

Report No.: 01

Test Time: 2017/2/6 11:29

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category: RB243.041PH

Luminous Length (mm): 500mm

Luminous Height (mm): 1mm

Current: 0.198 A

Power Factor: 1.000

Luminaire Description: RB243.041PH

Luminous Width (mm): 8mm

Voltage: 24.0 V

Power: 4.75 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 442.7 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H115.3

Vertical Diffuse Angle(50%): V115.4

Luminaire Efficacy Rating (LER): 93

Max. Intensity: 148.92 cd

Total Rated Lamp Lumens: 442.7 lm

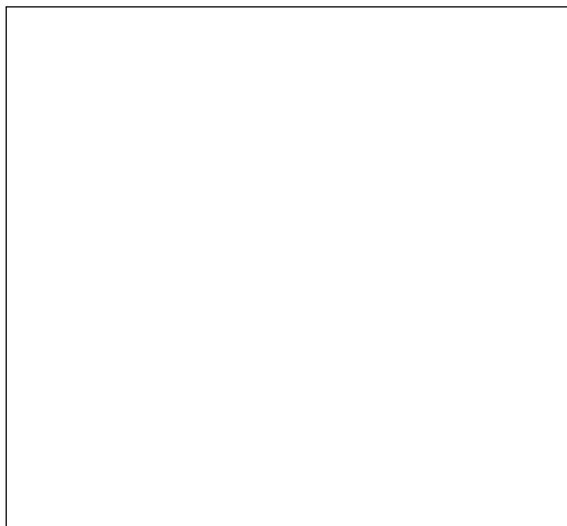
Efficiency: 100%

Upward Ratio: 1%

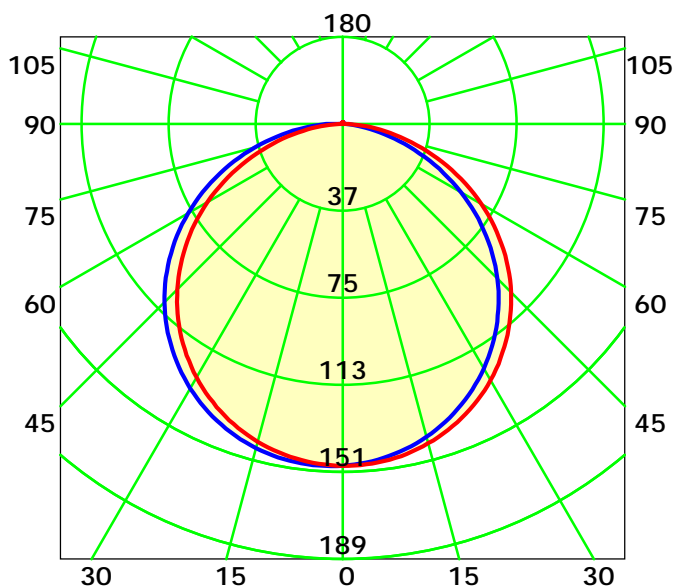
Central Intensity: 148.61 cd

Pos of Max. Intensity: H180 V4

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 115.4° Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 30.0

Test Lab: acolyteled

Test Type: TYPE C

Temperature: 25°C

Operator: roy

Gamma Plane (°):0.0-180.0: 1.0

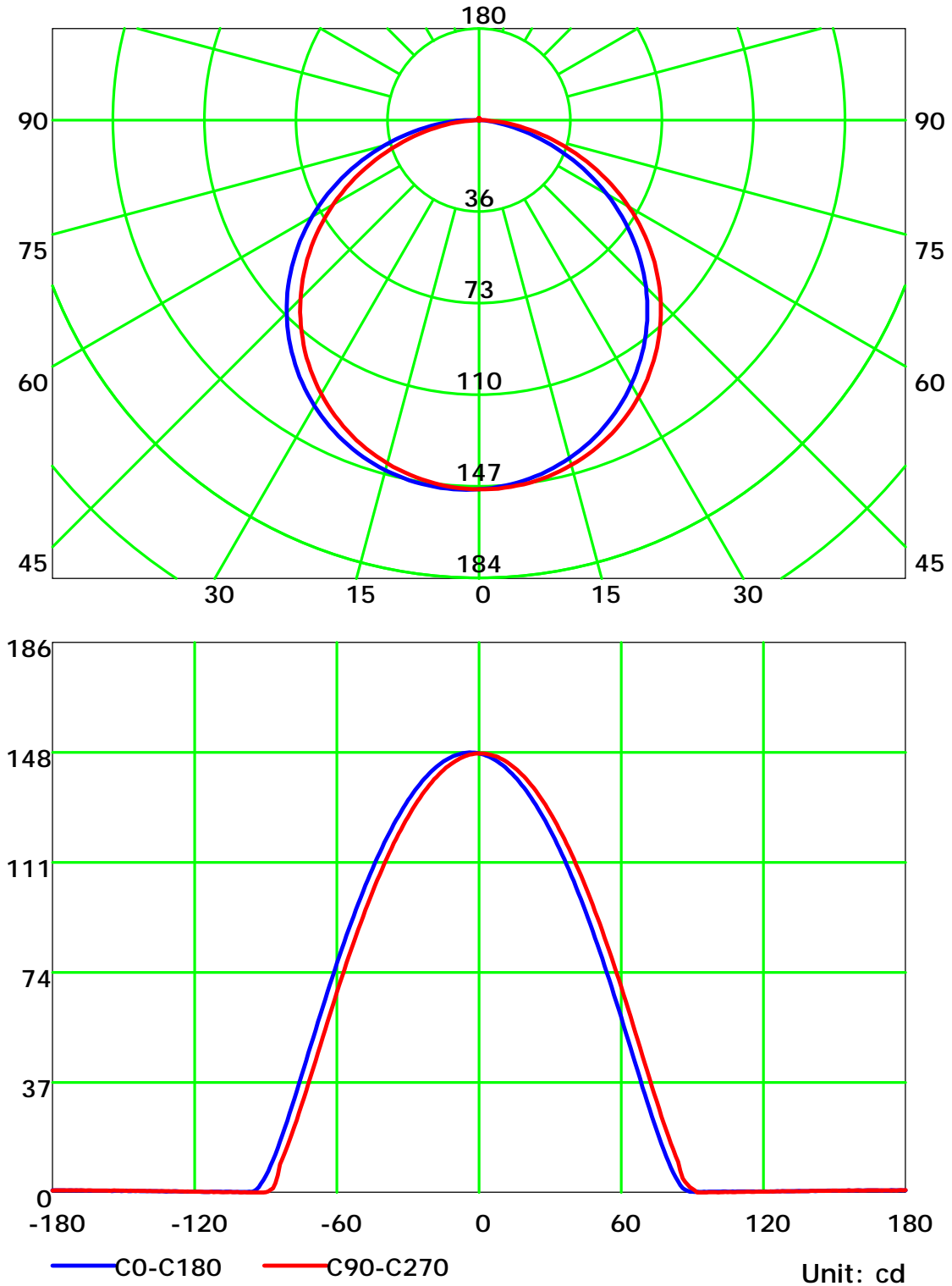
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

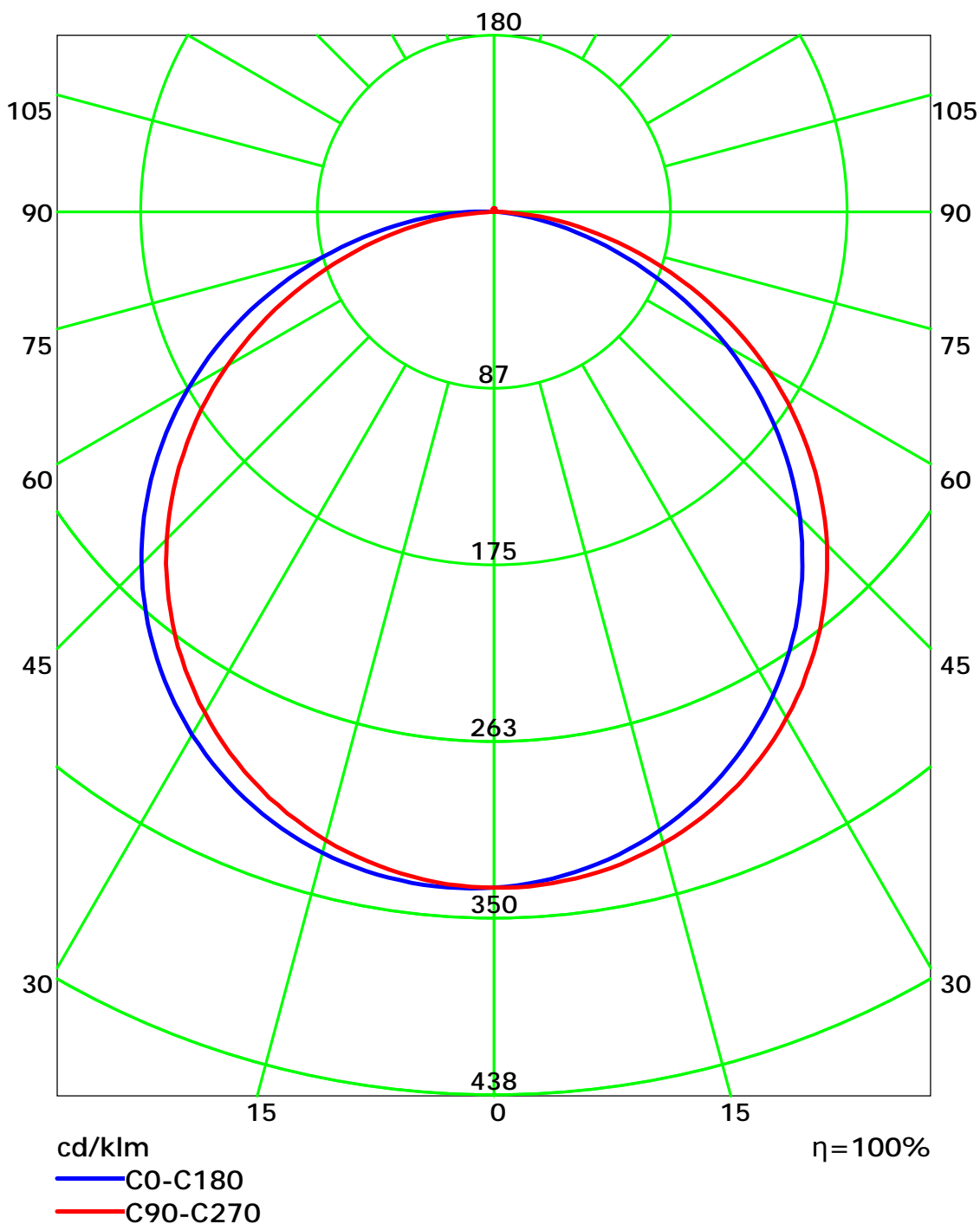
## Luminous Intensity Distribution Curve



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

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: acolyteled  
Test Type: TYPE C  
Temperature: 25°C  
Operator: roy

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

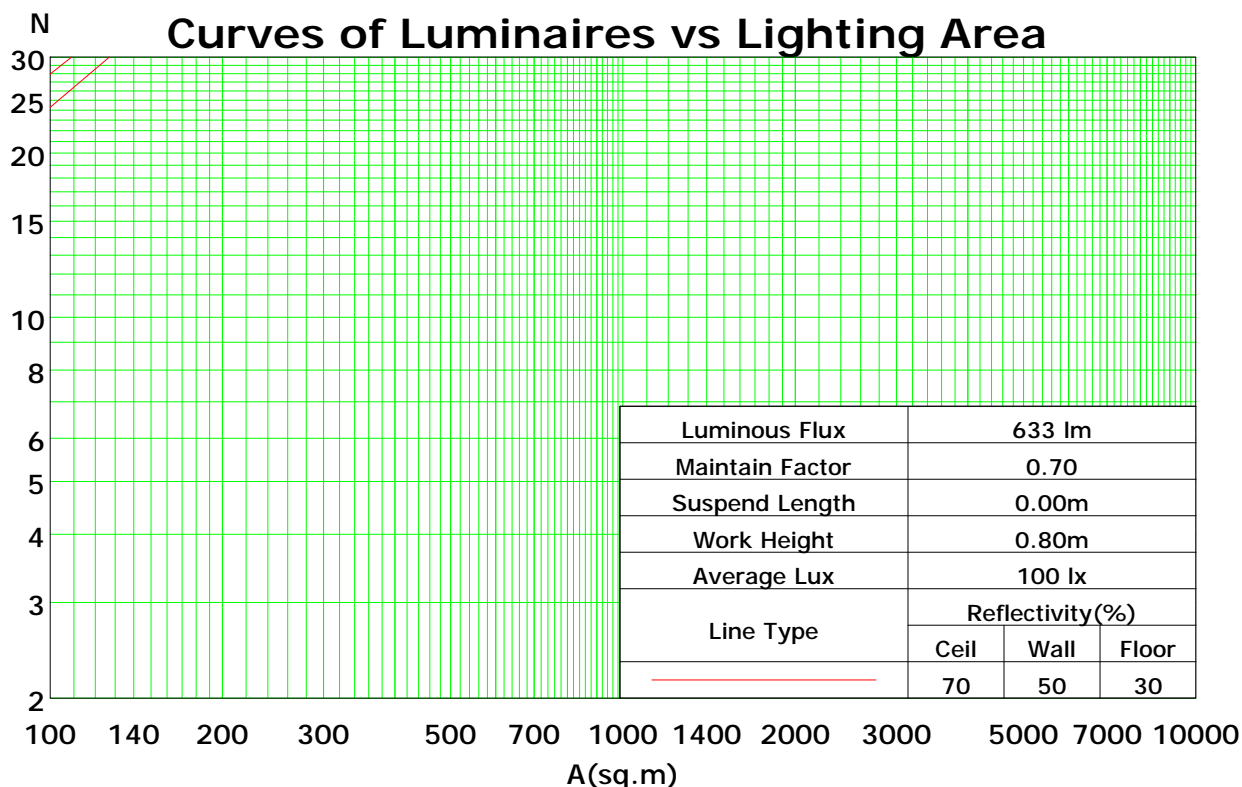
## Coefficients Of Utilization - Zonal Cavity Method

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	108	103	99	95	106	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	76	72	78	74	71	68
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	68	64	60	57
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	41	35	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	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

Spacing Criteria (0-180): 1.28

Spacing Criteria (90-270): 1.28

Spacing Criteria (Diagonal): 1.40



C Plane (°):0.0-360.0: 30.0

Test Lab: acolyteled

Test Type: TYPE C

Temperature: 25°C

Operator: roy

Gamma Plane (°):0.0-180.0: 1.0

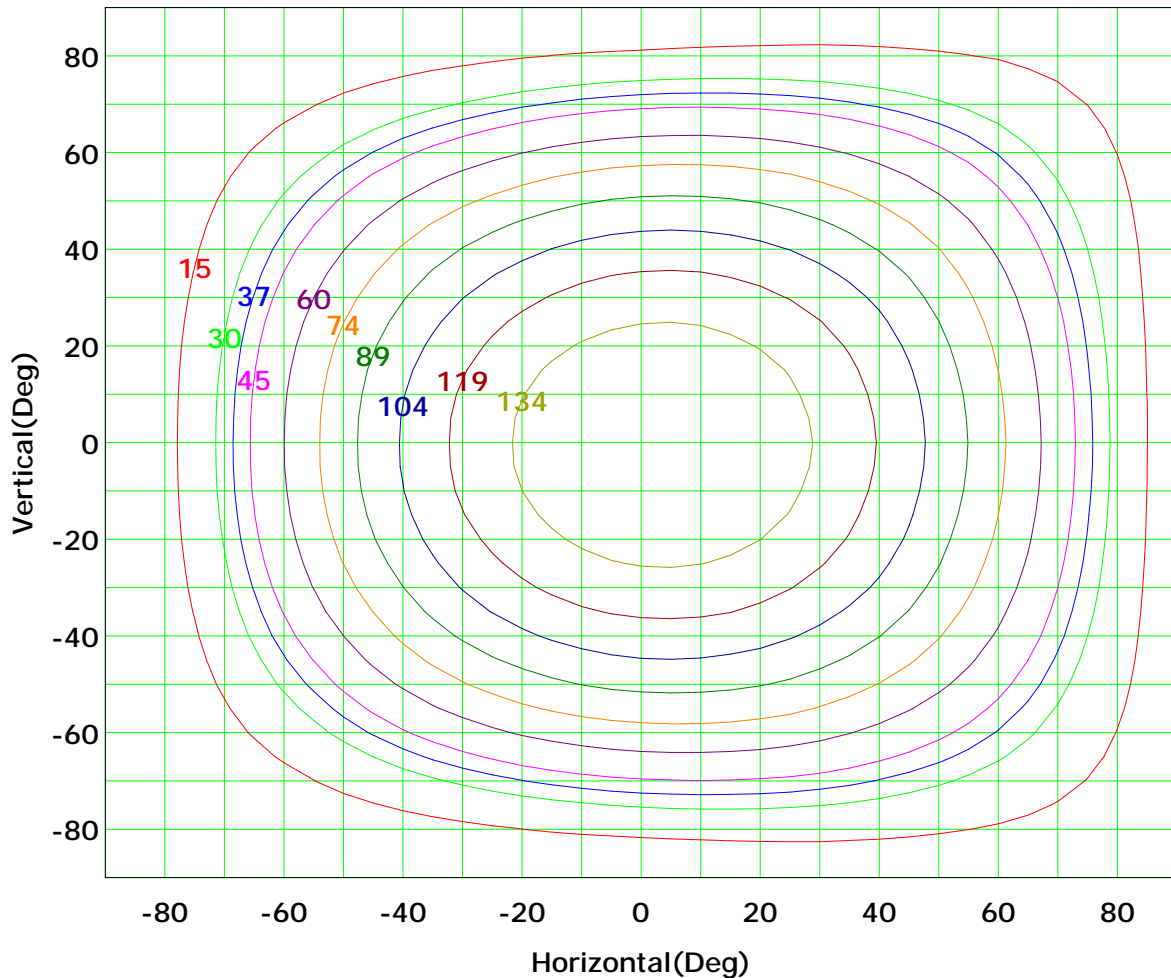
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## Isocandela (rectangle)



I<sub>max</sub> (100%): 149 cd

( 10%):	15 cd	( 20%):	30 cd
( 25%):	37 cd	( 30%):	45 cd
( 40%):	60 cd	( 50%):	74 cd
( 60%):	89 cd	( 70%):	104 cd
( 80%):	119 cd	( 90%):	134 cd

C Plane (°):0.0-360.0: 30.0

Test Lab: acolyteled

Test Type: TYPE C

Temperature: 25°C

Operator: roy

Gamma Plane (°):0.0-180.0:1.0

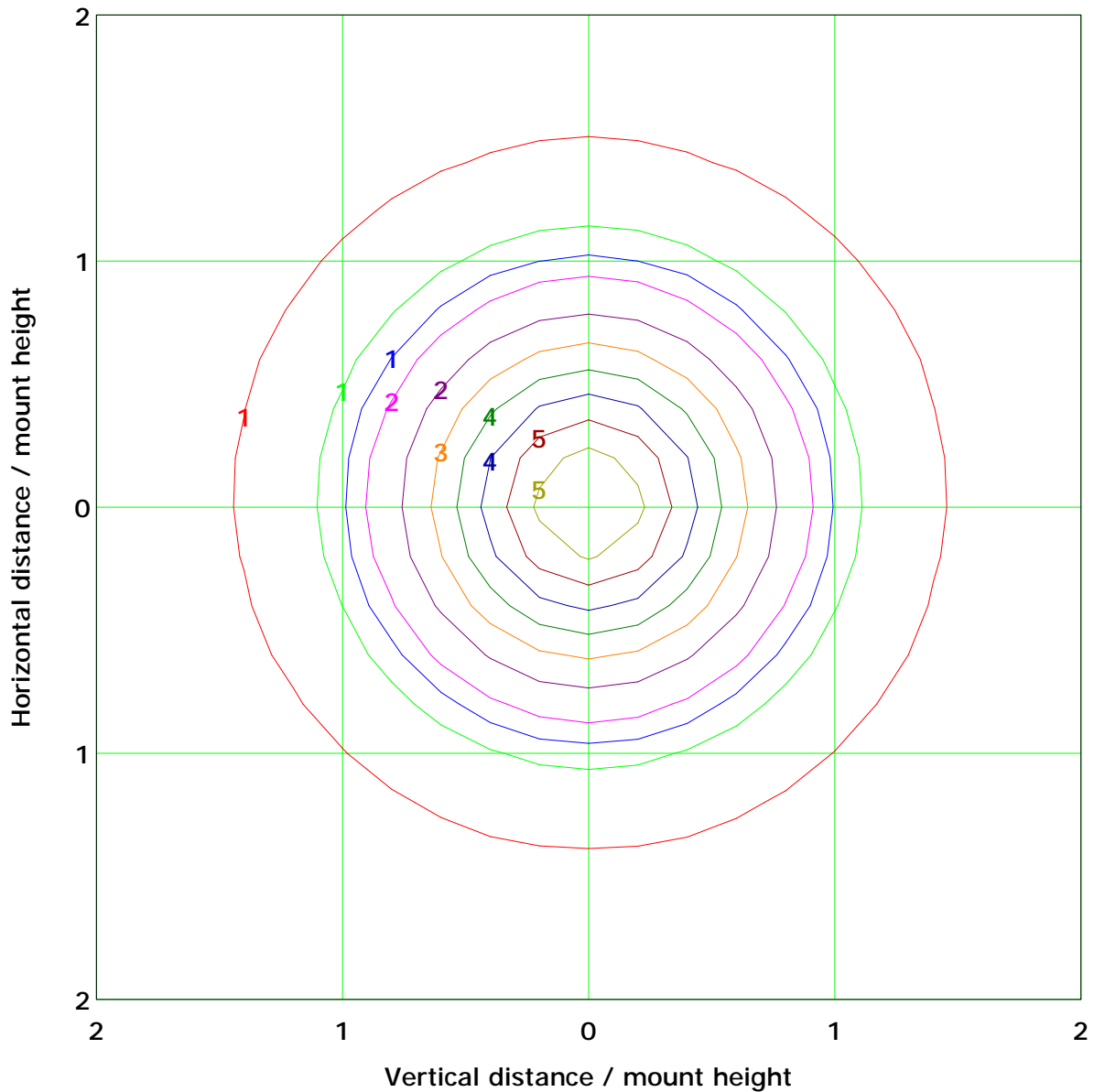
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## IsoLux Plot



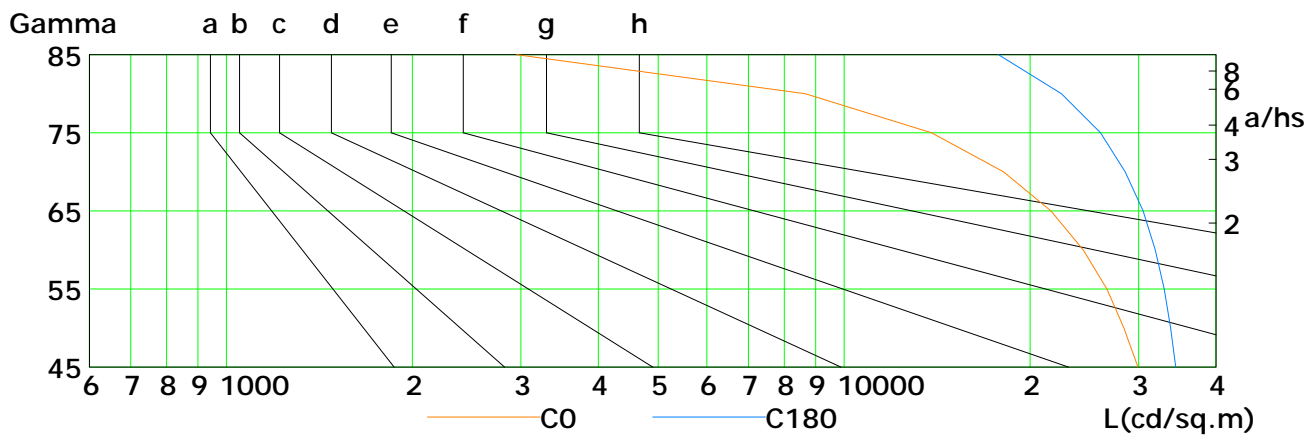
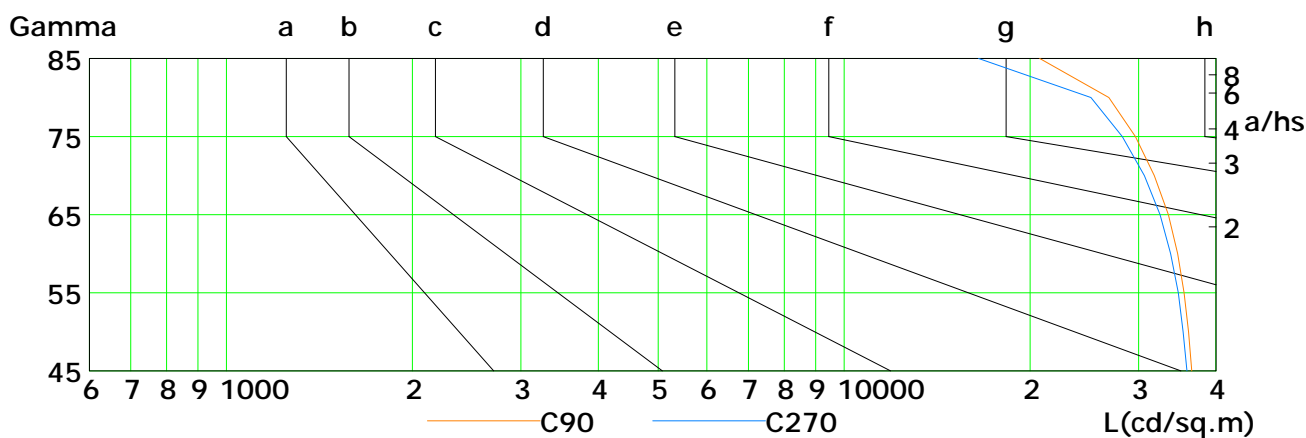
C Plane (°):0.0-360.0: 30.0  
Test Lab: acolyteled  
Test Type: TYPE C  
Temperature: 25°C  
Operator: roy

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	29915	28401	26636	24390	21622	18118	13852	8661	2953
C90	36548	36116	35543	34680	33492	31783	29636	26834	20752
C180	34447	33793	32971	31911	30476	28532	26024	22494	17774
C270	35913	35394	34765	33783	32496	30648	28226	25111	16517

C Plane (°):0.0-360.0: 30.0

Test Lab: acolyteled

Test Type: TYPE C

Temperature: 25℃

Operator: roy

Gamma Plane (°):0.0-180.0:1.0

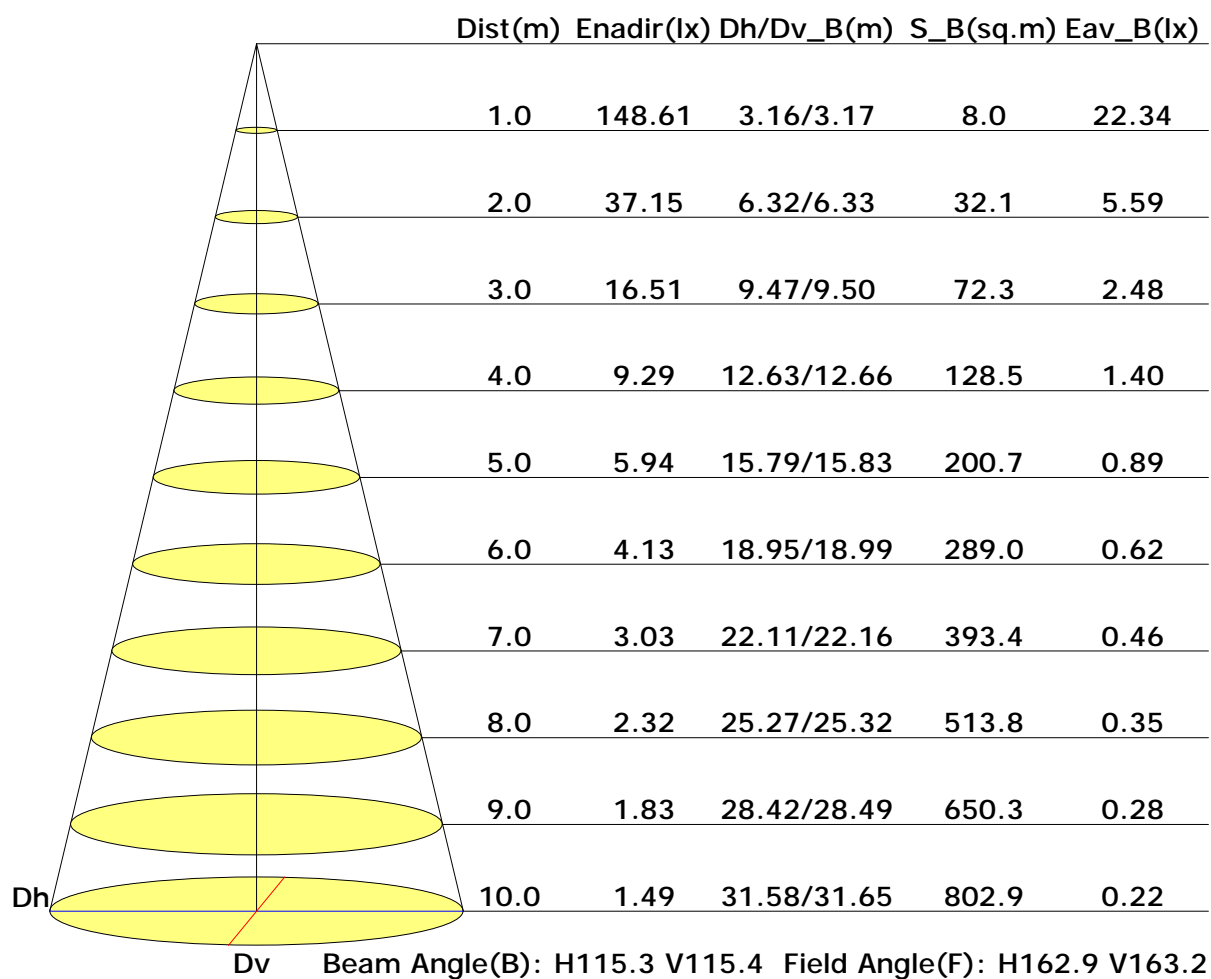
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

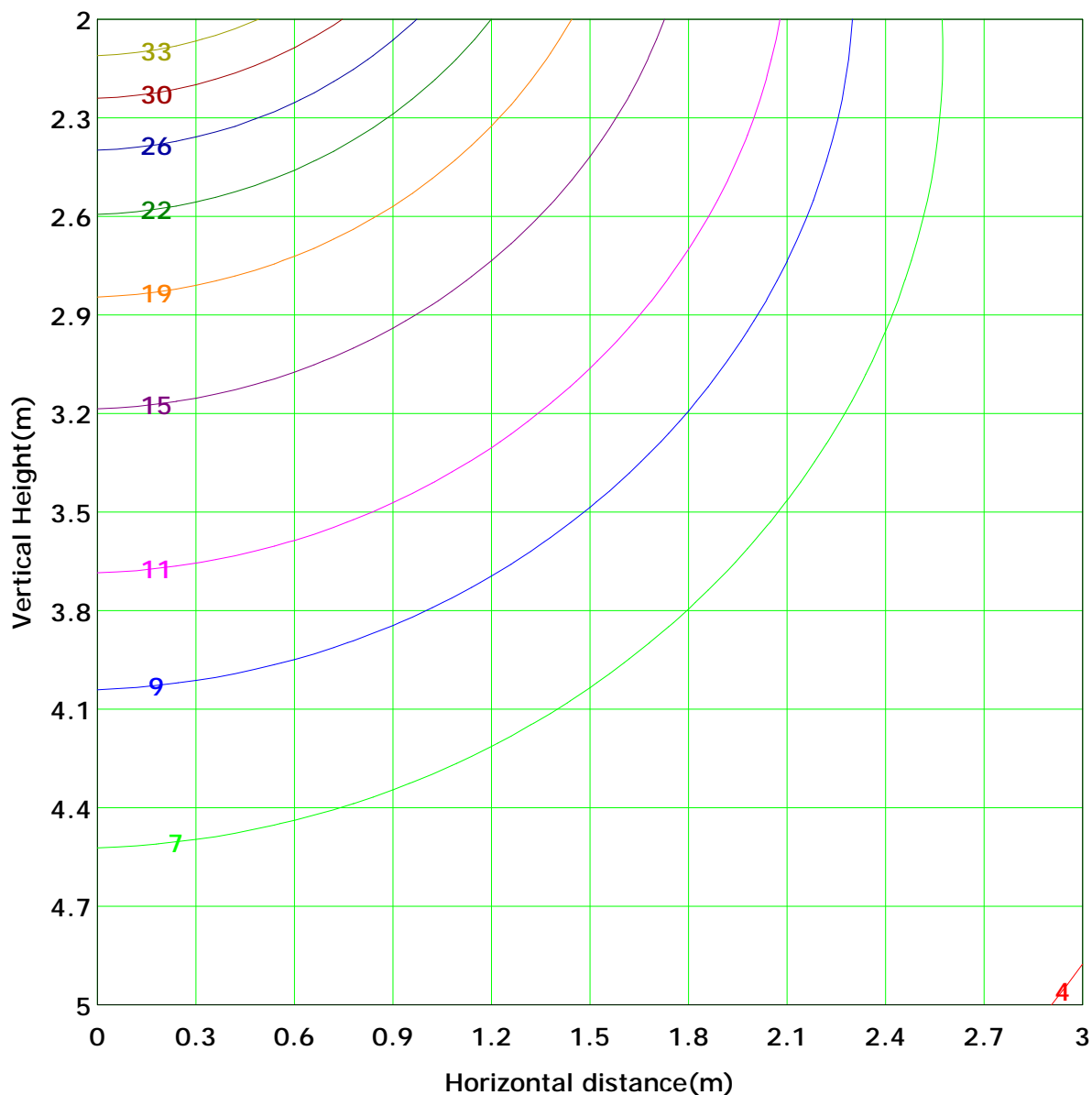
Inspector:

## Illuminance at a Distance





## Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 37.2 lx
( 10%): 3.7 lx	( 20%): 7.4 lx	
( 25%): 9.3 lx	( 30%): 11.1 lx	
( 40%): 14.9 lx	( 50%): 18.6 lx	
( 60%): 22.3 lx	( 70%): 26.0 lx	
( 80%): 29.7 lx	( 90%): 33.4 lx	

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

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

## Area Flux Table

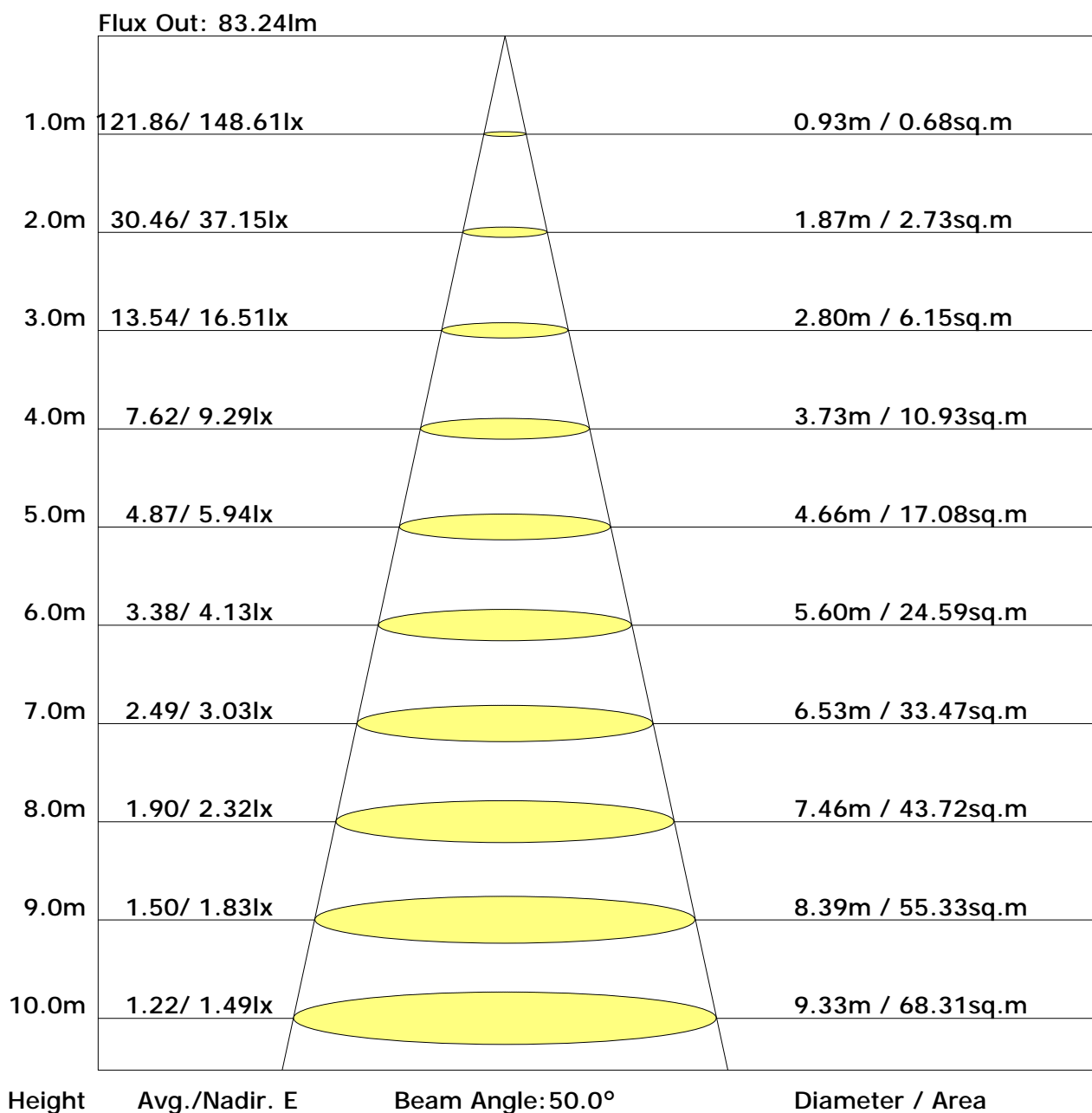
Unit: lm

Vertical plane		-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	Flux(T)	Flux(E)
		0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4
		0.0	0.1	0.2	0.4	0.5	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	3.8	3.4
		0.0	0.1	0.3	0.6	0.9	1.2	1.5	1.6	1.6	1.7	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.9	9.6	9.3
		0.0	0.2	0.5	0.8	1.3	1.7	2.1	2.3	2.3	2.4	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.7	1.6	17.6	17.2
		0.0	0.2	0.6	1.1	1.6	2.2	2.7	3.0	3.1	3.1	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.4	2.3	26.5	26.1
		0.0	0.3	0.8	1.4	2.1	2.8	3.4	3.7	3.8	3.9	4.0	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	34.9	34.9
		0.0	0.3	0.8	1.5	2.3	3.0	3.7	4.1	4.3	4.4	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	42.7	42.3
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	47.8	47.4
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	50.0	49.7
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	49.2	48.8
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	45.2	44.9
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	38.7	38.4
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	30.5	30.1
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	21.5	21.1
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	12.9	12.5
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	6.0	5.6
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	1.7	1.2
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	0.1	0.0
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	440	433
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	2.6	0.6
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	8.1	7.5
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	14.8	14.6
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	21.5	21.3
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	27.4	27.3
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	32.3	32.2
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	36.0	36.0
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	38.6	38.5
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	39.8	39.8
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	39.8	39.7
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	38.4	38.4
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	35.8	35.8
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	32.0	31.9
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	27.0	26.9
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	21.1	20.9
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	14.5	14.2
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	7.9	7.2
		0.0	0.3	0.8	1.6	2.3	3.1	3.8	4.3	4.5	4.5	4.4	4.3	4.2	4.1	4.0	3.9	3.8	3.7	3.6	2.4	0.5

C Plane (°):0.0-360.0: 30.0  
Test Lab: acolyteled  
Test Type: TYPE C  
Temperature: 25℃  
Operator: roy

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	26.3	28.0	26.7	28.3	28.6	26.9	28.5	27.2	28.8	29.2
3H	27.9	29.4	28.3	29.7	30.1	28.6	30.0	28.9	30.4	30.7
4H	28.4	29.8	28.8	30.1	30.5	29.1	30.5	29.6	30.9	31.3
6H	28.6	29.9	29.1	30.3	30.7	29.6	30.9	30.0	31.2	31.6
8H	28.7	29.9	29.1	30.3	30.7	29.7	30.9	30.1	31.3	31.7
12H	28.7	29.9	29.1	30.3	30.7	29.7	30.9	30.2	31.3	31.8
X=4H Y=2H	26.9	28.3	27.3	28.7	29.0	27.5	28.9	27.9	29.3	29.6
3H	28.6	29.8	29.0	30.2	30.6	29.4	30.6	29.8	31.0	31.4
4H	29.2	30.3	29.6	30.7	31.1	30.1	31.2	30.6	31.6	32.1
6H	29.6	30.5	30.0	30.9	31.4	30.6	31.6	31.1	32.0	32.5
8H	29.6	30.5	30.1	31.0	31.4	30.8	31.7	31.3	32.1	32.6
12H	29.7	30.4	30.1	30.9	31.4	30.9	31.7	31.4	32.2	32.6
X=8H Y=4H	29.4	30.3	29.9	30.8	31.2	30.4	31.3	30.9	31.8	32.2
6H	29.8	30.6	30.3	31.1	31.6	31.0	31.8	31.6	32.3	32.8
8H	29.9	30.6	30.5	31.1	31.6	31.3	31.9	31.8	32.5	32.9
12H	30.0	30.6	30.5	31.1	31.6	31.4	32.0	31.9	32.5	33.1
X=12H Y=4H	29.4	30.2	29.9	30.7	31.2	30.5	31.3	31.0	31.8	32.2
6H	29.9	30.5	30.4	31.0	31.6	31.1	31.8	31.7	32.3	32.8
8H	30.0	30.6	30.5	31.1	31.6	31.4	32.0	31.9	32.5	33.0

Calculate in accordance with CIE 190:2010

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

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 = 1.25								
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	0.55	0.66	0.73	0.79	0.86	0.91	0.95	1.00	1.03
	0.30		0.47	0.58	0.66	0.72	0.80	0.86	0.90	0.95	0.99
	0.20		0.42	0.52	0.60	0.66	0.75	0.81	0.85	0.92	0.96
0.50	0.50	0.20	0.54	0.64	0.71	0.76	0.83	0.88	0.91	0.96	0.98
	0.30		0.47	0.57	0.64	0.70	0.78	0.83	0.87	0.92	0.95
	0.20		0.41	0.52	0.59	0.65	0.73	0.79	0.83	0.89	0.93
0.30	0.50	0.20	0.52	0.62	0.68	0.73	0.80	0.84	0.88	0.92	0.94
	0.30		0.46	0.56	0.63	0.68	0.75	0.80	0.84	0.89	0.92
	0.20		0.41	0.51	0.58	0.64	0.72	0.77	0.81	0.86	0.90
0.00	0.00	0.00	0.39	0.48	0.55	0.61	0.68	0.73	0.77	0.82	0.85
<p>Rating:5W 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(Wall)

Utilisation Factors UF(W)			SHR NOM = 1.25								
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	1.01	0.84	0.71	0.62	0.50	0.41	0.35	0.28	0.22
	0.30		0.84	0.72	0.62	0.55	0.45	0.38	0.33	0.26	0.21
	0.20		0.72	0.63	0.55	0.49	0.41	0.35	0.31	0.24	0.20
0.50	0.50	0.20	0.98	0.80	0.68	0.60	0.48	0.43	0.34	0.26	0.21
	0.30		0.83	0.70	0.60	0.53	0.43	0.37	0.32	0.25	0.21
	0.20		0.72	0.62	0.54	0.48	0.40	0.34	0.30	0.24	0.20
0.30	0.50	0.20	0.95	0.77	0.66	0.57	0.46	0.38	0.32	0.25	0.20
	0.30		0.81	0.68	0.59	0.52	0.42	0.35	0.30	0.24	0.20
	0.20		0.71	0.61	0.53	0.47	0.39	0.33	0.29	0.23	0.19
0.00	0.00	0.00	0.61	0.51	0.44	0.39	0.32	0.26	0.23	0.18	0.15
<p>Rating:5W 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 = 1.25								
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	0.17	0.18	0.19	0.20	0.21	0.21	0.22	0.22	0.22
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.05	0.07	0.08	0.09	0.12	0.13	0.14	0.16	0.17
0.50	0.50	0.20	0.16	0.18	0.18	0.19	0.20	0.20	0.21	0.21	0.21
	0.30		0.10	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.07	0.08	0.09	0.11	0.13	0.14	0.16	0.17
0.30	0.50	0.20	0.16	0.17	0.18	0.18	0.19	0.20	0.20	0.20	0.21
	0.30		0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.18	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	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Rating:5W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											