

Report No.:

Test Time: 03.08.2020 14:20

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FD 111 160W 5000K 60 rp Ex

Number of Lamps: 1

Luminous Length (mm): 400 mm

Luminous Height (mm): 153 mm

Current: 0.742 A

Power Factor: 0.978

Lumens per Lamp: 16527.6 lm

Luminous Width (mm): 400 mm

Voltage: 221.3 V

Power: 160.52 W

Photometric Results

CIE Class: Direct

Measurement Flux: 16527.6 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): 103.01

Max. Intensity: 14261.13 cd

S/MH(C0/C180): 0.85

Total Rated Lamp Lumens: 16527.6 lm

Efficiency: 100.00%

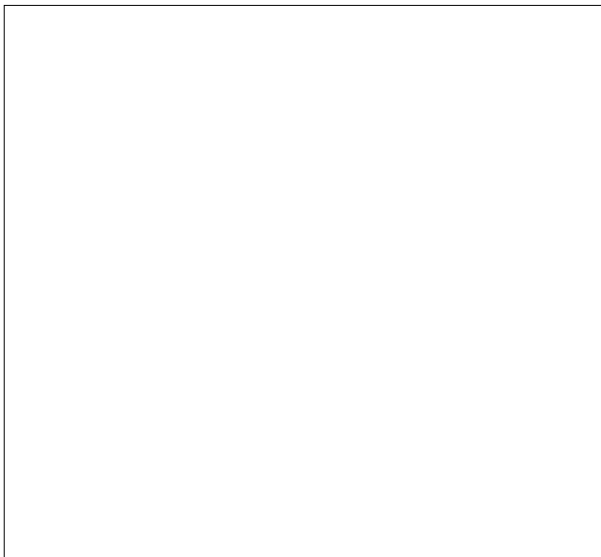
Upward Ratio: 0.37%

Central Intensity: 14209.89 cd

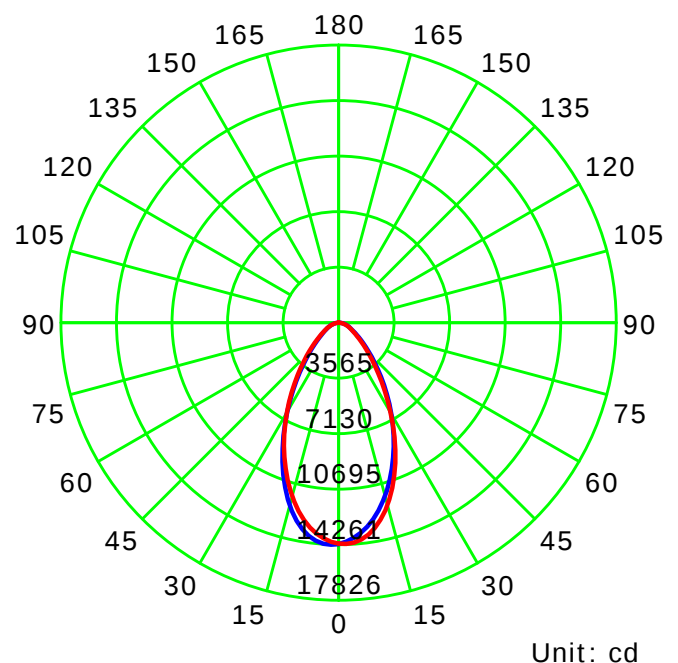
Pos of Max. Intensity: H180 V2

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

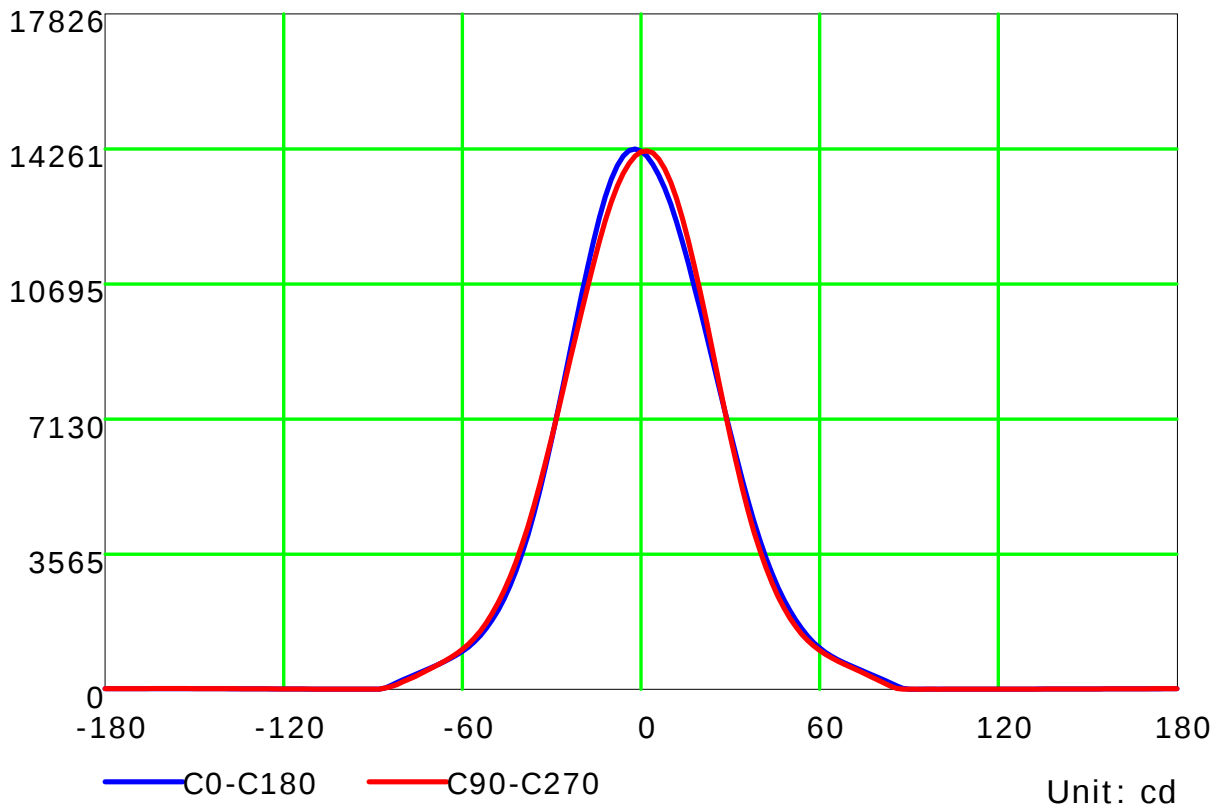
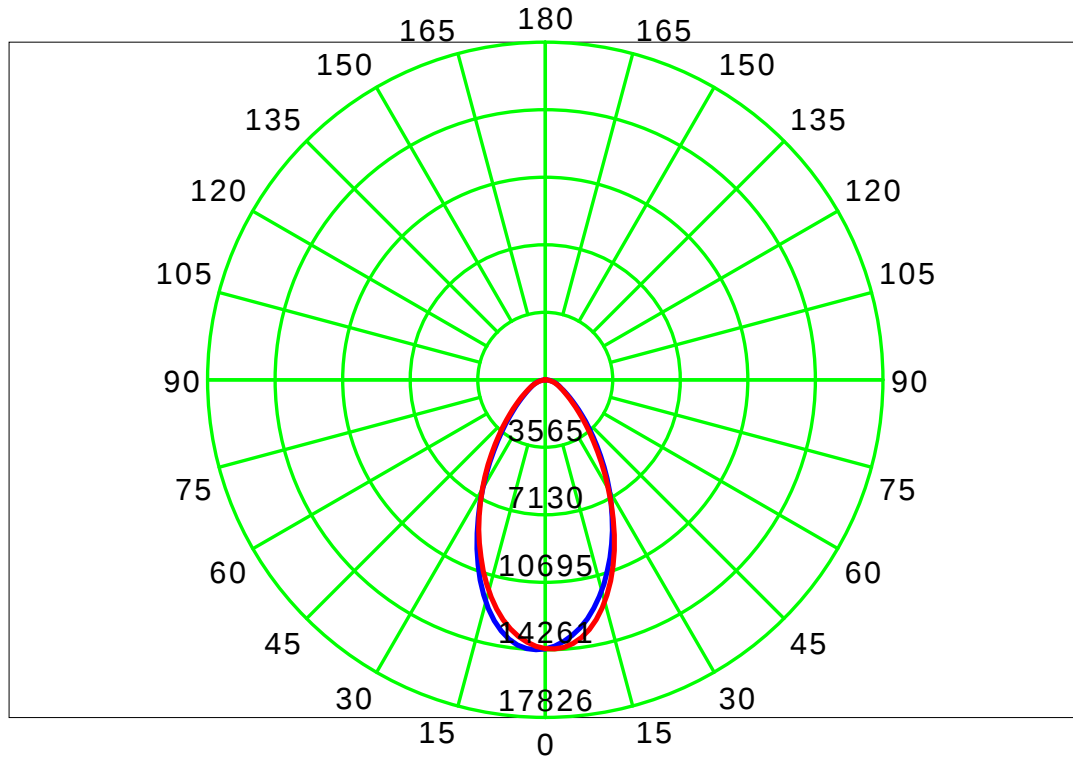
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

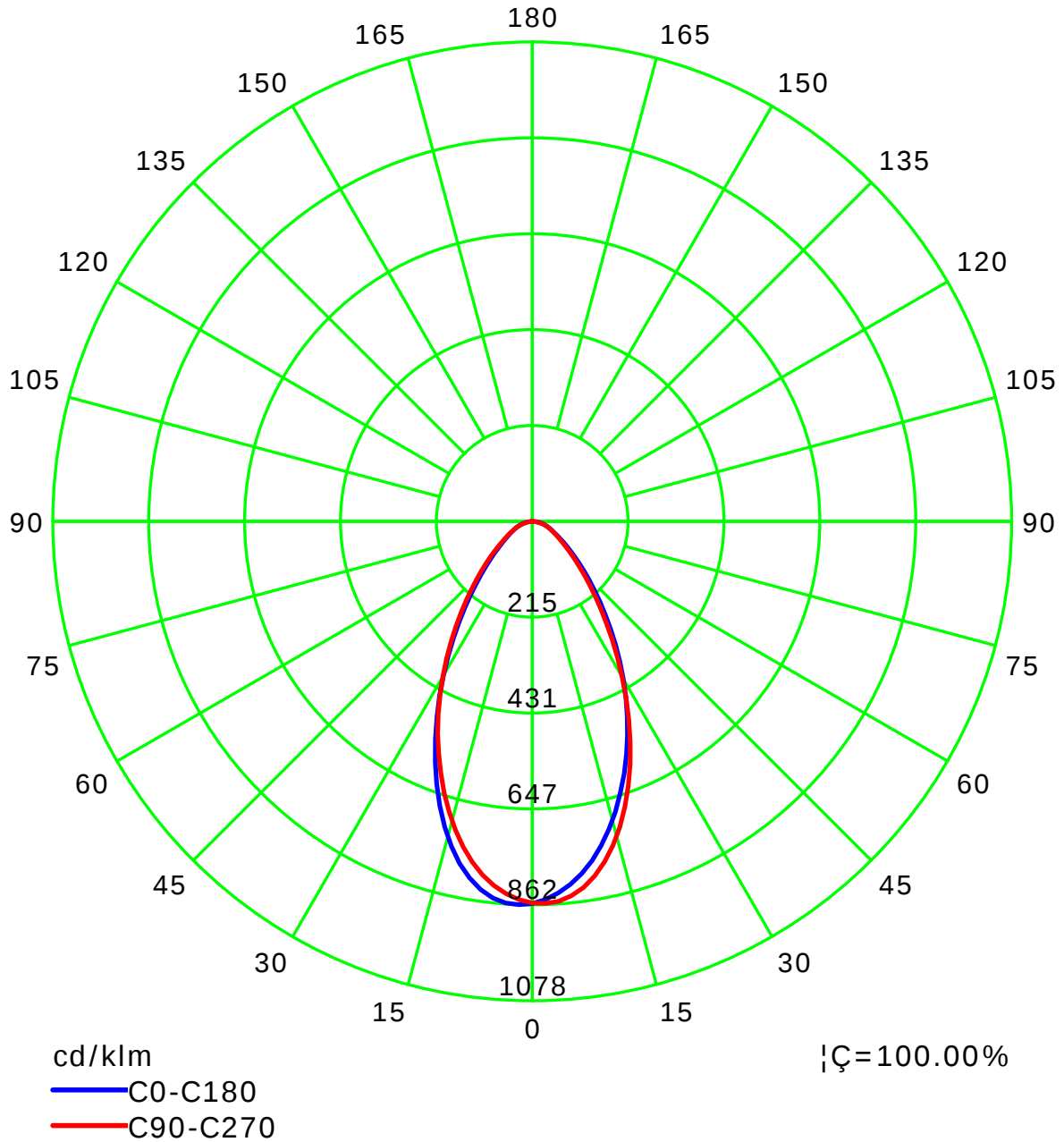
Luminous Intensity Distribution Curve



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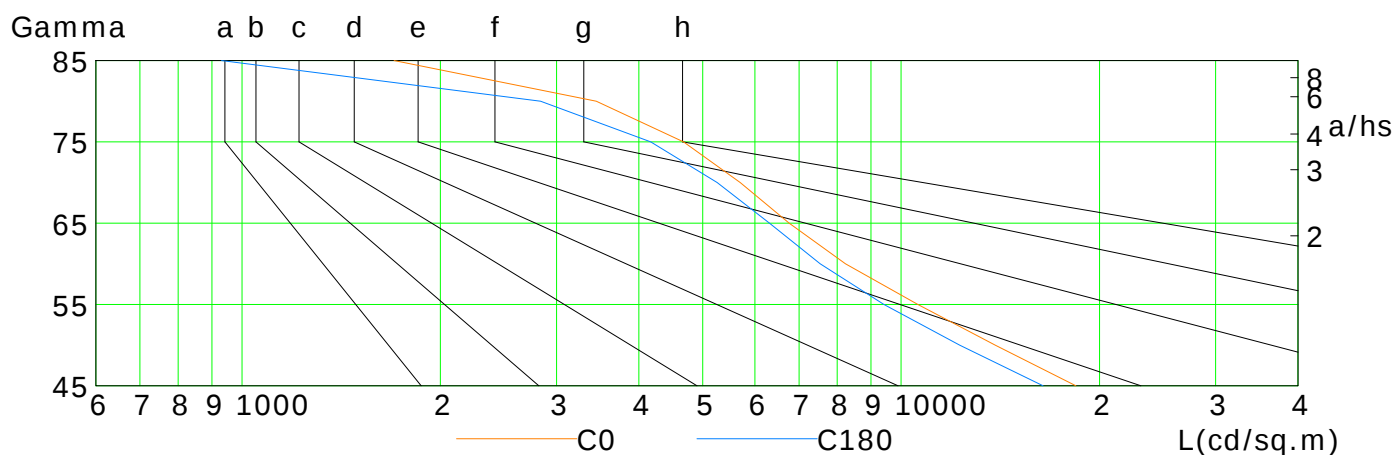
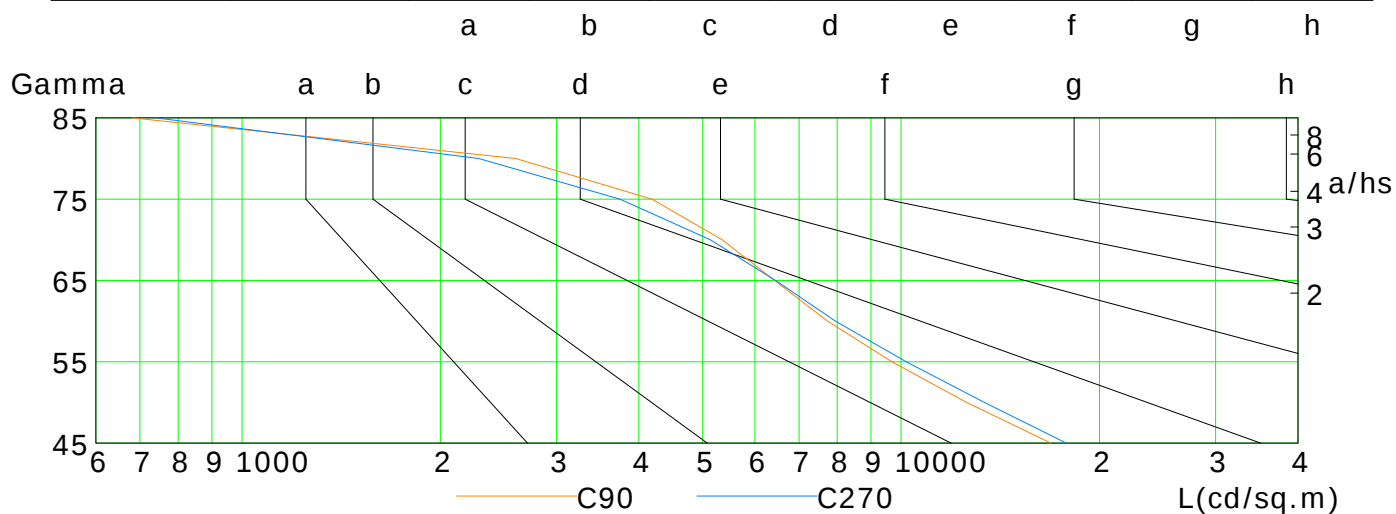
Gamma Plane (°):0.0-180.0:2.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

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	18411	13890	10599	8235	6763	5700	4675	3447	1701
C90	16869	12577	9685	7733	6429	5352	4188	2602	682
C180	16416	12265	9417	7539	6312	5258	4170	2838	931
C270	17805	13380	10178	7949	6447	5137	3744	2286	739

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

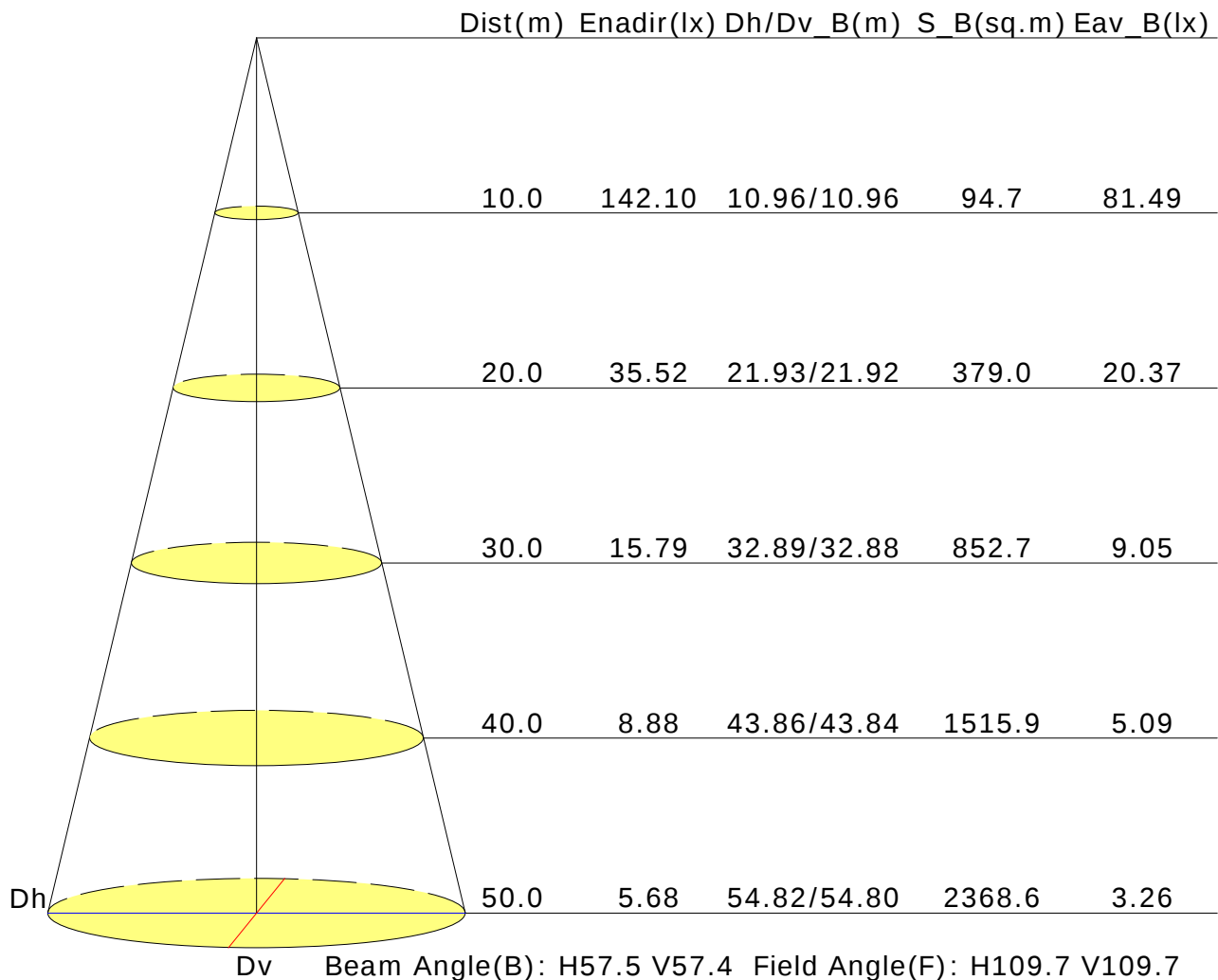
Test Device: LSG-1800B

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	19.4	20.5	19.7	20.7	21.0	19.2	20.3	19.5	20.5	20.8
3H	20.0	21.0	20.3	21.2	21.5	19.8	20.7	20.1	21.0	21.3
4H	20.3	21.2	20.6	21.5	21.7	20.0	20.9	20.3	21.2	21.4
6H	20.4	21.3	20.8	21.6	21.9	20.1	20.9	20.4	21.2	21.5
8H	20.5	21.3	20.8	21.6	21.9	20.1	20.9	20.4	21.2	21.5
12H	20.5	21.3	20.8	21.6	21.9	20.0	20.8	20.4	21.1	21.5
X=4H Y=2H	19.6	20.5	20.0	20.8	21.1	19.4	20.3	19.8	20.6	20.9
3H	20.3	21.1	20.7	21.5	21.8	20.1	20.9	20.5	21.2	21.6
4H	20.7	21.4	21.1	21.7	22.1	20.4	21.1	20.8	21.5	21.9
6H	21.0	21.6	21.4	22.0	22.4	20.6	21.2	21.0	21.6	22.0
8H	21.0	21.6	21.5	22.0	22.4	20.6	21.2	21.0	21.6	22.0
12H	21.1	21.6	21.5	22.0	22.4	20.6	21.1	21.0	21.5	22.0
X=8H Y=4H	20.8	21.3	21.2	21.7	22.2	20.5	21.1	20.9	21.5	21.9
6H	21.1	21.6	21.6	22.0	22.5	20.7	21.2	21.2	21.6	22.1
8H	21.2	21.6	21.7	22.1	22.6	20.8	21.2	21.3	21.6	22.1
12H	21.3	21.6	21.8	22.1	22.6	20.8	21.1	21.3	21.6	22.1
X=12H Y=4H	20.7	21.3	21.2	21.7	22.1	20.5	21.0	21.0	21.4	21.9
6H	21.1	21.5	21.6	22.0	22.5	20.8	21.2	21.2	21.6	22.1
8H	21.2	21.6	21.7	22.1	22.6	20.8	21.2	21.3	21.6	22.1
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 16528lm ($8\log(F/F_0) = 9.7$).

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Temperature:

Operator:

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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:161W 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:161W 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:161W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												