

Report No.:

Test Time: 03.08.2020 14:20

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FD 111 220W 5000K 60 rp Ex

Number of Lamps: 1

Luminous Length (mm): 400 mm

Luminous Height (mm): 153 mm

Current: 1.017 A

Power Factor: 0.979

Lumens per Lamp: 22734.0 lm

Luminous Width (mm): 400 mm

Voltage: 221.4 V

Power: 220.49 W

Photometric Results

CIE Class: Direct

Measurement Flux: 22734 lm

Downward Ratio: 99.63%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 109.7, 109.7, 111.4, 110.9

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 57.5, 57.4, 57.9, 57.0

Luminaire Efficacy Rating (LER): 103.16

Max. Intensity: 19616.42 cd

S/MH(C0/C180): 0.85

Total Rated Lamp Lumens: 22734.0 lm

Efficiency: 100.00%

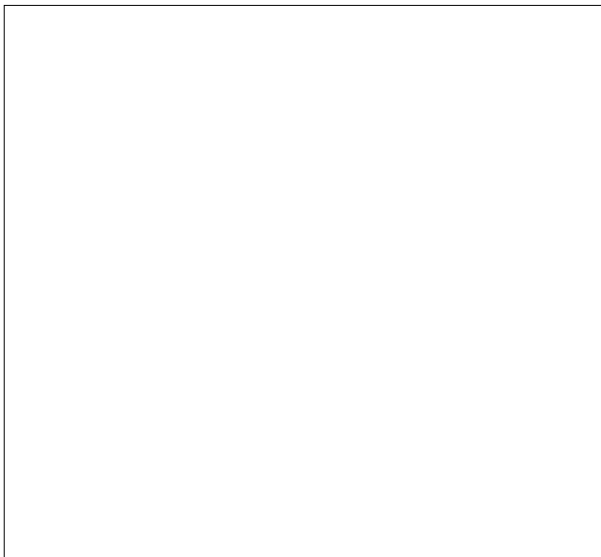
Upward Ratio: 0.37%

Central Intensity: 19545.93 cd

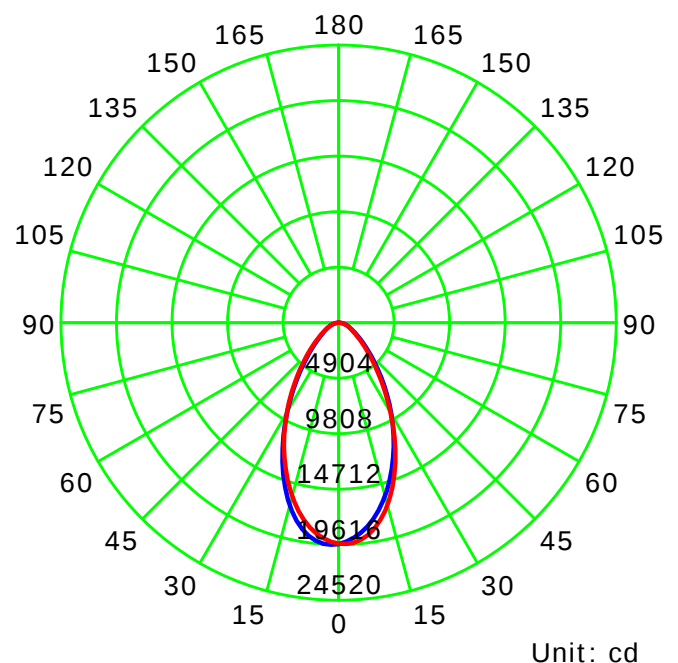
Pos of Max. Intensity: H180 V2

S/MH(C90/C270): 0.85

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

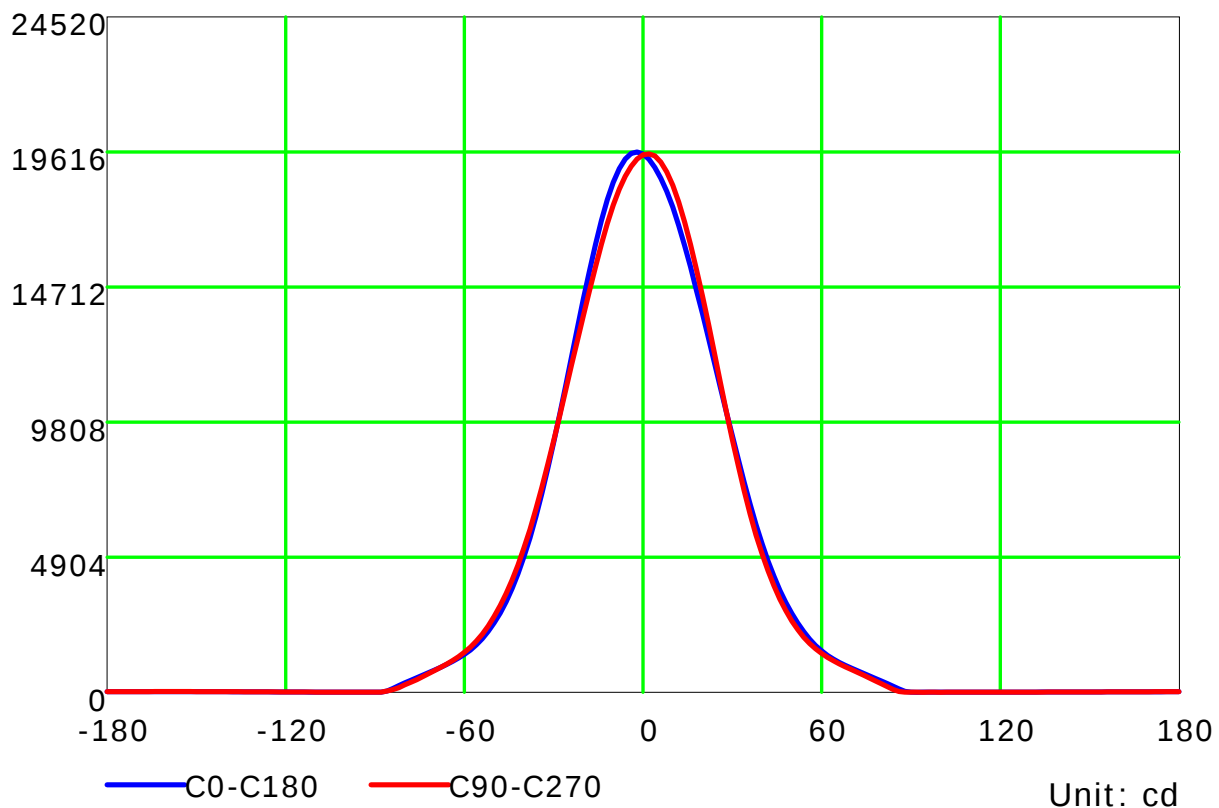
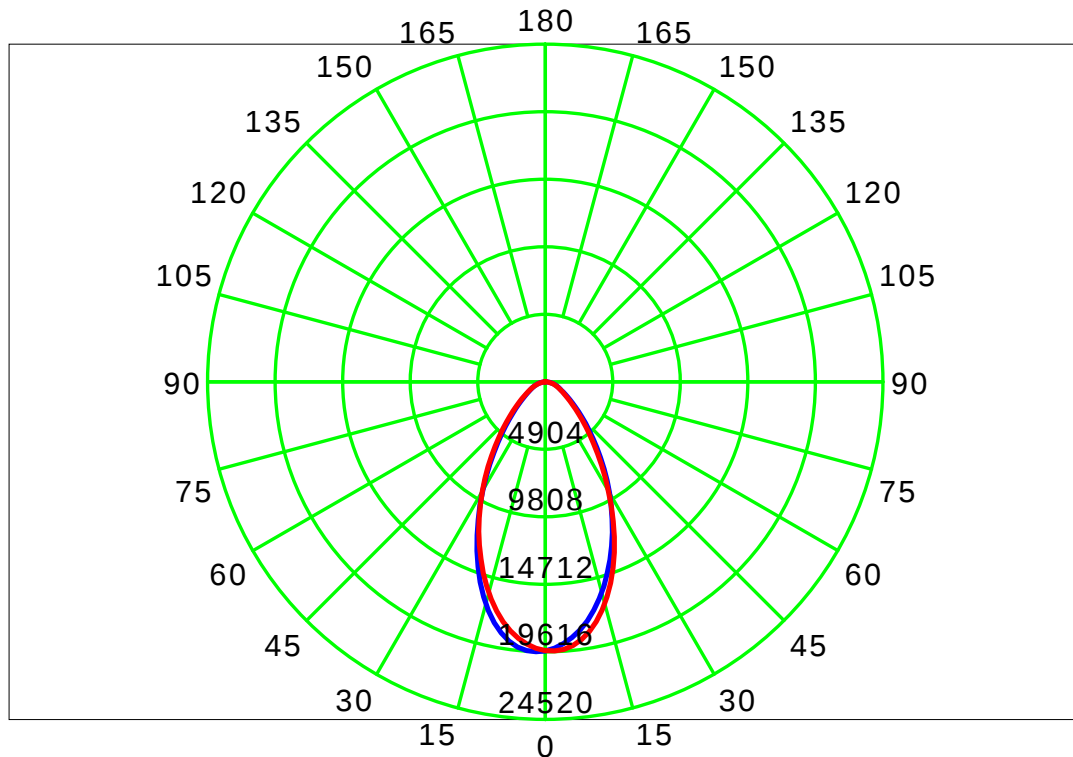
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

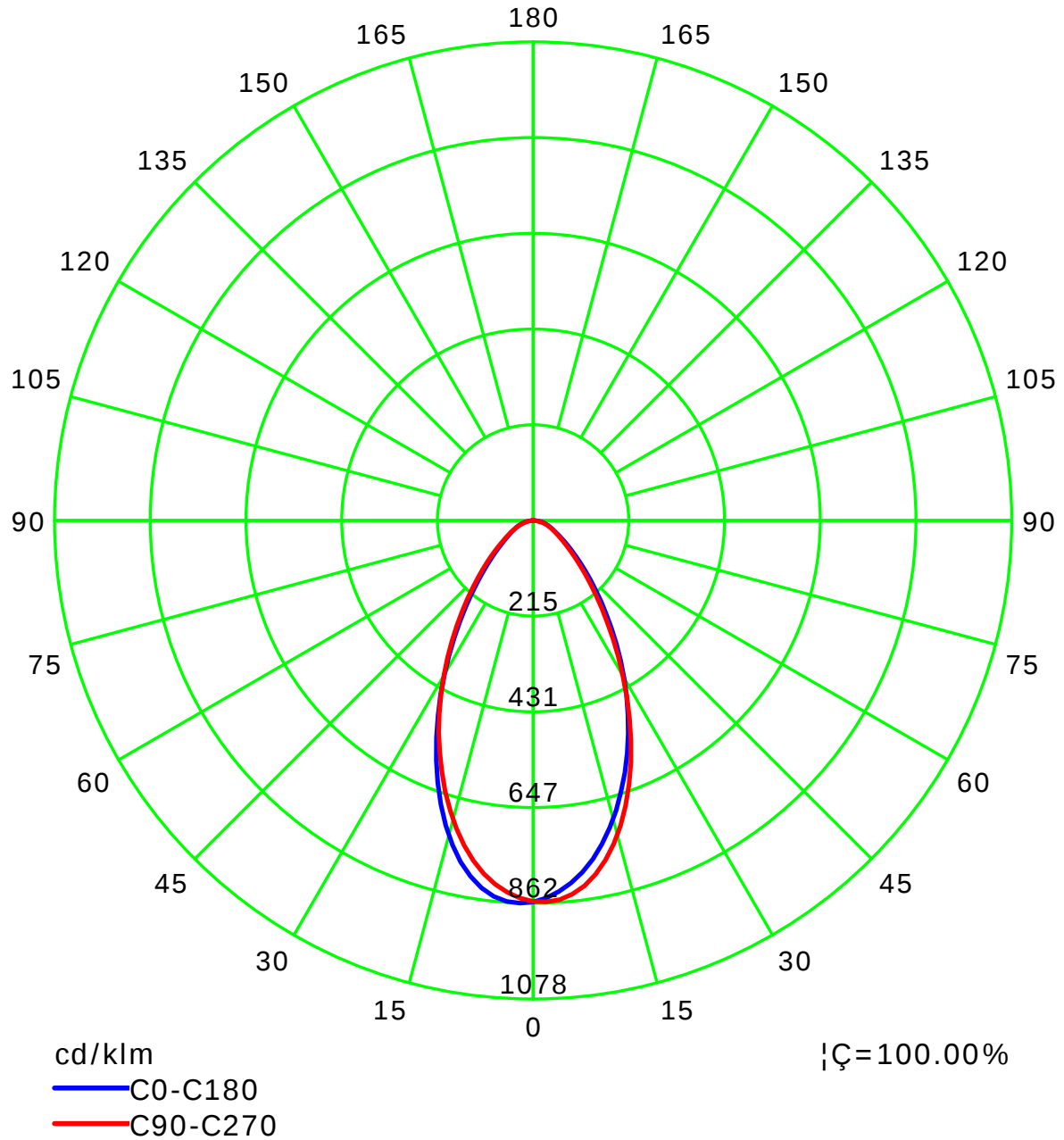
Luminous Intensity Distribution Curve



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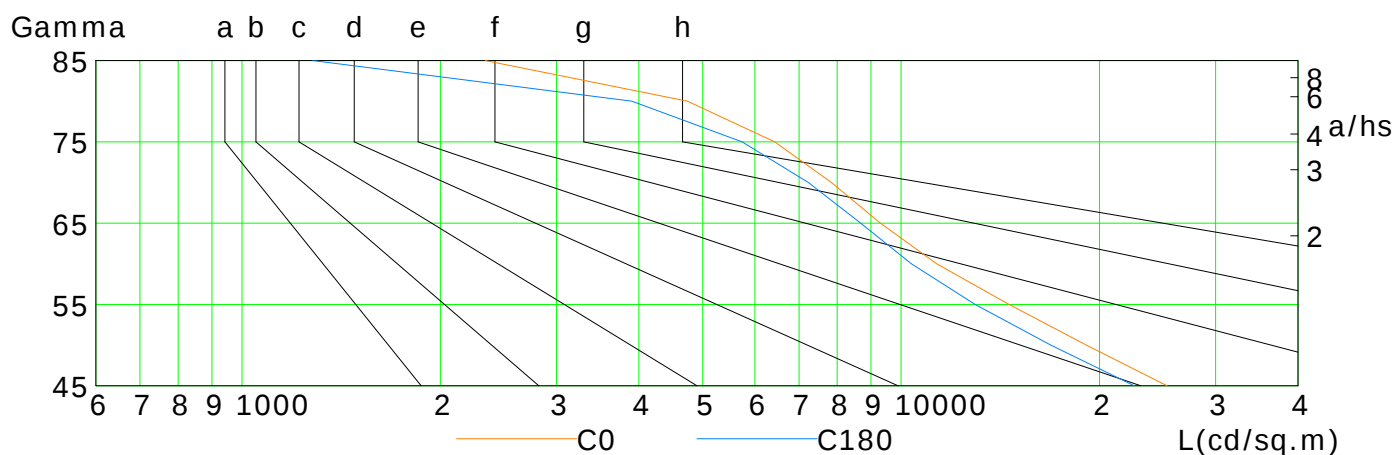
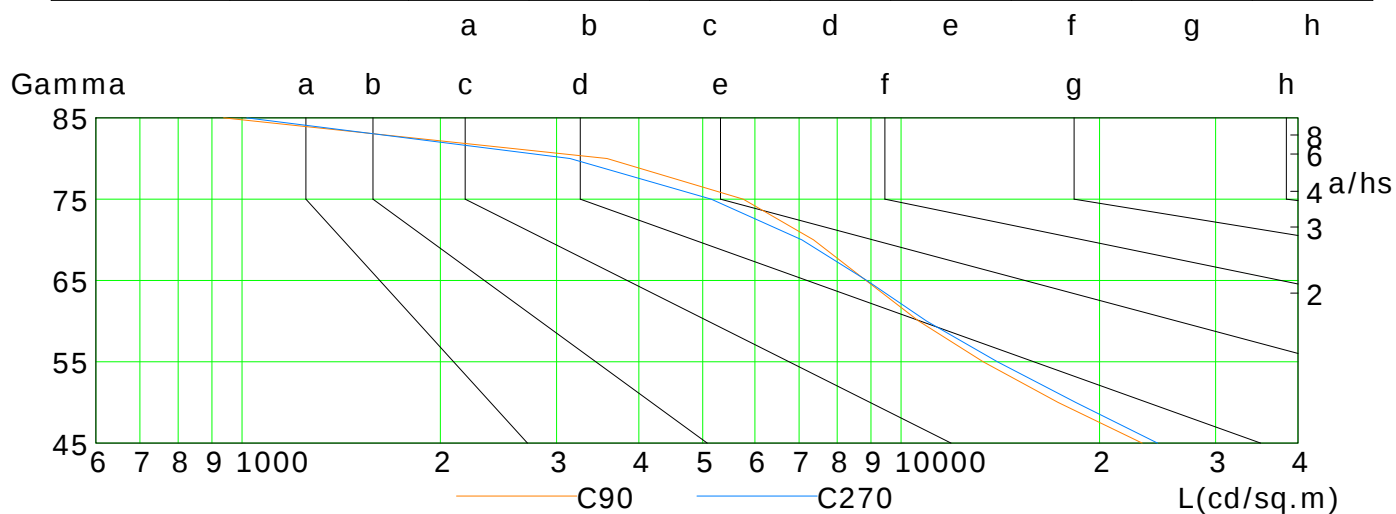
Gamma Plane (°):0.0-180.0:2.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

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	25324	19106	14579	11327	9303	7840	6430	4741	2340
C90	23203	17299	13321	10637	8843	7362	5761	3579	938
C180	22581	16871	12953	10370	8682	7232	5736	3904	1281
C270	24491	18405	14001	10934	8869	7066	5150	3145	1017

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

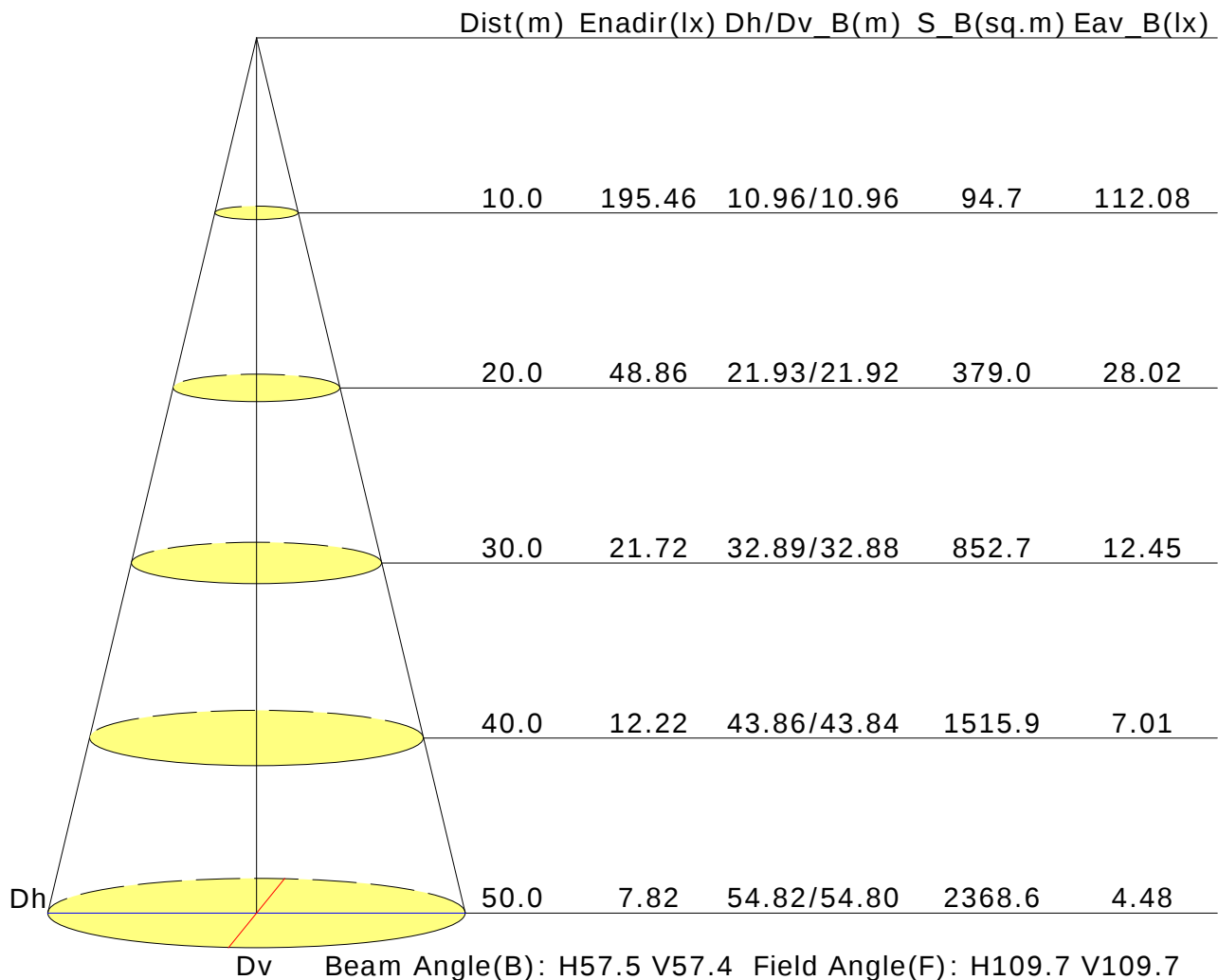
Test Device: LSG-1800B

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	20.5	21.6	20.8	21.8	22.1	20.3	21.4	20.6	21.6	21.9
3H	21.1	22.1	21.4	22.3	22.6	20.9	21.8	21.2	22.1	22.4
4H	21.4	22.3	21.7	22.6	22.8	21.1	22.0	21.4	22.3	22.6
6H	21.5	22.4	21.9	22.7	23.0	21.2	22.0	21.5	22.3	22.6
8H	21.6	22.4	21.9	22.7	23.0	21.2	22.0	21.5	22.3	22.6
12H	21.6	22.4	22.0	22.7	23.0	21.1	21.9	21.5	22.3	22.6
X=4H Y=2H	20.7	21.6	21.1	21.9	22.2	20.5	21.5	20.9	21.7	22.0
3H	21.5	22.2	21.8	22.6	22.9	21.2	22.0	21.6	22.4	22.7
4H	21.8	22.5	22.2	22.9	23.2	21.5	22.2	21.9	22.6	23.0
6H	22.1	22.7	22.5	23.1	23.5	21.7	22.3	22.1	22.7	23.1
8H	22.1	22.7	22.6	23.1	23.5	21.7	22.3	22.1	22.7	23.1
12H	22.2	22.7	22.6	23.1	23.5	21.7	22.2	22.1	22.6	23.1
X=8H Y=4H	21.9	22.4	22.3	22.8	23.3	21.6	22.2	22.1	22.6	23.0
6H	22.2	22.7	22.7	23.1	23.6	21.9	22.3	22.3	22.7	23.2
8H	22.3	22.7	22.8	23.2	23.7	21.9	22.3	22.4	22.8	23.2
12H	22.4	22.7	22.9	23.2	23.7	21.9	22.2	22.4	22.7	23.2
X=12H Y=4H	21.9	22.4	22.3	22.8	23.2	21.6	22.1	22.1	22.5	23.0
6H	22.2	22.6	22.7	23.1	23.6	21.9	22.3	22.3	22.7	23.2
8H	22.4	22.7	22.9	23.2	23.7	21.9	22.3	22.4	22.7	23.2
Variations with the observer position at spacings:										
S=1.0H	+0.6/-0.9					+0.7/-0.9				
S=1.5H	+1.6/-1.6					+1.7/-1.7				
S=2.0H	+2.8/-2.2					+2.9/-2.3				

Calculate in accordance with CIE Pub.117. The table is revised with 22734lm ($8\log(F/F_0) = 10.9$).

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Test Lab:

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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 = 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	0.70	0.79	0.85	0.89	0.95	0.99	1.02	1.05	1.07	
	0.30		0.63	0.72	0.79	0.84	0.90	0.95	0.98	1.02	1.05	
	0.20		0.59	0.68	0.74	0.79	0.86	0.91	0.94	0.99	1.02	
0.50	0.50	0.20	0.68	0.77	0.82	0.86	0.92	0.95	0.98	1.01	1.03	
	0.30		0.63	0.71	0.77	0.82	0.88	0.92	0.95	0.98	1.01	
	0.20		0.58	0.67	0.73	0.78	0.84	0.89	0.92	0.96	0.99	
0.30	0.50	0.20	0.67	0.75	0.80	0.84	0.89	0.92	0.95	0.97	0.99	
	0.30		0.62	0.70	0.76	0.80	0.86	0.89	0.92	0.95	0.97	
	0.20		0.58	0.66	0.72	0.77	0.83	0.87	0.90	0.93	0.96	
0.00	0.00	0.00	0.56	0.64	0.70	0.74	0.80	0.83	0.86	0.89	0.91	
Rating:220W 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	0.80	0.65	0.55	0.48	0.37	0.31	0.26	0.20	0.16	
	0.30		0.67	0.56	0.48	0.42	0.34	0.28	0.24	0.19	0.16	
	0.20		0.57	0.49	0.43	0.38	0.31	0.26	0.23	0.18	0.15	
0.50	0.50	0.20	0.77	0.62	0.52	0.45	0.35	0.33	0.25	0.19	0.15	
	0.30		0.65	0.54	0.46	0.40	0.32	0.27	0.23	0.18	0.15	
	0.20		0.57	0.48	0.41	0.37	0.30	0.25	0.22	0.17	0.14	
0.30	0.50	0.20	0.75	0.60	0.50	0.43	0.34	0.27	0.23	0.18	0.15	
	0.30		0.64	0.53	0.45	0.39	0.31	0.26	0.22	0.17	0.14	
	0.20		0.56	0.47	0.40	0.36	0.29	0.24	0.21	0.16	0.13	
0.00	0.00	0.00	0.44	0.36	0.30	0.26	0.21	0.17	0.14	0.11	0.09	
Rating:220W 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	0.15	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.22	
	0.30		0.10	0.11	0.13	0.14	0.16	0.17	0.18	0.19	0.20	
	0.20		0.06	0.07	0.09	0.10	0.12	0.14	0.15	0.17	0.18	
0.50	0.50	0.20	0.15	0.16	0.17	0.18	0.19	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		0.06	0.07	0.09	0.10	0.12	0.14	0.15	0.16	0.17	
0.30	0.50	0.20	0.14	0.15	0.16	0.17	0.18	0.18	0.19	0.19	0.20	
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.16	0.18	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rating:220W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												