

Report No.: 01

Test Time: 2016/10/13 18:27

Luminaire Property

Luminaire Manufacturer:

Luminaire Category: Synthesis LED Linear

Luminaire Description: Synthesis Indirect HO 28CM 307 mA 3500K 10degree

Luminous Length (mm): 304

Luminous Width (mm): 50

Luminous Height (mm): 2

Voltage: 219.7 V

Current: 0.056 A

Power: 10.26 W

Power Factor: 0.838

Photometric Results

CIE Class: Direct

Measurement Flux: 1001.9 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H32.1

Vertical Diffuse Angle(50%): V89.6

Luminaire Efficacy Rating (LER): 98

Max. Intensity: 1074.65 cd

Total Rated Lamp Lumens: 1001.9 lm

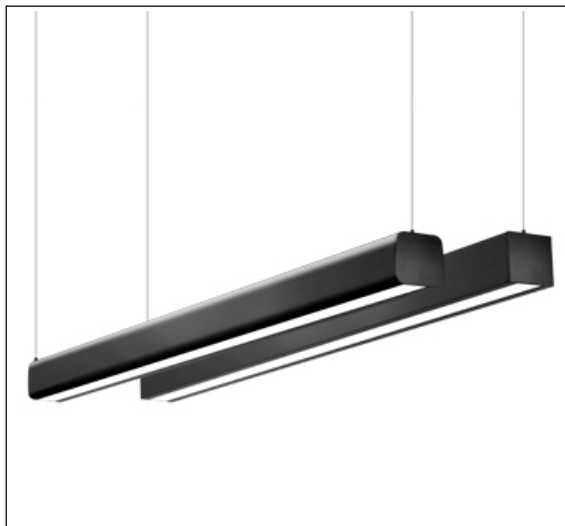
Efficiency: 100%

Upward Ratio: 1%

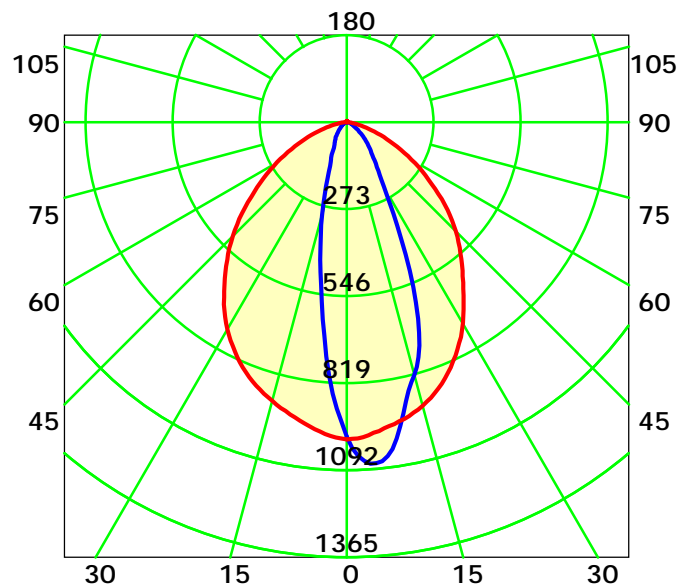
Central Intensity: 986.02 cd

Pos of Max. Intensity: H0 V4

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 60.8°

— 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

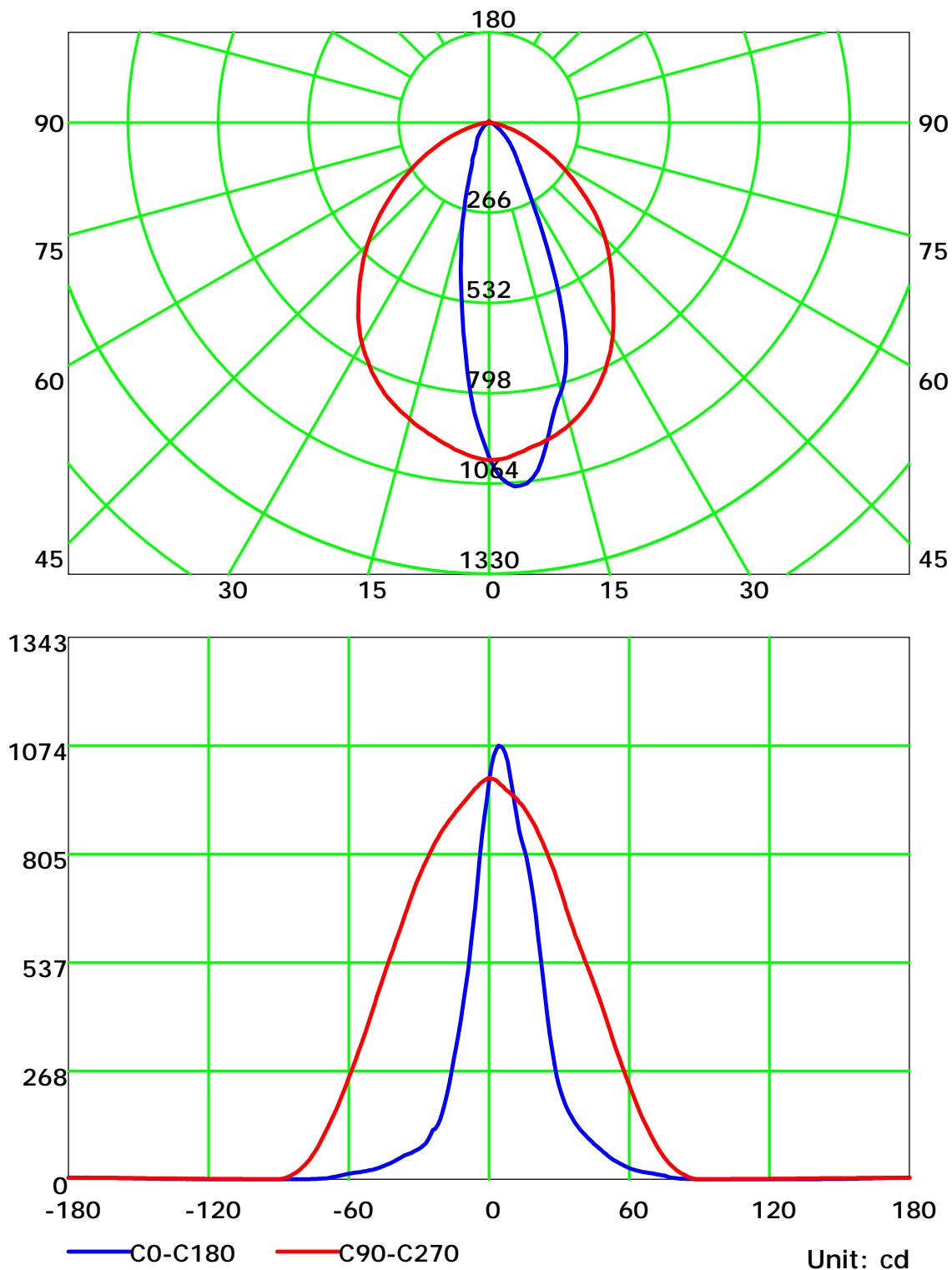
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

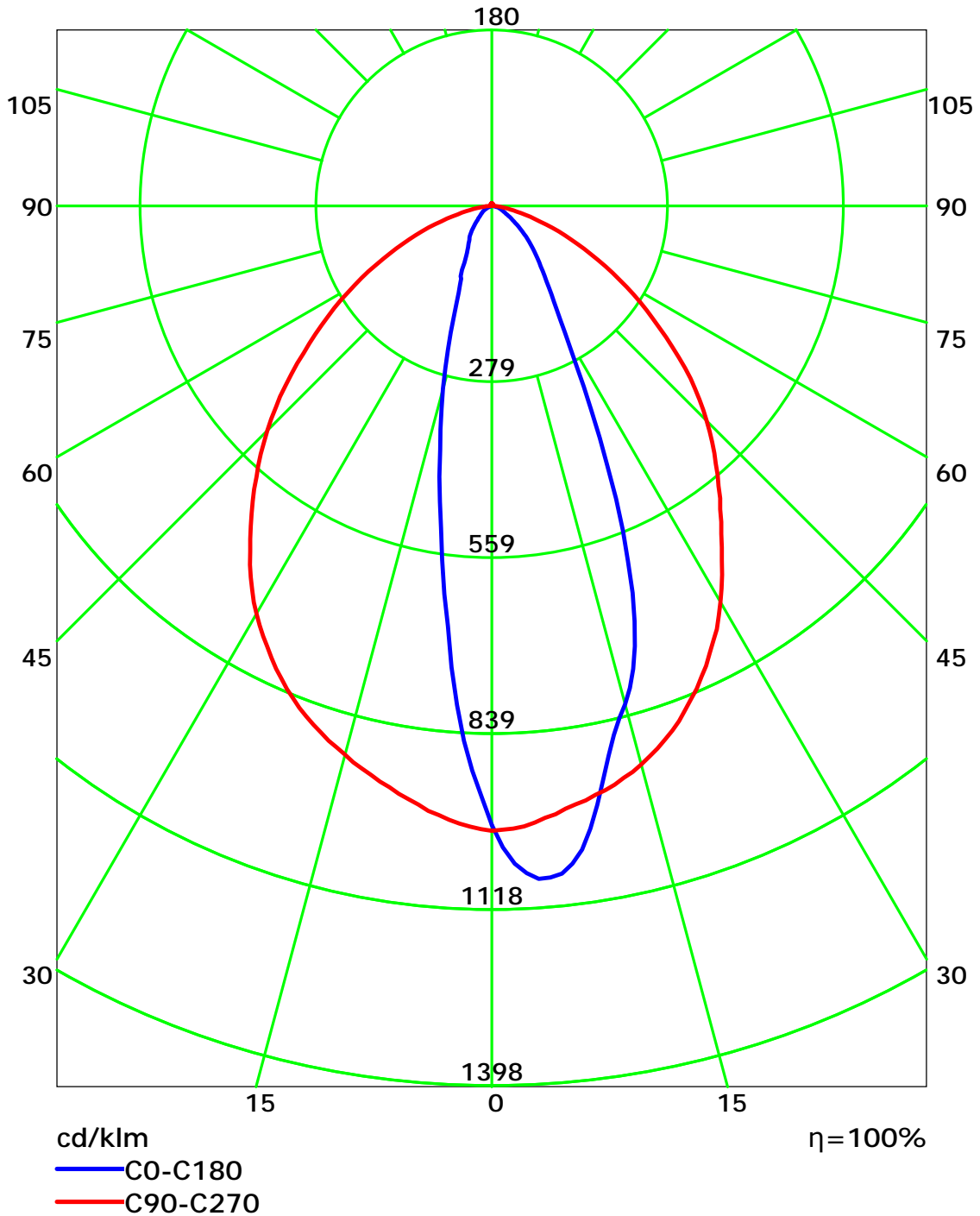
Luminous Intensity Distribution Curve



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:

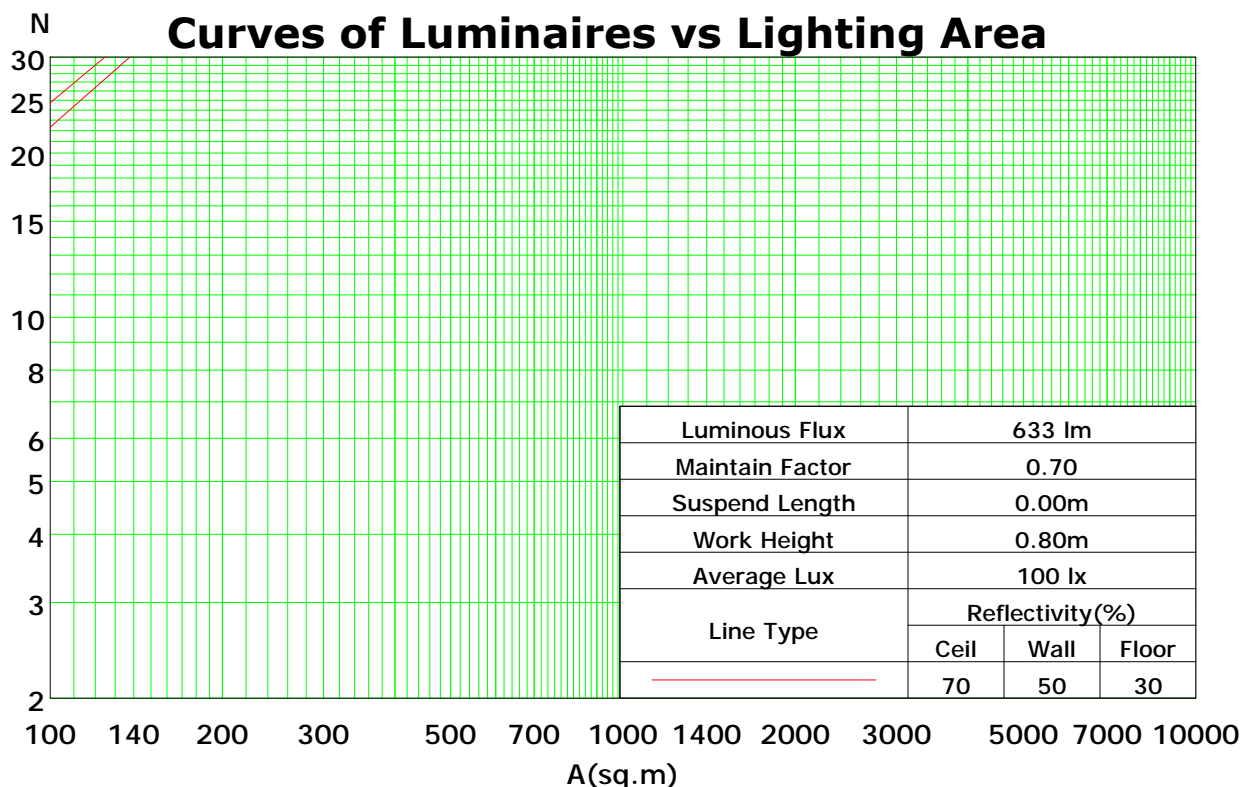
Coefficients Of Utilization - Zonal Cavity Method

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	110	110	110	106	106	106	101	101	101	99
1	111	108	105	102	109	105	103	100	101	99	97	97	95	93	93	92	91	89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	97	89	82	77	95	87	81	76	84	79	75	81	77	74	79	75	72	70
4	90	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	65	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	67	63	59	58
6	80	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53
7	75	64	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50	48
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45
9	67	55	49	44	65	55	48	44	54	48	43	53	47	43	52	47	43	41
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

Spacing Criteria (0-180): 0.55

Spacing Criteria (90-270): 1.12

Spacing Criteria (Diagonal): 0.77



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

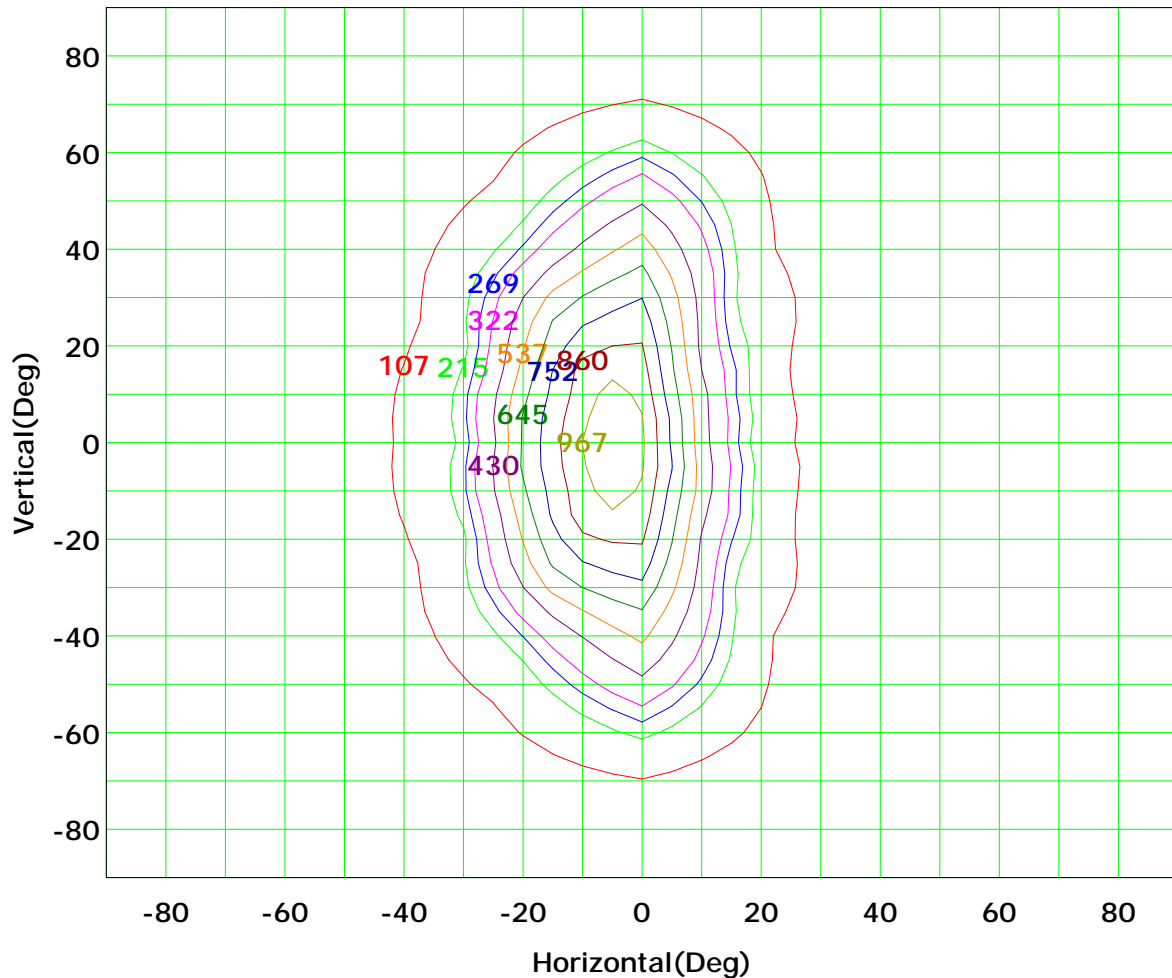
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Isocandela (rectangle)



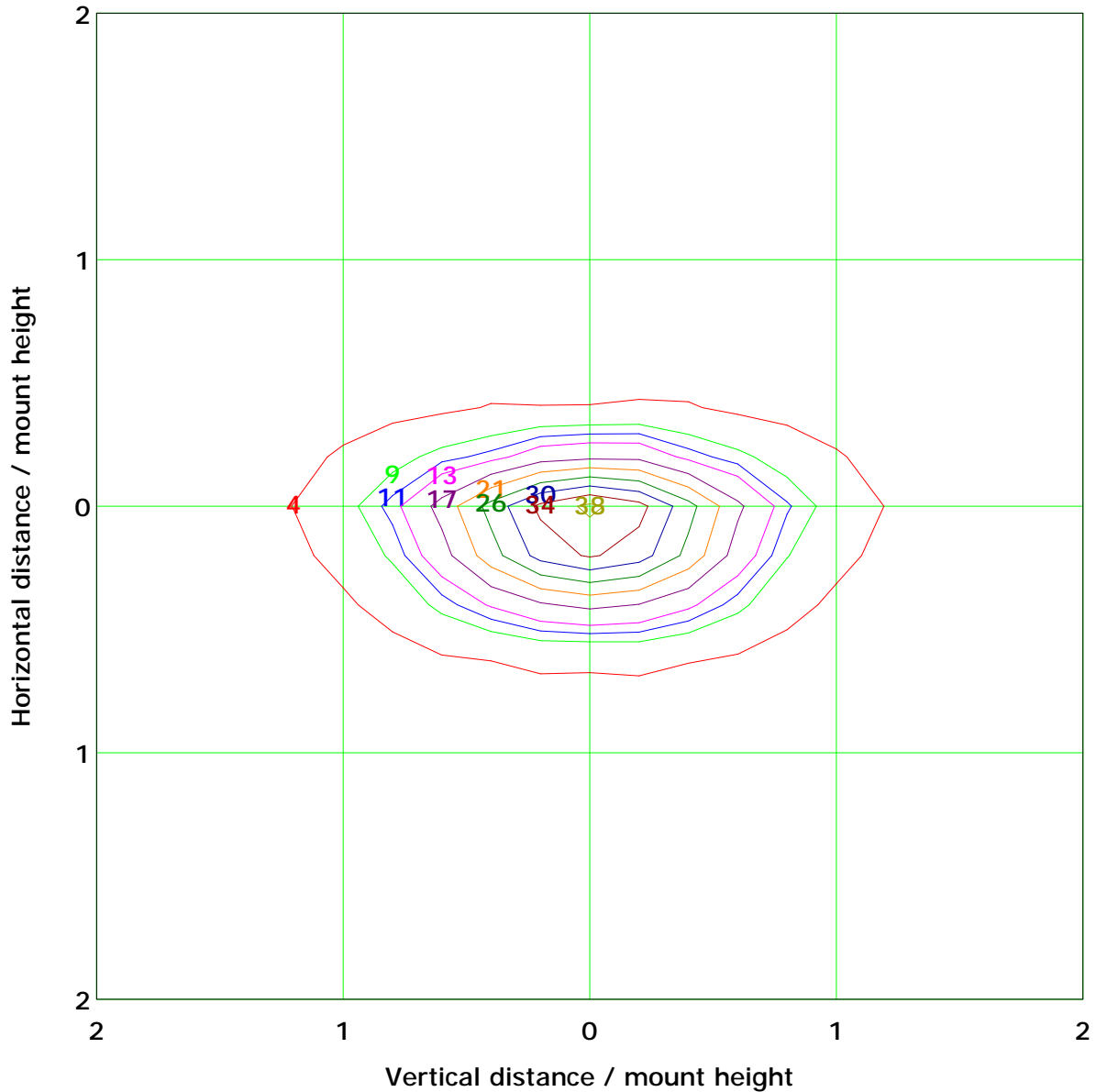
I_{max} (100%): 1075 cd

(10%): 107 cd	(20%): 215 cd
(25%): 269 cd	(30%): 322 cd
(40%): 430 cd	(50%): 537 cd
(60%): 645 cd	(70%): 752 cd
(80%): 860 cd	(90%): 967 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%): 42.7 lx

(10%): 4.3 lx	(20%): 8.5 lx
(25%): 10.7 lx	(30%): 12.8 lx
(40%): 17.1 lx	(50%): 21.3 lx
(60%): 25.6 lx	(70%): 29.9 lx
(80%): 34.1 lx	(90%): 38.4 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

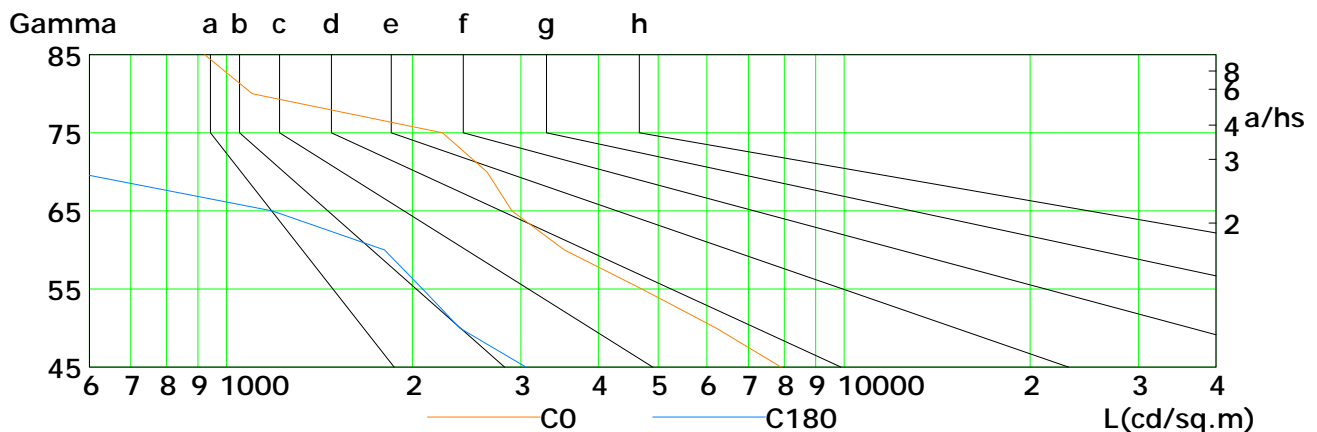
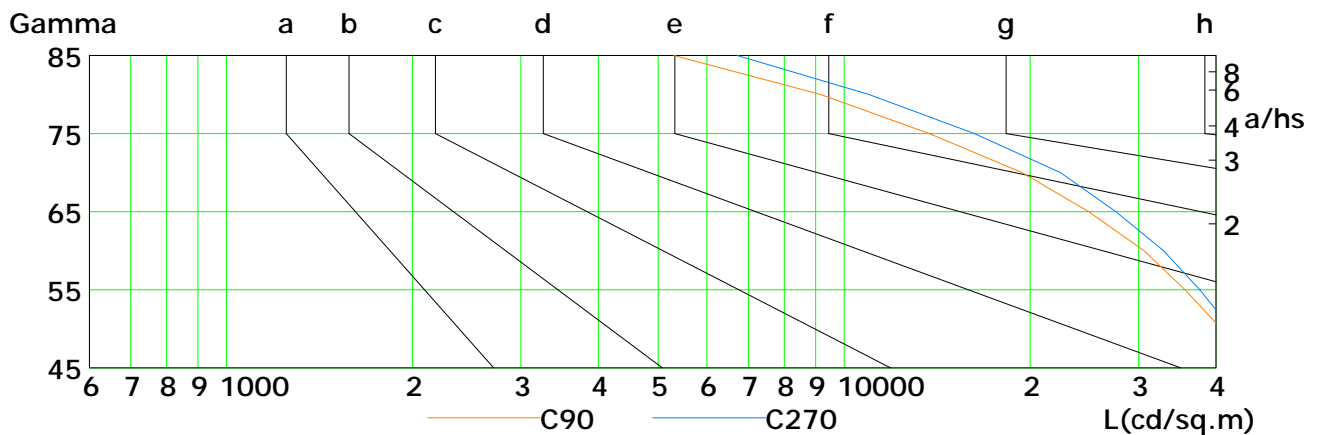
Humidity: 60%

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	7907	6210	4705	3528	2899	2641	2238	1102	922
C90	44782	40852	35635	30597	24894	19419	13740	9167	5301
C180	3057	2387	2079	1804	1187	563	376	300	456
C270	46797	42376	37647	32900	27557	22408	16251	10975	6719

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

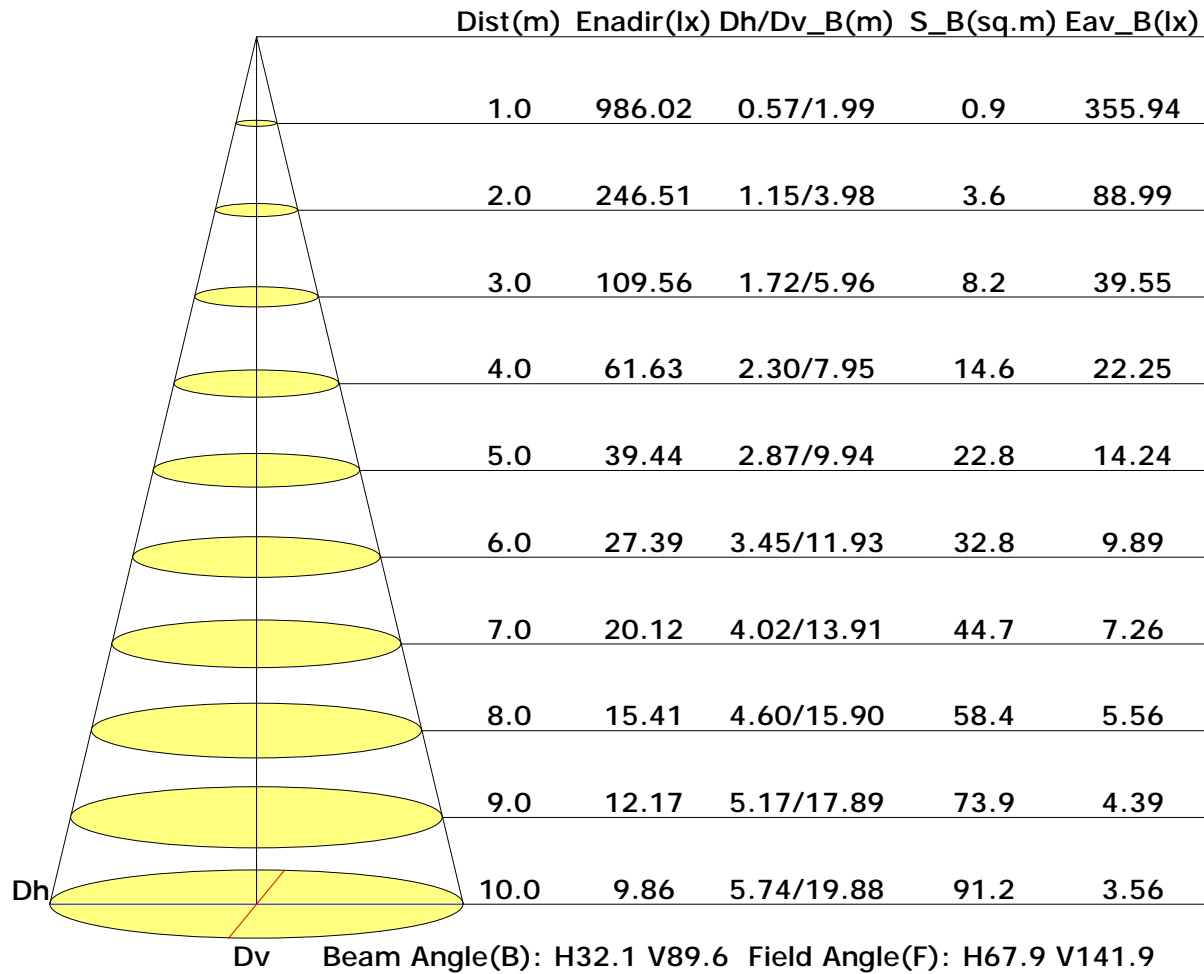
Test Device: GPM-1800B

Distance: 9.028 m

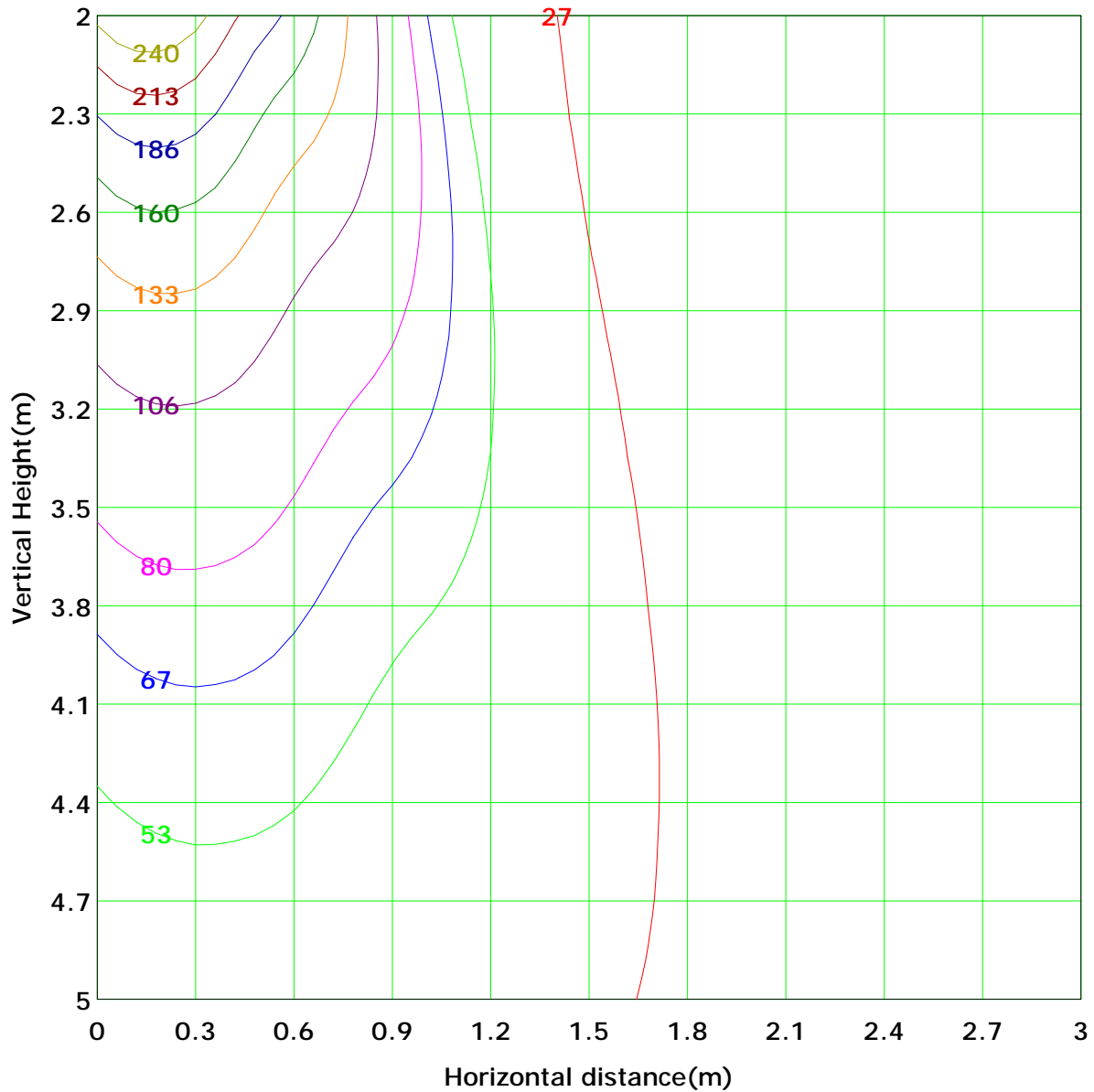
Humidity: 60%

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 266.2 lx
(10%): 26.6 lx	(20%): 53.2 lx	
(25%): 66.6 lx	(30%): 79.9 lx	
(40%): 106.5 lx	(50%): 133.1 lx	
(60%): 159.7 lx	(70%): 186.4 lx	
(80%): 213.0 lx	(90%): 239.6 lx	

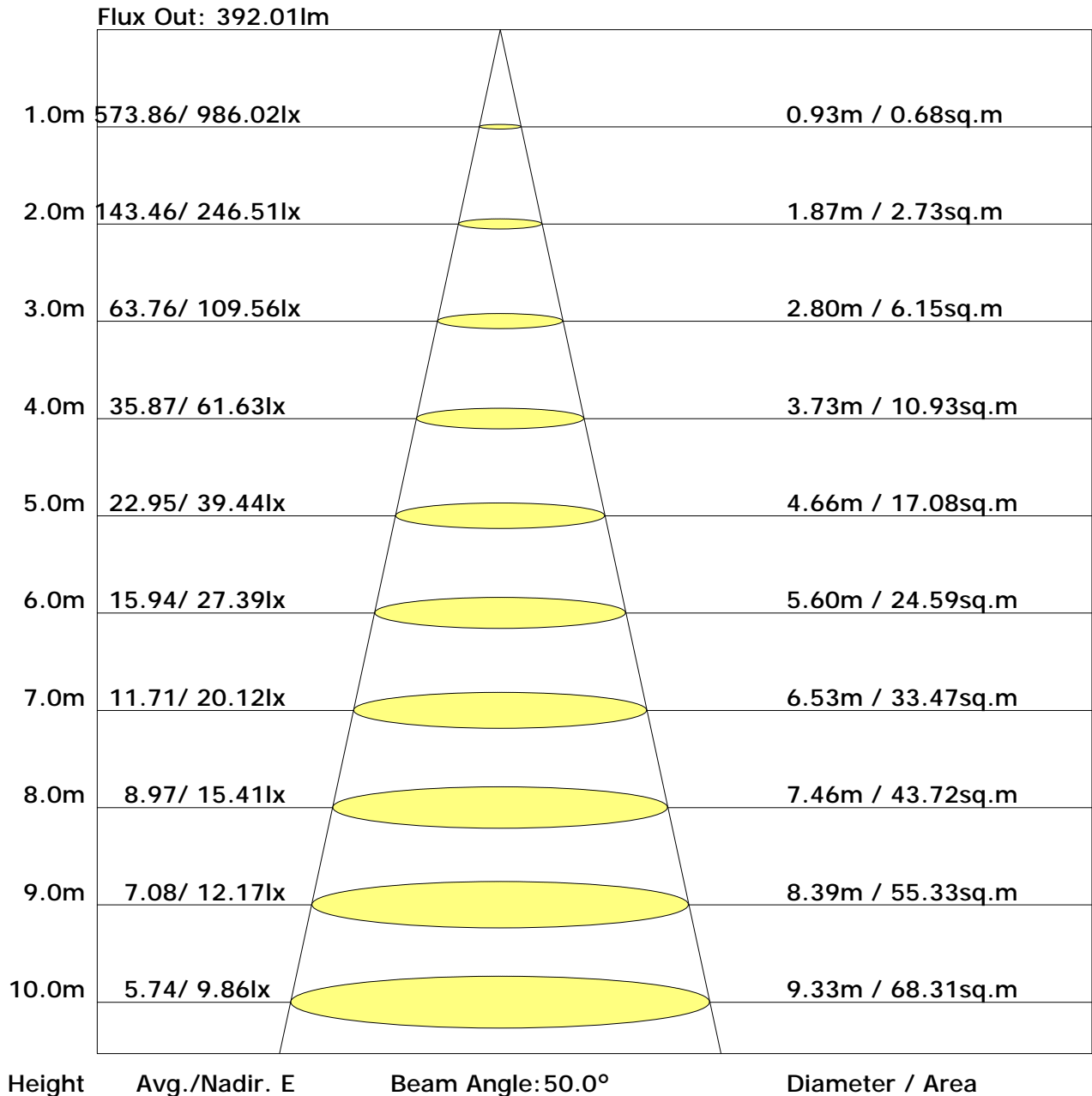
C Plane (°):0.0-360.0: 30.0
Test Lab: ACOLYTE
Test Type: TYPE C
Temperature: 25°C
Operator: leo

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	12.7	14.0	13.1	14.4	14.7	22.4	23.7	22.8	24.1	24.4
3H	13.7	14.9	14.1	15.2	15.6	23.9	25.1	24.3	25.4	25.8
4H	14.1	15.2	14.5	15.5	15.9	24.3	25.4	24.7	25.8	26.2
6H	14.2	15.2	14.6	15.6	16.0	24.5	25.5	24.9	25.9	26.3
8H	14.2	15.1	14.6	15.5	16.0	24.5	25.5	25.0	25.9	26.3
12H	14.2	15.1	14.6	15.5	15.9	24.5	25.4	25.0	25.8	26.3
X=4H Y=2H	14.3	15.4	14.7	15.8	16.2	22.3	23.4	22.7	23.8	24.2
3H	15.2	16.1	15.7	16.5	17.0	23.9	24.8	24.3	25.2	25.6
4H	15.6	16.4	16.0	16.8	17.3	24.3	25.1	24.8	25.6	26.0
6H	15.7	16.4	16.2	16.8	17.3	24.6	25.3	25.1	25.7	26.2
8H	15.7	16.3	16.2	16.8	17.3	24.6	25.3	25.1	25.7	26.2
12H	15.7	16.3	16.2	16.8	17.3	24.6	25.2	25.1	25.7	26.2
X=8H Y=4H	16.4	17.1	16.9	17.5	18.0	24.2	24.9	24.7	25.4	25.9
6H	16.6	17.1	17.1	17.6	18.1	24.5	25.0	25.0	25.6	26.1
8H	16.6	17.0	17.1	17.6	18.1	24.6	25.0	25.1	25.6	26.1
12H	16.6	17.0	17.1	17.5	18.1	24.6	25.0	25.1	25.5	26.1
X=12H Y=4H	16.6	17.1	17.1	17.6	18.1	24.2	24.8	24.7	25.3	25.8
6H	16.8	17.2	17.3	17.7	18.3	24.5	24.9	25.0	25.4	26.0
8H	16.8	17.2	17.4	17.7	18.3	24.6	25.0	25.1	25.5	26.1

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 = 0.75								
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	0.69	0.78	0.84	0.88	0.94	0.98	1.01	1.05	1.07
	0.30		0.63	0.72	0.78	0.83	0.90	0.94	0.97	1.02	1.04
	0.20		0.58	0.67	0.74	0.79	0.86	0.91	0.94	0.99	1.02
0.50	0.50	0.20	0.67	0.76	0.82	0.86	0.91	0.95	0.97	1.01	1.03
	0.30		0.62	0.70	0.77	0.81	0.87	0.91	0.94	0.98	1.00
	0.20		0.57	0.66	0.73	0.77	0.84	0.88	0.91	0.96	0.98
0.30	0.50	0.20	0.66	0.74	0.79	0.83	0.88	0.92	0.94	0.97	0.99
	0.30		0.61	0.69	0.75	0.79	0.85	0.89	0.91	0.95	0.97
	0.20		0.57	0.66	0.72	0.76	0.82	0.86	0.89	0.93	0.95
0.00	0.00	0.00	0.55	0.63	0.69	0.73	0.79	0.82	0.85	0.88	0.90
Rating: 10W 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 = 0.75								
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	0.81	0.66	0.56	0.48	0.38	0.31	0.26	0.20	0.16
	0.30		0.68	0.57	0.48	0.42	0.34	0.28	0.24	0.19	0.16
	0.20		0.58	0.49	0.43	0.38	0.31	0.26	0.23	0.18	0.15
0.50	0.50	0.20	0.78	0.63	0.53	0.45	0.36	0.33	0.25	0.19	0.15
	0.30		0.66	0.55	0.47	0.41	0.33	0.27	0.23	0.18	0.15
	0.20		0.57	0.48	0.42	0.37	0.30	0.25	0.22	0.17	0.14
0.30	0.50	0.20	0.75	0.60	0.50	0.43	0.34	0.27	0.23	0.18	0.14
	0.30		0.64	0.53	0.45	0.39	0.31	0.26	0.22	0.17	0.14
	0.20		0.56	0.47	0.41	0.36	0.29	0.24	0.21	0.16	0.13
0.00	0.00	0.00	0.44	0.36	0.30	0.26	0.21	0.17	0.14	0.11	0.09
Rating: 10W 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 = 0.75								
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	0.21	0.21	0.22	0.22
	0.30		0.10	0.12	0.13	0.15	0.16	0.17	0.18	0.20	0.20
	0.20		0.06	0.08	0.10	0.11	0.13	0.15	0.16	0.17	0.19
0.50	0.50	0.20	0.15	0.17	0.18	0.18	0.19	0.20	0.20	0.21	0.21
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.06	0.08	0.10	0.11	0.13	0.14	0.15	0.17	0.18
0.30	0.50	0.20	0.15	0.16	0.17	0.18	0.19	0.19	0.20	0.20	0.21
	0.30		0.10	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		0.06	0.08	0.09	0.11	0.13	0.14	0.15	0.17	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: 10W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											