

Report No.: 1

Test Time: 18.09.2019 16:20

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FD 112 150W 120gr Luminous Length (mm): 316

Luminous Width (mm): 316

Luminous Height (mm): 132

Voltage: 221.9 V

Current: 0.681 A

Power: 147.94 W

Power Factor: 0.978

Photometric Results

CIE Class: Direct

Measurement Flux: 22918 lm

Downward Ratio: 99%

Total Rated Lamp Lumens: 22918.0 lm

Efficiency: 100%

Upward Ratio: 1%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 151.8, 151.8, 151.4, 151.4

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 110.0, 111.3, 111.5, 111.5

Luminaire Efficacy Rating (LER): 154.96

Central Intensity: 8420.22 cd

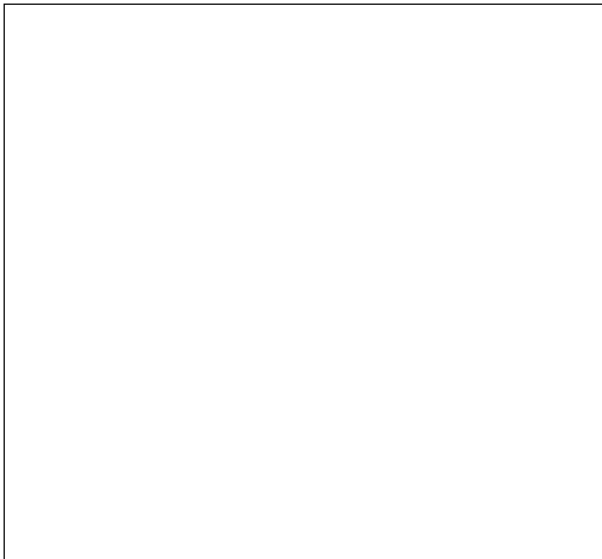
Max. Intensity: 8422.29 cd

Pos of Max. Intensity: H180 V1

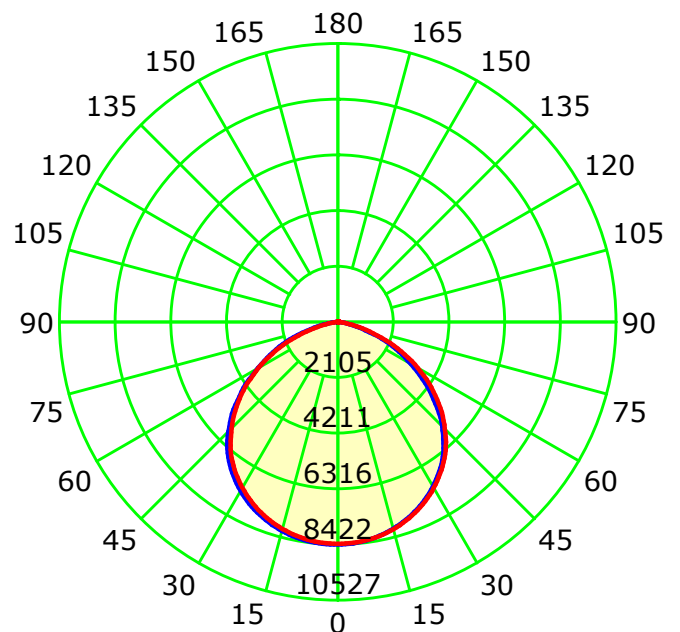
S/MH(C0/C180): 1.28

S/MH(C90/C270): 1.28

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

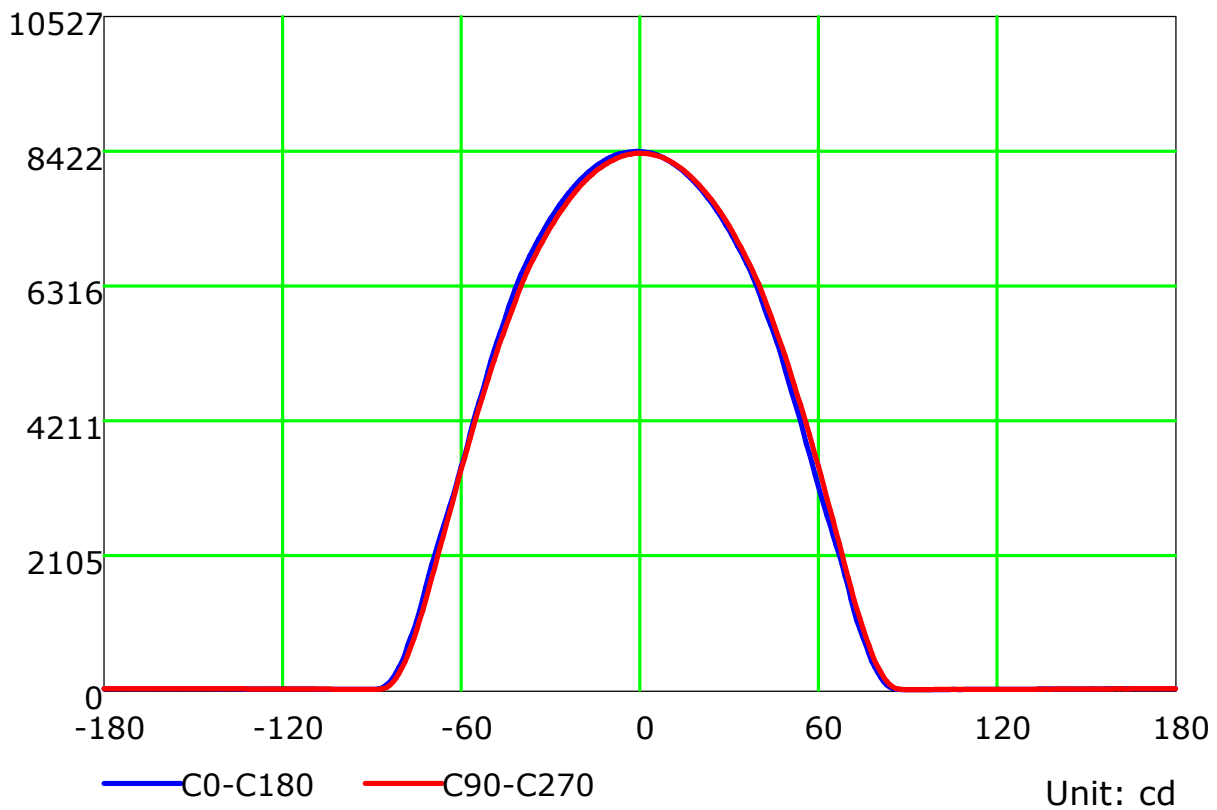
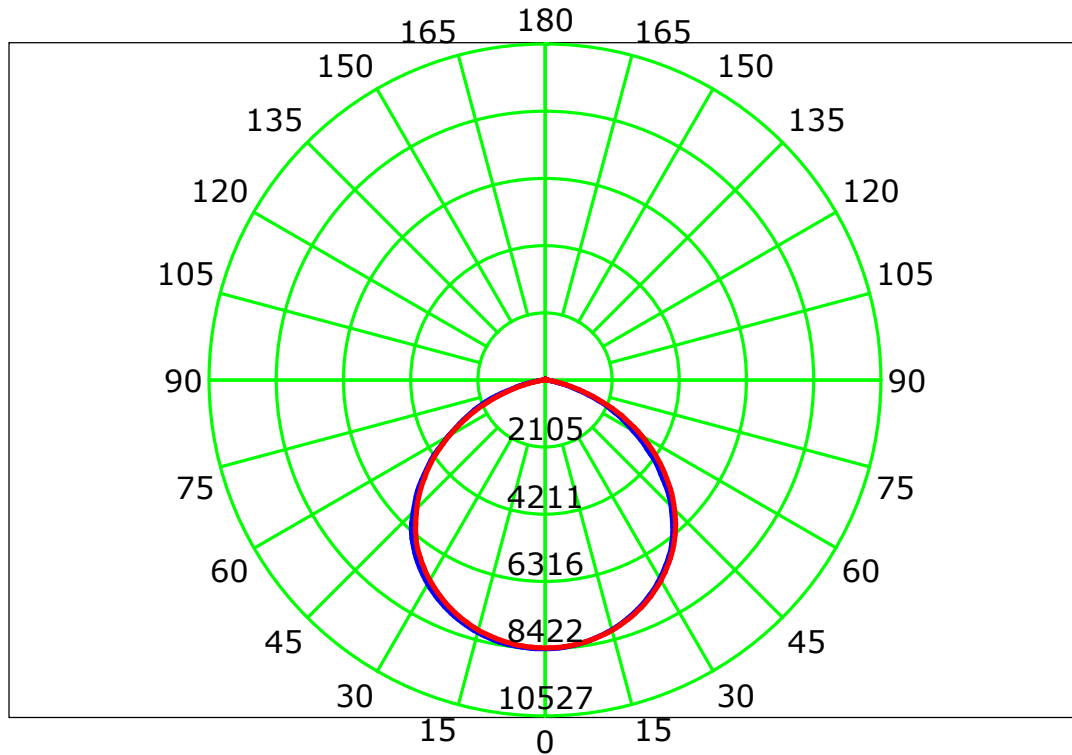
Test Device: LSG-1800B

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

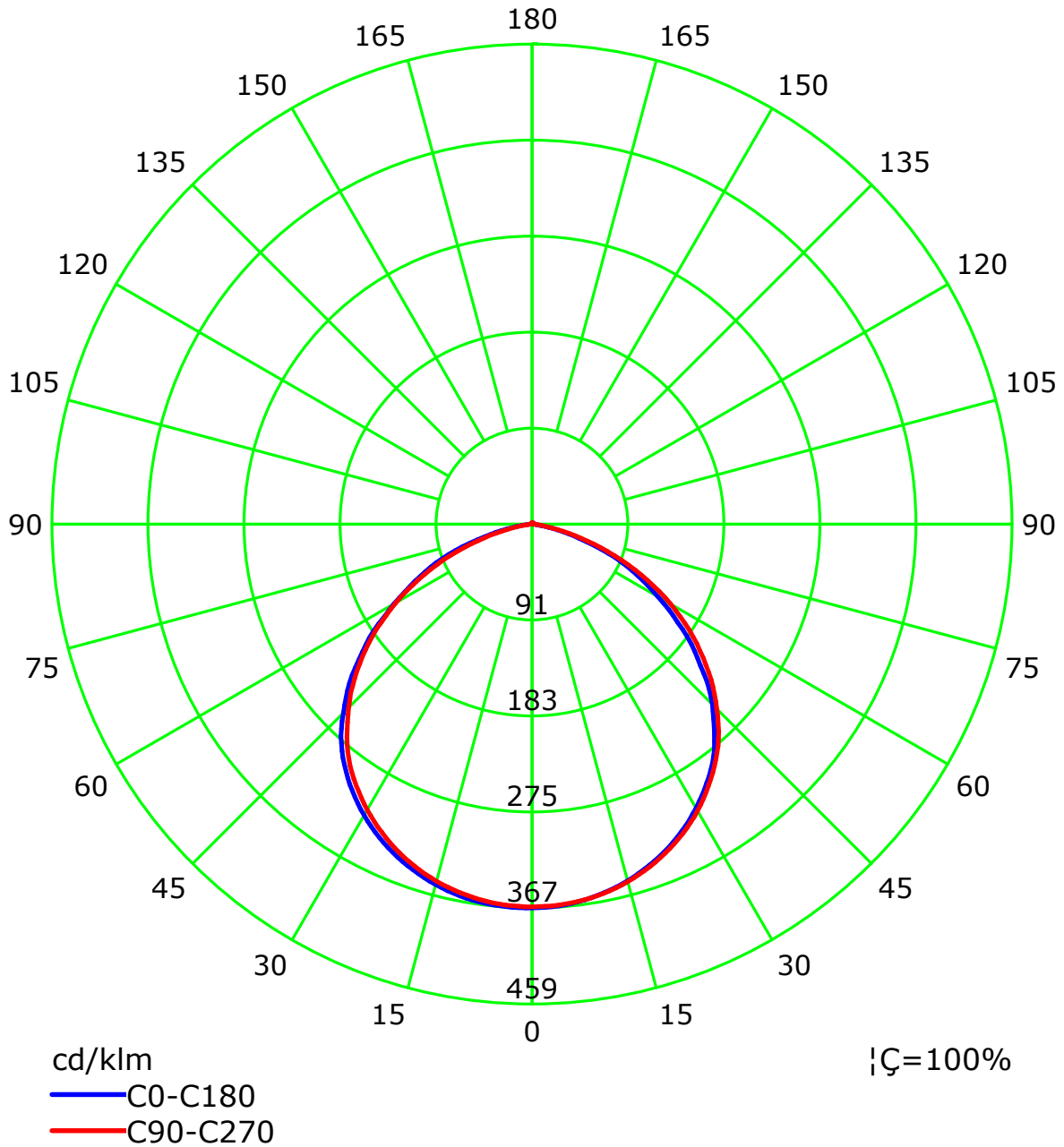
Test Device: LSG-1800B

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

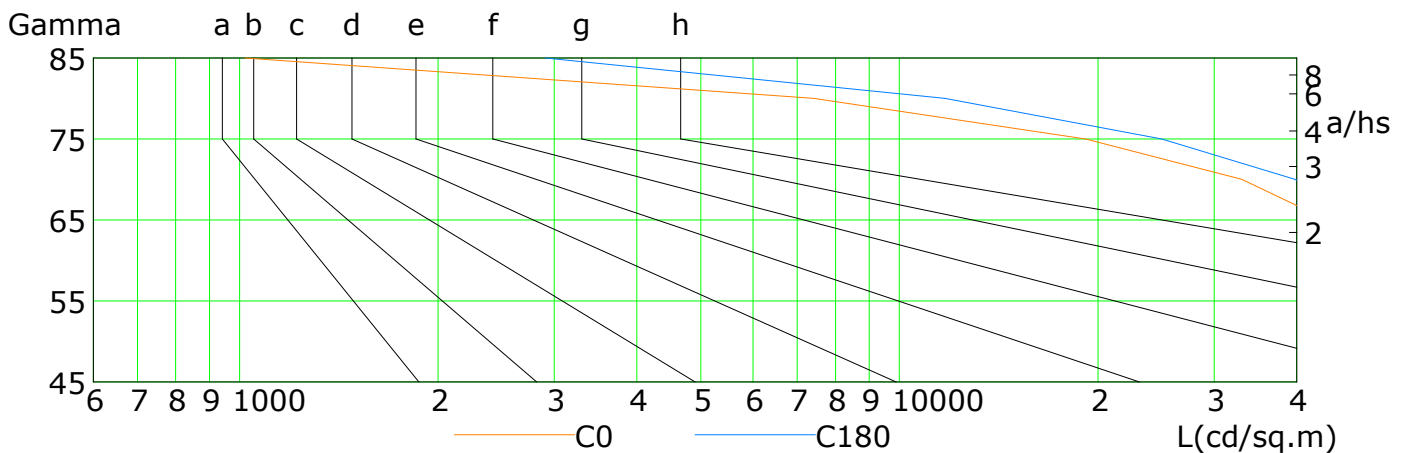
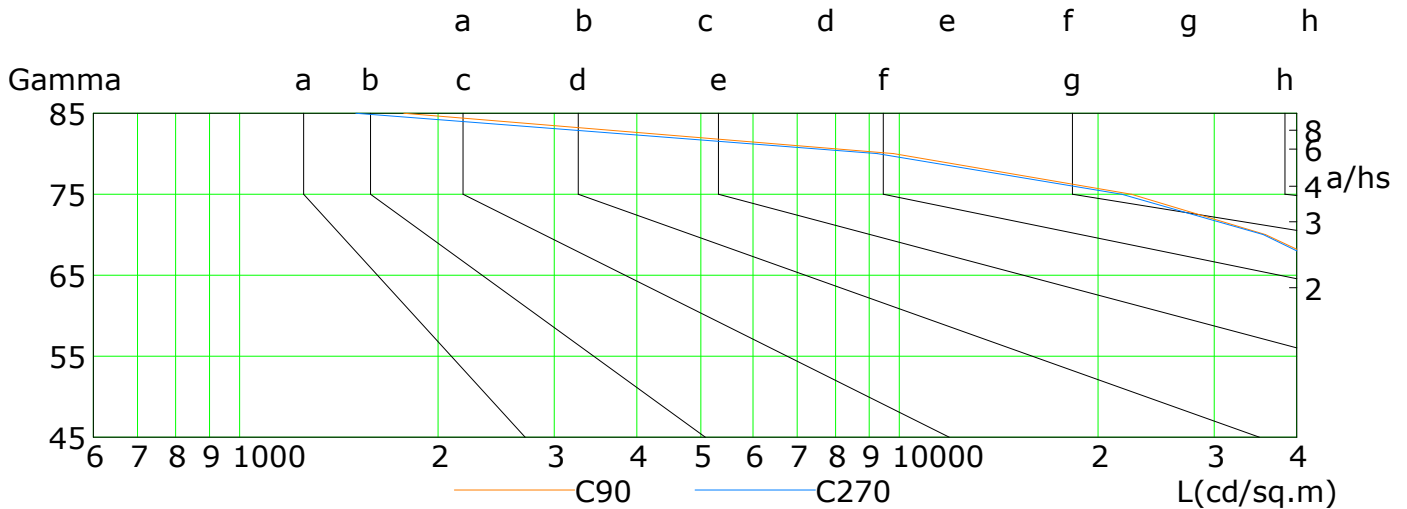
Distance: 12.677 m

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



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	78798	71392	63442	53853	44532	33034	19159	7411	1019
C90	80762	74891	67850	59182	48829	35885	22461	9801	1774
C180	82465	76282	68504	59068	49805	39773	24969	11710	2906
C270	80198	74214	67142	58406	47892	35591	21735	9250	1500

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

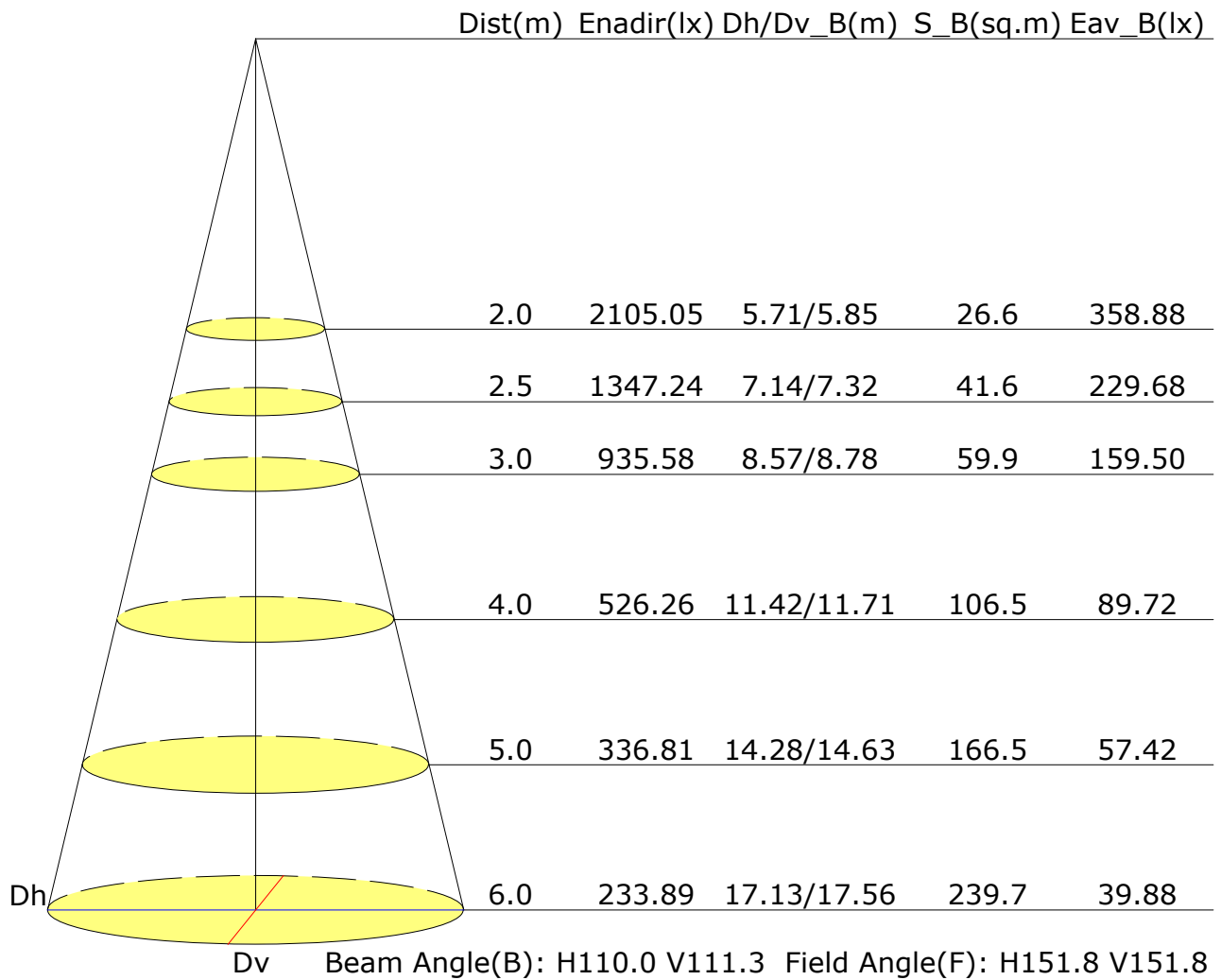
Test Device: LSG-1800B

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	26.7	28.0	27.0	28.2	28.5	27.0	28.3	27.3	28.5	28.8
3H	27.5	28.7	27.8	29.0	29.3	27.8	29.1	28.2	29.3	29.6
4H	27.6	28.8	28.0	29.1	29.4	28.0	29.2	28.4	29.5	29.8
6H	27.6	28.7	28.0	29.0	29.3	28.0	29.1	28.4	29.4	29.7
8H	27.6	28.6	28.0	28.9	29.3	28.0	29.0	28.4	29.4	29.7
12H	27.6	28.5	28.0	28.9	29.2	28.0	28.9	28.4	29.3	29.6
X=4H Y=2H	27.1	28.2	27.4	28.5	28.8	27.3	28.5	27.7	28.8	29.1
3H	28.0	29.0	28.4	29.3	29.7	28.3	29.3	28.7	29.6	30.0
4H	28.2	29.1	28.6	29.4	29.8	28.5	29.4	29.0	29.8	30.2
6H	28.2	29.0	28.7	29.4	29.8	28.6	29.4	29.0	29.7	30.2
8H	28.2	28.9	28.6	29.3	29.7	28.6	29.3	29.0	29.7	30.1
12H	28.2	28.8	28.6	29.2	29.7	28.5	29.2	29.0	29.6	30.0
X=8H Y=4H	28.2	28.9	28.7	29.3	29.8	28.6	29.2	29.0	29.7	30.1
6H	28.3	28.8	28.7	29.3	29.7	28.6	29.2	29.1	29.6	30.1
8H	28.3	28.7	28.7	29.2	29.7	28.6	29.1	29.1	29.6	30.1
12H	28.2	28.6	28.7	29.1	29.6	28.6	29.0	29.1	29.5	30.0
X=12H Y=4H	28.2	28.8	28.7	29.3	29.7	28.5	29.1	29.0	29.6	30.0
6H	28.2	28.7	28.7	29.2	29.7	28.6	29.1	29.1	29.5	30.0
8H	28.2	28.6	28.7	29.1	29.6	28.6	29.0	29.1	29.5	30.0
Variations with the observer position at spacings:										
S=1.0H	+0.2/-0.3					+0.2/-0.3				
S=1.5H	+0.6/-1.0					+0.5/-0.9				
S=2.0H	+1.2/-1.9					+1.1/-1.9				

Calculate in accordance with CIE Pub.117. The table is revised with 22918lm ($8\log(F/F_0) = 10.9$).

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	0.54	0.65	0.73	0.79	0.87	0.92	0.96	1.01	1.04
	0.30		0.46	0.57	0.65	0.72	0.81	0.87	0.91	0.97	1.00
	0.20		0.40	0.51	0.59	0.66	0.75	0.82	0.87	0.93	0.97
0.50	0.50	0.20	0.52	0.63	0.70	0.76	0.84	0.89	0.92	0.97	0.99
	0.30		0.45	0.56	0.64	0.70	0.78	0.84	0.88	0.93	0.97
	0.20		0.39	0.50	0.59	0.65	0.74	0.80	0.84	0.90	0.94
0.30	0.50	0.20	0.51	0.61	0.68	0.74	0.81	0.86	0.89	0.93	0.96
	0.30		0.44	0.55	0.62	0.68	0.76	0.82	0.85	0.90	0.93
	0.20		0.39	0.50	0.58	0.64	0.73	0.78	0.82	0.88	0.91
0.00	0.00	0.00	0.37	0.47	0.55	0.61	0.69	0.75	0.78	0.83	0.87
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	1.04	0.85	0.72	0.62	0.49	0.40	0.34	0.26	0.21	
	0.30		0.87	0.73	0.63	0.55	0.44	0.37	0.32	0.25	0.20	
	0.20		0.74	0.64	0.56	0.49	0.40	0.34	0.29	0.23	0.19	
0.50	0.50	0.20	1.00	0.82	0.69	0.60	0.47	0.42	0.32	0.25	0.20	
	0.30		0.85	0.71	0.61	0.54	0.43	0.36	0.30	0.23	0.19	
	0.20		0.74	0.63	0.55	0.49	0.39	0.33	0.29	0.22	0.18	
0.30	0.50	0.20	0.97	0.79	0.67	0.57	0.45	0.37	0.31	0.24	0.19	
	0.30		0.83	0.70	0.60	0.52	0.41	0.34	0.29	0.23	0.18	
	0.20		0.73	0.62	0.54	0.48	0.38	0.32	0.28	0.22	0.18	
0.00	0.00	0.00	0.63	0.53	0.45	0.39	0.31	0.25	0.22	0.17	0.13	
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	0.17	0.18	0.19	0.19	0.20	0.20	0.21	0.21	0.22
	0.30		0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.04	0.06	0.08	0.09	0.11	0.13	0.14	0.16	0.17
0.50	0.50	0.20	0.16	0.17	0.18	0.18	0.19	0.20	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		0.04	0.06	0.07	0.09	0.11	0.12	0.14	0.15	0.16
0.30	0.50	0.20	0.16	0.17	0.17	0.18	0.18	0.19	0.19	0.20	0.20
	0.30		0.09	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18
	0.20		0.04	0.06	0.07	0.09	0.11	0.12	0.13	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: