

Report No.: 21

Test Time: 2019/6/25 17:39

Luminaire Property

Luminaire Manufacturer: HAVIT COMMERCIAL

Luminaire Description: HCP-89X3004-5K

Current: 0.125 A

Power Factor: 0.985

Voltage: 220.5 V

Power: 27.21 W

Photometric Results

CIE Class: Direct

Measurement Flux: 2212.2 lm

Downward Ratio: 94%

Horizontal Diffuse Angle(50%): H123.1

Vertical Diffuse Angle(50%): V100.2

Luminaire Efficacy Rating (LER): 81.35

Max. Intensity: 755.64 cd

S/MH(C0/C180): 1.28

Total Rated Lamp Lumens: 2212.2 lm

Efficiency: 100%

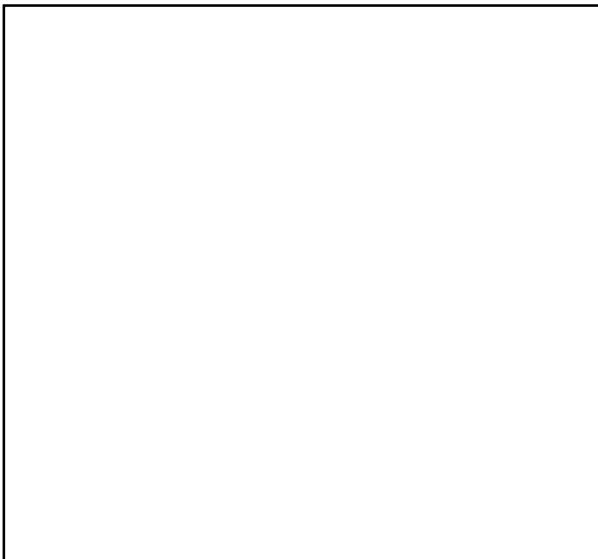
Upward Ratio: 6%

Central Intensity: 755.58 cd

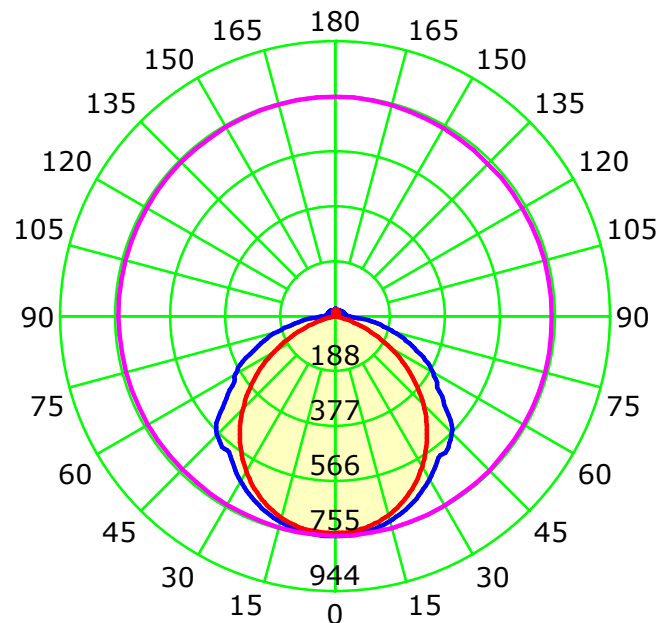
Pos of Max. Intensity: H180 V1

S/MH(C90/C270): 1.21

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 111.6°

— C0-C180 — C90-C270 — G1

C Plane (°):0.0-360.0: 45.0

Test Lab: Inventfine instruments

Test Type: TYPE C

Temperature: 26

Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0

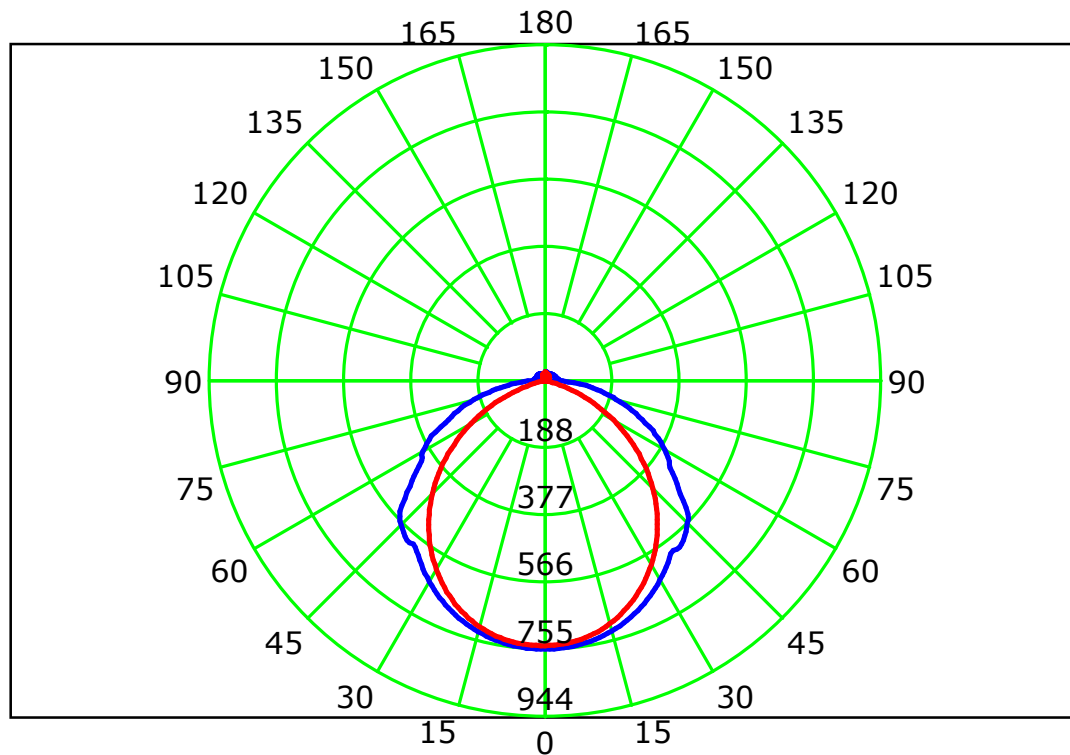
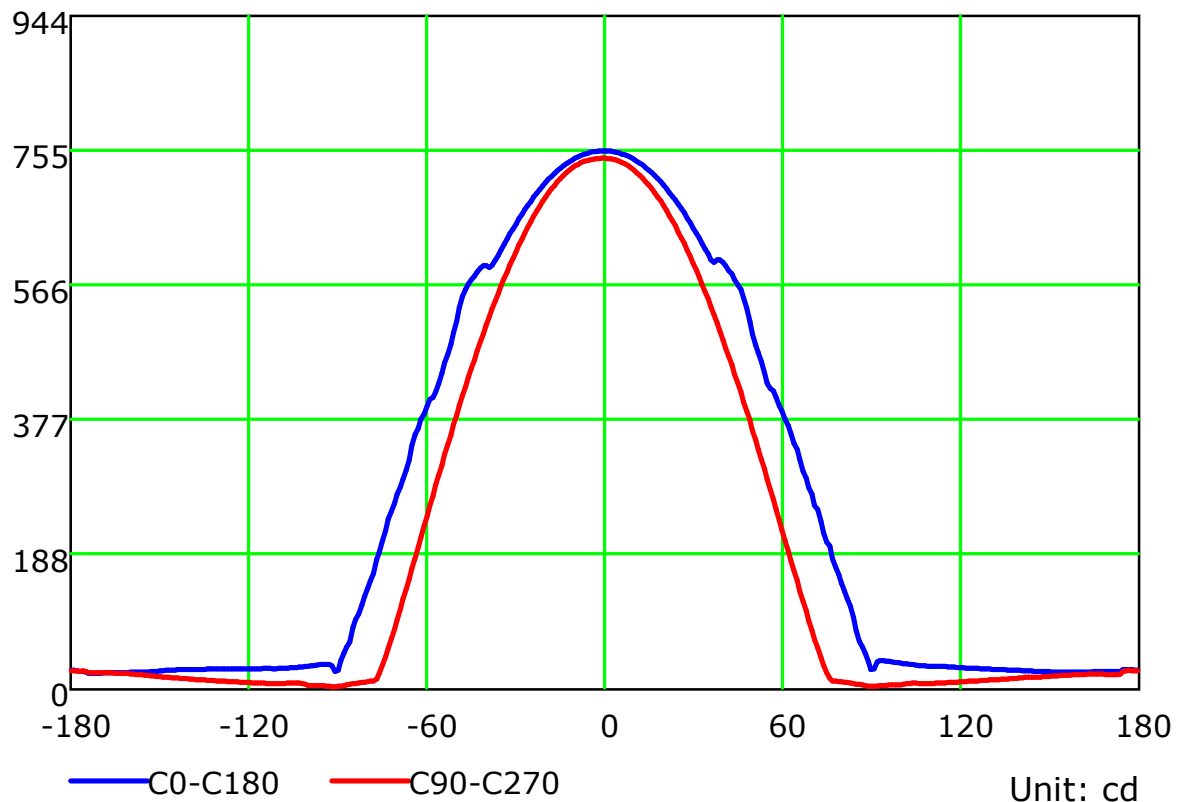
Test Device: GPM-1800B

Distance: 8.509 m

Humidity: 55

Inspector:

Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
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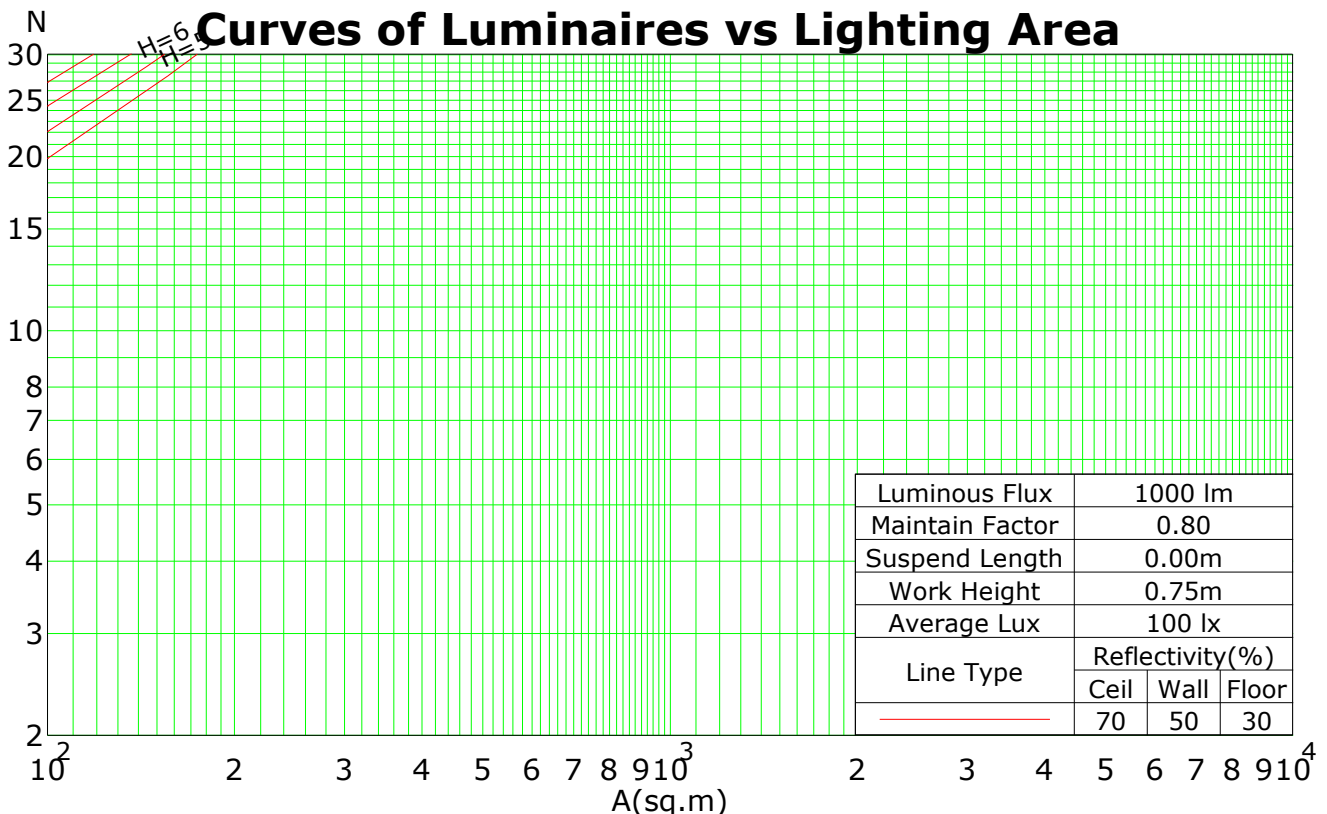
Coefficients Of Utilization - Zonal Cavity Method

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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	107	103	98	95	104	100	96	93	95	91	89	90	87	85	85	83	81	79
2	98	90	83	77	95	87	81	76	83	78	73	79	74	71	75	71	68	66
3	89	79	71	64	86	77	69	63	73	67	62	69	64	60	66	62	58	56
4	82	70	61	54	79	68	60	54	65	58	52	62	56	51	59	54	50	48
5	75	62	53	47	73	61	53	46	58	51	45	56	49	44	53	48	43	41
6	69	56	47	41	67	55	47	41	53	45	40	50	44	39	48	43	38	36
7	64	51	42	36	62	50	42	36	48	40	35	46	39	35	44	38	34	32
8	60	46	38	32	58	45	37	32	44	37	31	42	36	31	40	35	30	28
9	56	43	34	29	54	42	34	29	40	33	28	39	32	28	37	32	27	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	23

Spacing Criteria (0-180): 1.28

Spacing Criteria (90-270): 1.21

Spacing Criteria (Diagonal): 1.37



C Plane (°):0.0-360.0: 45.0

Test Lab: Inventfine instruments

Test Type: TYPE C

Temperature: 26

Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0

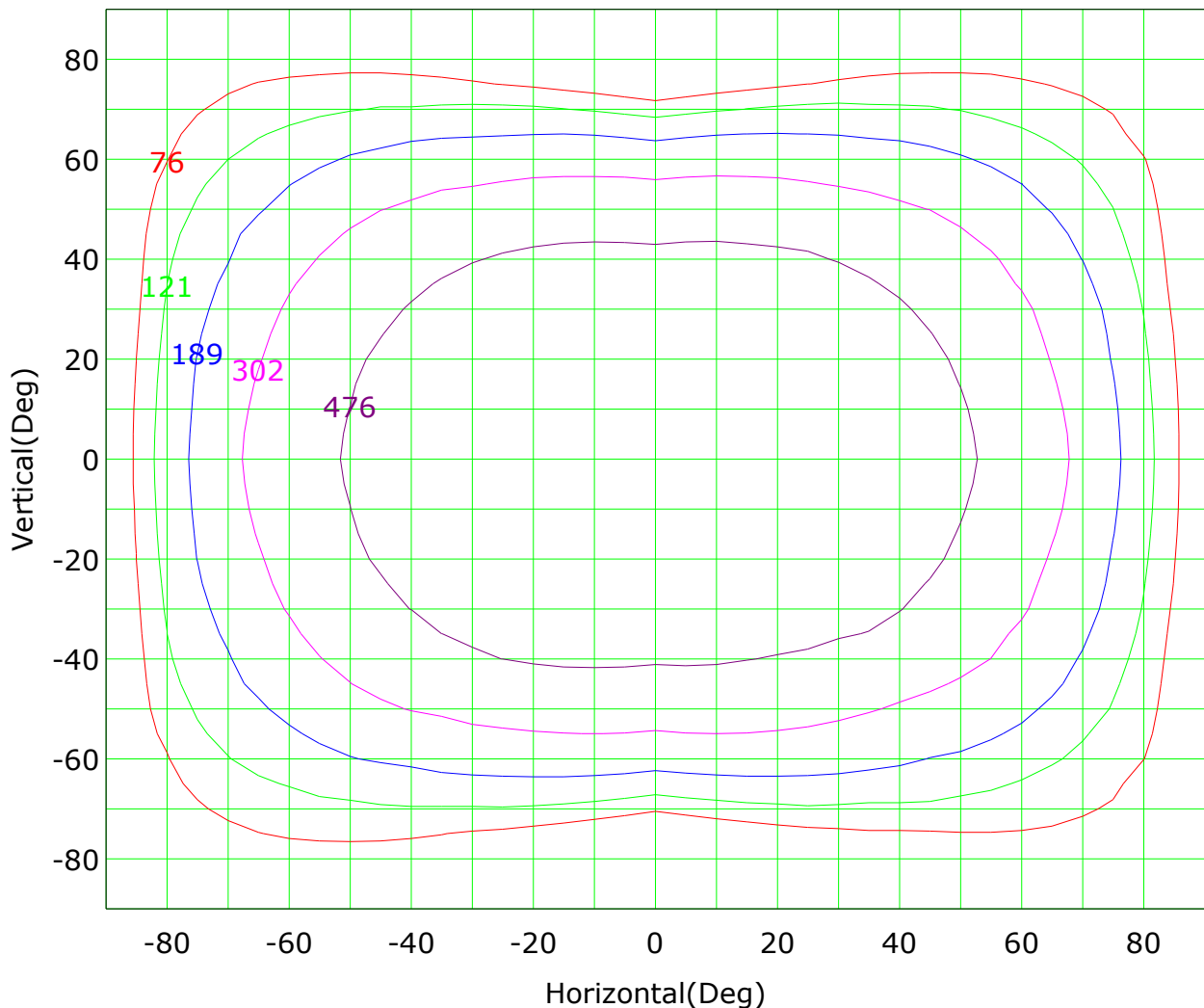
Test Device: GPM-1800B

Distance: 8.509 m

Humidity: 55

Inspector:

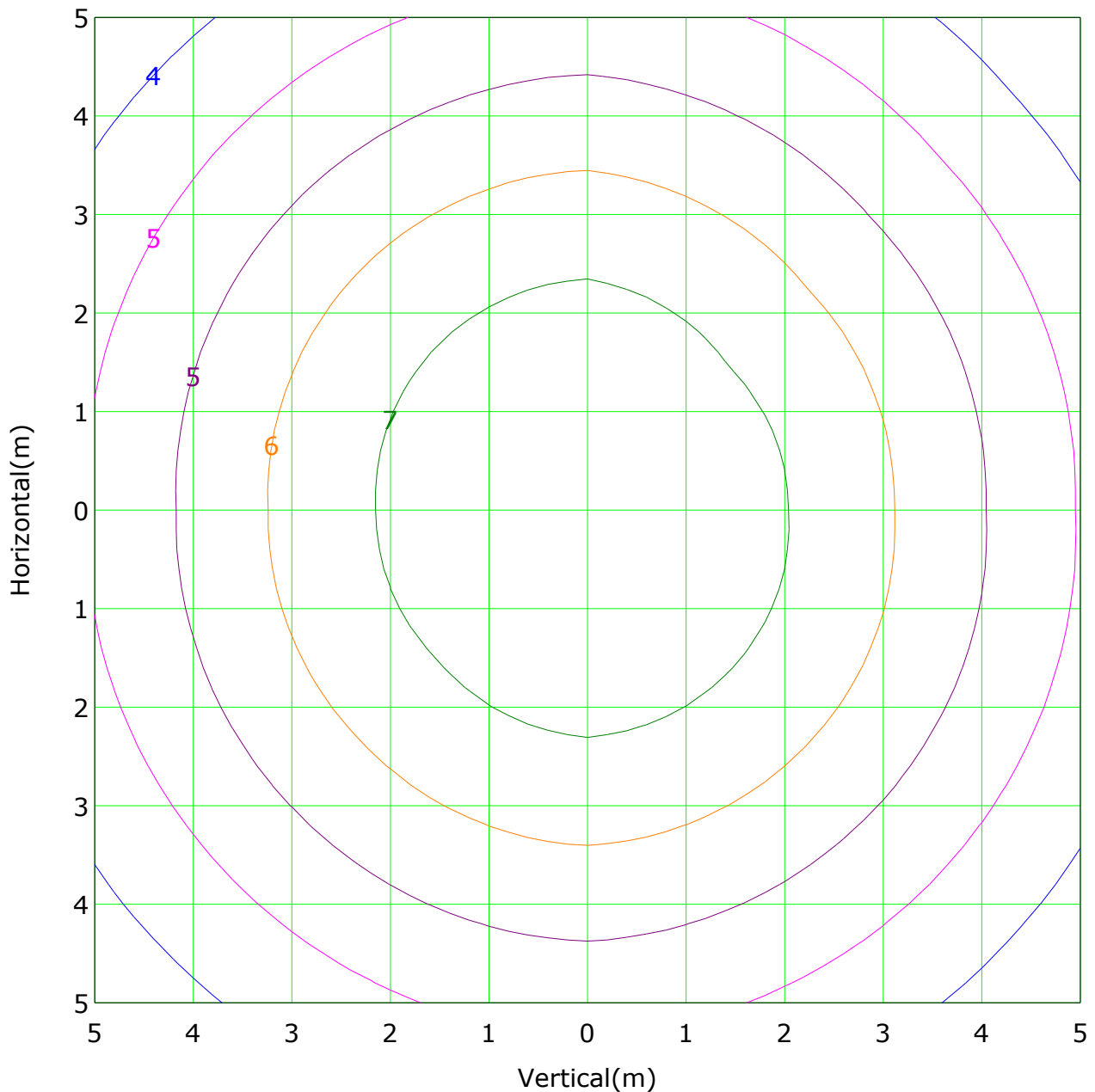
Isocandela (rectangle)



Imax (100%): 756 cd

(10%):	76 cd	(16%):	121 cd
(25%):	189 cd	(40%):	302 cd
(63%):	476 cd	(100%):	756 cd

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 7.6 lx

(30%): 2.3 lx	(40%): 3.0 lx
(50%): 3.8 lx	(60%): 4.5 lx
(70%): 5.3 lx	(80%): 6.0 lx
(90%): 6.8 lx	(100%): 7.6 lx
(120%): 9.1 lx	(150%): 11.3 lx

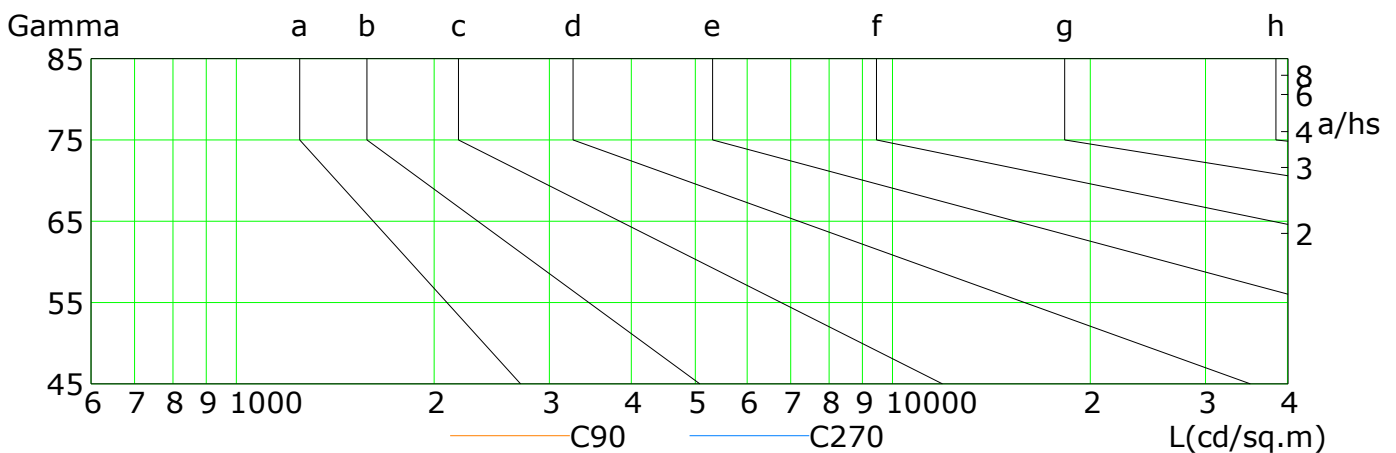
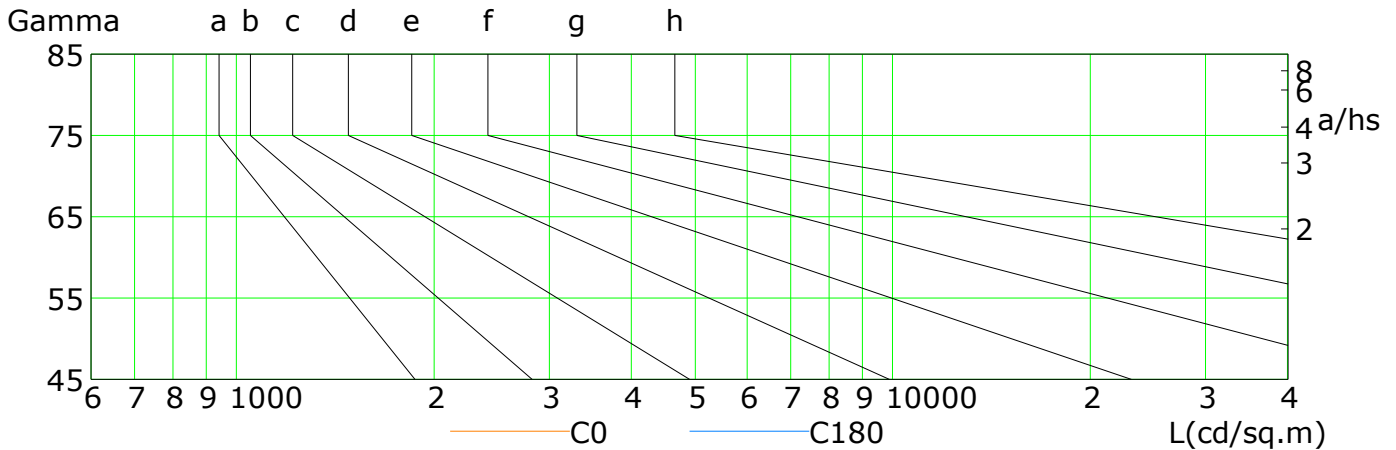
C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
Test Type: TYPE C
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Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
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Humidity: 55
Inspector:

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

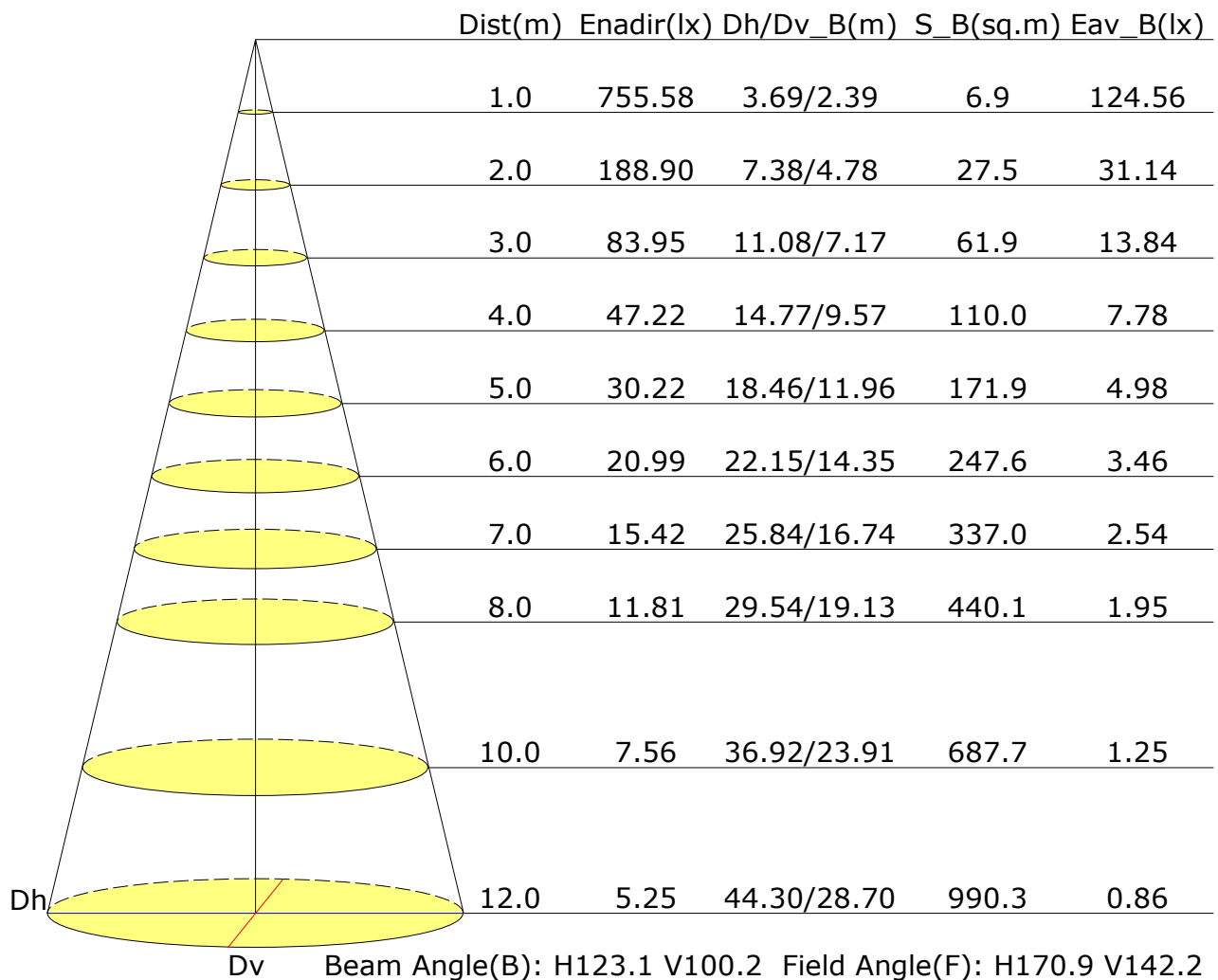


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	567	498	429	390	336	273	205	148	81
C90	429	362	294	222	151	82	22	9	6
C180	575	516	443	397	341	273	207	141	86
C270	450	384	314	242	168	96	33	9	7

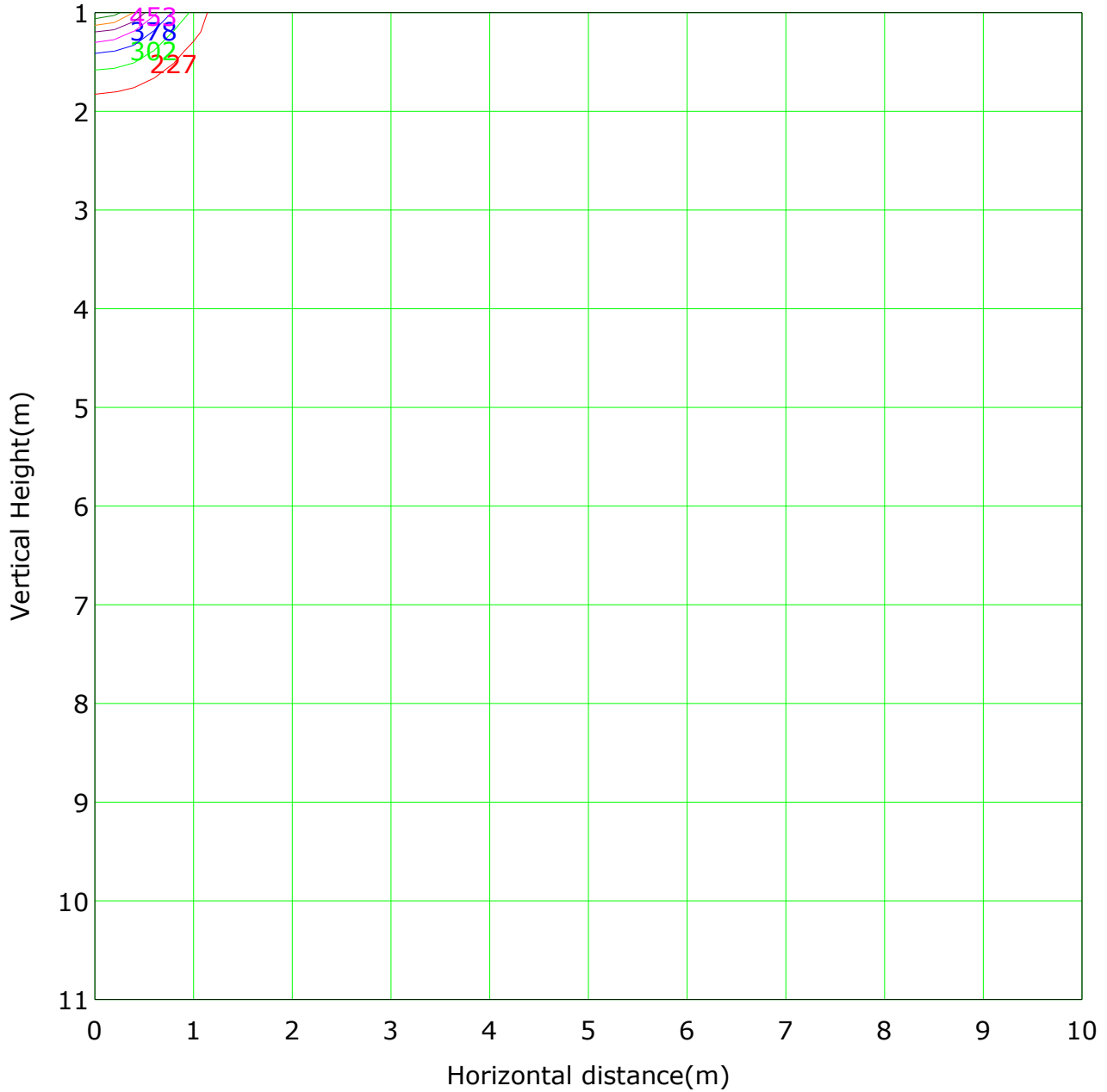
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Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
Inspector:

Illuminance at a Distance

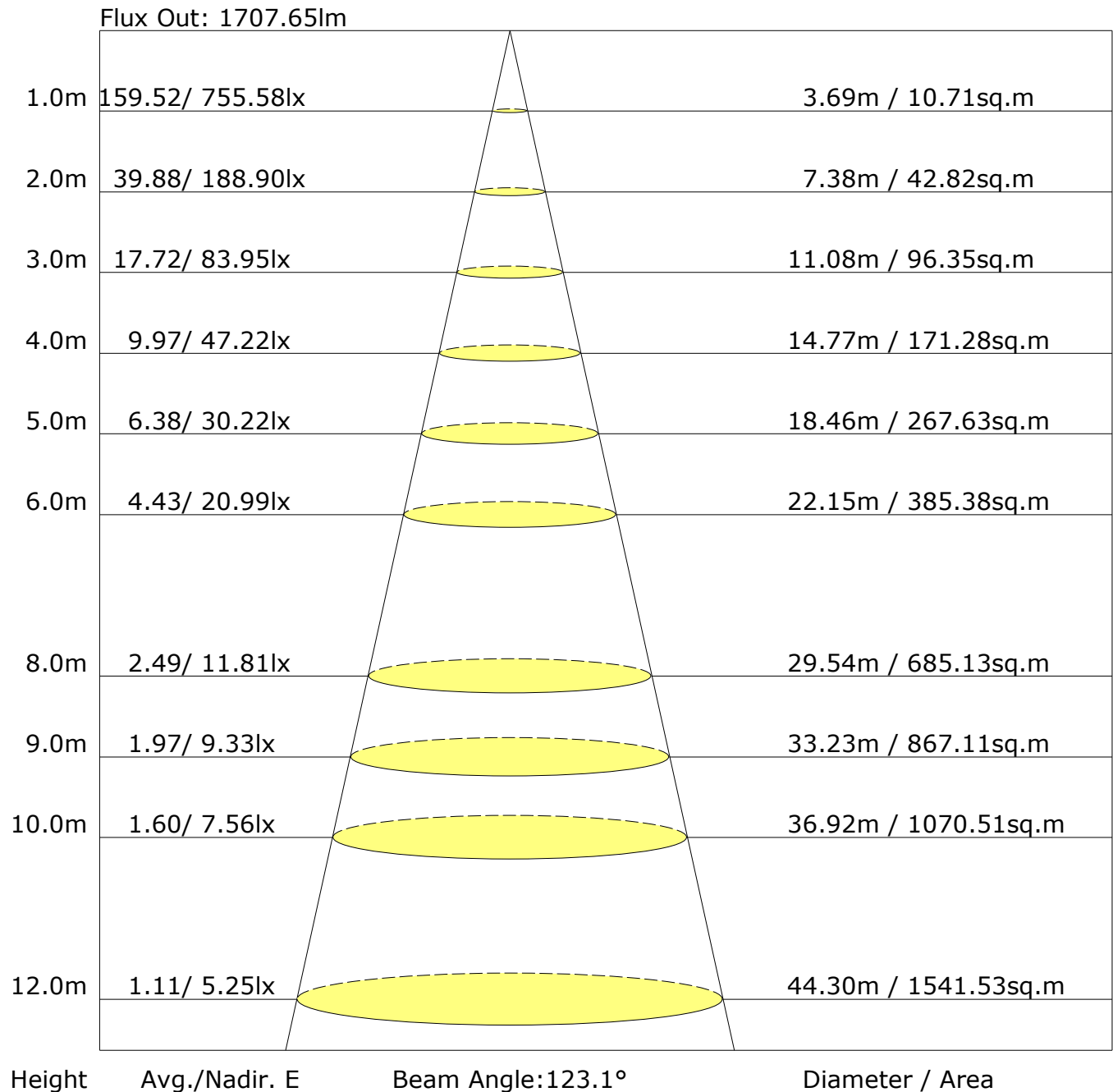


Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 755.6 lx
 (30%): 226.7 lx (40%): 302.2 lx
 (50%): 377.8 lx (60%): 453.3 lx
 (70%): 528.9 lx (80%): 604.5 lx
 (90%): 680.0 lx (100%): 755.6 lx
 (120%): 906.7 lx (150%): 1133.4 lx

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	-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.\$
Variations with the observer position at spacings:										
S=1.0H	-1.\$/-1.\$					-1.\$/-1.\$				
S=1.5H	-1.\$/-1.\$					-1.\$/-1.\$				
S=2.0H	-1.\$/-1.\$					-1.\$/-1.\$				

Calculate in accordance with CIE Pub.117. The table is revised with 2212lm ($8\log(F/F_0) = 2.8$).

Zonal Lumen

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	748.0	0.7	0.7	0.03	0.03
1.0-2.0	747.8	2.1	2.9	0.10	0.13
2.0-3.0	747.3	3.6	6.4	0.16	0.29
3.0-4.0	746.6	5.0	11.4	0.23	0.52
4.0-5.0	745.7	6.4	17.9	0.29	0.81
5.0-6.0	744.5	7.8	25.7	0.35	1.16
6.0-7.0	743.1	9.2	34.9	0.42	1.58
7.0-8.0	741.4	10.6	45.5	0.48	2.06
8.0-9.0	739.4	12.0	57.5	0.54	2.60
9.0-10.0	737.2	13.3	70.8	0.60	3.20
10.0-11.0	734.6	14.7	85.5	0.66	3.87
11.0-12.0	731.7	16.0	101.5	0.72	4.59
12.0-13.0	728.5	17.3	118.8	0.78	5.37
13.0-14.0	725.0	18.6	137.4	0.84	6.21
14.0-15.0	721.2	19.8	157.2	0.90	7.10
15.0-16.0	717.1	21.0	178.2	0.95	8.05
16.0-17.0	712.8	22.2	200.4	1.00	9.06
17.0-18.0	708.1	23.3	223.7	1.06	10.11
18.0-19.0	703.0	24.5	248.2	1.11	11.22
19.0-20.0	697.8	25.5	273.7	1.15	12.37
20.0-21.0	692.3	26.6	300.3	1.20	13.58
21.0-22.0	686.5	27.6	327.9	1.25	14.82
22.0-23.0	680.4	28.6	356.5	1.29	16.11
23.0-24.0	674.0	29.5	385.9	1.33	17.45
24.0-25.0	667.3	30.3	416.3	1.37	18.82
25.0-26.0	660.4	31.2	447.5	1.41	20.23
26.0-27.0	653.2	32.0	479.4	1.44	21.67
27.0-28.0	645.7	32.7	512.1	1.48	23.15
28.0-29.0	638.0	33.4	545.5	1.51	24.66
29.0-30.0	630.1	34.0	579.5	1.54	26.20
30.0-31.0	621.9	34.6	614.1	1.56	27.76
31.0-32.0	613.4	35.1	649.3	1.59	29.35
32.0-33.0	604.8	35.6	684.9	1.61	30.96
33.0-34.0	596.0	36.1	721.0	1.63	32.59
34.0-35.0	587.1	36.5	757.5	1.65	34.24
35.0-36.0	577.9	36.8	794.3	1.66	35.90

C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
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	568.7	37.1	831.4	1.68	37.58
37.0-38.0	560.2	37.4	868.8	1.69	39.27
38.0-39.0	552.1	37.7	906.5	1.70	40.98
39.0-40.0	544.2	38.0	944.4	1.72	42.69
40.0-41.0	537.0	38.2	982.7	1.73	44.42
41.0-42.0	530.4	38.5	1021.2	1.74	46.16
42.0-43.0	523.7	38.8	1060.0	1.75	47.92
43.0-44.0	516.6	39.0	1099.0	1.76	49.68
44.0-45.0	509.2	39.1	1138.1	1.77	51.45
45.0-46.0	500.7	39.2	1177.3	1.77	53.22
46.0-47.0	490.4	39.0	1216.3	1.76	54.98
47.0-48.0	478.0	38.6	1255.0	1.75	56.73
48.0-49.0	463.3	38.1	1293.0	1.72	58.45
49.0-50.0	447.4	37.3	1330.3	1.69	60.14
50.0-51.0	432.2	36.6	1366.9	1.65	61.79
51.0-52.0	418.0	35.9	1402.8	1.62	63.41
52.0-53.0	404.5	35.2	1437.9	1.59	65.00
53.0-54.0	391.1	34.5	1472.4	1.56	66.56
54.0-55.0	377.1	33.7	1506.1	1.52	68.08
55.0-56.0	363.4	32.8	1538.9	1.48	69.57
56.0-57.0	350.9	32.1	1571.0	1.45	71.02
57.0-58.0	338.7	31.3	1602.3	1.42	72.43
58.0-59.0	326.5	30.5	1632.9	1.38	73.81
59.0-60.0	315.2	29.8	1662.7	1.35	75.16
60.0-61.0	303.9	29.0	1691.7	1.31	76.47
61.0-62.0	293.2	28.3	1719.9	1.28	77.75
62.0-63.0	282.4	27.5	1747.4	1.24	78.99
63.0-64.0	270.3	26.5	1773.9	1.20	80.19
64.0-65.0	257.2	25.5	1799.4	1.15	81.34
65.0-66.0	242.1	24.2	1823.5	1.09	82.43
66.0-67.0	226.2	22.7	1846.3	1.03	83.46
67.0-68.0	212.1	21.5	1867.8	0.97	84.43
68.0-69.0	199.5	20.4	1888.1	0.92	85.35
69.0-70.0	187.7	19.3	1907.4	0.87	86.22
70.0-71.0	176.8	18.3	1925.7	0.83	87.05
71.0-72.0	165.9	17.2	1942.9	0.78	87.83

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Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
Inspector:

Zonal Lumen (Continue 2)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	153.5	16.1	1959.0	0.73	88.55
73.0-74.0	139.4	14.7	1973.6	0.66	89.22
74.0-75.0	126.4	13.4	1987.0	0.60	89.82
75.0-76.0	115.7	12.3	1999.3	0.56	90.38
76.0-77.0	105.5	11.3	2010.5	0.51	90.88
77.0-78.0	95.5	10.2	2020.7	0.46	91.35
78.0-79.0	87.1	9.4	2030.1	0.42	91.77
79.0-80.0	80.4	8.7	2038.8	0.39	92.16
80.0-81.0	74.1	8.0	2046.8	0.36	92.52
81.0-82.0	67.6	7.3	2054.1	0.33	92.85
82.0-83.0	61.0	6.6	2060.7	0.30	93.15
83.0-84.0	54.1	5.9	2066.6	0.27	93.42
84.0-85.0	46.9	5.1	2071.7	0.23	93.65
85.0-86.0	39.2	4.3	2076.0	0.19	93.85
86.0-87.0	33.3	3.6	2079.7	0.16	94.01
87.0-88.0	29.4	3.2	2082.9	0.15	94.16
88.0-89.0	25.3	2.8	2085.7	0.13	94.28
89.0-90.0	21.1	2.3	2088.0	0.10	94.39
90.0-91.0	19.1	2.1	2090.1	0.09	94.48
91.0-92.0	20.2	2.2	2092.3	0.10	94.58
92.0-93.0	21.6	2.4	2094.7	0.11	94.69
93.0-94.0	21.8	2.4	2097.0	0.11	94.80
94.0-95.0	21.7	2.4	2099.4	0.11	94.90
95.0-96.0	21.6	2.4	2101.8	0.11	95.01
96.0-97.0	21.4	2.3	2104.1	0.11	95.12
97.0-98.0	21.1	2.3	2106.4	0.10	95.22
98.0-99.0	20.7	2.2	2108.6	0.10	95.32
99.0-100.0	20.5	2.2	2110.9	0.10	95.42
100.0-101.0	20.3	2.2	2113.0	0.10	95.52
101.0-102.0	20.3	2.2	2115.2	0.10	95.62
102.0-103.0	20.2	2.2	2117.4	0.10	95.72
103.0-104.0	20.1	2.1	2119.5	0.10	95.81
104.0-105.0	20.0	2.1	2121.7	0.10	95.91
105.0-106.0	19.9	2.1	2123.8	0.10	96.00
106.0-107.0	19.8	2.1	2125.8	0.09	96.10
107.0-108.0	19.6	2.0	2127.9	0.09	96.19

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Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
Inspector:

Zonal Lumen (Continue 3)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	19.4	2.0	2129.9	0.09	96.28
109.0-110.0	19.2	2.0	2131.9	0.09	96.37
110.0-111.0	19.1	2.0	2133.9	0.09	96.46
111.0-112.0	19.1	1.9	2135.8	0.09	96.55
112.0-113.0	19.1	1.9	2137.7	0.09	96.63
113.0-114.0	19.0	1.9	2139.6	0.09	96.72
114.0-115.0	19.0	1.9	2141.5	0.09	96.81
115.0-116.0	18.9	1.9	2143.4	0.08	96.89
116.0-117.0	18.8	1.8	2145.3	0.08	96.97
117.0-118.0	18.8	1.8	2147.1	0.08	97.06
118.0-119.0	18.7	1.8	2148.9	0.08	97.14
119.0-120.0	18.7	1.8	2150.7	0.08	97.22
120.0-121.0	18.6	1.8	2152.4	0.08	97.30
121.0-122.0	18.6	1.7	2154.2	0.08	97.38
122.0-123.0	18.6	1.7	2155.9	0.08	97.45
123.0-124.0	18.6	1.7	2157.6	0.08	97.53
124.0-125.0	18.6	1.7	2159.2	0.08	97.61
125.0-126.0	18.6	1.7	2160.9	0.07	97.68
126.0-127.0	18.6	1.6	2162.5	0.07	97.76
127.0-128.0	18.7	1.6	2164.2	0.07	97.83
128.0-129.0	18.7	1.6	2165.8	0.07	97.90
129.0-130.0	18.8	1.6	2167.4	0.07	97.97
130.0-131.0	18.9	1.6	2169.0	0.07	98.05
131.0-132.0	19.1	1.6	2170.5	0.07	98.12
132.0-133.0	19.2	1.5	2172.1	0.07	98.19
133.0-134.0	19.2	1.5	2173.6	0.07	98.26
134.0-135.0	19.3	1.5	2175.1	0.07	98.32
135.0-136.0	19.3	1.5	2176.6	0.07	98.39
136.0-137.0	19.4	1.5	2178.1	0.07	98.46
137.0-138.0	19.5	1.4	2179.5	0.07	98.52
138.0-139.0	19.5	1.4	2180.9	0.06	98.59
139.0-140.0	19.6	1.4	2182.3	0.06	98.65
140.0-141.0	19.7	1.4	2183.7	0.06	98.71
141.0-142.0	19.8	1.4	2185.0	0.06	98.77
142.0-143.0	19.8	1.3	2186.4	0.06	98.83
143.0-144.0	19.8	1.3	2187.7	0.06	98.89

C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
Inspector:

Zonal Lumen (Continue 4)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
144.0-145.0	19.7	1.3	2188.9	0.06	98.95
145.0-146.0	19.6	1.2	2190.1	0.06	99.00
146.0-147.0	19.6	1.2	2191.3	0.05	99.06
147.0-148.0	19.6	1.2	2192.5	0.05	99.11
148.0-149.0	19.6	1.1	2193.6	0.05	99.16
149.0-150.0	19.7	1.1	2194.7	0.05	99.21
150.0-151.0	19.7	1.1	2195.8	0.05	99.26
151.0-152.0	19.7	1.0	2196.8	0.05	99.30
152.0-153.0	19.8	1.0	2197.8	0.05	99.35
153.0-154.0	19.9	1.0	2198.8	0.04	99.39
154.0-155.0	20.0	0.9	2199.7	0.04	99.44
155.0-156.0	20.1	0.9	2200.6	0.04	99.48
156.0-157.0	20.2	0.9	2201.5	0.04	99.52
157.0-158.0	20.3	0.9	2202.4	0.04	99.56
158.0-159.0	20.5	0.8	2203.2	0.04	99.59
159.0-160.0	20.6	0.8	2204.0	0.04	99.63
160.0-161.0	20.8	0.8	2204.7	0.03	99.66
161.0-162.0	20.9	0.7	2205.5	0.03	99.70
162.0-163.0	21.1	0.7	2206.2	0.03	99.73
163.0-164.0	21.2	0.7	2206.8	0.03	99.76
164.0-165.0	21.3	0.6	2207.4	0.03	99.79
165.0-166.0	21.4	0.6	2208.0	0.03	99.81
166.0-167.0	21.5	0.5	2208.6	0.02	99.84
167.0-168.0	21.5	0.5	2209.1	0.02	99.86
168.0-169.0	21.6	0.5	2209.6	0.02	99.88
169.0-170.0	21.6	0.4	2210.0	0.02	99.90
170.0-171.0	21.6	0.4	2210.4	0.02	99.92
171.0-172.0	21.6	0.4	2210.7	0.02	99.93
172.0-173.0	21.6	0.3	2211.0	0.01	99.95
173.0-174.0	21.9	0.3	2211.3	0.01	99.96
174.0-175.0	23.4	0.2	2211.6	0.01	99.97
175.0-176.0	25.0	0.2	2211.8	0.01	99.98
176.0-177.0	25.6	0.2	2212.0	0.01	99.99
177.0-178.0	25.9	0.1	2212.1	0.01	100.00
178.0-179.0	26.0	0.1	2212.1	0.00	100.00
179.0-180.0	26.1	0.0	2212.2	0.00	100.00

C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
Inspector:

Candlepower Table

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G0.0	755.6	749.2	744.8	742.6	755.6	749.2	744.8	742.6	755.6	
G1.0	755.3	748.8	744.6	742.4	755.6	749.1	745.0	742.8	755.3	
G2.0	754.8	748.3	744.1	742.0	755.2	748.9	744.8	742.5	754.8	
G3.0	754.2	747.5	743.5	741.2	754.6	748.5	744.4	742.0	754.2	
G4.0	753.3	746.6	742.5	740.2	754.0	747.7	743.7	741.3	753.3	
G5.0	752.2	745.7	741.0	739.0	753.0	746.9	742.9	740.6	752.2	
G6.0	750.9	744.3	739.1	737.5	751.9	745.7	741.9	739.6	750.9	
G7.0	749.5	742.7	736.9	735.6	750.5	744.5	740.7	738.4	749.5	
G8.0	747.9	740.3	734.5	733.4	748.8	743.0	738.8	736.8	747.9	
G9.0	745.7	738.2	731.5	730.8	747.3	741.2	736.7	735.3	745.7	
G10.0	743.7	735.5	728.5	728.1	745.3	739.2	734.3	733.3	743.7	
G11.0	741.2	732.7	725.0	725.1	742.8	736.8	731.4	731.1	741.2	
G12.0	738.2	729.5	721.1	721.6	740.2	734.2	728.0	728.2	738.2	
G13.0	735.2	726.1	716.7	718.1	737.4	731.4	724.5	725.4	735.2	
G14.0	732.0	722.0	712.3	714.2	734.3	727.7	720.8	721.8	732.0	
G15.0	728.6	717.8	707.4	710.2	731.0	724.3	716.4	718.3	728.6	
G16.0	724.5	713.4	702.5	705.7	727.4	720.3	711.8	714.6	724.5	
G17.0	720.7	708.9	696.5	700.7	723.8	716.2	707.0	710.4	720.7	
G18.0	716.5	703.5	690.8	695.7	719.4	711.2	702.0	705.7	716.5	
G19.0	711.9	698.2	684.8	690.5	715.3	706.5	695.9	701.0	711.9	
G20.0	707.2	692.3	678.6	684.5	710.9	701.5	690.2	696.1	707.2	
G21.0	702.5	686.6	671.4	678.8	706.2	695.7	684.1	690.3	702.5	
G22.0	697.0	680.8	664.5	672.3	701.2	690.0	677.7	684.8	697.0	
G23.0	691.7	674.0	657.3	666.0	695.5	684.2	670.3	679.0	691.7	
G24.0	686.3	667.4	649.7	658.6	690.1	678.2	663.1	672.2	686.3	
G25.0	680.6	659.9	641.2	652.0	684.5	671.2	655.8	666.0	680.6	
G26.0	674.0	652.8	633.1	645.0	678.9	664.5	648.3	659.4	674.0	
G27.0	667.6	645.3	624.4	636.7	672.8	657.4	639.5	652.3	667.6	
G28.0	661.1	637.6	615.6	628.9	666.6	649.6	631.3	644.5	661.1	
G29.0	654.3	628.8	606.7	621.0	659.5	642.1	622.9	637.2	654.3	
G30.0	647.5	620.8	597.7	612.4	652.7	634.4	614.2	629.6	647.5	
G31.0	640.0	611.8	588.5	603.5	645.8	626.4	604.3	621.5	640.0	
G32.0	633.1	603.3	578.1	594.9	638.8	617.3	595.0	612.5	633.1	
G33.0	625.2	593.7	568.4	586.3	631.7	608.9	585.6	604.3	625.2	
G34.0	618.0	585.0	557.3	576.6	623.7	600.3	575.8	595.8	618.0	
G35.0	610.5	575.0	547.1	567.5	616.2	591.4	565.8	587.1	610.5	
G36.0	602.1	565.9	536.5	558.3	608.6	581.6	554.4	578.3	602.1	

C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
Inspector:

Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G37.0	598.8	555.4	524.7	548.0	601.0	572.5	544.1	569.3	598.8	
G38.0	602.0	546.0	513.5	538.3	593.7	563.1	533.2	559.9	602.0	
G39.0	602.2	535.2	502.4	527.8	591.6	553.5	522.3	549.7	602.2	
G40.0	598.9	527.8	490.0	517.9	594.3	543.1	510.2	540.6	598.9	
G41.0	594.2	526.9	478.4	507.5	594.0	533.0	498.9	536.6	594.2	
G42.0	587.2	525.9	466.6	497.3	590.6	526.3	487.4	535.8	587.2	
G43.0	582.3	521.0	454.8	487.2	585.4	525.6	474.3	531.6	582.3	
G44.0	574.2	513.0	441.4	483.1	580.0	524.7	462.3	524.9	574.2	
G45.0	567.3	503.7	429.2	482.4	574.7	519.9	450.1	515.9	567.3	
G46.0	560.6	492.9	416.7	478.2	568.0	510.1	436.5	504.8	560.6	
G47.0	549.5	481.0	402.8	471.5	560.5	494.3	424.0	494.4	549.5	
G48.0	534.8	464.5	390.0	460.6	551.1	479.1	411.3	479.3	534.8	
G49.0	516.1	445.5	377.1	443.3	535.1	465.2	397.0	462.7	516.1	
G50.0	497.8	430.9	362.5	426.7	516.2	450.7	384.0	447.2	497.8	
G51.0	482.8	415.4	349.2	412.1	500.1	436.4	370.8	432.7	482.8	
G52.0	471.6	400.2	336.0	398.1	483.1	424.0	356.2	419.9	471.6	
G53.0	459.4	388.0	321.1	384.7	469.1	411.2	342.6	406.9	459.4	
G54.0	443.4	375.1	307.7	371.4	457.4	395.9	329.1	394.3	443.4	
G55.0	428.8	360.0	294.1	357.5	442.9	382.5	313.9	380.0	428.8	
G56.0	421.8	346.0	279.0	343.7	428.9	369.5	300.0	365.5	421.8	
G57.0	418.3	334.3	265.3	330.7	415.8	356.6	286.0	353.6	418.3	
G58.0	409.0	319.5	251.4	317.1	409.1	342.2	270.5	340.4	409.0	
G59.0	397.1	311.2	236.2	304.2	406.0	328.0	256.4	326.2	397.1	
G60.0	389.9	305.9	222.3	290.1	397.0	315.2	242.1	315.0	389.9	
G61.0	378.5	297.0	206.9	278.0	385.7	301.2	227.9	309.5	378.5	
G62.0	369.4	287.1	192.9	270.3	378.3	295.1	212.3	300.6	369.4	
G63.0	358.0	273.7	179.1	261.8	365.6	287.6	198.2	287.9	358.0	
G64.0	343.9	257.9	165.2	253.7	356.4	279.3	182.6	273.9	343.9	
G65.0	335.6	240.9	151.3	240.4	341.1	263.4	168.4	260.8	335.6	
G66.0	321.6	224.4	136.3	224.7	322.0	245.5	154.5	243.0	321.6	
G67.0	305.1	208.3	122.8	209.5	306.1	231.0	139.0	224.7	305.1	
G68.0	295.8	196.6	109.3	196.0	293.9	219.0	125.1	211.4	295.8	
G69.0	282.5	189.7	94.8	181.5	283.1	203.9	111.3	198.7	282.5	
G70.0	273.2	181.9	81.7	169.2	273.1	190.2	96.3	192.8	273.2	
G71.0	257.2	171.7	69.2	162.4	260.0	182.6	82.9	183.8	257.2	
G72.0	251.3	159.3	56.8	153.6	249.0	173.9	69.8	170.2	251.3	
G73.0	235.5	141.4	43.8	138.1	238.2	161.0	56.1	158.4	235.5	

C Plane (°):0.0-360.0: 45.0

Test Lab: Inventfine instruments

Test Type: TYPE C

Temperature: 26

Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 8.509 m

Humidity: 55

Inspector:

Candlepower Table (Continue 2)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G74.0	219.5	131.5	32.6	123.0	222.2	143.0	44.1	141.6	219.5	
G75.0	205.1	121.5	22.3	114.6	206.9	132.4	32.7	129.2	205.1	
G76.0	199.8	110.8	14.0	105.9	191.6	122.3	21.4	120.8	199.8	
G77.0	182.0	99.8	10.6	92.9	181.5	111.7	13.2	110.3	182.0	
G78.0	170.7	91.1	10.2	83.3	161.4	100.1	10.4	98.9	170.7	
G79.0	159.6	84.2	9.7	72.5	150.3	90.7	10.0	91.0	159.6	
G80.0	148.1	77.7	9.2	66.8	140.7	83.6	9.5	82.7	148.1	
G81.0	136.2	72.7	8.7	61.7	129.0	77.7	8.9	71.7	136.2	
G82.0	126.8	64.1	8.1	55.8	117.0	69.4	8.4	64.9	126.8	
G83.0	116.0	57.3	7.5	50.5	104.8	58.7	7.8	58.4	116.0	
G84.0	99.2	45.8	6.8	44.7	96.4	51.2	7.2	53.8	99.2	
G85.0	81.3	37.5	6.2	37.9	85.8	43.3	6.5	46.1	81.3	
G86.0	65.8	33.5	5.5	32.2	65.1	36.2	5.8	39.1	65.8	
G87.0	57.6	31.0	4.8	29.0	58.0	32.6	5.2	31.7	57.6	
G88.0	50.3	28.2	4.1	25.5	49.7	29.3	4.3	28.9	50.3	
G89.0	38.5	25.3	3.4	23.5	39.0	25.6	3.5	26.1	38.5	
G90.0	26.1	24.9	2.9	22.8	26.0	23.5	2.8	23.9	26.1	
G91.0	27.6	25.9	3.1	22.8	23.4	23.1	2.3	23.7	27.6	
G92.0	37.4	25.9	3.4	22.3	31.7	23.2	2.5	24.5	37.4	
G93.0	38.7	25.7	3.7	21.7	34.0	22.9	3.0	24.4	38.7	
G94.0	38.7	25.6	4.1	21.4	33.9	22.7	3.4	24.2	38.7	
G95.0	38.4	25.4	4.3	21.2	33.6	22.5	3.8	23.9	38.4	
G96.0	38.1	25.1	4.6	21.1	33.5	22.4	4.1	23.5	38.1	
G97.0	37.7	24.8	4.6	20.7	33.1	22.1	4.4	23.3	37.7	
G98.0	36.7	24.3	4.6	20.4	32.2	21.7	3.8	22.8	36.7	
G99.0	36.0	23.9	5.0	20.1	31.6	21.5	4.0	22.4	36.0	
G100.0	35.5	23.4	5.3	19.8	31.2	21.2	4.5	22.0	35.5	
G101.0	34.8	23.0	6.3	19.5	30.7	20.8	5.5	21.6	34.8	
G102.0	34.3	22.6	6.8	19.3	30.3	20.5	7.2	21.1	34.3	
G103.0	33.8	22.3	7.1	19.2	29.9	20.3	7.8	20.9	33.8	
G104.0	33.3	22.1	7.2	19.2	29.6	20.2	7.9	20.7	33.3	
G105.0	32.8	22.1	7.3	19.5	29.2	20.4	7.9	20.7	32.8	
G106.0	32.3	22.0	7.2	19.5	28.9	20.5	7.6	21.0	32.3	
G107.0	32.0	21.7	6.9	19.5	28.6	20.5	7.2	21.0	32.0	
G108.0	31.5	21.4	6.8	19.5	28.4	20.4	6.8	20.9	31.5	
G109.0	31.3	21.1	6.8	19.5	28.1	20.3	6.4	20.8	31.3	
G110.0	30.9	20.8	6.9	19.5	27.9	20.2	6.4	20.6	30.9	

C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
Inspector:

Candlepower Table (Continue 3)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G111.0	30.8	20.5	7.2	19.5	27.8	20.1	6.4	20.4	30.8	
G112.0	30.8	20.2	7.4	19.4	27.9	19.9	6.6	20.2	30.8	
G113.0	30.8	20.0	7.6	19.4	28.1	19.8	6.8	20.0	30.8	
G114.0	30.8	19.7	7.8	19.3	28.2	19.6	7.0	19.7	30.8	
G115.0	30.6	19.5	7.9	19.2	28.0	19.5	7.2	19.5	30.6	
G116.0	30.4	19.3	8.2	19.1	27.9	19.4	7.4	19.3	30.4	
G117.0	30.1	19.0	8.4	19.0	27.8	19.2	7.6	19.0	30.1	
G118.0	29.9	18.8	8.6	19.0	27.7	19.1	7.8	18.9	29.9	
G119.0	29.6	18.6	8.9	19.0	27.7	19.0	8.0	18.7	29.6	
G120.0	29.3	18.5	9.1	18.9	27.6	18.8	8.2	18.5	29.3	
G121.0	29.0	18.3	9.4	18.8	27.7	18.7	8.5	18.4	29.0	
G122.0	28.7	18.2	9.7	18.8	27.7	18.6	8.6	18.2	28.7	
G123.0	28.6	18.1	9.9	18.7	27.7	18.5	8.9	18.1	28.6	
G124.0	28.4	18.0	10.2	18.6	27.7	18.4	9.2	18.0	28.4	
G125.0	28.2	17.9	10.5	18.7	27.7	18.3	9.4	17.9	28.2	
G126.0	27.9	18.0	10.7	18.8	27.6	18.2	9.6	17.8	27.9	
G127.0	27.7	18.1	10.9	19.0	27.6	18.1	9.8	17.8	27.7	
G128.0	27.5	18.3	11.2	19.2	27.5	18.1	10.0	17.9	27.5	
G129.0	27.3	18.5	11.5	19.4	27.4	18.0	10.3	18.0	27.3	
G130.0	27.1	18.7	11.8	19.6	27.3	18.1	10.5	18.1	27.1	
G131.0	26.9	18.9	12.1	19.8	27.2	18.1	10.7	18.2	26.9	
G132.0	26.8	19.1	12.3	20.0	27.2	18.2	11.0	18.4	26.8	
G133.0	26.6	19.2	12.5	20.2	27.1	18.3	11.3	18.5	26.6	
G134.0	26.5	19.4	12.8	20.2	27.0	18.4	11.5	18.5	26.5	
G135.0	26.3	19.5	13.1	20.0	26.9	18.5	11.8	18.6	26.3	
G136.0	26.1	19.4	13.4	20.0	26.8	18.6	12.1	18.6	26.1	
G137.0	25.9	19.4	13.7	20.2	26.5	18.7	12.4	18.7	25.9	
G138.0	25.7	19.3	14.0	20.5	26.4	18.7	12.6	18.7	25.7	
G139.0	25.5	19.3	14.3	20.8	26.4	18.7	12.8	18.8	25.5	
G140.0	25.3	19.2	14.7	21.0	26.4	18.7	13.2	18.8	25.3	
G141.0	25.1	19.2	15.2	21.1	26.4	18.7	13.5	18.9	25.1	
G142.0	25.0	19.1	15.5	21.2	26.4	18.6	13.8	18.9	25.0	
G143.0	24.8	19.0	15.7	21.2	26.3	18.5	14.2	19.0	24.8	
G144.0	24.5	19.0	15.8	20.9	26.3	18.2	14.6	19.1	24.5	
G145.0	24.2	18.9	15.8	20.6	26.0	17.8	14.9	19.1	24.2	
G146.0	24.0	18.7	16.0	20.5	25.7	17.5	15.2	19.2	24.0	
G147.0	23.8	18.6	16.1	20.5	25.5	17.4	15.5	19.3	23.8	

C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.509 m
Humidity: 55
Inspector:

Candlepower Table (Continue 4)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G148.0	23.7	18.5	16.4	20.5	25.3	17.4	15.8	19.4	23.7	
G149.0	23.5	18.5	16.7	20.4	25.0	17.4	16.2	19.5	23.5	
G150.0	23.4	18.5	17.0	20.2	24.7	17.4	16.6	19.6	23.4	
G151.0	23.3	18.5	17.4	20.0	24.3	17.5	17.0	19.7	23.3	
G152.0	23.3	18.6	17.6	19.9	23.8	17.6	17.5	19.9	23.3	
G153.0	23.2	18.7	17.9	19.8	23.4	17.7	17.9	20.0	23.2	
G154.0	23.1	18.8	18.2	19.7	23.2	17.9	18.3	20.2	23.1	
G155.0	23.1	18.9	18.5	19.6	23.1	18.0	18.6	20.4	23.1	
G156.0	23.0	19.1	18.7	19.6	23.0	18.2	19.0	20.7	23.0	
G157.0	23.0	19.2	18.9	19.6	22.8	18.4	19.4	20.9	23.0	
G158.0	23.0	19.4	19.1	19.7	22.7	18.6	19.8	21.1	23.0	
G159.0	23.0	19.5	19.3	19.9	22.5	18.7	20.0	21.4	23.0	
G160.0	23.1	19.7	19.4	20.0	22.5	18.9	20.4	21.6	23.1	
G161.0	23.1	19.9	19.6	20.1	22.5	19.1	20.7	21.8	23.1	
G162.0	23.2	20.0	19.8	20.2	22.4	19.4	21.0	22.0	23.2	
G163.0	23.3	20.2	19.9	20.3	22.4	19.6	21.3	22.2	23.3	
G164.0	23.3	20.4	19.9	20.3	22.3	19.8	21.4	22.4	23.3	
G165.0	23.4	20.5	20.0	20.4	22.3	20.1	21.6	22.6	23.4	
G166.0	23.5	20.6	19.9	20.5	22.1	20.4	21.6	22.8	23.5	
G167.0	23.5	20.7	19.8	20.5	22.0	20.6	21.7	22.9	23.5	
G168.0	23.6	20.8	19.8	20.6	21.9	20.9	21.8	23.1	23.6	
G169.0	23.7	20.9	19.8	20.5	21.7	21.2	21.8	23.3	23.7	
G170.0	23.7	21.0	19.7	20.6	21.5	21.5	21.8	23.3	23.7	
G171.0	23.6	21.0	19.6	20.7	21.4	21.7	21.8	23.4	23.6	
G172.0	23.5	21.0	19.5	20.8	21.3	21.9	21.7	23.4	23.5	
G173.0	23.4	20.8	19.4	20.8	21.1	22.1	21.6	23.6	23.4	
G174.0	24.1	22.0	19.9	21.2	21.5	22.9	22.0	24.7	24.1	
G175.0	26.7	25.0	23.4	23.6	23.1	25.7	23.7	25.4	26.7	
G176.0	26.8	26.0	25.1	25.0	23.6	27.3	24.3	25.8	26.8	
G177.0	26.6	26.5	25.3	25.5	24.2	27.7	24.3	26.2	26.6	
G178.0	26.4	26.9	25.1	26.0	24.7	27.9	24.3	26.6	26.4	
G179.0	26.1	27.1	25.0	26.4	25.2	27.9	24.4	26.7	26.1	
G180.0	25.4	27.4	24.9	26.6	25.7	27.7	24.6	26.7	25.4	

C Plane (°):0.0-360.0: 45.0

Test Lab: Inventfine instruments

Test Type: TYPE C

Temperature: 26

Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 8.509 m

Humidity: 55

Inspector: