

Report No.:

Test Time: 2021/9/15 19:36

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Luminaire Description: MLS054W12V27KD(100°,黑胶)

Lamp Catalog: L150-2780500600000 (K3A2流明)

Lamp Description: MSPI-DDC1T2S-500 (3.52W)

Number of Lamps:

Lumens per Lamp:

Luminous Length (mm):

Luminous Width (mm):

Luminous Height (mm):

Voltage: 12.4 V

Current: 0.364 A

Power: 3.52 W

Power Factor: 0.778

Volt Amps: 4.52 VA

## Photometric Results

CIE Class: Direct

Total Rated Lamp Lumens: 274.5 lm

Measurement Flux: 274.5 lm

Efficiency: 100%

Downward Ratio: 99%

Upward Ratio: 1%

Horizontal Diffuse Angle(25%,50%,75%,100%): H122.1,H102.4,H83.9,H5

Vertical Diffuse Angle(25%,50%,75%,100%): V122.8,V101.8,V81,V10

Luminaire Efficacy Rating (LER): 78.02

C0r0 Intensity: 111.02 cd

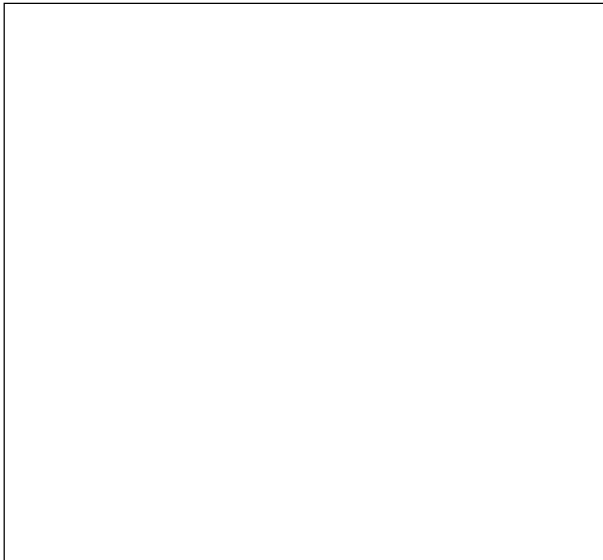
Max. Intensity: 111.81 cd

Pos of Max. Intensity: H150 V2

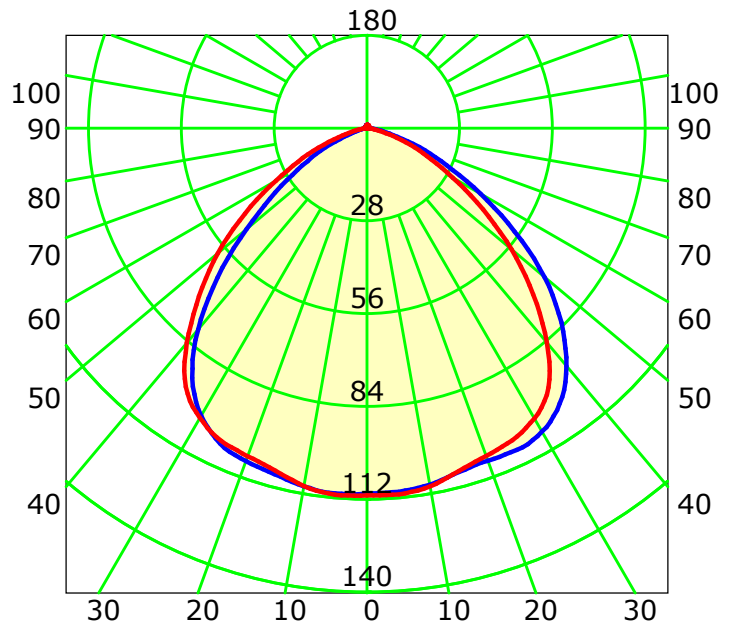
S/MH(C0/C180): 1.36

S/MH(C90/C270): 1.35

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 102.0°

C Plane (°):0.0-360.0: 30.0

Gamma Plane (°):0.0-180.0:1.0 C270

Test Lab:

Test Device: GPM-1800B

Test Type: TYPE C

Distance: 11.573 m [K=1.0000]

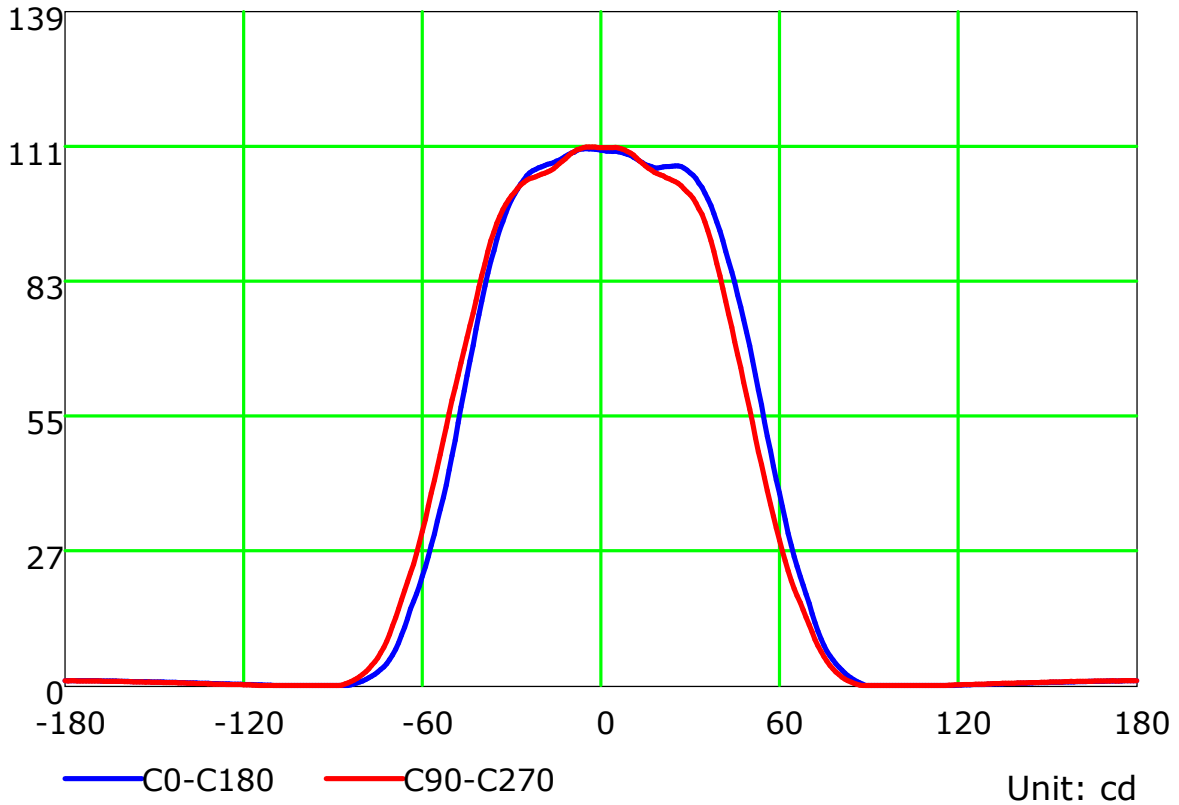
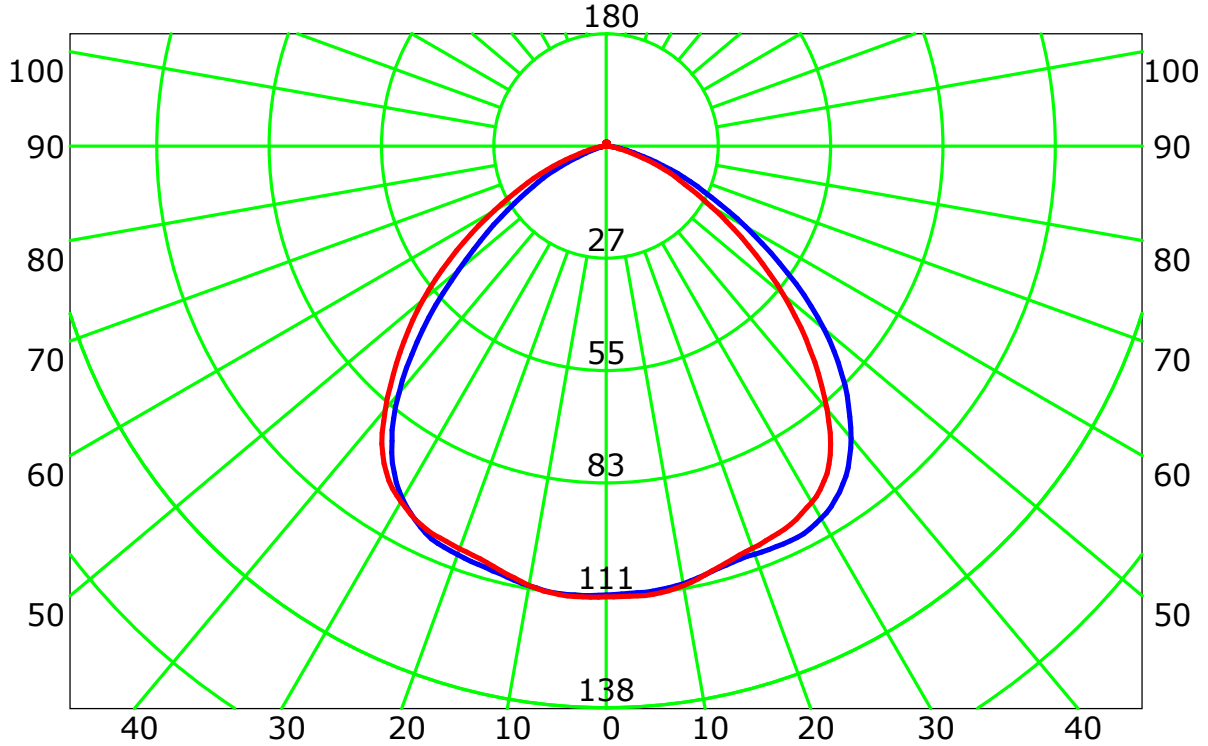
Temperature:

Humidity:

Operator:

Inspector:

## Luminous Intensity Distribution Curve

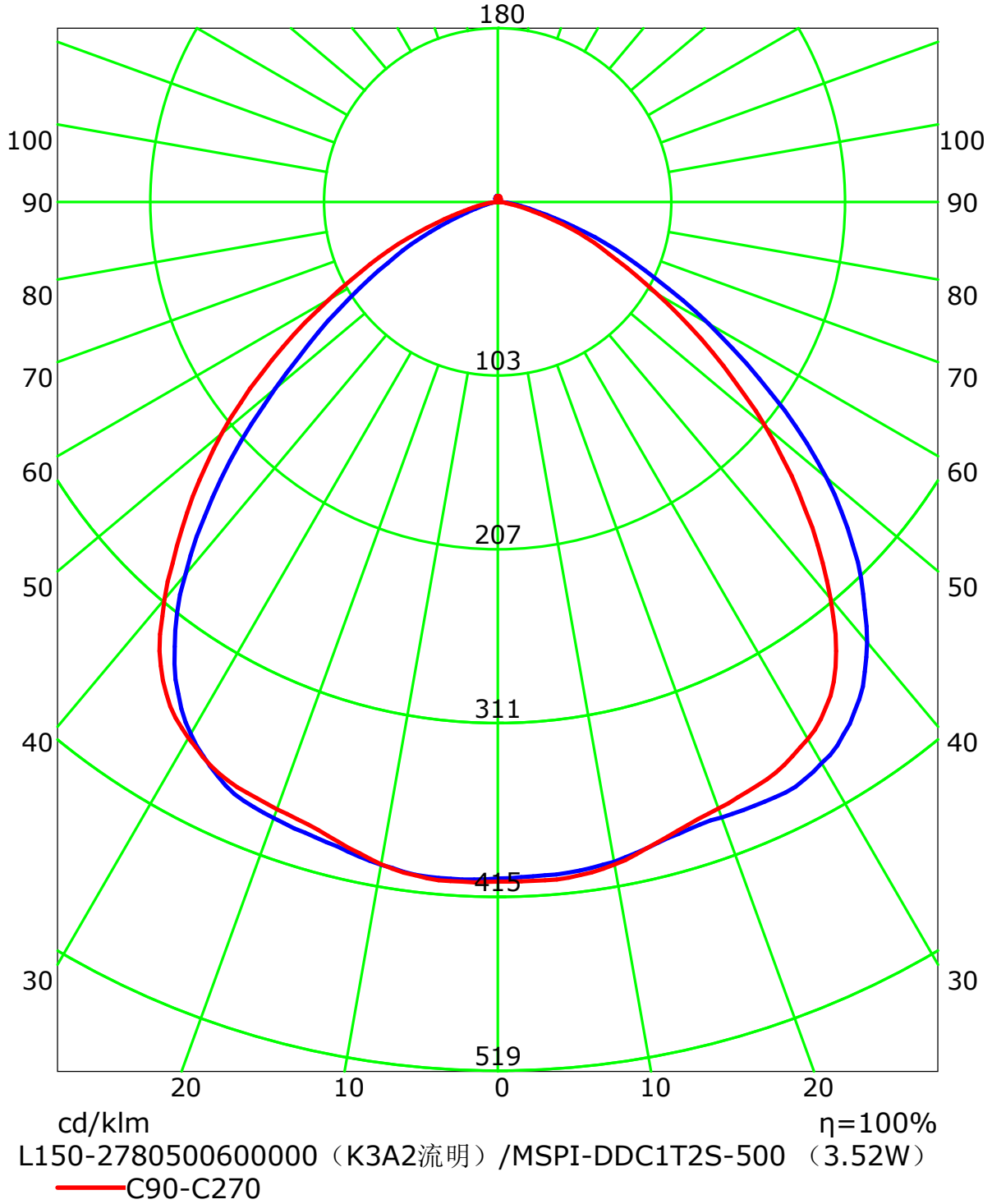


C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

Unit: cd

## Luminous Intensity Distribution Curve(cd/klm)



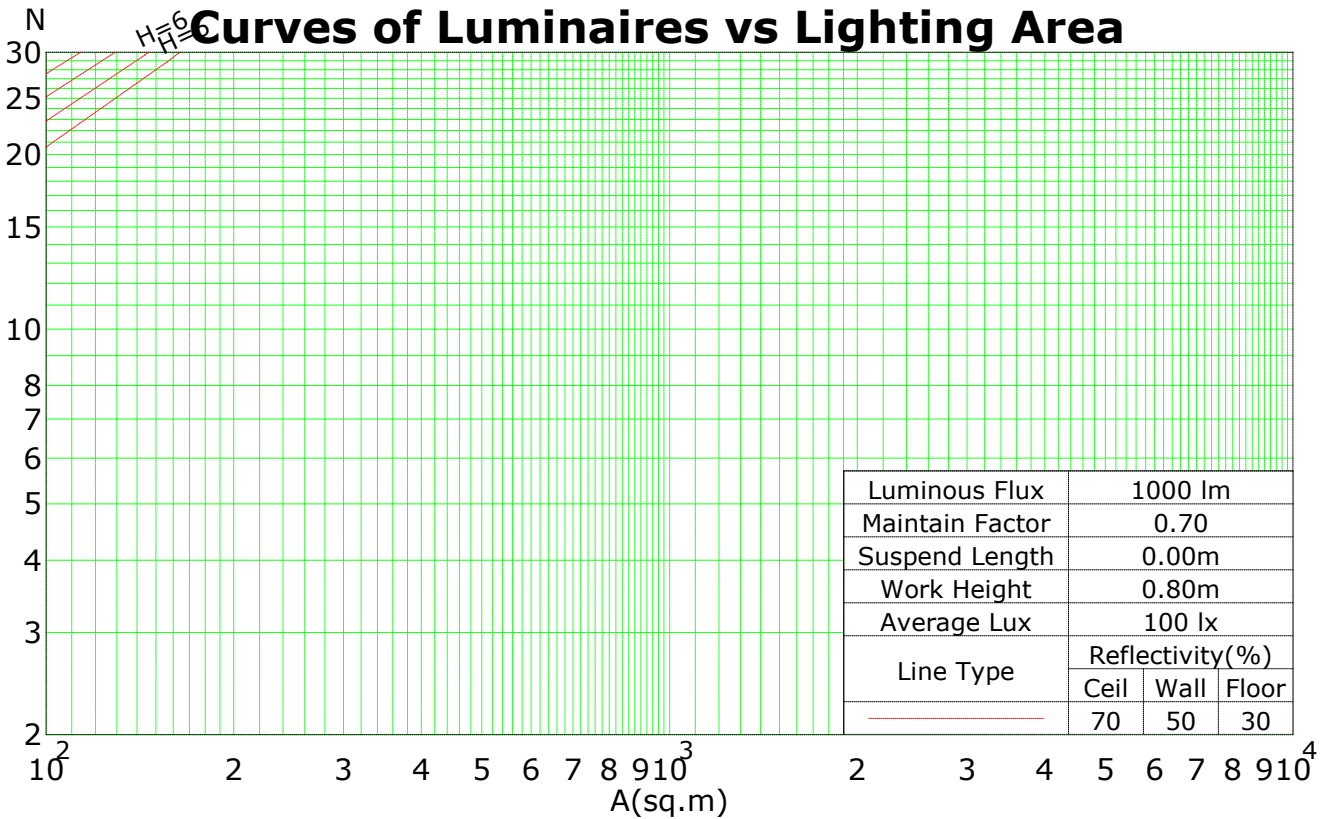
C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

### Coefficients Of Utilization - Zonal Cavity Method

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	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.99
1	1.11	1.07	1.03	1.00	1.08	1.04	1.01	0.98	1.00	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.89	0.87
2	1.02	0.95	0.89	0.84	0.99	0.93	0.88	0.83	0.89	0.85	0.81	0.86	0.82	0.79	0.83	0.80	0.77	0.75
3	0.94	0.84	0.77	0.72	0.91	0.83	0.76	0.71	0.80	0.74	0.70	0.77	0.72	0.68	0.75	0.71	0.67	0.65
4	0.86	0.76	0.68	0.62	0.84	0.74	0.67	0.61	0.72	0.65	0.60	0.69	0.64	0.60	0.67	0.63	0.59	0.57
5	0.80	0.68	0.60	0.54	0.78	0.67	0.59	0.53	0.65	0.58	0.53	0.63	0.57	0.52	0.61	0.56	0.52	0.50
6	0.74	0.62	0.53	0.47	0.72	0.61	0.53	0.47	0.59	0.52	0.47	0.57	0.51	0.46	0.56	0.50	0.46	0.44
7	0.69	0.56	0.48	0.42	0.67	0.55	0.47	0.42	0.54	0.47	0.42	0.52	0.46	0.41	0.51	0.45	0.41	0.39
8	0.64	0.51	0.43	0.38	0.63	0.51	0.43	0.38	0.49	0.42	0.37	0.48	0.42	0.37	0.47	0.41	0.37	0.35
9	0.60	0.47	0.39	0.34	0.58	0.47	0.39	0.34	0.45	0.39	0.34	0.44	0.38	0.34	0.43	0.38	0.33	0.32
10	0.56	0.44	0.36	0.31	0.55	0.43	0.36	0.31	0.42	0.35	0.31	0.41	0.35	0.31	0.40	0.34	0.30	0.29

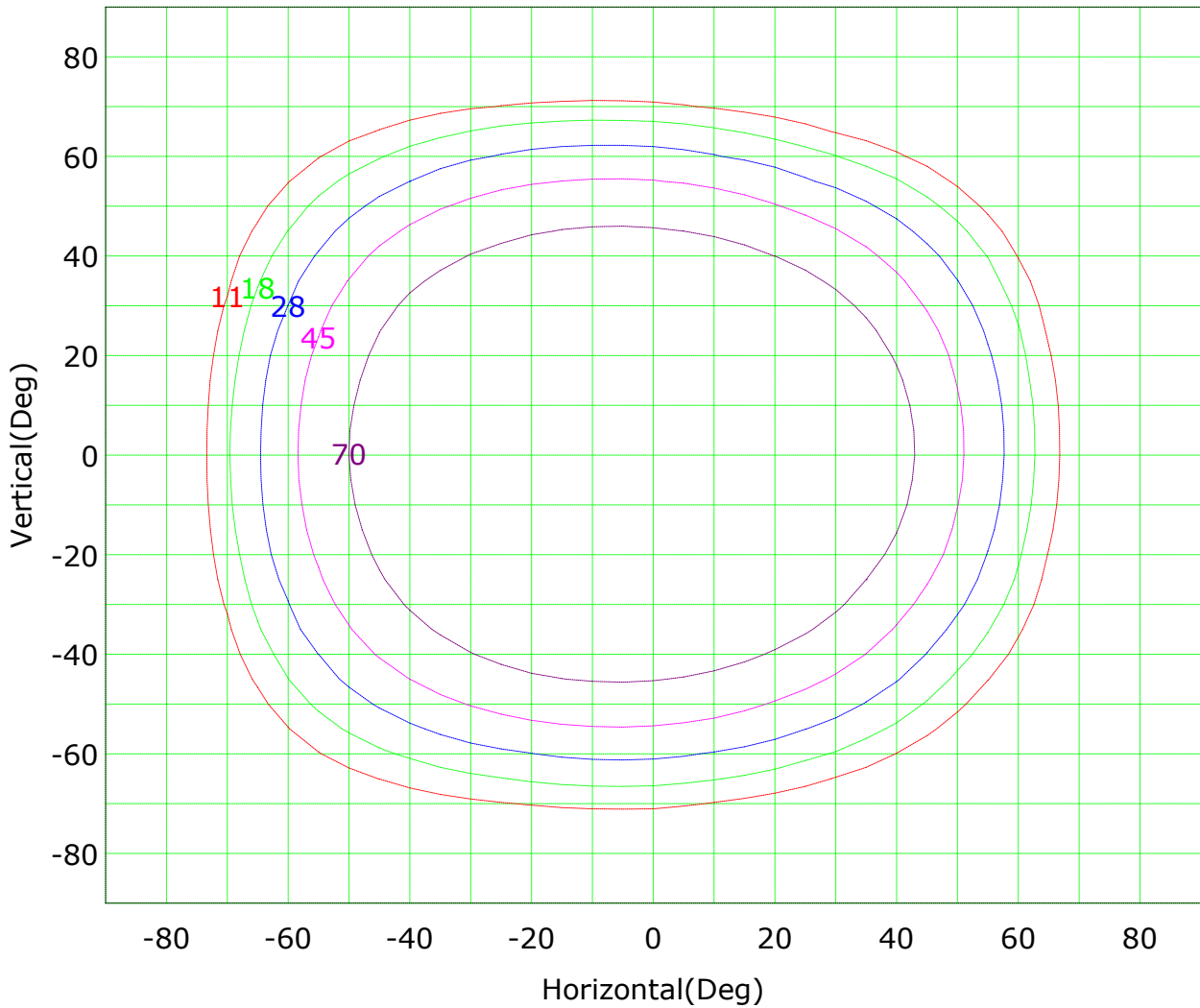
Spacing Criteria (0-180): 1.36  
 Spacing Criteria (90-270): 1.35  
 Spacing Criteria (Diagonal): 1.37



C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

## Isocandela (rectangle)



Imax (100%): 112 cd

— ( 10%):	11 cd	— ( 16%):	18 cd
— ( 25%):	28 cd	— ( 40%):	45 cd
— ( 63%):	70 cd	— (100%):	112 cd

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

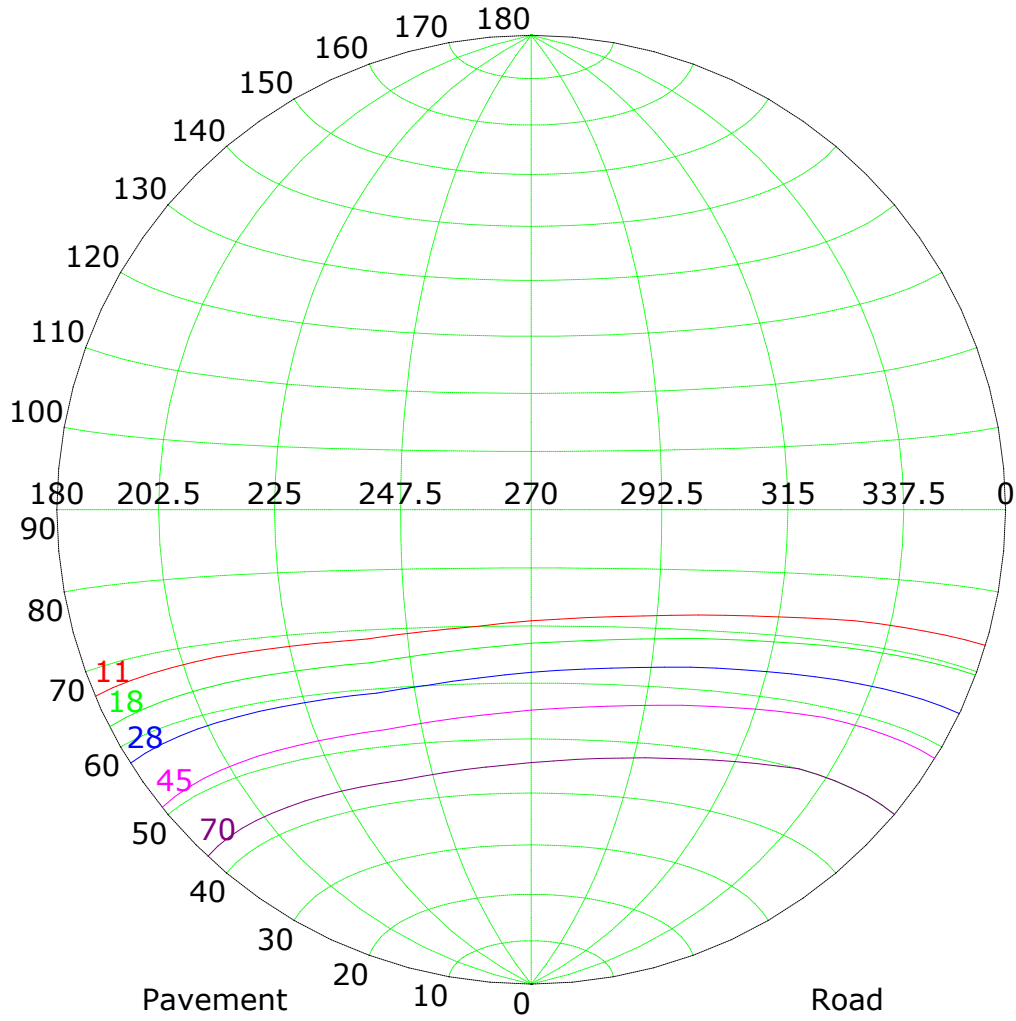
Test Device: GPM-1800B

Distance: 11.573 m [K=1.0000]

Humidity:

Inspector:

## Isocandela (sphere)



Imax (100%): 112 cd

— ( 10%):	11 cd	— ( 16%):	18 cd
— ( 25%):	28 cd	— ( 40%):	45 cd
— ( 63%):	70 cd	— (100%):	112 cd

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

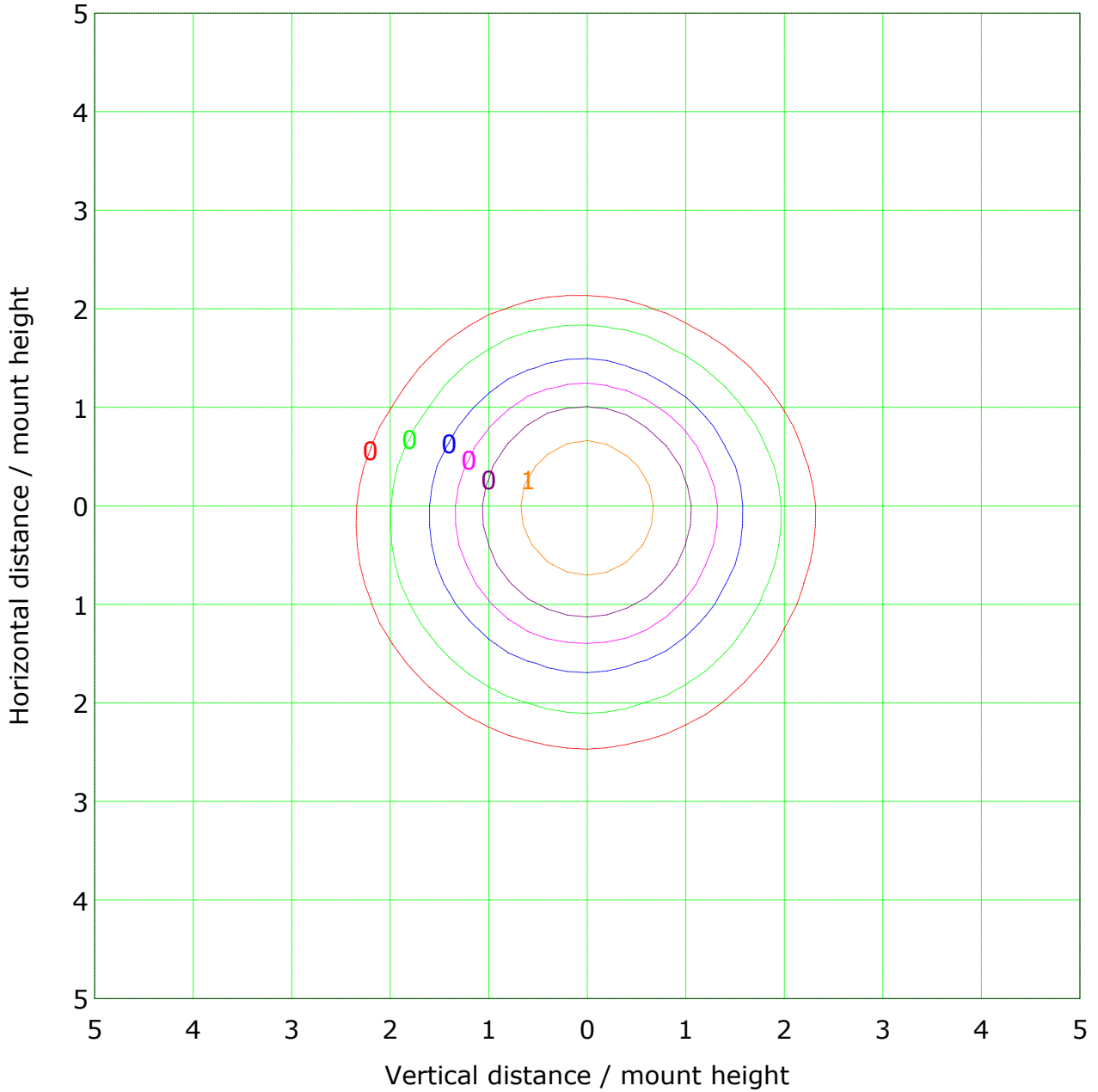
Test Device: GPM-1800B

Distance: 11.573 m [K=1.0000]

Humidity:

Inspector:

## IsoLux Plot



Mounting Height: 10.0m    Max Lux(100%): 1.1 lx

— ( 1%): 0.0 lx	— ( 2%): 0.0 lx
— ( 5%): 0.1 lx	— ( 10%): 0.1 lx
— ( 20%): 0.2 lx	— ( 50%): 0.6 lx
— (100%): 1.1 lx	

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

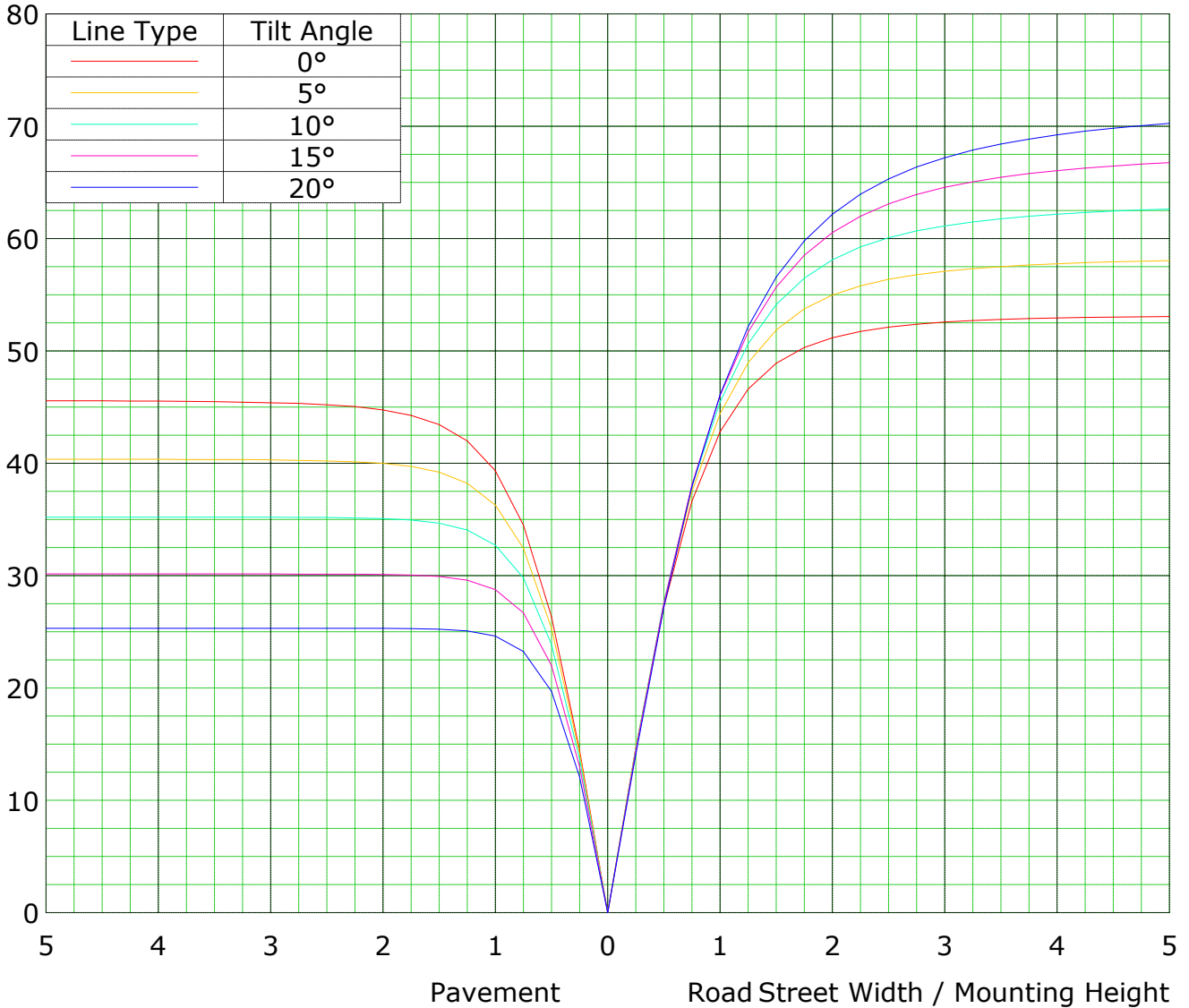
Distance: 11.573 m [K=1.0000]

Humidity:

Inspector:

## Roadway CU Curve

Efficiency(%)



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 11.573 m [K=1.0000]

Humidity:

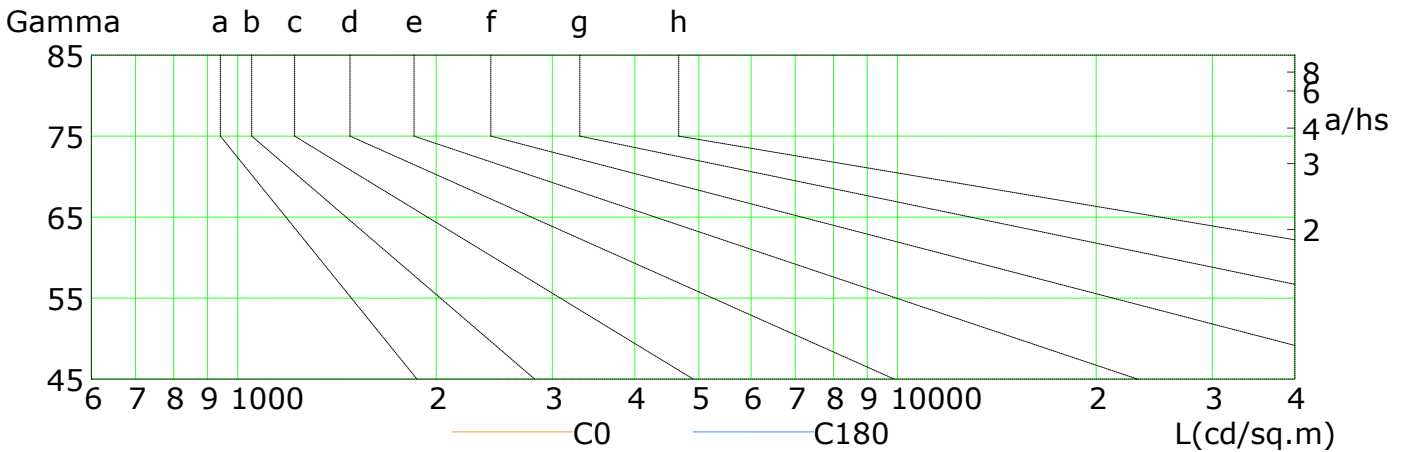
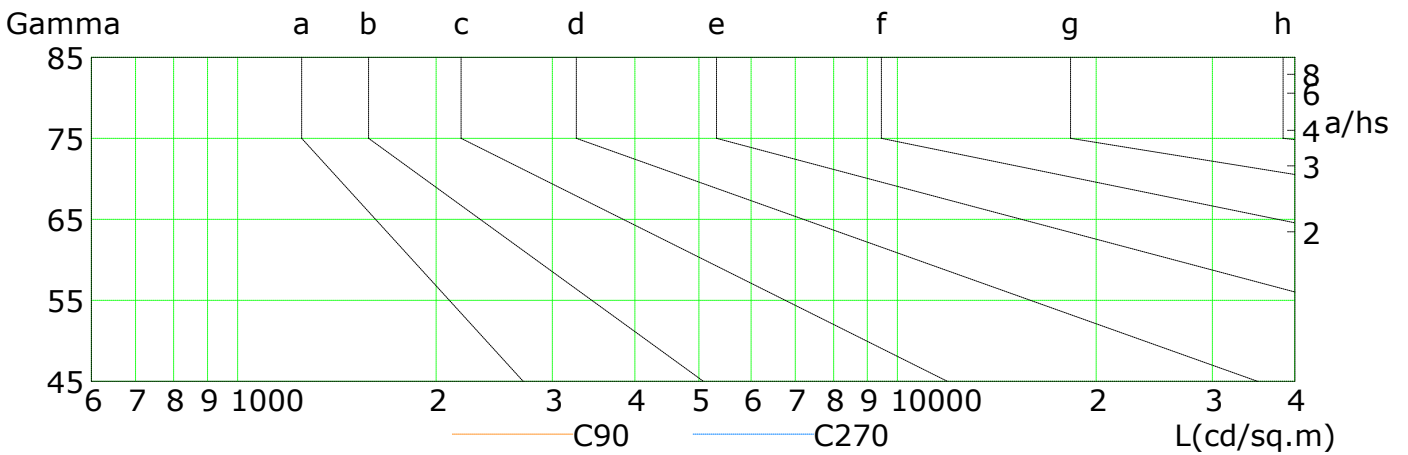
Inspector:



## Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
		2000	1000	500	<=300				
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

a b c d e f g h



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	84	70	55	40	27	17	8	4	1
C90	71	57	43	30	20	13	6	2	1
C180	64	48	34	23	14	6	3	1	0
C270	72	59	45	32	22	12	6	2	1

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

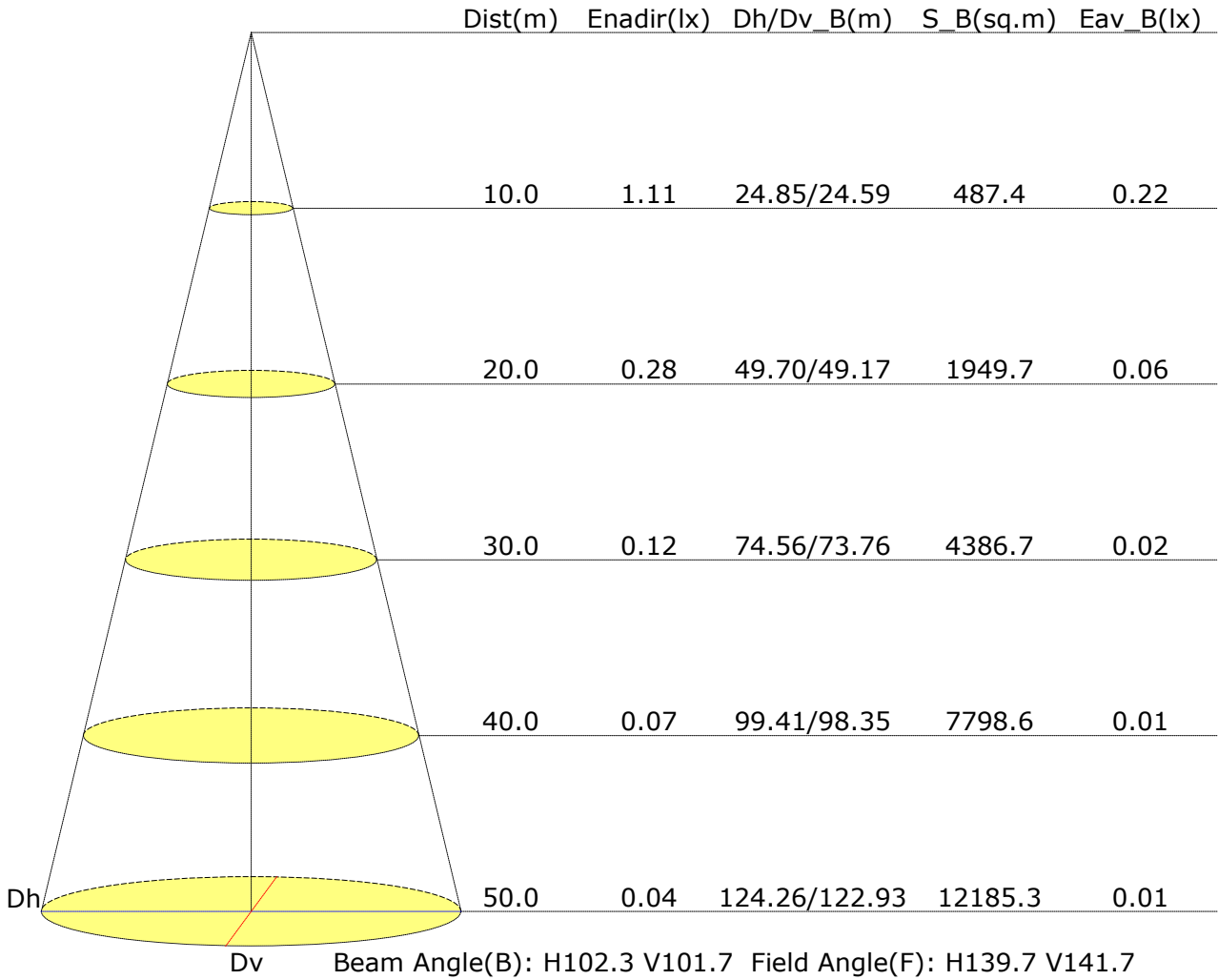
Test Device: GPM-1800B

Distance: 11.573 m [K=1.0000]

Humidity:

Inspector:

## Illuminance at a Distance



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

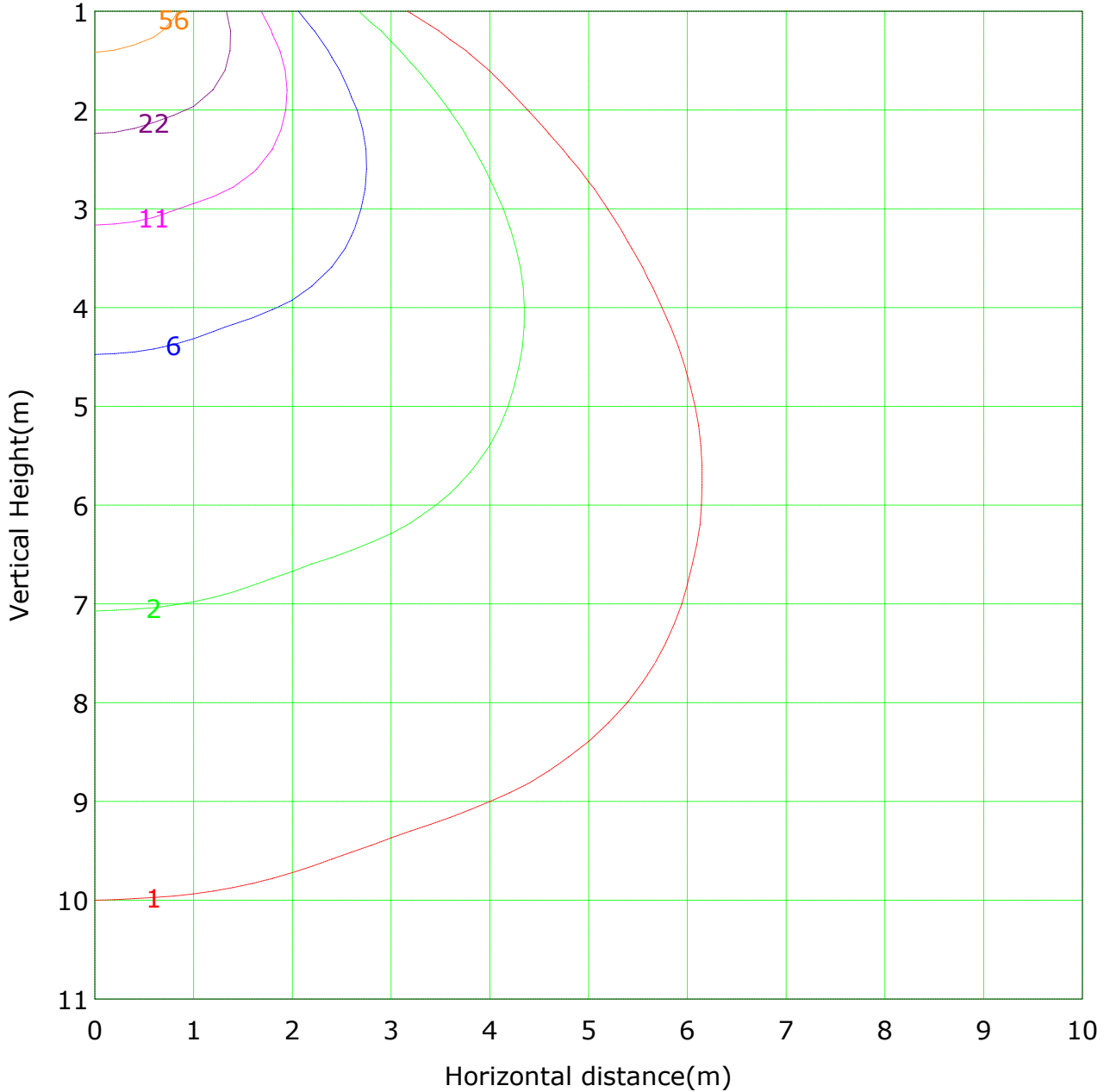
Test Device: GPM-1800B

Distance: 11.573 m [K=1.0000]

Humidity:

Inspector:

## Vertical IsoLux Plot



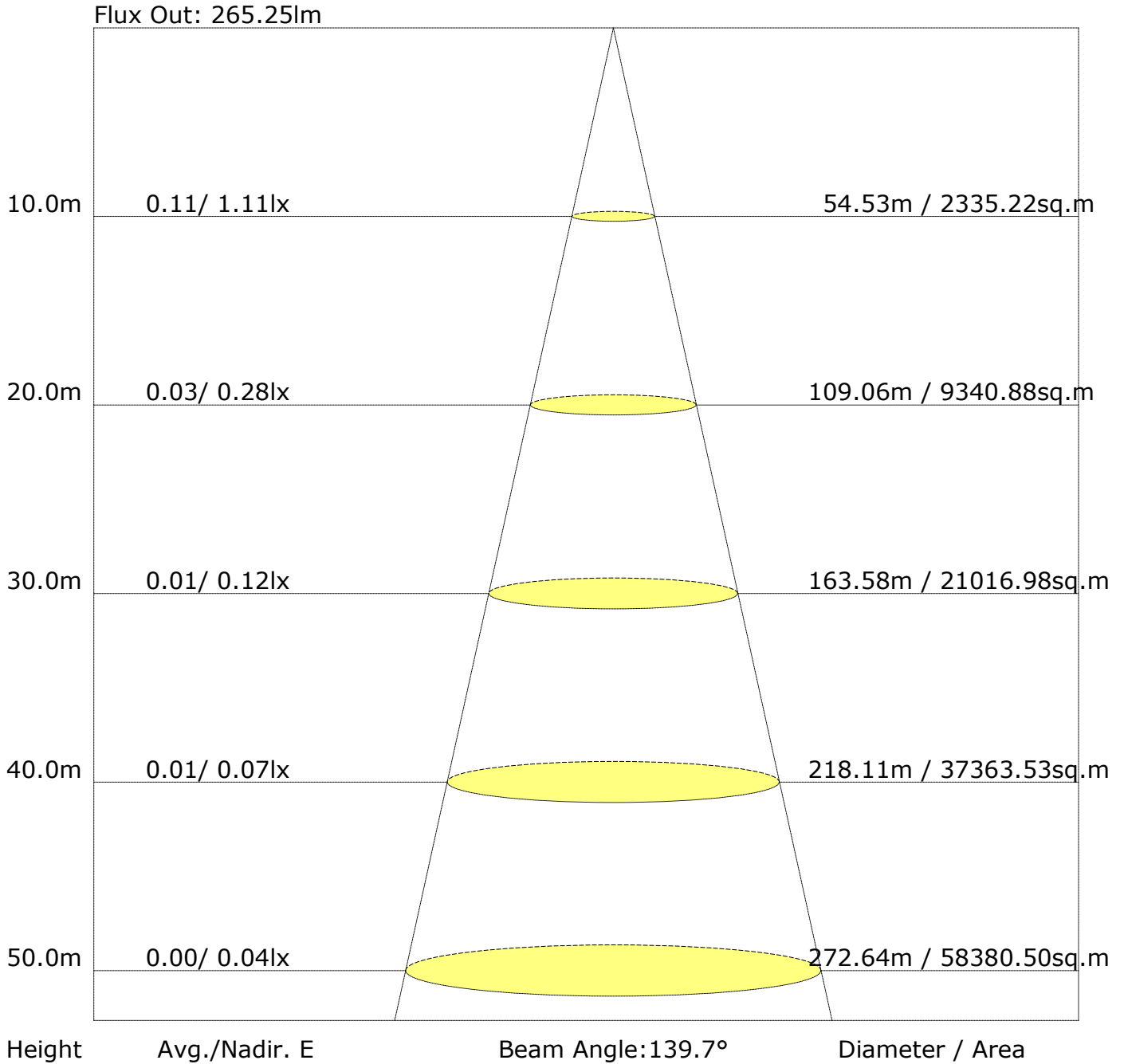
Lowest(m): 1.0m	Highest(m): 11.0m	Max Lux: 111.0 lx
— ( 1%): 1.1 lx	— ( 2%): 2.2 lx	
— ( 5%): 5.6 lx	— ( 10%): 11.1 lx	
— ( 20%): 22.2 lx	— ( 50%): 55.5 lx	
— (100%): 111.0 lx		

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:



## The Average Illuminance Effective Figure



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 11.573 m [K=1.0000]

Humidity:

Inspector:

## UGR Table

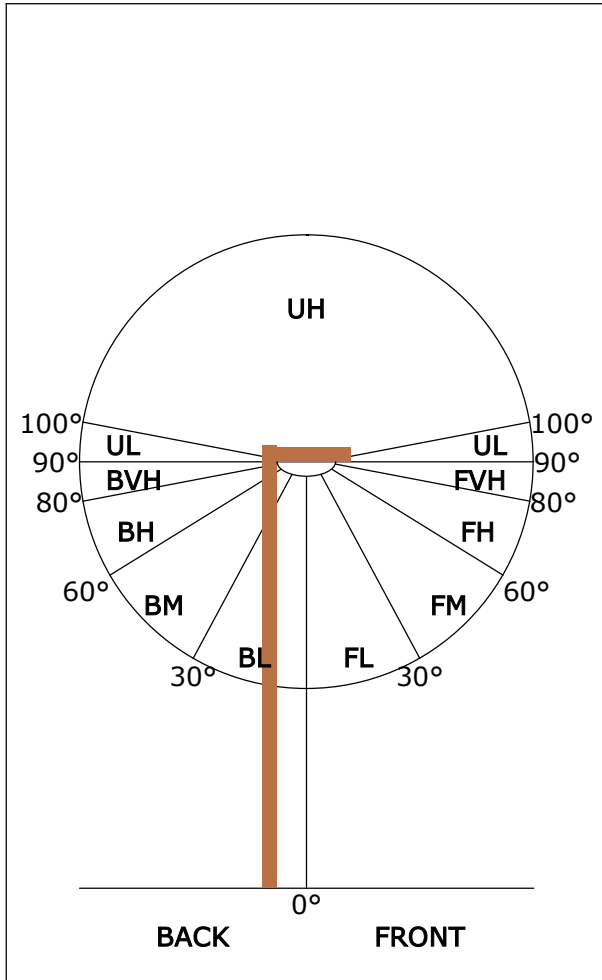
Room dimensions	Viewed crosswise					Viewed endwise				
Reflectance:										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
X=2H Y=2H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
3H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
4H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
6H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
8H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
12H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
X=4H Y=2H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
3H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
4H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
6H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
8H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
12H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
X=8H Y=4H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
6H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
8H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
12H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
X=12H Y=4H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
6H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$
8H	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$	1.\$

Calculate in accordance with CIE 190:2010 The table is revised with  $274\text{lm}$  ( $8\log(F/F_0) = -4.5$ ).

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

**FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM**



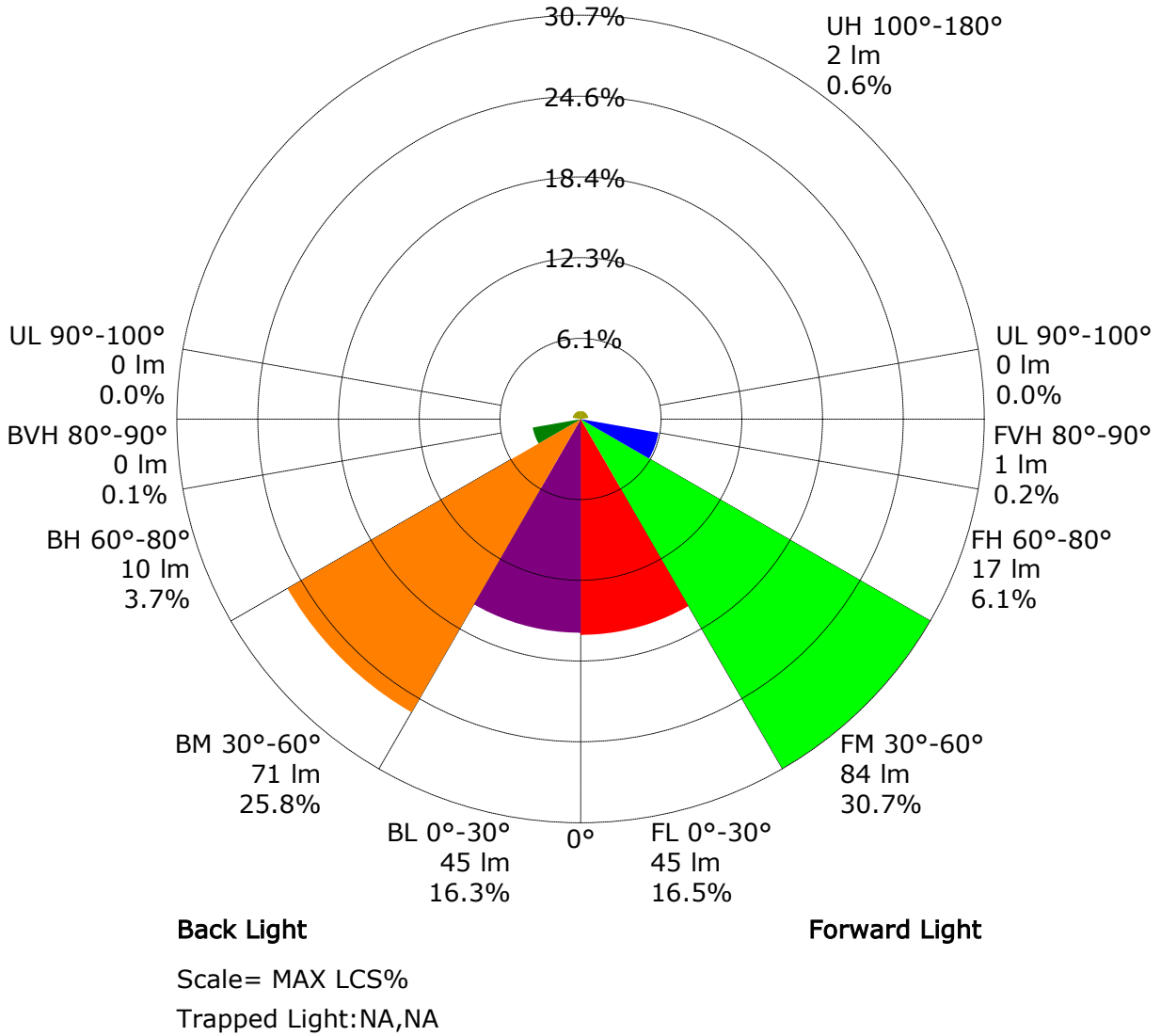
ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	147	53.5
FL ( 0°-30°)	45	16.5
FM (30°-60°)	84	30.7
FH (60°-80°)	17	6.1
FVH (80°-90°)	1	0.2
BACK LIGHT	126	45.9
BL ( 0°-30°)	45	16.3
BM (30°-60°)	71	25.8
BH (60°-80°)	10	3.7
BVH (80°-90°)	0	0.1
UP LIGHT	2	0.6
UL (90°-100°)	0	0.0
UH (100°-180°)	2	0.6
TRAPPED LIGHT	NA	NA

BUG(Backlight,Uplight,Glare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B0 U1 G0
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B0 U1 G0

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

### LCS Graph





## Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 1.25									
Room Reflectance			Room Index(RI)									
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	
0.70	0.50	0.20	0.63	0.74	0.81	0.86	0.93	0.97	1.00	1.04	1.06	
	0.30		0.56	0.67	0.75	0.80	0.87	0.92	0.96	1.00	1.03	
	0.20		0.51	0.62	0.70	0.75	0.83	0.89	0.92	0.97	1.01	
0.50	0.50	0.20	0.62	0.72	0.79	0.83	0.89	0.94	0.96	1.00	1.02	
	0.30		0.55	0.66	0.73	0.78	0.85	0.90	0.93	0.97	1.00	
	0.20		0.51	0.61	0.69	0.74	0.81	0.86	0.90	0.95	0.97	
0.30	0.50	0.20	0.60	0.70	0.76	0.81	0.87	0.90	0.93	0.96	0.98	
	0.30		0.55	0.65	0.72	0.77	0.83	0.87	0.90	0.94	0.96	
	0.20		0.50	0.61	0.68	0.73	0.80	0.84	0.88	0.92	0.94	
0.00	0.00	0.00	0.48	0.58	0.65	0.70	0.76	0.81	0.84	0.87	0.90	
<p>Rating:4W Photometrically tested without ceiling board.            Multiply UF values by service correction factors            Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>												

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

## Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 1.25									
Room Reflectance			Room Index(RI)									
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	
0.70	0.50	0.20	0.89	0.72	0.60	0.51	0.40	0.33	0.28	0.21	0.17	
	0.30		0.75	0.61	0.52	0.46	0.36	0.30	0.26	0.20	0.17	
	0.20		0.64	0.54	0.46	0.41	0.33	0.28	0.24	0.19	0.16	
0.50	0.50	0.20	0.86	0.69	0.57	0.49	0.38	0.35	0.26	0.20	0.16	
	0.30		0.73	0.60	0.50	0.44	0.35	0.29	0.25	0.19	0.16	
	0.20		0.63	0.53	0.45	0.40	0.32	0.27	0.23	0.18	0.15	
0.30	0.50	0.20	0.83	0.66	0.55	0.47	0.36	0.29	0.25	0.19	0.15	
	0.30		0.71	0.58	0.49	0.42	0.33	0.28	0.24	0.18	0.15	
	0.20		0.62	0.52	0.44	0.39	0.31	0.26	0.22	0.17	0.14	
0.00	0.00	0.00	0.51	0.41	0.34	0.29	0.23	0.19	0.16	0.12	0.10	
<p>Rating:4W Photometrically tested without ceiling board.            Multiply UF values by service correction factors            Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>												

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

## Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 1.25								
Room Reflectance			Room Index(RI)								
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.22	0.22
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.06	0.07	0.09	0.10	0.12	0.14	0.15	0.17	0.18
0.50	0.50	0.20	0.16	0.17	0.17	0.18	0.19	0.20	0.20	0.21	0.21
	0.30		0.10	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.07	0.09	0.10	0.12	0.14	0.15	0.16	0.17
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		0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.18
	0.20		0.05	0.07	0.09	0.10	0.12	0.13	0.14	0.16	0.17
0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<p>Rating:4W Photometrically tested without ceiling board.            Multiply UF values by service correction factors            Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

## Zonal Lumen

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	111.4	0.1	0.1	0.04	0.04
1.0-2.0	111.5	0.3	0.4	0.12	0.16
2.0-3.0	111.5	0.5	1.0	0.19	0.35
3.0-4.0	111.5	0.7	1.7	0.27	0.62
4.0-5.0	111.5	1.0	2.7	0.35	0.97
5.0-6.0	111.4	1.2	3.8	0.43	1.40
6.0-7.0	111.3	1.4	5.2	0.50	1.90
7.0-8.0	111.1	1.6	6.8	0.58	2.48
8.0-9.0	110.9	1.8	8.6	0.65	3.13
9.0-10.0	110.5	2.0	10.6	0.73	3.86
10.0-11.0	110.2	2.2	12.8	0.80	4.67
11.0-12.0	109.7	2.4	15.2	0.87	5.54
12.0-13.0	109.2	2.6	17.8	0.94	6.48
13.0-14.0	108.8	2.8	20.6	1.01	7.50
14.0-15.0	108.3	3.0	23.6	1.08	8.58
15.0-16.0	108.0	3.2	26.7	1.15	9.74
16.0-17.0	107.6	3.4	30.1	1.22	10.96
17.0-18.0	107.3	3.5	33.6	1.29	12.25
18.0-19.0	107.0	3.7	37.3	1.36	13.60
19.0-20.0	106.8	3.9	41.2	1.42	15.03
20.0-21.0	106.7	4.1	45.3	1.49	16.52
21.0-22.0	106.5	4.3	49.6	1.56	18.08
22.0-23.0	106.3	4.5	54.1	1.63	19.71
23.0-24.0	106.1	4.6	58.7	1.69	21.39
24.0-25.0	105.8	4.8	63.5	1.75	23.15
25.0-26.0	105.4	5.0	68.5	1.81	24.96
26.0-27.0	105.0	5.1	73.6	1.87	26.83
27.0-28.0	104.4	5.3	78.9	1.93	28.76
28.0-29.0	103.8	5.4	84.4	1.98	30.74
29.0-30.0	103.0	5.6	89.9	2.03	32.77
30.0-31.0	102.2	5.7	95.6	2.07	34.84
31.0-32.0	101.2	5.8	101.4	2.11	36.95
32.0-33.0	100.1	5.9	107.3	2.15	39.10
33.0-34.0	98.8	6.0	113.3	2.18	41.28
34.0-35.0	97.3	6.0	119.3	2.20	43.48
35.0-36.0	95.5	6.1	125.4	2.22	45.70

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

### Zonal Lumen (Continue 1)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	93.7	6.1	131.5	2.23	47.92
37.0-38.0	91.6	6.1	137.6	2.23	50.15
38.0-39.0	89.4	6.1	143.7	2.22	52.38
39.0-40.0	87.0	6.1	149.8	2.21	54.59
40.0-41.0	84.5	6.0	155.8	2.19	56.78
41.0-42.0	82.0	6.0	161.8	2.17	58.95
42.0-43.0	79.3	5.9	167.7	2.14	61.09
43.0-44.0	76.7	5.8	173.5	2.11	63.20
44.0-45.0	73.9	5.7	179.1	2.07	65.27
45.0-46.0	71.2	5.6	184.7	2.03	67.30
46.0-47.0	68.4	5.4	190.1	1.98	69.28
47.0-48.0	65.6	5.3	195.4	1.93	71.21
48.0-49.0	62.7	5.2	200.6	1.88	73.09
49.0-50.0	59.8	5.0	205.6	1.82	74.91
50.0-51.0	57.0	4.8	210.4	1.76	76.67
51.0-52.0	54.1	4.6	215.0	1.69	78.36
52.0-53.0	51.2	4.5	219.5	1.62	79.98
53.0-54.0	48.3	4.3	223.8	1.55	81.53
54.0-55.0	45.5	4.1	227.8	1.48	83.01
55.0-56.0	42.7	3.9	231.7	1.41	84.42
56.0-57.0	39.9	3.7	235.3	1.33	85.75
57.0-58.0	37.2	3.4	238.8	1.25	87.01
58.0-59.0	34.6	3.2	242.0	1.18	88.18
59.0-60.0	32.1	3.0	245.0	1.10	89.29
60.0-61.0	29.7	2.8	247.9	1.03	90.32
61.0-62.0	27.4	2.6	250.5	0.96	91.28
62.0-63.0	25.3	2.5	253.0	0.89	92.18
63.0-64.0	23.2	2.3	255.3	0.83	93.01
64.0-65.0	21.3	2.1	257.4	0.77	93.77
65.0-66.0	19.4	1.9	259.3	0.71	94.48
66.0-67.0	17.6	1.8	261.1	0.64	95.12
67.0-68.0	15.9	1.6	262.7	0.59	95.71
68.0-69.0	14.2	1.4	264.1	0.53	96.24
69.0-70.0	12.6	1.3	265.4	0.47	96.71
70.0-71.0	11.0	1.1	266.6	0.42	97.12
71.0-72.0	9.6	1.0	267.5	0.36	97.49

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

## Zonal Lumen (Continue 2)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	8.3	0.9	268.4	0.32	97.80
73.0-74.0	7.2	0.8	269.2	0.28	98.08
74.0-75.0	6.2	0.7	269.8	0.24	98.32
75.0-76.0	5.3	0.6	270.4	0.20	98.52
76.0-77.0	4.5	0.5	270.9	0.17	98.69
77.0-78.0	3.8	0.4	271.3	0.15	98.84
78.0-79.0	3.1	0.3	271.6	0.12	98.96
79.0-80.0	2.6	0.3	271.9	0.10	99.06
80.0-81.0	2.1	0.2	272.1	0.08	99.15
81.0-82.0	1.7	0.2	272.3	0.07	99.21
82.0-83.0	1.3	0.1	272.4	0.05	99.26
83.0-84.0	1.0	0.1	272.5	0.04	99.30
84.0-85.0	0.7	0.1	272.6	0.03	99.33
85.0-86.0	0.5	0.1	272.7	0.02	99.35
86.0-87.0	0.3	0.0	272.7	0.01	99.36
87.0-88.0	0.1	0.0	272.7	0.01	99.37
88.0-89.0	0.0	0.0	272.7	0.00	99.37
89.0-90.0	0.0	0.0	272.7	0.00	99.37
90.0-91.0	0.0	0.0	272.7	0.00	99.37
91.0-92.0	0.0	0.0	272.7	0.00	99.37
92.0-93.0	0.0	0.0	272.7	0.00	99.37
93.0-94.0	0.0	0.0	272.7	0.00	99.37
94.0-95.0	0.0	0.0	272.7	0.00	99.37
95.0-96.0	0.0	0.0	272.7	0.00	99.37
96.0-97.0	0.0	0.0	272.7	0.00	99.37
97.0-98.0	0.0	0.0	272.7	0.00	99.37
98.0-99.0	0.0	0.0	272.7	0.00	99.37
99.0-100.0	0.0	0.0	272.7	0.00	99.37
100.0-101.0	0.0	0.0	272.7	0.00	99.37
101.0-102.0	0.0	0.0	272.7	0.00	99.37
102.0-103.0	0.0	0.0	272.7	0.00	99.37
103.0-104.0	0.0	0.0	272.7	0.00	99.37
104.0-105.0	0.0	0.0	272.7	0.00	99.37
105.0-106.0	0.0	0.0	272.7	0.00	99.37
106.0-107.0	0.0	0.0	272.7	0.00	99.37
107.0-108.0	0.0	0.0	272.7	0.00	99.37

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

### Zonal Lumen (Continue 3)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	0.0	0.0	272.7	0.00	99.37
109.0-110.0	0.0	0.0	272.7	0.00	99.37
110.0-111.0	0.0	0.0	272.7	0.00	99.37
111.0-112.0	0.0	0.0	272.7	0.00	99.37
112.0-113.0	0.0	0.0	272.7	0.00	99.37
113.0-114.0	0.0	0.0	272.7	0.00	99.37
114.0-115.0	0.0	0.0	272.7	0.00	99.37
115.0-116.0	0.1	0.0	272.7	0.00	99.37
116.0-117.0	0.1	0.0	272.7	0.00	99.38
117.0-118.0	0.1	0.0	272.7	0.00	99.38
118.0-119.0	0.1	0.0	272.8	0.00	99.38
119.0-120.0	0.1	0.0	272.8	0.01	99.39
120.0-121.0	0.2	0.0	272.8	0.01	99.39
121.0-122.0	0.2	0.0	272.8	0.01	99.40
122.0-123.0	0.2	0.0	272.8	0.01	99.41
123.0-124.0	0.2	0.0	272.8	0.01	99.42
124.0-125.0	0.3	0.0	272.9	0.01	99.42
125.0-126.0	0.3	0.0	272.9	0.01	99.43
126.0-127.0	0.3	0.0	272.9	0.01	99.44
127.0-128.0	0.3	0.0	272.9	0.01	99.45
128.0-129.0	0.3	0.0	273.0	0.01	99.46
129.0-130.0	0.3	0.0	273.0	0.01	99.47
130.0-131.0	0.4	0.0	273.0	0.01	99.48
131.0-132.0	0.4	0.0	273.1	0.01	99.50
132.0-133.0	0.4	0.0	273.1	0.01	99.51
133.0-134.0	0.4	0.0	273.1	0.01	99.52
134.0-135.0	0.4	0.0	273.2	0.01	99.53
135.0-136.0	0.5	0.0	273.2	0.01	99.55
136.0-137.0	0.5	0.0	273.2	0.01	99.56
137.0-138.0	0.5	0.0	273.3	0.01	99.57
138.0-139.0	0.5	0.0	273.3	0.01	99.59
139.0-140.0	0.5	0.0	273.3	0.01	99.60
140.0-141.0	0.5	0.0	273.4	0.01	99.61
141.0-142.0	0.6	0.0	273.4	0.01	99.63
142.0-143.0	0.6	0.0	273.5	0.01	99.64
143.0-144.0	0.6	0.0	273.5	0.01	99.66

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

### Zonal Lumen (Continue 4)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
144.0-145.0	0.6	0.0	273.5	0.01	99.67
145.0-146.0	0.6	0.0	273.6	0.01	99.68
146.0-147.0	0.7	0.0	273.6	0.01	99.70
147.0-148.0	0.7	0.0	273.7	0.01	99.71
148.0-149.0	0.7	0.0	273.7	0.01	99.73
149.0-150.0	0.7	0.0	273.7	0.01	99.74
150.0-151.0	0.7	0.0	273.8	0.01	99.76
151.0-152.0	0.7	0.0	273.8	0.01	99.77
152.0-153.0	0.7	0.0	273.9	0.01	99.78
153.0-154.0	0.8	0.0	273.9	0.01	99.80
154.0-155.0	0.8	0.0	273.9	0.01	99.81
155.0-156.0	0.8	0.0	274.0	0.01	99.82
156.0-157.0	0.8	0.0	274.0	0.01	99.84
157.0-158.0	0.8	0.0	274.0	0.01	99.85
158.0-159.0	0.8	0.0	274.1	0.01	99.86
159.0-160.0	0.9	0.0	274.1	0.01	99.87
160.0-161.0	0.9	0.0	274.1	0.01	99.88
161.0-162.0	0.9	0.0	274.2	0.01	99.90
162.0-163.0	0.9	0.0	274.2	0.01	99.91
163.0-164.0	0.9	0.0	274.2	0.01	99.92
164.0-165.0	0.9	0.0	274.2	0.01	99.93
165.0-166.0	0.9	0.0	274.3	0.01	99.93
166.0-167.0	0.9	0.0	274.3	0.01	99.94
167.0-168.0	0.9	0.0	274.3	0.01	99.95
168.0-169.0	0.9	0.0	274.3	0.01	99.96
169.0-170.0	1.0	0.0	274.4	0.01	99.97
170.0-171.0	1.0	0.0	274.4	0.01	99.97
171.0-172.0	1.0	0.0	274.4	0.01	99.98
172.0-173.0	1.0	0.0	274.4	0.01	99.98
173.0-174.0	1.0	0.0	274.4	0.00	99.99
174.0-175.0	1.0	0.0	274.4	0.00	99.99
175.0-176.0	1.0	0.0	274.4	0.00	99.99
176.0-177.0	1.0	0.0	274.4	0.00	100.00
177.0-178.0	1.0	0.0	274.4	0.00	100.00
178.0-179.0	1.0	0.0	274.4	0.00	100.00
179.0-180.0	1.0	0.0	274.4	0.00	100.00

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:



## Zonal Lumen (Continue 5)

cone flux(90°): 179.14 lm

%lum = 65.3%

%lamp = 65.3%

cone flux(120°): 245.05 lm

%lum = 89.3%

%lamp = 89.3%

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C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 11.573 m [K=1.0000]

Humidity:

Inspector:

## Candlepower Table

Unit: cd

G\C	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0
G0.0	111.0	111.3	111.4	111.5	111.6	111.7	111.0	111.3	111.4	111.5
G5.0	110.8	111.0	111.4	111.6	111.6	111.7	111.4	111.5	111.6	111.7
G10.0	109.9	110.6	110.7	110.4	110.2	110.5	110.5	110.3	110.4	110.3
G15.0	108.1	108.7	108.9	107.8	107.5	108.5	108.8	108.3	107.9	107.7
G20.0	107.5	107.9	107.4	105.9	105.4	106.8	107.6	106.8	106.4	106.1
G25.0	107.8	107.6	106.7	104.6	103.6	104.5	105.7	105.2	104.9	104.8
G30.0	106.3	105.8	104.6	101.8	100.1	99.3	100.8	101.1	101.5	101.6
G35.0	102.1	101.3	99.8	96.2	92.6	90.1	92.6	93.0	93.6	95.9
G40.0	94.3	93.4	90.6	85.0	79.4	76.8	79.8	80.1	81.3	85.1
G45.0	83.6	81.7	77.6	71.4	65.0	61.3	64.3	65.8	67.1	72.2
G50.0	70.5	68.4	63.1	57.3	50.3	46.0	47.7	50.5	52.8	59.2
G55.0	54.7	53.2	47.9	43.1	36.8	32.3	34.1	36.4	38.9	45.3
G60.0	39.9	38.2	33.4	30.2	25.1	21.4	22.7	24.5	26.1	32.0
G65.0	26.7	25.3	22.0	20.1	16.7	13.3	13.9	16.0	17.0	21.6
G70.0	17.0	16.4	13.8	12.6	9.1	5.8	6.4	7.7	8.7	12.4
G75.0	8.3	8.6	7.1	6.0	3.8	2.3	2.8	3.5	3.8	5.7
G80.0	3.8	3.7	2.8	2.3	1.3	0.8	1.0	1.3	1.5	2.3
G85.0	1.3	1.1	0.8	0.5	0.2	0.0	0.0	0.2	0.2	0.6
G90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G95.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G115.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.0
G120.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2
G125.0	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
G130.0	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3
G135.0	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
G140.0	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6
G145.0	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6
G150.0	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7
G155.0	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
G160.0	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
G165.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
G170.0	0.9	0.9	0.9	1.0	0.9	1.0	1.0	1.0	1.0	0.9
G175.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G180.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.573 m [K=1.0000]  
 Humidity:  
 Inspector:

## Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0
G37.0	99.6	98.8	96.8	92.3	87.6	85.0	88.0	88.1	88.9	92.3
G42.0	90.1	89.2	85.4	79.7	73.7	70.6	73.9	74.6	75.7	79.8
G47.0	78.5	76.3	71.8	66.0	59.3	55.3	57.8	60.0	61.5	67.0
G52.0	64.4	62.5	57.2	51.4	44.6	40.3	41.6	44.3	47.3	53.6
G57.0	48.7	47.1	42.0	37.6	31.8	27.8	29.1	31.2	33.3	39.9
G62.0	34.4	32.8	28.3	25.8	21.2	17.9	19.0	21.3	22.2	27.4
G67.0	22.6	21.3	18.5	17.2	13.6	9.8	10.5	12.4	13.5	17.8
G72.0	13.0	13.0	10.9	9.6	6.4	4.1	4.5	5.5	6.2	9.2
G77.0	6.2	6.3	5.1	4.2	2.6	1.6	2.0	2.5	2.7	4.2
G82.0	2.6	2.4	1.8	1.4	0.8	0.4	0.6	0.8	0.8	1.5
G87.0	0.6	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1
G92.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G97.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G102.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G107.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
G112.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
G117.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1
G122.0	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2
G127.0	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3
G132.0	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4
G137.0	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5
G142.0	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
G147.0	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6
G152.0	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7
G157.0	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8
G162.0	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
G167.0	0.9	0.9	0.9	1.0	0.9	1.0	0.9	1.0	0.9	0.9
G172.0	1.0	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	0.9
G177.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
G0.0	111.1	111.3	111.6	111.7	111.8	111.2	111.3	111.5	111.6	111.6
G1.0	110.9	111.3	111.5	111.5	111.6	111.3	111.4	111.5	111.6	111.4
G6.0	110.3	110.4	110.0	109.6	110.1	110.1	110.0	109.9	109.8	109.6
G11.0	108.5	108.6	107.3	107.1	108.1	108.5	108.0	107.5	107.2	107.0
G16.0	107.9	107.3	105.7	105.0	106.4	107.4	106.6	106.2	105.8	105.9
G21.0	107.5	106.5	104.2	103.1	103.7	104.8	104.6	104.4	104.3	105.0
G26.0	105.2	103.9	101.1	99.1	97.9	99.6	99.8	100.4	100.7	102.4
G31.0	100.1	98.6	94.3	90.1	87.5	90.2	90.5	91.2	94.1	97.3

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 11.573 m [K=1.0000]

Humidity:

Inspector:

## LED Average Luminance Report

Avg.L	cd/m <sup>2</sup>
L 0-180(65) av	1.#J
L 0-180(75) av	1.#J
L 0-180(85) av	1.#J
L 90-270(65) av	1.#J
L 90-270(75) av	1.#J
L 90-270(85) av	1.#J
L 45(65) av	1.#J
L 45(75) av	1.#J
L 45(85) av	1.#J

Standard: GB/T 29293-2012

C Plane (°):0.0-360.0: 30.0  
Test Lab:  
Test Type: TYPE C  
Temperature:  
Operator:

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 11.573 m [K=1.0000]  
Humidity:  
Inspector: