

Report No.: 01

Test Time: 2017/2/4 15:20

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category: RB245.041PH

Luminous Length (mm): 500mm

Luminous Height (mm): 1mm

Current: 0.380 A

Power Factor: 1.000

Luminaire Description: RB245.041PH

Luminous Width (mm): 10mm

Voltage: 24.0 V

Power: 9.11 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 842.7 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H118

Vertical Diffuse Angle(50%): V118

Luminaire Efficacy Rating (LER): 92

Max. Intensity: 276.08 cd

Total Rated Lamp Lumens: 842.7 lm

Efficiency: 100%

Upward Ratio: 1%

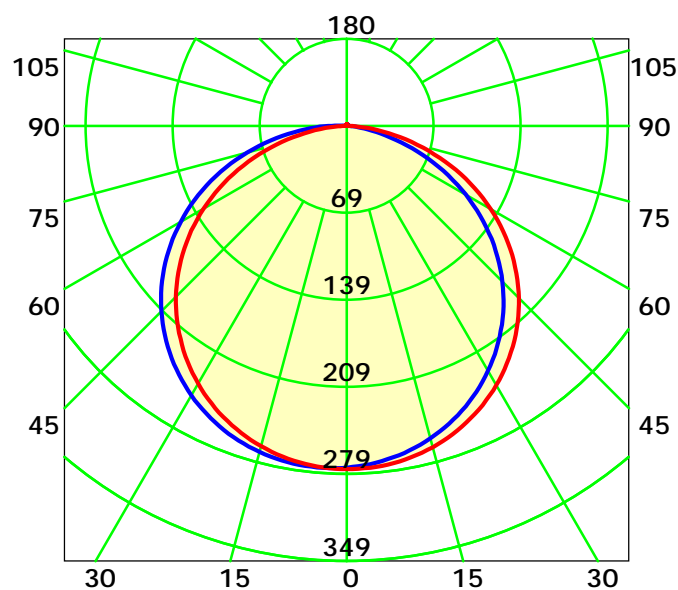
Central Intensity: 274.33 cd

Pos of Max. Intensity: H120 V3

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 118.0° 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

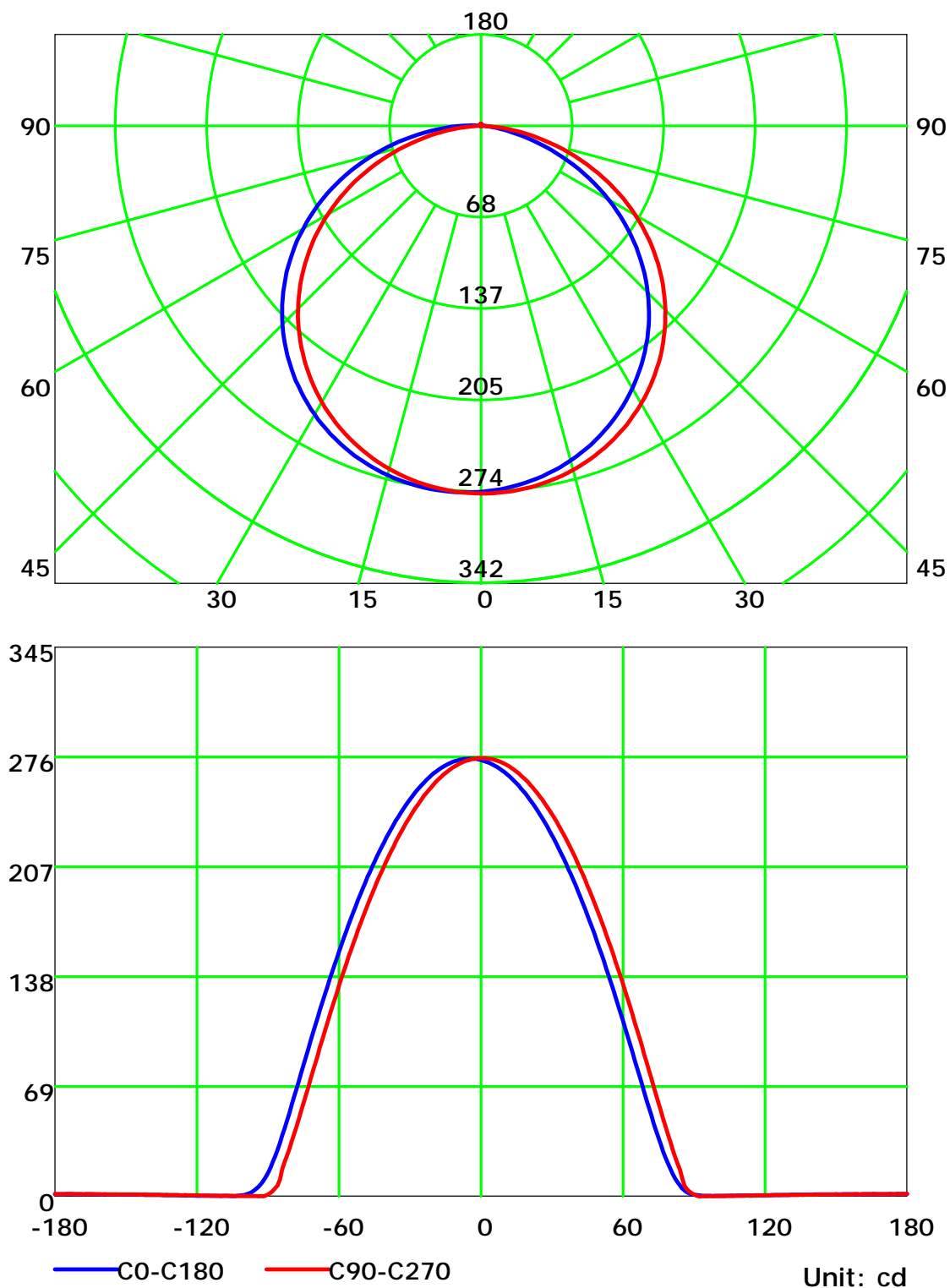
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

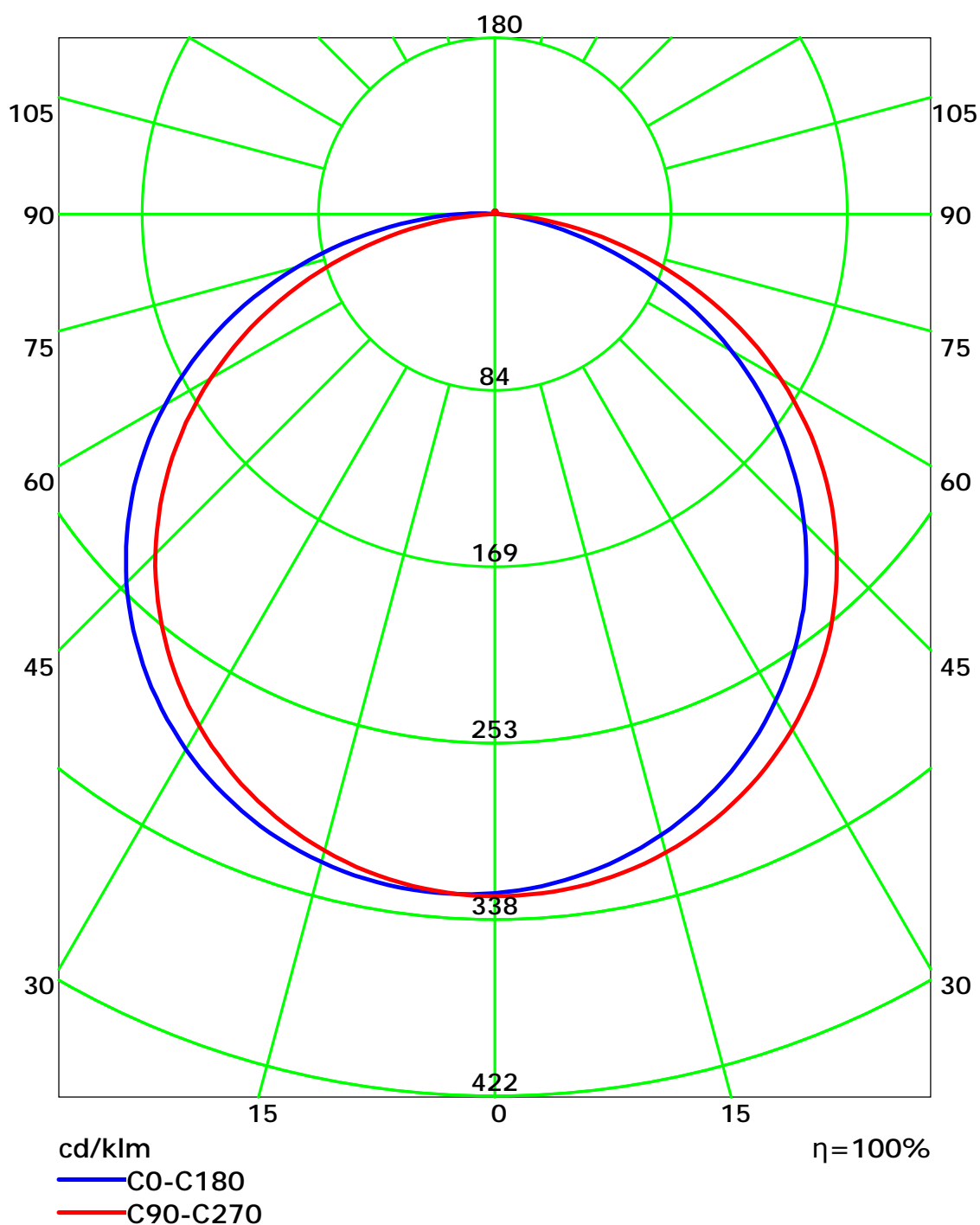
## Luminous Intensity Distribution Curve



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:

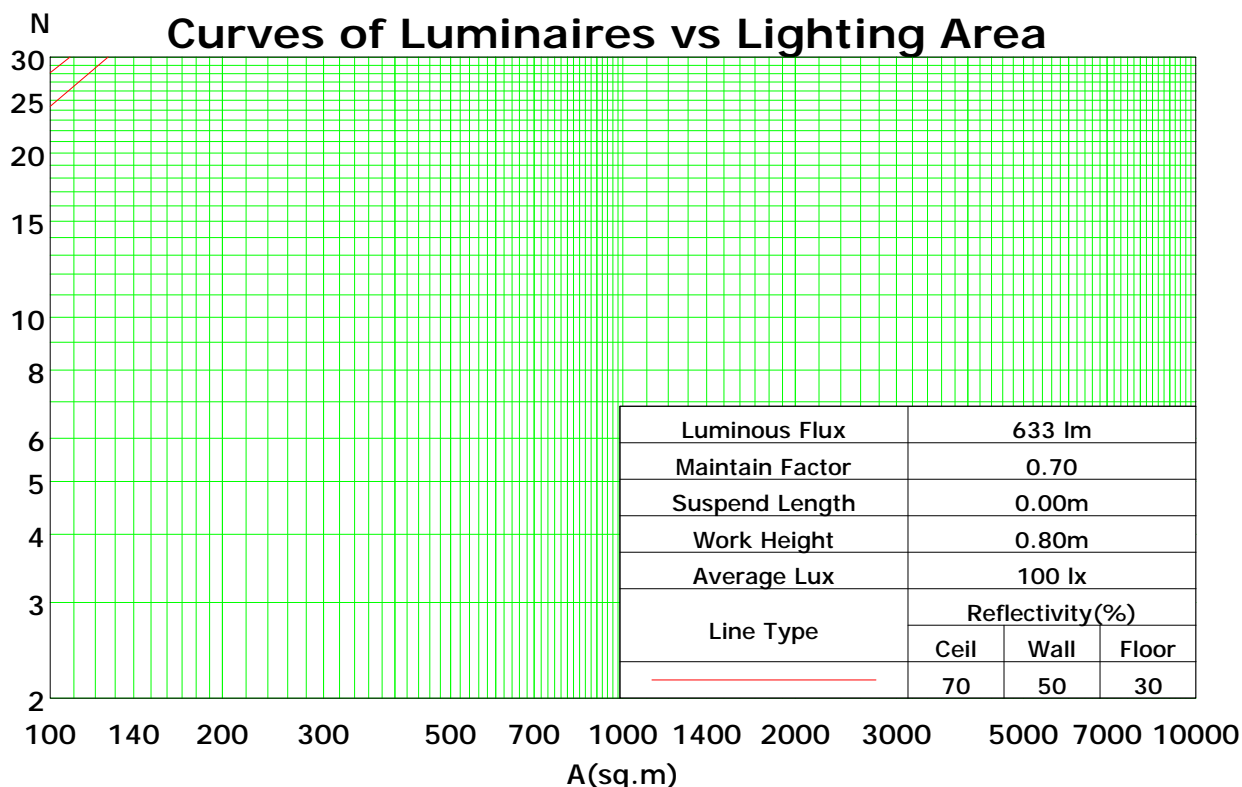
## Coefficients Of Utilization - Zonal Cavity Method

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	105	101	97	93	96	93	90	92	90	87	89	86	84	82
2	98	90	83	77	95	88	81	76	84	78	74	80	76	72	77	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	56	51	60	55	51	48
5	75	62	53	46	73	61	52	45	58	51	45	56	50	44	54	48	44	42
6	69	55	46	40	67	54	46	40	53	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	31	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

Spacing Criteria (0-180): 1.29

Spacing Criteria (90-270): 1.29

Spacing Criteria (Diagonal): 1.42



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

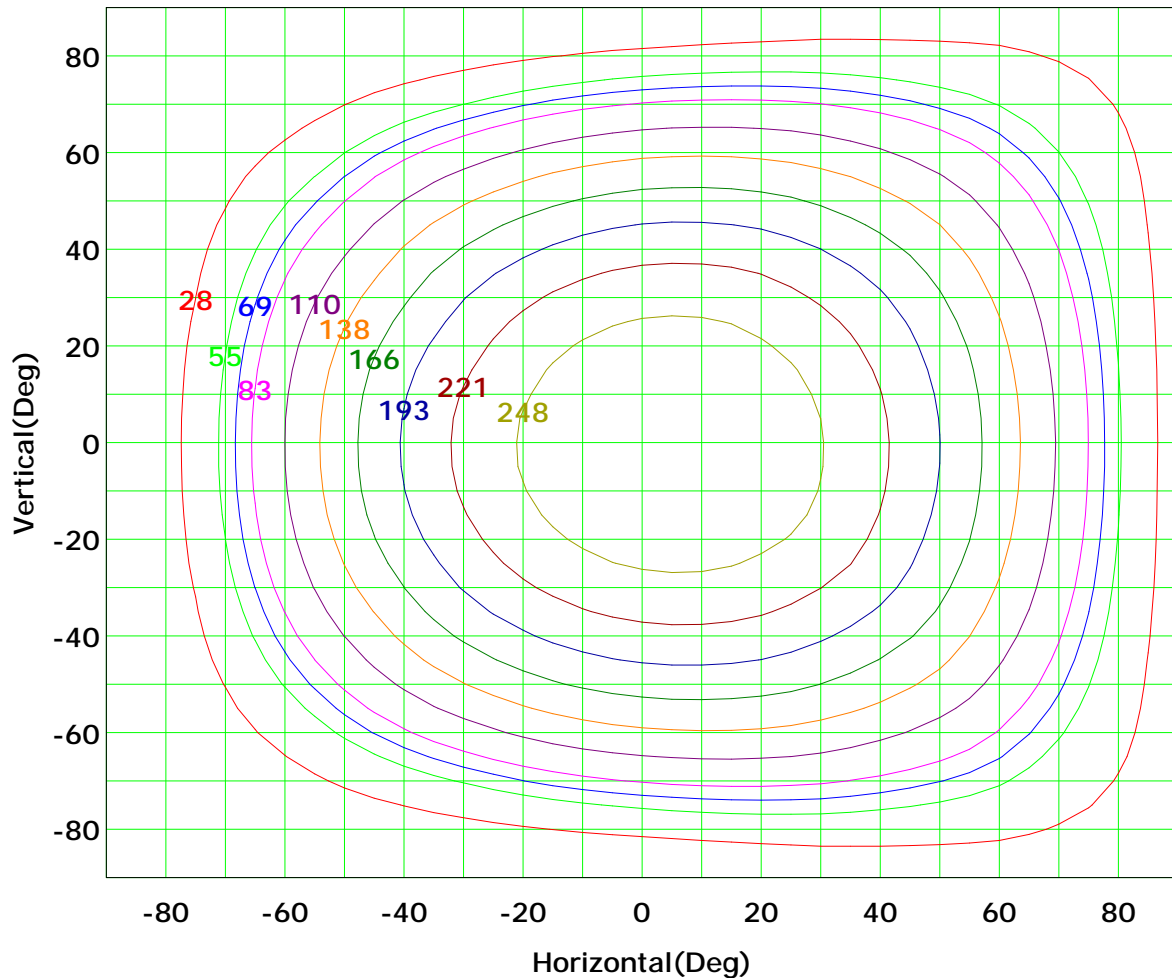
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## Isocandela (rectangle)



I<sub>max</sub> (100%): 276 cd

( 10%): 28 cd	( 20%): 55 cd
( 25%): 69 cd	( 30%): 83 cd
( 40%): 110 cd	( 50%): 138 cd
( 60%): 166 cd	( 70%): 193 cd
( 80%): 221 cd	( 90%): 248 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

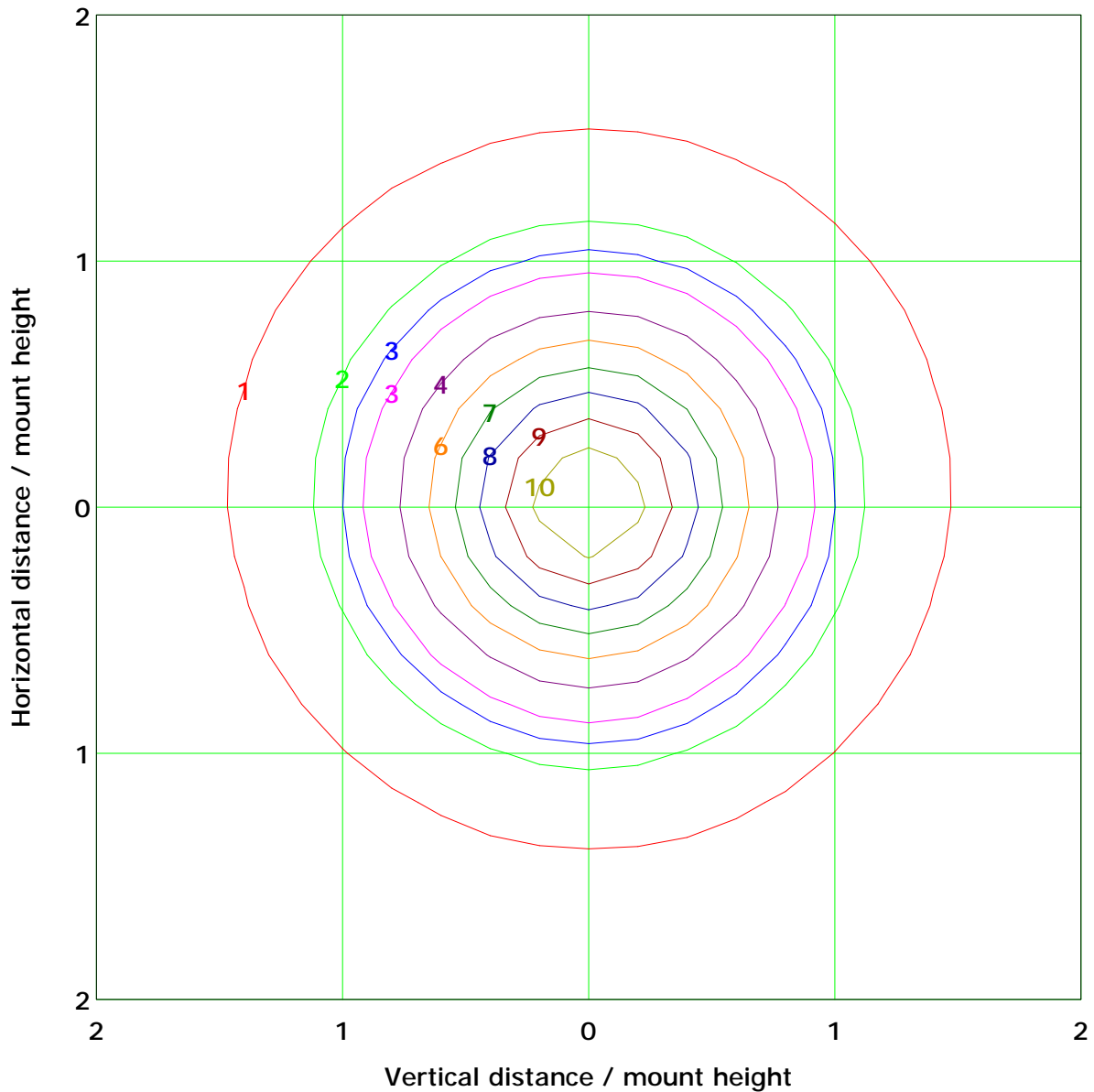
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## IsoLux Plot



Mounting Height: 5.0m		Max Lux(100%): 11.0 lx	
( 10%):	1.1 lx	( 20%):	2.2 lx
( 25%):	2.8 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

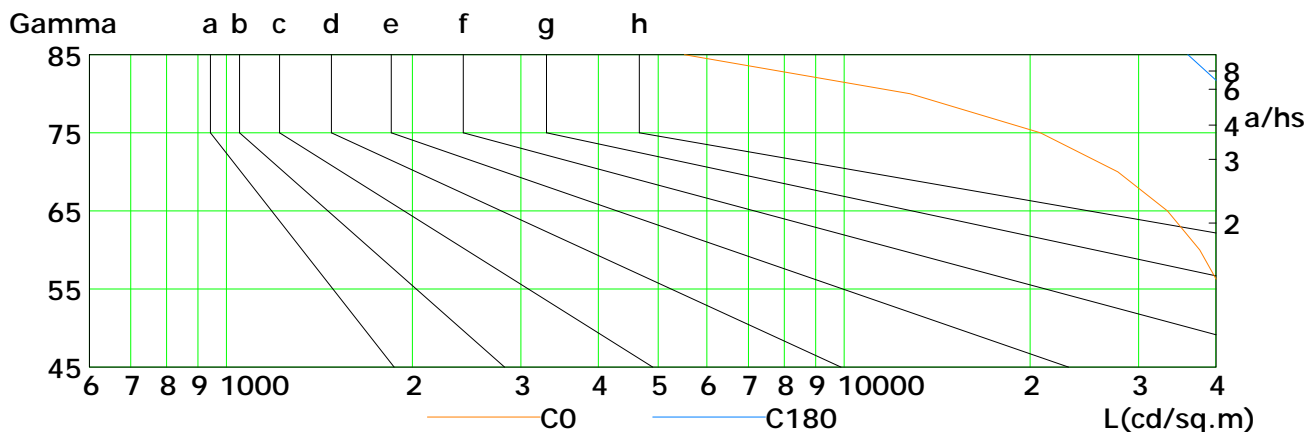
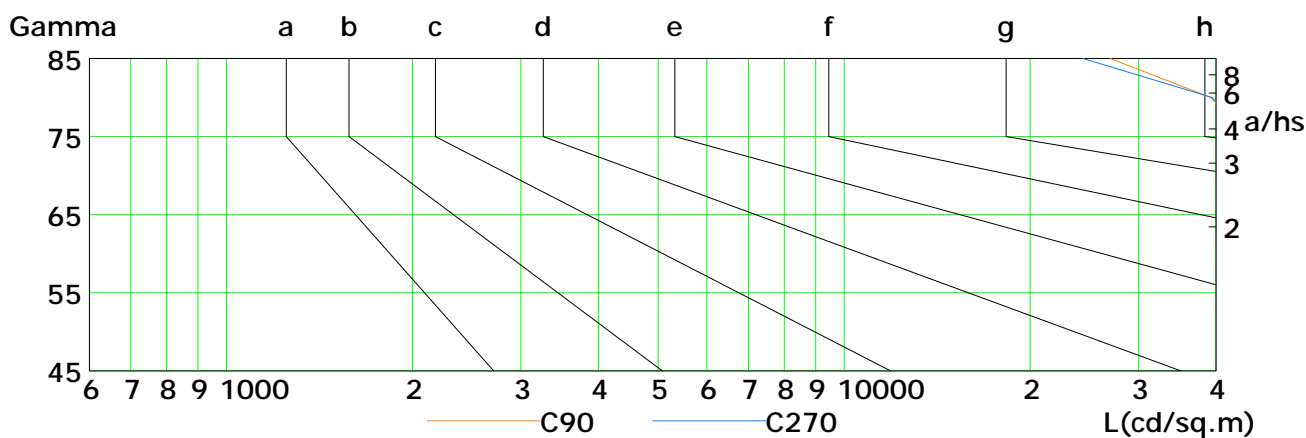
C Plane (°):0.0-360.0: 30.0  
Test Lab: acolyteled  
Test Type: TYPE C  
Temperature: 25°C  
Operator: roy

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	45468	43428	40907	37640	33376	27748	20798	12795	5515
C90	55183	54833	54275	53244	51584	49067	45008	39267	26966
C180	54141	53815	53273	52421	51293	49501	46583	42318	36054
C270	54756	54405	53778	52845	51363	48828	45085	39472	24364

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

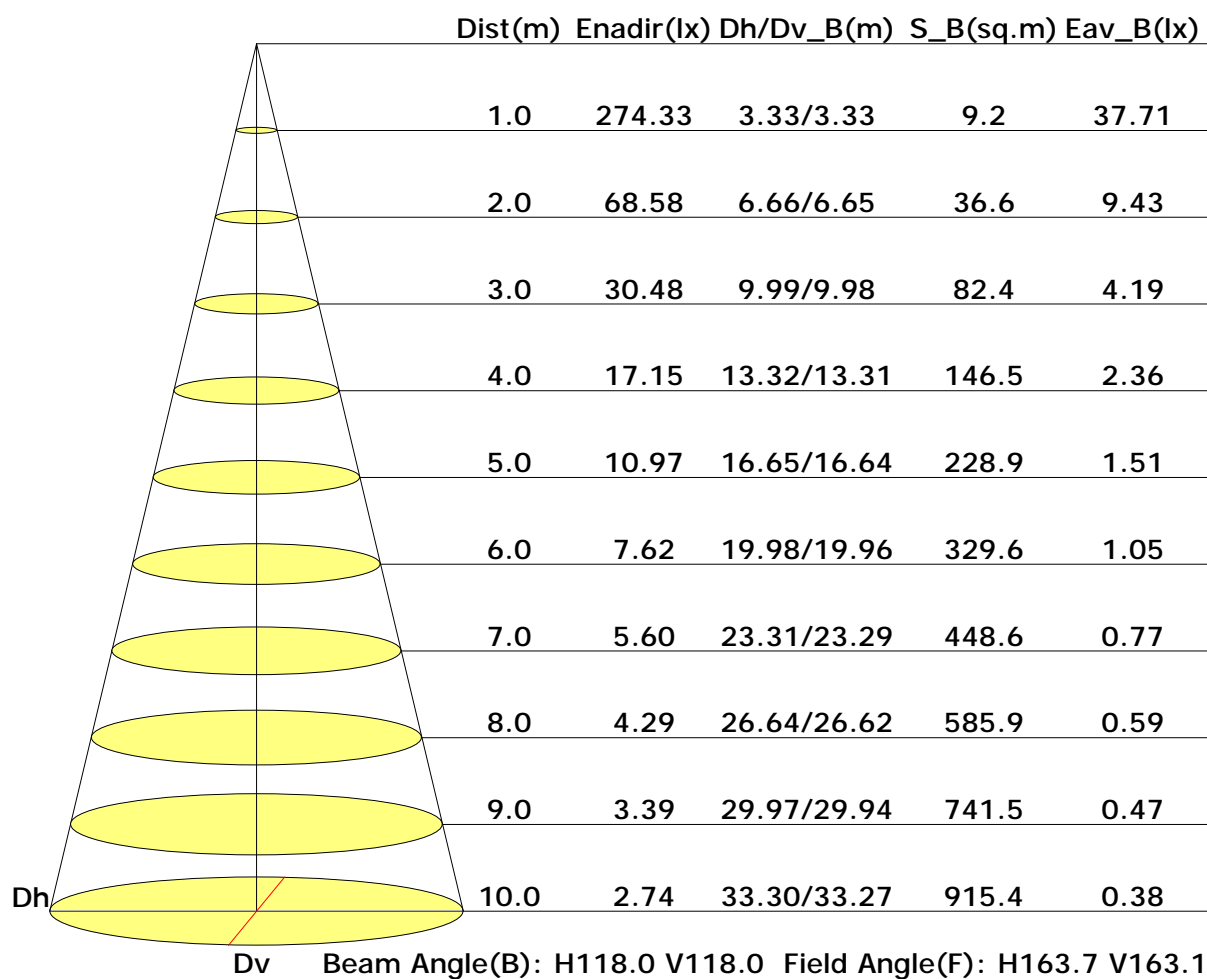
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

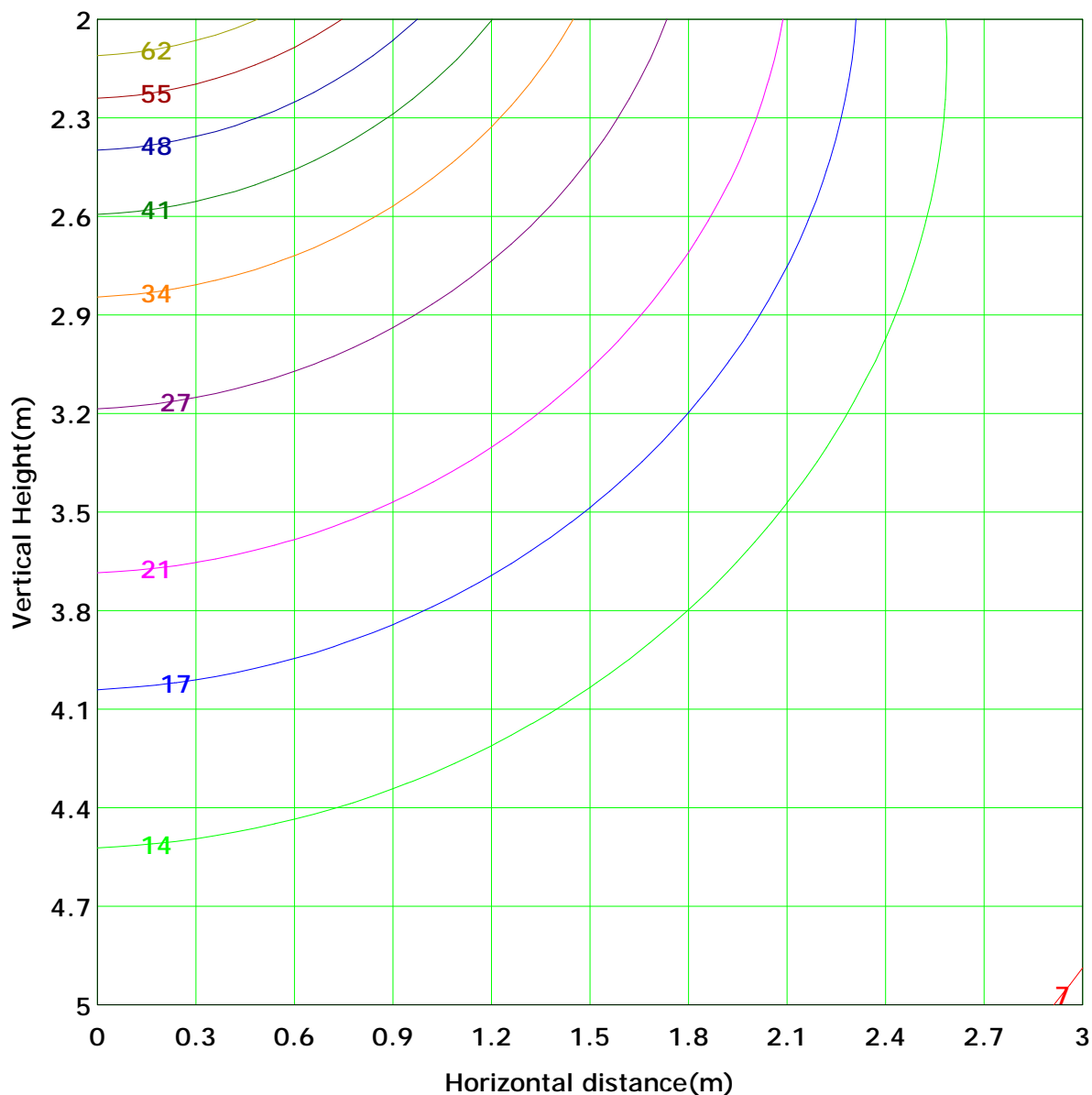
Inspector:

## Illuminance at a Distance





## Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 68.6 lx
( 10%): 6.9 lx	( 20%): 13.7 lx	
( 25%): 17.1 lx	( 30%): 20.6 lx	
( 40%): 27.4 lx	( 50%): 34.3 lx	
( 60%): 41.1 lx	( 70%): 48.0 lx	
( 80%): 54.9 lx	( 90%): 61.7 lx	

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:

## 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)
Horizontal plane	-90	0.0	0.1	0.3	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	4.7	1.5
	-80	0.1	0.2	0.5	0.8	1.2	1.5	1.7	1.8	1.8	1.8	1.7	1.4	1.1	0.8	0.4	0.2	0.1	0.0	0.0	15.4	14.3
	-70	0.1	0.3	0.7	1.3	1.9	2.5	3.0	3.3	3.3	3.2	2.8	2.3	1.7	1.1	0.6	0.2	0.1	0.0	0.0	28.3	27.9
	-60	0.1	0.4	1.0	1.8	2.6	3.4	4.1	4.6	4.7	4.6	4.1	3.5	2.6	1.7	1.1	0.6	0.2	0.1	0.0	40.8	40.5
	-50	0.1	0.5	1.2	2.2	3.2	4.2	5.1	5.7	5.9	5.8	5.3	4.5	3.5	2.4	1.4	0.6	0.2	0.0	0.0	51.6	51.5
	-40	0.1	0.6	1.4	2.5	3.7	4.9	5.9	6.6	6.9	6.7	6.2	5.3	4.2	2.9	1.8	0.8	0.2	0.0	0.0	60.6	60.5
	-30	0.1	0.6	1.5	2.8	4.1	5.4	6.5	7.3	7.6	7.5	6.9	5.9	4.7	3.3	2.0	1.0	0.3	0.0	0.0	67.4	67.3
	-20	0.1	0.6	1.6	2.9	4.4	5.7	6.9	7.7	8.1	7.9	7.3	6.3	5.0	3.6	2.2	1.1	0.3	0.0	0.0	72.0	71.9
	-10	0.1	0.7	1.7	3.0	4.5	5.9	7.1	7.9	8.3	8.2	7.6	6.6	5.3	3.8	2.3	1.1	0.3	0.0	0.0	74.4	74.3
	0	0.1	0.7	1.7	3.0	4.5	5.9	7.1	7.9	8.3	8.2	7.6	6.6	5.3	3.8	2.3	1.1	0.3	0.0	0.0	74.6	74.5
	10	0.1	0.7	1.7	3.0	4.4	5.8	7.0	7.8	8.1	8.0	7.4	6.4	5.1	3.7	2.3	1.1	0.3	0.0	0.0	72.6	72.5
	20	0.1	0.6	1.6	2.8	4.2	5.5	6.6	7.3	7.6	7.5	6.9	6.0	4.7	3.4	2.1	1.0	0.3	0.0	0.0	68.2	68.1
	30	0.1	0.6	1.4	2.6	3.8	5.0	6.0	6.6	6.9	6.8	6.2	5.4	4.2	3.0	1.8	0.8	0.2	0.0	0.0	61.5	61.4
	40	0.1	0.5	1.2	2.2	3.3	4.3	5.2	5.7	6.0	5.8	5.3	4.5	3.5	2.5	1.5	0.6	0.2	0.0	0.0	52.6	52.4
	50	0.1	0.4	1.0	1.8	2.7	3.5	4.2	4.6	4.8	4.6	4.2	3.5	2.7	1.8	1.0	0.5	0.1	0.0	0.0	41.6	41.4
	60	0.1	0.3	0.8	1.4	2.0	2.6	3.0	3.3	3.4	3.2	2.9	2.4	1.8	1.2	0.6	0.3	0.1	0.0	0.0	29.1	28.7
	70	0.1	0.2	0.5	0.9	1.2	1.5	1.8	1.9	1.9	1.7	1.5	1.2	0.8	0.5	0.3	0.1	0.0	0.0	0.0	16.0	14.9
	80	0.0	0.1	0.3	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	5.0	1.5
	90	1.5	8.1	20.1	35.8	52.8	68.9	82.3	91.1	94.5	92.2	84.3	71.8	56.2	39.4	23.4	10.7	2.9	0.2	0.2	836	
	Flux(E)	1.0	7.7	19.7	35.3	52.2	68.3	81.6	90.5	94.0	91.6	83.6	71.1	55.5	38.6	22.7	9.9	1.8	0.0	0.0	825	

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

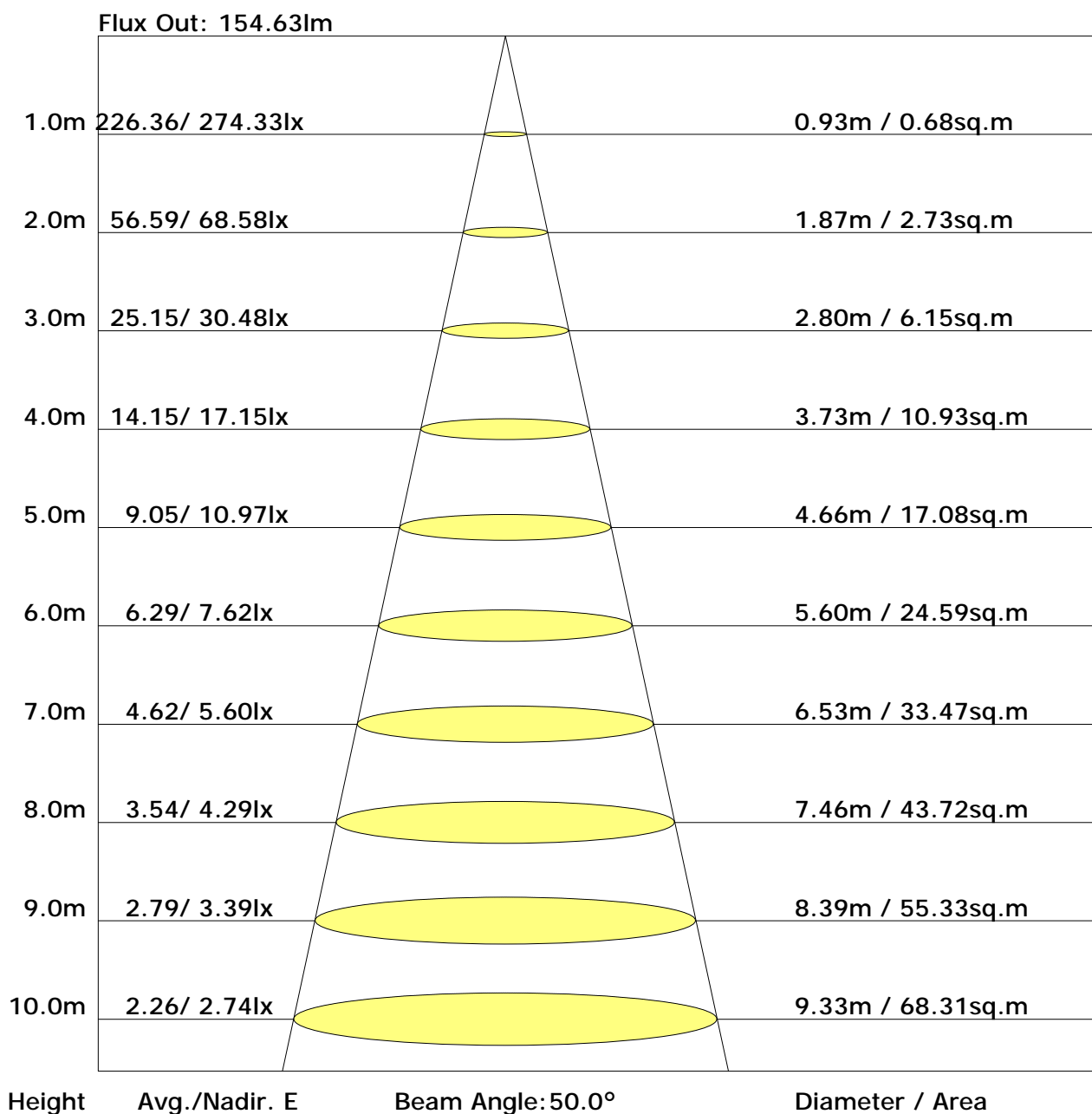
Test Device: GPM-1800B

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	25.4	27.0	25.7	27.3	27.7	26.2	27.9	26.6	28.2	28.5
3H	26.9	28.4	27.3	28.7	29.1	28.0	29.5	28.4	29.8	30.2
4H	27.3	28.7	27.7	29.1	29.5	28.6	30.0	29.0	30.4	30.8
6H	27.5	28.8	27.9	29.2	29.6	29.0	30.3	29.4	30.7	31.1
8H	27.6	28.8	28.0	29.2	29.6	29.1	30.3	29.5	30.7	31.2
12H	27.6	28.8	28.0	29.2	29.6	29.1	30.3	29.6	30.7	31.2
X=4H Y=2H	25.9	27.4	26.4	27.7	28.1	26.9	28.3	27.3	28.7	29.1
3H	27.6	28.8	28.0	29.2	29.6	28.9	30.1	29.3	30.5	30.9
4H	28.1	29.2	28.5	29.6	30.1	29.6	30.7	30.1	31.1	31.6
6H	28.4	29.3	28.9	29.8	30.3	30.1	31.1	30.6	31.5	32.0
8H	28.4	29.3	28.9	29.8	30.3	30.3	31.1	30.7	31.6	32.1
12H	28.5	29.3	29.0	29.7	30.2	30.3	31.1	30.8	31.6	32.1
X=8H Y=4H	28.3	29.2	28.8	29.6	30.1	30.0	30.9	30.5	31.3	31.8
6H	28.6	29.4	29.1	29.9	30.4	30.6	31.3	31.1	31.8	32.3
8H	28.7	29.4	29.2	29.9	30.4	30.8	31.5	31.3	32.0	32.5
12H	28.7	29.3	29.3	29.8	30.4	30.9	31.5	31.5	32.0	32.6
X=12H Y=4H	28.3	29.1	28.8	29.6	30.1	30.0	30.8	30.5	31.3	31.8
6H	28.7	29.3	29.2	29.8	30.3	30.7	31.4	31.2	31.8	32.4
8H	28.7	29.3	29.3	29.8	30.4	31.0	31.5	31.5	32.0	32.6

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	0.58	0.67	0.75	0.80	0.87	0.92	0.95	1.00	1.03
	0.30		0.51	0.59	0.67	0.73	0.81	0.86	0.90	0.96	0.99
	0.20		0.45	0.53	0.61	0.67	0.76	0.82	0.86	0.92	0.96
0.50	0.50	0.20	0.57	0.65	0.72	0.77	0.84	0.88	0.92	0.96	0.99
	0.30		0.50	0.58	0.66	0.71	0.79	0.84	0.87	0.92	0.96
	0.20		0.45	0.53	0.61	0.66	0.74	0.80	0.84	0.89	0.93
0.30	0.50	0.20	0.55	0.63	0.70	0.74	0.81	0.85	0.88	0.92	0.95
	0.30		0.49	0.57	0.64	0.69	0.76	0.81	0.85	0.89	0.92
	0.20		0.45	0.52	0.60	0.65	0.73	0.78	0.82	0.87	0.90
0.00	0.00	0.00	0.42	0.50	0.57	0.62	0.69	0.74	0.77	0.82	0.85
<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(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	0.82	0.70	0.61	0.49	0.40	0.35	0.27	0.22
	0.30		0.81	0.70	0.61	0.54	0.44	0.37	0.32	0.25	0.21
	0.20		0.69	0.61	0.54	0.48	0.40	0.34	0.30	0.24	0.20
0.50	0.50	0.20	0.93	0.79	0.67	0.58	0.46	0.42	0.33	0.26	0.21
	0.30		0.79	0.68	0.59	0.52	0.42	0.36	0.31	0.24	0.20
	0.20		0.68	0.60	0.53	0.47	0.39	0.33	0.29	0.23	0.19
0.30	0.50	0.20	0.90	0.76	0.64	0.56	0.44	0.37	0.31	0.24	0.20
	0.30		0.77	0.67	0.57	0.50	0.41	0.34	0.30	0.23	0.19
	0.20		0.67	0.60	0.52	0.46	0.38	0.32	0.28	0.22	0.18
0.00	0.00	0.00	0.57	0.50	0.43	0.37	0.30	0.26	0.22	0.17	0.14
<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	0.17	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	0.10	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	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		0.05	0.07	0.08	0.10	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
<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>											