Report No.: 1 Test Time: 31.01.2020 16:34

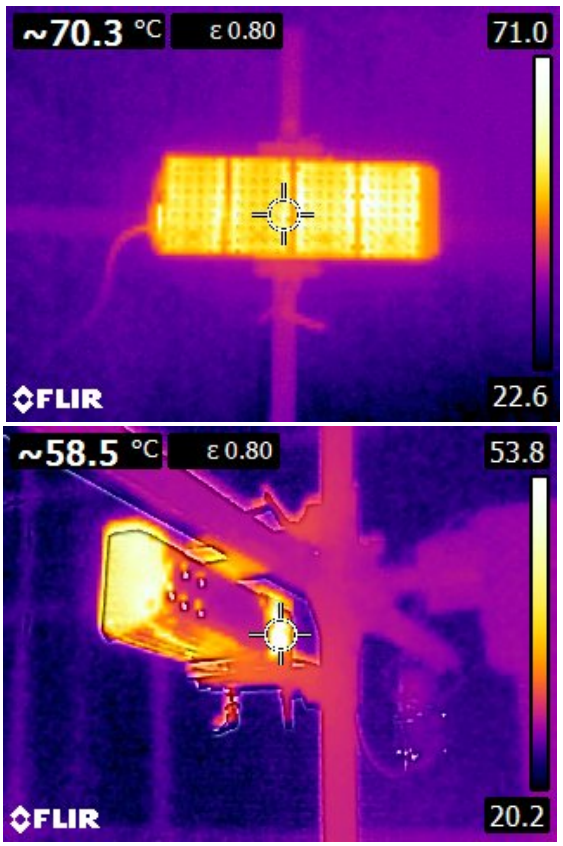
Luminaire Property

Luminaire Manufacturer:
Luminaire Description: FP 150 HE 4x28LED 150W 5000K 40x90gr.
Luminous Length (mm): 404 Luminous Width (mm): 153
Luminous Height (mm): 80 Voltage: 221.4 V
Current: 0.699 A Power: 151.55 W
Power Factor: 0.977

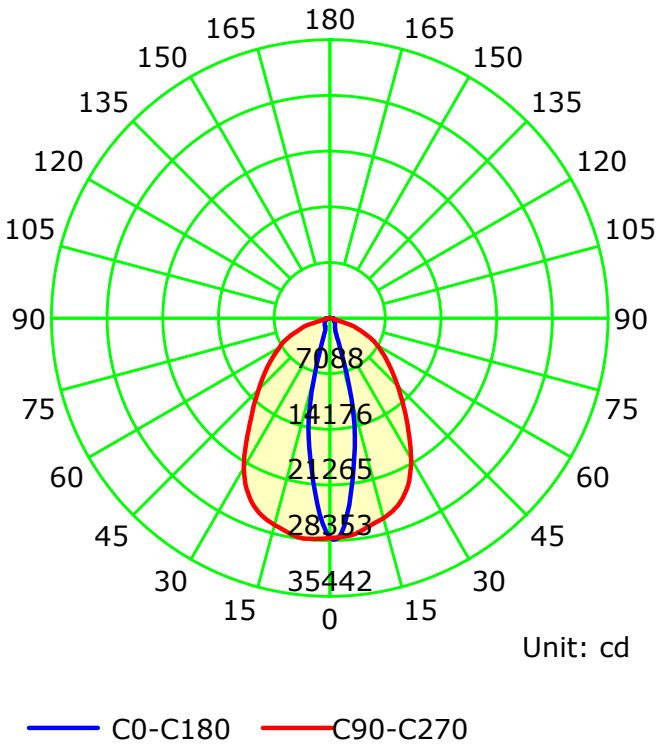
Photometric Results

CIE Class: Direct Total Rated Lamp Lumens: 20691.4 lm
Measurement Flux: 20691.4 lm Efficiency: 100%
Downward Ratio: 99% Upward Ratio: 1%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 39.3, 144.6, 52.8, 50.2
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 24.1, 83.3, 32.6, 31.3
Luminaire Efficacy Rating (LER): 136.58 Central Intensity: 27912.75 cd
Max. Intensity: 28353.74 cd Pos of Max. Intensity: H292.5 V3
S/MH(C0/C180): 0.41 S/MH(C90/C270): 1.15

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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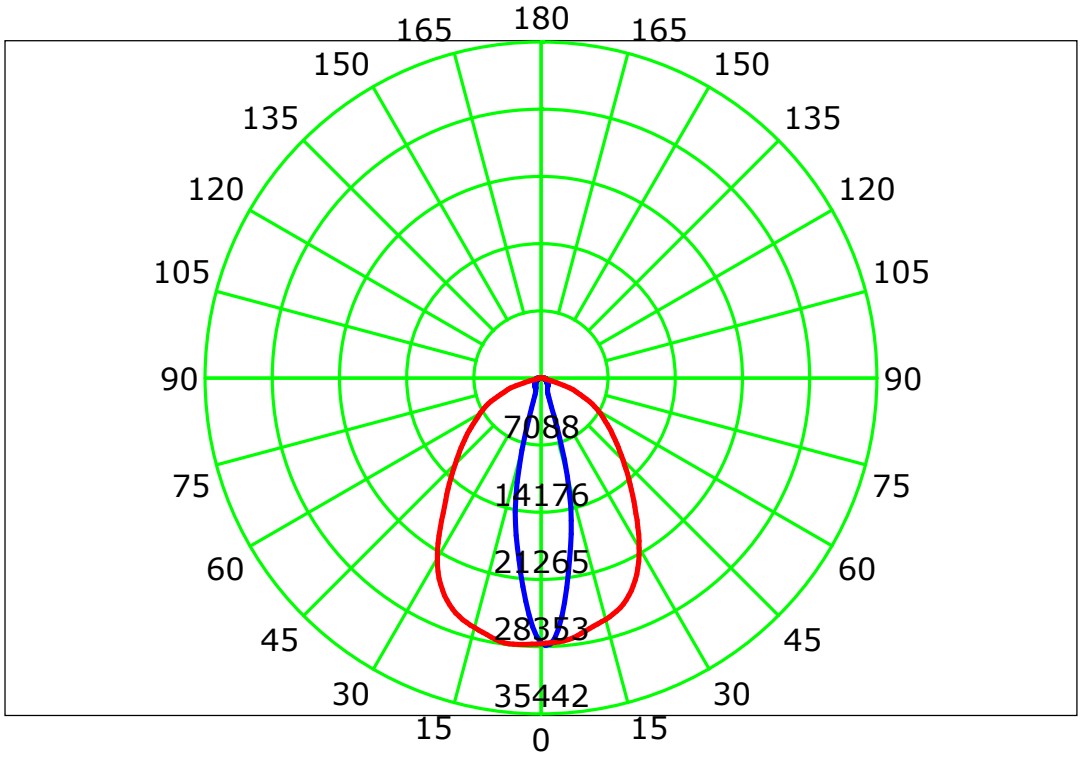
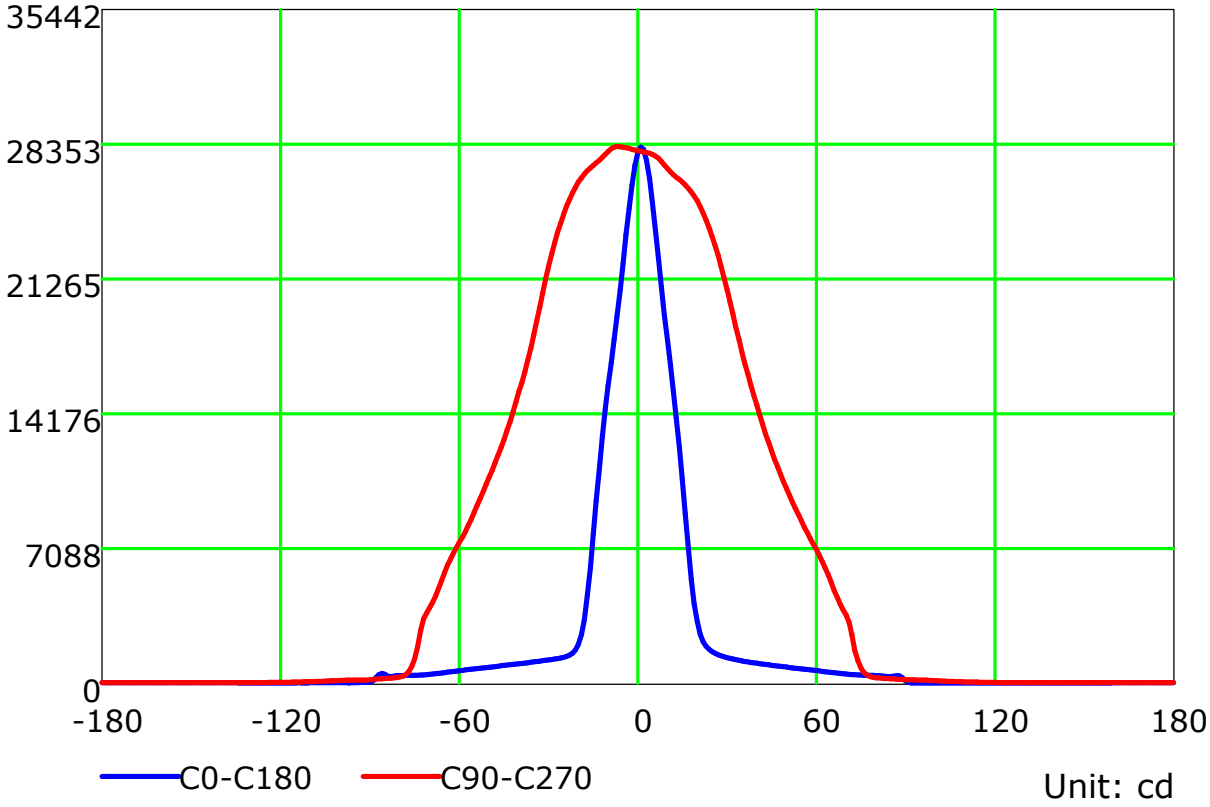
Luminous Intensity Distribution Curve

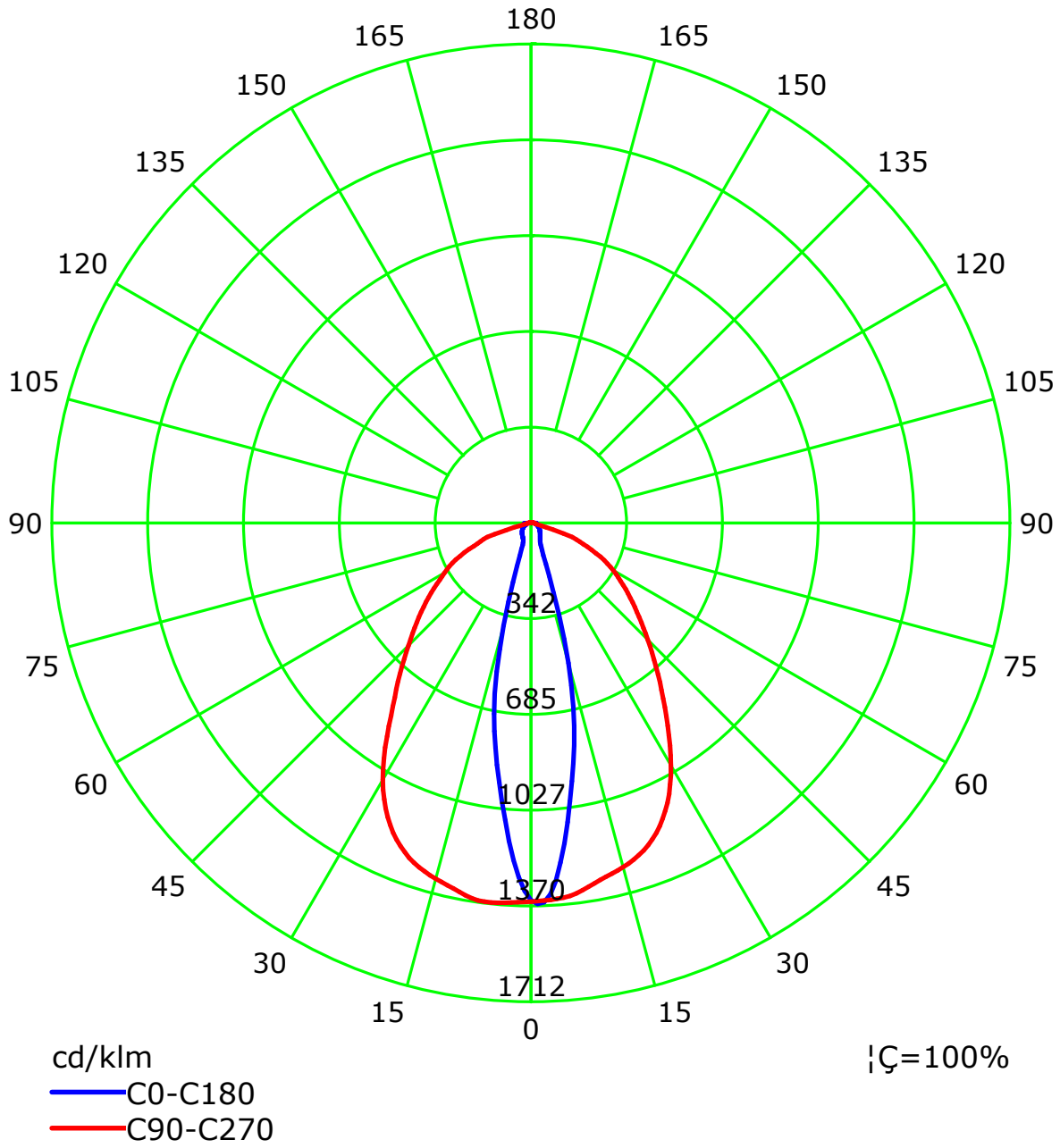




C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

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:
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Temperature:
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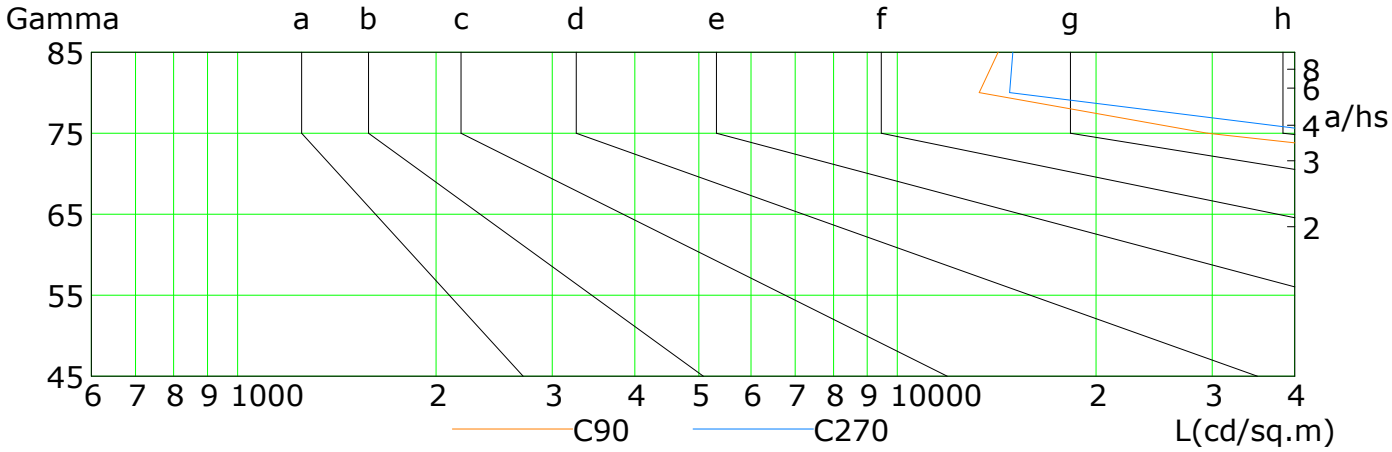
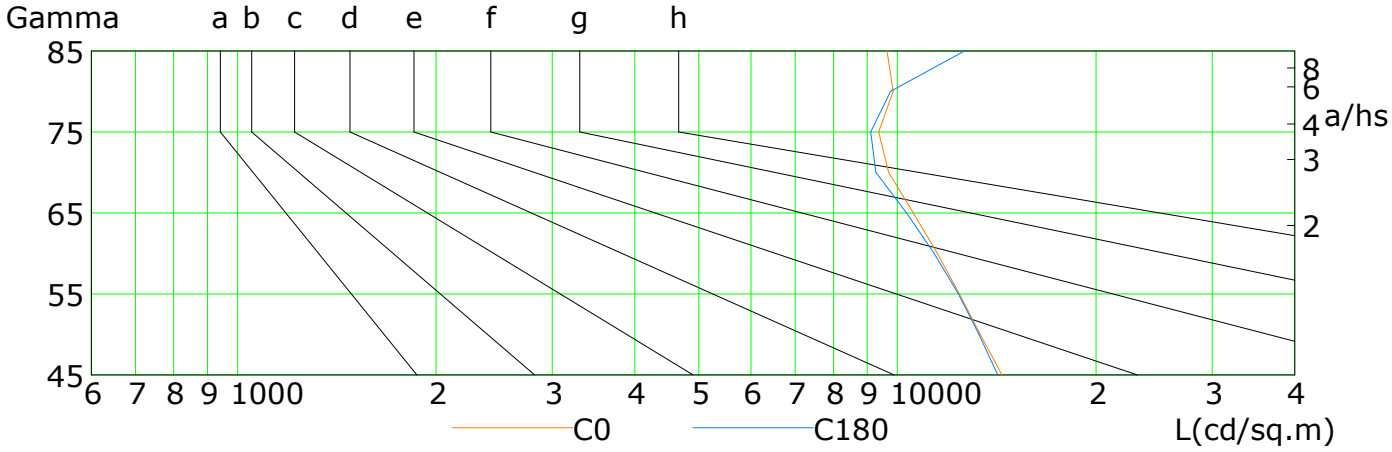
Lum Limit Curve

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	14411	13347	12414	11491	10564	9694	9364	9848	9647
C90	233724	208528	188115	169949	142999	110079	29519	13298	14218
C180	14198	13283	12376	11361	10330	9270	9115	9765	12643
C270	244972	220569	198394	178770	156179	121620	46620	14798	14956

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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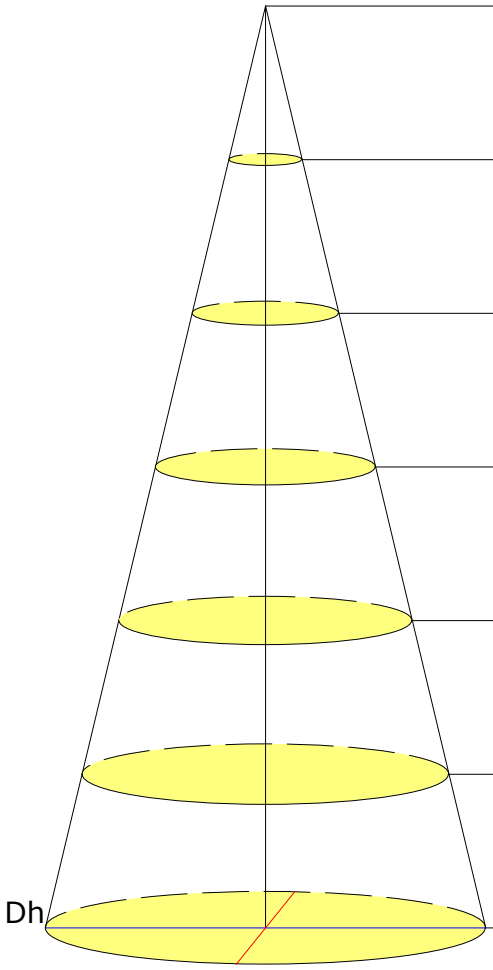
Illuminance at a Distance



Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
5.0	1116.51	2.13/8.89	15.3	472.22
10.0	279.13	4.27/17.78	61.1	118.05
15.0	124.06	6.40/26.67	137.5	52.47
20.0	69.78	8.54/35.56	244.5	29.51
25.0	44.66	10.67/44.45	382.0	18.89
30.0	31.01	12.81/53.34	550.1	13.12

Beam Angle(B): H24.1 V83.3 Field Angle(F): H39.3 V144.6

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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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	16.3	17.3	16.6	17.6	17.8	29.6	30.7	29.9	30.9	31.2
3H	17.7	18.6	18.0	18.9	19.2	31.0	31.9	31.3	32.2	32.5
4H	18.4	19.3	18.7	19.6	19.9	31.2	32.1	31.5	32.4	32.7
6H	19.1	20.0	19.5	20.3	20.6	31.1	32.0	31.5	32.3	32.6
8H	19.5	20.3	19.9	20.7	21.0	31.1	31.9	31.5	32.3	32.6
12H	19.9	20.7	20.3	21.0	21.4	31.1	31.9	31.5	32.2	32.6
X=4H Y=2H	17.6	18.5	18.0	18.8	19.1	29.4	30.3	29.8	30.6	30.9
3H	18.9	19.7	19.3	20.1	20.4	30.8	31.6	31.2	31.9	32.3
4H	19.6	20.3	20.0	20.7	21.1	31.0	31.7	31.4	32.1	32.5
6H	20.4	21.0	20.8	21.4	21.8	31.0	31.6	31.4	32.0	32.4
8H	20.8	21.3	21.2	21.8	22.2	31.0	31.5	31.4	32.0	32.4
12H	21.2	21.7	21.6	22.1	22.6	31.0	31.5	31.4	31.9	32.4
X=8H Y=4H	20.0	20.5	20.4	20.9	21.4	30.9	31.5	31.4	31.9	32.3
6H	20.8	21.2	21.2	21.7	22.2	30.9	31.4	31.4	31.8	32.3
8H	21.2	21.6	21.7	22.1	22.6	30.9	31.3	31.4	31.8	32.3
12H	21.7	22.0	22.2	22.5	23.0	30.9	31.2	31.4	31.7	32.3
X=12H Y=4H	20.0	20.5	20.5	20.9	21.4	30.9	31.4	31.3	31.8	32.3
6H	20.8	21.2	21.3	21.7	22.2	30.9	31.3	31.4	31.7	32.3
8H	21.3	21.6	21.8	22.1	22.6	30.9	31.2	31.4	31.7	32.2
Variations with the observer position at spacings:										
S=1.0H	+0.5/-0.4					+1.1/-1.5				
S=1.5H	+0.6/-0.8					+2.4/-4.0				
S=2.0H	+1.4/-1.2					+3.9/-7.2				

Calculate in accordance with CIE Pub.117. The table is revised with 20691lm (8log(F/F0) = 10.5).

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 = 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	0.71	0.79	0.85	0.89	0.95	0.99	1.02	1.05	1.07
	0.30		0.65	0.73	0.79	0.84	0.90	0.95	0.98	1.02	1.05
	0.20		0.60	0.69	0.75	0.80	0.86	0.91	0.94	0.99	1.02
0.50	0.50	0.20	0.69	0.77	0.83	0.87	0.92	0.95	0.98	1.01	1.03
	0.30		0.64	0.72	0.78	0.82	0.88	0.92	0.95	0.98	1.01
	0.20		0.60	0.68	0.74	0.78	0.84	0.89	0.92	0.96	0.99
0.30	0.50	0.20	0.68	0.75	0.80	0.84	0.89	0.92	0.94	0.97	0.99
	0.30		0.63	0.71	0.76	0.80	0.86	0.89	0.92	0.95	0.97
	0.20		0.59	0.67	0.73	0.77	0.83	0.87	0.89	0.93	0.95
0.00	0.00	0.00	0.57	0.65	0.70	0.74	0.79	0.83	0.85	0.88	0.90

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(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	0.79	0.65	0.55	0.48	0.38	0.31	0.27	0.21	0.17
	0.30		0.66	0.55	0.48	0.42	0.34	0.29	0.25	0.19	0.16
	0.20		0.56	0.48	0.42	0.38	0.31	0.26	0.23	0.18	0.15
0.50	0.50	0.20	0.75	0.62	0.52	0.45	0.36	0.33	0.25	0.19	0.16
	0.30		0.64	0.54	0.46	0.40	0.32	0.27	0.23	0.18	0.15
	0.20		0.55	0.47	0.41	0.37	0.30	0.25	0.22	0.17	0.14
0.30	0.50	0.20	0.73	0.59	0.49	0.43	0.33	0.28	0.23	0.18	0.15
	0.30		0.62	0.52	0.44	0.39	0.31	0.26	0.22	0.17	0.14
	0.20		0.54	0.46	0.40	0.35	0.29	0.24	0.21	0.16	0.14
0.00	0.00	0.00	0.42	0.35	0.30	0.26	0.20	0.17	0.14	0.11	0.09

Rating:152W 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	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.22	0.23
	0.30		0.11	0.12	0.14	0.15	0.17	0.18	0.19	0.20	0.21
	0.20		0.07	0.08	0.10	0.11	0.13	0.15	0.16	0.18	0.19
0.50	0.50	0.20	0.15	0.17	0.18	0.18	0.20	0.20	0.21	0.21	0.22
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.07	0.08	0.10	0.11	0.13	0.15	0.16	0.17	0.18
0.30	0.50	0.20	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.20	0.21
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.17	0.19	0.19
	0.20		0.07	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