

Report No.:

Test Time: 2015-05-11 09:13

Luminaire Property

Luminaire Manufacturer: P.Q.L., Inc.
Luminaire Description: 83231
Lumens per Lamp: 3715.0 lm
Luminous Width (mm): 0 mm
Voltage: 278.1 V
Power: 43.60 W

Number of Lamps: 1
Luminous Length (mm): 0 mm
Luminous Height (mm): 0 mm
Current: 0.167 A
Power Factor: 0.937

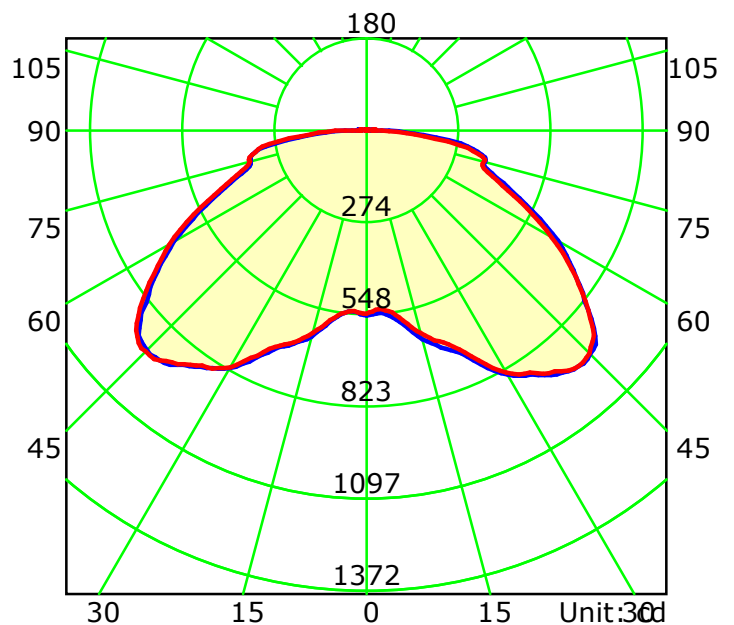
Photometric Results

CIE Class: Direct	Total Rated Lamp Lumens: 3715.0 lm
Measurement Flux: 3715 lm	Efficiency: 100.00%
Downward Ratio: 97.85%	Upward Ratio: 2.15%
Horizontal Diffuse Angle(10%,25%,50%,75%): H176.1,H166.5,H134.6,H116	
Vertical Diffuse Angle(10%,25%,50%,75%): V176,V166.2,V134.4,V116.1	
Luminaire Efficacy Rating (LER): 85.26	Central Intensity: 551.02 cd
Max. Intensity: 949.97 cd	Pos of Max. Intensity: H0 V43
S/MH(C0/C180): 2.22	S/MH(C90/C270): 2.23

Picture Of Luminaire



Luminous Intensity Distribution Curve



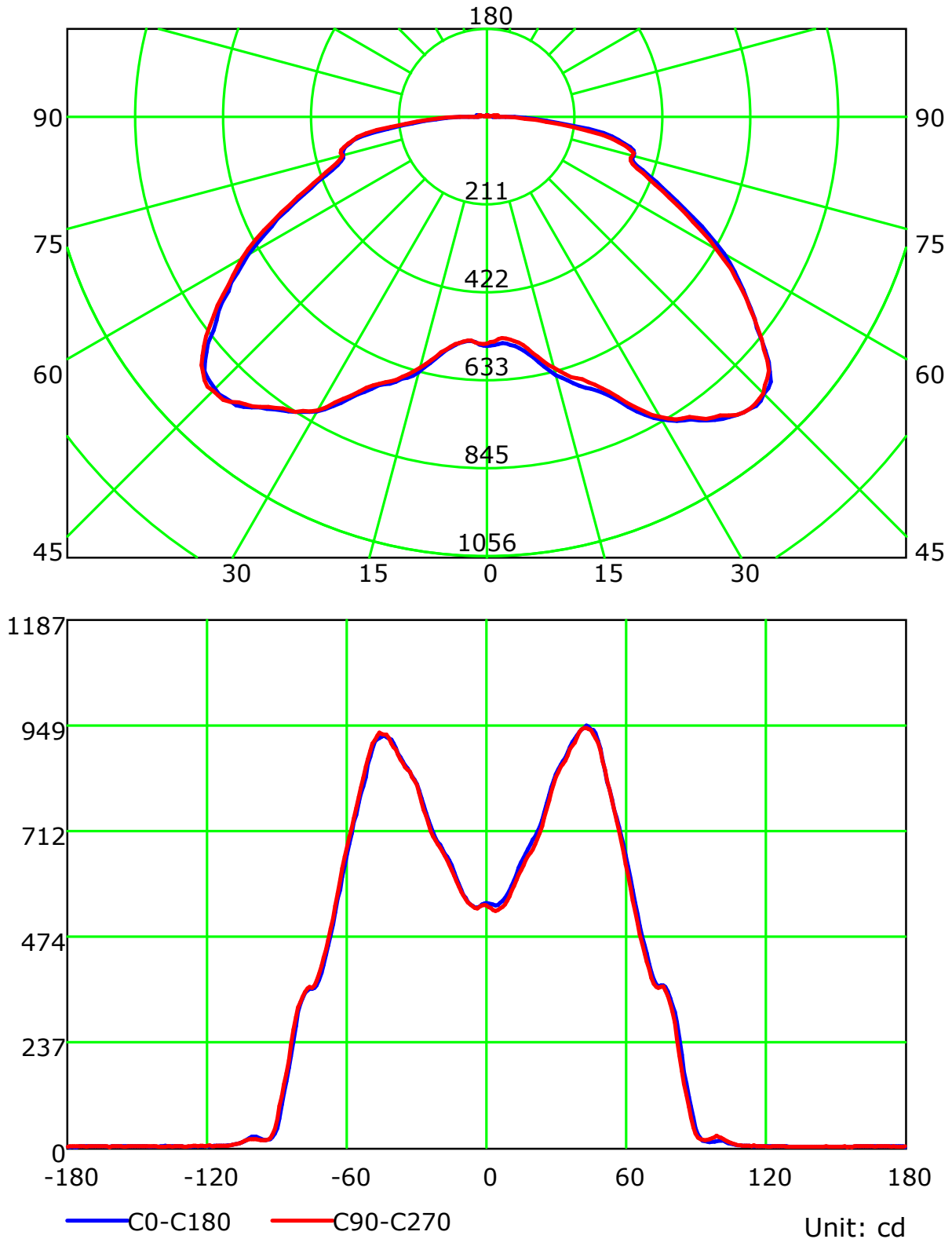
Average Diffuse Angle(50%): 134.2°

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 45.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 8.567 m
Humidity:
Inspector:

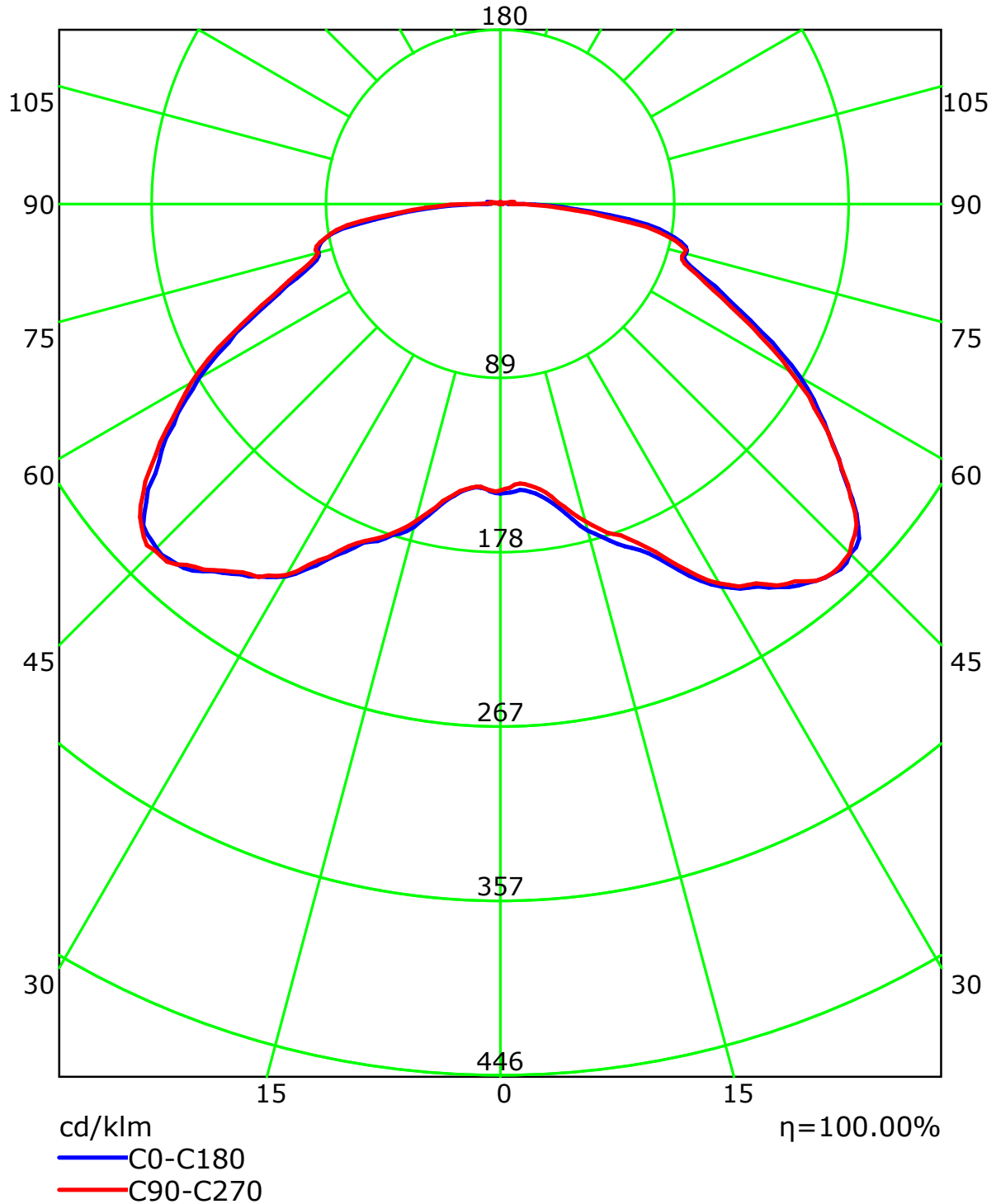
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 45.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 8.567 m
Humidity:
Inspector:

Luminous Intensity Distribution Curve(cd/klm)



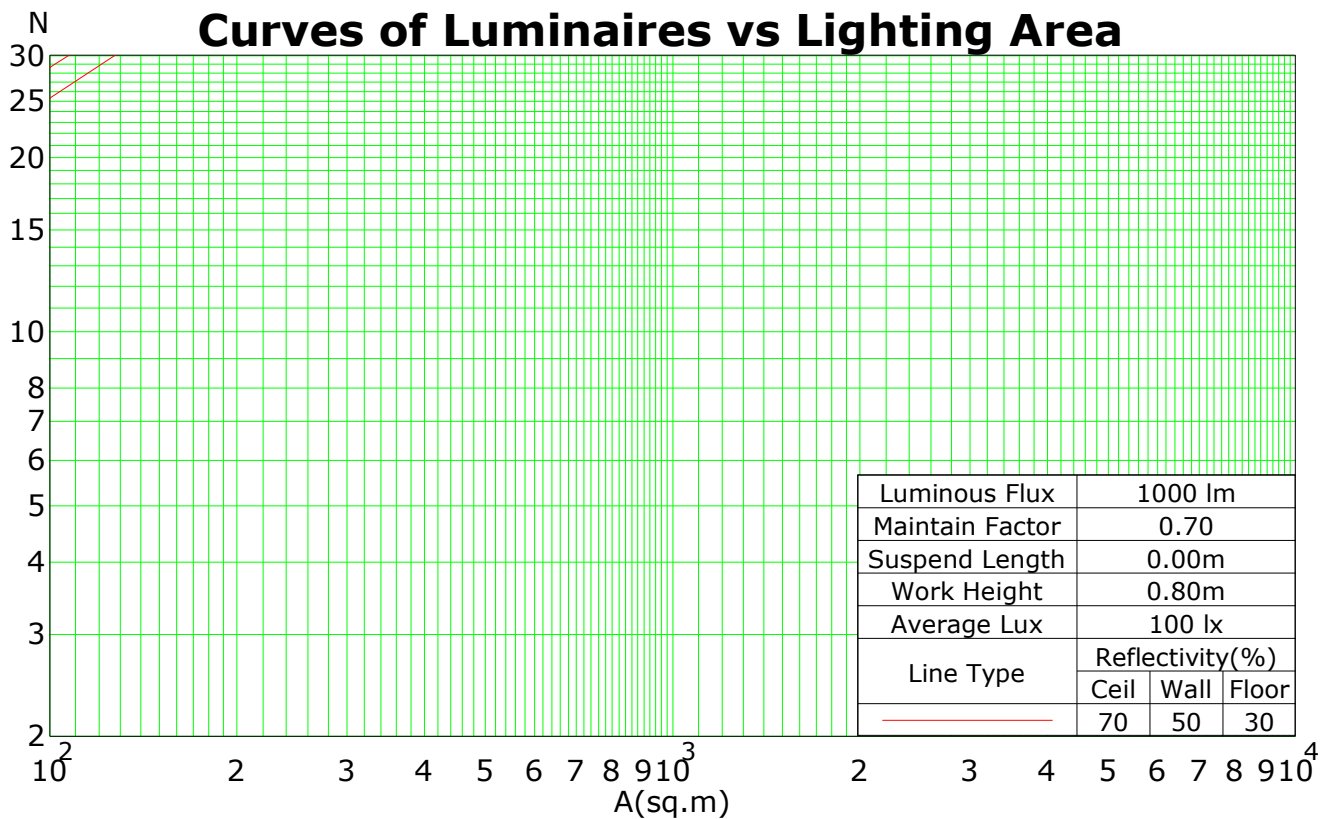
C Plane (°):0.0-360.0: 45.0
Test Lab:
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Humidity:
Inspector:

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	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	106	100	95	90	103	97	92	88	93	89	85	88	85	82	84	81	79	77
2	95	85	77	70	92	83	75	69	79	72	67	75	70	65	72	67	63	61
3	85	73	64	56	82	71	63	56	68	60	54	65	58	53	62	56	52	49
4	77	64	54	46	74	62	53	46	59	51	45	56	49	44	54	48	43	40
5	70	56	46	38	68	55	45	38	52	44	37	50	42	37	48	41	36	34
6	64	50	40	33	62	48	39	32	46	38	32	44	37	31	42	36	31	29
7	59	44	35	28	57	43	34	28	42	33	27	40	32	27	38	32	27	24
8	55	40	31	24	53	39	30	24	38	30	24	36	29	24	35	28	23	21
9	51	36	27	21	49	36	27	21	34	26	21	33	26	21	32	25	20	18
10	47	33	25	19	46	32	24	19	31	24	19	30	23	18	29	23	18	16

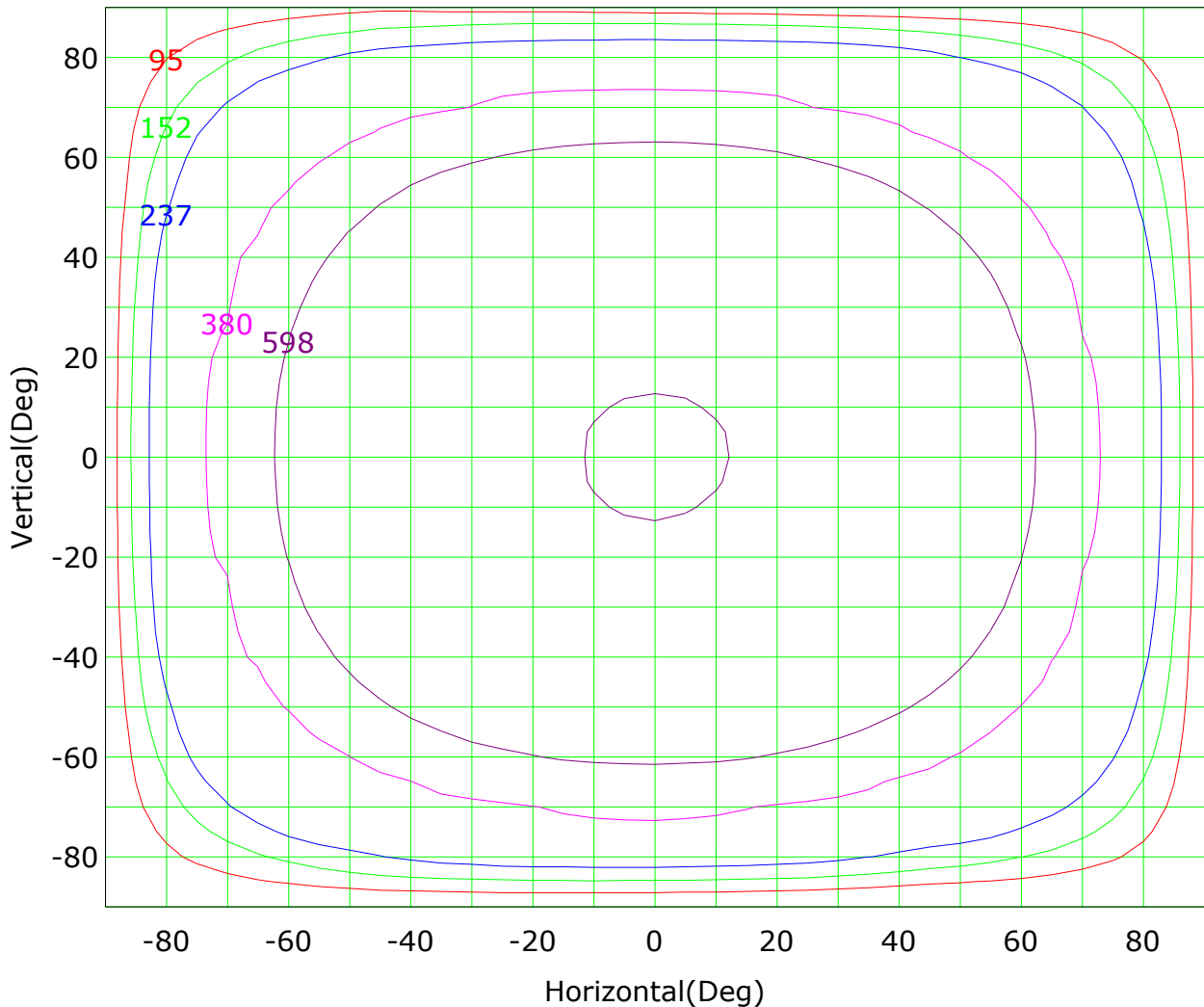
Spacing Criteria (0-180): 2.22
 Spacing Criteria (90-270): 2.23
 Spacing Criteria (Diagonal): 2.06



C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Isocandela (rectangle)



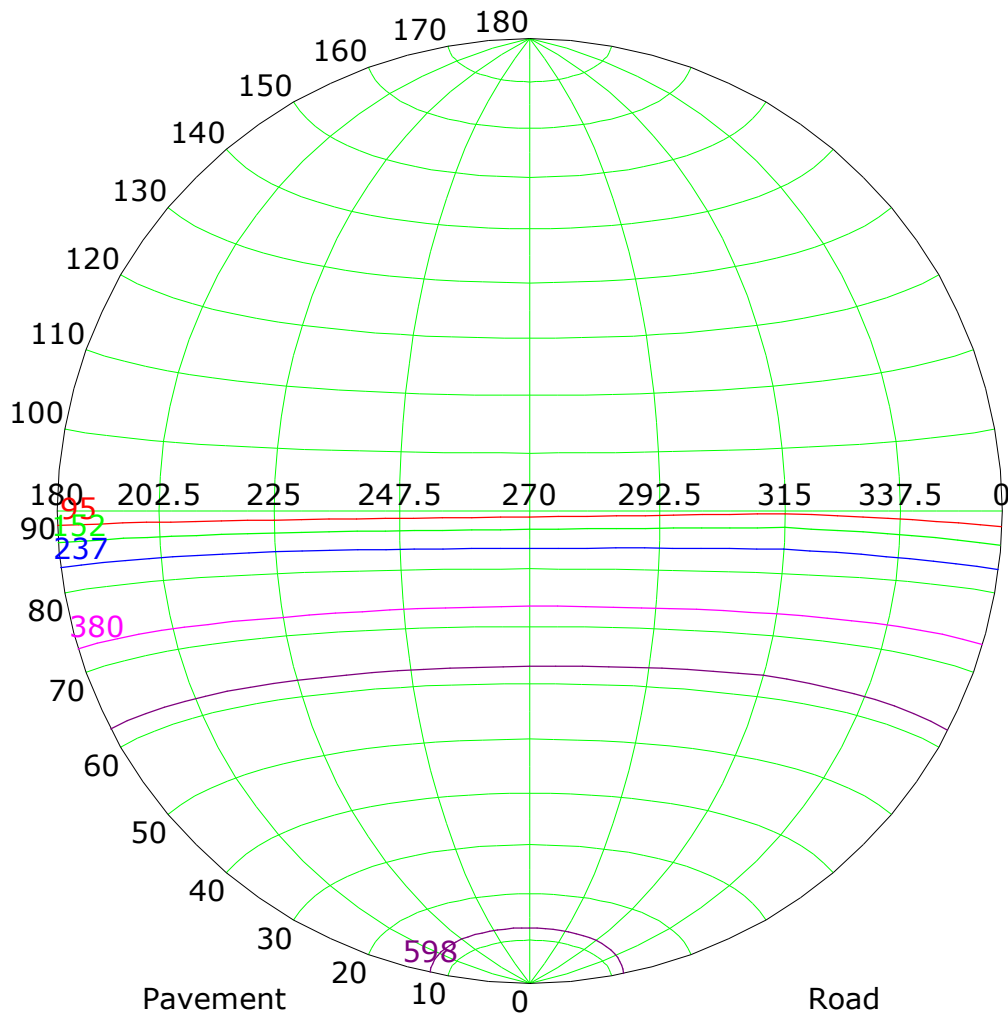
Imax (100%): 950 cd

(10%): 95 cd	(16%): 152 cd
(25%): 237 cd	(40%): 380 cd
(63%): 598 cd	(100%): 950 cd

C Plane (°):0.0-360.0: 45.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 8.567 m
Humidity:
Inspector:

Isocandela (sphere)



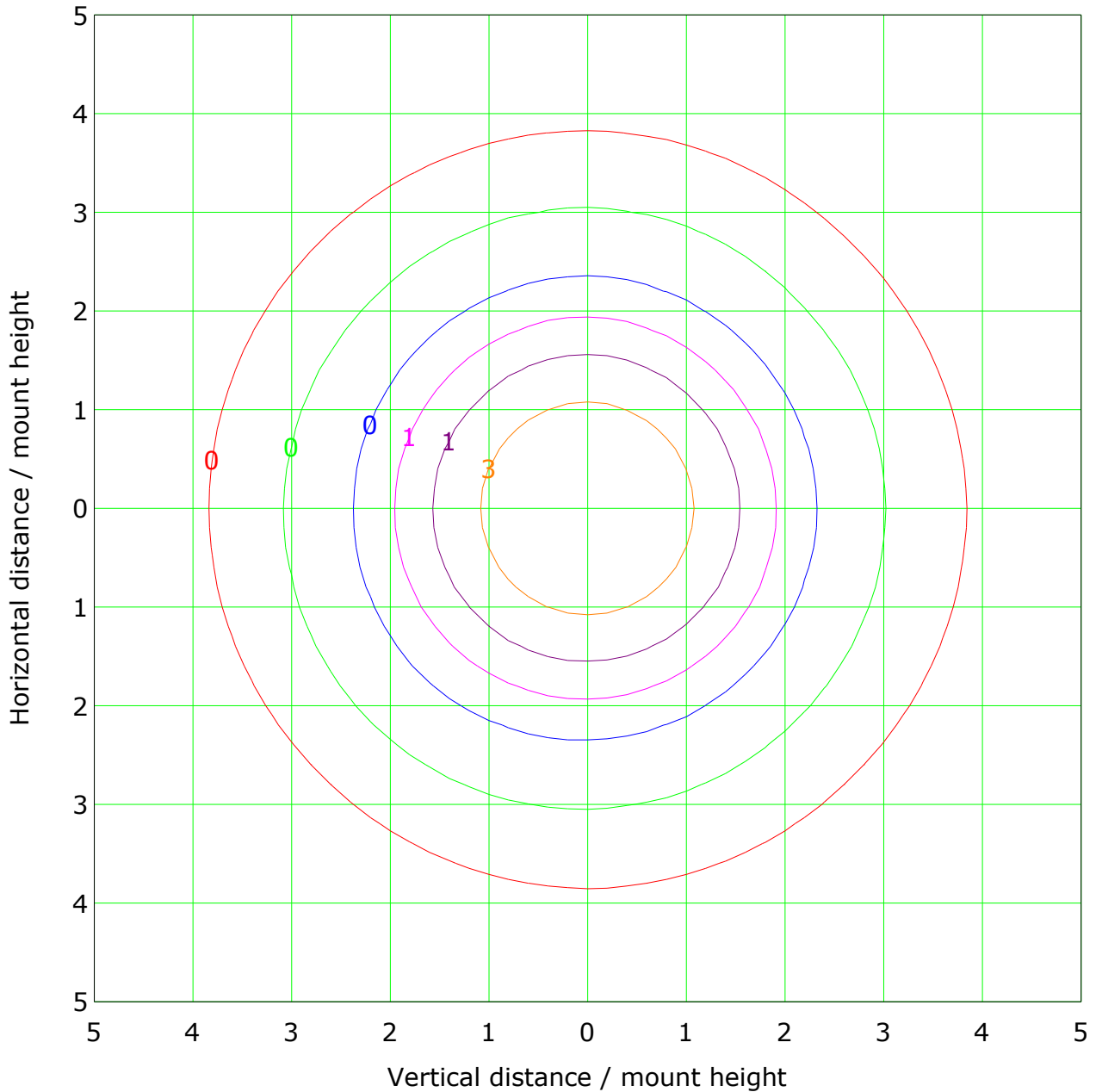
Imax (100%): 950 cd

(10%): 95 cd	(16%): 152 cd
(25%): 237 cd	(40%): 380 cd
(63%): 598 cd	(100%): 950 cd

C Plane (°):0.0-360.0: 45.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 8.567 m
Humidity:
Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 5.8 lx

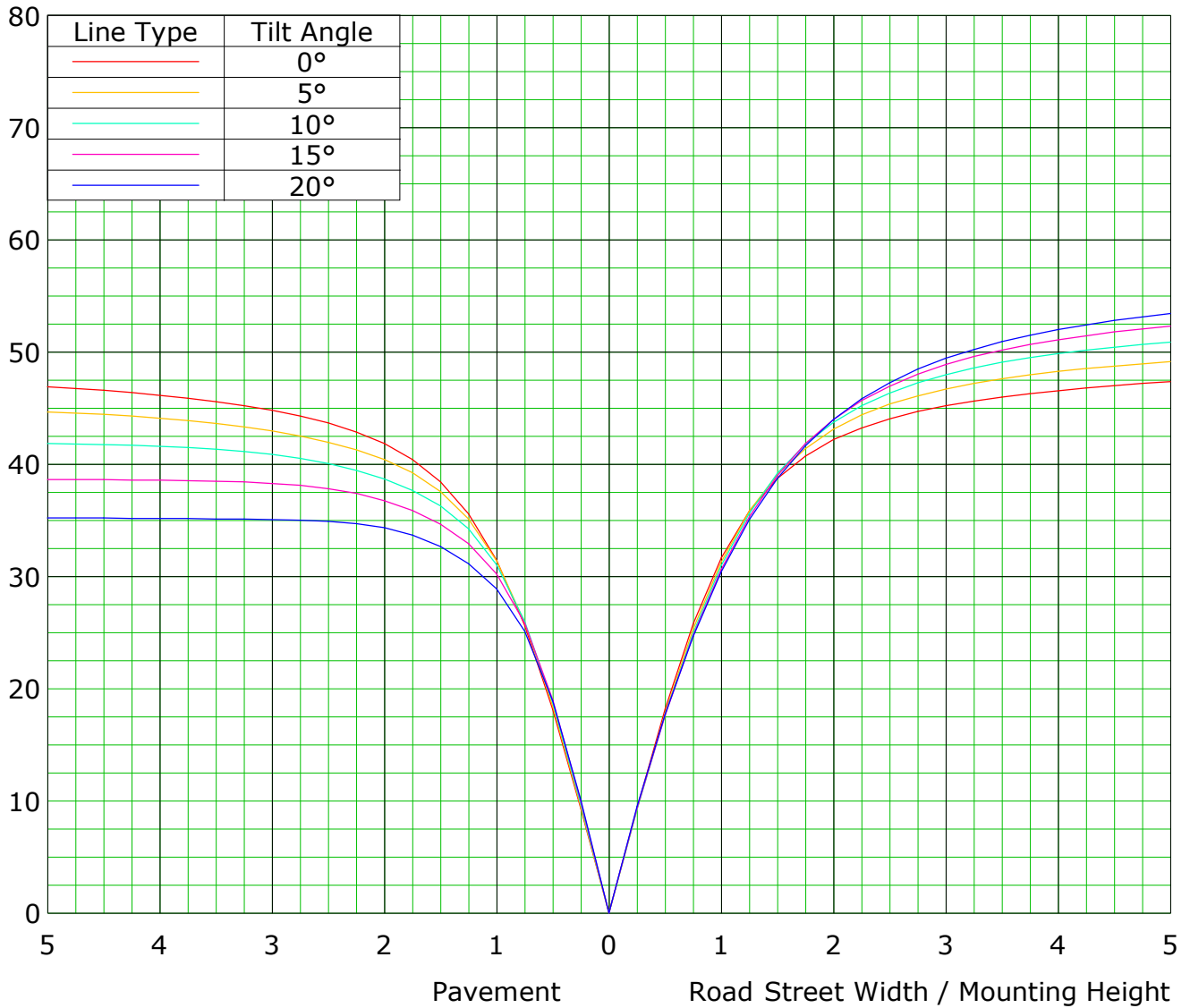
(1%): 0.1 lx	(2%): 0.1 lx
(5%): 0.3 lx	(10%): 0.6 lx
(20%): 1.2 lx	(50%): 2.9 lx
(100%): 5.8 lx	

C Plane (°):0.0-360.0: 45.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 8.567 m
Humidity:
Inspector:

Roadway CU Curve

Efficiency(%)



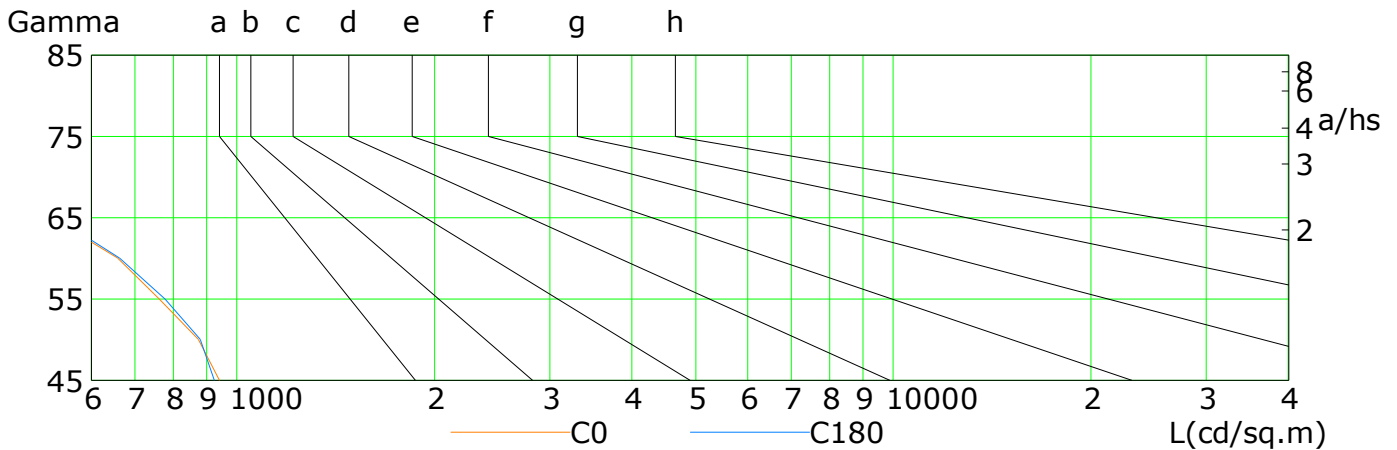
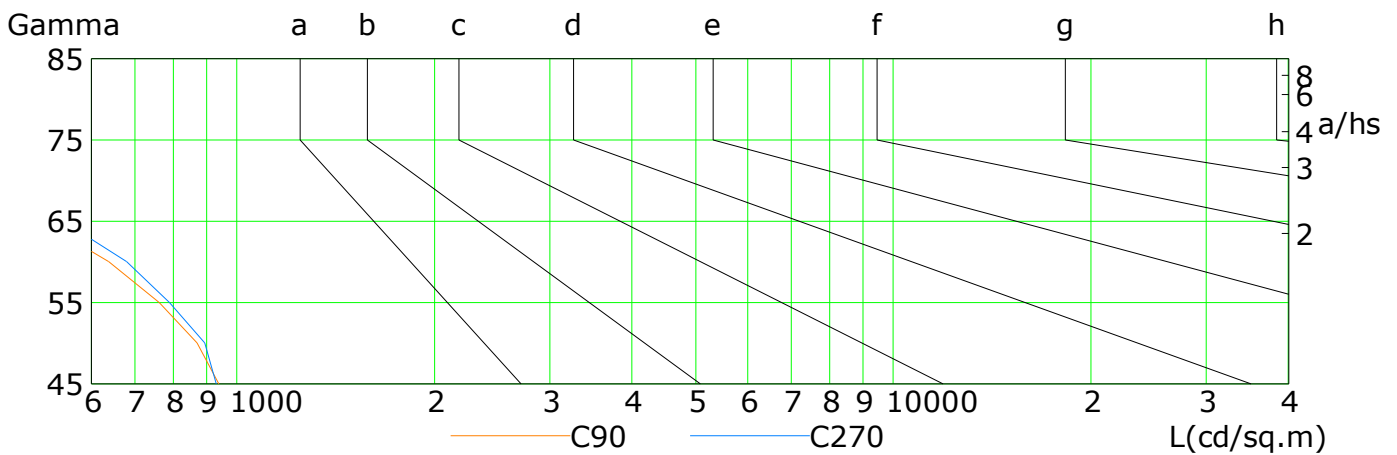
C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Lum Limit Curve

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

a b c d e f g h

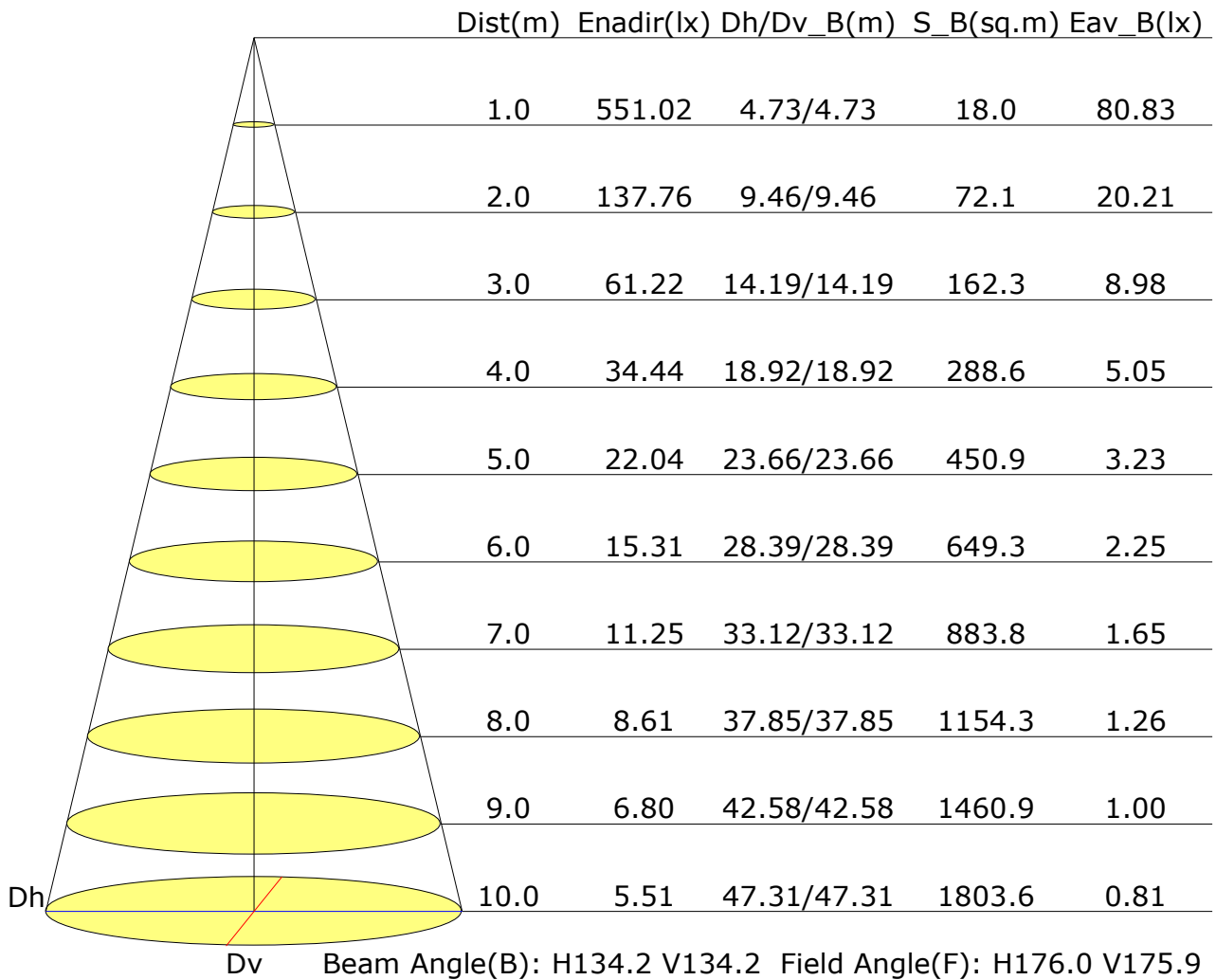


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	942	874	762	658	525	413	366	322	172
C90	940	870	762	638	505	402	363	307	144
C180	925	880	777	663	530	412	358	326	180
C270	932	894	790	679	545	428	360	328	197

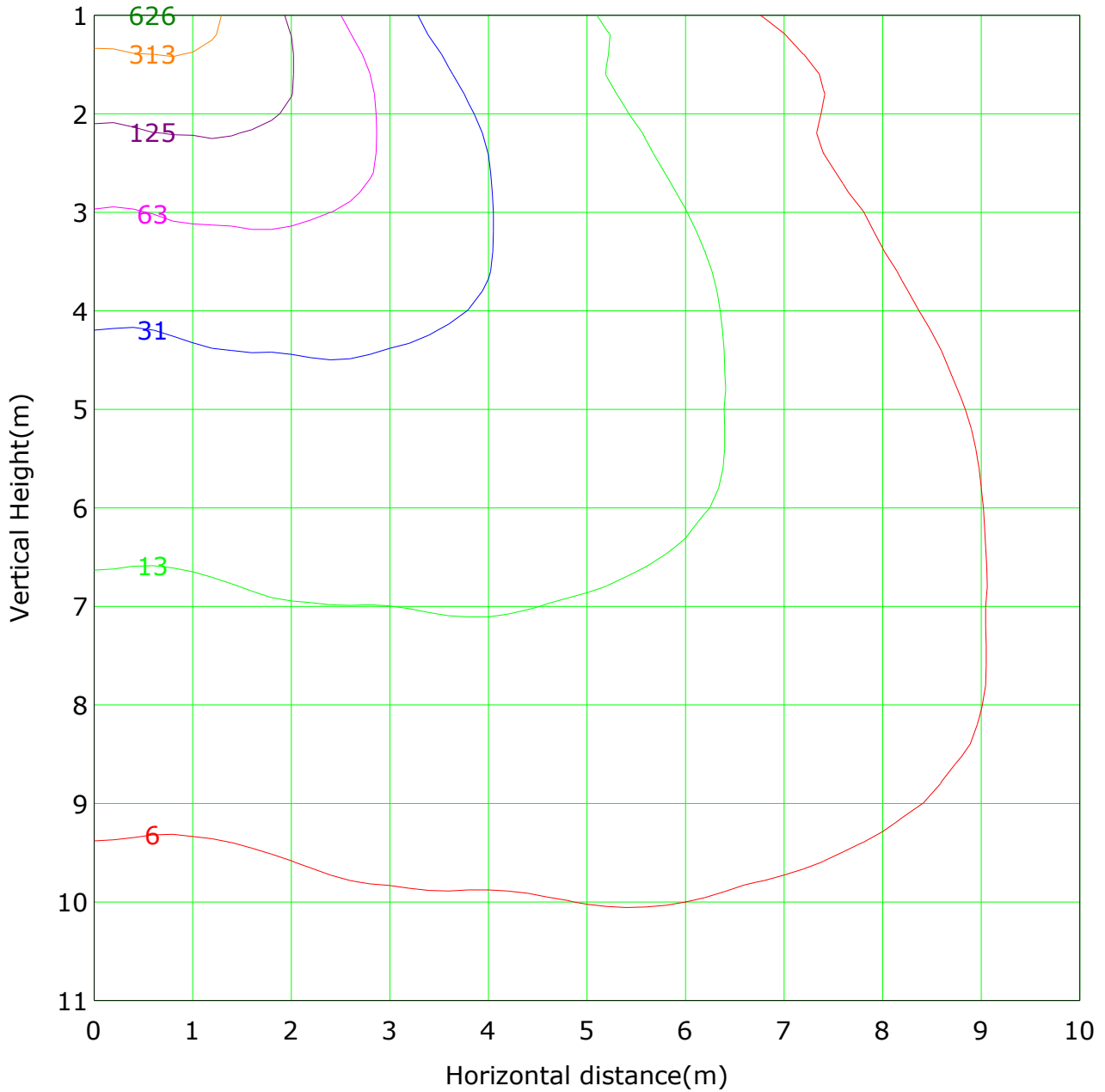
C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Illuminance at a Distance



Vertical IsoLux Plot

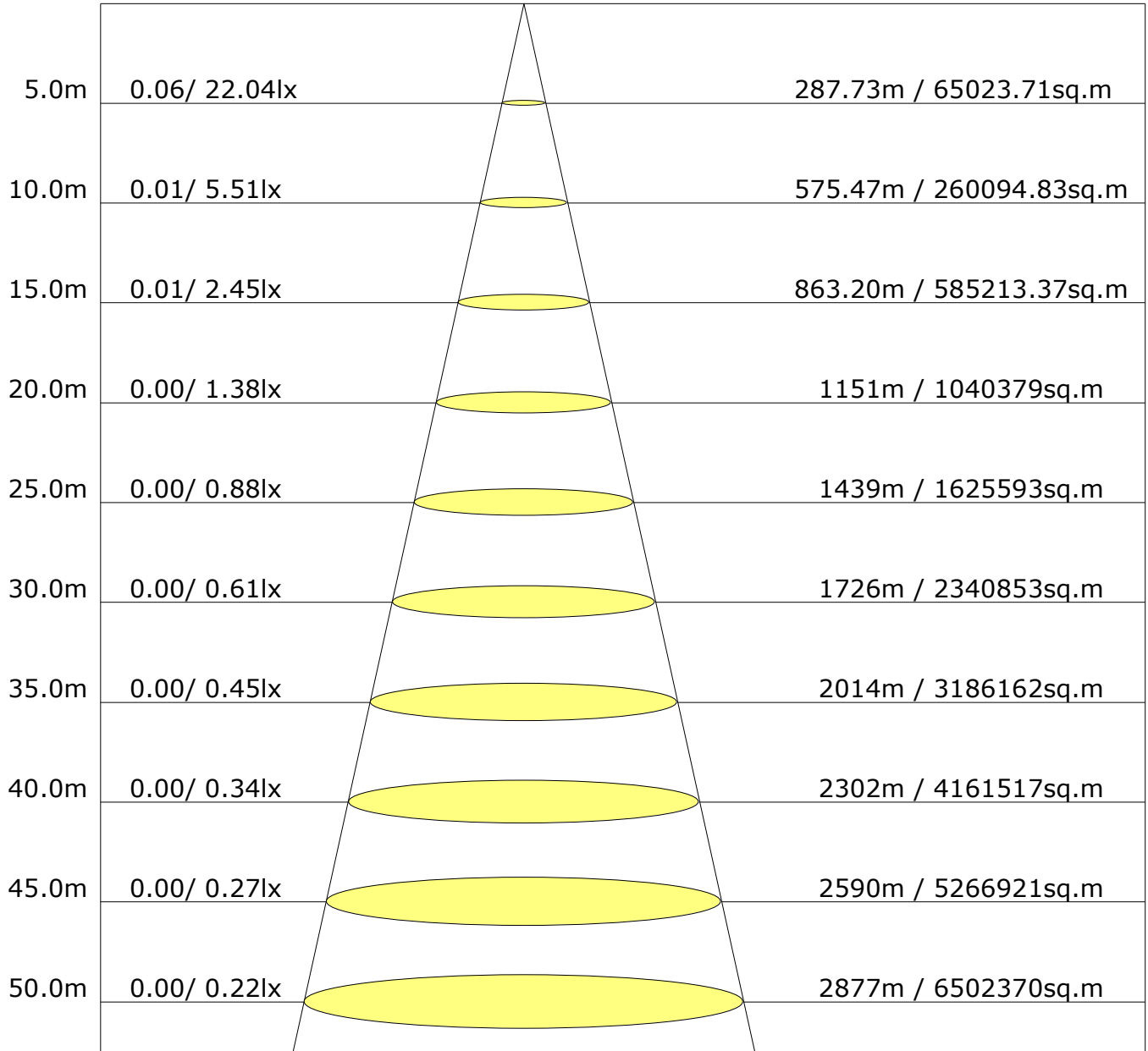


Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 626.0 lx

— (1%): 6.3 lx	— (2%): 12.5 lx
— (5%): 31.3 lx	— (10%): 62.6 lx
— (20%): 125.2 lx	— (50%): 313.0 lx
— (100%): 626.0 lx	

The Average Illuminance Effective Figure

Flux Out: 3619.79lm



Height

Avg./Nadir. E

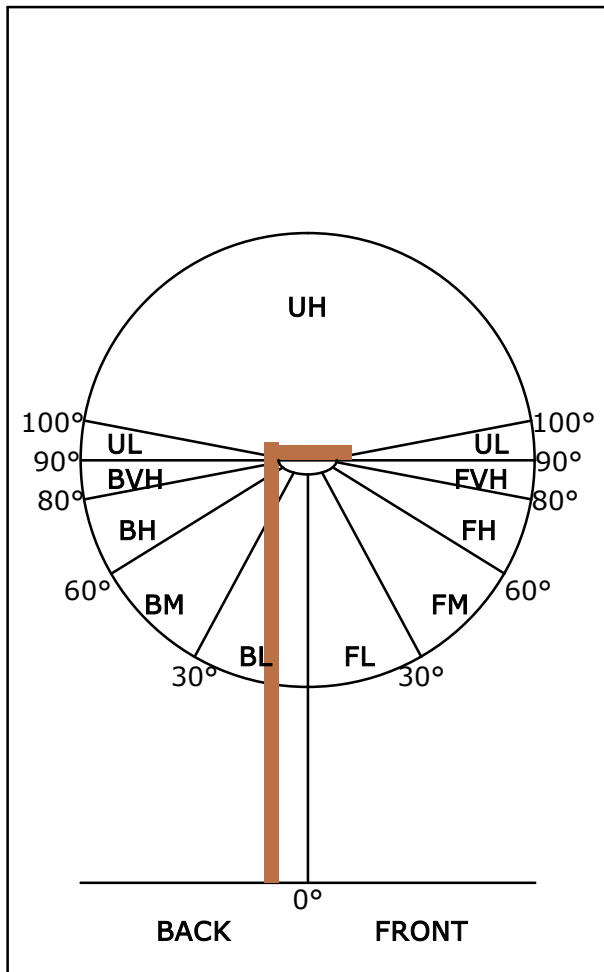
Beam Angle:176.0°

Diameter / Area

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM



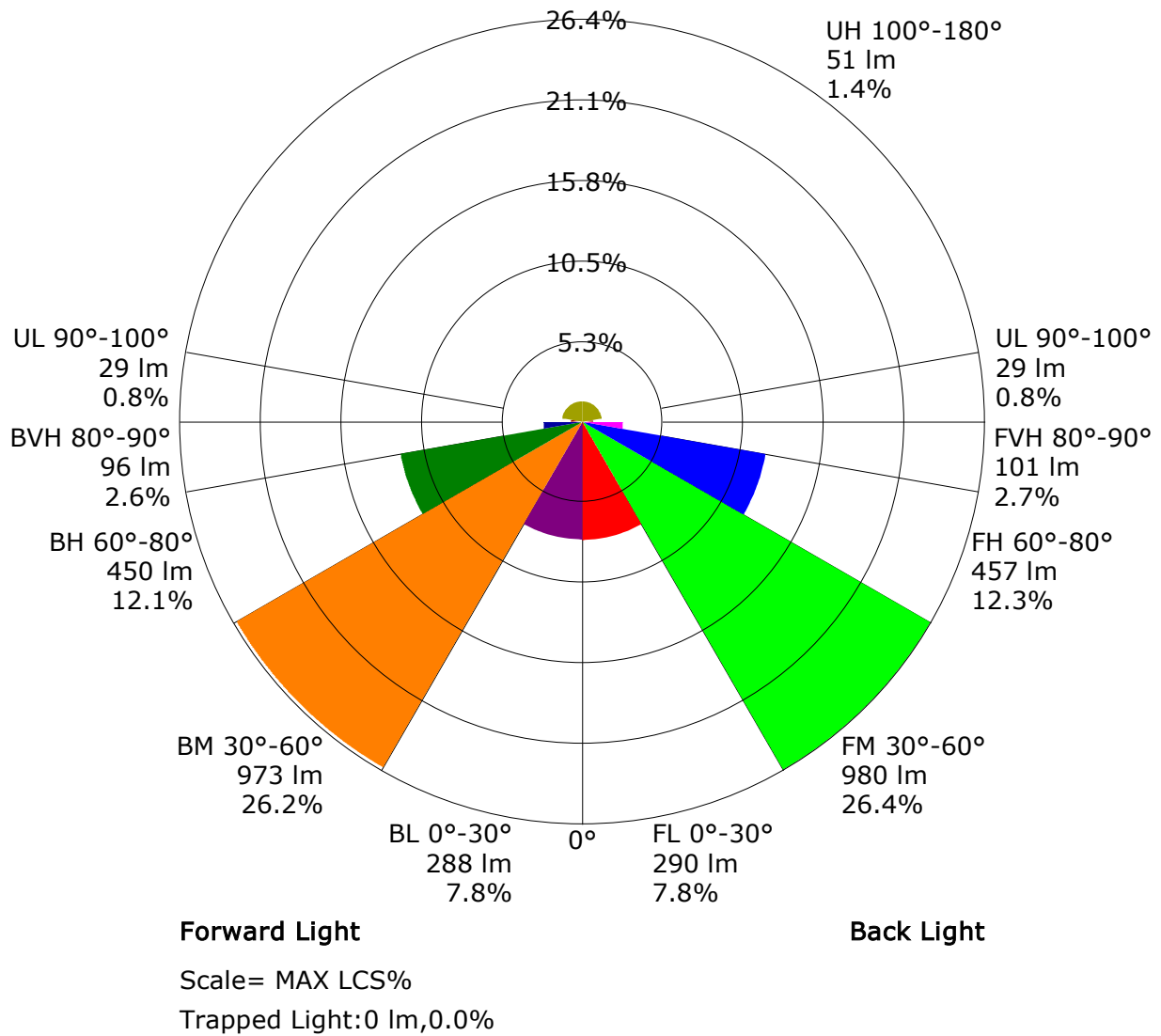
ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	1828	49.2
FL (0°-30°)	290	7.8
FM (30°-60°)	980	26.4
FH (60°-80°)	457	12.3
FVH (80°-90°)	101	2.7
BACK LIGHT	1807	48.6
BL (0°-30°)	288	7.8
BM (30°-60°)	973	26.2
BH (60°-80°)	450	12.1
BVH (80°-90°)	96	2.6
UP LIGHT	80	2.2
UL (90°-100°)	29	0.8
UH (100°-180°)	51	1.4
TRAPPED LIGHT	0	0.0

BUG(Backlight,Uplight,Glare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B1 U2 G1
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B1 U2 G1

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

LCS Graph



Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 2.00								
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	NA	0.64	0.70	0.75	0.83	0.88	0.92	0.96	1.00
	0.30		NA	0.56	0.62	0.67	0.76	0.82	0.86	0.92	0.95
	0.20		NA	0.50	0.56	0.61	0.71	0.77	0.81	0.87	0.92
0.50	0.50	0.20	NA	0.61	0.67	0.72	0.79	0.84	0.87	0.92	0.95
	0.30		NA	0.54	0.60	0.66	0.74	0.79	0.83	0.88	0.91
	0.20		NA	0.49	0.55	0.60	0.69	0.75	0.79	0.85	0.88
0.30	0.50	0.20	NA	0.59	0.65	0.69	0.76	0.81	0.84	0.88	0.91
	0.30		NA	0.53	0.59	0.64	0.71	0.76	0.80	0.85	0.88
	0.20		NA	0.48	0.54	0.59	0.67	0.73	0.76	0.82	0.85
0.00	0.00	0.00	NA	0.46	0.51	0.56	0.63	0.68	0.72	0.77	0.80
<p>Rating:44W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 2.00									
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	NA	0.85	0.75	0.66	0.53	0.45	0.39	0.31	0.26	
	0.30		NA	0.73	0.65	0.59	0.48	0.41	0.36	0.29	0.24	
	0.20		NA	0.64	0.58	0.53	0.44	0.38	0.34	0.27	0.23	
0.50	0.50	0.20	NA	0.82	0.72	0.63	0.51	0.46	0.37	0.29	0.24	
	0.30		NA	0.71	0.63	0.57	0.46	0.39	0.35	0.28	0.23	
	0.20		NA	0.63	0.57	0.51	0.43	0.37	0.33	0.26	0.22	
0.30	0.50	0.20	NA	0.78	0.69	0.61	0.49	0.41	0.35	0.28	0.23	
	0.30		NA	0.69	0.62	0.55	0.45	0.38	0.33	0.27	0.22	
	0.20		NA	0.62	0.56	0.50	0.42	0.36	0.32	0.26	0.22	
0.00	0.00	0.00	0.98	0.52	0.47	0.42	0.34	0.29	0.26	0.21	0.17	
<p>Rating:44W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>												

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 2.00								
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	NA	0.20	0.21	0.21	0.22	0.23	0.23	0.24	0.24
	0.30		NA	0.13	0.14	0.15	0.17	0.18	0.19	0.20	0.21
	0.20		NA	0.08	0.09	0.10	0.13	0.14	0.15	0.17	0.18
0.50	0.50	0.20	NA	0.19	0.20	0.21	0.21	0.22	0.22	0.23	0.23
	0.30		NA	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20
	0.20		NA	0.08	0.09	0.10	0.12	0.14	0.15	0.16	0.18
0.30	0.50	0.20	NA	0.18	0.19	0.20	0.21	0.21	0.21	0.22	0.22
	0.30		NA	0.12	0.14	0.15	0.16	0.17	0.18	0.19	0.19
	0.20		NA	0.08	0.09	0.10	0.12	0.13	0.14	0.16	0.17
0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
<p>Rating:44W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

Zonal Lumen

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	546.3	0.5	0.5	0.01	0.01
1.0-2.0	544.8	1.6	2.1	0.04	0.06
2.0-3.0	542.3	2.6	4.7	0.07	0.13
3.0-4.0	539.7	3.6	8.3	0.10	0.22
4.0-5.0	539.2	4.6	12.9	0.12	0.35
5.0-6.0	541.4	5.7	18.6	0.15	0.50
6.0-7.0	545.1	6.8	25.4	0.18	0.68
7.0-8.0	550.1	7.9	33.3	0.21	0.90
8.0-9.0	556.6	9.0	42.3	0.24	1.14
9.0-10.0	565.1	10.2	52.5	0.28	1.41
10.0-11.0	575.3	11.5	64.0	0.31	1.72
11.0-12.0	586.5	12.8	76.8	0.35	2.07
12.0-13.0	599.4	14.2	91.1	0.38	2.45
13.0-14.0	612.5	15.7	106.7	0.42	2.87
14.0-15.0	624.9	17.2	123.9	0.46	3.34
15.0-16.0	636.9	18.7	142.6	0.50	3.84
16.0-17.0	647.7	20.2	162.7	0.54	4.38
17.0-18.0	657.0	21.7	184.4	0.58	4.96
18.0-19.0	666.1	23.2	207.6	0.62	5.59
19.0-20.0	675.0	24.7	232.3	0.67	6.25
20.0-21.0	683.4	26.2	258.5	0.71	6.96
21.0-22.0	692.2	27.8	286.4	0.75	7.71
22.0-23.0	702.8	29.5	315.8	0.79	8.50
23.0-24.0	715.6	31.3	347.1	0.84	9.34
24.0-25.0	730.6	33.2	380.4	0.89	10.24
25.0-26.0	747.7	35.3	415.7	0.95	11.19
26.0-27.0	765.0	37.4	453.1	1.01	12.20
27.0-28.0	782.6	39.6	492.7	1.07	13.26
28.0-29.0	801.2	41.9	534.6	1.13	14.39
29.0-30.0	818.0	44.2	578.8	1.19	15.58
30.0-31.0	831.0	46.3	625.1	1.25	16.83
31.0-32.0	841.7	48.2	673.3	1.30	18.12
32.0-33.0	851.4	50.2	723.5	1.35	19.47
33.0-34.0	860.0	52.1	775.5	1.40	20.88
34.0-35.0	868.0	53.9	829.4	1.45	22.33
35.0-36.0	876.9	55.8	885.3	1.50	23.83

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 1)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	887.0	57.9	943.1	1.56	25.39
37.0-38.0	896.7	59.9	1003.0	1.61	27.00
38.0-39.0	905.9	61.8	1064.8	1.66	28.66
39.0-40.0	915.1	63.8	1128.7	1.72	30.38
40.0-41.0	922.8	65.7	1194.4	1.77	32.15
41.0-42.0	928.5	67.5	1261.8	1.82	33.97
42.0-43.0	932.5	69.1	1330.9	1.86	35.83
43.0-44.0	934.3	70.5	1401.5	1.90	37.72
44.0-45.0	933.3	71.7	1473.2	1.93	39.66
45.0-46.0	930.0	72.7	1545.9	1.96	41.61
46.0-47.0	924.4	73.5	1619.5	1.98	43.59
47.0-48.0	915.8	74.0	1693.5	1.99	45.59
48.0-49.0	903.8	74.2	1767.7	2.00	47.58
49.0-50.0	887.6	74.0	1841.8	1.99	49.58
50.0-51.0	868.5	73.5	1915.3	1.98	51.55
51.0-52.0	847.3	72.7	1988.0	1.96	53.51
52.0-53.0	825.4	71.8	2059.8	1.93	55.44
53.0-54.0	803.7	70.8	2130.6	1.91	57.35
54.0-55.0	782.0	69.8	2200.4	1.88	59.23
55.0-56.0	760.5	68.7	2269.2	1.85	61.08
56.0-57.0	738.8	67.6	2336.7	1.82	62.90
57.0-58.0	717.5	66.4	2403.1	1.79	64.69
58.0-59.0	695.4	65.0	2468.1	1.75	66.44
59.0-60.0	672.4	63.5	2531.6	1.71	68.15
60.0-61.0	648.5	61.9	2593.5	1.67	69.81
61.0-62.0	622.2	60.0	2653.5	1.61	71.43
62.0-63.0	594.3	57.8	2711.3	1.56	72.98
63.0-64.0	567.6	55.7	2767.0	1.50	74.48
64.0-65.0	540.9	53.5	2820.5	1.44	75.92
65.0-66.0	514.0	51.3	2871.8	1.38	77.30
66.0-67.0	489.0	49.2	2921.0	1.32	78.63
67.0-68.0	464.7	47.1	2968.1	1.27	79.89
68.0-69.0	442.1	45.1	3013.2	1.21	81.11
69.0-70.0	421.2	43.3	3056.5	1.16	82.27
70.0-71.0	401.3	41.5	3097.9	1.12	83.39
71.0-72.0	384.3	40.0	3137.9	1.08	84.47

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 2)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	370.8	38.8	3176.7	1.04	85.51
73.0-74.0	362.0	38.1	3214.7	1.02	86.53
74.0-75.0	358.5	37.9	3252.6	1.02	87.55
75.0-76.0	358.8	38.1	3290.7	1.03	88.58
76.0-77.0	357.0	38.1	3328.8	1.02	89.60
77.0-78.0	350.0	37.5	3366.3	1.01	90.61
78.0-79.0	338.8	36.4	3402.7	0.98	91.59
79.0-80.0	325.8	35.1	3437.8	0.95	92.54
80.0-81.0	310.3	33.6	3471.4	0.90	93.44
81.0-82.0	287.9	31.2	3502.6	0.84	94.28
82.0-83.0	257.6	28.0	3530.6	0.75	95.04
83.0-84.0	223.9	24.4	3555.0	0.66	95.69
84.0-85.0	191.0	20.9	3575.8	0.56	96.25
85.0-86.0	160.6	17.6	3593.4	0.47	96.73
86.0-87.0	133.1	14.6	3608.0	0.39	97.12
87.0-88.0	107.0	11.7	3619.7	0.32	97.43
88.0-89.0	81.4	8.9	3628.6	0.24	97.67
89.0-90.0	58.5	6.4	3635.0	0.17	97.85
90.0-91.0	40.8	4.5	3639.5	0.12	97.97
91.0-92.0	28.8	3.2	3642.7	0.09	98.05
92.0-93.0	22.1	2.4	3645.1	0.07	98.12
93.0-94.0	19.4	2.1	3647.2	0.06	98.18
94.0-95.0	19.2	2.1	3649.3	0.06	98.23
95.0-96.0	20.5	2.2	3651.5	0.06	98.29
96.0-97.0	23.3	2.5	3654.1	0.07	98.36
97.0-98.0	26.8	2.9	3657.0	0.08	98.44
98.0-99.0	30.2	3.3	3660.3	0.09	98.53
99.0-100.0	32.9	3.6	3663.8	0.10	98.62
100.0-101.0	35.0	3.8	3667.6	0.10	98.72
101.0-102.0	36.5	3.9	3671.5	0.11	98.83
102.0-103.0	36.7	3.9	3675.5	0.11	98.94
103.0-104.0	34.9	3.7	3679.2	0.10	99.04
104.0-105.0	31.7	3.4	3682.5	0.09	99.13
105.0-106.0	28.2	3.0	3685.5	0.08	99.21
106.0-107.0	24.8	2.6	3688.1	0.07	99.28
107.0-108.0	21.0	2.2	3690.3	0.06	99.34

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 3)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	17.8	1.9	3692.2	0.05	99.39
109.0-110.0	15.4	1.6	3693.8	0.04	99.43
110.0-111.0	13.4	1.4	3695.1	0.04	99.47
111.0-112.0	11.6	1.2	3696.3	0.03	99.50
112.0-113.0	10.0	1.0	3697.3	0.03	99.52
113.0-114.0	8.8	0.9	3698.2	0.02	99.55
114.0-115.0	8.4	0.8	3699.1	0.02	99.57
115.0-116.0	7.9	0.8	3699.8	0.02	99.59
116.0-117.0	6.8	0.7	3700.5	0.02	99.61
117.0-118.0	6.0	0.6	3701.1	0.02	99.63
118.0-119.0	5.8	0.6	3701.7	0.01	99.64
119.0-120.0	5.6	0.5	3702.2	0.01	99.66
120.0-121.0	5.6	0.5	3702.7	0.01	99.67
121.0-122.0	5.7	0.5	3703.2	0.01	99.68
122.0-123.0	5.7	0.5	3703.8	0.01	99.70
123.0-124.0	5.5	0.5	3704.3	0.01	99.71
124.0-125.0	5.5	0.5	3704.8	0.01	99.72
125.0-126.0	5.6	0.5	3705.3	0.01	99.74
126.0-127.0	5.3	0.5	3705.7	0.01	99.75
127.0-128.0	5.1	0.4	3706.2	0.01	99.76
128.0-129.0	5.0	0.4	3706.6	0.01	99.77
129.0-130.0	4.5	0.4	3707.0	0.01	99.78
130.0-131.0	4.3	0.4	3707.4	0.01	99.79
131.0-132.0	4.4	0.4	3707.7	0.01	99.80
132.0-133.0	4.4	0.4	3708.1	0.01	99.81
133.0-134.0	4.4	0.3	3708.4	0.01	99.82
134.0-135.0	4.1	0.3	3708.7	0.01	99.83
135.0-136.0	4.0	0.3	3709.1	0.01	99.84
136.0-137.0	4.0	0.3	3709.3	0.01	99.85
137.0-138.0	3.9	0.3	3709.6	0.01	99.86
138.0-139.0	3.8	0.3	3709.9	0.01	99.86
139.0-140.0	3.6	0.3	3710.2	0.01	99.87
140.0-141.0	3.3	0.2	3710.4	0.01	99.88
141.0-142.0	3.2	0.2	3710.6	0.01	99.88
142.0-143.0	3.2	0.2	3710.8	0.01	99.89
143.0-144.0	3.0	0.2	3711.0	0.01	99.89

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 4)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
144.0-145.0	3.0	0.2	3711.2	0.01	99.90
145.0-146.0	3.2	0.2	3711.4	0.01	99.90
146.0-147.0	3.4	0.2	3711.6	0.01	99.91
147.0-148.0	3.3	0.2	3711.8	0.01	99.91
148.0-149.0	3.4	0.2	3712.0	0.01	99.92
149.0-150.0	3.4	0.2	3712.2	0.01	99.92
150.0-151.0	3.4	0.2	3712.4	0.00	99.93
151.0-152.0	3.3	0.2	3712.6	0.00	99.93
152.0-153.0	3.4	0.2	3712.7	0.00	99.94
153.0-154.0	3.5	0.2	3712.9	0.00	99.94
154.0-155.0	3.3	0.2	3713.1	0.00	99.95
155.0-156.0	3.0	0.1	3713.2	0.00	99.95
156.0-157.0	3.1	0.1	3713.3	0.00	99.96
157.0-158.0	3.3	0.1	3713.5	0.00	99.96
158.0-159.0	3.3	0.1	3713.6	0.00	99.96
159.0-160.0	3.4	0.1	3713.7	0.00	99.97
160.0-161.0	3.4	0.1	3713.9	0.00	99.97
161.0-162.0	3.3	0.1	3714.0	0.00	99.97
162.0-163.0	3.2	0.1	3714.1	0.00	99.98
163.0-164.0	3.4	0.1	3714.2	0.00	99.98
164.0-165.0	3.4	0.1	3714.3	0.00	99.98
165.0-166.0	3.4	0.1	3714.4	0.00	99.98
166.0-167.0	3.3	0.1	3714.5	0.00	99.99
167.0-168.0	3.3	0.1	3714.5	0.00	99.99
168.0-169.0	3.3	0.1	3714.6	0.00	99.99
169.0-170.0	3.2	0.1	3714.7	0.00	99.99
170.0-171.0	3.3	0.1	3714.7	0.00	99.99
171.0-172.0	3.3	0.1	3714.8	0.00	99.99
172.0-173.0	3.3	0.0	3714.8	0.00	100.00
173.0-174.0	3.2	0.0	3714.9	0.00	100.00
174.0-175.0	3.2	0.0	3714.9	0.00	100.00
175.0-176.0	3.1	0.0	3714.9	0.00	100.00
176.0-177.0	3.0	0.0	3715.0	0.00	100.00
177.0-178.0	3.1	0.0	3715.0	0.00	100.00
178.0-179.0	3.2	0.0	3715.0	0.00	100.00
179.0-180.0	3.1	0.0	3715.0	0.00	100.00

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Candlepower Table

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G0.0	551.0	548.2	545.3	543.4	551.0	548.2	545.3	543.4	551.0	
G1.0	550.0	545.9	542.1	539.5	550.3	547.8	546.7	543.2	550.0	
G2.0	549.0	543.6	540.2	535.7	547.7	545.4	545.3	543.5	549.0	
G3.0	547.4	540.8	535.2	533.1	542.9	541.1	543.0	543.0	547.4	
G4.0	545.2	538.2	533.6	531.5	540.9	540.1	539.1	540.4	545.2	
G5.0	547.0	540.3	535.3	533.4	540.9	540.3	540.2	541.1	547.0	
G6.0	551.4	543.3	538.6	539.3	544.2	540.3	543.0	543.5	551.4	
G7.0	555.5	546.2	542.8	546.0	547.9	544.2	547.5	547.8	555.5	
G8.0	562.1	552.4	548.0	553.0	553.7	549.8	551.9	552.2	562.1	
G9.0	569.3	559.8	555.8	561.4	562.3	554.7	558.8	560.7	569.3	
G10.0	579.3	568.8	565.6	573.1	569.9	563.3	568.1	571.4	579.3	
G11.0	590.3	579.0	578.4	586.7	580.8	573.8	576.2	580.4	590.3	
G12.0	602.8	587.3	589.4	596.2	594.6	589.4	589.0	590.3	602.8	
G13.0	616.2	602.7	603.1	608.7	607.8	604.9	600.9	606.5	616.2	
G14.0	630.8	615.7	615.0	621.4	620.6	617.0	612.6	616.8	630.8	
G15.0	643.3	627.8	624.9	635.7	635.7	629.0	624.8	626.9	643.3	
G16.0	653.1	643.0	635.8	645.4	647.5	640.4	636.8	640.0	653.1	
G17.0	662.0	654.6	647.2	650.1	655.6	650.8	647.4	653.7	662.0	
G18.0	673.2	664.8	657.8	655.6	662.0	660.0	657.5	660.0	673.2	
G19.0	684.0	675.3	664.4	663.7	673.1	672.7	668.2	665.6	684.0	
G20.0	693.6	683.3	671.4	671.6	682.8	680.3	676.2	674.4	693.6	
G21.0	700.6	695.3	683.1	680.2	688.4	686.0	683.9	683.2	700.6	
G22.0	710.2	707.8	694.9	690.0	695.7	694.6	691.6	689.2	710.2	
G23.0	721.9	719.8	709.0	703.0	709.8	706.8	700.9	698.7	721.9	
G24.0	737.4	734.4	724.0	719.1	724.1	716.5	713.2	710.3	737.4	
G25.0	755.3	753.9	743.4	739.5	736.4	729.5	729.4	724.0	755.3	
G26.0	775.5	770.0	763.1	757.8	753.4	747.8	746.8	736.9	775.5	
G27.0	794.4	786.5	782.0	776.8	772.4	762.8	760.7	753.1	794.4	
G28.0	811.5	809.9	801.2	796.1	787.0	778.3	777.8	771.6	811.5	
G29.0	827.8	832.4	819.1	814.0	804.6	800.2	798.9	788.8	827.8	
G30.0	840.4	847.8	833.5	821.0	818.2	823.7	815.5	802.9	840.4	
G31.0	851.7	853.7	845.6	829.4	828.2	844.1	825.6	815.0	851.7	
G32.0	862.5	863.4	858.2	838.7	836.7	854.5	834.0	825.9	862.5	
G33.0	870.6	871.3	863.9	851.8	845.2	864.2	846.5	835.5	870.6	
G34.0	878.0	876.0	870.9	857.9	854.6	876.5	850.7	846.5	878.0	
G35.0	891.1	882.0	883.9	864.0	860.8	883.4	856.1	855.0	891.1	
G36.0	901.6	891.7	897.2	878.1	869.5	890.0	865.2	860.9	901.6	

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G37.0	912.8	897.7	905.1	893.8	878.9	902.4	873.5	873.4	912.8	
G38.0	921.5	905.8	911.5	903.0	887.2	909.7	884.8	885.3	921.5	
G39.0	928.2	919.8	923.3	909.9	899.3	916.5	895.8	892.7	928.2	
G40.0	936.2	926.0	935.3	920.3	910.7	924.4	902.0	901.2	936.2	
G41.0	942.0	930.7	941.6	921.9	918.5	926.8	910.3	916.8	942.0	
G42.0	945.2	939.9	944.7	924.6	920.9	925.7	922.7	923.6	945.2	
G43.0	950.0	943.5	944.7	926.3	924.2	929.3	930.6	924.7	950.0	
G44.0	948.5	937.3	942.5	927.4	927.7	931.8	930.7	930.4	948.5	
G45.0	941.6	935.2	939.8	925.4	925.4	924.8	931.8	933.1	941.6	
G46.0	940.3	933.5	929.8	917.7	922.1	919.1	934.5	926.5	940.3	
G47.0	933.8	917.8	922.2	906.3	919.6	917.6	928.2	921.2	933.8	
G48.0	916.2	908.7	911.7	896.1	914.2	904.0	918.2	917.0	916.2	
G49.0	898.4	896.4	893.8	882.3	897.8	892.8	909.3	904.4	898.4	
G50.0	873.6	876.0	869.8	860.7	880.0	883.0	893.6	889.5	873.6	
G51.0	849.3	856.1	850.8	839.5	863.6	865.1	875.2	870.8	849.3	
G52.0	824.1	829.4	827.4	814.3	833.8	847.2	857.9	852.4	824.1	
G53.0	806.7	811.0	805.6	791.8	813.6	824.2	833.1	833.5	806.7	
G54.0	784.7	787.0	781.4	771.8	797.0	798.1	810.6	808.6	784.7	
G55.0	762.2	765.0	761.7	747.4	777.0	781.2	790.3	788.3	762.2	
G56.0	743.4	747.2	737.1	724.4	749.8	757.0	765.0	771.3	743.4	
G57.0	721.6	723.4	712.8	708.0	732.9	739.7	741.0	745.8	721.6	
G58.0	702.6	702.3	692.0	686.6	707.4	715.9	719.5	728.2	702.6	
G59.0	681.2	678.5	664.1	659.7	683.3	694.0	699.0	712.3	681.2	
G60.0	658.3	656.0	637.9	633.9	663.2	670.5	679.4	686.9	658.3	
G61.0	633.1	628.0	614.0	608.3	635.3	652.0	655.9	663.4	633.1	
G62.0	605.3	596.4	584.0	580.9	609.7	622.1	629.6	636.6	605.3	
G63.0	580.9	569.5	556.6	553.0	580.7	589.2	602.8	611.0	580.9	
G64.0	551.0	544.3	532.3	527.6	561.0	562.7	573.2	586.5	551.0	
G65.0	524.9	514.4	505.0	501.1	529.7	535.7	545.1	560.5	524.9	
G66.0	500.2	484.1	479.9	476.7	504.3	509.0	517.6	535.7	500.2	
G67.0	475.3	461.7	459.4	454.2	478.7	484.8	493.4	509.2	475.3	
G68.0	455.2	435.5	437.6	427.7	454.8	457.7	467.1	482.8	455.2	
G69.0	438.1	418.4	418.4	406.2	436.1	431.9	447.5	458.4	438.1	
G70.0	412.9	398.4	401.6	384.8	412.1	411.2	427.7	435.2	412.9	
G71.0	396.3	380.4	382.6	368.6	393.8	390.6	409.8	415.3	396.3	
G72.0	379.1	365.5	368.7	358.7	378.2	373.6	391.6	395.6	379.1	
G73.0	367.8	356.1	362.2	352.4	366.4	362.4	376.5	377.6	367.8	

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Candlepower Table (Continue 2)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G74.0	363.3	353.6	359.8	349.4	360.3	355.3	366.0	362.6	363.3	
G75.0	366.1	356.9	362.8	348.3	358.1	358.0	359.6	356.2	366.1	
G76.0	365.6	358.7	364.0	347.8	357.4	359.7	362.5	358.7	365.6	
G77.0	362.3	355.7	354.5	336.1	354.1	357.9	359.6	357.4	362.3	
G78.0	352.1	344.1	341.6	321.5	349.2	353.6	350.6	349.1	352.1	
G79.0	336.8	332.3	324.0	306.3	336.8	345.9	339.7	337.0	336.8	
G80.0	321.7	319.5	306.9	289.0	325.5	337.6	328.1	326.2	321.7	
G81.0	305.4	301.5	281.7	263.6	305.7	323.7	315.7	313.0	305.4	
G82.0	283.6	273.0	246.2	230.8	274.4	295.5	294.3	297.9	283.6	
G83.0	247.3	231.5	207.1	196.1	240.3	261.4	266.7	275.0	247.3	
G84.0	209.4	194.9	172.8	172.2	206.1	223.0	232.8	246.1	209.4	
G85.0	171.6	163.8	144.1	140.3	180.3	190.8	197.3	211.0	171.6	
G86.0	145.1	134.5	118.8	112.9	150.3	165.5	167.7	176.1	145.1	
G87.0	115.0	111.1	92.3	88.5	122.3	136.4	143.4	149.9	115.0	
G88.0	93.8	84.7	67.9	60.7	97.4	107.8	117.1	124.5	93.8	
G89.0	67.2	56.0	45.8	38.4	66.0	80.2	94.5	101.1	67.2	
G90.0	44.7	38.1	31.7	28.1	45.2	52.7	64.8	81.3	44.7	
G91.0	29.9	26.6	23.0	21.5	32.6	37.3	42.9	51.7	29.9	
G92.0	22.0	20.1	20.1	18.1	24.4	27.4	30.1	33.4	22.0	
G93.0	17.0	16.0	18.3	17.7	20.3	22.9	22.0	24.6	17.0	
G94.0	14.8	17.9	17.4	20.8	18.5	21.8	18.6	21.8	14.8	
G95.0	13.6	20.6	18.2	25.0	17.9	22.5	17.2	19.9	13.6	
G96.0	13.5	22.9	19.9	30.9	19.0	26.9	17.3	22.4	13.5	
G97.0	13.8	27.7	21.6	37.7	20.8	34.0	18.0	25.5	13.8	
G98.0	14.6	33.5	24.3	45.3	23.6	40.5	19.0	29.2	14.6	
G99.0	15.6	39.0	27.3	48.0	25.3	43.5	20.2	35.0	15.6	
G100.0	16.1	43.0	24.7	54.7	26.0	47.2	20.2	40.1	16.1	
G101.0	16.4	49.3	22.8	59.5	25.2	52.0	20.1	42.1	16.4	
G102.0	16.0	50.3	19.7	61.5	22.6	57.2	20.1	49.4	16.0	
G103.0	13.4	48.7	16.5	63.5	19.1	57.3	18.0	54.3	13.4	
G104.0	11.3	45.5	13.7	56.2	15.7	55.0	16.0	54.4	11.3	
G105.0	9.7	39.8	11.4	49.5	13.0	51.6	13.3	50.7	9.7	
G106.0	8.5	33.2	9.8	45.8	11.1	44.7	11.2	48.5	8.5	
G107.0	7.3	27.0	8.2	37.9	9.5	38.4	9.7	45.4	7.3	
G108.0	6.5	21.2	6.8	31.1	8.2	29.4	8.4	41.5	6.5	
G109.0	5.9	18.2	6.1	26.9	7.2	24.3	7.1	36.4	5.9	
G110.0	5.4	16.2	5.5	23.6	6.4	20.7	6.3	29.8	5.4	

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Candlepower Table (Continue 3)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G111.0	5.0	14.0	5.1	20.6	5.9	18.4	5.6	25.4	5.0	
G112.0	4.7	9.1	4.9	18.5	5.3	16.5	5.1	22.1	4.7	
G113.0	4.6	3.1	4.6	17.0	5.0	15.1	4.8	19.7	4.6	
G114.0	4.4	3.0	4.2	14.6	4.9	14.2	4.7	17.4	4.4	
G115.0	4.1	3.1	5.7	13.5	4.8	13.9	4.8	16.4	4.1	
G116.0	4.0	3.0	4.0	13.0	4.8	11.5	4.6	15.1	4.0	
G117.0	3.7	3.3	3.9	11.9	4.7	3.1	4.5	14.1	3.7	
G118.0	3.8	3.2	3.8	10.4	4.4	3.2	4.3	13.1	3.8	
G119.0	3.7	3.4	3.5	10.2	4.2	3.2	5.7	12.2	3.7	
G120.0	3.9	2.3	3.5	9.7	4.0	3.3	5.4	11.4	3.9	
G121.0	3.8	7.0	3.3	9.5	3.8	3.3	4.0	10.6	3.8	
G122.0	3.9	7.5	3.1	9.2	3.7	3.4	5.4	10.4	3.9	
G123.0	4.0	7.2	3.5	8.7	3.7	3.5	5.1	9.7	4.0	
G124.0	4.1	6.9	3.7	8.0	3.5	3.5	3.7	9.2	4.1	
G125.0	4.2	5.4	3.7	7.4	3.6	7.1	5.5	8.2	4.2	
G126.0	4.0	4.8	3.7	7.4	3.5	8.2	5.1	7.8	4.0	
G127.0	3.8	4.0	3.5	7.3	3.4	7.6	3.6	7.5	3.8	
G128.0	3.8	4.4	3.4	7.4	3.3	7.6	3.5	7.4	3.8	
G129.0	3.5	4.2	3.2	7.1	3.1	6.2	3.3	7.7	3.5	
G130.0	3.3	2.7	2.7	6.9	2.9	4.9	3.2	7.6	3.3	
G131.0	2.8	2.7	2.6	6.2	4.3	4.5	4.4	7.4	2.8	
G132.0	2.9	4.1	2.6	6.0	4.2	4.3	4.2	7.5	2.9	
G133.0	2.8	4.0	2.4	6.1	4.1	4.6	4.0	7.2	2.8	
G134.0	2.6	4.2	2.6	5.9	3.9	4.3	3.9	7.0	2.6	
G135.0	2.8	2.7	2.6	5.5	4.2	4.4	2.5	6.6	2.8	
G136.0	2.8	2.7	2.6	5.3	4.5	4.2	4.1	6.2	2.8	
G137.0	2.8	2.7	2.6	4.9	4.2	4.2	3.9	5.8	2.8	
G138.0	2.8	4.2	2.7	4.5	4.8	4.1	2.5	5.4	2.8	
G139.0	2.8	4.3	2.6	3.8	4.2	4.6	2.5	5.0	2.8	
G140.0	2.8	2.7	2.6	3.4	4.1	4.2	2.5	4.7	2.8	
G141.0	2.8	2.4	2.7	2.8	2.6	4.2	2.5	5.6	2.8	
G142.0	2.8	2.7	2.6	2.5	2.4	4.2	4.1	4.6	2.8	
G143.0	2.7	2.7	2.6	2.6	3.5	4.0	4.1	2.8	2.7	
G144.0	2.7	2.6	2.4	2.6	2.6	4.1	4.1	2.7	2.7	
G145.0	2.7	2.6	2.7	2.5	2.5	4.2	3.9	2.4	2.7	
G146.0	2.7	2.7	4.1	4.1	3.7	4.1	4.2	2.6	2.7	
G147.0	2.7	2.6	2.3	3.8	4.3	4.2	4.1	2.5	2.7	

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector:

Candlepower Table (Continue 4)

Unit: cd

G\C	C0.0	C45.0	C90.0	C135.0	C180.0	C225.0	C270.0	C315.0	C360.0	
G148.0	2.4	2.6	2.6	4.0	4.2	4.5	4.2	2.3	2.4	
G149.0	2.7	2.5	2.7	4.1	4.2	4.1	4.1	2.5	2.7	
G150.0	2.7	2.5	2.6	3.8	4.2	4.2	4.1	4.1	2.7	
G151.0	2.4	2.5	2.5	3.3	4.1	4.0	4.1	4.1	2.4	
G152.0	2.6	2.2	2.6	4.0	4.0	4.1	4.0	2.5	2.6	
G153.0	2.6	2.5	2.5	4.3	3.8	4.1	3.8	4.0	2.6	
G154.0	2.6	2.4	3.9	3.9	4.0	4.1	4.0	4.0	2.6	
G155.0	2.5	2.2	2.2	3.9	4.1	4.1	2.5	2.4	2.5	
G156.0	2.5	2.4	2.4	3.8	4.0	4.1	2.4	2.2	2.5	
G157.0	2.5	2.3	2.3	4.8	3.9	4.0	4.0	2.4	2.5	
G158.0	2.5	2.3	3.7	3.7	3.7	4.1	3.9	2.4	2.5	
G159.0	4.0	2.3	3.7	3.2	3.8	3.8	3.9	2.1	4.0	
G160.0	4.1	2.3	3.6	3.4	3.5	3.9	3.8	2.3	4.1	
G161.0	4.0	2.2	4.0	3.8	3.8	3.9	3.7	2.4	4.0	
G162.0	4.0	2.2	3.7	3.8	3.1	3.9	2.3	2.3	4.0	
G163.0	4.1	2.3	3.6	3.6	3.1	3.8	3.8	2.2	4.1	
G164.0	4.2	2.2	3.6	3.8	3.8	3.7	3.8	2.3	4.2	
G165.0	4.1	2.1	3.4	3.7	3.7	3.8	3.8	2.2	4.1	
G166.0	4.0	2.1	3.6	3.7	3.5	4.0	3.7	2.2	4.0	
G167.0	3.8	2.1	3.4	3.6	3.7	3.7	3.7	2.2	3.8	
G168.0	4.0	2.1	3.6	3.6	3.7	3.7	3.7	2.1	4.0	
G169.0	4.0	1.8	3.5	3.6	3.6	3.7	3.5	2.1	4.0	
G170.0	3.9	2.0	3.5	3.5	3.7	3.7	3.7	2.2	3.9	
G171.0	3.9	2.0	3.5	3.3	3.7	3.9	3.6	2.1	3.9	
G172.0	3.8	2.0	3.5	3.5	3.6	4.7	3.4	2.0	3.8	
G173.0	3.9	2.0	3.4	4.0	3.5	4.0	3.6	2.1	3.9	
G174.0	3.8	2.0	3.3	3.5	3.6	2.8	3.7	2.1	3.8	
G175.0	3.8	2.0	3.5	3.7	3.7	3.6	3.6	2.0	3.8	
G176.0	3.8	2.0	3.4	3.3	2.0	3.6	3.5	2.0	3.8	
G177.0	3.8	1.9	3.4	3.5	2.0	3.6	3.6	2.0	3.8	
G178.0	3.8	1.9	3.4	3.4	3.4	3.6	3.5	3.5	3.8	
G179.0	3.6	2.1	3.2	3.5	2.0	3.5	3.7	3.5	3.6	
G180.0	2.1	1.9	3.5	3.5	2.9	4.0	3.3	3.3	2.1	

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 8.567 m
 Humidity:
 Inspector: