

Report No.:

Test Time: 03.08.2020 16:03

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FD 111 160W 5000K 90 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: 17051.1 lm

Luminous Width (mm): 400 mm

Voltage: 221.3 V

Power: 160.62 W

Photometric Results

CIE Class: Direct

Measurement Flux: 17051.1 lm

Downward Ratio: 99.64%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 129.3, 128.2, 127.9, 126.9

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 82.3, 82.6, 83.1, 82.0

Luminaire Efficacy Rating (LER): 106.21

Max. Intensity: 9342.17 cd

S/MH(C0/C180): 1.43

Total Rated Lamp Lumens: 17051.1 lm

Efficiency: 100.00%

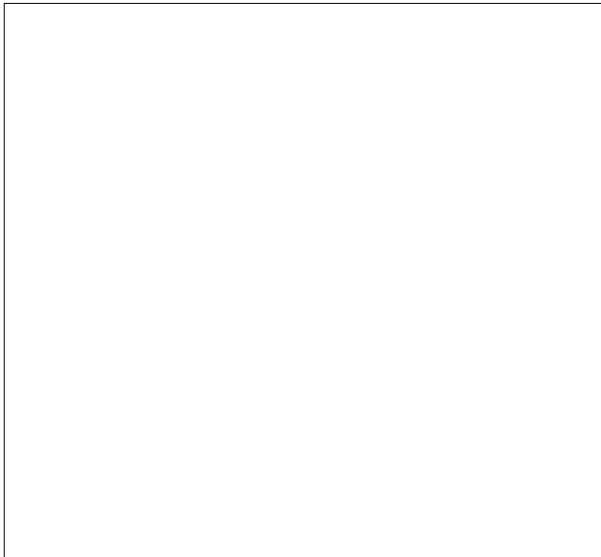
Upward Ratio: 0.36%

Central Intensity: 7815.74 cd

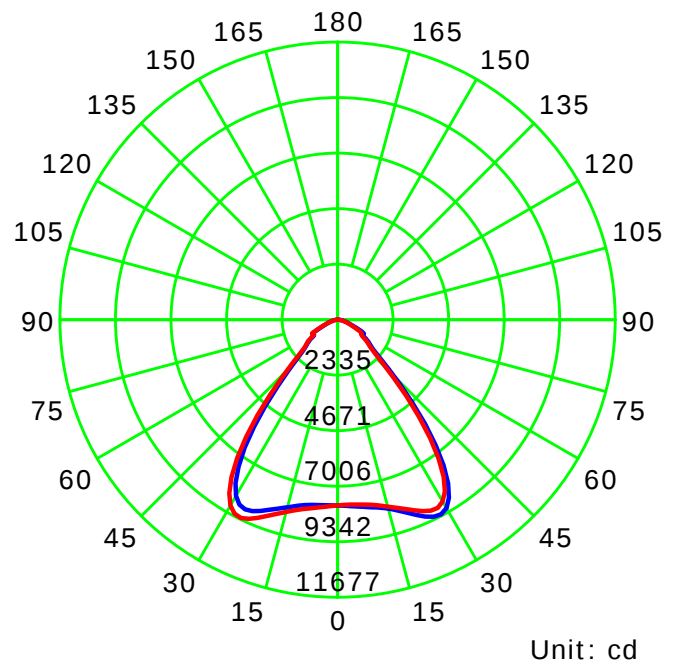
Pos of Max. Intensity: H337.5 V28

S/MH(C90/C270): 1.44

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

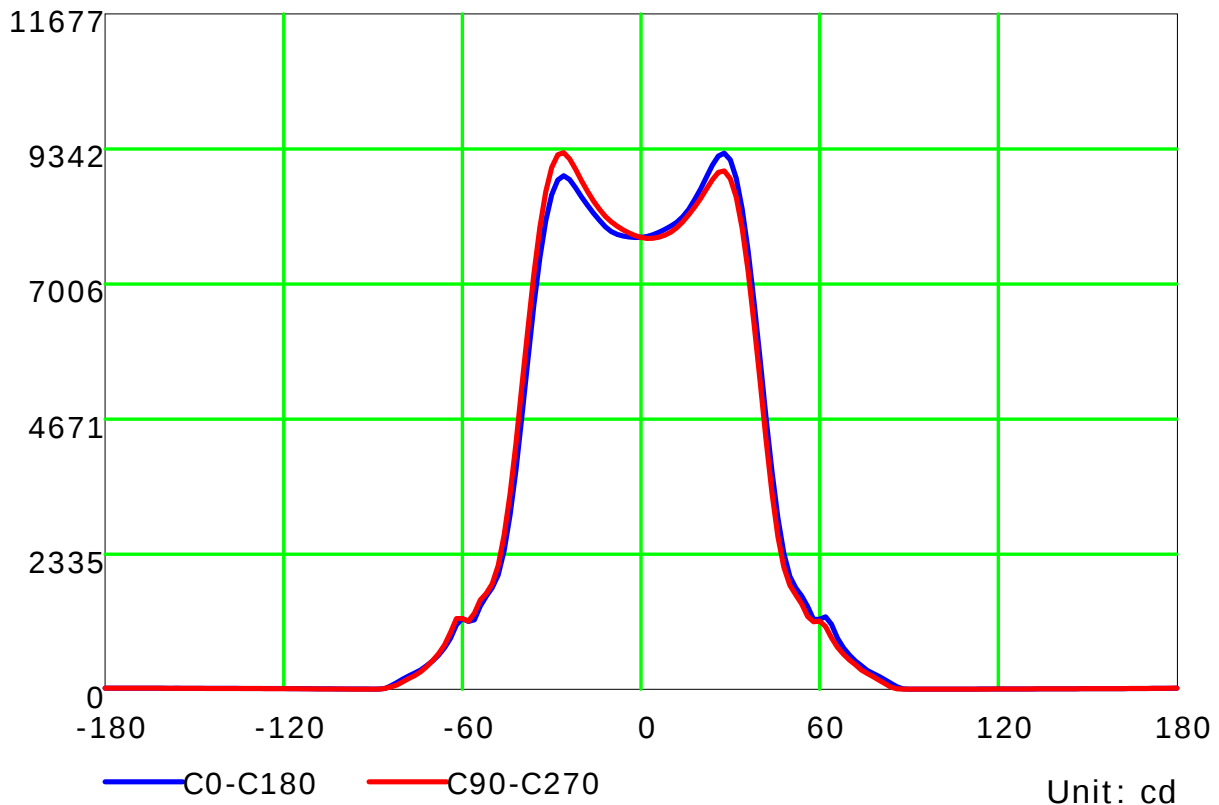
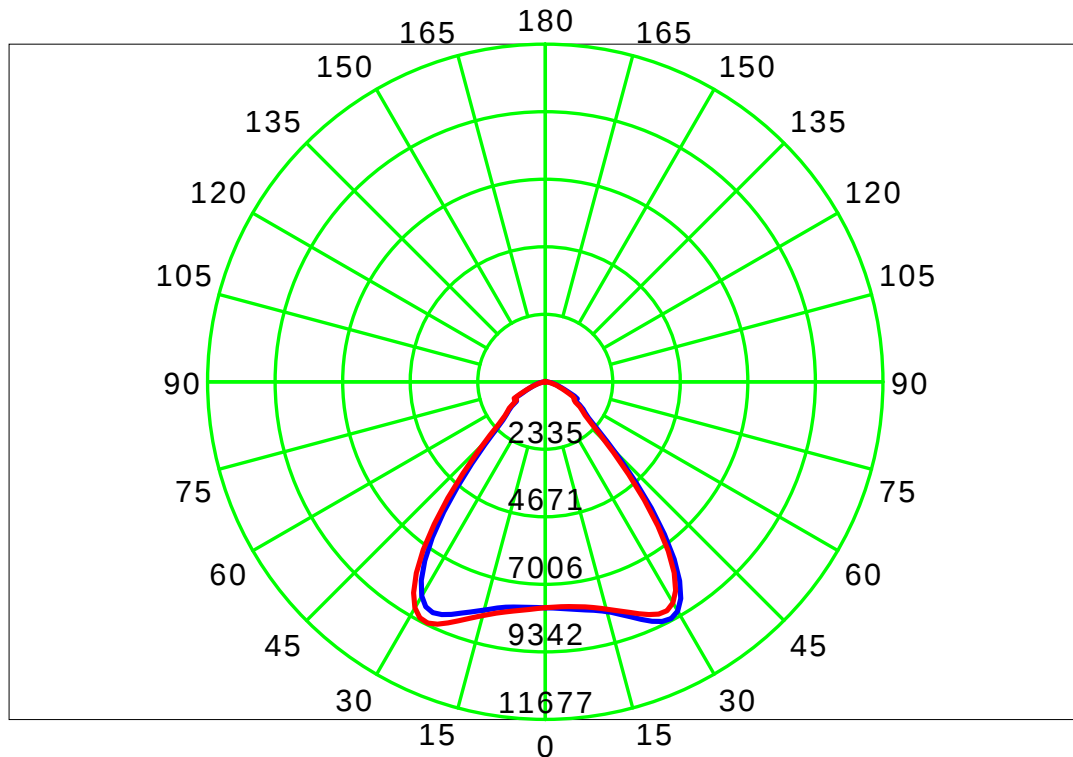
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

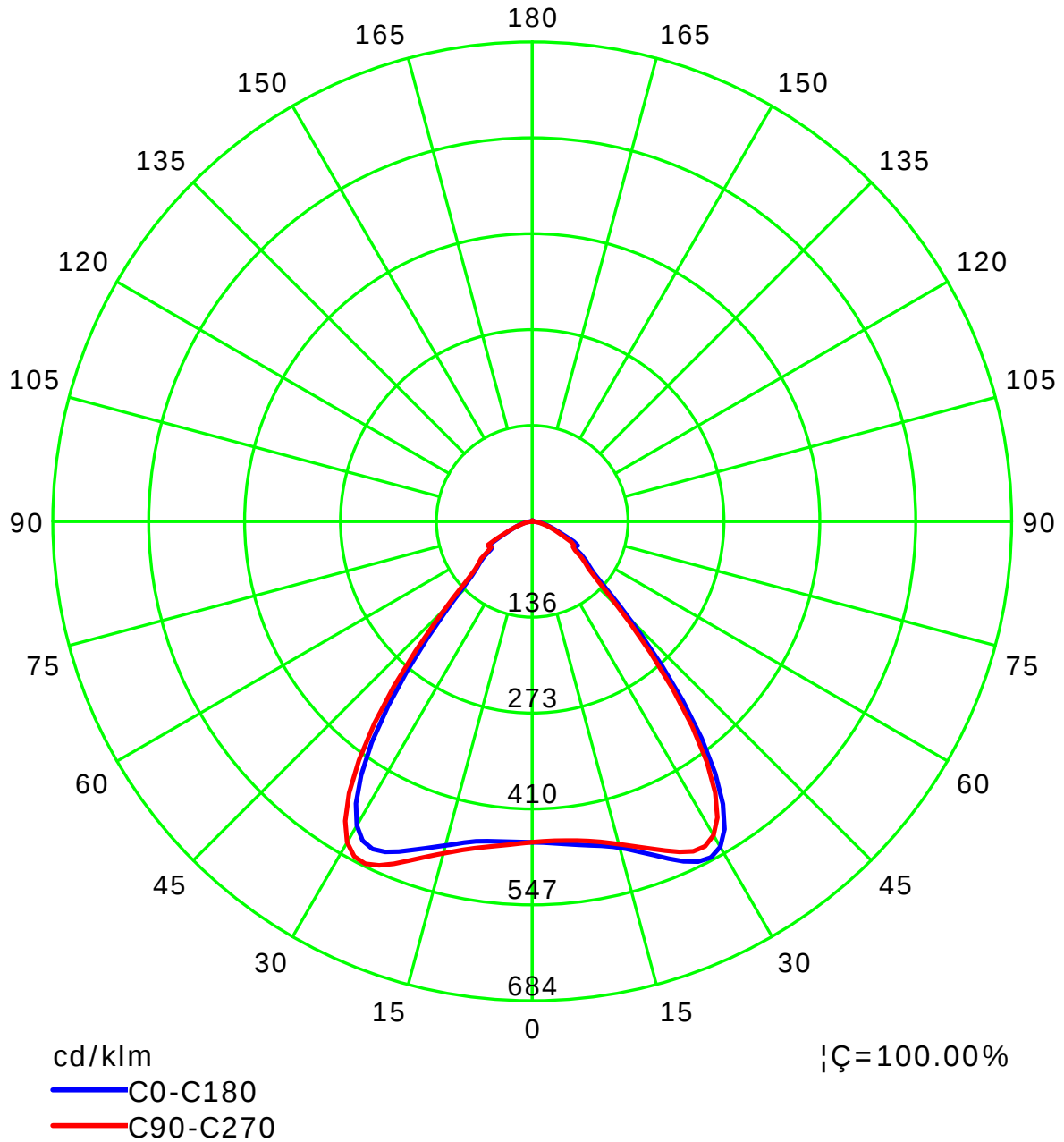
Luminous Intensity Distribution Curve



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Test Lab:
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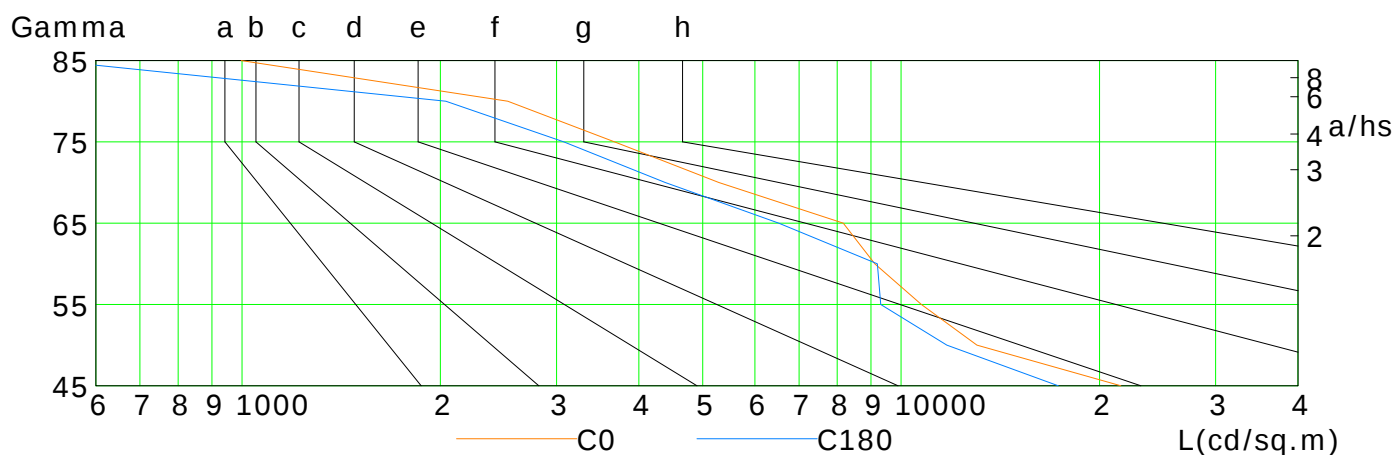
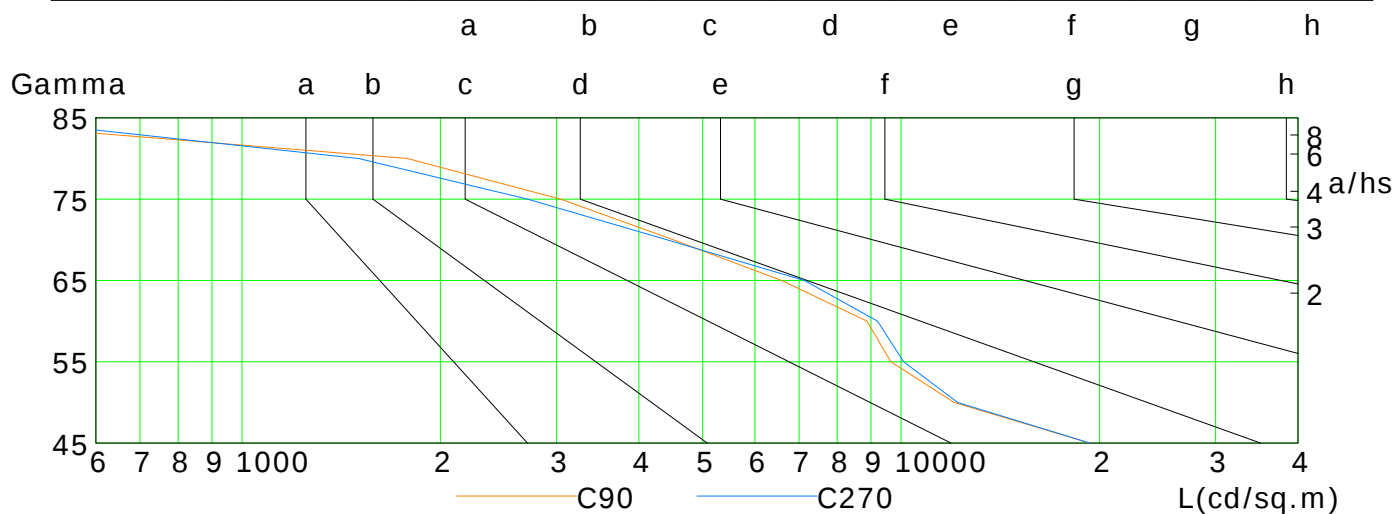
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Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

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	21546	13032	10731	9120	8170	5292	3673	2530	997
C90	19314	12027	9645	8874	6586	4513	3045	1783	310
C180	17317	11732	9312	9203	6523	4388	3077	2038	514
C270	19341	12179	10085	9209	7130	4414	2712	1503	407

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Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:2.0

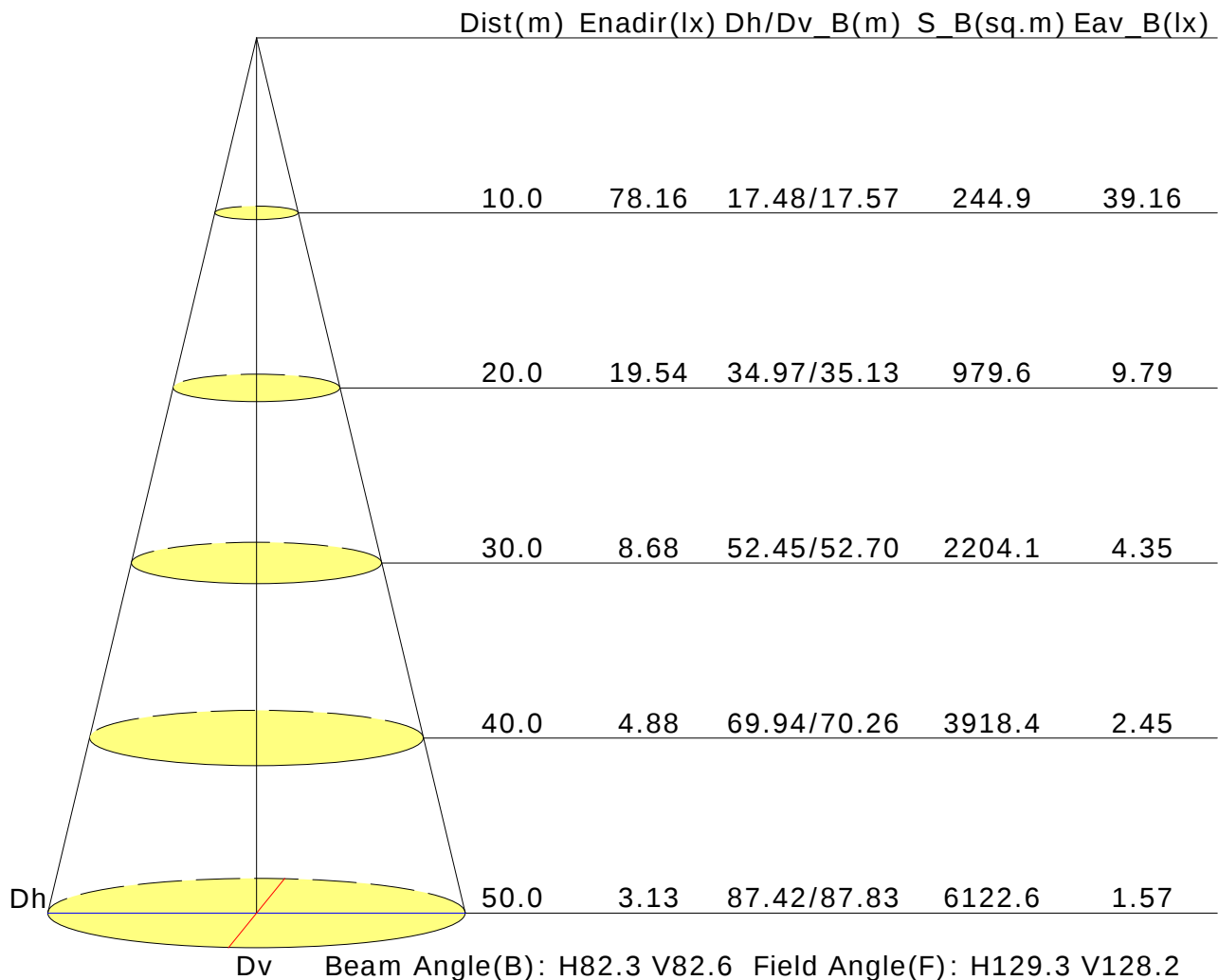
Test Device: LSG-1800B

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	20.4	21.6	20.7	21.8	22.0	20.1	21.3	20.4	21.5	21.8
3H	20.9	21.9	21.2	22.2	22.5	20.6	21.6	20.9	21.9	22.1
4H	21.1	22.0	21.4	22.3	22.6	20.7	21.6	21.0	21.9	22.2
6H	21.1	22.0	21.5	22.3	22.7	20.7	21.6	21.0	21.9	22.2
8H	21.1	22.0	21.5	22.3	22.6	20.7	21.5	21.0	21.8	22.2
12H	21.1	21.9	21.5	22.3	22.6	20.6	21.5	21.0	21.8	22.1
X=4H Y=2H	20.5	21.5	20.9	21.8	22.1	20.3	21.2	20.6	21.5	21.8
3H	21.2	22.0	21.6	22.4	22.7	20.9	21.7	21.3	22.1	22.4
4H	21.5	22.2	21.9	22.6	23.0	21.1	21.9	21.5	22.2	22.6
6H	21.7	22.3	22.1	22.7	23.1	21.2	21.9	21.7	22.3	22.7
8H	21.7	22.3	22.2	22.7	23.2	21.2	21.8	21.7	22.2	22.7
12H	21.7	22.3	22.2	22.7	23.1	21.2	21.7	21.7	22.2	22.6
X=8H Y=4H	21.6	22.2	22.1	22.6	23.1	21.3	21.9	21.7	22.3	22.7
6H	21.9	22.4	22.4	22.8	23.3	21.5	22.0	22.0	22.4	22.9
8H	22.0	22.4	22.5	22.9	23.4	21.5	21.9	22.0	22.4	22.9
12H	22.0	22.4	22.5	22.9	23.4	21.5	21.9	22.0	22.3	22.8
X=12H Y=4H	21.6	22.2	22.1	22.6	23.0	21.3	21.8	21.7	22.2	22.7
6H	21.9	22.4	22.4	22.8	23.3	21.5	21.9	22.0	22.4	22.9
8H	22.0	22.4	22.5	22.9	23.4	21.5	21.9	22.0	22.4	22.9
Variations with the observer position at spacings:										
S=1.0H	+1.1/-1.3					+1.2/-1.4				
S=1.5H	+2.7/-1.7					+2.8/-1.7				
S=2.0H	+4.1/-2.3					+4.3/-2.5				

Calculate in accordance with CIE Pub.117. The table is revised with 17051lm ($8\log(F/F_0) = 9.9$).

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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 = 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	0.73	0.81	0.87	0.91	0.96	1.00	1.02	1.05	1.07	
	0.30		0.67	0.75	0.81	0.86	0.92	0.96	0.99	1.02	1.05	
	0.20		0.62	0.71	0.77	0.82	0.88	0.92	0.95	1.00	1.03	
0.50	0.50	0.20	0.71	0.79	0.84	0.88	0.93	0.96	0.99	1.02	1.03	
	0.30		0.66	0.74	0.80	0.84	0.89	0.93	0.96	0.99	1.01	
	0.20		0.62	0.70	0.76	0.80	0.86	0.90	0.93	0.97	0.99	
0.30	0.50	0.20	0.70	0.77	0.82	0.86	0.90	0.93	0.95	0.98	0.99	
	0.30		0.65	0.73	0.78	0.82	0.87	0.91	0.93	0.96	0.98	
	0.20		0.62	0.70	0.75	0.79	0.85	0.88	0.91	0.94	0.96	
0.00	0.00	0.00	0.60	0.67	0.73	0.76	0.81	0.85	0.87	0.90	0.92	
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 = 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	0.75	0.61	0.51	0.44	0.35	0.29	0.25	0.19	0.16	
	0.30		0.63	0.52	0.45	0.39	0.32	0.27	0.23	0.18	0.15	
	0.20		0.54	0.46	0.40	0.35	0.29	0.25	0.21	0.17	0.14	
0.50	0.50	0.20	0.72	0.58	0.49	0.42	0.33	0.31	0.23	0.18	0.14	
	0.30		0.61	0.50	0.43	0.38	0.30	0.25	0.22	0.17	0.14	
	0.20		0.53	0.45	0.39	0.34	0.28	0.23	0.20	0.16	0.13	
0.30	0.50	0.20	0.70	0.55	0.46	0.40	0.31	0.26	0.22	0.17	0.14	
	0.30		0.59	0.49	0.41	0.36	0.29	0.24	0.20	0.16	0.13	
	0.20		0.52	0.44	0.38	0.33	0.27	0.22	0.19	0.15	0.13	
0.00	0.00	0.00	0.40	0.32	0.27	0.23	0.19	0.15	0.13	0.10	0.08	
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 = 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	0.15	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.22	
	0.30		0.09	0.11	0.13	0.14	0.15	0.17	0.18	0.19	0.20	
	0.20		0.06	0.08	0.09	0.11	0.13	0.14	0.15	0.17	0.18	
0.50	0.50	0.20	0.14	0.15	0.16	0.17	0.18	0.19	0.19	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	0.16	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												