



Report No.:

Test Time: 2023-10-11 09:17

Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Lamp Catalog: 3000K

Number of Lamps:

Luminous Length (mm): 1200

Luminous Height (mm): 25

Current: 0.1469 A

Power Factor: 0.9110

Luminaire Description: 2580

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 80

Voltage: 230.90 V

Power: 30.92 W

Photometric Results

CIE Class: Direct

Measurement Flux: 1278.5 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H43.6

Vertical Diffuse Angle(50%): V43.6

Luminous Efficacy (lm/w): 41.35

Max. Intensity: 2663.38 cd

S/MH(C0/C180): 0.77

Total Rated Lamp Lumens: 1278.5 lm

Efficiency: 100%

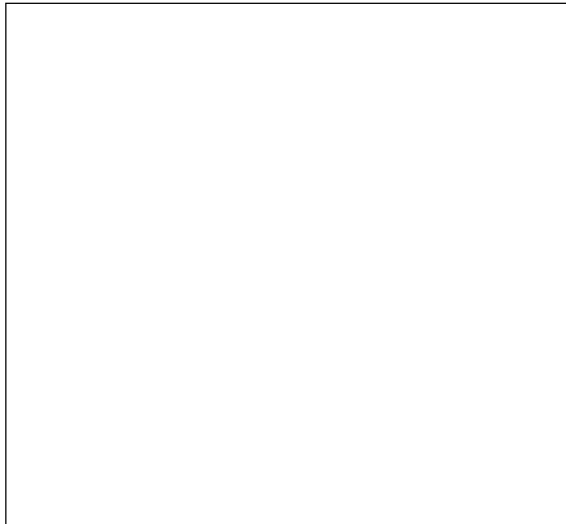
Upward Ratio: 0%

C0r0 Intensity: 2303.29 cd

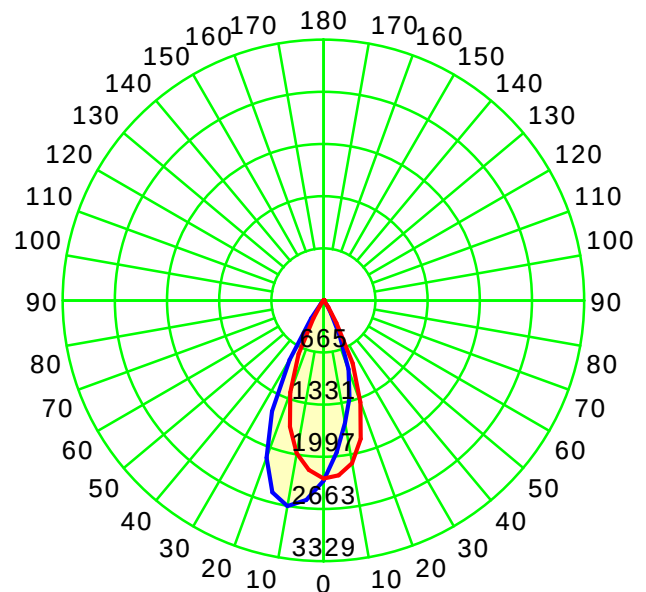
Pos of Max. Intensity: H180 V10

S/MH(C90/C270): 0.71

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 42.3°

— 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

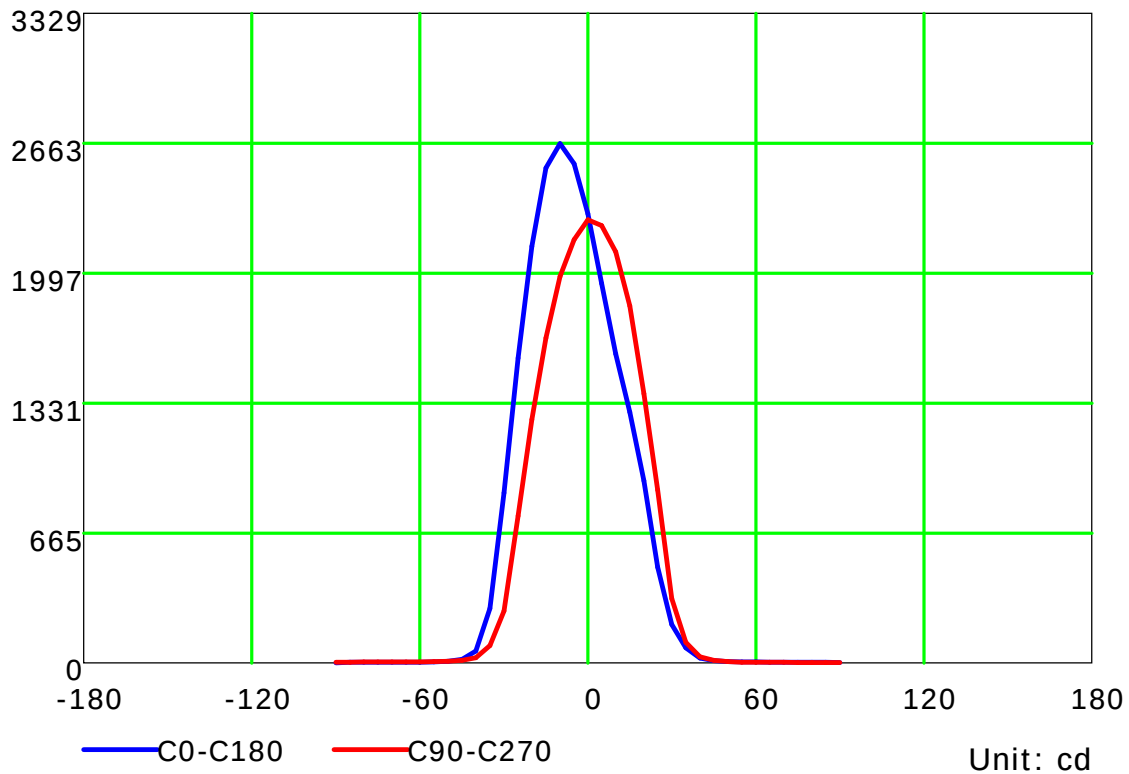
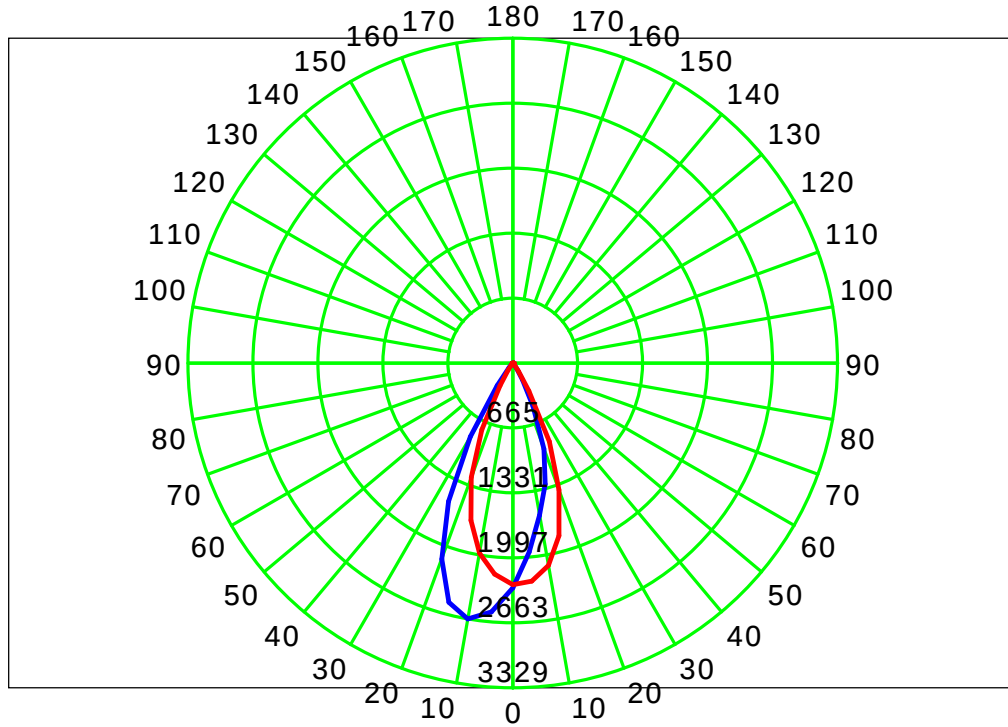
Distance: 7.305 m [K=1.0000]

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:

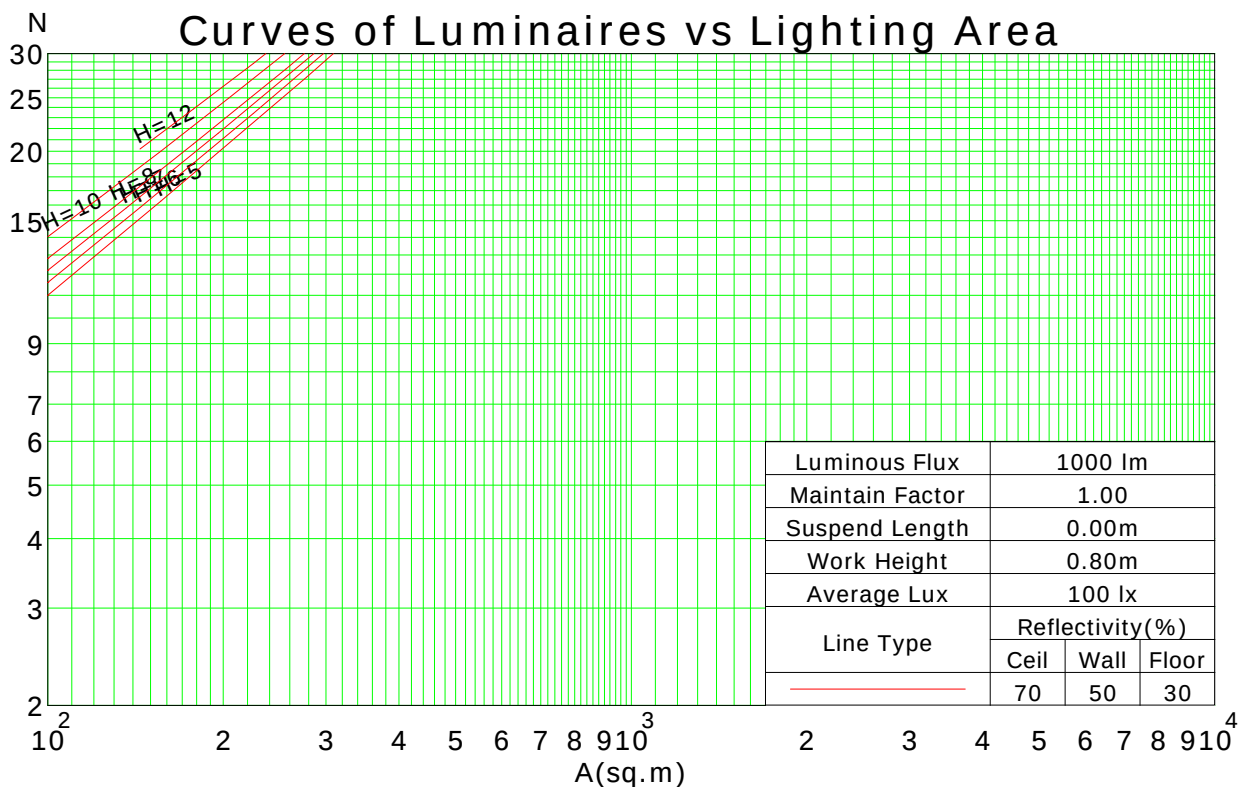
Coefficients Of Utilization - Zonal Cavity Method

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	1.14	1.11	1.09	1.07	1.12	1.09	1.07	1.05	1.05	1.04	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.94
2	1.09	1.05	1.01	0.98	1.07	1.03	1.00	0.97	1.00	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.91	0.89
3	1.05	0.99	0.94	0.91	1.03	0.97	0.93	0.90	0.95	0.91	0.89	0.92	0.90	0.87	0.90	0.88	0.86	0.85
4	1.00	0.94	0.89	0.85	0.98	0.92	0.88	0.84	0.90	0.86	0.83	0.88	0.85	0.82	0.87	0.84	0.82	0.80
5	0.96	0.89	0.84	0.80	0.95	0.88	0.83	0.80	0.86	0.82	0.79	0.85	0.81	0.78	0.83	0.80	0.77	0.76
6	0.92	0.84	0.79	0.75	0.91	0.84	0.79	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.76	0.74	0.72
7	0.88	0.80	0.75	0.72	0.87	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.70	0.69
8	0.85	0.77	0.72	0.68	0.84	0.76	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.70	0.67	0.66
9	0.82	0.73	0.68	0.65	0.81	0.73	0.68	0.65	0.72	0.68	0.64	0.71	0.67	0.64	0.70	0.67	0.64	0.63
10	0.79	0.70	0.65	0.62	0.78	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.68	0.64	0.61	0.60

Spacing Criteria (0-180): 0.77

Spacing Criteria (90-270): 0.71

Spacing Criteria (Diagonal): 0.70



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

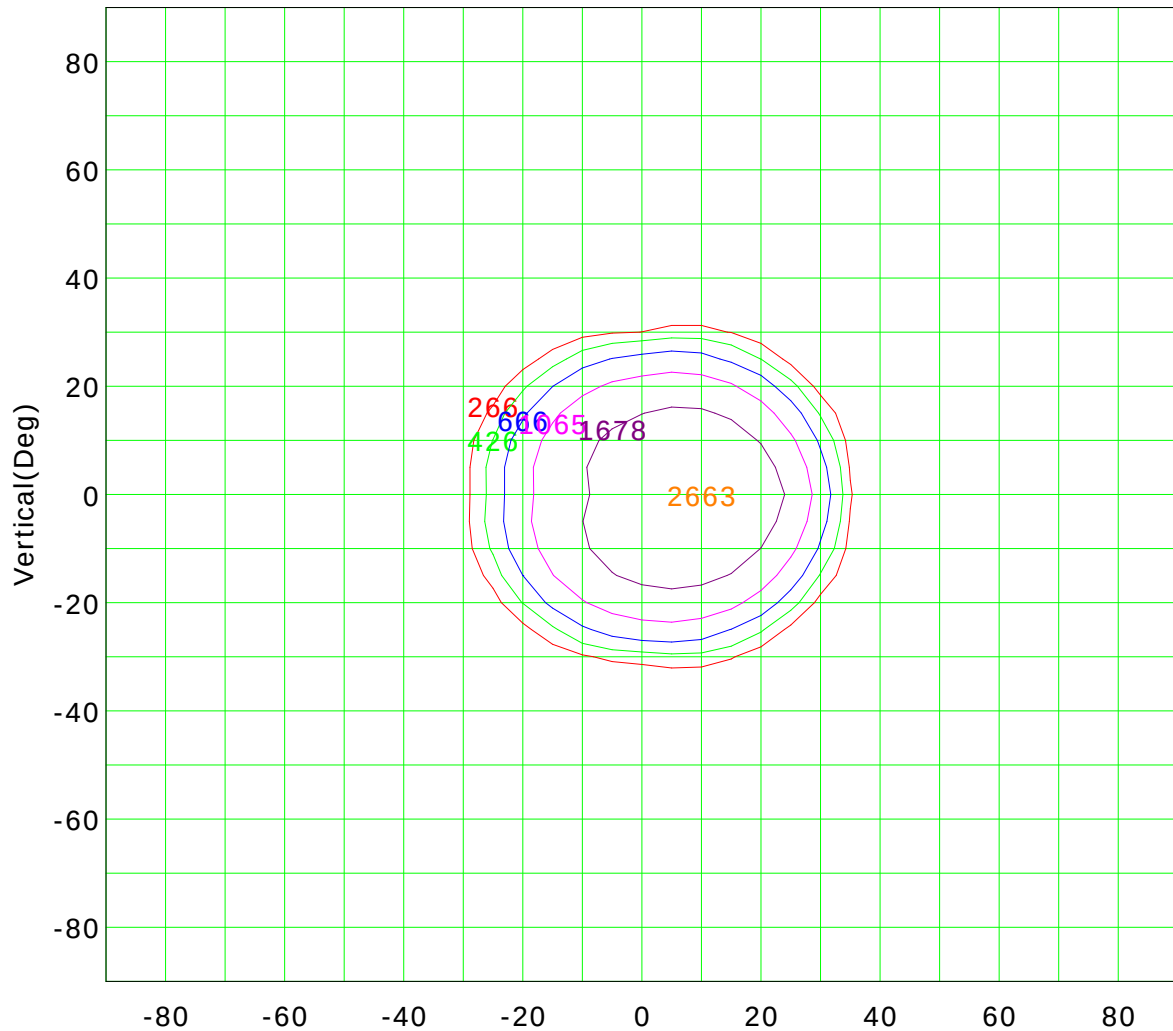
Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:



Isocandela (rectangle)



Horizontal(Deg)
Imax (100%): 2663 cd

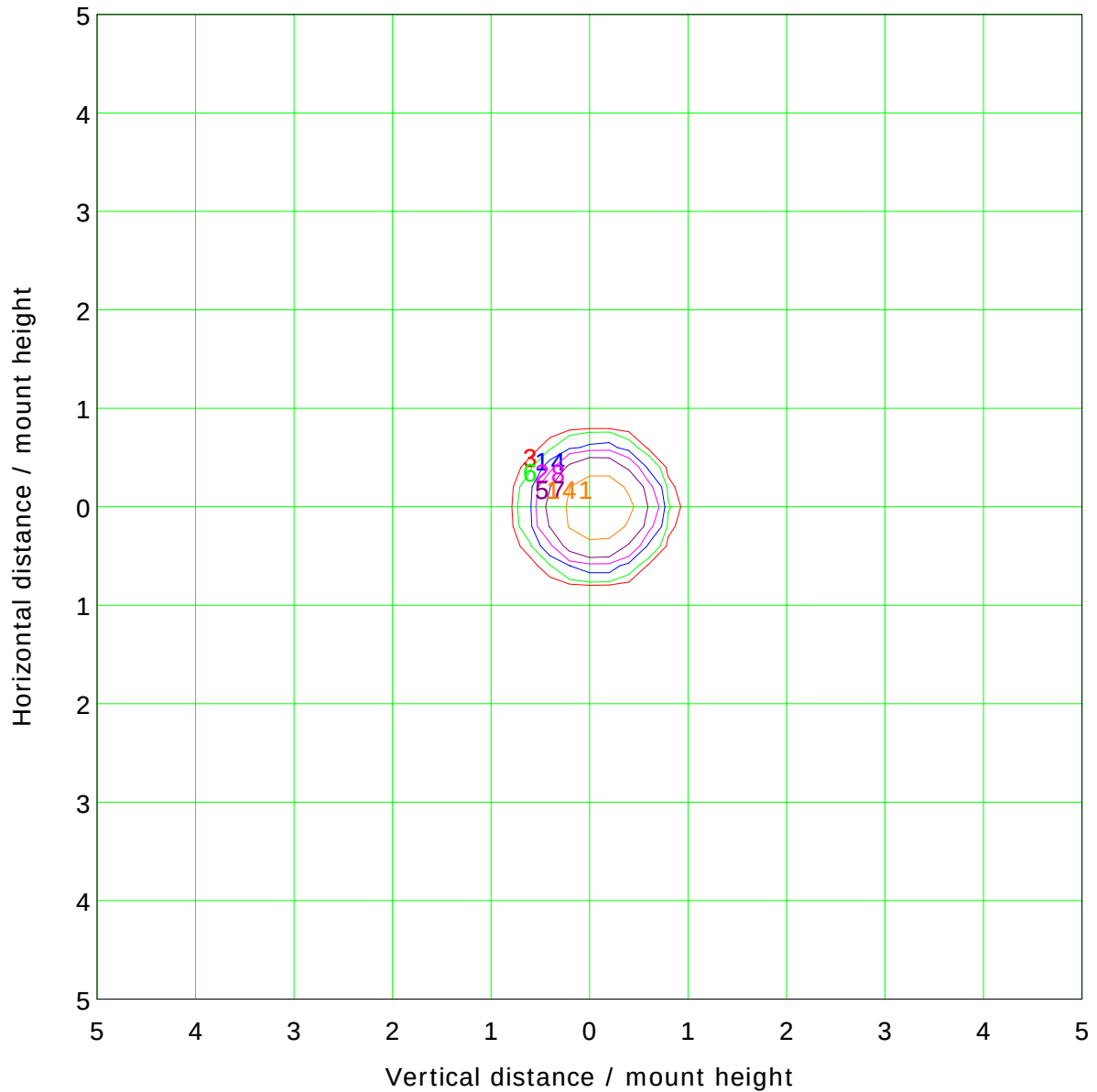
(10%): 266 cd	(16%): 426 cd
(25%): 666 cd	(40%): 1065 cd
(63%): 1678 cd	(100%): 2663 cd

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%): 282.6 lx

(1%): 2.8 lx	(2%): 5.7 lx
(5%): 14.1 lx	(10%): 28.3 lx
(20%): 56.5 lx	(50%): 141.3 lx
(100%): 282.6 lx	

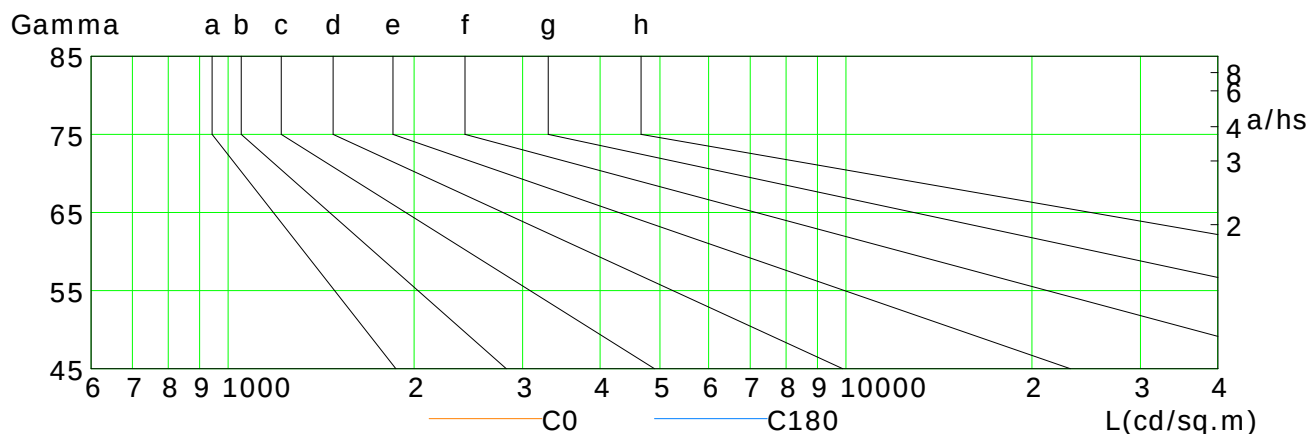
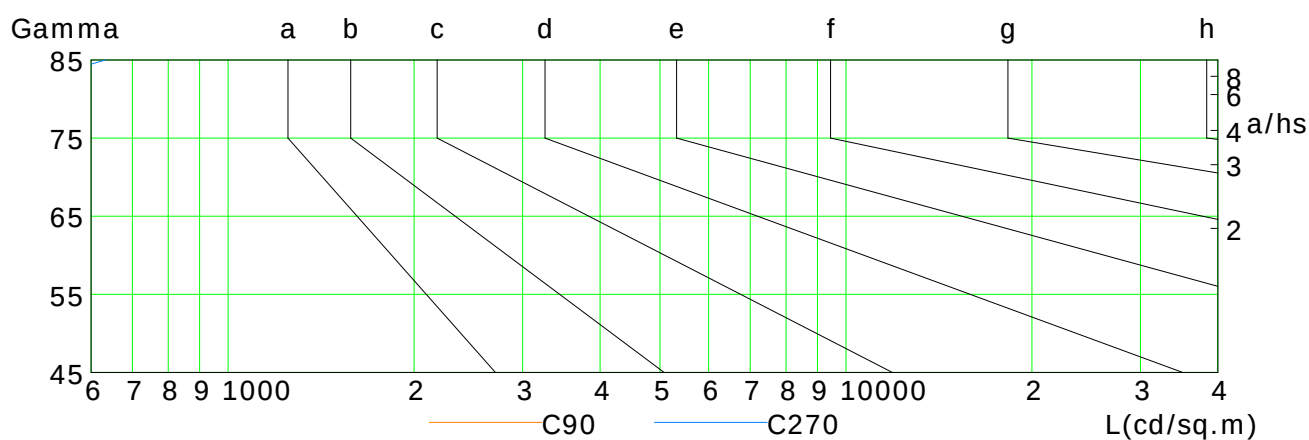
C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

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



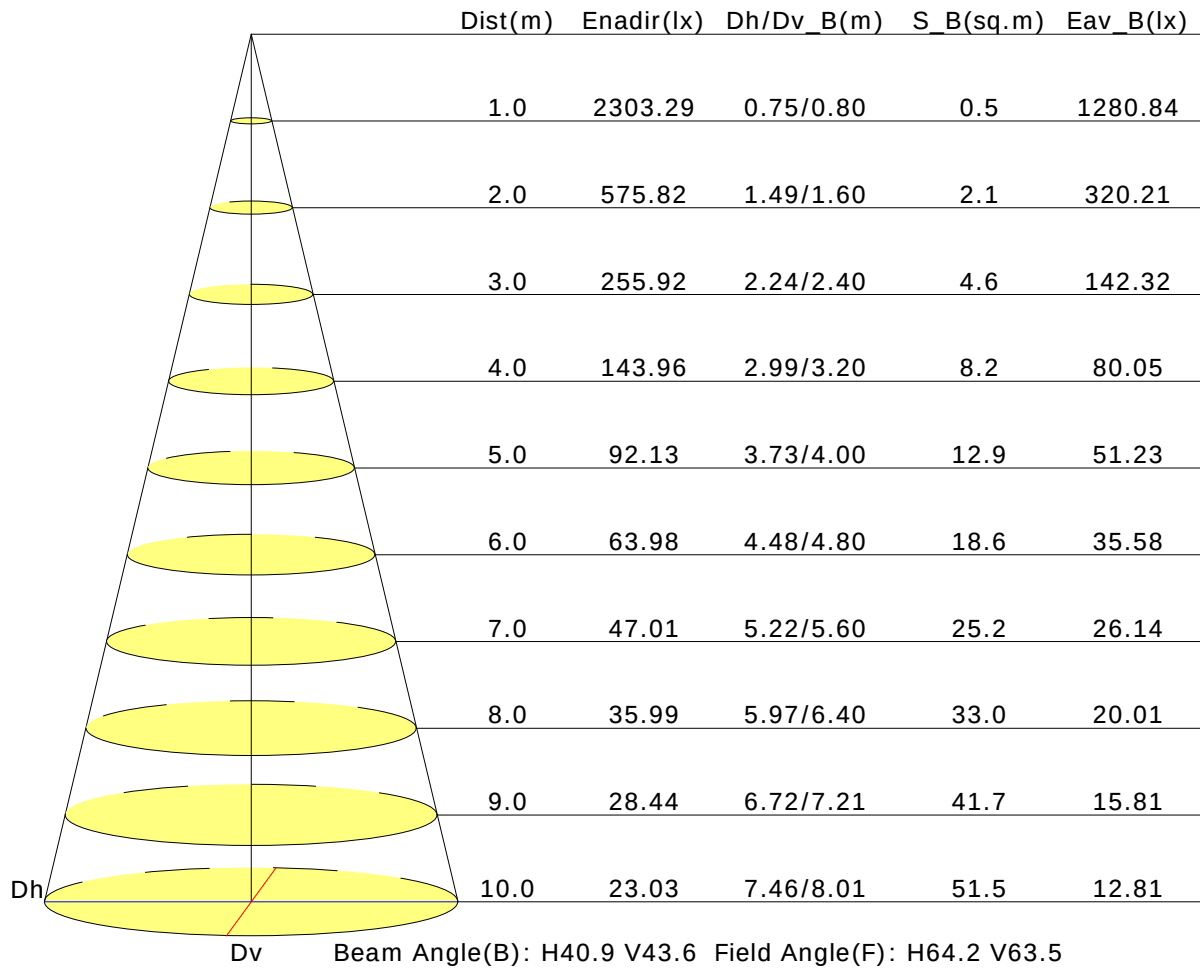
L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	158	111	96	94	97	103	114	135	154
C90	225	154	111	115	127	147	168	233	403
C180	235	135	93	85	84	91	114	120	131
C270	235	164	152	164	189	231	277	370	633

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

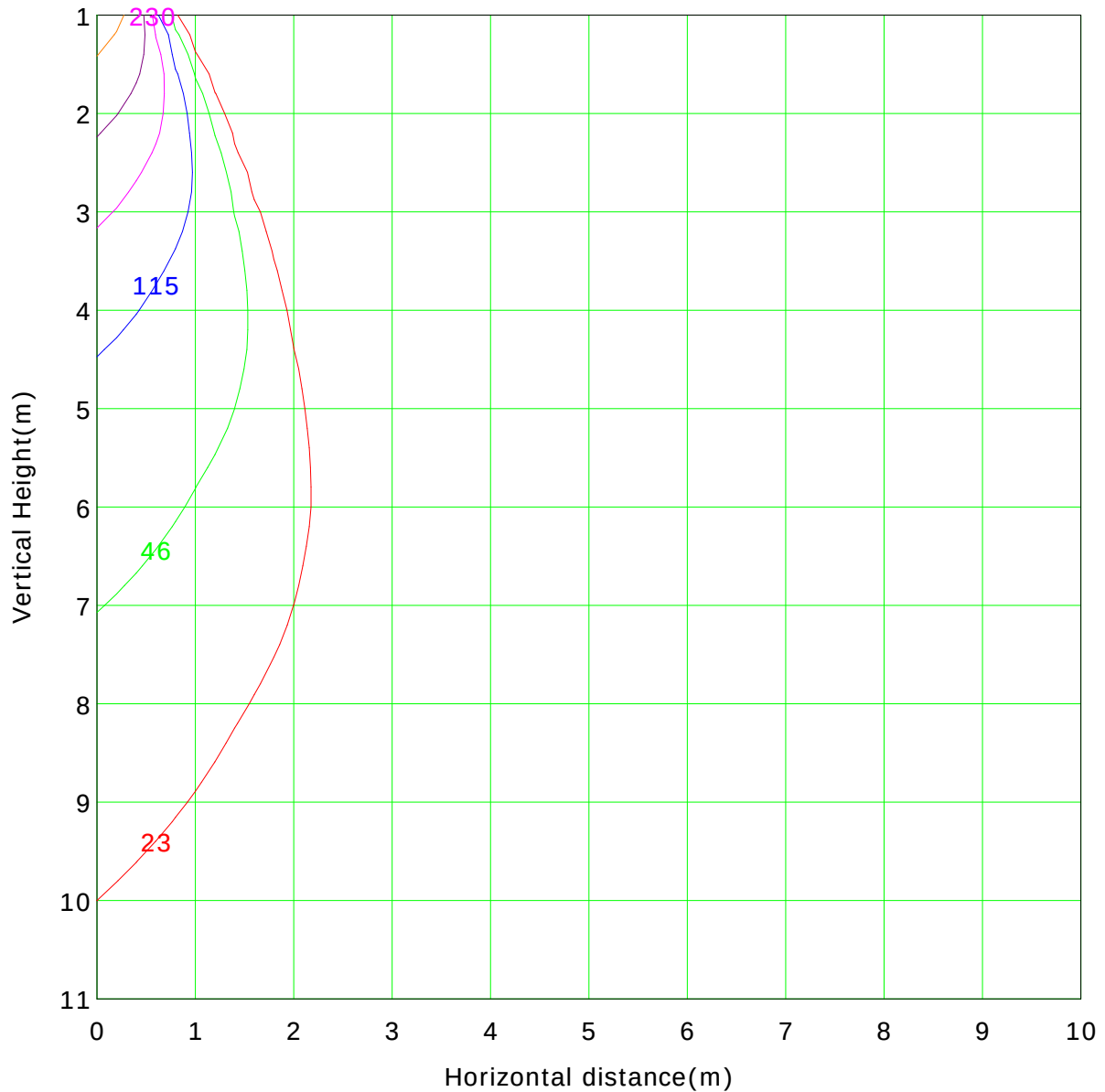


C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

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: 2303.3 lx

(1%): 23.0 lx	(2%): 46.1 lx
(5%): 115.2 lx	(10%): 230.3 lx
(20%): 460.7 lx	(50%): 1151.6 lx
(100%): 2303.3 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: 7.305 m [K=1.0000]
Humidity:
Inspector:



Area Flux Table

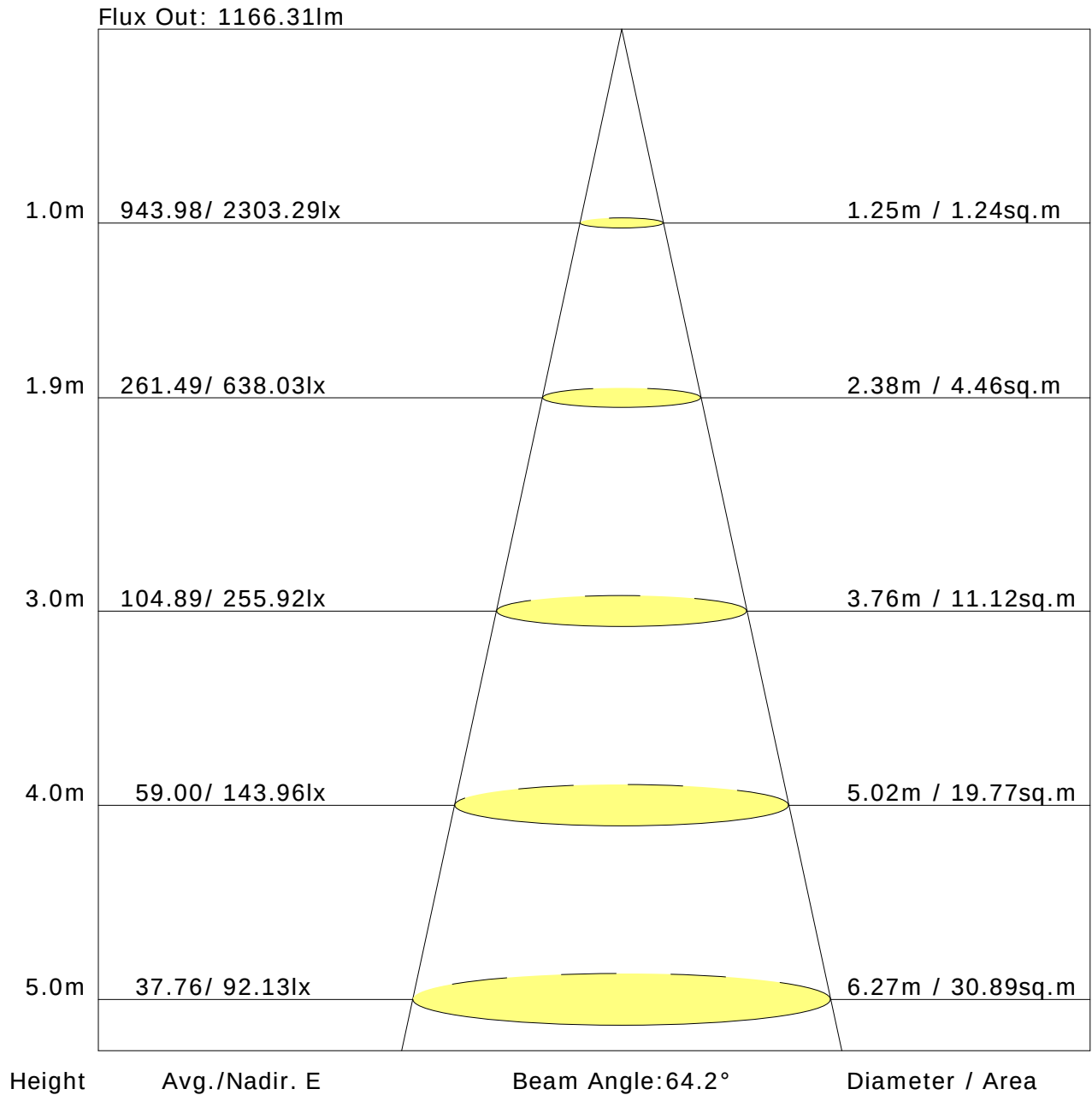
		Vertical plane																				
		-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	Flux(T)	Flux(E)
Horizontal plane	-90	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.0
	-80	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8	0.8	0.0
	-70	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	0.1	0.1	0.1	0.1	0.1	1.3	1.3	0.0
	-60	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	-50	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	0.1	0.1	0.1	0.1	0.1	2.0	4.2	0.0
	-40	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	0.1	0.1	0.1	0.1	0.1	15.7	29.5	0.0
	-30	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	0.1	0.1	0.1	0.1	0.1	131.7	131.7	0.0
	-20	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	0.1	0.1	0.1	0.1	0.1	264.0	264.0	0.0
	-10	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	0.1	0.1	0.1	0.1	0.1	305.2	305.2	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	0.1	0.1	0.1	0.1	0.1	2254.8	2254.8	0.0
	10	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	0.1	0.1	0.1	0.1	0.1	153.1	153.1	0.0
	20	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	0.1	0.1	0.1	0.1	0.1	42.2	42.2	0.0
	30	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	40	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	50	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	60	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	70	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	80	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	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	90	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	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.0
		Flux(T)																			1270	1167
		Flux(E)																				1167

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





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	-1.1	-0.3	-0.8	-0.1	0.1	0.7	1.4	0.9	1.6	1.8
3H	-0.6	0.1	-0.3	0.3	0.5	1.1	1.8	1.4	2.1	2.3
4H	-0.2	0.5	0.1	0.7	1.0	1.6	2.2	1.9	2.5	2.8
6H	0.4	1.0	0.8	1.3	1.6	2.3	2.9	2.6	3.2	3.5
8H	0.8	1.4	1.2	1.7	2.0	2.8	3.4	3.1	3.6	4.0
12H	1.2	1.8	1.6	2.1	2.4	3.4	4.0	3.8	4.3	4.6
X=4H Y=2H	-1.0	-0.4	-0.7	-0.1	0.1	0.6	1.3	0.9	1.5	1.8
3H	-0.3	0.3	0.0	0.6	0.9	1.3	1.9	1.7	2.2	2.5
4H	0.3	0.8	0.7	1.2	1.5	1.9	2.4	2.3	2.8	3.1
6H	1.2	1.7	1.6	2.0	2.4	2.9	3.3	3.3	3.7	4.1
8H	1.8	2.2	2.2	2.5	3.0	3.6	4.0	4.0	4.3	4.7
12H	2.3	2.7	2.8	3.1	3.5	4.4	4.7	4.8	5.1	5.6
X=8H Y=4H	0.7	1.1	1.1	1.5	1.9	2.1	2.5	2.5	2.9	3.3
6H	1.8	2.1	2.3	2.6	3.0	3.3	3.6	3.8	4.1	4.5
8H	2.5	2.8	3.0	3.3	3.7	4.1	4.4	4.6	4.8	5.3
12H	3.3	3.5	3.8	4.0	4.5	5.1	5.4	5.6	5.8	6.3
X=12H Y=4H	0.8	1.1	1.2	1.5	2.0	2.1	2.5	2.6	2.9	3.3
6H	2.0	2.3	2.5	2.7	3.2	3.4	3.7	3.9	4.1	4.6
8H	2.8	3.0	3.3	3.5	4.0	4.3	4.5	4.8	5.0	5.5
Variations with the observer position at spacings:										
S=1.0H	+2.9/-1.4					+3.1/-1.4				
S=1.5H	+5.0/-1.7					+5.2/-1.8				
S=2.0H	+6.7/-2.0					+6.8/-2.2				

Calculate in accordance with CIE Pub.117. The table is revised with 1278lm ($8\log(F/F_0) = 0.9$).

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 0.75									
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	0.90	0.95	0.99	1.01	1.04	1.07	1.08	1.10	1.11	
	0.30		0.86	0.92	0.95	0.98	1.01	1.04	1.06	1.08	1.09	
	0.20		0.84	0.89	0.92	0.95	0.99	1.02	1.03	1.06	1.08	
0.50	0.50	0.20	0.89	0.94	0.97	0.99	1.02	1.03	1.05	1.06	1.07	
	0.30		0.86	0.91	0.94	0.96	0.99	1.01	1.03	1.05	1.06	
	0.20		0.83	0.88	0.91	0.94	0.97	0.99	1.01	1.03	1.05	
0.30	0.50	0.20	0.88	0.92	0.95	0.97	0.99	1.00	1.01	1.03	1.04	
	0.30		0.85	0.90	0.92	0.94	0.97	0.99	1.00	1.01	1.02	
	0.20		0.83	0.87	0.90	0.93	0.95	0.97	0.99	1.00	1.01	
0.00	0.00	0.00	0.81	0.86	0.88	0.90	0.92	0.94	0.95	0.96	0.97	
Rating:31W 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 = 0.75									
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	0.49	0.40	0.34	0.29	0.23	0.19	0.17	0.13	0.11	
	0.30		0.41	0.34	0.30	0.26	0.21	0.18	0.15	0.12	0.10	
	0.20		0.35	0.30	0.26	0.23	0.19	0.16	0.14	0.11	0.10	
0.50	0.50	0.20	0.47	0.38	0.32	0.27	0.22	0.22	0.15	0.12	0.10	
	0.30		0.40	0.33	0.28	0.24	0.20	0.16	0.14	0.11	0.09	
	0.20		0.34	0.29	0.25	0.22	0.18	0.15	0.13	0.11	0.09	
0.30	0.50	0.20	0.44	0.35	0.29	0.25	0.20	0.16	0.14	0.11	0.09	
	0.30		0.38	0.31	0.26	0.23	0.18	0.15	0.13	0.10	0.08	
	0.20		0.33	0.28	0.24	0.21	0.17	0.14	0.12	0.10	0.08	
0.00	0.00	0.00	0.19	0.15	0.12	0.10	0.08	0.07	0.06	0.04	0.04	
Rating:31W 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 = 0.75									
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	0.12	0.14	0.15	0.16	0.17	0.18	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	0.10	0.11	0.13	0.15	0.16	0.17	0.18	
0.50	0.50	0.20	0.12	0.13	0.14	0.15	0.17	0.18	0.18	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	0.10	0.11	0.13	0.14	0.15	0.17	0.18	
0.30	0.50	0.20	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.18	0.19	
	0.30		0.08	0.10	0.12	0.13	0.14	0.15	0.16	0.17	0.18	
	0.20		0.06	0.08	0.10	0.11	0.13	0.14	0.15	0.16	0.17	
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Rating:31W 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°): 1247.42 lm

%lum = 97.6%

%lamp = 97.6%

cone flux(120°): 1260.02 lm

%lum = 98.6%

%lamp = 98.6%



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: