

Report No.:

Test Time: 2024/10/10

## Luminaire Property

Luminaire Manufacturer: MESTER

Luminaire Category:

Luminaire Description: MALL014F27V30K-DOWN-100%

Lamp Catalog:

Number of Lamps:

Luminous Length (mm): 1200

Luminous Height (mm):

Current: 0.334 A

Power Factor: 0.995

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 63

Voltage: 120.4 V

Power: 40.00 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 5011.2 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(10%,50%,75%,100%): H162.1,H112.4,H75.8,H3

Vertical Diffuse Angle(10%,50%,75%,100%): V162.2,V113.4,V76.9,V1

Luminous Efficacy (lm/w): 125.28

Max. Intensity: 1749.13 cd

S/MH(C0/C180): 1.24

Total Rated Lamp Lumens: 5011.2 lm

Efficiency: 100%

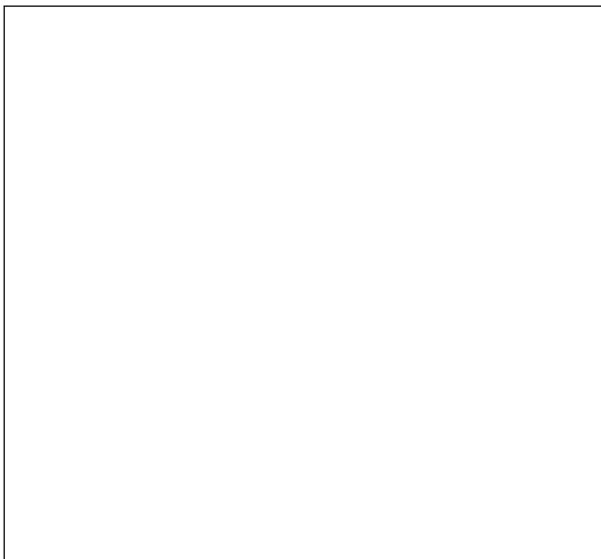
Upward Ratio: 0%

C0r0 Intensity: 1745.98 cd

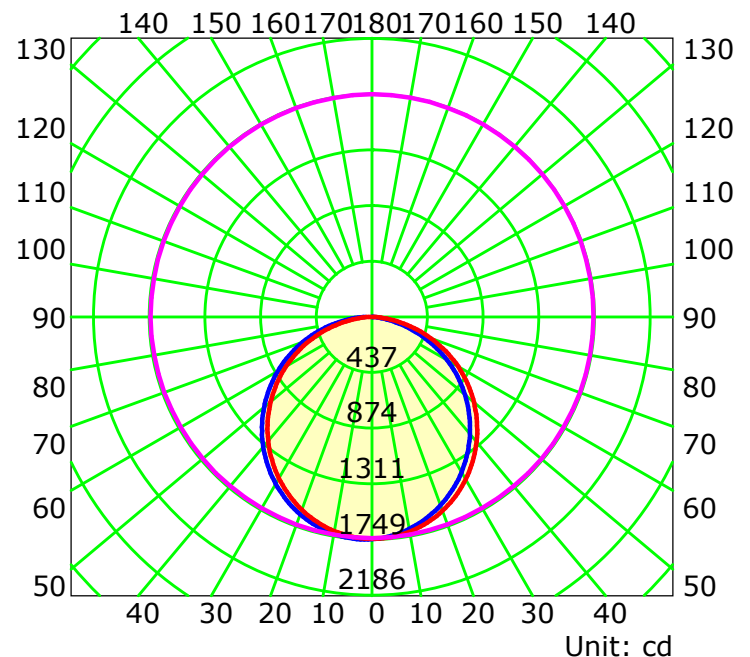
Pos of Max. Intensity: H180 V3

S/MH(C90/C270): 1.25

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 112.9°

— C0-C180 — C90-C270 — G3

C Plane (°):0.0-360.0: 30.0

Test Lab: MESTER LAB

Test Type: TYPE C

Temperature: 25.5°C

Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0

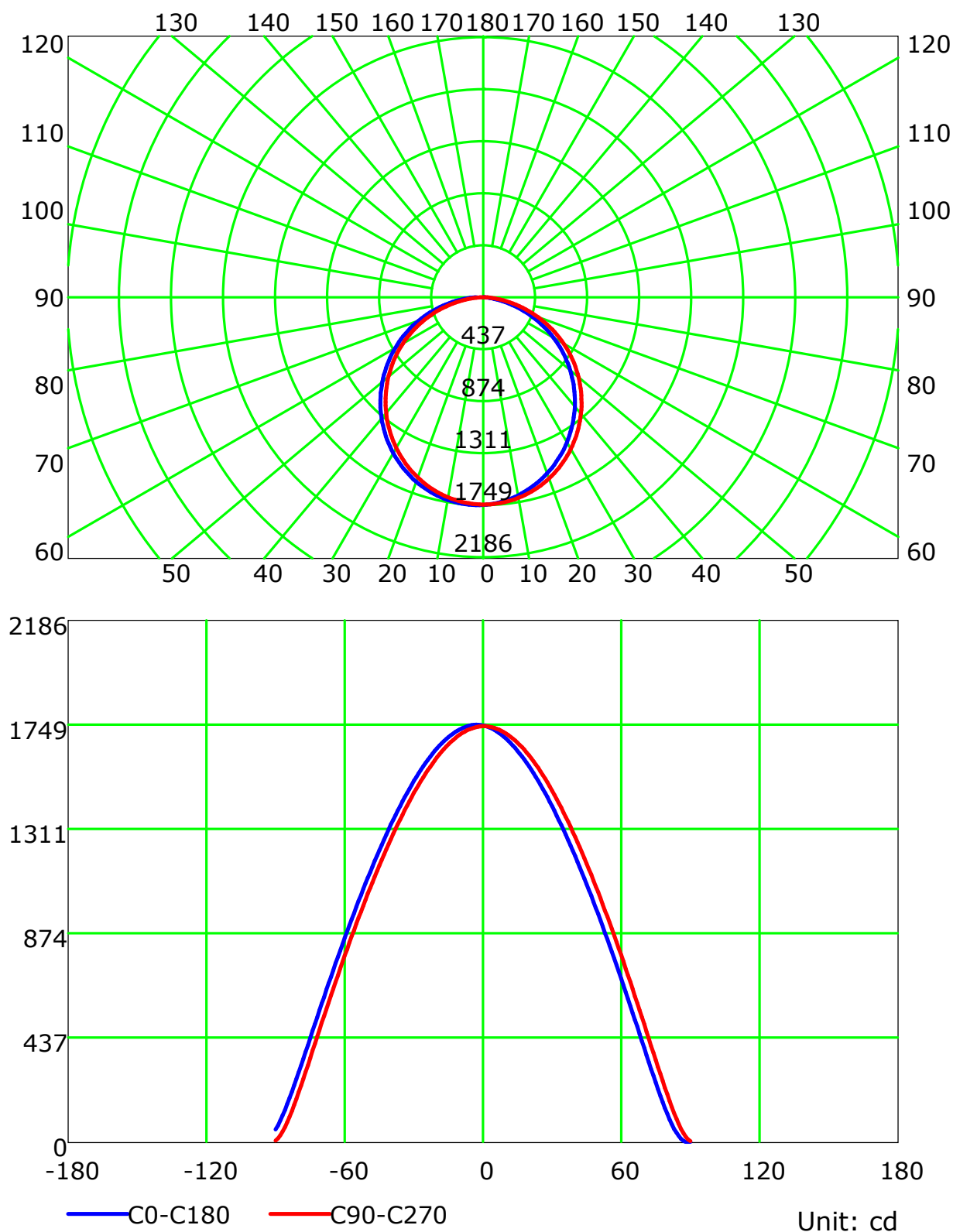
Test Device: GPM-1800B

Distance: 11.655 m [K=1.0000]

Humidity: 45% R.H

Inspector:

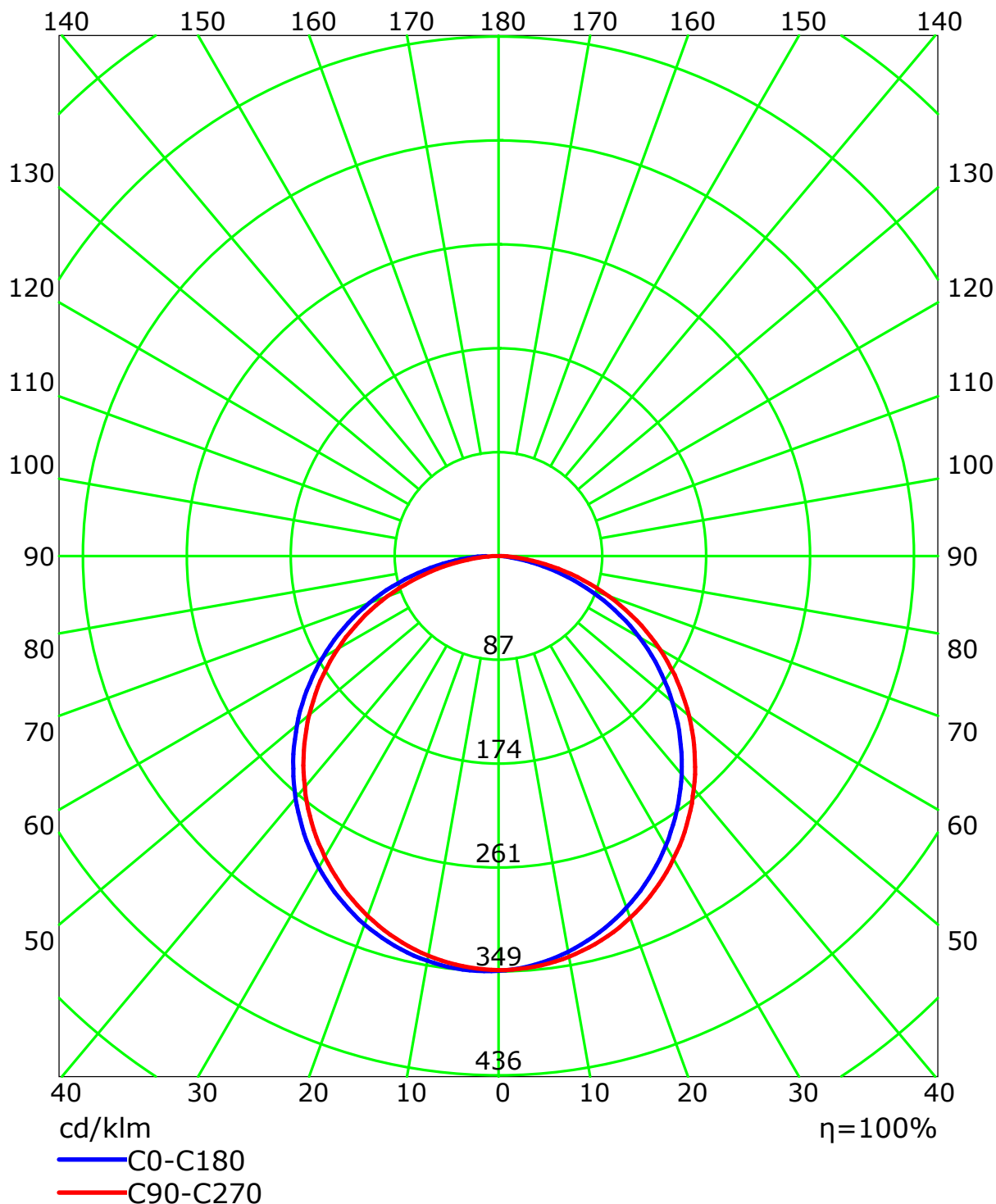
## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5℃  
Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

## Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5℃  
Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

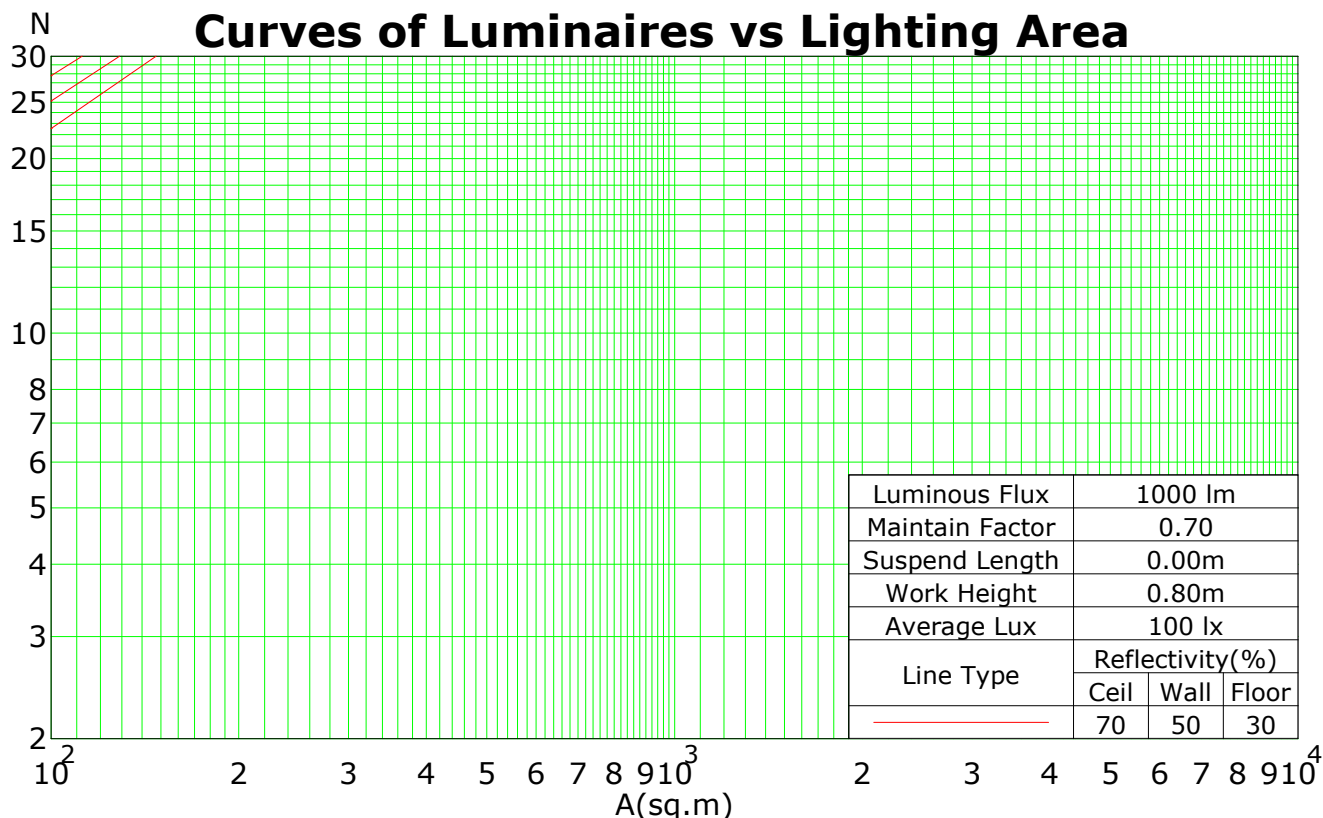
## Coefficients Of Utilization - Zonal Cavity Method

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	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.09	1.04	0.99	0.95	1.06	1.01	0.97	0.94	0.97	0.94	0.91	0.93	0.91	0.88	0.90	0.87	0.85	0.83
2	0.99	0.90	0.83	0.77	0.96	0.88	0.82	0.76	0.85	0.79	0.75	0.81	0.77	0.73	0.78	0.75	0.71	0.69
3	0.90	0.79	0.71	0.64	0.87	0.77	0.70	0.64	0.74	0.68	0.62	0.72	0.66	0.61	0.69	0.64	0.60	0.58
4	0.82	0.70	0.61	0.54	0.80	0.69	0.60	0.54	0.66	0.59	0.53	0.64	0.57	0.52	0.62	0.56	0.52	0.49
5	0.75	0.62	0.53	0.47	0.73	0.61	0.53	0.46	0.59	0.52	0.46	0.57	0.51	0.45	0.55	0.49	0.45	0.43
6	0.70	0.56	0.47	0.41	0.68	0.55	0.47	0.40	0.53	0.46	0.40	0.52	0.45	0.40	0.50	0.44	0.39	0.37
7	0.65	0.51	0.42	0.36	0.63	0.50	0.42	0.36	0.49	0.41	0.35	0.47	0.40	0.35	0.46	0.40	0.35	0.33
8	0.60	0.46	0.38	0.32	0.58	0.46	0.38	0.32	0.44	0.37	0.32	0.43	0.36	0.31	0.42	0.36	0.31	0.29
9	0.56	0.43	0.34	0.29	0.55	0.42	0.34	0.29	0.41	0.34	0.28	0.40	0.33	0.28	0.39	0.33	0.28	0.26
10	0.53	0.39	0.31	0.26	0.51	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.30	0.26	0.36	0.30	0.26	0.24

Spacing Criteria (0-180): 1.24

Spacing Criteria (90-270): 1.25

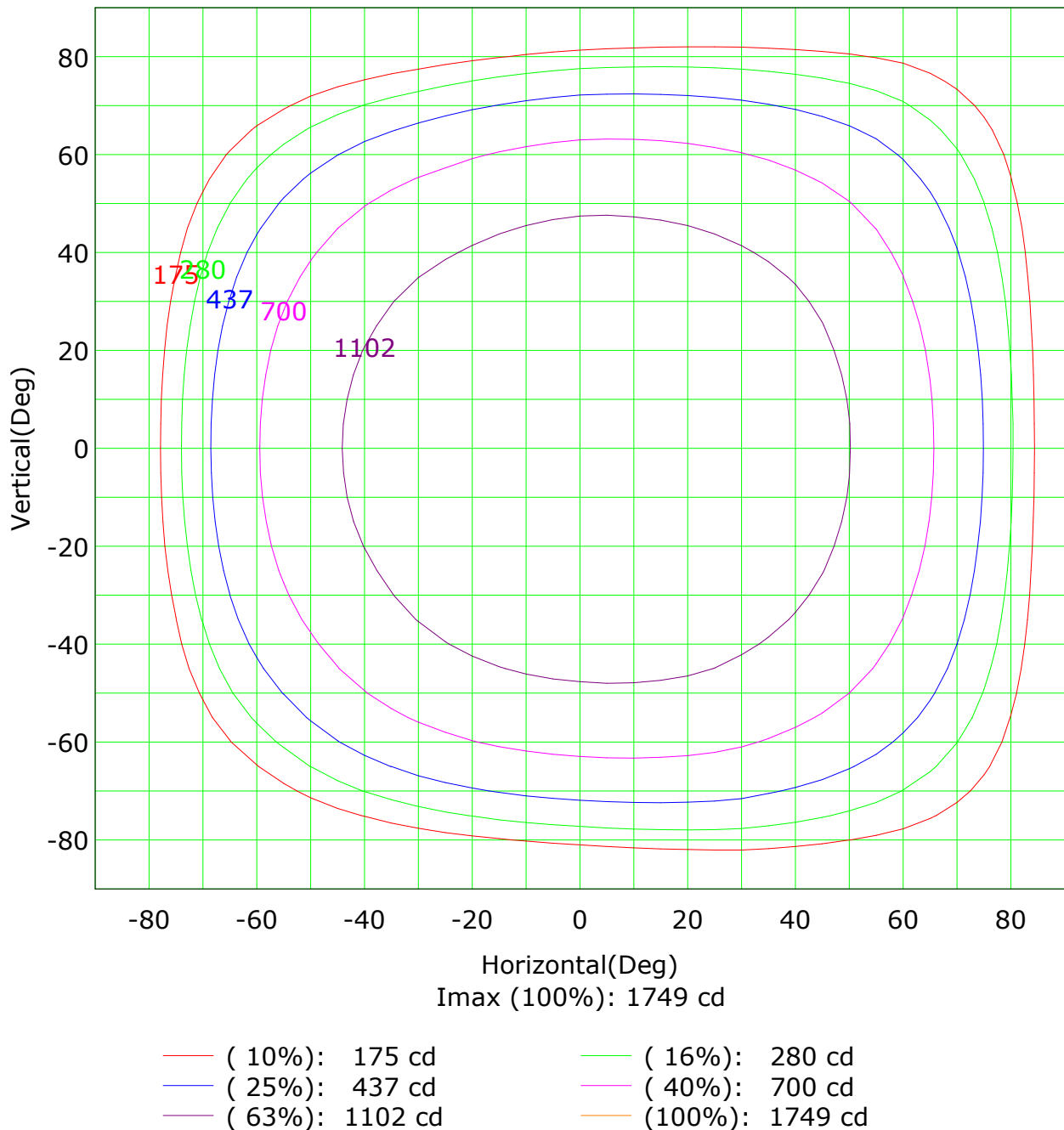
Spacing Criteria (Diagonal): 1.37



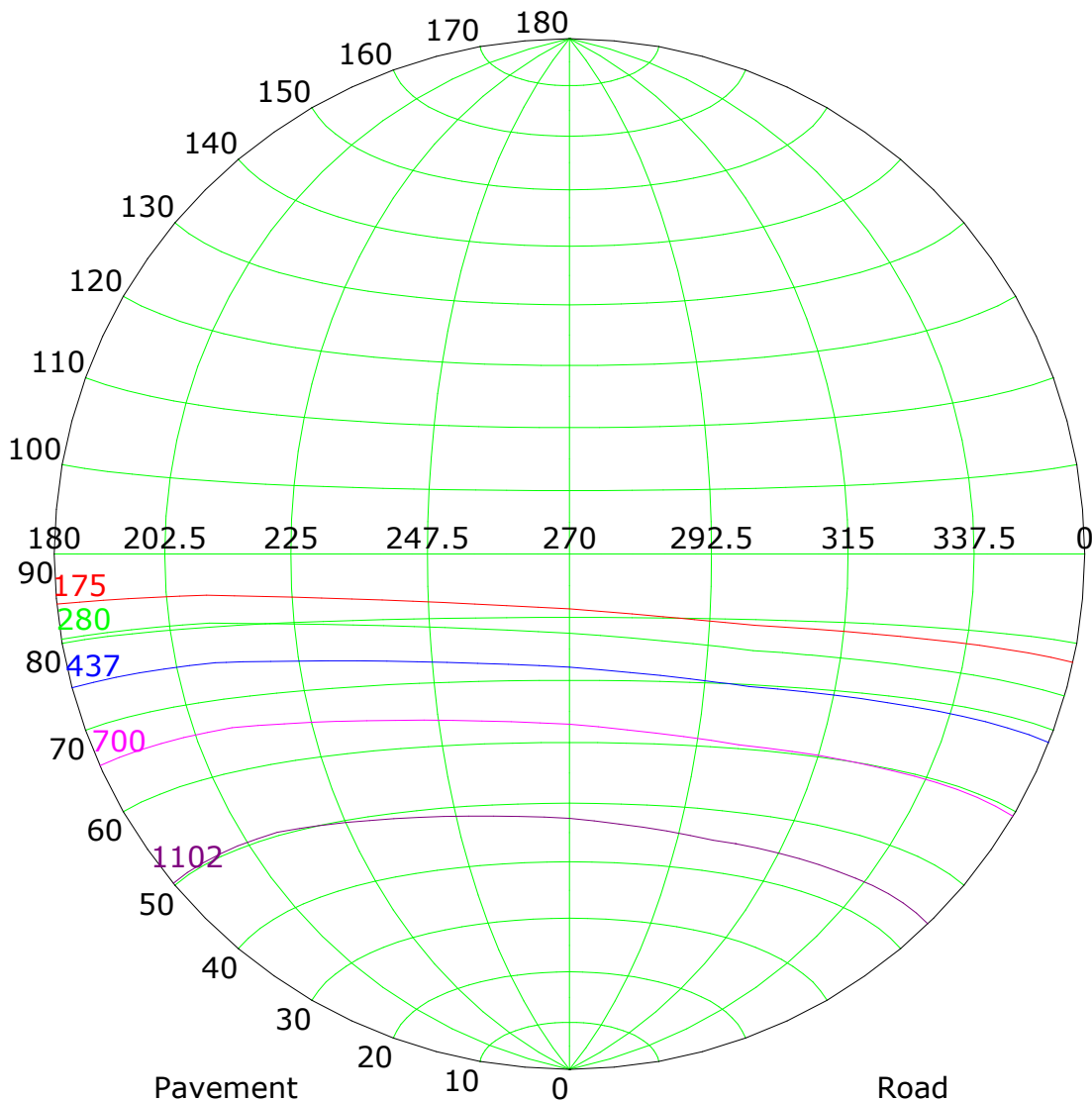
C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5℃  
Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

## Isocandela (rectangle)



## Isocandela (sphere)



Imax (100%): 1749 cd

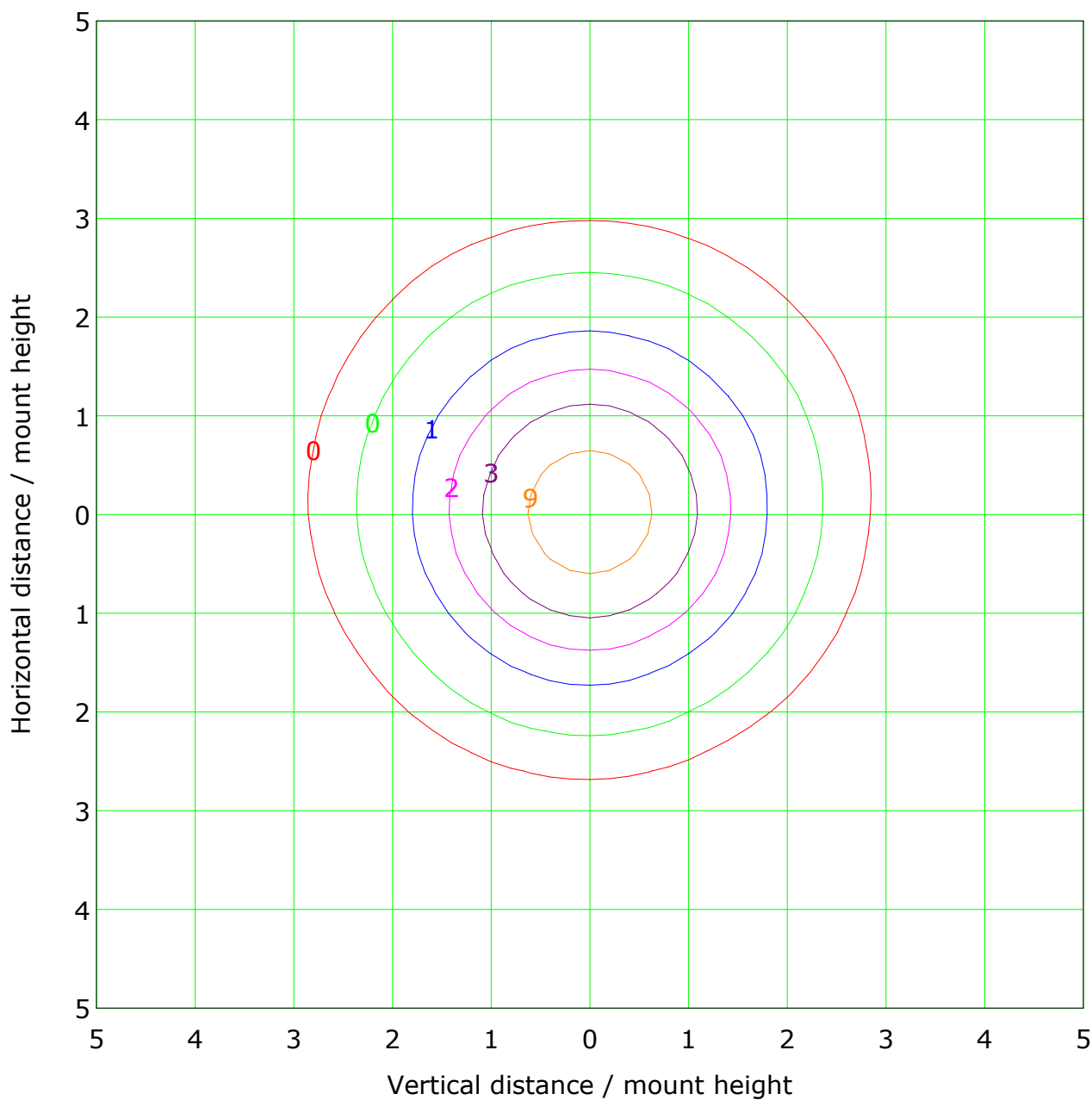
( 10%): 175 cd  
( 25%): 437 cd  
( 63%): 1102 cd

( 16%): 280 cd  
( 40%): 700 cd  
(100%): 1749 cd

CIE: narrow - short  
CIE: Semi-cut-off luminaire  
Max.At90: 10.417 cd/klm

IES: Cut-off  
Max.At80: 58.858 cd/klm  
Max.80-90: 58.858 cd/klm

## IsoLux Plot



Mounting Height: 10.0m    Max Lux(100%): 17.5 lx

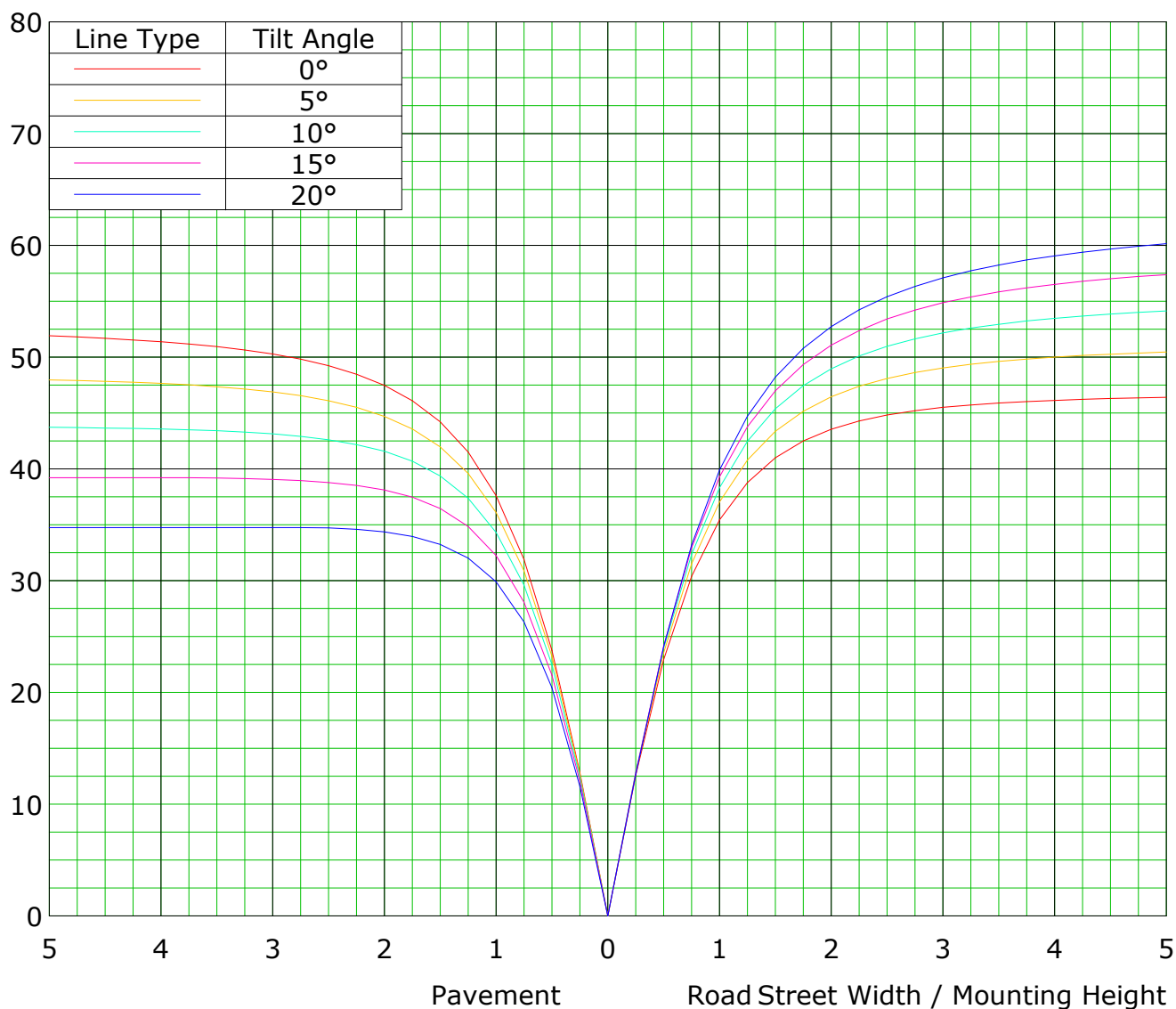
— ( 1%): 0.2 lx	— ( 2%): 0.3 lx
— ( 5%): 0.9 lx	— ( 10%): 1.7 lx
— ( 20%): 3.5 lx	— ( 50%): 8.7 lx
— (100%): 17.5 lx	

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Test Lab: MESTER LAB  
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Temperature: 25.5°C  
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Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

## Roadway CU Curve

Efficiency(%)



C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5°C  
Operator: huayan Luo

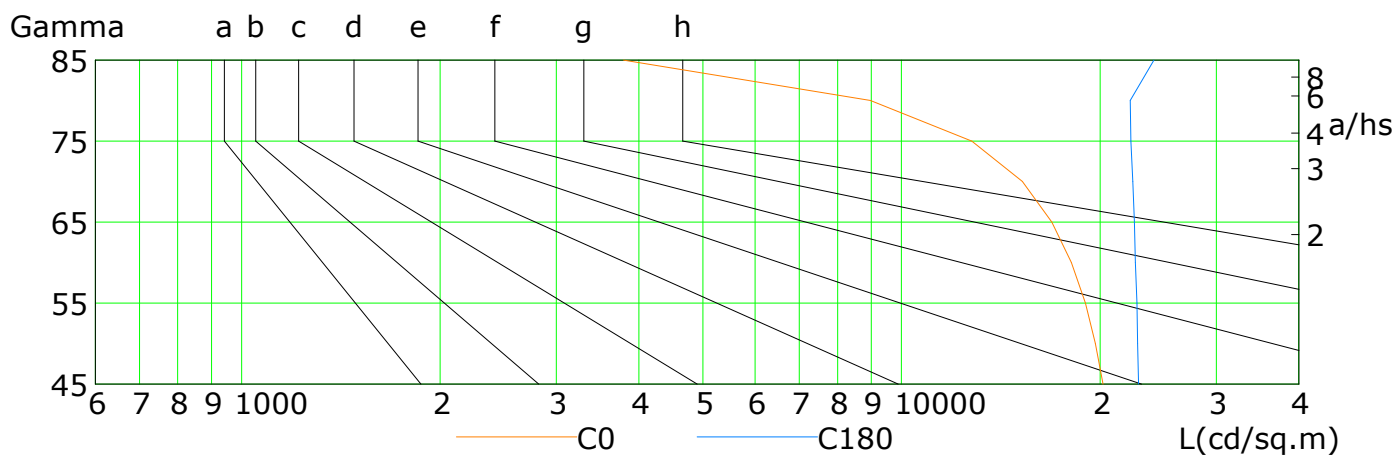
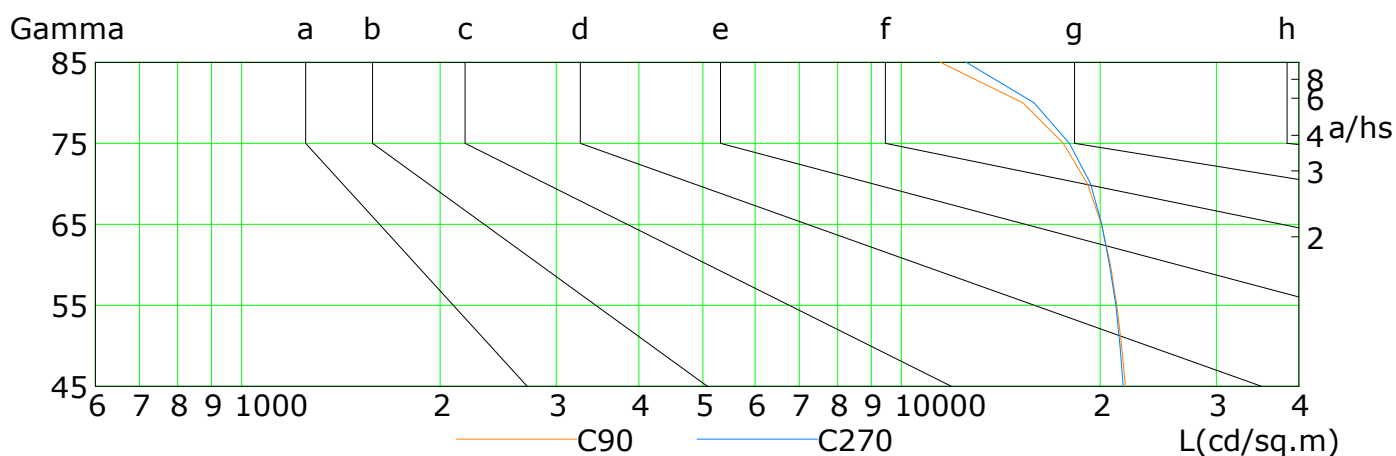
Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:



## 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

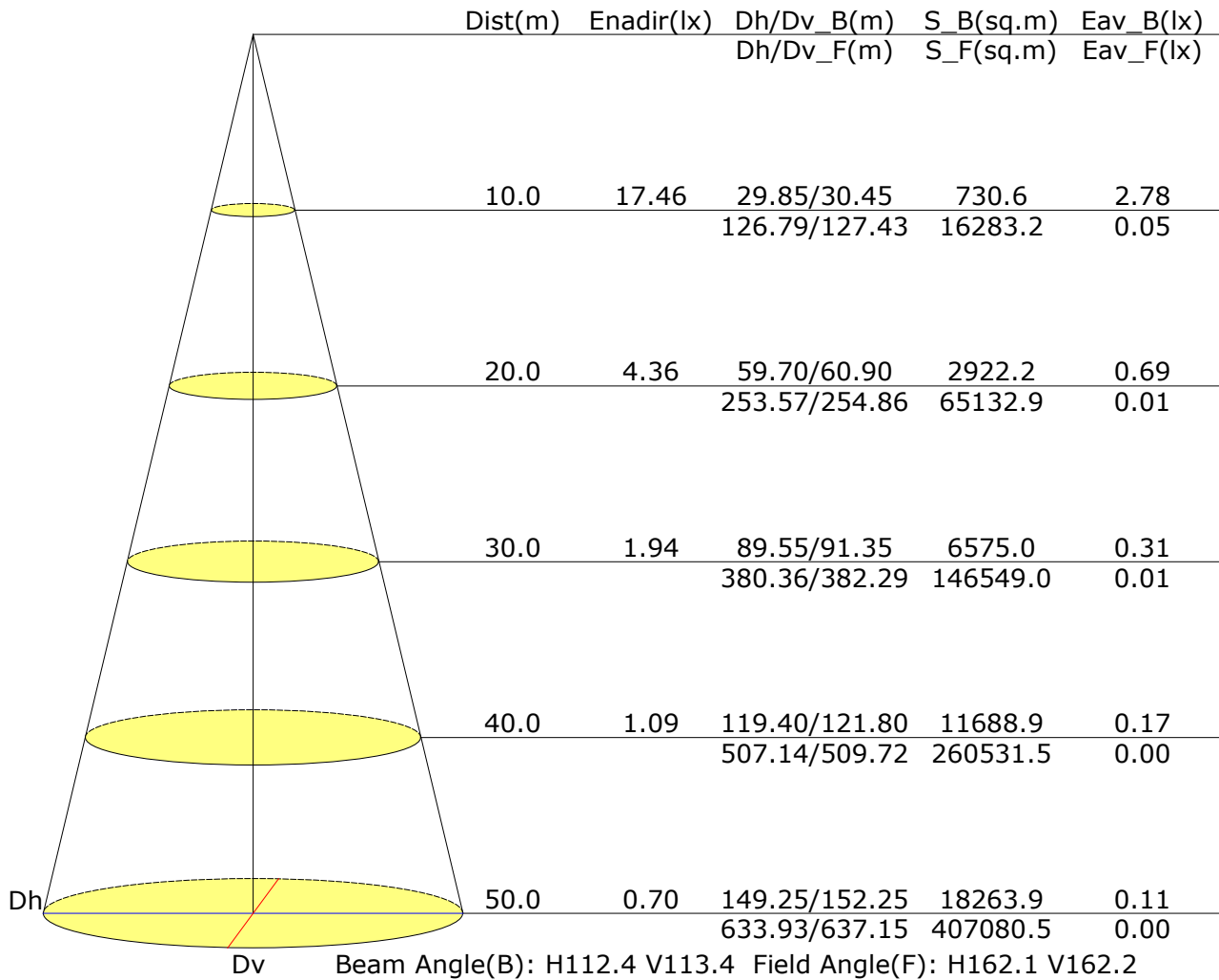


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	20211	19666	18992	18081	16897	15255	12784	8973	3790
C90	21837	21547	21199	20734	20090	19120	17595	15267	11461
C180	22877	22798	22743	22616	22534	22415	22254	22215	24135
C270	21688	21429	21117	20670	20119	19341	17972	15876	12539

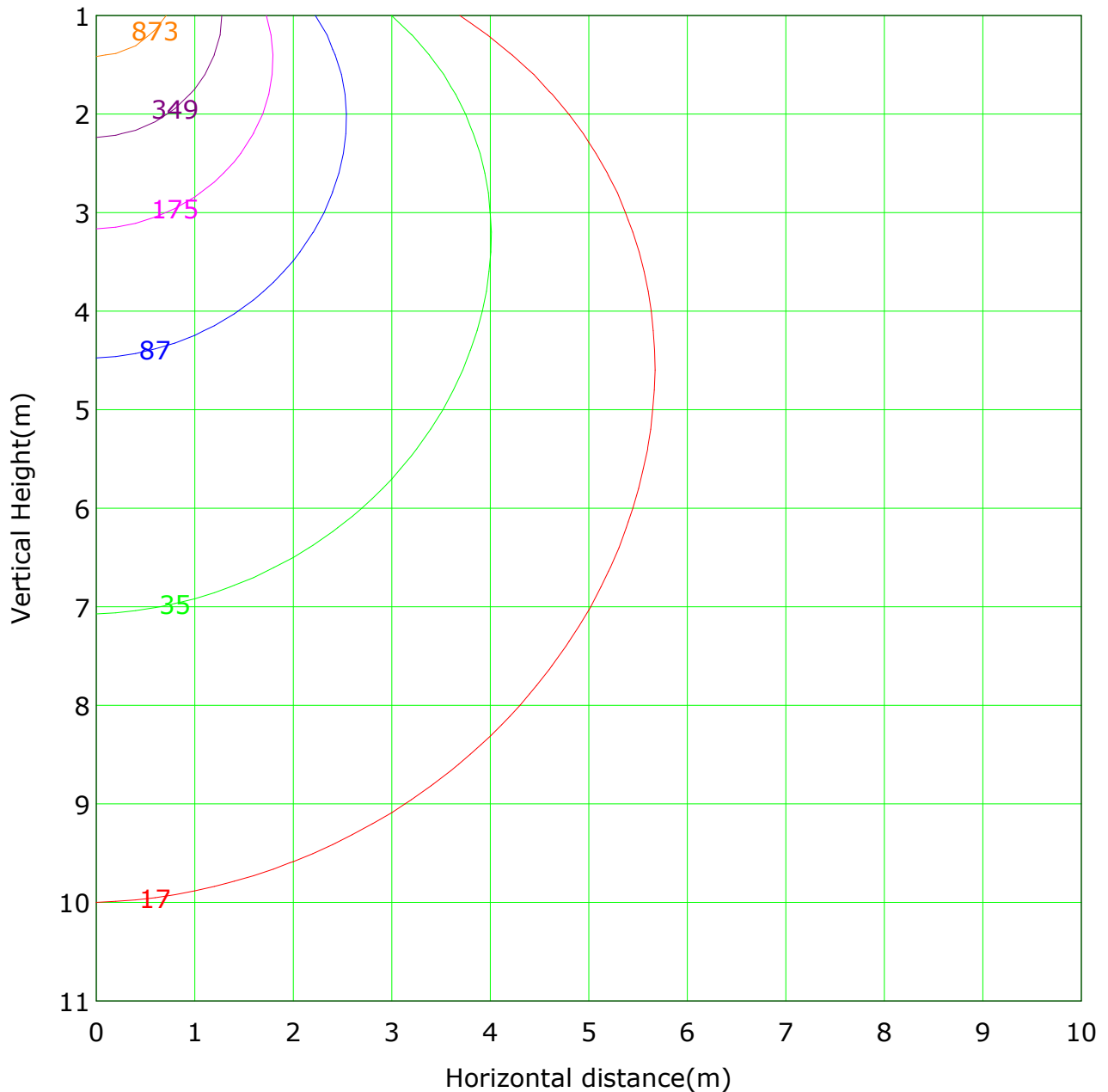
C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5℃  
Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

## Illuminance at a Distance



## Vertical IsoLux Plot



Lowest(m): 1.0m    Highest(m): 11.0m    Max Lux: 1746.0 lx  
— ( 1%): 17.5 lx                      — ( 2%): 34.9 lx  
— ( 5%): 87.3 lx                        — ( 10%): 174.6 lx  
— ( 20%): 349.2 lx                    — ( 50%): 873.0 lx  
— (100%):1746.0 lx

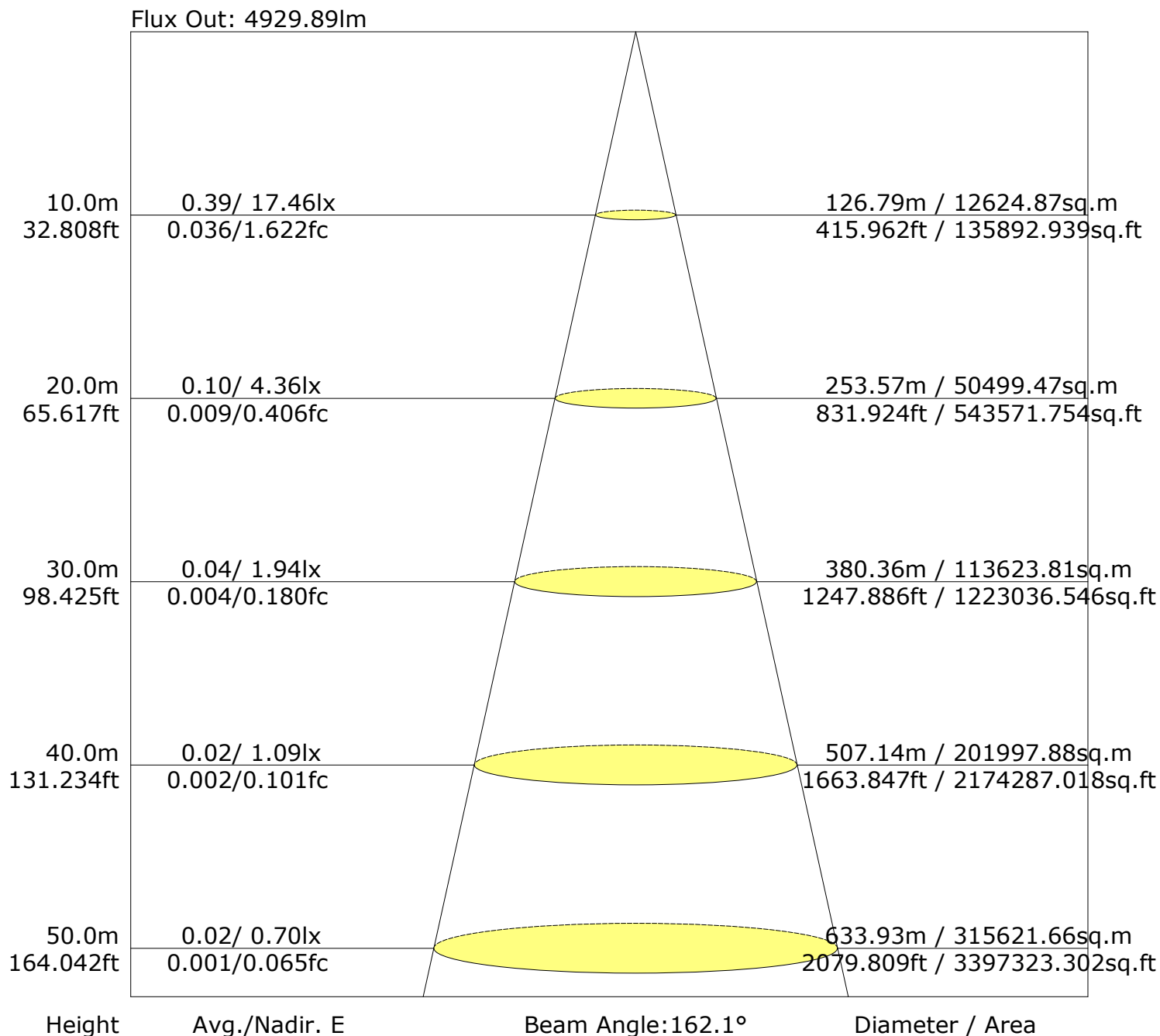
## Area Flux Table

Unit: lm

Vertical plane																			Corrected									
-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	Flux(T)	Flux(E)								
0.2	0.6	1.2	1.8	2.3	2.8	3.0	3.1	2.9	2.5	2.0	1.4	0.9	0.5	0.2	0.1	0.0	0.0	0.0	25.6	4.9								
0.2	1.1	2.5	4.4	6.3	8.1	9.6	10.6	10.9	10.3	8.9	7.1	5.2	3.4	1.8	0.7	0.1	0.0	0.0	91.0	82.8								
0.3	1.6	3.9	7.1	10.6	14.0	16.8	18.8	19.6	19.0	17.0	14.1	10.7	7.3	4.2	1.8	0.4	0.0	0.0	167.1	164.4								
0.3	2.1	5.3	9.8	14.7	19.5	23.6	26.5	27.8	27.1	24.7	20.8	16.3	11.4	6.7	3.0	0.8	0.0	0.0	240.3	238.9								
0.4	2.5	6.6	12.2	18.4	24.4	29.6	33.4	35.1	34.5	31.5	26.9	21.2	15.0	9.1	4.3	1.2	0.1	0.1	306.3	305.4								
0.5	2.9	7.7	14.1	21.5	28.7	34.9	39.4	41.5	40.9	37.4	32.1	25.4	18.1	11.1	5.3	1.5	0.1	0.1	363.1	362.4								
0.5	3.2	8.5	15.6	23.8	32.1	39.1	44.2	46.7	46.0	42.3	36.3	28.8	20.6	12.7	6.2	1.8	0.1	0.1	408.5	408.0								
0.5	3.4	9.0	16.7	25.4	34.3	42.1	47.8	50.4	49.7	45.8	39.3	31.1	22.3	13.8	6.7	2.0	0.1	0.1	440.7	440.2								
0.5	3.5	9.3	17.2	26.2	35.4	43.5	49.6	52.5	51.8	47.8	41.0	32.4	23.2	14.4	7.0	2.1	0.1	0.1	457.5	457.0								
0.5	3.5	9.3	17.2	26.2	35.4	43.6	49.6	52.6	51.9	47.8	41.0	32.4	23.1	14.3	7.0	2.1	0.1	0.1	457.8	457.3								
0.5	3.4	9.0	16.7	25.4	34.3	42.3	48.1	50.8	50.0	46.0	39.4	31.1	22.2	13.8	6.7	2.0	0.1	0.1	441.9	441.3								
0.5	3.2	8.4	15.6	23.8	32.1	39.4	44.8	47.1	46.4	42.8	36.6	28.7	20.5	12.6	6.1	1.8	0.1	0.1	410.7	410.1								
0.5	2.9	7.6	14.0	21.5	28.9	35.4	40.0	42.0	41.3	38.0	32.5	25.5	18.0	11.0	5.2	1.5	0.1	0.1	365.8	365.1								
0.4	2.5	6.5	12.0	18.4	24.7	30.2	34.0	35.5	34.8	32.1	27.4	21.4	14.9	8.9	4.1	1.1	0.1	0.1	309.0	308.1								
0.3	2.0	5.2	9.6	14.7	19.8	24.1	26.9	28.0	27.4	25.1	21.3	16.5	11.3	6.5	2.9	0.7	0.0	0.0	242.4	240.9								
0.3	1.5	3.8	7.0	10.6	14.2	17.2	19.0	19.6	19.0	17.2	14.4	10.9	7.3	4.0	1.6	0.4	0.0	0.0	168.1	165.1								
0.2	1.0	2.4	4.2	6.2	8.2	9.8	10.6	10.7	10.1	8.9	7.2	5.2	3.3	1.6	0.6	0.1	0.0	0.0	90.5	82.3								
0.2	0.6	1.1	1.7	2.2	2.8	3.0	3.0	2.8	2.4	1.9	1.4	0.9	0.5	0.2	0.0	0.0	0.0	0.0	24.6	4.3								
6.8	41.5	107.4	196.9	298.4	399.6	487.5	554.9	576.5	556.1	517.3	440.1	344.7	242.7	146.9	69.4	19.5	1.3	5011										
3.3	37.5	103.6	193.0	294.5	395.7	483.6	545.5	557.2	556.1	513.0	436.0	340.4	238.4	142.6	64.7	13.4	0.0			4939								

Horizontal plane

## 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	22.0	23.6	22.4	24.0	24.3	22.9	24.5	23.2	24.8	25.1
3H	23.6	25.1	24.0	25.4	25.8	24.7	26.2	25.1	26.5	26.9
4H	24.1	25.5	24.5	25.9	26.2	25.4	26.8	25.8	27.2	27.5
6H	24.4	25.7	24.8	26.1	26.5	25.9	27.2	26.3	27.6	27.9
8H	24.4	25.7	24.9	26.1	26.5	26.0	27.3	26.4	27.7	28.1
12H	24.4	25.6	24.9	26.0	26.4	26.1	27.3	26.5	27.7	28.1
X=4H Y=2H	22.6	24.0	23.0	24.4	24.8	23.5	24.9	23.9	25.3	25.6
3H	24.4	25.6	24.8	26.0	26.4	25.6	26.8	26.0	27.2	27.6
4H	25.0	26.1	25.5	26.5	27.0	26.4	27.5	26.9	27.9	28.3
6H	25.4	26.3	25.9	26.8	27.2	27.0	28.0	27.5	28.4	28.9
8H	25.5	26.3	25.9	26.8	27.2	27.2	28.1	27.7	28.5	29.0
12H	25.5	26.3	26.0	26.7	27.2	27.3	28.1	27.8	28.6	29.1
X=8H Y=4H	25.3	26.2	25.8	26.6	27.1	26.8	27.6	27.2	28.1	28.5
6H	25.7	26.5	26.2	27.0	27.4	27.5	28.2	28.0	28.7	29.2
8H	25.8	26.5	26.3	27.0	27.5	27.7	28.4	28.3	28.9	29.4
12H	25.9	26.4	26.4	26.9	27.5	27.9	28.5	28.4	29.0	29.6
X=12H Y=4H	25.4	26.1	25.8	26.6	27.1	26.8	27.6	27.3	28.1	28.5
6H	25.8	26.5	26.3	26.9	27.4	27.6	28.2	28.1	28.7	29.2
8H	25.9	26.5	26.4	27.0	27.5	27.9	28.5	28.4	28.9	29.5

Calculate in accordance with CIE 190:2010 The table is revised with 5011lm ( $8\log(F/F_0) = 5.6$ ).

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 Distance: 11.655 m [K=1.0000]  
 Humidity: 45% R.H  
 Inspector:

**FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM**

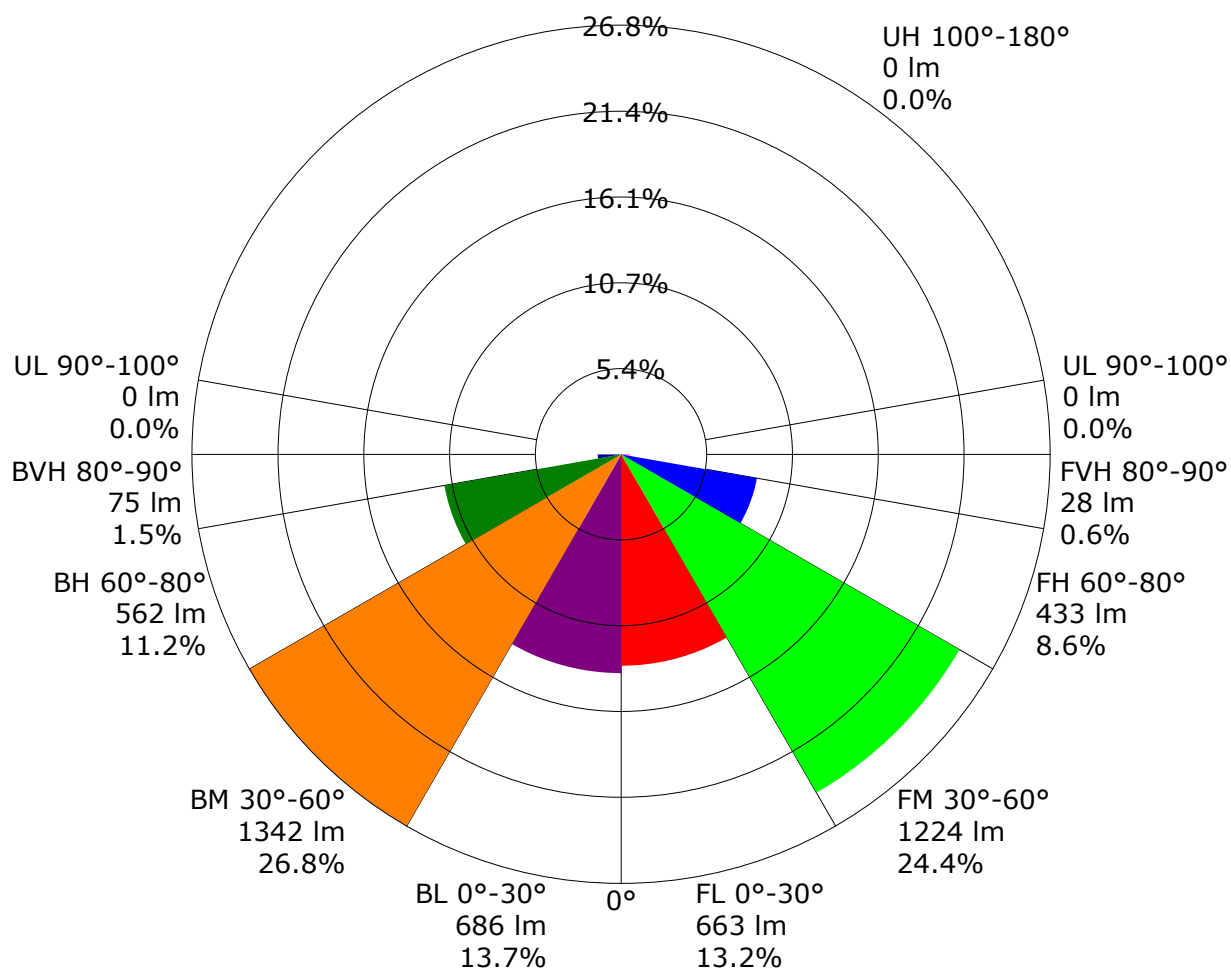
	ZONE	LUMENS	% LAMP LUMENS
	FORWARD LIGHT	2347	46.8
	FL ( 0°-30°)	663	13.2
	FM (30°-60°)	1224	24.4
	FH (60°-80°)	433	8.6
	FVH (80°-90°)	28	0.6
	BACK LIGHT	2664	53.2
	BL ( 0°-30°)	686	13.7
	BM (30°-60°)	1342	26.8
	BH (60°-80°)	562	11.2
	BVH (80°-90°)	75	1.5
	UP LIGHT	0	0.0
	UL (90°-100°)	0	0.0
	UH (100°-180°)	0	0.0
	TRAPPED LIGHT	NA	NA

BUG(Backlight,Uplight,Glare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B2 U1 G2
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B2 U1 G1

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Humidity: 45% R.H  
Inspector:

## LCS Graph



**Back Light**

**Forward Light**

Scale= MAX LCS%

Trapped Light:NA,NA



## Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 1.25									
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	0.56	0.66	0.74	0.79	0.87	0.92	0.95	1.00	1.03	
	0.30		0.48	0.59	0.66	0.72	0.80	0.86	0.90	0.96	0.99	
	0.20		0.42	0.53	0.60	0.66	0.75	0.81	0.86	0.92	0.96	
0.50	0.50	0.20	0.54	0.64	0.71	0.76	0.84	0.88	0.92	0.96	0.99	
	0.30		0.47	0.57	0.65	0.70	0.78	0.83	0.87	0.93	0.96	
	0.20		0.42	0.52	0.60	0.65	0.74	0.79	0.84	0.89	0.93	
0.30	0.50	0.20	0.53	0.62	0.69	0.74	0.81	0.85	0.88	0.92	0.95	
	0.30		0.46	0.56	0.63	0.69	0.76	0.81	0.85	0.89	0.93	
	0.20		0.42	0.52	0.59	0.64	0.72	0.78	0.82	0.87	0.90	
0.00	0.00	0.00	0.39	0.49	0.56	0.61	0.69	0.74	0.78	0.82	0.86	
Rating:40W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

## Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 1.25									
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	1.01	0.83	0.71	0.62	0.50	0.41	0.35	0.27	0.22	
	0.30		0.84	0.71	0.62	0.55	0.45	0.38	0.33	0.26	0.21	
	0.20		0.72	0.62	0.55	0.49	0.41	0.35	0.30	0.24	0.20	
0.50	0.50	0.20	0.97	0.80	0.68	0.60	0.47	0.43	0.34	0.26	0.21	
	0.30		0.82	0.70	0.60	0.53	0.43	0.36	0.31	0.25	0.20	
	0.20		0.72	0.62	0.54	0.48	0.40	0.34	0.30	0.23	0.20	
0.30	0.50	0.20	0.95	0.77	0.66	0.57	0.45	0.38	0.32	0.25	0.20	
	0.30		0.81	0.68	0.59	0.52	0.42	0.35	0.30	0.24	0.20	
	0.20		0.71	0.61	0.53	0.47	0.39	0.33	0.29	0.23	0.19	
0.00	0.00	0.00	0.61	0.51	0.44	0.39	0.31	0.26	0.23	0.18	0.15	
Rating:40W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

## Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 1.25									
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	0.16	0.18	0.19	0.19	0.20	0.21	0.21	0.22	0.22	
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19	
	0.20		0.05	0.06	0.08	0.09	0.11	0.13	0.14	0.16	0.17	
0.50	0.50	0.20	0.16	0.17	0.18	0.18	0.19	0.20	0.20	0.21	0.21	
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19	
	0.20		0.04	0.06	0.08	0.09	0.11	0.12	0.13	0.15	0.16	
0.30	0.50	0.20	0.15	0.16	0.17	0.18	0.19	0.19	0.19	0.20	0.20	
	0.30		0.09	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	
	0.20		0.04	0.06	0.07	0.09	0.11	0.12	0.13	0.15	0.16	
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Rating:40W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

## Zonal Lumen

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	1743.5	1.7	1.7	0.03	0.03
1.0-2.0	1742.9	5.0	6.7	0.10	0.13
2.0-3.0	1741.5	8.3	15.0	0.17	0.30
3.0-4.0	1739.6	11.6	26.6	0.23	0.53
4.0-5.0	1736.9	14.9	41.6	0.30	0.83
5.0-6.0	1733.5	18.2	59.8	0.36	1.19
6.0-7.0	1729.5	21.5	81.3	0.43	1.62
7.0-8.0	1724.8	24.7	106.0	0.49	2.11
8.0-9.0	1719.6	27.9	133.8	0.56	2.67
9.0-10.0	1713.7	31.0	164.9	0.62	3.29
10.0-11.0	1707.1	34.1	199.0	0.68	3.97
11.0-12.0	1699.9	37.2	236.1	0.74	4.71
12.0-13.0	1692.1	40.2	276.3	0.80	5.51
13.0-14.0	1683.8	43.1	319.4	0.86	6.37
14.0-15.0	1674.7	46.0	365.4	0.92	7.29
15.0-16.0	1665.2	48.8	414.2	0.97	8.27
16.0-17.0	1655.1	51.5	465.7	1.03	9.29
17.0-18.0	1644.4	54.2	520.0	1.08	10.38
18.0-19.0	1632.9	56.8	576.8	1.13	11.51
19.0-20.0	1621.0	59.3	636.1	1.18	12.69
20.0-21.0	1608.7	61.8	697.9	1.23	13.93
21.0-22.0	1595.7	64.1	762.0	1.28	15.21
22.0-23.0	1582.2	66.4	828.4	1.32	16.53
23.0-24.0	1568.2	68.6	897.0	1.37	17.90
24.0-25.0	1553.5	70.6	967.6	1.41	19.31
25.0-26.0	1538.2	72.6	1040.3	1.45	20.76
26.0-27.0	1522.7	74.5	1114.8	1.49	22.25
27.0-28.0	1506.8	76.3	1191.1	1.52	23.77
28.0-29.0	1490.2	78.0	1269.0	1.56	25.32
29.0-30.0	1473.3	79.6	1348.6	1.59	26.91
30.0-31.0	1455.9	81.0	1429.6	1.62	28.53
31.0-32.0	1438.0	82.4	1512.0	1.64	30.17
32.0-33.0	1419.8	83.7	1595.7	1.67	31.84
33.0-34.0	1401.1	84.8	1680.5	1.69	33.53
34.0-35.0	1381.7	85.8	1766.3	1.71	35.25
35.0-36.0	1362.3	86.8	1853.1	1.73	36.98

C Plane (°):0.0-360.0: 30.0  
 Test Lab: MESTER LAB  
 Test Type: TYPE C  
 Temperature: 25.5℃  
 Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.655 m [K=1.0000]  
 Humidity: 45% R.H  
 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	1342.6	87.6	1940.6	1.75	38.73
37.0-38.0	1322.1	88.3	2028.9	1.76	40.49
38.0-39.0	1301.3	88.8	2117.7	1.77	42.26
39.0-40.0	1280.4	89.3	2207.0	1.78	44.04
40.0-41.0	1258.8	89.7	2296.7	1.79	45.83
41.0-42.0	1237.1	89.9	2386.6	1.79	47.62
42.0-43.0	1215.2	90.0	2476.6	1.80	49.42
43.0-44.0	1192.5	90.0	2566.6	1.80	51.22
44.0-45.0	1169.5	89.9	2656.5	1.79	53.01
45.0-46.0	1146.5	89.7	2746.2	1.79	54.80
46.0-47.0	1122.8	89.3	2835.5	1.78	56.58
47.0-48.0	1098.7	88.8	2924.3	1.77	58.36
48.0-49.0	1074.7	88.3	3012.6	1.76	60.12
49.0-50.0	1050.5	87.6	3100.2	1.75	61.87
50.0-51.0	1025.8	86.8	3187.0	1.73	63.60
51.0-52.0	1000.6	85.9	3272.9	1.71	65.31
52.0-53.0	975.1	84.8	3357.7	1.69	67.00
53.0-54.0	949.4	83.7	3441.4	1.67	68.67
54.0-55.0	923.8	82.5	3523.9	1.65	70.32
55.0-56.0	897.7	81.1	3605.0	1.62	71.94
56.0-57.0	871.4	79.7	3684.7	1.59	73.53
57.0-58.0	844.6	78.1	3762.8	1.56	75.09
58.0-59.0	817.5	76.4	3839.3	1.53	76.61
59.0-60.0	790.4	74.7	3913.9	1.49	78.10
60.0-61.0	762.9	72.8	3986.8	1.45	79.56
61.0-62.0	735.4	70.9	4057.6	1.41	80.97
62.0-63.0	707.5	68.8	4126.5	1.37	82.34
63.0-64.0	679.1	66.6	4193.1	1.33	83.67
64.0-65.0	650.8	64.4	4257.5	1.29	84.96
65.0-66.0	622.3	62.1	4319.6	1.24	86.20
66.0-67.0	593.3	59.7	4379.3	1.19	87.39
67.0-68.0	564.5	57.2	4436.5	1.14	88.53
68.0-69.0	535.6	54.6	4491.1	1.09	89.62
69.0-70.0	506.3	52.0	4543.1	1.04	90.66
70.0-71.0	476.8	49.3	4592.4	0.98	91.64
71.0-72.0	447.7	46.6	4639.0	0.93	92.57

C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5℃  
Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

## Zonal Lumen (Continue 3)

cone flux(90°): 2656.52 lm

%lum = 53.0%

%lamp = 53.0%

cone flux(120°): 3913.94 lm

%lum = 78.1%

%lamp = 78.1%

## Candlepower Table

Unit: cd

G\C	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0
G0.0	1746.0	1742.3	1742.6	1742.9	1743.3	1744.5	1746.0	1742.3	1742.6	1742.9
G1.0	1744.1	1740.1	1741.4	1743.1	1744.9	1746.3	1748.0	1744.1	1743.4	1742.6
G2.0	1741.1	1736.5	1739.5	1742.2	1745.6	1748.0	1748.7	1745.3	1743.2	1741.1
G3.0	1737.4	1733.2	1737.4	1740.5	1745.6	1748.4	1749.1	1745.6	1742.4	1739.1
G4.0	1733.0	1728.6	1734.2	1738.7	1745.4	1748.0	1748.7	1745.6	1741.0	1736.5
G5.0	1727.6	1724.2	1730.3	1735.8	1744.0	1746.8	1747.2	1744.7	1738.7	1733.5
G6.0	1721.6	1717.9	1725.9	1732.2	1742.1	1746.0	1745.1	1743.0	1735.9	1729.8
G7.0	1714.8	1711.6	1720.8	1728.5	1739.1	1743.6	1742.5	1740.7	1733.0	1725.4
G8.0	1707.7	1704.5	1715.0	1723.7	1736.3	1741.0	1738.7	1737.9	1728.7	1719.8
G9.0	1700.1	1697.3	1708.2	1718.6	1732.0	1737.7	1734.7	1734.3	1724.0	1714.9
G10.0	1691.6	1689.1	1701.4	1712.5	1727.8	1733.6	1730.1	1730.0	1718.9	1708.3
G11.0	1681.9	1680.4	1693.9	1706.3	1723.1	1728.7	1725.0	1725.4	1712.2	1701.7
G12.0	1672.4	1670.6	1685.9	1699.0	1717.4	1723.4	1719.4	1719.4	1705.8	1693.4
G13.0	1662.5	1661.3	1676.6	1691.4	1710.3	1716.8	1712.6	1713.2	1698.8	1685.6
G14.0	1651.8	1650.7	1667.4	1683.4	1704.2	1710.0	1705.2	1706.5	1690.9	1676.7
G15.0	1639.8	1638.7	1657.6	1674.0	1696.5	1702.9	1697.9	1699.0	1682.4	1667.6
G16.0	1628.0	1627.2	1647.5	1664.7	1688.0	1694.8	1689.5	1691.0	1673.1	1658.2
G17.0	1615.7	1615.1	1636.4	1654.9	1679.3	1686.4	1680.1	1682.4	1664.1	1646.9
G18.0	1602.9	1602.4	1624.9	1644.2	1670.2	1676.3	1670.6	1672.3	1654.0	1636.1
G19.0	1589.5	1588.1	1612.1	1632.0	1659.3	1666.2	1661.2	1662.4	1642.7	1624.5
G20.0	1574.7	1574.8	1599.6	1620.6	1648.8	1655.9	1650.3	1652.0	1632.5	1612.6
G21.0	1560.6	1560.6	1586.4	1608.5	1638.1	1645.2	1639.7	1641.2	1620.0	1599.2
G22.0	1545.8	1545.3	1571.9	1595.4	1625.5	1633.5	1626.9	1628.5	1607.5	1585.9
G23.0	1530.7	1530.4	1557.2	1582.3	1613.2	1621.4	1614.5	1616.4	1594.9	1572.5
G24.0	1513.4	1514.5	1542.8	1568.6	1600.5	1607.6	1601.6	1604.3	1581.5	1558.8
G25.0	1497.4	1496.7	1526.0	1553.0	1587.5	1594.4	1588.6	1590.6	1566.5	1544.5
G26.0	1480.7	1480.6	1510.5	1538.3	1572.2	1580.8	1574.7	1575.7	1552.1	1528.1
G27.0	1463.4	1463.5	1494.5	1523.0	1558.3	1566.7	1559.3	1561.4	1537.4	1512.5
G28.0	1446.0	1445.6	1477.6	1507.3	1543.2	1550.6	1544.7	1546.9	1522.6	1496.4
G29.0	1426.3	1425.9	1460.9	1490.8	1528.5	1535.5	1529.5	1531.9	1505.3	1480.4
G30.0	1408.0	1407.8	1443.4	1472.7	1512.9	1519.9	1513.8	1516.5	1488.9	1463.8
G31.0	1389.5	1389.1	1424.1	1455.5	1495.1	1503.8	1496.6	1499.0	1472.6	1445.0
G32.0	1368.7	1370.0	1406.6	1438.0	1478.7	1485.4	1479.9	1482.1	1455.2	1427.8
G33.0	1349.0	1350.1	1387.6	1420.2	1461.4	1468.1	1463.1	1465.1	1438.1	1410.1
G34.0	1329.3	1328.5	1366.6	1401.6	1442.0	1451.1	1445.6	1448.0	1418.6	1391.7
G35.0	1308.9	1307.7	1347.2	1380.6	1424.2	1432.8	1427.7	1430.4	1400.0	1371.0
G36.0	1288.3	1286.9	1327.5	1361.7	1405.7	1414.9	1407.8	1410.7	1381.6	1352.2

C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5℃  
Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:



## Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0
G37.0	1265.1	1266.3	1307.2	1342.0	1387.2	1396.1	1388.9	1392.3	1362.3	1332.5
G38.0	1243.8	1243.4	1284.4	1322.4	1366.0	1375.3	1369.7	1373.5	1341.1	1312.6
G39.0	1222.3	1221.6	1263.6	1299.8	1346.4	1356.0	1350.7	1354.0	1321.7	1292.1
G40.0	1199.5	1199.4	1241.8	1278.8	1326.0	1336.0	1330.8	1332.6	1301.6	1268.9
G41.0	1175.1	1176.9	1220.2	1257.8	1306.1	1313.6	1309.1	1312.2	1281.4	1248.1
G42.0	1152.3	1154.2	1198.1	1236.6	1285.3	1293.1	1288.8	1292.2	1258.5	1227.1
G43.0	1129.7	1131.0	1173.5	1214.3	1263.9	1272.1	1267.8	1271.7	1238.0	1205.4
G44.0	1104.2	1105.2	1151.1	1190.0	1240.4	1250.8	1244.3	1248.3	1216.1	1181.4
G45.0	1080.4	1081.6	1128.1	1167.3	1218.7	1228.9	1222.9	1227.0	1194.1	1159.4
G46.0	1057.0	1057.1	1102.7	1144.2	1196.9	1206.7	1201.1	1205.6	1169.5	1136.7
G47.0	1032.6	1032.8	1078.9	1120.7	1172.2	1182.0	1178.8	1181.4	1146.8	1111.8
G48.0	1005.9	1005.9	1055.0	1095.1	1149.2	1159.3	1154.0	1159.1	1124.3	1088.5
G49.0	980.9	981.1	1030.9	1071.3	1126.3	1136.2	1130.8	1136.6	1101.5	1065.3
G50.0	955.7	955.6	1005.7	1047.1	1102.5	1113.3	1107.9	1113.7	1075.7	1041.3
G51.0	930.5	930.5	978.8	1022.6	1076.5	1087.5	1084.8	1090.5	1052.2	1015.0
G52.0	904.2	902.4	953.2	995.4	1052.0	1063.4	1060.8	1064.4	1027.9	990.6
G53.0	876.0	875.9	927.8	970.1	1027.6	1039.2	1035.0	1040.6	1004.1	965.8
G54.0	849.8	850.3	899.3	945.4	1002.8	1012.2	1010.7	1016.7	976.8	941.0
G55.0	823.5	823.4	873.6	919.2	975.6	987.3	986.2	992.0	952.2	915.7
G56.0	797.3	794.6	847.5	893.8	950.0	962.1	959.0	964.9	927.2	888.0
G57.0	767.9	767.8	821.2	864.7	924.9	936.8	933.7	940.3	901.8	862.4
G58.0	741.1	739.8	791.8	837.4	896.7	910.8	908.6	915.0	876.4	836.4
G59.0	713.6	712.3	764.6	810.4	870.3	884.5	883.1	889.6	847.6	807.8
G60.0	683.5	684.6	737.5	783.7	843.9	856.0	854.9	861.8	821.7	781.3
G61.0	655.8	653.9	709.8	756.2	817.3	829.2	828.5	835.5	795.2	754.8
G62.0	627.9	626.0	681.7	725.8	790.1	802.0	802.4	809.5	768.5	728.0
G63.0	600.0	598.1	650.9	698.5	760.3	775.2	776.1	783.1	739.3	698.1
G64.0	568.4	569.2	622.5	670.0	732.6	745.1	749.3	753.8	711.9	670.6
G65.0	539.8	540.8	593.8	641.9	704.6	717.8	720.0	726.7	685.0	642.8
G66.0	511.6	509.2	562.6	610.3	674.4	689.9	692.7	699.6	657.5	615.4
G67.0	483.1	480.3	533.7	581.5	646.1	661.8	665.5	672.2	627.2	584.7
G68.0	452.0	451.5	505.4	552.5	617.7	633.6	637.9	642.1	599.1	556.4
G69.0	422.9	422.2	476.0	523.5	589.3	602.3	607.6	614.6	571.2	528.3
G70.0	394.4	390.3	444.2	494.4	557.7	573.6	579.6	586.8	543.0	500.1
G71.0	363.2	361.5	415.3	462.0	528.8	545.1	551.7	556.5	511.7	469.1
G72.0	335.3	333.7	384.3	433.6	500.4	517.4	521.6	529.0	484.2	441.4
G73.0	306.1	303.9	354.2	402.8	470.3	487.1	494.7	499.9	454.6	411.8

C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5℃  
Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

## Candlepower Table (Continue 3)

Unit: cd

G\C	C300.0	C330.0	C360.0						
G0.0	1743.3	1744.5	1746.0						
G1.0	1741.2	1742.1	1744.1						
G2.0	1738.3	1738.7	1741.1						
G3.0	1734.8	1735.0	1737.4						
G4.0	1731.0	1730.4	1733.0						
G5.0	1726.2	1724.9	1727.6						
G6.0	1721.0	1719.1	1721.6						
G7.0	1714.9	1713.0	1714.8						
G8.0	1708.4	1706.2	1707.7						
G9.0	1701.2	1698.9	1700.1						
G10.0	1692.9	1689.8	1691.6						
G11.0	1684.6	1681.2	1681.9						
G12.0	1675.8	1671.6	1672.4						
G13.0	1666.4	1661.8	1662.5						
G14.0	1656.4	1650.3	1651.8						
G15.0	1644.9	1639.3	1639.8						
G16.0	1633.7	1627.7	1628.0						
G17.0	1622.6	1615.3	1615.7						
G18.0	1610.2	1602.7	1602.9						
G19.0	1596.5	1589.4	1589.5						
G20.0	1583.2	1574.6	1574.7						
G21.0	1569.8	1560.4	1560.6						
G22.0	1555.2	1545.7	1545.8						
G23.0	1540.6	1530.8	1530.7						
G24.0	1525.4	1513.3	1513.4						
G25.0	1508.2	1497.5	1497.4						
G26.0	1492.0	1480.8	1480.7						
G27.0	1475.4	1463.4	1463.4						
G28.0	1458.7	1444.4	1446.0						
G29.0	1439.9	1426.6	1426.3						
G30.0	1421.8	1408.2	1408.0						
G31.0	1403.8	1389.6	1389.5						
G32.0	1384.9	1370.8	1368.7						
G33.0	1365.9	1349.5	1349.0						
G34.0	1344.7	1329.6	1329.3						
G35.0	1324.6	1309.4	1308.9						
G36.0	1304.8	1289.1	1288.3						

C Plane (°):0.0-360.0: 30.0  
 Test Lab: MESTER LAB  
 Test Type: TYPE C  
 Temperature: 25.5℃  
 Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.655 m [K=1.0000]  
 Humidity: 45% R.H  
 Inspector:

## Candlepower Table (Continue 4)

Unit: cd

G\C	C300.0	C330.0	C360.0						
G37.0	1284.3	1266.4	1265.1						
G38.0	1261.5	1245.7	1243.8						
G39.0	1240.7	1223.6	1222.3						
G40.0	1219.1	1201.7	1199.5						
G41.0	1198.0	1176.9	1175.1						
G42.0	1173.6	1154.8	1152.3						
G43.0	1151.2	1131.9	1129.7						
G44.0	1128.4	1109.3	1104.2						
G45.0	1105.1	1085.8	1080.4						
G46.0	1079.5	1059.7	1057.0						
G47.0	1055.8	1035.7	1032.6						
G48.0	1032.1	1011.7	1005.9						
G49.0	1008.1	984.7	980.9						
G50.0	981.3	959.9	955.7						
G51.0	956.6	934.8	930.5						
G52.0	931.4	909.5	904.2						
G53.0	904.1	881.1	876.0						
G54.0	878.1	855.8	849.8						
G55.0	852.8	829.8	823.5						
G56.0	826.6	803.2	797.3						
G57.0	799.9	777.2	767.9						
G58.0	770.8	747.6	741.1						
G59.0	744.1	720.7	713.6						
G60.0	717.3	693.8	683.5						
G61.0	690.0	663.8	655.8						
G62.0	662.4	636.1	627.9						
G63.0	632.2	608.6	600.0						
G64.0	604.1	580.2	568.4						
G65.0	576.6	552.1	539.8						
G66.0	548.2	521.6	511.6						
G67.0	517.3	493.1	483.1						
G68.0	488.7	464.8	452.0						
G69.0	460.1	433.9	422.9						
G70.0	429.2	405.7	394.4						
G71.0	400.7	377.7	363.2						
G72.0	372.9	347.3	335.3						
G73.0	343.2	318.4	306.1						

C Plane (°):0.0-360.0: 30.0  
 Test Lab: MESTER LAB  
 Test Type: TYPE C  
 Temperature: 25.5℃  
 Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
 Test Device: GPM-1800B  
 Distance: 11.655 m [K=1.0000]  
 Humidity: 45% R.H  
 Inspector:

### Candlepower Table (Continue 5)

Unit: cd

[illegible]

C Plane (°):0.0-360.0: 30.0  
Test Lab: MESTER LAB  
Test Type: TYPE C  
Temperature: 25.5°C  
Operator: huayan Luo

Gamma Plane (°):0.0-90.0:1.0  
Test Device: GPM-1800B  
Distance: 11.655 m [K=1.0000]  
Humidity: 45% R.H  
Inspector:

## LED Average Luminance Report

Avg.L	cd/m <sup>2</sup>
L 0-180(65) av	19715.50
L 0-180(75) av	17519.03
L 0-180(85) av	13962.57
L 90-270(65) av	20104.65
L 90-270(75) av	17783.69
L 90-270(85) av	11999.90
L 45(65) av	19942.75
L 45(75) av	17677.44
L 45(85) av	13108.63

Standard: GB/T 29293-2012