

Report No.: 01

Test Time: 2016/10/17 09:37

Luminaire Property

Luminaire Manufacturer:

Luminaire Category: Synthesis LED Linear

Luminaire Description: Synthesis Indirect SO 28CM 180 mA 3500K 120degree

Luminous Length (mm): 304

Luminous Width (mm): 50

Luminous Height (mm): 2

Voltage: 219.8 V

Current: 0.031 A

Power: 6.01 W

Power Factor: 0.871

Photometric Results

CIE Class: Direct

Measurement Flux: 546.7 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H110.1

Vertical Diffuse Angle(50%): V88.4

Luminaire Efficacy Rating (LER): 91

Max. Intensity: 295.7 cd

Total Rated Lamp Lumens: 546.7 lm

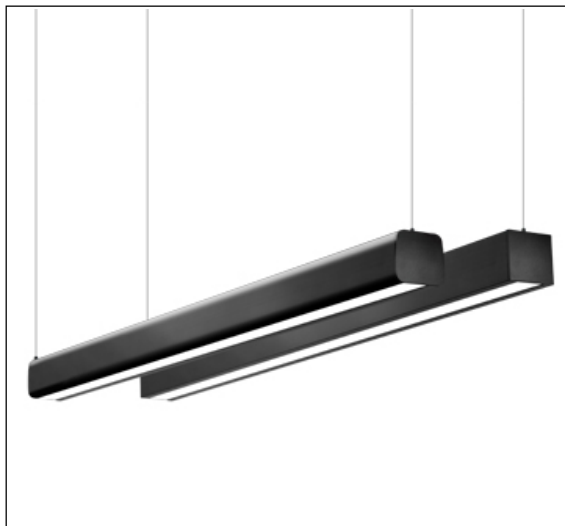
Efficiency: 100%

Upward Ratio: 1%

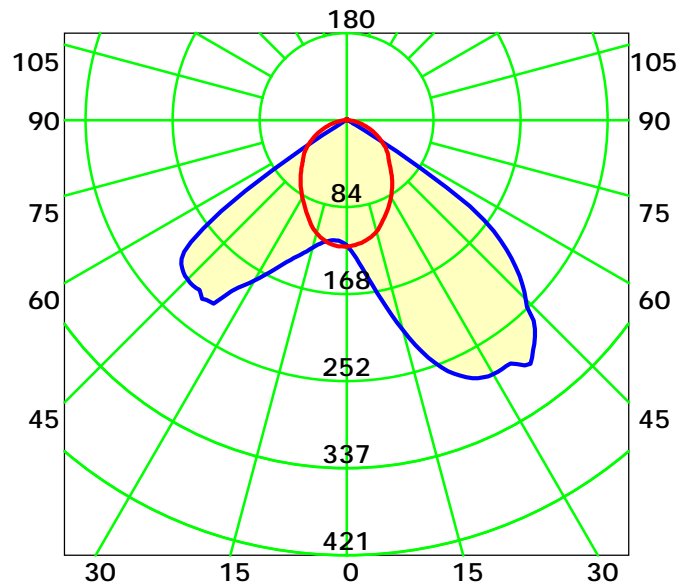
Central Intensity: 121.5 cd

Pos of Max. Intensity: H0 V37

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 99.3° Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 30.0

Test Lab: ACOLYTE

Test Type: TYPE C

Temperature: 25°C

Operator: leo

Gamma Plane (°):0.0-180.0: 1.0

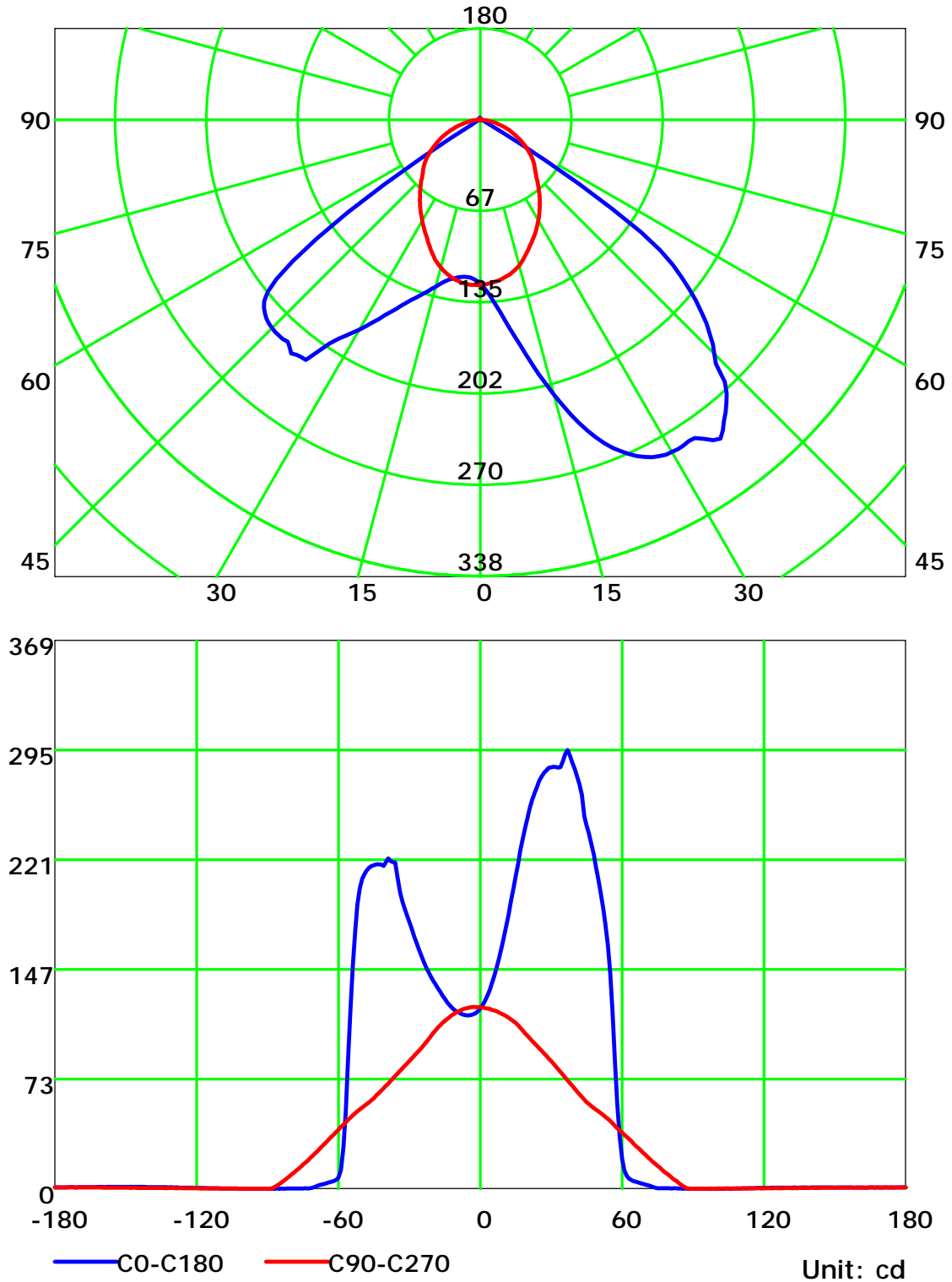
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

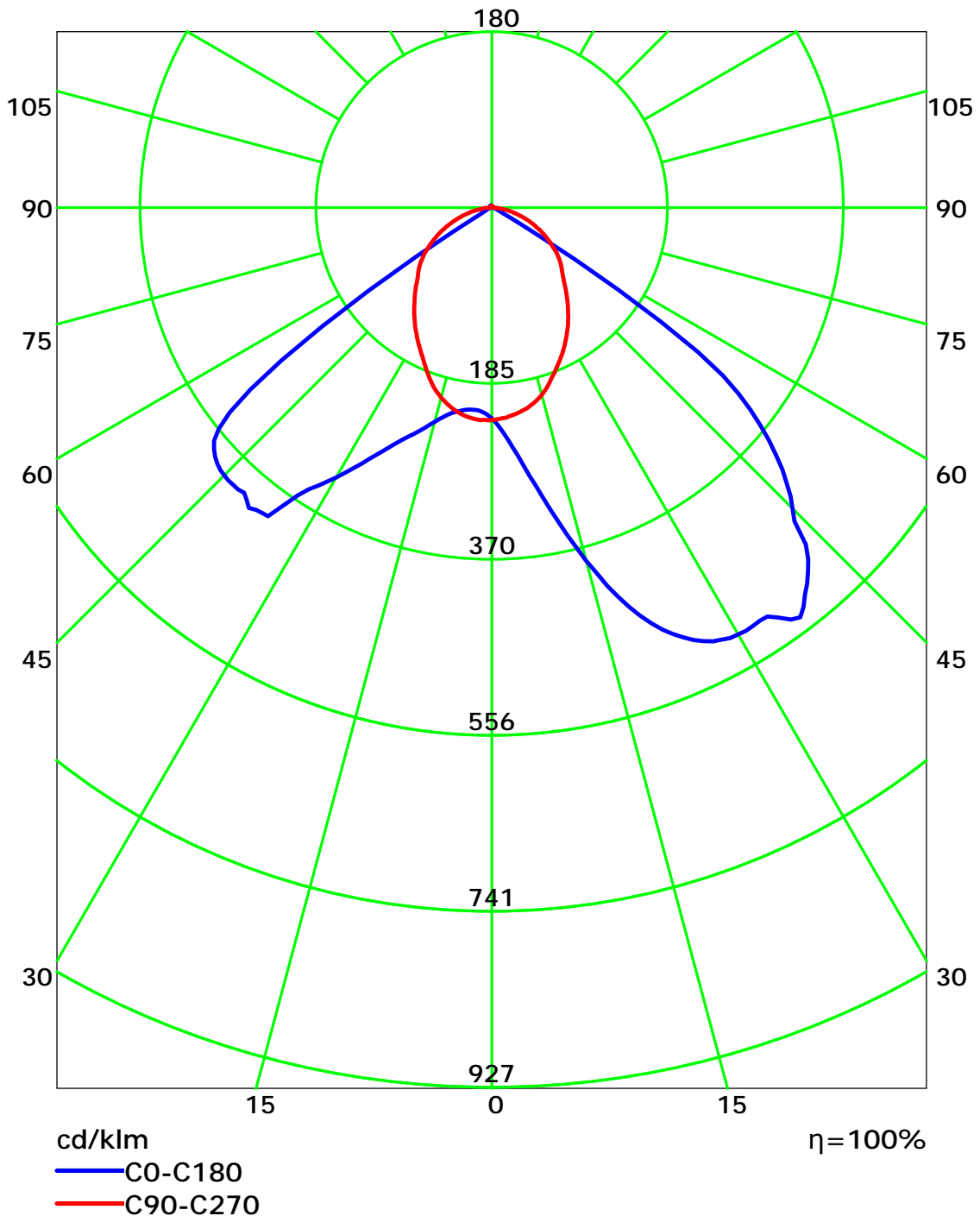
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0
Test Lab: ACOLYTE
Test Type: TYPE C
Temperature: 25°C
Operator: leo

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 30.0
Test Lab: ACOLYTE
Test Type: TYPE C
Temperature: 25°C
Operator: leo

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

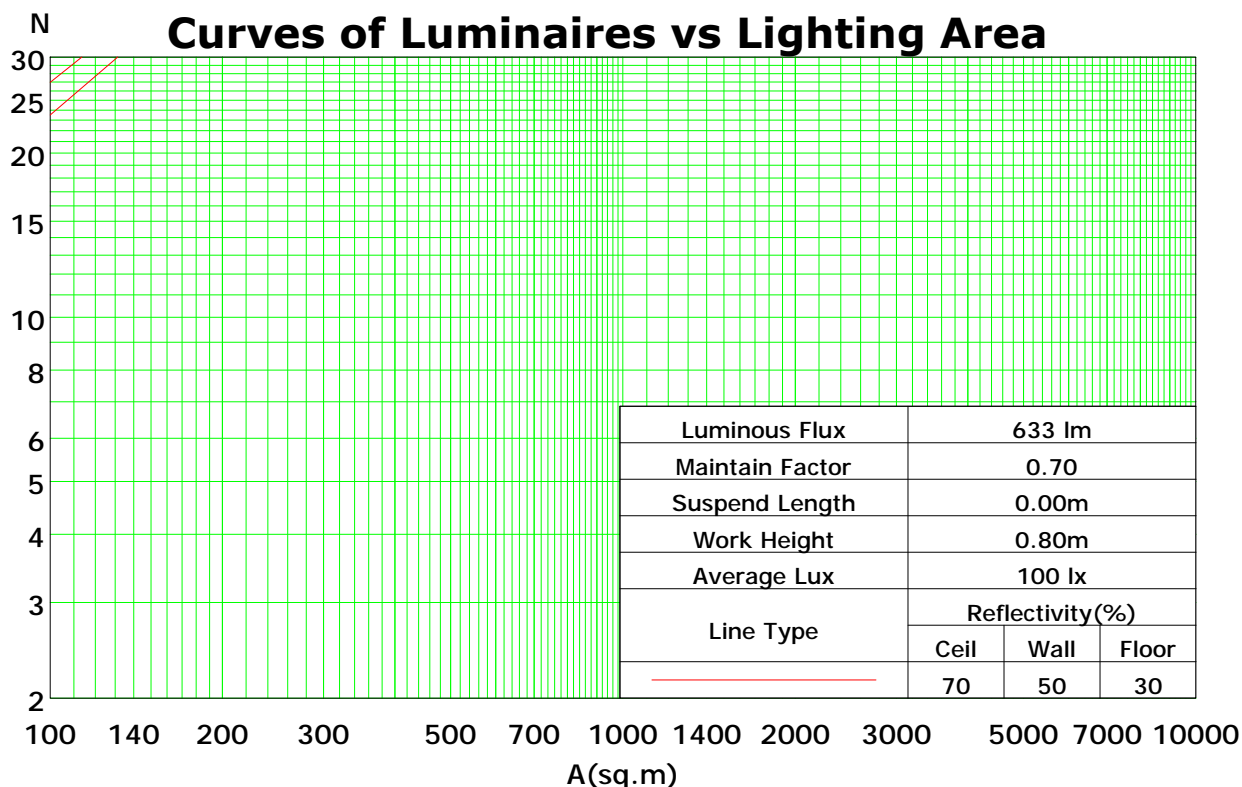
Coefficients Of Utilization - Zonal Cavity Method

RC	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.3	0.3	0.3	0.1	0.1	0.1	0
RW	0.7	0.5	0.3	0.1	0.7	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0.5	0.3	0.1	0
RCR	RF = 0.2																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	77	75	72
3	92	81	74	68	89	80	73	67	77	71	66	74	69	64	71	67	63	61
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	63	58	54	52
5	77	64	55	48	74	63	54	48	60	53	48	58	52	47	57	51	46	44
6	70	57	48	42	68	56	48	41	54	47	41	52	46	41	51	45	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

Spacing Criteria (0-180): 2.30

Spacing Criteria (90-270): 1.07

Spacing Criteria (Diagonal): 1.98



C Plane (°):0.0-360.0: 30.0

Test Lab: ACOLYTE

Test Type: TYPE C

Temperature: 25°C

Operator: leo

Gamma Plane (°):0.0-180.0:1.0

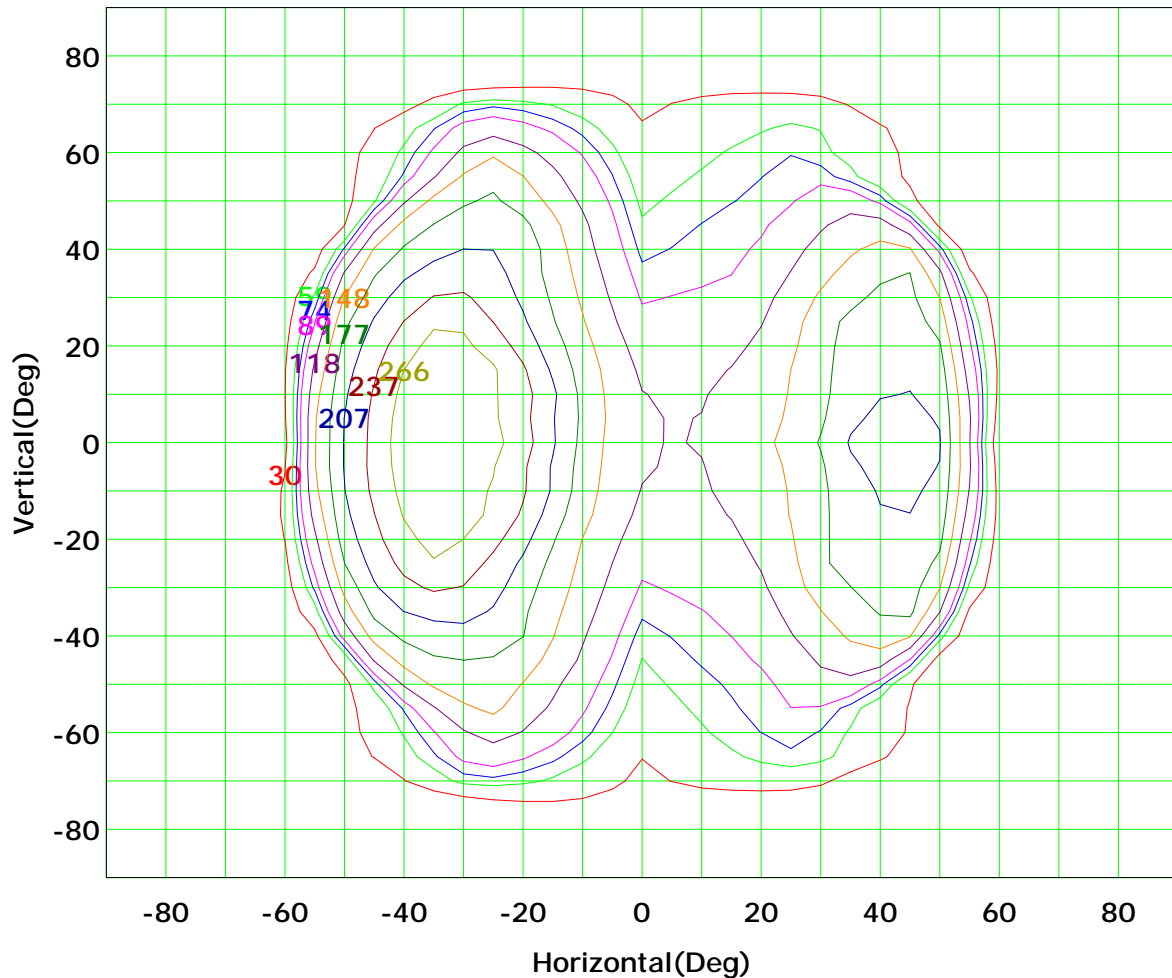
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Isocandela (rectangle)



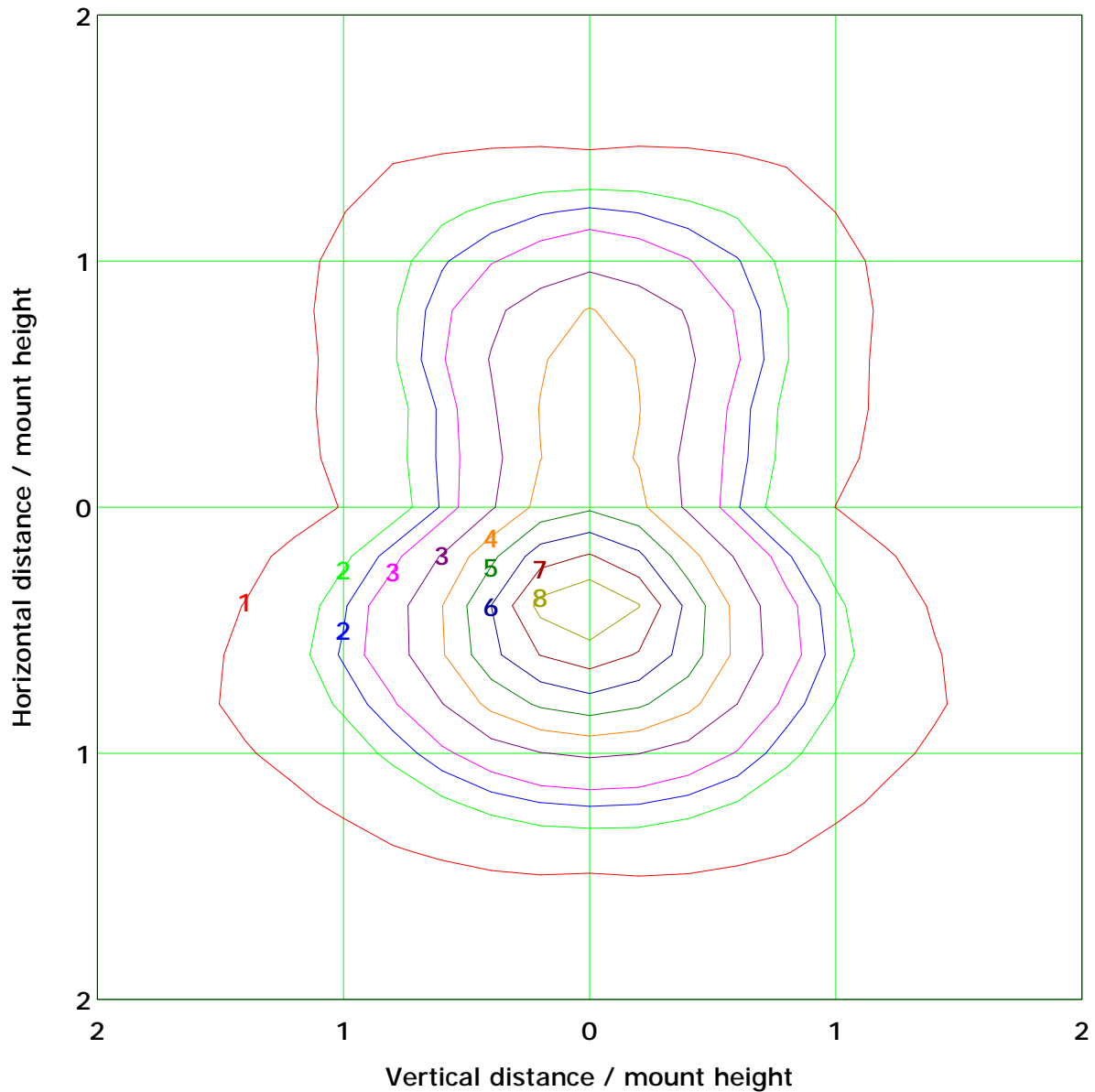
I_{max} (100%): 296 cd

(10%): 30 cd	(20%): 59 cd
(25%): 74 cd	(30%): 89 cd
(40%): 118 cd	(50%): 148 cd
(60%): 177 cd	(70%): 207 cd
(80%): 237 cd	(90%): 266 cd

C Plane (°):0.0-360.0: 30.0
Test Lab: ACOLYTE
Test Type: TYPE C
Temperature: 25°C
Operator: leo

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

IsoLux Plot



Mounting Height: 5.0m Max Lux(100%): 8.4 lx

(10%): 0.8 lx	(20%): 1.7 lx
(25%): 2.1 lx	(30%): 2.5 lx
(40%): 3.3 lx	(50%): 4.2 lx
(60%): 5.0 lx	(70%): 5.9 lx
(80%): 6.7 lx	(90%): 7.5 lx

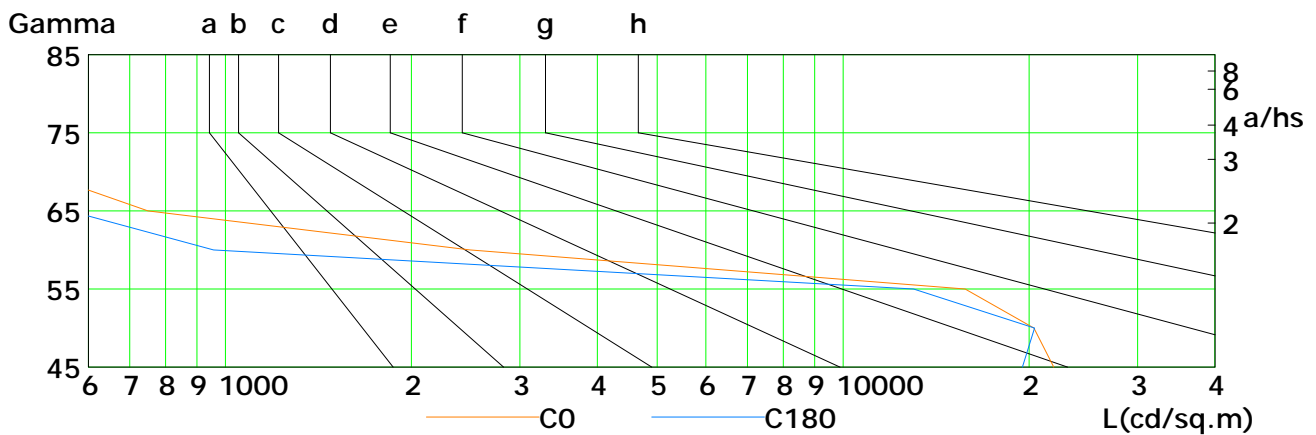
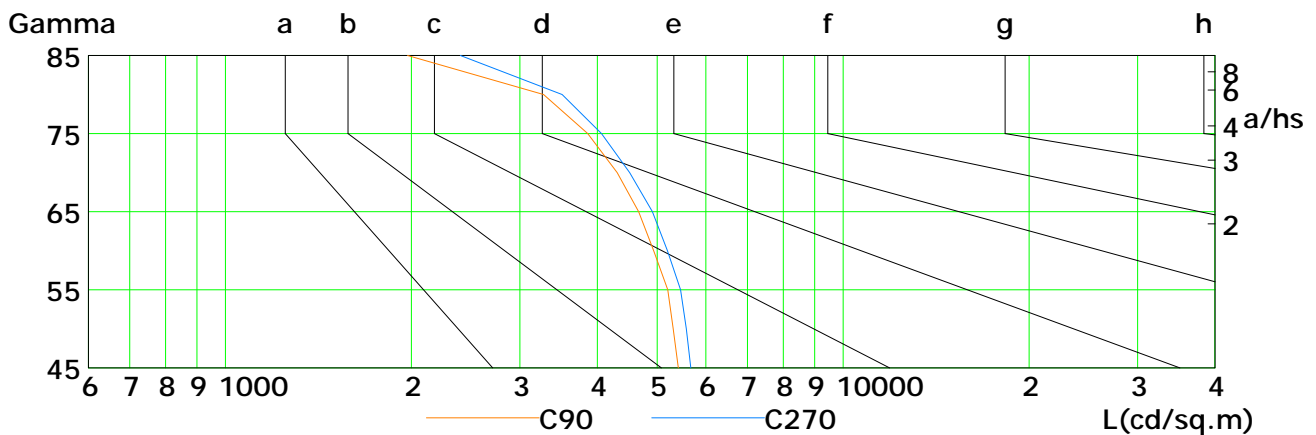
C Plane (°):0.0-360.0: 30.0
Test Lab: ACOLYTE
Test Type: TYPE C
Temperature: 25°C
Operator: leo

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
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	21936	20368	15770	2492	750	496	119	139	140
C90	5415	5307	5203	4935	4667	4308	3860	3276	1973
C180	19525	20426	13016	957	559	229	66	108	93
C270	5669	5577	5457	5197	4914	4514	4066	3510	2401

C Plane (°):0.0-360.0: 30.0

Test Lab: ACOLYTE

Test Type: TYPE C

Temperature: 25°C

Operator: leo

Gamma Plane (°):0.0-180.0:1.0

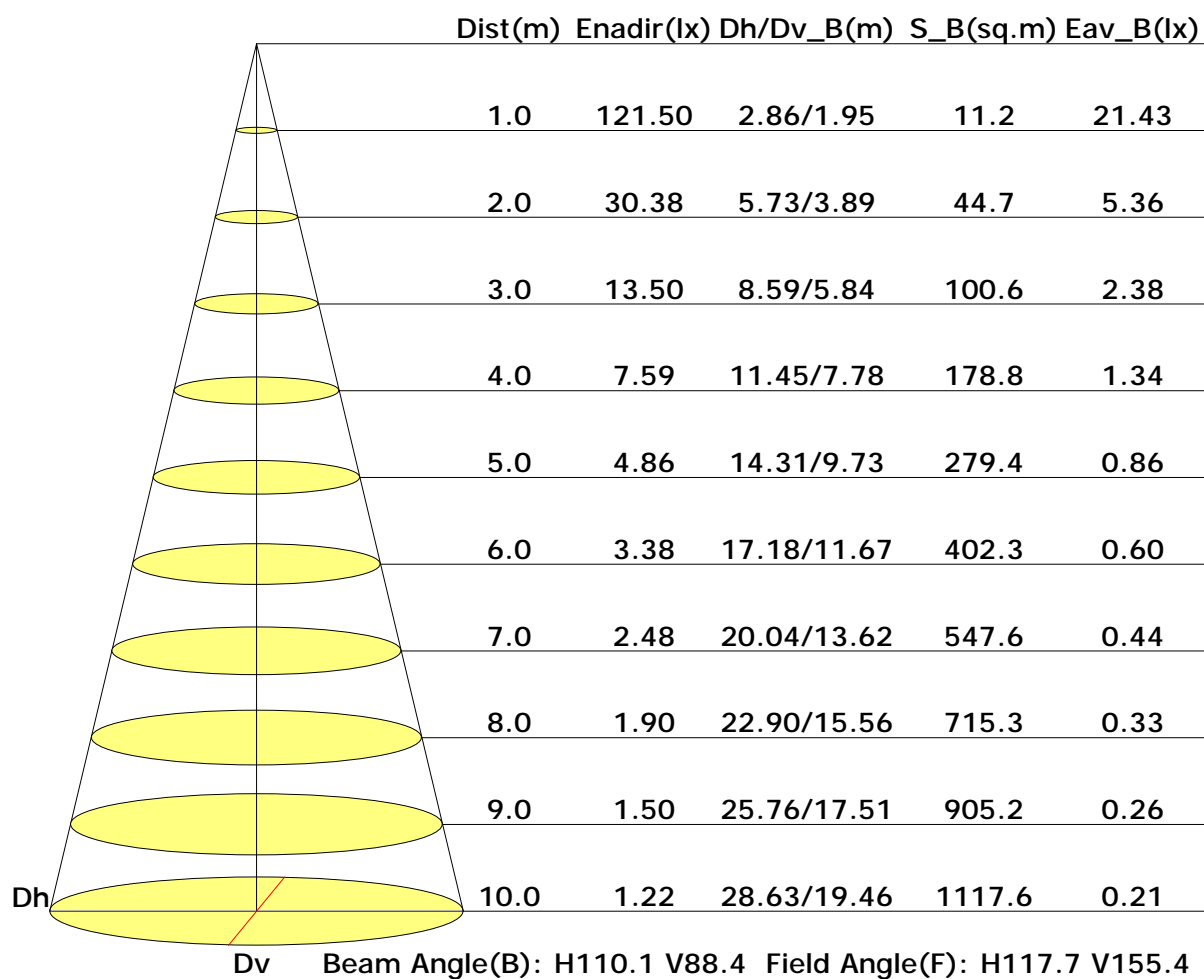
Test Device: GPM-1800B

Distance: 9.028 m

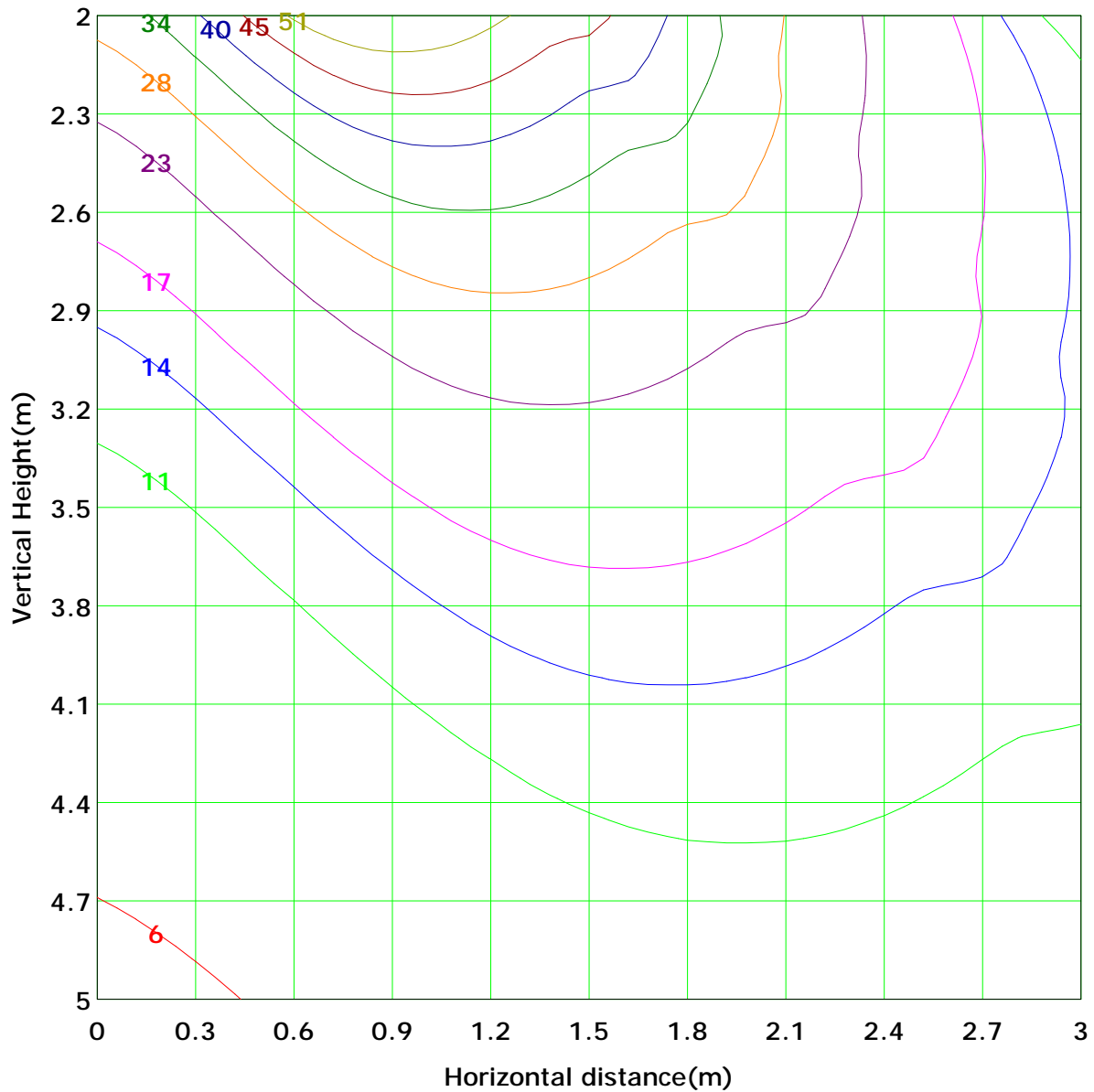
Humidity: 60%

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 56.5 lx
(10%): 5.7 lx	(20%): 11.3 lx	
(25%): 14.1 lx	(30%): 17.0 lx	
(40%): 22.6 lx	(50%): 28.3 lx	
(60%): 33.9 lx	(70%): 39.6 lx	
(80%): 45.2 lx	(90%): 50.9 lx	

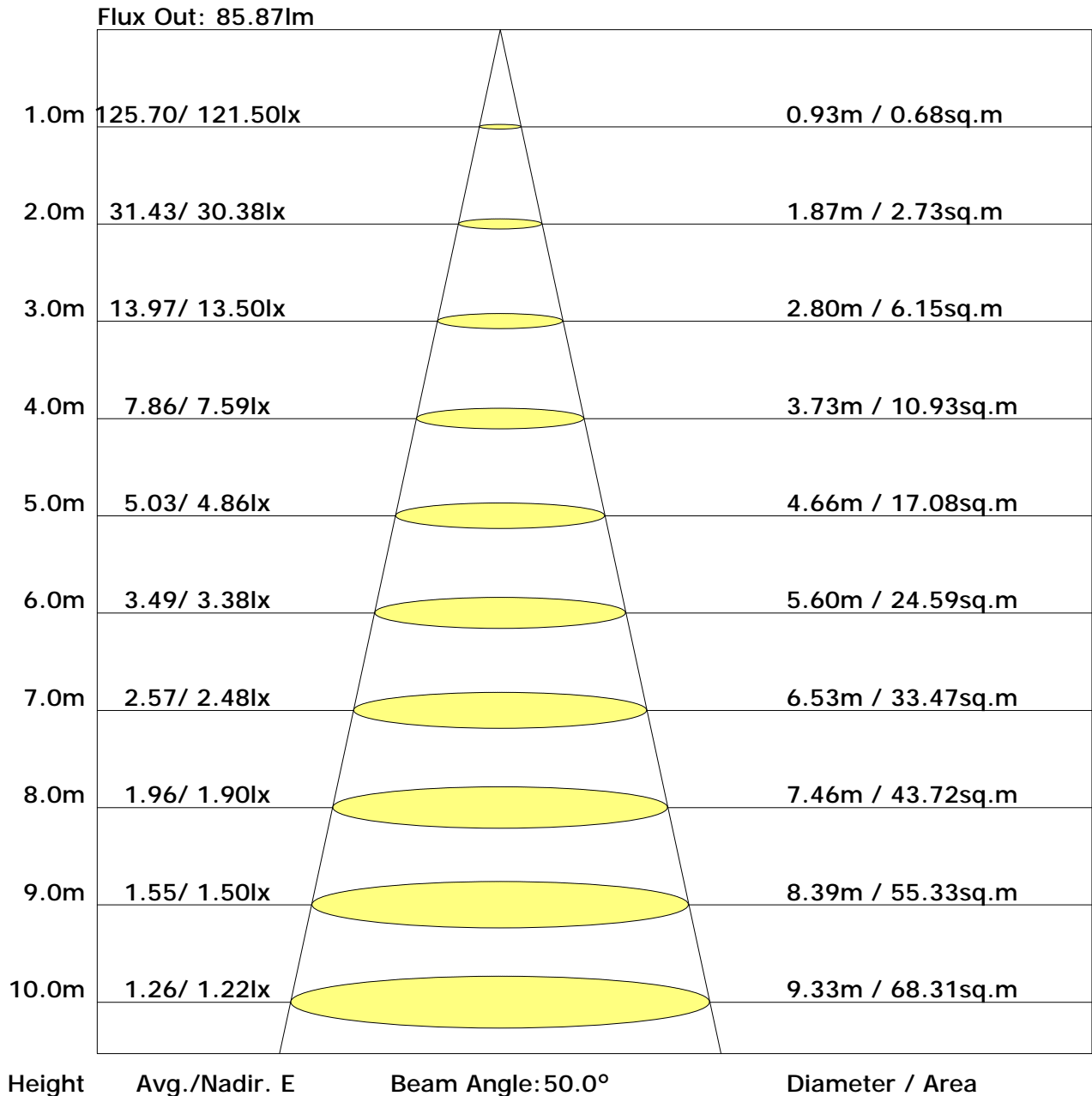
C Plane (°):0.0-360.0: 30.0
Test Lab: ACOLYTE
Test Type: TYPE C
Temperature: 25°C
Operator: leo

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

Unit: 1m

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

The Average Illuminance Effective Figure



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	24.3	25.9	24.7	26.3	26.6	22.8	24.4	23.1	24.7	25.0
3H	24.2	25.7	24.6	26.0	26.4	24.0	25.5	24.4	25.8	26.2
4H	24.2	25.5	24.6	25.9	26.3	24.2	25.6	24.7	25.9	26.3
6H	24.1	25.4	24.5	25.7	26.1	24.3	25.5	24.7	25.9	26.3
8H	24.1	25.3	24.5	25.7	26.1	24.3	25.4	24.7	25.8	26.3
12H	24.1	25.2	24.5	25.6	26.0	24.3	25.4	24.7	25.8	26.2
X=4H Y=2H	24.7	26.1	25.2	26.4	26.8	23.2	24.5	23.6	24.9	25.3
3H	24.7	25.8	25.1	26.2	26.6	25.4	26.5	25.8	26.9	27.3
4H	24.6	25.6	25.0	26.0	26.5	25.6	26.6	26.1	27.0	27.5
6H	24.5	25.4	25.0	25.8	26.3	25.7	26.5	26.1	27.0	27.4
8H	24.5	25.3	25.0	25.8	26.2	25.6	26.4	26.1	26.9	27.4
12H	24.5	25.2	25.0	25.7	26.2	25.6	26.3	26.1	26.8	27.3
X=8H Y=4H	24.9	25.7	25.3	26.1	26.6	25.6	26.4	26.1	26.8	27.3
6H	24.8	25.4	25.3	25.9	26.4	25.6	26.2	26.1	26.7	27.2
8H	24.7	25.3	25.3	25.8	26.3	25.6	26.1	26.1	26.7	27.2
12H	24.7	25.2	25.2	25.7	26.3	25.5	26.1	26.1	26.6	27.1
X=12H Y=4H	24.8	25.5	25.3	26.0	26.5	25.6	26.3	26.0	26.7	27.2
6H	24.7	25.3	25.3	25.8	26.4	25.5	26.1	26.1	26.6	27.2
8H	24.7	25.2	25.2	25.7	26.3	25.5	26.0	26.0	26.5	27.1

Calculate in accordance with CIE 190:2010

C Plane (°):0.0-360.0: 30.0
 Test Lab: ACOLYTE
 Test Type: TYPE C
 Temperature: 25°C
 Operator: leo

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector:

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 2.00								
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	NA	0.77	0.82	0.87	0.94	0.98	1.01	1.04	1.06
	0.30		NA	0.70	0.76	0.82	0.89	0.94	0.97	1.01	1.04
	0.20		NA	0.66	0.72	0.77	0.85	0.90	0.94	0.98	1.01
0.50	0.50	0.20	NA	0.75	0.80	0.85	0.91	0.95	0.97	1.00	1.02
	0.30		NA	0.69	0.75	0.80	0.87	0.91	0.94	0.98	1.00
	0.20		NA	0.65	0.71	0.76	0.83	0.88	0.91	0.95	0.98
0.30	0.50	0.20	NA	0.73	0.78	0.82	0.88	0.91	0.94	0.96	0.98
	0.30		NA	0.68	0.73	0.78	0.85	0.89	0.91	0.94	0.97
	0.20		NA	0.64	0.70	0.75	0.82	0.86	0.89	0.93	0.95
0.00	0.00	0.00	NA	0.62	0.67	0.72	0.78	0.82	0.85	0.88	0.90
Rating: 6W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											

Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 2.00								
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	NA	0.67	0.57	0.49	0.37	0.30	0.26	0.20	0.16
	0.30		NA	0.57	0.49	0.43	0.34	0.28	0.24	0.19	0.15
	0.20		NA	0.50	0.44	0.39	0.31	0.26	0.22	0.18	0.15
0.50	0.50	0.20	NA	0.64	0.54	0.46	0.35	0.32	0.24	0.19	0.15
	0.30		NA	0.55	0.48	0.41	0.32	0.27	0.23	0.18	0.14
	0.20		NA	0.49	0.43	0.37	0.30	0.25	0.21	0.17	0.14
0.30	0.50	0.20	NA	0.61	0.51	0.44	0.33	0.27	0.23	0.17	0.14
	0.30		NA	0.53	0.46	0.40	0.31	0.25	0.22	0.17	0.14
	0.20		NA	0.48	0.42	0.36	0.29	0.24	0.20	0.16	0.13
0.00	0.00	0.00	0.99	0.37	0.32	0.27	0.20	0.17	0.14	0.11	0.09
Rating: 6W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 2.00								
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	NA	0.17	0.18	0.18	0.19	0.20	0.21	0.21	0.22
	0.30		NA	0.11	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		NA	0.08	0.09	0.10	0.13	0.14	0.15	0.17	0.18
0.50	0.50	0.20	NA	0.16	0.17	0.18	0.19	0.19	0.20	0.20	0.21
	0.30		NA	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		NA	0.07	0.09	0.10	0.12	0.14	0.15	0.16	0.17
0.30	0.50	0.20	NA	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20
	0.30		NA	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.18
	0.20		NA	0.07	0.09	0.10	0.12	0.14	0.15	0.16	0.17
0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Rating: 6W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											