ACOLYTE
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Report No.: 01 **Test Time: 2016/10/14 17:11**

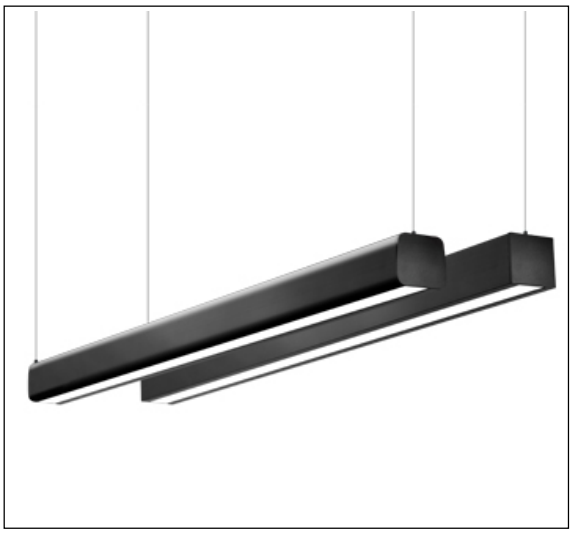
Luminaire Property

Luminaire Manufacturer:
Luminaire Category: Synthesis LED Linear
Luminaire Description: Synthesis Indirect LO 28CM 135 mA 3500K 120degree
Luminous Length (mm): 304 **Luminous Width (mm): 50**
Luminous Height (mm): 2 **Voltage: 219.8 V**
Current: 0.024 A **Power: 4.53 W**
Power Factor: 0.848

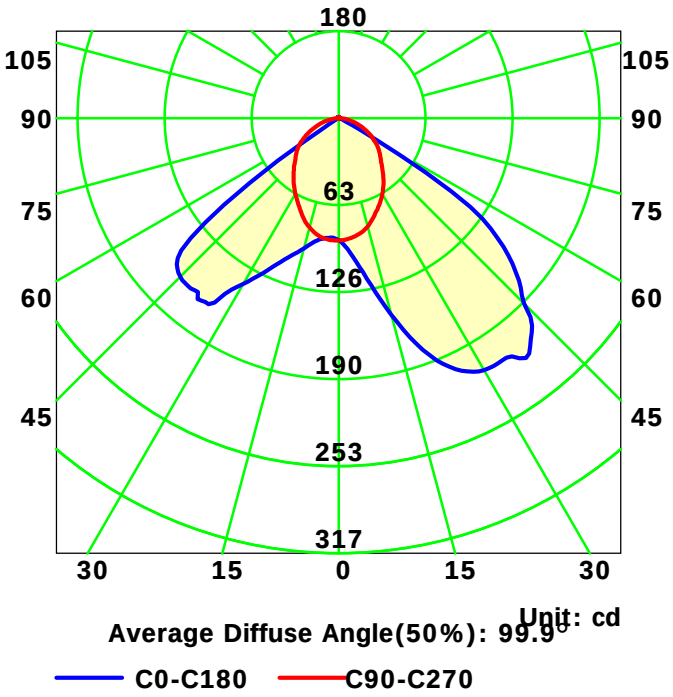
Photometric Results

CIE Class: Direct **Total Rated Lamp Lumens: 410.7 lm**
Measurement Flux: 410.7 lm **Efficiency: 100%**
Downward Ratio: 99% **Upward Ratio: 1%**
Horizontal Diffuse Angle(50%): H110.1
Vertical Diffuse Angle(50%): V89.8
Luminaire Efficacy Rating (LER): 91 **Central Intensity: 88.98 cd**
Max. Intensity: 222.03 cd **Pos of Max. Intensity: H0 V38**

Picture Of Luminaire



Luminous Intensity Distribution Curve



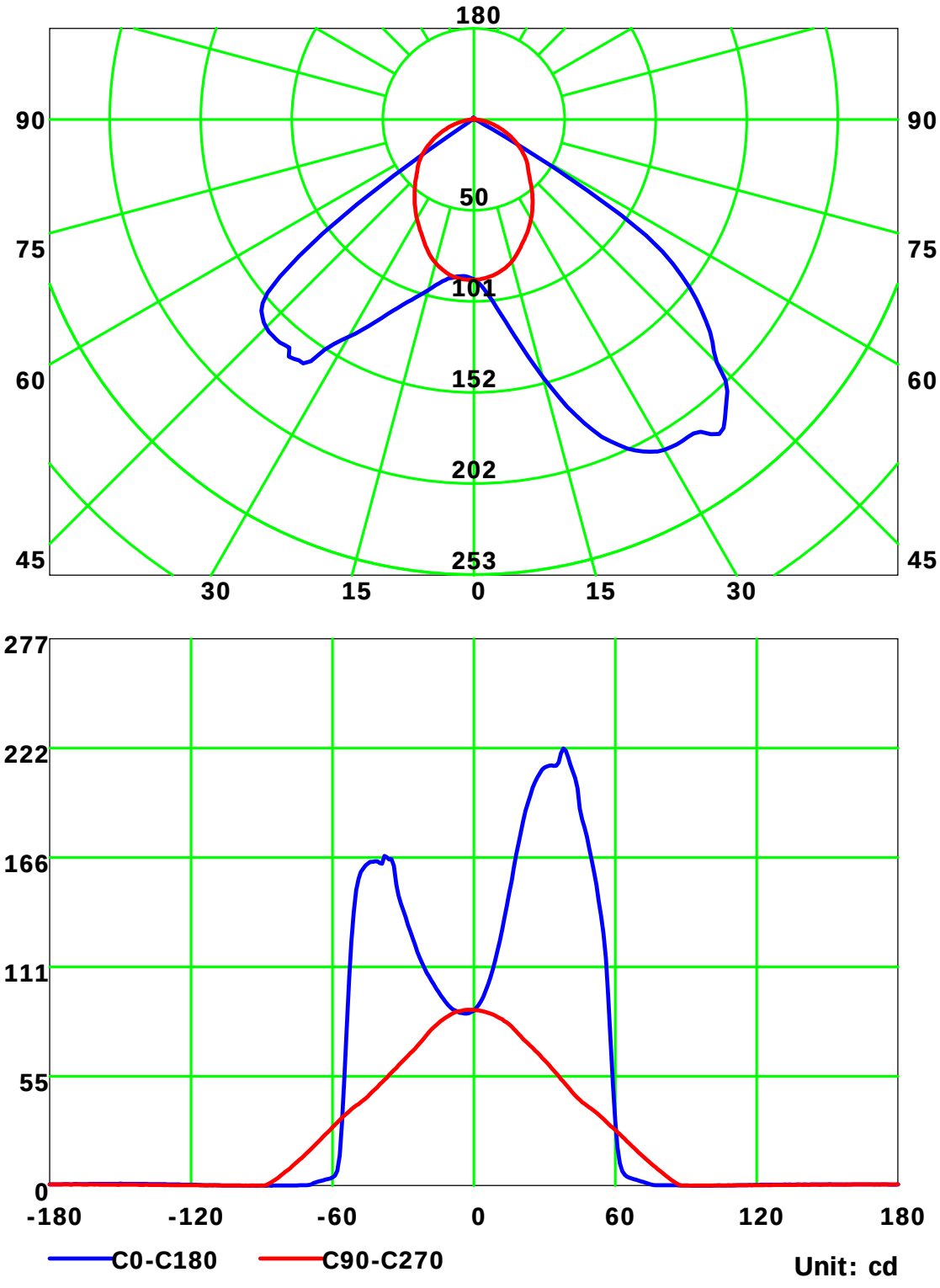
Unit: cd

Average Diffuse Angle(50%): 99.9°

C0-C180 **C90-C270**

C Plane (°):0.0-360.0: 30.0 **Gamma Plane (°):0.0-180.0:1.0**
Test Lab: ACOLYTE **Test Device: GPM-1800B**
Test Type: TYPE C **Distance: 9.028 m**
Temperature: 25℃ **Humidity: 60%**
Operator: leo **Inspector:**

Luminous Intensity Distribution Curve



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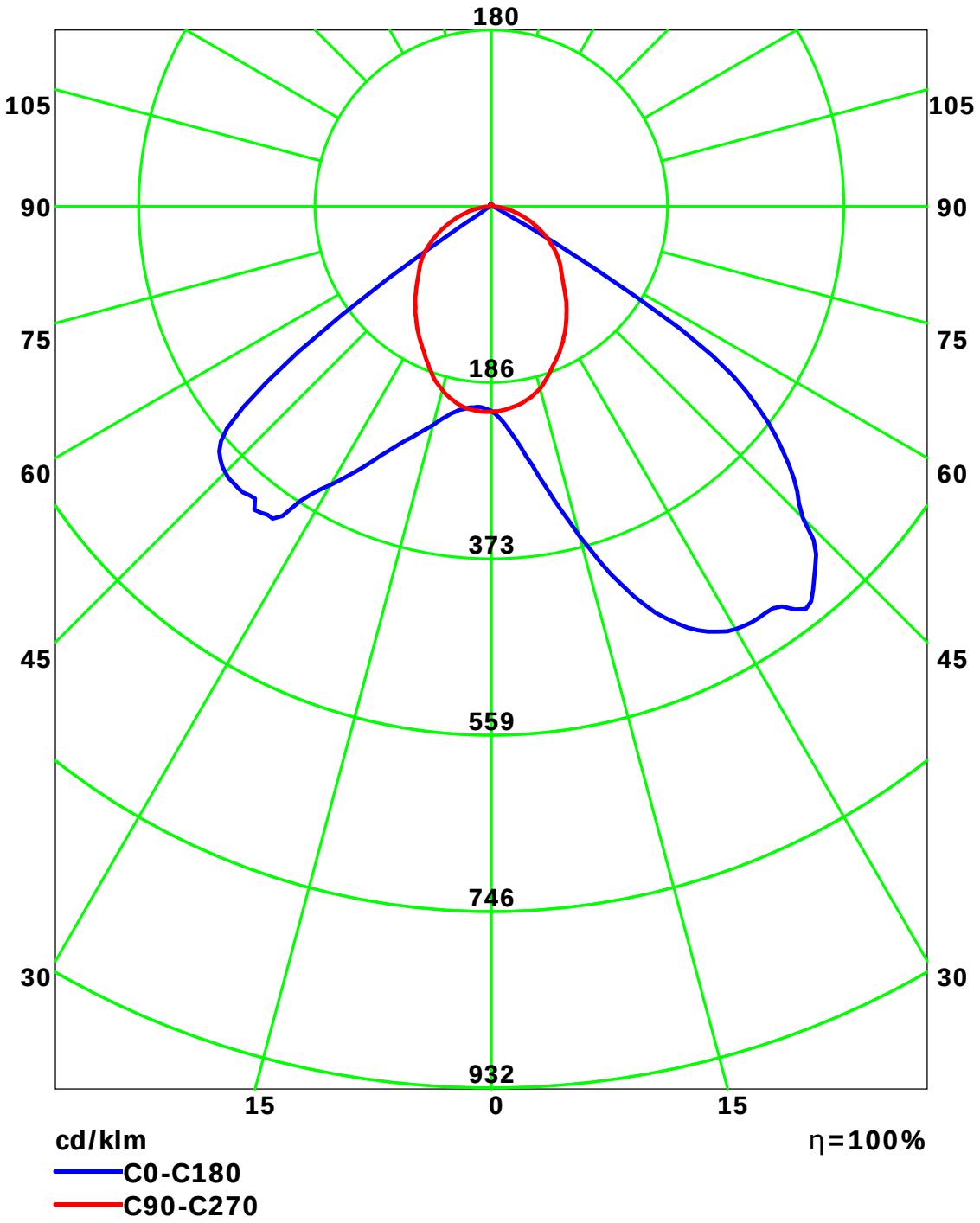
Test Type: TYPE C
Temperature: 25℃
Operator: leo

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
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Operator: leo

Gamma Plane (°):0.0-180.0:1.0
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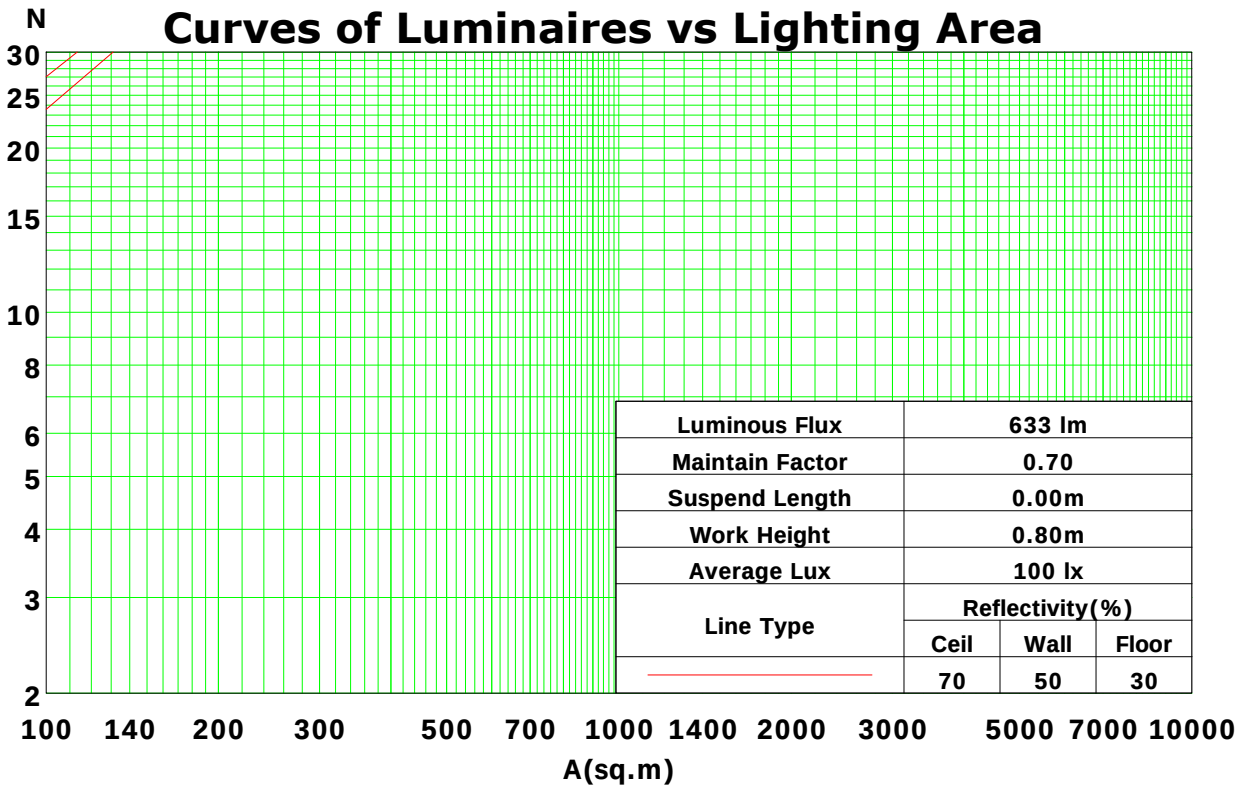
Distance: 9.028 m
Humidity: 60%
Inspector:

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	110	106	102	98	107	103	100	97	99	96	93	95	93	90	91	89	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	91	81	73	67	89	80	72	67	77	70	65	74	68	64	71	67	63	61
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

Spacing Criteria (0-180): 2.33
Spacing Criteria (90-270): 1.08
Spacing Criteria (Diagonal): 2.01

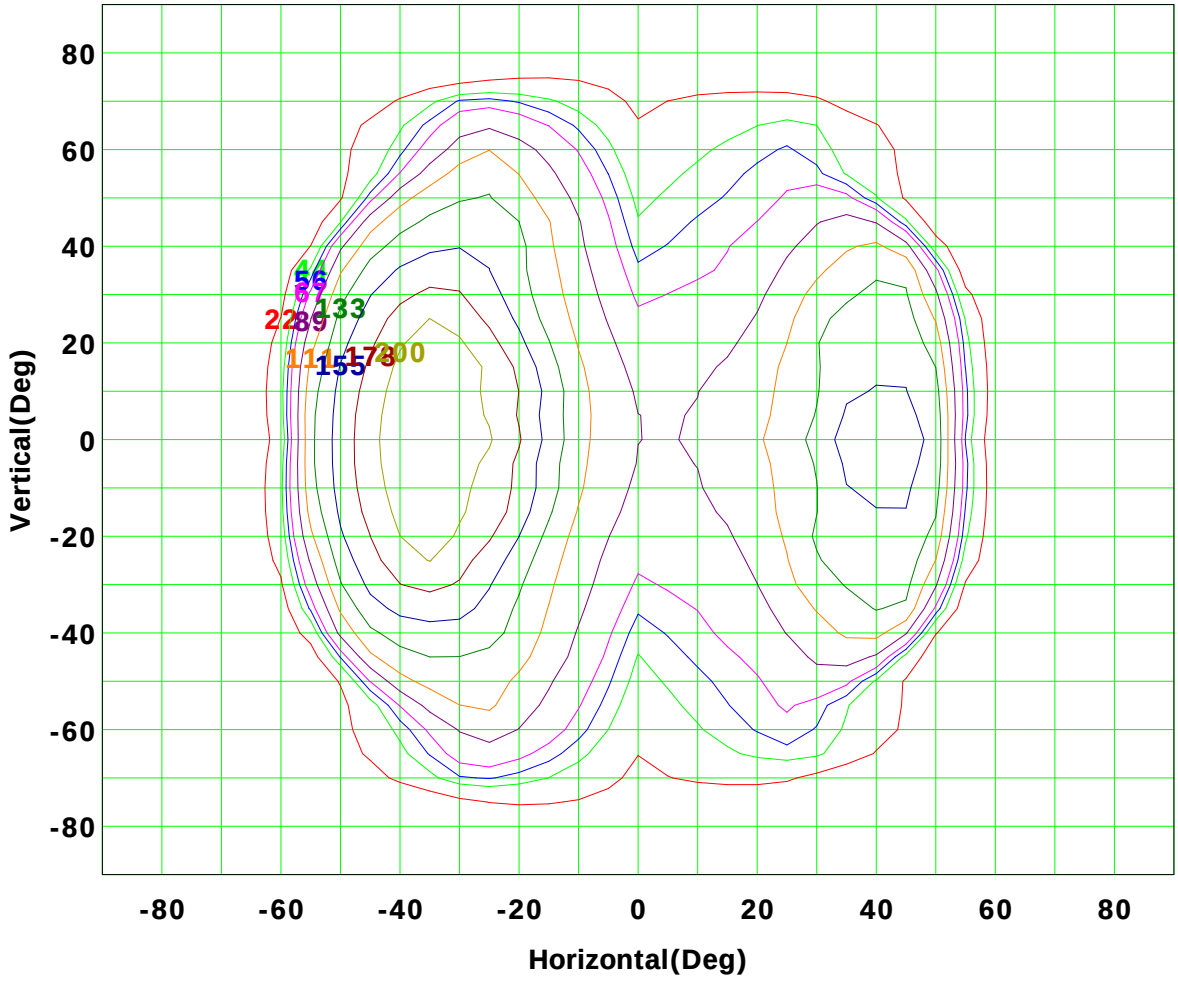
Curves of Luminaires vs Lighting Area



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

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

Isocandela (rectangle)



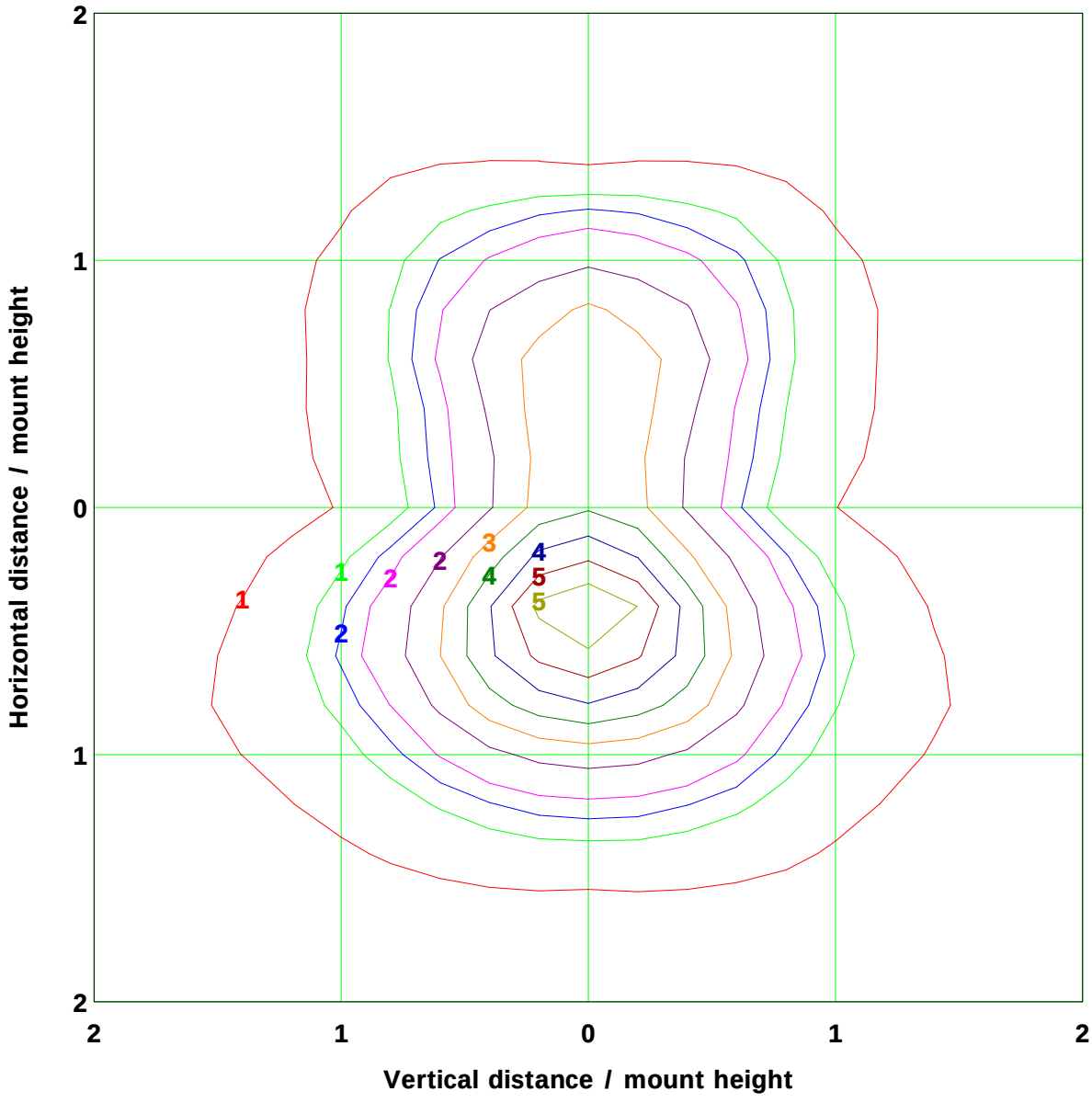
Imax (100%): 222 cd

(10%):	22 cd	(20%):	44 cd
(25%):	56 cd	(30%):	67 cd
(40%):	89 cd	(50%):	111 cd
(60%):	133 cd	(70%):	155 cd
(80%):	178 cd	(90%):	200 cd

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

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%): 6.1 lx

(10%): 0.6 lx	(20%): 1.2 lx
(25%): 1.5 lx	(30%): 1.8 lx
(40%): 2.4 lx	(50%): 3.0 lx
(60%): 3.6 lx	(70%): 4.3 lx
(80%): 4.9 lx	(90%): 5.5 lx

C Plane (°):0.0-360.0: 30.0
Test Lab: ACOLYTE
Test Type: TYPE C
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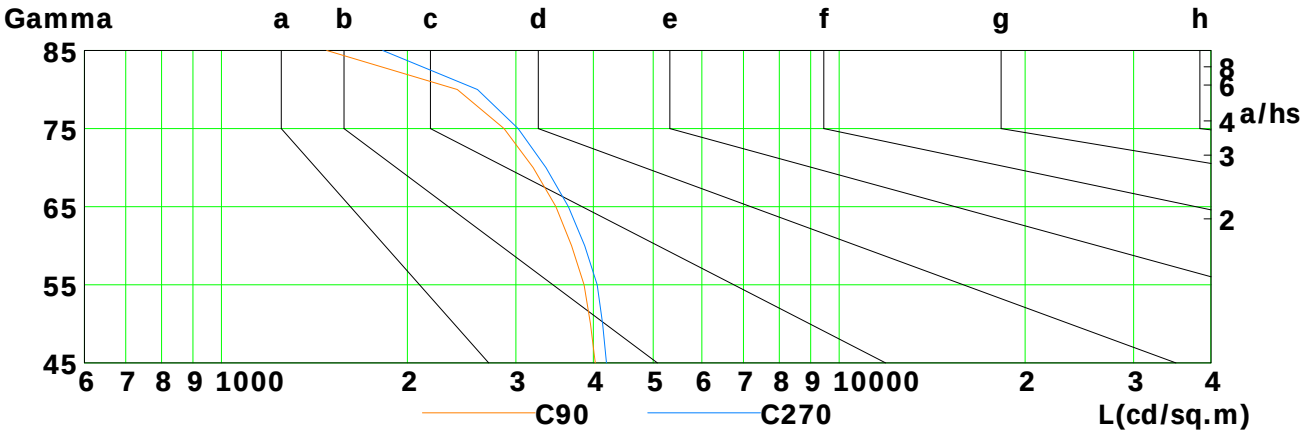
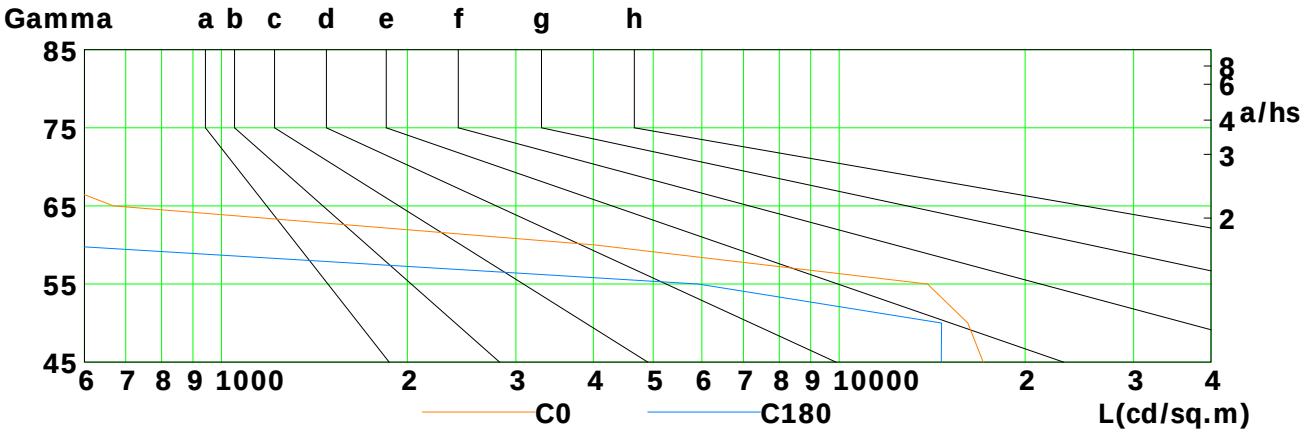
Operator: leo

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



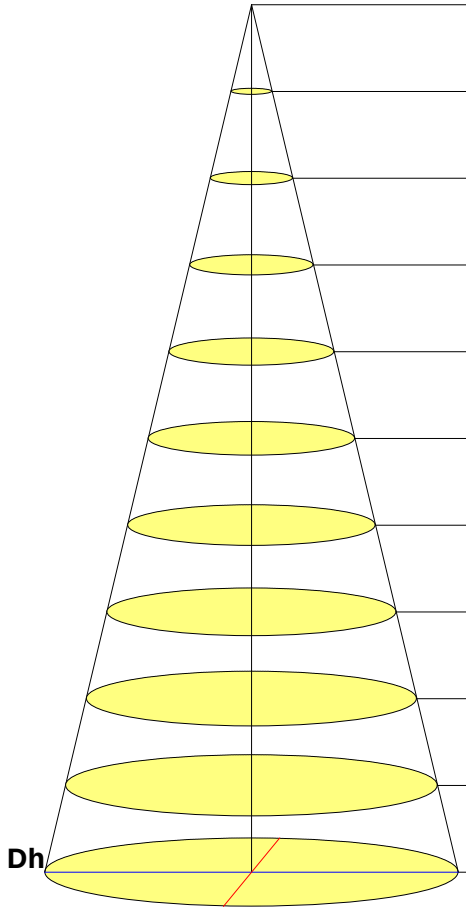


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	17126	16165	13906	4024	670	461	179	114	150
C90	4033	3960	3867	3690	3480	3197	2868	2411	1481
C180	14638	14663	5911	534	356	85	60	80	78
C270	4202	4143	4061	3874	3647	3354	3024	2597	1825

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

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

Illuminance at a Distance



Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
1.0	88.98	2.86/1.99	11.7	15.25
2.0	22.25	5.73/3.98	47.0	3.81
3.0	9.89	8.59/5.98	105.7	1.69
4.0	5.56	11.45/7.97	187.9	0.95
5.0	3.56	14.32/9.96	293.6	0.61
6.0	2.47	17.18/11.95	422.8	0.42
7.0	1.82	20.04/13.94	575.4	0.31
8.0	1.39	22.90/15.94	751.6	0.24
9.0	1.10	25.77/17.93	951.2	0.19
10.0	0.89	28.63/19.92	1174.3	0.15

Beam Angle(B): H110.1 V89.8 Field Angle(F): H117.7 V155.7

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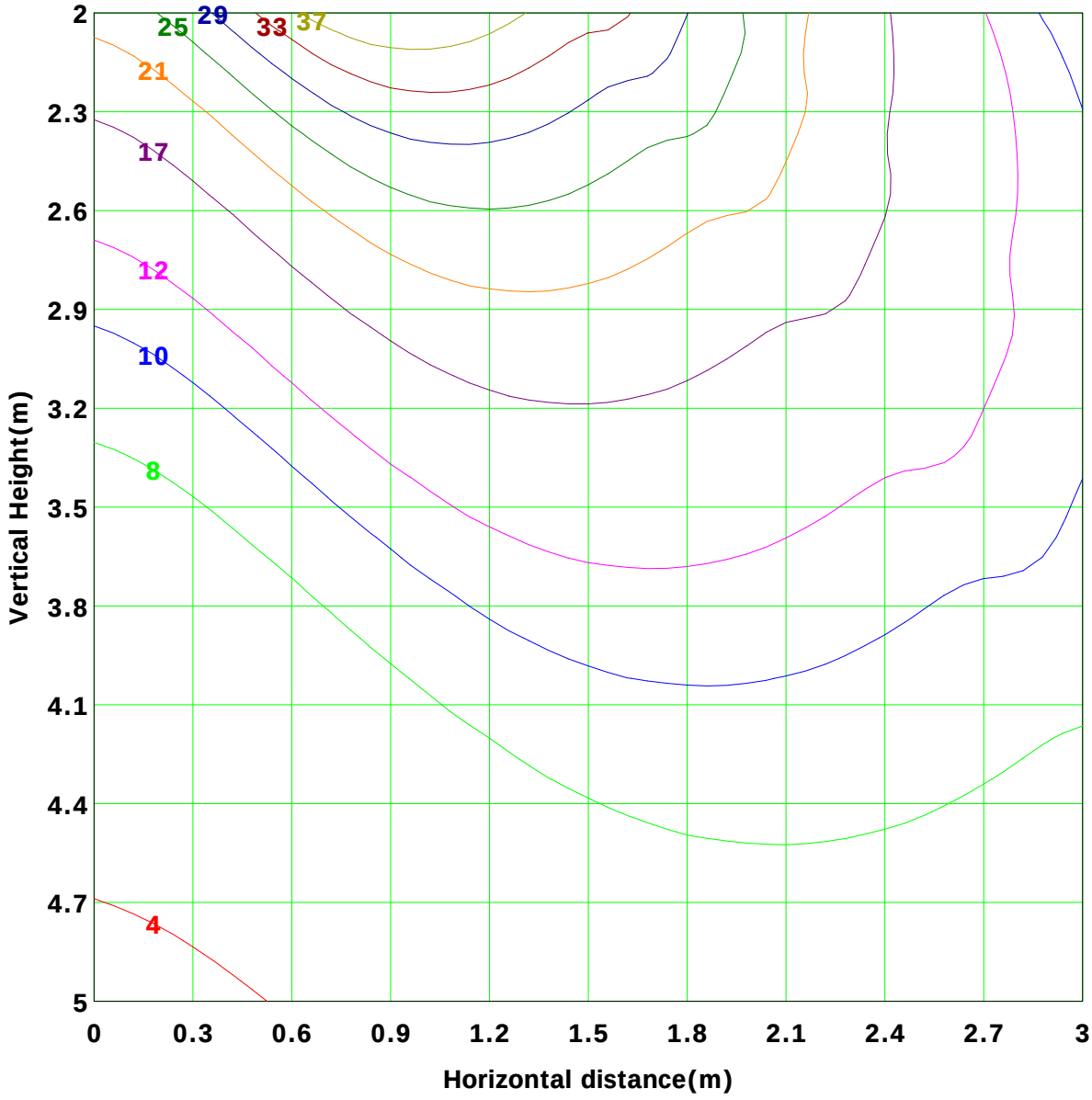
Test Type: TYPE C
Temperature: 25℃
Operator: leo

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: 41.4 lx

(10%): 4.1 lx	**(20%): 8.3 lx**
(25%): 10.4 lx	**(30%): 12.4 lx**
(40%): 16.6 lx	**(50%): 20.7 lx**
(60%): 24.9 lx	**(70%): 29.0 lx**
(80%): 33.1 lx	**(90%): 37.3 lx**

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Operator: leo

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

Area Flux Table

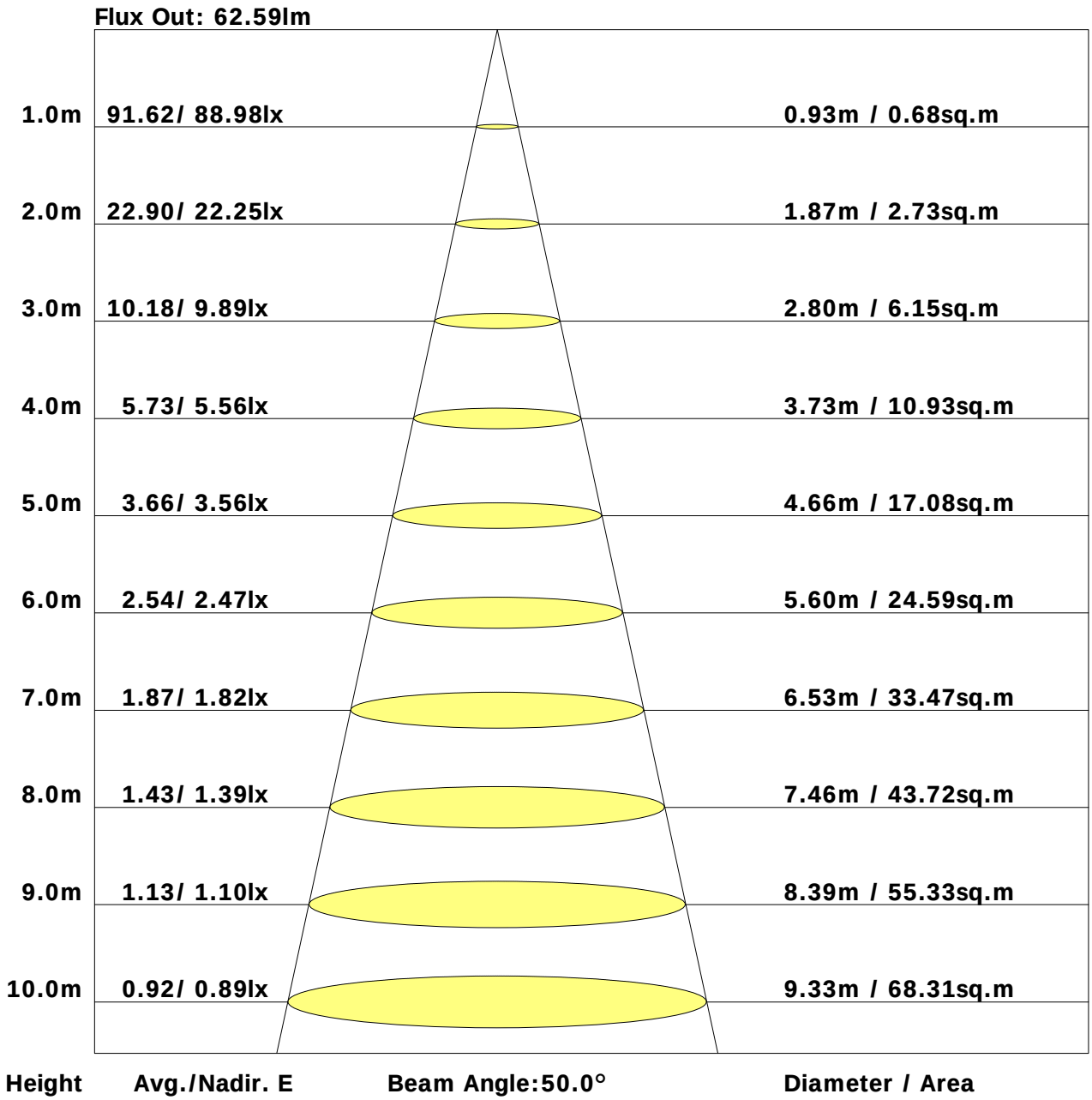
Unit: lm

Vertical plane \ Horizontal plane	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	Flux(T)	Flux(E)
-90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
-80	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.4	0.5	0.7	0.6	0.3	0.1	0.0	0.0	0.0	0.0	3.3	1.7
-70	0.0	0.0	0.0	0.0	0.3	0.8	1.3	1.2	0.9	1.2	1.9	2.3	1.5	0.6	0.1	0.0	0.0	0.0	11.9	11.3
-60	0.0	0.0	0.0	0.1	0.4	1.2	1.7	1.5	1.3	1.7	2.7	3.3	2.4	0.9	0.1	0.0	0.0	0.0	17.4	16.9
-50	0.0	0.0	0.0	0.1	1.1	2.3	2.1	1.8	1.6	2.0	3.3	3.9	3.4	2.0	0.3	0.0	0.0	0.0	23.9	23.6
-40	0.0	0.0	0.0	0.4	2.5	3.0	2.6	2.0	1.9	2.3	3.5	4.3	4.1	3.0	0.9	0.1	0.0	0.0	30.4	30.2
-30	0.0	0.0	0.0	0.9	3.0	3.4	3.0	2.3	2.2	2.6	3.7	4.8	4.9	3.5	1.5	0.1	0.0	0.0	35.9	35.7
-20	0.0	0.0	0.0	1.1	3.2	3.6	3.2	2.7	2.5	2.9	4.2	5.3	5.2	3.9	1.9	0.1	0.0	0.0	40.0	39.8
-10	0.0	0.0	0.0	1.2	3.4	3.8	3.3	2.8	2.7	3.1	4.3	5.4	5.3	4.1	2.1	0.1	0.0	0.0	41.7	41.5
0	0.0	0.0	0.0	1.2	3.4	3.8	3.3	2.8	2.6	3.0	4.2	5.4	5.3	4.1	2.1	0.1	0.0	0.0	41.5	41.3
10	0.0	0.0	0.0	1.1	3.3	3.7	3.2	2.7	2.5	2.8	4.0	5.2	5.1	4.0	1.9	0.2	0.0	0.0	39.8	39.6
20	0.0	0.0	0.0	0.8	3.0	3.6	3.1	2.4	2.2	2.6	3.5	4.6	4.9	3.6	1.6	0.1	0.0	0.0	36.1	35.9
30	0.0	0.0	0.0	0.3	2.5	3.1	2.7	2.1	1.9	2.3	3.2	4.1	4.1	3.1	1.1	0.1	0.0	0.0	30.5	30.3
40	0.0	0.0	0.0	0.1	1.0	2.3	2.2	1.9	1.5	1.9	2.9	3.5	3.3	2.2	0.4	0.0	0.0	0.0	23.3	23.0
50	0.0	0.0	0.0	0.1	0.4	1.2	1.8	1.6	1.2	1.5	2.4	3.0	2.3	0.9	0.1	0.0	0.0	0.0	16.8	16.4
60	0.0	0.0	0.0	0.0	0.2	0.8	1.3	1.2	0.9	1.1	1.8	2.1	1.4	0.5	0.1	0.0	0.0	0.0	11.4	10.8
70	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.5	0.7	0.7	0.4	0.1	0.0	0.0	0.0	0.0	3.2	1.6
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Flux(T)	0.0	0.0	0.3	7.4	27.7	36.8	35.0	29.9	26.7	32.2	47.2	58.5	53.9	36.7	14.2	1.0	0.1	0.0	408	
Flux(E)	0.0	0.0	0.0	6.6	26.8	36.5	34.7	29.4	25.7	31.4	46.8	58.2	53.7	36.2	13.4	0.3	0.0	0.0		400

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

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

The Average Illuminance Effective Figure



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Test Lab: ACOLYTE
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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	25.7	27.3	26.1	27.7	28.0	22.7	24.3	23.1	24.6	25.0
3H	25.6	27.1	26.0	27.4	27.8	24.0	25.5	24.4	25.8	26.2
4H	25.6	26.9	26.0	27.3	27.7	24.2	25.6	24.7	25.9	26.3
6H	25.5	26.7	25.9	27.1	27.5	24.3	25.5	24.7	25.9	26.3
8H	25.5	26.7	25.9	27.1	27.5	24.3	25.5	24.7	25.9	26.3
12H	25.4	26.6	25.9	27.0	27.4	24.3	25.4	24.7	25.8	26.2
X=4H Y=2H	26.0	27.4	26.5	27.8	28.1	23.3	24.6	23.7	25.0	25.4
3H	26.0	27.1	26.4	27.5	27.9	25.4	26.5	25.8	26.9	27.4
4H	25.9	26.9	26.4	27.3	27.8	25.8	26.7	26.2	27.2	27.6
6H	25.9	26.7	26.3	27.2	27.6	25.8	26.6	26.3	27.1	27.6
8H	25.8	26.6	26.3	27.1	27.5	25.8	26.6	26.2	27.0	27.5
12H	25.8	26.5	26.3	27.0	27.5	25.8	26.5	26.2	27.0	27.4
X=8H Y=4H	26.2	26.9	26.6	27.4	27.9	25.7	26.5	26.2	27.0	27.5
6H	26.1	26.7	26.6	27.2	27.7	25.7	26.4	26.3	26.9	27.4
8H	26.0	26.6	26.5	27.1	27.6	25.7	26.3	26.2	26.8	27.3
12H	26.0	26.5	26.5	27.0	27.6	25.7	26.2	26.2	26.7	27.3
X=12H Y=4H	26.1	26.8	26.6	27.3	27.8	25.7	26.4	26.2	26.9	27.4
6H	26.0	26.6	26.6	27.1	27.7	25.7	26.3	26.2	26.8	27.3
8H	26.0	26.5	26.5	27.0	27.6	25.7	26.2	26.2	26.7	27.3

Calculate in accordance with CIE 190:2010

C Plane (°):0.0-360.0: 30.0
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Operator: leo

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Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

Utilisation Factor Table(Floor cavity)

Utilisation Factors UF(F)			SHR NOM = 2.00								
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	NA	0.76	0.82	0.87	0.94	0.98	1.01	1.04	1.06
	0.30		NA	0.70	0.76	0.81	0.89	0.94	0.97	1.01	1.04
	0.20		NA	0.65	0.71	0.77	0.85	0.90	0.93	0.98	1.01
0.50	0.50	0.20	NA	0.74	0.80	0.84	0.91	0.95	0.97	1.00	1.02
	0.30		NA	0.69	0.75	0.80	0.87	0.91	0.94	0.98	1.00
	0.20		NA	0.65	0.70	0.76	0.83	0.88	0.91	0.95	0.98
0.30	0.50	0.20	NA	0.73	0.78	0.82	0.88	0.91	0.94	0.96	0.98
	0.30		NA	0.68	0.73	0.78	0.84	0.88	0.91	0.94	0.97
	0.20		NA	0.64	0.70	0.74	0.82	0.86	0.89	0.93	0.95
0.00	0.00	0.00	NA	0.62	0.67	0.72	0.78	0.82	0.85	0.88	0.90

Rating:5W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

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

Utilisation Factor Table(Wall)

Utilisation Factors UF(W)			SHR NOM = 2.00								
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	NA	0.67	0.58	0.49	0.38	0.31	0.26	0.20	0.16
	0.30		NA	0.58	0.50	0.44	0.34	0.28	0.24	0.19	0.16
	0.20		NA	0.50	0.44	0.39	0.31	0.26	0.23	0.18	0.15
0.50	0.50	0.20	NA	0.64	0.55	0.47	0.36	0.33	0.25	0.19	0.15
	0.30		NA	0.56	0.48	0.42	0.33	0.27	0.23	0.18	0.15
	0.20		NA	0.49	0.43	0.38	0.30	0.25	0.22	0.17	0.14
0.30	0.50	0.20	NA	0.62	0.52	0.45	0.34	0.28	0.23	0.18	0.14
	0.30		NA	0.54	0.47	0.40	0.31	0.26	0.22	0.17	0.14
	0.20		NA	0.48	0.42	0.37	0.29	0.24	0.21	0.16	0.13
0.00	0.00	0.00	0.99	0.38	0.32	0.28	0.21	0.17	0.15	0.11	0.09

Rating:5W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

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

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

Utilisation Factor Table(Ceiling cavity)

Utilisation Factors UF(C)			SHR NOM = 2.00								
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	NA	0.17	0.18	0.19	0.20	0.20	0.21	0.21	0.22
	0.30		NA	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.20
	0.20		NA	0.08	0.09	0.10	0.13	0.14	0.15	0.17	0.18
0.50	0.50	0.20	NA	0.16	0.17	0.18	0.19	0.19	0.20	0.21	0.21
	0.30		NA	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.19
	0.20		NA	0.08	0.09	0.10	0.12	0.14	0.15	0.17	0.18
0.30	0.50	0.20	NA	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20
	0.30		NA	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19
	0.20		NA	0.07	0.09	0.10	0.12	0.14	0.15	0.16	0.17
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:5W Photometrically tested without ceiling board.
Multiply UF values by service correction factors
Calculate in accordance with CIBSE Technical Memorandum NO.5 1980

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

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