

Report No.:

Test Time:

Luminaire Property

Luminaire Manufacturer: OSAKA LIGHTING (PVT.) LTD.

Luminaire Category: LED HIGHBAY

Lamp Catalog: LED

Number of Lamps:

Luminous Length (mm):

Luminous Height (mm):

Current: 0.696 A

Power Factor: 0.960

Luminaire Description: H001E-150W

Lamp Description: SMD

Lumens per Lamp:

Luminous Width (mm):

Voltage: 230.5 V

Power: 154.03 W

Photometric Results

IES NEMA Type: 7H x 7V

Measurement radiation Flux: 26507 mW

Field Lumens: 25808.2 mW

Field Angle: H138.9, V160.6

Luminous Efficacy (lm/w): 172.09

Max. Intensity: 425.37 mW/sr/klm

Total Rated Lamp radiation flux: 26507.0 mW

Efficiency: 100%

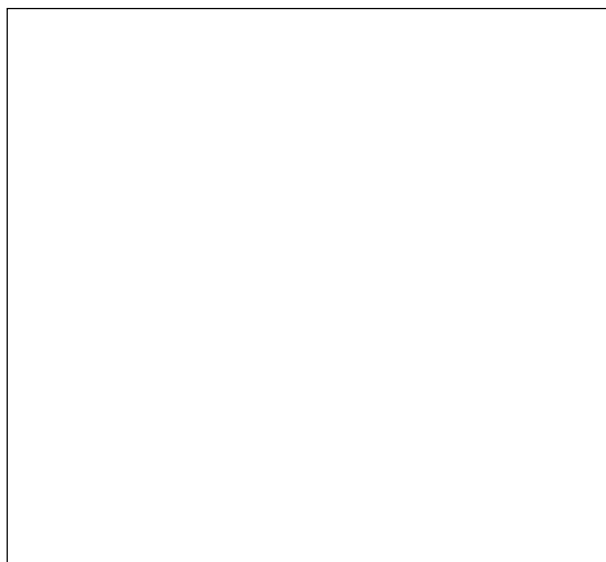
Field Efficiency: 97.36%

Beam Angle: H99.5, V98.7

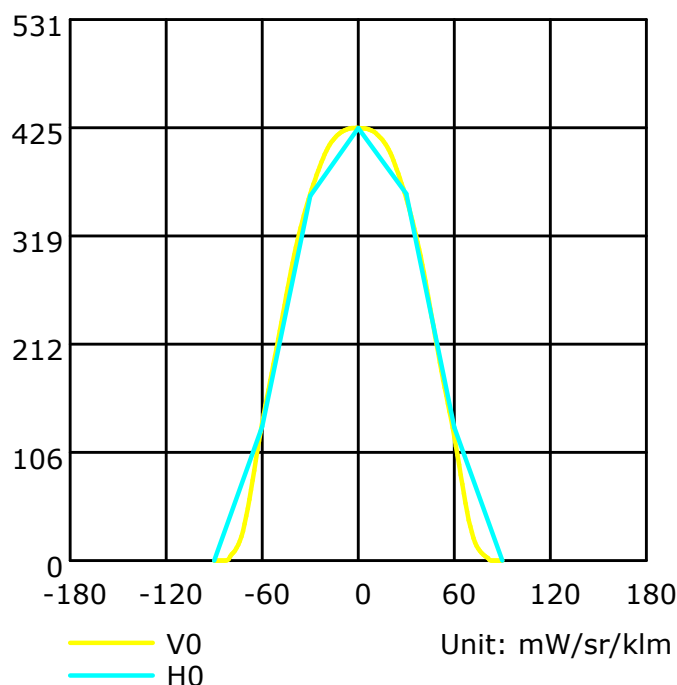
C0r0 Intensity: 425.28 mW/sr/klm

Pos of Max. Intensity: H-1 V0

Picture Of Luminaire



Radiation Intensity Distribution Curve



B Plane (°):-90.0-90.0: 30.0

Test Lab:

Test Type: TYPE B

Temperature:

Operator: F

Beta Plane (°):-90.0-90.0:1.0

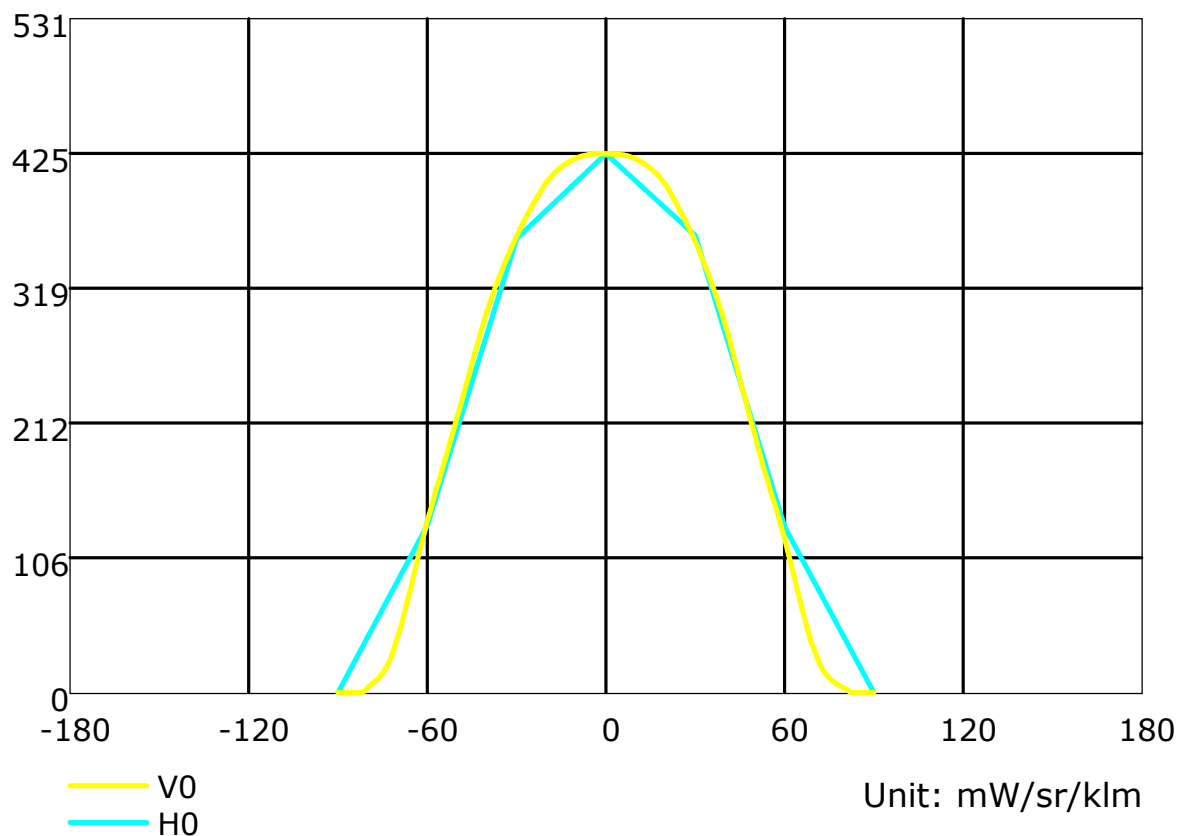
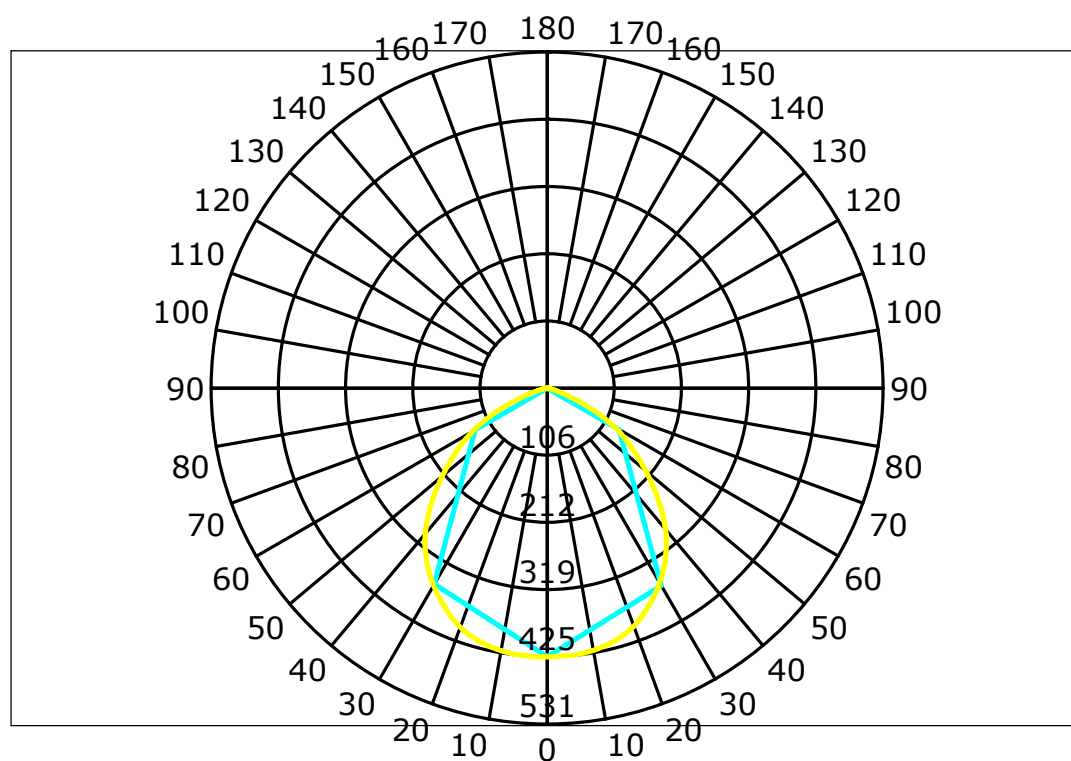
Test Device: GPM-1600L

Distance: 6.912 m

Humidity:

Inspector:

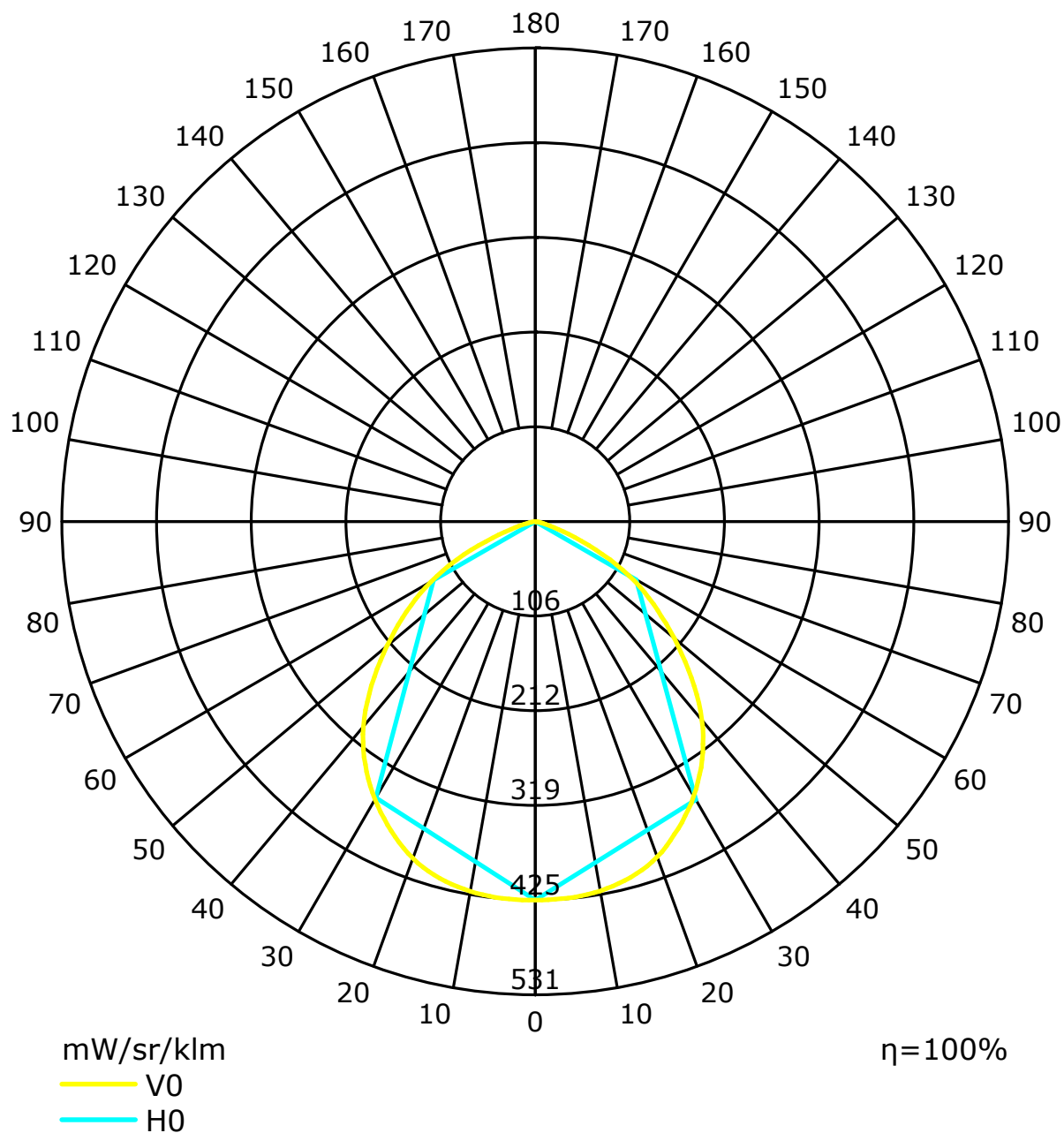
Radiation Intensity Distribution Curve



B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Radiation Intensity Distribution Curve(mW/sr/klm)



B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

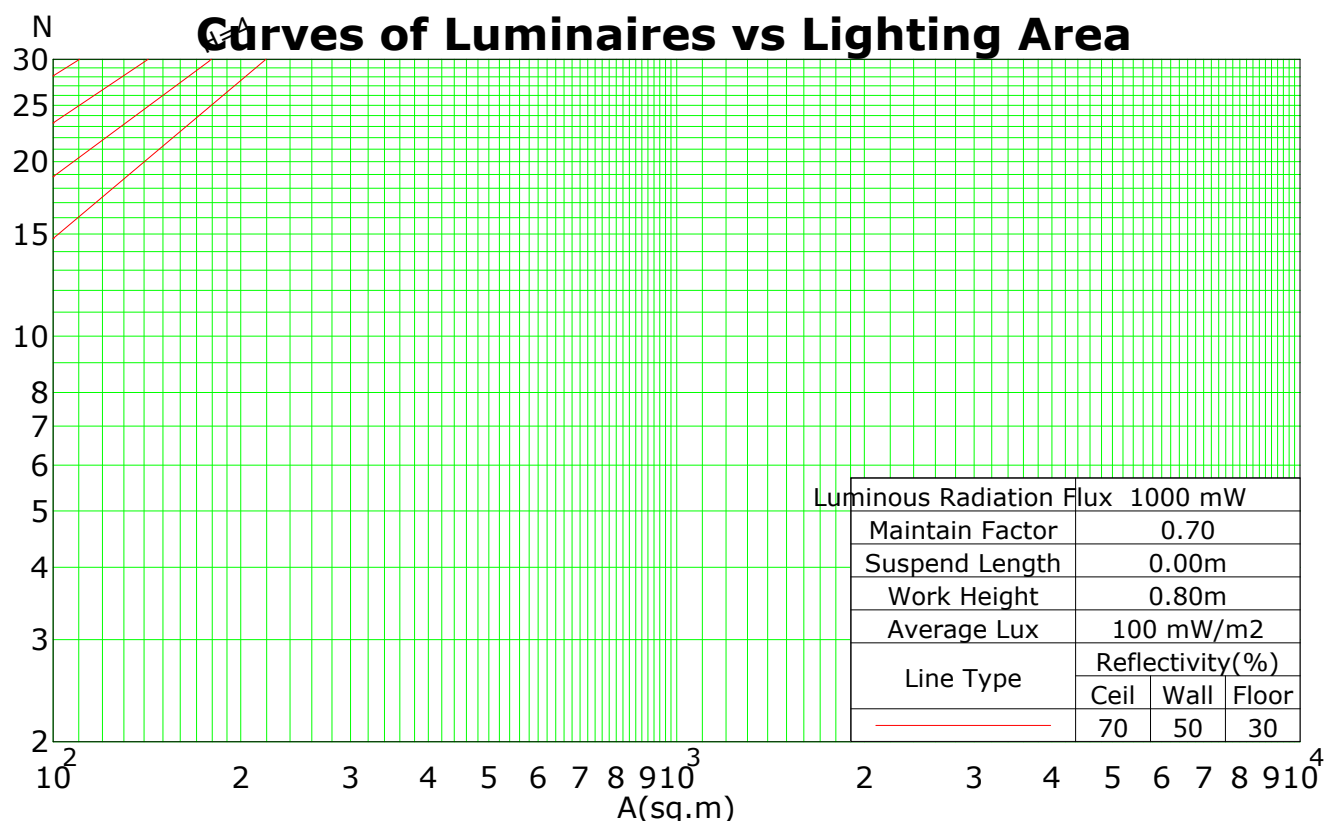
Coefficients Of Utilization - Zonal Cavity Method

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	1.02	0.98	1.07	1.04	1.00	0.97	0.99	0.96	0.94	0.95	0.93	0.91	0.92	0.90	0.88	0.86
2	1.01	0.93	0.87	0.82	0.98	0.92	0.86	0.81	0.88	0.83	0.79	0.85	0.81	0.77	0.82	0.79	0.76	0.74
3	0.93	0.83	0.75	0.69	0.90	0.81	0.74	0.69	0.79	0.73	0.68	0.76	0.71	0.66	0.73	0.69	0.65	0.63
4	0.85	0.74	0.66	0.60	0.83	0.73	0.65	0.59	0.70	0.64	0.58	0.68	0.62	0.58	0.66	0.61	0.57	0.55
5	0.79	0.67	0.58	0.52	0.77	0.66	0.58	0.52	0.64	0.57	0.51	0.62	0.55	0.51	0.60	0.54	0.50	0.48
6	0.73	0.60	0.52	0.46	0.71	0.59	0.51	0.46	0.58	0.51	0.45	0.56	0.50	0.45	0.54	0.49	0.44	0.42
7	0.68	0.55	0.47	0.41	0.66	0.54	0.46	0.41	0.53	0.45	0.40	0.51	0.45	0.40	0.50	0.44	0.40	0.38
8	0.63	0.50	0.42	0.36	0.62	0.50	0.42	0.36	0.48	0.41	0.36	0.47	0.41	0.36	0.46	0.40	0.36	0.34
9	0.59	0.46	0.38	0.33	0.58	0.46	0.38	0.33	0.45	0.38	0.33	0.44	0.37	0.33	0.43	0.37	0.32	0.31
10	0.56	0.43	0.35	0.30	0.54	0.42	0.35	0.30	0.41	0.34	0.30	0.40	0.34	0.30	0.40	0.34	0.30	0.28

Spacing Criteria (0-180): 1.25

Spacing Criteria (90-270): 1.24

Spacing Criteria (Diagonal): 1.31



B Plane (°):-90.0-90.0: 30.0

Test Lab:

Test Type: TYPE B

Temperature:

Operator: F

Beta Plane (°):-90.0-90.0:1.0

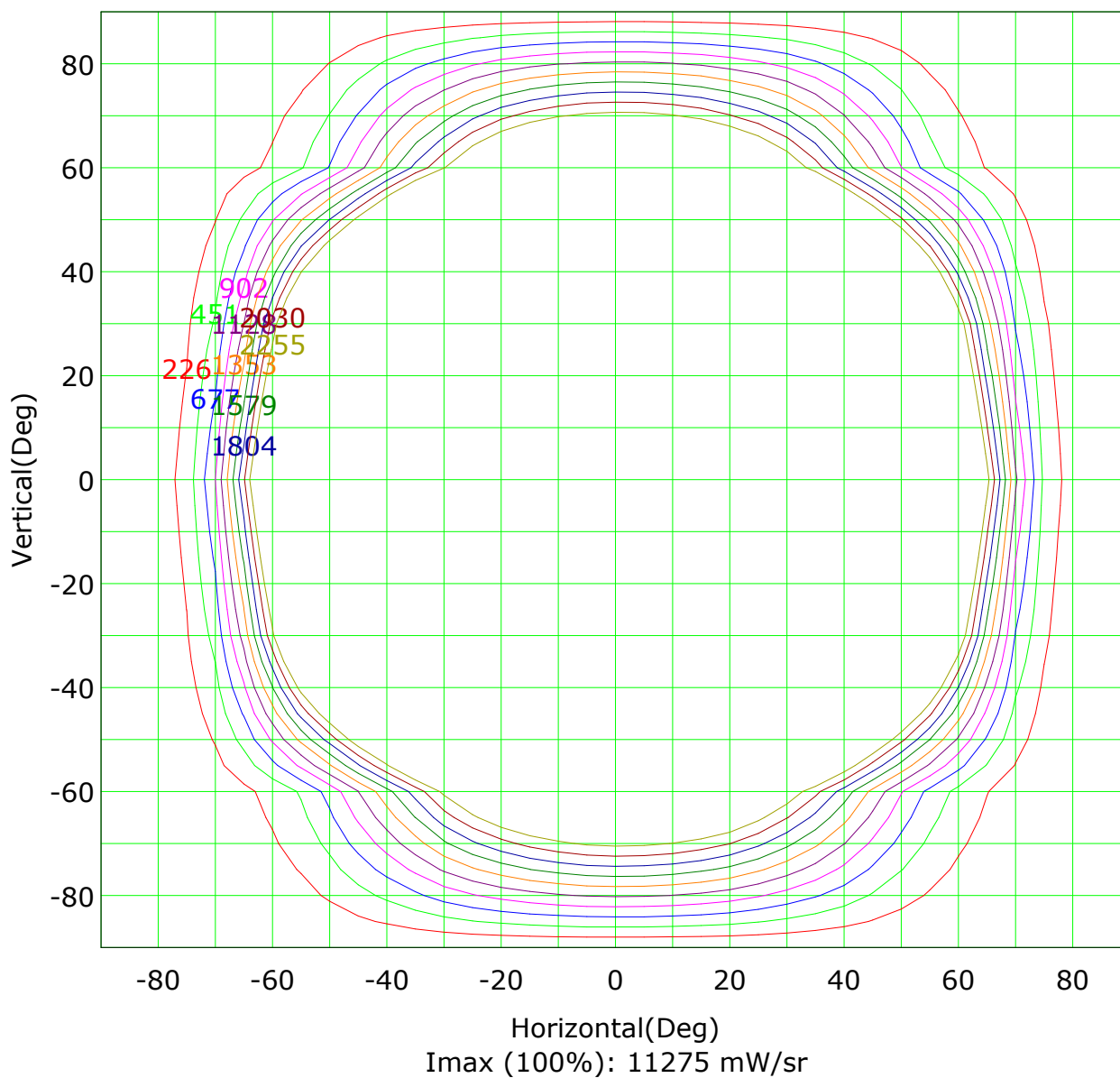
Test Device: GPM-1600L

Distance: 6.912 m

Humidity:

Inspector:

Iso Radiation intensity(rectangle)

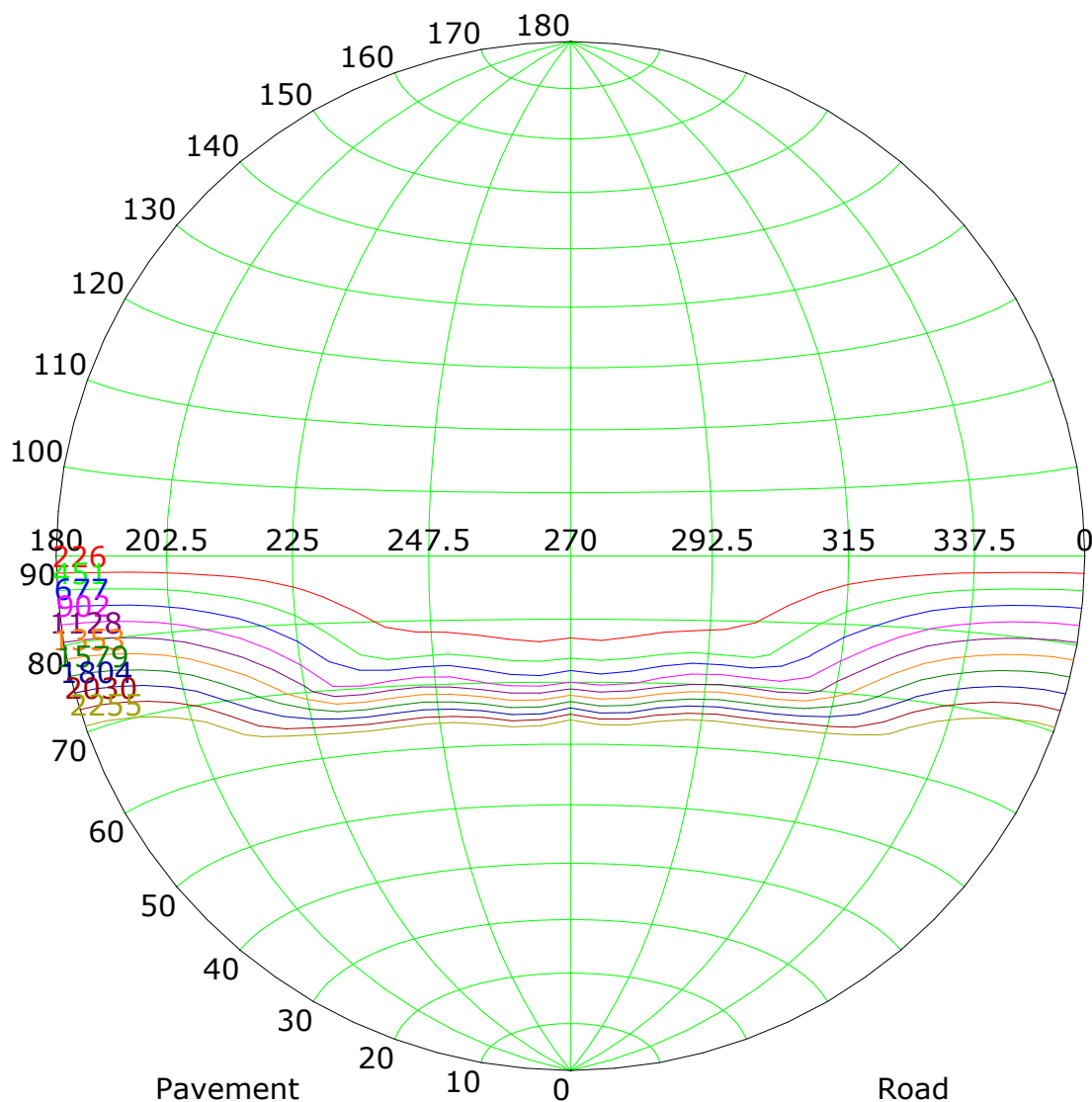


(2%): 226 mW/sr	(4%): 451 mW/sr
(6%): 677 mW/sr	(8%): 902 mW/sr
(10%): 1128 mW/sr	(12%): 1353 mW/sr
(14%): 1579 mW/sr	(16%): 1804 mW/sr
(18%): 2030 mW/sr	(20%): 2255 mW/sr

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

Iso Radiation intensity(sphere)



Imax (100%): 11275 mW/sr

(2%): 226 mW/sr	(4%): 451 mW/sr
(6%): 677 mW/sr	(8%): 902 mW/sr
(10%): 1128 mW/sr	(12%): 1353 mW/sr
(14%): 1579 mW/sr	(16%): 1804 mW/sr
(18%): 2030 mW/sr	(20%): 2255 mW/sr

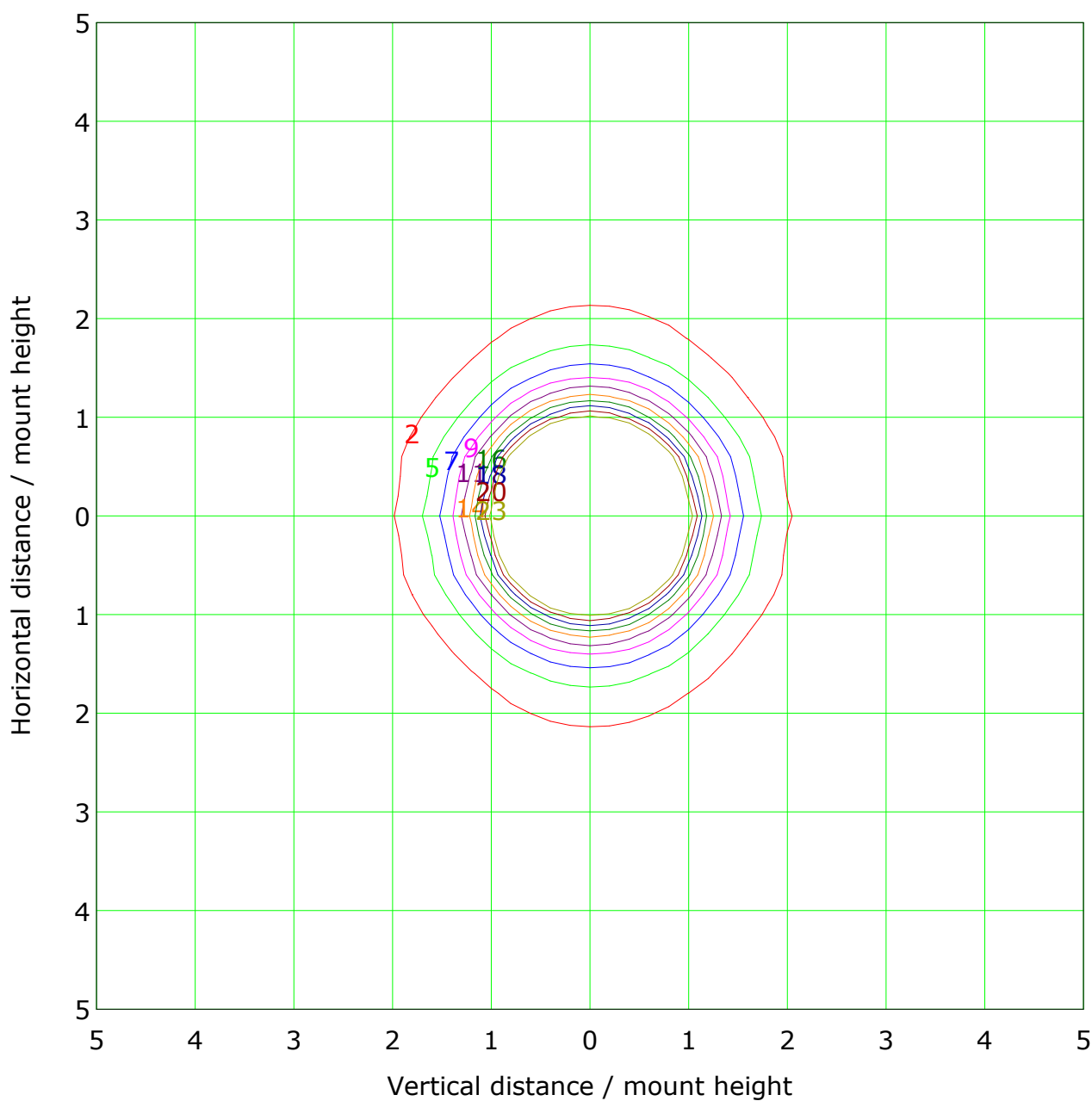
CIE: narrow - long
CIE: Non-cut-off luminaire
Max.At90: 16.044 cd/klm

IES: Cut-off
Max.At80: 15.912 cd/klm
Max.80-90: 16.047 cd/klm

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

IsoIrradiance Plot



Mounting Height: 10.0m Max Irradiance(100%): 112.7 mW/m²

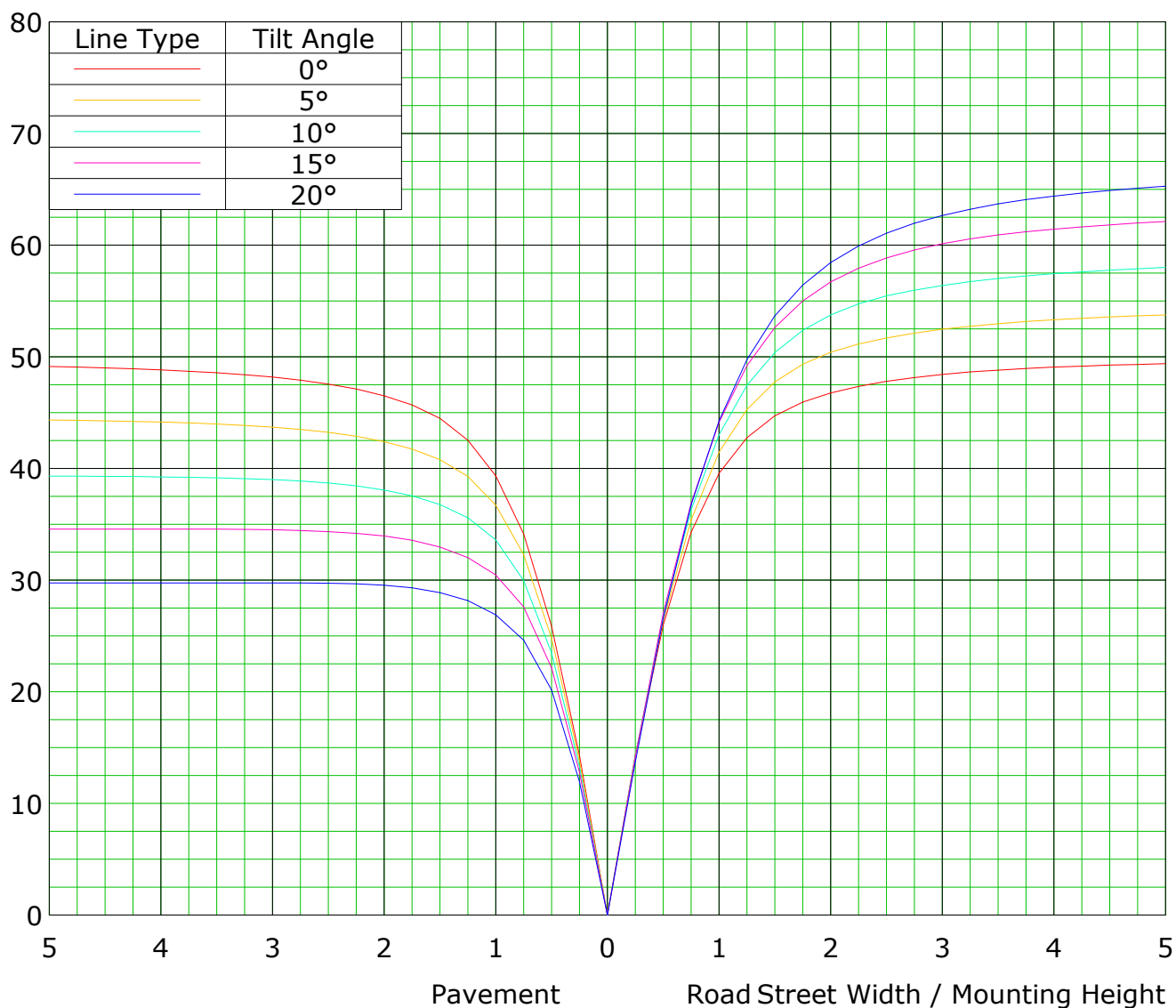
(2%): 2.3 mW/m ²	(4%): 4.5 mW/m ²
(6%): 6.8 mW/m ²	(8%): 9.0 mW/m ²
(10%): 11.3 mW/m ²	(12%): 13.5 mW/m ²
(14%): 15.8 mW/m ²	(16%): 18.0 mW/m ²
(18%): 20.3 mW/m ²	(20%): 22.5 mW/m ²

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

Roadway CU Curve

Efficiency(%)



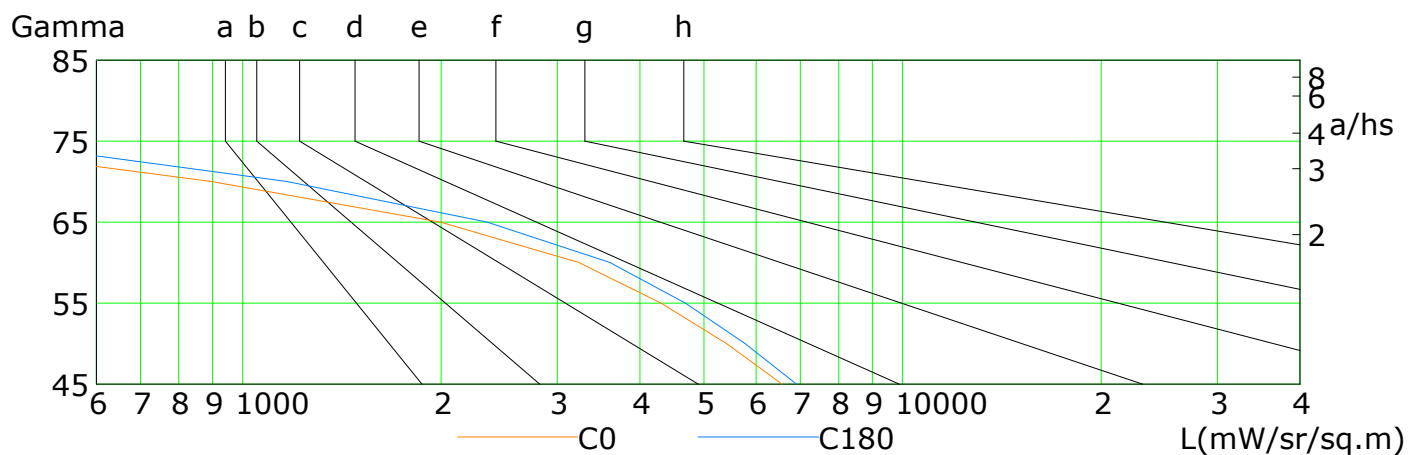
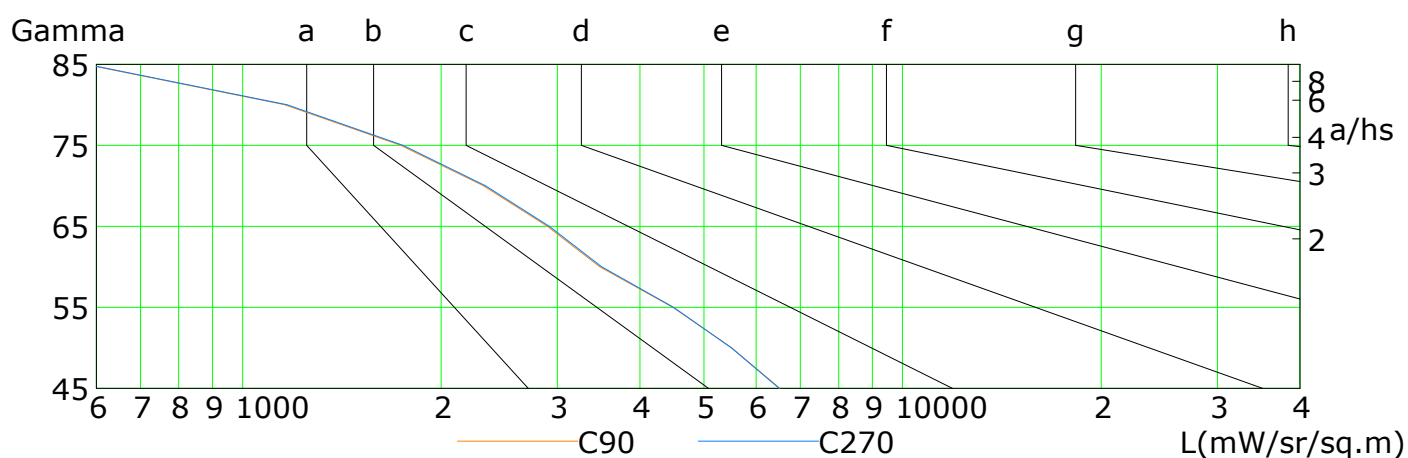
B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
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

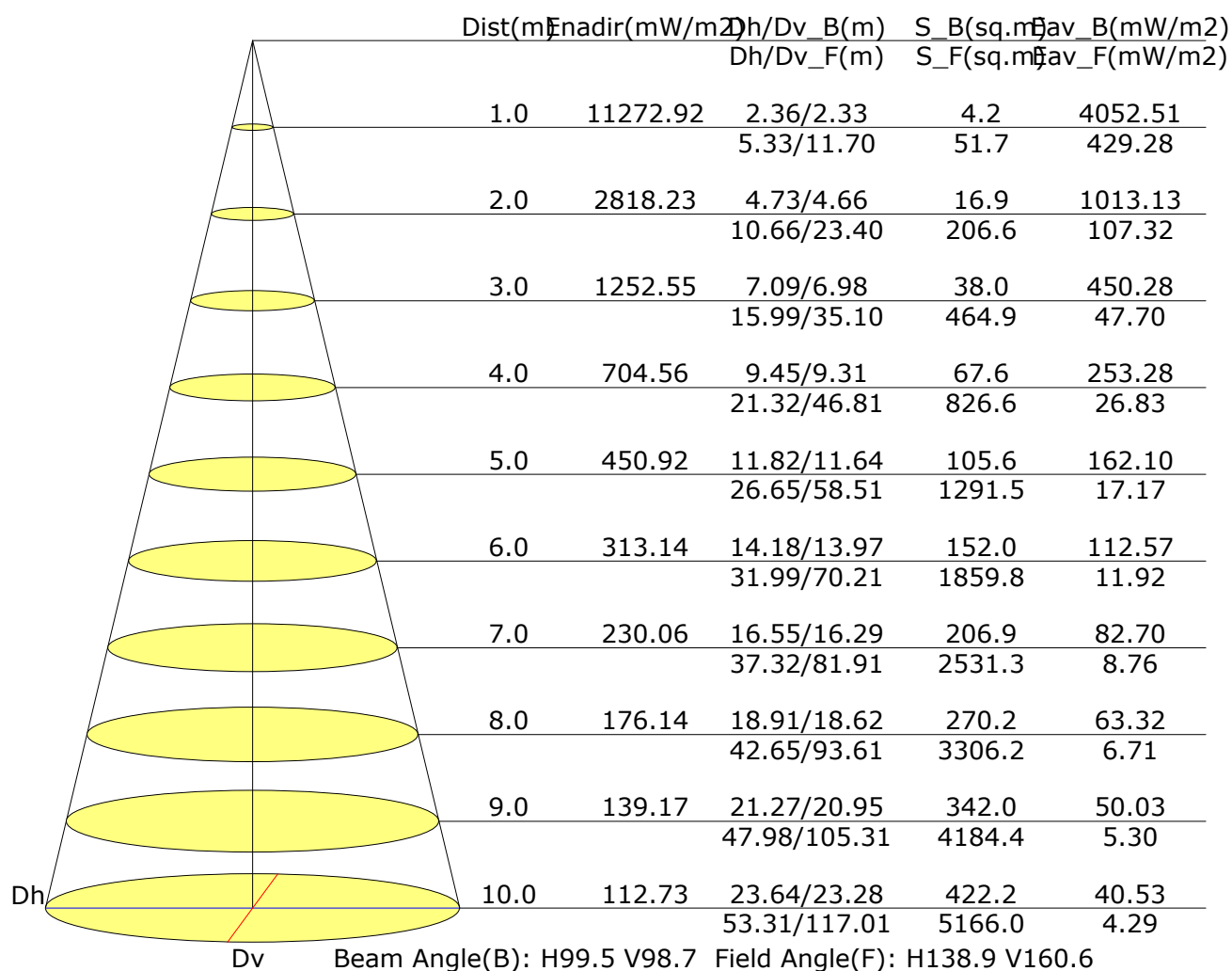


L(mW/sr/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	6571	5407	4304	3233	1994	897	312	100	0
C90	6519	5504	4489	3474	2895	2316	1737	1158	579
C180	6907	5768	4689	3603	2349	1166	411	114	0
C270	6499	5499	4499	3499	2916	2333	1750	1166	583

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

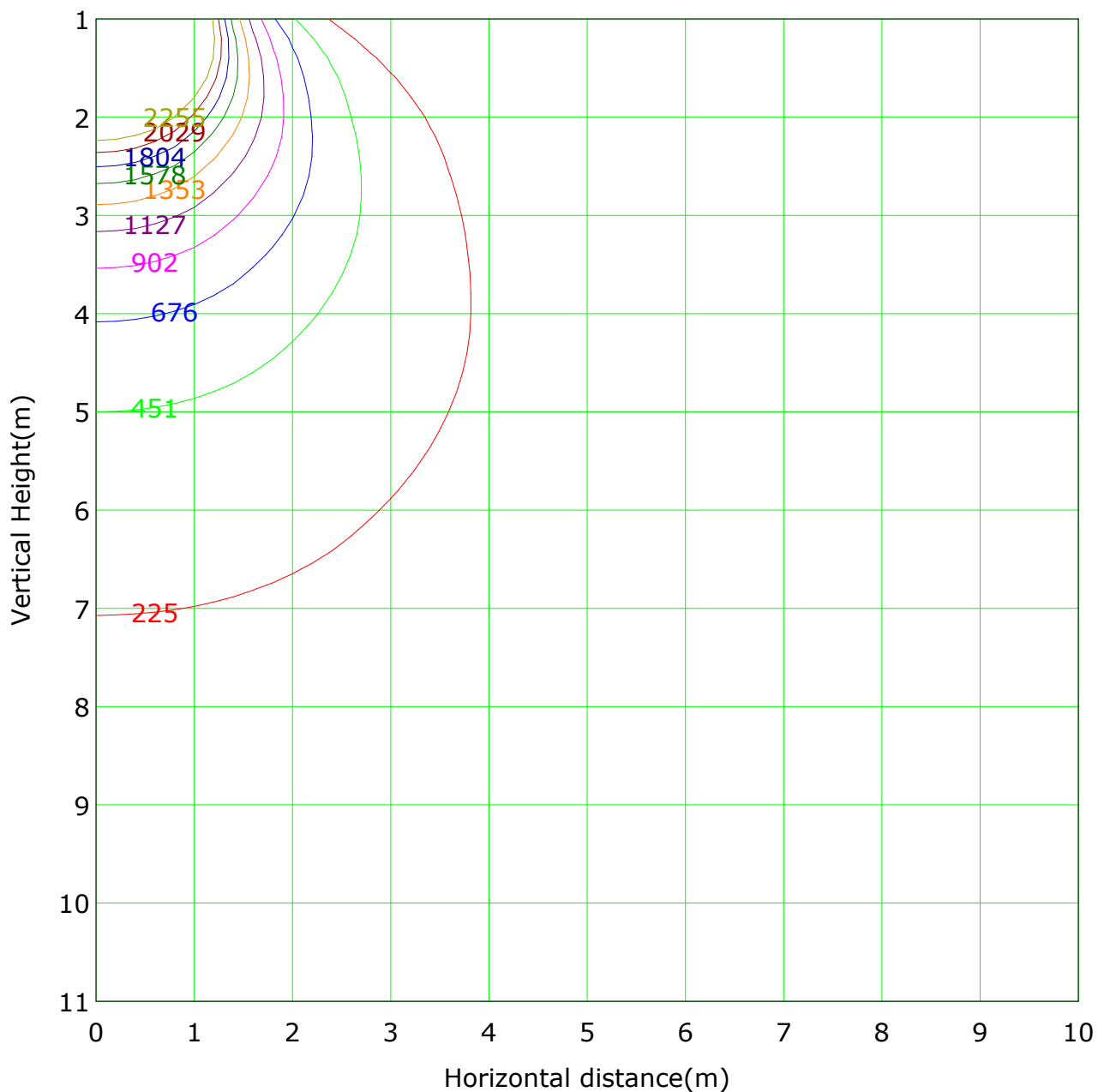
Illuminance at a Distance



B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

Vertical IsoIrradiance Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Irradiance: 11272.9 mW/m2

(2%): 225.5 mW/m2	(4%): 450.9 mW/m2
(6%): 676.4 mW/m2	(8%): 901.8 mW/m2
(10%):1127.3 mW/m2	(12%):1352.8 mW/m2
(14%):1578.2 mW/m2	(16%):1803.7 mW/m2
(18%):2029.1 mW/m2	(20%):2254.6 mW/m2

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

Area Radiation Flux Table

Unit: mW/klm

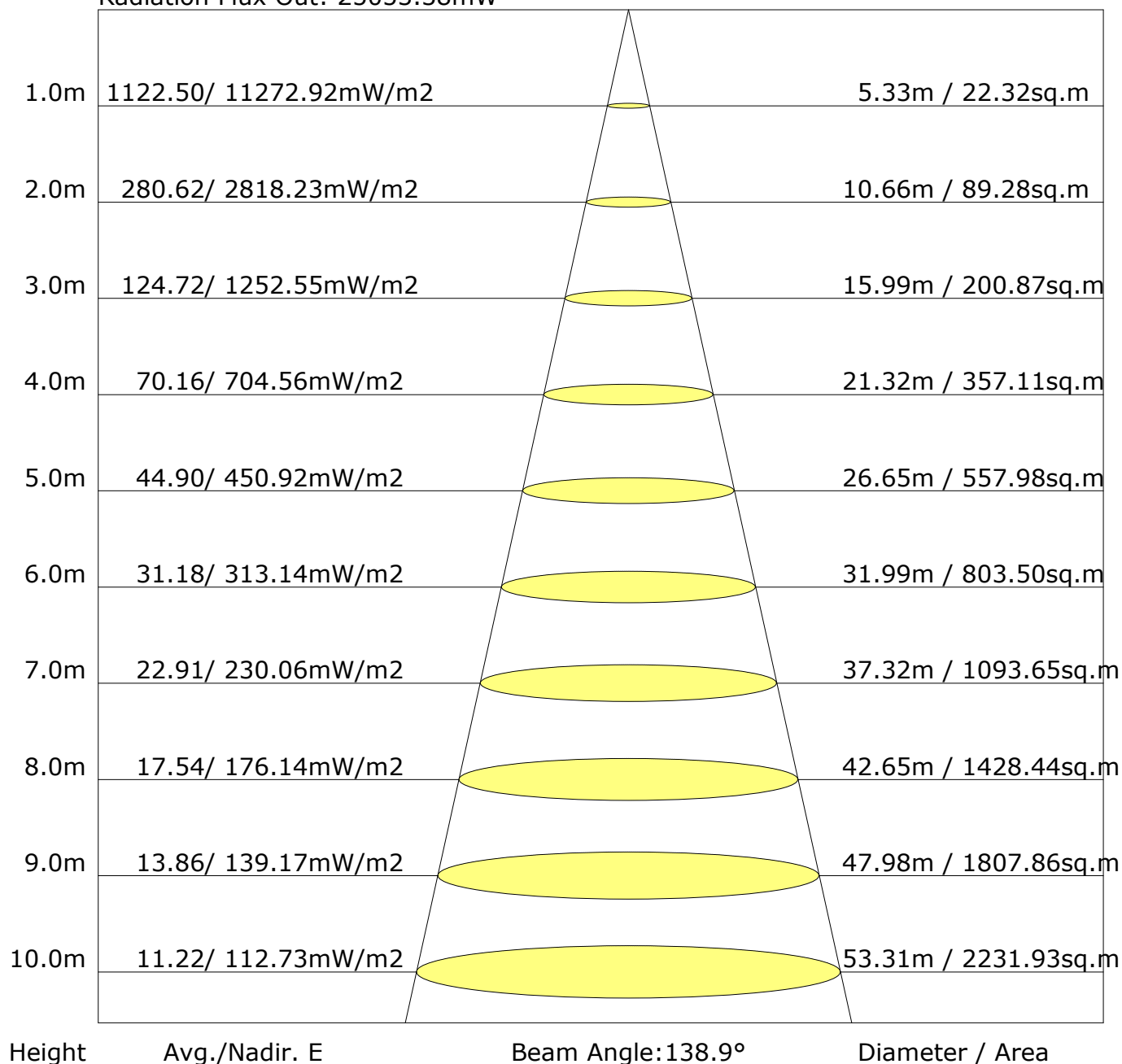
Vertical plane	Horizontal plane																		Flux(T)	Flux(E)
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80		
-90	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.6	0.7	0.7	0.6	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
-80	0.0	0.0	0.1	0.2	0.5	1.0	1.5	1.8	2.0	2.0	1.8	1.4	0.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0
-70	0.0	0.0	0.1	0.3	0.9	1.7	2.4	3.0	3.3	3.3	2.9	2.3	1.5	0.7	0.2	0.1	0.0	0.0	0.0	0.0
-60	0.0	0.0	0.2	0.7	1.6	2.8	3.9	4.7	5.1	5.1	4.6	3.7	2.5	1.4	0.6	0.2	0.0	0.0	0.0	0.0
-50	0.0	0.1	0.4	1.3	2.7	4.2	5.7	6.8	7.4	7.4	6.7	5.6	4.0	2.4	1.2	0.3	0.0	0.0	0.0	0.0
-40	0.0	0.1	0.6	2.0	3.7	5.7	7.6	9.0	9.7	9.6	8.9	7.5	5.5	3.5	1.8	0.5	0.1	0.0	0.0	0.0
-30	0.0	0.1	0.8	2.4	4.5	6.8	8.9	10.4	11.1	11.1	10.3	8.8	6.6	4.2	2.2	0.7	0.1	0.1	0.0	0.0
-20	0.0	0.1	1.0	2.7	4.9	7.4	9.6	11.1	11.8	11.8	11.1	9.5	7.2	4.7	2.5	0.8	0.1	0.1	0.0	0.0
-10	0.0	0.2	1.1	3.0	5.4	8.0	10.2	11.8	12.5	12.5	11.8	10.1	7.8	5.1	2.7	0.9	0.1	0.1	0.0	0.0
0	0.0	0.2	1.1	3.0	5.4	8.0	10.2	11.8	12.5	12.5	11.8	10.1	7.8	5.2	2.7	0.9	0.1	0.1	0.0	0.0
10	0.0	0.1	1.0	2.7	5.0	7.4	9.6	11.1	11.9	11.9	11.1	9.5	7.2	4.7	2.5	0.8	0.1	0.1	0.0	0.0
20	0.0	0.1	0.8	2.5	4.5	6.8	8.9	10.4	11.2	11.2	10.4	8.8	6.6	4.3	2.3	0.7	0.1	0.1	0.0	0.0
30	0.0	0.1	0.7	2.0	3.8	5.8	7.7	9.0	9.7	9.7	8.9	7.5	5.6	3.6	1.9	0.6	0.1	0.1	0.0	0.0
40	0.0	0.1	0.4	1.4	2.7	4.3	5.8	6.8	7.4	7.4	6.8	5.6	4.1	2.5	1.2	0.4	0.0	0.0	0.0	0.0
50	0.0	0.0	0.2	0.7	1.6	2.7	3.8	4.7	5.1	5.1	4.6	3.7	2.6	1.5	0.6	0.2	0.0	0.0	0.0	0.0
60	0.0	0.0	0.1	0.3	0.9	1.6	2.4	3.0	3.3	3.3	2.9	2.3	1.5	0.8	0.3	0.1	0.0	0.0	0.0	0.0
70	0.0	0.0	0.1	0.2	0.5	1.0	1.4	1.8	2.0	2.0	1.7	1.4	0.9	0.5	0.2	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.1	0.2	0.3	0.5	0.6	0.7	0.7	0.6	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
90	0.0	1.2	8.8	25.7	49.0	76.0	100.7	118.5	127.3	127.0	117.4	98.6	72.9	45.8	23.2	7.3	0.9	0.0	0.0	0.0
Flux(E)	0.0	0.0	6.8	23.8	46.6	74.3	99.2	117.2	126.0	125.7	116.1	97.1	71.0	43.3	21.5	5.1	0.0	0.0	0.0	0.0

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

The Average Illuminance Effective Figure

Radiation Flux Out: 25053.38mW



B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

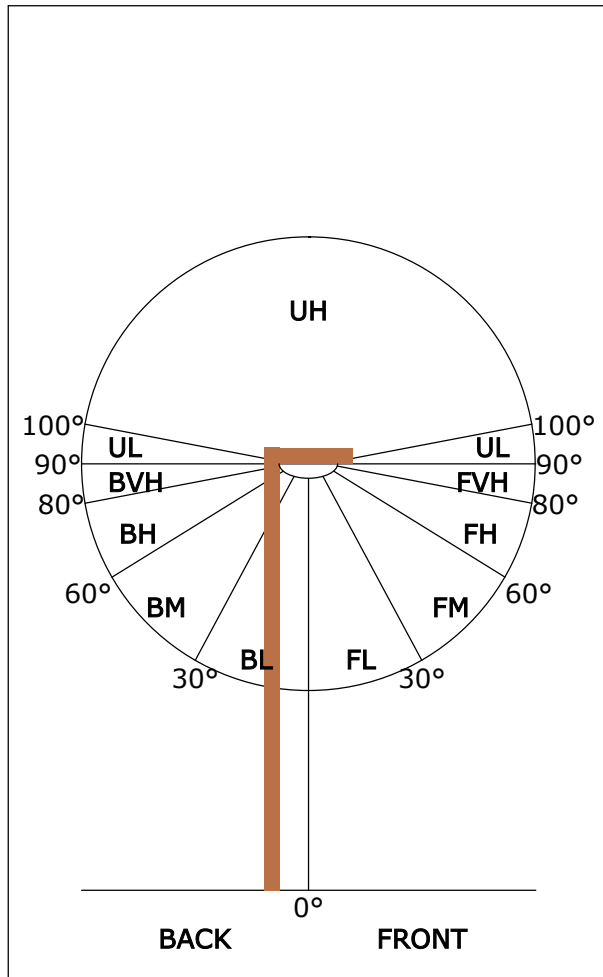
UGR Table

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.\$
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 26507lm ($8\log(F/F_0) = 11.4$).

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM

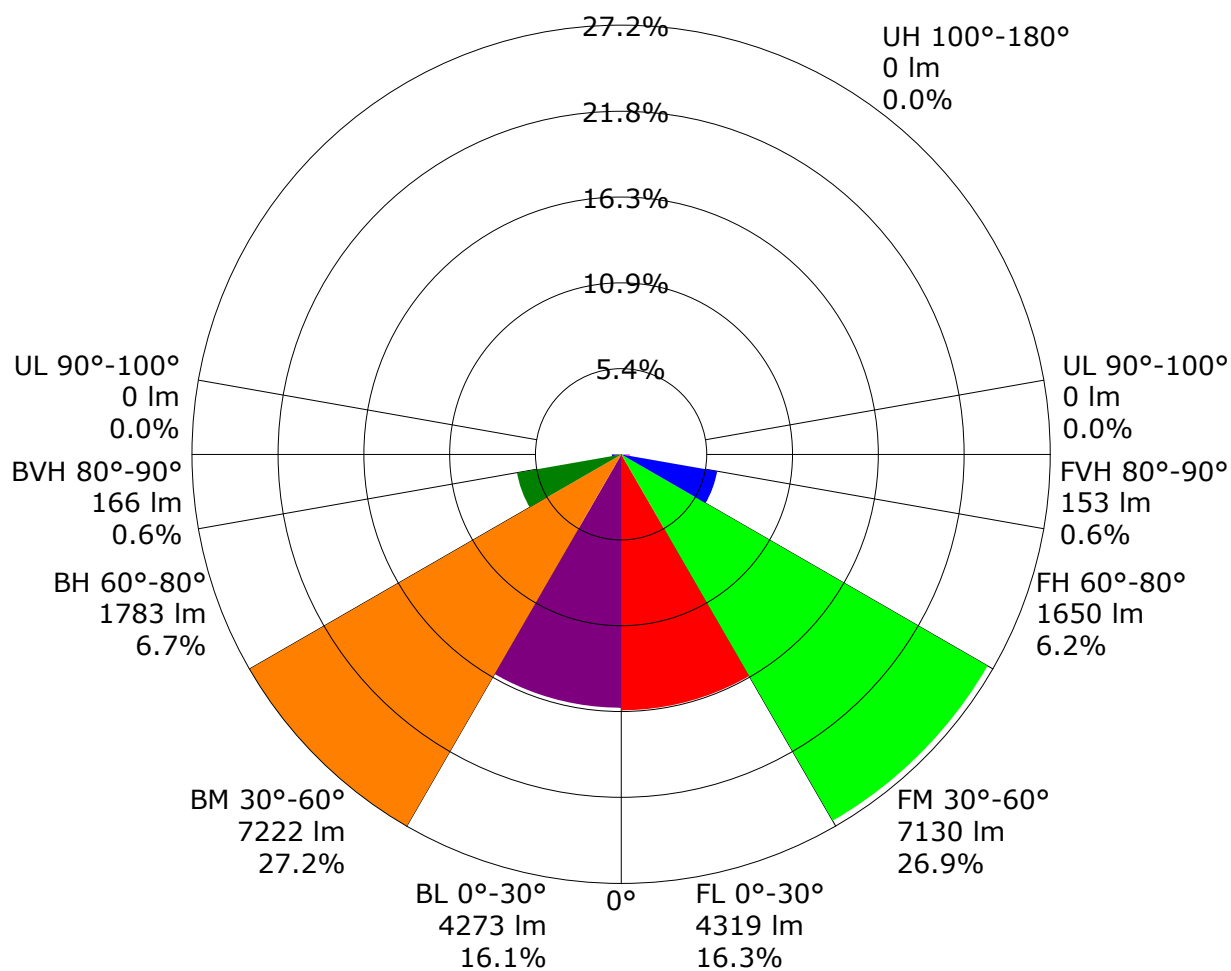
ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	13252	50.0
FL (0°-30°)	4319	16.3
FM (30°-60°)	7130	26.9
FH (60°-80°)	1650	6.2
FVH (80°-90°)	153	0.6
BACK LIGHT	13444	50.7
BL (0°-30°)	4273	16.1
BM (30°-60°)	7222	27.2
BH (60°-80°)	1783	6.7
BVH (80°-90°)	166	0.6
UP LIGHT	0	0.0
UL (90°-100°)	0	0.0
UH (100°-180°)	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)	B4 U5 G3
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B4 U5 G1

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

LCS Graph



Back Light

Forward Light

Scale= MAX LCS%

Trapped Light:NA,NA

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
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	0.47	0.55	0.61	0.65	0.71	0.74	0.77	0.80	0.82	
	0.30		0.41	0.50	0.56	0.60	0.66	0.70	0.73	0.77	0.80	
	0.20		0.37	0.46	0.52	0.56	0.63	0.67	0.70	0.75	0.77	
0.50	0.50	0.20	0.46	0.54	0.59	0.63	0.68	0.72	0.74	0.77	0.79	
	0.30		0.41	0.49	0.55	0.59	0.65	0.68	0.71	0.75	0.77	
	0.20		0.37	0.45	0.51	0.55	0.62	0.66	0.69	0.73	0.75	
0.30	0.50	0.20	0.45	0.52	0.58	0.61	0.66	0.69	0.71	0.74	0.76	
	0.30		0.40	0.48	0.54	0.58	0.63	0.67	0.69	0.72	0.74	
	0.20		0.37	0.45	0.50	0.55	0.60	0.64	0.67	0.71	0.73	
0.00	0.00	0.00	0.35	0.43	0.48	0.52	0.58	0.61	0.64	0.67	0.69	
Rating:156W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

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	0.73	0.59	0.50	0.43	0.34	0.28	0.24	0.18	0.15	
	0.30		0.61	0.51	0.44	0.38	0.31	0.26	0.22	0.17	0.14	
	0.20		0.52	0.44	0.39	0.34	0.28	0.24	0.20	0.16	0.13	
0.50	0.50	0.20	0.71	0.57	0.48	0.41	0.32	0.29	0.22	0.17	0.14	
	0.30		0.60	0.49	0.42	0.37	0.29	0.24	0.21	0.16	0.13	
	0.20		0.52	0.44	0.38	0.33	0.27	0.23	0.20	0.15	0.13	
0.30	0.50	0.20	0.69	0.55	0.46	0.39	0.31	0.25	0.21	0.16	0.13	
	0.30		0.59	0.48	0.41	0.36	0.28	0.23	0.20	0.16	0.13	
	0.20		0.51	0.43	0.37	0.33	0.26	0.22	0.19	0.15	0.12	
0.00	0.00	0.00	0.43	0.35	0.30	0.26	0.20	0.17	0.14	0.11	0.09	
Rating:156W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

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	0.12	0.13	0.14	0.14	0.15	0.16	0.16	0.16	0.17	
	0.30		0.07	0.09	0.10	0.10	0.12	0.13	0.13	0.14	0.15	
	0.20		0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	0.13	
0.50	0.50	0.20	0.12	0.13	0.13	0.14	0.15	0.15	0.15	0.16	0.16	
	0.30		0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.14	
	0.20		0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	0.13	
0.30	0.50	0.20	0.12	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.15	
	0.30		0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.13	0.14	
	0.20		0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	0.13	
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Rating:156W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

B Plane (°):-90.0-90.0: 30.0
 Test Lab:
 Test Type: TYPE B
 Temperature:
 Operator: F

Beta Plane (°):-90.0-90.0:1.0
 Test Device: GPM-1600L
 Distance: 6.912 m
 Humidity:
 Inspector:

Zonal Lumen

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Zonal Lumen (Continue 1)

cone flux(90°): 16448.49 mW

%lum = 62.1%
%lamp = 62.1%

cone flux(120°): 22792.70 mW

%lum = 86.0%
%lamp = 86.0%

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 2)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 3)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 4)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 5)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 6)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 7)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 8)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 9)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 10)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 11)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 12)

Unit: mW/sr/klm

V\H	H30.0	H31.0	H32.0	H33.0	H34.0	H35.0	H36.0	H37.0	H38.0	H39.0
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V-60.0	-87.3	-84.3	-80.8	-77.8	-74.7	-71.6	-68.5	-65.2	-62.2	-59.5
V-90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V30.0	47.1	45.5	43.8	42.0	40.2	38.4	36.6	34.8	33.0	31.2
V60.0	87.3	84.3	80.8	77.8	74.7	71.6	68.5	65.2	62.2	59.5
V90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V-30.0	-47.1	-45.5	-43.8	-42.0	-40.2	-38.4	-36.6	-34.8	-33.0	-31.2
V										

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 13)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 14)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 15)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 16)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 17)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

Candlepower Table (Continue 18)

Unit: mW/sr/klm

[illegible]

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector:

LED Average Luminance Report

Avg.L	mW/sr/m ²
L 0-180(65) av	1.#J
L 0-180(75) av	1.#J
L 0-180(85) av	-1.#J
L 90-270(65) av	1.#J
L 90-270(75) av	1.#J
L 90-270(85) av	1.#J
L 45(65) av	1.#J
L 45(75) av	1.#J
L 45(85) av	1.#J

Standard: GB/T 29293-2012

B Plane (°):-90.0-90.0: 30.0
Test Lab:
Test Type: TYPE B
Temperature:
Operator: F

Beta Plane (°):-90.0-90.0:1.0
Test Device: GPM-1600L
Distance: 6.912 m
Humidity:
Inspector: