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Complete Integrated LED Lighting Solutions

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Report No.:

Test Time: 2018/10/12 14:44

Luminaire Property

Luminaire Manufacturer:

Luminaire Category: RIBBONLYTE

Luminous Length (mm): 500

Luminous Height (mm): 1

Current: 0.309 A

Power Factor: 1.000

Luminaire Description: RBS220244.4R

Luminous Width (mm): 8

Voltage: 24.0 V

Power: 7.42 W

Photometric Results

CIE Class: Direct

Measurement Flux: 283.6 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H124.4

Vertical Diffuse Angle(50%): V122.4

Luminaire Efficacy Rating (LER): 38

Max. Intensity: 88.63 cd

Total Rated Lamp Lumens: 283.6 lm

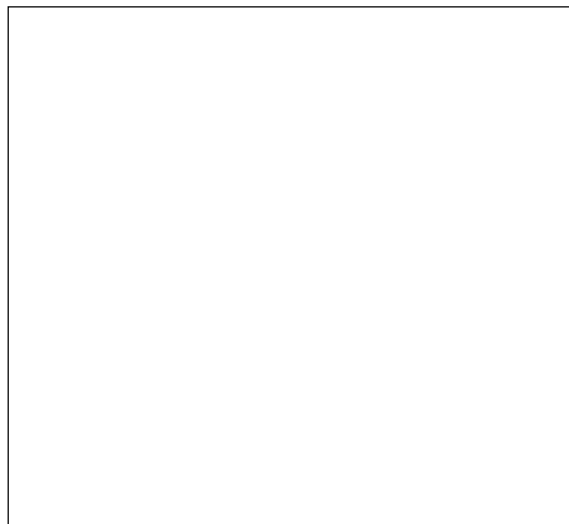
Efficiency: 100%

Upward Ratio: 1%

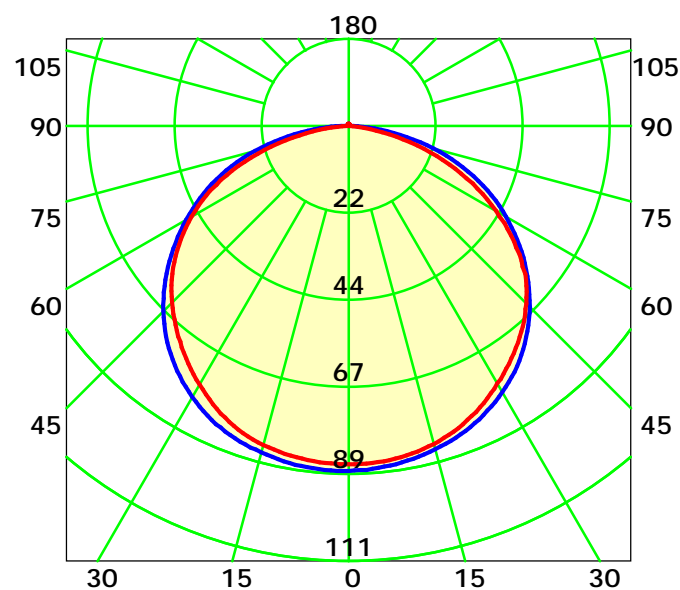
Central Intensity: 88.58 cd

Pos of Max. Intensity: H180 V2

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 123.4° 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

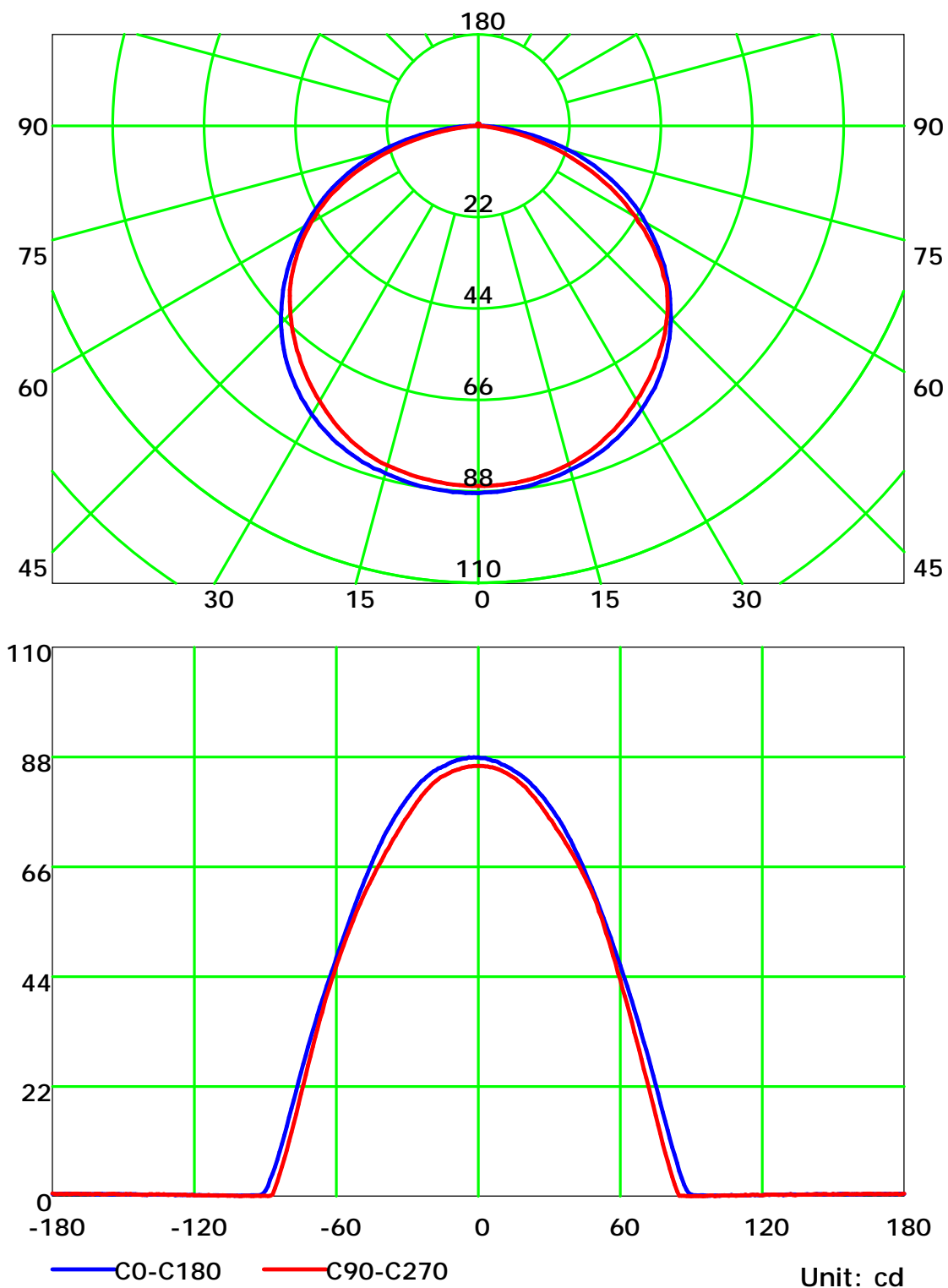
Distance: 9.028 m

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

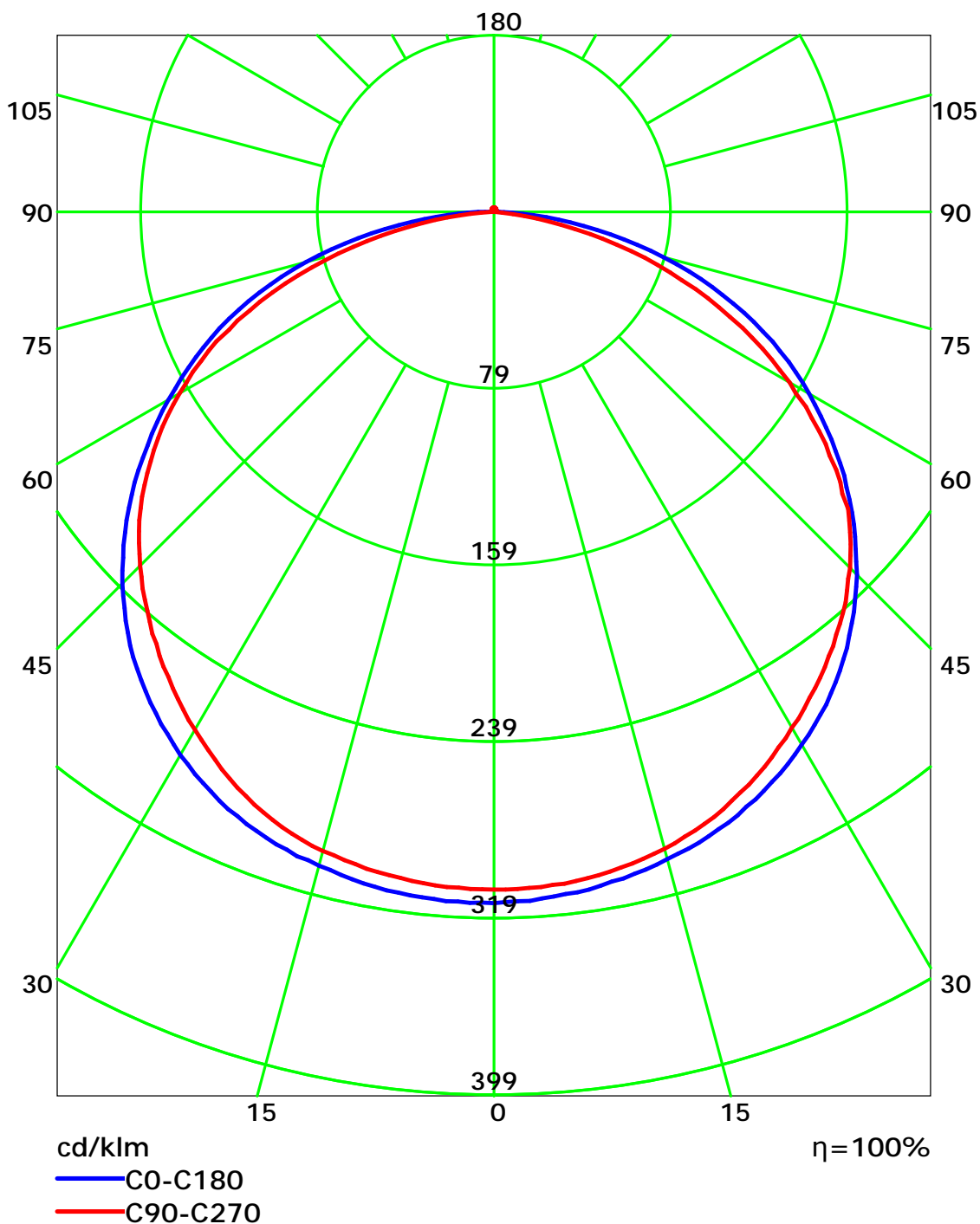
Test Device: GPM-1800B

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:



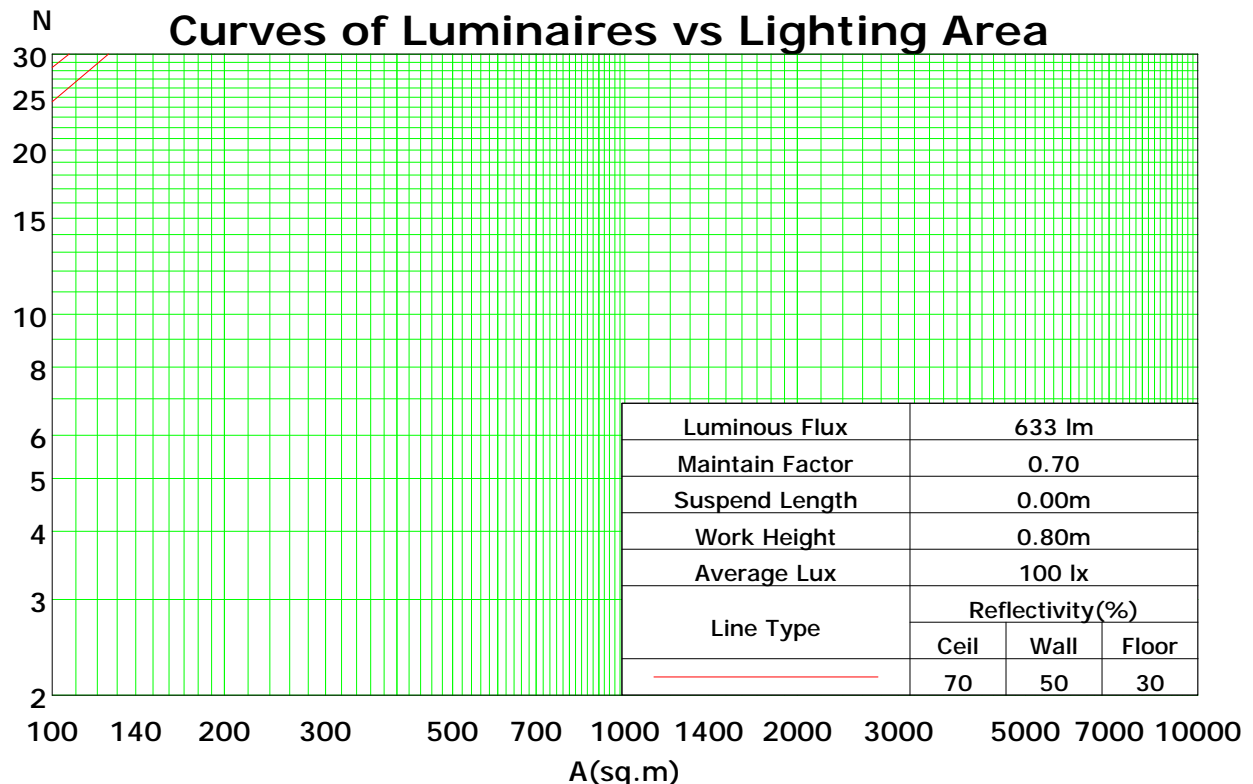
Coefficients Of Utilization - Zonal Cavity Method

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	108	103	98	94	105	101	96	93	96	93	90	92	89	87	88	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	69	67
3	89	78	69	62	86	76	68	62	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	52	45	72	60	51	44	57	50	44	55	49	43	53	47	43	40
6	68	55	45	39	66	54	45	39	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	61	49	40	34	47	39	34	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	35	30	40	34	29	27
9	55	41	33	27	53	41	32	27	39	32	27	38	31	27	37	31	26	25
10	51	38	30	24	50	37	30	24	36	29	24	35	29	24	34	28	24	22

Spacing Criteria (0-180): 1.34

Spacing Criteria (90-270): 1.31

Spacing Criteria (Diagonal): 1.44



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

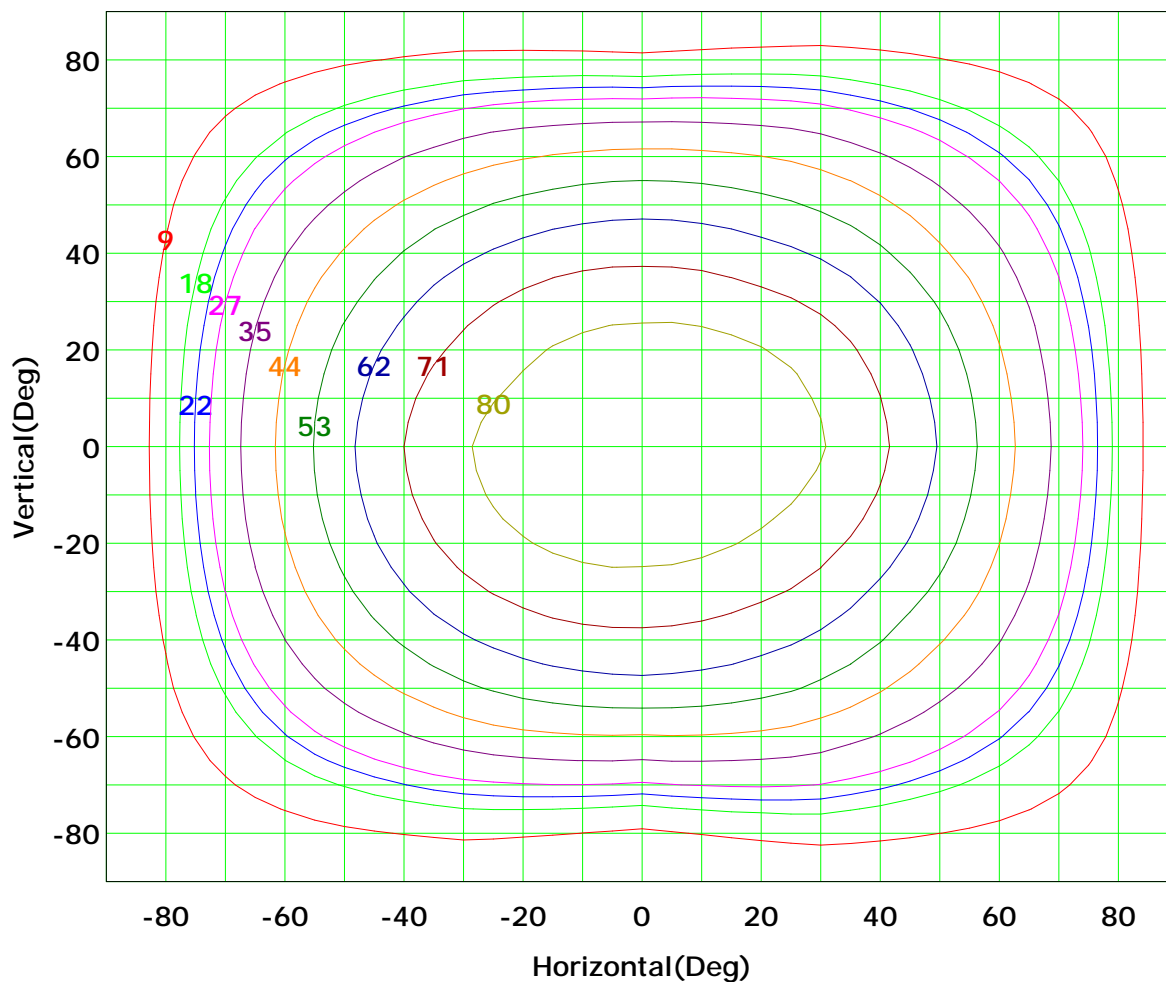
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Isocandela (rectangle)



I_{max} (100%): 89 cd

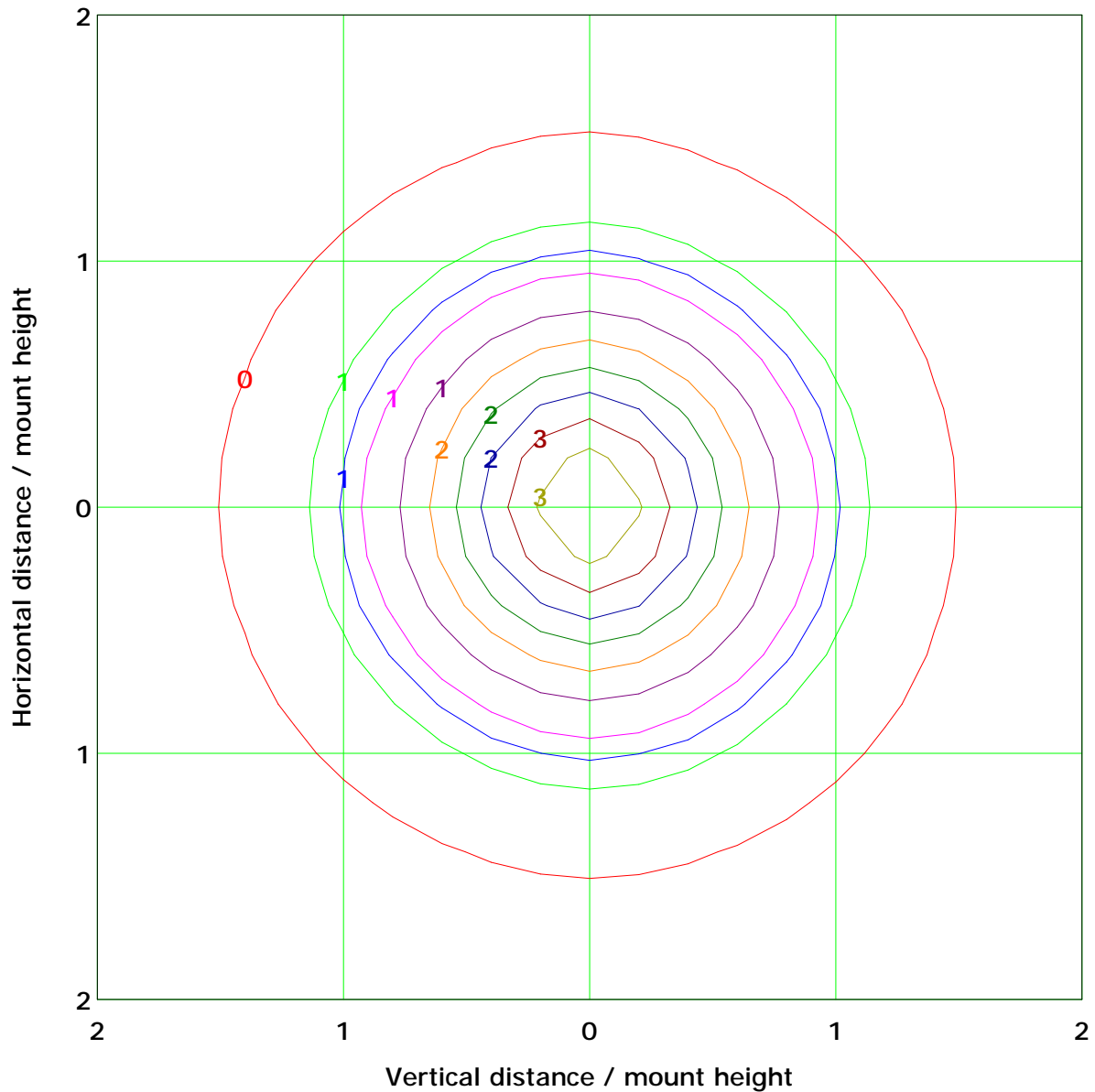
(10%):	9 cd	(20%):	18 cd
(25%):	22 cd	(30%):	27 cd
(40%):	35 cd	(50%):	44 cd
(60%):	53 cd	(70%):	62 cd
(80%):	71 cd	(90%):	80 cd

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%): 3.5 lx

(10%): 0.4 lx	(20%): 0.7 lx
(25%): 0.9 lx	(30%): 1.1 lx
(40%): 1.4 lx	(50%): 1.8 lx
(60%): 2.1 lx	(70%): 2.5 lx
(80%): 2.8 lx	(90%): 3.2 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%

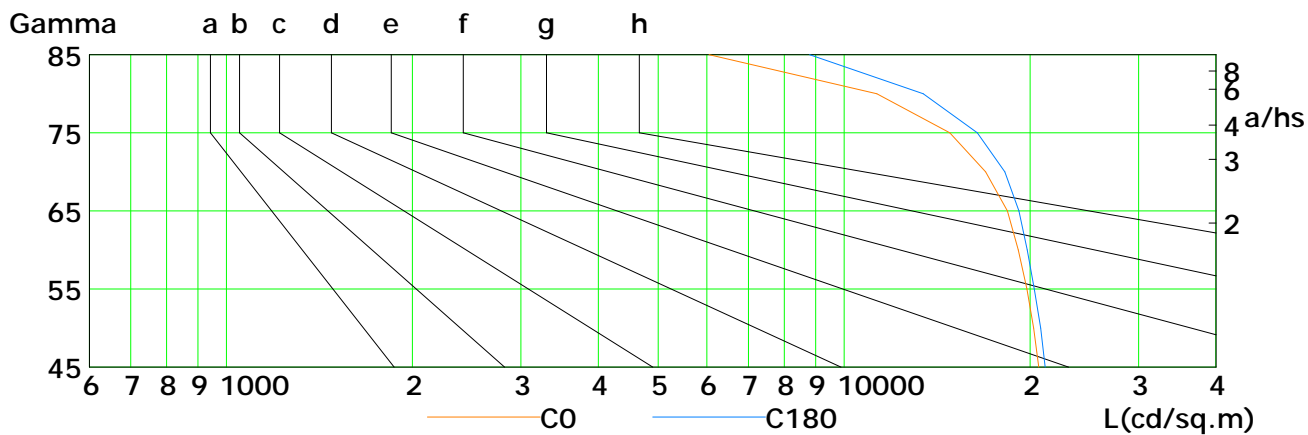
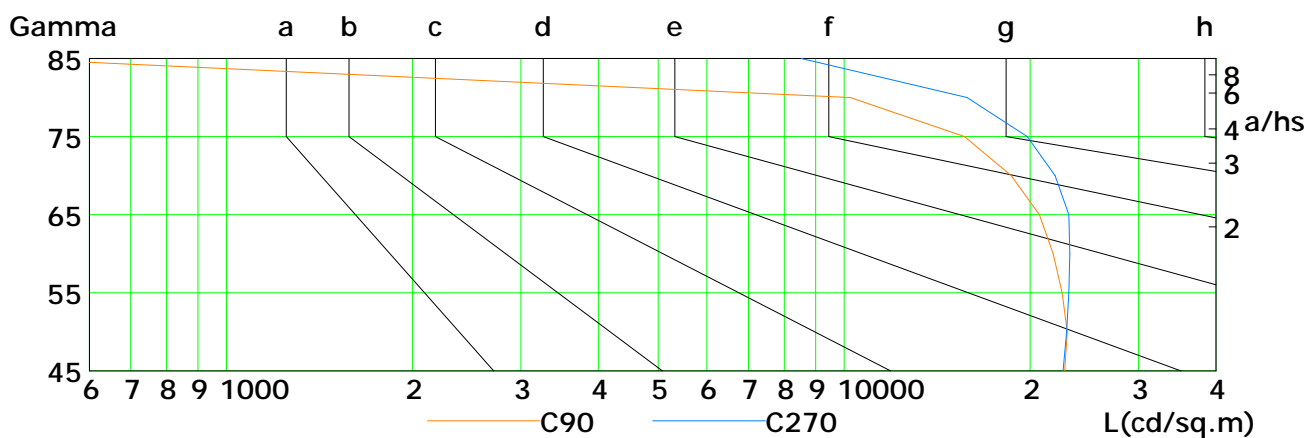
Inspector:



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	20673	20283	19772	19157	18385	16948	14833	11306	6047
C90	22776	22985	22548	21804	20710	18661	15666	10235	449
C180	21166	20818	20323	19803	19182	18222	16434	13429	8799
C270	22628	22927	23122	23200	23131	21954	19808	15816	8525

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:



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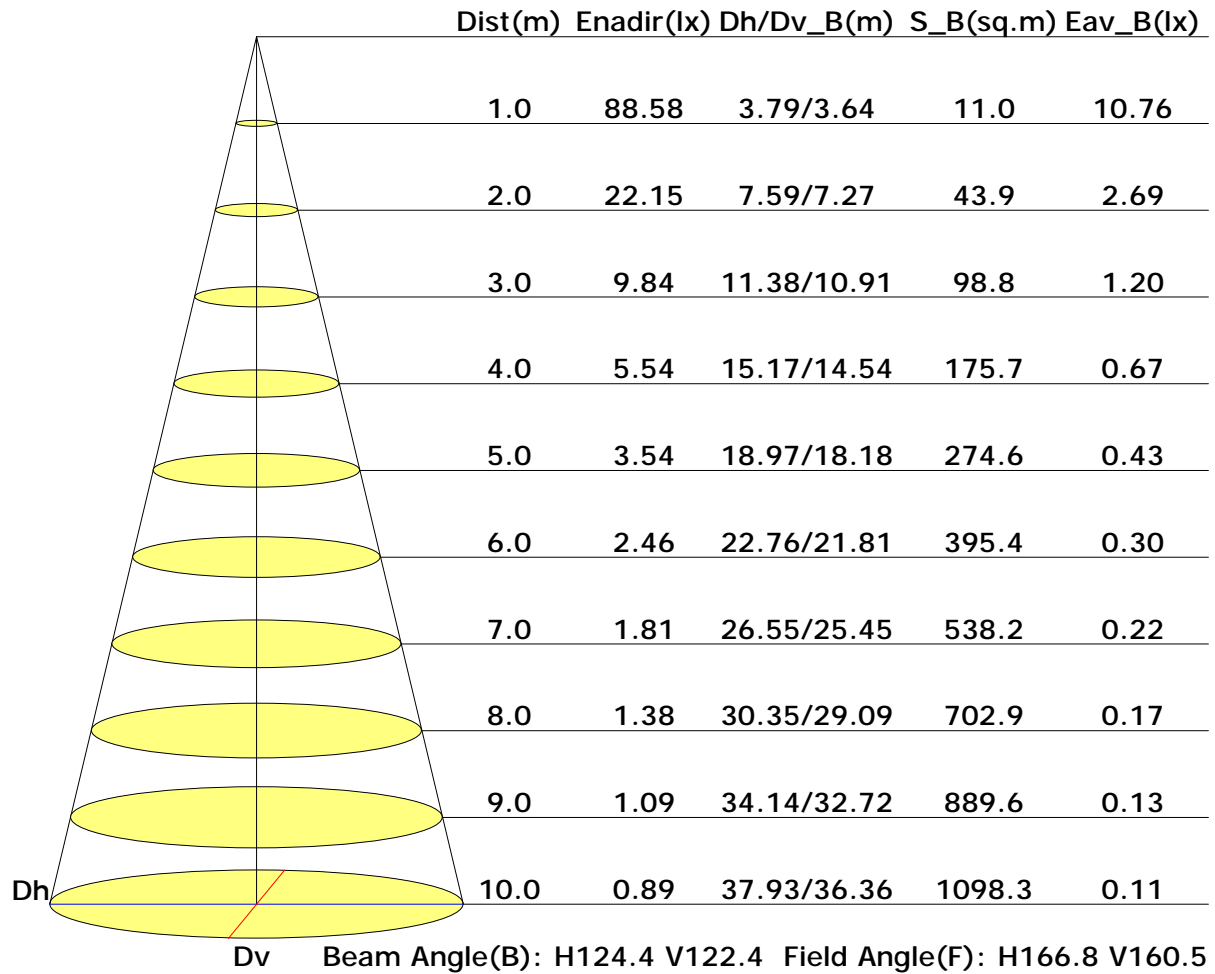
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Illuminance at a Distance



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

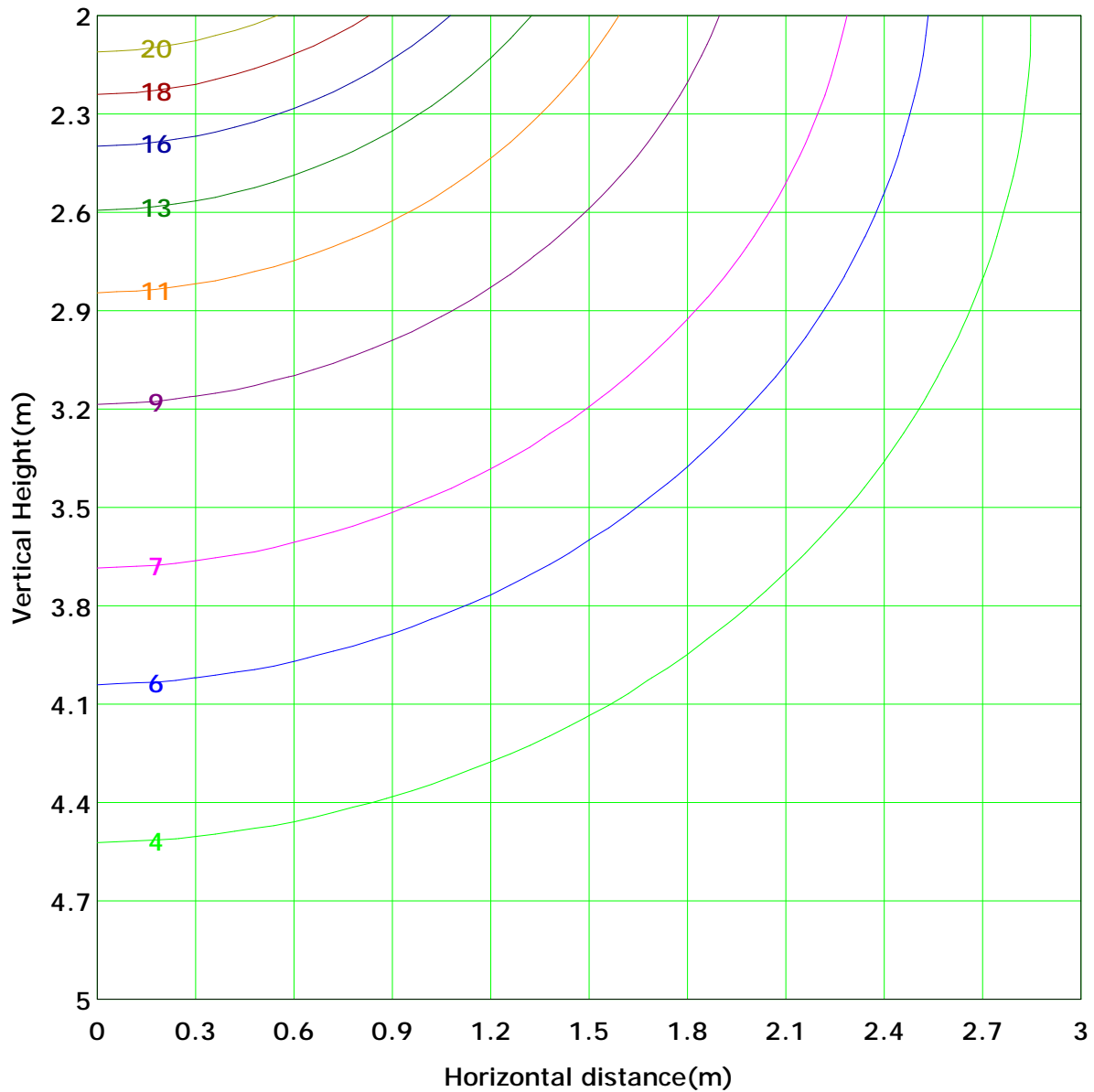
Distance: 9.028 m

Humidity: 60%

Inspector:



Vertical IsoLux Plot



Lowest(m): 2.0m	Highest(m): 5.0m	Max Lux: 22.1 lx
(10%): 2.2 lx	(20%): 4.4 lx	
(25%): 5.5 lx	(30%): 6.6 lx	
(40%): 8.9 lx	(50%): 11.1 lx	
(60%): 13.3 lx	(70%): 15.5 lx	
(80%): 17.7 lx	(90%): 19.9 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:



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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	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.2
	-80	0.0	0.0	0.1	0.2	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.1	0.0	0.0	2.2	2.1
	-70	0.0	0.1	0.2	0.4	0.6	0.8	1.0	1.1	1.2	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.0	0.0	0.0	5.9	5.7
	-60	0.0	0.1	0.3	0.5	0.8	1.1	1.3	1.5	1.6	1.6	1.5	1.3	1.2	1.1	1.0	0.9	0.0	0.0	0.0	10.7	10.5
	-50	0.0	0.1	0.4	0.7	1.0	1.3	1.6	1.9	1.9	1.9	1.8	1.6	1.5	1.4	1.3	1.2	0.0	0.0	0.0	16.2	16.0
	-40	0.0	0.2	0.4	0.8	1.2	1.5	1.9	2.1	2.2	2.2	2.1	1.9	1.8	1.7	1.6	1.5	0.0	0.0	0.0	21.5	21.4
	-30	0.0	0.2	0.5	0.9	1.3	1.7	2.1	2.3	2.4	2.4	2.3	2.1	2.0	1.9	1.8	1.7	0.0	0.0	0.0	26.0	25.8
	-20	0.0	0.2	0.5	0.9	1.4	1.8	2.2	2.5	2.6	2.6	2.5	2.3	2.2	2.1	2.0	1.9	0.0	0.0	0.0	30.3	30.1
	-10	0.0	0.2	0.5	1.0	1.4	1.9	2.3	2.6	2.6	2.6	2.5	2.4	2.3	2.2	2.1	2.0	0.0	0.0	0.0	28.9	28.7
	0	0.0	0.2	0.5	1.0	1.4	1.9	2.3	2.6	2.6	2.6	2.5	2.4	2.3	2.2	2.1	2.0	0.0	0.0	0.0	30.2	30.0
	10	0.0	0.2	0.5	1.0	1.4	1.9	2.3	2.6	2.6	2.6	2.5	2.4	2.3	2.2	2.1	2.0	0.0	0.0	0.0	28.7	28.5
		20	0.0	0.2	0.5	0.9	1.4	1.8	2.2	2.5	2.6	2.5	2.4	2.3	2.2	2.1	2.0	0.0	0.0	0.0	25.6	25.4
		30	0.0	0.2	0.5	0.8	1.3	1.7	2.0	2.3	2.4	2.3	2.2	2.1	2.0	1.9	1.8	0.0	0.0	0.0	21.2	21.0
		40	0.0	0.2	0.4	0.8	1.1	1.5	1.8	2.1	2.2	2.1	2.0	1.9	1.8	1.7	1.6	0.0	0.0	0.0	15.8	15.7
		50	0.0	0.1	0.4	0.7	1.0	1.3	1.6	1.9	1.9	1.8	1.7	1.6	1.5	1.4	1.3	0.0	0.0	0.0	10.4	10.2
		60	0.0	0.1	0.3	0.5	0.8	1.1	1.3	1.5	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.0	0.0	0.0	5.6	5.4
		70	0.0	0.1	0.2	0.4	0.6	0.8	0.9	1.0	1.1	1.0	0.9	0.9	0.8	0.7	0.6	0.0	0.0	0.0	2.0	1.8
		80	0.0	0.0	0.1	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.0	0.0	0.0	0.2	0.1
		90	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	1.3	0.2
		Flux(E)	0.2	2.1	5.7	10.5	16.0	21.4	25.8	30.1	30.0	28.5	25.4	21.0	15.7	10.2	5.4	1.8	0.1	0.1	278	278

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:



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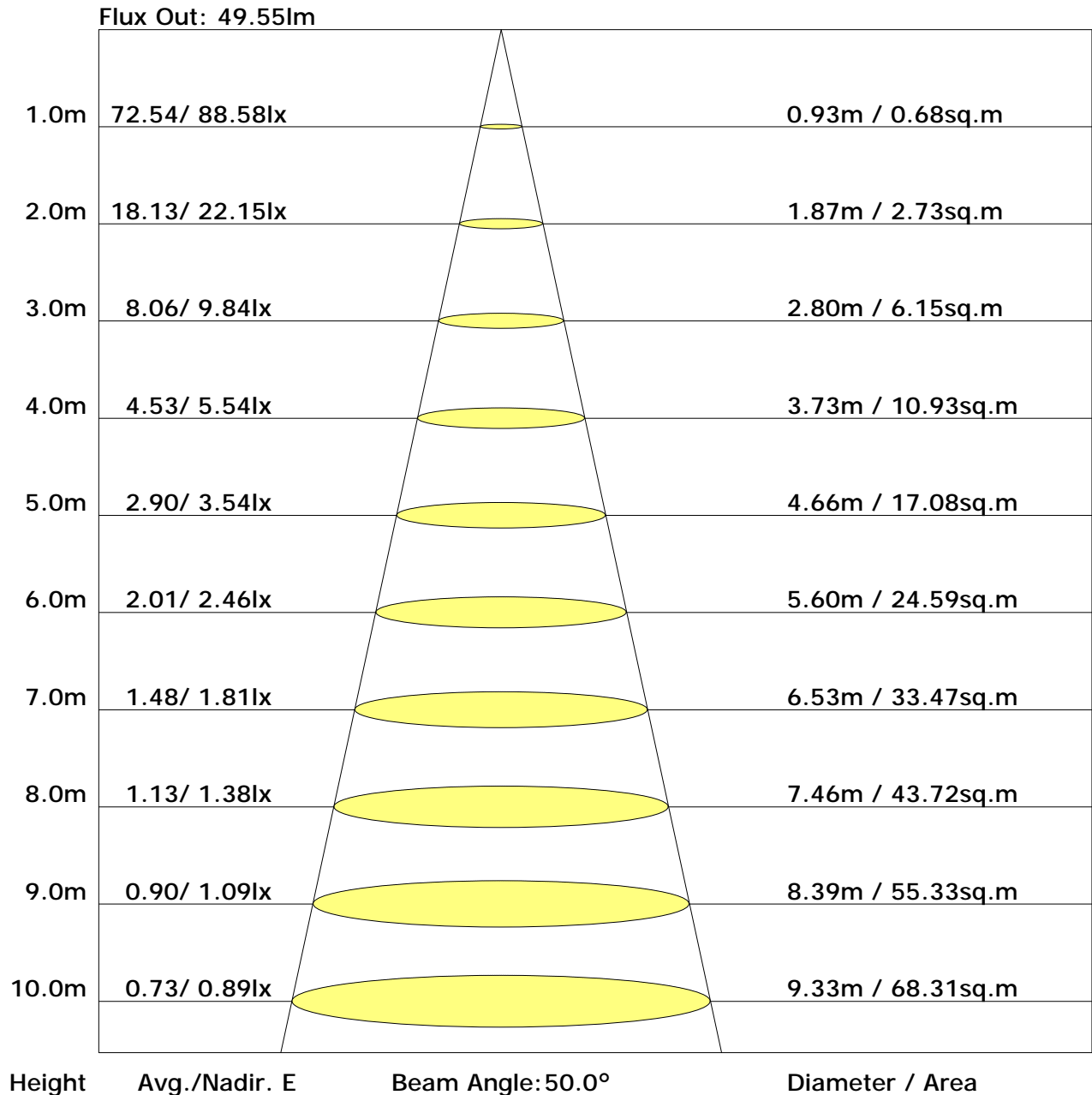
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The Average Illuminance Effective Figure



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:



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	27.4	29.0	27.7	29.4	29.7	26.9	28.6	27.3	28.9	29.2
3H	29.4	30.9	29.8	31.3	31.7	28.5	30.0	28.9	30.4	30.8
4H	30.2	31.7	30.6	32.0	32.4	29.0	30.5	29.4	30.8	31.2
6H	30.8	32.1	31.2	32.5	32.9	29.3	30.6	29.7	31.0	31.4
8H	31.0	32.2	31.4	32.6	33.1	29.3	30.5	29.7	31.0	31.4
12H	31.1	32.3	31.5	32.7	33.1	29.3	30.5	29.7	30.9	31.3
X=4H Y=2H	28.0	29.4	28.4	29.8	30.2	27.6	29.1	28.0	29.4	29.8
3H	30.3	31.5	30.7	31.9	32.3	29.5	30.7	29.9	31.1	31.5
4H	31.2	32.3	31.6	32.7	33.1	30.2	31.3	30.6	31.7	32.1
6H	31.9	32.8	32.3	33.3	33.7	30.5	31.5	31.0	31.9	32.4
8H	32.1	33.0	32.6	33.4	33.9	30.6	31.5	31.0	31.9	32.4
12H	32.2	33.0	32.7	33.5	34.0	30.6	31.4	31.0	31.8	32.3
X=8H Y=4H	31.5	32.4	31.9	32.8	33.3	30.6	31.5	31.0	31.9	32.4
6H	32.2	33.0	32.7	33.5	34.0	31.0	31.8	31.6	32.3	32.8
8H	32.5	33.2	33.0	33.7	34.2	31.2	31.8	31.7	32.4	32.9
12H	32.7	33.3	33.2	33.8	34.4	31.2	31.8	31.7	32.3	32.9
X=12H Y=4H	31.5	32.3	32.0	32.8	33.3	30.6	31.4	31.1	31.9	32.4
6H	32.3	33.0	32.8	33.4	34.0	31.2	31.8	31.7	32.3	32.9
8H	32.6	33.2	33.1	33.7	34.3	31.3	31.9	31.8	32.4	33.0

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 = 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	0.57	0.66	0.73	0.79	0.86	0.91	0.95	1.00	1.03
	0.30		0.49	0.58	0.66	0.72	0.80	0.85	0.90	0.95	0.99
	0.20		0.44	0.52	0.60	0.66	0.75	0.81	0.85	0.91	0.96
0.50	0.50	0.20	0.56	0.64	0.71	0.76	0.83	0.88	0.91	0.95	0.98
	0.30		0.49	0.57	0.64	0.70	0.78	0.83	0.87	0.92	0.95
	0.20		0.43	0.51	0.59	0.65	0.73	0.79	0.83	0.89	0.93
0.30	0.50	0.20	0.54	0.62	0.69	0.73	0.80	0.84	0.87	0.92	0.94
	0.30		0.48	0.55	0.63	0.68	0.75	0.80	0.84	0.89	0.92
	0.20		0.43	0.51	0.58	0.64	0.71	0.77	0.81	0.86	0.90
0.00	0.00	0.00	0.41	0.48	0.55	0.61	0.68	0.73	0.77	0.81	0.85
<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 = 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	0.99	0.84	0.71	0.62	0.50	0.42	0.36	0.28	0.23	
	0.30		0.82	0.72	0.62	0.55	0.45	0.38	0.33	0.26	0.21	
	0.20		0.71	0.63	0.55	0.50	0.41	0.35	0.31	0.25	0.20	
0.50	0.50	0.20	0.95	0.81	0.68	0.60	0.48	0.43	0.34	0.26	0.21	
	0.30		0.81	0.70	0.60	0.53	0.44	0.37	0.32	0.25	0.21	
	0.20		0.70	0.62	0.54	0.48	0.40	0.34	0.30	0.24	0.20	
0.30	0.50	0.20	0.92	0.78	0.66	0.57	0.46	0.38	0.32	0.25	0.21	
	0.30		0.79	0.69	0.59	0.52	0.42	0.35	0.31	0.24	0.20	
	0.20		0.69	0.61	0.53	0.47	0.39	0.33	0.29	0.23	0.19	
0.00	0.00	0.00	0.59	0.52	0.44	0.39	0.32	0.27	0.23	0.18	0.15	
<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 = 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	0.23
	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	0.19	0.19	0.20	0.20	0.21	0.21	0.22
	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	0.09	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
<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>											