

Report No.: 1

Test Time: 14.08.2019 09:37

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FG 190 78W 4000K

Luminous Length (mm): 1210

Luminous Height (mm): 86

Current: 0.364 A

Power Factor: 0.978

Lamp Description: LED

Luminous Width (mm): 189

Voltage: 221.2 V

Power: 78.77 W

Photometric Results

CIE Class: Direct

Measurement Flux: 10820.4 lm

Downward Ratio: 99%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 152.6, 72.0, 91.7, 90.4

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 110.7, 55.3, 71.6, 70.5

Luminaire Efficacy Rating (LER): 137.42

Max. Intensity: 8021.69 cd

S/MH(C0/C180): 1.27

Total Rated Lamp Lumens: 10820.4 lm

Efficiency: 100%

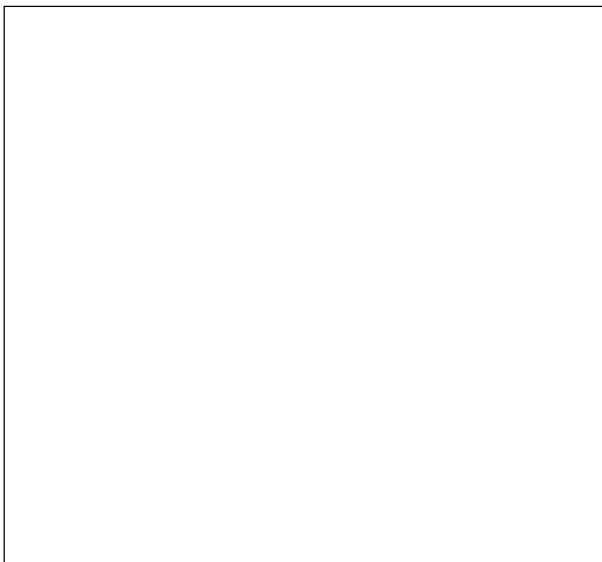
Upward Ratio: 1%

Central Intensity: 7921.17 cd

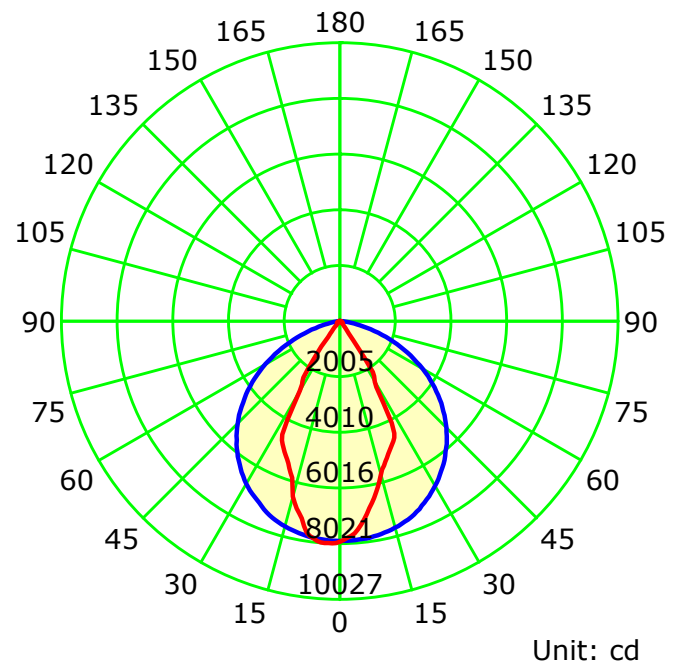
Pos of Max. Intensity: H315 V2

S/MH(C90/C270): 0.82

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

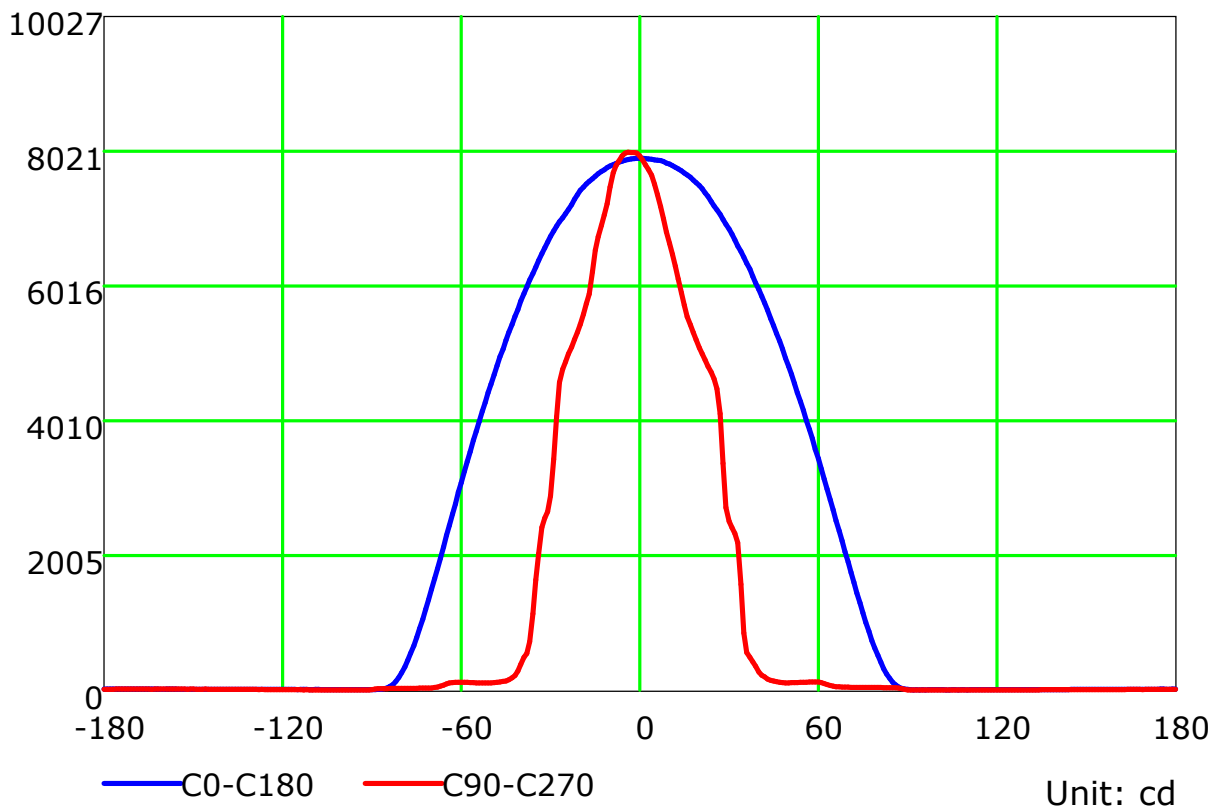
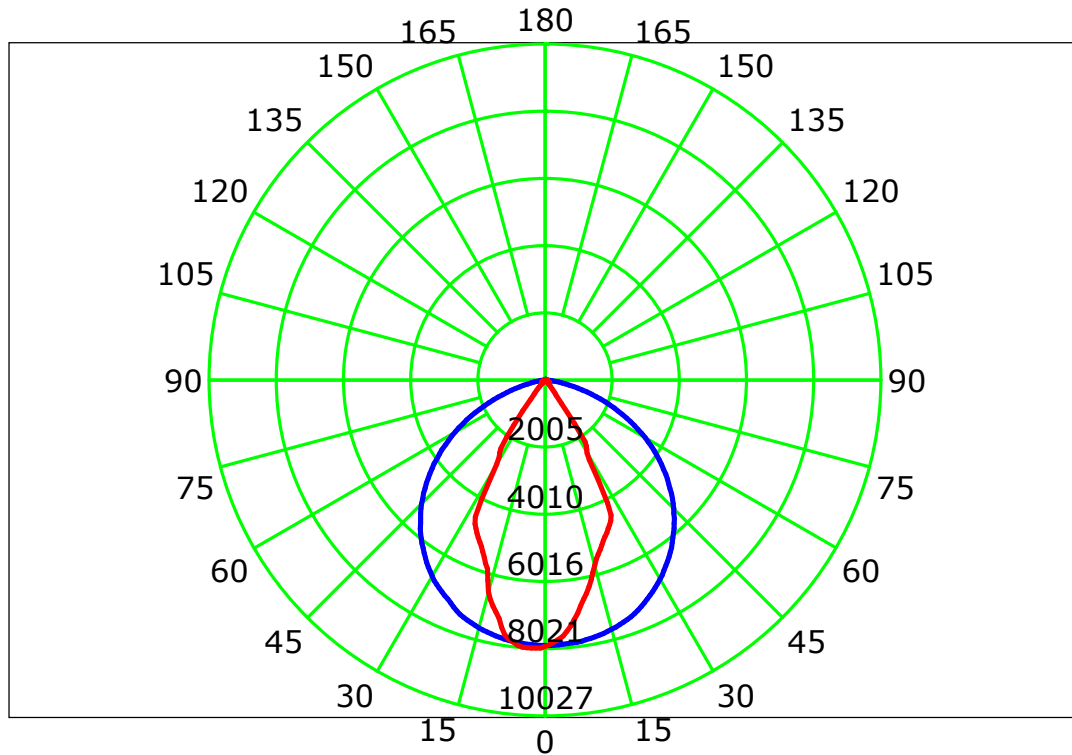
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

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

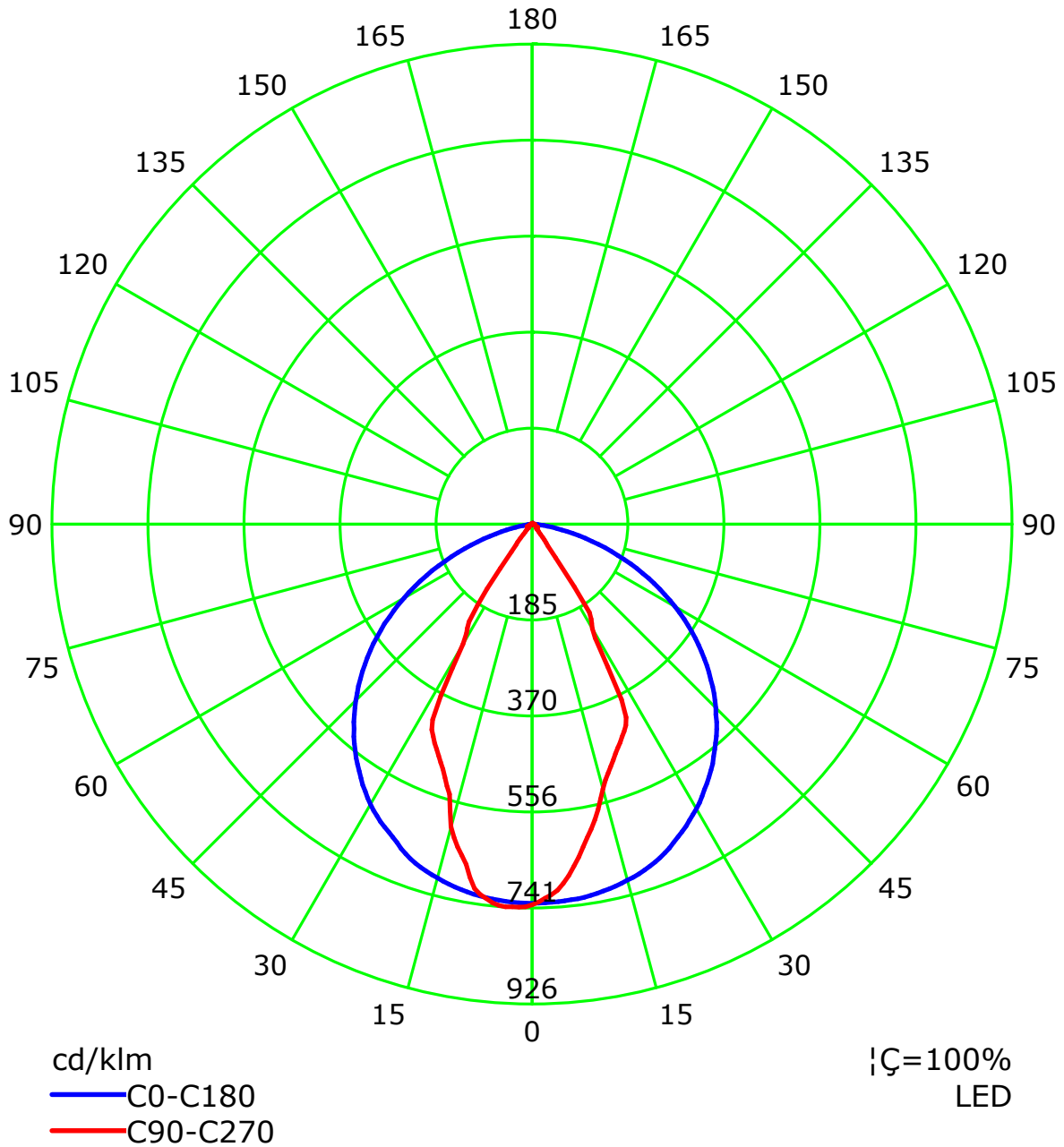
Test Device: LSG-1800B

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:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: LSG-1800B

Distance: 12.677 m

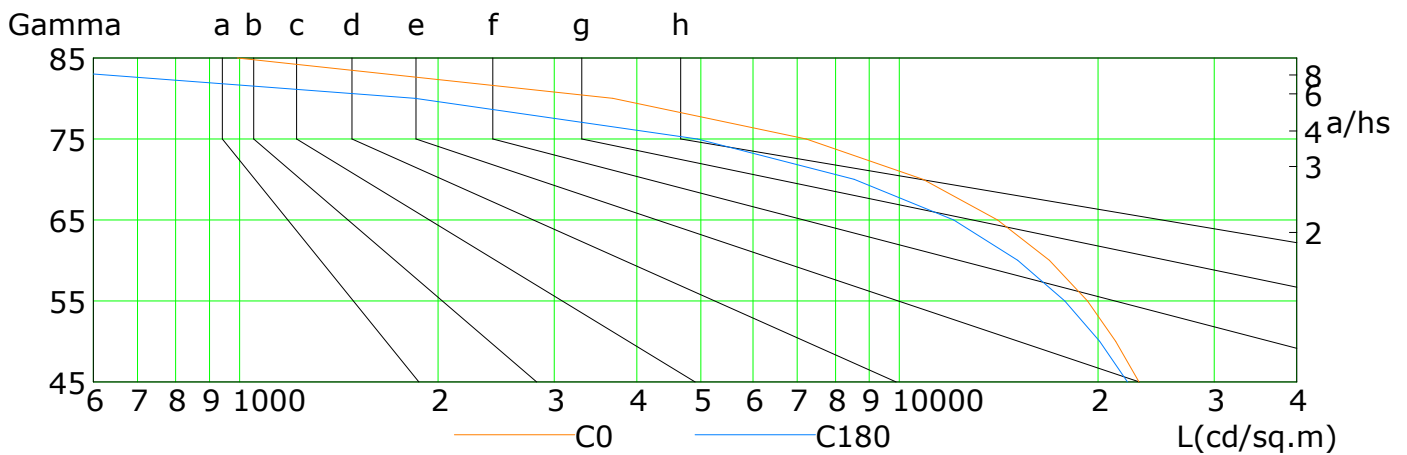
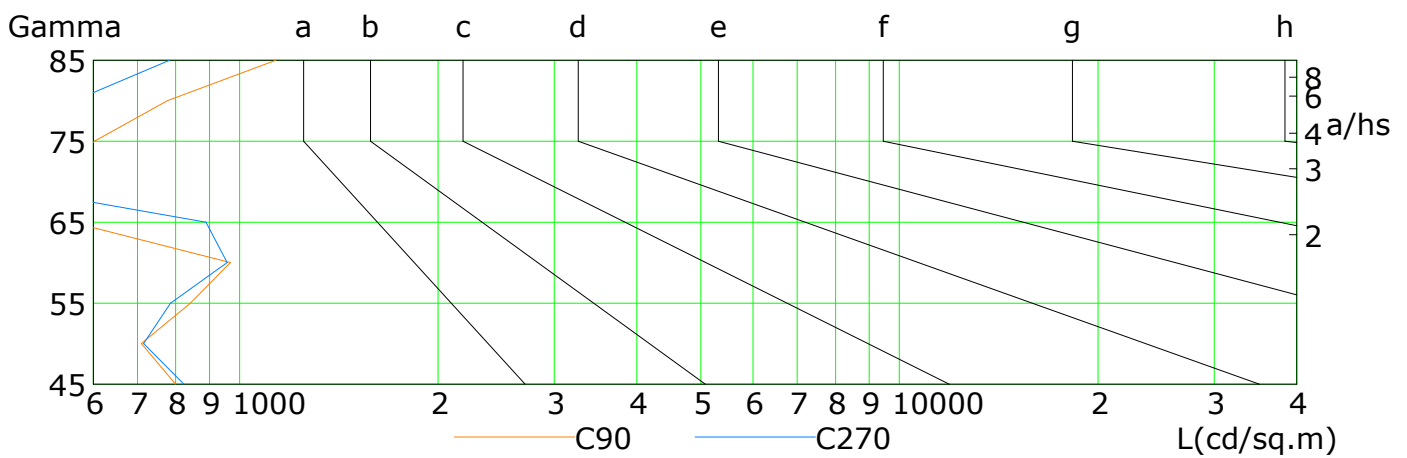
Humidity:

Inspector:

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	23076	21267	19278	16887	14092	10856	7221	3678	992
C90	800	710	843	969	558	514	602	778	1134
C180	22159	20106	17816	15105	12087	8535	4941	1845	289
C270	824	715	785	957	889	400	437	561	783

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

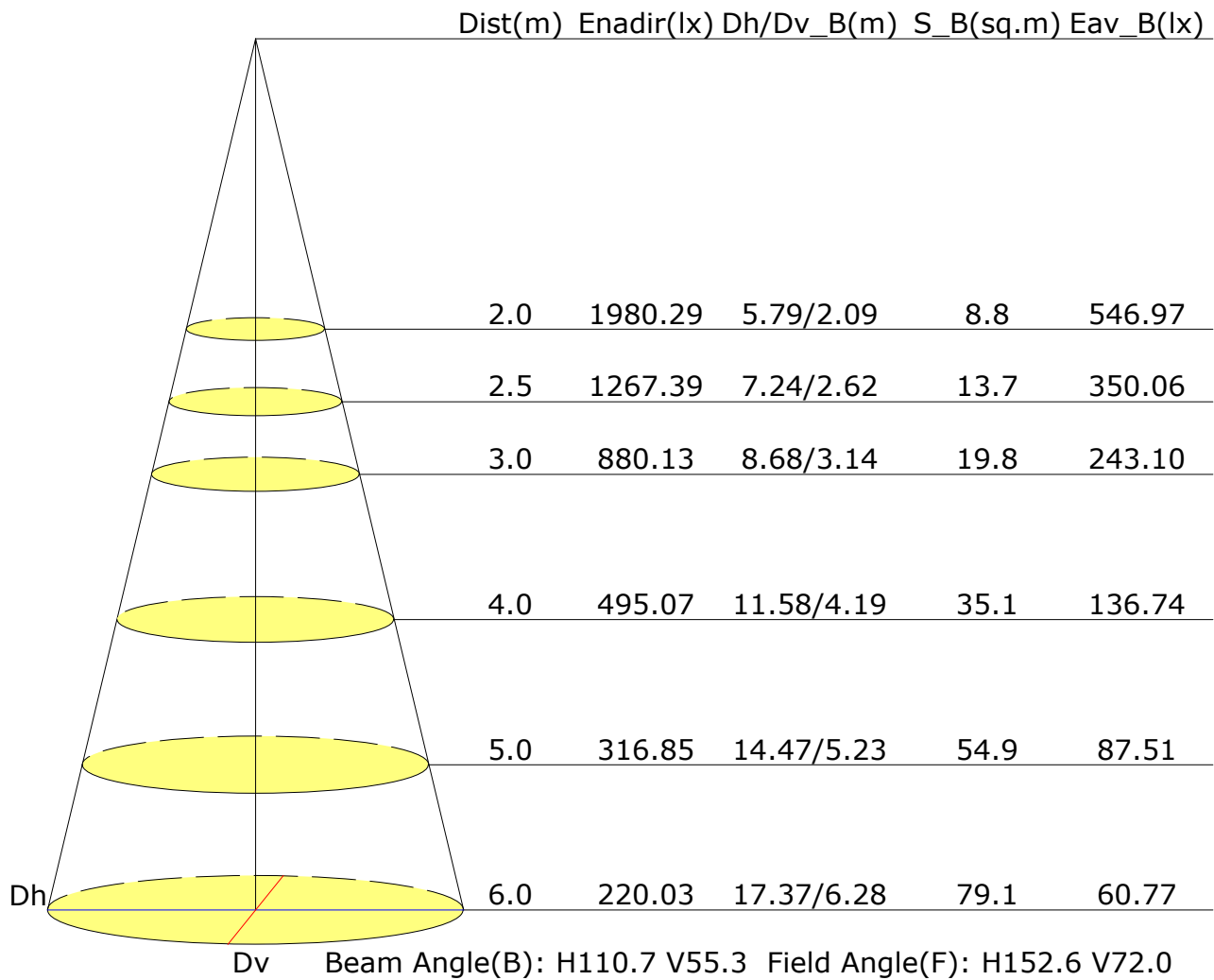
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

Illuminance at a Distance



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:

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	22.4	23.5	22.7	23.8	24.0	10.8	11.9	11.1	12.2	12.4
3H	23.4	24.4	23.7	24.6	24.9	10.8	11.8	11.1	12.1	12.3
4H	23.7	24.6	24.0	24.9	25.2	10.8	11.7	11.1	12.0	12.3
6H	23.9	24.7	24.2	25.0	25.3	10.8	11.7	11.2	12.0	12.3
8H	23.9	24.7	24.2	25.0	25.3	10.8	11.7	11.2	12.0	12.3
12H	23.8	24.6	24.2	25.0	25.3	10.9	11.7	11.3	12.0	12.4
X=4H Y=2H	22.2	23.1	22.5	23.4	23.7	11.6	12.5	12.0	12.8	13.1
3H	23.1	23.9	23.5	24.3	24.6	11.6	12.4	12.0	12.7	13.1
4H	23.5	24.2	23.9	24.6	24.9	11.6	12.3	12.0	12.7	13.0
6H	23.7	24.3	24.1	24.7	25.1	11.7	12.3	12.1	12.7	13.1
8H	23.7	24.3	24.1	24.7	25.1	11.7	12.3	12.1	12.7	13.1
12H	23.7	24.2	24.1	24.6	25.1	11.8	12.3	12.2	12.7	13.2
X=8H Y=4H	23.4	23.9	23.8	24.3	24.8	11.6	12.2	12.0	12.6	13.0
6H	23.6	24.0	24.0	24.5	24.9	11.7	12.1	12.2	12.6	13.0
8H	23.6	24.0	24.1	24.4	24.9	11.8	12.2	12.3	12.6	13.1
12H	23.6	23.9	24.1	24.4	24.9	11.9	12.3	12.4	12.7	13.2
X=12H Y=4H	23.3	23.8	23.8	24.3	24.7	11.6	12.1	12.0	12.5	13.0
6H	23.5	23.9	24.0	24.4	24.9	11.7	12.1	12.2	12.5	13.0
8H	23.6	23.9	24.1	24.4	24.9	11.8	12.1	12.3	12.6	13.1
Variations with the observer position at spacings:										
S=1.0H	+0.5/-0.7					+4.0/-5.6				
S=1.5H	+2.2/-4.3					+5.9/-5.5				
S=2.0H	+3.6/-8.0					+7.0/-6.8				

Calculate in accordance with CIE Pub.117. The table is revised with 10820lm ($8\log(F/F_0) = 8.3$).

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(Floor cavity)

Utilance U(F)											
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	0.65	0.75	0.82	0.87	0.93	0.98	1.00	1.04	1.06
	0.30		0.59	0.69	0.76	0.81	0.88	0.93	0.96	1.01	1.04
	0.20		0.54	0.64	0.71	0.77	0.84	0.89	0.93	0.98	1.01
0.50	0.50	0.20	0.64	0.73	0.80	0.84	0.90	0.94	0.97	1.00	1.02
	0.30		0.58	0.68	0.74	0.79	0.86	0.91	0.94	0.98	1.00
	0.20		0.53	0.63	0.70	0.75	0.83	0.87	0.91	0.95	0.98
0.30	0.50	0.20	0.63	0.72	0.78	0.82	0.88	0.91	0.94	0.97	0.99
	0.30		0.57	0.67	0.73	0.78	0.84	0.88	0.91	0.95	0.97
	0.20		0.53	0.63	0.69	0.74	0.81	0.85	0.89	0.93	0.95
0.00	0.00	0.00	0.51	0.60	0.67	0.72	0.78	0.82	0.85	0.88	0.90
Luminous ceiling reflectance(into room):0.30 Luminous ceiling reflectance(into void):0.20 Luminous ceiling transmittance:0.40 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)

Utilance U(W)												
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	0.86	0.70	0.58	0.50	0.39	0.32	0.27	0.21	0.17	
	0.30		0.72	0.60	0.51	0.44	0.35	0.29	0.25	0.20	0.16	
	0.20		0.62	0.52	0.45	0.40	0.32	0.27	0.23	0.19	0.15	
0.50	0.50	0.20	0.83	0.67	0.56	0.48	0.37	0.34	0.26	0.20	0.16	
	0.30		0.70	0.58	0.49	0.43	0.34	0.28	0.24	0.19	0.15	
	0.20		0.61	0.51	0.44	0.39	0.31	0.26	0.23	0.18	0.15	
0.30	0.50	0.20	0.81	0.64	0.53	0.45	0.35	0.29	0.24	0.18	0.15	
	0.30		0.69	0.56	0.48	0.41	0.32	0.27	0.23	0.18	0.14	
	0.20		0.60	0.50	0.43	0.38	0.30	0.25	0.22	0.17	0.14	
0.00	0.00	0.00	0.49	0.40	0.33	0.28	0.22	0.18	0.15	0.12	0.10	
Luminous ceiling reflectance(into room):0.30 Luminous ceiling reflectance(into void):0.20 Luminous ceiling transmittance:0.40 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)

Utilance U(C)											
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	0.21
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.07	0.08	0.10	0.12	0.13	0.15	0.16	0.17
0.50	0.50	0.20	0.15	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.07	0.08	0.10	0.12	0.13	0.14	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	0.19
	0.30		0.09	0.10	0.12	0.13	0.14	0.15	0.16	0.17	0.18
	0.20		0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.15	0.16
0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
Luminous ceiling reflectance(into room):0.30 Luminous ceiling reflectance(into void):0.20 Luminous ceiling transmittance:0.40 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: