

Report No.: 01

Test Time: 2016/10/13 17:40

Luminaire Property

Luminaire Manufacturer:

Luminaire Category: Synthesis LED Linear

Luminaire Description: Synthesis Indirect HO 28CM 307 mA 3500K 75degree

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: 922.2 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H80

Vertical Diffuse Angle(50%): V102.2

Luminaire Efficacy Rating (LER): 90

Max. Intensity: 597.33 cd

Total Rated Lamp Lumens: 922.2 lm

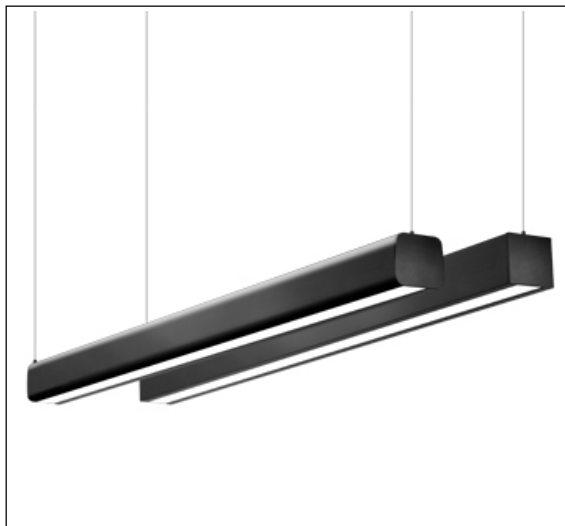
Efficiency: 100%

Upward Ratio: 1%

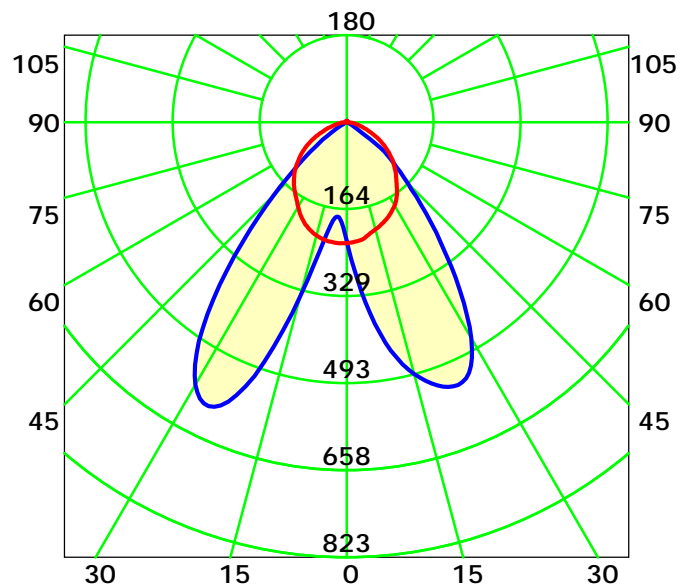
Central Intensity: 224.66 cd

Pos of Max. Intensity: H180 V26

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 91.1° 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

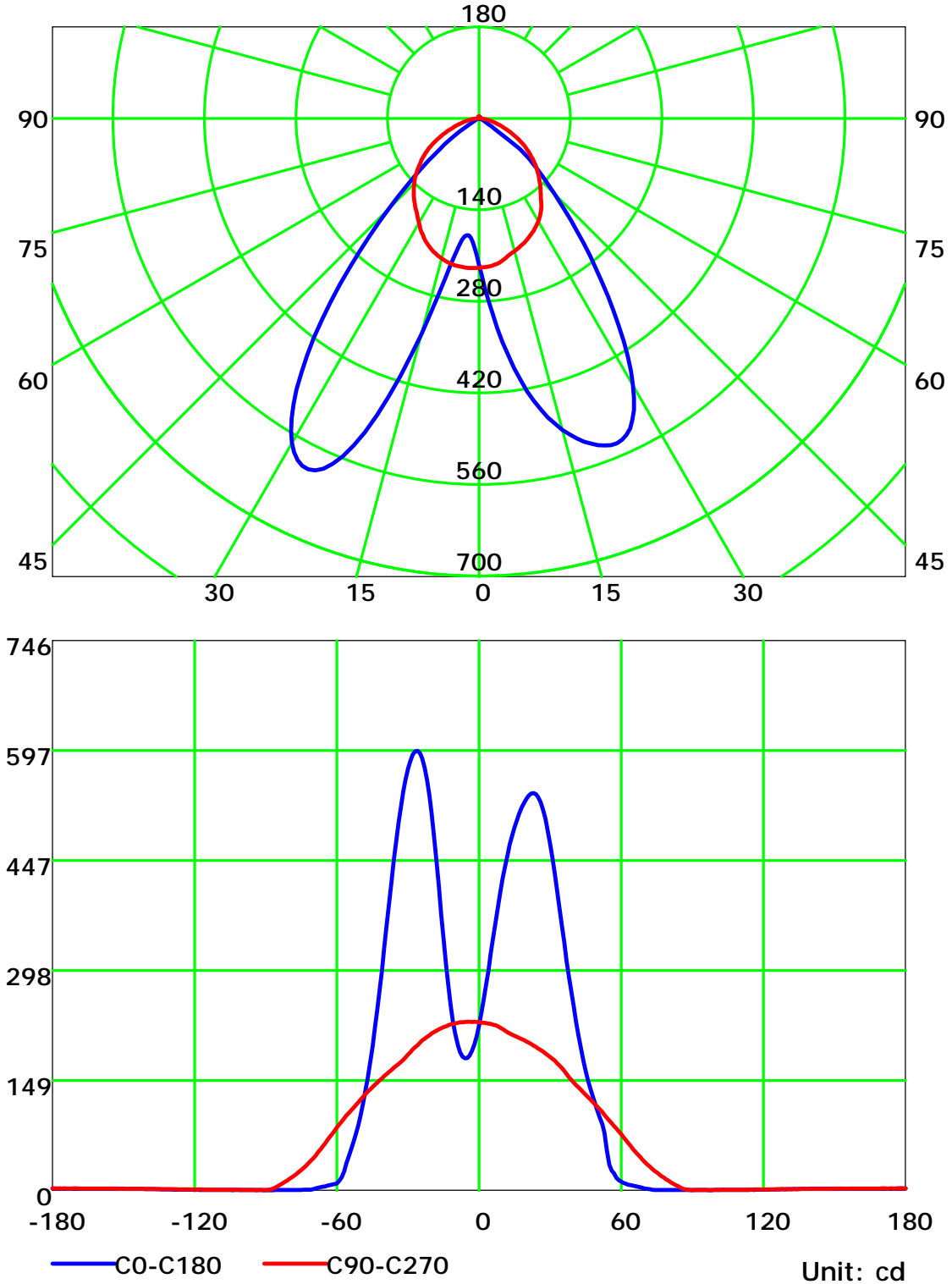
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

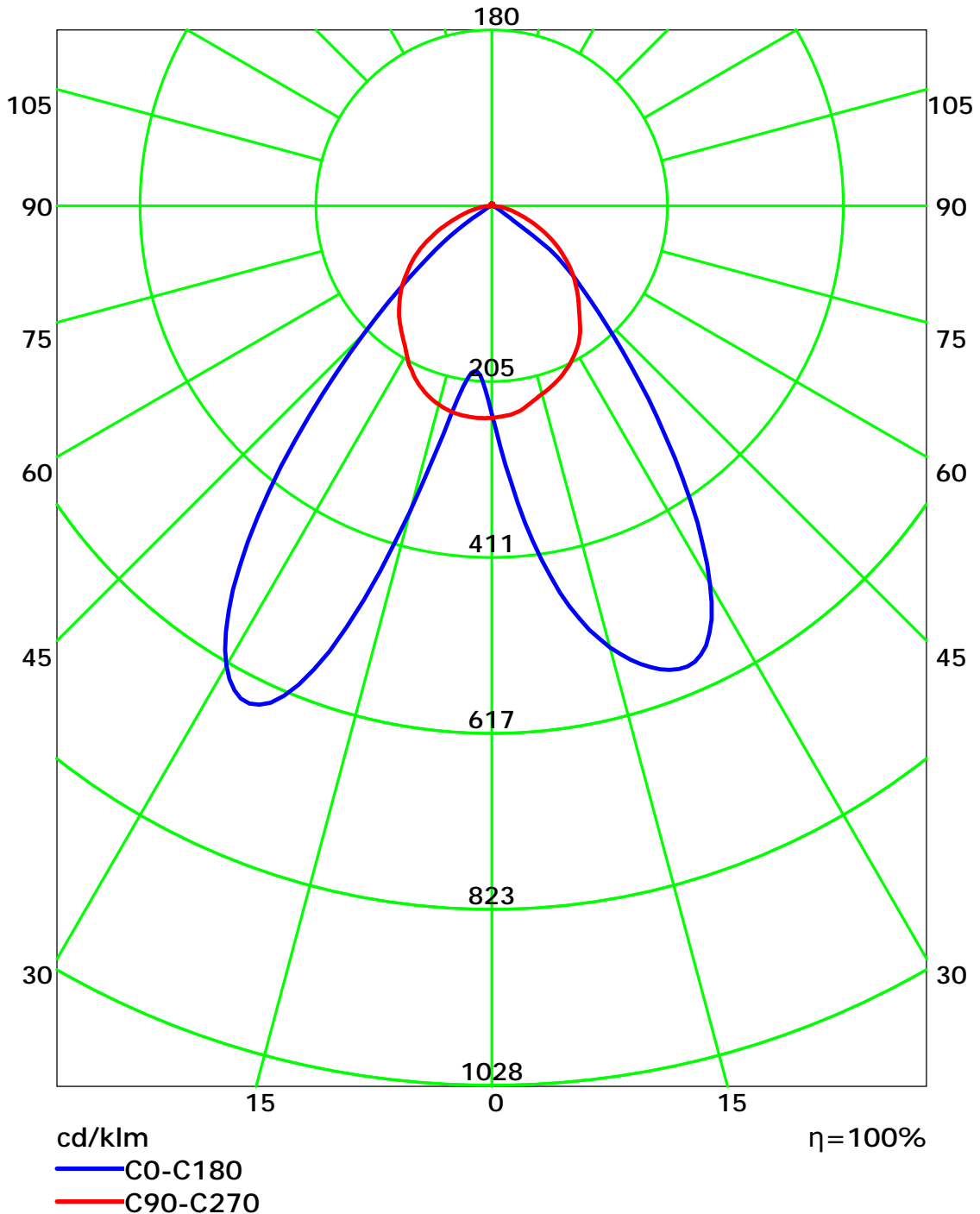
Luminous Intensity Distribution Curve



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:

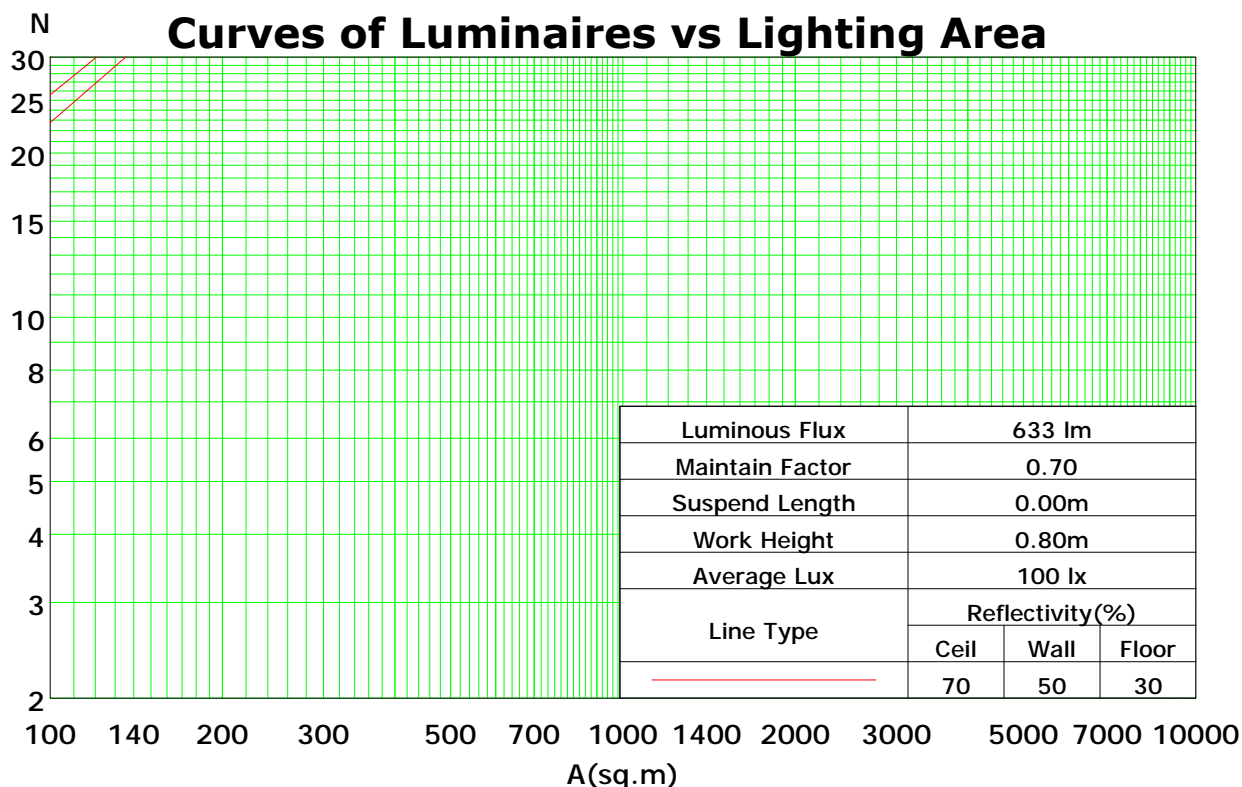
Coefficients Of Utilization - Zonal Cavity Method

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	110	110	110	106	106	106	101	101	101	99
1	111	107	104	101	108	105	102	99	100	98	96	96	94	93	93	91	90	88
2	103	96	90	85	100	94	89	84	90	86	82	87	83	80	84	81	78	76
3	95	86	79	73	92	84	78	73	81	76	71	78	74	70	76	72	69	67
4	87	77	69	63	85	76	68	63	73	67	62	71	65	61	69	64	60	58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	57	51	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40
8	65	52	44	39	63	51	44	38	50	43	38	49	42	38	47	42	38	36
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29

Spacing Criteria (0-180): 1.74

Spacing Criteria (90-270): 1.19

Spacing Criteria (Diagonal): 1.71



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

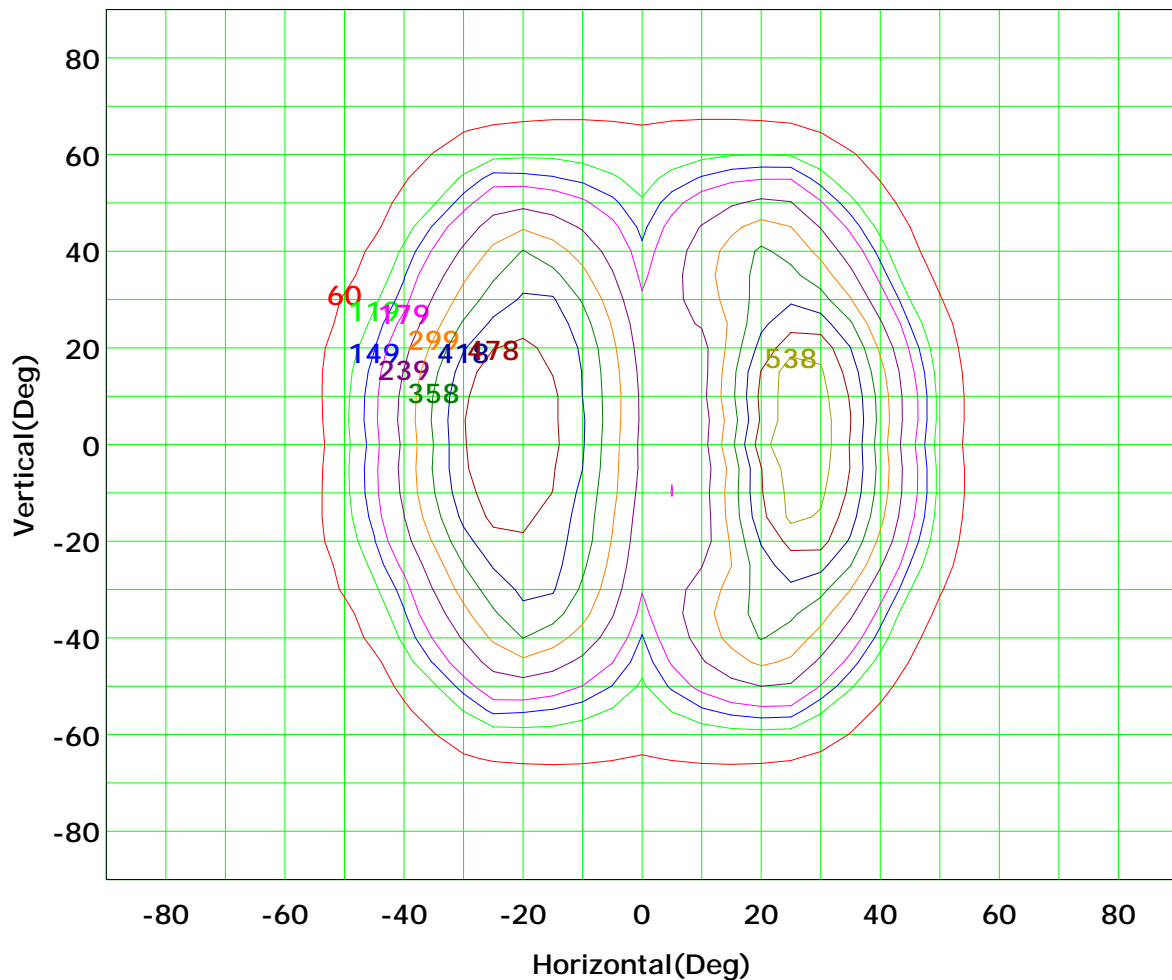
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Isocandela (rectangle)



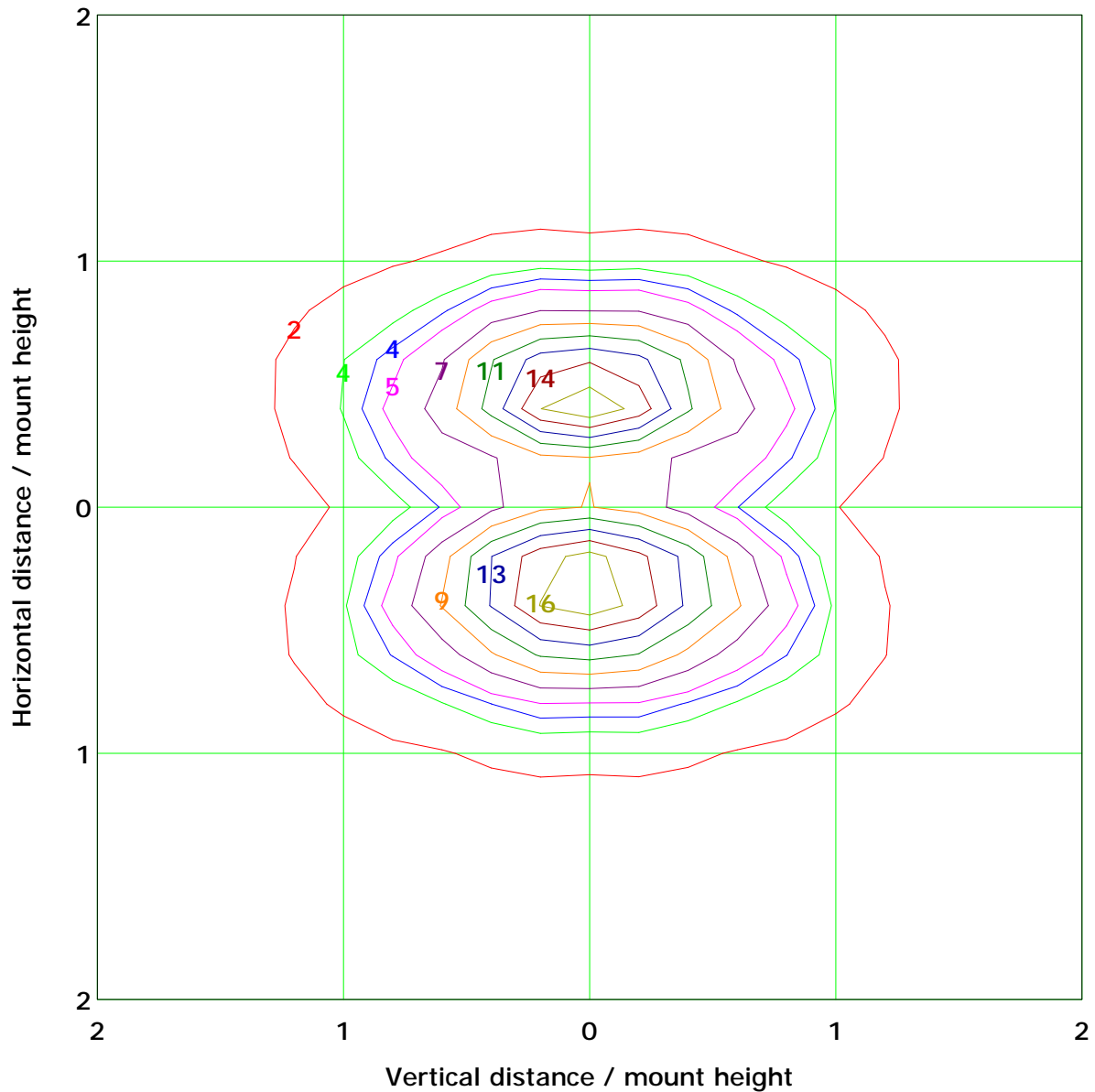
I_{max} (100%): 597 cd

(10%): 60 cd	(20%): 119 cd
(25%): 149 cd	(30%): 179 cd
(40%): 239 cd	(50%): 299 cd
(60%): 358 cd	(70%): 418 cd
(80%): 478 cd	(90%): 538 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%): 17.9 lx

(10%): 1.8 lx	(20%): 3.6 lx
(25%): 4.5 lx	(30%): 5.4 lx
(40%): 7.2 lx	(50%): 9.0 lx
(60%): 10.8 lx	(70%): 12.5 lx
(80%): 14.3 lx	(90%): 16.1 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

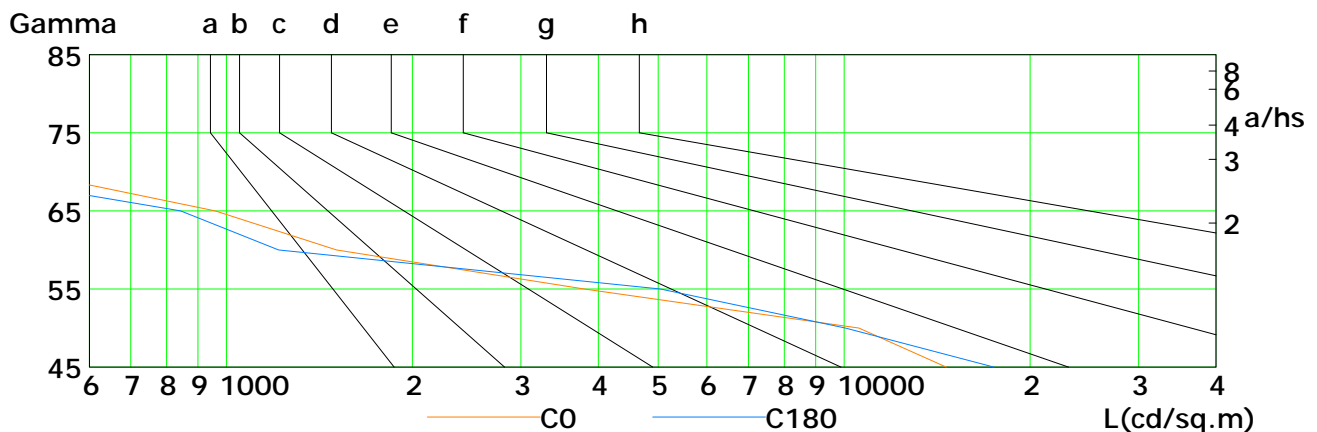
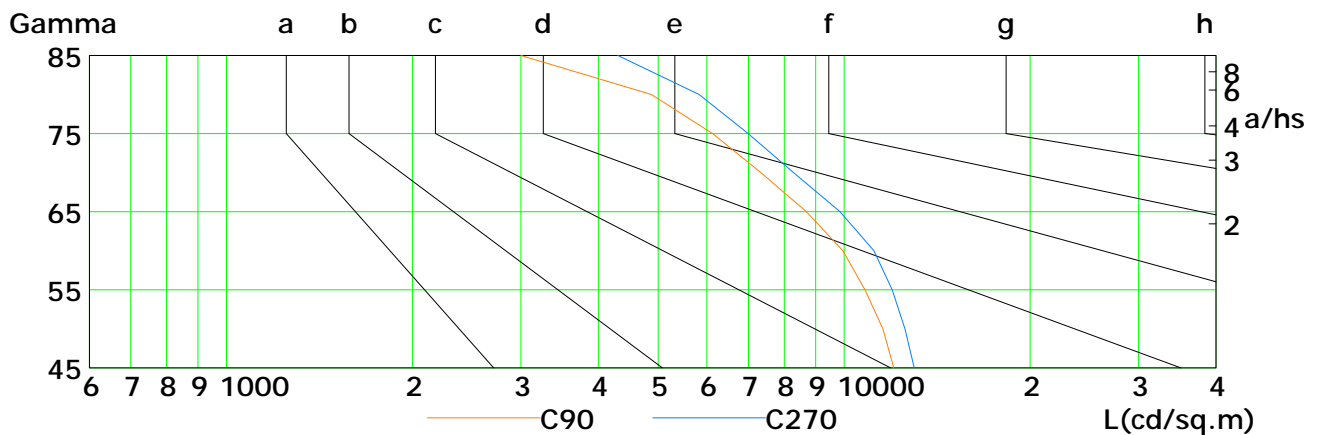
Humidity: 60%

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	14640	10566	3799	1509	959	475	215	275	461
C90	12043	11565	10817	9960	8693	7333	6131	4880	2998
C180	17494	10054	5045	1215	843	357	237	306	425
C270	12997	12554	11963	11175	9846	8281	6996	5829	4304

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

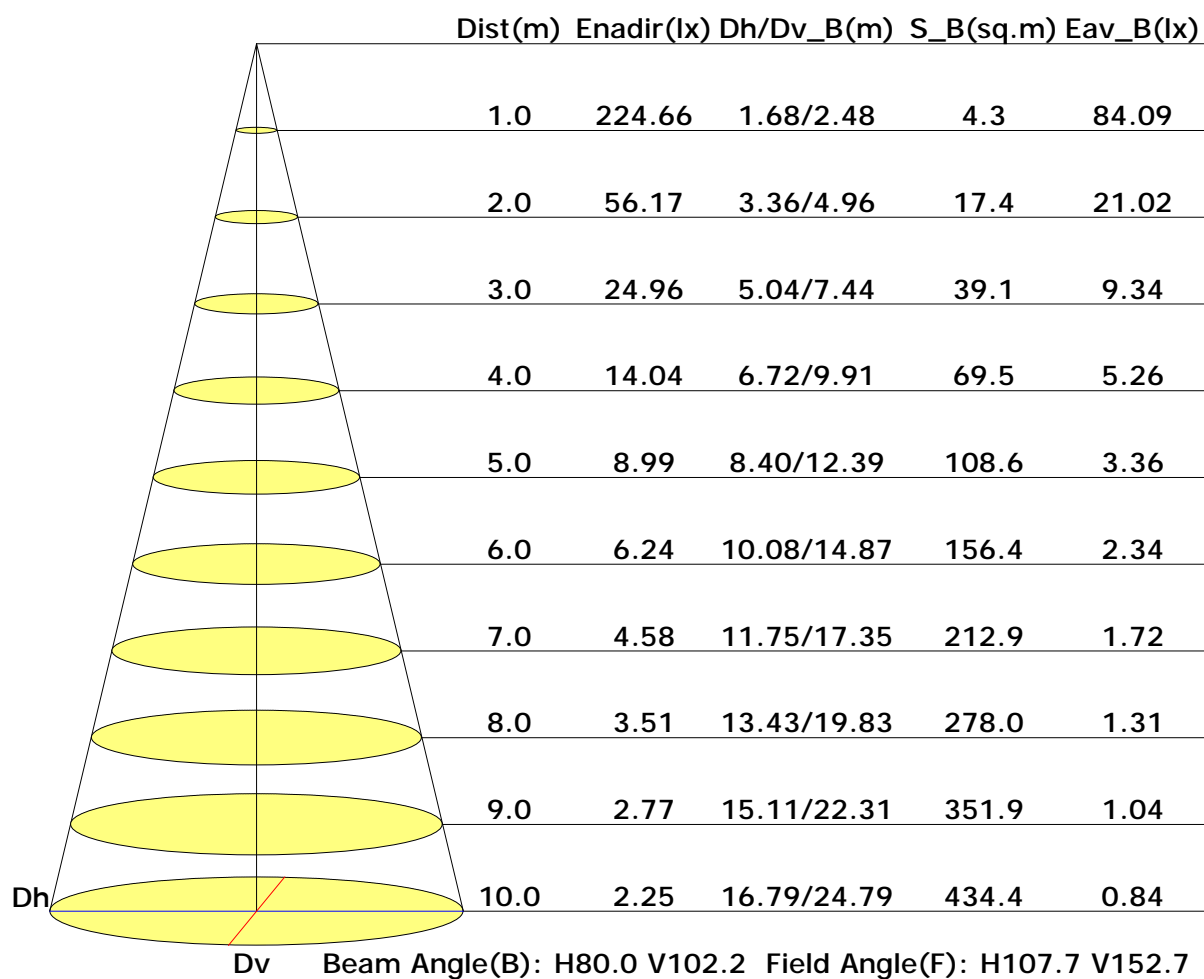
Test Device: GPM-1800B

Distance: 9.028 m

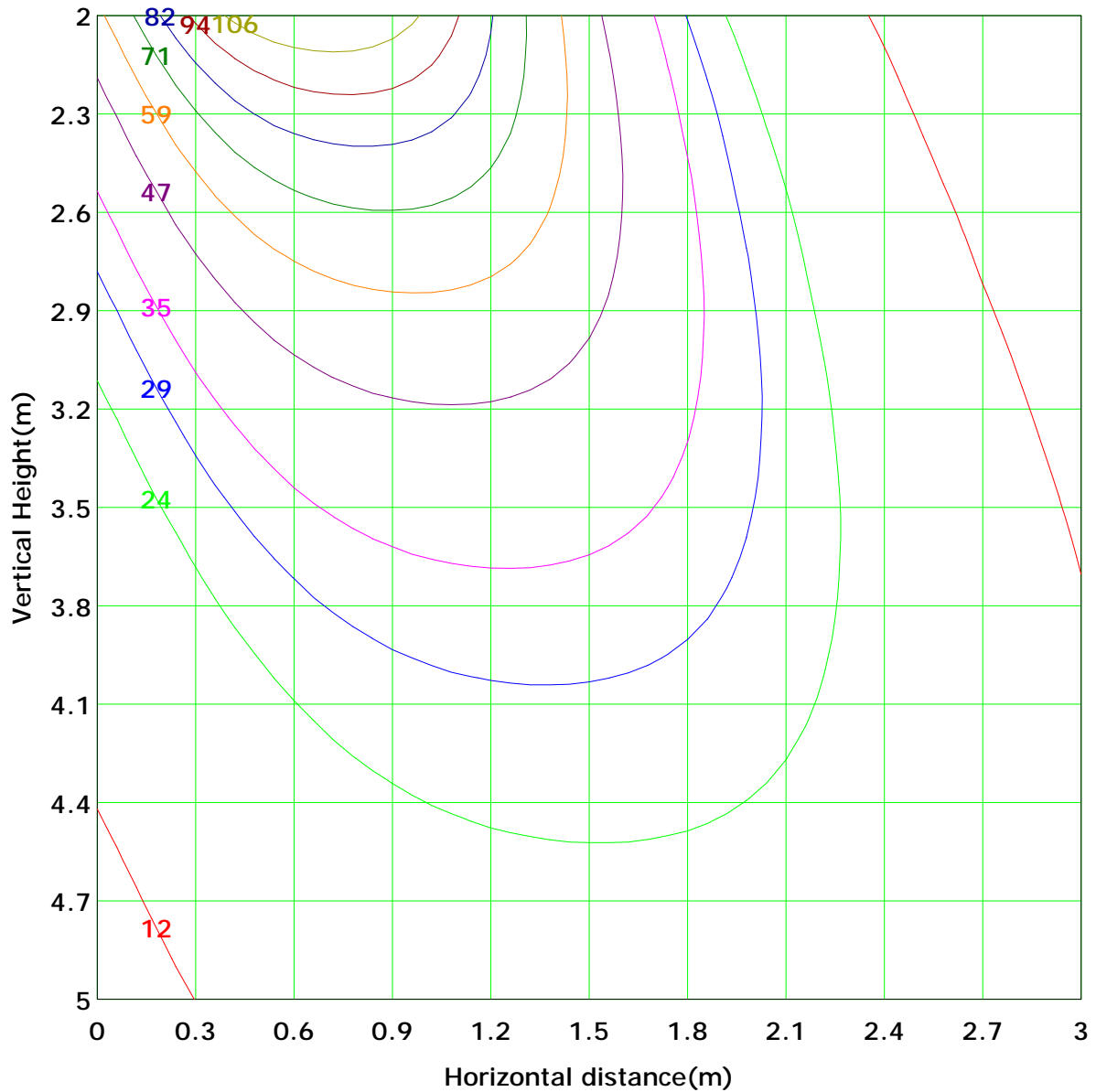
Humidity: 60%

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 117.6 lx
(10%): 11.8 lx	(20%): 23.5 lx	
(25%): 29.4 lx	(30%): 35.3 lx	
(40%): 47.0 lx	(50%): 58.8 lx	
(60%): 70.5 lx	(70%): 82.3 lx	
(80%): 94.1 lx	(90%): 105.8 lx	

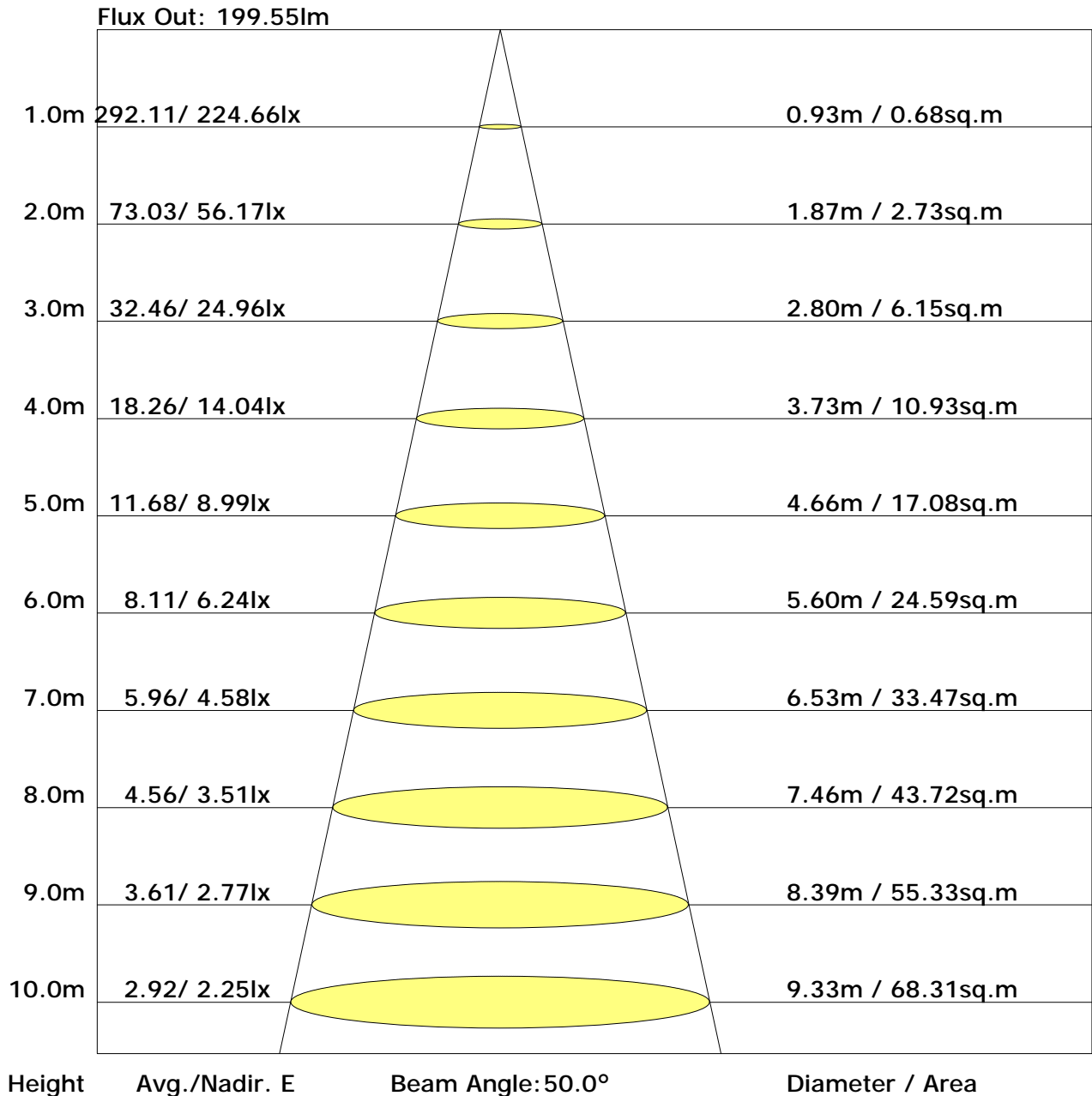
C Plane (°):0.0-360.0: 30.0
Test Lab: ACOLYTE
Test Type: TYPE C
Temperature: 25°C
Operator: leo

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	13.9	15.3	14.3	15.6	15.9	22.2	23.5	22.5	23.9	24.2
3H	13.8	15.1	14.2	15.4	15.8	22.7	23.9	23.1	24.3	24.7
4H	13.8	14.9	14.2	15.3	15.7	22.8	23.9	23.2	24.3	24.7
6H	13.7	14.8	14.1	15.2	15.6	22.8	23.9	23.3	24.3	24.7
8H	13.7	14.7	14.1	15.1	15.5	22.8	23.8	23.3	24.2	24.7
12H	13.6	14.6	14.1	15.0	15.5	22.8	23.7	23.2	24.2	24.6
X=4H Y=2H	15.4	16.6	15.8	16.9	17.3	22.1	23.3	22.6	23.7	24.1
3H	15.4	16.3	15.8	16.8	17.2	22.8	23.8	23.3	24.2	24.6
4H	15.3	16.2	15.8	16.6	17.1	22.9	23.8	23.4	24.2	24.7
6H	15.3	16.0	15.7	16.4	16.9	23.0	23.7	23.5	24.2	24.7
8H	15.2	15.9	15.7	16.4	16.8	23.0	23.6	23.5	24.1	24.6
12H	15.2	15.8	15.7	16.3	16.8	23.0	23.6	23.5	24.1	24.6
X=8H Y=4H	15.6	16.3	16.1	16.7	17.2	22.8	23.5	23.3	24.0	24.5
6H	15.5	16.1	16.0	16.6	17.1	22.8	23.4	23.4	23.9	24.4
8H	15.5	15.9	16.0	16.5	17.0	22.8	23.3	23.4	23.9	24.4
12H	15.4	15.9	16.0	16.4	17.0	22.8	23.3	23.4	23.8	24.4
X=12H Y=4H	15.6	16.2	16.1	16.7	17.2	22.8	23.4	23.3	23.9	24.4
6H	15.5	16.0	16.0	16.5	17.0	22.8	23.3	23.3	23.8	24.4
8H	15.4	15.9	16.0	16.4	17.0	22.8	23.2	23.3	23.8	24.3

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 = 1.50								
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	0.71	0.79	0.86	0.90	0.96	1.00	1.02	1.05	1.07
	0.30		0.65	0.74	0.80	0.85	0.91	0.96	0.98	1.02	1.05
	0.20		0.61	0.69	0.76	0.81	0.88	0.92	0.95	1.00	1.03
0.50	0.50	0.20	0.70	0.77	0.84	0.88	0.93	0.96	0.98	1.01	1.03
	0.30		0.64	0.72	0.79	0.83	0.89	0.93	0.95	0.99	1.01
	0.20		0.60	0.68	0.75	0.80	0.86	0.90	0.93	0.97	0.99
0.30	0.50	0.20	0.68	0.76	0.81	0.85	0.90	0.93	0.95	0.97	0.99
	0.30		0.64	0.71	0.77	0.82	0.87	0.90	0.93	0.96	0.97
	0.20		0.60	0.68	0.74	0.79	0.84	0.88	0.91	0.94	0.96
0.00	0.00	0.00	0.58	0.65	0.71	0.76	0.81	0.84	0.86	0.89	0.91
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 = 1.50									
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	0.76	0.62	0.52	0.44	0.34	0.28	0.24	0.19	0.15	
	0.30		0.64	0.53	0.45	0.39	0.31	0.26	0.22	0.17	0.14	
	0.20		0.55	0.47	0.40	0.35	0.28	0.24	0.21	0.16	0.14	
0.50	0.50	0.20	0.73	0.59	0.49	0.42	0.32	0.30	0.22	0.17	0.14	
	0.30		0.62	0.52	0.43	0.37	0.30	0.25	0.21	0.16	0.13	
	0.20		0.54	0.46	0.39	0.34	0.27	0.23	0.20	0.15	0.13	
0.30	0.50	0.20	0.70	0.57	0.46	0.39	0.30	0.25	0.21	0.16	0.13	
	0.30		0.60	0.50	0.42	0.36	0.28	0.23	0.20	0.15	0.12	
	0.20		0.53	0.44	0.38	0.33	0.26	0.22	0.19	0.15	0.12	
0.00	0.00	0.00	0.41	0.33	0.27	0.23	0.18	0.15	0.12	0.09	0.08	
<p>Rating: 10W Photometrically tested without ceiling board.</p> <p>Multiply UF values by service correction factors</p> <p>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>												

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 1.50								
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	0.18	0.19	0.20	0.20	0.21	0.22	0.22
	0.30		0.10	0.12	0.13	0.14	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	0.18	0.19
0.50	0.50	0.20	0.15	0.16	0.17	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	0.16	0.17	0.18
0.30	0.50	0.20	0.14	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20
	0.30		0.10	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		0.06	0.08	0.10	0.11	0.13	0.14	0.15	0.17	0.18
0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<p>Rating: 10W Photometrically tested without ceiling board.</p> <p>Multiply UF values by service correction factors</p> <p>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											