

Report No.:

Test Time: 31.07.2020 19:34

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FD 111 160W 5000K 120 rp Ex

Number of Lamps: 1

Luminous Length (mm): 400 mm

Luminous Height (mm): 215 mm

Current: 0.736 A

Power Factor: 0.980

Lumens per Lamp: 18044.4 lm

Luminous Width (mm): 400 mm

Voltage: 222.0 V

Power: 160.08 W

Photometric Results

CIE Class: Direct

Measurement Flux: 18043.5 lm

Downward Ratio: 99.61%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 155.7, 155.5, 155.7, 155.6

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 114.8, 114.3, 114.6, 114.5

Luminaire Efficacy Rating (LER): 112.77

Max. Intensity: 6310.59 cd

S/MH(C0/C180): 1.29

Total Rated Lamp Lumens: 18044.4 lm

Efficiency: 100.00%

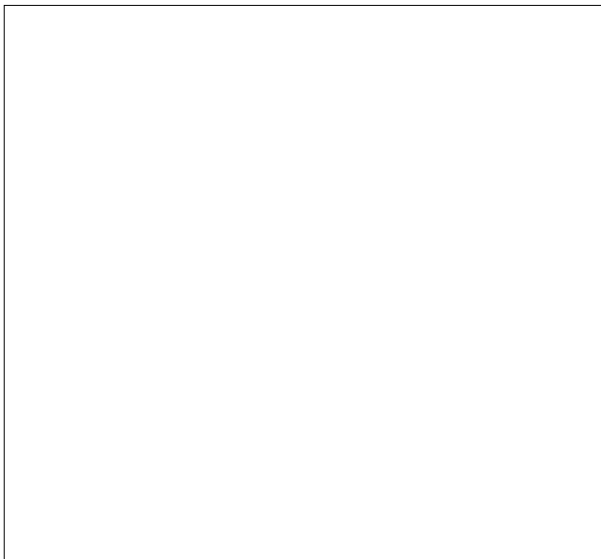
Upward Ratio: 0.39%

Central Intensity: 6304.89 cd

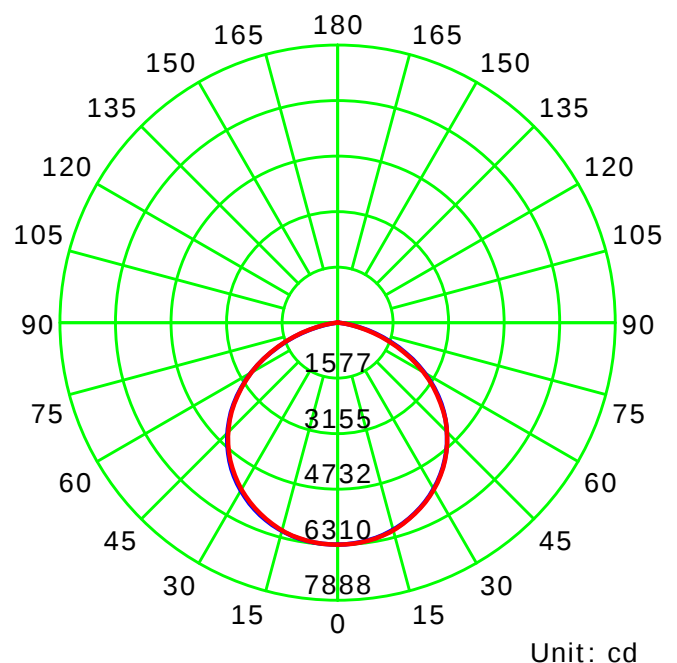
Pos of Max. Intensity: H135 V0

S/MH(C90/C270): 1.29

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

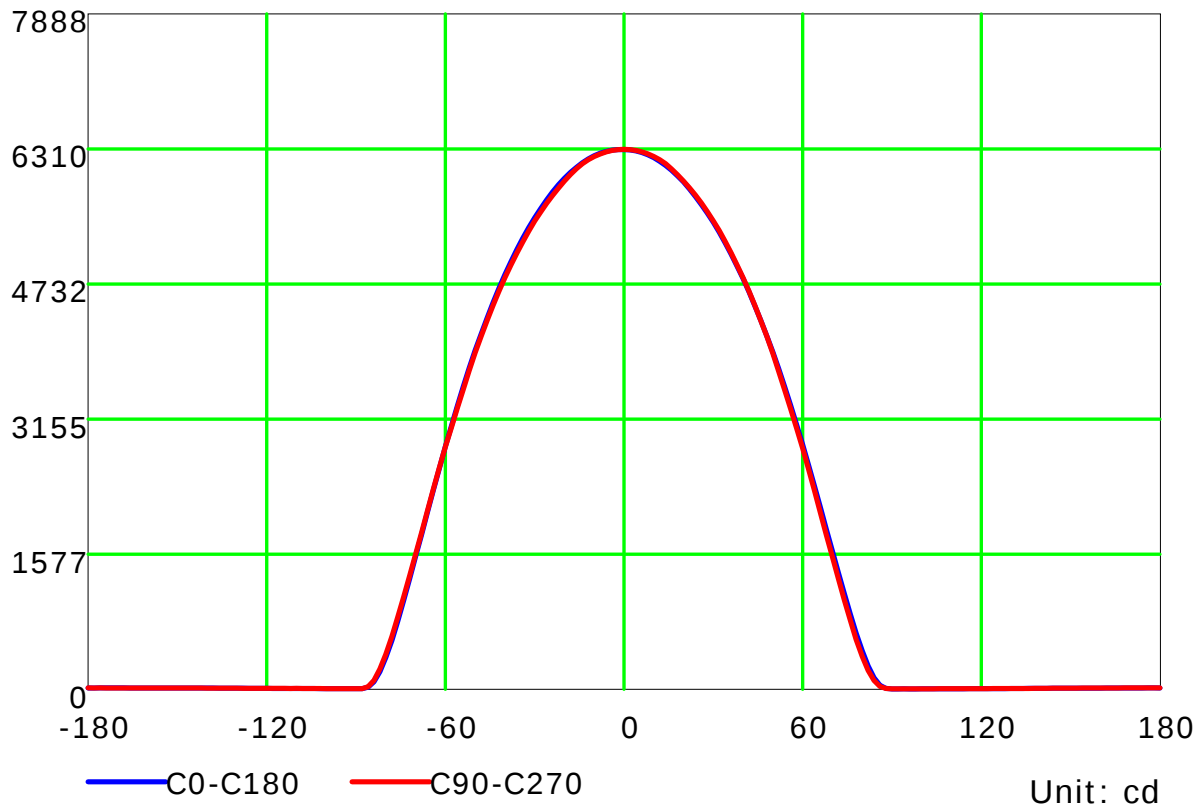
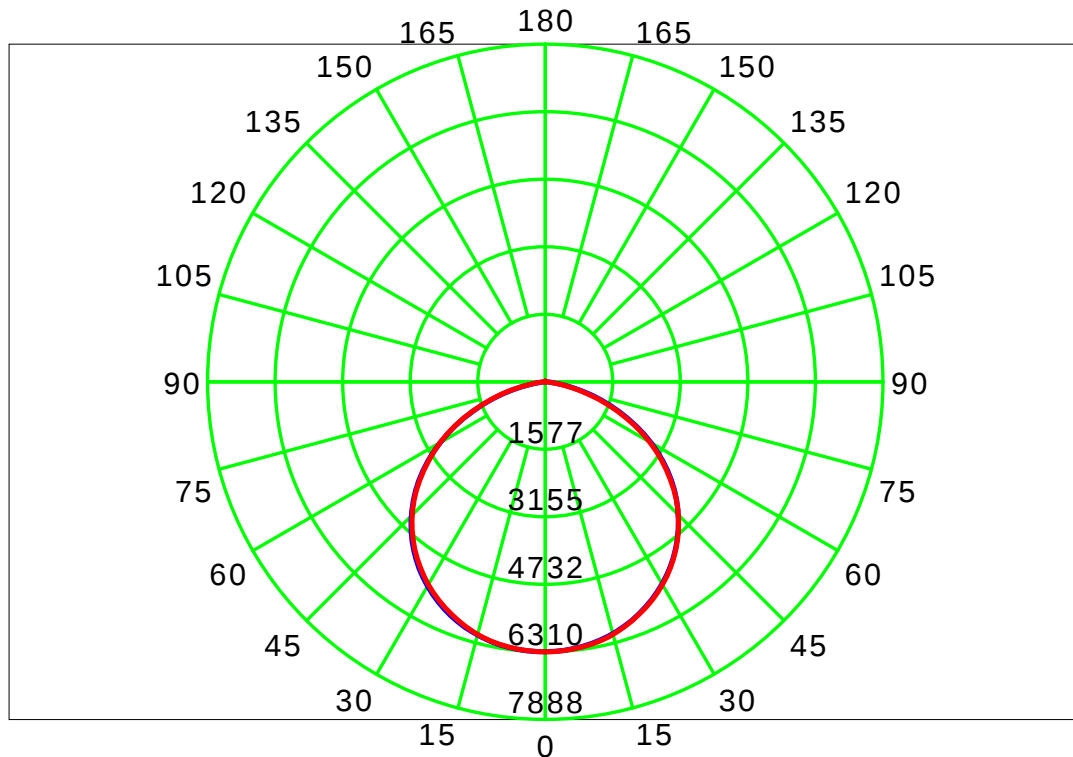
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

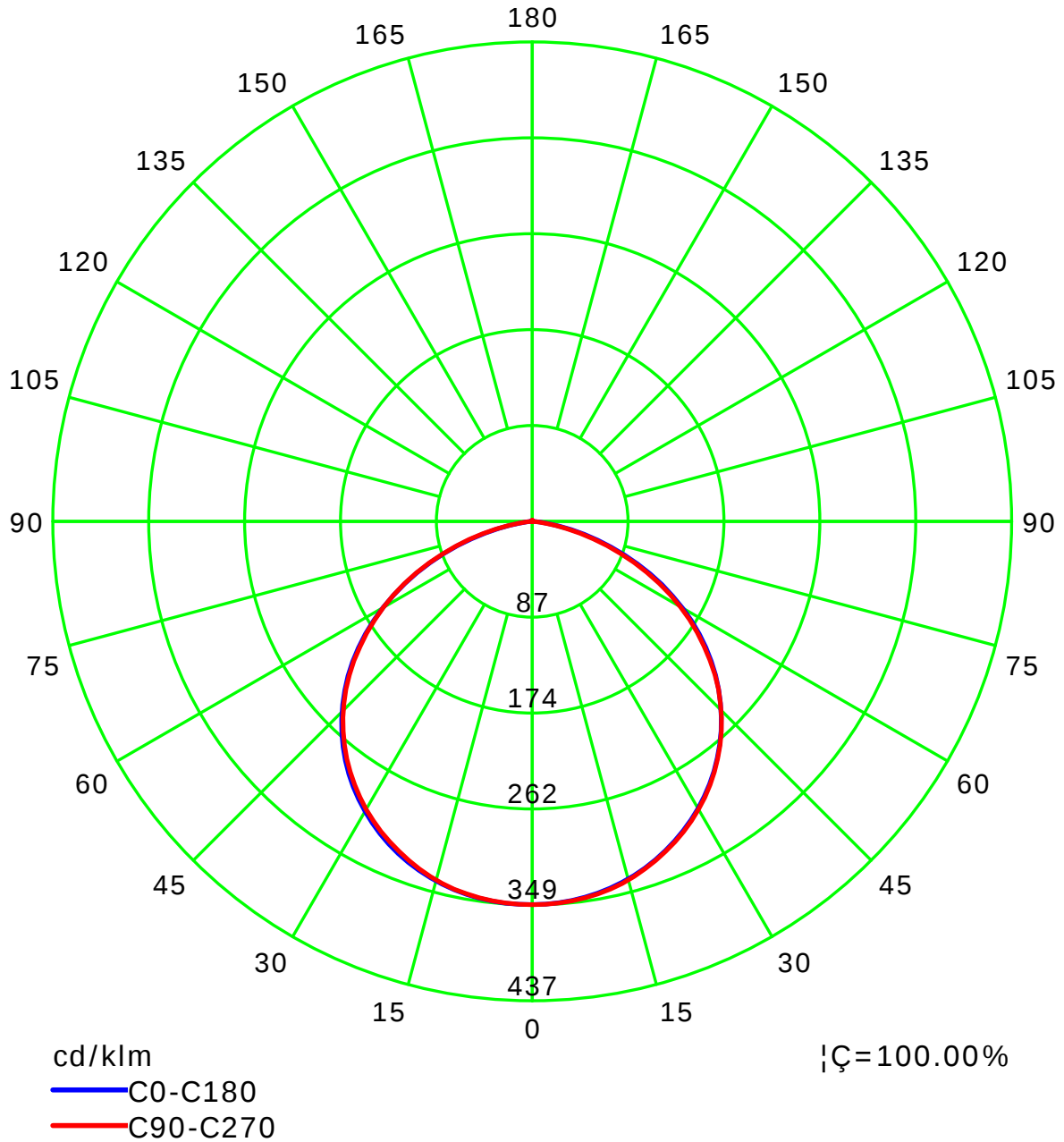
Luminous Intensity Distribution Curve



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Test Lab:
Test Type: TYPE C
Temperature:
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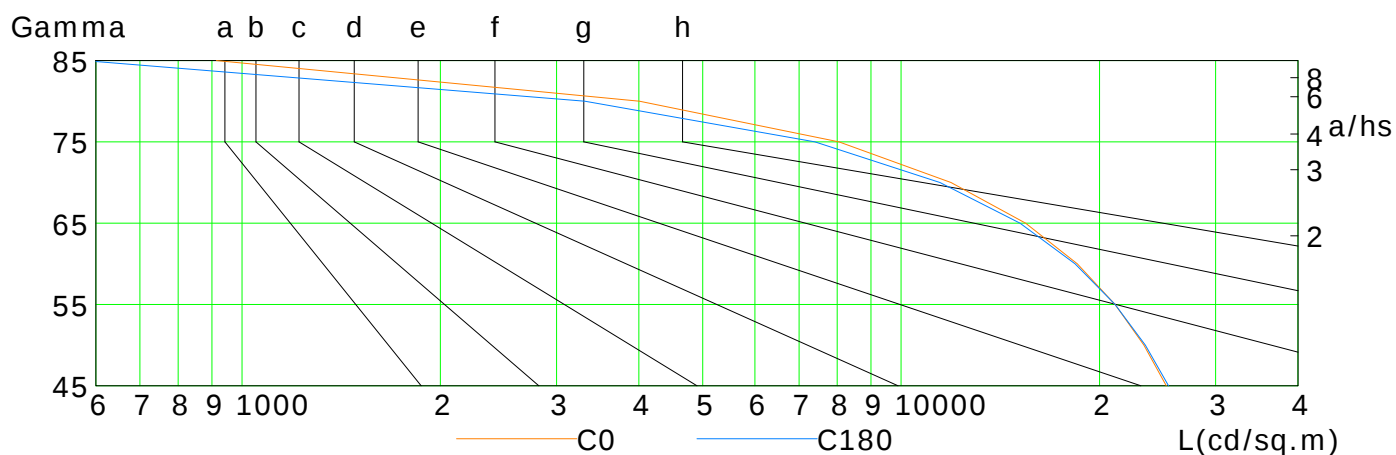
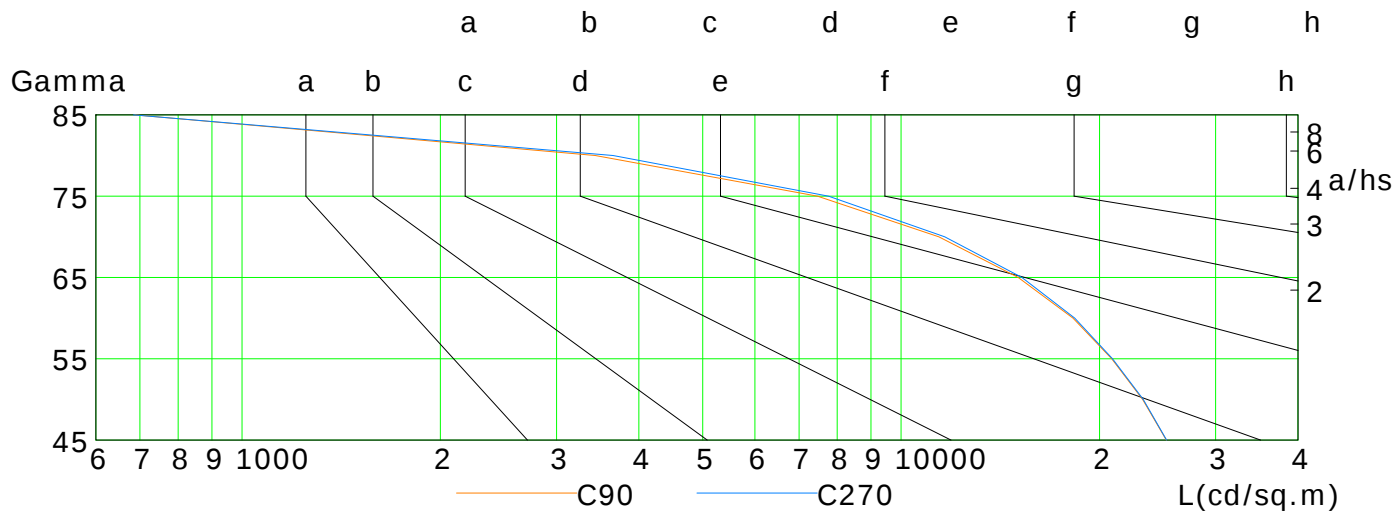
Gamma Plane (°):0.0-180.0:2.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

Luminous Intensity Distribution Curve(cd / klm)



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



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	25245	23346	21112	18507	15449	11903	8045	4008	915
C90	25256	23247	20866	18230	15051	11406	7466	3435	687
C180	25453	23467	21114	18360	15144	11451	7401	3313	576
C270	25283	23301	20929	18339	15248	11644	7759	3656	684

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

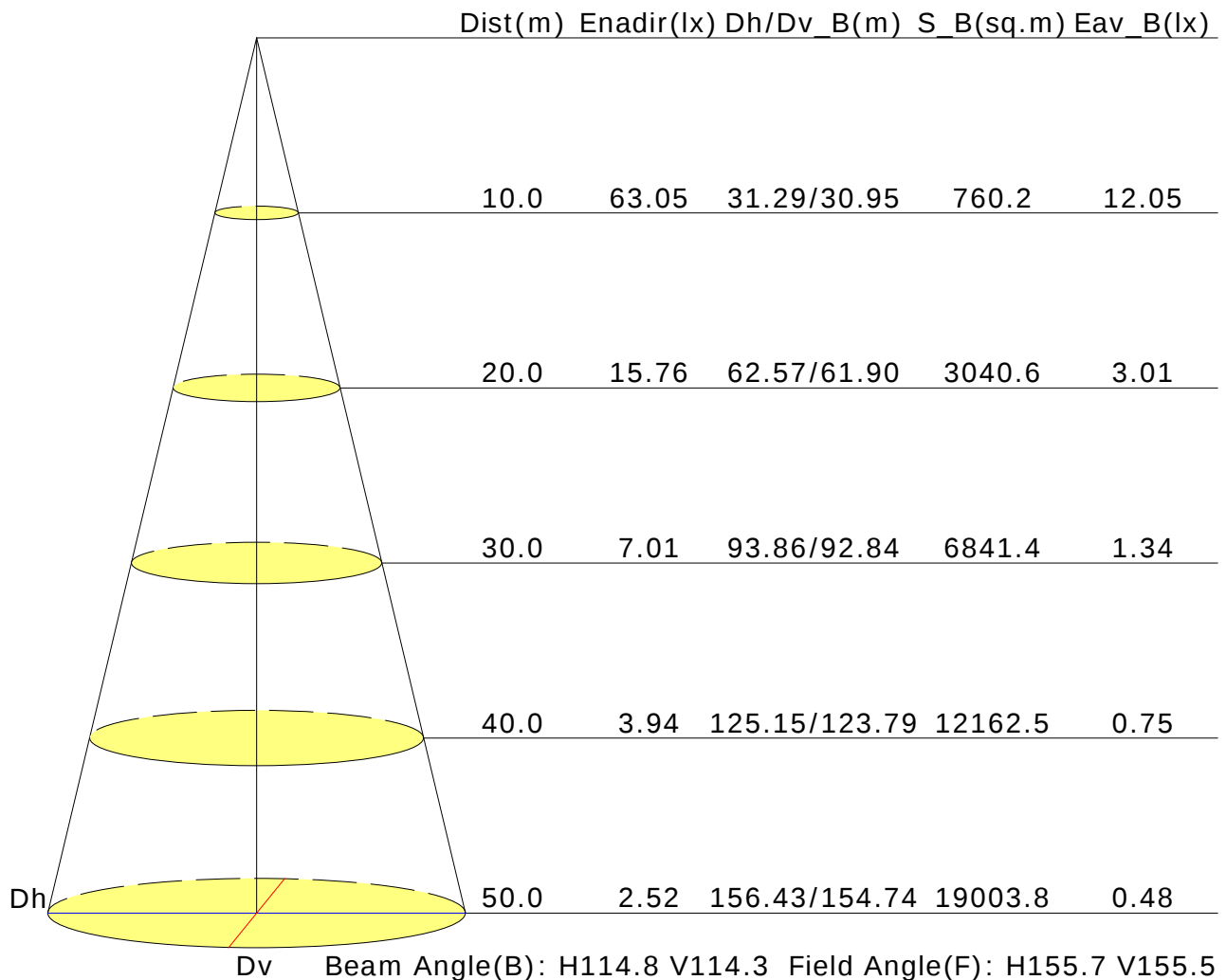
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

Illuminance at a Distance



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	23.0	24.3	23.3	24.6	24.8	22.9	24.3	23.2	24.5	24.8
3H	24.0	25.3	24.3	25.5	25.8	23.9	25.2	24.3	25.5	25.7
4H	24.3	25.5	24.6	25.8	26.1	24.2	25.4	24.6	25.7	26.0
6H	24.4	25.5	24.8	25.8	26.1	24.3	25.4	24.7	25.7	26.0
8H	24.4	25.4	24.8	25.7	26.1	24.3	25.3	24.6	25.6	26.0
12H	24.3	25.3	24.7	25.7	26.0	24.2	25.2	24.6	25.6	25.9
X=4H Y=2H	23.4	24.6	23.8	24.9	25.2	23.4	24.6	23.7	24.8	25.1
3H	24.6	25.6	25.0	25.9	26.3	24.5	25.5	24.9	25.9	26.2
4H	25.0	25.8	25.4	26.2	26.6	24.9	25.8	25.3	26.1	26.5
6H	25.1	25.9	25.5	26.3	26.7	25.0	25.8	25.4	26.2	26.6
8H	25.1	25.8	25.5	26.2	26.7	25.0	25.7	25.4	26.1	26.6
12H	25.1	25.7	25.5	26.2	26.6	25.0	25.6	25.4	26.0	26.5
X=8H Y=4H	25.0	25.8	25.5	26.2	26.6	25.0	25.7	25.4	26.1	26.5
6H	25.2	25.8	25.7	26.3	26.7	25.1	25.7	25.6	26.2	26.6
8H	25.2	25.8	25.7	26.2	26.7	25.1	25.7	25.6	26.1	26.6
12H	25.2	25.7	25.7	26.2	26.7	25.1	25.6	25.6	26.0	26.6
X=12H Y=4H	25.0	25.7	25.5	26.1	26.5	24.9	25.6	25.4	26.0	26.5
6H	25.2	25.7	25.7	26.2	26.7	25.1	25.6	25.6	26.1	26.6
8H	25.2	25.7	25.7	26.2	26.7	25.1	25.6	25.6	26.1	26.6
Variations with the observer position at spacings:										
S=1.0H	+0.2/-0.2					+0.2/-0.2				
S=1.5H	+0.4/-0.6					+0.4/-0.7				
S=2.0H	+0.9/-1.4					+0.9/-1.4				

Calculate in accordance with CIE Pub.117. The table is revised with 18044lm ($8\log(F/F_0) = 10.1$).

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

Test Device: LSG-1800B

Distance: 12.677 m

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	0.57	0.68	0.75	0.81	0.88	0.93	0.97	1.01	1.04	
	0.30		0.49	0.60	0.68	0.74	0.82	0.88	0.92	0.97	1.01	
	0.20		0.44	0.54	0.62	0.69	0.77	0.83	0.88	0.94	0.98	
0.50	0.50	0.20	0.55	0.66	0.73	0.78	0.85	0.90	0.93	0.97	1.00	
	0.30		0.48	0.59	0.67	0.72	0.80	0.85	0.89	0.94	0.97	
	0.20		0.43	0.54	0.62	0.67	0.76	0.81	0.85	0.91	0.95	
0.30	0.50	0.20	0.54	0.64	0.71	0.75	0.82	0.86	0.89	0.93	0.96	
	0.30		0.48	0.58	0.65	0.70	0.78	0.83	0.86	0.91	0.94	
	0.20		0.43	0.53	0.61	0.66	0.74	0.79	0.83	0.88	0.92	
0.00	0.00	0.00	0.41	0.51	0.58	0.63	0.71	0.76	0.79	0.84	0.87	
Rating:160W 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 = 1.25									
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	0.99	0.81	0.68	0.59	0.47	0.39	0.33	0.25	0.20	
	0.30		0.83	0.69	0.60	0.53	0.42	0.35	0.30	0.24	0.19	
	0.20		0.71	0.61	0.53	0.47	0.39	0.33	0.28	0.22	0.19	
0.50	0.50	0.20	0.95	0.78	0.66	0.57	0.45	0.40	0.31	0.24	0.19	
	0.30		0.81	0.68	0.58	0.51	0.41	0.34	0.29	0.23	0.19	
	0.20		0.70	0.60	0.52	0.46	0.38	0.32	0.27	0.22	0.18	
0.30	0.50	0.20	0.93	0.75	0.63	0.54	0.43	0.35	0.30	0.23	0.18	
	0.30		0.79	0.66	0.56	0.49	0.39	0.33	0.28	0.22	0.18	
	0.20		0.69	0.59	0.51	0.45	0.37	0.31	0.26	0.21	0.17	
0.00	0.00	0.00	0.59	0.49	0.42	0.36	0.29	0.24	0.20	0.16	0.13	
Rating:160W 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 = 1.25									
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	0.17	0.18	0.19	0.19	0.20	0.21	0.21	0.22	0.22	
	0.30		0.10	0.11	0.13	0.14	0.15	0.17	0.18	0.19	0.20	
	0.20		0.05	0.07	0.08	0.09	0.12	0.13	0.14	0.16	0.17	
0.50	0.50	0.20	0.16	0.17	0.18	0.19	0.19	0.20	0.20	0.21	0.21	
	0.30		0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19	
	0.20		0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.16	0.17	
0.30	0.50	0.20	0.16	0.17	0.17	0.18	0.19	0.19	0.19	0.20	0.20	
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.16	0.17	0.18	
	0.20		0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.15	0.16	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rating:160W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												