HAVIT COMMERCIAL
http://www.havitcommercial.com.au
Tel: 02 9381 8383
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Report No.: 8

Test Time: 2019/6/19 16:18

Luminaire Property

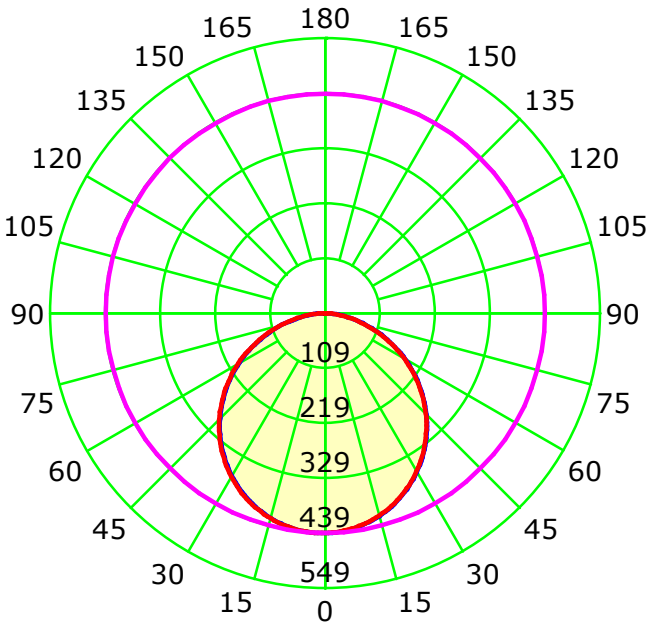
Luminaire Manufacturer: HAVIT COMMERCIAL
Luminaire Description: HCP-89X2004-5K
Voltage: 220V
Current: 0.083 A
Power: 17.70 W
Power Factor: 0.969

Photometric Results

CIE Class: Direct
Total Rated Lamp Lumens: 1251.5 lm
Measurement Flux: 1251.5 lm
Efficiency: 100%
Downward Ratio: 100%
Upward Ratio: 0%
Horizontal Diffuse Angle(50%): H112.1
Vertical Diffuse Angle(50%): V112.4
Luminaire Efficacy Rating (LER): 70.76
Central Intensity: 439.38 cd
Max. Intensity: 439.48 cd
Pos of Max. Intensity: H180 V1
S/MH(C0/C180): 1.25
S/MH(C90/C270): 1.26

Picture Of Luminaire

Luminous Intensity Distribution Curve

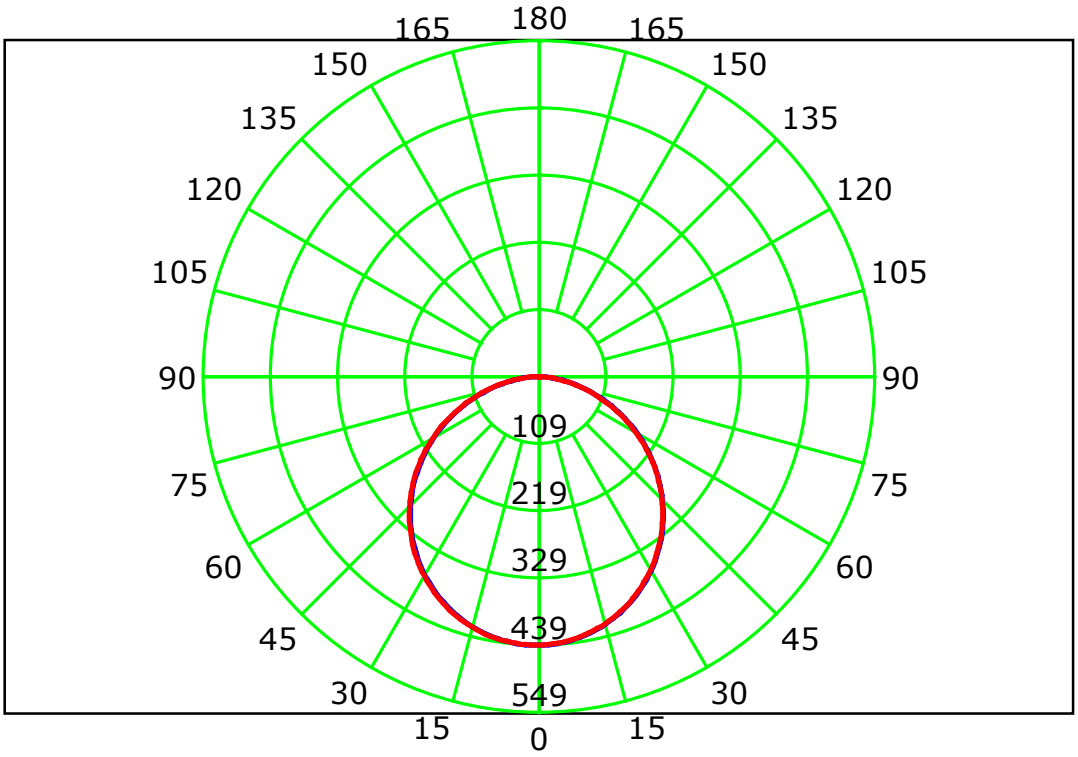


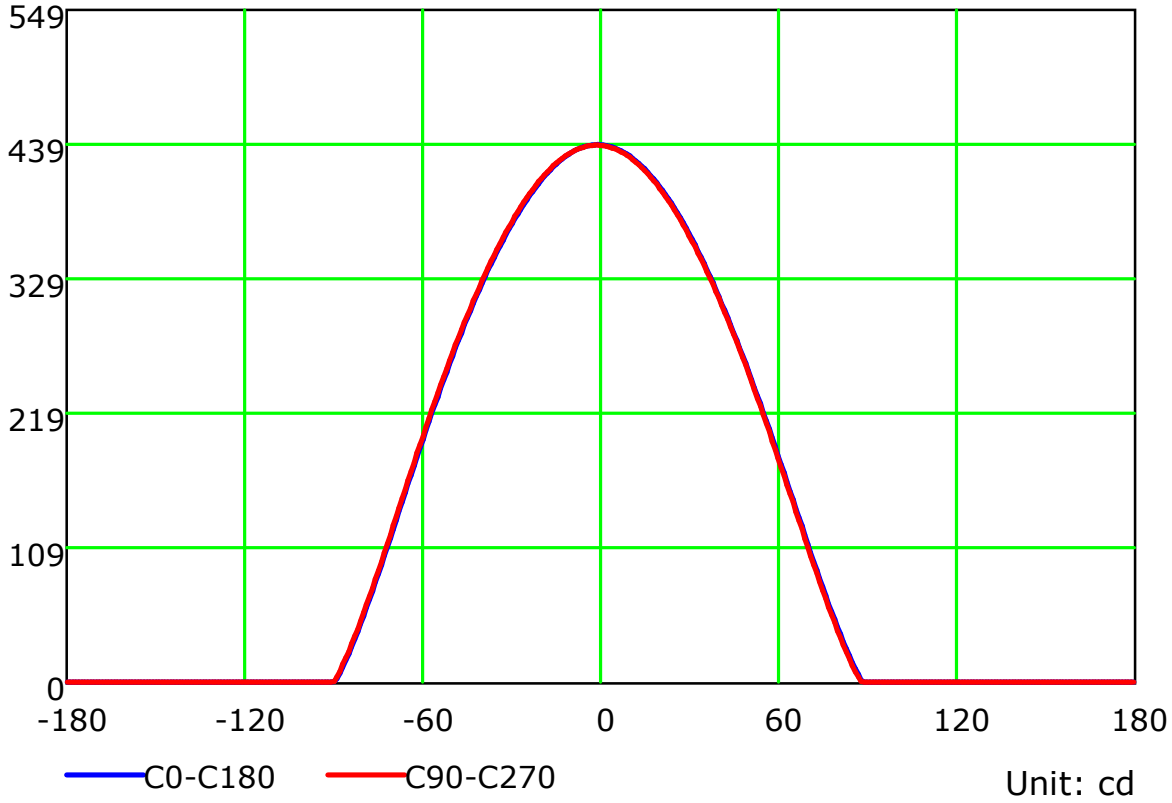
Unit: cd
Average Diffuse Angle(50%): 112.2°
C0-C180 C90-C270 G1

C Plane (°):0.0-360.0: 45.0
Gamma Plane (°):0.0-180.0:1.0
Test Lab: Inventfine instruments
Test Device: GPM-1800B
Test Type: TYPE C
Distance: 8.509 m
Temperature: 26
Humidity: 55
Operator: Jacky tang
Inspector:

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Luminous Intensity Distribution Curve





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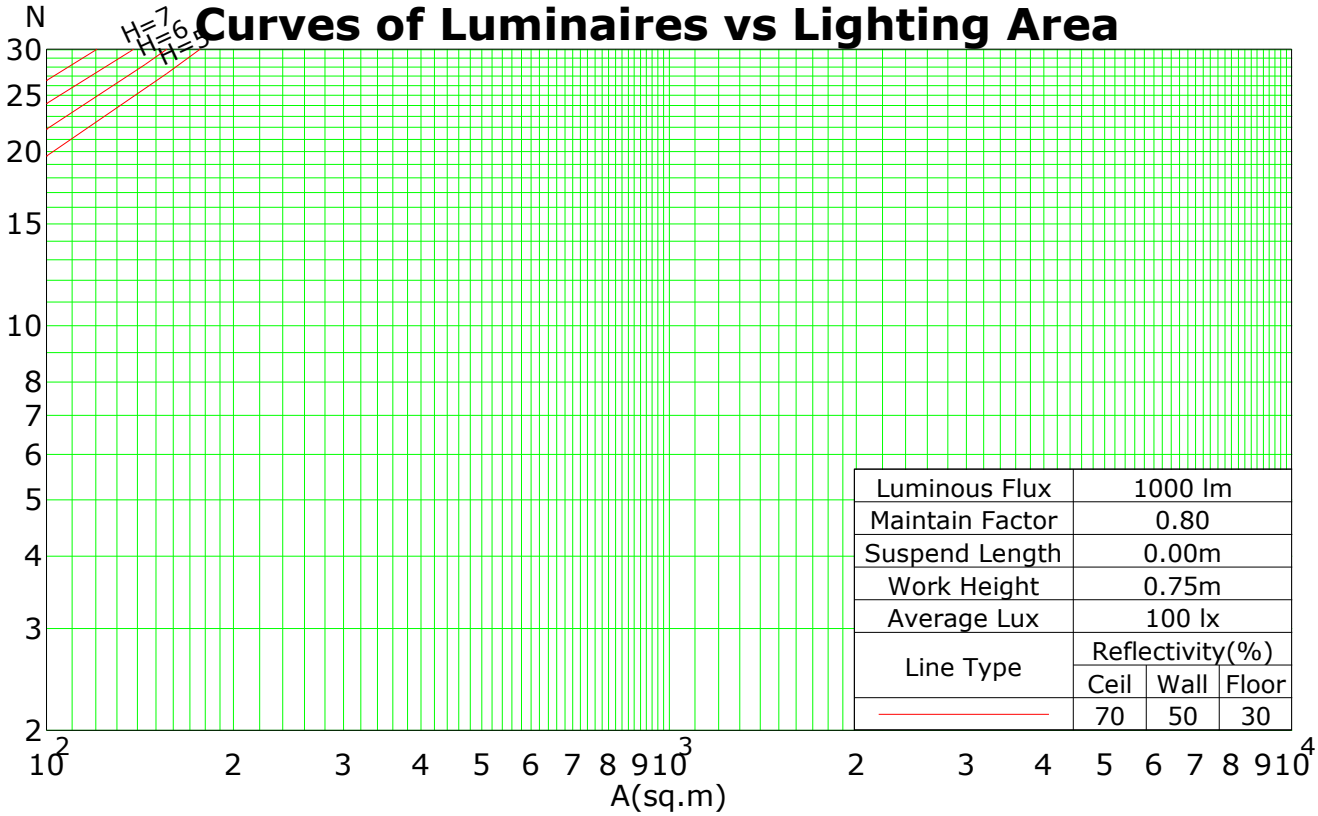
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Coefficients Of Utilization - Zonal Cavity Method

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

Spacing Criteria (0-180): 1.25
Spacing Criteria (90-270): 1.26
Spacing Criteria (Diagonal): 1.37

Curves of Luminaires vs Lighting Area

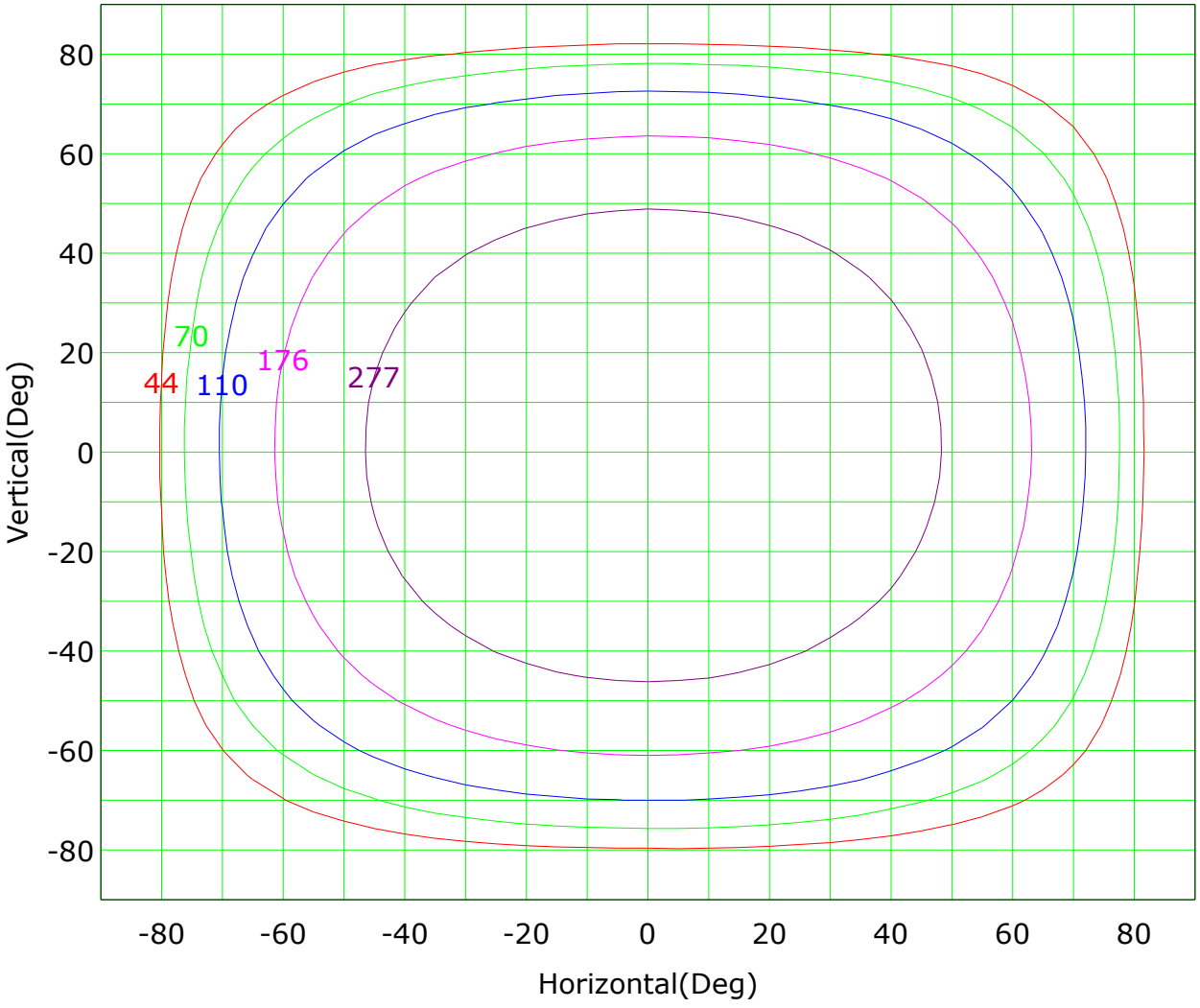


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Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
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Isocandela (rectangle)



Imax (100%): 439 cd

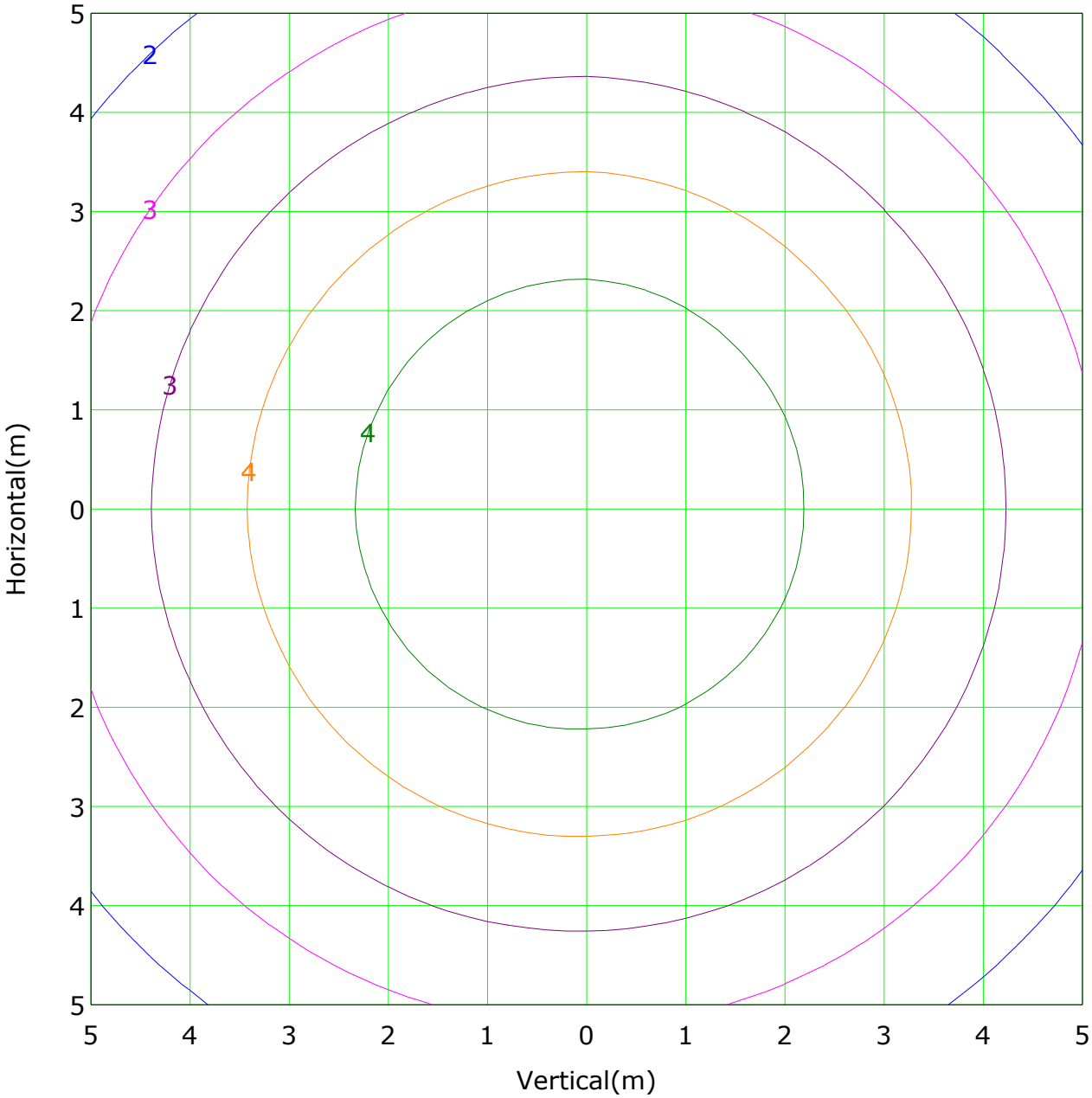
(10%): 44 cd	(16%): 70 cd
(25%): 110 cd	(40%): 176 cd
(63%): 277 cd	(100%): 439 cd

C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
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IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 4.4 lx

(30%): 1.3 lx	(40%): 1.8 lx
(50%): 2.2 lx	(60%): 2.6 lx
(70%): 3.1 lx	(80%): 3.5 lx
(90%): 4.0 lx	(100%): 4.4 lx
(120%): 5.3 lx	(150%): 6.6 lx

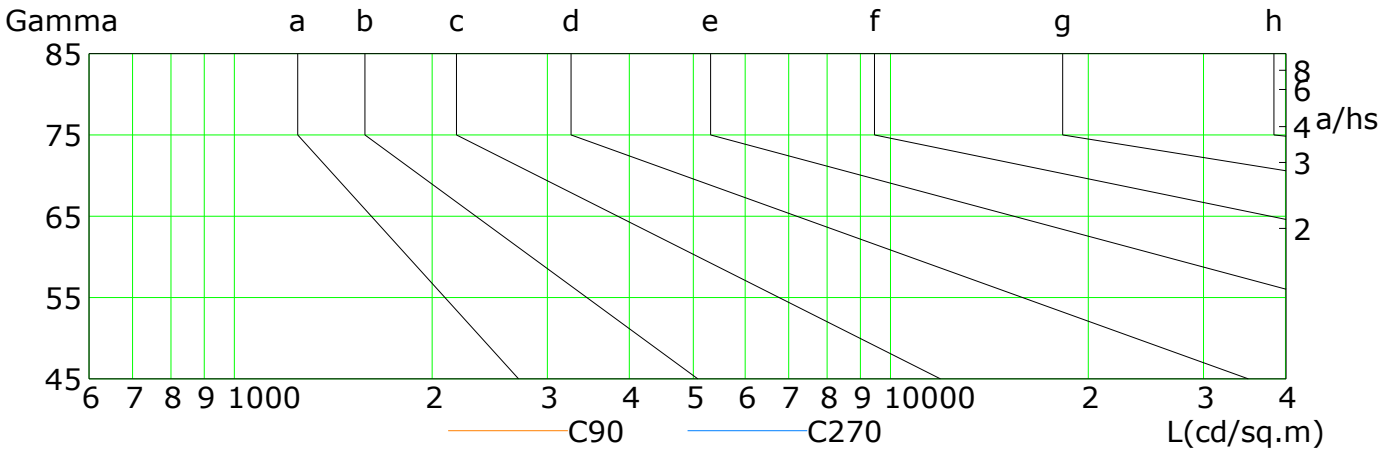
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Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
Operator: Jacky tang

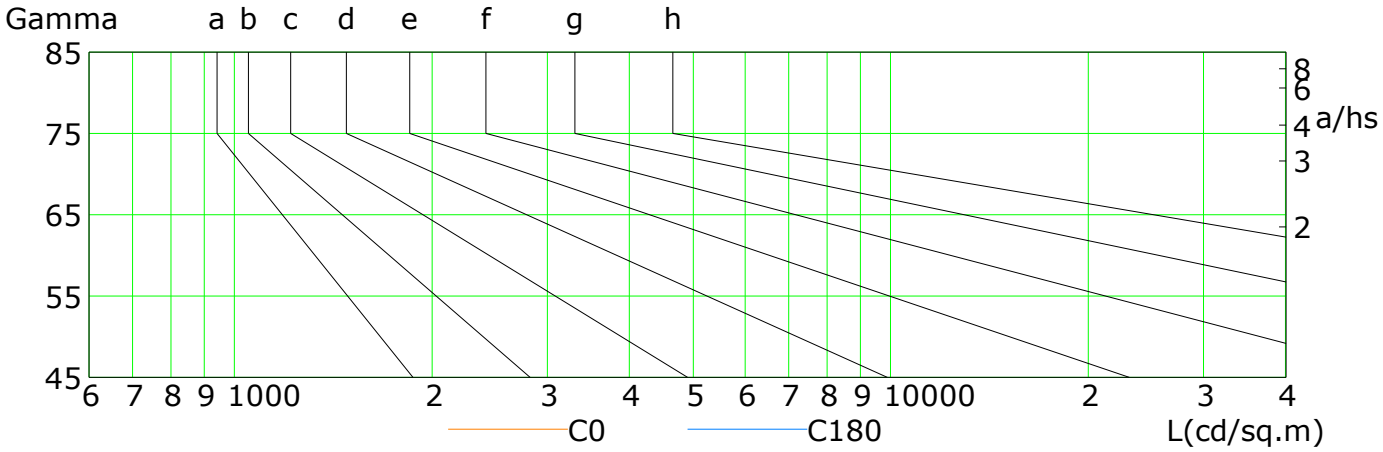
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Lum Limit Curve

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





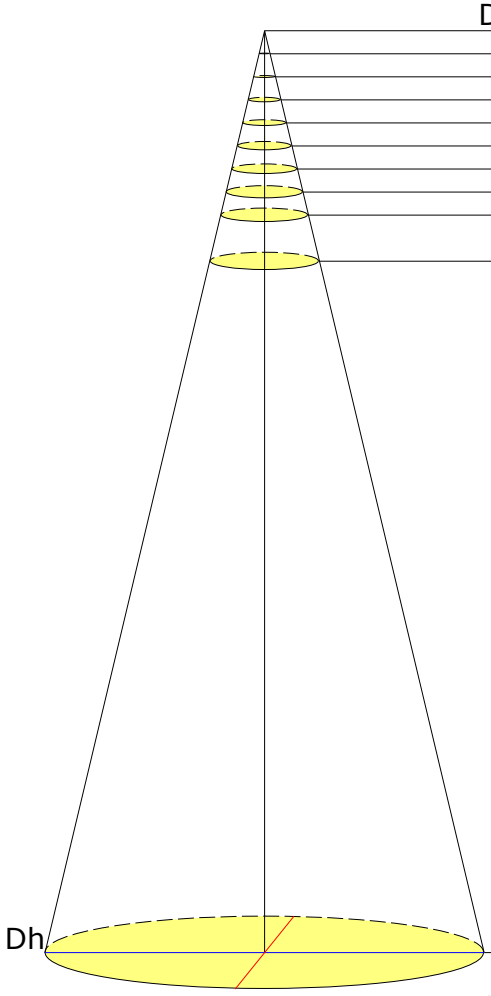
L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	286	254	220	185	149	113	78	45	17
C90	284	253	219	183	147	110	75	42	14
C180	298	267	233	199	162	125	89	54	23
C270	300	270	237	201	165	128	91	57	26

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Illuminance at a Distance



Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
1.0	439.38	2.97/2.98	7.0	73.53
2.0	109.85	5.94/5.97	28.0	18.38
3.0	48.82	8.92/8.95	62.9	8.17
4.0	27.46	11.89/11.94	111.9	4.60
5.0	17.58	14.86/14.92	174.8	2.94
6.0	12.20	17.83/17.91	251.8	2.04
7.0	8.97	20.80/20.89	342.7	1.50
8.0	6.87	23.78/23.88	447.6	1.15
10.0	4.39	29.72/29.85	699.3	0.74
40.0	0.27	118.88/119.39	11189.6	0.05

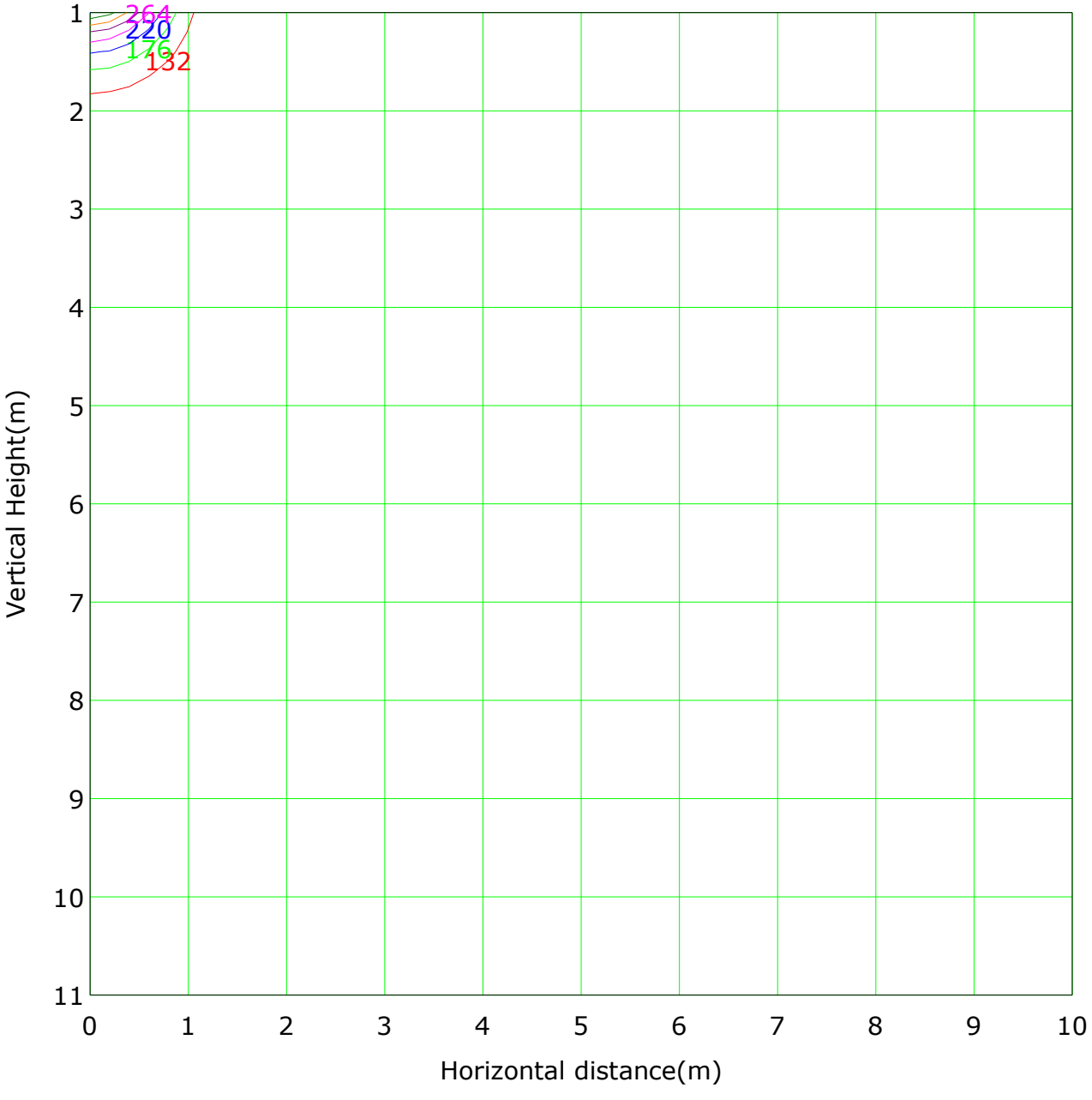
Beam Angle(B): H112.1 V112.4 Field Angle(F): H161.8 V161.7

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
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Vertical IsoLux Plot



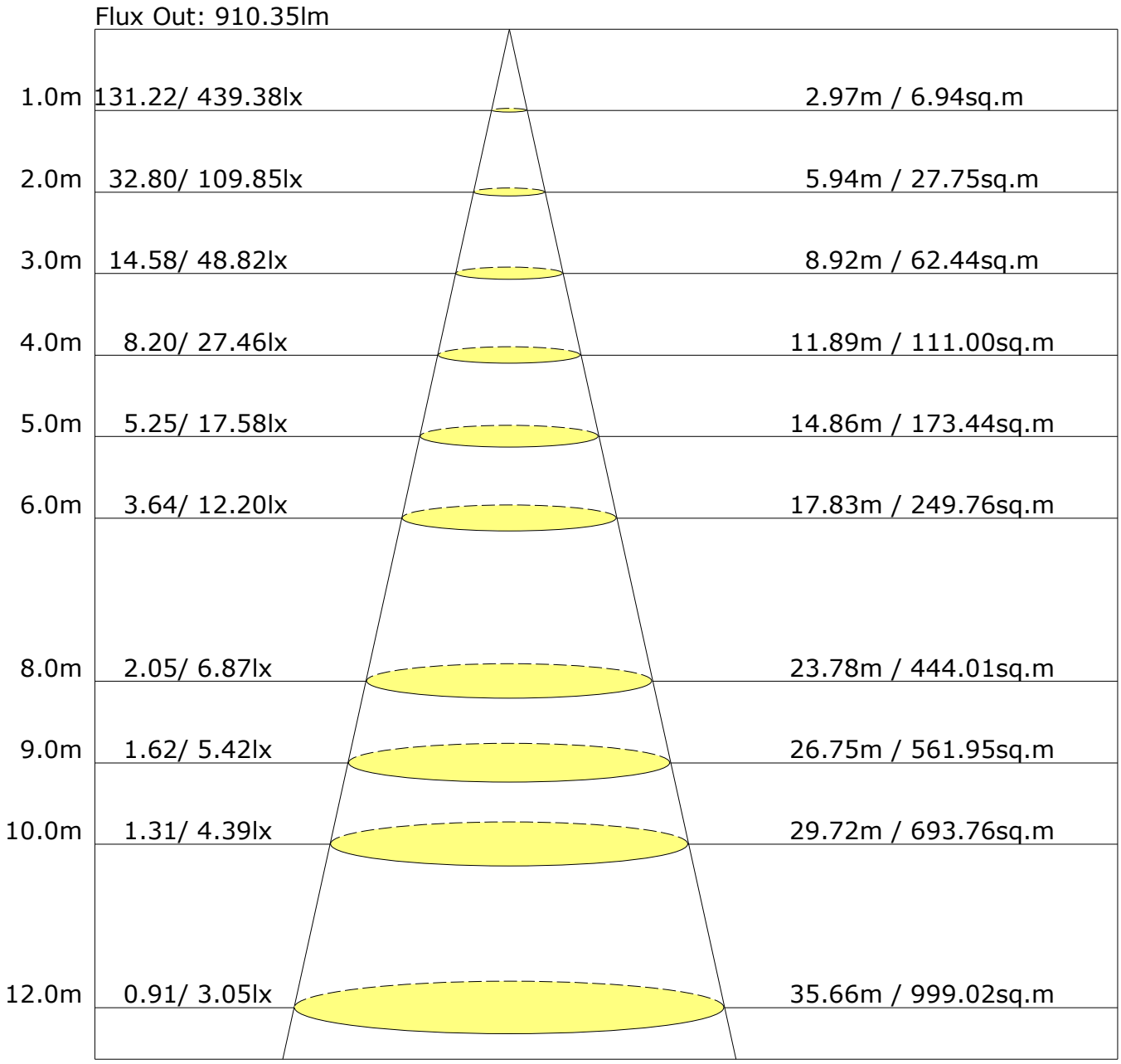
Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 439.4 lx

(30%): 131.8 lx	(40%): 175.8 lx
(50%): 219.7 lx	(60%): 263.6 lx
(70%): 307.6 lx	(80%): 351.5 lx
(90%): 395.4 lx	(100%): 439.4 lx
(120%): 527.3 lx	(150%): 659.1 lx

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

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

The Average Illuminance Effective Figure



C Plane (°):0.0-360.0: 45.0
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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:

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 1252lm (8log(F/F0) = 0.8).

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

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

Zonal Lumen

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	439.0	0.4	0.4	0.03	0.03
1.0-2.0	438.9	1.3	1.7	0.10	0.13
2.0-3.0	438.5	2.1	3.8	0.17	0.30
3.0-4.0	438.1	2.9	6.7	0.23	0.54
4.0-5.0	437.4	3.8	10.5	0.30	0.84
5.0-6.0	436.7	4.6	15.1	0.37	1.20
6.0-7.0	435.7	5.4	20.5	0.43	1.64
7.0-8.0	434.6	6.2	26.7	0.50	2.13
8.0-9.0	433.3	7.0	33.7	0.56	2.69
9.0-10.0	431.9	7.8	41.5	0.62	3.32
10.0-11.0	430.3	8.6	50.1	0.69	4.01
11.0-12.0	428.6	9.4	59.5	0.75	4.75
12.0-13.0	426.7	10.1	69.6	0.81	5.56
13.0-14.0	424.7	10.9	80.5	0.87	6.43
14.0-15.0	422.5	11.6	92.1	0.93	7.36
15.0-16.0	420.1	12.3	104.4	0.98	8.34
16.0-17.0	417.6	13.0	117.4	1.04	9.38
17.0-18.0	415.0	13.7	131.1	1.09	10.48
18.0-19.0	412.2	14.3	145.5	1.15	11.62
19.0-20.0	409.3	15.0	160.4	1.20	12.82
20.0-21.0	406.2	15.6	176.0	1.25	14.07
21.0-22.0	403.1	16.2	192.2	1.29	15.36
22.0-23.0	399.7	16.8	209.0	1.34	16.70
23.0-24.0	396.2	17.3	226.3	1.38	18.08
24.0-25.0	392.6	17.9	244.2	1.43	19.51
25.0-26.0	388.9	18.4	262.5	1.47	20.98
26.0-27.0	385.0	18.8	281.4	1.51	22.48
27.0-28.0	381.0	19.3	300.7	1.54	24.03
28.0-29.0	376.9	19.7	320.4	1.58	25.60
29.0-30.0	372.6	20.1	340.5	1.61	27.21
30.0-31.0	368.3	20.5	361.0	1.64	28.85
31.0-32.0	363.8	20.8	381.9	1.67	30.51
32.0-33.0	359.2	21.2	403.0	1.69	32.20
33.0-34.0	354.4	21.5	424.5	1.71	33.92
34.0-35.0	349.5	21.7	446.2	1.73	35.65
35.0-36.0	344.6	21.9	468.1	1.75	37.41

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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	339.6	22.1	490.3	1.77	39.18
37.0-38.0	334.4	22.3	512.6	1.78	40.96
38.0-39.0	329.1	22.5	535.1	1.79	42.75
39.0-40.0	323.7	22.6	557.6	1.80	44.56
40.0-41.0	318.1	22.7	580.3	1.81	46.37
41.0-42.0	312.5	22.7	603.0	1.81	48.18
42.0-43.0	306.8	22.7	625.7	1.82	50.00
43.0-44.0	300.9	22.7	648.5	1.82	51.81
44.0-45.0	295.0	22.7	671.1	1.81	53.62
45.0-46.0	289.0	22.6	693.7	1.81	55.43
46.0-47.0	282.9	22.5	716.2	1.80	57.23
47.0-48.0	276.6	22.4	738.6	1.79	59.02
48.0-49.0	270.3	22.2	760.8	1.77	60.79
49.0-50.0	263.9	22.0	782.8	1.76	62.55
50.0-51.0	257.5	21.8	804.6	1.74	64.29
51.0-52.0	250.8	21.5	826.1	1.72	66.01
52.0-53.0	244.1	21.2	847.4	1.70	67.71
53.0-54.0	237.5	20.9	868.3	1.67	69.38
54.0-55.0	230.7	20.6	888.9	1.65	71.02
55.0-56.0	223.8	20.2	909.1	1.62	72.64
56.0-57.0	216.9	19.8	928.9	1.58	74.22
57.0-58.0	209.9	19.4	948.4	1.55	75.78
58.0-59.0	202.9	19.0	967.3	1.52	77.29
59.0-60.0	195.6	18.5	985.8	1.48	78.77
60.0-61.0	188.5	18.0	1003.8	1.44	80.21
61.0-62.0	181.4	17.5	1021.3	1.40	81.60
62.0-63.0	174.2	16.9	1038.2	1.35	82.96
63.0-64.0	166.9	16.4	1054.6	1.31	84.27
64.0-65.0	159.6	15.8	1070.4	1.26	85.53
65.0-66.0	152.2	15.2	1085.6	1.21	86.74
66.0-67.0	144.9	14.6	1100.2	1.16	87.91
67.0-68.0	137.6	13.9	1114.1	1.11	89.02
68.0-69.0	130.3	13.3	1127.4	1.06	90.08
69.0-70.0	122.9	12.6	1140.0	1.01	91.09
70.0-71.0	115.6	11.9	1152.0	0.95	92.05
71.0-72.0	108.3	11.3	1163.2	0.90	92.95

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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	101.1	10.6	1173.8	0.85	93.79
73.0-74.0	94.0	9.9	1183.7	0.79	94.58
74.0-75.0	86.8	9.2	1192.9	0.73	95.31
75.0-76.0	79.8	8.5	1201.4	0.68	95.99
76.0-77.0	73.0	7.8	1209.1	0.62	96.61
77.0-78.0	66.2	7.1	1216.2	0.57	97.18
78.0-79.0	59.6	6.4	1222.6	0.51	97.69
79.0-80.0	53.0	5.7	1228.3	0.46	98.15
80.0-81.0	46.5	5.0	1233.4	0.40	98.55
81.0-82.0	40.3	4.4	1237.7	0.35	98.90
82.0-83.0	34.3	3.7	1241.5	0.30	99.20
83.0-84.0	28.3	3.1	1244.6	0.25	99.44
84.0-85.0	22.5	2.5	1247.0	0.20	99.64
85.0-86.0	17.1	1.9	1248.9	0.15	99.79
86.0-87.0	11.9	1.3	1250.2	0.10	99.89
87.0-88.0	7.1	0.8	1251.0	0.06	99.96
88.0-89.0	3.4	0.4	1251.3	0.03	99.99
89.0-90.0	1.3	0.1	1251.5	0.01	100.00
90.0-91.0	0.3	0.0	1251.5	0.00	100.00
91.0-92.0	0.0	0.0	1251.5	0.00	100.00
92.0-93.0	0.0	0.0	1251.5	0.00	100.00
93.0-94.0	0.0	0.0	1251.5	0.00	100.00
94.0-95.0	0.0	0.0	1251.5	0.00	100.00
95.0-96.0	0.0	0.0	1251.5	0.00	100.00
96.0-97.0	0.0	0.0	1251.5	0.00	100.00
97.0-98.0	0.0	0.0	1251.5	0.00	100.00
98.0-99.0	0.0	0.0	1251.5	0.00	100.00
99.0-100.0	0.0	0.0	1251.5	0.00	100.00
100.0-101.0	0.0	0.0	1251.5	0.00	100.00
101.0-102.0	0.0	0.0	1251.5	0.00	100.00
102.0-103.0	0.0	0.0	1251.5	0.00	100.00
103.0-104.0	0.0	0.0	1251.5	0.00	100.00
104.0-105.0	0.0	0.0	1251.5	0.00	100.00
105.0-106.0	0.0	0.0	1251.5	0.00	100.00
106.0-107.0	0.0	0.0	1251.5	0.00	100.00
107.0-108.0	0.0	0.0	1251.5	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:

Zonal Lumen (Continue 3)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	0.0	0.0	1251.5	0.00	100.00
109.0-110.0	0.0	0.0	1251.5	0.00	100.00
110.0-111.0	0.0	0.0	1251.5	0.00	100.00
111.0-112.0	0.0	0.0	1251.5	0.00	100.00
112.0-113.0	0.0	0.0	1251.5	0.00	100.00
113.0-114.0	0.0	0.0	1251.5	0.00	100.00
114.0-115.0	0.0	0.0	1251.5	0.00	100.00
115.0-116.0	0.0	0.0	1251.5	0.00	100.00
116.0-117.0	0.0	0.0	1251.5	0.00	100.00
117.0-118.0	0.0	0.0	1251.5	0.00	100.00
118.0-119.0	0.0	0.0	1251.5	0.00	100.00
119.0-120.0	0.0	0.0	1251.5	0.00	100.00
120.0-121.0	0.0	0.0	1251.5	0.00	100.00
121.0-122.0	0.0	0.0	1251.5	0.00	100.00
122.0-123.0	0.0	0.0	1251.5	0.00	100.00
123.0-124.0	0.0	0.0	1251.5	0.00	100.00
124.0-125.0	0.0	0.0	1251.5	0.00	100.00
125.0-126.0	0.0	0.0	1251.5	0.00	100.00
126.0-127.0	0.0	0.0	1251.5	0.00	100.00
127.0-128.0	0.0	0.0	1251.5	0.00	100.00
128.0-129.0	0.0	0.0	1251.5	0.00	100.00
129.0-130.0	0.0	0.0	1251.5	0.00	100.00
130.0-131.0	0.0	0.0	1251.5	0.00	100.00
131.0-132.0	0.0	0.0	1251.5	0.00	100.00
132.0-133.0	0.0	0.0	1251.5	0.00	100.00
133.0-134.0	0.0	0.0	1251.5	0.00	100.00
134.0-135.0	0.0	0.0	1251.5	0.00	100.00
135.0-136.0	0.0	0.0	1251.5	0.00	100.00
136.0-137.0	0.0	0.0	1251.5	0.00	100.00
137.0-138.0	0.0	0.0	1251.5	0.00	100.00
138.0-139.0	0.0	0.0	1251.5	0.00	100.00
139.0-140.0	0.0	0.0	1251.5	0.00	100.00
140.0-141.0	0.0	0.0	1251.5	0.00	100.00
141.0-142.0	0.0	0.0	1251.5	0.00	100.00
142.0-143.0	0.0	0.0	1251.5	0.00	100.00
143.0-144.0	0.0	0.0	1251.5	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:

Zonal Lumen (Continue 4)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
144.0-145.0	0.0	0.0	1251.5	0.00	100.00
145.0-146.0	0.0	0.0	1251.5	0.00	100.00
146.0-147.0	0.0	0.0	1251.5	0.00	100.00
147.0-148.0	0.0	0.0	1251.5	0.00	100.00
148.0-149.0	0.0	0.0	1251.5	0.00	100.00
149.0-150.0	0.0	0.0	1251.5	0.00	100.00
150.0-151.0	0.0	0.0	1251.5	0.00	100.00
151.0-152.0	0.0	0.0	1251.5	0.00	100.00
152.0-153.0	0.0	0.0	1251.5	0.00	100.00
153.0-154.0	0.0	0.0	1251.5	0.00	100.00
154.0-155.0	0.0	0.0	1251.5	0.00	100.00
155.0-156.0	0.0	0.0	1251.5	0.00	100.00
156.0-157.0	0.0	0.0	1251.5	0.00	100.00
157.0-158.0	0.0	0.0	1251.5	0.00	100.00
158.0-159.0	0.0	0.0	1251.5	0.00	100.00
159.0-160.0	0.0	0.0	1251.5	0.00	100.00
160.0-161.0	0.0	0.0	1251.5	0.00	100.00
161.0-162.0	0.0	0.0	1251.5	0.00	100.00
162.0-163.0	0.0	0.0	1251.5	0.00	100.00
163.0-164.0	0.0	0.0	1251.5	0.00	100.00
164.0-165.0	0.0	0.0	1251.5	0.00	100.00
165.0-166.0	0.0	0.0	1251.5	0.00	100.00
166.0-167.0	0.0	0.0	1251.5	0.00	100.00
167.0-168.0	0.0	0.0	1251.5	0.00	100.00
168.0-169.0	0.0	0.0	1251.5	0.00	100.00
169.0-170.0	0.0	0.0	1251.5	0.00	100.00
170.0-171.0	0.0	0.0	1251.5	0.00	100.00
171.0-172.0	0.0	0.0	1251.5	0.00	100.00
172.0-173.0	0.0	0.0	1251.5	0.00	100.00
173.0-174.0	0.0	0.0	1251.5	0.00	100.00
174.0-175.0	0.0	0.0	1251.5	0.00	100.00
175.0-176.0	0.0	0.0	1251.5	0.00	100.00
176.0-177.0	0.0	0.0	1251.5	0.00	100.00
177.0-178.0	0.0	0.0	1251.5	0.00	100.00
178.0-179.0	0.0	0.0	1251.5	0.00	100.00
179.0-180.0	0.0	0.0	1251.5	0.00	100.00

C Plane (°):0.0-360.0: 45.0
Gamma Plane (°):0.0-180.0:1.0
Test Lab: Inventfine instruments
Test Device: GPM-1800B
Test Type: TYPE C
Distance: 8.509 m
Temperature: 26
Humidity: 55
Operator: Jacky tang
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	439.4	439.1	438.9	438.8	439.4	439.1	438.9	438.8	439.4	
G1.0	439.2	438.9	438.6	438.6	439.5	439.2	439.1	438.9	439.2	
G2.0	438.8	438.4	438.1	438.3	439.3	439.2	439.0	438.8	438.8	
G3.0	438.3	437.8	437.5	437.8	439.1	439.0	438.9	438.4	438.3	
G4.0	437.6	437.1	436.8	437.1	438.7	438.6	438.5	438.0	437.6	
G5.0	436.8	436.2	435.9	436.3	438.1	438.1	438.0	437.3	436.8	
G6.0	435.7	435.0	434.8	435.4	437.4	437.5	437.3	436.5	435.7	
G7.0	434.5	433.9	433.5	434.1	436.4	436.6	436.4	435.6	434.5	
G8.0	433.1	432.6	432.2	432.9	435.4	435.6	435.5	434.6	433.1	
G9.0	431.7	430.9	430.7	431.3	434.3	434.5	434.4	433.3	431.7	
G10.0	430.1	429.3	429.1	429.7	432.9	433.1	433.1	431.9	430.1	
G11.0	428.1	427.5	427.2	428.0	431.4	431.7	431.7	430.3	428.1	
G12.0	426.2	425.4	425.1	426.1	429.6	430.1	430.2	428.6	426.2	
G13.0	424.2	423.3	423.0	423.9	427.8	428.4	428.5	426.6	424.2	
G14.0	422.0	421.1	420.8	421.6	425.9	426.4	426.6	424.7	422.0	
G15.0	419.6	418.7	418.4	419.4	423.6	424.4	424.4	422.6	419.6	
G16.0	416.9	416.0	415.6	416.9	421.3	422.0	422.3	420.1	416.9	
G17.0	414.2	413.3	413.0	414.2	419.0	419.7	420.0	417.6	414.2	
G18.0	411.4	410.5	410.1	411.2	416.2	417.2	417.4	415.1	411.4	
G19.0	408.5	407.3	407.2	408.4	413.6	414.4	414.8	412.4	408.5	
G20.0	405.2	404.3	403.9	405.1	410.7	411.6	412.1	409.3	405.2	
G21.0	402.1	401.1	400.7	402.0	407.5	408.7	409.3	406.3	402.1	
G22.0	398.8	397.4	397.3	398.7	404.5	405.7	406.3	403.1	398.8	
G23.0	395.0	394.0	393.5	394.9	401.2	402.2	402.8	399.9	395.0	
G24.0	391.5	390.4	389.9	391.4	397.8	398.8	399.5	396.5	391.5	
G25.0	387.7	386.3	386.1	387.7	394.3	395.5	396.1	392.6	387.7	
G26.0	383.5	382.5	382.4	383.5	390.7	392.0	392.6	389.0	383.5	
G27.0	379.5	378.4	378.0	379.5	386.6	388.3	388.6	385.2	379.5	
G28.0	375.7	374.3	373.7	375.3	382.8	384.1	384.8	381.3	375.7	
G29.0	371.0	370.0	369.4	371.1	378.8	380.2	381.0	376.9	371.0	
G30.0	366.8	365.3	365.1	366.4	374.8	376.2	376.5	372.8	366.8	
G31.0	362.0	361.0	360.4	362.1	370.5	371.9	372.4	368.4	362.0	
G32.0	357.6	356.0	355.9	357.1	366.1	367.6	368.0	364.1	357.6	
G33.0	352.5	351.4	350.8	352.4	361.2	363.2	363.7	359.6	352.5	
G34.0	347.8	346.1	346.0	347.7	356.6	358.3	358.7	354.5	347.8	
G35.0	342.4	341.3	341.1	342.5	351.9	353.6	354.1	349.8	342.4	
G36.0	337.4	336.3	335.6	337.5	347.0	348.8	349.3	344.9	337.4	

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:

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	332.2	331.1	330.4	332.3	342.0	343.9	344.4	339.9	332.2	
G38.0	326.5	325.3	325.2	327.1	337.1	338.9	338.9	334.8	326.5	
G39.0	321.2	320.0	319.4	321.3	331.9	333.8	333.9	329.7	321.2	
G40.0	315.3	314.6	313.9	315.9	326.3	328.7	328.8	324.0	315.3	
G41.0	309.7	308.5	308.4	310.3	320.9	322.9	322.9	318.6	309.7	
G42.0	304.1	302.9	302.1	304.3	315.5	317.5	317.5	313.2	304.1	
G43.0	297.9	297.1	296.5	298.5	309.4	312.0	312.0	307.6	297.9	
G44.0	292.0	290.8	290.7	292.8	303.7	306.4	305.9	301.9	292.0	
G45.0	285.6	284.9	284.3	286.4	298.0	300.7	300.1	296.1	285.6	
G46.0	279.7	278.5	278.3	280.5	292.1	294.9	294.4	289.7	279.7	
G47.0	273.1	272.4	272.3	273.9	285.6	289.0	288.5	283.8	273.1	
G48.0	266.9	265.6	265.5	267.7	279.6	282.5	281.9	277.8	266.9	
G49.0	260.6	259.3	259.2	261.0	273.5	276.4	275.8	271.0	260.6	
G50.0	254.3	253.0	252.8	254.5	266.7	270.2	269.7	264.8	254.3	
G51.0	247.2	246.5	245.8	248.0	260.4	264.0	262.9	258.5	247.2	
G52.0	240.7	239.5	239.4	241.7	253.5	257.1	256.6	251.6	240.7	
G53.0	234.2	232.9	232.2	234.5	247.0	250.6	249.6	245.1	234.2	
G54.0	227.6	225.7	225.6	227.9	240.5	244.2	243.1	238.6	227.6	
G55.0	220.3	219.0	218.9	220.6	233.3	237.1	236.6	232.1	220.3	
G56.0	213.5	212.3	211.5	213.8	226.7	230.4	229.3	224.8	213.5	
G57.0	206.7	204.8	204.6	207.1	220.0	223.7	222.6	218.0	206.7	
G58.0	199.9	197.9	197.2	200.3	213.1	216.3	215.7	211.2	199.9	
G59.0	193.0	191.0	190.2	192.7	205.6	209.4	208.3	203.7	193.0	
G60.0	185.4	183.4	183.3	185.7	198.7	201.8	201.4	196.8	185.4	
G61.0	178.3	176.3	175.5	178.7	191.7	194.8	194.4	189.8	178.3	
G62.0	171.2	169.2	168.5	171.6	184.0	187.9	187.4	182.7	171.2	
G63.0	164.1	162.2	161.4	164.6	176.9	180.9	179.7	175.0	164.1	
G64.0	156.3	155.0	154.2	157.4	169.3	173.1	172.6	168.0	156.3	
G65.0	149.2	147.8	147.0	150.3	162.2	166.1	164.8	160.2	149.2	
G66.0	142.1	140.1	139.3	142.5	155.1	158.3	157.8	153.1	142.1	
G67.0	135.0	133.0	132.2	135.4	147.2	151.0	150.6	146.0	135.0	
G68.0	127.8	125.9	125.1	128.2	140.0	143.9	142.7	138.0	127.8	
G69.0	120.7	118.8	117.3	121.2	132.9	136.0	135.5	130.9	120.7	
G70.0	112.9	111.0	110.2	114.1	124.9	128.8	128.3	123.6	112.9	
G71.0	106.0	104.1	103.2	106.3	117.7	121.6	120.4	115.8	106.0	
G72.0	98.9	97.0	96.2	99.2	110.6	113.6	113.1	108.6	98.9	
G73.0	91.9	90.1	89.2	92.2	103.5	106.6	106.1	101.5	91.9	

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 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	85.0	83.2	82.4	85.3	95.8	99.5	98.4	93.9	85.0	
G75.0	78.2	75.7	74.9	78.4	88.8	91.8	91.4	87.0	78.2	
G76.0	70.8	69.1	68.3	71.7	81.9	84.9	84.5	80.1	70.8	
G77.0	64.3	62.5	61.7	65.1	74.4	78.0	77.0	73.3	64.3	
G78.0	57.8	56.2	55.3	58.0	67.8	71.3	70.3	66.1	57.8	
G79.0	51.6	49.8	49.0	51.7	61.1	63.9	63.6	59.5	51.6	
G80.0	45.4	43.1	42.3	45.4	54.0	57.4	57.1	52.5	45.4	
G81.0	39.5	37.2	36.4	38.8	47.7	51.0	50.1	46.3	39.5	
G82.0	33.1	31.4	30.6	33.0	41.4	44.6	43.8	40.2	33.1	
G83.0	27.5	25.7	25.0	27.4	35.4	37.9	37.8	34.3	27.5	
G84.0	22.0	19.7	19.0	21.4	28.9	31.9	31.8	27.9	22.0	
G85.0	16.6	14.4	13.7	16.0	23.3	26.2	25.6	22.5	16.6	
G86.0	11.0	9.4	8.9	11.1	17.9	20.0	20.0	17.1	11.0	
G87.0	6.3	4.8	4.4	6.5	12.3	14.6	14.8	12.0	6.3	
G88.0	2.0	0.8	0.7	1.8	7.5	9.6	9.3	6.8	2.0	
G89.0	0.5	0.4	0.4	0.4	3.0	4.9	4.7	2.3	0.5	
G90.0	0.5	0.5	0.5	0.4	0.6	0.7	0.6	0.5	0.5	
G91.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G92.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G93.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G94.0	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	
G96.0	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	
G98.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G99.0	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	
G101.0	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	
G103.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G104.0	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	
G106.0	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	
G108.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G109.0	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	

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	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	0.0	0.0	0.0	0.0	
G113.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G114.0	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	0.0	0.0	0.0	0.0	0.0	
G116.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G117.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G118.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G119.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G121.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G122.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G123.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G124.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G125.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G126.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G127.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G128.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G129.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G130.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G131.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G132.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G133.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G134.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G136.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G137.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G138.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G139.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G141.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G142.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G143.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G144.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G146.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G147.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G149.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G151.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G152.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G153.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G154.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G156.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G157.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G158.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G159.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G161.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G162.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G163.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G164.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G166.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G167.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G168.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G169.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G171.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G172.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G173.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G174.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G176.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G177.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G178.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G179.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
G180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

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: