

Report No.:

Test Time: 2023-10-20 13:44

Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Lamp Catalog: 3000K

Number of Lamps:

Luminous Length (mm): 85

Luminous Height (mm):

Current: 0.0210 A

Power Factor: 0.8140

Luminaire Description: ADL90DP

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 85

Voltage: 230.69 V

Power: 4.00 W

Photometric Results

CIE Class: Direct

Measurement Flux: 422.1 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H67.4

Vertical Diffuse Angle(50%): V67.5

Luminous Efficacy (lm/w): 105.52

Max. Intensity: 332.4 cd

S/MH(C0/C180): 0.97

Total Rated Lamp Lumens: 422.1 lm

Efficiency: 100%

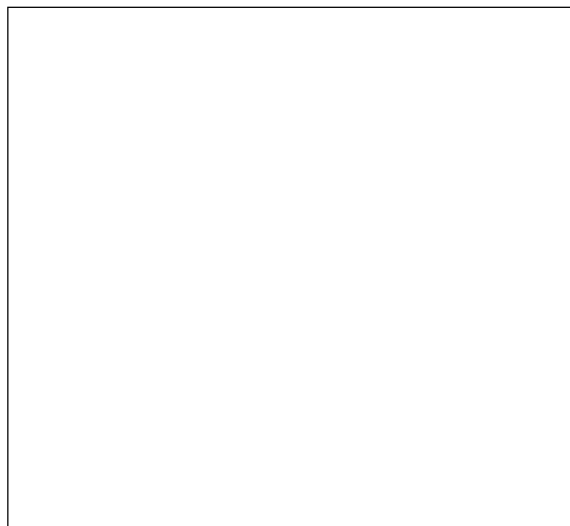
Upward Ratio: 0%

C0r0 Intensity: 332.39 cd

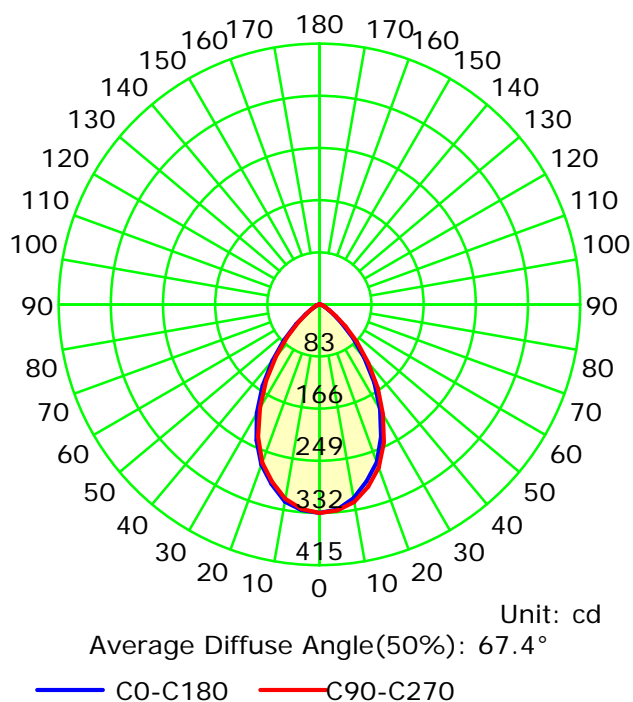
Pos of Max. Intensity: H0 V0

S/MH(C90/C270): 0.98

Picture Of Luminaire



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

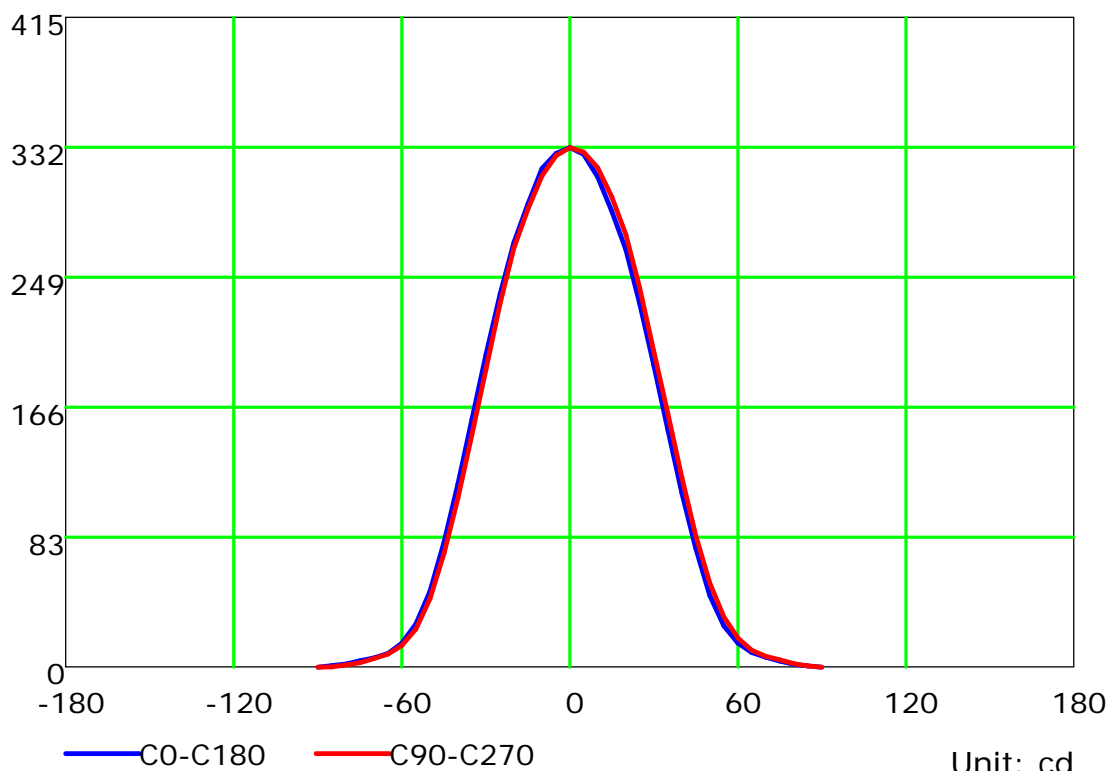
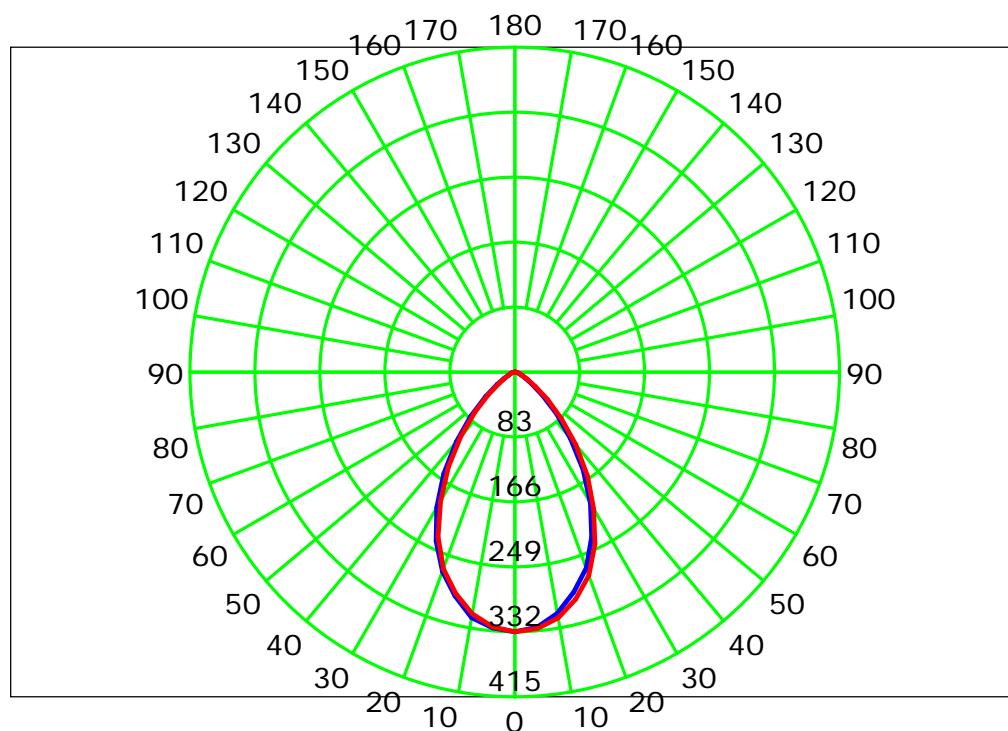
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

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:

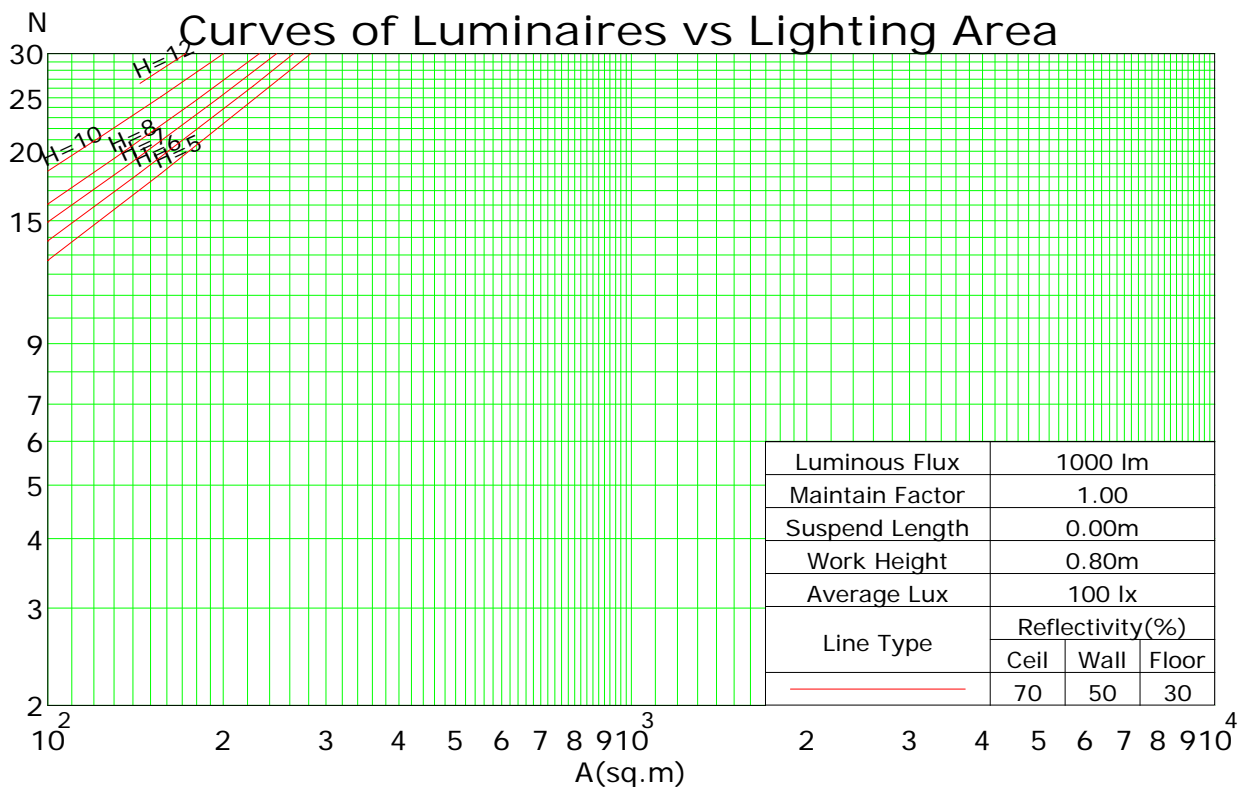
Coefficients Of Utilization - Zonal Cavity Method

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	1.00	0.95	0.91	1.03	0.98	0.93	0.90	0.94	0.91	0.88	0.91	0.88	0.86	0.89	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	0.93	0.84	0.77	0.72	0.91	0.82	0.76	0.72	0.80	0.75	0.71	0.78	0.74	0.70	0.76	0.72	0.69	0.67
5	0.87	0.77	0.70	0.65	0.85	0.76	0.70	0.65	0.74	0.68	0.64	0.72	0.67	0.64	0.71	0.66	0.63	0.61
6	0.82	0.71	0.64	0.59	0.80	0.70	0.64	0.59	0.69	0.63	0.58	0.67	0.62	0.58	0.66	0.61	0.58	0.56
7	0.77	0.66	0.59	0.54	0.75	0.65	0.59	0.54	0.64	0.58	0.54	0.63	0.57	0.53	0.61	0.57	0.53	0.51
8	0.72	0.61	0.55	0.50	0.71	0.61	0.54	0.50	0.60	0.54	0.49	0.59	0.53	0.49	0.57	0.53	0.49	0.47
9	0.68	0.57	0.51	0.46	0.67	0.57	0.50	0.46	0.56	0.50	0.46	0.55	0.49	0.46	0.54	0.49	0.45	0.44
10	0.65	0.54	0.47	0.43	0.64	0.53	0.47	0.43	0.52	0.46	0.42	0.51	0.46	0.42	0.51	0.46	0.42	0.41

Spacing Criteria (0-180): 0.97

Spacing Criteria (90-270): 0.98

Spacing Criteria (Diagonal): 1.00



C Plane (°): 0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°): 0.0-90.0: 5.0

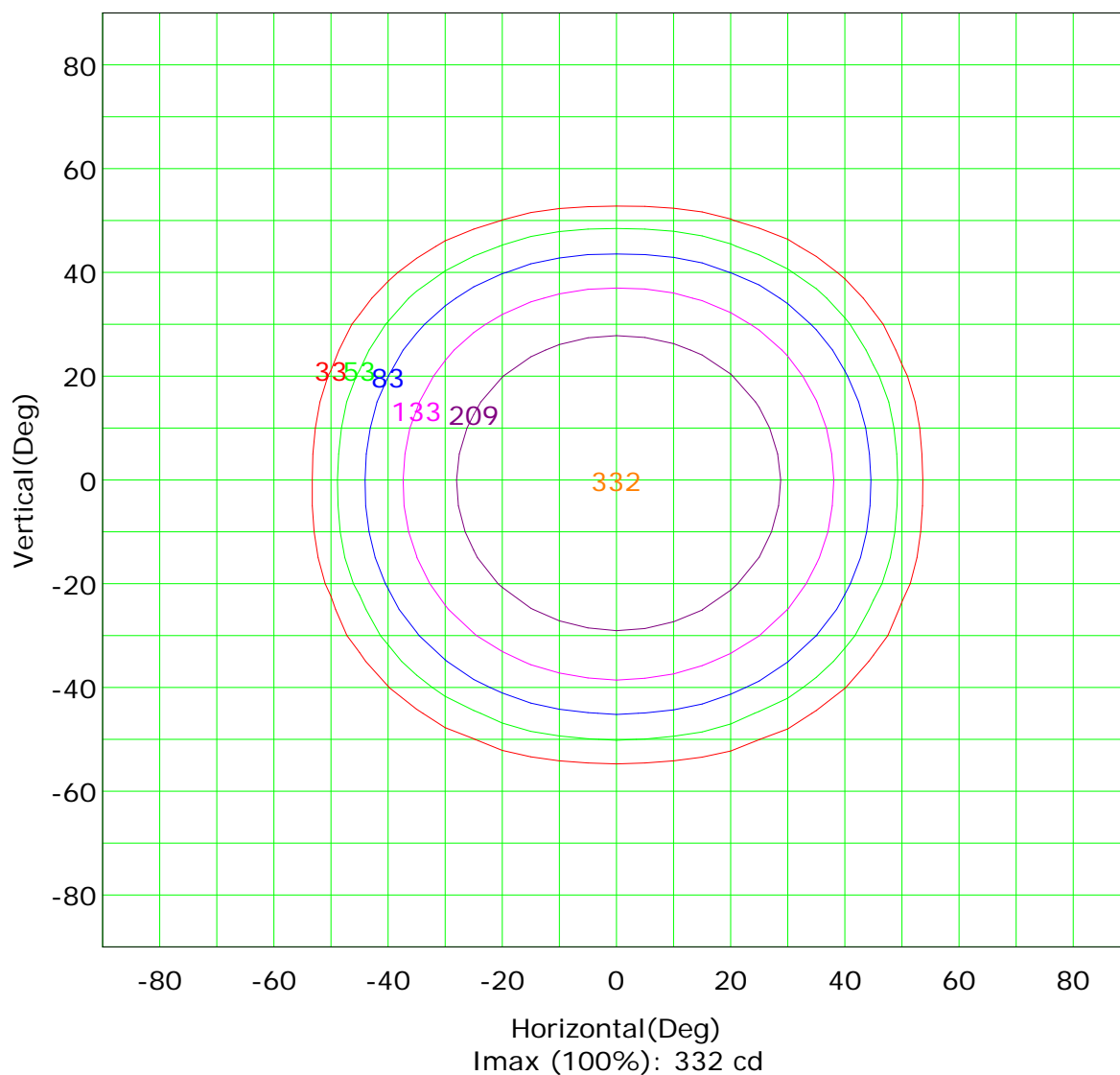
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

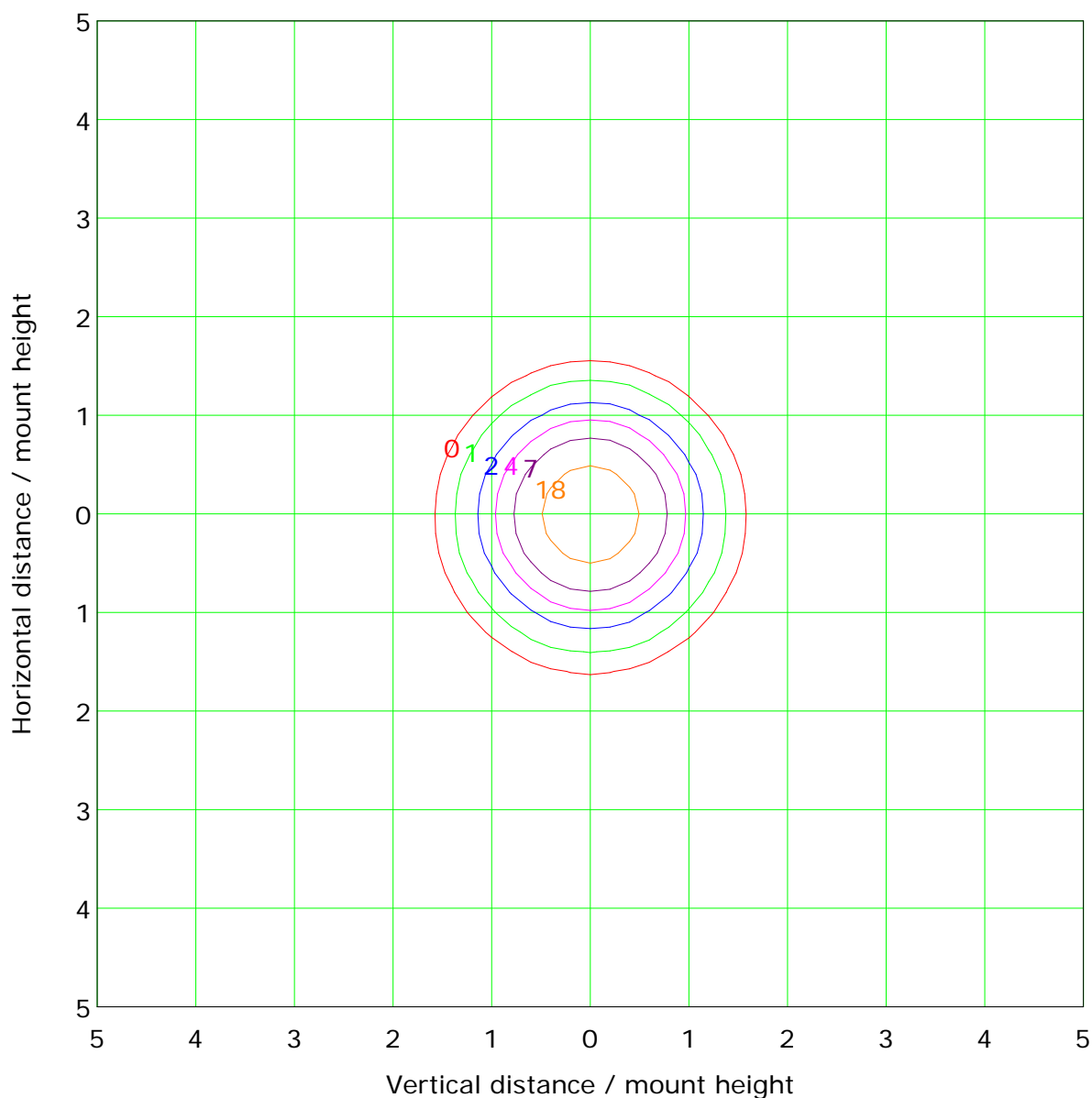
Isocandela (rectangle)



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%): 36.9 lx	
— (1%):	0.4 lx	— (2%):	0.7 lx
— (5%):	1.8 lx	— (10%):	3.7 lx
— (20%):	7.4 lx	— (50%):	18.5 lx
— (100%):	36.9 lx		

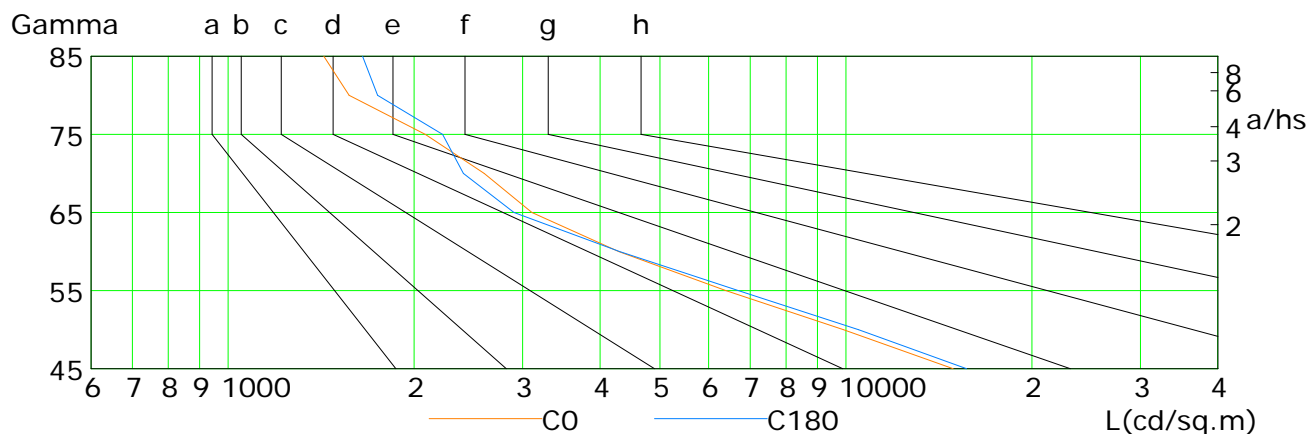
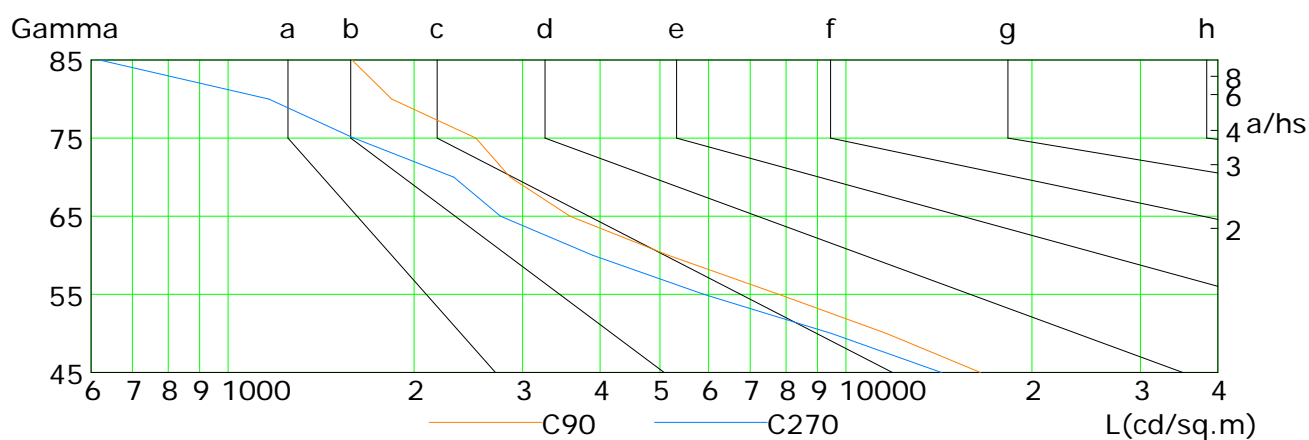
C Plane (°):0.0-360.0: 90.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

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	14929	9916	6397	4288	3105	2598	2086	1570	1429
C90	16516	11630	7785	5163	3576	2861	2519	1841	1588
C180	15683	10484	6704	4304	2902	2404	2225	1746	1652
C270	14275	9466	5888	3895	2761	2319	1599	1164	619

C Plane (°):0.0-360.0: 90.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:5.0

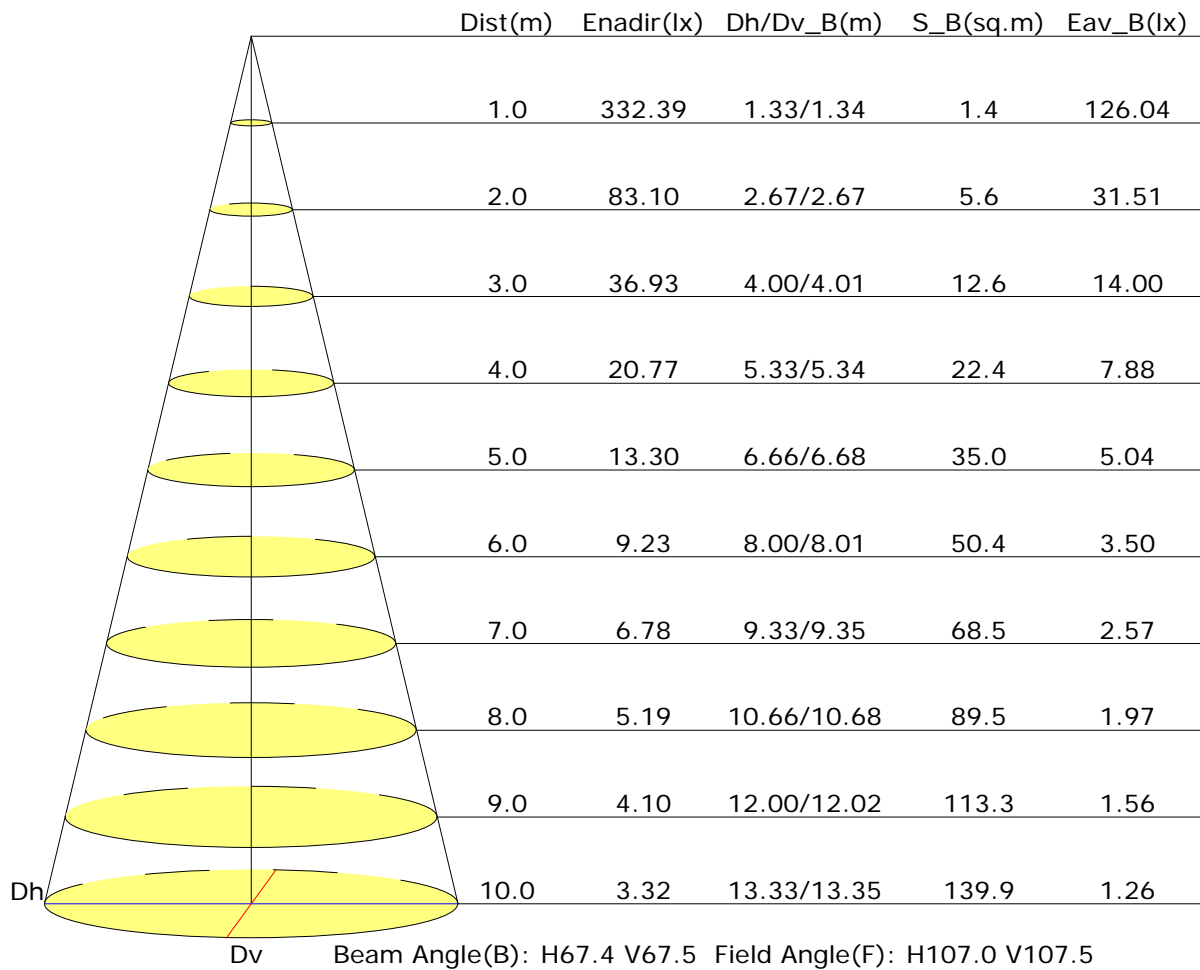
Test Device: GPM-1600L

Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:

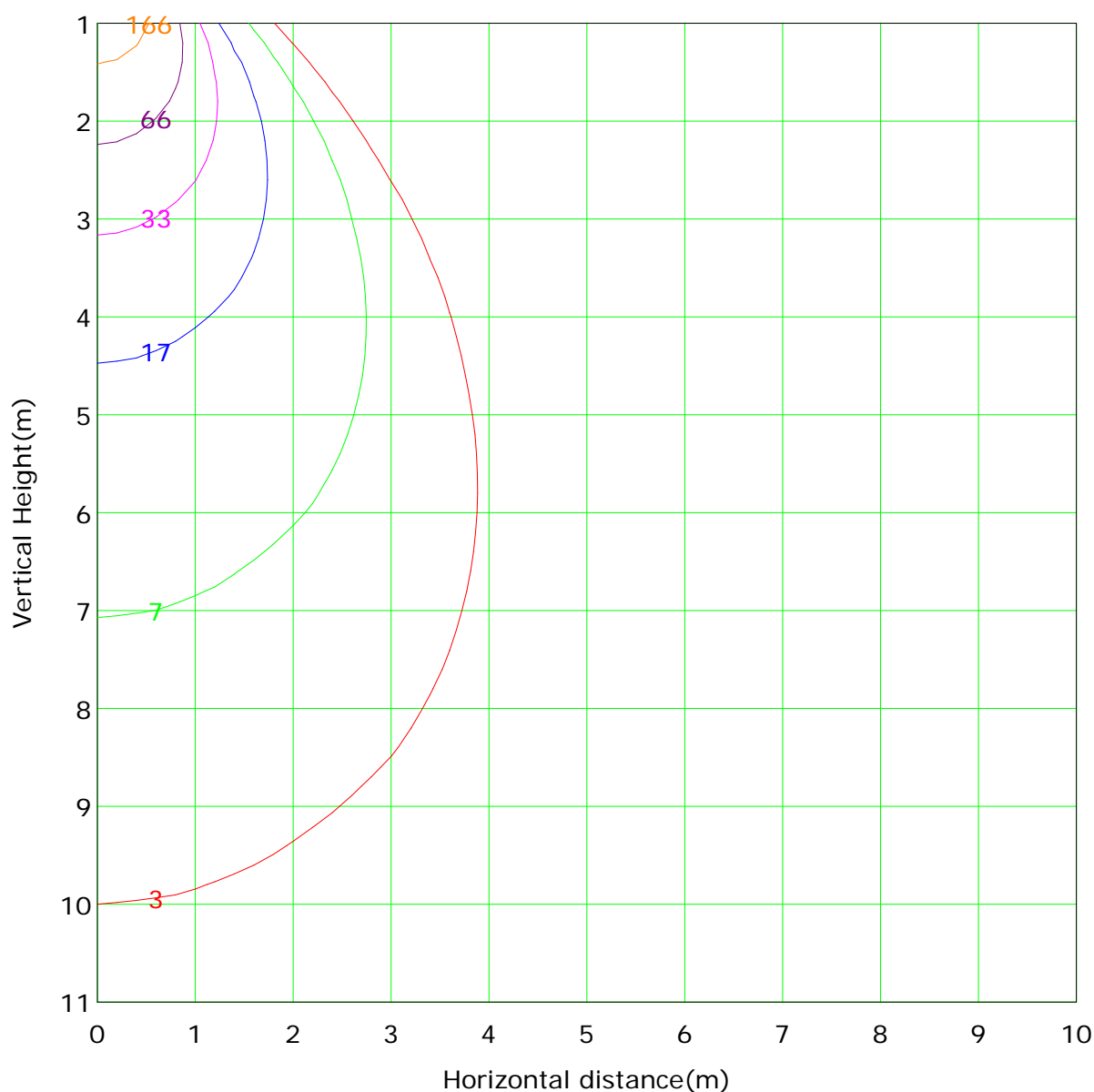
Illuminance at a Distance



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: 332.4 lx

— (1%): 3.3 lx	— (2%): 6.6 lx
— (5%): 16.6 lx	— (10%): 33.2 lx
— (20%): 66.5 lx	— (50%): 166.2 lx
— (100%): 332.4 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:

Area Flux Table

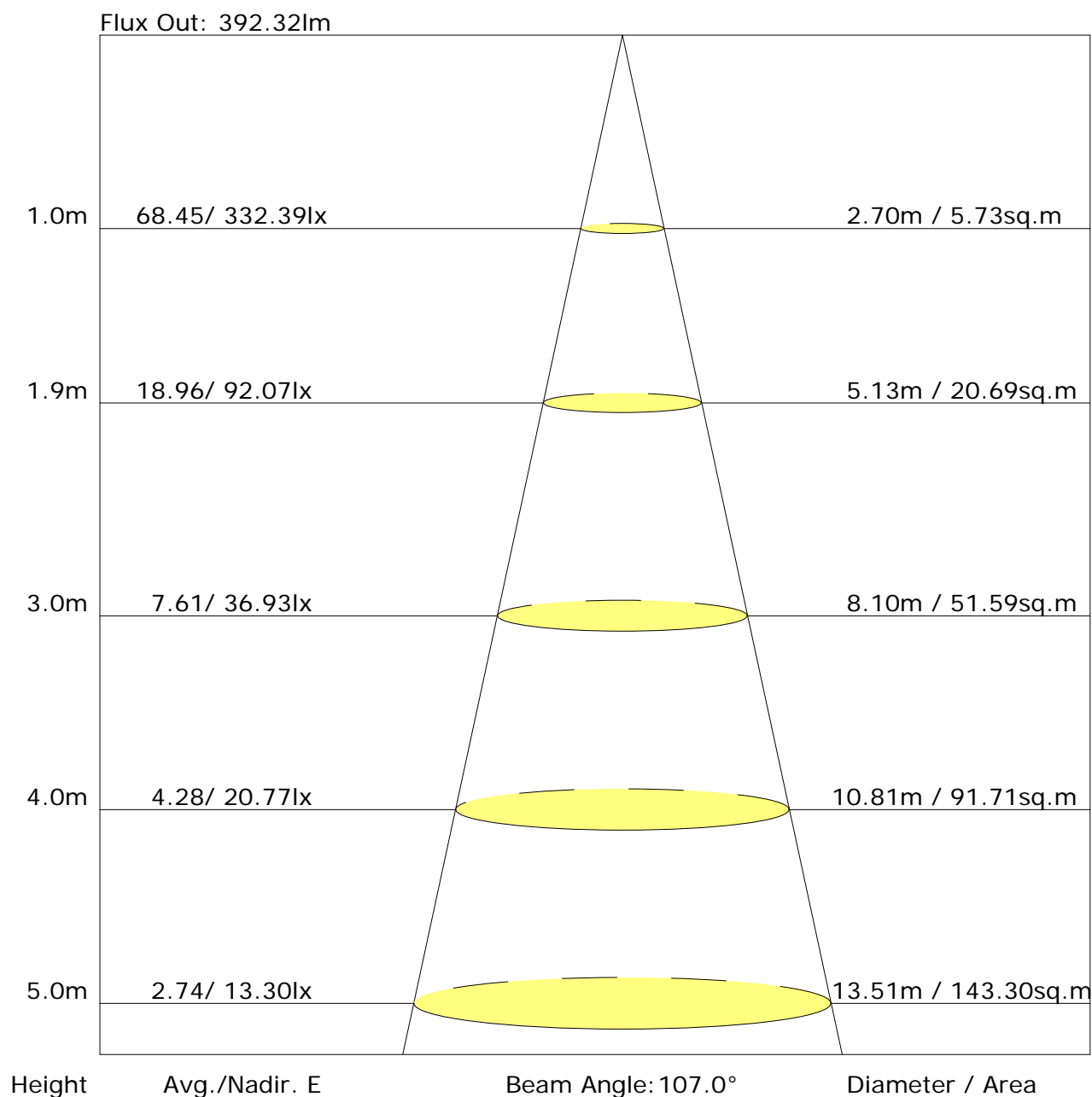
Unit: lm

Vertical plane	Horizontal plane																		Flux(E)	Flux(T)	Flux(E)
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90		
-90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-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	0.0	0.0
-70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flux(E)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flux(T)	0.0	0.4	1.2	3.9	11.4	25.5	43.1	58.8	67.9	67.6	58.1	42.2	24.7	11.0	3.8	1.2	0.3	0.0	0.0	421	
Flux(E)	0.0	0.0	0.0	0.9	9.2	23.4	41.1	56.9	66.1	65.8	56.2	40.3	22.6	8.7	0.7	0.0	0.0	0.0	0.0		392

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	18.2	19.2	18.5	19.5	19.7	18.4	19.4	18.6	19.6	19.8
3H	18.3	19.2	18.6	19.5	19.7	18.4	19.4	18.8	19.6	19.9
4H	18.3	19.2	18.6	19.5	19.7	18.5	19.3	18.8	19.6	19.9
6H	18.3	19.1	18.6	19.4	19.7	18.4	19.3	18.8	19.5	19.8
8H	18.3	19.1	18.6	19.4	19.7	18.4	19.2	18.8	19.5	19.8
12H	18.3	19.0	18.6	19.3	19.6	18.4	19.1	18.8	19.5	19.8
X=4H Y=2H	18.2	19.1	18.5	19.3	19.6	18.3	19.2	18.7	19.5	19.8
3H	18.3	19.1	18.7	19.4	19.7	18.5	19.2	18.9	19.5	19.9
4H	18.4	19.1	18.8	19.4	19.8	18.5	19.2	18.9	19.6	19.9
6H	18.4	19.0	18.8	19.4	19.8	18.6	19.1	19.0	19.5	19.9
8H	18.4	19.0	18.9	19.3	19.8	18.6	19.1	19.0	19.5	19.9
12H	18.4	18.9	18.9	19.3	19.7	18.5	19.0	19.0	19.4	19.9
X=8H Y=4H	18.4	18.9	18.8	19.3	19.7	18.5	19.0	18.9	19.4	19.8
6H	18.4	18.8	18.9	19.3	19.7	18.6	19.0	19.0	19.4	19.9
8H	18.4	18.8	18.9	19.3	19.7	18.6	18.9	19.0	19.4	19.9
12H	18.4	18.8	18.9	19.2	19.7	18.6	18.9	19.0	19.3	19.8
X=12H Y=4H	18.3	18.8	18.8	19.2	19.7	18.5	18.9	18.9	19.4	19.8
6H	18.4	18.8	18.9	19.2	19.7	18.5	18.9	19.0	19.3	19.8
8H	18.4	18.7	18.9	19.2	19.7	18.5	18.9	19.0	19.3	19.8
Variations with the observer position at spacings:										
S=1.0H	+1.2/-2.4					+1.3/-2.5				
S=1.5H	+2.9/-4.1					+3.0/-4.3				
S=2.0H	+4.6/-5.2					+4.8/-5.4				

Calculate in accordance with CIE Pub.117. The table is revised with 422Im ($8\log(F/F_0) = -3.0$).

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: 7.305 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	0.75	0.83	0.89	0.93	0.98	1.01	1.04	1.07	1.08	
	0.30		0.69	0.78	0.84	0.88	0.94	0.98	1.00	1.04	1.06	
	0.20		0.65	0.74	0.80	0.84	0.90	0.95	0.97	1.01	1.04	
0.50	0.50	0.20	0.73	0.82	0.87	0.90	0.95	0.98	1.00	1.03	1.04	
	0.30		0.68	0.77	0.83	0.86	0.92	0.95	0.97	1.01	1.02	
	0.20		0.65	0.73	0.79	0.83	0.89	0.92	0.95	0.99	1.01	
0.30	0.50	0.20	0.72	0.80	0.85	0.88	0.92	0.95	0.97	0.99	1.01	
	0.30		0.68	0.76	0.81	0.85	0.90	0.93	0.95	0.97	0.99	
	0.20		0.64	0.73	0.78	0.82	0.87	0.90	0.93	0.96	0.98	
0.00	0.00	0.00	0.63	0.71	0.76	0.79	0.84	0.87	0.89	0.92	0.93	
<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	0.72	0.57	0.48	0.41	0.32	0.26	0.22	0.17	0.14	
	0.30		0.60	0.49	0.42	0.36	0.29	0.24	0.21	0.16	0.13	
	0.20		0.51	0.43	0.37	0.33	0.27	0.22	0.19	0.15	0.13	
0.50	0.50	0.20	0.69	0.54	0.45	0.39	0.30	0.29	0.21	0.16	0.13	
	0.30		0.58	0.47	0.40	0.35	0.28	0.23	0.20	0.15	0.12	
	0.20		0.51	0.42	0.36	0.31	0.25	0.21	0.18	0.14	0.12	
0.30	0.50	0.20	0.66	0.52	0.43	0.37	0.28	0.23	0.20	0.15	0.12	
	0.30		0.57	0.46	0.38	0.33	0.26	0.22	0.18	0.14	0.12	
	0.20		0.50	0.41	0.35	0.30	0.24	0.20	0.17	0.14	0.11	
0.00	0.00	0.00	0.37	0.29	0.24	0.21	0.16	0.13	0.11	0.08	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	0.15	0.16	0.17	0.18	0.19	0.20	0.20	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	0.13	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	0.14	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°): 354.47 lm

%lum = 84.0%

%lamp = 84.0%

cone flux(120°): 406.65 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: