

Report No.:

Test Time: 2026-01-12 16:31

Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Lamp Catalog: 4000K

Number of Lamps:

Luminous Length (mm): 600

Luminous Height (mm): 27

Current: 0.0900 A

Power Factor: 0.9640

Luminaire Description:

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 130

Voltage: 232.10 V

Power: 20.18 W

Photometric Results

CIE Class: Direct

Measurement Flux: 2446.1 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H89.8

Vertical Diffuse Angle(50%): V83.9

Luminous Efficacy (lm/w): 121.21

Max. Intensity: 494.84 cd/klm

S/MH(C0/C180): 1.21

Total Rated Lamp Lumens: 2446.1 lm

Efficiency: 100%

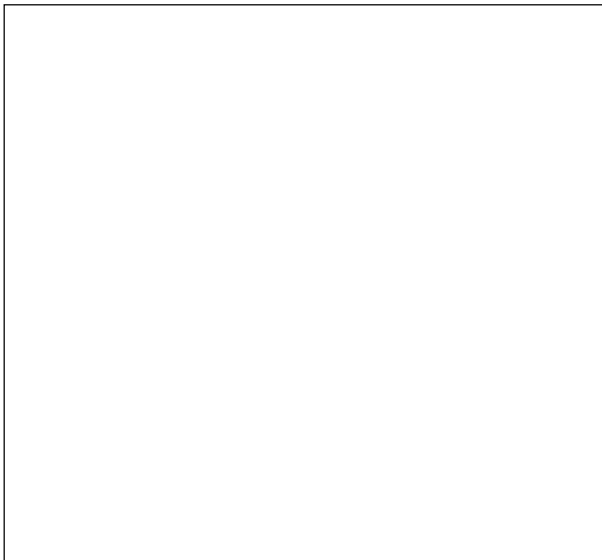
Upward Ratio: 0%

C0r0 Intensity: 494.54 cd/klm

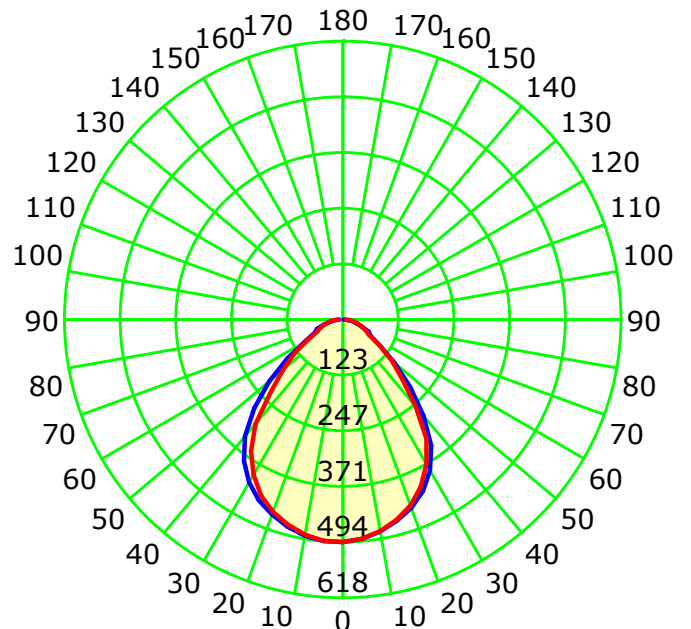
Pos of Max. Intensity: H90 V0

S/MH(C90/C270): 1.16

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd/klm

Average Diffuse Angle(50%): 86.9°

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:5.0

Test Device: GPM-1600L

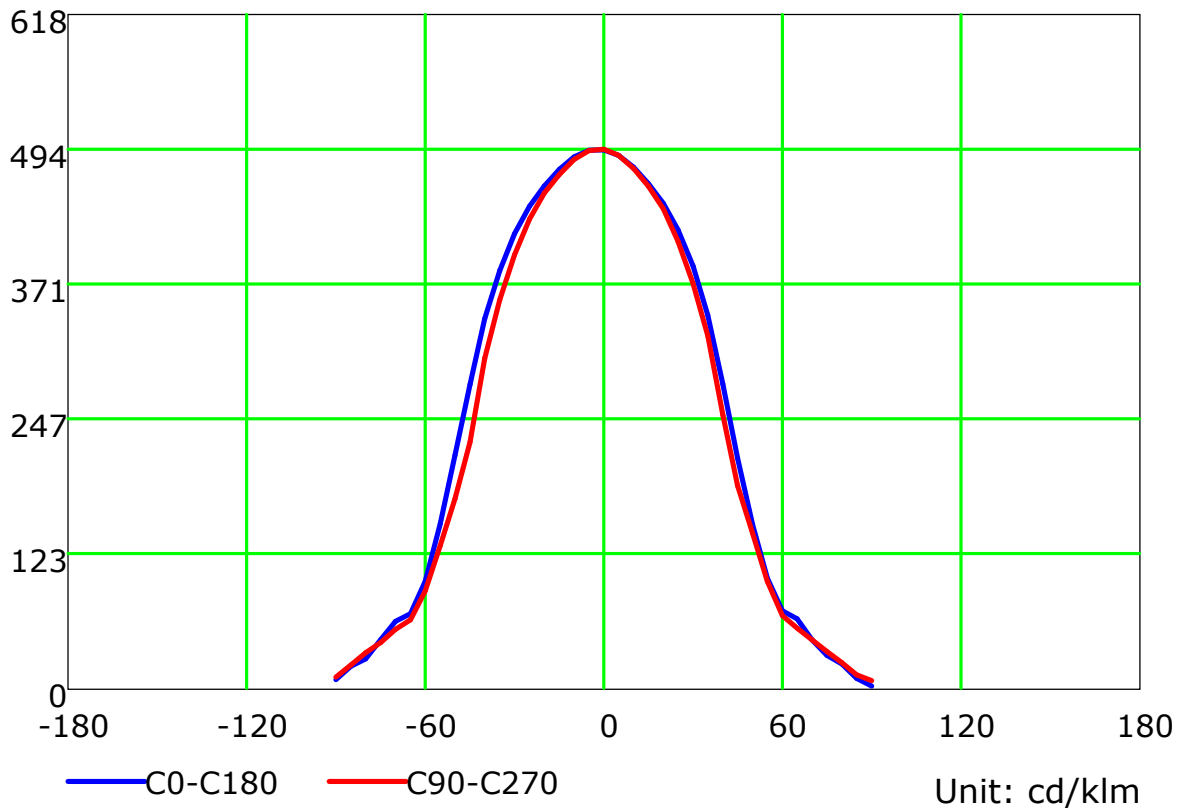
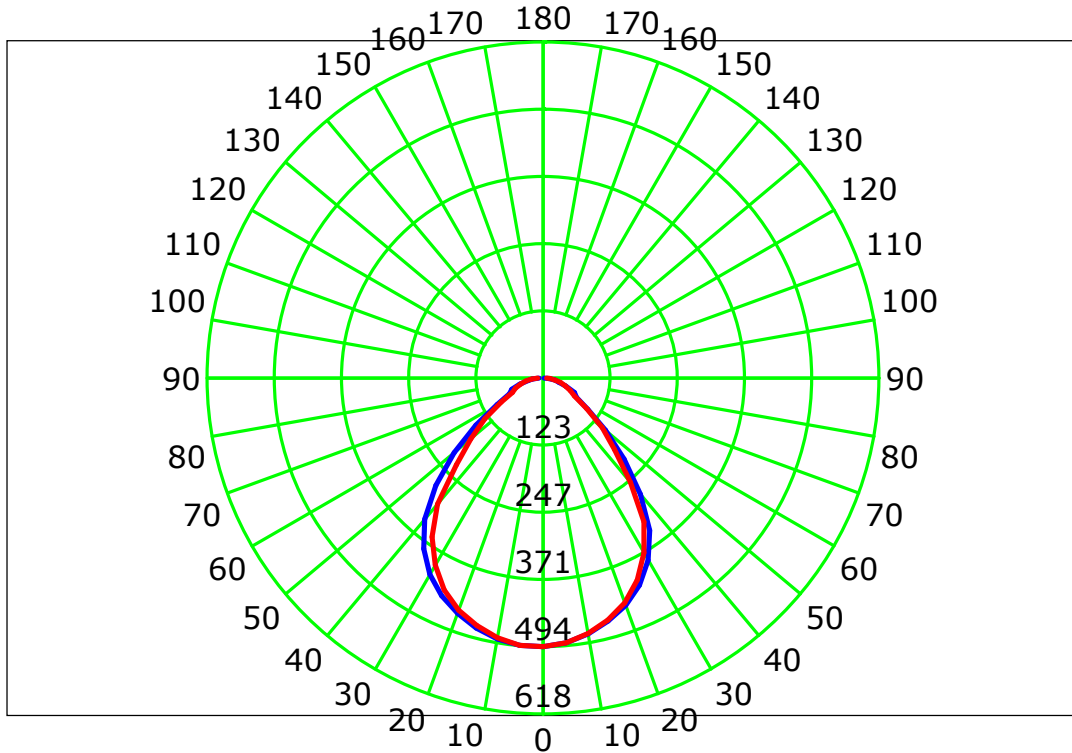
Distance: 7.172 m [K=1.0000]

Humidity:

Inspector:



Luminous Intensity Distribution Curve

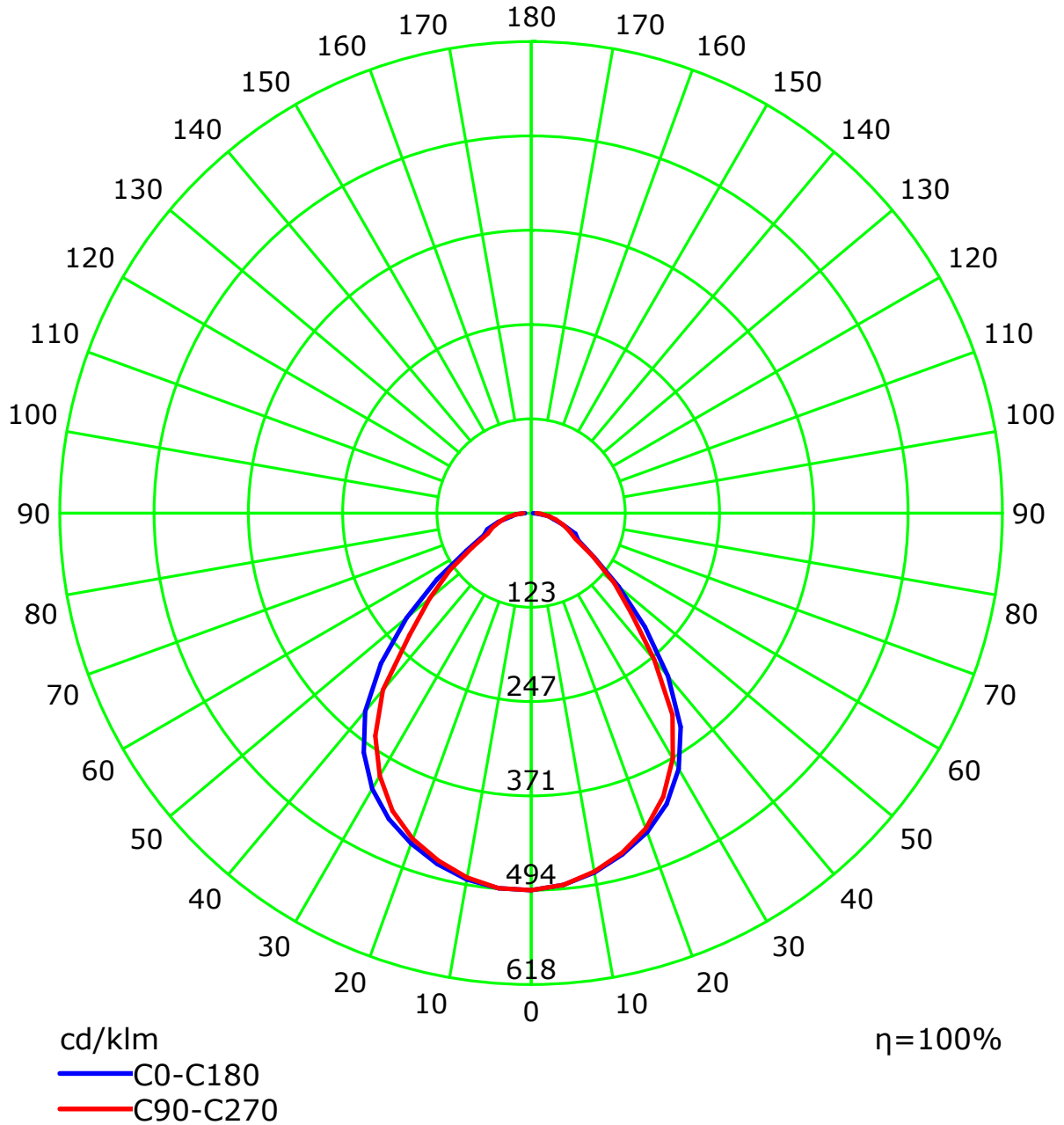


C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-90.0:5.0
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:

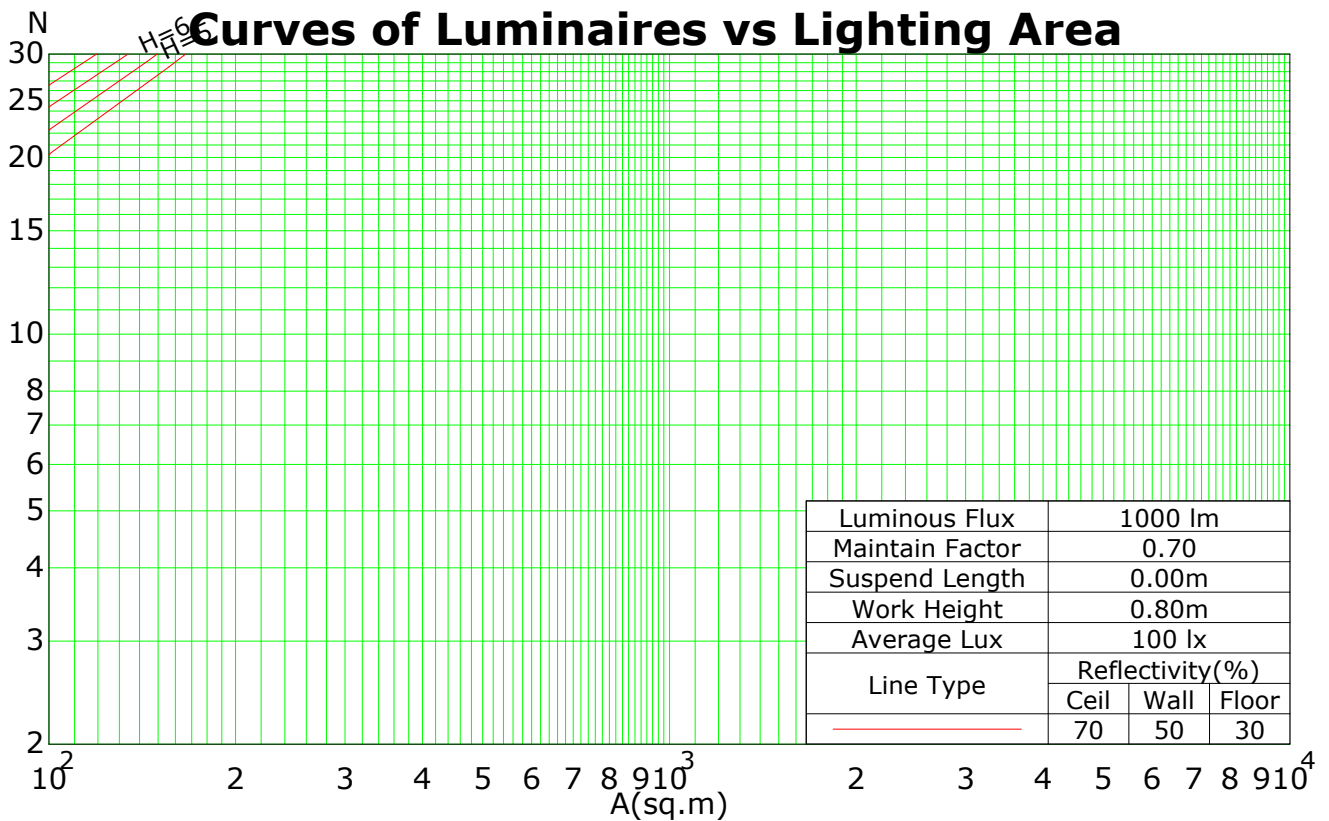
Gamma Plane (°):0.0-90.0:5.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:



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	1.10	1.06	1.02	0.99	1.08	1.04	1.00	0.97	1.00	0.97	0.94	0.96	0.94	0.91	0.92	0.90	0.89	0.87
2	1.02	0.95	0.89	0.84	0.99	0.93	0.87	0.83	0.89	0.85	0.81	0.86	0.82	0.79	0.83	0.80	0.77	0.75
3	0.94	0.85	0.78	0.72	0.92	0.83	0.77	0.71	0.80	0.75	0.70	0.78	0.73	0.69	0.75	0.71	0.68	0.66
4	0.87	0.76	0.69	0.63	0.85	0.75	0.68	0.62	0.73	0.66	0.61	0.70	0.65	0.61	0.68	0.64	0.60	0.58
5	0.81	0.69	0.61	0.55	0.79	0.68	0.61	0.55	0.66	0.59	0.54	0.64	0.58	0.54	0.62	0.57	0.53	0.51
6	0.75	0.63	0.55	0.49	0.73	0.62	0.55	0.49	0.60	0.54	0.49	0.59	0.53	0.48	0.57	0.52	0.48	0.46
7	0.70	0.58	0.50	0.44	0.69	0.57	0.49	0.44	0.56	0.49	0.44	0.54	0.48	0.43	0.53	0.47	0.43	0.41
8	0.66	0.53	0.45	0.40	0.64	0.53	0.45	0.40	0.51	0.44	0.40	0.50	0.44	0.39	0.49	0.43	0.39	0.37
9	0.62	0.49	0.42	0.36	0.60	0.49	0.41	0.36	0.47	0.41	0.36	0.46	0.40	0.36	0.45	0.40	0.36	0.34
10	0.58	0.46	0.38	0.33	0.57	0.45	0.38	0.33	0.44	0.38	0.33	0.43	0.37	0.33	0.42	0.37	0.33	0.31

Spacing Criteria (0-180): 1.21
 Spacing Criteria (90-270): 1.16
 Spacing Criteria (Diagonal): 1.22

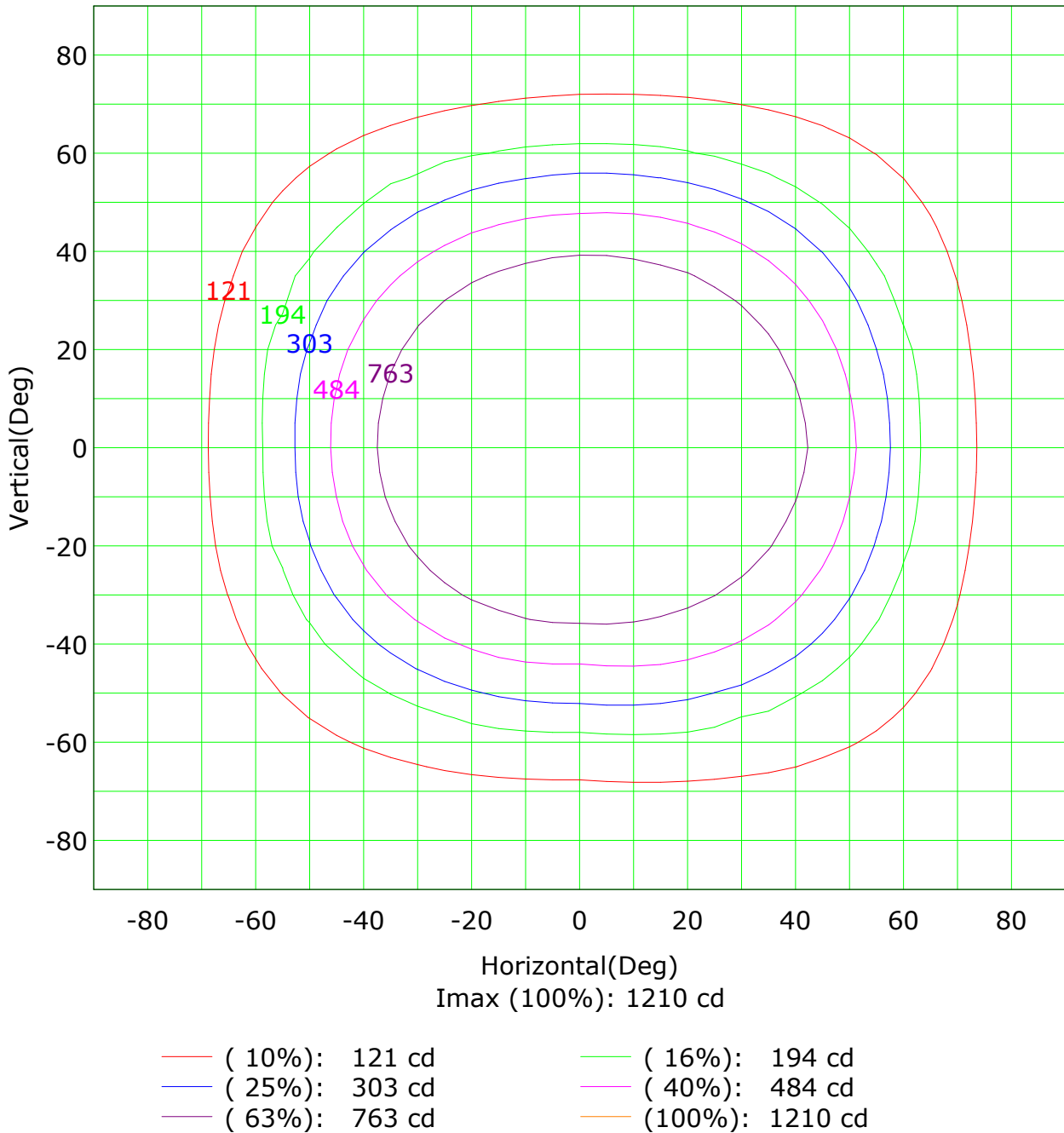


C Plane (°):0.0-360.0: 90.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:5.0
 Test Device: GPM-1600L
 Distance: 7.172 m [K=1.0000]
 Humidity:
 Inspector:



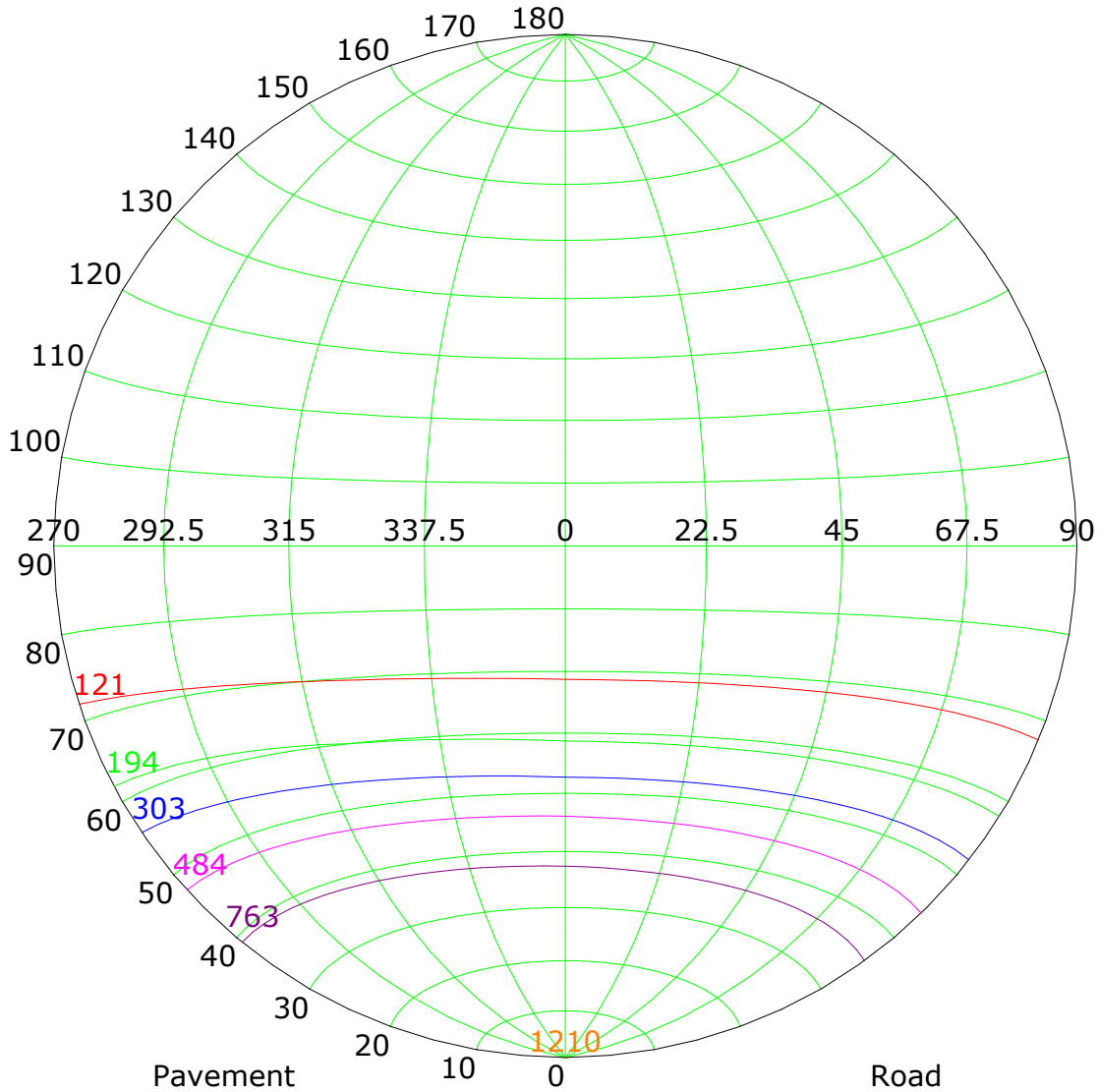
Isocandela (rectangle)



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

Gamma Plane (°):0.0-90.0:5.0
Test Device: GPM-1600L
Distance: 7.172 m [K=1.0000]
Humidity:
Inspector:

Isocandela (sphere)



Imax (100%): 1210 cd

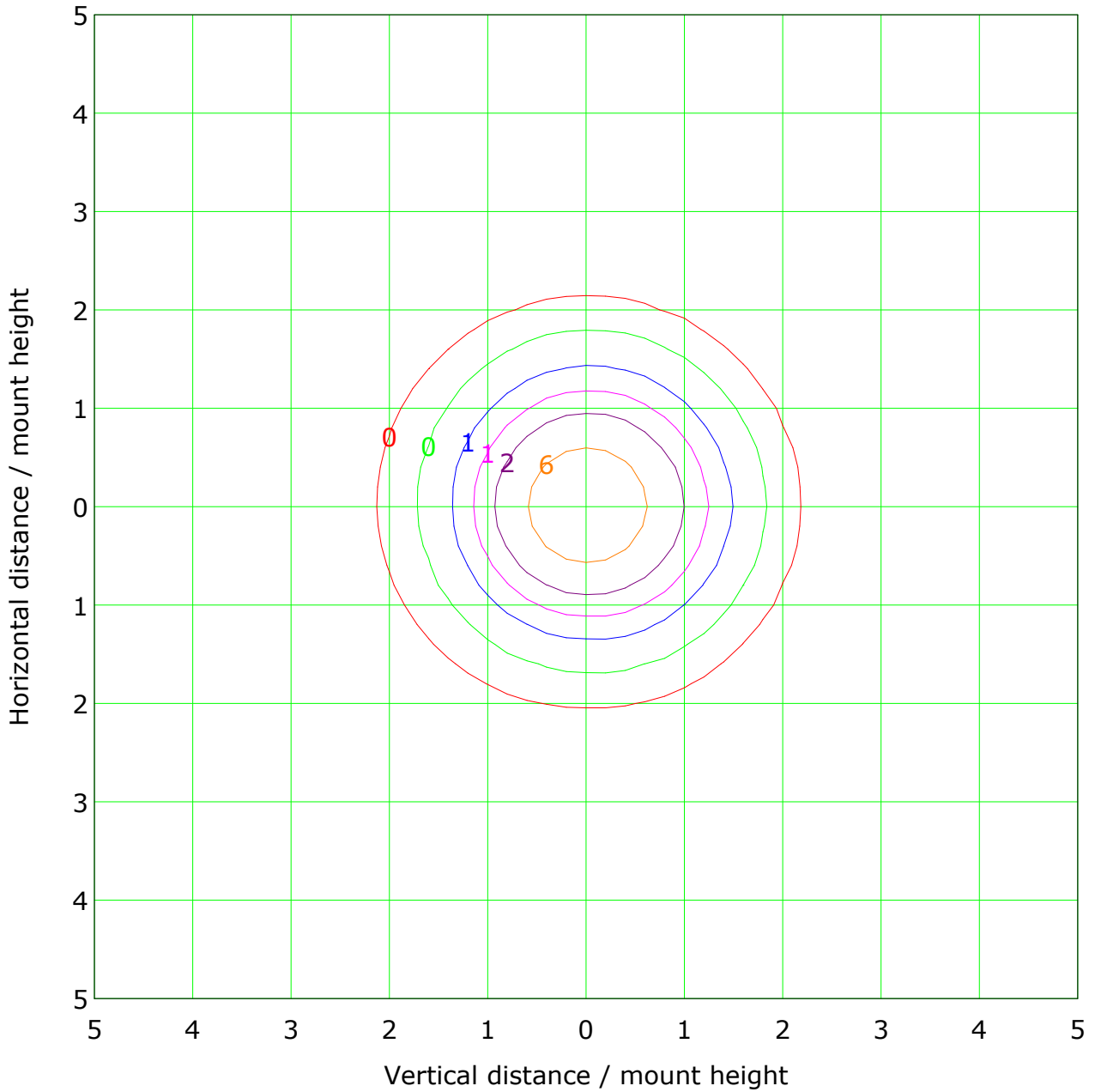
— (10%): 121 cd	— (16%): 194 cd
— (25%): 303 cd	— (40%): 484 cd
— (63%): 763 cd	— (100%): 1210 cd

CIE: narrow - short
 CIE: Non-cut-off luminaire
 Max.At90: 18.224 cd/klm

IES: Semi-cut-off
 Max.At80: 182.050 cd/klm
 Max.80-90: 146015841.363 cd/klm



IsoLux Plot



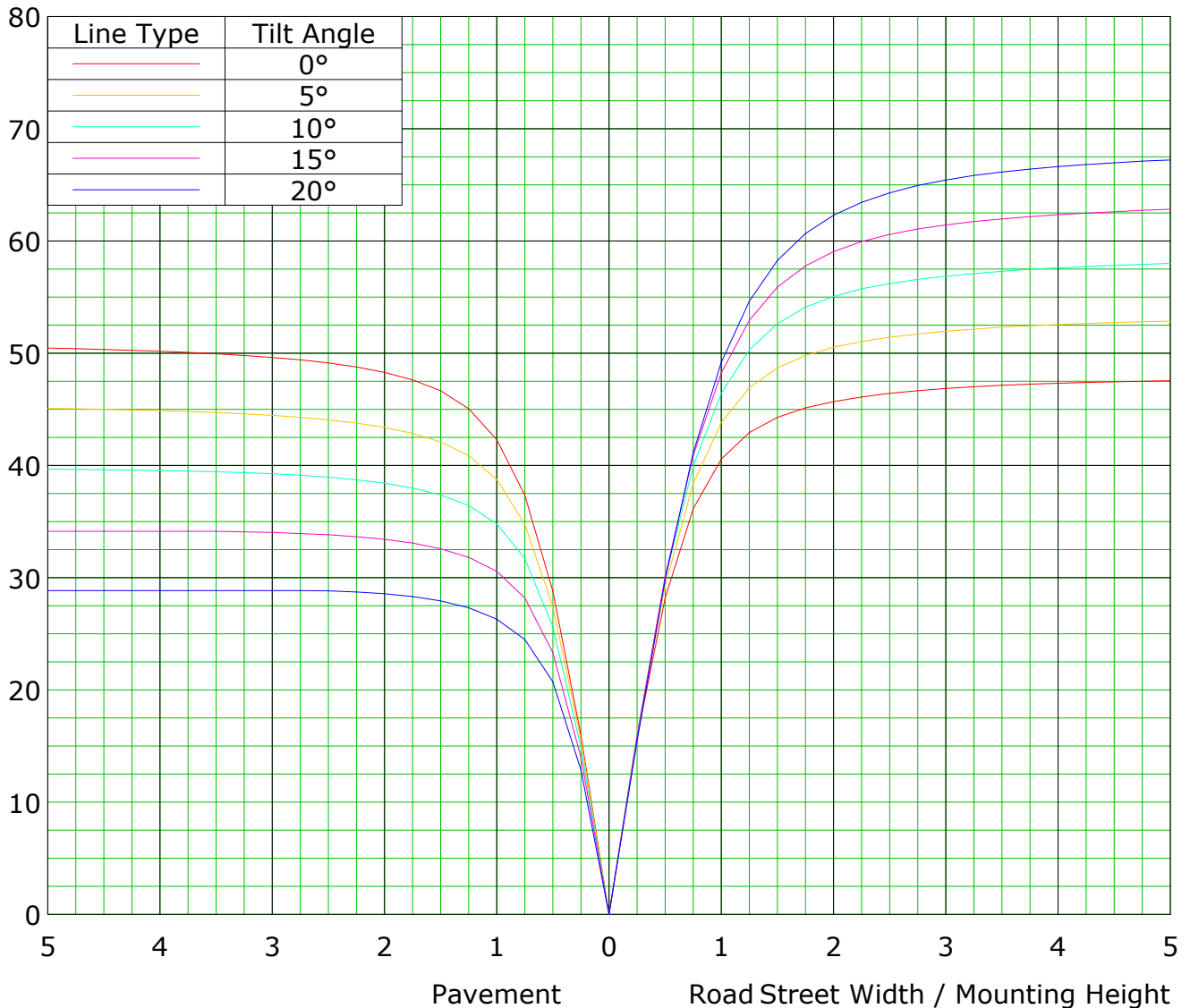
Mounting Height: 10.0m		Max Lux(100%): 12.1 lx	
— (1%):	0.1 lx	— (2%):	0.2 lx
— (5%):	0.6 lx	— (10%):	1.2 lx
— (20%):	2.4 lx	— (50%):	6.1 lx
— (100%):	12.1 lx		

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

Gamma Plane (°):0.0-90.0:5.0
 Test Device: GPM-1600L
 Distance: 7.172 m [K=1.0000]
 Humidity:
 Inspector:

Roadway CU Curve

Efficiency(%)



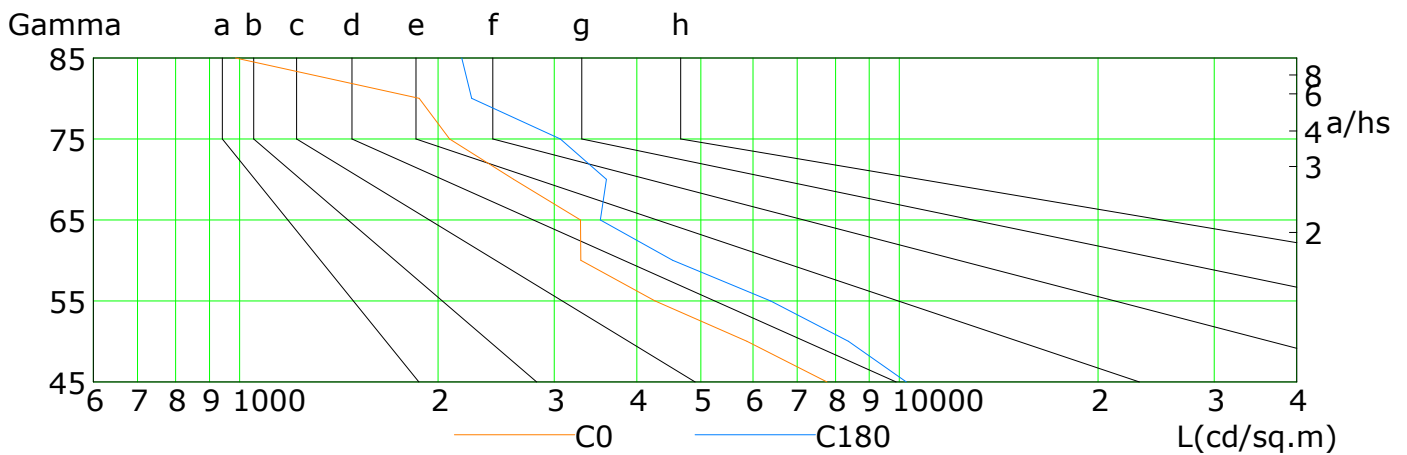
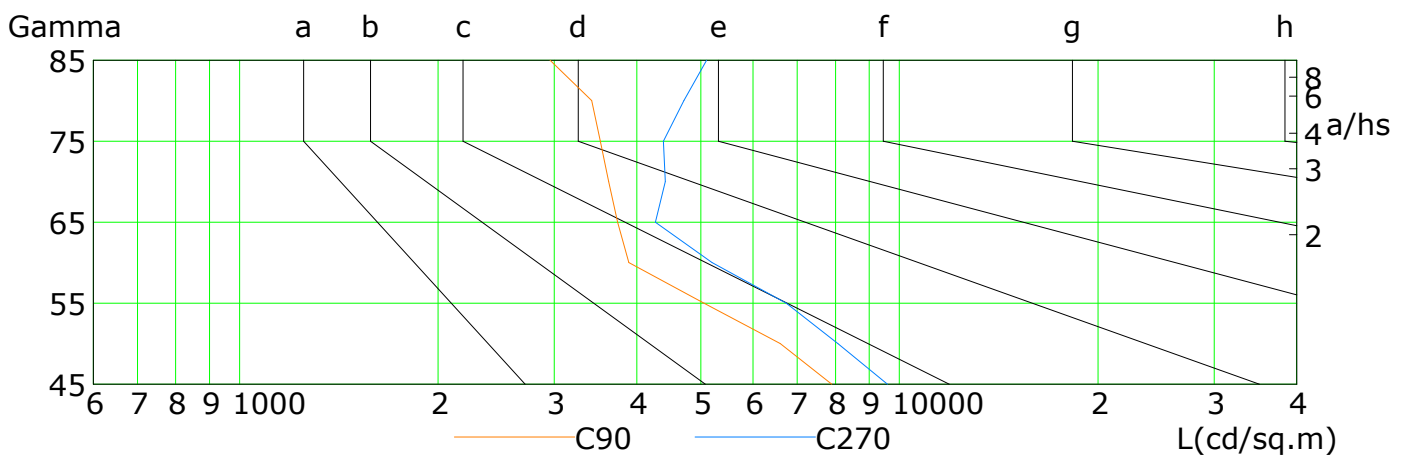
C Plane (°):0.0-360.0: 90.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:5.0
 Test Device: GPM-1600L
 Distance: 7.172 m [K=1.0000]
 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



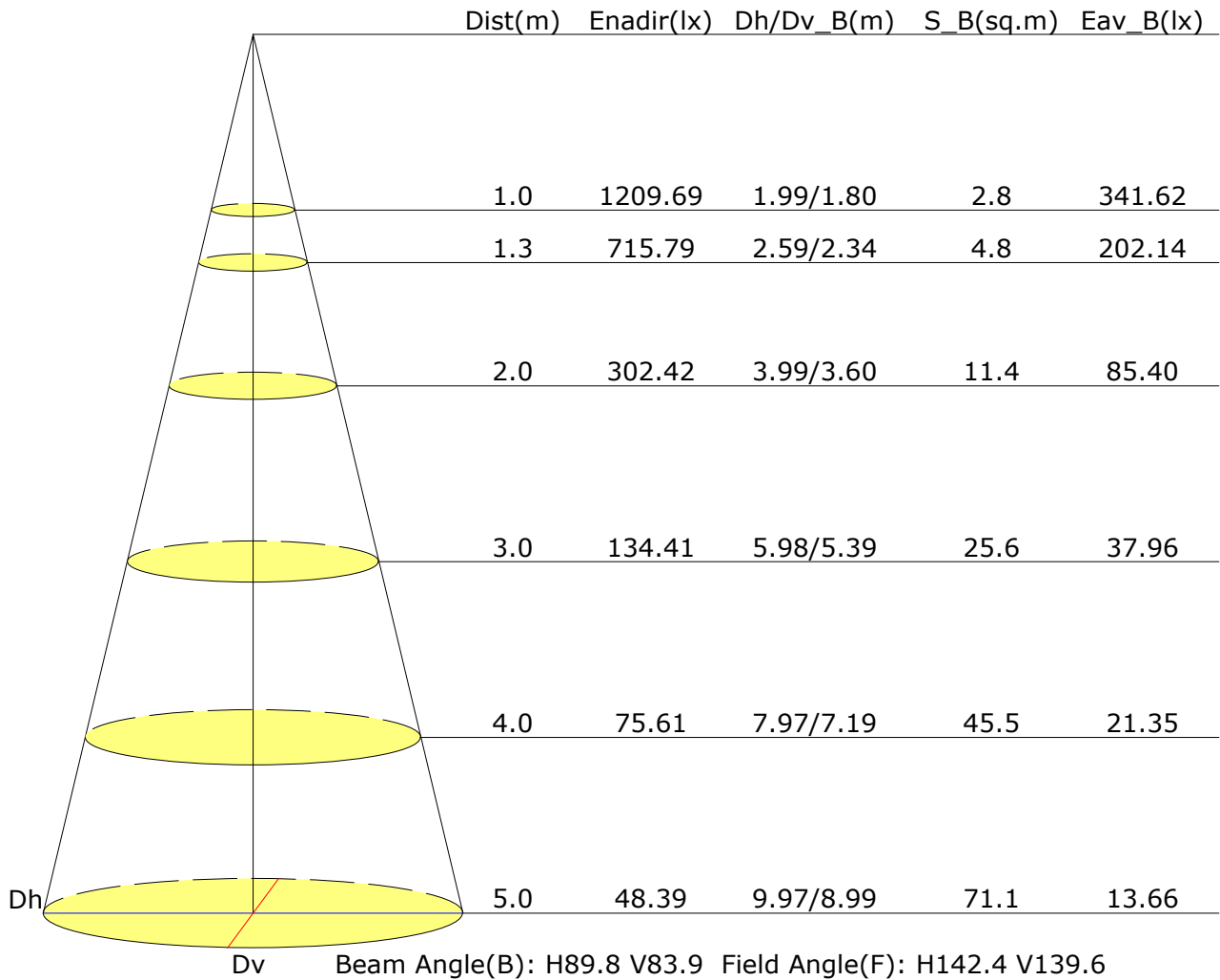
L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	7763	5875	4263	3289	3288	2602	2081	1871	985
C90	7896	6597	5056	3892	3743	3626	3523	3419	2954
C180	10250	8368	6380	4534	3523	3599	3062	2248	2172
C270	9596	8068	6737	5203	4266	4418	4390	4713	5105

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

Gamma Plane (°):0.0-90.0:5.0
 Test Device: GPM-1600L
 Distance: 7.172 m [K=1.0000]
 Humidity:
 Inspector:

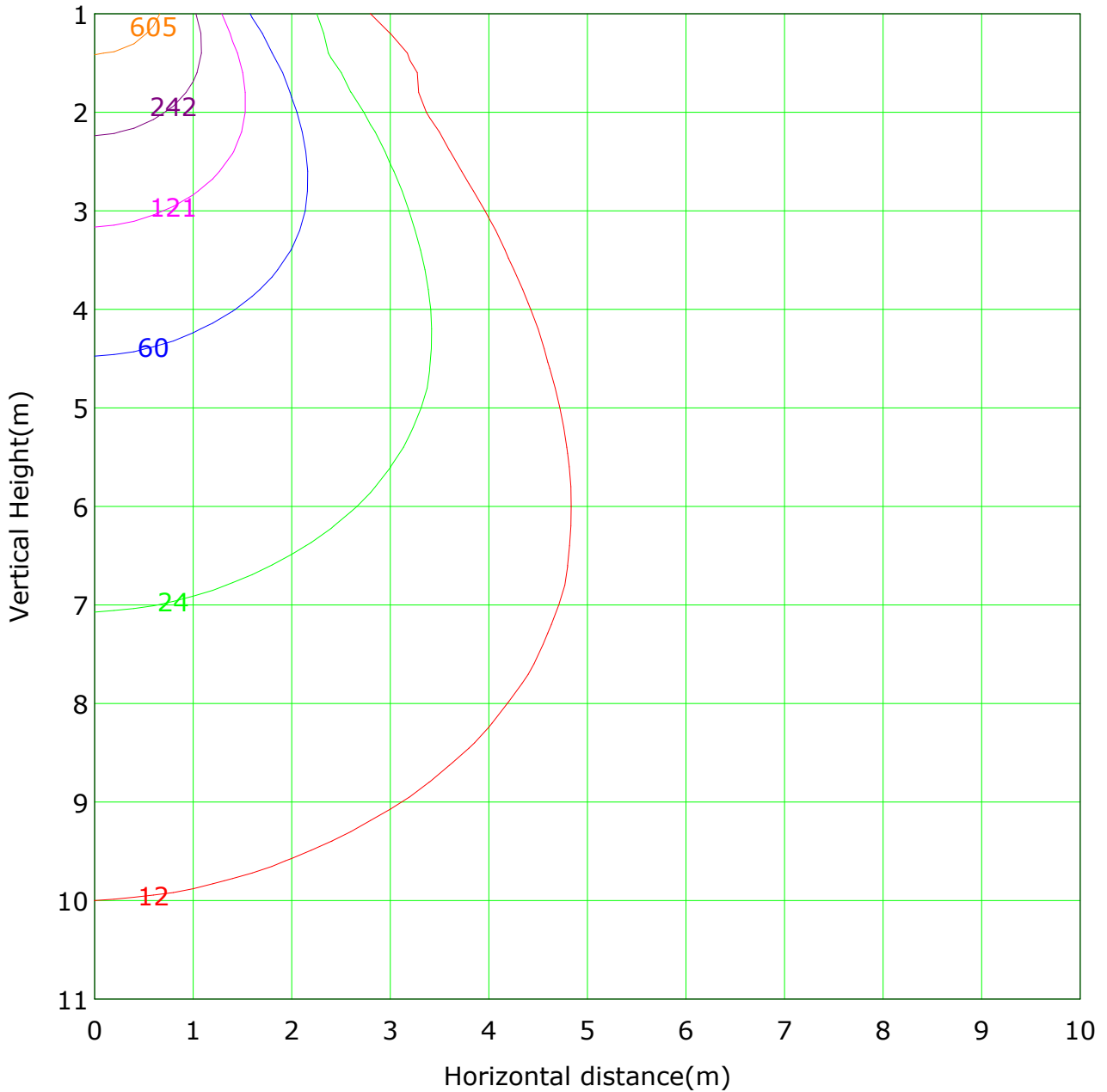


Illuminance at a Distance





Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 1209.7 lx
 (1%): 12.1 lx (2%): 24.2 lx
 (5%): 60.5 lx (10%): 121.0 lx
 (20%): 241.9 lx (50%): 604.8 lx
 (100%):1209.7 lx

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

Gamma Plane (°):0.0-90.0:5.0
 Test Device: GPM-1600L
 Distance: 7.172 m [K=1.0000]
 Humidity:
 Inspector:



Area Flux Table

Unit: lm/klm

-90	0.0	0.1	0.2	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.1	0.0	0.0	5.9	0.0
-80	0.0	0.1	0.3	0.5	0.7	0.9	1.1	1.2	1.3	1.3	1.2	1.0	0.8	0.6	0.4	0.2	0.1	0.0	11.7	1.0
-70	0.0	0.2	0.4	0.7	1.1	1.4	1.7	1.9	2.0	2.0	1.9	1.6	1.3	0.9	0.6	0.3	0.1	0.0	18.2	13.8
-60	0.0	0.2	0.5	1.0	1.4	2.1	2.9	3.6	4.0	3.9	3.4	2.6	1.9	1.3	0.8	0.4	0.2	0.0	30.3	28.3
-50	0.1	0.2	0.7	1.2	2.1	3.6	5.2	6.4	7.0	6.9	6.0	4.6	3.0	1.8	1.0	0.5	0.2	0.0	50.6	49.3
-40	0.1	0.3	0.8	1.5	3.2	5.5	7.9	9.8	10.7	10.6	9.4	7.2	4.6	2.5	1.3	0.6	0.2	0.0	76.3	75.4
-30	0.1	0.3	0.8	2.0	4.4	7.4	10.2	12.0	12.9	12.8	11.7	9.6	6.4	3.4	1.5	0.7	0.2	0.0	96.6	95.9
-20	0.1	0.4	0.9	2.4	5.3	8.7	11.5	13.3	14.2	14.1	13.0	10.9	7.8	4.1	1.7	0.8	0.3	0.0	109.5	108.8
-10	0.1	0.4	1.0	2.7	5.9	9.4	12.0	13.9	14.8	14.7	13.5	11.5	8.4	4.6	1.9	0.8	0.3	0.0	115.7	115.1
0	0.1	0.4	1.0	2.6	5.8	9.3	12.0	13.8	14.7	14.6	13.5	11.4	8.3	4.5	1.8	0.8	0.3	0.0	114.9	114.4
10	0.1	0.3	0.9	2.3	5.2	8.5	11.2	13.0	13.9	13.8	12.8	10.7	7.5	4.0	1.7	0.8	0.3	0.0	107.1	106.5
20	0.1	0.3	0.8	1.9	4.2	7.0	9.7	11.6	12.4	12.3	11.3	9.1	6.0	3.2	1.4	0.7	0.2	0.0	92.3	91.5
30	0.1	0.3	0.7	1.4	3.0	5.1	7.2	8.9	9.7	9.5	8.5	6.5	4.2	2.3	1.2	0.6	0.2	0.0	69.6	68.7
40	0.0	0.2	0.6	1.1	1.9	3.3	4.6	5.6	5.9	5.8	5.1	4.0	2.6	1.6	1.0	0.5	0.2	0.0	44.2	42.8
50	0.0	0.2	0.5	0.9	1.3	1.9	2.5	3.0	3.1	3.0	2.7	2.2	1.7	1.2	0.8	0.4	0.2	0.0	25.6	23.3
60	0.0	0.2	0.4	0.7	1.0	1.3	1.5	1.7	1.7	1.7	1.6	1.4	1.1	0.8	0.5	0.3	0.1	0.0	16.0	9.2
70	0.0	0.1	0.3	0.4	0.6	0.8	0.9	1.0	1.0	1.0	1.0	0.8	0.7	0.5	0.3	0.2	0.1	0.0	9.8	0.0
80	0.0	0.1	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.0	4.3	0.0
90	0.8	4.3	10.9	23.9	47.9	77.1	103.2	121.7	130.6	129.1	117.4	95.9	67.0	37.9	18.3	8.7	3.1	0.5	999	
Flux(T)	0.0	0.9	7.8	20.9	44.9	74.1	100.0	118.4	127.2	125.8	114.0	92.6	63.7	34.5	14.8	4.5	0.0	0.0		944
Flux(E)	0.0	0.9	7.8	20.9	44.9	74.1	100.0	118.4	127.2	125.8	114.0	92.6	63.7	34.5	14.8	4.5	0.0	0.0		944

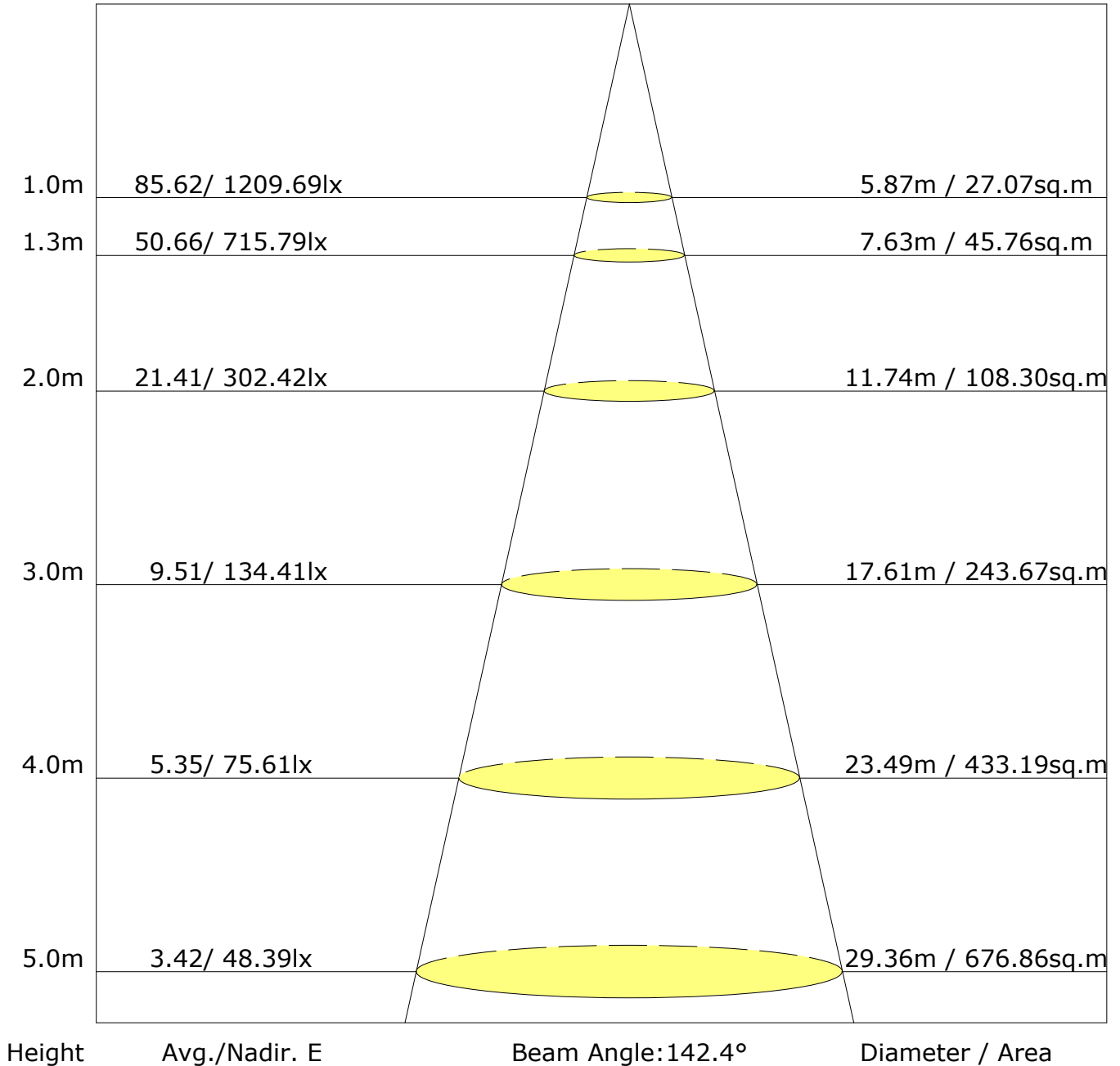
Gamma Plane (°): 0.0-90.0: 5.0
 Test Device: GPM-1600L
 Distance: 7.172 m [K=1.0000]
 Humidity:
 Inspector:

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



The Average Illuminance Effective Figure

Flux Out: 2318.16lm



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

Gamma Plane (°):0.0-90.0:5.0
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	17.0	18.3	17.3	18.5	18.7	17.6	18.8	17.8	19.0	19.2
3H	17.7	18.9	18.1	19.1	19.4	18.4	19.5	18.7	19.7	20.0
4H	18.0	19.1	18.3	19.3	19.6	18.8	19.9	19.2	20.2	20.4
6H	18.2	19.2	18.6	19.5	19.8	19.3	20.3	19.6	20.6	20.9
8H	18.3	19.2	18.7	19.6	19.9	19.5	20.4	19.9	20.7	21.1
12H	18.3	19.2	18.7	19.5	19.9	19.7	20.6	20.1	20.9	21.2
X=4H Y=2H	17.3	18.4	17.7	18.7	18.9	17.8	18.8	18.1	19.1	19.4
3H	18.2	19.1	18.6	19.5	19.8	18.8	19.7	19.2	20.0	20.4
4H	18.6	19.4	19.0	19.8	20.1	19.4	20.2	19.8	20.5	20.9
6H	19.0	19.7	19.4	20.1	20.5	20.0	20.7	20.4	21.1	21.5
8H	19.1	19.7	19.5	20.1	20.6	20.3	20.9	20.7	21.3	21.8
12H	19.1	19.7	19.6	20.2	20.6	20.5	21.1	21.0	21.6	22.0
X=8H Y=4H	18.8	19.5	19.3	19.9	20.3	19.5	20.2	20.0	20.6	21.0
6H	19.3	19.8	19.8	20.3	20.7	20.3	20.8	20.8	21.3	21.7
8H	19.5	20.0	20.0	20.4	20.9	20.7	21.1	21.1	21.6	22.1
12H	19.6	20.0	20.1	20.5	21.0	21.0	21.4	21.5	21.9	22.4
X=12H Y=4H	18.8	19.4	19.3	19.9	20.3	19.5	20.1	20.0	20.5	21.0
6H	19.4	19.8	19.9	20.3	20.8	20.3	20.8	20.8	21.2	21.7
8H	19.6	20.0	20.1	20.5	21.0	20.7	21.1	21.2	21.6	22.1
Variations with the observer position at spacings:										
S=1.0H	+0.5/-0.7					+0.4/-0.5				
S=1.5H	+1.0/-1.3					+1.0/-1.2				
S=2.0H	+2.0/-1.6					+1.9/-1.8				

Calculate in accordance with CIE Pub.117. The table is revised with 2446lm ($8\log(F/F_0) = 3.1$).

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 1.25									
Room Reflectance			Room Index(RI)									
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	
0.70	0.50	0.20	0.67	0.76	0.82	0.87	0.93	0.97	1.00	1.03	1.06	
	0.30		0.60	0.70	0.76	0.81	0.88	0.92	0.95	1.00	1.03	
	0.20		0.55	0.65	0.71	0.76	0.83	0.88	0.92	0.97	1.00	
0.50	0.50	0.20	0.65	0.74	0.80	0.84	0.90	0.93	0.96	0.99	1.01	
	0.30		0.59	0.68	0.75	0.79	0.85	0.90	0.93	0.97	0.99	
	0.20		0.55	0.64	0.71	0.75	0.82	0.86	0.90	0.94	0.97	
0.30	0.50	0.20	0.64	0.72	0.78	0.82	0.87	0.90	0.93	0.96	0.98	
	0.30		0.59	0.67	0.73	0.78	0.83	0.87	0.90	0.93	0.96	
	0.20		0.55	0.64	0.70	0.74	0.80	0.84	0.87	0.91	0.94	
0.00	0.00	0.00	0.53	0.61	0.67	0.71	0.77	0.81	0.83	0.87	0.89	
Rating:20W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 1.25									
Room Reflectance			Room Index(RI)									
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	
0.70	0.50	0.20	0.84	0.69	0.58	0.50	0.40	0.33	0.29	0.22	0.18	
	0.30		0.70	0.59	0.51	0.45	0.36	0.31	0.26	0.21	0.17	
	0.20		0.60	0.51	0.45	0.40	0.33	0.28	0.25	0.20	0.17	
0.50	0.50	0.20	0.81	0.66	0.55	0.48	0.38	0.35	0.27	0.21	0.17	
	0.30		0.69	0.57	0.49	0.43	0.35	0.29	0.25	0.20	0.16	
	0.20		0.60	0.50	0.44	0.39	0.32	0.27	0.24	0.19	0.16	
0.30	0.50	0.20	0.79	0.63	0.53	0.46	0.36	0.30	0.26	0.20	0.16	
	0.30		0.67	0.55	0.47	0.41	0.33	0.28	0.24	0.19	0.16	
	0.20		0.59	0.49	0.43	0.38	0.31	0.26	0.23	0.18	0.15	
0.00	0.00	0.00	0.47	0.39	0.33	0.29	0.23	0.19	0.17	0.13	0.11	
Rating:20W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 1.25								
Room Reflectance			Room Index(RI)								
Ceiling	Wall	Floor	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.15	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.21
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.07	0.08	0.10	0.12	0.13	0.14	0.16	0.17
0.50	0.50	0.20	0.14	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.07	0.08	0.10	0.12	0.13	0.14	0.16	0.17
0.30	0.50	0.20	0.14	0.15	0.16	0.17	0.18	0.18	0.19	0.19	0.20
	0.30		0.09	0.10	0.12	0.13	0.14	0.15	0.16	0.17	0.18
	0.20		0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.15	0.16
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rating:20W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											

Zonal Lumen (Continue 1)

cone flux(90°): 1682.61 lm

%lum = 68.8%
%lamp = 68.8%

cone flux(120°): 2147.10 lm

%lum = 87.8%
%lamp = 87.8%

LED Average Luminance Report

Avg.L	cd/m ²
L 0-180(65) av	4921.70
L 0-180(75) av	4564.12
L 0-180(85) av	5326.45
L 90-270(65) av	4390.82
L 90-270(75) av	4620.59
L 90-270(85) av	6101.66
L 45(65) av	4656.26
L 45(75) av	4592.36
L 45(85) av	5714.06

Standard: GB/T 29293-2012