

Report No.:

Test Time: 2023-10-19 17:11

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Lamp Catalog: 4000K

Number of Lamps:

Luminous Length (mm): 85

Luminous Height (mm):

Current: 0.0220 A

Power Factor: 0.8180

Luminaire Description: ADLT90DPW

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 85

Voltage: 230.90 V

Power: 4.09 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 477.3 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H67.9

Vertical Diffuse Angle(50%): V70.1

Luminous Efficacy (lm/w): 116.69

Max. Intensity: 349.49 cd

S/MH(C0/C180): 0.96

Total Rated Lamp Lumens: 477.3 lm

Efficiency: 100%

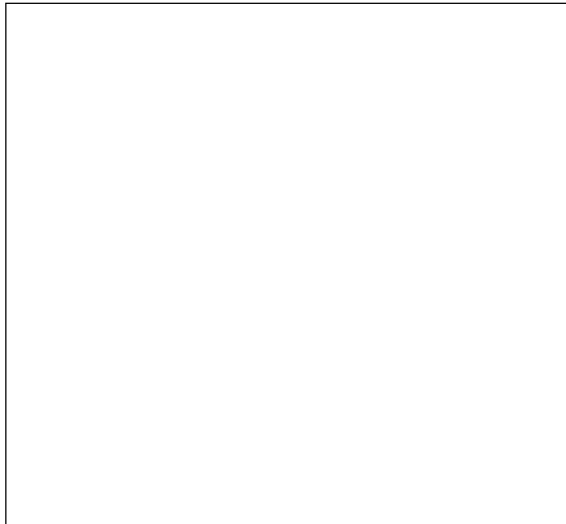
Upward Ratio: 0%

C0r0 Intensity: 349.49 cd

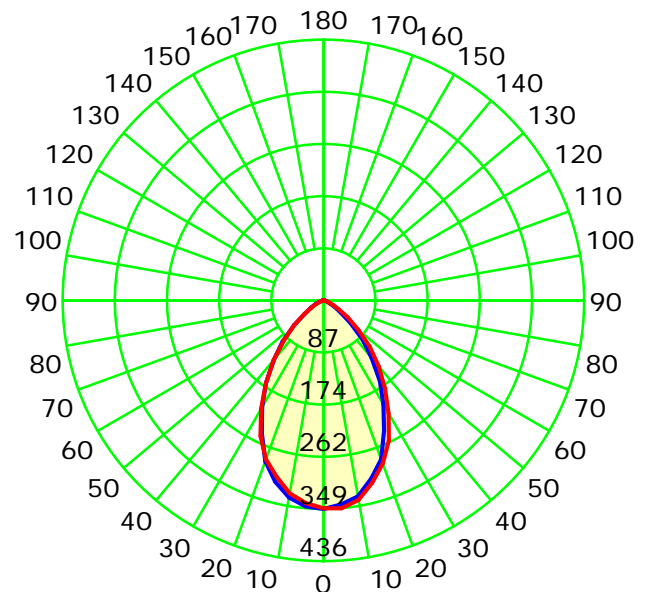
Pos of Max. Intensity: H0 V0

S/MH(C90/C270): 1.00

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 69.0°

— 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

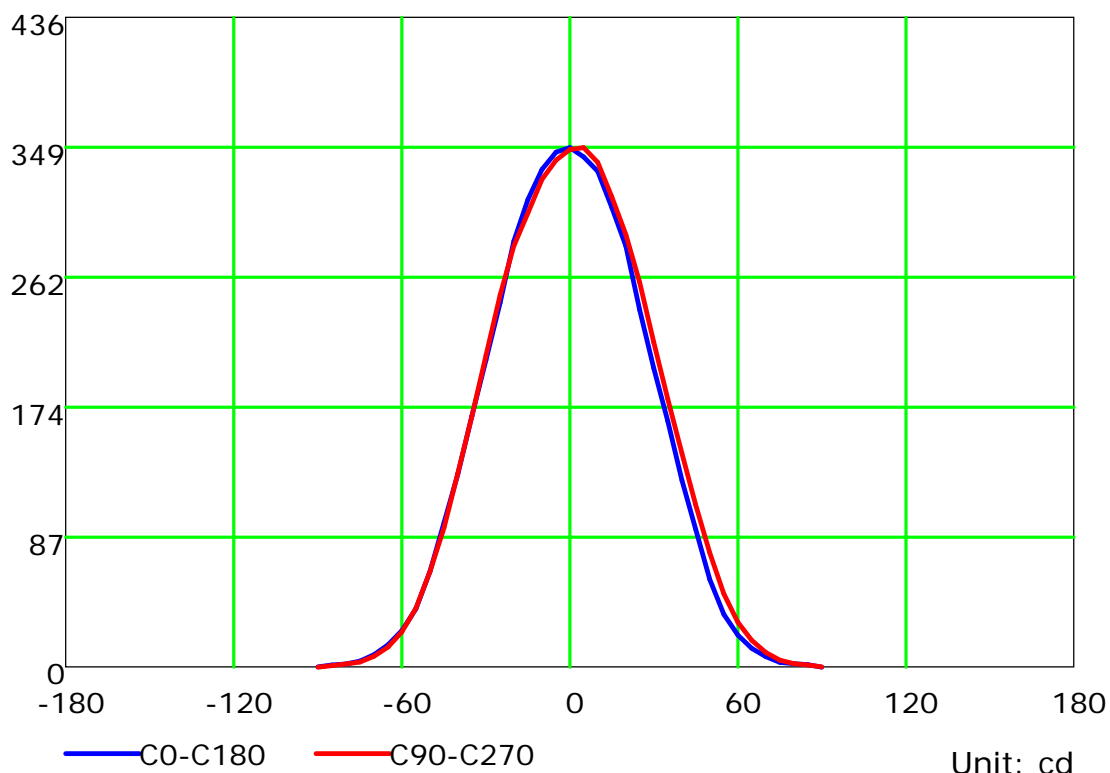
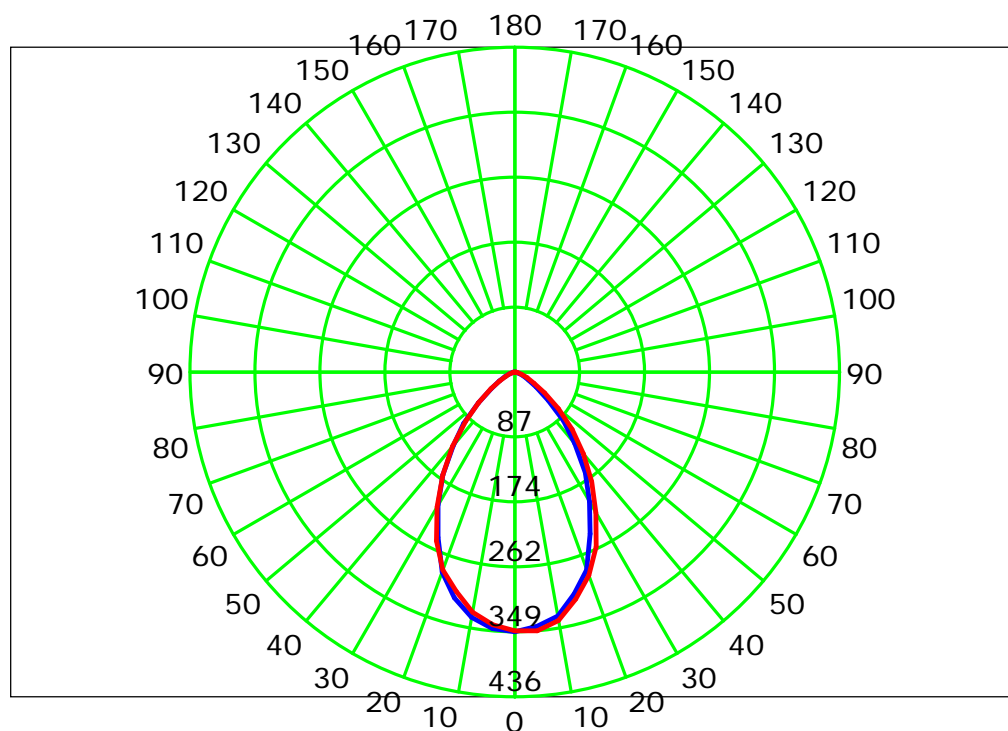
Test Device: GPM-1600L

Distance: 7.305 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: 7.305 m [K=1.0000]  
 Humidity:  
 Inspector:

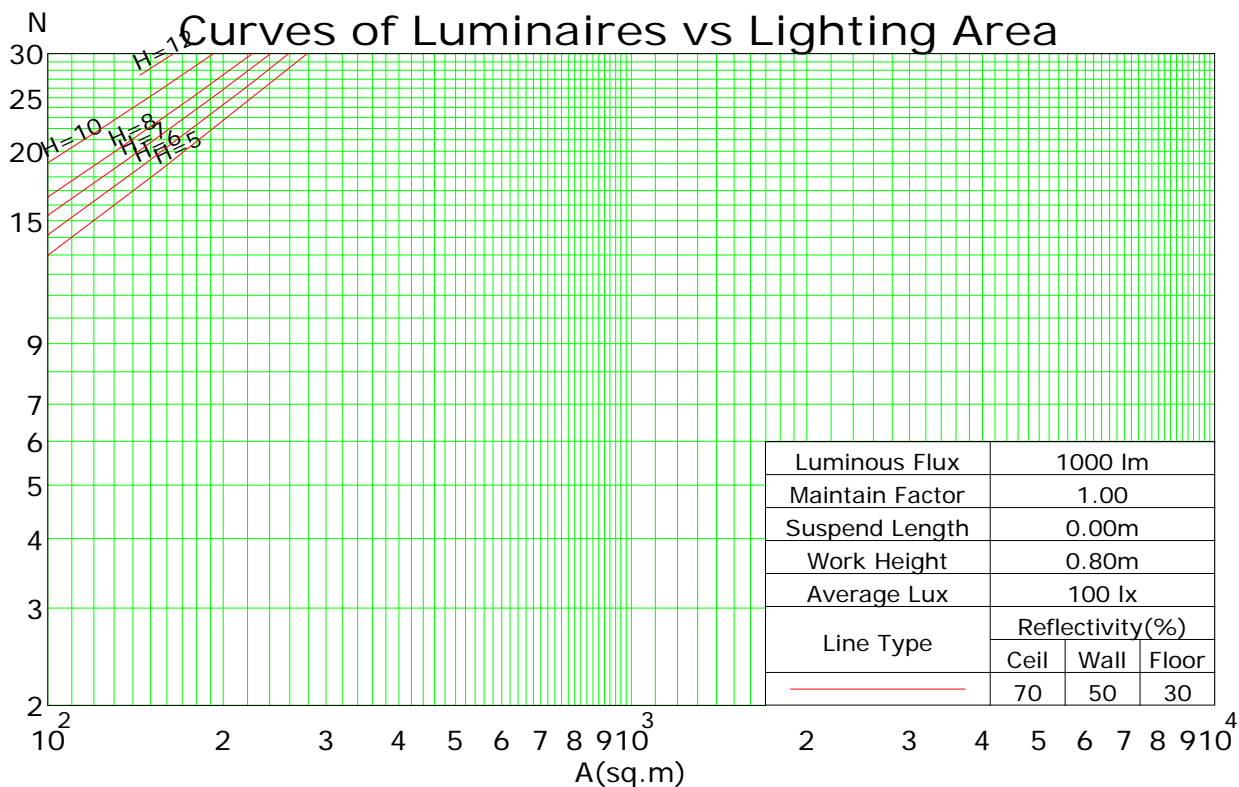
## Coefficients Of Utilization - Zonal Cavity Method

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	1.12	1.09	1.06	1.03	1.09	1.06	1.04	1.01	1.02	1.00	0.98	0.99	0.97	0.95	0.95	0.94	0.92	0.90
2	1.05	0.99	0.94	0.90	1.02	0.97	0.92	0.89	0.94	0.90	0.87	0.91	0.87	0.85	0.88	0.85	0.83	0.81
3	0.98	0.90	0.84	0.79	0.96	0.89	0.83	0.78	0.86	0.81	0.77	0.83	0.79	0.76	0.81	0.77	0.75	0.73
4	0.92	0.82	0.75	0.70	0.90	0.81	0.75	0.70	0.79	0.73	0.69	0.77	0.72	0.68	0.75	0.71	0.67	0.65
5	0.86	0.75	0.68	0.63	0.84	0.74	0.68	0.63	0.73	0.67	0.62	0.71	0.66	0.62	0.69	0.65	0.61	0.59
6	0.80	0.70	0.62	0.57	0.79	0.69	0.62	0.57	0.67	0.61	0.56	0.65	0.60	0.56	0.64	0.59	0.56	0.54
7	0.75	0.64	0.57	0.52	0.74	0.64	0.57	0.52	0.62	0.56	0.52	0.61	0.55	0.51	0.60	0.55	0.51	0.49
8	0.71	0.60	0.53	0.48	0.70	0.59	0.52	0.48	0.58	0.52	0.47	0.57	0.51	0.47	0.56	0.51	0.47	0.45
9	0.67	0.56	0.49	0.44	0.66	0.55	0.48	0.44	0.54	0.48	0.44	0.53	0.47	0.43	0.52	0.47	0.43	0.42
10	0.63	0.52	0.45	0.41	0.62	0.51	0.45	0.41	0.51	0.45	0.40	0.50	0.44	0.40	0.49	0.44	0.40	0.39

Spacing Criteria (0-180): 0.96

Spacing Criteria (90-270): 1.00

Spacing Criteria (Diagonal): 1.02



C Plane (°): 0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°): 0.0-90.0: 5.0

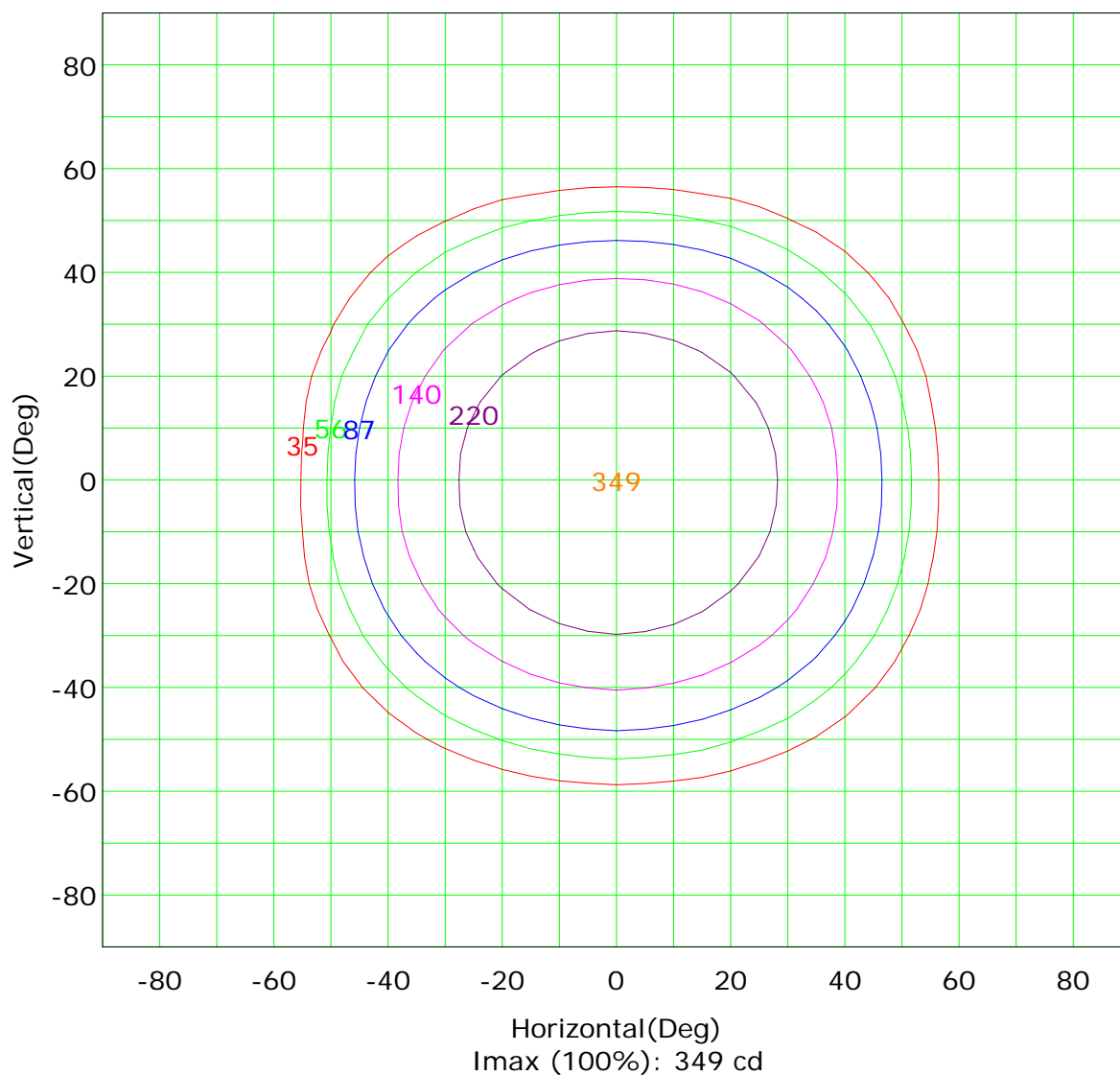
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

## Isocandela (rectangle)



( 10%):	35 cd	( 16%):	56 cd
( 25%):	87 cd	( 40%):	140 cd
( 63%):	220 cd	(100%):	349 cd

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:5.0

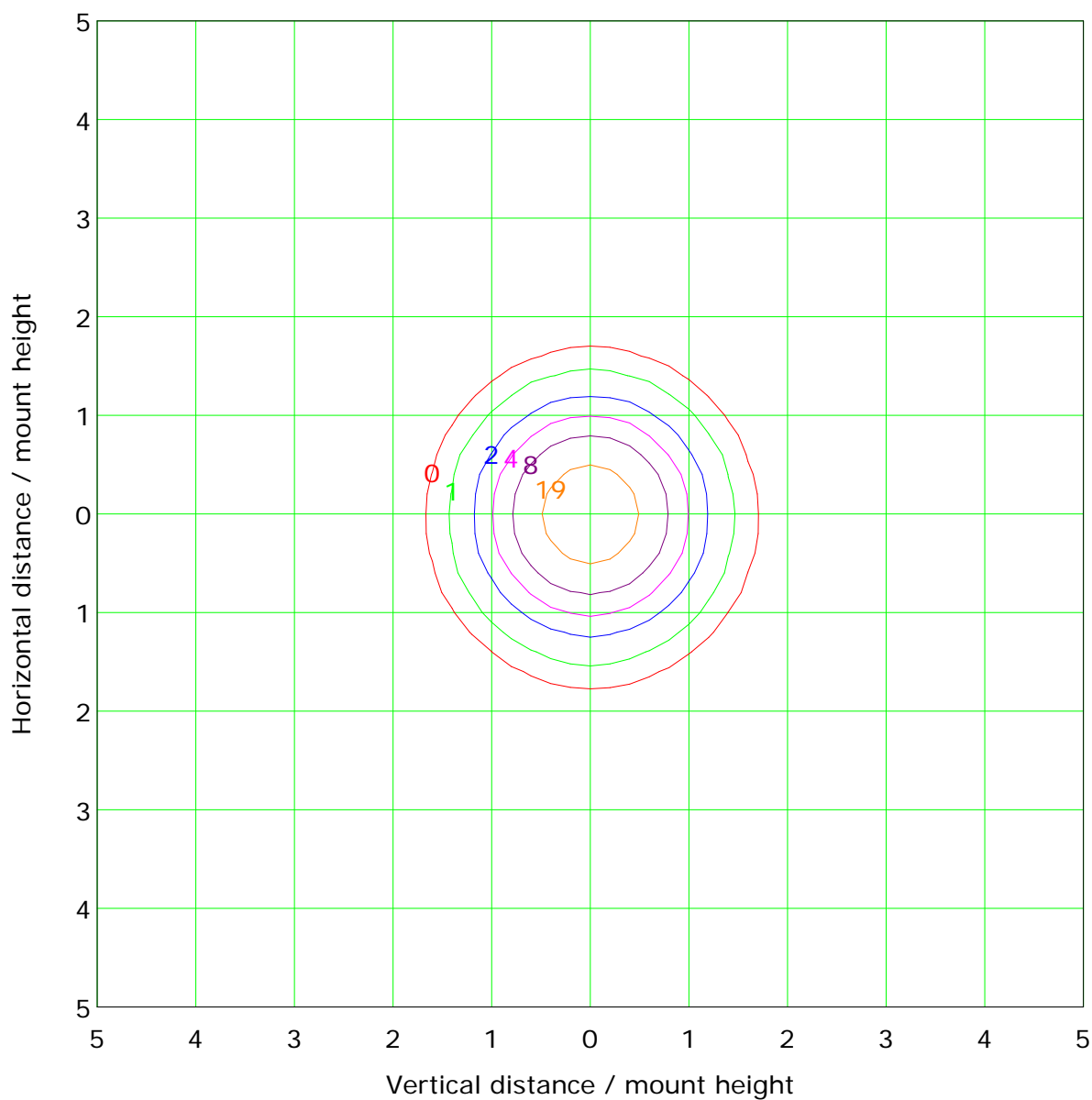
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

## IsoLux Plot



Mounting Height: 3.0m		Max Lux(100%): 38.8 lx	
— ( 1%):	0.4 lx	— ( 2%):	0.8 lx
— ( 5%):	1.9 lx	— (10%):	3.9 lx
— (20%):	7.8 lx	— (50%):	19.4 lx
— (100%):	38.8 lx		

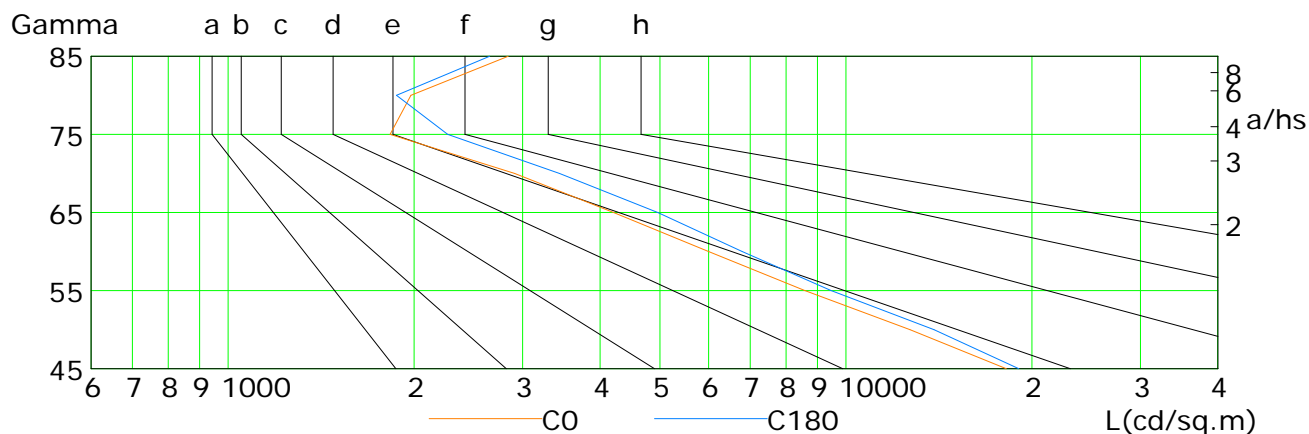
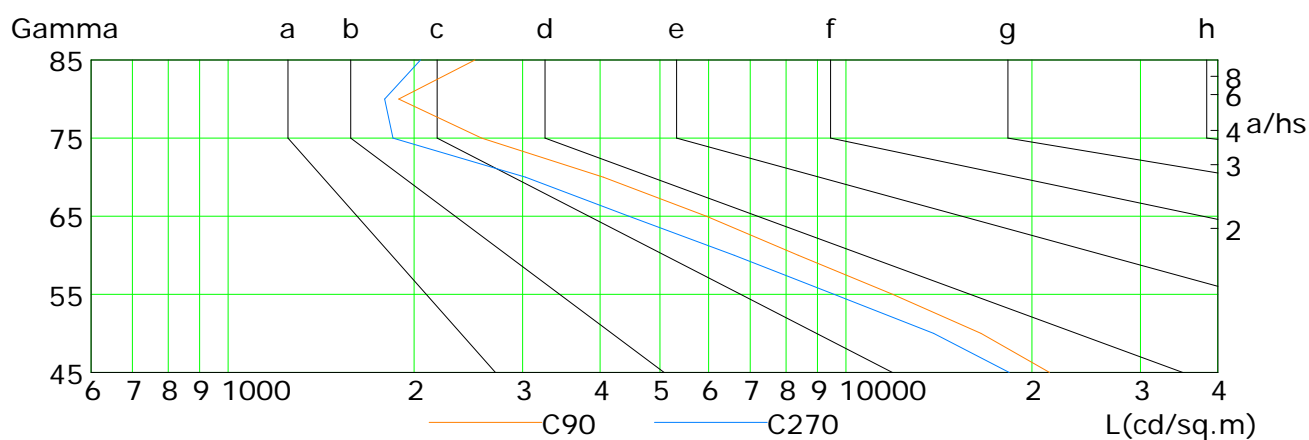
C Plane (°): 0.0-360.0: 90.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°): 0.0-90.0: 5.0  
 Test Device: GPM-1600L  
 Distance: 7.305 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	18194	12698	8593	5999	4208	2910	1829	1977	2843
C90	21375	16561	11913	8379	5947	4051	2572	1889	2509
C180	19067	13886	9474	6799	4962	3440	2267	1873	2652
C270	18394	13869	9570	6599	4454	3031	1850	1793	2049

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:5.0

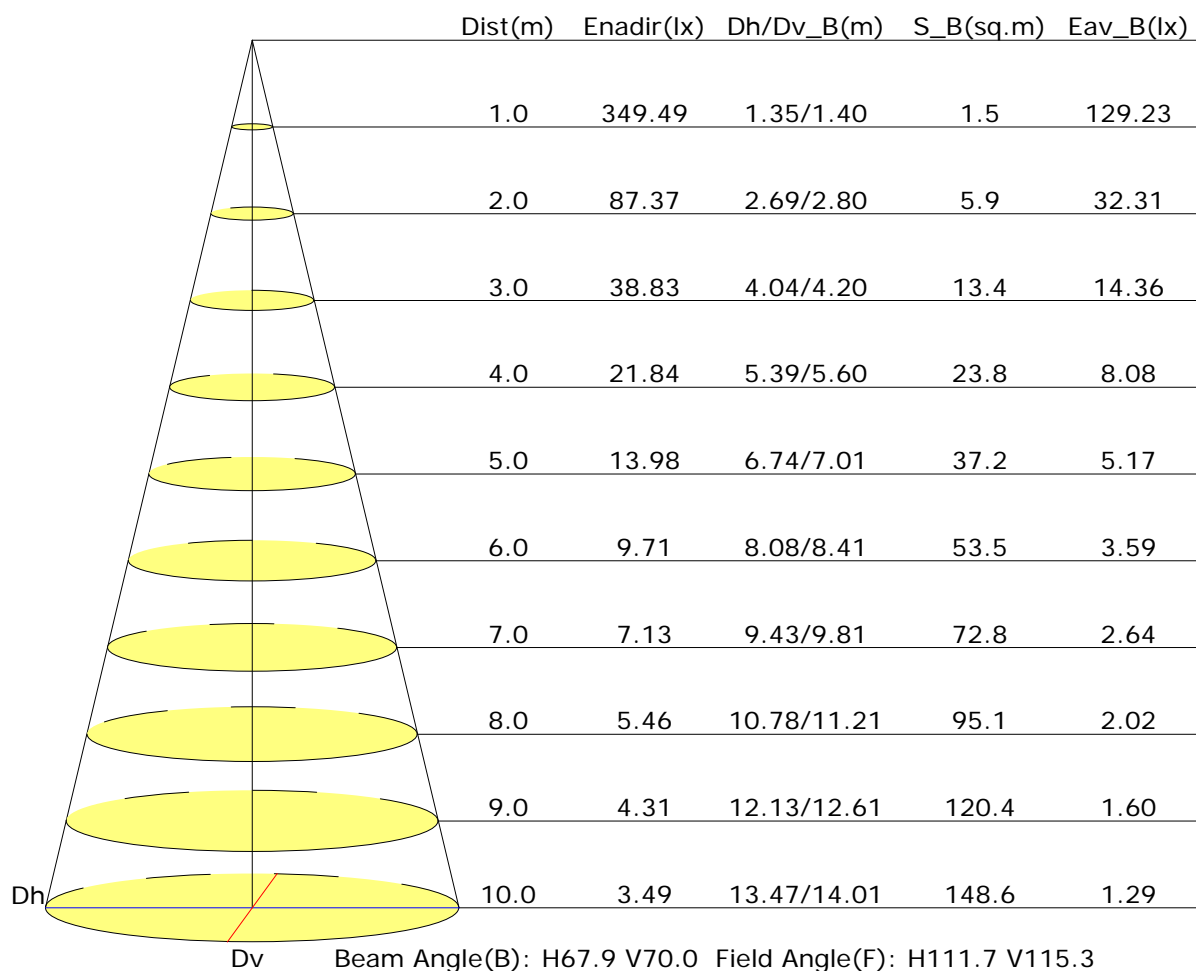
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

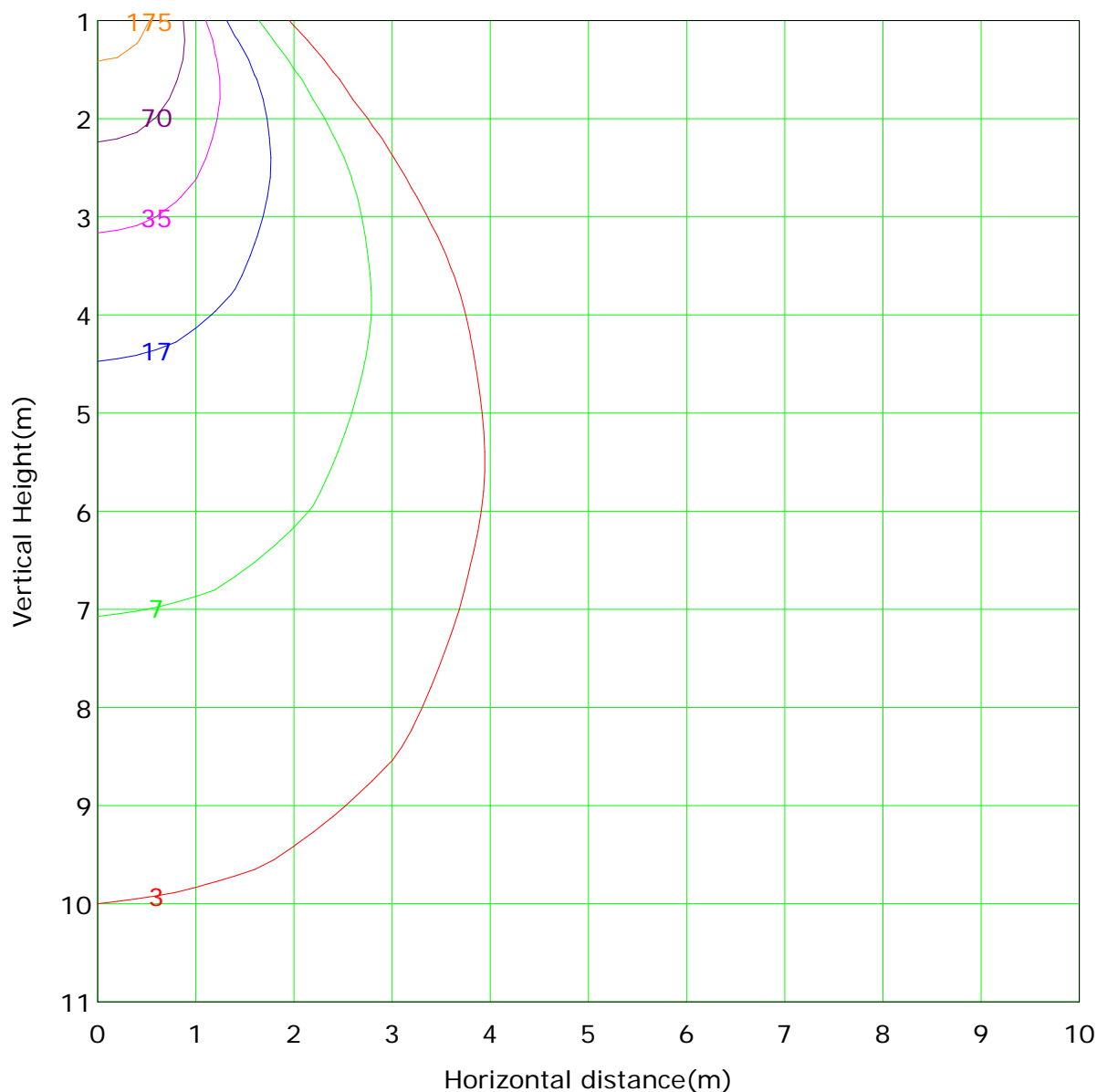
## Illuminance at a Distance



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: 7.305 m [K=1.0000]  
 Humidity:  
 Inspector:

## Vertical IsoLux Plot



Lowest(m): 1.0m    Highest(m): 11.0m    Max Lux: 349.5 lx

( 1%): 3.5 lx	( 2%): 7.0 lx
( 5%): 17.5 lx	( 10%): 34.9 lx
( 20%): 69.9 lx	( 50%): 174.7 lx
(100%): 349.5 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: 7.305 m [K=1.0000]  
 Humidity:  
 Inspector:



## Area Flux Table

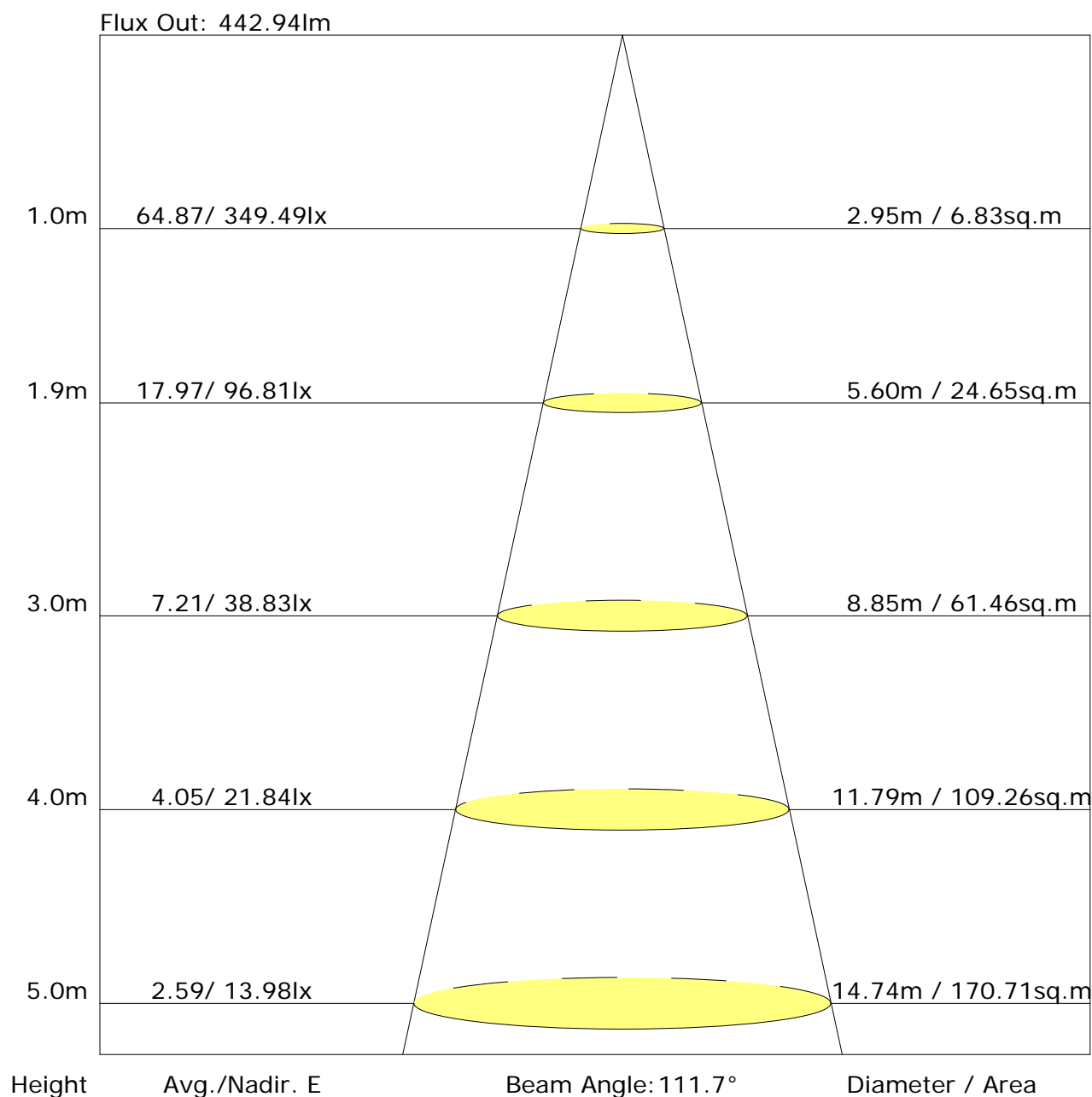
Unit: lm

Flux(E)	Vertical plane																		Flux(T)	Flux(E)
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	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	0.1	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	2.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	12.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.8	27.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.0	46.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.9	63.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.7	72.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.4	72.6
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.3	62.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.1	45.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0	26.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	11.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	1.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	476	445

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: 7.305 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: 5.0  
 Test Device: GPM-1600L  
 Distance: 7.305 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	19.3	20.3	19.5	20.5	20.8	19.8	20.9	20.1	21.1	21.3
3H	19.3	20.3	19.7	20.6	20.8	19.9	20.9	20.2	21.2	21.4
4H	19.3	20.2	19.7	20.5	20.8	19.9	20.8	20.3	21.1	21.4
6H	19.3	20.1	19.6	20.4	20.7	19.9	20.7	20.2	21.0	21.3
8H	19.3	20.1	19.6	20.4	20.7	19.9	20.7	20.2	21.0	21.3
12H	19.3	20.1	19.6	20.4	20.7	19.9	20.6	20.2	20.9	21.3
X=4H Y=2H	19.3	20.2	19.6	20.5	20.8	19.8	20.7	20.1	21.0	21.3
3H	19.5	20.2	19.8	20.6	20.9	20.0	20.8	20.4	21.1	21.4
4H	19.5	20.2	19.9	20.5	20.9	20.0	20.7	20.4	21.1	21.4
6H	19.5	20.1	19.9	20.5	20.9	20.0	20.6	20.4	21.0	21.4
8H	19.5	20.0	19.9	20.4	20.8	20.0	20.6	20.5	21.0	21.4
12H	19.5	20.0	20.0	20.4	20.9	20.0	20.5	20.5	20.9	21.4
X=8H Y=4H	19.4	20.0	19.9	20.4	20.8	20.0	20.5	20.4	20.9	21.3
6H	19.5	19.9	19.9	20.3	20.8	20.0	20.4	20.4	20.9	21.3
8H	19.5	19.9	20.0	20.3	20.8	20.0	20.4	20.5	20.8	21.3
12H	19.6	19.9	20.0	20.4	20.9	20.0	20.4	20.5	20.8	21.3
X=12H Y=4H	19.4	19.9	19.8	20.3	20.7	19.9	20.4	20.4	20.8	21.3
6H	19.4	19.8	19.9	20.3	20.8	20.0	20.3	20.4	20.8	21.3
8H	19.5	19.8	20.0	20.3	20.8	20.0	20.3	20.5	20.8	21.3
Variations with the observer position at spacings:										
S=1.0H	+0.9/-2.0					+0.8/-1.8				
S=1.5H	+2.1/-3.8					+2.0/-3.6				
S=2.0H	+3.7/-5.3					+3.7/-5.1				

Calculate in accordance with CIE Pub.117. The table is revised with  $477\text{lm}$  ( $8\log(F/F_0) = -2.6$ ).

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: 7.305 m [K=1.0000]  
Humidity:  
Inspector:

## Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 1.00								
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	0.72	0.81	0.87	0.91	0.97	1.00	1.03	1.06	1.08
	0.30		0.66	0.76	0.82	0.86	0.92	0.96	0.99	1.03	1.05
	0.20		0.62	0.71	0.78	0.82	0.89	0.93	0.96	1.01	1.03
0.50	0.50	0.20	0.71	0.80	0.85	0.89	0.94	0.97	0.99	1.02	1.04
	0.30		0.65	0.75	0.80	0.85	0.90	0.94	0.96	1.00	1.02
	0.20		0.62	0.71	0.77	0.81	0.87	0.91	0.94	0.98	1.00
0.30	0.50	0.20	0.70	0.78	0.83	0.87	0.91	0.94	0.96	0.98	1.00
	0.30		0.65	0.74	0.79	0.83	0.88	0.91	0.94	0.97	0.98
	0.20		0.61	0.70	0.76	0.80	0.86	0.89	0.92	0.95	0.97
0.00	0.00	0.00	0.59	0.68	0.73	0.77	0.82	0.86	0.88	0.91	0.92
<p>Rating: 4W 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>											

## Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 1.00									
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	0.76	0.60	0.50	0.43	0.34	0.28	0.24	0.18	0.15	
	0.30		0.63	0.52	0.44	0.38	0.31	0.26	0.22	0.17	0.14	
	0.20		0.54	0.45	0.39	0.34	0.28	0.24	0.20	0.16	0.13	
0.50	0.50	0.20	0.73	0.58	0.48	0.41	0.32	0.30	0.22	0.17	0.14	
	0.30		0.62	0.50	0.42	0.37	0.29	0.24	0.21	0.16	0.13	
	0.20		0.53	0.44	0.38	0.33	0.27	0.22	0.19	0.15	0.13	
0.30	0.50	0.20	0.70	0.55	0.46	0.39	0.30	0.25	0.21	0.16	0.13	
	0.30		0.60	0.48	0.41	0.35	0.28	0.23	0.20	0.15	0.12	
	0.20		0.53	0.43	0.37	0.32	0.26	0.22	0.18	0.14	0.12	
0.00	0.00	0.00	0.41	0.32	0.26	0.23	0.18	0.14	0.12	0.09	0.07	
<p>Rating: 4W 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>												

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: 7.305 m [K=1.0000]  
Humidity:  
Inspector:

## Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 1.00									
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	0.14	0.16	0.17	0.17	0.18	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	0.17	0.18	
0.50	0.50	0.20	0.14	0.15	0.16	0.17	0.18	0.18	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	0.15	0.16	0.17	
0.30	0.50	0.20	0.13	0.14	0.15	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	
Rating: 4W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												

## 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: 7.305 m [K=1.0000]  
Humidity:  
Inspector:

## Zonal Lumen (Continue 1)

cone flux(90°): 383.38 lm

%lum = 80.3%

%lamp = 80.3%

cone flux(120°): 455.20 lm

%lum = 95.4%

%lamp = 95.4%



## Unit: cd

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: 7.305 m [K=1.0000]  
Humidity:  
Inspector: