

Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## LUMINAIRE PHOTOMETRIC TEST REPORT

### Luminaire Property

Manufacturer:  
Luminaire Type: RH-CL3181-30W-3000  
Lamp Type: COB  
Luminous Width: 95 mm  
Luminous Length: 95 mm  
Luminous Height: 70 mm

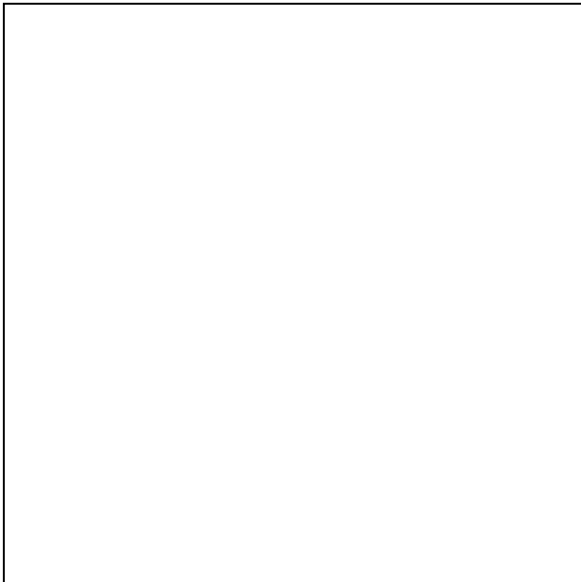
Voltage(V): 231.10 V  
Current(A): 0.1200 A  
Power(W): 27.29 W  
Power Factor: 0.9770  
Lamp Luminous Flux: 3213.70

### Photometric Results

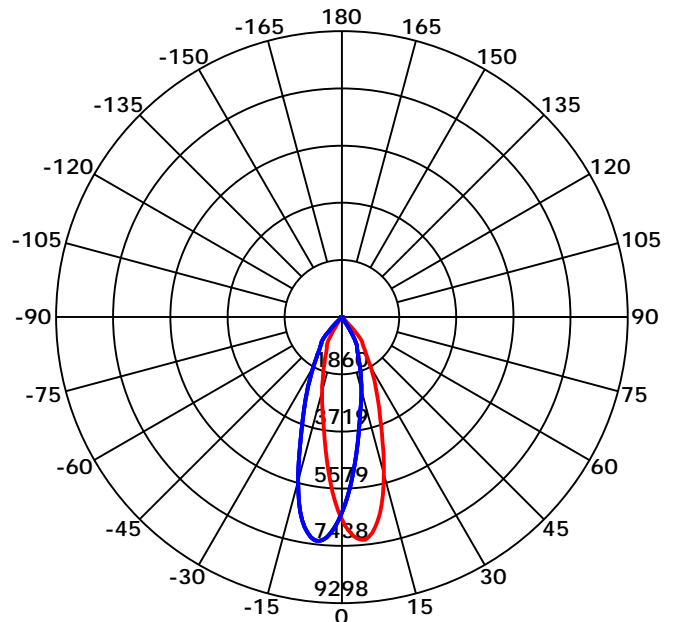
CIE Class: Direct  
Luminaire Luminous Flux: 3213.697 lm  
Downward Ratio: 100.00%  
Luminaire Efficacy Rating(LER): 117.76 lm/W  
Beam Angle(50%) C0-180,C90-270: 29.7,29.3  
Field Angle(10%) C0-180,C90-270: 72.9,72.9  
S/MH C0-180,C90-270: 0.573,0.573

Max. Intensity: 7438.34 cd  
Max.Intensity Angle: C=315 Gamma=8  
Upward Ratio: 0.00%  
Efficacy: 100.00%  
Center Intensity: 6571.47 cd  
Effective Luminous Flux: 2979.89 lm  
ERP( $\varphi$ use)(120deg): 3194.74 lm

Picture of Luminaire



Luminous Intensity Distribution Curve



Beam Angle(50%) C0-180,C90-270: 29.7 deg,29.3 deg

C0-180 ——— C90-270 ———

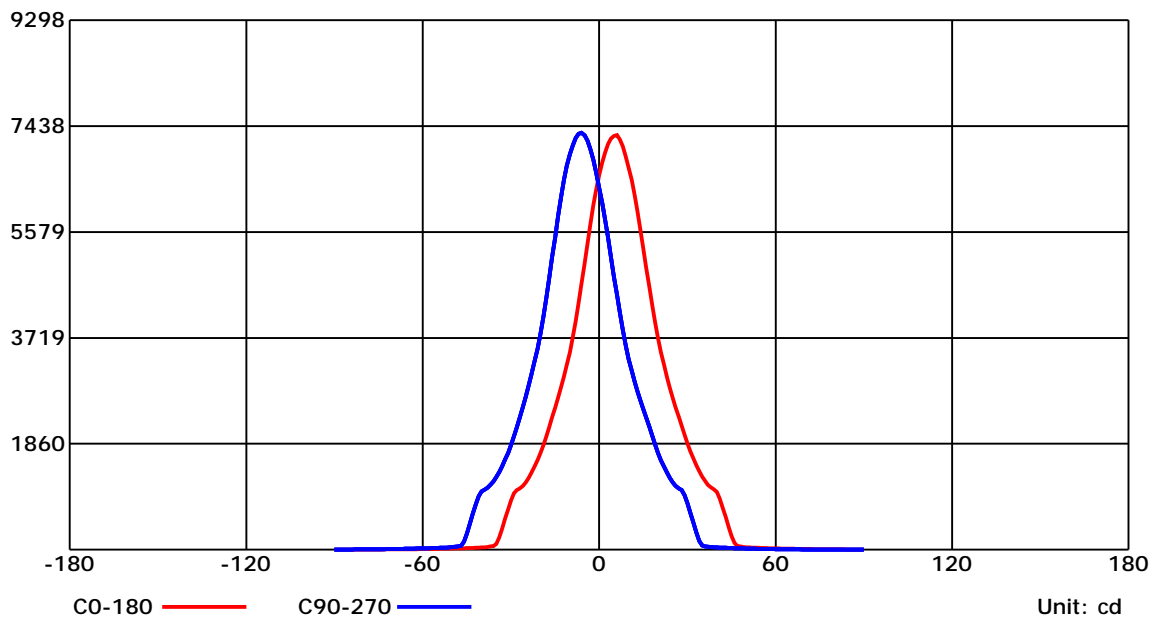
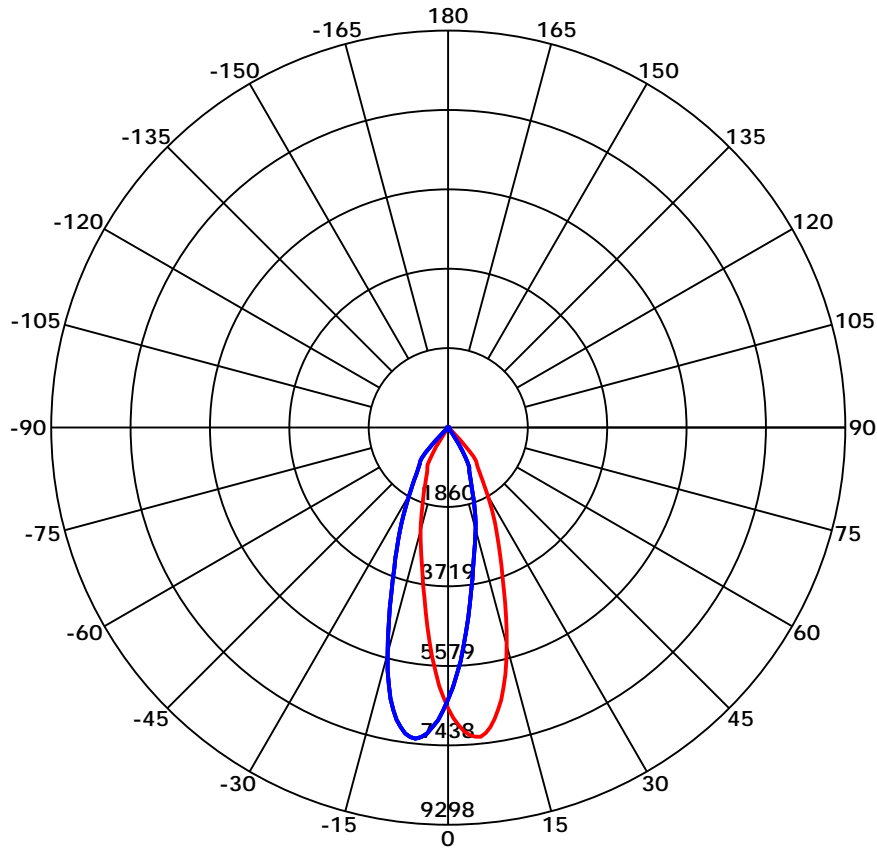
C Range: 0 - 360 Deg  
C Interval: 45.0 Deg  
Test Speed: High  
Temperature: 7.93  
Operators:  
Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg  
G Interval: 1.0 Deg  
Test System: Huipu CPM-1600B Goniophotometer  
Humidity: 1  
Test Distance: 7.93 m  
Remarks:

Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## Luminous Intensity Distribution Curve



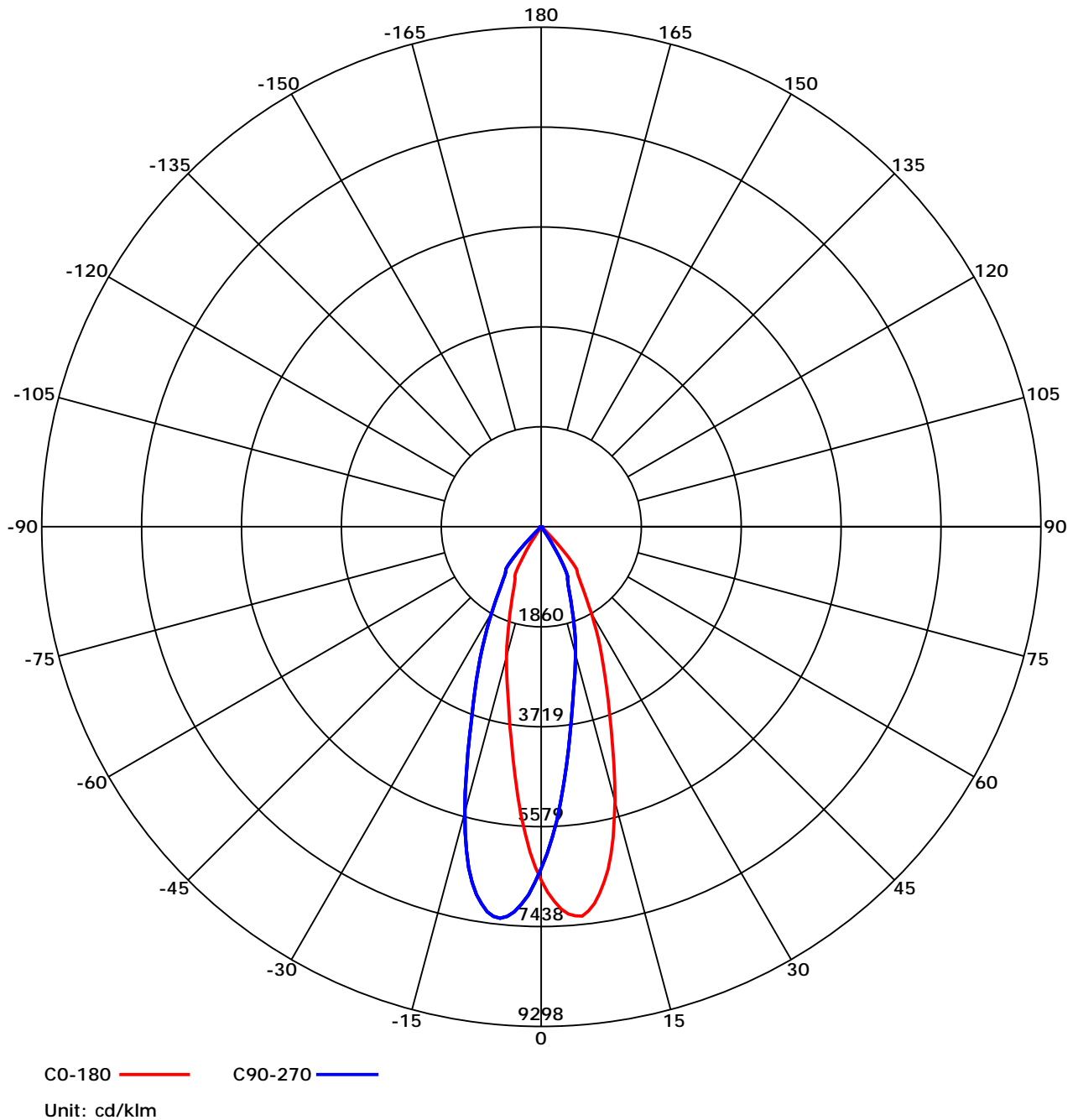
C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature: 7.93  
 Operators:  
 Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1600B Goniophotometer  
 Humidity: 1  
 Test Distance: 7.93 m  
 Remarks:

Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## Luminous Intensity Distribution Curve



C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.93

Operators:

Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

Test Distance: 7.93 m

Remarks:

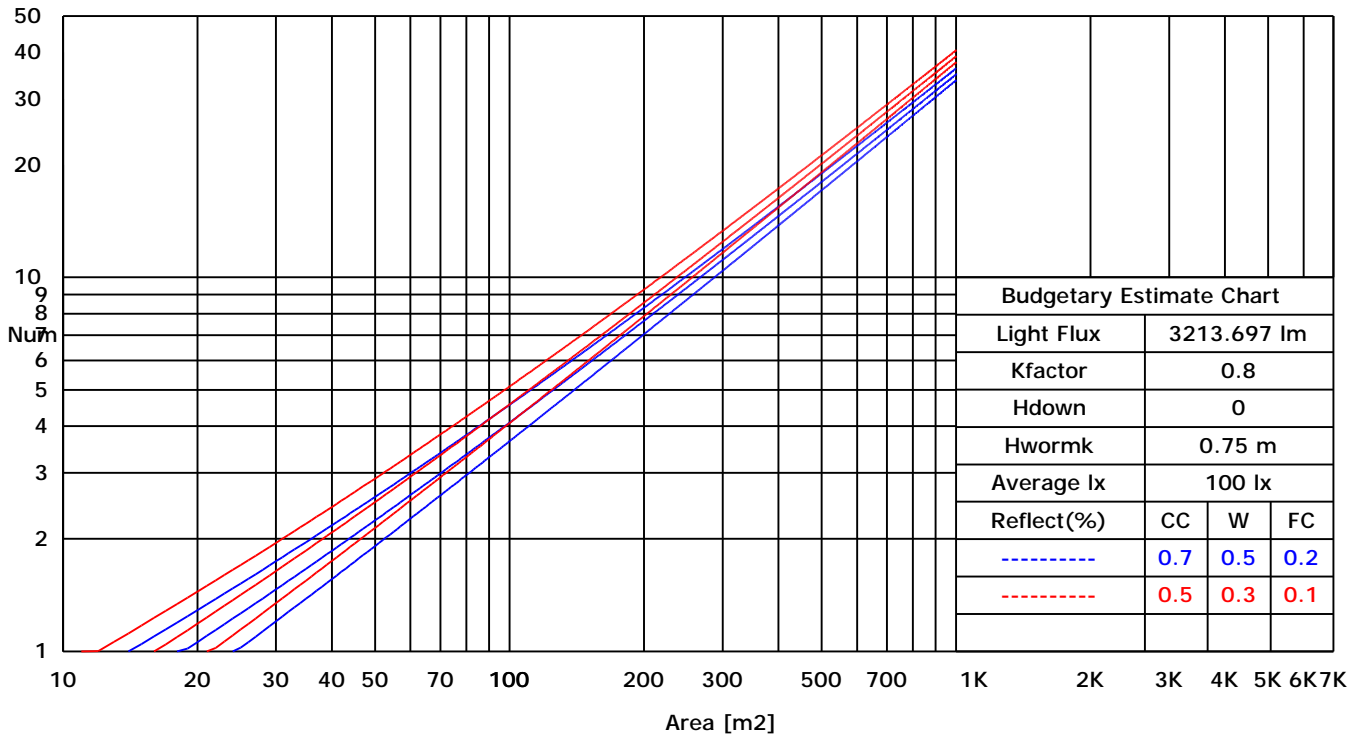
Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## 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	1.15	1.14	1.13	1.13	1.12	1.11	1.09	1.08	1.07	1.03	1.02	1.01	0.96	0.95	0.94	0.88
2	1.08	1.07	1.06	1.07	1.05	1.04	1.03	1.01	1.00	0.98	0.96	0.94	0.92	0.90	0.88	0.83
3	1.02	1.01	1.00	1.01	0.99	0.98	0.97	0.95	0.93	0.93	0.91	0.88	0.88	0.85	0.83	0.78
4	0.96	0.95	0.94	0.95	0.93	0.92	0.92	0.90	0.88	0.88	0.85	0.83	0.84	0.81	0.78	0.74
5	0.91	0.90	0.89	0.90	0.88	0.87	0.87	0.85	0.83	0.84	0.81	0.78	0.80	0.77	0.74	0.70
6	0.86	0.85	0.84	0.85	0.83	0.82	0.83	0.80	0.78	0.80	0.77	0.74	0.77	0.73	0.70	0.66
7	0.82	0.80	0.80	0.81	0.79	0.78	0.79	0.76	0.74	0.76	0.73	0.70	0.73	0.69	0.66	0.62
8	0.78	0.76	0.75	0.77	0.75	0.74	0.75	0.72	0.70	0.73	0.69	0.67	0.70	0.66	0.63	0.59
9	0.74	0.73	0.72	0.73	0.71	0.70	0.72	0.69	0.67	0.70	0.66	0.63	0.67	0.63	0.60	0.56
10	0.71	0.69	0.68	0.70	0.68	0.67	0.68	0.66	0.64	0.67	0.63	0.60	0.65	0.60	0.57	0.54

## LUMINAIRE BUDGETARY ESTIMATE DIAGRAM



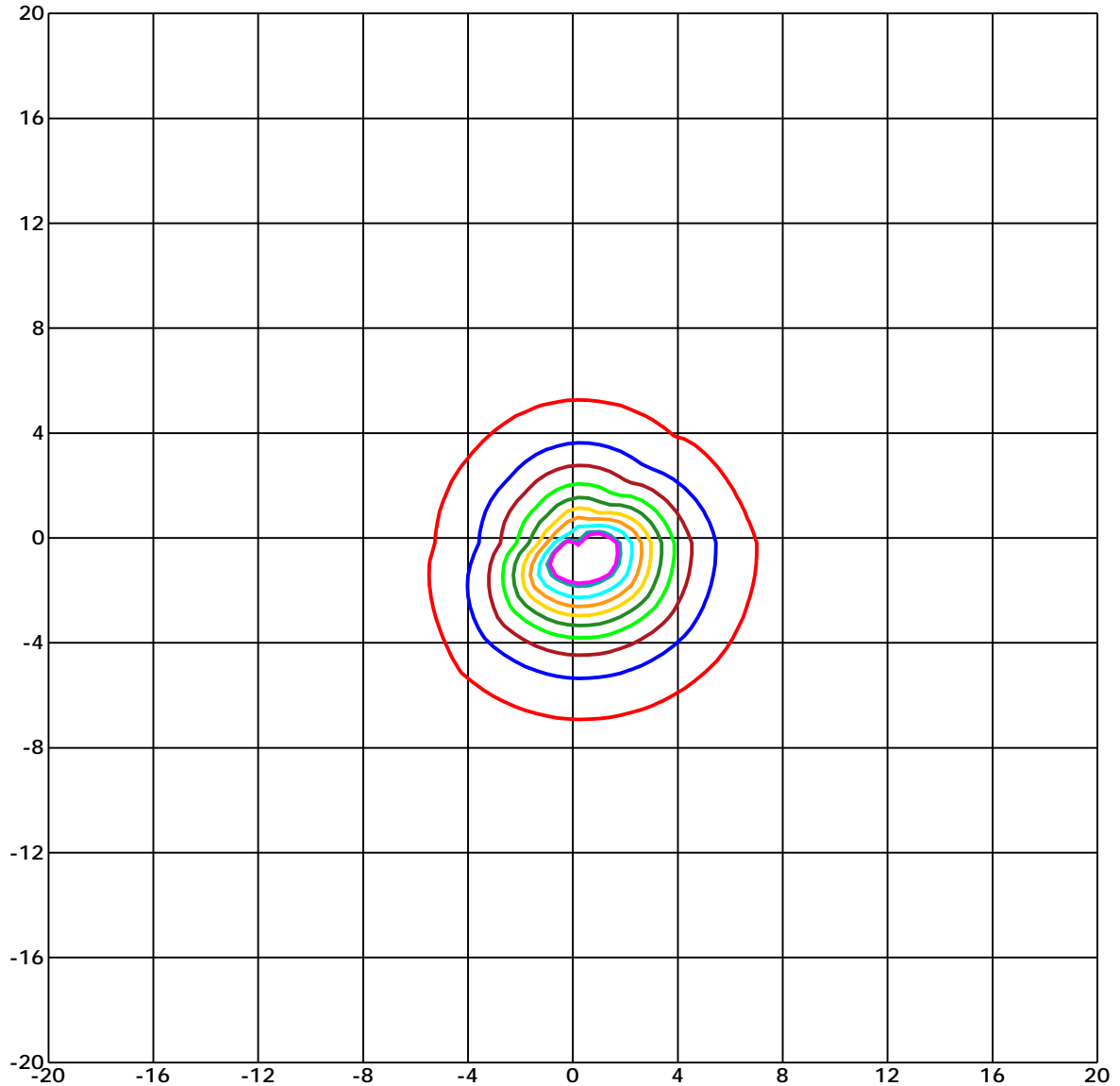
C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature: 7.93  
 Operators:  
 Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1600B Goniophotometer  
 Humidity: 1  
 Test Distance: 7.93 m  
 Remarks:

Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## ISOLX DIAGRAM



Unit of illumination: lx      Height of plane: 10.0(m)/32.81(ft)

— 66.75(92%Emax)	— 36.277(50%Emax)
— 65.299(90%Emax)	— 29.022(40%Emax)
— 58.044(80%Emax)	— 21.766(30%Emax)
— 50.788(70%Emax)	— 14.511(20%Emax)
— 43.533(60%Emax)	— 7.255(10%Emax)

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.93

Operators:

Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

Test Distance: 7.93 m

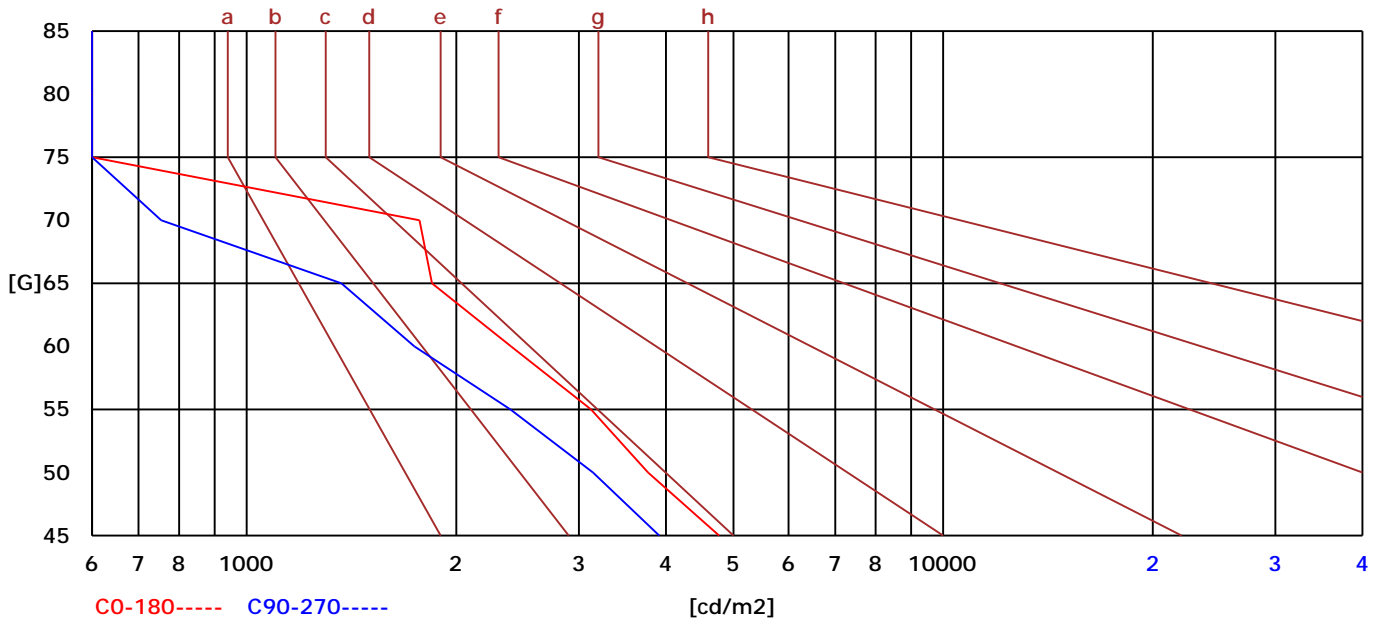
Remarks:

Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## BRIGHT LIMIT DIAGRAM

C/G	45	50	55	60	65	70	75	80	85
C0	4769	3772	3122	2397	1847	1772	458	0	0
C90	3912	3144	2393	1742	1368	754	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



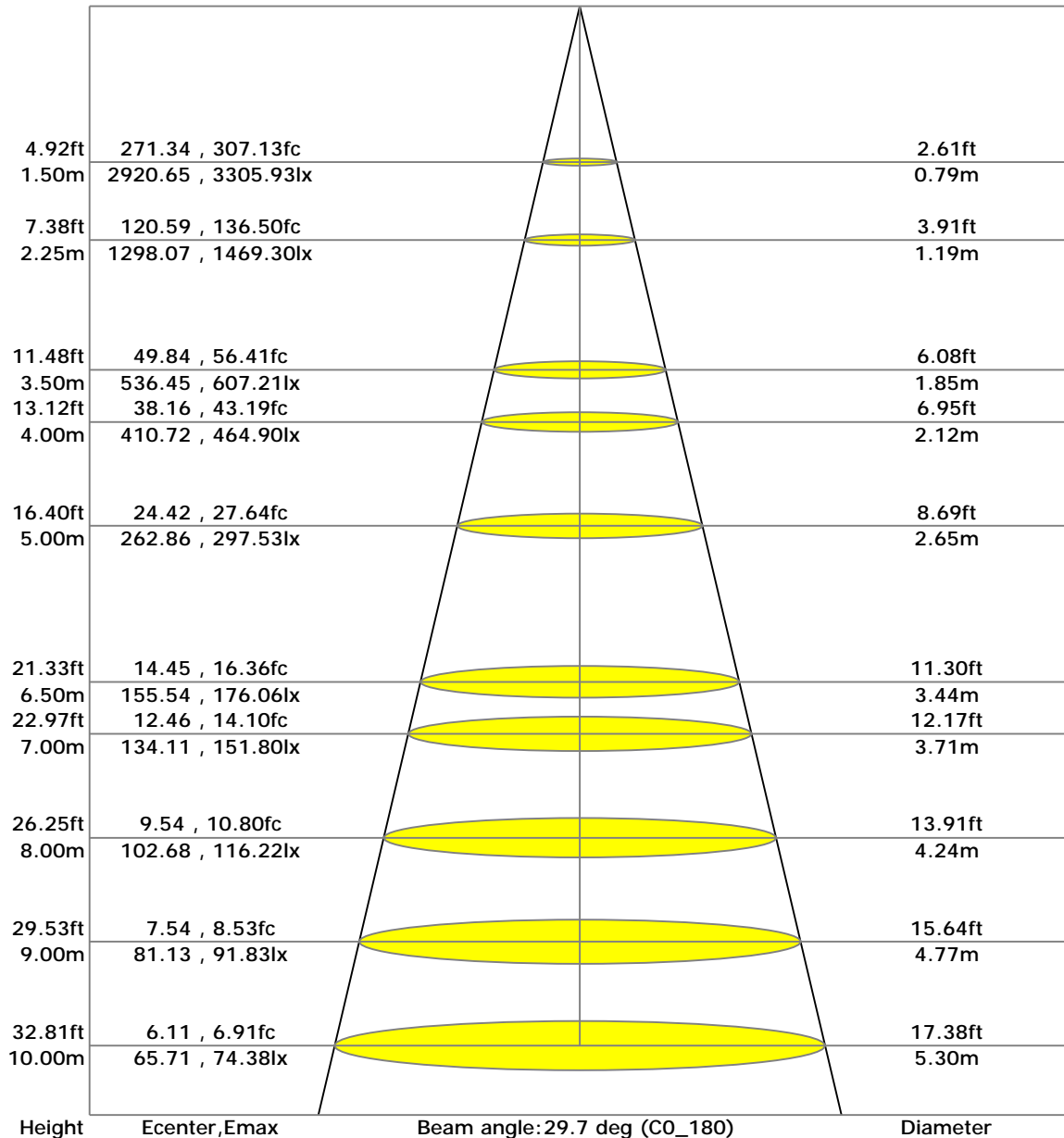
C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature: 7.93  
 Operators:  
 Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1600B Goniophotometer  
 Humidity: 1  
 Test Distance: 7.93 m  
 Remarks:

Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## LX-DISTANCE DIAGRAM



C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.93

Operators:

Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

Test Distance: 7.93 m

Remarks:

Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## 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	18.35	18.61	18.60	19.02	19.50	14.23	14.49	14.47	14.89	15.38
3H	18.13	18.37	18.40	18.79	19.29	14.01	14.26	14.28	14.67	15.17
4H	18.01	18.25	18.30	18.67	19.18	13.90	14.13	14.18	14.55	15.07
6H	17.90	18.12	18.19	18.54	19.07	13.78	14.01	14.08	14.43	14.95
8H	17.84	18.06	18.14	18.48	19.01	13.72	13.94	14.03	14.36	14.90
12H	17.78	17.99	18.09	18.41	18.95	13.66	13.88	13.98	14.30	14.84
4H 2H	18.09	18.32	18.37	18.74	19.25	13.93	14.17	14.21	14.58	15.10
3H	17.86	18.07	18.17	18.49	19.03	13.71	13.92	14.02	14.34	14.88
4H	17.74	17.93	18.06	18.36	18.91	13.59	13.79	13.92	14.21	14.77
6H	17.61	17.79	17.96	18.22	18.79	13.47	13.65	13.82	14.08	14.65
8H	17.55	17.72	17.91	18.15	18.73	13.41	13.58	13.77	14.01	14.59
12H	17.49	17.65	17.86	18.08	18.67	13.35	13.51	13.71	13.94	14.52
8H 4H	17.96	18.18	18.27	18.60	19.13	13.76	13.97	14.06	14.40	14.93
6H	17.49	17.64	17.86	18.07	18.66	13.29	13.43	13.66	13.87	14.46
8H	17.43	17.56	17.81	18.00	18.60	13.23	13.36	13.61	13.80	14.40
12H	17.37	17.49	17.76	17.92	18.53	13.17	13.29	13.56	13.72	14.33
12H 4H	17.57	17.73	17.93	18.16	18.75	13.35	13.51	13.71	13.94	14.52
6H	17.45	17.58	17.83	18.02	18.62	13.23	13.36	13.61	13.79	14.39

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.93

Operators:

Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

Test Distance: 7.93 m

Remarks:





Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## ZONAL LUMINOUS FLUX TABLE-2

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zonal	φ total	%lum	%lamp
10	6713.5	3768.2	3352.4	3074.9	3470.6	6555.6	6950.2	7264.1	10	549.2	549.2	17.1	17.1
20	3715.4	1933.6	1699.3	1492.1	1696.9	3383.3	3797.7	4320.9	20	1082.8	1632.0	50.8	50.8
30	1869.4	1010.9	816.6	560.4	864.5	1621.9	1842.3	2124.8	30	898.6	2530.6	78.7	78.7
40	1014.1	41.2	38.5	33.5	39.3	840.3	1021.9	1079.8	40	487.8	3018.4	93.9	93.9
50	42.4	21.9	19.9	18.2	20.4	38.5	44.1	57.2	50	155.5	3173.9	98.8	98.8
60	23.3	10.8	8.7	7.9	10.8	20.2	23.3	26.2	60	20.9	3194.7	99.4	99.4
70	12.6	5.5	3.6	2.3	5.2	10.5	12.1	13.8	70	11.9	3206.6	99.8	99.8
80	6.4	0.0	0.0	0.0	0.0	6.2	7.5	7.6	80	5.5	3212.2	100.0	100.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90	1.5	3213.7	100.0	100.0

Conical surface Flux(90deg) : 3146.7 lm

%lum = 97.9%

%lamp = 97.9%

Conical surface Flux(120deg) : 3194.7 lm

%lum = 99.4%

%lamp = 99.4%

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.93

Operators:

Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

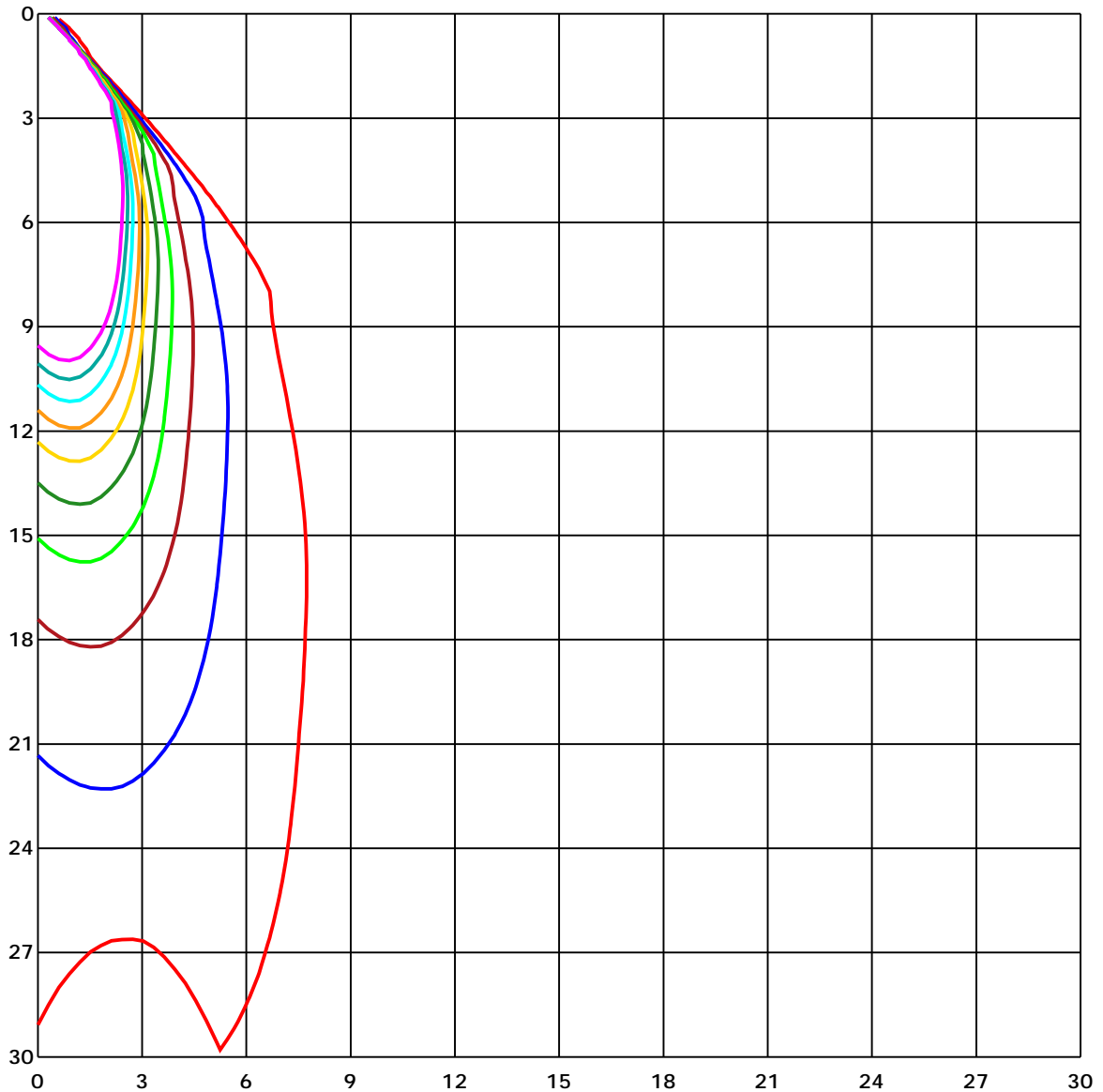
Test Distance: 7.93 m

Remarks:

Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## SPACE ISOLX DIAGRAM



Unit of illumination: lx

72.239	36.12
65.015	28.896
57.791	21.672
50.568	14.448
43.344	7.224

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.93

Operators:

Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

Test Distance: 7.93 m

Remarks:



Report No.:

Test Time: 2024/6/28 星期五 10:01:53

## LUMINOUS DISTRIBUTION INTENSITY DATA

Gamma\C	C0	C45	C90	C135	C180	C225	C270	C315	C360	
G0	6571.47	6670.58	6360.68	6082.29	6571.47	6670.58	6360.68	6082.29	6571.47	
G1	6801.0	6441.8	6084.62	5769.0	6327.48	6885.58	6615.87	6377.35	6801.0	
G2	6975.0	6186.99	5788.81	5446.4	6047.64	7043.55	6850.18	6638.51	6975.0	
G3	7123.29	5918.48	5481.99	5093.74	5722.27	7178.19	7026.82	6869.48	7123.29	
G4	7219.69	5631.09	5140.97	4737.75	5381.06	7229.06	7182.27	7081.78	7219.69	
G5	7266.41	5295.47	4803.65	4395.91	5034.44	7249.69	7273.9	7243.15	7266.41	
G6	7281.76	4979.54	4475.9	4077.14	4670.59	7209.94	7321.56	7358.6	7281.76	
G7	7200.89	4661.47	4160.84	3788.69	4336.61	7099.2	7303.52	7420.17	7200.89	
G8	7083.04	4350.44	3863.08	3516.46	4013.19	6951.93	7231.13	7438.34	7083.04	
G9	6912.81	4046.27	3595.32	3278.19	3741.02	6781.51	7101.09	7375.58	6912.81	
G10	6713.47	3768.19	3352.39	3074.88	3470.62	6555.56	6950.23	7264.09	6713.47	
G11	6496.2	3508.16	3141.73	2884.41	3245.3	6295.97	6739.88	7095.56	6496.2	
G12	6228.5	3274.67	2953.39	2712.6	3035.89	5981.74	6491.42	6900.8	6228.5	
G13	5938.54	3066.71	2777.56	2547.15	2852.15	5626.06	6187.87	6659.45	5938.54	
G14	5617.63	2881.76	2623.12	2383.78	2670.85	5275.92	5862.26	6373.26	5617.63	
G15	5291.2	2711.91	2468.23	2216.13	2498.98	4919.93	5490.1	6068.46	5291.2	
G16	4954.83	2546.4	2320.45	2047.85	2321.96	4573.62	5132.6	5717.5	4954.83	
G17	4619.4	2395.03	2158.27	1890.45	2148.02	4227.88	4763.59	5355.78	4619.4	
G18	4296.23	2244.05	2000.31	1743.92	1984.46	3918.17	4416.34	5008.97	4296.23	
G19	3994.89	2088.79	1844.41	1609.6	1834.6	3636.38	4089.78	4662.6	3994.89	
G20	3715.43	1933.65	1699.34	1492.07	1696.95	3383.33	3797.68	4320.95	3715.43	
G21	3472.76	1779.27	1567.97	1383.53	1573.07	3153.87	3530.42	4009.04	3472.76	
G22	3244.42	1641.55	1457.61	1285.24	1457.67	2955.09	3301.21	3731.34	3244.42	
G23	3032.0	1515.46	1354.73	1202.17	1357.43	2764.55	3085.51	3481.18	3032.0	
G24	2842.33	1410.26	1259.08	1135.51	1261.09	2578.03	2886.54	3241.4	2842.33	
G25	2668.21	1309.33	1180.73	1088.29	1182.74	2390.13	2688.02	3030.99	2668.21	
G26	2499.05	1220.6	1119.35	1052.06	1119.48	2213.86	2506.34	2832.71	2499.05	
G27	2335.99	1149.03	1077.78	1004.96	1077.97	2053.82	2319.32	2642.99	2335.99	
G28	2176.07	1097.59	1047.16	889.95	1048.61	1897.24	2151.54	2463.58	2176.07	
G29	2018.29	1063.95	958.3	732.55	992.45	1750.09	1992.01	2285.8	2018.29	
G30	1869.38	1010.88	816.62	560.43	864.48	1621.93	1842.34	2124.82	1869.38	
G31	1726.69	903.22	646.71	384.16	707.46	1509.93	1699.72	1967.29	1726.69	
G32	1598.22	748.9	467.74	226.64	538.48	1399.94	1578.35	1815.3	1598.22	
G33	1478.55	572.5	296.94	110.11	369.07	1307.82	1460.57	1677.08	1478.55	
G34	1377.24	394.48	154.63	62.51	213.56	1224.81	1364.6	1545.46	1377.24	
G35	1285.93	236.89	76.22	54.27	100.05	1156.14	1276.31	1437.99	1285.93	
G36	1208.15	118.98	57.41	47.67	62.95	1103.32	1201.23	1339.95	1208.15	

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.93

Operators:

Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

Test Distance: 7.93 m

Remarks:





Report No.:

Test Time: 2024/6/28 星期五 10:01:5:

## LUMINOUS DISTRIBUTION INTENSITY DATA(Continue 1)

Gamma\C	C0	C45	C90	C135	C180	C225	C270	C315	C360	
G37	1139.54	64.08	49.87	41.25	54.96	1063.2	1134.38	1253.93	1139.54	
G38	1090.99	53.58	44.33	39.05	46.72	1033.83	1086.78	1185.44	1090.99	
G39	1058.16	48.8	40.5	36.91	41.19	968.11	1051.94	1123.88	1058.16	
G40	1014.15	41.19	38.49	33.52	39.3	840.33	1021.94	1079.8	1014.15	
G41	894.54	38.05	36.1	32.45	35.72	675.64	941.64	1046.72	894.54	
G42	737.14	35.97	33.39	29.62	33.77	502.89	798.64	1001.13	737.14	
G43	567.79	34.34	32.64	28.17	31.82	328.13	628.28	886.3	567.79	
G44	397.62	32.07	30.0	26.47	29.93	180.1	448.68	730.47	397.62	
G45	239.47	30.44	27.67	24.97	28.3	83.57	280.09	550.68	239.47	
G46	118.73	28.11	25.97	23.96	26.41	59.49	141.68	373.66	118.73	
G47	65.02	26.29	24.53	22.2	25.47	51.5	70.62	219.53	65.02	
G48	55.97	24.46	23.77	20.19	23.96	45.15	56.66	107.28	55.97	
G49	49.05	23.58	21.76	19.62	22.39	41.32	49.62	64.58	49.05	
G50	42.38	21.88	19.93	18.24	20.37	38.55	44.08	57.16	42.38	
G51	40.25	20.75	19.05	16.98	19.49	35.09	40.31	49.24	40.25	
G52	37.54	19.24	18.05	15.22	17.92	33.45	37.35	43.71	37.54	
G53	34.9	18.43	16.1	14.09	16.85	31.51	34.4	40.06	34.9	
G54	33.2	16.85	15.09	13.58	16.16	30.0	32.95	37.61	33.2	
G55	31.95	16.16	14.9	12.39	14.78	27.42	31.07	36.1	31.95	
G56	29.49	14.59	13.58	11.7	13.96	26.47	29.3	33.08	29.49	
G57	27.67	14.09	11.89	10.38	13.27	24.4	27.1	31.82	27.67	
G58	25.78	13.21	11.51	9.31	11.89	22.89	25.85	29.43	25.78	
G59	25.34	11.0	10.63	8.93	11.32	21.63	25.15	28.74	25.34	
G60	23.27	10.82	8.74	7.86	10.75	20.19	23.27	26.22	23.27	
G61	22.39	10.25	8.05	7.17	10.0	19.43	21.7	24.97	22.39	
G62	20.12	9.06	7.61	6.54	8.8	18.17	21.44	24.08	20.12	
G63	19.31	8.99	7.55	5.79	8.68	17.54	19.62	22.7	19.31	
G64	17.92	7.67	6.73	5.72	7.42	15.85	18.11	21.44	17.92	
G65	16.73	7.04	6.29	5.22	7.23	14.65	17.04	19.68	16.73	
G66	16.6	7.29	5.53	4.78	7.67	14.27	16.04	18.24	16.6	
G67	14.65	6.29	5.16	4.21	6.98	12.95	14.65	17.04	14.65	
G68	14.09	5.79	6.04	3.4	5.91	12.2	14.27	15.91	14.09	
G69	12.58	5.53	3.9	3.21	5.57	11.57	12.89	15.16	12.58	
G70	12.64	5.47	3.58	2.33	5.22	10.5	12.14	13.83	12.64	
G71	11.07	4.84	3.14	2.14	5.97	10.38	10.88	13.39	11.07	
G72	10.63	3.58	2.7	0.31	5.47	8.93	10.69	12.39	10.63	
G73	9.75	3.24	1.19	0.0	4.84	8.24	9.62	11.0	9.75	

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 7.93

Operators:

Test Date: 2024/6/28 星期五 10:01:53

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1600B Goniophotometer

Humidity: 1

Test Distance: 7.93 m

Remarks:



