

Report No.:

Test Time: 2018/10/31 13:41

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category: MINI WALL WAHSER

Luminaire Description: MINIRGBW2424RGB6535TS (W)

Luminous Length (mm): 500

Luminous Width (mm): 50

Luminous Height (mm): 70

Voltage: 24.0 V

Current: 0.247 A

Power: 5.92 W

Power Factor: 1.000

## Photometric Results

CIE Class: Direct

Measurement Flux: 406.2 lm

Downward Ratio: 98%

Horizontal Diffuse Angle(50%): H35.1

Vertical Diffuse Angle(50%): V34.8

Luminaire Efficacy Rating (LER): 69

Max. Intensity: 852.55 cd

Total Rated Lamp Lumens: 406.2 lm

Efficiency: 100%

Upward Ratio: 2%

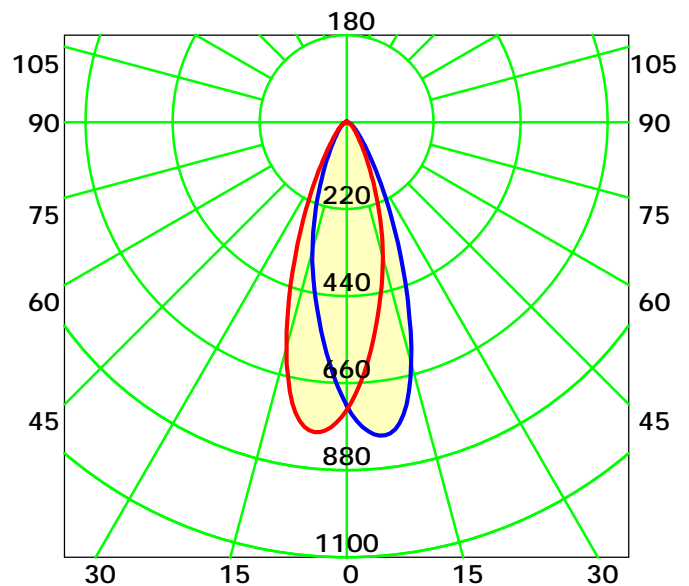
Central Intensity: 716.92 cd

Pos of Max. Intensity: H330 V8

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 34.9° Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0: 1.0

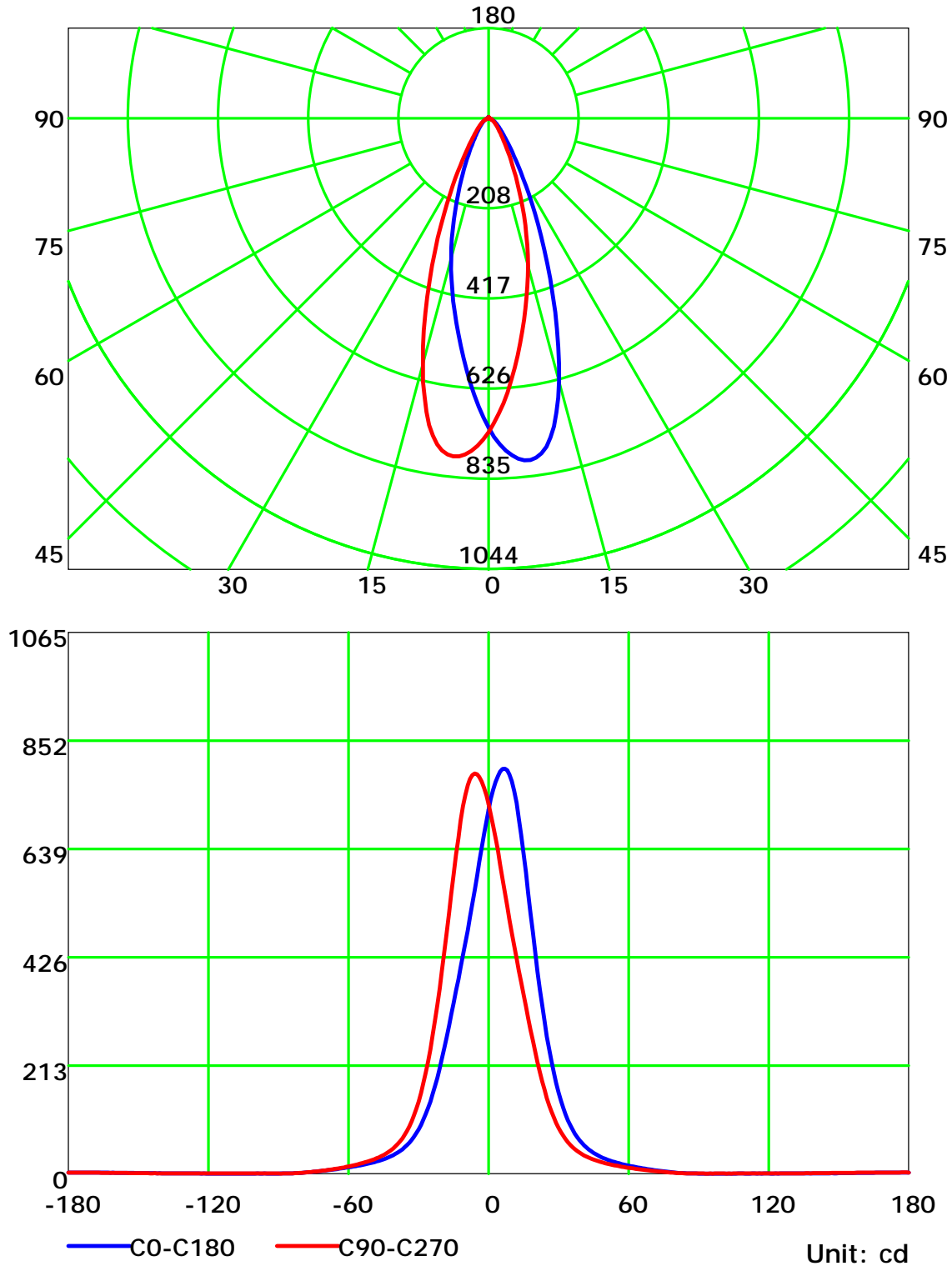
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

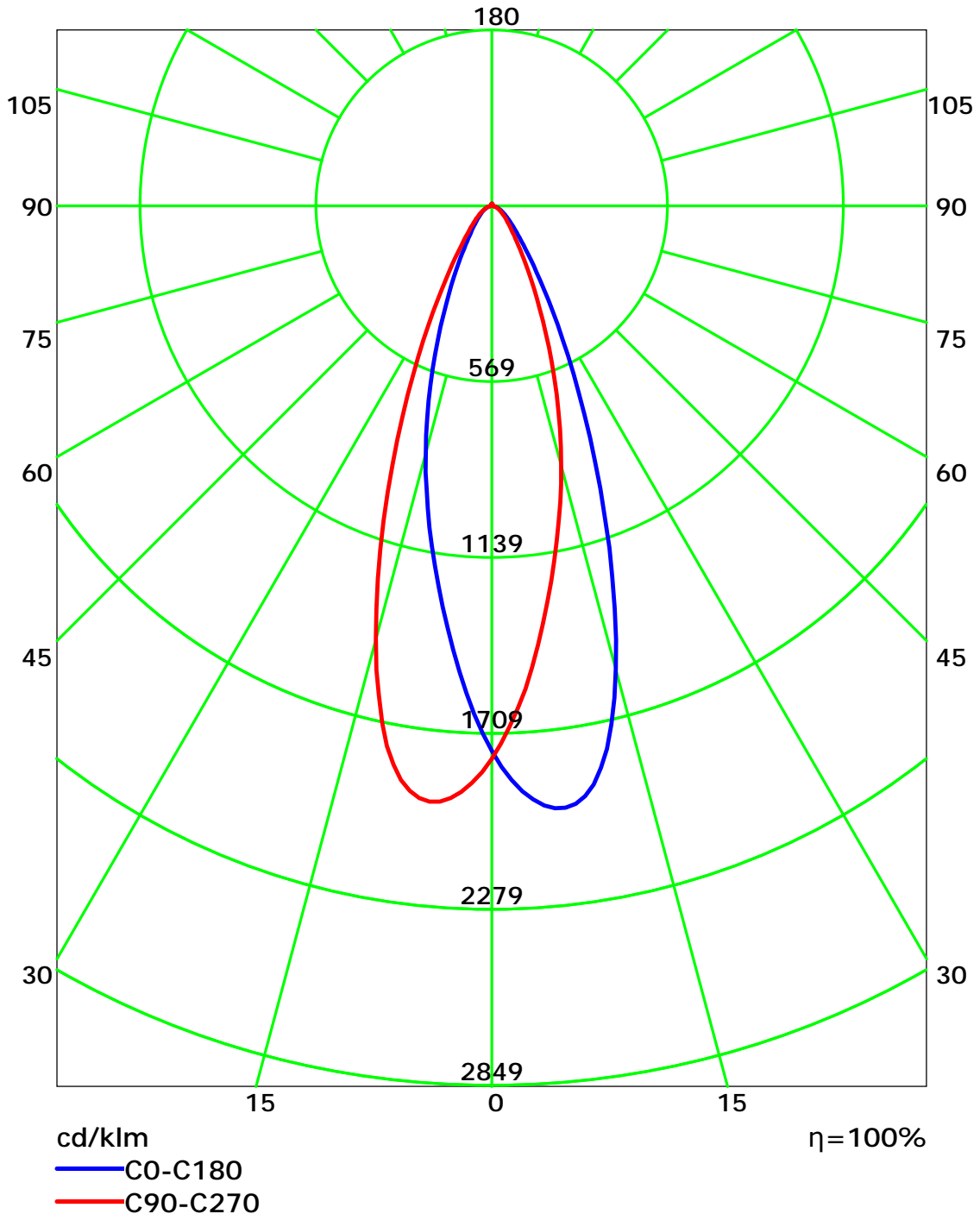
## Luminous Intensity Distribution Curve



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

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:  
Test Type: TYPE C  
Temperature: 25  
Operator: Aaron

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

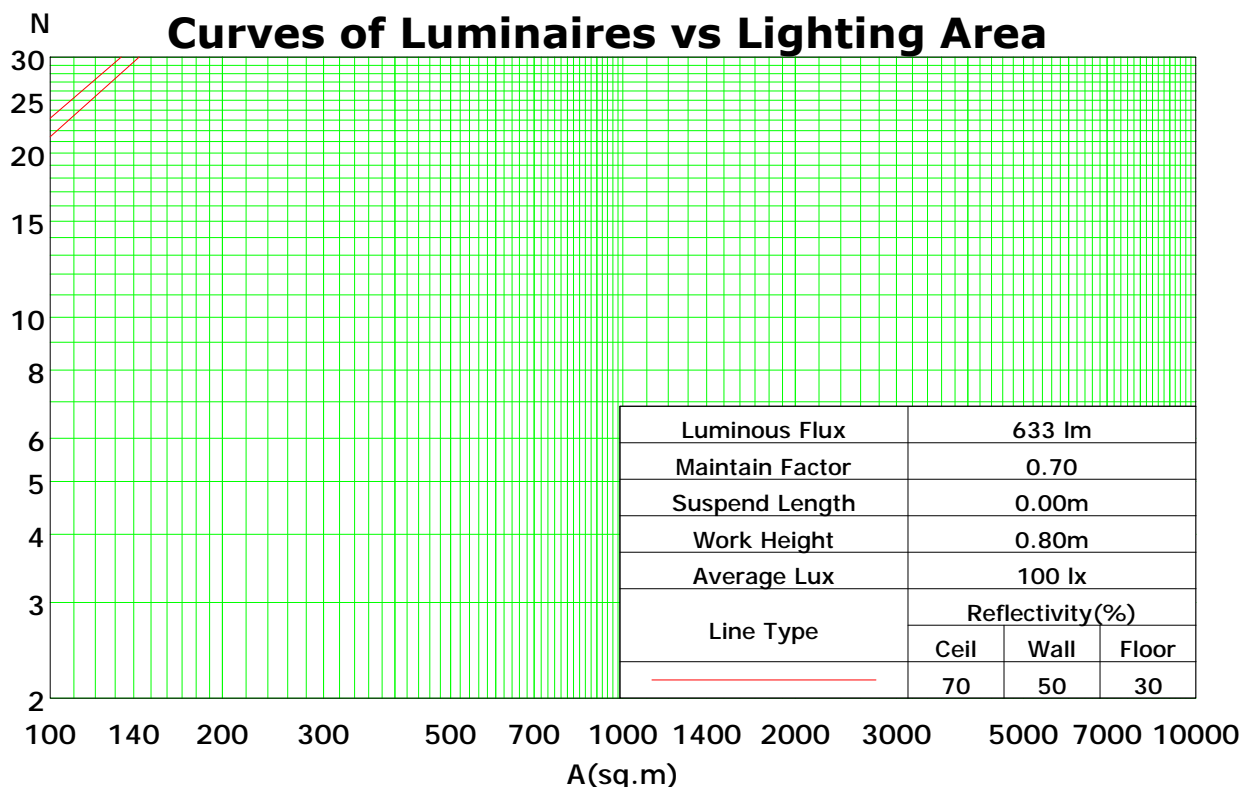
## Coefficients Of Utilization - Zonal Cavity Method

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	105	105	105	100	100	100	98
1	113	110	107	104	110	107	105	103	103	101	99	99	97	96	95	94	93	91
2	107	102	97	94	104	100	96	92	96	93	90	93	90	88	90	88	86	84
3	101	94	89	85	99	93	88	84	90	86	83	87	84	81	85	82	80	78
4	96	88	83	78	94	87	82	78	85	80	77	82	79	76	80	77	74	73
5	91	83	77	73	90	82	76	72	80	75	71	78	74	71	76	73	70	68
6	87	78	72	68	86	77	72	68	76	71	67	74	70	66	73	69	66	64
7	83	74	68	64	82	73	68	64	72	67	63	70	66	63	69	65	62	61
8	80	70	64	60	78	70	64	60	68	63	60	67	63	59	66	62	59	58
9	76	67	61	57	75	66	61	57	65	60	57	64	60	56	63	59	56	55
10	73	64	58	54	72	63	58	54	62	57	54	61	57	54	60	56	53	52

Spacing Criteria (0-180): 0.62

Spacing Criteria (90-270): 0.61

Spacing Criteria (Diagonal): 0.62



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

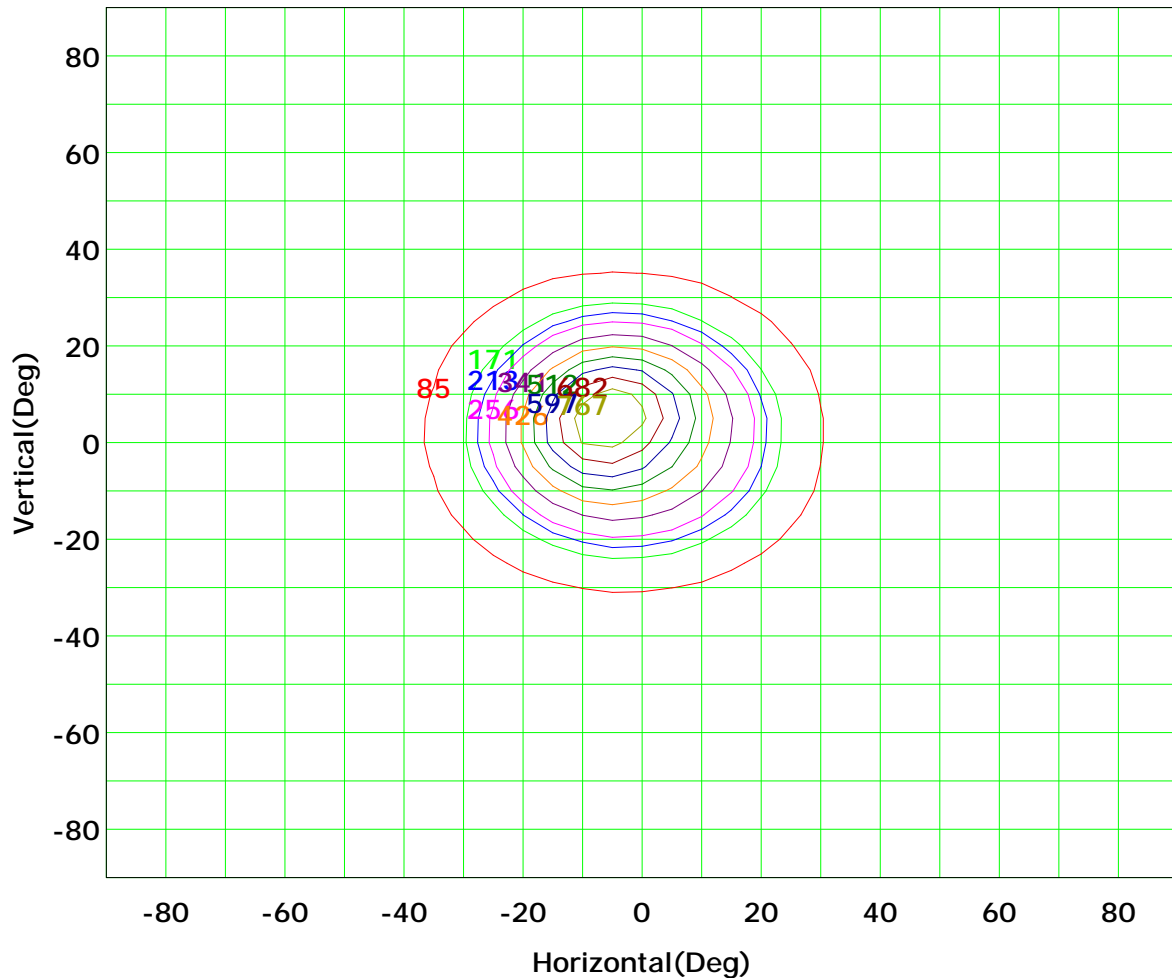
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## Isocandela (rectangle)



I<sub>max</sub> (100%): 853 cd

( 10%): 85 cd	( 20%): 171 cd
( 25%): 213 cd	( 30%): 256 cd
( 40%): 341 cd	( 50%): 426 cd
( 60%): 512 cd	( 70%): 597 cd
( 80%): 682 cd	( 90%): 767 cd

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

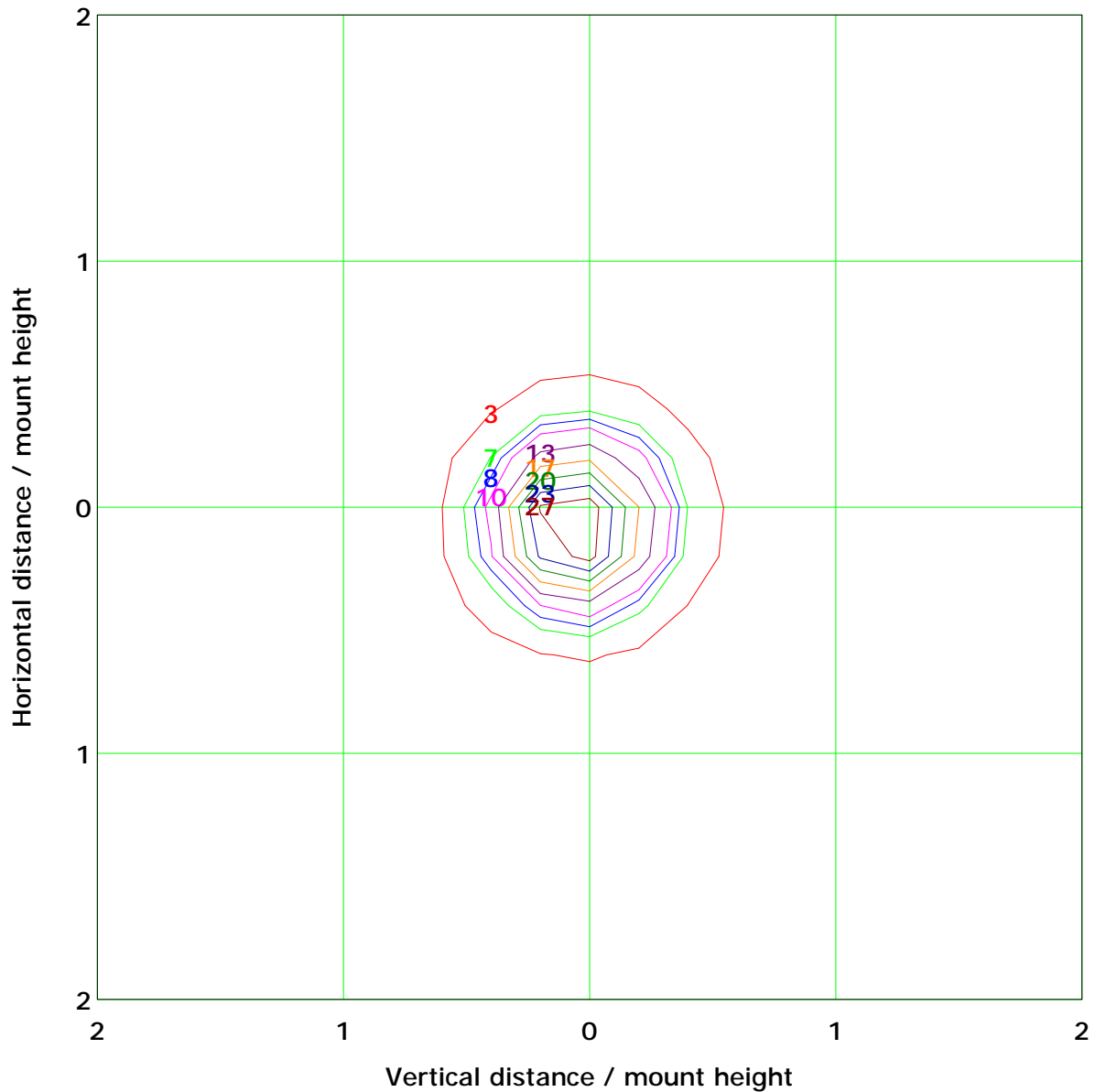
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## IsoLux Plot



Mounting Height: 5.0m		Max Lux(100%): 33.3 lx	
( 10%):	3.3 lx	( 20%):	6.7 lx
( 25%):	8.3 lx	( 30%):	10.0 lx
( 40%):	13.3 lx	( 50%):	16.6 lx
( 60%):	20.0 lx	( 70%):	23.3 lx
( 80%):	26.6 lx	( 90%):	29.9 lx

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 9.028 m

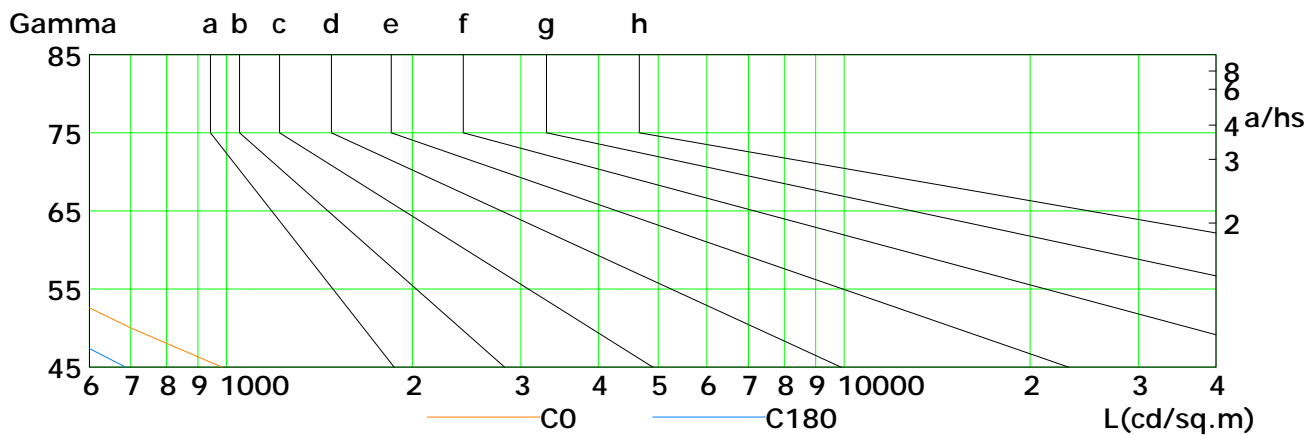
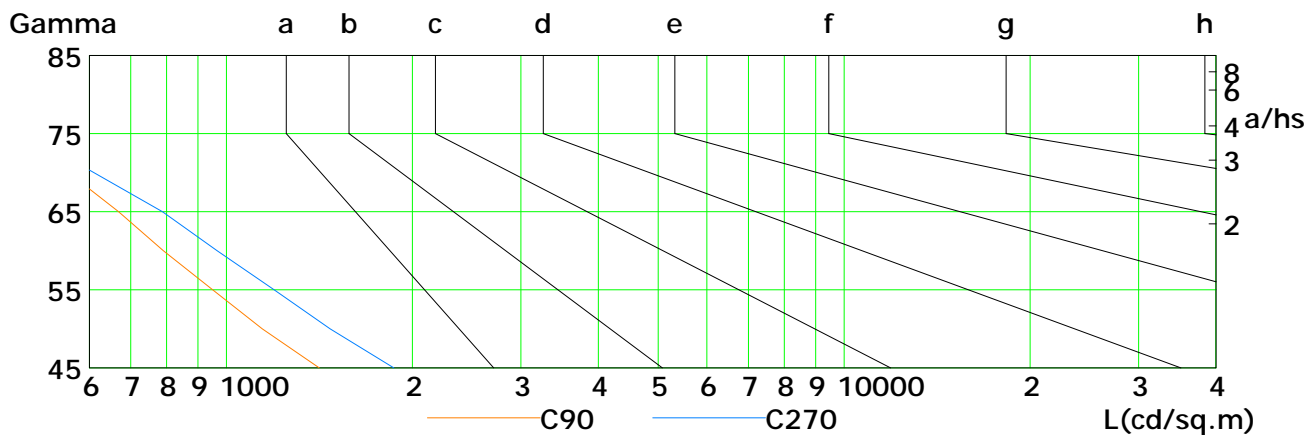
Humidity: 60%

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	983	701	519	389	290	206	133	72	36
C90	1414	1143	950	791	669	556	427	297	228
C180	687	518	401	311	235	170	112	63	33
C270	1868	1473	1195	966	788	611	484	330	233

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

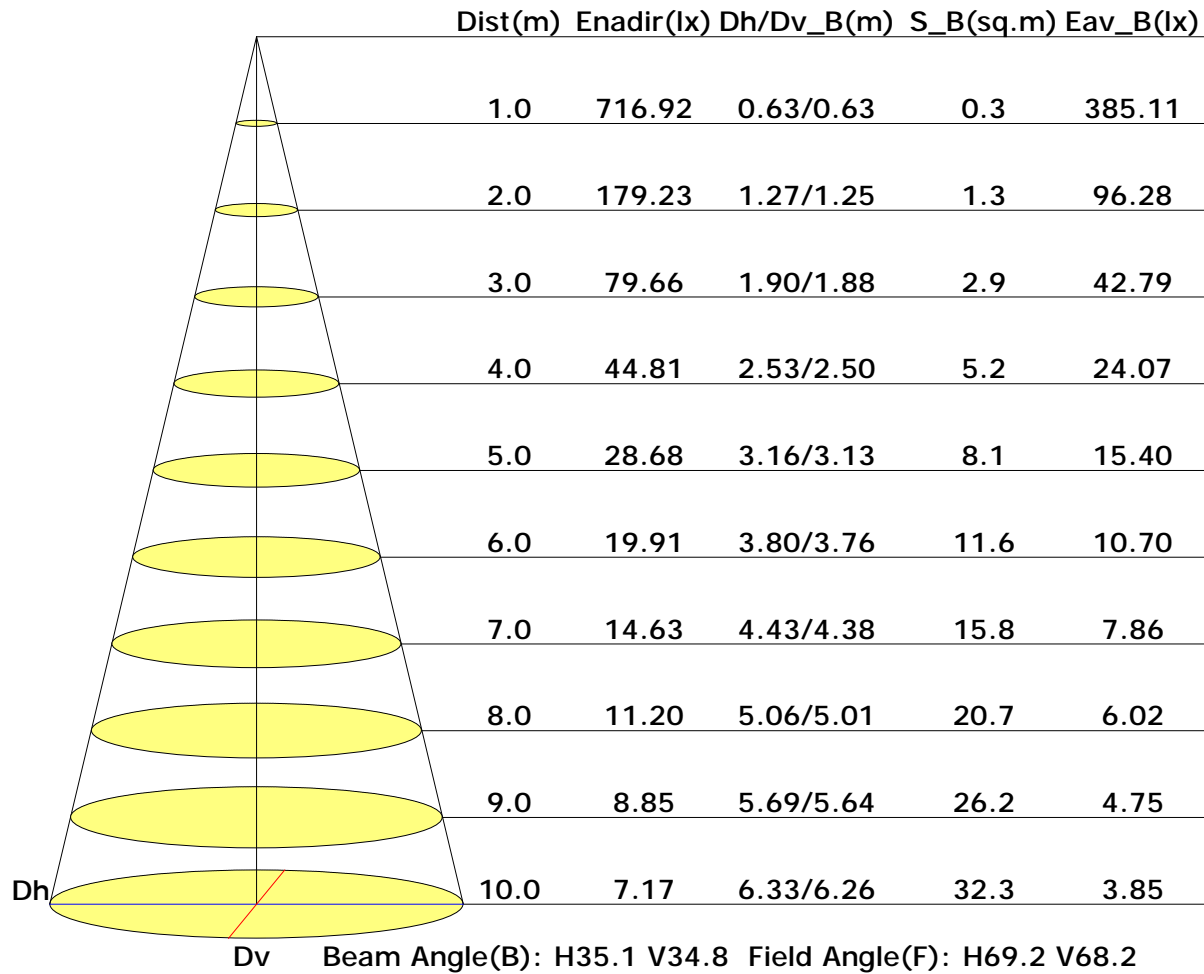
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

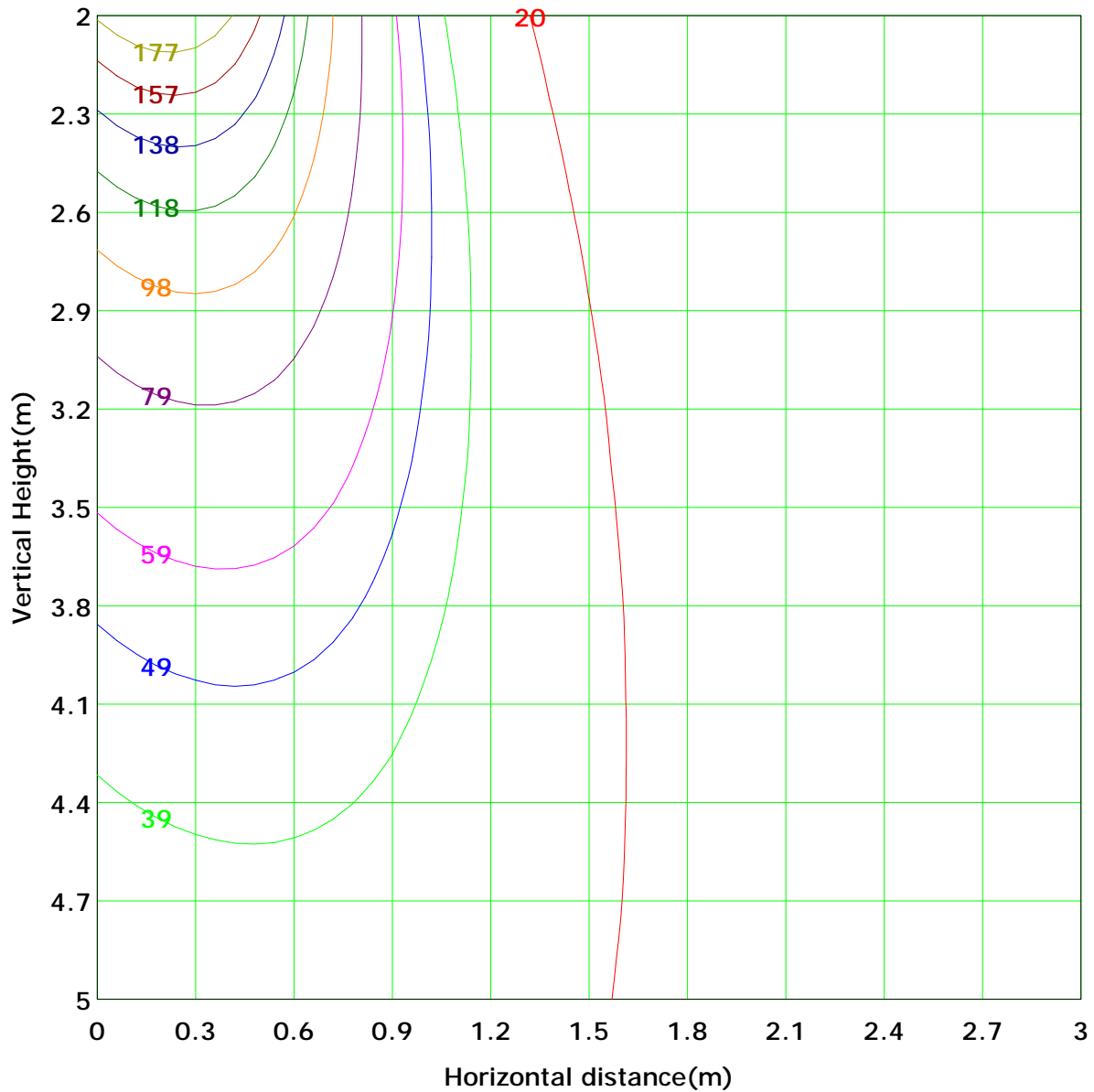
Inspector:

## Illuminance at a Distance





## Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 196.6 lx
( 10%): 19.7 lx	( 20%): 39.3 lx	
( 25%): 49.2 lx	( 30%): 59.0 lx	
( 40%): 78.6 lx	( 50%): 98.3 lx	
( 60%): 118.0 lx	( 70%): 137.6 lx	
( 80%): 157.3 lx	( 90%): 177.0 lx	

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

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)
Orbit, int																						
-90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
-80	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	1.2	0.0
-70	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.7	0.0
-60	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.7	2.7	0.0
-50	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.7	4.9	0.0
-40	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.7	8.2	0.0	
-30	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.3	2.7	15.2	4.3	
-20	0.0	0.0	0.1	0.3	0.5	0.9	1.3	1.9	2.5	3.2	4.0	4.7	5.5	6.3	7.1	8.0	8.9	9.8	10.8	33.7	27.2	
-10	0.0	0.0	0.1	0.3	0.6	1.3	2.1	3.2	4.6	6.4	8.6	11.2	14.2	17.4	20.8	24.3	27.8	31.2	34.5	68.1	62.8	
0	0.0	0.0	0.1	0.3	0.6	1.5	2.5	4.1	6.7	10.1	13.9	18.1	22.7	27.6	32.7	37.9	43.1	48.2	53.2	90.3	85.4	
10	0.0	0.0	0.1	0.3	0.6	1.4	2.4	3.8	5.6	8.0	10.9	14.2	17.8	21.6	25.5	29.4	33.2	36.9	40.5	76.3	71.4	
20	0.0	0.0	0.1	0.3	0.6	1.2	2.2	3.7	5.9	9.5	13.4	17.6	22.0	26.5	31.0	35.4	39.7	43.9	47.9	47.0	41.5	
30	0.0	0.0	0.1	0.3	0.5	0.9	1.6	2.9	4.3	6.6	9.9	13.9	18.4	23.2	28.0	32.7	37.3	41.7	45.9	23.2	15.3	
40	0.0	0.0	0.1	0.2	0.4	0.6	0.9	1.3	1.7	2.1	2.5	2.9	3.3	3.6	3.9	4.2	4.4	4.6	4.7	11.4	0.3	
50	0.0	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.5	1.6	1.6	6.6	0.0	
60	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4.1	0.0	
70	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	2.4	0.0	
80	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1	0.0	
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	
Flux(T)	0.1	0.4	1.3	2.9	5.6	10.5	22.2	46.2	77.6	95.0	72.2	35.2	15.2	7.3	3.6	1.6	0.5	0.1	0.1	397		
Flux(E)	0.0	0.0	0.0	0.0	0.0	0.0	13.1	38.8	70.7	88.1	65.1	27.5	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	308	
Horizontal plane																						
-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	Flux(T)Flux(E)			

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

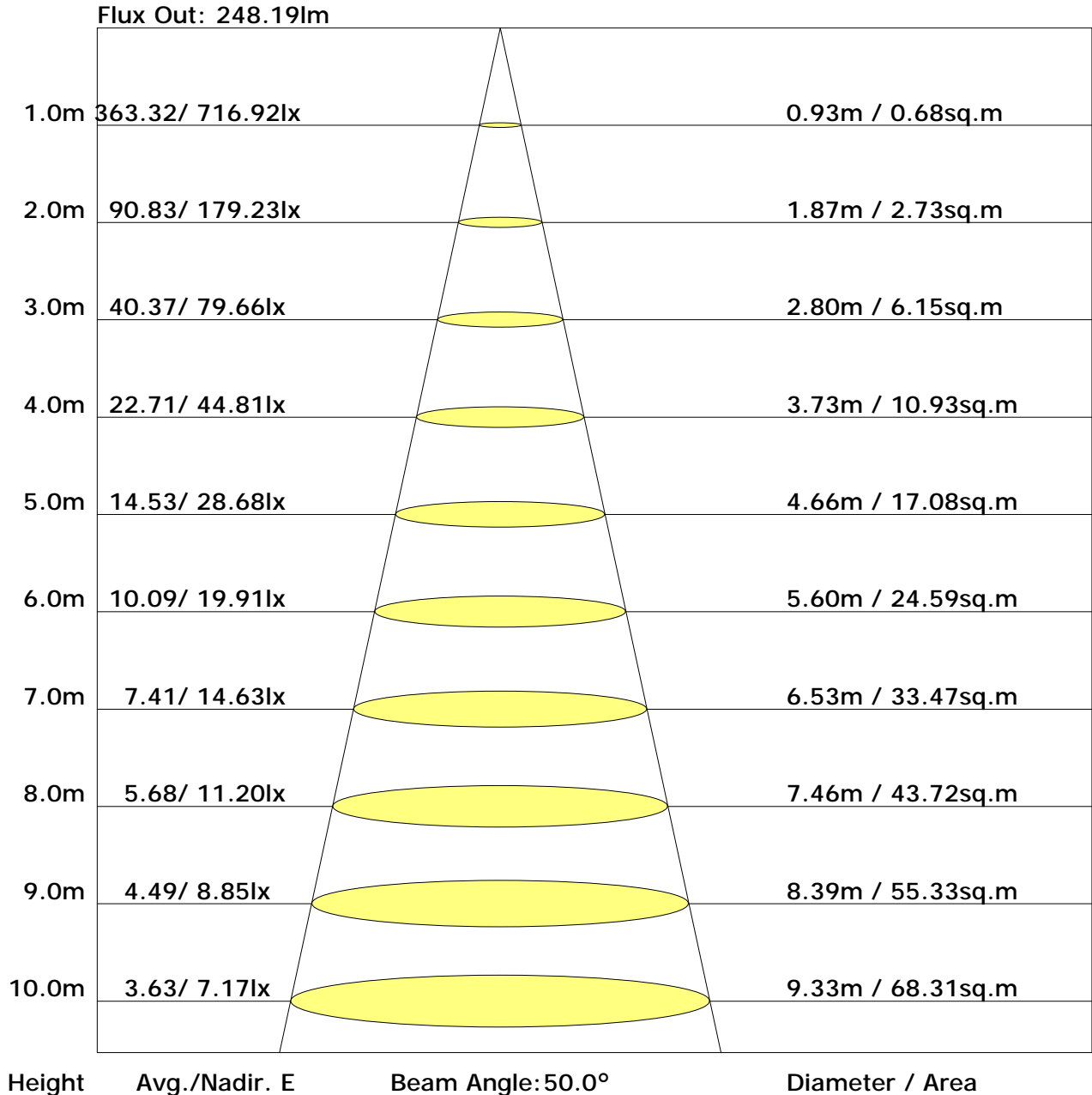
Test Device: GPM-1800B

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	10.4	11.5	10.8	11.8	12.2	6.7	7.8	7.2	8.2	8.6
3H	11.5	12.4	11.9	12.8	13.2	7.6	8.6	8.0	8.9	9.4
4H	11.8	12.7	12.2	13.1	13.5	7.8	8.7	8.3	9.1	9.5
6H	12.0	12.8	12.4	13.2	13.6	7.9	8.7	8.3	9.1	9.6
8H	12.0	12.7	12.5	13.2	13.6	7.9	8.6	8.4	9.1	9.5
12H	12.0	12.7	12.5	13.1	13.6	7.9	8.6	8.3	9.0	9.5
X=4H Y=2H	10.4	11.3	10.9	11.7	12.2	7.2	8.1	7.6	8.5	8.9
3H	11.7	12.4	12.1	12.8	13.3	8.2	8.9	8.6	9.3	9.8
4H	12.0	12.7	12.5	13.1	13.6	8.4	9.1	8.9	9.5	10.0
6H	12.3	12.8	12.8	13.3	13.8	8.5	9.1	9.1	9.6	10.1
8H	12.3	12.8	12.8	13.3	13.8	8.5	9.1	9.1	9.5	10.1
12H	12.3	12.7	12.8	13.3	13.8	8.5	9.0	9.1	9.5	10.0
X=8H Y=4H	12.0	12.5	12.5	13.0	13.5	8.5	9.0	9.0	9.5	10.1
6H	12.2	12.6	12.8	13.2	13.7	8.7	9.1	9.2	9.6	10.2
8H	12.3	12.6	12.8	13.2	13.7	8.7	9.1	9.3	9.6	10.2
12H	12.3	12.6	12.9	13.2	13.8	8.7	9.1	9.3	9.6	10.2
X=12H Y=4H	11.9	12.4	12.4	12.9	13.4	8.5	9.0	9.0	9.5	10.0
6H	12.2	12.5	12.7	13.0	13.6	8.7	9.0	9.2	9.6	10.2
8H	12.2	12.6	12.8	13.1	13.7	8.7	9.0	9.3	9.6	10.2

Calculate in accordance with CIE 190:2010

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

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 = 0.75								
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	0.82	0.89	0.93	0.96	1.01	1.04	1.06	1.08	1.10
	0.30		0.78	0.84	0.89	0.92	0.97	1.00	1.02	1.06	1.08
	0.20		0.74	0.81	0.85	0.89	0.94	0.97	1.00	1.03	1.06
0.50	0.50	0.20	0.81	0.87	0.91	0.94	0.97	1.00	1.02	1.04	1.05
	0.30		0.77	0.83	0.87	0.90	0.94	0.97	0.99	1.02	1.03
	0.20		0.74	0.80	0.84	0.87	0.92	0.95	0.97	1.00	1.02
0.30	0.50	0.20	0.80	0.85	0.89	0.91	0.95	0.97	0.98	1.00	1.01
	0.30		0.76	0.82	0.85	0.88	0.92	0.95	0.96	0.98	1.00
	0.20		0.73	0.79	0.83	0.86	0.90	0.93	0.95	0.97	0.99
0.00	0.00	0.00	0.71	0.77	0.80	0.83	0.86	0.89	0.90	0.92	0.93
<p>Rating: 6W 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 = 0.75								
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	0.61	0.50	0.42	0.37	0.29	0.24	0.20	0.16	0.13
	0.30		0.51	0.43	0.37	0.32	0.26	0.22	0.19	0.15	0.12
	0.20		0.44	0.37	0.33	0.29	0.24	0.20	0.18	0.14	0.12
0.50	0.50	0.20	0.58	0.47	0.39	0.34	0.27	0.26	0.19	0.14	0.12
	0.30		0.49	0.41	0.35	0.31	0.25	0.20	0.18	0.14	0.11
	0.20		0.43	0.36	0.31	0.28	0.23	0.19	0.17	0.13	0.11
0.30	0.50	0.20	0.55	0.44	0.37	0.32	0.25	0.20	0.17	0.13	0.11
	0.30		0.47	0.39	0.33	0.29	0.23	0.19	0.16	0.13	0.10
	0.20		0.41	0.35	0.30	0.26	0.21	0.18	0.15	0.12	0.10
0.00	0.00	0.00	0.28	0.22	0.19	0.16	0.13	0.10	0.09	0.07	0.05
<p>Rating: 6W 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 = 0.75								
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	0.21	0.22	0.23	0.23
	0.30		0.11	0.13	0.14	0.16	0.17	0.19	0.19	0.21	0.22
	0.20		0.08	0.10	0.12	0.13	0.15	0.16	0.18	0.19	0.20
0.50	0.50	0.20	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22	0.22
	0.30		0.11	0.13	0.14	0.15	0.17	0.18	0.19	0.20	0.21
	0.20		0.08	0.10	0.11	0.13	0.15	0.16	0.17	0.19	0.19
0.30	0.50	0.20	0.14	0.16	0.17	0.17	0.19	0.19	0.20	0.21	0.21
	0.30		0.11	0.12	0.14	0.15	0.16	0.17	0.18	0.19	0.20
	0.20		0.08	0.10	0.11	0.12	0.14	0.16	0.17	0.18	0.19
0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Rating: 6W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											