

Report No.:

Test Time: 2025-11-11 16:14

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Lamp Catalog: 5000K

Number of Lamps:

Luminous Length (mm): 110

Luminous Height (mm):

Current: 0.0420 A

Power Factor: 0.9320

Luminaire Description:

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 110

Voltage: 232.00 V

Power: 9.14 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 879.4 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H86.6

Vertical Diffuse Angle(50%): V85.9

Luminous Efficacy (lm/w): 96.21

Max. Intensity: 545.02 cd/klm

S/MH(C0/C180): 1.16

Total Rated Lamp Lumens: 879.4 lm

Efficiency: 100%

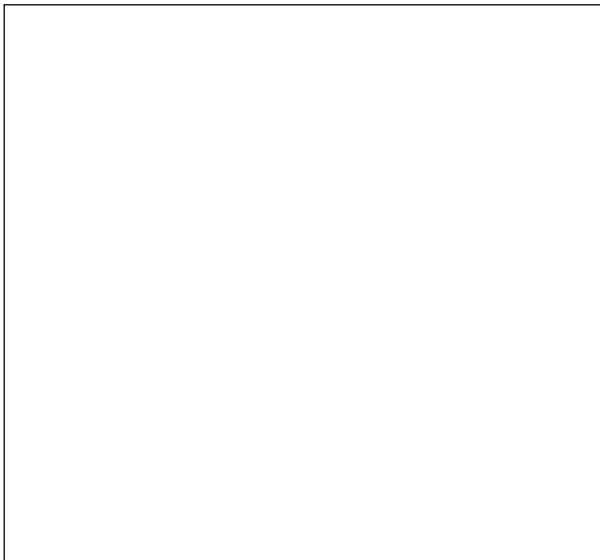
Upward Ratio: 0%

C0r0 Intensity: 545.02 cd/klm

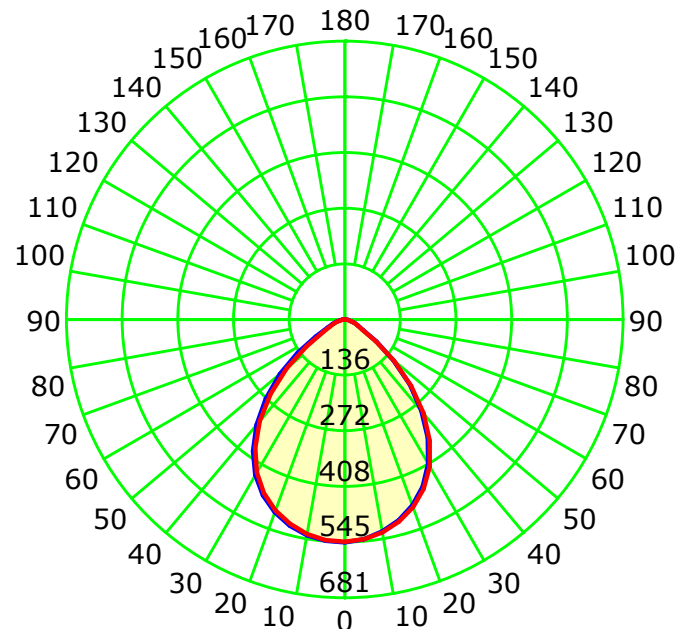
Pos of Max. Intensity: H0 V0

S/MH(C90/C270): 1.16

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd/klm

Average Diffuse Angle(50%): 86.3°

— 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

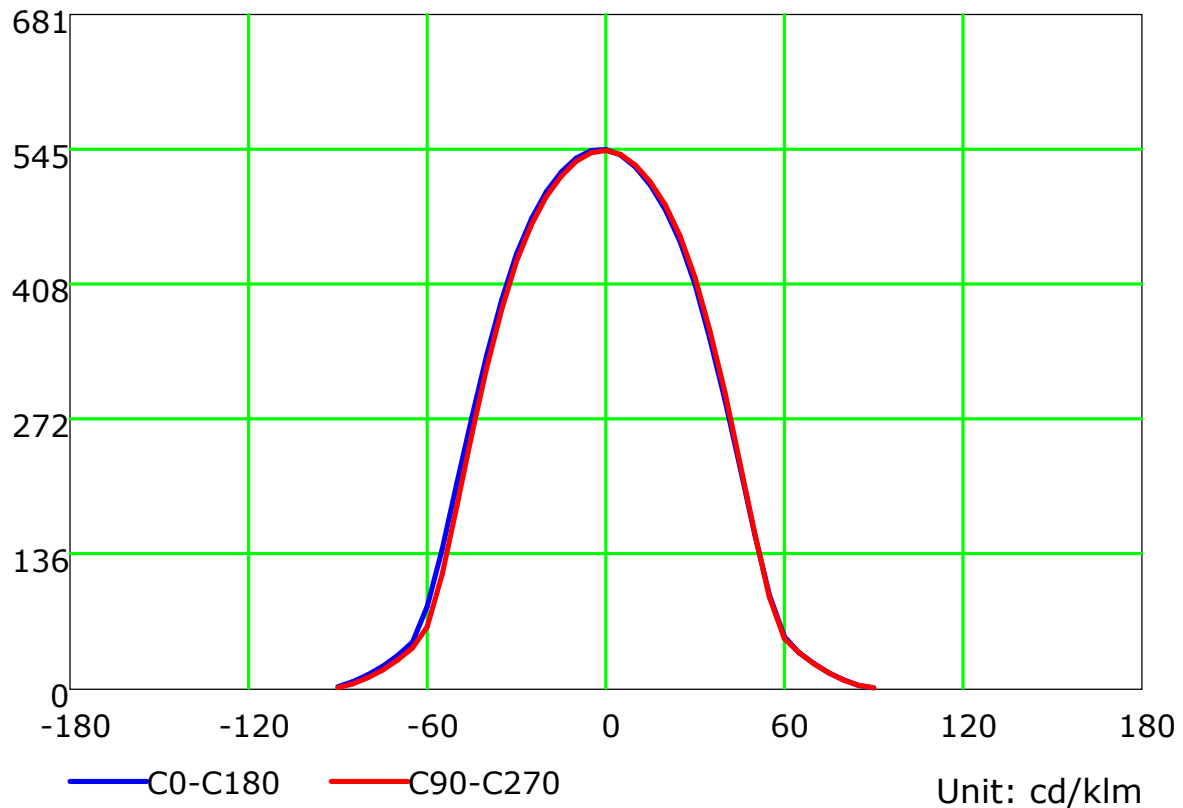
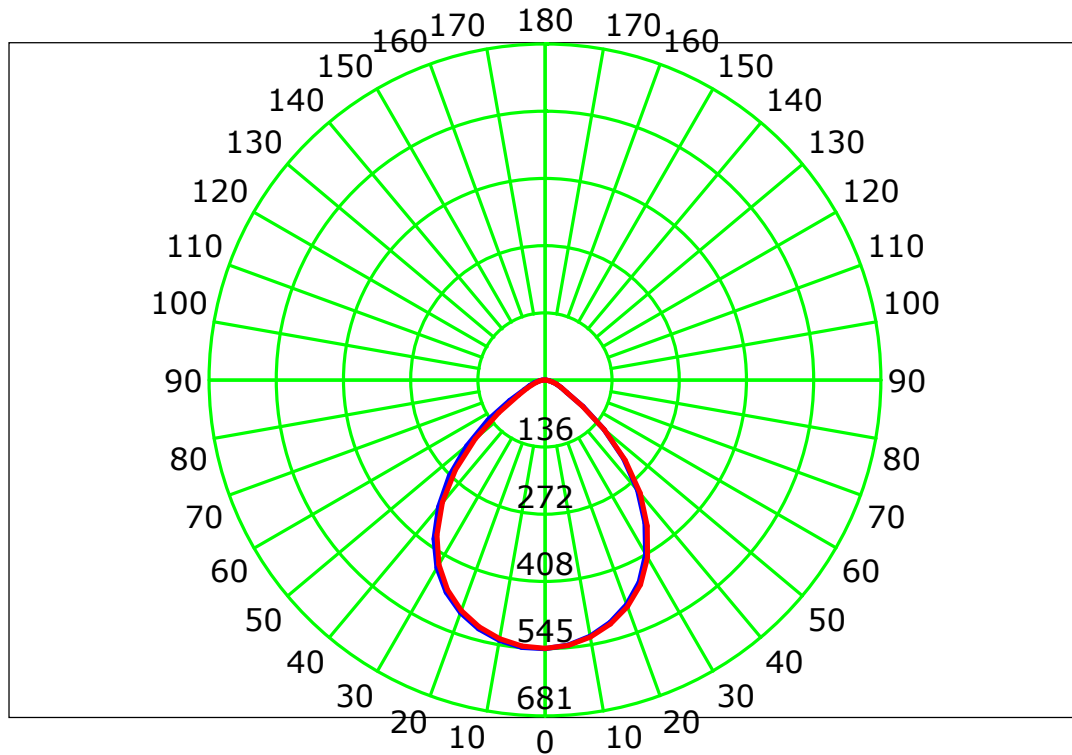
Test Device: GPM-1600L

Distance: 7.172 m [K=1.0000]

Humidity:

Inspector:

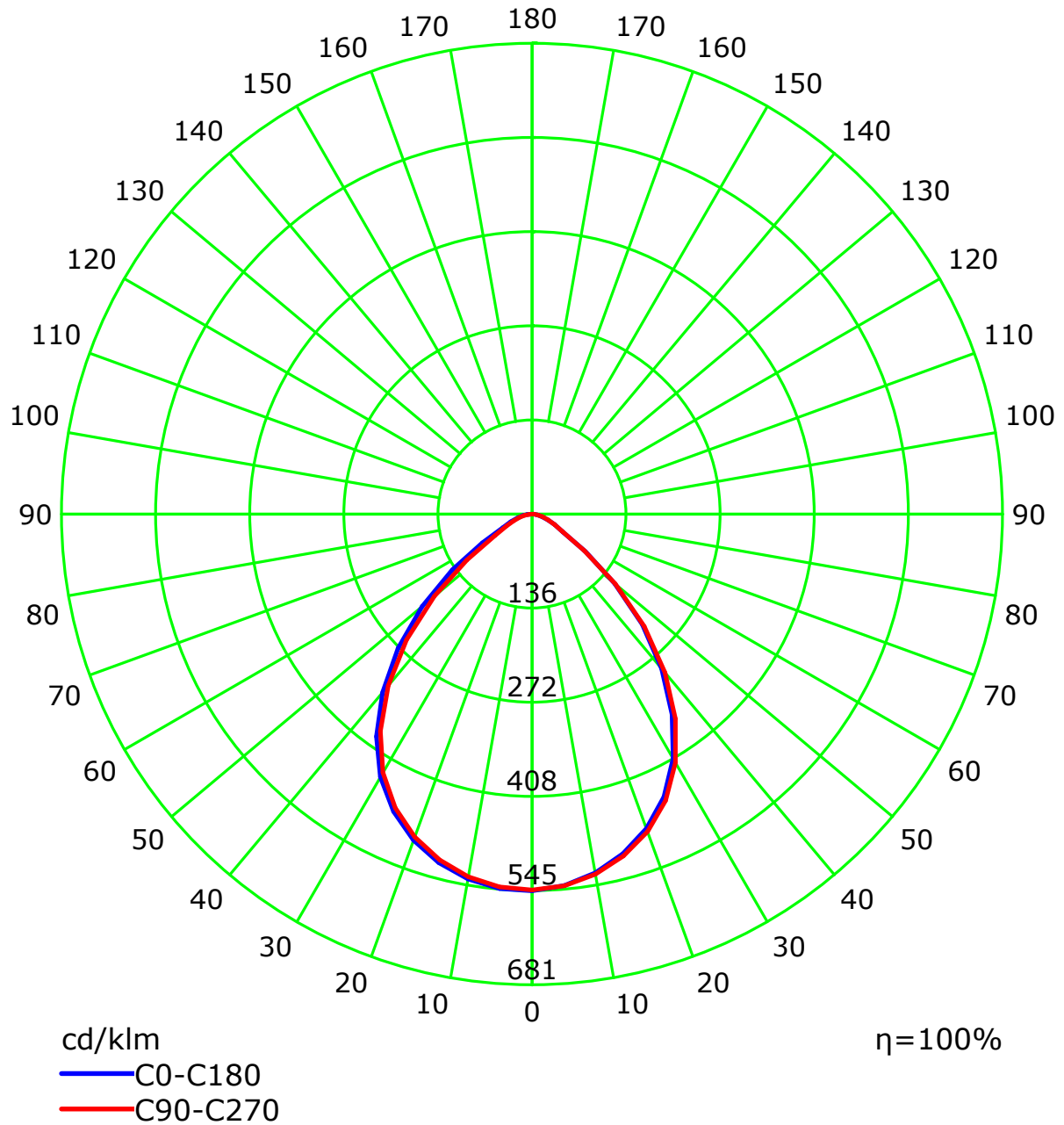
## Luminous Intensity Distribution Curve



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)



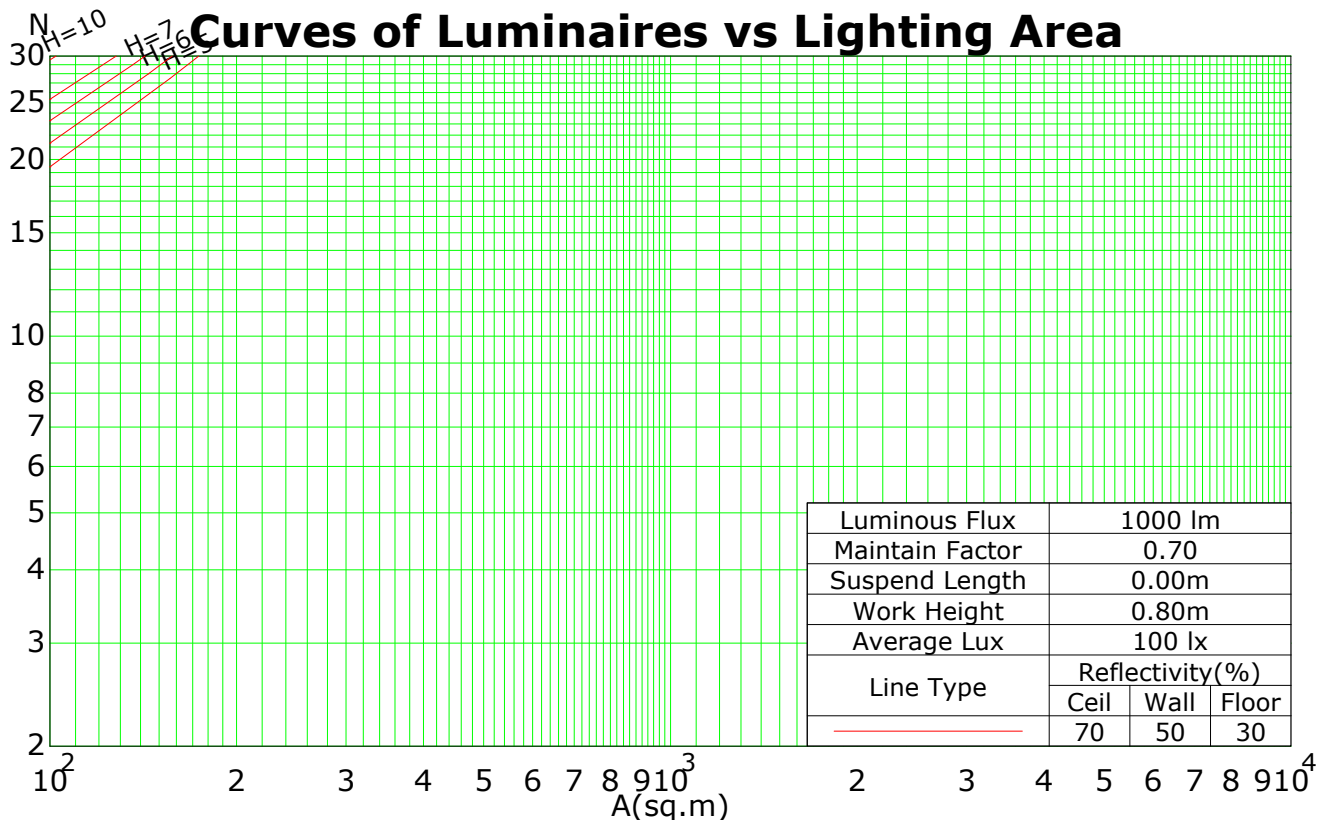
C Plane (°):0.0-360.0: 90.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

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	1.11	1.08	1.04	1.01	1.09	1.05	1.02	1.00	1.01	0.99	0.97	0.97	0.96	0.94	0.94	0.92	0.91	0.89
2	1.03	0.97	0.92	0.87	1.01	0.95	0.90	0.86	0.92	0.88	0.84	0.89	0.85	0.82	0.86	0.83	0.80	0.78
3	0.96	0.87	0.81	0.76	0.94	0.86	0.80	0.75	0.83	0.78	0.74	0.81	0.76	0.72	0.78	0.74	0.71	0.69
4	0.89	0.79	0.72	0.66	0.87	0.78	0.71	0.66	0.76	0.70	0.65	0.73	0.68	0.64	0.71	0.67	0.63	0.62
5	0.83	0.72	0.64	0.59	0.81	0.71	0.64	0.59	0.69	0.63	0.58	0.67	0.62	0.57	0.66	0.61	0.57	0.55
6	0.77	0.66	0.58	0.53	0.76	0.65	0.58	0.52	0.63	0.57	0.52	0.62	0.56	0.52	0.60	0.55	0.51	0.49
7	0.72	0.60	0.53	0.47	0.71	0.60	0.52	0.47	0.58	0.52	0.47	0.57	0.51	0.47	0.56	0.50	0.46	0.45
8	0.68	0.56	0.48	0.43	0.66	0.55	0.48	0.43	0.54	0.47	0.43	0.53	0.47	0.42	0.52	0.46	0.42	0.40
9	0.64	0.52	0.44	0.39	0.62	0.51	0.44	0.39	0.50	0.43	0.39	0.49	0.43	0.39	0.48	0.43	0.39	0.37
10	0.60	0.48	0.41	0.36	0.59	0.47	0.40	0.36	0.46	0.40	0.36	0.46	0.40	0.36	0.45	0.39	0.35	0.34

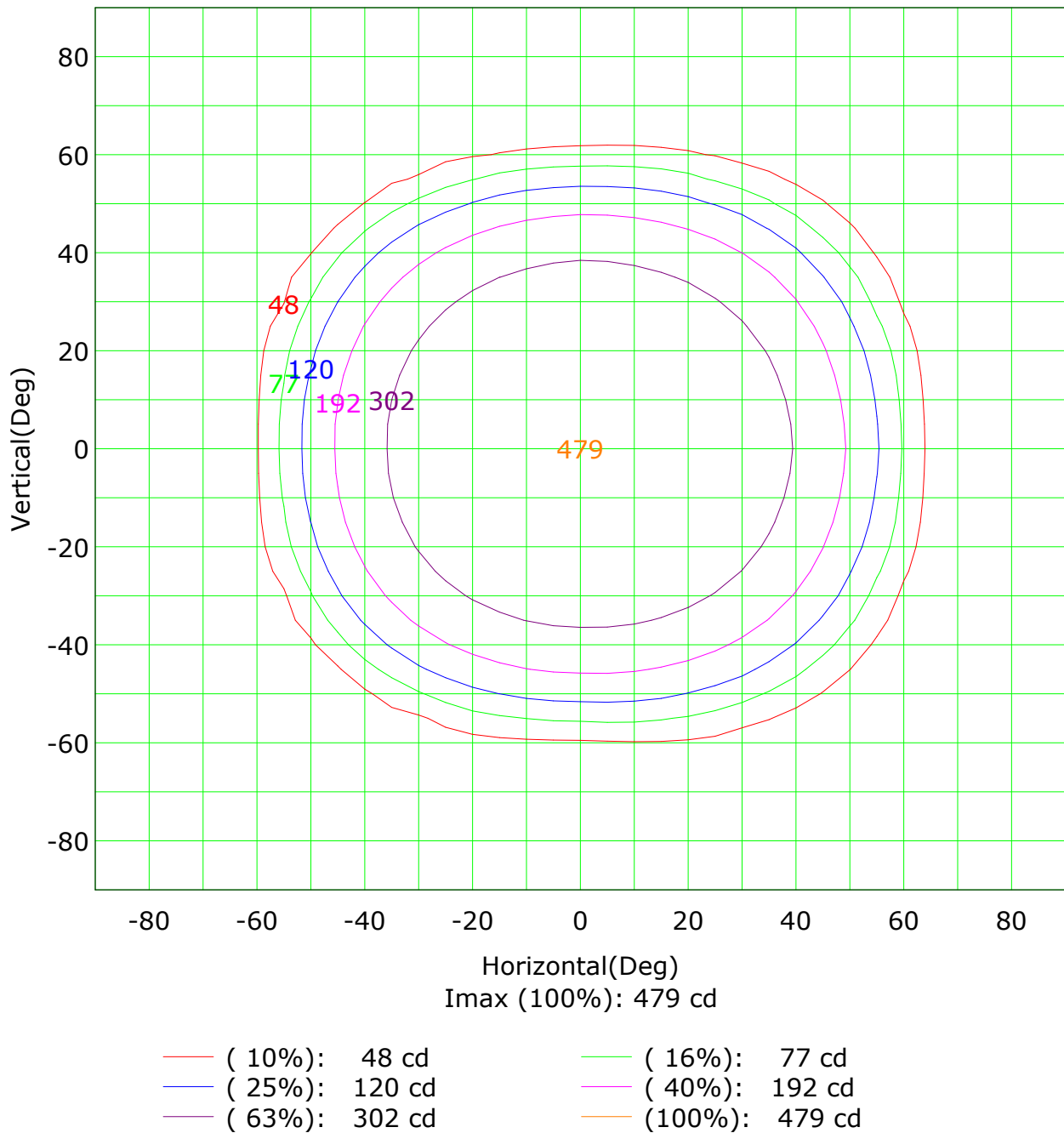
Spacing Criteria (0-180): 1.16  
 Spacing Criteria (90-270): 1.16  
 Spacing Criteria (Diagonal): 1.20



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:

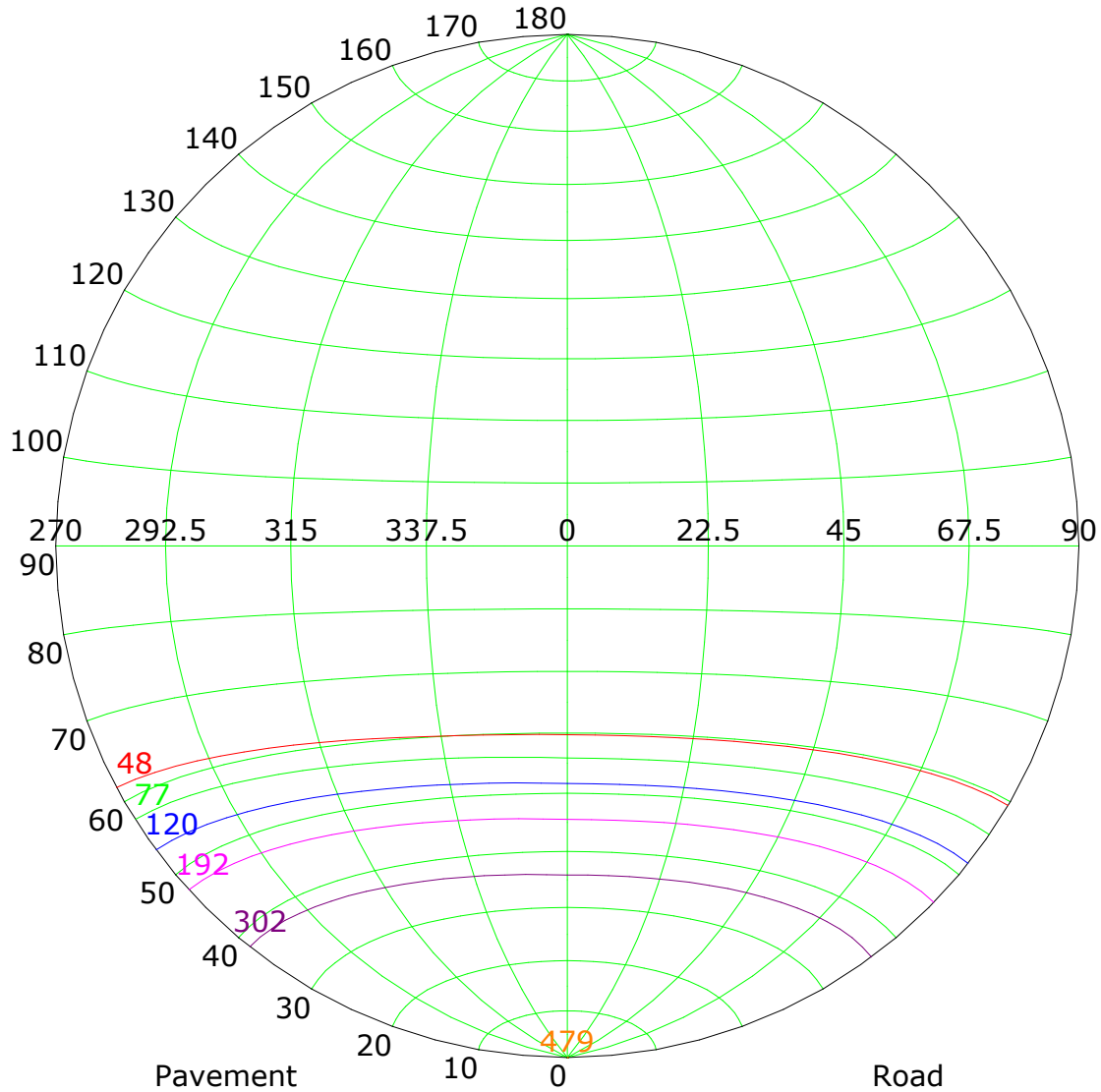
## Isocandela (rectangle)



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%): 479 cd

( 10%): 48 cd  
( 25%): 120 cd  
( 63%): 302 cd

( 16%): 77 cd  
( 40%): 192 cd  
(100%): 479 cd

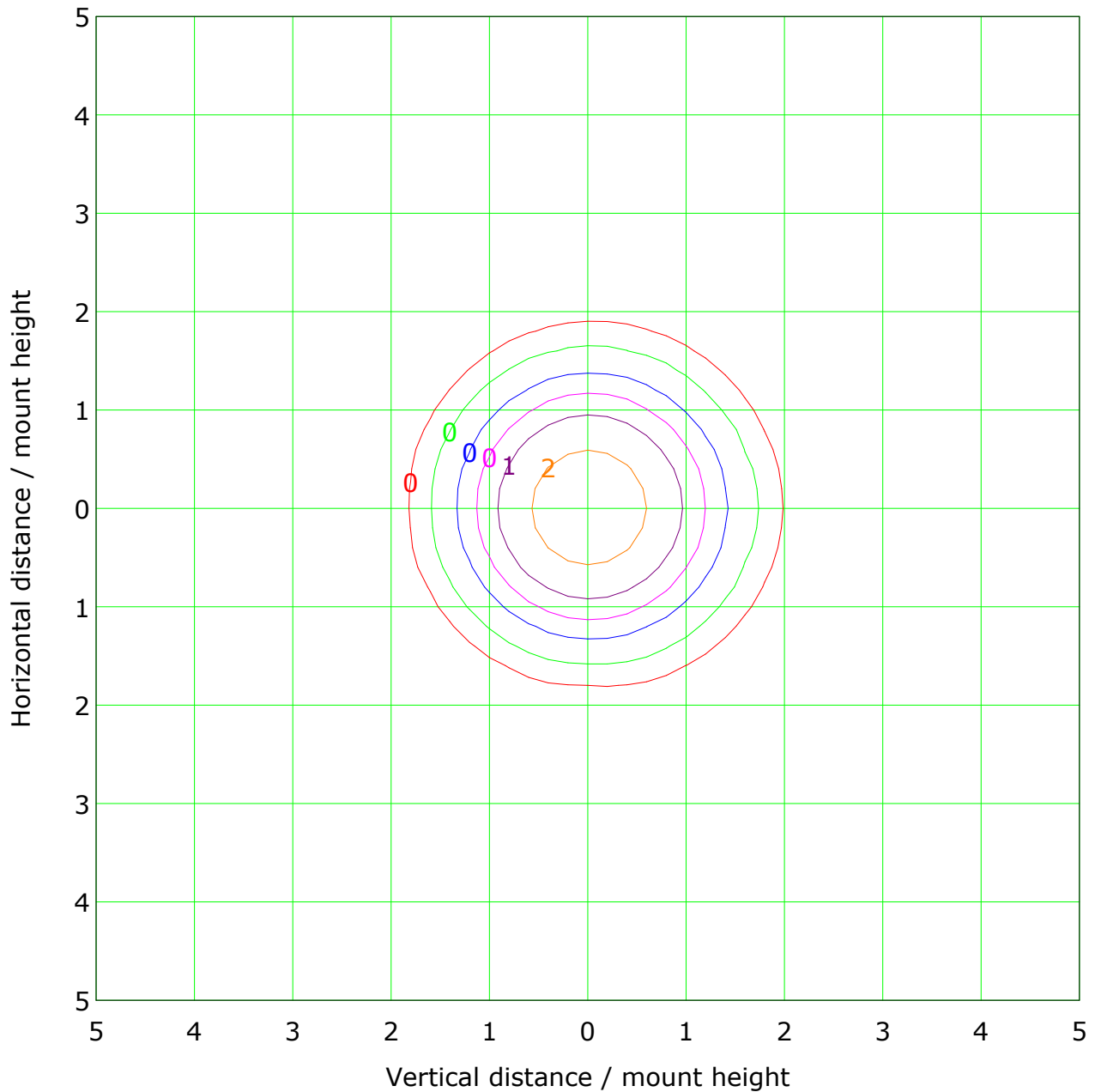
CIE: narrow - short  
CIE: Non-cut-off luminaire  
Max.At90: 28.489 cd/klm

IES: Non-cut-off  
Max.At80: 636976497906679810.000 cd/klm  
Max.80-90: 92222123915643084000000000000.0

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:

## IsoLux Plot



Mounting Height: 10.0m    Max Lux(100%): 4.8 lx

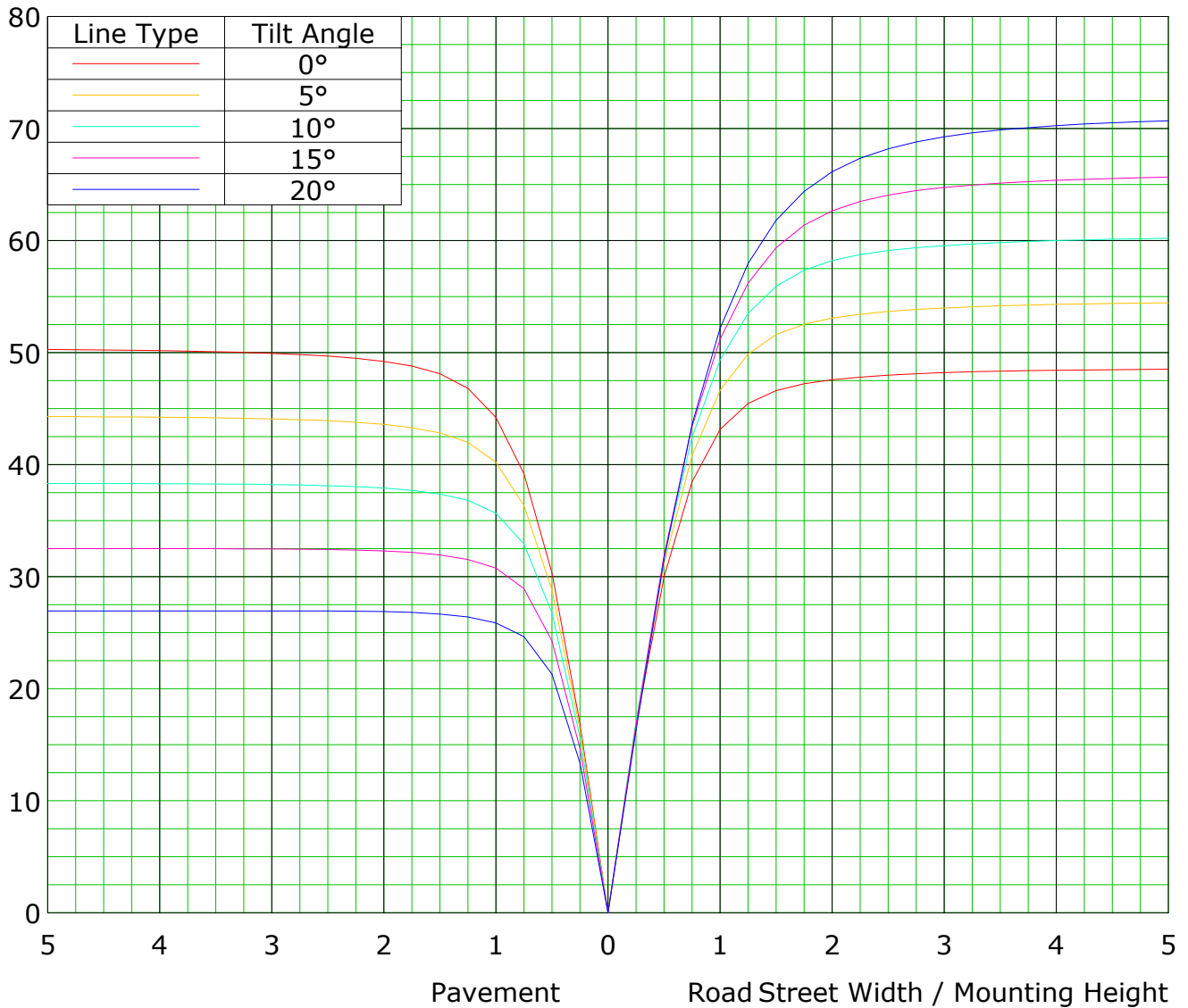
( 1%): 0.0 lx	( 2%): 0.1 lx
( 5%): 0.2 lx	( 10%): 0.5 lx
( 20%): 1.0 lx	( 50%): 2.4 lx
(100%): 4.8 lx	

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(%)



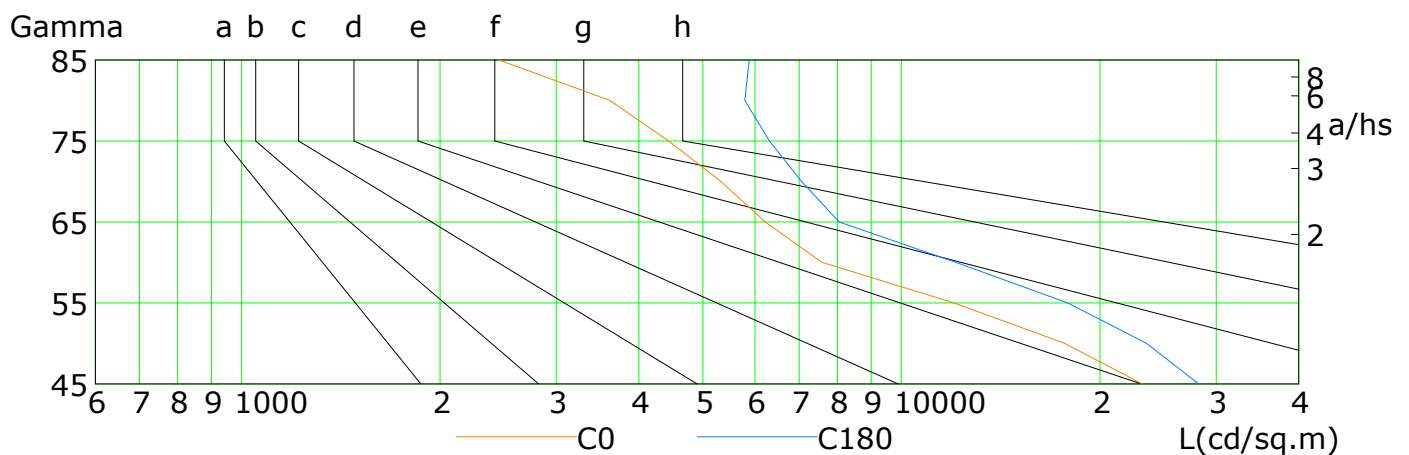
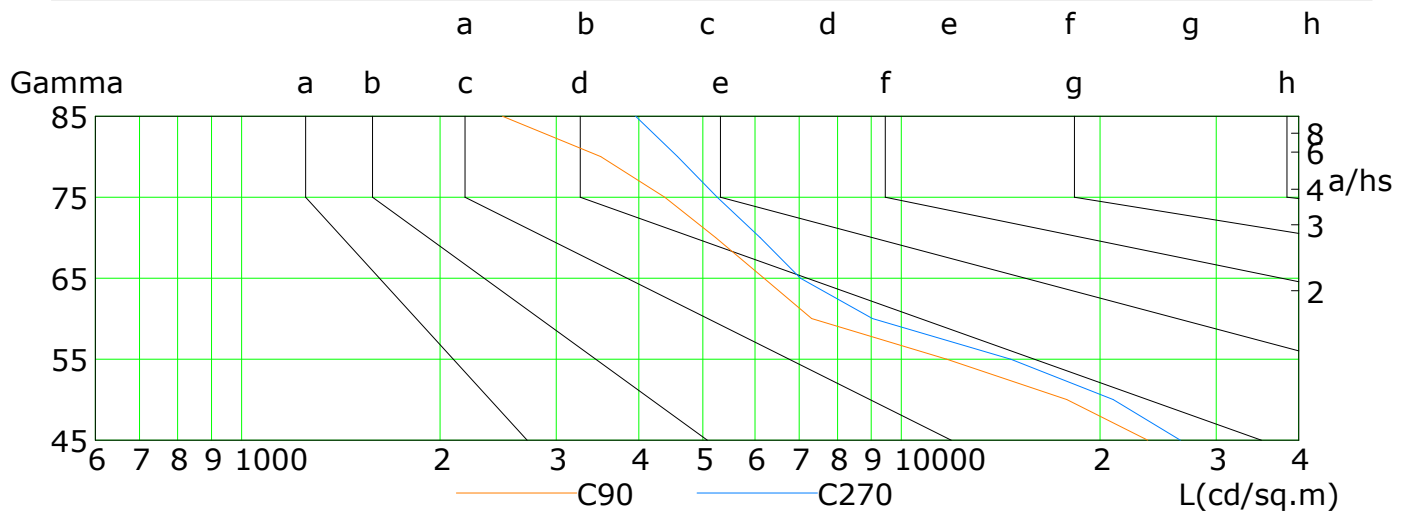
C Plane (°):0.0-360.0: 90.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

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)							
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



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	23186	17674	12014	7575	6217	5323	4438	3612	2456
C90	23613	17803	11719	7311	6189	5229	4381	3503	2484
C180	28216	23512	17870	12088	8051	7053	6306	5787	5879
C270	26482	20929	14646	9041	7032	6109	5259	4578	3954

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:5.0

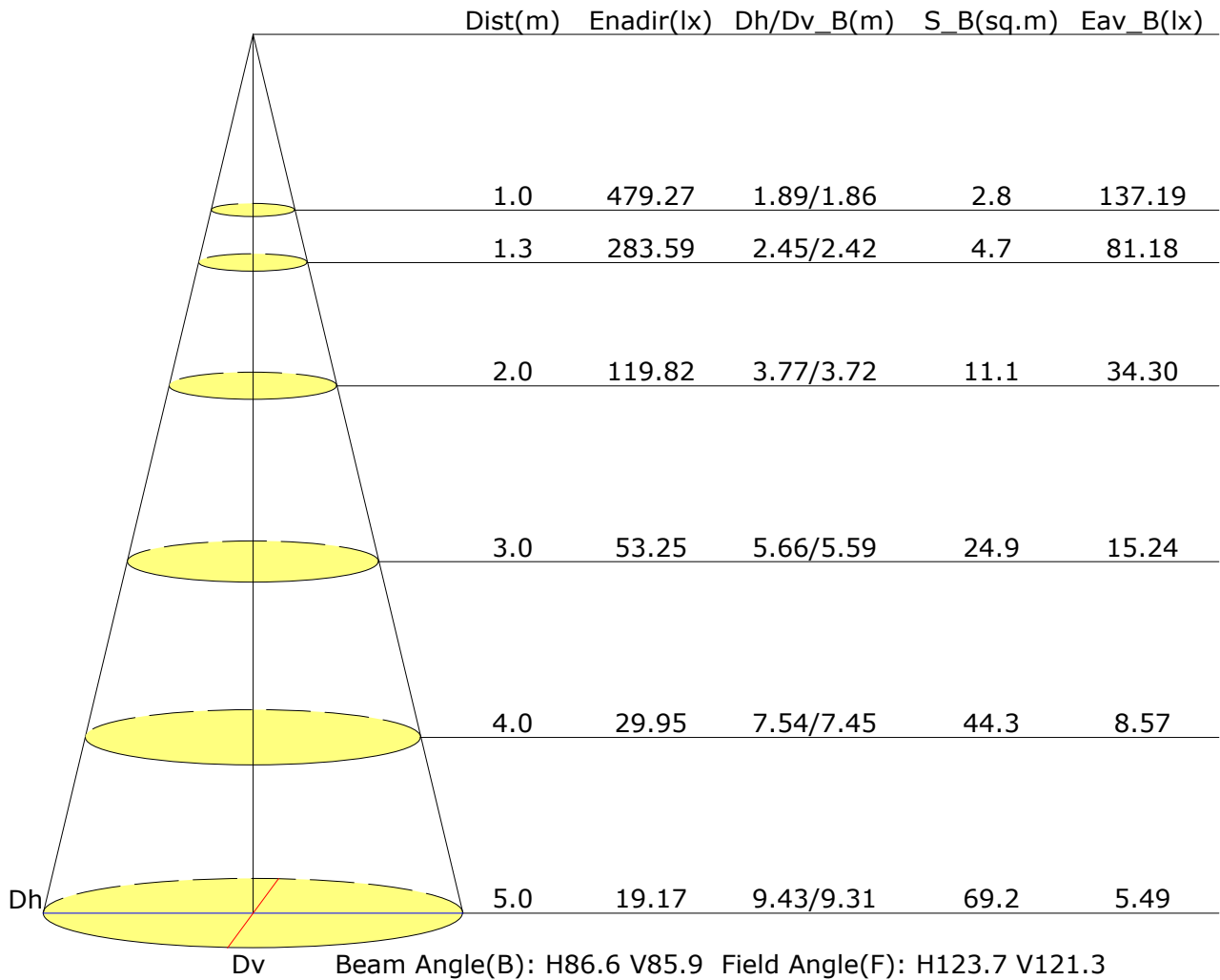
Test Device: GPM-1600L

Distance: 7.172 m [K=1.0000]

Humidity:

Inspector:

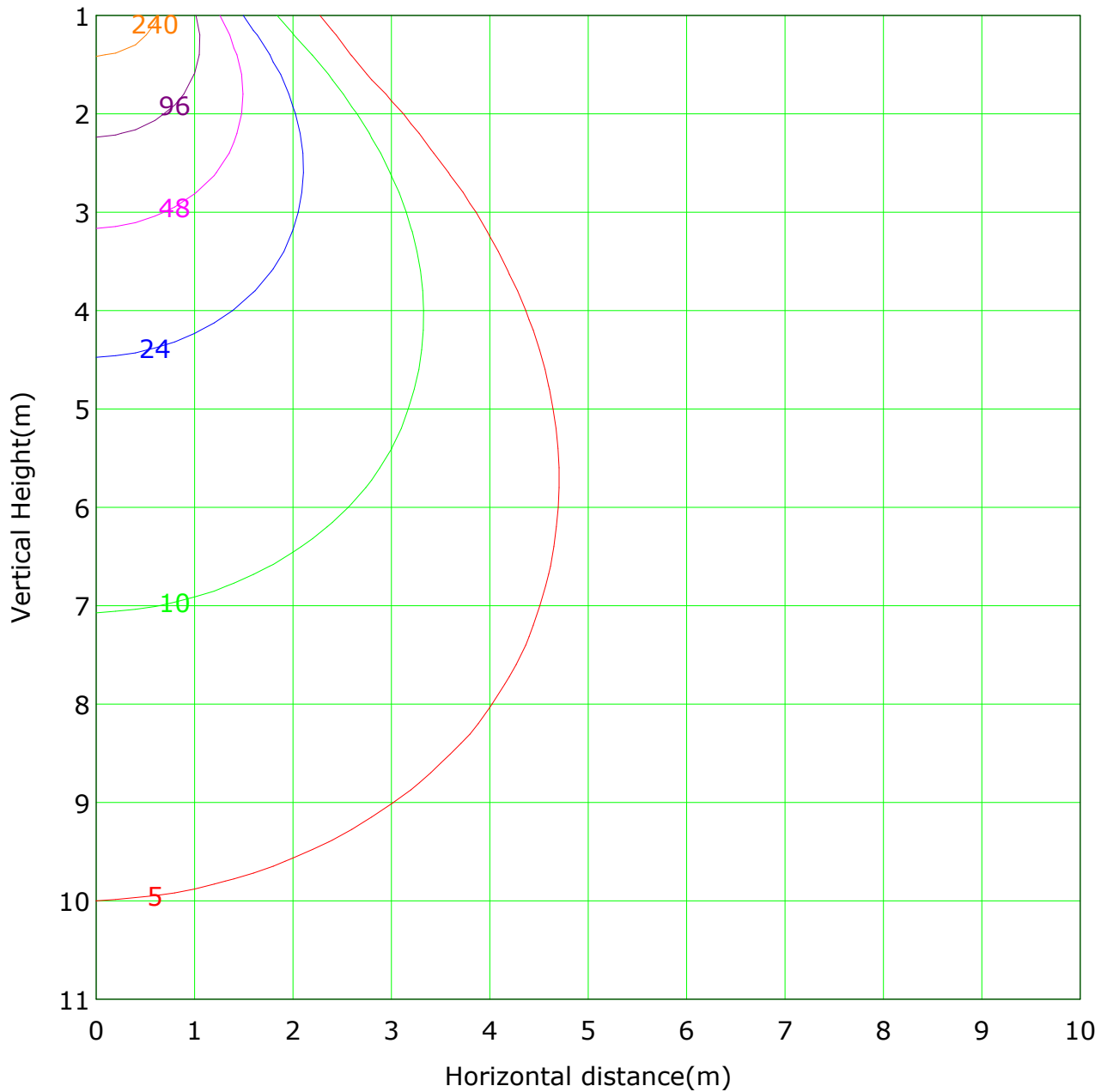
## Illuminance at a Distance



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:

## Vertical IsoLux Plot



Lowest(m): 1.0m    Highest(m): 11.0m    Max Lux: 479.3 lx  
 ( 1%): 4.8 lx    ( 2%): 9.6 lx  
 ( 5%): 24.0 lx    ( 10%): 47.9 lx  
 ( 20%): 95.9 lx    ( 50%): 239.6 lx  
 (100%): 479.3 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

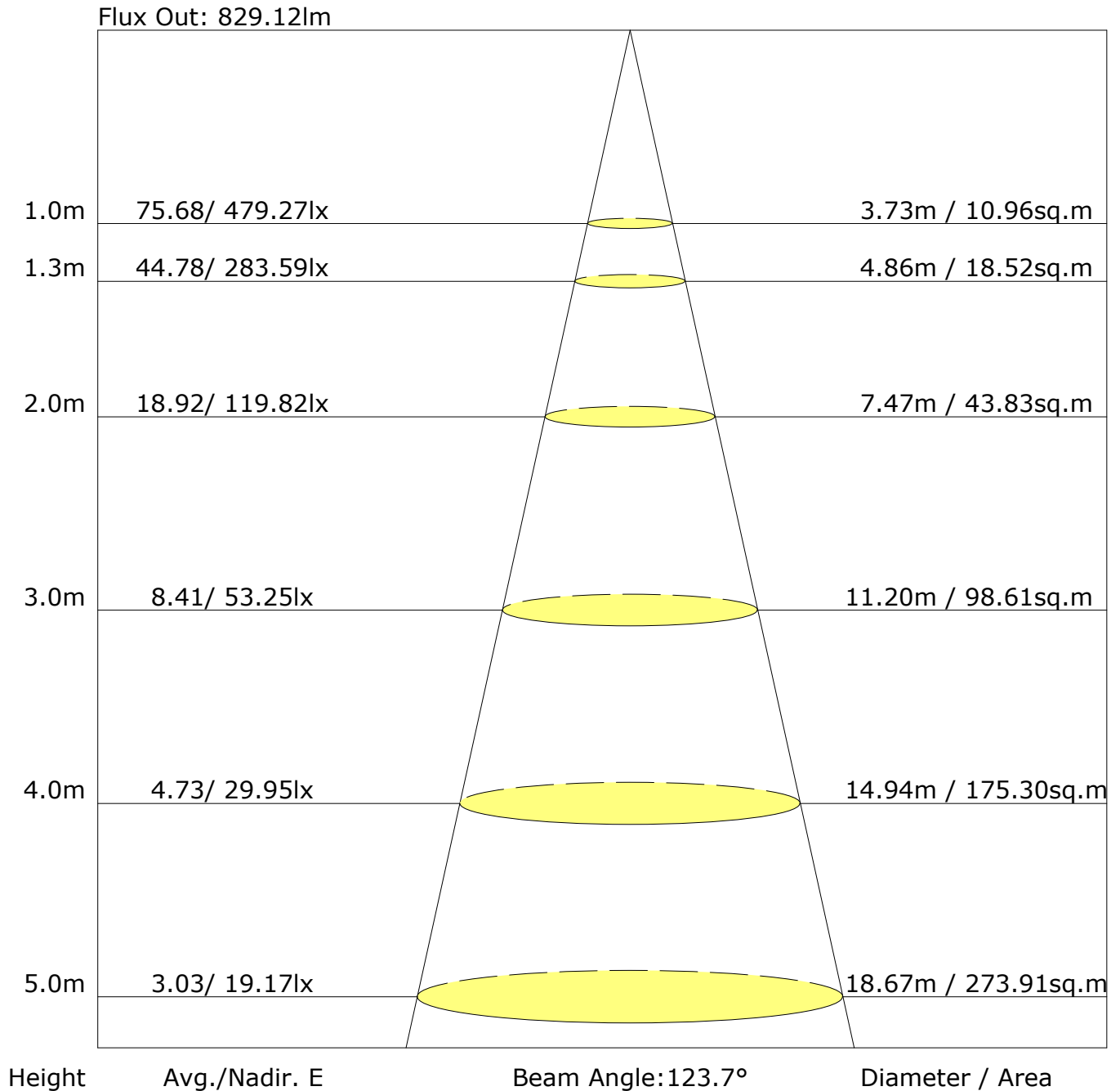
Vertical plane	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90
Flux(T)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Flux(E)	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0
	0.0	0.1	0.2	0.3	0.6	0.8	1.0	1.2	1.3	1.3	1.1	0.9	0.7	0.5	0.3	0.1	0.0	0.0	0.0
	0.0	0.1	0.3	0.5	0.9	1.6	2.4	3.2	3.6	3.5	2.9	2.1	1.3	0.8	0.4	0.2	0.1	0.0	0.0
	0.0	0.1	0.4	0.8	1.7	3.4	5.3	6.8	7.7	7.6	6.5	4.8	2.8	1.3	0.6	0.3	0.1	0.0	0.0
	0.0	0.1	0.4	1.2	3.0	5.7	8.3	10.4	11.4	11.3	10.0	7.8	5.0	2.4	0.9	0.3	0.1	0.0	0.0
	0.0	0.2	0.5	1.7	4.3	7.6	10.7	12.9	14.0	14.0	12.6	10.1	6.9	3.5	1.2	0.4	0.1	0.0	0.0
	0.0	0.2	0.6	2.2	5.3	9.0	12.2	14.4	15.6	15.5	14.2	11.7	8.1	4.4	1.6	0.5	0.1	0.0	0.0
	0.0	0.2	0.7	2.5	5.8	9.6	12.9	15.2	16.3	16.2	14.8	12.3	8.7	4.8	1.8	0.5	0.1	0.0	0.0
	0.0	0.2	0.7	2.5	5.8	9.6	12.9	15.1	16.3	16.1	14.8	12.3	8.7	4.8	1.7	0.5	0.1	0.0	0.0
	0.0	0.2	0.6	2.2	5.2	8.8	12.1	14.3	15.4	15.3	14.0	11.5	8.0	4.3	1.5	0.5	0.1	0.0	0.0
	0.0	0.2	0.5	1.7	4.2	7.4	10.4	12.6	13.7	13.6	12.3	9.9	6.6	3.4	1.2	0.4	0.1	0.0	0.0
	0.0	0.1	0.4	1.1	2.9	5.4	7.9	9.9	10.8	10.7	9.5	7.4	4.7	2.2	0.8	0.3	0.1	0.0	0.0
	0.0	0.1	0.3	0.7	1.6	3.1	4.8	6.2	6.9	6.8	5.9	4.3	2.5	1.2	0.6	0.3	0.1	0.0	0.0
	0.0	0.1	0.3	0.5	0.9	1.4	2.1	2.7	3.0	2.9	2.5	1.8	1.2	0.7	0.4	0.2	0.1	0.0	0.0
	0.0	0.1	0.2	0.3	0.5	0.7	0.9	1.1	1.1	1.1	1.0	0.8	0.6	0.4	0.3	0.1	0.0	0.0	0.0
	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0
	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Flux(T)	0.3	2.0	6.4	18.7	43.5	75.0	105.1	127.4	138.6	137.3	123.5	98.6	66.7	35.4	13.6	4.7	1.4	0.1	998
Flux(E)	0.0	0.0	1.4	14.8	39.9	71.5	101.7	124.0	135.1	133.7	119.9	95.0	62.9	31.4	8.7	0.0	0.0	0.0	940

Horizontal plane

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



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

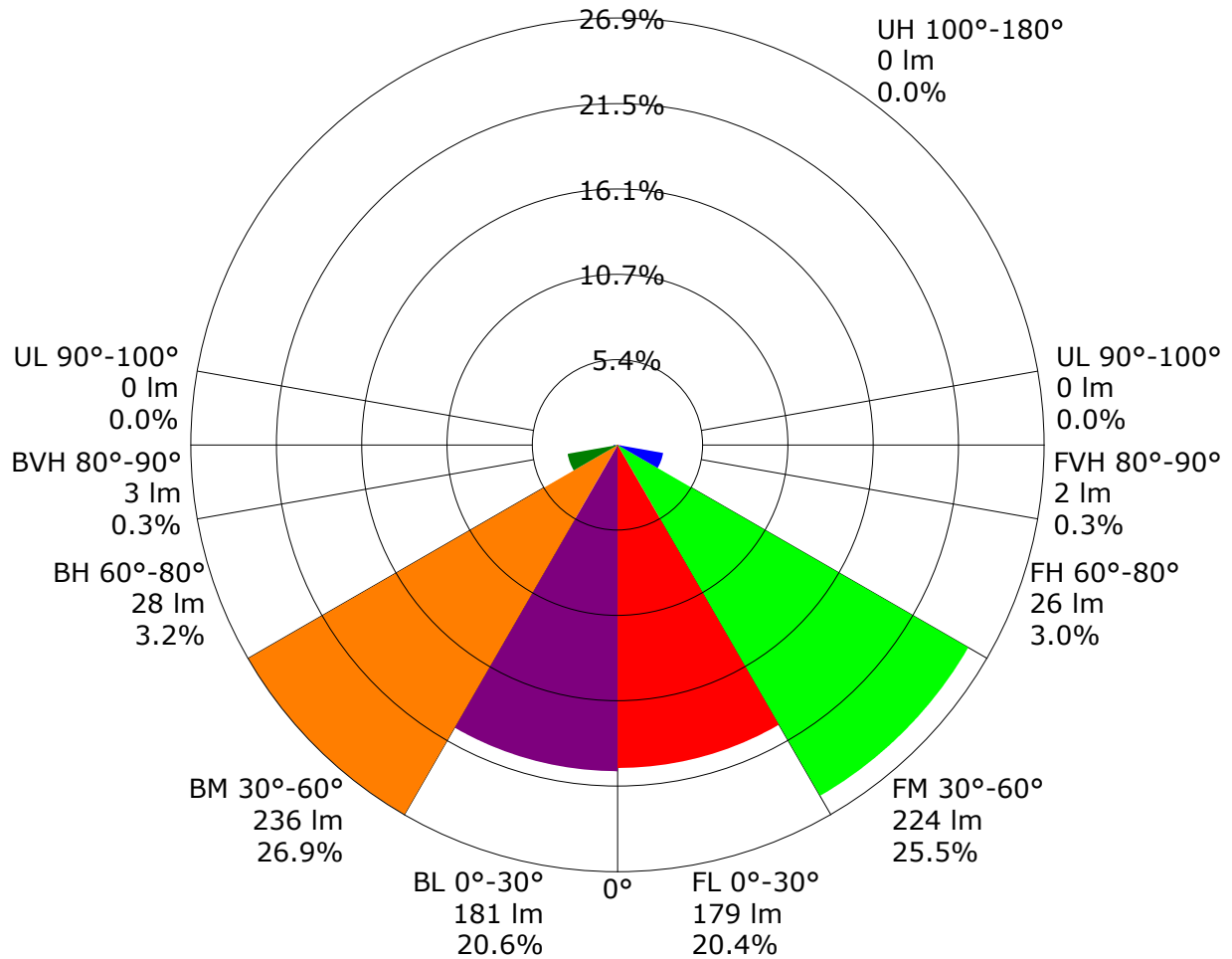
Reflectance:										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X=2H Y=2H	20.5	21.7	20.8	21.9	22.1	20.8	22.0	21.1	22.2	22.4
3H	20.7	21.8	21.1	22.0	22.3	21.0	22.1	21.4	22.3	22.6
4H	20.8	21.8	21.2	22.1	22.4	21.1	22.1	21.5	22.4	22.7
6H	20.9	21.8	21.2	22.1	22.4	21.2	22.1	21.5	22.4	22.7
8H	20.9	21.7	21.2	22.1	22.4	21.2	22.1	21.6	22.4	22.7
12H	20.9	21.7	21.2	22.0	22.3	21.2	22.0	21.6	22.4	22.7
X=4H Y=2H	20.6	21.6	20.9	21.8	22.1	20.9	21.8	21.2	22.1	22.4
3H	20.9	21.8	21.3	22.1	22.4	21.2	22.0	21.6	22.4	22.7
4H	21.1	21.8	21.5	22.2	22.6	21.4	22.1	21.8	22.5	22.8
6H	21.2	21.9	21.6	22.2	22.6	21.5	22.2	21.9	22.5	22.9
8H	21.2	21.8	21.7	22.2	22.6	21.5	22.1	22.0	22.5	22.9
12H	21.2	21.8	21.7	22.2	22.6	21.6	22.1	22.0	22.5	22.9
X=8H Y=4H	21.1	21.7	21.6	22.1	22.5	21.4	22.0	21.8	22.4	22.8
6H	21.3	21.8	21.8	22.2	22.7	21.6	22.1	22.0	22.5	22.9
8H	21.4	21.8	21.8	22.2	22.7	21.7	22.1	22.1	22.5	23.0
12H	21.4	21.7	21.9	22.2	22.7	21.7	22.1	22.2	22.5	23.0
X=12H Y=4H	21.1	21.6	21.6	22.1	22.5	21.4	21.9	21.8	22.3	22.8
6H	21.3	21.7	21.8	22.2	22.6	21.6	22.0	22.1	22.4	22.9
8H	21.4	21.7	21.9	22.2	22.7	21.7	22.0	22.2	22.5	23.0
Variations with the observer position at spacings:										
S=1.0H	+0.8/-1.4					+0.7/-1.2				
S=1.5H	+1.7/-2.9					+1.8/-2.8				
S=2.0H	+3.2/-3.5					+3.3/-3.7				

Calculate in accordance with CIE Pub.117. The table is revised with  $879\text{Im}$  ( $8\log(F/F_0) = -0.4$ ).

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:

## LCS Graph



**Back Light**

**Forward Light**

Scale= MAX LCS%

Trapped Light:NA,NA

## 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	0.70	0.80	0.86	0.90	0.96	1.00	1.02	1.05	1.07	
	0.30		0.64	0.74	0.80	0.85	0.91	0.95	0.98	1.02	1.05	
	0.20		0.60	0.69	0.76	0.81	0.87	0.92	0.95	1.00	1.03	
0.50	0.50	0.20	0.69	0.78	0.84	0.88	0.93	0.96	0.99	1.01	1.03	
	0.30		0.63	0.73	0.79	0.83	0.89	0.93	0.96	0.99	1.01	
	0.20		0.59	0.69	0.75	0.80	0.86	0.90	0.93	0.97	0.99	
0.30	0.50	0.20	0.68	0.76	0.82	0.85	0.90	0.93	0.95	0.98	1.00	
	0.30		0.63	0.72	0.78	0.82	0.87	0.90	0.93	0.96	0.98	
	0.20		0.59	0.68	0.74	0.79	0.84	0.88	0.91	0.94	0.96	
0.00	0.00	0.00	0.57	0.66	0.72	0.76	0.81	0.84	0.87	0.90	0.92	
Rating:9W 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 (°):0.0-90.0:5.0  
 Test Device: GPM-1600L  
 Distance: 7.172 m [K=1.0000]  
 Humidity:  
 Inspector:



## 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	0.79	0.63	0.53	0.45	0.36	0.29	0.25	0.19	0.16	
	0.30		0.66	0.54	0.46	0.40	0.32	0.27	0.23	0.18	0.15	
	0.20		0.56	0.47	0.41	0.36	0.29	0.25	0.21	0.17	0.14	
0.50	0.50	0.20	0.76	0.60	0.50	0.43	0.34	0.31	0.23	0.18	0.15	
	0.30		0.64	0.52	0.44	0.38	0.31	0.25	0.22	0.17	0.14	
	0.20		0.56	0.46	0.40	0.35	0.28	0.24	0.21	0.16	0.13	
0.30	0.50	0.20	0.73	0.57	0.48	0.41	0.32	0.26	0.22	0.17	0.14	
	0.30		0.62	0.51	0.43	0.37	0.29	0.24	0.21	0.16	0.13	
	0.20		0.55	0.45	0.39	0.34	0.27	0.23	0.20	0.15	0.13	
0.00	0.00	0.00	0.43	0.34	0.28	0.24	0.19	0.16	0.13	0.10	0.08	
Rating:9W 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 (°):0.0-90.0:5.0  
 Test Device: GPM-1600L  
 Distance: 7.172 m [K=1.0000]  
 Humidity:  
 Inspector:

## Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 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	0.19	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	0.09	0.10	0.12	0.14	0.15	0.16	0.18	
0.50	0.50	0.20	0.14	0.15	0.16	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	0.09	0.10	0.12	0.13	0.14	0.16	0.17	
0.30	0.50	0.20	0.14	0.15	0.16	0.16	0.17	0.18	0.18	0.19	0.19	
	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	0.09	0.10	0.12	0.13	0.14	0.16	0.17	
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	
<p>Rating:9W Photometrically tested without ceiling board.</p> <p>Multiply UF values by service correction factors</p> <p>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>												

## Zonal Lumen

[illegible]

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:

## Zonal Lumen (Continue 1)

cone flux(90°): 654.87 lm

%lum = 74.5%  
%lamp = 74.5%

cone flux(120°): 820.30 lm

%lum = 93.3%  
%lamp = 93.3%

## Unit: 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:

## LED Average Luminance Report

Avg.L	cd/m <sup>2</sup>
L 0-180(65) av	7133.80
L 0-180(75) av	5372.46
L 0-180(85) av	4167.52
L 90-270(65) av	6610.70
L 90-270(75) av	4820.05
L 90-270(85) av	3219.28
L 45(65) av	6872.25
L 45(75) av	5096.26
L 45(85) av	3693.40

Standard: GB/T 29293-2012