

Report No.: 8

Test Time: 2017/4/14 17:55

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: QL-AL1807-60D1

Current: 0.107 A

Power Factor: 0.382

Voltage: 220 V

Power: 9.04W

Photometric Results

CIE Class: Direct

Measurement Flux: 911.4 lm

Downward Ratio: 98%

Horizontal Diffuse Angle(50%): H117.3

Vertical Diffuse Angle(50%): V48.8

Luminaire Efficacy Rating (LER): 101

Max. Intensity: 664.37 cd

Total Rated Lamp Lumens: 911.4 lm

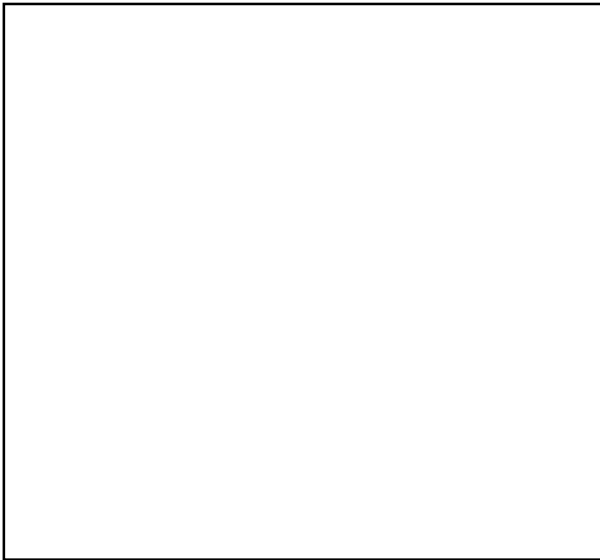
Efficiency: 100%

Upward Ratio: 2%

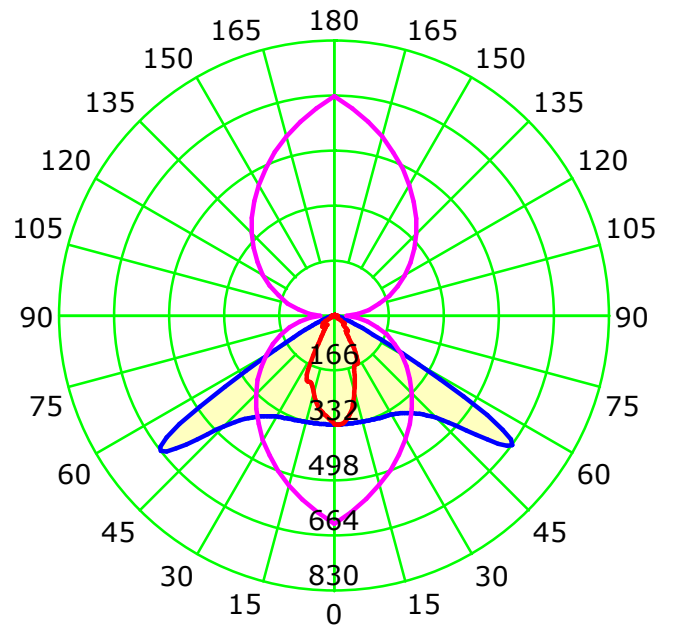
Central Intensity: 329.27 cd

Pos of Max. Intensity: H180 V52

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 83.1° Unit: cd

— C0-C180 — C90-C270 — G52

C Plane (°):0.0-360.0: 90.0

Test Lab: Inventfine instrument

Test Type: TYPE C

Temperature: 28

Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0

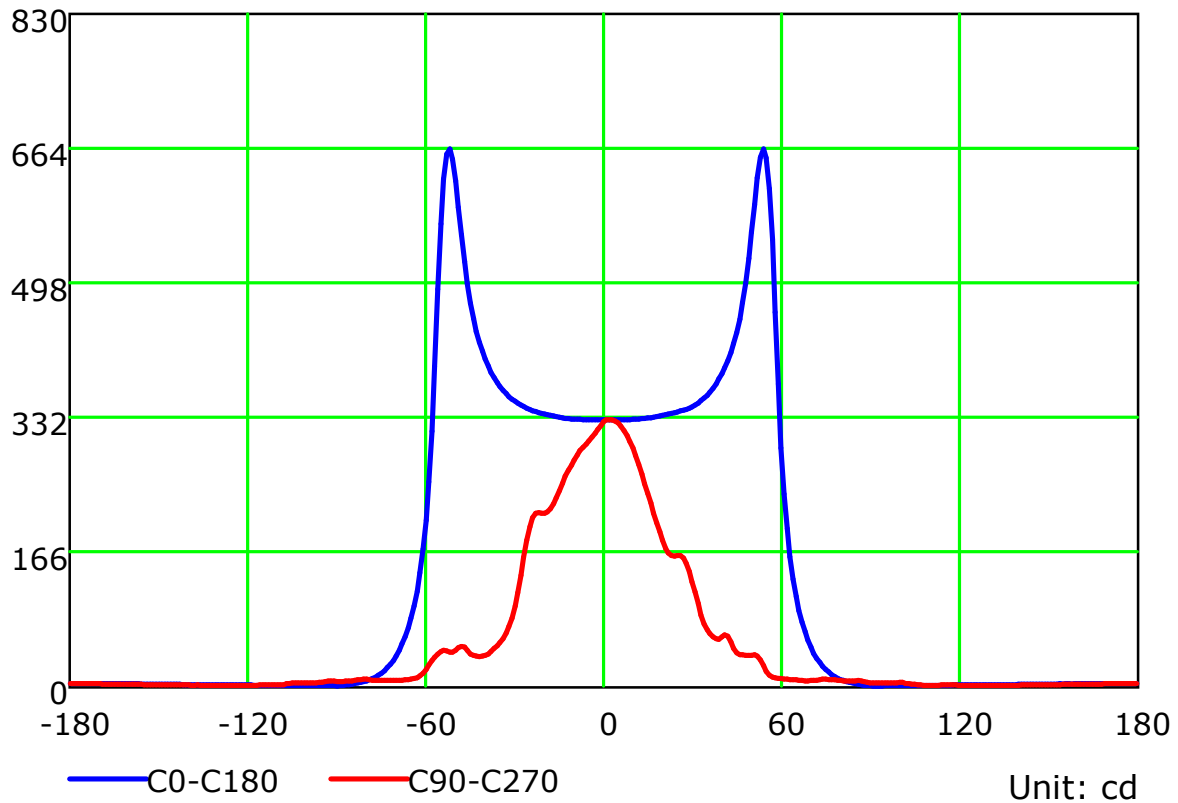
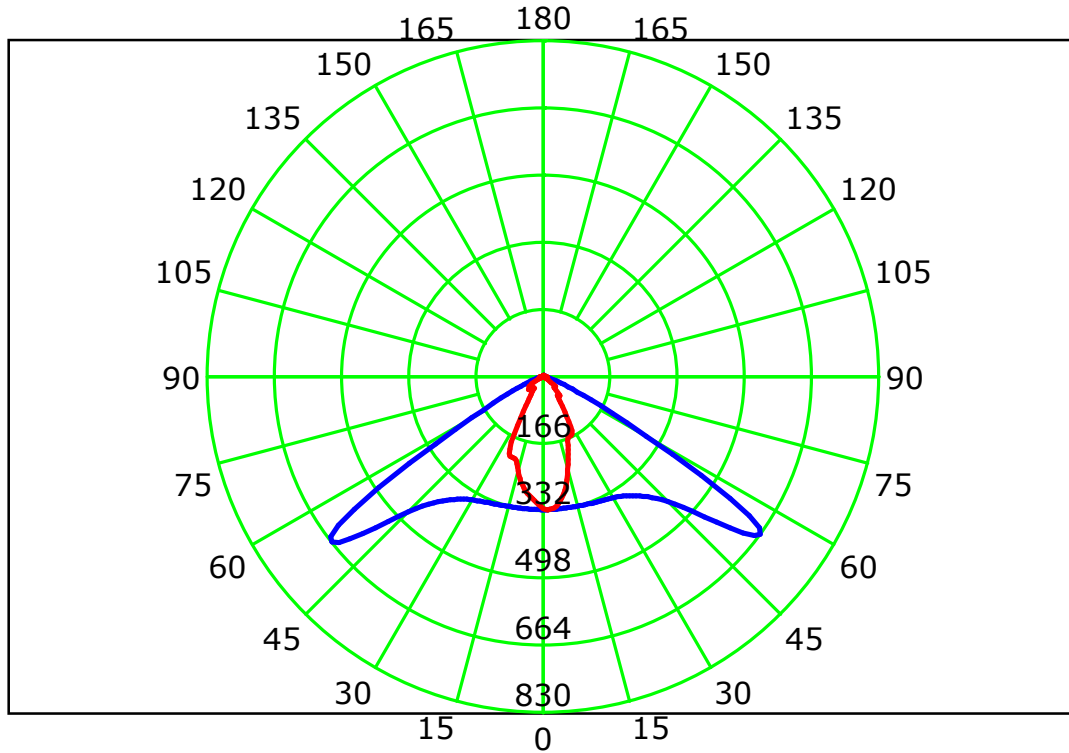
Test Device: GPM-1800B

Distance: 8.082 m

Humidity: 58

Inspector:

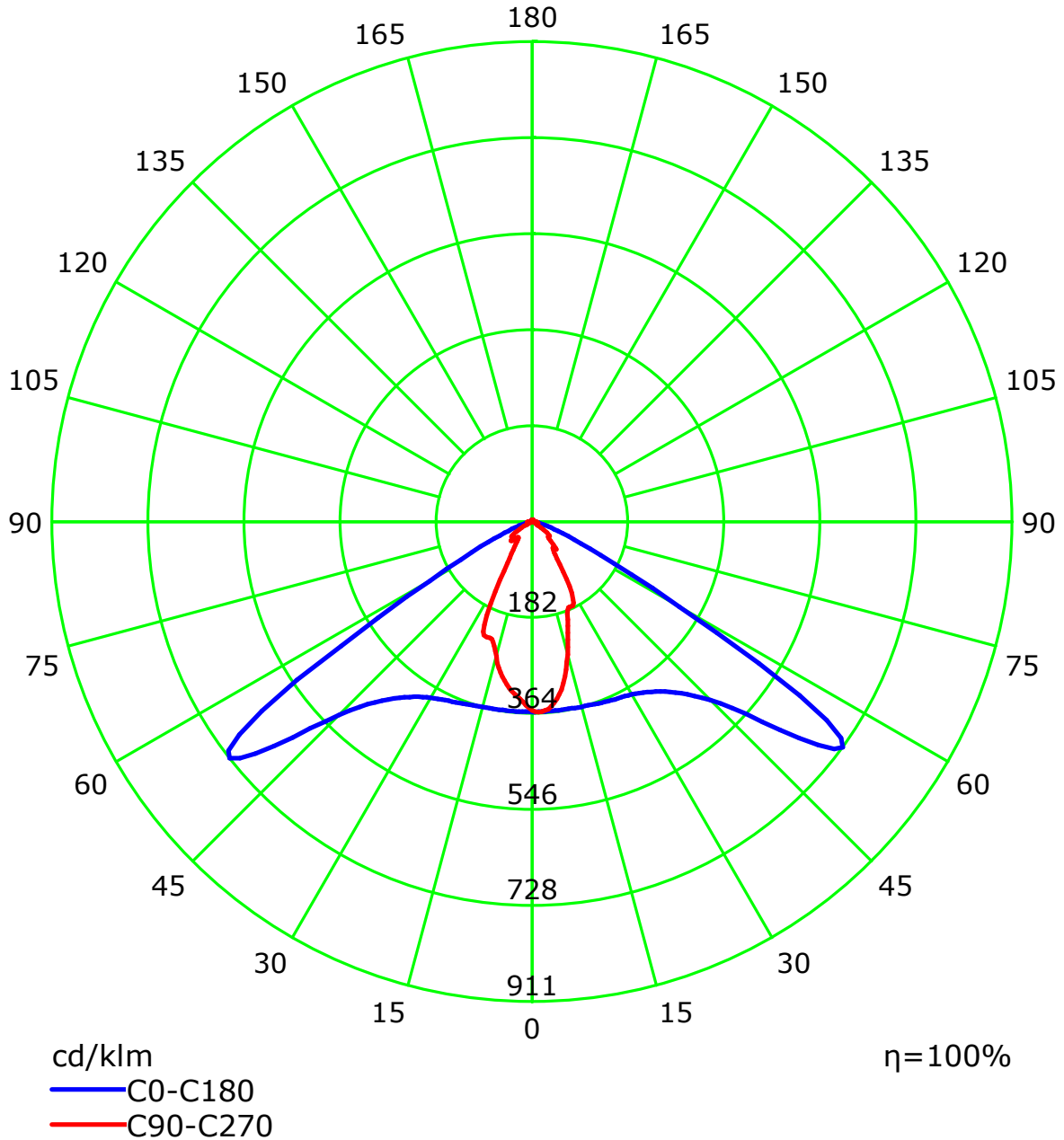
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 90.0
Test Lab: Inventfine instrument
Test Type: TYPE C
Temperature: 28
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.082 m
Humidity: 58
Inspector:

Luminous Intensity Distribution Curve(cd/klm)



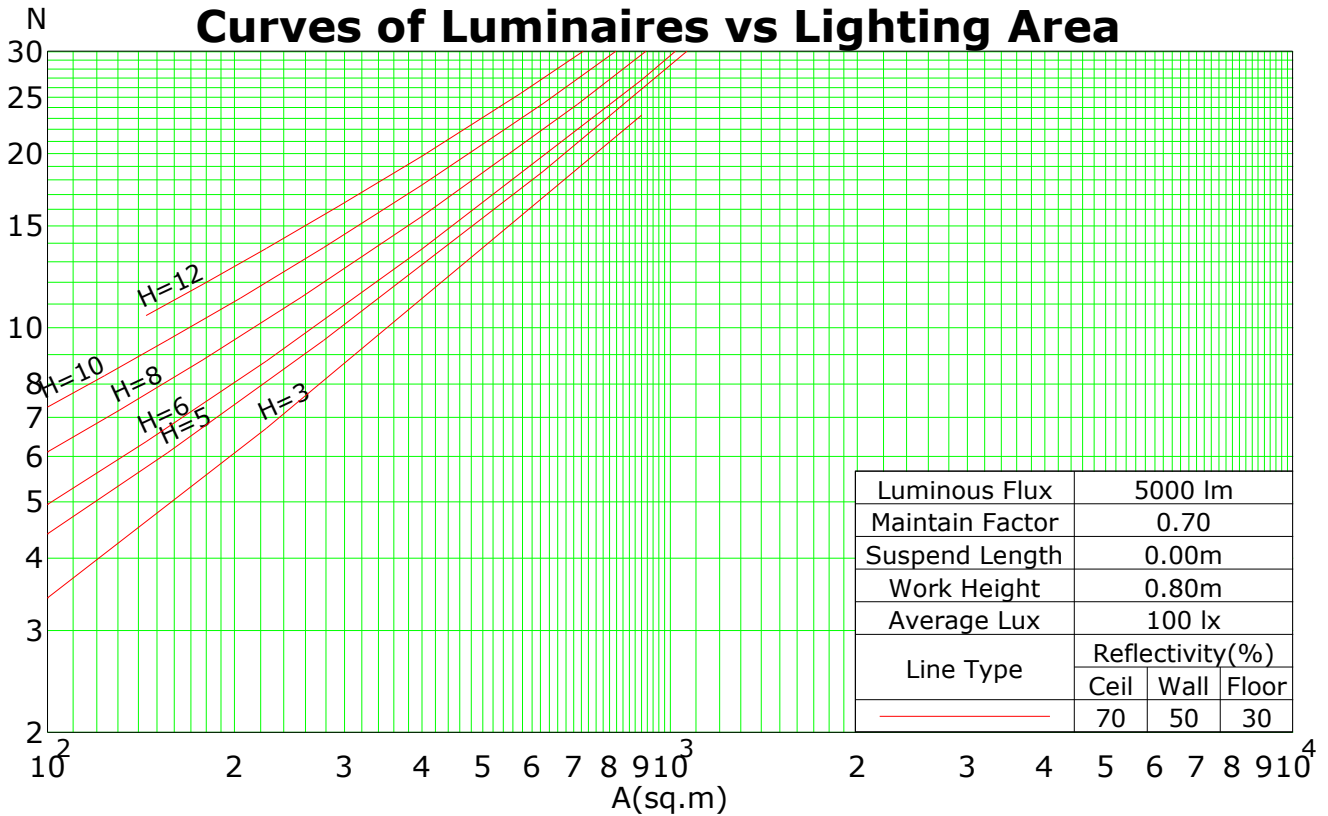
C Plane (°):0.0-360.0: 90.0
Test Lab: Inventfine instrument
Test Type: TYPE C
Temperature: 28
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.082 m
Humidity: 58
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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	98
1	110	106	102	98	107	103	100	97	99	96	93	95	92	90	91	89	87	85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	80	77	74	72
3	91	81	74	68	89	80	73	67	77	71	65	74	69	64	71	67	63	61
4	83	72	63	57	81	70	63	56	68	61	55	65	59	55	63	58	54	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	68	56	48	41	54	47	41	52	46	41	51	45	40	38
7	65	51	43	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	42	34	29	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

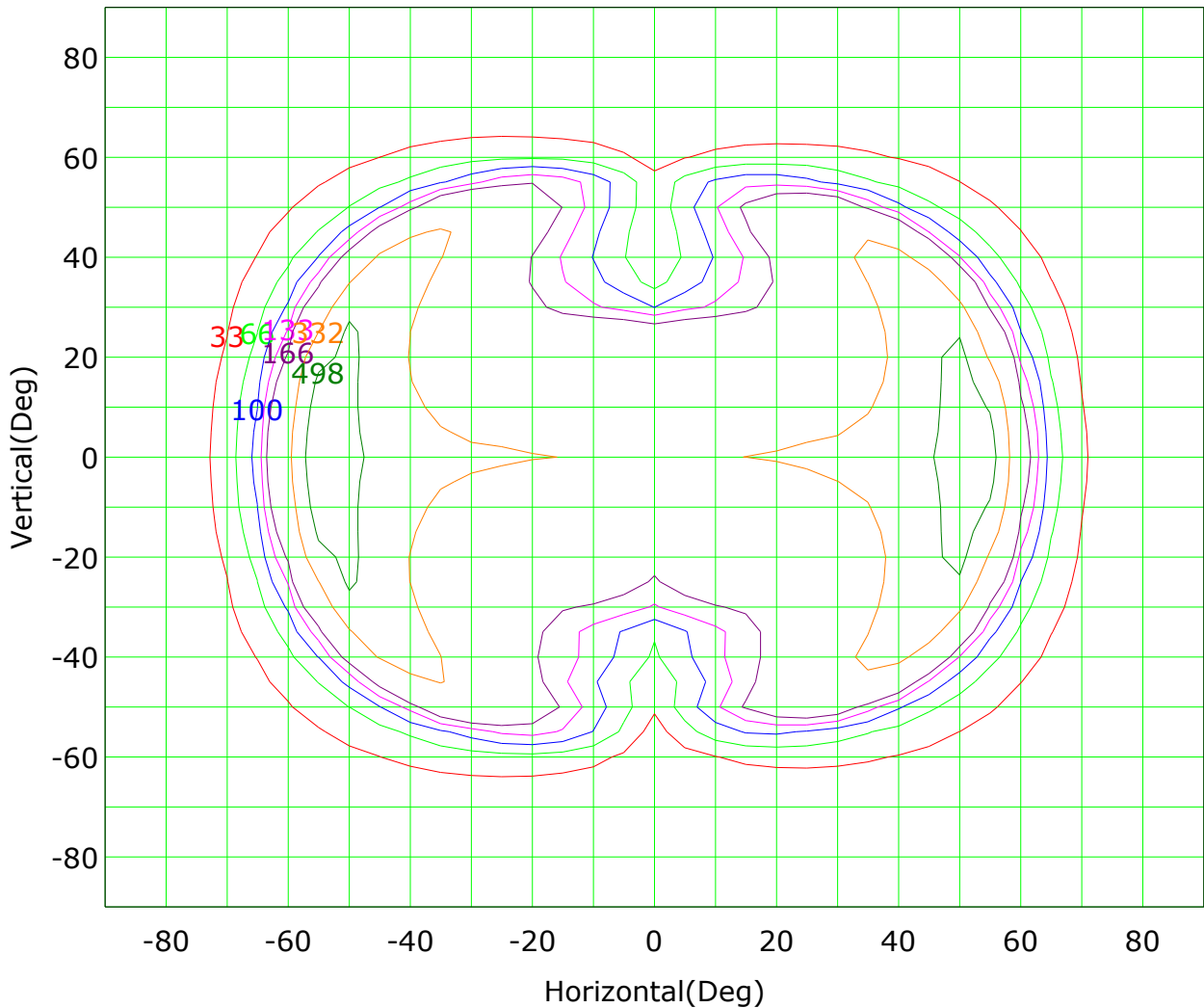
Spacing Criteria (0-180): 1.91
 Spacing Criteria (90-270): 0.73
 Spacing Criteria (Diagonal): 1.76



C Plane (°): 0.0-360.0: 90.0
 Test Lab: Inventfine instrument
 Test Type: TYPE C
 Temperature: 28
 Operator: Jacky tang

Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 8.082 m
 Humidity: 58
 Inspector:

Isocandela (rectangle)



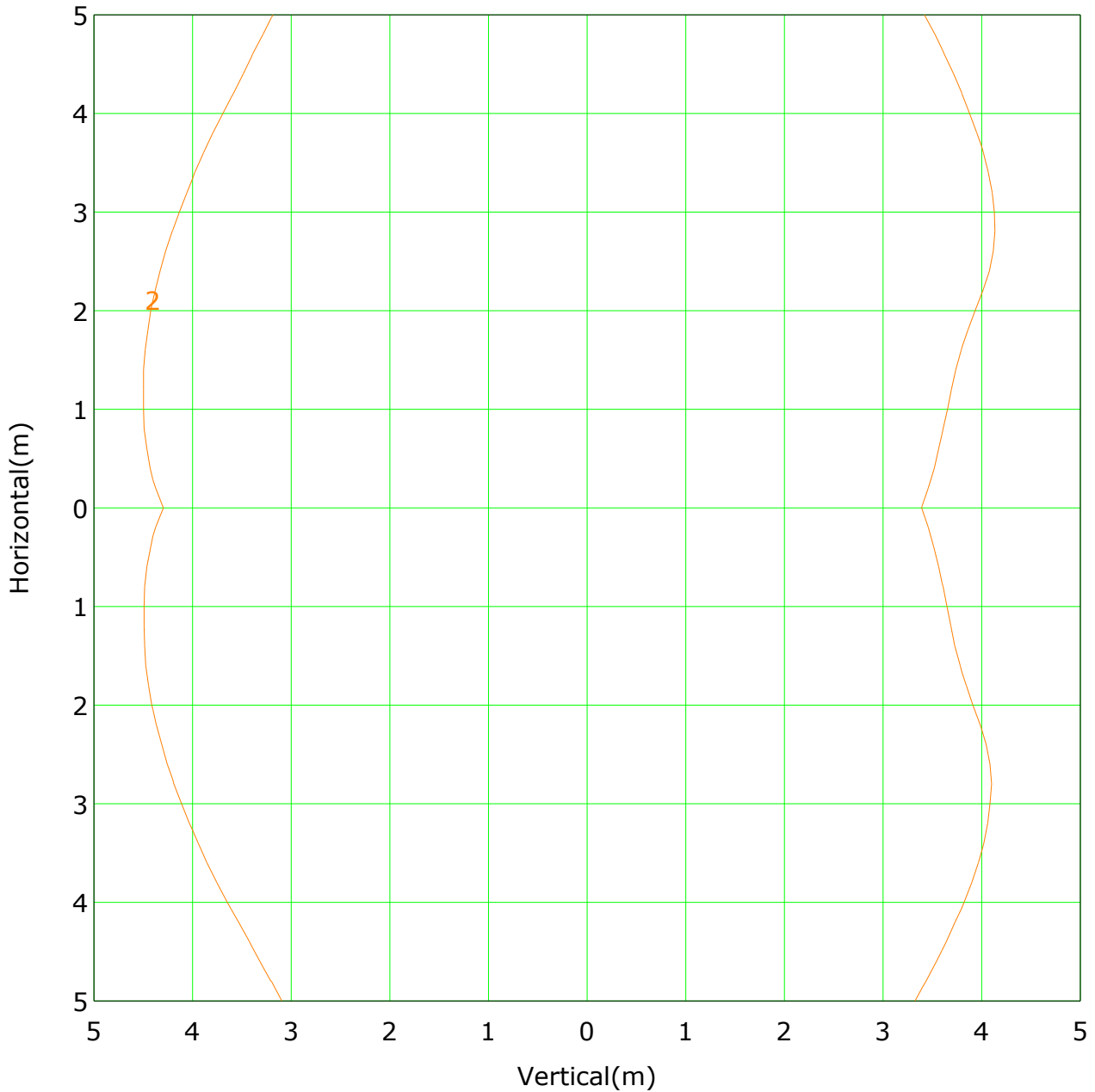
Imax (100%): 664 cd

— (5%):	33 cd	— (10%):	66 cd
— (15%):	100 cd	— (20%):	133 cd
— (25%):	166 cd	— (50%):	332 cd
— (75%):	498 cd	— (100%):	664 cd

C Plane (°): 0.0-360.0: 90.0
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Test Type: TYPE C
Temperature: 28
Operator: Jacky tang

Gamma Plane (°): 0.0-180.0: 1.0
Test Device: GPM-1800B
Distance: 8.082 m
Humidity: 58
Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 3.3 lx

— (1%): 0.0 lx	— (2%): 0.1 lx
— (5%): 0.2 lx	— (10%): 0.3 lx
— (20%): 0.7 lx	— (50%): 1.6 lx
— (100%): 3.3 lx	— (200%): 6.6 lx

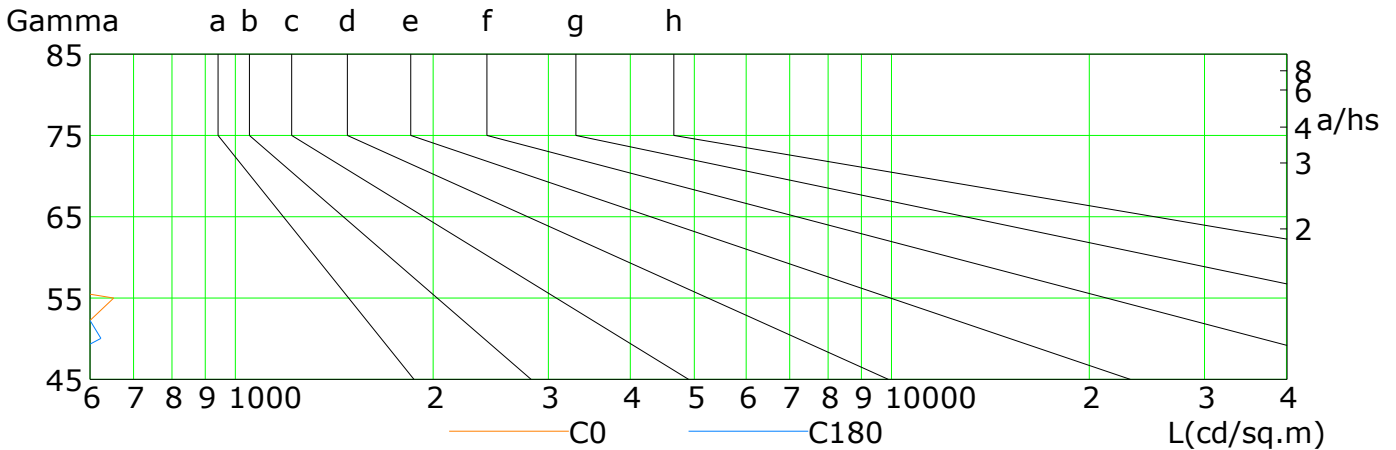
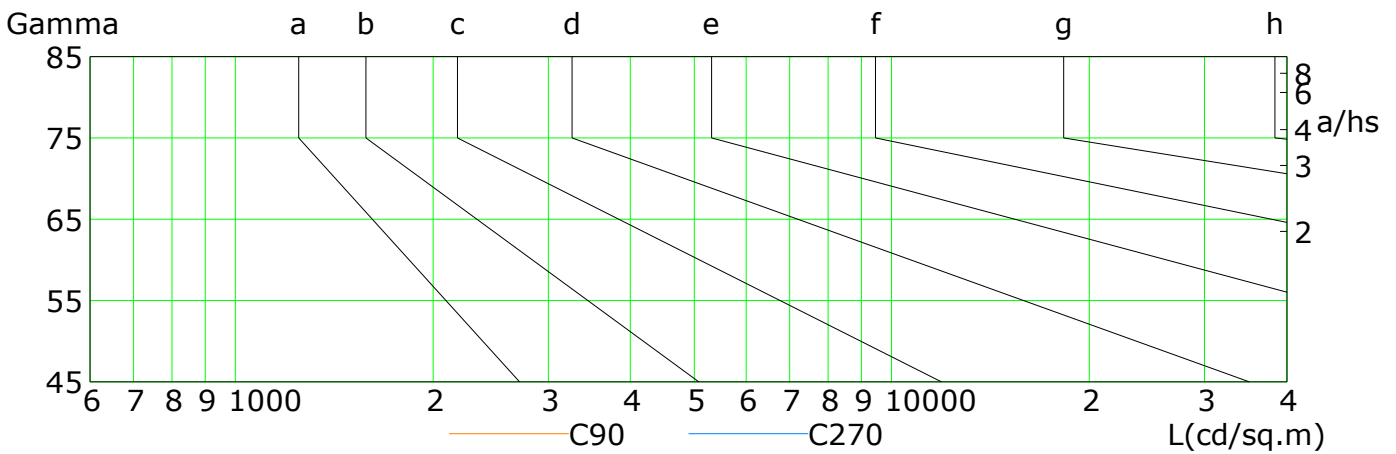
C Plane (°):0.0-360.0: 90.0
 Test Lab: Inventfine instrument
 Test Type: TYPE C
 Temperature: 28
 Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1800B
 Distance: 8.082 m
 Humidity: 58
 Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
		2000	1000	500	<=300				
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300

a b c d e f g h

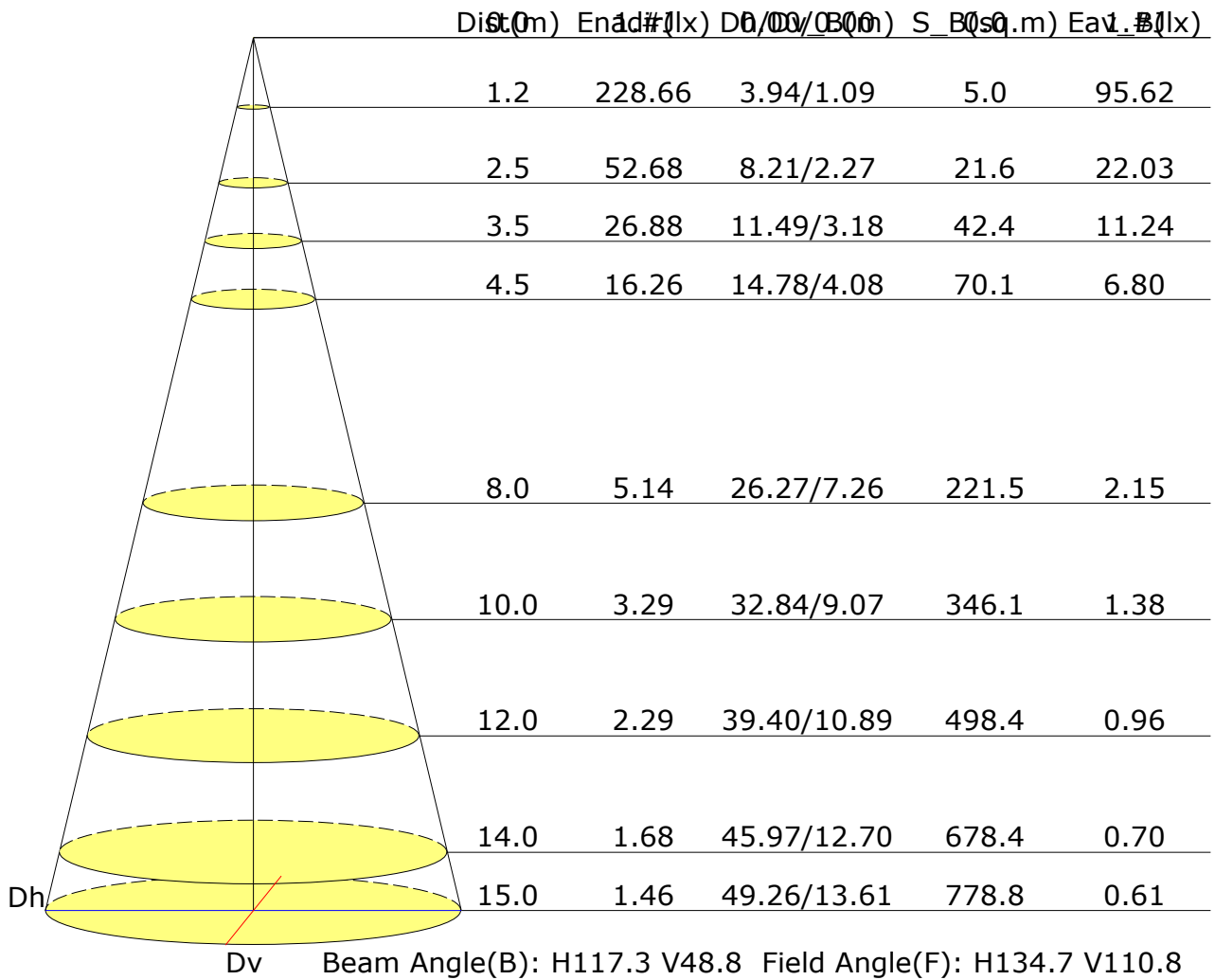


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	437	561	653	295	111	48	21	9	3
C90	42	39	19	10	8	7	9	7	7
C180	474	625	571	205	84	38	16	7	3
C270	40	44	43	21	9	7	7	9	7

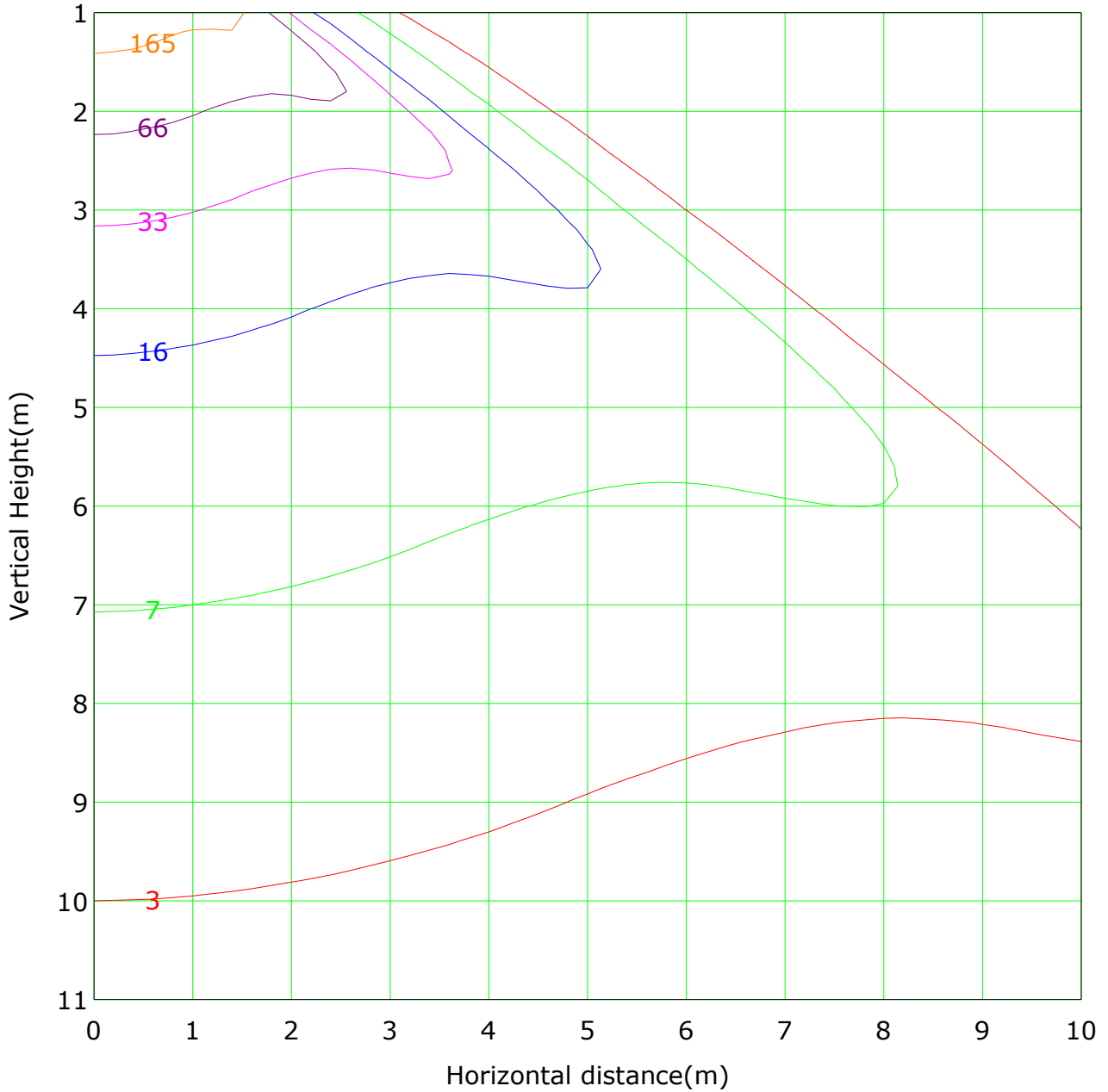
C Plane (°):0.0-360.0: 90.0
 Test Lab: Inventfine instrument
 Test Type: TYPE C
 Temperature: 28
 Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1800B
 Distance: 8.082 m
 Humidity: 58
 Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 11.0m	Max Lux: 329.3 lx
— (1%): 3.3 lx	— (2%): 6.6 lx	
— (5%): 16.5 lx	— (10%): 32.9 lx	
— (20%): 65.9 lx	— (50%): 164.6 lx	
— (100%): 329.3 lx	— (200%): 658.5 lx	

C Plane (°):0.0-360.0: 90.0
Test Lab: Inventfine instrument
Test Type: TYPE C
Temperature: 28
Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 8.082 m
Humidity: 58
Inspector:

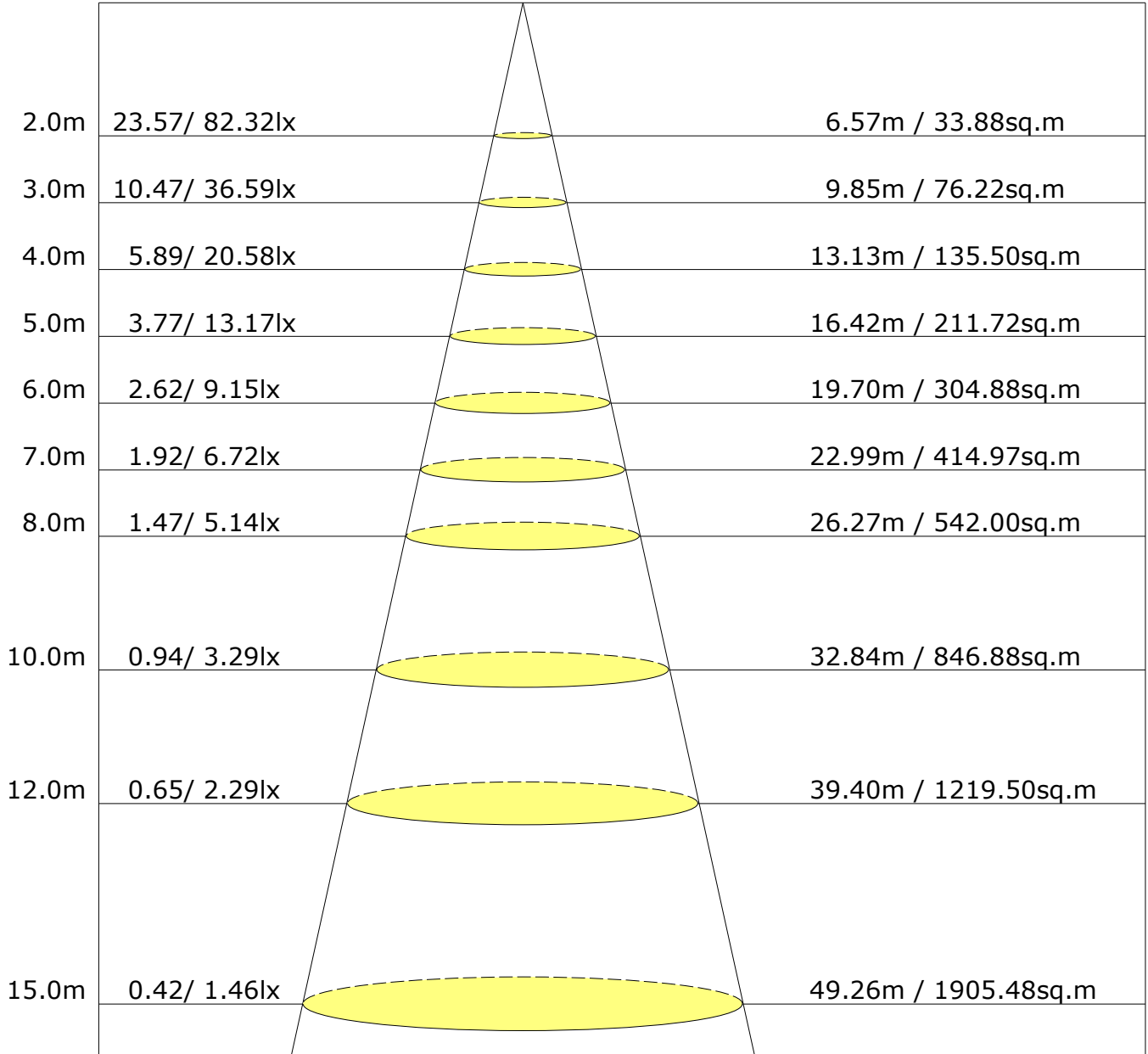
Area Flux Table

Unit: lm

		Vertical plane																		90 Flux(T)	898	847																			
		-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80				90																		
Flux(E)	Flux(T)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4	8.3	4.3	45.2	81.8	81.4	77.0	70.0	57.1	57.0	70.2	77.2	81.4	82.3	55.2	7.2	0.0	0.0	0.0	
Flux(E)	Flux(T)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4	8.3	4.3	45.2	81.8	81.4	77.0	70.0	57.1	57.0	70.2	77.2	81.4	82.3	55.2	7.2	0.0	0.0	0.0
Flux(E)	Flux(T)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4	8.3	4.3	45.2	81.8	81.4	77.0	70.0	57.1	57.0	70.2	77.2	81.4	82.3	55.2	7.2	0.0	0.0	0.0

The Average Illuminance Effective Figure

Flux Out: 798.36lm



Height

Avg./Nadir. E

Beam Angle: 117.3°

Diameter / Area

C Plane (°): 0.0-360.0: 90.0
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Test Type: TYPE C
Temperature: 28
Operator: Jacky tang

Gamma Plane (°): 0.0-180.0: 1.0
Test Device: GPM-1800B
Distance: 8.082 m
Humidity: 58
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.\$

Calculate in accordance with CIE 190:2010

C Plane (°):0.0-360.0: 90.0
 Test Lab: Inventfine instrument
 Test Type: TYPE C
 Temperature: 28
 Operator: Jacky tang

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1800B
 Distance: 8.082 m
 Humidity: 58
 Inspector:

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 1.00								
Room Reflectance			Room Index(RI)								
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.55	0.68	0.76	0.82	0.90	0.96	0.99	1.04	1.06
	0.30		0.47	0.60	0.69	0.75	0.84	0.90	0.94	1.00	1.03
	0.20		0.41	0.54	0.63	0.70	0.79	0.86	0.90	0.96	1.00
0.50	0.50	0.20	0.53	0.66	0.74	0.79	0.87	0.92	0.95	0.99	1.02
	0.30		0.46	0.59	0.67	0.73	0.82	0.87	0.91	0.96	0.99
	0.20		0.40	0.53	0.62	0.69	0.78	0.84	0.88	0.93	0.97
0.30	0.50	0.20	0.51	0.64	0.71	0.77	0.84	0.88	0.91	0.95	0.98
	0.30		0.45	0.58	0.66	0.72	0.80	0.85	0.88	0.93	0.96
	0.20		0.40	0.53	0.61	0.67	0.76	0.81	0.85	0.90	0.93
0.00	0.00	0.00	0.37	0.50	0.58	0.64	0.72	0.77	0.81	0.86	0.88
<p>Rating:9W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 1.00									
Room Reflectance			Room Index(RI)									
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	
0.70	0.50	0.20	1.06	0.84	0.70	0.60	0.47	0.39	0.33	0.25	0.20	
	0.30		0.88	0.72	0.61	0.53	0.43	0.35	0.30	0.24	0.19	
	0.20		0.76	0.63	0.54	0.48	0.39	0.33	0.28	0.22	0.18	
0.50	0.50	0.20	1.02	0.81	0.67	0.58	0.45	0.40	0.31	0.24	0.19	
	0.30		0.86	0.70	0.59	0.52	0.41	0.34	0.29	0.22	0.18	
	0.20		0.75	0.62	0.53	0.47	0.38	0.32	0.27	0.21	0.18	
0.30	0.50	0.20	0.99	0.77	0.64	0.55	0.43	0.35	0.29	0.22	0.18	
	0.30		0.84	0.68	0.58	0.50	0.39	0.33	0.28	0.21	0.17	
	0.20		0.74	0.61	0.52	0.46	0.37	0.30	0.26	0.20	0.17	
0.00	0.00	0.00	0.64	0.51	0.43	0.37	0.29	0.23	0.20	0.15	0.12	
<p>Rating: 9W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>												

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 1.00								
Room Reflectance			Room Index(RI)								
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.19	0.20	0.20	0.21	0.22	0.22	0.23	0.23	0.24
	0.30		0.11	0.13	0.14	0.15	0.17	0.18	0.19	0.20	0.21
	0.20		0.06	0.08	0.09	0.11	0.13	0.15	0.16	0.18	0.19
0.50	0.50	0.20	0.18	0.19	0.19	0.20	0.21	0.21	0.22	0.22	0.22
	0.30		0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.20	0.20
	0.20		0.06	0.08	0.09	0.11	0.13	0.14	0.15	0.17	0.18
0.30	0.50	0.20	0.17	0.18	0.19	0.19	0.20	0.20	0.21	0.21	0.22
	0.30		0.11	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.06	0.08	0.09	0.10	0.12	0.14	0.15	0.17	0.18
0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
<p>Rating:9W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											