

SHADOW - Main Result

Assumptions for shadow calculations

Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) []
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.96 2.07 4.32 6.59 9.64 9.55 9.82 8.35 5.52 3.17 1.24 0.85

Operational time
0 1 Sum
4 076 4 076 8 152

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Elevation Grid Data Object: Limbaži_RECOVER001 11.
Receptor grid resolution: 1.0 m

All coordinates are in
Latvian TM LKS92-LKS92 (LV)

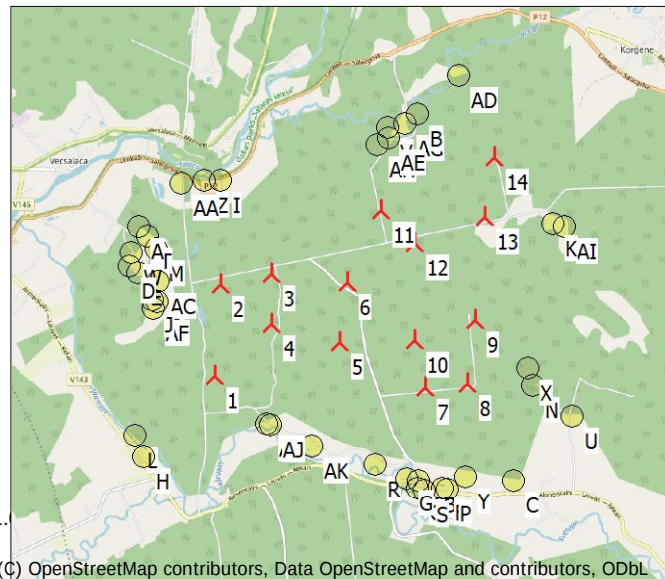
WTGs

	Y	X	Z	Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.	Type-generator				Calculation distance [m]	RPM [RPM]
1	526 509	398 765	23.8	Z1	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
2	526 578	399 986	24.0	Z2	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
3	527 252	400 134	26.3	Z3	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
4	527 258	399 468	26.0	Z4	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
5	528 156	399 224	26.7	Z5	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
6	528 255	400 023	28.8	Z6	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
7	529 297	398 647	28.4	Z8	No	GENVIND	VES-8 000	8 000	200.0	175.0	2 344	16.0
8	529 862	398 686	31.5	Z9	No	GENVIND	VES-8 000	8 000	200.0	175.0	2 344	16.0
9	529 954	399 532	30.1	Z10	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
10	529 162	399 262	27.1	Z11	No	GENVIND	VES-8 000	8 000	200.0	175.0	2 344	16.0
11	528 702	400 976	29.2	Z12	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
12	529 153	400 543	28.2	Z13	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
13	530 084	400 891	30.3	Z16	No	GENVIND	VES-8 000	8 000	200.0	200.0	2 342	16.0
14	530 196	401 685	32.3	Z17	No	GENVIND	VES-8 000	8 000	200.0	175.0	2 344	16.0

Shadow receptor-Input

No.	Name	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[m]	[°]		[m]
A	Aiviekstes	525 480	400 742	16.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5
B	Birzuli	529 172	402 254	30.1	1.5	1.5	1.0	90.0	"Green house mode"	2.5
C	Caunites	530 478	397 407	36.7	1.5	1.5	1.0	90.0	"Green house mode"	2.5
D	Cerini 2	525 358	400 220	15.4	1.5	1.5	1.0	90.0	"Green house mode"	2.5
E	Drupas	525 471	400 124	16.0	1.5	1.5	1.0	90.0	"Green house mode"	2.5
F	Einbluti	529 546	397 309	30.0	1.5	1.5	1.0	90.0	"Green house mode"	2.5
G	Ilgupils	529 075	397 432	21.1	1.5	1.5	1.0	90.0	"Green house mode"	2.5
H	Indrani (Nr.2)	525 570	397 701	15.7	1.5	1.5	1.0	90.0	"Green house mode"	2.5
I	Jaunjeceni	526 563	401 353	21.8	1.5	1.5	1.0	90.0	"Green house mode"	2.5
J	Jaunkastanas	525 669	399 774	17.1	1.5	1.5	1.0	90.0	"Green house mode"	2.5
K	Jaunto Seni	530 976	400 817	34.1	1.5	1.5	1.0	90.0	"Green house mode"	2.5
L	Jaunupites	525 453	397 980	15.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5
M	Kalnmalas	525 716	400 446	17.9	1.5	1.5	1.0	90.0	"Green house mode"	2.5
N	Kardes	530 727	398 674	36.0	1.5	1.5	1.0	90.0	"Green house mode"	2.5
O	Krusteici	525 734	399 745	17.8	1.5	1.5	1.0	90.0	"Green house mode"	2.5
P	Kuikules magazina	529 606	397 295	31.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5

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SHADOW - Main Result

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No.	Name	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[m]	[°]		[m]
Q	Kuikuli	529 203	397 297	29.6	1.5	1.5	1.0	90.0	"Green house mode"	2.5
R	Kilzumi	528 642	397 619	23.9	1.5	1.5	1.0	90.0	"Green house mode"	2.5
S	Lielkuikuli	529 293	397 279	29.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5
T	Mazkaleji	525 603	400 609	17.3	1.5	1.5	1.0	90.0	"Green house mode"	2.5
U	Namdari	531 253	398 274	38.6	1.5	1.5	1.0	90.0	"Green house mode"	2.5
V	Norinas	528 768	402 073	30.0	1.5	1.5	1.0	90.0	"Green house mode"	2.5
W	Pavasari	525 383	400 397	16.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5
X	Plesini	530 664	398 903	36.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5
Y	Silkalni	529 852	397 464	35.9	1.5	1.5	1.0	90.0	"Green house mode"	2.5
Z	Silveveri	526 342	401 352	22.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AA	Smilgas	526 052	401 314	20.7	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AB	Svetupe	529 217	397 397	27.5	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AC	Tamisari	525 755	400 019	17.8	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AD	Tuiskas	529 716	402 772	30.0	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AE	Vaverites	528 791	401 939	30.6	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AF	Veckastani	525 682	399 657	17.4	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AG	Vecmelderi	529 002	402 124	29.5	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AH	Vecsilupites	528 641	401 842	30.0	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AI	Vecto šeni	531 132	400 781	35.5	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AJ	Vedamurgas	527 257	398 127	21.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AK	Vejini	527 799	397 858	21.9	1.5	1.5	1.0	90.0	"Green house mode"	2.5
AL	Zvaigznes	527 206	398 136	21.2	1.5	1.5	1.0	90.0	"Green house mode"	2.5

Calculation Results

Shadow receptor

No.	Name	Shadow, expected values Shadow hours per year [h/year]
A	Aiviekstes	8:04
B	Birzuli	8:56
C	Caunites	0:00
D	Cerini 2	14:49
E	Drupas	18:51
F	Einbluti	0:00
G	Ilgupils	0:00
H	Indrani (Nr.2)	0:00
I	Jaunjeceni	5:44
J	Jaunkastanas	41:39
K	Jaunto šeni	31:40
L	Jaunupites	10:30
M	Kalnmalas	16:07
N	Kardes	33:06
O	Krusteici	53:32
P	Kuikules magazina	0:00
Q	Kuikuli	0:00
R	Kilzumi	3:10
S	Lielkuikuli	0:00
T	Mazkaleji	10:51
U	Namdari	17:13
V	Norinas	6:04
W	Pavasari	12:50
X	Plesini	29:28
Y	Silkalni	0:00
Z	Silveveri	4:22
AA	Smilgas	4:46
AB	Svetupe	0:00
AC	Tamisari	34:27
AD	Tuiskas	4:04
AE	Vaverites	7:51
AF	Veckastani	49:20
AG	Vecmelderi	8:31
AH	Vecsilupites	8:13

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SHADOW - Main Result

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Shadow, expected values	
No.	Name
Shadow hours	
per year	
[h/year]	
AI	Vecto šeni
	21:38
AJ	Vedamurgas
	10:08
AK	Vejini
	25:30
AL	Zvaigznes
	9:09

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Expected
		[h/year]
1	Z1	26:24
2	Z2	118:43
3	Z3	45:56
4	Z4	26:06
5	Z5	0:00
6	Z6	3:18
7	Z8	33:27
8	Z9	59:11
9	Z10	3:44
10	Z11	25:47
11	Z12	7:56
12	Z13	7:33
13	Z16	37:23
14	Z17	27:28

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

The calculation of the total expected values for a given receptor assumes a weighted average directional reduction for all WTGs contributing to shadow flicker within the same day. In the case where shadow flicker from different WTGs is not concurrent within the day, the total expected time at a given receptor may deviate marginally from the individual flicker time caused by each turbine separately.

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

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Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: A - Aiviekstes

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January			February			March			April			May		June	
1	09:07		10:16 (1)	08:27			07:20		07:50 (3)	06:54		05:34			04:33	
	15:46	22	10:38 (1)	16:46			17:52	36	09:07 (2)	20:01		21:08			22:09	
2	09:06		10:16 (1)	08:25			07:17		07:46 (3)	06:51		05:31			04:32	
	15:47	22	10:38 (1)	16:49			17:54	41	09:06 (2)	20:04		21:10			22:10	
3	09:06		10:16 (1)	08:23			07:14		07:44 (3)	06:48		05:29			04:31	
	15:48	22	10:38 (1)	16:51			17:57	42	09:04 (2)	20:06		21:12			22:12	
4	09:06		10:16 (1)	08:21			07:12		07:43 (3)	06:46		05:27			04:30	
	15:50	22	10:38 (1)	16:53			17:59	40	09:02 (2)	20:08		21:14			22:13	
5	09:05		10:18 (1)	08:19		08:50 (4)	07:09		07:42 (3)	06:43		05:24			04:28	
	15:51	21	10:39 (1)	16:56	5	08:55 (4)	18:01	36	08:59 (2)	20:10		21:16			22:15	
6	09:04		10:18 (1)	08:17		08:48 (4)	07:06		07:41 (3)	06:40		05:22			04:27	
	15:53	21	10:39 (1)	16:58	10	08:58 (4)	18:04	23	08:04 (3)	20:12		21:19			22:16	
7	09:04		10:19 (1)	08:14		08:45 (4)	07:04		07:40 (3)	06:37		05:20			04:27	
	15:54	21	10:40 (1)	17:00	14	08:59 (4)	18:06	24	08:04 (3)	20:15		21:21			22:17	
8	09:03		10:19 (1)	08:12		08:44 (4)	07:01		07:40 (3)	06:35		05:17			04:26	
	15:56	21	10:40 (1)	17:03	17	09:01 (4)	18:08	24	08:04 (3)	20:17		21:23			22:18	
9	09:02		10:19 (1)	08:10		08:42 (4)	06:58		07:40 (3)	06:32		05:15			04:25	
	15:58	20	10:39 (1)	17:05	19	09:01 (4)	18:10	25	08:05 (3)	20:19		21:25			22:19	
10	09:01		10:20 (1)	08:08		08:42 (4)	06:55		07:40 (3)	06:29		05:13			04:24	
	15:59	20	10:40 (1)	17:08	21	09:03 (4)	18:13	24	08:04 (3)	20:21		21:27			22:21	
11	09:00		10:21 (1)	08:05		08:42 (4)	06:53		07:40 (3)	06:26		05:11			04:24	
	16:01	19	10:40 (1)	17:10	21	09:03 (4)	18:15	23	08:03 (3)	20:23		21:29			22:22	
12	08:59		10:22 (1)	08:03		08:42 (4)	06:50		07:40 (3)	06:24		05:08			04:23	
	16:03	17	10:39 (1)	17:12	22	09:04 (4)	18:17	22	08:02 (3)	20:26		21:31			22:22	
13	08:58		10:23 (1)	08:00		08:42 (4)	06:47		07:41 (3)	06:21		05:06			04:23	
	16:05	16	10:39 (1)	17:15	23	09:05 (2)	18:19	20	08:01 (3)	20:28		21:34			22:23	
14	08:57		10:24 (1)	07:58		08:41 (4)	06:44		07:43 (3)	06:18		05:04			04:22	
	16:07	14	10:38 (1)	17:17	25	09:06 (2)	18:22	17	08:00 (3)	20:30		21:36			22:24	
15	08:56		10:26 (1)	07:56		08:41 (2)	06:41		07:44 (3)	06:15		05:02			04:22	
	16:09	12	10:38 (1)	17:19	27	09:08 (2)	18:24	13	07:57 (3)	20:32		21:38			22:25	
16	08:55		10:27 (1)	07:53		08:40 (2)	06:39		07:47 (3)	06:13		05:00			04:21	
	16:11	10	10:37 (1)	17:22	29	09:09 (2)	18:26	6	07:53 (3)	20:34		21:40			22:25	
17	08:53		10:30 (1)	07:51		08:40 (2)	06:36			06:10		04:58			04:21	
	16:13	4	10:34 (1)	17:24	30	09:10 (2)	18:28			20:37		21:42			22:26	
18	08:52			07:48		08:39 (2)	06:33			06:07		04:56			04:21	
	16:15			17:26	32	09:11 (2)	18:30			20:39		21:44			22:27	
19	08:50			07:46		08:38 (2)	06:30			06:05		04:54			04:21	
	16:17			17:29	33	09:11 (2)	18:33			20:41		21:46			22:27	
20	08:49			07:43		08:38 (2)	06:28			06:02		04:52			04:21	
	16:19			17:31	34	09:12 (2)	18:35			20:43		21:48			22:27	
21	08:47			07:41		08:37 (2)	06:25			05:59		04:50			04:21	
	16:21			17:34	35	09:12 (2)	18:37			20:46		21:50			22:28	
22	08:46			07:38		08:37 (2)	06:22			05:57		04:48			04:21	
	16:23			17:36	34	09:11 (2)	18:39			20:48		21:52			22:28	
23	08:44			07:36		08:37 (2)	06:19			05:54		04:47			04:22	
	16:26			17:38	35	09:12 (2)	18:42			20:50		21:54			22:28	
24	08:42			07:33		08:37 (2)	06:16			05:52		04:45			04:22	
	16:28			17:41	34	09:11 (2)	18:44			20:52		21:55			22:28	
25	08:41			07:30		08:37 (2)	06:14			05:49		04:43			04:22	
	16:30			17:43	34	09:11 (2)	18:46			20:54		21:57			22:28	
26	08:39			07:28		08:37 (2)	06:11			05:46		04:42			04:23	
	16:32			17:45	33	09:10 (2)	18:48			20:57		21:59			22:28	
27	08:37			07:25		08:38 (2)	06:08			05:44		04:40			04:23	
	16:35			17:47	32	09:10 (2)	18:50			20:59		22:01			22:28	
28	08:35			07:22		08:38 (2)	06:05			05:41		04:39			04:24	
	16:37			17:50	31	09:09 (2)	18:53			21:01		22:02			22:28	
29	08:33						07:02			05:39		04:37			04:25	
	16:39						19:55			21:03		22:04			22:27	
30	08:31						07:00			05:36		04:36			04:25	
	16:42						19:57			21:05		22:06			22:27	
31	08:29						06:57					04:34				
	16:44						19:59					22:07				
Potential sun hours	227			262			365			429		515			539	
Total, worst case		304			630		416									
Sun reduction		0.13			0.22		0.37									
Oper. time red.		0.93			0.93		0.93									
Wind dir. red.		0.42			0.79		0.89									
Total reduction		0.05			0.15		0.28									
Total, real		14			94		116									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: A - Aiviekstes

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:25	08:20 (3)	07:34
	22:26	21:42	20:24	19:00	08:41 (3)	16:38
2	04:27	05:17	06:23	07:27	08:18 (3)	07:36
	22:26	21:39	20:21	18:57	23 08:41 (3)	16:36
3	04:28	05:19	06:25	07:29	08:18 (3)	07:38
	22:25	21:37	20:18	18:54	24 08:42 (3)	16:34
4	04:29	05:22	06:27	07:31	08:17 (3)	07:41
	22:24	21:35	20:15	18:51	25 08:42 (3)	16:31
5	04:30	05:24	06:30	07:33	08:17 (3)	07:43
	22:24	21:33	20:13	18:49	24 08:41 (3)	16:29
6	04:31	05:26	06:32	07:35	08:16 (3)	07:45
	22:23	21:30	20:10	18:46	25 08:41 (3)	16:27
7	04:32	05:28	06:34	07:38	08:17 (3)	07:48
	22:22	21:28	20:07	18:43	24 08:41 (3)	16:24
8	04:34	05:30	06:36	07:40	08:17 (3)	07:50
	22:21	21:26	20:04	18:40	32 09:32 (2)	16:22
9	04:35	05:32	06:38	07:42	08:17 (3)	07:52
	22:20	21:23	20:01	18:38	38 09:35 (2)	16:20
10	04:36	05:34	06:40	07:44	08:18 (3)	07:55
	22:19	21:21	19:59	18:35	40 09:37 (2)	16:18
11	04:38	05:36	06:42	07:46	08:20 (3)	07:57
	22:18	21:18	19:56	18:32	40 09:39 (2)	16:16
12	04:39	05:38	06:44	07:49	08:21 (3)	07:59
	22:17	21:16	19:53	18:29	39 09:40 (2)	16:14
13	04:41	05:41	06:47	07:51	08:25 (3)	08:01
	22:15	21:14	19:50	18:27	33 09:41 (2)	16:12
14	04:42	05:43	06:49	07:53	09:11 (2)	08:04
	22:14	21:11	19:47	18:24	31 09:42 (2)	16:10
15	04:44	05:45	06:51	07:55	09:10 (2)	08:06
	22:13	21:09	19:45	18:21	32 09:42 (2)	16:08
16	04:45	05:47	06:53	07:57	09:09 (2)	08:08
	22:11	21:06	19:42	18:19	33 09:42 (2)	16:06
17	04:47	05:49	06:55	08:00	09:09 (2)	08:10
	22:10	21:04	19:39	18:16	34 09:43 (2)	16:04
18	04:49	05:51	06:57	08:02	09:08 (2)	08:13
	22:08	21:01	19:36	18:13	35 09:43 (2)	16:02
19	04:50	05:53	06:59	08:04	09:07 (2)	08:15
	22:06	20:58	19:33	18:11	35 09:42 (2)	16:01
20	04:52	05:55	07:01	08:06	09:08 (2)	08:17
	22:05	20:56	19:31	18:08	34 09:42 (2)	15:59
21	04:54	05:58	07:03	08:09	09:07 (2)	08:19
	22:03	20:53	19:28	18:06	35 09:42 (2)	15:57
22	04:56	06:00	07:05	08:11	09:08 (2)	08:21
	22:01	20:51	19:25	18:03	34 09:42 (2)	15:56
23	04:58	06:02	07:08	08:13	09:08 (2)	08:23
	22:00	20:48	19:22	18:00	33 09:41 (2)	15:54
24	04:59	06:04	07:10	08:15	09:09 (2)	08:25
	21:58	20:45	19:19	17:58	32 09:41 (2)	15:53
25	05:01	06:06	07:12	07:18	08:09 (2)	08:28
	21:56	20:43	19:16	16:55	30 08:39 (2)	15:51
26	05:03	06:08	07:14	07:20	08:10 (2)	08:30
	21:54	20:40	19:14	16:53	29 08:39 (2)	15:50
27	05:05	06:10	07:16	07:22	08:11 (2)	08:32
	21:52	20:37	19:11	16:50	26 08:37 (2)	15:48
28	05:07	06:13	07:18	07:25	08:12 (4)	08:34
	21:50	20:35	19:08	16:48	24 08:36 (2)	15:47
29	05:09	06:15	07:20	08:23 (3)	07:27	08:11 (4)
	21:48	20:32	19:05	16:45	23 08:34 (2)	15:46
30	05:11	06:17	07:23	08:21 (3)	07:29	08:11 (4)
	21:46	20:29	19:02	16:43	22 08:33 (4)	15:45
31	05:13	06:19		07:32	08:11 (4)	
	21:44	20:26		16:41	21 08:32 (4)	
Potential sun hours	538	474	386	321	241	207
Total, worst case			46	931	156	679
Sun reduction			0.43	0.31	0.15	0.13
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.93	0.83	0.62	0.42
Total reduction			0.34	0.22	0.08	0.05
Total, real			16	201	13	31

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: B - Birzuli

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07	09:55 (13)	08:27	10:05 (13)	07:20	08:14 (14)
15:45	66	14:10 (11)	16:46	10:22 (13)	17:52	08:53 (14)
2	09:06	09:55 (13)	08:25	10:06 (13)	07:17	08:13 (14)
15:47	67	14:11 (11)	16:48	10:19 (13)	17:54	08:52 (14)
3	09:06	09:55 (13)	08:23	10:10 (13)	07:14	08:13 (14)
15:48	67	14:11 (11)	16:51	10:16 (13)	17:56	08:52 (14)
4	09:05	09:54 (13)	08:21	07:11	08:13 (14)	06:45
15:49	67	14:11 (11)	16:53	17:59	08:51 (14)	20:08
5	09:05	09:54 (13)	08:19	07:09	08:14 (14)	06:43
15:51	66	14:12 (11)	16:55	18:01	08:51 (14)	20:10
6	09:04	09:55 (13)	08:16	07:06	08:14 (14)	06:40
15:52	64	14:13 (11)	16:58	18:03	08:50 (14)	20:12
7	09:04	09:55 (13)	08:14	07:03	08:15 (14)	06:37
15:54	57	14:14 (11)	17:00	18:06	08:49 (14)	20:14
8	09:03	09:54 (13)	08:12	07:01	08:15 (14)	06:34
15:56	58	14:13 (11)	17:02	18:08	08:47 (14)	20:17
9	09:02	09:54 (13)	08:10	06:58	08:16 (14)	06:32
15:57	59	14:14 (11)	17:05	18:10	08:45 (14)	20:19
10	09:01	09:54 (13)	08:07	06:55	08:18 (14)	06:29
15:59	62	14:15 (11)	17:07	18:12	08:44 (14)	20:21
11	09:00	09:54 (13)	08:05	06:52	08:20 (14)	06:26
16:01	62	14:15 (11)	17:10	18:15	08:42 (14)	20:23
12	08:59	09:54 (13)	08:03	06:50	08:22 (14)	06:23
16:03	62	14:15 (11)	17:12	18:17	08:38 (14)	20:25
13	08:58	09:54 (13)	08:00	06:47	08:28 (14)	06:21
16:05	63	14:16 (11)	17:14	18:19	08:31 (14)	20:28
14	08:57	09:54 (13)	07:58	06:44	06:18	05:04
16:06	63	14:16 (11)	17:17	18:21	20:30	21:35
15	08:56	09:54 (13)	07:55	06:41	06:15	05:02
16:08	64	14:16 (11)	17:19	18:24	20:32	21:38
16	08:54	09:54 (13)	07:53	06:38	06:12	05:00
16:10	64	14:16 (11)	17:21	18:26	20:34	21:40
17	08:53	09:54 (13)	07:51	06:36	06:10	04:58
16:12	64	14:16 (11)	17:24	18:28	20:36	21:42
18	08:52	09:55 (13)	07:48	06:33	06:07	04:56
16:14	63	14:17 (11)	17:26	18:30	20:39	21:44
19	08:50	09:55 (13)	07:46	06:30	06:04	04:54
16:17	64	14:17 (11)	17:29	18:32	20:41	21:46
20	08:49	09:55 (13)	07:43	06:27	06:02	04:52
16:19	62	14:16 (11)	17:31	18:35	20:43	21:48
21	08:47	09:55 (13)	07:40	06:25	05:59	04:50
16:21	62	14:16 (11)	17:33	18:37	20:45	21:50
22	08:46	09:56 (13)	07:38	06:22	05:57	04:48
16:23	60	14:16 (11)	17:36	18:39	20:48	21:51
23	08:44	09:56 (13)	07:35	06:19	05:54	04:46
16:25	58	14:15 (11)	17:38	18:41	20:50	21:53
24	08:42	09:56 (13)	07:33	06:16	05:51	04:45
16:27	57	14:15 (11)	17:40	18:43	20:52	21:55
25	08:41	09:57 (13)	07:30	06:13	05:49	04:43
16:30	54	14:14 (11)	17:43	18:46	20:54	21:57
26	08:39	09:58 (13)	07:27	06:10	05:46	04:41
16:32	51	14:13 (11)	17:45	18:48	20:56	21:59
27	08:37	09:59 (13)	07:25	06:08	05:44	04:40
16:34	46	14:12 (11)	17:47	18:50	20:59	22:01
28	08:35	10:00 (13)	07:22	06:05	05:41	04:38
16:37	41	14:11 (11)	17:50	18:52	21:01	22:02
29	08:33	10:00 (13)	07:02	06:02	05:39	04:37
16:39	34	14:07 (11)	19:55	21:03	22:04	22:27
30	08:31	10:01 (13)	06:59	05:36	04:35	04:25
16:41	22	10:23 (13)	19:57	21:05	22:06	22:27
31	08:29	10:03 (13)	06:57	04:34		
16:44	20	10:23 (13)	19:59	22:07		
Potential sun hours	227	262	365	429	515	539
Total, worst case	1769	443	390			
Sun reduction	0.13	0.22	0.37			
Oper. time red.	0.93	0.93	0.93			
Wind dir. red.	0.43	0.82	0.85			
Total reduction	0.05	0.15	0.25			
Total, real	80	65	98			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: B - Birzuli

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October		November		December
1	04:26	05:15	06:21	07:24	12	09:03 (14)	07:34	08:39
	22:26	21:41	20:23	18:59		09:15 (14)	16:38	15:43
2	04:27	05:17	06:23	07:27	19	08:59 (14)	07:36	08:41
	22:26	21:39	20:21	18:57		09:18 (14)	16:36	15:42
3	04:28	05:19	06:25	07:29	24	08:56 (14)	07:38	08:43
	22:25	21:37	20:18	18:54		09:20 (14)	16:33	15:41
4	04:29	05:21	06:27	07:31	28	08:55 (14)	07:41	08:44
	22:24	21:35	20:15	18:51		09:23 (14)	16:31	15:40
5	04:30	05:23	06:29	07:33	31	08:53 (14)	07:43	08:46
	22:24	21:32	20:12	18:48		09:24 (14)	16:29	15:39
6	04:31	05:25	06:31	07:35	32	08:52 (14)	07:45	08:48
	22:23	21:30	20:10	18:46		09:24 (14)	16:26	15:39
7	04:32	05:27	06:34	07:37	35	08:50 (14)	07:47	08:49
	22:22	21:28	20:07	18:43		09:25 (14)	16:24	15:38
8	04:33	05:30	06:36	07:40	36	08:50 (14)	07:50	08:51
	22:21	21:26	20:04	18:40		09:26 (14)	16:22	15:37
9	04:35	05:32	06:38	07:42	37	08:49 (14)	07:52	09:37 (13)
	22:20	21:23	20:01	18:37		09:26 (14)	16:20	15:37
10	04:36	05:34	06:40	07:44	38	08:48 (14)	07:54	09:35 (13)
	22:19	21:21	19:58	18:35		09:26 (14)	16:18	15:36
11	04:37	05:36	06:42	07:46	39	08:47 (14)	07:57	09:33 (13)
	22:18	21:18	19:56	18:32		09:26 (14)	16:16	15:36
12	04:39	05:38	06:44	07:48	39	08:47 (14)	07:59	09:33 (13)
	22:16	21:16	19:53	18:29		09:26 (14)	16:14	15:35
13	04:40	05:40	06:46	07:51	39	08:47 (14)	08:01	09:32 (13)
	22:15	21:13	19:50	18:26		09:26 (14)	16:12	15:35
14	04:42	05:42	06:48	07:53	39	08:46 (14)	08:03	09:31 (13)
	22:14	21:11	19:47	18:24		09:25 (14)	16:10	15:35
15	04:43	05:44	06:50	07:55	39	08:47 (14)	08:06	09:30 (13)
	22:12	21:08	19:44	18:21		09:26 (14)	16:08	15:35
16	04:45	05:47	06:53	07:57	39	08:46 (14)	08:08	09:31 (13)
	22:11	21:06	19:42	18:18		09:25 (14)	16:06	15:35
17	04:47	05:49	06:55	07:59	38	08:46 (14)	08:10	09:31 (13)
	22:09	21:03	19:39	18:16		09:24 (14)	16:04	15:35
18	04:48	05:51	06:57	08:02	37	08:47 (14)	08:12	09:30 (13)
	22:08	21:01	19:36	18:13		09:24 (14)	16:02	15:35
19	04:50	05:53	06:59	08:04	35	08:47 (14)	08:15	09:31 (13)
	22:06	20:58	19:33	18:10		09:22 (14)	16:00	15:35
20	04:52	05:55	07:01	08:06	33	08:49 (14)	08:17	09:31 (13)
	22:05	20:56	19:30	18:08		09:22 (14)	15:59	15:35
21	04:54	05:57	07:03	08:08	31	08:49 (14)	08:19	09:31 (13)
	22:03	20:53	19:27	18:05		09:20 (14)	15:57	15:36
22	04:55	05:59	07:05	08:11	29	08:51 (14)	08:21	09:31 (13)
	22:01	20:50	19:25	18:03		09:20 (14)	15:55	15:36
23	04:57	06:02	07:07	08:13	27	08:51 (14)	08:23	09:31 (13)
	21:59	20:48	19:22	18:00		09:18 (14)	15:54	15:37
24	04:59	06:04	07:09	08:15	22	08:53 (14)	08:25	09:32 (13)
	21:58	20:45	19:19	17:58		09:15 (14)	15:52	15:37
25	05:01	06:06	07:12	07:18	17	07:56 (14)	08:27	09:32 (13)
	21:56	20:42	19:16	16:55		08:13 (14)	15:51	15:38
26	05:03	06:08	07:14	07:20	10	07:59 (14)	08:29	09:33 (13)
	21:54	20:40	19:13	16:53		08:09 (14)	15:49	15:39
27	05:05	06:10	07:16	07:22			08:31	09:34 (13)
	21:52	20:37	19:11	16:50			15:48	15:40
28	05:07	06:12	07:18	07:24			08:33	09:34 (13)
	21:50	20:34	19:08	16:48			15:47	15:41
29	05:09	06:14	07:20	07:27			08:35	09:34 (13)
	21:48	20:32	19:05	16:45			15:45	15:42
30	05:11	06:17	07:22	07:29			08:37	09:35 (13)
	21:46	20:29	19:02	16:43			15:44	15:43
31	05:13	06:19		07:31				09:07
	21:44	20:26		16:40				15:44
Potential sun hours	539	475	386	321		241		207
Total, worst case					805	1112		1914
Sun reduction					0.31	0.15		0.13
Oper. time red.					0.93	0.93		0.93
Wind dir. red.					0.85	0.46		0.32
Total reduction					0.21	0.06		0.03
Total, real					168	63		64

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: D - Cerini 2

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07 15:46	08:27 16:46	09:44 (1) 10:05 (1)	07:20 17:52	07:51 (4) 08:12 (4)	06:54 20:01
2	09:06 15:47	08:25 16:49	09:44 (1) 10:03 (1)	07:17 17:54	06:51 20:04	07:38 (3) 21:10
3	09:06 15:48	08:23 16:51	09:46 (1) 10:02 (1)	07:14 17:57	06:48 20:06	07:38 (3) 21:12
4	09:06 15:50	08:21 16:53	09:48 (1) 10:01 (1)	07:12 17:59	06:46 20:08	07:40 (3) 21:14
5	09:05 15:51	08:19 16:56	09:52 (1) 09:57 (1)	07:09 18:01	06:43 20:10	07:41 (3) 21:16
6	09:04 15:53	08:17 16:58	07:06 18:04	06:40 20:12	07:43 (3) 21:19	05:22 22:16
7	09:04 15:54	08:14 17:00	07:04 18:06	06:37 20:15	05:20 21:21	04:27 22:17
8	09:03 15:56	08:12 17:03	07:01 18:08	06:35 20:17	05:17 21:23	04:26 22:18
9	09:02 15:58	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19
10	09:01 15:59	09:45 (1) 09:50 (1)	08:08 17:08	06:55 18:13	05:13 21:27	04:24 22:21
11	09:00 16:01	09:43 (1) 09:53 (1)	08:05 17:10	06:53 18:15	05:11 21:29	04:24 22:22
12	08:59 16:03	09:42 (1) 09:54 (1)	08:03 17:12	06:50 18:17	05:08 21:31	04:23 22:22
13	08:58 16:05	09:41 (1) 09:56 (1)	08:00 17:15	06:47 18:19	05:06 21:34	04:23 22:23
14	08:57 16:07	09:40 (1) 09:57 (1)	07:58 17:17	06:44 18:22	05:04 21:36	04:22 22:24
15	08:56 16:09	09:40 (1) 09:59 (1)	07:56 17:19	06:42 18:24	05:02 21:38	04:22 22:25
16	08:55 16:11	09:39 (1) 10:00 (1)	07:53 17:22	06:39 18:26	05:00 21:40	04:21 22:25
17	08:53 16:13	09:39 (1) 10:00 (1)	07:51 17:24	06:36 18:28	05:00 21:42	04:21 22:26
18	08:52 16:15	09:39 (1) 10:02 (1)	07:48 17:27	06:33 18:30	05:00 21:44	04:21 22:27
19	08:50 16:17	09:39 (1) 10:02 (1)	07:46 17:29	06:30 18:33	05:00 21:46	04:21 22:27
20	08:49 16:19	09:39 (1) 10:03 (1)	07:43 17:31	06:28 18:35	05:00 21:48	04:21 22:27
21	08:47 16:21	09:39 (1) 10:04 (1)	07:41 17:34	06:25 18:37	05:00 21:50	04:21 22:28
22	08:46 16:23	09:39 (1) 10:04 (1)	07:38 17:36	06:22 18:39	05:00 21:52	04:21 22:28
23	08:44 16:26	09:39 (1) 10:05 (1)	07:36 17:38	06:19 18:42	05:00 21:54	04:21 22:28
24	08:42 16:28	09:39 (1) 10:05 (1)	07:33 17:41	06:16 18:44	05:00 21:55	04:21 22:28
25	08:41 16:30	09:39 (1) 10:05 (1)	07:30 17:43	06:14 18:46	05:00 21:57	04:21 22:28
26	08:39 16:32	09:40 (1) 10:06 (1)	07:28 17:45	06:11 18:48	05:00 21:59	04:21 22:28
27	08:37 16:35	09:40 (1) 10:06 (1)	07:25 17:48	06:08 18:50	05:00 22:01	04:21 22:28
28	08:35 16:37	09:41 (1) 10:06 (1)	07:22 17:50	06:05 18:53	05:00 22:02	04:21 22:27
29	08:33 16:39	09:41 (1) 10:06 (1)	07:20 17:55	06:03 19:55	05:00 22:03	04:21 22:27
30	08:31 16:42	09:41 (1) 10:05 (1)	07:00 19:57	05:36 20:58	04:36 22:06	04:25 22:27
31	08:29 16:44	09:42 (1) 10:05 (1)	06:57 19:59	05:36 20:58	04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Total, worst case	467	131	926	242		
Sun reduction	0.13	0.22	0.37	0.46		
Oper. time red.	0.93	0.93	0.93	0.93		
Wind dir. red.	0.59	0.73	0.96	0.98		
Total reduction	0.07	0.14	0.31	0.39		
Total, real	31	18	283	95		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: D - Cerini 2

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:25	07:34	08:39
	22:26	21:42	20:24	19:00	16:38	15:44
2	04:27	05:17	06:23	07:27	07:36	08:41
	22:26	21:39	20:21	18:57	16:36	15:42
3	04:28	05:19	06:25	07:29	08:33 (4)	07:38
	22:25	21:37	20:18	18:54	10 08:43 (4)	16:34
4	04:29	05:22	06:27	07:31	08:30 (4)	07:41
	22:24	21:35	20:15	18:51	15 08:45 (4)	16:31
5	04:30	05:24	06:30	07:33	08:28 (4)	07:43
	22:24	21:33	20:13	18:49	18 08:46 (4)	16:29
6	04:31	05:26	06:32	07:39 (3)	07:35	08:27 (4)
	22:23	21:30	20:10	19 08:22 (2)	18:46	19 08:46 (4)
7	04:32	05:28	06:34	07:36 (3)	07:38	08:26 (4)
	22:22	21:28	20:07	32 08:26 (2)	18:43	22 08:48 (4)
8	04:34	05:30	06:36	07:34 (3)	07:40	08:25 (4)
	22:21	21:26	20:04	40 08:28 (2)	18:40	23 08:48 (4)
9	04:35	05:32	06:38	07:33 (3)	07:42	08:25 (4)
	22:20	21:23	20:01	46 08:30 (2)	18:38	22 08:47 (4)
10	04:36	05:34	06:40	07:31 (3)	07:44	08:24 (4)
	22:19	21:21	19:59	50 08:31 (2)	18:35	23 08:47 (4)
11	04:38	05:36	06:42	07:30 (3)	07:46	08:25 (4)
	22:18	21:18	19:56	54 08:31 (2)	18:32	22 08:47 (4)
12	04:39	05:38	06:44	07:30 (3)	07:49	08:25 (4)
	22:17	21:16	19:53	56 08:32 (2)	18:29	21 08:46 (4)
13	04:41	05:41	06:47	07:29 (3)	07:51	08:25 (4)
	22:15	21:14	19:50	57 08:32 (2)	18:27	20 08:45 (4)
14	04:42	05:43	06:49	07:29 (3)	07:53	08:26 (4)
	22:14	21:11	19:47	59 08:33 (2)	18:24	18 08:44 (4)
15	04:44	05:45	06:51	07:29 (3)	07:55	08:27 (4)
	22:13	21:09	19:45	59 08:33 (2)	18:21	15 08:42 (4)
16	04:45	05:47	06:53	07:29 (3)	07:57	08:28 (4)
	22:11	21:06	19:42	58 08:32 (2)	18:19	12 08:40 (4)
17	04:47	05:49	06:55	07:30 (3)	08:00	08:33 (4)
	22:10	21:03	19:39	57 08:33 (2)	18:16	4 08:37 (4)
18	04:49	05:51	06:57	07:30 (3)	08:02	08:13
	22:08	21:01	19:36	57 08:33 (2)	18:13	16:02
19	04:50	05:53	06:59	07:31 (3)	08:04	08:15
	22:06	20:58	19:33	53 08:32 (2)	18:11	16:01
20	04:52	05:56	07:01	07:33 (3)	08:06	08:17
	22:05	20:56	19:31	47 08:31 (2)	18:08	15:59
21	04:54	05:58	07:03	07:37 (3)	08:09	08:19
	22:03	20:53	19:28	38 08:31 (2)	18:06	15:57
22	04:56	06:00	07:06	07:56 (2)	08:11	08:21
	22:01	20:51	19:25	34 08:30 (2)	18:03	15:56
23	04:58	06:02	07:08	07:56 (2)	08:13	08:23
	22:00	20:48	19:22	32 08:28 (2)	18:00	15:54
24	05:00	06:04	07:10	07:56 (2)	08:15	08:25
	21:58	20:45	19:19	31 08:27 (2)	17:58	15:53
25	05:01	06:06	07:12	07:57 (2)	07:18	08:27
	21:56	20:43	19:16	28 08:25 (2)	16:55	15:51
26	05:03	06:08	07:14	07:58 (2)	07:20	08:30
	21:54	20:40	19:14	25 08:23 (2)	16:53	15:50
27	05:05	06:10	07:16	08:00 (2)	07:22	08:32
	21:52	20:37	19:11	22 08:22 (2)	16:50	15:48
28	05:07	06:13	07:18	08:02 (2)	07:25	08:33
	21:50	20:34	19:08	17 08:19 (2)	16:48	15:47
29	05:09	06:15	07:20	08:06 (2)	07:27	08:35
	21:48	20:32	19:05	8 08:14 (2)	16:45	15:46
30	05:11	06:17	07:23	07:29	16:43	08:37
	21:46	20:29	19:02	16:43	15:45	12 09:36 (1)
31	05:13	06:19		07:31		09:07
	21:44	20:26		16:41		15:44
Potential sun hours	538	474	386	321	241	207
Total, worst case			979	264	529	16
Sun reduction			0.43	0.31	0.15	0.13
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.98	0.91	0.59	0.59
Total reduction			0.36	0.24	0.08	0.06
Total, real			356	64	41	1

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Riga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: E - Drupas

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

January		February		March		April		May		June	
1	09:07 15:46		08:27 16:46		09:46 (1) 10:11 (1)	07:20 17:52		07:49 (4) 08:06 (4)	06:54 20:01	07:29 (3) 08:34 (2)	05:34 21:08
2	09:06 15:47		08:25 16:49	25	09:47 (1) 10:10 (1)	07:17 17:54	17	07:48 (4) 08:07 (4)	06:51 20:04	07:28 (3) 08:33 (2)	05:31 21:10
3	09:06 15:48		08:23 16:51	23	09:48 (1) 10:09 (1)	07:14 17:57	19	07:46 (4) 08:08 (4)	06:48 20:06	07:27 (3) 08:33 (2)	05:29 21:12
4	09:06 15:50		08:21 16:53	21	09:50 (1) 10:08 (1)	07:12 17:59	22	07:46 (4) 08:09 (4)	06:46 20:08	07:27 (3) 08:33 (2)	05:27 21:14
5	09:05 15:51		08:19 16:56	18	09:51 (1) 10:06 (1)	07:09 18:01	23	07:45 (4) 08:09 (4)	06:43 20:10	07:27 (3) 08:32 (2)	05:24 21:16
6	09:04 15:53		08:17 16:58	15	09:55 (1) 10:03 (1)	07:06 18:04	24	07:45 (4) 08:09 (4)	06:40 20:12	07:26 (3) 08:31 (2)	05:22 21:19
7	09:04 15:54		08:14 17:00	8	07:01 10:03 (1)	18:04 18:06	24	07:44 (4) 08:08 (4)	06:37 20:15	07:27 (3) 08:31 (2)	05:20 21:21
8	09:03 15:56		08:12 17:03			18:06 18:08	24	07:44 (4) 08:08 (4)	06:35 20:17	07:27 (3) 08:29 (2)	05:17 21:23
9	09:02 15:58	3	09:50 (1) 09:53 (1)	08:10 17:05		06:58 18:10	23	07:45 (4) 08:08 (4)	06:32 20:19	07:28 (3) 08:28 (2)	05:15 21:25
10	09:01 15:59	9	09:47 (1) 09:56 (1)	08:08 17:08		06:55 18:13	22	07:45 (4) 08:07 (4)	06:29 20:21	07:28 (3) 08:26 (2)	05:13 21:27
11	09:00 16:01	12	09:47 (1) 09:59 (1)	08:05 17:10		06:53 18:15	20	07:45 (4) 08:05 (4)	06:26 20:23	07:31 (3) 08:25 (2)	05:11 21:29
12	08:59 16:03	15	09:45 (1) 10:00 (1)	08:03 17:12		06:50 18:17	18	07:46 (4) 08:04 (4)	06:24 20:26	07:33 (3) 08:23 (2)	05:08 21:31
13	08:58 16:05	17	09:45 (1) 10:02 (1)	08:00 17:15		06:47 18:19	13	07:48 (4) 08:01 (4)	06:21 20:28	07:58 (2) 08:20 (2)	05:06 21:34
14	08:57 16:07	19	09:44 (1) 10:03 (1)	07:58 17:17		06:44 18:22	8	07:51 (4) 07:59 (4)	06:18 20:30	08:00 (2) 08:18 (2)	05:04 21:36
15	08:56 16:09	20	09:44 (1) 10:04 (1)	07:56 17:19		06:41 18:24			06:15 20:32	08:04 (2) 08:13 (2)	05:02 21:38
16	08:55 16:11	22	09:43 (1) 10:05 (1)	07:53 17:22		06:39 18:26			06:13 20:34		05:00 21:40
17	08:53 16:13	23	09:43 (1) 10:06 (1)	07:51 17:24		06:36 18:28			06:10 20:37		04:58 21:42
18	08:52 16:15	24	09:43 (1) 10:07 (1)	07:48 17:27		06:33 18:30			06:07 20:39		04:56 21:44
19	08:50 16:17	25	09:43 (1) 10:08 (1)	07:46 17:29		06:30 18:33			06:05 20:41		04:54 21:46
20	08:49 16:19	26	09:42 (1) 10:08 (1)	07:43 17:31		06:28 18:35			06:02 20:43		04:52 21:48
21	08:47 16:21	27	09:42 (1) 10:09 (1)	07:41 17:34		06:25 18:37	15	07:10 (2) 07:25 (2)	05:59 20:45		04:50 21:50
22	08:46 16:23	28	09:42 (1) 10:10 (1)	07:38 17:36		06:22 18:39	22	07:06 (2) 07:28 (2)	05:57 20:48		04:48 21:52
23	08:44 16:26	28	09:42 (1) 10:10 (1)	07:35 17:38		06:19 18:42	27	07:03 (2) 07:30 (2)	05:54 20:50		04:47 21:53
24	08:42 16:28	29	09:42 (1) 10:11 (1)	07:33 17:41		06:16 18:44	30	07:01 (2) 07:31 (2)	05:52 20:52		04:45 21:55
25	08:41 16:30	28	09:43 (1) 10:11 (1)	07:30 17:43		06:14 18:46	33	07:00 (2) 07:33 (2)	05:49 20:54		04:43 21:57
26	08:39 16:32	28	09:43 (1) 10:11 (1)	07:28 17:45		06:11 18:48	34	06:59 (2) 07:33 (2)	05:46 20:57		04:42 21:59
27	08:37 16:35	29	09:43 (1) 10:12 (1)	07:25 17:48	5	07:56 (4) 08:01 (4)	06:08 18:50	06:38 (3) 07:34 (2)	05:44 20:59		04:40 22:01
28	08:35 16:37	28	09:44 (1) 10:12 (1)	07:22 17:50	12	07:52 (4) 08:04 (4)	06:05 18:53	06:34 (3) 07:34 (2)	05:41 21:01		04:39 22:02
29	08:33 16:39	27	09:44 (1) 10:11 (1)			07:02 19:55	58	07:32 (3) 08:34 (2)	05:39 21:03		04:37 22:04
30	08:31 16:42	27	09:44 (1) 10:11 (1)			07:00 19:57	61	07:31 (3) 08:35 (2)	05:36 21:05		04:36 22:06
31	08:29 16:44	26	09:45 (1) 10:11 (1)			06:57 19:59	63	07:30 (3) 08:34 (2)			04:34 22:07
Potential sun hours		227		262		365		429		515	539
Total, worst case		520		127		723		743			
Sun reduction		0.13		0.22		0.37		0.46			
Oper. time red.		0.93		0.93		0.93		0.93			
Wind dir. red.		0.57		0.62		0.96		0.99			
Total reduction		0.06		0.12		0.30		0.39			
Total, real		34		15		220		292			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Shadow receptor: E - Drupas

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:30 (3)	07:25	08:26 (4)
2	22:26	21:42	20:24	08:24 (2)	19:00	08:42 (4)
3	04:27	05:17	06:23	07:27 (3)	07:27	08:24 (4)
4	22:26	21:39	20:21	08:25 (2)	18:57	19:08 (4)
5	04:28	05:19	06:25	07:26 (3)	07:29	08:23 (4)
6	22:25	21:37	20:18	08:26 (2)	18:54	19:34 (4)
7	04:29	05:22	06:27	07:24 (3)	07:31	08:22 (4)
8	22:24	21:35	20:15	08:27 (2)	18:51	19:31 (4)
9	04:30	05:24	06:30	07:23 (3)	07:33	08:21 (4)
10	22:24	21:33	20:13	08:27 (2)	18:49	19:29 (4)
11	04:31	05:26	06:32	07:22 (3)	07:35	08:20 (4)
12	22:23	21:30	20:10	08:27 (2)	18:46	19:27 (4)
13	04:32	05:28	06:34	07:22 (3)	07:38	08:21 (4)
14	22:22	21:28	20:07	08:27 (2)	18:43	19:25 (4)
15	04:34	05:30	06:36	07:21 (3)	07:40	08:20 (4)
16	22:21	21:26	20:04	08:27 (2)	18:40	19:22 (4)
17	04:35	05:32	06:38	07:21 (3)	07:42	08:20 (4)
18	22:20	21:23	20:01	08:27 (2)	18:38	19:20 (4)
19	04:36	05:34	06:40	07:21 (3)	07:44	08:20 (4)
20	22:19	21:21	20:00	08:27 (2)	18:35	19:18 (4)
21	04:38	05:36	06:42	07:21 (3)	07:46	08:21 (4)
22	22:18	21:18	20:00	08:26 (2)	18:32	19:16 (4)
23	04:39	05:38	06:44	07:21 (3)	07:49	08:22 (4)
24	22:17	21:16	20:00	08:26 (2)	18:29	19:14 (4)
25	04:41	05:41	06:47	07:21 (3)	07:51	08:23 (4)
26	22:15	21:14	20:00	08:25 (2)	18:27	19:12 (4)
27	04:42	05:43	06:49	07:22 (3)	07:53	08:26 (4)
28	22:14	21:11	20:00	08:24 (2)	18:24	19:10 (4)
29	04:44	05:45	06:51	07:24 (3)	07:55	08:28 (4)
30	22:13	21:09	20:00	08:23 (2)	18:21	19:08 (4)
31	04:45	05:47	06:53	07:26 (3)	07:57	08:30 (4)
32	22:11	21:06	20:00	08:22 (2)	18:19	19:06 (4)
33	04:47	05:49	06:55	07:47 (2)	08:00	08:10 (4)
34	22:10	21:03	20:00	08:22 (2)	18:16	19:04 (4)
35	04:49	05:51	06:57	07:48 (2)	08:02	08:13 (4)
36	22:08	21:01	20:00	08:20 (2)	18:13	19:02 (4)
37	04:50	05:53	06:59	07:48 (2)	08:04	08:15 (4)
38	22:06	20:58	20:00	08:19 (2)	18:11	19:01 (4)
39	04:52	05:56	07:01	07:50 (2)	08:06	08:17 (4)
40	22:05	20:56	20:00	08:17 (2)	18:08	19:00 (4)
41	04:54	05:58	07:03	07:51 (2)	08:09	08:20 (4)
42	22:03	20:53	20:00	08:14 (2)	18:06	19:00 (4)
43	04:56	06:00	07:06	07:53 (2)	08:11	08:22 (4)
44	22:01	20:51	20:00	08:11 (2)	18:03	19:00 (4)
45	04:58	06:02	07:08	07:57 (2)	08:13	08:24 (4)
46	22:00	20:48	20:00	08:06 (2)	18:00	19:00 (4)
47	05:00	06:04	07:10	08:05 (2)	08:15	08:26 (4)
48	21:58	20:45	20:00	08:04 (2)	18:00	19:00 (4)
49	05:01	06:06	07:12	08:06 (2)	08:17	08:28 (4)
50	21:56	20:43	20:00	08:05 (2)	18:00	19:00 (4)
51	05:03	06:08	07:14	08:07 (2)	08:19	08:30 (4)
52	21:54	20:40	20:00	08:06 (2)	18:00	19:00 (4)
53	05:05	06:10	07:16	08:08 (2)	08:21	08:32 (4)
54	21:52	20:37	20:00	08:07 (2)	18:00	19:00 (4)
55	05:07	06:13	07:18	08:09 (2)	08:23	08:34 (4)
56	21:50	20:34	20:00	08:08 (2)	18:01	19:01 (4)
57	05:09	06:15	07:20	08:10 (2)	08:25	08:36 (4)
58	21:48	20:32	20:00	08:09 (2)	18:00	19:00 (4)
59	05:11	06:17	07:23	08:11 (2)	08:27	08:38 (4)
60	21:46	20:29	20:00	08:10 (2)	18:01	19:01 (4)
61	05:13	06:19	07:26	08:12 (2)	08:29	08:40 (4)
62	21:44	20:26	20:00	08:11 (2)	18:02	19:02 (4)
63	Potential sun hours	538	474	386	321	241
64	Total, worst case		87	1129	286	609
65	Sun reduction		0.55	0.43	0.31	0.15
66	Oper. time red.		0.93	0.93	0.93	0.93
67	Wind dir. red.		0.99	0.99	0.92	0.57
68	Total reduction		0.46	0.37	0.24	0.08
69	Total, real		40	413	70	2

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometņu iela 31
LV-1002 Rīga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: F - Einblūti

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:08	04:26 22:26	05:15 21:41	06:21 20:23	07:24 18:59	07:33 16:38	08:39 15:43
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	04:32 22:10	04:27 22:25	05:17 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:42
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	04:31 22:11	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 16:33	08:42 15:41
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:27 21:14	04:30 22:13	04:29 22:24	05:21 21:35	06:27 20:15	07:31 18:51	07:40 16:31	08:44 15:40
5	09:05 15:51	08:18 16:55	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14	04:30 22:23	05:23 21:32	06:29 20:12	07:33 18:48	07:43 16:29	08:46 15:40
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8	09:02 15:56	08:12 17:03	07:01 18:08	06:34 20:16	05:17 21:22	04:26 22:18	04:34 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 16:22	08:50 15:37
9	09:02 15:58	08:09 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19	04:35 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 16:20	08:52 15:37
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31	08:29 16:44		06:57 19:59		04:34 22:07		05:13 21:43	06:19 20:26		07:31 16:40		09:06 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: G - Ilgupils

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:08	04:26 22:26	05:15 21:41	06:21 20:23	07:24 18:59	07:33 16:38	08:39 15:43
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	04:32 22:10	04:27 22:25	05:17 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:42
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31	08:29 16:44		06:57 19:59		04:34 22:07		05:13 21:43	06:19 20:26		07:31 16:40		09:06 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Riga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: H - Indrani (Nr.2)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:07 15:46	08:27 16:46	07:20 17:52	06:54 20:01	05:34 21:08	04:33 22:09	04:26 22:26	05:15 21:41	06:21 20:24	07:25 19:00	07:34 16:38	08:39 15:44
2	09:06 15:47	08:25 16:49	07:17 17:54	06:51 20:03	05:32 21:10	04:32 22:10	04:27 22:26	05:18 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:43
3	09:06 15:49	08:23 16:51	07:14 17:57	06:48 20:06	05:29 21:12	04:31 22:12	04:28 22:25	05:20 21:37	06:25 20:18	07:29 18:54	07:38 16:34	08:43 15:42
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25	08:41 16:30	07:30 17:43	06:14 18:46	05:49 20:54	04:43 21:57	04:23 22:28	05:02 21:56	06:06 20:42	07:12 19:16	07:18 16:55	08:27 15:51	09:06 15:39
26	08:39 16:32	07:28 17:45	06:11 18:48	05:47 20:56	04:42 21:59	04:23 22:28	05:04 21:54	06:08 20:40	07:14 19:14	07:20 16:53	08:29 15:50	09:07 15:39
27	08:37 16:35	07:25 17:48	06:08 18:50	05:44 20:59	04:40 22:01	04:24 22:28	05:05 21:52	06:11 20:37	07:16 19:11	07:22 16:50	08:31 15:48	09:07 15:40
28	08:35 16:37	07:22 17:50	06:05 18:53	05:41 21:01	04:39 22:02	04:24 22:27	05:07 21:50	06:13 20:34	07:18 19:08	07:25 16:48	08:33 15:47	09:07 15:41
29	08:33 16:39		07:02 19:55	05:39 21:03	04:37 22:04	04:25 22:27	05:09 21:48	06:15 20:32	07:20 19:05	07:27 16:45	08:35 15:46	09:07 15:42
30	08:31 16:42		07:00 19:57	05:36 21:05	04:36 22:06	04:26 22:27	05:11 21:46	06:17 20:29	07:23 19:02	07:29 16:43	08:37 15:45	09:07 15:43
31	08:29 16:44		06:57 19:59		04:35 22:07		05:13 21:44	06:19 20:26		07:31 16:41		09:07 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometņu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: I - Jaunjeceni

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1 09:07	10:11 (3)	08:27	09:00 (6)	07:20	06:54	04:33
15:46	81	12:42 (2)	16:46	28	10:44 (3)	17:52
2 09:06	10:10 (3)	08:25	08:57 (6)	07:17	06:51	04:32
15:47	80	12:42 (2)	16:48	32	10:43 (3)	17:54
3 09:06	10:10 (3)	08:23	08:55 (6)	07:14	06:48	05:29
15:48	80	12:42 (2)	16:51	31	10:41 (3)	17:57
4 09:06	10:10 (3)	08:21	08:53 (6)	07:12	06:46	05:27
15:50	79	12:42 (2)	16:53	30	10:39 (3)	17:59
5 09:05	10:11 (3)	08:19	08:52 (6)	07:09	06:43	05:24
15:51	80	12:43 (2)	16:56	23	10:34 (3)	18:01
6 09:04	10:11 (3)	08:17	08:52 (6)	07:06	06:40	05:22
15:53	79	12:43 (2)	16:58	20	09:12 (6)	18:03
7 09:04	10:11 (3)	08:14	08:51 (6)	07:03	06:37	05:19
15:54	79	12:44 (2)	17:00	21	09:12 (6)	18:06
8 09:03	10:10 (3)	08:12	08:51 (6)	07:01	06:34	05:17
15:56	78	12:43 (2)	17:03	22	09:13 (6)	18:08
9 09:02	10:10 (3)	08:10	08:50 (6)	06:58	06:32	05:15
15:58	75	12:43 (2)	17:05	22	09:12 (6)	18:10
10 09:01	10:10 (3)	08:08	08:51 (6)	06:55	06:29	05:13
15:59	73	12:43 (2)	17:07	22	09:13 (6)	18:13
11 09:00	10:11 (3)	08:05	08:51 (6)	06:53	06:26	05:10
16:01	71	12:44 (2)	17:10	21	09:12 (6)	18:15
12 08:59	10:10 (3)	08:03	08:52 (6)	06:50	07:16 (11)	06:23
16:03	62	12:43 (2)	17:12	21	09:13 (6)	18:17
13 08:58	10:11 (3)	08:00	08:52 (6)	06:47	07:13 (11)	06:21
16:05	61	12:43 (2)	17:15	20	09:12 (6)	18:19
14 08:57	10:10 (3)	07:58	08:52 (6)	06:44	07:10 (11)	06:18
16:07	62	12:43 (2)	17:17	18	09:10 (6)	18:21
15 08:56	10:11 (3)	07:56	08:54 (6)	06:41	07:09 (11)	06:15
16:09	60	12:43 (2)	17:19	16	09:10 (6)	18:24
16 08:55	10:11 (3)	07:53	08:55 (6)	06:39	07:08 (11)	06:13
16:11	58	12:42 (2)	17:22	13	09:08 (6)	18:26
17 08:53	10:10 (3)	07:51	08:59 (6)	06:36	07:07 (11)	06:10
16:13	58	12:41 (2)	17:24	6	09:05 (6)	18:28
18 08:52	10:11 (3)	07:48	06:33	07:06 (11)	06:07	04:56
16:15	56	12:41 (2)	17:26	22	07:28 (11)	20:39
19 08:50	10:11 (3)	07:46	06:30	07:06 (11)	06:05	04:54
16:17	53	12:40 (2)	17:29	21	07:27 (11)	20:41
20 08:49	10:12 (3)	07:43	06:27	07:07 (11)	06:02	04:52
16:19	48	12:38 (2)	17:31	20	07:27 (11)	20:43
21 08:47	10:12 (3)	07:41	06:25	07:07 (11)	05:59	04:50
16:21	42	12:35 (2)	17:33	19	07:26 (11)	20:45
22 08:46	10:12 (3)	07:38	06:22	07:07 (11)	05:57	04:48
16:23	35	10:47 (3)	17:36	18	07:25 (11)	20:48
23 08:44	10:12 (3)	07:35	06:19	07:08 (11)	05:54	04:47
16:25	35	10:47 (3)	17:38	15	07:23 (11)	20:50
24 08:42	10:13 (3)	07:33	06:16	07:10 (11)	05:51	04:45
16:28	34	10:47 (3)	17:40	10	07:20 (11)	20:52
25 08:41	10:13 (3)	07:30	06:13	05:49	04:43	04:22
16:30	34	10:47 (3)	17:43	20:54	21:57	22:28
26 08:39	10:14 (3)	07:28	06:11	05:46	04:42	04:23
16:32	33	10:47 (3)	17:45	20:57	21:59	22:28
27 08:37	10:15 (3)	07:25	06:08	05:44	04:40	04:23
16:34	32	10:47 (3)	17:47	20:59	22:01	22:28
28 08:35	10:16 (3)	07:22	06:05	05:41	04:38	04:24
16:37	31	10:47 (3)	17:50	21:01	22:02	22:27
29 08:33	10:16 (3)	07:20	07:02	05:39	04:37	04:24
16:39	30	10:46 (3)	19:55	21:03	22:04	22:27
30 08:31	10:17 (3)	07:18	06:59	05:36	04:36	04:25
16:41	29	10:46 (3)	19:57	21:05	22:06	22:27
31 08:29	10:18 (3)	07:16	06:57	04:34		
16:44	27	10:45 (3)	19:59	22:07		
Potential sun hours	227	262	365	429	515	539
Total, worst case	1735	366	220			
Sun reduction	0.13	0.22	0.37			
Oper. time red.	0.93	0.93	0.93			
Wind dir. red.	0.29	0.69	0.98			
Total reduction	0.03	0.11	0.27			
Total, real	49	42	59			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: I - Jaunjeceni

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December				
1	04:26	05:15	06:21	07:25	07:54 (11)	07:34	08:20 (6)	08:39	09:53 (3)	
	22:26	21:42	20:24	19:00	9 08:03 (11)	16:38	23 08:43 (6)	15:43	70 12:26 (2)	
2	04:27	05:17	06:23	07:27	07:56 (11)	07:36	08:20 (6)	08:41	09:53 (3)	
	22:26	21:39	20:21	18:57	2 07:58 (11)	16:36	22 08:42 (6)	15:42	75 12:27 (2)	
3	04:28	05:19	06:25	07:29		07:38	08:21 (6)	08:43	09:54 (3)	
	22:25	21:37	20:18	18:54		16:33	21 08:42 (6)	15:41	76 12:27 (2)	
4	04:29	05:21	06:27	07:31		07:41	08:20 (6)	08:44	09:55 (3)	
	22:24	21:35	20:15	18:51		16:31	21 08:41 (6)	15:40	77 12:28 (2)	
5	04:30	05:24	06:30	07:33		07:43	08:21 (6)	08:46	09:56 (3)	
	22:24	21:33	20:13	18:48		16:29	20 08:41 (6)	15:40	79 12:29 (2)	
6	04:31	05:26	06:32	07:35		07:45	08:22 (6)	08:48	09:57 (3)	
	22:23	21:30	20:10	18:46		16:27	25 10:05 (3)	15:39	79 12:29 (2)	
7	04:32	05:28	06:34	07:38		07:48	08:23 (6)	08:49	09:57 (3)	
	22:22	21:28	20:07	18:43		16:24	31 10:09 (3)	15:38	79 12:29 (2)	
8	04:33	05:30	06:36	07:40		07:50	08:26 (6)	08:51	09:58 (3)	
	22:21	21:26	20:04	18:40		16:22	32 10:12 (3)	15:37	79 12:30 (2)	
9	04:35	05:32	06:38	07:42		07:52	08:28 (6)	08:52	09:59 (3)	
	22:20	21:23	20:01	18:37		16:20	31 10:13 (3)	15:37	80 12:31 (2)	
10	04:36	05:34	06:40	07:44		07:55	08:31 (6)	08:54	09:59 (3)	
	22:19	21:21	19:59	18:35		16:18	28 10:15 (3)	15:36	80 12:31 (2)	
11	04:37	05:36	06:42	07:46		07:57	09:49 (3)	08:55	10:01 (3)	
	22:18	21:18	19:56	18:32		16:16	27 10:16 (3)	15:36	81 12:32 (2)	
12	04:39	05:38	06:44	07:49		07:59	09:49 (3)	08:56	10:01 (3)	
	22:17	21:16	19:53	18:29		16:14	28 10:17 (3)	15:36	80 12:32 (2)	
13	04:40	05:40	06:46	07:51		08:01	09:47 (3)	08:58	10:02 (3)	
	22:15	21:14	19:50	18:27		16:12	31 10:18 (3)	15:35	79 12:32 (2)	
14	04:42	05:43	06:49	07:53		08:04	09:48 (3)	08:59	10:03 (3)	
	22:14	21:11	19:47	18:24		16:10	31 10:19 (3)	15:35	80 12:34 (2)	
15	04:44	05:45	06:51	07:55		08:06	09:48 (3)	09:00	10:04 (3)	
	22:13	21:09	19:45	18:21		16:08	32 10:20 (3)	15:35	79 12:34 (2)	
16	04:45	05:47	06:53	07:57		08:08	09:47 (3)	09:01	10:05 (3)	
	22:11	21:06	19:42	18:19		16:06	33 10:20 (3)	15:35	78 12:34 (2)	
17	04:47	05:49	06:55	08:00		08:10	09:47 (3)	09:02	10:05 (3)	
	22:10	21:03	19:39	18:16		16:04	34 10:21 (3)	15:35	78 12:35 (2)	
18	04:49	05:51	06:57	08:02		08:13	09:47 (3)	09:03	10:06 (3)	
	22:08	21:01	19:36	18:13		16:02	34 10:21 (3)	15:35	78 12:36 (2)	
19	04:50	05:53	06:59	08:04	07:58 (11)	08:15	09:47 (3)	09:03	10:06 (3)	
	22:06	20:58	19:33	9 08:07 (11)	18:11	16:01	35 10:22 (3)	15:35	78 12:35 (2)	
20	04:52	05:55	07:01	08:06	07:55 (11)	08:06	08:17	09:47 (3)	09:04	10:07 (3)
	22:05	20:56	19:30	14 08:09 (11)	18:08	15:59	35 10:22 (3)	15:36	77 12:36 (2)	
21	04:54	05:58	07:03	08:09	07:53 (11)	08:09	08:19	09:48 (3)	09:05	10:08 (3)
	22:03	20:53	19:28	17 08:10 (11)	18:05	15:57	43 12:11 (2)	15:36	76 12:37 (2)	
22	04:56	06:00	07:05	08:11	07:52 (11)	08:11	08:21	09:48 (3)	09:05	10:08 (3)
	22:01	20:50	19:25	19 08:11 (11)	18:03	15:56	48 12:14 (2)	15:37	76 12:37 (2)	
23	04:58	06:02	07:08	08:13	07:51 (11)	08:13	08:23	09:48 (3)	09:06	10:09 (3)
	22:00	20:48	19:22	20 08:11 (11)	18:00	15:54	53 12:17 (2)	15:37	77 12:38 (2)	
24	04:59	06:04	07:10	08:15	07:50 (11)	08:15	08:25	09:48 (3)	09:06	10:09 (3)
	21:58	20:45	19:19	21 08:11 (11)	17:58	15:52	56 12:18 (2)	15:38	77 12:38 (2)	
25	05:01	06:06	07:12	08:18	07:49 (11)	07:18	08:27 (6)	09:49 (3)	09:07	10:09 (3)
	21:56	20:43	19:16	21 08:10 (11)	16:55	9 08:36 (6)	15:51	57 12:19 (2)	15:38	78 12:38 (2)
26	05:03	06:08	07:14	08:20	07:49 (11)	07:20	08:25 (6)	08:30	09:50 (3)	10:09 (3)
	21:54	20:40	19:14	21 08:10 (11)	16:53	14 08:39 (6)	15:50	58 12:21 (2)	15:39	79 12:39 (2)
27	05:05	06:10	07:16	08:22	07:50 (11)	07:22	08:23 (6)	08:32	09:50 (3)	10:10 (3)
	21:52	20:37	19:11	20 08:10 (11)	16:50	17 08:40 (6)	15:48	60 12:22 (2)	15:40	78 12:39 (2)
28	05:07	06:12	07:18	08:25	07:50 (11)	07:25	08:22 (6)	08:33	09:50 (3)	10:10 (3)
	21:50	20:34	19:08	19 08:09 (11)	16:48	19 08:41 (6)	15:47	61 12:23 (2)	15:41	78 12:40 (2)
29	05:09	06:15	07:20	08:27	07:50 (11)	07:27	08:21 (6)	08:35	09:51 (3)	10:10 (3)
	21:48	20:32	19:05	18 08:08 (11)	16:45	20 08:41 (6)	15:46	62 12:24 (2)	15:42	78 12:40 (2)
30	05:11	06:17	07:22	08:29	07:52 (11)	07:29	08:21 (6)	08:37	09:52 (3)	10:11 (3)
	21:46	20:29	19:02	14 08:06 (11)	16:43	21 08:42 (6)	15:44	62 12:25 (2)	15:43	79 12:41 (2)
31	05:13	06:19		07:31	07:31	08:20 (6)			09:07	10:10 (3)
	21:44	20:26		16:40	22 08:42 (6)				15:44	80 12:41 (2)
Potential sun hours	538	474	386	321		241		207		
Total, worst case			213	133		1134		2418		
Sun reduction			0.43	0.31		0.15		0.13		
Oper. time red.			0.93	0.93		0.93		0.93		
Wind dir. red.			0.98	0.78		0.41		0.22		
Total reduction			0.31	0.18		0.05		0.02		
Total, real			66	24		54		51		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

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Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: J - Jaunkastanas

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	
1	09:07 15:46	08:27 16:46	09:35 (1) 10:10 (1)	07:20 17:52	06:54 20:01		
2	09:06 15:47	08:25 16:49	09:34 (1) 10:10 (1)	07:17 17:54	06:51 20:04		
3	09:06 15:48	08:23 16:51	09:34 (1) 10:10 (1)	07:14 17:57	06:48 20:06		
4	09:05 15:50	08:21 16:53	09:35 (1) 10:11 (1)	07:12 17:59	06:46 20:08		
5	09:05 15:51	08:19 16:56	09:34 (1) 10:10 (1)	07:09 18:01	06:43 20:10		
6	09:04 15:53	08:17 16:58	09:35 (1) 10:11 (1)	07:06 18:04	06:40 20:12		
7	09:04 15:54	08:14 17:00	09:35 (1) 10:10 (1)	07:04 18:06	06:37 20:15		
8	09:03 15:56	08:12 17:03	09:36 (1) 10:10 (1)	07:01 18:08	06:35 20:17		
9	09:02 15:58	08:10 17:05	09:36 (1) 10:10 (1)	06:58 18:10	06:32 20:19		
10	09:01 15:59	08:08 17:08	09:37 (1) 10:10 (1)	06:55 18:13	06:29 20:21		
11	09:00 16:01	08:05 17:10	09:37 (1) 10:08 (1)	06:53 18:15	06:26 20:23		
12	08:59 16:03	08:03 17:12	09:38 (1) 10:08 (1)	06:50 18:17	06:24 20:26		
13	08:58 16:05	08:00 17:15	09:39 (1) 10:07 (1)	06:47 18:19	06:21 20:28		
14	08:57 16:07	07:58 17:17	09:40 (1) 10:05 (1)	06:44 18:22	06:18 20:30		
15	08:56 16:09	07:56 17:19	09:42 (1) 10:04 (1)	06:41 18:24	06:15 20:32		
16	08:55 16:11	07:53 17:22	09:44 (1) 10:01 (1)	06:39 18:26	06:13 20:34		
17	08:53 16:13	07:51 17:24	09:48 (1) 09:58 (1)	06:36 18:28	06:10 20:37		
18	08:52 16:15	07:48 17:26	06:33 18:30	06:07 20:39	06:07 20:41		
19	08:50 16:17	09:45 (1) 09:53 (1)	07:46 17:29	06:30 18:33	06:05 20:41		
20	08:49 16:19	09:42 (1) 09:56 (1)	07:43 17:31	06:28 18:35	06:02 20:43		
21	08:47 16:21	09:41 (1) 09:58 (1)	07:41 17:34	06:25 18:37	06:00 20:45		
22	08:46 16:23	09:39 (1) 10:00 (1)	07:38 17:36	06:22 18:39	06:00 20:48		
23	08:44 16:26	09:38 (1) 10:01 (1)	07:35 17:38	06:19 18:42	06:00 20:50		
24	08:42 16:28	09:37 (1) 10:03 (1)	07:33 17:41	06:16 18:44	06:00 20:52		
25	08:41 16:30	09:37 (1) 10:04 (1)	07:30 17:43	06:14 18:46	06:00 20:54		
26	08:39 16:32	09:36 (1) 10:05 (1)	07:28 17:45	06:11 18:48	06:00 20:57		
27	08:37 16:35	09:36 (1) 10:06 (1)	07:25 17:47	06:08 18:50	06:00 20:59		
28	08:35 16:37	09:36 (1) 10:07 (1)	07:22 17:50	06:05 18:53	06:00 21:01		
29	08:33 16:39	09:34 (1) 10:07 (1)		07:02 19:55	06:00 21:03		
30	08:31 16:42	09:34 (1) 10:08 (1)		07:00 19:57	06:00 21:05		
31	08:29 16:44	09:34 (1) 10:09 (1)		06:57 19:59			
Potential sun hours	227	262	365	429	515	539	
Total, worst case	328	514	391	567	1384	213	
Sun reduction	0.13	0.22	0.37	0.46	0.58	0.53	
Oper. time red.	0.93	0.93	0.93	0.93	0.93	0.93	
Wind dir. red.	0.61	0.61	0.97	0.98	0.98	0.98	
Total reduction	0.07	0.12	0.31	0.40	0.50	0.46	
Total, real	23	60	122	225	692	98	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: J - Jaunkastanas
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

July		August		September		October		November		December	
1	04:26	07:04 (2)	05:15	06:47 (2)	06:21	07:25		07:34	09:06 (1)	08:39	
2	22:26	07:10 (2)	21:42	07:37 (2)	20:24	19:00	8	16:38	09:39 (1)	15:44	
2	04:27	07:03 (2)	05:17	06:47 (2)	06:23	07:27		07:36	09:05 (1)	08:41	
3	22:26	07:12 (2)	21:39	07:37 (2)	20:21	18:57		16:36	09:39 (1)	15:42	
3	04:28	07:02 (2)	05:19	06:47 (2)	06:25	07:29		07:38	09:05 (1)	08:43	
4	22:25	07:14 (2)	21:37	07:37 (2)	20:18	18:54		16:34	09:40 (1)	15:41	
4	04:29	07:01 (2)	05:22	06:46 (2)	06:27	07:31		07:41	09:04 (1)	08:44	
5	22:24	07:16 (2)	21:35	07:36 (2)	20:15	18:51		16:31	09:40 (1)	15:41	
5	04:30	07:00 (2)	05:24	06:46 (2)	06:30	07:33		07:43	09:05 (1)	08:46	
6	22:24	07:17 (2)	21:33	07:36 (2)	20:13	18:49		16:29	09:41 (1)	15:40	
6	04:31	06:59 (2)	05:26	06:46 (2)	06:32	07:35		07:45	09:04 (1)	08:48	
7	22:23	07:18 (2)	21:30	07:36 (2)	20:10	18:46		16:27	09:40 (1)	15:39	
7	04:32	06:58 (2)	05:28	06:46 (2)	06:34	07:38		07:48	09:04 (1)	08:49	
8	22:22	07:19 (2)	21:28	07:36 (2)	20:07	18:43		16:25	09:41 (1)	15:38	
8	04:34	06:57 (2)	05:30	06:46 (2)	06:36	07:40		07:50	09:05 (1)	08:51	
9	22:21	07:20 (2)	21:26	07:36 (2)	20:04	18:40		16:22	09:41 (1)	15:38	
9	04:35	06:56 (2)	05:32	06:47 (2)	06:38	07:42		07:52	09:05 (1)	08:52	
10	22:20	07:21 (2)	21:23	07:36 (2)	20:01	18:38		16:20	09:40 (1)	15:37	
10	04:36	06:56 (2)	05:34	06:47 (2)	06:40	07:44		07:54	09:05 (1)	08:54	
11	22:19	07:23 (2)	21:21	07:35 (2)	19:59	18:35		16:18	09:41 (1)	15:37	
11	04:38	06:55 (2)	05:36	06:47 (2)	06:42	07:46		07:57	09:05 (1)	08:55	
12	22:18	07:24 (2)	21:18	07:35 (2)	19:56	18:32		16:16	09:40 (1)	15:36	
12	04:39	06:55 (2)	05:38	06:48 (2)	06:44	07:49		07:59	09:06 (1)	08:56	
13	22:16	07:25 (2)	21:16	07:34 (2)	19:53	18:29		16:14	09:40 (1)	15:36	
13	04:41	06:54 (2)	05:41	06:48 (2)	06:46	07:51		08:01	09:06 (1)	08:58	
14	22:15	07:25 (2)	21:14	07:34 (2)	19:50	18:27		16:12	09:39 (1)	15:36	
14	04:42	06:54 (2)	05:43	06:47 (3)	06:49	07:53	11	08:04	09:07 (1)	08:59	
15	22:14	07:27 (2)	21:11	07:33 (2)	19:47	18:24		16:10	09:39 (1)	15:35	
15	04:44	06:53 (2)	05:45	06:47 (3)	06:51	08:02 (4)	17	08:06	09:09 (1)	09:00	
16	22:12	07:27 (2)	21:09	07:32 (2)	19:45	18:21		16:08	09:39 (1)	15:35	
16	04:45	06:53 (2)	05:47	06:46 (3)	06:53	08:00 (4)	20	08:08	09:09 (1)	09:01	
17	22:11	07:29 (2)	21:06	07:31 (2)	19:42	18:19		16:06	09:38 (1)	15:35	
17	04:47	06:52 (2)	05:49	06:46 (3)	06:55	07:59 (4)	23	08:10	09:11 (1)	09:02	
18	22:10	07:29 (2)	21:03	07:30 (2)	19:39	18:16		16:04	09:38 (1)	15:35	
18	04:49	06:52 (2)	05:51	06:45 (3)	06:57	07:57 (4)	25	08:13	09:11 (1)	09:03	
19	22:08	07:30 (2)	21:01	07:28 (2)	19:36	18:13		16:02	09:37 (1)	15:35	
19	04:50	06:51 (2)	05:53	06:45 (3)	06:59	07:56 (4)	27	08:15	09:13 (1)	09:03	
20	22:06	07:31 (2)	20:58	07:27 (2)	19:33	18:11		16:01	09:36 (1)	15:36	
20	04:52	06:51 (2)	05:56	06:45 (3)	07:01	08:06		08:17	09:14 (1)	09:04	
21	22:05	07:32 (2)	20:56	07:25 (2)	19:30	18:08		15:59	09:35 (1)	15:36	
21	04:54	06:51 (2)	05:58	06:45 (3)	07:03	07:55 (4)	18	08:19	09:17 (1)	09:05	
22	22:03	07:33 (2)	20:53	07:22 (2)	19:28	18:06		15:57	09:34 (1)	15:36	
22	04:56	06:49 (2)	06:00	06:45 (3)	07:05	07:54 (4)	26	08:21	09:18 (1)	09:05	
23	22:01	07:33 (2)	20:50	07:20 (2)	19:25	18:03		15:56	09:32 (1)	15:37	
23	04:58	06:49 (2)	06:02	06:45 (3)	07:08	07:54 (4)	28	08:23	09:21 (1)	09:06	
24	21:59	07:34 (2)	20:48	07:16 (2)	19:22	18:00		15:54	09:29 (1)	15:37	
24	05:00	06:49 (2)	06:04	06:45 (3)	07:10	07:53 (4)	30	08:25		09:06	
25	21:58	07:34 (2)	20:45	07:11 (3)	19:19	17:58		15:53		15:38	
25	05:01	06:48 (2)	06:06	06:46 (3)	07:12	07:53 (4)	12	08:27		09:07	
26	21:56	07:34 (2)	20:43	07:10 (3)	19:16	16:55		15:51		15:39	
26	05:03	06:48 (2)	06:08	06:47 (3)	07:14	07:53 (4)	18	08:29		09:07	
27	21:54	07:35 (2)	20:40	07:08 (3)	19:14	16:53		15:50		15:39	
27	05:05	06:48 (2)	06:10	06:48 (3)	07:16	07:55 (4)	23	08:31		09:07	
28	21:52	07:36 (2)	20:37	07:07 (3)	19:11	16:50		15:48		15:40	
28	05:07	06:48 (2)	06:13	06:50 (3)	07:18	07:55 (4)	26	08:33		09:07	
29	21:50	07:36 (2)	20:34	07:04 (3)	19:08	16:48		15:47		15:41	
29	05:09	06:47 (2)	06:15	06:53 (3)	07:20	07:56 (4)	28	08:35		09:07	
30	21:48	07:36 (2)	20:32	07:01 (3)	19:05	16:45		15:46		15:42	
30	05:11	06:47 (2)	06:17		07:23	07:58 (4)	30	08:37		09:07	
31	21:46	07:36 (2)	20:29		19:02	16:43		15:45		15:43	
31	05:13	06:47 (2)	06:19			07:31		09:06 (1)		09:07	
Potential sun hours	538	07:37 (2)	20:26		386	16:41	32	09:38 (1)		15:44	
Total, worst case	1036		474	1157	396	321		241	683	207	
Sun reduction	0.57			0.55	0.43				0.15		
Oper. time red.	0.93			0.93	0.93				0.93		
Wind dir. red.	0.98			0.98	0.97				0.61		
Total reduction	0.49			0.47	0.37				0.08		
Total, real	505			544	145	30		56			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: K - Jauntošeni

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06	08:27	15:05 (9)	07:19	06:54	19:24 (11)
	15:45	16:46	15:33 (9)	17:52	20:01	19:32 (11)
2	09:06	08:25	15:06 (9)	07:17	06:51	19:22 (11)
	15:47	16:48	15:33 (9)	17:54	20:03	19:34 (11)
3	09:06	08:23	15:07 (9)	07:14	06:48	19:21 (11)
	15:48	16:51	15:32 (9)	17:56	20:05	19:36 (11)
4	09:05	08:21	15:07 (9)	07:11	06:45	19:20 (11)
	15:49	16:53	15:31 (9)	17:59	20:08	19:38 (11)
5	09:05	08:18	15:09 (9)	07:09	06:42	19:20 (11)
	15:51	16:55	15:31 (9)	18:01	20:10	19:40 (11)
6	09:04	08:16	15:10 (9)	07:06	06:40	19:19 (11)
	15:52	16:58	15:29 (9)	18:03	20:12	19:39 (11)
7	09:03	08:14	15:12 (9)	07:03	06:37	19:13 (11)
	15:54	17:00	15:28 (9)	18:05	20:14	19:39 (11)
8	09:03	08:12	15:14 (9)	07:00	06:34	19:05 (13)
	15:56	17:02	15:25 (9)	18:08	20:16	19:38 (11)
9	09:02	08:10		06:58	06:31	19:02 (13)
	15:57	17:05		18:10	20:19	19:37 (11)
10	09:01	08:07		06:55	06:29	18:59 (13)
	15:59	17:07		18:12	20:21	19:36 (11)
11	09:00	08:05		06:52	06:26	18:57 (13)
	16:01	17:10		18:14	20:23	19:34 (11)
12	08:59	15:10 (9)	08:03	06:49	06:23	18:55 (13)
	16:03	15:16 (9)	17:12	18:17	20:25	19:32 (11)
13	08:58	15:09 (9)	08:00	06:47	06:20	18:53 (13)
	16:04	15:19 (9)	17:14	18:19	20:27	19:33 (13)
14	08:57	15:07 (9)	07:58	06:44	06:18	18:52 (13)
	16:06	15:21 (9)	17:17	18:21	20:30	19:33 (13)
15	08:55	15:06 (9)	07:55	06:41	06:15	18:51 (13)
	16:08	15:22 (9)	17:19	18:23	20:32	19:35 (13)
16	08:54	15:06 (9)	07:53	06:38	06:12	18:49 (13)
	16:10	15:24 (9)	17:21	18:26	20:34	19:35 (13)
17	08:53	15:05 (9)	07:50	06:36	06:10	18:49 (13)
	16:12	15:25 (9)	17:24	18:28	20:36	19:36 (13)
18	08:51	15:04 (9)	07:48	06:33	06:07	18:48 (13)
	16:14	15:26 (9)	17:26	18:30	20:38	19:36 (13)
19	08:50	15:04 (9)	07:45	06:30	06:04	18:48 (13)
	16:17	15:28 (9)	17:28	18:32	20:41	19:37 (13)
20	08:49	15:04 (9)	07:43	06:27	06:02	18:46 (13)
	16:19	15:29 (9)	17:31	18:35	20:43	19:36 (13)
21	08:47	15:04 (9)	07:40	06:24	05:59	18:45 (13)
	16:21	15:30 (9)	17:33	18:37	20:45	19:36 (13)
22	08:45	15:03 (9)	07:38	06:22	05:56	18:45 (13)
	16:23	15:30 (9)	17:36	18:39	20:47	19:37 (13)
23	08:44	15:03 (9)	07:35	06:19	05:54	18:46 (13)
	16:25	15:31 (9)	17:38	18:41	20:50	19:37 (13)
24	08:42	15:03 (9)	07:33	06:16	05:51	18:45 (13)
	16:27	15:32 (9)	17:40	18:43	20:52	19:36 (13)
25	08:40	15:03 (9)	07:30	06:13	05:49	18:45 (13)
	16:30	15:32 (9)	17:42	18:46	20:54	19:37 (13)
26	08:39	15:03 (9)	07:27	06:10	05:46	18:44 (13)
	16:32	15:33 (9)	17:45	18:48	20:56	19:36 (13)
27	08:37	15:04 (9)	07:25	06:08	05:44	18:45 (13)
	16:34	15:33 (9)	17:47	18:50	20:58	19:36 (13)
28	08:35	15:03 (9)	07:22	06:05	05:41	18:44 (13)
	16:37	15:33 (9)	17:49	18:52	21:01	19:35 (13)
29	08:33	15:04 (9)		07:02	05:39	18:45 (13)
	16:39	15:33 (9)		19:54	21:03	19:35 (13)
30	08:31	15:04 (9)		06:59	05:36	18:45 (13)
	16:41	15:33 (9)		19:57	21:05	19:35 (13)
31	08:29	15:05 (9)		06:56	19:26 (11)	04:34
	16:43	15:33 (9)		19:59	19:29 (11)	22:07
Potential sun hours	227	262	365	429	515	539
Total, worst case	469	172	310	1172	564	
Sun reduction	0.13	0.22	0.37	0.46	0.58	
Oper. time red.	0.93	0.93	0.93	0.93	0.93	
Wind dir. red.	0.66	0.66	0.99	0.99	0.99	
Total reduction	0.08	0.13	0.32	0.40	0.51	
Total, real	36	22	100	472	286	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: K - Jauntošeni

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July		August		September		October		November		December	
1	04:26		05:15	19:04 (13)	06:21	18:57 (13)	07:24	07:33				08:39
	22:26		21:41	31 19:35 (13)	20:23	37 19:34 (11)	18:59	16:38				15:43
2	04:27		05:17	19:03 (13)	06:23	18:58 (13)	07:26	07:36				08:41
	22:25		21:39	33 19:36 (13)	20:20	37 19:35 (11)	18:56	16:35				15:42
3	04:28		05:19	19:02 (13)	06:25	19:00 (13)	07:29	07:38		14:43 (9)		08:42
	22:25		21:37	35 19:37 (13)	20:18	35 19:35 (11)	18:54	16:33	12	14:55 (9)		15:41
4	04:29		05:21	19:01 (13)	06:27	19:03 (13)	07:31	07:40		14:41 (9)		08:44
	22:24		21:35	37 19:38 (13)	20:15	33 19:36 (11)	18:51	16:31	17	14:58 (9)		15:40
5	04:30		05:23	19:00 (13)	06:29	19:09 (13)	07:33	07:43		14:40 (9)		08:46
	22:23		21:32	39 19:39 (13)	20:12	26 19:36 (11)	18:48	16:29	20	15:00 (9)		15:39
6	04:31		05:25	18:59 (13)	06:31	19:15 (11)	07:35	07:45		14:38 (9)		08:47
	22:23		21:30	41 19:40 (13)	20:09	20 19:35 (11)	18:45	16:26	23	15:01 (9)		15:39
7	04:32		05:27	18:58 (13)	06:33	19:15 (11)	07:37	07:47		14:38 (9)		08:49
	22:22		21:28	43 19:41 (13)	20:07	20 19:35 (11)	18:43	16:24	24	15:02 (9)		15:38
8	04:33		05:30	18:57 (13)	06:36	19:15 (11)	07:39	07:50		14:37 (9)		08:51
	22:21		21:25	44 19:41 (13)	20:04	18 19:33 (11)	18:40	16:22	25	15:02 (9)		15:37
9	04:34		05:32	18:56 (13)	06:38	19:15 (11)	07:42	07:52		14:36 (9)		08:52
	22:20		21:23	46 19:42 (13)	20:01	15 19:30 (11)	18:37	16:20	27	15:03 (9)		15:37
10	04:36		05:34	18:55 (13)	06:40	19:15 (11)	07:44	07:54		14:36 (9)		08:53
	22:19		21:21	47 19:42 (13)	19:58	12 19:27 (11)	18:34	16:18	27	15:03 (9)		15:36
11	04:37		05:36	18:55 (13)	06:42	19:16 (11)	07:46	07:56		14:36 (9)		08:55
	22:17		21:18	48 19:43 (13)	19:55	9 19:25 (11)	18:32	16:16	28	15:04 (9)		15:36
12	04:39		05:38	18:54 (13)	06:44	19:18 (11)	07:48	07:59		14:36 (9)		08:56
	22:16		21:16	49 19:43 (13)	19:53	4 19:22 (11)	18:29	16:14	29	15:05 (9)		15:35
13	04:40		05:40	18:54 (13)	06:46	18:36 (12)	07:50	08:01		14:35 (9)		08:57
	22:15		21:13	49 19:43 (13)	19:50	4 18:40 (12)	18:26	16:12	30	15:05 (9)		15:35
14	04:42		05:42	18:52 (13)	06:48	18:31 (12)	07:53	08:03		14:36 (9)		08:58
	22:14		21:11	50 19:42 (13)	19:47	13 18:44 (12)	18:24	16:10	29	15:05 (9)		15:35
15	04:43		05:44	18:52 (13)	06:50	18:29 (12)	07:55	08:06		14:36 (9)		08:59
	22:12		21:08	50 19:42 (13)	19:44	16 18:45 (12)	18:21	16:08	29	15:05 (9)		15:35
16	04:45		05:47	18:51 (13)	06:52	18:27 (12)	07:57	08:08		14:36 (9)		09:00
	22:11		21:06	51 19:42 (13)	19:41	19 18:46 (12)	18:18	16:06	30	15:06 (9)		15:35
17	04:47		05:49	18:51 (13)	06:55	18:25 (12)	07:59	08:10		14:36 (9)		09:01
	22:09		21:03	51 19:42 (13)	19:39	22 18:47 (12)	18:16	16:04	29	15:05 (9)		15:35
18	04:48		05:51	18:51 (13)	06:57	18:24 (12)	08:02	08:12		14:37 (9)		09:02
	22:08		21:01	51 19:42 (13)	19:36	23 18:47 (12)	18:13	16:02	29	15:06 (9)		15:35
19	04:50		05:53	18:50 (13)	06:59	18:23 (12)	08:04	08:14		14:37 (9)		09:03
	22:06		20:58	52 19:42 (13)	19:33	24 18:47 (12)	18:10	16:00	28	15:05 (9)		15:35
20	04:52		05:55	18:50 (13)	07:01	18:22 (12)	08:06	08:17		14:38 (9)		09:04
	22:04		20:55	52 19:42 (13)	19:30	25 18:47 (12)	18:08	15:59	27	15:05 (9)		15:35
21	04:54		05:57	18:50 (13)	07:03	18:23 (12)	08:08	08:19		14:39 (9)		09:04
	22:03		20:53	51 19:41 (13)	19:27	25 18:48 (12)	18:05	15:57	26	15:05 (9)		15:36
22	04:55		05:59	18:50 (13)	07:05	18:22 (12)	08:11	08:21		14:40 (9)		09:05
	22:01		20:50	51 19:41 (13)	19:25	25 18:47 (12)	18:03	15:55	25	15:05 (9)		15:36
23	04:57		06:02	18:50 (13)	07:07	18:22 (12)	08:13	08:23		14:40 (9)		09:05
	21:59		20:48	50 19:40 (13)	19:22	24 18:46 (12)	18:00	15:54	24	15:04 (9)		15:37
24	04:59		06:04	18:50 (13)	07:09	18:22 (12)	08:15	08:25		14:42 (9)		09:06
	21:57		20:45	49 19:39 (13)	19:19	23 18:45 (12)	17:57	15:52	22	15:04 (9)		15:37
25	05:01		06:06	18:51 (13)	07:11	18:22 (12)	07:17	08:27		14:43 (9)		09:06
	21:55		20:42	47 19:38 (13)	19:16	22 18:44 (12)	16:55	15:51	20	15:03 (9)		15:38
26	05:03		06:08	18:51 (13)	07:14	18:23 (12)	07:20	08:29		14:44 (9)		09:06
	21:54		20:40	47 19:38 (13)	19:13	19 18:42 (12)	16:52	15:49	18	15:02 (9)		15:39
27	05:05		06:10	18:51 (13)	07:16	18:24 (12)	07:22	08:31		14:46 (9)		09:07
	21:52	2	19:21 (13)	20:37	45	19:36 (13)	19:10	15:48	16	15:02 (9)		15:40
28	05:07		06:12	18:52 (13)	07:18	18:26 (12)	07:24	08:33		14:47 (9)		09:07
	21:50	14	19:27 (13)	20:34	43	19:35 (13)	19:08	15:47	14	15:01 (9)		15:41
29	05:09		06:14	18:53 (13)	07:20		07:27	08:35		14:49 (9)		09:07
	21:48	19	19:30 (13)	20:31	41	19:34 (13)	19:05	16:45	11	15:00 (9)		15:42
30	05:11		06:16	18:53 (13)	07:22		07:29	08:37		14:51 (9)		09:07
	21:45	24	19:32 (13)	20:29	39	19:32 (13)	19:02	16:43	15:44	7	14:58 (9)	15:43
31	05:13		06:19	18:54 (13)			07:31					09:07
	21:43	27	19:34 (13)	20:26	37	19:31 (11)	16:40					15:44
Potential sun hours	538		474			386		321		241		207
Total, worst case	86		1399			575				646		
Sun reduction	0.57		0.55			0.43				0.15		
Oper. time red.	0.93		0.93			0.93				0.93		
Wind dir. red.	0.99		0.99			0.99				0.66		
Total reduction	0.49		0.48			0.38				0.09		
Total, real	43		668			216				58		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: L - Jaunupites

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:07 15:46	08:27 16:46	07:20 17:52	06:54 20:01	05:34 21:08	04:33 22:09	05:10 (4) 22:26	05:07 (4) 21:41	06:21 20:24	07:25 19:00	07:34 16:38	08:39 15:44
2	09:06 15:47	08:25 16:49	07:17 17:54	06:51 20:04	05:32 21:10	04:32 22:10	05:09 (4) 22:26	05:07 (4) 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:43
3	09:06 15:48	08:23 16:51	07:14 17:57	06:48 20:06	05:29 21:12	04:31 22:12	05:08 (4) 22:25	05:08 (4) 21:37	06:25 20:18	07:29 18:54	07:38 16:34	08:43 15:42
4	09:05 15:50	08:21 16:53	07:12 17:59	06:46 20:08	05:27 21:14	04:30 22:13	05:07 (4) 22:24	05:09 (4) 21:35	06:28 20:15	07:31 18:51	07:41 16:31	08:44 15:41
5	09:05 15:51	08:19 16:56	07:09 18:01	06:43 20:10	05:24 21:16	04:29 22:14	05:06 (4) 22:24	05:10 (4) 21:33	06:30 20:13	07:33 18:49	07:43 16:29	08:46 15:40
6	09:04 15:53	08:17 16:58	07:06 18:04	06:40 20:12	05:22 21:18	04:28 22:16	05:05 (4) 22:23	05:11 (4) 21:30	06:32 20:10	07:35 18:46	07:45 16:27	08:48 15:39
7	09:04 15:54	08:14 17:00	07:04 18:06	06:37 20:15	05:20 21:21	04:27 22:17	05:05 (4) 22:22	05:12 (4) 21:28	06:34 20:07	07:38 18:43	07:48 16:25	08:49 15:38
8	09:03 15:56	08:12 17:03	07:01 18:08	06:35 20:17	05:17 21:23	04:26 22:18	05:04 (4) 22:21	05:13 (4) 21:26	06:36 20:04	07:40 18:40	07:50 16:22	08:51 15:38
9	09:02 15:58	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19	05:03 (4) 22:20	05:14 (4) 21:23	06:38 20:01	07:42 18:38	07:52 16:20	08:52 15:37
10	09:01 16:00	08:07 17:08	06:55 18:13	06:29 20:21	05:13 21:27	04:24 22:20	05:03 (4) 22:19	05:16 (4) 21:21	06:40 19:59	07:44 18:35	07:54 16:18	08:54 15:37
11	09:00 16:01	08:05 17:10	06:53 18:15	06:26 20:23	05:11 21:29	04:24 22:21	05:03 (4) 22:18	05:17 (4) 21:18	06:42 19:56	07:46 18:32	07:57 16:16	08:55 15:36
12	08:59 16:03	08:03 17:12	06:50 18:17	06:24 20:26	05:08 21:31	04:23 22:22	05:03 (4) 22:16	05:18 (4) 21:16	06:44 19:53	07:49 18:29	07:59 16:14	08:56 15:36
13	08:58 16:05	08:00 17:15	06:47 18:19	06:21 20:28	05:06 21:33	04:23 22:23	05:04 (4) 22:15	05:20 (4) 21:13	06:47 19:50	07:51 18:27	08:01 16:12	08:57 15:36
14	08:57 16:07	07:58 17:17	06:44 18:22	06:18 20:30	05:04 21:36	04:22 22:24	05:03 (4) 22:14	05:21 (4) 21:11	06:49 19:47	07:53 18:24	08:04 16:10	08:59 15:35
15	08:56 16:09	07:56 17:19	06:41 18:24	06:15 20:32	05:02 21:38	04:22 22:25	05:03 (4) 22:12	05:45 21:08	06:51 19:45	07:55 18:21	08:06 16:08	09:00 15:35
16	08:54 16:11	07:53 17:22	06:39 18:26	06:13 20:34	05:00 21:40	04:22 22:25	05:04 (4) 22:11	05:47 21:06	06:53 19:42	07:57 18:19	08:08 16:06	09:01 15:35
17	08:53 16:13	07:51 17:24	06:36 18:28	06:10 20:37	04:58 21:42	04:21 22:26	05:04 (4) 22:09	05:49 21:03	06:55 19:39	08:00 18:16	08:10 16:04	09:02 15:35
18	08:52 16:15	07:48 17:27	06:33 18:30	06:07 20:39	04:56 21:44	04:21 22:26	05:04 (4) 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 16:03	09:02 15:36
19	08:50 16:17	07:46 17:29	06:30 18:33	06:05 20:41	04:54 21:46	04:21 22:27	05:04 (4) 22:06	05:53 20:58	06:59 19:33	08:04 18:11	08:15 16:01	09:03 15:36
20	08:49 16:19	07:43 17:31	06:28 18:35	06:02 20:43	04:52 21:48	04:21 22:27	05:04 (4) 22:05	05:56 20:56	07:01 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	08:47 16:21	07:41 17:34	06:25 18:37	06:00 20:45	04:50 21:50	04:21 22:27	05:04 (4) 22:03	05:58 20:53	07:03 19:28	08:09 18:06	08:19 15:57	09:05 15:36
22	08:46 16:24	07:38 17:36	06:22 18:39	05:57 20:48	04:49 21:51	04:22 22:28	05:05 (4) 22:01	06:00 20:50	07:06 19:25	08:11 18:03	08:21 15:56	09:05 15:37
23	08:44 16:26	07:35 17:38	06:19 18:42	05:54 20:50	04:47 21:53	04:22 22:28	05:05 (4) 21:59	06:02 20:48	07:08 19:22	08:13 18:00	08:23 15:54	09:06 15:37
24	08:42 16:28	07:33 17:41	06:16 18:44	05:52 20:52	04:45 21:55	04:22 22:28	05:05 (4) 21:58	06:04 20:45	07:10 19:19	08:15 17:58	08:25 15:53	09:06 15:38
25	08:41 16:30	07:30 17:43	06:14 18:46	05:49 20:54	04:43 21:57	04:22 22:28	05:06 (4) 21:56	06:06 20:42	07:12 19:16	08:17 18:05	08:27 15:51	09:06 15:39
26	08:39 16:32	07:28 17:45	06:11 18:48	05:47 20:56	04:42 21:59	04:23 22:28	05:06 (4) 21:54	06:08 20:40	07:14 19:14	08:20 18:03	08:29 15:50	09:07 15:39
27	08:37 16:35	07:25 17:48	06:08 18:50	05:44 20:59	04:40 22:01	04:23 22:28	05:06 (4) 21:52	06:11 20:37	07:16 19:11	08:22 18:00	08:31 15:48	09:07 15:40
28	08:35 16:37	07:22 17:50	06:05 18:53	05:41 21:01	04:39 22:02	04:24 22:27	05:06 (4) 21:50	06:13 20:34	07:18 19:08	08:25 18:08	08:33 16:48	09:07 15:41
29	08:33 16:39		07:02 19:55	05:39 21:03	04:37 22:04	04:25 22:27	05:07 (4) 21:48	06:15 20:32	07:20 19:05	08:27 18:05	08:35 16:45	09:07 15:42
30	08:31 16:42		07:00 19:57	05:36 21:05	04:36 22:06	04:26 22:27	05:07 (4) 21:46	06:17 20:29	07:23 19:02	08:29 18:02	08:37 16:43	09:07 15:43
31	08:29 16:44		06:57 19:59		04:35 22:07	05:11 (4) 05:14 (4)	05:13 21:44	06:19 20:26		07:31 16:41	15:45	09:07 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Total, worst case					3	1167						
Sun reduction					0.58	0.53						
Oper. time red.					0.93	0.93						
Wind dir. red.					0.80	0.82						
Total reduction					0.43	0.40						
Total, real					1	471						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometņu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: M - Kalnmalas

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January			February			March			April			May			June		
1	09:07		10:23 (1)	08:27			07:20		08:17 (2)	06:54		05:34			04:33			
	15:46	27	10:50 (1)	16:46			17:52	38	08:55 (2)	20:01		21:08			22:09			
2	09:06		10:24 (1)	08:25			07:17		08:16 (2)	06:51		05:31			04:32			
	15:47	27	10:51 (1)	16:49			17:54	40	08:56 (2)	20:04		21:10			22:10			
3	09:06		10:24 (1)	08:23			07:14		08:14 (2)	06:48		05:29			04:31			
	15:48	27	10:51 (1)	16:51			17:57	42	08:56 (2)	20:06		21:12			22:12			
4	09:06		10:24 (1)	08:21			07:12		08:14 (2)	06:46		05:27			04:30			
	15:50	27	10:51 (1)	16:53			17:59	44	08:58 (2)	20:08		21:14			22:13			
5	09:05		10:26 (1)	08:19			07:09		08:13 (2)	06:43		05:24			04:28			
	15:51	26	10:52 (1)	16:56			18:01	45	08:58 (2)	20:10		21:16			22:15			
6	09:04		10:26 (1)	08:17			07:06		08:12 (2)	06:40		05:22			04:28			
	15:53	27	10:53 (1)	16:58			18:04	46	08:58 (2)	20:12		21:19			22:16			
7	09:04		10:27 (1)	08:14			07:04		08:12 (2)	06:37		05:20			04:27			
	15:54	26	10:53 (1)	17:00			18:06	46	08:58 (2)	20:15		21:21			22:17			
8	09:03		10:26 (1)	08:12			07:01		08:11 (2)	06:35		05:17			04:26			
	15:56	26	10:52 (1)	17:03			18:08	46	08:57 (2)	20:17		21:23			22:18			
9	09:02		10:27 (1)	08:10			06:58		08:12 (2)	06:32		05:15			04:25			
	15:58	26	10:53 (1)	17:05			18:10	46	08:58 (2)	20:19		21:25			22:19			
10	09:01		10:28 (1)	08:08			06:55		08:11 (2)	06:29		05:13			04:24			
	15:59	25	10:53 (1)	17:08			18:13	46	08:57 (2)	20:21		21:27			22:21			
11	09:00		10:29 (1)	08:05		08:38 (4)	06:53		08:11 (2)	06:26		05:11			04:24			
	16:01	25	10:54 (1)	17:10	9	08:47 (4)	18:15	46	08:57 (2)	20:23		21:29			22:21			
12	08:59		10:29 (1)	08:03		08:36 (4)	06:50		07:23 (3)	06:24		05:08			04:23			
	16:03	24	10:53 (1)	17:12	14	08:50 (4)	18:17	55	08:56 (2)	20:26		21:31			22:22			
13	08:58		10:30 (1)	08:00		08:34 (4)	06:47		07:20 (3)	06:21		05:06			04:23			
	16:05	24	10:54 (1)	17:15	17	08:51 (4)	18:19	60	08:55 (2)	20:28		21:34			22:23			
14	08:57		10:30 (1)	07:58		08:32 (4)	06:44		07:18 (3)	06:18		05:04			04:22			
	16:07	23	10:53 (1)	17:17	20	08:52 (4)	18:22	63	08:55 (2)	20:30		21:36			22:24			
15	08:56		10:32 (1)	07:56		08:32 (4)	06:41		07:16 (3)	06:15		05:02			04:22			
	16:09	22	10:54 (1)	17:19	22	08:54 (4)	18:24	65	08:54 (2)	20:32		21:38			22:25			
16	08:55		10:32 (1)	07:53		08:31 (4)	06:39		07:15 (3)	06:13		05:00			04:21			
	16:11	21	10:53 (1)	17:22	23	08:54 (4)	18:26	66	08:53 (2)	20:34		21:40			22:25			
17	08:53		10:33 (1)	07:51		08:31 (4)	06:36		07:14 (3)	06:10		04:58			04:21			
	16:13	19	10:52 (1)	17:24	24	08:55 (4)	18:28	65	08:51 (2)	20:37		21:42			22:26			
18	08:52		10:35 (1)	07:48		08:30 (4)	06:33		07:12 (3)	06:07		04:56			04:21			
	16:15	17	10:52 (1)	17:26	25	08:55 (4)	18:30	65	08:50 (2)	20:39		21:44			22:27			
19	08:50		10:36 (1)	07:46		08:29 (4)	06:30		07:12 (3)	06:05		04:54			04:21			
	16:17	15	10:51 (1)	17:29	26	08:55 (4)	18:33	62	08:48 (2)	20:41		21:46			22:27			
20	08:49		10:38 (1)	07:43		08:30 (4)	06:28		07:12 (3)	06:02		04:52			04:21			
	16:19	12	10:50 (1)	17:31	26	08:56 (4)	18:35	59	08:46 (2)	20:43		21:48			22:27			
21	08:47		10:41 (1)	07:41		08:30 (4)	06:25		07:11 (3)	05:59		04:50			04:21			
	16:21	6	10:47 (1)	17:34	25	08:55 (4)	18:37	57	08:44 (2)	20:45		21:50			22:28			
22	08:46			07:38		08:30 (4)	06:22		07:11 (3)	05:57		04:48			04:21			
	16:23			17:36	24	08:54 (4)	18:39	51	08:41 (2)	20:48		21:52			22:28			
23	08:44			07:35		08:29 (2)	06:19		07:11 (3)	05:54		04:47			04:22			
	16:26			17:38	24	08:53 (4)	18:42	42	08:36 (2)	20:50		21:53			22:28			
24	08:42			07:33		08:26 (2)	06:16		07:11 (3)	05:52		04:45			04:22			
	16:28			17:41	27	08:53 (4)	18:44	27	07:38 (3)	20:52		21:55			22:28			
25	08:41			07:30		08:24 (2)	06:14		07:11 (3)	05:49		04:43			04:22			
	16:30			17:43	28	08:52 (4)	18:46	26	07:37 (3)	20:54		21:57			22:28			
26	08:39			07:28		08:21 (2)	06:11		07:13 (3)	05:46		04:42			04:23			
	16:32			17:45	31	08:52 (2)	18:48	23	07:36 (3)	20:57		21:59			22:28			
27	08:37			07:25		08:20 (2)	06:08		07:13 (3)	05:44		04:40			04:23			
	16:35			17:47	34	08:54 (2)	18:50	21	07:34 (3)	20:59		22:01			04:24			
28	08:35			07:22		08:18 (2)	06:05		07:15 (3)	05:41		04:39			04:25			
	16:37			17:50	37	08:55 (2)	18:53	17	07:32 (3)	21:01		22:02			22:27			
29	08:33						07:02		08:17 (3)	05:39		04:37			04:25			
	16:39						19:55	12	08:29 (3)	21:03		22:04			22:27			
30	08:31						07:00			05:36		04:36			04:25			
	16:42						19:57			21:05		22:06			22:27			
31	08:29						06:57					04:34						
	16:44						19:59					22:07						
Potential sun hours	227			262			365			429		515			539			
Total, worst case		472			436		1321											
Sun reduction		0.13			0.22		0.37											
Oper. time red.		0.93			0.93		0.93											
Wind dir. red.		0.39			0.83		0.90											
Total reduction		0.04			0.15		0.27											
Total, real		20			67		363											

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: M - Kalnmalas

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:25	08:01 (3)	07:34
	22:26	21:42	20:24	19:00	58 09:35 (2)	16:38
2	04:27	05:17	06:23	07:27	08:06 (3)	07:36
	22:26	21:39	20:21	18:57	48 09:35 (2)	16:36
3	04:28	05:19	06:25	07:29	08:49 (2)	07:38
	22:25	21:37	20:18	18:54	47 09:36 (2)	16:34
4	04:29	05:22	06:27	07:31	08:49 (2)	07:41
	22:24	21:35	20:15	18:51	46 09:35 (2)	16:31
5	04:30	05:24	06:30	07:33	08:48 (2)	07:43
	22:24	21:33	20:13	18:49	47 09:35 (2)	16:29
6	04:31	05:26	06:32	07:35	08:48 (2)	07:45
	22:23	21:30	20:10	18:46	46 09:34 (2)	16:27
7	04:32	05:28	06:34	07:38	08:49 (2)	07:48
	22:22	21:28	20:07	18:43	45 09:34 (2)	16:24
8	04:34	05:30	06:36	07:40	08:48 (2)	07:50
	22:21	21:26	20:04	18:40	45 09:33 (2)	16:22
9	04:35	05:32	06:38	07:42	08:48 (2)	07:52
	22:20	21:23	20:01	18:38	44 09:32 (2)	16:20
10	04:36	05:34	06:40	07:44	08:48 (2)	07:55
	22:19	21:21	19:59	18:35	43 09:31 (2)	16:18
11	04:38	05:36	06:42	07:46	08:50 (2)	07:57
	22:18	21:18	19:56	18:32	41 09:31 (2)	16:16
12	04:39	05:38	06:44	07:49	08:50 (2)	07:59
	22:17	21:16	19:53	18:29	39 09:29 (2)	16:14
13	04:41	05:41	06:46	07:51	08:50 (2)	08:01
	22:15	21:14	19:50	18:27	38 09:28 (2)	16:12
14	04:42	05:43	06:49	08:08 (3)	07:53	08:04
	22:14	21:11	19:47	18:24	35 09:27 (2)	16:10
15	04:44	05:45	06:51	08:04 (3)	07:55	08:06
	22:13	21:09	19:45	18:21	32 09:25 (2)	16:08
16	04:45	05:47	06:53	08:02 (3)	07:57	08:08
	22:11	21:06	19:42	18:19	29 09:23 (2)	16:06
17	04:47	05:49	06:55	08:01 (3)	08:00	08:10
	22:10	21:03	19:39	18:16	28 09:24 (4)	16:04
18	04:49	05:51	06:57	08:00 (3)	08:02	08:13
	22:08	21:01	19:36	18:13	26 09:25 (4)	16:02
19	04:50	05:53	06:59	07:59 (3)	08:04	08:15
	22:06	20:58	19:33	18:11	24 09:25 (4)	16:01
20	04:52	05:55	07:01	07:58 (3)	08:06	08:17
	22:05	20:56	19:30	18:08	25 09:26 (4)	15:59
21	04:54	05:58	07:03	07:57 (3)	08:09	08:19
	22:03	20:53	19:28	18:06	25 09:25 (4)	15:57
22	04:56	06:00	07:05	07:56 (3)	08:11	08:21
	22:01	20:51	19:25	18:03	26 09:26 (4)	15:56
23	04:58	06:02	07:08	07:56 (3)	08:13	08:23
	22:00	20:48	19:22	18:00	25 09:25 (4)	15:54
24	05:00	06:04	07:10	07:55 (3)	08:15	08:25
	21:58	20:45	19:19	17:58	25 09:25 (4)	15:53
25	05:01	06:06	07:12	07:55 (3)	07:18	08:27
	21:56	20:43	19:16	17:55	24 08:24 (4)	15:51
26	05:03	06:08	07:14	07:55 (3)	07:20	08:30
	21:54	20:40	19:14	17:53	23 08:24 (4)	15:50
27	05:05	06:10	07:16	07:56 (3)	07:22	08:32
	21:52	20:37	19:11	17:50	22 08:23 (4)	15:48
28	05:07	06:13	07:18	07:57 (3)	07:25	08:33
	21:50	20:34	19:08	17:48	19 08:22 (4)	15:47
29	05:09	06:15	07:20	07:58 (3)	07:27	08:35
	21:48	20:32	19:05	17:45	17 08:20 (4)	15:46
30	05:11	06:17	07:23	07:59 (3)	07:29	08:37
	21:46	20:29	19:02	17:43	13 08:19 (4)	15:45
31	05:13	06:19		07:31	08:08 (4)	
	21:44	20:26		16:41	7 08:15 (4)	
Potential sun hours	538	474	386	321	241	207
Total, worst case			772	1012	182	821
Sun reduction			0.43	0.31	0.15	0.13
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.92	0.85	0.39	0.39
Total reduction			0.33	0.22	0.05	0.04
Total, real			255	220	9	34

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: N - Kardes

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 15:45	08:27 16:46	07:19 17:52	06:54 20:01	18:52 (8) 21:07	05:34 20:33 (10)
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	18:49 (8) 21:09	05:31 20:32 (10)
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	18:47 (8) 21:12	05:29 20:33 (10)
4	09:05 15:49	08:21 16:53	07:11 17:59	06:45 20:08	18:45 (8) 21:14	05:26 20:33 (10)
5	09:05 15:51	08:18 16:55	07:09 18:01	06:43 20:10	18:44 (8) 21:16	05:24 20:33 (10)
6	09:04 15:52	08:16 16:58	07:06 18:03	06:40 20:12	18:42 (8) 21:18	05:22 20:33 (10)
7	09:03 15:54	08:14 17:00	07:03 18:05	06:37 20:14	18:41 (8) 21:20	05:19 20:31 (10)
8	09:03 15:56	08:12 17:02	07:00 18:08	06:34 20:16	18:40 (8) 21:22	05:17 20:31 (10)
9	09:02 15:57	08:09 17:05	06:58 18:10	06:31 20:19	18:39 (8) 21:25	05:15 20:30 (10)
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	18:38 (8) 21:27	05:13 20:30 (10)
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	18:37 (8) 21:29	05:10 20:29 (10)
12	08:59 16:03	08:02 17:12	06:49 18:17	06:23 20:25	18:37 (8) 21:31	05:08 20:28 (10)
13	08:58 16:05	08:00 17:14	06:47 18:19	06:21 20:27	18:36 (8) 21:33	05:06 20:27 (10)
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	18:35 (8) 21:35	05:04 20:27 (10)
15	08:55 16:09	07:55 17:19	06:41 18:23	06:15 20:32	18:36 (8) 21:37	05:02 20:25 (10)
16	08:54 16:11	07:53 17:21	06:38 18:26	06:12 20:34	18:35 (8) 21:39	05:00 20:23 (10)
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	18:36 (8) 21:41	04:58 20:26 (10)
18	08:51 16:15	07:48 17:26	06:33 18:30	06:07 20:38	18:35 (8) 21:43	04:56 20:26 (10)
19	08:50 16:17	07:45 17:29	06:30 18:32	06:04 20:41	18:36 (8) 21:45	04:54 20:26 (10)
20	08:48 16:19	07:43 17:31	06:27 18:35	06:02 20:43	18:35 (8) 21:47	04:52 20:27 (10)
21	08:47 16:21	07:40 17:33	06:24 18:37	05:59 20:45	18:36 (8) 21:49	04:50 20:27 (10)
22	08:45 16:23	07:38 17:36	06:22 18:39	05:57 20:47	18:36 (8) 21:51	04:48 20:27 (10)
23	08:44 16:25	07:35 17:38	06:19 18:41	05:54 20:50	18:37 (8) 21:53	04:46 20:27 (10)
24	08:42 16:28	07:33 17:40	06:16 18:43	05:51 20:52	18:37 (8) 21:55	04:45 20:28 (10)
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	18:38 (8) 21:57	04:43 20:27 (10)
26	08:38 16:32	07:27 17:45	06:10 18:48	05:46 20:56	18:38 (8) 21:59	04:41 20:27 (10)
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:58	18:39 (8) 22:00	04:40 20:27 (10)
28	08:35 16:37	07:22 17:49	06:05 18:52	05:41 21:01	18:40 (8) 22:02	04:38 20:27 (10)
29	08:33 16:39		07:02 19:54	05:39 21:03	18:41 (8) 22:04	04:37 20:30 (10)
30	08:31 16:41		06:59 19:57	05:36 21:05	18:42 (8) 22:05	04:36 20:32 (10)
31	08:29 16:44		06:56 19:59	05:34 21:07	18:43 (8) 22:07	04:34 20:33 (10)
Potential sun hours	227	262	365	429	515	539
Total, worst case			173	1517	493	
Sun reduction			0.37	0.46	0.58	
Oper. time red.			0.93	0.93	0.93	
Wind dir. red.			1.00	0.99	0.94	
Total reduction			0.34	0.43	0.51	
Total, real			59	646	250	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: N - Kardes

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	20:18 (10)	06:21	18:37 (8)	07:24
	22:26	21:41	20:40 (10)	20:23	19:28 (8)	18:59
2	04:27	05:17	20:16 (10)	06:23	18:37 (8)	07:26
	22:25	21:39	20:40 (10)	20:20	19:28 (8)	18:57
3	04:28	05:19	20:15 (10)	06:25	18:37 (8)	07:29
	22:25	21:37	20:40 (10)	20:18	19:27 (8)	18:54
4	04:29	05:21	20:15 (10)	06:27	18:38 (8)	07:31
	22:24	21:34	20:41 (10)	20:15	19:26 (8)	18:51
5	04:30	05:23	20:14 (10)	06:29	18:38 (8)	07:33
	22:23	21:32	20:41 (10)	20:12	19:25 (8)	18:48
6	04:31	05:25	20:14 (10)	06:31	18:38 (8)	07:35
	22:22	21:30	20:42 (10)	20:09	19:23 (8)	18:45
7	04:32	05:28	20:14 (10)	06:34	18:39 (8)	07:37
	22:22	21:28	20:42 (10)	20:07	19:22 (8)	18:43
8	04:33	05:30	19:03 (8)	06:36	18:40 (8)	07:39
	22:21	21:25	20:42 (10)	20:04	19:20 (8)	18:40
9	04:35	05:32	18:59 (8)	06:38	18:41 (8)	07:42
	22:20	21:23	20:42 (10)	20:01	19:19 (7)	18:37
10	04:36	05:34	18:56 (8)	06:40	18:42 (8)	07:44
	22:18	21:20	20:42 (10)	19:58	19:19 (7)	18:34
11	04:37	05:36	18:54 (8)	06:42	18:44 (8)	07:46
	22:17	21:18	20:42 (10)	19:55	19:18 (7)	18:32
12	04:39	05:38	18:52 (8)	06:44	18:46 (8)	07:48
	22:16	21:16	20:41 (10)	19:53	19:17 (7)	18:29
13	04:40	05:40	18:51 (8)	06:46	18:46 (7)	07:50
	22:15	21:13	20:40 (10)	19:50	19:16 (7)	18:26
14	04:42	05:42	18:49 (8)	06:48	18:47 (7)	07:53
	22:13	21:11	20:37 (10)	19:47	19:15 (7)	18:24
15	04:43	05:45	18:48 (8)	06:50	18:47 (7)	07:55
	22:12	21:08	20:35 (10)	19:44	19:13 (7)	18:21
16	04:45	05:47	18:46 (8)	06:52	18:48 (7)	07:57
	22:11	21:06	20:33 (10)	19:41	19:10 (7)	18:18
17	04:47	05:49	18:45 (8)	06:55	18:49 (7)	07:59
	22:09	21:03	20:30 (10)	19:39	19:07 (7)	18:16
18	04:48	05:51	18:43 (8)	06:57	18:50 (7)	08:02
	22:08	21:01	20:27 (10)	19:36	19:04 (7)	18:13
19	04:50	05:53	18:42 (8)	06:59	18:53 (7)	08:04
	22:06	20:58	20:25 (10)	19:33	19:02 (7)	18:10
20	04:52	05:55	18:41 (8)	07:01		08:06
	22:04	20:55	19:30 (8)	19:30		18:08
21	04:54	05:57	18:40 (8)	07:03		08:08
	22:03	20:53	19:30 (8)	19:27		18:05
22	04:56	05:59	18:40 (8)	07:05		08:11
	22:01	20:50	19:30 (8)	19:25		18:03
23	04:57	06:02	18:39 (8)	07:07		08:13
	21:59	20:47	19:30 (8)	19:22		18:00
24	04:59	06:04	18:38 (8)	07:09		08:15
	21:57	20:45	19:30 (8)	19:19		17:58
25	05:01	06:06	18:38 (8)	07:12		07:17
	21:55	20:42	19:30 (8)	19:16		16:55
26	05:03	06:08	18:37 (8)	07:14		07:20
	21:53	20:39	19:30 (8)	19:13		16:53
27	05:05	20:25 (10)	06:10	18:37 (8)	07:16	07:22
	21:51	20:31 (10)	20:37	19:30 (8)	19:10	16:50
28	05:07	20:22 (10)	06:12	18:38 (8)	07:18	07:24
	21:49	20:34 (10)	20:34	19:31 (8)	19:08	16:48
29	05:09	20:21 (10)	06:14	18:37 (8)	07:20	07:26
	21:47	20:36 (10)	20:31	19:30 (8)	19:05	16:45
30	05:11	20:19 (10)	06:17	18:37 (8)	07:22	07:29
	21:45	20:37 (10)	20:29	19:30 (8)	19:02	16:43
31	05:13	20:18 (10)	06:19	18:37 (8)		07:31
	21:43	20:39 (10)	20:26	19:29 (8)		16:40
Potential sun hours	538	474	386		321	241
Total, worst case	72	1475	662			207
Sun reduction	0.57	0.55	0.43			
Oper. time red.	0.93	0.93	0.93			
Wind dir. red.	0.92	0.97	1.00			
Total reduction	0.49	0.50	0.40			
Total, real	35	732	265			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometņu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: O - Krusteici

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January		February		March		April		May		June	
1	09:07		08:27	09:40 (1)	07:20		06:54		05:34		06:33 (3)	04:33
	15:46		16:46	37	10:17 (1)	17:52		20:01		21:08	42	07:15 (2)
2	09:06		08:25		09:39 (1)	07:17		06:51		05:31		06:34 (2)
	15:47		16:49	38	10:17 (1)	17:54		20:04		21:10	42	07:16 (2)
3	09:06		08:23		09:40 (1)	07:14		06:48		05:29		06:32 (2)
	15:48		16:51	37	10:17 (1)	17:57		20:06		21:12	44	07:16 (2)
4	09:05		08:21		09:40 (1)	07:12		06:46		05:27		06:31 (2)
	15:50		16:53	38	10:18 (1)	17:59		20:08		21:14	46	07:17 (2)
5	09:05		08:19		09:40 (1)	07:09		06:43		05:24		06:30 (2)
	15:51		16:56	38	10:18 (1)	18:01		20:10		21:16	48	07:18 (2)
6	09:04		08:17		09:40 (1)	07:06		06:40		05:22		06:30 (2)
	15:53		16:58	38	10:18 (1)	18:04		20:12		21:19	48	07:18 (2)
7	09:04		08:14		09:40 (1)	07:04		06:37		05:20		06:29 (2)
	15:54		17:00	37	10:17 (1)	18:06		20:15		21:21	50	07:19 (2)
8	09:03		08:12		09:41 (1)	07:01		06:35		05:17		06:29 (2)
	15:56		17:03	36	10:17 (1)	18:08		20:17		21:23	50	07:19 (2)
9	09:02		08:10		09:41 (1)	06:58		06:32		05:15		06:28 (2)
	15:58		17:05	36	10:17 (1)	18:10		20:19		21:25	52	07:20 (2)
10	09:01		08:08		09:42 (1)	06:55		06:29		05:13		06:28 (2)
	15:59		17:08	35	10:17 (1)	18:13		20:21		21:27	52	07:20 (2)
11	09:00		08:05		09:42 (1)	06:53		06:26		05:11		06:28 (2)
	16:01		17:10	33	10:15 (1)	18:15		20:23		21:29	52	07:20 (2)
12	08:59		08:03		09:44 (1)	06:50		06:24		05:08		06:27 (2)
	16:03		17:12	31	10:15 (1)	18:17		20:26		21:31	53	07:20 (2)
13	08:58		08:00		09:44 (1)	06:47		06:21		05:06		06:27 (2)
	16:05		17:15	30	10:14 (1)	18:19		20:28		21:34	53	07:20 (2)
14	08:57		07:58		09:45 (1)	06:44		06:18		05:04		06:27 (2)
	16:07		17:17	27	10:12 (1)	18:22	13	07:31 (4)		21:36	53	07:20 (2)
15	08:56		07:56		09:47 (1)	06:41		06:15		05:02		06:26 (2)
	16:09		17:19	24	10:11 (1)	18:24	18	07:33 (4)		21:38	54	07:20 (2)
16	08:55		07:53		09:49 (1)	06:39		06:13		05:00		06:26 (2)
	16:11		17:22	19	10:08 (1)	18:26	21	07:34 (4)		21:40	54	07:20 (2)
17	08:53	09:53 (1)	07:51		09:53 (1)	06:36		06:10	06:44 (3)	04:58		06:26 (2)
	16:13	2	09:55 (1)	12	10:05 (1)	18:28	24	07:35 (4)	21:42	54	07:20 (2)	06:27 (2)
18	08:52		09:49 (1)		07:48	06:33		06:07	06:41 (3)	04:56		06:27 (2)
	16:15	12	10:01 (1)		17:26	18:30	26	07:36 (4)	21:44	54	07:21 (2)	06:27 (2)
19	08:50		09:47 (1)		07:46	06:30		06:05	06:39 (3)	04:54		06:26 (2)
	16:17	16	10:03 (1)		17:29	18:33	28	07:36 (4)	21:46	54	07:20 (2)	06:27 (2)
20	08:49		09:46 (1)		07:43	06:28		06:02	06:37 (3)	04:52		06:26 (2)
	16:19	19	10:05 (1)		17:31	18:35	29	07:37 (4)	21:48	54	07:20 (2)	06:27 (2)
21	08:47		09:44 (1)		07:41	06:25		05:59	06:37 (3)	04:50		06:27 (2)
	16:21	23	10:07 (1)		17:34	18:37	30	07:37 (4)	21:50	53	07:20 (2)	06:27 (2)
22	08:46		09:43 (1)		07:38	06:22		05:57	06:35 (3)	04:48		06:27 (2)
	16:23	25	10:08 (1)		17:36	18:39	29	07:36 (4)	21:52	53	07:20 (2)	06:27 (2)
23	08:44		09:42 (1)		07:35	06:19		05:54	06:35 (3)	04:47		06:27 (2)
	16:26	27	10:09 (1)		17:38	18:42	30	07:36 (4)	21:53	53	07:20 (2)	06:27 (2)
24	08:42		09:42 (1)		07:33	06:16		05:52	06:34 (3)	04:45		06:27 (2)
	16:28	29	10:11 (1)		17:41	18:44	29	07:35 (4)	21:55	53	07:20 (2)	06:27 (2)
25	08:41		09:41 (1)		07:30	06:14		05:49	06:33 (3)	04:43		06:28 (2)
	16:30	31	10:12 (1)		17:43	18:46	28	07:34 (4)	21:57	52	07:20 (2)	06:28 (2)
26	08:39		09:41 (1)		07:28	06:11		05:46	06:34 (3)	04:42		06:28 (2)
	16:32	32	10:13 (1)		17:45	18:48	27	07:34 (4)	21:59	52	07:20 (2)	06:28 (2)
27	08:37		09:41 (1)		07:25	06:08		05:44	06:33 (3)	04:40		06:28 (2)
	16:35	33	10:14 (1)		17:47	18:50	26	07:33 (4)	22:01	51	07:19 (2)	06:28 (2)
28	08:35		09:41 (1)		07:22	06:05		05:41	06:33 (3)	04:39		06:28 (2)
	16:37	34	10:15 (1)		17:50	18:53	23	07:31 (4)	22:02	51	07:19 (2)	06:27 (2)
29	08:33		09:39 (1)			07:02		05:39	06:33 (3)	04:37		06:29 (2)
	16:39	36	10:15 (1)			19:55	21	08:29 (4)	22:04	50	07:19 (2)	06:29 (2)
30	08:31		09:39 (1)			07:00		05:36	06:33 (3)	04:36		06:30 (2)
	16:42	37	10:16 (1)			19:57	17	08:28 (4)	22:06	49	07:19 (2)	06:29 (2)
31	08:29		09:40 (1)			06:57		08:13 (4)	04:34			06:30 (2)
	16:44	36	10:16 (1)			19:59	11	08:24 (4)	22:07	49	07:19 (2)	
Potential sun hours	227			262		365		429		515		539
Total, worst case		392		546		430		400		1575		1293
Sun reduction		0.13		0.22		0.37		0.46		0.58		0.53
Oper. time red.		0.93		0.93		0.93		0.93		0.93		0.93
Wind dir. red.		0.58		0.58		0.97		0.98		0.97		0.97
Total reduction		0.07		0.11		0.31		0.40		0.50		0.45
Total, real		26		62		135		158		782		588

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: Q - Kuikuli

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:08	04:26 22:26	05:15 21:41	06:21 20:23	07:24 18:59	07:33 16:38	08:39 15:43
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	04:32 22:10	04:27 22:25	05:17 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:42
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	04:31 22:11	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 16:33	08:42 15:41
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:27 21:14	04:30 22:13	04:29 22:24	05:21 21:35	06:27 20:15	07:31 18:51	07:40 16:31	08:44 15:40
5	09:05 15:51	08:18 16:56	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14	04:30 22:23	05:24 21:32	06:29 20:12	07:33 18:48	07:43 16:29	08:46 15:40
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:28 22:15	04:31 22:22	05:26 21:30	06:32 20:09	07:35 18:46	07:45 16:27	08:47 15:39
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:19 21:20	04:27 22:17	04:32 22:22	05:28 21:28	06:34 20:07	07:37 18:43	07:47 16:24	08:49 15:38
8	09:03 15:56	08:12 17:03	07:01 18:08	06:34 20:16	05:17 21:23	04:26 22:18	04:34 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 16:22	08:50 15:38
9	09:02 15:58	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19	04:35 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 16:20	08:52 15:37
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20	04:36 22:18	05:34 21:21	06:40 19:58	07:44 18:35	07:54 16:18	08:53 15:36
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:10 21:29	04:24 22:21	04:38 22:17	05:36 21:18	06:42 19:56	07:46 18:32	07:56 16:16	08:55 15:36
12	08:59 16:03	08:03 17:12	06:50 18:17	06:23 20:25	05:08 21:31	04:23 22:22	04:39 22:16	05:38 21:16	06:44 19:53	07:48 18:29	07:59 16:14	08:56 15:36
13	08:58 16:05	08:00 17:15	06:47 18:19	06:21 20:27	05:06 21:33	04:23 22:23	04:41 22:15	05:40 21:13	06:46 19:50	07:50 18:26	08:01 16:12	08:57 15:35
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24	04:42 22:13	05:43 21:11	06:48 19:47	07:53 18:24	08:03 16:10	08:58 15:35
15	08:55 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37	04:22 22:24	04:44 22:12	05:45 21:08	06:51 19:44	07:55 18:21	08:05 16:08	08:59 15:35
16	08:54 16:11	07:53 17:22	06:38 18:26	06:13 20:34	05:00 21:39	04:21 22:25	04:45 22:11	05:47 21:06	06:53 19:42	07:57 18:18	08:08 16:06	09:00 15:35
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	04:58 21:41	04:21 22:26	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 16:04	09:01 15:35
18	08:51 16:15	07:48 17:26	06:33 18:30	06:07 20:39	04:56 21:43	04:21 22:26	04:49 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 16:02	09:02 15:35
19	08:50 16:17	07:45 17:29	06:30 18:32	06:05 20:41	04:54 21:45	04:21 22:26	04:50 22:06	05:53 20:58	06:59 19:33	08:04 18:11	08:14 16:01	09:03 15:36
20	08:48 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:47	04:21 22:27	04:52 22:04	05:55 20:55	07:01 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	08:47 16:21	07:40 17:33	06:25 18:37	05:59 20:45	04:50 21:49	04:21 22:27	04:54 22:03	05:57 20:53	07:03 19:27	08:08 18:05	08:19 15:57	09:04 15:36
22	08:45 16:23	07:38 17:36	06:22 18:39	05:57 20:47	04:48 21:51	04:21 22:27	04:56 22:01	06:00 20:50	07:05 19:25	08:11 18:03	08:21 15:56	09:05 15:37
23	08:44 16:26	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:22 22:27	04:58 21:59	06:02 20:48	07:07 19:22	08:13 18:00	08:23 15:54	09:05 15:37
24	08:42 16:28	07:33 17:40	06:16 18:43	05:51 20:52	04:45 21:55	04:22 22:28	04:59 21:57	06:04 20:45	07:09 19:19	08:15 17:58	08:25 15:52	09:06 15:38
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:27	05:01 21:55	06:06 20:42	07:12 19:16	07:17 16:55	08:27 15:51	09:06 15:38
26	08:38 16:32	07:27 17:45	06:11 18:48	05:46 20:56	04:42 21:59	04:23 22:27	05:03 21:53	06:08 20:40	07:14 19:13	07:20 16:53	08:29 15:50	09:06 15:39
27	08:37 16:35	07:25 17:47	06:08 18:50	05:44 20:58	04:40 22:00	04:23 22:27	05:05 21:51	06:10 20:37	07:16 19:11	07:22 16:50	08:31 15:48	09:07 15:40
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:39 22:02	04:24 22:27	05:07 21:49	06:12 20:34	07:18 19:08	07:24 16:48	08:33 15:47	09:07 15:41
29	08:33 16:39		07:02 19:54	05:39 21:03	04:37 22:04	04:25 22:27	05:09 21:47	06:15 20:31	07:20 19:05	07:27 16:45	08:35 15:46	09:07 15:42
30	08:31 16:41		06:59 19:57	05:36 21:05	04:36 22:05	04:25 22:26	05:11 21:45	06:17 20:29	07:22 19:02	07:29 16:43	08:37 15:45	09:07 15:43
31	08:29 16:44		06:57 19:59		04:34 22:07		05:13 21:43	06:19 20:26		07:31 16:40		09:06 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometņu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: S - Lielkuikuli

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:08	04:26 22:26	05:15 21:41	06:21 20:23	07:24 18:59	07:33 16:38	08:39 15:43
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	04:32 22:10	04:27 22:25	05:17 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:42
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	04:31 22:11	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 16:33	08:42 15:41
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:27 21:14	04:30 22:13	04:29 22:24	05:21 21:35	06:27 20:15	07:31 18:51	07:40 16:31	08:44 15:40
5	09:05 15:51	08:18 16:56	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14	04:30 22:23	05:24 21:32	06:29 20:12	07:33 18:48	07:43 16:29	08:46 15:40
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:28 22:15	04:31 22:22	05:26 21:30	06:32 20:09	07:35 18:46	07:45 16:27	08:47 15:39
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:19 21:20	04:27 22:17	04:32 22:22	05:28 21:28	06:34 20:07	07:37 18:43	07:47 16:24	08:49 15:38
8	09:03 15:56	08:12 17:03	07:01 18:08	06:34 20:16	05:17 21:23	04:26 22:18	04:34 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 16:22	08:50 15:38
9	09:02 15:58	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19	04:35 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 16:20	08:52 15:37
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20	04:36 22:18	05:34 21:21	06:40 19:58	07:44 18:35	07:54 16:18	08:53 15:36
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:10 21:29	04:24 22:21	04:38 22:17	05:36 21:18	06:42 19:56	07:46 18:32	07:56 16:16	08:55 15:36
12	08:59 16:03	08:03 17:12	06:50 18:17	06:23 20:25	05:08 21:31	04:23 22:22	04:39 22:16	05:38 21:16	06:44 19:53	07:48 18:29	07:59 16:14	08:56 15:36
13	08:58 16:05	08:00 17:15	06:47 18:19	06:21 20:27	05:06 21:33	04:23 22:23	04:41 22:15	05:40 21:13	06:46 19:50	07:50 18:26	08:01 16:12	08:57 15:35
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24	04:42 22:13	05:43 21:11	06:48 19:47	07:53 18:24	08:03 16:10	08:58 15:35
15	08:55 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37	04:22 22:24	04:44 22:12	05:45 21:08	06:50 19:44	07:55 18:21	08:05 16:08	08:59 15:35
16	08:54 16:11	07:53 17:22	06:38 18:26	06:13 20:34	05:00 21:39	04:21 22:25	04:45 22:11	05:47 21:06	06:53 19:41	07:57 18:18	08:08 16:06	09:00 15:35
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	04:58 21:41	04:21 22:26	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 16:04	09:01 15:35
18	08:51 16:15	07:48 17:26	06:33 18:30	06:07 20:39	04:56 21:43	04:21 22:26	04:49 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 16:02	09:02 15:35
19	08:50 16:17	07:45 17:29	06:30 18:32	06:05 20:41	04:54 21:45	04:21 22:26	04:50 22:06	05:53 20:58	06:59 19:33	08:04 18:11	08:14 16:01	09:03 15:36
20	08:48 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:47	04:21 22:27	04:52 22:04	05:55 20:55	07:01 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	08:47 16:21	07:40 17:33	06:25 18:37	05:59 20:45	04:50 21:49	04:21 22:27	04:54 22:03	05:57 20:53	07:03 19:27	08:08 18:05	08:19 15:57	09:04 15:36
22	08:45 16:23	07:38 17:36	06:22 18:39	05:57 20:47	04:48 21:51	04:21 22:27	04:56 22:01	06:00 20:50	07:05 19:25	08:11 18:03	08:21 15:56	09:05 15:37
23	08:44 16:26	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:22 22:27	04:58 21:59	06:02 20:48	07:07 19:22	08:13 18:00	08:23 15:54	09:05 15:37
24	08:42 16:28	07:33 17:40	06:16 18:43	05:51 20:52	04:45 21:55	04:22 22:27	04:59 21:57	06:04 20:45	07:09 19:19	08:15 17:58	08:25 15:52	09:06 15:38
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:27	05:01 21:55	06:06 20:42	07:12 19:16	07:17 18:55	08:27 15:51	09:06 15:38
26	08:38 16:32	07:27 17:45	06:11 18:48	05:46 20:56	04:42 21:59	04:23 22:27	05:03 21:53	06:08 20:40	07:14 19:13	07:20 18:53	08:29 15:50	09:06 15:39
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:58	04:40 22:00	04:23 22:27	05:05 21:51	06:10 20:37	07:16 19:11	07:22 18:50	08:31 15:48	09:07 15:40
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:39 22:02	04:24 22:27	05:07 21:49	06:12 20:34	07:18 19:08	07:24 18:48	08:33 15:47	09:07 15:41
29	08:33 16:39		07:02 19:54	05:39 21:03	04:37 22:04	04:25 22:27	05:09 21:47	06:15 20:31	07:20 19:05	07:27 18:45	08:35 15:46	09:07 15:42
30	08:31 16:41		06:59 19:57	05:36 21:05	04:36 22:05	04:25 22:26	05:11 21:45	06:17 20:29	07:22 19:02	07:29 18:43	08:37 15:45	09:07 15:43
31	08:29 16:44		06:57 19:59		04:34 22:07		05:13 21:43	06:19 20:26		07:31 16:40		09:06 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: T - Mazkaleji

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07	10:21 (1) 08:27	07:20	08:29 (2) 06:54	05:34	04:33
	15:46	10:45 (1) 16:46	17:52	09:08 (2) 20:01	21:08	22:09
2	09:06	10:21 (1) 08:25	07:17	08:28 (2) 06:51	05:31	04:32
	15:47	10:45 (1) 16:49	17:54	09:08 (2) 20:04	21:10	22:10
3	09:06	10:21 (1) 08:23	07:14	08:28 (2) 06:48	05:29	04:31
	15:48	10:45 (1) 16:51	17:57	09:07 (2) 20:06	21:12	22:12
4	09:06	10:21 (1) 08:21	07:12	08:29 (2) 06:46	05:27	04:30
	15:50	10:45 (1) 16:53	17:59	09:07 (2) 20:08	21:14	22:13
5	09:05	10:23 (1) 08:19	07:09	07:42 (3) 06:43	05:24	04:28
	15:51	10:46 (1) 16:56	18:01	09:06 (2) 20:10	21:16	22:15
6	09:04	10:23 (1) 08:17	07:06	07:37 (3) 06:40	05:22	04:27
	15:53	10:47 (1) 16:58	18:04	09:05 (2) 20:12	21:19	22:16
7	09:04	10:24 (1) 08:14	07:04	07:35 (3) 06:37	05:20	04:27
	15:54	10:47 (1) 17:00	08:52 (4) 18:06	09:03 (2) 20:15	21:21	22:17
8	09:03	10:23 (1) 08:12	07:01	07:33 (3) 06:35	05:17	04:26
	15:56	10:46 (1) 17:03	08:56 (4) 18:08	09:02 (2) 20:17	21:23	22:18
9	09:02	10:24 (1) 08:10	08:41 (4) 06:58	07:32 (3) 06:32	05:15	04:25
	15:58	10:46 (1) 17:05	08:57 (4) 18:10	09:01 (2) 20:19	21:25	22:19
10	09:01	10:25 (1) 08:08	08:40 (4) 06:55	07:31 (3) 06:29	05:13	04:24
	15:59	10:47 (1) 17:08	08:59 (4) 18:13	08:58 (2) 20:21	21:27	22:21
11	09:00	10:26 (1) 08:05	08:39 (4) 06:53	07:30 (3) 06:26	05:11	04:24
	16:01	10:47 (1) 17:10	08:59 (4) 18:15	08:55 (2) 20:23	21:29	22:22
12	08:59	10:26 (1) 08:03	08:39 (4) 06:50	07:29 (3) 06:24	05:08	04:23
	16:03	10:46 (1) 17:12	09:00 (4) 18:17	08:51 (2) 20:26	21:31	22:22
13	08:58	10:28 (1) 08:00	08:38 (4) 06:47	07:29 (3) 06:21	05:06	04:23
	16:05	10:47 (1) 17:15	09:01 (4) 18:19	07:55 (3) 20:28	21:34	22:23
14	08:57	10:28 (1) 07:58	08:37 (4) 06:44	07:29 (3) 06:18	05:04	04:22
	16:07	10:46 (1) 17:17	09:01 (4) 18:22	07:56 (3) 20:30	21:36	22:24
15	08:56	10:30 (1) 07:56	08:38 (4) 06:41	07:29 (3) 06:15	05:02	04:22
	16:09	10:46 (1) 17:19	09:01 (4) 18:24	07:55 (3) 20:32	21:38	22:25
16	08:55	10:31 (1) 07:53	08:37 (4) 06:39	07:29 (3) 06:13	05:00	04:21
	16:11	10:45 (1) 17:22	09:01 (4) 18:26	07:54 (3) 20:34	21:40	22:25
17	08:53	10:33 (1) 07:51	08:38 (4) 06:36	07:29 (3) 06:10	04:58	04:21
	16:13	10:44 (1) 17:24	09:01 (2) 18:28	07:53 (3) 20:37	21:42	22:26
18	08:52	10:36 (1) 07:48	08:37 (2) 06:33	07:29 (3) 06:07	04:56	04:21
	16:15	10:42 (1) 17:26	09:03 (2) 18:30	07:52 (3) 20:39	21:44	22:27
19	08:50	07:46	08:35 (2) 06:30	07:30 (3) 06:05	04:54	04:21
	16:17	17:29	09:04 (2) 18:33	07:50 (3) 20:41	21:46	22:27
20	08:49	07:43	08:34 (2) 06:28	07:32 (3) 06:02	04:52	04:21
	16:19	17:31	09:06 (2) 18:35	07:49 (3) 20:43	21:48	22:27
21	08:47	07:41	08:33 (2) 06:25	07:34 (3) 05:59	04:50	04:21
	16:21	17:34	09:06 (2) 18:37	07:46 (3) 20:45	21:50	22:28
22	08:46	07:38	08:32 (2) 06:22	05:57	04:48	04:21
	16:23	17:36	09:07 (2) 18:39	20:48	21:52	22:28
23	08:44	07:35	08:30 (2) 06:19	05:54	04:47	04:22
	16:26	17:38	09:07 (2) 18:42	20:50	21:54	22:28
24	08:42	07:33	08:30 (2) 06:16	05:52	04:45	04:22
	16:28	17:41	09:08 (2) 18:44	20:52	21:55	22:28
25	08:41	07:30	08:30 (2) 06:14	05:49	04:43	04:22
	16:30	17:43	09:08 (2) 18:46	20:54	21:57	22:28
26	08:39	07:28	08:29 (2) 06:11	05:46	04:42	04:23
	16:32	17:45	09:08 (2) 18:48	20:57	21:59	22:28
27	08:37	07:25	08:29 (2) 06:08	05:44	04:40	04:23
	16:35	17:47	09:09 (2) 18:50	20:59	22:01	22:28
28	08:35	07:22	08:29 (2) 06:05	05:41	04:39	04:24
	16:37	17:50	09:09 (2) 18:53	21:01	22:02	22:27
29	08:33		07:02	05:39	04:37	04:25
	16:39		19:55	21:03	22:04	22:27
30	08:31		07:00	05:36	04:36	04:25
	16:42		19:57	21:05	22:06	22:27
31	08:29		06:57		04:34	
	16:44		19:59		22:07	
Potential sun hours	227	262	365	429	515	539
Total, worst case	358	599	732			
Sun reduction	0.13	0.22	0.37			
Oper. time red.	0.93	0.93	0.93			
Wind dir. red.	0.40	0.81	0.88			
Total reduction	0.04	0.15	0.27			
Total, real	16	90	199			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: T - Mazkaleji

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:25	08:08 (3)	07:34
	22:26	21:42	20:24	19:00	09:27 (2)	16:38
2	04:27	05:17	06:23	07:27	08:08 (3)	07:36
	22:26	21:39	20:21	18:57	09:32 (2)	16:36
3	04:28	05:19	06:25	07:29	08:09 (3)	07:38
	22:25	21:37	20:18	18:54	09:35 (2)	16:34
4	04:29	05:22	06:27	07:31	08:09 (3)	07:41
	22:24	21:35	20:15	18:51	09:37 (2)	16:31
5	04:30	05:24	06:30	07:33	08:09 (3)	07:43
	22:24	21:33	20:13	18:49	09:38 (2)	16:29
6	04:31	05:26	06:32	07:35	08:10 (3)	07:45
	22:23	21:30	20:10	18:46	09:39 (2)	16:27
7	04:32	05:28	06:34	07:38	08:12 (3)	07:48
	22:22	21:28	20:07	18:43	09:40 (2)	16:24
8	04:34	05:30	06:36	07:40	08:15 (3)	07:50
	22:21	21:26	20:04	18:40	09:41 (2)	16:22
9	04:35	05:32	06:38	07:42	09:04 (2)	07:52
	22:20	21:23	20:01	18:38	09:41 (2)	16:20
10	04:36	05:34	06:40	07:44	09:03 (2)	07:55
	22:19	21:21	19:59	18:35	09:41 (2)	16:18
11	04:38	05:36	06:42	07:46	09:03 (2)	07:57
	22:18	21:18	19:56	18:32	09:42 (2)	16:16
12	04:39	05:38	06:44	07:49	09:02 (2)	07:59
	22:17	21:16	19:53	18:29	09:42 (2)	16:14
13	04:41	05:41	06:46	07:51	09:01 (2)	08:01
	22:15	21:14	19:50	18:27	09:41 (2)	16:12
14	04:42	05:43	06:49	07:53	09:02 (2)	08:04
	22:14	21:11	19:47	18:24	09:42 (2)	16:10
15	04:44	05:45	06:51	07:55	09:01 (2)	08:06
	22:13	21:09	19:45	18:21	09:41 (2)	16:08
16	04:45	05:47	06:53	07:57	09:01 (2)	08:08
	22:11	21:06	19:42	18:19	09:40 (2)	16:06
17	04:47	05:49	06:55	08:00	09:02 (2)	08:10
	22:10	21:03	19:39	18:16	09:40 (2)	16:04
18	04:49	05:51	06:57	08:02	09:02 (2)	08:13
	22:08	21:01	19:36	18:13	09:39 (2)	16:02
19	04:50	05:53	06:59	08:04	09:02 (2)	08:15
	22:06	20:58	19:33	18:11	09:38 (2)	16:01
20	04:52	05:55	07:01	08:06	09:03 (2)	08:17
	22:05	20:56	19:30	18:08	09:38 (2)	15:59
21	04:54	05:58	07:03	08:09	09:03 (2)	08:19
	22:03	20:53	19:28	18:06	09:36 (2)	15:57
22	04:56	06:00	07:05	08:20 (3)	09:05 (2)	08:21
	22:01	20:51	19:25	18:03	09:36 (2)	15:56
23	04:58	06:02	07:08	08:17 (3)	09:05 (2)	08:23
	22:00	20:48	19:22	18:00	09:34 (2)	15:54
24	04:59	06:04	07:10	08:14 (3)	09:07 (2)	08:25
	21:58	20:45	19:19	17:58	09:33 (2)	15:53
25	05:01	06:06	07:12	08:13 (3)	08:08 (4)	08:27
	21:56	20:43	19:16	17:55	08:31 (4)	15:51
26	05:03	06:08	07:14	08:11 (3)	08:08 (4)	08:30
	21:54	20:40	19:14	17:53	08:31 (4)	15:50
27	05:05	06:10	07:16	08:11 (3)	08:07 (4)	08:32
	21:52	20:37	19:11	17:50	08:31 (4)	15:48
28	05:07	06:13	07:18	08:10 (3)	08:08 (4)	08:34
	21:50	20:34	19:08	17:48	08:31 (4)	15:47
29	05:09	06:15	07:20	08:09 (3)	08:08 (4)	08:35
	21:48	20:32	19:05	17:45	08:30 (4)	15:46
30	05:11	06:17	07:23	08:09 (3)	08:09 (4)	08:37
	21:46	20:29	19:02	17:43	08:30 (4)	15:45
31	05:13	06:19		07:31	08:09 (4)	
	21:44	20:26		16:41	08:29 (4)	
Potential sun hours	538	474	386	321	241	207
Total, worst case			192	1104	153	741
Sun reduction			0.43	0.31	0.15	0.13
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.95	0.83	0.53	0.40
Total reduction			0.34	0.22	0.07	0.04
Total, real			66	238	11	32

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: U - Namdari

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 15:45	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	19:46 (8) 20:34 (10)
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	19:46 (8) 20:35 (10)
3	09:05 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	19:46 (8) 20:38 (10)
4	09:05 15:49	08:21 16:53	07:11 17:59	06:45 20:08	05:26 21:14	19:47 (8) 20:40 (10)
5	09:04 15:51	08:18 16:55	07:09 18:01	06:42 20:10	05:24 21:16	19:47 (8) 20:42 (10)
6	09:04 15:52	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	19:48 (8) 20:44 (10)
7	09:03 15:54	08:14 17:00	07:03 18:05	06:37 20:14	05:19 21:20	19:48 (8) 20:45 (10)
8	09:02 15:56	08:12 17:02	07:00 18:08	06:34 20:16	05:17 21:22	19:49 (8) 20:47 (10)
9	09:02 15:57	08:09 17:05	06:58 18:10	06:31 20:19	19:45 (7) 19:49 (7)	05:15 21:25
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	19:43 (7) 19:50 (7)	05:12 21:27
11	09:00 16:01	08:05 17:10	06:52 18:14	06:26 20:23	19:41 (7) 19:52 (7)	05:10 21:29
12	08:59 16:03	08:02 17:12	06:49 18:17	06:23 20:25	19:40 (7) 19:55 (7)	05:08 21:31
13	08:58 16:05	08:00 17:14	06:47 18:19	06:21 20:27	19:39 (7) 19:57 (7)	05:06 21:33
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	19:38 (7) 19:58 (7)	05:04 21:35
15	08:55 16:08	07:55 17:19	06:41 18:23	06:15 20:32	19:38 (7) 20:01 (7)	05:02 21:37
16	08:54 16:10	07:53 17:21	06:38 18:26	06:12 20:34	19:38 (7) 20:01 (7)	05:00 21:39
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	19:38 (7) 20:01 (7)	04:58 21:41
18	08:51 16:15	07:48 17:26	06:33 18:30	06:07 20:38	19:38 (7) 20:07 (8)	04:56 21:43
19	08:50 16:17	07:45 17:29	06:30 18:32	06:04 20:41	19:39 (7) 20:10 (8)	04:54 21:45
20	08:48 16:19	07:43 17:31	06:27 18:35	06:02 20:43	19:39 (7) 20:11 (8)	04:52 21:47
21	08:47 16:21	07:40 17:33	06:24 18:37	05:59 20:45	19:40 (7) 20:14 (8)	04:50 21:49
22	08:45 16:23	07:38 17:36	06:22 18:39	05:56 20:47	19:41 (7) 20:15 (8)	04:48 21:51
23	08:44 16:25	07:35 17:38	06:19 18:41	05:54 20:49	19:43 (7) 20:18 (8)	04:46 21:53
24	08:42 16:28	07:32 17:40	06:16 18:43	05:51 20:52	19:49 (8) 20:18 (8)	04:45 21:55
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	19:48 (8) 20:19 (8)	04:43 21:57
26	08:38 16:32	07:27 17:45	06:10 18:48	05:46 20:56	19:47 (8) 20:19 (8)	04:41 21:58
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:58	19:47 (8) 20:19 (8)	04:40 22:00
28	08:35 16:37	07:22 17:49	06:05 18:52	05:41 21:01	19:47 (8) 20:19 (8)	04:38 22:02
29	08:33 16:39		07:02 19:54	05:39 21:03	19:46 (8) 20:19 (8)	04:37 22:04
30	08:31 16:41		06:59 19:57	05:36 21:05	19:46 (8) 20:19 (8)	04:35 22:05
31	08:29 16:44		06:56 19:59			04:34 22:07
Potential sun hours	227	262	365	429	515	539
Total, worst case				561	547	
Sun reduction				0.46	0.58	
Oper. time red.				0.93	0.93	
Wind dir. red.				0.96	0.92	
Total reduction				0.41	0.50	
Total, real				230	272	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Riga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: U - Namdari

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December		
1	04:26	05:15	20:05 (8)	06:21	19:41 (7)	07:24	07:33	08:39
	22:26	21:41	33 20:58 (10)	20:23	11 19:52 (7)	18:59	16:38	15:43
2	04:27	05:17	20:02 (8)	06:23	19:42 (7)	07:26	07:36	08:40
	22:25	21:39	39 20:58 (10)	20:20	7 19:49 (7)	18:56	16:36	15:42
3	04:28	05:19	20:01 (8)	06:25	19:43 (7)	07:29	07:38	08:42
	22:25	21:37	41 20:58 (10)	20:18	4 19:47 (7)	18:54	16:33	15:41
4	04:29	05:21	20:00 (8)	06:27		07:31	07:40	08:44
	22:24	21:34	43 20:58 (10)	20:15		18:51	16:31	15:40
5	04:30	05:23	19:59 (8)	06:29		07:33	07:43	08:46
	22:23	21:32	44 20:57 (10)	20:12		18:48	16:29	15:39
6	04:31	05:25	19:58 (8)	06:31		07:35	07:45	08:47
	22:22	21:30	44 20:55 (10)	20:09		18:45	16:26	15:39
7	04:32	05:28	19:57 (8)	06:33		07:37	07:47	08:49
	22:21	21:28	44 20:53 (10)	20:07		18:43	16:24	15:38
8	04:33	05:30	19:57 (8)	06:36		07:39	07:49	08:50
	22:20	21:25	42 20:51 (10)	20:04		18:40	16:22	15:37
9	04:35	05:32	19:56 (8)	06:38		07:42	07:52	08:52
	22:19	21:23	42 20:49 (10)	20:01		18:37	16:20	15:37
10	04:36	05:34	19:56 (8)	06:40		07:44	07:54	08:53
	22:18	21:20	38 20:46 (10)	19:58		18:34	16:18	15:36
11	04:37	05:36	19:55 (8)	06:42		07:46	07:56	08:55
	22:17	21:18	36 20:44 (10)	19:55		18:32	16:16	15:36
12	04:39	05:38	19:55 (8)	06:44		07:48	07:59	08:56
	22:16	21:16	33 20:42 (10)	19:53		18:29	16:14	15:36
13	04:40	05:40	19:55 (8)	06:46		07:50	08:01	08:57
	22:15	21:13	32 20:27 (8)	19:50		18:26	16:12	15:35
14	04:42	05:42	19:54 (8)	06:48		07:53	08:03	08:58
	22:13	21:11	33 20:27 (8)	19:47		18:24	16:10	15:35
15	04:43	05:45	19:54 (8)	06:50		07:55	08:05	08:59
	22:12	21:08	33 20:27 (8)	19:44		18:21	16:08	15:35
16	04:45	05:47	19:53 (8)	06:52		07:57	08:08	09:00
	22:11	21:06	33 20:26 (8)	19:41		18:18	16:06	15:35
17	04:47	05:49	19:54 (8)	06:55		07:59	08:10	09:01
	22:09	21:03	31 20:25 (8)	19:39		18:16	16:04	15:35
18	04:48	05:51	19:54 (8)	06:57		08:01	08:12	09:02
	22:08	21:00	30 20:24 (8)	19:36		18:13	16:02	15:35
19	04:50	05:53	19:51 (7)	06:59		08:04	08:14	09:03
	22:06	20:58	33 20:24 (8)	19:33		18:10	16:00	15:35
20	04:52	05:55	19:47 (7)	07:01		08:06	08:16	09:04
	22:04	20:55	35 20:22 (8)	19:30		18:08	15:59	15:36
21	04:54	05:57	19:45 (7)	07:03		08:08	08:19	09:04
	22:03	20:53	35 20:20 (8)	19:27		18:05	15:57	15:36
22	04:56	05:59	19:44 (7)	07:05		08:10	08:21	09:05
	22:01	20:50	33 20:17 (8)	19:24		18:03	15:55	15:36
23	04:57	06:02	19:42 (7)	07:07		08:13	08:23	09:05
	21:59	20:47	33 20:15 (8)	19:22		18:00	15:54	15:37
24	04:59	06:04	19:41 (7)	07:09		08:15	08:25	09:06
	21:57	20:45	31 20:12 (8)	19:19		17:58	15:52	15:38
25	05:01	06:06	19:40 (7)	07:11		07:17	08:27	09:06
	21:55	20:42	30 20:10 (8)	19:16		16:55	15:51	15:38
26	05:03	06:08	19:40 (7)	07:14		07:20	08:29	09:06
	21:53	20:39	23 20:03 (7)	19:13		16:52	15:49	15:39
27	05:05	20:45 (10)	06:10	19:39 (7)	07:16	07:22	08:31	09:06
	21:51	6 20:51 (10)	20:37	20:03 (7)	19:10	16:50	15:48	15:40
28	05:07	20:43 (10)	06:12	19:39 (7)	07:18	07:24	08:33	09:07
	21:49	11 20:54 (10)	20:34	20:02 (7)	19:08	16:48	15:47	15:41
29	05:09	20:42 (10)	06:14	19:39 (7)	07:20	07:26	08:35	09:07
	21:47	13 20:55 (10)	20:31	19:59 (7)	19:05	16:45	15:46	15:42
30	05:11	20:41 (10)	06:17	19:40 (7)	07:22	07:29	08:37	09:07
	21:45	15 20:56 (10)	20:29	19:57 (7)	19:02	16:43	15:44	15:43
31	05:13	20:08 (8)	06:19	19:40 (7)		07:31		09:06
	21:43	26 20:57 (10)	20:26	19:55 (7)		16:40		15:44
Potential sun hours	538		474	386		321	241	207
Total, worst case	71		1023	22				
Sun reduction	0.57		0.55	0.43				
Oper. time red.	0.93		0.93	0.93				
Wind dir. red.	0.89		0.94	0.97				
Total reduction	0.47		0.48	0.39				
Total, real	33		490	9				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: V - Norinas

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07	11:09 (12) 08:27	09:06 (13) 07:20	06:54	05:34	04:33
	15:45	13:02 (11) 16:46	12:57 (11) 17:52	20:01	21:07	22:09
2	09:06	11:10 (12) 08:25	09:05 (13) 07:17	06:51	05:31	04:32
	15:47	13:03 (11) 16:48	09:28 (13) 17:54	20:03	21:10	22:10
3	09:06	11:11 (12) 08:23	09:05 (13) 07:14	06:48	05:29	04:30
	15:48	13:04 (11) 16:51	09:29 (13) 17:56	20:06	21:12	22:12
4	09:05	11:11 (12) 08:21	09:04 (13) 07:11	06:45	05:26	04:29
	15:49	13:04 (11) 16:53	09:29 (13) 17:59	20:08	21:14	22:13
5	09:05	11:12 (12) 08:19	09:04 (13) 07:09	07:36 (14)	06:43	05:24
	15:51	13:04 (11) 16:55	09:30 (13) 18:01	07:47 (14)	20:10	21:16
6	09:04	11:13 (12) 08:16	09:04 (13) 07:06	07:33 (14)	06:40	05:22
	15:52	13:06 (11) 16:58	09:31 (13) 18:03	07:49 (14)	20:12	21:18
7	09:04	11:14 (12) 08:14	09:04 (13) 07:03	07:30 (14)	06:37	05:19
	15:54	13:06 (11) 17:00	09:31 (13) 18:06	07:51 (14)	20:14	21:21
8	09:03	11:14 (12) 08:12	09:04 (13) 07:01	07:28 (14)	06:34	05:17
	15:56	13:06 (11) 17:02	09:31 (13) 18:08	07:52 (14)	20:17	21:23
9	09:02	11:15 (12) 08:10	09:04 (13) 06:58	07:26 (14)	06:32	05:15
	15:57	13:06 (11) 17:05	09:30 (13) 18:10	07:53 (14)	20:19	21:25
10	09:01	11:16 (12) 08:07	09:05 (13) 06:55	07:26 (14)	06:29	05:12
	15:59	13:07 (11) 17:07	09:31 (13) 18:12	07:54 (14)	20:21	21:27
11	09:00	11:17 (12) 08:05	09:05 (13) 06:52	07:25 (14)	06:26	05:10
	16:01	13:08 (11) 17:10	09:30 (13) 18:15	07:54 (14)	20:23	21:29
12	08:59	11:18 (12) 08:03	09:06 (13) 06:50	07:24 (14)	06:23	05:08
	16:03	13:07 (11) 17:12	09:30 (13) 18:17	07:54 (14)	20:25	21:31
13	08:58	11:19 (12) 08:00	09:07 (13) 06:47	07:23 (14)	06:21	05:06
	16:05	13:08 (11) 17:14	09:28 (13) 18:19	07:54 (14)	20:28	21:33
14	08:57	11:20 (12) 07:58	09:07 (13) 06:44	07:23 (14)	06:18	05:04
	16:06	13:08 (11) 17:17	09:27 (13) 18:21	07:54 (14)	20:30	21:36
15	08:56	11:22 (12) 07:55	09:10 (13) 06:41	07:23 (14)	06:15	05:02
	16:08	13:09 (11) 17:19	09:26 (13) 18:24	07:54 (14)	20:32	21:38
16	08:54	11:24 (12) 07:53	09:11 (13) 06:38	07:23 (14)	06:12	05:00
	16:10	13:09 (11) 17:22	09:23 (13) 18:26	07:54 (14)	20:34	21:40
17	08:53	11:26 (12) 07:51	06:36	07:23 (14)	06:10	04:58
	16:12	13:08 (11) 17:24	18:28	07:53 (14)	20:36	21:42
18	08:52	12:27 (11) 07:48	06:33	07:23 (14)	06:07	04:56
	16:15	13:09 (11) 17:26	18:30	07:52 (14)	20:39	21:44
19	08:50	12:27 (11) 07:46	06:30	07:23 (14)	06:04	04:54
	16:17	13:09 (11) 17:29	18:32	07:50 (14)	20:41	21:46
20	08:49	12:27 (11) 07:43	06:27	07:24 (14)	06:02	04:52
	16:19	13:09 (11) 17:31	18:35	07:49 (14)	20:43	21:48
21	08:47	12:28 (11) 07:40	06:25	07:26 (14)	05:59	04:50
	16:21	13:09 (11) 17:33	18:37	07:48 (14)	20:45	21:50
22	08:46	12:29 (11) 07:38	06:22	07:27 (14)	05:57	04:48
	16:23	13:08 (11) 17:36	18:39	07:46 (14)	20:48	21:52
23	08:44	12:30 (11) 07:35	06:19	07:29 (14)	05:54	04:46
	16:25	13:08 (11) 17:38	18:41	07:42 (14)	20:50	21:53
24	08:42	12:31 (11) 07:33	06:16	05:51	04:45	04:22
	16:28	13:08 (11) 17:40	18:44	20:52	21:55	22:28
25	08:41	12:32 (11) 07:30	06:13	05:49	04:43	04:22
	16:30	13:07 (11) 17:43	18:46	20:54	21:57	22:28
26	08:39	12:33 (11) 07:27	06:11	05:46	04:41	04:22
	16:32	13:07 (11) 17:45	18:48	20:56	21:59	22:28
27	08:37	09:14 (13) 07:25	06:08	05:44	04:40	04:23
	16:34	13:06 (11) 17:47	18:50	20:59	22:01	22:28
28	08:35	09:11 (13) 07:22	06:05	05:41	04:38	04:24
	16:37	13:05 (11) 17:50	18:52	21:01	22:02	22:27
29	08:33	09:08 (13)	07:02	05:39	04:37	04:24
	16:39	13:03 (11)	19:55	21:03	22:04	22:27
30	08:31	09:07 (13)	06:59	05:36	04:35	04:25
	16:41	13:02 (11)	19:57	21:05	22:06	22:27
31	08:29	09:06 (13)	06:57		04:34	
	16:44	13:00 (11)	19:59		22:07	
Potential sun hours	227	262	365	429	515	539
Total, worst case	1703	381	475			
Sun reduction	0.13	0.22	0.37			
Oper. time red.	0.93	0.93	0.93			
Wind dir. red.	0.15	0.70	0.95			
Total reduction	0.01	0.10	0.23			
Total, real	22	38	108			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: V - Norinas

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:24	08:03 (14)	07:34
2	22:26	21:41	20:23	18:59	08:34 (14)	16:38
2	04:27	05:17	06:23	07:27	08:03 (14)	07:36
3	22:26	21:39	20:21	18:57	08:33 (14)	16:36
3	04:28	05:19	06:25	07:29	08:03 (14)	07:38
4	22:25	21:37	20:18	18:54	08:32 (14)	16:33
4	04:29	05:21	06:27	07:31	08:04 (14)	07:41
5	22:24	21:35	20:15	18:51	08:31 (14)	16:31
5	04:30	05:23	06:29	07:33	08:05 (14)	07:43
6	22:24	21:33	20:12	18:48	08:30 (14)	16:29
6	04:31	05:25	06:31	07:35	08:05 (14)	07:45
7	22:23	21:30	20:10	18:46	08:28 (14)	16:26
7	04:32	05:28	06:34	07:37	08:07 (14)	07:47
8	22:22	21:28	20:07	18:43	08:26 (14)	16:24
8	04:33	05:30	06:36	07:40	08:10 (14)	07:50
9	22:21	21:26	20:04	18:40	08:24 (14)	16:22
9	04:35	05:32	06:38	07:42	08:13 (14)	07:52
10	22:20	21:23	20:01	18:37	08:19 (14)	16:20
10	04:36	05:34	06:40	07:44		07:54
11	22:19	21:21	19:58	18:35		16:18
11	04:37	05:36	06:42	07:46		07:57
12	22:18	21:18	19:56	18:32		16:16
12	04:39	05:38	06:44	07:48		07:59
13	22:16	21:16	19:53	18:29		16:14
13	04:40	05:40	06:46	07:51		08:01
14	22:15	21:13	19:50	18:26		16:12
14	04:42	05:42	06:48	07:53		08:03
15	22:14	21:11	19:47	18:24		16:10
15	04:43	05:45	06:50	07:55		08:06
16	22:12	21:08	19:44	18:21		16:08
16	04:45	05:47	06:53	07:57		08:08
17	22:11	21:06	19:42	18:18		16:06
17	04:47	05:49	06:55	07:59		08:10
18	22:09	21:03	19:39	18:16		16:04
18	04:48	05:51	06:57	08:02		08:12
19	22:08	21:01	19:36	18:13		16:02
19	04:50	05:53	06:59	08:04		08:15
20	22:06	20:58	19:33	18:10		16:00
20	04:52	05:55	07:01	08:06		08:17
21	22:05	20:56	19:30	18:08		15:59
21	04:54	05:57	07:03	08:13 (14)		08:19
22	22:03	20:53	19:27	18:05		15:57
22	04:55	06:00	07:05	08:11 (14)		08:21
23	22:01	20:50	19:25	18:03		15:55
23	04:57	06:02	07:07	08:09 (14)		08:23
24	21:59	20:48	19:22	18:00		15:54
24	04:59	06:04	07:10	08:08 (14)		08:25
25	21:58	20:45	19:19	17:58		15:52
25	05:01	06:06	07:12	08:06 (14)		08:27
26	21:56	20:42	19:16	17:55		15:51
26	05:03	06:08	07:14	08:05 (14)		08:29
27	21:54	20:40	19:13	17:53		15:49
27	05:05	06:10	07:16	08:04 (14)		08:31
28	21:52	20:37	19:11	17:50		15:48
28	05:07	06:12	07:18	08:04 (14)		08:33
29	21:50	20:34	19:08	17:48		15:47
29	05:09	06:14	07:20	08:04 (14)		08:35
30	21:48	20:32	19:05	17:45		15:45
30	05:11	06:17	07:22	08:03 (14)		08:37
31	21:46	20:29	19:02	17:43		15:44
31	05:13	06:19		07:31		08:34 (13)
Potential sun hours	539	475	386	321	241	207
Total, worst case			280	330	1171	2435
Sun reduction			0.43	0.31	0.15	0.13
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.95	0.86	0.28	0.15
Total reduction			0.27	0.17	0.03	0.01
Total, real			75	57	33	31

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: W - Pavasari

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07 15:46 13	09:51 (1) 08:27 10:04 (1) 16:46 10:04 (1) 16:46	07:20 17:52 20	08:08 (4) 06:54 08:28 (4) 20:01 08:09 (4) 06:51	05:34 21:08 05:31	04:33 22:09 04:32
2	09:06 15:47 15	09:51 (1) 08:25 10:06 (1) 16:49 09:51 (1) 08:23	07:17 17:54 17	08:09 (4) 06:51 08:26 (4) 20:04 08:10 (4) 06:48	05:31 21:10 05:29	04:32 22:10 04:31
3	09:06 15:48 16	10:07 (1) 16:51 09:50 (1) 08:21 10:07 (1) 16:53	07:14 17:57 14	08:10 (4) 06:48 08:24 (4) 20:06 07:54 (2) 06:46	05:29 21:12 05:27	04:31 22:12 04:30
4	09:06 15:50 17	09:50 (1) 08:12 10:07 (1) 16:53 09:51 (1) 08:19	07:12 17:59 22	07:54 (2) 06:46 08:23 (4) 20:08 07:50 (2) 06:43	05:27 21:14 05:24	04:30 22:13 04:29
5	09:05 15:51 18	09:51 (1) 08:19 10:09 (1) 16:56 09:51 (1) 08:17	07:09 18:01 18	06:43 08:08 (2) 20:10 07:47 (2) 06:40	05:24 21:16 05:22	04:29 22:15 04:28
6	09:04 15:53 19	09:51 (1) 08:17 10:10 (1) 16:58 09:51 (1) 08:14	07:06 18:04 23	06:40 08:10 (2) 20:12 07:45 (2) 06:37	05:22 21:19 05:20	04:28 22:16 04:27
7	09:04 15:54 20	09:51 (1) 08:14 10:11 (1) 17:00 09:50 (1) 08:12	07:04 18:06 26	06:37 08:11 (2) 20:15 07:43 (2) 06:35	05:20 21:21 05:17	04:27 22:17 04:26
8	09:03 15:56 21	09:50 (1) 08:12 10:11 (1) 17:03 09:50 (1) 08:10	07:01 18:08 29	06:35 08:12 (2) 20:17 07:43 (2) 06:32	05:17 21:23 05:15	04:26 22:18 04:25
9	09:02 15:58 22	09:50 (1) 08:10 10:12 (1) 17:05 09:51 (1) 08:08	06:58 18:10 31	06:32 08:14 (2) 20:19 07:42 (2) 06:29	05:15 21:25 05:13	04:25 22:19 04:24
10	09:01 15:59 22	09:51 (1) 08:08 10:13 (1) 17:08 09:51 (1) 08:05	06:55 18:13 32	06:29 08:14 (2) 20:21 07:41 (2) 06:26	05:13 21:27 05:11	04:24 22:21 04:24
11	09:00 16:01 23	09:51 (1) 08:05 10:14 (1) 17:10 09:51 (1) 08:03	06:53 18:15 34	06:26 08:15 (2) 20:23 07:40 (2) 06:24	05:11 21:29 05:08	04:24 22:22 04:23
12	08:59 16:03 23	09:51 (1) 08:03 10:14 (1) 17:12 09:51 (1) 08:00	06:50 18:17 35	06:24 08:15 (2) 20:26 07:39 (2) 06:21	05:08 21:31 05:06	04:23 22:22 04:23
13	08:58 16:05 24	09:51 (1) 08:00 10:15 (1) 17:15 09:51 (1) 07:58	06:47 18:19 35	06:21 08:14 (2) 20:28 07:39 (2) 06:18	05:06 21:34 05:04	04:23 22:23 04:22
14	08:57 16:07 24	09:51 (1) 07:58 10:15 (1) 17:17 09:52 (1) 07:56	06:44 18:22 36	06:18 08:15 (2) 20:30 07:12 (3) 06:15	05:04 21:36 05:02	04:22 22:24 04:22
15	08:56 16:09 24	09:52 (1) 07:56 10:16 (1) 17:19 09:51 (1) 07:53	06:42 18:24 39	06:15 08:15 (2) 20:32 07:07 (3) 06:13	05:02 21:38 05:00	04:22 22:25 04:21
16	08:55 16:11 25	09:51 (1) 07:53 10:16 (1) 17:22 09:51 (1) 07:51	06:39 18:26 48	06:13 08:14 (2) 20:34 07:04 (3) 06:10	05:00 21:40 04:58	04:21 22:25 04:21
17	08:53 16:13 25	09:51 (1) 07:51 10:16 (1) 17:24 09:53 (1) 07:48	06:36 18:28 52	06:10 08:13 (2) 20:37 07:02 (3) 06:07	04:58 21:42 04:56	04:21 22:26 04:21
18	08:52 16:15 24	09:53 (1) 07:48 10:17 (1) 17:27 09:53 (1) 07:46	06:33 18:30 55	06:07 08:13 (2) 20:39 07:01 (3) 06:05	04:56 21:44 04:54	04:21 22:27 04:21
19	08:50 16:17 24	09:53 (1) 07:46 10:17 (1) 17:29 09:53 (1) 07:43	06:30 18:33 55	06:05 08:12 (2) 20:41 07:01 (3) 06:02	04:54 21:46 04:52	04:21 22:27 04:21
20	08:49 16:19 24	09:53 (1) 07:43 10:17 (1) 17:31 09:53 (1) 07:41	06:28 18:35 55	06:02 08:11 (2) 20:43 07:00 (3) 05:59	04:52 21:48 04:50	04:21 22:27 04:21
21	08:47 16:21 24	09:53 (1) 07:41 10:17 (1) 17:34 09:54 (1) 07:38	06:25 18:37 54	05:59 08:10 (2) 20:45 06:59 (3) 05:57	04:50 21:50 04:48	04:21 22:28 04:21
22	08:46 16:23 23	09:54 (1) 07:38 10:17 (1) 17:36 09:55 (1) 07:36	06:22 18:39 52	05:57 08:08 (2) 20:48 06:59 (3) 05:54	04:48 21:52 04:47	04:21 22:28 04:22
23	08:44 16:26 22	09:55 (1) 07:36 10:17 (1) 17:38 09:55 (1) 07:33	06:19 18:42 49	05:54 08:06 (2) 20:50 06:58 (3) 05:52	04:47 21:54 04:45	04:22 22:28 04:22
24	08:42 16:28 22	09:55 (1) 07:33 10:17 (1) 17:41 09:56 (1) 07:30	06:16 18:44 45	05:52 08:04 (2) 20:52 06:59 (3) 05:49	04:45 21:55 04:43	04:22 22:28 04:22
25	08:41 16:30 21	09:56 (1) 07:30 10:17 (1) 17:43 09:57 (1) 07:28	06:14 18:46 38	05:49 08:01 (2) 20:54 06:59 (3) 05:46	04:43 21:57 04:42	04:22 22:28 04:23
26	08:39 16:32 19	09:57 (1) 07:28 10:16 (1) 17:45 09:59 (1) 07:25	06:11 18:48 28	05:46 07:56 (2) 20:57 07:00 (3) 05:44	04:42 21:59 04:40	04:23 22:28 04:23
27	08:37 16:35 17	09:59 (1) 07:25 10:16 (1) 17:48 10:01 (1) 07:22	06:08 18:50 20	05:44 07:00 (3) 05:41 07:20 (3) 20:59	04:40 22:01 04:39	04:23 22:28 04:24
28	08:35 16:37 13	10:01 (1) 07:22 10:14 (1) 17:50 10:03 (1)	06:05 18:53 18	05:41 07:00 (3) 21:01 08:02 (3) 05:39	04:39 22:02 04:37	04:24 22:27 04:25
29	08:33 16:39 10	10:03 (1) 10:13 (1)	07:02 19:55 13	05:39 08:15 (3) 21:03 08:05 (3) 05:36	04:37 22:04 04:36	04:25 22:27 04:25
30	08:31 16:42		07:00 19:57 8	05:36 21:05	04:36 22:06	04:25 22:27
31	08:29 16:44		06:57 19:59		04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Total, worst case	594	198	1001			
Sun reduction	0.13	0.22	0.37			
Oper. time red.	0.93	0.93	0.93			
Wind dir. red.	0.53	0.88	0.94			
Total reduction	0.06	0.16	0.29			
Total, real	35	32	293			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: W - Pavasari

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:25	08:19 (2)	07:34
	22:26	21:42	20:24	19:00	35 08:54 (2)	16:38
2	04:27	05:17	06:23	07:27	08:18 (2)	07:36
	22:26	21:39	20:21	18:57	35 08:53 (2)	16:36
3	04:28	05:19	06:25	07:29	08:19 (2)	07:38
	22:25	21:37	20:18	18:54	34 08:53 (2)	16:34
4	04:29	05:22	06:27	07:31	08:20 (2)	07:41
	22:24	21:35	20:15	18:51	32 08:52 (2)	16:31
5	04:30	05:24	06:30	07:33	08:20 (2)	07:43
	22:24	21:33	20:13	18:49	30 08:50 (2)	16:29
6	04:31	05:26	06:32	07:35	08:21 (2)	07:45
	22:23	21:30	20:10	18:46	27 08:48 (2)	16:27
7	04:32	05:28	06:34	07:38	08:23 (2)	07:48
	22:22	21:28	20:07	18:43	24 08:47 (2)	16:25
8	04:34	05:30	06:36	07:40	08:24 (2)	07:50
	22:21	21:26	20:04	18:40	21 08:45 (2)	16:22
9	04:35	05:32	06:38	07:42	08:26 (2)	07:52
	22:20	21:23	20:01	18:38	20 08:54 (4)	16:20
10	04:36	05:34	06:40	07:44	08:30 (2)	07:55
	22:19	21:21	19:59	18:35	19 08:58 (4)	16:18
11	04:38	05:36	06:42	07:46	08:44 (4)	07:57
	22:18	21:18	19:56	18:32	16 09:00 (4)	16:16
12	04:39	05:38	06:44	07:49	08:43 (4)	07:59
	22:17	21:16	19:53	18:29	18 09:01 (4)	16:14
13	04:41	05:41	06:47	07:51	08:41 (4)	08:01
	22:15	21:14	19:50	18:27	20 09:01 (4)	16:12
14	04:42	05:43	06:49	07:52 (3)	07:53	08:04
	22:14	21:11	19:47	18:24	21 09:02 (4)	16:10
15	04:44	05:45	06:51	07:50 (3)	07:55	08:06
	22:13	21:09	19:45	18:21	22 09:02 (4)	16:08
16	04:45	05:47	06:53	07:48 (3)	07:57	08:08
	22:11	21:06	19:42	18:19	23 09:02 (4)	16:06
17	04:47	05:49	06:55	07:48 (3)	08:00	08:10
	22:10	21:04	19:39	18:16	22 09:02 (4)	16:04
18	04:49	05:51	06:57	07:47 (3)	08:02	08:13
	22:08	21:01	19:36	18:13	22 09:01 (4)	16:02
19	04:50	05:53	06:59	07:46 (3)	08:04	08:15
	22:06	20:58	19:33	18:11	21 09:00 (4)	16:01
20	04:52	05:56	07:01	07:45 (3)	08:06	08:17
	22:05	20:56	19:31	18:08	19 09:00 (4)	15:59
21	04:54	05:58	07:03	07:45 (3)	08:09	08:19
	22:03	20:53	19:28	18:06	17 08:58 (4)	15:57
22	04:56	06:00	07:06	07:44 (3)	08:11	08:21
	22:01	20:51	19:25	18:03	14 08:57 (4)	15:56
23	04:58	06:02	07:08	07:44 (3)	08:13	08:23
	22:00	20:48	19:22	18:00	9 08:54 (4)	15:54
24	05:00	06:04	07:10	07:44 (3)	08:15	08:25
	21:58	20:45	19:19	17:58	15:53	24 09:54 (1)
25	05:01	06:06	07:12	07:45 (3)	07:18	08:28
	21:56	20:43	19:16	17:55	15:51	24 09:54 (1)
26	05:03	06:08	07:14	07:46 (3)	07:20	08:30
	21:54	20:40	19:14	17:53	15:50	24 09:55 (1)
27	05:05	06:10	07:16	07:48 (3)	07:22	08:32
	21:52	20:37	19:11	17:50	15:48	24 09:55 (1)
28	05:07	06:13	07:18	07:51 (3)	07:25	08:34
	21:50	20:35	19:08	17:48	15:47	24 09:55 (1)
29	05:09	06:15	07:20	08:19 (2)	07:27	08:35
	21:48	20:32	19:05	17:45	15:46	24 09:55 (1)
30	05:11	06:17	07:23	08:19 (2)	07:29	08:37
	21:46	20:29	19:02	17:43	15:45	23 09:56 (1)
31	05:13	06:19		07:32		09:07
	21:44	20:26		16:41		15:44
Potential sun hours	538	474	386	321	241	207
Total, worst case			691	521	386	359
Sun reduction			0.43	0.31	0.15	0.13
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.95	0.90	0.53	0.53
Total reduction			0.35	0.23	0.07	0.06
Total, real			240	122	27	21

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: X - Plesini

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 15:45	08:27 16:46	07:19 17:52	06:54 20:01	17:48 (8) 21:07	19:42 (10) 22:08
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	17:48 (8) 21:09	19:43 (10) 22:10
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	17:48 (8) 21:12	19:45 (10) 22:11
4	09:05 15:49	08:21 16:53	07:11 17:59	06:45 20:08	17:49 (8) 21:14	19:47 (10) 22:13
5	09:05 15:51	08:18 16:55	07:09 18:01	06:43 20:10	17:50 (8) 21:16	19:48 (10) 22:14
6	09:04 15:52	08:16 16:58	07:06 18:03	06:40 20:12	17:51 (8) 21:18	19:49 (10) 22:15
7	09:03 15:54	08:14 17:00	07:03 18:05	06:37 20:14	17:52 (8) 21:20	19:50 (10) 22:17
8	09:03 15:56	08:12 17:02	07:00 18:08	06:34 20:16	17:54 (8) 21:22	19:51 (10) 22:18
9	09:02 15:57	08:09 17:05	06:58 18:10	17:11 (8) 20:19	17:56 (8) 21:25	19:52 (10) 22:19
10	09:01 15:59	08:07 17:07	06:55 18:12	17:06 (8) 20:21	17:58 (8) 21:27	19:53 (10) 22:20
11	09:00 16:01	08:05 17:10	06:52 18:15	17:04 (8) 20:23	18:01 (8) 21:29	19:54 (10) 22:21
12	08:59 16:03	08:02 17:12	06:49 18:17	17:01 (8) 20:25	18:02 (8) 21:31	19:55 (10) 22:22
13	08:58 16:05	08:00 17:14	06:47 18:19	16:59 (8) 20:27	19:51 (10) 21:33	19:56 (10) 22:23
14	08:57 16:07	07:58 17:17	06:44 18:21	16:57 (8) 20:30	19:48 (10) 21:35	19:57 (10) 22:24
15	08:55 16:08	07:55 17:19	06:41 18:23	16:55 (8) 20:32	19:46 (10) 21:37	19:59 (10) 22:25
16	08:54 16:10	07:53 17:21	06:38 18:26	16:55 (8) 20:34	19:44 (10) 21:39	19:59 (10) 22:26
17	08:53 16:13	07:50 17:24	06:36 18:28	16:53 (8) 20:36	19:43 (10) 21:41	19:59 (10) 22:27
18	08:51 16:15	07:48 17:26	06:33 18:30	16:52 (8) 20:38	19:42 (10) 21:43	19:59 (10) 22:28
19	08:50 16:17	07:45 17:29	06:30 18:32	16:51 (8) 20:41	19:41 (10) 21:45	19:59 (10) 22:29
20	08:48 16:19	07:43 17:31	06:27 18:35	16:50 (8) 20:43	19:40 (10) 21:47	19:59 (10) 22:30
21	08:47 16:21	07:40 17:33	06:24 18:37	16:49 (8) 20:45	19:40 (10) 21:49	19:59 (10) 22:31
22	08:45 16:23	07:38 17:36	06:22 18:39	16:49 (8) 20:47	19:39 (10) 21:51	19:59 (10) 22:32
23	08:44 16:25	07:35 17:38	06:19 18:41	16:48 (8) 20:50	19:39 (10) 21:53	19:59 (10) 22:33
24	08:42 16:28	07:33 17:40	06:16 18:43	16:48 (8) 20:52	19:39 (10) 21:55	19:59 (10) 22:34
25	08:40 16:30	07:30 17:43	06:13 18:46	16:47 (8) 20:54	19:39 (10) 21:57	19:59 (10) 22:35
26	08:38 16:32	07:27 17:45	06:10 18:48	16:47 (8) 20:56	19:38 (10) 21:59	19:59 (10) 22:36
27	08:37 16:34	07:25 17:47	06:08 18:50	16:47 (8) 20:58	19:39 (10) 22:00	19:59 (10) 22:37
28	08:35 16:37	07:22 17:49	06:05 18:52	16:47 (8) 21:01	19:40 (10) 22:02	19:59 (10) 22:38
29	08:33 16:39		07:02 19:54	17:47 (8) 21:03	19:40 (10) 22:04	19:59 (10) 22:39
30	08:31 16:41		06:59 19:57	17:47 (8) 21:05	19:41 (10) 22:05	19:59 (10) 22:40
31	08:29 16:44		06:56 19:59	17:47 (8) 18:44 (7)	19:41 (10) 22:07	19:59 (10) 22:41
Potential sun hours	227	262	365	429	515	539
Total, worst case			1325	862	67	
Sun reduction			0.37	0.46	0.58	
Oper. time red.			0.93	0.93	0.93	
Wind dir. red.			0.98	0.97	0.96	
Total reduction			0.33	0.42	0.52	
Total, real			444	358	35	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: X - Plesini

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	18:01 (8)	07:24	17:40 (8)
2	22:26	21:41	20:23	18:19 (8)	18:59	18:28 (7)
3	04:27	05:17	06:23	17:57 (8)	07:26	17:41 (8)
4	22:25	21:39	20:20	18:22 (8)	18:57	18:25 (7)
5	04:28	05:19	06:25	17:54 (8)	07:29	17:43 (8)
6	22:25	21:37	20:18	18:24 (8)	18:54	18:09 (8)
7	04:29	05:21	06:27	17:52 (8)	07:31	17:46 (8)
8	22:24	21:35	20:15	18:25 (8)	18:51	18:06 (8)
9	04:30	05:23	06:29	17:49 (8)	07:33	17:52 (8)
10	22:23	21:32	20:12	18:27 (8)	18:48	18:00 (8)
11	04:31	05:25	06:31	17:47 (8)	07:35	17:45
12	22:22	21:30	20:09	18:28 (8)	18:45	16:26
13	04:32	05:28	06:34	17:46 (8)	07:37	16:26
14	22:22	21:28	20:07	18:28 (8)	18:43	16:24
15	04:33	05:30	06:36	17:44 (8)	07:39	16:24
16	22:21	21:25	20:05 (10)	18:29 (8)	18:40	16:22
17	04:35	05:32	06:38	17:43 (8)	07:42	16:22
18	22:20	21:23	20:08 (10)	18:30 (8)	18:37	16:20
19	04:36	05:34	06:40	17:41 (8)	07:44	16:20
20	22:18	21:20	20:10 (10)	18:30 (8)	18:34	16:18
21	04:37	05:36	06:42	17:40 (8)	07:46	16:18
22	22:17	21:18	20:12 (10)	18:30 (8)	18:32	16:16
23	04:39	05:38	06:44	17:39 (8)	07:48	16:16
24	22:16	21:16	20:13 (10)	18:36 (7)	18:29	16:14
25	04:40	05:40	06:46	17:38 (8)	07:50	16:14
26	22:15	21:13	20:14 (10)	18:38 (7)	18:26	16:12
27	04:42	05:42	06:48	17:37 (8)	07:53	16:12
28	22:13	21:11	20:14 (10)	18:40 (7)	18:24	16:10
29	04:43	05:45	06:50	17:36 (8)	07:55	16:10
30	22:12	21:08	20:15 (10)	18:41 (7)	18:21	16:08
31	04:45	05:47	06:52	17:36 (8)	07:57	16:08
32	22:11	21:06	20:15 (10)	18:41 (7)	18:18	16:06
33	04:47	05:49	06:55	17:35 (8)	07:59	16:06
34	22:09	21:03	20:16 (10)	18:42 (7)	18:16	16:04
35	04:48	05:51	06:57	17:35 (8)	08:02	16:04
36	22:08	21:01	20:15 (10)	18:42 (7)	18:13	16:02
37	04:50	05:53	06:59	17:34 (8)	08:04	16:02
38	22:06	20:58	20:15 (10)	18:42 (7)	18:10	16:00
39	04:52	05:55	07:01	17:34 (8)	08:06	16:00
40	22:04	20:55	20:14 (10)	18:42 (7)	18:08	15:59
41	04:54	05:57	07:03	17:35 (8)	08:08	15:59
42	22:03	20:53	20:14 (10)	18:43 (7)	18:05	15:57
43	04:56	05:59	07:05	17:34 (8)	08:11	15:57
44	22:01	20:50	20:14 (10)	18:42 (7)	18:03	15:55
45	04:57	06:02	07:07	17:34 (8)	08:13	15:55
46	21:59	20:47	20:13 (10)	18:42 (7)	18:00	15:54
47	04:59	06:04	07:09	17:34 (8)	08:15	15:54
48	21:57	20:45	20:12 (10)	18:41 (7)	17:58	15:52
49	05:01	06:06	07:12	17:35 (8)	07:17	15:52
50	21:55	20:42	20:10 (10)	18:40 (7)	16:55	15:51
51	05:03	06:08	07:14	17:35 (8)	07:20	15:51
52	21:53	20:39	20:07 (10)	18:39 (7)	16:53	15:49
53	05:05	06:10	07:16	17:35 (8)	07:22	15:49
54	21:51	20:37	20:04 (10)	18:38 (7)	16:50	15:48
55	05:07	06:12	07:18	17:36 (8)	07:24	15:48
56	21:49	20:34	20:03 (10)	18:36 (7)	16:48	15:47
57	05:09	06:14	07:20	17:38 (8)	07:26	15:47
58	21:47	20:31	20:00 (10)	18:34 (7)	16:45	15:46
59	05:11	06:17	07:22	17:39 (8)	07:29	15:46
60	21:45	20:29	19:57 (10)	18:31 (7)	16:43	15:44
61	05:13	06:19	18:10 (8)	16:40	15:44	15:44
62	21:43	20:26	18:11 (8)	16:40	15:44	15:44
63	Potential sun hours	538	474	386	321	241
64	Total, worst case		522	1629	141	207
65	Sun reduction		0.55	0.43	0.31	
66	Oper. time red.		0.93	0.93	0.93	
67	Wind dir. red.		0.96	0.98	0.98	
68	Total reduction		0.49	0.39	0.28	
69	Total, real		255	638	39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometņu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: Y - Silkalni

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:08	04:26 22:26	05:15 21:41	06:21 20:23	07:24 18:59	07:33 16:38	08:39 15:43
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	04:32 22:10	04:27 22:25	05:17 21:39	06:23 20:20	07:27 18:57	07:36 16:36	08:41 15:42
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	04:31 22:11	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 16:33	08:42 15:41
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:26 21:14	04:29 22:13	04:29 22:24	05:21 21:34	06:27 20:15	07:31 18:51	07:40 16:31	08:44 15:40
5	09:05 15:51	08:18 16:55	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14	04:30 22:23	05:23 21:32	06:29 20:12	07:33 18:48	07:43 16:29	08:46 15:40
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:27 22:15	04:31 22:22	05:26 21:30	06:31 20:09	07:35 18:46	07:45 16:27	08:47 15:39
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:19 21:20	04:27 22:17	04:32 22:21	05:28 21:28	06:34 20:07	07:37 18:43	07:47 16:24	08:49 15:38
8	09:02 15:56	08:12 17:03	07:00 18:08	06:34 20:16	05:17 21:22	04:26 22:18	04:34 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 16:22	08:50 15:37
9	09:02 15:58	08:09 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19	04:35 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 16:20	08:52 15:37
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20	04:36 22:18	05:34 21:20	06:40 19:58	07:44 18:35	07:54 16:18	08:53 15:36
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:10 21:29	04:24 22:21	04:38 22:17	05:36 21:18	06:42 19:55	07:46 18:32	07:56 16:16	08:55 15:36
12	08:59 16:03	08:02 17:12	06:49 18:17	06:23 20:25	05:08 21:31	04:23 22:22	04:39 22:16	05:38 21:16	06:44 19:53	07:48 18:29	07:59 16:14	08:56 15:36
13	08:58 16:05	08:00 17:14	06:47 18:19	06:21 20:27	05:06 21:33	04:22 22:23	04:40 22:15	05:40 21:13	06:46 19:50	07:50 18:26	08:01 16:12	08:57 15:35
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24	04:42 22:13	05:42 21:11	06:48 19:47	07:53 18:24	08:03 16:10	08:58 15:35
15	08:55 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37	04:22 22:24	04:44 22:12	05:45 21:08	06:50 19:44	07:55 18:21	08:05 16:08	08:59 15:35
16	08:54 16:11	07:53 17:22	06:38 18:26	06:13 20:34	05:00 21:39	04:21 22:25	04:45 22:11	05:47 21:06	06:53 19:41	07:57 18:18	08:08 16:06	09:00 15:35
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	04:58 21:41	04:21 22:25	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 16:04	09:01 15:35
18	08:51 16:15	07:48 17:26	06:33 18:30	06:07 20:38	04:56 21:43	04:21 22:26	04:49 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 16:02	09:02 15:35
19	08:50 16:17	07:45 17:29	06:30 18:32	06:05 20:41	04:54 21:45	04:21 22:26	04:50 22:06	05:53 20:58	06:59 19:33	08:04 18:11	08:14 16:01	09:03 15:35
20	08:48 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:47	04:21 22:27	04:52 22:04	05:55 20:55	07:01 19:30	08:06 18:08	08:16 15:59	09:04 15:36
21	08:47 16:21	07:40 17:33	06:24 18:37	05:59 20:45	04:50 21:49	04:21 22:27	04:54 22:03	05:57 20:53	07:03 19:27	08:08 18:05	08:19 15:57	09:04 15:36
22	08:45 16:23	07:38 17:36	06:22 18:39	05:57 20:47	04:48 21:51	04:21 22:27	04:56 22:01	06:00 20:50	07:05 19:25	08:11 18:03	08:21 15:56	09:05 15:37
23	08:44 16:25	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:22 22:27	04:58 21:59	06:02 20:48	07:07 19:22	08:13 18:00	08:23 15:54	09:05 15:37
24	08:42 16:28	07:33 17:40	06:16 18:43	05:51 20:52	04:45 21:55	04:22 22:27	04:59 21:57	06:04 20:45	07:09 19:19	08:15 17:58	08:25 15:52	09:06 15:38
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:27	05:01 21:55	06:06 20:42	07:12 19:16	07:17 18:55	08:27 15:51	09:06 15:38
26	08:38 16:32	07:27 17:45	06:10 18:48	05:46 20:56	04:42 21:58	04:23 22:27	05:03 21:53	06:08 20:40	07:14 19:13	07:20 18:53	08:29 15:50	09:06 15:39
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:58	04:40 22:00	04:23 22:27	05:05 21:51	06:10 20:37	07:16 19:11	07:22 18:50	08:31 15:48	09:06 15:40
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:39 22:02	04:24 22:27	05:07 21:49	06:12 20:34	07:18 19:08	07:24 18:48	08:33 15:47	09:07 15:41
29	08:33 16:39		07:02 19:54	05:39 21:03	04:37 22:04	04:25 22:27	05:09 21:47	06:15 20:31	07:20 19:05	07:27 18:45	08:35 15:46	09:07 15:42
30	08:31 16:41		06:59 19:57	05:36 21:05	04:36 22:05	04:25 22:26	05:11 21:45	06:17 20:29	07:22 19:02	07:29 18:43	08:37 15:45	09:07 15:43
31	08:29 16:44		06:57 19:59		04:34 22:07		05:13 21:43	06:19 20:26		07:31 18:40		09:06 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: AB - Svetupe

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:08	04:26 22:26	05:15 21:41	06:21 20:23	07:24 18:59	07:33 16:38	08:39 15:43
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	04:32 22:10	04:27 22:25	05:17 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:42
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	04:31 22:11	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 16:33	08:42 15:41
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:27 21:14	04:30 22:13	04:29 22:24	05:21 21:35	06:27 20:15	07:31 18:51	07:40 16:31	08:44 15:40
5	09:05 15:51	08:18 16:56	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14	04:30 22:23	05:24 21:32	06:29 20:12	07:33 18:48	07:43 16:29	08:46 15:40
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:27 22:15	04:31 22:22	05:26 21:30	06:32 20:09	07:35 18:46	07:45 16:27	08:47 15:39
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:19 21:20	04:27 22:17	04:32 22:22	05:28 21:28	06:34 20:07	07:37 18:43	07:47 16:24	08:49 15:38
8	09:03 15:56	08:12 17:03	07:01 18:08	06:34 20:16	05:17 21:23	04:26 22:18	04:34 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 16:22	08:50 15:38
9	09:02 15:58	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19	04:35 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 16:20	08:52 15:37
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20	04:36 22:18	05:34 21:21	06:40 19:58	07:44 18:35	07:54 16:18	08:53 15:36
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:10 21:29	04:24 22:21	04:38 22:17	05:36 21:18	06:42 19:56	07:46 18:32	07:56 16:16	08:55 15:36
12	08:59 16:03	08:03 17:12	06:50 18:17	06:23 20:25	05:08 21:31	04:23 22:22	04:39 22:16	05:38 21:16	06:44 19:53	07:48 18:29	07:59 16:14	08:56 15:36
13	08:58 16:05	08:00 17:15	06:47 18:19	06:21 20:27	05:06 21:33	04:23 22:23	04:41 22:15	05:40 21:13	06:46 19:50	07:50 18:26	08:01 16:12	08:57 15:35
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24	04:42 22:13	05:43 21:11	06:48 19:47	07:53 18:24	08:03 16:10	08:58 15:35
15	08:55 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37	04:22 22:24	04:44 22:12	05:45 21:08	06:50 19:44	07:55 18:21	08:05 16:08	08:59 15:35
16	08:54 16:11	07:53 17:22	06:38 18:26	06:13 20:34	05:00 21:39	04:21 22:25	04:45 22:11	05:47 21:06	06:53 19:41	07:57 18:18	08:08 16:06	09:00 15:35
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	04:58 21:41	04:21 22:26	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 16:04	09:01 15:35
18	08:51 16:15	07:48 17:26	06:33 18:30	06:07 20:39	04:56 21:43	04:21 22:26	04:49 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 16:02	09:02 15:35
19	08:50 16:17	07:45 17:29	06:30 18:32	06:05 20:41	04:54 21:45	04:21 22:26	04:50 22:06	05:53 20:58	06:59 19:33	08:04 18:11	08:14 16:01	09:03 15:36
20	08:48 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:47	04:21 22:27	04:52 22:04	05:55 20:55	07:01 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	08:47 16:21	07:40 17:33	06:25 18:37	05:59 20:45	04:50 21:49	04:21 22:27	04:54 22:03	05:57 20:53	07:03 19:27	08:08 18:05	08:19 15:57	09:04 15:36
22	08:45 16:23	07:38 17:36	06:22 18:39	05:57 20:47	04:48 21:51	04:21 22:27	04:56 22:01	06:00 20:50	07:05 19:25	08:11 18:03	08:21 15:56	09:05 15:37
23	08:44 16:26	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:22 22:27	04:58 21:59	06:02 20:48	07:07 19:22	08:13 18:00	08:23 15:54	09:05 15:37
24	08:42 16:28	07:33 17:40	06:16 18:43	05:51 20:52	04:45 21:55	04:22 22:28	04:59 21:57	06:04 20:45	07:09 19:19	08:15 17:58	08:25 15:52	09:06 15:38
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:27	05:01 21:55	06:06 20:42	07:12 19:16	07:17 16:55	08:27 15:51	09:06 15:38
26	08:38 16:32	07:27 17:45	06:11 18:48	05:46 20:56	04:42 21:59	04:23 22:27	05:03 21:53	06:08 20:40	07:14 19:13	07:20 16:53	08:29 15:50	09:06 15:39
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:58	04:40 22:00	04:23 22:27	05:05 21:52	06:10 20:37	07:16 19:11	07:22 16:50	08:31 15:48	09:07 15:40
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:39 22:02	04:24 22:27	05:07 21:50	06:12 20:34	07:18 19:08	07:24 16:48	08:33 15:47	09:07 15:41
29	08:33 16:39		07:02 19:54	05:39 21:03	04:37 22:04	04:25 22:27	05:09 21:47	06:15 20:31	07:20 19:05	07:27 16:45	08:35 15:46	09:07 15:42
30	08:31 16:41		06:59 19:57	05:36 21:05	04:36 22:05	04:25 22:26	05:11 21:45	06:17 20:29	07:22 19:02	07:29 16:43	08:37 15:45	09:07 15:43
31	08:29 16:44		06:57 19:59		04:34 22:07		05:13 21:43	06:19 20:26		07:31 16:40		09:06 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: AC - Tamisari

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 21:42	06:21 20:24	07:10 (3) 19:00	07:25 16:38	08:39 15:44
2	04:27 22:26	05:17 21:39	06:23 20:21	07:10 (3) 18:57	07:27 16:36	08:41 15:42
3	04:28 22:25	05:19 21:37	06:25 20:18	07:10 (3) 18:54	07:29 16:34	08:43 15:41
4	04:29 22:24	05:22 21:35	06:27 20:15	07:10 (3) 18:51	07:31 16:31	08:44 15:41
5	04:30 22:24	05:24 21:33	06:30 20:13	07:11 (3) 18:49	07:33 16:29	08:46 15:40
6	04:31 22:23	05:26 21:30	07:58 (2) 20:10	07:12 (3) 18:46	07:35 16:27	08:48 15:39
7	04:32 22:22	05:28 21:28	07:54 (2) 20:07	07:12 (3) 18:43	07:38 16:25	08:49 15:38
8	04:34 22:21	05:30 21:26	07:52 (2) 20:04	07:14 (3) 18:40	07:40 16:22	08:51 15:38
9	04:35 22:20	05:32 21:23	07:50 (2) 20:01	07:16 (3) 18:38	07:42 16:20	08:52 15:37
10	04:36 22:19	05:34 21:21	07:48 (2) 19:59	07:22 (3) 18:35	07:44 16:18	08:54 15:37
11	04:38 22:18	05:36 21:18	07:47 (2) 19:56	07:43 (2) 18:32	07:57 16:16	08:55 15:36
12	04:39 22:17	05:38 21:16	07:46 (2) 19:53	07:46 (2) 18:29	07:59 16:14	08:56 15:36
13	04:41 22:15	05:41 21:14	07:44 (2) 19:50	07:50 (2) 18:27	08:01 16:12	08:58 15:35
14	04:42 22:14	05:43 21:11	07:43 (2) 19:47	07:53 18:24	08:04 16:10	08:59 15:35
15	04:44 22:13	05:45 21:09	07:42 (2) 19:45	07:55 18:21	08:06 16:08	09:00 15:35
16	04:45 22:11	05:47 21:06	07:41 (2) 19:42	07:57 18:19	08:08 16:06	09:01 15:35
17	04:47 22:10	05:49 21:03	07:40 (2) 19:39	08:00 18:16	08:10 16:04	09:02 15:35
18	04:49 22:08	05:51 21:01	07:40 (2) 19:36	08:02 18:13	08:13 16:02	09:03 15:35
19	04:50 22:06	05:53 20:58	07:39 (2) 19:33	08:04 18:11	08:15 16:01	09:03 15:36
20	04:52 22:05	05:55 20:56	07:26 (3) 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	04:54 22:03	05:58 20:53	07:22 (3) 19:28	08:09 18:06	08:19 15:57	09:05 15:36
22	04:56 22:01	06:00 20:50	07:19 (3) 19:25	08:11 18:03	08:21 15:56	09:05 15:37
23	04:58 21:59	06:02 20:48	07:17 (3) 19:22	08:13 18:00	08:23 15:54	09:06 15:37
24	05:00 21:58	06:04 20:45	07:16 (3) 19:19	08:15 17:58	08:25 15:53	09:06 15:38
25	05:01 21:56	06:06 20:43	07:15 (3) 19:16	08:18 17:55	08:27 15:51	09:07 15:38
26	05:03 21:54	06:08 20:40	07:14 (3) 19:14	08:31 (4) 16:53	08:29 15:50	09:07 15:39
27	05:05 21:52	06:10 20:37	07:13 (3) 19:11	08:29 (4) 16:50	08:31 15:48	09:07 15:40
28	05:07 21:50	06:13 20:34	07:12 (3) 19:08	08:27 (4) 16:48	08:33 15:47	09:07 15:41
29	05:09 21:48	06:15 20:32	07:11 (3) 19:05	08:25 (4) 16:45	08:35 15:46	09:07 15:42
30	05:11 21:46	06:17 20:29	07:11 (3) 19:02	08:24 (4) 16:43	08:37 15:45	09:07 15:43
31	05:13 21:44	06:19 20:26	07:11 (3) 18:28 (2)	07:31 16:41		09:07 15:44
Potential sun hours	538	474	386	321	241	207
Total, worst case		1413	821	317	712	534
Sun reduction		0.55	0.43	0.31	0.15	0.13
Oper. time red.		0.93	0.93	0.93	0.93	0.93
Wind dir. red.		1.00	0.99	0.92	0.48	0.48
Total reduction		0.45	0.35	0.24	0.06	0.05
Total, real		640	290	75	44	27

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: AE - Vaverites

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07	11:06 (12)	08:27	09:05 (13)	07:20	06:54
15:45	96	13:43 (6)	16:46	13:19 (11)	17:52	20:01
2	09:06	11:07 (12)	08:25	09:00 (13)	07:17	06:51
15:47	94	13:43 (6)	16:48	13:17 (11)	17:54	20:03
3	09:06	11:07 (12)	08:23	08:59 (13)	07:14	06:48
15:48	93	13:43 (6)	16:51	13:16 (11)	17:56	20:06
4	09:05	11:07 (12)	08:21	08:57 (13)	07:11	06:45
15:49	92	13:42 (6)	16:53	13:15 (11)	17:59	20:08
5	09:05	11:08 (12)	08:19	08:56 (13)	07:09	06:43
15:51	90	13:41 (6)	16:55	13:13 (11)	18:01	20:10
6	09:04	11:09 (12)	08:16	08:56 (13)	07:06	06:40
15:52	88	13:41 (6)	16:58	13:12 (11)	18:03	20:12
7	09:04	11:10 (12)	08:14	08:54 (13)	07:03	06:37
15:54	81	13:15 (11)	17:00	13:08 (11)	18:06	20:14
8	09:03	11:10 (12)	08:12	08:54 (13)	07:01	06:34
15:56	80	13:15 (11)	17:02	13:02 (11)	18:08	20:17
9	09:02	11:10 (12)	08:10	08:53 (13)	06:58	06:32
15:57	82	13:16 (11)	17:05	09:21 (13)	18:10	20:19
10	09:01	11:11 (12)	08:07	08:54 (13)	06:55	06:29
15:59	81	13:17 (11)	17:07	09:22 (13)	18:12	20:21
11	09:00	11:12 (12)	08:05	08:53 (13)	06:52	07:22 (14)
16:01	81	13:17 (11)	17:10	09:21 (13)	18:15	07:25 (14)
12	08:59	11:13 (12)	08:03	08:53 (13)	06:50	07:16 (14)
16:03	79	13:17 (11)	17:12	09:21 (13)	18:17	07:30 (14)
13	08:58	11:14 (12)	08:00	08:53 (13)	06:47	07:13 (14)
16:05	78	13:18 (11)	17:14	09:22 (13)	18:19	07:32 (14)
14	08:57	11:14 (12)	07:58	08:53 (13)	06:44	07:11 (14)
16:06	79	13:18 (11)	17:17	09:21 (13)	18:21	07:33 (14)
15	08:56	11:16 (12)	07:55	08:54 (13)	06:41	07:10 (14)
16:08	77	13:19 (11)	17:19	09:21 (13)	18:24	07:35 (14)
16	08:54	11:16 (12)	07:53	08:54 (13)	06:38	07:08 (14)
16:10	76	13:19 (11)	17:22	09:20 (13)	18:26	07:36 (14)
17	08:53	11:17 (12)	07:51	08:55 (13)	06:36	07:07 (14)
16:12	75	13:19 (11)	17:24	09:19 (13)	18:28	07:36 (14)
18	08:52	11:19 (12)	07:48	08:56 (13)	06:33	07:06 (14)
16:15	73	13:20 (11)	17:26	09:19 (13)	18:30	07:36 (14)
19	08:50	11:20 (12)	07:46	08:57 (13)	06:30	07:05 (14)
16:17	71	13:21 (11)	17:29	09:17 (13)	18:32	07:36 (14)
20	08:49	11:22 (12)	07:43	08:58 (13)	06:27	07:04 (14)
16:19	67	13:21 (11)	17:31	09:15 (13)	18:35	07:36 (14)
21	08:47	11:24 (12)	07:40	09:02 (13)	06:25	07:05 (14)
16:21	64	13:21 (11)	17:33	09:13 (13)	18:37	07:37 (14)
22	08:46	11:28 (12)	07:38	06:22	07:04 (14)	05:57
16:23	56	13:21 (11)	17:36	18:39	07:36 (14)	20:48
23	08:44	12:32 (11)	07:35	06:19	07:04 (14)	05:54
16:25	49	13:21 (11)	17:38	18:41	07:36 (14)	20:50
24	08:42	12:32 (11)	07:33	06:16	07:04 (14)	05:51
16:28	49	13:21 (11)	17:40	18:44	07:35 (14)	20:52
25	08:41	12:33 (11)	07:30	06:13	07:04 (14)	05:49
16:30	48	13:21 (11)	17:43	18:46	07:34 (14)	20:54
26	08:39	12:34 (11)	07:27	06:11	07:04 (14)	05:46
16:32	47	13:21 (11)	17:45	18:48	07:32 (14)	20:56
27	08:37	12:35 (11)	07:25	06:08	07:06 (14)	05:44
16:34	46	13:21 (11)	17:47	18:50	07:32 (14)	20:59
28	08:35	12:36 (11)	07:22	06:05	07:06 (14)	05:41
16:37	45	13:21 (11)	17:50	18:52	07:30 (14)	21:01
29	08:33	12:36 (11)	07:20	06:02	08:07 (14)	05:39
16:39	44	13:20 (11)	17:49	19:55	08:28 (14)	21:03
30	08:31	12:37 (11)	07:18	06:59	08:09 (14)	05:36
16:41	42	13:19 (11)	17:47	19:57	08:25 (14)	21:05
31	08:29	12:38 (11)	07:16	06:57	08:13 (14)	05:34
16:44	41	13:19 (11)	17:46	19:59	08:21 (14)	21:07
Potential sun hours	227	262	365	429	515	539
Total, worst case	2164	682	513			
Sun reduction	0.13	0.22	0.37			
Oper. time red.	0.93	0.93	0.93			
Wind dir. red.	0.16	0.55	0.98			
Total reduction	0.01	0.08	0.24			
Total, real	30	55	121			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: AE - Vaverites

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September		October		November		December				
1	04:26	05:15	06:21		07:24	07:54 (14)	07:34	08:23 (13)	08:39	10:55 (12)			
	22:26	21:41	20:23		18:59	16	08:10 (14)	16:38	28	08:51 (13)	15:43	81	13:00 (11)
2	04:27	05:17	06:23		07:27	07:57 (14)	07:36	08:23 (13)	08:41	10:55 (12)			
	22:26	21:39	20:21		18:57	9	08:06 (14)	16:36	27	08:50 (13)	15:42	80	13:00 (11)
3	04:28	05:19	06:25		07:29		07:38	08:24 (13)	08:43	10:55 (12)			
	22:25	21:37	20:18		18:54		16:33	34	12:34 (11)	15:41	81	13:00 (11)	
4	04:29	05:21	06:27		07:31		07:41	08:24 (13)	08:44	10:55 (12)			
	22:24	21:35	20:15		18:51		16:31	43	12:38 (11)	15:40	80	13:00 (11)	
5	04:30	05:23	06:29		07:33		07:43	08:25 (13)	08:46	10:55 (12)			
	22:24	21:33	20:12		18:48		16:29	49	12:42 (11)	15:39	81	13:01 (11)	
6	04:31	05:25	06:31		07:35		07:45	08:26 (13)	08:48	10:55 (12)			
	22:23	21:30	20:10		18:46		16:26	49	12:43 (11)	15:39	86	13:26 (6)	
7	04:32	05:28	06:34		07:37		07:47	08:28 (13)	08:49	10:55 (12)			
	22:22	21:28	20:07		18:43		16:24	51	12:45 (11)	15:38	90	13:28 (6)	
8	04:33	05:30	06:36		07:40		07:50	08:29 (13)	08:51	10:56 (12)			
	22:21	21:26	20:04		18:40		16:22	51	12:46 (11)	15:37	91	13:30 (6)	
9	04:35	05:32	06:38		07:42		07:52	08:31 (13)	08:52	10:56 (12)			
	22:20	21:23	20:01		18:37		16:20	49	12:48 (11)	15:37	93	13:32 (6)	
10	04:36	05:34	06:40		07:44		07:54	08:36 (13)	08:54	10:56 (12)			
	22:19	21:21	19:58		18:35		16:18	43	12:50 (11)	15:36	94	13:32 (6)	
11	04:37	05:36	06:42		07:46		07:57	12:09 (11)	08:55	10:57 (12)			
	22:18	21:18	19:56		18:32		16:16	41	12:50 (11)	15:36	96	13:34 (6)	
12	04:39	05:38	06:44	08:06 (14)	07:48		07:59	12:09 (11)	08:56	10:57 (12)			
	22:16	21:16	19:53	6	08:12 (14)	18:29	16:14	42	12:51 (11)	15:35	96	13:34 (6)	
13	04:40	05:40	06:46	08:01 (14)	07:51		08:01	12:07 (11)	08:57	10:57 (12)			
	22:15	21:13	19:50	15	08:16 (14)	18:26	16:12	45	12:52 (11)	15:35	97	13:35 (6)	
14	04:42	05:42	06:48	07:58 (14)	07:53		08:03	12:07 (11)	08:59	10:58 (12)			
	22:14	21:11	19:47	20	08:18 (14)	18:24	16:10	46	12:53 (11)	15:35	97	13:36 (6)	
15	04:43	05:45	06:50	07:56 (14)	07:55		08:06	12:07 (11)	09:00	10:58 (12)			
	22:12	21:08	19:44	23	08:19 (14)	18:21	16:08	46	12:53 (11)	15:35	98	13:37 (6)	
16	04:45	05:47	06:53	07:54 (14)	07:57		08:08	12:07 (11)	09:01	10:59 (12)			
	22:11	21:06	19:42	26	08:20 (14)	18:18	16:06	47	12:54 (11)	15:35	96	13:37 (6)	
17	04:47	05:49	06:55	07:53 (14)	07:59		08:10	12:07 (11)	09:02	10:59 (12)			
	22:09	21:03	19:39	28	08:21 (14)	18:16	16:04	48	12:55 (11)	15:35	99	13:38 (6)	
18	04:48	05:51	06:57	07:52 (14)	08:02		08:12	12:06 (11)	09:02	11:00 (12)			
	22:08	21:01	19:36	29	08:21 (14)	18:13	16:02	49	12:55 (11)	15:35	98	13:39 (6)	
19	04:50	05:53	06:59	07:51 (14)	08:04		08:15	12:07 (11)	09:03	11:00 (12)			
	22:06	20:58	19:33	30	08:21 (14)	18:10	16:00	49	12:56 (11)	15:35	97	13:38 (6)	
20	04:52	05:55	07:01	07:51 (14)	08:06	09:36 (13)	08:17	11:03 (12)	09:04	11:00 (12)			
	22:05	20:56	19:30	31	08:22 (14)	18:08	4	09:40 (13)	12:56 (11)	15:36	99	13:39 (6)	
21	04:54	05:57	07:03	07:50 (14)	08:08	09:31 (13)	08:19	11:00 (12)	09:05	11:01 (12)			
	22:03	20:53	19:27	32	08:22 (14)	18:05	13	09:44 (13)	12:57 (11)	15:36	98	13:40 (6)	
22	04:55	06:00	07:05	07:49 (14)	08:11	09:29 (13)	08:21	10:58 (12)	09:05	11:01 (12)			
	22:01	20:50	19:25	33	08:22 (14)	18:03	18	09:47 (13)	12:57 (11)	15:36	98	13:40 (6)	
23	04:57	06:02	07:07	07:49 (14)	08:13	09:27 (13)	08:23	10:57 (12)	09:06	11:02 (12)			
	21:59	20:48	19:22	32	08:21 (14)	18:00	21	09:48 (13)	12:57 (11)	15:37	99	13:41 (6)	
24	04:59	06:04	07:10	07:49 (14)	08:15	09:25 (13)	08:25	10:56 (12)	09:06	11:02 (12)			
	21:58	20:45	19:19	31	08:20 (14)	17:58	23	09:48 (13)	12:58 (11)	15:37	98	13:41 (6)	
25	05:01	06:06	07:12	07:49 (14)	07:18	08:25 (13)	08:27	10:55 (12)	09:06	11:03 (12)			
	21:56	20:42	19:16	30	08:19 (14)	16:55	25	08:50 (13)	12:57 (11)	15:38	98	13:42 (6)	
26	05:03	06:08	07:14	07:49 (14)	07:20	08:23 (13)	08:29	10:55 (12)	09:07	11:03 (12)			
	21:54	20:40	19:13	29	08:18 (14)	16:53	27	08:50 (13)	12:58 (11)	15:39	99	13:42 (6)	
27	05:05	06:10	07:16	07:49 (14)	07:22	08:23 (13)	08:31	10:55 (12)	09:07	11:04 (12)			
	21:52	20:37	19:11	28	08:17 (14)	16:50	28	08:51 (13)	12:58 (11)	15:40	97	13:42 (6)	
28	05:07	06:12	07:18	07:50 (14)	07:24	08:23 (13)	08:33	10:54 (12)	09:07	11:04 (12)			
	21:50	20:34	19:08	27	08:17 (14)	16:48	27	08:50 (13)	12:58 (11)	15:41	99	13:43 (6)	
29	05:09	06:14	07:20	07:51 (14)	07:27	08:23 (13)	08:35	10:54 (12)	09:07	11:05 (12)			
	21:48	20:32	19:05	24	08:15 (14)	16:45	28	08:51 (13)	12:58 (11)	15:42	97	13:43 (6)	
30	05:11	06:17	07:22	07:52 (14)	07:29	08:22 (13)	08:37	10:54 (12)	09:07	11:05 (12)			
	21:46	20:29	19:02	21	08:13 (14)	16:43	29	08:51 (13)	12:58 (11)	15:43	96	13:42 (6)	
31	05:13	06:19			07:31	08:23 (13)			09:07	11:06 (12)			
	21:44	20:26			16:40	28	08:51 (13)		15:44	96	13:43 (6)		
Potential sun hours	539	475	386		321		241		207				
Total, worst case			495		296		1631		2905				
Sun reduction			0.43		0.31		0.15		0.13				
Oper. time red.			0.93		0.93		0.93		0.93				
Wind dir. red.			0.98		0.77		0.22		0.19				
Total reduction			0.28		0.15		0.02		0.02				
Total, real			137		46		37		46				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometņu iela 31
LV-1002 Rīga
+37129262684
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Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: AF - Veckastani
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January		February		March		April		May		June		
1	09:07		08:27		09:26 (1)	07:20		06:54	07:55 (4)	05:34	06:23 (3)	04:33	06:13 (2)
	15:46		16:46	32	09:58 (1)	17:52		20:01	23 08:18 (4)	21:08	29 06:52 (3)	22:09	50 07:03 (2)
2	09:06		08:25		09:25 (1)	07:17		06:51	07:55 (4)	05:31	06:24 (3)	04:32	06:14 (2)
	15:47		16:49	33	09:58 (1)	17:54		20:04	21 08:16 (4)	21:10	28 06:52 (3)	22:10	49 07:03 (2)
3	09:06		08:23		09:25 (1)	07:14		06:48	07:56 (4)	05:29	06:23 (3)	04:31	06:14 (2)
	15:48		16:51	34	09:59 (1)	17:57		20:06	18 08:14 (4)	21:12	28 06:51 (3)	22:12	48 07:02 (2)
4	09:05		08:21		09:24 (1)	07:12		06:46	07:59 (4)	05:27	06:22 (2)	04:30	06:14 (2)
	15:50		16:53	36	10:00 (1)	17:59		20:08	13 08:12 (4)	21:14	29 06:51 (2)	22:13	48 07:02 (2)
5	09:05		08:19		09:24 (1)	07:09		06:43		05:24	06:21 (2)	04:29	06:14 (2)
	15:51		16:56	36	10:00 (1)	18:01		20:10		21:16	32 06:53 (2)	22:15	48 07:02 (2)
6	09:04		08:17		09:24 (1)	07:06		06:40		05:22	06:20 (2)	04:28	06:14 (2)
	15:53		16:58	37	10:01 (1)	18:04		20:12		21:19	34 06:54 (2)	22:16	48 07:02 (2)
7	09:04		08:14		09:23 (1)	07:04		06:37		05:20	06:18 (2)	04:27	06:15 (2)
	15:54		17:00	38	10:01 (1)	18:06		20:15		21:21	38 06:56 (2)	22:17	48 07:03 (2)
8	09:03		08:12		09:23 (1)	07:01		06:35		05:17	06:17 (2)	04:26	06:15 (2)
	15:56		17:03	39	10:02 (1)	18:08		20:17		21:23	40 06:57 (2)	22:18	47 07:02 (2)
9	09:02		08:10		09:23 (1)	06:58		06:32		05:15	06:17 (2)	04:25	06:15 (2)
	15:58		17:05	38	10:01 (1)	18:10		20:19		21:25	41 06:58 (2)	22:19	47 07:02 (2)
10	09:01		08:08		09:23 (1)	06:55		06:29		05:13	06:16 (2)	04:24	06:16 (2)
	15:59		17:08	39	10:02 (1)	18:13		20:21		21:27	42 06:58 (2)	22:20	46 07:02 (2)
11	09:00		08:05		09:23 (1)	06:53		06:26		05:11	06:15 (2)	04:24	06:16 (2)
	16:01		17:10	39	10:02 (1)	18:15		20:23		21:29	44 06:59 (2)	22:21	46 07:02 (2)
12	08:59		08:03		09:24 (1)	06:50		06:24		05:08	06:14 (2)	04:23	06:16 (2)
	16:03		17:12	38	10:02 (1)	18:17		20:26		21:31	45 06:59 (2)	22:22	46 07:02 (2)
13	08:58		08:00		09:24 (1)	06:47		06:21		05:06	06:14 (2)	04:23	06:17 (2)
	16:05		17:15	37	10:01 (1)	18:19		20:28		21:34	46 07:00 (2)	22:23	46 07:03 (2)
14	08:57		07:58		09:24 (1)	06:44		06:18		05:04	06:13 (2)	04:22	06:17 (2)
	16:07		17:17	36	10:00 (1)	18:22		20:30		21:36	47 07:00 (2)	22:24	45 07:02 (2)
15	08:56		07:56		09:25 (1)	06:41		06:15		05:02	06:13 (2)	04:22	06:17 (2)
	16:09		17:19	35	10:00 (1)	18:24		20:32		21:38	47 07:00 (2)	22:25	45 07:02 (2)
16	08:55		07:53		09:25 (1)	06:39		06:13		05:00	06:12 (2)	04:22	06:18 (2)
	16:11		17:22	34	09:59 (1)	18:26		20:34		21:40	48 07:00 (2)	22:25	45 07:03 (2)
17	08:53		07:51		09:26 (1)	06:36		06:10		04:58	06:12 (2)	04:21	06:18 (2)
	16:13		17:24	33	09:59 (1)	18:28		20:37		21:42	48 07:00 (2)	22:26	45 07:03 (2)
18	08:52		07:48		09:27 (1)	06:33	9 07:06 (4)	06:07		04:56	06:12 (2)	04:21	06:18 (2)
	16:15		17:27	31	09:58 (1)	18:30		20:39		21:44	49 07:01 (2)	22:26	45 07:03 (2)
19	08:50		07:46		09:28 (1)	06:30	9 07:02 (4)	06:05		04:54	06:12 (2)	04:21	06:18 (2)
	16:17		17:29	28	09:56 (1)	18:33	16 07:18 (4)	20:41		21:46	49 07:01 (2)	22:27	45 07:03 (2)
20	08:49		07:43		09:30 (1)	06:28	9 07:01 (4)	06:02	9 06:35 (3)	04:52	06:11 (2)	04:21	06:19 (2)
	16:19		17:31	25	09:55 (1)	18:35	20 07:21 (4)	20:43	9 06:44 (3)	21:48	50 07:01 (2)	22:27	44 07:03 (2)
21	08:47		07:41		09:31 (1)	06:25	9 06:59 (4)	05:59	9 06:33 (3)	04:50	50 06:12 (2)	04:21	06:19 (2)
	16:21		17:34	22	09:53 (1)	18:37	22 07:21 (4)	20:45	14 06:47 (3)	21:50	50 07:02 (2)	22:28	44 07:03 (2)
22	08:46		07:38		09:33 (1)	06:22	22 06:57 (4)	05:57	14 06:30 (3)	04:49	50 06:11 (2)	04:21	06:19 (2)
	16:23		17:36	16	09:49 (1)	18:39	25 07:22 (4)	20:48	18 06:48 (3)	21:52	50 07:01 (2)	22:28	44 07:03 (2)
23	08:44		07:35		09:38 (1)	06:19	25 06:56 (4)	05:54	18 06:29 (3)	04:47	50 06:12 (2)	04:22	06:19 (2)
	16:26		17:38	6	09:44 (1)	18:42	26 07:22 (4)	20:50	21 06:50 (3)	21:53	50 07:02 (2)	22:28	45 07:04 (2)
24	08:42		07:33			06:16	26 06:55 (4)	05:52	21 06:27 (3)	04:45	50 06:11 (2)	04:22	06:19 (2)
	16:28		17:41			18:44	27 07:22 (4)	20:52	23 06:50 (3)	21:55	51 07:02 (2)	22:28	45 07:04 (2)
25	08:41		07:30			06:14	27 06:54 (4)	05:49	23 06:26 (3)	04:43	51 06:12 (2)	04:22	06:20 (2)
	16:30	7 09:36 (1)	17:43			18:46	28 07:22 (4)	20:54	25 06:51 (3)	21:57	50 07:02 (2)	22:28	45 07:05 (2)
26	08:39		07:28			06:11	28 06:54 (4)	05:46	25 06:26 (3)	04:42	50 06:12 (2)	04:23	06:20 (2)
	16:32	14 09:47 (1)	17:45			18:48	29 07:23 (4)	20:57	26 06:52 (3)	21:59	50 07:02 (2)	22:28	45 07:05 (2)
27	08:37		07:25			06:08	29 06:54 (4)	05:44	26 06:24 (3)	04:40	50 06:12 (2)	04:23	06:20 (2)
	16:35	19 09:50 (1)	17:48			18:50	28 07:22 (4)	20:59	28 06:52 (3)	22:01	50 07:02 (2)	22:28	46 07:06 (2)
28	08:35		07:22			06:05	29 06:53 (4)	05:41	28 06:24 (3)	04:39	50 06:12 (2)	04:24	06:20 (2)
	16:37	22 09:52 (1)	17:50			18:53	29 07:22 (4)	21:01	29 06:53 (3)	22:02	50 07:02 (2)	22:27	45 07:05 (2)
29	08:33		07:02			07:02	29 07:53 (4)	05:39	29 06:24 (3)	04:37	50 06:12 (2)	04:25	06:20 (2)
	16:39	25 09:53 (1)				19:55	28 08:21 (4)	21:03	29 06:53 (3)	22:04	50 07:02 (2)	22:27	46 07:06 (2)
30	08:31		07:00			07:00	28 07:54 (4)	05:36	29 06:23 (3)	04:36	50 06:13 (2)	04:25	06:21 (2)
	16:42	28 09:55 (1)				19:57	27 08:21 (4)	21:05	29 06:52 (3)	22:06	49 07:02 (2)	22:27	46 07:07 (2)
31	08:29		06:57			06:57	27 07:54 (4)			04:34			
	16:44	30 09:56 (1)				19:59	26 08:20 (4)			22:07	50 07:03 (2)		
Potential sun hours	227		262			365		429		515		539	
Total, worst case		145		742		340		326		1364			1382
Sun reduction		0.13		0.22		0.37		0.46		0.58			0.53
Oper. time red.		0.93		0.93		0.93		0.93		0.93			0.93
Wind dir. red.		0.65		0.65		0.99		0.97		0.95			0.95
Total reduction		0.08		0.13		0.32		0.40		0.49			0.45
Total, real		11		95		110		130		674			625

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: AF - Veckastani

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26 46	06:20 (2) 07:06 (2) 21:41	05:15 21:41 44	06:25 (2) 07:09 (2) 20:24	07:25 19:00	08:53 (1) 09:32 (1) 15:44
2	04:27 22:26 47	06:20 (2) 07:07 (2) 21:39	05:17 21:39 43	06:26 (2) 07:09 (2) 20:21	07:27 18:57 39	08:52 (1) 09:31 (1) 15:42
3	04:28 22:25 47	06:20 (2) 07:07 (2) 21:37	05:19 21:37 42	06:26 (2) 07:08 (2) 20:18	07:29 18:54 38	08:53 (1) 09:31 (1) 15:42
4	04:29 22:24 47	06:21 (2) 07:08 (2) 21:35	05:22 21:35 40	06:26 (2) 07:06 (2) 20:15	07:31 18:51 38	08:53 (1) 09:31 (1) 15:41
5	04:30 22:24 47	06:21 (2) 07:08 (2) 21:33	05:24 21:33 39	06:27 (2) 07:06 (2) 20:13	07:33 18:49 38	08:53 (1) 09:31 (1) 15:40
6	04:31 22:23 47	06:21 (2) 07:08 (2) 21:30	05:26 21:30 37	06:28 (2) 07:05 (2) 20:10	07:35 18:46 37	08:53 (1) 09:30 (1) 15:39
7	04:32 22:22 47	06:21 (2) 07:08 (2) 21:28	05:28 21:28 34	06:29 (2) 07:03 (2) 20:07	07:38 18:43 36	08:54 (1) 09:30 (1) 15:38
8	04:34 22:21 48	06:21 (2) 07:09 (2) 21:26	05:30 21:26 31	06:31 (2) 07:02 (2) 20:04	07:40 18:40 35	08:55 (1) 09:30 (1) 15:38
9	04:35 22:20 49	06:20 (2) 07:09 (2) 21:23	05:32 21:23 28	06:32 (2) 07:00 (2) 20:01	07:42 18:38 33	08:56 (1) 09:29 (1) 15:37
10	04:36 22:19 49	06:21 (2) 07:10 (2) 21:21	05:34 21:21 29	06:32 (3) 07:01 (3) 19:59	07:44 18:35 31	08:57 (1) 09:28 (1) 15:37
11	04:38 22:18 49	06:21 (2) 07:10 (2) 21:18	05:36 21:18 29	06:32 (3) 07:01 (3) 19:56	07:46 18:32 30	08:57 (1) 09:27 (1) 15:36
12	04:39 22:16 49	06:21 (2) 07:10 (2) 21:16	05:38 21:16 29	06:32 (3) 07:01 (3) 19:53	07:46 18:29 27	08:59 (1) 09:26 (1) 15:36
13	04:41 22:15 50	06:20 (2) 07:10 (2) 21:14	05:41 21:14 29	06:32 (3) 07:01 (3) 19:50	07:44 18:27 27	08:58 (1) 09:25 (1) 15:36
14	04:42 22:14 50	06:21 (2) 07:11 (2) 21:11	05:43 21:11 28	06:32 (3) 07:00 (3) 19:47	07:43 18:24 28	08:59 (1) 09:24 (1) 15:35
15	04:44 22:12 50	06:21 (2) 07:11 (2) 21:09	05:45 21:09 28	06:32 (3) 07:00 (3) 19:45	07:43 18:21 28	09:04 (1) 09:23 (1) 15:35
16	04:45 22:11 50	06:21 (2) 07:11 (2) 21:06	05:47 21:06 27	06:32 (3) 06:59 (3) 19:42	07:42 18:19 29	09:06 (1) 09:20 (1) 15:35
17	04:47 22:10 50	06:21 (2) 07:11 (2) 21:03	05:49 21:03 27	06:32 (3) 06:59 (3) 19:39	07:43 18:16 29	09:10 (1) 09:17 (1) 15:35
18	04:49 22:08 51	06:21 (2) 07:12 (2) 21:01	05:51 21:01 25	06:33 (3) 06:58 (3) 19:36	07:42 18:13 29	09:03 15:35
19	04:50 22:06 50	06:21 (2) 07:11 (2) 20:58	05:53 20:58 23	06:34 (3) 06:57 (3) 19:33	07:42 18:11 28	09:03 15:36
20	04:52 22:05 51	06:21 (2) 07:12 (2) 20:56	05:56 20:56 21	06:34 (3) 06:55 (3) 19:30	07:42 18:08 27	09:04 15:36
21	04:54 22:03 50	06:22 (2) 07:12 (2) 20:53	05:58 20:53 18	06:36 (3) 06:54 (3) 19:28	07:43 18:06 25	09:05 15:36
22	04:56 22:01 51	06:21 (2) 07:12 (2) 20:50	06:00 20:50 13	06:38 (3) 06:51 (3) 19:25	07:43 18:03 23	09:05 15:37
23	04:58 21:59 50	06:22 (2) 07:12 (2) 20:48	06:02 20:48 7	06:41 (3) 06:48 (3) 19:22	07:44 18:00 21	09:06 15:37
24	05:00 21:58 50	06:22 (2) 07:12 (2) 20:45	06:04 20:45 7	07:10 19:19 17	07:45 17:58 31	09:06 15:38
25	05:01 21:56 49	06:22 (2) 07:11 (2) 20:43	06:06 20:43 7	07:12 19:16 12	07:18 16:55 34	09:07 15:39
26	05:03 21:54 50	06:22 (2) 07:12 (2) 20:40	06:08 20:40 50	07:14 19:14 35	07:20 16:53 35	09:07 15:39
27	05:05 21:52 49	06:23 (2) 07:12 (2) 20:37	06:10 20:37 49	07:16 19:11 36	07:22 16:50 36	09:07 15:40
28	05:07 21:50 48	06:23 (2) 07:11 (2) 20:34	06:13 20:34 48	07:18 19:08 37	07:25 16:48 37	09:07 15:41
29	05:09 21:48 47	06:23 (2) 07:10 (2) 20:32	06:15 20:32 47	07:20 19:05 38	07:27 16:45 38	09:07 15:42
30	05:11 21:46 46	06:24 (2) 07:10 (2) 20:29	06:17 20:29 46	07:23 19:02 38	07:29 16:43 38	09:07 15:43
31	05:13 21:44 46	06:24 (2) 07:10 (2) 20:26	06:19 20:26 46	07:23 19:02 39	07:31 16:41 39	09:07 15:44
Potential sun hours	538	474	386	321	241	207
Total, worst case	1510	671	420	395	508	
Sun reduction	0.57	0.55	0.43	0.31	0.15	
Oper. time red.	0.93	0.93	0.93	0.93	0.93	
Wind dir. red.	0.95	0.96	0.99	0.65	0.65	
Total reduction	0.48	0.47	0.38	0.18	0.09	
Total, real	727	315	159	70	45	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: AG - Vecmelderi

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January			February			March			April			May			June		
1	09:07		11:49 (12)	08:27		09:29 (13)	07:20		07:50 (14)	06:54		05:34		04:33				
	15:45	77	13:59 (6)	16:46	38	13:44 (11)	17:52	22	08:12 (14)	20:01		21:07		22:09				
2	09:06		11:50 (12)	08:25		09:29 (13)	07:17		07:48 (14)	06:51		05:31		04:31				
	15:47	76	13:59 (6)	16:48	29	09:58 (13)	17:54	26	08:14 (14)	20:03		21:10		22:10				
3	09:06		11:51 (12)	08:23		09:30 (13)	07:14		07:46 (14)	06:48		05:29		04:30				
	15:48	74	13:58 (6)	16:51	28	09:58 (13)	17:56	29	08:15 (14)	20:06		21:12		22:12				
4	09:05		11:51 (12)	08:21		09:30 (13)	07:11		07:45 (14)	06:45		05:26		04:29				
	15:49	73	13:58 (6)	16:53	27	09:57 (13)	17:59	30	08:15 (14)	20:08		21:14		22:13				
5	09:05		11:52 (12)	08:19		09:31 (13)	07:09		07:45 (14)	06:43		05:24		04:28				
	15:51	68	13:56 (6)	16:55	26	09:57 (13)	18:01	32	08:17 (14)	20:10		21:16		22:15				
6	09:04		11:54 (12)	08:16		09:32 (13)	07:06		07:43 (14)	06:40		05:22		04:27				
	15:52	63	13:52 (11)	16:58	25	09:57 (13)	18:03	34	08:17 (14)	20:12		21:18		22:16				
7	09:04		11:55 (12)	08:14		09:32 (13)	07:03		07:42 (14)	06:37		05:19		04:26				
	15:54	62	13:52 (11)	17:00	24	09:56 (13)	18:06	35	08:17 (14)	20:14		21:21		22:17				
8	09:03		11:55 (12)	08:12		09:34 (13)	07:01		07:42 (14)	06:34		05:17		04:25				
	15:56	61	13:52 (11)	17:02	21	09:55 (13)	18:08	35	08:17 (14)	20:17		21:23		22:18				
9	09:02		11:57 (12)	08:10		09:35 (13)	06:58		07:41 (14)	06:32		05:15		04:25				
	15:57	59	13:52 (11)	17:05	18	09:53 (13)	18:10	36	08:17 (14)	20:19		21:25		22:19				
10	09:01		11:58 (12)	08:07		09:38 (13)	06:55		07:41 (14)	06:29		05:12		04:24				
	15:59	57	13:53 (11)	17:07	13	09:51 (13)	18:12	37	08:18 (14)	20:21		21:27		22:20				
11	09:00		12:00 (12)	08:05		09:41 (13)	06:52		07:41 (14)	06:26		05:10		04:23				
	16:01	56	13:54 (11)	17:10	6	09:47 (13)	18:15	36	08:17 (14)	20:23		21:29		22:21				
12	08:59		12:02 (12)	08:03			06:50		07:41 (14)	06:23		05:08		04:23				
	16:03	50	13:53 (11)	17:12			18:17	35	08:16 (14)	20:25		21:31		22:22				
13	08:58		13:13 (11)	08:00			06:47		07:41 (14)	06:21		05:06		04:22				
	16:05	41	13:54 (11)	17:14			18:19	35	08:16 (14)	20:28		21:33		22:23				
14	08:57		13:13 (11)	07:58			06:44		07:41 (14)	06:18		05:04		04:22				
	16:06	41	13:54 (11)	17:17			18:21	34	08:15 (14)	20:30		21:35		22:24				
15	08:56		13:14 (11)	07:55			06:41		07:41 (14)	06:15		05:02		04:21				
	16:08	41	13:55 (11)	17:19			18:24	33	08:14 (14)	20:32		21:38		22:25				
16	08:54		13:14 (11)	07:53			06:38		07:42 (14)	06:12		05:00		04:21				
	16:10	41	13:55 (11)	17:21			18:26	31	08:13 (14)	20:34		21:40		22:25				
17	08:53		09:35 (13)	07:51			06:36		07:43 (14)	06:10		04:58		04:21				
	16:12	49	13:55 (11)	17:24			18:28	29	08:12 (14)	20:36		21:42		22:26				
18	08:52		09:34 (13)	07:48			06:33		07:44 (14)	06:07		04:56		04:21				
	16:15	53	13:56 (11)	17:26			18:30	26	08:10 (14)	20:39		21:44		22:26				
19	08:50		09:32 (13)	07:46			06:30		07:45 (14)	06:04		04:54		04:21				
	16:17	55	13:55 (11)	17:29			18:32	22	08:07 (14)	20:41		21:46		22:27				
20	08:49		09:31 (13)	07:43			06:27		07:47 (14)	06:02		04:52		04:21				
	16:19	58	13:55 (11)	17:31			18:35	18	08:05 (14)	20:43		21:48		22:27				
21	08:47		09:30 (13)	07:40			06:25		07:51 (14)	05:59		04:50		04:21				
	16:21	59	13:55 (11)	17:33			18:37	10	08:01 (14)	20:45		21:50		22:28				
22	08:46		09:30 (13)	07:38			06:22			05:57		04:48		04:21				
	16:23	59	13:55 (11)	17:36			18:39			20:48		21:51		22:28				
23	08:44		09:29 (13)	07:35			06:19			05:54		04:46		04:21				
	16:25	61	13:55 (11)	17:38			18:41			20:50		21:53		22:28				
24	08:42		09:29 (13)	07:33			06:16			05:51		04:45		04:22				
	16:27	60	13:54 (11)	17:40			18:43			20:52		21:55		22:28				
25	08:41		09:29 (13)	07:30			06:13			05:49		04:43		04:22				
	16:30	60	13:54 (11)	17:43			18:46			20:54		21:57		22:28				
26	08:39		09:29 (13)	07:27			06:11			05:46		04:41		04:22				
	16:32	59	13:54 (11)	17:45			18:48			20:56		21:59		22:28				
27	08:37		09:29 (13)	07:25		07:56 (14)	06:08			05:44		04:40		04:23				
	16:34	58	13:53 (11)	17:47	10	08:06 (14)	18:50			20:59		22:01		22:28				
28	08:35		09:29 (13)	07:22		07:53 (14)	06:05			05:41		04:38		04:24				
	16:37	55	13:52 (11)	17:50	17	08:10 (14)	18:52			21:01		22:02		22:27				
29	08:33		09:28 (13)				07:02			05:39		04:37		04:24				
	16:39	54	13:50 (11)				19:55			21:03		22:04		22:27				
30	08:31		09:28 (13)				06:59			05:36		04:35		04:25				
	16:41	51	13:49 (11)				19:57			21:05		22:06		22:27				
31	08:29		09:29 (13)				06:57					04:34						
	16:44	45	13:47 (11)				19:59					22:07						
Potential sun hours	227			262			365			429		515		539				
Total, worst case	1776			282			625											
Sun reduction	0.13			0.22			0.37											
Oper. time red.	0.93			0.93			0.93											
Wind dir. red.	0.33			0.64			0.92											
Total reduction	0.03			0.10			0.25											
Total, real	56			29			155											

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: AG - Vecmolderi

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:24	08:20 (14)	07:34
2	22:26	21:41	20:23	18:59	08:55 (14)	16:38
3	04:27	05:17	06:23	07:27	08:19 (14)	07:36
4	22:26	21:39	20:21	18:57	08:55 (14)	16:36
5	04:28	05:19	06:25	07:29	08:19 (14)	07:38
6	22:25	21:37	20:18	18:54	08:55 (14)	16:33
7	04:29	05:21	06:27	07:31	08:19 (14)	07:41
8	22:24	21:35	20:15	18:51	08:55 (14)	16:31
9	04:30	05:23	06:29	07:33	08:19 (14)	07:43
10	22:24	21:32	20:12	18:48	08:54 (14)	16:29
11	04:31	05:25	06:31	07:35	08:19 (14)	07:45
12	22:23	21:30	20:10	18:46	08:54 (14)	16:26
13	04:32	05:27	06:34	07:37	08:18 (14)	07:47
14	22:22	21:28	20:07	18:43	08:53 (14)	16:24
15	04:33	05:30	06:36	07:40	08:19 (14)	07:50
16	22:21	21:26	20:04	18:40	08:52 (14)	16:22
17	04:35	05:32	06:38	07:42	08:20 (14)	07:52
18	22:20	21:23	20:01	18:37	08:51 (14)	16:20
19	04:36	05:34	06:40	07:44	08:20 (14)	07:54
20	22:19	21:21	19:58	18:35	08:50 (14)	16:18
21	04:37	05:36	06:42	07:46	08:21 (14)	07:57
22	22:18	21:18	19:56	18:32	08:48 (14)	16:16
23	04:39	05:38	06:44	07:48	08:23 (14)	07:59
24	22:16	21:16	19:53	18:29	08:47 (14)	16:14
25	04:40	05:40	06:46	07:51	08:24 (14)	08:01
26	22:15	21:13	19:50	18:26	08:44 (14)	16:12
27	04:42	05:42	06:48	07:53	08:26 (14)	08:03
28	22:14	21:11	19:47	18:24	08:41 (14)	16:10
29	04:43	05:45	06:50	07:55	08:32 (14)	08:06
30	22:12	21:08	19:44	18:21	08:36 (14)	16:08
31	04:45	05:47	06:53	07:57	08:08	16:08
32	22:11	21:06	19:42	18:18	16:06	15:59
33	04:47	05:49	06:55	07:59	08:10	16:04
34	22:09	21:03	19:39	18:16	16:04	15:57
35	04:48	05:51	06:57	08:02	08:12	16:02
36	22:08	21:01	19:36	18:13	16:02	15:55
37	04:50	05:53	06:59	08:04	08:15	16:00
38	22:06	20:58	19:33	18:10	16:00	15:53
39	04:52	05:55	07:01	08:06	08:17	16:00
40	22:05	20:56	19:30	18:08	15:59	15:50
41	04:54	05:57	07:03	08:08	08:19	16:00
42	22:03	20:53	19:27	18:05	15:57	15:47
43	04:55	05:59	07:05	08:37 (14)	08:21	16:00
44	22:01	20:50	19:25	18:03	15:55	15:45
45	04:57	06:02	07:07	08:32 (14)	08:23	16:00
46	21:59	20:48	19:22	18:00	15:54	15:45
47	04:59	06:04	07:10	08:29 (14)	08:25	16:00
48	21:58	20:45	19:19	17:58	15:52	15:43
49	05:01	06:06	07:12	08:27 (14)	08:27	16:00
50	21:56	20:42	19:16	17:55	15:51	15:42
51	05:03	06:08	07:14	08:25 (14)	08:29	16:00
52	21:54	20:40	19:13	17:53	15:49	15:40
53	05:05	06:10	07:16	08:24 (14)	08:31	16:00
54	21:52	20:37	19:11	17:50	15:48	15:39
55	05:07	06:12	07:18	08:23 (14)	08:33	16:00
56	21:50	20:34	19:08	17:48	15:47	15:38
57	05:09	06:14	07:20	08:22 (14)	08:35	16:00
58	21:48	20:32	19:05	17:45	15:45	15:36
59	05:11	06:17	07:22	08:21 (14)	08:37	16:00
60	21:46	20:29	19:02	17:43	15:44	15:35
61	05:13	06:19		07:31	09:09 (13)	16:00
62	21:44	20:26		16:40	09:18 (13)	15:44
Potential sun hours	539	475	386	321	241	207
Total, worst case			227	441	1311	2314
Sun reduction			0.43	0.31	0.15	0.13
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.92	0.92	0.44	0.23
Total reduction			0.29	0.21	0.05	0.02
Total, real			66	91	66	49

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Riga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: AH - Vecsilupites

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

January		February		March		April		May		June	
1	09:07	10:36 (12)	08:27	11:55 (11)	07:20	06:54		07:50 (14)	05:34	04:33	
	15:45	13:27 (6)	16:46	15:28 (3)	17:52	20:01	22	08:12 (14)	21:07	22:09	
2	09:06	10:37 (12)	08:25	11:55 (11)	07:17	06:51		07:51 (14)	05:31	04:32	
	15:47	13:28 (6)	16:48	12:45 (11)	17:54	20:03	19	08:10 (14)	21:10	22:10	
3	09:06	10:37 (12)	08:23	11:56 (11)	07:14	06:48		07:52 (14)	05:29	04:30	
	15:48	13:27 (6)	16:51	12:45 (11)	17:56	20:06	15	08:07 (14)	21:12	22:12	
4	09:05	10:38 (12)	08:21	11:56 (11)	07:11	06:45		07:55 (14)	05:26	04:29	
	15:49	13:27 (6)	16:53	12:43 (11)	17:59	20:08	7	08:02 (14)	21:14	22:13	
5	09:05	10:38 (12)	08:19	11:57 (11)	07:09	06:43			05:24	04:28	
	15:51	13:26 (6)	16:55	12:43 (11)	18:01	20:10			21:16	22:15	
6	09:04	10:39 (12)	08:16	11:59 (11)	07:06	06:40			05:22	04:27	
	15:52	13:26 (6)	16:58	12:43 (11)	18:03	20:12			21:18	22:16	
7	09:04	10:40 (12)	08:14	12:00 (11)	07:03	06:37			05:19	04:26	
	15:54	13:24 (6)	17:00	12:41 (11)	18:06	20:14			21:21	22:17	
8	09:03	10:39 (12)	08:12	12:01 (11)	07:01	06:34			05:17	04:25	
	15:56	12:37 (11)	17:03	12:40 (11)	18:08	20:17			21:23	22:18	
9	09:02	10:40 (12)	08:10	08:43 (13)	06:58	06:32			05:15	04:25	
	15:57	12:38 (11)	17:05	12:38 (11)	18:10	20:19			21:25	22:19	
10	09:01	10:40 (12)	08:07	08:40 (13)	06:55	06:29			05:12	04:24	
	15:59	15:15 (3)	17:07	12:37 (11)	18:12	20:21			21:27	22:20	
11	09:00	10:41 (12)	08:05	08:38 (13)	06:52	06:26			05:10	04:23	
	16:01	15:18 (3)	17:10	12:34 (11)	18:15	20:23			21:29	22:21	
12	08:59	10:41 (12)	08:03	08:37 (13)	06:50	06:23			05:08	04:23	
	16:03	15:19 (3)	17:12	12:32 (11)	18:17	20:25			21:31	22:22	
13	08:58	10:42 (12)	08:00	08:35 (13)	06:47	06:21			05:06	04:22	
	16:05	15:22 (3)	17:14	12:27 (11)	18:19	20:28			21:33	22:23	
14	08:57	10:42 (12)	07:58	08:34 (13)	06:44	06:18			05:04	04:22	
	16:06	15:24 (3)	17:17	08:58 (13)	18:21	20:30			21:36	22:24	
15	08:56	10:43 (12)	07:55	08:34 (13)	06:41	06:15			05:02	04:21	
	16:08	15:27 (3)	17:19	08:59 (13)	18:24	20:32			21:38	22:25	
16	08:54	10:43 (12)	07:53	08:33 (13)	06:39	06:12			05:00	04:21	
	16:10	15:28 (3)	17:22	08:59 (13)	18:26	20:34			21:40	22:25	
17	08:53	10:43 (12)	07:51	08:32 (13)	06:36		07:02 (14)	06:10	04:58	04:21	
	16:12	15:30 (3)	17:24	08:59 (13)	18:28		07:10 (14)	20:36	21:42	22:26	
18	08:52	10:45 (12)	07:48	08:33 (13)	06:33		06:59 (14)	06:07	04:56	04:21	
	16:15	15:31 (3)	17:26	09:00 (13)	18:30		07:13 (14)	20:39	21:44	22:26	
19	08:50	10:45 (12)	07:46	08:33 (13)	06:30		06:56 (14)	06:04	04:54	04:21	
	16:17	15:32 (3)	17:29	09:00 (13)	18:32		07:14 (14)	20:41	21:46	22:27	
20	08:49	10:46 (12)	07:43	08:32 (13)	06:27		06:53 (14)	06:02	04:52	04:21	
	16:19	15:32 (3)	17:31	08:59 (13)	18:35		07:15 (14)	20:43	21:48	22:27	
21	08:47	10:47 (12)	07:40	08:33 (13)	06:25		06:52 (14)	05:59	04:50	04:21	
	16:21	15:32 (3)	17:33	08:59 (13)	18:37		07:17 (14)	20:45	21:50	22:28	
22	08:46	10:48 (12)	07:38	08:33 (13)	06:22		06:51 (14)	05:57	04:48	04:21	
	16:23	15:33 (3)	17:36	08:58 (13)	18:39		07:17 (14)	20:48	21:51	22:28	
23	08:44	10:49 (12)	07:35	08:34 (13)	06:19		06:49 (14)	05:54	04:46	04:21	
	16:25	15:33 (3)	17:38	08:57 (13)	18:41		07:17 (14)	20:50	21:53	22:28	
24	08:42	10:50 (12)	07:33	08:35 (13)	06:16		06:49 (14)	05:51	04:45	04:22	
	16:28	15:33 (3)	17:40	08:57 (13)	18:44		07:17 (14)	20:52	21:55	22:28	
25	08:41	10:51 (12)	07:30	08:36 (13)	06:13		06:48 (14)	05:49	04:43	04:22	
	16:30	15:33 (3)	17:43	08:55 (13)	18:46		07:17 (14)	20:54	21:57	22:28	
26	08:39	10:53 (12)	07:27	08:38 (13)	06:11		06:47 (14)	05:46	04:41	04:22	
	16:32	15:33 (3)	17:45	08:53 (13)	18:48		07:17 (14)	20:56	21:59	22:28	
27	08:37	10:55 (12)	07:25	08:40 (13)	06:08		06:48 (14)	05:44	04:40	04:23	
	16:34	15:33 (3)	17:47	08:49 (13)	18:50		07:17 (14)	20:59	22:01	22:28	
28	08:35	10:58 (12)	07:22		06:05		06:48 (14)	05:41	04:38	04:24	
	16:37	15:33 (3)	17:50		18:52		07:16 (14)	21:01	22:02	22:27	
29	08:33	11:52 (11)			07:02		07:47 (14)	05:39	04:37	04:24	
	16:39	15:32 (3)			19:55		08:15 (14)	21:03	22:04	22:27	
30	08:31	11:53 (11)			06:59		07:48 (14)	05:36	04:35	04:25	
	16:41	15:31 (3)			19:57		08:14 (14)	21:05	22:06	22:27	
31	08:29	11:54 (11)			06:57		07:49 (14)		04:34		
	16:44	15:30 (3)			19:59		08:13 (14)		22:07		
Potential sun hours	227		262		365			429		539	
Total, worst case	2942		903		363			63			
Sun reduction	0.13		0.22		0.37			0.46			
Oper. time red.	0.93		0.93		0.93			0.93			
Wind dir. red.	0.20		0.38		0.99			0.99			
Total reduction	0.02		0.06		0.25			0.31			
Total, real	53		51		89			19			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: AH - Vecsilupites

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	07:24	07:34	08:10 (13)
	22:26	21:41	20:23	18:59	16:38	15:00 (3)
2	04:27	05:17	06:23	07:27	07:36	08:14 (13)
	22:26	21:39	20:21	18:57	16:36	15:42 (3)
3	04:28	05:19	06:25	07:29	07:38	11:31 (11)
	22:25	21:37	20:18	18:54	16:33	15:41 (3)
4	04:29	05:21	06:27	07:31	07:41	11:29 (11)
	22:24	21:35	20:15	18:51	16:31	15:40 (3)
5	04:30	05:23	06:29	07:33	07:43	11:28 (11)
	22:24	21:33	20:12	18:48	16:29	15:39 (3)
6	04:31	05:25	06:31	07:35	07:45	11:27 (11)
	22:23	21:30	20:10	18:46	16:26	15:39 (3)
7	04:32	05:28	06:34	07:37	07:47	11:27 (11)
	22:22	21:28	20:07	18:43	16:24	15:38 (3)
8	04:33	05:30	06:36	07:40	07:50	11:26 (11)
	22:21	21:26	20:04	18:40	16:22	15:37 (3)
9	04:35	05:32	06:38	07:47 (14)	07:52	11:25 (11)
	22:20	21:23	20:01	18:37	16:20	15:37 (3)
10	04:36	05:34	06:40	07:44 (14)	07:54	11:25 (11)
	22:19	21:21	19:58	18:35	16:18	15:36 (3)
11	04:37	05:36	06:42	07:42 (14)	07:57	11:24 (11)
	22:18	21:18	19:56	18:32	16:16	15:36 (3)
12	04:39	05:38	06:44	07:40 (14)	07:59	11:25 (11)
	22:16	21:16	19:53	18:29	16:14	15:35 (3)
13	04:40	05:40	06:46	07:39 (14)	08:01	11:24 (11)
	22:15	21:13	19:50	18:26	16:12	15:35 (3)
14	04:42	05:42	06:48	07:38 (14)	08:03	10:30 (12)
	22:14	21:11	19:47	18:24	16:10	15:35 (3)
15	04:43	05:45	06:50	07:37 (14)	08:06	10:27 (12)
	22:12	21:08	19:44	18:21	16:08	15:35 (3)
16	04:45	05:47	06:53	07:36 (14)	08:08	10:26 (12)
	22:11	21:06	19:42	18:18	16:06	15:35 (3)
17	04:47	05:49	06:55	07:36 (14)	08:10	10:25 (12)
	22:09	21:03	19:39	18:16	16:04	15:35 (3)
18	04:48	05:51	06:57	07:35 (14)	08:12	10:24 (12)
	22:08	21:01	19:36	18:13	16:02	15:35 (3)
19	04:50	05:53	06:59	07:35 (14)	08:15	10:24 (12)
	22:06	20:58	19:33	18:10	16:00	15:35 (3)
20	04:52	05:55	07:01	07:36 (14)	08:17	10:23 (12)
	22:05	20:56	19:30	18:08	15:59	15:36 (3)
21	04:54	05:57	07:03	07:36 (14)	08:19	10:23 (12)
	22:03	20:53	19:27	18:05	15:57	15:36 (3)
22	04:55	06:00	07:05	07:36 (14)	08:21	10:22 (12)
	22:01	20:50	19:25	18:03	15:55	15:36 (3)
23	04:57	06:02	07:07	07:37 (14)	08:23	10:21 (12)
	21:59	20:48	19:22	18:00	15:54	15:37 (3)
24	04:59	06:04	07:10	07:39 (14)	08:25	10:22 (12)
	21:58	20:45	19:19	17:58	15:52	15:37 (3)
25	05:01	06:06	07:12	07:41 (14)	08:27	10:22 (12)
	21:56	20:42	19:16	17:56 (14)	15:51	15:38 (3)
26	05:03	06:08	07:14	07:43 (14)	08:29	10:22 (12)
	21:54	20:40	19:13	17:53 (14)	15:49	15:39 (3)
27	05:05	06:10	07:16	07:22	08:04 (13)	10:22 (12)
	21:52	20:37	19:11	16:50	15:48	15:40 (3)
28	05:07	06:12	07:18	07:24	08:04 (13)	10:22 (12)
	21:50	20:34	19:08	16:48	15:47	15:41 (3)
29	05:09	06:14	07:20	07:27	08:05 (13)	10:22 (12)
	21:48	20:32	19:05	16:45	15:45	15:42 (3)
30	05:11	06:17	07:22	07:29	08:06 (13)	10:22 (12)
	21:46	20:29	19:02	16:43	15:44	15:43 (3)
31	05:13	06:19		07:31	08:08 (13)	09:07
	21:44	20:26		16:40	15:44	15:44 (3)
Potential sun hours	538	475	386	321	241	207
Total, worst case			434	452	2389	2963
Sun reduction			0.43	0.31	0.15	0.13
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.99	0.70	0.19	0.17
Total reduction			0.29	0.14	0.02	0.01
Total, real			125	65	48	44

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: AI - Vecto šeni
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06	08:27	15:24 (9)	07:19	06:54	05:34
	15:45	16:46	15:52 (9)	17:52	20:01	21:07
2	09:06	08:25	15:24 (9)	07:17	06:51	05:31
	15:47	16:48	15:52 (9)	17:54	20:03	21:09
3	09:06	08:23	15:25 (9)	07:14	06:48	05:29
	15:48	16:51	15:53 (9)	17:56	20:05	21:12
4	09:05	08:21	15:25 (9)	07:11	06:45	05:26
	15:49	16:53	15:52 (9)	17:59	20:08	21:14
5	09:05	08:18	15:25 (9)	07:09	06:42	05:24
	15:51	16:55	15:52 (9)	18:01	20:10	21:16
6	09:04	08:16	15:25 (9)	07:06	06:40	05:22
	15:52	16:58	15:51 (9)	18:03	20:12	21:18
7	09:03	08:14	15:26 (9)	07:03	06:37	05:19
	15:54	17:00	15:51 (9)	18:05	20:14	21:20
8	09:03	08:12	15:27 (9)	07:00	06:34	05:17
	15:56	17:02	15:50 (9)	18:08	20:16	21:23
9	09:02	08:10	15:28 (9)	06:58	06:31	05:15
	15:57	17:05	15:50 (9)	18:10	20:19	21:25
10	09:01	08:07	15:29 (9)	06:55	06:29	05:12
	15:59	17:07	15:48 (9)	18:12	20:21	21:27
11	09:00	08:05	15:32 (9)	06:52	06:26	05:10
	16:01	17:10	15:47 (9)	18:14	20:23	21:29
12	08:59	08:03	15:34 (9)	06:49	06:23	05:08
	16:03	17:12	15:44 (9)	18:17	20:25	21:31
13	08:58	08:00		06:47	06:20	05:06
	16:04	17:14		18:19	20:27	21:33
14	08:57	07:58		06:44	06:18	05:04
	16:06	17:17		18:21	20:30	21:35
15	08:55	07:55		06:41	06:15	05:02
	16:08	17:19		18:23	20:32	21:37
16	08:54	07:53		06:38	06:12	05:00
	16:10	17:21		18:26	20:34	21:39
17	08:53	07:50		06:36	06:10	04:58
	16:12	17:24		18:28	20:36	21:41
18	08:51	07:48		06:33	06:07	04:56
	16:14	17:26		18:30	20:38	21:43
19	08:50	07:45		06:30	06:04	04:54
	16:17	17:28		18:32	20:41	21:45
20	08:49	07:43		06:27	06:02	04:52
	16:19	17:31		18:35	20:43	21:47
21	08:47	15:31 (9)	07:40	06:24	05:59	04:50
	16:21	15:41 (9)	17:33	18:37	20:45	21:49
22	08:45	15:29 (9)	07:38	06:22	05:56	04:48
	16:23	15:43 (9)	17:35	18:39	20:47	21:51
23	08:44	15:28 (9)	07:35	06:19	05:54	04:46
	16:25	15:45 (9)	17:38	18:41	20:50	21:53
24	08:42	15:27 (9)	07:33	06:16	05:51	04:45
	16:27	15:46 (9)	17:40	18:43	20:52	21:55
25	08:40	15:26 (9)	07:30	06:13	05:49	04:43
	16:30	15:47 (9)	17:42	18:46	20:54	21:57
26	08:39	15:26 (9)	07:27	06:10	05:46	04:41
	16:32	15:49 (9)	17:45	18:48	20:56	21:59
27	08:37	15:25 (9)	07:25	06:08	05:44	04:40
	16:34	15:50 (9)	17:47	18:50	20:58	22:00
28	08:35	15:24 (9)	07:22	06:05	05:41	04:38
	16:37	15:50 (9)	17:49	18:52	21:01	22:02
29	08:33	15:24 (9)		07:02	05:38	04:37
	16:39	15:51 (9)		19:54	21:03	22:04
30	08:31	15:24 (9)		06:59	05:36	04:35
	16:41	15:51 (9)		19:57	21:05	22:05
31	08:29	15:25 (9)		06:56		04:34
	16:43	15:52 (9)		19:59		22:07
Potential sun hours	227	262	365	429	515	539
Total, worst case	236	278	251	884	235	
Sun reduction	0.13	0.22	0.37	0.46	0.58	
Oper. time red.	0.93	0.93	0.93	0.93	0.93	
Wind dir. red.	0.72	0.72	1.00	0.99	0.99	
Total reduction	0.08	0.14	0.32	0.40	0.51	
Total, real	20	39	82	358	120	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Riga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: AI - Vecto šeni

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26	05:15	06:21	19:06 (13)	07:24	07:33
	22:26	21:41	20:23	19:37 (13)	18:59	16:38
2	04:27	05:17	06:23	19:08 (13)	07:26	07:36
	22:25	21:39	20:20	19:35 (13)	18:56	16:35
3	04:28	05:19	06:25	19:10 (13)	07:29	07:38
	22:25	21:37	20:18	19:32 (13)	18:54	16:33
4	04:29	05:21	19:22 (13)	06:27	19:12 (13)	07:31
	22:24	21:35	12 19:34 (13)	20:15	17 19:29 (13)	18:51
5	04:30	05:23	19:19 (13)	06:29	19:18 (13)	07:33
	22:23	21:32	18 19:37 (13)	20:12	5 19:23 (13)	18:48
6	04:31	05:25	19:16 (13)	06:31	07:35	07:45
	22:23	21:30	23 19:39 (13)	20:09	18:45	16:26
7	04:32	05:27	19:15 (13)	06:33	07:37	07:47
	22:22	21:28	26 19:41 (13)	20:07	18:43	16:24
8	04:33	05:30	19:13 (13)	06:36	07:39	07:50
	22:21	21:25	29 19:42 (13)	20:04	18:40	16:22
9	04:34	05:32	19:12 (13)	06:38	07:42	07:52
	22:20	21:23	31 19:43 (13)	20:01	18:37	16:20
10	04:36	05:34	19:10 (13)	06:40	07:44	07:54
	22:19	21:21	34 19:44 (13)	19:58	18:34	16:18
11	04:37	05:36	19:09 (13)	06:42	07:46	07:56
	22:17	21:18	36 19:45 (13)	19:55	18:32	16:16
12	04:39	05:38	19:08 (13)	06:44	07:48	07:59
	22:16	21:16	38 19:46 (13)	19:53	18:29	16:14
13	04:40	05:40	19:07 (13)	06:46	18:40 (12)	07:50
	22:15	21:13	39 19:46 (13)	19:50	10 18:50 (12)	18:26
14	04:42	05:42	19:06 (13)	06:48	18:37 (12)	07:53
	22:14	21:11	40 19:46 (13)	19:47	14 18:51 (12)	18:24
15	04:43	05:44	19:05 (13)	06:50	18:35 (12)	07:55
	22:12	21:08	41 19:46 (13)	19:44	17 18:52 (12)	18:21
16	04:45	05:47	19:04 (13)	06:52	18:33 (12)	07:57
	22:11	21:06	42 19:46 (13)	19:41	20 18:53 (12)	18:18
17	04:47	05:49	19:04 (13)	06:55	18:32 (12)	07:59
	22:09	21:03	42 19:46 (13)	19:39	21 18:53 (12)	18:16
18	04:48	05:51	19:03 (13)	06:57	18:31 (12)	08:02
	22:08	21:01	43 19:46 (13)	19:36	22 18:53 (12)	18:13
19	04:50	05:53	19:03 (13)	06:59	18:30 (12)	08:04
	22:06	20:58	43 19:46 (13)	19:33	23 18:53 (12)	18:10
20	04:52	05:55	19:02 (13)	07:01	18:30 (12)	08:06
	22:04	20:55	44 19:46 (13)	19:30	23 18:53 (12)	18:08
21	04:54	05:57	19:02 (13)	07:03	18:29 (12)	08:08
	22:03	20:53	44 19:46 (13)	19:27	23 18:52 (12)	18:05
22	04:55	05:59	19:02 (13)	07:05	18:30 (12)	08:11
	22:01	20:50	44 19:46 (13)	19:24	22 18:52 (12)	18:03
23	04:57	06:02	19:02 (13)	07:07	18:30 (12)	08:13
	21:59	20:48	43 19:45 (13)	19:22	21 18:51 (12)	18:00
24	04:59	06:04	19:02 (13)	07:09	18:31 (12)	08:15
	21:57	20:45	43 19:45 (13)	19:19	17 18:48 (12)	17:57
25	05:01	06:06	19:02 (13)	07:11	18:32 (12)	07:17
	21:55	20:42	42 19:44 (13)	19:16	13 18:45 (12)	16:55
26	05:03	06:08	19:02 (13)	07:14	18:33 (12)	07:20
	21:54	20:40	41 19:43 (13)	19:13	9 18:42 (12)	16:52
27	05:05	06:10	19:02 (13)	07:16	18:37 (12)	07:22
	21:52	20:37	40 19:42 (13)	19:10	2 18:39 (12)	16:50
28	05:07	06:12	19:02 (13)	07:18	07:24	08:33
	21:50	20:34	39 19:41 (13)	19:08	16:47	15:47
29	05:09	06:14	19:03 (13)	07:20	07:27	08:35
	21:48	20:31	37 19:40 (13)	19:05	16:45	15:45
30	05:11	06:16	19:04 (13)	07:22	07:29	08:37
	21:45	20:29	35 19:39 (13)	19:02	11 16:43	15:14 (9)
31	05:13	06:19	19:04 (13)		07:31	15:01 (9)
	21:43	20:26	33 19:37 (13)		16:40	15:17 (9)
Potential sun hours	538	474		386	321	241
Total, worst case			1022	359	27	489
Sun reduction			0.55	0.43	0.31	0.15
Oper. time red.			0.93	0.93	0.93	0.93
Wind dir. red.			0.99	0.99	0.72	0.72
Total reduction			0.48	0.38	0.20	0.10
Total, real			490	136	5	48

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar

Shadow receptor: AJ - Vedomurgas

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 15:46	08:27 16:46	07:20 17:52	06:54 20:01	05:34 21:07	04:33 22:09
2	09:06 15:47	08:25 16:49	07:17 17:54	06:51 20:03	05:31 21:10	04:32 22:10
3	09:06 15:48	08:23 16:51	07:14 17:57	06:48 20:06	05:29 21:12	04:31 22:12
4	09:05 15:50	08:21 16:53	07:12 17:59	06:46 20:08	05:27 21:14	04:30 22:13
5	09:05 15:51	08:19 16:56	07:09 18:01	06:43 20:10	05:24 21:16	04:29 22:14
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:28 22:16
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:20 21:21	04:27 22:17
8	09:03 15:56	08:12 17:03	07:01 18:08	06:34 20:17	05:17 21:23	04:26 22:18
9	09:02 15:58	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:11 21:29	04:24 22:21
12	08:59 16:03	08:03 17:12	06:50 18:17	06:24 20:25	05:08 21:31	04:23 22:22
13	08:58 16:05	08:00 17:15	06:47 18:19	06:21 20:28	05:06 21:33	04:23 22:23
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24
15	08:56 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37	04:22 22:25
16	08:54 16:11	07:53 17:22	06:39 18:26	06:13 20:34	05:00 21:40	04:22 22:25
17	08:53 16:13	07:51 17:24	06:36 18:28	06:10 20:36	04:58 21:42	04:21 22:26
18	08:52 16:15	07:48 17:26	06:33 18:30	06:07 20:39	04:56 21:44	04:21 22:26
19	08:50 16:17	07:46 17:29	06:30 18:33	06:05 20:41	04:54 21:46	04:21 22:27
20	08:49 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:48	04:21 22:27
21	08:47 16:21	07:40 17:33	06:25 18:37	05:59 20:45	04:50 21:49	04:21 22:27
22	08:46 16:23	07:38 17:36	06:22 18:39	05:57 20:48	04:48 21:51	04:21 22:28
23	08:44 16:26	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:22 22:28
24	08:42 16:28	07:33 17:40	06:16 18:44	05:52 20:52	04:45 21:55	04:22 22:28
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:28
26	08:39 16:32	07:28 17:45	06:11 18:48	05:46 20:56	04:42 21:59	04:23 22:28
27	08:37 16:35	07:25 17:47	06:08 18:50	05:44 20:59	04:40 22:00	04:23 22:27
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:39 22:02	04:24 22:27
29	08:33 16:39		07:02 19:55	05:39 21:03	04:37 22:04	04:25 22:27
30	08:31 16:42		06:59 19:57	05:36 21:05	04:36 22:05	04:25 22:26
31	08:29 16:44		06:57 19:59		04:34 22:07	04:25 22:26
Potential sun hours	227	262	365	429	515	539
Total, worst case				258	378	16
Sun reduction				0.46	0.58	0.53
Oper. time red.				0.93	0.93	0.93
Wind dir. red.				0.98	0.88	0.88
Total reduction				0.42	0.48	0.44
Total, real				109	180	7

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: AJ - Vedomurgas
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

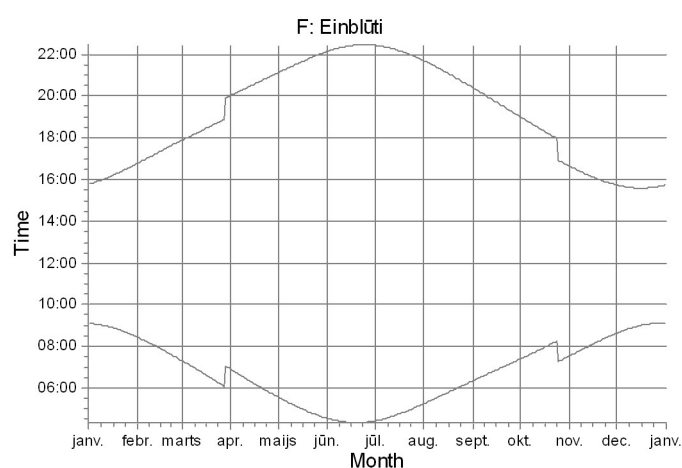
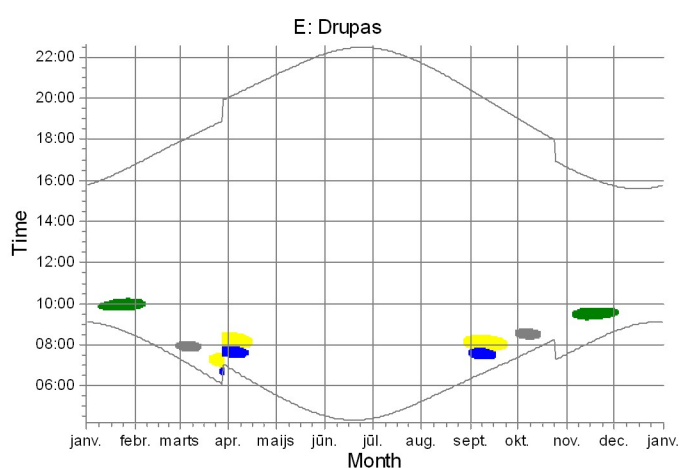
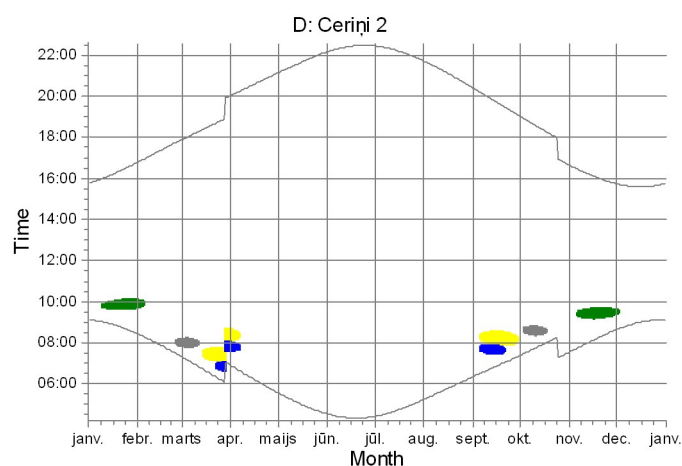
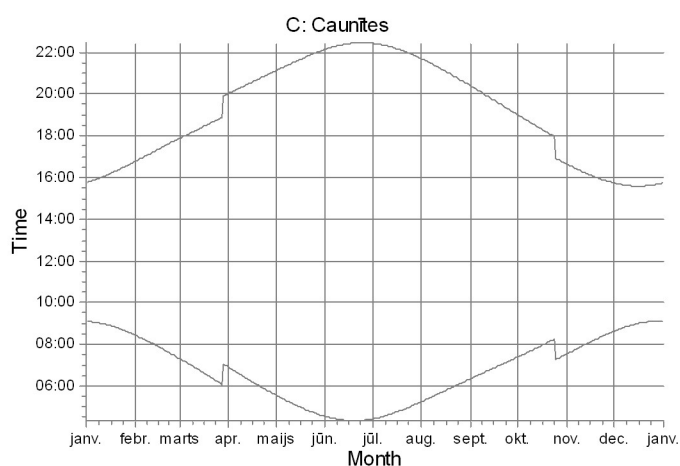
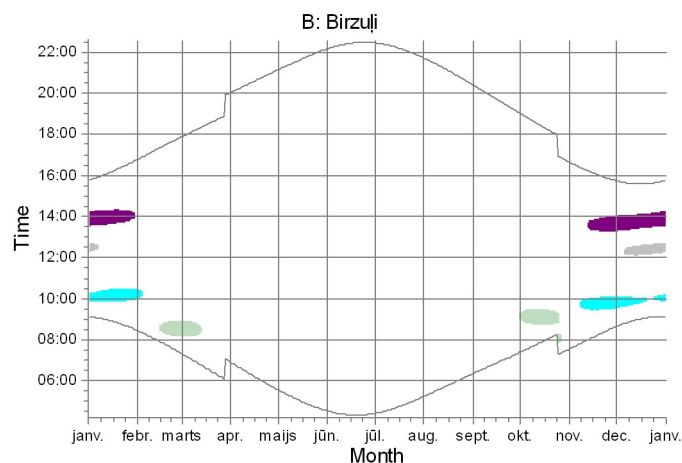
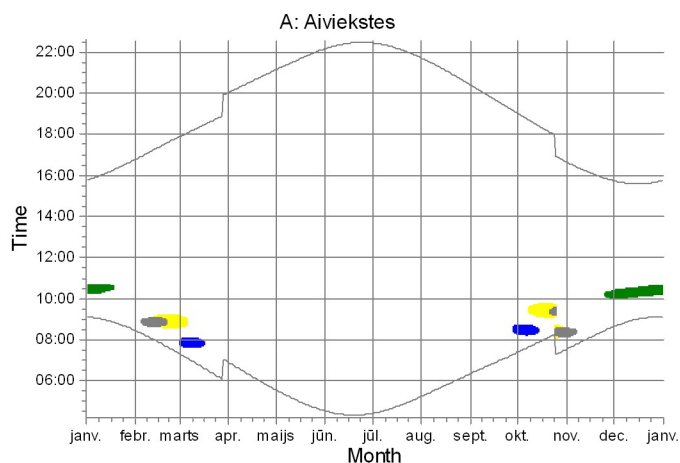
Operational time
0 1 Sum
4 076 4 076 8 152

	July	August	September	October	November	December
1	04:26	05:15	05:51 (10)	06:21	07:25	07:34
	22:26	21:41	06:01 (10)	20:23	19:00	16:38
2	04:27	05:17	05:53 (10)	06:23	07:27	07:36
	22:25	21:39	06:00 (10)	20:21	18:57	16:36
3	04:28	05:19	05:55 (10)	06:25	07:29	07:38
	22:25	21:37	05:58 (10)	20:18	18:54	16:34
4	04:29	05:22		06:27	07:31	07:41
	22:24	21:35		20:15	18:51	16:31
5	04:30	05:24		06:30	07:33	07:43
	22:23	21:32		20:12	18:48	16:29
6	04:31	05:26		06:32	07:35	07:45
	22:23	21:30		20:10	18:46	16:27
7	04:32	05:28		06:34	07:38	07:47
	22:22	21:28		20:07	18:43	16:24
8	04:34	05:30		06:36	07:40	07:50
	22:21	21:25		20:04	18:40	16:22
9	04:35	05:32		06:38	07:42	07:52
	22:20	21:23		20:01	18:37	16:20
10	04:36	05:34		06:40	07:44	07:54
	22:19	21:21		19:58	18:35	16:18
11	04:38	05:36		06:42	07:46	07:57
	22:17	21:18		19:56	18:32	16:16
12	04:39	05:38		06:44	07:48	07:59
	22:16	21:16		19:53	18:29	16:14
13	04:41	05:41		06:46	07:51	08:01
	22:15	21:13		19:50	18:27	16:12
14	04:42	05:43		06:49	07:53	08:03
	22:14	21:11		19:47	18:24	16:10
15	04:44	05:45	06:46 (7)	06:51	07:55	08:06
	22:12	21:08	06:54 (7)	19:44	18:21	16:08
16	04:45	05:47	06:43 (7)	06:53	07:57	08:08
	22:11	21:06	06:56 (7)	19:42	18:19	16:06
17	04:47	05:49	06:42 (7)	06:55	08:00	08:10
	22:09	21:03	06:58 (7)	19:39	18:16	16:04
18	04:49	05:51	06:40 (7)	06:57	08:02	08:12
	22:08	21:01	06:58 (7)	19:36	18:13	16:02
19	04:50	05:53	06:39 (7)	06:59	08:04	08:15
	22:06	20:58	06:59 (7)	19:33	18:11	16:01
20	04:52	05:55	06:38 (7)	07:01	08:06	08:17
	22:05	20:56	06:59 (7)	19:30	18:08	15:59
21	04:54	05:58	06:38 (7)	07:03	08:08	08:19
	22:03	20:53	07:00 (7)	19:28	18:05	15:57
22	04:56	06:00	06:37 (7)	07:05	08:11	08:21
	22:01	20:50	07:00 (7)	19:25	18:03	15:56
23	04:58	06:02	06:37 (7)	07:08	08:13	08:23
	21:59	20:48	06:59 (7)	19:22	18:00	15:54
24	05:00	06:04	06:37 (7)	07:10	08:15	08:25
	21:57	20:45	06:59 (7)	19:19	17:58	15:53
25	05:01	06:06	06:38 (7)	07:12	07:18	08:27
	21:56	20:42	06:58 (7)	19:16	16:55	15:51
26	05:03	06:08	06:40 (7)	07:14	07:20	08:29
	21:54	20:40	06:58 (7)	19:14	16:53	15:50
27	05:05	06:10	06:42 (7)	07:16	07:22	08:31
	21:52	20:37	06:57 (7)	19:11	16:50	15:48
28	05:07	06:13	06:44 (7)	07:18	07:24	08:33
	21:50	20:34	06:55 (7)	19:08	16:48	15:47
29	05:09	06:15	06:46 (7)	07:20	07:27	08:35
	21:48	20:32	06:53 (7)	19:05	16:45	15:46
30	05:11	06:17	06:48 (7)	07:22	07:29	08:37
	21:46	20:29	06:51 (7)	19:02	16:43	15:45
31	05:13	06:19			07:31	09:07
	21:43	20:26			16:41	15:44
Potential sun hours	538	474		386	321	241
Total, worst case	374	279				
Sun reduction	0.57	0.55				
Oper. time red.	0.93	0.93				
Wind dir. red.	0.88	0.97				
Total reduction	0.47	0.50				
Total, real	174	138				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

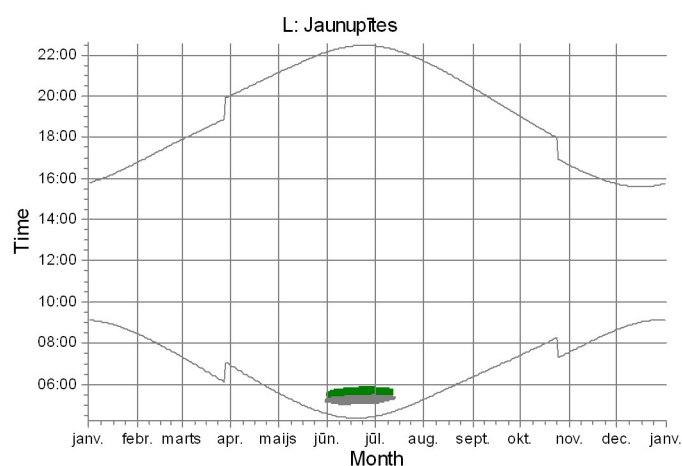
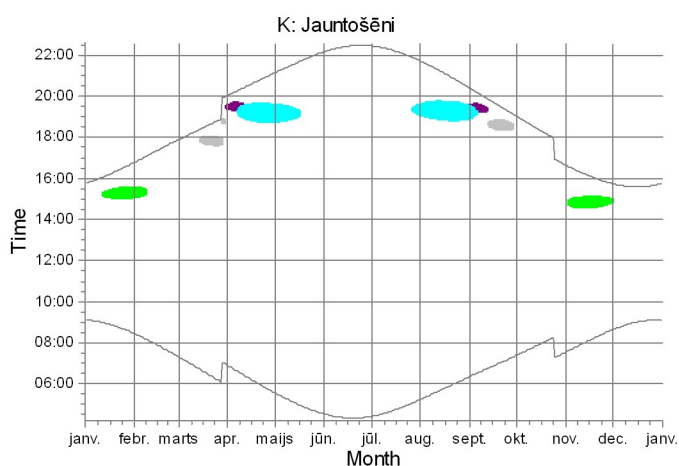
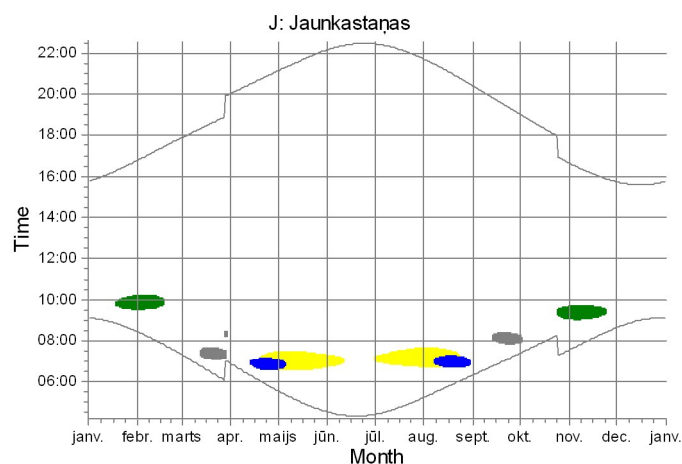
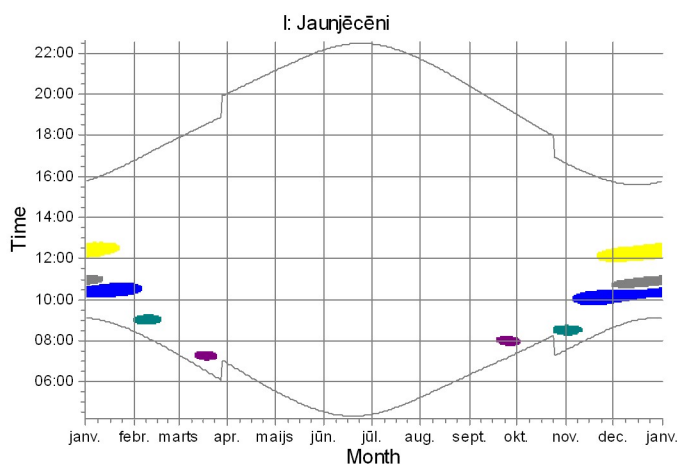
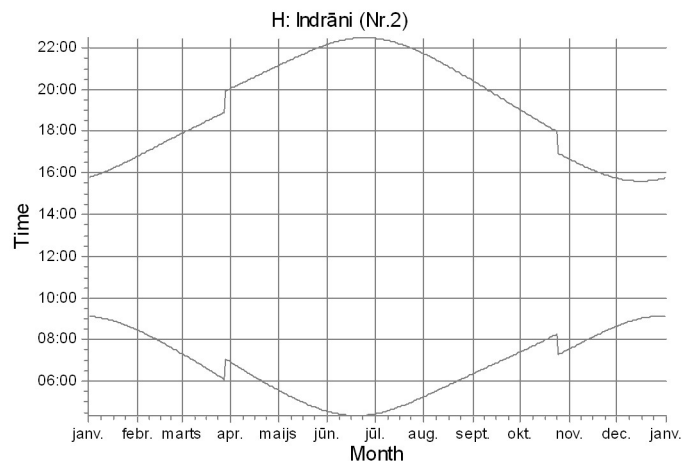
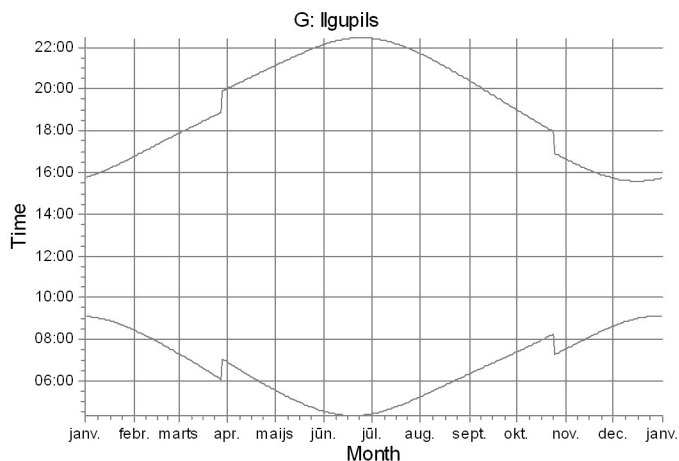
SHADOW - Calendar, graphical



WTGs



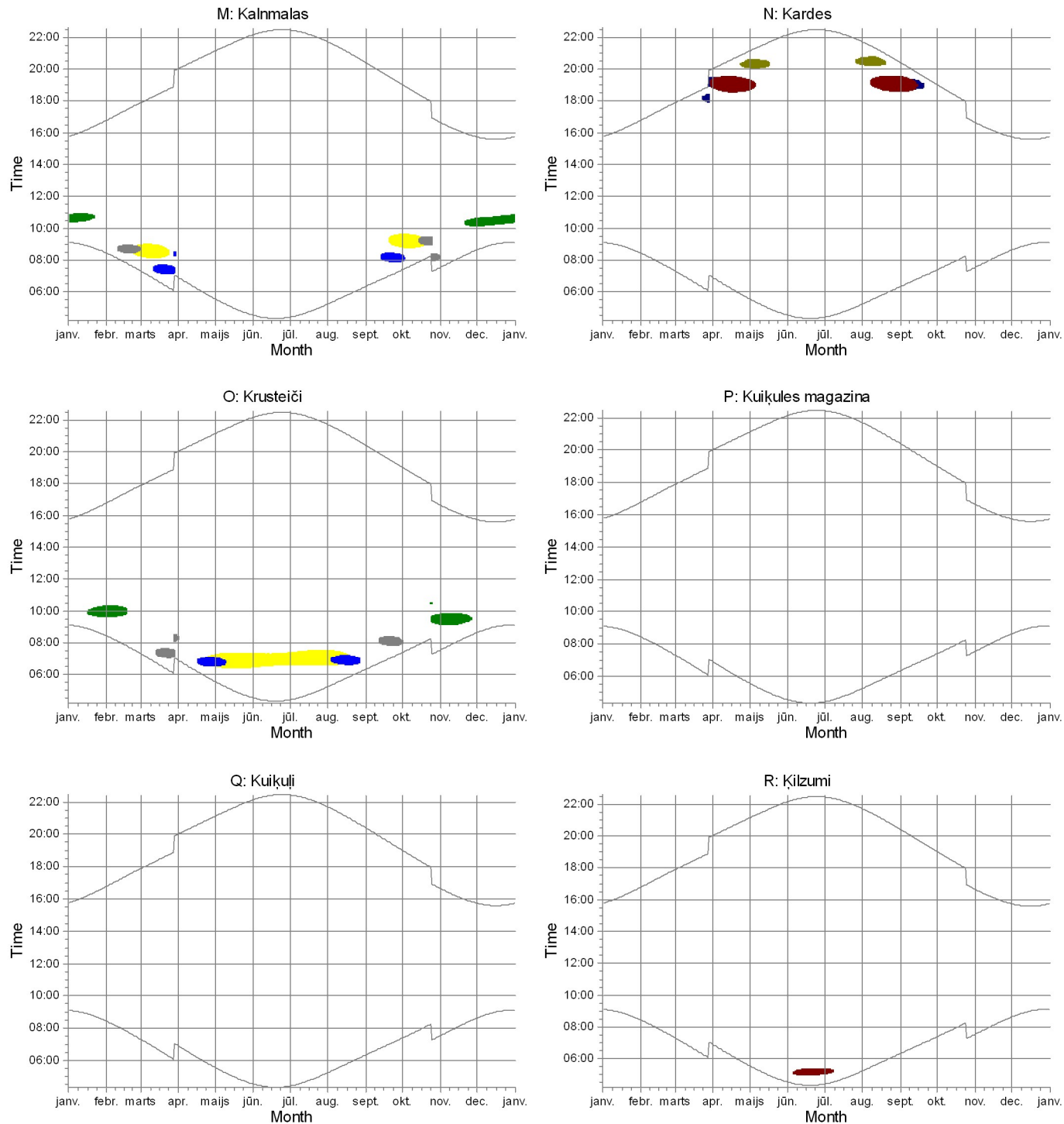
SHADOW - Calendar, graphical



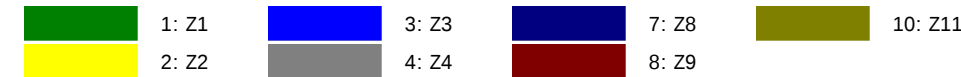
WTGs



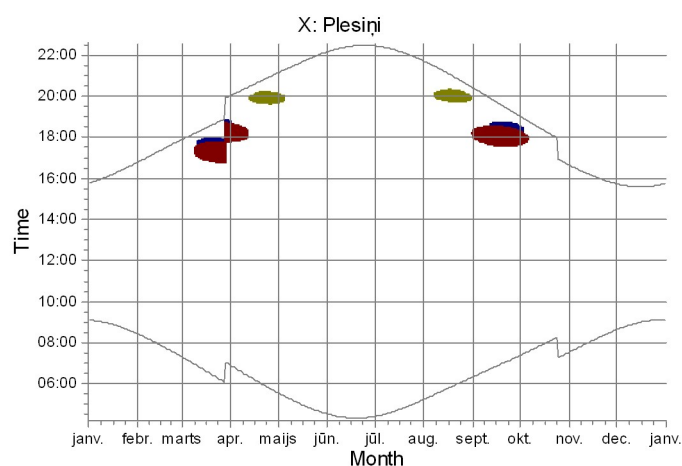
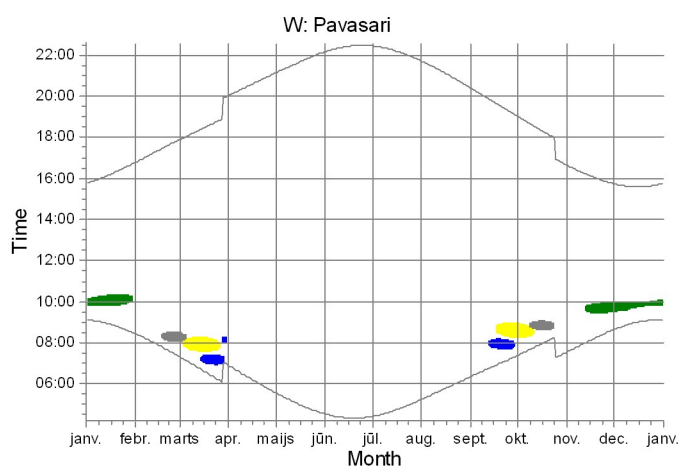
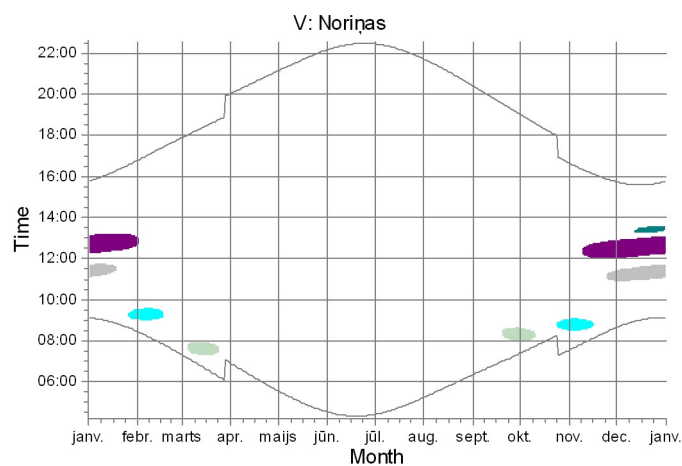
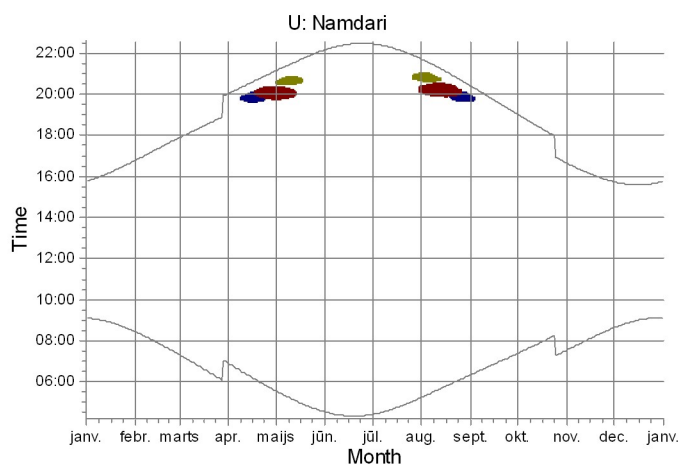
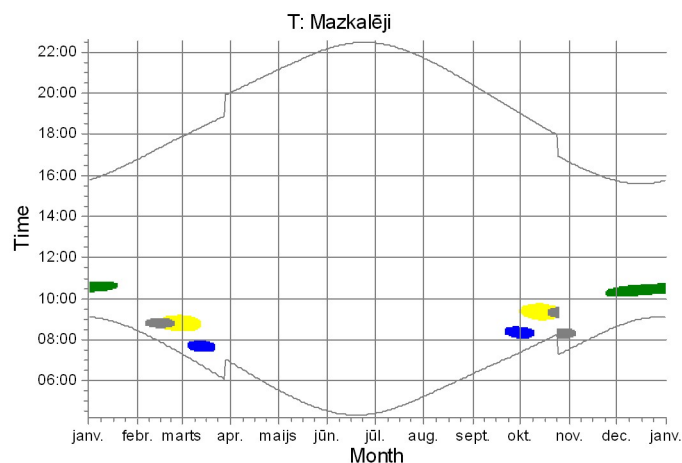
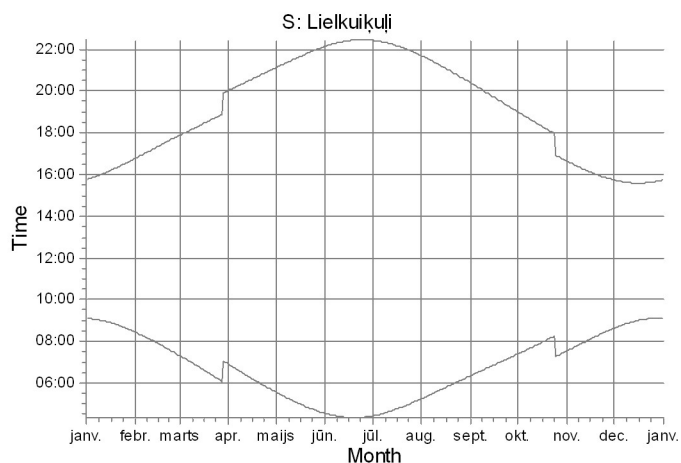
SHADOW - Calendar, graphical



WTGs



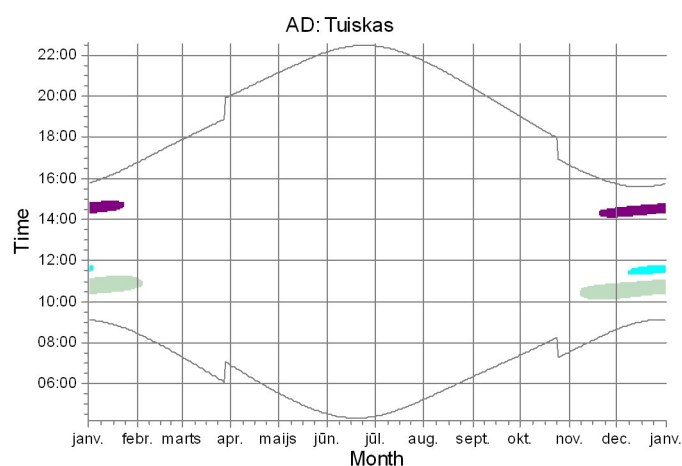
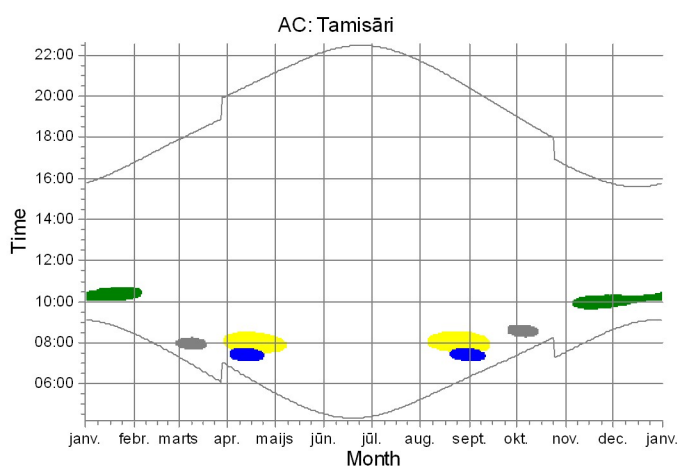
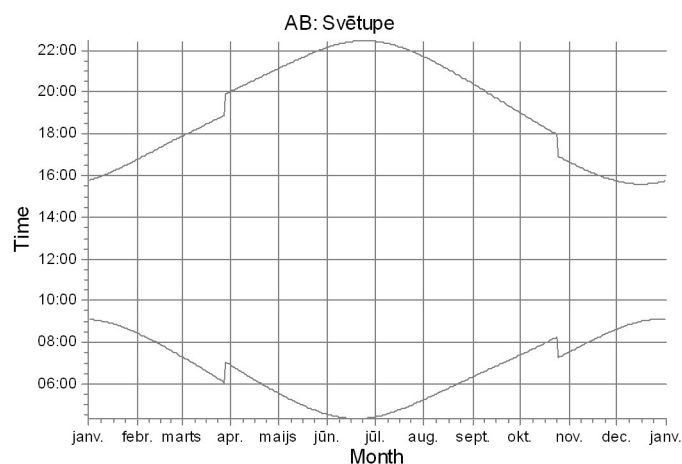
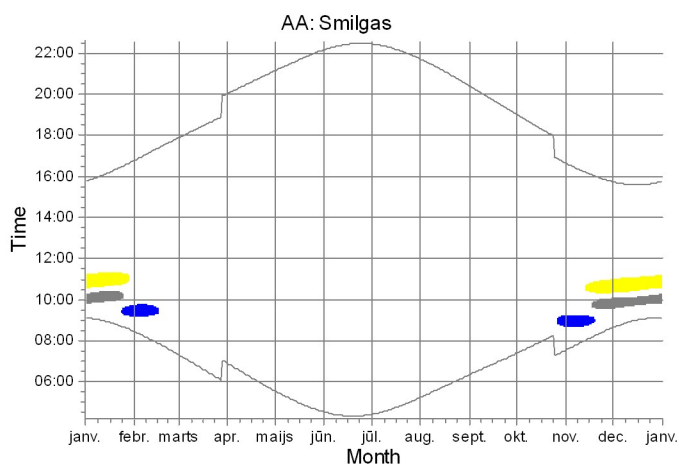
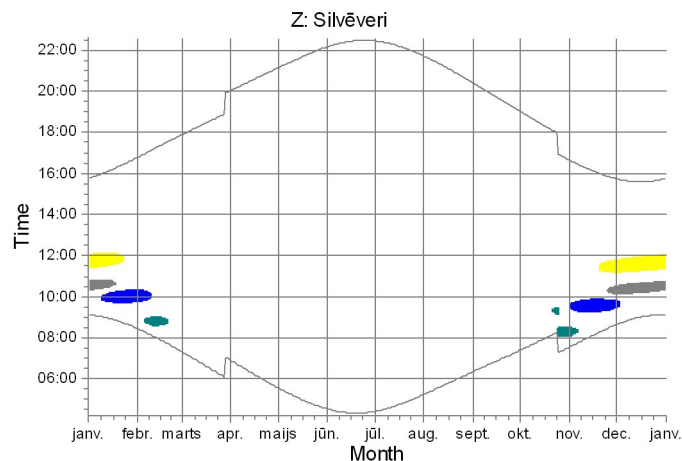
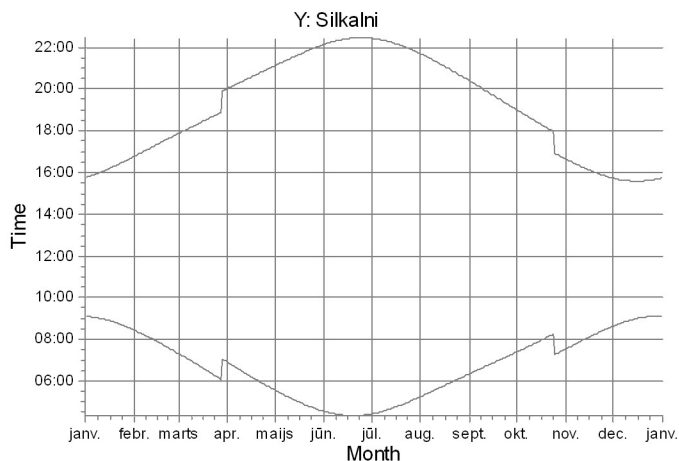
SHADOW - Calendar, graphical



WTGs

1: Z1	4: Z4	8: Z9	12: Z13
2: Z2	6: Z6	10: Z11	13: Z16
3: Z3	7: Z8	11: Z12	14: Z17

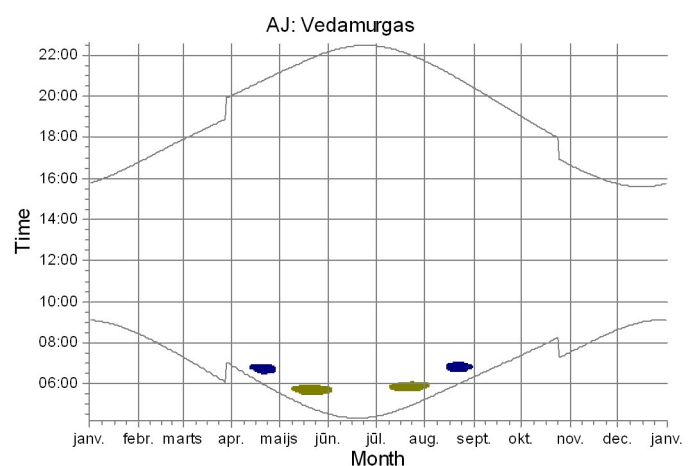
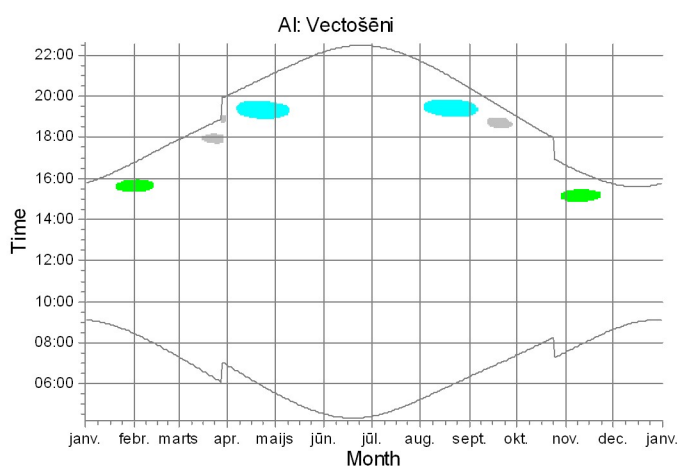
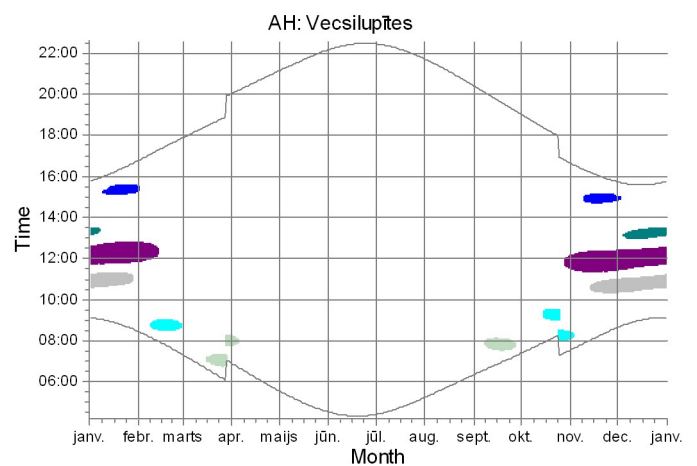
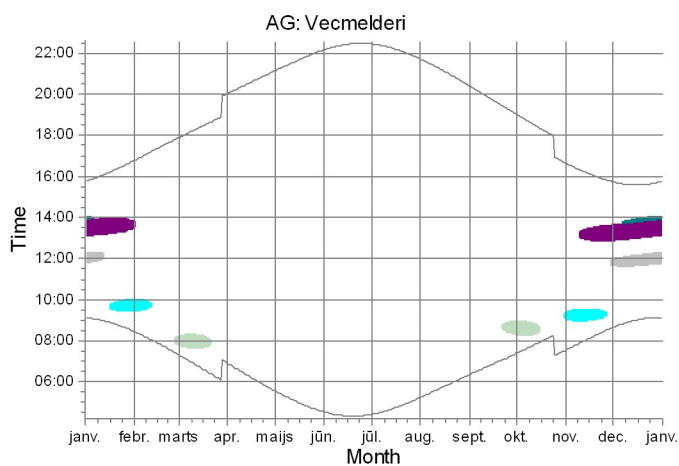
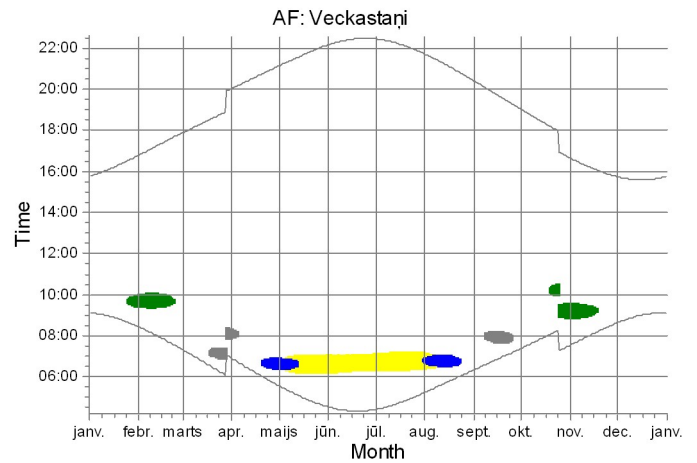
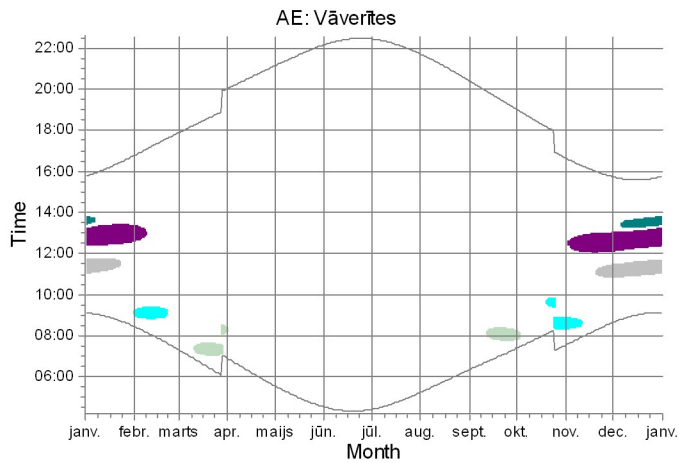
SHADOW - Calendar, graphical



WTGs



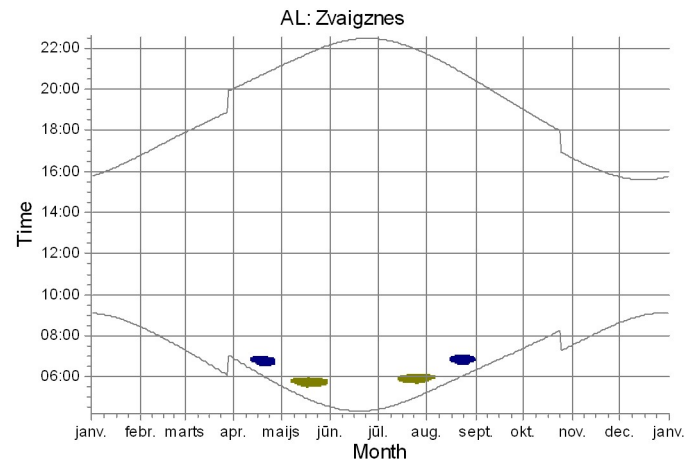
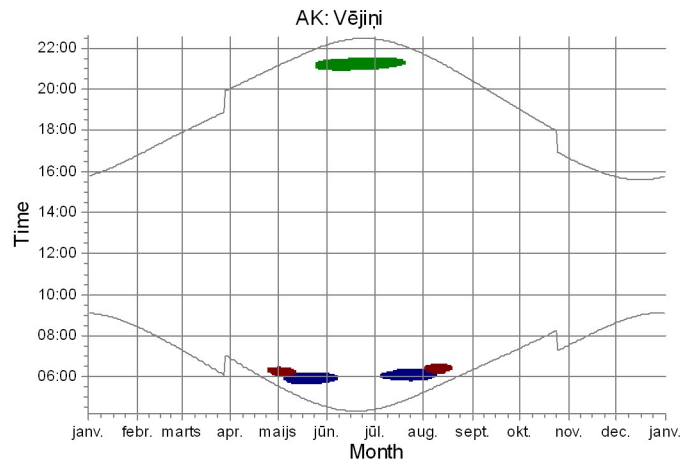
SHADOW - Calendar, graphical



WTGs

1: Z1	4: Z4	9: Z10	12: Z13
2: Z2	6: Z6	10: Z11	13: Z16
3: Z3	7: Z8	11: Z12	14: Z17

SHADOW - Calendar, graphical



WTGs



1: Z1



7: Z8



8: Z9



10: Z11

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 1 - Z1

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07 10:05-10:50/45 15:46 09:51-10:04/13	08:27 09:26-10:37/71 16:46	07:20 17:52	06:54 20:01	05:34 21:07	04:33 20:58-21:21/23 22:09 05:27-05:33/6
2	09:06 09:51-10:51/60 15:47	08:25 09:25-10:36/71 16:49	07:17 17:54	06:51 20:03	05:31 21:10	04:32 20:57-21:22/25 22:10 05:25-05:36/11
3	09:06 09:51-10:51/60 15:48	08:23 09:25-10:34/69 16:51	07:14 17:57	06:48 20:06	05:29 21:12	04:31 20:57-21:22/25 22:12 05:23-05:38/15
4	09:05 09:50-10:51/61 15:50	08:21 09:24-10:18/54 16:53 10:19-10:33/14	07:12 17:59	06:46 20:08	05:27 21:14	04:30 20:57-21:23/26 22:13 05:22-05:39/17
5	09:05 09:51-10:52/61 15:51	08:19 09:24-10:18/54 16:56 10:23-10:27/4	07:09 18:01	06:43 20:10	05:24 21:16	04:29 20:56-21:23/27 22:14 05:21-05:40/19
6	09:04 09:51-10:53/62 15:53	08:17 09:24-10:18/54 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:28 20:56-21:23/27 22:16 05:20-05:41/21
7	09:04 09:51-10:53/62 15:54	08:14 09:23-10:17/54 17:00	07:03 18:06	06:37 20:14	05:20 21:21	04:27 20:55-21:23/28 22:17 05:21-05:42/21
8	09:03 09:50-10:52/62 15:56	08:12 09:23-10:17/54 17:03	07:01 18:08	06:35 20:17	05:17 21:23	04:26 20:56-21:25/29 22:18 05:20-05:43/23
9	09:02 09:50-10:53/63 15:58	08:10 09:23-10:17/54 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 20:56-21:24/28 22:19 05:19-05:43/24
10	09:01 09:45-10:53/68 15:59	08:07 09:23-10:17/54 17:08	06:55 18:13	06:29 20:21	05:13 21:27	04:24 20:56-21:25/29 22:20 05:19-05:44/25
11	09:00 09:43-10:54/71 16:01	08:05 09:23-10:15/52 17:10	06:52 18:15	06:26 20:23	05:11 21:29	04:24 20:56-21:25/29 22:21 05:19-05:44/25
12	08:59 09:42-10:53/71 16:03	08:03 09:24-10:15/51 17:12	06:50 18:17	06:24 20:25	05:08 21:31	04:23 20:56-21:26/30 22:22 05:19-05:45/26
13	08:58 09:41-10:54/73 16:05	08:00 09:24-10:14/50 17:15	06:47 18:19	06:21 20:28	05:06 21:33	04:23 20:57-21:26/29 22:23 05:19-05:46/27
14	08:57 09:40-10:53/73 16:07	07:58 09:24-10:12/48 17:17	06:44 18:22	06:18 20:30	05:04 21:35	04:22 20:56-21:26/30 22:24 05:18-05:45/27
15	08:56 09:40-10:54/74 16:09	07:56 09:25-10:11/46 17:19	06:41 18:24	06:15 20:32	05:02 21:38	04:22 20:56-21:27/31 22:25 05:19-05:46/27
16	08:54 09:39-10:53/74 16:11	07:53 09:25-10:08/43 17:22	06:39 18:26	06:13 20:34	05:00 21:40	04:22 20:57-21:27/30 22:25 05:19-05:47/28
17	08:53 09:39-10:52/73 16:13	07:51 09:26-10:05/39 17:24	06:36 18:28	06:10 20:37	04:58 21:42	04:21 20:57-21:27/30 22:26 05:19-05:47/28
18	08:52 09:39-10:52/73 16:15	07:48 09:27-09:58/31 17:26	06:33 18:30	06:07 20:39	04:56 21:44	04:21 20:57-21:28/31 22:26 05:19-05:47/28
19	08:50 09:39-10:51/72 16:17	07:46 09:28-09:56/28 17:29	06:30 18:33	06:05 20:41	04:54 21:46	04:21 20:57-21:28/31 22:27 05:19-05:48/29
20	08:49 09:39-10:50/71 16:19	07:43 09:30-09:55/25 17:31	06:27 18:35	06:02 20:43	04:52 21:48	04:21 20:57-21:28/31 22:27 05:19-05:48/29
21	08:47 09:39-10:39/60 16:21 10:41-10:47/6	07:41 09:31-09:53/22 17:34	06:25 18:37	05:59 20:45	04:50 21:50	04:21 20:57-21:28/31 22:27 05:19-05:48/29
22	08:46 09:39-10:39/60 16:23	07:38 09:33-09:49/16 17:36	06:22 18:39	05:57 20:48	04:49 21:51	04:21 20:57-21:28/31 22:28 05:20-05:49/29
23	08:44 09:38-10:40/62 16:26	07:35 09:38-09:44/6 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:22 20:58-21:29/31 22:28 05:20-05:49/29
24	08:42 09:37-10:40/63 16:28	07:33 17:41	06:16 18:44	05:52 20:52	04:45 21:55	04:22 20:58-21:29/31 22:28 05:20-05:48/28
25	08:41 09:36-10:40/64 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	21:04-21:12/8 22:28 05:21-05:49/28
26	08:39 09:33-10:40/67 16:32	07:28 17:45	06:11 18:48	05:46 20:56	04:42 21:59	21:02-21:15/13 22:28 05:21-05:49/28
27	08:37 09:31-10:40/69 16:35	07:25 17:47	06:08 18:50	05:44 20:59	04:40 22:01	21:00-21:16/16 22:28 05:22-05:49/27
28	08:35 09:30-10:40/70 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:39 22:02	21:00-21:17/17 22:27 05:21-05:49/28
29	08:33 09:28-10:39/71 16:39		07:02 19:55	05:39 21:03	04:37 22:04	20:59-21:18/19 22:27 05:22-05:49/27
30	08:31 09:27-10:38/71 16:42		07:00 19:57	05:36 21:05	04:36 22:06	20:58-21:20/22 22:27 05:23-05:49/26
31	08:29 09:26-10:38/72 16:44		06:57 19:59		04:34 22:07	20:58-21:20/22
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	2077	1064	0	0	117	1609

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometņu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 1 - Z1

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 21:00-21:29/29 22:26 05:23-05:48/25	05:15 21:41 20:23 19:00	06:21 20:23 20:21 18:57	07:25 20:21 18:57 16:36	07:34 08:53-09:46/53 16:38 15:44	08:39 09:25-10:36/71 15:44 15:42
2	04:27 21:00-21:30/30 22:26 05:23-05:48/25	05:17 21:39 20:21 18:57	06:23 20:21 18:57 16:36	07:27 20:21 18:57 16:36	07:36 08:52-09:46/54 16:36 15:42	08:41 09:28-10:36/68 15:42 15:42
3	04:28 21:01-21:30/29 22:25 05:24-05:48/24	05:19 21:37 20:18 18:54	06:25 20:18 18:54 16:34	07:29 20:18 18:54 16:34	07:38 08:53-09:47/54 16:34 15:42	08:43 09:33-10:37/64 15:42 15:41
4	04:29 21:01-21:30/29 22:24 05:25-05:48/23	05:22 21:35 20:15 18:51	06:27 20:15 18:51 16:31	07:31 20:15 18:51 16:31	07:41 08:53-09:47/54 16:31 15:41	08:44 09:35-10:38/63 15:41 15:40
5	04:30 21:02-21:30/28 22:24 05:26-05:48/22	05:24 21:33 20:12 18:48	06:30 20:12 18:48 16:29	07:33 20:12 18:48 16:29	07:43 08:53-09:48/55 16:29 15:40	08:46 09:36-10:38/62 15:40 15:39
6	04:31 21:02-21:30/28 22:23 05:26-05:47/21	05:26 21:30 20:10 18:46	06:32 20:10 18:46 16:27	07:35 20:10 18:46 16:27	07:45 08:53-09:47/54 16:27 09:52-09:58/6	08:48 09:36-10:38/62 15:39 15:38
7	04:32 21:02-21:30/28 22:22 05:27-05:47/20	05:28 21:28 20:07 18:43	06:34 20:07 18:43 16:25	07:38 20:07 18:43 16:25	07:48 08:54-10:03/69 16:25 15:38	08:49 09:37-10:38/61 15:38 15:37
8	04:34 21:03-21:29/26 22:21 05:28-05:46/18	05:30 21:26 20:04 18:40	06:36 20:04 18:40 16:22	07:40 20:04 18:40 16:22	07:50 08:55-10:05/70 16:22 15:38	08:51 09:38-10:39/61 15:38 15:37
9	04:35 21:03-21:29/26 22:20 05:29-05:45/16	05:32 21:23 20:01 18:37	06:38 20:01 18:37 16:20	07:42 20:01 18:37 16:20	07:52 08:56-10:07/71 16:20 15:37	08:52 09:40-10:40/60 15:37 15:37
10	04:36 21:05-21:30/25 22:19 05:32-05:44/12	05:34 21:21 19:59 18:35	06:40 21:21 19:59 18:35	07:44 21:21 19:59 18:35	07:54 08:57-10:08/71 16:18 15:37	08:54 09:40-10:40/60 15:37 15:36
11	04:38 21:05-21:29/24 22:18 05:33-05:42/9	05:36 21:18 19:56 18:32	06:42 21:18 19:56 18:32	07:46 21:18 19:56 18:32	07:57 08:57-10:09/72 16:16 15:36	08:55 09:56-10:41/45 15:36 09:42-09:55/13
12	04:39 21:05-21:28/23 22:16 05:33-05:42/9	05:38 21:16 19:53 18:29	06:44 21:16 19:53 18:29	07:48 21:16 19:53 18:29	07:59 08:59-10:10/71 16:14 15:36	08:56 09:57-10:41/44 15:36 09:42-09:55/13
13	04:41 21:06-21:27/21 22:15 05:33-05:42/9	05:41 21:13 19:50 18:27	06:46 21:13 19:50 18:27	07:51 21:13 19:50 18:27	08:01 09:00-10:11/71 16:12 15:36	08:57 09:57-10:41/44 15:36 09:43-09:55/12
14	04:42 21:07-21:28/21 22:14 05:33-05:42/9	05:43 21:11 19:47 18:24	06:49 21:11 19:47 18:24	07:53 21:11 19:47 18:24	08:03 09:02-10:12/70 16:10 15:35	08:59 09:59-10:42/43 15:35 09:45-09:55/10
15	04:44 21:08-21:26/18 22:12 05:33-05:42/9	05:45 21:08 19:45 18:21	06:51 21:08 19:45 18:21	07:55 21:08 19:45 18:21	08:06 09:04-10:13/69 16:08 15:35	09:00 10:00-10:42/42 15:35 09:46-09:55/9
16	04:45 21:09-21:26/17 22:11 05:33-05:42/9	05:47 21:06 19:42 18:19	06:53 21:06 19:42 18:19	07:57 21:06 19:42 18:19	08:08 09:06-10:13/67 16:06 15:35	09:01 10:01-10:43/42 15:35 09:46-09:55/9
17	04:47 21:10-21:24/14 22:09 05:33-05:42/9	05:49 21:03 19:39 18:16	06:55 21:03 19:39 18:16	08:00 21:03 19:39 18:16	08:10 09:10-10:14/64 16:04 15:35	09:02 10:02-10:43/41 15:35 09:48-09:55/7
18	04:49 21:13-21:23/10 22:08 05:33-05:42/9	05:51 21:01 19:36 18:13	06:57 21:01 19:36 18:13	08:02 21:01 19:36 18:13	08:12 09:11-10:14/63 16:02 15:35	09:02 10:03-10:44/41 15:35 09:49-09:55/6
19	04:50 21:15-21:19/4 22:06 05:33-05:42/9	05:53 20:58 19:33 18:11	06:59 20:58 19:33 18:11	08:04 20:58 19:33 18:11	08:15 09:13-10:15/62 16:01 15:36	09:03 10:03-10:43/40 15:36 09:49-09:54/5
20	04:52 21:15-21:19/4 22:05 05:33-05:42/9	05:55 20:55 19:30 18:08	07:01 20:55 19:30 18:08	08:06 20:55 19:30 18:08	08:17 09:14-10:14/60 15:59 15:36	09:04 10:04-10:44/40 15:36 09:50-09:54/4
21	04:54 21:15-21:19/4 22:03 05:33-05:42/9	05:58 20:53 19:28 18:05	07:03 20:53 19:28 18:05	08:09 20:53 19:28 18:05	08:19 09:15-10:15/60 15:57 15:36	09:05 10:05-10:45/40 15:36 09:51-09:55/4
22	04:56 21:15-21:19/4 22:01 05:33-05:42/9	06:00 20:50 19:25 18:03	07:05 20:50 19:25 18:03	08:11 20:50 19:25 18:03	08:21 09:15-10:26/71 15:56 15:37	09:05 10:05-10:45/40 15:37 09:51-09:55/4
23	04:58 21:15-21:19/4 21:59 05:33-05:42/9	06:02 20:48 19:22 18:00	07:08 20:48 19:22 18:00	08:13 20:48 19:22 18:00	08:23 09:16-10:28/72 15:54 15:37	09:06 10:06-10:46/40 15:37 09:52-09:56/4
24	05:00 21:15-21:19/4 21:58 05:33-05:42/9	06:04 20:45 19:19 17:58	07:10 20:45 19:19 17:58	08:15 20:45 19:19 17:58	08:25 09:16-10:29/73 15:53 15:38	09:06 10:06-10:46/40 15:38 09:52-09:57/5
25	05:01 21:15-21:19/4 21:56 05:33-05:42/9	06:06 20:42 19:16 16:55	07:12 20:42 19:16 16:55	08:18 20:42 19:16 16:55	08:27 09:17-10:30/73 15:51 15:39	09:06 10:06-10:47/41 15:39 09:52-09:58/6
26	05:03 21:15-21:19/4 21:54 05:33-05:42/9	06:08 20:40 19:14 16:53	07:14 20:40 19:14 16:53	08:19 20:40 19:14 16:53	08:29 09:19-10:32/73 15:50 15:39	09:07 10:06-10:47/41 15:39 09:52-09:58/6
27	05:05 21:15-21:19/4 21:52 05:33-05:42/9	06:10 20:37 19:11 16:50	07:16 20:37 19:11 16:50	08:22 20:37 19:11 16:50	08:31 09:19-10:33/74 15:48 15:40	09:07 10:06-10:48/42 15:40 09:51-09:58/8
28	05:07 21:15-21:19/4 21:50 05:33-05:42/9	06:13 20:34 19:08 16:48	07:18 20:34 19:08 16:48	08:24 20:34 19:08 16:48	08:33 09:20-10:33/73 15:47 15:41	09:07 10:06-10:48/42 15:41 09:51-10:00/9
29	05:09 21:15-21:19/4 21:48 05:33-05:42/9	06:15 20:32 19:05 16:45	07:20 20:32 19:05 16:45	08:27 20:32 19:05 16:45	08:35 09:21-10:34/73 15:46 15:42	09:07 10:06-10:49/43 15:42 09:52-10:02/10
30	05:11 21:15-21:19/4 21:46 05:33-05:42/9	06:17 20:29 19:02 16:43	07:22 20:29 19:02 16:43	08:33 20:29 19:02 16:43	08:37 09:24-10:35/71 15:45 15:43	09:07 10:05-10:50/45 15:43 09:52-10:03/11
31	05:13 21:15-21:19/4 21:44 05:33-05:42/9	06:19 20:26 19:02 16:41	07:24 20:26 19:02 16:41	08:35 20:26 19:02 16:41	08:41 09:24-10:35/71 15:45 15:43	09:07 10:06-10:49/43 15:44 09:51-10:03/12
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	645	0	0	476	1999	1678

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Riga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 2 - Z2

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07 10:37-11:11/34 12:06-12:42/36 15:46 11:27-12:02/35	08:27 16:46	07:20 08:17-09:08/51 17:52	06:54 07:51-08:39/48 20:01	05:34 06:31-07:26/55 21:08 07:38-08:16/38	04:33 06:13-07:19/66 22:09
2	09:06 10:37-11:11/34 12:06-12:42/36 15:47 11:27-12:02/35	08:25 16:48	07:17 08:16-09:08/52 17:54	06:51 07:48-08:38/50 20:03	05:31 06:27-07:27/60 21:10 07:39-08:14/35	04:32 06:14-07:19/65 22:10
3	09:06 10:37-11:11/34 12:07-12:42/35 15:48 11:27-12:02/35	08:23 16:51	07:14 08:14-09:07/53 17:57	06:48 07:46-08:35/49 20:06	05:29 06:24-07:26/62 21:12 07:39-08:12/33	04:31 06:14-07:19/65 22:12
4	09:05 10:38-11:12/34 12:07-12:42/35 15:50 11:27-12:02/35	08:21 16:53	07:12 07:54-08:06/12 17:59 08:14-09:07/53	06:46 07:45-08:34/49 20:08	05:27 06:22-07:26/64 21:14 07:41-08:10/29	04:30 06:14-07:18/64 22:13
5	09:05 10:39-11:13/34 12:08-12:43/35 15:51 11:29-12:03/34	08:19 16:56	07:09 07:50-08:08/18 18:01 08:13-09:06/53	06:43 07:43-08:32/49 20:10	05:24 06:21-07:27/66 21:16 07:43-08:08/25	04:28 06:14-07:18/64 22:15
6	09:04 10:39-11:13/34 12:09-12:43/34 15:53 11:29-12:04/35	08:17 16:58	07:06 07:47-08:10/23 18:03 08:12-09:05/53	06:40 07:41-08:31/50 20:12	05:22 06:20-07:27/67 21:18 07:46-08:05/19	04:27 06:14-07:18/64 22:16
7	09:04 10:39-11:14/35 12:10-12:44/34 15:54 11:30-12:04/34	08:14 17:00	07:03 07:45-08:11/26 18:06 08:12-09:03/51	06:37 07:40-08:31/51 20:14	05:20 06:18-07:27/69 21:21 07:50-08:01/11	04:27 06:15-07:18/63 22:17
8	09:03 10:40-11:14/34 12:09-12:43/34 15:56 11:30-12:04/34	08:12 17:03	07:01 07:43-09:02/79 18:08	06:34 07:39-08:29/50 20:17	05:17 06:17-07:27/70 21:23	04:26 06:15-07:18/63 22:18
9	09:02 10:40-11:14/34 12:10-12:43/33 15:58 11:30-12:04/34	08:10 17:05	06:58 07:43-09:01/78 18:10	06:32 07:37-08:28/51 20:19	05:15 06:17-07:27/70 21:25	04:25 06:15-07:17/62 22:19
10	09:01 10:40-11:15/35 12:11-12:43/32 15:59 11:31-12:04/33	08:07 17:07	06:55 07:42-08:58/76 18:13	06:29 07:36-08:28/52 20:21	05:13 06:16-07:27/71 21:27	04:24 06:16-07:18/62 22:20
11	09:00 10:41-11:15/34 12:12-12:44/32 16:01 11:32-12:04/32	08:05 08:49-09:00/11 17:10	06:52 07:41-08:57/76 18:15	06:26 07:36-08:29/53 20:23	05:11 06:15-07:27/72 21:29	04:24 06:16-07:17/61 22:21
12	08:59 10:41-11:15/34 12:13-12:43/30 16:03 11:32-12:04/32	08:03 08:47-09:03/16 17:12	06:50 07:40-08:56/76 18:17	06:24 07:35-08:28/53 20:25	05:08 06:14-07:27/73 21:31	04:23 06:16-07:17/61 22:22
13	08:58 10:42-11:16/34 12:14-12:43/29 16:05 11:34-12:04/30	08:00 08:44-09:05/21 17:15	06:47 07:39-08:55/76 18:19	06:21 07:34-08:28/54 20:28	05:06 06:14-07:26/72 21:33	04:22 06:17-07:18/61 22:23
14	08:57 10:42-11:16/34 12:14-12:43/29 16:07 11:34-12:04/30	07:58 08:42-09:06/24 17:17	06:44 07:39-08:55/76 18:21	06:18 07:34-08:29/55 20:30	05:04 06:13-07:26/73 21:36	04:22 06:17-07:17/60 22:24
15	08:56 10:43-11:16/33 12:16-12:43/27 16:09 11:35-12:04/29	07:56 08:41-09:08/27 17:19	06:41 07:39-08:54/75 18:24 07:23-07:37/14	06:15 07:33-08:28/55 20:32	05:02 06:13-07:25/72 21:38	04:22 06:17-07:17/60 22:25
16	08:54 10:43-11:16/33 12:17-12:42/25 16:11 11:36-12:03/27	07:53 08:40-09:09/29 17:22	06:39 07:19-08:53/94 18:26	06:13 07:33-08:29/56 20:34	05:00 06:12-07:25/73 21:40	04:21 06:18-07:17/59 22:25
17	08:53 10:44-11:17/33 12:18-12:41/23 16:13 11:37-12:03/26	07:51 08:39-09:10/31 17:24	06:36 07:17-08:51/94 18:28	06:10 07:33-08:28/55 20:37	04:58 06:12-07:24/72 21:42	04:21 06:18-07:18/60 22:26
18	08:52 10:45-11:17/32 12:20-12:41/21 16:15 11:39-12:03/24	07:48 08:37-09:11/34 17:26	06:33 07:15-08:50/95 18:30	06:07 07:32-08:27/55 20:39	04:56 06:12-07:25/73 21:44	04:21 06:18-07:18/60 22:26
19	08:50 10:45-11:16/31 12:22-12:40/18 16:17 11:40-12:02/22	07:46 08:35-09:11/36 17:29	06:30 07:13-08:12/59 18:33 08:14-08:48/34	06:05 07:32-08:27/55 20:41	04:54 06:12-07:24/72 21:46	04:21 06:18-07:18/60 22:27
20	08:49 10:46-11:16/30 12:24-12:38/14 16:19 11:42-12:00/18	07:43 08:34-09:12/38 17:31	06:27 07:12-08:11/59 18:35 08:16-08:46/30	06:02 07:32-08:26/54 20:43 06:57-07:12/15	04:52 06:11-07:23/72 21:48	04:21 06:19-07:18/59 22:27
21	08:47 10:47-11:16/29 12:27-12:35/8 16:21 11:44-11:59/15	07:41 08:33-09:12/39 17:33	06:25 07:10-08:10/60 18:37 08:17-08:44/27	05:59 07:32-08:26/54 20:45 06:54-07:15/21	04:50 06:12-07:23/71 21:50	04:21 06:19-07:18/59 22:27
22	08:46 10:47-11:15/28 16:23 11:47-11:56/9	07:38 08:32-09:11/39 17:36	06:22 07:06-08:08/62 18:39 08:19-08:41/22	05:57 07:32-08:25/53 20:48 06:50-07:17/27	04:48 06:11-07:22/71 21:52	04:21 06:19-07:18/59 22:28
23	08:44 10:48-11:15/27 16:26	07:35 08:29-09:12/43 17:38	06:19 07:03-08:06/63 18:41 08:22-08:36/14	05:54 07:33-08:25/52 20:50 06:49-07:19/30	04:47 06:12-07:22/70 21:53	04:22 06:19-07:19/60 22:28
24	08:42 10:50-11:14/24 16:28	07:33 08:26-09:11/45 17:40	06:16 07:01-08:04/63 18:44	05:52 07:32-08:23/51 20:52 06:46-07:20/34	04:45 06:11-07:21/70 21:55	04:22 06:19-07:19/60 22:28
25	08:41 10:51-11:13/22 16:30	07:30 08:24-09:11/47 17:43	06:13 07:46-08:01/15 18:46 07:00-07:45/45	05:49 07:33-08:23/50 20:54 06:45-07:22/37	04:43 06:12-07:21/69 21:57	04:22 06:20-07:20/60 22:28
26	08:39 10:53-11:12/19 16:32	07:28 08:21-09:10/49 17:45	06:11 07:50-07:56/6 18:48 06:59-07:45/46	05:46 07:34-08:22/48 20:56 06:44-07:23/39	04:42 06:12-07:21/69 21:59	04:23 06:20-07:20/60 22:28
27	08:37 10:55-11:11/16 16:35	07:25 08:20-09:10/50 17:47	06:08 06:57-07:44/47 18:50	05:44 07:34-08:21/47 20:59 06:42-07:23/41	04:40 06:12-07:19/67 22:01	04:23 06:20-07:20/60 22:28
28	08:35 10:59-11:08/9 16:37	07:22 08:18-09:09/51 17:50	06:05 06:56-07:43/47 18:52	05:41 07:35-08:20/45 21:01 06:40-07:24/44	04:39 06:12-07:19/67 22:02	04:24 06:20-07:20/60 22:27
29	08:33 16:39	 17:55	07:02 07:55-08:42/47 19:55	05:39 07:36-08:19/43 21:03 06:38-07:25/47	04:37 06:12-07:19/67 22:04	04:25 06:20-07:21/61 22:27
30	08:31 16:41	 17:57	06:59 07:55-08:42/47 19:57	05:36 07:36-08:17/41 21:05 06:36-07:25/49	04:36 06:13-07:19/66 22:06	04:25 06:21-07:22/61 22:27
31	08:29 16:44	 17:59	06:57 07:54-08:41/47 19:59	 21:05	04:34 06:13-07:19/66 22:07	 22:27
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	2082	630	2194	1912	2321	1839

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 2 - Z2

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 06:20-07:21/61 22:26	05:15 06:25-07:37/72 21:41	06:21 07:35-08:28/53 20:24	07:25 08:19-09:35/76 19:00	07:34 16:38	08:39 10:23-10:58/35 11:55-12:26/31 15:43 11:14-11:47/33
2	04:27 06:20-07:22/62 22:26	05:17 06:26-07:37/71 21:39	06:23 07:35-08:27/52 20:21	07:27 08:18-09:35/77 18:57	07:36 16:36	08:41 10:23-10:58/35 11:54-12:27/33 15:42 11:14-11:47/33
3	04:28 06:20-07:22/62 22:25	05:19 06:26-07:37/71 21:37	06:25 07:35-08:26/51 20:18	07:29 08:19-09:36/77 18:54	07:38 16:33	08:43 10:24-10:58/34 11:54-12:27/33 15:41 11:14-11:48/34
4	04:29 06:21-07:23/62 22:24	05:21 06:26-07:36/70 21:35	06:27 07:36-08:27/51 20:15	07:31 08:20-09:37/77 18:51	07:41 16:31	08:44 10:24-10:59/35 11:55-12:28/33 15:41 11:15-11:48/33
5	04:30 06:21-07:23/62 22:24	05:24 06:27-07:36/69 21:33	06:30 07:36-08:27/51 20:12	07:33 08:20-09:38/78 18:48	07:43 16:29	08:46 10:25-10:59/34 11:55-12:29/34 15:40 11:15-11:49/34
6	04:31 06:21-07:24/63 22:23	05:26 06:28-07:36/68 21:30 07:58-08:12/14	06:32 07:37-08:27/50 20:10	07:35 08:21-09:39/78 18:46	07:45 16:27	08:48 10:25-11:00/35 11:55-12:29/34 15:39 11:15-11:50/35
7	04:32 06:21-07:24/63 22:22	05:28 06:29-07:36/67 21:28 07:54-08:15/21	06:34 07:38-08:27/49 20:07	07:38 08:23-08:47/24 18:43	07:48 16:24	08:49 10:25-10:59/34 11:55-12:29/34 15:38 11:15-11:50/35
8	04:34 06:21-07:25/64 22:21	05:30 06:31-07:36/65 21:26 07:52-08:18/26	06:36 07:39-08:28/49 20:04	07:40 08:24-08:45/21 18:40	07:50 16:22	08:51 10:26-11:00/34 11:55-12:30/35 15:38 11:15-11:50/35
9	04:35 06:20-07:25/65 22:20	05:32 06:32-07:36/64 21:23 07:50-08:20/30	06:38 07:40-08:30/50 20:01	07:42 08:26-08:42/16 18:37	07:52 16:20	08:52 10:27-11:00/33 11:56-12:31/35 15:37 11:16-11:51/35
10	04:36 06:21-07:26/65 22:19	05:34 06:34-07:35/61 21:21 07:48-08:22/34	06:40 07:41-08:31/50 19:59	07:44 08:30-08:37/7 18:35	07:54 16:18	08:54 10:26-11:00/34 11:56-12:31/35 15:36 11:16-11:51/35
11	04:38 06:21-07:26/65 22:18	05:36 06:37-07:35/58 21:18 07:47-08:23/36	06:42 07:43-08:31/48 19:56	07:46 08:50-09:42/52 18:32	07:57 16:16	08:55 10:27-11:01/34 11:56-12:32/36 15:36 11:17-11:52/35
12	04:39 06:21-07:27/66 22:16	05:38 06:41-07:34/53 21:16 07:46-08:24/38	06:44 07:45-08:32/47 19:53	07:49 08:50-09:42/52 18:29	07:59 16:14	08:56 10:28-11:01/33 11:56-12:32/36 15:36 11:17-11:52/35
13	04:41 06:20-07:27/67 22:15	05:40 07:44-08:26/42 21:13 06:45-07:34/49	06:46 07:45-08:32/47 19:50	07:51 08:50-09:41/51 18:27	08:01 16:12	08:57 10:28-11:01/33 11:56-12:32/36 15:35 11:17-11:52/35
14	04:42 06:21-07:28/67 22:14	05:43 07:43-08:27/44 21:11 06:46-07:33/47	06:49 07:45-08:33/48 19:47	07:53 08:52-09:42/50 18:24	08:04 10:30-10:40/10 16:10	08:59 10:29-11:02/33 11:58-12:34/36 15:35 11:18-11:54/36
15	04:44 06:21-07:28/67 22:12	05:45 07:42-08:28/46 21:08 06:48-07:32/44	06:51 07:45-08:33/48 19:45	07:55 08:53-09:42/49 18:21	08:06 10:28-10:44/16 16:08	09:00 10:29-11:02/33 11:58-12:34/36 15:35 11:18-11:54/36
16	04:45 06:21-07:29/68 22:11	05:47 07:41-08:28/47 21:06 06:50-07:31/41	06:53 07:46-08:32/46 19:42	07:57 08:54-09:42/48 18:19	08:08 10:26-10:45/19 16:06	09:01 10:30-11:03/33 11:58-12:34/36 15:35 11:19-11:54/35
17	04:47 06:21-07:29/68 22:09	05:49 07:40-08:29/49 21:03 06:51-07:30/39	06:55 07:47-08:33/46 19:39	08:00 08:56-09:43/47 18:16	08:10 10:25-10:47/22 16:04	09:02 10:31-11:03/32 11:59-12:35/36 15:35 11:19-11:55/36
18	04:49 06:21-07:30/69 22:08	05:51 07:40-08:29/49 21:01 06:52-07:28/36	06:57 08:34-08:48/14 19:36	08:02 08:59-09:43/44 18:13	08:12 10:24-10:48/24 16:02	09:02 10:31-11:04/33 11:59-12:36/37 15:35 11:20-11:56/36
19	04:50 06:21-07:31/70 22:06	05:53 07:39-08:30/51 20:58 06:53-07:27/34	06:59 07:48-08:51/63 19:33	08:04 09:02-09:42/40 18:11	08:15 10:23-10:50/27 16:01	09:03 10:31-11:03/32 11:59-12:35/36 15:36 11:19-11:55/36
20	04:52 06:21-07:32/71 22:05	05:55 07:38-08:30/52 20:56 06:54-07:25/31	07:01 07:50-08:52/62 19:30	08:06 09:03-09:42/39 18:08	08:17 10:22-10:50/28 15:59	09:04 10:32-11:04/32 12:00-12:36/36 15:36 11:20-11:56/36
21	04:54 06:22-07:33/71 22:03	05:58 07:38-08:31/53 20:53 06:56-07:22/26	07:03 07:51-08:53/62 19:28	08:09 09:03-09:42/39 18:05	08:19 10:23-10:52/29 12:03-12:11/8 15:57	09:05 10:33-11:05/32 12:01-12:37/36 15:36 11:21-11:57/36
22	04:56 06:21-07:33/72 22:01	06:00 07:37-08:31/54 20:50 06:59-07:20/21	07:05 07:53-08:54/61 19:25	08:11 09:05-09:42/37 18:03	08:21 10:22-10:52/30 12:00-12:14/14 15:56	09:05 10:33-11:05/32 12:01-12:37/36 15:37 11:21-11:57/36
23	04:58 06:22-07:34/72 21:59	06:02 07:37-08:31/54 20:48 07:02-07:16/14	07:08 07:56-08:55/59 19:22	08:13 09:05-09:41/36 18:00	08:23 10:22-10:53/31 11:59-12:17/18 15:54	09:06 10:34-11:06/32 12:02-12:38/36 15:37 11:22-11:58/36
24	04:59 06:22-07:34/72 21:58	06:04 07:36-08:31/55 20:45	07:10 07:56-08:55/59 19:19	08:15 09:07-09:41/34 17:58	08:25 10:22-10:54/32 11:57-12:18/21 15:53	09:06 10:34-11:06/32 12:02-12:38/36 15:38 11:22-11:58/36
25	05:01 06:22-07:34/72 21:56	06:06 07:36-08:31/55 20:42	07:12 07:57-08:55/58 19:16	08:18 08:09-08:39/30 16:55	08:27 10:21-10:54/33 11:56-12:19/23 15:51	09:06 10:34-11:07/33 12:02-12:38/36 15:38 11:22-11:58/36
26	05:03 06:22-07:35/73 21:54	06:08 07:35-08:31/56 20:40	07:14 07:58-09:33/95 19:14	07:20 08:10-08:39/29 16:53	08:29 10:22-10:55/33 11:56-12:21/25 15:50	09:07 10:34-11:07/33 12:02-12:39/37 15:39 11:23-11:59/36
27	05:05 06:23-07:36/73 21:52	06:10 07:35-08:30/55 20:37	07:16 08:00-09:34/94 19:11	07:22 08:11-08:37/26 16:50	08:31 10:22-10:56/34 11:55-12:22/27 15:48	09:07 10:35-11:07/32 12:03-12:39/36 15:40 11:23-11:59/36
28	05:07 06:23-07:36/73 21:50	06:13 07:35-08:30/55 20:34	07:18 08:20-09:35/75 19:08	07:25 08:13-08:36/23 16:48	08:33 10:22-10:56/34 11:55-12:23/28 15:47	09:07 10:35-11:08/33 12:04-12:40/36 15:41 11:24-12:00/36
29	05:09 06:23-07:36/73 21:48	06:15 07:35-08:29/54 20:32	07:20 08:19-09:35/76 19:05	07:27 08:14-08:34/20 16:45	08:35 10:22-10:56/34 11:54-12:24/30 15:46	09:07 10:36-11:09/33 12:04-12:40/36 15:42 11:25-12:00/35
30	05:11 06:24-07:36/72 21:46	06:17 07:35-08:29/54 20:29	07:22 08:19-09:35/76 19:02	07:29 08:17-08:32/15 16:43	08:37 10:23-10:57/34 11:55-12:25/30 15:45	09:07 10:37-11:10/33 12:05-12:41/36 15:43 11:25-12:01/36
31	05:13 06:24-07:37/73 21:44	06:19 07:35-08:28/53 20:26		07:31 08:20-08:28/8 16:41		09:07 10:36-11:10/34 12:05-12:41/36 15:44 11:25-12:01/36
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	2103	2348	1913	1510	955	3218

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limba ži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 3 - Z3

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07 10:11-10:34/23 15:46	08:27 15:21-15:28/7 09:47-10:17/30 16:46 09:14-09:41/27 10:20-10:44/24	07:20 07:50-07:58/8 17:52	06:54 07:29-08:01/32 20:01	05:34 06:23-07:03/40 21:07	04:33 22:09
2	09:06 10:10-10:34/24 15:47	08:25 09:13-09:41/28 10:20-10:43/23 16:48 09:47-10:16/29	07:17 07:46-08:00/14 17:54	06:51 07:28-08:00/32 20:03	05:31 06:24-07:02/38 21:10	04:32 22:10
3	09:06 10:10-10:35/25 15:48	08:23 09:14-09:41/27 10:23-10:41/18 16:51 09:48-10:16/28	07:14 07:44-08:02/18 17:57	06:48 07:22-07:59/37 20:06	05:29 06:23-06:59/36 21:12	04:31 22:12
4	09:05 10:10-10:35/25 15:50	08:21 09:14-09:42/28 10:26-10:39/13 16:53 09:50-10:16/26	07:12 07:43-08:04/21 17:59	06:46 07:20-07:58/38 20:08	05:27 06:24-06:59/35 21:14	04:29 22:13
5	09:05 10:11-10:37/26 15:51	08:19 09:13-09:42/29 10:30-10:34/4 16:56 09:50-10:14/24	07:09 07:42-08:04/22 18:01	06:43 07:17-07:56/39 20:10	05:24 06:24-06:58/34 21:16	04:28 22:14
6	09:04 10:11-10:38/27 15:53	08:17 09:14-09:42/28 16:58 09:52-10:13/21	07:06 07:37-08:04/27 18:03	06:40 07:15-07:53/38 20:12	05:22 06:25-06:57/32 21:18	04:27 22:16
7	09:04 10:11-10:39/28 15:54	08:14 09:14-09:42/28 17:00 09:53-10:11/18	07:03 07:35-08:04/29 18:06	06:37 07:15-07:51/36 20:14	05:19 06:25-06:55/30 21:21	04:27 22:17
8	09:03 10:10-10:38/28 15:56	08:12 09:15-09:42/27 17:03 09:56-10:10/14	07:01 07:33-08:04/31 18:08	06:34 07:13-07:50/37 20:17	05:17 06:26-06:53/27 21:23	04:26 22:18
9	09:02 10:10-10:39/29 15:58	08:10 09:15-09:41/26 17:05 09:59-10:05/6	06:58 07:32-08:05/33 18:10	06:32 07:12-07:48/36 20:19	05:15 06:27-06:49/22 21:25	04:25 22:19
10	09:01 15:13-15:15/2 10:10-10:40/30 15:59 09:51-09:59/8	08:07 09:16-09:41/25 17:07	06:55 07:31-08:04/33 18:12	06:29 07:11-07:46/35 20:21	05:13 06:28-06:46/18 21:27	04:24 22:20
11	09:00 15:12-15:18/6 10:11-10:42/31 16:01 09:50-10:02/12	08:05 09:16-09:40/24 17:10	06:52 07:30-08:03/33 18:15	06:26 07:11-07:45/34 20:23	05:10 06:30-06:44/14 21:29	04:24 22:21
12	08:59 15:11-15:19/8 10:10-10:42/32 16:03 09:48-10:03/15	08:03 09:18-09:40/22 17:12	06:50 07:23-08:02/39 18:17	06:23 07:11-07:41/30 20:25	05:08 06:32-06:42/10 21:31	04:23 22:22
13	08:58 15:11-15:22/11 10:11-10:43/32 16:05 09:48-10:05/17	08:00 09:18-09:38/20 17:15	06:47 07:20-08:01/41 18:19	06:21 07:10-07:41/31 20:28	05:06 21:33	04:22 22:23
14	08:57 15:10-15:24/14 10:10-10:43/33 16:07 09:47-10:06/19	07:58 09:20-09:36/16 17:17	06:44 07:18-08:00/42 18:21	06:18 07:11-07:41/30 20:30 06:52-07:00/8	05:04 21:36	04:22 22:24
15	08:56 15:11-15:27/16 10:11-10:44/33 16:09 09:47-10:08/21	07:56 09:23-09:33/10 17:19	06:41 07:12-07:15/3 18:24 07:16-07:57/41	06:15 07:10-07:40/30 20:32 06:48-07:03/15	05:02 21:38	04:22 22:25
16	08:54 15:10-15:28/18 10:11-10:44/33 16:11 09:46-10:09/23	07:53 17:22	06:39 07:07-07:54/47 18:26	06:13 07:11-07:40/29 20:34 06:46-07:05/19	05:00 21:40	04:21 22:25
17	08:53 15:10-15:30/20 16:13 09:45-10:45/60	07:51 17:24	06:36 07:04-07:53/49 18:28	06:10 07:11-07:38/27 20:37 06:44-07:06/22	04:58 21:42	04:21 22:26
18	08:52 15:10-15:31/21 16:15 09:46-10:46/60	07:48 17:26	06:33 07:02-07:52/50 18:30	06:07 07:11-07:37/26 20:39 06:41-07:06/25	04:56 21:44	04:21 22:26
19	08:50 15:10-15:32/22 16:17 09:45-10:46/61	07:46 17:29	06:30 07:01-07:50/49 18:33	06:05 07:12-07:36/24 20:41 06:39-07:07/28	04:54 21:46	04:21 22:27
20	08:49 15:10-15:32/22 16:19 09:45-10:46/61	07:43 17:31	06:27 07:01-07:49/48 18:35	06:02 06:35-07:07/32 20:43 07:13-07:34/21	04:52 21:48	04:21 22:27
21	08:47 15:10-15:32/22 16:21 09:45-10:46/61	07:41 17:33	06:25 07:00-07:46/46 18:37	05:59 06:33-07:08/35 20:45 07:15-07:33/18	04:50 21:50	04:21 22:27
22	08:46 15:10-15:33/23 16:23 09:44-10:47/63	07:38 17:36	06:22 06:59-07:40/41 18:39	05:57 06:30-07:08/38 20:48 07:16-07:29/13	04:48 21:51	04:21 22:28
23	08:44 15:11-15:33/22 16:25 09:44-10:47/63	07:35 17:38	06:19 06:59-07:39/40 18:41 06:47-06:58/11	05:54 06:29-07:08/39 20:50 07:22-07:25/3	04:47 21:53	04:21 22:28
24	08:42 15:11-15:33/22 09:44-10:47/63 16:28 09:25-09:26/1	07:33 17:40	06:16 06:44-07:38/54 18:44	05:51 06:27-07:07/40 20:52	04:45 21:55	04:22 22:28
25	08:41 15:12-15:33/21 09:45-10:47/62 16:30 09:20-09:31/11	07:30 17:43	06:13 06:43-07:37/54 18:46	05:49 06:26-07:07/41 20:54	04:43 21:57	04:22 22:28
26	08:39 15:12-15:33/21 09:45-10:47/62 16:32 09:19-09:33/14	07:28 17:45	06:11 06:41-07:36/55 18:48	05:46 06:26-07:07/41 20:56	04:42 21:59	04:23 22:28
27	08:37 15:13-15:33/20 09:45-10:47/62 16:34 09:17-09:35/18	07:25 17:47	06:08 06:38-07:34/56 18:50	05:44 06:24-07:06/42 20:59	04:40 22:01	04:23 22:28
28	08:35 15:14-15:33/19 09:45-10:47/62 16:37 09:17-09:37/20	07:22 17:50	06:05 06:34-07:32/58 18:52	05:41 06:24-07:06/42 21:01	04:39 22:02	04:24 22:27
29	08:33 15:15-15:32/17 09:46-10:46/60 16:39 09:16-09:38/22		07:02 07:32-08:15/43 19:55 08:17-08:29/12	05:39 06:24-07:06/42 21:03	04:37 22:04	04:24 22:27
30	08:31 15:16-15:31/15 09:46-10:46/60 16:41 09:15-09:39/24		06:59 08:05-08:13/8 19:57 07:31-08:03/32	05:36 06:23-07:04/41 21:05	04:36 22:06	04:25 22:27
31	08:29 15:18-15:30/12 09:46-10:17/31 16:44 09:14-09:40/26 10:18-10:45/27		06:57 07:30-08:02/32 19:59		04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	2002	650	1220	1226	336	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 3 - Z3

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 06:41-06:53/12 21:41	06:21 07:10-07:44/34 20:23	07:25 08:01-08:41/40 19:00	07:34 08:45-09:11/26 16:38	08:39 14:54-15:00/6 09:53-10:24/31 15:43 09:32-09:44/12
2	04:27 22:26	05:17 06:40-06:55/15 21:39	06:23 07:10-07:45/35 20:21	07:27 08:06-08:41/35 18:57	07:36 08:44-09:11/27 16:36 09:28-09:36/8	08:41 14:56-14:58/2 09:53-10:24/31 15:42 09:34-09:43/9
3	04:28 22:25	05:19 06:38-06:57/19 21:37	06:25 07:10-07:46/36 20:18	07:29 08:09-08:42/33 18:54	07:38 08:44-09:12/28 16:33 09:25-09:40/15	08:43 09:54-10:24/30 15:41
4	04:29 22:24	05:21 06:36-07:00/24 21:35	06:27 07:10-07:47/37 20:15	07:31 08:09-08:42/33 18:51	07:41 08:43-09:11/28 16:31 09:22-09:41/19	08:44 09:55-10:24/29 15:40
5	04:30 22:24	05:24 06:35-07:03/28 21:33	06:29 07:11-07:47/36 20:12	07:33 08:09-08:41/32 18:48	07:43 08:44-09:12/28 16:29 09:21-09:43/22	08:46 09:56-10:24/28 15:40
6	04:31 22:23	05:26 06:34-07:05/31 21:30	06:32 07:12-07:49/37 20:10	07:35 08:10-08:41/31 18:46	07:45 08:43-09:11/28 09:58-10:05/7 16:27 09:20-09:44/24	08:48 09:57-10:24/27 15:39
7	04:32 22:22	05:28 06:34-07:06/32 21:28	06:34 07:12-07:51/39 20:07	07:38 08:12-08:41/29 18:43	07:48 08:44-09:12/28 09:55-10:09/14 16:24 09:19-09:45/26	08:49 09:57-10:23/26 15:38
8	04:33 22:21	05:30 06:33-07:07/34 21:26	06:36 07:14-07:52/38 20:04	07:40 08:15-08:40/25 18:40	07:50 08:44-09:12/28 09:53-10:12/19 16:22 09:19-09:47/28	08:51 09:58-10:23/25 15:37
9	04:35 22:20	05:32 06:33-07:08/35 21:23	06:38 07:16-07:53/37 20:01	07:42 08:17-08:39/22 18:37	07:52 08:44-09:11/27 09:51-10:13/22 16:20 09:18-09:47/29	08:52 09:59-10:24/25 15:37
10	04:36 22:19	05:34 06:32-07:09/37 21:21	06:40 07:21-07:53/32 19:59	07:44 08:18-08:37/19 18:35	07:54 14:52-14:59/7 09:18-09:48/30 16:18 08:45-09:11/26 09:50-10:15/25	08:54 09:59-10:23/24 15:36
11	04:38 22:18	05:36 06:32-07:11/39 21:18	06:42 07:21-07:54/33 19:56	07:46 08:20-08:36/16 18:32	07:57 14:49-15:01/12 09:17-09:48/31 16:16 08:45-09:10/25 09:49-10:16/27	08:55 10:01-10:24/23 15:36
12	04:39 22:16	05:38 06:32-07:12/40 21:16	06:44 07:21-07:54/33 19:53	07:48 08:21-08:33/12 18:29	07:59 14:48-15:03/15 09:17-10:17/60 16:14 08:47-09:10/23	08:56 10:01-10:23/22 15:36
13	04:40 22:15	05:40 06:32-07:13/41 21:13	06:46 07:56-08:02/6 19:50	07:51 08:25-08:28/3 18:27	08:01 14:46-15:03/17 09:18-10:18/60 16:12 08:48-09:10/22	08:57 10:02-10:23/21 15:35
14	04:42 22:14	05:43 06:32-07:13/41 21:11	06:48 07:22-08:05/43 19:47	07:53 08:20-08:36/16 18:24	08:04 14:46-15:05/19 09:17-10:19/62 16:10 08:48-09:09/21	08:59 10:03-10:24/21 15:35
15	04:44 22:12	05:45 06:32-07:14/42 21:08	06:51 07:24-08:21/57 19:44	07:55 07:55 18:21	08:06 14:45-15:05/20 09:18-10:20/62 16:08 08:50-09:08/18	09:00 10:04-10:24/20 15:35
16	04:45 22:11	05:47 06:32-07:14/42 21:06	06:53 07:26-08:23/57 19:42	07:57 08:00 18:19	08:08 14:45-15:06/21 09:18-10:20/62 16:06 08:52-09:06/14	09:01 10:05-10:24/19 15:35
17	04:47 22:09	05:49 06:32-07:14/42 21:03	06:55 07:30-08:25/55 19:39	08:00 08:02 18:16	08:10 14:46-15:07/21 09:18-10:21/63 16:04 08:54-09:05/11	09:02 10:05-10:24/19 15:35
18	04:49 22:08	05:51 06:33-07:14/41 21:01	06:57 07:30-08:25/55 19:36	08:02 08:04 18:13	08:12 14:45-15:07/22 09:18-10:21/63 16:02 08:59-09:00/1	09:02 10:06-10:24/18 15:35
19	04:50 22:06	05:53 06:34-07:14/40 20:58	06:59 07:31-08:25/54 19:33	08:04 08:06 18:11	08:15 14:46-15:08/22 16:01 09:19-10:22/63	09:03 10:06-10:24/18 15:35
20	04:52 22:05	05:55 06:34-07:14/40 20:56	07:01 07:33-08:26/53 19:30	08:06 08:08 18:08	08:17 14:45-15:08/23 15:59 09:19-10:22/63	09:04 10:07-10:25/18 15:36
21	04:54 22:03	05:58 06:36-07:13/37 20:53	07:03 07:45-08:26/41 19:28	08:09 08:05 18:05	08:19 14:46-15:08/22 15:57 09:21-10:23/62	09:05 10:08-10:25/17 15:36
22	04:56 22:01	06:00 06:38-07:13/35 20:50	07:05 07:44-08:29/45 19:25	08:11 08:03 18:03	08:21 14:46-15:08/22 15:56 09:21-10:22/61	09:05 10:08-10:25/17 15:37
23	04:58 21:59	06:02 06:41-07:12/31 20:48	07:08 07:44-08:32/48 19:22	08:13 08:00 18:00	08:23 14:46-15:08/22 15:54 09:22-10:23/61	09:06 10:09-10:27/18 15:37
24	04:59 21:58	06:04 07:16-07:40/24 20:45	07:10 07:44-08:33/49 19:19	08:15 08:03 17:58	08:25 14:48-15:08/20 15:52 09:23-10:23/60	09:06 10:09-10:27/18 15:38
25	05:01 21:56	06:06 07:15-07:41/26 20:42	07:12 07:45-08:34/49 19:16	08:18 08:03 16:55	08:27 14:48-15:08/20 09:49-10:23/34 15:51 09:23-09:48/25	09:06 10:09-10:27/18 15:38
26	05:03 21:54	06:08 07:14-07:41/27 20:40	07:14 07:46-08:35/49 19:14	08:20 08:03 16:53	08:29 14:49-15:08/19 09:50-10:23/33 15:50 09:25-09:48/23	09:07 10:09-10:28/19 15:39
27	05:05 21:52	06:10 07:13-07:42/29 20:37	07:16 07:48-08:36/48 19:11	08:22 08:52-09:04/12 16:50	08:31 14:50-15:06/16 09:50-10:23/33 15:48 09:26-09:47/21	09:07 10:10-10:29/19 15:40
28	05:07 21:50	06:12 07:12-07:42/30 20:34	07:18 07:51-08:37/46 19:08	08:24 08:50-09:06/16 16:48	08:33 14:50-15:04/14 09:50-10:23/33 15:47 09:27-09:46/19	09:07 10:10-10:29/19 15:41
29	05:09 21:48	06:15 07:11-07:42/31 20:32	07:20 07:58-08:39/41 19:05	08:27 08:48-09:08/20 16:45	08:35 14:51-15:02/11 09:51-10:23/32 15:46 09:28-09:46/18	09:07 10:10-10:30/20 15:42
30	05:11 21:46	06:17 07:11-07:42/31 20:29	07:22 07:59-08:40/41 19:02	08:29 08:47-09:09/22 16:43	08:37 14:52-15:00/8 09:52-10:24/32 15:45 09:30-09:46/16	09:07 10:11-10:32/21 15:43
31	05:13 21:44	06:19 07:11-07:41/30 20:26	07:24 07:59-08:40/41 19:02	08:31 08:45-09:10/25 16:40	08:39 14:54-15:00/6 09:53-10:24/31 15:44	09:07 10:10-10:32/22 15:44
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	4	1180	1310	425	2249	712

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Rīga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 4 - Z4

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07 09:54-10:13/19 10:47-11:09/22 15:46 10:22-10:45/23	08:27 16:46 08:25 16:48	07:20 07:49-08:28/39 17:52 20:01	06:54 07:55-08:18/23 20:01 21:07	05:34 21:07 05:31 21:10	04:33 05:10-05:16/6 22:09 04:32 05:09-05:17/8
2	09:06 09:54-10:13/19 10:48-11:08/20 15:47 10:22-10:45/23	08:23 16:51 08:21 16:53	07:17 07:48-08:26/38 17:54 20:03	06:51 07:55-08:16/21 20:03 21:10	05:29 21:12 05:27 21:14	04:31 05:08-05:18/10 22:12 04:30 05:07-05:19/12
3	09:06 09:53-10:14/21 10:48-11:08/20 15:48 10:22-10:45/23	08:23 16:51 08:21 16:53	07:14 07:46-08:24/38 17:57 20:06	06:48 07:56-08:14/18 20:06 21:12	05:29 21:12 05:27 21:14	04:31 05:08-05:18/10 22:12 04:30 05:07-05:19/12
4	09:05 09:53-10:14/21 10:49-11:08/19 15:50 10:22-10:45/23	08:21 16:53 08:19 08:50-08:55/5	07:12 07:46-08:23/37 17:59 20:08	06:46 07:59-08:12/13 20:08 21:14	05:27 21:14 05:24 21:16	04:30 05:07-05:19/12 22:13 04:28 05:06-05:19/13
5	09:05 09:55-10:16/21 10:50-11:09/19 15:51 10:24-10:47/23	08:19 08:50-08:55/5 08:16 08:48-08:58/10	07:09 07:45-08:12/27 18:01 20:10	06:43 05:24 20:10 21:16	05:24 21:16 05:22 21:18	04:28 05:06-05:19/13 22:14 04:27 05:05-05:19/14
6	09:04 09:55-10:16/21 10:51-11:09/18 15:53 10:24-10:47/23	08:16 08:48-08:58/10 08:14 08:45-08:59/14	07:06 07:45-08:12/27 18:03 20:12	06:40 05:22 20:12 21:18	05:22 21:18 05:20 21:20	04:27 05:05-05:19/14 22:16 04:27 05:05-05:21/16
7	09:04 09:55-10:17/22 10:52-11:09/17 15:54 10:25-10:47/22	08:14 08:45-08:59/14 08:12 08:43-09:01/18	07:03 07:44-08:12/28 18:06 20:14	06:37 05:20 20:14 21:21	05:20 21:21 05:17 21:23	04:27 05:05-05:21/16 22:17 04:26 05:04-05:21/17
8	09:03 09:55-10:17/22 10:52-11:08/16 15:56 10:26-10:47/21	08:12 08:43-09:01/18 08:10 08:41-09:01/20	07:01 07:44-08:12/28 18:08 20:17	06:34 05:17 20:17 21:23	05:17 21:23 05:15 21:25	04:26 05:04-05:21/17 22:18 04:25 05:03-05:21/18
9	09:02 09:55-10:17/22 10:54-11:07/13 15:58 10:26-10:46/20	08:10 08:41-09:01/20 08:07 08:40-09:03/23	06:58 07:44-08:13/29 18:10 20:19	06:32 05:15 20:19 21:25	05:15 21:25 05:13 21:27	04:25 05:03-05:21/18 22:19 04:24 05:03-05:22/19
10	09:01 09:55-10:18/23 10:56-11:07/11 15:59 10:27-10:47/20	08:07 08:40-09:03/23 08:05 08:38-09:03/25	06:55 07:44-08:12/28 18:12 20:21	06:29 05:13 20:21 21:27	05:13 21:27 05:10 21:29	04:24 05:03-05:22/19 22:20 04:24 05:03-05:22/19
11	09:00 09:56-10:19/23 10:58-11:06/8 16:01 10:28-10:47/19	08:05 08:38-09:03/25 08:03 08:36-09:04/28	06:52 07:44-08:12/28 18:15 20:23	06:26 05:10 20:23 21:29	05:10 21:29 05:08 21:31	04:24 05:03-05:22/19 22:21 04:23 05:03-05:22/19
12	08:59 09:56-10:18/22 16:03 10:28-10:46/18	08:03 08:36-09:04/28 08:00 08:34-09:03/29	06:50 07:44-08:11/27 18:17 20:25	06:23 05:08 20:25 21:31	05:08 21:31 05:06 21:33	04:23 05:03-05:22/19 22:22 04:22 05:04-05:23/19
13	08:58 09:57-10:19/22 16:05 10:30-10:46/16	08:00 08:34-09:03/29 07:58 08:32-09:03/31	06:47 07:44-08:10/26 18:19 07:19-07:32/13	06:21 05:06 20:28 21:33	05:06 21:33 05:04 21:35	04:22 05:04-05:23/19 22:23 04:22 05:03-05:23/20
14	08:57 09:57-10:19/22 16:07 10:31-10:45/14	07:58 08:32-09:03/31 07:56 08:32-09:03/31	06:44 07:45-08:09/24 18:21 07:17-07:35/18	06:18 05:04 20:30 21:35	05:04 21:35 05:02 21:38	04:22 05:03-05:23/20 22:24 04:22 05:03-05:23/20
15	08:56 09:58-10:20/22 16:09 10:33-10:45/12	07:56 08:32-09:03/31 07:53 08:31-09:02/31	06:41 07:46-08:08/22 18:24 07:15-07:36/21	06:15 05:02 20:32 21:38	05:02 21:38 05:00 21:40	04:22 05:03-05:23/20 22:25 04:21 05:04-05:24/20
16	08:54 09:58-10:20/22 16:11 10:34-10:43/9	07:53 08:31-09:02/31 07:51 08:31-09:02/31	06:39 07:47-08:06/19 18:26 07:13-07:37/24	06:13 05:00 20:34 21:40	05:00 21:40 04:58 21:42	04:21 05:04-05:24/20 22:26 04:21 05:04-05:24/20
17	08:53 09:59-10:20/21 16:13 10:37-10:40/3	07:51 08:31-09:02/31 07:48 08:18-08:21/3	06:36 07:49-08:03/14 18:28 07:11-07:37/26	06:10 04:58 20:36 21:42	04:58 21:42 04:56 21:44	04:21 05:04-05:24/20 22:27 04:21 05:04-05:24/20
18	08:52 10:00-10:20/20 16:15	07:48 08:18-08:21/3 07:46 08:14-08:25/11	06:33 07:06-07:37/31 18:30 07:52-07:58/6	06:07 04:56 20:39 21:44	04:56 21:44 04:54 21:46	04:21 05:04-05:24/20 22:28 04:21 05:04-05:24/20
19	08:50 10:00-10:20/20 16:17	07:46 08:14-08:25/11 07:43 08:12-08:27/15	06:30 07:02-07:37/35 18:33 20:41	06:05 04:54 20:41 21:46	04:54 21:46 04:52 21:48	04:21 05:04-05:24/20 22:29 04:21 05:04-05:25/21
20	08:49 10:01-10:19/18 16:19	07:43 08:12-08:27/15 07:41 08:10-08:28/18	06:27 07:01-07:38/37 18:35 20:43	06:02 04:52 20:43 21:48	04:52 21:48 04:50 21:50	04:21 05:04-05:24/20 22:30 04:21 05:04-05:25/21
21	08:47 10:02-10:19/17 16:21	07:41 08:10-08:28/18 07:38 08:09-08:29/20	06:25 06:59-07:38/39 18:37 20:45	05:59 04:50 20:45 21:50	04:50 21:50 04:48 21:51	04:21 05:04-05:25/21 22:31 04:22 05:05-05:25/20
22	08:46 10:03-10:18/15 16:23	07:38 08:09-08:29/20 07:36 08:30-08:55/25	06:22 06:57-07:37/40 18:39 20:48	05:57 04:48 20:48 21:51	04:48 21:51 04:47 21:53	04:22 05:05-05:25/20 22:32 04:22 05:05-05:25/20
23	08:44 10:05-10:17/12 16:26	07:35 08:09-08:53/44 07:33 08:08-08:30/22	06:19 06:56-07:36/40 18:41 20:50	05:54 04:45 20:50 21:55	04:45 21:55 04:43 21:57	04:22 05:05-05:25/20 22:33 04:22 05:06-05:26/20
24	08:42 10:07-10:15/8 16:28	07:33 08:08-08:30/22 07:30 08:08-08:30/22 07:59-08:06/7	06:16 06:55-07:35/40 18:44 20:52	05:52 04:45 20:52 21:55	04:45 21:55 04:43 21:57	04:22 05:05-05:25/20 22:34 04:22 05:06-05:26/20
25	08:41 16:30 08:39 16:32	07:30 08:08-08:30/22 07:59-08:06/7 17:43 08:32-08:52/20	06:13 06:54-07:34/40 18:46 20:54	05:49 04:43 20:54 21:57	04:43 21:57 04:42 21:59	04:22 05:06-05:26/20 22:35 04:23 05:06-05:26/20
26	08:39 16:32 08:37 16:35	07:28 07:55-08:30/35 17:45 08:33-08:50/17	06:11 06:54-07:34/40 18:48 20:56	05:46 04:42 20:56 21:59	04:42 21:59 04:40 22:01	04:23 05:06-05:26/20 22:36 04:23 05:06-05:26/20
27	08:35 16:37 08:35 16:37	07:25 07:54-08:30/36 17:47 08:36-08:48/12	06:08 06:54-07:33/39 18:50 20:59	05:44 04:40 20:59 22:01	04:40 22:01 04:39 22:02	04:23 05:06-05:26/20 22:37 04:24 05:06-05:26/20
28	08:33 16:39 08:31 16:41	07:22 07:52-08:29/37 17:50 08:40-08:43/3	06:05 06:53-07:31/38 18:52 21:01	05:41 04:39 21:01 22:02	04:39 22:02 04:37 22:04	04:24 05:06-05:26/20 22:38 04:25 05:07-05:26/19
29	08:33 16:44 08:29 16:44	07:22 07:52-08:29/37 17:50 08:40-08:43/3	06:05 06:53-07:31/38 18:52 21:01	05:41 04:39 21:01 22:02	04:39 22:02 04:37 22:04	04:24 05:06-05:26/20 22:39 04:25 05:07-05:26/19
30	08:31 16:44 08:29 16:44	07:22 07:52-08:29/37 17:50 08:40-08:43/3	06:05 06:53-07:31/38 18:52 21:01	05:41 04:39 21:01 22:02	04:39 22:02 04:37 22:04	04:24 05:06-05:26/20 22:40 04:25 05:07-05:27/20
31	08:29 16:44 08:27 16:44	07:22 07:52-08:29/37 17:50 08:40-08:43/3	06:05 06:53-07:31/38 18:52 21:01	05:41 04:39 21:01 22:02	04:39 22:02 04:37 22:04	04:24 05:06-05:26/20 22:41 04:25 05:07-05:27/20
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	970	781	1106	75	3	530

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 4 - Z4

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 05:07-05:26/19 22:26	05:15 21:41 20:23	06:21 20:23 06:23	07:25 08:23-08:50/27 19:00 08:01-08:09/8	07:34 08:10-08:32/22 16:38	08:39 09:38-10:01/23 10:40-10:48/8 15:43 10:10-10:29/19
2	04:27 05:07-05:26/19 22:26	05:17 21:39 20:21	06:23 20:21 18:57	07:27 08:22-08:50/28 18:57	07:36 08:11-08:31/20 16:36	08:41 09:39-10:01/22 10:39-10:50/11 15:42 10:10-10:30/20
3	04:28 05:08-05:26/18 22:25	05:19 21:37 20:18	06:25 20:18 18:54	07:29 08:22-08:50/28 18:54	07:38 08:13-08:31/18 16:33	08:43 09:39-10:01/22 10:38-10:51/13 15:41 10:10-10:31/21
4	04:29 05:09-05:26/17 22:24	05:21 21:35 20:15	06:27 20:15 18:51	07:31 08:21-08:50/29 18:51	07:41 08:15-08:29/14 16:31	08:44 09:40-10:01/21 10:38-10:53/15 15:40 10:10-10:31/21
5	04:30 05:10-05:26/16 22:24	05:24 21:32 20:12	06:30 20:12 18:48	07:33 08:21-08:49/28 18:48	07:43 08:18-08:28/10 16:29	08:46 09:40-10:02/22 10:37-10:54/17 15:40 10:10-10:32/22
6	04:31 05:11-05:26/15 22:23	05:26 21:30 20:10	06:32 20:10 18:46	07:35 08:20-08:49/29 18:46	07:45 08:21-08:25/4 16:27	08:48 09:41-10:02/21 10:37-10:55/18 15:39 10:11-10:33/22
7	04:32 05:12-05:26/14 22:22	05:28 21:28 20:07	06:34 20:07 18:43	07:38 08:21-08:49/28 18:43	07:47 16:24 07:50	08:49 09:41-10:02/21 10:36-10:55/19 15:38 10:10-10:33/23
8	04:34 05:13-05:25/12 22:21	05:30 21:26 20:04	06:36 07:54-08:06/12 18:40	07:40 08:20-08:48/28 18:40	07:50 16:22 07:52	08:51 09:42-10:02/20 10:37-10:56/19 15:38 10:11-10:34/23
9	04:35 05:14-05:25/11 22:20	05:32 21:23 20:01	06:38 07:51-08:08/17 18:37	07:42 08:20-08:47/27 18:37	07:52 16:20 07:54	08:52 09:43-10:03/20 10:37-10:57/20 15:37 10:11-10:34/23
10	04:36 05:16-05:25/9 22:19	05:34 21:21 19:58	06:40 07:49-08:09/20 18:35	07:44 08:20-08:58/38 18:35	07:54 16:18 07:57	08:54 09:43-10:02/19 10:37-10:58/21 15:36 10:11-10:34/23
11	04:38 05:17-05:24/7 22:18	05:36 21:18 19:56	06:42 07:47-08:10/23 18:32	07:46 08:21-09:00/39 18:32	07:57 16:16 07:59	08:55 09:44-10:03/19 10:37-10:59/22 15:36 10:12-10:35/23
12	04:39 05:18-05:22/4 22:16	05:38 21:16 19:53	06:44 07:46-08:15/29 18:29	07:48 08:22-09:01/39 18:29	07:59 16:14 08:01	08:56 09:44-10:03/19 10:37-10:59/22 15:36 10:12-10:35/23
13	04:41 05:20-05:21/1 22:15	05:40 21:13 19:50	06:46 07:44-08:18/34 18:27	07:51 08:23-09:01/38 18:27	08:01 16:12 08:03	08:57 09:44-10:03/19 10:37-10:59/22 15:35 10:12-10:36/24
14	04:42 22:14 21:11	05:43 21:11 19:47	06:49 07:43-08:19/36 18:24	07:53 08:26-09:02/36 18:24	08:03 16:10 08:06	08:59 09:46-10:04/18 10:38-11:01/23 15:35 10:13-10:37/24
15	04:44 22:12 21:08	05:45 21:08 19:44	06:51 07:43-08:20/37 18:21	07:55 08:27-09:02/35 18:21	08:06 16:08 08:08	09:00 09:46-10:04/18 10:38-11:01/23 15:35 10:13-10:37/24
16	04:45 22:11 21:06	05:47 21:06 19:42	06:53 07:42-08:21/39 18:19	07:57 08:28-09:02/34 18:19	08:08 16:06 08:10	09:01 09:47-10:04/17 10:39-11:02/23 15:35 10:14-10:38/24
17	04:47 22:09 21:03	05:49 21:03 19:39	06:55 07:43-08:23/40 18:16	08:00 08:40-09:02/22 08:33-08:37/4 18:16	08:10 16:04 08:12	09:02 09:47-10:05/18 10:39-11:02/23 15:35 10:14-10:38/24
18	04:49 22:08 21:01	05:51 21:01 19:36	06:57 07:42-08:23/41 18:13	08:02 08:39-09:01/22 18:13	08:12 09:41-09:49/8 16:02	09:02 09:48-10:05/17 10:40-11:03/23 15:35 10:15-10:39/24
19	04:50 22:06 21:00	05:53 21:00 19:33	06:59 07:42-08:23/41 18:11	08:04 08:39-09:00/21 18:11	08:15 09:40-09:52/12 16:01	09:03 09:48-10:05/17 10:39-11:03/24 15:36 10:14-10:38/24
20	04:52 22:05 21:00	05:55 21:00 19:30	07:01 07:42-08:23/41 18:08	08:06 08:41-09:00/19 18:08	08:17 09:38-09:53/15 15:59	09:04 09:49-10:05/16 10:40-11:03/23 15:36 10:15-10:39/24
21	04:54 22:03 21:00	05:58 21:00 19:28	07:03 07:43-08:23/40 18:05	08:09 08:41-08:58/17 18:05	08:19 09:38-09:55/17 15:57	09:05 09:50-10:06/16 10:41-11:04/23 15:36 10:16-10:40/24
22	04:56 22:01 21:00	06:00 21:00 19:25	07:05 07:43-08:22/39 18:03	08:11 08:43-08:57/14 18:03	08:21 09:37-09:55/18 15:56	09:05 09:50-10:06/16 10:41-11:04/23 15:37 10:16-10:40/24
23	04:58 21:59 21:00	06:02 21:00 19:22	07:08 07:44-08:22/38 18:13	08:13 08:45-08:54/9 18:00	08:23 09:37-09:57/20 15:54	09:06 09:51-10:07/16 10:42-11:05/23 15:37 10:17-10:41/24
24	04:59 21:58 21:00	06:04 21:00 19:19	07:10 07:45-08:21/36 17:58	08:15 09:00-09:31/31 17:58	08:25 09:37-09:57/20 15:52	09:06 09:51-10:08/17 10:42-11:05/23 15:38 10:17-10:41/24
25	05:01 21:56 21:00	06:06 21:00 19:16	07:12 07:47-08:20/33 16:55	08:18 08:00-08:31/31 16:55	08:27 09:36-09:57/21 15:51	09:06 09:51-10:08/17 15:38 10:18-11:06/48
26	05:03 21:54 21:00	06:08 21:00 19:14	07:14 08:31-08:44/13 16:53	08:20 08:01-08:32/31 16:53	08:29 09:37-09:59/22 15:50	09:07 09:51-10:08/17 10:43-11:06/23 15:39 10:18-10:42/24
27	05:05 21:52 21:00	06:10 21:00 19:11	07:16 08:29-08:47/18 16:50	08:22 08:01-08:32/31 16:50	08:31 09:37-09:59/22 15:48	09:07 09:52-10:09/17 10:43-11:06/23 15:40 10:18-10:42/24
28	05:07 21:50 21:00	06:13 21:00 19:08	07:18 08:27-08:48/21 16:48	08:24 08:03-08:33/30 16:48	08:33 09:37-09:59/22 15:47	09:07 09:52-10:10/18 10:44-11:07/23 15:41 10:19-10:43/24
29	05:09 21:48 21:00	06:15 21:00 19:05	07:20 08:25-08:49/24 16:45	08:27 08:03-08:33/30 16:45	08:35 09:37-09:59/22 15:46	09:07 09:53-10:11/18 10:45-11:07/22 15:42 10:20-10:44/24
30	05:11 21:46 21:00	06:17 21:00 19:02	07:22 08:24-08:49/25 16:43	08:29 08:06-08:33/27 16:43	08:37 09:38-10:00/22 15:45	09:07 09:53-10:12/19 10:46-11:08/22 15:43 10:21-10:44/23
31	05:13 21:44 21:00	06:19 21:00 19:02	07:24 08:25-08:49/25 16:41	08:31 08:08-08:32/24 16:41	08:39 10:10-10:28/18 15:44	09:07 09:53-10:12/19 10:46-11:08/22 15:44 10:20-10:44/24
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	162	0	805	1108	400	1937

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometņu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 5 - Z5

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:06 15:46	08:27 16:46	07:20 17:52	06:54 20:01	05:34 21:07	04:33 22:09	04:26 22:26	05:15 21:41	06:21 20:23	07:25 18:59	07:34 16:38	08:39 15:43
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:10	04:32 22:10	04:27 22:25	05:17 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:42
3	09:06 15:48	08:23 16:51	07:14 17:57	06:48 20:06	05:29 21:12	04:31 22:12	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 16:33	08:43 15:41
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:27 21:14	04:29 22:13	04:29 22:24	05:21 21:35	06:27 20:15	07:31 18:51	07:41 16:31	08:44 15:40
5	09:05 15:51	08:19 16:56	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14	04:30 22:23	05:23 21:32	06:29 20:12	07:33 18:48	07:43 16:29	08:46 15:40
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:27 22:16	04:31 22:23	05:26 21:30	06:32 20:10	07:35 18:46	07:45 16:27	08:48 15:39
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:19 21:21	04:27 22:17	04:32 22:22	05:28 21:28	06:34 20:07	07:37 18:43	07:47 16:24	08:49 15:38
8	09:03 15:56	08:12 17:03	07:01 18:08	06:34 20:17	05:17 21:23	04:26 22:18	04:34 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 16:22	08:51 15:37
9	09:02 15:58	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19	04:35 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 16:20	08:52 15:37
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20	04:36 22:19	05:34 21:21	06:40 19:58	07:44 18:35	07:54 16:18	08:53 15:36
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:10 21:29	04:24 22:21	04:38 22:18	05:36 21:18	06:42 19:56	07:46 18:32	07:57 16:16	08:55 15:36
12	08:59 16:03	08:03 17:12	06:50 18:17	06:23 20:25	05:08 21:31	04:23 22:22	04:39 22:16	05:38 21:16	06:44 19:53	07:48 18:29	07:59 16:14	08:56 15:36
13	08:58 16:05	08:00 17:15	06:47 18:19	06:21 20:28	05:06 21:33	04:22 22:23	04:40 22:15	05:40 21:13	06:46 19:50	07:51 18:27	08:01 16:12	08:57 15:35
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24	04:42 22:14	05:43 21:11	06:48 19:47	07:53 18:24	08:03 16:10	08:58 15:35
15	08:56 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37	04:22 22:25	04:44 22:12	05:45 21:08	06:51 19:44	07:55 18:21	08:06 16:08	09:00 15:35
16	08:54 16:11	07:53 17:22	06:39 18:26	06:13 20:34	05:00 21:40	04:21 22:25	04:45 22:11	05:47 21:06	06:53 19:42	07:57 18:18	08:08 16:06	09:01 15:35
17	08:53 16:13	07:51 17:24	06:36 18:28	06:10 20:36	04:58 21:42	04:21 22:26	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 16:04	09:01 15:35
18	08:52 16:15	07:48 17:26	06:33 18:30	06:07 20:39	04:56 21:44	04:21 22:26	04:49 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 16:02	09:02 15:35
19	08:50 16:17	07:46 17:29	06:30 18:33	06:05 20:41	04:54 21:46	04:21 22:27	04:50 22:06	05:53 20:58	06:59 19:33	08:04 18:11	08:15 16:01	09:03 15:35
20	08:49 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:48	04:21 22:27	04:52 22:05	05:55 20:56	07:01 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	08:47 16:21	07:40 17:33	06:25 18:37	05:59 20:45	04:50 21:49	04:21 22:27	04:54 22:03	05:57 20:53	07:03 19:28	08:08 18:05	08:19 15:57	09:04 15:36
22	08:46 16:23	07:38 17:36	06:22 18:39	05:57 20:47	04:48 21:51	04:21 22:28	04:56 22:01	06:00 20:50	07:05 19:25	08:11 18:03	08:21 15:56	09:05 15:37
23	08:44 16:25	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:22 22:28	04:58 21:59	06:02 20:48	07:07 19:22	08:13 18:00	08:23 15:54	09:06 15:37
24	08:42 16:28	07:33 17:40	06:16 18:44	05:51 20:52	04:45 21:55	04:22 22:28	04:59 21:57	06:04 20:45	07:10 19:19	08:15 17:58	08:25 15:52	09:06 15:38
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:28	05:01 21:56	06:06 20:42	07:12 19:16	07:18 16:55	08:27 15:51	09:06 15:38
26	08:39 16:32	07:27 17:45	06:11 18:48	05:46 20:56	04:42 21:59	04:23 22:28	05:03 21:54	06:08 20:40	07:14 19:13	08:06 16:53	08:17 15:50	09:07 15:39
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:59	04:40 22:00	04:23 22:27	05:05 21:52	06:10 20:37	07:16 19:11	07:22 16:50	08:31 15:48	09:07 15:40
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:39 22:02	04:24 22:27	05:07 21:50	06:12 20:34	07:18 19:08	07:24 16:48	08:33 15:47	09:07 15:41
29	08:33 16:39		07:02 19:55	05:39 21:03	04:37 22:04	04:24 22:27	05:09 21:48	06:15 20:32	07:20 19:05	07:27 16:45	08:35 15:46	09:07 15:42
30	08:31 16:41		06:59 19:57	05:36 21:05	04:36 22:06	04:25 22:26	05:11 21:46	06:17 20:29	07:22 19:02	07:29 16:43	08:37 15:45	09:07 15:43
31	08:29 16:44		06:57 19:59		04:34 22:07		05:13 21:43	06:19 20:26		07:31 16:40		09:07 15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometņu iela 31

LV-1002 Rīga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 6 - Z6

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 13:10-13:43/33	08:27 09:00-09:04/4	07:20	06:54	05:34	04:33
	15:46 13:46-13:59/13	16:46	17:52	20:01	21:07	22:09
2	09:06 13:12-13:28/16 13:29-13:43/14	08:25 08:57-09:06/9	07:17	06:51	05:31	04:32
	15:47 13:48-13:59/11	16:48	17:54	20:03	21:10	22:10
3	09:06 13:13-13:27/14 13:30-13:43/13	08:23 08:55-09:08/13	07:14	06:48	05:29	04:31
	15:48 13:49-13:58/9	16:51	17:57	20:06	21:12	22:12
4	09:05 13:14-13:27/13 13:31-13:42/11	08:21 08:53-09:10/17	07:11	06:45	05:26	04:29
	15:50 13:50-13:58/8	16:53	17:59	20:08	21:14	22:13
5	09:05 13:15-13:26/11 13:32-13:41/9	08:19 08:52-09:11/19	07:09	06:43	05:24	04:28
	15:51 13:52-13:56/4	16:55	18:01	20:10	21:16	22:14
6	09:04 13:18-13:26/8	08:16 08:48-09:12/24	07:06	06:40	05:22	04:27
	15:53 13:35-13:41/6	16:58	18:03	20:12	21:18	22:16
7	09:04 13:21-13:24/3	08:14 08:45-09:12/27	07:03	06:37	05:19	04:26
	15:54	17:00	18:06	20:14	21:21	22:17
8	09:03	08:12 08:43-09:13/30	07:01	06:34	05:17	04:26
	15:56	17:03	18:08	20:17	21:23	22:18
9	09:02	08:10 08:40-09:12/32	06:58	06:32	05:15	04:25
	15:57	17:05	18:10	20:19	21:25	22:19
10	09:01	08:07 08:39-09:13/34	06:55	06:29	05:13	04:24
	15:59	17:07	18:12	20:21	21:27	22:20
11	09:00	08:05 08:38-09:12/34	06:52	06:26	05:10	04:23
	16:01	17:10	18:15	20:23	21:29	22:21
12	08:59	08:03 08:39-09:13/34	06:50	06:23	05:08	04:23
	16:03	17:12	18:17	20:25	21:31	22:22
13	08:58	08:00 08:38-09:12/34	06:47	06:21	05:06	04:22
	16:05	17:14	18:19	20:28	21:33	22:23
14	08:57	07:58 08:38-09:10/32	06:44	06:18	05:04	04:22
	16:07	17:17	18:21	20:30	21:35	22:24
15	08:56	07:55 08:39-09:10/31	06:41	06:15	05:02	04:22
	16:09	17:19	18:24	20:32	21:38	22:25
16	08:54	07:53 08:39-09:08/29	06:39	06:13	05:00	04:21
	16:11	17:22	18:26	20:34	21:40	22:25
17	08:53	07:51 08:41-08:57/16	06:36	06:10	04:58	04:21
	16:13	17:24 08:59-09:05/6	18:28	20:36	21:42	22:26
18	08:52	07:48 08:42-08:55/13	06:33	06:07	04:56	04:21
	16:15	17:26	18:30	20:39	21:44	22:26
19	08:50	07:46 08:43-08:53/10	06:30	06:05	04:54	04:21
	16:17	17:29	18:33	20:41	21:46	22:27
20	08:49	07:43	06:27	06:02	04:52	04:21
	16:19	17:31	18:35	20:43	21:48	22:27
21	08:47	07:40	06:25	05:59	04:50	04:21
	16:21	17:33	18:37	20:45	21:49	22:27
22	08:46	07:38	06:22	05:57	04:48	04:21
	16:23	17:36	18:39	20:48	21:51	22:28
23	08:44	07:35	06:19	05:54	04:47	04:21
	16:25	17:38	18:41	20:50	21:53	22:28
24	08:42	07:33	06:16	05:51	04:45	04:22
	16:28	17:40	18:44	20:52	21:55	22:28
25	08:40	07:30	06:13	05:49	04:43	04:22
	16:30	17:43	18:46	20:54	21:57	22:28
26	08:39	07:27	06:11	05:46	04:42	04:23
	16:32	17:45	18:48	20:56	21:59	22:28
27	08:37	07:25	06:08	05:44	04:40	04:23
	16:34	17:47	18:50	20:59	22:01	22:28
28	08:35	07:22	06:05	05:41	04:38	04:24
	16:37	17:50	18:52	21:01	22:02	22:27
29	08:33		07:02	05:39	04:37	04:24
	16:39		19:55	21:03	22:04	22:27
30	08:31		06:59	05:36	04:36	04:25
	16:41		19:57	21:05	22:06	22:27
31	08:29		06:57		04:34	
	16:44		19:59		22:07	
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	196	448	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

WTG: 6 - Z6

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 21:41	06:21 20:23	07:24 18:59	07:34 16:38	08:09-08:43/34 15:43
2	04:27 22:26	05:17 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:10-08:42/32 15:42
3	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 16:33	08:13-08:42/29 15:41
4	04:29 22:24	05:21 21:35	06:27 20:15	07:31 18:51	07:41 16:31	08:15-08:41/26 15:40
5	04:30 22:23	05:23 21:32	06:29 20:12	07:33 18:48	07:43 16:29	08:18-08:41/23 15:40
6	04:31 22:23	05:26 21:30	06:32 20:10	07:35 18:46	07:45 16:27	08:22-08:40/18 15:39
7	04:32 22:22	05:28 21:28	06:34 20:07	07:37 18:43	07:47 16:24	08:23-08:40/17 15:38
8	04:33 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 16:22	08:26-08:39/13 15:37
9	04:35 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 16:20	08:28-08:37/9 15:37
10	04:36 22:19	05:34 21:21	06:40 19:58	07:44 18:35	07:54 16:18	08:31-08:34/3 15:36
11	04:37 22:18	05:36 21:18	06:42 19:56	07:46 18:32	07:57 16:16	08:55 15:36
12	04:39 22:16	05:38 21:16	06:44 19:53	07:48 18:29	07:59 16:14	08:56 15:36
13	04:40 22:15	05:40 21:13	06:46 19:50	07:51 18:26	08:01 16:12	08:57 15:35
14	04:42 22:14	05:43 21:11	06:48 19:47	07:53 18:24	08:03 16:10	08:58 15:35
15	04:44 22:12	05:45 21:08	06:51 19:44	07:55 18:21	08:06 16:08	09:00 15:35
16	04:45 22:11	05:47 21:06	06:53 19:42	07:57 18:18	08:08 16:06	09:01 15:35
17	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 16:04	09:02 15:35
18	04:49 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 16:02	09:02 15:35
19	04:50 22:06	05:53 20:58	06:59 19:33	08:04 18:11	08:15 16:01	09:03 15:35
20	04:52 22:05	05:55 20:56	07:01 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	04:54 22:03	05:57 20:53	07:03 19:28	08:08 18:05	08:19 15:57	09:05 15:36
22	04:56 22:01	06:00 20:50	07:05 19:25	08:11 18:03	08:21 15:55	09:05 15:37
23	04:57 21:59	06:02 20:48	07:07 19:22	08:13 18:00	08:23 15:54	09:06 15:37
24	04:59 21:57	06:04 20:45	07:10 19:19	08:15 17:58	08:25 15:52	09:06 15:38
25	05:01 21:56	06:06 20:42	07:12 19:16	08:17 16:55	08:27 15:51	09:06 15:38
26	05:03 21:54	06:08 20:40	07:14 19:13	08:19 16:53	08:29 15:50	09:07 15:39
27	05:05 21:52	06:10 20:37	07:16 19:11	08:22 16:50	08:31 15:48	09:07 15:40
28	05:07 21:50	06:12 20:34	07:18 19:08	08:24 16:48	08:33 15:47	09:07 15:41
29	05:09 21:48	06:15 20:32	07:20 19:05	08:27 16:45	08:35 15:46	09:07 15:42
30	05:11 21:46	06:17 20:29	07:22 19:02	08:29 16:43	08:37 15:44	09:07 15:43
31	05:13 21:43	06:19 20:26		07:31 16:40	08:38-08:42/34	09:07 15:44
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	0	0	0	253	204	1211

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

WTG: 7 - Z8

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:09
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	04:32 22:10
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	04:31 22:11
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:26 21:14	04:29 22:13
5	09:05 15:51	08:19 16:55	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:27 22:16
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:19 21:20	04:26 22:17
8	09:03 15:56	08:12 17:03	07:01 18:08	06:34 20:16	05:17 21:23	04:26 22:18
9	09:02 15:57	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:10 21:29	04:23 22:21
12	08:59 16:03	08:03 17:12	06:50 18:17	06:23 20:25	05:08 21:31	04:23 22:22
13	08:58 16:05	08:00 17:14	06:47 18:19	06:21 20:27	05:06 21:33	04:22 22:23
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24
15	08:55 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37	04:22 22:24
16	08:54 16:11	07:53 17:22	06:38 18:26	06:13 20:34	05:00 21:39	04:21 22:25
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	04:58 21:41	04:21 22:26
18	08:51 16:15	07:48 17:26	06:33 18:30	06:07 20:39	04:56 21:43	04:21 22:26
19	08:50 16:17	07:45 17:29	06:30 18:32	06:05 20:41	04:54 21:45	04:21 22:27
20	08:49 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:47	04:21 22:27
21	08:47 16:21	07:40 17:33	06:25 18:37	05:59 20:45	04:50 21:49	04:21 22:27
22	08:45 16:23	07:38 17:36	06:22 18:39	05:57 20:47	04:48 21:51	04:21 22:27
23	08:44 16:25	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:21 22:28
24	08:42 16:28	07:33 17:40	06:16 18:43	05:51 20:52	04:45 21:55	04:22 22:28
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:28
26	08:39 16:32	07:27 17:45	06:11 18:48	05:46 20:56	04:42 21:59	04:23 22:27
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:58	04:40 22:00	04:23 22:27
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:38 22:02	04:24 22:27
29	08:33 16:39		07:02 18:54	05:39 21:03	04:37 22:04	04:24 22:27
30	08:31 16:41		06:59 18:55	05:36 21:05	04:36 22:05	04:25 22:26
31	08:29 16:44		06:57 18:54		04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	0	0	706	878	647	91

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometņu iela 31
LV-1002 Rīga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 7 - Z8

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 05:53-06:19/26 21:41	06:21 19:41-19:52/11 20:23 18:56-19:17/21	07:24 18:14-18:28/14 18:59	07:33 16:38	08:39 15:43
2	04:27 22:25	05:17 05:54-06:19/25 21:39	06:23 19:42-19:49/7 20:21 18:54-19:18/24	07:27 18:17-18:25/8 18:57	07:36 16:36	08:41 15:42
3	04:28 22:24	05:19 05:55-06:18/23 21:37	06:25 19:43-19:47/4 20:18 18:52-19:19/27	07:29 18:54	07:38 16:33	08:42 15:41
4	04:29 22:24	05:21 05:56-06:16/20 21:35	06:27 18:51-19:19/28 20:15	07:31 18:51	07:40 16:31	08:44 15:40
5	04:30 06:01-06:06/5 22:23	05:23 05:58-06:15/17 21:32	06:29 18:50-19:19/29 20:12	07:33 18:48	07:43 16:29	08:46 15:40
6	04:31 06:00-06:08/8 22:22	05:26 06:00-06:14/14 21:30	06:31 18:49-19:20/31 20:09	07:35 18:46	07:45 16:27	08:47 15:39
7	04:32 05:59-06:09/10 22:22	05:28 06:02-06:12/10 21:28	06:34 18:48-19:20/32 20:07	07:37 18:43	07:47 16:24	08:49 15:38
8	04:33 05:58-06:10/12 22:21	05:30 06:04-06:09/5 21:25	06:36 18:47-19:19/32 20:04	07:40 18:40	07:50 16:22	08:51 15:37
9	04:35 05:57-06:11/14 22:20	05:32 21:23	06:38 18:47-19:19/32 20:01	07:42 18:37	07:52 16:20	08:52 15:37
10	04:36 05:57-06:13/16 22:19	05:34 21:21	06:40 18:47-19:19/32 19:58	07:44 18:35	07:54 16:18	08:53 15:36
11	04:38 05:56-06:14/18 22:17	05:36 21:18	06:42 18:46-19:18/32 19:56	07:46 18:32	07:56 16:16	08:55 15:36
12	04:39 05:55-06:14/19 22:16	05:38 21:16	06:44 18:24-18:36/12 19:53	07:48 18:29	07:59 16:14	08:56 15:36
13	04:40 05:54-06:15/21 22:15	05:40 21:13	06:46 18:20-18:38/18 19:50	07:51 18:26	08:01 16:12	08:57 15:35
14	04:42 05:54-06:16/22 22:14	05:42 21:11	06:48 18:18-18:40/22 19:47	07:53 18:24	08:03 16:10	08:58 15:35
15	04:44 05:54-06:16/22 22:12	05:45 06:46-06:54/8 21:08	06:50 18:16-18:41/25 19:44	07:55 18:21	08:06 16:08	08:59 15:35
16	04:45 05:54-06:18/24 22:11	05:47 06:43-06:56/13 21:06	06:53 18:14-18:41/27 19:42	07:57 18:18	08:08 16:06	09:00 15:35
17	04:47 05:53-06:18/25 22:09	05:49 06:42-06:58/16 21:03	06:55 18:13-18:42/29 19:39	07:59 18:16	08:10 16:04	09:01 15:35
18	04:49 05:53-06:19/26 22:08	05:51 06:40-06:58/18 21:01	06:57 18:12-18:42/30 19:36	08:02 18:13	08:12 16:02	09:02 15:35
19	04:50 05:52-06:19/27 22:06	05:53 06:39-06:59/20 20:58	06:59 18:11-18:42/31 19:33	08:04 18:11	08:14 16:01	09:03 15:35
20	04:52 05:53-06:19/26 22:04	05:55 06:38-07:00/22 20:55	07:01 18:10-18:42/32 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	04:54 05:52-06:19/27 22:03	05:57 06:38-07:01/23 20:53	07:03 18:10-18:43/33 19:27	08:08 18:05	08:19 15:57	09:04 15:36
22	04:56 05:52-06:20/28 22:01	06:00 06:37-07:01/24 20:50	07:05 18:09-18:42/33 19:25	08:11 18:03	08:21 15:55	09:05 15:37
23	04:57 05:52-06:20/28 21:59	06:02 06:37-07:01/24 20:48	07:07 18:09-18:42/33 19:22	08:13 18:00	08:23 15:54	09:05 15:37
24	04:59 05:51-06:20/29 21:57	06:04 06:37-07:01/24 20:45	07:09 18:09-18:41/32 19:19	08:15 17:58	08:25 15:52	09:06 15:38
25	05:01 05:52-06:20/28 21:55	06:06 06:38-07:00/22 20:42	07:12 18:09-18:40/31 19:16	07:17 16:55	08:27 15:51	09:06 15:38
26	05:03 05:52-06:21/29 21:54	06:08 06:40-07:00/20 20:40	07:14 18:09-18:39/30 19:13	07:20 16:53	08:29 15:50	09:06 15:39
27	05:05 05:52-06:21/29 21:52	06:10 06:42-06:59/17 20:37	07:16 18:09-18:38/29 19:11	07:22 16:50	08:31 15:48	09:07 15:40
28	05:07 05:52-06:20/28 21:50	06:12 06:44-06:58/14 20:34	07:18 18:09-18:36/27 19:08	07:24 16:48	08:33 15:47	09:07 15:41
29	05:09 05:52-06:20/28 21:48	06:15 06:46-06:56/10 20:31	07:20 18:11-18:34/23 19:05	07:27 16:45	08:35 15:46	09:07 15:42
30	05:11 05:52-06:20/28 21:45	06:17 06:48-06:54/6 19:02-19:12/10 20:29	07:22 18:12-18:31/19 19:02	07:29 16:43	08:37 15:44	09:07 15:43
31	05:13 05:53-06:20/27 21:43	06:19 06:50-06:51/1 18:58-19:15/17 20:26		07:31 16:40		09:07 15:44
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	604	686	1036	22	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA

Maza Nometnu iela 31

LV-1002 Riga

+37129262684

SIA Enviroprojekts / atis@enviro.lv

Calculated:

06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 8 - Z9

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	06:04-06:26/22 18:44-19:16/32	04:33 22:08
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:09	06:05-06:26/21 18:45-19:14/29	04:32 22:10
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	06:04-06:25/21 18:48-19:12/24	04:31 22:11
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:26 21:14	06:04-06:25/21 18:51-19:09/18	04:29 22:13
5	09:05 15:51	08:18 16:55	07:09 18:01	06:43 20:10	05:24 21:16	06:05-06:25/20 18:55-19:05/10	04:28 22:14
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	06:05-06:24/19 19:48-20:16/28	04:27 22:15
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:19 21:20	06:06-06:23/17 19:48-20:15/27	04:26 22:17
8	09:03 15:56	08:12 17:03	07:00 18:08	06:34 20:16	05:17 21:23	06:07-06:22/15 19:49-20:14/25	04:26 22:18
9	09:02 15:57	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	06:08-06:21/13 19:50-20:13/23	04:25 22:19
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	06:10-06:19/9 19:51-20:11/20	04:24 22:20
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:10 21:29	06:13-06:16/3 19:53-20:10/17	04:23 22:21
12	08:59 16:03	08:03 17:12	06:50 18:17	06:23 20:25	05:08 21:31	19:55-20:08/13	04:23 22:22
13	08:58 16:05	08:00 17:14	06:47 18:19	06:21 20:27	05:06 21:33	19:58-20:04/6	04:22 22:23
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35		04:22 22:24
15	08:55 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37		04:22 22:24
16	08:54 16:11	07:53 17:22	06:38 18:26	06:12 20:34	05:00 21:39		04:21 22:25
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	04:58 21:41		04:21 22:26
18	08:51 16:15	07:48 17:26	06:33 18:30	06:07 20:39	04:56 21:43		04:21 22:26
19	08:50 16:17	07:45 17:29	06:30 18:32	06:04 20:41	04:54 21:45		04:21 22:27
20	08:49 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:47		04:21 22:27
21	08:47 16:21	07:40 17:33	06:24 18:37	05:59 20:45	04:50 21:49		04:21 22:27
22	08:45 16:23	07:38 17:36	06:22 18:39	05:57 20:47	04:48 21:51		04:21 22:27
23	08:44 16:25	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53		04:21 22:28
24	08:42 16:28	07:33 17:40	06:16 18:43	05:51 20:52	04:45 21:55		04:22 22:28
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57		04:22 22:28
26	08:39 16:32	07:27 17:45	06:10 18:48	05:46 20:56	04:42 21:59		04:23 22:27
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:58	04:40 22:00		04:23 22:27
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:38 22:02		04:24 22:27
29	08:33 16:39		07:02 19:54	05:39 21:03	04:37 22:04		04:24 22:27
30	08:31 16:41		06:59 19:57	05:36 21:05	04:36 22:05		04:25 22:26
31	08:29 16:44		06:56 19:59		04:34 22:07		
Potential sun hours	227	262	365	429	515	539	
Sum of minutes with flicker	0	0	1094	2219	610	416	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometņu iela 31
LV-1002 Rīga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 8 - Z9

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 05:06-05:21/15 22:26	05:15 20:05-20:20/15 21:41	06:21 18:01-18:19/18 20:23 18:37-19:28/51	07:24 17:40-18:15/35 18:59	07:33 16:38 15:43	08:39 15:43
2	04:27 05:07-05:21/14 22:25	05:17 06:22-06:28/6 21:39 20:02-20:21/19	06:23 17:57-18:22/25 20:21 18:37-19:28/51	07:27 17:41-18:12/31 18:57	07:36 16:36 15:42	08:41 15:42
3	04:28 05:08-05:21/13 22:25	05:19 06:19-06:30/11 21:37 20:01-20:22/21	06:25 17:54-18:24/30 20:18 18:37-19:27/50	07:29 17:43-18:09/26 18:54	07:38 16:33 15:41	08:42 15:41
4	04:29 05:09-05:20/11 22:24	05:21 06:17-06:31/14 21:35 20:00-20:23/23	06:27 17:52-18:25/33 20:15 18:38-19:26/48	07:31 17:46-18:06/20 18:51	07:40 16:31 15:40	08:44 15:40
5	04:30 05:10-05:19/9 22:23	05:23 06:16-06:32/16 21:32 19:59-20:24/25	06:29 17:49-18:27/38 20:12 18:38-19:25/47	07:33 17:52-18:00/8 18:48	07:43 16:29 15:40	08:46 15:40
6	04:31 05:11-05:18/7 22:22	05:26 06:15-06:33/18 21:30 19:58-20:25/27	06:31 17:47-18:28/41 20:09 18:38-19:23/45	07:35 17:47-18:28/41 18:45	07:45 16:26 15:39	08:47 15:39
7	04:32 05:12-05:16/4 22:21	05:28 06:14-06:34/20 21:28 19:57-20:26/29	06:34 17:46-18:28/42 20:07 18:39-19:22/43	07:37 18:43 16:24	07:47 15:38 15:38	08:49 15:38
8	04:33 22:21	05:30 06:14-06:34/20 19:03-19:16/13 21:25 19:57-20:26/29	06:36 17:44-18:29/45 20:04 18:40-19:20/40	07:40 18:40 16:22	07:50 16:22 15:37	08:50 15:37
9	04:35 22:20	05:32 06:13-06:34/21 18:59-19:19/20 21:23 19:56-20:27/31	06:38 17:43-18:30/47 20:01 18:41-19:18/37	07:42 17:43-18:30/47 18:37	07:52 16:20 15:37	08:52 15:37
10	04:36 22:19	05:34 06:13-06:34/21 18:56-19:22/26 21:21 19:56-20:27/31	06:40 17:41-18:30/49 19:58 18:42-19:16/34	07:44 18:35 16:18	07:54 15:36 15:36	08:53 15:36
11	04:37 22:17	05:36 06:13-06:34/21 18:54-19:23/29 21:18 19:55-20:27/32	06:42 17:40-18:30/50 19:56 18:44-19:14/30	07:46 18:32 16:16	07:56 15:36 15:36	08:55 15:36
12	04:39 22:16	05:38 06:13-06:34/21 18:52-19:25/33 21:16 19:55-20:27/32	06:44 17:39-18:30/51 19:53 18:46-19:11/25	07:48 18:29 16:14	07:59 15:36 15:36	08:56 15:36
13	04:40 22:15	05:40 06:14-06:34/20 18:51-19:26/35 21:13 19:55-20:27/32	06:46 17:38-18:30/52 19:50 18:49-19:07/18	07:50 18:26 16:12	08:01 15:35 15:35	08:57 15:35
14	04:42 22:14	05:42 06:16-06:33/17 18:49-19:27/38 21:11 19:54-20:27/33	06:48 17:37-18:30/53 19:47 18:56-19:00/4	07:53 18:24 16:10	08:03 15:35 15:35	08:58 15:35
15	04:44 22:12	05:45 06:18-06:33/15 18:48-19:28/40 21:08 19:54-20:27/33	06:50 17:36-18:30/54 19:44	07:55 18:21 16:08	08:06 15:35 15:35	08:59 15:35
16	04:45 22:11	05:47 06:20-06:32/12 18:46-19:29/43 21:06 19:53-20:26/33	06:53 17:36-18:30/54 19:41	07:57 18:18 16:06	08:08 15:35 15:35	09:00 15:35
17	04:47 22:09	05:49 06:22-06:30/8 18:45-19:30/45 21:03 19:54-20:25/31	06:55 17:35-18:29/54 19:39	07:59 18:16 16:04	08:10 15:35 15:35	09:01 15:35
18	04:48 22:08	05:51 06:24-06:28/4 18:43-19:29/46 21:01 19:54-20:24/30	06:57 17:35-18:29/54 19:36	08:02 18:13 16:02	08:12 15:35 15:35	09:02 15:35
19	04:50 22:06	05:53 19:54-20:24/30 20:58 18:42-19:30/48	06:59 17:34-18:29/55 19:33	08:04 18:10 16:00	08:14 15:35 15:35	09:03 15:35
20	04:52 22:04	05:55 19:55-20:22/27 20:55 18:41-19:30/49	07:01 17:34-18:28/54 19:30	08:06 18:08 15:59	08:17 15:36 15:36	09:04 15:36
21	04:54 22:03	05:57 19:55-20:20/25 20:53 18:40-19:30/50	07:03 17:35-18:28/53 19:27	08:08 18:05 15:57	08:19 15:36 15:36	09:04 15:36
22	04:56 22:01	06:00 19:56-20:17/21 20:50 18:40-19:30/50	07:05 17:34-18:27/53 19:25	08:11 18:03 15:55	08:21 15:36 15:36	09:05 15:36
23	04:57 21:59	06:02 19:58-20:15/17 20:48 18:39-19:30/51	07:07 17:34-18:26/52 19:22	08:13 18:00 15:54	08:23 15:37 15:37	09:05 15:37
24	04:59 21:57	06:04 19:59-20:12/13 20:45 18:38-19:30/52	07:09 17:34-18:25/51 19:19	08:15 17:58 15:52	08:25 15:38 15:38	09:06 15:38
25	05:01 21:55	06:06 20:02-20:10/8 20:42 18:38-19:30/52	07:12 17:35-18:24/49 19:16	07:17 16:55 15:51	08:27 15:38 15:38	09:06 15:38
26	05:03 21:53	06:08 18:37-19:30/53 20:40	07:14 17:35-18:23/48 19:13	07:20 16:53 15:49	08:29 15:39 15:39	09:06 15:39
27	05:05 21:52	06:10 18:37-19:30/53 20:37	07:16 17:35-18:21/46 19:11	07:22 16:50 15:48	08:31 15:40 15:40	09:07 15:40
28	05:07 21:50	06:12 18:38-19:31/53 20:34	07:18 17:36-18:20/44 19:08	07:24 16:48 15:47	08:33 15:41 15:41	09:07 15:41
29	05:09 21:47	06:14 18:37-19:30/53 20:31	07:20 17:38-18:19/41 19:05	07:27 16:45 15:46	08:35 15:42 15:42	09:07 15:42
30	05:11 21:45	06:17 18:37-19:30/53 20:29	07:22 17:39-18:17/38 19:02	07:29 16:43 15:44	08:37 15:43 15:43	09:07 15:43
31	05:13 20:08-20:17/9 21:43	06:19 18:10-18:11/1 20:26 18:37-19:29/52		07:31 16:40 15:44	09:07 15:44 15:44	09:07 15:44
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	82	1950	1897	120	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 9 - Z10

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June	July	August	September	October	November	December
1 09:06		08:27 15:05-15:52/47	07:19 06:54	05:34	04:33	04:26	05:15	06:21	07:24		07:33 14:59-15:18/19	08:39
15:45		16:46	17:52	20:01	21:07	22:09	22:26	21:41	20:23	18:59	16:38	15:43
2 09:06		08:25 15:06-15:52/46	07:17 06:51	05:31	04:32	04:27	05:17	06:23	07:27		07:36 14:58-15:20/22	08:41
15:47		16:48	17:54	20:03	21:09	22:10	22:25	21:39	20:21	18:57	16:36	15:42
3 09:06		08:23 15:07-15:53/46	07:14 06:48	05:29	04:30	04:28	05:19	06:25	07:29		07:38 14:56-15:20/24	08:42
15:48		16:51	17:56	20:05	21:12	22:12	22:25	21:37	20:18	18:54	16:33 14:43-14:55/12	15:41
4 09:05		08:21 15:07-15:52/45	07:11 06:45	05:26	04:29	04:29	05:21	06:27	07:31		07:40 14:41-15:21/40	08:44
15:49		16:53	17:59	20:08	21:14	22:13	22:24	21:35	20:15	18:51	16:31	15:40
5 09:05		08:18 15:09-15:52/43	07:09 06:43	05:24	04:28	04:30	05:23	06:29	07:33		07:43 14:40-15:22/42	08:46
15:51		16:55	18:01	20:10	21:16	22:14	22:23	21:32	20:12	18:48	16:29	15:39
6 09:04		08:16 15:10-15:51/41	07:06 06:40	05:22	04:27	04:31	05:25	06:31	07:35		07:45 14:38-15:22/44	08:47
15:52		16:58	18:03	20:12	21:18	22:16	22:23	21:30	20:09	18:45	16:26	15:39
7 09:03		08:14 15:12-15:51/39	07:03 06:37	05:19	04:26	04:32	05:28	06:34	07:37		07:47 14:38-15:23/45	08:49
15:54		17:00	18:06	20:14	21:20	22:17	22:22	21:28	20:07	18:43	16:24	15:38
8 09:03		08:12 15:27-15:50/23	07:00 06:34	05:17	04:26	04:33	05:30	06:36	07:40		07:50 14:37-15:22/45	08:51
15:56		17:03 15:14-15:25/11	18:08	20:16	21:23	22:18	22:21	21:25	20:04	18:40	16:22	15:37
9 09:02		08:10 15:28-15:50/22	06:58 06:32	05:15	04:25	04:35	05:32	06:38	07:42		07:52 14:36-15:23/47	08:52
15:57		17:05	18:10	20:19	21:25	22:19	22:20	21:23	20:01	18:37	16:20	15:37
10 09:01		08:07 15:29-15:48/19	06:55 06:29	05:13	04:24	04:36	05:34	06:40	07:44		07:54 14:36-15:22/46	08:53
15:59		17:07	18:12	20:21	21:27	22:20	22:19	21:21	19:58	18:35	16:18	15:36
11 09:00		08:05 15:32-15:47/15	06:52 06:26	05:10	04:23	04:37	05:36	06:42	07:46		07:56 14:36-15:23/47	08:55
16:01		17:10	18:15	20:23	21:29	22:21	22:17	21:18	19:56	18:32	16:16	15:36
12 08:59 15:10-15:16/6		08:03 15:34-15:44/10	06:50 06:23	05:08	04:23	04:39	05:38	06:44	07:48		07:59 14:36-15:23/47	08:56
16:03		17:12	18:17	20:25	21:31	22:22	22:16	21:16	19:53	18:29	16:14	15:36
13 08:58 15:09-15:19/10		08:00	06:47 06:21	05:06	04:22	04:40	05:40	06:46	07:50		08:01 14:35-15:22/47	08:57
16:05		17:14	18:19	20:27	21:33	22:23	22:15	21:13	19:50	18:26	16:12	15:35
14 08:57 15:07-15:21/14		07:58	06:44 06:18	05:04	04:22	04:42	05:42	06:48	07:53		08:03 14:36-15:23/47	08:58
16:07		17:17	18:21	20:30	21:35	22:24	22:14	21:11	19:47	18:24	16:10	15:35
15 08:55 15:06-15:22/16		07:55	06:41 06:15	05:02	04:22	04:43	05:45	06:50	07:55		08:06 14:36-15:22/46	08:59
16:09		17:19	18:24	20:32	21:37	22:24	22:12	21:08	19:44	18:21	16:08	15:35
16 08:54 15:06-15:24/18		07:53	06:38 06:12	05:00	04:21	04:45	05:47	06:53	07:57		08:08 14:36-15:22/46	09:00
16:11		17:21	18:26	20:34	21:39	22:25	22:11	21:06	19:41	18:18	16:06	15:35
17 08:53 15:05-15:25/20		07:50	06:36 06:10	04:58	04:21	04:47	05:49	06:55	07:59		08:10 14:36-15:20/44	09:01
16:13		17:24	18:28	20:36	21:41	22:26	22:09	21:03	19:39	18:16	16:04	15:35
18 08:51 15:04-15:26/22		07:48	06:33 06:07	04:56	04:21	04:48	05:51	06:57	08:02		08:12 14:37-15:20/43	09:02
16:15		17:26	18:30	20:39	21:43	22:26	22:08	21:01	19:36	18:13	16:02	15:35
19 08:50 15:04-15:28/24		07:45	06:30 06:04	04:54	04:21	04:50	05:53	06:59	08:04		08:14 14:37-15:19/42	09:03
16:17		17:29	18:32	20:41	21:45	22:27	22:06	20:58	19:33	18:10	16:00	15:35
20 08:49 15:04-15:29/25		07:43	06:27 06:02	04:52	04:21	04:52	05:55	07:01	08:06		08:17 14:38-15:18/40	09:04
16:19		17:31	18:35	20:43	21:47	22:27	22:04	20:55	19:30	18:08	15:59	15:36
21 08:47 15:31-15:41/10		07:40	06:24 05:59	04:50	04:21	04:54	05:57	07:03	08:08		08:19 15:06-15:16/10	09:04
16:21		17:33	18:37	20:45	21:49	22:27	22:03	20:53	19:27	18:05	15:57 14:39-15:05/26	15:36
22 08:45 15:03-15:43/40		07:38	06:22 05:57	04:48	04:21	04:56	06:00	07:05	08:11		08:21 14:40-15:05/25	09:05
16:23		17:36	18:39	20:47	21:51	22:27	22:01	20:50	19:25	18:03	15:55	15:36
23 08:44 15:03-15:45/42		07:35	06:19 05:54	04:46	04:21	04:57	06:02	07:07	08:13		08:23 14:40-15:04/24	09:05
16:25		17:38	18:41	20:50	21:53	22:28	21:59	20:48	19:22	18:00	15:54	15:37
24 08:42 15:03-15:46/43		07:33	06:16 05:51	04:45	04:22	04:59	06:04	07:09	08:15		08:25 14:42-15:04/22	09:06
16:28		17:40	18:43	20:52	21:55	22:28	21:57	20:45	19:19	17:58	15:52	15:38
25 08:40 15:03-15:47/44		07:30	06:13 05:49	04:43	04:22	05:01	06:06	07:12	08:17		08:27 14:43-15:03/20	09:06
16:30		17:43	18:46	20:54	21:57	22:28	21:55	20:42	19:16	16:55	15:51	15:38
26 08:39 15:03-15:49/46		07:27	06:10 05:46	04:41	04:23	05:03	06:08	07:14	08:19		08:29 14:44-15:02/18	09:06
16:32		17:45	18:48	20:56	21:59	22:28	21:54	20:40	19:13	16:53	15:49	15:39
27 08:37 15:04-15:50/46		07:25	06:08 05:44	04:40	04:23	05:05	06:10	07:16	08:21		08:31 14:46-15:02/16	09:07
16:34		17:47	18:50	20:58	22:00	22:27	21:52	20:37	19:11	16:50	15:48	15:40
28 08:35 15:03-15:50/47		07:22	06:05 05:41	04:38	04:24	05:07	06:12	07:18	08:24		08:33 14:47-15:01/14	09:07
16:37		17:50	18:52	21:01	22:02	22:27	21:50	20:34	19:08	16:48	15:47	15:41
29 08:33 15:04-15:51/47			07:02 05:39	04:37	04:24	05:09	06:14	07:20	08:27		08:35 14:49-15:00/11	09:07
16:39			19:54	21:03	22:04	22:27	21:48	20:31	19:05	16:45	15:46	15:42
30 08:31 15:04-15:51/47			06:59 05:36	04:35	04:25	05:11	06:17	07:22	08:29	15:03-15:14/11	08:37 14:51-14:58/7	09:07
16:41			19:57	21:05	22:05	22:26	21:45	20:29	19:02	16:43	15:44	15:43
31 08:29 15:05-15:52/47			06:56		04:34		05:13	06:19		07:31 15:01-15:17/16		09:07
16:44			19:59		22:07		21:43	20:26		16:40		15:44
Potential sun hours	227	262	365	429	515	539	538	474	386	321	241	207
Sum of minutes with flicker	640	407	0	0	0	0	0	0	0	27	1028	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

WTG: 10 - Z11

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 15:46	08:27 16:46	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:09
2	09:06 15:47	08:25 16:48	07:17 17:54	06:51 20:03	05:31 21:10	04:32 22:10
3	09:06 15:48	08:23 16:51	07:14 17:56	06:48 20:05	05:29 21:12	04:31 22:12
4	09:05 15:50	08:21 16:53	07:11 17:59	06:45 20:08	05:26 21:14	04:29 22:13
5	09:05 15:51	08:19 16:55	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14
6	09:04 15:53	08:16 16:58	07:06 18:03	06:40 20:12	05:22 21:18	04:27 22:16
7	09:03 15:54	08:14 17:00	07:03 18:06	06:37 20:14	05:19 21:20	04:26 22:17
8	09:03 15:56	08:12 17:03	07:01 18:08	06:34 20:16	05:17 21:23	04:26 22:18
9	09:02 15:57	08:10 17:05	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19
10	09:01 15:59	08:07 17:07	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20
11	09:00 16:01	08:05 17:10	06:52 18:15	06:26 20:23	05:10 21:29	04:23 22:21
12	08:59 16:03	08:03 17:12	06:50 18:17	06:23 20:25	05:08 21:31	04:23 22:22
13	08:58 16:05	08:00 17:14	06:47 18:19	06:21 20:28	05:06 21:33	04:22 22:23
14	08:57 16:07	07:58 17:17	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24
15	08:56 16:09	07:55 17:19	06:41 18:24	06:15 20:32	05:02 21:37	04:22 22:24
16	08:54 16:11	07:53 17:22	06:38 18:26	06:13 20:34	05:00 21:39	04:21 22:25
17	08:53 16:13	07:50 17:24	06:36 18:28	06:10 20:36	04:58 21:41	04:21 22:26
18	08:52 16:15	07:48 17:26	06:33 18:30	06:07 20:39	04:56 21:43	04:21 22:26
19	08:50 16:17	07:45 17:29	06:30 18:32	06:05 20:41	04:54 21:45	04:21 22:27
20	08:49 16:19	07:43 17:31	06:27 18:35	06:02 20:43	04:52 21:47	04:21 22:27
21	08:47 16:21	07:40 17:33	06:25 18:37	05:59 20:45	04:50 21:49	04:21 22:27
22	08:45 16:23	07:38 17:36	06:22 18:39	05:57 20:47	04:48 21:51	04:21 22:27
23	08:44 16:25	07:35 17:38	06:19 18:41	05:54 20:50	04:47 21:53	04:21 22:28
24	08:42 16:28	07:33 17:40	06:16 18:43	05:51 20:52	04:45 21:55	04:22 22:28
25	08:40 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:28
26	08:39 16:32	07:27 17:45	06:11 18:48	05:46 20:56	04:42 21:59	04:23 22:28
27	08:37 16:34	07:25 17:47	06:08 18:50	05:44 20:58	04:40 22:00	04:23 22:27
28	08:35 16:37	07:22 17:50	06:05 18:52	05:41 21:01	04:38 22:02	04:24 22:27
29	08:33 16:39		07:02 19:54	05:39 21:03	04:37 22:04	04:24 22:27
30	08:31 16:41		06:59 19:57	05:36 21:05	04:36 22:05	04:25 22:26
31	08:29 16:44		06:57 19:59		04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	0	0	0	565	1076	16

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 10 - Z11

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 05:51-06:05/14 21:41 20:18-20:58/40	06:21 20:23	07:24 18:59	07:34 16:38	08:39 15:43
2	04:27 22:25	05:17 05:53-06:04/11 21:39 20:16-20:58/42	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:42
3	04:28 22:25	05:19 05:55-06:03/8 21:37 20:15-20:58/43	06:25 20:18	07:29 18:54	07:38 16:33	08:42 15:41
4	04:29 22:24	05:21 05:56-06:01/5 21:35 20:15-20:58/43	06:27 20:15	07:31 18:51	07:40 16:31	08:44 15:40
5	04:30 22:23	05:23 05:58-06:00/2 21:32 20:14-20:57/43	06:29 20:12	07:33 18:48	07:43 16:29	08:46 15:40
6	04:31 22:23	05:26 20:14-20:55/41 21:30	06:31 20:10	07:35 18:46	07:45 16:27	08:47 15:39
7	04:32 22:22	05:28 20:14-20:53/39 21:28	06:34 20:07	07:37 18:43	07:47 16:24	08:49 15:38
8	04:33 22:21	05:30 19:59-20:05/6 21:25 20:13-20:51/38	06:36 20:04	07:40 18:40	07:50 16:22	08:51 15:37
9	04:35 22:20	05:32 19:56-20:08/12 21:23 20:13-20:49/36	06:38 20:01	07:42 18:37	07:52 16:20	08:52 15:37
10	04:36 05:49-05:53/4 22:19	05:34 19:53-20:10/17 21:21 20:13-20:46/33	06:40 19:58	07:44 18:35	07:54 16:18	08:53 15:36
11	04:37 05:47-05:55/8 22:17	05:36 19:52-20:12/20 21:18 20:13-20:44/31	06:42 19:56	07:46 18:32	07:57 16:16	08:55 15:36
12	04:39 05:45-05:56/11 22:16	05:38 19:50-20:13/23 21:16 20:14-20:42/28	06:44 19:53	07:48 18:29	07:59 16:14	08:56 15:36
13	04:40 05:44-05:57/13 22:15	05:40 19:49-20:40/51 21:13	06:46 19:50	07:51 18:26	08:01 16:12	08:57 15:35
14	04:42 05:44-05:58/14 22:14	05:42 19:48-20:37/49 21:11	06:48 19:47	07:53 18:24	08:03 16:10	08:58 15:35
15	04:44 05:43-05:59/16 22:12	05:45 19:47-20:35/48 21:08	06:50 19:44	07:55 18:21	08:06 16:08	08:59 15:35
16	04:45 05:43-06:00/17 22:11	05:47 19:47-20:15/28 21:06 20:16-20:33/17	06:53 19:42	07:57 18:18	08:08 16:06	09:00 15:35
17	04:47 05:42-06:01/19 22:09	05:49 19:46-20:16/30 21:03 20:17-20:30/13	06:55 19:39	07:59 18:16	08:10 16:04	09:01 15:35
18	04:48 05:42-06:02/20 22:08	05:51 19:44-20:15/31 21:01 20:17-20:27/10	06:57 19:36	08:02 18:13	08:12 16:02	09:02 15:35
19	04:50 05:42-06:03/21 22:06	05:53 19:44-20:15/31 20:58 20:19-20:25/6	06:59 19:33	08:04 18:11	08:14 16:00	09:03 15:35
20	04:52 05:42-06:04/22 22:04	05:55 19:44-20:14/30 20:55	07:01 19:30	08:06 18:08	08:17 15:59	09:04 15:36
21	04:54 05:41-06:05/24 22:03	05:57 19:44-20:14/30 20:53	07:03 19:27	08:08 18:05	08:19 15:57	09:04 15:36
22	04:56 05:41-06:05/24 22:01	06:00 19:44-20:14/30 20:50	07:05 19:25	08:11 18:03	08:21 15:55	09:05 15:36
23	04:57 05:41-06:05/24 21:59	06:02 19:44-20:13/29 20:48	07:07 19:22	08:13 18:00	08:23 15:54	09:05 15:37
24	04:59 05:42-06:06/24 21:57	06:04 19:44-20:12/28 20:45	07:09 19:19	08:15 17:58	08:25 15:52	09:06 15:38
25	05:01 05:41-06:06/25 21:55	06:06 19:44-20:10/26 20:42	07:12 19:16	07:17 16:55	08:27 15:51	09:06 15:38
26	05:03 05:41-06:06/25 21:54	06:08 19:45-20:07/22 20:40	07:14 19:13	07:20 16:53	08:29 15:50	09:06 15:39
27	05:05 05:42-06:06/24 20:25-20:31/6 21:52 20:45-20:51/6	06:10 19:46-20:04/18 20:37	07:16 19:11	07:22 16:50	08:31 15:48	09:07 15:40
28	05:07 05:43-06:06/23 20:22-20:34/12 21:50 20:43-20:54/11	06:12 19:48-20:03/15 20:34	07:18 19:08	07:24 16:48	08:33 15:47	09:07 15:41
29	05:09 05:45-06:06/21 20:21-20:36/15 21:48 20:42-20:55/13	06:15 19:49-20:00/11 20:32	07:20 19:05	07:27 16:45	08:35 15:46	09:07 15:42
30	05:11 05:47-06:05/18 20:19-20:37/18 21:45 20:41-20:56/15	06:17 19:52-19:57/5 20:29	07:22 19:02	07:29 16:43	08:37 15:44	09:07 15:43
31	05:13 05:49-06:05/16 20:18-20:39/21 21:43 20:40-20:57/17	06:19 20:26	 16:40	07:31 16:40	 15:44	09:07 15:44
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	547	1133	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 11 - Z12

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:07 11:46-14:10/144 15:45 14:22-14:45/23	08:27 11:55-13:19/84 16:46 13:35-13:44/9	07:20 17:52	06:54 19:24-19:32/8 20:01	05:34 21:07	04:33 22:09
2	09:06 11:47-14:11/144 15:47 14:23-14:46/23	08:25 11:55-13:17/82 16:48	07:17 17:54	06:51 19:22-19:34/12 20:03	05:31 21:10	04:32 22:10
3	09:06 11:47-14:11/144 15:48 14:23-14:47/24	08:23 11:56-13:16/80 16:51	07:14 17:56	06:48 19:21-19:36/15 20:06	05:29 21:12	04:30 22:12
4	09:05 11:47-14:11/144 15:49 14:23-14:47/24	08:21 11:56-13:15/79 16:53	07:11 17:59	06:45 19:20-19:38/18 20:08	05:26 21:14	04:29 22:13
5	09:05 11:47-14:12/145 15:51 14:23-14:47/24	08:19 11:57-12:43/46 16:55 12:45-13:13/28	07:09 18:01	06:43 19:20-19:40/20 20:10	05:24 21:16	04:28 22:14
6	09:04 11:48-14:13/145 15:52 14:25-14:49/24	08:16 11:59-12:43/44 16:58 12:48-13:12/24	07:06 18:03	06:40 19:19-19:39/20 20:12	05:22 21:18	04:27 22:16
7	09:04 11:48-14:14/146 15:54 14:25-14:49/24	08:14 12:00-12:41/41 17:00 12:51-13:08/17	07:03 18:06	06:37 19:18-19:39/21 20:14	05:19 21:21	04:26 22:17
8	09:03 11:47-14:13/146 15:56 14:25-14:49/24	08:12 12:01-12:40/39 17:03 12:58-13:02/4	07:01 18:08	06:34 19:18-19:38/20 20:17	05:17 21:23	04:25 22:18
9	09:02 11:47-14:14/147 15:57 14:25-14:49/24	08:10 12:03-12:38/35 17:05	06:58 18:10	06:32 19:19-19:37/18 20:19	05:15 21:25	04:25 22:19
10	09:01 11:48-14:15/147 15:59 14:26-14:50/24	08:07 12:05-12:37/32 17:07	06:55 18:12	06:29 19:19-19:36/17 20:21	05:13 21:27	04:24 22:20
11	09:00 11:48-14:15/147 16:01 14:27-14:50/23	08:05 12:07-12:34/27 17:10	06:52 18:15	06:26 19:20-19:34/14 20:23	05:10 21:29	04:23 22:21
12	08:59 11:48-14:15/147 16:03 14:27-14:50/23	08:03 12:10-12:32/22 17:12	06:50 07:16-07:23/7 18:17	06:23 19:23-19:32/9 20:25	05:08 21:31	04:23 22:22
13	08:58 11:48-14:16/148 16:05 14:28-14:51/23	08:00 12:15-12:27/12 17:14	06:47 07:13-07:25/12 18:19	06:21 20:28	05:06 21:33	04:22 22:23
14	08:57 11:48-14:16/148 16:07 14:28-14:50/22	07:58 17:17	06:44 07:10-07:26/16 18:21	06:18 20:30	05:04 21:35	04:22 22:24
15	08:56 11:49-14:16/147 16:09 14:29-14:51/22	07:55 17:19	06:41 07:09-07:28/19 18:24	06:15 20:32	05:02 21:38	04:21 22:25
16	08:54 11:49-14:16/147 16:11 14:30-14:50/20	07:53 17:22	06:39 07:08-07:28/20 18:26	06:13 20:34	05:00 21:40	04:21 22:25
17	08:53 11:48-14:16/148 16:13 14:30-14:50/20	07:51 17:24	06:36 07:07-07:28/21 18:28	06:10 20:36	04:58 21:42	04:21 22:26
18	08:52 11:49-14:17/148 16:15 14:32-14:50/18	07:48 17:26	06:33 07:06-07:28/22 18:30	06:07 20:39	04:56 21:44	04:21 22:26
19	08:50 11:49-14:17/148 16:17 14:33-14:50/17	07:46 17:29	06:30 07:06-07:27/21 18:32	06:04 20:41	04:54 21:46	04:21 22:27
20	08:49 11:49-14:16/147 16:19 14:34-14:49/15	07:43 17:31	06:27 07:07-07:27/20 18:35	06:02 20:43	04:52 21:48	04:21 22:27
21	08:47 11:50-14:16/146 16:21 14:36-14:48/12	07:40 17:33	06:25 07:07-07:26/19 18:37	05:59 20:45	04:50 21:50	04:21 22:27
22	08:46 11:50-14:16/146 16:23 14:39-14:46/7	07:38 17:36	06:22 07:07-07:25/18 18:39	05:57 20:48	04:48 21:51	04:21 22:28
23	08:44 11:50-14:15/145 16:25	07:35 17:38	06:19 07:08-07:23/15 18:41	05:54 20:50	04:46 21:53	04:21 22:28
24	08:42 11:50-14:15/145 16:28	07:33 17:40	06:16 07:10-07:20/10 18:44	05:51 20:52	04:45 21:55	04:22 22:28
25	08:40 11:51-14:14/143 16:30	07:30 17:43	06:13 18:46	05:49 20:54	04:43 21:57	04:22 22:28
26	08:39 11:51-13:21/90 16:32 13:22-14:13/51	07:27 17:45	06:11 18:48	05:46 20:56	04:41 21:59	04:22 22:28
27	08:37 11:52-13:21/89 16:34 13:23-14:12/49	07:25 17:47	06:08 18:50	05:44 20:59	04:40 22:01	04:23 22:28
28	08:35 11:52-13:21/89 13:55-14:11/16 16:37 13:25-13:52/27	07:22 17:50	06:05 18:52	05:41 21:01	04:38 22:02	04:24 22:27
29	08:33 11:52-13:20/88 13:57-14:07/10 16:39 13:25-13:50/25		07:02 19:55	05:39 21:03	04:37 22:04	04:24 22:27
30	08:31 11:53-13:19/86 16:41 13:28-13:49/21		06:59 19:57	05:36 21:05	04:35 22:06	04:25 22:27
31	08:29 11:54-13:19/85 16:44 13:31-13:47/16		06:57 19:26-19:29/3 19:59		04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	4854	705	223	192	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometņu iela 31
LV-1002 Rīga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 11 - Z12

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 21:41	06:21 19:20-19:34/14 20:23	07:24 07:54-08:03/9 18:59	07:34 11:34-12:07/33 16:38	08:39 11:30-13:57/147 15:43 14:09-14:33/24
2	04:27 22:26	05:17 21:39	06:23 19:18-19:35/17 20:21	07:27 07:56-07:58/2 18:57	07:36 11:32-12:08/36 16:36	08:41 11:31-13:58/147 15:42 14:09-14:33/24
3	04:28 22:25	05:19 21:37	06:25 19:17-19:35/18 20:18	07:29 18:54	07:38 11:31-12:10/39 16:33 12:26-12:34/8	08:43 11:32-13:58/146 15:41 14:09-14:33/24
4	04:29 22:24	05:21 21:35	06:27 19:16-19:36/20 20:15	07:31 18:51	07:41 11:29-12:11/42 16:31 12:20-12:38/18	08:44 11:32-13:58/146 15:40 14:10-14:34/24
5	04:30 22:24	05:23 21:32	06:29 19:15-19:36/21 20:12	07:33 18:48	07:43 11:28-12:12/44 16:29 12:17-12:42/25	08:46 11:33-13:59/146 15:39 14:10-14:34/24
6	04:31 22:23	05:25 21:30	06:31 19:15-19:35/20 20:10	07:35 18:46	07:45 11:27-12:13/46 16:26 12:15-12:43/28	08:48 11:33-13:58/145 15:39 14:10-14:34/24
7	04:32 22:22	05:28 21:28	06:34 19:15-19:35/20 20:07	07:37 18:43	07:47 11:27-12:45/78 16:24	08:49 11:34-13:59/145 15:38 14:10-14:34/24
8	04:33 22:21	05:30 21:25	06:36 19:15-19:33/18 20:04	07:40 18:40	07:50 11:26-12:46/80 16:22	08:51 11:35-13:59/144 15:37 14:11-14:35/24
9	04:35 22:20	05:32 21:23	06:38 19:15-19:30/15 20:01	07:42 18:37	07:52 11:25-12:48/83 16:20	08:52 11:36-14:00/144 15:37 14:12-14:36/24
10	04:36 22:19	05:34 21:21	06:40 19:15-19:27/12 19:58	07:44 18:35	07:54 11:25-12:50/85 16:18 13:05-13:15/10	08:54 11:36-14:00/144 15:36 14:12-14:36/24
11	04:37 22:18	05:36 21:18	06:42 19:16-19:25/9 19:56	07:46 18:32	07:57 11:24-12:50/86 16:16 13:01-13:18/17	08:55 11:37-14:01/144 15:36 14:13-14:36/23
12	04:39 22:16	05:38 21:16	06:44 19:18-19:22/4 19:53	07:48 18:29	07:59 11:25-12:51/86 16:14 12:59-13:21/22	08:56 11:37-14:01/144 15:35 14:13-14:36/23
13	04:40 22:15	05:40 21:13	06:46 19:50	07:51 18:26	08:01 11:24-12:52/88 13:29-13:39/10 16:12 12:57-13:22/25	08:57 11:38-14:01/143 15:35 14:13-14:36/23
14	04:42 22:14	05:42 21:11	06:48 19:47	07:53 18:24	08:03 11:24-12:53/89 13:27-13:43/16 16:10 12:56-13:24/28	08:59 11:39-14:02/143 15:35 14:15-14:38/23
15	04:43 22:12	05:45 21:08	06:50 19:44	07:55 18:21	08:06 11:24-12:53/89 16:08 12:55-13:44/49	09:00 11:40-14:02/142 15:35 14:15-14:38/23
16	04:45 22:11	05:47 21:06	06:53 19:42	07:57 18:18	08:08 11:24-12:54/90 16:06 12:55-13:46/51	09:01 11:40-14:02/142 15:35 14:15-14:38/23
17	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 11:25-13:48/143 16:04	09:02 11:41-14:03/142 15:35 14:16-14:39/23
18	04:48 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 11:24-13:49/145 16:02	09:02 11:41-14:03/142 15:35 14:17-14:39/22
19	04:50 22:06	05:53 20:58	06:59 07:58-08:07/9 19:33	08:04 18:11	08:15 11:25-13:50/145 16:00	09:03 11:41-14:03/142 15:35 14:16-14:39/23
20	04:52 22:05	05:55 20:56	07:01 07:55-08:09/14 19:30	08:06 18:08	08:17 11:25-13:51/146 15:59 14:14-14:21/7	09:04 11:42-14:04/142 15:36 14:17-14:39/22
21	04:54 22:03	05:57 20:53	07:03 07:53-08:10/17 19:27	08:08 18:05	08:19 11:26-13:52/146 15:57 14:12-14:24/12	09:05 11:43-14:05/142 15:36 14:18-14:40/22
22	04:56 22:01	06:00 20:50	07:05 07:52-08:11/19 19:25	08:11 18:03	08:21 11:26-13:52/146 15:55 14:10-14:25/15	09:05 11:43-14:05/142 15:36 14:18-14:40/22
23	04:57 21:59	06:02 20:48	07:07 07:51-08:11/20 19:22	08:13 18:00	08:23 11:25-13:53/148 15:54 14:09-14:26/17	09:06 11:44-14:06/142 15:37 14:19-14:41/22
24	04:59 21:58	06:04 20:45	07:10 07:50-08:11/21 19:19	08:15 17:58	08:25 11:26-13:54/148 15:52 14:09-14:27/18	09:06 11:44-14:06/142 15:38 14:19-14:42/23
25	05:01 21:56	06:06 20:42	07:12 07:49-08:10/21 19:16	07:18 16:55	08:27 11:27-13:54/147 15:51 14:08-14:28/20	09:06 11:44-14:06/142 15:38 14:20-14:42/22
26	05:03 21:54	06:08 20:40	07:14 07:49-08:10/21 19:13	07:20 16:53	08:29 11:28-13:55/147 15:49 14:09-14:30/21	09:07 11:45-14:07/142 15:39 14:20-14:42/22
27	05:05 21:52	06:10 20:37	07:16 07:50-08:10/20 19:11	07:22 16:50	08:31 11:28-13:55/147 15:48 14:08-14:30/22	09:07 11:45-14:07/142 15:40 14:20-14:43/23
28	05:07 21:50	06:12 20:34	07:18 07:50-08:09/19 19:08	07:24 16:48	08:33 11:28-13:56/148 15:47 14:08-14:30/22	09:07 11:45-14:08/143 15:41 14:21-14:44/23
29	05:09 21:48	06:14 20:32	07:20 07:50-08:08/18 19:05	07:27 11:43-11:57/14 16:45	08:35 11:29-13:56/147 15:46 14:08-14:31/23	09:07 11:46-14:09/143 15:42 14:21-14:44/23
30	05:11 21:46	06:17 20:29	07:22 07:52-08:06/14 19:02	07:29 11:38-12:01/23 16:43	08:37 11:29-13:56/147 15:44 14:08-14:31/23	09:07 11:45-14:08/143 15:43 14:21-14:44/23
31	05:13 21:44	06:19 19:21-19:31/10 20:26		07:31 11:36-12:04/28 16:40		09:07 11:46-14:09/143 15:44 14:22-14:45/23
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	0	10	401	76	3651	5162

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 12 - Z13

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 10:36-11:40/64 12:20-12:37/17 15:45 11:49-12:15/26	08:27 16:46 17:52	07:19 17:52	06:54 20:01	05:34 21:07	04:33 22:09
2	09:06 10:37-11:41/64 12:22-12:38/16 15:47 11:50-12:16/26	08:25 16:48 17:54	07:17 17:54	06:51 20:03	05:31 21:10	04:32 22:10
3	09:06 10:37-11:41/64 12:22-12:37/15 15:48 11:51-12:16/25	08:23 16:51 17:56	07:14 17:56	06:48 20:05	05:29 21:12	04:30 22:12
4	09:05 10:38-11:41/63 12:24-12:37/13 15:49 11:51-12:15/24	08:21 16:53 17:59	07:11 17:59	06:45 20:08	05:26 21:14	04:29 22:13
5	09:05 10:38-11:42/64 12:25-12:36/11 15:51 11:52-12:15/23	08:19 16:55 18:01	07:09 18:01	06:43 20:10	05:24 21:16	04:28 22:14
6	09:04 10:39-11:43/64 12:28-12:36/8 15:52 11:54-12:16/22	08:16 16:58 18:03	07:06 18:03	06:40 20:12	05:22 21:18	04:27 22:16
7	09:03 10:40-11:43/63 15:54 11:55-12:16/21	08:14 17:00 18:06	07:03 18:06	06:37 20:14	05:19 21:21	04:26 22:17
8	09:03 10:39-11:42/63 15:56 11:55-12:15/20	08:12 17:01 18:08	07:01 18:08	06:34 20:17	05:17 21:23	04:25 22:18
9	09:02 10:40-11:43/63 15:57 11:57-12:15/18	08:10 17:05 18:10	06:58 18:10	06:32 20:19	05:15 21:25	04:25 22:19
10	09:01 10:40-11:43/63 15:59 11:58-12:14/16	08:07 17:07 18:12	06:55 18:12	06:29 20:21	05:13 21:27	04:24 22:20
11	09:00 10:41-11:44/63 16:01 12:00-12:14/14	08:05 17:10 18:15	06:52 18:15	06:26 20:23	05:10 21:29	04:23 22:21
12	08:59 10:41-11:43/62 16:03 12:02-12:11/9	08:03 17:12 18:17	06:50 18:17	06:23 20:25	05:08 21:31	04:23 22:22
13	08:58 10:42-11:43/61 16:05	08:00 17:14 18:19	06:47 18:19	06:21 20:28	05:06 21:33	04:22 22:23
14	08:57 10:42-11:43/61 16:07	07:58 17:17 18:21	06:44 18:21	06:18 20:30	05:04 21:35	04:22 22:24
15	08:56 10:43-11:43/60 16:09	07:55 17:19 18:24	17:46-17:54/8	06:15 20:32	05:02 21:37	04:21 22:25
16	08:54 10:43-11:42/59 16:10	07:53 17:22 18:26	17:44-17:57/13	06:12 20:34	05:00 21:40	04:21 22:25
17	08:53 10:43-11:42/59 16:13	07:50 17:24 18:28	17:42-17:59/17	06:10 20:36	04:58 21:42	04:21 22:26
18	08:52 10:45-11:18/33 16:15 11:19-11:42/23	07:48 17:26 18:30	17:40-18:01/21	06:07 20:39	04:56 21:44	04:21 22:26
19	08:50 10:45-11:17/32 16:17 11:20-11:41/21	07:45 17:29 18:32	17:39-18:03/24	06:04 20:41	04:54 21:46	04:21 22:27
20	08:49 10:46-11:17/31 16:19 11:22-11:39/17	07:43 17:31 18:35	17:37-18:05/28	06:02 20:43	04:52 21:48	04:21 22:27
21	08:47 10:47-11:17/30 16:21 11:24-11:38/14	07:40 17:33 18:37	17:37-18:06/29	05:59 20:45	04:50 21:49	04:21 22:27
22	08:46 10:48-11:16/28 16:23 11:28-11:34/6	07:38 17:36 18:39	17:37-18:07/30	05:57 20:47	04:48 21:51	04:21 22:28
23	08:44 10:49-11:16/27 16:25	07:35 17:38 18:41	17:37-18:07/30	05:54 20:50	04:46 21:53	04:21 22:28
24	08:42 10:50-11:15/25 16:28	07:33 17:40 18:43	17:36-18:07/31	05:51 20:52	04:45 21:55	04:22 22:28
25	08:40 10:51-11:14/23 16:30	07:30 17:43 18:46	17:36-18:06/30	05:49 20:54	04:43 21:57	04:22 22:28
26	08:39 10:53-11:13/20 16:32	07:27 17:45 18:48	17:36-18:05/29	05:46 20:56	04:41 21:59	04:23 22:28
27	08:37 10:55-11:12/17 16:34	07:25 17:47 18:50	17:38-18:05/27	05:44 20:59	04:40 22:00	04:23 22:27
28	08:35 10:58-11:09/11 16:37	07:22 17:50 18:52	17:39-18:03/24	05:41 21:01	04:38 22:02	04:24 22:27
29	08:33 16:39 16:39	07:02 19:54	18:40-19:01/21	05:39 21:03	04:37 22:04	04:24 22:27
30	08:31 16:41 16:41	06:59 19:57	18:43-18:59/16	05:36 21:05	04:35 22:06	04:25 22:27
31	08:29 16:44	06:57 19:59			04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	1742	0	378	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
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SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 12 - Z13

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 21:41	06:21 20:23	07:24 18:59	07:34 16:38	08:39 15:43 10:23-11:26/63 11:43-11:56/13
2	04:27 22:26	05:17 21:39	06:23 20:21	07:27 18:57	07:36 16:36	08:41 15:42 10:23-11:26/63 11:42-11:57/15
3	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 16:33	08:43 15:41 10:24-11:27/63 11:41-11:59/18
4	04:29 22:24	05:21 21:35	06:27 20:15	07:31 18:51	07:40 16:31	08:44 15:40 10:24-11:27/63 11:40-12:00/20
5	04:30 22:23	05:23 21:32	06:29 20:12	07:33 18:48	07:43 16:29	08:46 15:39 10:25-11:28/63 11:40-12:01/21
6	04:31 22:23	05:25 21:30	06:31 20:10	07:35 18:46	07:45 16:26	08:48 15:39 10:24-11:28/64 12:13-12:21/8 11:39-12:01/22
7	04:32 22:22	05:28 21:28	06:34 20:07	07:37 18:43	07:47 16:24	08:49 15:38 10:25-11:29/64 12:12-12:23/11 11:39-12:02/23
8	04:33 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 16:22	08:51 15:37 10:26-11:29/63 12:12-12:25/13 11:40-12:04/24
9	04:35 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 16:20	08:52 15:37 10:27-11:30/63 12:12-12:26/14 11:40-12:05/25
10	04:36 22:19	05:34 21:21	06:40 19:58	07:44 18:35	07:54 16:18	08:53 15:36 10:26-11:30/64 12:11-12:27/16 11:40-12:05/25
11	04:37 22:18	05:36 21:18	06:42 19:56	07:46 18:32	07:57 16:16	08:55 15:36 10:28-11:31/63 12:11-12:29/18 11:40-12:06/26
12	04:39 22:16	05:38 21:16	06:44 19:53	07:48 18:29	07:59 16:14	08:56 15:35 10:28-11:31/63 12:11-12:29/18 11:40-12:06/26
13	04:40 22:15	05:40 21:13	06:46 19:50	07:51 18:26	08:01 16:12	08:57 15:35 10:28-11:31/63 12:10-12:30/20 11:40-12:07/27
14	04:42 22:14	05:42 21:11	06:48 19:47	07:53 18:24	08:03 16:10	08:58 15:35 10:29-11:33/64 12:11-12:31/20 11:41-12:08/27
15	04:43 22:12	05:45 21:08	06:50 19:44	07:55 18:21	08:06 16:08	09:00 15:35 10:29-11:33/64 12:11-12:32/21 11:41-12:09/28
16	04:45 22:11	05:47 21:06	06:53 19:42	07:57 18:18	08:08 16:06	09:01 15:35 10:30-11:33/63 12:12-12:32/20 11:41-12:09/28
17	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 16:04	09:01 15:35 10:30-11:34/64 12:12-12:33/21 11:42-12:10/28
18	04:48 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 16:02	09:02 15:35 10:31-11:35/64 12:12-12:34/22 11:42-12:10/28
19	04:50 22:06	05:53 20:58	06:59 19:33	08:04 18:10	08:15 16:00	09:03 15:35 10:31-11:34/63 12:12-12:33/21 11:42-12:10/28
20	04:52 22:05	05:55 20:56	07:01 19:30	08:06 18:08	08:17 15:59	09:04 15:36 10:32-11:35/63 12:13-12:34/21 11:03-11:09/6 11:43-12:11/28
21	04:54 22:03	05:57 20:53	07:03 19:27	08:08 18:05	08:19 15:57	09:05 15:36 10:33-11:36/63 12:13-12:35/22 11:00-11:14/14 11:43-12:12/29
22	04:56 22:01	06:00 20:50	07:05 19:25	08:11 18:03	08:21 15:55	09:05 15:36 10:33-11:36/63 12:13-12:35/22 10:58-11:15/17 11:43-12:12/29
23	04:57 21:59	06:02 20:48	07:07 19:22	08:13 18:00	08:23 15:54	09:06 15:37 10:34-11:37/63 12:14-12:36/22 10:57-11:17/20 11:45-12:13/28
24	04:59 21:57	06:04 20:45	07:09 19:19	08:15 17:58	08:25 15:52	09:06 15:38 10:34-11:37/63 12:15-12:36/21 10:56-11:19/23 11:45-12:13/28
25	05:01 21:56	06:06 20:42	07:12 19:16	08:17 17:55	08:27 15:51	09:06 15:38 10:34-11:37/63 12:15-12:37/22 10:55-11:20/58 11:45-12:13/28
26	05:03 21:54	06:08 20:40	07:14 19:13	08:19 17:53	08:29 15:49	09:07 15:39 10:34-11:38/64 12:16-12:37/21 10:22-11:21/59 11:46-12:14/28
27	05:05 21:52	06:10 20:37	07:16 19:11	08:22 17:50	08:31 15:48	09:07 15:40 10:35-11:38/63 12:16-12:37/21 10:22-11:22/60 11:46-12:14/28
28	05:07 21:50	06:12 20:34	07:18 19:08	08:24 17:48	08:33 15:47	09:07 15:41 10:35-11:39/64 12:17-12:37/20 10:22-11:23/61 11:47-12:14/27
29	05:09 21:48	06:14 20:32	07:20 19:05	08:27 17:45	08:35 15:46	09:07 15:42 10:36-11:39/63 12:18-12:38/20 10:22-11:23/61 11:48-12:15/27
30	05:11 21:46	06:17 20:29	07:22 19:02	08:29 17:43	08:37 15:44	09:07 15:43 10:36-11:39/63 12:18-12:37/19 10:22-11:24/62 11:47-12:15/28
31	05:13 21:43	06:19 20:26		08:31 17:40		09:07 15:44 10:36-11:40/64 12:19-12:38/19 11:49-12:15/26
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	0	0	382	0	727	3242

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
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+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 13 - Z16

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 11:32-11:42/10 15:45 09:55-10:09/14	08:27 09:29-09:58/29 10:05-10:22/17 16:46 09:05-09:28/23	07:19 06:54 17:52 20:01		05:34 18:46-19:37/51 21:07	04:33 22:09
2	09:06 11:34-11:42/8 15:47 09:55-10:11/16	08:25 09:29-09:58/29 10:06-10:19/13 16:48 09:00-09:28/28	07:17 06:51 17:54 20:03		05:31 18:45-19:35/50 21:10	04:32 22:10
3	09:06 11:36-11:41/5 15:48 09:55-10:12/17	08:23 09:30-09:58/28 10:10-10:16/6 16:51 08:59-09:29/30	07:14 06:48 17:56 20:05		05:29 18:46-19:34/48 21:12	04:30 22:12
4	09:05 09:54-10:13/19 15:49	08:21 09:30-09:57/27 16:53 08:57-09:29/32	07:11 06:45 17:59 20:08		05:26 18:47-19:33/46 21:14	04:29 22:13
5	09:05 09:54-10:13/19 15:51	08:19 09:31-09:57/26 16:55 08:56-09:30/34	07:09 06:43 18:01 20:10		05:24 18:48-19:32/44 21:16	04:28 22:14
6	09:04 09:55-10:15/20 15:52	08:16 09:32-09:57/25 16:58 08:56-09:31/35	07:06 06:40 18:03 20:12		05:22 18:48-19:30/42 21:18	04:27 22:16
7	09:03 09:55-10:16/21 15:54	08:14 09:32-09:56/24 17:00 08:54-09:31/37	07:03 06:37 19:21-19:25/4 18:06 19:13-19:16/3		05:19 18:49-19:30/41 21:20	04:26 22:17
8	09:03 09:54-10:16/22 15:56	08:12 09:34-09:55/21 17:02 08:54-09:31/37	07:01 06:34 19:05-19:31/26 18:08 20:16		05:17 18:50-19:29/39 21:23	04:25 22:18
9	09:02 09:54-10:17/23 15:57	08:10 08:43-08:49/6 08:53-09:30/37 17:05 09:35-09:53/18	06:58 06:31 19:02-19:34/32 18:10 20:19		05:15 18:51-19:28/37 21:25	04:25 22:19
10	09:01 09:54-10:19/25 15:59	08:07 08:40-08:53/13 08:54-09:31/37 17:07 09:38-09:51/13	06:55 06:29 18:59-19:36/37 18:12 20:21		05:12 18:52-19:27/35 21:27	04:24 22:20
11	09:00 09:54-10:20/26 16:01	08:05 08:38-09:30/52 17:10 09:41-09:47/6	06:52 06:26 18:57-19:37/40 18:15 20:23		05:10 18:53-19:25/32 21:29	04:23 22:21
12	08:59 09:54-10:20/26 16:03	08:03 08:37-09:30/53 17:12	06:50 06:23 18:55-19:39/44 18:17 20:25		05:08 18:55-19:24/29 21:31	04:23 22:22
13	08:58 09:54-10:21/27 16:05	08:00 08:35-09:28/53 17:14	06:47 06:21 18:53-19:39/46 18:19 20:27		05:06 18:56-19:22/26 21:33	04:22 22:23
14	08:57 09:54-10:21/27 16:06	07:58 08:34-09:27/53 17:17	06:44 06:18 18:52-19:40/48 18:21 20:30		05:04 18:58-19:20/22 21:35	04:22 22:24
15	08:56 09:54-10:23/29 16:08	07:55 08:34-09:26/52 17:19	06:41 06:15 18:51-19:41/50 18:23 20:32		05:02 19:01-19:19/18 21:37	04:21 22:25
16	08:54 09:54-10:23/29 16:10	07:53 08:33-09:23/50 17:21	06:38 06:12 18:49-19:41/52 18:26 20:34		05:00 19:05-19:15/10 21:39	04:21 22:25
17	08:53 09:35-09:43/8 16:12 09:54-10:23/29	07:50 08:32-09:19/47 17:24	06:36 06:10 18:49-19:42/53 18:28 20:36		04:58 21:42	04:21 22:26
18	08:52 09:34-09:47/13 16:15 09:55-10:24/29	07:48 08:33-09:19/46 17:26	06:33 06:07 18:48-19:41/53 18:30 20:39		04:56 21:44	04:21 22:26
19	08:50 09:32-09:48/16 16:17 09:55-10:25/30	07:45 08:33-09:17/44 17:29	06:30 06:04 18:48-19:42/54 18:32 20:41		04:54 21:46	04:21 22:27
20	08:49 09:31-09:50/19 16:19 09:55-10:25/30	07:43 08:32-09:15/43 17:31	06:27 06:02 18:46-19:42/56 18:35 20:43		04:52 21:47	04:21 22:27
21	08:47 09:30-09:51/21 16:21 09:55-10:25/30	07:40 08:33-08:59/26 17:33 09:02-09:13/11	06:24 05:59 18:45-19:41/56 18:37 20:45		04:50 21:49	04:21 22:27
22	08:45 09:30-09:52/22 16:23 09:56-10:25/29	07:38 08:33-08:58/25 17:36	06:22 05:56 18:45-19:41/56 18:39 20:47		04:48 21:51	04:21 22:28
23	08:44 09:29-09:53/24 16:25 09:56-10:25/29	07:35 08:34-08:57/23 17:38	06:19 05:54 18:46-19:42/56 18:41 20:50		04:46 21:53	04:21 22:28
24	08:42 09:29-09:54/25 16:27 09:56-10:25/29	07:33 08:35-08:57/22 17:40	06:16 05:51 18:45-19:41/56 18:43 20:52		04:45 21:55	04:22 22:28
25	08:40 09:29-09:55/26 16:30 09:57-10:26/29	07:30 08:36-08:55/19 17:43	06:13 05:49 18:45-19:41/56 18:46 20:54		04:43 21:57	04:22 22:28
26	08:39 09:29-09:56/27 16:32 09:58-10:26/28	07:27 08:38-08:53/15 17:45	06:10 05:46 18:44-19:40/56 18:48 20:56		04:41 21:59	04:22 22:28
27	08:37 09:29-09:57/28 09:59-10:25/26 16:34 09:14-09:17/3	07:25 08:40-08:49/9 17:47	06:08 05:44 18:45-19:40/55 18:50 20:58		04:40 22:00	04:23 22:27
28	08:35 09:29-09:57/28 10:00-10:25/25 16:37 09:11-09:22/11	07:22 17:49	06:05 05:41 18:44-19:38/54 18:52 21:01		04:38 22:02	04:24 22:27
29	08:33 09:28-09:57/29 10:00-10:24/24 16:39 09:08-09:23/15		07:02 05:39 18:45-19:38/53 19:54 21:03		04:37 22:04	04:24 22:27
30	08:31 09:28-09:58/30 10:01-10:23/22 16:41 09:07-09:25/18		06:59 05:36 18:45-19:38/53 19:57 21:05		04:35 22:05	04:25 22:26
31	08:29 09:29-09:58/29 10:03-10:23/20 16:44 09:06-09:27/21		06:56 19:59		04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	1205	1274	0	1149	570	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 13 - Z16

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 19:04-19:35/31 21:41	06:21 18:57-19:37/40 20:23	07:24 18:59	07:34 08:10-08:22/12 08:23-09:00/37 16:38 09:07-09:21/14	08:39 09:37-10:02/25 15:43
2	04:27 22:25	05:17 19:03-19:36/33 21:39	06:23 18:58-19:35/37 20:21	07:27 18:57	07:36 08:14-08:18/4 08:23-09:00/37 16:36 09:04-09:23/19	08:41 09:37-10:02/25 15:42
3	04:28 22:25	05:19 19:02-19:37/35 21:37	06:25 19:00-19:32/32 20:18	07:29 18:54	07:38 09:03-09:25/22 16:33 08:24-09:01/37	08:42 09:38-10:02/24 15:41
4	04:29 22:24	05:21 19:01-19:38/37 21:35	06:27 19:03-19:29/26 20:15	07:31 18:51	07:40 09:02-09:25/23 16:31 08:24-09:00/36	08:44 09:39-10:02/23 15:40
5	04:30 22:23	05:23 19:00-19:39/39 21:32	06:29 19:18-19:23/5 20:12 19:09-19:14/5	07:33 18:48	07:43 08:25-09:27/62 16:29	08:46 09:40-10:02/22 15:39
6	04:31 22:23	05:25 18:59-19:40/41 21:30	06:31 20:09	07:35 18:45	07:45 08:26-09:27/61 16:26	08:48 09:40-10:01/21 15:39
7	04:32 22:22	05:27 18:58-19:41/43 21:28	06:34 20:07	07:37 18:43	07:47 08:28-09:28/60 16:24	08:49 09:41-10:01/20 15:38
8	04:33 22:21	05:30 18:57-19:42/45 21:25	06:36 20:04	07:40 18:40	07:50 08:29-09:28/59 16:22 09:39-09:46/7	08:51 09:43-10:01/18 15:37
9	04:35 22:20	05:32 18:56-19:43/47 21:23	06:38 20:01	07:42 18:37	07:52 09:00-09:29/29 09:37-09:50/13 16:20 08:31-08:59/28	08:52 11:25-11:29/4 15:37 09:44-10:01/17
10	04:36 22:19	05:34 18:55-19:44/49 21:21	06:40 19:58	07:44 18:34	07:54 09:00-09:29/29 09:35-09:53/18 16:18 08:36-08:59/23	08:53 11:23-11:31/8 15:36 09:44-10:00/16
11	04:37 22:17	05:36 18:55-19:45/50 21:18	06:42 19:56	07:46 18:32	07:57 08:59-09:29/30 09:33-09:54/21 16:16 08:37-08:57/20	08:55 11:23-11:33/10 15:36 09:46-10:00/14
12	04:39 22:16	05:38 18:54-19:46/52 21:16	06:44 19:53	07:48 18:29	07:59 09:00-09:29/29 09:33-09:55/22 16:14 08:39-08:57/18	08:56 11:22-11:34/12 15:35 09:47-10:00/13
13	04:40 22:15	05:40 18:54-19:46/52 21:13	06:46 19:50	07:50 18:26	08:01 09:00-09:29/29 09:32-09:56/24 16:12 08:40-08:55/15	08:57 11:22-11:35/13 15:35 09:48-09:59/11
14	04:42 22:14	05:42 18:52-19:46/54 21:11	06:48 19:47	07:53 18:24	08:03 09:01-09:29/28 09:31-09:57/26 16:10 08:43-08:53/10	08:58 11:23-11:36/13 15:35 09:49-10:00/11
15	04:43 22:12	05:44 18:52-19:46/54 21:08	06:50 19:44	07:55 09:12-09:24/12 18:21	08:06 09:01-09:28/27 09:30-09:57/27 16:08 08:47-08:49/2	09:00 11:22-11:37/15 15:35 09:51-09:59/8
16	04:45 22:11	05:47 18:51-19:46/55 21:06	06:53 19:41	07:57 09:09-09:26/17 18:18	08:08 09:02-09:29/27 16:06 09:31-09:58/27	09:01 11:22-11:38/16 15:35 09:52-09:59/7
17	04:47 22:09	05:49 18:51-19:46/55 21:03	06:55 19:39	07:59 09:07-09:27/20 18:16	08:10 09:03-09:29/26 16:04 09:31-09:59/28	09:01 11:23-11:39/16 15:35 09:53-09:59/6
18	04:48 22:08	05:51 18:51-19:46/55 21:01	06:57 19:36	08:02 09:06-09:28/22 18:13	08:12 09:03-09:28/25 16:02 09:30-09:59/29	09:02 11:23-11:39/16 15:35 09:54-09:58/4
19	04:50 22:06	05:53 18:50-19:46/56 20:58	06:59 19:33	08:04 09:05-09:29/24 18:10	08:14 09:04-09:28/24 16:00 09:31-10:00/29	09:03 11:23-11:39/16 15:35 09:55-09:57/2
20	04:52 22:05	05:55 18:50-19:46/56 20:55	07:01 19:30	08:06 09:04-09:30/26 18:08 09:36-09:40/4	08:17 09:05-09:27/22 15:59 09:31-10:00/29	09:04 11:23-11:40/17 15:36
21	04:54 22:03	05:57 18:50-19:46/56 20:53	07:03 19:27	08:08 09:03-09:30/27 18:05 09:31-09:44/13	08:19 09:06-09:27/21 15:57 09:31-10:01/30	09:04 11:24-11:41/17 15:36
22	04:55 22:01	05:59 18:50-19:46/56 20:50	07:05 19:25	08:11 09:03-09:47/44 18:03	08:21 09:07-09:26/19 15:55 09:31-10:01/30	09:05 11:24-11:41/17 15:36
23	04:57 21:59	06:02 18:50-19:45/55 20:48	07:07 19:22	08:13 09:03-09:48/45 18:00	08:23 09:08-09:24/16 15:54 09:31-10:01/30	09:06 11:25-11:42/17 15:37
24	04:59 21:57	06:04 18:50-19:45/55 20:45	07:09 19:19	08:15 09:02-09:48/46 17:58	08:25 09:11-09:24/13 15:52 09:32-10:01/29	09:06 11:26-11:42/16 15:37
25	05:01 21:56	06:06 18:51-19:44/53 20:42	07:12 19:16	07:17 08:03-08:50/47 16:55	08:27 09:13-09:22/9 15:51 09:32-10:01/29	09:06 11:26-11:42/16 15:38 09:58-10:01/3
26	05:03 21:54	06:08 18:51-19:43/52 20:40	07:14 19:13	07:20 08:03-08:53/50 16:52	08:29 09:33-10:02/29 15:49	09:07 11:26-11:42/16 15:39 09:57-10:02/5
27	05:05 19:19-19:21/2 21:52	06:10 18:51-19:42/51 20:37	07:16 19:11	07:22 08:04-08:56/52 16:50	08:31 09:34-10:02/28 15:48	09:07 11:27-11:43/16 15:40 09:57-10:04/7
28	05:07 19:13-19:27/14 21:50	06:12 18:52-19:41/49 20:34	07:18 19:08	07:24 08:04-08:57/53 16:48	08:33 09:34-10:01/27 15:47	09:07 11:28-11:43/15 15:41 09:57-10:05/8
29	05:09 19:11-19:30/19 21:48	06:14 18:53-19:40/47 20:31	07:20 19:05	07:27 08:05-08:58/53 16:45	08:35 09:34-10:01/27 15:45	09:07 11:29-11:43/14 15:42 09:56-10:06/10
30	05:11 19:08-19:32/24 21:46	06:17 18:53-19:39/46 20:29	07:22 19:02	07:29 08:06-08:58/52 16:43	08:37 09:35-10:01/26 15:44	09:07 11:29-11:43/14 15:43 09:56-10:07/11
31	05:13 19:07-19:34/27 21:43	06:19 18:54-19:37/43 20:26	07:24 19:00	07:31 08:08-08:59/51 16:40 09:09-09:18/9	08:39 09:36-10:02/25 15:43	09:07 11:31-11:43/12 15:44 09:56-10:08/12
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	86	1502	145	667	1587	669

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Limbaži

Licensed user:

Enviroprojekts, SIA
Maza Nometnu iela 31
LV-1002 Riga
+37129262684
SIA Enviroprojekts / atis@enviro.lv
Calculated:
06.08.2024 11:11/4.0.531

SHADOW - Calendar per WTG

WTG: 14 - Z17

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

0	1	Sum
4 076	4 076	8 152

	January	February	March	April	May	June
1	09:06 10:25-11:04/39 15:45	08:27 10:45-11:06/21 16:46	07:19 07:50-08:12/22 17:52 08:14-08:53/39	06:54 07:50-08:12/22 20:01	05:34 21:07	04:33 22:09
2	09:06 10:26-11:05/39 15:47	08:25 10:47-11:03/16 16:48	07:17 07:48-08:52/64 17:54	06:51 07:51-08:10/19 20:03	05:31 21:10	04:31 22:10
3	09:06 10:26-11:05/39 15:48	08:23 10:51-10:59/8 16:51	07:14 07:46-08:52/66 17:56	06:48 07:52-08:07/15 20:05	05:29 21:12	04:30 22:12
4	09:05 10:26-11:05/39 15:49	08:21 16:53	07:11 07:45-08:51/66 17:59	06:45 07:55-08:02/7 20:08	05:26 21:14	04:29 22:13
5	09:05 10:26-11:06/40 15:51	08:19 16:55	07:09 07:36-08:51/75 18:01	06:43 20:10	05:24 21:16	04:28 22:14
6	09:04 10:28-11:07/39 15:52	08:16 16:58	07:06 07:33-08:50/77 18:03	06:40 20:12	05:22 21:18	04:27 22:16
7	09:03 10:28-11:08/40 15:54	08:14 17:00	07:03 07:30-08:49/79 18:05	06:37 20:14	05:19 21:20	04:26 22:17
8	09:03 10:27-11:08/41 15:56	08:12 17:02	07:01 07:28-08:47/79 18:08	06:34 20:16	05:17 21:23	04:25 22:18
9	09:02 10:28-11:08/40 15:57	08:10 17:05	06:58 07:26-08:45/79 18:10	06:31 20:19	05:15 21:25	04:25 22:19
10	09:01 10:28-11:09/41 15:59	08:07 17:07	06:55 07:26-08:44/78 18:12	06:29 20:21	05:12 21:27	04:24 22:20
11	09:00 10:29-11:10/41 16:01	08:05 17:10	06:52 07:22-08:17/55 18:15	06:26 20:23	05:10 21:29	04:23 22:21
12	08:59 10:29-11:10/41 16:03	08:03 17:12	06:49 07:16-08:16/60 18:17	06:23 20:25	05:08 21:31	04:23 22:22
13	08:58 10:29-11:11/42 16:04	08:00 17:14	06:47 07:13-08:16/63 18:19	06:21 20:28	05:06 21:33	04:22 22:23
14	08:57 10:29-11:11/42 16:06	07:58 17:17	06:44 07:11-08:15/64 18:21	06:18 20:30	05:04 21:35	04:22 22:24
15	08:56 10:30-11:11/41 16:08	07:55 17:19	06:41 07:10-08:14/64 18:23	06:15 20:32	05:02 21:37	04:21 22:25
16	08:54 10:30-11:11/41 16:10	07:53 08:28-08:41/13 17:21	06:38 07:08-08:13/65 18:26	06:12 20:34	05:00 21:40	04:21 22:25
17	08:53 10:30-11:11/41 16:12	07:50 08:25-08:44/19 17:24	06:36 07:02-08:12/70 18:28	06:10 20:36	04:58 21:42	04:21 22:26
18	08:52 10:31-11:12/41 16:14	07:48 08:23-08:46/23 17:26	06:33 06:59-08:10/71 18:30	06:07 20:39	04:56 21:44	04:21 22:26
19	08:50 10:32-11:12/40 16:17	07:45 08:21-08:48/27 17:28	06:30 06:56-08:07/71 18:32	06:04 20:41	04:54 21:46	04:21 22:27
20	08:49 10:32-11:12/40 16:19	07:43 08:19-08:49/30 17:31	06:27 06:53-08:05/72 18:35	06:02 20:43	04:52 21:48	04:21 22:27
21	08:47 10:33-11:12/39 16:21	07:40 08:18-08:51/33 17:33	06:24 06:52-07:48/56 18:37	05:59 20:45	04:50 21:49	04:21 22:27
22	08:46 10:33-11:12/39 16:23	07:38 08:17-08:51/34 17:36	06:22 06:51-07:46/55 18:39	05:56 20:47	04:48 21:51	04:21 22:28
23	08:44 10:34-11:12/38 16:25	07:35 08:16-08:52/36 17:38	06:19 06:49-07:42/53 18:41	05:54 20:50	04:46 21:53	04:21 22:28
24	08:42 10:34-11:12/38 16:27	07:33 08:16-08:53/37 17:40	06:16 06:49-07:35/46 18:43	05:51 20:52	04:45 21:55	04:21 22:28
25	08:40 10:35-11:12/37 16:30	07:30 08:15-08:53/38 17:43	06:13 06:48-07:34/46 18:46	05:49 20:54	04:43 21:57	04:22 22:28
26	08:39 10:36-11:11/35 16:32	07:27 08:14-08:53/39 17:45	06:10 06:47-07:32/45 18:48	05:46 20:56	04:41 21:59	04:22 22:28
27	08:37 10:37-11:11/34 16:34	07:25 07:56-08:06/10 17:47	06:08 06:48-07:32/44 18:50	05:44 20:59	04:40 22:01	04:23 22:28
28	08:35 10:39-11:11/32 16:37	07:22 07:53-08:10/17 17:49	06:05 06:48-07:30/42 18:52	05:41 21:01	04:38 22:02	04:23 22:27
29	08:33 10:39-11:09/30 16:39		07:02 07:47-08:28/41 19:54	05:39 21:03	04:37 22:04	04:24 22:27
30	08:31 10:41-11:08/27 16:41		06:59 07:48-08:25/37 19:57	05:36 21:05	04:35 22:06	04:25 22:27
31	08:29 10:42-11:07/25 16:43		06:56 07:49-08:21/32 19:59		04:34 22:07	
Potential sun hours	227	262	365	429	515	539
Sum of minutes with flicker	1181	479	1927	63	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

WTG: 14 - Z17

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.96	2.07	4.32	6.59	9.64	9.55	9.82	8.35	5.52	3.17	1.24	0.85

Operational time

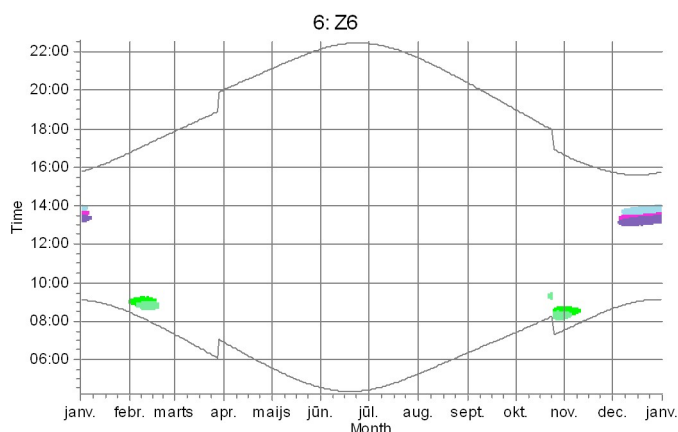
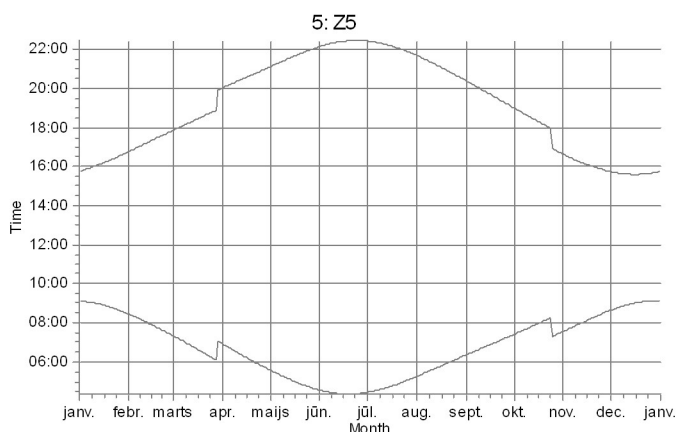
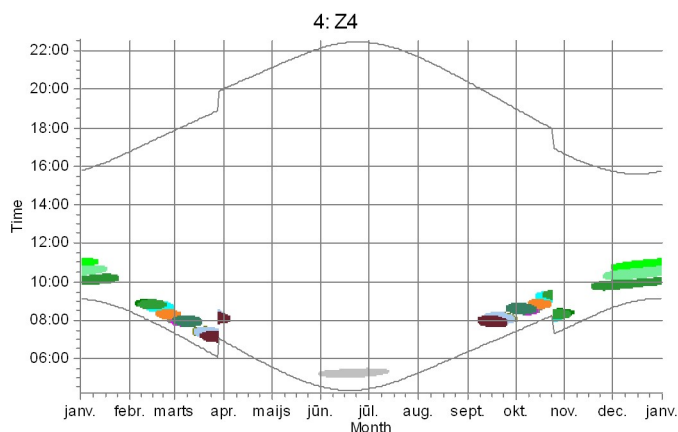
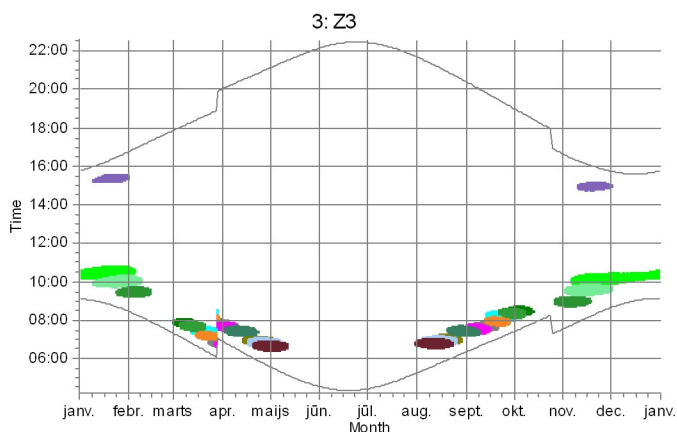
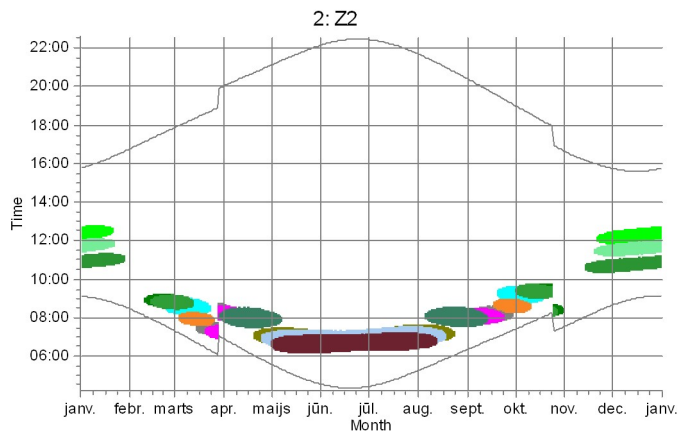
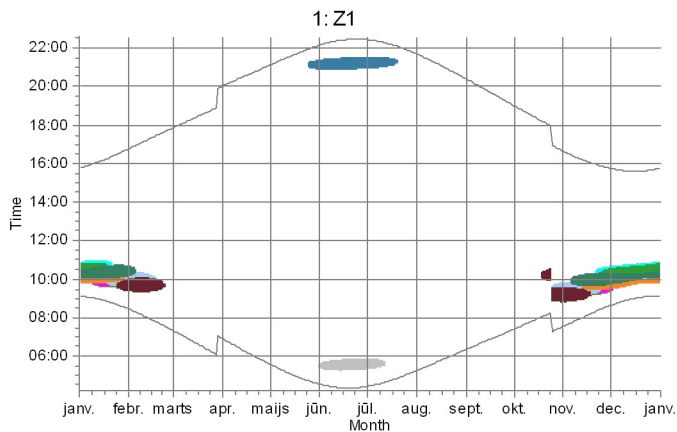
0	1	Sum
4 076	4 076	8 152

	July	August	September	October	November	December
1	04:26 22:26	05:15 21:41	06:21 20:23	07:24 07:54-08:55/61	07:34 16:38	08:39 10:11-10:52/41
2	04:27 22:26	05:17 21:39	06:23 20:21	07:27 18:57	07:36 08:59-09:18/19	08:41 15:42
3	04:28 22:25	05:19 21:37	06:25 20:18	07:29 18:54	07:38 08:03-08:55/52	08:43 10:12-10:52/40
4	04:29 22:24	05:21 21:35	06:27 20:15	07:31 18:51	07:40 08:04-09:23/79	08:44 10:12-10:53/41
5	04:30 22:23	05:23 21:32	06:29 20:12	07:33 18:48	07:43 08:05-09:24/79	08:46 10:13-10:53/40
6	04:31 22:23	05:25 21:30	06:31 20:09	07:35 18:45	07:45 08:05-09:24/79	08:48 10:13-10:52/39
7	04:32 22:22	05:27 21:28	06:34 20:07	07:37 18:43	07:47 08:07-09:25/78	08:49 10:13-10:53/40
8	04:33 22:21	05:30 21:25	06:36 20:04	07:40 18:40	07:50 08:10-09:26/76	08:51 10:14-10:54/40
9	04:34 22:20	05:32 21:23	06:38 20:01	07:42 18:37	07:52 08:20-09:26/66	08:52 10:15-10:54/39
10	04:36 22:19	05:34 21:21	06:40 19:58	07:44 18:34	07:54 08:20-09:26/66	08:54 10:15-10:54/39
11	04:37 22:18	05:36 21:18	06:42 19:56	07:46 18:32	07:57 08:21-09:26/65	08:55 10:16-10:55/39
12	04:39 22:16	05:38 21:16	06:44 19:53	07:48 18:29	07:59 08:23-09:26/63	08:56 10:16-10:55/39
13	04:40 22:15	05:40 21:13	06:46 19:50	07:50 18:26	08:01 08:24-08:44/20	08:57 10:17-10:55/38
14	04:42 22:14	05:42 21:11	06:48 19:47	07:53 18:24	08:03 08:47-09:26/39	08:58 10:18-10:56/38
15	04:43 22:12	05:44 21:08	06:50 19:44	07:55 18:21	08:06 08:32-08:36/4	09:00 10:18-10:56/38
16	04:45 22:11	05:47 21:06	06:53 19:41	07:57 18:18	08:08 08:46-09:25/39	09:01 10:19-10:56/37
17	04:47 22:09	05:49 21:03	06:55 19:39	07:59 18:16	08:10 08:46-09:24/38	09:02 10:19-10:46/37
18	04:48 22:08	05:51 21:01	06:57 19:36	08:02 18:13	08:12 08:47-09:24/37	09:02 10:20-10:57/37
19	04:50 22:06	05:53 20:58	06:59 19:33	08:04 18:10	08:15 08:47-09:22/35	09:03 10:20-10:57/37
20	04:52 22:05	05:55 20:55	07:01 19:30	08:06 18:08	08:17 08:49-09:22/33	09:04 10:21-10:57/36
21	04:54 22:03	05:57 20:53	07:03 19:27	08:08 18:05	08:19 08:49-09:20/31	09:05 10:22-10:58/36
22	04:55 22:01	05:59 20:50	07:05 19:25	08:11 18:03	08:21 08:51-09:20/29	09:05 10:22-10:58/36
23	04:57 21:59	06:02 20:48	07:07 19:22	08:13 18:00	08:23 08:51-09:18/27	09:06 10:23-10:59/36
24	04:59 21:57	06:04 20:45	07:09 19:19	08:15 17:57	08:25 08:53-09:15/22	09:06 10:23-11:00/37
25	05:01 21:56	06:06 20:42	07:12 19:16	07:17 16:55	07:56-08:13/17	09:06 10:23-11:00/37
26	05:03 21:54	06:08 20:40	07:14 19:13	07:20 16:52	07:59-08:09/10	09:07 10:23-11:00/37
27	05:05 21:52	06:10 20:37	07:16 19:11	07:22 16:50	08:31 10:09-10:51/42	09:07 10:24-11:01/37
28	05:07 21:50	06:12 20:34	07:18 19:08	07:24 16:48	08:33 10:09-10:51/42	09:07 10:24-11:02/38
29	05:09 21:48	06:14 20:31	07:20 19:05	07:27 16:45	08:35 10:09-10:51/42	09:07 10:25-11:02/37
30	05:11 21:46	06:17 20:29	07:22 19:02	07:29 16:43	08:37 10:10-10:51/41	09:07 10:24-11:02/38
31	05:13 21:43	06:19 20:26		07:31 16:40		09:07 10:25-11:03/38
Potential sun hours	538	474	386	321	241	207
Sum of minutes with flicker	0	0	1103	1357	794	1183

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG, graphical



Shadow receptors

A: Aiviekstes
D: Cerini 2
E: Drupas
I: Jaunjeceni

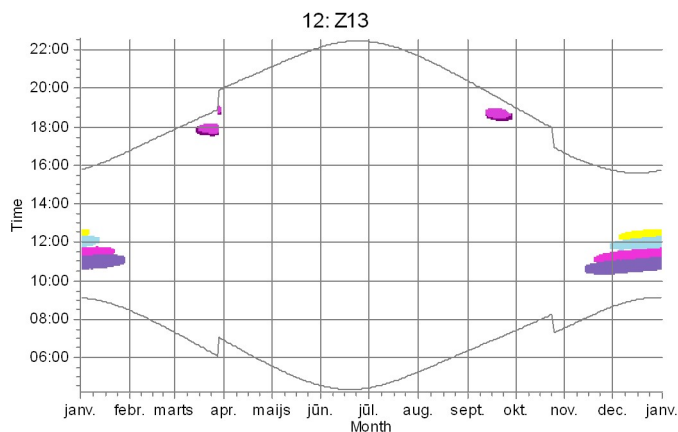
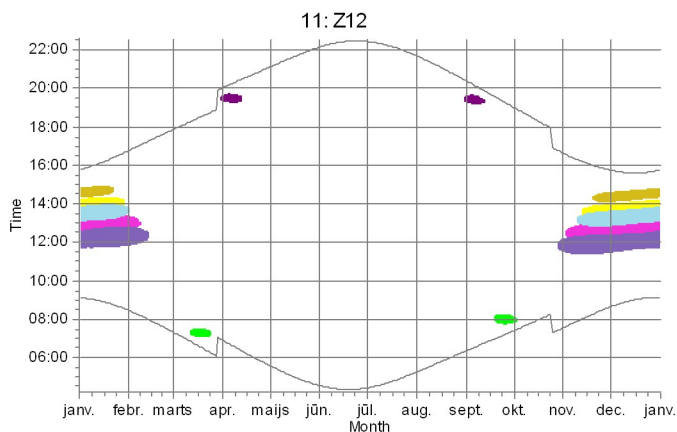
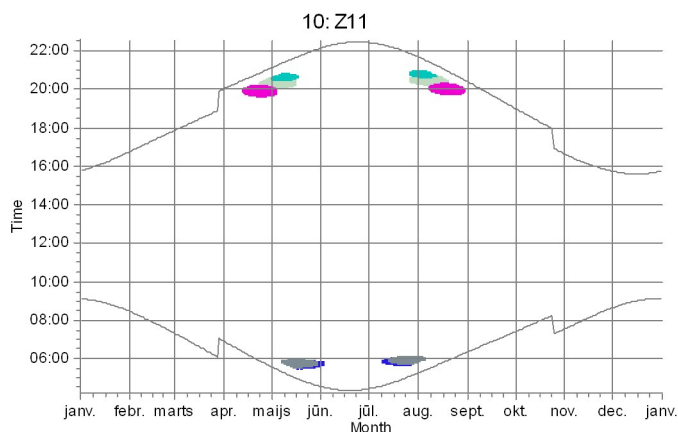
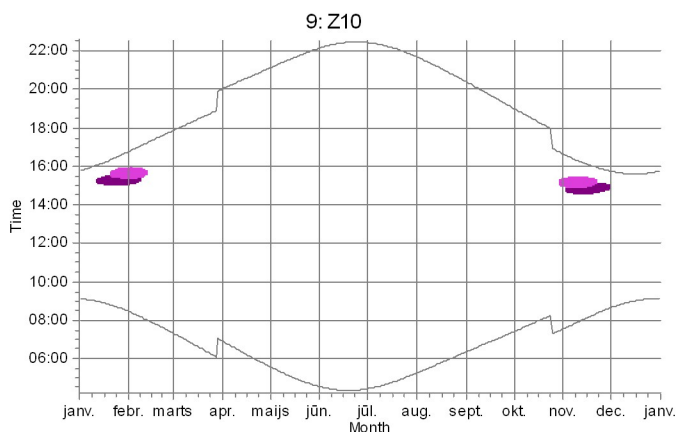
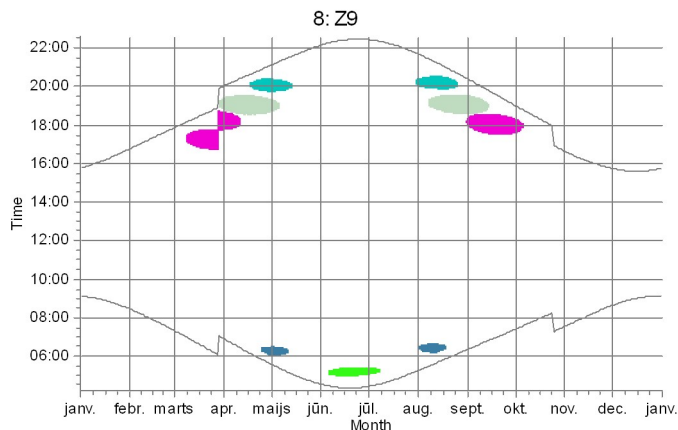
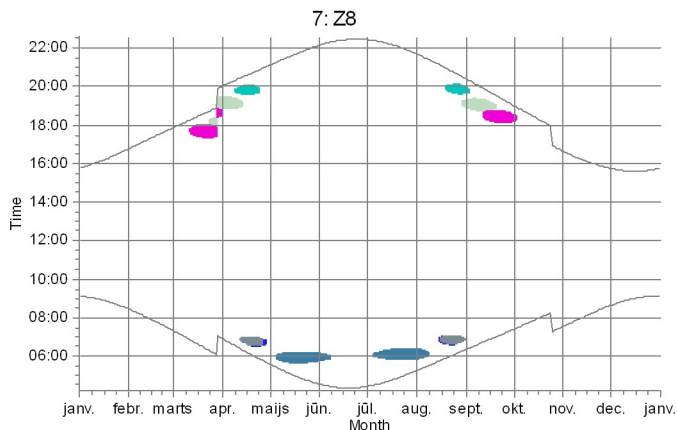
J: Jaunkastanas
L: Jaunupites
M: Kalnmalas
O: Krusteici

T: Mazkaleji
V: Norinas
W: Pavasari
Z: Silveveri

AA: Smilgas
AC: Tamisari
AE: Vaverites
AF: Veckastani

AG: Vecmelderi
AH: Vecsilupites
AK: Vejini

SHADOW - Calendar per WTG, graphical



Shadow receptors

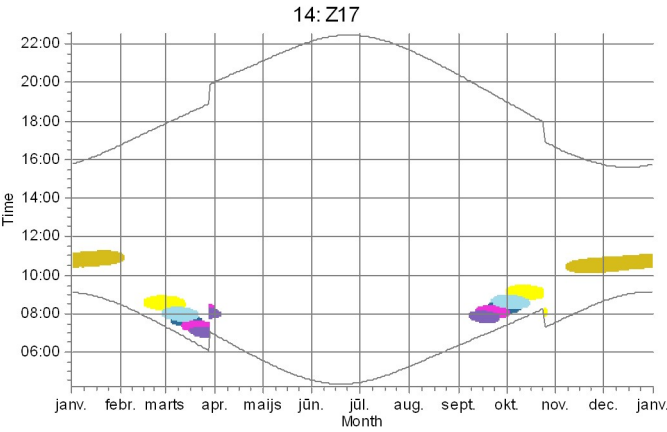
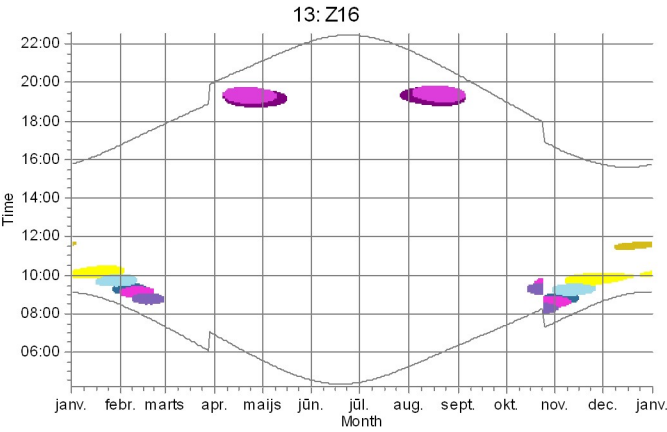
B: Birzuli
I: Jaunjeceni
K: Jaunā šeni
N: Kardes

R: Kizumi
U: Namdari
V: Norinas
X: Plesini

AD: Tuiskas
AE: Vaverites
AG: Vecmelderi
AH: Vecsilupites

AI: Vecto šeni
AJ: Vedamurgas
AK: Vejini
AL: Zvaigznes

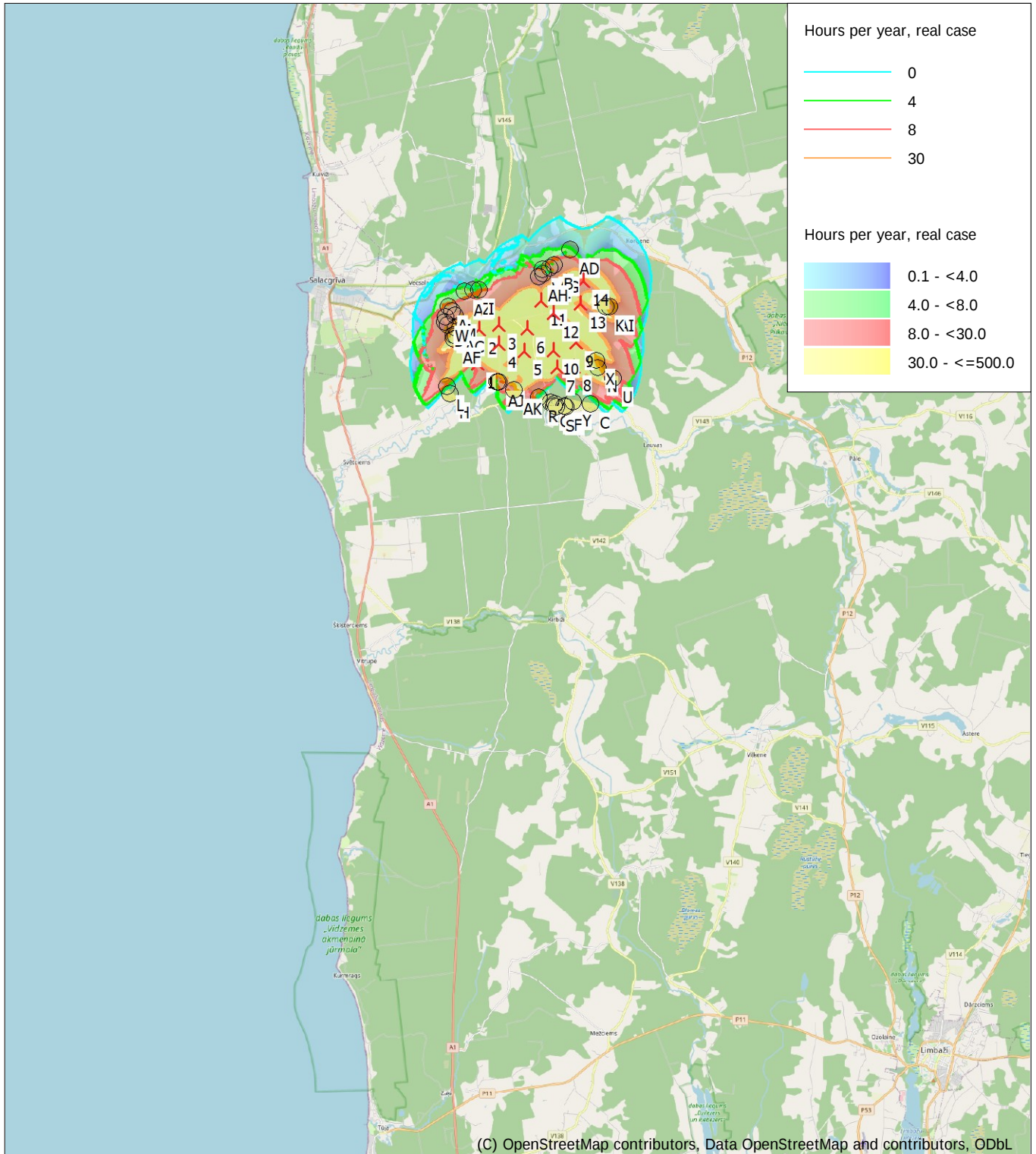
SHADOW - Calendar per WTG, graphical



Shadow receptors

B: Birzuli	V: Norinas	AE: Vaverites	AH: Vecsilupites
K: Jauntonšeni	AD: Tuiskas	AG: Vecmēdri	AI: Vectonšeni

SHADOW - Map



Map: EMD OpenStreetMap , Print scale 1:200 000, Map center Latvian TM LKS92-LKS92 (LV) East: 528 700 North: 391 940
New WTG Shadow receptor
Flicker map level: Elevation Grid Data Object: Limbaži i_RECOVER001 11.01.2024 18_11_56_EMDGrid_1.wpg (7)
Time step: 2 minutes, Day step: 3 days, Map resolution: 10 m, Visibility resolution: 5 m, Eye height: 1.5 m