



Report No.:

Test Time: 2025/3/19 8:18:40

LUMINAIRE PHOTOMETRIC TEST REPORT

Luminaire Property

Manufacturer:
Luminaire Type: RH-LPS16K-20W-4000K
Lamp Type: CXA1820
Luminous Width: 75 mm
Luminous Length: 150 mm
Luminous Height: 150 mm

Voltage(V): 221.60 V
Current(A): 0.0960 A
Power(W): 19.88 W
Power Factor: 0.9260
Lamp Luminous Flux: 1762.96

Photometric Results

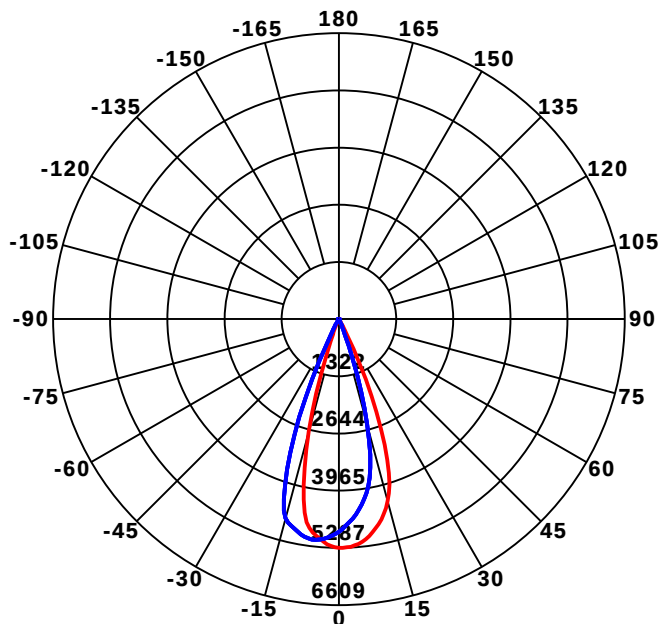
CIE Class: Direct
Luminaire Luminous Flux: 1762.956 lm
Downward Ratio: 100.00%
Luminaire Efficacy Rating(LER): 88.68 lm/W
Beam Angle(50%) C0-180,C90-270: 36.2,36.6
Field Angle(10%) C0-180,C90-270: 46.9,47.2
S/MH C0-180,C90-270: 0.611,0.611

Max. Intensity: 5287.12 cd
Max.Intensity Angle: C=180 Gamma=0
Upward Ratio: 0.00%
Efficacy: 100.00%
Center Intensity: 5287.12 cd
Effective Luminous Flux: 1675.44 lm
ERP(ϕ use)(120deg): 1762.96 lm

Picture of Luminaire



Luminous Intensity Distribution Curve



Beam Angle(50%) C0-180,C90-270: 36.2 deg,36.6 deg

C0-180 — C90-270

C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

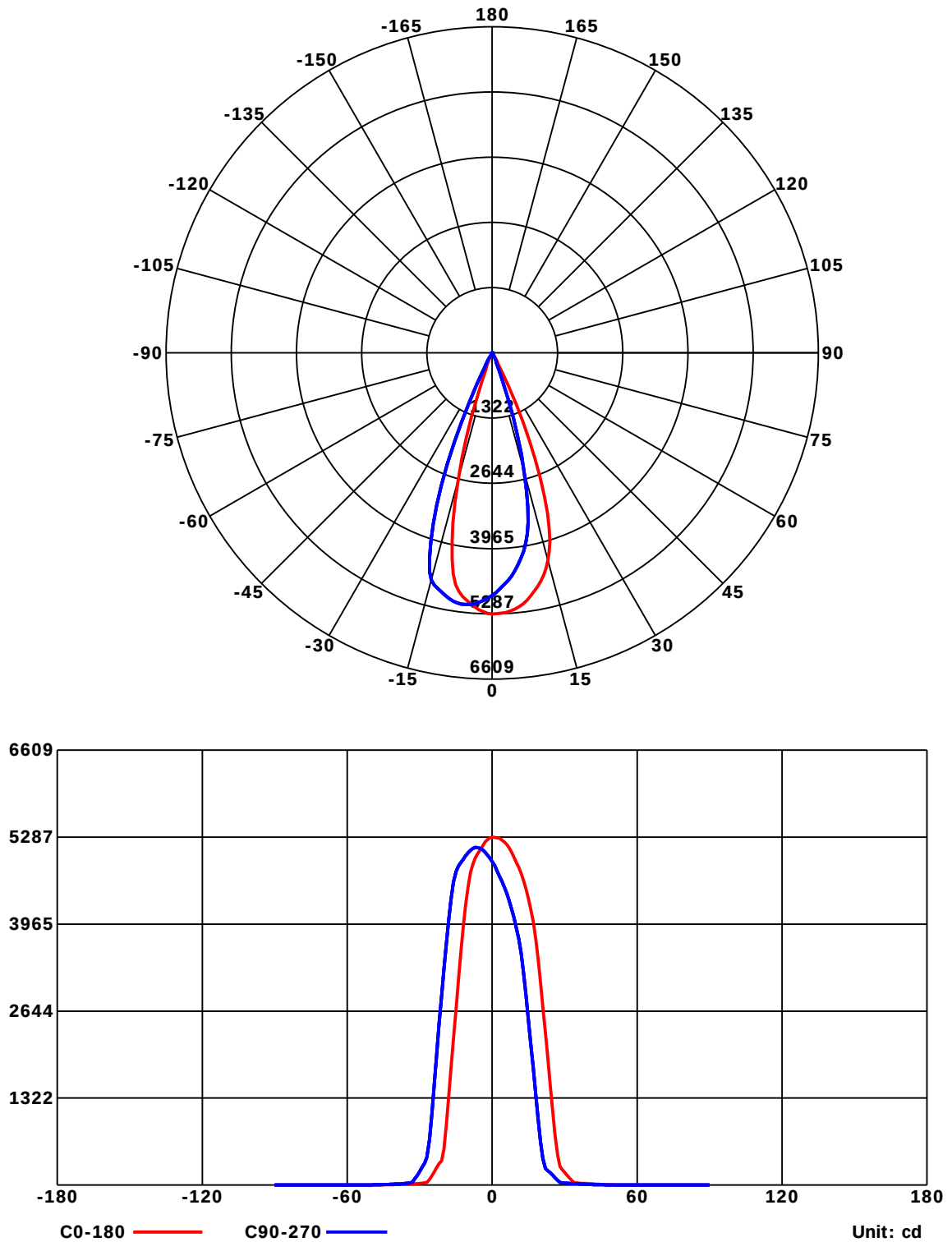
G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



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Luminous Intensity Distribution Curve



C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

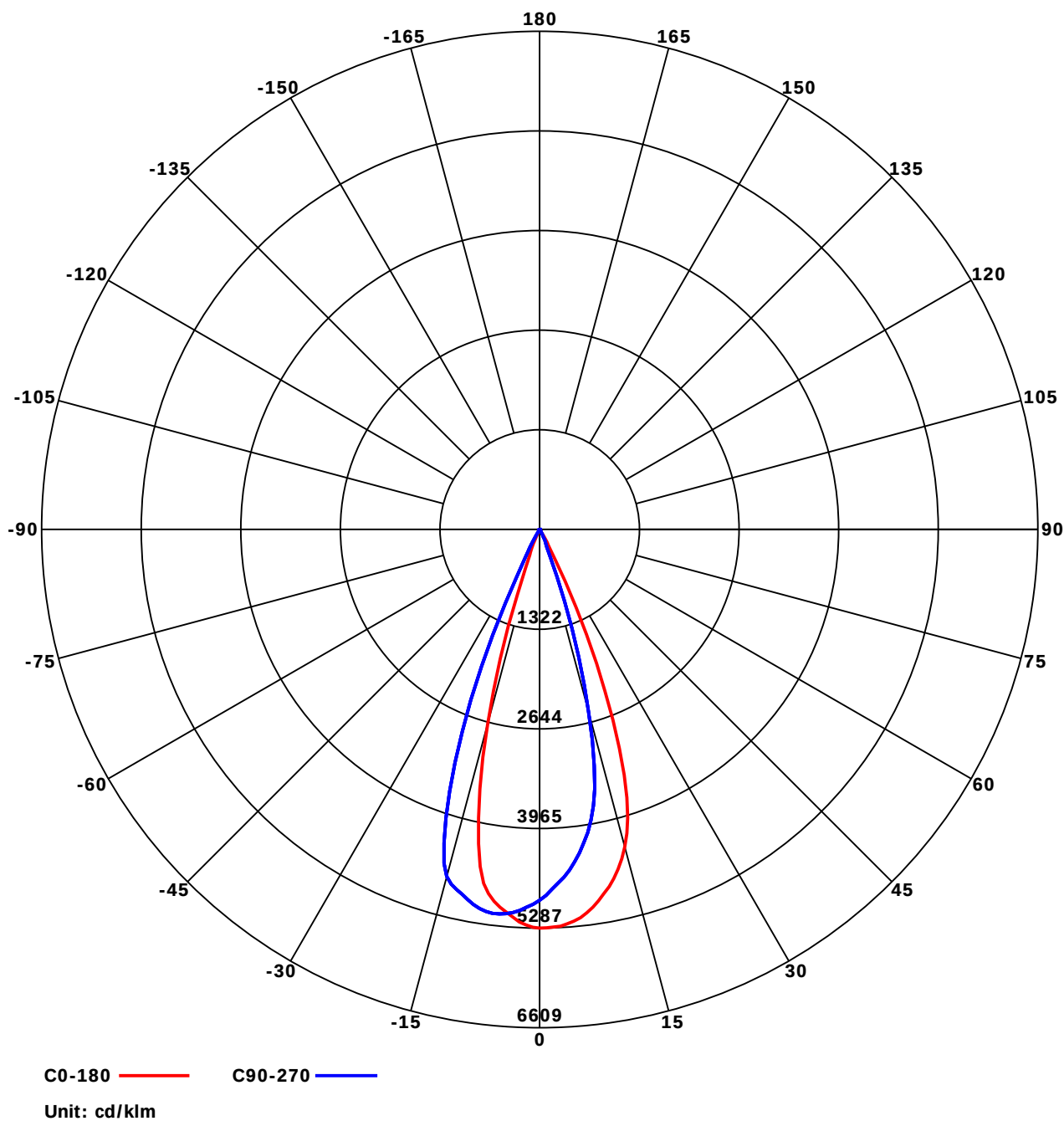
G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



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Luminous Intensity Distribution Curve



C Range: 0 - 360 Deg
C Interval: 45.0 Deg
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Temperature: 7.8
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Test Date: 2025/3/19 8:18:40

G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



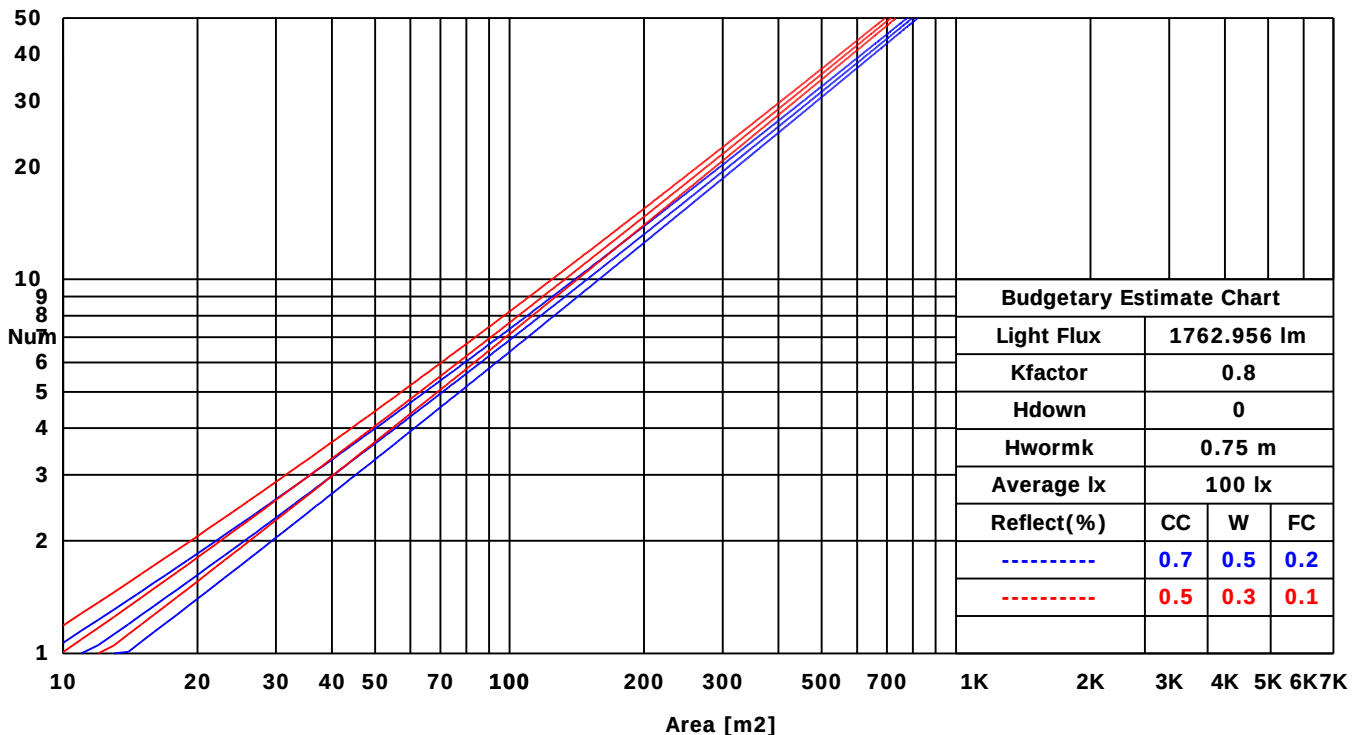
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UTILIZATION FACTORS TABLE

RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION FOR RHOFC=20															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.17	1.16	1.16	1.15	1.14	1.14	1.10	1.10	1.09	1.05	1.04	1.03	0.97	0.96	0.95	0.90
2	1.13	1.12	1.11	1.11	1.10	1.09	1.07	1.05	1.04	1.01	1.00	0.99	0.95	0.93	0.92	0.87
3	1.09	1.08	1.07	1.07	1.06	1.05	1.03	1.01	1.00	0.98	0.96	0.95	0.92	0.90	0.88	0.84
4	1.05	1.04	1.03	1.03	1.02	1.01	0.99	0.97	0.96	0.95	0.93	0.91	0.90	0.87	0.85	0.81
5	1.01	1.00	1.00	1.00	0.98	0.97	0.96	0.94	0.93	0.92	0.90	0.88	0.87	0.85	0.82	0.78
6	0.98	0.97	0.96	0.96	0.95	0.94	0.93	0.91	0.89	0.89	0.87	0.85	0.85	0.82	0.79	0.76
7	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.88	0.86	0.86	0.84	0.82	0.83	0.79	0.77	0.73
8	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.85	0.83	0.84	0.81	0.79	0.80	0.77	0.74	0.71
9	0.89	0.88	0.87	0.87	0.86	0.85	0.84	0.82	0.81	0.81	0.79	0.76	0.78	0.75	0.72	0.69
10	0.86	0.85	0.85	0.85	0.83	0.82	0.82	0.80	0.78	0.79	0.76	0.74	0.76	0.72	0.70	0.67

LUMINAIRE BUDGETARY ESTIMATE DIAGRAM



C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

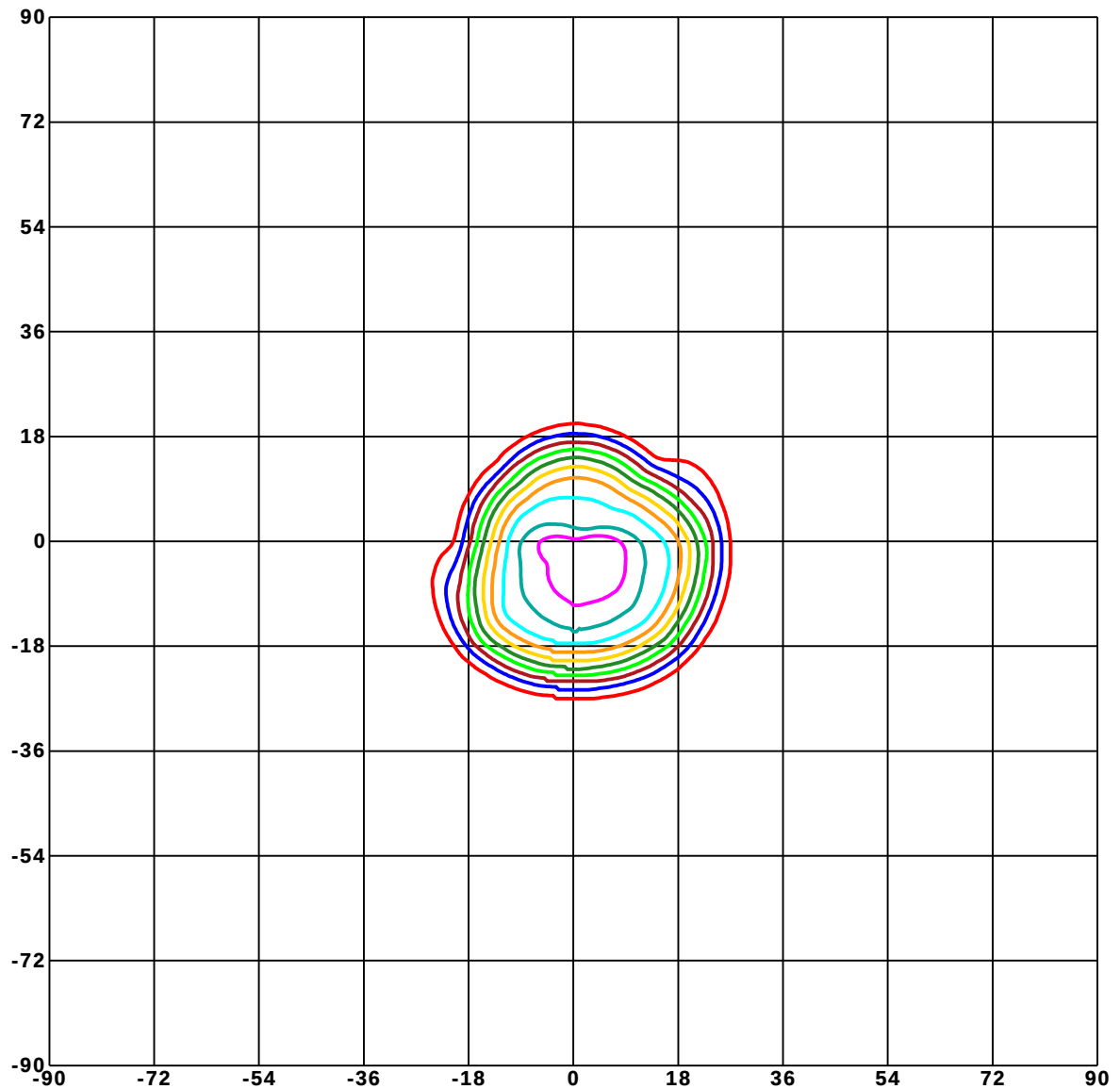
G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



Report No.:

Test Time: 2025/3/19 8:18:40

ISOCANDELA DIAGRAM (RECTANGULAR)



Unit of intensity:cd I_{max}(100%): 5287.118 cd

5022.762(95%I_{max})
4758.406(90%I_{max})
4229.695(80%I_{max})
3700.983(70%I_{max})
3172.271(60%I_{max})

2643.559(50%I_{max})
2114.847(40%I_{max})
1586.135(30%I_{max})
1057.424(20%I_{max})
528.712(10%I_{max})

C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

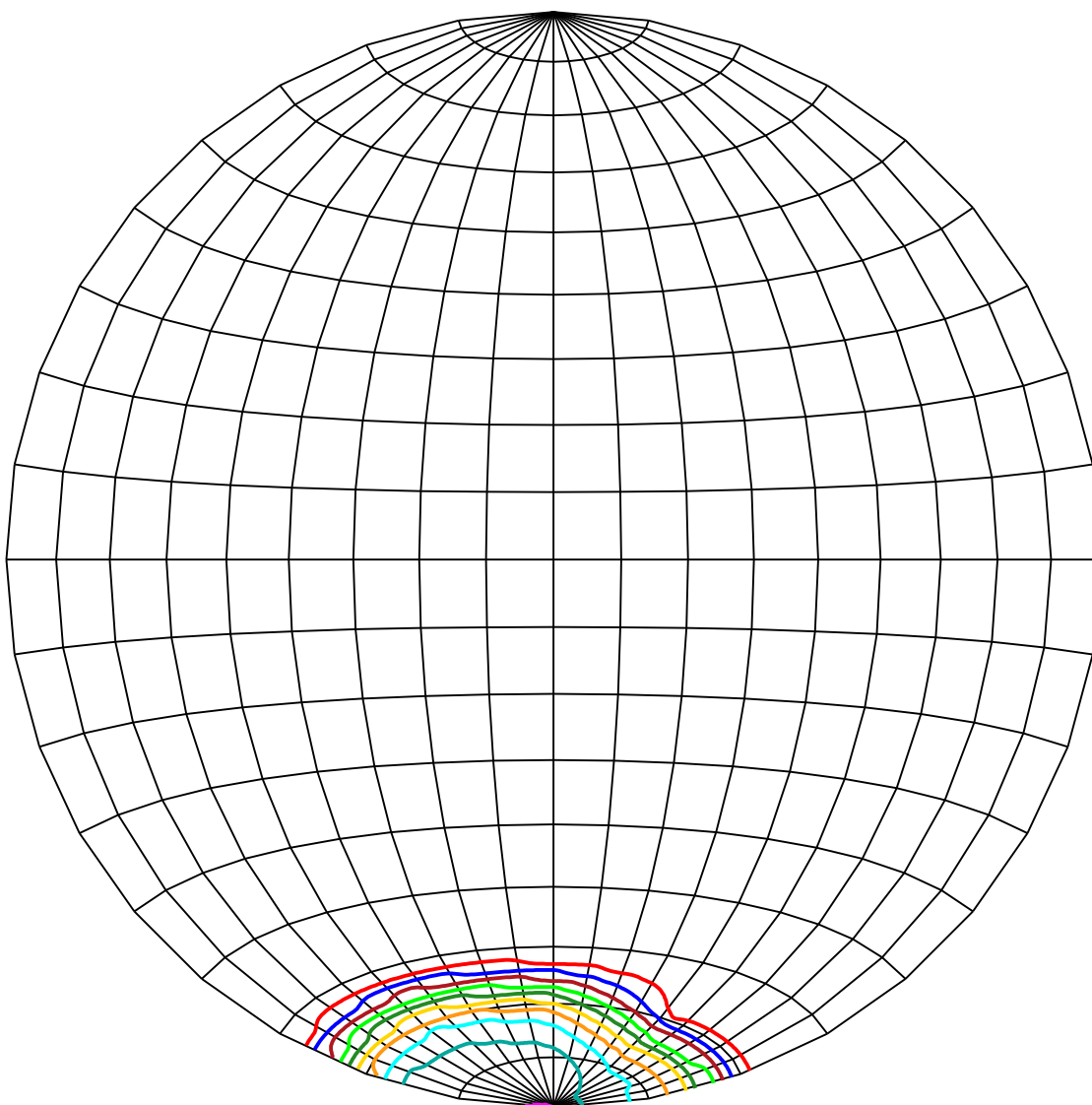
G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



Report No.:

Test Time: 2025/3/19 8:18:40

ISOCANDELA DIAGRAM (SPHERE)



Unit of intensity:cd I_{max}(100%): 5287.118 cd

— 5022.762(95%I_{max})

— 2643.559(50%I_{max})

— 4758.406(90%I_{max})

— 2114.847(40%I_{max})

— 4229.695(80%I_{max})

— 1586.135(30%I_{max})

— 3700.983(70%I_{max})

— 1057.424(20%I_{max})

— 3172.271(60%I_{max})

— 528.712(10%I_{max})

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.8

Operators:

Test Date: 2025/3/19 8:18:40

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

Test Distance: 7.79 m

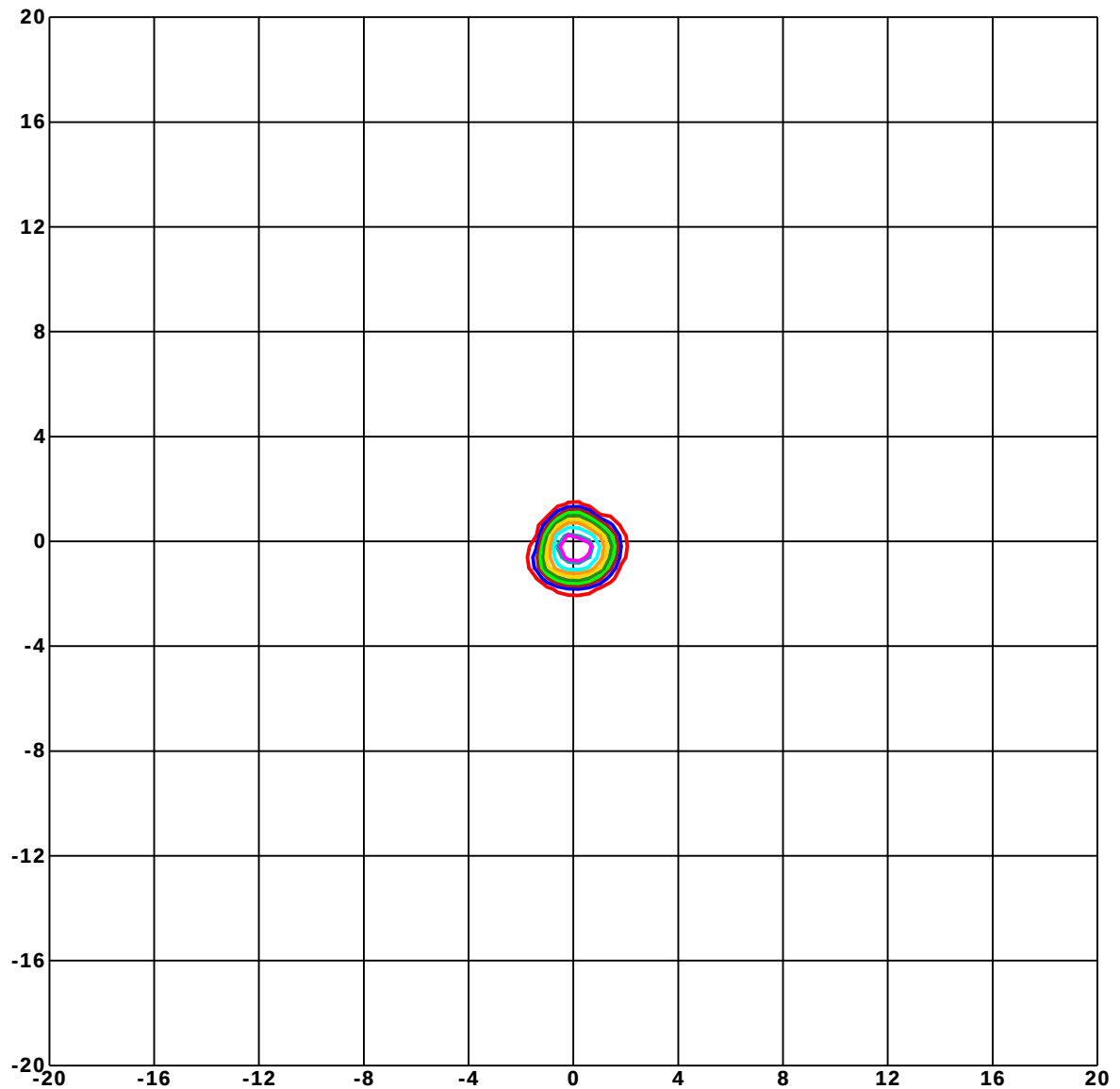
Remarks:



Report No.:

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ISOLX DIAGRAM



Unit of illumination:lx Height of plane:4.0(m)/13.12(ft)

304.009(92%Emax)
297.4(90%Emax)
264.356(80%Emax)
231.311(70%Emax)
198.267(60%Emax)

165.222(50%Emax)
132.178(40%Emax)
99.133(30%Emax)
66.089(20%Emax)
33.044(10%Emax)

C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

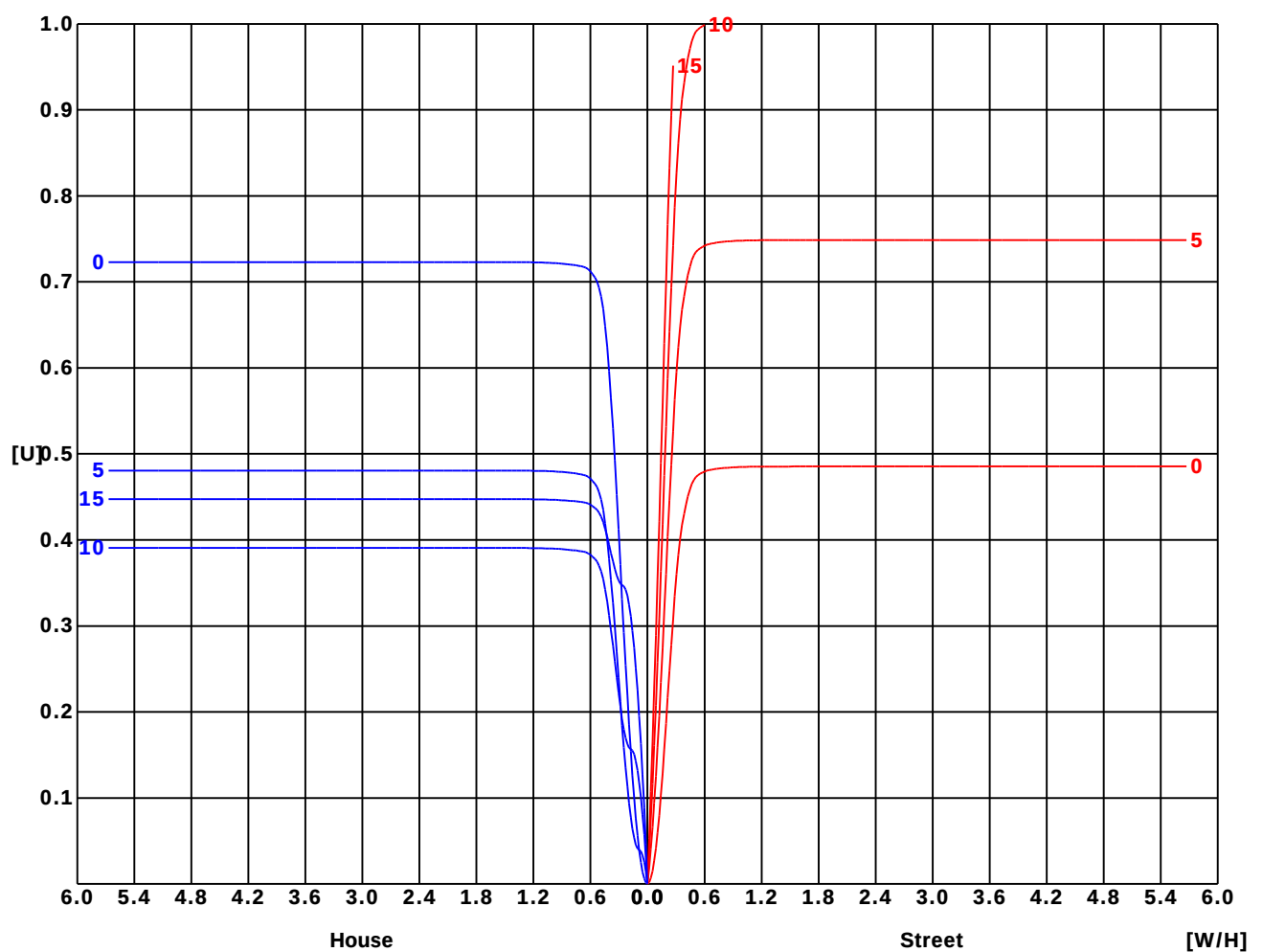
G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



Report No.:

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UTILIZATION FACTOR DIAGRAM (ROAD)



C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:

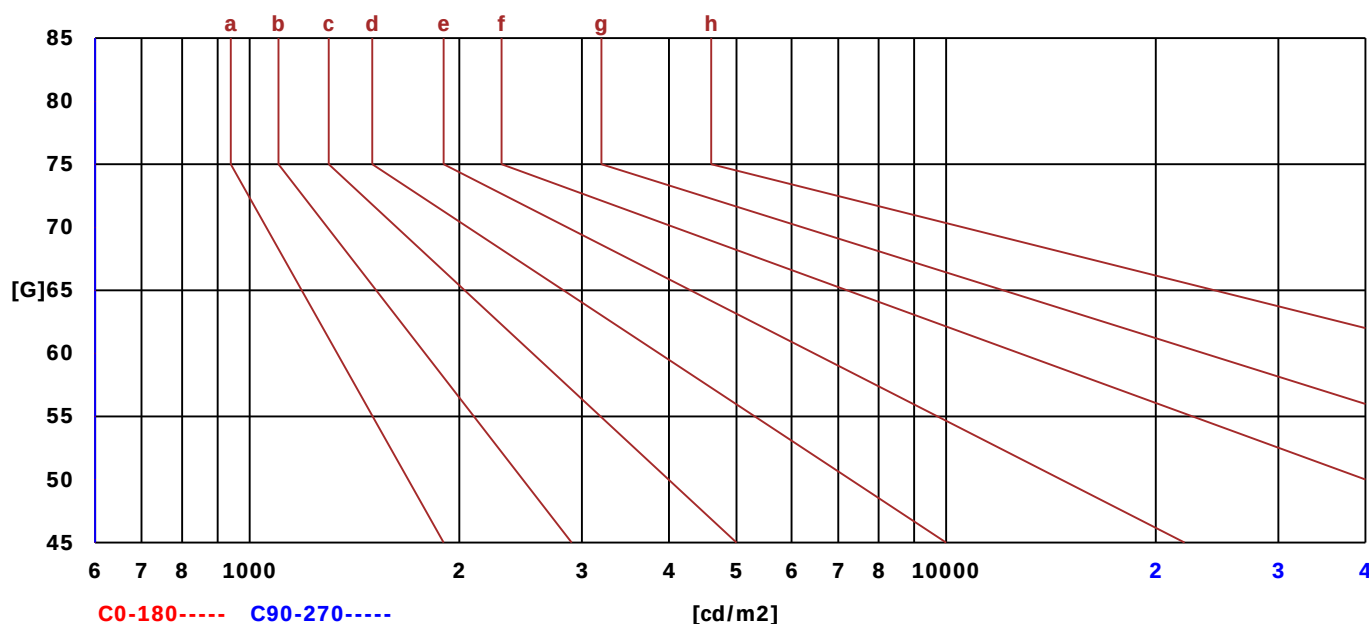


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BRIGHT LIMIT DIAGRAM

C/G	45	50	55	60	65	70	75	80	85
C0	390	126	0	0	0	0	0	0	0
C90	344	118	0	0	0	0	0	0	0
Dazzle	Quality	Illuminance	---	---	---	---	---	---	---
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
---	---	a	b	c	d	e	f	g	h



C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

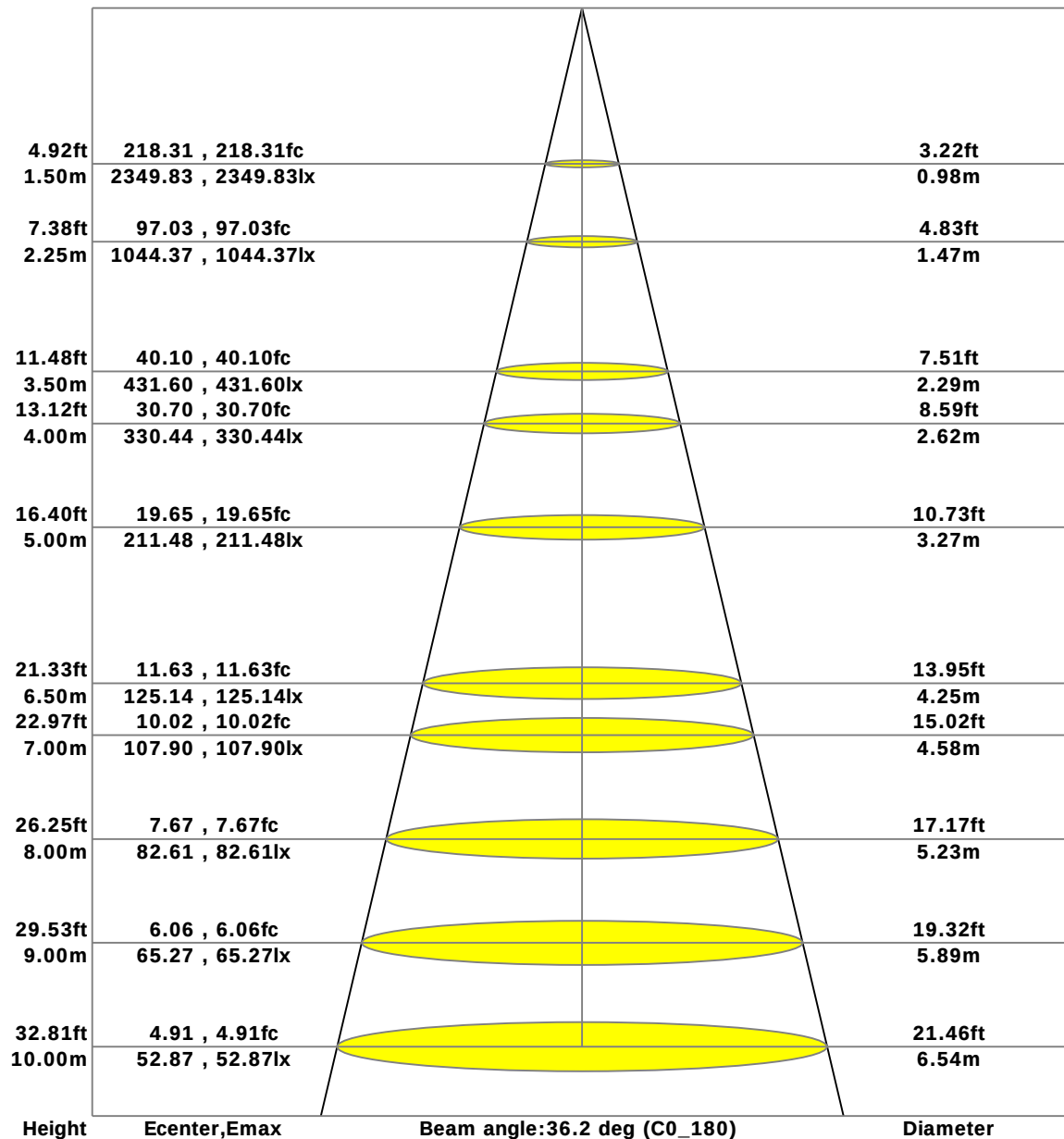
G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



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LX-DISTANCE DIAGRAM



C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



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UGR(Unified Glare Rating) TABLE

RHOCC	70	70	50	50	30	70	70	50	50	30
RHOW	50	30	50	30	30	50	30	50	30	30
RHOF	20	20	20	20	20	20	20	20	20	20
Room Size X Y	Viewed Endwise					Viewed Crosswise				
2H 2H	3.56	3.73	3.92	4.20	4.77	3.56	3.73	3.92	4.20	4.77
3H	3.41	3.57	3.78	4.05	4.62	3.41	3.57	3.78	4.05	4.62
4H	3.34	3.49	3.71	3.96	4.54	3.34	3.49	3.71	3.96	4.54
6H	3.26	3.41	3.64	3.88	4.46	3.26	3.41	3.64	3.88	4.46
8H	3.22	3.37	3.60	3.84	4.42	3.22	3.37	3.60	3.84	4.42
12H	3.18	3.32	3.57	3.79	4.38	3.18	3.32	3.57	3.79	4.38
4H 2H	3.34	3.49	3.71	3.96	4.54	3.34	3.49	3.71	3.96	4.54
3H	3.18	3.32	3.57	3.79	4.38	3.18	3.32	3.57	3.79	4.38
4H	3.10	3.24	3.49	3.70	4.30	3.10	3.24	3.49	3.70	4.30
6H	3.02	3.15	3.42	3.61	4.21	3.02	3.15	3.42	3.61	4.21
8H	2.98	3.10	3.38	3.56	4.17	2.98	3.10	3.38	3.56	4.17
12H	2.94	3.05	3.34	3.51	4.12	2.94	3.05	3.34	3.51	4.12
8H 4H	3.22	3.37	3.60	3.84	4.42	3.22	3.37	3.60	3.84	4.42
6H	2.90	3.00	3.30	3.46	4.07	2.90	3.00	3.30	3.46	4.07
8H	2.85	2.95	3.26	3.40	4.02	2.85	2.95	3.26	3.40	4.02
12H	2.81	2.90	3.22	3.35	3.97	2.81	2.90	3.22	3.35	3.97
12H 4H	2.94	3.05	3.34	3.51	4.12	2.94	3.05	3.34	3.51	4.12
6H	2.85	2.95	3.26	3.40	4.02	2.85	2.95	3.26	3.40	4.02

C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
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G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
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ZONAL LUMINOUS FLUX TABLE-2

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zonal	φ total	%lum	%lamp
10	4904.4	4001.2	3910.6	3932.5	4540.3	4896.6	5051.5	5090.9	10	459.5	459.5	26.1	26.1
20	3091.2	525.5	665.7	306.7	551.2	3312.6	3290.4	3643.3	20	927.9	1387.3	78.7	78.7
30	194.5	19.5	31.2	27.3	25.3	259.3	209.5	248.8	30	345.2	1732.6	98.3	98.3
40	21.5	8.0	9.1	6.1	7.2	15.1	16.3	19.9	40	24.6	1757.2	99.7	99.7
50	3.7	0.9	1.6	0.9	0.9	3.9	2.8	3.7	50	5.1	1762.3	100.0	100.0
60	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	60	0.7	1763.0	100.0	100.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70	0.0	1763.0	100.0	100.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80	0.0	1763.0	100.0	100.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90	0.0	1763.0	100.0	100.0

Conical surface Flux(90deg) : 1760.7 lm

%lum = 99.9%

%lamp = 99.9%

Conical surface Flux(120deg) : 1763.0 lm

%lum = 100.0%

%lamp = 100.0%

C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

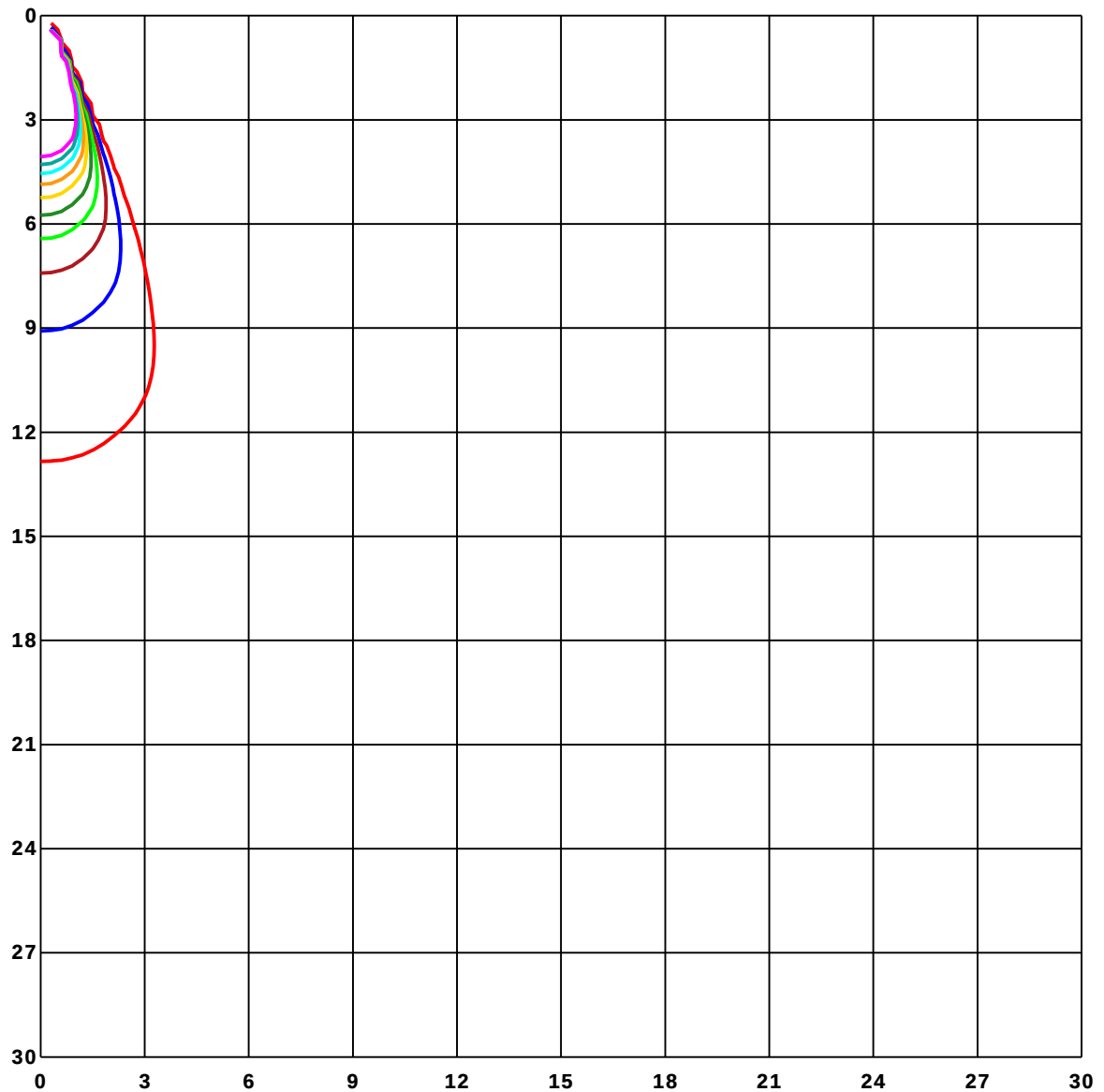
G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



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SPACE ISOLX DIAGRAM



Unit of illumination:lx

320.542
288.488
256.433
224.379
192.325

160.271
128.217
96.163
64.108
32.054

C Range: 0 - 360 Deg
C Interval: 45.0 Deg
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Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



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LUMINOUS DISTRIBUTION INTENSITY DATA

Gamma/C	C0	C45	C90	C135	C180	C225	C270	C315	C360	
G0	5287.12	4925.79	4917.15	5069.98	5287.12	4925.79	4917.15	5069.98	5287.12	
G1	5285.35	4880.34	4854.24	5004.82	5276.41	4968.13	4970.81	5107.34	5285.35	
G2	5276.47	4819.02	4772.29	4927.01	5246.05	4994.84	5014.37	5149.25	5276.47	
G3	5269.41	4756.11	4693.75	4863.49	5211.43	5014.31	5060.43	5168.3	5269.41	
G4	5241.55	4669.9	4622.02	4805.45	5151.38	5026.3	5094.86	5167.81	5241.55	
G5	5215.39	4583.2	4533.55	4722.71	5094.92	5027.45	5114.45	5169.7	5215.39	
G6	5175.05	4488.05	4432.01	4642.82	5036.21	5019.36	5127.17	5180.59	5175.05	
G7	5122.18	4388.88	4320.37	4533.01	4970.14	5009.57	5131.06	5177.91	5122.18	
G8	5059.94	4279.18	4196.01	4373.61	4874.68	4986.33	5115.67	5161.79	5059.94	
G9	4984.93	4150.63	4068.49	4186.1	4751.24	4943.43	5089.45	5133.86	4984.93	
G10	4904.43	4001.2	3910.61	3932.52	4540.31	4896.59	5051.48	5090.91	4904.43	
G11	4825.77	3795.44	3732.23	3611.58	4247.67	4839.28	5003.73	5029.52	4825.77	
G12	4731.71	3520.32	3509.92	3279.15	3907.69	4781.54	4948.91	4960.35	4731.71	
G13	4623.05	3189.23	3213.33	2911.26	3529.27	4722.52	4901.03	4891.54	4623.05	
G14	4500.21	2825.17	2880.9	2497.91	3114.28	4653.17	4848.4	4822.0	4500.21	
G15	4358.27	2438.35	2509.53	2105.13	2673.31	4556.92	4763.23	4750.75	4358.27	
G16	4192.36	2051.89	2147.65	1686.18	2222.3	4427.02	4604.86	4650.55	4192.36	
G17	3996.03	1635.5	1766.0	1248.25	1791.86	4241.52	4347.99	4510.8	3996.03	
G18	3739.35	1235.54	1380.28	863.38	1347.42	3970.78	4028.03	4270.42	3739.35	
G19	3442.08	851.88	1006.17	508.93	914.73	3646.63	3670.9	3988.31	3442.08	
G20	3091.22	525.54	665.65	306.69	551.21	3312.56	3290.41	3643.28	3091.22	
G21	2708.11	316.06	403.73	255.83	367.9	2924.09	2872.56	3297.22	2708.11	
G22	2311.01	240.8	253.03	222.43	325.13	2535.81	2437.92	2895.13	2311.01	
G23	1930.51	216.83	218.23	178.5	263.86	2117.96	1974.56	2483.43	1930.51	
G24	1522.7	181.0	189.94	132.21	200.77	1698.41	1530.98	2084.07	1522.7	
G25	1147.99	135.79	151.86	85.78	140.97	1267.6	1079.67	1658.07	1147.99	
G26	770.36	90.65	111.64	44.29	84.2	867.34	694.25	1257.2	770.36	
G27	463.36	48.73	71.37	36.32	41.86	546.95	422.66	848.54	463.36	
G28	283.94	29.51	41.74	32.91	33.28	361.82	328.05	495.3	283.94	
G29	234.11	24.4	34.92	30.48	29.08	316.12	272.62	299.39	234.11	
G30	194.51	19.53	31.15	27.26	25.31	259.3	209.47	248.84	194.51	
G31	150.21	17.1	27.5	24.88	22.51	199.86	149.79	200.1	150.21	
G32	105.56	16.61	24.52	21.9	20.5	140.18	96.61	150.46	105.56	
G33	64.0	18.13	23.0	19.29	19.53	85.66	46.85	103.43	64.0	
G34	35.71	18.8	22.02	16.61	17.95	39.91	31.09	60.41	35.71	
G35	31.27	18.01	20.69	14.3	16.61	28.41	27.13	36.26	31.27	
G36	28.29	16.12	18.68	12.23	14.72	22.94	23.85	31.21	28.29	

C Range: 0 - 360 Deg
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G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:



Report No.:

Test Time: 2025/3/19 8:18:40

LUMINOUS DISTRIBUTION INTENSITY DATA(Continue 1)

Gamma/C	C0	C45	C90	C135	C180	C225	C270	C315	C360	
G37	26.34	13.75	15.51	10.34	12.9	18.43	20.14	28.23	26.34	
G38	24.58	11.5	13.08	8.76	10.89	16.0	17.83	25.86	24.58	
G39	23.3	9.55	10.77	7.42	9.0	14.36	17.1	22.15	23.3	
G40	21.48	8.03	9.13	6.08	7.24	15.09	16.31	19.89	21.48	
G41	19.83	6.51	7.42	5.17	6.21	15.82	14.97	17.95	19.83	
G42	16.97	5.48	6.33	4.2	5.11	15.88	13.14	15.88	16.97	
G43	13.93	4.38	5.11	3.65	4.26	14.3	11.01	13.32	13.93	
G44	11.32	3.65	4.32	3.1	3.59	12.35	9.25	11.01	11.32	
G45	9.55	3.1	3.71	2.74	2.92	10.4	7.42	9.37	9.55	
G46	7.85	2.43	3.16	2.25	2.43	8.52	6.14	7.54	7.85	
G47	6.39	2.07	2.62	1.83	2.01	7.0	4.99	6.21	6.39	
G48	5.17	1.52	2.31	1.46	1.52	5.72	4.2	5.17	5.17	
G49	4.38	1.22	1.7	1.16	1.22	4.75	3.29	4.26	4.38	
G50	3.65	0.91	1.58	0.85	0.91	3.89	2.8	3.65	3.65	
G51	3.04	0.61	1.03	0.67	0.73	3.16	2.07	2.86	3.04	
G52	2.62	0.43	1.03	0.49	0.55	2.62	1.76	2.43	2.62	
G53	2.19	0.3	0.67	0.24	0.37	2.25	1.22	1.95	2.19	
G54	1.7	0.0	0.43	0.12	0.0	1.7	1.1	1.64	1.7	
G55	1.46	0.0	0.18	0.0	0.0	1.34	0.67	1.16	1.46	
G56	0.97	0.0	0.12	0.0	0.0	1.1	0.55	0.85	0.97	
G57	0.79	0.0	0.0	0.0	0.0	0.85	0.06	0.61	0.79	
G58	0.61	0.0	0.0	0.0	0.0	0.67	0.06	0.37	0.61	
G59	0.37	0.0	0.0	0.0	0.0	0.37	0.0	0.3	0.37	
G60	0.06	0.0	0.0	0.0	0.0	0.18	0.0	0.0	0.06	
G61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks:

Report No.:

Test Time: 2025/3/19 8:18:40

LUMINOUS DISTRIBUTION INTENSITY DATA(Continue 2)

[illegible]

C Range: 0 - 360 Deg
C Interval: 45.0 Deg
Test Speed: High
Temperature: 7.8
Operators:
Test Date: 2025/3/19 8:18:40

G Range: 0 - 90 Deg
G Interval: 1.0 Deg
Test System: Huipu CPM-1600B Goniophotometer
Humidity: 1
Test Distance: 7.79 m
Remarks: