

Report No.:

Test Time: 2014-08-27 16:47

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category: LED STREETLIGHT

Lamp Catalog: HIGH POWER COB

Voltage: 230.8 V

Power: 155.70 W

Luminaire Description: 03

Lamp Description: 150W

Current: 0.670 A

Power Factor: 0.977

## Photometric Results

IES Classification: Type III

Total Rated Lamp Lumens: 13366.3 lm

Efficiency: 100%

Upward Ratio: 1%

Central Intensity: 2773.12 cd

Pos of Max. Intensity: H90 V55

Longitudinal Classification: Very Short

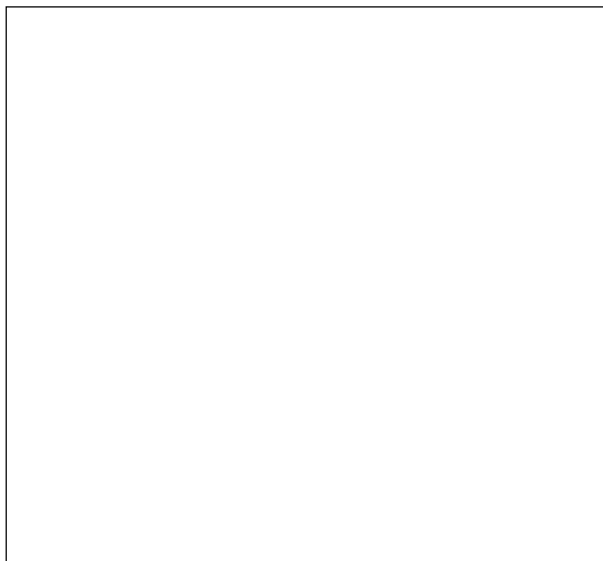
Measurement Flux: 13366.3 lm

Downward Ratio: 99%

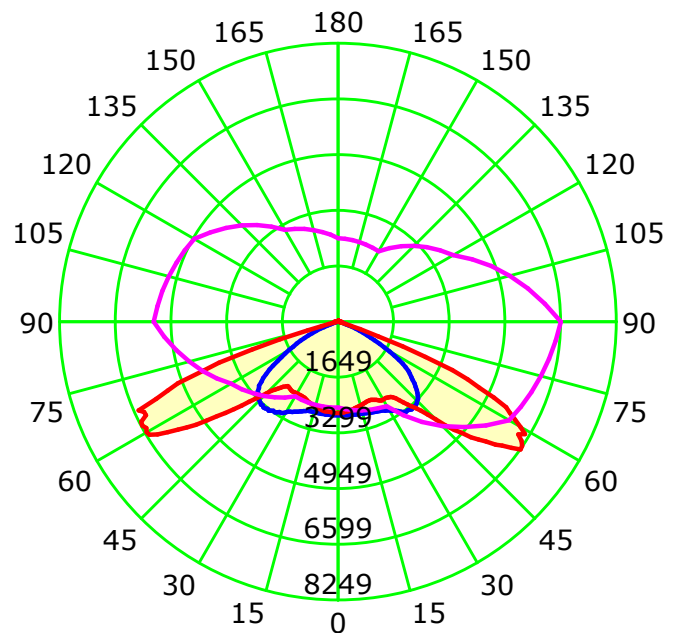
Luminaire Efficacy Rating (LER): 86

Max. Intensity: 6599.75 cd

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

— C0-C180 — C90-C270 — G55

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

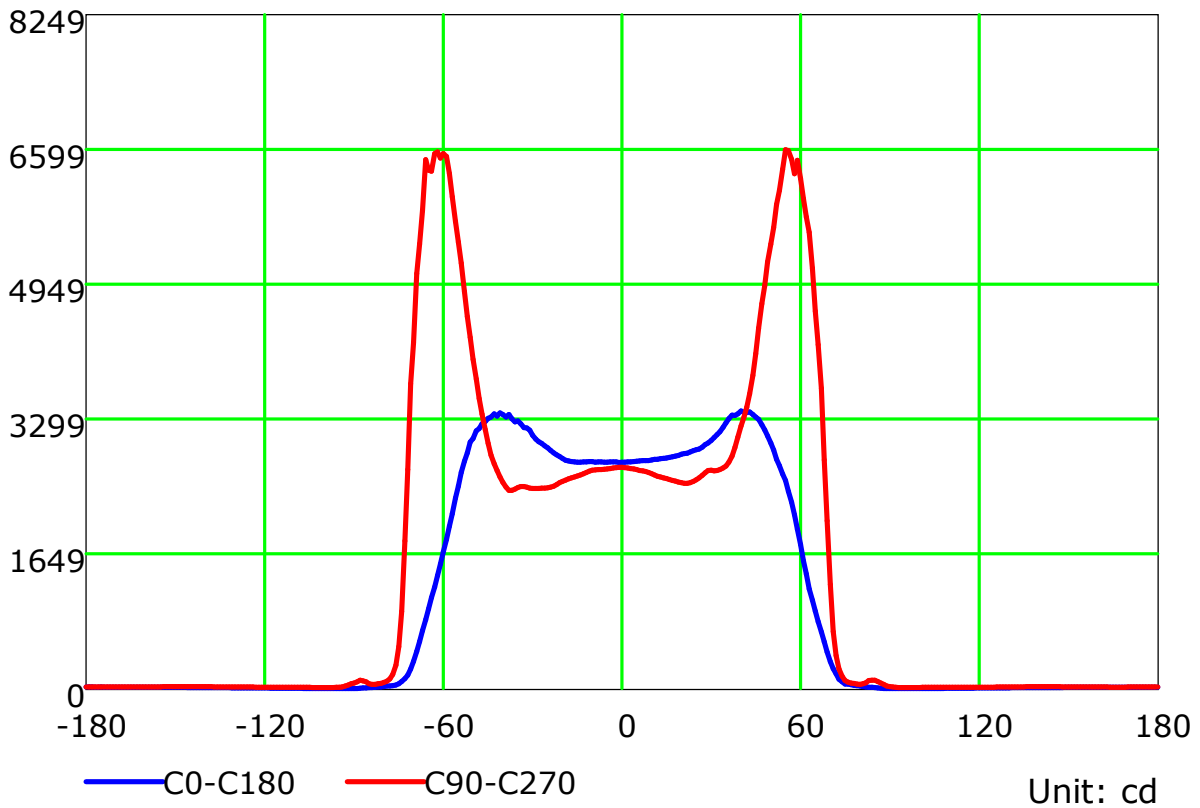
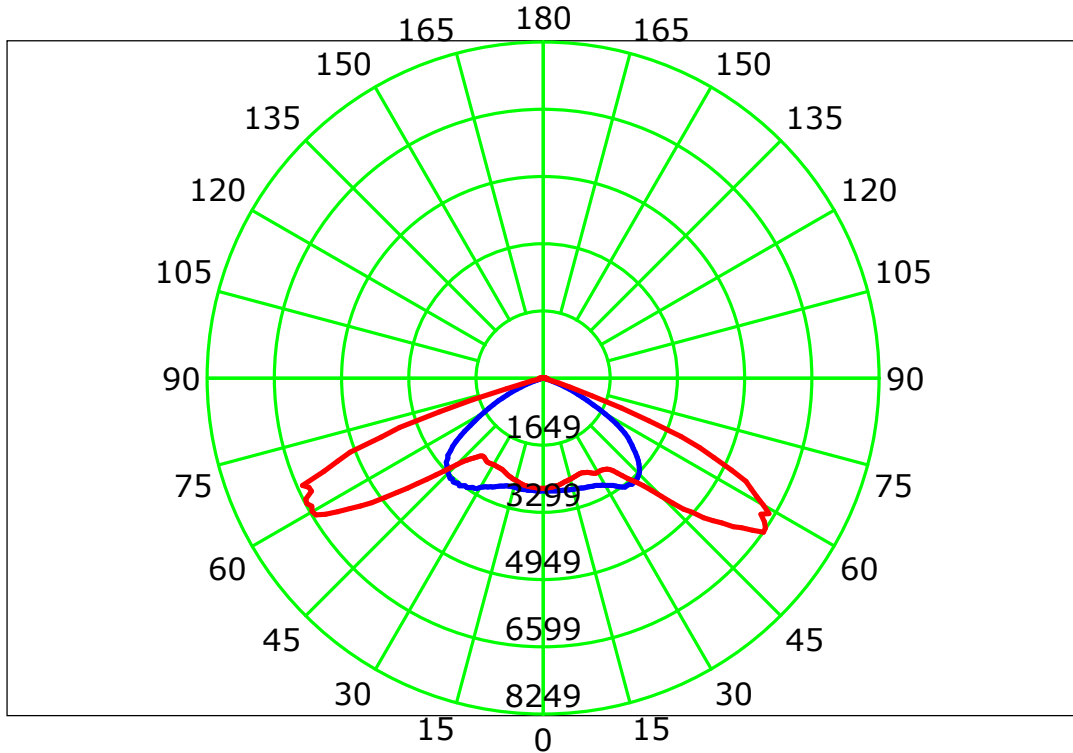
Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:

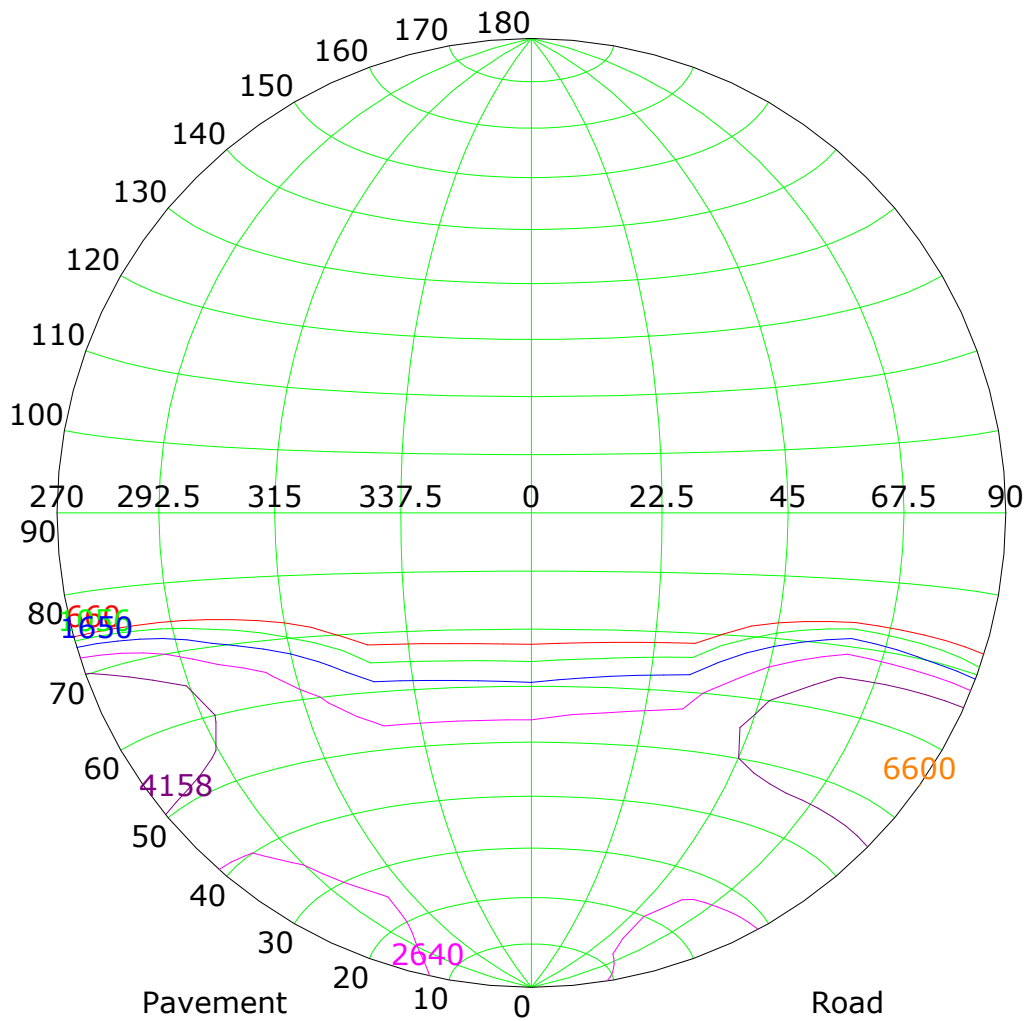
### Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1600  
 Distance: 9.067 m  
 Humidity:  
 Inspector:

### Isocandela (sphere)



Imax (100%): 6600 cd

- |                   |                   |
|-------------------|-------------------|
| — ( 10%): 660 cd  | — ( 16%): 1056 cd |
| — ( 25%): 1650 cd | — ( 40%): 2640 cd |
| — ( 63%): 4158 cd | — (100%): 6600 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

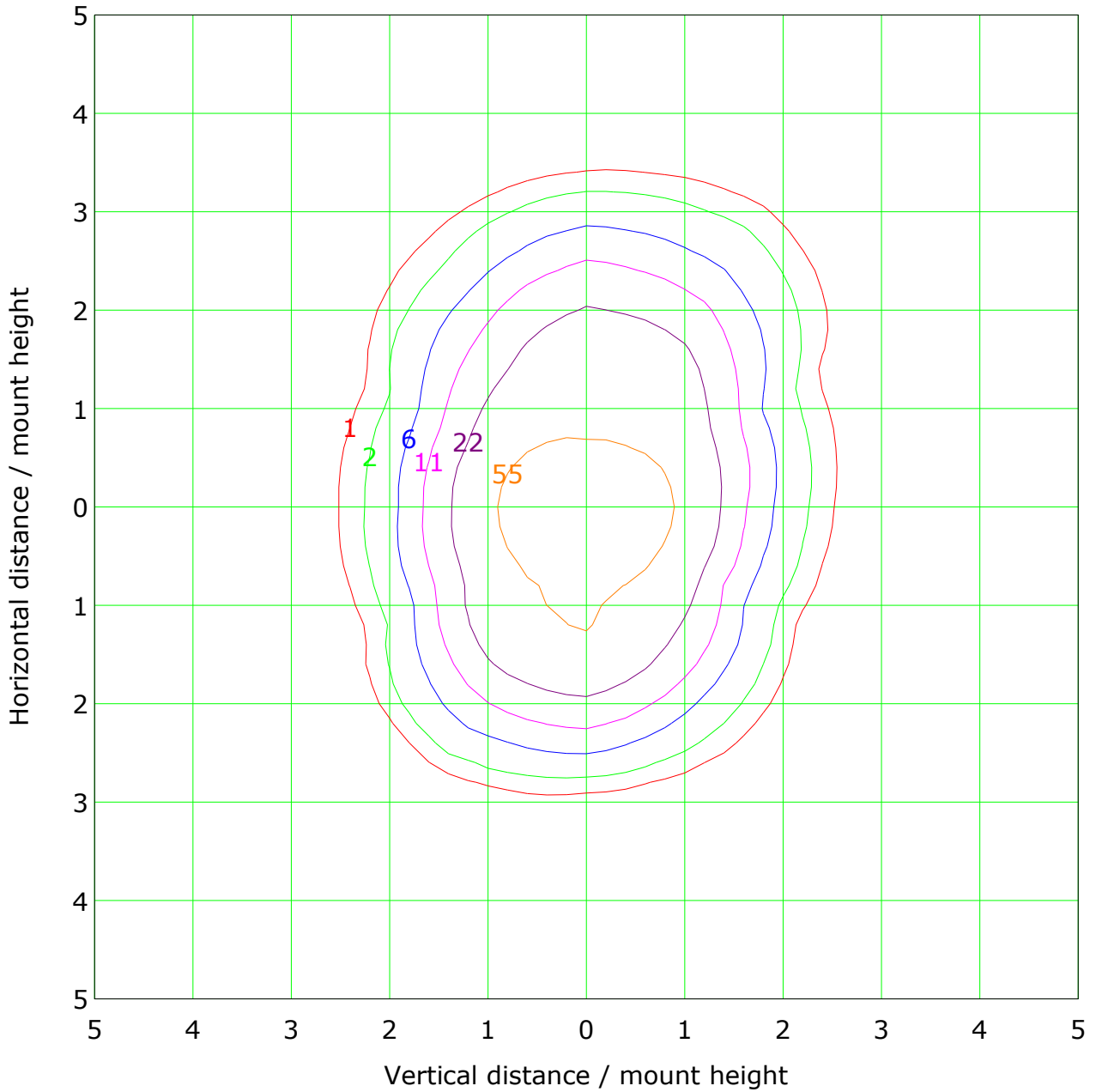
Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:

### IsoLux Plot



Mounting Height: 5.0m		Max Lux(100%): 110.9 lx	
— ( 1%):	1.1 lx	— ( 2%):	2.2 lx
— ( 5%):	5.5 lx	— ( 10%):	11.1 lx
— ( 20%):	22.2 lx	— ( 50%):	55.5 lx
— (100%):	110.9 lx		

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1600

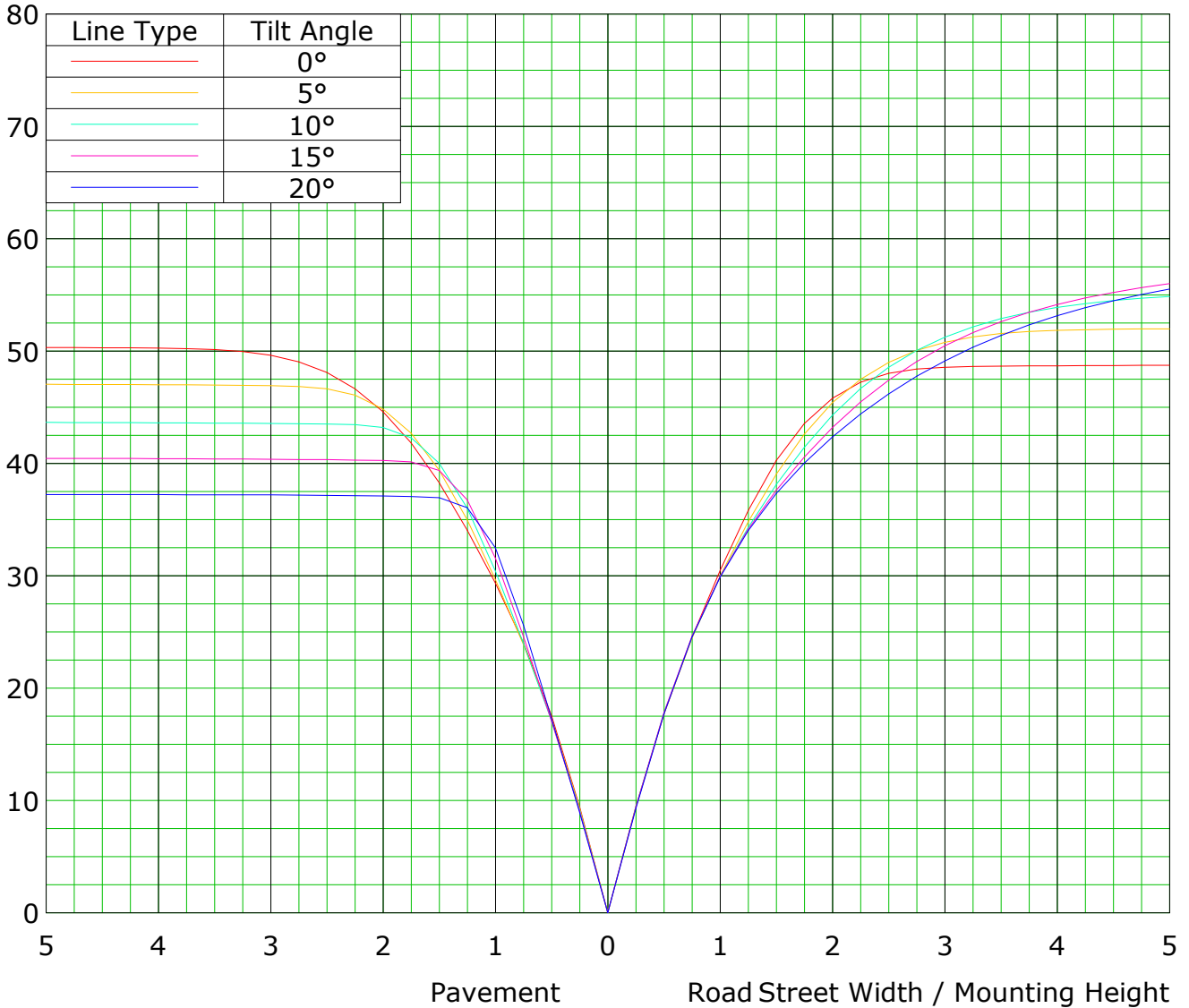
Distance: 9.067 m

Humidity:

Inspector:

## Roadway CU Curve

Efficiency(%)



C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:



## Zonal Lumen

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	2721.5	2.6	2.6	0.02	0.02
1.0-2.0	2721.0	7.8	10.4	0.06	0.08
2.0-3.0	2720.3	13.0	23.4	0.10	0.18
3.0-4.0	2718.7	18.2	41.6	0.14	0.31
4.0-5.0	2716.0	23.4	65.0	0.17	0.49
5.0-6.0	2713.0	28.5	93.5	0.21	0.70
6.0-7.0	2710.5	33.6	127.2	0.25	0.95
7.0-8.0	2708.4	38.8	165.9	0.29	1.24
8.0-9.0	2706.1	43.9	209.8	0.33	1.57
9.0-10.0	2703.7	48.9	258.7	0.37	1.94
10.0-11.0	2700.0	54.0	312.7	0.40	2.34
11.0-12.0	2694.9	58.9	371.6	0.44	2.78
12.0-13.0	2690.1	63.8	435.5	0.48	3.26
13.0-14.0	2685.8	68.8	504.2	0.51	3.77
14.0-15.0	2681.5	73.6	577.8	0.55	4.32
15.0-16.0	2677.4	78.5	656.3	0.59	4.91
16.0-17.0	2673.2	83.3	739.6	0.62	5.53
17.0-18.0	2670.0	88.0	827.6	0.66	6.19
18.0-19.0	2668.7	92.9	920.5	0.69	6.89
19.0-20.0	2668.7	97.7	1018.1	0.73	7.62
20.0-21.0	2670.4	102.6	1120.7	0.77	8.38
21.0-22.0	2673.0	107.4	1228.1	0.80	9.19
22.0-23.0	2676.6	112.3	1340.5	0.84	10.03
23.0-24.0	2682.8	117.3	1457.8	0.88	10.91
24.0-25.0	2692.3	122.4	1580.2	0.92	11.82
25.0-26.0	2705.8	127.7	1707.9	0.96	12.78
26.0-27.0	2724.0	133.3	1841.2	1.00	13.78
27.0-28.0	2745.1	139.0	1980.2	1.04	14.82
28.0-29.0	2766.3	144.8	2125.0	1.08	15.90
29.0-30.0	2788.7	150.6	2275.6	1.13	17.02
30.0-31.0	2810.9	156.4	2432.0	1.17	18.20
31.0-32.0	2832.8	162.3	2594.3	1.21	19.41
32.0-33.0	2854.2	168.2	2762.5	1.26	20.67
33.0-34.0	2878.1	174.2	2936.7	1.30	21.97
34.0-35.0	2905.7	180.5	3117.2	1.35	23.32
35.0-36.0	2931.5	186.7	3303.9	1.40	24.72

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1600  
 Distance: 9.067 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	2962.8	193.3	3497.1	1.45	26.16
37.0-38.0	3000.8	200.3	3697.4	1.50	27.66
38.0-39.0	3037.4	207.3	3904.8	1.55	29.21
39.0-40.0	3082.9	215.0	4119.8	1.61	30.82
40.0-41.0	3133.3	223.1	4343.0	1.67	32.49
41.0-42.0	3176.7	230.8	4573.8	1.73	34.22
42.0-43.0	3224.5	238.9	4812.7	1.79	36.01
43.0-44.0	3277.6	247.4	5060.1	1.85	37.86
44.0-45.0	3336.0	256.4	5316.5	1.92	39.78
45.0-46.0	3402.0	266.1	5582.6	1.99	41.77
46.0-47.0	3471.7	276.2	5858.8	2.07	43.83
47.0-48.0	3538.0	286.0	6144.8	2.14	45.97
48.0-49.0	3604.2	296.0	6440.8	2.21	48.19
49.0-50.0	3660.2	305.2	6746.0	2.28	50.47
50.0-51.0	3703.0	313.3	7059.4	2.34	52.81
51.0-52.0	3746.2	321.5	7380.9	2.41	55.22
52.0-53.0	3789.4	329.7	7710.6	2.47	57.69
53.0-54.0	3833.6	337.9	8048.5	2.53	60.21
54.0-55.0	3866.0	345.1	8393.7	2.58	62.80
55.0-56.0	3874.5	350.2	8743.8	2.62	65.42
56.0-57.0	3854.4	352.5	9096.3	2.64	68.05
57.0-58.0	3817.9	353.1	9449.4	2.64	70.70
58.0-59.0	3773.5	352.8	9802.2	2.64	73.34
59.0-60.0	3691.5	348.8	10151.0	2.61	75.94
60.0-61.0	3567.4	340.5	10491.5	2.55	78.49
61.0-62.0	3435.1	331.1	10822.5	2.48	80.97
62.0-63.0	3277.4	318.8	11141.3	2.39	83.35
63.0-64.0	3071.8	301.5	11442.8	2.26	85.61
64.0-65.0	2857.2	282.8	11725.6	2.12	87.73
65.0-66.0	2665.6	266.0	11991.6	1.99	89.72
66.0-67.0	2441.0	245.5	12237.1	1.84	91.55
67.0-68.0	2158.4	218.7	12455.8	1.64	93.19
68.0-69.0	1856.2	189.4	12645.1	1.42	94.60
69.0-70.0	1536.1	157.8	12802.9	1.18	95.79
70.0-71.0	1220.1	126.1	12929.1	0.94	96.73
71.0-72.0	936.1	97.3	13026.4	0.73	97.46

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1600  
 Distance: 9.067 m  
 Humidity:  
 Inspector:



## Zonal Lumen (Continue 2)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	677.2	70.8	13097.2	0.53	97.99
73.0-74.0	451.2	47.4	13144.7	0.35	98.34
74.0-75.0	281.2	29.7	13174.4	0.22	98.56
75.0-76.0	174.0	18.5	13192.8	0.14	98.70
76.0-77.0	113.9	12.1	13205.0	0.09	98.79
77.0-78.0	79.9	8.6	13213.5	0.06	98.86
78.0-79.0	63.2	6.8	13220.3	0.05	98.91
79.0-80.0	55.3	6.0	13226.3	0.04	98.95
80.0-81.0	50.7	5.5	13231.8	0.04	98.99
81.0-82.0	47.8	5.2	13236.9	0.04	99.03
82.0-83.0	46.1	5.0	13242.0	0.04	99.07
83.0-84.0	44.3	4.8	13246.8	0.04	99.11
84.0-85.0	42.6	4.7	13251.4	0.03	99.14
85.0-86.0	41.6	4.5	13256.0	0.03	99.17
86.0-87.0	39.8	4.4	13260.3	0.03	99.21
87.0-88.0	37.1	4.1	13264.4	0.03	99.24
88.0-89.0	32.9	3.6	13268.0	0.03	99.26
89.0-90.0	27.9	3.1	13271.1	0.02	99.29
90.0-91.0	23.6	2.6	13273.7	0.02	99.31
91.0-92.0	19.6	2.1	13275.8	0.02	99.32
92.0-93.0	15.7	1.7	13277.5	0.01	99.34
93.0-94.0	12.3	1.3	13278.9	0.01	99.35
94.0-95.0	10.1	1.1	13280.0	0.01	99.35
95.0-96.0	9.0	1.0	13280.9	0.01	99.36
96.0-97.0	8.5	0.9	13281.9	0.01	99.37
97.0-98.0	8.3	0.9	13282.8	0.01	99.38
98.0-99.0	8.3	0.9	13283.7	0.01	99.38
99.0-100.0	8.6	0.9	13284.6	0.01	99.39
100.0-101.0	8.9	1.0	13285.6	0.01	99.40
101.0-102.0	9.4	1.0	13286.6	0.01	99.40
102.0-103.0	9.8	1.0	13287.6	0.01	99.41
103.0-104.0	10.1	1.1	13288.7	0.01	99.42
104.0-105.0	10.4	1.1	13289.8	0.01	99.43
105.0-106.0	10.9	1.2	13290.9	0.01	99.44
106.0-107.0	11.4	1.2	13292.1	0.01	99.45
107.0-108.0	11.6	1.2	13293.4	0.01	99.45

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1600  
 Distance: 9.067 m  
 Humidity:  
 Inspector:

### Zonal Lumen (Continue 3)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	11.8	1.2	13294.6	0.01	99.46
109.0-110.0	12.0	1.2	13295.8	0.01	99.47
110.0-111.0	12.2	1.3	13297.1	0.01	99.48
111.0-112.0	12.4	1.3	13298.3	0.01	99.49
112.0-113.0	12.6	1.3	13299.6	0.01	99.50
113.0-114.0	12.8	1.3	13300.9	0.01	99.51
114.0-115.0	13.1	1.3	13302.2	0.01	99.52
115.0-116.0	13.3	1.3	13303.5	0.01	99.53
116.0-117.0	13.5	1.3	13304.8	0.01	99.54
117.0-118.0	13.8	1.3	13306.2	0.01	99.55
118.0-119.0	14.0	1.4	13307.5	0.01	99.56
119.0-120.0	14.3	1.4	13308.9	0.01	99.57
120.0-121.0	14.5	1.4	13310.3	0.01	99.58
121.0-122.0	14.8	1.4	13311.7	0.01	99.59
122.0-123.0	15.1	1.4	13313.0	0.01	99.60
123.0-124.0	15.2	1.4	13314.4	0.01	99.61
124.0-125.0	15.4	1.4	13315.8	0.01	99.62
125.0-126.0	15.6	1.4	13317.2	0.01	99.63
126.0-127.0	15.9	1.4	13318.6	0.01	99.64
127.0-128.0	16.1	1.4	13320.0	0.01	99.65
128.0-129.0	16.4	1.4	13321.4	0.01	99.66
129.0-130.0	16.7	1.4	13322.8	0.01	99.67
130.0-131.0	17.0	1.4	13324.3	0.01	99.69
131.0-132.0	17.2	1.4	13325.7	0.01	99.70
132.0-133.0	17.5	1.4	13327.1	0.01	99.71
133.0-134.0	17.9	1.4	13328.5	0.01	99.72
134.0-135.0	18.2	1.4	13329.9	0.01	99.73
135.0-136.0	18.5	1.4	13331.4	0.01	99.74
136.0-137.0	18.8	1.4	13332.8	0.01	99.75
137.0-138.0	19.0	1.4	13334.2	0.01	99.76
138.0-139.0	19.3	1.4	13335.6	0.01	99.77
139.0-140.0	19.6	1.4	13337.0	0.01	99.78
140.0-141.0	19.8	1.4	13338.4	0.01	99.79
141.0-142.0	20.0	1.4	13339.7	0.01	99.80
142.0-143.0	20.3	1.4	13341.1	0.01	99.81
143.0-144.0	20.5	1.3	13342.4	0.01	99.82

C Plane (°):0.0-360.0: 10.0  
 Test Lab: Test  
 Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1600  
 Distance: 9.067 m  
 Humidity:  
 Inspector:

### Zonal Lumen (Continue 4)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
144.0-145.0	20.5	1.3	13343.7	0.01	99.83
145.0-146.0	20.4	1.3	13345.0	0.01	99.84
146.0-147.0	20.5	1.2	13346.2	0.01	99.85
147.0-148.0	20.4	1.2	13347.4	0.01	99.86
148.0-149.0	20.4	1.2	13348.6	0.01	99.87
149.0-150.0	20.4	1.1	13349.7	0.01	99.88
150.0-151.0	20.3	1.1	13350.8	0.01	99.88
151.0-152.0	20.4	1.1	13351.9	0.01	99.89
152.0-153.0	20.4	1.0	13352.9	0.01	99.90
153.0-154.0	20.2	1.0	13353.9	0.01	99.91
154.0-155.0	20.0	0.9	13354.9	0.01	99.91
155.0-156.0	19.9	0.9	13355.8	0.01	99.92
156.0-157.0	19.8	0.9	13356.6	0.01	99.93
157.0-158.0	19.7	0.8	13357.5	0.01	99.93
158.0-159.0	19.6	0.8	13358.3	0.01	99.94
159.0-160.0	19.5	0.7	13359.0	0.01	99.95
160.0-161.0	19.4	0.7	13359.7	0.01	99.95
161.0-162.0	19.3	0.7	13360.4	0.01	99.96
162.0-163.0	19.3	0.6	13361.0	0.00	99.96
163.0-164.0	19.2	0.6	13361.6	0.00	99.97
164.0-165.0	19.3	0.6	13362.2	0.00	99.97
165.0-166.0	19.3	0.5	13362.7	0.00	99.97
166.0-167.0	19.3	0.5	13363.2	0.00	99.98
167.0-168.0	19.1	0.5	13363.7	0.00	99.98
168.0-169.0	19.0	0.4	13364.1	0.00	99.98
169.0-170.0	19.0	0.4	13364.5	0.00	99.99
170.0-171.0	19.1	0.3	13364.8	0.00	99.99
171.0-172.0	19.2	0.3	13365.1	0.00	99.99
172.0-173.0	19.2	0.3	13365.4	0.00	99.99
173.0-174.0	19.2	0.2	13365.6	0.00	100.00
174.0-175.0	19.3	0.2	13365.8	0.00	100.00
175.0-176.0	19.3	0.2	13366.0	0.00	100.00
176.0-177.0	19.2	0.1	13366.1	0.00	100.00
177.0-178.0	19.3	0.1	13366.2	0.00	100.00
178.0-179.0	19.5	0.1	13366.3	0.00	100.00
179.0-180.0	19.6	0.0	13366.3	0.00	100.00

C Plane (°):0.0-360.0: 10.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature:  
 Operator:

Gamma Plane (°):0.0-180.0:1.0  
 Test Device: GPM-1600  
 Distance: 9.067 m  
 Humidity:  
 Inspector: