



Report No.:

Test Time: 2023-11-17 13:55

Luminaire Property

Luminaire Manufacturer:

Luminaire Category:

Lamp Catalog: 5000K

Number of Lamps:

Luminous Length (mm): 380

Luminous Height (mm):

Current: 0.0990 A

Power Factor: 0.8630

Luminaire Description: J380

Lamp Description:

Lumens per Lamp:

Luminous Width (mm): 380

Voltage: 230.80 V

Power: 19.70 W

Photometric Results

CIE Class: Direct

Measurement Flux: 2216.1 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(50%): H103

Vertical Diffuse Angle(50%): V102.9

Luminous Efficacy (lm/w): 112.49

Max. Intensity: 847.25 cd

S/MH(C0/C180): 1.19

Total Rated Lamp Lumens: 2216.1 lm

Efficiency: 100%

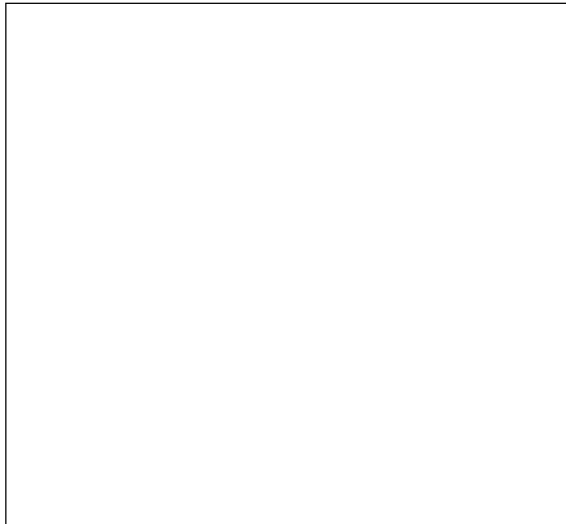
Upward Ratio: 0%

C0r0 Intensity: 847.25 cd

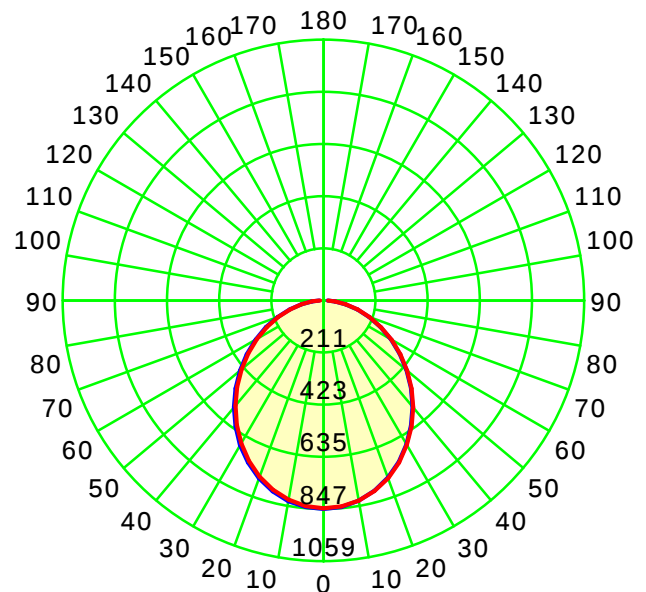
Pos of Max. Intensity: H0 V0

S/MH(C90/C270): 1.19

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

Average Diffuse Angle(50%): 102.9°

— 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

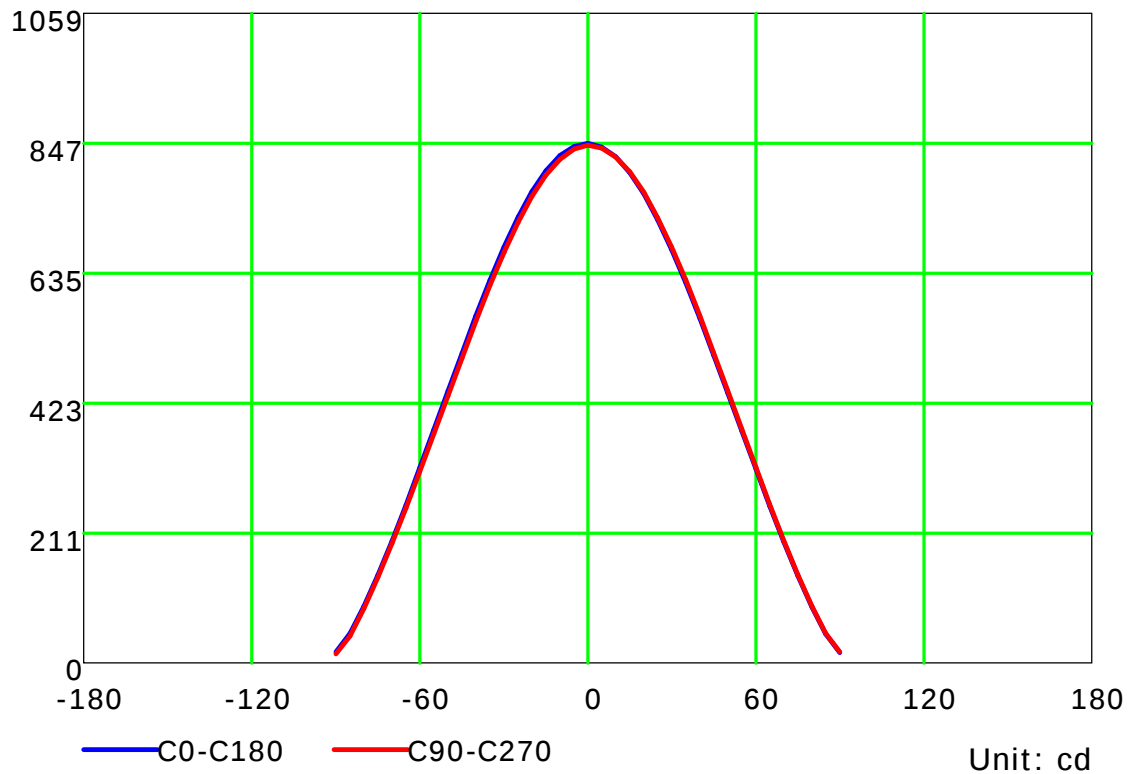
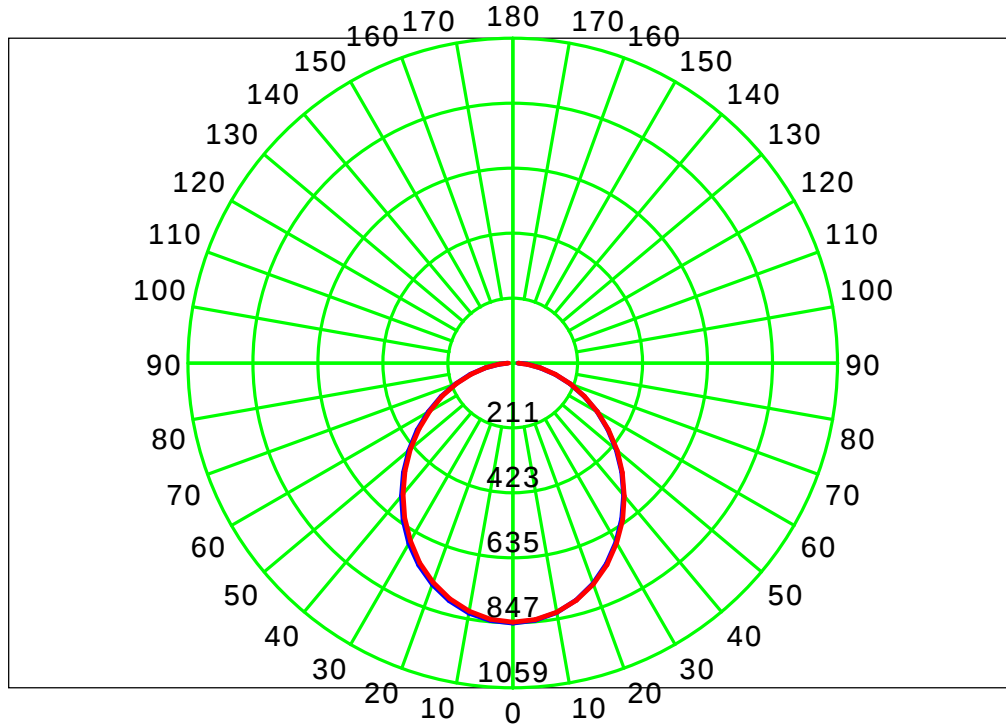
Distance: 7.305 m [K=1.0000]

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:

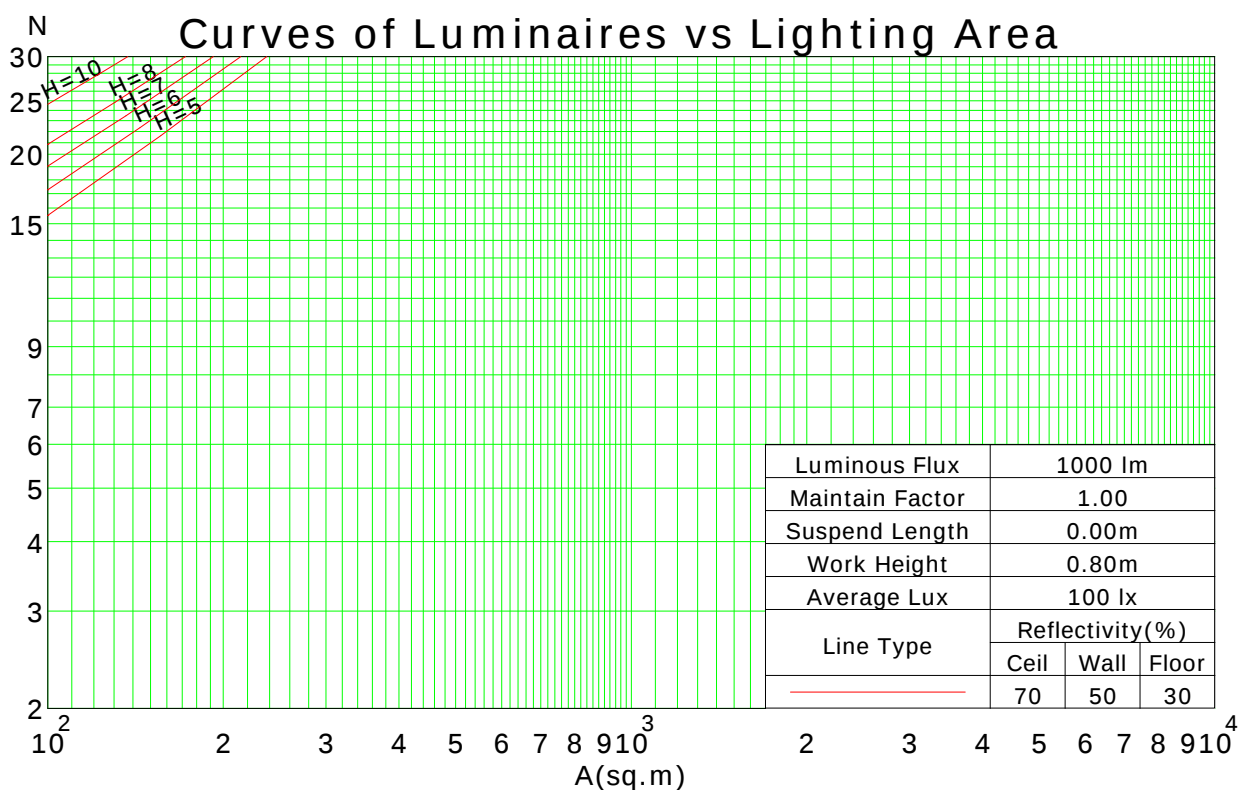
Coefficients Of Utilization - Zonal Cavity Method

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	1.09	1.04	0.99	0.96	1.06	1.02	0.98	0.94	0.97	0.94	0.91	0.93	0.91	0.88	0.90	0.88	0.86	0.83
2	0.99	0.91	0.84	0.78	0.96	0.89	0.82	0.77	0.85	0.80	0.75	0.82	0.77	0.74	0.79	0.75	0.72	0.70
3	0.90	0.80	0.72	0.65	0.88	0.78	0.71	0.65	0.75	0.69	0.63	0.72	0.67	0.62	0.70	0.65	0.61	0.59
4	0.83	0.71	0.62	0.55	0.80	0.69	0.61	0.55	0.67	0.60	0.54	0.65	0.58	0.53	0.62	0.57	0.53	0.51
5	0.76	0.63	0.54	0.48	0.74	0.62	0.54	0.48	0.60	0.53	0.47	0.58	0.52	0.47	0.56	0.51	0.46	0.44
6	0.70	0.57	0.48	0.42	0.69	0.56	0.48	0.42	0.54	0.47	0.41	0.53	0.46	0.41	0.51	0.45	0.41	0.39
7	0.65	0.52	0.43	0.37	0.64	0.51	0.43	0.37	0.50	0.42	0.37	0.48	0.41	0.36	0.47	0.41	0.36	0.34
8	0.61	0.47	0.39	0.33	0.59	0.47	0.39	0.33	0.45	0.38	0.33	0.44	0.38	0.33	0.43	0.37	0.32	0.31
9	0.57	0.44	0.35	0.30	0.56	0.43	0.35	0.30	0.42	0.35	0.30	0.41	0.34	0.30	0.40	0.34	0.29	0.28
10	0.53	0.40	0.32	0.27	0.52	0.40	0.32	0.27	0.39	0.32	0.27	0.38	0.31	0.27	0.37	0.31	0.27	0.25

Spacing Criteria (0-180): 1.19

Spacing Criteria (90-270): 1.19

Spacing Criteria (Diagonal): 1.30



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

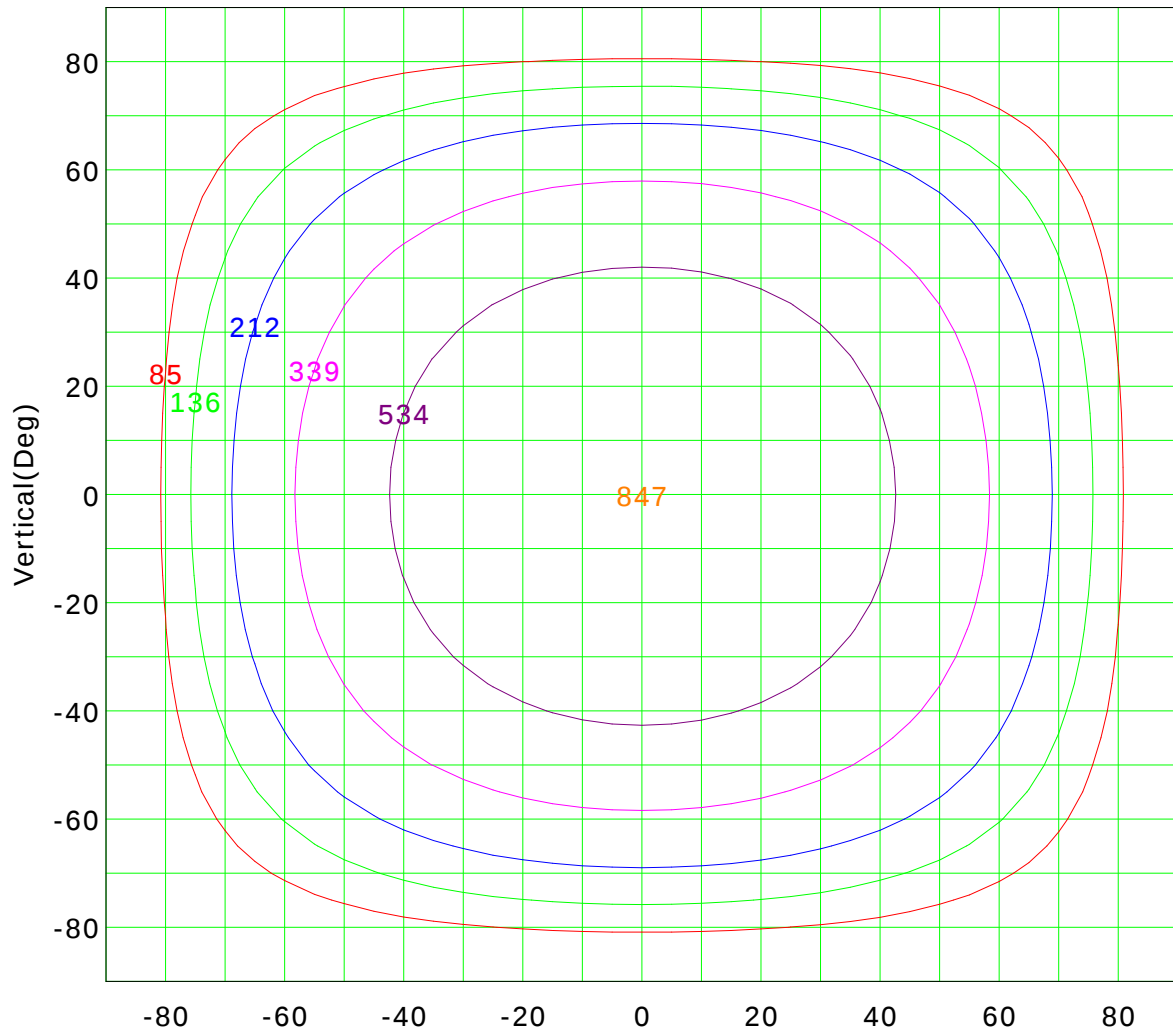
Distance: 7.305 m [K=1.0000]

Humidity:

Inspector:



Isocandela (rectangle)



Horizontal(Deg)
I_{max} (100%): 847 cd

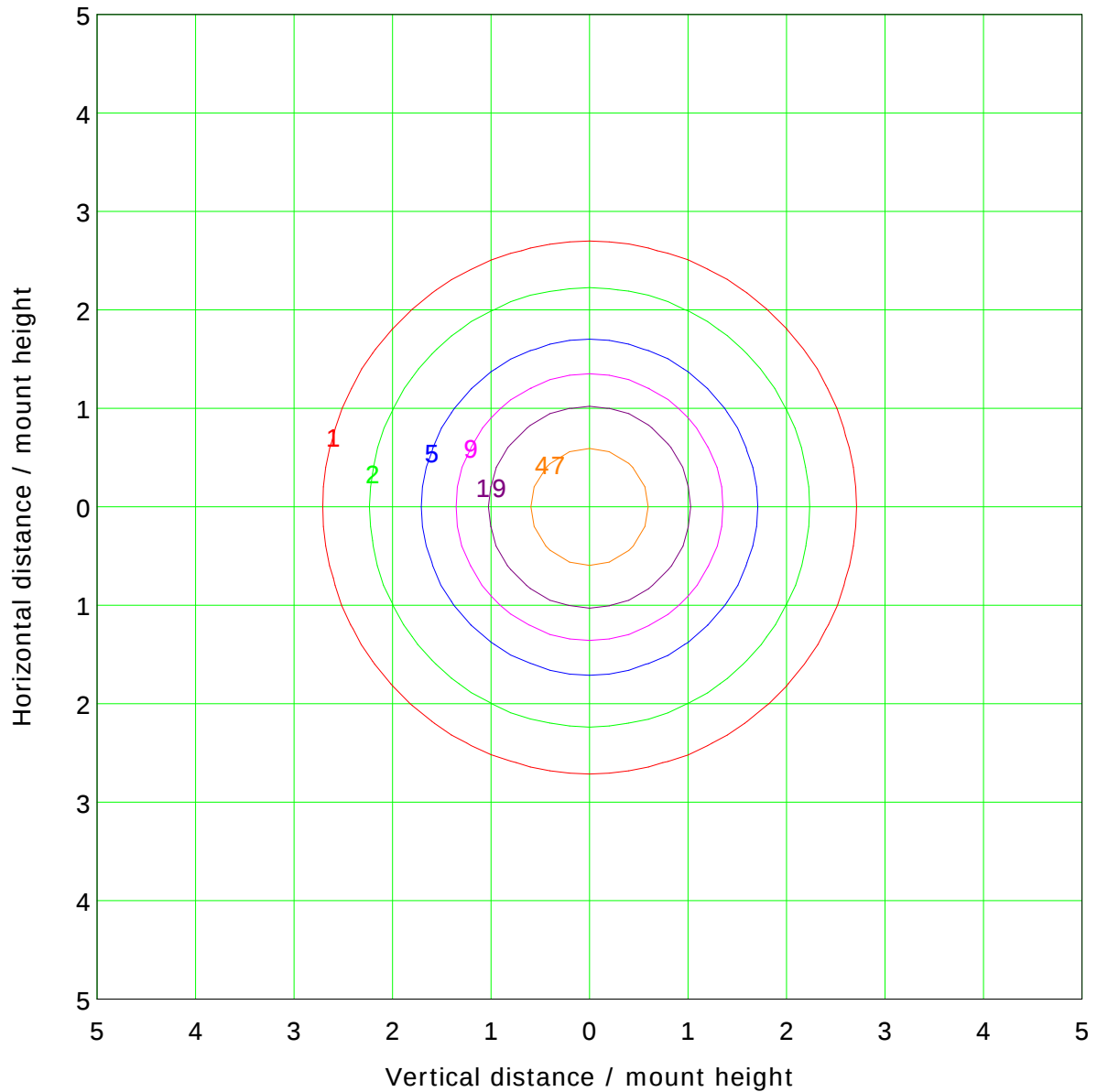
(10%): 85 cd	(16%): 136 cd
(25%): 212 cd	(40%): 339 cd
(63%): 534 cd	(100%): 847 cd

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%): 94.1 lx	
(1%):	0.9 lx	(2%):	1.9 lx
(5%):	4.7 lx	(10%):	9.4 lx
(20%):	18.8 lx	(50%):	47.1 lx
(100%):	94.1 lx		

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

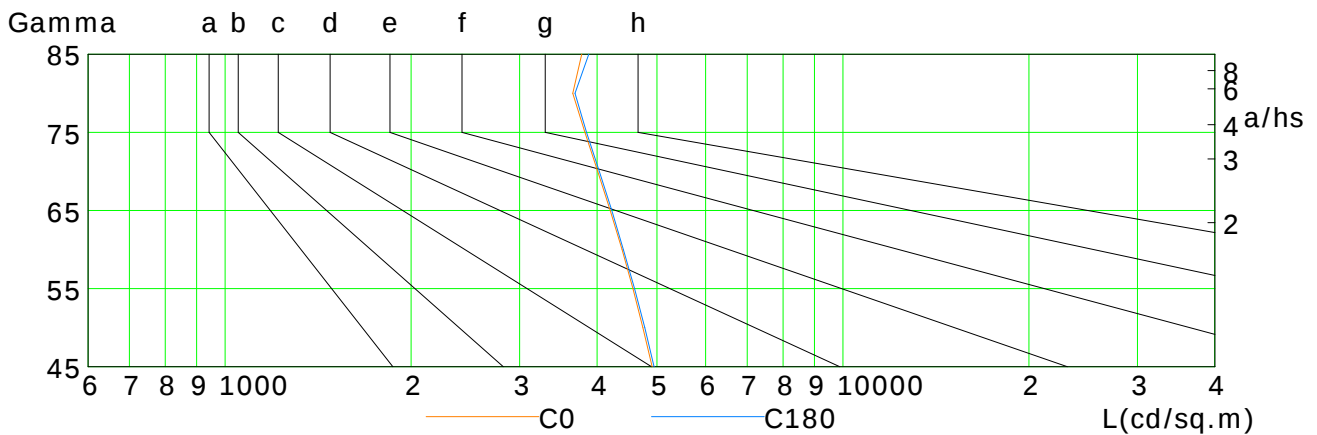
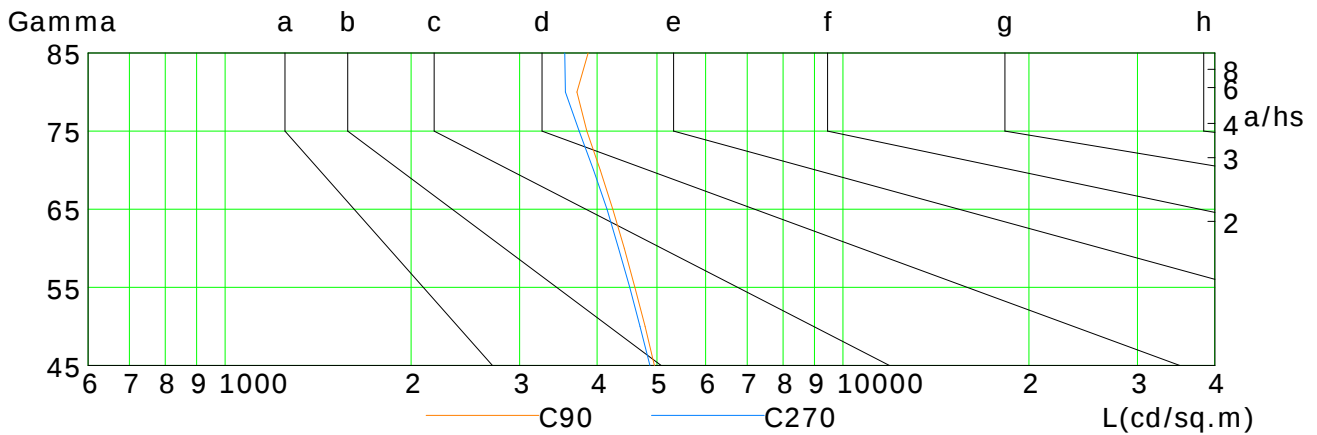
Gamma Plane (°):0.0-90.0:5.0
Test Device: GPM-1600L
Distance: 7.305 m [K=1.0000]
Humidity:
Inspector:



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



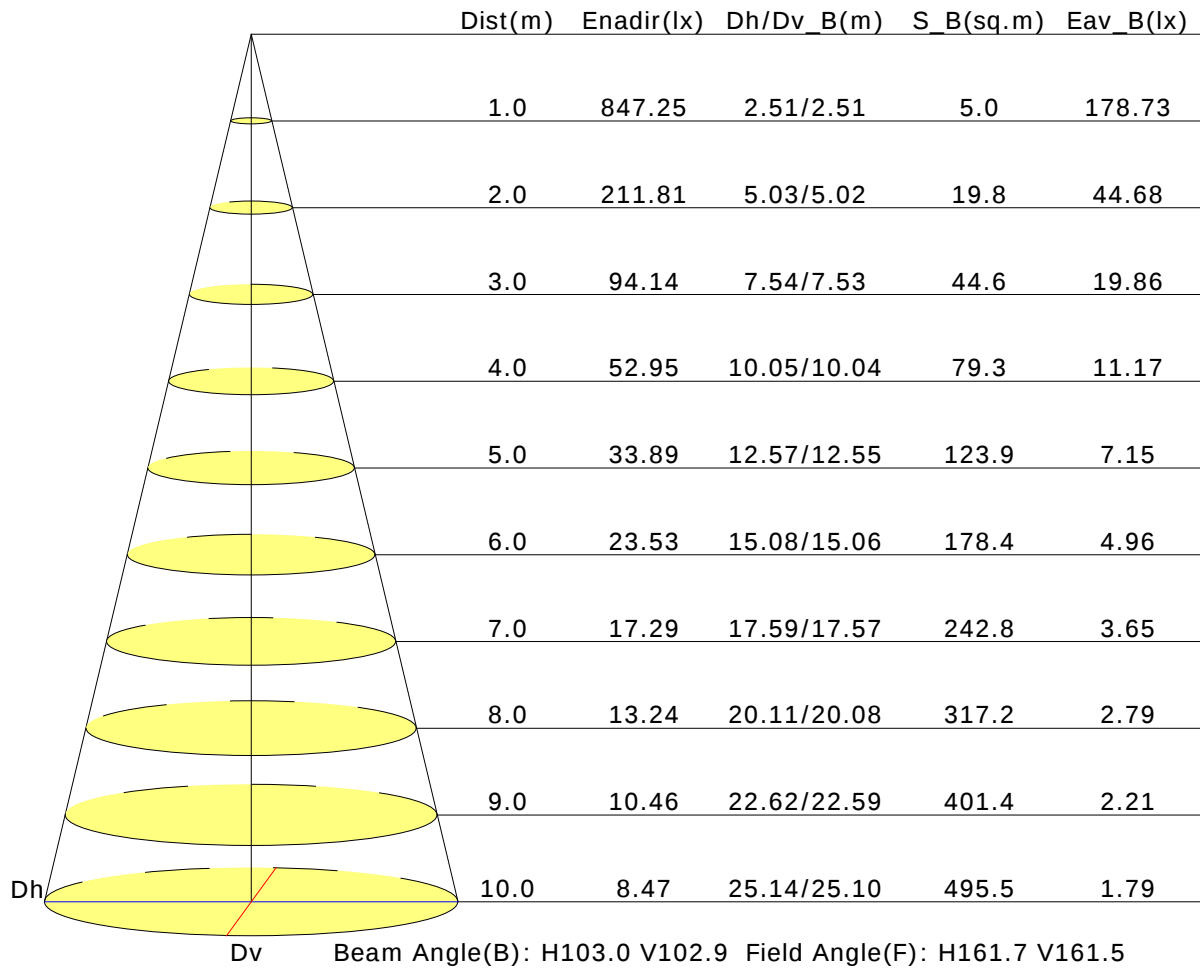
L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	4916	4746	4573	4393	4204	4013	3824	3655	3779
C90	4956	4787	4610	4429	4241	4052	3854	3712	3873
C180	4951	4783	4601	4416	4230	4034	3848	3686	3878
C270	4873	4696	4519	4335	4152	3951	3742	3555	3548

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

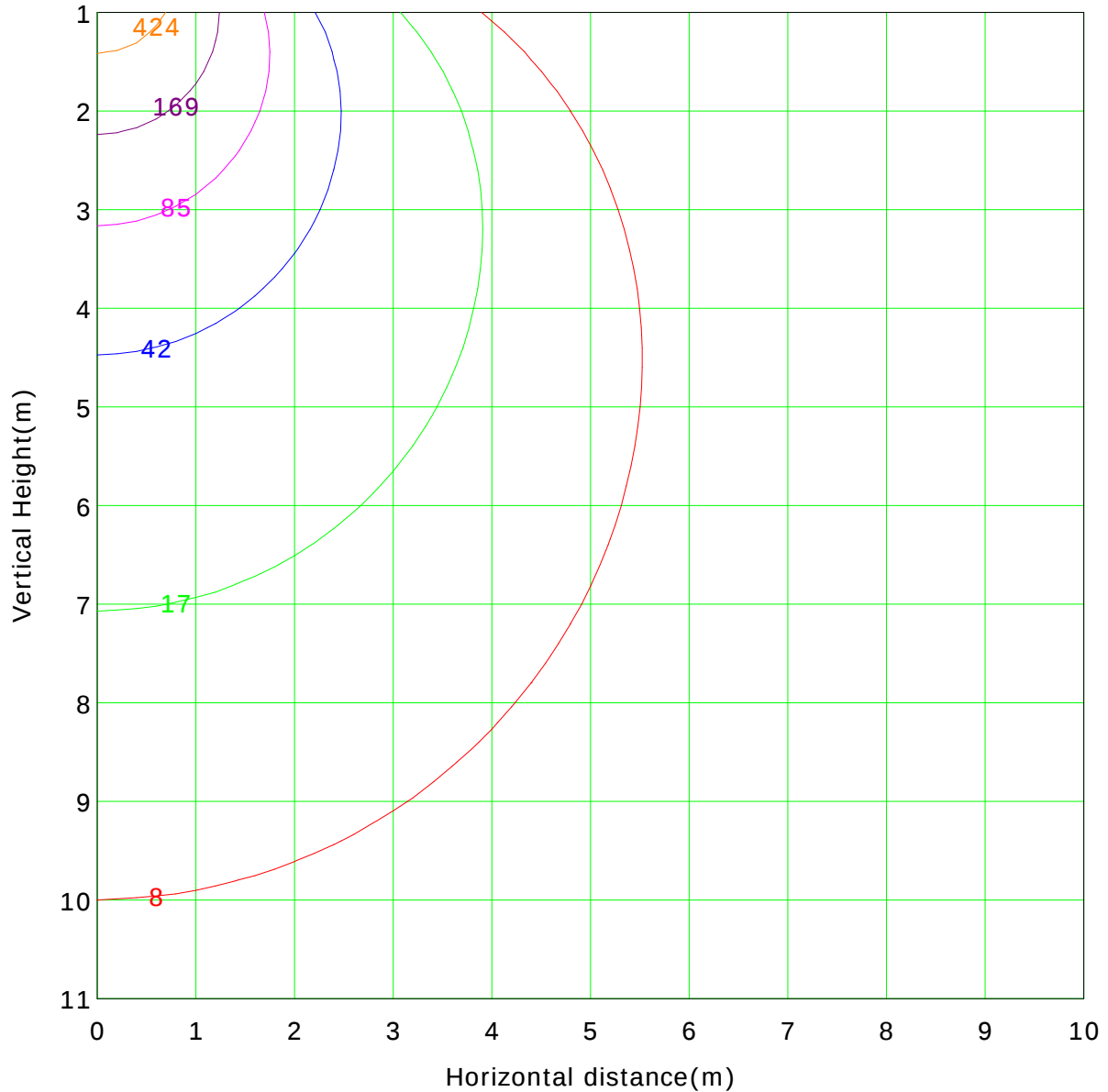


C Plane (°):0.0-360.0: 90.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

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: 847.3 lx

(1%): 8.5 lx	(2%): 16.9 lx
(5%): 42.4 lx	(10%): 84.7 lx
(20%): 169.4 lx	(50%): 423.6 lx
(100%): 847.2 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

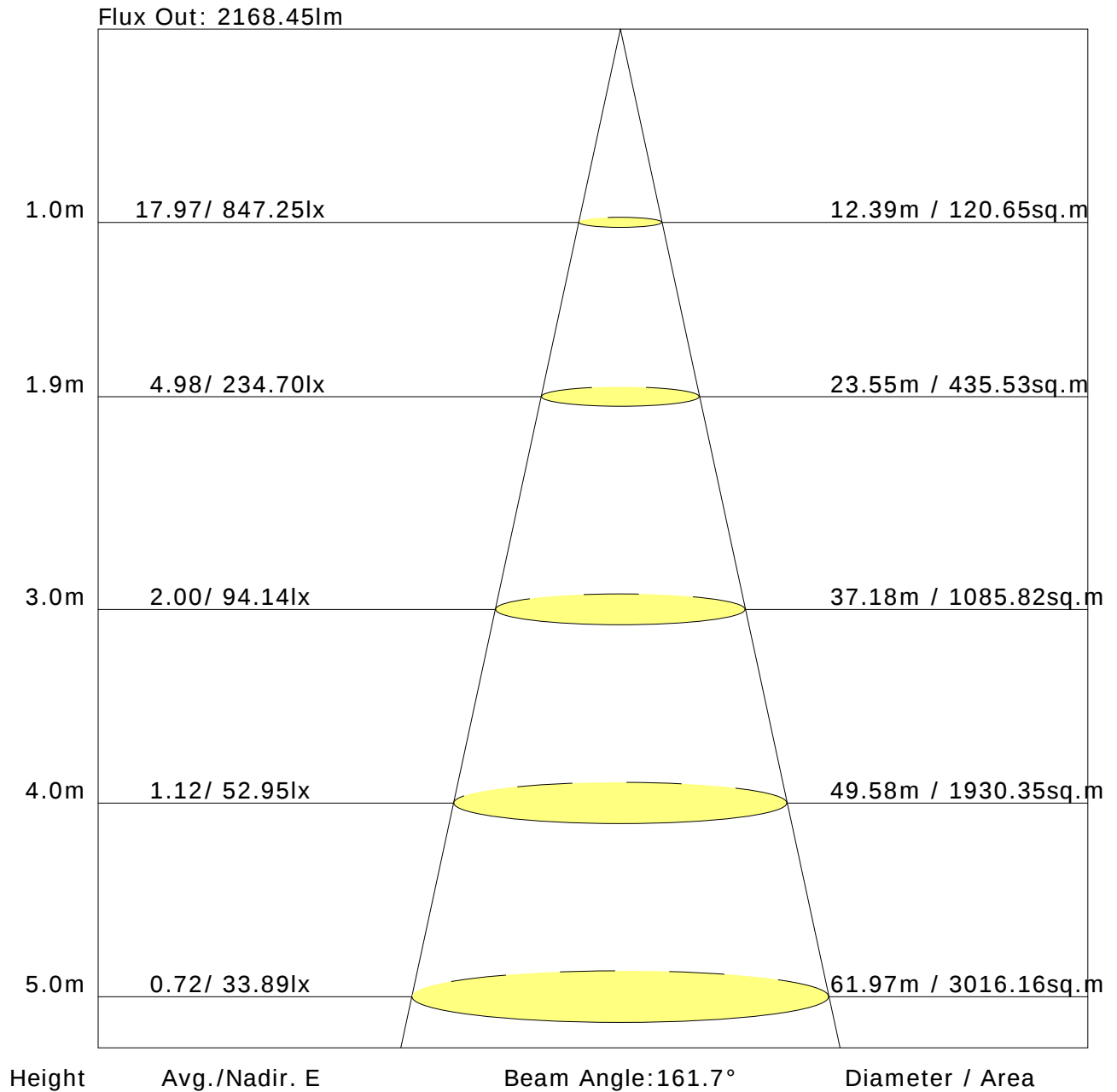
		Vertical plane																				
		-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90		
Flux(E)	Flux(T)	0.1	0.2	0.4	0.6	0.8	1.1	1.3	1.4	1.5	1.5	1.4	1.4	1.3	1.1	0.8	0.6	0.4	0.2	0.1	Flux(T)Flux(E)	2166
		0.1	0.3	0.8	1.4	2.1	2.8	3.5	4.0	4.3	4.3	4.0	3.5	2.8	2.1	1.4	0.8	0.4	0.2	0.1		
0.1	0.5	1.2	2.3	3.6	5.0	6.2	7.2	7.7	7.6	7.1	6.2	5.0	3.6	2.3	1.4	0.8	0.4	0.2	0.1	0.1	14.5	0.0
0.1	0.6	1.7	3.3	5.2	7.3	9.1	10.5	11.3	11.3	10.5	9.1	7.3	5.2	3.3	1.7	0.6	0.1	0.1	0.1	67.5	65.9	
0.1	0.8	2.2	4.3	6.8	9.5	12.0	14.0	15.0	15.0	13.9	12.0	9.5	6.8	4.3	2.2	0.8	0.1	0.1	0.1	98.4	97.6	
0.1	0.9	2.6	5.1	8.3	11.6	14.8	17.2	18.5	18.5	17.2	14.7	11.6	8.2	5.1	2.6	0.9	0.1	0.1	0.1	129.3	128.8	
0.2	1.1	3.0	5.9	9.5	13.4	17.1	20.0	21.6	21.6	20.0	17.1	13.3	9.4	5.8	3.0	1.0	0.2	0.2	0.2	183.0	182.7	
0.2	1.1	3.2	6.4	10.4	14.7	18.9	22.1	23.9	23.9	22.1	18.8	14.6	10.3	6.3	3.2	1.1	0.2	0.2	0.2	201.4	201.1	
0.2	1.2	3.3	6.6	10.8	15.4	19.8	23.3	25.2	25.2	23.2	19.7	15.3	10.7	6.6	3.3	1.2	0.2	0.2	0.2	211.4	211.1	
0.2	1.2	3.4	6.7	10.8	15.4	19.9	23.3	25.2	25.2	23.3	19.8	15.4	10.8	6.6	3.3	1.2	0.2	0.2	0.2	211.6	211.4	
0.2	1.1	3.2	6.4	10.4	14.8	18.9	22.2	24.0	24.0	22.2	18.9	14.7	10.3	6.4	3.2	1.1	0.2	0.2	0.2	202.2	201.9	
0.2	1.1	3.0	5.9	9.5	13.5	17.2	20.2	21.8	21.8	20.1	17.2	13.4	9.5	5.9	3.0	1.1	0.2	0.2	0.2	184.3	184.0	
0.1	0.9	2.6	5.2	8.3	11.7	14.9	17.4	18.8	18.7	17.4	14.9	11.7	8.3	5.2	2.6	0.9	0.1	0.1	0.1	159.7	159.3	
0.1	0.8	2.2	4.3	6.9	9.6	12.2	14.1	15.2	15.2	14.1	12.1	9.6	6.9	4.3	2.2	0.8	0.1	0.1	0.1	130.9	130.3	
0.1	0.7	1.7	3.3	5.3	7.4	9.3	10.7	11.5	11.5	10.7	9.2	7.3	5.3	3.3	1.7	0.6	0.1	0.1	0.1	99.8	99.0	
0.1	0.5	1.3	2.4	3.7	5.1	6.3	7.3	7.8	7.8	7.3	6.3	5.1	3.7	2.3	1.2	0.5	0.1	0.1	0.1	68.6	67.0	
0.1	0.3	0.8	1.4	2.1	2.9	3.6	4.1	4.4	4.4	4.1	3.6	2.9	2.1	1.4	0.8	0.3	0.1	0.1	0.1	39.3	34.0	
0.1	0.2	0.4	0.6	0.9	1.1	1.3	1.5	1.6	1.6	1.5	1.3	1.1	0.9	0.6	0.4	0.2	0.1	0.1	0.1	15.3	0.9	
2.2	13.6	37.1	72.1	115.5	162.3	206.3	240.5	259.1	258.9	240.0	205.6	161.6	114.9	71.7	36.9	13.5	2.1	2214				
0.1	10.6	34.3	69.3	112.8	159.6	203.7	237.8	256.3	256.1	237.3	202.9	158.9	112.2	69.0	34.1	10.4	0.1					

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	17.7	19.1	18.0	19.4	19.6	17.7	19.1	18.0	19.3	19.6
3H	19.3	20.5	19.6	20.8	21.1	19.3	20.5	19.6	20.8	21.1
4H	19.9	21.1	20.3	21.4	21.7	19.9	21.1	20.2	21.4	21.7
6H	20.4	21.5	20.8	21.8	22.2	20.4	21.5	20.8	21.8	22.1
8H	20.6	21.7	21.0	22.0	22.3	20.6	21.7	21.0	22.0	22.3
12H	20.8	21.8	21.2	22.1	22.5	20.8	21.8	21.1	22.1	22.5
X=4H Y=2H	18.4	19.6	18.7	19.9	20.2	18.4	19.6	18.7	19.9	20.2
3H	20.1	21.1	20.5	21.5	21.8	20.1	21.1	20.5	21.5	21.8
4H	20.9	21.8	21.3	22.2	22.6	20.9	21.8	21.3	22.2	22.5
6H	21.6	22.4	22.0	22.8	23.2	21.5	22.4	22.0	22.7	23.1
8H	21.8	22.6	22.3	23.0	23.4	21.8	22.6	22.2	23.0	23.4
12H	22.0	22.7	22.5	23.1	23.6	22.0	22.7	22.5	23.1	23.6
X=8H Y=4H	21.2	22.0	21.7	22.4	22.8	21.2	22.0	21.6	22.4	22.8
6H	22.0	22.7	22.5	23.1	23.6	22.0	22.6	22.5	23.1	23.5
8H	22.4	23.0	22.9	23.4	23.9	22.4	22.9	22.9	23.4	23.9
12H	22.7	23.2	23.2	23.7	24.2	22.7	23.2	23.2	23.7	24.2
X=12H Y=4H	21.3	21.9	21.7	22.4	22.8	21.2	21.9	21.7	22.3	22.8
6H	22.1	22.7	22.6	23.1	23.6	22.1	22.7	22.6	23.1	23.6
8H	22.6	23.0	23.0	23.5	24.0	22.5	23.0	23.0	23.5	24.0
Variations with the observer position at spacings:										
S=1.0H	+0.2/-0.2					+0.2/-0.2				
S=1.5H	+0.4/-0.5					+0.4/-0.5				
S=2.0H	+0.5/-0.9					+0.5/-0.9				

Calculate in accordance with CIE Pub.117. The table is revised with 2216lm (8log(F/F0) = 2.8).

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 1.50									
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	0.61	0.70	0.77	0.82	0.89	0.93	0.97	1.01	1.04	
	0.30		0.54	0.62	0.70	0.75	0.83	0.88	0.92	0.97	1.00	
	0.20		0.49	0.57	0.64	0.70	0.78	0.83	0.88	0.93	0.97	
0.50	0.50	0.20	0.60	0.68	0.74	0.79	0.86	0.90	0.93	0.97	1.00	
	0.30		0.53	0.61	0.68	0.73	0.81	0.85	0.89	0.94	0.97	
	0.20		0.49	0.56	0.64	0.69	0.76	0.81	0.85	0.91	0.94	
0.30	0.50	0.20	0.59	0.66	0.72	0.77	0.83	0.87	0.90	0.93	0.96	
	0.30		0.53	0.60	0.67	0.72	0.78	0.83	0.86	0.90	0.93	
	0.20		0.48	0.56	0.63	0.68	0.75	0.80	0.83	0.88	0.91	
0.00	0.00	0.00	0.46	0.53	0.60	0.65	0.71	0.76	0.79	0.84	0.87	
Rating:20W 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 = 1.50									
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	0.92	0.78	0.66	0.58	0.46	0.39	0.33	0.26	0.21	
	0.30		0.77	0.67	0.58	0.51	0.42	0.36	0.31	0.24	0.20	
	0.20		0.66	0.59	0.51	0.46	0.38	0.33	0.29	0.23	0.19	
0.50	0.50	0.20	0.89	0.75	0.64	0.55	0.44	0.40	0.32	0.25	0.20	
	0.30		0.75	0.65	0.56	0.50	0.41	0.34	0.30	0.23	0.19	
	0.20		0.65	0.58	0.50	0.45	0.37	0.32	0.28	0.22	0.18	
0.30	0.50	0.20	0.86	0.72	0.61	0.53	0.42	0.35	0.30	0.23	0.19	
	0.30		0.74	0.64	0.55	0.48	0.39	0.33	0.28	0.22	0.18	
	0.20		0.65	0.57	0.50	0.44	0.36	0.31	0.27	0.21	0.18	
0.00	0.00	0.00	0.54	0.47	0.40	0.35	0.29	0.24	0.21	0.16	0.14	
Rating:20W 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 = 1.50									
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	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.21	0.22	
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19	
	0.20		0.05	0.06	0.08	0.09	0.11	0.13	0.14	0.16	0.17	
0.50	0.50	0.20	0.15	0.17	0.17	0.18	0.19	0.20	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	0.06	0.08	0.09	0.11	0.12	0.14	0.15	0.16	
0.30	0.50	0.20	0.15	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20	
	0.30		0.09	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	
	0.20		0.05	0.06	0.08	0.09	0.11	0.12	0.13	0.15	0.16	
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Rating:20W 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°): 1224.09 lm

%lum = 55.2%

%lamp = 55.2%

cone flux(120°): 1754.06 lm

%lum = 79.2%

%lamp = 79.2%



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: