Report No.: 1

Test Time: 18.09.2019 13:29

Luminaire Property

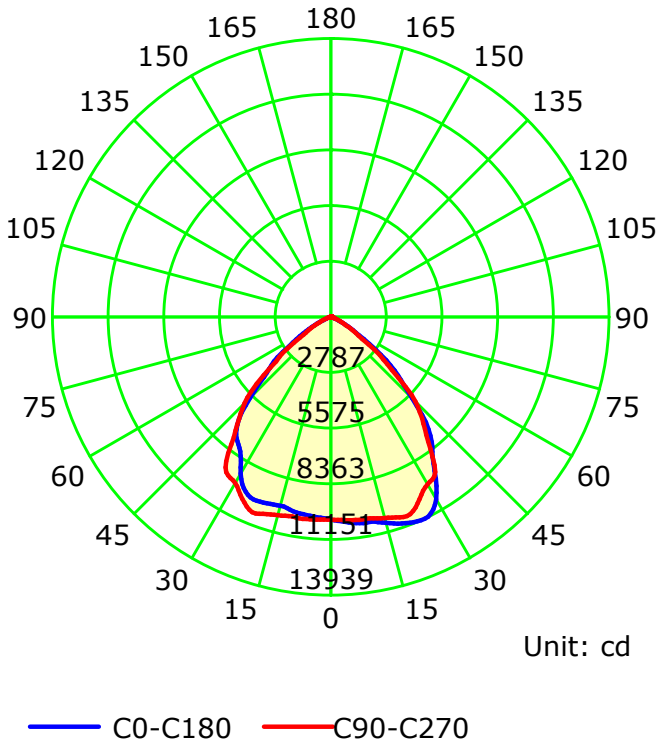
Luminaire Manufacturer:
Luminaire Description: FD 112 150W 90gr
Luminous Length (mm): 275
Luminous Width (mm): 275
Luminous Height (mm): 90
Voltage: 220.8 V
Current: 0.678 A
Power: 146.55 W
Power Factor: 0.977

Photometric Results

CIE Class: Direct
Total Rated Lamp Lumens: 21650.7 lm
Measurement Flux: 21650.7 lm
Efficiency: 100%
Downward Ratio: 99%
Upward Ratio: 1%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 122.0, 121.2, 121.4, 121.6
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 90.8, 93.9, 92.2, 92.3
Luminaire Efficacy Rating (LER): 147.79
Central Intensity: 10142.29 cd
Max. Intensity: 11151.6 cd
Pos of Max. Intensity: H0 V25
S/MH(C0/C180): 1.33
S/MH(C90/C270): 1.39

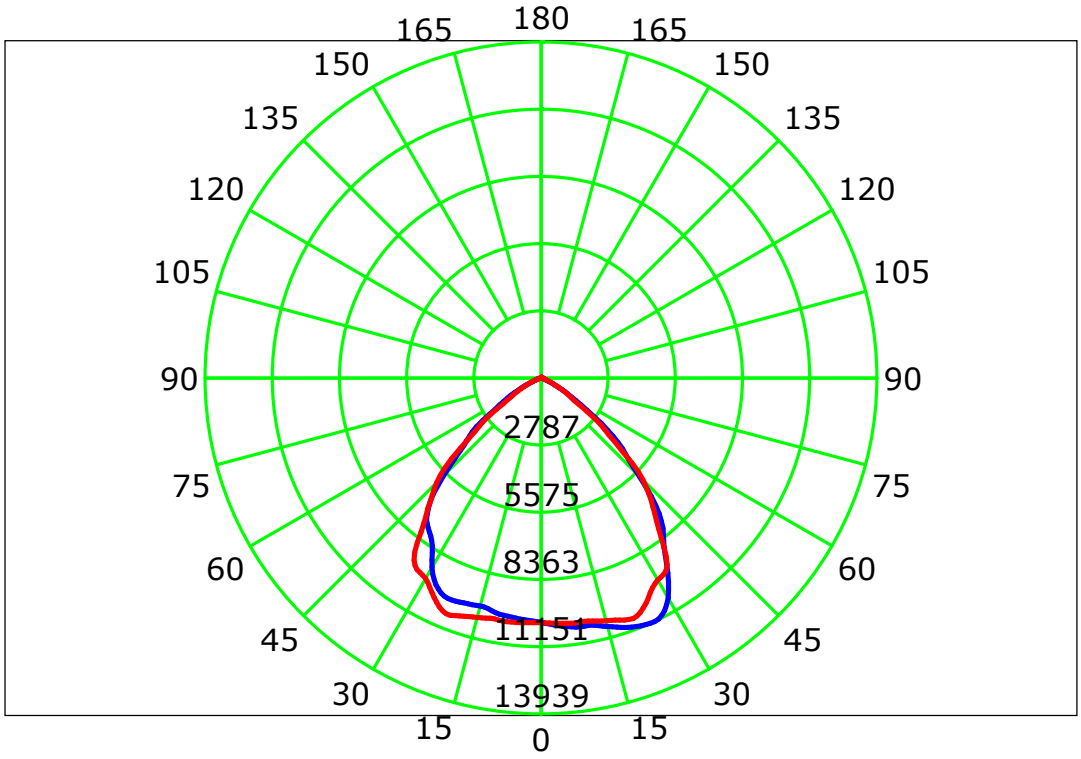
Picture Of Luminaire

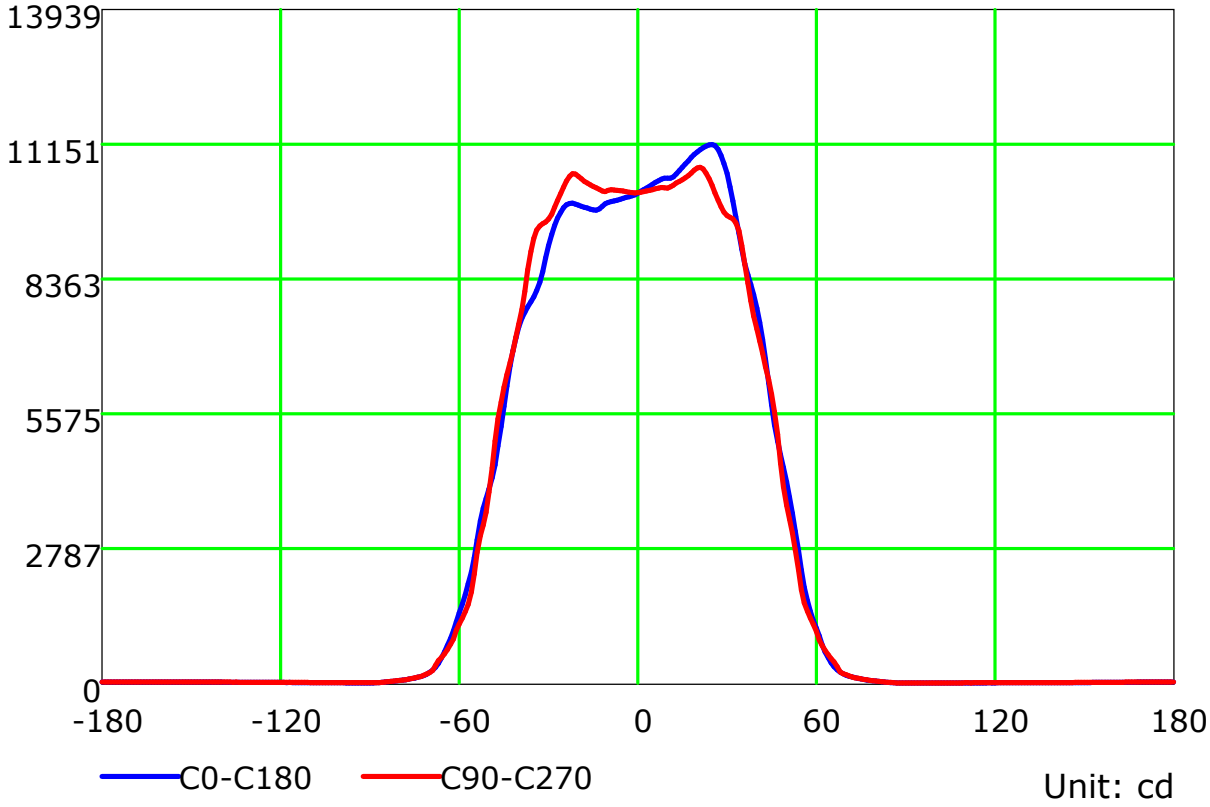
Luminous Intensity Distribution Curve



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:

Luminous Intensity Distribution Curve

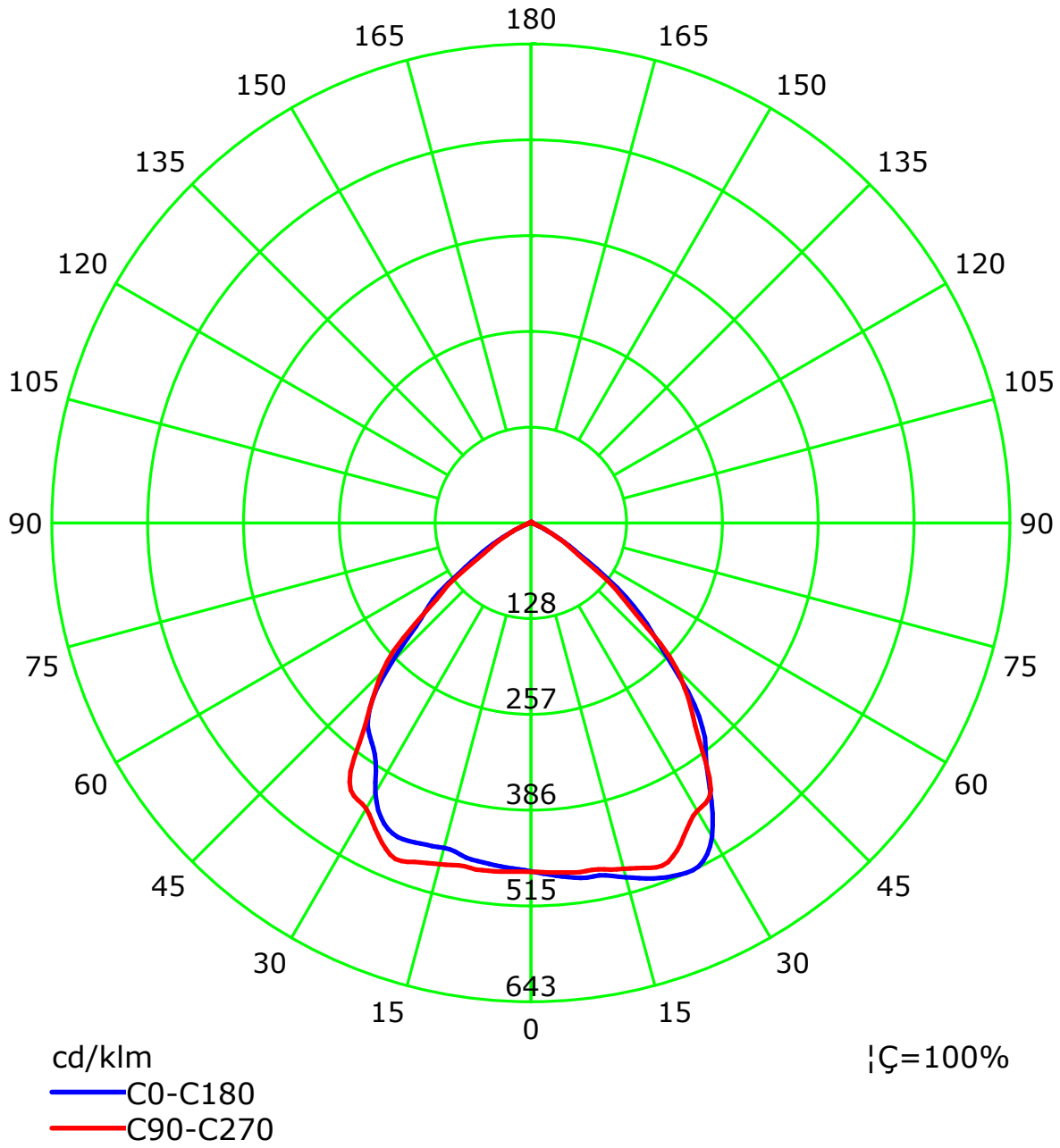




C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

Luminous Intensity Distribution Curve(cd/klm)

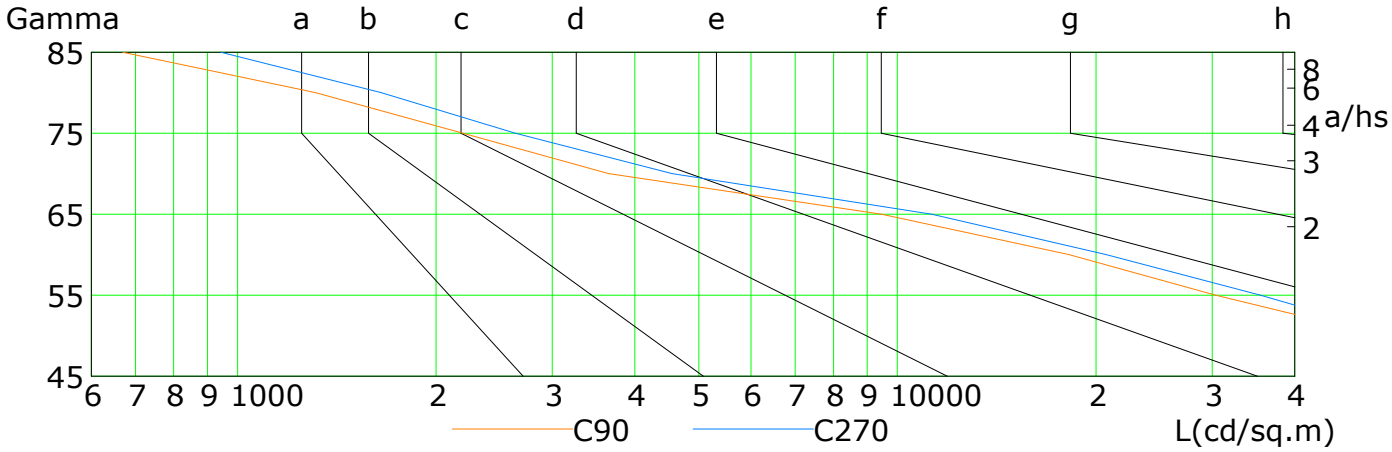


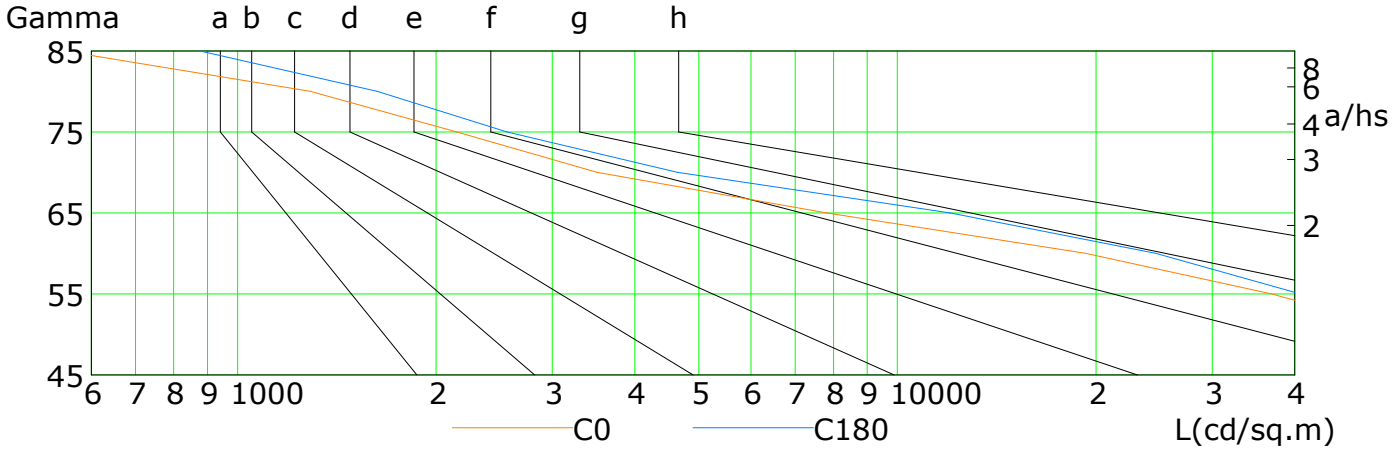
C Plane (°):0.0-360.0: 22.5
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

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	81211	61716	36915	19270	7815	3504	2149	1289	547
C90	84288	54583	30380	18200	9462	3648	2197	1313	670
C180	80725	59530	40851	24633	12031	4639	2563	1627	877
C270	86307	58540	35525	20717	11283	4555	2637	1650	943

C Plane (°):0.0-360.0: 22.5
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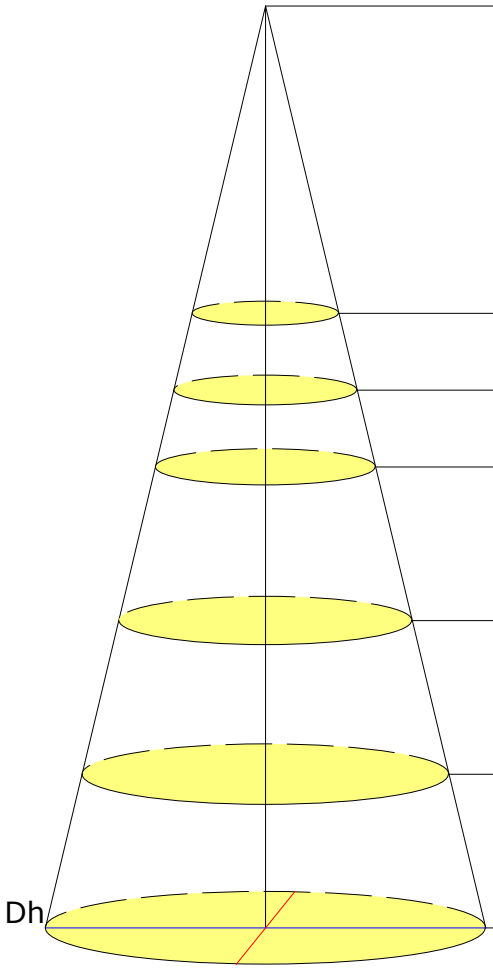
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: LSG-1800B
Distance: 12.677 m
Humidity:
Inspector:

Illuminance at a Distance



Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
2.0	2535.57	4.06/4.28	14.1	641.37
2.5	1622.77	5.07/5.35	22.0	410.48
3.0	1126.92	6.09/6.42	31.7	285.05
4.0	633.89	8.12/8.56	56.4	160.34
5.0	405.69	10.14/10.70	88.0	102.62
6.0	281.73	12.17/12.84	126.8	71.26

Beam Angle(B): H90.8 V93.9 Field Angle(F): H122.0 V121.2

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	24.6	25.7	24.9	26.0	26.2	24.8	26.0	25.1	26.2	26.4
3H	24.5	25.5	24.8	25.8	26.0	24.7	25.7	25.0	26.0	26.3
4H	24.4	25.4	24.8	25.7	25.9	24.7	25.6	25.0	25.9	26.2
6H	24.4	25.2	24.7	25.5	25.8	24.6	25.5	24.9	25.8	26.1
8H	24.3	25.2	24.7	25.5	25.8	24.5	25.4	24.9	25.7	26.0
12H	24.3	25.1	24.7	25.4	25.7	24.5	25.3	24.9	25.6	26.0
X=4H Y=2H	24.5	25.5	24.8	25.7	26.0	24.7	25.7	25.0	25.9	26.2
3H	24.4	25.2	24.8	25.5	25.9	24.6	25.4	25.0	25.7	26.1
4H	24.3	25.0	24.7	25.4	25.8	24.6	25.3	25.0	25.6	26.0
6H	24.3	24.9	24.7	25.3	25.7	24.5	25.1	24.9	25.5	25.9
8H	24.2	24.8	24.7	25.2	25.6	24.4	25.0	24.9	25.4	25.8
12H	24.2	24.7	24.7	25.1	25.6	24.4	24.9	24.9	25.3	25.8
X=8H Y=4H	24.2	24.8	24.7	25.2	25.6	24.4	25.0	24.9	25.4	25.8
6H	24.2	24.6	24.6	25.1	25.5	24.4	24.8	24.8	25.3	25.7
8H	24.1	24.5	24.6	25.0	25.5	24.3	24.7	24.8	25.2	25.7
12H	24.1	24.4	24.6	24.9	25.4	24.3	24.6	24.8	25.1	25.6
X=12H Y=4H	24.2	24.7	24.6	25.1	25.6	24.4	24.9	24.9	25.3	25.8
6H	24.1	24.5	24.6	25.0	25.5	24.3	24.7	24.8	25.2	25.7
8H	24.1	24.4	24.6	24.9	25.4	24.3	24.6	24.8	25.1	25.6
Variations with the observer position at spacings:										
S=1.0H	+1.1/-3.4					+1.1/-2.5				
S=1.5H	+3.2/-7.7					+2.7/-7.3				
S=2.0H	+5.1/-12.4					+4.6/-11.8				

Calculate in accordance with CIE Pub.117. The table is revised with 21651lm (8log(F/F0) = 10.7).

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	0.63	0.74	0.81	0.86	0.93	0.98	1.01	1.04	1.07
	0.30		0.56	0.67	0.75	0.81	0.88	0.93	0.96	1.01	1.04
	0.20		0.51	0.62	0.70	0.76	0.84	0.89	0.93	0.98	1.01
0.50	0.50	0.20	0.62	0.72	0.79	0.84	0.90	0.94	0.97	1.00	1.02
	0.30		0.55	0.66	0.74	0.79	0.86	0.91	0.94	0.98	1.00
	0.20		0.51	0.62	0.69	0.75	0.82	0.87	0.91	0.95	0.98
0.30	0.50	0.20	0.60	0.70	0.77	0.81	0.87	0.91	0.94	0.97	0.99
	0.30		0.54	0.65	0.72	0.77	0.84	0.88	0.91	0.95	0.97
	0.20		0.50	0.61	0.68	0.74	0.81	0.85	0.89	0.93	0.95
0.00	0.00	0.00	0.48	0.59	0.66	0.71	0.78	0.82	0.85	0.88	0.91

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

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	0.90	0.72	0.59	0.51	0.39	0.32	0.27	0.21	0.17
	0.30		0.75	0.61	0.52	0.45	0.36	0.30	0.25	0.20	0.16
	0.20		0.64	0.54	0.46	0.40	0.32	0.27	0.23	0.18	0.15
0.50	0.50	0.20	0.87	0.69	0.57	0.48	0.37	0.34	0.26	0.20	0.16
	0.30		0.73	0.60	0.50	0.43	0.34	0.28	0.24	0.18	0.15
	0.20		0.64	0.53	0.45	0.39	0.31	0.26	0.23	0.18	0.15
0.30	0.50	0.20	0.84	0.66	0.54	0.46	0.35	0.29	0.24	0.18	0.15
	0.30		0.72	0.58	0.49	0.42	0.33	0.27	0.23	0.18	0.14
	0.20		0.63	0.52	0.44	0.38	0.30	0.25	0.22	0.17	0.14
0.00	0.00	0.00	0.52	0.41	0.34	0.29	0.22	0.18	0.15	0.12	0.09

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

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

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: