

Report No.: 01

Test Time: 2016/10/14 15:05

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category: Synthesis LED Linear

Luminaire Description: Synthesis Indirect SO 28CM 180 mA 3500K 75degree

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: 0.870

## Photometric Results

CIE Class: Direct

Measurement Flux: 560.1 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H81.8

Vertical Diffuse Angle(50%): V100.2

Luminaire Efficacy Rating (LER): 93

Max. Intensity: 352.5 cd

Total Rated Lamp Lumens: 560.1 lm

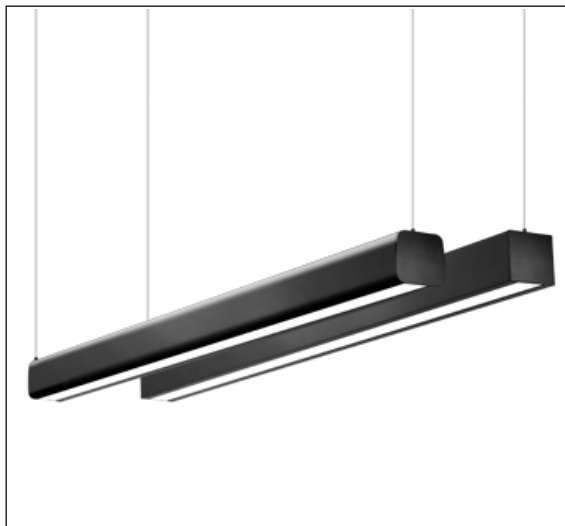
Efficiency: 100%

Upward Ratio: 1%

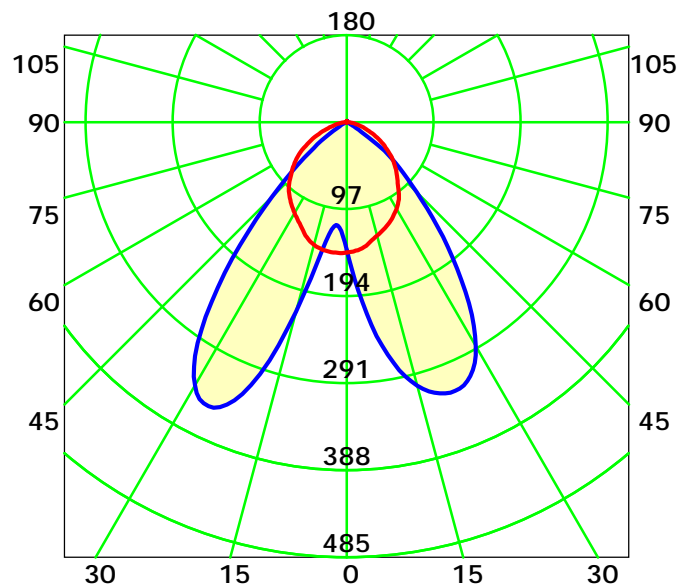
Central Intensity: 142.57 cd

Pos of Max. Intensity: H180 V26

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 91.0° 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

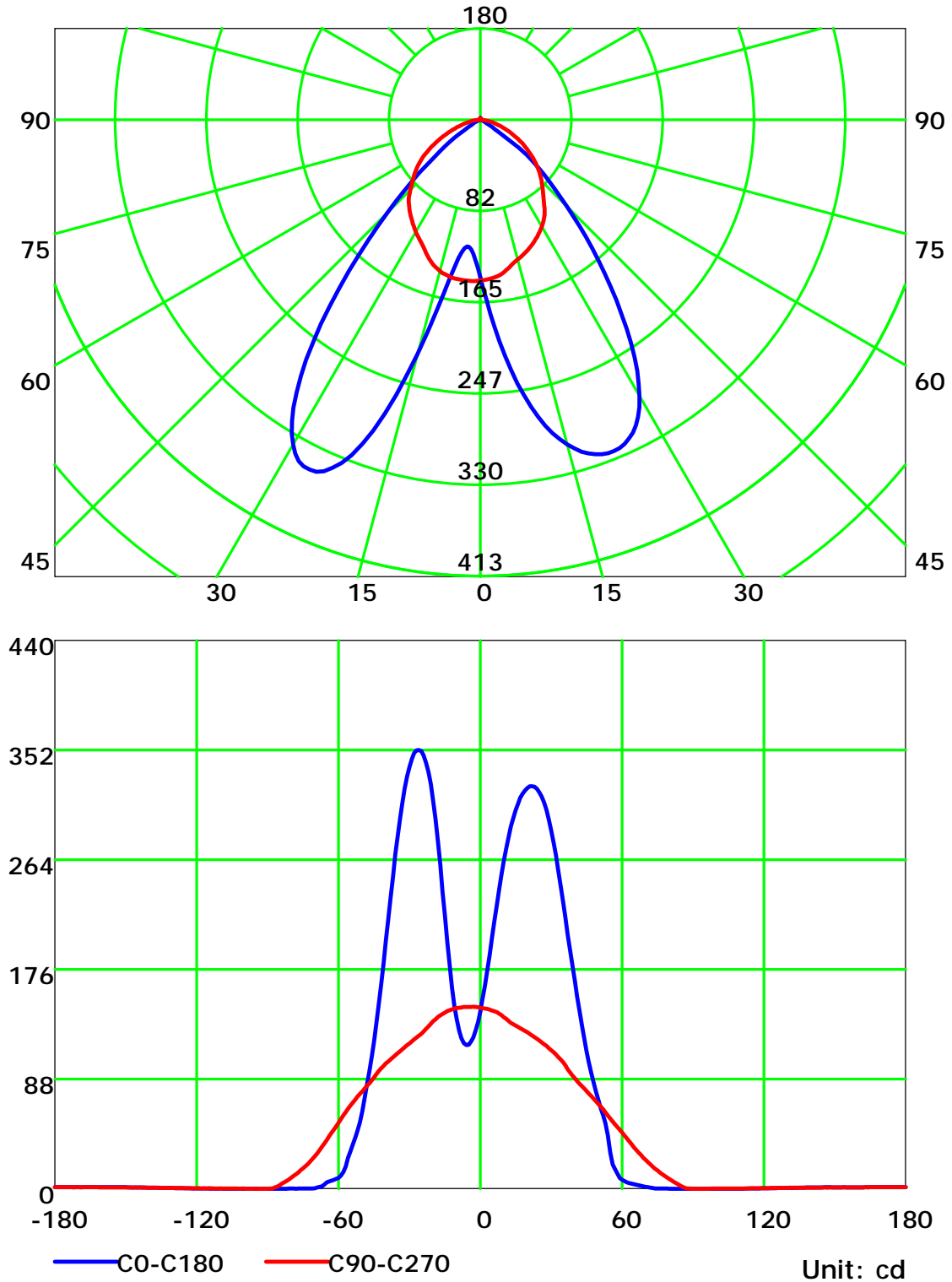
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

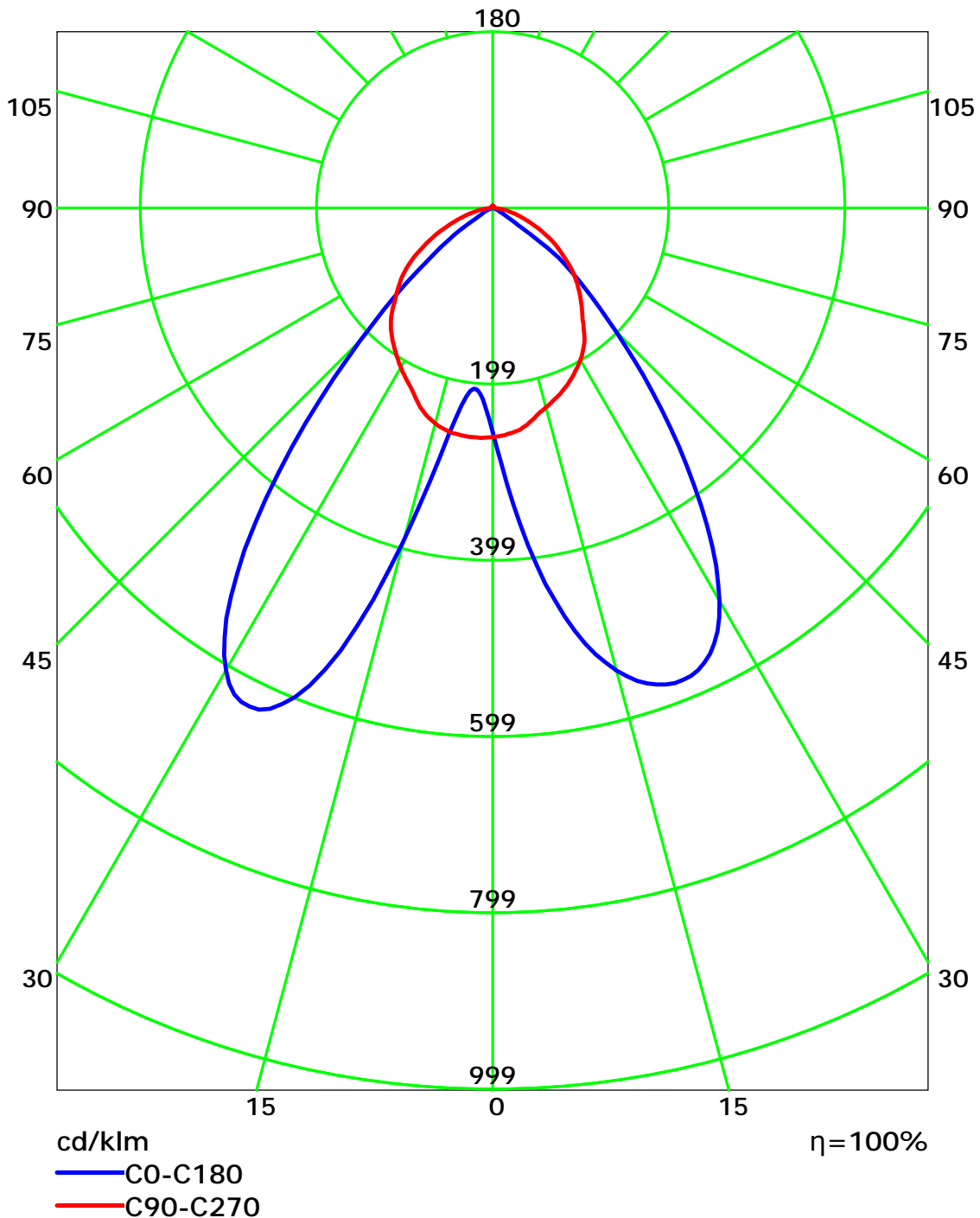
## Luminous Intensity Distribution Curve



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:

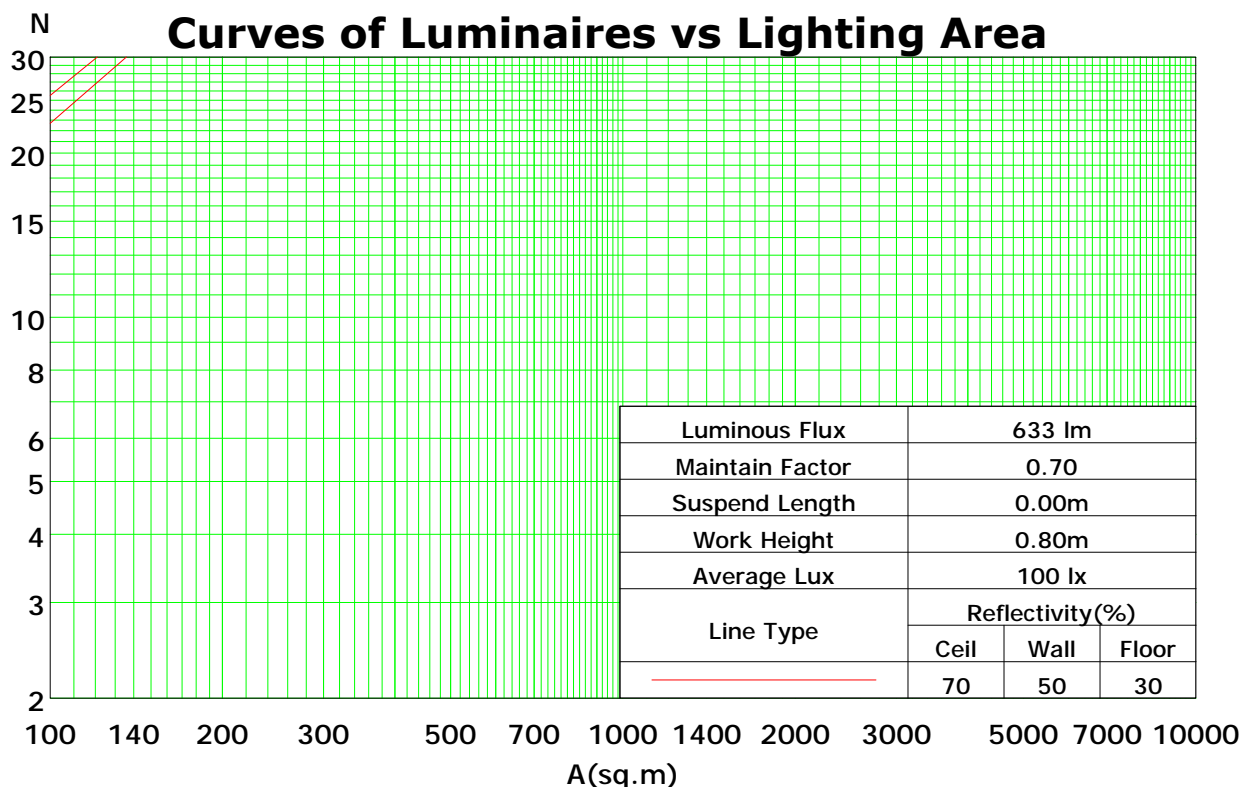
## Coefficients Of Utilization - Zonal Cavity Method

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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	90	86	100	94	89	85	91	86	83	87	84	81	84	81	79	77
3	95	86	79	74	92	84	78	73	81	76	71	79	74	70	76	72	69	67
4	88	77	69	64	85	76	69	63	73	67	62	71	66	61	69	64	61	59
5	81	70	62	56	79	68	61	55	66	60	55	64	59	54	63	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	57	52	47	46
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36
9	60	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	32
10	57	44	37	32	55	44	36	31	43	36	31	42	35	31	41	35	31	29

Spacing Criteria (0-180): 1.75

Spacing Criteria (90-270): 1.17

Spacing Criteria (Diagonal): 1.69



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

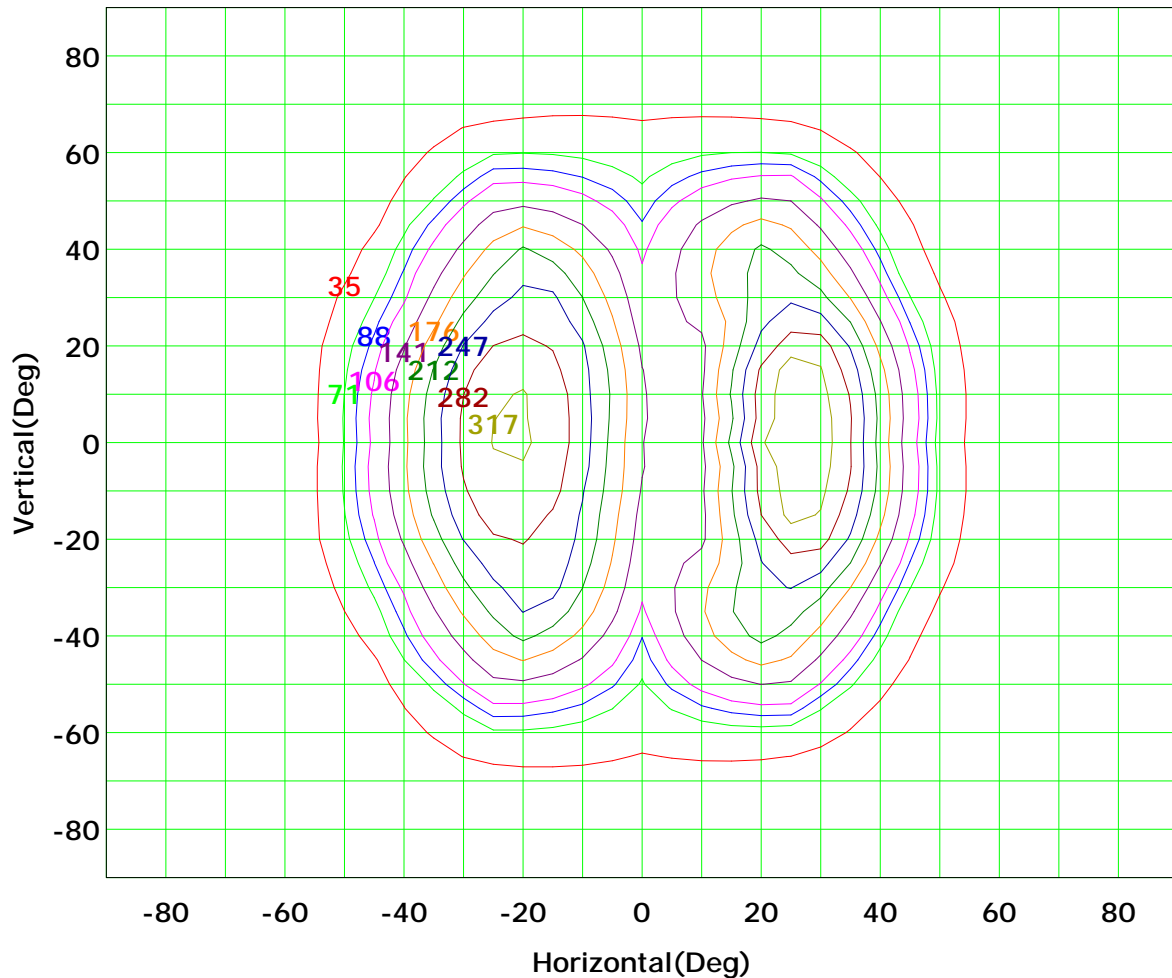
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## Isocandela (rectangle)



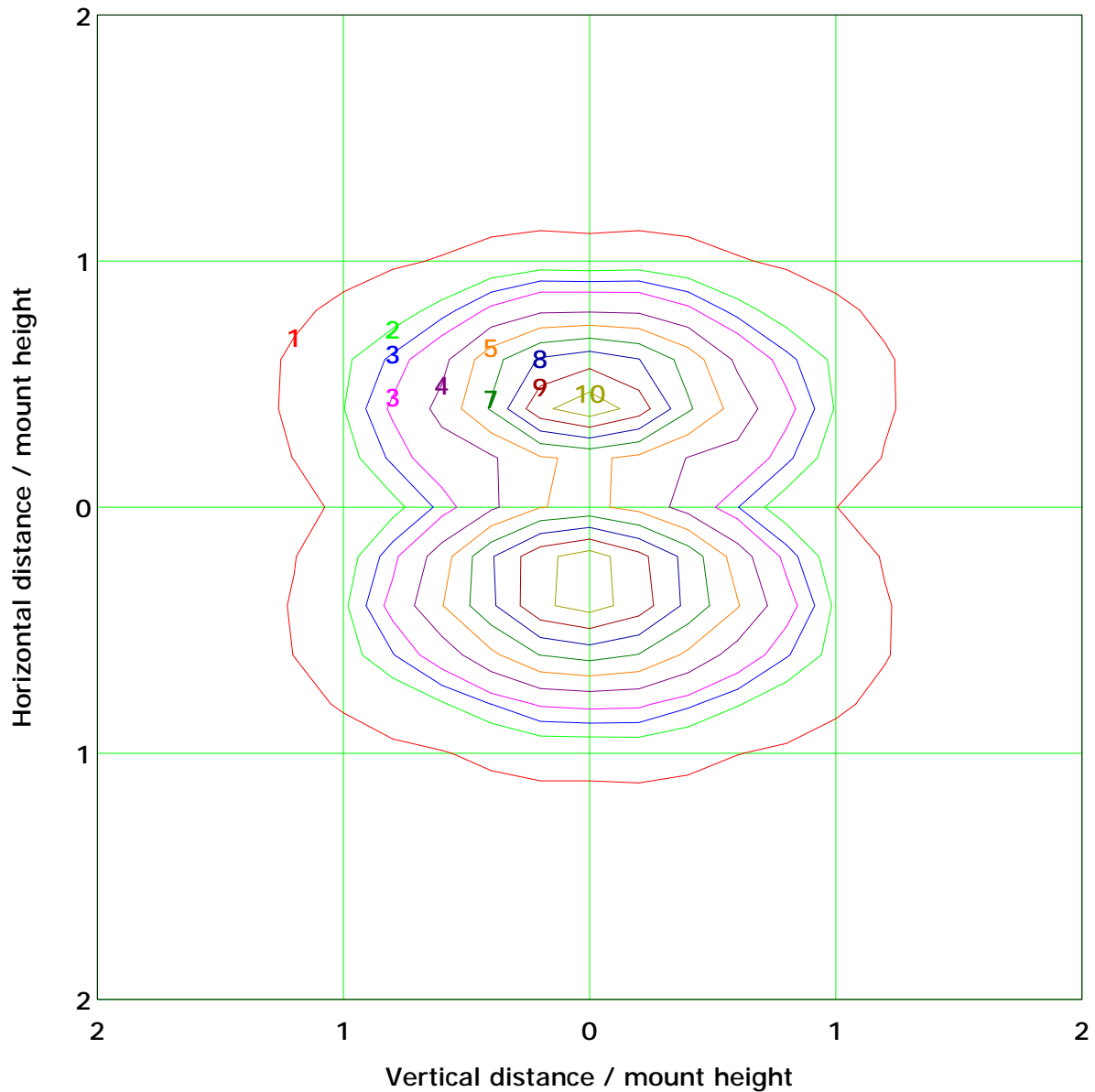
I<sub>max</sub> (100%): 353 cd

( 10%): 35 cd	( 20%): 71 cd
( 25%): 88 cd	( 30%): 106 cd
( 40%): 141 cd	( 50%): 176 cd
( 60%): 212 cd	( 70%): 247 cd
( 80%): 282 cd	( 90%): 317 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%): 11.0 lx	
( 10%):	1.1 lx	( 20%):	2.2 lx
( 25%):	2.7 lx	( 30%):	3.3 lx
( 40%):	4.4 lx	( 50%):	5.5 lx
( 60%):	6.6 lx	( 70%):	7.7 lx
( 80%):	8.8 lx	( 90%):	9.9 lx

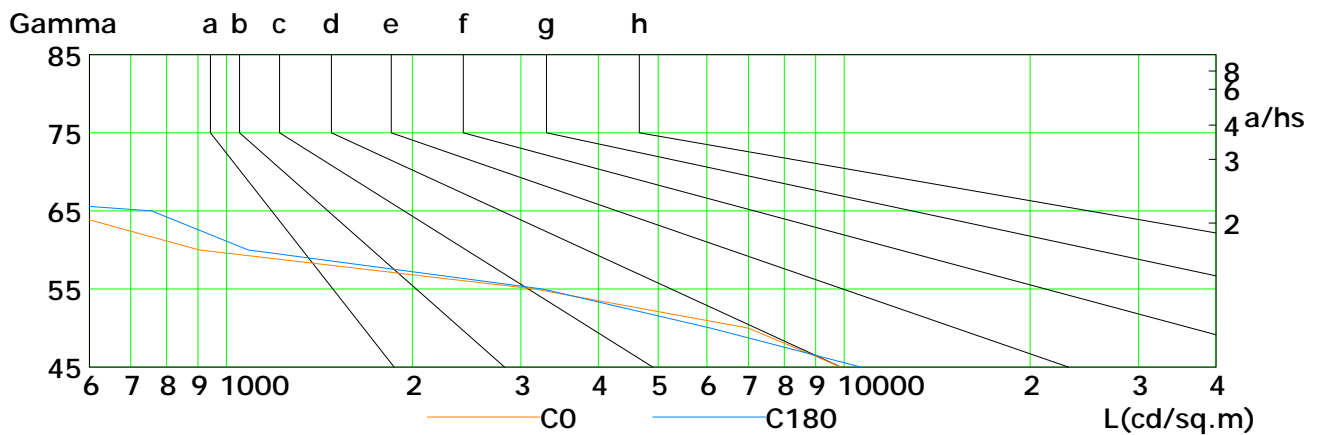
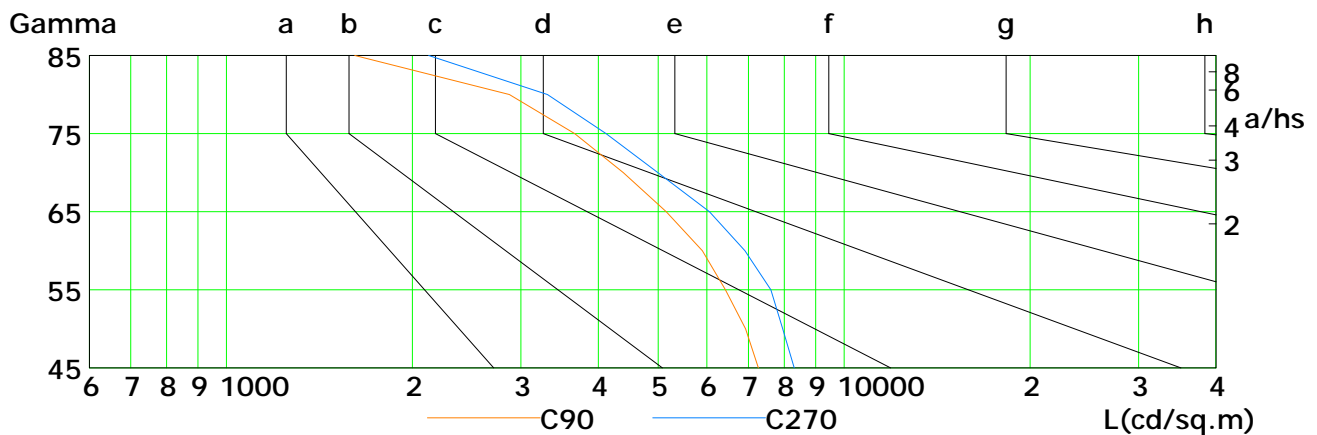
C Plane (°):0.0-360.0: 30.0  
Test Lab: ACOLYTE  
Test Type: TYPE C  
Temperature: 25°C  
Operator: leo

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

## 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	9903	6995	3156	904	532	291	53	56	83
C90	7270	6929	6426	5897	5156	4393	3664	2871	1615
C180	10657	6079	3251	1085	757	113	75	86	98
C270	8306	7955	7610	6909	6053	4996	4118	3309	2127

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

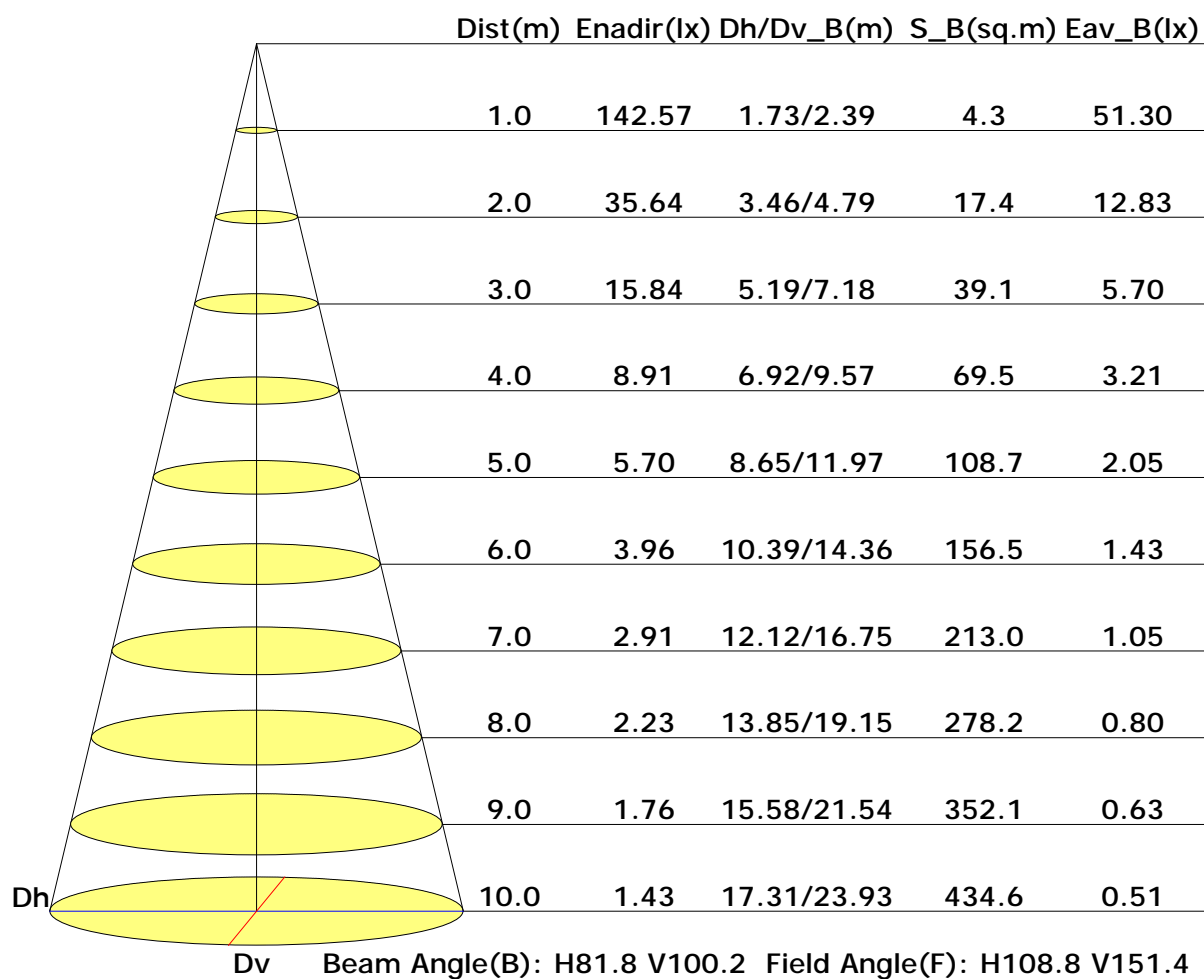
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

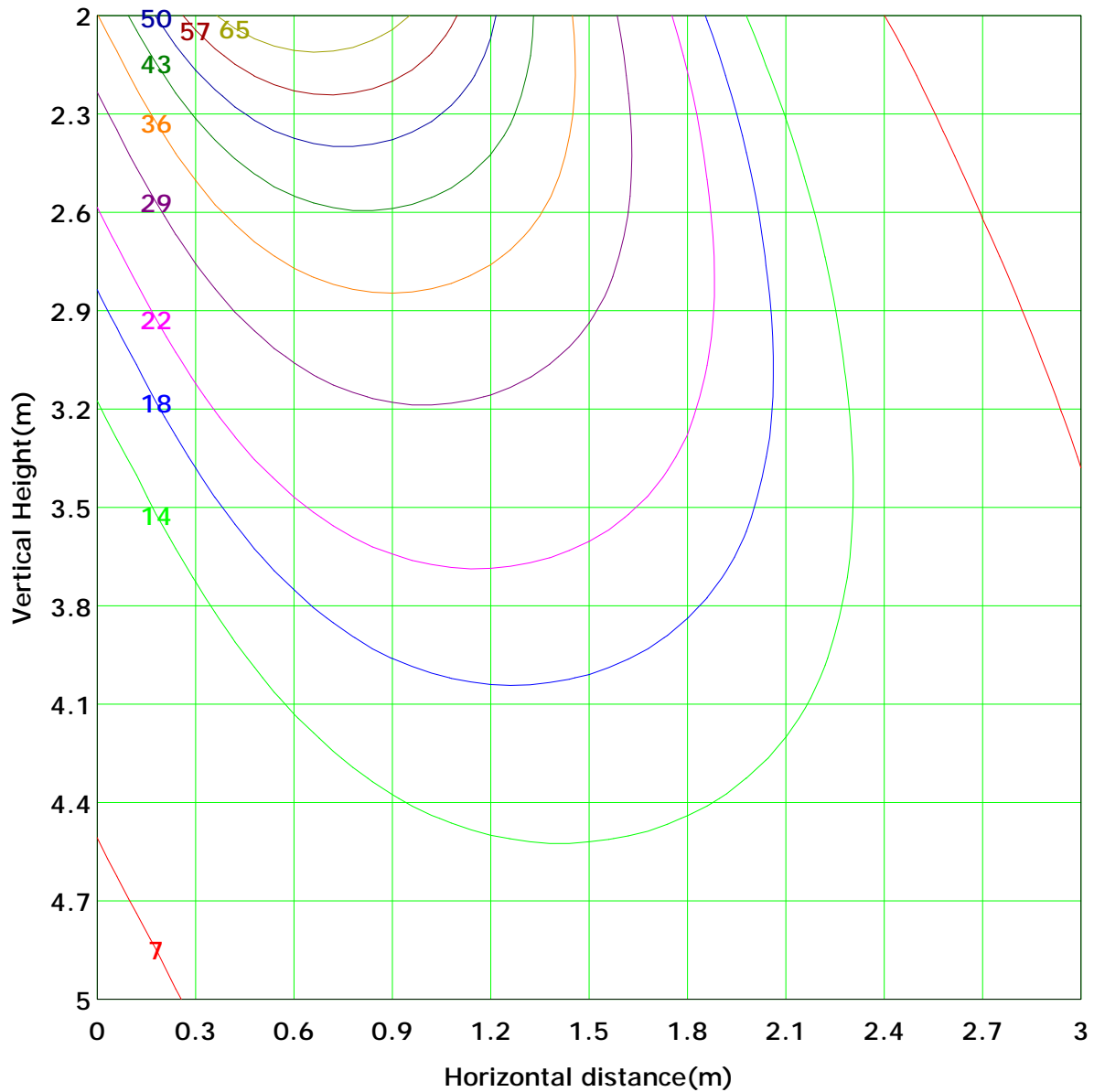
Inspector:

## Illuminance at a Distance





## Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 71.8 lx
( 10%): 7.2 lx	( 20%): 14.4 lx	
( 25%): 17.9 lx	( 30%): 21.5 lx	
( 40%): 28.7 lx	( 50%): 35.9 lx	
( 60%): 43.1 lx	( 70%): 50.2 lx	
( 80%): 57.4 lx	( 90%): 64.6 lx	

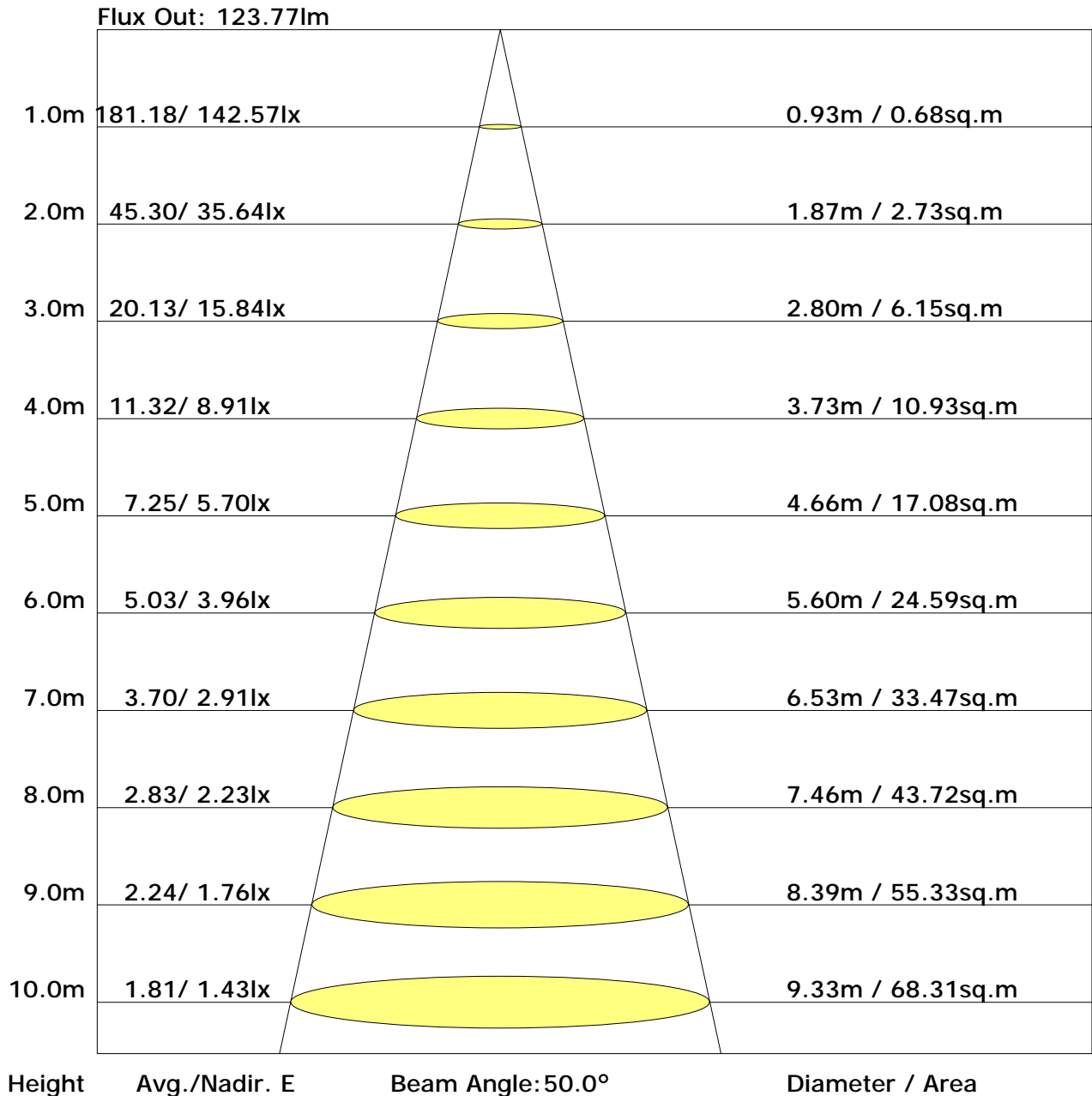
C Plane (°):0.0-360.0: 30.0  
Test Lab: ACOLYTE  
Test Type: TYPE C  
Temperature: 25°C  
Operator: leo

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	15.1	16.5	15.5	16.9	17.2	22.2	23.6	22.6	23.9	24.2
3H	15.1	16.3	15.5	16.6	17.0	22.7	24.0	23.1	24.3	24.7
4H	15.0	16.2	15.4	16.5	16.9	22.8	24.0	23.2	24.3	24.7
6H	14.9	16.0	15.4	16.4	16.8	22.8	23.9	23.3	24.3	24.7
8H	14.9	15.9	15.3	16.3	16.7	22.8	23.8	23.3	24.2	24.7
12H	14.8	15.8	15.3	16.2	16.7	22.8	23.8	23.2	24.2	24.6
X=4H Y=2H	16.4	17.5	16.8	17.9	18.3	22.2	23.3	22.6	23.7	24.1
3H	16.3	17.2	16.7	17.7	18.1	22.9	23.8	23.3	24.3	24.7
4H	16.2	17.1	16.7	17.5	17.9	23.0	23.8	23.4	24.3	24.7
6H	16.1	16.9	16.6	17.3	17.8	23.0	23.8	23.5	24.2	24.7
8H	16.1	16.8	16.6	17.2	17.7	23.0	23.7	23.5	24.2	24.6
12H	16.1	16.6	16.6	17.1	17.6	23.0	23.6	23.5	24.1	24.6
X=8H Y=4H	16.5	17.1	16.9	17.6	18.1	22.9	23.6	23.4	24.0	24.5
6H	16.3	16.9	16.9	17.4	17.9	22.9	23.5	23.4	24.0	24.5
8H	16.3	16.8	16.8	17.3	17.8	22.9	23.4	23.4	23.9	24.4
12H	16.3	16.7	16.8	17.2	17.8	22.9	23.3	23.4	23.8	24.4
X=12H Y=4H	16.4	17.0	16.9	17.5	18.0	22.8	23.4	23.3	23.9	24.4
6H	16.3	16.8	16.9	17.3	17.9	22.9	23.4	23.4	23.8	24.4
8H	16.3	16.7	16.8	17.2	17.8	22.8	23.3	23.4	23.8	24.4

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	0.72	0.80	0.86	0.91	0.96	1.00	1.02	1.05	1.08
	0.30		0.65	0.74	0.81	0.85	0.92	0.96	0.99	1.03	1.05
	0.20		0.61	0.69	0.76	0.81	0.88	0.93	0.96	1.00	1.03
0.50	0.50	0.20	0.70	0.78	0.84	0.88	0.93	0.96	0.99	1.02	1.03
	0.30		0.65	0.73	0.79	0.84	0.90	0.93	0.96	0.99	1.01
	0.20		0.61	0.69	0.75	0.80	0.86	0.90	0.93	0.97	1.00
0.30	0.50	0.20	0.69	0.76	0.82	0.86	0.90	0.93	0.95	0.98	0.99
	0.30		0.64	0.72	0.78	0.82	0.87	0.91	0.93	0.96	0.98
	0.20		0.60	0.68	0.74	0.79	0.85	0.88	0.91	0.94	0.96
0.00	0.00	0.00	0.58	0.66	0.72	0.76	0.81	0.85	0.87	0.90	0.92
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 = 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	0.77	0.62	0.52	0.44	0.34	0.28	0.24	0.18	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	0.13
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	0.71	0.57	0.47	0.40	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	0.45	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
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 = 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	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.22
	0.30		0.10	0.11	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.06	0.08	0.09	0.11	0.13	0.14	0.16	0.17	0.18
0.50	0.50	0.20	0.15	0.16	0.17	0.17	0.18	0.19	0.20	0.20	0.21
	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	0.09	0.11	0.13	0.14	0.15	0.17	0.18
0.30	0.50	0.20	0.14	0.15	0.16	0.17	0.18	0.18	0.19	0.19	0.20
	0.30		0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		0.06	0.08	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											