

Report No.:

Test Time: 2018/10/29 09:33

Luminaire Property

Luminaire Manufacturer:

Luminaire Category: MINI WALL WAHSE

Luminaire Description: MINIRGBW2424RGB6515TS (B)

Luminous Length (mm): 500

Luminous Width (mm): 50

Luminous Height (mm): 70

Voltage: 24.0 V

Current: 0.287 A

Power: 6.88 W

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 64 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H16.7

Vertical Diffuse Angle(50%): V16.5

Luminaire Efficacy Rating (LER): 9

Max. Intensity: 274.4 cd

Total Rated Lamp Lumens: 64.0 lm

Efficiency: 100%

Upward Ratio: 1%

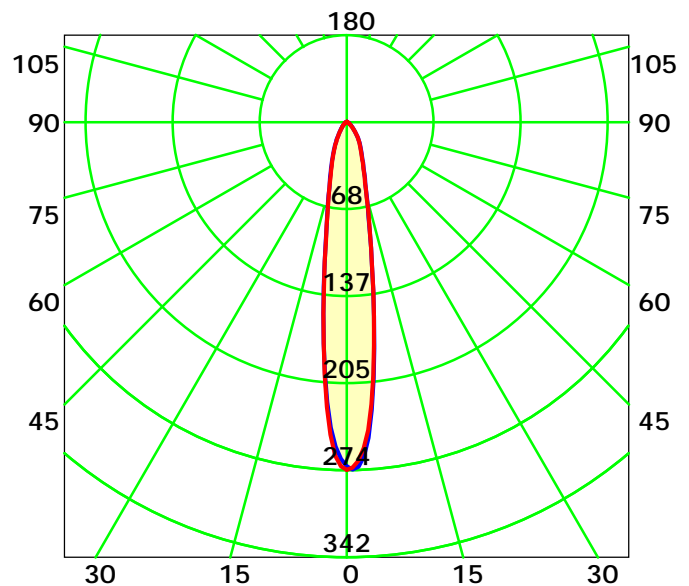
Central Intensity: 271.31 cd

Pos of Max. Intensity: H120 V0

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 16.6° 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

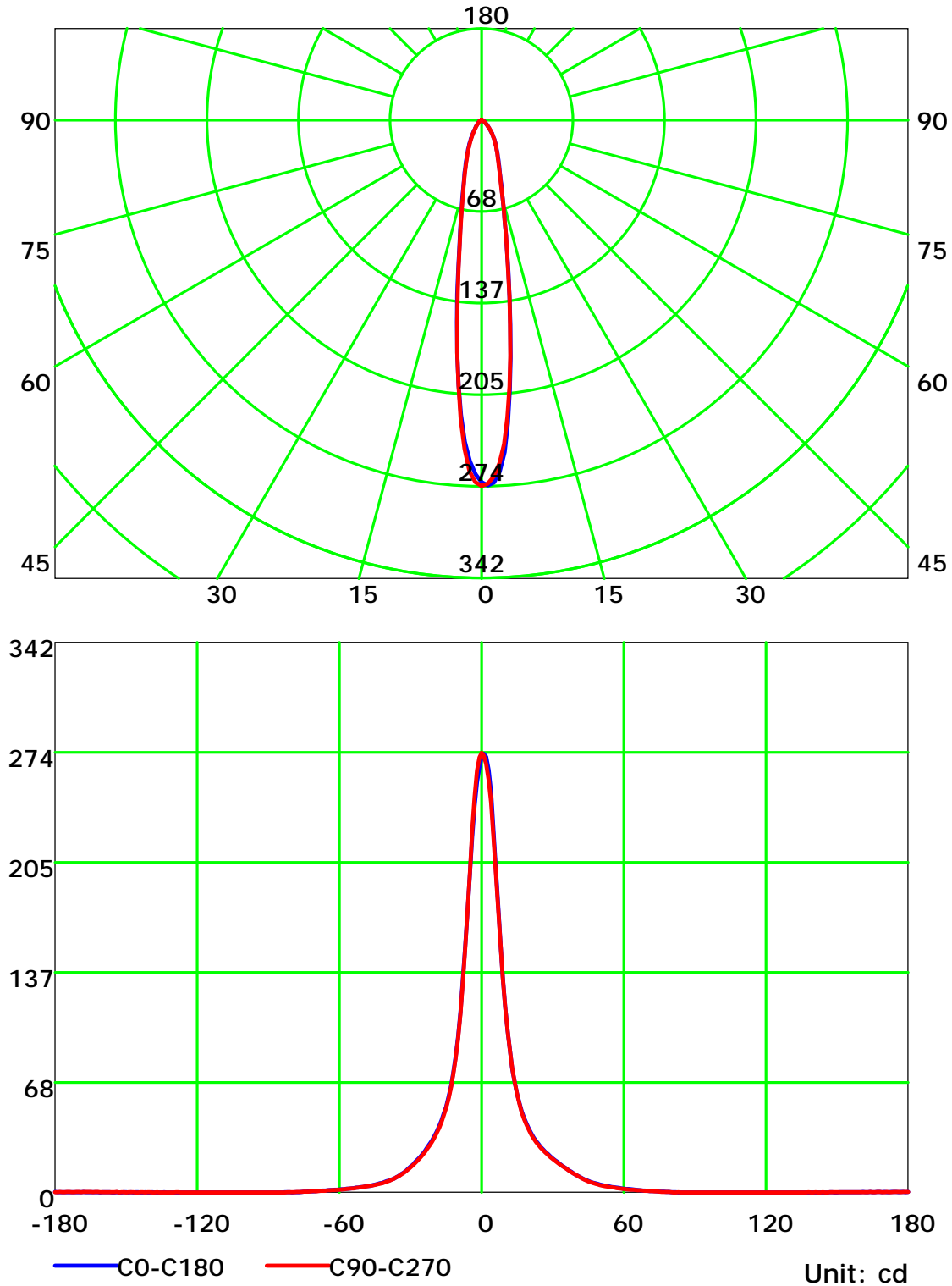
Test Device: GPM-1800B

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

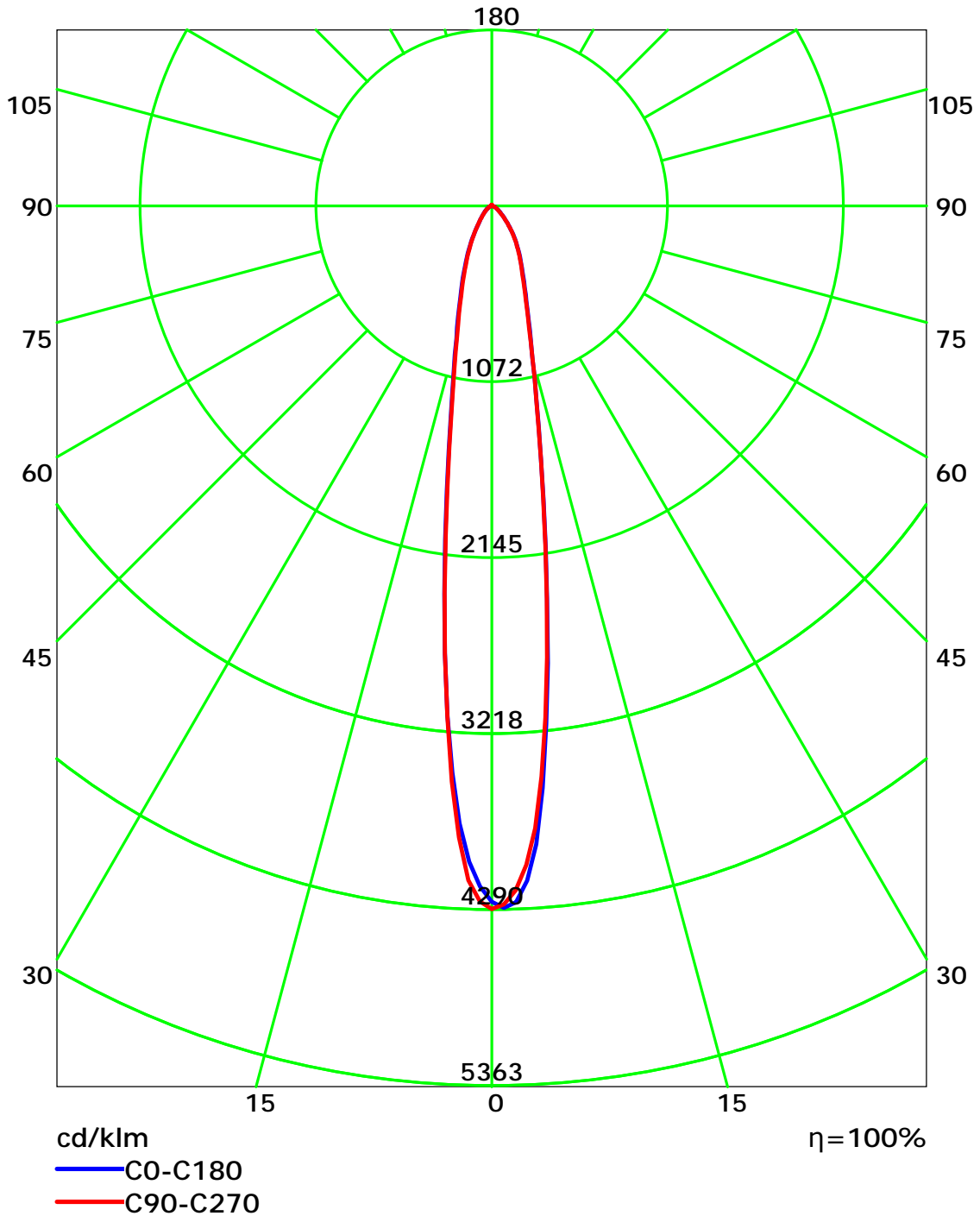
Test Device: GPM-1800B

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:

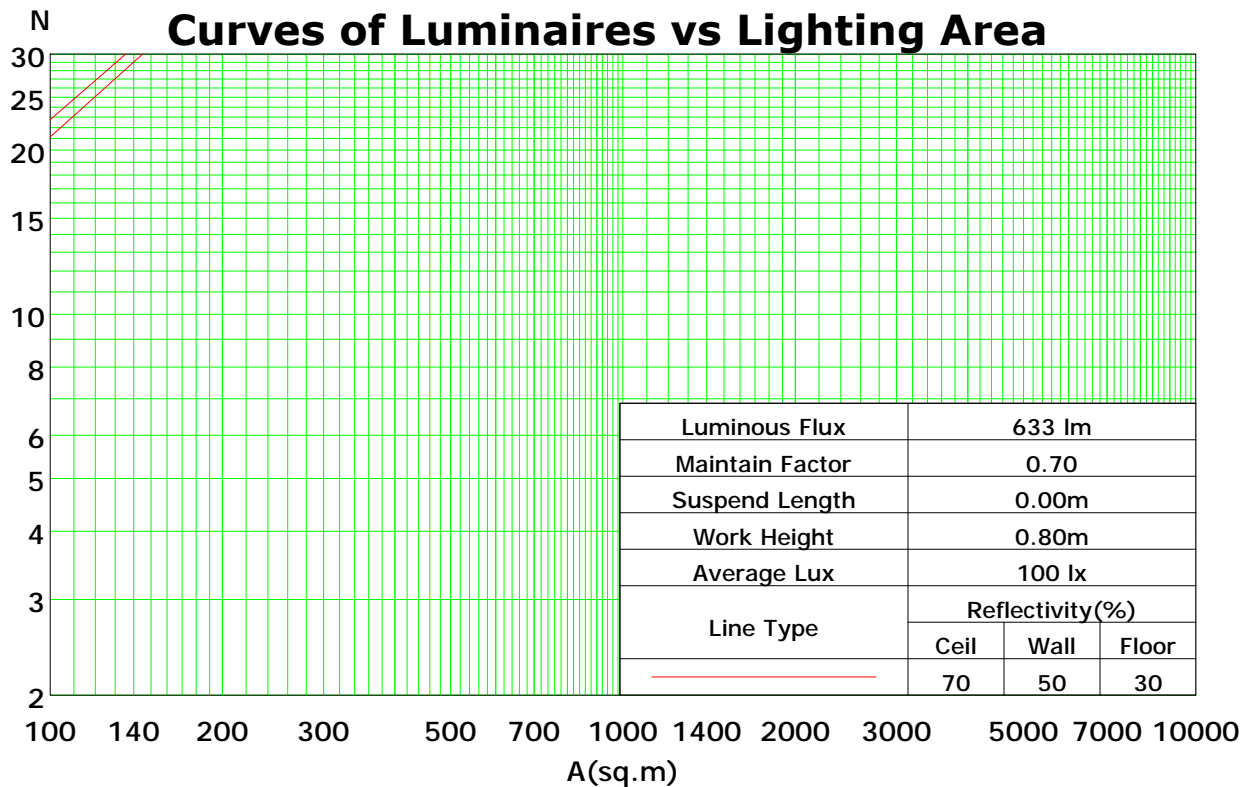
Coefficients Of Utilization - Zonal Cavity Method

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	111	111	111	106	106	106	101	101	101	99
1	113	110	108	106	111	108	106	104	104	102	100	100	99	97	96	95	94	92
2	108	103	99	95	105	101	97	94	98	95	92	94	92	90	92	90	88	86
3	102	96	91	87	100	95	90	87	92	88	85	89	86	84	87	84	82	81
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76
5	93	85	80	76	92	84	79	75	82	78	74	81	77	74	79	76	73	72
6	89	81	75	71	88	80	75	71	78	74	70	77	73	70	76	72	69	68
7	86	77	71	67	84	76	71	67	75	70	67	74	69	66	72	69	66	65
8	82	73	68	64	81	73	68	64	72	67	64	71	66	63	70	66	63	62
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	63	60	59
10	76	67	62	59	75	67	62	58	66	62	58	65	61	58	65	61	58	57

Spacing Criteria (0-180): 0.29

Spacing Criteria (90-270): 0.28

Spacing Criteria (Diagonal): 0.32



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

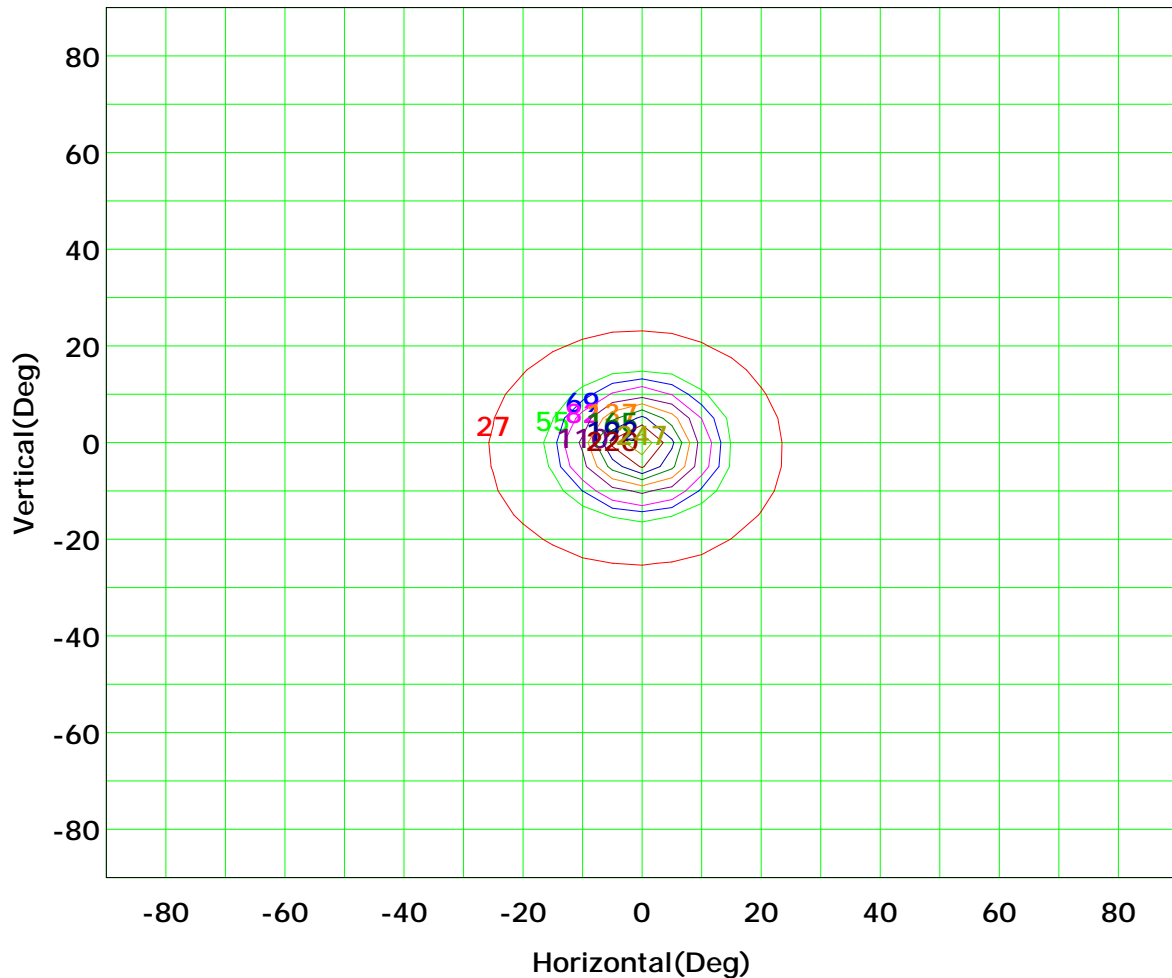
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Isocandela (rectangle)



I_{max} (100%): 274 cd

(10%): 27 cd	(20%): 55 cd
(25%): 69 cd	(30%): 82 cd
(40%): 110 cd	(50%): 137 cd
(60%): 165 cd	(70%): 192 cd
(80%): 220 cd	(90%): 247 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

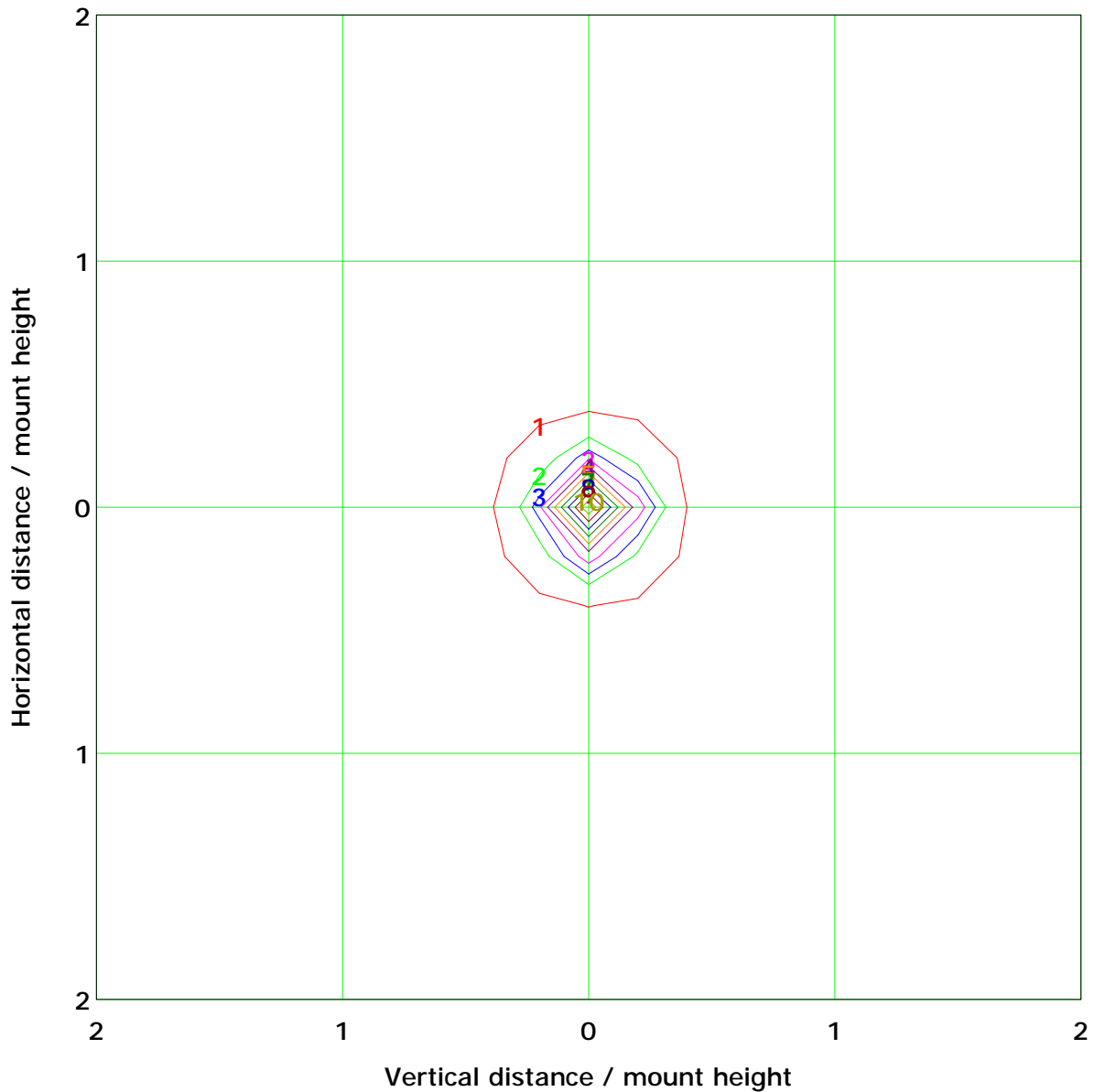
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

IsoLux Plot



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

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 9.028 m

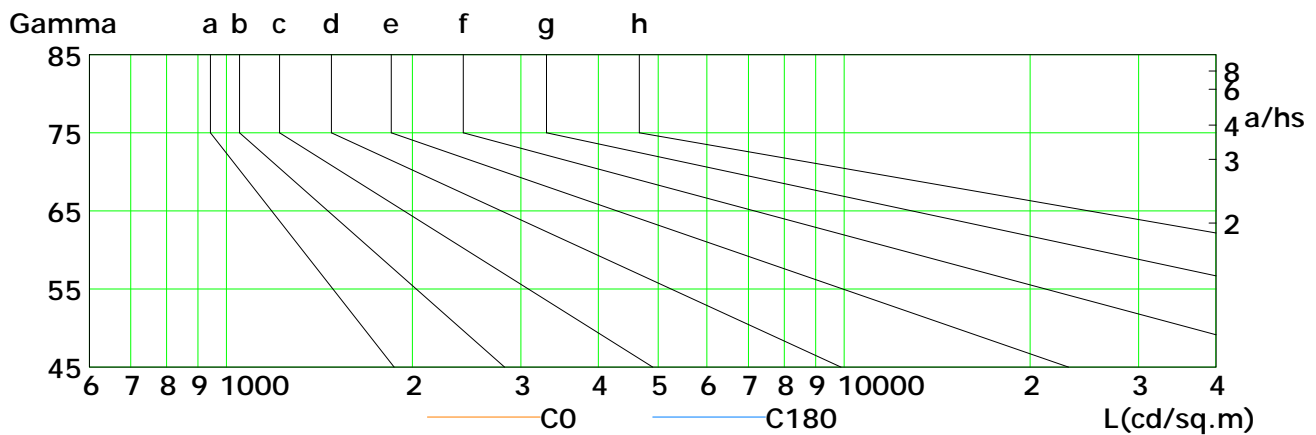
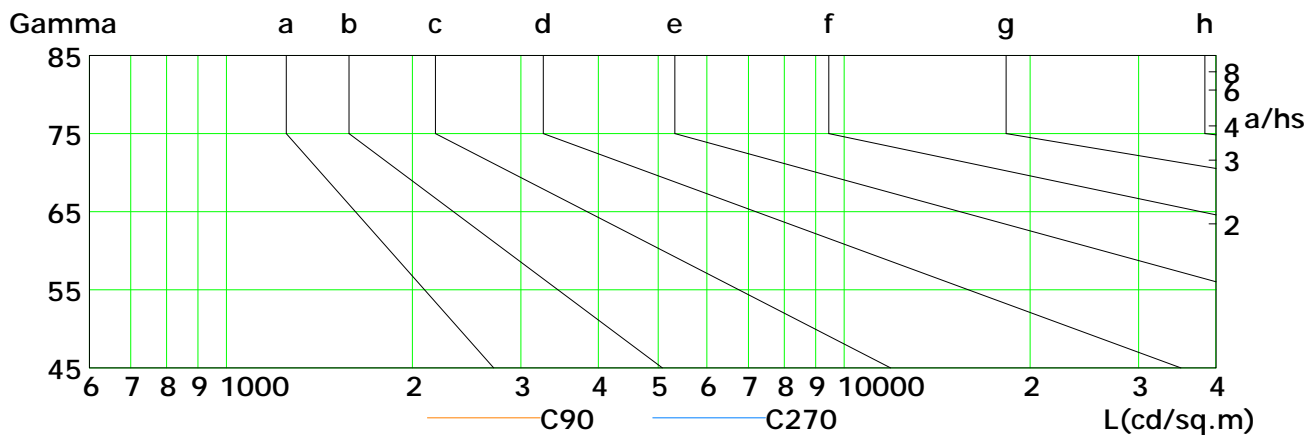
Humidity: 60%

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	172	118	82	58	41	28	16	7	2
C90	352	252	190	147	119	90	60	31	7
C180	119	82	61	46	35	21	15	3	2
C270	239	189	151	117	100	66	59	40	25

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

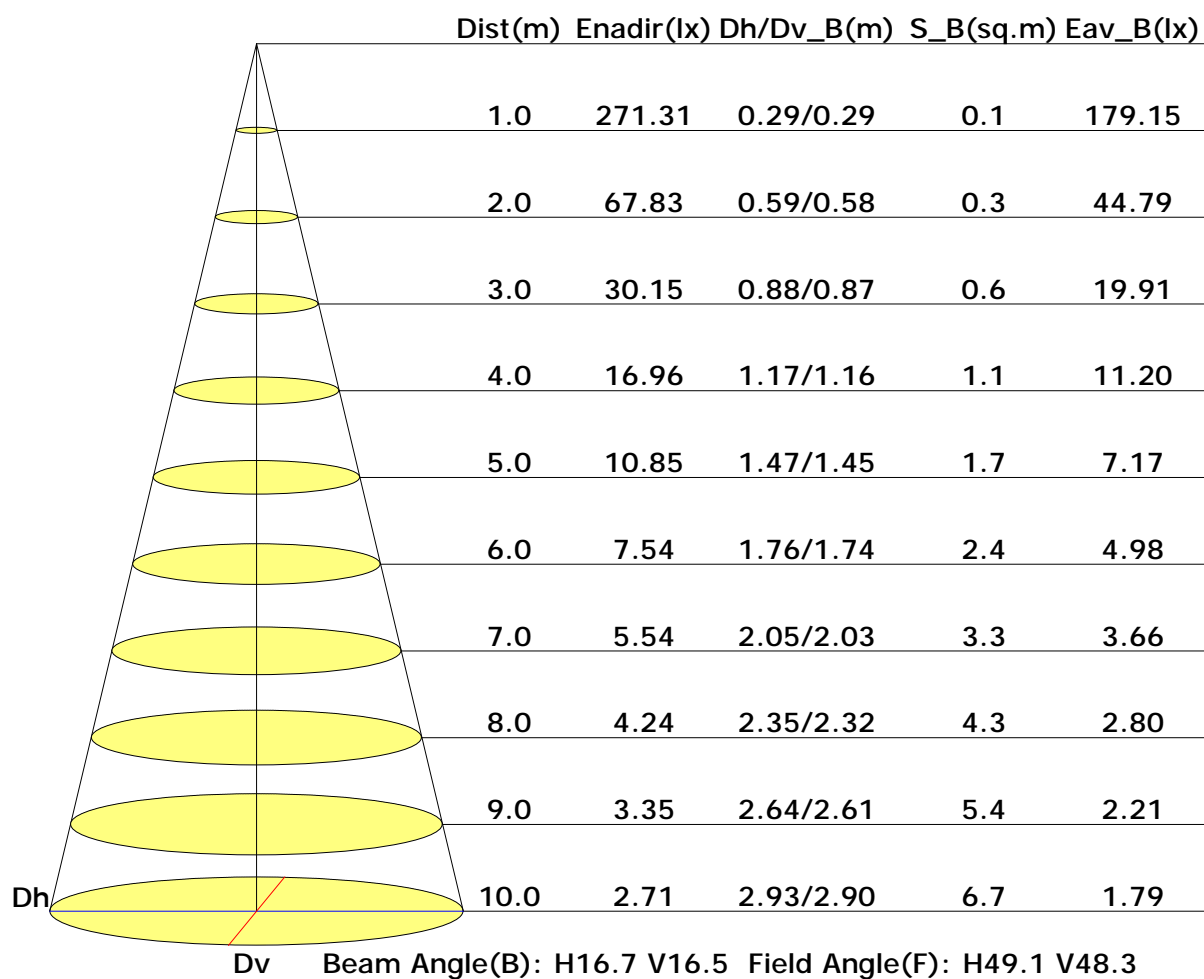
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Illuminance at a Distance



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

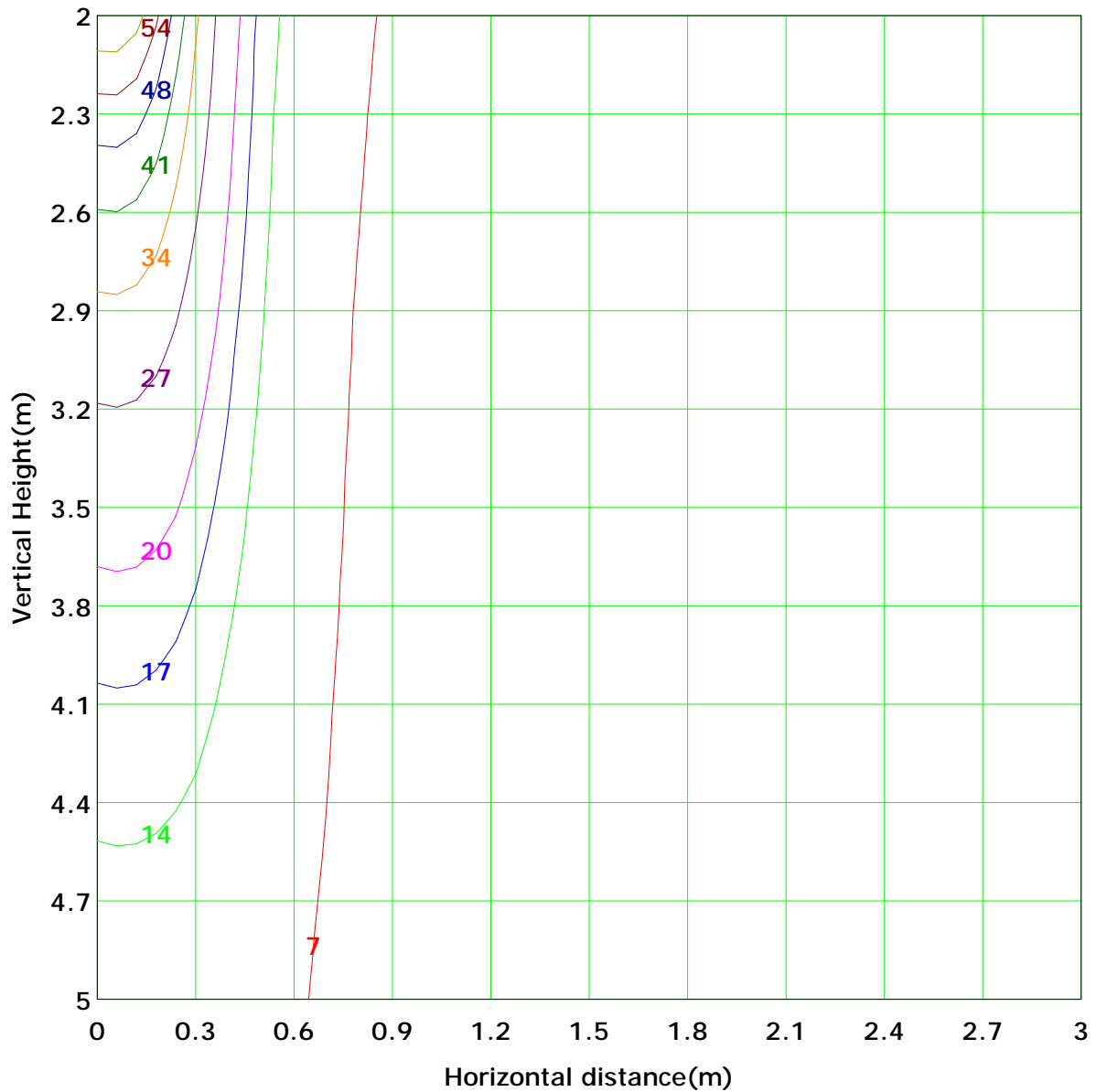
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 68.0 lx
(10%): 6.8 lx	(20%): 13.6 lx	
(25%): 17.0 lx	(30%): 20.4 lx	
(40%): 27.2 lx	(50%): 34.0 lx	
(60%): 40.8 lx	(70%): 47.6 lx	
(80%): 54.4 lx	(90%): 61.2 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

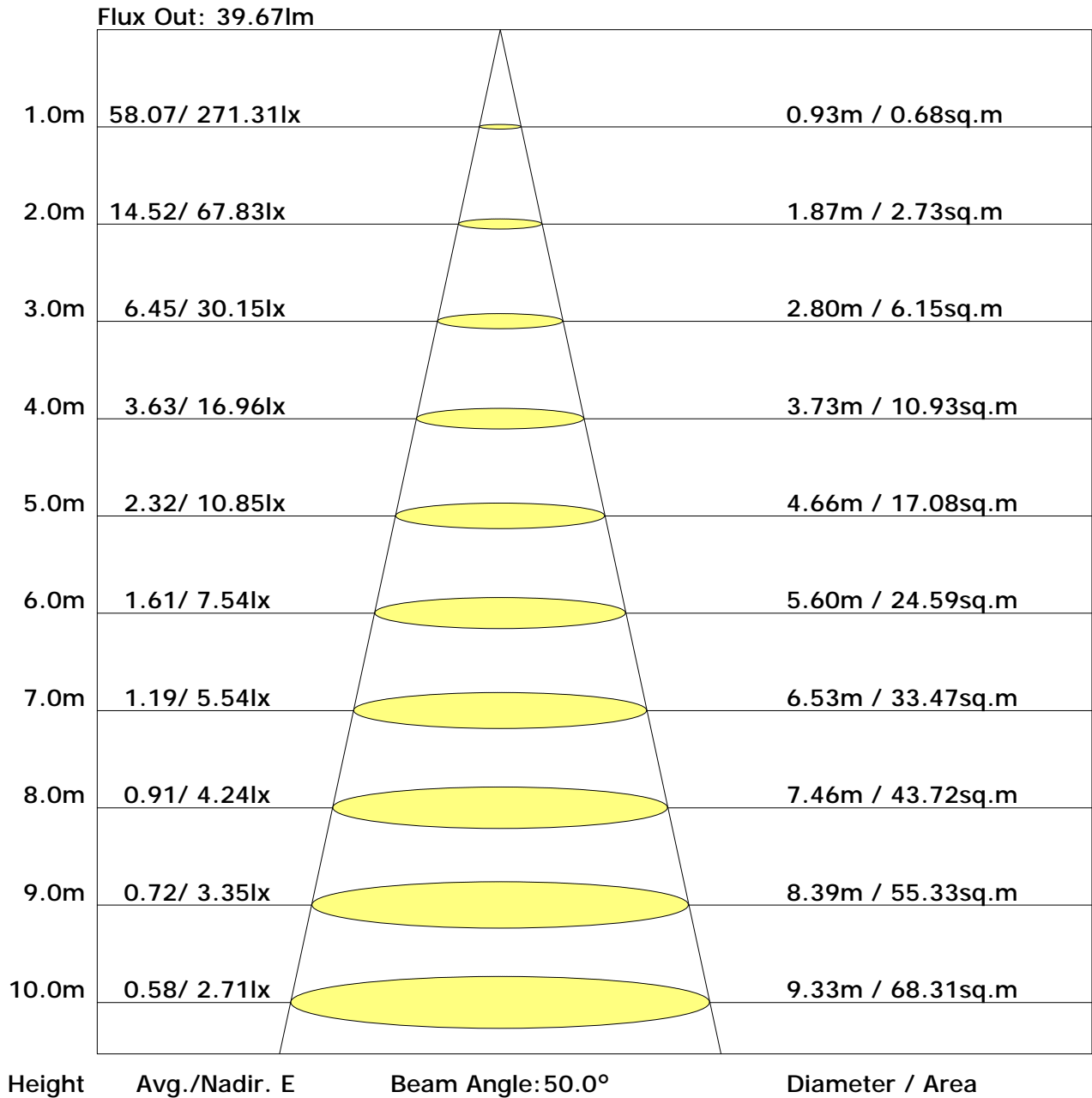
Unit: lm

		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)
Horizontal plane	-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	0.0
	-80	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	0.0
	-70	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	0.0
	-60	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	0.3	0.0
	-50	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	0.6	0.0
	-40	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	1.1	0.0
	-30	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	1.9	0.0
	-20	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	3.7	0.4
	-10	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	7.0	4.8
	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	14.7	12.8
	10	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	15.8	14.0
	20	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	7.9	5.8
	30	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	4.6	1.1
	40	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	2.7	0.0
	50	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	1.4	0.0
	60	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	0.7	0.0
	70	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	0.4	0.0
	80	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	0.1	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	0.0	0.0
		0.0	0.0	0.2	0.4	0.9	1.8	3.8	7.4	15.5	16.1	8.1	4.6	2.5	1.2	0.5	0.2	0.1	0.0	0.0	63	
		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		39

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	10.3	11.3	10.6	11.7	12.0	8.0	9.1	8.4	9.4	9.7
3H	11.1	12.0	11.5	12.4	12.8	8.6	9.5	9.0	9.9	10.3
4H	11.3	12.2	11.7	12.5	12.9	8.7	9.6	9.1	10.0	10.4
6H	11.3	12.1	11.8	12.5	12.9	8.7	9.5	9.1	9.9	10.3
8H	11.3	12.1	11.8	12.5	12.9	8.6	9.4	9.1	9.8	10.3
12H	11.2	12.0	11.7	12.4	12.8	8.6	9.3	9.1	9.7	10.2
X=4H Y=2H	10.3	11.1	10.7	11.5	11.9	8.3	9.1	8.7	9.5	9.9
3H	11.2	11.9	11.6	12.3	12.8	9.0	9.7	9.4	10.1	10.6
4H	11.4	12.1	11.9	12.5	13.0	9.2	9.8	9.6	10.2	10.7
6H	11.5	12.1	12.0	12.5	13.0	9.2	9.7	9.6	10.2	10.7
8H	11.5	12.0	12.0	12.5	13.0	9.1	9.6	9.6	10.1	10.6
12H	11.4	11.9	11.9	12.4	12.9	9.1	9.5	9.6	10.0	10.5
X=8H Y=4H	11.3	11.8	11.8	12.3	12.8	9.2	9.7	9.6	10.1	10.6
6H	11.4	11.8	12.0	12.4	12.9	9.2	9.6	9.7	10.1	10.6
8H	11.4	11.8	12.0	12.3	12.8	9.1	9.5	9.7	10.0	10.5
12H	11.4	11.7	11.9	12.2	12.8	9.1	9.4	9.6	9.9	10.5
X=12H Y=4H	11.3	11.7	11.8	12.2	12.7	9.1	9.6	9.6	10.1	10.6
6H	11.4	11.7	11.9	12.2	12.8	9.1	9.5	9.7	10.0	10.5
8H	11.4	11.7	11.9	12.2	12.8	9.1	9.4	9.6	9.9	10.5

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 = 0.50								
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	0.85	0.92	0.96	1.00	1.05	1.08	1.10	1.12	1.14
	0.30		0.79	0.87	0.92	0.95	1.01	1.04	1.07	1.10	1.12
	0.20		0.76	0.83	0.88	0.92	0.97	1.01	1.04	1.08	1.10
0.50	0.50	0.20	0.83	0.90	0.94	0.97	1.01	1.04	1.06	1.08	1.10
	0.30		0.79	0.85	0.90	0.94	0.98	1.01	1.03	1.06	1.08
	0.20		0.75	0.82	0.87	0.90	0.96	0.99	1.01	1.04	1.06
0.30	0.50	0.20	0.82	0.88	0.92	0.95	0.99	1.01	1.02	1.04	1.06
	0.30		0.78	0.84	0.89	0.92	0.96	0.99	1.00	1.03	1.04
	0.20		0.75	0.81	0.86	0.89	0.94	0.97	0.99	1.01	1.03
0.00	0.00	0.00	0.73	0.79	0.83	0.86	0.90	0.93	0.94	0.97	0.98
<p>Rating: 7W 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 = 0.50								
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	0.65	0.53	0.45	0.39	0.30	0.25	0.21	0.16	0.13
	0.30		0.55	0.45	0.39	0.34	0.28	0.23	0.20	0.16	0.13
	0.20		0.47	0.40	0.35	0.31	0.25	0.21	0.18	0.15	0.12
0.50	0.50	0.20	0.62	0.50	0.42	0.36	0.28	0.27	0.20	0.15	0.12
	0.30		0.53	0.44	0.37	0.32	0.26	0.22	0.18	0.14	0.12
	0.20		0.46	0.38	0.33	0.29	0.24	0.20	0.17	0.14	0.11
0.30	0.50	0.20	0.60	0.47	0.40	0.34	0.26	0.22	0.18	0.14	0.11
	0.30		0.51	0.42	0.35	0.31	0.24	0.20	0.17	0.13	0.11
	0.20		0.45	0.37	0.32	0.28	0.23	0.19	0.16	0.13	0.10
0.00	0.00	0.00	0.31	0.25	0.20	0.18	0.14	0.11	0.09	0.07	0.06
<p>Rating: 7W 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 = 0.50								
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	0.18	0.18	0.20	0.21	0.21	0.22	0.23
	0.30		0.10	0.12	0.14	0.15	0.17	0.18	0.19	0.20	0.21
	0.20		0.07	0.09	0.11	0.12	0.14	0.16	0.17	0.19	0.20
0.50	0.50	0.20	0.14	0.16	0.17	0.18	0.19	0.20	0.20	0.21	0.22
	0.30		0.10	0.12	0.13	0.15	0.16	0.17	0.18	0.20	0.20
	0.20		0.07	0.09	0.11	0.12	0.14	0.15	0.17	0.18	0.19
0.30	0.50	0.20	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.20	0.21
	0.30		0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		0.07	0.09	0.10	0.12	0.14	0.15	0.16	0.18	0.18
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: 7W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980											