Report No.: 10 Test Time: 2019/3/9 10:24

Luminaire Property

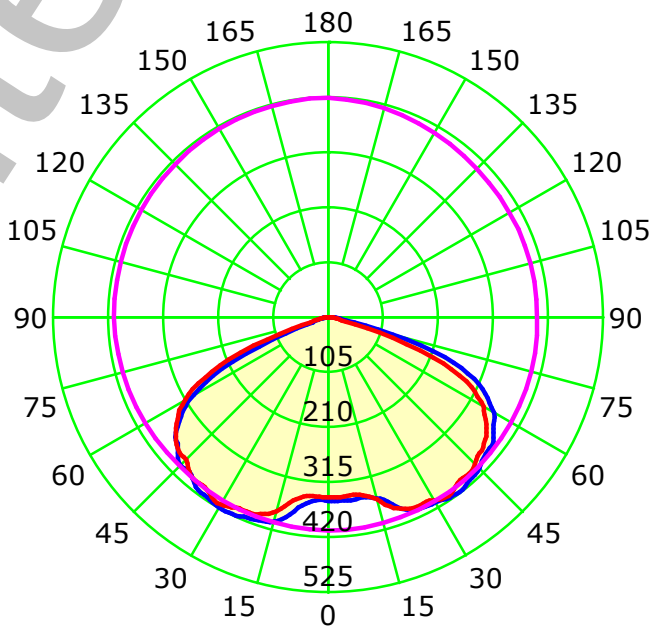
Luminaire Manufacturer:
Luminaire Description: 18W
Current: 0.170 A
Power Factor: 0.479
Voltage: 220.2 V
Power: 17.92 W

Photometric Results

CIE Class: Direct
Measurement Flux: 1546.7 lm
Downward Ratio: 100%
Horizontal Diffuse Angle(50%): H136.7
Vertical Diffuse Angle(50%): V136.4
Luminaire Efficacy Rating (LER): 86.36
Max. Intensity: 420.12 cd
S/MH(C0/C180): 1.73
Total Rated Lamp Lumens: 1546.7 lm
Efficiency: 100%
Upward Ratio: 0%
Central Intensity: 350.9 cd
Pos of Max. Intensity: H180 V28
S/MH(C90/C270): 1.74

Picture Of Luminaire

Luminous Intensity Distribution Curve



Unit: cd
Average Diffuse Angle(50%): 136.5°
C0-C180 C90-C270 G28

C Plane (°):0.0-360.0: 45.0
Test Lab: Inventfine instruments
Test Type: TYPE C
Temperature: 26
Operator: Jacky tang
Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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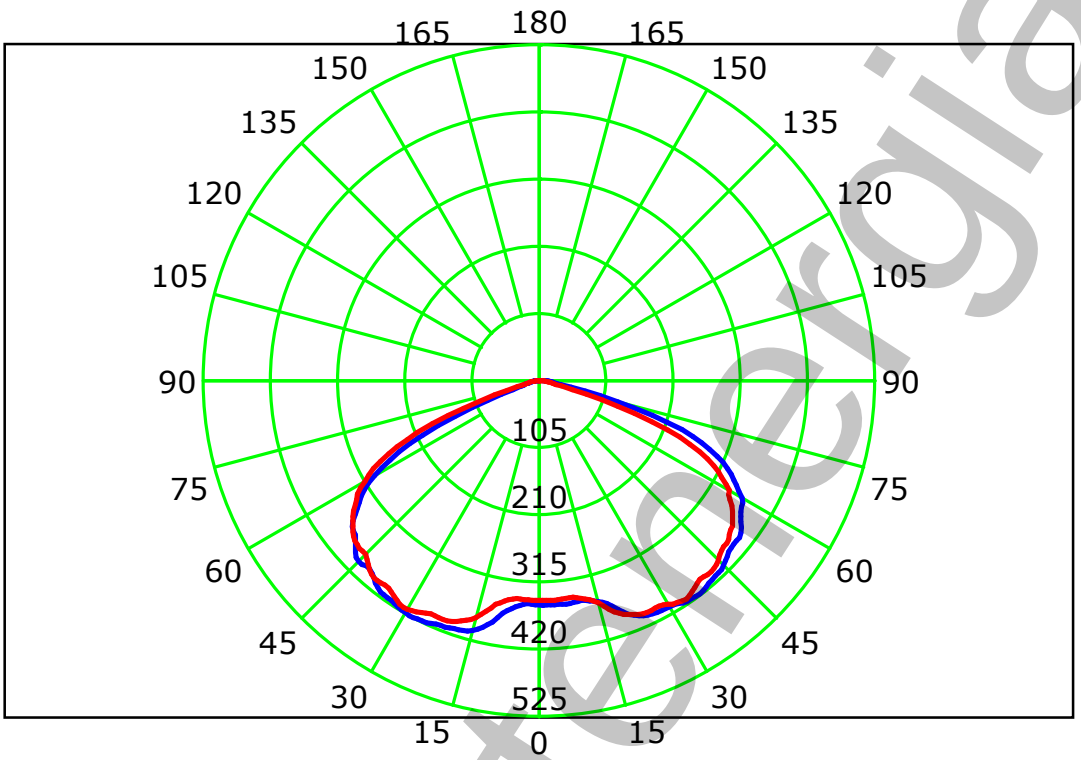
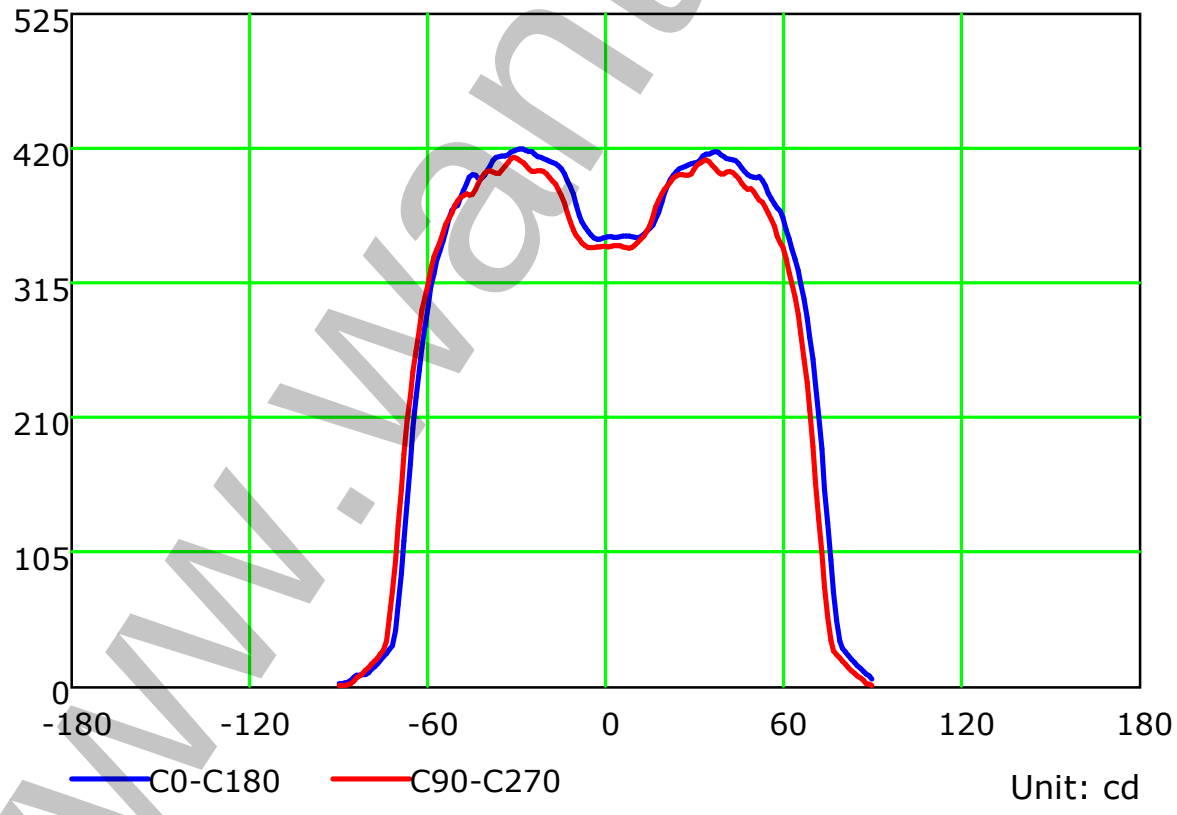
Luminous Intensity Distribution Curve





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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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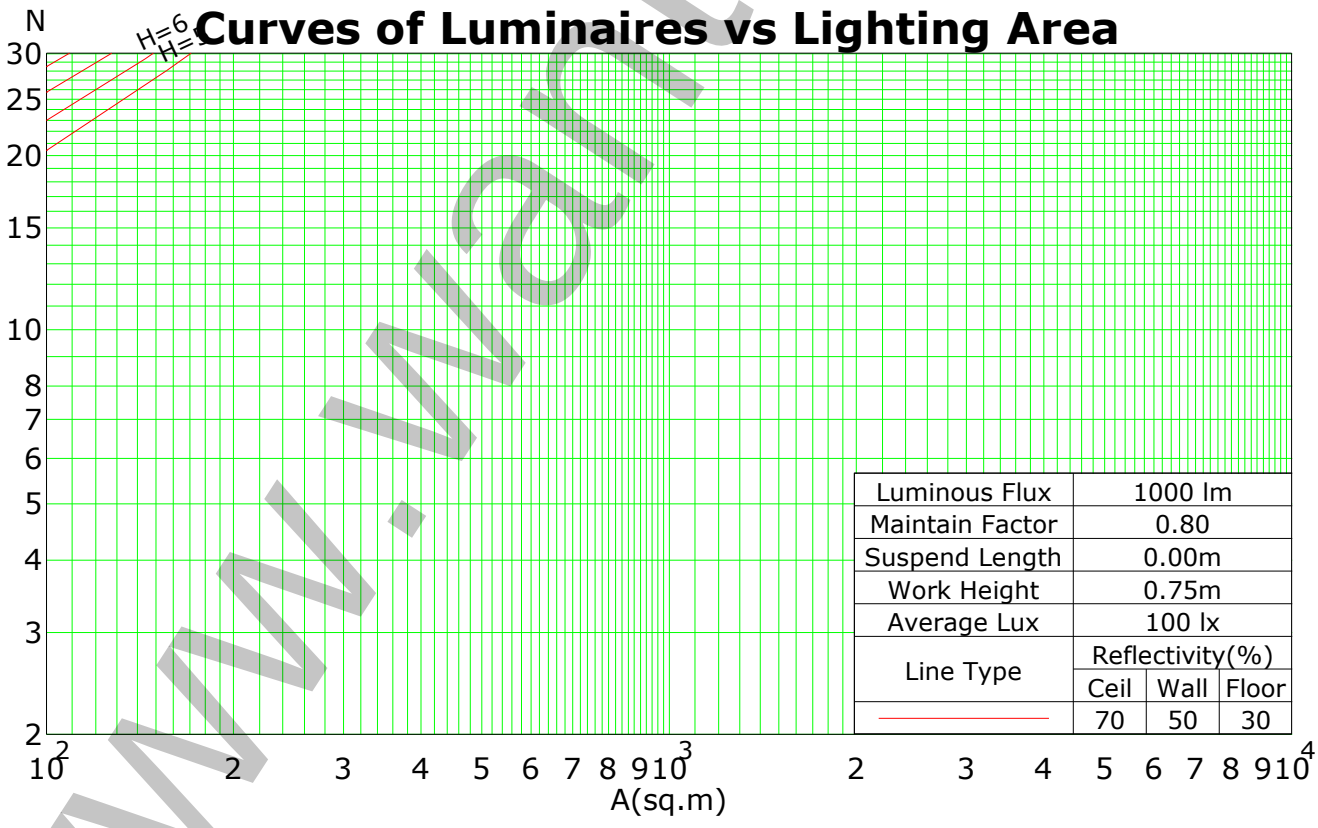
Coefficients Of Utilization - Zonal Cavity Method

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	95	98	95	92	94	91	89	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	89	78	70	63	87	77	69	62	74	67	61	71	65	60	68	63	59	57
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	44	38	66	53	44	37	51	43	37	49	42	37	48	41	36	34
7	62	48	39	33	61	47	39	32	46	38	32	44	37	32	43	36	32	30
8	58	44	35	29	56	43	34	28	41	34	28	40	33	28	39	33	28	26
9	54	40	31	25	52	39	31	25	38	30	25	37	30	25	36	29	25	23
10	50	36	28	23	49	36	28	22	35	27	22	34	27	22	33	27	22	20

Spacing Criteria (0-180): 1.73
Spacing Criteria (90-270): 1.74
Spacing Criteria (Diagonal): 1.81

Curves of Luminaires vs Lighting Area



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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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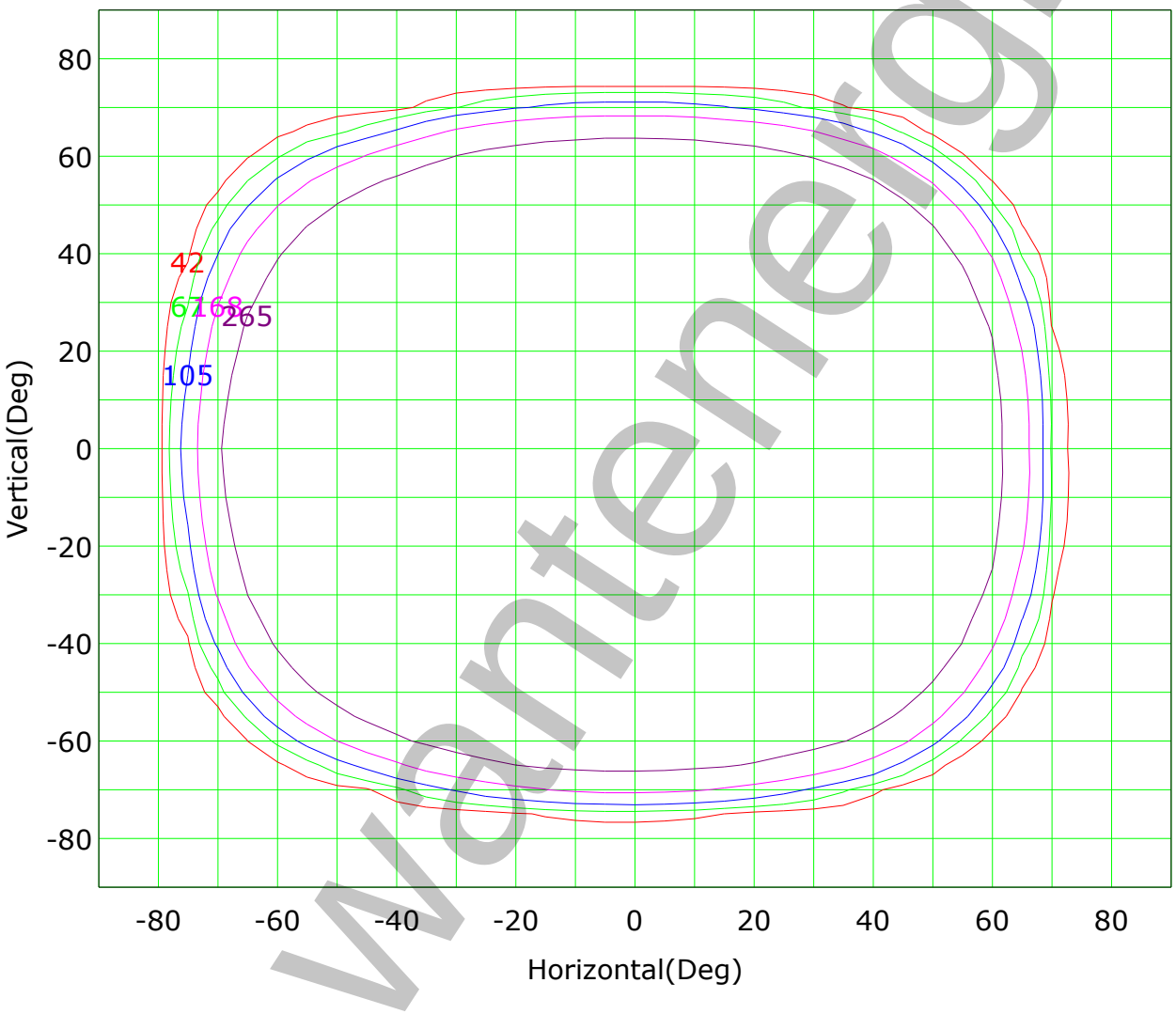
Isocandela (rectangle)



Imax (100%): 420 cd

(10%): 42 cd
(16%): 67 cd
(25%): 105 cd
(40%): 168 cd
(63%): 265 cd
(100%): 420 cd

C Plane (°):0.0-360.0: 45.0
Gamma Plane (°):0.0-90.0:1.0
Test Lab: Inventfine instruments
Test Device: GPM-1800B
Test Type: TYPE C
Distance: 7.970 m
Temperature: 26
Humidity: 55
Operator: Jacky tang
Inspector:

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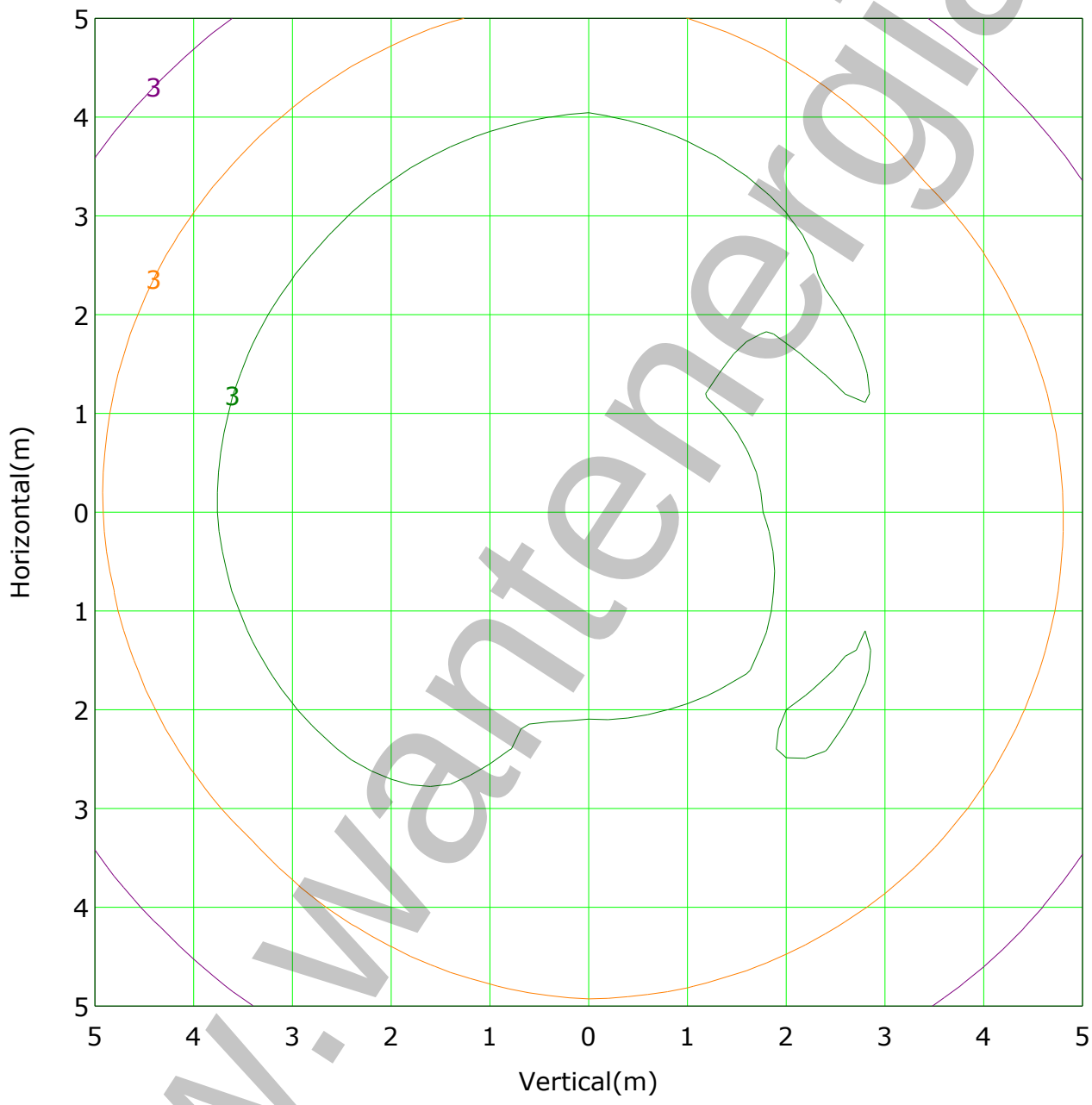
IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 3.7 lx

(30%): 1.1 lx	(40%): 1.5 lx
(50%): 1.8 lx	(60%): 2.2 lx
(70%): 2.6 lx	(80%): 2.9 lx
(90%): 3.3 lx	(100%): 3.7 lx
(120%): 4.4 lx	(150%): 5.5 lx

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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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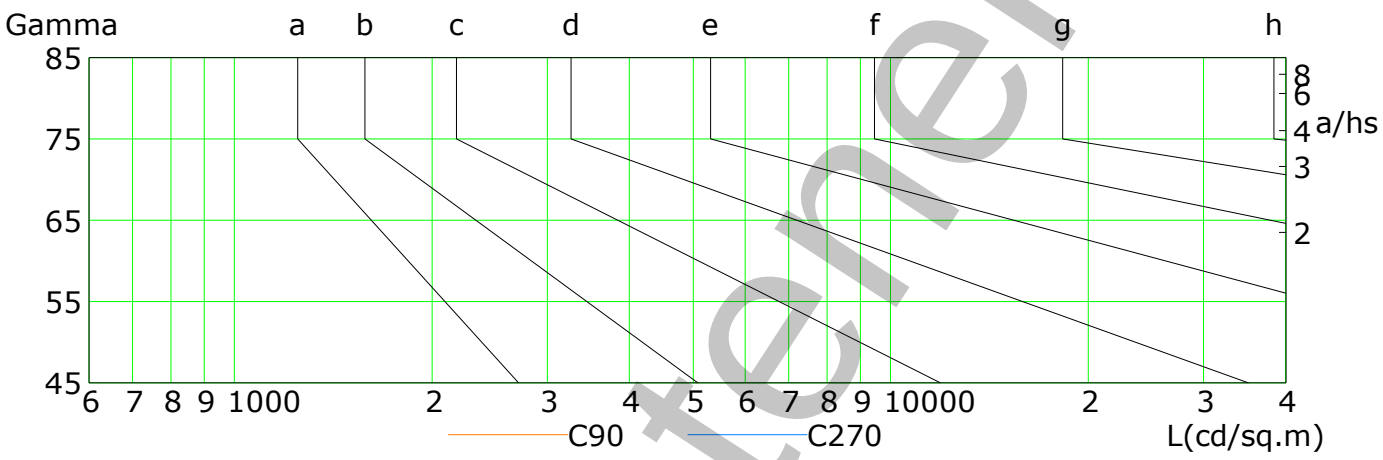
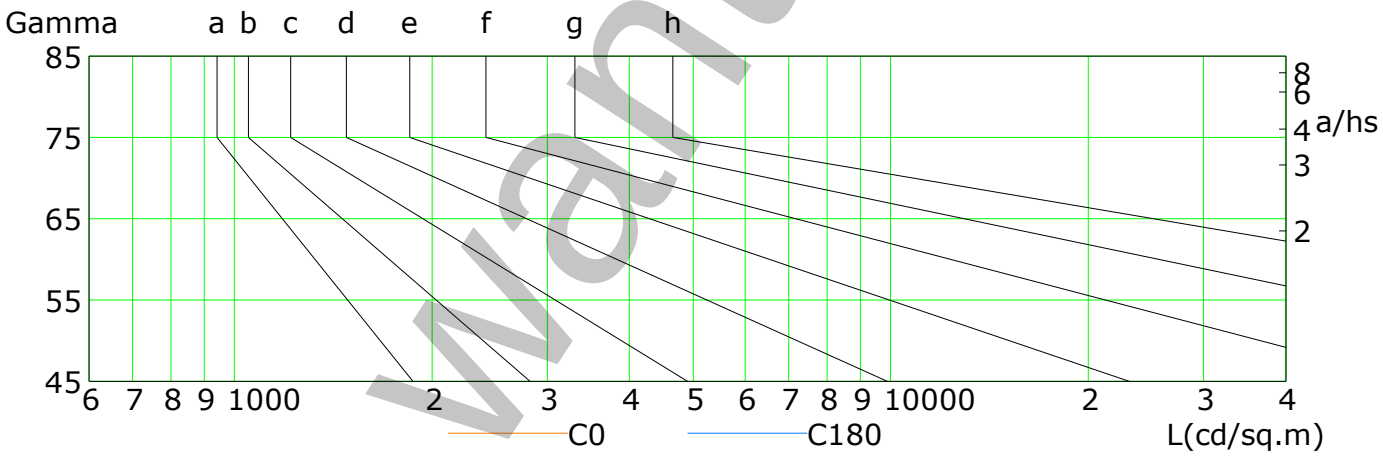
Lum Limit Curve

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	408	398	385	366	325	256	128	30	16
C90	397	387	370	343	291	187	54	20	8
C180	400	376	348	297	202	64	23	11	7
C270	385	379	354	315	246	126	28	15	4

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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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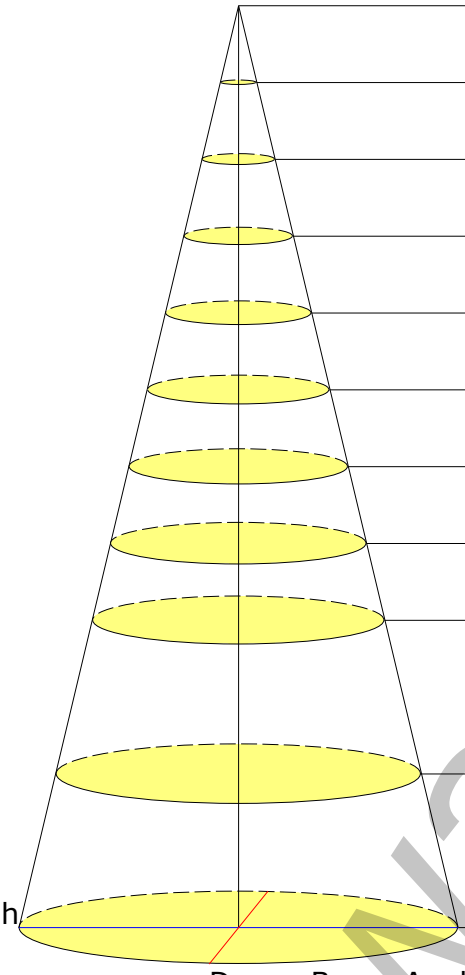
Illuminance at a Distance



Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
1.0	350.90	5.04/5.00	20.3	32.67
2.0	87.72	10.08/9.99	81.3	8.17
3.0	38.99	15.11/14.99	182.8	3.63
4.0	21.93	20.15/19.98	325.0	2.04
5.0	14.04	25.19/24.98	507.9	1.31
6.0	9.75	30.23/29.97	731.3	0.91
7.0	7.16	35.26/34.97	995.4	0.67
8.0	5.48	40.30/39.96	1300.1	0.51
10.0	3.51	50.38/49.96	2031.4	0.33
12.0	2.44	60.45/59.95	2925.3	0.23

Beam Angle(B): H136.7 V136.4 Field Angle(F): H149.7 V149.4

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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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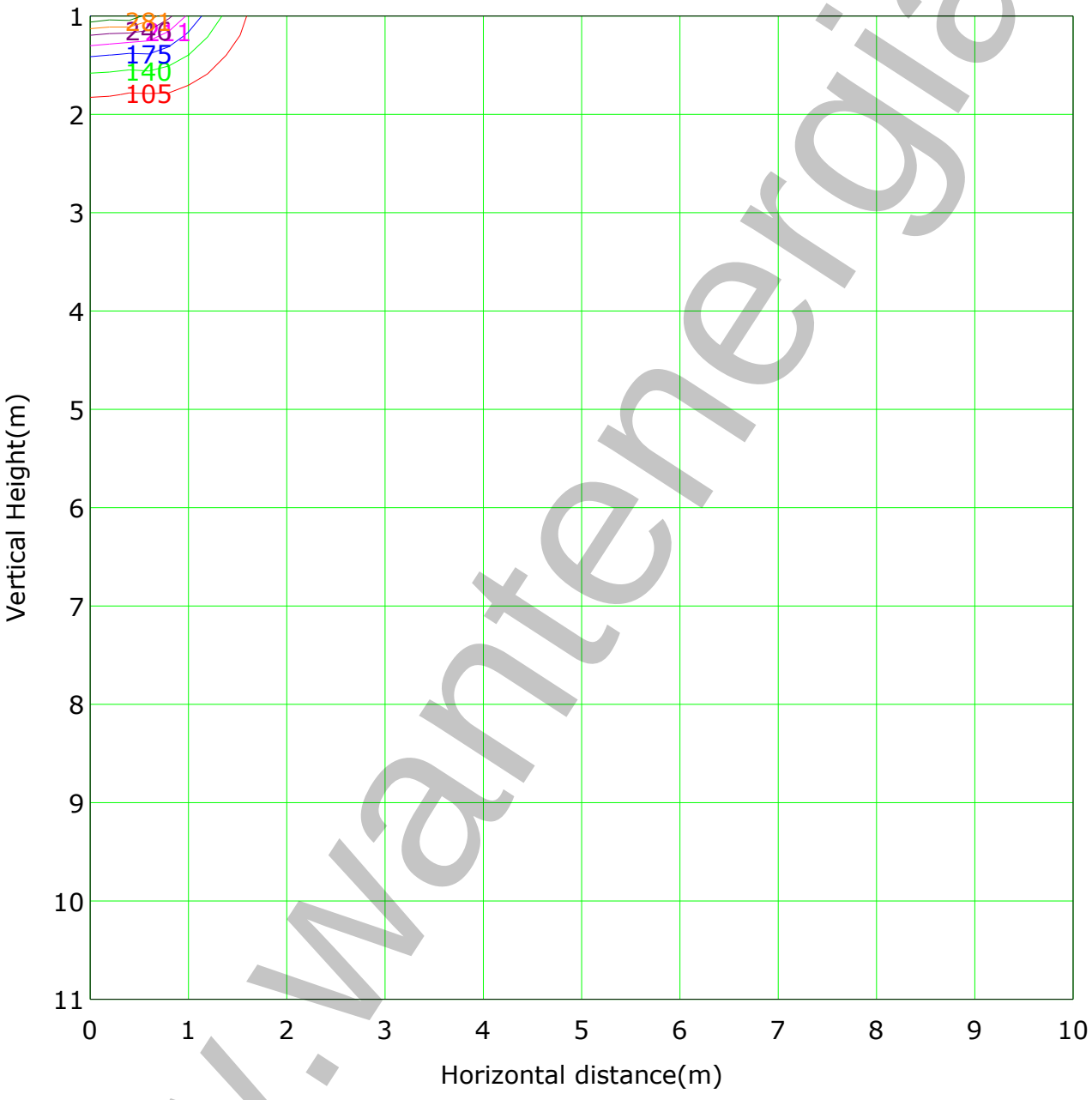
Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 350.9 lx

(30%): 105.3 lx	(40%): 140.4 lx
(50%): 175.4 lx	(60%): 210.5 lx
(70%): 245.6 lx	(80%): 280.7 lx
(90%): 315.8 lx	(100%): 350.9 lx
(120%): 421.1 lx	(150%): 526.3 lx

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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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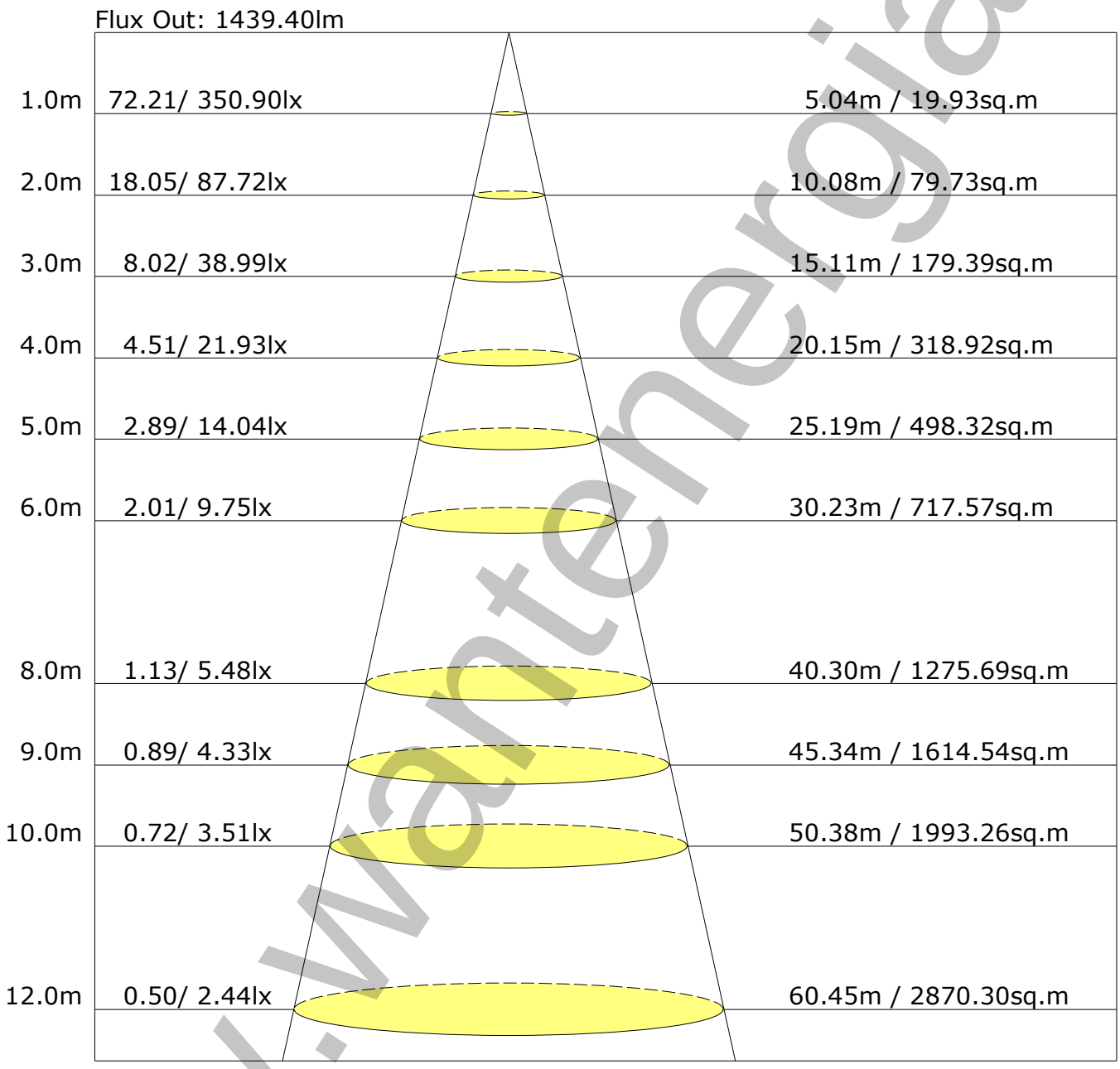
The Average Illuminance Effective Figure



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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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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 1547lm (8log(F/F0) = 1.5).

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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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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	350.9	346.5	343.6	341.4	350.9	346.5	343.6	341.4	350.9	
G1.0	351.3	346.5	343.5	341.4	350.4	346.6	343.6	341.4	351.3	
G2.0	351.3	346.8	343.9	342.0	349.5	346.3	343.4	341.3	351.3	
G3.0	351.0	347.4	344.1	342.2	349.2	345.9	343.2	341.3	351.0	
G4.0	351.1	347.6	344.3	342.0	350.6	345.4	343.0	341.2	351.1	
G5.0	351.2	347.5	344.2	341.1	352.6	344.9	342.6	340.9	351.2	
G6.0	351.8	347.0	343.5	340.5	355.5	345.0	342.6	340.4	351.8	
G7.0	352.0	346.4	343.0	340.2	358.9	346.4	344.2	340.6	352.0	
G8.0	351.8	346.1	342.4	340.8	362.8	348.4	346.3	342.3	351.8	
G9.0	351.3	346.8	343.1	342.2	368.0	351.2	349.2	344.6	351.3	
G10.0	350.7	348.5	344.7	344.1	376.5	354.5	352.5	347.1	350.7	
G11.0	350.4	350.4	346.9	346.7	384.3	358.6	356.5	350.2	350.4	
G12.0	351.2	353.1	349.3	349.7	390.6	364.4	363.1	354.0	351.2	
G13.0	353.2	355.8	351.9	353.5	395.3	371.8	370.4	360.0	353.2	
G14.0	355.5	359.4	355.3	359.2	400.5	379.8	377.2	368.1	355.5	
G15.0	358.0	364.3	360.0	366.5	404.6	385.8	383.5	374.5	358.0	
G16.0	360.6	370.9	366.8	374.1	407.1	390.7	388.6	380.0	360.6	
G17.0	364.8	378.8	374.2	379.2	408.5	395.0	392.1	385.1	364.8	
G18.0	370.6	384.6	380.1	383.4	409.3	398.4	395.1	388.0	370.6	
G19.0	378.3	389.2	385.1	387.8	410.2	401.2	397.8	390.4	378.3	
G20.0	385.3	393.5	388.6	391.8	411.3	402.9	400.5	393.3	385.3	
G21.0	391.3	396.9	391.3	394.0	412.6	404.4	402.2	396.0	391.3	
G22.0	395.8	399.2	393.9	395.4	413.2	405.6	402.8	397.6	395.8	
G23.0	399.4	400.5	397.2	396.2	413.9	406.3	402.9	398.1	399.4	
G24.0	402.5	401.9	399.0	397.1	416.1	406.7	402.4	398.1	402.5	
G25.0	404.3	402.9	399.8	398.0	418.0	407.6	402.4	397.7	404.3	
G26.0	405.4	403.4	399.8	398.5	418.1	409.4	404.2	397.6	405.4	
G27.0	406.4	404.0	399.4	399.3	418.7	411.5	407.4	398.7	406.4	
G28.0	407.4	405.2	399.3	401.1	420.1	414.0	409.3	402.0	407.4	
G29.0	408.2	406.7	400.4	403.1	419.8	415.9	410.8	405.9	408.2	
G30.0	408.7	408.6	404.0	406.1	419.2	416.0	412.5	408.6	408.7	
G31.0	409.5	411.1	407.3	407.5	418.6	415.4	413.5	408.5	409.5	
G32.0	411.5	412.8	409.1	407.0	417.2	414.1	412.2	407.3	411.5	
G33.0	414.5	412.6	410.6	406.3	415.4	413.6	409.4	405.8	414.5	
G34.0	415.6	412.1	411.5	405.9	414.4	413.6	406.2	404.8	415.6	
G35.0	415.7	411.7	410.1	406.5	414.5	412.2	403.2	403.8	415.7	
G36.0	416.7	411.7	407.6	406.7	414.1	410.4	401.1	402.3	416.7	

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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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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	417.6	412.0	405.0	405.4	413.6	408.3	400.7	399.5	417.6	
G38.0	417.5	410.9	402.1	403.9	410.8	406.3	401.9	397.1	417.5	
G39.0	415.6	409.1	400.1	401.7	407.0	403.5	402.6	396.5	415.6	
G40.0	413.9	406.1	400.4	399.8	402.9	400.3	402.5	395.1	413.9	
G41.0	412.3	404.0	402.0	397.2	399.1	397.5	400.9	393.9	412.3	
G42.0	411.7	403.5	402.4	394.6	396.8	398.0	397.4	394.6	411.7	
G43.0	411.3	401.9	401.5	394.5	396.6	399.6	392.6	393.5	411.3	
G44.0	410.8	400.7	399.5	395.5	399.5	399.0	388.3	391.5	410.8	
G45.0	408.4	400.1	396.7	394.2	400.1	395.8	384.5	388.0	408.4	
G46.0	404.8	397.7	393.0	391.4	397.9	392.1	383.9	385.1	404.8	
G47.0	402.3	394.1	390.1	389.7	393.1	389.5	385.1	383.4	402.3	
G48.0	399.7	390.4	388.2	387.6	387.5	386.1	383.3	380.3	399.7	
G49.0	398.3	389.3	388.8	385.2	381.2	381.4	381.8	376.8	398.3	
G50.0	397.7	389.6	386.8	381.6	376.0	377.8	379.3	375.0	397.7	
G51.0	397.5	388.2	383.0	377.9	374.1	376.5	375.3	374.8	397.5	
G52.0	398.2	384.6	380.0	377.2	371.9	375.8	369.7	373.6	398.2	
G53.0	395.6	381.9	378.6	375.0	364.6	371.8	365.3	369.7	395.6	
G54.0	390.9	377.4	374.0	372.5	354.9	365.1	360.8	363.9	390.9	
G55.0	385.1	372.9	369.7	366.6	348.0	357.2	354.2	356.6	385.1	
G56.0	380.9	367.2	365.0	359.6	339.9	352.0	346.7	349.7	380.9	
G57.0	376.8	360.7	359.1	353.4	332.2	346.0	340.9	345.9	376.8	
G58.0	373.7	355.6	352.0	349.0	322.2	338.0	335.8	340.1	373.7	
G59.0	371.6	349.3	346.3	341.8	312.3	330.3	326.0	333.6	371.6	
G60.0	366.3	342.3	343.2	335.1	297.5	320.8	314.7	322.4	366.3	
G61.0	357.0	334.8	334.3	325.3	281.4	308.7	304.6	312.6	357.0	
G62.0	349.1	325.3	323.0	316.0	264.3	298.1	293.6	302.6	349.1	
G63.0	341.6	315.6	314.7	306.8	246.8	283.3	278.4	289.5	341.6	
G64.0	334.0	306.2	304.5	293.5	225.6	265.5	262.1	274.3	334.0	
G65.0	325.1	292.3	291.1	279.1	201.7	250.0	245.9	256.5	325.1	
G66.0	314.3	275.9	275.1	263.6	173.3	230.3	226.4	240.2	314.3	
G67.0	302.9	258.7	255.8	245.5	144.0	210.6	208.0	222.2	302.9	
G68.0	288.0	240.6	237.4	224.0	113.8	186.5	181.1	199.1	288.0	
G69.0	272.4	215.8	215.7	199.5	87.6	158.7	153.1	169.8	272.4	
G70.0	256.0	189.6	187.4	171.6	63.7	128.9	126.0	142.6	256.0	
G71.0	236.0	159.7	158.6	143.5	43.7	102.5	98.5	114.7	236.0	
G72.0	211.1	132.0	130.3	113.9	31.9	78.6	74.3	87.5	211.1	
G73.0	186.0	103.9	104.2	86.8	28.6	57.0	52.6	64.5	186.0	

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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

www.inventfine.cl

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	153.9	78.2	77.9	62.9	25.8	40.1	35.8	45.3	153.9	
G75.0	127.9	55.9	54.2	43.6	23.0	30.9	28.2	31.4	127.9	
G76.0	98.9	36.8	36.4	30.8	20.4	27.7	25.1	27.5	98.9	
G77.0	74.0	28.9	27.5	27.4	17.8	24.6	22.5	24.7	74.0	
G78.0	51.5	26.2	24.8	24.6	15.4	22.1	19.8	22.0	51.5	
G79.0	35.1	23.5	22.1	22.0	13.1	19.3	17.3	19.5	35.1	
G80.0	29.8	20.9	19.5	19.6	10.9	16.8	14.9	17.0	29.8	
G81.0	26.8	18.5	17.1	17.2	9.1	14.5	12.7	14.6	26.8	
G82.0	24.1	16.1	14.8	14.9	9.0	12.2	10.5	12.3	24.1	
G83.0	21.5	13.8	12.5	12.7	8.9	10.2	8.4	10.3	21.5	
G84.0	18.8	11.6	10.4	10.6	8.8	8.2	6.5	8.3	18.8	
G85.0	16.4	9.6	8.4	8.7	7.0	6.0	4.4	6.4	16.4	
G86.0	14.0	7.4	6.7	6.8	4.7	3.6	2.2	4.0	14.0	
G87.0	12.0	5.4	4.6	4.4	3.4	2.4	1.3	2.1	12.0	
G88.0	9.9	2.9	2.5	2.8	2.6	1.4	0.7	1.3	9.9	
G89.0	8.1	1.8	1.5	1.9	2.3	0.9	0.6	0.8	8.1	
G90.0	5.9	1.0	0.9	1.3	2.3	0.7	0.6	0.7	5.9	

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

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1800B
Distance: 7.970 m
Humidity: 55
Inspector:

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