杭州创惠仪器有限公司
http://www.inventfine.com.cn
86-571-88091262
86-571-88262100

Report No.: Test Time: 2019-07-02 12:16

Luminaire Property

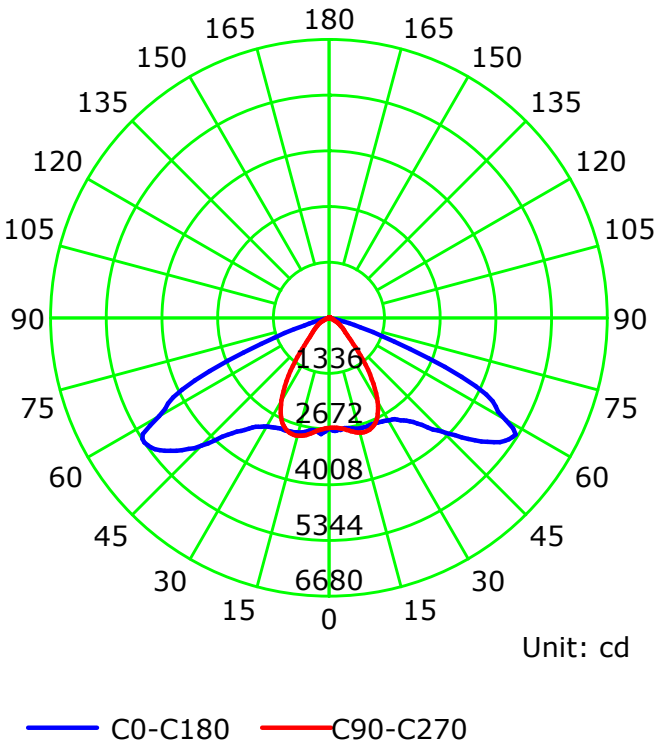
Luminaire Manufacturer:
Luminaire Description: TR19D063 100W Voltage: 229.9 V
Current: 0.440 A Power: 99.81 W
Power Factor: 0.986

Photometric Results

CIE Class: Direct Total Rated Lamp Lumens: 9360.4 lm
Measurement Flux: 9360.4 lm Efficiency: 100%
Downward Ratio: 100% Upward Ratio: 0%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 148.5, 116.7, 141.4, 140.5
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 134.7, 74.6, 120.1, 116.1
Luminaire Efficacy Rating (LER): 93.83 Central Intensity: 2652.29 cd
Max. Intensity: 5344.73 cd Pos of Max. Intensity: H180 V56
S/MH(C0/C180): 2.27 S/MH(C90/C270): 1.23

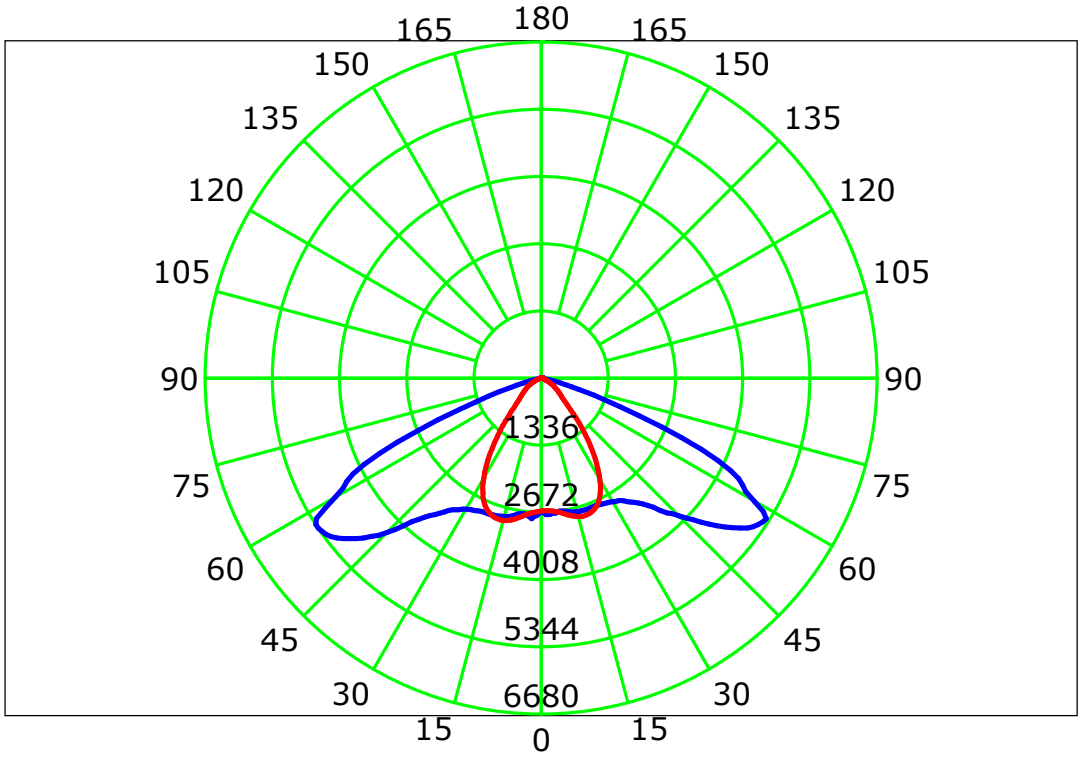
Picture Of Luminaire

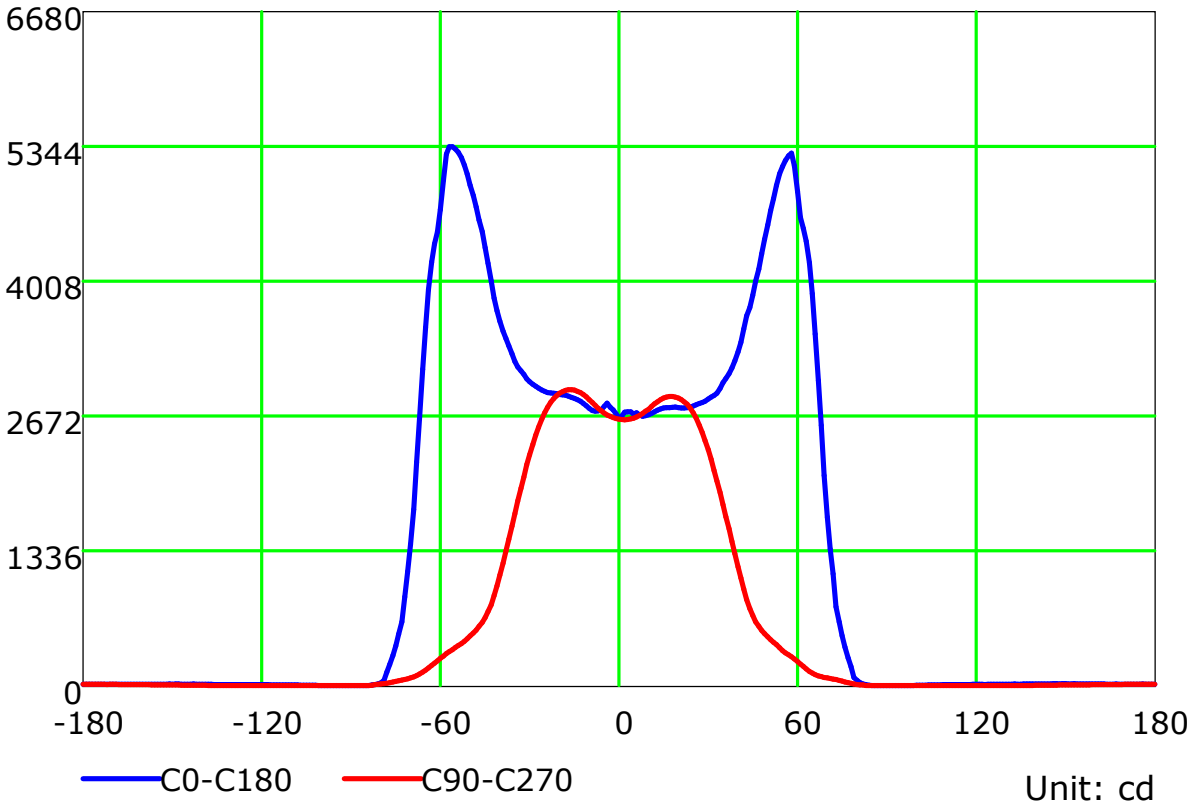
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0 Gamma Plane (°):0.0-180.0:1.0
Test Lab: TRONTOP Test Device: GPM-1600L
Test Type: TYPE C Distance: 7.340 m
Temperature: Humidity:
Operator: Inspector:

Luminous Intensity Distribution Curve





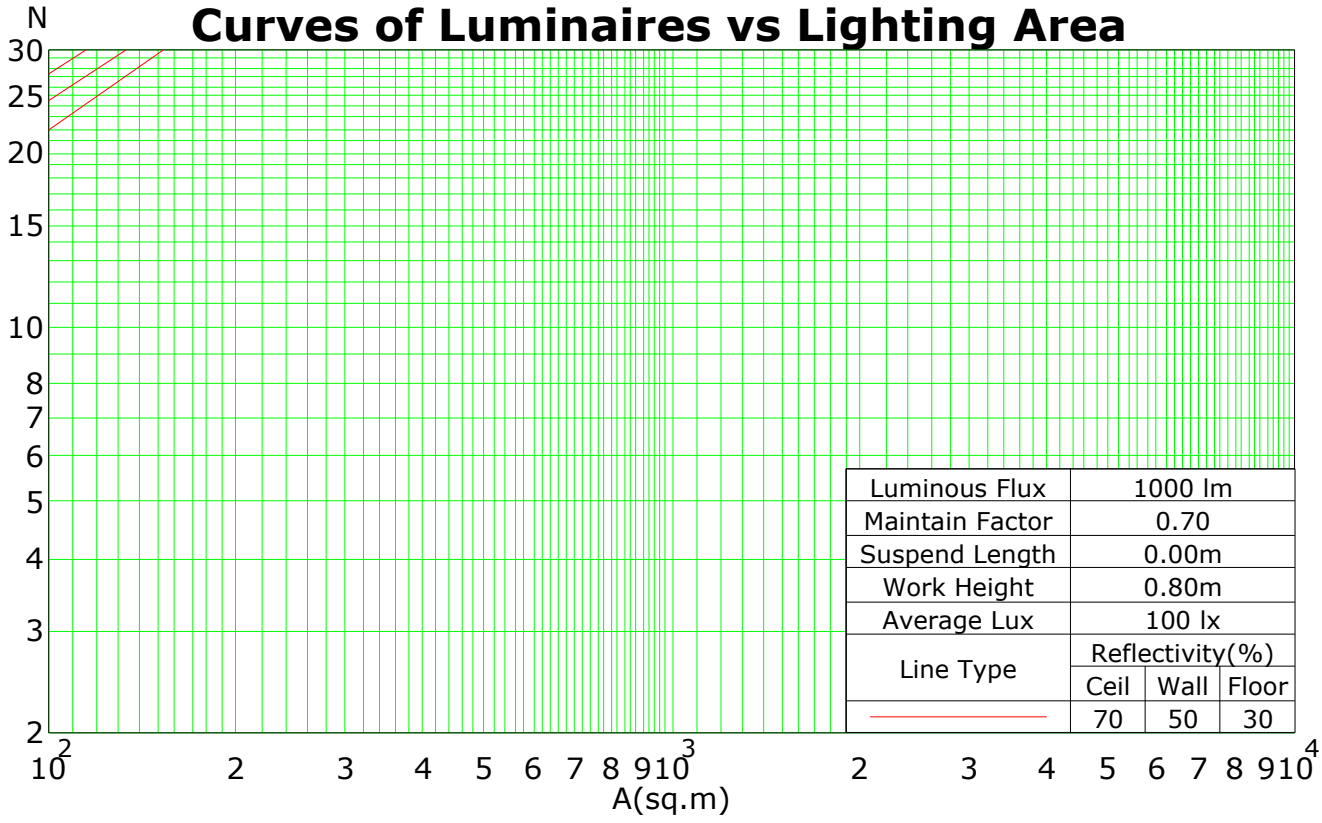
C Plane (°):0.0-360.0: 30.0
Gamma Plane (°):0.0-180.0:1.0
Test Lab: TRONTOP
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 7.340 m
Temperature:
Humidity:
Operator:
Inspector:

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	102	102	102	100
1	110	106	102	99	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	81	74	67	89	80	73	67	77	71	66	74	69	64	72	67	63	61
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	63	58	54	52
5	77	64	55	49	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

Spacing Criteria (0-180): 2.27
Spacing Criteria (90-270): 1.23
Spacing Criteria (Diagonal): 1.63

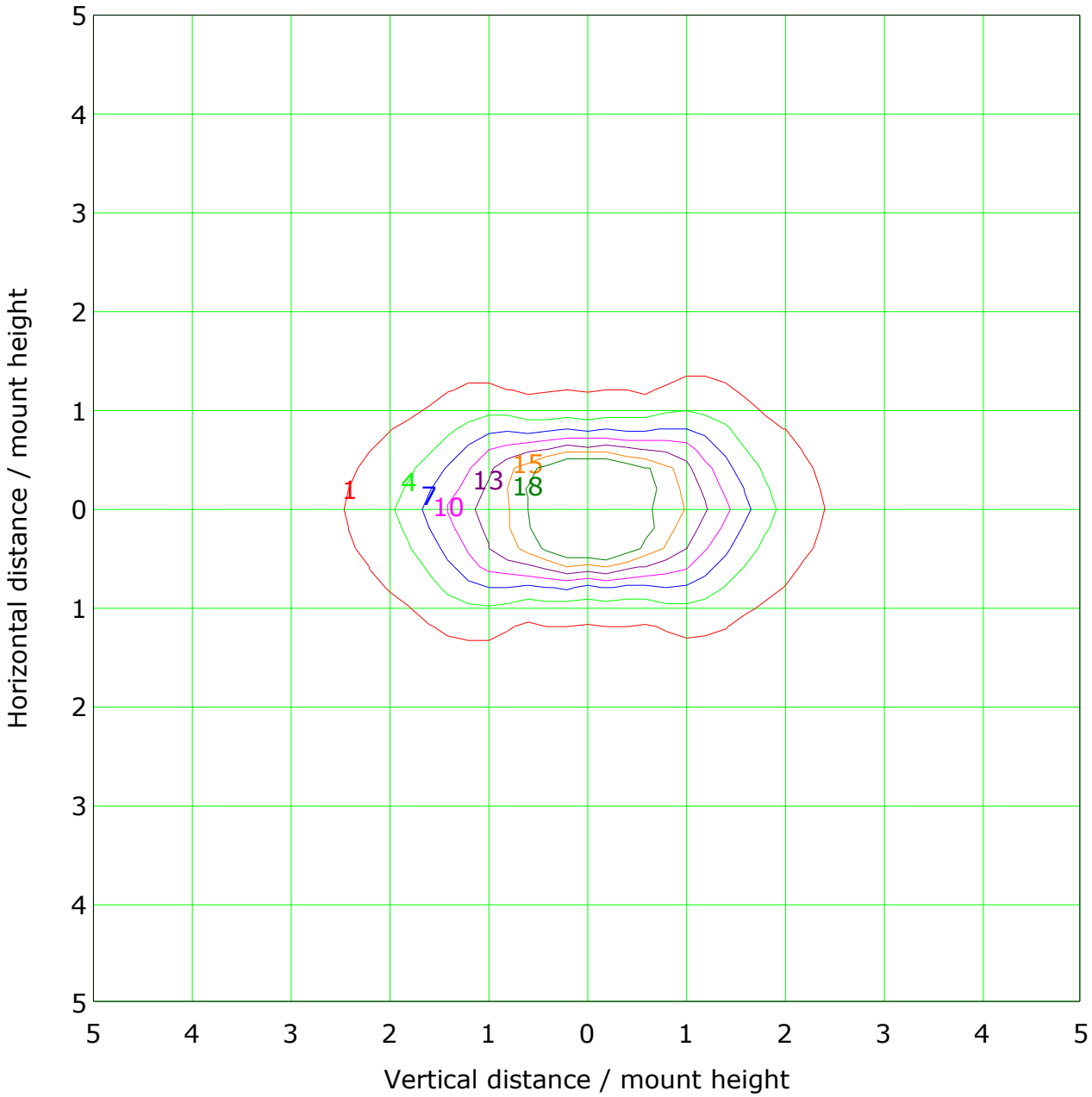
Curves of Luminaires vs Lighting Area



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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector:

IsoLux Plot



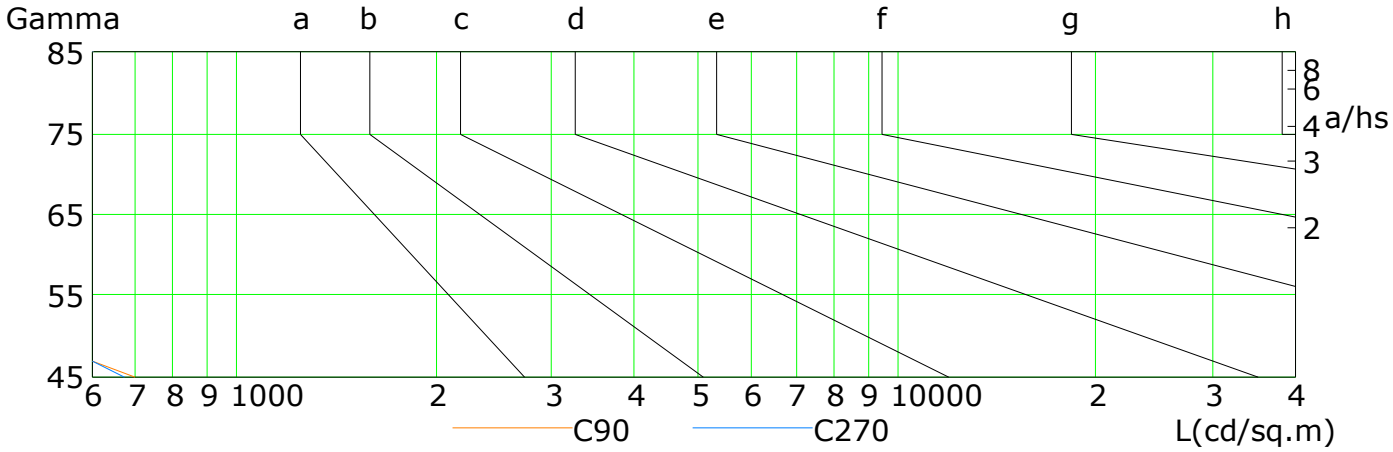
Mounting Height: 10.0m Max Lux(100%): 28.2 lx

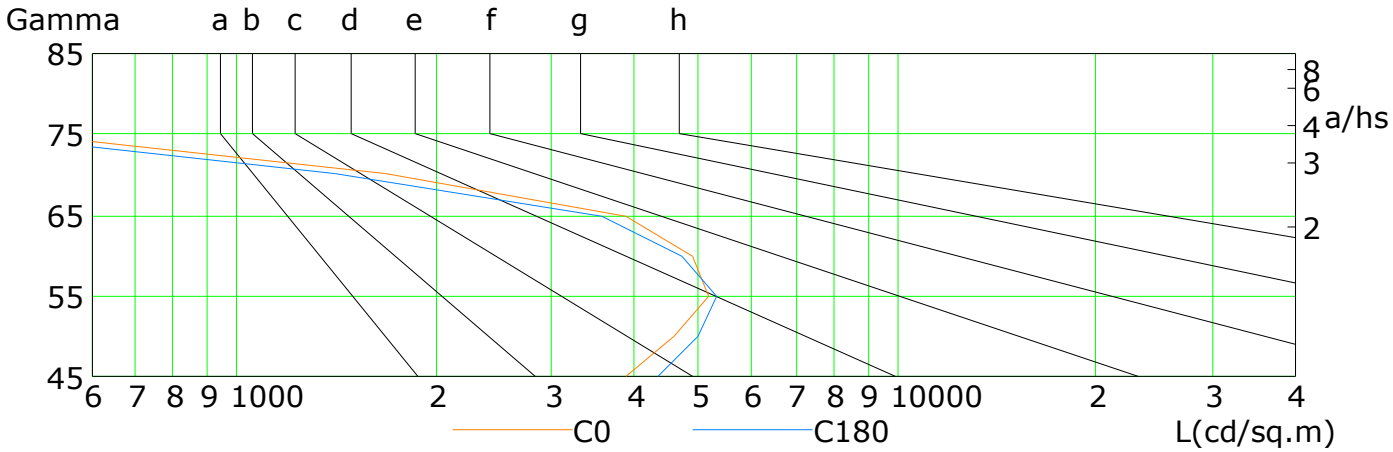
(5%): 1.4 lx
(15%): 4.2 lx
(25%): 7.0 lx
(35%): 9.9 lx
(45%): 12.7 lx
(55%): 15.5 lx
(65%): 18.3 lx

C Plane (°):0.0-360.0: 30.0
Gamma Plane (°):0.0-180.0:1.0
Test Lab: TRONTOP
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 7.340 m
Temperature:
Humidity:
Operator:
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



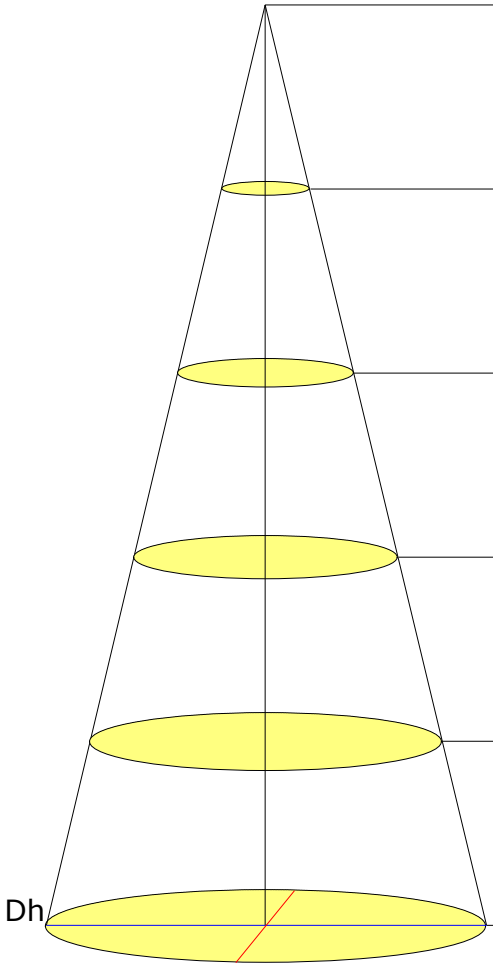


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	3870	4567	5148	4899	3888	1671	497	51	3
C90	696	484	347	240	126	76	45	12	0
C180	4343	4963	5320	4717	3551	1401	395	28	0
C270	673	494	379	270	154	77	42	19	0

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector:

Illuminance at a Distance



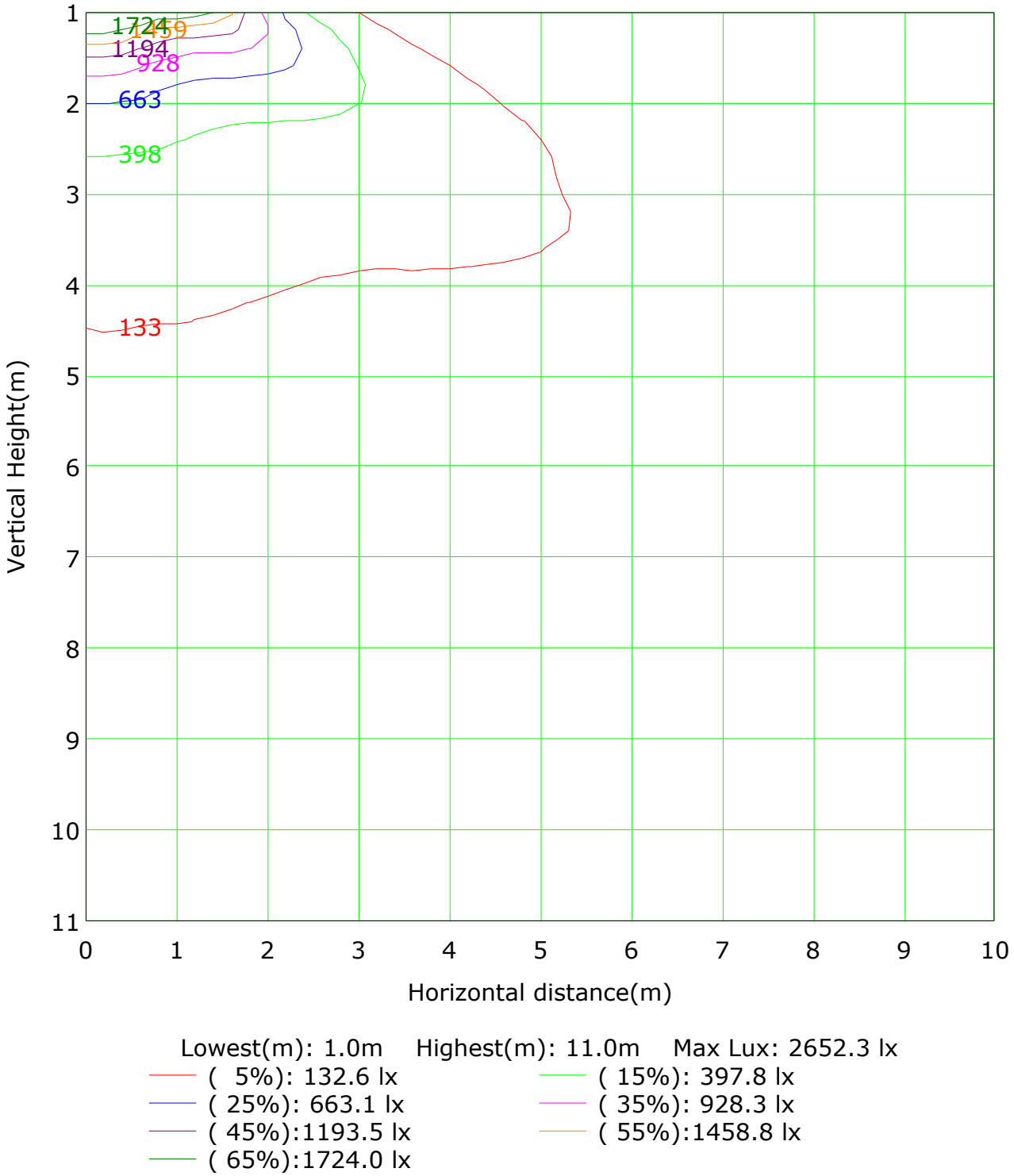
Dist(m)	Enadir(lx)	Dh/Dv_B(m)	S_B(sq.m)	Eav_B(lx)
10.0	26.52	47.98/15.24	755.9	5.32
20.0	6.63	95.96/30.47	3023.8	1.33
30.0	2.95	143.95/45.71	6803.5	0.59
40.0	1.66	191.93/60.95	12095.0	0.33
50.0	1.06	239.91/76.19	18898.5	0.21

Beam Angle(B): H134.7 V74.6 Field Angle(F): H148.5 V116.7

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector:

Vertical IsoLux Plot

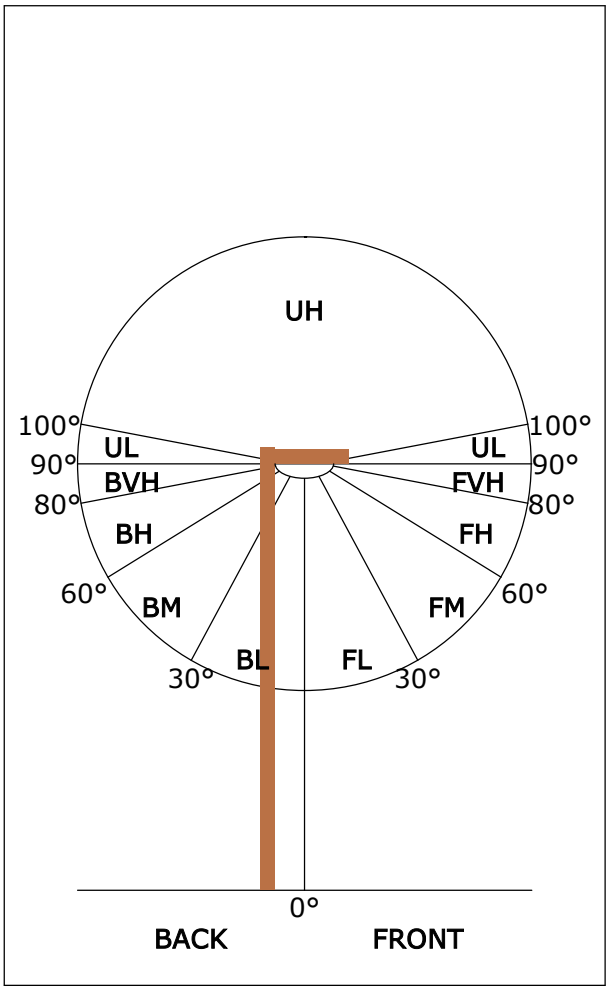


Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 2652.3 lx

(5%): 132.6 lx
(15%): 397.8 lx
(25%): 663.1 lx
(35%): 928.3 lx
(45%):1193.5 lx
(55%):1458.8 lx
(65%):1724.0 lx

C Plane (°):0.0-360.0: 30.0
Gamma Plane (°):0.0-180.0:1.0
Test Lab: TRONTOP
Test Device: GPM-1600L
Test Type: TYPE C
Distance: 7.340 m
Temperature:
Humidity:
Operator:
Inspector:

FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM



ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	4663	49.8
FL (0°-30°)	1195	12.8
FM (30°-60°)	2815	30.1
FH (60°-80°)	651	7.0
FVH (80°-90°)	2	0.0
BACK LIGHT	4664	49.8
BL (0°-30°)	1222	13.1
BM (30°-60°)	2799	29.9
BH (60°-80°)	640	6.8
BVH (80°-90°)	2	0.0
UP LIGHT	33	0.4
UL (90°-100°)	0	0.0
UH (100°-180°)	33	0.3
TRAPPED LIGHT	NA	NA

BUG(**B**acklight,**U**plight,**G**lare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B3 U2 G2
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B3 U2 G0

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector:

Zonal Lumen

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	2651.2	2.5	2.5	0.03	0.03
1.0-2.0	2674.2	7.7	10.2	0.08	0.11
2.0-3.0	2700.0	12.9	23.1	0.14	0.25
3.0-4.0	2718.0	18.2	41.3	0.19	0.44
4.0-5.0	2730.0	23.5	64.8	0.25	0.69
5.0-6.0	2733.1	28.7	93.5	0.31	1.00
6.0-7.0	2735.0	34.0	127.5	0.36	1.36
7.0-8.0	2742.1	39.2	166.7	0.42	1.78
8.0-9.0	2749.4	44.6	211.3	0.48	2.26
9.0-10.0	2760.1	50.0	261.3	0.53	2.79
10.0-11.0	2776.2	55.5	316.7	0.59	3.38
11.0-12.0	2794.5	61.1	377.8	0.65	4.04
12.0-13.0	2812.1	66.7	444.6	0.71	4.75
13.0-14.0	2829.9	72.4	517.0	0.77	5.52
14.0-15.0	2847.3	78.2	595.2	0.84	6.36
15.0-16.0	2863.3	83.9	679.1	0.90	7.26
16.0-17.0	2877.5	89.6	768.7	0.96	8.21
17.0-18.0	2889.2	95.3	864.0	1.02	9.23
18.0-19.0	2899.1	100.9	964.9	1.08	10.31
19.0-20.0	2907.7	106.4	1071.3	1.14	11.45
20.0-21.0	2914.8	111.9	1183.3	1.20	12.64
21.0-22.0	2919.5	117.3	1300.6	1.25	13.89
22.0-23.0	2922.1	122.6	1423.2	1.31	15.20
23.0-24.0	2923.3	127.8	1551.1	1.37	16.57
24.0-25.0	2922.3	132.9	1683.9	1.42	17.99
25.0-26.0	2919.0	137.8	1821.8	1.47	19.46
26.0-27.0	2912.4	142.5	1964.3	1.52	20.98
27.0-28.0	2902.6	147.0	2111.2	1.57	22.56
28.0-29.0	2890.1	151.2	2262.5	1.62	24.17
29.0-30.0	2874.2	155.2	2417.7	1.66	25.83
30.0-31.0	2855.6	158.9	2576.6	1.70	27.53
31.0-32.0	2832.8	162.3	2738.9	1.73	29.26
32.0-33.0	2807.9	165.4	2904.3	1.77	31.03
33.0-34.0	2782.0	168.4	3072.7	1.80	32.83
34.0-35.0	2753.7	171.0	3243.8	1.83	34.65
35.0-36.0	2724.3	173.5	3417.3	1.85	36.51

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector:

Zonal Lumen (Continue 1)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	2694.0	175.7	3593.0	1.88	38.39
37.0-38.0	2662.7	177.8	3770.7	1.90	40.28
38.0-39.0	2631.9	179.7	3950.4	1.92	42.20
39.0-40.0	2601.6	181.5	4131.9	1.94	44.14
40.0-41.0	2572.8	183.2	4315.1	1.96	46.10
41.0-42.0	2548.2	185.2	4500.3	1.98	48.08
42.0-43.0	2526.6	187.2	4687.4	2.00	50.08
43.0-44.0	2505.9	189.2	4876.6	2.02	52.10
44.0-45.0	2487.5	191.2	5067.8	2.04	54.14
45.0-46.0	2474.0	193.5	5261.3	2.07	56.21
46.0-47.0	2463.0	195.9	5457.2	2.09	58.30
47.0-48.0	2450.9	198.2	5655.4	2.12	60.42
48.0-49.0	2437.8	200.2	5855.6	2.14	62.56
49.0-50.0	2424.5	202.2	6057.8	2.16	64.72
50.0-51.0	2406.8	203.7	6261.4	2.18	66.89
51.0-52.0	2384.1	204.6	6466.0	2.19	69.08
52.0-53.0	2356.7	205.0	6671.1	2.19	71.27
53.0-54.0	2321.5	204.6	6875.7	2.19	73.46
54.0-55.0	2277.5	203.3	7079.0	2.17	75.63
55.0-56.0	2223.1	200.9	7279.9	2.15	77.77
56.0-57.0	2160.1	197.5	7477.5	2.11	79.88
57.0-58.0	2087.2	193.0	7670.5	2.06	81.95
58.0-59.0	1987.1	185.8	7856.3	1.98	83.93
59.0-60.0	1861.3	175.9	8032.2	1.88	85.81
60.0-61.0	1724.5	164.6	8196.8	1.76	87.57
61.0-62.0	1583.8	152.6	8349.4	1.63	89.20
62.0-63.0	1439.0	140.0	8489.4	1.50	90.70
63.0-64.0	1299.8	127.6	8616.9	1.36	92.06
64.0-65.0	1173.6	116.2	8733.1	1.24	93.30
65.0-66.0	1047.8	104.6	8837.7	1.12	94.42
66.0-67.0	916.2	92.1	8929.8	0.98	95.40
67.0-68.0	788.7	79.9	9009.7	0.85	96.25
68.0-69.0	664.2	67.8	9077.5	0.72	96.98
69.0-70.0	546.4	56.1	9133.6	0.60	97.58
70.0-71.0	448.6	46.4	9180.0	0.50	98.07
71.0-72.0	362.5	37.7	9217.7	0.40	98.48

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector:

Zonal Lumen (Continue 2)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	281.2	29.4	9247.1	0.31	98.79
73.0-74.0	215.8	22.7	9269.8	0.24	99.03
74.0-75.0	164.7	17.4	9287.2	0.19	99.22
75.0-76.0	121.4	12.9	9300.1	0.14	99.36
76.0-77.0	88.9	9.5	9309.5	0.10	99.46
77.0-78.0	62.8	6.7	9316.3	0.07	99.53
78.0-79.0	40.7	4.4	9320.6	0.05	99.58
79.0-80.0	25.1	2.7	9323.3	0.03	99.60
80.0-81.0	17.1	1.8	9325.2	0.02	99.62
81.0-82.0	11.3	1.2	9326.4	0.01	99.64
82.0-83.0	6.6	0.7	9327.1	0.01	99.65
83.0-84.0	2.8	0.3	9327.5	0.00	99.65
84.0-85.0	0.7	0.1	9327.5	0.00	99.65
85.0-86.0	0.2	0.0	9327.6	0.00	99.65
86.0-87.0	0.0	0.0	9327.6	0.00	99.65
87.0-88.0	0.0	0.0	9327.6	0.00	99.65
88.0-89.0	0.0	0.0	9327.6	0.00	99.65
89.0-90.0	0.0	0.0	9327.6	0.00	99.65
90.0-91.0	0.0	0.0	9327.6	0.00	99.65
91.0-92.0	0.0	0.0	9327.6	0.00	99.65
92.0-93.0	0.0	0.0	9327.6	0.00	99.65
93.0-94.0	0.0	0.0	9327.6	0.00	99.65
94.0-95.0	0.0	0.0	9327.6	0.00	99.65
95.0-96.0	0.0	0.0	9327.6	0.00	99.65
96.0-97.0	0.1	0.0	9327.6	0.00	99.65
97.0-98.0	0.2	0.0	9327.6	0.00	99.65
98.0-99.0	0.3	0.0	9327.6	0.00	99.65
99.0-100.0	0.4	0.0	9327.7	0.00	99.65
100.0-101.0	0.5	0.1	9327.7	0.00	99.65
101.0-102.0	0.7	0.1	9327.8	0.00	99.65
102.0-103.0	0.8	0.1	9327.9	0.00	99.65
103.0-104.0	1.0	0.1	9328.0	0.00	99.65
104.0-105.0	1.2	0.1	9328.1	0.00	99.66
105.0-106.0	1.4	0.1	9328.3	0.00	99.66
106.0-107.0	1.7	0.2	9328.4	0.00	99.66
107.0-108.0	1.9	0.2	9328.6	0.00	99.66

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector:

Zonal Lumen (Continue 3)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	2.1	0.2	9328.9	0.00	99.66
109.0-110.0	2.3	0.2	9329.1	0.00	99.67
110.0-111.0	2.5	0.3	9329.4	0.00	99.67
111.0-112.0	2.7	0.3	9329.6	0.00	99.67
112.0-113.0	2.9	0.3	9329.9	0.00	99.68
113.0-114.0	3.1	0.3	9330.2	0.00	99.68
114.0-115.0	3.3	0.3	9330.6	0.00	99.68
115.0-116.0	3.4	0.3	9330.9	0.00	99.69
116.0-117.0	3.4	0.3	9331.2	0.00	99.69
117.0-118.0	3.5	0.3	9331.6	0.00	99.69
118.0-119.0	3.7	0.4	9331.9	0.00	99.70
119.0-120.0	3.9	0.4	9332.3	0.00	99.70
120.0-121.0	4.1	0.4	9332.7	0.00	99.70
121.0-122.0	4.3	0.4	9333.1	0.00	99.71
122.0-123.0	4.5	0.4	9333.5	0.00	99.71
123.0-124.0	4.8	0.4	9334.0	0.00	99.72
124.0-125.0	5.0	0.4	9334.4	0.00	99.72
125.0-126.0	5.2	0.5	9334.9	0.00	99.73
126.0-127.0	5.6	0.5	9335.4	0.01	99.73
127.0-128.0	5.8	0.5	9335.9	0.01	99.74
128.0-129.0	6.0	0.5	9336.4	0.01	99.74
129.0-130.0	6.3	0.5	9336.9	0.01	99.75
130.0-131.0	6.5	0.5	9337.5	0.01	99.76
131.0-132.0	6.8	0.6	9338.0	0.01	99.76
132.0-133.0	7.1	0.6	9338.6	0.01	99.77
133.0-134.0	7.5	0.6	9339.2	0.01	99.77
134.0-135.0	7.8	0.6	9339.8	0.01	99.78
135.0-136.0	8.1	0.6	9340.4	0.01	99.79
136.0-137.0	8.3	0.6	9341.0	0.01	99.79
137.0-138.0	8.6	0.6	9341.7	0.01	99.80
138.0-139.0	9.0	0.7	9342.3	0.01	99.81
139.0-140.0	9.3	0.7	9343.0	0.01	99.81
140.0-141.0	9.6	0.7	9343.7	0.01	99.82
141.0-142.0	9.9	0.7	9344.3	0.01	99.83
142.0-143.0	10.3	0.7	9345.0	0.01	99.84
143.0-144.0	10.4	0.7	9345.7	0.01	99.84

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector:

Zonal Lumen (Continue 4)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
144.0-145.0	10.7	0.7	9346.4	0.01	99.85
145.0-146.0	10.9	0.7	9347.1	0.01	99.86
146.0-147.0	11.1	0.7	9347.7	0.01	99.87
147.0-148.0	11.3	0.7	9348.4	0.01	99.87
148.0-149.0	11.5	0.7	9349.1	0.01	99.88
149.0-150.0	11.7	0.6	9349.7	0.01	99.89
150.0-151.0	11.8	0.6	9350.3	0.01	99.89
151.0-152.0	11.8	0.6	9351.0	0.01	99.90
152.0-153.0	12.0	0.6	9351.6	0.01	99.91
153.0-154.0	12.1	0.6	9352.2	0.01	99.91
154.0-155.0	12.2	0.6	9352.7	0.01	99.92
155.0-156.0	12.2	0.6	9353.3	0.01	99.92
156.0-157.0	12.2	0.5	9353.8	0.01	99.93
157.0-158.0	12.3	0.5	9354.3	0.01	99.94
158.0-159.0	12.5	0.5	9354.8	0.01	99.94
159.0-160.0	12.6	0.5	9355.3	0.01	99.95
160.0-161.0	12.6	0.5	9355.8	0.00	99.95
161.0-162.0	12.6	0.4	9356.2	0.00	99.96
162.0-163.0	12.8	0.4	9356.7	0.00	99.96
163.0-164.0	12.9	0.4	9357.1	0.00	99.96
164.0-165.0	13.0	0.4	9357.4	0.00	99.97
165.0-166.0	13.0	0.4	9357.8	0.00	99.97
166.0-167.0	13.2	0.3	9358.1	0.00	99.98
167.0-168.0	13.4	0.3	9358.4	0.00	99.98
168.0-169.0	13.4	0.3	9358.7	0.00	99.98
169.0-170.0	13.5	0.3	9359.0	0.00	99.99
170.0-171.0	13.6	0.2	9359.3	0.00	99.99
171.0-172.0	13.8	0.2	9359.5	0.00	99.99
172.0-173.0	13.9	0.2	9359.7	0.00	99.99
173.0-174.0	14.0	0.2	9359.9	0.00	99.99
174.0-175.0	14.0	0.1	9360.0	0.00	100.00
175.0-176.0	14.2	0.1	9360.1	0.00	100.00
176.0-177.0	14.4	0.1	9360.2	0.00	100.00
177.0-178.0	14.5	0.1	9360.3	0.00	100.00
178.0-179.0	14.4	0.0	9360.3	0.00	100.00
179.0-180.0	14.4	0.0	9360.3	0.00	100.00

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

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1600L
Distance: 7.340 m
Humidity:
Inspector: