

Report No.: MSTLAB250609003

Test Time: 2025-06-09 10:01:46

## Luminaire Property

Luminaire Manufacturer: MESTER

Luminaire Category:

Luminaire Description: ALL054F40W27V35K DOWN100%

Lamp Catalog: L128-ETSP2-YKCIE-SC(2790)+L128-ETSP2-YHCIE-SC(5090)

Lamp Description: BQ-40-0820-47-AD

Number of Lamps: 1

Lumens per Lamp:

Luminous Length (mm): 1200

Luminous Width (mm): 63

Luminous Height (mm):

Voltage: 120.0 V

Current: 0.314 A

Power: 37.61 W

Power Factor: 0.997

## Photometric Results

CIE Class: Direct

Measurement Flux: 4925 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(10%,50%,75%,100%): H133.3,H83.8,H54.8,H0

Vertical Diffuse Angle(10%,50%,75%,100%): V152.7,V97.8,V67.2,V0

Luminous Efficacy (lm/w): 130.95

C0r0 Intensity: 2336.77 cd

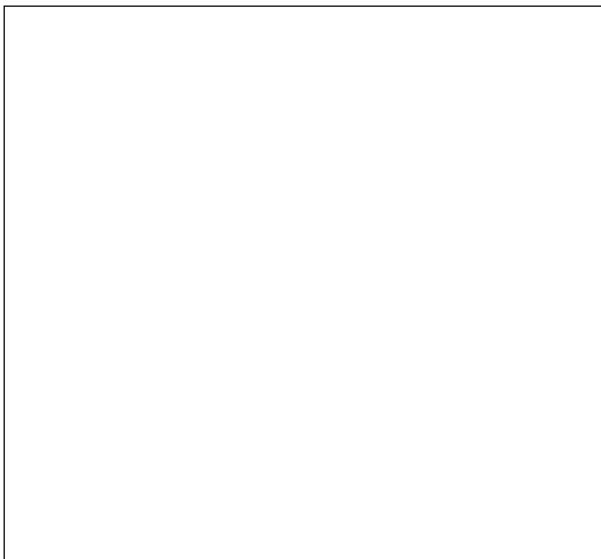
Max. Intensity: 2342.23 cd

Pos of Max. Intensity: H150 V3

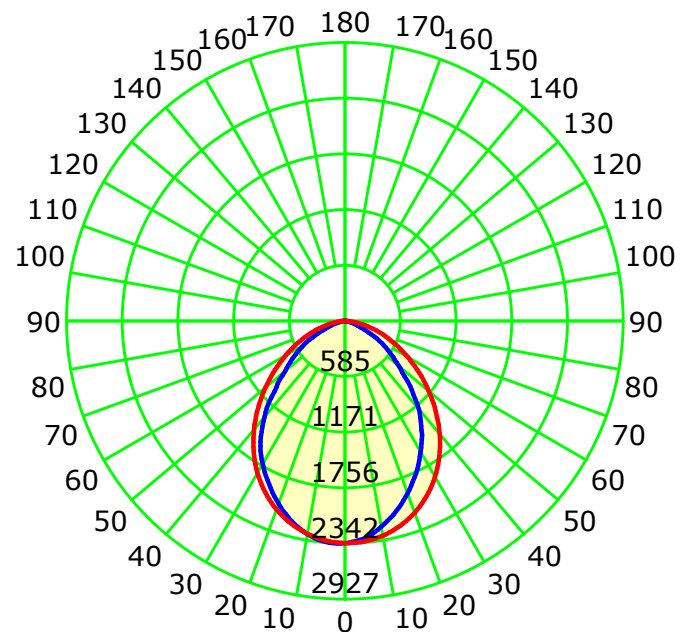
S/MH(C0/C180): 1.08

S/MH(C90/C270): 1.19

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 90.8°

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 30.0

Test Lab: EVERFINE

Test Type: TYPE C

Temperature: 25.3°C

Operator:

Gamma Plane (°):0.0-90.0:1.0

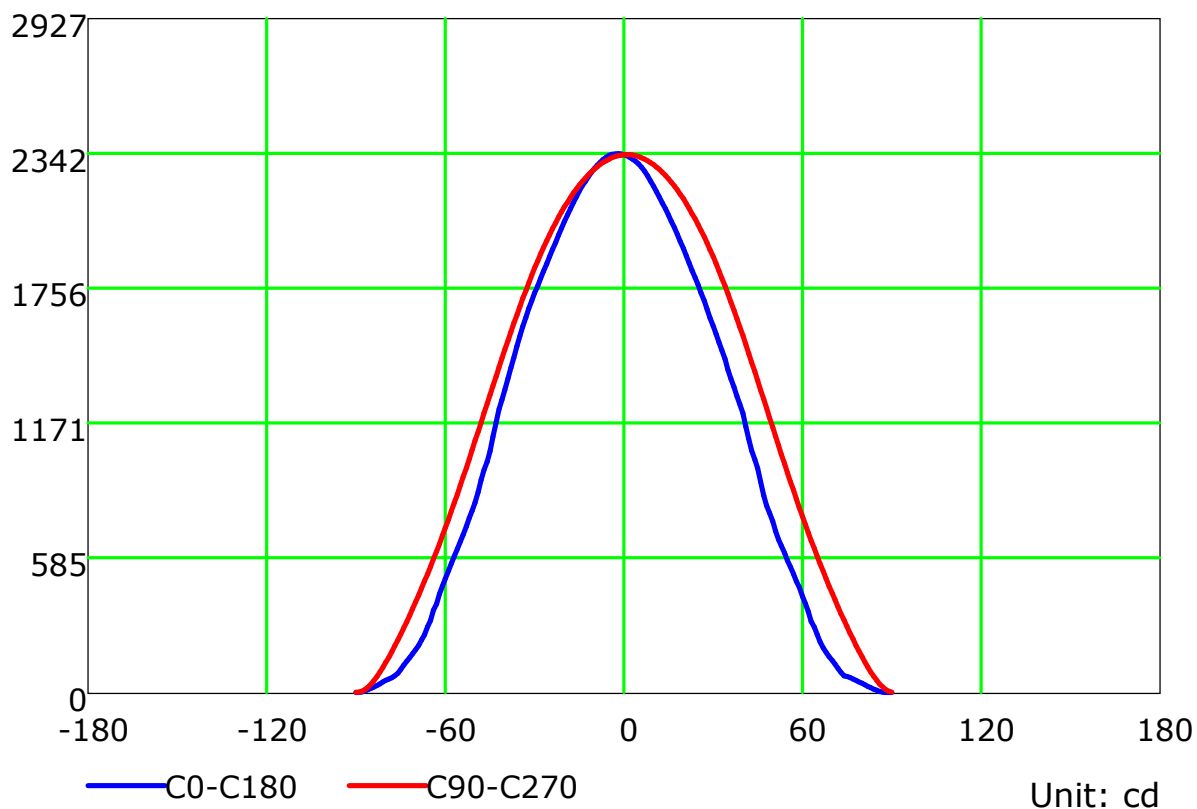
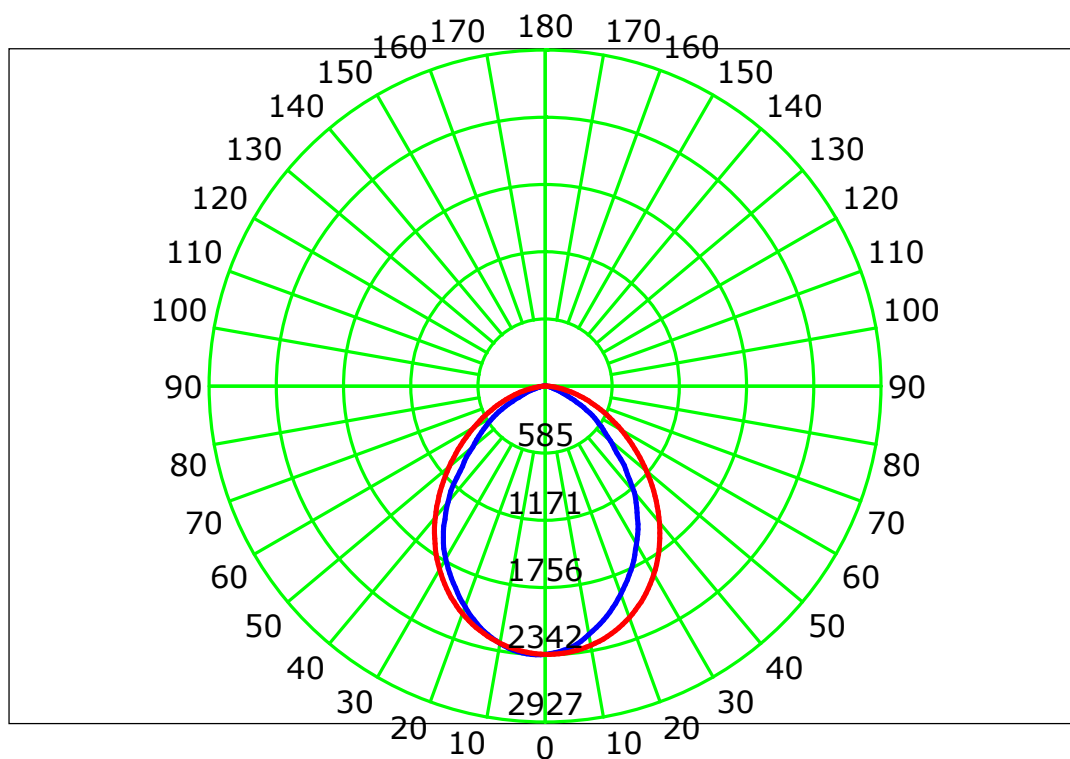
Test Device:

Distance: 11.655m [K=1.0000]

Humidity: 45% R.H

Inspector:

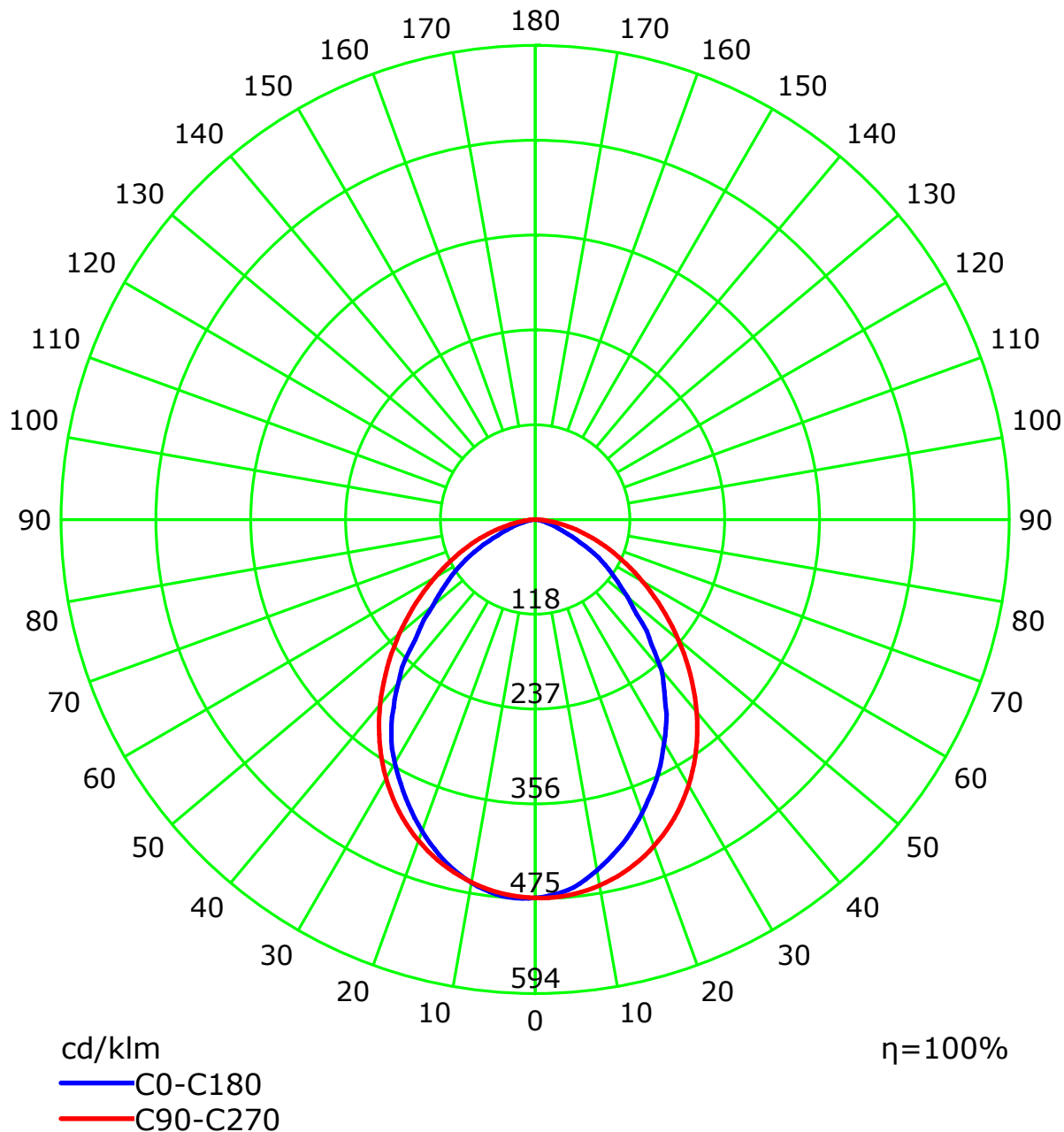
## Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

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

## Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

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

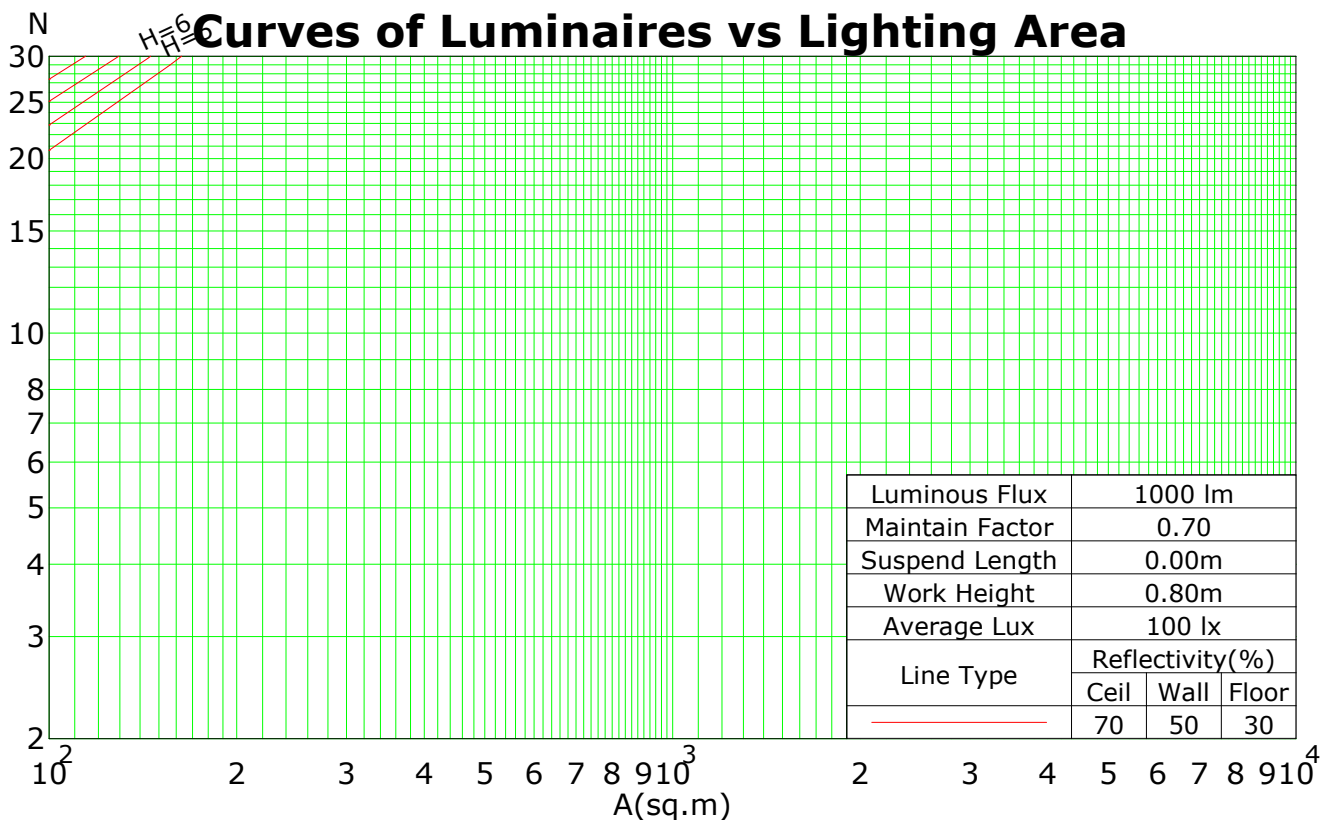
## Coefficients Of Utilization - Zonal Cavity Method

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	1.10	1.06	1.03	0.99	1.08	1.04	1.01	0.98	1.00	0.97	0.95	0.96	0.94	0.92	0.92	0.91	0.89	0.87
2	1.02	0.94	0.88	0.83	0.99	0.92	0.87	0.82	0.89	0.84	0.80	0.86	0.82	0.79	0.83	0.80	0.77	0.75
3	0.93	0.84	0.77	0.71	0.91	0.82	0.76	0.70	0.80	0.74	0.69	0.77	0.72	0.68	0.74	0.70	0.67	0.65
4	0.86	0.75	0.67	0.61	0.84	0.74	0.67	0.61	0.72	0.65	0.60	0.69	0.64	0.59	0.67	0.62	0.58	0.56
5	0.80	0.68	0.60	0.54	0.78	0.67	0.59	0.53	0.65	0.58	0.53	0.63	0.57	0.52	0.61	0.56	0.52	0.50
6	0.74	0.62	0.53	0.47	0.72	0.61	0.53	0.47	0.59	0.52	0.47	0.57	0.51	0.46	0.56	0.50	0.46	0.44
7	0.69	0.56	0.48	0.42	0.67	0.55	0.48	0.42	0.54	0.47	0.42	0.53	0.46	0.42	0.51	0.46	0.41	0.39
8	0.64	0.52	0.44	0.38	0.63	0.51	0.43	0.38	0.50	0.43	0.38	0.48	0.42	0.38	0.47	0.42	0.37	0.36
9	0.60	0.48	0.40	0.35	0.59	0.47	0.40	0.34	0.46	0.39	0.34	0.45	0.39	0.34	0.44	0.38	0.34	0.32
10	0.57	0.44	0.37	0.32	0.55	0.44	0.36	0.31	0.43	0.36	0.31	0.42	0.36	0.31	0.41	0.35	0.31	0.29

Spacing Criteria (0-180): 1.08

Spacing Criteria (90-270): 1.19

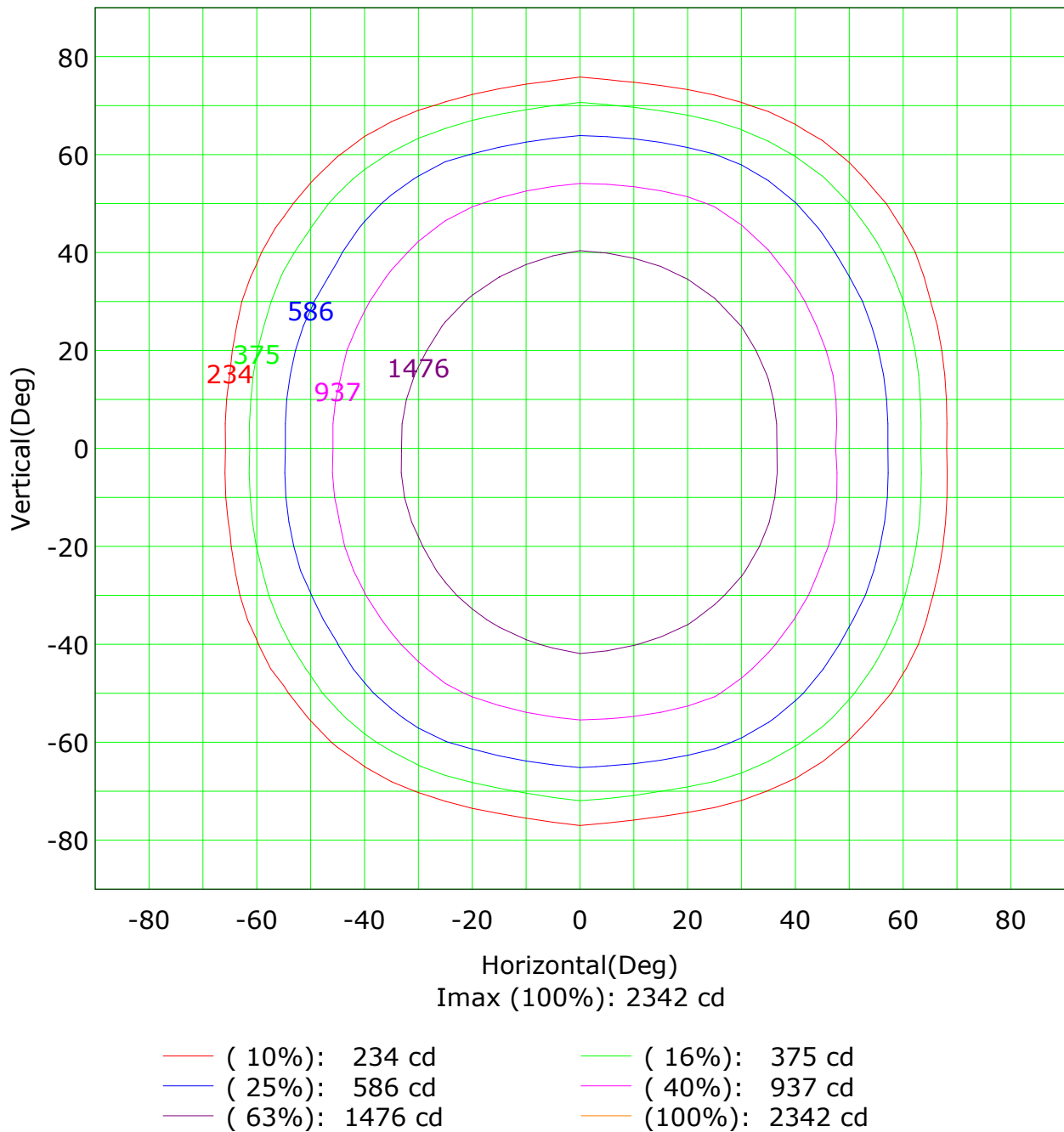
Spacing Criteria (Diagonal): 1.22



C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

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

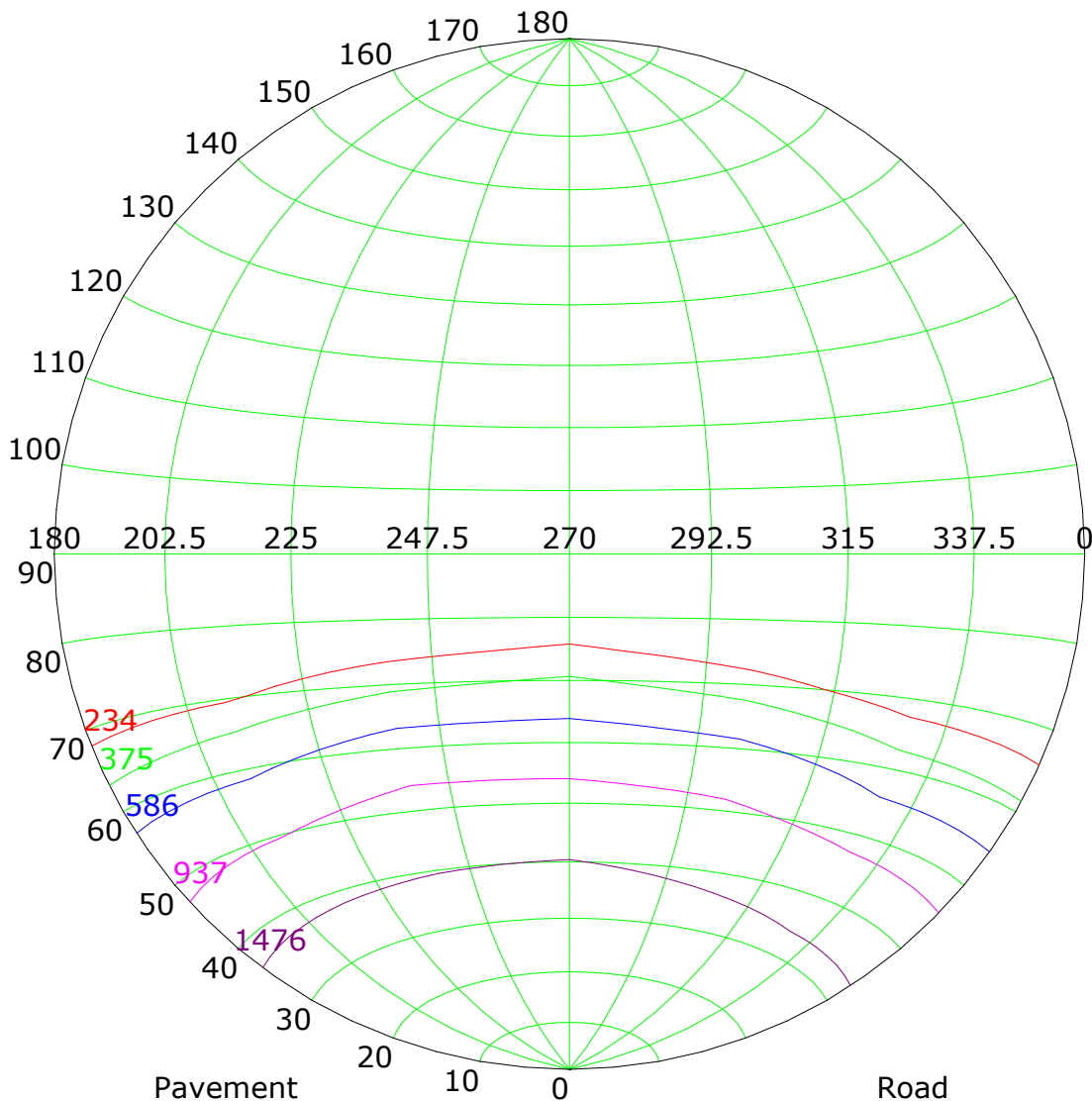
## Isocandela (rectangle)



C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

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

## Isocandela (sphere)



Imax (100%): 2342 cd

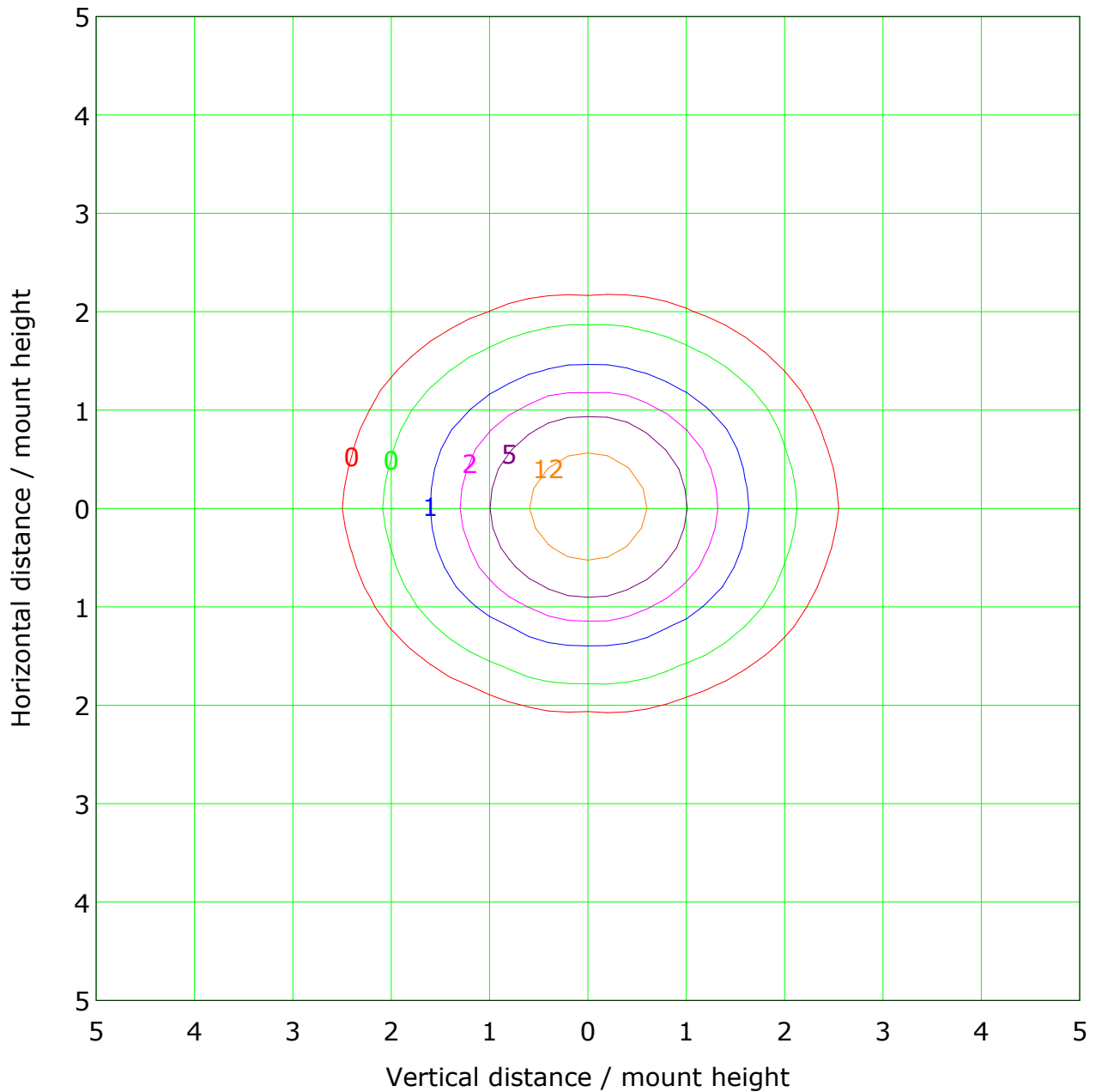
( 10%): 234 cd  
( 25%): 586 cd  
( 63%): 1476 cd

( 16%): 375 cd  
( 40%): 937 cd  
(100%): 2342 cd

CIE: narrow - short  
CIE: Semi-cut-off luminaire  
Max.At90: 0.507 cd/klm

IES: Cut-off  
Max.At80: 31.740 cd/klm  
Max.80-90: 31.740 cd/klm

## IsoLux Plot



Mounting Height: 10.0m    Max Lux(100%): 23.4 lx

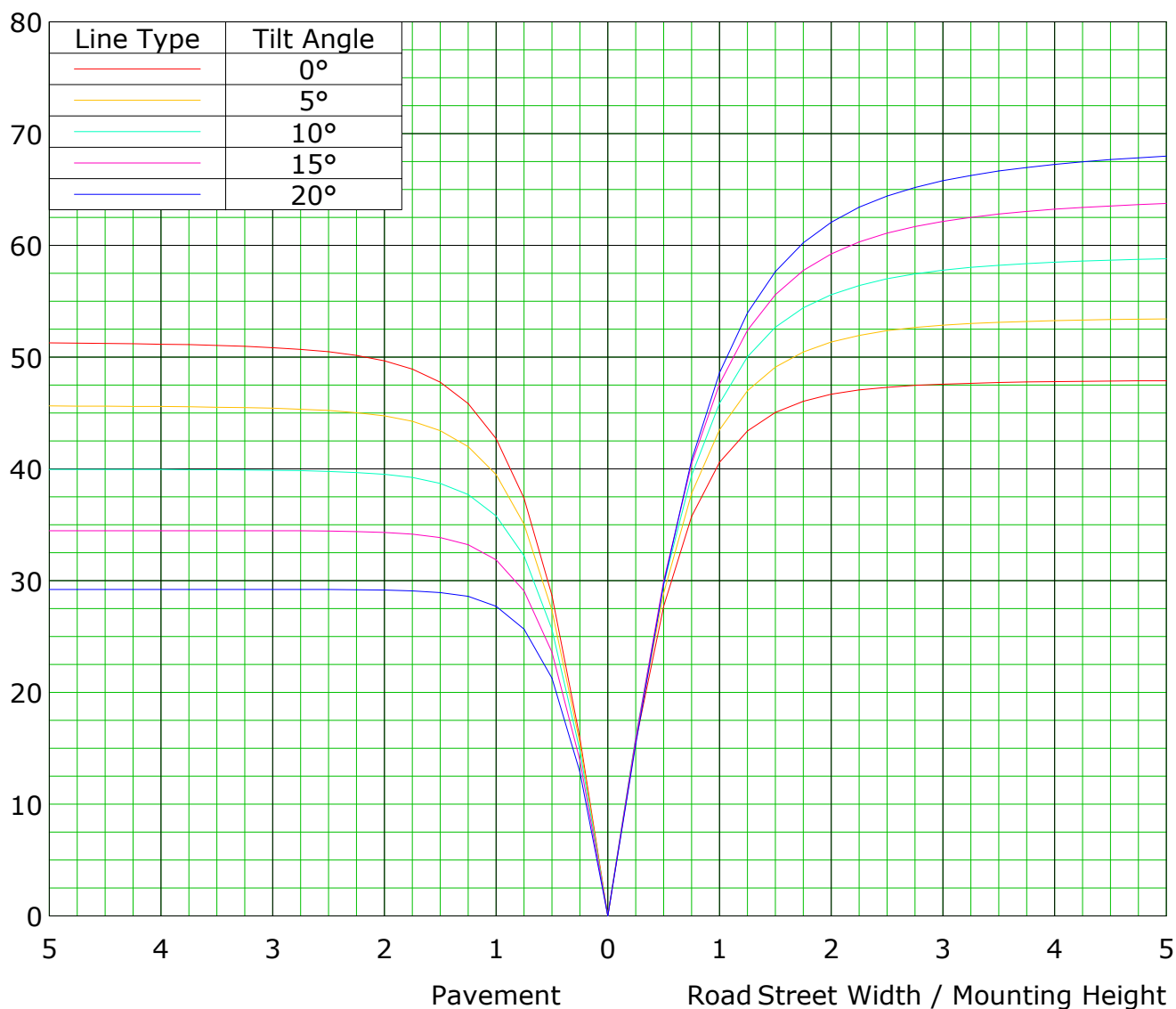
( 1%): 0.2 lx	( 2%): 0.5 lx
( 5%): 1.2 lx	( 10%): 2.3 lx
( 20%): 4.7 lx	( 50%): 11.7 lx
(100%): 23.4 lx	

C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

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

## Roadway CU Curve

Efficiency(%)



C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

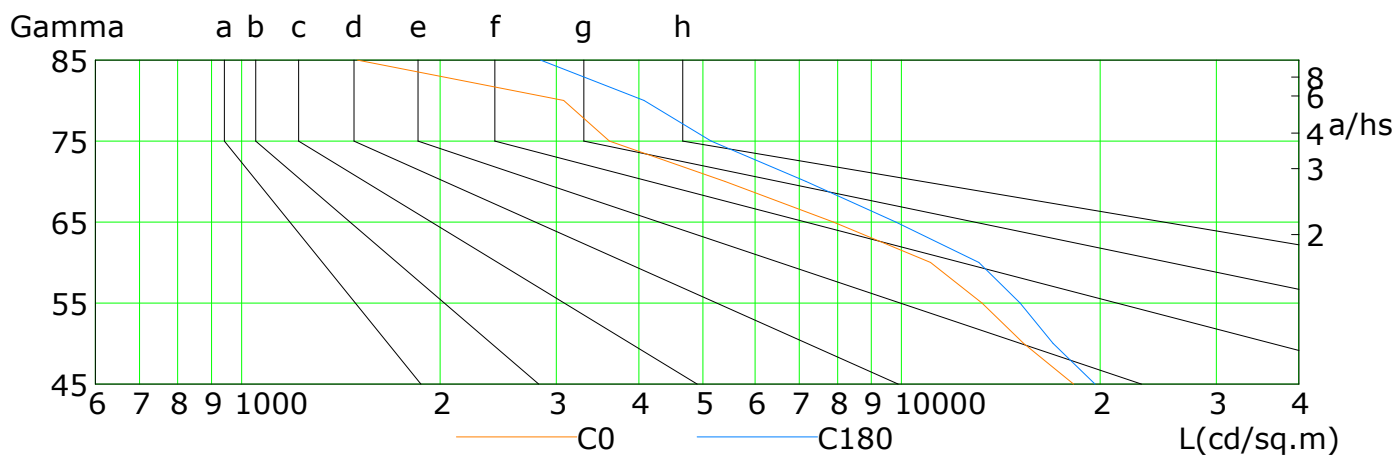
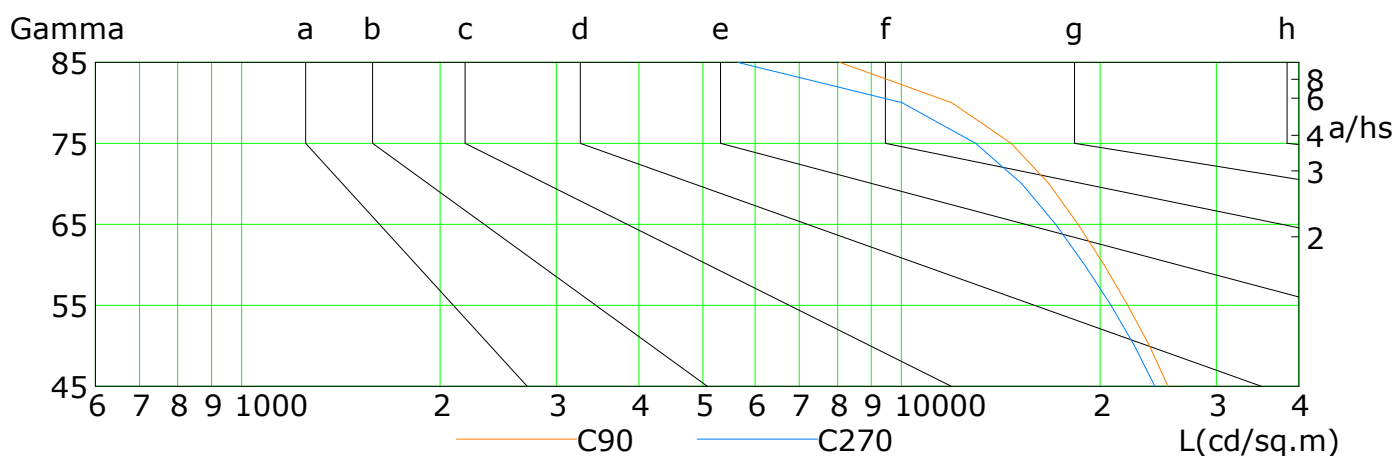
Gamma Plane (°):0.0-90.0:1.0  
Test Device:  
Distance: 11.655m [K=1.0000]  
Humidity: 45% R.H  
Inspector:



## 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

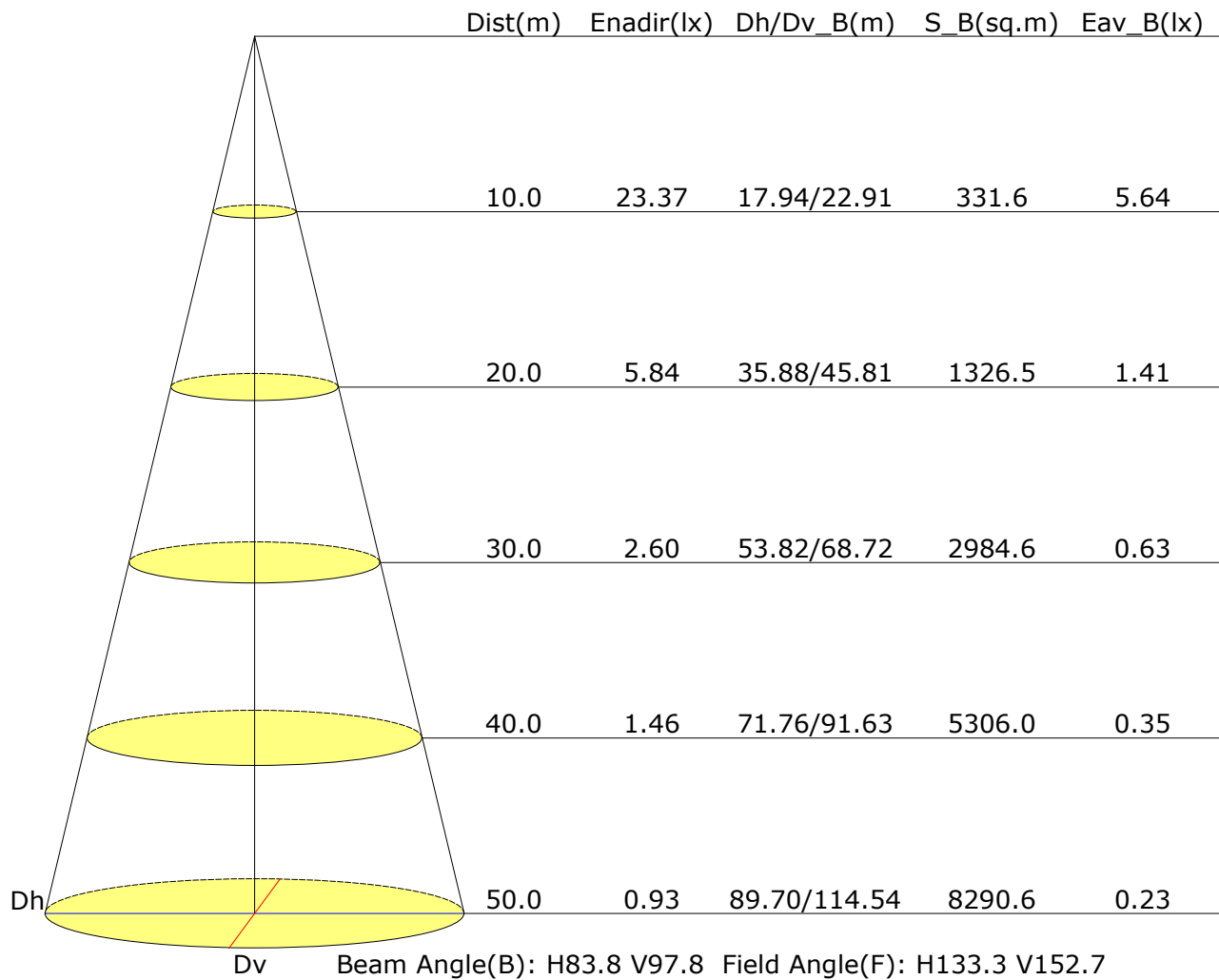


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	18236	15323	13245	11066	7893	5401	3608	3075	1499
C90	25351	23749	22027	20273	18518	16722	14661	11907	8061
C180	19638	16973	15126	13098	9804	7166	5147	4071	2840
C270	24202	22541	20769	18941	17131	15213	12960	10022	5641

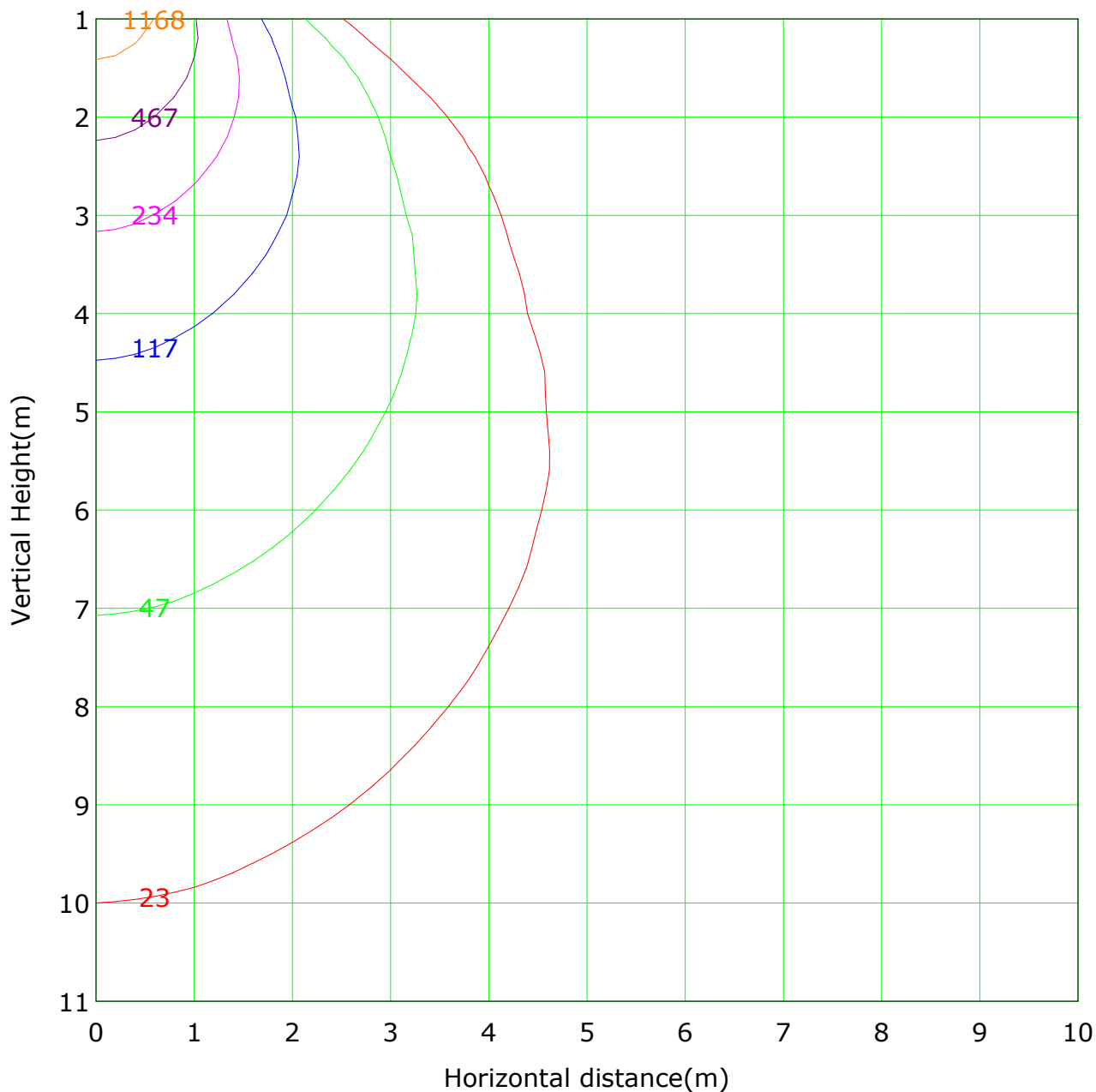
C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

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

## Illuminance at a Distance



## Vertical IsoLux Plot



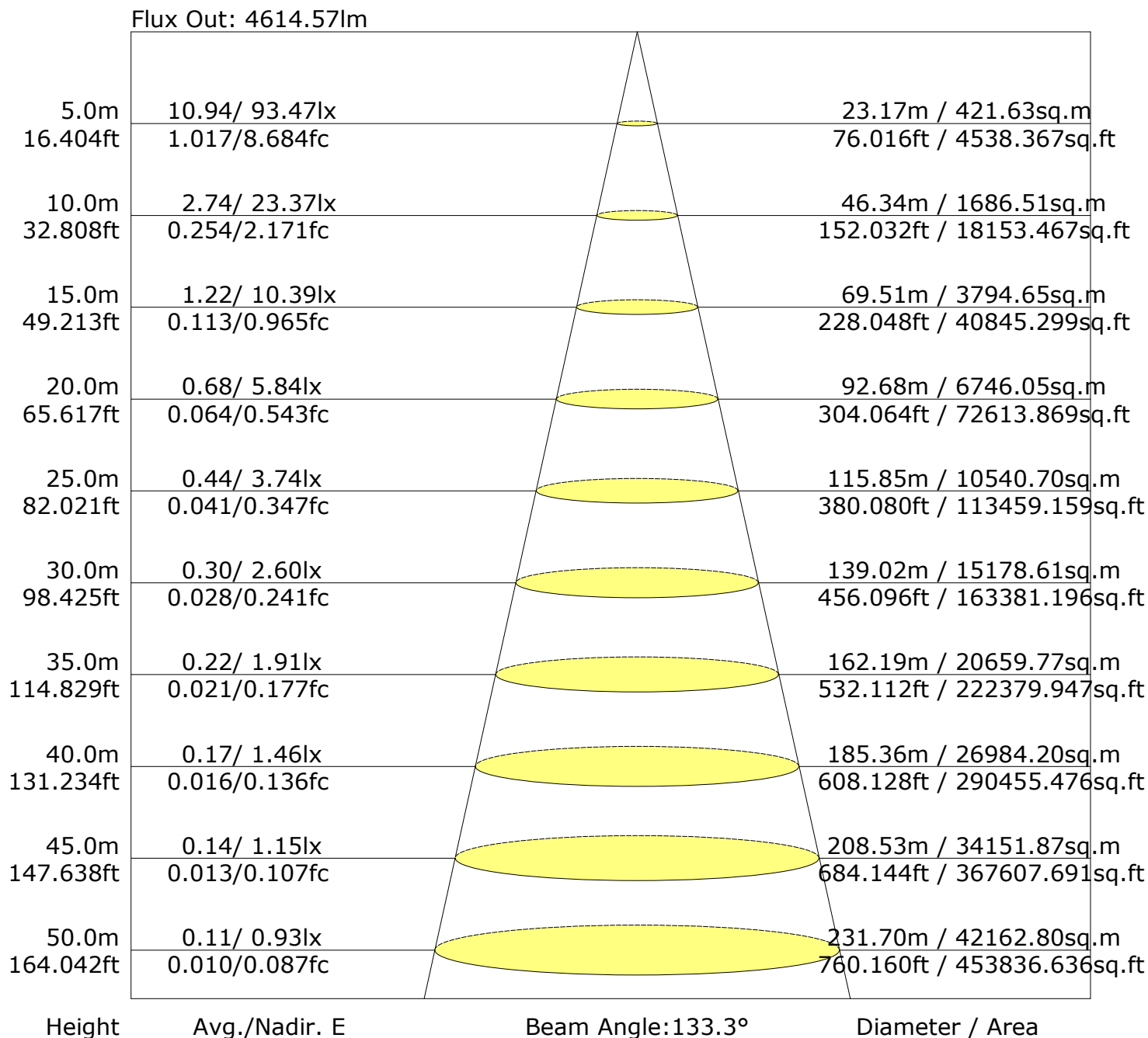
Lowest(m): 1.0m    Highest(m): 11.0m    Max Lux: 2336.8 lx  
— ( 1%): 23.4 lx                      — ( 2%): 46.7 lx  
— ( 5%): 116.8 lx                      — ( 10%): 233.7 lx  
— ( 20%): 467.4 lx                      — ( 50%): 1168.4 lx  
— (100%): 2336.8 lx

## Area Flux Table

Unit: lm

Vertical plane																	Orbit, m									
-90	0.0	0.0	0.1	0.2	0.3	0.4	0.7	1.0	1.3	1.3	0.9	0.6	0.3	0.2	0.1	0.0	0.0	0.0	7.4	0.0						
-80	0.0	0.1	0.4	0.8	1.7	3.0	4.7	6.3	7.4	7.2	5.8	4.0	2.3	1.2	0.6	0.2	0.0	0.0	45.8	17.7						
-70	0.0	0.2	0.7	1.9	4.4	8.0	11.8	14.7	16.4	16.1	13.9	10.7	6.8	3.5	1.4	0.6	0.1	0.0	111.0	97.7						
-60	0.0	0.4	1.3	3.7	8.4	14.4	20.6	24.9	27.1	26.6	23.6	18.9	12.7	6.9	2.7	0.9	0.3	0.0	193.3	185.3						
-50	0.0	0.5	2.0	6.0	12.3	20.5	29.3	35.4	38.7	38.1	33.7	27.0	18.4	10.6	4.7	1.4	0.4	0.0	279.2	2273.4						
-40	0.1	0.6	2.9	8.1	15.9	26.7	37.3	45.3	50.0	49.2	43.3	34.7	24.2	13.8	6.8	2.1	0.5	0.0	361.3	3357.0						
-30	0.1	0.8	3.6	9.9	19.5	32.4	44.4	53.9	59.4	58.4	51.3	41.1	29.2	17.2	8.5	2.8	0.5	0.0	433.0	429.4						
-20	0.1	0.9	4.1	11.1	22.1	36.4	49.3	60.1	66.2	65.0	57.1	45.7	33.0	19.8	9.6	3.3	0.6	0.1	484.3	481.1						
-10	0.1	0.9	4.3	11.6	23.2	38.3	51.9	63.4	69.8	68.6	60.3	48.4	34.9	20.9	10.2	3.5	0.6	0.1	510.8	507.9						
0	0.1	0.9	4.3	11.7	23.2	38.5	52.1	63.6	70.1	68.9	60.6	48.6	35.1	21.0	10.2	3.5	0.6	0.1	513.1	510.1						
10	0.1	0.9	4.2	11.2	22.3	36.8	49.9	60.8	67.0	65.9	57.9	46.3	33.4	20.1	9.8	3.3	0.6	0.1	490.4	487.2						
20	0.1	0.8	3.7	10.1	19.9	33.0	45.3	55.0	60.7	59.7	52.5	42.0	29.9	17.7	8.7	2.9	0.6	0.0	442.2	438.7						
30	0.1	0.6	3.0	8.4	16.3	27.5	38.3	46.7	51.5	50.8	44.6	35.7	25.0	14.3	7.0	2.2	0.5	0.0	372.6	368.5						
40	0.0	0.5	2.2	6.3	12.8	21.4	30.5	36.9	40.4	39.9	35.2	28.1	19.2	11.1	5.0	1.5	0.4	0.0	291.4	286.0						
50	0.0	0.4	1.4	3.9	8.9	15.2	21.8	26.3	28.7	28.2	25.0	20.0	13.6	7.5	3.0	1.0	0.3	0.0	205.2	197.6						
60	0.0	0.2	0.8	2.1	4.8	8.7	12.9	15.9	17.7	17.4	15.1	11.7	7.6	3.9	1.5	0.6	0.2	0.0	121.0	108.9						
70	0.0	0.1	0.4	0.9	1.9	3.5	5.4	7.1	8.4	8.2	6.6	4.7	2.8	1.5	0.7	0.3	0.1	0.0	52.7	25.2						
80	0.0	0.0	0.1	0.2	0.4	0.6	0.9	1.3	1.7	1.7	1.2	0.7	0.4	0.3	0.1	0.0	0.0	0.0	9.8	0.0						
90	0.8	8.8	39.3	108.1	218.1	365.3	507.1	618.5	682.3	671.1	588.6	468.8	328.9	191.4	90.5	30.1	6.2	0.5	4924							
Flux(E)	0.0	0.0	24.2	97.5	208.6	356.8	499.2	610.8	6674.7	663.6	580.7	460.7	320.2	181.4	79.2	13.8	0.0	0.0		4772						
-90	-80 <td>-70<td>-60<td>-50<td>-40<td>-30<td>-20<td>-10<td>0<td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	-70 <td>-60<td>-50<td>-40<td>-30<td>-20<td>-10<td>0<td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	-60 <td>-50<td>-40<td>-30<td>-20<td>-10<td>0<td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td></td></td></td></td></td></td>	-50 <td>-40<td>-30<td>-20<td>-10<td>0<td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td></td></td></td></td></td>	-40 <td>-30<td>-20<td>-10<td>0<td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td></td></td></td></td>	-30 <td>-20<td>-10<td>0<td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td></td></td></td>	-20 <td>-10<td>0<td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td></td></td>	-10 <td>0<td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td></td>	0 <td>10<td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td></td>	10 <td>20<td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td></td>	20 <td>30<td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td></td>	30 <td>40<td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td></td>	40 <td>50<td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td></td>	50 <td>60<td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td></td>	60 <td>70<td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td></td>	70 <td>80<td>90</td><td>Flux(T)</td><td>Flux(E)</td></td>	80 <td>90</td> <td>Flux(T)</td> <td>Flux(E)</td>	90	Flux(T)	Flux(E)						

## The Average Illuminance Effective Figure



C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device:  
Distance: 11.655m [K=1.0000]  
Humidity: 45% R.H  
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	19.7	21.2	20.1	21.5	21.8	22.9	24.4	23.2	24.7	25.0
3H	20.3	21.6	20.7	21.9	22.3	24.3	25.6	24.7	26.0	26.3
4H	20.3	21.6	20.7	21.9	22.3	24.8	26.0	25.2	26.4	26.8
6H	20.4	21.5	20.8	21.9	22.3	25.1	26.3	25.5	26.6	27.0
8H	20.4	21.5	20.8	21.9	22.3	25.2	26.3	25.6	26.7	27.1
12H	20.4	21.4	20.8	21.8	22.2	25.2	26.3	25.7	26.7	27.1
X=4H Y=2H	20.4	21.6	20.8	22.0	22.4	23.1	24.4	23.5	24.7	25.1
3H	21.0	22.1	21.4	22.5	22.9	24.7	25.8	25.2	26.2	26.6
4H	21.1	22.1	21.6	22.5	22.9	25.3	26.2	25.8	26.7	27.1
6H	21.2	22.0	21.7	22.5	22.9	25.7	26.5	26.2	27.0	27.4
8H	21.2	22.0	21.7	22.4	22.9	25.8	26.6	26.3	27.0	27.5
12H	21.2	21.9	21.7	22.4	22.8	25.9	26.5	26.4	27.0	27.5
X=8H Y=4H	21.3	22.1	21.8	22.5	23.0	25.3	26.1	25.8	26.5	27.0
6H	21.4	22.1	21.9	22.6	23.0	25.7	26.4	26.3	26.9	27.3
8H	21.5	22.0	22.0	22.5	23.0	25.9	26.4	26.4	26.9	27.4
12H	21.5	21.9	22.0	22.4	23.0	26.0	26.5	26.5	26.9	27.5
X=12H Y=4H	21.3	22.0	21.8	22.5	23.0	25.3	26.0	25.8	26.4	26.9
6H	21.5	22.0	22.0	22.5	23.0	25.7	26.3	26.3	26.8	27.3
8H	21.5	22.0	22.0	22.5	23.0	25.9	26.4	26.4	26.8	27.4

Calculate in accordance with CIE 190:2010 The table is revised with 4925lm ( $8\log(F/F_0) = 5.5$ ).

C Plane (°):0.0-360.0: 30.0  
 Test Lab: EVERFINE  
 Test Type: TYPE C  
 Temperature: 25.3℃  
 Operator:

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

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

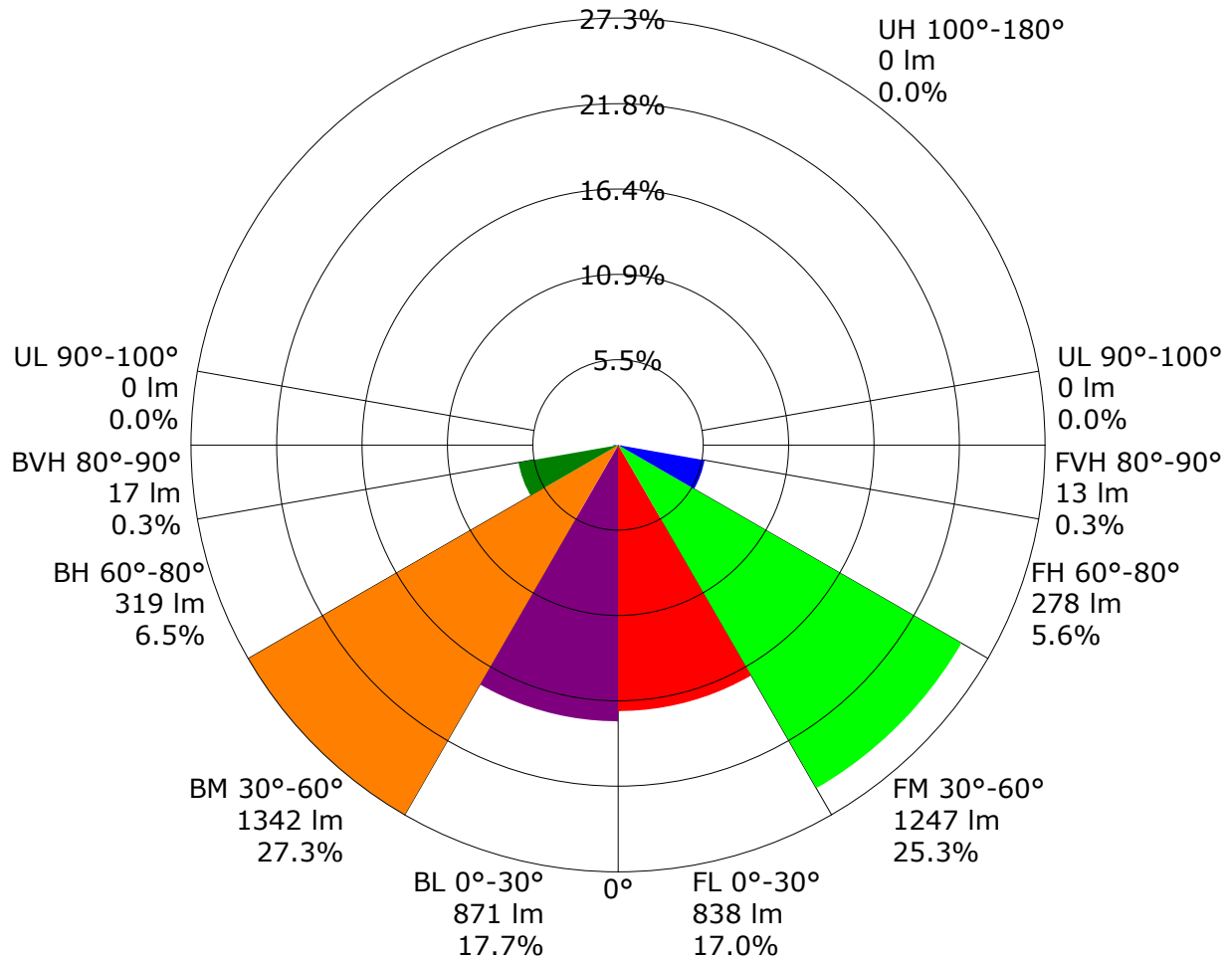
	ZONE	LUMENS	% LAMP LUMENS
	FORWARD LIGHT	2376	48.3
	FL ( 0°-30°)	838	17.0
	FM (30°-60°)	1247	25.3
	FH (60°-80°)	278	5.6
	FVH (80°-90°)	13	0.3
	BACK LIGHT	2549	51.7
	BL ( 0°-30°)	871	17.7
	BM (30°-60°)	1342	27.3
	BH (60°-80°)	319	6.5
	BVH (80°-90°)	17	0.3
	UP LIGHT	0	0.0
	UL (90°-100°)	0	0.0
	UH (100°-180°)	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 G1
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B2 U1 G1

C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device:  
Distance: 11.655m [K=1.0000]  
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	0.64	0.74	0.81	0.86	0.92	0.97	1.00	1.04	1.06	
	0.30		0.57	0.67	0.74	0.80	0.87	0.92	0.95	1.00	1.03	
	0.20		0.52	0.62	0.69	0.75	0.83	0.88	0.92	0.97	1.00	
0.50	0.50	0.20	0.62	0.72	0.78	0.83	0.89	0.93	0.96	1.00	1.02	
	0.30		0.56	0.66	0.73	0.78	0.85	0.89	0.93	0.97	0.99	
	0.20		0.51	0.61	0.69	0.74	0.81	0.86	0.89	0.94	0.97	
0.30	0.50	0.20	0.61	0.70	0.76	0.81	0.86	0.90	0.93	0.96	0.98	
	0.30		0.55	0.65	0.72	0.76	0.83	0.87	0.90	0.94	0.96	
	0.20		0.51	0.61	0.68	0.73	0.79	0.84	0.87	0.92	0.94	
0.00	0.00	0.00	0.49	0.58	0.65	0.70	0.76	0.80	0.83	0.87	0.90	
<p>Rating:38W Photometrically tested without ceiling board.</p> <p>Multiply UF values by service correction factors</p> <p>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>												

## 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	0.89	0.72	0.61	0.52	0.41	0.34	0.29	0.22	0.18	
	0.30		0.74	0.62	0.53	0.46	0.37	0.31	0.27	0.21	0.17	
	0.20		0.64	0.54	0.47	0.42	0.34	0.29	0.25	0.20	0.16	
0.50	0.50	0.20	0.86	0.69	0.58	0.50	0.39	0.36	0.27	0.21	0.17	
	0.30		0.73	0.60	0.51	0.45	0.36	0.30	0.26	0.20	0.16	
	0.20		0.63	0.53	0.46	0.41	0.33	0.28	0.24	0.19	0.16	
0.30	0.50	0.20	0.83	0.66	0.56	0.48	0.37	0.31	0.26	0.20	0.16	
	0.30		0.71	0.58	0.50	0.43	0.34	0.29	0.24	0.19	0.15	
	0.20		0.62	0.52	0.45	0.40	0.32	0.27	0.23	0.18	0.15	
0.00	0.00	0.00	0.51	0.42	0.35	0.30	0.24	0.20	0.17	0.13	0.11	
Rating:38W 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	0.15	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		0.05	0.07	0.08	0.10	0.12	0.13	0.14	0.16	0.17	
0.50	0.50	0.20	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.20	0.20	
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19	
	0.20		0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.16	0.17	
0.30	0.50	0.20	0.14	0.16	0.16	0.17	0.18	0.18	0.19	0.19	0.20	
	0.30		0.09	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	
	0.20		0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.15	0.16	
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Rating:38W 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	2336.5	2.2	2.2	0.05	0.05
1.0-2.0	2335.2	6.7	8.9	0.14	0.18
2.0-3.0	2332.5	11.2	20.1	0.23	0.41
3.0-4.0	2328.4	15.6	35.7	0.32	0.72
4.0-5.0	2322.9	20.0	55.7	0.41	1.13
5.0-6.0	2315.8	24.3	80.0	0.49	1.62
6.0-7.0	2306.8	28.6	108.6	0.58	2.21
7.0-8.0	2295.9	32.9	141.5	0.67	2.87
8.0-9.0	2283.4	37.0	178.5	0.75	3.62
9.0-10.0	2269.3	41.1	219.6	0.83	4.46
10.0-11.0	2254.0	45.0	264.6	0.91	5.37
11.0-12.0	2237.6	48.9	313.6	0.99	6.37
12.0-13.0	2220.0	52.7	366.2	1.07	7.44
13.0-14.0	2200.9	56.3	422.6	1.14	8.58
14.0-15.0	2180.8	59.9	482.5	1.22	9.80
15.0-16.0	2160.0	63.3	545.8	1.29	11.08
16.0-17.0	2137.6	66.6	612.3	1.35	12.43
17.0-18.0	2114.0	69.7	682.1	1.42	13.85
18.0-19.0	2089.5	72.7	754.8	1.48	15.33
19.0-20.0	2063.9	75.5	830.3	1.53	16.86
20.0-21.0	2037.6	78.3	908.6	1.59	18.45
21.0-22.0	2010.6	80.8	989.4	1.64	20.09
22.0-23.0	1982.5	83.2	1072.6	1.69	21.78
23.0-24.0	1953.5	85.4	1158.0	1.73	23.51
24.0-25.0	1924.2	87.5	1245.5	1.78	25.29
25.0-26.0	1894.5	89.4	1334.9	1.82	27.11
26.0-27.0	1863.8	91.2	1426.1	1.85	28.96
27.0-28.0	1832.2	92.8	1518.9	1.88	30.84
28.0-29.0	1799.9	94.2	1613.1	1.91	32.75
29.0-30.0	1767.7	95.5	1708.5	1.94	34.69
30.0-31.0	1734.6	96.5	1805.1	1.96	36.65
31.0-32.0	1700.4	97.4	1902.5	1.98	38.63
32.0-33.0	1666.4	98.2	2000.7	1.99	40.62
33.0-34.0	1631.9	98.8	2099.5	2.01	42.63
34.0-35.0	1595.8	99.1	2198.6	2.01	44.64
35.0-36.0	1559.3	99.3	2297.9	2.02	46.66

C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device:  
Distance: 11.655m [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	1522.2	99.3	2397.2	2.02	48.67
37.0-38.0	1484.2	99.1	2496.3	2.01	50.69
38.0-39.0	1445.7	98.7	2594.9	2.00	52.69
39.0-40.0	1406.6	98.1	2693.1	1.99	54.68
40.0-41.0	1366.2	97.3	2790.4	1.98	56.66
41.0-42.0	1325.8	96.3	2886.7	1.96	58.61
42.0-43.0	1285.8	95.3	2982.0	1.93	60.55
43.0-44.0	1244.6	93.9	3075.9	1.91	62.45
44.0-45.0	1202.1	92.4	3168.3	1.88	64.33
45.0-46.0	1159.7	90.7	3259.0	1.84	66.17
46.0-47.0	1117.3	88.9	3347.9	1.80	67.98
47.0-48.0	1075.0	86.9	3434.8	1.76	69.74
48.0-49.0	1033.2	84.9	3519.7	1.72	71.46
49.0-50.0	991.0	82.6	3602.3	1.68	73.14
50.0-51.0	949.3	80.3	3682.6	1.63	74.77
51.0-52.0	909.6	78.1	3760.7	1.59	76.36
52.0-53.0	871.0	75.8	3836.5	1.54	77.90
53.0-54.0	832.2	73.4	3909.8	1.49	79.39
54.0-55.0	793.7	70.9	3980.7	1.44	80.83
55.0-56.0	757.1	68.4	4049.1	1.39	82.22
56.0-57.0	722.0	66.0	4115.1	1.34	83.56
57.0-58.0	686.7	63.5	4178.6	1.29	84.85
58.0-59.0	652.2	61.0	4239.6	1.24	86.08
59.0-60.0	618.0	58.4	4298.0	1.19	87.27
60.0-61.0	583.6	55.7	4353.7	1.13	88.40
61.0-62.0	549.9	53.0	4406.7	1.08	89.48
62.0-63.0	515.3	50.1	4456.8	1.02	90.49
63.0-64.0	481.2	47.2	4504.1	0.96	91.45
64.0-65.0	447.6	44.3	4548.4	0.90	92.35
65.0-66.0	413.6	41.3	4589.6	0.84	93.19
66.0-67.0	380.0	38.2	4627.8	0.78	93.97
67.0-68.0	347.1	35.2	4663.0	0.71	94.68
68.0-69.0	316.0	32.2	4695.3	0.65	95.34
69.0-70.0	286.7	29.4	4724.7	0.60	95.93
70.0-71.0	259.1	26.8	4751.5	0.54	96.48
71.0-72.0	233.7	24.3	4775.8	0.49	96.97

C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

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



## Zonal Lumen (Continue 3)

cone flux(90°): 3168.30 lm

%lum = 64.3%

%lamp = 64.3%

cone flux(120°): 4298.01 lm

%lum = 87.3%

%lamp = 87.3%

## Candlepower Table

Unit: cd

G\C	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0
G0.0	2336.8	2336.8	2336.8	2336.8	2336.8	2336.8	2336.8	2336.8	2336.8
G1.0	2332.5	2332.7	2335.0	2337.6	2338.8	2340.3	2339.9	2339.3	2337.4
G2.0	2326.2	2328.1	2332.8	2336.8	2339.6	2342.2	2341.2	2340.0	2336.4
G3.0	2318.3	2321.2	2329.0	2335.3	2339.3	2342.2	2340.3	2339.4	2334.4
G4.0	2308.3	2312.9	2323.8	2332.8	2337.7	2340.9	2338.6	2336.5	2330.9
G5.0	2297.4	2303.6	2317.4	2329.1	2335.3	2337.6	2333.9	2332.6	2326.6
G6.0	2283.4	2291.6	2309.1	2324.0	2331.8	2333.1	2326.5	2326.6	2320.6
G7.0	2265.5	2277.4	2300.2	2318.5	2325.9	2325.3	2316.4	2317.7	2313.5
G8.0	2244.9	2260.4	2290.6	2311.2	2319.6	2315.5	2304.4	2306.8	2304.9
G9.0	2222.7	2241.0	2279.1	2303.3	2311.9	2303.8	2292.0	2294.1	2295.8
G10.0	2199.1	2219.2	2266.0	2294.0	2302.4	2291.0	2276.5	2280.2	2284.5
G11.0	2175.6	2196.7	2252.5	2283.8	2291.6	2276.6	2259.8	2264.8	2273.0
G12.0	2152.2	2174.0	2236.6	2272.7	2279.6	2260.5	2241.3	2247.8	2259.9
G13.0	2127.4	2150.9	2218.2	2261.2	2265.8	2243.0	2222.5	2229.6	2243.5
G14.0	2102.0	2127.1	2198.8	2247.3	2249.4	2223.1	2202.3	2208.5	2226.8
G15.0	2075.8	2102.5	2178.7	2233.4	2233.1	2203.7	2180.2	2188.7	2209.1
G16.0	2048.7	2077.0	2156.5	2218.1	2216.6	2183.6	2155.0	2167.2	2190.6
G17.0	2020.3	2050.4	2132.0	2201.5	2197.4	2160.8	2128.1	2143.7	2170.4
G18.0	1991.0	2022.7	2109.2	2184.1	2177.1	2136.2	2102.9	2118.3	2149.6
G19.0	1961.1	1994.6	2084.8	2165.4	2155.5	2109.2	2075.6	2090.5	2126.3
G20.0	1930.0	1965.0	2058.5	2146.2	2133.3	2082.4	2046.2	2063.2	2102.4
G21.0	1898.2	1935.1	2032.2	2125.0	2109.3	2056.1	2017.3	2036.9	2078.5
G22.0	1866.3	1904.6	2006.7	2103.9	2084.2	2027.3	1987.9	2006.6	2052.4
G23.0	1834.5	1873.0	1979.2	2080.7	2059.3	1996.2	1956.1	1975.9	2024.9
G24.0	1802.5	1841.1	1950.0	2057.3	2031.5	1965.6	1925.8	1944.7	1998.3
G25.0	1770.9	1809.1	1920.8	2033.3	2004.5	1936.1	1894.9	1914.1	1969.9
G26.0	1737.2	1776.9	1892.1	2007.5	1977.2	1903.8	1863.7	1881.5	1940.1
G27.0	1703.4	1744.7	1861.3	1980.6	1946.9	1871.2	1831.6	1849.2	1910.0
G28.0	1664.9	1711.4	1828.8	1953.1	1915.5	1840.2	1800.1	1817.2	1878.0
G29.0	1627.7	1678.3	1796.7	1924.6	1885.1	1808.3	1767.8	1785.2	1845.1
G30.0	1593.1	1645.0	1764.8	1895.2	1853.0	1775.9	1736.3	1753.1	1813.4
G31.0	1558.5	1609.1	1731.3	1864.5	1817.9	1743.4	1702.4	1720.1	1778.2
G32.0	1522.5	1569.8	1697.2	1833.1	1785.2	1710.1	1669.4	1686.9	1744.8
G33.0	1488.1	1534.6	1663.9	1800.5	1753.8	1678.0	1631.3	1654.3	1711.3
G34.0	1450.5	1499.6	1629.1	1767.6	1718.3	1644.6	1590.0	1620.6	1675.2
G35.0	1402.5	1464.7	1593.7	1733.1	1681.1	1610.7	1549.0	1586.9	1638.9

C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device:  
Distance: 11.655m [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
G36.0	1364.8	1428.1	1559.1	1698.1	1646.3	1575.8	1506.2	1551.9	1602.3
G37.0	1327.0	1393.0	1523.7	1661.9	1608.6	1539.3	1454.6	1513.9	1564.5
G38.0	1288.4	1356.3	1488.4	1625.3	1571.4	1497.9	1411.1	1472.5	1529.0
G39.0	1253.5	1310.6	1453.8	1589.1	1536.4	1457.4	1365.6	1432.6	1492.4
G40.0	1213.0	1271.9	1417.5	1551.0	1500.3	1417.2	1315.3	1390.9	1454.3
G41.0	1154.5	1235.1	1381.7	1512.2	1461.5	1368.0	1272.4	1341.5	1418.2
G42.0	1102.9	1197.9	1346.9	1473.7	1424.1	1324.4	1230.9	1299.4	1381.7
G43.0	1052.3	1161.4	1310.5	1435.1	1389.1	1282.5	1174.5	1256.7	1345.2
G44.0	1013.2	1124.5	1274.5	1395.1	1354.7	1236.0	1111.5	1209.6	1309.1
G45.0	974.8	1072.8	1238.0	1355.2	1316.0	1190.8	1049.8	1167.1	1271.8
G46.0	917.5	1025.8	1201.5	1315.2	1277.7	1151.9	1003.9	1127.4	1234.8
G47.0	856.2	978.4	1163.9	1275.1	1243.1	1106.3	967.1	1077.2	1200.0
G48.0	811.6	938.1	1125.4	1235.4	1210.1	1049.1	924.6	1022.1	1163.6
G49.0	780.4	902.5	1086.7	1194.3	1171.6	993.9	872.5	965.2	1128.0
G50.0	744.6	855.0	1050.7	1154.1	1134.7	940.7	824.8	918.4	1091.5
G51.0	702.0	796.6	1014.2	1113.9	1100.8	902.3	791.3	881.7	1055.4
G52.0	666.2	745.7	976.9	1073.8	1063.0	865.6	758.5	842.0	1018.1
G53.0	637.3	713.5	940.7	1034.3	1023.4	814.7	723.2	788.6	979.2
G54.0	606.9	680.8	904.5	995.0	984.9	765.2	686.5	741.2	939.5
G55.0	574.3	636.3	865.5	955.1	945.7	725.3	655.9	705.6	900.8
G56.0	547.9	597.0	827.8	917.3	905.2	693.8	624.6	675.0	859.7
G57.0	515.4	568.7	791.7	879.4	865.2	659.7	592.1	637.4	820.8
G58.0	483.8	538.8	756.6	840.2	824.7	619.7	560.9	599.1	782.4
G59.0	458.1	504.9	722.2	803.8	785.4	587.7	529.6	570.0	743.3
G60.0	418.3	477.6	686.5	766.3	748.0	557.5	495.1	538.2	705.7
G61.0	386.8	447.6	648.6	730.4	709.6	525.5	462.5	506.1	668.5
G62.0	352.4	417.5	610.0	695.4	671.9	494.4	428.8	477.3	628.7
G63.0	309.1	390.1	576.4	659.9	630.5	464.6	386.6	445.2	588.8
G64.0	284.2	357.2	544.3	626.0	591.6	432.2	358.6	414.0	551.8
G65.0	252.2	330.1	504.1	591.7	553.9	403.1	313.2	384.7	517.9
G66.0	220.2	291.6	467.3	559.3	520.9	369.1	287.6	349.1	479.2
G67.0	194.0	264.5	432.4	526.2	477.6	336.1	250.9	320.3	437.9
G68.0	174.2	225.6	402.6	494.6	438.7	302.3	228.4	280.8	404.9
G69.0	157.1	201.7	361.5	462.8	405.9	269.1	204.7	249.4	370.9
G70.0	139.7	173.0	330.0	432.4	370.7	238.7	185.3	218.1	333.4
G71.0	122.4	151.7	299.7	402.1	333.4	208.3	168.5	191.3	304.3

C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

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

### Candlepower Table(Continue 2)

Unit: cd

[illegible]

C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3°C  
Operator:

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

## Candlepower Table(Continue 3)

Unit: cd

G\C	C270.0	C300.0	C330.0	C360.0					
G0.0	2336.8	2336.8	2336.8	2336.8					
G1.0	2335.1	2333.5	2331.6	2332.5					
G2.0	2332.8	2328.6	2325.9	2326.2					
G3.0	2328.9	2322.6	2318.1	2318.3					
G4.0	2324.4	2316.5	2308.7	2308.3					
G5.0	2318.5	2307.7	2298.2	2297.4					
G6.0	2311.5	2297.7	2285.2	2283.4					
G7.0	2303.6	2287.1	2269.9	2265.5					
G8.0	2295.2	2275.5	2251.3	2244.9					
G9.0	2284.8	2262.6	2230.6	2222.7					
G10.0	2273.9	2247.6	2207.8	2199.1					
G11.0	2262.3	2231.7	2184.3	2175.6					
G12.0	2249.6	2214.8	2161.0	2152.2					
G13.0	2235.9	2194.2	2137.3	2127.4					
G14.0	2220.6	2173.0	2112.2	2102.0					
G15.0	2205.0	2151.2	2086.8	2075.8					
G16.0	2188.4	2128.5	2060.5	2048.7					
G17.0	2170.0	2103.0	2033.6	2020.3					
G18.0	2150.9	2078.3	2005.5	1991.0					
G19.0	2130.8	2053.0	1976.0	1961.1					
G20.0	2110.4	2026.5	1946.1	1930.0					
G21.0	2088.2	1999.1	1915.7	1898.2					
G22.0	2065.5	1972.7	1884.6	1866.3					
G23.0	2040.7	1943.9	1852.4	1834.5					
G24.0	2015.6	1914.1	1820.3	1802.5					
G25.0	1989.7	1883.9	1787.9	1770.9					
G26.0	1962.9	1854.2	1755.5	1737.2					
G27.0	1934.7	1822.3	1723.0	1703.4					
G28.0	1905.6	1788.8	1689.7	1664.9					
G29.0	1874.9	1756.0	1655.4	1627.7					
G30.0	1844.7	1723.0	1621.9	1593.1					
G31.0	1812.8	1688.3	1584.7	1558.5					
G32.0	1779.9	1654.1	1546.0	1522.5					
G33.0	1746.1	1620.8	1511.2	1488.1					
G34.0	1712.2	1586.2	1476.7	1450.5					
G35.0	1677.0	1549.9	1441.5	1402.5					

C Plane (°):0.0-360.0: 30.0  
 Test Lab: EVERFINE  
 Test Type: TYPE C  
 Temperature: 25.3℃  
 Operator:

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

## Candlepower Table(Continue 4)

Unit: cd

G\C	C270.0	C300.0	C330.0	C360.0					
G36.0	1640.7	1515.1	1405.3	1364.8					
G37.0	1603.7	1479.7	1369.8	1327.0					
G38.0	1567.3	1444.4	1328.2	1288.4					
G39.0	1529.1	1409.3	1285.8	1253.5					
G40.0	1490.4	1373.6	1248.0	1213.0					
G41.0	1452.3	1337.0	1211.3	1154.5					
G42.0	1413.2	1303.0	1174.4	1102.9					
G43.0	1373.6	1266.7	1139.0	1052.3					
G44.0	1332.8	1229.3	1093.3	1013.2					
G45.0	1293.8	1193.5	1043.5	974.8					
G46.0	1255.2	1156.1	997.8	917.5					
G47.0	1214.5	1116.2	953.2	856.2					
G48.0	1173.5	1079.8	916.3	811.6					
G49.0	1133.9	1042.8	875.6	780.4					
G50.0	1095.4	1006.0	820.1	744.6					
G51.0	1055.6	970.2	764.0	702.0					
G52.0	1014.9	933.2	724.9	666.2					
G53.0	975.7	897.0	692.8	637.3					
G54.0	938.2	857.7	652.7	606.9					
G55.0	900.6	820.3	611.3	574.3					
G56.0	861.6	785.8	578.8	547.9					
G57.0	824.2	749.9	548.5	515.4					
G58.0	788.7	715.7	516.5	483.8					
G59.0	752.0	681.4	487.8	458.1					
G60.0	716.0	639.4	457.4	418.3					
G61.0	681.7	605.5	428.3	386.8					
G62.0	646.7	570.5	402.2	352.4					
G63.0	613.5	537.8	368.8	309.1					
G64.0	580.9	498.1	339.8	284.2					
G65.0	547.3	459.3	306.4	252.2					
G66.0	515.7	429.3	272.2	220.2					
G67.0	484.5	393.2	240.9	194.0					
G68.0	453.7	354.9	210.6	174.2					
G69.0	423.3	326.3	180.8	157.1					
G70.0	393.4	292.8	160.0	139.7					
G71.0	364.7	263.9	141.0	122.4					

C Plane (°):0.0-360.0: 30.0  
Test Lab: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3℃  
Operator:

Gamma Plane (°):0.0-90.0:1.0  
Test Device:  
Distance: 11.655m [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: EVERFINE  
Test Type: TYPE C  
Temperature: 25.3°C  
Operator:

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

## LED Average Luminance Report

Avg.L	cd/m <sup>2</sup>
L 0-180(65) av	8848.19
L 0-180(75) av	4377.55
L 0-180(85) av	2169.44
L 90-270(65) av	17824.39
L 90-270(75) av	13810.58
L 90-270(85) av	6851.04
L 45(65) av	13535.16
L 45(75) av	7443.70
L 45(85) av	2965.89

Standard: GB/T 29293-2012