Lisun Electronics Inc.
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Report No.: 1 Test Time: 31.01.2020 15:45

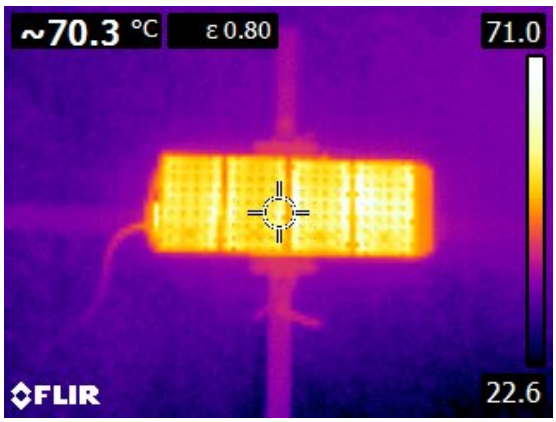
Luminaire Property

Luminaire Manufacturer:
Luminaire Description: FP 150 150W 5000K 90x90gr. NEMA
Luminous Length (mm): 404 Luminous Width (mm): 153
Luminous Height (mm): 80 Voltage: 221.4 V
Current: 0.699 A Power: 151.50 W
Power Factor: 0.977

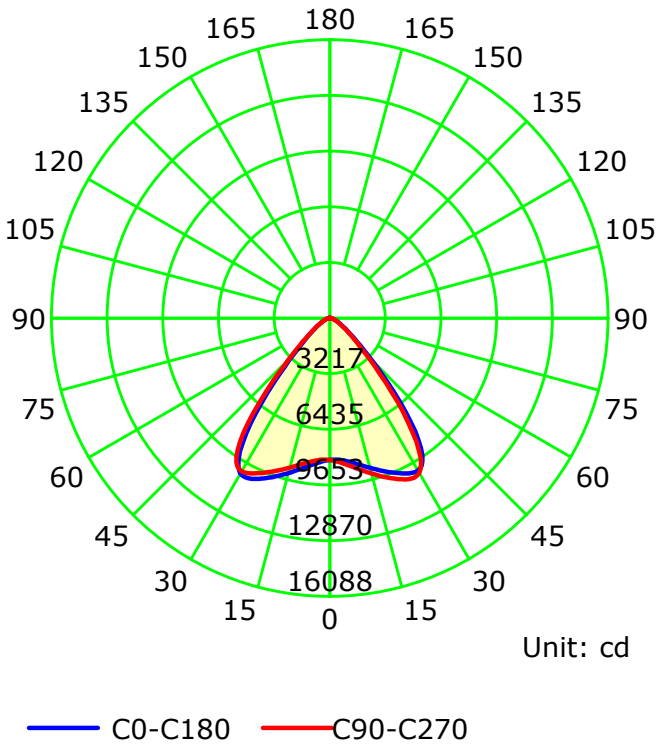
Photometric Results

CIE Class: Direct Total Rated Lamp Lumens: 20887.9 lm
Measurement Flux: 20887.9 lm Efficiency: 100%
Downward Ratio: 99% Upward Ratio: 1%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 111.5, 111.1, 120.6, 120.1
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 82.2, 82.1, 90.7, 90.2
Luminaire Efficacy Rating (LER): 137.92 Central Intensity: 8193.54 cd
Max. Intensity: 12870.72 cd Pos of Max. Intensity: H135 V33
S/MH(C0/C180): 1.50 S/MH(C90/C270): 1.50

Termogramma



Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 22.5 Gamma Plane (°):0.0-180.0:1.0
Test Lab: Test Device: LSG-1800B
Test Type: TYPE C Distance: 12.677 m
Temperature: Humidity:
Operator: Inspector:

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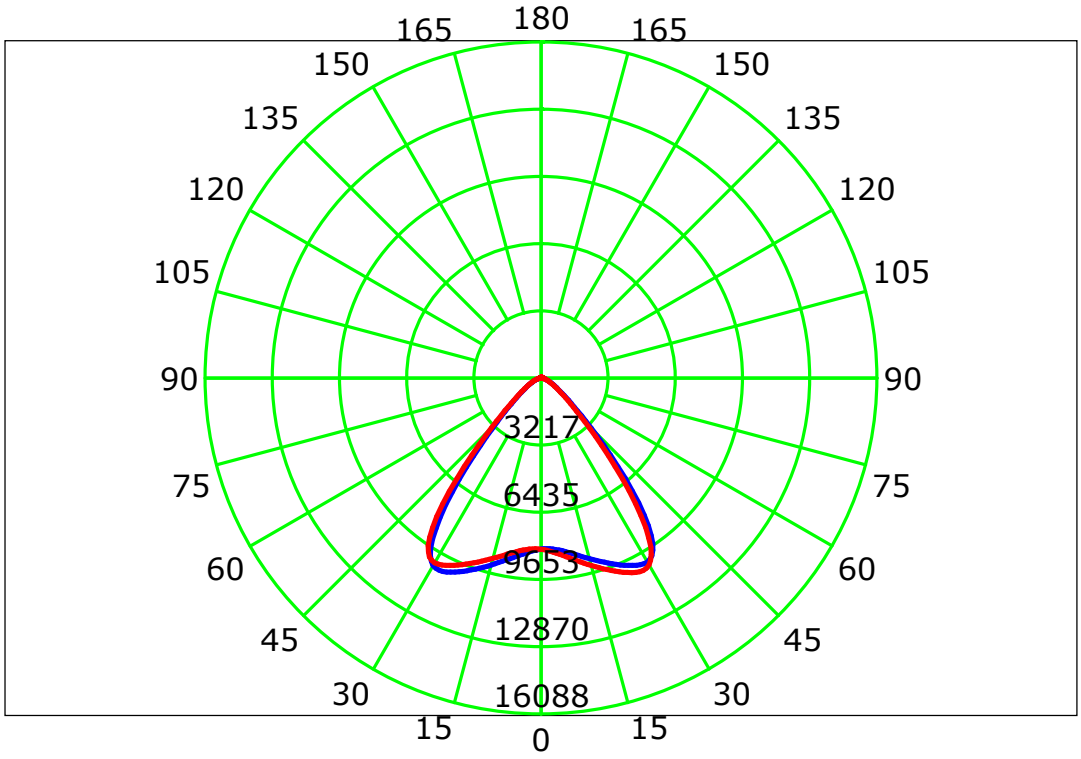
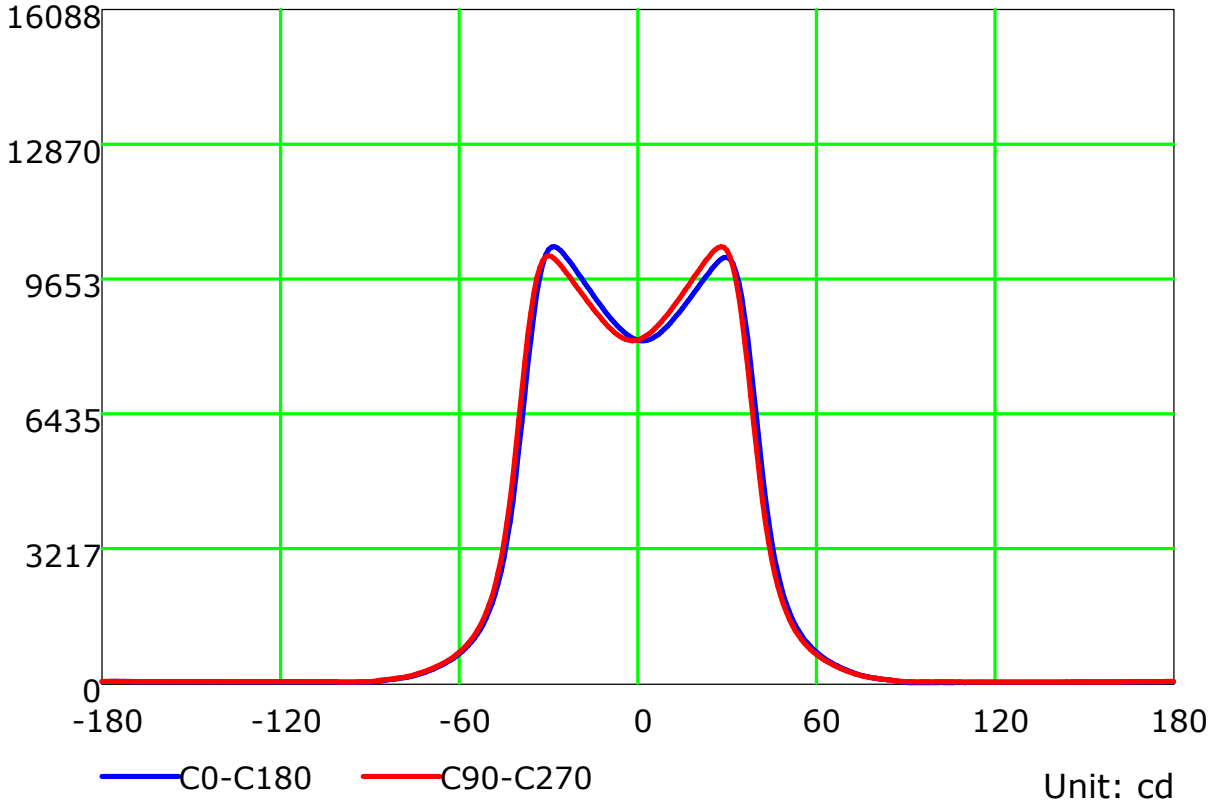
Luminous Intensity Distribution Curve

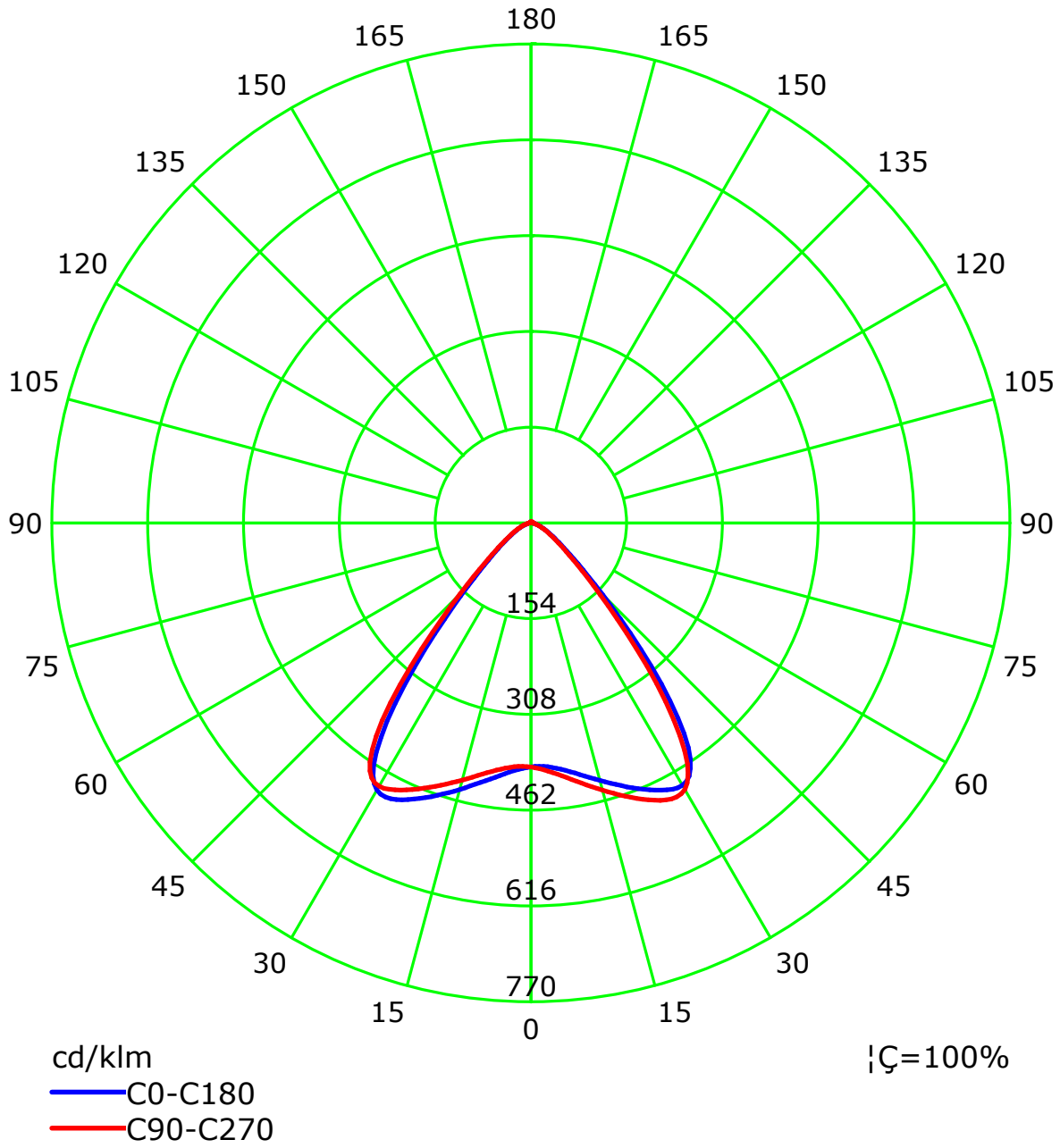




C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
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Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
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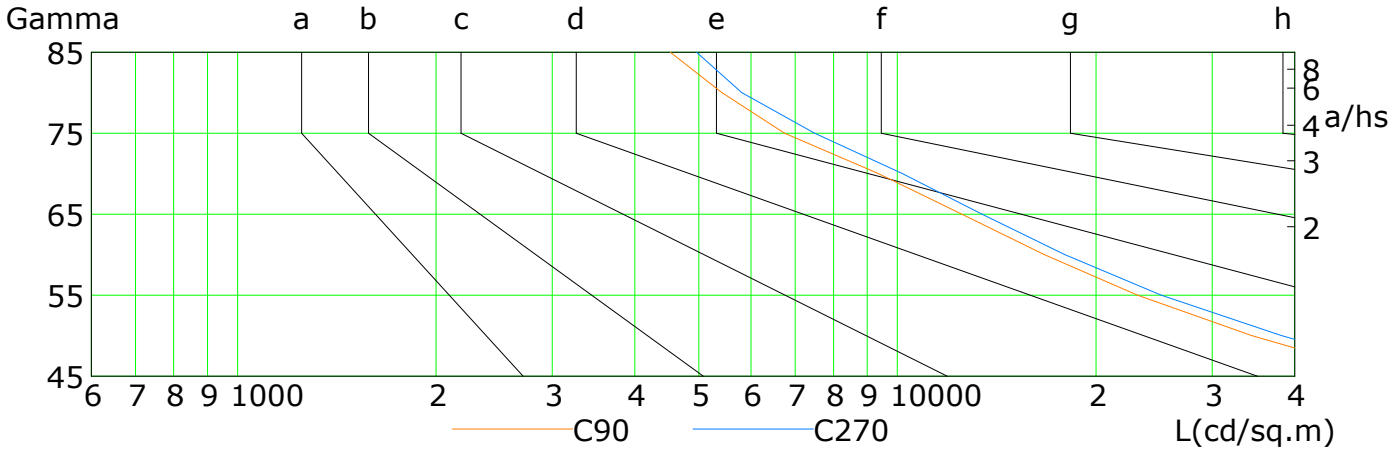
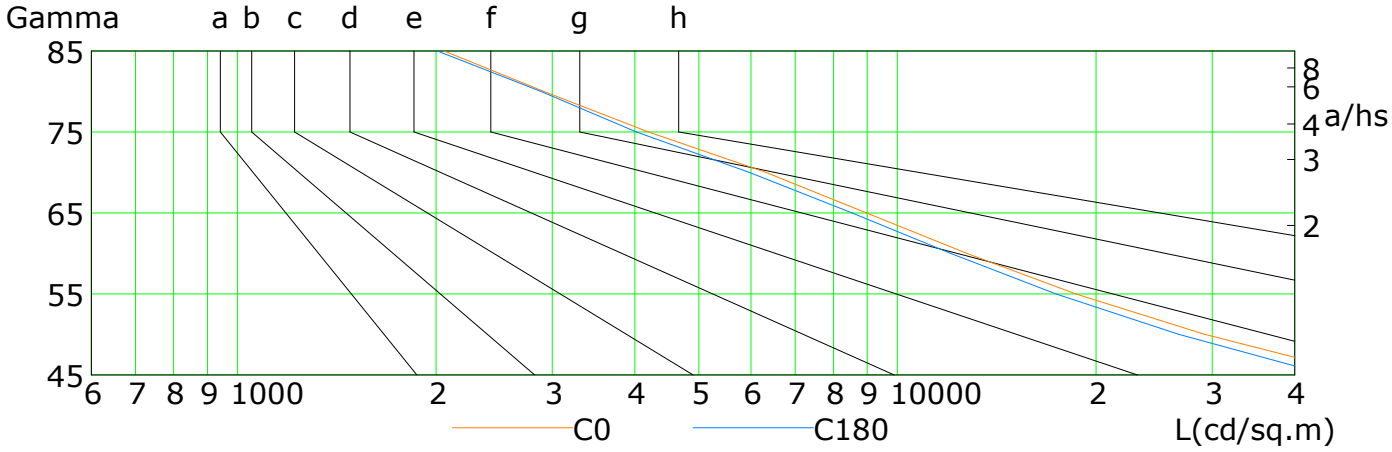
Lum Limit Curve

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	51297	29221	18644	12733	8984	6318	4195	2909	2055
C90	56785	34418	23119	16682	12530	9356	6749	5420	4527
C180	45092	26680	17397	12032	8538	5957	4020	2881	2008
C270	64508	38188	25115	17932	13441	10177	7491	5808	4963

C Plane (°):0.0-360.0: 22.5
Test Lab:
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Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
Distance: 12.677 m
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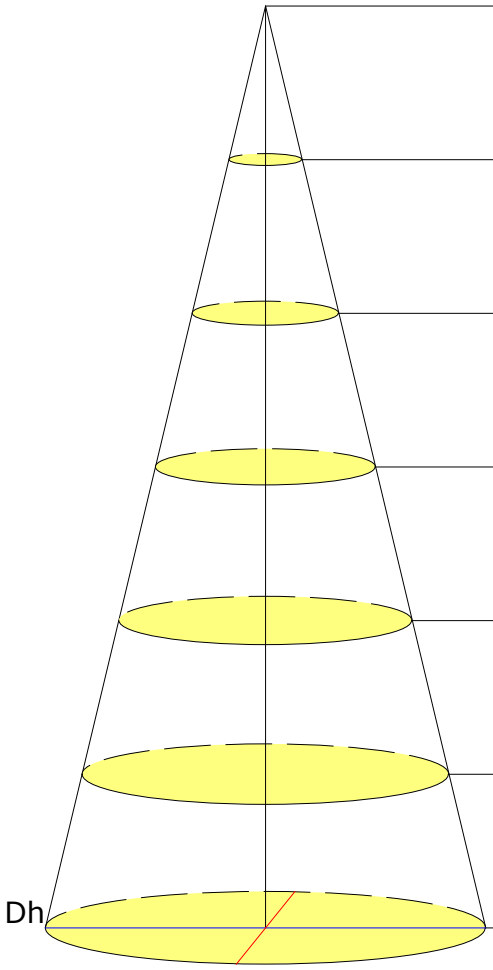
Illuminance at a Distance



Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
5.0	327.74	8.73/8.71	68.9	115.52
10.0	81.94	17.46/17.42	275.7	28.88
15.0	36.42	26.18/26.13	620.3	12.84
20.0	20.48	34.91/34.84	1102.8	7.22
25.0	13.11	43.64/43.54	1723.2	4.62
30.0	9.10	52.37/52.25	2481.4	3.21

Beam Angle(B): H82.2 V82.1 Field Angle(F): H111.5 V111.1

C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

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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	24.5	25.6	24.8	25.8	26.1	24.7	25.8	25.0	26.0	26.3
3H	24.4	25.4	24.8	25.7	26.0	24.6	25.6	25.0	25.9	26.2
4H	24.4	25.3	24.7	25.6	25.9	24.6	25.6	25.0	25.8	26.1
6H	24.3	25.2	24.7	25.5	25.9	24.6	25.4	24.9	25.8	26.1
8H	24.3	25.1	24.7	25.5	25.8	24.6	25.4	24.9	25.7	26.0
12H	24.3	25.1	24.7	25.4	25.8	24.5	25.3	24.9	25.7	26.0
X=4H Y=2H	24.5	25.4	24.8	25.7	26.0	24.6	25.6	25.0	25.9	26.2
3H	24.5	25.3	24.9	25.6	26.0	24.7	25.5	25.1	25.8	26.2
4H	24.5	25.2	24.9	25.5	25.9	24.7	25.4	25.1	25.7	26.1
6H	24.4	25.1	24.9	25.4	25.9	24.7	25.3	25.1	25.7	26.1
8H	24.4	25.0	24.9	25.4	25.8	24.7	25.2	25.1	25.6	26.1
12H	24.4	24.9	24.8	25.3	25.8	24.6	25.1	25.1	25.6	26.0
X=8H Y=4H	24.4	25.0	24.9	25.4	25.8	24.6	25.2	25.1	25.6	26.0
6H	24.4	24.9	24.9	25.3	25.8	24.6	25.1	25.1	25.5	26.0
8H	24.4	24.8	24.9	25.3	25.8	24.6	25.0	25.1	25.5	26.0
12H	24.4	24.7	24.9	25.2	25.7	24.6	25.0	25.1	25.5	26.0
X=12H Y=4H	24.4	24.9	24.8	25.3	25.8	24.6	25.1	25.1	25.5	26.0
6H	24.4	24.8	24.9	25.2	25.7	24.6	25.0	25.1	25.5	26.0
8H	24.4	24.7	24.9	25.2	25.7	24.6	25.0	25.1	25.4	26.0
Variations with the observer position at spacings:										
S=1.0H	+3.0/-4.0					+2.7/-3.7				
S=1.5H	+3.8/-5.7					+3.6/-5.3				
S=2.0H	+5.6/-6.9					+5.3/-6.5				

Calculate in accordance with CIE Pub.117. The table is revised with 20888lm (8log(F/F0) = 10.6).

C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

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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	0.82	0.88	0.92	0.97	1.00	1.03	1.06	1.08
	0.30		0.67	0.76	0.82	0.87	0.93	0.97	0.99	1.03	1.05
	0.20		0.62	0.72	0.78	0.83	0.89	0.93	0.96	1.01	1.03
0.50	0.50	0.20	0.71	0.80	0.85	0.89	0.94	0.97	0.99	1.02	1.04
	0.30		0.66	0.75	0.81	0.85	0.90	0.94	0.96	1.00	1.02
	0.20		0.62	0.71	0.77	0.81	0.87	0.91	0.94	0.98	1.00
0.30	0.50	0.20	0.70	0.78	0.83	0.86	0.91	0.94	0.96	0.98	1.00
	0.30		0.65	0.74	0.79	0.83	0.88	0.91	0.93	0.96	0.98
	0.20		0.61	0.70	0.76	0.80	0.86	0.89	0.91	0.95	0.97
0.00	0.00	0.00	0.60	0.68	0.74	0.77	0.82	0.85	0.87	0.90	0.92

Rating:152W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

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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	0.60	0.50	0.43	0.34	0.28	0.23	0.18	0.15
	0.30		0.63	0.51	0.43	0.38	0.30	0.25	0.22	0.17	0.14
	0.20		0.54	0.45	0.38	0.34	0.28	0.23	0.20	0.16	0.13
0.50	0.50	0.20	0.72	0.57	0.47	0.40	0.31	0.30	0.22	0.17	0.14
	0.30		0.61	0.49	0.42	0.36	0.29	0.24	0.20	0.16	0.13
	0.20		0.53	0.44	0.37	0.33	0.26	0.22	0.19	0.15	0.13
0.30	0.50	0.20	0.69	0.54	0.45	0.38	0.30	0.24	0.20	0.16	0.13
	0.30		0.59	0.48	0.40	0.34	0.27	0.23	0.19	0.15	0.12
	0.20		0.52	0.42	0.36	0.32	0.25	0.21	0.18	0.14	0.12
0.00	0.00	0.00	0.40	0.31	0.26	0.22	0.17	0.14	0.12	0.09	0.07

Rating:152W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

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	0.17	0.18	0.18	0.19	0.20	0.21	0.22	0.22
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.06	0.08	0.10	0.11	0.13	0.15	0.16	0.18	0.19
0.50	0.50	0.20	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.21	0.21
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.06	0.08	0.10	0.11	0.13	0.14	0.16	0.17	0.18
0.30	0.50	0.20	0.14	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.20
	0.30		0.10	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		0.06	0.08	0.10	0.11	0.13	0.14	0.15	0.17	0.18
0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

Rating:152W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980