

PHOTOMETRIC TEST REPORT

LM79 & EN 13032



LUG Light Factory Ltd ul. Gorzowska 11 65-127 Zielona Góra, POLAND KRS 0000290498 REGON 080212116 NIP PL 929-17-85-452		LUG Testing Laboratory address ul. Nowa 7 66-002 Nowy Kisielin, POLAND	TEST SPECIFICATION – STANDARDS: PN – EN 13032 – 4 :2015 LM79 – 08
Test Report No./Test protocol BF_13_5529_18		Tested by: Krzysztof Olek	Compiled by: Krzysztof Olek
Sample No. 094/1/18		Approved by: Marcin Białas	Client name: LUG Light Factory
Date :	2018-04-24	Model name:	5529 AVENIDA LENS 2350lm 740 O20 szary
Index:	130272.5L022.031	Company:	LUG Light Factory
This protocol shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products.			

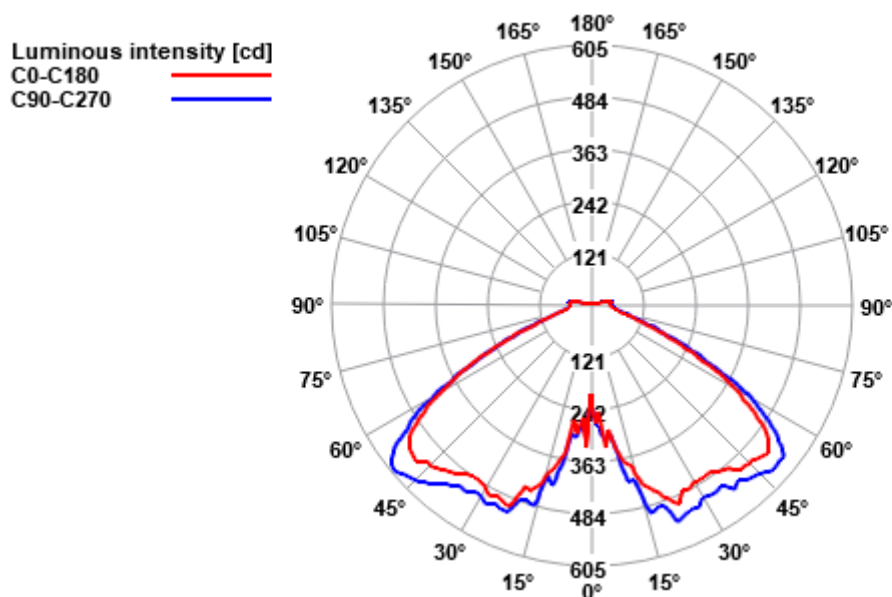
Eulumdat Fields

Dimensions of luminaire Length: 360 mm Width: 0 mm Height: 482 mm Dimensions of luminous area Length: 100 mm Width: 100 mm C0-plane 0 mm C90-plane 0 mm C180-plane 0 mm C270-plane 0 mm Utilization factors: k = 0.60 0,176 k = 2.00 0,616 k = 0.80 0,282 k = 2.50 0,671 k = 1.00 0,370 k = 3.00 0,711 k = 1.25 0,456 k = 4.00 0,763 k = 1.50 0,522 k = 5.00 0,795		Lamps: Type of lamps: LED Total luminous flux: 2327,61 lm Color temperature: 3726 K Color rendering index: 71,54 Wattage including ballast: 18,10 W Electrical parameters: U = 230,0 V I = 0,084 A P = 18,10 W Power factor = 0,940 Power apparent = 19,255 VA Power Reactive = n/a Frequency = 50,0 Hz THDI = n/a Temperature = 25,0°C	
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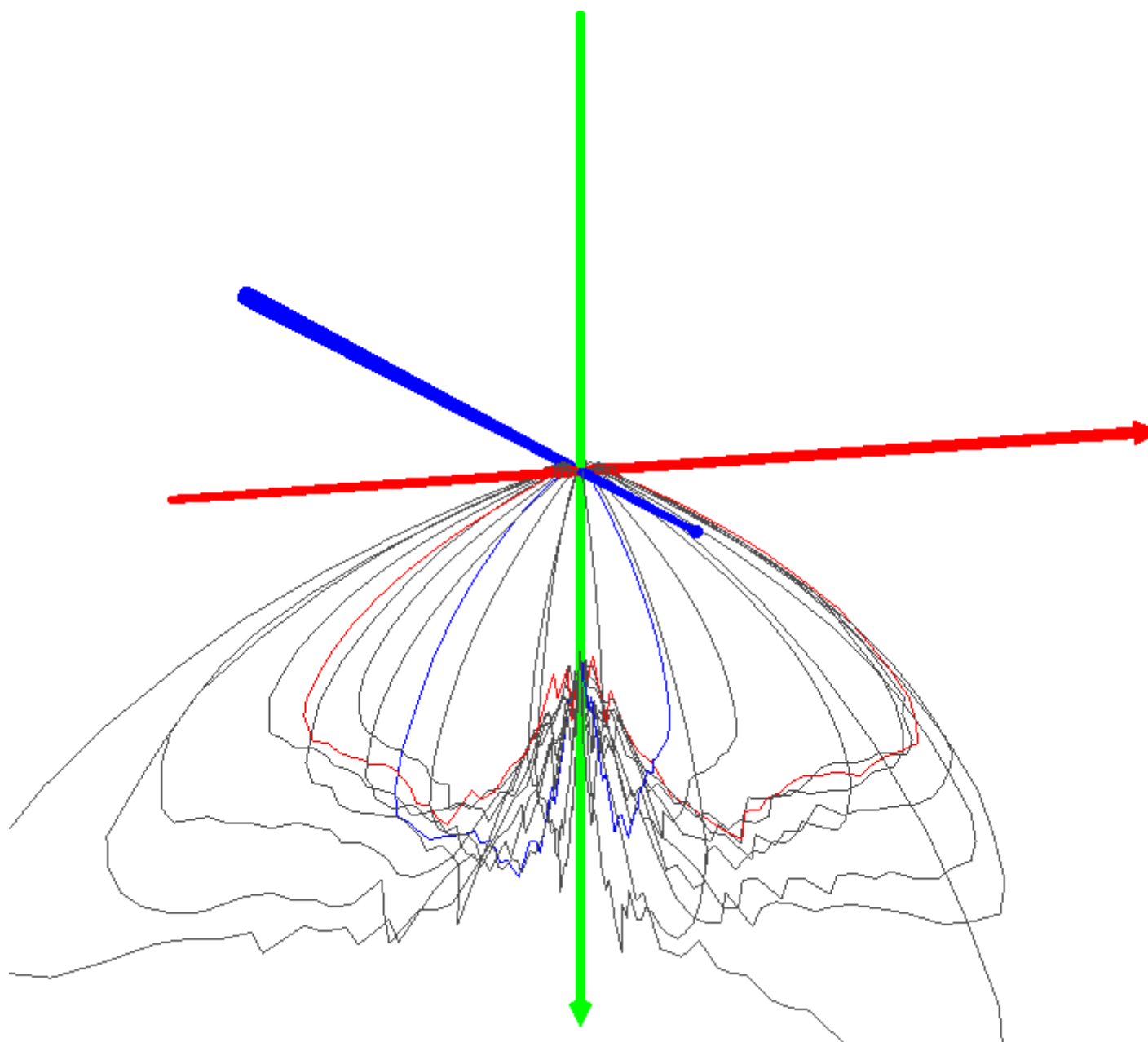
Goniometric measurement results

Total flux (utilized luminaire flux)	2327,61 lm
Flux in lower hemisphere	96,83 %
Flux in upper hemisphere	3,17 %
Maximum luminous intensity	859,48 cd
Light output ratio (LOR)	100,00 %
Luminous efficacy	128,60 lm/W

Light intensity distribution diagram



3D Chart



Legend



- C0-C180



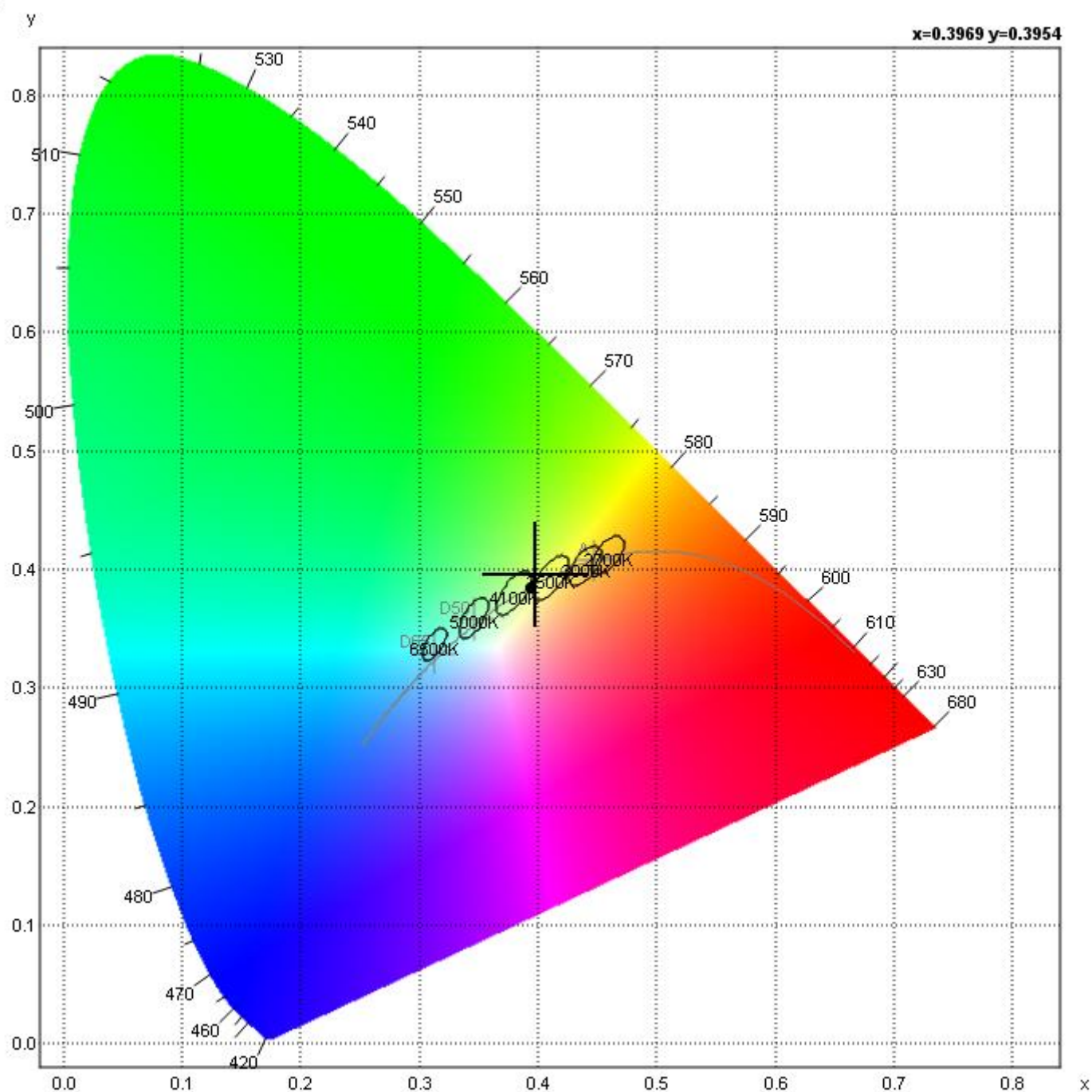
- C90-C270



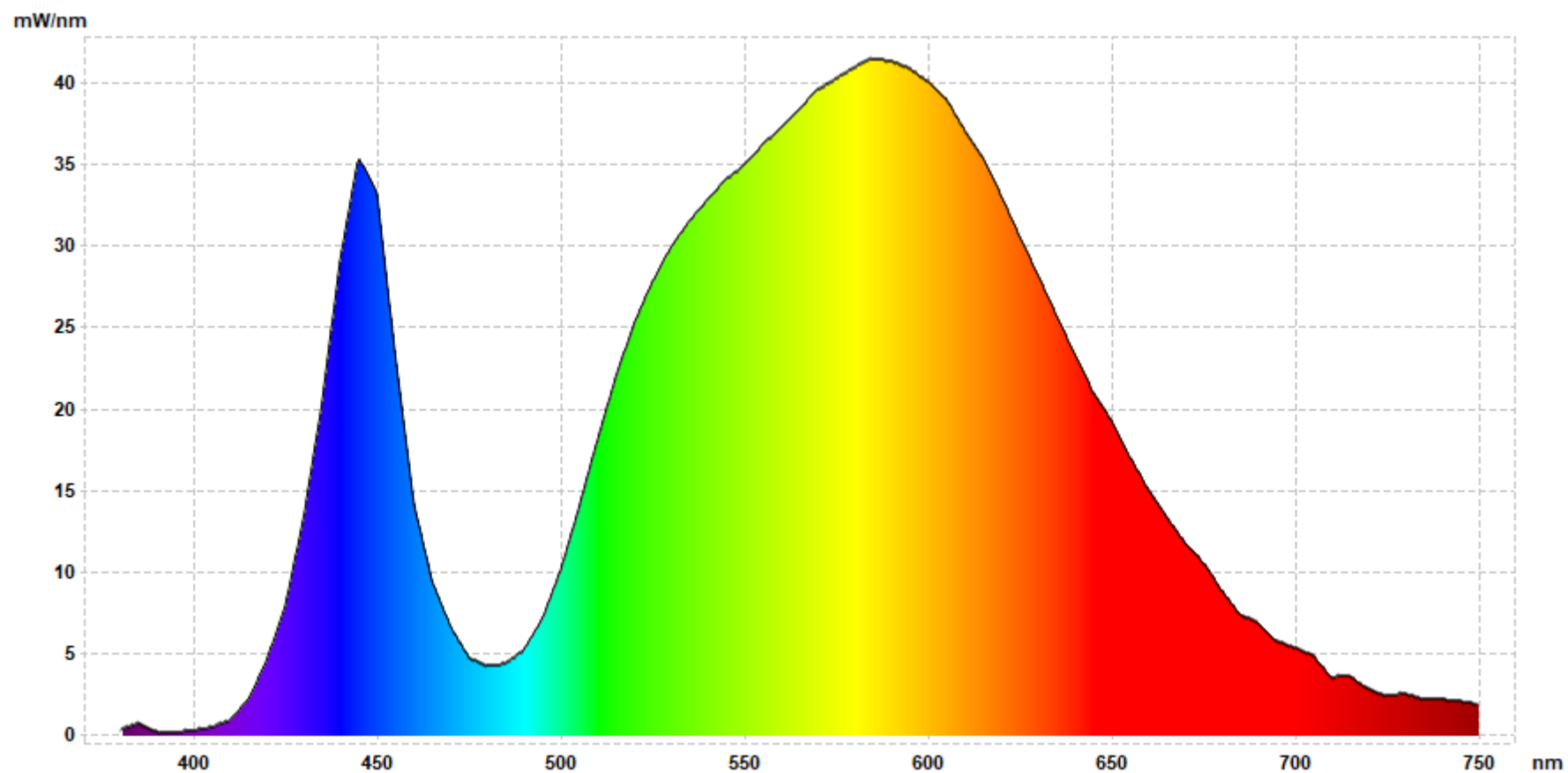
- G0-G180

CIE 1931 diagram

x 0,3969
 y 0,3954
 Angular Colour Uniformity 0,0000



Spectrum



Luminous intensity [cd/klm]

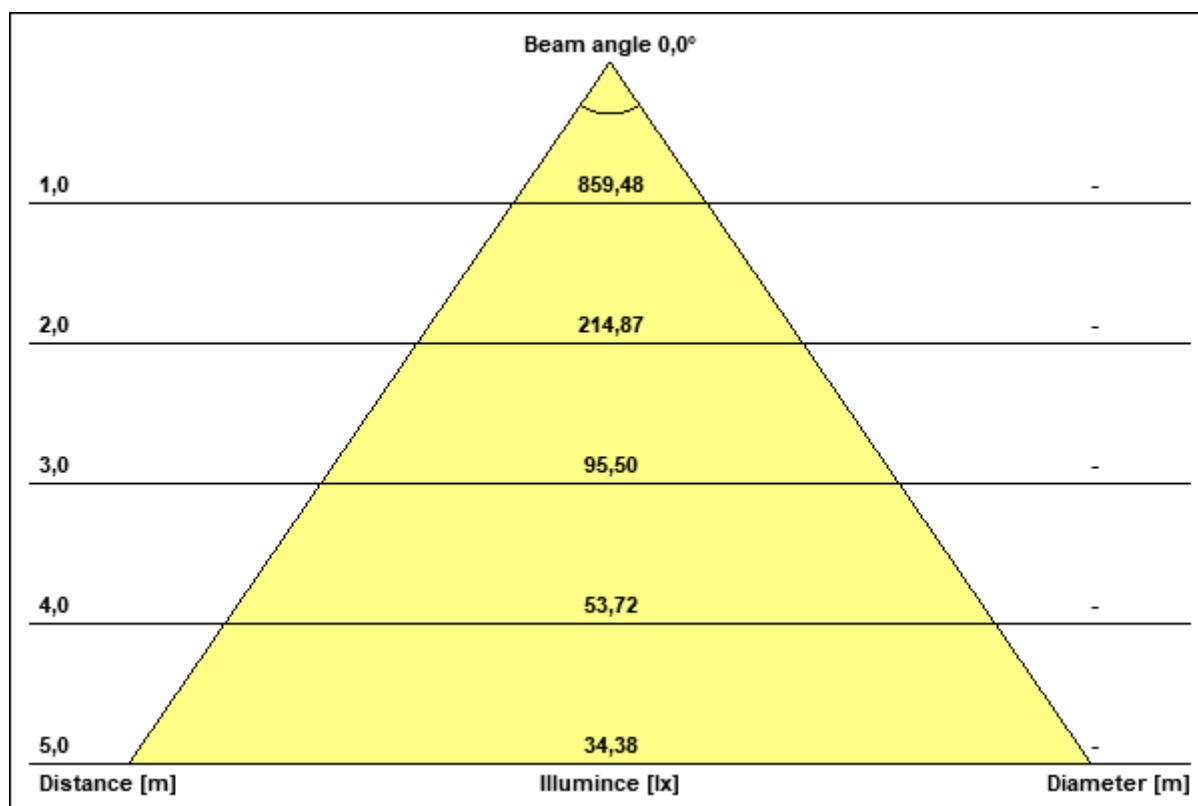
G \ C	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°	165°
0°	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48
2°	119,25	116,55	123,09	135,02	126,78	113,65	119,57	116,51	106,78	138,04	142,76	124,87
4°	106,60	120,54	124,19	137,63	142,31	159,96	124,02	139,58	134,24	159,01	129,48	111,64
6°	143,48	132,72	137,52	146,20	136,83	131,37	137,44	124,06	151,64	147,13	146,71	135,74
8°	125,90	130,38	136,91	138,28	148,92	164,90	130,63	160,08	144,44	140,12	156,41	141,78
10°	146,86	153,52	156,14	163,53	164,52	158,40	151,57	165,31	161,60	177,37	157,43	140,70
12°	160,89	171,96	184,46	168,28	189,98	166,31	181,26	168,88	183,24	192,56	185,09	170,69
14°	166,78	177,73	181,06	213,20	185,51	194,56	179,54	185,07	193,89	216,40	192,67	190,72
16°	186,38	189,48	194,83	222,56	237,45	191,34	218,00	191,75	219,88	230,83	231,43	191,38
18°	192,74	201,59	195,35	236,32	237,80	211,21	213,43	201,80	214,30	233,45	225,08	210,78
20°	201,21	201,80	215,85	263,73	256,84	214,55	213,38	221,52	241,96	252,27	248,23	206,47
22°	210,71	213,47	220,38	268,76	257,90	232,67	234,46	223,98	244,06	248,69	245,46	208,74
24°	217,90	211,41	238,63	256,25	243,75	219,07	229,91	208,12	233,92	253,88	249,62	210,14
26°	206,21	216,44	227,70	260,00	243,14	230,45	227,93	218,46	241,58	266,90	252,05	218,69
28°	208,68	216,55	238,20	279,53	266,45	231,78	229,28	216,28	246,80	272,27	251,31	206,35
30°	205,52	208,13	234,50	272,70	266,45	230,89	223,30	215,23	239,83	266,24	244,41	210,27
32°	206,45	212,71	239,59	279,62	267,07	226,79	224,47	214,17	243,10	270,21	255,27	211,44
34°	205,20	212,93	236,60	298,60	275,43	221,68	224,93	216,36	242,46	290,63	255,49	208,18
36°	205,97	212,23	233,87	293,78	275,51	224,23	222,89	215,64	249,09	288,49	262,30	208,77
38°	210,90	210,73	248,01	300,95	285,06	230,22	233,54	219,24	256,93	293,18	265,93	213,53
40°	214,08	212,85	252,15	315,55	288,37	234,30	228,60	220,10	263,74	299,26	267,62	214,09
42°	222,83	219,51	259,65	320,84	287,31	239,09	234,44	228,49	267,18	312,42	276,25	219,56

44°	222,89	223,97	266,06	340,49	303,99	239,72	236,50	229,54	274,64	326,83	291,99	223,00
46°	224,54	226,20	274,62	353,77	320,99	246,46	241,37	237,62	287,60	339,16	298,79	225,42
48°	228,39	237,15	279,71	359,15	323,97	248,04	245,82	238,20	289,00	351,76	307,61	229,12
50°	231,81	234,56	281,18	369,25	320,12	251,37	245,35	236,50	294,61	356,38	307,01	229,15
52°	225,32	222,21	279,51	366,15	316,42	245,18	244,29	236,25	298,41	359,45	311,38	226,12
54°	216,22	218,56	276,35	353,49	304,42	234,47	232,27	230,59	288,48	349,64	299,73	220,12
56°	199,68	199,08	258,18	325,05	288,76	218,84	218,80	210,94	271,28	332,33	286,35	210,16
58°	181,39	183,41	236,64	298,73	267,65	201,24	201,18	195,75	250,67	307,08	269,12	193,07
60°	165,44	163,65	214,25	267,94	242,70	178,24	182,61	176,92	228,43	276,82	243,91	174,33
62°	139,27	144,23	186,26	234,79	213,35	154,92	155,44	154,87	201,78	243,89	215,29	150,96
64°	117,07	116,75	158,06	198,37	179,83	128,55	128,47	128,05	165,46	203,22	180,37	125,87
66°	93,25	92,48	123,19	152,88	142,34	100,99	105,74	102,84	130,91	160,71	143,75	100,62
68°	72,91	72,19	90,45	112,82	104,39	78,04	81,93	80,02	100,08	117,85	107,38	76,89
70°	56,84	55,50	68,19	82,59	78,26	59,13	64,01	60,93	76,30	86,85	78,87	58,25
72°	44,83	45,04	53,02	62,98	58,96	47,95	50,52	48,81	57,85	65,74	59,74	45,40
74°	37,23	37,48	42,37	49,64	47,18	39,54	41,48	40,14	46,01	51,18	47,90	36,93
76°	30,43	32,23	34,43	40,13	38,03	33,62	34,09	34,22	37,60	41,24	38,65	31,00
78°	25,84	27,87	28,78	33,11	31,89	29,42	28,90	29,76	30,91	34,02	32,23	27,13
80°	22,69	24,96	25,38	28,75	26,98	25,86	25,26	26,44	27,00	28,71	27,20	24,15
82°	20,99	23,72	22,63	24,81	24,49	23,72	24,07	23,88	23,68	24,40	24,48	22,36
84°	20,15	22,12	20,38	21,20	21,57	21,43	22,14	22,88	22,25	20,78	22,17	21,30
86°	19,78	20,97	18,95	18,24	19,65	20,13	21,70	21,55	19,90	18,29	19,67	19,27
88°	19,64	20,12	16,63	15,70	16,97	18,80	20,94	19,96	17,83	16,34	17,13	18,52
90°	19,47	19,75	16,39	15,52	16,38	19,17	21,10	19,45	17,01	15,55	16,74	17,59

G \ C	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°	330°	345°
0°	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48	88,48
2°	142,19	139,28	130,04	130,62	120,71	119,32	122,13	129,90	130,38	134,01	133,86	112,58
4°	113,42	128,52	122,20	150,41	137,19	128,09	115,94	138,73	136,01	144,05	133,89	111,67
6°	130,34	137,86	143,45	152,72	161,93	130,65	134,47	130,75	142,94	157,00	158,90	124,82
8°	117,07	156,58	144,84	137,59	146,39	180,11	130,27	163,11	147,39	145,15	149,49	158,13
10°	149,67	151,50	148,43	148,84	144,35	151,47	157,00	156,67	176,29	163,33	160,11	139,64
12°	165,25	170,68	182,19	161,54	178,01	182,69	185,32	172,48	188,03	179,32	196,80	152,32
14°	172,18	183,51	184,39	188,90	184,20	200,75	177,19	188,27	191,75	199,74	185,73	177,62
16°	189,14	186,58	201,21	250,37	203,76	187,63	209,69	187,55	216,18	231,57	209,92	188,51
18°	195,68	198,97	221,57	222,19	221,04	200,68	205,13	205,67	226,58	228,99	233,42	205,84
20°	192,99	198,05	230,94	236,03	240,10	205,89	206,48	216,65	223,09	254,48	243,79	209,09
22°	216,68	204,57	237,85	264,87	244,61	222,03	224,03	217,37	242,45	257,02	247,90	212,98
24°	216,18	209,42	239,55	257,05	246,79	217,46	222,66	221,80	256,23	260,31	249,39	206,99
26°	212,16	214,67	234,81	272,19	264,60	225,00	220,44	232,96	238,40	258,96	238,51	219,20
28°	215,70	211,24	233,97	267,61	253,90	222,46	224,31	221,77	246,21	257,88	256,27	208,68
30°	210,62	209,61	234,30	273,58	241,67	221,36	220,63	224,11	237,38	271,28	251,19	202,23
32°	208,51	211,80	238,95	275,13	257,21	227,54	220,13	214,54	252,01	276,26	251,88	206,32
34°	207,62	214,59	236,50	293,61	262,20	223,89	225,00	217,51	255,42	279,89	256,60	209,60
36°	209,33	212,36	239,98	288,82	263,33	223,72	223,36	220,09	253,97	292,65	264,20	210,00
38°	215,29	214,23	243,11	298,53	268,52	224,01	228,59	221,13	260,36	299,78	266,63	216,98
40°	217,55	217,21	253,47	304,89	271,31	228,14	234,17	226,58	270,50	305,09	271,24	220,91
42°	222,27	216,66	257,74	315,09	279,25	232,47	239,91	231,71	278,36	321,52	278,59	226,50
44°	225,70	218,56	265,78	332,77	293,43	237,63	246,87	235,66	285,21	335,88	287,17	228,32
46°	227,40	226,23	270,20	350,31	301,63	240,74	250,02	236,03	288,64	354,46	299,02	228,88
48°	234,69	228,15	283,93	358,77	307,13	239,12	252,73	241,99	292,27	362,47	305,61	233,98

50°	232,59	232,13	284,33	369,10	309,42	244,70	257,45	242,05	293,16	363,41	310,79	232,93
52°	230,92	227,24	277,61	367,54	307,34	242,80	253,07	239,27	291,82	362,16	305,73	227,04
54°	223,30	222,19	270,56	356,51	301,48	233,86	241,41	226,27	290,78	352,45	294,10	217,86
56°	208,14	208,00	260,61	335,89	281,98	224,27	221,84	209,64	274,78	331,17	280,95	205,04
58°	192,26	193,70	242,43	309,26	263,58	206,25	203,76	190,59	253,52	307,70	260,20	185,45
60°	172,99	173,55	222,85	276,03	244,54	181,51	179,63	171,50	226,40	276,17	234,77	171,45
62°	150,93	151,51	198,63	238,66	210,88	154,61	152,52	145,96	195,69	238,32	202,58	145,30
64°	126,79	127,12	165,06	202,98	175,17	127,10	124,77	120,67	160,79	195,73	168,73	119,13
66°	102,53	102,05	128,79	158,83	139,49	99,13	101,62	96,51	125,53	148,75	130,82	94,17
68°	79,93	77,97	94,39	117,79	103,36	76,91	81,35	74,87	94,42	110,62	96,99	71,88
70°	60,03	58,95	69,49	86,11	76,35	59,86	61,28	57,74	71,94	81,45	72,13	55,08
72°	46,73	46,81	52,87	65,18	57,58	47,54	48,89	45,68	56,30	62,33	55,23	45,50
74°	38,28	38,62	42,53	50,37	46,56	38,68	40,30	37,47	44,34	48,74	45,03	36,81
76°	31,64	32,89	34,27	40,17	37,09	33,60	33,47	31,62	36,24	39,03	36,38	31,26
78°	27,04	28,68	28,75	33,36	31,80	28,80	28,49	27,54	30,59	32,70	31,07	27,92
80°	24,01	26,83	24,93	27,78	27,54	26,27	24,99	25,30	26,52	28,05	26,83	25,15
82°	22,06	24,62	22,49	23,93	24,10	23,57	23,06	23,01	24,19	23,96	23,62	23,34
84°	21,20	23,34	21,13	21,33	21,57	22,34	22,20	21,54	22,09	20,72	21,18	21,47
86°	20,63	22,27	19,35	18,33	20,28	20,90	21,66	20,32	19,34	17,65	18,96	19,27
88°	20,66	21,45	17,18	16,13	18,12	19,17	21,40	19,69	18,52	15,35	16,90	17,82
90°	20,24	20,54	17,50	15,54	17,29	19,04	20,53	19,88	17,49	14,77	16,25	16,98

Beam cone



Distance [m]	Max illuminance [lx]	Diameter [m]
1	859,4798	-
2	214,8700	-
3	95,4978	-
4	53,7175	-
5	34,3792	-

Beam angles

C plane	Beam angle [°]	Gamma max [°]	Start [°]	Stop [°]
0-180	0,0	-48,0	0,0	0,0
15-195	0,0	48,0	0,0	0,0
30-210	0,0	-50,0	0,0	0,0
45-225	0,0	50,0	0,0	0,0
60-240	0,0	48,0	0,0	0,0
75-255	0,0	50,0	0,0	0,0
90-270	0,0	-50,0	0,0	0,0
105-285	0,0	-50,0	0,0	0,0
120-300	0,0	52,0	0,0	0,0
135-315	0,0	-50,0	0,0	0,0
150-330	0,0	52,0	0,0	0,0
165-345	0,0	-48,0	0,0	0,0