

Report No.:

Test Time: 2023-10-20 13:50

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: 0.8170

Luminaire Description: ADL90DP

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 85

Voltage: 230.90 V

Power: 4.09 W

Photometric Results

CIE Class: Direct

Measurement Flux: 458.9 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H72.4

Vertical Diffuse Angle(50%): V63.8

Luminous Efficacy (lm/w): 112.20

Max. Intensity: 354.42 cd

S/MH(C0/C180): 1.05

Total Rated Lamp Lumens: 458.9 lm

Efficiency: 100%

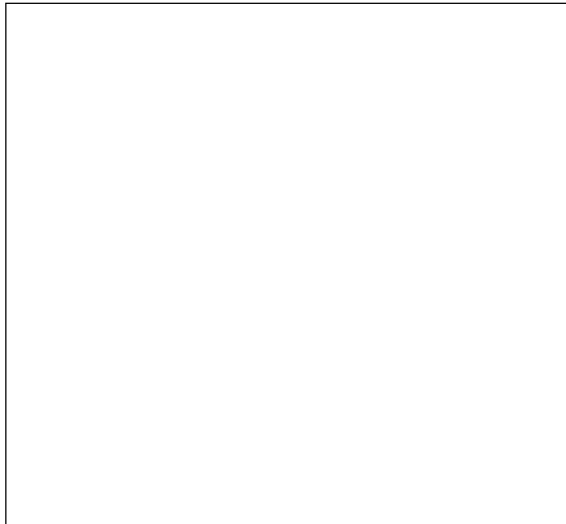
Upward Ratio: 0%

C0r0 Intensity: 354.41 cd

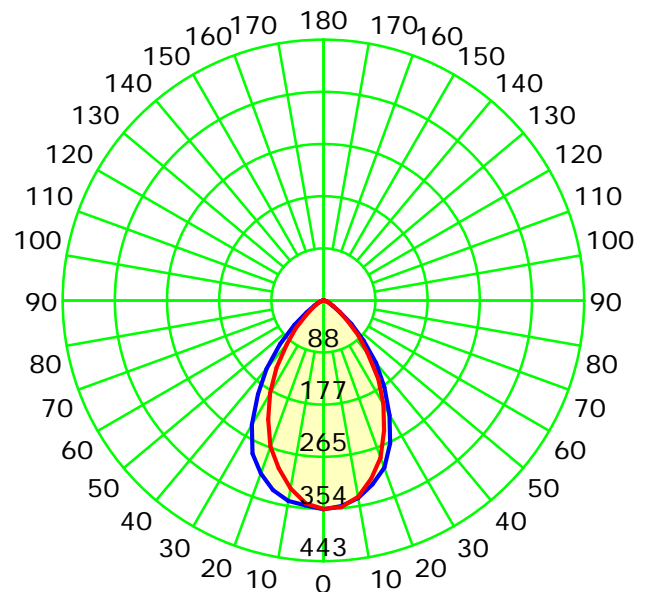
Pos of Max. Intensity: H0 V0

S/MH(C90/C270): 0.92

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 68.1°

— 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

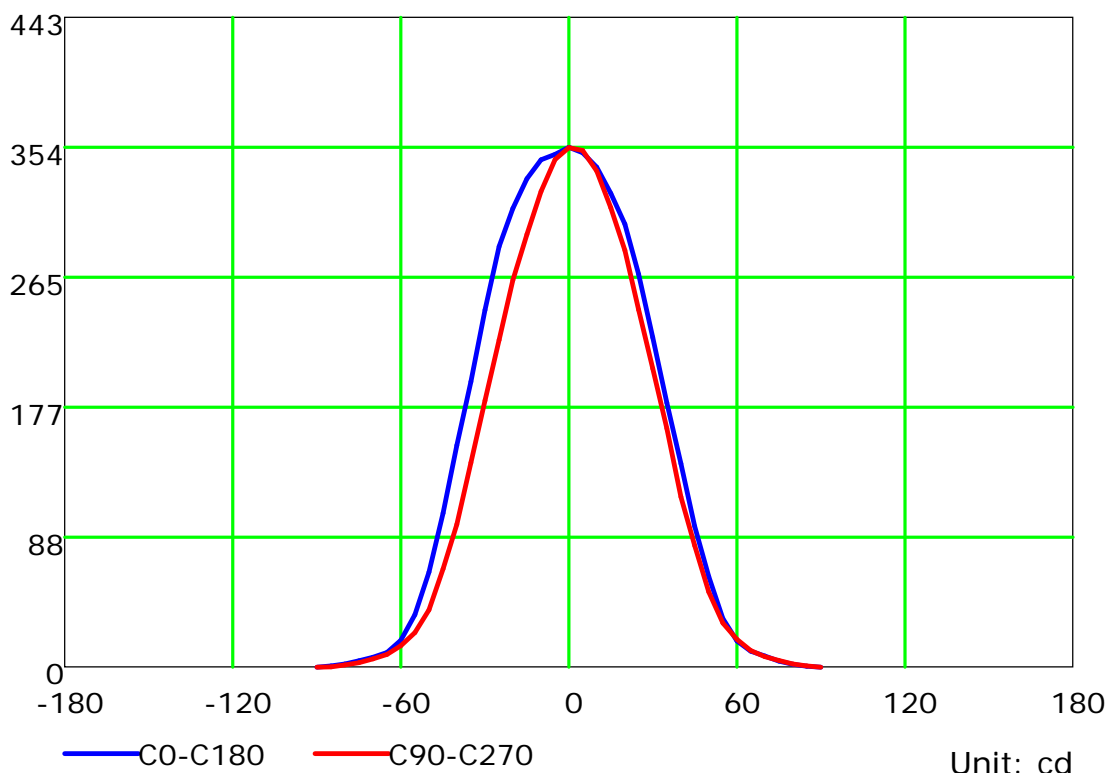
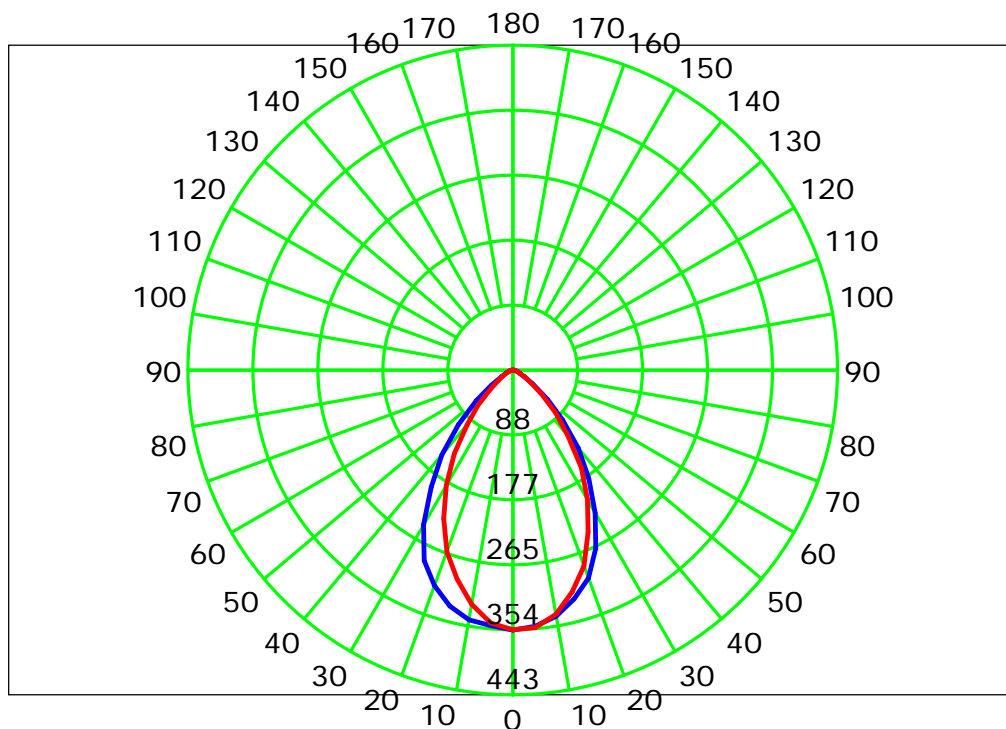
Test Device: GPM-1600L

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:

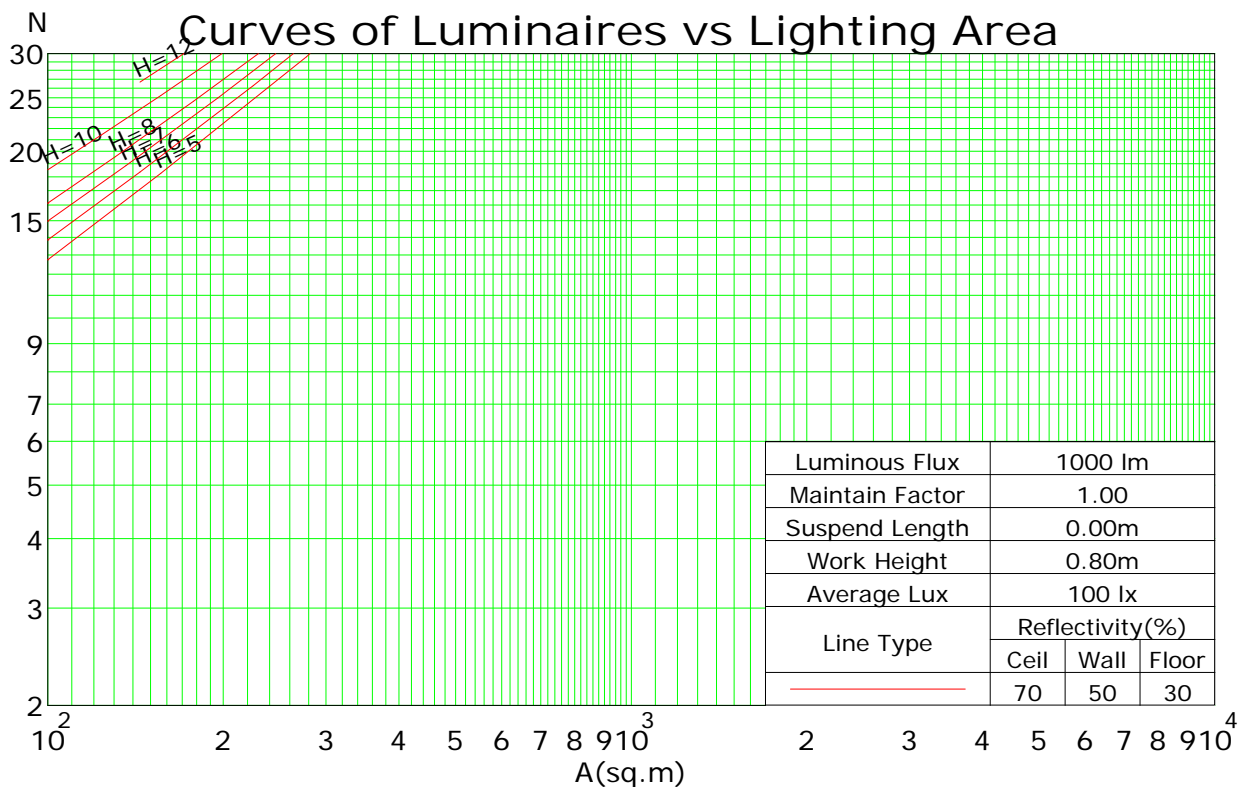
Coefficients Of Utilization - Zonal Cavity Method

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	1.10	1.07	1.04	1.02	1.03	1.01	0.99	0.99	0.97	0.96	0.95	0.94	0.93	0.91
2	1.05	0.99	0.95	0.91	1.03	0.98	0.93	0.90	0.94	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.82
3	0.99	0.91	0.85	0.80	0.97	0.90	0.84	0.80	0.87	0.82	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.74
4	0.92	0.83	0.77	0.72	0.90	0.82	0.76	0.71	0.80	0.75	0.70	0.78	0.73	0.70	0.76	0.72	0.69	0.67
5	0.87	0.77	0.70	0.65	0.85	0.76	0.69	0.64	0.74	0.68	0.64	0.72	0.67	0.63	0.70	0.66	0.63	0.61
6	0.81	0.71	0.64	0.59	0.80	0.70	0.63	0.59	0.68	0.63	0.58	0.67	0.62	0.58	0.66	0.61	0.57	0.56
7	0.77	0.66	0.59	0.54	0.75	0.65	0.58	0.54	0.64	0.58	0.53	0.62	0.57	0.53	0.61	0.56	0.53	0.51
8	0.72	0.61	0.54	0.49	0.71	0.61	0.54	0.49	0.59	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.47
9	0.68	0.57	0.50	0.46	0.67	0.56	0.50	0.46	0.55	0.50	0.45	0.55	0.49	0.45	0.54	0.49	0.45	0.43
10	0.64	0.53	0.47	0.42	0.63	0.53	0.47	0.42	0.52	0.46	0.42	0.51	0.46	0.42	0.50	0.45	0.42	0.40

Spacing Criteria (0-180): 1.05

Spacing Criteria (90-270): 0.92

Spacing Criteria (Diagonal): 1.01



C Plane (°): 0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°): 0.0-90.0: 5.0

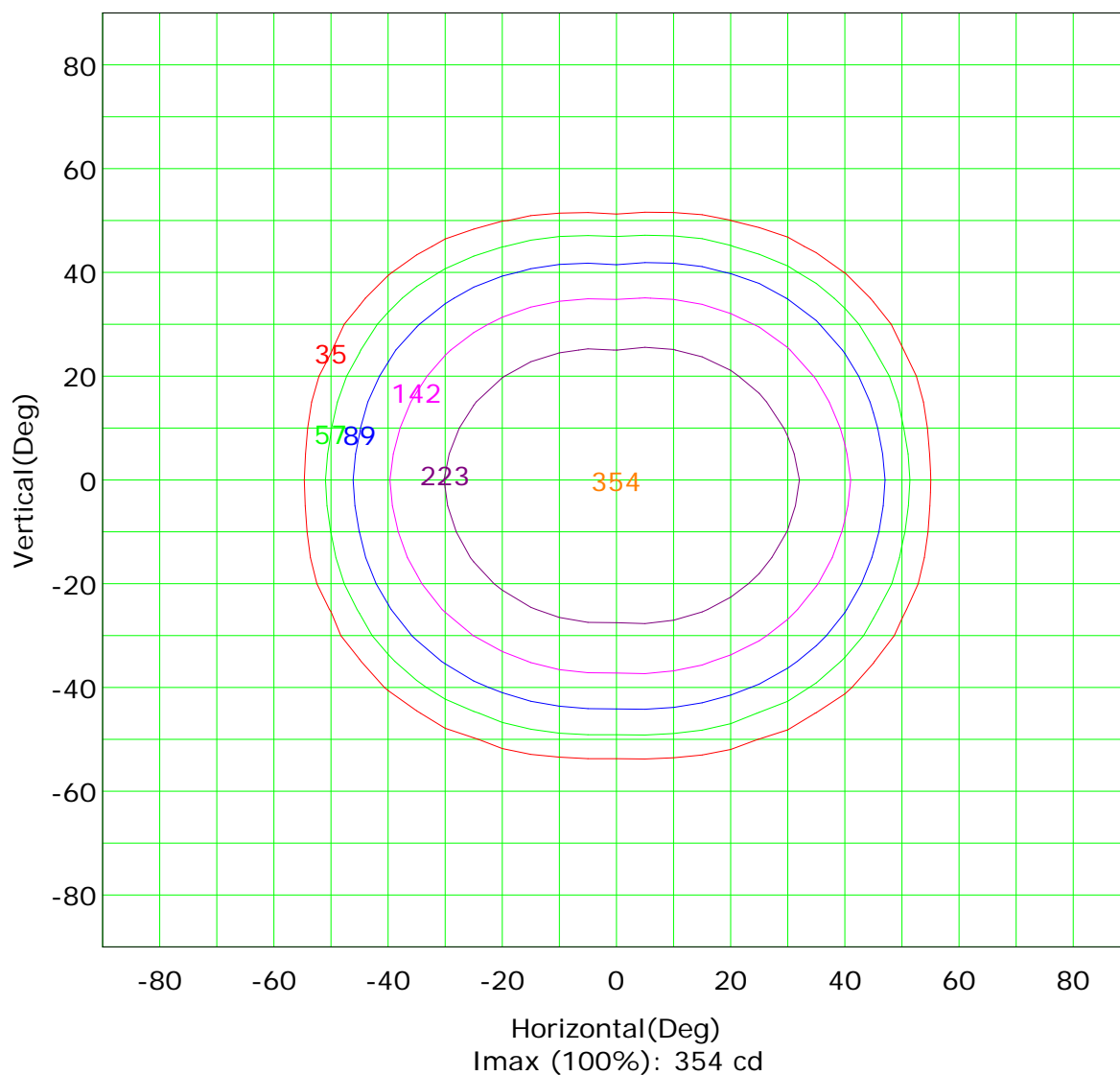
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

Isocandela (rectangle)



(10%):	35 cd	(16%):	57 cd
(25%):	89 cd	(40%):	142 cd
(63%):	223 cd	(100%):	354 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

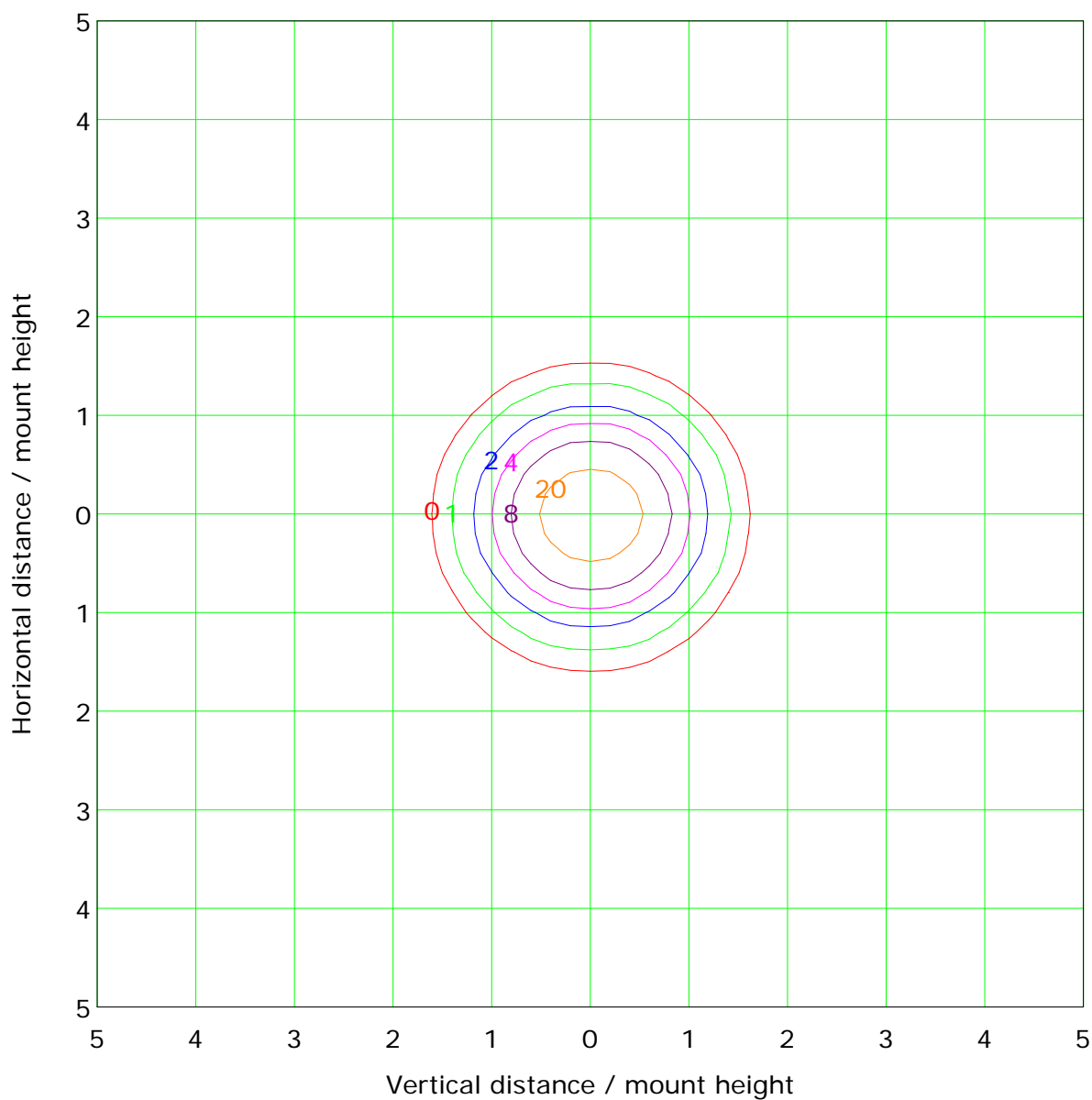
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 3.0m		Max Lux(100%): 39.4 lx	
(1%):	0.4 lx	(2%):	0.8 lx
(5%):	2.0 lx	(10%):	3.9 lx
(20%):	7.9 lx	(50%):	19.7 lx
(100%):	39.4 lx		

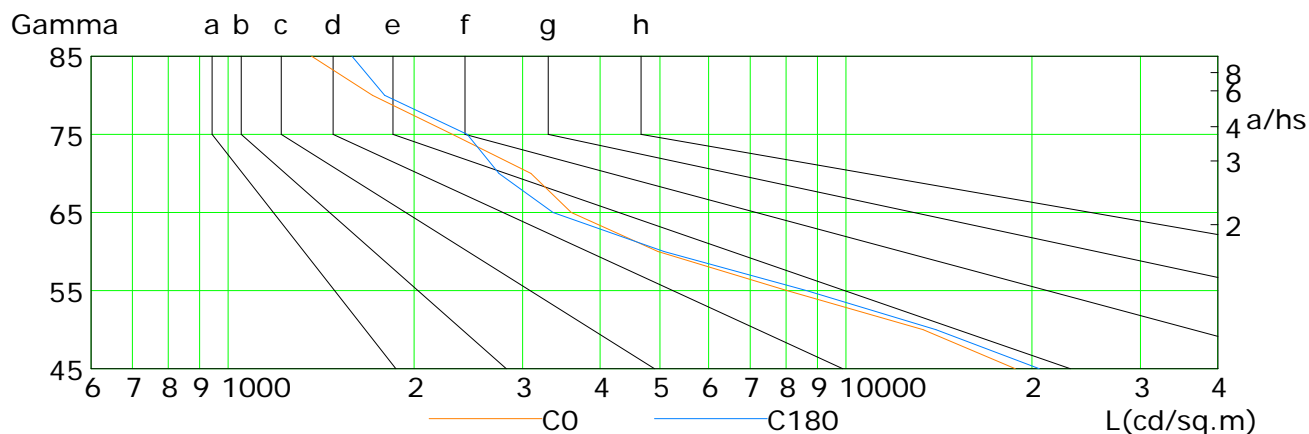
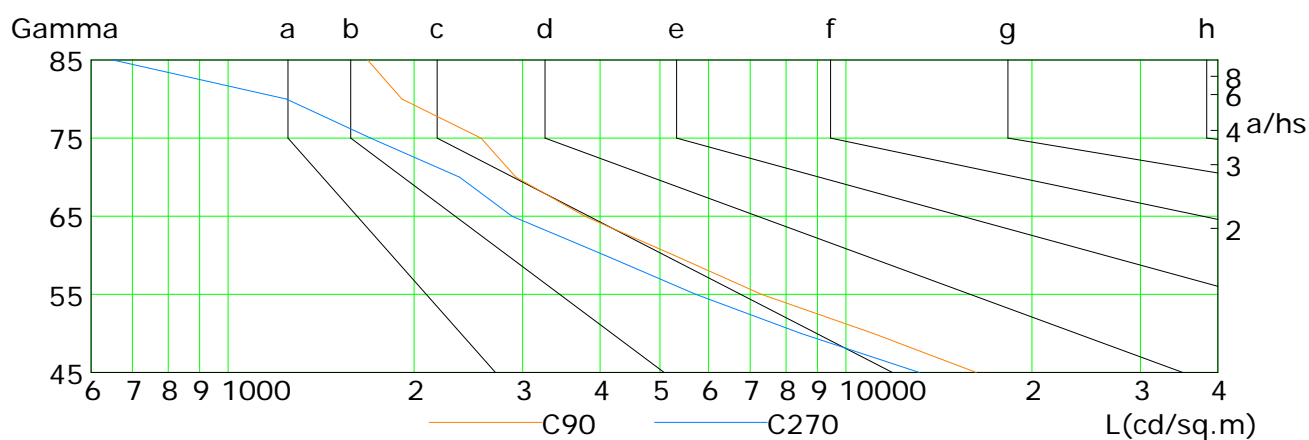
C Plane (°):0.0-360.0: 90.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

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	18818	13339	8033	4966	3596	3092	2310	1714	1366
C90	16256	11074	7304	5271	3779	2926	2567	1913	1683
C180	20576	13998	8639	5082	3357	2744	2439	1793	1588
C270	13142	8452	5714	4072	2882	2371	1701	1243	651

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:5.0

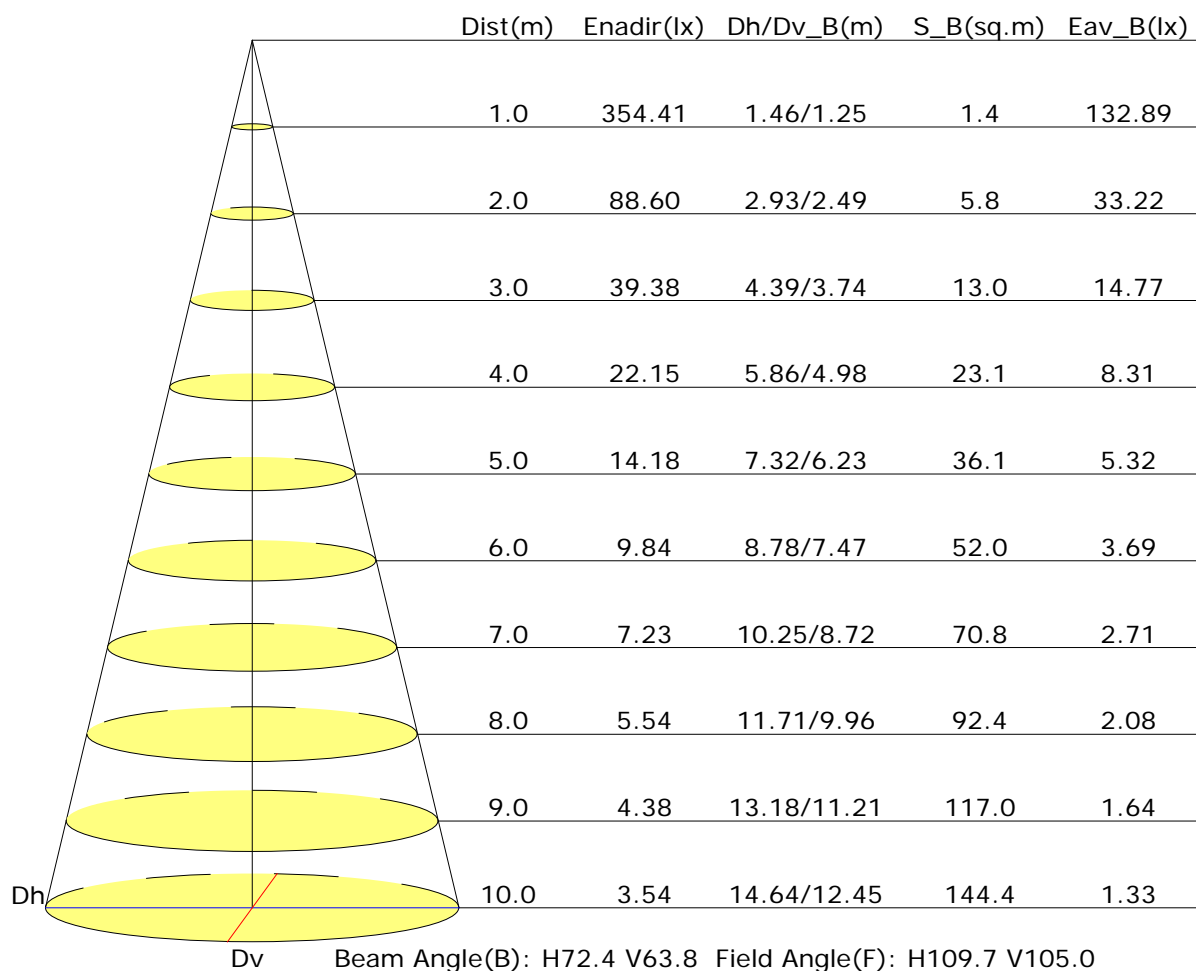
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

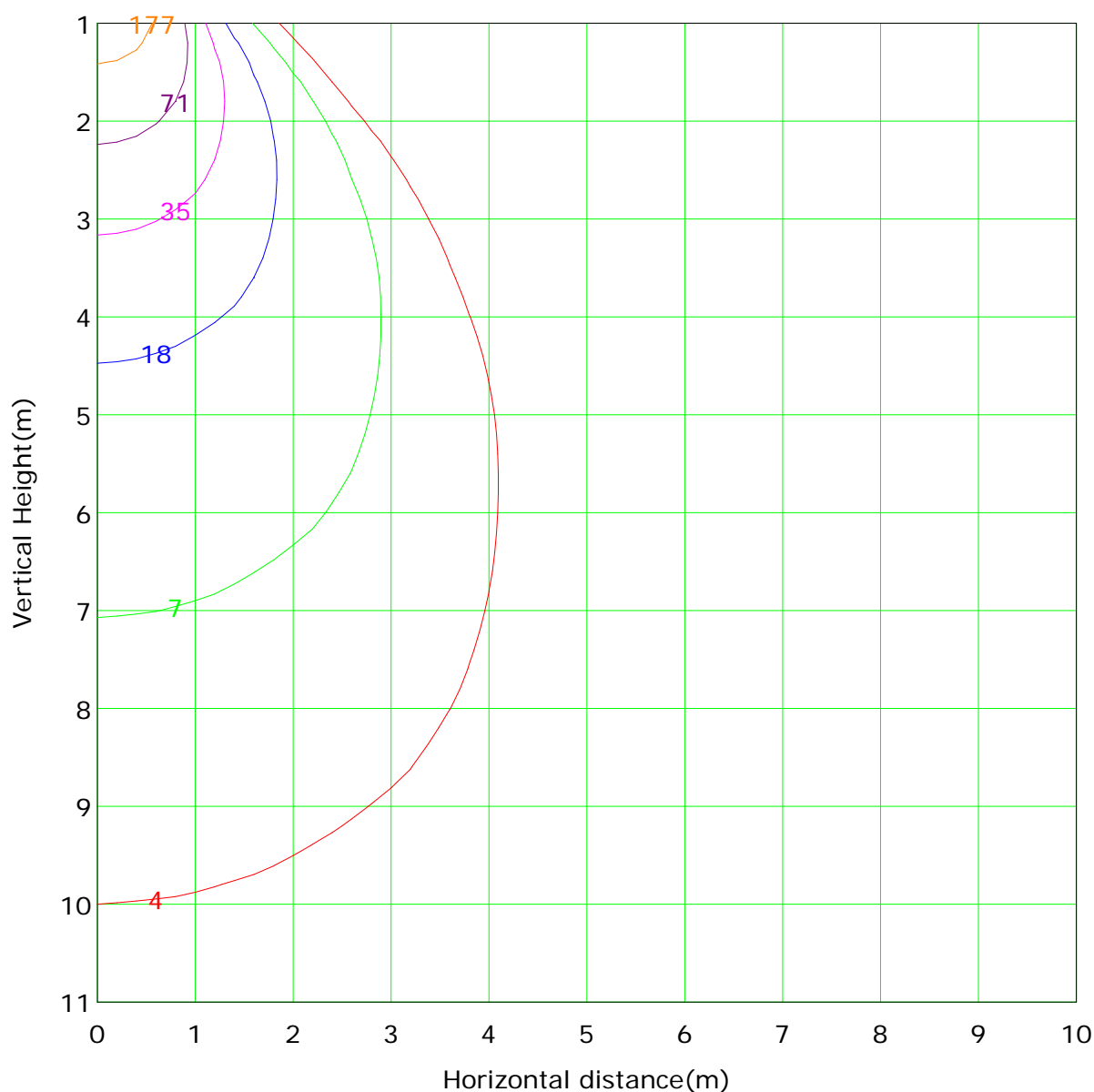
Illuminance at a Distance



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: 354.4 lx

— (1%): 3.5 lx	— (2%): 7.1 lx
— (5%): 17.7 lx	— (10%): 35.4 lx
— (20%): 70.9 lx	— (50%): 177.2 lx
— (100%): 354.4 lx	

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

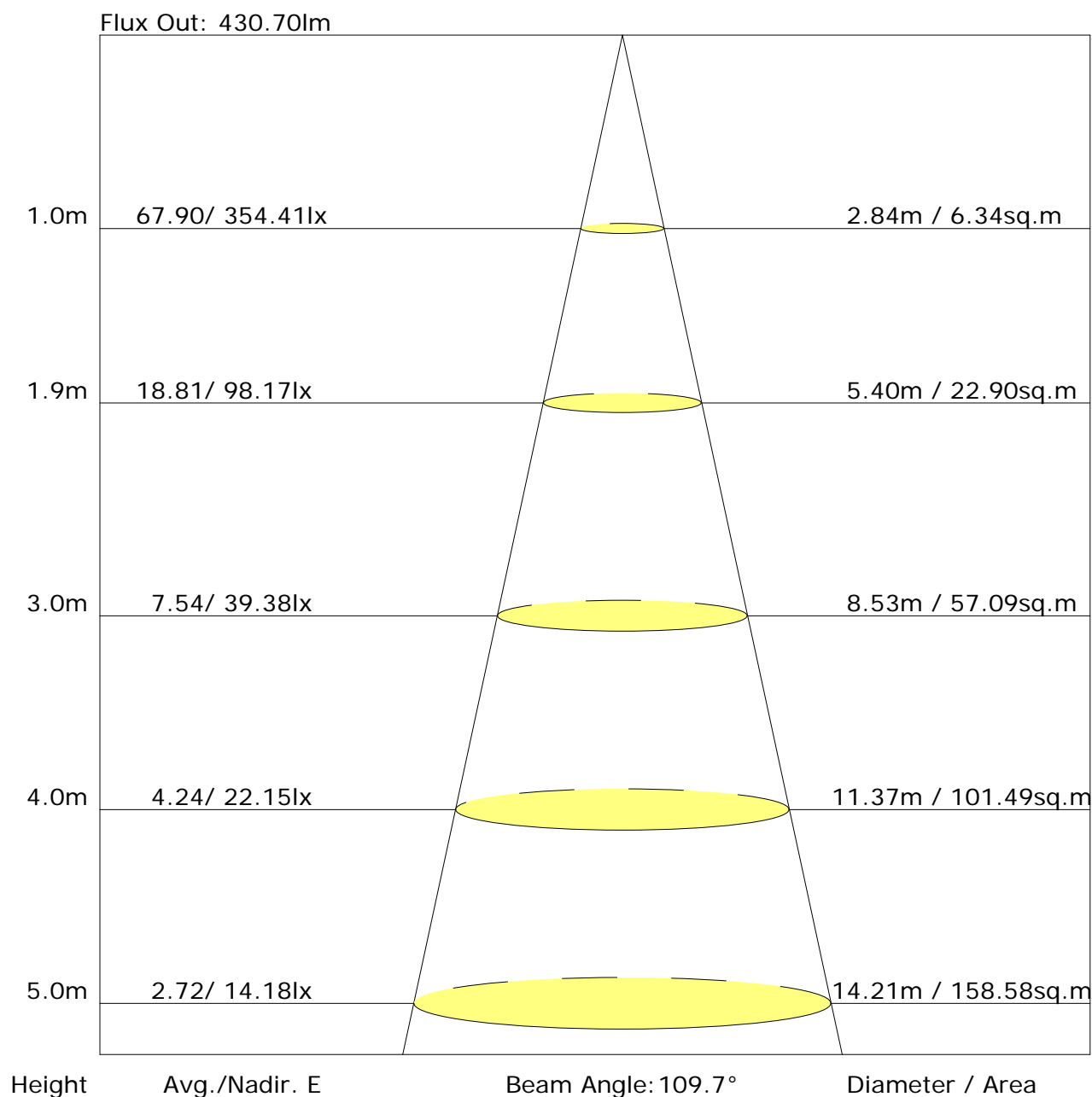
Gamma Plane (°): 0.0-90.0: 5.0
 Test Device: GPM-1600L
 Distance: 7.305 m [K=1.0000]
 Humidity:
 Inspector:

Unit: lm

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	19.0	20.1	19.3	20.3	20.5	18.2	19.3	18.5	19.5	19.7
3H	19.1	20.1	19.4	20.3	20.6	18.3	19.3	18.6	19.5	19.8
4H	19.1	20.0	19.4	20.3	20.5	18.3	19.2	18.7	19.5	19.8
6H	19.1	19.9	19.4	20.2	20.5	18.3	19.1	18.7	19.4	19.7
8H	19.1	19.9	19.4	20.2	20.5	18.3	19.1	18.7	19.4	19.7
12H	19.1	19.8	19.4	20.1	20.4	18.3	19.0	18.7	19.4	19.7
X=4H Y=2H	19.0	19.9	19.3	20.1	20.4	18.2	19.1	18.6	19.4	19.7
3H	19.1	19.9	19.5	20.2	20.5	18.4	19.2	18.8	19.5	19.8
4H	19.2	19.8	19.6	20.2	20.6	18.5	19.1	18.9	19.5	19.8
6H	19.2	19.8	19.6	20.2	20.5	18.5	19.1	18.9	19.4	19.8
8H	19.2	19.7	19.6	20.1	20.5	18.5	19.0	18.9	19.4	19.8
12H	19.2	19.6	19.6	20.1	20.5	18.5	18.9	18.9	19.4	19.8
X=8H Y=4H	19.1	19.7	19.6	20.1	20.5	18.4	19.0	18.9	19.4	19.8
6H	19.2	19.6	19.6	20.0	20.5	18.5	18.9	18.9	19.3	19.8
8H	19.2	19.5	19.7	20.0	20.5	18.5	18.9	19.0	19.3	19.8
12H	19.2	19.5	19.7	20.0	20.5	18.5	18.8	19.0	19.3	19.8
X=12H Y=4H	19.1	19.6	19.5	20.0	20.4	18.4	18.9	18.8	19.3	19.7
6H	19.1	19.5	19.6	20.0	20.4	18.5	18.8	18.9	19.3	19.8
8H	19.2	19.5	19.6	19.9	20.4	18.5	18.8	19.0	19.3	19.8
Variations with the observer position at spacings:										
S=1.0H	+1.1/-2.3					+1.4/-2.5				
S=1.5H	+2.8/-4.3					+2.7/-4.0				
S=2.0H	+4.5/-5.3					+4.5/-5.1				

Calculate in accordance with CIE Pub.117. The table is revised with 459lm ($8\log(F/F_0) = -2.7$).

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 = 1.25								
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	0.87	0.92	0.95	1.00	1.03	1.05	1.07	1.09
	0.30		0.74	0.82	0.87	0.91	0.96	0.99	1.02	1.05	1.07
	0.20		0.70	0.78	0.83	0.87	0.93	0.96	0.99	1.03	1.05
0.50	0.50	0.20	0.78	0.85	0.89	0.93	0.97	0.99	1.01	1.04	1.05
	0.30		0.73	0.81	0.85	0.89	0.94	0.97	0.99	1.02	1.03
	0.20		0.70	0.77	0.82	0.86	0.91	0.94	0.97	1.00	1.02
0.30	0.50	0.20	0.76	0.83	0.88	0.90	0.94	0.96	0.98	1.00	1.01
	0.30		0.72	0.80	0.84	0.87	0.92	0.94	0.96	0.98	1.00
	0.20		0.69	0.77	0.81	0.85	0.89	0.92	0.94	0.97	0.99
0.00	0.00	0.00	0.68	0.75	0.79	0.82	0.86	0.89	0.90	0.93	0.94
<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 = 1.25								
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	0.66	0.52	0.44	0.38	0.30	0.24	0.21	0.16	0.13
	0.30		0.55	0.45	0.38	0.33	0.27	0.22	0.19	0.15	0.12
	0.20		0.47	0.39	0.34	0.30	0.24	0.21	0.18	0.14	0.12
0.50	0.50	0.20	0.63	0.50	0.41	0.35	0.28	0.27	0.19	0.15	0.12
	0.30		0.53	0.43	0.37	0.32	0.25	0.21	0.18	0.14	0.11
	0.20		0.46	0.38	0.33	0.29	0.23	0.20	0.17	0.13	0.11
0.30	0.50	0.20	0.60	0.47	0.39	0.33	0.26	0.21	0.18	0.14	0.11
	0.30		0.52	0.42	0.35	0.30	0.24	0.20	0.17	0.13	0.11
	0.20		0.45	0.37	0.32	0.28	0.22	0.19	0.16	0.12	0.10
0.00	0.00	0.00	0.32	0.25	0.21	0.18	0.14	0.11	0.09	0.07	0.06
<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(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	0.13	0.15	0.16	0.17	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	0.09	0.11	0.13	0.14	0.15	0.17	0.18
0.50	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	0.10	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.06	0.08	0.09	0.10	0.12	0.14	0.15	0.16	0.17
0.30	0.50	0.20	0.13	0.14	0.15	0.16	0.17	0.17	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		0.06	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°): 383.71 lm

%lum = 83.6%

%lamp = 83.6%

cone flux(120°): 442.13 lm

%lum = 96.3%

%lamp = 96.3%

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: