

Report No.: 4

Test Time: 2024-06-10 11:07:36

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Goniophotometer Test Report

Product Info

Luminaire Category: Indoor

Luminaire: Hydra Growth 400W272-230

Lamp Category: LED

Manufacturer: Industrial Lighting Ltd.

Number of Lamps: 1

Lumens per Lamp: 25949 lm

Luminous Length: 370 mm

Luminous Width: 370 mm

Luminous Height: 0 mm

Electric Parameters

Voltage: 229.10 V Current: 1.7200 A Power: 386.40 W Power Factor: 0.981 Frequency: 49.99 Hz

Photometric Parameters

CIE Class: Direct

Measurement Flux: 25949.2 lm

Upward Ratio: 0.00 %

Maximum Intensity: 318.63 cd/klm

Central Intensity: 318.49 cd/klm

Luminaire Efficacy Rating (LER): 67

Beam Angle (C0-C180, C90-C270): 123.0°, 122.7°

Field Angle (C0-C180, C90-C270): 157.0°, 156.6°

Total Rated Lamp Lumens: 25949.2 lm

Efficiency: 100.00 %

Downward Ratio: 100.00 %

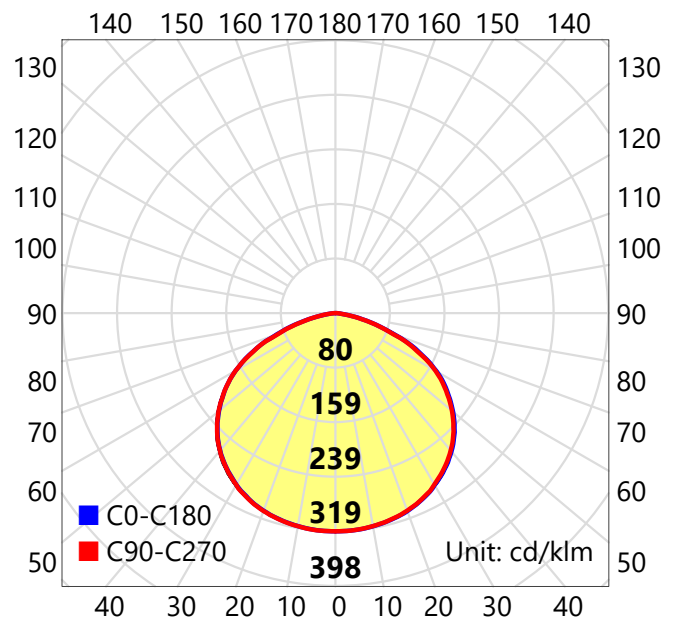
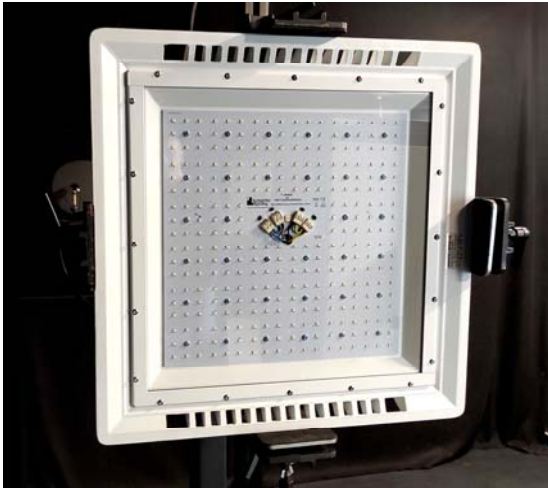
Position Of Maximum Intensity: C175° γ2°

S/MH(C0-C180, C90-C270): 1.35, 1.35

Energy Efficiency Class: G (EU 2019/2015 η_{TM}: 79lm/W)

Beam Angle (C45-C225, C135-C315): 123.0°, 122.9°

Field Angle (C45-C225, C135-C315): 156.5°, 158.0°



Test Type: Type C Test Distance: 8.131 m

Test Device: Lisun LSG-1700B

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature: 24.0°C

Review By:

γ (°): 0.0-90.0:1.0

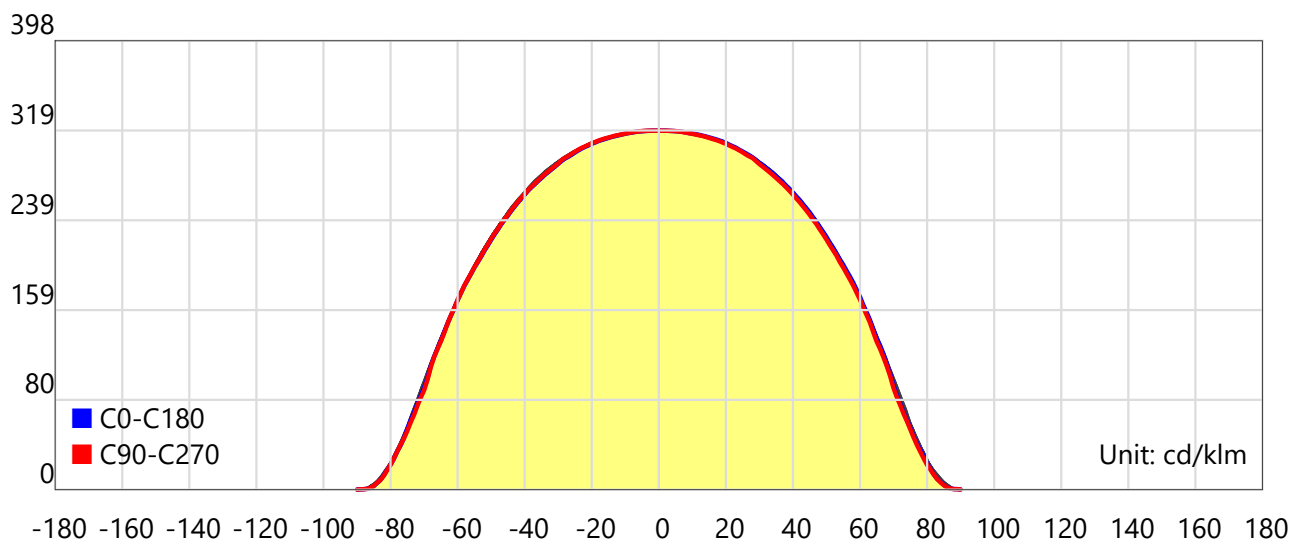
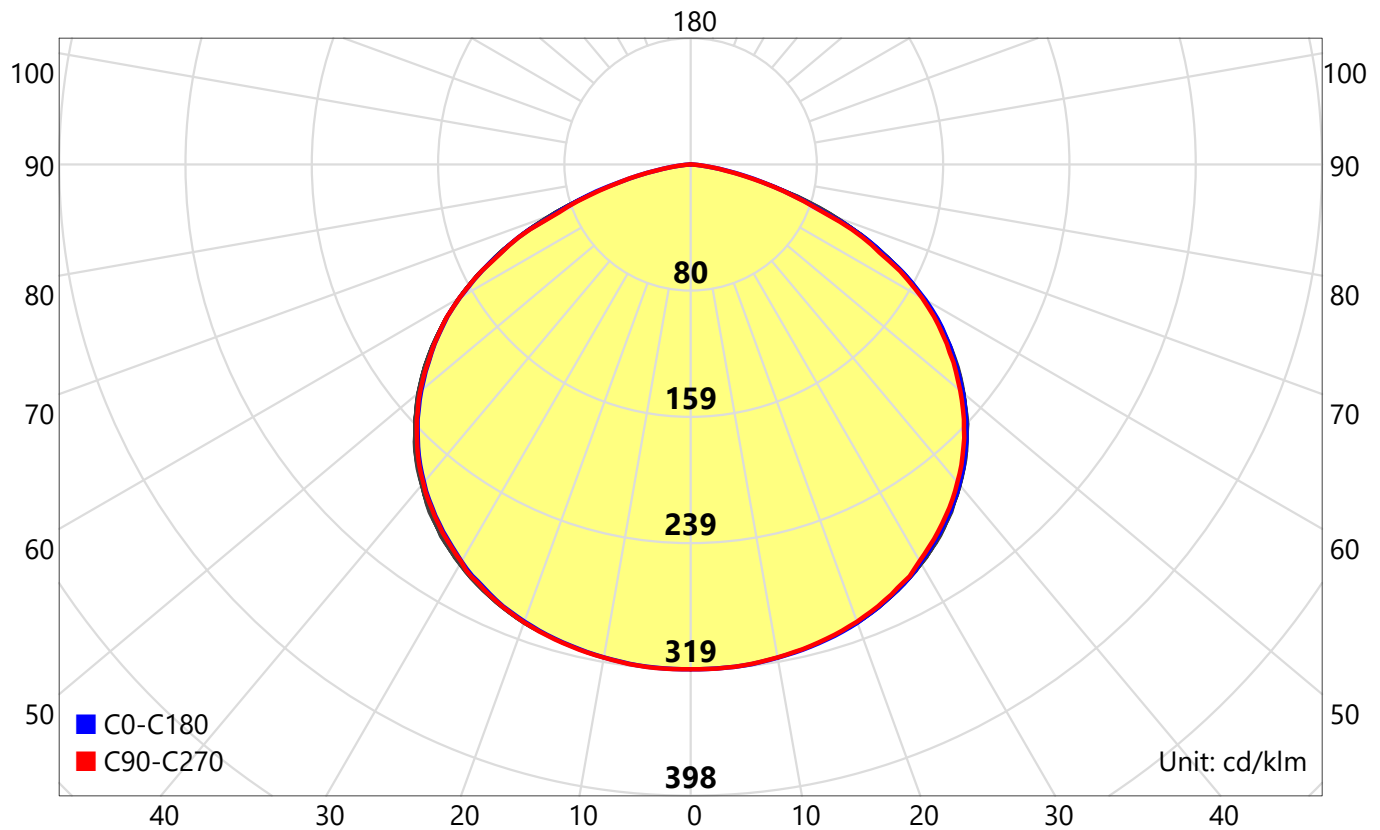
Humidity: 60.0%

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Light Distribution Curve



Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Ivaylo Stoyanov

Review By:

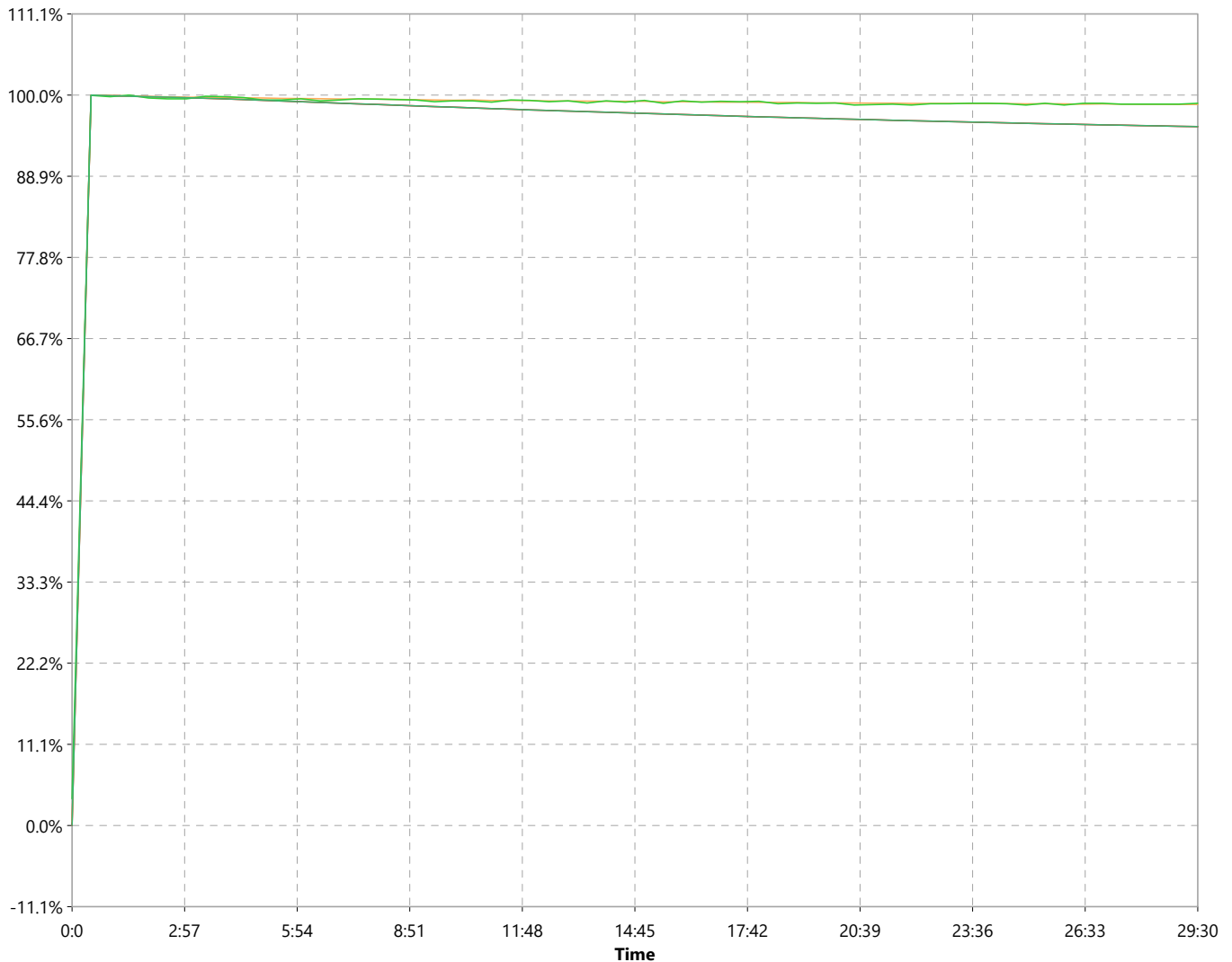


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Warmup Log



Stable time: 29:30

Uptime: 0:30

Parameters	Maximum	Minimum	Change
Luminous intensity ,cd	8792.48	0.00	8792.48
Power ,W	393.20	1.69	391.51
Current ,A	1.7520	0.0640	1.6880
Illumination ,lx	133.002	0.000	133.002

Test Type: Type C Test Distance: 8.131 m

Test Device: Lisun LSG-1700B

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Ivalyo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature: 24.0°C

Review By:

 γ (°): 0.0-90.0:1.0

Humidity: 60.0%



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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	27.1	28.8	27.5	29.1	29.4	27.1	28.7	27.4	29.0	29.4
3H	28.7	30.2	29.1	30.5	30.9	28.7	30.2	29.1	30.5	30.9
4H	29.1	30.5	29.5	30.9	31.3	29.1	30.5	29.5	30.9	31.2
6H	29.3	30.6	29.7	31.0	31.4	29.3	30.6	29.7	30.9	31.3
8H	29.3	30.6	29.7	30.9	31.3	29.3	30.5	29.7	30.9	31.3
12H	29.3	30.5	29.7	30.9	31.3	29.3	30.5	29.7	30.9	31.3
X=4H Y=2H	27.7	29.1	28.1	29.5	29.9	27.7	29.1	28.1	29.4	29.8
3H	29.5	30.7	29.9	31.1	31.5	29.5	30.7	29.9	31.1	31.5
4H	30.0	31.1	30.4	31.5	31.9	30.0	31.0	30.4	31.5	31.9
6H	30.2	31.2	30.7	31.6	32.1	30.2	31.2	30.7	31.6	32.1
8H	30.3	31.1	30.7	31.6	32.0	30.3	31.1	30.7	31.6	32.0
12H	30.3	31.0	30.7	31.5	32.0	30.3	31.0	30.7	31.5	32.0
X=8H Y=4H	30.2	31.0	30.7	31.5	32.0	30.2	31.1	30.7	31.5	32.0
6H	30.4	31.2	31.0	31.7	32.1	30.5	31.2	31.0	31.7	32.2
8H	30.5	31.1	31.0	31.6	32.1	30.5	31.2	31.0	31.7	32.1
12H	30.5	31.1	31.0	31.5	32.1	30.5	31.1	31.0	31.6	32.1
X=12H Y=4H	30.2	31.0	30.7	31.4	31.9	30.2	31.0	30.7	31.4	31.9
6H	30.5	31.1	31.0	31.6	32.1	30.5	31.1	31.0	31.6	32.1
8H	30.5	31.1	31.0	31.6	32.1	30.6	31.1	31.1	31.6	32.2

Calculate in accordance with CIE 190:2010. The table is corrected with 25949lm ($8\log(F/F_0) = 11.3$).

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	27.4	28.9	27.8	29.1	29.3	27.4	28.8	27.7	29.1	29.3
3H	28.8	30.1	29.2	30.4	30.7	28.8	30.1	29.1	30.4	30.6
4H	29.2	30.4	29.6	30.7	31.0	29.2	30.4	29.5	30.7	31.0
6H	29.4	30.5	29.7	30.8	31.1	29.3	30.5	29.7	30.8	31.1
8H	29.4	30.5	29.8	30.8	31.1	29.4	30.4	29.7	30.7	31.1
12H	29.4	30.4	29.7	30.7	31.1	29.3	30.4	29.7	30.7	31.0
X=4H Y=2H	28.1	29.3	28.5	29.6	29.9	28.1	29.3	28.5	29.6	29.9
3H	29.7	30.7	30.1	31.0	31.4	29.6	30.7	30.0	31.0	31.3
4H	30.1	31.0	30.5	31.4	31.8	30.1	31.0	30.5	31.4	31.8
6H	30.3	31.1	30.8	31.5	31.9	30.3	31.1	30.7	31.5	31.9
8H	30.4	31.1	30.8	31.5	31.9	30.3	31.1	30.8	31.5	31.9
12H	30.3	31.0	30.8	31.4	31.9	30.3	31.0	30.8	31.4	31.9
X=8H Y=4H	30.3	31.1	30.7	31.5	31.9	30.3	31.0	30.7	31.4	31.9
6H	30.6	31.2	31.0	31.6	32.1	30.6	31.2	31.0	31.6	32.1
8H	30.6	31.1	31.1	31.6	32.1	30.6	31.1	31.1	31.6	32.1
12H	30.6	31.1	31.1	31.5	32.1	30.6	31.1	31.1	31.5	32.0
X=12H Y=4H	30.3	31.0	30.7	31.4	31.8	30.3	30.9	30.7	31.4	31.8
6H	30.6	31.1	31.1	31.6	32.0	30.6	31.1	31.1	31.6	32.0
8H	30.6	31.1	31.1	31.6	32.1	30.6	31.1	31.1	31.6	32.1
Variations with the observer position at spacings										
S=1.0H	+0.1/-0.2					+0.2/-0.1				
S=1.5H	+0.3/-0.4					+0.3/-0.4				
S=2.0H	+0.7/-0.9					+0.7/-0.9				

Calculate in accordance with CIE Pub.117. The table is corrected with 25949lm ($8\log(F/F_0) = 11.3$).

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

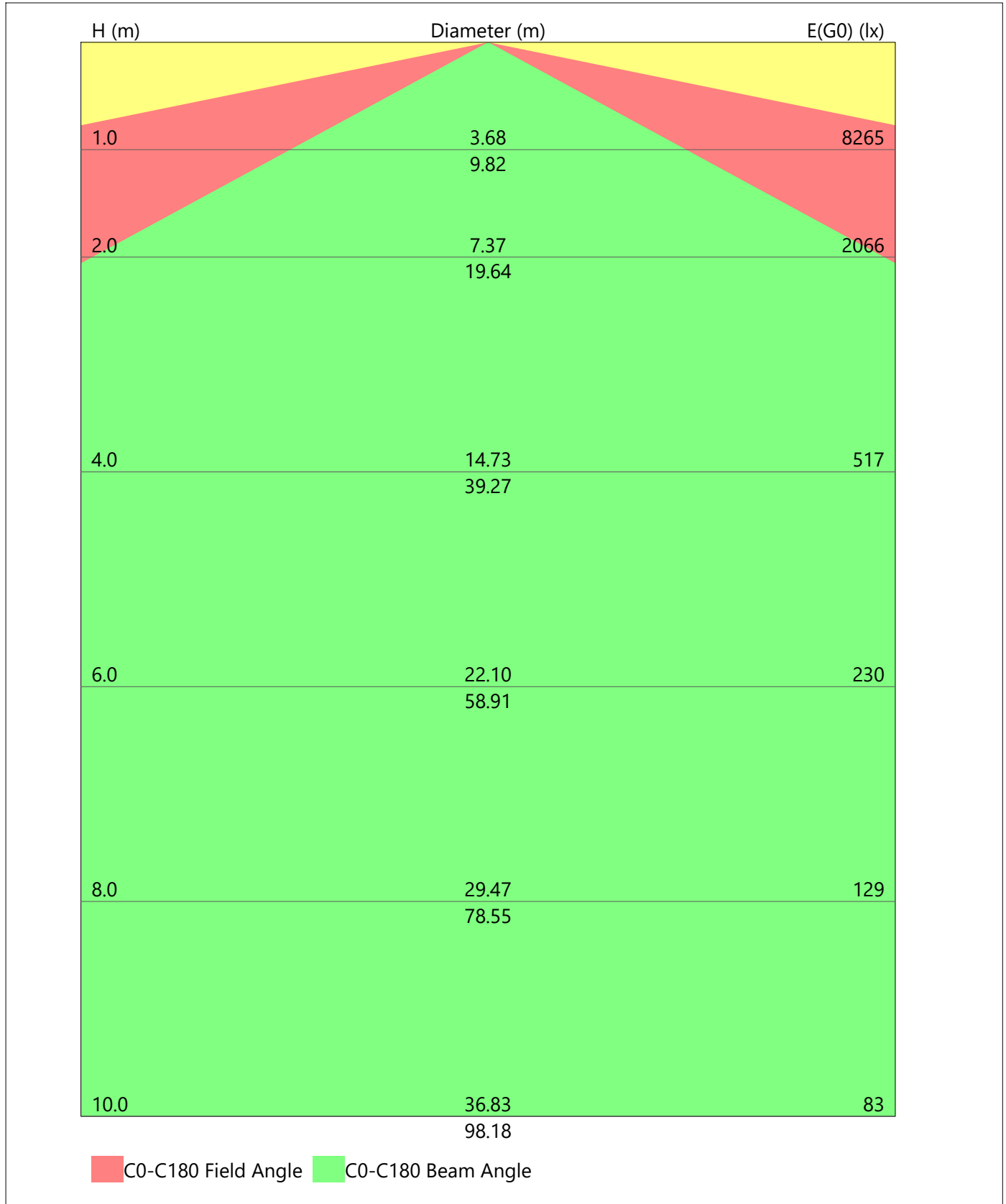
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Lux-Distance



Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

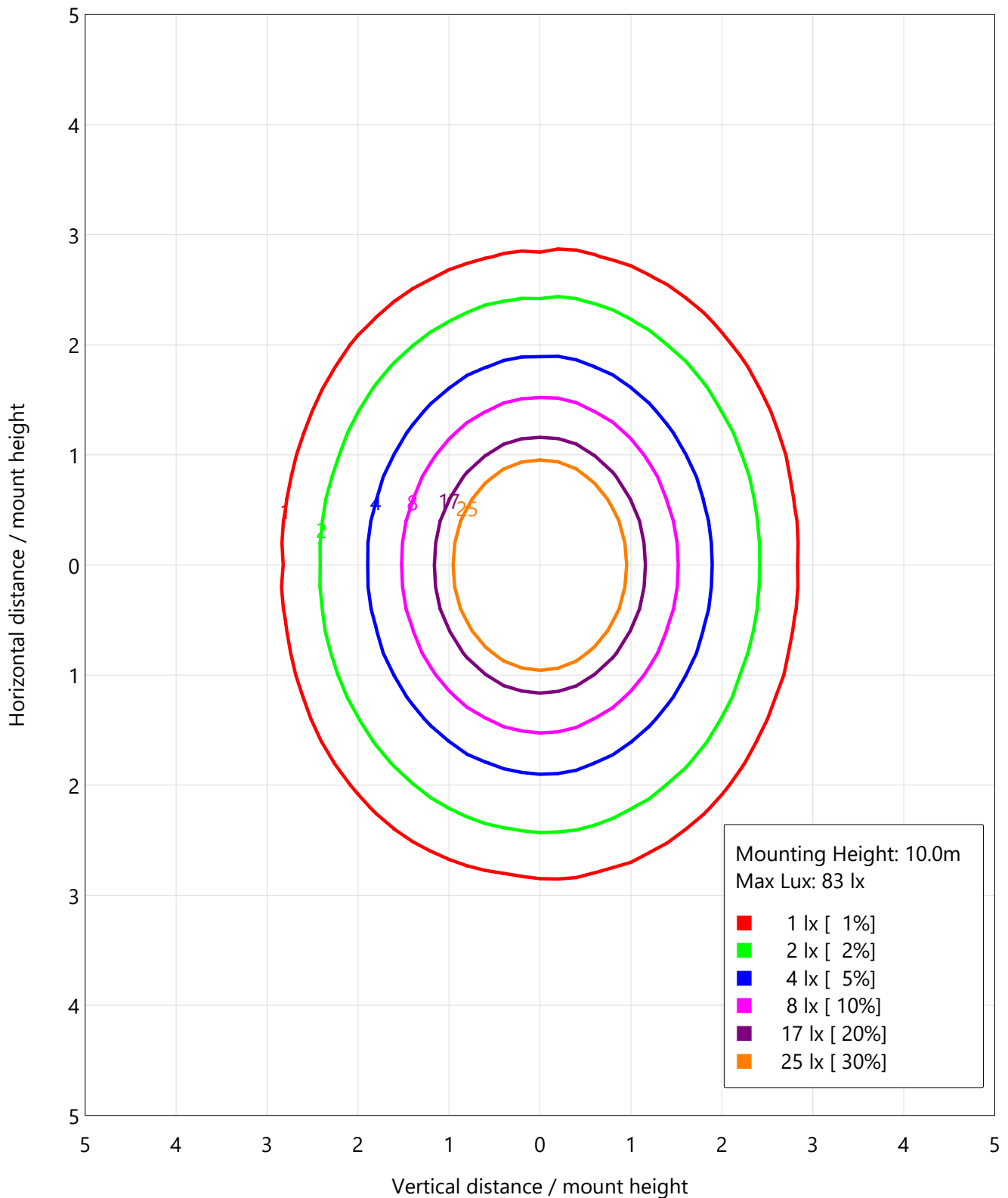
Test By: Eng. Ivaylo Stoyanov

Review By:

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IsoLux

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

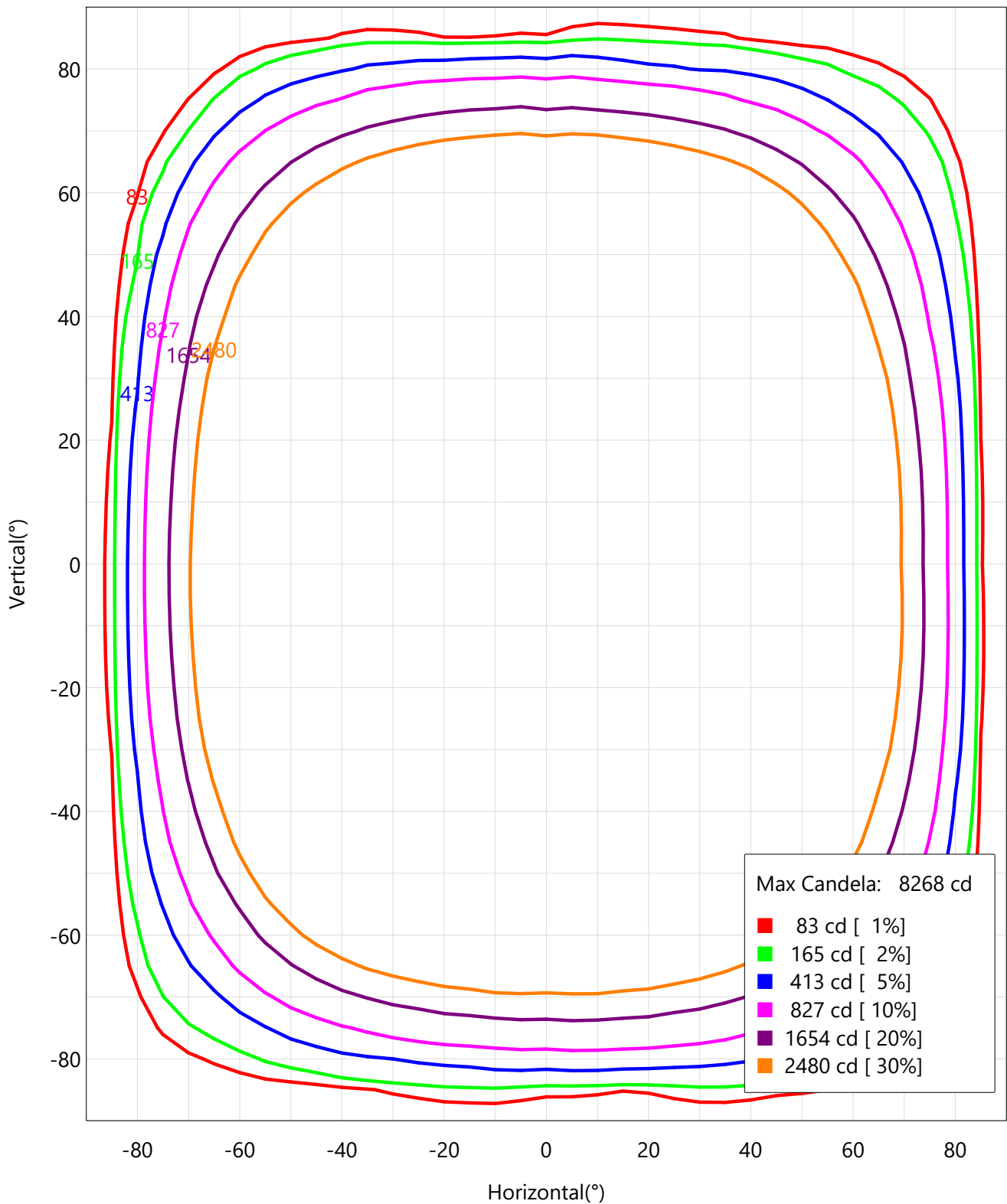
Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :

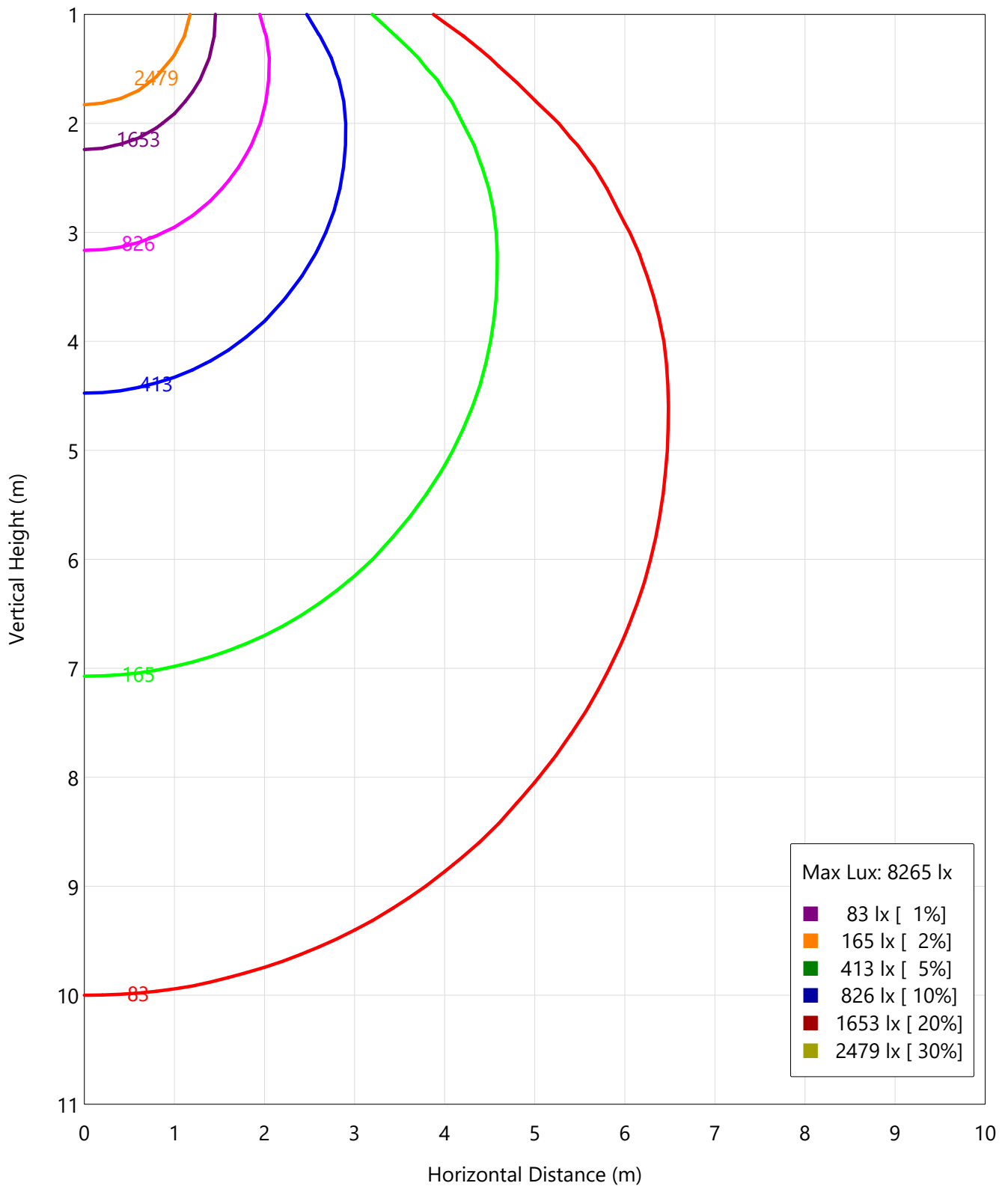
IsoCandela

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Vertical IsoLux Plot



Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

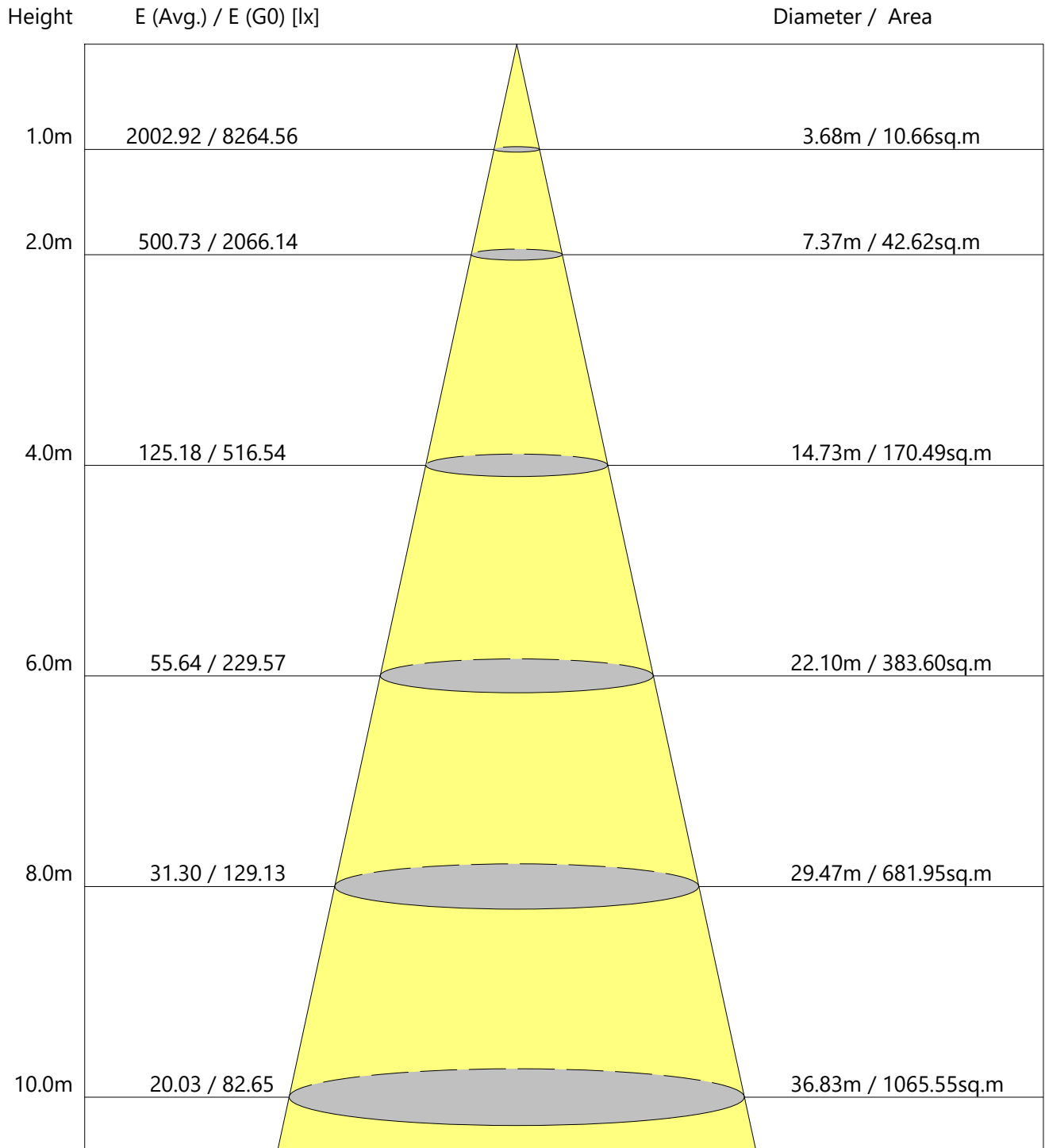
Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Ivaylo Stoyanov

Review By:

Average Illuminance Effective Figure



Beam Angle: 123° Flux Out: 21342.16lm



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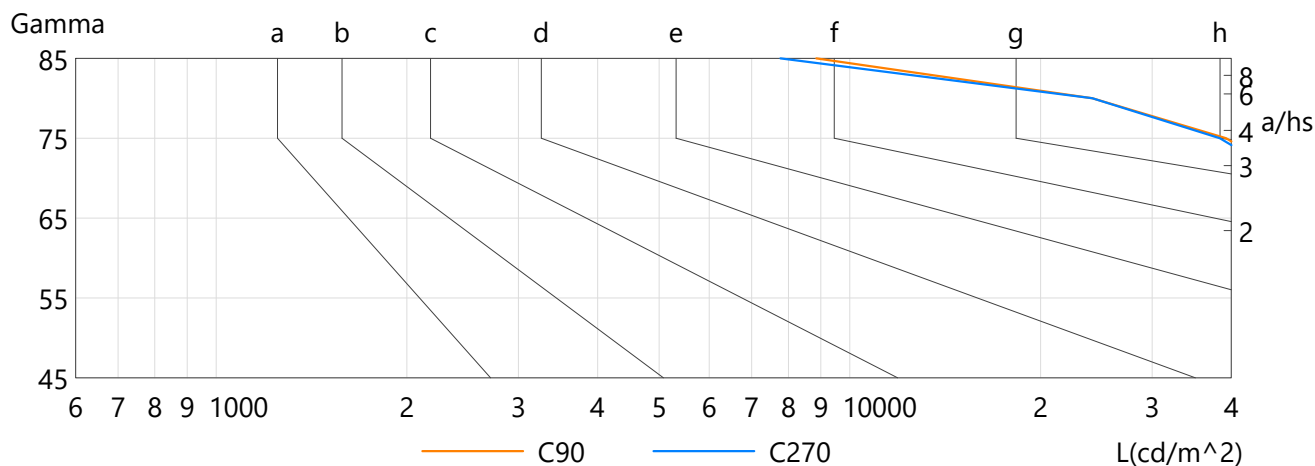
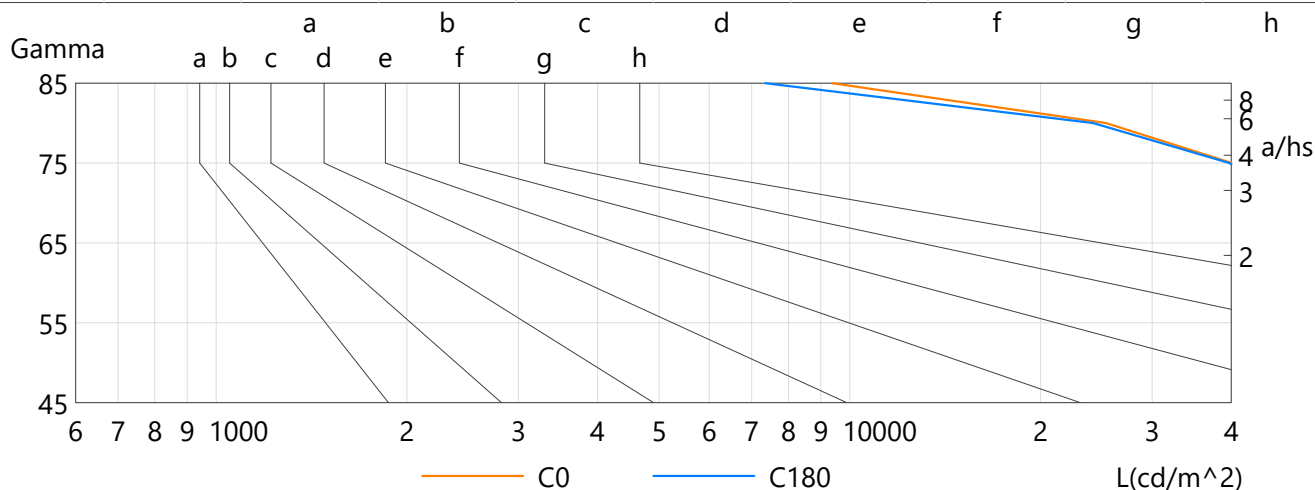
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Lumen Limit Curve

L (cd/m ²)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	65978	66129	65952	64841	60236	51379	40110	25366	9372
C90	65422	65474	65172	63914	58942	50003	39257	24130	8856
C270	65276	65414	65132	63756	59355	50306	39730	24205	7355
C90	65459	65686	65272	63872	59141	48990	38364	24130	7772

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 : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

γ (°): 0.0-90.0:1.0

Humidity : 60.0%

Review By :



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TM5 UF Table

Utilisation Factors UF (F)			SHR NOM = 1.50								
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	0.59	0.68	0.76	0.81	0.89	0.93	0.97	1.01	1.04
	0.30		0.51	0.60	0.68	0.74	0.83	0.88	0.92	0.97	1.01
	0.20		0.46	0.54	0.63	0.69	0.78	0.84	0.88	0.94	0.98
0.50	0.50	0.20	0.57	0.66	0.73	0.78	0.85	0.90	0.93	0.97	1.00
	0.30		0.51	0.59	0.67	0.73	0.80	0.86	0.89	0.94	0.97
	0.20		0.46	0.54	0.62	0.68	0.76	0.82	0.86	0.91	0.95
0.30	0.50	0.20	0.56	0.64	0.71	0.76	0.83	0.87	0.90	0.94	0.96
	0.30		0.50	0.58	0.66	0.71	0.78	0.83	0.87	0.91	0.94
	0.20		0.45	0.53	0.61	0.67	0.75	0.80	0.84	0.89	0.92
0.00	0.00	0.00	0.43	0.51	0.59	0.64	0.71	0.76	0.80	0.84	0.87
Utilisation Factors UF (W)			SHR NOM = 1.50								
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	0.96	0.81	0.68	0.59	0.47	0.38	0.33	0.25	0.20
	0.30		0.80	0.70	0.59	0.52	0.42	0.35	0.30	0.24	0.19
	0.20		0.69	0.61	0.53	0.47	0.38	0.33	0.28	0.22	0.18
0.50	0.50	0.20	0.93	0.78	0.65	0.56	0.44	0.40	0.31	0.24	0.19
	0.30		0.79	0.68	0.58	0.51	0.41	0.34	0.29	0.23	0.18
	0.20		0.68	0.60	0.52	0.46	0.37	0.32	0.27	0.22	0.18
0.30	0.50	0.20	0.90	0.75	0.63	0.54	0.42	0.35	0.30	0.23	0.18
	0.30		0.77	0.66	0.56	0.49	0.39	0.33	0.28	0.22	0.18
	0.20		0.67	0.59	0.51	0.45	0.36	0.31	0.26	0.21	0.17
0.00	0.00	0.00	0.57	0.49	0.42	0.36	0.29	0.24	0.20	0.16	0.13
Utilisation Factors UF (C)			SHR NOM = 1.50								
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	0.18	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	0.15	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	0.12	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: 386W 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 : 8.131 m

C Plane (°): 0.0-360.0:5.0

γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 4

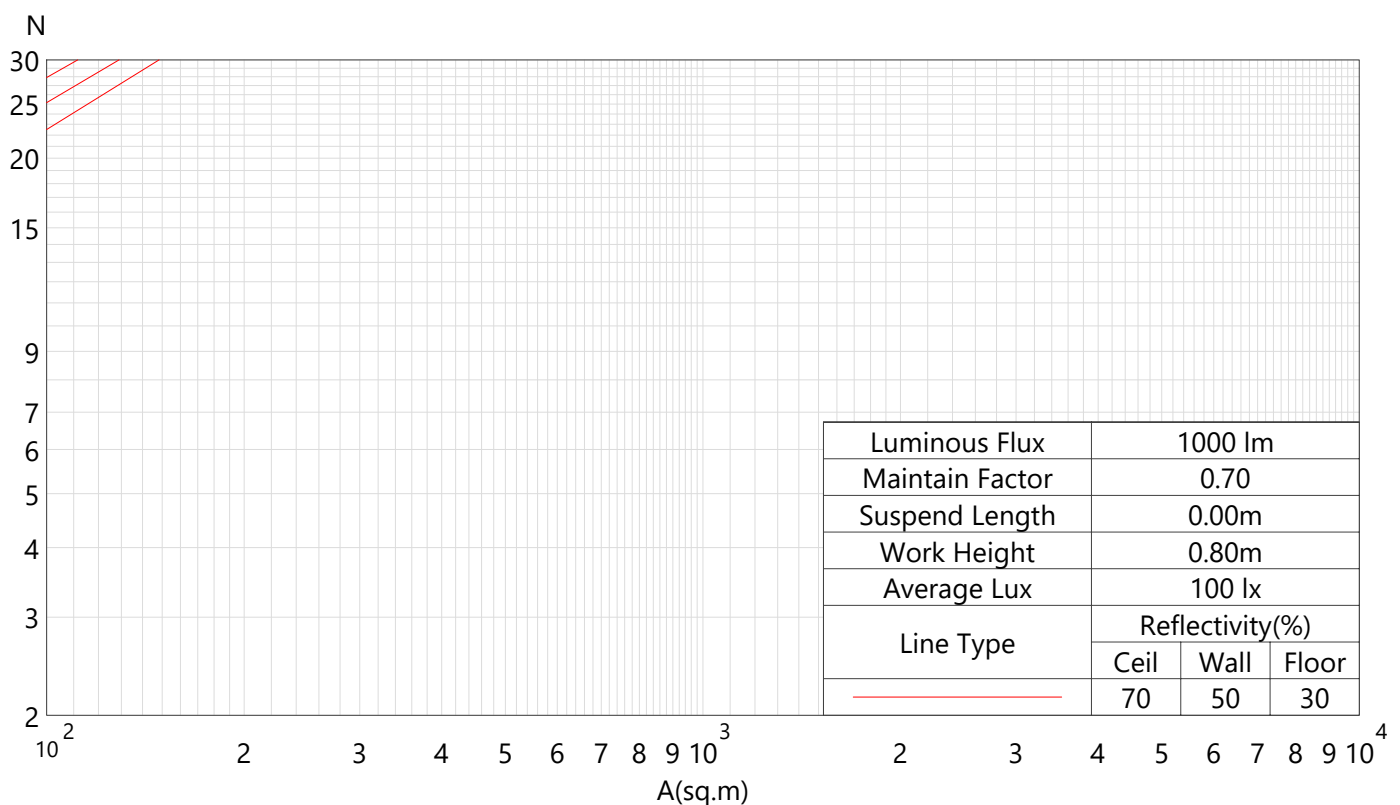
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Indoor CU, Curves of Luminaires vs Lighting Area

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	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	87	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70
3	90	80	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

Spacing Criteria: 1.35 (0-180), 1.35 (90-270), 1.48 (Diagonal)



Test Type : Type C

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Humidity : 60.0%

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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	318.5	7.9	7.9	0.03	0.03
1.0-2.0	318.5	23.7	31.6	0.09	0.12
2.0-3.0	318.5	39.5	71.2	0.15	0.27
3.0-4.0	318.4	55.3	126.5	0.21	0.49
4.0-5.0	318.2	71.0	197.5	0.27	0.76
5.0-6.0	318.0	86.7	284.3	0.33	1.10
6.0-7.0	317.7	102.3	386.6	0.39	1.49
7.0-8.0	317.3	117.8	504.4	0.45	1.94
8.0-9.0	316.8	133.2	637.7	0.51	2.46
9.0-10.0	316.2	148.5	786.2	0.57	3.03
10.0-11.0	315.6	163.7	949.8	0.63	3.66
11.0-12.0	315.0	178.7	1128.5	0.69	4.35
12.0-13.0	314.3	193.6	1322.1	0.75	5.09
13.0-14.0	313.6	208.4	1530.5	0.80	5.90
14.0-15.0	312.9	222.9	1753.4	0.86	6.76
15.0-16.0	312.1	237.3	1990.7	0.91	7.67
16.0-17.0	311.2	251.5	2242.3	0.97	8.64
17.0-18.0	310.3	265.5	2507.8	1.02	9.66
18.0-19.0	309.2	279.2	2786.9	1.08	10.74
19.0-20.0	308.1	292.6	3079.6	1.13	11.87
20.0-21.0	306.8	305.8	3385.3	1.18	13.05
21.0-22.0	305.5	318.6	3704.0	1.23	14.27
22.0-23.0	304.1	331.2	4035.2	1.28	15.55
23.0-24.0	302.7	343.4	4378.6	1.32	16.87
24.0-25.0	301.1	355.3	4733.9	1.37	18.24
25.0-26.0	299.4	366.8	5100.7	1.41	19.66
26.0-27.0	297.6	377.9	5478.6	1.46	21.11
27.0-28.0	295.8	388.7	5867.2	1.50	22.61
28.0-29.0	293.9	399.1	6266.3	1.54	24.15
29.0-30.0	291.8	408.9	6675.3	1.58	25.72
30.0-31.0	289.6	418.2	7093.5	1.61	27.34
31.0-32.0	287.3	427.1	7520.6	1.65	28.98
32.0-33.0	284.9	435.5	7956.2	1.68	30.66
33.0-34.0	282.5	443.7	8399.8	1.71	32.37
34.0-35.0	279.9	451.1	8850.9	1.74	34.11
35.0-36.0	277.2	458.0	9308.9	1.77	35.87
36.0-37.0	274.4	464.5	9773.5	1.79	37.66
37.0-38.0	271.5	470.3	10243.8	1.81	39.48
38.0-39.0	268.5	475.7	10719.4	1.83	41.31
39.0-40.0	265.3	480.3	11199.7	1.85	43.16

Test Type: Type C Test Distance: 8.131 m

Test Device: Lisun LSG-1700B

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature: 24.0°C

Review By:

γ (°): 0.0-90.0:1.0

Humidity: 60.0%



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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 %
40.0-41.0	262.0	484.2	11684.0	1.87	45.03
41.0-42.0	258.7	487.8	12171.8	1.88	46.91
42.0-43.0	255.2	490.6	12662.4	1.89	48.80
43.0-44.0	251.5	492.6	13155.0	1.90	50.70
44.0-45.0	247.7	494.1	13649.1	1.90	52.60
45.0-46.0	243.8	494.8	14143.9	1.91	54.51
46.0-47.0	239.8	495.0	14638.9	1.91	56.41
47.0-48.0	235.6	494.3	15133.1	1.90	58.32
48.0-49.0	231.2	492.7	15625.9	1.90	60.22
49.0-50.0	226.8	490.8	16116.7	1.89	62.11
50.0-51.0	222.2	487.8	16604.5	1.88	63.99
51.0-52.0	217.3	484.0	17088.6	1.87	65.85
52.0-53.0	212.5	479.6	17568.2	1.85	67.70
53.0-54.0	207.3	474.1	18042.3	1.83	69.53
54.0-55.0	202.0	468.0	18510.3	1.80	71.33
55.0-56.0	196.5	460.9	18971.3	1.78	73.11
56.0-57.0	190.9	453.0	19424.2	1.75	74.85
57.0-58.0	185.3	444.8	19869.0	1.71	76.57
58.0-59.0	179.3	435.1	20304.1	1.68	78.25
59.0-60.0	173.0	424.3	20728.3	1.63	79.88
60.0-61.0	166.6	412.7	21141.0	1.59	81.47
61.0-62.0	160.0	400.2	21541.2	1.54	83.01
62.0-63.0	153.5	387.5	21928.7	1.49	84.51
63.0-64.0	146.5	373.0	22301.7	1.44	85.94
64.0-65.0	139.1	357.2	22658.9	1.38	87.32
65.0-66.0	131.8	341.2	23000.1	1.31	88.63
66.0-67.0	124.2	324.1	23324.1	1.25	89.88
67.0-68.0	116.5	306.3	23630.4	1.18	91.06
68.0-69.0	108.5	287.3	23917.7	1.11	92.17
69.0-70.0	99.9	266.3	24184.0	1.03	93.20
70.0-71.0	91.4	245.1	24429.0	0.94	94.14
71.0-72.0	82.9	223.8	24652.8	0.86	95.00
72.0-73.0	74.8	203.0	24855.8	0.78	95.79
73.0-74.0	67.2	183.3	25039.2	0.71	96.49
74.0-75.0	59.6	163.4	25202.6	0.63	97.12
75.0-76.0	52.1	143.5	25346.1	0.55	97.68
76.0-77.0	44.8	124.1	25470.2	0.48	98.15
77.0-78.0	38.2	106.2	25576.4	0.41	98.56
78.0-79.0	32.3	90.1	25666.5	0.35	98.91
79.0-80.0	26.4	73.9	25740.4	0.28	99.20

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	21.1	59.3	25799.7	0.23	99.42
81.0-82.0	16.6	46.7	25846.4	0.18	99.60
82.0-83.0	12.5	35.2	25881.6	0.14	99.74
83.0-84.0	9.1	25.7	25907.3	0.10	99.84
84.0-85.0	6.4	18.1	25925.4	0.07	99.91
85.0-86.0	4.1	11.7	25937.1	0.05	99.95
86.0-87.0	2.4	6.7	25943.8	0.03	99.98
87.0-88.0	1.1	3.1	25946.9	0.01	99.99
88.0-89.0	0.5	1.4	25948.4	0.01	100.00
89.0-90.0	0.3	0.9	25949.2	0.00	100.00

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.5	318.5	318.5	318.5	318.4	318.5	318.5	318.5
G2.0	318.5	318.5	318.5	318.4	318.5	318.5	318.5	318.5
G3.0	318.4	318.5	318.5	318.4	318.4	318.4	318.5	318.5
G4.0	318.3	318.3	318.3	318.2	318.3	318.3	318.3	318.4
G5.0	318.1	318.2	318.1	318.1	318.1	318.1	318.1	318.1
G6.0	317.9	317.9	317.9	317.9	317.9	317.7	317.8	317.8
G7.0	317.6	317.6	317.6	317.6	317.5	317.5	317.5	317.4
G8.0	317.0	317.0	317.1	317.0	317.1	317.0	317.1	317.1
G9.0	316.5	316.5	316.6	316.4	316.5	316.4	316.5	316.6
G10.0	316.0	316.0	316.0	315.9	315.9	315.8	315.9	316.0
G11.0	315.4	315.5	315.5	315.4	315.3	315.2	315.2	315.2
G12.0	314.9	314.9	314.9	314.8	314.8	314.6	314.7	314.7
G13.0	314.2	314.3	314.3	314.2	314.3	314.2	314.1	314.1
G14.0	313.4	313.5	313.6	313.5	313.7	313.6	313.7	313.5
G15.0	312.7	312.8	312.8	312.7	312.9	312.9	313.1	312.8
G16.0	311.8	311.9	311.9	311.7	311.9	311.9	312.2	312.0
G17.0	310.9	311.0	311.0	310.8	311.0	311.0	311.1	311.0
G18.0	309.9	310.0	310.1	309.8	310.0	310.0	309.9	310.0
G19.0	308.8	308.9	308.9	308.7	308.8	308.8	308.7	308.8
G20.0	307.6	307.7	307.7	307.6	307.7	307.5	307.6	307.7
G21.0	306.2	306.2	306.3	306.0	306.4	306.1	306.4	306.5
G22.0	304.9	305.0	304.9	304.8	304.8	304.7	304.9	305.5
G23.0	303.5	303.6	303.7	303.5	303.5	303.3	303.5	304.3
G24.0	301.7	301.8	301.8	301.8	302.0	301.8	302.1	302.7
G25.0	300.1	300.2	300.1	300.1	300.2	300.3	300.9	301.1
G26.0	298.4	298.5	298.5	298.4	298.4	298.6	299.4	299.6
G27.0	296.8	296.8	296.7	296.7	296.6	296.7	297.5	297.7
G28.0	294.8	295.0	295.0	295.1	295.0	295.0	295.7	295.7
G29.0	292.6	292.5	292.9	292.8	293.2	293.2	293.7	293.5
G30.0	289.9	290.1	290.3	290.4	290.9	291.6	291.9	291.6
G31.0	287.9	288.0	288.1	288.1	288.5	289.4	289.9	289.5
G32.0	285.5	285.5	285.7	285.8	286.2	286.8	287.3	287.6
G33.0	283.1	283.2	283.5	283.4	283.9	284.5	284.7	285.3
G34.0	280.8	280.8	281.2	280.9	281.6	282.2	282.1	282.3
G35.0	278.1	278.1	278.3	278.3	279.1	279.5	279.6	279.5
G36.0	275.5	275.5	275.8	275.7	276.7	277.0	277.0	277.0
G37.0	272.9	272.7	273.0	272.7	274.2	274.0	274.4	274.2
G38.0	269.7	269.7	269.9	270.0	271.1	271.2	271.2	271.3
G39.0	266.8	266.8	266.9	267.1	268.3	268.1	268.3	268.5

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Iwaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	263.6	263.5	263.6	263.9	265.0	264.8	265.2	265.0
G41.0	260.4	260.3	260.4	260.7	261.9	261.8	262.1	261.7
G42.0	257.1	257.0	257.0	257.5	258.4	258.3	258.7	258.7
G43.0	253.3	253.3	253.4	253.9	254.6	254.5	255.1	255.4
G44.0	249.8	249.8	249.6	250.3	251.1	251.1	251.6	251.5
G45.0	246.1	245.5	246.0	246.2	247.2	247.2	247.6	247.0
G46.0	241.8	241.7	241.9	242.6	243.1	243.4	243.6	242.9
G47.0	237.8	237.8	237.9	238.7	239.4	239.4	240.0	238.9
G48.0	233.3	233.4	233.5	234.2	234.8	235.1	235.4	234.4
G49.0	228.8	229.0	229.5	230.1	230.5	230.5	230.6	230.3
G50.0	224.3	224.7	225.1	225.8	226.2	225.9	226.0	225.7
G51.0	219.2	219.6	220.3	221.1	221.6	221.2	220.8	220.8
G52.0	214.6	215.0	215.8	216.5	216.9	216.8	216.1	216.1
G53.0	209.5	209.8	211.1	211.3	212.2	211.1	211.0	210.7
G54.0	204.3	204.9	205.8	206.2	206.8	205.4	205.5	205.5
G55.0	199.6	199.9	200.7	201.3	201.7	199.9	200.3	200.3
G56.0	194.2	194.0	195.4	195.7	195.7	194.0	194.7	194.4
G57.0	189.0	188.8	190.2	190.3	190.2	188.4	188.9	188.9
G58.0	183.6	183.4	184.8	184.8	185.0	183.0	183.3	183.0
G59.0	177.3	177.1	178.5	178.3	178.7	176.8	177.1	176.6
G60.0	171.0	170.8	172.5	172.5	171.9	170.8	170.9	170.4
G61.0	163.9	164.2	166.0	165.2	164.7	164.3	164.3	163.6
G62.0	157.4	158.2	159.9	159.0	158.1	158.0	158.0	157.3
G63.0	150.4	151.3	153.2	152.5	151.6	151.3	151.6	150.8
G64.0	142.4	143.4	146.0	144.8	143.6	144.1	144.0	143.4
G65.0	134.3	135.3	137.2	137.7	136.6	137.2	137.4	136.0
G66.0	128.0	127.9	130.2	128.7	128.0	129.3	130.1	128.2
G67.0	120.5	120.8	122.7	121.2	120.0	120.3	122.3	120.5
G68.0	111.7	112.8	114.9	113.0	113.6	112.8	113.6	113.0
G69.0	103.2	105.0	106.1	103.7	105.3	104.3	105.9	104.3
G70.0	92.7	94.6	96.8	95.3	97.8	96.1	98.2	97.3
G71.0	83.5	85.4	86.5	84.6	88.6	88.7	89.5	90.2
G72.0	76.5	77.7	78.8	76.7	77.3	77.6	81.2	81.2
G73.0	68.5	69.7	70.4	69.2	69.8	69.5	70.9	73.2
G74.0	61.6	61.9	63.5	61.4	61.9	60.7	63.5	62.9
G75.0	54.8	54.7	54.6	54.1	54.3	54.1	54.8	55.8
G76.0	47.3	47.7	46.7	46.6	47.3	46.8	48.7	47.8
G77.0	40.8	41.2	39.2	39.0	38.7	40.0	40.7	40.6
G78.0	35.5	35.5	34.1	33.5	32.7	33.0	34.1	33.9
G79.0	29.8	30.3	29.4	28.0	27.6	26.7	27.9	26.8

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Iwaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	23.2	24.1	23.1	21.5	21.8	21.3	21.7	21.5
G81.0	18.6	19.3	19.1	17.7	17.5	16.8	16.1	17.7
G82.0	13.6	14.5	14.7	13.7	14.1	12.1	13.0	13.3
G83.0	9.7	10.6	11.2	10.8	10.7	9.3	9.6	10.3
G84.0	7.1	7.8	8.5	8.4	7.6	7.2	7.3	7.6
G85.0	4.3	5.0	6.0	6.1	5.6	5.0	4.9	5.1
G86.0	2.2	3.0	4.2	4.0	3.8	3.3	3.2	3.0
G87.0	1.0	1.4	1.9	1.9	1.7	1.7	1.6	1.3
G88.0	0.6	0.6	0.6	0.7	0.6	0.7	0.6	0.5
G89.0	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4
G90.0	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G2.0	318.5	318.6	318.5	318.5	318.5	318.5	318.5	318.5
G3.0	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.4
G4.0	318.3	318.3	318.3	318.4	318.3	318.3	318.3	318.3
G5.0	318.0	318.1	318.1	318.0	318.1	318.1	318.1	318.0
G6.0	317.7	317.7	317.7	317.7	317.7	317.8	317.7	317.7
G7.0	317.4	317.4	317.4	317.4	317.4	317.3	317.3	317.3
G8.0	317.1	317.0	317.1	316.9	316.9	316.9	316.9	316.8
G9.0	316.6	316.6	316.6	316.5	316.4	316.4	316.4	316.2
G10.0	316.0	316.1	316.1	316.0	315.8	315.6	315.8	315.6
G11.0	315.4	315.5	315.4	315.3	315.2	315.1	315.0	315.0
G12.0	314.6	314.6	314.6	314.6	314.6	314.4	314.3	314.3
G13.0	313.9	313.7	313.8	313.9	313.9	313.8	313.9	313.8
G14.0	313.1	312.9	312.8	313.0	313.3	313.4	313.3	313.1
G15.0	312.4	312.2	312.2	312.3	312.7	312.9	312.6	312.3
G16.0	311.7	311.5	311.5	311.7	311.9	311.8	311.6	311.3
G17.0	311.1	310.9	311.0	310.9	310.8	310.7	310.5	310.2
G18.0	310.2	310.5	310.3	309.9	309.6	309.6	309.5	309.2
G19.0	309.1	309.6	309.4	308.7	308.4	308.2	308.4	307.9
G20.0	308.3	308.5	308.4	307.6	307.3	307.0	307.1	306.9
G21.0	307.2	307.1	307.2	306.5	306.1	305.6	306.0	305.4
G22.0	305.9	305.8	305.6	305.2	304.7	304.3	304.3	304.1
G23.0	304.4	304.4	304.3	304.1	303.5	302.9	302.8	302.8
G24.0	302.9	302.6	302.7	302.5	302.0	301.5	301.2	301.0
G25.0	301.2	301.1	301.2	300.9	300.7	300.1	299.6	299.5
G26.0	299.3	299.4	299.4	299.3	299.3	298.5	297.9	297.8
G27.0	297.6	297.6	297.5	297.6	297.3	296.6	296.0	295.6
G28.0	295.7	295.5	295.9	295.7	295.5	294.9	294.1	294.1
G29.0	293.8	293.6	294.1	293.5	293.5	292.9	292.8	292.2
G30.0	291.6	291.7	291.6	291.4	291.2	291.4	290.5	289.3
G31.0	289.4	289.7	289.7	289.2	289.7	289.2	287.8	287.0
G32.0	287.1	287.3	287.3	287.0	287.3	286.1	285.4	284.5
G33.0	285.3	284.9	284.7	285.0	284.3	283.9	283.3	282.2
G34.0	283.1	282.5	282.6	282.3	281.5	281.4	281.0	279.8
G35.0	280.2	279.8	280.2	279.0	278.9	278.7	278.4	277.0
G36.0	277.3	277.4	277.0	276.4	276.2	276.1	275.8	274.5
G37.0	274.2	274.9	273.9	273.4	273.3	273.1	273.2	271.6
G38.0	271.0	271.3	270.8	270.4	270.4	270.3	270.1	268.8
G39.0	268.3	267.4	268.2	267.4	267.5	267.2	267.1	265.8

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Iwaylo Stoyanov

Review By :



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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	265.3	263.9	264.6	264.3	264.3	263.8	263.8	262.6
G41.0	261.7	260.6	261.0	261.2	260.8	260.5	260.5	259.4
G42.0	257.9	257.4	257.5	258.1	257.5	257.1	257.2	256.1
G43.0	254.1	253.5	253.7	254.2	253.8	253.5	253.2	252.3
G44.0	250.5	250.1	250.2	250.4	250.4	250.0	249.7	248.8
G45.0	246.9	246.2	246.5	246.0	246.8	246.0	246.0	244.8
G46.0	242.7	242.4	242.4	242.2	242.8	241.9	241.8	240.9
G47.0	238.8	238.6	238.6	238.3	238.8	237.9	237.8	237.0
G48.0	234.5	234.3	234.2	233.9	233.9	233.6	233.3	232.7
G49.0	230.4	229.9	230.0	229.5	229.5	229.2	228.9	228.3
G50.0	226.1	225.5	225.6	225.2	225.0	224.9	224.7	224.0
G51.0	220.9	220.7	220.7	220.0	220.0	219.9	219.8	219.2
G52.0	216.2	216.0	216.0	215.4	215.3	214.7	215.0	214.5
G53.0	211.4	210.4	211.0	210.1	210.2	209.0	210.2	209.3
G54.0	205.7	205.4	205.6	205.1	204.6	203.8	204.5	204.4
G55.0	200.4	200.1	200.3	199.9	199.5	198.6	199.5	199.3
G56.0	194.6	194.2	194.4	194.0	193.5	192.7	193.8	193.4
G57.0	189.0	188.5	188.5	188.3	188.1	187.0	188.5	187.7
G58.0	183.2	182.3	182.8	182.5	182.5	181.5	182.6	182.3
G59.0	176.5	175.6	176.3	176.1	176.3	175.4	176.0	176.0
G60.0	170.5	169.0	170.1	169.8	170.0	169.3	169.8	169.6
G61.0	163.6	162.1	163.0	163.1	163.2	162.8	162.9	162.6
G62.0	157.0	155.6	156.6	156.7	156.9	156.5	156.1	156.5
G63.0	150.7	149.2	150.2	150.2	150.1	150.2	149.7	150.0
G64.0	143.5	142.0	142.8	142.5	142.8	142.7	142.0	142.5
G65.0	136.6	135.5	136.2	135.4	136.2	135.9	135.1	133.4
G66.0	129.8	128.2	129.4	127.8	128.9	127.9	125.3	124.7
G67.0	122.2	121.1	121.7	120.2	120.7	117.7	117.4	117.4
G68.0	115.2	113.9	114.8	113.0	111.1	110.0	110.4	110.0
G69.0	107.0	106.0	107.2	102.9	103.0	101.6	102.3	101.5
G70.0	98.4	98.5	98.4	94.9	95.0	93.1	95.3	92.3
G71.0	90.6	89.7	89.2	87.9	86.7	85.8	85.3	81.9
G72.0	82.5	79.1	81.5	79.0	78.6	75.2	75.4	74.5
G73.0	74.1	71.9	72.3	71.0	69.6	68.0	68.5	67.4
G74.0	65.5	63.3	64.8	61.4	62.5	60.7	60.4	60.4
G75.0	55.5	55.9	55.2	54.1	54.2	53.9	53.2	53.6
G76.0	48.5	45.3	47.9	46.4	47.1	46.8	46.8	45.8
G77.0	40.2	38.8	40.1	39.7	39.7	38.8	38.5	38.4
G78.0	32.9	32.6	33.5	33.1	33.2	32.8	32.7	32.4
G79.0	27.5	27.4	28.0	26.7	27.4	27.3	27.5	26.8

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	22.0	21.9	22.1	21.6	21.8	21.7	21.4	21.0
G81.0	17.8	17.5	17.8	17.7	17.1	17.5	17.3	17.4
G82.0	13.3	13.7	13.9	13.8	14.0	13.0	14.2	13.5
G83.0	10.3	9.9	10.6	10.8	10.5	10.2	10.8	10.4
G84.0	7.1	7.3	7.4	7.7	7.9	7.7	7.6	8.0
G85.0	4.6	4.4	4.7	5.0	5.1	5.3	5.7	5.8
G86.0	2.7	2.5	2.7	2.8	3.0	3.1	3.8	3.8
G87.0	1.1	1.0	1.1	1.4	1.5	1.7	1.8	1.8
G88.0	0.6	0.5	0.6	0.5	0.6	0.6	0.6	0.6
G89.0	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4
G90.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.5	318.6	318.5	318.5	318.5	318.5	318.5	318.5
G2.0	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G3.0	318.4	318.4	318.5	318.4	318.4	318.4	318.4	318.5
G4.0	318.3	318.3	318.2	318.3	318.3	318.2	318.3	318.3
G5.0	318.1	318.1	318.1	318.0	318.1	318.0	318.1	318.1
G6.0	317.8	317.8	317.8	317.7	317.8	317.8	317.8	317.8
G7.0	317.3	317.4	317.4	317.4	317.5	317.4	317.5	317.5
G8.0	316.9	316.9	317.0	316.8	317.0	316.9	317.1	317.0
G9.0	316.2	316.4	316.3	316.2	316.4	316.3	316.3	316.4
G10.0	315.8	315.8	315.8	315.7	315.8	315.7	315.8	315.7
G11.0	315.1	315.1	315.1	315.0	315.1	315.0	315.1	315.1
G12.0	314.5	314.5	314.5	314.5	314.5	314.4	314.5	314.4
G13.0	313.8	313.9	313.9	313.8	313.9	313.8	313.9	313.8
G14.0	313.0	313.0	313.0	312.9	313.1	313.1	313.3	313.3
G15.0	312.2	312.1	312.2	312.0	312.3	312.1	312.4	312.5
G16.0	311.2	311.2	311.2	311.1	311.3	311.2	311.4	311.5
G17.0	310.2	310.3	310.3	310.3	310.4	310.3	310.5	310.6
G18.0	309.3	309.3	309.3	309.3	309.4	309.3	309.5	309.6
G19.0	307.9	308.0	308.0	308.0	308.1	307.9	308.3	308.4
G20.0	307.0	306.9	307.0	307.0	307.0	306.9	307.2	307.1
G21.0	305.4	305.3	305.4	305.4	305.5	305.5	306.1	305.8
G22.0	304.1	304.1	304.1	304.2	304.2	304.1	304.4	304.2
G23.0	302.8	302.7	302.8	302.8	302.9	302.8	303.1	302.7
G24.0	301.1	301.0	301.0	301.0	301.1	301.2	301.5	301.2
G25.0	299.4	299.4	299.5	299.4	299.5	299.6	299.8	299.6
G26.0	297.6	297.4	297.4	297.4	297.6	297.9	298.1	298.0
G27.0	295.7	295.7	295.7	295.7	295.7	295.8	295.9	296.2
G28.0	294.4	294.2	294.2	294.2	294.4	294.5	294.0	294.0
G29.0	292.2	291.2	291.5	291.2	292.0	292.3	292.7	292.3
G30.0	289.3	288.8	288.9	288.7	289.2	289.6	290.2	290.9
G31.0	287.0	286.6	286.6	286.5	286.9	287.1	287.5	288.4
G32.0	284.6	284.1	284.2	284.0	284.5	284.8	284.9	285.5
G33.0	282.2	281.7	281.8	281.7	282.2	282.4	282.7	283.3
G34.0	279.7	279.3	279.3	279.2	279.6	279.8	280.3	280.7
G35.0	277.0	276.4	276.6	276.4	277.0	276.9	277.6	278.0
G36.0	274.2	273.8	273.9	273.8	274.3	274.2	275.1	275.3
G37.0	271.4	270.8	271.2	270.8	271.4	271.2	272.5	272.4
G38.0	268.4	268.0	268.2	268.0	268.4	268.4	269.4	269.5
G39.0	265.3	265.0	265.1	264.8	265.4	265.4	266.6	266.6

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Iwaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	261.8	261.6	261.7	261.4	261.9	262.0	263.1	263.1
G41.0	258.6	258.4	258.5	258.4	258.7	258.9	259.7	259.9
G42.0	255.4	255.1	255.3	254.9	255.4	255.6	256.4	256.7
G43.0	251.5	251.3	251.5	251.2	251.6	251.8	252.7	253.0
G44.0	247.9	247.5	247.8	247.6	247.8	248.0	249.1	249.3
G45.0	244.3	243.5	244.1	243.4	244.2	244.0	245.4	245.4
G46.0	240.1	239.6	239.6	239.6	240.0	240.3	241.2	241.7
G47.0	236.3	235.6	235.7	235.6	236.0	236.2	237.4	237.7
G48.0	231.9	231.1	231.1	231.1	231.6	231.9	232.8	233.2
G49.0	227.7	226.9	226.7	226.7	227.4	227.7	228.7	228.9
G50.0	223.3	222.3	222.0	222.3	223.1	223.3	224.5	224.2
G51.0	218.6	217.6	217.0	217.3	218.1	218.5	219.5	219.1
G52.0	214.1	212.9	212.4	212.6	213.5	213.8	214.8	214.5
G53.0	209.5	207.7	207.6	207.3	208.8	208.8	210.2	209.5
G54.0	204.0	202.6	202.0	202.4	203.3	203.6	204.7	204.1
G55.0	199.2	197.8	197.2	197.4	198.3	198.6	199.6	198.7
G56.0	193.6	191.8	191.8	191.7	192.7	192.9	193.8	192.7
G57.0	188.5	186.4	186.6	186.1	187.3	187.6	188.0	187.1
G58.0	182.7	180.9	181.0	180.7	181.5	182.1	182.4	181.6
G59.0	176.6	174.5	174.7	174.5	175.3	175.5	176.3	175.2
G60.0	170.5	168.5	168.6	168.2	169.2	169.5	170.1	169.4
G61.0	163.6	161.8	161.9	161.8	162.7	162.6	163.1	162.6
G62.0	157.6	155.7	155.0	155.8	156.7	156.5	156.6	156.3
G63.0	151.1	149.3	148.3	149.1	150.1	149.8	150.0	150.1
G64.0	143.2	140.6	139.7	140.3	142.9	142.6	142.2	143.1
G65.0	134.1	132.8	131.4	133.0	134.5	134.3	135.5	136.4
G66.0	126.7	125.2	125.0	125.8	127.2	126.6	127.8	128.3
G67.0	118.9	118.0	117.7	118.6	119.4	119.6	120.5	120.7
G68.0	110.8	110.3	109.7	111.2	112.1	111.8	113.7	113.6
G69.0	103.1	102.5	100.9	102.9	104.3	103.4	105.7	105.4
G70.0	93.3	91.9	90.2	92.1	94.5	94.9	98.5	97.9
G71.0	83.7	83.5	82.2	84.3	85.2	84.2	88.1	89.9
G72.0	76.1	76.2	75.0	76.9	77.4	77.0	78.3	78.0
G73.0	68.2	68.9	67.5	69.4	70.4	70.2	71.3	70.8
G74.0	61.3	61.3	60.9	62.1	63.5	63.1	64.4	63.3
G75.0	53.5	54.4	53.6	55.9	56.0	56.6	57.2	57.5
G76.0	45.3	46.9	46.3	47.9	48.7	49.4	51.0	51.1
G77.0	38.2	39.9	39.6	40.9	41.6	42.1	42.9	43.6
G78.0	32.8	33.5	33.6	35.2	36.0	36.3	37.0	37.4
G79.0	27.7	28.2	27.7	29.5	30.8	30.8	31.7	31.8

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	22.3	22.8	22.1	23.6	24.1	23.9	25.0	26.1
G81.0	18.1	18.5	18.1	18.9	19.5	19.0	19.5	20.1
G82.0	14.0	14.0	13.6	13.2	13.8	13.3	14.7	14.7
G83.0	10.5	10.2	9.6	9.2	9.2	9.1	9.6	10.9
G84.0	7.8	7.3	6.6	6.3	6.1	5.8	6.3	7.7
G85.0	5.7	4.8	4.1	4.1	3.9	3.6	4.1	5.2
G86.0	3.8	2.9	2.1	2.3	2.2	2.0	2.4	3.4
G87.0	1.7	1.3	1.1	1.2	1.1	1.2	1.5	1.8
G88.0	0.7	0.6	0.6	0.5	0.5	0.6	0.7	0.7
G89.0	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5
G90.0	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No.: 4

Test Time: 2024-06-10 11:07:36

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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
G0.0	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.5	318.6	318.5	318.5	318.5	318.5	318.6	318.5
G2.0	318.5	318.5	318.5	318.6	318.6	318.6	318.6	318.6
G3.0	318.5	318.5	318.5	318.5	318.5	318.6	318.5	318.5
G4.0	318.4	318.4	318.4	318.3	318.3	318.4	318.4	318.4
G5.0	318.0	318.1	318.1	318.1	318.0	318.1	318.1	318.2
G6.0	317.8	317.7	317.7	317.7	317.7	317.7	317.7	317.8
G7.0	317.4	317.4	317.4	317.5	317.3	317.3	317.4	317.4
G8.0	317.0	317.0	317.0	316.9	317.0	316.9	317.0	317.0
G9.0	316.5	316.5	316.6	316.5	316.6	316.6	316.6	316.5
G10.0	315.7	315.8	316.0	316.1	316.1	316.1	316.0	315.9
G11.0	315.1	315.2	315.3	315.4	315.6	315.4	315.3	315.2
G12.0	314.5	314.5	314.7	314.5	314.7	314.7	314.6	314.6
G13.0	313.8	314.0	314.0	313.7	313.7	314.0	314.1	314.0
G14.0	313.3	313.2	313.0	312.8	312.9	313.0	313.4	313.3
G15.0	312.8	312.7	312.2	312.0	312.2	312.2	312.7	312.9
G16.0	311.8	311.8	311.5	311.2	311.3	311.5	311.9	311.9
G17.0	310.8	310.7	310.9	310.6	310.7	310.8	310.8	310.9
G18.0	309.6	309.6	309.9	309.9	310.0	309.7	309.7	309.6
G19.0	308.3	308.4	308.7	309.0	309.1	308.6	308.4	308.3
G20.0	307.2	307.3	307.7	308.0	308.1	307.5	307.2	307.1
G21.0	305.8	305.9	306.6	306.6	306.8	306.3	306.0	305.6
G22.0	304.5	304.7	305.3	305.2	305.3	305.1	304.6	304.3
G23.0	303.0	303.7	303.8	303.6	303.8	303.6	303.4	302.9
G24.0	301.4	302.1	302.2	302.1	302.2	302.1	302.0	301.4
G25.0	300.1	300.5	300.7	300.5	300.6	300.6	300.6	300.0
G26.0	298.6	298.9	298.9	298.9	299.1	298.9	299.1	298.5
G27.0	296.9	297.0	297.1	297.0	297.0	297.0	297.3	296.7
G28.0	295.1	295.1	295.4	295.1	295.3	295.4	295.4	294.8
G29.0	292.9	293.1	293.4	292.9	293.6	293.3	293.3	292.6
G30.0	290.8	290.9	291.2	291.1	291.4	291.0	291.0	290.7
G31.0	289.3	288.7	289.2	289.2	289.3	289.0	288.9	288.9
G32.0	286.6	286.9	286.5	286.8	286.8	286.4	286.9	286.5
G33.0	283.6	284.7	284.3	284.4	284.5	284.4	284.8	284.0
G34.0	281.1	281.6	282.7	281.8	282.0	282.3	282.0	281.4
G35.0	278.4	278.5	279.9	278.8	279.5	279.5	279.2	278.7
G36.0	275.7	276.0	276.6	276.6	277.0	276.7	276.5	276.1
G37.0	273.1	273.3	273.5	274.0	273.9	273.6	273.5	273.1
G38.0	270.0	270.5	270.1	270.7	270.7	270.7	270.5	270.2
G39.0	266.9	267.3	267.2	267.4	268.2	267.6	267.9	267.4

Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Iwaylo Stoyanov

Review By:



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	263.7	263.8	264.1	263.6	264.6	264.2	264.6	264.2
G41.0	260.7	260.5	261.0	260.2	260.6	261.0	261.3	260.8
G42.0	257.6	257.1	257.5	256.7	257.1	258.1	258.2	257.6
G43.0	253.8	253.6	253.6	253.0	253.4	254.6	254.5	253.9
G44.0	250.0	250.4	249.9	249.5	249.7	250.6	250.9	250.7
G45.0	246.3	246.2	246.0	245.6	246.2	246.2	247.1	246.5
G46.0	242.0	242.2	242.0	241.8	242.3	242.1	243.4	242.7
G47.0	238.2	238.0	238.2	238.0	238.3	238.2	239.8	238.9
G48.0	234.0	233.3	233.6	233.6	233.9	233.8	234.6	234.4
G49.0	229.6	229.2	229.6	229.6	229.8	229.5	230.0	229.9
G50.0	225.1	224.9	225.3	225.1	225.6	225.3	225.5	225.5
G51.0	219.9	219.9	220.4	220.2	220.7	220.4	220.5	220.9
G52.0	215.0	215.1	215.8	215.3	215.8	215.6	215.7	216.1
G53.0	209.8	209.9	210.8	210.0	211.0	210.3	210.8	210.2
G54.0	204.4	204.8	205.3	205.0	205.5	205.3	205.4	204.8
G55.0	199.2	199.6	200.2	199.7	200.3	200.2	200.3	199.6
G56.0	193.5	193.8	194.2	193.9	194.3	194.4	194.4	193.6
G57.0	188.1	188.4	188.5	188.3	188.8	188.7	189.0	188.2
G58.0	182.4	182.5	182.9	182.2	183.2	183.1	183.4	182.8
G59.0	176.1	176.2	176.5	175.6	176.7	176.8	177.2	176.6
G60.0	170.2	169.9	170.2	169.2	170.5	170.5	171.1	170.9
G61.0	163.4	163.2	163.4	162.4	163.7	163.8	164.6	164.4
G62.0	157.0	156.8	157.1	156.0	157.4	157.5	158.2	158.3
G63.0	150.4	150.4	150.4	149.7	151.1	151.2	151.6	151.6
G64.0	143.0	142.7	143.4	142.8	143.9	143.6	144.4	144.5
G65.0	136.5	135.8	136.9	136.2	137.3	136.8	137.8	137.9
G66.0	129.9	128.0	129.9	129.0	130.3	129.3	130.7	130.5
G67.0	122.1	120.9	122.6	122.3	122.9	122.0	123.0	122.4
G68.0	114.0	113.9	115.9	115.0	116.1	115.0	115.0	115.1
G69.0	106.3	105.7	108.3	107.2	108.6	106.6	107.4	107.0
G70.0	99.2	98.9	100.5	99.6	101.2	99.3	100.4	99.4
G71.0	91.2	91.7	93.2	92.2	93.5	92.6	92.9	90.6
G72.0	83.0	83.5	85.2	83.0	85.9	84.4	83.6	81.0
G73.0	72.8	75.9	77.5	76.2	78.2	75.6	74.9	73.3
G74.0	65.4	65.1	70.2	68.7	70.3	66.5	67.7	66.6
G75.0	58.1	58.4	60.1	61.5	60.7	59.6	60.2	59.8
G76.0	51.7	51.9	52.5	50.7	53.9	53.5	53.5	53.5
G77.0	45.1	45.4	44.5	43.5	46.4	47.1	46.8	46.1
G78.0	38.8	39.1	38.2	37.9	38.7	40.9	40.0	39.4
G79.0	32.9	31.8	32.9	32.8	33.4	33.1	34.5	33.7

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Iwaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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
G80.0	26.5	26.4	27.0	26.9	27.3	27.0	28.5	28.5
G81.0	20.9	22.0	22.5	21.7	22.8	22.9	22.1	22.4
G82.0	16.9	17.5	18.3	17.8	18.1	18.4	18.3	17.0
G83.0	12.9	13.9	14.3	13.6	14.5	14.9	14.0	12.5
G84.0	9.6	10.3	10.7	10.6	10.8	11.3	10.7	9.2
G85.0	6.6	7.2	7.4	7.5	7.4	8.0	7.3	6.1
G86.0	4.4	5.1	5.0	4.8	5.0	5.5	5.0	3.9
G87.0	2.7	3.0	2.8	2.8	3.2	3.5	3.0	2.5
G88.0	0.8	1.0	1.0	1.1	1.1	1.2	0.9	0.9
G89.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
G90.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

 γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No.: 4

Test Time: 2024-06-10 11:07:36

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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	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.5	318.5	318.5	318.6	318.5	318.6	318.6	318.5
G2.0	318.6	318.6	318.6	318.6	318.5	318.6	318.5	318.5
G3.0	318.5	318.5	318.5	318.5	318.4	318.5	318.5	318.5
G4.0	318.4	318.4	318.4	318.4	318.2	318.4	318.4	318.3
G5.0	318.1	318.2	318.2	318.2	318.1	318.2	318.1	318.1
G6.0	317.8	317.8	317.9	317.9	317.8	317.8	317.8	317.9
G7.0	317.5	317.5	317.5	317.6	317.4	317.5	317.5	317.5
G8.0	317.1	317.0	317.1	317.1	316.9	317.1	317.1	317.1
G9.0	316.5	316.5	316.5	316.5	316.4	316.5	316.4	316.4
G10.0	315.9	315.8	315.9	315.9	315.8	315.9	315.9	315.8
G11.0	315.2	315.1	315.3	315.3	315.1	315.3	315.2	315.1
G12.0	314.6	314.5	314.6	314.7	314.5	314.6	314.6	314.5
G13.0	314.0	314.0	314.0	314.0	313.7	314.0	313.9	313.9
G14.0	313.4	313.3	313.3	313.2	313.0	313.2	313.1	313.2
G15.0	312.7	312.5	312.4	312.3	312.1	312.4	312.3	312.4
G16.0	311.7	311.4	311.4	311.4	311.2	311.4	311.3	311.5
G17.0	310.8	310.5	310.5	310.5	310.3	310.5	310.4	310.4
G18.0	309.8	309.5	309.4	309.5	309.3	309.5	309.4	309.4
G19.0	308.6	308.3	308.3	308.4	308.0	308.3	308.2	308.2
G20.0	307.4	307.2	307.1	307.2	306.9	307.2	307.0	307.0
G21.0	306.1	305.9	305.9	305.7	305.5	305.8	305.7	305.8
G22.0	304.5	304.5	304.3	304.3	304.2	304.3	304.2	304.3
G23.0	303.0	303.2	303.1	303.1	302.8	303.1	302.9	303.0
G24.0	301.4	301.6	301.6	301.4	301.1	301.5	301.3	301.6
G25.0	300.0	300.1	300.0	299.7	299.3	299.6	299.5	299.7
G26.0	298.2	298.3	298.2	297.9	297.3	297.6	297.6	297.9
G27.0	296.1	296.1	296.1	295.8	295.4	295.6	295.5	295.8
G28.0	294.1	294.2	294.4	294.2	293.8	294.0	293.9	294.0
G29.0	292.4	292.4	292.8	292.1	291.7	291.9	292.1	292.3
G30.0	290.5	290.3	290.4	289.9	289.2	289.5	289.6	290.0
G31.0	288.5	288.1	288.1	287.5	286.7	286.9	287.2	287.6
G32.0	286.2	285.4	285.4	284.9	284.2	284.4	284.6	284.9
G33.0	283.7	282.9	283.1	282.5	281.8	282.0	282.2	282.4
G34.0	281.4	280.6	280.7	280.1	279.3	279.6	279.8	280.0
G35.0	278.8	277.7	277.9	277.3	276.5	276.9	276.9	277.4
G36.0	276.0	275.2	275.4	274.7	274.0	274.2	274.3	274.9
G37.0	273.4	272.3	272.5	271.8	270.9	271.5	271.2	272.1
G38.0	270.4	269.5	269.4	269.0	268.2	268.3	268.4	269.0
G39.0	267.4	266.5	266.5	266.0	265.3	265.4	265.3	266.0

Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Iwaylo Stoyanov

Review By:



Report No.: 4

Test Time: 2024-06-10 11:07:36

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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	264.1	263.3	263.1	262.5	261.8	261.9	261.9	262.8
G41.0	260.9	260.2	259.7	259.4	258.5	258.8	258.5	259.5
G42.0	257.6	257.1	256.3	256.0	255.1	255.3	255.2	256.3
G43.0	253.8	253.2	252.7	252.2	251.4	251.6	251.5	252.5
G44.0	250.2	249.7	249.2	248.6	247.6	247.8	247.8	248.9
G45.0	246.6	245.6	245.3	244.6	243.5	244.2	243.7	245.3
G46.0	242.5	241.5	241.3	240.9	239.5	240.0	240.0	241.2
G47.0	238.6	237.7	237.5	236.8	235.6	236.0	235.9	237.2
G48.0	234.3	233.3	232.9	232.4	230.9	231.6	231.6	232.8
G49.0	229.9	229.0	228.9	228.1	226.5	227.2	227.3	228.6
G50.0	225.7	224.8	224.6	223.9	221.8	223.0	223.1	224.4
G51.0	221.0	220.1	219.8	219.1	216.9	217.9	218.4	219.5
G52.0	216.4	215.4	215.2	214.6	212.3	213.3	213.6	215.1
G53.0	211.4	210.4	210.6	209.5	206.8	208.6	208.6	210.2
G54.0	206.1	205.7	205.4	204.5	202.1	203.2	203.6	204.9
G55.0	201.0	200.8	200.6	199.5	197.1	198.0	198.7	199.8
G56.0	195.3	195.1	194.9	193.8	191.6	192.4	193.0	194.2
G57.0	190.2	189.8	189.7	188.5	186.2	186.9	187.8	188.5
G58.0	184.7	184.2	184.2	182.8	180.9	181.3	182.4	183.1
G59.0	178.0	178.0	178.0	176.6	174.6	174.9	176.0	176.9
G60.0	171.7	171.8	172.1	170.5	168.2	168.9	170.2	170.9
G61.0	164.6	165.1	165.1	164.1	161.0	162.7	163.2	164.4
G62.0	158.3	158.7	159.1	158.0	154.6	156.2	156.9	157.4
G63.0	151.9	152.2	153.0	151.9	147.6	149.6	150.5	150.5
G64.0	144.4	144.6	145.6	145.0	140.4	142.5	143.1	143.1
G65.0	137.7	138.2	138.7	137.2	132.3	134.2	135.2	135.6
G66.0	130.7	129.4	131.2	129.8	125.5	127.7	128.0	128.5
G67.0	122.6	122.0	123.8	123.2	118.4	120.1	120.6	120.2
G68.0	115.9	115.3	116.9	115.4	110.2	112.2	112.0	113.1
G69.0	108.0	106.5	107.7	106.1	98.7	103.1	102.4	103.8
G70.0	99.8	96.6	97.7	96.5	90.8	93.6	93.5	92.6
G71.0	89.7	88.3	89.4	88.6	83.5	86.0	85.1	83.7
G72.0	81.0	80.5	82.1	81.2	76.3	78.4	77.3	76.3
G73.0	74.4	74.1	74.9	73.9	68.7	71.2	69.4	70.1
G74.0	67.2	66.7	67.2	66.5	62.1	64.4	63.2	62.8
G75.0	60.0	60.4	59.6	59.9	54.2	56.4	54.3	54.6
G76.0	53.5	53.1	52.5	51.9	46.1	47.8	45.7	47.0
G77.0	45.2	45.3	45.1	45.2	39.4	40.9	39.0	40.0
G78.0	39.9	39.4	39.5	39.1	34.1	35.2	32.9	33.4
G79.0	34.3	34.0	34.2	33.0	27.5	28.7	27.1	28.0

Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Iwaylo Stoyanov

Review By:



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	27.6	27.0	27.1	25.9	22.2	23.2	22.2	21.7
G81.0	22.4	22.0	21.9	21.2	18.2	19.2	18.4	17.9
G82.0	17.3	16.8	17.2	16.0	13.0	14.5	14.0	14.2
G83.0	12.4	12.0	11.9	11.3	8.9	10.1	10.5	10.7
G84.0	7.9	7.8	7.9	7.8	6.1	7.2	7.9	8.2
G85.0	5.3	5.2	5.3	5.3	3.4	4.4	5.6	5.5
G86.0	3.2	3.1	3.3	3.2	1.7	2.4	3.6	3.6
G87.0	1.9	1.8	1.8	1.7	0.8	1.0	1.3	1.6
G88.0	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.6
G89.0	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5
G90.0	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

 γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No.: 4

Test Time: 2024-06-10 11:07:36

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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	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.6	318.5	318.5	318.5	318.5	318.6	318.5	318.6
G2.0	318.5	318.5	318.6	318.6	318.6	318.6	318.5	318.6
G3.0	318.4	318.4	318.4	318.5	318.5	318.6	318.4	318.6
G4.0	318.3	318.3	318.3	318.4	318.4	318.4	318.3	318.4
G5.0	318.1	318.1	318.0	318.1	318.1	318.2	318.1	318.2
G6.0	317.7	317.7	317.7	317.8	317.7	317.9	317.7	317.9
G7.0	317.5	317.4	317.3	317.5	317.5	317.5	317.4	317.6
G8.0	317.0	317.0	317.0	317.1	317.0	317.1	316.9	317.1
G9.0	316.4	316.5	316.4	316.6	316.6	316.5	316.5	316.6
G10.0	315.8	315.8	315.9	316.2	316.1	316.0	316.0	316.0
G11.0	315.1	315.1	315.2	315.4	315.4	315.4	315.2	315.3
G12.0	314.4	314.4	314.5	314.7	314.6	314.7	314.6	314.7
G13.0	313.9	313.9	313.8	314.0	313.7	313.8	313.9	314.1
G14.0	313.2	313.1	313.2	313.2	312.9	312.9	313.0	313.3
G15.0	312.5	312.6	312.6	312.3	312.2	312.2	312.3	312.8
G16.0	311.5	311.8	311.7	311.7	311.4	311.5	311.5	312.1
G17.0	310.5	310.7	310.7	311.0	310.7	310.7	311.0	311.0
G18.0	309.5	309.5	309.5	309.9	310.0	310.1	310.1	310.0
G19.0	308.2	308.2	308.3	308.7	309.1	309.5	309.0	308.8
G20.0	307.1	307.0	307.1	307.6	308.2	308.5	308.0	307.6
G21.0	305.9	305.7	306.0	306.4	307.0	307.2	306.9	306.5
G22.0	304.3	304.3	304.5	305.3	305.4	305.7	305.5	305.1
G23.0	302.8	302.9	303.2	304.1	304.0	304.1	304.1	304.1
G24.0	301.4	301.5	301.6	302.6	302.3	302.6	302.4	302.9
G25.0	299.8	300.0	300.4	300.9	300.7	300.8	300.9	301.1
G26.0	298.0	298.4	299.0	299.2	299.1	299.2	299.2	299.4
G27.0	295.8	296.4	297.1	297.4	297.1	297.5	297.3	297.7
G28.0	293.9	294.6	295.2	295.6	295.3	295.6	295.6	295.8
G29.0	292.2	292.6	293.1	293.7	293.8	293.6	293.7	293.8
G30.0	290.3	290.8	290.7	291.3	291.5	291.8	291.5	291.5
G31.0	287.9	289.0	288.8	289.0	289.3	289.9	289.4	289.2
G32.0	285.4	286.6	286.6	286.9	286.8	287.4	286.9	286.9
G33.0	283.0	284.1	284.3	284.8	284.5	285.0	284.6	285.1
G34.0	280.7	281.5	281.6	282.5	282.2	282.5	282.5	282.8
G35.0	278.0	278.6	278.8	279.7	279.6	279.4	280.2	279.4
G36.0	275.6	276.1	276.1	276.9	277.0	276.9	277.3	276.8
G37.0	272.8	273.3	273.1	274.1	273.6	274.7	273.5	274.2
G38.0	269.9	270.3	270.2	271.0	270.5	271.8	270.4	271.1
G39.0	266.9	267.2	267.4	267.9	267.6	268.3	267.6	268.1

Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Iwaylo Stoyanov

Review By:



Report No.: 4

Test Time: 2024-06-10 11:07:36

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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	263.6	263.9	264.3	264.5	264.6	264.2	264.5	264.5
G41.0	260.2	260.9	261.0	261.1	261.1	260.9	261.2	261.3
G42.0	256.9	257.4	257.5	258.0	257.2	257.4	257.6	258.0
G43.0	253.0	253.7	253.8	254.6	253.4	253.8	253.7	254.6
G44.0	249.5	250.2	250.2	251.2	249.8	250.1	250.1	251.1
G45.0	245.3	246.7	246.0	247.2	245.7	246.4	245.9	247.3
G46.0	241.4	242.5	242.3	242.5	242.0	242.3	242.2	242.8
G47.0	237.7	238.6	238.6	238.4	238.0	238.6	238.2	238.6
G48.0	233.2	233.7	234.4	234.0	233.7	234.1	233.8	234.3
G49.0	228.8	229.4	229.4	229.7	229.5	230.1	229.5	230.0
G50.0	224.5	224.7	224.6	225.3	225.0	225.5	225.3	225.4
G51.0	219.6	219.9	219.4	220.3	220.2	220.6	220.2	220.5
G52.0	215.1	215.4	214.8	215.6	215.2	215.9	215.5	215.7
G53.0	209.7	210.8	209.2	210.9	210.0	211.1	210.0	210.9
G54.0	204.8	204.5	204.2	205.3	204.7	205.2	205.0	205.5
G55.0	199.4	199.0	198.9	200.1	199.5	200.1	199.6	200.1
G56.0	193.5	193.2	193.1	194.0	193.4	194.3	193.7	194.4
G57.0	188.0	187.5	187.7	188.5	187.8	188.4	187.8	188.7
G58.0	182.7	182.2	181.9	182.7	182.1	182.6	182.2	183.1
G59.0	176.6	175.8	175.6	176.5	175.5	175.8	175.5	176.4
G60.0	169.7	169.9	169.5	170.2	169.5	169.6	169.4	170.5
G61.0	162.6	164.0	163.0	164.2	162.5	163.2	162.4	164.1
G62.0	156.0	157.2	156.4	157.1	156.2	156.1	156.1	157.1
G63.0	149.4	150.5	149.9	150.6	149.6	149.4	149.4	150.4
G64.0	141.6	143.0	142.3	142.9	142.2	142.3	142.4	143.1
G65.0	134.6	136.4	135.5	136.0	135.6	136.0	135.4	135.8
G66.0	126.1	129.2	128.6	128.8	128.7	129.1	128.7	128.8
G67.0	118.5	119.8	120.5	120.5	121.1	121.7	121.0	121.0
G68.0	112.0	112.5	111.4	113.4	113.9	114.2	114.4	113.4
G69.0	103.1	104.9	103.5	103.9	106.1	106.8	106.1	104.0
G70.0	94.5	95.3	96.4	96.6	96.7	98.8	96.8	96.3
G71.0	85.4	86.1	87.7	89.6	89.0	90.6	88.9	89.1
G72.0	76.6	76.3	77.7	80.4	81.0	78.7	81.0	79.9
G73.0	69.5	69.9	69.1	72.0	71.9	72.0	71.8	71.5
G74.0	61.7	63.3	62.8	63.7	63.0	64.0	62.9	62.8
G75.0	54.0	55.5	54.3	55.6	53.9	54.9	54.2	55.6
G76.0	46.9	48.7	48.2	47.7	47.0	46.0	47.0	47.8
G77.0	38.9	40.5	40.7	40.7	38.3	39.6	38.4	40.5
G78.0	32.8	34.9	33.8	33.8	32.5	33.7	32.7	34.0
G79.0	27.5	28.7	27.1	27.3	27.4	27.9	27.1	27.6

Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Iwaylo Stoyanov

Review By:



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	21.5	21.8	20.7	22.1	22.0	22.3	22.3	22.2
G81.0	17.5	17.6	16.5	17.8	17.5	18.2	17.9	17.8
G82.0	13.7	13.4	13.1	14.3	13.7	14.6	13.9	13.9
G83.0	10.2	10.3	10.0	11.0	10.4	10.6	10.7	10.8
G84.0	7.6	7.7	7.6	8.2	7.8	8.0	7.9	8.0
G85.0	5.4	5.4	5.0	5.3	4.8	5.1	5.3	5.5
G86.0	3.6	3.3	3.0	3.1	2.6	2.8	3.0	3.5
G87.0	1.6	1.6	1.5	1.3	1.0	1.0	1.1	1.4
G88.0	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5
G89.0	0.4	0.4	0.3	0.2	0.2	0.3	0.3	0.4
G90.0	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.6	318.6	318.6	318.5	318.5	318.5	318.6	318.6
G2.0	318.6	318.6	318.6	318.5	318.5	318.6	318.6	318.5
G3.0	318.5	318.5	318.5	318.4	318.5	318.5	318.5	318.5
G4.0	318.4	318.4	318.4	318.3	318.4	318.4	318.4	318.4
G5.0	318.2	318.3	318.2	318.2	318.2	318.2	318.2	318.2
G6.0	318.0	318.0	318.0	317.9	317.9	317.9	317.9	318.0
G7.0	317.6	317.6	317.7	317.5	317.6	317.6	317.6	317.7
G8.0	317.1	317.2	317.1	317.1	317.1	317.1	317.0	317.2
G9.0	316.6	316.6	316.5	316.4	316.5	316.5	316.6	316.6
G10.0	315.9	316.0	316.0	315.9	316.0	316.0	315.9	316.0
G11.0	315.3	315.3	315.3	315.3	315.4	315.4	315.4	315.4
G12.0	314.6	314.7	314.7	314.7	314.8	314.9	314.8	314.7
G13.0	314.0	314.1	314.1	314.1	314.2	314.2	314.1	314.2
G14.0	313.4	313.6	313.6	313.5	313.4	313.5	313.3	313.4
G15.0	312.9	313.0	312.8	312.6	312.6	312.6	312.5	312.6
G16.0	312.1	312.1	311.7	311.7	311.7	311.8	311.7	311.8
G17.0	311.1	311.0	310.7	310.7	310.7	310.8	310.7	310.8
G18.0	309.8	310.0	309.7	309.7	309.8	310.0	309.7	309.8
G19.0	308.5	308.7	308.5	308.4	308.5	308.7	308.5	308.5
G20.0	307.3	307.5	307.3	307.3	307.5	307.6	307.5	307.5
G21.0	306.0	306.2	306.2	306.2	306.1	306.3	306.1	306.3
G22.0	304.8	304.8	304.7	304.6	304.7	304.9	304.7	304.8
G23.0	303.6	303.3	303.2	303.3	303.3	303.5	303.3	303.5
G24.0	301.9	301.8	301.8	301.8	301.7	302.0	301.6	301.9
G25.0	300.5	300.4	300.0	300.0	300.0	300.1	299.9	300.0
G26.0	299.2	298.8	298.3	298.3	298.1	298.2	298.0	298.3
G27.0	297.3	296.8	296.2	296.2	296.1	296.2	296.0	296.1
G28.0	295.4	295.0	294.3	294.4	294.6	294.7	294.6	294.7
G29.0	293.5	292.9	292.6	292.9	292.8	292.8	292.5	292.9
G30.0	291.1	291.2	290.8	290.6	289.9	289.9	289.5	290.0
G31.0	289.3	289.5	288.3	287.8	287.5	287.6	287.2	287.5
G32.0	287.2	286.9	285.6	285.3	285.0	285.1	284.8	285.1
G33.0	284.6	284.3	283.2	283.0	282.6	282.9	282.4	282.7
G34.0	281.6	281.9	280.9	280.6	280.2	280.3	280.0	280.3
G35.0	278.9	279.1	278.3	277.8	277.4	277.6	277.2	277.5
G36.0	276.3	276.5	275.9	275.3	274.8	274.9	274.6	274.9
G37.0	273.4	273.7	273.0	272.5	271.8	272.2	271.6	272.2
G38.0	270.4	270.7	270.3	269.4	268.8	269.1	268.8	269.0
G39.0	267.6	267.5	267.3	266.5	265.9	266.1	265.9	266.1

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Iwaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	264.4	264.2	263.9	263.0	262.3	262.8	262.4	262.6
G41.0	261.2	261.0	260.7	260.0	259.1	259.4	259.2	259.4
G42.0	258.0	257.7	257.2	256.6	255.6	256.2	255.8	256.1
G43.0	254.0	254.0	253.4	253.1	251.9	252.3	252.1	252.4
G44.0	250.4	250.4	249.7	249.4	248.2	248.8	248.3	248.7
G45.0	246.1	246.8	245.6	245.6	244.2	244.9	244.2	245.0
G46.0	242.4	242.7	241.7	241.5	240.3	240.8	240.2	240.7
G47.0	238.6	238.8	237.8	237.7	236.4	236.7	236.3	236.8
G48.0	234.3	234.2	233.3	233.3	231.9	232.3	231.6	232.1
G49.0	229.7	229.8	229.1	229.2	227.8	228.0	227.5	228.1
G50.0	225.1	225.0	224.6	224.8	223.3	223.7	222.8	223.5
G51.0	220.0	220.2	219.8	220.0	218.6	218.7	217.8	218.8
G52.0	215.0	215.4	215.3	215.3	214.1	214.1	212.9	213.9
G53.0	209.4	210.8	210.0	210.7	208.8	209.1	207.4	209.2
G54.0	204.3	205.0	205.0	205.3	204.0	203.8	202.4	203.9
G55.0	199.1	199.6	199.6	200.1	199.0	198.6	197.5	198.6
G56.0	193.4	193.6	193.8	194.5	193.5	192.9	191.9	192.8
G57.0	188.0	187.9	188.0	188.7	188.0	187.5	186.6	187.2
G58.0	182.1	182.4	182.5	183.2	182.7	181.8	181.2	181.8
G59.0	176.0	176.0	176.1	176.9	176.2	175.6	174.7	175.3
G60.0	169.6	170.0	170.0	170.9	170.2	169.3	168.5	169.3
G61.0	163.0	164.1	162.6	164.4	163.6	163.4	161.5	163.2
G62.0	156.5	157.0	156.2	157.6	157.7	156.8	155.0	156.8
G63.0	149.9	150.6	149.6	150.9	150.9	150.4	147.8	150.1
G64.0	142.4	143.4	141.9	143.2	143.3	142.6	139.3	142.3
G65.0	135.7	136.9	134.9	135.1	134.0	134.0	131.9	134.5
G66.0	128.8	129.6	124.8	126.9	126.6	127.2	125.1	127.7
G67.0	120.4	118.8	117.4	118.9	119.2	119.5	118.0	119.7
G68.0	110.6	111.4	110.7	111.2	111.2	111.5	109.0	111.8
G69.0	102.6	103.9	102.1	102.9	101.6	102.2	97.8	102.4
G70.0	95.0	95.3	93.4	92.1	92.9	91.9	88.4	92.4
G71.0	86.9	85.9	84.6	83.3	84.3	84.3	81.9	85.0
G72.0	77.4	75.9	75.6	76.3	76.8	77.1	74.7	77.6
G73.0	68.4	68.6	68.6	69.2	68.2	69.1	66.5	70.0
G74.0	62.0	62.2	60.0	61.5	60.9	62.9	59.8	63.7
G75.0	53.1	54.1	52.0	53.0	53.0	54.9	52.4	56.2
G76.0	47.1	47.0	45.3	45.4	45.0	47.9	45.6	48.8
G77.0	39.7	38.5	37.8	39.3	38.7	41.8	39.9	42.4
G78.0	33.5	33.4	31.6	33.3	33.9	36.2	34.0	36.4
G79.0	27.3	27.0	26.7	27.5	27.9	29.9	27.8	29.5

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Iwaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	20.7	20.8	20.5	21.3	22.7	24.4	22.1	23.6
G81.0	16.3	16.8	16.3	17.5	18.8	19.8	17.6	18.8
G82.0	12.9	12.7	12.8	14.0	14.4	14.8	12.8	13.6
G83.0	9.7	9.7	9.7	10.6	10.8	10.8	8.9	9.0
G84.0	7.5	7.3	7.4	8.2	8.3	7.7	6.3	6.1
G85.0	5.2	5.3	5.5	5.8	6.0	4.9	3.6	3.8
G86.0	3.4	3.5	3.7	3.9	3.8	2.8	1.7	2.0
G87.0	1.6	1.7	1.8	1.8	1.5	1.1	0.8	0.8
G88.0	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4
G89.0	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3
G90.0	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

 γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No.: 4

Test Time: 2024-06-10 11:07:36

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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	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.6	318.5	318.5	318.6	318.5	318.6	318.5	318.5
G2.0	318.6	318.6	318.6	318.6	318.5	318.6	318.6	318.6
G3.0	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G4.0	318.4	318.3	318.3	318.3	318.3	318.4	318.3	318.4
G5.0	318.2	318.2	318.2	318.2	318.1	318.1	318.0	318.1
G6.0	317.9	317.9	317.9	317.9	317.8	317.8	317.7	317.7
G7.0	317.6	317.6	317.5	317.5	317.4	317.5	317.4	317.5
G8.0	317.1	317.2	317.0	317.1	317.0	317.2	317.0	317.2
G9.0	316.5	316.5	316.5	316.6	316.5	316.7	316.7	316.8
G10.0	315.9	315.9	315.8	315.9	315.9	316.2	316.2	316.3
G11.0	315.3	315.3	315.2	315.4	315.4	315.6	315.5	315.6
G12.0	314.7	314.7	314.6	314.7	314.8	315.0	314.7	314.8
G13.0	314.1	314.1	314.1	314.2	314.2	314.3	314.0	313.9
G14.0	313.4	313.4	313.6	313.7	313.6	313.4	313.0	313.2
G15.0	312.5	312.6	312.8	313.2	313.0	312.6	312.3	312.5
G16.0	311.6	311.7	311.9	312.3	312.0	312.1	311.6	311.8
G17.0	310.6	310.8	311.0	311.2	310.9	311.2	311.1	311.1
G18.0	309.6	309.7	309.9	310.1	309.8	310.3	310.4	310.6
G19.0	308.3	308.6	308.8	308.7	308.6	309.2	309.5	309.7
G20.0	307.4	307.5	307.6	307.6	307.6	308.2	308.5	308.6
G21.0	306.0	306.4	306.5	306.2	306.3	307.0	307.2	307.3
G22.0	304.5	304.9	304.9	305.0	305.1	305.8	305.8	306.0
G23.0	303.2	303.5	303.4	303.5	303.9	304.4	304.4	304.6
G24.0	301.6	302.2	301.8	302.1	302.4	303.1	302.8	303.1
G25.0	300.0	300.3	300.2	300.7	301.1	301.3	301.3	301.4
G26.0	298.2	298.7	298.4	299.1	299.6	299.8	299.7	299.8
G27.0	296.1	296.6	296.5	297.2	297.6	298.1	297.8	298.0
G28.0	294.6	294.8	294.5	295.6	295.7	296.3	296.0	296.2
G29.0	293.0	293.2	292.9	293.5	293.8	294.3	294.3	294.2
G30.0	290.2	290.9	291.0	291.5	291.4	292.2	291.9	292.2
G31.0	287.8	288.3	288.8	289.9	289.6	289.8	289.8	290.1
G32.0	285.3	285.5	285.9	287.2	287.6	287.4	287.3	287.6
G33.0	283.1	283.3	283.8	284.6	285.1	285.5	285.0	285.2
G34.0	280.6	280.8	281.5	282.1	282.3	283.3	282.6	282.8
G35.0	277.9	278.2	278.9	279.5	279.4	280.2	280.2	280.0
G36.0	275.3	275.5	276.2	276.8	276.8	277.4	277.5	277.7
G37.0	272.1	272.9	273.3	274.2	273.6	274.5	274.0	275.3
G38.0	269.3	269.8	270.5	271.3	270.9	271.3	271.2	272.1
G39.0	266.2	266.9	267.5	268.1	267.9	268.4	268.3	268.2

Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Iwaylo Stoyanov

Review By:



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	262.7	263.7	264.1	264.8	264.5	265.0	264.8	264.4
G41.0	259.4	260.4	260.8	261.5	261.3	262.0	261.1	261.2
G42.0	256.0	257.2	257.5	258.1	257.8	258.9	257.7	257.8
G43.0	252.1	253.4	253.6	254.3	254.1	255.2	253.8	253.9
G44.0	248.6	249.8	250.1	250.8	250.4	251.2	250.3	250.5
G45.0	244.3	246.0	245.9	247.0	246.6	247.3	246.1	246.8
G46.0	240.6	241.9	242.1	242.8	242.9	242.8	242.5	242.7
G47.0	236.6	237.9	238.1	238.6	239.1	238.9	238.4	238.9
G48.0	232.1	233.4	233.6	234.0	234.1	234.3	234.0	234.4
G49.0	228.0	229.1	229.1	229.7	229.6	230.1	229.6	230.3
G50.0	223.5	224.8	224.8	225.4	224.8	225.7	225.4	225.8
G51.0	218.7	219.9	219.7	220.5	219.8	220.7	220.2	220.9
G52.0	214.0	215.4	215.1	215.9	215.1	215.9	215.5	216.0
G53.0	208.7	210.5	209.6	210.6	209.5	211.1	210.0	210.9
G54.0	203.7	205.1	204.6	204.8	204.5	205.7	205.0	205.3
G55.0	198.8	200.1	199.5	199.2	199.2	200.3	199.5	200.2
G56.0	192.9	194.3	193.6	193.3	193.2	194.5	193.6	194.0
G57.0	187.5	188.8	188.3	188.0	187.7	188.8	188.1	188.3
G58.0	181.8	183.0	182.6	182.3	182.1	183.2	182.2	182.2
G59.0	175.5	176.7	175.9	176.1	175.7	176.5	175.7	175.6
G60.0	169.2	170.5	169.4	170.1	169.7	170.2	169.3	169.1
G61.0	162.7	164.2	162.5	164.1	162.7	164.1	162.5	162.8
G62.0	156.5	157.0	155.8	157.0	156.4	157.1	155.8	155.2
G63.0	150.2	150.6	149.4	150.6	149.5	150.3	149.4	148.9
G64.0	142.7	143.0	141.6	143.4	142.4	142.8	142.0	141.8
G65.0	134.6	135.3	134.6	136.4	135.7	135.4	134.9	135.4
G66.0	127.3	128.4	126.8	129.6	128.3	128.3	128.1	128.4
G67.0	120.0	120.4	119.4	120.7	120.4	120.3	120.5	120.6
G68.0	111.7	112.9	112.9	113.5	112.6	113.0	113.6	113.3
G69.0	101.8	104.2	104.0	105.8	104.5	104.8	105.5	105.8
G70.0	92.3	92.8	94.6	97.0	96.7	97.5	97.4	97.4
G71.0	84.3	83.7	85.3	87.0	89.0	90.7	90.1	89.7
G72.0	76.6	76.8	77.2	77.5	78.3	82.1	82.3	81.0
G73.0	69.0	70.3	70.2	70.7	70.6	72.8	74.3	74.5
G74.0	62.6	64.2	63.2	64.1	63.6	64.4	65.3	67.0
G75.0	54.7	56.3	55.8	57.3	56.1	57.2	56.5	57.8
G76.0	47.5	49.0	49.1	50.7	49.4	51.0	50.0	48.3
G77.0	41.0	42.1	41.7	42.9	42.8	44.1	41.8	42.0
G78.0	35.5	35.9	36.3	37.1	37.0	37.6	36.0	36.1
G79.0	29.5	30.4	30.9	31.6	31.3	30.9	30.1	31.1

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Iwaylo Stoyanov

Review By :



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	23.4	23.8	24.0	25.3	24.9	25.7	25.2	24.8
G81.0	18.4	18.7	18.7	20.1	20.1	21.0	20.6	20.4
G82.0	12.4	13.5	13.0	15.1	15.9	17.0	16.0	16.4
G83.0	8.3	8.7	9.1	10.5	11.7	12.5	12.2	11.5
G84.0	5.6	5.6	6.0	7.6	8.5	9.0	8.5	8.4
G85.0	3.5	3.5	3.7	4.7	5.5	6.1	5.7	5.5
G86.0	2.1	2.0	2.1	2.9	3.6	4.1	4.0	3.5
G87.0	0.8	0.9	1.1	1.7	1.8	2.2	2.2	1.8
G88.0	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.6
G89.0	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3
G90.0	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2

Test Type : Type C Test Distance : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

γ (°): 0.0-90.0:1.0

Humidity : 60.0%



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G1.0	318.5	318.5	318.5	318.5	318.5	318.5	318.5	318.5
G2.0	318.6	318.6	318.5	318.5	318.5	318.6	318.5	318.5
G3.0	318.5	318.5	318.5	318.5	318.4	318.5	318.4	318.5
G4.0	318.4	318.3	318.4	318.4	318.3	318.4	318.3	318.3
G5.0	318.0	318.1	318.2	318.2	318.2	318.2	318.1	318.2
G6.0	317.8	317.8	317.9	317.9	317.9	318.0	317.9	317.9
G7.0	317.5	317.5	317.5	317.6	317.6	317.7	317.6	317.6
G8.0	317.1	317.2	317.1	317.2	317.0	317.2	317.0	317.1
G9.0	316.7	316.6	316.5	316.5	316.4	316.6	316.5	316.4
G10.0	316.1	316.0	315.8	315.8	315.8	316.0	315.9	316.0
G11.0	315.4	315.3	315.2	315.3	315.2	315.4	315.3	315.4
G12.0	314.7	314.8	314.7	314.7	314.7	314.8	314.8	314.8
G13.0	314.1	314.2	314.2	314.2	314.1	314.2	314.1	314.2
G14.0	313.2	313.6	313.6	313.7	313.5	313.5	313.3	313.4
G15.0	312.5	313.0	313.1	312.9	312.6	312.6	312.5	312.6
G16.0	311.8	312.1	312.0	312.1	311.7	311.8	311.6	311.8
G17.0	311.1	311.1	311.0	311.0	310.8	310.9	310.7	310.8
G18.0	310.2	310.1	309.8	310.1	309.9	309.8	309.6	309.9
G19.0	309.1	309.0	308.7	308.9	308.6	308.6	308.5	308.7
G20.0	308.2	307.9	307.6	307.7	307.6	307.6	307.2	307.4
G21.0	307.1	306.8	306.3	306.5	306.3	306.2	305.8	306.1
G22.0	305.7	305.5	305.0	304.8	304.7	304.7	304.4	304.8
G23.0	304.3	304.4	303.5	303.4	303.5	303.4	303.0	303.3
G24.0	302.8	302.9	302.0	302.0	301.7	301.8	301.2	301.6
G25.0	301.1	301.0	300.8	300.3	300.0	300.0	299.6	299.8
G26.0	299.3	299.7	299.3	298.6	298.1	298.3	297.9	298.2
G27.0	297.8	297.8	297.3	296.6	296.3	296.6	296.3	296.5
G28.0	295.8	295.9	295.4	294.9	294.7	295.1	294.5	294.6
G29.0	294.0	293.9	293.6	293.5	292.9	293.0	292.2	292.2
G30.0	291.7	291.7	291.7	291.5	290.4	290.3	289.7	289.6
G31.0	289.6	289.7	289.7	289.2	287.9	288.0	287.5	287.4
G32.0	287.1	287.7	287.1	286.5	285.6	285.6	285.0	285.0
G33.0	285.2	285.5	284.4	284.2	283.3	283.2	282.7	282.6
G34.0	283.0	282.8	282.0	282.0	281.0	280.8	280.2	280.3
G35.0	280.0	279.6	279.2	279.4	278.3	278.0	277.6	277.4
G36.0	277.0	277.2	276.7	276.6	275.9	275.4	274.9	274.9
G37.0	273.8	274.6	273.8	274.0	272.9	272.7	271.9	272.0
G38.0	270.6	271.4	270.8	270.9	270.1	269.6	269.0	268.9
G39.0	267.9	268.4	267.8	267.9	267.2	266.7	266.1	266.1

Test Type : Type C

Test Distance : 8.131 m

C Plane (°): 0.0-360.0:5.0

 γ (°): 0.0-90.0:1.0

Test Device : Lisun LSG-1700B

Temperature : 24.0°C

Humidity : 60.0%

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

Review By :



Report No.: 4

Test Time: 2024-06-10 11:07:36

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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	265.1	264.9	264.6	264.5	263.7	263.2	262.7	262.5
G41.0	261.6	261.7	261.4	261.5	260.5	260.1	259.3	259.3
G42.0	257.8	258.3	258.1	258.0	257.1	256.7	255.9	255.9
G43.0	253.7	255.0	254.2	254.3	253.3	253.0	252.0	252.0
G44.0	250.2	251.7	250.7	250.7	249.7	249.4	248.4	248.5
G45.0	246.2	247.7	246.4	247.1	245.7	245.8	244.2	244.8
G46.0	242.4	242.9	242.6	242.9	241.7	241.5	240.3	240.5
G47.0	238.3	238.9	238.9	238.9	238.0	237.6	236.3	236.5
G48.0	234.1	234.5	234.6	234.3	233.4	232.9	231.9	231.9
G49.0	229.7	230.0	229.6	229.8	229.0	228.7	227.5	227.7
G50.0	225.4	225.7	224.9	225.2	224.4	224.3	223.2	223.1
G51.0	220.4	220.7	219.7	219.9	219.6	219.5	218.3	218.0
G52.0	215.5	215.7	214.8	215.5	214.9	214.7	213.5	213.5
G53.0	210.2	210.8	209.5	210.5	209.4	210.1	208.1	208.7
G54.0	204.8	205.4	204.2	204.6	204.4	204.7	203.2	203.2
G55.0	199.6	200.1	198.8	198.8	198.9	199.4	198.2	198.1
G56.0	193.4	194.0	193.0	192.8	193.0	193.8	192.3	192.2
G57.0	187.8	188.4	187.5	187.3	187.4	188.1	186.9	186.8
G58.0	181.8	182.7	181.6	181.9	182.0	182.5	181.1	181.0
G59.0	175.2	176.1	175.3	175.4	175.5	176.1	174.7	174.8
G60.0	168.9	170.0	169.0	169.7	169.2	169.8	168.4	168.5
G61.0	162.1	163.7	162.4	163.5	161.7	163.4	161.8	162.5
G62.0	155.4	156.5	155.8	156.7	155.2	156.5	155.4	155.5
G63.0	149.2	149.9	149.2	150.0	148.4	149.4	148.9	149.1
G64.0	141.8	142.2	141.6	142.7	140.6	141.2	140.9	141.4
G65.0	134.8	135.3	134.5	135.5	133.9	133.7	133.4	133.6
G66.0	128.0	127.9	127.4	128.6	126.1	126.6	126.1	126.6
G67.0	120.4	119.9	119.4	119.8	118.1	118.9	118.5	119.0
G68.0	113.0	112.5	111.5	112.3	110.7	110.3	110.1	110.8
G69.0	104.8	104.7	104.0	104.9	101.9	102.7	101.4	103.0
G70.0	97.3	97.2	96.3	95.7	94.0	92.5	90.1	90.1
G71.0	90.1	90.1	88.8	86.9	83.3	83.0	82.6	82.8
G72.0	82.2	81.6	78.9	75.7	75.5	75.4	74.3	75.2
G73.0	73.9	72.9	69.9	69.5	68.3	68.3	66.7	68.1
G74.0	66.1	64.2	63.3	62.5	61.1	61.9	59.7	61.2
G75.0	56.4	56.7	55.2	55.5	53.9	54.6	52.7	54.1
G76.0	49.6	50.4	48.9	48.9	47.3	47.2	45.0	46.9
G77.0	41.4	43.5	42.2	40.8	40.0	40.0	38.7	40.2
G78.0	35.6	36.6	35.6	35.3	34.3	34.4	33.4	34.2
G79.0	29.7	29.9	30.0	30.2	29.1	28.7	26.8	27.3

Test Type: Type C

Test Distance: 8.131 m

C Plane (°): 0.0-360.0:5.0

γ (°): 0.0-90.0:1.0

Test Device: Lisun LSG-1700B

Temperature: 24.0°C

Humidity: 60.0%

Test Lab: Light Lab TU-Gabrovo

Test By: Eng. Ivaylo Stoyanov

Review By:



Report No. : 4

Test Time : 2024-06-10 11:07:36

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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	24.4	24.7	23.5	23.4	21.7	21.7	21.0	21.5
G81.0	19.7	19.6	18.0	17.8	16.6	17.0	15.8	16.6
G82.0	15.0	15.6	13.7	12.8	11.2	11.6	10.8	11.9
G83.0	11.6	11.4	10.1	8.7	7.2	6.6	6.9	7.8
G84.0	8.4	8.2	7.1	6.0	5.1	4.6	4.9	5.6
G85.0	5.3	5.6	4.8	3.8	3.2	2.7	2.9	3.4
G86.0	3.5	3.8	3.1	2.3	1.8	1.4	1.5	1.8
G87.0	1.7	1.7	1.3	1.1	0.8	0.6	0.6	0.7
G88.0	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4
G89.0	0.3	0.3	0.3	0.3	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 : 8.131 m

Test Device : Lisun LSG-1700B

Test Lab : Light Lab TU-Gabrovo

Test By : Eng. Ivaylo Stoyanov

C Plane (°): 0.0-360.0:5.0

Temperature : 24.0°C

Review By :

 γ (°): 0.0-90.0:1.0

Humidity : 60.0%