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Goniophotometer Test Report

Product Info

Luminaire Category : **Indoor**

Luminaire : **Hydra Small Growth 240W 609-230**

Lamp Category : **LED**

Manufacturer : **Industrial Lighting Ltd**

Number of Lamps : **1**

Lumens per Lamp : **45902 lm**

Luminous Length : **290 mm**

Luminous Width : **290 mm**

Luminous Height : **0 mm**

Electric Parameters

Voltage : **229.50 V** Current : **1.0450 A** Power : **235.90 W** Power Factor : **0.98** Frequency : **49.99 Hz**

Photometric Parameters

CIE Class : **Direct**

Measurement Flux : **45901.9 lm**

Upward Ratio : **0.00 %**

Maximum Intensity : **351.87 cd/klm**

Central Intensity : **351.63 cd/klm**

Luminaire Efficacy Rating (LER) : **195**

Conical Flux (90°) : **25398.60 lm (55.3%)**

Beam Angle (C0-C180,C90-C270) : **115.4 °, 115.0 °** Beam Angle (C45-C225,C135-C315) : **115.5 °, 115.4 °**

Field Angle (C0-C180,C90-C270) : **154.0 °, 153.9 °** Field Angle (C45-C225,C135-C315) : **154.2 °, 154.2 °**

Total Rated Lamp Lumens : **45901.9 lm**

Efficiency : **100.00 %**

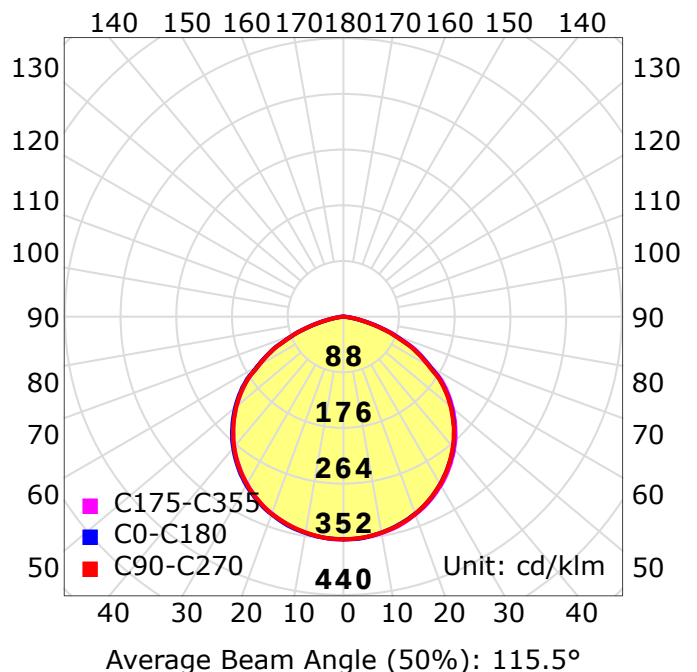
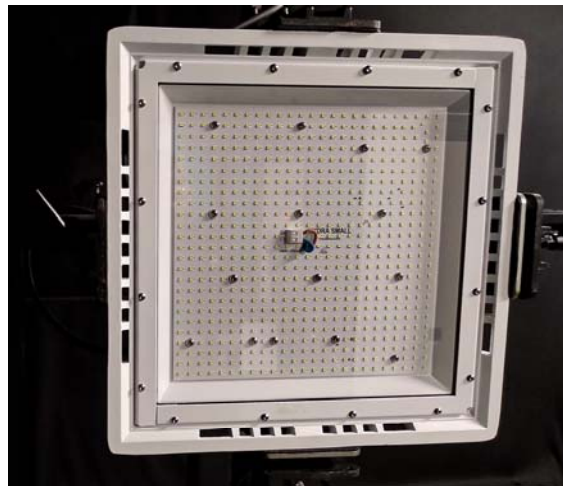
Downward Ratio : **100.00 %**

Position Of Maximum Intensity : **C355° γ2°**

S/MH(C0-C180,C90-C270) : **1.29, 1.29**

Energy Efficiency Class : **B (EU 2019/2015 □TM:188lm/W)**

Conical Flux (120°) : **37634.87 lm (82.0%)**



Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°): 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :

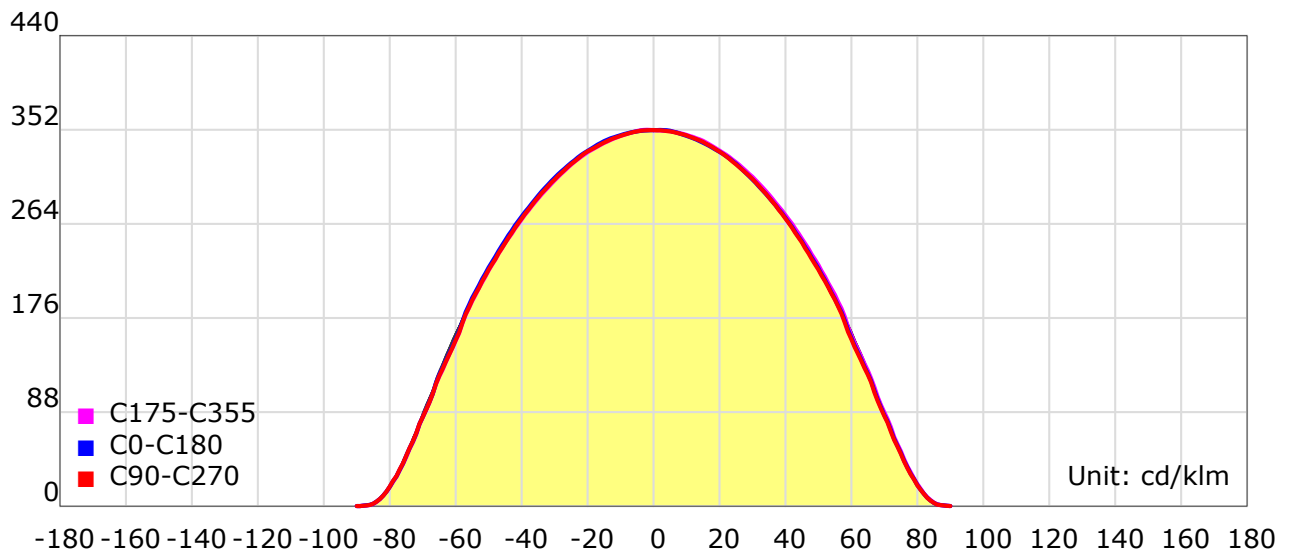
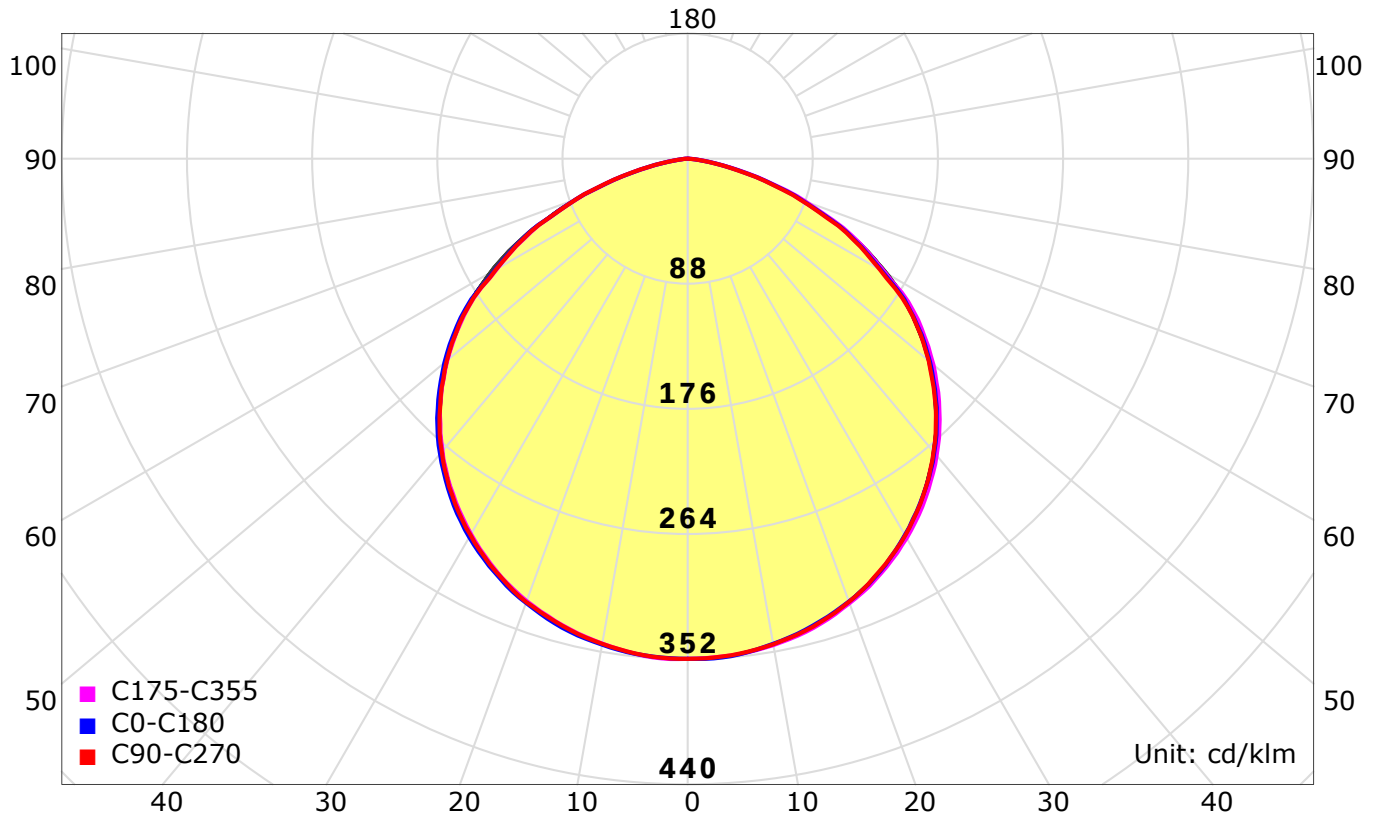


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Light Distribution Curve



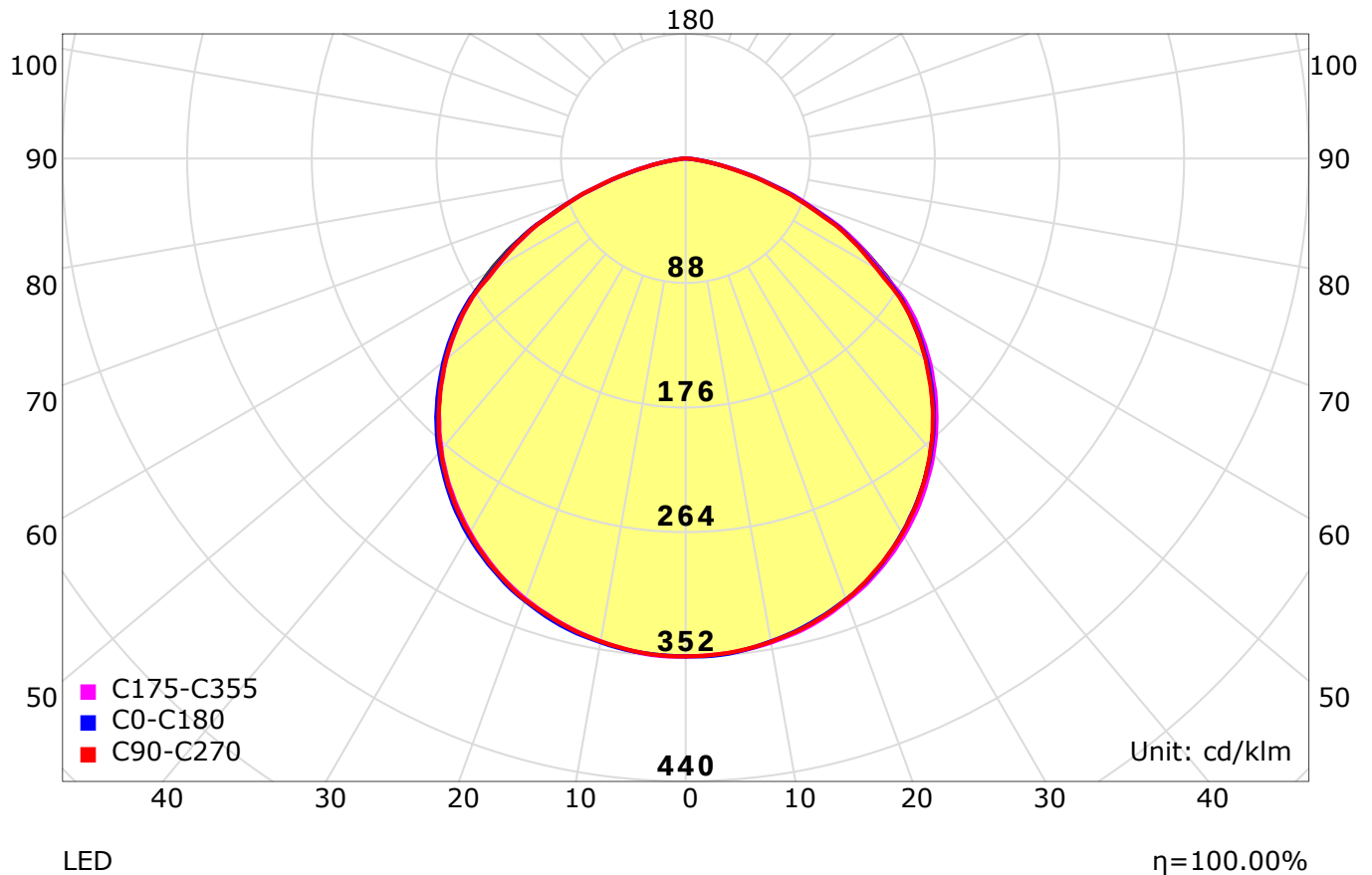


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Light Distribution Curve (cd / klm)



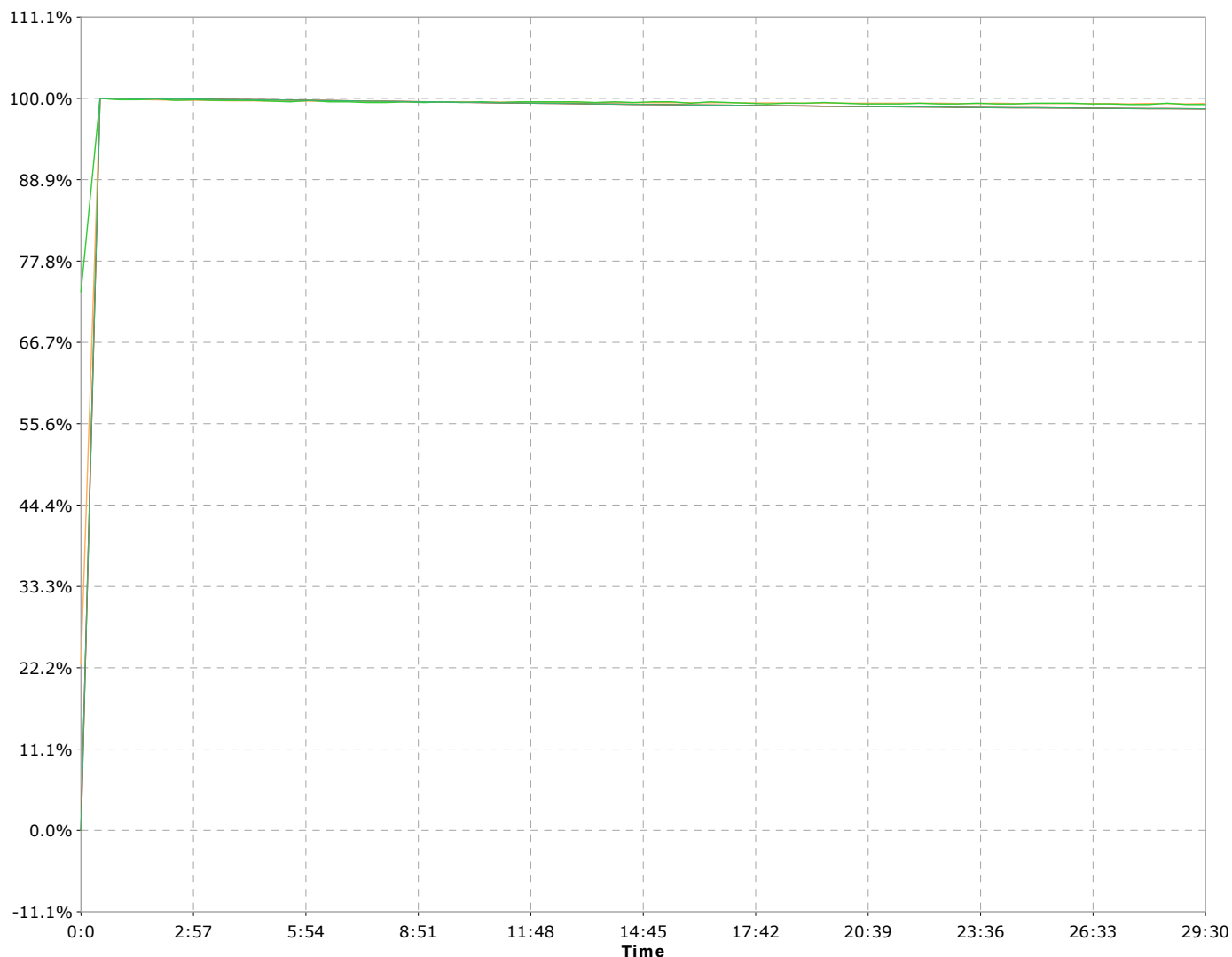


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Warmup Log



Uptime: 0:30

Parameters	Maximum	Minimum	Change
Luminous intensity ,cd	16458.40	0.00	16458.40
Power ,W	237.90	53.96	183.94
Current ,A	1.0550	0.7760	0.2790
Illumination ,lx	248.558	0.000	248.558



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UGR

Reflectance										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X=2H Y=2H	30.5	32.1	30.8	32.4	32.7	30.5	32.1	30.9	32.4	32.7
3H	31.9	33.3	32.2	33.6	34.0	31.9	33.3	32.3	33.7	34.0
4H	32.2	33.6	32.6	34.0	34.3	32.3	33.6	32.7	34.0	34.4
6H	32.4	33.6	32.8	34.0	34.4	32.4	33.7	32.8	34.1	34.5
8H	32.4	33.6	32.8	34.0	34.4	32.4	33.6	32.9	34.0	34.4
12H	32.4	33.5	32.8	33.9	34.3	32.4	33.6	32.8	34.0	34.4
X=4H Y=2H	31.0	32.4	31.4	32.8	33.1	31.1	32.4	31.5	32.8	33.2
3H	32.6	33.7	33.0	34.1	34.5	32.7	33.8	33.1	34.2	34.6
4H	33.1	34.1	33.5	34.5	34.9	33.1	34.2	33.6	34.6	35.0
6H	33.3	34.2	33.7	34.6	35.1	33.3	34.2	33.8	34.7	35.1
8H	33.3	34.1	33.7	34.5	35.0	33.4	34.2	33.8	34.6	35.1
12H	33.3	34.0	33.7	34.5	35.0	33.3	34.1	33.8	34.6	35.0
X=8H Y=4H	33.2	34.0	33.7	34.5	35.0	33.3	34.1	33.7	34.6	35.0
6H	33.4	34.1	33.9	34.6	35.1	33.5	34.2	34.0	34.7	35.2
8H	33.5	34.1	34.0	34.6	35.1	33.6	34.2	34.1	34.7	35.2
12H	33.5	34.0	34.0	34.5	35.1	33.6	34.1	34.1	34.6	35.1
X=12H Y=4H	33.2	33.9	33.7	34.4	34.9	33.3	34.0	33.8	34.5	35.0
6H	33.4	34.1	34.0	34.5	35.1	33.5	34.1	34.1	34.6	35.1
8H	33.5	34.0	34.0	34.5	35.1	33.6	34.1	34.1	34.6	35.2

Calculate in accordance with CIE 190:2010. The table is corrected with 45902lm ($8\log(F/F_0) = 13.3$).

Reflectance										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X=2H Y=2H	30.8	32.2	31.1	32.4	32.6	30.8	32.2	31.1	32.4	32.6
3H	32.0	33.3	32.4	33.6	33.8	32.0	33.3	32.4	33.5	33.8
4H	32.4	33.6	32.7	33.8	34.1	32.4	33.6	32.7	33.8	34.1
6H	32.5	33.6	32.9	33.9	34.2	32.5	33.6	32.9	33.9	34.2
8H	32.5	33.6	32.9	33.9	34.2	32.5	33.5	32.9	33.9	34.2
12H	32.5	33.5	32.9	33.8	34.2	32.5	33.5	32.9	33.8	34.1
X=4H Y=2H	31.4	32.6	31.8	32.9	33.2	31.4	32.6	31.8	32.9	33.2
3H	32.8	33.8	33.2	34.1	34.5	32.8	33.8	33.2	34.1	34.5
4H	33.2	34.1	33.6	34.5	34.9	33.2	34.1	33.6	34.5	34.9
6H	33.4	34.2	33.8	34.6	35.0	33.4	34.2	33.8	34.6	35.0
8H	33.4	34.2	33.9	34.6	35.0	33.4	34.2	33.9	34.6	35.0
12H	33.4	34.1	33.9	34.5	34.9	33.4	34.1	33.9	34.5	34.9
X=8H Y=4H	33.4	34.1	33.8	34.5	34.9	33.4	34.1	33.8	34.5	34.9
6H	33.6	34.2	34.1	34.6	35.1	33.6	34.2	34.1	34.6	35.1
8H	33.7	34.2	34.1	34.6	35.1	33.7	34.2	34.1	34.6	35.1
12H	33.6	34.1	34.1	34.5	35.1	33.6	34.1	34.1	34.6	35.1
X=12H Y=4H	33.4	34.0	33.8	34.4	34.9	33.4	34.0	33.8	34.4	34.9
6H	33.6	34.1	34.1	34.6	35.1	33.6	34.1	34.1	34.6	35.1
8H	33.7	34.1	34.1	34.6	35.1	33.7	34.1	34.1	34.6	35.1
Variations with the observer position at spacings										
S=1.0H	+0.1/-0.2					+0.2/-0.2				
S=1.5H	+0.4/-0.6					+0.4/-0.6				
S=2.0H	+0.7/-1.1					+0.8/-1.2				

Calculate in accordance with CIE Pub.117. The table is corrected with 45902lm ($8\log(F/F_0) = 13.3$).

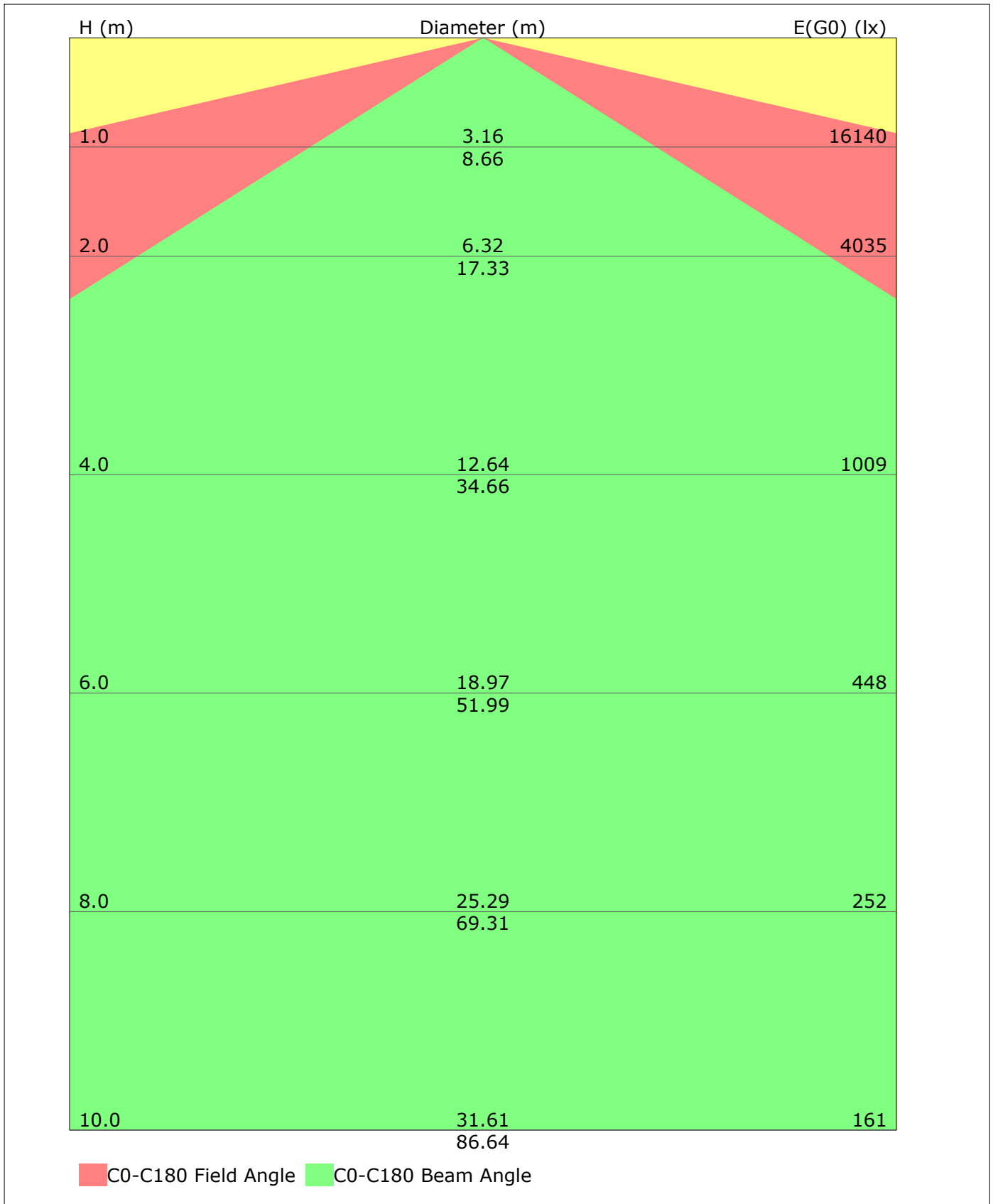


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Lux-Distance



Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :

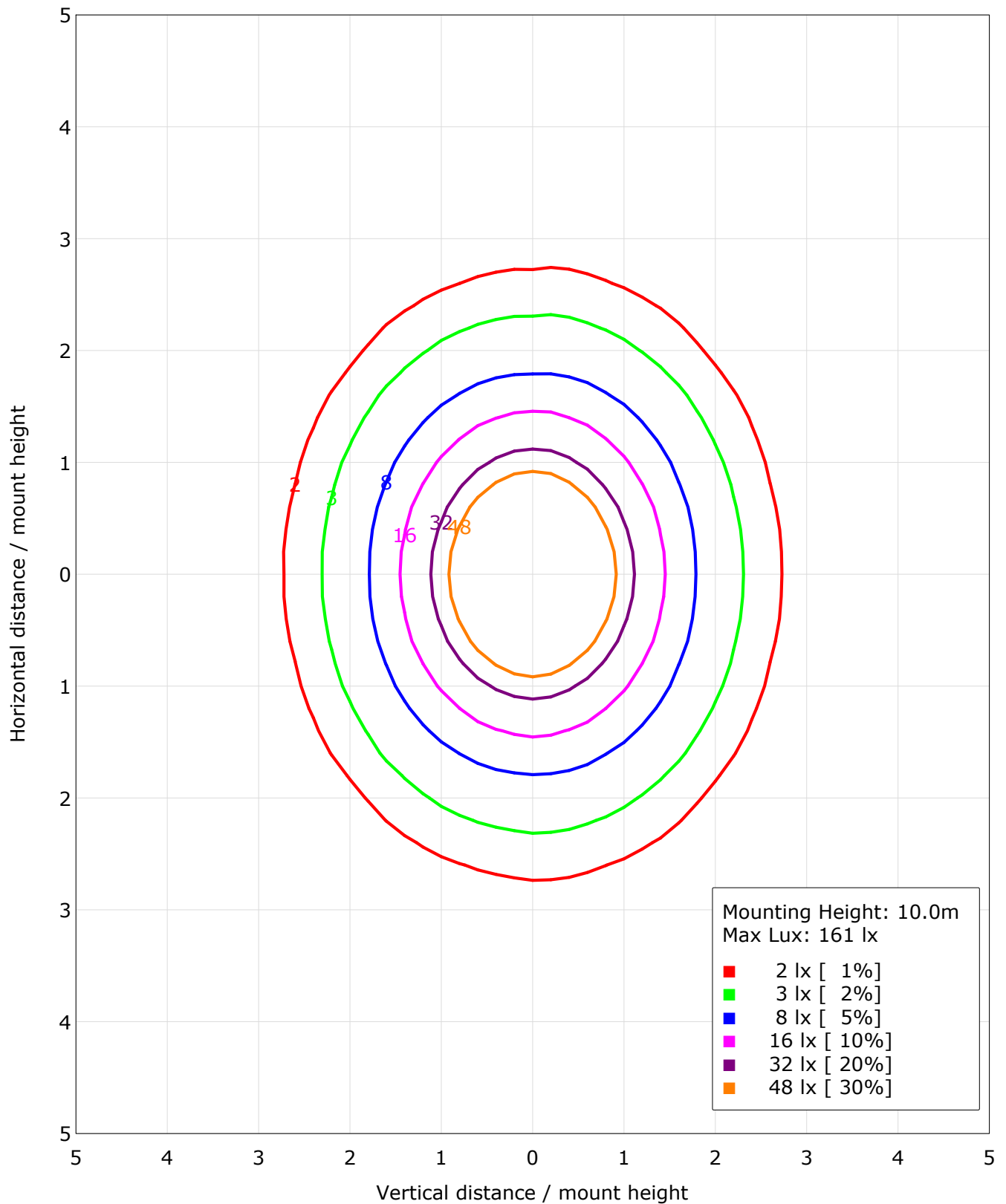


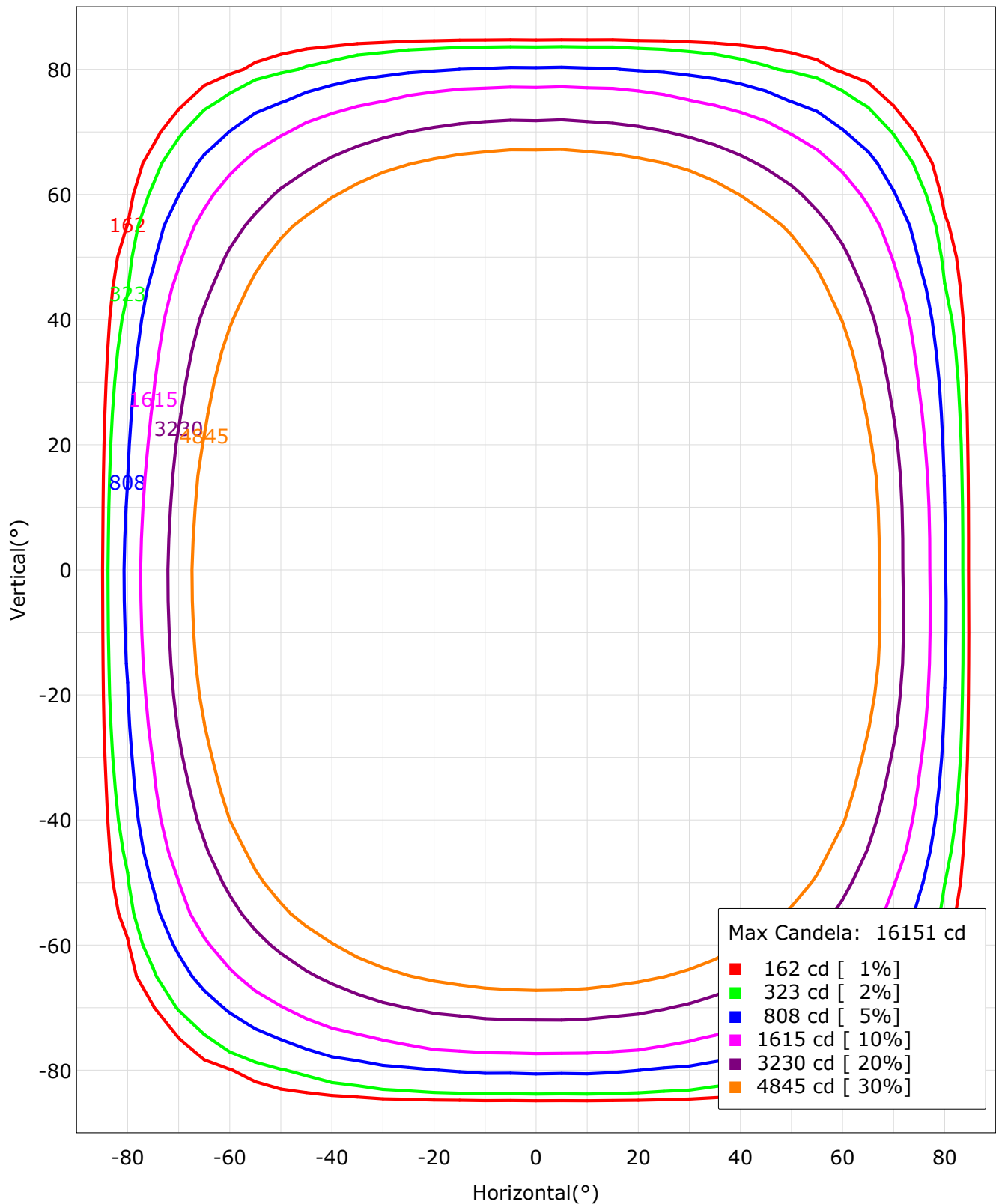
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IsoLux



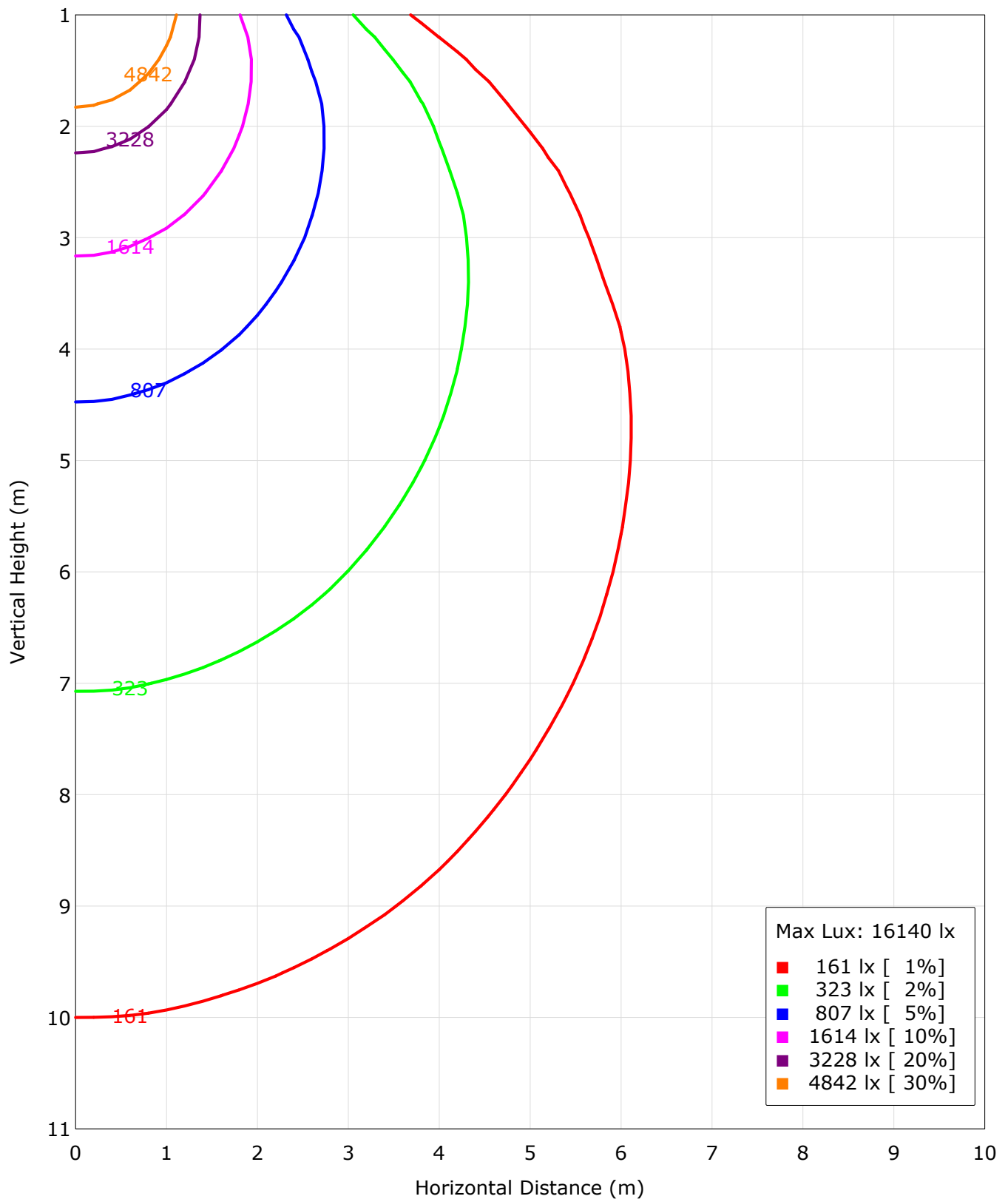
IsoCandela

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Vertical IsoLux Plot



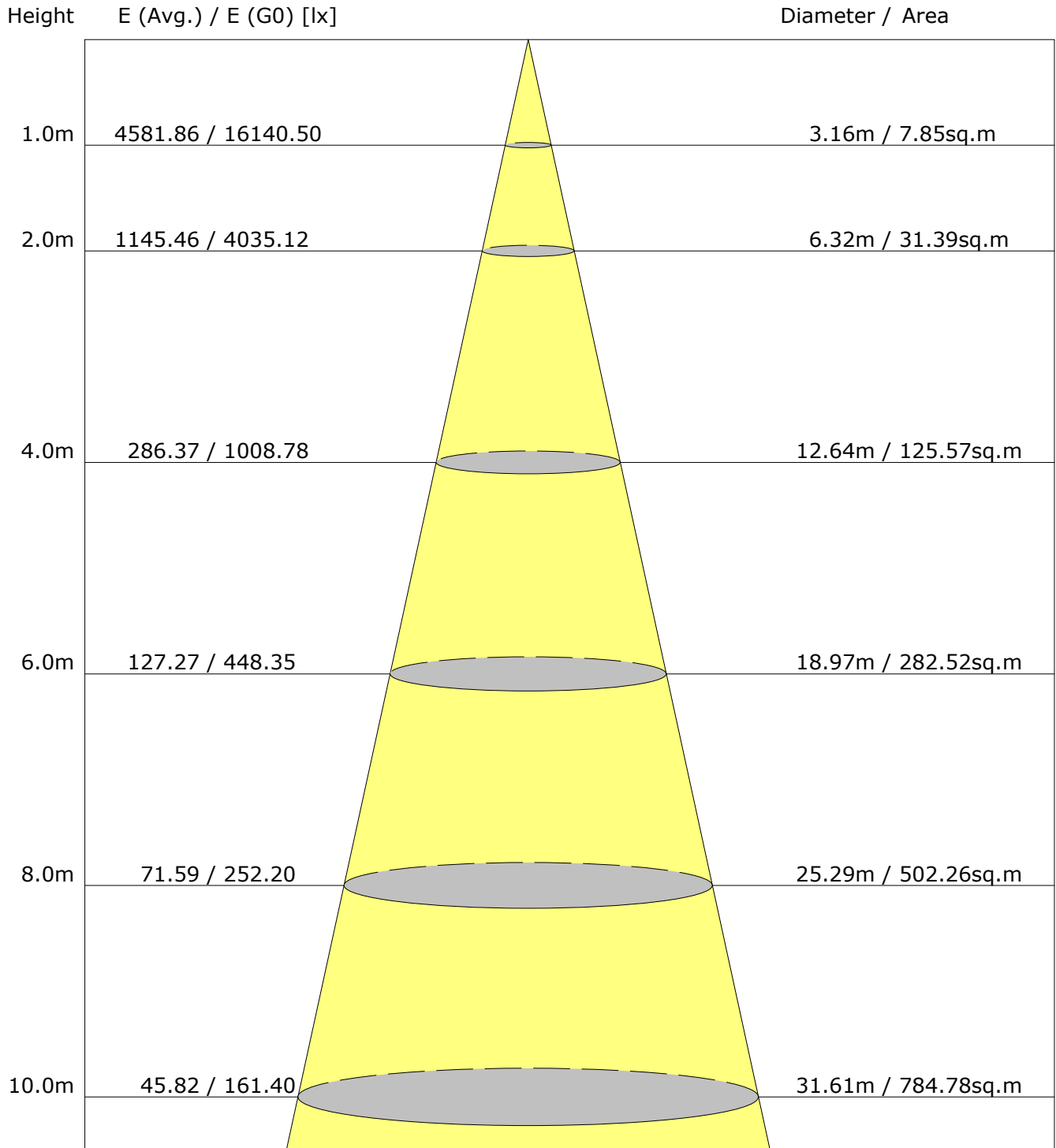


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Average Illuminance Effective Figure



Beam Angle: 115.4° Flux Out: 35957.64lm



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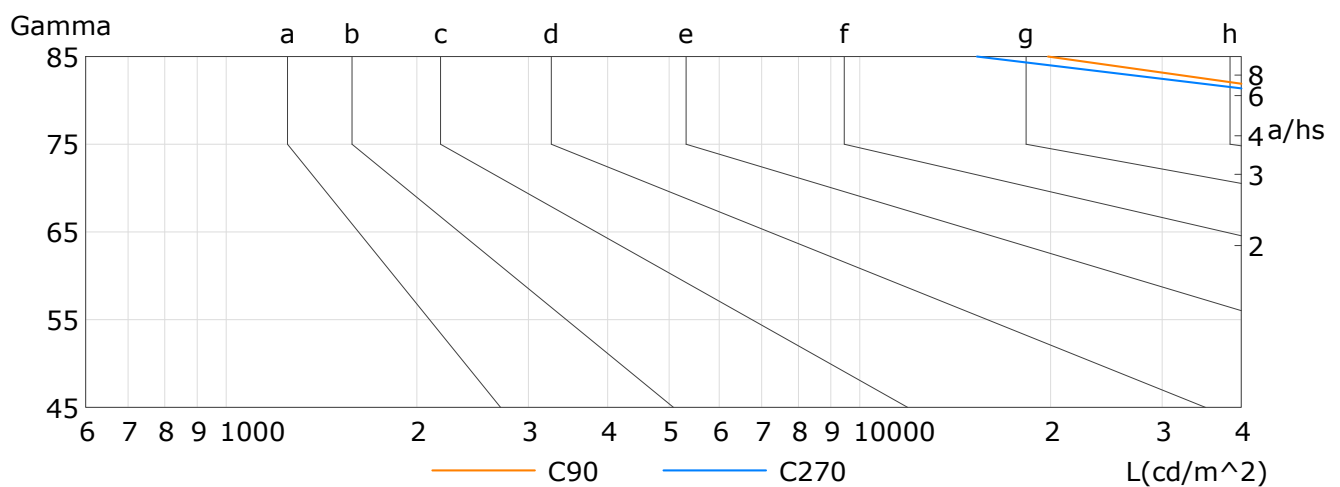
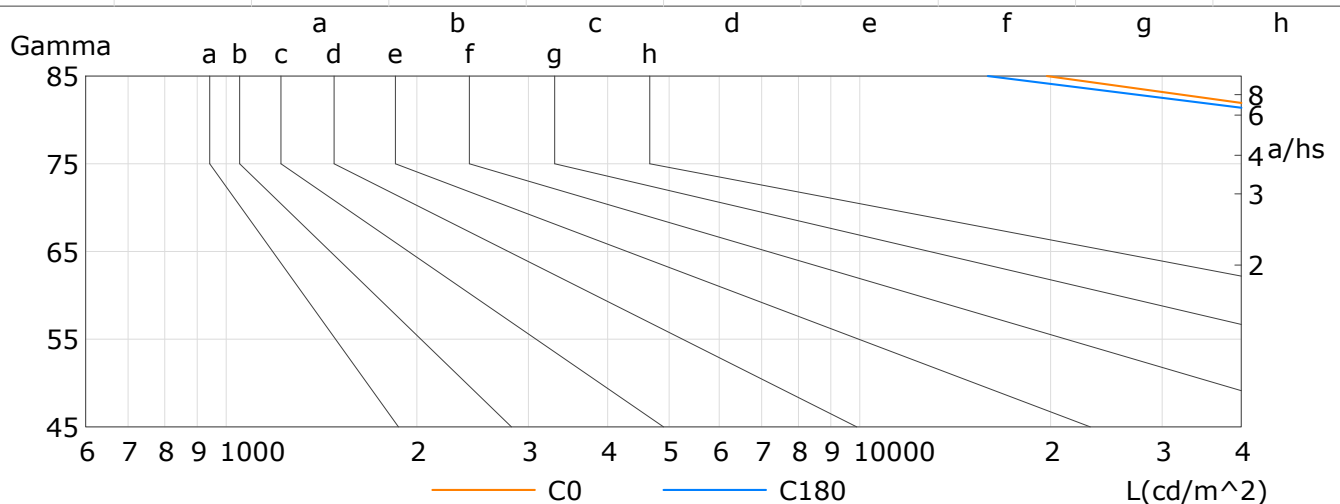
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Luminance Limit Curve

(cd/m ²)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	191094	188891	184490	171793	160158	136015	105232	62513	19733
C90	190397	187792	183767	170398	158786	134478	103440	61552	19818
C180	191708	189619	185351	170823	158989	133227	100001	57119	15923
C270	189864	187752	183350	169663	157410	133003	99608	57859	15305

Dazzle	Quality	Illuminance (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



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TM5 UF Table

Utilisation Factors UF (F)			SHR NOM = 1.25								
Room Reflectance			Room Index(RI)								
C	W	F	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.57	0.68	0.76	0.81	0.89	0.94	0.97	1.02	1.04
	0.30		0.49	0.60	0.68	0.74	0.83	0.88	0.92	0.98	1.01
	0.20		0.44	0.55	0.63	0.69	0.78	0.84	0.88	0.94	0.98
0.50	0.50	0.20	0.56	0.66	0.73	0.78	0.85	0.90	0.93	0.98	1.00
	0.30		0.49	0.59	0.67	0.73	0.80	0.86	0.89	0.94	0.97
	0.20		0.43	0.54	0.62	0.68	0.76	0.82	0.86	0.92	0.95
0.30	0.50	0.20	0.54	0.64	0.71	0.76	0.83	0.87	0.90	0.94	0.96
	0.30		0.48	0.58	0.66	0.71	0.78	0.83	0.87	0.91	0.94
	0.20		0.43	0.54	0.61	0.67	0.75	0.80	0.84	0.89	0.92
0.00	0.00	0.00	0.41	0.51	0.58	0.64	0.71	0.76	0.80	0.85	0.87

Utilisation Factors UF (W)			SHR NOM = 1.25								
Room Reflectance			Room Index(RI)								
C	W	F	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.99	0.81	0.68	0.59	0.47	0.38	0.33	0.25	0.20
	0.30		0.83	0.69	0.60	0.52	0.42	0.35	0.30	0.23	0.19
	0.20		0.71	0.60	0.53	0.47	0.38	0.32	0.28	0.22	0.18
0.50	0.50	0.20	0.96	0.78	0.65	0.57	0.45	0.40	0.31	0.24	0.19
	0.30		0.81	0.67	0.58	0.51	0.41	0.34	0.29	0.22	0.18
	0.20		0.70	0.60	0.52	0.46	0.37	0.31	0.27	0.21	0.18
0.30	0.50	0.20	0.93	0.75	0.63	0.54	0.43	0.35	0.30	0.22	0.18
	0.30		0.79	0.66	0.56	0.49	0.39	0.33	0.28	0.22	0.18
	0.20		0.69	0.59	0.51	0.45	0.36	0.31	0.26	0.21	0.17
0.00	0.00	0.00	0.59	0.49	0.42	0.36	0.29	0.24	0.20	0.16	0.13

Utilisation Factors UF (C)			SHR NOM = 1.25								
Room Reflectance			Room Index(RI)								
C	W	F	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.21	0.22
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.06	0.08	0.09	0.11	0.13	0.14	0.16	0.17
0.50	0.50	0.20	0.16	0.17	0.18	0.18	0.19	0.19	0.20	0.20	0.21
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.06	0.08	0.09	0.11	0.13	0.14	0.15	0.16
0.30	0.50	0.20	0.15	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20
	0.30		0.09	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18
	0.20		0.05	0.06	0.08	0.09	0.11	0.12	0.13	0.15	0.16
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA

Rating: 236W Photometrically tested without ceiling board.

Multiply UF values by service correction factors

Calculate in accordance with CIBSE Technical Memorandum No.5/1980

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



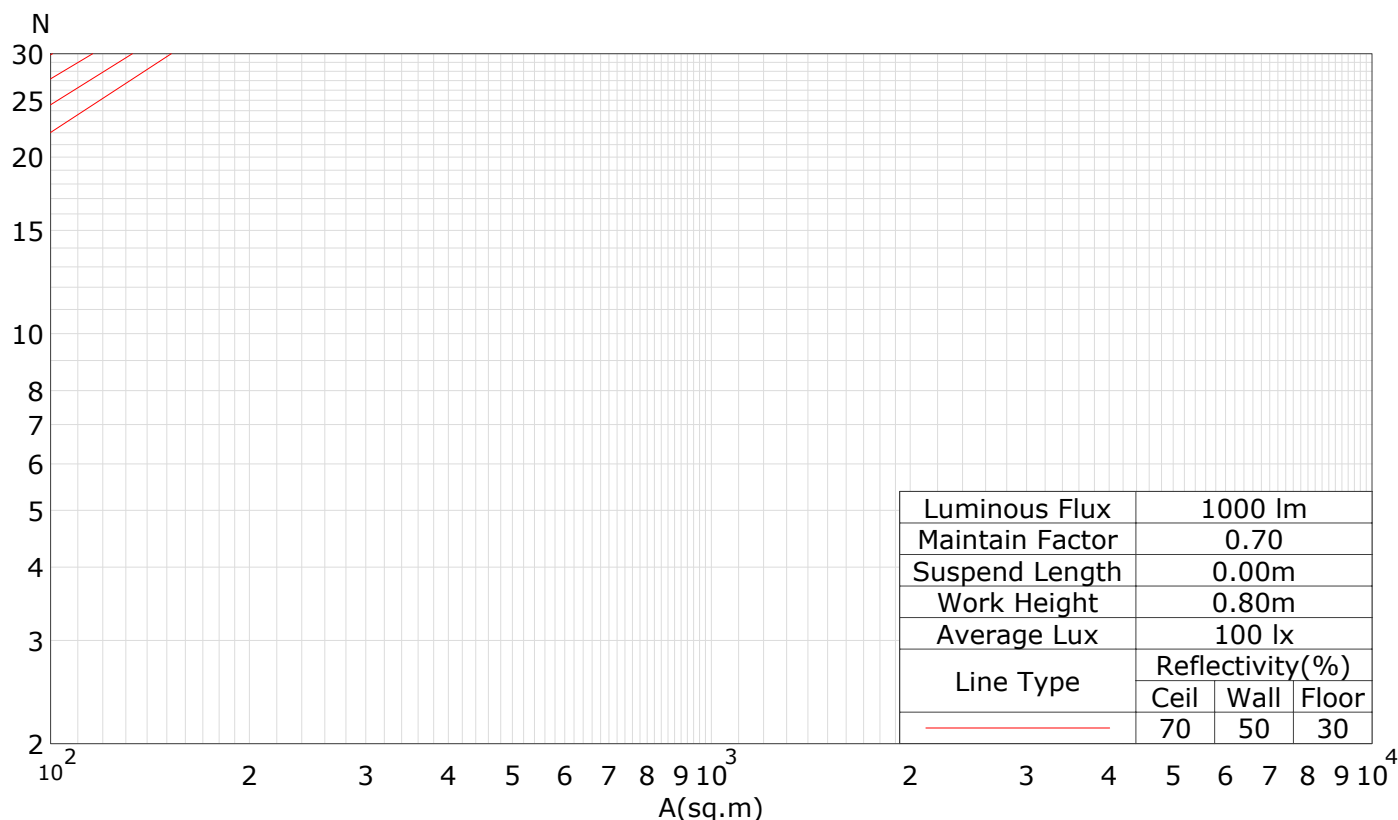
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Indoor CU, Curves of Luminaires vs Lighting Area

RC	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.3	0.3	0.3	0.1	0.1	0.1	0
RW	0.7	0.5	0.3	0.1	0.7	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0
RCR	RF = 0.2																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	74	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25

Spacing Criteria: 1.29 (0-180), 1.29 (90-270), 1.41 (Diagonal)



Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

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Zonal Flux

Gamma °	I _{mean} cd/klm	Zonal Flux lm	Sum Zonal Flux lm	Rel Zonal Flux %	Sum Rel Zonal Flux %
0.0-1.0	351.6	15.4	15.4	0.03	0.03
1.0-2.0	351.6	46.3	61.8	0.10	0.13
2.0-3.0	351.4	77.2	138.9	0.17	0.30
3.0-4.0	351.1	107.9	246.8	0.24	0.54
4.0-5.0	350.7	138.5	385.3	0.30	0.84
5.0-6.0	350.1	168.9	554.2	0.37	1.21
6.0-7.0	349.5	199.1	753.4	0.43	1.64
7.0-8.0	348.7	229.1	982.5	0.50	2.14
8.0-9.0	347.9	258.8	1241.3	0.56	2.70
9.0-10.0	346.9	288.2	1529.5	0.63	3.33
10.0-11.0	345.9	317.3	1846.8	0.69	4.02
11.0-12.0	344.8	346.0	2192.8	0.75	4.78
12.0-13.0	343.6	374.4	2567.2	0.82	5.59
13.0-14.0	342.3	402.3	2969.4	0.88	6.47
14.0-15.0	340.9	429.7	3399.1	0.94	7.41
15.0-16.0	339.4	456.6	3855.7	0.99	8.40
16.0-17.0	337.8	482.9	4338.6	1.05	9.45
17.0-18.0	336.1	508.8	4847.4	1.11	10.56
18.0-19.0	334.3	534.0	5381.4	1.16	11.72
19.0-20.0	332.4	558.5	5939.9	1.22	12.94
20.0-21.0	330.5	582.6	6522.5	1.27	14.21
21.0-22.0	328.4	605.8	7128.3	1.32	15.53
22.0-23.0	326.1	628.2	7756.6	1.37	16.90
23.0-24.0	323.8	649.9	8406.4	1.42	18.31
24.0-25.0	321.3	670.6	9077.1	1.46	19.77
25.0-26.0	318.7	690.7	9767.8	1.50	21.28
26.0-27.0	316.0	709.8	10477.5	1.55	22.83
27.0-28.0	313.2	727.9	11205.5	1.59	24.41
28.0-29.0	310.4	745.4	11950.9	1.62	26.04
29.0-30.0	307.3	761.8	12712.7	1.66	27.70
30.0-31.0	304.2	777.3	13489.9	1.69	29.39
31.0-32.0	301.0	791.7	14281.6	1.72	31.11
32.0-33.0	297.7	805.1	15086.7	1.75	32.87
33.0-34.0	294.4	817.8	15904.5	1.78	34.65
34.0-35.0	290.8	829.0	16733.5	1.81	36.45
35.0-36.0	287.1	839.1	17572.7	1.83	38.28
36.0-37.0	283.4	848.4	18421.1	1.85	40.13
37.0-38.0	279.5	856.4	19277.5	1.87	42.00
38.0-39.0	275.5	863.4	20140.9	1.88	43.88
39.0-40.0	271.4	869.0	21009.9	1.89	45.77

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 15 of 43

Zonal Flux

Gamma °	I _{mean} cd/klm	Zonal Flux lm	Sum Zonal Flux lm	Rel Zonal Flux %	Sum Rel Zonal Flux %
40.0-41.0	267.2	873.4	21883.2	1.90	47.67
41.0-42.0	263.0	877.1	22760.3	1.91	49.58
42.0-43.0	258.5	879.1	23639.4	1.92	51.50
43.0-44.0	253.9	879.7	24519.2	1.92	53.42
44.0-45.0	249.3	879.4	25398.6	1.92	55.33
45.0-46.0	244.4	877.5	26276.1	1.91	57.24
46.0-47.0	239.6	874.7	27150.8	1.91	59.15
47.0-48.0	234.5	870.2	28021.1	1.90	61.05
48.0-49.0	229.3	864.4	28885.5	1.88	62.93
49.0-50.0	224.2	858.2	29743.7	1.87	64.80
50.0-51.0	218.8	849.9	30593.6	1.85	66.65
51.0-52.0	213.3	840.2	31433.8	1.83	68.48
52.0-53.0	207.7	829.5	32263.3	1.81	70.29
53.0-54.0	201.9	816.9	33080.2	1.78	72.07
54.0-55.0	196.1	803.6	33883.8	1.75	73.82
55.0-56.0	190.1	788.5	34672.4	1.72	75.54
56.0-57.0	183.9	771.8	35444.2	1.68	77.22
57.0-58.0	177.6	753.8	36198.0	1.64	78.86
58.0-59.0	170.3	731.0	36928.9	1.59	80.45
59.0-60.0	162.8	705.9	37634.9	1.54	81.99
60.0-61.0	155.4	680.9	38315.8	1.48	83.47
61.0-62.0	148.1	655.3	38971.0	1.43	84.90
62.0-63.0	141.1	630.1	39601.2	1.37	86.27
63.0-64.0	133.9	603.2	40204.4	1.31	87.59
64.0-65.0	126.7	575.5	40779.9	1.25	88.84
65.0-66.0	119.7	548.1	41328.0	1.19	90.04
66.0-67.0	112.1	517.5	41845.5	1.13	91.16
67.0-68.0	104.3	484.9	42330.4	1.06	92.22
68.0-69.0	96.5	451.8	42782.1	0.98	93.20
69.0-70.0	88.8	418.7	43200.8	0.91	94.12
70.0-71.0	81.6	387.2	43588.0	0.84	94.96
71.0-72.0	74.2	354.1	43942.1	0.77	95.73
72.0-73.0	66.6	319.7	44261.8	0.70	96.43
73.0-74.0	59.4	286.8	44548.6	0.62	97.05
74.0-75.0	52.5	254.4	44803.0	0.55	97.61
75.0-76.0	45.7	222.6	45025.6	0.49	98.09
76.0-77.0	39.0	191.0	45216.6	0.42	98.51
77.0-78.0	32.8	161.4	45378.0	0.35	98.86
78.0-79.0	27.4	135.2	45513.2	0.29	99.15
79.0-80.0	22.1	109.5	45622.7	0.24	99.39

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36

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Zonal Flux

Gamma °	I _{mean} cd/klm	Zonal Flux lm	Sum Zonal Flux lm	Rel Zonal Flux %	Sum Rel Zonal Flux %
80.0-81.0	17.3	85.8	45708.5	0.19	99.58
81.0-82.0	13.1	65.2	45773.7	0.14	99.72
82.0-83.0	9.4	47.1	45820.7	0.10	99.82
83.0-84.0	6.5	32.4	45853.2	0.07	99.89
84.0-85.0	4.1	20.7	45873.9	0.05	99.94
85.0-86.0	2.4	12.2	45886.1	0.03	99.97
86.0-87.0	1.4	7.2	45893.2	0.02	99.98
87.0-88.0	0.9	4.5	45897.8	0.01	99.99
88.0-89.0	0.5	2.7	45900.4	0.01	100.00
89.0-90.0	0.3	1.5	45901.9	0.00	100.00



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 17 of 43

Light Distribution Data

Unit: cd/klm

G\C	C0.0	C5.0	C10.0	C15.0	C20.0	C25.0	C30.0	C35.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.7	351.8	351.7	351.7	351.7	351.7	351.6	351.6
G2.0	351.8	351.7	351.8	351.7	351.7	351.7	351.6	351.6
G3.0	351.7	351.7	351.7	351.6	351.6	351.5	351.5	351.5
G4.0	351.5	351.4	351.5	351.3	351.3	351.2	351.2	351.1
G5.0	351.0	351.0	351.0	350.8	350.8	350.7	350.6	350.5
G6.0	350.2	350.1	350.2	350.0	350.0	349.8	349.8	349.8
G7.0	349.3	349.3	349.3	349.2	349.2	349.1	349.0	348.9
G8.0	348.4	348.2	348.4	348.3	348.3	348.1	348.3	348.0
G9.0	347.4	347.3	347.4	347.3	347.4	347.2	347.3	347.1
G10.0	346.3	346.3	346.4	346.3	346.3	346.2	346.4	346.2
G11.0	345.2	345.2	345.2	345.1	345.2	345.0	345.1	345.0
G12.0	344.1	344.0	344.1	344.0	344.1	343.9	344.0	343.8
G13.0	342.8	342.8	342.9	342.7	342.8	342.7	342.8	342.6
G14.0	341.4	341.2	341.4	341.2	341.3	341.2	341.3	341.2
G15.0	339.8	339.9	339.9	339.8	339.9	339.7	339.9	339.7
G16.0	338.3	338.2	338.3	338.1	338.2	338.0	338.1	337.9
G17.0	336.7	336.6	336.6	336.5	336.6	336.3	336.5	336.3
G18.0	335.0	334.9	334.9	334.8	334.9	334.6	334.8	334.6
G19.0	333.1	332.8	332.9	332.8	332.9	332.6	332.8	332.6
G20.0	331.4	331.1	331.0	330.9	331.0	330.7	330.8	330.8
G21.0	329.4	328.9	329.1	328.7	328.9	328.5	328.8	328.5
G22.0	327.2	326.9	326.8	326.5	326.7	326.3	326.4	326.4
G23.0	325.1	324.7	324.6	324.4	324.4	324.1	324.2	324.3
G24.0	322.6	322.2	322.1	321.8	321.9	321.6	321.8	321.7
G25.0	320.2	319.8	319.7	319.4	319.4	319.1	319.3	319.4
G26.0	317.4	317.2	317.1	316.9	317.0	316.6	316.9	316.9
G27.0	314.4	314.2	314.3	314.0	314.1	313.9	314.1	314.0
G28.0	311.6	311.3	311.4	311.1	311.2	311.0	311.3	311.1
G29.0	308.6	308.2	308.6	307.9	308.3	307.9	308.5	308.1
G30.0	305.4	305.2	305.4	304.9	305.0	305.0	305.1	305.1
G31.0	302.4	302.1	302.3	301.9	302.0	301.9	302.0	302.0
G32.0	298.8	298.8	299.0	298.6	298.7	298.4	298.4	298.4
G33.0	295.7	295.5	295.9	295.5	295.4	295.1	295.2	295.0
G34.0	292.3	292.1	292.4	292.0	292.2	291.6	291.8	291.7
G35.0	288.7	288.4	288.5	288.3	288.5	287.9	287.9	287.9
G36.0	285.1	284.8	285.0	284.7	284.8	284.2	284.4	284.1
G37.0	281.5	280.9	281.5	280.7	281.3	280.4	280.5	280.0
G38.0	277.6	277.2	277.3	277.0	277.3	276.7	276.4	276.1
G39.0	273.9	273.5	273.5	273.3	273.4	272.9	272.7	272.2

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 18 of 43

Light Distribution Data

Unit: cd/klm

G\C	C0.0	C5.0	C10.0	C15.0	C20.0	C25.0	C30.0	C35.0
G40.0	269.6	269.1	269.2	268.8	269.0	268.6	268.4	267.8
G41.0	265.5	265.1	265.3	264.9	264.9	264.4	264.4	263.7
G42.0	261.3	260.8	260.9	260.8	260.8	260.5	260.0	259.5
G43.0	256.5	256.2	256.3	256.0	256.0	255.9	255.4	254.7
G44.0	251.9	251.8	252.0	251.6	251.5	251.3	251.0	250.4
G45.0	247.6	247.0	247.4	246.8	246.7	246.3	246.3	245.5
G46.0	242.4	242.2	242.5	242.1	241.8	241.6	241.3	240.7
G47.0	237.7	237.5	237.8	237.2	237.1	236.5	236.3	236.0
G48.0	232.4	232.2	232.3	231.9	231.5	231.2	231.1	230.6
G49.0	227.5	227.1	227.3	227.0	226.6	226.2	226.1	225.3
G50.0	222.5	222.2	222.4	221.7	221.5	220.8	221.1	220.3
G51.0	216.8	216.5	216.7	216.0	216.0	215.0	215.2	214.5
G52.0	211.4	211.2	211.2	210.7	210.6	209.8	209.9	209.0
G53.0	205.9	205.0	205.8	204.6	205.2	203.9	204.4	202.9
G54.0	199.6	199.5	199.8	198.6	199.0	198.0	198.3	197.3
G55.0	193.9	193.8	194.2	193.0	193.2	192.2	192.4	191.9
G56.0	187.5	187.5	187.7	186.5	186.7	185.9	186.1	185.9
G57.0	181.5	181.5	181.8	180.6	180.8	180.1	180.2	180.1
G58.0	173.7	173.8	175.1	174.2	174.8	174.1	174.3	173.6
G59.0	164.9	164.8	165.6	166.2	167.8	167.0	167.2	166.7
G60.0	157.4	156.8	157.5	157.7	159.4	160.3	161.0	160.2
G61.0	150.3	150.0	150.1	149.6	150.3	151.2	153.9	153.2
G62.0	143.7	143.8	143.5	143.3	143.3	143.2	145.9	146.6
G63.0	137.4	137.5	137.1	136.9	136.6	136.2	137.0	139.5
G64.0	130.4	130.3	130.1	129.6	129.5	129.1	128.9	130.2
G65.0	124.0	123.9	123.6	123.1	123.0	122.3	122.1	122.5
G66.0	117.2	116.6	116.8	116.1	116.4	115.2	115.6	115.1
G67.0	107.9	108.3	108.9	108.9	109.1	108.5	108.8	108.3
G68.0	99.9	99.9	100.1	100.3	102.0	101.5	102.4	101.6
G69.0	92.4	92.6	92.7	91.7	92.4	92.8	94.7	94.2
G70.0	85.2	85.6	85.8	84.5	85.4	84.5	86.9	87.0
G71.0	79.3	79.2	79.1	77.9	78.4	77.9	78.3	78.9
G72.0	71.2	71.2	71.9	71.2	71.4	70.9	70.9	68.5
G73.0	63.0	63.0	63.7	62.9	64.4	64.7	64.7	61.8
G74.0	56.5	55.8	57.0	55.9	56.5	56.0	57.5	55.6
G75.0	49.9	49.6	50.6	50.1	50.1	49.5	48.8	49.4
G76.0	42.5	42.1	43.0	43.3	44.7	43.5	42.5	42.5
G77.0	36.4	35.7	36.4	36.4	37.0	35.9	36.9	35.7
G78.0	30.4	30.0	31.2	31.1	31.7	30.1	30.8	29.9
G79.0	25.5	25.2	25.6	25.6	25.7	25.4	25.3	24.6

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 19 of 43

Light Distribution Data

Unit: cd/klm

G\C	C0.0	C5.0	C10.0	C15.0	C20.0	C25.0	C30.0	C35.0
G80.0	19.9	19.8	20.3	20.2	20.4	20.0	19.8	19.6
G81.0	15.7	15.3	15.9	15.9	15.8	15.4	15.7	15.1
G82.0	11.7	10.9	12.0	11.4	11.9	11.2	11.8	11.0
G83.0	8.1	7.9	8.1	8.0	8.2	8.0	8.2	8.1
G84.0	5.3	5.3	5.6	5.4	5.5	5.3	5.6	5.5
G85.0	3.2	3.1	3.2	3.1	3.2	3.2	3.4	3.3
G86.0	1.7	1.7	1.8	1.8	1.9	2.0	2.1	2.0
G87.0	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.2
G88.0	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.7
G89.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
G90.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 20 of 43

Light Distribution Data

Unit: cd/klm

G\C	C40.0	C45.0	C50.0	C55.0	C60.0	C65.0	C70.0	C75.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.6	351.6	351.7	351.6	351.6	351.7	351.6	351.6
G2.0	351.6	351.6	351.6	351.5	351.5	351.5	351.5	351.4
G3.0	351.4	351.3	351.3	351.1	351.2	351.2	351.2	351.0
G4.0	351.1	350.9	351.0	350.7	350.8	350.8	350.8	350.7
G5.0	350.4	350.4	350.5	350.2	350.4	350.2	350.3	350.3
G6.0	349.6	349.6	349.8	349.5	349.8	349.6	349.6	349.7
G7.0	348.9	348.9	349.1	348.9	349.1	349.0	349.0	348.9
G8.0	348.2	348.0	348.3	348.1	348.4	348.2	348.2	348.0
G9.0	347.2	347.1	347.4	347.2	347.3	347.3	347.3	347.2
G10.0	346.3	346.2	346.3	346.2	346.4	346.4	346.4	346.3
G11.0	345.2	345.0	345.2	345.1	345.2	345.1	345.2	345.1
G12.0	343.9	343.9	344.0	343.9	344.0	344.0	344.1	344.0
G13.0	342.7	342.5	342.8	342.6	342.8	342.8	342.9	342.8
G14.0	341.2	341.1	341.3	341.2	341.4	341.4	341.5	341.5
G15.0	339.8	339.6	339.8	339.7	339.9	340.0	340.2	340.0
G16.0	338.1	338.0	338.2	338.0	338.3	338.4	338.6	338.5
G17.0	336.3	336.3	336.6	336.5	336.7	336.7	337.0	337.0
G18.0	334.6	334.5	334.9	334.7	335.0	335.0	335.2	335.3
G19.0	332.7	332.6	332.8	332.7	332.9	332.9	333.3	333.4
G20.0	330.8	330.6	330.9	330.7	331.0	331.0	331.4	331.5
G21.0	329.0	328.4	328.8	328.5	329.0	328.8	329.3	329.2
G22.0	326.6	326.2	326.5	326.3	326.7	326.6	327.1	327.0
G23.0	324.3	324.0	324.3	324.1	324.4	324.4	324.8	324.7
G24.0	321.9	321.6	321.7	321.6	321.9	321.9	322.2	322.0
G25.0	319.4	319.1	319.4	319.1	319.6	319.4	319.5	319.3
G26.0	317.0	316.6	316.8	316.7	316.9	316.7	316.8	316.6
G27.0	314.1	313.8	314.0	313.8	313.9	313.8	314.0	313.8
G28.0	311.5	311.0	311.3	311.0	311.0	310.9	311.1	311.0
G29.0	308.5	308.0	308.4	307.7	308.2	307.7	308.3	307.9
G30.0	305.5	305.2	305.2	304.7	305.1	304.8	305.1	305.0
G31.0	302.6	302.2	301.9	301.6	301.9	301.7	302.1	301.9
G32.0	299.1	298.5	298.5	298.2	298.5	298.3	298.6	298.5
G33.0	295.5	295.1	295.2	295.0	295.4	295.1	295.3	295.2
G34.0	291.9	291.4	291.7	291.4	291.8	291.6	292.0	291.8
G35.0	287.8	287.5	288.0	287.6	288.1	287.8	288.1	288.0
G36.0	284.1	283.9	284.2	284.0	284.5	284.1	284.4	284.4
G37.0	280.4	279.7	280.6	280.0	280.9	280.0	280.8	280.2
G38.0	276.1	276.0	276.5	276.2	276.8	276.2	276.6	276.4
G39.0	272.4	272.0	272.6	272.4	272.6	272.3	272.6	272.6

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 21 of 43

Light Distribution Data

Unit: cd/klm

G\C	C40.0	C45.0	C50.0	C55.0	C60.0	C65.0	C70.0	C75.0
G40.0	268.1	267.7	268.0	268.1	268.3	267.7	268.2	268.2
G41.0	264.0	263.4	263.9	263.8	264.2	263.7	264.1	263.9
G42.0	259.7	259.3	259.6	259.5	260.1	259.5	259.8	259.7
G43.0	255.1	254.6	255.0	254.6	255.3	254.6	255.1	254.9
G44.0	250.8	250.0	250.3	250.0	250.6	250.2	250.6	250.2
G45.0	246.1	245.0	245.8	245.1	245.9	245.3	245.8	245.1
G46.0	241.0	240.3	240.5	240.4	240.6	240.7	240.7	240.5
G47.0	236.3	235.5	235.7	235.6	235.9	235.7	236.1	235.8
G48.0	230.8	230.2	230.5	230.0	230.6	230.4	230.7	230.3
G49.0	225.9	225.4	225.4	224.9	225.2	225.5	225.6	225.4
G50.0	220.8	220.5	220.4	219.6	220.1	220.2	220.5	220.1
G51.0	215.1	214.5	214.7	214.0	214.5	214.4	214.9	214.4
G52.0	209.5	209.2	209.5	208.7	209.1	209.1	209.5	209.2
G53.0	204.1	203.0	204.1	202.7	203.4	203.2	204.2	203.2
G54.0	198.0	197.4	197.8	196.9	197.3	197.4	198.2	197.6
G55.0	192.4	191.4	192.3	191.4	191.9	191.6	192.5	191.8
G56.0	185.8	185.1	186.0	185.4	185.8	185.1	185.9	185.5
G57.0	180.0	179.1	180.1	179.6	179.8	179.3	180.1	179.5
G58.0	174.1	173.1	173.8	173.5	173.9	173.1	174.1	172.9
G59.0	167.1	166.4	167.1	166.3	167.3	166.2	166.4	164.0
G60.0	160.7	160.6	160.9	160.1	160.8	158.9	157.6	155.9
G61.0	153.7	153.7	153.8	152.8	153.1	149.8	148.6	148.4
G62.0	147.0	146.6	147.5	146.1	144.8	142.1	141.9	142.2
G63.0	140.7	140.0	141.0	138.3	135.9	135.5	135.2	135.6
G64.0	133.4	132.6	133.0	129.4	128.2	128.5	128.0	128.6
G65.0	125.6	125.5	124.8	121.8	121.7	121.7	121.5	122.0
G66.0	116.8	117.7	115.9	114.5	114.9	114.4	115.4	114.7
G67.0	108.5	108.3	108.1	107.9	108.1	107.8	108.3	107.6
G68.0	101.6	98.4	101.3	100.9	101.9	100.8	100.6	98.2
G69.0	92.9	90.3	93.3	93.6	94.3	91.6	91.2	90.2
G70.0	85.0	83.9	84.9	86.9	85.9	84.1	84.6	83.5
G71.0	77.7	77.6	77.8	78.2	77.9	77.5	78.2	77.0
G72.0	70.5	70.4	70.2	68.5	70.3	70.5	70.6	70.2
G73.0	63.1	63.8	62.5	61.7	64.2	64.1	63.5	62.2
G74.0	56.2	54.4	56.1	55.2	57.7	55.3	55.8	55.1
G75.0	49.5	47.6	49.4	49.3	48.2	49.1	49.6	49.2
G76.0	42.6	42.2	42.7	42.3	42.4	43.1	43.9	42.7
G77.0	35.7	35.9	35.6	35.5	36.4	35.7	36.4	35.6
G78.0	30.8	29.2	30.5	29.5	30.6	29.9	31.2	30.6
G79.0	25.0	24.4	25.1	24.6	25.5	25.2	25.4	25.1

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 22 of 43

Light Distribution Data

Unit: cd/klm

G\C	C40.0	C45.0	C50.0	C55.0	C60.0	C65.0	C70.0	C75.0
G80.0	19.6	19.0	19.5	19.5	19.7	19.8	20.1	19.9
G81.0	15.3	15.0	15.3	15.1	15.8	15.3	15.7	15.6
G82.0	11.6	10.9	11.6	11.0	11.7	11.3	11.8	11.2
G83.0	8.3	8.0	8.3	8.0	8.3	8.1	8.1	7.9
G84.0	5.7	5.6	5.6	5.5	5.6	5.4	5.5	5.3
G85.0	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.2
G86.0	2.1	2.1	2.1	2.0	2.1	2.0	1.9	1.8
G87.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
G88.0	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
G89.0	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5
G90.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 23 of 43

Light Distribution Data

Unit: cd/klm

G\C	C80.0	C85.0	C90.0	C95.0	C100.0	C105.0	C110.0	C115.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.6	351.6	351.6	351.6	351.6	351.5	351.5	351.5
G2.0	351.4	351.4	351.4	351.5	351.4	351.3	351.3	351.2
G3.0	351.1	351.1	351.2	351.1	351.1	351.1	351.0	351.0
G4.0	350.7	350.7	350.8	350.8	350.7	350.7	350.6	350.7
G5.0	350.3	350.3	350.4	350.3	350.3	350.3	350.3	350.4
G6.0	349.7	349.7	349.8	349.8	349.8	349.7	349.8	349.8
G7.0	349.0	349.0	349.1	349.1	349.2	349.1	349.1	349.1
G8.0	348.3	348.2	348.4	348.4	348.4	348.2	348.4	348.3
G9.0	347.4	347.5	347.5	347.5	347.5	347.4	347.5	347.4
G10.0	346.4	346.4	346.6	346.6	346.6	346.5	346.6	346.5
G11.0	345.3	345.4	345.4	345.4	345.5	345.4	345.4	345.4
G12.0	344.2	344.3	344.3	344.3	344.4	344.3	344.3	344.2
G13.0	343.1	343.2	343.3	343.3	343.3	343.0	343.2	343.1
G14.0	341.7	341.8	342.0	341.8	341.9	341.7	341.8	341.7
G15.0	340.3	340.4	340.6	340.4	340.4	340.2	340.4	340.4
G16.0	338.8	338.7	338.8	338.6	338.8	338.5	338.7	338.7
G17.0	337.3	337.1	337.1	337.0	337.1	336.9	337.2	337.1
G18.0	335.7	335.4	335.5	335.2	335.4	335.3	335.5	335.5
G19.0	333.7	333.4	333.4	333.2	333.4	333.4	333.6	333.5
G20.0	331.8	331.5	331.5	331.3	331.4	331.4	331.7	331.7
G21.0	329.7	329.4	329.5	329.1	329.5	329.3	329.7	329.5
G22.0	327.5	327.1	327.2	327.0	327.3	327.2	327.4	327.4
G23.0	325.1	324.8	324.9	324.8	325.0	324.9	325.2	325.2
G24.0	322.3	322.1	322.2	322.0	322.3	322.1	322.7	322.7
G25.0	319.5	319.4	319.6	319.5	319.7	319.6	320.1	320.2
G26.0	317.0	317.0	317.1	317.1	317.2	317.1	317.5	317.4
G27.0	314.1	314.1	314.4	314.2	314.4	314.3	314.6	314.5
G28.0	311.4	311.3	311.6	311.5	311.6	311.4	311.7	311.9
G29.0	308.7	308.3	308.9	308.5	308.9	308.4	309.0	308.8
G30.0	305.5	305.5	305.8	305.4	305.8	305.5	305.8	305.8
G31.0	302.3	302.4	302.7	302.5	302.8	302.4	302.8	302.8
G32.0	299.1	299.1	299.2	298.9	299.4	299.1	299.4	299.5
G33.0	295.8	295.9	295.9	295.7	296.0	295.9	296.2	296.2
G34.0	292.3	292.4	292.5	292.3	292.8	292.5	293.0	292.9
G35.0	288.6	288.6	288.7	288.5	289.0	288.7	289.1	289.0
G36.0	284.9	284.9	285.0	284.8	285.3	285.0	285.6	285.3
G37.0	281.2	280.9	281.4	280.8	281.6	280.9	281.8	281.3
G38.0	277.0	277.0	277.1	277.0	277.3	277.1	277.8	277.5
G39.0	272.9	273.1	273.2	272.9	273.4	273.3	273.9	273.4

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 24 of 43

Light Distribution Data

Unit: cd/klm

G\C	C80.0	C85.0	C90.0	C95.0	C100.0	C105.0	C110.0	C115.0
G40.0	268.5	268.6	268.9	268.6	269.0	268.9	269.5	269.0
G41.0	264.4	264.3	264.9	264.5	264.8	264.6	265.3	264.9
G42.0	260.2	260.2	260.4	260.3	260.4	260.4	260.8	260.5
G43.0	255.2	255.4	255.7	255.4	255.8	255.7	255.9	255.9
G44.0	250.8	250.9	251.2	251.0	251.3	251.2	251.5	251.7
G45.0	246.3	245.9	246.7	246.0	246.6	246.3	246.6	246.7
G46.0	241.1	241.2	241.3	241.2	241.7	241.6	241.7	241.8
G47.0	236.4	236.3	236.5	236.4	237.1	236.7	237.0	237.0
G48.0	231.2	231.1	231.2	231.1	231.6	231.5	231.5	231.7
G49.0	226.0	226.1	226.1	226.0	226.7	226.6	226.6	226.8
G50.0	221.0	220.8	221.2	221.0	221.7	221.5	221.6	221.5
G51.0	215.2	215.2	215.6	215.5	216.1	215.6	216.1	215.8
G52.0	210.0	209.9	210.4	210.0	210.8	210.3	210.7	210.5
G53.0	204.3	204.1	204.8	204.1	205.3	204.2	205.5	204.4
G54.0	198.3	198.3	198.8	198.7	199.3	198.2	199.5	199.0
G55.0	192.8	192.7	193.1	193.1	193.7	192.9	193.8	193.3
G56.0	186.6	186.5	186.8	186.9	187.4	186.3	187.3	186.9
G57.0	180.3	180.0	180.0	180.4	181.4	180.5	181.5	181.1
G58.0	172.7	172.1	172.0	172.1	173.8	173.9	175.5	174.9
G59.0	163.5	162.6	163.0	163.0	164.5	164.9	167.4	168.0
G60.0	155.3	155.5	156.1	155.6	156.3	156.8	159.0	160.3
G61.0	148.3	148.6	148.9	149.0	149.3	149.3	150.0	151.1
G62.0	142.1	142.5	142.5	142.8	143.1	142.8	143.5	143.2
G63.0	135.8	136.2	136.2	136.5	136.7	136.5	136.9	136.7
G64.0	128.6	129.1	129.2	129.2	129.3	129.5	129.7	129.8
G65.0	122.4	122.4	122.9	122.7	122.9	123.0	122.9	123.1
G66.0	115.6	115.3	116.0	115.7	116.1	115.6	116.4	116.0
G67.0	106.8	106.6	106.3	106.6	107.4	108.7	109.2	109.0
G68.0	98.5	98.2	98.6	98.6	98.9	99.7	101.6	102.5
G69.0	91.5	91.1	91.2	91.4	91.9	91.2	92.1	93.2
G70.0	84.8	84.6	84.3	85.1	85.1	84.5	85.6	85.2
G71.0	78.4	77.8	78.1	78.3	78.8	77.6	78.9	78.5
G72.0	70.7	69.7	69.6	70.3	71.3	70.8	71.7	71.6
G73.0	62.5	61.8	62.0	62.1	62.9	62.6	64.7	65.2
G74.0	56.1	54.6	55.7	55.2	56.4	55.8	56.4	56.6
G75.0	49.3	48.7	49.1	49.2	49.9	49.7	50.2	50.0
G76.0	42.4	41.3	41.9	41.6	42.9	43.4	44.5	44.0
G77.0	35.6	35.2	35.5	35.5	36.0	36.1	37.0	36.5
G78.0	30.4	29.7	30.0	29.7	30.8	31.1	31.7	30.4
G79.0	25.3	24.7	25.0	24.8	25.5	25.4	25.9	25.9

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 25 of 43

Light Distribution Data

Unit: cd/klm

G\C	C80.0	C85.0	C90.0	C95.0	C100.0	C105.0	C110.0	C115.0
G80.0	19.9	19.3	19.6	19.5	20.1	20.4	20.5	20.2
G81.0	15.6	15.2	15.5	15.4	16.0	15.9	16.0	15.6
G82.0	11.7	11.0	11.6	11.1	11.9	11.5	12.0	11.6
G83.0	8.2	7.9	8.0	8.0	8.3	8.1	8.4	8.3
G84.0	5.4	5.2	5.3	5.3	5.5	5.5	5.7	5.7
G85.0	3.2	3.1	3.2	3.1	3.3	3.3	3.4	3.5
G86.0	1.7	1.6	1.6	1.7	1.8	1.8	2.0	2.1
G87.0	1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.2
G88.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
G89.0	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
G90.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 26 of 43

Light Distribution Data

Unit: cd/klm

G\C	C120.0	C125.0	C130.0	C135.0	C140.0	C145.0	C150.0	C155.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.5	351.4	351.5	351.5	351.4	351.5	351.6	351.6
G2.0	351.3	351.3	351.4	351.3	351.3	351.3	351.4	351.4
G3.0	351.0	351.0	351.1	351.1	351.0	351.1	351.1	351.1
G4.0	350.7	350.7	350.7	350.8	350.7	350.7	350.8	350.8
G5.0	350.3	350.3	350.3	350.3	350.3	350.3	350.4	350.4
G6.0	349.8	349.8	349.8	349.8	349.7	349.8	349.8	350.0
G7.0	349.1	349.2	349.2	349.2	349.2	349.2	349.3	349.4
G8.0	348.4	348.4	348.5	348.4	348.5	348.5	348.6	348.6
G9.0	347.6	347.5	347.7	347.6	347.7	347.7	347.8	347.8
G10.0	346.7	346.6	346.7	346.8	346.8	346.8	347.0	347.0
G11.0	345.5	345.4	345.6	345.6	345.8	345.8	345.9	345.8
G12.0	344.3	344.4	344.5	344.5	344.7	344.6	344.8	344.8
G13.0	343.1	343.2	343.3	343.3	343.4	343.4	343.5	343.6
G14.0	341.7	341.8	341.9	341.8	342.0	342.1	342.1	342.3
G15.0	340.5	340.4	340.5	340.4	340.6	340.7	340.8	341.0
G16.0	338.9	338.8	338.8	338.9	338.9	339.1	339.3	339.3
G17.0	337.2	337.3	337.4	337.4	337.4	337.6	337.7	337.7
G18.0	335.6	335.5	335.7	335.8	335.8	335.8	336.0	336.0
G19.0	333.6	333.6	333.8	334.0	333.9	333.9	334.2	334.0
G20.0	331.8	331.8	332.1	332.2	332.2	332.1	332.2	332.2
G21.0	329.8	329.7	330.2	329.9	330.2	329.9	330.3	330.0
G22.0	327.5	327.7	328.1	327.8	327.8	328.0	328.0	328.0
G23.0	325.4	325.5	325.9	325.6	325.7	325.8	326.0	325.9
G24.0	323.0	323.2	323.4	323.0	323.3	323.3	323.5	323.6
G25.0	320.5	320.8	321.0	320.5	320.8	321.0	321.3	321.3
G26.0	318.0	318.2	318.4	318.1	318.3	318.7	318.9	318.7
G27.0	315.0	315.2	315.5	315.3	315.7	315.9	316.0	315.9
G28.0	312.2	312.3	312.6	312.7	313.1	313.2	313.2	313.2
G29.0	309.4	308.9	309.8	309.6	310.3	310.0	310.3	310.1
G30.0	306.2	306.0	306.5	306.9	307.2	306.9	307.2	307.3
G31.0	303.2	303.0	303.5	303.7	303.9	304.0	304.3	304.3
G32.0	299.8	299.6	300.2	300.2	300.6	300.5	300.9	300.9
G33.0	296.3	296.5	297.0	296.9	297.4	297.4	297.9	297.8
G34.0	293.0	293.0	293.6	293.3	293.9	294.1	294.6	294.5
G35.0	289.2	289.4	289.8	289.5	290.0	290.3	290.8	290.6
G36.0	285.6	285.9	286.0	286.0	286.4	286.8	287.4	287.1
G37.0	282.0	282.0	282.4	282.0	282.6	282.7	283.6	283.2
G38.0	277.8	278.0	278.3	278.3	278.6	278.8	279.6	279.5
G39.0	274.1	274.0	274.3	274.4	274.8	274.7	275.7	275.5

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36

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Light Distribution Data

Unit: cd/klm

G\C	C120.0	C125.0	C130.0	C135.0	C140.0	C145.0	C150.0	C155.0
G40.0	269.7	269.7	270.0	270.1	270.3	270.4	271.2	271.3
G41.0	265.4	265.4	266.0	265.8	266.3	266.4	266.9	267.2
G42.0	261.3	261.2	261.6	261.6	262.3	262.0	262.6	263.0
G43.0	256.5	256.5	256.9	257.0	257.6	257.4	258.0	258.5
G44.0	252.1	252.0	252.5	252.6	253.0	253.1	253.5	254.3
G45.0	247.3	246.8	247.9	247.3	248.5	248.3	249.1	249.3
G46.0	242.2	242.2	242.8	242.7	243.5	243.5	244.2	244.4
G47.0	237.2	237.4	238.0	237.9	238.5	238.9	239.3	239.6
G48.0	232.0	231.9	232.7	232.3	233.3	233.7	234.1	234.3
G49.0	227.2	226.8	227.5	227.4	228.4	228.7	229.2	229.2
G50.0	222.1	221.8	222.4	222.5	223.2	223.3	224.2	224.2
G51.0	216.5	216.0	216.7	216.7	217.5	217.7	218.5	218.5
G52.0	210.9	210.4	211.5	211.4	212.3	212.4	213.0	213.0
G53.0	205.5	204.4	205.9	205.4	206.9	206.0	207.6	207.1
G54.0	199.4	198.5	200.0	199.7	200.8	200.5	201.5	201.6
G55.0	193.8	193.2	194.4	194.1	194.9	195.0	196.0	196.0
G56.0	187.2	187.2	188.1	187.9	188.6	188.8	189.6	189.6
G57.0	181.4	181.5	182.0	181.6	182.8	183.2	183.8	183.4
G58.0	175.5	175.5	176.1	175.6	177.0	176.9	177.8	177.4
G59.0	168.9	168.7	169.4	169.0	170.1	170.0	170.8	170.5
G60.0	162.4	162.3	162.8	162.7	163.9	163.7	164.5	163.4
G61.0	155.0	155.3	155.9	156.1	156.5	156.4	157.3	154.4
G62.0	146.7	148.3	149.5	149.1	150.1	149.7	148.9	146.1
G63.0	137.8	140.2	143.1	142.5	143.5	142.3	139.9	138.8
G64.0	130.1	131.0	135.4	135.2	136.2	133.1	131.4	131.5
G65.0	123.6	123.6	127.0	128.1	128.1	124.7	124.5	124.9
G66.0	116.7	116.6	118.3	120.4	119.3	117.2	117.9	117.7
G67.0	109.6	109.7	109.9	110.5	110.7	110.6	110.8	110.7
G68.0	103.3	102.9	103.1	100.4	103.7	103.7	104.6	104.1
G69.0	95.9	95.1	95.2	92.3	94.9	96.4	97.0	95.4
G70.0	87.7	88.4	86.5	85.4	86.9	89.2	89.3	86.6
G71.0	79.3	80.3	79.4	79.3	79.8	81.2	80.6	80.0
G72.0	71.7	69.8	71.9	72.3	72.4	70.6	72.6	72.5
G73.0	65.5	62.9	63.8	65.4	64.3	63.4	66.3	66.3
G74.0	59.0	56.4	57.6	56.1	57.7	56.9	59.3	58.3
G75.0	49.2	50.5	50.6	48.8	51.0	51.2	50.5	51.2
G76.0	42.9	43.1	44.0	43.2	44.0	43.9	43.9	44.9
G77.0	37.2	36.4	36.2	37.1	36.9	37.1	37.9	37.9
G78.0	31.2	30.7	31.3	30.1	31.5	31.1	32.1	31.4
G79.0	26.1	25.2	26.1	25.2	26.3	25.6	26.4	26.4

Test Type : Type C

Test Distance : 8.137 m

C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 28 of 43

Light Distribution Data

Unit: cd/klm

G\C	C120.0	C125.0	C130.0	C135.0	C140.0	C145.0	C150.0	C155.0
G80.0	20.1	20.6	20.2	20.2	20.5	20.7	20.7	21.0
G81.0	16.3	15.6	16.1	15.5	16.1	15.9	16.8	16.3
G82.0	12.1	11.4	12.0	11.3	12.2	11.7	12.4	12.1
G83.0	8.6	8.4	8.6	8.4	8.6	8.6	8.9	8.6
G84.0	5.8	5.8	5.9	5.9	6.0	5.9	6.1	5.9
G85.0	3.5	3.6	3.7	3.7	3.8	3.7	3.8	3.6
G86.0	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2
G87.0	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.3
G88.0	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9
G89.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
G90.0	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 29 of 43

Light Distribution Data

Unit: cd/klm

G\C	C160.0	C165.0	C170.0	C175.0	C180.0	C185.0	C190.0	C195.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.5	351.5	351.5	351.6	351.5	351.6	351.6	351.5
G2.0	351.4	351.4	351.4	351.4	351.4	351.3	351.4	351.4
G3.0	351.1	351.1	351.1	351.1	351.1	351.1	351.1	351.1
G4.0	350.8	350.7	350.7	350.8	350.8	350.8	350.8	350.8
G5.0	350.4	350.4	350.4	350.6	350.5	350.6	350.5	350.4
G6.0	350.0	350.0	350.0	350.1	350.0	350.1	350.0	349.9
G7.0	349.5	349.4	349.5	349.5	349.4	349.5	349.4	349.3
G8.0	348.8	348.6	348.8	348.8	348.6	348.8	348.7	348.6
G9.0	348.0	347.9	348.0	348.0	347.9	347.9	347.8	347.9
G10.0	347.1	347.0	347.1	347.1	346.9	347.0	346.9	346.9
G11.0	346.0	345.9	346.1	346.1	345.9	345.9	345.8	345.8
G12.0	344.9	344.9	345.1	345.2	344.9	345.0	344.8	344.7
G13.0	343.8	343.8	344.0	344.1	343.9	344.0	343.7	343.6
G14.0	342.5	342.5	342.7	342.9	342.7	342.8	342.4	342.3
G15.0	341.3	341.2	341.3	341.6	341.3	341.5	341.0	340.9
G16.0	339.7	339.6	339.6	339.9	339.7	340.0	339.3	339.3
G17.0	338.0	338.0	338.1	338.2	338.0	338.1	337.7	337.6
G18.0	336.4	336.3	336.4	336.4	336.1	336.4	336.1	336.0
G19.0	334.3	334.3	334.4	334.4	334.1	334.3	334.1	334.0
G20.0	332.5	332.4	332.7	332.5	332.2	332.4	332.4	332.2
G21.0	330.6	330.4	330.8	330.6	330.4	330.6	330.4	330.4
G22.0	328.5	328.4	328.7	328.6	328.3	328.4	328.3	328.3
G23.0	326.4	326.4	326.7	326.6	326.1	326.3	326.0	326.1
G24.0	324.0	324.0	324.2	324.0	323.4	323.8	323.5	323.8
G25.0	321.7	321.4	321.8	321.6	321.0	321.1	320.9	321.0
G26.0	319.0	318.9	319.1	319.1	318.5	318.6	318.4	318.4
G27.0	316.1	316.1	316.3	316.3	315.7	315.8	315.4	315.5
G28.0	313.3	313.3	313.5	313.7	313.0	313.2	312.8	312.8
G29.0	310.5	310.4	310.9	310.6	310.2	310.3	309.9	309.9
G30.0	307.5	307.5	307.9	307.9	307.1	307.2	306.7	306.8
G31.0	304.5	304.5	304.8	304.8	304.1	304.2	303.8	303.7
G32.0	301.2	301.3	301.6	301.5	300.7	300.9	300.4	300.4
G33.0	298.1	298.2	298.5	298.4	297.5	297.6	297.2	297.1
G34.0	294.9	294.7	295.1	295.0	294.1	294.4	293.9	293.9
G35.0	291.2	291.0	291.4	291.3	290.3	290.7	290.0	290.1
G36.0	287.6	287.4	288.0	287.8	286.6	287.0	286.6	286.6
G37.0	284.1	283.5	284.3	283.8	282.7	283.3	282.6	282.9
G38.0	280.0	279.8	280.3	280.1	278.8	279.2	278.9	279.0
G39.0	276.1	276.1	276.6	276.4	275.0	275.5	274.9	275.3

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 30 of 43

Light Distribution Data

Unit: cd/klm

G\C	C160.0	C165.0	C170.0	C175.0	C180.0	C185.0	C190.0	C195.0
G40.0	271.8	271.8	272.2	272.2	270.8	271.0	270.6	270.9
G41.0	267.7	267.7	268.2	268.1	266.8	267.1	266.6	266.9
G42.0	263.7	263.7	264.1	264.1	262.6	262.9	262.3	262.6
G43.0	259.1	258.9	259.6	259.4	257.8	258.2	257.7	258.1
G44.0	254.8	254.7	255.0	254.9	253.5	253.7	253.1	253.4
G45.0	250.3	249.7	250.6	250.1	248.4	249.2	248.3	248.9
G46.0	245.1	245.1	245.4	245.6	243.8	244.0	243.5	243.7
G47.0	240.4	240.2	240.8	240.8	238.7	239.4	238.9	238.9
G48.0	235.2	235.0	235.6	235.3	233.5	234.1	233.4	233.7
G49.0	230.0	230.2	230.7	230.6	228.3	228.9	228.5	228.7
G50.0	224.9	224.9	225.5	225.5	223.3	223.9	223.3	223.3
G51.0	219.2	219.2	219.9	219.8	217.7	218.1	217.7	217.7
G52.0	214.0	214.0	214.8	214.6	212.3	212.6	212.2	212.5
G53.0	208.4	208.1	209.3	208.7	206.4	207.3	206.2	206.9
G54.0	202.3	202.4	203.2	203.2	200.5	201.3	200.4	200.9
G55.0	196.7	196.8	197.7	197.6	194.8	195.4	194.9	195.1
G56.0	190.4	190.4	191.6	191.1	188.1	189.1	188.6	188.8
G57.0	184.3	184.4	185.7	185.0	181.5	182.3	182.1	182.5
G58.0	178.3	178.2	178.4	177.5	172.6	174.3	174.4	175.8
G59.0	171.1	169.4	169.0	167.6	163.6	164.6	164.3	166.4
G60.0	163.1	160.8	160.6	159.9	156.5	157.4	156.6	158.1
G61.0	153.2	152.1	152.7	152.9	149.5	150.9	149.3	150.6
G62.0	145.8	145.8	146.4	146.5	142.9	144.1	143.0	143.8
G63.0	139.5	139.4	140.0	140.1	136.5	137.4	136.3	137.1
G64.0	131.9	132.3	132.6	133.2	129.4	130.4	129.0	130.1
G65.0	125.4	125.6	126.5	126.7	123.1	123.7	122.8	123.4
G66.0	118.8	118.5	120.0	119.7	115.6	117.0	116.1	116.9
G67.0	111.7	111.9	111.5	111.2	105.0	106.9	106.5	108.8
G68.0	104.4	102.5	102.4	102.2	97.8	98.9	98.2	99.5
G69.0	94.8	93.8	94.8	94.5	90.4	92.2	90.9	91.8
G70.0	87.3	87.0	87.7	87.8	83.5	84.6	84.2	84.1
G71.0	80.8	80.0	81.2	81.4	77.1	78.3	77.7	77.6
G72.0	73.7	73.3	74.4	73.8	67.9	69.3	69.2	70.6
G73.0	66.6	65.5	65.4	64.9	60.8	61.9	61.4	62.1
G74.0	58.3	57.6	58.9	58.0	54.4	55.6	55.0	55.8
G75.0	51.6	51.5	51.9	51.5	47.4	48.5	48.4	49.1
G76.0	45.8	45.4	45.4	44.1	40.1	40.6	40.5	41.9
G77.0	38.4	37.7	38.0	37.3	34.0	34.7	34.4	35.5
G78.0	32.7	32.3	32.5	32.0	28.0	28.5	28.7	30.1
G79.0	27.5	26.4	26.5	26.1	23.6	24.0	23.9	24.7

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 31 of 43

Light Distribution Data

Unit: cd/klm

G\C	C160.0	C165.0	C170.0	C175.0	C180.0	C185.0	C190.0	C195.0
G80.0	21.5	21.4	21.5	20.9	18.2	18.7	18.4	19.1
G81.0	16.6	16.8	16.9	16.6	13.9	14.4	14.1	14.9
G82.0	12.6	12.2	12.7	12.1	9.9	10.7	10.1	11.0
G83.0	8.8	8.7	9.0	8.6	7.0	7.1	7.1	7.3
G84.0	6.2	5.9	6.0	5.9	4.6	4.6	4.6	4.9
G85.0	3.7	3.7	3.7	3.6	2.5	2.6	2.7	2.7
G86.0	2.2	2.1	2.1	2.1	1.4	1.4	1.4	1.5
G87.0	1.3	1.3	1.2	1.2	1.0	0.9	0.9	1.0
G88.0	0.9	0.9	0.8	0.9	0.6	0.6	0.6	0.6
G89.0	0.5	0.5	0.5	0.6	0.2	0.2	0.2	0.3
G90.0	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 32 of 43

Light Distribution Data

Unit: cd/klm

G\C	C200.0	C205.0	C210.0	C215.0	C220.0	C225.0	C230.0	C235.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.5	351.6	351.6	351.6	351.5	351.5	351.6	351.6
G2.0	351.4	351.4	351.4	351.4	351.4	351.4	351.5	351.4
G3.0	351.1	351.2	351.1	351.1	351.1	351.2	351.3	351.2
G4.0	350.8	350.8	350.8	350.8	350.8	350.8	350.9	350.8
G5.0	350.4	350.4	350.3	350.4	350.3	350.3	350.5	350.4
G6.0	349.9	349.9	349.8	349.9	349.7	349.7	349.8	349.8
G7.0	349.4	349.3	349.3	349.2	349.1	349.1	349.2	349.1
G8.0	348.6	348.7	348.4	348.5	348.3	348.3	348.4	348.4
G9.0	347.8	347.7	347.6	347.6	347.4	347.5	347.5	347.4
G10.0	346.8	346.8	346.7	346.6	346.6	346.5	346.6	346.5
G11.0	345.7	345.7	345.6	345.7	345.4	345.4	345.5	345.3
G12.0	344.6	344.6	344.5	344.5	344.4	344.3	344.3	344.3
G13.0	343.4	343.4	343.3	343.4	343.1	343.1	343.1	343.1
G14.0	342.1	342.1	342.0	342.0	341.7	341.7	341.7	341.8
G15.0	340.7	340.8	340.6	340.6	340.3	340.3	340.4	340.5
G16.0	339.1	339.3	339.0	339.1	338.8	338.9	338.8	339.0
G17.0	337.5	337.6	337.4	337.5	337.3	337.3	337.3	337.3
G18.0	335.8	335.9	335.7	335.7	335.7	335.7	335.5	335.6
G19.0	333.9	333.9	333.7	333.8	333.7	333.8	333.7	333.7
G20.0	332.1	332.0	331.8	331.9	331.7	332.1	331.9	331.9
G21.0	330.1	330.2	329.9	330.0	329.7	330.0	330.1	330.0
G22.0	328.0	328.0	327.8	327.7	327.5	327.7	327.9	328.0
G23.0	325.8	325.8	325.7	325.6	325.1	325.5	325.7	325.9
G24.0	323.3	323.6	323.3	323.3	322.7	323.2	323.3	323.8
G25.0	320.8	321.1	320.8	320.7	320.2	320.6	321.0	321.1
G26.0	318.2	318.6	318.4	318.4	317.9	318.2	318.6	318.6
G27.0	315.1	315.6	315.4	315.6	315.2	315.6	315.6	315.3
G28.0	312.5	312.9	312.7	312.9	312.6	313.1	312.5	312.3
G29.0	309.7	310.0	309.7	309.9	310.0	310.3	309.6	309.4
G30.0	306.6	306.9	306.6	306.7	306.8	307.1	306.3	306.2
G31.0	303.7	303.8	303.6	303.9	303.7	303.8	303.4	303.1
G32.0	300.3	300.4	300.3	300.6	300.1	300.1	300.0	299.8
G33.0	297.1	297.1	297.1	297.4	296.6	296.8	296.8	296.6
G34.0	293.8	293.9	293.9	294.2	293.2	293.4	293.4	293.4
G35.0	289.9	290.1	290.3	290.4	289.3	289.5	289.5	289.6
G36.0	286.3	286.6	286.8	286.6	285.9	286.0	285.7	286.2
G37.0	282.3	282.8	283.0	282.8	281.7	282.3	281.7	282.5
G38.0	278.6	278.8	279.1	278.6	278.1	278.2	277.8	278.4
G39.0	274.6	275.0	275.0	274.7	274.1	274.3	274.0	274.2

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 33 of 43

Light Distribution Data

Unit: cd/klm

G\C	C200.0	C205.0	C210.0	C215.0	C220.0	C225.0	C230.0	C235.0
G40.0	270.3	270.7	270.3	270.2	269.8	270.1	269.9	269.9
G41.0	266.1	266.8	265.9	266.3	265.8	265.9	265.7	265.9
G42.0	262.1	262.6	261.7	261.9	261.4	261.7	261.5	261.5
G43.0	257.6	258.0	257.0	257.3	256.7	257.0	256.7	256.6
G44.0	253.1	253.5	252.5	252.7	252.1	252.4	252.4	252.3
G45.0	248.0	248.9	247.7	248.3	247.2	247.7	247.2	247.6
G46.0	243.5	243.5	242.9	243.1	242.4	242.7	242.5	242.6
G47.0	239.0	238.7	238.2	238.5	237.7	238.0	237.4	238.0
G48.0	233.6	233.2	232.7	233.2	232.3	232.5	232.2	232.4
G49.0	228.5	228.4	227.7	228.0	227.4	227.6	227.0	227.3
G50.0	223.1	223.1	222.4	222.9	222.2	222.5	222.0	222.0
G51.0	217.3	217.5	216.8	217.1	216.6	217.0	216.3	216.3
G52.0	211.9	212.0	211.5	211.9	211.4	211.5	210.9	210.8
G53.0	205.8	206.7	205.3	206.1	205.2	206.0	205.0	205.3
G54.0	200.0	200.7	199.8	199.9	199.3	199.9	199.3	199.2
G55.0	194.4	194.7	194.0	194.1	193.7	194.0	193.7	193.5
G56.0	187.8	188.2	187.8	188.1	187.4	187.7	187.2	187.6
G57.0	181.9	182.0	181.6	182.0	181.2	181.4	181.4	181.7
G58.0	175.8	176.0	175.5	176.0	175.2	175.3	175.0	175.7
G59.0	167.6	168.9	168.7	169.0	168.3	168.5	168.2	168.7
G60.0	158.9	161.3	162.2	162.5	162.1	162.6	161.6	162.6
G61.0	149.7	152.8	154.6	156.1	155.0	156.3	154.8	156.0
G62.0	143.0	144.2	145.6	148.6	148.5	148.7	148.1	148.3
G63.0	136.3	137.1	136.8	140.5	141.7	142.2	141.8	140.6
G64.0	128.8	130.1	129.1	131.2	134.2	134.5	134.0	131.2
G65.0	122.4	123.3	122.2	123.3	125.2	127.5	125.6	123.7
G66.0	115.9	116.8	115.3	116.7	116.4	120.0	116.7	116.9
G67.0	108.5	109.2	108.6	109.2	108.5	109.5	108.4	109.7
G68.0	99.9	102.1	102.2	102.6	101.1	99.4	101.4	102.6
G69.0	90.9	93.5	94.4	95.7	92.8	91.8	92.9	95.5
G70.0	84.1	84.6	85.5	88.2	85.0	84.8	84.5	87.7
G71.0	77.5	78.2	77.6	79.2	77.8	78.5	77.7	79.5
G72.0	70.5	70.9	70.2	69.4	70.0	71.3	69.8	69.2
G73.0	62.4	64.7	63.7	62.3	62.2	64.3	62.6	62.2
G74.0	55.2	56.2	56.4	56.4	55.5	55.6	55.9	56.4
G75.0	48.8	49.3	47.5	49.7	48.8	48.0	48.6	49.7
G76.0	42.7	43.1	41.5	42.3	41.8	42.5	41.9	42.5
G77.0	35.4	35.2	35.7	35.7	35.0	36.1	35.1	35.6
G78.0	30.1	29.8	29.6	29.7	29.9	29.3	30.0	29.8
G79.0	24.3	25.0	24.3	24.6	24.0	24.5	24.2	24.7

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 34 of 43

Light Distribution Data

Unit: cd/klm

G\C	C200.0	C205.0	C210.0	C215.0	C220.0	C225.0	C230.0	C235.0
G80.0	18.9	19.5	18.8	19.7	18.9	19.0	19.0	19.4
G81.0	14.7	14.9	14.6	14.9	14.3	15.0	14.3	15.1
G82.0	10.6	11.0	10.6	11.3	10.5	11.1	10.7	11.1
G83.0	7.3	7.6	7.5	7.8	7.6	7.6	7.6	7.8
G84.0	4.8	5.0	5.0	5.2	5.1	5.3	5.1	5.2
G85.0	2.8	2.9	3.0	3.2	3.1	3.2	3.1	3.1
G86.0	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8
G87.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G88.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
G89.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
G90.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 35 of 43

Light Distribution Data

Unit: cd/klm

G\C	C240.0	C245.0	C250.0	C255.0	C260.0	C265.0	C270.0	C275.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.6	351.6	351.7	351.6	351.6	351.6	351.6	351.7
G2.0	351.4	351.5	351.5	351.5	351.5	351.5	351.5	351.6
G3.0	351.2	351.2	351.3	351.3	351.2	351.3	351.3	351.3
G4.0	350.8	350.9	350.9	350.9	350.8	350.9	351.0	350.9
G5.0	350.4	350.5	350.4	350.4	350.4	350.5	350.4	350.4
G6.0	349.7	349.8	349.8	349.8	349.7	349.8	349.8	349.8
G7.0	349.1	349.1	349.0	349.1	349.1	349.2	349.0	349.1
G8.0	348.3	348.4	348.2	348.4	348.2	348.3	348.2	348.3
G9.0	347.4	347.4	347.2	347.3	347.2	347.3	347.3	347.3
G10.0	346.4	346.5	346.3	346.3	346.3	346.4	346.3	346.3
G11.0	345.3	345.4	345.2	345.2	345.2	345.3	345.3	345.3
G12.0	344.2	344.3	344.2	344.1	344.1	344.2	344.2	344.2
G13.0	343.1	343.2	343.1	342.9	343.0	343.0	343.0	343.0
G14.0	341.7	341.9	341.6	341.6	341.4	341.5	341.5	341.6
G15.0	340.3	340.5	340.1	340.1	339.9	340.1	340.0	340.2
G16.0	338.6	339.0	338.6	338.7	338.4	338.6	338.4	338.7
G17.0	337.0	337.2	337.0	336.9	336.7	336.8	336.7	337.1
G18.0	335.3	335.6	335.3	335.3	335.0	335.2	335.1	335.5
G19.0	333.5	333.6	333.4	333.4	333.2	333.3	333.3	333.7
G20.0	331.6	331.8	331.7	331.7	331.4	331.7	331.8	332.0
G21.0	329.7	330.0	329.8	329.8	329.6	329.8	329.8	330.1
G22.0	327.6	327.8	327.6	327.6	327.3	327.4	327.4	327.7
G23.0	325.6	325.5	325.2	325.2	324.9	325.0	324.9	325.1
G24.0	323.1	323.1	322.5	322.7	322.2	322.6	322.3	322.6
G25.0	320.5	320.2	319.8	320.0	319.7	319.9	319.9	320.0
G26.0	317.8	317.7	317.3	317.6	317.2	317.5	317.4	317.4
G27.0	314.8	314.8	314.3	314.6	314.4	314.5	314.4	314.5
G28.0	311.9	312.1	311.6	312.0	311.5	311.9	311.6	311.7
G29.0	309.1	309.3	308.9	309.1	308.8	309.0	308.8	309.0
G30.0	305.8	306.1	305.6	306.0	305.5	305.8	305.5	305.8
G31.0	302.8	303.1	302.7	302.9	302.6	302.6	302.5	303.0
G32.0	299.2	299.8	299.4	299.4	299.3	299.3	299.2	299.6
G33.0	296.1	296.5	296.1	296.2	296.0	296.0	295.8	296.3
G34.0	292.6	293.3	292.9	293.0	292.8	292.7	292.5	293.0
G35.0	289.0	289.3	289.1	289.1	288.9	288.8	288.6	289.2
G36.0	285.4	285.8	285.7	285.6	285.4	285.3	285.2	285.6
G37.0	281.5	282.0	281.6	281.9	281.2	281.5	281.0	282.0
G38.0	277.8	278.0	277.9	277.8	277.5	277.4	277.3	277.7
G39.0	274.0	274.2	273.9	273.8	273.5	273.6	273.3	273.7

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 36 of 43

Light Distribution Data

Unit: cd/klm

G\C	C240.0	C245.0	C250.0	C255.0	C260.0	C265.0	C270.0	C275.0
G40.0	269.7	269.7	269.5	269.5	269.1	269.2	268.9	269.1
G41.0	265.5	265.7	265.2	265.4	264.9	265.1	264.9	265.1
G42.0	261.2	261.4	260.7	261.2	260.7	260.8	260.5	260.7
G43.0	256.4	256.9	256.0	256.4	255.8	256.1	255.7	256.1
G44.0	252.0	252.4	251.3	252.0	251.5	251.6	251.1	251.6
G45.0	246.8	248.0	246.3	247.4	246.4	247.1	246.0	247.1
G46.0	242.1	242.6	241.5	242.4	241.9	242.1	241.4	242.1
G47.0	237.1	237.8	236.9	237.5	237.0	237.3	236.7	237.2
G48.0	231.9	232.4	231.5	232.2	231.7	231.7	231.1	232.0
G49.0	226.8	227.3	226.6	227.1	226.6	226.9	226.3	226.9
G50.0	221.8	221.9	221.3	222.0	221.6	221.7	221.1	221.8
G51.0	216.2	216.3	215.8	216.4	215.9	216.1	215.6	215.9
G52.0	210.8	210.8	210.4	210.7	210.5	210.6	210.2	210.6
G53.0	204.8	205.6	204.6	205.0	204.6	205.2	204.0	205.0
G54.0	198.9	199.6	198.8	198.9	198.9	199.3	198.6	199.0
G55.0	193.3	193.6	193.1	193.3	193.4	193.5	192.7	193.2
G56.0	186.7	187.3	186.8	186.8	187.0	187.3	185.9	186.9
G57.0	180.8	181.3	180.7	180.9	181.0	180.8	179.5	180.4
G58.0	174.6	175.4	174.8	174.6	173.1	173.1	171.5	172.5
G59.0	167.9	168.2	166.8	165.8	163.7	163.6	162.3	162.9
G60.0	161.5	161.2	158.4	157.4	155.6	156.4	155.4	155.8
G61.0	154.2	152.6	149.2	150.3	148.9	150.1	148.4	149.5
G62.0	145.4	143.9	142.7	143.2	142.3	143.4	141.7	142.8
G63.0	136.9	136.8	136.2	136.9	135.9	136.9	135.5	136.7
G64.0	129.0	129.9	128.7	129.7	128.6	129.8	128.5	129.3
G65.0	122.5	123.3	122.1	123.1	121.8	122.9	121.9	122.4
G66.0	115.6	116.4	115.2	116.3	115.0	116.4	114.5	116.0
G67.0	108.7	109.0	107.9	108.9	106.3	106.9	105.0	106.4
G68.0	101.9	102.1	100.0	99.7	98.0	98.5	97.4	98.4
G69.0	94.5	93.9	91.2	92.1	90.8	92.2	90.1	91.7
G70.0	85.8	84.8	84.5	84.5	84.0	84.9	83.3	84.4
G71.0	77.9	78.4	78.0	77.6	77.7	78.3	77.1	77.8
G72.0	70.3	71.2	70.3	70.5	69.6	69.7	68.1	69.4
G73.0	63.8	64.9	62.6	62.2	61.8	62.2	61.0	61.6
G74.0	56.5	56.7	55.3	56.1	55.5	55.7	54.5	55.0
G75.0	47.3	49.4	48.9	49.8	48.5	48.8	47.2	48.3
G76.0	41.7	43.5	43.0	42.8	41.1	41.0	40.3	40.7
G77.0	35.9	35.8	35.6	35.7	35.0	35.1	34.5	34.9
G78.0	29.7	30.0	30.4	30.5	28.8	28.9	28.2	28.7
G79.0	24.4	24.9	24.6	25.0	24.3	24.4	23.9	24.3

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 37 of 43

Light Distribution Data

Unit: cd/klm

G\C	C240.0	C245.0	C250.0	C255.0	C260.0	C265.0	C270.0	C275.0
G80.0	19.1	19.8	19.0	19.6	18.9	18.9	18.4	18.7
G81.0	14.8	15.0	14.7	15.2	14.5	14.6	13.9	14.3
G82.0	10.7	11.1	10.7	11.1	10.4	10.7	10.0	10.8
G83.0	7.6	7.6	7.3	7.5	7.2	7.3	6.9	7.1
G84.0	5.1	5.1	4.8	4.9	4.8	4.7	4.5	4.7
G85.0	3.0	2.9	2.7	2.8	2.6	2.6	2.4	2.6
G86.0	1.7	1.6	1.5	1.5	1.4	1.3	1.3	1.3
G87.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9
G88.0	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6
G89.0	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
G90.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 38 of 43

Light Distribution Data

Unit: cd/klm

G\C	C280.0	C285.0	C290.0	C295.0	C300.0	C305.0	C310.0	C315.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.6	351.7	351.7	351.7	351.7	351.6	351.7	351.7
G2.0	351.5	351.5	351.6	351.6	351.6	351.6	351.6	351.7
G3.0	351.3	351.2	351.3	351.3	351.3	351.4	351.3	351.5
G4.0	350.8	350.9	350.9	350.9	350.8	350.9	350.9	351.1
G5.0	350.4	350.4	350.3	350.4	350.3	350.3	350.3	350.5
G6.0	349.7	349.7	349.5	349.6	349.5	349.5	349.5	349.7
G7.0	349.0	349.0	348.9	348.9	348.8	348.8	348.7	349.0
G8.0	348.1	348.2	348.0	348.1	348.0	348.0	347.9	348.1
G9.0	347.1	347.2	347.1	347.2	347.1	347.1	347.1	347.2
G10.0	346.2	346.1	346.1	346.1	346.1	346.1	346.1	346.2
G11.0	345.0	345.1	344.9	345.0	344.8	345.0	344.9	345.0
G12.0	344.0	344.0	343.9	343.9	343.7	343.8	343.6	343.9
G13.0	342.8	342.9	342.8	342.7	342.5	342.6	342.4	342.6
G14.0	341.4	341.4	341.3	341.3	341.2	341.3	341.0	341.1
G15.0	340.0	340.1	339.9	340.0	339.7	339.8	339.6	339.6
G16.0	338.5	338.6	338.3	338.4	338.1	338.3	338.0	338.3
G17.0	336.9	337.0	336.6	336.7	336.4	336.6	336.3	336.5
G18.0	335.4	335.4	335.0	335.0	334.7	334.7	334.6	334.6
G19.0	333.6	333.6	333.0	333.1	332.7	332.8	332.5	332.7
G20.0	331.9	331.9	331.3	331.2	330.8	330.9	330.5	330.8
G21.0	330.0	330.0	329.3	329.2	328.8	328.8	328.4	328.7
G22.0	327.5	327.5	327.1	327.0	326.6	326.6	326.1	326.4
G23.0	324.9	325.0	324.7	324.8	324.5	324.4	323.9	324.1
G24.0	322.1	322.5	321.9	322.3	321.9	322.3	321.6	321.8
G25.0	319.5	319.6	319.2	319.5	319.2	319.6	319.2	319.2
G26.0	317.0	317.1	316.7	316.8	316.6	317.0	316.8	316.8
G27.0	314.1	314.1	313.7	313.8	313.4	314.0	313.9	314.1
G28.0	311.4	311.4	311.0	311.1	310.8	311.1	311.0	311.4
G29.0	308.5	308.5	308.1	308.3	307.9	308.1	308.0	308.6
G30.0	305.2	305.3	304.8	305.0	304.7	304.8	304.7	305.3
G31.0	302.3	302.2	301.8	301.9	301.6	301.9	301.6	302.2
G32.0	299.0	298.9	298.4	298.6	298.2	298.3	298.0	298.4
G33.0	295.7	295.6	295.1	295.2	294.8	295.1	294.7	295.1
G34.0	292.4	292.4	291.9	291.9	291.5	291.7	291.4	291.5
G35.0	288.5	288.5	288.0	288.2	287.6	288.0	287.4	287.7
G36.0	285.0	285.0	284.5	284.5	284.2	284.5	283.8	284.1
G37.0	280.9	281.3	280.6	280.9	280.2	280.8	279.8	280.3
G38.0	277.0	277.1	276.7	276.7	276.3	276.8	276.0	276.2
G39.0	273.0	273.3	272.9	272.8	272.5	272.7	272.0	272.1

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 39 of 43

Light Distribution Data

Unit: cd/klm

G\C	C280.0	C285.0	C290.0	C295.0	C300.0	C305.0	C310.0	C315.0
G40.0	268.6	268.8	268.3	268.4	268.0	268.3	267.6	267.7
G41.0	264.5	264.7	264.2	264.4	264.1	264.1	263.2	263.4
G42.0	260.1	260.4	259.9	260.1	259.7	259.8	259.0	259.3
G43.0	255.4	255.7	255.2	255.5	255.0	254.9	254.4	254.4
G44.0	250.8	251.0	250.7	251.0	250.3	250.5	249.8	250.1
G45.0	245.9	246.4	245.5	246.4	245.3	245.7	244.9	245.4
G46.0	241.1	241.1	240.7	241.3	240.4	240.7	239.9	240.3
G47.0	236.4	236.5	236.0	236.4	235.6	235.6	235.2	235.6
G48.0	230.9	231.2	230.4	231.1	230.2	230.2	229.8	230.2
G49.0	226.0	226.0	225.3	225.9	225.0	225.0	224.7	225.5
G50.0	220.8	220.7	220.1	220.9	220.0	220.0	219.7	220.4
G51.0	215.1	215.1	214.6	214.9	214.1	214.3	214.1	214.8
G52.0	209.5	209.6	209.5	209.6	208.8	209.0	208.6	209.1
G53.0	203.5	204.2	203.3	204.0	202.5	203.5	202.8	203.5
G54.0	198.0	198.2	197.8	197.9	197.1	197.3	197.0	197.1
G55.0	192.3	192.4	191.9	191.8	191.3	192.0	191.4	191.5
G56.0	186.1	186.1	185.6	185.4	185.2	185.7	184.8	184.9
G57.0	179.8	179.9	179.5	179.6	179.1	179.9	179.0	178.9
G58.0	172.3	173.7	173.5	173.4	173.3	173.4	172.6	172.6
G59.0	162.4	164.7	165.7	166.6	166.6	166.6	166.0	166.3
G60.0	154.8	156.5	156.7	159.3	160.3	160.2	159.8	160.3
G61.0	147.7	149.2	147.8	150.9	152.7	153.8	152.7	153.9
G62.0	141.5	142.2	141.1	142.3	143.6	146.4	146.1	146.3
G63.0	134.9	136.0	134.6	135.5	134.7	138.6	139.6	139.7
G64.0	127.8	128.7	127.5	128.7	127.4	129.1	131.6	132.0
G65.0	121.4	122.1	121.0	122.0	120.5	121.8	122.8	125.3
G66.0	114.4	115.3	114.4	115.2	114.1	115.0	114.0	118.2
G67.0	105.7	107.8	107.2	107.6	107.1	107.9	106.6	107.3
G68.0	97.8	98.4	99.4	100.9	100.7	100.7	99.8	97.2
G69.0	90.5	91.0	90.2	92.3	92.9	94.0	91.1	90.1
G70.0	84.1	83.5	83.5	84.0	84.1	86.4	82.7	83.3
G71.0	77.4	77.3	76.9	77.5	76.2	77.5	76.1	76.9
G72.0	69.3	70.1	69.2	70.4	69.3	67.8	68.1	69.6
G73.0	61.3	61.9	61.4	63.7	63.1	61.1	60.6	62.9
G74.0	54.9	55.6	54.7	55.2	55.3	55.5	54.6	54.1
G75.0	48.2	49.1	48.4	48.7	46.6	48.4	47.5	46.8
G76.0	40.6	41.9	41.9	42.7	41.0	41.6	40.5	41.5
G77.0	34.7	35.2	34.9	34.8	34.9	34.8	34.2	34.8
G78.0	28.5	29.9	30.1	29.5	29.3	29.0	29.1	28.5
G79.0	24.2	24.5	24.1	24.3	23.7	24.1	23.1	23.9

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 40 of 43

Light Distribution Data

Unit: cd/klm

G\C	C280.0	C285.0	C290.0	C295.0	C300.0	C305.0	C310.0	C315.0
G80.0	18.6	19.1	18.5	19.5	18.6	18.7	18.4	18.2
G81.0	14.3	14.9	14.6	14.6	14.3	14.5	13.8	14.4
G82.0	10.1	10.9	10.3	10.9	10.2	10.8	10.1	10.8
G83.0	7.1	7.3	7.1	7.4	7.2	7.3	7.2	7.5
G84.0	4.6	4.8	4.6	4.9	4.7	5.0	4.9	5.0
G85.0	2.6	2.7	2.6	2.8	2.8	2.9	2.8	3.0
G86.0	1.3	1.4	1.5	1.5	1.6	1.7	1.6	1.6
G87.0	0.9	1.0	1.0	1.0	1.0	1.0	0.9	1.0
G88.0	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.6
G89.0	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2
G90.0	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 41 of 43

Light Distribution Data

Unit: cd/klm

G\C	C320.0	C325.0	C330.0	C335.0	C340.0	C345.0	C350.0	C355.0
G0.0	351.6	351.6	351.6	351.6	351.6	351.6	351.6	351.6
G1.0	351.7	351.7	351.7	351.8	351.8	351.8	351.7	351.8
G2.0	351.7	351.8	351.7	351.8	351.8	351.8	351.8	351.9
G3.0	351.4	351.5	351.5	351.6	351.7	351.7	351.6	351.7
G4.0	351.0	351.1	351.1	351.2	351.3	351.4	351.3	351.4
G5.0	350.3	350.6	350.5	350.7	350.7	350.8	350.8	350.8
G6.0	349.5	349.9	349.6	349.9	349.9	350.0	350.0	350.0
G7.0	348.7	349.0	348.8	349.1	349.0	349.1	349.1	349.1
G8.0	347.8	348.1	347.9	348.2	348.0	348.2	348.0	348.2
G9.0	346.9	347.2	346.9	347.1	347.1	347.2	347.0	347.2
G10.0	346.0	346.1	345.9	346.0	346.0	346.1	346.0	346.2
G11.0	344.8	345.0	344.7	344.9	345.0	345.1	344.9	345.0
G12.0	343.6	343.8	343.5	343.8	343.7	343.8	343.6	343.9
G13.0	342.4	342.6	342.3	342.6	342.5	342.6	342.4	342.6
G14.0	340.8	341.1	340.9	341.0	340.9	341.1	340.9	341.1
G15.0	339.4	339.7	339.4	339.6	339.5	339.6	339.5	339.6
G16.0	337.7	338.1	337.7	338.0	337.9	338.1	337.8	338.1
G17.0	336.1	336.3	336.0	336.4	336.3	336.4	336.3	336.3
G18.0	334.4	334.5	334.3	334.6	334.5	334.7	334.5	334.6
G19.0	332.5	332.7	332.4	332.6	332.5	332.7	332.5	332.7
G20.0	330.6	330.8	330.5	330.6	330.6	330.8	330.7	331.0
G21.0	328.5	328.8	328.4	328.6	328.5	328.8	328.6	328.9
G22.0	326.1	326.4	326.1	326.3	326.2	326.4	326.3	326.7
G23.0	323.9	324.1	324.0	324.0	323.8	324.1	324.0	324.4
G24.0	321.2	321.7	321.3	321.6	321.3	321.8	321.4	322.1
G25.0	319.0	319.1	318.9	319.0	318.7	319.0	318.8	319.3
G26.0	316.4	316.7	316.2	316.4	316.2	316.4	316.1	316.6
G27.0	313.6	313.7	313.3	313.7	313.1	313.3	313.3	313.6
G28.0	311.0	311.0	310.6	310.8	310.3	310.6	310.4	310.9
G29.0	308.2	308.1	307.6	307.9	307.5	307.6	307.5	307.8
G30.0	305.2	305.0	304.4	304.5	304.2	304.4	304.2	304.6
G31.0	302.2	302.0	301.2	301.4	301.1	301.2	301.3	301.5
G32.0	298.3	298.5	297.7	297.8	297.6	297.8	297.7	298.2
G33.0	294.8	295.1	294.3	294.6	294.4	294.5	294.5	294.9
G34.0	291.0	291.8	291.0	291.1	291.1	291.2	291.0	291.5
G35.0	287.1	287.9	287.2	287.4	287.2	287.3	287.2	287.7
G36.0	283.4	284.1	283.8	283.7	283.7	283.9	283.5	284.2
G37.0	279.5	280.4	279.8	280.2	279.6	280.4	279.7	280.5
G38.0	275.5	276.0	276.0	276.2	275.9	276.2	275.8	276.4
G39.0	271.7	272.2	272.0	272.3	271.9	272.4	272.0	272.7

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 42 of 43

Light Distribution Data

Unit: cd/klm

G\C	C320.0	C325.0	C330.0	C335.0	C340.0	C345.0	C350.0	C355.0
G40.0	267.3	267.6	267.3	268.1	267.6	268.0	267.7	268.2
G41.0	263.0	263.6	263.3	264.1	263.5	264.0	263.4	263.9
G42.0	258.8	259.2	258.9	259.9	259.2	259.7	259.3	259.8
G43.0	254.0	254.6	254.2	255.3	254.3	255.1	254.5	255.0
G44.0	249.7	250.1	249.7	250.5	249.9	250.4	250.1	250.7
G45.0	244.6	245.6	244.7	245.8	245.0	245.9	245.0	246.3
G46.0	240.0	240.5	239.8	240.6	240.3	240.7	240.4	241.1
G47.0	235.1	235.6	235.1	235.7	235.6	236.1	235.5	236.3
G48.0	229.9	230.2	229.8	230.3	230.1	230.5	230.2	230.8
G49.0	224.7	224.9	224.6	225.1	224.8	225.6	225.1	225.8
G50.0	219.6	219.9	219.6	220.1	219.8	220.3	220.1	220.6
G51.0	213.7	214.1	213.8	214.2	214.2	214.7	214.4	215.0
G52.0	208.5	208.7	208.5	209.0	208.8	209.0	208.8	209.3
G53.0	202.3	203.0	202.3	203.4	202.8	203.5	202.9	203.9
G54.0	196.8	197.0	196.8	197.3	196.8	197.5	197.1	197.6
G55.0	190.9	191.3	190.9	191.5	191.1	191.6	191.2	191.9
G56.0	184.6	185.3	184.5	184.7	184.5	185.1	184.8	185.5
G57.0	178.5	179.4	178.3	178.8	178.5	179.0	178.7	179.0
G58.0	172.5	172.9	172.2	172.5	172.5	172.6	170.5	171.0
G59.0	165.8	165.8	165.5	165.8	164.4	163.5	161.3	161.7
G60.0	159.3	159.7	159.1	158.5	156.0	155.5	153.6	154.8
G61.0	152.4	153.3	151.7	150.4	147.1	148.2	146.8	148.3
G62.0	145.6	145.9	142.8	141.5	140.7	141.2	140.2	141.5
G63.0	139.3	138.1	134.2	134.9	133.9	134.7	133.8	135.0
G64.0	131.6	129.1	126.8	127.6	126.6	127.8	126.8	127.6
G65.0	122.6	121.2	120.0	121.0	120.3	121.0	119.9	121.2
G66.0	114.4	114.6	113.7	114.2	113.5	114.1	113.2	114.2
G67.0	106.3	107.2	106.6	106.8	106.1	106.2	103.7	104.6
G68.0	99.5	100.1	100.0	100.0	97.8	96.9	96.3	96.9
G69.0	90.3	93.4	92.2	91.3	89.3	89.9	88.8	90.0
G70.0	82.6	85.8	83.4	82.9	82.3	82.2	82.1	82.9
G71.0	75.7	77.0	75.7	76.2	75.7	76.1	75.8	76.5
G72.0	68.2	67.1	68.6	69.4	68.2	68.1	66.8	67.0
G73.0	60.6	60.9	62.2	62.7	60.3	60.6	59.7	60.0
G74.0	54.5	55.3	54.0	54.9	53.9	54.2	53.5	53.6
G75.0	47.2	48.1	46.1	47.8	47.3	47.9	46.3	46.0
G76.0	40.5	41.3	40.6	41.8	40.9	40.5	39.4	39.5
G77.0	33.9	34.5	34.3	34.1	34.2	34.1	33.5	33.5
G78.0	29.1	28.6	28.7	28.8	28.9	28.4	27.4	27.6
G79.0	23.0	24.0	23.2	23.6	23.2	23.8	23.0	23.0

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 22.9°C Humidity : 55.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 2

Test Time : 2025-10-24 15:17:36 Page 43 of 43

Light Distribution Data

Unit: cd/klm

G\C	C320.0	C325.0	C330.0	C335.0	C340.0	C345.0	C350.0	C355.0
G80.0	18.4	18.5	18.4	18.7	17.8	18.2	17.7	17.8
G81.0	13.8	14.4	13.9	14.1	13.8	14.0	13.4	13.6
G82.0	10.1	10.6	10.1	10.6	9.7	10.0	9.5	9.9
G83.0	7.2	7.3	7.0	7.0	6.7	6.8	6.5	6.6
G84.0	4.8	4.9	4.6	4.5	4.3	4.2	4.2	4.1
G85.0	2.8	2.8	2.6	2.6	2.4	2.4	2.2	2.2
G86.0	1.6	1.6	1.5	1.5	1.4	1.3	1.3	1.3
G87.0	0.9	0.9	0.9	1.0	1.0	0.9	0.9	0.9
G88.0	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5
G89.0	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
G90.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Test Type : Type C Test Distance : 8.137 m C Plane (°): 0.0-360.0:5.0 (°) : 0.0-90.0:1.0
Test Device : Lisun LSG-1700B Temperature : 22.9°C Humidity : 55.0%
Test Lab : Light Lab TU-Gabrovo
Test By : Eng. Ivaylo Stoyanov Review By :