

Report No.: TH-3921A

Test Time: 2022/12/19 10:49

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Lamp Catalog:

Number of Lamps:

Luminous Length (mm): -85

Luminous Height (mm):

Current: 0.078 A

Power Factor: 0.853

Luminaire Description: IPO 15W

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): -85

Voltage: 219.9 V

Power: 14.60 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 1392.9 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H85.9

Vertical Diffuse Angle(50%): V85.3

Luminaire Efficacy Rating (LER): 95.45

Max. Intensity: 720.66 cd

S/MH(C0/C180): 1.13

Total Rated Lamp Lumens: 1392.9 lm

Efficiency: 100%

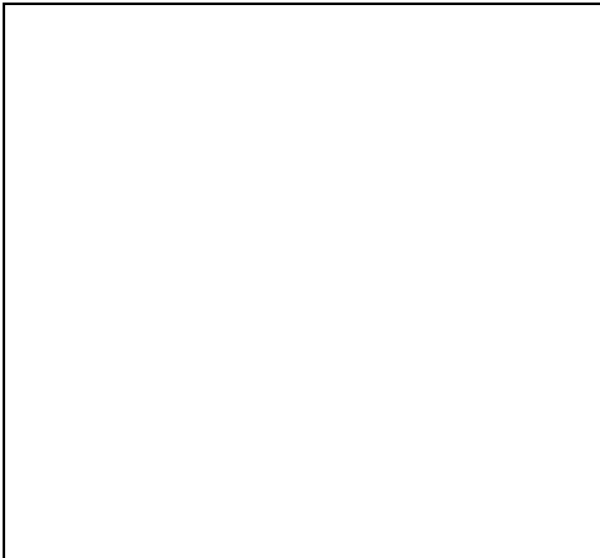
Upward Ratio: 1%

C0r0 Intensity: 720.07 cd

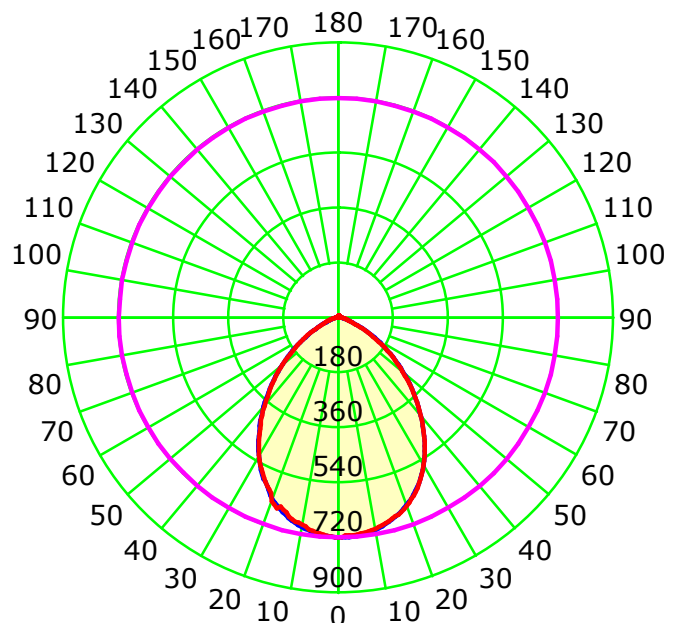
Pos of Max. Intensity: H90 V1

S/MH(C90/C270): 1.13

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 85.6°

— C0-C180 — C90-C270 — G1

C Plane (°):0.0-360.0: 90.0

Test Lab: Inventfine instrument

Test Type: TYPE C

Temperature: 26

Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0

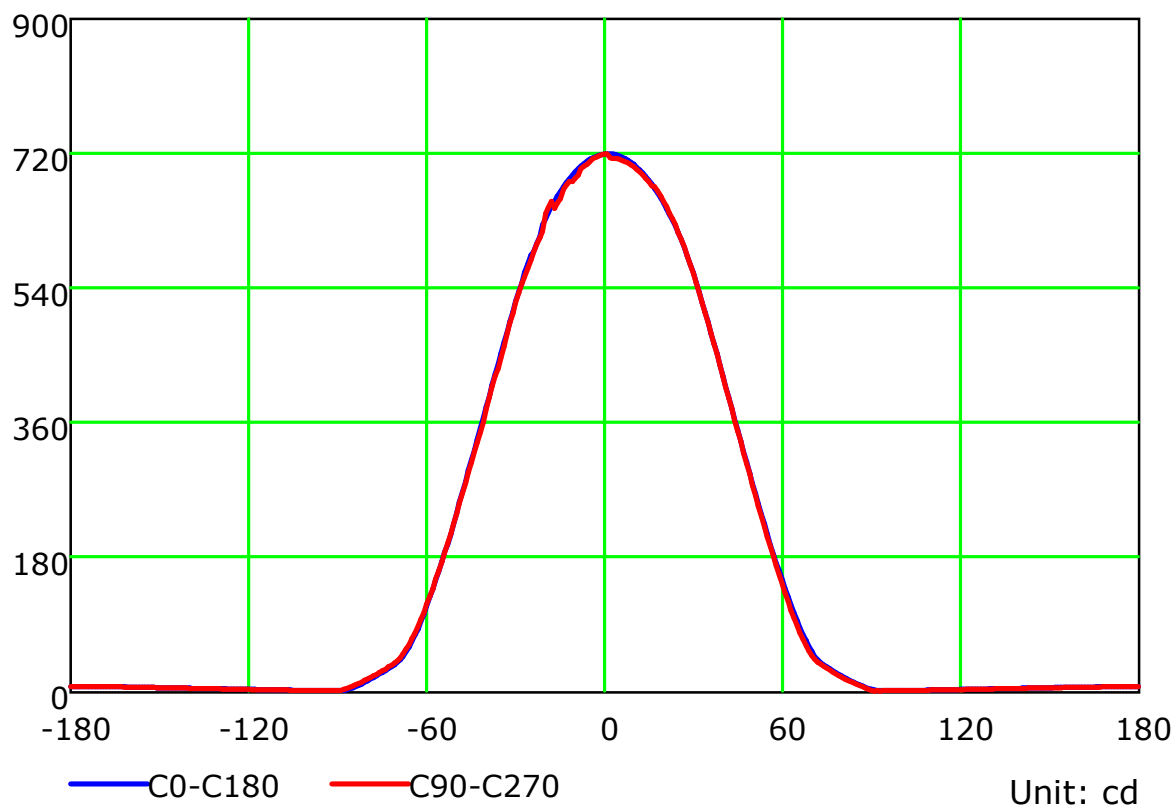
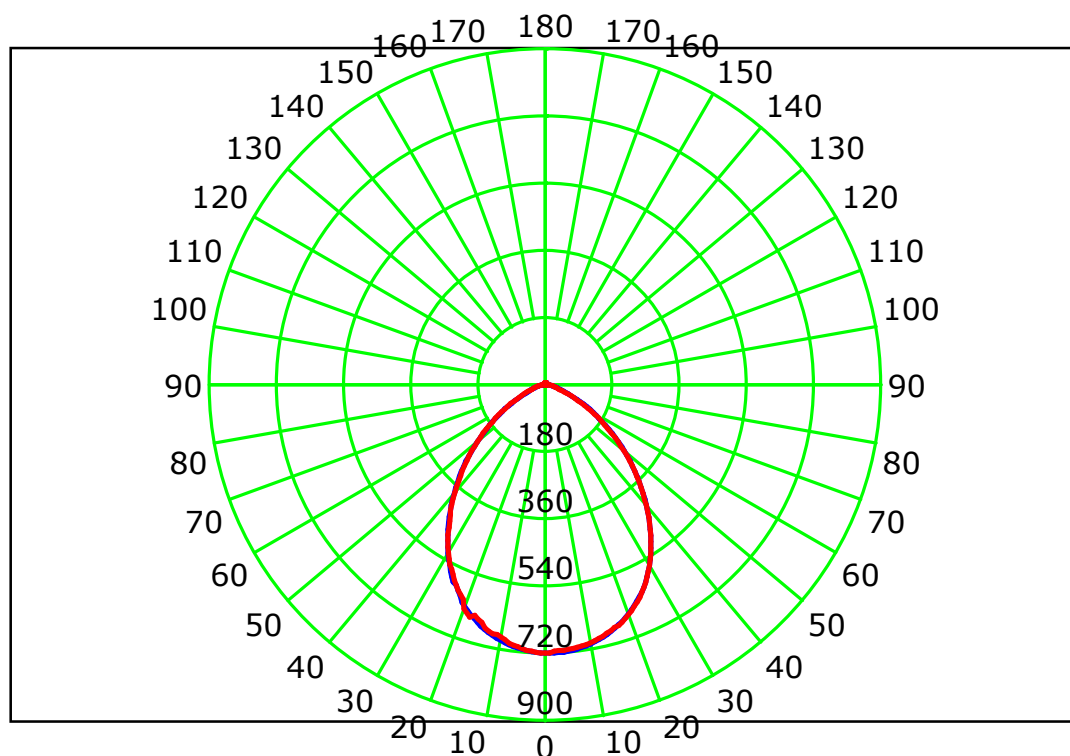
Test Device: GPM-1800B

Distance: 8.607 m [K=1.0000]

Humidity: 65

Inspector:

## Luminous Intensity Distribution Curve



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

Gamma Plane (°): 0.0-180.0: 1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
Inspector:

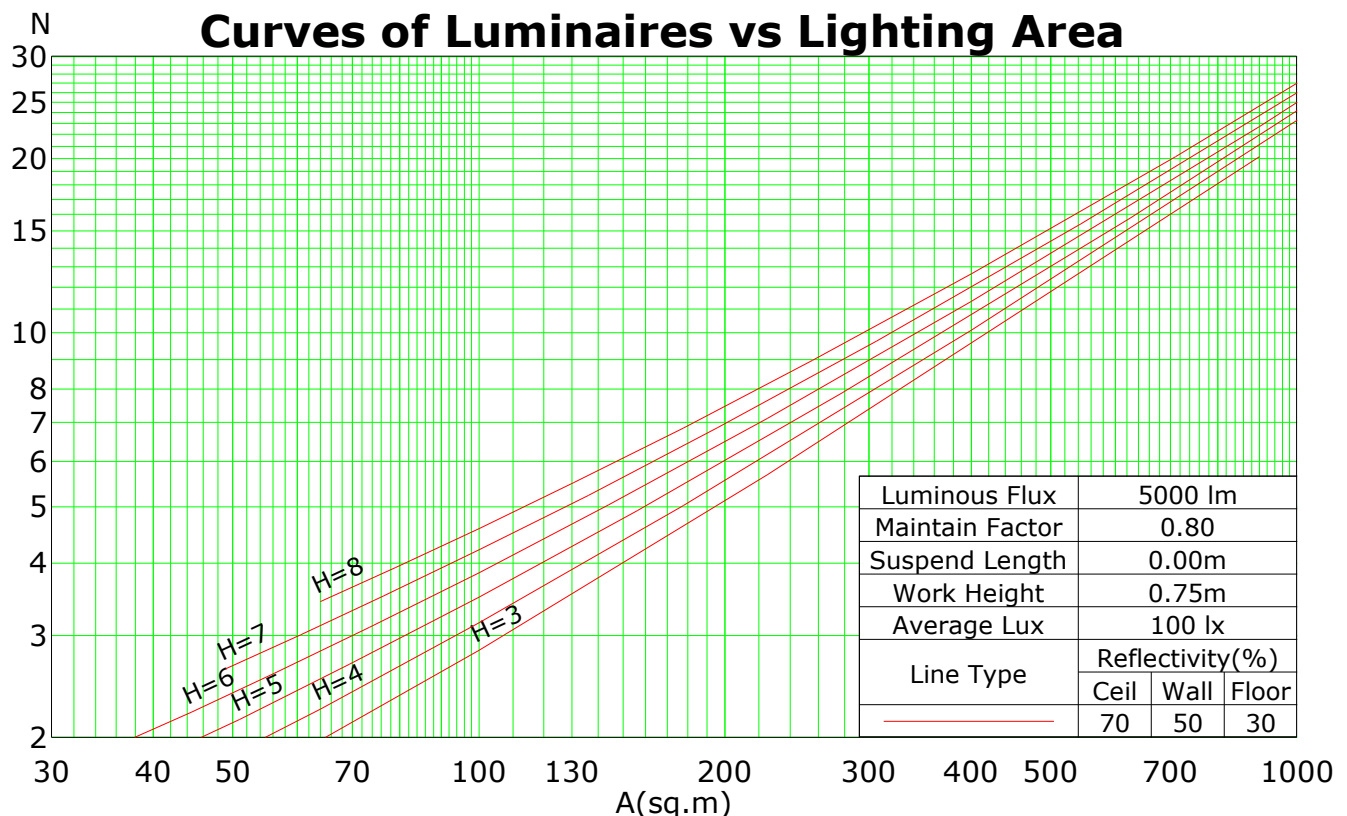
## Coefficients Of Utilization - Zonal Cavity Method

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	1.10	1.10	1.10	1.05	1.05	1.05	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	0.96	0.90	0.85	1.00	0.94	0.89	0.84	0.90	0.86	0.82	0.87	0.83	0.80	0.84	0.81	0.78	0.76
3	0.95	0.86	0.79	0.73	0.92	0.84	0.78	0.73	0.81	0.76	0.71	0.78	0.74	0.70	0.76	0.72	0.69	0.67
4	0.88	0.77	0.70	0.64	0.86	0.76	0.69	0.64	0.74	0.67	0.63	0.71	0.66	0.62	0.69	0.64	0.61	0.59
5	0.81	0.70	0.62	0.56	0.79	0.69	0.62	0.56	0.67	0.60	0.55	0.65	0.59	0.55	0.63	0.58	0.54	0.52
6	0.76	0.64	0.56	0.50	0.74	0.63	0.55	0.50	0.61	0.54	0.50	0.59	0.54	0.49	0.58	0.53	0.49	0.47
7	0.71	0.59	0.51	0.45	0.69	0.58	0.50	0.45	0.56	0.49	0.45	0.55	0.49	0.44	0.53	0.48	0.44	0.42
8	0.66	0.54	0.46	0.41	0.65	0.53	0.46	0.41	0.52	0.45	0.40	0.51	0.44	0.40	0.49	0.44	0.40	0.38
9	0.62	0.50	0.42	0.37	0.61	0.49	0.42	0.37	0.48	0.41	0.37	0.47	0.41	0.37	0.46	0.40	0.36	0.35
10	0.58	0.46	0.39	0.34	0.57	0.46	0.39	0.34	0.45	0.38	0.34	0.44	0.38	0.34	0.43	0.37	0.33	0.32

Spacing Criteria (0-180): 1.13

Spacing Criteria (90-270): 1.13

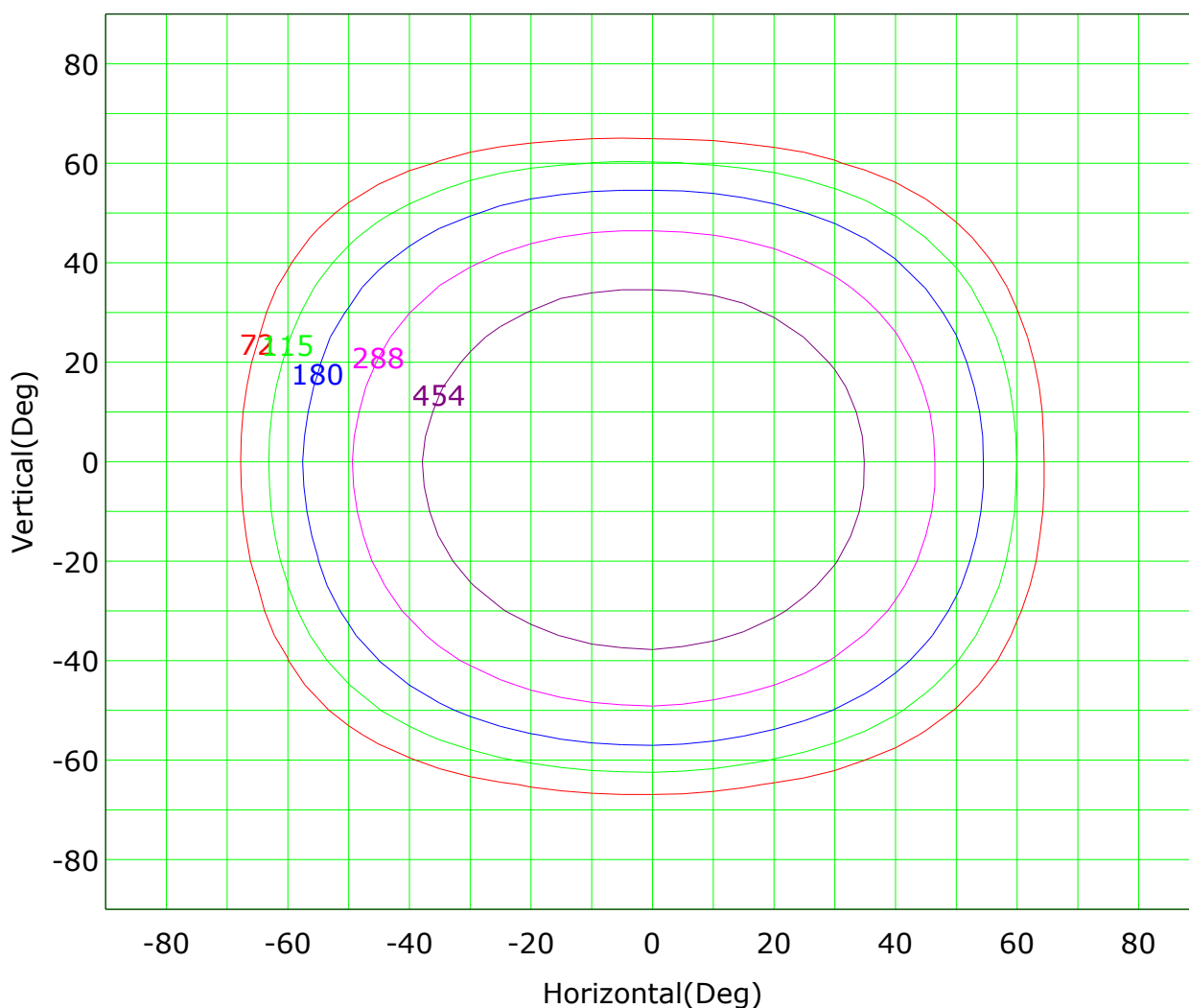
Spacing Criteria (Diagonal): 1.19



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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
Inspector:

## Isocandela (rectangle)



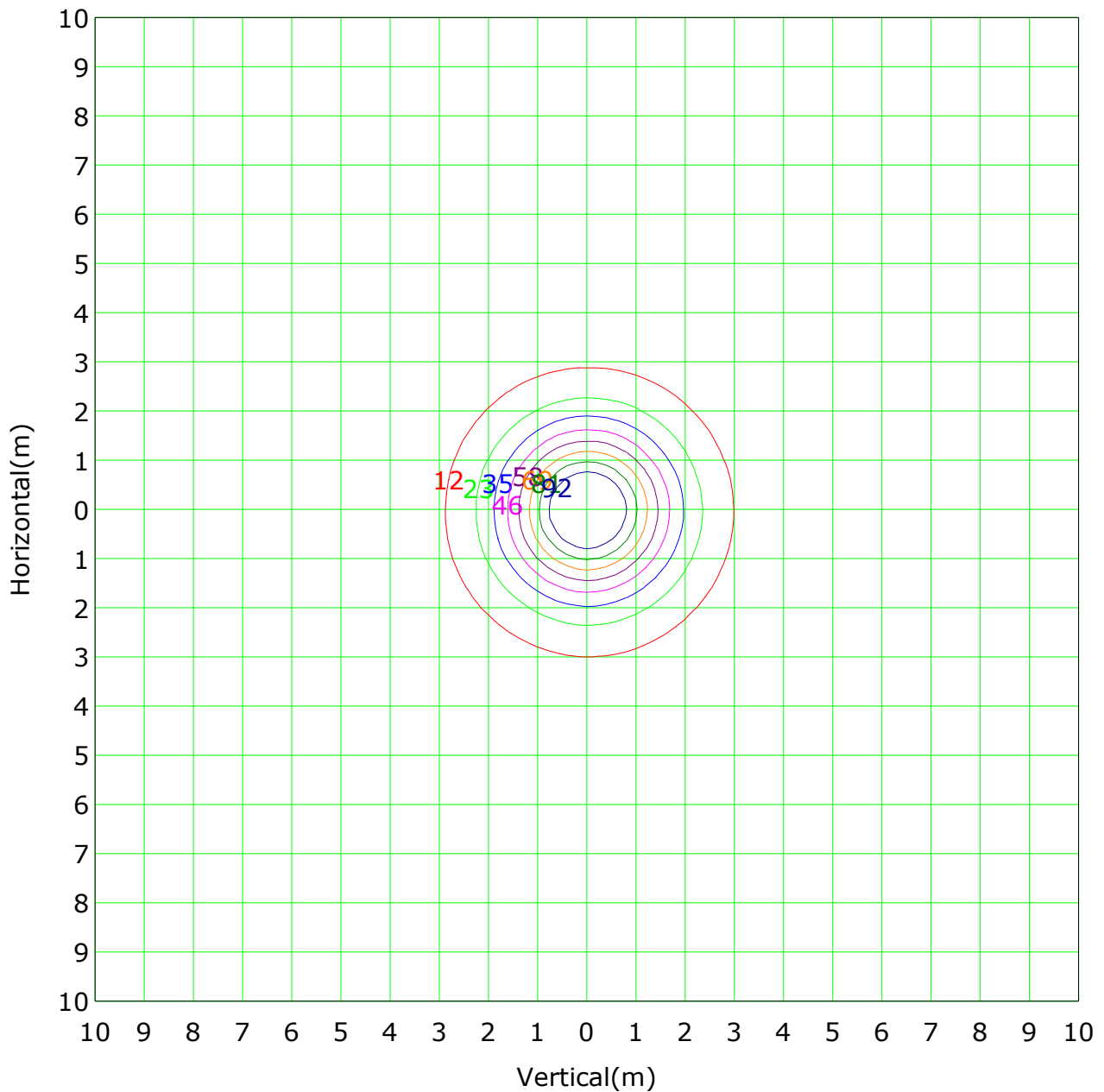
Imax (100%): 721 cd

( 10%): 72 cd	( 16%): 115 cd
( 25%): 180 cd	( 40%): 288 cd
( 63%): 454 cd	(100%): 721 cd

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
Inspector:

## IsoLux Plot



Mounting Height: 2.5m		Max Lux(100%): 115.3 lx	
— ( 10%):	11.5 lx	— ( 20%):	23.1 lx
— ( 30%):	34.6 lx	— ( 40%):	46.1 lx
— ( 50%):	57.6 lx	— ( 60%):	69.2 lx
— ( 70%):	80.7 lx	— ( 80%):	92.2 lx

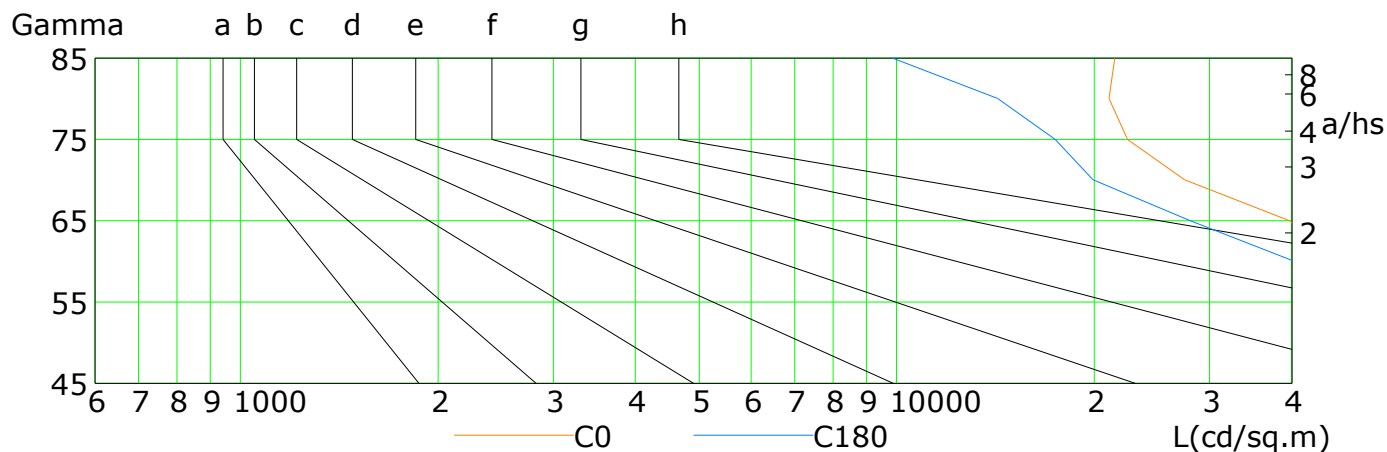
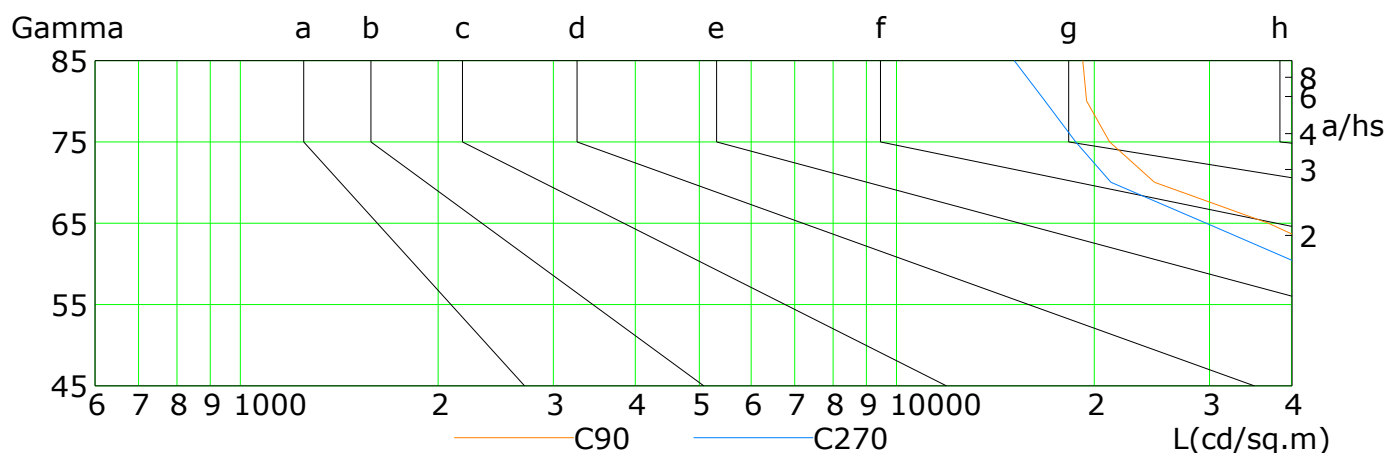
C Plane (°):0.0-360.0: 90.0  
Test Lab: Inventfine instrument  
Test Type: TYPE C  
Temperature: 26  
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Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
Inspector:

## Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
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

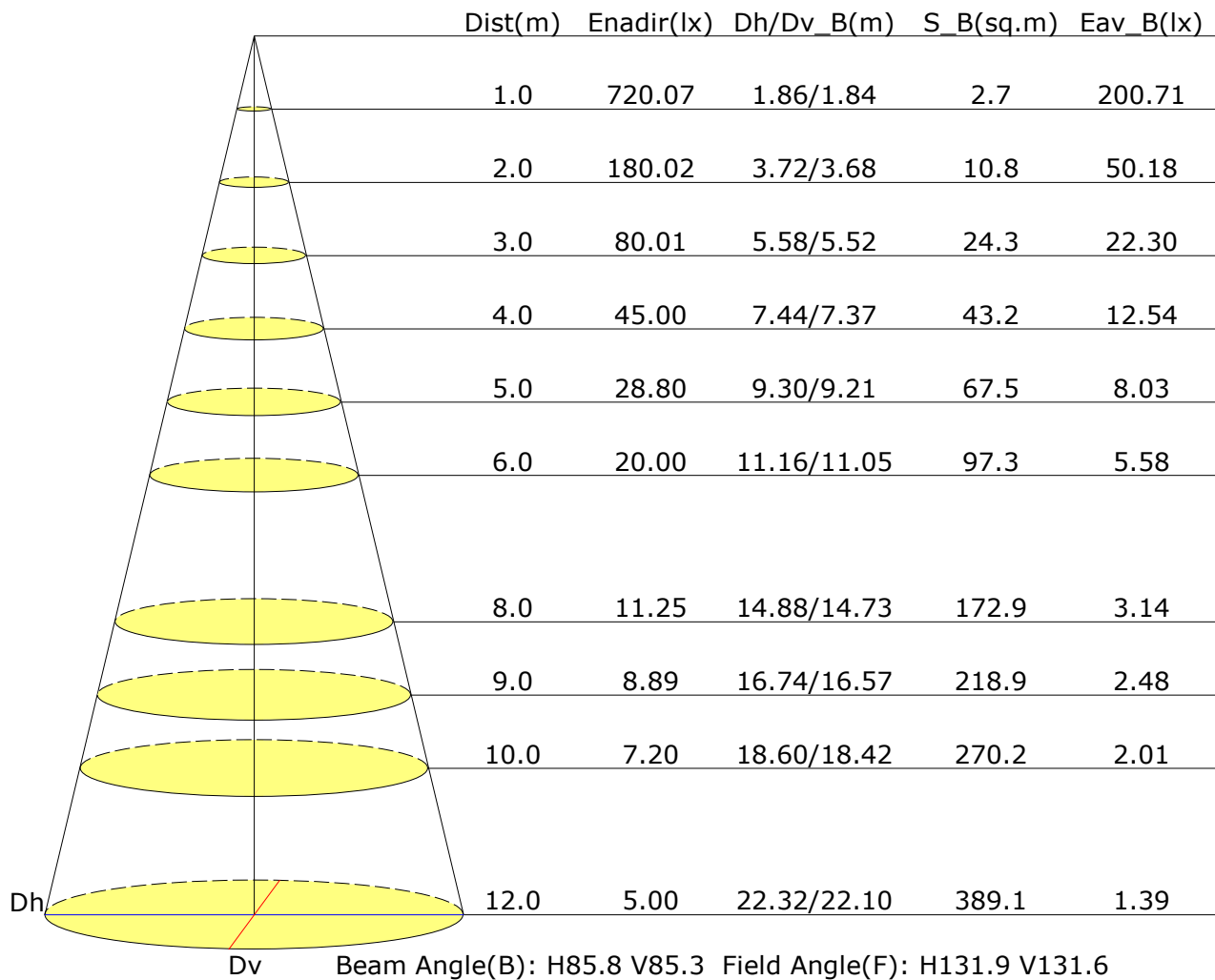


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	87388	76368	65000	52493	39652	27487	22509	21075	21500
C90	86989	75638	63709	50417	36832	24718	21137	19490	19213
C180	77230	65597	53533	40367	28015	19914	17438	14246	9851
C270	76467	65321	53309	41218	29667	21196	18755	16815	15120

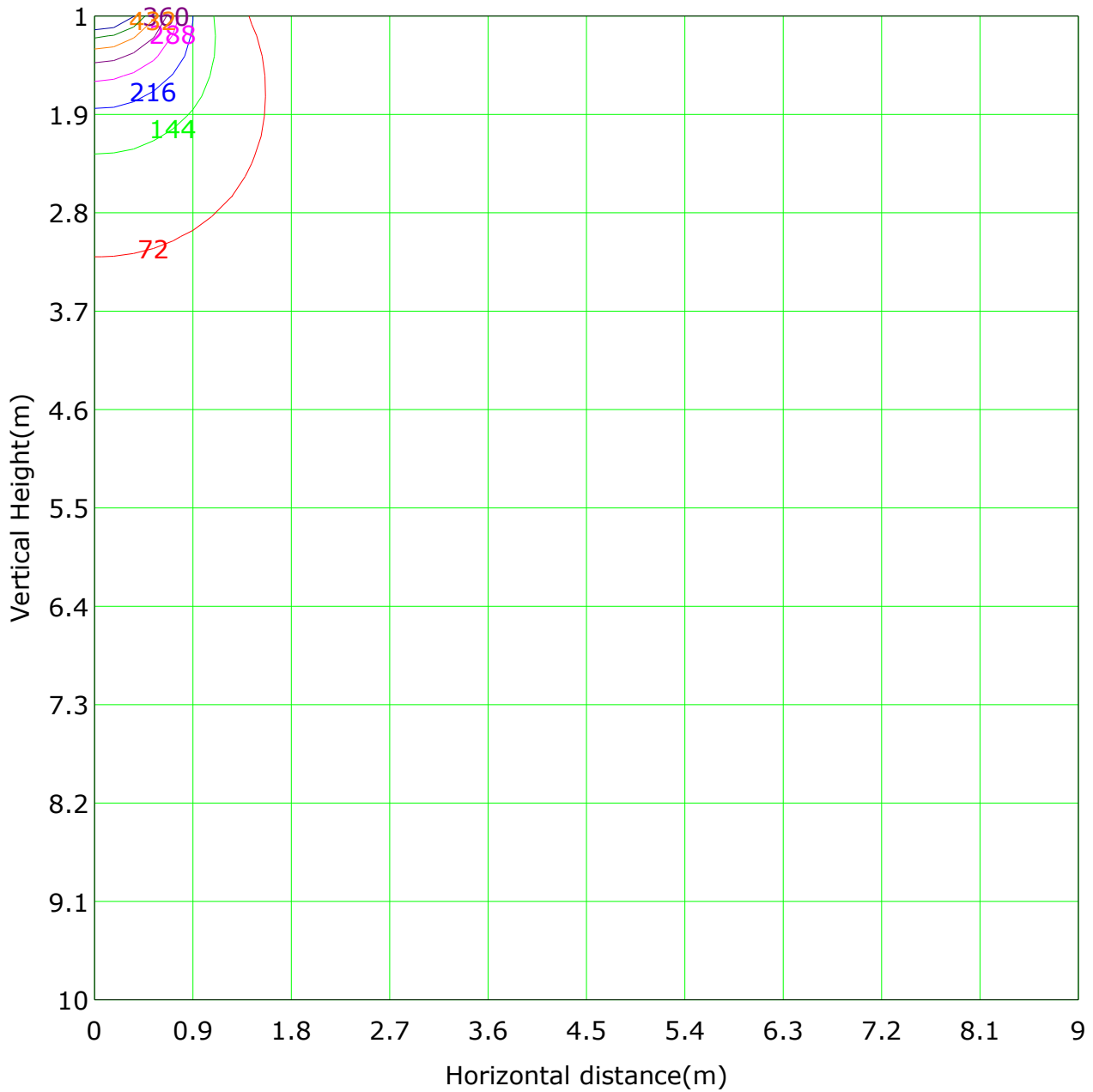
C Plane (°):0.0-360.0: 90.0  
Test Lab: Inventfine instrument  
Test Type: TYPE C  
Temperature: 26  
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
Inspector:

## Illuminance at a Distance



## Vertical IsoLux Plot



Lowest(m): 1.0m    Highest(m): 10.0m    Max Lux: 720.1 lx

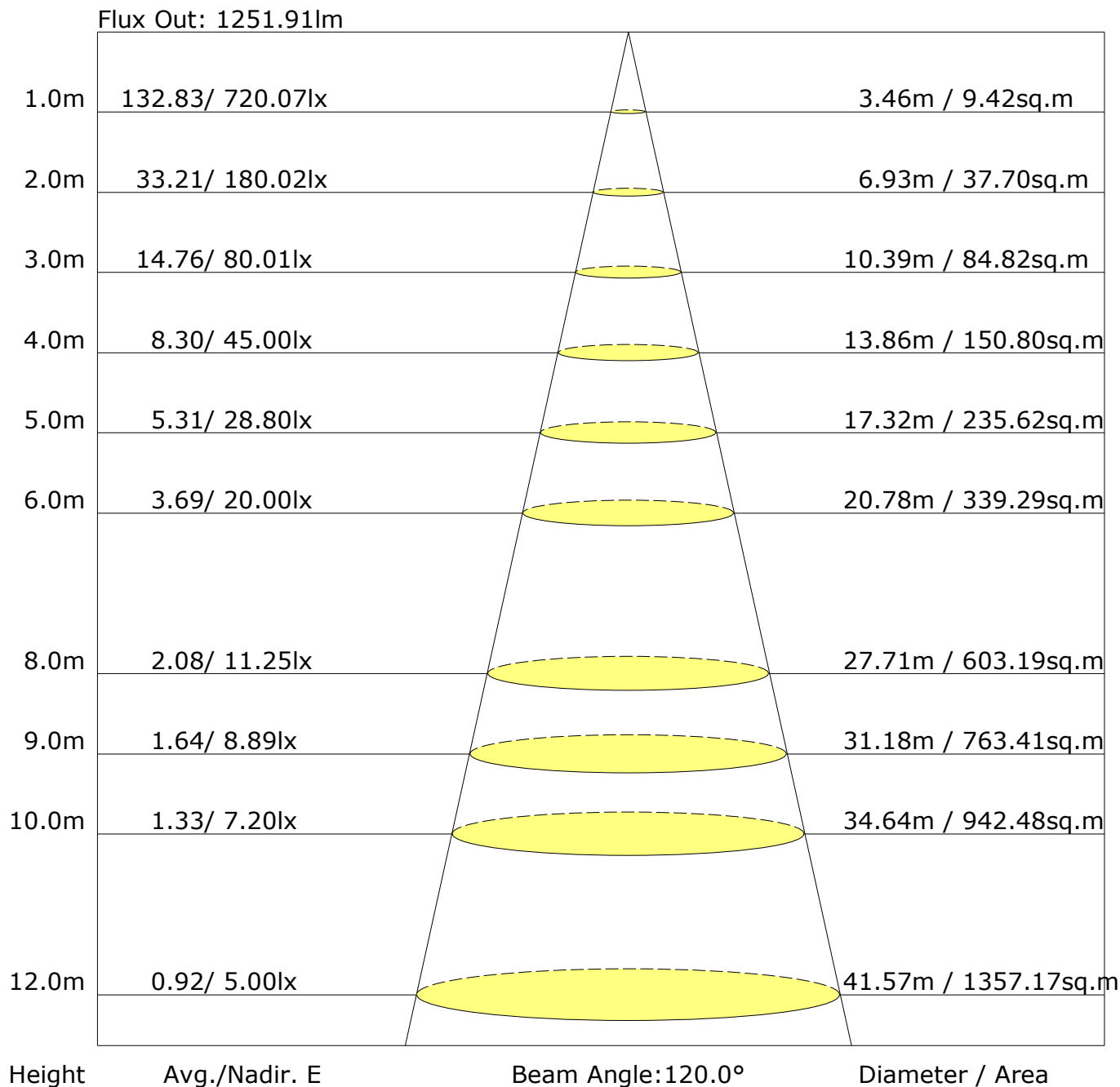
( 10%): 72.0 lx	( 20%): 144.0 lx
( 30%): 216.0 lx	( 40%): 288.0 lx
( 50%): 360.0 lx	( 60%): 432.0 lx
( 70%): 504.1 lx	( 80%): 576.1 lx

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
Inspector:



## The Average Illuminance Effective Figure



## 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	26.5	27.7	26.8	27.9	28.2	26.1	27.3	26.4	27.6	27.8
3H	26.9	28.0	27.3	28.3	28.6	26.5	27.6	26.8	27.8	28.1
4H	27.0	28.0	27.4	28.3	28.7	26.6	27.6	26.9	27.9	28.2
6H	27.1	28.1	27.5	28.4	28.7	26.7	27.6	27.0	27.9	28.2
8H	27.2	28.1	27.5	28.4	28.7	26.7	27.6	27.1	27.9	28.2
12H	27.2	28.0	27.6	28.4	28.7	26.7	27.5	27.1	27.9	28.2
X=4H Y=2H	26.7	27.7	27.1	28.0	28.3	26.4	27.4	26.8	27.7	28.0
3H	27.3	28.1	27.7	28.5	28.8	26.9	27.7	27.3	28.1	28.4
4H	27.4	28.2	27.9	28.6	29.0	27.0	27.8	27.4	28.2	28.6
6H	27.6	28.3	28.0	28.7	29.1	27.2	27.8	27.6	28.2	28.7
8H	27.7	28.3	28.1	28.7	29.1	27.2	27.8	27.7	28.3	28.7
12H	27.7	28.3	28.2	28.7	29.2	27.3	27.8	27.7	28.3	28.7
X=8H Y=4H	27.5	28.1	27.9	28.5	28.9	27.1	27.7	27.5	28.1	28.5
6H	27.7	28.2	28.2	28.6	29.1	27.3	27.8	27.8	28.2	28.7
8H	27.8	28.3	28.3	28.7	29.2	27.4	27.8	27.9	28.3	28.8
12H	27.9	28.3	28.5	28.8	29.3	27.5	27.9	28.0	28.3	28.9
X=12H Y=4H	27.4	28.0	27.9	28.4	28.9	27.1	27.6	27.5	28.0	28.5
6H	27.7	28.1	28.2	28.6	29.1	27.3	27.7	27.8	28.2	28.7
8H	27.9	28.2	28.4	28.7	29.2	27.4	27.8	27.9	28.3	28.8
Variations with the observer position at spacings:										
S=1.0H	+0.4/-0.6					+0.5/-0.7				
S=1.5H	+0.7/-1.5					+0.8/-1.9				
S=2.0H	+1.7/-2.9					+1.7/-3.3				

Calculate in accordance with CIE Pub.117. The table is revised with 1393lm ( $8\log(F/F_0) = 1.2$ ).

## 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	720.0	0.7	0.7	0.05	0.05
1.0-2.0	718.8	2.1	2.8	0.15	0.20
2.0-3.0	717.3	3.4	6.2	0.25	0.44
3.0-4.0	716.2	4.8	11.0	0.34	0.79
4.0-5.0	714.5	6.1	17.1	0.44	1.23
5.0-6.0	712.4	7.5	24.6	0.54	1.77
6.0-7.0	710.2	8.8	33.4	0.63	2.40
7.0-8.0	707.6	10.1	43.6	0.73	3.13
8.0-9.0	704.1	11.4	55.0	0.82	3.95
9.0-10.0	700.2	12.7	67.6	0.91	4.86
10.0-11.0	696.4	13.9	81.6	1.00	5.86
11.0-12.0	692.9	15.1	96.7	1.09	6.94
12.0-13.0	689.0	16.4	113.1	1.17	8.12
13.0-14.0	684.2	17.5	130.6	1.26	9.38
14.0-15.0	678.1	18.6	149.2	1.34	10.71
15.0-16.0	671.6	19.7	168.9	1.41	12.13
16.0-17.0	666.2	20.7	189.6	1.49	13.61
17.0-18.0	662.3	21.8	211.5	1.57	15.18
18.0-19.0	657.3	22.9	234.3	1.64	16.82
19.0-20.0	649.9	23.8	258.1	1.71	18.53
20.0-21.0	640.3	24.6	282.7	1.77	20.30
21.0-22.0	629.5	25.3	308.0	1.82	22.11
22.0-23.0	620.3	26.0	334.1	1.87	23.98
23.0-24.0	611.2	26.7	360.8	1.92	25.90
24.0-25.0	602.2	27.4	388.2	1.97	27.87
25.0-26.0	592.9	28.0	416.2	2.01	29.88
26.0-27.0	582.1	28.5	444.6	2.04	31.92
27.0-28.0	571.1	28.9	473.6	2.08	34.00
28.0-29.0	559.5	29.3	502.8	2.10	36.10
29.0-30.0	547.1	29.5	532.4	2.12	38.22
30.0-31.0	534.5	29.7	562.1	2.14	40.36
31.0-32.0	521.3	29.9	592.0	2.14	42.50
32.0-33.0	507.9	29.9	621.9	2.15	44.65
33.0-34.0	493.9	29.9	651.8	2.15	46.80
34.0-35.0	479.2	29.8	681.6	2.14	48.93
35.0-36.0	465.0	29.6	711.2	2.13	51.06

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
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	451.3	29.4	740.6	2.11	53.17
37.0-38.0	437.7	29.2	769.8	2.10	55.27
38.0-39.0	423.5	28.9	798.8	2.08	57.35
39.0-40.0	408.7	28.5	827.3	2.05	59.39
40.0-41.0	393.7	28.0	855.3	2.01	61.41
41.0-42.0	379.2	27.6	882.9	1.98	63.39
42.0-43.0	364.6	27.0	909.9	1.94	65.32
43.0-44.0	350.4	26.4	936.3	1.90	67.22
44.0-45.0	336.3	25.8	962.2	1.86	69.08
45.0-46.0	322.0	25.2	987.4	1.81	70.89
46.0-47.0	307.5	24.5	1011.8	1.76	72.64
47.0-48.0	293.3	23.7	1035.5	1.70	74.35
48.0-49.0	279.3	22.9	1058.5	1.65	75.99
49.0-50.0	265.1	22.1	1080.6	1.59	77.58
50.0-51.0	250.9	21.2	1101.8	1.52	79.10
51.0-52.0	237.2	20.4	1122.2	1.46	80.57
52.0-53.0	223.8	19.5	1141.6	1.40	81.96
53.0-54.0	210.6	18.6	1160.2	1.33	83.30
54.0-55.0	197.9	17.7	1177.9	1.27	84.56
55.0-56.0	185.0	16.7	1194.6	1.20	85.77
56.0-57.0	172.0	15.7	1210.3	1.13	86.89
57.0-58.0	159.9	14.8	1225.1	1.06	87.96
58.0-59.0	148.4	13.9	1239.0	1.00	88.95
59.0-60.0	136.9	12.9	1251.9	0.93	89.88
60.0-61.0	125.3	12.0	1263.9	0.86	90.74
61.0-62.0	114.6	11.0	1274.9	0.79	91.53
62.0-63.0	104.3	10.1	1285.0	0.73	92.26
63.0-64.0	94.2	9.2	1294.3	0.66	92.92
64.0-65.0	84.9	8.4	1302.7	0.60	93.53
65.0-66.0	76.2	7.6	1310.3	0.55	94.07
66.0-67.0	67.9	6.8	1317.1	0.49	94.56
67.0-68.0	60.3	6.1	1323.2	0.44	95.00
68.0-69.0	53.7	5.5	1328.7	0.39	95.40
69.0-70.0	48.0	4.9	1333.6	0.35	95.75
70.0-71.0	43.1	4.5	1338.1	0.32	96.07
71.0-72.0	39.2	4.1	1342.2	0.29	96.36

C Plane (°):0.0-360.0: 90.0  
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Test Type: TYPE C  
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Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 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	35.9	3.8	1345.9	0.27	96.63
73.0-74.0	33.1	3.5	1349.4	0.25	96.88
74.0-75.0	30.5	3.2	1352.6	0.23	97.11
75.0-76.0	28.1	3.0	1355.6	0.21	97.33
76.0-77.0	25.6	2.7	1358.4	0.20	97.52
77.0-78.0	23.2	2.5	1360.8	0.18	97.70
78.0-79.0	20.9	2.2	1363.1	0.16	97.86
79.0-80.0	18.7	2.0	1365.1	0.14	98.01
80.0-81.0	16.6	1.8	1366.9	0.13	98.14
81.0-82.0	14.6	1.6	1368.5	0.11	98.25
82.0-83.0	12.6	1.4	1369.9	0.10	98.35
83.0-84.0	10.7	1.2	1371.0	0.08	98.43
84.0-85.0	9.0	1.0	1372.0	0.07	98.50
85.0-86.0	7.3	0.8	1372.8	0.06	98.56
86.0-87.0	5.7	0.6	1373.4	0.04	98.61
87.0-88.0	4.2	0.5	1373.9	0.03	98.64
88.0-89.0	2.9	0.3	1374.2	0.02	98.66
89.0-90.0	2.0	0.2	1374.4	0.02	98.68
90.0-91.0	1.4	0.1	1374.6	0.01	98.69
91.0-92.0	1.0	0.1	1374.7	0.01	98.70
92.0-93.0	1.0	0.1	1374.8	0.01	98.70
93.0-94.0	1.0	0.1	1374.9	0.01	98.71
94.0-95.0	1.0	0.1	1375.0	0.01	98.72
95.0-96.0	1.1	0.1	1375.1	0.01	98.73
96.0-97.0	1.1	0.1	1375.3	0.01	98.74
97.0-98.0	1.2	0.1	1375.4	0.01	98.75
98.0-99.0	1.2	0.1	1375.5	0.01	98.76
99.0-100.0	1.2	0.1	1375.6	0.01	98.76
100.0-101.0	1.3	0.1	1375.8	0.01	98.77
101.0-102.0	1.3	0.1	1375.9	0.01	98.79
102.0-103.0	1.4	0.1	1376.1	0.01	98.80
103.0-104.0	1.4	0.2	1376.2	0.01	98.81
104.0-105.0	1.5	0.2	1376.4	0.01	98.82
105.0-106.0	1.6	0.2	1376.6	0.01	98.83
106.0-107.0	1.6	0.2	1376.7	0.01	98.84
107.0-108.0	1.7	0.2	1376.9	0.01	98.86

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 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	1.8	0.2	1377.1	0.01	98.87
109.0-110.0	1.8	0.2	1377.3	0.01	98.88
110.0-111.0	1.9	0.2	1377.5	0.01	98.90
111.0-112.0	2.0	0.2	1377.7	0.01	98.91
112.0-113.0	2.0	0.2	1377.9	0.01	98.93
113.0-114.0	2.1	0.2	1378.1	0.02	98.94
114.0-115.0	2.2	0.2	1378.3	0.02	98.96
115.0-116.0	2.2	0.2	1378.5	0.02	98.97
116.0-117.0	2.3	0.2	1378.8	0.02	98.99
117.0-118.0	2.4	0.2	1379.0	0.02	99.01
118.0-119.0	2.5	0.2	1379.2	0.02	99.02
119.0-120.0	2.6	0.2	1379.5	0.02	99.04
120.0-121.0	2.6	0.3	1379.7	0.02	99.06
121.0-122.0	2.7	0.3	1380.0	0.02	99.08
122.0-123.0	2.8	0.3	1380.2	0.02	99.10
123.0-124.0	2.9	0.3	1380.5	0.02	99.11
124.0-125.0	3.0	0.3	1380.8	0.02	99.13
125.0-126.0	3.1	0.3	1381.1	0.02	99.15
126.0-127.0	3.1	0.3	1381.3	0.02	99.17
127.0-128.0	3.2	0.3	1381.6	0.02	99.19
128.0-129.0	3.3	0.3	1381.9	0.02	99.21
129.0-130.0	3.4	0.3	1382.2	0.02	99.23
130.0-131.0	3.5	0.3	1382.5	0.02	99.26
131.0-132.0	3.6	0.3	1382.8	0.02	99.28
132.0-133.0	3.6	0.3	1383.1	0.02	99.30
133.0-134.0	3.7	0.3	1383.4	0.02	99.32
134.0-135.0	3.8	0.3	1383.7	0.02	99.34
135.0-136.0	3.9	0.3	1384.0	0.02	99.36
136.0-137.0	4.0	0.3	1384.3	0.02	99.38
137.0-138.0	4.0	0.3	1384.6	0.02	99.40
138.0-139.0	4.1	0.3	1384.9	0.02	99.43
139.0-140.0	4.2	0.3	1385.2	0.02	99.45
140.0-141.0	4.3	0.3	1385.5	0.02	99.47
141.0-142.0	4.4	0.3	1385.7	0.02	99.49
142.0-143.0	4.4	0.3	1386.0	0.02	99.51
143.0-144.0	4.5	0.3	1386.3	0.02	99.53

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 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	4.6	0.3	1386.6	0.02	99.55
145.0-146.0	4.7	0.3	1386.9	0.02	99.57
146.0-147.0	4.8	0.3	1387.2	0.02	99.60
147.0-148.0	4.8	0.3	1387.5	0.02	99.62
148.0-149.0	4.9	0.3	1387.8	0.02	99.64
149.0-150.0	4.9	0.3	1388.0	0.02	99.66
150.0-151.0	5.0	0.3	1388.3	0.02	99.67
151.0-152.0	5.1	0.3	1388.6	0.02	99.69
152.0-153.0	5.2	0.3	1388.8	0.02	99.71
153.0-154.0	5.2	0.3	1389.1	0.02	99.73
154.0-155.0	5.3	0.3	1389.4	0.02	99.75
155.0-156.0	5.4	0.2	1389.6	0.02	99.77
156.0-157.0	5.5	0.2	1389.8	0.02	99.78
157.0-158.0	5.5	0.2	1390.1	0.02	99.80
158.0-159.0	5.6	0.2	1390.3	0.02	99.82
159.0-160.0	5.7	0.2	1390.5	0.02	99.83
160.0-161.0	5.8	0.2	1390.7	0.02	99.85
161.0-162.0	5.8	0.2	1390.9	0.01	99.86
162.0-163.0	5.9	0.2	1391.1	0.01	99.88
163.0-164.0	6.0	0.2	1391.3	0.01	99.89
164.0-165.0	6.0	0.2	1391.5	0.01	99.90
165.0-166.0	6.1	0.2	1391.7	0.01	99.91
166.0-167.0	6.1	0.2	1391.8	0.01	99.93
167.0-168.0	6.2	0.1	1392.0	0.01	99.94
168.0-169.0	6.3	0.1	1392.1	0.01	99.95
169.0-170.0	6.3	0.1	1392.2	0.01	99.96
170.0-171.0	6.4	0.1	1392.3	0.01	99.96
171.0-172.0	6.4	0.1	1392.4	0.01	99.97
172.0-173.0	6.5	0.1	1392.5	0.01	99.98
173.0-174.0	6.5	0.1	1392.6	0.01	99.98
174.0-175.0	6.5	0.1	1392.7	0.00	99.99
175.0-176.0	6.6	0.1	1392.7	0.00	99.99
176.0-177.0	6.6	0.0	1392.8	0.00	100.00
177.0-178.0	6.6	0.0	1392.8	0.00	100.00
178.0-179.0	6.6	0.0	1392.8	0.00	100.00
179.0-180.0	6.6	0.0	1392.8	0.00	100.00

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
Inspector:

## Zonal Lumen (Continue 5)

cone flux(90°): 962.17 lm

%lum = 69.1%

%lamp = 69.1%

cone flux(120°): 1251.91 lm

%lum = 89.9%

%lamp = 89.9%



## Candlepower Table

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G0.0	720.1	720.1	720.1	720.1	720.1					
G1.0	720.3	720.7	719.5	719.2	720.3					
G2.0	720.2	714.6	718.4	717.8	720.2					
G3.0	719.9	714.6	717.0	716.0	719.9					
G4.0	719.0	714.0	715.3	714.0	719.0					
G5.0	717.8	713.1	713.0	710.0	717.8					
G6.0	716.3	711.9	710.6	706.9	716.3					
G7.0	714.2	710.2	707.7	703.8	714.2					
G8.0	711.9	708.3	704.2	700.3	711.9					
G9.0	709.3	705.7	700.6	692.2	709.3					
G10.0	706.3	703.0	696.6	687.7	706.3					
G11.0	702.6	699.9	692.3	683.1	702.6					
G12.0	699.0	696.0	687.0	683.7	699.0					
G13.0	694.4	692.1	681.8	678.4	694.4					
G14.0	689.9	687.9	676.3	672.7	689.9					
G15.0	685.1	683.2	669.7	660.3	685.1					
G16.0	679.8	677.5	663.4	654.0	679.8					
G17.0	674.3	676.3	656.7	647.3	674.3					
G18.0	667.6	670.4	649.5	656.6	667.6					
G19.0	661.2	663.4	641.3	648.1	661.2					
G20.0	654.6	656.6	633.3	640.5	654.6					
G21.0	646.9	649.5	625.0	616.2	646.9					
G22.0	639.5	641.2	609.6	607.7	639.5					
G23.0	631.7	633.2	600.2	598.9	631.7					
G24.0	622.9	625.0	589.1	588.5	622.9					
G25.0	614.5	615.1	584.6	578.1	614.5					
G26.0	605.4	605.4	573.1	566.9	605.4					
G27.0	594.3	595.1	561.3	555.3	594.3					
G28.0	583.6	584.2	548.0	546.8	583.6					
G29.0	572.0	571.6	535.6	534.4	572.0					
G30.0	560.3	559.6	522.5	521.2	560.3					
G31.0	548.4	547.8	509.5	506.8	548.4					
G32.0	535.1	534.4	495.1	493.4	535.1					
G33.0	522.5	521.8	481.5	479.7	522.5					
G34.0	508.2	507.5	467.8	461.9	508.2					
G35.0	494.7	494.1	452.7	446.5	494.7					
G36.0	479.9	480.7	438.8	432.6	479.9					

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 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	466.3	465.6	424.7	422.2	466.3					
G38.0	452.3	451.7	410.8	408.1	452.3					
G39.0	438.1	437.6	395.5	394.0	438.1					
G40.0	422.8	422.1	381.5	377.7	422.8					
G41.0	408.7	407.9	367.6	361.3	408.7					
G42.0	394.3	393.4	353.3	347.2	394.3					
G43.0	378.8	379.0	337.8	333.2	378.8					
G44.0	364.7	363.3	323.9	322.2	364.7					
G45.0	350.6	349.0	309.9	306.8	350.6					
G46.0	335.3	334.9	296.0	293.2	335.3					
G47.0	321.2	319.3	280.8	279.4	321.2					
G48.0	307.3	305.2	267.3	265.9	307.3					
G49.0	292.2	291.3	253.9	251.4	292.2					
G50.0	278.6	275.9	239.3	238.3	278.6					
G51.0	265.0	262.1	223.8	224.1	265.0					
G52.0	251.6	248.4	210.9	211.4	251.6					
G53.0	237.3	234.9	197.1	199.0	237.3					
G54.0	224.3	220.4	186.5	185.4	224.3					
G55.0	211.6	207.4	174.2	173.5	211.6					
G56.0	195.8	194.5	160.9	161.8	195.8					
G57.0	183.6	180.5	149.0	150.2	183.6					
G58.0	171.7	168.3	137.6	138.1	171.7					
G59.0	161.7	156.1	126.4	127.5	161.7					
G60.0	148.9	143.0	114.5	116.9	148.9					
G61.0	137.8	131.6	103.2	106.1	137.8					
G62.0	126.9	120.3	93.7	96.9	126.9					
G63.0	116.2	108.5	83.6	88.0	116.2					
G64.0	104.9	98.1	75.8	78.8	104.9					
G65.0	95.1	88.3	67.2	71.1	95.1					
G66.0	85.7	78.9	59.9	63.2	85.7					
G67.0	76.2	69.6	53.3	56.7	76.2					
G68.0	67.9	61.7	47.1	50.4	67.9					
G69.0	60.4	54.6	42.3	45.2	60.4					
G70.0	53.3	48.0	38.6	41.1	53.3					
G71.0	47.1	43.1	35.4	38.1	47.1					
G72.0	42.4	39.4	32.8	35.0	42.4					
G73.0	38.6	36.3	30.3	32.6	38.6					

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 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	35.7	33.6	27.9	29.9	35.7					
G75.0	33.1	31.0	25.6	27.5	33.1					
G76.0	30.6	28.5	23.3	25.2	30.6					
G77.0	28.1	25.9	20.7	22.8	28.1					
G78.0	25.3	23.6	18.4	20.7	25.3					
G79.0	23.0	21.4	16.3	18.6	23.0					
G80.0	20.8	19.2	14.0	16.6	20.8					
G81.0	18.6	17.1	12.0	14.7	18.6					
G82.0	16.5	15.0	10.2	12.6	16.5					
G83.0	14.4	13.0	8.4	10.8	14.4					
G84.0	12.4	11.2	6.5	9.1	12.4					
G85.0	10.6	9.5	4.9	7.5	10.6					
G86.0	8.8	7.8	3.5	5.8	8.8					
G87.0	7.2	6.2	2.2	4.3	7.2					
G88.0	5.5	4.5	1.0	2.8	5.5					
G89.0	3.9	3.1	1.0	1.2	3.9					
G90.0	2.9	1.6	1.0	0.9	2.9					
G91.0	1.7	0.8	1.0	0.9	1.7					
G92.0	0.9	0.9	1.1	0.9	0.9					
G93.0	0.9	0.8	1.1	1.1	0.9					
G94.0	1.0	0.9	1.1	1.0	1.0					
G95.0	1.0	0.9	1.2	1.1	1.0					
G96.0	1.0	1.0	1.2	1.1	1.0					
G97.0	1.1	1.0	1.2	1.3	1.1					
G98.0	1.1	1.1	1.3	1.2	1.1					
G99.0	1.2	1.1	1.3	1.3	1.2					
G100.0	1.2	1.1	1.4	1.3	1.2					
G101.0	1.3	1.2	1.4	1.4	1.3					
G102.0	1.4	1.2	1.5	1.4	1.4					
G103.0	1.4	1.3	1.5	1.5	1.4					
G104.0	1.5	1.3	1.6	1.5	1.5					
G105.0	1.5	1.4	1.6	1.6	1.5					
G106.0	1.6	1.4	1.8	1.7	1.6					
G107.0	1.6	1.6	1.8	1.8	1.6					
G108.0	1.7	1.6	1.9	1.8	1.7					
G109.0	1.9	1.6	2.0	1.8	1.9					
G110.0	1.9	1.7	2.0	1.9	1.9					

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 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	1.9	1.8	2.0	2.0	1.9					
G112.0	2.0	1.8	2.2	2.0	2.0					
G113.0	2.0	1.9	2.2	2.1	2.0					
G114.0	2.1	2.0	2.3	2.2	2.1					
G115.0	2.2	2.1	2.3	2.2	2.2					
G116.0	2.2	2.1	2.5	2.3	2.2					
G117.0	2.4	2.2	2.5	2.4	2.4					
G118.0	2.4	2.3	2.6	2.5	2.4					
G119.0	2.5	2.4	2.6	2.5	2.5					
G120.0	2.6	2.5	2.7	2.6	2.6					
G121.0	2.7	2.5	2.8	2.7	2.7					
G122.0	2.7	2.6	2.9	2.8	2.7					
G123.0	2.8	2.7	3.0	2.9	2.8					
G124.0	2.9	2.7	3.0	3.0	2.9					
G125.0	2.9	2.9	3.2	3.1	2.9					
G126.0	3.1	2.9	3.2	3.1	3.1					
G127.0	3.1	3.1	3.3	3.2	3.1					
G128.0	3.2	3.1	3.5	3.3	3.2					
G129.0	3.3	3.2	3.5	3.4	3.3					
G130.0	3.5	3.3	3.6	3.4	3.5					
G131.0	3.5	3.4	3.7	3.5	3.5					
G132.0	3.6	3.5	3.7	3.6	3.6					
G133.0	3.7	3.5	3.8	3.7	3.7					
G134.0	3.7	3.6	3.9	3.8	3.7					
G135.0	3.9	3.9	4.0	3.8	3.9					
G136.0	3.9	3.8	4.0	3.9	3.9					
G137.0	4.0	3.9	4.1	4.0	4.0					
G138.0	4.1	4.0	4.2	4.1	4.1					
G139.0	4.2	4.1	4.3	4.1	4.2					
G140.0	4.2	4.1	4.3	4.3	4.2					
G141.0	4.3	4.2	4.4	4.3	4.3					
G142.0	4.4	4.3	4.5	4.4	4.4					
G143.0	4.5	4.4	4.6	4.5	4.5					
G144.0	4.6	4.4	4.6	4.6	4.6					
G145.0	4.6	4.5	4.7	4.6	4.6					
G146.0	4.7	4.6	4.7	5.1	4.7					
G147.0	4.8	4.6	4.8	4.7	4.8					

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 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	4.9	4.8	4.9	4.8	4.9					
G149.0	5.0	4.8	5.0	4.8	5.0					
G150.0	5.1	4.9	5.0	5.0	5.1					
G151.0	5.1	5.0	5.1	5.1	5.1					
G152.0	5.2	5.0	5.2	5.2	5.2					
G153.0	5.3	5.1	5.3	5.2	5.3					
G154.0	5.3	5.1	5.4	5.3	5.3					
G155.0	5.5	5.3	5.5	5.4	5.5					
G156.0	5.5	5.3	5.5	5.5	5.5					
G157.0	5.5	5.4	5.5	5.6	5.5					
G158.0	5.6	5.5	5.7	5.6	5.6					
G159.0	5.7	5.5	5.7	5.8	5.7					
G160.0	5.7	5.6	5.8	5.8	5.7					
G161.0	5.8	5.7	5.9	5.9	5.8					
G162.0	5.8	5.7	6.0	6.0	5.8					
G163.0	5.9	5.8	6.1	6.0	5.9					
G164.0	6.0	5.9	6.2	6.1	6.0					
G165.0	6.0	5.9	6.2	6.1	6.0					
G166.0	6.0	5.9	6.3	6.2	6.0					
G167.0	6.1	6.0	6.3	6.3	6.1					
G168.0	6.2	6.1	6.4	6.4	6.2					
G169.0	6.2	6.1	6.4	6.4	6.2					
G170.0	6.3	6.1	6.5	6.4	6.3					
G171.0	6.3	6.1	6.5	6.5	6.3					
G172.0	6.4	6.3	6.6	6.6	6.4					
G173.0	6.4	6.4	6.6	6.5	6.4					
G174.0	6.4	6.4	6.6	6.5	6.4					
G175.0	6.6	6.5	6.6	6.6	6.6					
G176.0	6.6	6.5	6.7	6.6	6.6					
G177.0	6.7	6.6	6.7	6.6	6.7					
G178.0	6.6	6.5	6.8	6.6	6.6					
G179.0	6.6	6.6	6.7	6.6	6.6					
G180.0	6.7	6.6	6.7	6.6	6.7					

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

Gamma Plane (°):0.0-180.0:1.0  
Test Device: GPM-1800B  
Distance: 8.607 m [K=1.0000]  
Humidity: 65  
Inspector:

## LED Average Luminance Report

Avg.L	cd/m <sup>2</sup>
L 0-180(65) av	33833.61
L 0-180(75) av	19973.19
L 0-180(85) av	15675.39
L 90-270(65) av	33249.62
L 90-270(75) av	19945.95
L 90-270(85) av	17166.59
L 45(65) av	33541.61
L 45(75) av	19959.57
L 45(85) av	16420.99

Standard: GB/T 29293-2012