

Report No.: 01

Test Time: 2017/2/4 13:37

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category: RB245.024PH

Luminous Length (mm): 500mm

Luminous Height (mm): 1mm

Current: 0.377 A

Power Factor: 1.000

Luminaire Description: RB245.024PH

Luminous Width (mm): 10mm

Voltage: 24.0 V

Power: 9.05 W

## Photometric Results

CIE Class: Semi-Direct

Measurement Flux: 825.3 lm

Downward Ratio: 89%

Horizontal Diffuse Angle(50%): H119.1

Vertical Diffuse Angle(50%): V118.7

Luminaire Efficacy Rating (LER): 91

Max. Intensity: 237.7 cd

Total Rated Lamp Lumens: 825.3 lm

Efficiency: 100%

Upward Ratio: 11%

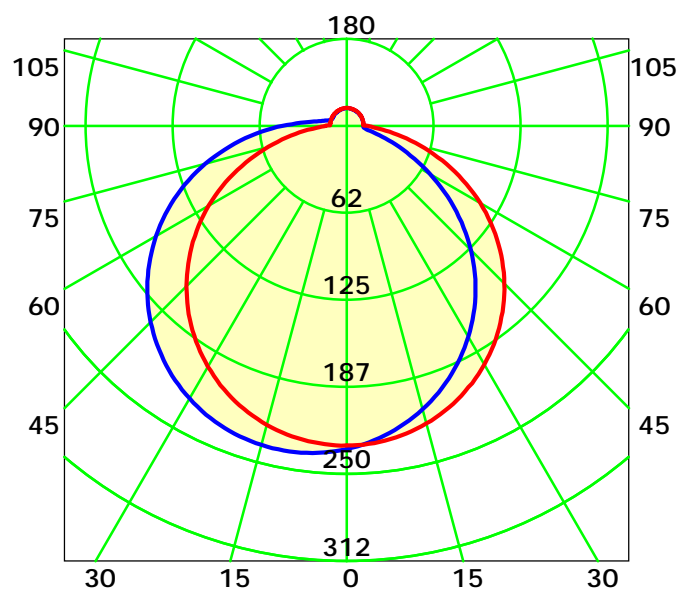
Central Intensity: 232.27 cd

Pos of Max. Intensity: H180 V13

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 118.9° 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

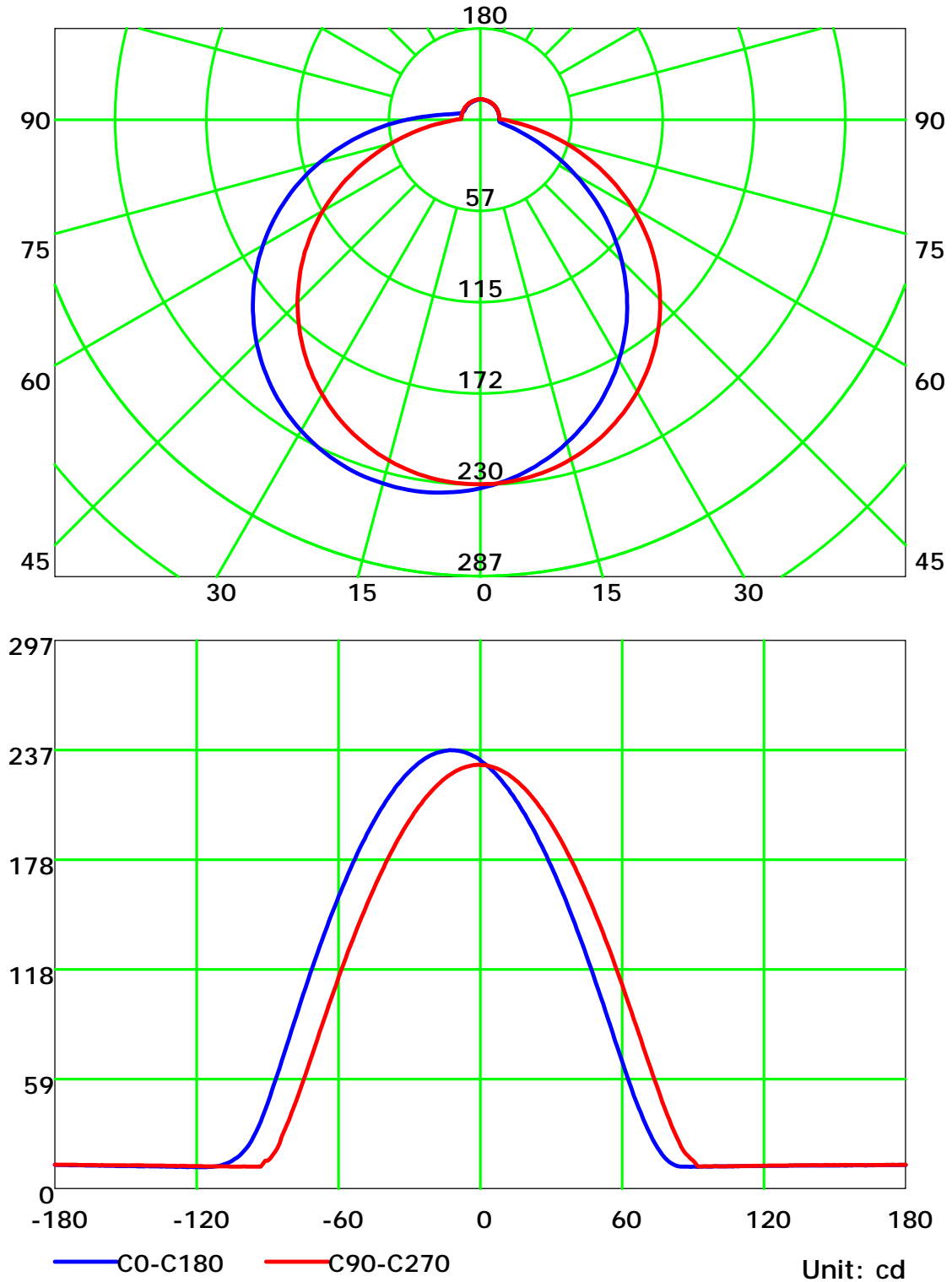
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

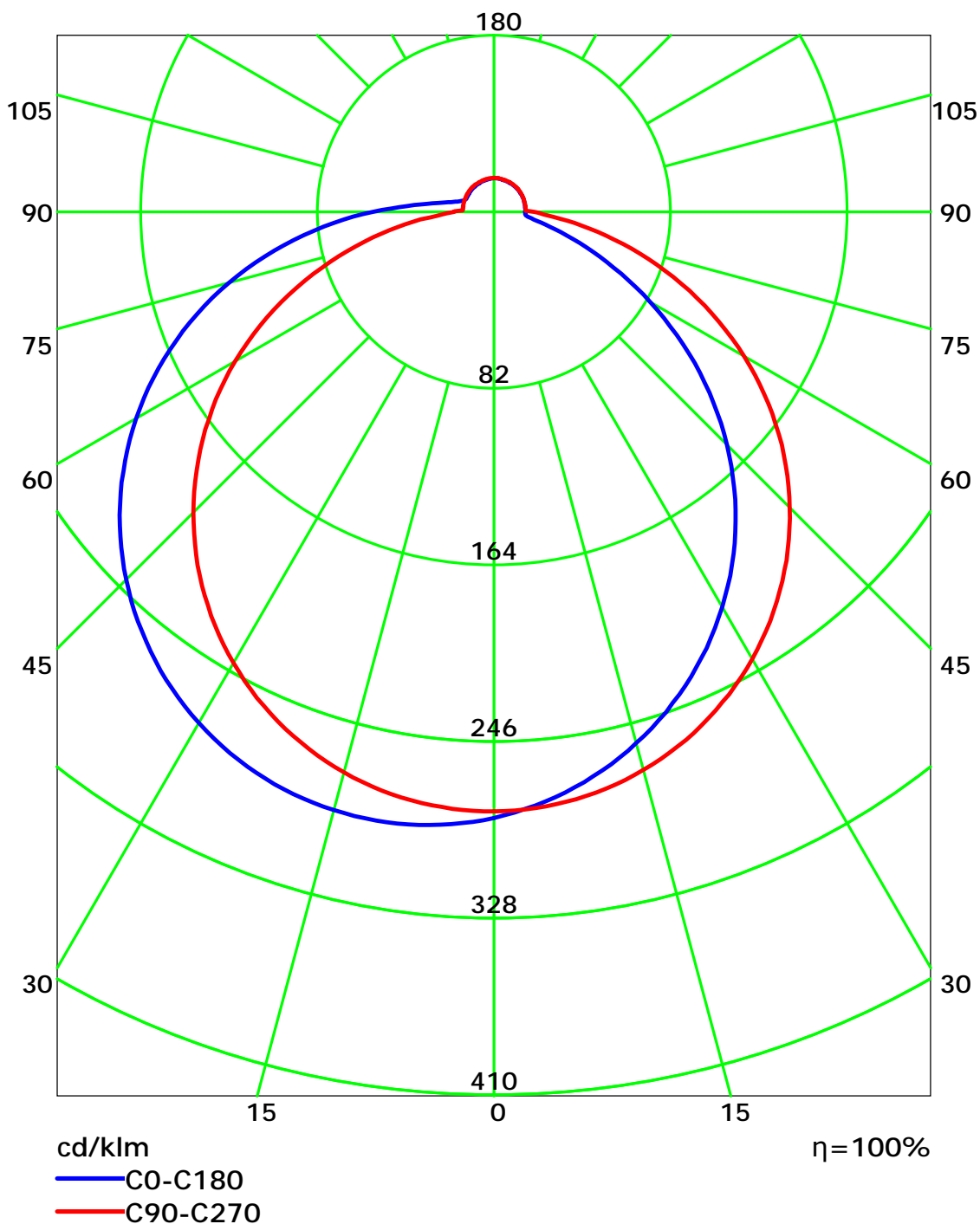
## Luminous Intensity Distribution Curve



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:

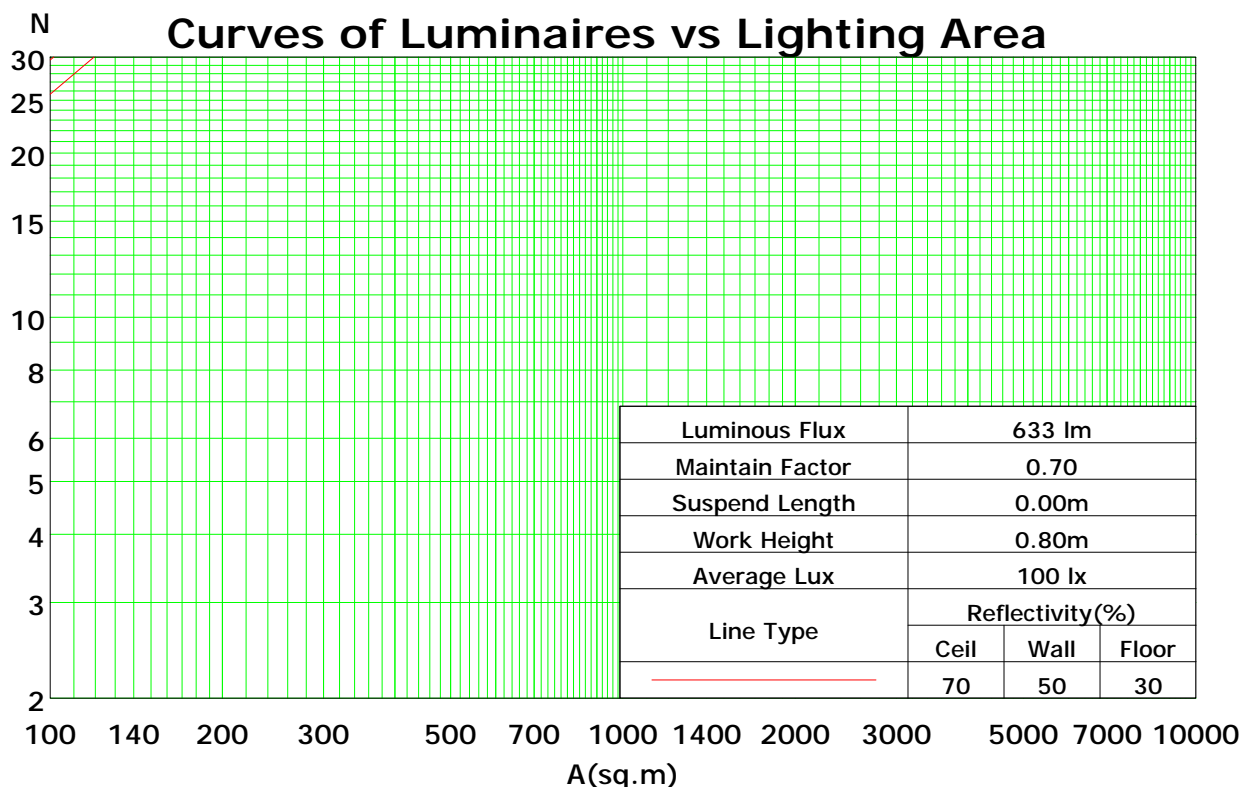
## Coefficients Of Utilization - Zonal Cavity Method

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	117	117	117	117	113	113	113	113	105	105	105	98	98	98	92	92	92	89
1	105	100	95	90	101	96	92	88	90	86	83	84	81	79	79	77	75	72
2	95	86	79	73	91	83	76	71	78	72	68	73	68	64	68	65	61	59
3	86	75	67	60	83	73	65	58	68	61	56	64	58	54	60	55	52	49
4	79	66	57	50	75	64	56	49	60	53	47	57	51	46	53	48	44	41
5	72	59	50	43	69	57	49	42	54	46	41	51	44	39	48	42	38	35
6	67	53	44	37	64	51	43	37	48	41	35	46	39	34	43	38	33	31
7	62	48	39	33	59	47	38	32	44	37	31	42	35	30	39	34	29	27
8	57	44	35	29	55	42	34	29	40	33	28	38	32	27	36	30	26	24
9	53	40	32	26	51	39	31	26	37	30	25	35	29	24	33	28	24	22
10	50	37	29	23	48	36	28	23	34	27	23	32	26	22	31	25	21	20

Spacing Criteria (0-180): 1.28

Spacing Criteria (90-270): 1.29

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

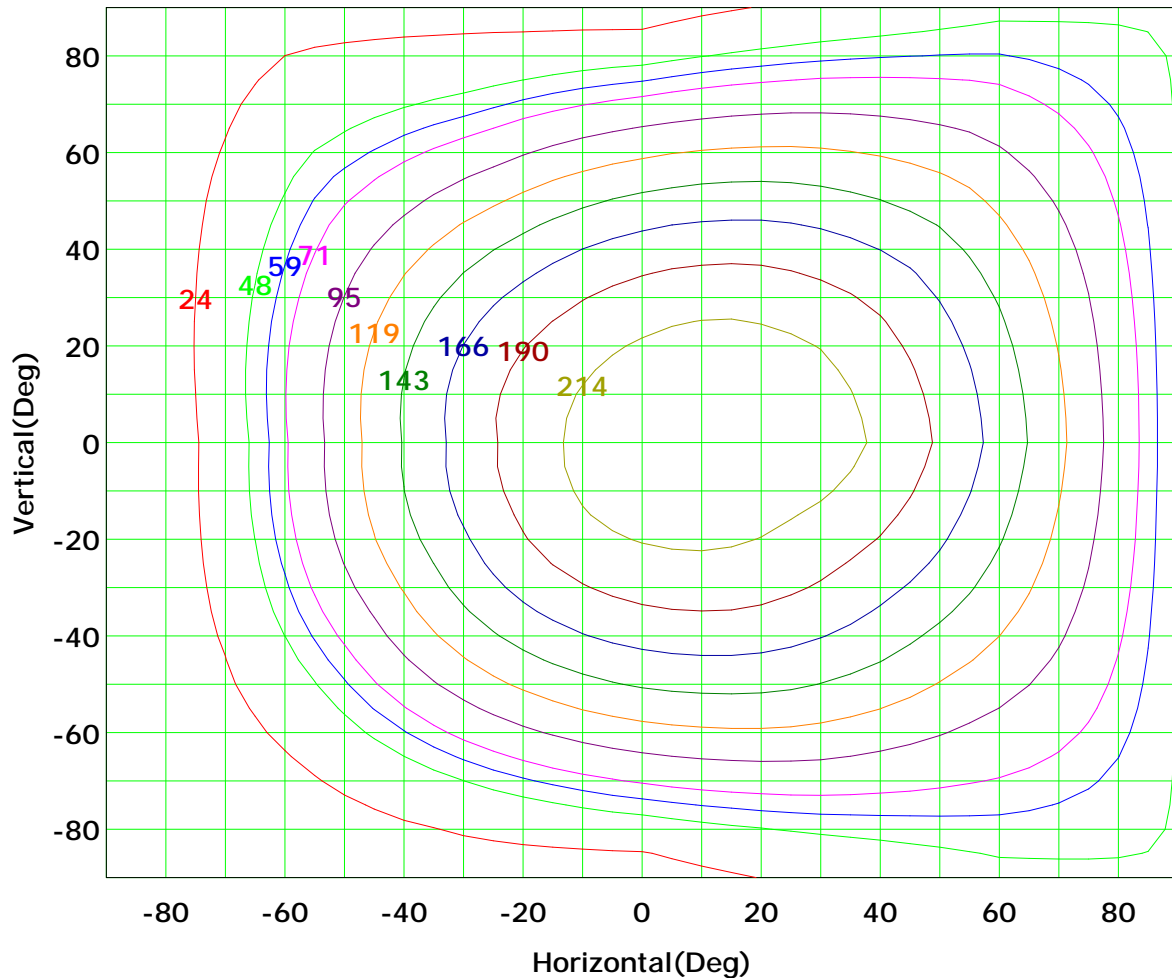
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## Isocandela (rectangle)



I<sub>max</sub> (100%): 238 cd

( 10%): 24 cd	( 20%): 48 cd
( 25%): 59 cd	( 30%): 71 cd
( 40%): 95 cd	( 50%): 119 cd
( 60%): 143 cd	( 70%): 166 cd
( 80%): 190 cd	( 90%): 214 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

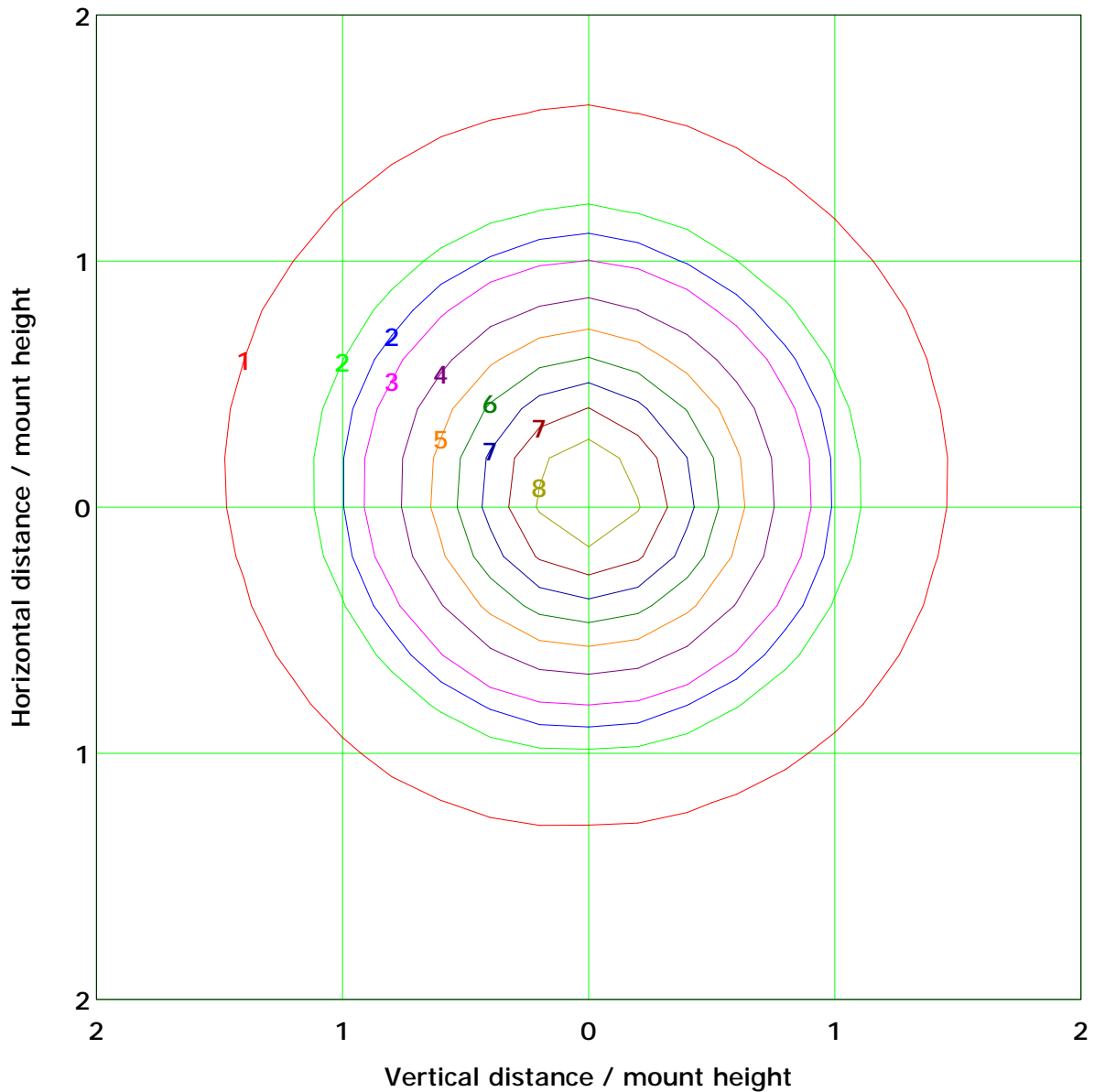
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## IsoLux Plot



Mounting Height: 5.0m Max Lux(100%): 9.3 lx

( 10%): 0.9 lx	( 20%): 1.9 lx
( 25%): 2.3 lx	( 30%): 2.8 lx
( 40%): 3.7 lx	( 50%): 4.7 lx
( 60%): 5.6 lx	( 70%): 6.5 lx
( 80%): 7.5 lx	( 90%): 8.4 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

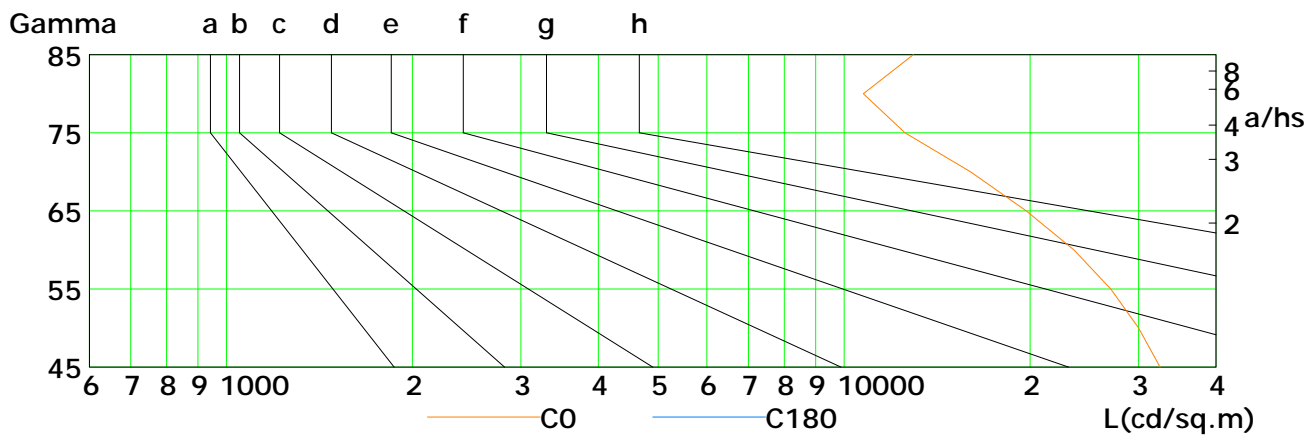
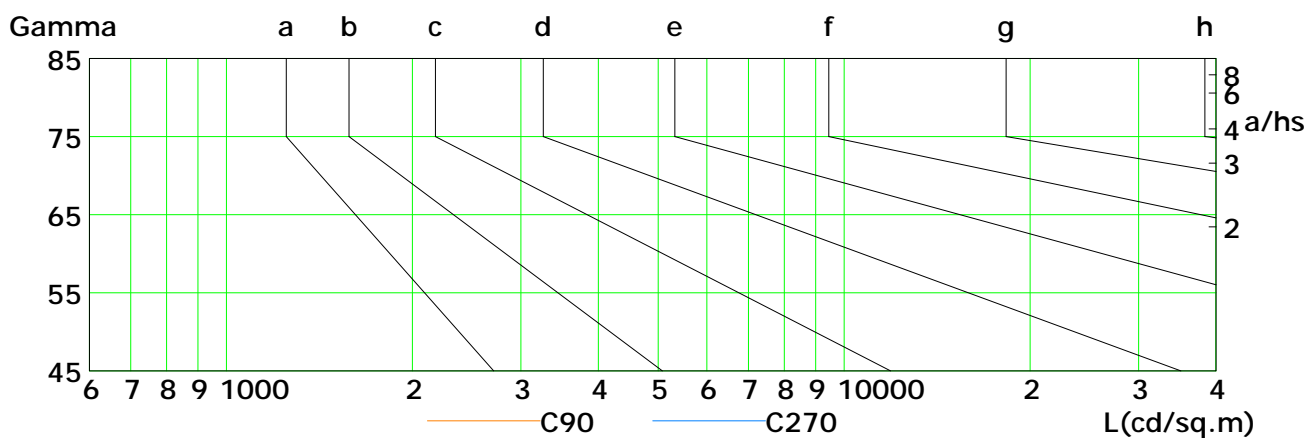
Humidity: 60%

Inspector:

## 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	32481	29984	27021	23570	19721	16028	12549	10752	12946
C90	45252	45030	44689	44151	43380	42559	41994	42581	51241
C180	51264	52055	52910	53972	55240	56919	59233	62764	70138
C270	46003	45934	45833	45630	45345	44908	44763	46419	55189

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

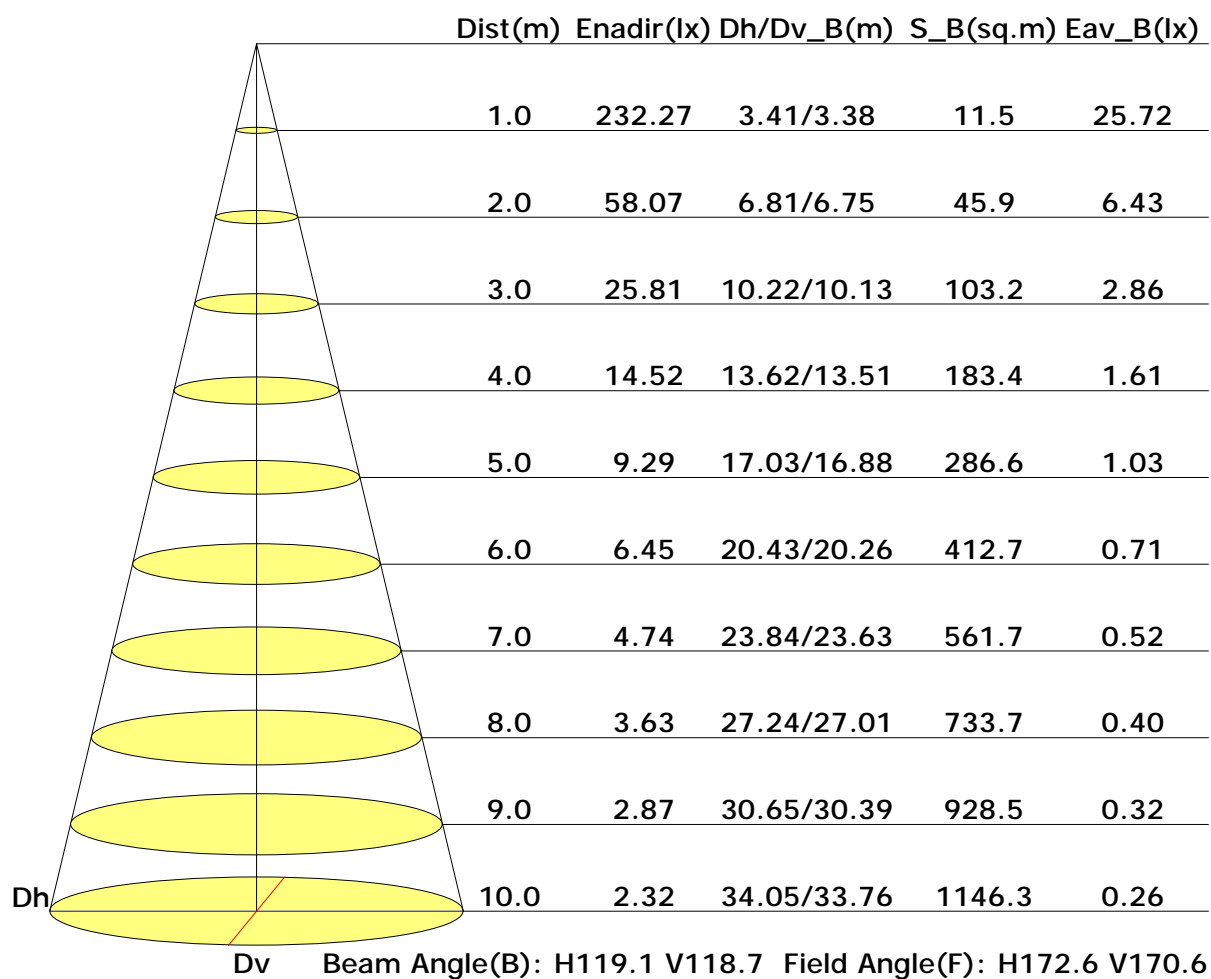
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

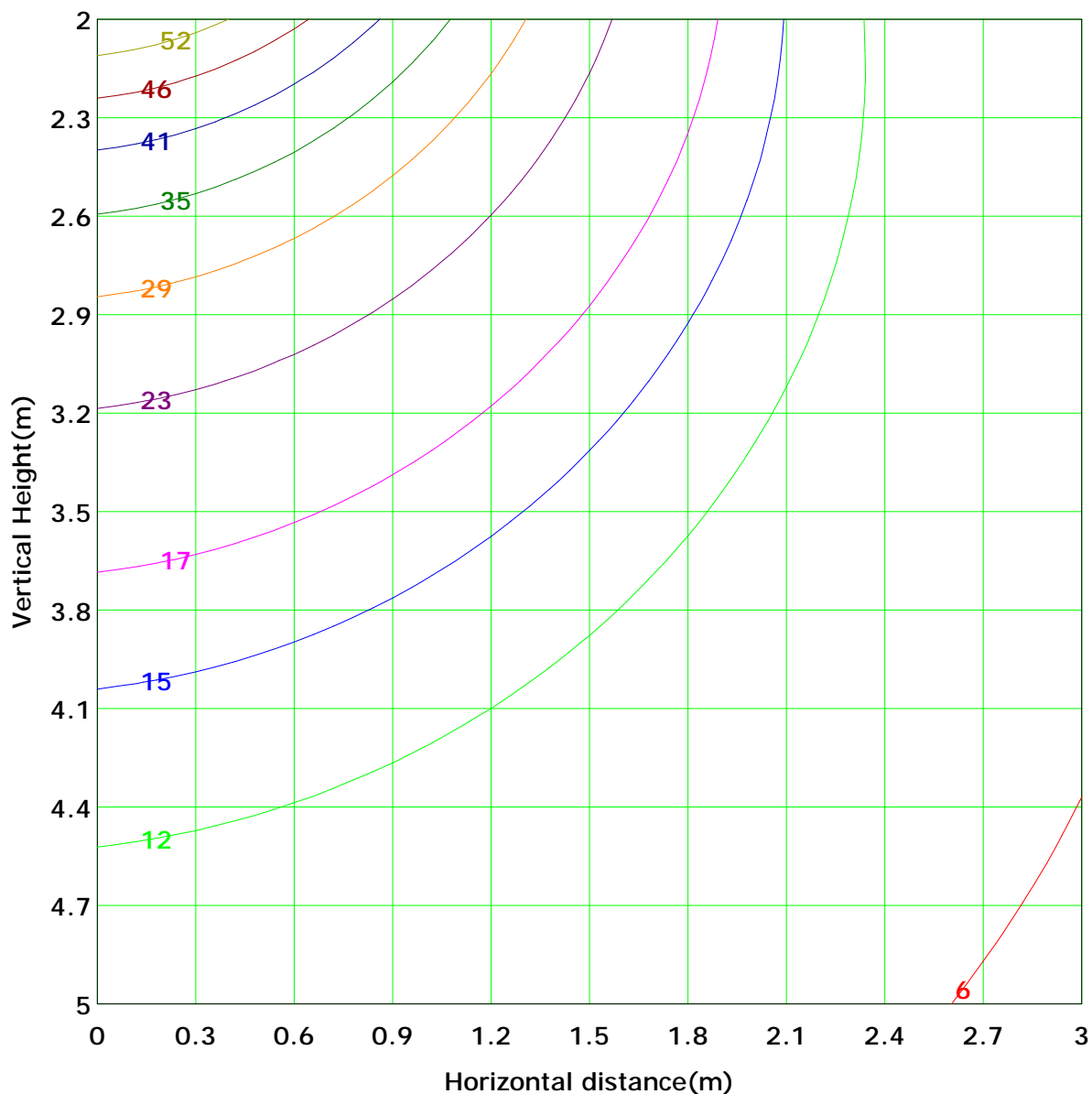
Inspector:

## Illuminance at a Distance





## Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 58.1 lx
( 10%): 5.8 lx	( 20%): 11.6 lx	
( 25%): 14.5 lx	( 30%): 17.4 lx	
( 40%): 23.2 lx	( 50%): 29.0 lx	
( 60%): 34.8 lx	( 70%): 40.6 lx	
( 80%): 46.5 lx	( 90%): 52.3 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

		Correct data																		Flux(T)Flux(E)		
		-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80			90
Vertical plane	-90	0.1	0.4	0.7	0.9	1.0	1.1	1.1	1.0	0.9	0.8	0.7	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0	11.1	8.7
	-80	0.1	0.5	0.9	1.2	1.6	1.8	2.0	2.0	1.9	1.7	1.5	1.2	1.0	0.7	0.5	0.3	0.1	0.0	19.0	18.7	
	-70	0.1	0.5	1.1	1.6	2.1	2.6	2.9	3.1	3.0	2.8	2.4	2.0	1.5	1.1	0.7	0.4	0.2	0.0	28.3	28.0	
	-60	0.2	0.6	1.3	2.0	2.7	3.3	3.8	4.1	4.1	3.9	3.4	2.8	2.1	1.5	0.9	0.5	0.2	0.0	37.4	37.2	
	-50	0.2	0.7	1.4	2.3	3.2	4.0	4.6	5.0	5.0	4.8	4.3	3.6	2.7	1.9	1.1	0.5	0.2	0.0	45.6	45.4	
	-40	0.2	0.7	1.6	2.6	3.6	4.5	5.3	5.7	5.8	5.6	5.0	4.2	3.3	2.2	1.3	0.6	0.2	0.0	52.5	52.4	
	-30	0.2	0.8	1.7	2.8	3.9	5.0	5.8	6.3	6.4	6.2	5.6	4.7	3.7	2.5	1.5	0.7	0.2	0.0	57.9	57.8	
	-20	0.2	0.8	1.8	2.9	4.1	5.3	6.1	6.7	6.8	6.6	6.0	5.1	3.9	2.7	1.6	0.7	0.2	0.0	61.5	61.4	
	-10	0.2	0.8	1.8	3.0	4.3	5.4	6.3	6.9	7.1	6.8	6.2	5.2	4.0	2.7	1.6	0.7	0.2	0.0	63.2	63.1	
	0	0.2	0.8	1.8	3.0	4.2	5.3	6.3	6.8	7.0	6.8	6.2	5.2	4.0	2.7	1.6	0.7	0.2	0.0	62.7	62.6	
	10	0.2	0.8	1.7	2.8	4.0	5.1	5.9	6.5	6.7	6.6	6.0	5.0	3.9	2.6	1.5	0.7	0.2	0.0	60.3	60.2	
	20	0.2	0.8	1.6	2.6	3.7	4.7	5.6	6.1	6.3	6.2	5.6	4.7	3.6	2.4	1.4	0.6	0.2	0.0	56.2	56.1	
	30	0.2	0.7	1.5	2.4	3.3	4.3	5.0	5.6	5.7	5.5	5.0	4.2	3.2	2.1	1.2	0.5	0.2	0.0	50.6	50.4	
	40	0.2	0.7	1.3	2.1	2.9	3.7	4.4	4.8	4.9	4.7	4.2	3.5	2.6	1.7	0.9	0.4	0.1	0.0	43.4	43.2	
	50	0.2	0.6	1.1	1.8	2.4	3.1	3.6	3.9	4.0	3.8	3.3	2.7	2.0	1.3	0.7	0.3	0.1	0.0	35.0	34.7	
	60	0.1	0.5	1.0	1.4	1.9	2.4	2.7	2.9	2.9	2.7	2.3	1.9	1.4	0.9	0.5	0.2	0.1	0.0	25.8	25.4	
	70	0.1	0.4	0.8	1.1	1.4	1.6	1.8	1.8	1.7	1.6	1.4	1.1	0.8	0.5	0.3	0.2	0.1	0.0	16.9	16.0	
	80	0.1	0.4	0.6	0.8	0.9	1.0	1.0	0.9	0.8	0.7	0.6	0.6	0.5	0.3	0.2	0.2	0.1	0.0	9.9	7.2	
	90	2.9	11.6	23.6	37.4	51.4	64.2	74.2	80.0	81.1	77.6	69.8	58.3	44.6	30.6	18.0	8.4	2.9	0.6	737		
	Flux(E)	2.9	11.6	23.6	37.4	51.4	64.2	74.2	79.9	80.6	77.0	69.1	57.6	43.8	29.7	17.0	7.3	1.1	0.0		728	
		-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	Flux(T)Flux(E)	
Horizontal plane																						

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

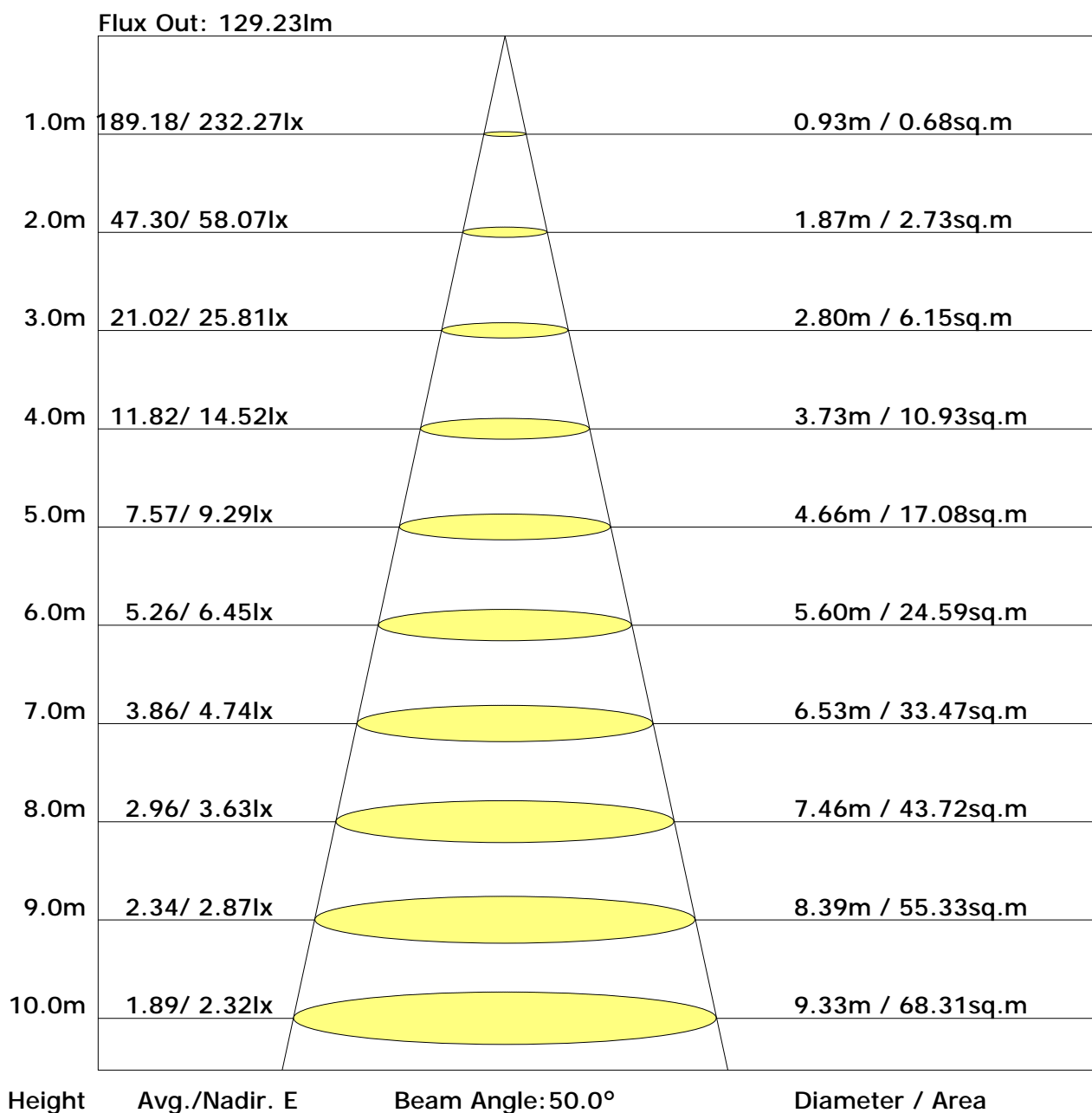
Test Device: GPM-1800B

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	22.7	24.1	23.2	24.6	25.2	24.7	26.1	25.2	26.7	27.2
3H	24.0	25.3	24.5	25.8	26.4	26.5	27.9	27.1	28.4	29.0
4H	24.4	25.7	25.0	26.2	26.8	27.3	28.5	27.8	29.1	29.7
6H	24.8	25.9	25.3	26.5	27.1	27.8	29.0	28.4	29.6	30.2
8H	24.9	26.0	25.5	26.6	27.3	28.0	29.2	28.6	29.7	30.4
12H	25.1	26.2	25.7	26.8	27.4	28.2	29.3	28.8	29.9	30.5
X=4H Y=2H	23.4	24.6	23.9	25.2	25.8	25.4	26.6	25.9	27.2	27.8
3H	25.0	26.0	25.5	26.6	27.3	27.5	28.5	28.0	29.1	29.8
4H	25.6	26.6	26.2	27.2	27.8	28.3	29.3	28.9	29.9	30.6
6H	26.1	26.9	26.7	27.6	28.2	29.1	29.9	29.7	30.5	31.2
8H	26.3	27.1	26.9	27.7	28.4	29.3	30.2	30.0	30.8	31.5
12H	26.6	27.3	27.2	28.0	28.7	29.6	30.3	30.2	31.0	31.7
X=8H Y=4H	26.0	26.8	26.6	27.5	28.2	28.8	29.6	29.4	30.2	30.9
6H	26.7	27.4	27.4	28.1	28.8	29.7	30.4	30.4	31.1	31.8
8H	27.1	27.7	27.8	28.4	29.1	30.1	30.7	30.8	31.4	32.1
12H	27.6	28.1	28.2	28.8	29.5	30.5	31.0	31.2	31.7	32.5
X=12H Y=4H	26.1	26.8	26.7	27.5	28.2	28.9	29.6	29.6	30.3	31.0
6H	26.9	27.5	27.6	28.2	28.9	29.9	30.5	30.6	31.2	31.9
8H	27.4	27.9	28.0	28.6	29.3	30.4	30.9	31.1	31.6	32.4

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 = 1.50									
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	0.54	0.63	0.70	0.75	0.82	0.87	0.90	0.95	0.98	
	0.30		0.47	0.55	0.62	0.68	0.75	0.81	0.85	0.90	0.94	
	0.20		0.41	0.49	0.56	0.62	0.70	0.76	0.80	0.86	0.91	
0.50	0.50	0.20	0.52	0.59	0.66	0.71	0.77	0.82	0.85	0.89	0.92	
	0.30		0.45	0.53	0.60	0.65	0.72	0.77	0.80	0.85	0.89	
	0.20		0.40	0.48	0.55	0.60	0.67	0.72	0.76	0.82	0.86	
0.30	0.50	0.20	0.50	0.56	0.62	0.67	0.73	0.77	0.80	0.83	0.86	
	0.30		0.44	0.50	0.57	0.62	0.68	0.73	0.76	0.81	0.84	
	0.20		0.39	0.46	0.53	0.58	0.64	0.69	0.73	0.78	0.81	
0.00	0.00	0.00	0.36	0.42	0.49	0.53	0.59	0.64	0.67	0.71	0.74	
Rating:9W 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	0.97	0.83	0.71	0.63	0.51	0.43	0.37	0.29	0.24	
	0.30		0.81	0.71	0.62	0.55	0.46	0.39	0.34	0.28	0.23	
	0.20		0.70	0.62	0.55	0.50	0.42	0.36	0.32	0.26	0.22	
0.50	0.50	0.20	0.92	0.78	0.67	0.59	0.48	0.43	0.35	0.27	0.23	
	0.30		0.78	0.68	0.59	0.53	0.44	0.37	0.32	0.26	0.22	
	0.20		0.67	0.60	0.53	0.48	0.40	0.35	0.30	0.25	0.21	
0.30	0.50	0.20	0.87	0.74	0.63	0.55	0.45	0.38	0.32	0.26	0.21	
	0.30		0.74	0.65	0.56	0.50	0.41	0.35	0.31	0.25	0.20	
	0.20		0.65	0.58	0.51	0.46	0.38	0.33	0.29	0.23	0.20	
0.00	0.00	0.00	0.53	0.47	0.41	0.37	0.30	0.26	0.23	0.18	0.15	
<p>Rating:9W 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	0.26	0.28	0.29	0.29	0.30	0.31	0.31	0.32	0.32	
	0.30		0.20	0.21	0.23	0.24	0.25	0.26	0.27	0.28	0.29	
	0.20		0.15	0.16	0.18	0.19	0.21	0.22	0.24	0.25	0.26	
0.50	0.50	0.20	0.26	0.27	0.28	0.28	0.29	0.30	0.30	0.30	0.31	
	0.30		0.19	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.28	
	0.20		0.15	0.16	0.18	0.19	0.21	0.22	0.23	0.25	0.26	
0.30	0.50	0.20	0.25	0.26	0.27	0.27	0.28	0.28	0.29	0.29	0.29	
	0.30		0.19	0.20	0.22	0.22	0.24	0.25	0.25	0.26	0.27	
	0.20		0.15	0.16	0.17	0.18	0.20	0.21	0.22	0.24	0.25	
0.00	0.00	0.00	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	
Rating:9W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980												