

Report No.:

Test Time: 2014-08-14 17:21

Luminaire Property

Luminaire Manufacturer:

Luminaire Description: MR16-3000K-60D

Current: 0.531 A

Power Factor: 0.660

Voltage: 12.3 V

Power: 4.30 W

Photometric Results

CIE Class: Direct

Measurement Flux: 281.9 lm

Downward Ratio: 100%

Horizontal Diffuse Angle(15%,30%,50%,75%): H62.5,H48.4,H35.9,H22.4

Vertical Diffuse Angle(15%,30%,50%,75%): V62.4,V48.5,V35.5,V21.9

Luminaire Efficacy Rating (LER): 66

Max. Intensity: 559.34 cd

Total Rated Lamp Lumens: 281.9 lm

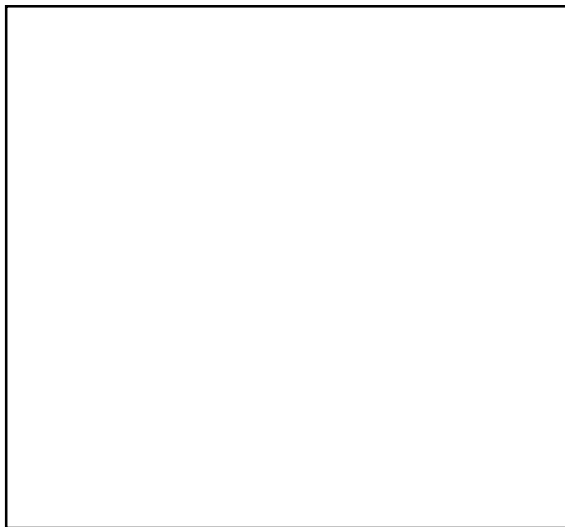
Efficiency: 100%

Upward Ratio: 0%

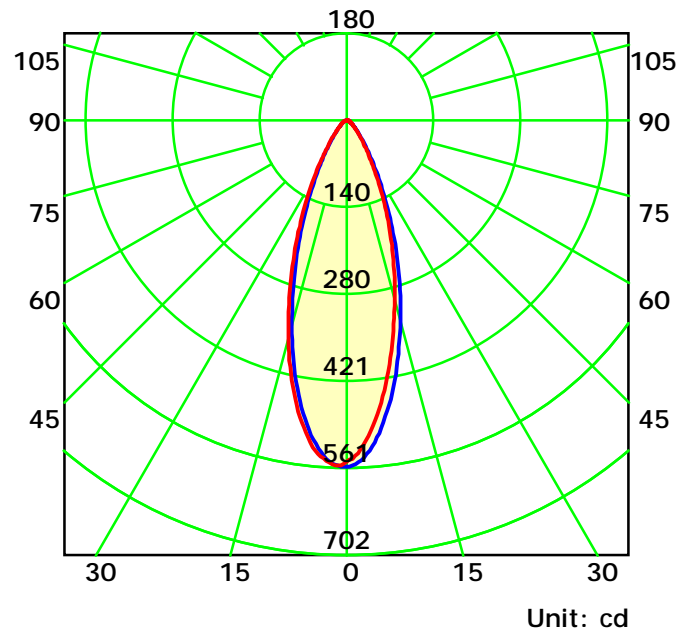
Central Intensity: 558.78 cd

Pos of Max. Intensity: H180 V1

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 45.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-90.0:0.5

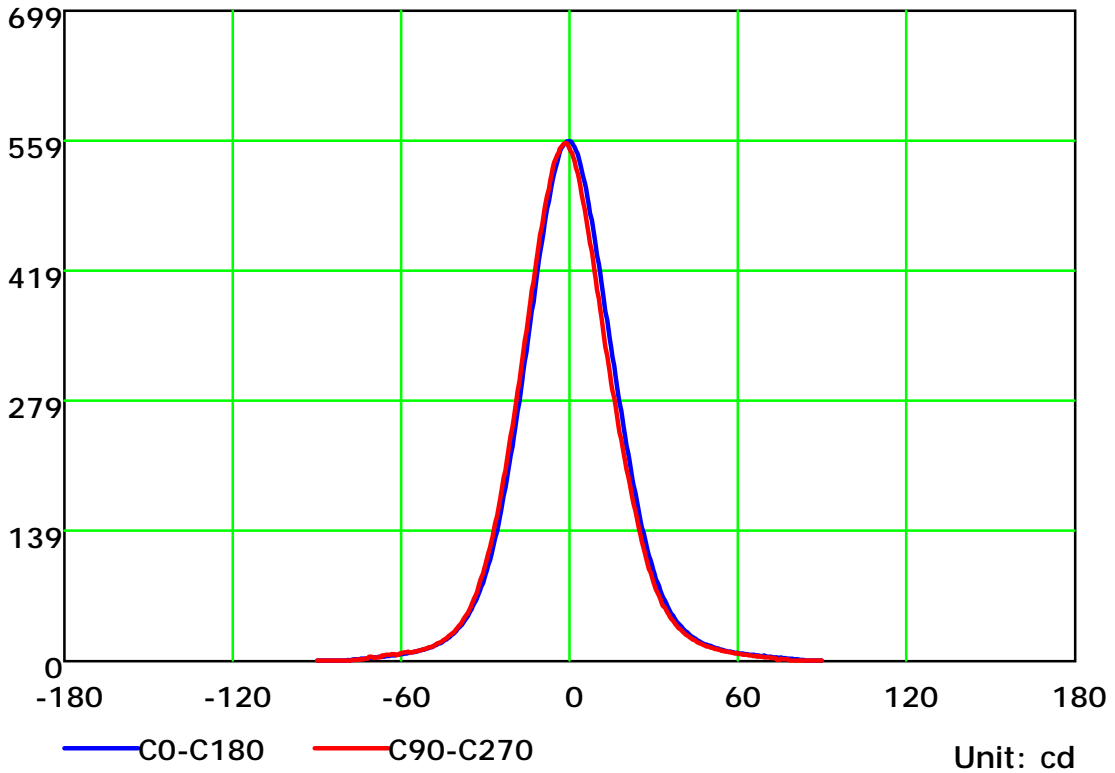
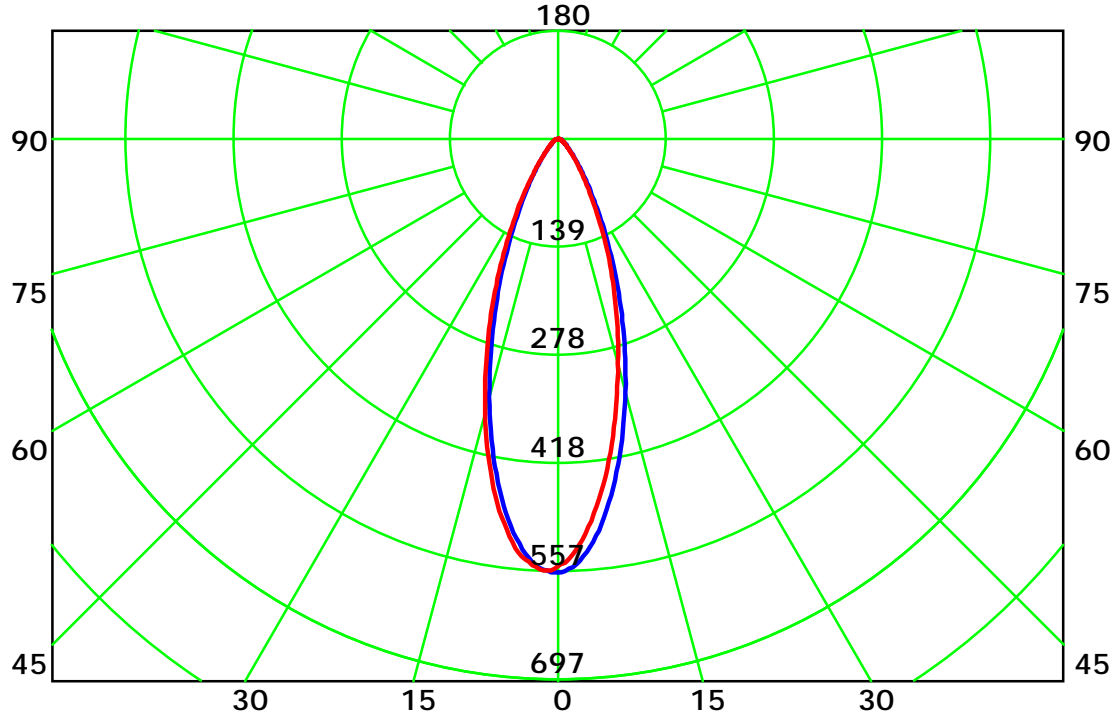
Test Device: GPM-1600

Distance: 8.177 m

Humidity:

Inspector:

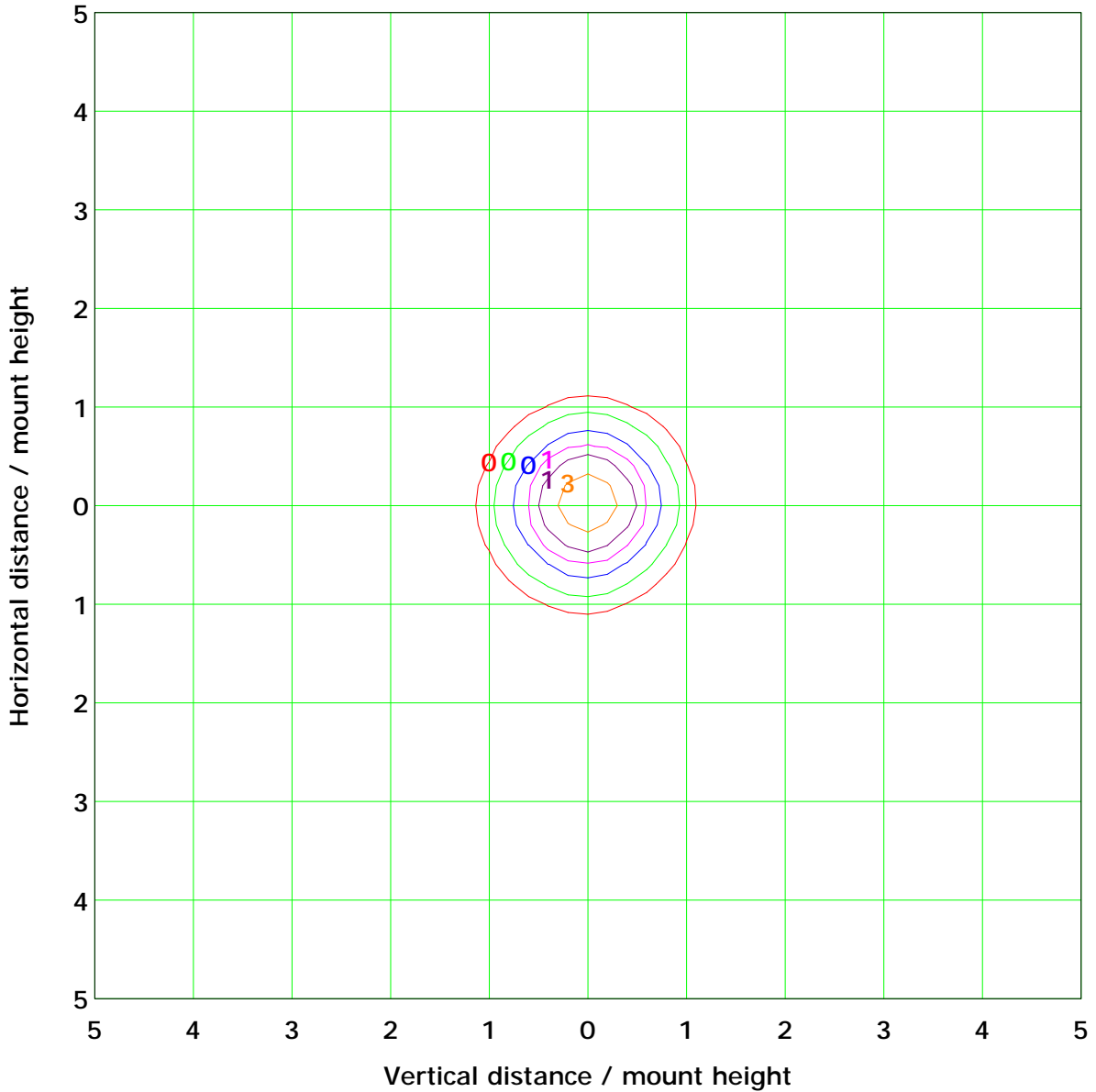
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

IsoLux Plot

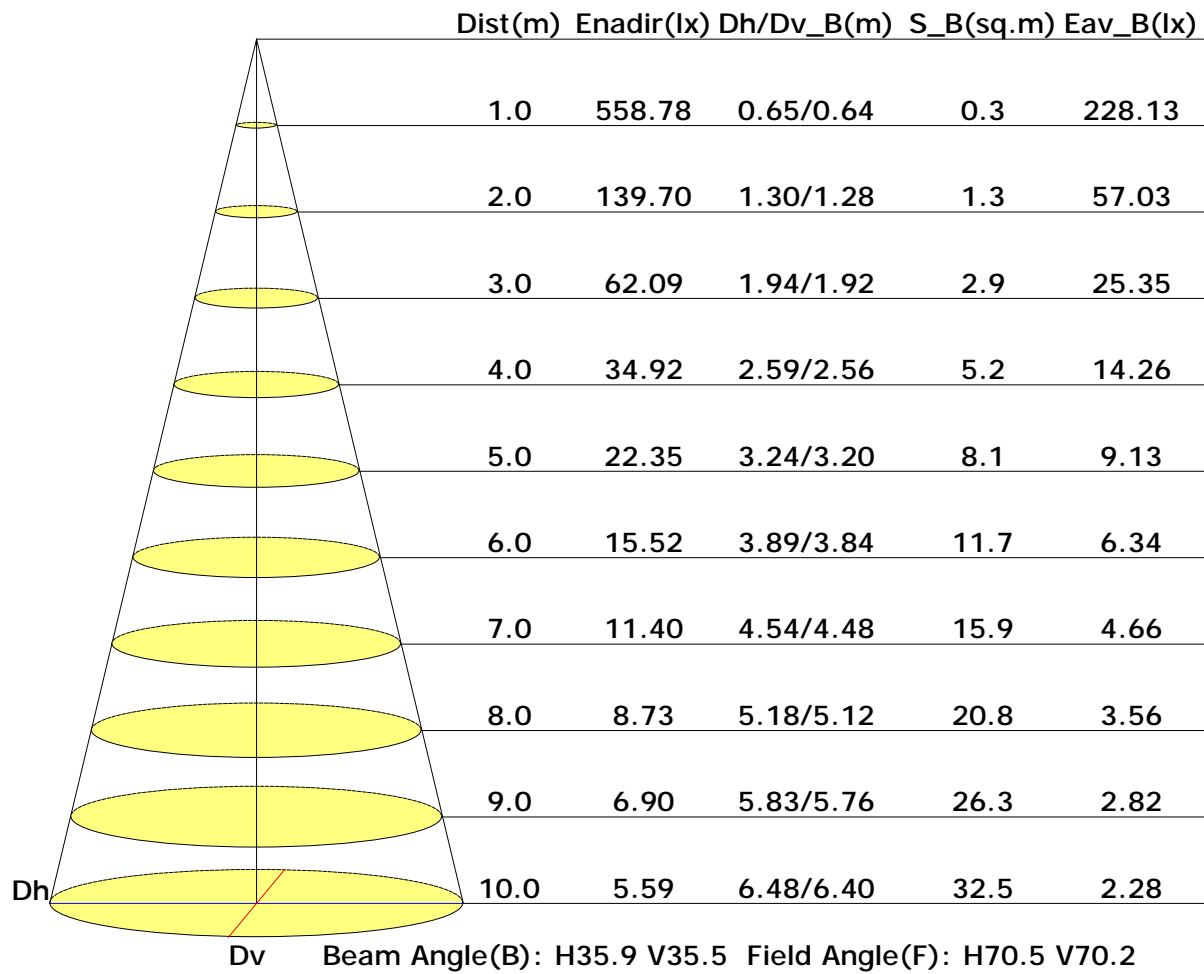


Mounting Height: 10.0m		Max Lux(100%): 5.6 lx	
— (1%):	0.1 lx	— (2%):	0.1 lx
— (5%):	0.3 lx	— (10%):	0.6 lx
— (20%):	1.1 lx	— (50%):	2.8 lx
— (100%):	5.6 lx	— (200%):	11.2 lx
— (300%):	16.8 lx	— (500%):	28.0 lx

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

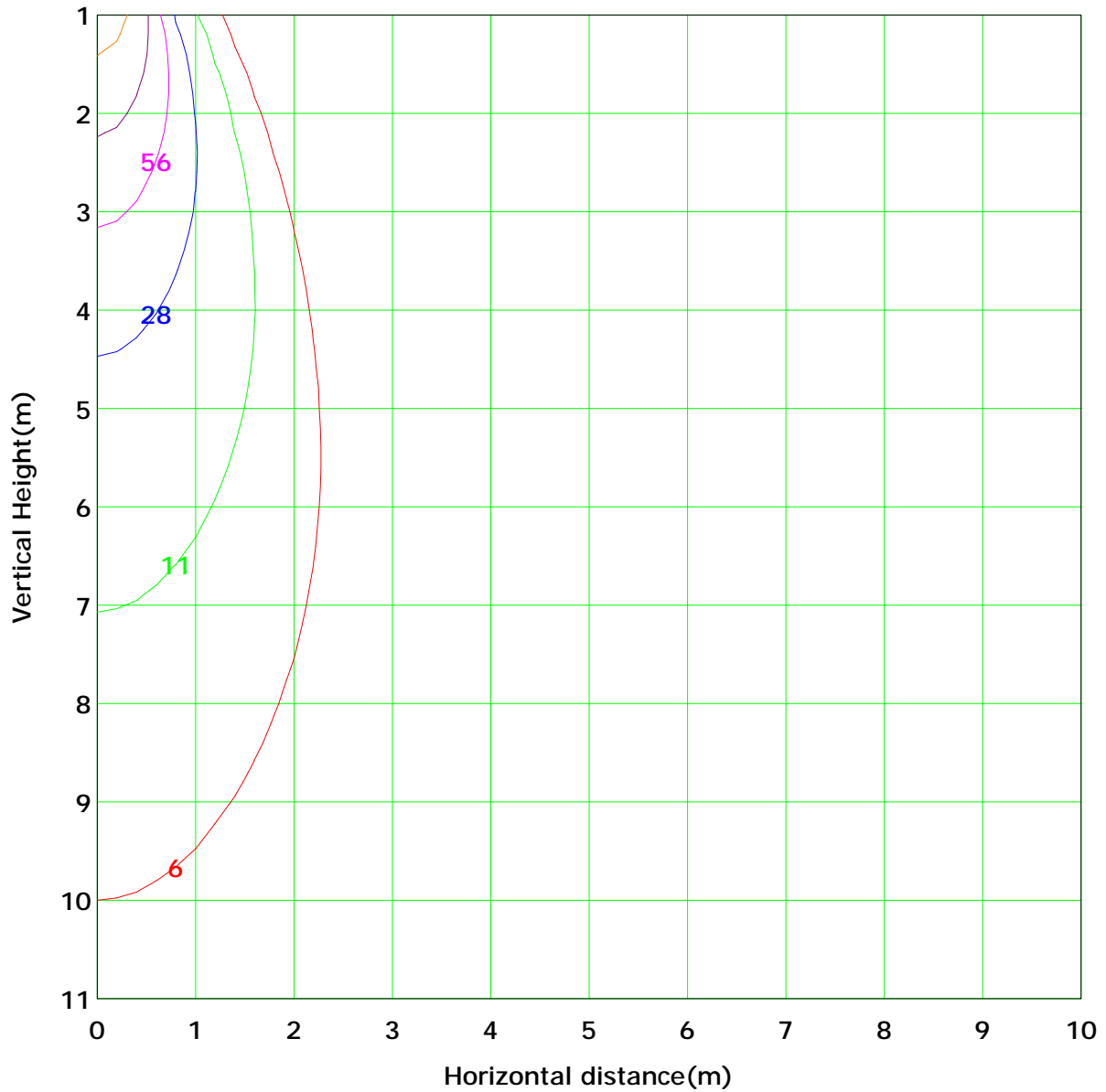
Illuminance at a Distance



C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 11.0m	Max Lux: 558.8 lx
(1%): 5.6 lx	(2%): 11.2 lx	
(5%): 27.9 lx	(10%): 55.9 lx	
(20%): 111.8 lx	(50%): 279.4 lx	
(100%): 558.8 lx	(200%): 1117.6 lx	
(300%): 1676.3 lx	(500%): 2793.9 lx	

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

Area Flux Table

		Vertical plane																				
		-90.0	-80.0	-70.0	-60.0	-50.0	-40.0	-30.0	-20.0	-10.0	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0		
ΦE	ΦT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	282	233
-90.0	-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	0.0
-80.0	-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	0.0
-70.0	-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	0.0	0.0
-60.0	-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	0.0	0.0
-50.0	-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	0.0	0.0	0.0
-40.0	-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	0.0	0.0	0.0
-30.0	-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	0.0	0.0	0.0
-20.0	-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	0.0	0.0	0.0
-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	0.0	0.0	0.0	0.0
0.0	10.0	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0
10.0	20.0	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0
20.0	30.0	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0
30.0	40.0	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0
40.0	50.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
50.0	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	0.0	0.0
60.0	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	0.0
70.0	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	0.0
80.0	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
90.0	ΦT	0.0	0.4	1.3	2.4	4.5	9.9	23.0	23.0	44.2	62.0	58.6	38.5	19.8	8.9	4.3	2.4	1.3	0.4	0.0	282	
ΦE	-90.0	-80.0	-70.0	-60.0	-50.0	-40.0	-30.0	-20.0	-10.0	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	ΦT	ΦE	

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

Zonal Lumen

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-0.5	554.4	0.1	0.1	0.05	0.05
0.5-1.0	553.9	0.4	0.5	0.14	0.19
1.0-1.5	552.8	0.7	1.2	0.23	0.42
1.5-2.0	550.7	0.9	2.1	0.33	0.75
2.0-2.5	547.8	1.2	3.3	0.42	1.17
2.5-3.0	544.2	1.4	4.7	0.51	1.68
3.0-3.5	540.1	1.7	6.4	0.60	2.27
3.5-4.0	535.2	1.9	8.3	0.68	2.95
4.0-4.5	529.7	2.2	10.5	0.76	3.72
4.5-5.0	523.9	2.4	12.9	0.84	4.56
5.0-5.5	517.3	2.6	15.4	0.92	5.48
5.5-6.0	510.3	2.8	18.3	0.99	6.47
6.0-6.5	503.2	3.0	21.3	1.07	7.54
6.5-7.0	495.5	3.2	24.4	1.13	8.67
7.0-7.5	487.1	3.4	27.8	1.20	9.87
7.5-8.0	478.4	3.5	31.4	1.25	11.12
8.0-8.5	469.9	3.7	35.1	1.31	12.43
8.5-9.0	461.0	3.8	38.9	1.36	13.80
9.0-9.5	451.7	4.0	42.9	1.41	15.21
9.5-10.0	442.1	4.1	47.0	1.46	16.67
10.0-10.5	432.4	4.2	51.2	1.50	18.16
10.5-11.0	422.6	4.3	55.5	1.53	19.70
11.0-11.5	412.4	4.4	59.9	1.56	21.26
11.5-12.0	402.2	4.5	64.4	1.59	22.85
12.0-12.5	392.0	4.6	69.0	1.62	24.47
12.5-13.0	381.6	4.6	73.6	1.64	26.11
13.0-13.5	371.3	4.7	78.3	1.66	27.76
13.5-14.0	361.1	4.7	83.0	1.67	29.43
14.0-14.5	350.8	4.7	87.7	1.68	31.11
14.5-15.0	340.7	4.8	92.5	1.69	32.80
15.0-15.5	330.3	4.8	97.2	1.69	34.49
15.5-16.0	319.8	4.8	102.0	1.69	36.18
16.0-16.5	309.8	4.8	106.7	1.69	37.86
16.5-17.0	299.8	4.7	111.5	1.68	39.55
17.0-17.5	289.7	4.7	116.2	1.67	41.22
17.5-18.0	279.8	4.7	120.9	1.66	42.88

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 1)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
18.0-18.5	270.0	4.6	125.5	1.64	44.52
18.5-19.0	260.4	4.6	130.1	1.63	46.15
19.0-19.5	251.2	4.5	134.6	1.61	47.76
19.5-20.0	242.0	4.5	139.1	1.59	49.35
20.0-20.5	233.0	4.4	143.5	1.57	50.92
20.5-21.0	224.1	4.4	147.9	1.54	52.46
21.0-21.5	215.4	4.3	152.2	1.52	53.98
21.5-22.0	206.7	4.2	156.4	1.49	55.47
22.0-22.5	198.1	4.1	160.5	1.46	56.93
22.5-23.0	189.8	4.0	164.5	1.43	58.36
23.0-23.5	181.8	3.9	168.4	1.40	59.75
23.5-24.0	173.9	3.8	172.3	1.36	61.11
24.0-24.5	166.2	3.7	176.0	1.33	62.44
24.5-25.0	158.8	3.6	179.7	1.29	63.73
25.0-25.5	151.7	3.5	183.2	1.26	64.99
25.5-26.0	144.7	3.4	186.7	1.22	66.22
26.0-26.5	138.0	3.3	190.0	1.19	67.40
26.5-27.0	131.4	3.2	193.3	1.15	68.55
27.0-27.5	125.2	3.1	196.4	1.12	69.67
27.5-28.0	119.2	3.0	199.4	1.08	70.75
28.0-28.5	113.3	2.9	202.4	1.04	71.79
28.5-29.0	107.8	2.8	205.2	1.01	72.80
29.0-29.5	102.4	2.7	208.0	0.97	73.77
29.5-30.0	97.3	2.6	210.6	0.94	74.71
30.0-30.5	92.4	2.6	213.2	0.91	75.62
30.5-31.0	87.8	2.5	215.6	0.87	76.49
31.0-31.5	83.4	2.4	218.0	0.84	77.33
31.5-32.0	79.2	2.3	220.3	0.81	78.14
32.0-32.5	75.2	2.2	222.5	0.78	78.92
32.5-33.0	71.3	2.1	224.6	0.75	79.67
33.0-33.5	67.7	2.0	226.6	0.72	80.40
33.5-34.0	64.4	2.0	228.6	0.70	81.09
34.0-34.5	61.2	1.9	230.5	0.67	81.76
34.5-35.0	58.2	1.8	232.3	0.65	82.41
35.0-35.5	55.4	1.8	234.1	0.62	83.03
35.5-36.0	52.6	1.7	235.8	0.60	83.63

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 2)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-36.5	50.1	1.6	237.4	0.58	84.20
36.5-37.0	47.6	1.6	238.9	0.55	84.76
37.0-37.5	45.3	1.5	240.4	0.53	85.29
37.5-38.0	43.1	1.4	241.9	0.51	85.80
38.0-38.5	41.0	1.4	243.3	0.49	86.30
38.5-39.0	38.9	1.3	244.6	0.47	86.77
39.0-39.5	36.9	1.3	245.9	0.45	87.22
39.5-40.0	35.1	1.2	247.1	0.44	87.66
40.0-40.5	33.5	1.2	248.3	0.42	88.08
40.5-41.0	31.9	1.1	249.5	0.41	88.49
41.0-41.5	30.5	1.1	250.6	0.39	88.88
41.5-42.0	29.2	1.1	251.6	0.38	89.26
42.0-42.5	27.9	1.0	252.7	0.37	89.62
42.5-43.0	26.8	1.0	253.7	0.35	89.98
43.0-43.5	25.6	1.0	254.6	0.34	90.32
43.5-44.0	24.5	0.9	255.5	0.33	90.65
44.0-44.5	23.3	0.9	256.4	0.32	90.96
44.5-45.0	22.3	0.9	257.3	0.31	91.27
45.0-45.5	21.4	0.8	258.1	0.30	91.56
45.5-46.0	20.5	0.8	258.9	0.29	91.85
46.0-46.5	19.7	0.8	259.7	0.28	92.13
46.5-47.0	18.9	0.8	260.5	0.27	92.39
47.0-47.5	18.1	0.7	261.2	0.26	92.65
47.5-48.0	17.4	0.7	261.9	0.25	92.90
48.0-48.5	16.7	0.7	262.6	0.24	93.15
48.5-49.0	16.1	0.7	263.3	0.24	93.38
49.0-49.5	15.5	0.6	263.9	0.23	93.61
49.5-50.0	14.9	0.6	264.5	0.22	93.83
50.0-50.5	14.4	0.6	265.1	0.22	94.05
50.5-51.0	13.9	0.6	265.7	0.21	94.26
51.0-51.5	13.4	0.6	266.3	0.20	94.46
51.5-52.0	12.9	0.6	266.8	0.20	94.66
52.0-52.5	12.4	0.5	267.4	0.19	94.85
52.5-53.0	12.1	0.5	267.9	0.19	95.03
53.0-53.5	11.7	0.5	268.4	0.18	95.22
53.5-54.0	11.2	0.5	268.9	0.18	95.39

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 3)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
54.0-54.5	10.8	0.5	269.4	0.17	95.56
54.5-55.0	10.5	0.5	269.9	0.17	95.73
55.0-55.5	10.1	0.5	270.3	0.16	95.89
55.5-56.0	9.7	0.4	270.8	0.16	96.05
56.0-56.5	9.5	0.4	271.2	0.15	96.20
56.5-57.0	9.2	0.4	271.6	0.15	96.35
57.0-57.5	8.9	0.4	272.0	0.15	96.50
57.5-58.0	8.8	0.4	272.4	0.14	96.64
58.0-58.5	8.5	0.4	272.8	0.14	96.78
58.5-59.0	8.3	0.4	273.2	0.14	96.92
59.0-59.5	8.1	0.4	273.6	0.13	97.05
59.5-60.0	7.8	0.4	274.0	0.13	97.19
60.0-60.5	7.6	0.4	274.3	0.13	97.31
60.5-61.0	7.3	0.3	274.7	0.12	97.44
61.0-61.5	7.0	0.3	275.0	0.12	97.56
61.5-62.0	6.8	0.3	275.3	0.12	97.67
62.0-62.5	6.6	0.3	275.7	0.11	97.78
62.5-63.0	6.5	0.3	276.0	0.11	97.90
63.0-63.5	6.3	0.3	276.3	0.11	98.01
63.5-64.0	6.1	0.3	276.6	0.11	98.11
64.0-64.5	5.9	0.3	276.9	0.10	98.22
64.5-65.0	5.7	0.3	277.2	0.10	98.32
65.0-65.5	5.6	0.3	277.4	0.10	98.42
65.5-66.0	5.4	0.3	277.7	0.10	98.51
66.0-66.5	5.2	0.3	278.0	0.09	98.60
66.5-67.0	5.1	0.3	278.2	0.09	98.70
67.0-67.5	4.8	0.2	278.5	0.09	98.78
67.5-68.0	4.5	0.2	278.7	0.08	98.86
68.0-68.5	4.4	0.2	278.9	0.08	98.94
68.5-69.0	4.2	0.2	279.1	0.08	99.02
69.0-69.5	4.1	0.2	279.4	0.07	99.09
69.5-70.0	3.8	0.2	279.6	0.07	99.16
70.0-70.5	3.6	0.2	279.7	0.07	99.23
70.5-71.0	3.5	0.2	279.9	0.06	99.29
71.0-71.5	3.5	0.2	280.1	0.06	99.36
71.5-72.0	3.3	0.2	280.3	0.06	99.42

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector:

Zonal Lumen (Continue 4)

Gamma [°]	I _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-72.5	3.0	0.2	280.4	0.06	99.47
72.5-73.0	2.8	0.1	280.6	0.05	99.52
73.0-73.5	2.5	0.1	280.7	0.05	99.57
73.5-74.0	2.2	0.1	280.8	0.04	99.61
74.0-74.5	2.1	0.1	280.9	0.04	99.65
74.5-75.0	2.0	0.1	281.0	0.04	99.69
75.0-75.5	2.0	0.1	281.1	0.04	99.73
75.5-76.0	1.9	0.1	281.2	0.04	99.76
76.0-76.5	1.7	0.1	281.3	0.03	99.79
76.5-77.0	1.5	0.1	281.4	0.03	99.82
77.0-77.5	1.4	0.1	281.5	0.03	99.85
77.5-78.0	1.2	0.1	281.6	0.02	99.87
78.0-78.5	1.1	0.1	281.6	0.02	99.89
78.5-79.0	0.9	0.1	281.7	0.02	99.91
79.0-79.5	0.8	0.0	281.7	0.01	99.93
79.5-80.0	0.6	0.0	281.7	0.01	99.94
80.0-80.5	0.4	0.0	281.8	0.01	99.94
80.5-81.0	0.3	0.0	281.8	0.01	99.95
81.0-81.5	0.4	0.0	281.8	0.01	99.96
81.5-82.0	0.4	0.0	281.8	0.01	99.96
82.0-82.5	0.3	0.0	281.8	0.01	99.97
82.5-83.0	0.2	0.0	281.8	0.00	99.97
83.0-83.5	0.2	0.0	281.8	0.00	99.98
83.5-84.0	0.2	0.0	281.9	0.00	99.98
84.0-84.5	0.2	0.0	281.9	0.00	99.98
84.5-85.0	0.1	0.0	281.9	0.00	99.99
85.0-85.5	0.0	0.0	281.9	0.00	99.99
85.5-86.0	0.0	0.0	281.9	0.00	99.99
86.0-86.5	0.1	0.0	281.9	0.00	99.99
86.5-87.0	0.1	0.0	281.9	0.00	99.99
87.0-87.5	0.1	0.0	281.9	0.00	99.99
87.5-88.0	0.1	0.0	281.9	0.00	99.99
88.0-88.5	0.1	0.0	281.9	0.00	99.99
88.5-89.0	0.0	0.0	281.9	0.00	100.00
89.0-89.5	0.1	0.0	281.9	0.00	100.00
89.5-90.0	0.2	0.0	281.9	0.00	100.00

C Plane (°):0.0-360.0: 45.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-90.0:0.5
 Test Device: GPM-1600
 Distance: 8.177 m
 Humidity:
 Inspector: