

Report No.:

Test Time: 2020/3/14 12:32:46

## LUMINAIRE PHOTOMETRIC TEST REPORT

### Luminaire Property

Manufacturer: 0  
 Luminaire Type: 24V-2110-700L-3000K  
 Lamp Type:  
 Luminous Width: 0 mm  
 Luminous Length: 0 mm  
 Luminous Height: 0 mm

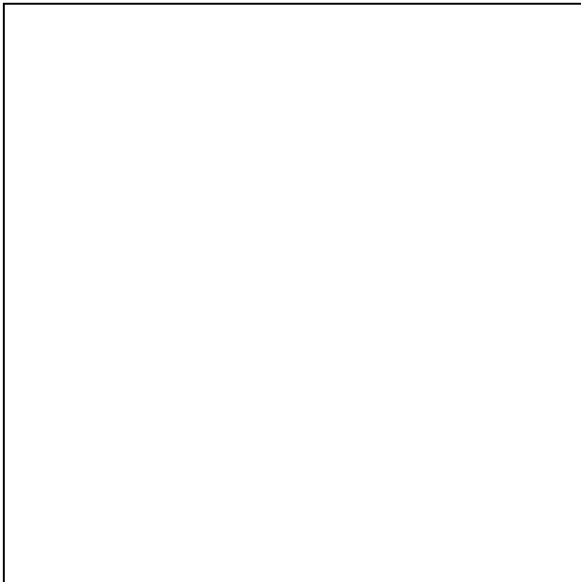
Voltage(V): 24.00 V  
 Current(A): 1.0000 A  
 Power(W): 24.00 W  
 Power Factor: 1.0000  
 Lamp Luminous Flux: 2230.58

### Photometric Results

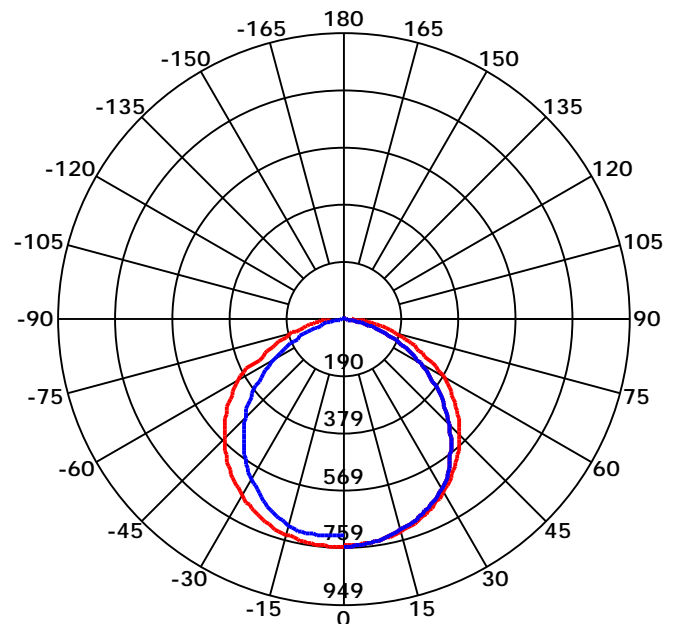
CIE Class: Direct  
 Luminaire Luminous Flux: 2230.582  
 Downward Ratio: 100.00%  
 Luminaire Efficacy Rating(LER): 92.94 lm/W  
 Beam Angle(50%) C0-180,C90-270: 121.9,105.5  
 Field Angle(10%) C0-180,C90-270: 169.3,151.1

Max. Intensity: 758.82 cd  
 Max.Intensity Angle: C=225 Gamma=5  
 Upward Ratio: 0.00%  
 Efficacy: 100.00%  
 Center Intensity: 749.20 cd

Picture of Luminaire



Luminous Intensity Distribution Curve



Beam Angle(50%) C0-180,C90-270: 105.5 deg

C0-180 ——— C90-270 ———

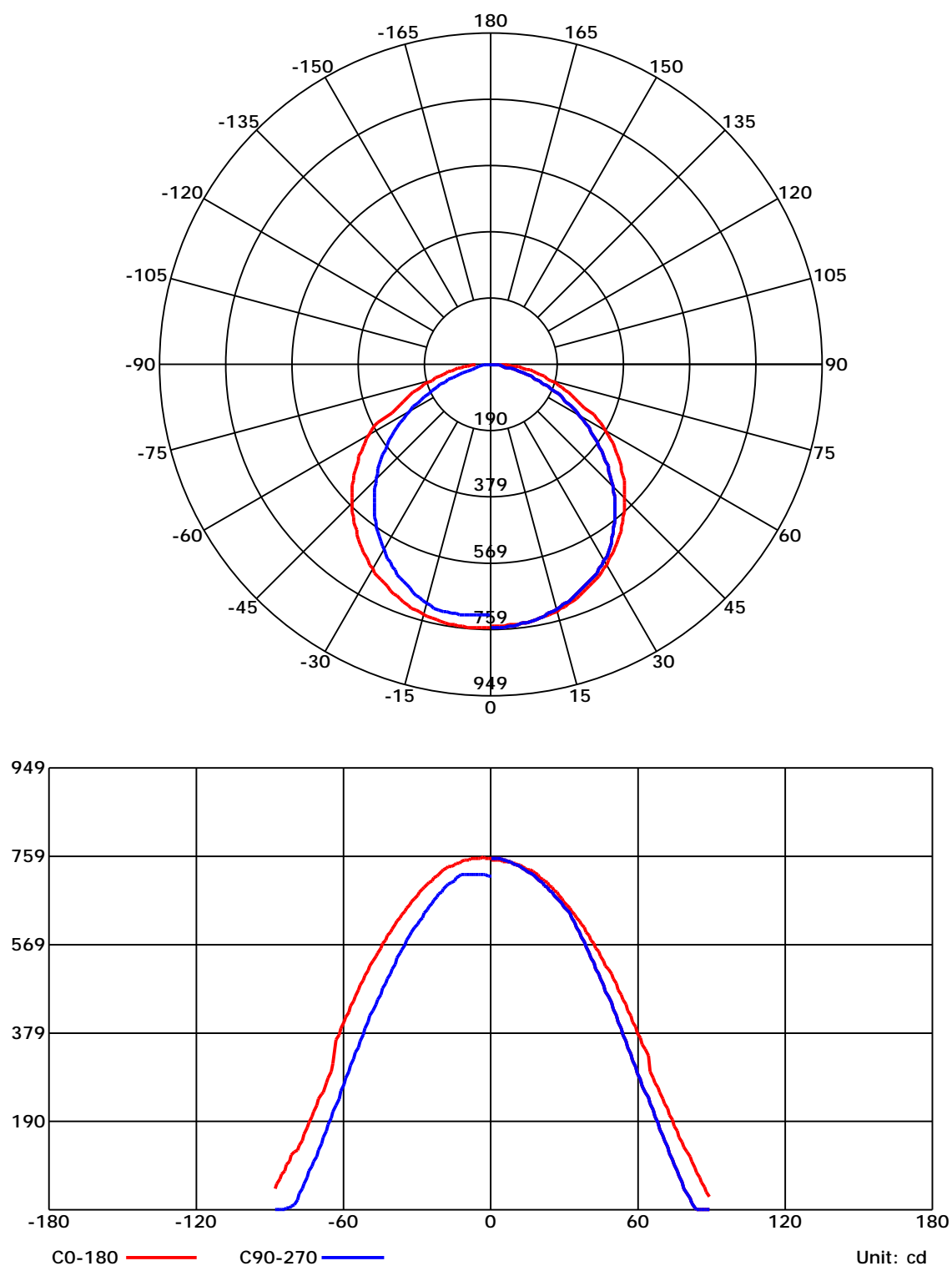
C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature: 6.35  
 Operators:  
 Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1800B Goniophotometer  
 Humidity: 1.1  
 Test Distance: 6.35 m  
 Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## Luminous Intensity Distribution Curve



C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

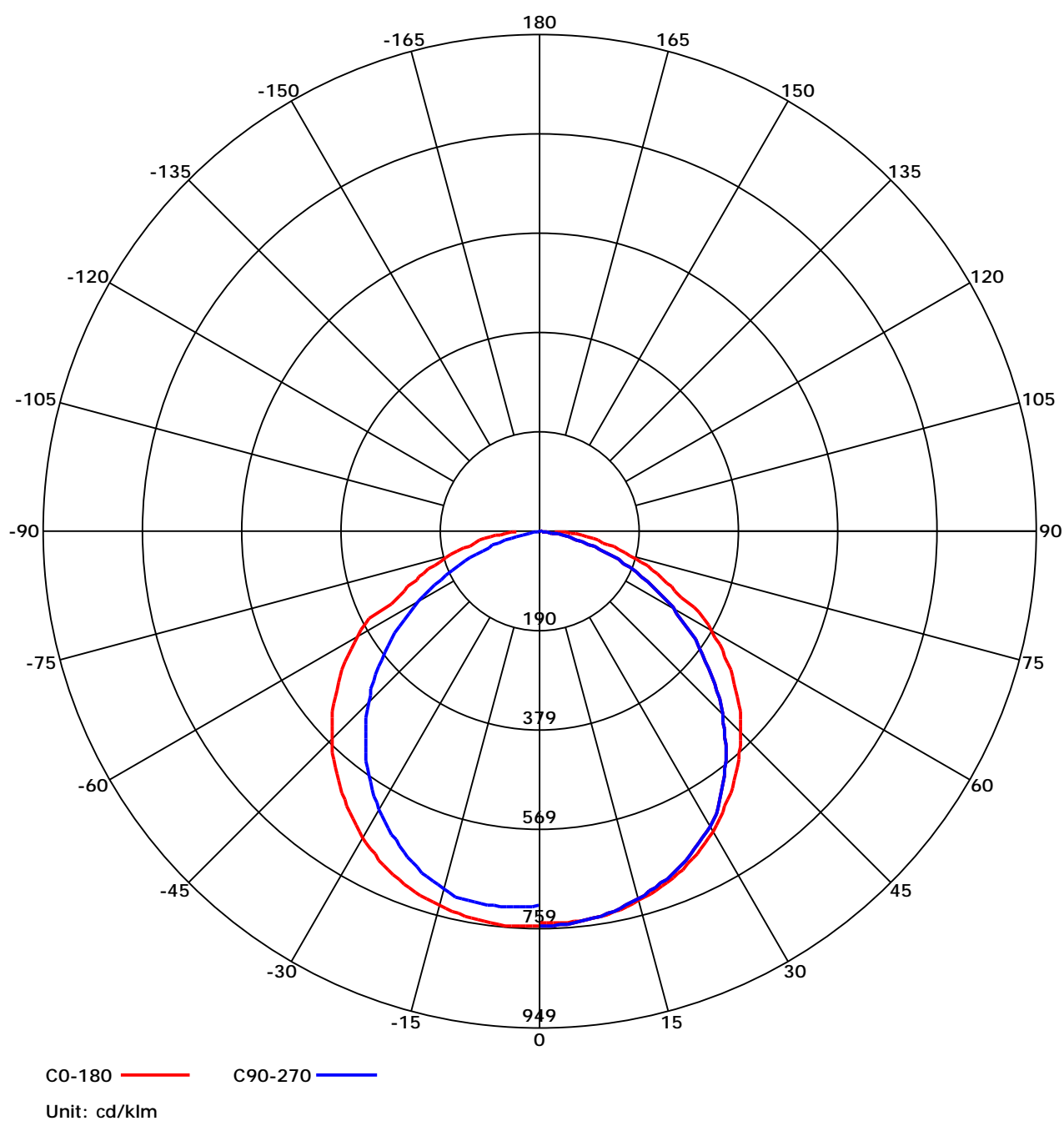
Test Distance: 6.35 m

Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## Luminous Intensity Distribution Curve



C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature: 6.35  
 Operators:  
 Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1800B Goniophotometer  
 Humidity: 1.1  
 Test Distance: 6.35 m  
 Remarks:

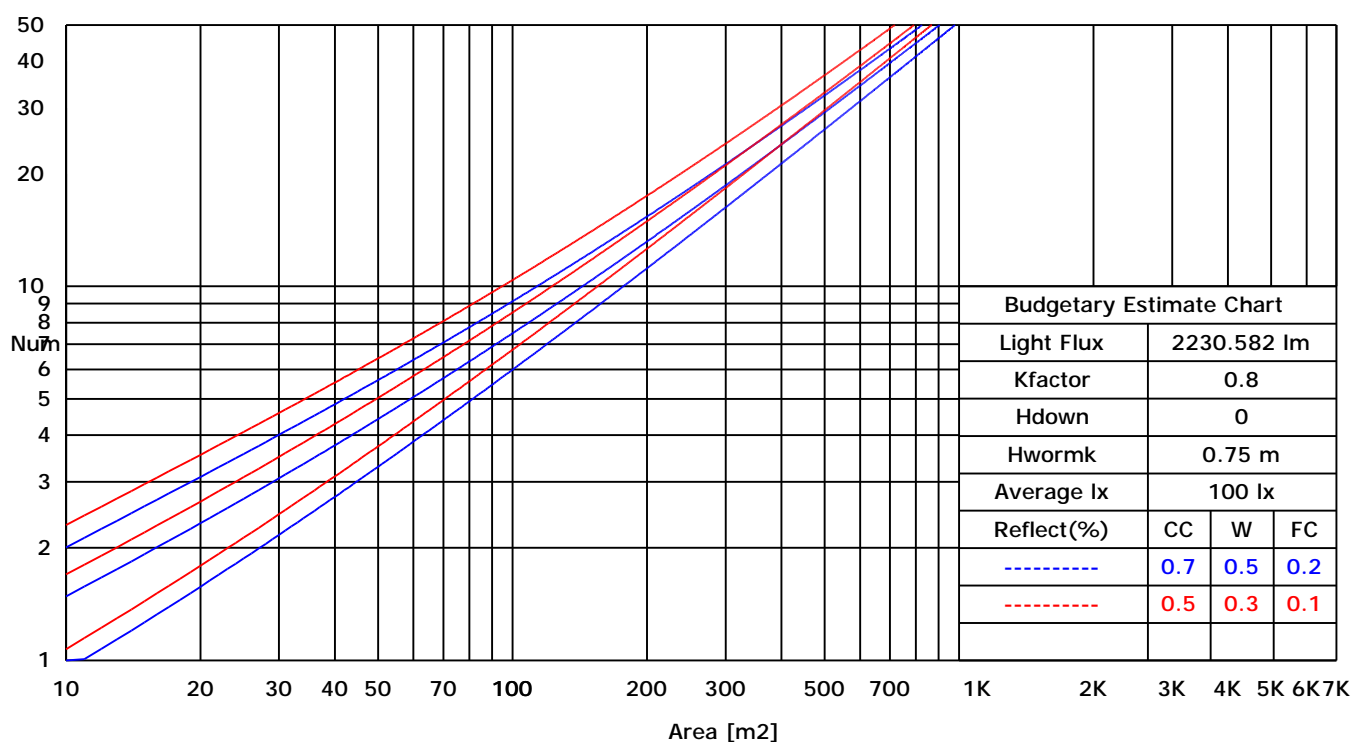
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## UTILIZATION FACTORS TABLE

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	1.07	1.05	1.04	1.05	1.03	1.02	1.01	0.99	0.98	0.97	0.94	0.93	0.90	0.88	0.86	0.81
2	0.94	0.92	0.91	0.94	0.91	0.89	0.91	0.88	0.85	0.87	0.84	0.81	0.82	0.79	0.75	0.71
3	0.84	0.81	0.80	0.83	0.80	0.78	0.82	0.78	0.75	0.79	0.75	0.71	0.75	0.71	0.67	0.62
4	0.75	0.72	0.71	0.75	0.72	0.69	0.74	0.70	0.66	0.72	0.67	0.63	0.69	0.64	0.59	0.55
5	0.67	0.65	0.63	0.68	0.64	0.62	0.67	0.63	0.59	0.66	0.60	0.57	0.63	0.58	0.53	0.50
6	0.61	0.59	0.57	0.61	0.58	0.56	0.61	0.57	0.54	0.60	0.55	0.51	0.59	0.53	0.48	0.45
7	0.56	0.54	0.52	0.56	0.53	0.51	0.56	0.52	0.49	0.56	0.50	0.47	0.55	0.49	0.44	0.41
8	0.51	0.49	0.48	0.52	0.49	0.47	0.52	0.48	0.45	0.52	0.47	0.43	0.51	0.45	0.41	0.37
9	0.48	0.45	0.44	0.48	0.45	0.43	0.48	0.44	0.41	0.48	0.43	0.39	0.48	0.42	0.37	0.34
10	0.44	0.42	0.41	0.45	0.42	0.40	0.45	0.41	0.38	0.45	0.40	0.37	0.45	0.39	0.35	0.32

## LUMINAIRE BUDGETARY ESTIMATE DIAGRAM



C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

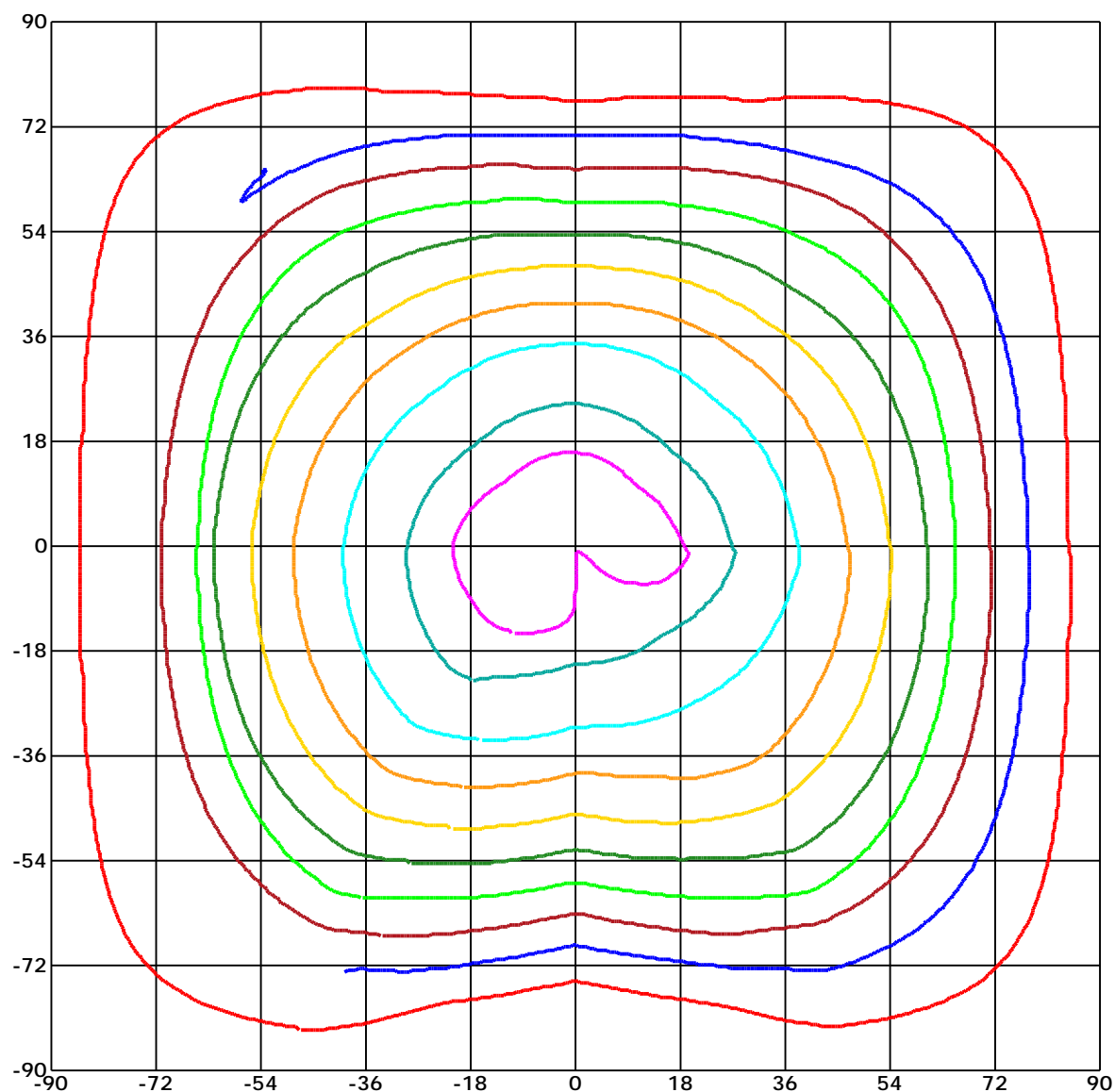
Test Distance: 6.35 m

Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## ISOCANDELA DIAGRAM (RECTANGULAR)

Unit of intensity:cd     $I_{max}(100\%)$ : 758.821 cd720.88(95% $I_{max}$ )682.939(90% $I_{max}$ )607.057(80% $I_{max}$ )531.175(70% $I_{max}$ )455.293(60% $I_{max}$ )379.411(50% $I_{max}$ )303.528(40% $I_{max}$ )227.646(30% $I_{max}$ )151.764(20% $I_{max}$ )75.882(10% $I_{max}$ )

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

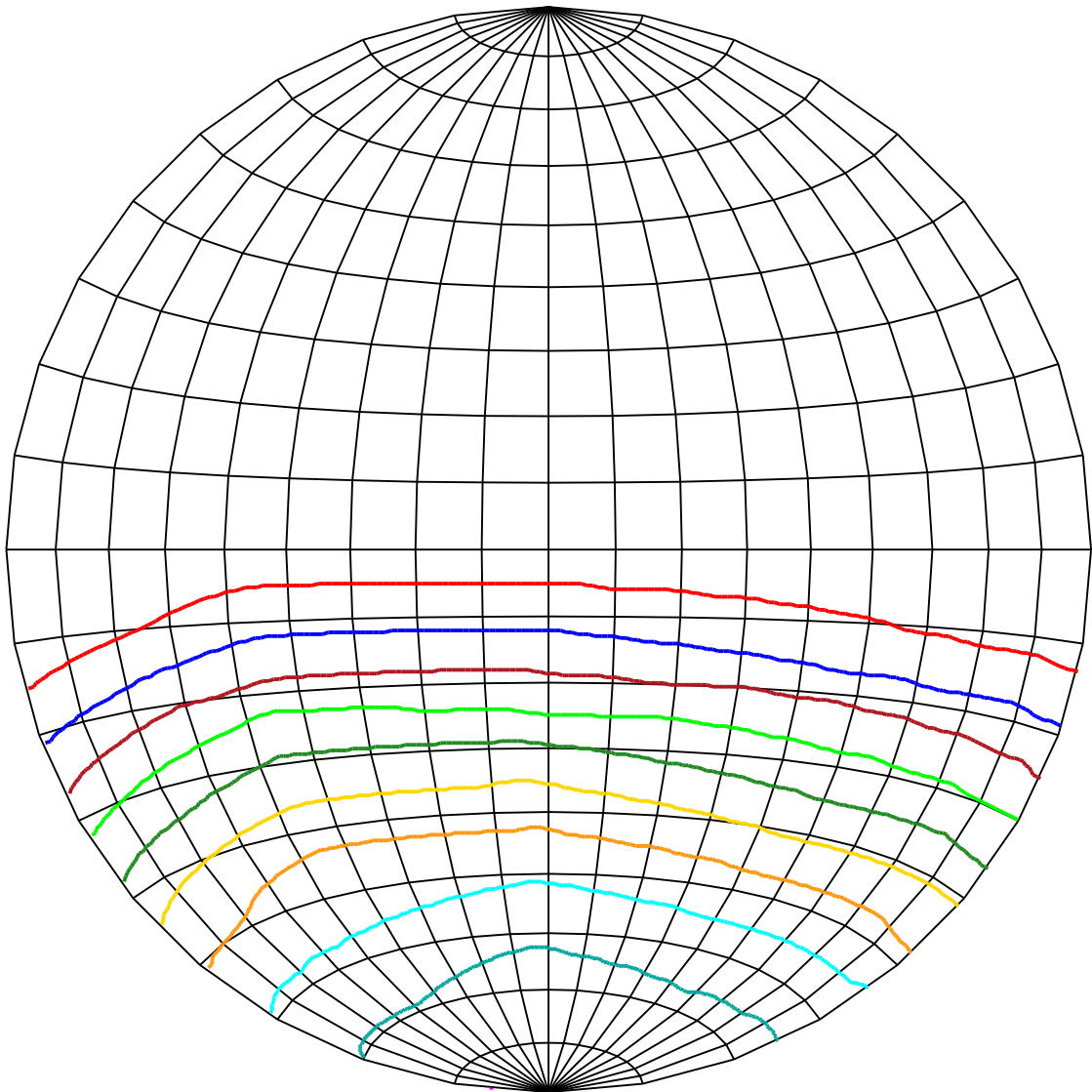
Test Distance: 6.35 m

Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## ISOCANDELA DIAGRAM (SPHERE)



Unit of intensity:cd      Imax(100%): 758.821 cd

720.88(95%Imax)  
682.939(90%Imax)  
607.057(80%Imax)  
531.175(70%Imax)  
455.293(60%Imax)

379.411(50%Imax)  
303.528(40%Imax)  
227.646(30%Imax)  
151.764(20%Imax)  
75.882(10%Imax)

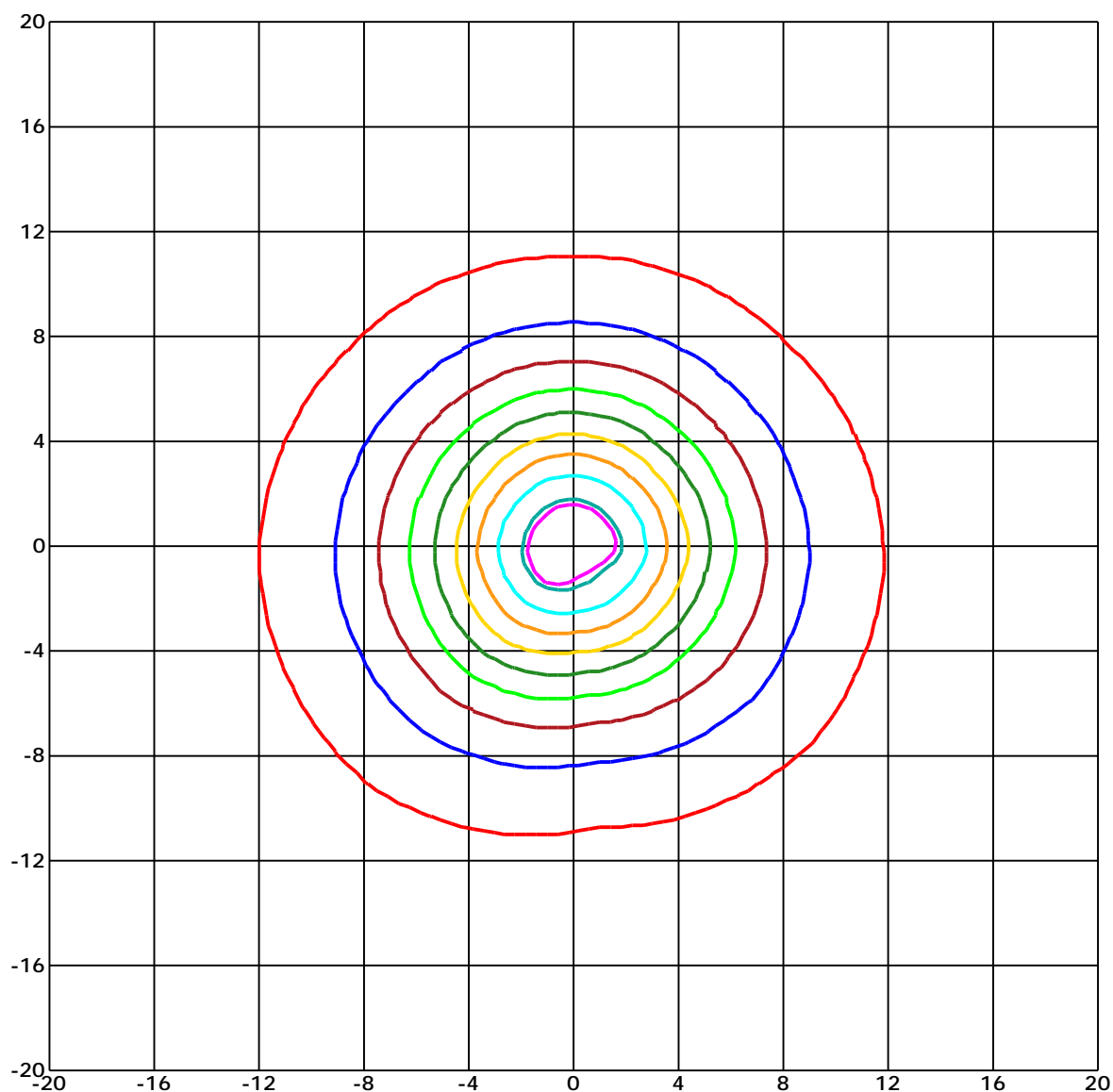
C Range: 0 - 360 Deg  
C Interval: 45.0 Deg  
Test Speed: High  
Temperature: 6.35  
Operators:  
Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg  
G Interval: 1.0 Deg  
Test System: Huipu CPM-1800B Goniophotometer  
Humidity: 1.1  
Test Distance: 6.35 m  
Remarks:

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## ISOLX DIAGRAM



Unit of illumination: lx      Height of plane: 8.0(m)/26.25(ft)

10.872(1%Emax)	5.909(1%Emax)
10.636(1%Emax)	4.727(1%Emax)
9.454(1%Emax)	3.545(0%Emax)
8.273(1%Emax)	2.364(0%Emax)
7.091(1%Emax)	1.182(0%Emax)

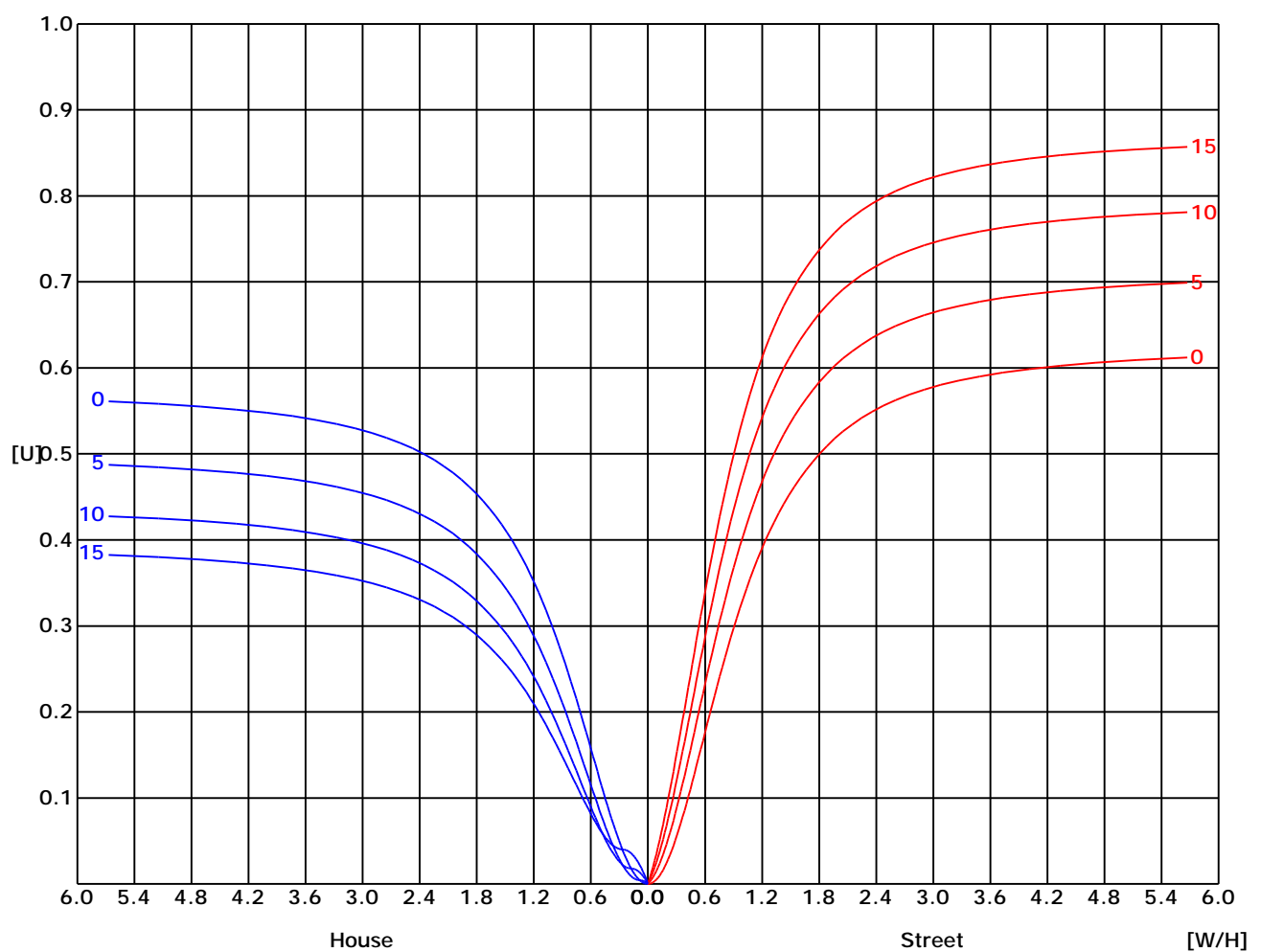
C Range: 0 - 360 Deg  
 C Interval: 45.0 Deg  
 Test Speed: High  
 Temperature: 6.35  
 Operators:  
 Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg  
 G Interval: 1.0 Deg  
 Test System: Huipu CPM-1800B Goniophotometer  
 Humidity: 1.1  
 Test Distance: 6.35 m  
 Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## UTILIZATION FACTOR DIAGRAM (ROAD)



C Range: 0 - 360 Deg  
C Interval: 45.0 Deg  
Test Speed: High  
Temperature: 6.35  
Operators:  
Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg  
G Interval: 1.0 Deg  
Test System: Huipu CPM-1800B Goniophotometer  
Humidity: 1.1  
Test Distance: 6.35 m  
Remarks:

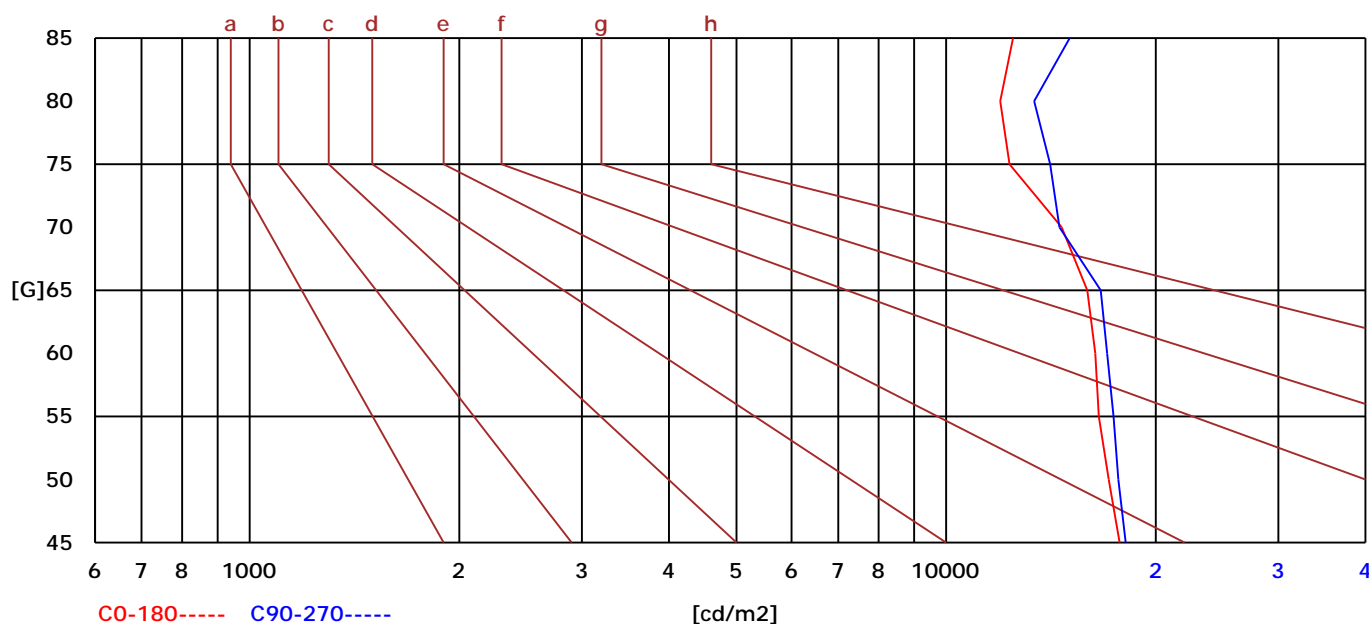


Report No.:

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## BRIGHT LIMIT DIAGRAM

C/G	45	50	55	60	65	70	75	80	85
C0	17753	17111	16564	16380	15945	14651	12326	11960	12481
C90	18100	17667	17384	17030	16674	14551	14100	13372	15051
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: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

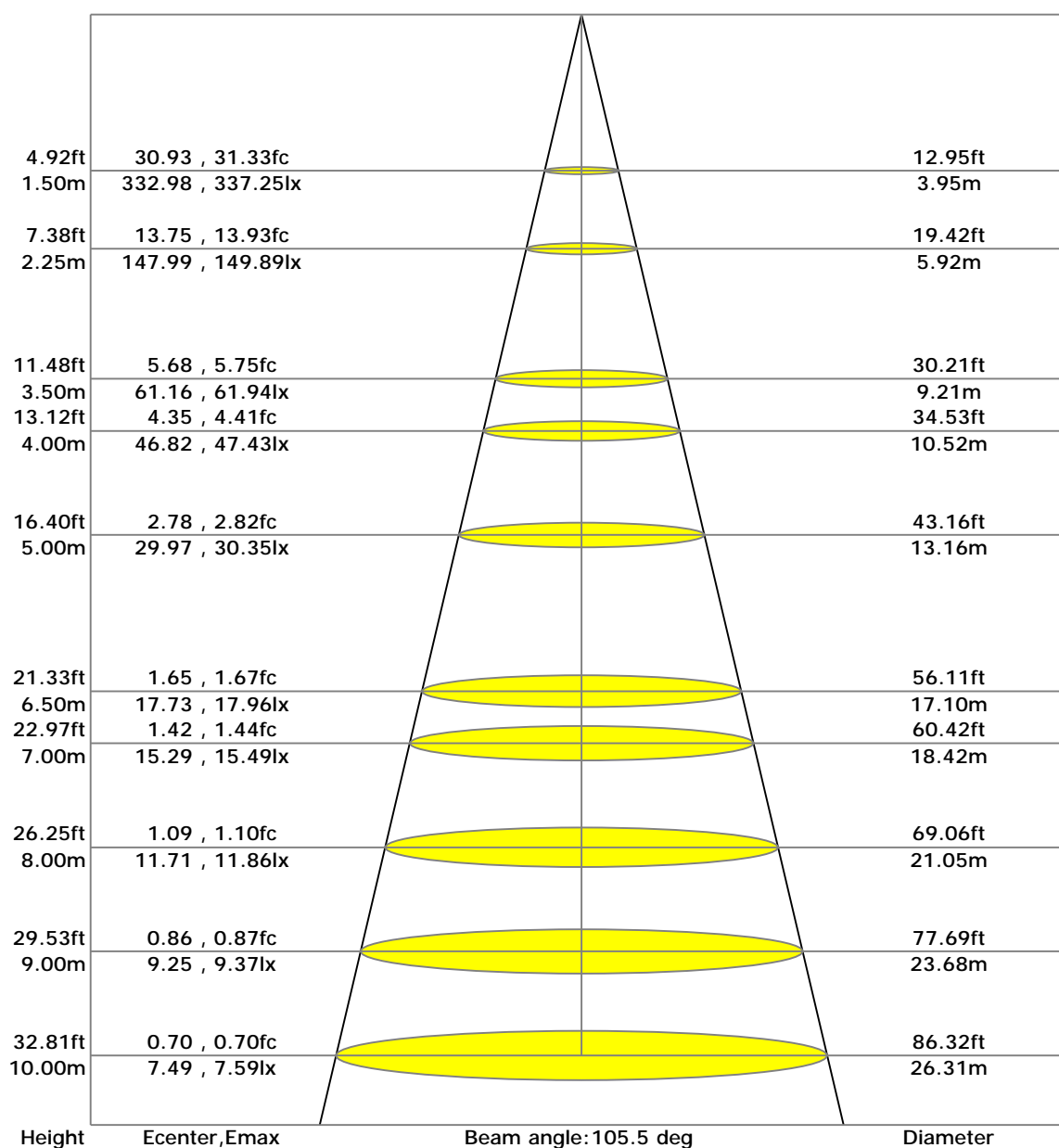
Test Distance: 6.35 m

Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## LX-DISTANCE DIAGRAM



C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

Test Distance: 6.35 m

Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## UGR(Unified Glare Rating) TABLE

RHOCC	70	70	50	50	30	70	70	50	50	30
RHOW	70	70	50	50	30	70	70	50	50	30
RHOF	20	20	20	20	20	20	20	20	20	20
Room Size X Y	Viewed Endwise					Viewed Crosswise				
2H 2H	19.38	19.46	19.58	19.64	19.89	18.85	18.93	19.05	19.12	19.36
3H	19.47	19.55	19.68	19.74	19.99	19.01	19.09	19.22	19.28	19.53
4H	19.47	19.54	19.68	19.74	19.99	19.03	19.11	19.24	19.30	19.55
6H	19.44	19.52	19.66	19.72	19.97	19.02	19.09	19.24	19.29	19.54
8H	19.43	19.50	19.65	19.70	19.96	19.00	19.07	19.22	19.28	19.53
12H	19.41	19.48	19.63	19.69	19.94	18.99	19.06	19.21	19.26	19.52
4H 2H	22.10	22.17	22.31	22.37	22.62	20.91	20.98	21.12	21.18	21.43
3H	22.31	22.38	22.53	22.58	22.84	21.20	21.27	21.42	21.48	21.73
4H	22.34	22.41	22.57	22.62	22.88	21.28	21.34	21.51	21.55	21.81
6H	22.33	22.39	22.57	22.61	22.88	21.31	21.37	21.55	21.59	21.86
8H	22.32	22.37	22.56	22.60	22.87	21.31	21.37	21.56	21.60	21.86
12H	22.30	22.35	22.54	22.58	22.85	21.30	21.35	21.55	21.58	21.85
8H 4H	23.03	23.10	23.25	23.30	23.56	21.15	21.22	21.37	21.42	21.68
6H	23.58	23.63	23.84	23.87	24.14	21.79	21.84	22.05	22.08	22.35
8H	23.59	23.63	23.85	23.88	24.16	21.84	21.89	22.10	22.13	22.41
12H	23.57	23.61	23.84	23.87	24.15	21.86	21.90	22.13	22.16	22.44
12H 4H	23.85	23.91	24.10	24.14	24.41	21.67	21.73	21.92	21.96	22.23
6H	23.98	24.02	24.24	24.27	24.55	21.82	21.87	22.09	22.12	22.39

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

Test Distance: 6.35 m

Remarks:

[illegible]

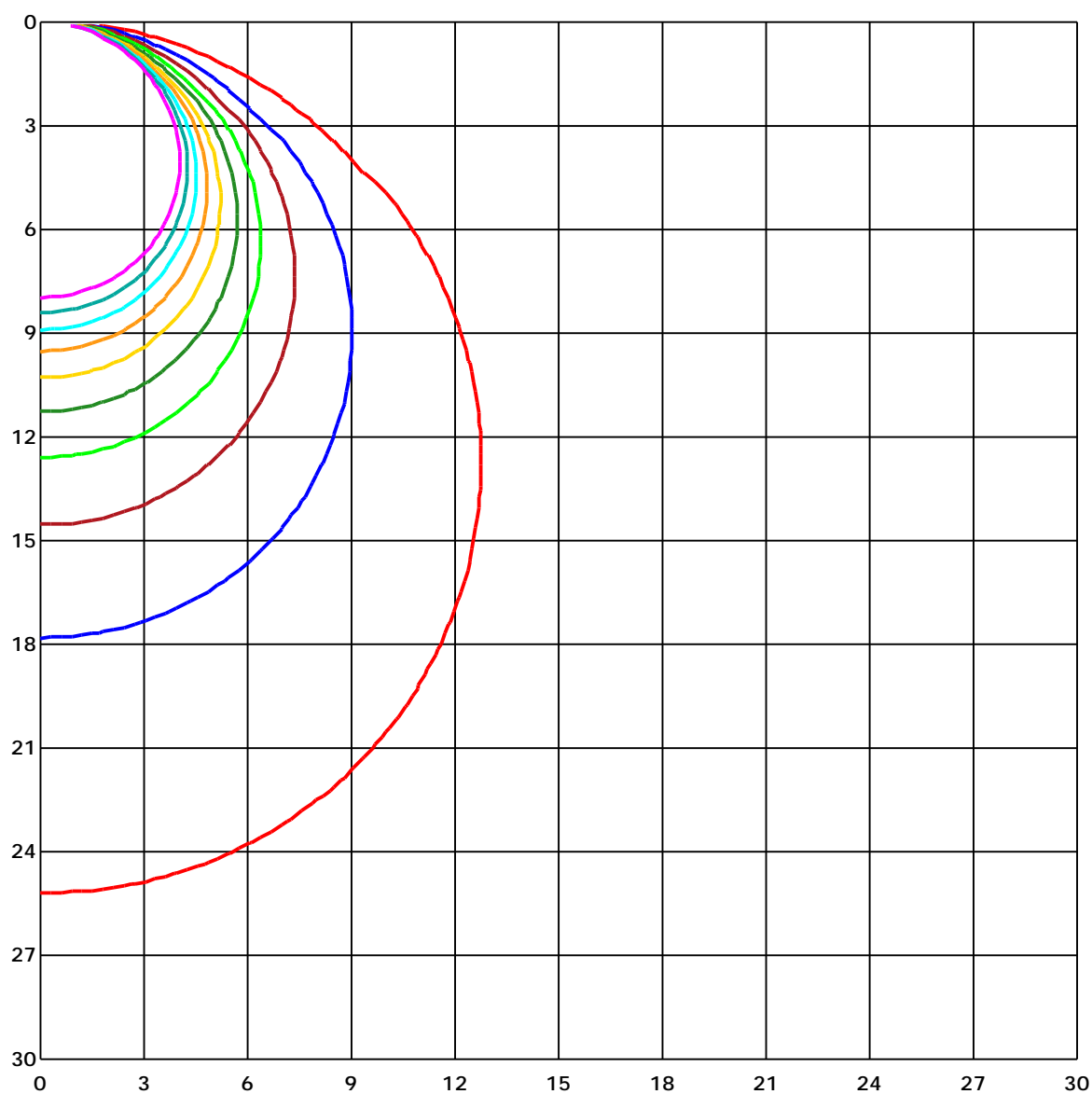
C Range: 0 - 360 Deg  
C Interval: 45.0 Deg  
Test Speed: High  
Temperature: 6.35  
Operators:  
Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg  
G Interval: 1.0 Deg  
Test System: Huipu CPM-1800B Goniophotometer  
Humidity: 1.1  
Test Distance: 6.35 m  
Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## SPACE ISOLX DIAGRAM



Unit of illumination: lx

11.81

10.629

9.448

8.267

7.086

5.905

4.724

3.543

2.362

1.181

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

Test Distance: 6.35 m

Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## LUMINOUS DISTRIBUTION INTENSITY DATA

Gamma\C	C0	C45	C90	C135	C180	C225	C270	C315	C360	
G0	749.2	751.99	754.83	754.87	753.85	755.76	715.31	717.57	756.2	
G1	749.15	751.55	754.56	754.43	754.65	756.69	716.64	717.57	756.65	
G2	749.02	750.7	753.81	753.94	755.54	757.4	718.01	717.79	756.65	
G3	749.24	749.55	753.23	753.23	755.8	757.85	718.9	718.19	756.74	
G4	749.02	748.31	752.43	752.21	755.72	758.38	720.14	718.1	756.38	
G5	748.53	746.58	751.19	751.19	755.54	758.82	720.32	718.5	755.72	
G6	747.55	744.98	749.86	749.28	755.01	758.78	721.03	718.99	755.18	
G7	746.71	742.99	748.09	747.51	754.7	758.33	720.59	718.59	754.08	
G8	745.47	740.86	746.18	745.34	753.5	757.09	720.19	717.66	753.01	
G9	743.96	738.33	743.96	743.21	752.26	755.63	719.92	716.2	751.59	
G10	742.54	735.89	741.52	740.81	750.79	754.21	720.05	713.89	750.22	
G11	740.77	733.05	738.86	738.11	749.15	751.95	719.35	711.81	748.4	
G12	738.68	730.12	736.16	735.18	746.93	750.22	718.86	710.16	746.4	
G13	736.42	726.71	733.18	732.16	745.12	748.04	716.02	708.48	744.14	
G14	733.76	723.12	729.86	728.84	743.16	744.98	711.45	707.33	741.57	
G15	731.14	719.48	726.4	725.2	740.59	740.5	707.46	705.77	738.86	
G16	728.39	715.49	722.72	721.65	737.93	736.24	702.98	703.87	735.85	
G17	724.98	711.45	718.9	717.53	735.18	732.3	699.16	700.45	732.87	
G18	721.52	707.06	715.0	713.53	732.61	727.15	694.37	698.06	729.55	
G19	718.01	702.58	710.78	709.1	729.01	722.05	689.49	694.33	725.73	
G20	714.38	697.7	706.48	704.53	725.38	717.53	682.8	688.43	721.87	
G21	710.16	692.95	701.65	699.74	720.9	714.82	676.85	682.53	717.88	
G22	705.82	687.59	696.99	695.04	716.73	710.96	670.69	677.03	713.36	
G23	701.16	682.26	692.02	689.85	712.38	707.37	664.83	671.71	708.57	
G24	696.33	676.41	686.79	684.26	707.5	702.89	658.89	666.34	703.82	
G25	691.27	670.24	681.24	678.49	702.8	699.34	651.31	661.82	698.72	
G26	685.95	664.03	675.52	672.15	697.92	696.28	643.76	657.91	693.22	
G27	680.27	657.74	669.36	665.94	692.95	695.75	636.09	651.93	687.28	
G28	674.64	651.04	662.93	659.47	687.28	692.91	628.15	645.01	681.87	
G29	668.65	644.08	656.67	652.68	681.47	686.79	620.83	637.87	676.06	
G30	662.13	637.07	650.06	645.94	675.52	680.76	613.16	631.08	669.67	
G31	655.25	629.84	643.1	639.02	669.09	674.72	604.56	623.58	663.1	
G32	648.56	622.52	635.96	631.7	662.44	668.25	596.39	617.2	656.18	
G33	641.68	614.67	628.33	624.2	655.83	661.68	587.83	610.14	649.09	
G34	634.32	607.31	617.86	616.84	648.87	655.39	578.16	604.33	641.86	
G35	627.0	599.19	607.48	608.81	641.9	648.16	568.89	596.48	634.54	
G36	619.64	591.2	596.79	601.05	634.72	640.88	559.49	588.85	626.82	

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

Test Distance: 6.35 m

Remarks:

Report No.:

Test Time: 2020/3/14 12:32:46

## LUMINOUS DISTRIBUTION INTENSITY DATA(Continue 1)

Gamma\C	C0	C45	C90	C135	C180	C225	C270	C315	C360	
G37	613.16	582.87	585.88	592.89	627.35	633.56	549.38	580.47	619.1	
G38	605.31	574.44	574.84	584.68	619.81	625.76	539.04	569.83	612.54	
G39	597.1	565.74	563.84	576.3	611.96	617.68	527.95	559.89	604.24	
G40	588.54	556.87	552.66	567.74	604.16	609.3	517.84	557.36	595.73	
G41	579.45	547.65	541.35	557.81	595.82	600.92	506.89	561.4	586.72	
G42	570.93	536.83	529.6	546.67	587.61	592.58	496.02	561.58	577.45	
G43	561.93	525.52	518.2	535.45	579.18	583.8	485.55	565.3	568.67	
G44	552.93	514.12	506.04	523.87	570.45	575.06	473.84	556.25	559.58	
G45	543.83	502.14	494.25	511.94	561.49	566.01	462.58	547.03	550.4	
G46	534.56	489.9	481.83	499.79	552.31	556.61	450.69	537.31	540.99	
G47	524.98	478.28	469.36	488.04	542.86	547.07	439.56	527.38	531.46	
G48	515.27	465.59	456.77	476.5	533.19	536.69	427.54	517.13	521.48	
G49	505.2	452.82	443.77	465.28	523.74	526.89	415.43	506.89	511.54	
G50	494.78	439.95	430.6	454.24	513.58	516.56	402.3	496.33	500.85	
G51	484.0	428.33	416.49	444.17	503.16	505.25	389.39	485.73	490.03	
G52	473.09	417.07	402.92	433.08	492.43	493.89	376.39	474.64	478.99	
G53	462.18	405.58	390.01	421.59	481.91	482.45	362.82	463.02	468.08	
G54	450.64	392.98	376.04	410.06	470.65	470.87	349.69	450.6	456.54	
G55	439.29	380.03	362.29	398.84	459.52	459.12	336.48	437.56	445.06	
G56	427.54	367.97	348.05	387.13	448.03	446.83	322.9	427.71	433.26	
G57	416.05	355.46	334.57	375.77	436.67	434.72	309.51	418.35	421.55	
G58	404.03	344.46	320.82	364.2	425.1	422.97	295.36	409.31	409.62	
G59	392.14	336.12	306.8	352.44	413.25	410.33	281.48	400.21	397.46	
G60	380.03	327.6	293.23	340.6	401.37	397.64	267.5	389.48	385.35	
G61	368.1	315.89	280.01	328.71	389.43	384.95	253.4	379.54	373.2	
G62	355.59	304.27	266.22	317.14	377.19	372.76	238.98	367.35	360.65	
G63	343.13	292.7	253.27	305.38	365.0	360.25	224.48	354.75	348.14	
G64	329.2	281.08	239.78	293.36	314.3	347.48	210.42	342.11	335.63	
G65	297.71	269.54	226.39	281.87	295.8	334.75	196.58	329.96	301.92	
G66	283.96	257.83	212.64	270.03	283.74	321.97	182.08	317.4	289.37	
G67	272.6	246.12	199.6	254.06	272.78	309.06	168.73	304.89	277.93	
G68	261.56	233.97	186.11	238.76	252.73	296.07	154.31	291.72	266.66	
G69	250.52	221.95	173.12	227.89	247.32	282.67	141.31	277.97	255.35	
G70	238.89	200.44	159.85	199.06	236.68	269.46	127.92	247.77	243.64	
G71	227.14	178.62	147.04	181.1	225.14	245.19	115.28	233.17	231.62	
G72	215.7	161.23	133.86	170.54	211.88	231.22	102.64	220.62	220.0	
G73	204.03	151.03	121.09	158.17	199.82	218.45	94.03	208.42	208.33	

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

Test Distance: 6.35 m

Remarks:

Test Time: 2020/3/14 12:32:46

## LUMINOUS DISTRIBUTION INTENSITY DATA(Continue 2)

[illegible]

C Range: 0 - 360 Deg

C Interval: 45.0 Deg

Test Speed: High

Temperature: 6.35

Operators:

Test Date: 2020/3/14 12:32:46

G Range: 0 - 90 Deg

G Interval: 1.0 Deg

Test System: Huipu CPM-1800B Goniophotometer

Humidity: 1.1

Test Distance: 6.35 m

Remarks: