

Report No.:

Test Time: 2014-08-28 17:23

Luminaire Property

Luminaire Manufacturer:

Luminaire Category: LED STREETLIGHT

Lamp Catalog: HIGH POWER COB

Voltage: 231.4 V

Power: 186.90 W

Luminaire Description: 03

Lamp Description: 180W

Current: 0.856 A

Power Factor: 0.976

Photometric Results

IES Classification: Type IV

Total Rated Lamp Lumens: 14608.7 lm

Efficiency: 100%

Upward Ratio: 1%

Central Intensity: 2644.39 cd

Pos of Max. Intensity: H270 V60

Longitudinal Classification: Very Short

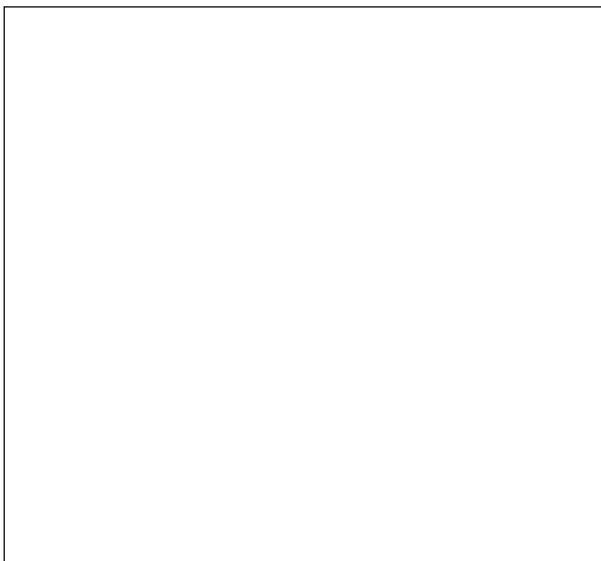
Measurement Flux: 14608.7 lm

Downward Ratio: 99%

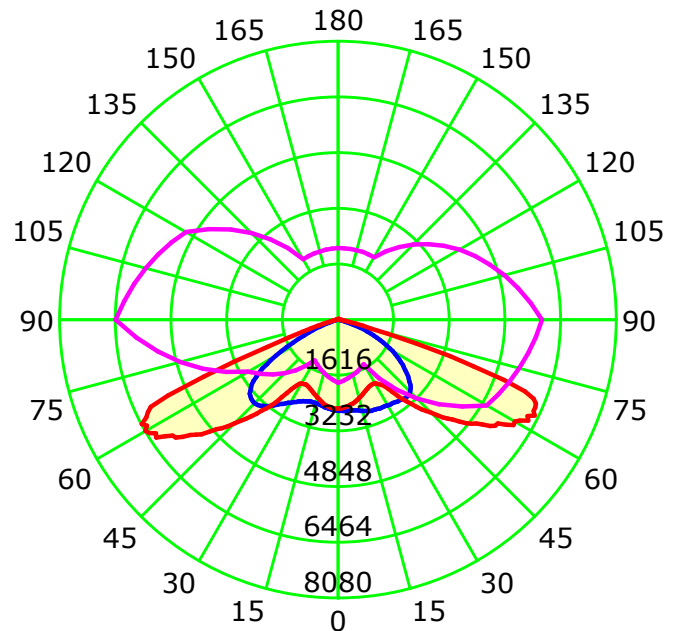
Luminaire Efficacy Rating (LER): 78

Max. Intensity: 6464.5 cd

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

— C0-C180 — C90-C270 — G60

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

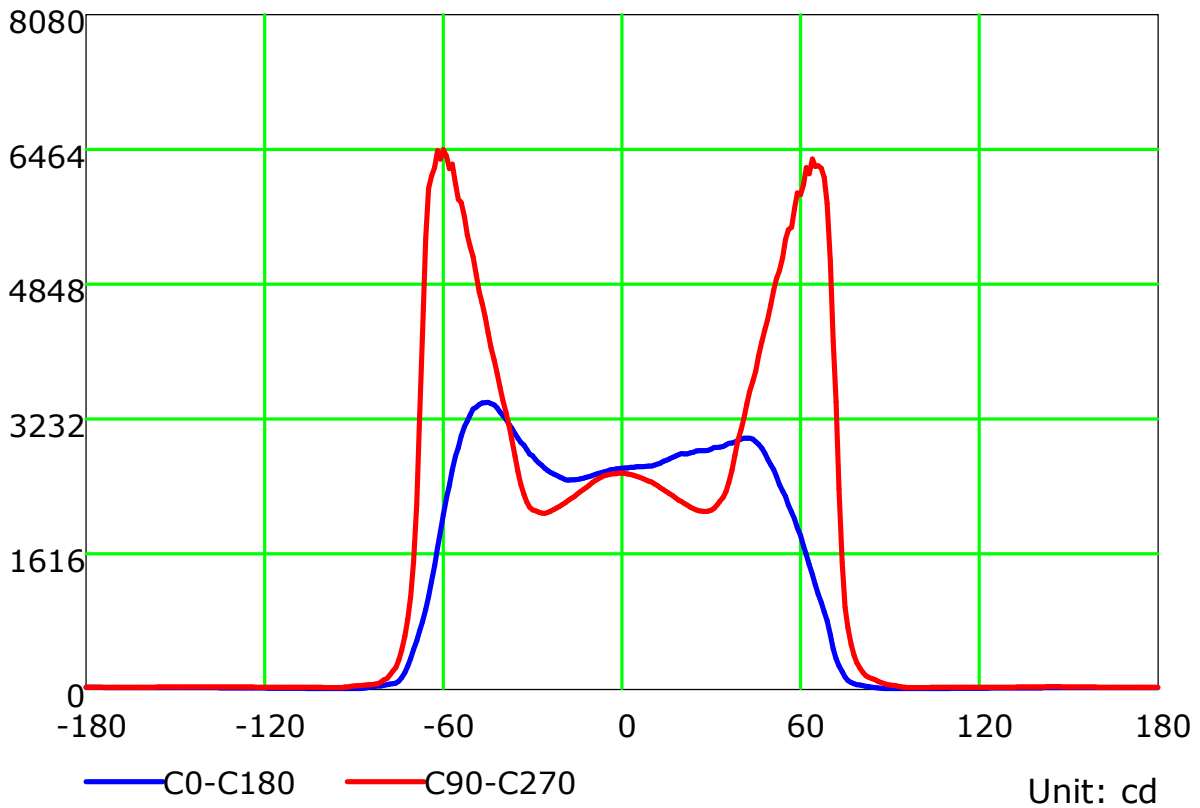
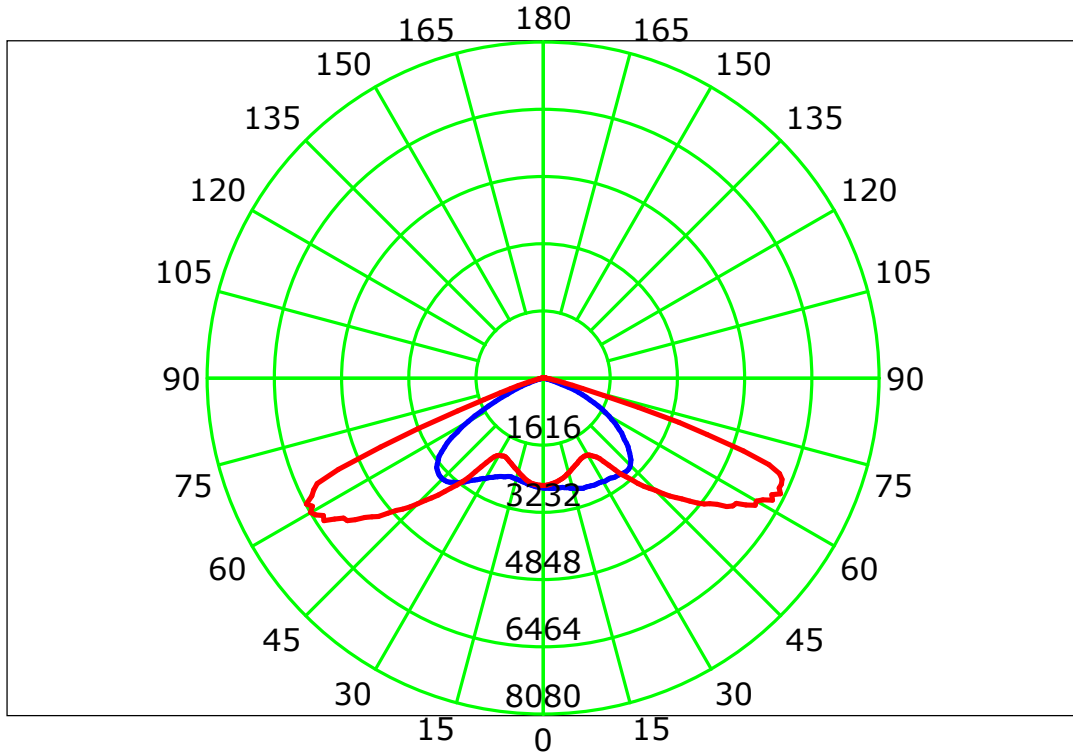
Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:

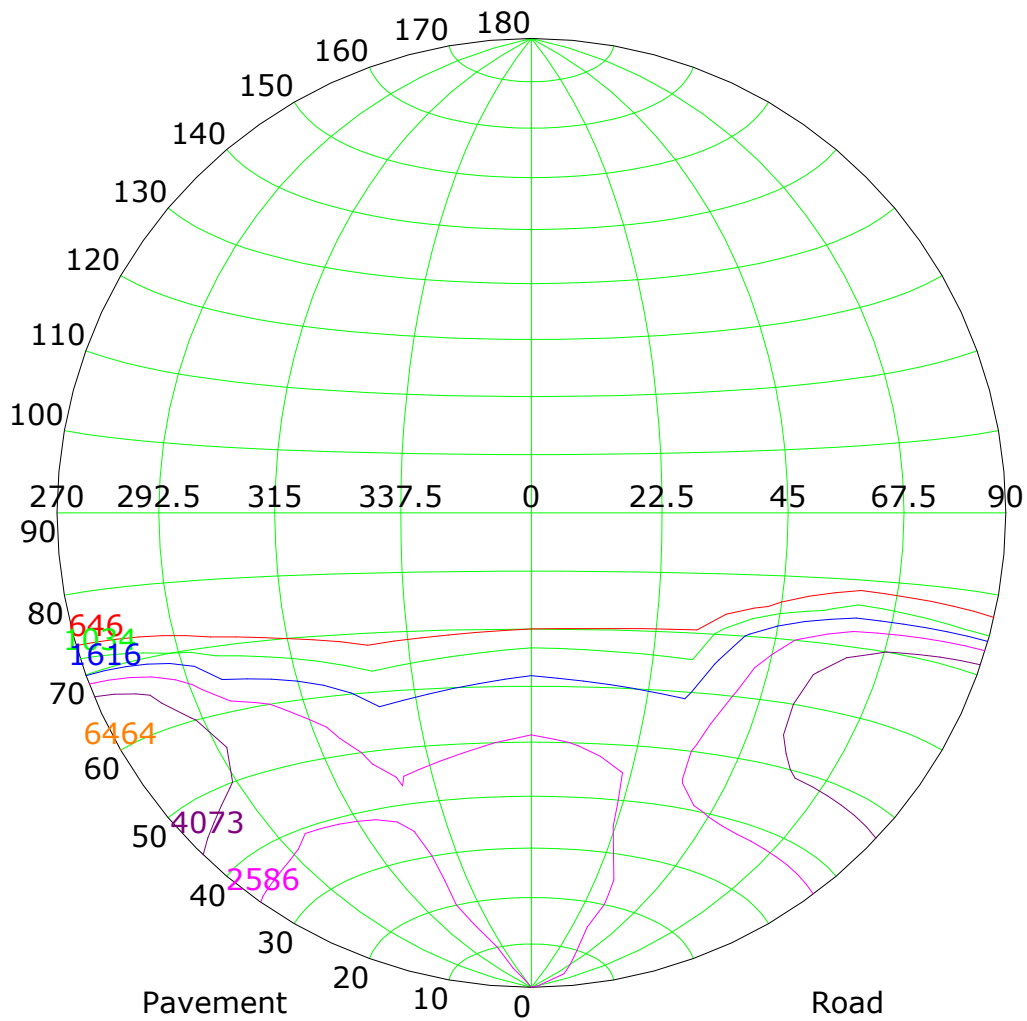
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0
 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%): 6464 cd

- | | |
|-------------------|-------------------|
| — (10%): 646 cd | — (16%): 1034 cd |
| — (25%): 1616 cd | — (40%): 2586 cd |
| — (63%): 4073 cd | — (100%): 6464 cd |

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

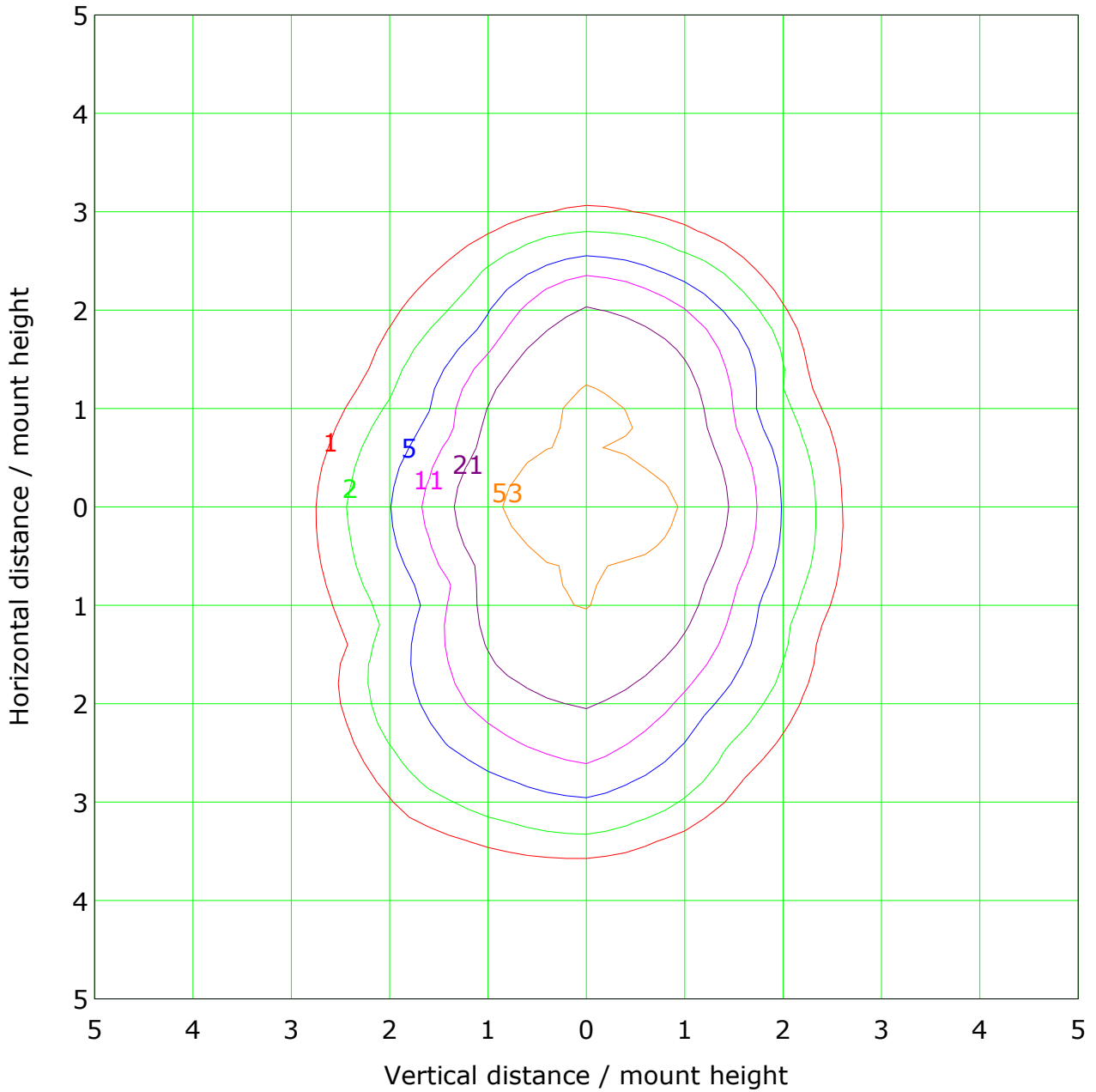
Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 5.0m		Max Lux(100%): 105.9 lx	
— (1%):	1.1 lx	— (2%):	2.1 lx
— (5%):	5.3 lx	— (10%):	10.6 lx
— (20%):	21.2 lx	— (50%):	52.9 lx
— (100%):	105.9 lx		

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1600

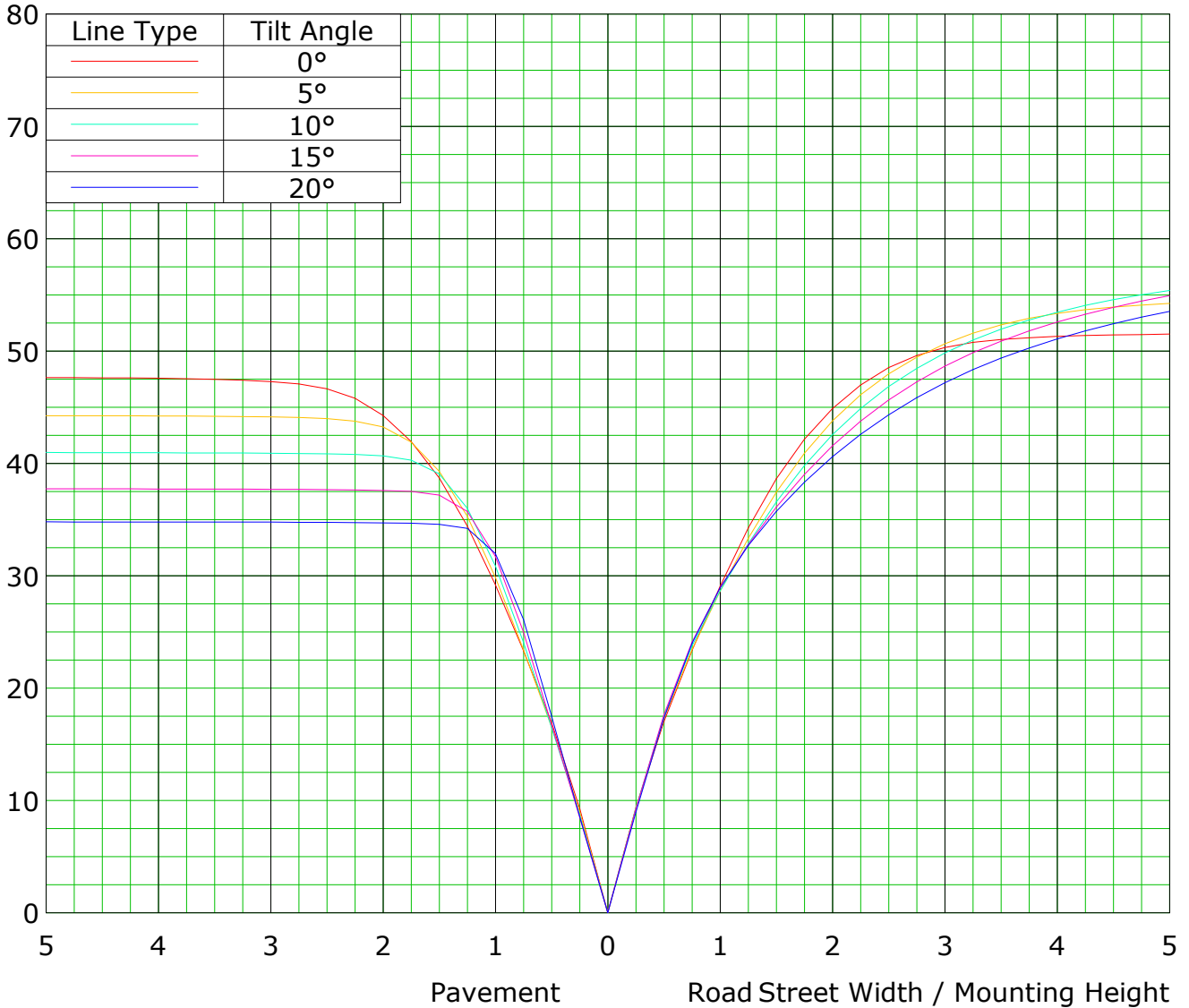
Distance: 9.067 m

Humidity:

Inspector:

Roadway CU Curve

Efficiency(%)



C Plane (°):0.0-360.0: 30.0

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 [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	2597.0	2.5	2.5	0.02	0.02
1.0-2.0	2595.6	7.5	9.9	0.06	0.08
2.0-3.0	2592.7	12.4	22.3	0.10	0.18
3.0-4.0	2588.2	17.3	39.7	0.14	0.31
4.0-5.0	2582.5	22.2	61.9	0.18	0.49
5.0-6.0	2575.2	27.1	89.0	0.21	0.71
6.0-7.0	2566.1	31.9	120.8	0.25	0.96
7.0-8.0	2555.6	36.6	157.4	0.29	1.25
8.0-9.0	2544.3	41.2	198.6	0.33	1.58
9.0-10.0	2531.6	45.8	244.4	0.36	1.94
10.0-11.0	2517.6	50.3	294.8	0.40	2.34
11.0-12.0	2503.9	54.7	349.5	0.43	2.77
12.0-13.0	2490.6	59.1	408.6	0.47	3.24
13.0-14.0	2476.8	63.4	472.0	0.50	3.74
14.0-15.0	2463.0	67.6	539.7	0.54	4.28
15.0-16.0	2449.2	71.8	611.4	0.57	4.85
16.0-17.0	2437.3	75.9	687.3	0.60	5.45
17.0-18.0	2426.3	80.0	767.3	0.63	6.09
18.0-19.0	2415.5	84.1	851.4	0.67	6.75
19.0-20.0	2406.3	88.1	939.5	0.70	7.45
20.0-21.0	2397.4	92.1	1031.5	0.73	8.18
21.0-22.0	2389.1	96.0	1127.6	0.76	8.94
22.0-23.0	2381.2	99.9	1227.5	0.79	9.74
23.0-24.0	2374.4	103.8	1331.3	0.82	10.56
24.0-25.0	2370.1	107.8	1439.1	0.85	11.41
25.0-26.0	2368.1	111.8	1550.9	0.89	12.30
26.0-27.0	2368.5	115.9	1666.8	0.92	13.22
27.0-28.0	2371.7	120.1	1786.9	0.95	14.17
28.0-29.0	2377.6	124.4	1911.3	0.99	15.16
29.0-30.0	2387.2	128.9	2040.2	1.02	16.18
30.0-31.0	2399.8	133.6	2173.8	1.06	17.24
31.0-32.0	2418.0	138.5	2312.3	1.10	18.34
32.0-33.0	2442.4	143.9	2456.2	1.14	19.48
33.0-34.0	2470.7	149.5	2605.8	1.19	20.67
34.0-35.0	2506.4	155.7	2761.4	1.23	21.90
35.0-36.0	2553.2	162.6	2924.0	1.29	23.19

C Plane (°):0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
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Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600
 Distance: 9.067 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 [%]
36.0-37.0	2611.3	170.3	3094.4	1.35	24.54
37.0-38.0	2676.9	178.7	3273.1	1.42	25.96
38.0-39.0	2746.5	187.5	3460.6	1.49	27.45
39.0-40.0	2817.9	196.6	3657.1	1.56	29.00
40.0-41.0	2892.6	206.0	3863.1	1.63	30.64
41.0-42.0	2973.2	216.0	4079.2	1.71	32.35
42.0-43.0	3052.4	226.1	4305.3	1.79	34.15
43.0-44.0	3124.7	235.9	4541.2	1.87	36.02
44.0-45.0	3195.8	245.6	4786.8	1.95	37.96
45.0-46.0	3272.3	255.9	5042.8	2.03	39.99
46.0-47.0	3345.7	266.1	5308.9	2.11	42.11
47.0-48.0	3404.2	275.2	5584.1	2.18	44.29
48.0-49.0	3454.5	283.7	5867.8	2.25	46.54
49.0-50.0	3506.9	292.4	6160.3	2.32	48.86
50.0-51.0	3551.0	300.5	6460.8	2.38	51.24
51.0-52.0	3580.0	307.2	6768.0	2.44	53.68
52.0-53.0	3602.3	313.4	7081.4	2.49	56.16
53.0-54.0	3619.3	319.0	7400.4	2.53	58.69
54.0-55.0	3619.1	323.1	7723.5	2.56	61.26
55.0-56.0	3605.8	325.9	8049.4	2.58	63.84
56.0-57.0	3584.2	327.8	8377.2	2.60	66.44
57.0-58.0	3539.4	327.3	8704.5	2.60	69.04
58.0-59.0	3486.3	326.0	9030.5	2.59	71.62
59.0-60.0	3418.9	323.0	9353.5	2.56	74.18
60.0-61.0	3316.5	316.5	9670.1	2.51	76.69
61.0-62.0	3215.0	309.8	9979.9	2.46	79.15
62.0-63.0	3091.4	300.7	10280.6	2.38	81.54
63.0-64.0	2949.6	289.5	10570.1	2.30	83.83
64.0-65.0	2802.6	277.4	10847.5	2.20	86.03
65.0-66.0	2617.7	261.2	11108.7	2.07	88.10
66.0-67.0	2384.0	239.7	11348.4	1.90	90.00
67.0-68.0	2122.0	215.0	11563.4	1.71	91.71
68.0-69.0	1851.7	188.9	11752.4	1.50	93.21
69.0-70.0	1578.2	162.1	12914.5	1.29	94.49
70.0-71.0	1314.5	135.9	12050.4	1.08	95.57
71.0-72.0	1074.0	111.7	12162.0	0.89	96.46

C Plane (°):0.0-360.0: 30.0
 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 _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	844.5	88.3	13250.4	0.70	97.16
73.0-74.0	622.4	65.4	13315.8	0.52	97.68
74.0-75.0	450.1	47.6	13363.4	0.38	98.05
75.0-76.0	331.3	35.2	14398.5	0.28	98.33
76.0-77.0	250.7	26.7	14425.3	0.21	98.55
77.0-78.0	190.9	20.4	14445.7	0.16	98.71
78.0-79.0	146.5	15.7	14461.5	0.12	98.83
79.0-80.0	115.5	12.5	14473.9	0.10	98.93
80.0-81.0	92.0	10.0	14483.9	0.08	99.01
81.0-82.0	72.9	7.9	14491.8	0.06	99.07
82.0-83.0	59.2	6.4	14498.2	0.05	99.12
83.0-84.0	49.9	5.4	14503.6	0.04	99.17
84.0-85.0	43.1	4.7	14508.3	0.04	99.20
85.0-86.0	37.6	4.1	14512.5	0.03	99.24
86.0-87.0	32.6	3.6	14516.0	0.03	99.27
87.0-88.0	28.5	3.1	14519.2	0.02	99.29
88.0-89.0	25.0	2.7	14521.9	0.02	99.31
89.0-90.0	21.8	2.4	14524.3	0.02	99.33
90.0-91.0	18.9	2.1	14526.4	0.02	99.35
91.0-92.0	16.0	1.8	14528.1	0.01	99.36
92.0-93.0	13.3	1.5	14529.6	0.01	99.37
93.0-94.0	11.0	1.2	14530.8	0.01	99.38
94.0-95.0	9.3	1.0	14531.8	0.01	99.39
95.0-96.0	8.4	0.9	14532.7	0.01	99.40
96.0-97.0	8.0	0.9	14533.6	0.01	99.40
97.0-98.0	7.9	0.9	14534.4	0.01	99.41
98.0-99.0	7.9	0.9	14535.3	0.01	99.42
99.0-100.0	8.1	0.9	14536.2	0.01	99.42
100.0-101.0	8.4	0.9	14537.1	0.01	99.43
101.0-102.0	8.6	0.9	14538.0	0.01	99.44
102.0-103.0	8.9	1.0	14539.0	0.01	99.45
103.0-104.0	9.2	1.0	14539.9	0.01	99.45
104.0-105.0	9.5	1.0	14540.9	0.01	99.46
105.0-106.0	9.8	1.0	14542.0	0.01	99.47
106.0-107.0	10.1	1.1	14543.0	0.01	99.48
107.0-108.0	10.5	1.1	14544.1	0.01	99.49

C Plane (°):0.0-360.0: 30.0
 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 _{mean} [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	10.7	1.1	14545.3	0.01	99.50
109.0-110.0	11.0	1.1	14546.4	0.01	99.51
110.0-111.0	11.2	1.2	14547.5	0.01	99.52
111.0-112.0	11.4	1.2	14548.7	0.01	99.52
112.0-113.0	11.6	1.2	14549.9	0.01	99.53
113.0-114.0	11.8	1.2	14551.1	0.01	99.54
114.0-115.0	12.0	1.2	14552.3	0.01	99.55
115.0-116.0	12.1	1.2	14553.5	0.01	99.56
116.0-117.0	12.3	1.2	14554.7	0.01	99.57
117.0-118.0	12.5	1.2	14555.9	0.01	99.58
118.0-119.0	12.7	1.2	14557.1	0.01	99.59
119.0-120.0	12.9	1.2	14558.4	0.01	99.60
120.0-121.0	13.0	1.2	14559.6	0.01	99.61
121.0-122.0	13.3	1.2	14560.8	0.01	99.62
122.0-123.0	13.5	1.2	14562.1	0.01	99.63
123.0-124.0	13.7	1.2	14563.3	0.01	99.64
124.0-125.0	13.9	1.3	14564.6	0.01	99.65
125.0-126.0	14.1	1.3	14565.8	0.01	99.66
126.0-127.0	14.2	1.3	14567.1	0.01	99.67
127.0-128.0	14.4	1.3	14568.3	0.01	99.68
128.0-129.0	14.7	1.3	14569.6	0.01	99.69
129.0-130.0	14.9	1.3	14570.9	0.01	99.70
130.0-131.0	15.1	1.3	14572.1	0.01	99.71
131.0-132.0	15.3	1.3	14573.4	0.01	99.72
132.0-133.0	15.6	1.3	14574.6	0.01	99.73
133.0-134.0	15.8	1.3	14575.9	0.01	99.74
134.0-135.0	16.1	1.3	14577.1	0.01	99.75
135.0-136.0	16.3	1.3	14578.4	0.01	99.76
136.0-137.0	16.6	1.3	14579.6	0.01	99.77
137.0-138.0	16.8	1.2	14580.9	0.01	99.78
138.0-139.0	17.1	1.2	14582.1	0.01	99.79
139.0-140.0	17.2	1.2	14583.4	0.01	99.80
140.0-141.0	17.4	1.2	14584.6	0.01	99.81
141.0-142.0	17.6	1.2	14585.8	0.01	99.82
142.0-143.0	17.7	1.2	14587.0	0.01	99.83
143.0-144.0	17.8	1.2	14588.1	0.01	99.84

C Plane (°):0.0-360.0: 30.0
 Test Lab:
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Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600
 Distance: 9.067 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 [%]
144.0-145.0	17.8	1.1	14589.3	0.01	99.85
145.0-146.0	17.9	1.1	14590.4	0.01	99.85
146.0-147.0	17.9	1.1	14591.4	0.01	99.86
147.0-148.0	17.9	1.1	14592.5	0.01	99.87
148.0-149.0	17.9	1.0	14593.5	0.01	99.88
149.0-150.0	17.8	1.0	14594.5	0.01	99.89
150.0-151.0	17.8	1.0	14595.5	0.01	99.90
151.0-152.0	17.7	0.9	14596.4	0.01	99.90
152.0-153.0	17.6	0.9	14597.3	0.01	99.91
153.0-154.0	17.5	0.9	14598.1	0.01	99.92
154.0-155.0	17.4	0.8	14599.0	0.01	99.92
155.0-156.0	17.3	0.8	14599.8	0.01	99.93
156.0-157.0	17.1	0.7	14600.5	0.01	99.94
157.0-158.0	17.0	0.7	14601.2	0.01	99.94
158.0-159.0	16.9	0.7	14601.9	0.01	99.95
159.0-160.0	16.8	0.6	14602.5	0.01	99.95
160.0-161.0	16.7	0.6	14603.2	0.00	99.96
161.0-162.0	16.6	0.6	14603.7	0.00	99.96
162.0-163.0	16.4	0.5	14604.3	0.00	99.97
163.0-164.0	16.3	0.5	14604.8	0.00	99.97
164.0-165.0	16.2	0.5	14605.3	0.00	99.97
165.0-166.0	16.1	0.4	14605.7	0.00	99.98
166.0-167.0	16.1	0.4	14606.1	0.00	99.98
167.0-168.0	16.0	0.4	14606.5	0.00	99.98
168.0-169.0	15.9	0.3	14606.8	0.00	99.99
169.0-170.0	16.0	0.3	14607.2	0.00	99.99
170.0-171.0	15.9	0.3	14607.5	0.00	99.99
171.0-172.0	15.8	0.3	14607.7	0.00	99.99
172.0-173.0	15.9	0.2	14607.9	0.00	99.99
173.0-174.0	15.9	0.2	14608.1	0.00	100.00
174.0-175.0	15.9	0.2	14608.3	0.00	100.00
175.0-176.0	15.9	0.1	14608.4	0.00	100.00
176.0-177.0	16.0	0.1	14608.5	0.00	100.00
177.0-178.0	16.0	0.1	14608.6	0.00	100.00
178.0-179.0	16.0	0.0	14608.7	0.00	100.00
179.0-180.0	16.0	0.0	14608.7	0.00	100.00

C Plane (°):0.0-360.0: 30.0
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Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-1600
 Distance: 9.067 m
 Humidity:
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