

Report No.: 1

Test Time: 14.08.2019 11:16

## Luminaire Property

Luminaire Manufacturer:

Luminaire Description: FL 58\_750 152LED 0,39A 23W 4000K microprisma

Lamp Description: LED

Luminous Length (mm): 750

Luminous Width (mm): 75

Luminous Height (mm): 60

Voltage: 221.3 V

Current: 0.106 A

Power: 22.96 W

Power Factor: 0.970

## Photometric Results

CIE Class: Direct

Measurement Flux: 3103 lm

Downward Ratio: 99%

Total Rated Lamp Lumens: 3103.0 lm

Efficiency: 100%

Upward Ratio: 1%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 163.3, 160.8, 152.4, 152.2

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 78.5, 79.3, 76.2, 76.5

Luminaire Efficacy Rating (LER): 135.20

Central Intensity: 1558.07 cd

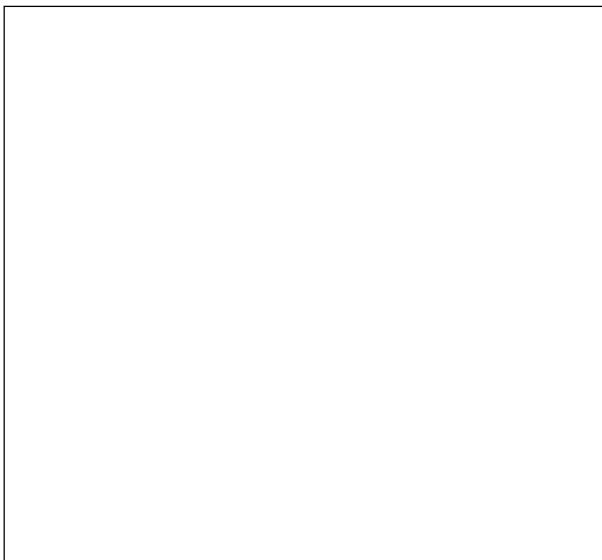
Max. Intensity: 1561.46 cd

Pos of Max. Intensity: H135 V1

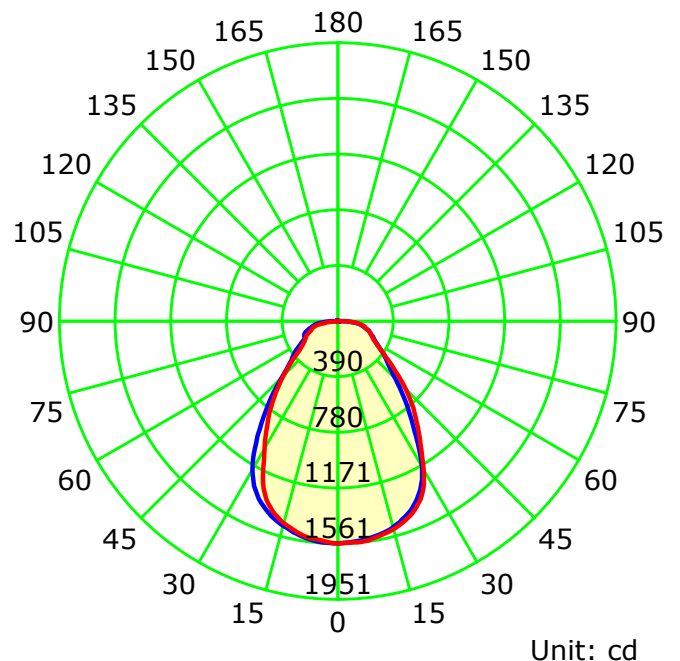
S/MH(C0/C180): 1.15

S/MH(C90/C270): 1.10

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

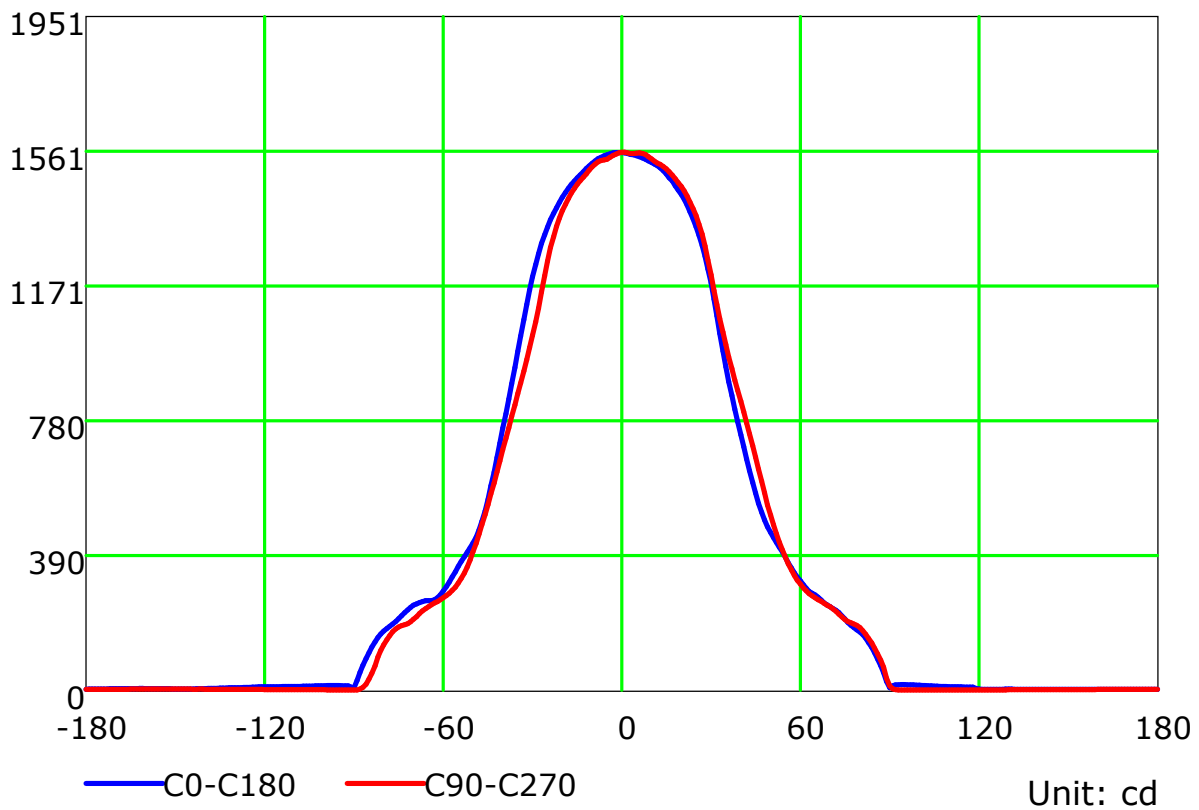
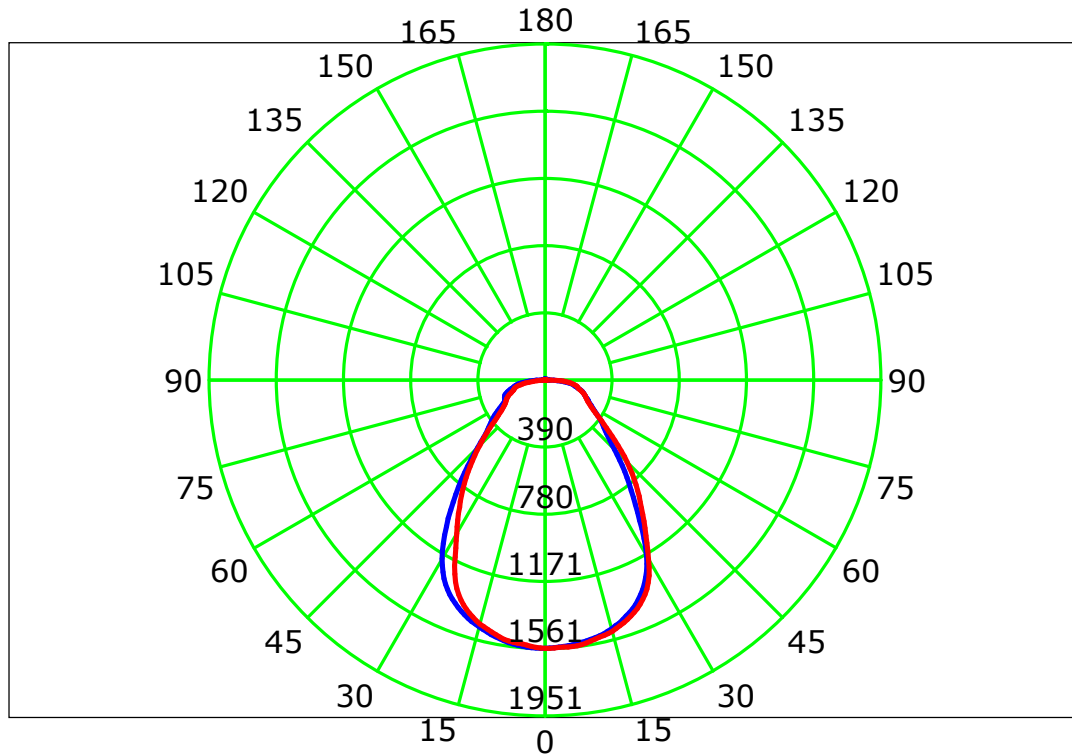
Test Device: LSG-1800B

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

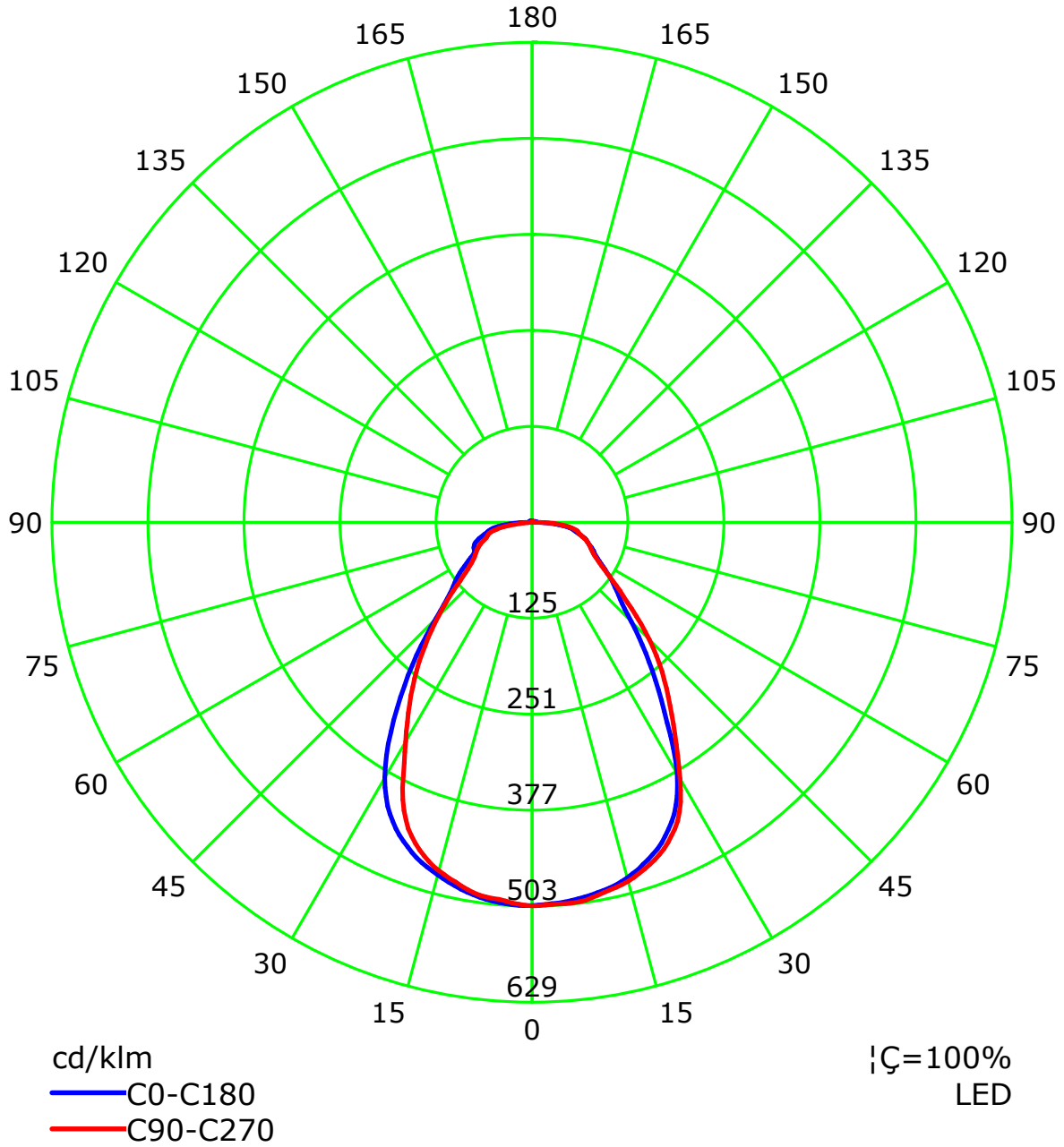
Test Device: LSG-1800B

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

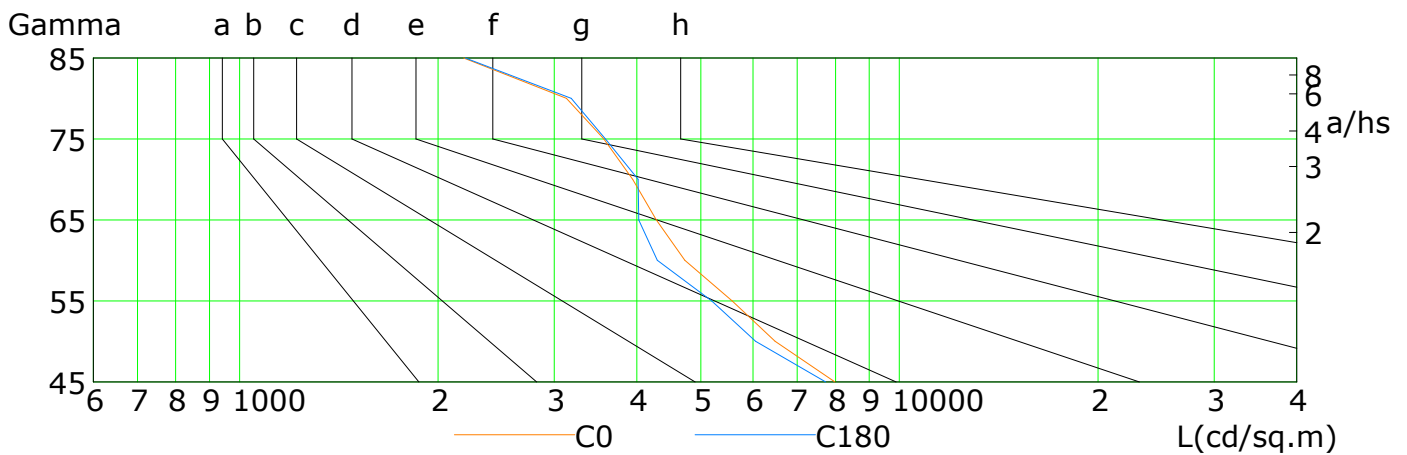
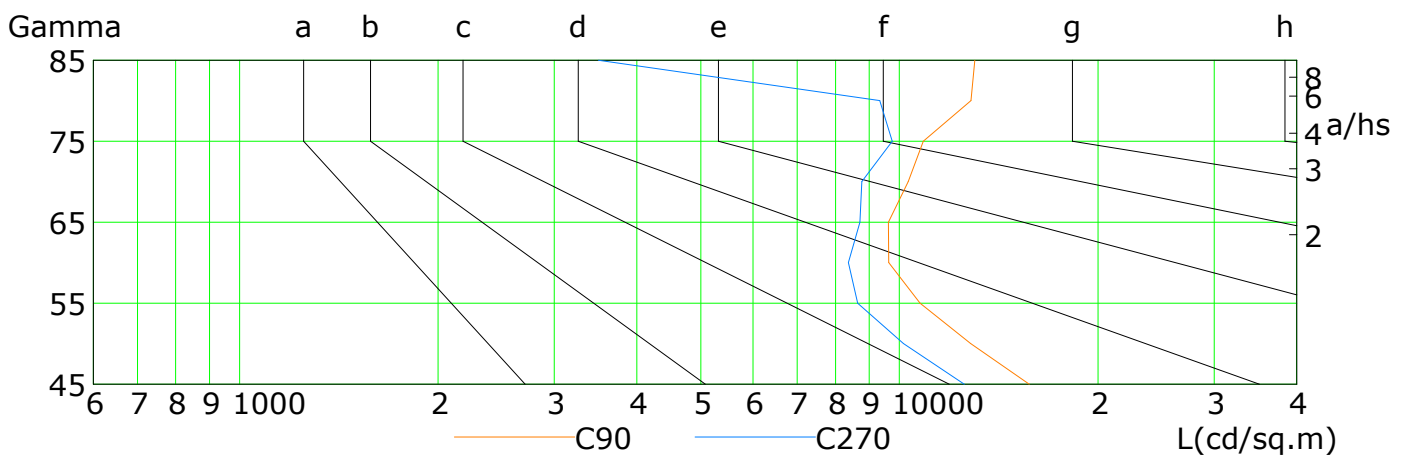
Humidity:

Inspector:

## Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
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	7983	6483	5582	4728	4283	3942	3565	3129	2186
C90	15726	12821	10747	9632	9627	10316	10867	12836	13015
C180	7729	6052	5193	4296	4026	4019	3585	3182	2198
C270	12538	10138	8644	8370	8717	8772	9749	9336	3499

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

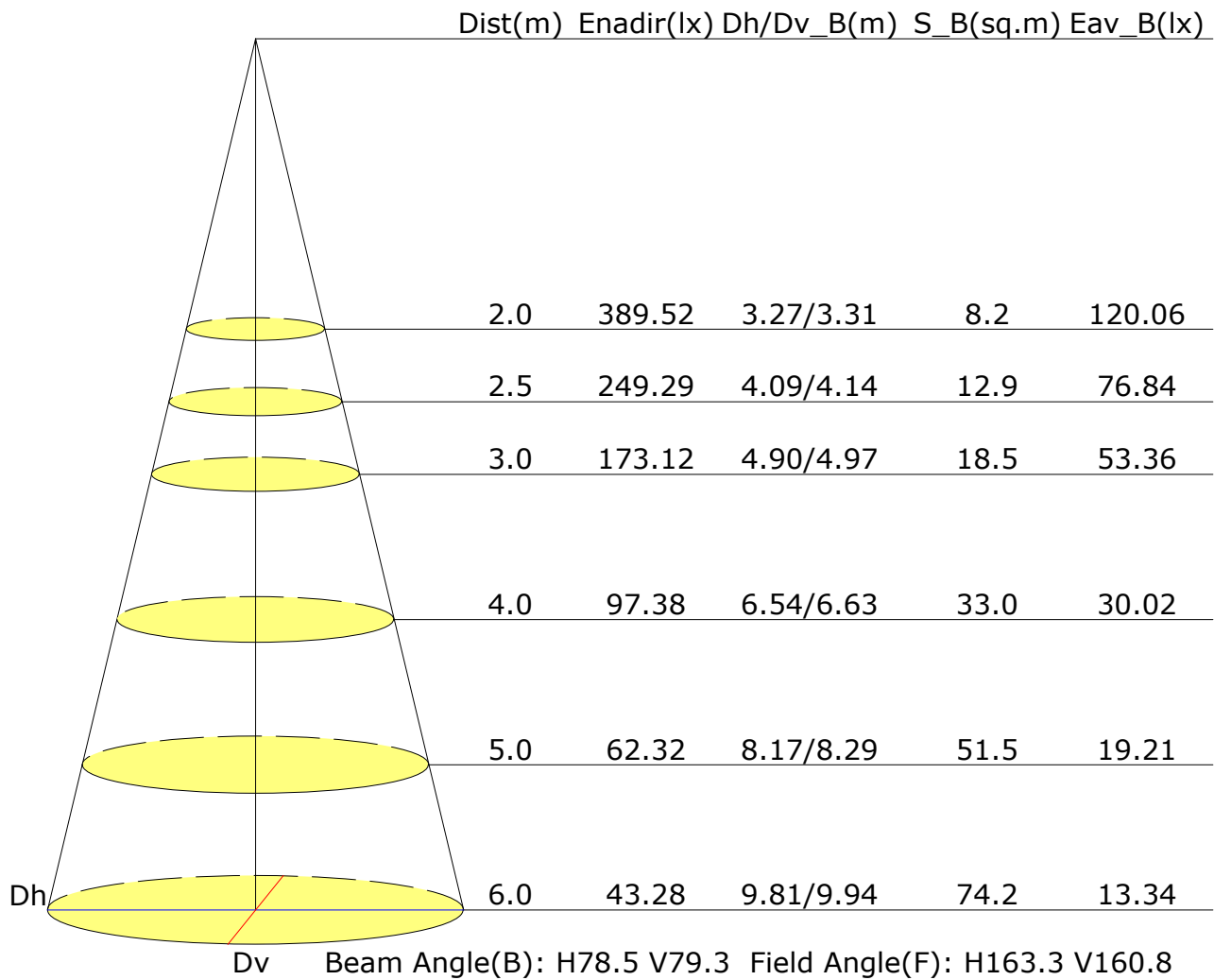
Test Device: LSG-1800B

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	17.8	19.1	18.1	19.3	19.6	18.8	20.1	19.1	20.3	20.6
3H	19.0	20.2	19.4	20.5	20.8	20.3	21.5	20.7	21.8	22.1
4H	19.7	20.8	20.0	21.1	21.4	21.2	22.3	21.6	22.6	22.9
6H	20.2	21.2	20.6	21.6	21.9	22.1	23.1	22.5	23.5	23.8
8H	20.5	21.4	20.8	21.8	22.1	22.5	23.5	22.9	23.8	24.2
12H	20.6	21.5	21.0	21.9	22.3	22.8	23.7	23.2	24.1	24.4
X=4H Y=2H	18.3	19.3	18.6	19.6	19.9	19.1	20.2	19.4	20.5	20.8
3H	19.7	20.7	20.1	21.0	21.4	20.8	21.8	21.2	22.1	22.5
4H	20.5	21.4	20.9	21.7	22.1	21.8	22.7	22.3	23.1	23.4
6H	21.2	21.9	21.6	22.4	22.8	22.9	23.7	23.3	24.1	24.5
8H	21.5	22.2	22.0	22.6	23.0	23.4	24.0	23.8	24.5	24.9
12H	21.7	22.3	22.2	22.8	23.2	23.7	24.3	24.2	24.8	25.2
X=8H Y=4H	20.8	21.5	21.3	21.9	22.3	22.0	22.7	22.5	23.1	23.6
6H	21.6	22.2	22.1	22.6	23.1	23.2	23.7	23.7	24.2	24.7
8H	22.0	22.5	22.5	23.0	23.5	23.7	24.2	24.2	24.7	25.2
12H	22.3	22.7	22.8	23.2	23.7	24.1	24.6	24.6	25.0	25.6
X=12H Y=4H	20.8	21.5	21.3	21.9	22.4	22.0	22.6	22.5	23.1	23.5
6H	21.7	22.2	22.2	22.7	23.2	23.2	23.7	23.7	24.2	24.7
8H	22.1	22.5	22.6	23.0	23.6	23.8	24.2	24.3	24.7	25.2
Variations with the observer position at spacings:										
S=1.0H	+0.3/-0.3					+0.3/-0.3				
S=1.5H	+0.5/-0.8					+0.5/-0.6				
S=2.0H	+0.9/-1.2					+0.9/-0.8				

Calculate in accordance with CIE Pub.117. The table is revised with 3103lm ( $8\log(F/F_0) = 3.9$ ).

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	0.58	0.68	0.75	0.80	0.87	0.92	0.96	1.00	1.03
	0.30		0.50	0.60	0.68	0.73	0.81	0.87	0.91	0.96	0.99
	0.20		0.45	0.55	0.62	0.68	0.76	0.82	0.86	0.92	0.96
0.50	0.50	0.20	0.57	0.66	0.73	0.77	0.84	0.89	0.92	0.96	0.99
	0.30		0.50	0.59	0.66	0.72	0.79	0.84	0.88	0.93	0.96
	0.20		0.45	0.54	0.61	0.67	0.75	0.80	0.84	0.90	0.93
0.30	0.50	0.20	0.55	0.64	0.70	0.75	0.81	0.86	0.89	0.92	0.95
	0.30		0.49	0.58	0.65	0.70	0.77	0.82	0.85	0.90	0.93
	0.20		0.44	0.54	0.60	0.66	0.73	0.78	0.82	0.87	0.90
0.00	0.00	0.00	0.42	0.51	0.58	0.63	0.70	0.74	0.78	0.83	0.86
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	0.97	0.81	0.69	0.60	0.48	0.40	0.35	0.27	0.22
	0.30		0.81	0.69	0.60	0.53	0.44	0.37	0.32	0.25	0.21
	0.20		0.70	0.60	0.53	0.48	0.40	0.34	0.30	0.24	0.20
0.50	0.50	0.20	0.94	0.78	0.66	0.58	0.46	0.42	0.33	0.26	0.21
	0.30		0.80	0.67	0.59	0.52	0.42	0.36	0.31	0.24	0.20
	0.20		0.69	0.60	0.52	0.47	0.39	0.33	0.29	0.23	0.19
0.30	0.50	0.20	0.91	0.75	0.64	0.55	0.44	0.37	0.31	0.24	0.20
	0.30		0.78	0.66	0.57	0.50	0.41	0.34	0.30	0.23	0.19
	0.20		0.68	0.59	0.52	0.46	0.38	0.32	0.28	0.22	0.19
0.00	0.00	0.00	0.58	0.49	0.42	0.37	0.30	0.26	0.22	0.17	0.14
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	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.21	0.22
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.06	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	0.21	0.21
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.18
	0.20		0.05	0.06	0.08	0.09	0.11	0.12	0.13	0.15	0.16
0.30	0.50	0.20	0.15	0.16	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		0.05	0.06	0.08	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: