

Report No.: 3

Test Time: 2018/4/6 09:53

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: 1.5M

Current: 0.485A

Power Factor: 0.515

Voltage: 220V

Power: 55.08W

Photometric Results

CIE Class: Direct

Measurement Flux: 3851.7 lm

Downward Ratio: 93%

Horizontal Diffuse Angle(50%): H116.1

Vertical Diffuse Angle(50%): V125.5

Luminaire Efficacy Rating (LER): 69.98

Max. Intensity: 1108.69 cd

S/MH(C0/C180): 1.28

Total Rated Lamp Lumens: 3851.7 lm

Efficiency: 100%

Upward Ratio: 7%

Central Intensity: 1107.12 cd

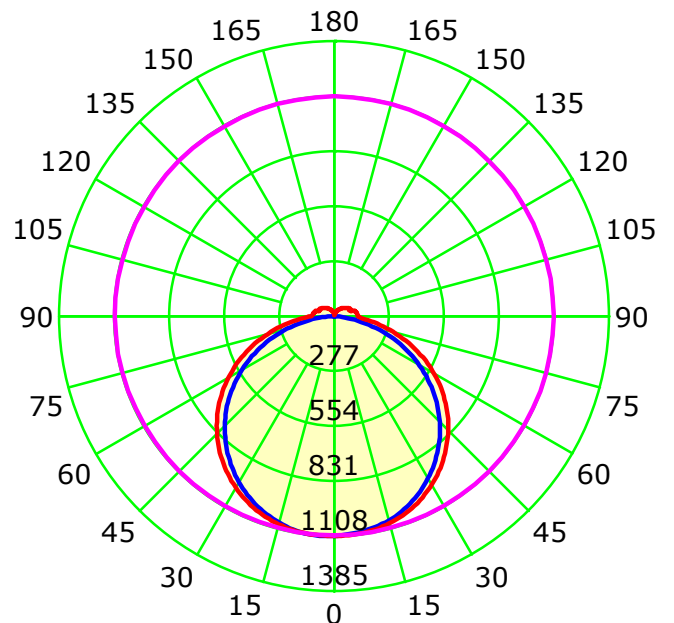
Pos of Max. Intensity: H180 V3

S/MH(C90/C270): 1.33

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 120.7°

— C0-C180 — C90-C270 — G3

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

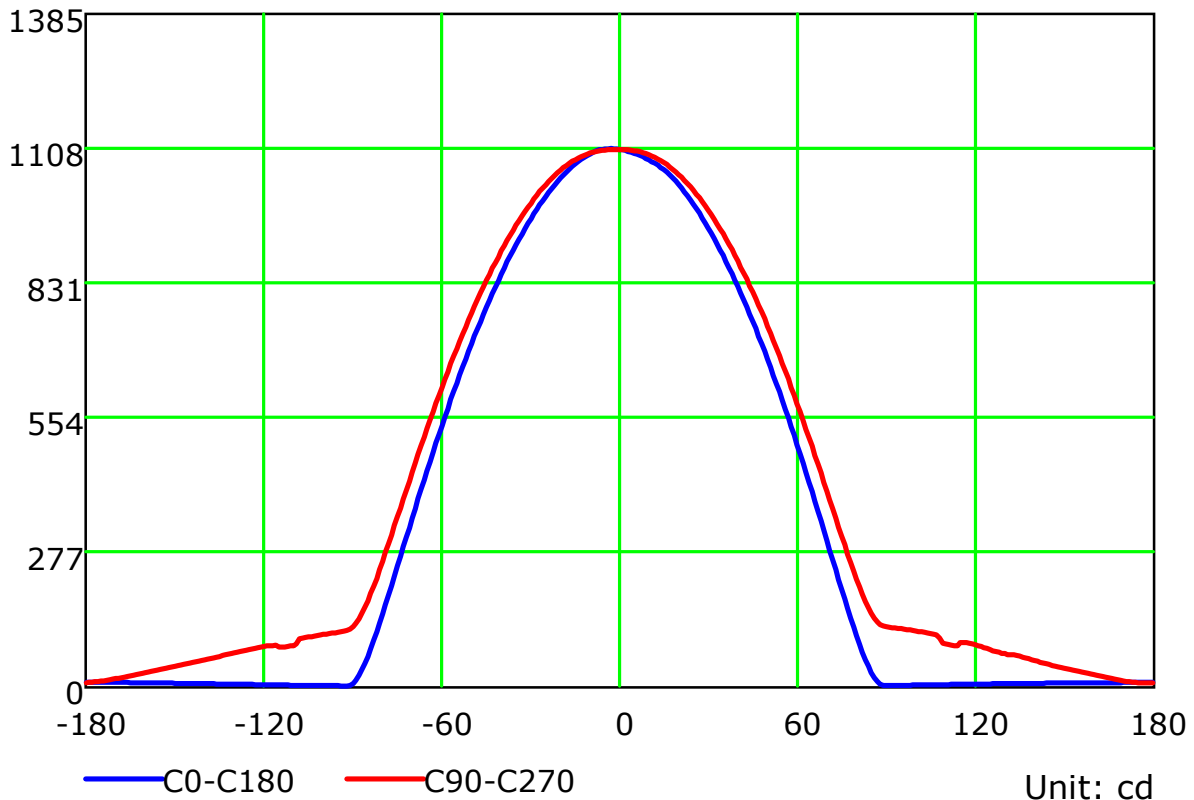
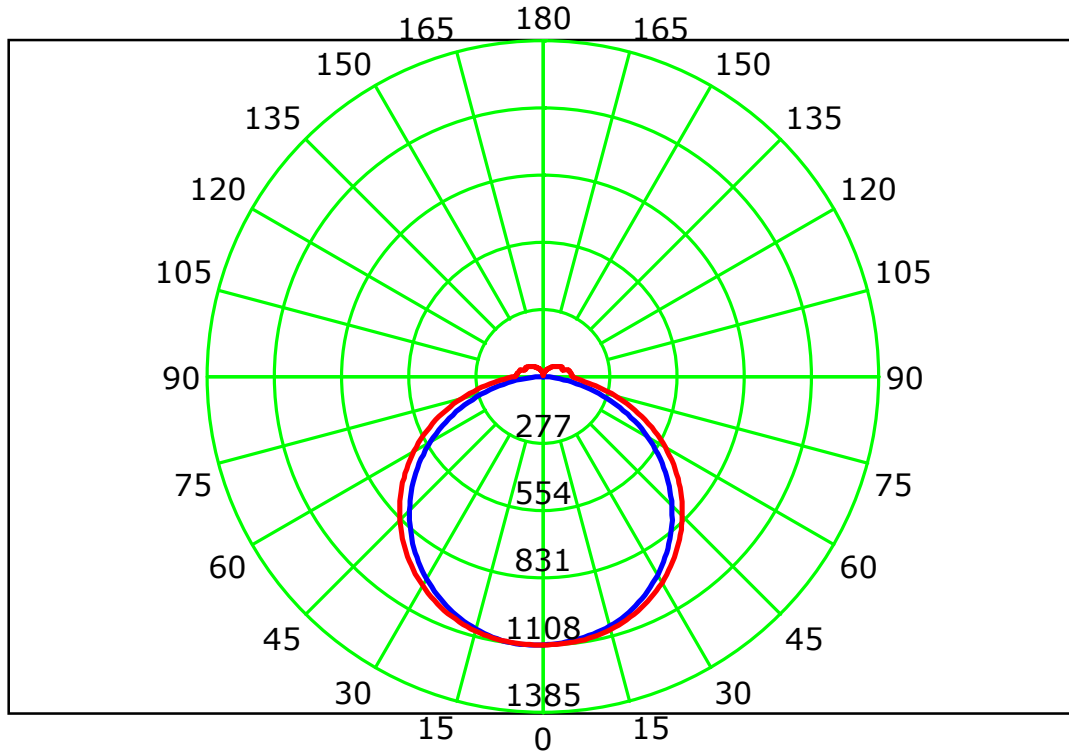
Test Device: GPM-1800B

Distance: 8.030 m

Humidity: 58

Inspector:

Luminous Intensity Distribution Curve



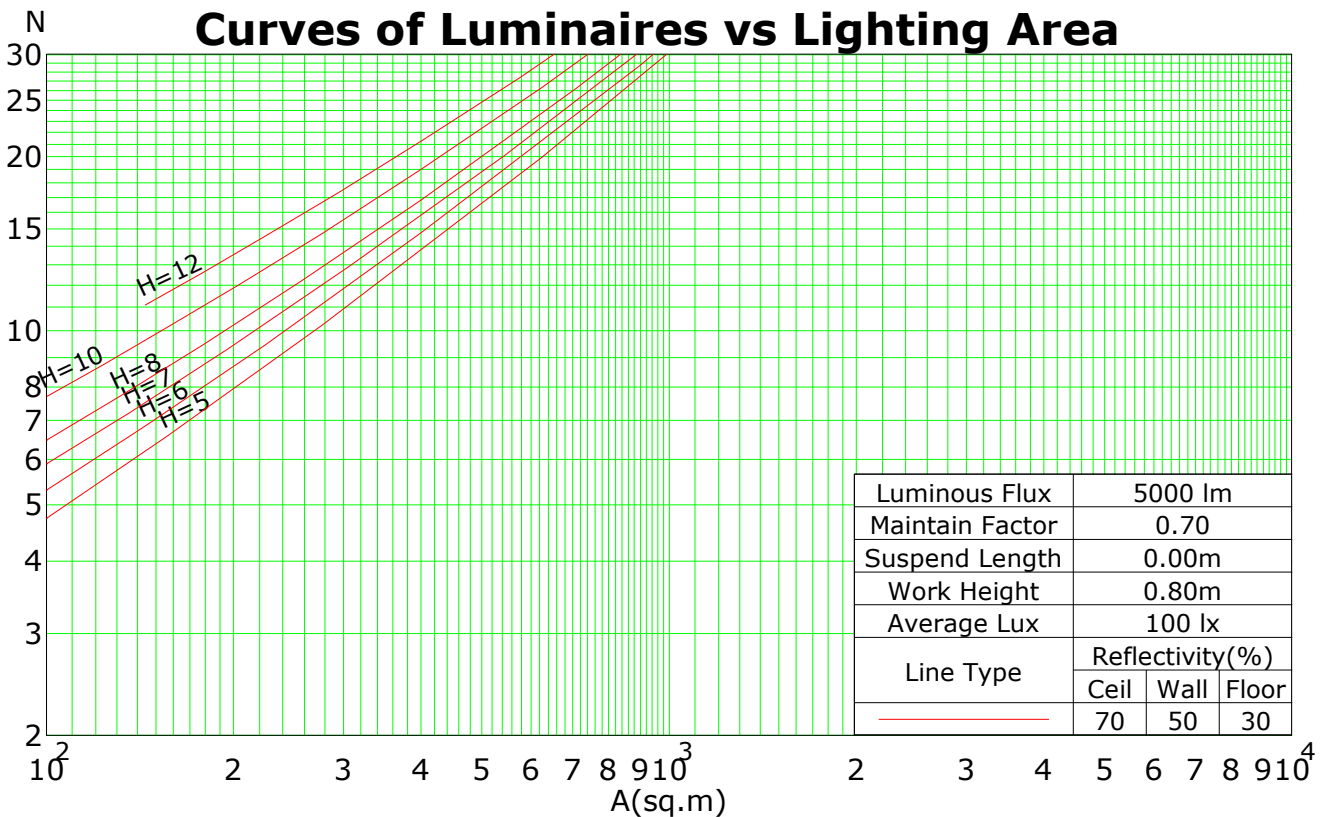
C Plane (°):0.0-360.0: 45.0
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 Test Type: TYPE C
 Temperature: 26
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Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1800B
 Distance: 8.030 m
 Humidity: 58
 Inspector:

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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	106	101	96	92	102	98	94	90	92	89	86	87	84	82	82	80	78	75
2	96	87	80	74	93	85	78	72	80	74	70	75	71	67	71	68	64	62
3	87	76	68	61	84	74	66	60	70	63	58	66	61	56	63	58	54	51
4	80	67	58	51	77	65	57	50	62	55	49	59	52	47	56	50	46	43
5	73	60	50	44	70	58	50	43	55	48	42	52	46	41	50	44	40	37
6	67	54	44	38	65	52	44	37	50	42	36	47	41	36	45	39	35	32
7	62	48	40	33	60	47	39	33	45	38	32	43	36	31	41	35	31	29
8	58	44	35	29	56	43	35	29	41	34	29	39	33	28	38	32	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	23
10	51	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20

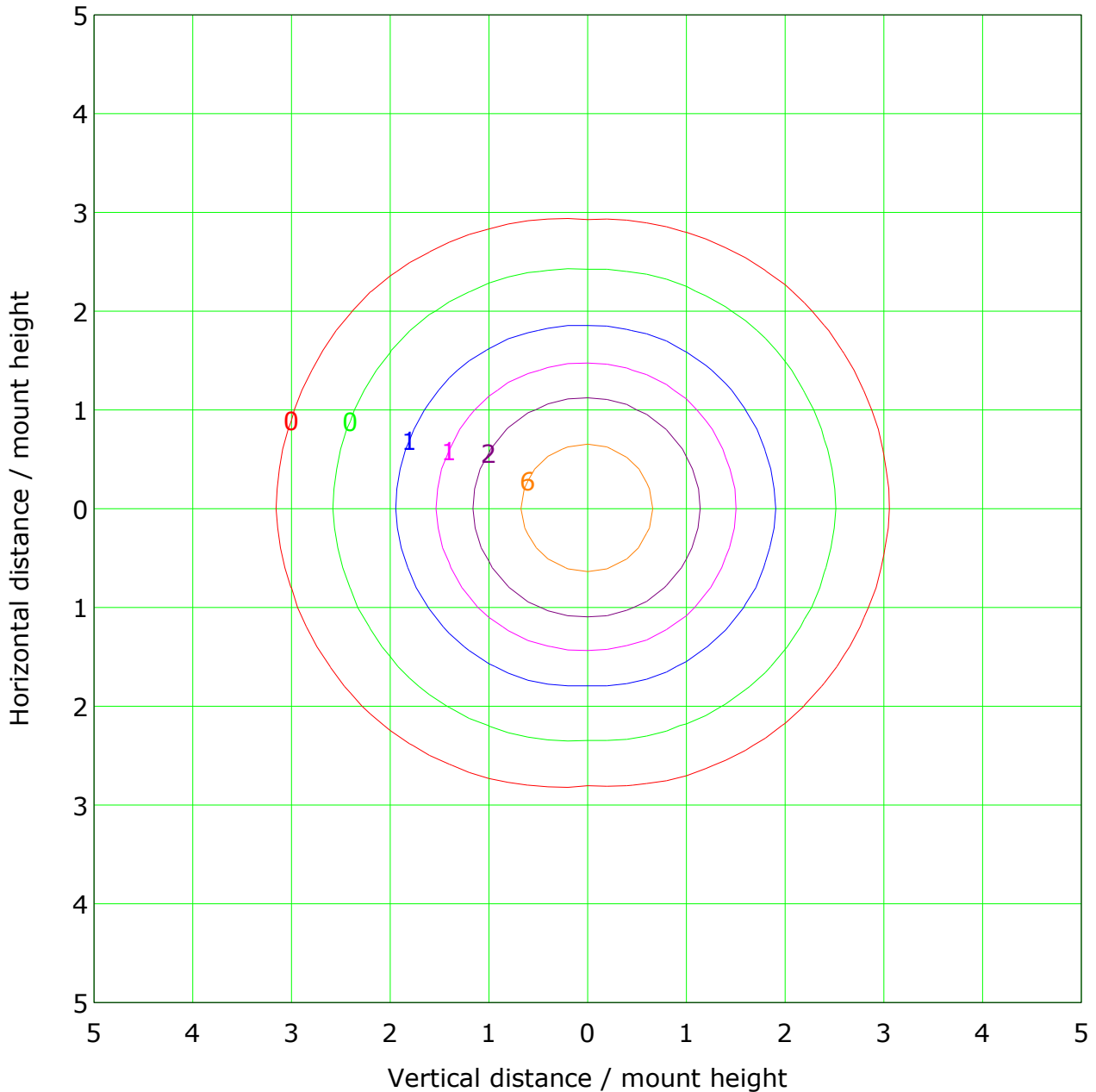
Spacing Criteria (0-180): 1.28
 Spacing Criteria (90-270): 1.33
 Spacing Criteria (Diagonal): 1.44



C Plane (°):0.0-360.0: 45.0
 Test Lab: Inventfine instruments
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 Test Device: GPM-1800B
 Distance: 8.030 m
 Humidity: 58
 Inspector:

IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 11.1 lx	
— (1%):	0.1 lx	— (2%):	0.2 lx
— (5%):	0.6 lx	— (10%):	1.1 lx
— (20%):	2.2 lx	— (50%):	5.5 lx
— (100%):	11.1 lx		

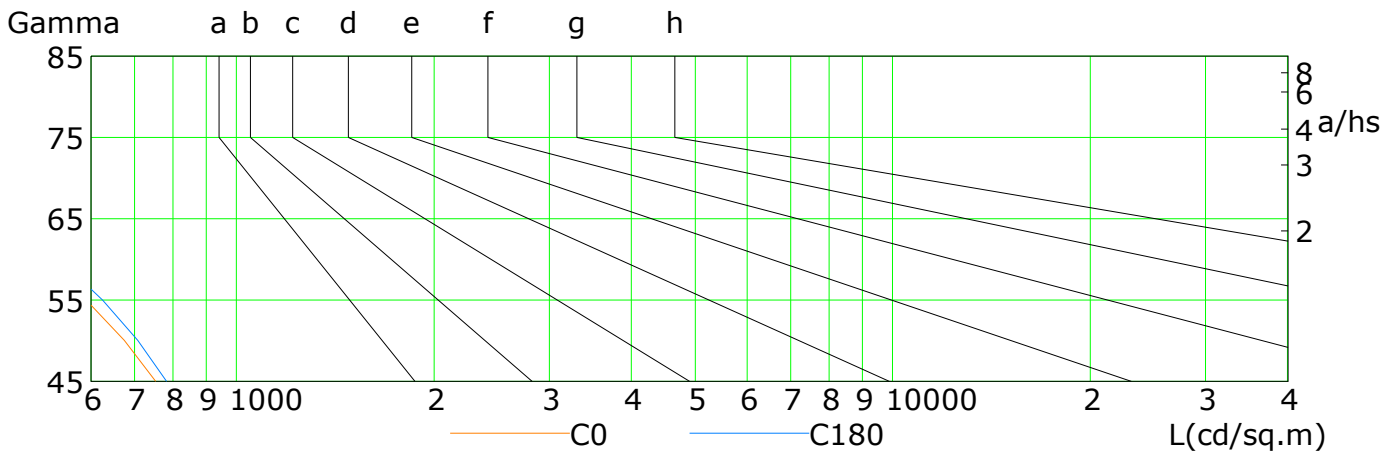
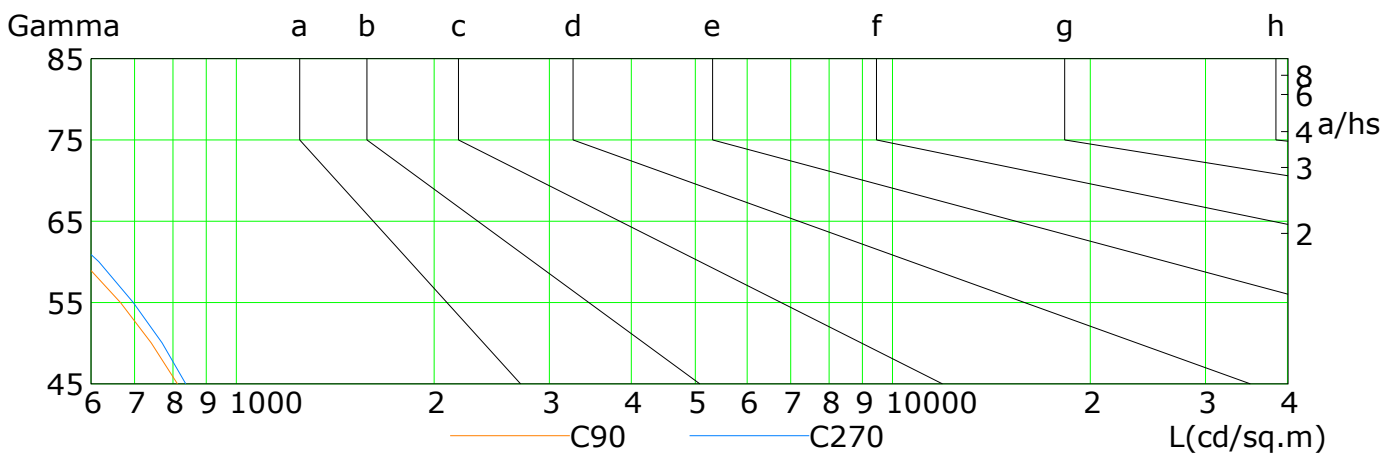
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Lum Limit Curve

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

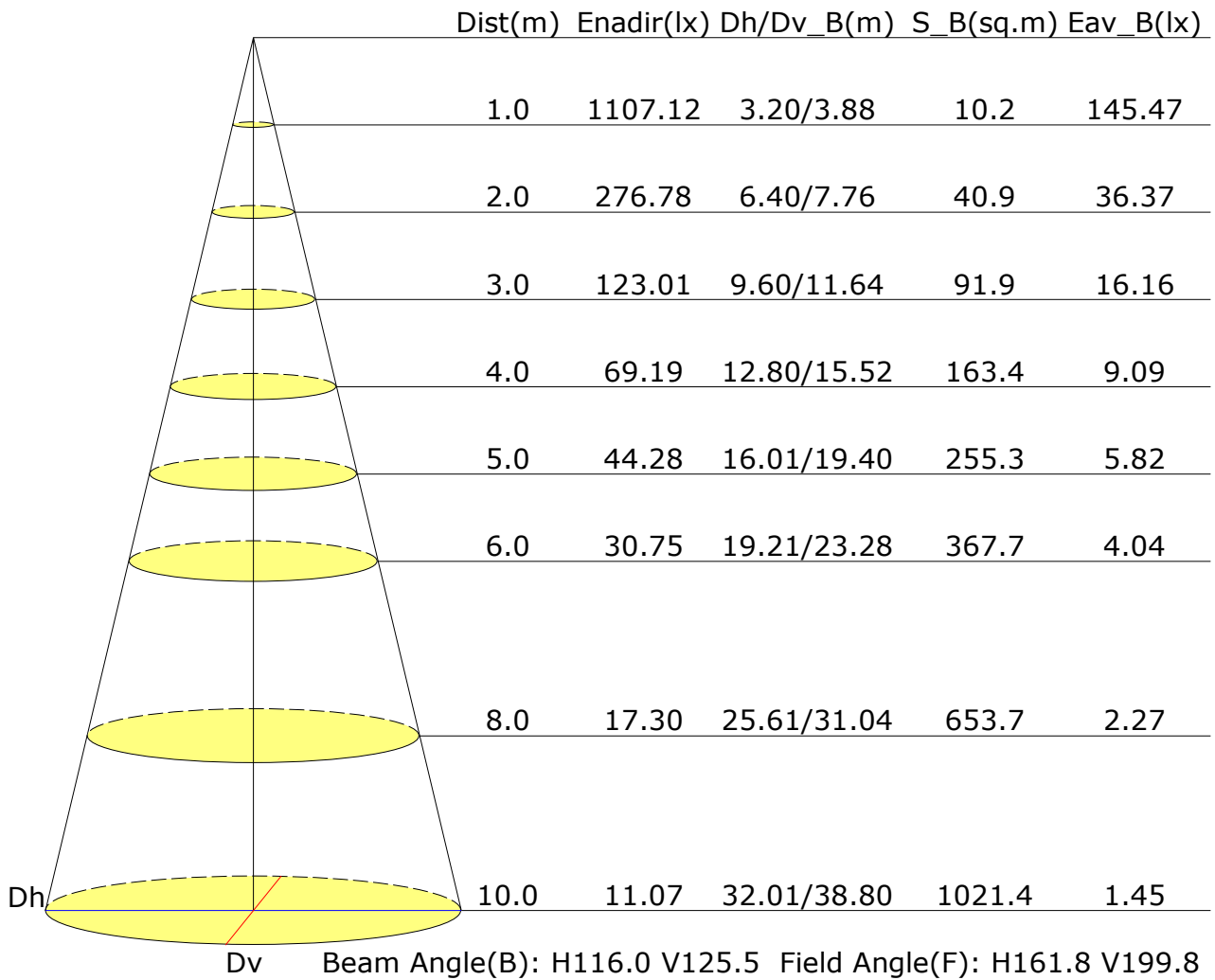


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	753	675	590	498	402	300	200	105	28
C90	813	742	666	583	496	403	310	221	151
C180	782	707	625	538	444	347	248	150	62
C270	837	770	696	617	531	441	350	258	177

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 Test Device: GPM-1800B
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 Inspector:

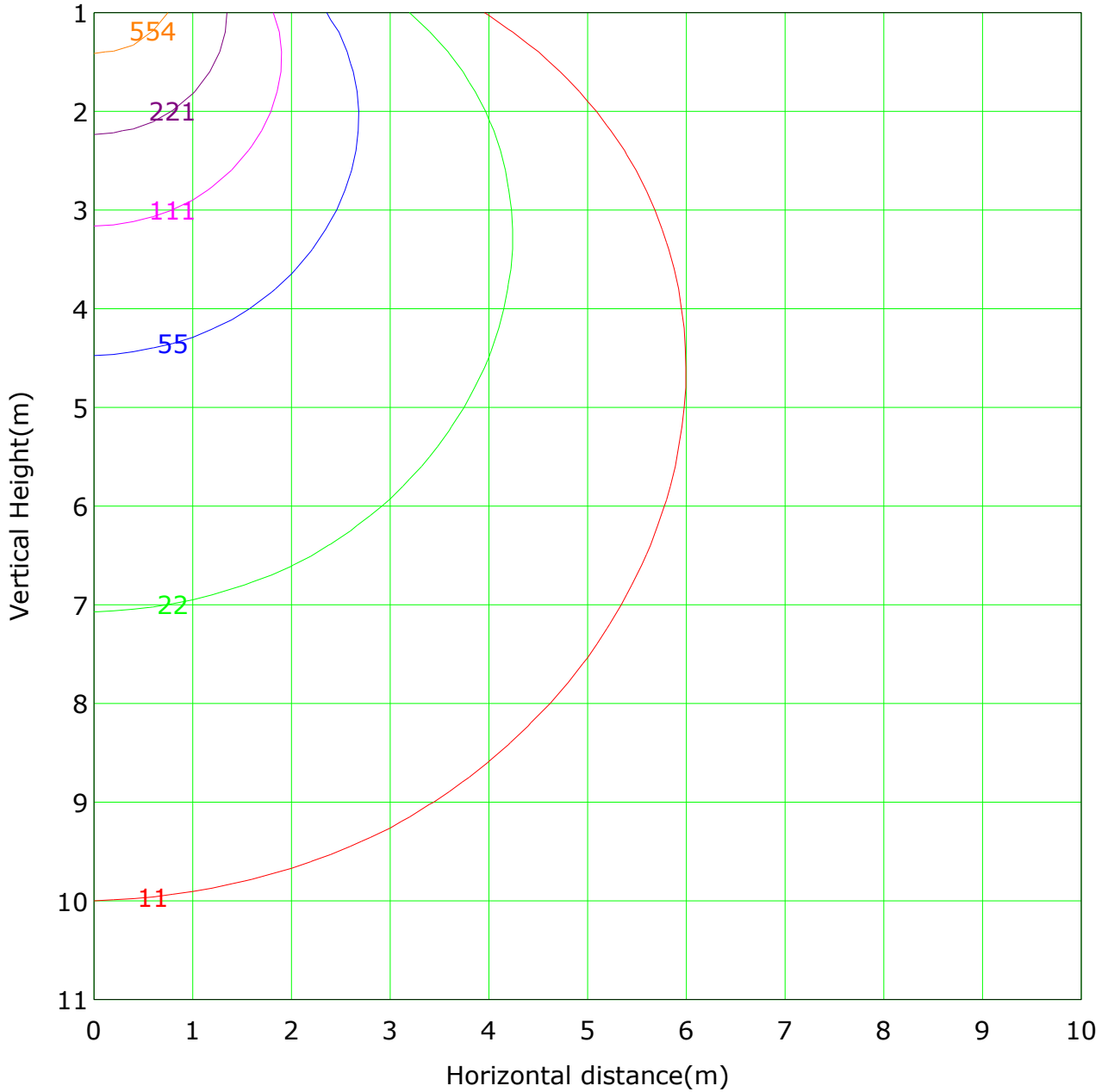
Illuminance at a Distance



C Plane (°):0.0-360.0: 45.0
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 Test Type: TYPE C
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Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1800B
 Distance: 8.030 m
 Humidity: 58
 Inspector:

Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 11.0m	Max Lux: 1107.1 lx
— (1%): 11.1 lx	— (2%): 22.1 lx	
— (5%): 55.4 lx	— (10%): 110.7 lx	
— (20%): 221.4 lx	— (50%): 553.6 lx	
— (100%):1107.1 lx		

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Area Flux Table

Unit: lm

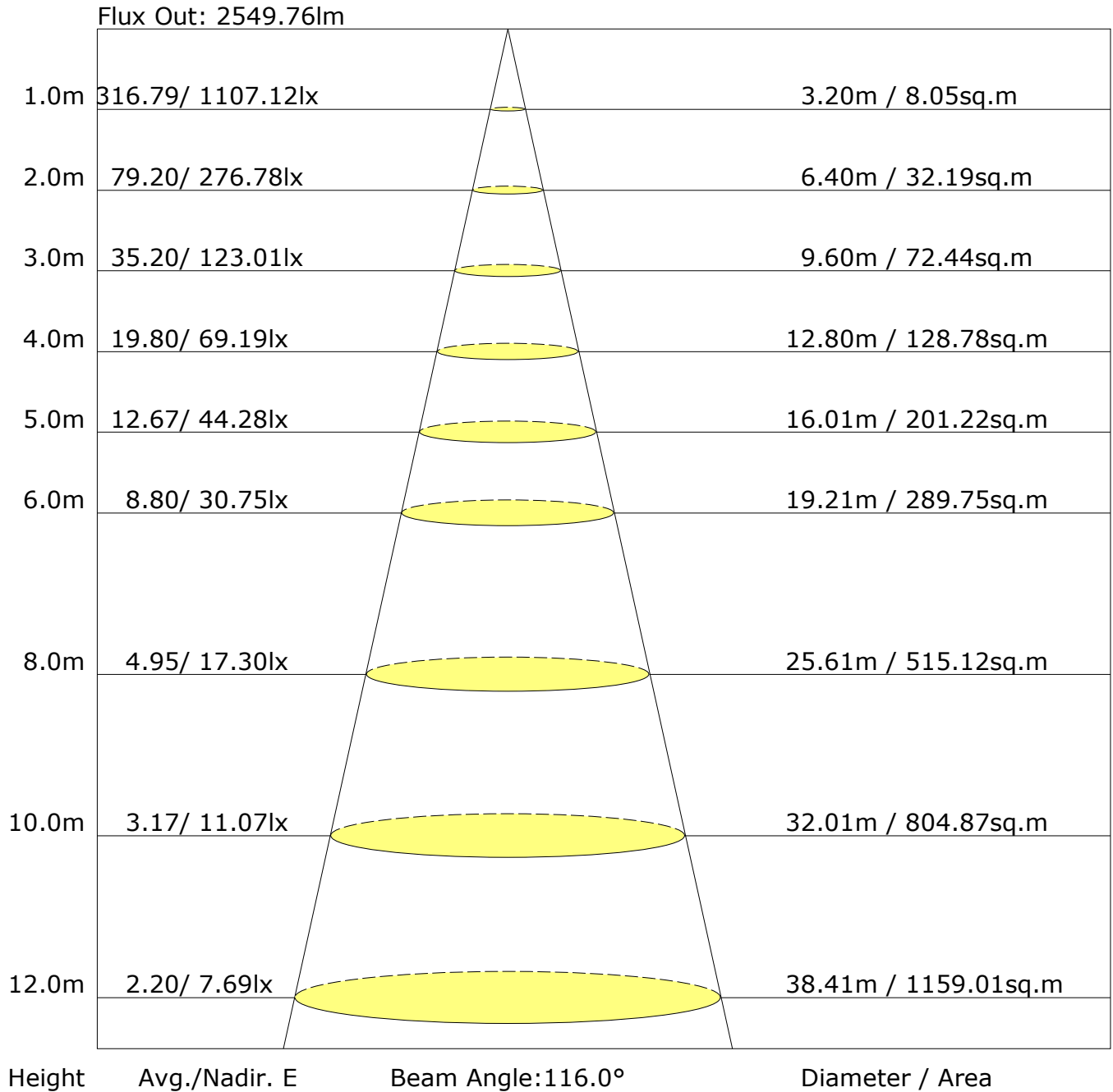
		Vertical plane																				
		-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90		
Flux(E)	Flux(T)	0.1	0.4	1.0	1.8	2.8	3.6	4.4	5.0	5.4	5.3	4.7	4.0	3.2	2.3	1.4	0.7	0.3	0.0	46.2	37.3	
0.8	3.0	0.1	0.6	1.7	3.3	5.2	7.0	8.6	9.8	10.5	10.4	9.4	8.0	6.3	4.5	2.7	1.3	0.4	0.0	89.8	87.6	
		0.1	0.9	2.6	5.0	8.0	10.8	13.2	15.0	16.0	15.8	14.6	12.6	10.0	7.2	4.4	2.1	0.6	0.1	138.7	137.7	
		0.2	1.2	3.5	6.7	10.5	14.2	17.4	19.7	20.9	20.8	19.3	16.7	13.5	9.7	6.0	2.9	0.9	0.1	184.1	183.5	
		0.2	1.5	4.3	8.2	12.7	17.2	21.0	23.7	25.2	25.0	23.3	20.3	16.4	11.9	7.5	3.7	1.1	0.1	223.3	222.9	
		0.2	1.7	4.9	9.4	14.5	19.6	23.9	27.0	28.6	28.5	26.5	23.2	18.8	13.7	8.7	4.4	1.4	0.1	255.1	254.7	
		0.2	1.9	5.4	10.2	15.8	21.3	26.1	29.5	31.2	31.0	29.0	25.4	20.6	15.1	9.6	4.9	1.5	0.1	278.6	278.3	
		0.2	2.0	5.7	10.8	16.6	22.3	27.4	31.1	32.8	32.6	30.5	26.8	21.7	15.9	10.2	5.2	1.6	0.1	293.4	293.2	
		0.2	2.0	5.8	11.0	16.9	22.7	27.9	31.6	33.5	33.2	31.2	27.4	22.1	16.2	10.4	5.3	1.7	0.1	299.2	299.0	
		0.2	2.0	5.8	10.9	16.8	22.6	27.8	31.5	33.4	33.2	31.2	27.4	22.1	16.2	10.3	5.2	1.7	0.1	298.5	298.3	
		0.2	2.0	5.6	10.7	16.4	22.1	27.1	30.7	32.5	32.4	30.4	26.7	21.6	15.8	10.1	5.1	1.6	0.1	291.4	291.2	
		0.2	1.9	5.3	10.1	15.5	20.9	25.6	29.0	30.8	30.7	28.8	25.3	20.4	14.9	9.5	4.8	1.5	0.1	275.4	275.0	
		0.2	1.7	4.8	9.1	14.1	19.0	23.3	26.4	28.1	28.0	26.2	23.0	18.6	13.5	8.5	4.3	1.3	0.1	250.2	249.9	
		0.2	1.4	4.1	7.8	12.2	16.5	20.3	23.0	24.5	24.4	22.8	19.9	16.0	11.6	7.3	3.6	1.1	0.1	216.7	216.2	
		0.1	1.1	3.3	6.3	9.9	13.4	16.5	18.8	20.0	19.9	18.5	16.1	12.9	9.3	5.7	2.8	0.8	0.1	175.8	175.0	
		0.1	0.8	2.4	4.6	7.3	9.9	12.2	13.9	14.9	14.8	13.6	11.8	9.3	6.7	4.0	1.9	0.6	0.1	128.8	127.6	
		0.1	0.5	1.5	2.9	4.5	6.2	7.6	8.7	9.3	9.2	8.4	7.2	5.7	4.0	2.4	1.2	0.4	0.0	79.7	76.8	
		0.1	0.3	0.8	1.5	2.4	3.1	3.8	4.3	4.7	4.6	4.2	3.6	2.9	2.1	1.3	0.7	0.3	0.0	40.7	28.7	
		3.0	24.0	68.3	130.3	201.8	272.5	333.7	378.6	402.2	400.0	372.8	325.2	262.1	190.9	120.1	59.9	18.8	1.7	3566		
		21.2	65.6	128.0	200.0	271.0	333.2	378.7	440.2	2400.0	0.3	372.4	432.3	725.9	918.8	2117.0	56.6	15.1	0.0		3533	

Horizontal plane

C Plane (°):0.0-360.0: 45.0
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 Test Device: GPM-1800B
 Distance: 8.030 m
 Humidity: 58
 Inspector:

The Average Illuminance Effective Figure



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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 3852lm ($8\log(F/F_0) = 4.7$).

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

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1800B
 Distance: 8.030 m
 Humidity: 58
 Inspector:

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 1.50								
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	0.64	0.71	0.76	0.84	0.88	0.92	0.97	1.00
		0.30	0.48	0.56	0.64	0.69	0.77	0.83	0.87	0.92	0.96
		0.20	0.42	0.50	0.58	0.64	0.72	0.78	0.82	0.88	0.93
0.50	0.50	0.20	0.53	0.61	0.68	0.73	0.79	0.84	0.87	0.91	0.94
		0.30	0.46	0.54	0.61	0.67	0.74	0.79	0.83	0.88	0.91
		0.20	0.41	0.49	0.56	0.62	0.69	0.75	0.79	0.84	0.88
0.30	0.50	0.20	0.51	0.58	0.65	0.69	0.75	0.79	0.82	0.86	0.89
		0.30	0.45	0.52	0.59	0.64	0.71	0.76	0.79	0.83	0.87
		0.20	0.41	0.48	0.55	0.60	0.67	0.72	0.76	0.81	0.84
0.00	0.00	0.00	0.38	0.44	0.51	0.56	0.62	0.67	0.70	0.75	0.78

Rating:56W Photometrically tested without ceiling board.
 Multiply UF values by service correction factors
 Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

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 Test Device: GPM-1800B
 Distance: 8.030 m
 Humidity: 58
 Inspector:

Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 1.50								
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	0.97	0.83	0.71	0.62	0.50	0.42	0.36	0.28	0.23
	0.30		0.81	0.71	0.62	0.55	0.45	0.39	0.33	0.27	0.22
	0.20		0.70	0.62	0.55	0.49	0.41	0.36	0.31	0.25	0.21
0.50	0.50	0.20	0.92	0.79	0.67	0.59	0.47	0.43	0.34	0.27	0.22
	0.30		0.78	0.68	0.59	0.53	0.43	0.37	0.32	0.25	0.21
	0.20		0.68	0.60	0.53	0.48	0.40	0.34	0.30	0.24	0.20
0.30	0.50	0.20	0.88	0.75	0.63	0.55	0.45	0.37	0.32	0.25	0.21
	0.30		0.75	0.66	0.57	0.50	0.41	0.35	0.30	0.24	0.20
	0.20		0.66	0.59	0.51	0.46	0.38	0.33	0.29	0.23	0.19
0.00	0.00	0.00	0.55	0.48	0.42	0.37	0.30	0.26	0.22	0.18	0.15
<p>Rating:56W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

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 Inspector:

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 1.50								
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	0.23	0.25	0.26	0.26	0.27	0.28	0.28	0.29	0.29
	0.30		0.17	0.18	0.20	0.20	0.22	0.23	0.24	0.25	0.26
	0.20		0.12	0.13	0.15	0.16	0.18	0.19	0.21	0.22	0.24
0.50	0.50	0.20	0.23	0.24	0.25	0.25	0.26	0.27	0.27	0.27	0.28
	0.30		0.16	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25
	0.20		0.12	0.13	0.15	0.16	0.18	0.19	0.20	0.22	0.23
0.30	0.50	0.20	0.22	0.23	0.24	0.24	0.25	0.26	0.26	0.26	0.26
	0.30		0.16	0.17	0.19	0.19	0.21	0.22	0.23	0.24	0.24
	0.20		0.12	0.13	0.14	0.15	0.17	0.19	0.20	0.21	0.22
0.00	0.00	0.00	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
<p>Rating:56W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

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: 8.030 m
 Humidity: 58
 Inspector: