

Report No.: 1

Test Time: 20.09.2019 09:08

## Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FD 112 200W 90gr

Luminous Width (mm): 360

Voltage: 221.1 V

Power: 202.47 W

Luminous Length (mm): 360

Luminous Height (mm): 50

Current: 0.937 A

Power Factor: 0.976

## Photometric Results

CIE Class: Direct

Measurement Flux: 30476.2 lm

Downward Ratio: 99%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 119.9, 117.5, 118.7, 118.2

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 92.0, 92.4, 91.9, 91.3

Luminaire Efficacy Rating (LER): 150.57

Max. Intensity: 15950.81 cd

S/MH(C0/C180): 1.37

Total Rated Lamp Lumens: 30476.2 lm

Efficiency: 100%

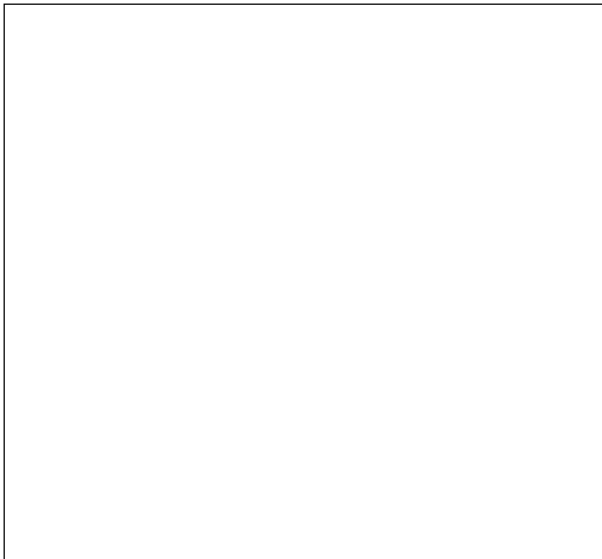
Upward Ratio: 1%

Central Intensity: 14011.5 cd

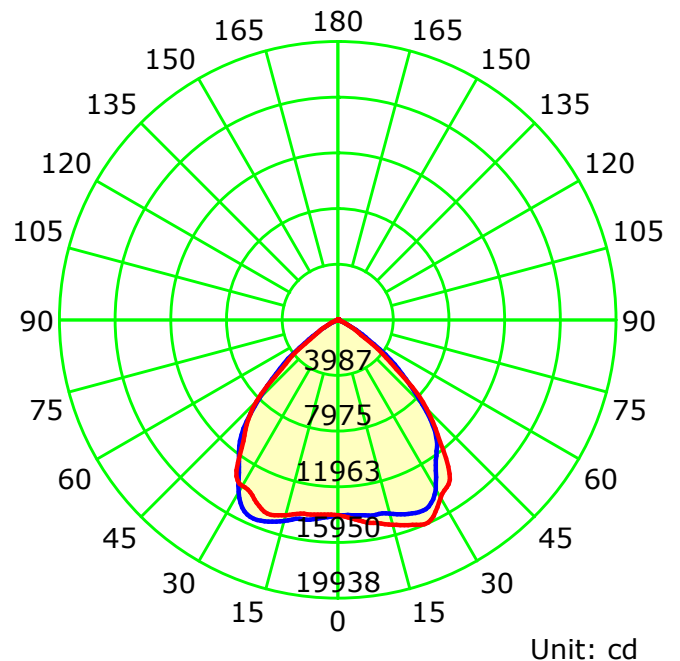
Pos of Max. Intensity: H135 V24

S/MH(C90/C270): 1.43

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 (°):0.0-180.0:1.0

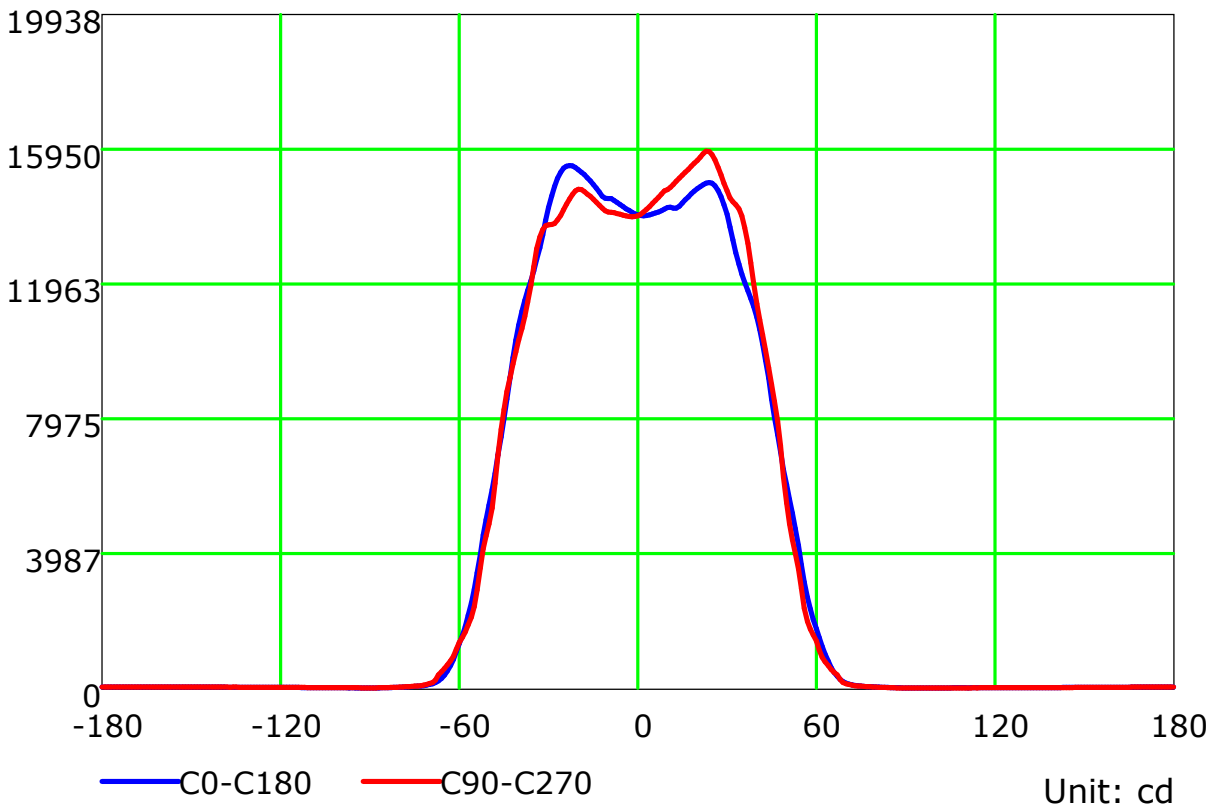
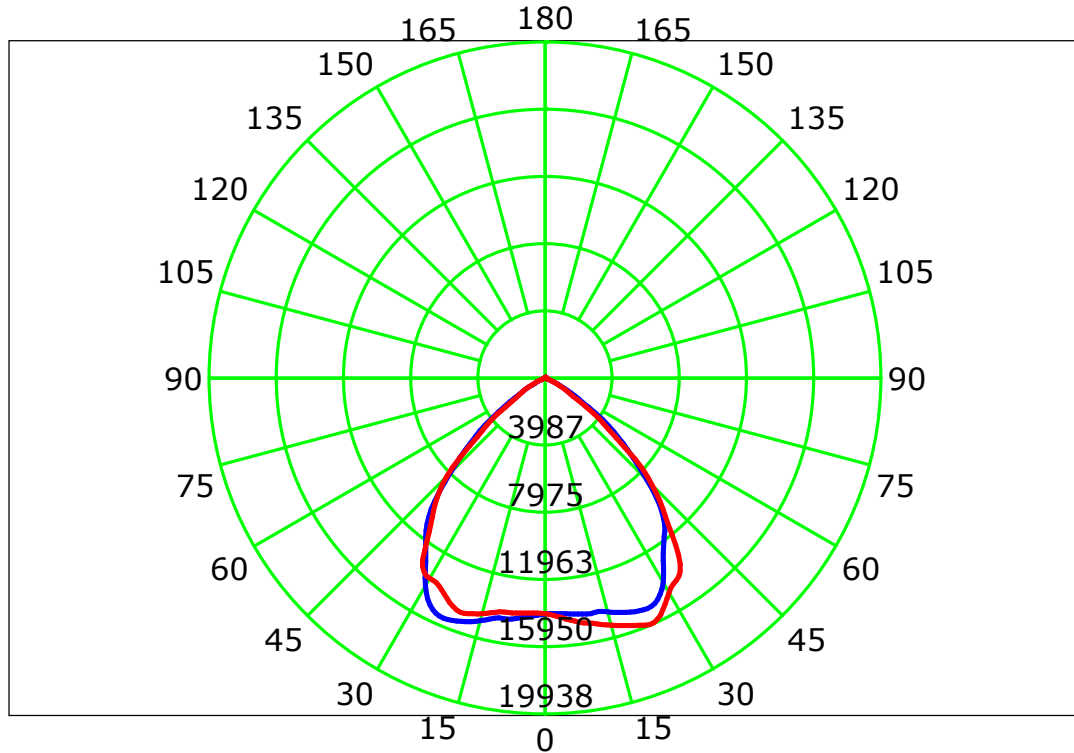
Test Device: LSG-1800B

Distance: 12.677 m

Humidity:

Inspector:

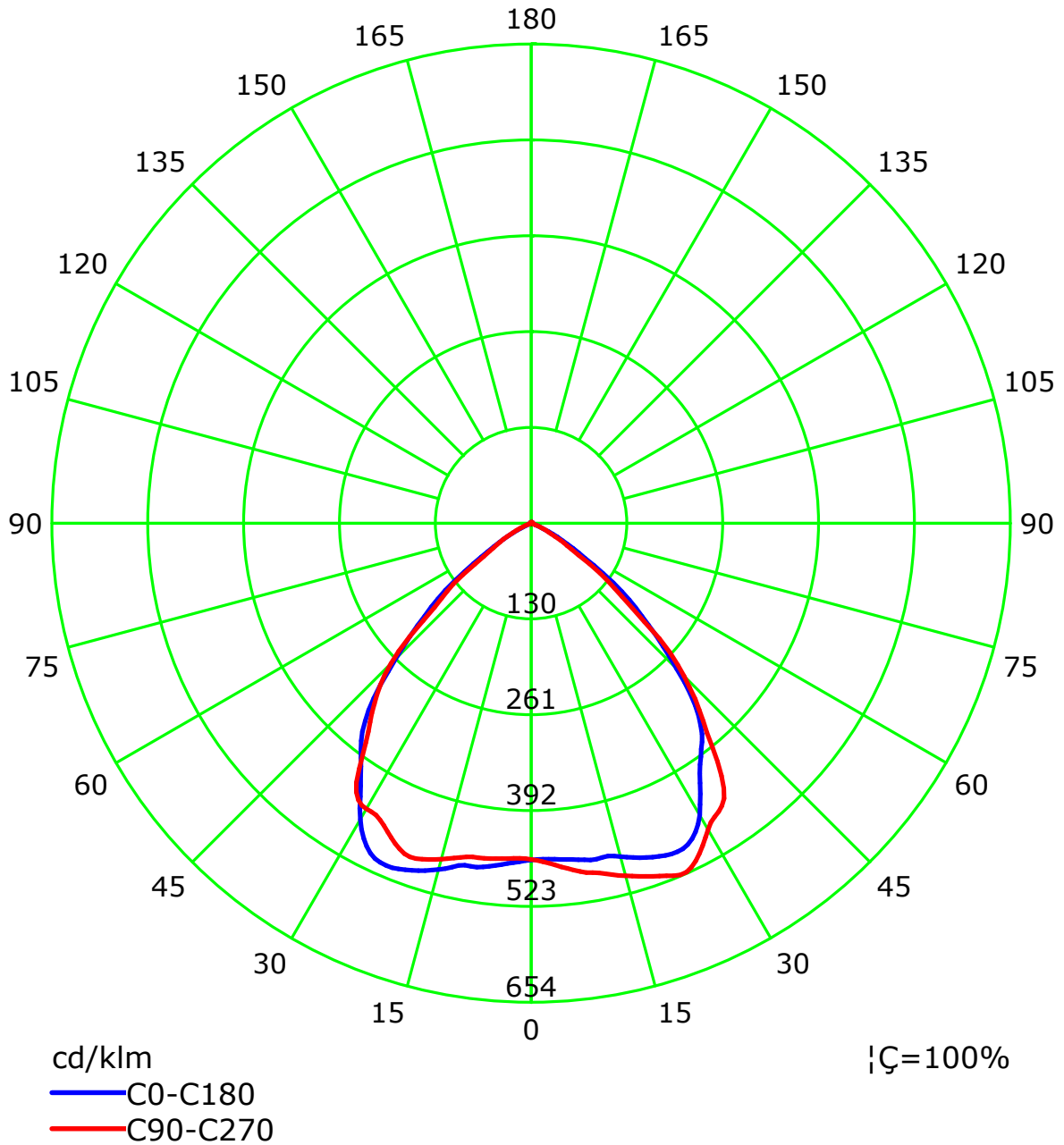
## Luminous Intensity Distribution Curve



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)



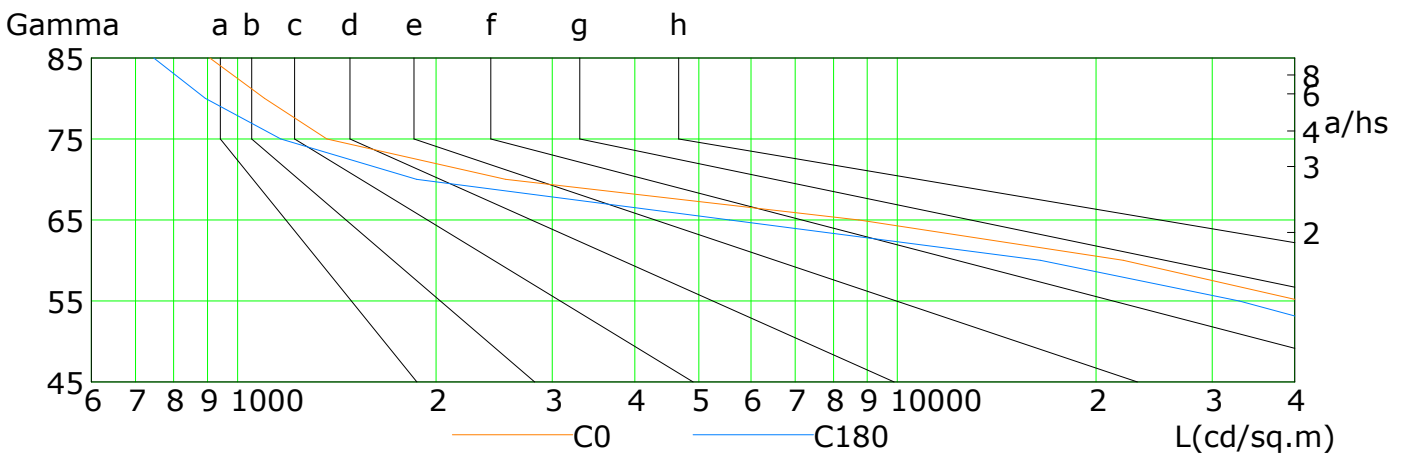
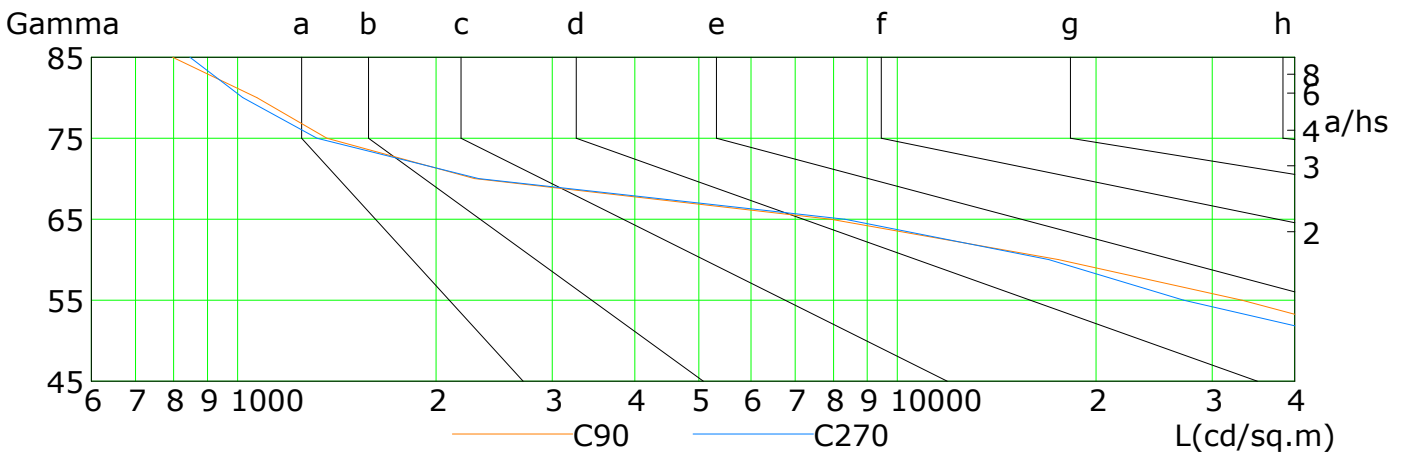
C Plane (°):0.0-360.0: 22.5  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

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)							
		2000	1000	500	<=300				
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	81996	62064	41125	21987	8741	2546	1366	1099	908
C90	86188	56563	33296	17539	7920	2286	1366	1070	797
C180	76548	55865	32958	16464	5569	1868	1163	894	746
C270	79110	50118	27168	16952	8327	2320	1320	1018	847

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

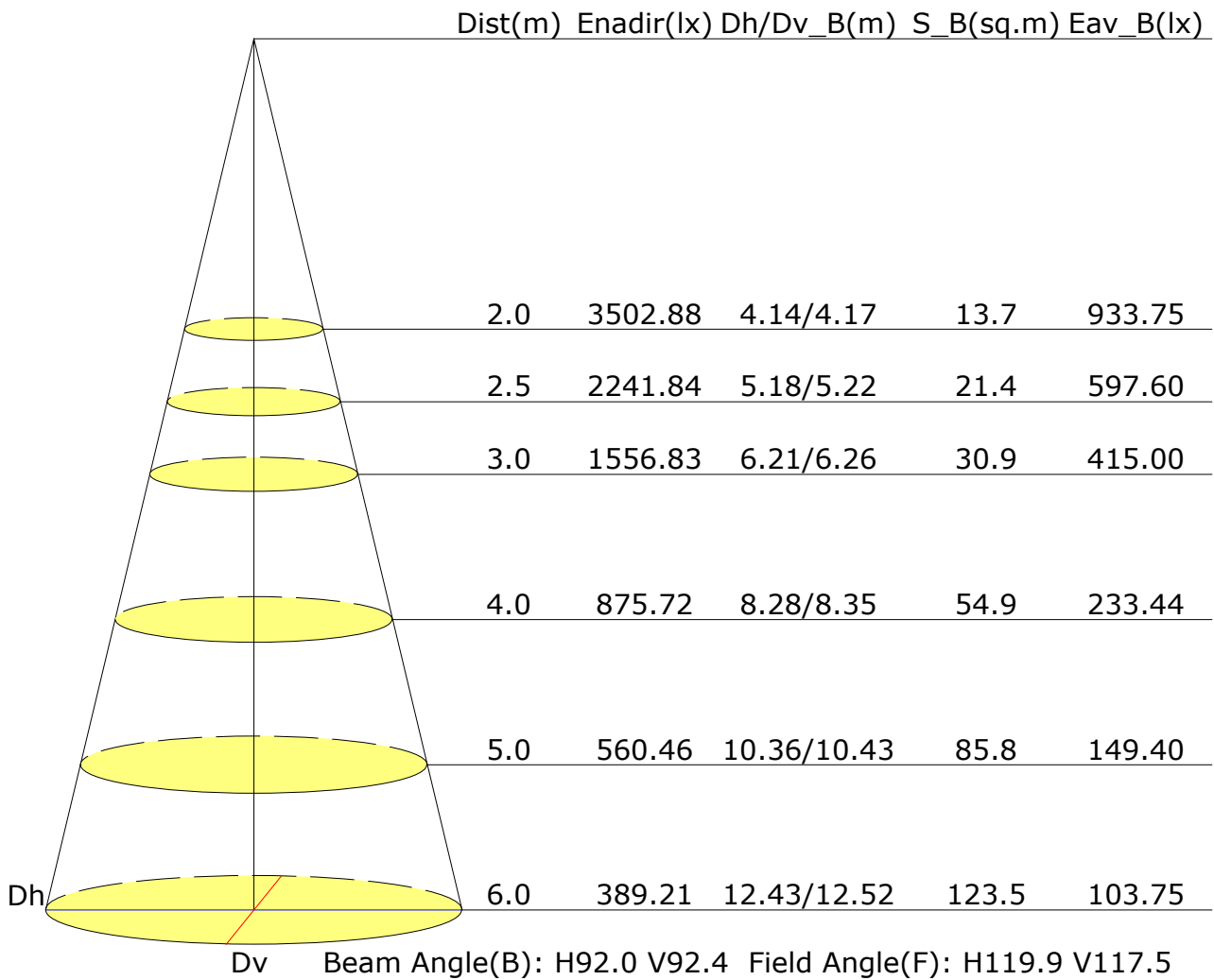
Test Device: LSG-1800B

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	24.8	25.9	25.1	26.1	26.4	24.8	25.9	25.1	26.1	26.4
3H	24.7	25.7	25.0	25.9	26.2	24.7	25.7	25.0	25.9	26.2
4H	24.6	25.5	24.9	25.8	26.1	24.6	25.5	24.9	25.8	26.1
6H	24.5	25.4	24.9	25.7	26.0	24.5	25.4	24.9	25.7	26.0
8H	24.5	25.3	24.8	25.6	25.9	24.5	25.3	24.8	25.6	26.0
12H	24.4	25.2	24.8	25.6	25.9	24.4	25.2	24.8	25.6	25.9
X=4H Y=2H	24.7	25.6	25.0	25.9	26.2	24.7	25.6	25.0	25.9	26.2
3H	24.6	25.4	25.0	25.7	26.0	24.6	25.4	24.9	25.7	26.0
4H	24.5	25.2	24.9	25.6	25.9	24.5	25.2	24.9	25.5	25.9
6H	24.4	25.0	24.9	25.4	25.8	24.4	25.0	24.8	25.4	25.8
8H	24.4	25.0	24.8	25.4	25.8	24.4	24.9	24.8	25.3	25.8
12H	24.4	24.9	24.8	25.3	25.7	24.3	24.8	24.8	25.3	25.7
X=8H Y=4H	24.4	25.0	24.8	25.4	25.8	24.4	24.9	24.8	25.3	25.8
6H	24.3	24.8	24.8	25.2	25.7	24.3	24.8	24.8	25.2	25.7
8H	24.3	24.7	24.8	25.1	25.6	24.3	24.7	24.8	25.1	25.6
12H	24.3	24.6	24.8	25.1	25.6	24.2	24.6	24.7	25.0	25.6
X=12H Y=4H	24.4	24.9	24.8	25.3	25.7	24.3	24.8	24.8	25.3	25.7
6H	24.3	24.7	24.8	25.1	25.6	24.3	24.7	24.8	25.1	25.6
8H	24.3	24.6	24.8	25.1	25.6	24.2	24.6	24.7	25.0	25.6
Variations with the observer position at spacings:										
S=1.0H	+1.1/-3.0					+1.4/-3.3				
S=1.5H	+2.9/-7.6					+2.8/-8.0				
S=2.0H	+4.7/-13.3					+4.8/-14.4				

Calculate in accordance with CIE Pub.117. The table is revised with 30476lm ( $8\log(F/F_0) = 11.9$ ).

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	0.64	0.75	0.82	0.87	0.94	0.98	1.01	1.05	1.07
		0.30	0.57	0.68	0.76	0.81	0.89	0.94	0.97	1.01	1.04
		0.20	0.52	0.63	0.71	0.77	0.85	0.90	0.94	0.99	1.02
0.50	0.50	0.20	0.62	0.73	0.80	0.85	0.91	0.95	0.97	1.01	1.03
		0.30	0.56	0.67	0.74	0.80	0.87	0.91	0.94	0.98	1.00
		0.20	0.51	0.63	0.70	0.76	0.83	0.88	0.91	0.96	0.99
0.30	0.50	0.20	0.61	0.71	0.78	0.82	0.88	0.92	0.94	0.97	0.99
		0.30	0.55	0.66	0.73	0.78	0.85	0.89	0.91	0.95	0.97
		0.20	0.51	0.62	0.69	0.75	0.82	0.86	0.89	0.93	0.96
0.00	0.00	0.00	0.49	0.60	0.67	0.72	0.78	0.82	0.85	0.89	0.91
<p>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</p>											

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	0.89	0.70	0.58	0.50	0.39	0.31	0.27	0.20	0.16
	0.30		0.74	0.60	0.51	0.44	0.35	0.29	0.25	0.19	0.16
	0.20		0.63	0.53	0.45	0.40	0.32	0.27	0.23	0.18	0.15
0.50	0.50	0.20	0.85	0.67	0.56	0.47	0.37	0.33	0.25	0.19	0.15
	0.30		0.72	0.59	0.49	0.42	0.33	0.28	0.23	0.18	0.15
	0.20		0.63	0.52	0.44	0.38	0.31	0.26	0.22	0.17	0.14
0.30	0.50	0.20	0.83	0.65	0.53	0.45	0.35	0.28	0.24	0.18	0.15
	0.30		0.71	0.57	0.48	0.41	0.32	0.26	0.22	0.17	0.14
	0.20		0.62	0.51	0.43	0.37	0.30	0.25	0.21	0.16	0.13
0.00	0.00	0.00	0.51	0.40	0.33	0.28	0.22	0.18	0.15	0.11	0.09
<p>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</p>											

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	0.17	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
<p>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</p>											

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: