

Report No.: TH-4288A

Test Time: 2023/6/28 16:39

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Luminaire Description: NOVA-Recessed-White 20W-500mA-24D

Lamp Catalog:

Lamp Description:

Number of Lamps:

Lumens per Lamp:

Luminous Length (mm): -50

Luminous Width (mm): -50

Luminous Height (mm):

Voltage: 220.2 V

Current: 0.100 A

Power: 20.92 W

Power Factor: 0.950

## Photometric Results

CIE Class: Direct

Measurement Flux: 1354.4 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H21

Vertical Diffuse Angle(50%): V21.4

Luminaire Efficacy Rating (LER): 64.79

Max. Intensity: 6607.09 cd

S/MH(C0/C180): 0.36

Total Rated Lamp Lumens: 1354.4 lm

Efficiency: 100%

Upward Ratio: 0%

C0r0 Intensity: 6566.62 cd

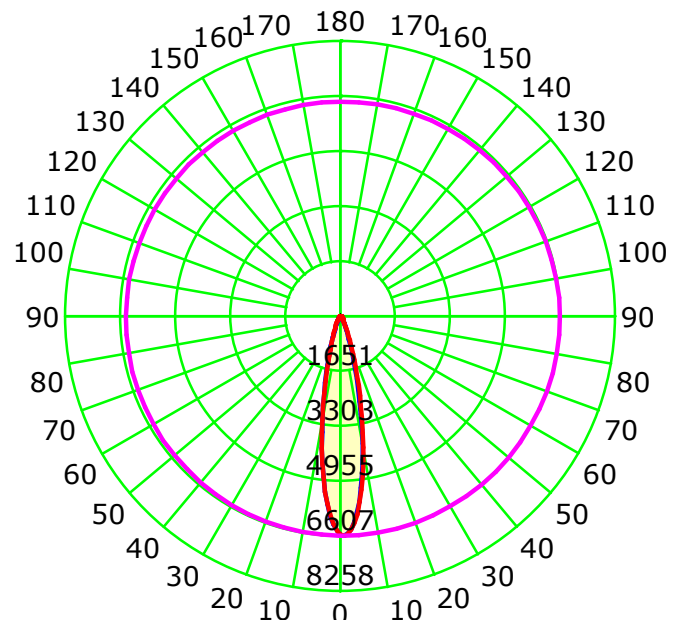
Pos of Max. Intensity: H90 V1

S/MH(C90/C270): 0.36

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 21.1°

— C0-C180 — C90-C270 — G1

C Plane (°):0.0-360.0: 90.0

Test Lab: inventfine instruments

Test Type: TYPE C

Temperature: 26

Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0

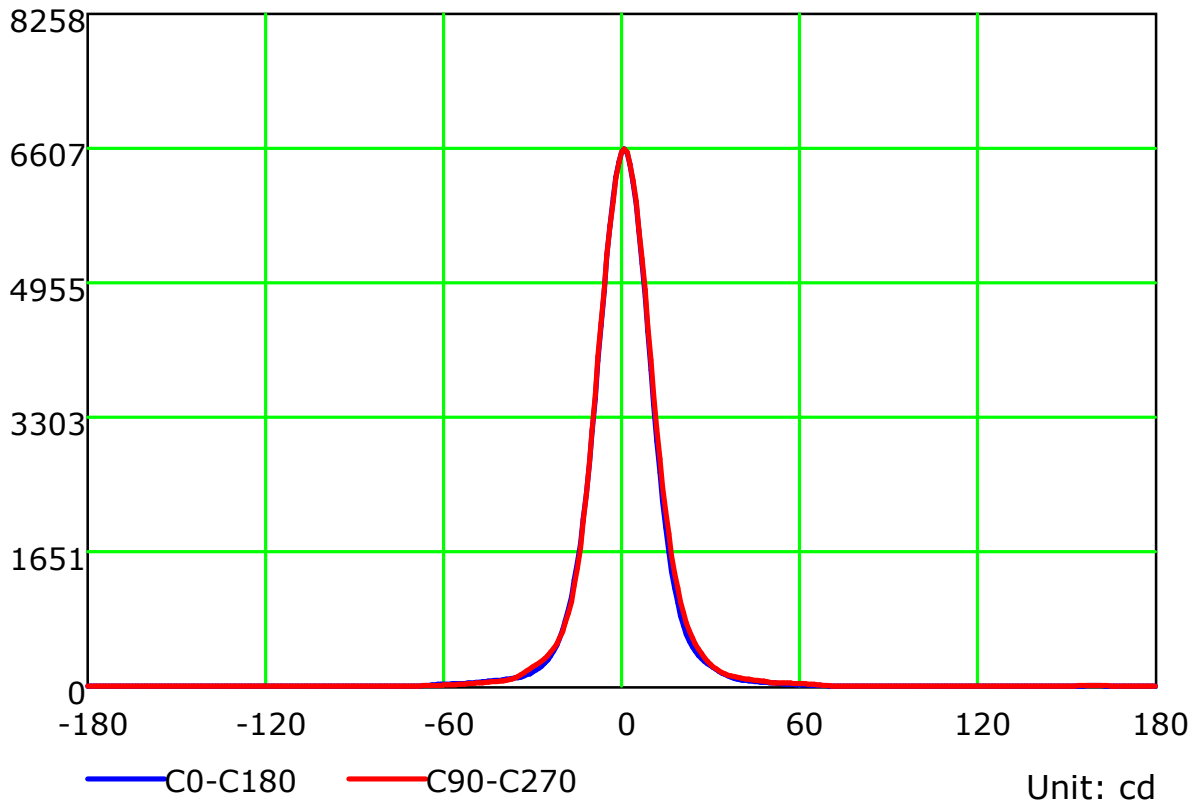
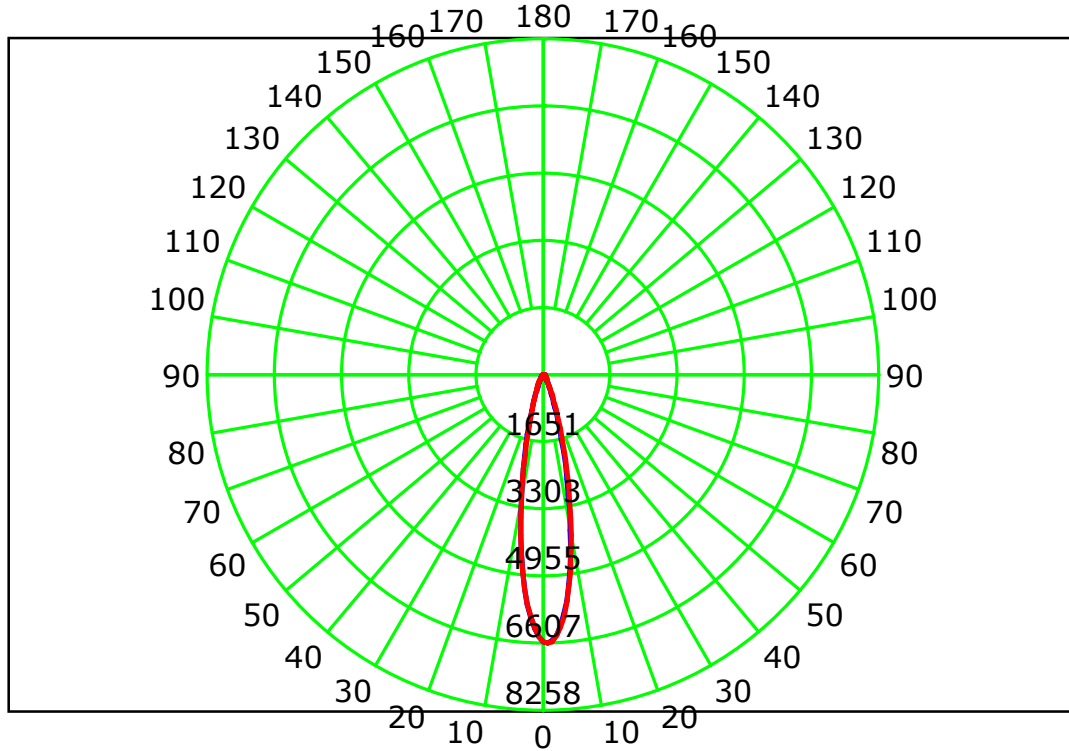
Test Device: GPM-1800B

Distance: 8.684 m [K=1.0000]

Humidity: 65

Inspector:

## Luminous Intensity Distribution Curve



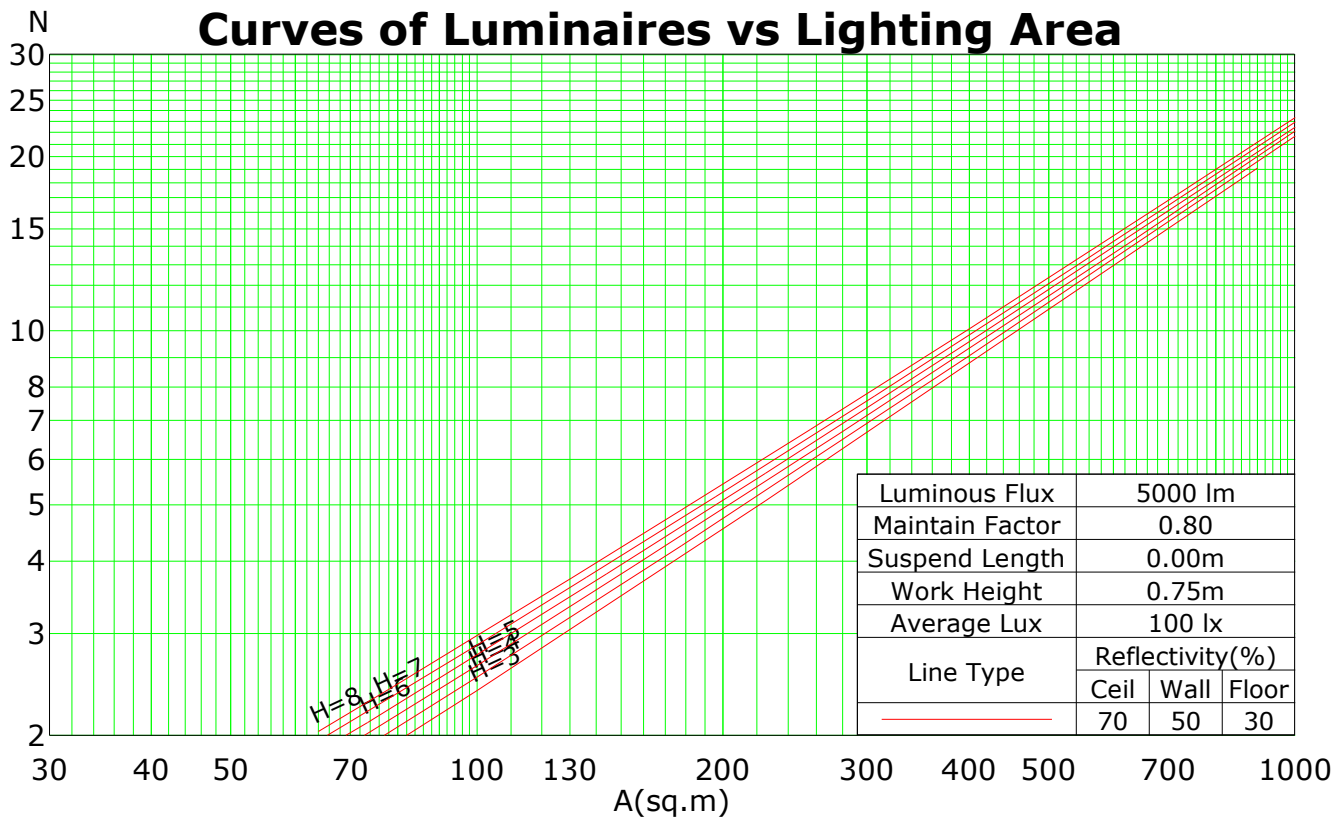
C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
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	1.02	1.02	1.02	1.00
1	1.15	1.12	1.10	1.08	1.12	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	0.99	0.98	0.97	0.96
2	1.10	1.06	1.03	1.00	1.08	1.05	1.02	0.99	1.01	0.99	0.97	0.98	0.96	0.95	0.96	0.94	0.93	0.91
3	1.06	1.01	0.97	0.94	1.04	1.00	0.96	0.93	0.97	0.94	0.92	0.95	0.92	0.90	0.93	0.91	0.89	0.87
4	1.02	0.96	0.92	0.89	1.01	0.95	0.91	0.88	0.93	0.90	0.87	0.91	0.88	0.86	0.90	0.87	0.85	0.84
5	0.99	0.92	0.88	0.84	0.97	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.85	0.83	0.87	0.84	0.82	0.81
6	0.96	0.89	0.84	0.81	0.94	0.88	0.84	0.80	0.87	0.83	0.80	0.85	0.82	0.79	0.84	0.81	0.79	0.78
7	0.93	0.85	0.81	0.78	0.91	0.85	0.81	0.77	0.84	0.80	0.77	0.83	0.79	0.77	0.82	0.79	0.76	0.75
8	0.90	0.83	0.78	0.75	0.89	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.74	0.73
9	0.87	0.80	0.75	0.72	0.86	0.79	0.75	0.72	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72	0.71
10	0.85	0.77	0.73	0.70	0.84	0.77	0.73	0.70	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69

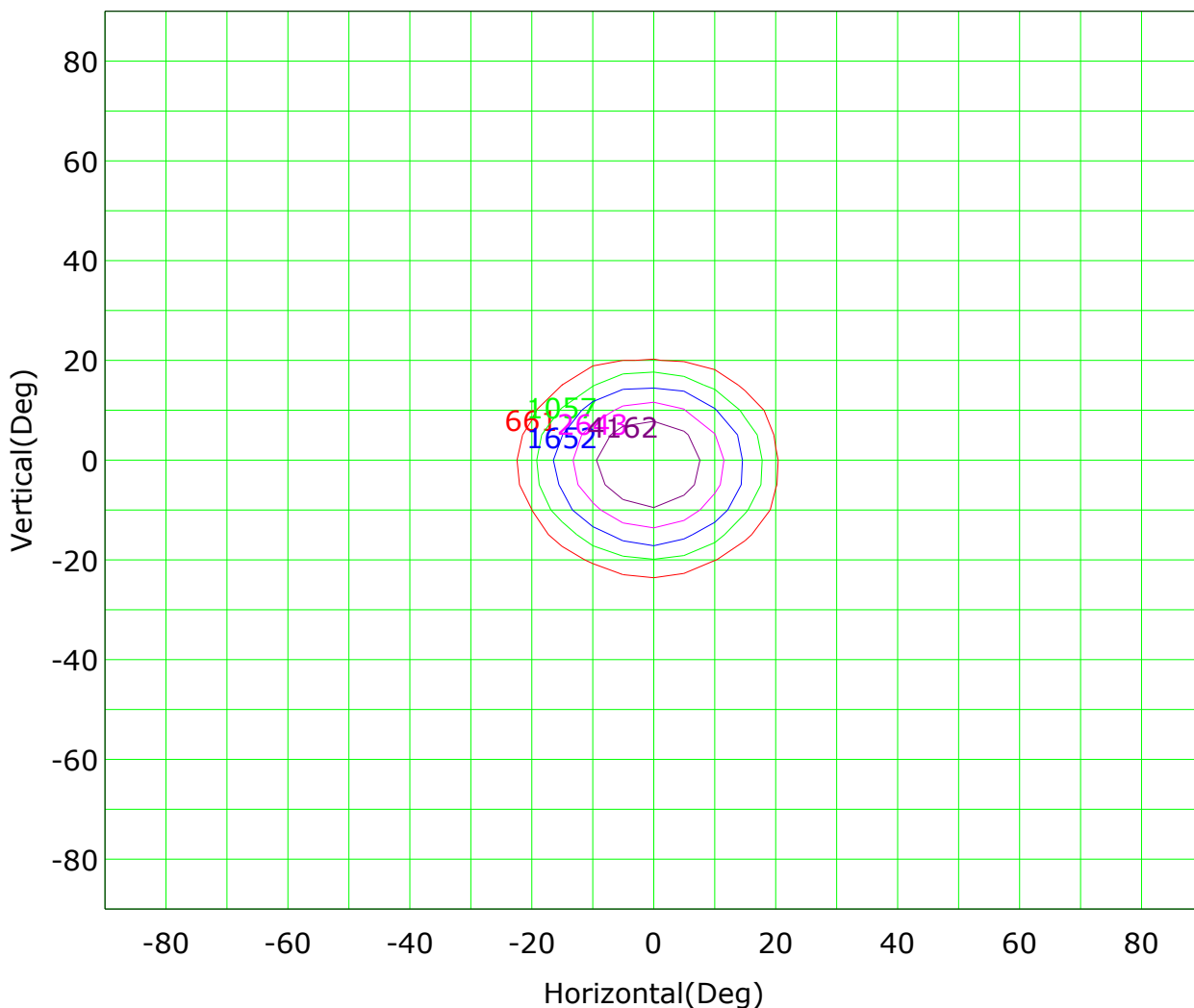
Spacing Criteria (0-180): 0.36  
 Spacing Criteria (90-270): 0.36  
 Spacing Criteria (Diagonal): 0.37



C Plane (°):0.0-360.0: 90.0  
 Test Lab: inventfine instruments  
 Test Type: TYPE C  
 Temperature: 26  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 8.684 m [K=1.0000]  
 Humidity: 65  
 Inspector:

## Isocandela (rectangle)



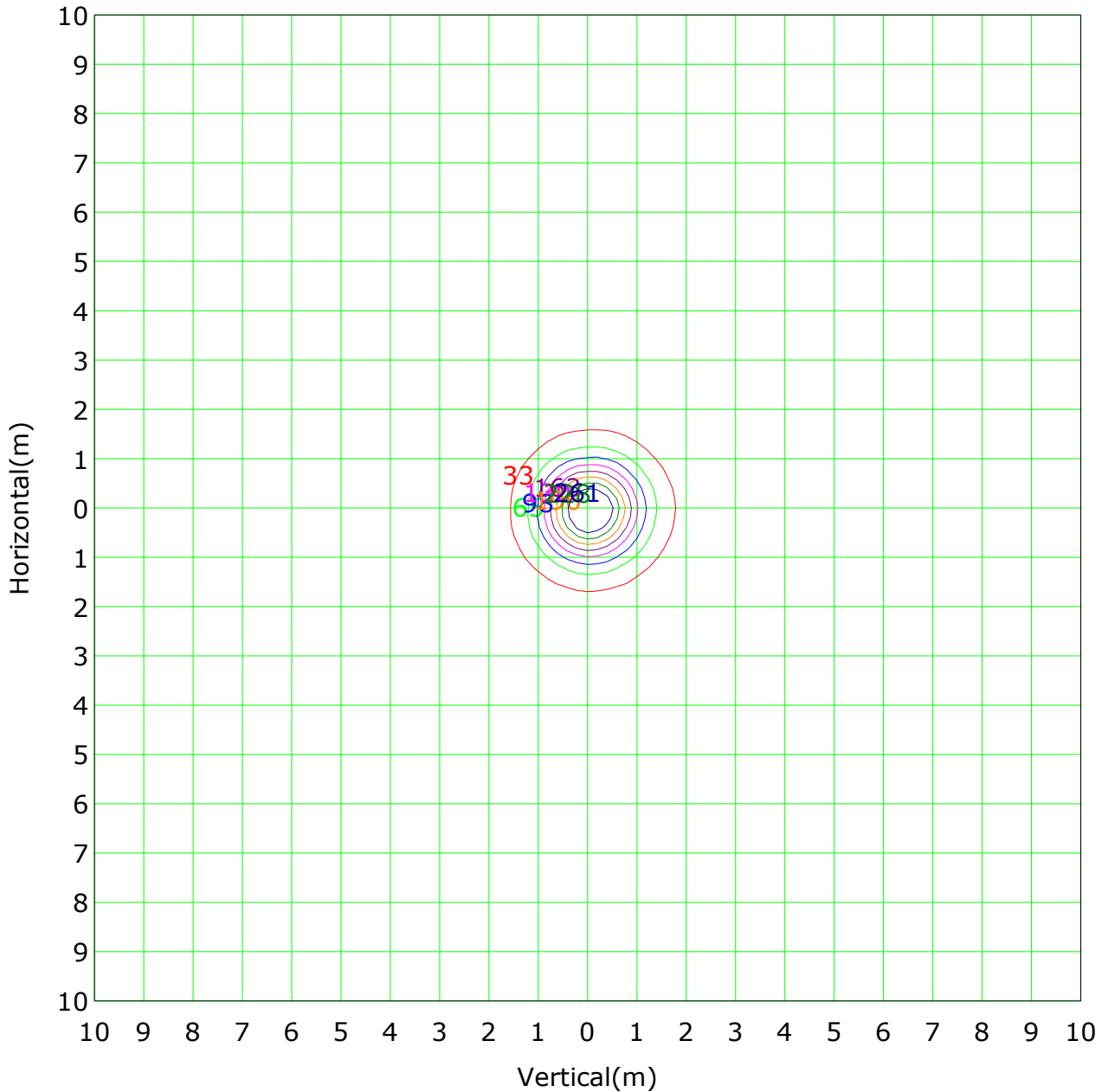
Imax (100%): 6607 cd

— ( 10%): 661 cd	— ( 16%): 1057 cd
— ( 25%): 1652 cd	— ( 40%): 2643 cd
— ( 63%): 4162 cd	— (100%): 6607 cd

C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
Inspector:

## IsoLux Plot



Mounting Height: 4.5m		Max Lux(100%): 326.1 lx	
— ( 10%): 32.6 lx	— ( 20%): 65.2 lx	— ( 40%): 130.5 lx	— ( 80%): 260.9 lx
— ( 30%): 97.8 lx	— ( 50%): 163.1 lx	— ( 60%): 195.7 lx	
— ( 70%): 228.3 lx			

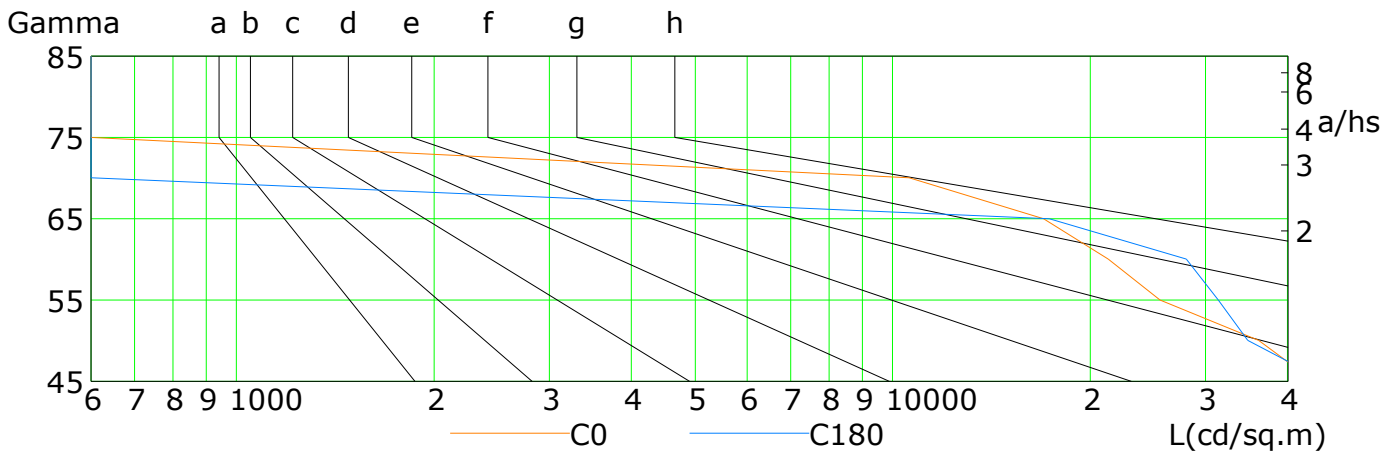
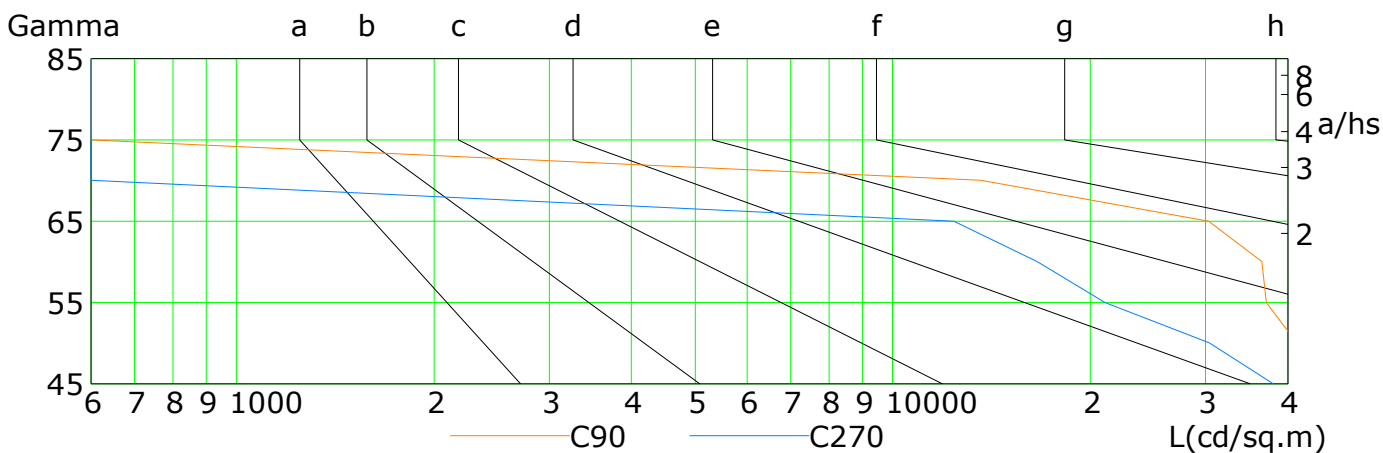
C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
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Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
Inspector:

## 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

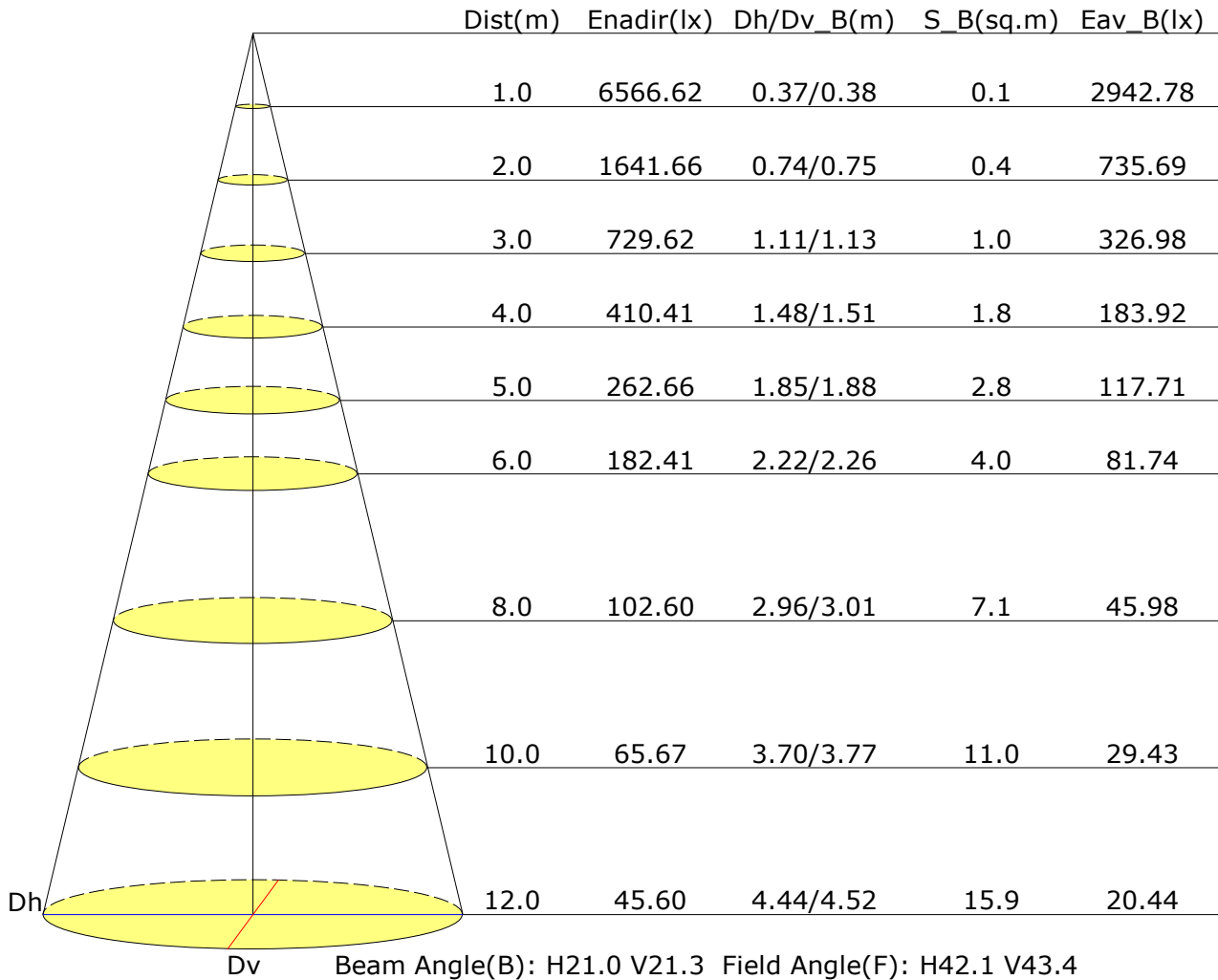


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	44013	36115	25552	21328	16990	10601	0	0	0
C90	55614	41350	37075	36559	30329	13626	0	0	0
C180	46070	34762	31368	27999	17339	0	0	0	0
C270	38000	30359	21074	16600	12404	0	0	0	0

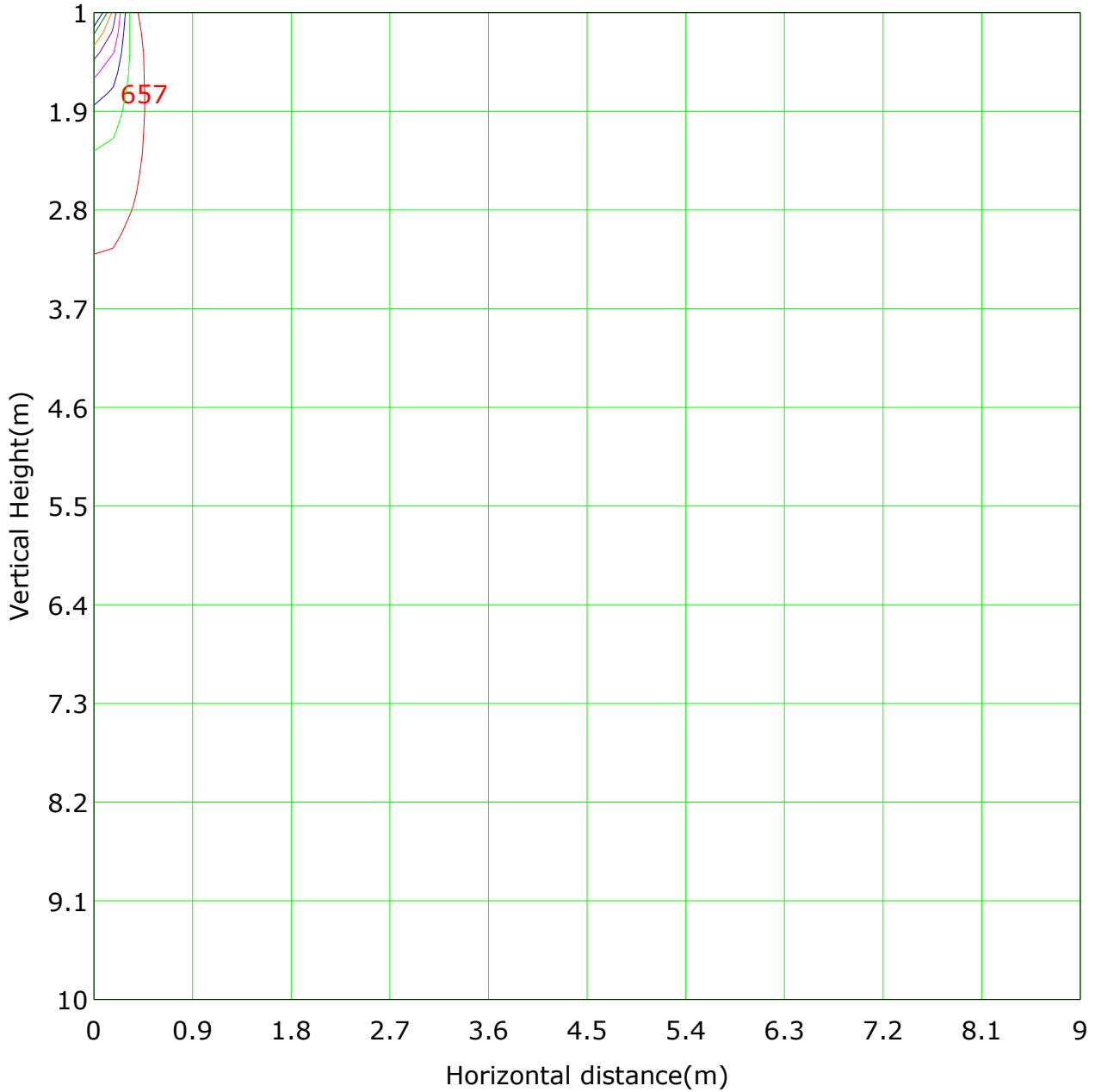
C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
Inspector:

## Illuminance at a Distance



## Vertical IsoLux Plot



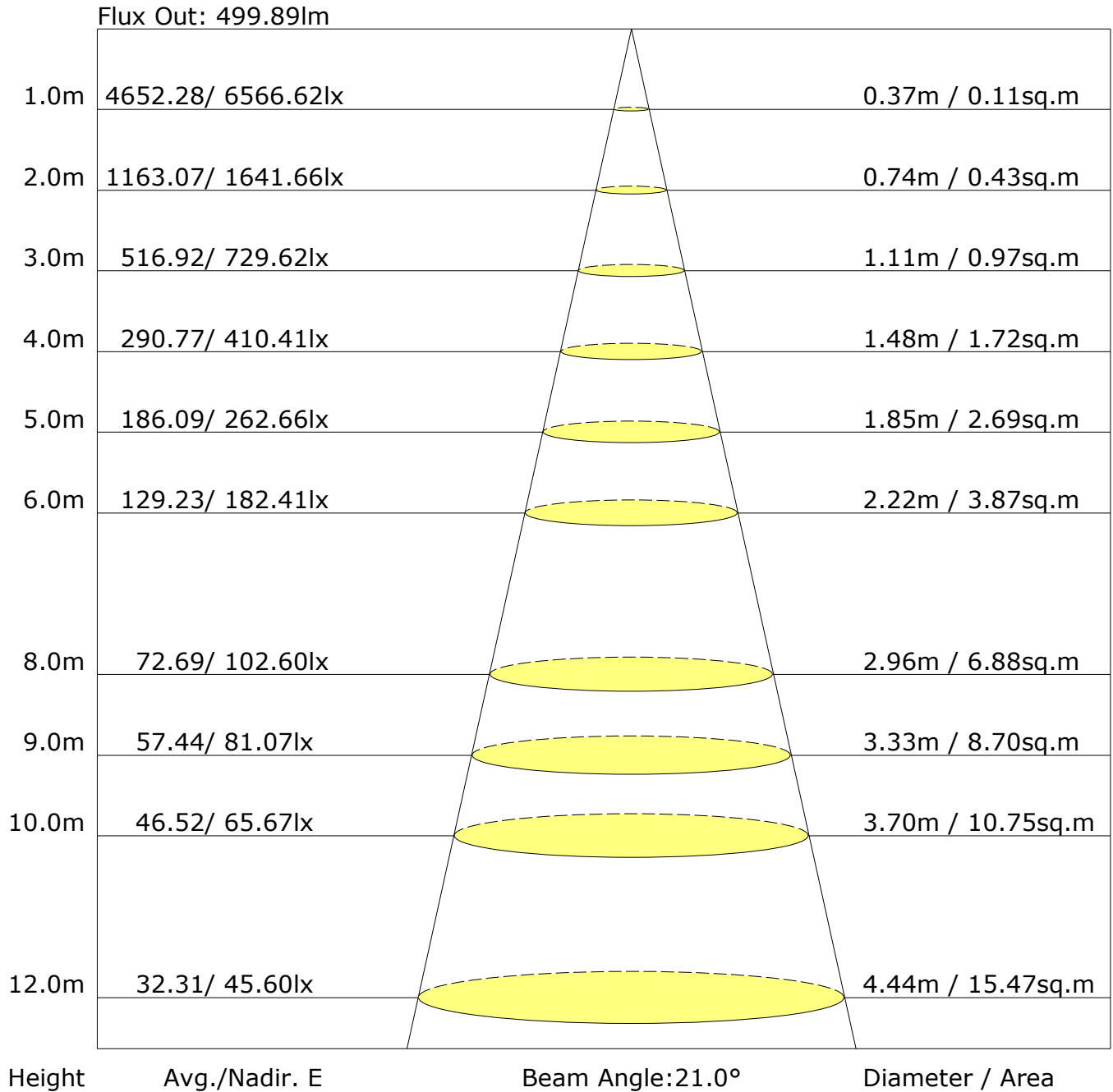
Lowest(m): 1.0m	Highest(m): 10.0m	Max Lux: 6566.6 lx
— ( 10%): 656.7 lx	— ( 20%): 1313.3 lx	
— ( 30%): 1970.0 lx	— ( 40%): 2626.6 lx	
— ( 50%): 3283.3 lx	— ( 60%): 3940.0 lx	
— ( 70%): 4596.6 lx	— ( 80%): 5253.3 lx	

C Plane (°): 0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
Inspector:



## The Average Illuminance Effective Figure



C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
Inspector:

## UGR Table

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	18.7	19.3	18.9	19.5	19.7	19.1	19.8	19.3	20.0	20.2					
3H	18.9	19.5	19.2	19.8	20.0	19.4	20.0	19.7	20.3	20.5					
4H	18.8	19.4	19.1	19.7	19.9	19.3	19.9	19.6	20.2	20.4					
6H	18.8	19.3	19.1	19.6	19.9	19.3	19.8	19.6	20.1	20.4					
8H	18.7	19.2	19.1	19.5	19.8	19.2	19.7	19.6	20.0	20.3					
12H	18.7	19.2	19.0	19.5	19.8	19.2	19.7	19.5	20.0	20.3					
X=4H Y=2H	18.9	19.5	19.2	19.7	20.0	19.3	19.8	19.6	20.1	20.4					
3H	19.1	19.6	19.5	20.0	20.3	19.6	20.1	19.9	20.4	20.7					
4H	19.1	19.5	19.4	19.8	20.2	19.5	19.9	19.9	20.3	20.6					
6H	19.0	19.4	19.4	19.7	20.1	19.4	19.8	19.8	20.2	20.6					
8H	18.9	19.3	19.4	19.7	20.1	19.4	19.7	19.8	20.1	20.5					
12H	18.9	19.2	19.3	19.6	20.0	19.3	19.6	19.8	20.1	20.5					
X=8H Y=4H	18.9	19.3	19.4	19.7	20.1	19.4	19.7	19.8	20.1	20.5					
6H	18.8	19.1	19.3	19.6	20.0	19.3	19.6	19.7	20.0	20.5					
8H	18.8	19.1	19.3	19.5	20.0	19.2	19.5	19.7	19.9	20.4					
12H	18.8	19.0	19.2	19.4	19.9	19.2	19.4	19.7	19.9	20.4					
X=12H Y=4H	18.9	19.2	19.3	19.6	20.1	19.3	19.7	19.8	20.1	20.5					
6H	18.8	19.1	19.3	19.5	20.0	19.2	19.5	19.7	19.9	20.4					
8H	18.8	19.0	19.2	19.4	19.9	19.2	19.4	19.7	19.9	20.4					
Variations with the observer position at spacings:															
S=1.0H						+2.0/-1.8					+1.8/-1.9				
S=1.5H						+3.9/-3.0					+3.8/-3.5				
S=2.0H						+5.5/-4.9					+5.8/-6.0				

Calculate in accordance with CIE Pub.117. The table is revised with 1354lm ( $8\log(F/F_0) = 1.1$ ).

## 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	6544.1	6.3	6.3	0.46	0.46
1.0-2.0	6462.8	18.6	24.8	1.37	1.83
2.0-3.0	6302.7	30.1	55.0	2.23	4.06
3.0-4.0	6066.3	40.6	95.6	3.00	7.06
4.0-5.0	5776.0	49.7	145.3	3.67	10.73
5.0-6.0	5429.4	57.1	202.3	4.21	14.94
6.0-7.0	5037.9	62.5	264.9	4.62	19.56
7.0-8.0	4633.0	66.3	331.2	4.90	24.45
8.0-9.0	4202.6	68.1	399.3	5.03	29.48
9.0-10.0	3763.1	68.1	467.4	5.03	34.51
10.0-11.0	3346.9	66.9	534.3	4.94	39.45
11.0-12.0	2935.0	64.2	598.5	4.74	44.19
12.0-13.0	2552.0	60.6	659.0	4.47	48.66
13.0-14.0	2214.2	56.7	715.7	4.19	52.85
14.0-15.0	1910.0	52.4	768.2	3.87	56.72
15.0-16.0	1643.5	48.2	816.3	3.56	60.27
16.0-17.0	1404.2	43.7	860.1	3.23	63.50
17.0-18.0	1200.9	39.6	899.7	2.92	66.43
18.0-19.0	1033.5	36.0	935.6	2.66	69.08
19.0-20.0	888.2	32.5	968.1	2.40	71.48
20.0-21.0	762.2	29.3	997.4	2.16	73.64
21.0-22.0	659.7	26.5	1023.9	1.96	75.60
22.0-23.0	574.8	24.1	1048.1	1.78	77.38
23.0-24.0	501.8	21.9	1070.0	1.62	79.00
24.0-25.0	442.5	20.1	1090.1	1.49	80.49
25.0-26.0	392.3	18.5	1108.6	1.37	81.86
26.0-27.0	348.3	17.0	1125.7	1.26	83.11
27.0-28.0	311.2	15.8	1141.4	1.16	84.28
28.0-29.0	278.8	14.6	1156.0	1.08	85.35
29.0-30.0	249.5	13.5	1169.5	0.99	86.35
30.0-31.0	223.5	12.4	1181.9	0.92	87.27
31.0-32.0	199.5	11.4	1193.4	0.84	88.11
32.0-33.0	177.3	10.4	1203.8	0.77	88.88
33.0-34.0	157.8	9.5	1213.4	0.70	89.59
34.0-35.0	140.2	8.7	1222.1	0.64	90.23
35.0-36.0	125.0	8.0	1230.0	0.59	90.82

C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
Inspector:

## Zonal Lumen (Continue 1)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	112.8	7.4	1237.4	0.54	91.36
37.0-38.0	102.6	6.9	1244.2	0.51	91.87
38.0-39.0	94.2	6.4	1250.7	0.47	92.34
39.0-40.0	87.4	6.1	1256.8	0.45	92.79
40.0-41.0	81.9	5.8	1262.6	0.43	93.22
41.0-42.0	77.2	5.6	1268.2	0.41	93.64
42.0-43.0	73.1	5.4	1273.6	0.40	94.04
43.0-44.0	69.3	5.2	1278.9	0.39	94.42
44.0-45.0	65.7	5.0	1283.9	0.37	94.80
45.0-46.0	62.0	4.9	1288.8	0.36	95.15
46.0-47.0	58.6	4.7	1293.4	0.34	95.50
47.0-48.0	55.2	4.5	1297.9	0.33	95.83
48.0-49.0	51.2	4.2	1302.1	0.31	96.14
49.0-50.0	47.0	3.9	1306.0	0.29	96.43
50.0-51.0	43.3	3.7	1309.7	0.27	96.70
51.0-52.0	40.3	3.5	1313.1	0.26	96.95
52.0-53.0	37.7	3.3	1316.4	0.24	97.20
53.0-54.0	35.3	3.1	1319.5	0.23	97.43
54.0-55.0	33.3	3.0	1322.5	0.22	97.64
55.0-56.0	31.7	2.9	1325.4	0.21	97.86
56.0-57.0	30.4	2.8	1328.1	0.21	98.06
57.0-58.0	28.9	2.7	1330.8	0.20	98.26
58.0-59.0	27.5	2.6	1333.4	0.19	98.45
59.0-60.0	26.0	2.5	1335.8	0.18	98.63
60.0-61.0	24.4	2.3	1338.2	0.17	98.80
61.0-62.0	22.9	2.2	1340.4	0.16	98.97
62.0-63.0	21.2	2.1	1342.4	0.15	99.12
63.0-64.0	19.0	1.9	1344.3	0.14	99.26
64.0-65.0	16.9	1.7	1346.0	0.12	99.38
65.0-66.0	14.9	1.5	1347.5	0.11	99.49
66.0-67.0	12.8	1.3	1348.7	0.09	99.58
67.0-68.0	10.8	1.1	1349.8	0.08	99.66
68.0-69.0	8.1	0.8	1350.7	0.06	99.73
69.0-70.0	5.3	0.5	1351.2	0.04	99.77
70.0-71.0	3.7	0.4	1351.6	0.03	99.79
71.0-72.0	1.7	0.2	1351.8	0.01	99.81

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Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
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	0.0	0.0	1351.8	0.00	99.81
73.0-74.0	0.0	0.0	1351.8	0.00	99.81
74.0-75.0	0.0	0.0	1351.8	0.00	99.81
75.0-76.0	0.0	0.0	1351.8	0.00	99.81
76.0-77.0	0.0	0.0	1351.8	0.00	99.81
77.0-78.0	0.0	0.0	1351.8	0.00	99.81
78.0-79.0	0.0	0.0	1351.8	0.00	99.81
79.0-80.0	0.0	0.0	1351.8	0.00	99.81
80.0-81.0	0.0	0.0	1351.8	0.00	99.81
81.0-82.0	0.0	0.0	1351.8	0.00	99.81
82.0-83.0	0.0	0.0	1351.8	0.00	99.81
83.0-84.0	0.0	0.0	1351.8	0.00	99.81
84.0-85.0	0.0	0.0	1351.8	0.00	99.81
85.0-86.0	0.0	0.0	1351.8	0.00	99.81
86.0-87.0	0.0	0.0	1351.8	0.00	99.81
87.0-88.0	0.0	0.0	1351.8	0.00	99.81
88.0-89.0	0.0	0.0	1351.8	0.00	99.81
89.0-90.0	0.0	0.0	1351.8	0.00	99.81
90.0-91.0	0.0	0.0	1351.8	0.00	99.81
91.0-92.0	0.0	0.0	1351.8	0.00	99.81
92.0-93.0	0.0	0.0	1351.8	0.00	99.81
93.0-94.0	0.0	0.0	1351.8	0.00	99.81
94.0-95.0	0.0	0.0	1351.8	0.00	99.81
95.0-96.0	0.0	0.0	1351.8	0.00	99.81
96.0-97.0	0.0	0.0	1351.8	0.00	99.81
97.0-98.0	0.0	0.0	1351.8	0.00	99.81
98.0-99.0	0.0	0.0	1351.8	0.00	99.81
99.0-100.0	0.0	0.0	1351.8	0.00	99.81
100.0-101.0	0.0	0.0	1351.8	0.00	99.81
101.0-102.0	0.0	0.0	1351.8	0.00	99.81
102.0-103.0	0.0	0.0	1351.8	0.00	99.81
103.0-104.0	0.0	0.0	1351.8	0.00	99.81
104.0-105.0	0.0	0.0	1351.8	0.00	99.81
105.0-106.0	0.0	0.0	1351.8	0.00	99.81
106.0-107.0	0.0	0.0	1351.8	0.00	99.81
107.0-108.0	0.0	0.0	1351.8	0.00	99.81

C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
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	1351.8	0.00	99.81
109.0-110.0	0.0	0.0	1351.8	0.00	99.81
110.0-111.0	0.0	0.0	1351.8	0.00	99.81
111.0-112.0	0.0	0.0	1351.8	0.00	99.81
112.0-113.0	0.0	0.0	1351.8	0.00	99.81
113.0-114.0	0.0	0.0	1351.8	0.00	99.81
114.0-115.0	0.0	0.0	1351.8	0.00	99.81
115.0-116.0	0.0	0.0	1351.8	0.00	99.81
116.0-117.0	0.0	0.0	1351.8	0.00	99.81
117.0-118.0	0.0	0.0	1351.8	0.00	99.81
118.0-119.0	0.0	0.0	1351.8	0.00	99.81
119.0-120.0	0.0	0.0	1351.8	0.00	99.81
120.0-121.0	0.0	0.0	1351.8	0.00	99.81
121.0-122.0	0.0	0.0	1351.8	0.00	99.81
122.0-123.0	0.0	0.0	1351.8	0.00	99.81
123.0-124.0	0.0	0.0	1351.8	0.00	99.81
124.0-125.0	0.0	0.0	1351.8	0.00	99.81
125.0-126.0	0.0	0.0	1351.8	0.00	99.81
126.0-127.0	0.0	0.0	1351.8	0.00	99.81
127.0-128.0	0.0	0.0	1351.8	0.00	99.81
128.0-129.0	0.0	0.0	1351.8	0.00	99.81
129.0-130.0	0.0	0.0	1351.8	0.00	99.81
130.0-131.0	0.0	0.0	1351.8	0.00	99.81
131.0-132.0	0.0	0.0	1351.8	0.00	99.81
132.0-133.0	0.0	0.0	1351.8	0.00	99.81
133.0-134.0	0.0	0.0	1351.8	0.00	99.81
134.0-135.0	0.0	0.0	1351.8	0.00	99.81
135.0-136.0	0.0	0.0	1351.8	0.00	99.81
136.0-137.0	0.0	0.0	1351.8	0.00	99.81
137.0-138.0	0.0	0.0	1351.8	0.00	99.81
138.0-139.0	0.0	0.0	1351.8	0.00	99.81
139.0-140.0	0.0	0.0	1351.8	0.00	99.81
140.0-141.0	0.0	0.0	1351.8	0.00	99.81
141.0-142.0	0.0	0.0	1351.8	0.00	99.81
142.0-143.0	0.0	0.0	1351.8	0.00	99.81
143.0-144.0	0.0	0.0	1351.8	0.00	99.81

C Plane (°):0.0-360.0: 90.0  
 Test Lab: inventfine instruments  
 Test Type: TYPE C  
 Temperature: 26  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 8.684 m [K=1.0000]  
 Humidity: 65  
 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	0.0	0.0	1351.8	0.00	99.81
145.0-146.0	0.0	0.0	1351.8	0.00	99.81
146.0-147.0	0.0	0.0	1351.8	0.00	99.81
147.0-148.0	0.0	0.0	1351.8	0.00	99.81
148.0-149.0	0.0	0.0	1351.8	0.00	99.81
149.0-150.0	0.7	0.0	1351.8	0.00	99.81
150.0-151.0	1.5	0.1	1351.9	0.01	99.82
151.0-152.0	2.4	0.1	1352.0	0.01	99.82
152.0-153.0	3.3	0.2	1352.2	0.01	99.84
153.0-154.0	3.6	0.2	1352.4	0.01	99.85
154.0-155.0	3.8	0.2	1352.5	0.01	99.86
155.0-156.0	4.0	0.2	1352.7	0.01	99.88
156.0-157.0	4.1	0.2	1352.9	0.01	99.89
157.0-158.0	4.1	0.2	1353.1	0.01	99.90
158.0-159.0	4.2	0.2	1353.2	0.01	99.92
159.0-160.0	4.2	0.2	1353.4	0.01	99.93
160.0-161.0	4.3	0.2	1353.6	0.01	99.94
161.0-162.0	4.2	0.1	1353.7	0.01	99.95
162.0-163.0	4.0	0.1	1353.8	0.01	99.96
163.0-164.0	3.9	0.1	1354.0	0.01	99.97
164.0-165.0	3.7	0.1	1354.1	0.01	99.98
165.0-166.0	3.5	0.1	1354.2	0.01	99.98
166.0-167.0	3.3	0.1	1354.2	0.01	99.99
167.0-168.0	3.1	0.1	1354.3	0.01	100.00
168.0-169.0	2.3	0.0	1354.4	0.00	100.00
169.0-170.0	0.8	0.0	1354.4	0.00	100.00
170.0-171.0	0.0	0.0	1354.4	0.00	100.00
171.0-172.0	0.0	0.0	1354.4	0.00	100.00
172.0-173.0	0.0	0.0	1354.4	0.00	100.00
173.0-174.0	0.0	0.0	1354.4	0.00	100.00
174.0-175.0	0.0	0.0	1354.4	0.00	100.00
175.0-176.0	0.0	0.0	1354.4	0.00	100.00
176.0-177.0	0.0	0.0	1354.4	0.00	100.00
177.0-178.0	0.0	0.0	1354.4	0.00	100.00
178.0-179.0	0.0	0.0	1354.4	0.00	100.00
179.0-180.0	0.0	0.0	1354.4	0.00	100.00

C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
Inspector:

## Zonal Lumen (Continue 5)

cone flux(90°): 1283.90 lm

%lum = 94.8%

%lamp = 94.8%

cone flux(120°): 1335.83 lm

%lum = 98.6%

%lamp = 98.6%



## Candlepower Table

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G0.0	6566.6	6566.6	6566.6	6566.6	6566.6					
G1.0	6600.8	6607.1	6442.5	6435.5	6600.8					
G2.0	6548.1	6564.2	6260.7	6243.3	6548.1					
G3.0	6412.1	6423.2	6009.1	5960.9	6412.1					
G4.0	6184.4	6219.0	5663.8	5658.1	6184.4					
G5.0	5918.4	5959.8	5299.1	5305.3	5918.4					
G6.0	5596.7	5617.3	4855.4	4883.4	5596.7					
G7.0	5192.0	5256.7	4430.6	4471.2	5192.0					
G8.0	4786.2	4871.7	4003.2	4052.7	4786.2					
G9.0	4363.6	4422.3	3538.9	3582.1	4363.6					
G10.0	3892.5	4011.0	3132.8	3161.3	3892.5					
G11.0	3466.1	3597.7	2750.6	2763.2	3466.1					
G12.0	3016.3	3163.7	2366.0	2356.4	3016.3					
G13.0	2632.0	2798.9	2060.2	2022.7	2632.0					
G14.0	2278.0	2461.2	1760.2	1700.5	2278.0					
G15.0	1955.6	2152.8	1520.2	1451.7	1955.6					
G16.0	1647.2	1875.4	1306.2	1238.4	1647.2					
G17.0	1409.6	1606.6	1104.5	1045.5	1409.6					
G18.0	1204.7	1391.7	944.6	900.0	1204.7					
G19.0	1029.5	1207.8	809.8	780.3	1029.5					
G20.0	866.4	1045.9	693.4	672.6	866.4					
G21.0	743.9	897.0	585.5	592.8	743.9					
G22.0	643.4	783.0	505.3	526.8	643.4					
G23.0	553.1	684.2	438.4	464.1	553.1					
G24.0	486.7	592.2	376.9	418.7	486.7					
G25.0	432.9	521.5	329.9	380.9	432.9					
G26.0	380.9	459.4	288.7	344.0	380.9					
G27.0	343.7	404.5	250.7	314.4	343.7					
G28.0	309.4	356.2	222.1	288.5	309.4					
G29.0	280.9	313.3	198.1	261.8	280.9					
G30.0	255.0	272.8	175.9	238.5	255.0					
G31.0	231.3	241.6	156.6	215.9	231.3					
G32.0	205.7	212.8	141.6	190.9	205.7					
G33.0	184.6	189.2	125.9	167.4	184.6					
G34.0	164.1	169.2	116.7	145.0	164.1					
G35.0	143.4	153.1	108.5	121.5	143.4					
G36.0	127.1	138.8	102.6	105.1	127.1					

C Plane (°):0.0-360.0: 90.0  
Test Lab: inventfine instruments  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.684 m [K=1.0000]  
Humidity: 65  
Inspector:

## Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G37.0	111.5	128.4	96.6	91.9	111.5					
G38.0	99.7	119.3	91.3	82.2	99.7					
G39.0	88.9	110.8	87.0	74.6	88.9					
G40.0	81.5	104.7	82.3	69.2	81.5					
G41.0	75.8	98.5	78.5	64.8	75.8					
G42.0	71.4	92.8	74.8	61.5	71.4					
G43.0	67.4	87.1	70.9	58.9	67.4					
G44.0	64.4	82.5	67.4	55.9	64.4					
G45.0	61.1	77.2	64.0	52.8	61.1					
G46.0	57.7	72.8	60.8	49.8	57.7					
G47.0	54.6	68.3	57.7	47.0	54.6					
G48.0	51.6	64.2	54.0	44.0	51.6					
G49.0	48.7	57.9	48.4	41.0	48.7					
G50.0	45.6	52.2	43.9	38.3	45.6					
G51.0	42.7	47.2	40.9	35.3	42.7					
G52.0	40.0	44.2	39.6	32.3	40.0					
G53.0	36.3	43.2	38.3	27.7	36.3					
G54.0	31.6	42.5	37.0	25.6	31.6					
G55.0	28.8	41.8	35.3	23.7	28.8					
G56.0	27.2	40.6	34.5	22.0	27.2					
G57.0	25.9	39.5	32.8	20.6	25.9					
G58.0	23.9	38.5	31.2	19.0	23.9					
G59.0	22.6	37.3	29.6	17.6	22.6					
G60.0	20.9	35.9	27.5	16.3	20.9					
G61.0	19.7	34.2	26.1	15.0	19.7					
G62.0	18.2	32.9	24.1	13.4	18.2					
G63.0	17.0	31.2	20.2	12.3	17.0					
G64.0	15.1	28.2	17.1	11.3	15.1					
G65.0	14.1	25.2	14.4	10.3	14.1					
G66.0	12.7	21.7	11.5	9.2	12.7					
G67.0	11.3	17.7	9.5	8.4	11.3					
G68.0	9.8	14.6	7.7	7.1	9.8					
G69.0	8.7	11.4	0.0	5.7	8.7					
G70.0	7.1	9.2	0.0	0.0	7.1					
G71.0	5.8	7.4	0.0	0.0	5.8					
G72.0	0.0	0.0	0.0	0.0	0.0					
G73.0	0.0	0.0	0.0	0.0	0.0					

C Plane (°):0.0-360.0: 90.0  
 Test Lab: inventfine instruments  
 Test Type: TYPE C  
 Temperature: 26  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 8.684 m [K=1.0000]  
 Humidity: 65  
 Inspector:

## Candlepower Table (Continue 2)

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G74.0	0.0	0.0	0.0	0.0	0.0					
G75.0	0.0	0.0	0.0	0.0	0.0					
G76.0	0.0	0.0	0.0	0.0	0.0					
G77.0	0.0	0.0	0.0	0.0	0.0					
G78.0	0.0	0.0	0.0	0.0	0.0					
G79.0	0.0	0.0	0.0	0.0	0.0					
G80.0	0.0	0.0	0.0	0.0	0.0					
G81.0	0.0	0.0	0.0	0.0	0.0					
G82.0	0.0	0.0	0.0	0.0	0.0					
G83.0	0.0	0.0	0.0	0.0	0.0					
G84.0	0.0	0.0	0.0	0.0	0.0					
G85.0	0.0	0.0	0.0	0.0	0.0					
G86.0	0.0	0.0	0.0	0.0	0.0					
G87.0	0.0	0.0	0.0	0.0	0.0					
G88.0	0.0	0.0	0.0	0.0	0.0					
G89.0	0.0	0.0	0.0	0.0	0.0					
G90.0	0.0	0.0	0.0	0.0	0.0					
G91.0	0.0	0.0	0.0	0.0	0.0					
G92.0	0.0	0.0	0.0	0.0	0.0					
G93.0	0.0	0.0	0.0	0.0	0.0					
G94.0	0.0	0.0	0.0	0.0	0.0					
G95.0	0.0	0.0	0.0	0.0	0.0					
G96.0	0.0	0.0	0.0	0.0	0.0					
G97.0	0.0	0.0	0.0	0.0	0.0					
G98.0	0.0	0.0	0.0	0.0	0.0					
G99.0	0.0	0.0	0.0	0.0	0.0					
G100.0	0.0	0.0	0.0	0.0	0.0					
G101.0	0.0	0.0	0.0	0.0	0.0					
G102.0	0.0	0.0	0.0	0.0	0.0					
G103.0	0.0	0.0	0.0	0.0	0.0					
G104.0	0.0	0.0	0.0	0.0	0.0					
G105.0	0.0	0.0	0.0	0.0	0.0					
G106.0	0.0	0.0	0.0	0.0	0.0					
G107.0	0.0	0.0	0.0	0.0	0.0					
G108.0	0.0	0.0	0.0	0.0	0.0					
G109.0	0.0	0.0	0.0	0.0	0.0					
G110.0	0.0	0.0	0.0	0.0	0.0					

C Plane (°):0.0-360.0: 90.0  
 Test Lab: inventfine instruments  
 Test Type: TYPE C  
 Temperature: 26  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 8.684 m [K=1.0000]  
 Humidity: 65  
 Inspector:

## Candlepower Table (Continue 3)

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G111.0	0.0	0.0	0.0	0.0	0.0					
G112.0	0.0	0.0	0.0	0.0	0.0					
G113.0	0.0	0.0	0.0	0.0	0.0					
G114.0	0.0	0.0	0.0	0.0	0.0					
G115.0	0.0	0.0	0.0	0.0	0.0					
G116.0	0.0	0.0	0.0	0.0	0.0					
G117.0	0.0	0.0	0.0	0.0	0.0					
G118.0	0.0	0.0	0.0	0.0	0.0					
G119.0	0.0	0.0	0.0	0.0	0.0					
G120.0	0.0	0.0	0.0	0.0	0.0					
G121.0	0.0	0.0	0.0	0.0	0.0					
G122.0	0.0	0.0	0.0	0.0	0.0					
G123.0	0.0	0.0	0.0	0.0	0.0					
G124.0	0.0	0.0	0.0	0.0	0.0					
G125.0	0.0	0.0	0.0	0.0	0.0					
G126.0	0.0	0.0	0.0	0.0	0.0					
G127.0	0.0	0.0	0.0	0.0	0.0					
G128.0	0.0	0.0	0.0	0.0	0.0					
G129.0	0.0	0.0	0.0	0.0	0.0					
G130.0	0.0	0.0	0.0	0.0	0.0					
G131.0	0.0	0.0	0.0	0.0	0.0					
G132.0	0.0	0.0	0.0	0.0	0.0					
G133.0	0.0	0.0	0.0	0.0	0.0					
G134.0	0.0	0.0	0.0	0.0	0.0					
G135.0	0.0	0.0	0.0	0.0	0.0					
G136.0	0.0	0.0	0.0	0.0	0.0					
G137.0	0.0	0.0	0.0	0.0	0.0					
G138.0	0.0	0.0	0.0	0.0	0.0					
G139.0	0.0	0.0	0.0	0.0	0.0					
G140.0	0.0	0.0	0.0	0.0	0.0					
G141.0	0.0	0.0	0.0	0.0	0.0					
G142.0	0.0	0.0	0.0	0.0	0.0					
G143.0	0.0	0.0	0.0	0.0	0.0					
G144.0	0.0	0.0	0.0	0.0	0.0					
G145.0	0.0	0.0	0.0	0.0	0.0					
G146.0	0.0	0.0	0.0	0.0	0.0					
G147.0	0.0	0.0	0.0	0.0	0.0					

C Plane (°):0.0-360.0: 90.0  
 Test Lab: inventfine instruments  
 Test Type: TYPE C  
 Temperature: 26  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 8.684 m [K=1.0000]  
 Humidity: 65  
 Inspector:

## Candlepower Table (Continue 4)

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G148.0	0.0	0.0	0.0	0.0	0.0					
G149.0	0.0	0.0	0.0	0.0	0.0					
G150.0	0.0	5.7	0.0	0.0	0.0					
G151.0	0.0	6.1	0.0	0.0	0.0					
G152.0	6.1	6.6	0.0	0.0	6.1					
G153.0	6.6	7.4	0.0	0.0	6.6					
G154.0	7.3	7.9	0.0	0.0	7.3					
G155.0	7.4	8.1	0.0	0.0	7.4					
G156.0	7.7	8.6	0.0	0.0	7.7					
G157.0	8.1	8.4	0.0	0.0	8.1					
G158.0	8.1	8.3	0.0	0.0	8.1					
G159.0	8.3	8.6	0.0	0.0	8.3					
G160.0	8.4	8.6	0.0	0.0	8.4					
G161.0	8.3	8.9	0.0	0.0	8.3					
G162.0	8.0	8.3	0.0	0.0	8.0					
G163.0	7.8	8.3	0.0	0.0	7.8					
G164.0	7.1	8.1	0.0	0.0	7.1					
G165.0	6.8	7.7	0.0	0.0	6.8					
G166.0	6.3	7.3	0.0	0.0	6.3					
G167.0	6.0	7.0	0.0	0.0	6.0					
G168.0	5.7	6.4	0.0	0.0	5.7					
G169.0	0.0	6.0	0.0	0.0	0.0					
G170.0	0.0	0.0	0.0	0.0	0.0					
G171.0	0.0	0.0	0.0	0.0	0.0					
G172.0	0.0	0.0	0.0	0.0	0.0					
G173.0	0.0	0.0	0.0	0.0	0.0					
G174.0	0.0	0.0	0.0	0.0	0.0					
G175.0	0.0	0.0	0.0	0.0	0.0					
G176.0	0.0	0.0	0.0	0.0	0.0					
G177.0	0.0	0.0	0.0	0.0	0.0					
G178.0	0.0	0.0	0.0	0.0	0.0					
G179.0	0.0	0.0	0.0	0.0	0.0					
G180.0	0.0	0.0	0.0	0.0	0.0					

C Plane (°):0.0-360.0: 90.0  
 Test Lab: inventfine instruments  
 Test Type: TYPE C  
 Temperature: 26  
 Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1800B  
 Distance: 8.684 m [K=1.0000]  
 Humidity: 65  
 Inspector:

## LED Average Luminance Report

Avg.L	cd/m <sup>2</sup>
L 0-180(65) av	17164.75
L 0-180(75) av	0.00
L 0-180(85) av	0.00
L 90-270(65) av	21366.61
L 90-270(75) av	0.00
L 90-270(85) av	0.00
L 45(65) av	19265.68
L 45(75) av	0.00
L 45(85) av	0.00

Standard: GB/T 29293-2012