Report No.: Test Time: 2024-06-04 14:23

Luminaire Property

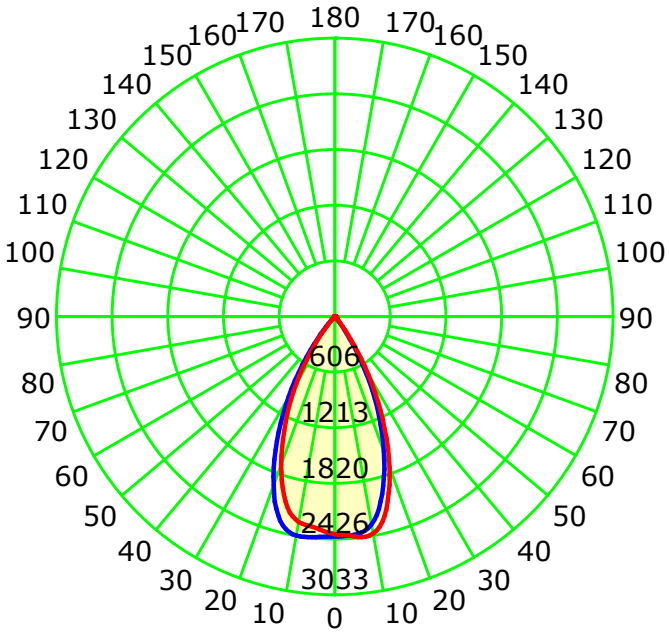
Luminaire Manufacturer:
Luminaire Category: Luminaire Description: DL.X1095A
Lamp Catalog: 3000K Lamp Description: RA90
Number of Lamps: Lumens per Lamp:
Luminous Length (mm): 95 Luminous Width (mm): 95
Luminous Height (mm): Voltage: 231.00 V
Current: 0.1040 A Power: 22.67 W
Power Factor: 0.9450

Photometric Results

CIE Class: Direct Total Rated Lamp Lumens: 1710.8 lm
Measurement Flux: 1710.8 lm Efficiency: 100%
Downward Ratio: 100% Upward Ratio: 0%
Horizontal Diffuse Angle(50%): H51.8
Vertical Diffuse Angle(50%): V51.4
Luminous Efficacy (lm/w): 75.47 C0r0 Intensity: 2397.39 cd
Max. Intensity: 2426.79 cd Pos of Max. Intensity: H180 V9
S/MH(C0/C180): 0.83 S/MH(C90/C270): 0.83

Picture Of Luminaire

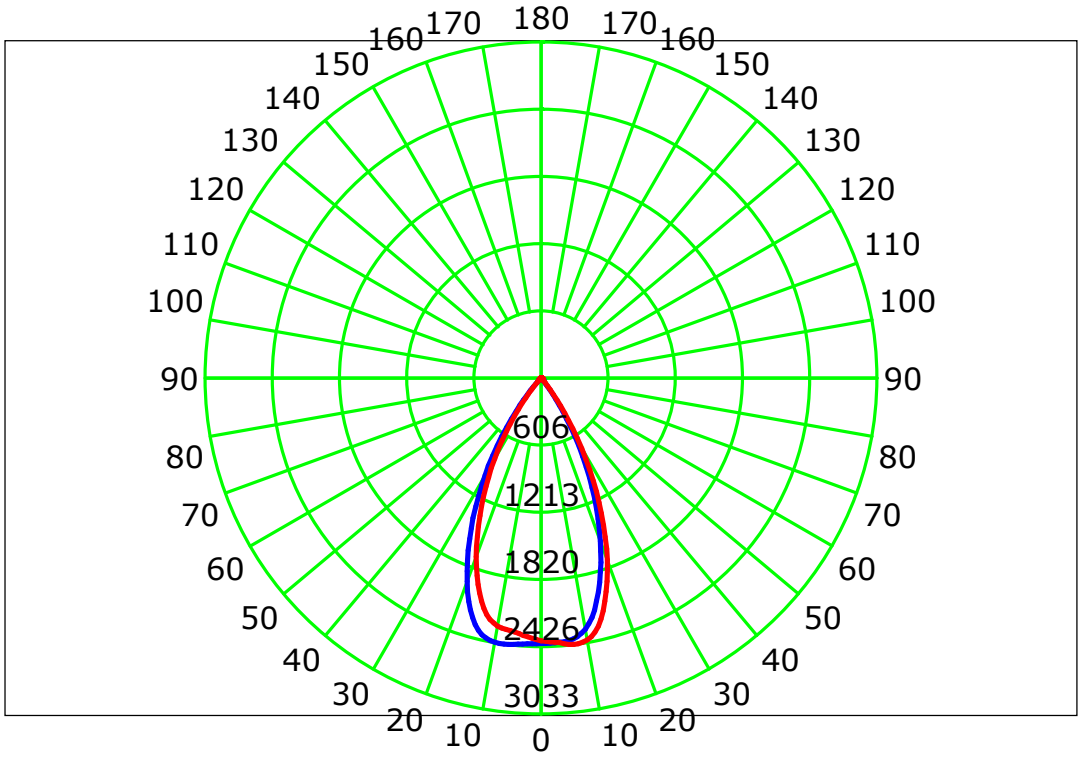
Luminous Intensity Distribution Curve

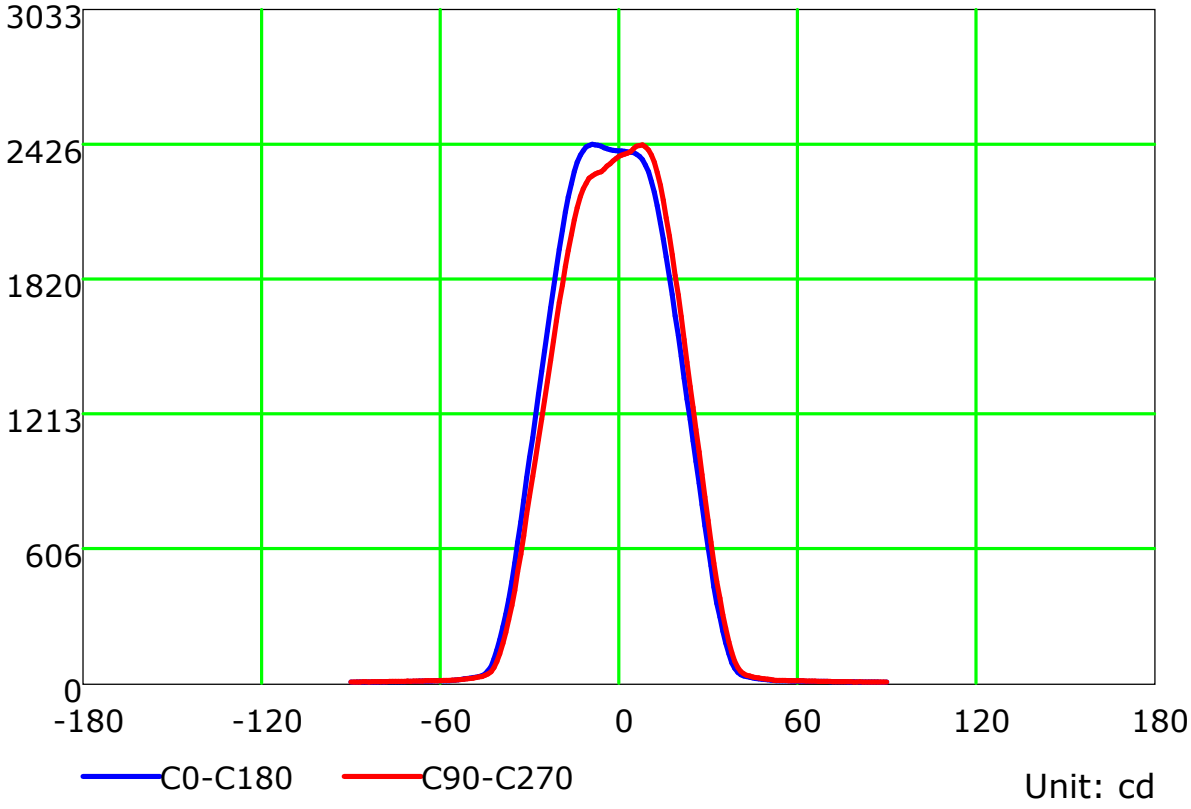


Unit: cd
Average Diffuse Angle(50%): 51.3°
C0-C180 C90-C270

C Plane (°):0.0-360.0: 90.0 Gamma Plane (°):0.0-90.0:1.0
Test Lab: Test Device: GPM-1600L
Test Type: TYPE C Distance: 7.172 m [K=1.0000]
Temperature: Humidity:
Operator: Inspector:

Luminous Intensity Distribution Curve

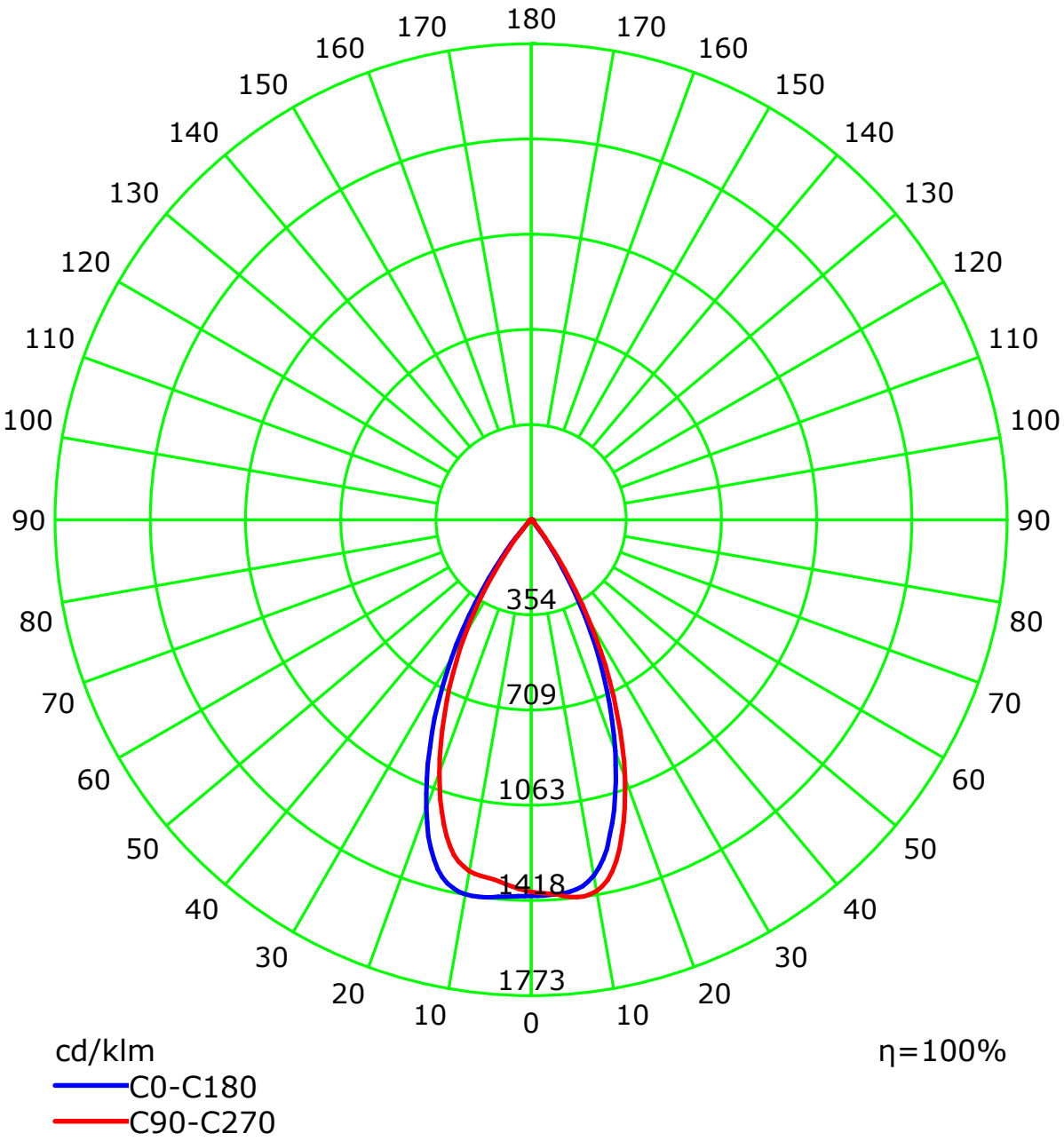




C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

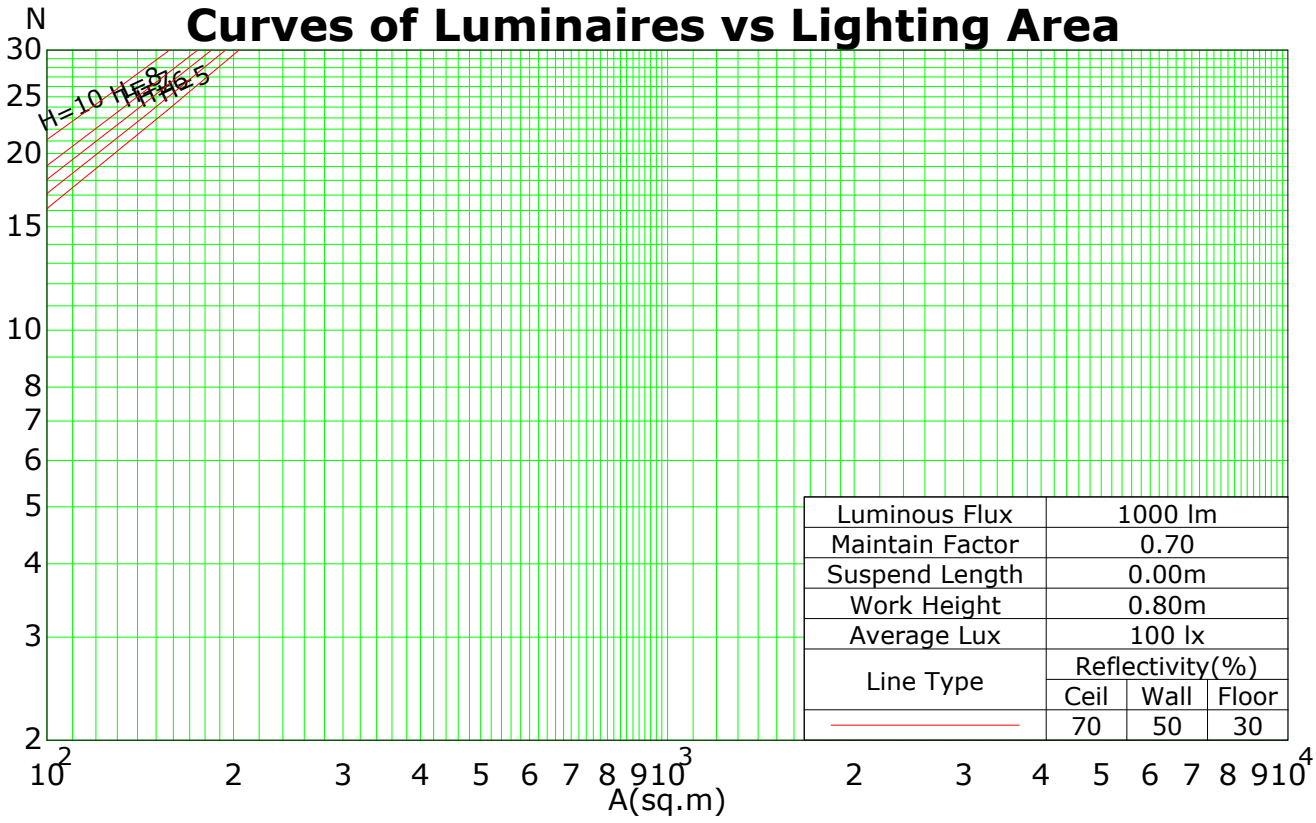
Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

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	1.14	1.11	1.09	1.06	1.11	1.09	1.07	1.05	1.05	1.03	1.01	1.01	1.00	0.98	0.98	0.97	0.96	0.94
2	1.08	1.04	1.00	0.97	1.06	1.02	0.99	0.96	0.99	0.96	0.94	0.96	0.94	0.92	0.93	0.91	0.90	0.88
3	1.04	0.97	0.93	0.89	1.02	0.96	0.92	0.88	0.93	0.90	0.87	0.91	0.88	0.86	0.89	0.86	0.84	0.83
4	0.99	0.92	0.87	0.83	0.97	0.91	0.86	0.82	0.89	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.79	0.78
5	0.94	0.87	0.81	0.77	0.93	0.86	0.81	0.77	0.84	0.79	0.76	0.82	0.78	0.75	0.81	0.77	0.75	0.73
6	0.90	0.82	0.76	0.72	0.89	0.81	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.77	0.73	0.71	0.69
7	0.86	0.78	0.72	0.68	0.85	0.77	0.72	0.68	0.76	0.71	0.68	0.75	0.70	0.67	0.73	0.70	0.67	0.66
8	0.82	0.74	0.68	0.64	0.81	0.73	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.62
9	0.79	0.70	0.65	0.61	0.78	0.70	0.64	0.61	0.69	0.64	0.61	0.68	0.63	0.60	0.67	0.63	0.60	0.59
10	0.76	0.67	0.61	0.58	0.75	0.66	0.61	0.58	0.66	0.61	0.58	0.65	0.60	0.57	0.64	0.60	0.57	0.56

Spacing Criteria (0-180): 0.83
Spacing Criteria (90-270): 0.83
Spacing Criteria (Diagonal): 0.78

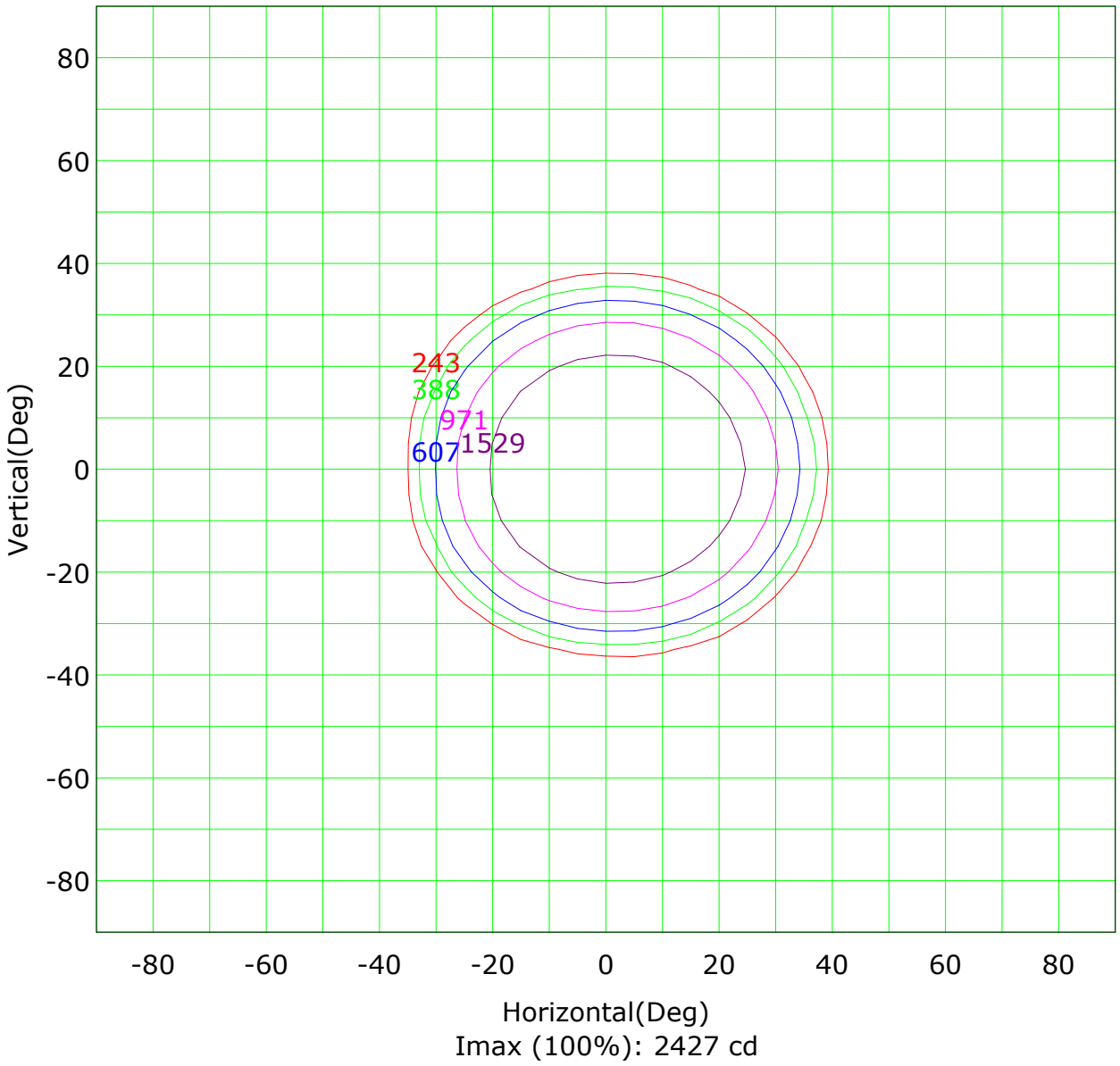
Curves of Luminaires vs Lighting Area



C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

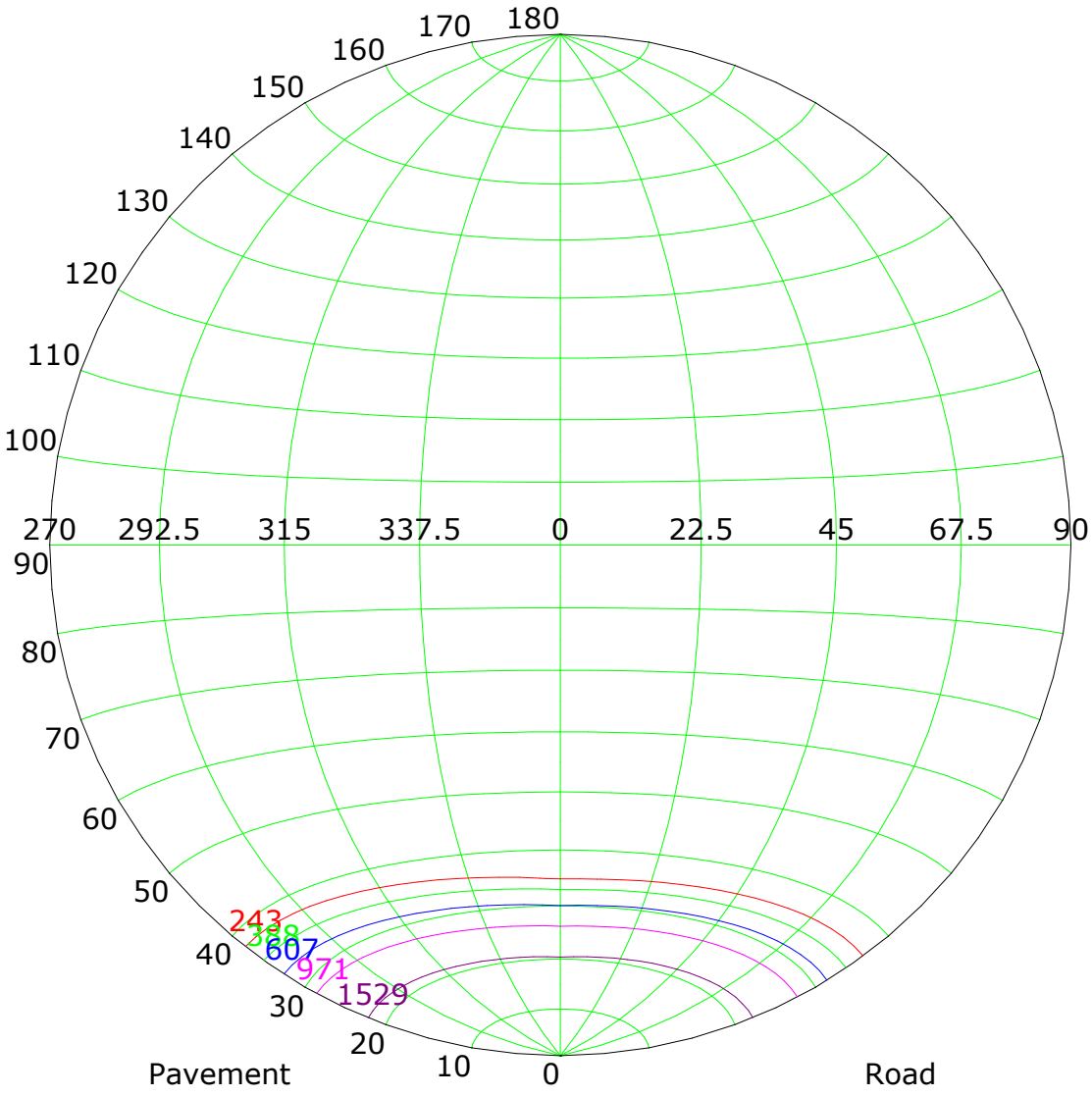
Isocandela (rectangle)



(10%): 243 cd
(16%): 388 cd
(25%): 607 cd
(40%): 971 cd
(63%): 1529 cd
(100%): 2427 cd

C Plane (°):0.0-360.0: 90.0
Gamma Plane (°):0.0-90.0:1.0
Test Lab:
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 7.172 m [K=1.0000]
Temperature:
Humidity:
Operator:
Inspector:

Isocandela (sphere)



Imax (100%): 2427 cd

(10%): 243 cd	(16%): 388 cd
(25%): 607 cd	(40%): 971 cd
(63%): 1529 cd	(100%): 2427 cd

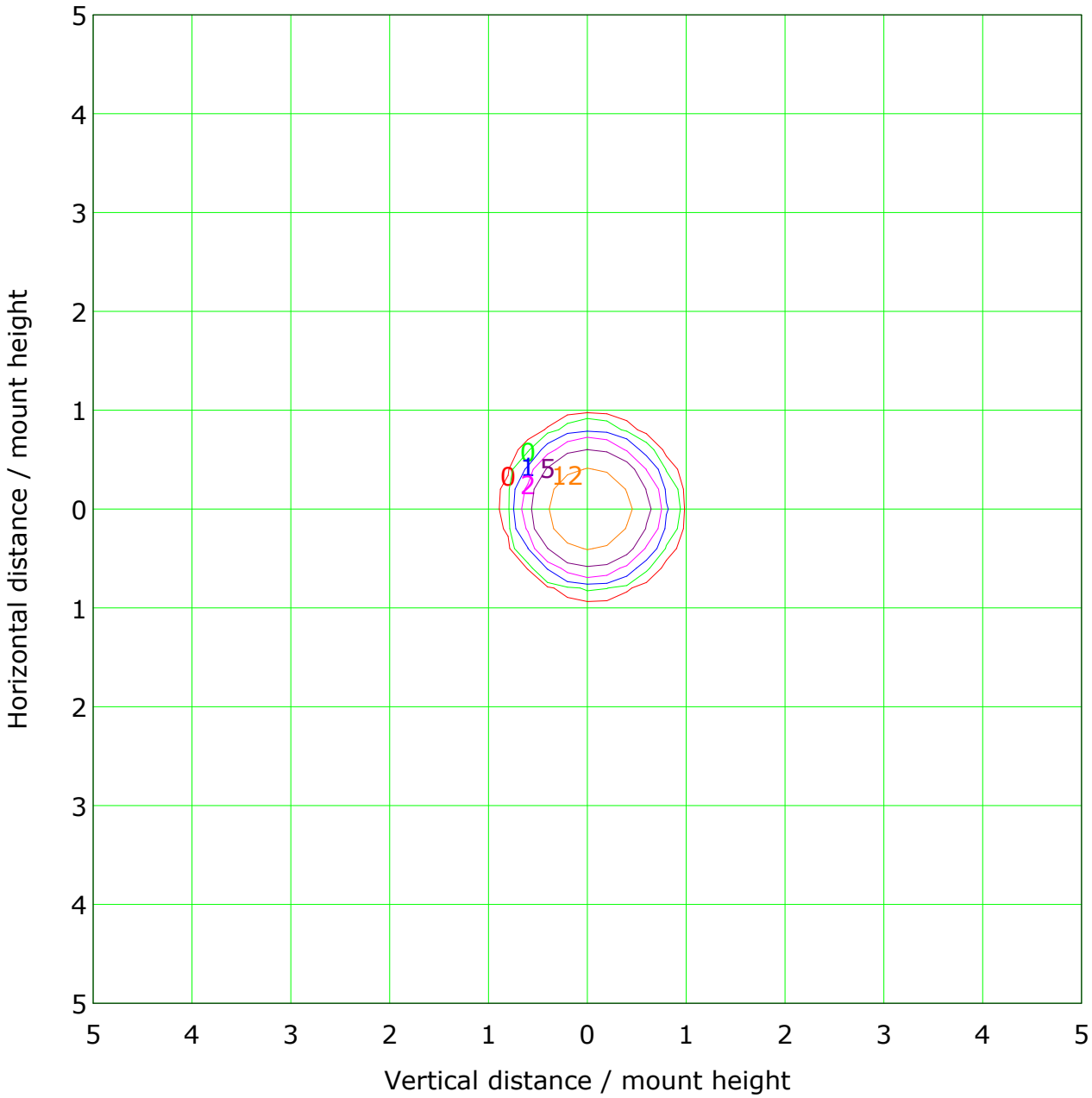
CIE: narrow - short
CIE: Full-cut-off luminaire
Max.At90: 3.887 cd/klm

IES: Cut-off
Max.At80: 4.846 cd/klm
Max.80-90: 4.846 cd/klm

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

IsoLux Plot



Mounting Height: 10.0m Max Lux(100%): 24.0 lx

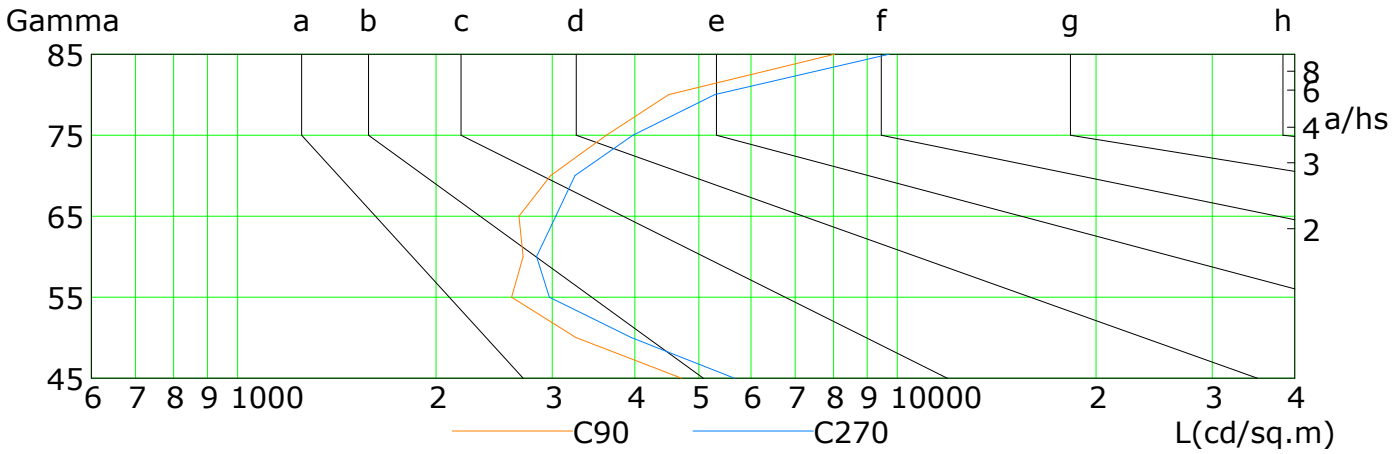
(1%): 0.2 lx	(2%): 0.5 lx
(5%): 1.2 lx	(10%): 2.4 lx
(20%): 4.8 lx	(50%): 12.0 lx
(100%): 24.0 lx	

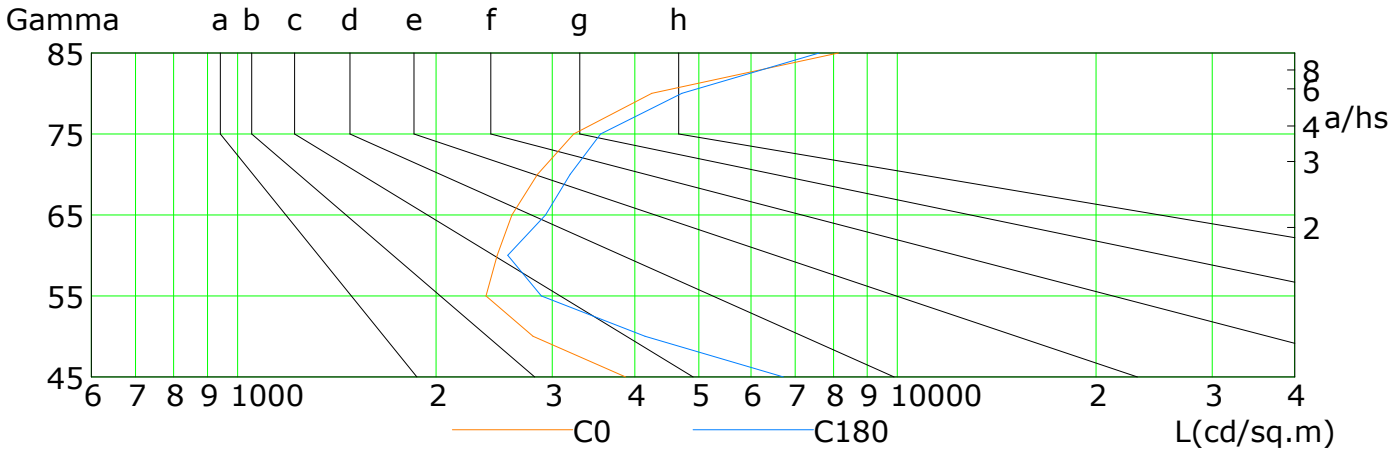
C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
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



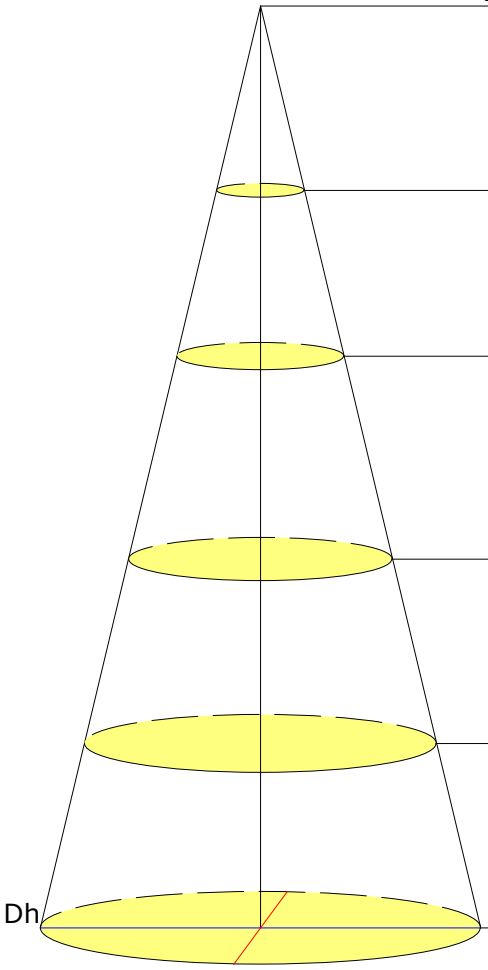


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	3874	2803	2380	2475	2606	2848	3232	4243	8136
C90	4709	3256	2602	2710	2669	2980	3622	4505	8035
C180	6716	4147	2886	2566	2929	3191	3549	4715	7615
C270	5662	3949	2967	2839	3036	3246	3973	5290	9713

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Illuminance at a Distance



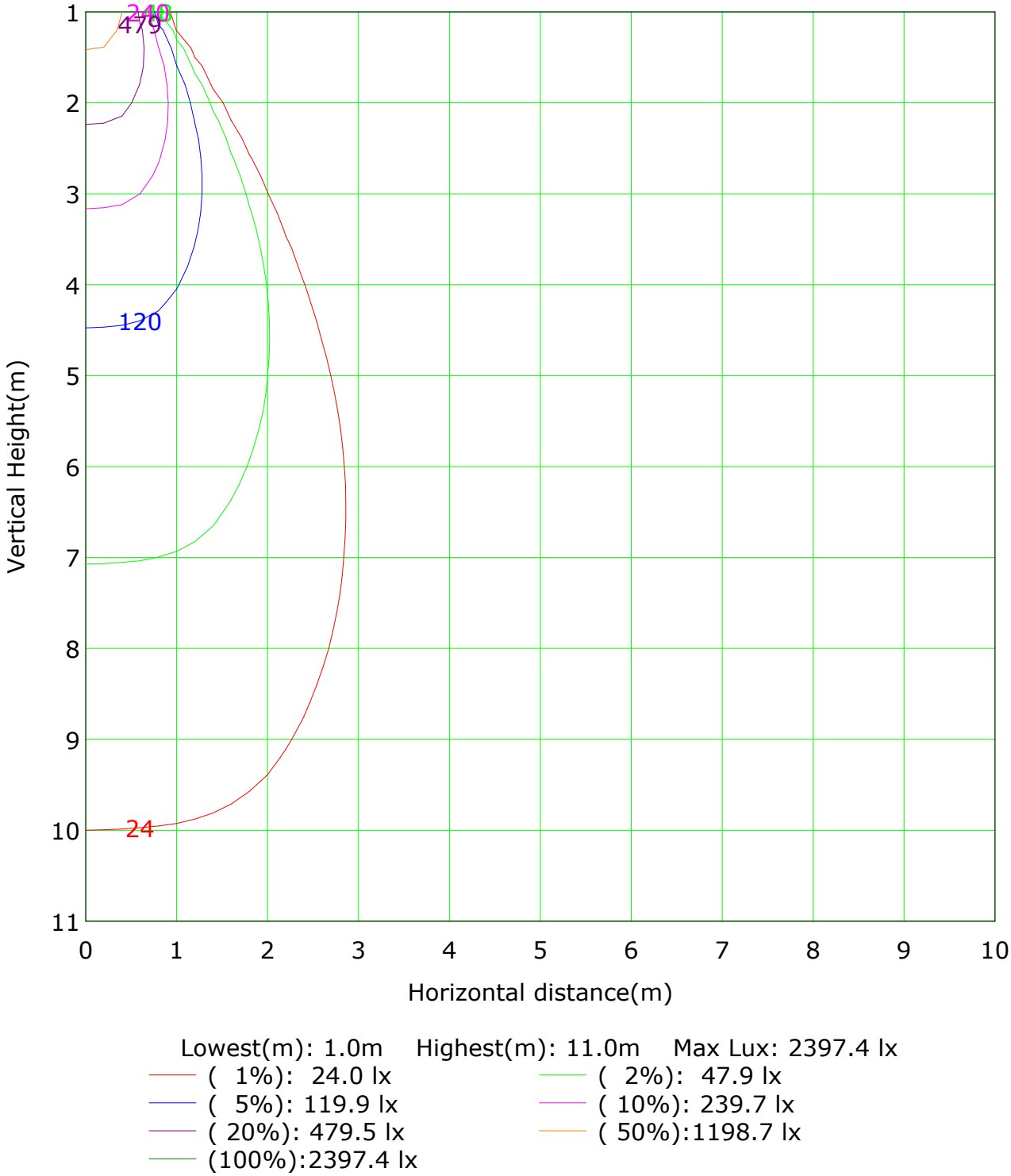
Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
1.0	2397.39	0.97/0.96	0.7	928.18
1.9	664.10	1.84/1.81	2.7	257.11
3.0	266.38	2.90/2.87	6.6	103.13
4.0	149.84	3.87/3.82	11.8	58.01
5.0	95.90	4.84/4.78	18.4	37.13

Beam Angle(B): H51.6 V51.1 Field Angle(F): H74.1 V73.9

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 2397.4 lx

(1%): 24.0 lx
(2%): 47.9 lx
(5%): 119.9 lx
(10%): 239.7 lx
(20%): 479.5 lx
(50%):1198.7 lx
(100%):2397.4 lx

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Area Flux Table

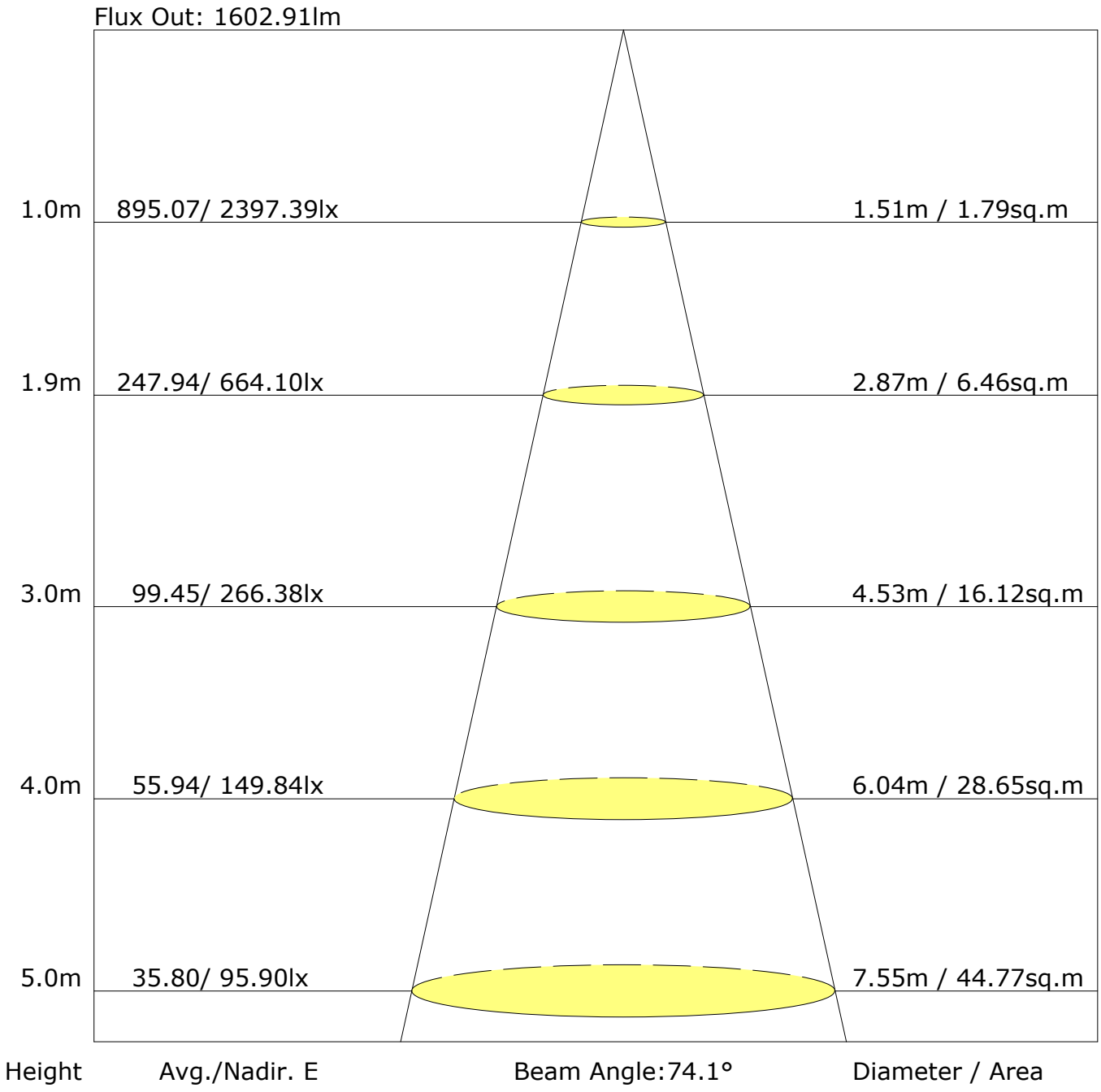
Unit: lm

Vertical plane	Horizontal plane																							
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	Flux(T)	Flux(E)
-90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
-80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
-70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
-60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0
-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.0
-40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.8	40.3
-30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	171.6	162.4
-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	305.5	297.1
-10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	372.4	364.3
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	361.1	353.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	267.0	258.5
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	126.1	116.4
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.4	13.8
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
90	2.4	2.9	3.4	4.3	7.9	48.6	159.1	282.4	352.6	356.1	283.9	150.1	38.1	6.7	3.9	3.2	2.6	2.2	0.0	1710	1606
Flux(E)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Flux(T)	Flux(E)

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

The Average Illuminance Effective Figure



C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
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	13.5	14.3	13.8	14.5	14.7	15.1	15.9	15.4	16.1	16.3
3H	13.6	14.4	13.9	14.6	14.8	15.2	15.9	15.5	16.1	16.4
4H	13.8	14.5	14.1	14.7	15.0	15.3	16.0	15.6	16.2	16.5
6H	14.1	14.7	14.4	15.0	15.3	15.5	16.1	15.8	16.4	16.7
8H	14.3	14.9	14.6	15.2	15.5	15.7	16.3	16.0	16.6	16.9
12H	14.6	15.2	15.0	15.5	15.8	15.9	16.5	16.3	16.8	17.1
X=4H Y=2H	13.4	14.1	13.7	14.3	14.6	15.0	15.6	15.3	15.9	16.2
3H	13.7	14.3	14.0	14.6	14.9	15.1	15.7	15.5	16.0	16.3
4H	14.0	14.5	14.3	14.8	15.2	15.3	15.9	15.7	16.2	16.6
6H	14.4	14.9	14.9	15.3	15.7	15.7	16.2	16.1	16.6	16.9
8H	14.8	15.2	15.2	15.6	16.0	16.0	16.4	16.4	16.8	17.2
12H	15.3	15.7	15.7	16.1	16.5	16.4	16.8	16.9	17.2	17.7
X=8H Y=4H	14.1	14.5	14.5	14.9	15.3	15.4	15.8	15.8	16.2	16.6
6H	14.8	15.1	15.2	15.5	16.0	15.9	16.3	16.4	16.7	17.2
8H	15.3	15.6	15.8	16.0	16.5	16.4	16.7	16.9	17.1	17.6
12H	16.0	16.3	16.5	16.8	17.3	17.0	17.3	17.5	17.8	18.3
X=12H Y=4H	14.1	14.5	14.6	14.9	15.3	15.4	15.8	15.8	16.2	16.6
6H	14.9	15.2	15.4	15.6	16.1	16.0	16.3	16.5	16.8	17.2
8H	15.5	15.8	16.0	16.2	16.7	16.5	16.8	17.0	17.3	17.8
Variations with the observer position at spacings:										
S=1.0H	+4.3/-2.5					+5.0/-3.6				
S=1.5H	+6.8/-2.9					+7.6/-4.0				
S=2.0H	+8.6/-3.2					+9.5/-4.2				

Calculate in accordance with CIE Pub.117. The table is revised with 1711lm (8log(F/F0) = 1.9).

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 0.75								
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	0.87	0.93	0.97	1.00	1.03	1.06	1.07	1.10	1.11
	0.30		0.82	0.89	0.93	0.96	1.00	1.03	1.05	1.07	1.09
	0.20		0.79	0.85	0.90	0.93	0.97	1.00	1.03	1.06	1.08
0.50	0.50	0.20	0.85	0.91	0.95	0.97	1.00	1.03	1.04	1.06	1.07
	0.30		0.81	0.87	0.91	0.94	0.98	1.00	1.02	1.04	1.05
	0.20		0.79	0.85	0.89	0.92	0.96	0.98	1.00	1.03	1.04
0.30	0.50	0.20	0.84	0.90	0.93	0.95	0.98	1.00	1.01	1.02	1.03
	0.30		0.81	0.86	0.90	0.92	0.96	0.98	0.99	1.01	1.02
	0.20		0.78	0.84	0.88	0.90	0.94	0.96	0.98	1.00	1.01
0.00	0.00	0.00	0.77	0.82	0.85	0.88	0.91	0.93	0.94	0.95	0.96

Rating:23W Photometrically tested without ceiling board.

Multiply UF values by service correction factors

Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 0.75								
Room Reflectance			Room Index(RI)								
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.56	0.45	0.38	0.32	0.26	0.21	0.18	0.14	0.11
	0.30		0.46	0.38	0.33	0.29	0.23	0.20	0.17	0.13	0.11
	0.20		0.40	0.33	0.29	0.26	0.21	0.18	0.16	0.12	0.10
0.50	0.50	0.20	0.53	0.42	0.35	0.30	0.24	0.24	0.17	0.13	0.10
	0.30		0.45	0.37	0.31	0.27	0.22	0.18	0.16	0.12	0.10
	0.20		0.39	0.32	0.28	0.25	0.20	0.17	0.15	0.12	0.10
0.30	0.50	0.20	0.51	0.40	0.33	0.28	0.22	0.18	0.15	0.12	0.10
	0.30		0.43	0.35	0.30	0.26	0.20	0.17	0.14	0.11	0.09
	0.20		0.38	0.31	0.27	0.23	0.19	0.16	0.14	0.11	0.09
0.00	0.00	0.00	0.24	0.19	0.15	0.13	0.10	0.08	0.07	0.05	0.04

Rating:23W Photometrically tested without ceiling board.

Multiply UF values by service correction factors

Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 0.75								
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	0.13	0.14	0.15	0.16	0.18	0.19	0.19	0.20	0.21
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.19	0.19
	0.20		0.06	0.08	0.10	0.11	0.13	0.15	0.16	0.17	0.18
0.50	0.50	0.20	0.12	0.14	0.15	0.16	0.17	0.18	0.19	0.19	0.20
	0.30		0.09	0.10	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.06	0.08	0.10	0.11	0.13	0.14	0.15	0.17	0.18
0.30	0.50	0.20	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.19
	0.30		0.08	0.10	0.12	0.13	0.14	0.15	0.16	0.17	0.18
	0.20		0.06	0.08	0.09	0.11	0.13	0.14	0.15	0.16	0.17
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA

Rating:23W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Zonal Lumen

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	2384.2	2.3	2.3	0.13	0.13
1.0-2.0	2383.3	6.8	9.1	0.40	0.53
2.0-3.0	2381.9	11.4	20.5	0.67	1.20
3.0-4.0	2380.8	15.9	36.5	0.93	2.13
4.0-5.0	2381.0	20.5	56.9	1.20	3.33
5.0-6.0	2381.3	25.0	82.0	1.46	4.79
6.0-7.0	2380.2	29.5	111.5	1.73	6.52
7.0-8.0	2377.2	34.0	145.5	1.99	8.51
8.0-9.0	2370.2	38.4	184.0	2.25	10.75
9.0-10.0	2357.9	42.7	226.6	2.49	13.25
10.0-11.0	2338.3	46.7	273.4	2.73	15.98
11.0-12.0	2311.1	50.5	323.9	2.95	18.93
12.0-13.0	2275.9	54.0	377.9	3.16	22.09
13.0-14.0	2228.6	57.1	435.0	3.33	25.42
14.0-15.0	2171.8	59.6	494.6	3.49	28.91
15.0-16.0	2106.9	61.7	556.3	3.61	32.52
16.0-17.0	2034.0	63.3	619.7	3.70	36.22
17.0-18.0	1957.9	64.6	684.3	3.77	40.00
18.0-19.0	1875.5	65.3	749.5	3.81	43.81
19.0-20.0	1789.2	65.5	815.0	3.83	47.64
20.0-21.0	1701.6	65.3	880.4	3.82	51.46
21.0-22.0	1608.5	64.6	945.0	3.78	55.24
22.0-23.0	1514.4	63.6	1008.6	3.71	58.95
23.0-24.0	1418.1	62.0	1070.6	3.62	62.58
24.0-25.0	1322.2	60.1	1130.7	3.51	66.09
25.0-26.0	1230.4	58.1	1188.8	3.40	69.49
26.0-27.0	1135.3	55.5	1244.3	3.25	72.73
27.0-28.0	1038.6	52.6	1296.9	3.07	75.81
28.0-29.0	943.9	49.4	1346.3	2.89	78.69
29.0-30.0	849.3	45.9	1392.2	2.68	81.37
30.0-31.0	757.6	42.2	1434.3	2.46	83.84
31.0-32.0	665.0	38.1	1472.4	2.23	86.07
32.0-33.0	574.7	33.9	1506.3	1.98	88.04
33.0-34.0	494.3	29.9	1536.2	1.75	89.79
34.0-35.0	416.1	25.8	1562.1	1.51	91.30
35.0-36.0	343.4	21.9	1583.9	1.28	92.58

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
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	278.4	18.2	1602.1	1.06	93.64
37.0-38.0	219.8	14.7	1616.8	0.86	94.50
38.0-39.0	172.2	11.8	1628.5	0.69	95.19
39.0-40.0	132.1	9.2	1637.7	0.54	95.73
40.0-41.0	99.3	7.1	1644.8	0.41	96.14
41.0-42.0	75.3	5.5	1650.3	0.32	96.46
42.0-43.0	57.0	4.2	1654.5	0.25	96.71
43.0-44.0	44.4	3.4	1657.8	0.20	96.90
44.0-45.0	36.7	2.8	1660.7	0.16	97.07
45.0-46.0	31.3	2.4	1663.1	0.14	97.21
46.0-47.0	27.9	2.2	1665.3	0.13	97.34
47.0-48.0	25.4	2.1	1667.4	0.12	97.46
48.0-49.0	23.2	1.9	1669.3	0.11	97.57
49.0-50.0	21.4	1.8	1671.1	0.10	97.68
50.0-51.0	19.5	1.7	1672.7	0.10	97.77
51.0-52.0	17.9	1.5	1674.3	0.09	97.86
52.0-53.0	16.4	1.4	1675.7	0.08	97.95
53.0-54.0	15.2	1.3	1677.0	0.08	98.02
54.0-55.0	14.5	1.3	1678.3	0.08	98.10
55.0-56.0	13.7	1.2	1679.6	0.07	98.17
56.0-57.0	13.1	1.2	1680.8	0.07	98.24
57.0-58.0	12.6	1.2	1681.9	0.07	98.31
58.0-59.0	12.3	1.2	1683.1	0.07	98.38
59.0-60.0	12.1	1.1	1684.2	0.07	98.44
60.0-61.0	11.8	1.1	1685.3	0.07	98.51
61.0-62.0	11.7	1.1	1686.5	0.07	98.58
62.0-63.0	11.4	1.1	1687.6	0.06	98.64
63.0-64.0	10.9	1.1	1688.6	0.06	98.70
64.0-65.0	10.8	1.1	1689.7	0.06	98.76
65.0-66.0	10.5	1.1	1690.8	0.06	98.83
66.0-67.0	10.3	1.0	1691.8	0.06	98.89
67.0-68.0	10.0	1.0	1692.8	0.06	98.95
68.0-69.0	9.7	1.0	1693.8	0.06	99.00
69.0-70.0	9.5	1.0	1694.8	0.06	99.06
70.0-71.0	9.3	1.0	1695.7	0.06	99.12
71.0-72.0	8.9	0.9	1696.7	0.05	99.17

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Zonal Lumen (Continue 2)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	8.7	0.9	1697.6	0.05	99.23
73.0-74.0	8.7	0.9	1698.5	0.05	99.28
74.0-75.0	8.6	0.9	1699.4	0.05	99.33
75.0-76.0	8.4	0.9	1700.3	0.05	99.38
76.0-77.0	8.1	0.9	1701.2	0.05	99.43
77.0-78.0	7.9	0.8	1702.0	0.05	99.48
78.0-79.0	7.6	0.8	1702.8	0.05	99.53
79.0-80.0	7.4	0.8	1703.6	0.05	99.58
80.0-81.0	7.2	0.8	1704.4	0.05	99.62
81.0-82.0	7.1	0.8	1705.2	0.04	99.67
82.0-83.0	7.0	0.8	1705.9	0.04	99.71
83.0-84.0	6.8	0.7	1706.7	0.04	99.76
84.0-85.0	6.7	0.7	1707.4	0.04	99.80
85.0-86.0	6.7	0.7	1708.1	0.04	99.84
86.0-87.0	6.5	0.7	1708.8	0.04	99.88
87.0-88.0	6.2	0.7	1709.5	0.04	99.92
88.0-89.0	6.1	0.7	1710.2	0.04	99.96
89.0-90.0	6.1	0.7	1710.8	0.04	100.00

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Zonal Lumen (Continue 3)

cone flux(90°): 1660.67 lm

%lum = 97.1%
%lamp = 97.1%

cone flux(120°): 1684.21 lm

%lum = 98.4%
%lamp = 98.4%

Candlepower Table

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G0.0	2397.4	2372.0	2397.4	2372.0	2397.4					
G1.0	2396.6	2377.9	2398.4	2362.2	2396.6					
G2.0	2396.1	2382.4	2400.1	2352.6	2396.1					
G3.0	2393.1	2387.5	2403.5	2339.9	2393.1					
G4.0	2391.7	2394.0	2407.6	2328.8	2391.7					
G5.0	2390.2	2408.0	2412.1	2315.4	2390.2					
G6.0	2383.5	2418.2	2418.7	2303.9	2383.5					
G7.0	2373.0	2422.4	2423.3	2298.9	2373.0					
G8.0	2357.6	2424.0	2425.3	2292.9	2357.6					
G9.0	2333.8	2415.9	2426.8	2285.1	2333.8					
G10.0	2303.0	2401.8	2422.3	2274.3	2303.0					
G11.0	2259.4	2378.4	2415.4	2251.8	2259.4					
G12.0	2211.1	2346.3	2399.3	2227.4	2211.1					
G13.0	2150.5	2300.8	2378.9	2192.9	2150.5					
G14.0	2073.5	2243.2	2346.8	2141.9	2073.5					
G15.0	2000.8	2176.0	2305.5	2086.8	2000.8					
G16.0	1920.1	2095.5	2250.2	2020.4	1920.1					
G17.0	1831.4	2015.4	2189.8	1949.1	1831.4					
G18.0	1749.8	1929.9	2121.6	1876.5	1749.8					
G19.0	1654.4	1837.1	2041.2	1794.0	1654.4					
G20.0	1567.6	1748.5	1955.2	1715.6	1567.6					
G21.0	1472.9	1652.7	1868.6	1631.3	1472.9					
G22.0	1373.8	1547.8	1778.7	1542.2	1373.8					
G23.0	1280.7	1446.4	1691.3	1454.3	1280.7					
G24.0	1187.5	1336.2	1588.1	1360.1	1187.5					
G25.0	1091.5	1242.9	1496.8	1274.3	1091.5					
G26.0	998.9	1143.8	1405.0	1190.2	998.9					
G27.0	901.8	1042.4	1301.7	1098.3	901.8					
G28.0	804.5	941.0	1204.6	1014.4	804.5					
G29.0	709.8	839.1	1106.2	931.3	709.8					
G30.0	613.4	734.4	1016.6	843.5	613.4					
G31.0	528.9	636.7	925.8	761.7	528.9					
G32.0	435.1	541.3	825.2	665.4	435.1					
G33.0	361.1	458.7	729.1	582.1	361.1					
G34.0	298.8	384.1	636.6	503.7	298.8					
G35.0	235.3	308.8	542.0	419.3	235.3					
G36.0	182.5	249.1	459.2	351.0	182.5					

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Candlepower Table (Continue 1)

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G37.0	133.7	186.6	377.1	288.0	133.7					
G38.0	93.3	139.0	311.3	229.2	93.3					
G39.0	67.8	99.9	255.7	181.3	67.8					
G40.0	50.4	70.6	197.2	133.6	50.4					
G41.0	40.2	53.4	150.5	98.4	40.2					
G42.0	34.6	44.1	110.4	70.8	34.6					
G43.0	30.6	37.4	75.9	52.0	30.6					
G44.0	27.5	33.4	56.6	42.0	27.5					
G45.0	24.7	30.0	42.9	36.1	24.7					
G46.0	22.8	27.2	35.6	31.1	22.8					
G47.0	20.7	25.0	31.7	29.1	20.7					
G48.0	19.5	23.0	28.2	26.3	19.5					
G49.0	17.6	20.9	26.0	24.2	17.6					
G50.0	16.3	18.9	24.1	22.9	16.3					
G51.0	14.6	17.3	21.9	20.4	14.6					
G52.0	13.6	15.6	20.4	19.2	13.6					
G53.0	12.8	13.6	17.9	17.7	12.8					
G54.0	12.8	13.5	16.7	16.7	12.8					
G55.0	12.3	13.5	14.9	15.4	12.3					
G56.0	11.9	13.3	13.6	14.4	11.9					
G57.0	12.0	12.7	12.9	13.9	12.0					
G58.0	11.3	12.6	12.5	13.3	11.3					
G59.0	11.3	11.8	12.4	13.4	11.3					
G60.0	11.2	12.2	11.6	12.8	11.2					
G61.0	10.5	11.8	11.7	12.7	10.5					
G62.0	11.1	11.7	11.7	12.3	11.1					
G63.0	9.5	11.3	11.1	12.2	9.5					
G64.0	9.9	10.5	10.9	12.0	9.9					
G65.0	9.9	10.2	11.2	11.6	9.9					
G66.0	9.5	10.4	10.4	11.0	9.5					
G67.0	9.7	10.0	10.3	11.5	9.7					
G68.0	9.0	9.4	9.7	10.8	9.0					
G69.0	9.0	9.0	9.9	10.6	9.0					
G70.0	8.8	9.2	9.9	10.0	8.8					
G71.0	8.3	8.9	9.4	10.2	8.3					
G72.0	8.0	8.5	8.5	9.8	8.0					
G73.0	8.0	8.5	8.3	9.7	8.0					

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Candlepower Table (Continue 2)

Unit: cd

G\C	C0.0	C90.0	C180.0	C270.0	C360.0					
G74.0	7.9	8.6	8.6	9.8	7.9					
G75.0	7.6	8.5	8.3	9.3	7.6					
G76.0	7.9	8.1	8.0	9.4	7.9					
G77.0	7.1	7.6	7.8	9.1	7.1					
G78.0	6.9	8.0	7.8	8.5	6.9					
G79.0	7.5	6.8	7.1	8.6	7.5					
G80.0	6.7	7.1	7.4	8.3	6.7					
G81.0	6.3	7.5	6.7	7.7	6.3					
G82.0	6.7	6.7	7.1	7.9	6.7					
G83.0	6.4	6.9	6.7	7.5	6.4					
G84.0	6.2	6.7	6.9	7.1	6.2					
G85.0	6.4	6.3	6.0	7.6	6.4					
G86.0	6.2	6.8	6.5	7.3	6.2					
G87.0	5.9	6.1	6.1	6.8	5.9					
G88.0	5.5	6.0	6.0	7.1	5.5					
G89.0	5.6	6.2	5.2	7.1	5.6					
G90.0	6.4	5.9	5.9	6.7	6.4					

C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:1.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector: