

Report No.:

Test Time: 2023-04-11 14:55

Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Lamp Catalog:

Number of Lamps:

Luminous Length (mm): 155

Luminous Height (mm): 50

Current: 0.179 A

Power Factor: 0.490

Luminaire Description:

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 95

Voltage: 220.4 V

Power: 19.36 W

Photometric Results

CIE Class: Direct

Measurement Flux: 1460.1 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H33.9

Vertical Diffuse Angle(50%): V33.6

Luminaire Efficacy Rating (LER): 75.47

Max. Intensity: 2542.04 cd

S/MH(C0/C180): 0.54

Total Rated Lamp Lumens: 1460.1 lm

Efficiency: 100%

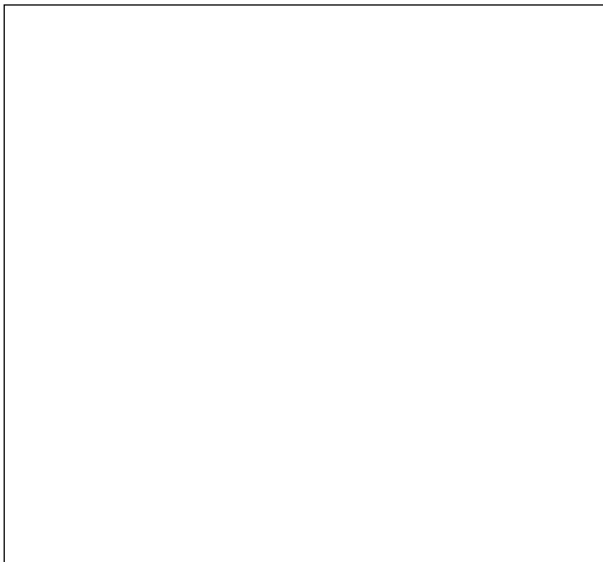
Upward Ratio: 1%

C0r0 Intensity: 2542.03 cd

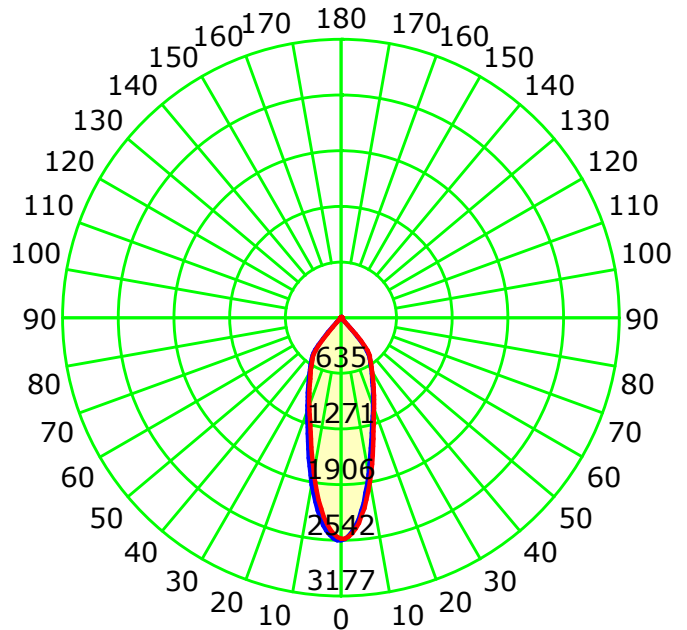
Pos of Max. Intensity: H0 V0

S/MH(C90/C270): 0.53

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 33.8°

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

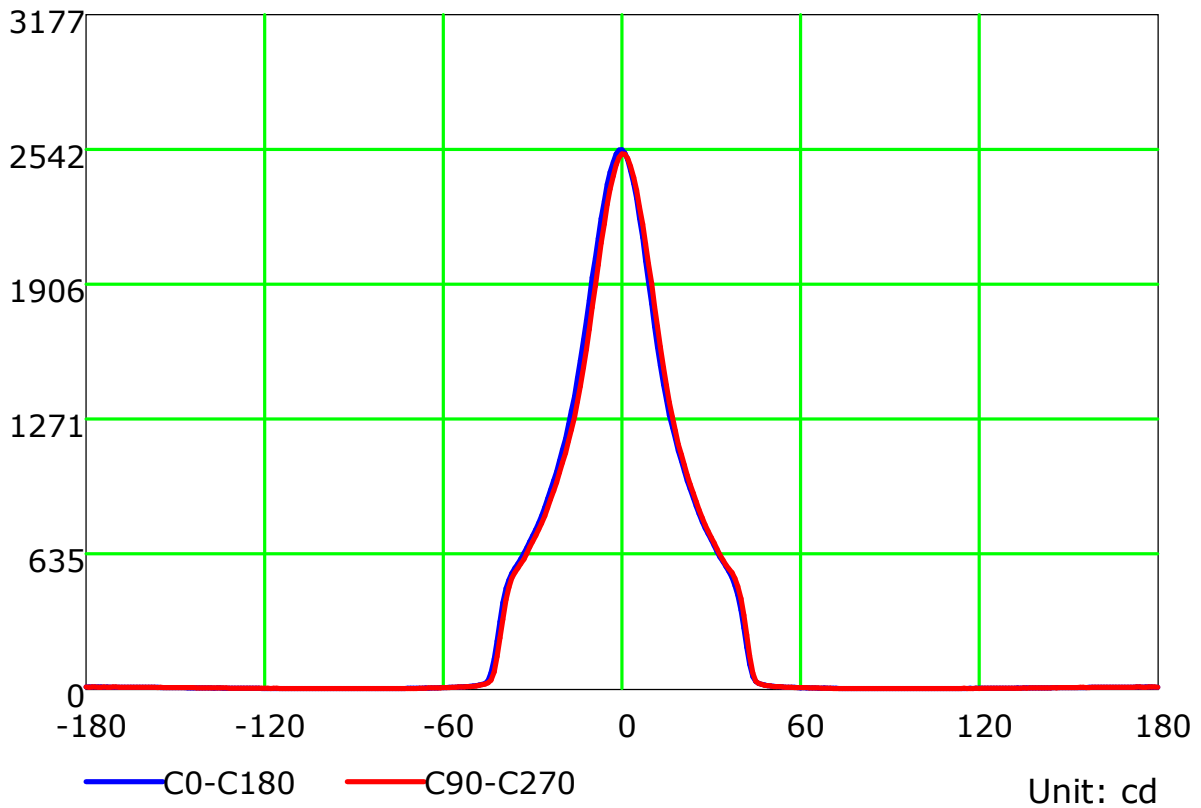
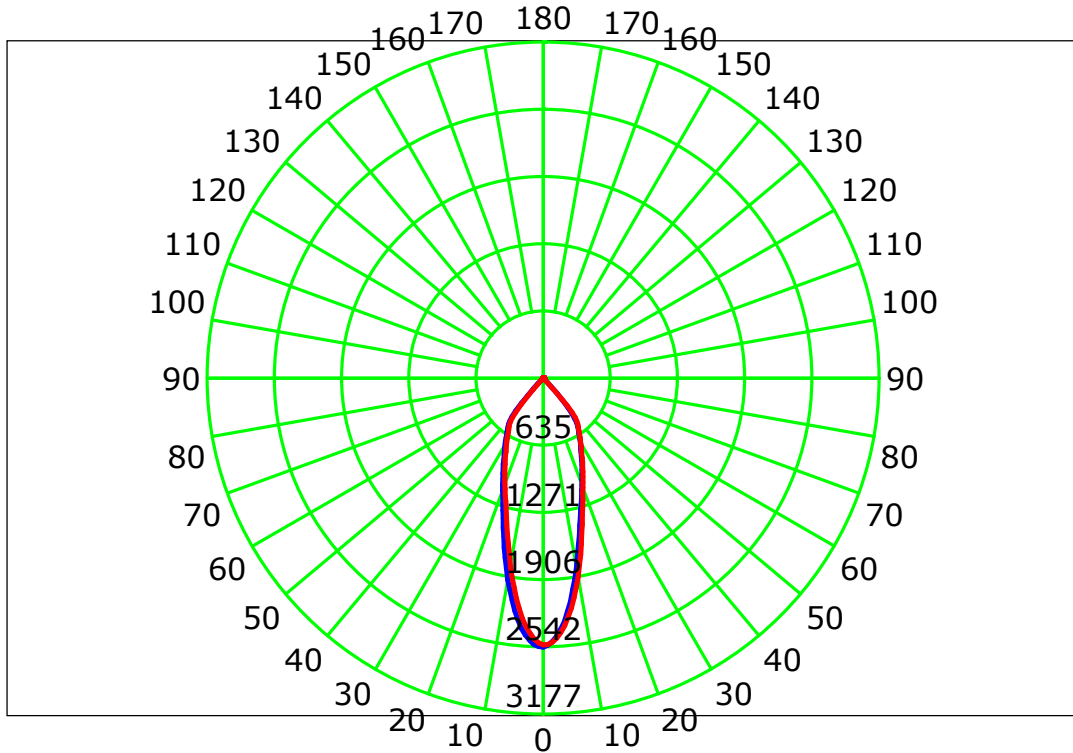
Test Device: GPM-1600L

Distance: 6.043 m [K=1.0000]

Humidity:

Inspector:

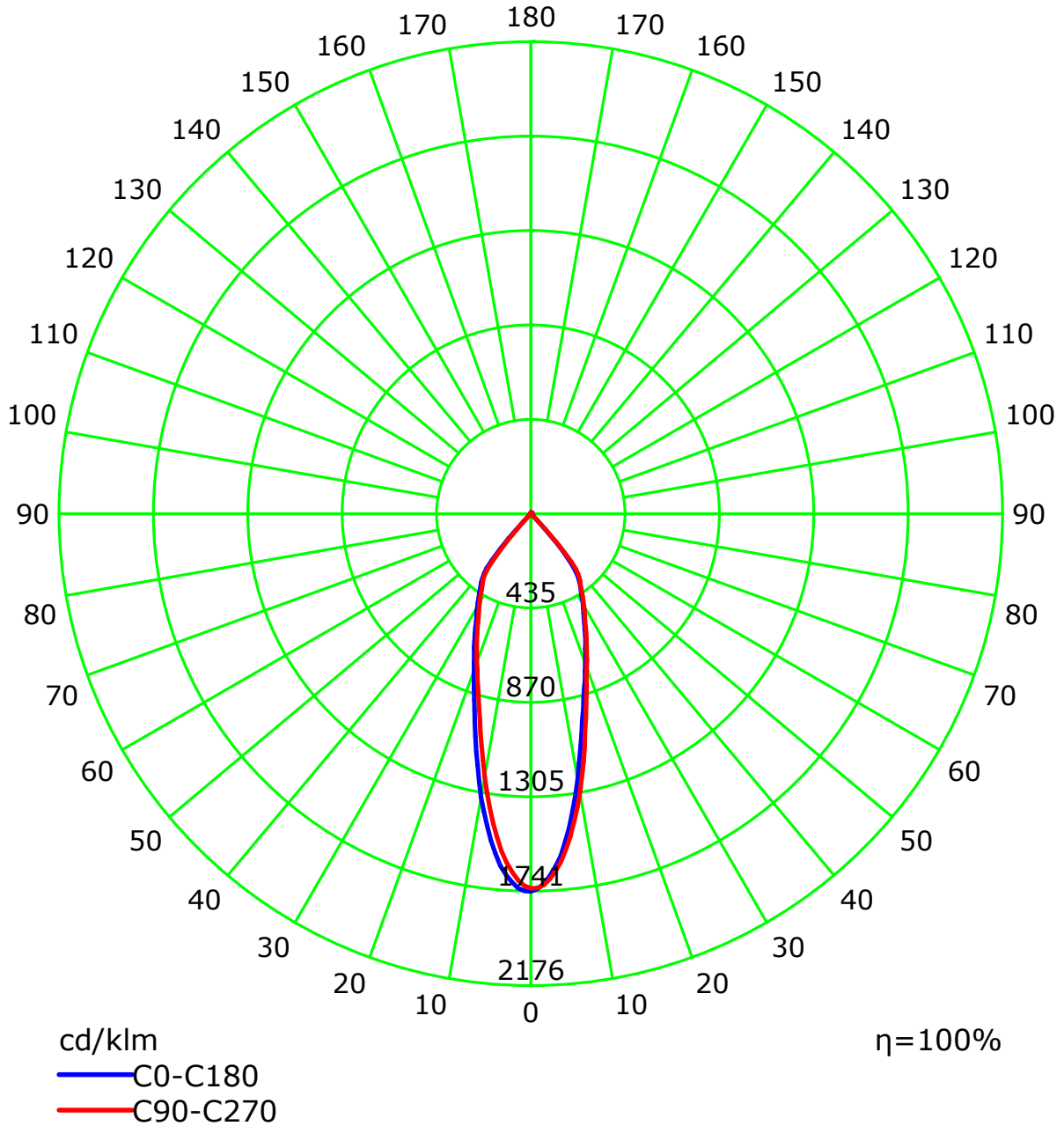
Luminous Intensity Distribution Curve



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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 6.043 m [K=1.0000]
Humidity:
Inspector:

Luminous Intensity Distribution Curve(cd/klm)



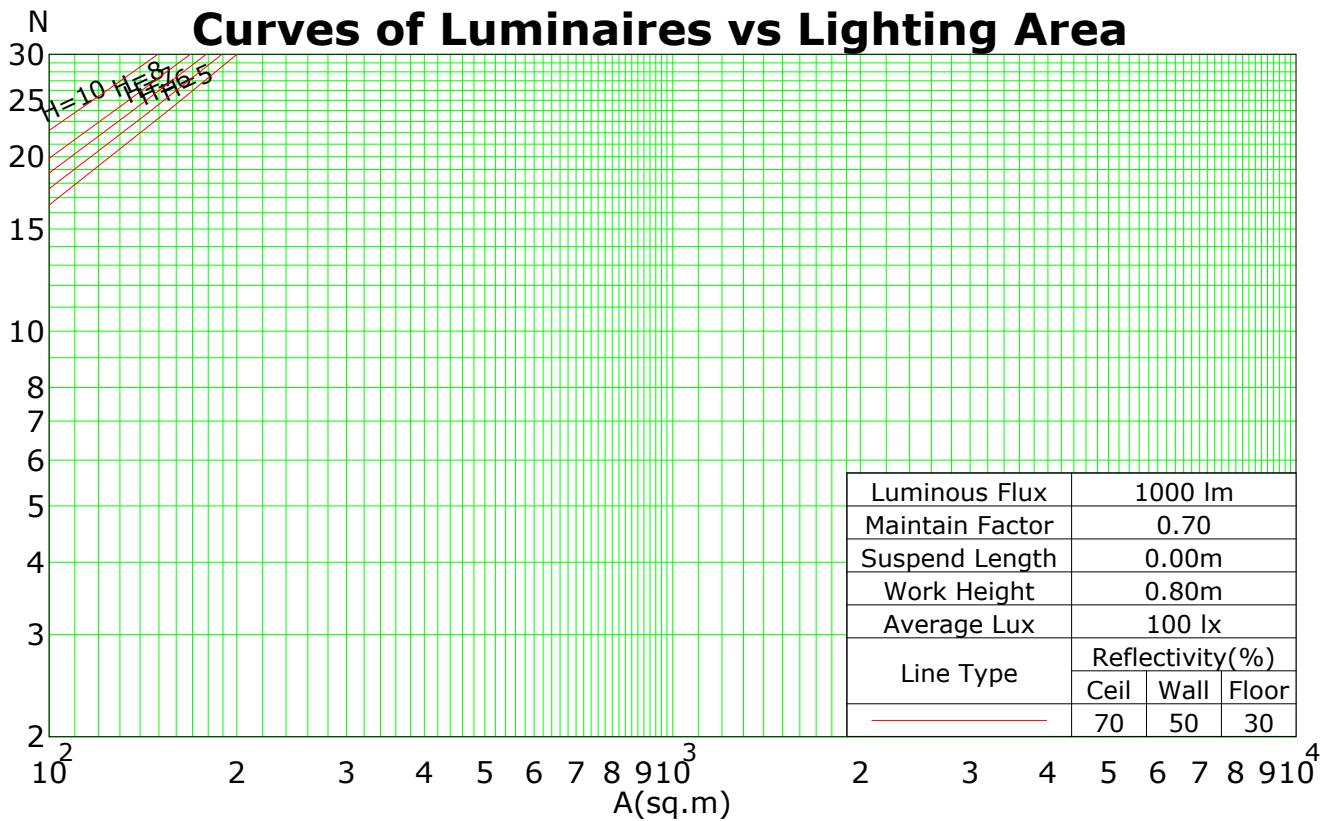
C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 6.043 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	1.01	1.01	1.01	0.99
1	1.13	1.11	1.08	1.06	1.11	1.08	1.06	1.04	1.04	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.93
2	1.08	1.03	0.99	0.96	1.06	1.01	0.98	0.95	0.98	0.95	0.92	0.95	0.92	0.90	0.92	0.90	0.88	0.87
3	1.03	0.96	0.91	0.88	1.01	0.95	0.90	0.87	0.92	0.88	0.85	0.90	0.86	0.84	0.87	0.85	0.82	0.81
4	0.98	0.90	0.85	0.81	0.96	0.89	0.84	0.80	0.87	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.76
5	0.93	0.85	0.79	0.75	0.91	0.84	0.78	0.74	0.82	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.72	0.71
6	0.88	0.80	0.74	0.70	0.87	0.79	0.73	0.69	0.77	0.72	0.69	0.76	0.71	0.68	0.74	0.71	0.68	0.66
7	0.84	0.75	0.69	0.65	0.83	0.74	0.69	0.65	0.73	0.68	0.64	0.72	0.67	0.64	0.70	0.67	0.64	0.62
8	0.80	0.71	0.65	0.61	0.79	0.70	0.65	0.61	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.63	0.60	0.59
9	0.76	0.67	0.61	0.57	0.75	0.66	0.61	0.57	0.65	0.60	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.55
10	0.73	0.64	0.58	0.54	0.72	0.63	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.61	0.56	0.53	0.52

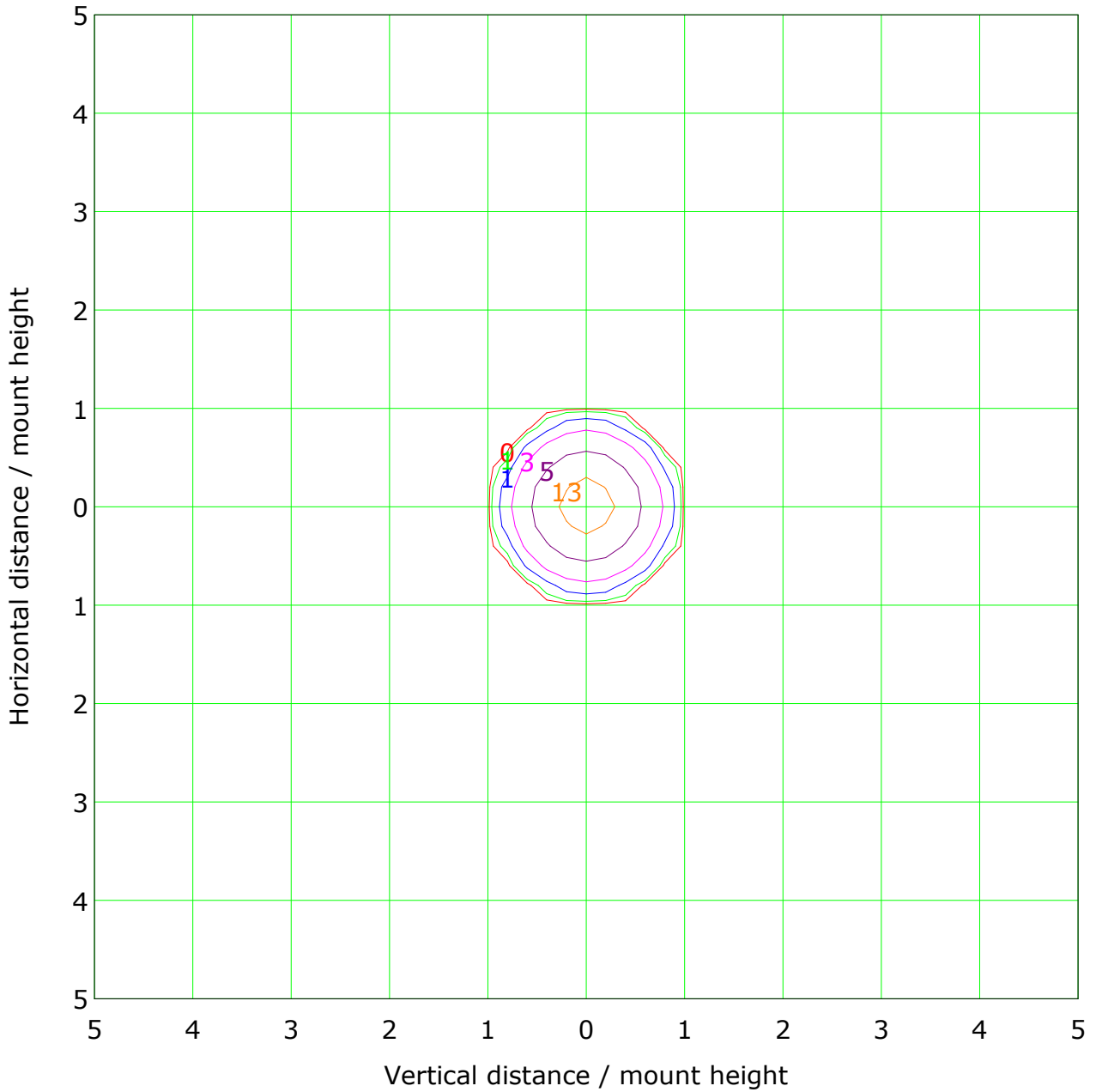
Spacing Criteria (0-180): 0.54
 Spacing Criteria (90-270): 0.53
 Spacing Criteria (Diagonal): 0.67



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

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 6.043 m [K=1.0000]
 Humidity:
 Inspector:

IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 25.4 lx	
<ul style="list-style-type: none"> <li style="margin-bottom: 5px;">— (1%): 0.3 lx <li style="margin-bottom: 5px;">— (5%): 1.3 lx <li style="margin-bottom: 5px;">— (20%): 5.1 lx <li style="margin-bottom: 5px;">— (100%): 25.4 lx 	<ul style="list-style-type: none"> <li style="margin-bottom: 5px;">— (2%): 0.5 lx <li style="margin-bottom: 5px;">— (10%): 2.5 lx <li style="margin-bottom: 5px;">— (50%): 12.7 lx 		

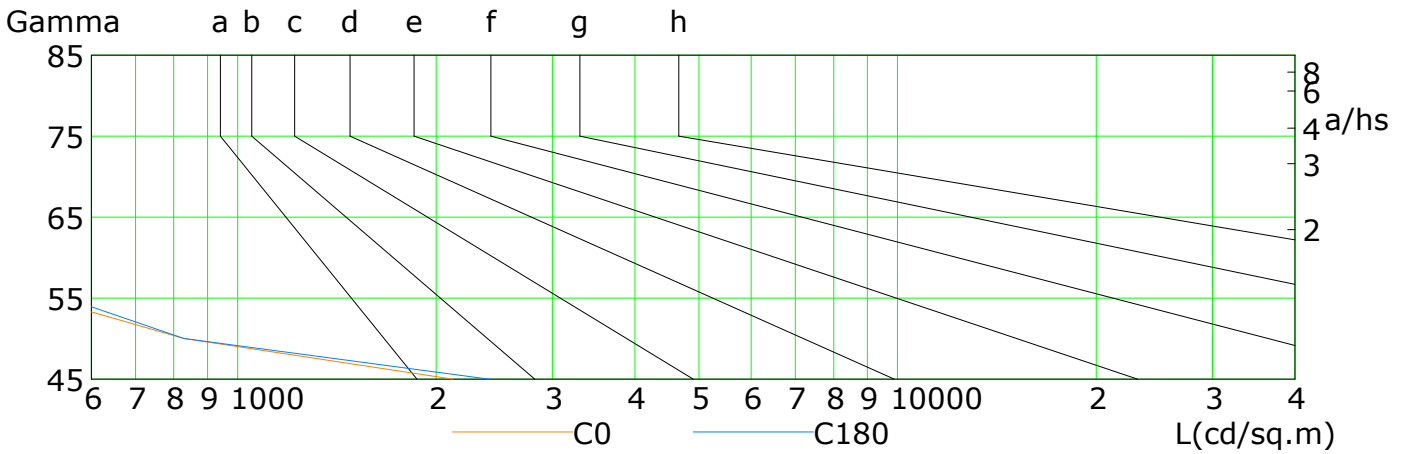
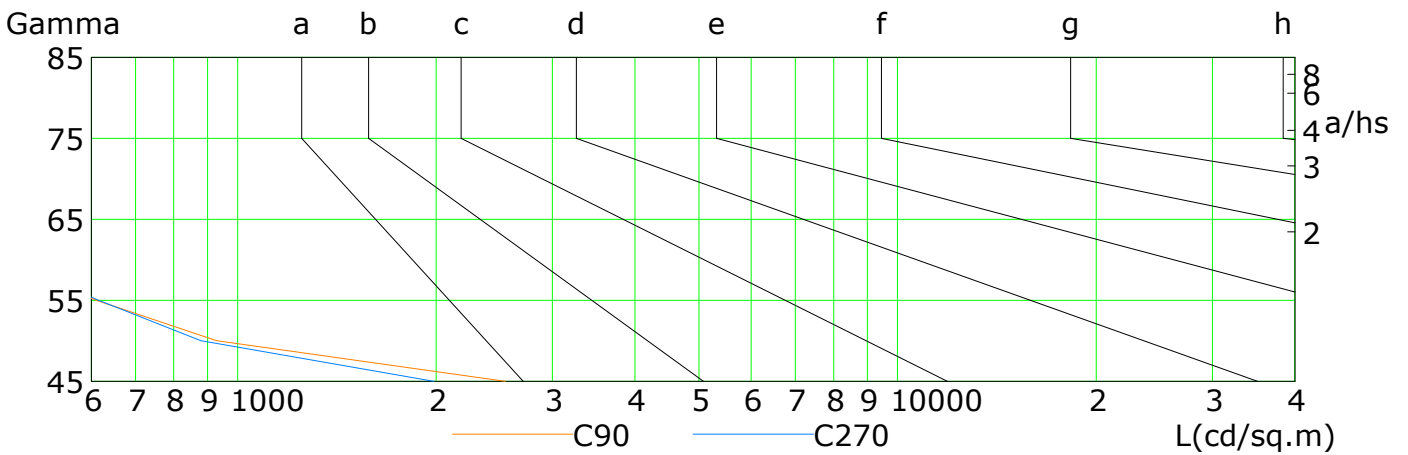
C Plane (°):0.0-360.0: 90.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 6.043 m [K=1.0000]
 Humidity:
 Inspector:

Lum Limit Curve

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

a b c d e f g h

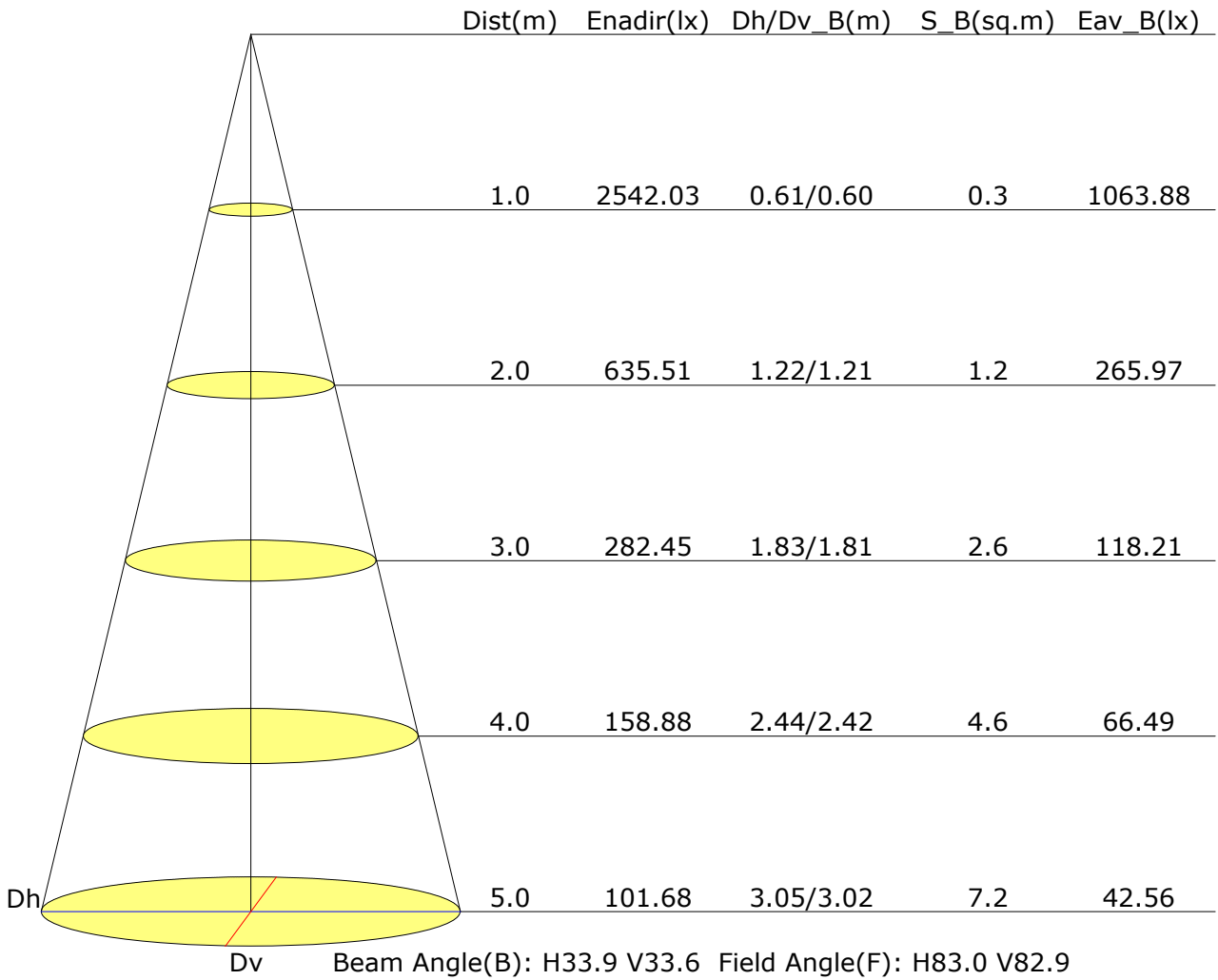


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	2119	829	510	308	260	135	121	99	66
C90	2544	929	611	440	311	200	142	173	168
C180	2402	829	550	346	202	144	100	81	92
C270	1983	879	616	451	294	156	170	115	198

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

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 6.043 m [K=1.0000]
 Humidity:
 Inspector:

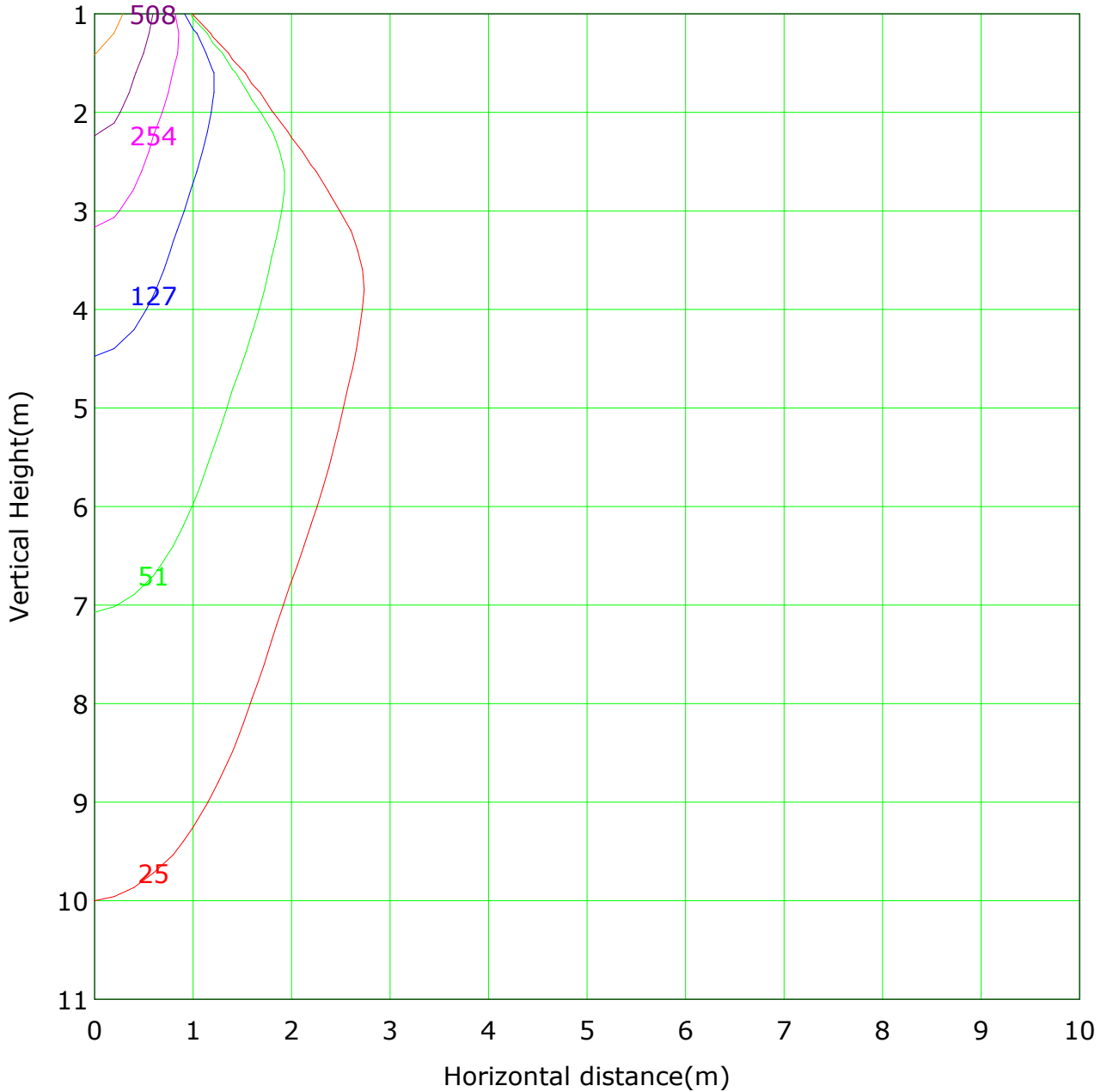
Illuminance at a Distance



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

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 6.043 m [K=1.0000]
 Humidity:
 Inspector:

Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 2542.0 lx

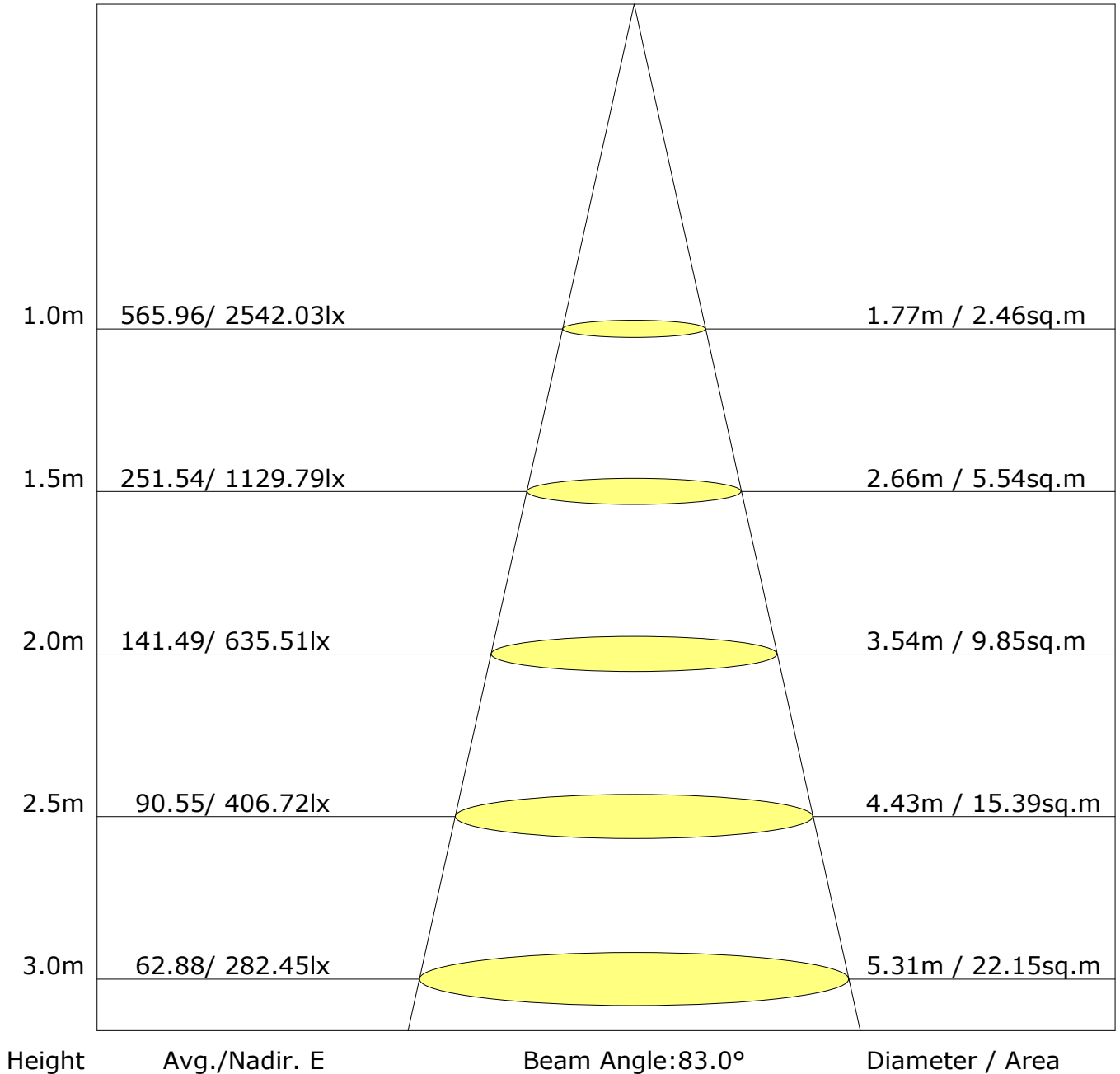
— (1%): 25.4 lx	— (2%): 50.8 lx
— (5%): 127.1 lx	— (10%): 254.2 lx
— (20%): 508.4 lx	— (50%): 1271.0 lx
— (100%): 2542.0 lx	

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

Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1600L
 Distance: 6.043 m [K=1.0000]
 Humidity:
 Inspector:

The Average Illuminance Effective Figure

Flux Out: 1393.20lm



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

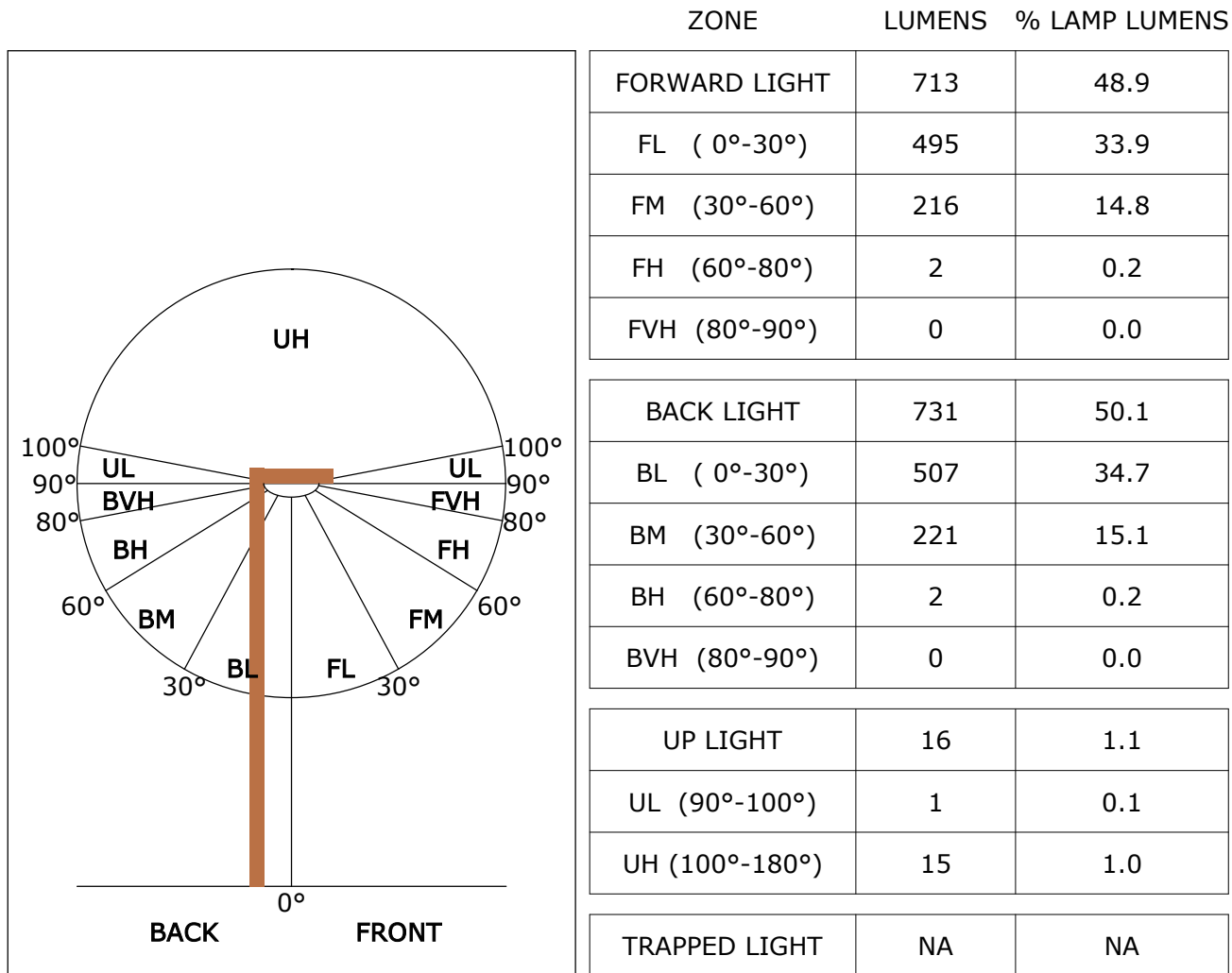
Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1600L
 Distance: 6.043 m [K=1.0000]
 Humidity:
 Inspector:

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	15.7	16.5	15.9	16.7	17.0	15.9	16.8	16.2	17.0	17.2
3H	15.5	16.3	15.8	16.5	16.8	15.8	16.6	16.1	16.8	17.1
4H	15.4	16.2	15.8	16.4	16.7	15.7	16.4	16.1	16.7	17.0
6H	15.4	16.0	15.7	16.3	16.6	15.6	16.3	16.0	16.6	16.9
8H	15.3	16.0	15.7	16.3	16.6	15.6	16.2	16.0	16.5	16.9
12H	15.3	15.9	15.7	16.2	16.6	15.6	16.2	15.9	16.5	16.8
X=4H Y=2H	15.4	16.2	15.8	16.4	16.7	15.7	16.4	16.1	16.7	17.0
3H	15.3	15.9	15.7	16.2	16.6	15.6	16.2	15.9	16.5	16.8
4H	15.2	15.7	15.6	16.1	16.5	15.5	16.0	15.9	16.4	16.8
6H	15.1	15.6	15.6	16.0	16.4	15.4	15.9	15.8	16.3	16.7
8H	15.1	15.5	15.5	15.9	16.4	15.4	15.8	15.8	16.2	16.6
12H	15.0	15.4	15.5	15.8	16.3	15.3	15.7	15.8	16.1	16.6
X=8H Y=4H	15.1	15.5	15.5	15.9	16.3	15.4	15.8	15.8	16.2	16.6
6H	15.0	15.3	15.5	15.8	16.3	15.3	15.6	15.7	16.1	16.5
8H	14.9	15.2	15.4	15.7	16.2	15.2	15.5	15.7	16.0	16.5
12H	14.9	15.2	15.4	15.6	16.2	15.2	15.4	15.7	15.9	16.4
X=12H Y=4H	15.0	15.4	15.5	15.8	16.3	15.3	15.7	15.8	16.1	16.6
6H	14.9	15.2	15.4	15.7	16.2	15.2	15.5	15.7	16.0	16.5
8H	14.9	15.2	15.4	15.6	16.2	15.2	15.4	15.7	15.9	16.4
Variations with the observer position at spacings:										
S=1.0H	+4.3/-16.5					+4.4/-16.4				
S=1.5H	+7.0/-18.4					+7.3/-17.9				
S=2.0H	+9.0/-19.1					+9.3/-18.9				

Calculate in accordance with CIE Pub.117. The table is revised with 1460lm ($8\log(F/F_0) = 1.3$).

FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM



BUG(Backlight,Uplight,Glare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B2 U2 G0
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B2 U2 G0

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

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600L
 Distance: 6.043 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	0.82	0.88	0.93	0.96	1.00	1.03	1.04	1.07	1.08	
		0.30	0.77	0.84	0.89	0.92	0.97	1.00	1.02	1.04	1.06	
		0.20	0.74	0.81	0.85	0.89	0.94	0.97	0.99	1.03	1.05	
0.50	0.50	0.20	0.80	0.87	0.91	0.93	0.97	0.99	1.01	1.03	1.04	
		0.30	0.76	0.83	0.87	0.90	0.94	0.97	0.99	1.01	1.02	
		0.20	0.73	0.80	0.84	0.88	0.92	0.95	0.97	1.00	1.01	
0.30	0.50	0.20	0.79	0.85	0.89	0.91	0.94	0.96	0.98	0.99	1.00	
		0.30	0.75	0.82	0.86	0.88	0.92	0.94	0.96	0.98	0.99	
		0.20	0.73	0.79	0.83	0.86	0.90	0.93	0.94	0.97	0.98	
0.00	0.00	0.00	0.71	0.77	0.81	0.84	0.87	0.89	0.90	0.92	0.93	
<p>Rating:19W 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)

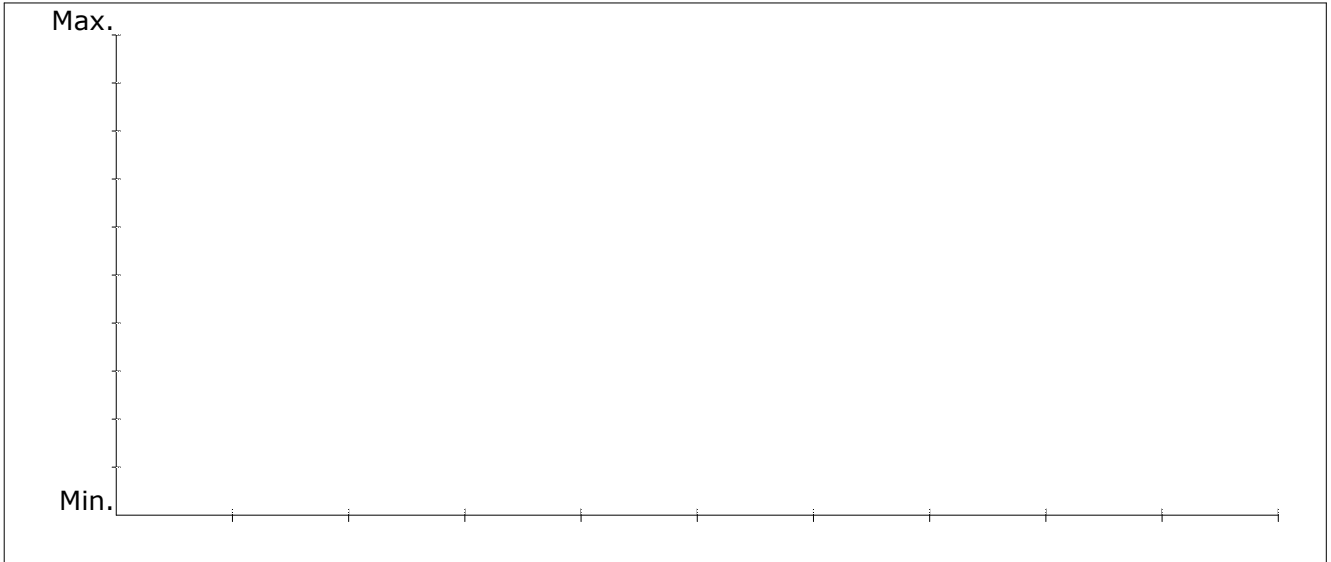
Utilisation Factors UF(W)			SHR NOM = 0.75									
Room Reflectance			Room Index(RI)									
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	
0.70	0.50	0.20	0.59	0.47	0.39	0.34	0.26	0.22	0.18	0.14	0.11	
	0.30		0.49	0.40	0.34	0.30	0.24	0.20	0.17	0.13	0.11	
	0.20		0.42	0.35	0.30	0.27	0.22	0.18	0.16	0.13	0.10	
0.50	0.50	0.20	0.56	0.44	0.37	0.31	0.24	0.24	0.17	0.13	0.10	
	0.30		0.47	0.38	0.32	0.28	0.22	0.18	0.16	0.12	0.10	
	0.20		0.41	0.34	0.29	0.25	0.20	0.17	0.15	0.12	0.10	
0.30	0.50	0.20	0.53	0.41	0.34	0.29	0.22	0.18	0.15	0.12	0.10	
	0.30		0.46	0.37	0.31	0.26	0.21	0.17	0.15	0.11	0.09	
	0.20		0.40	0.33	0.28	0.24	0.19	0.16	0.14	0.11	0.09	
0.00	0.00	0.00	0.27	0.20	0.17	0.14	0.11	0.09	0.07	0.05	0.04	
<p>Rating:19W 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 = 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	0.14	0.15	0.16	0.17	0.19	0.19	0.20	0.21	0.21
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.07	0.09	0.10	0.12	0.14	0.15	0.16	0.18	0.19
0.50	0.50	0.20	0.13	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.21
	0.30		0.10	0.11	0.13	0.14	0.15	0.17	0.17	0.19	0.19
	0.20		0.07	0.09	0.10	0.12	0.13	0.15	0.16	0.17	0.18
0.30	0.50	0.20	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.19	0.20
	0.30		0.09	0.11	0.12	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		0.07	0.09	0.10	0.11	0.13	0.15	0.16	0.17	0.18
0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Rating:19W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											

Preheating curve

Preheating curve



Preheat time: 0 h

Sample interval: 1 s

Stable range: 0.00 %

Stable time: 00:00:00

C Plane (°): 0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°): 0.0-180.0: 1.0

Test Device: GPM-1600L

Distance: 6.043 m [K=1.0000]

Humidity:

Inspector: