

Report No.:

Test Time: 2014-08-25 11:25

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category: LED STREET LIGHT

Lamp Catalog: HIGH POWER COB

Voltage: 230.3 V

Power: 53.00 W

Luminaire Description: 03

Lamp Description: 50W

Current: 0.234 A

Power Factor: 0.982

## Photometric Results

IES Classification: Type III

Total Rated Lamp Lumens: 4205.8 lm

Efficiency: 100%

Upward Ratio: 0%

Central Intensity: 827.66 cd

Pos of Max. Intensity: H90 V55

Longitudinal Classification: Very Short

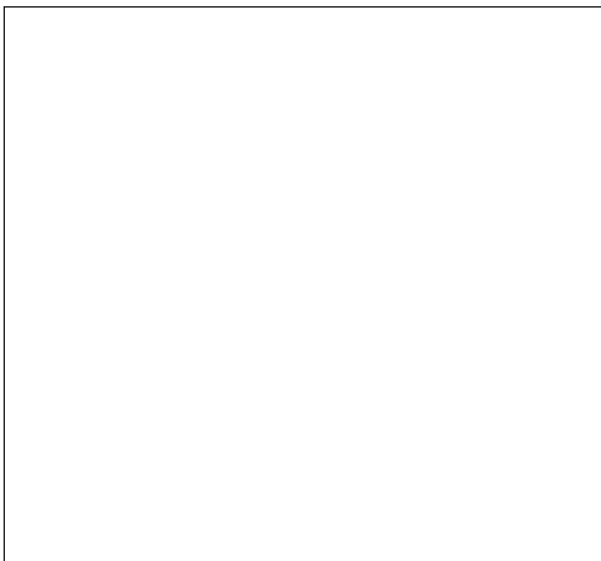
Measurement Flux: 4205.8 lm

Downward Ratio: 100%

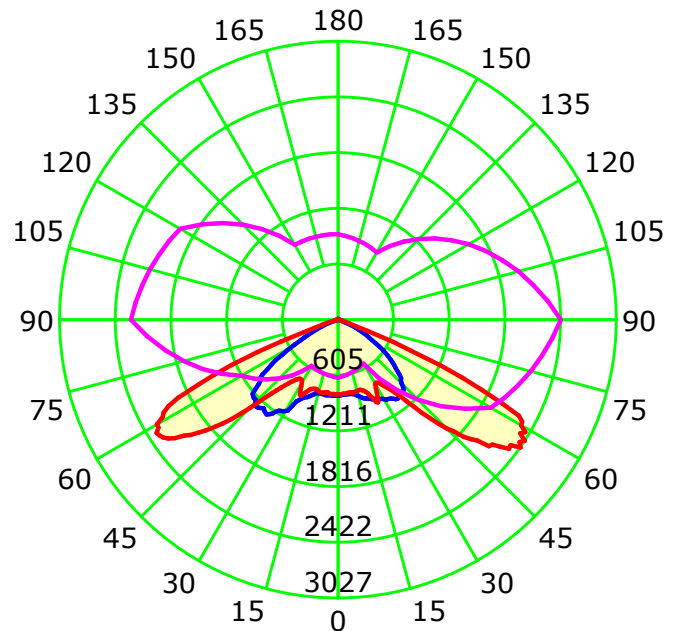
Luminaire Efficacy Rating (LER): 79

Max. Intensity: 2422.4 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

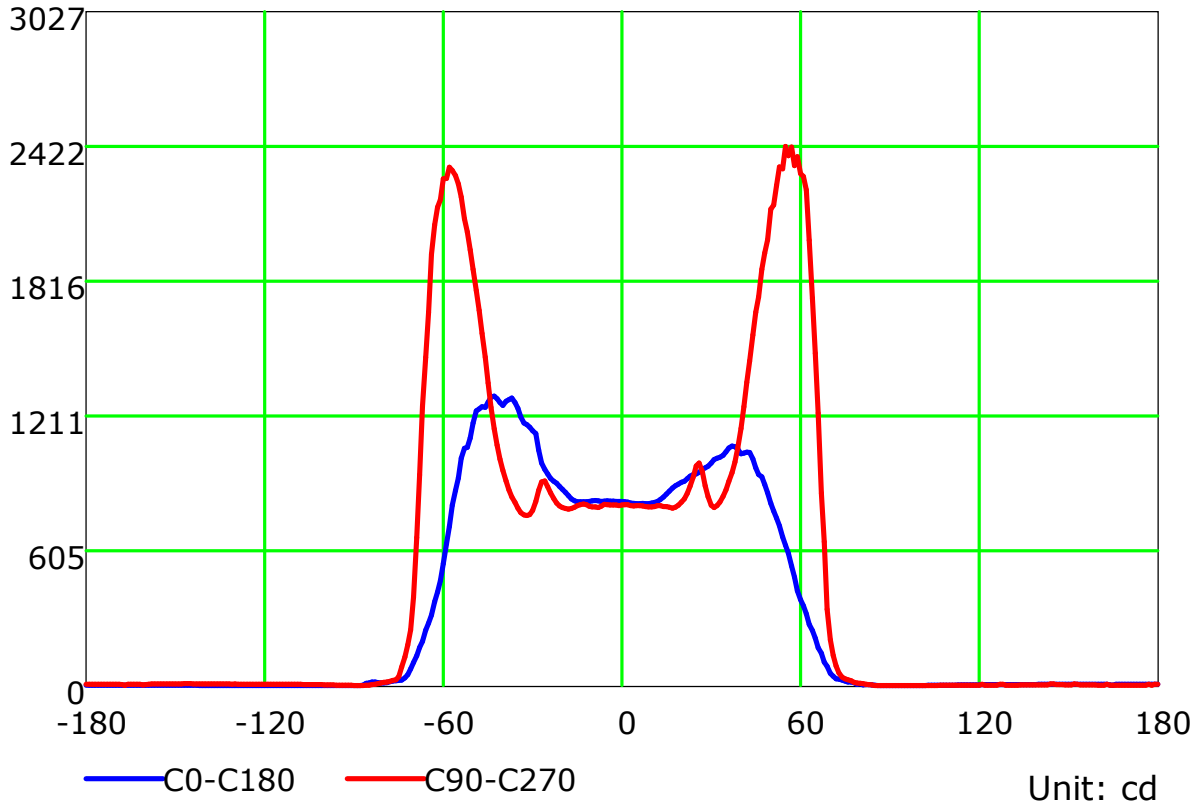
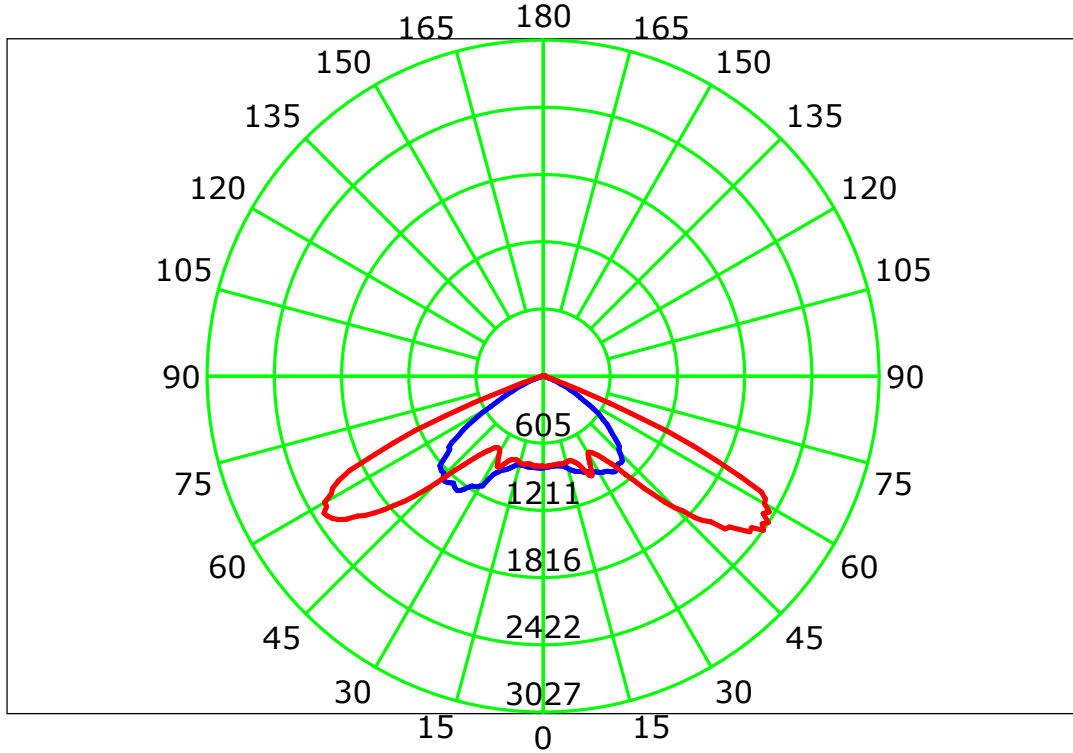
Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:

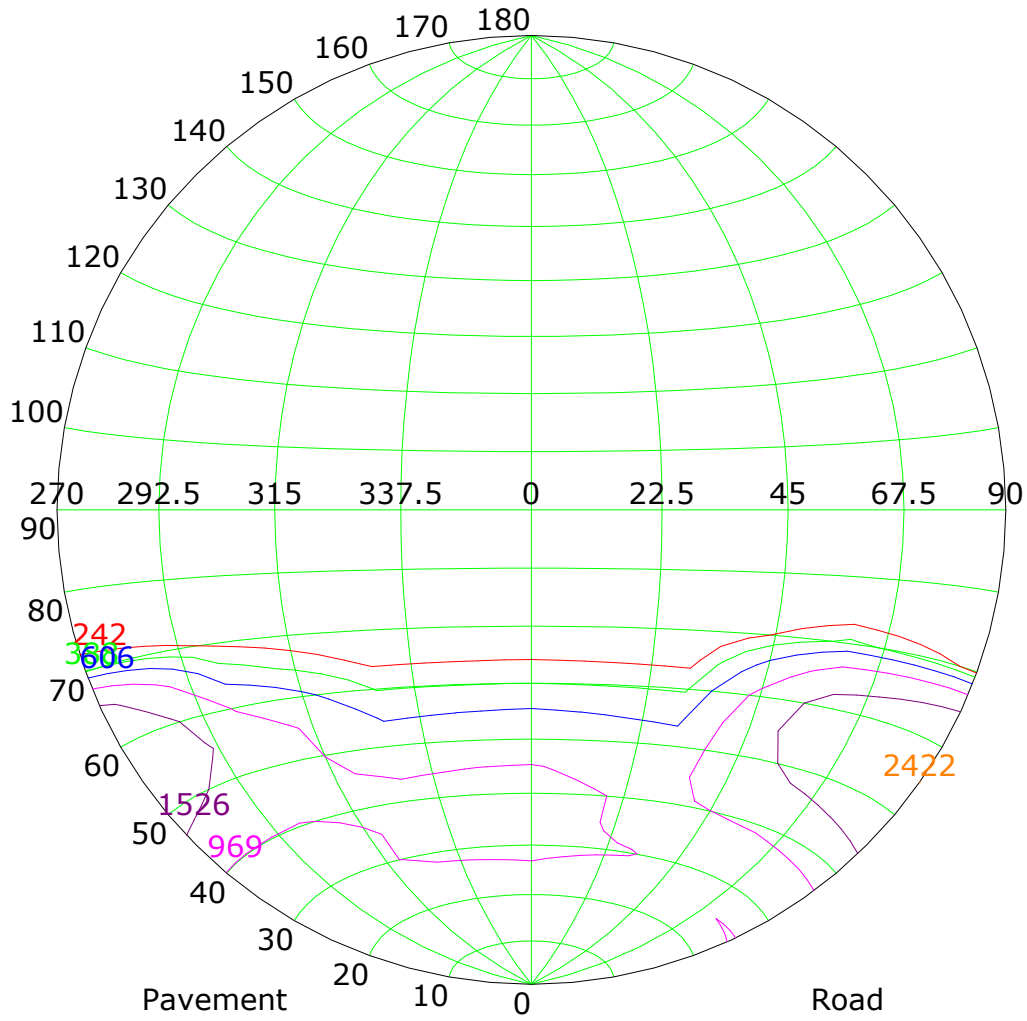
### Luminous Intensity Distribution Curve



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%): 2422 cd

- |                   |                   |
|-------------------|-------------------|
| — ( 10%): 242 cd  | — ( 16%): 388 cd  |
| — ( 25%): 606 cd  | — ( 40%): 969 cd  |
| — ( 63%): 1526 cd | — (100%): 2422 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

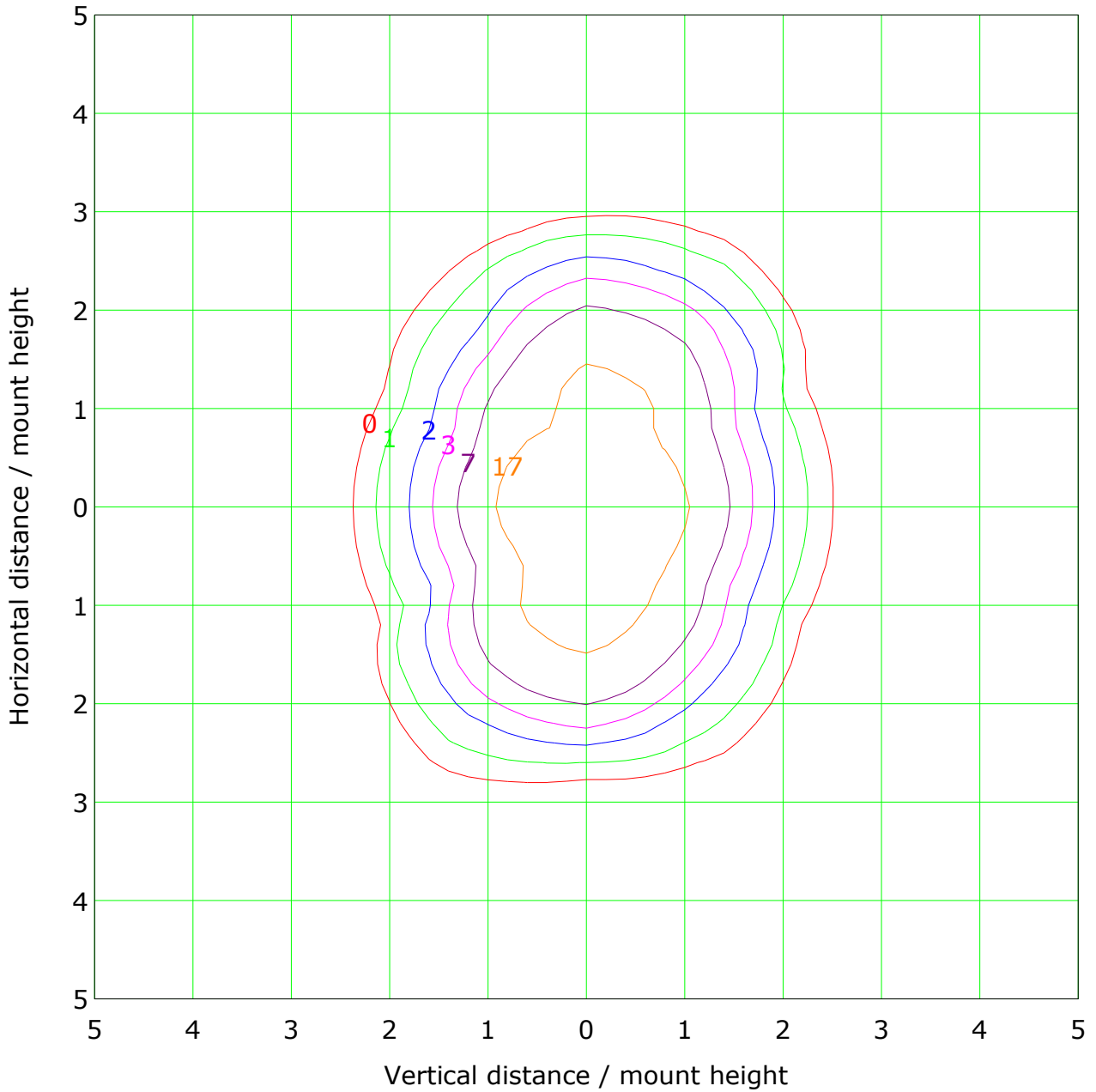
Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:

### IsoLux Plot



Mounting Height: 5.0m		Max Lux(100%): 33.1 lx
— ( 1%): 0.3 lx	— ( 2%): 0.7 lx	
— ( 5%): 1.7 lx	— ( 10%): 3.3 lx	
— ( 20%): 6.6 lx	— ( 50%): 16.6 lx	
— (100%): 33.1 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

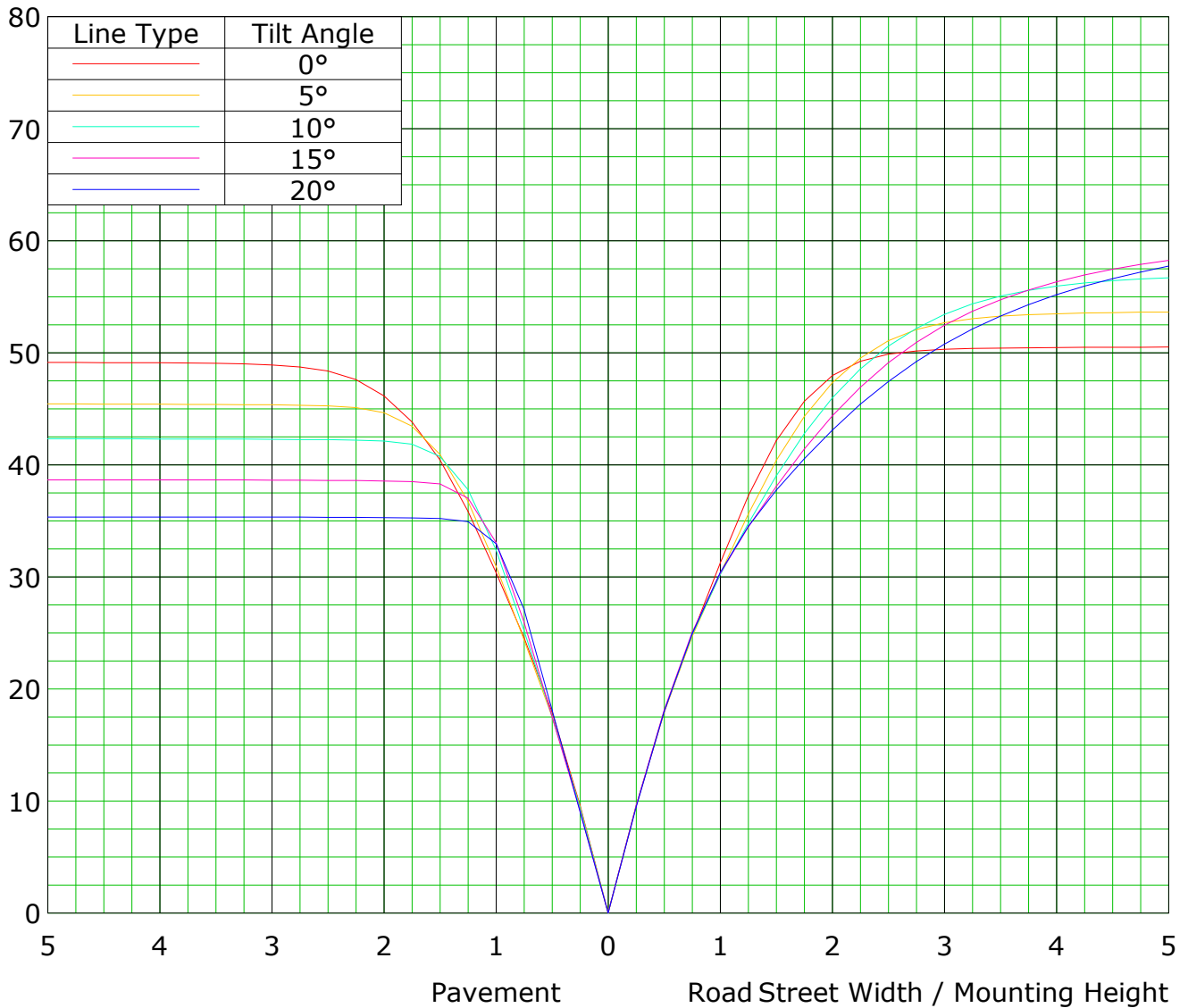
Distance: 9.067 m

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:

### Area Flux Table

Unit: lx

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
Flux(E)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flux(T)	3.0	17.4	215.5	383.2	333.2	266.7	274.9	282.2	288.3	287.8	281.5	277.7	280.0	372.0	406.4	198.4	15.2	2.3	4185
Flux(E)	0.0	3.1	205.9	377.4	328.0	262.9	271.9	279.6	285.9	285.4	278.9	274.6	275.9	366.7	400.8	188.0	0.0	0.0	4085

Horizontal plane

## 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	814.2	0.8	0.8	0.02	0.02
1.0-2.0	814.7	2.3	3.1	0.06	0.07
2.0-3.0	814.5	3.9	7.0	0.09	0.17
3.0-4.0	813.3	5.4	12.5	0.13	0.30
4.0-5.0	812.3	7.0	19.4	0.17	0.46
5.0-6.0	811.8	8.5	28.0	0.20	0.67
6.0-7.0	810.9	10.1	38.0	0.24	0.90
7.0-8.0	809.4	11.6	49.6	0.28	1.18
8.0-9.0	808.1	13.1	62.7	0.31	1.49
9.0-10.0	807.8	14.6	77.3	0.35	1.84
10.0-11.0	808.2	16.2	93.5	0.38	2.22
11.0-12.0	809.5	17.7	111.2	0.42	2.64
12.0-13.0	811.9	19.3	130.5	0.46	3.10
13.0-14.0	814.7	20.9	151.3	0.50	3.60
14.0-15.0	817.9	22.5	173.8	0.53	4.13
15.0-16.0	821.0	24.1	197.8	0.57	4.70
16.0-17.0	822.8	25.6	223.5	0.61	5.31
17.0-18.0	824.6	27.2	250.7	0.65	5.96
18.0-19.0	828.6	28.8	279.5	0.69	6.65
19.0-20.0	835.3	30.6	310.1	0.73	7.37
20.0-21.0	843.7	32.4	342.5	0.77	8.14
21.0-22.0	853.7	34.3	376.8	0.82	8.96
22.0-23.0	866.8	36.4	413.2	0.86	9.82
23.0-24.0	884.2	38.7	451.8	0.92	10.74
24.0-25.0	905.7	41.2	493.0	0.98	11.72
25.0-26.0	927.5	43.8	536.8	1.04	12.76
26.0-27.0	945.3	46.3	583.0	1.10	13.86
27.0-28.0	955.2	48.4	631.4	1.15	15.01
28.0-29.0	959.0	50.2	681.6	1.19	16.21
29.0-30.0	955.9	51.6	733.2	1.23	17.43
30.0-31.0	946.0	52.7	785.9	1.25	18.69
31.0-32.0	937.0	53.7	839.6	1.28	19.96
32.0-33.0	933.0	55.0	894.5	1.31	21.27
33.0-34.0	936.7	56.7	951.2	1.35	22.62
34.0-35.0	948.5	58.9	1010.1	1.40	24.02
35.0-36.0	964.0	61.4	1071.5	1.46	25.48

C Plane (°):0.0-360.0: 10.0  
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 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 [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	981.2	64.0	1135.5	1.52	27.00
37.0-38.0	1000.8	66.8	1202.3	1.59	28.59
38.0-39.0	1021.9	69.8	1272.1	1.66	30.25
39.0-40.0	1043.3	72.8	1344.9	1.73	31.98
40.0-41.0	1067.6	76.0	1420.9	1.81	33.78
41.0-42.0	1096.3	79.7	1500.6	1.89	35.68
42.0-43.0	1124.3	83.3	1583.9	1.98	37.66
43.0-44.0	1152.4	87.0	1670.9	2.07	39.73
44.0-45.0	1181.9	90.8	1761.7	2.16	41.89
45.0-46.0	1209.3	94.6	1856.3	2.25	44.14
46.0-47.0	1239.5	98.6	1954.9	2.34	46.48
47.0-48.0	1269.5	102.6	2057.5	2.44	48.92
48.0-49.0	1290.7	106.0	2163.5	2.52	51.44
49.0-50.0	1307.3	109.0	2272.5	2.59	54.03
50.0-51.0	1317.8	111.5	2384.1	2.65	56.69
51.0-52.0	1325.7	113.8	2497.8	2.71	59.39
52.0-53.0	1335.3	116.2	2614.0	2.76	62.15
53.0-54.0	1337.3	117.9	2731.9	2.80	64.96
54.0-55.0	1331.4	118.9	2850.7	2.83	67.78
55.0-56.0	1314.8	118.8	2969.6	2.83	70.61
56.0-57.0	1288.7	117.8	3087.4	2.80	73.41
57.0-58.0	1252.2	115.8	3203.2	2.75	76.16
58.0-59.0	1202.0	112.4	3315.6	2.67	78.83
59.0-60.0	1147.1	108.4	3424.0	2.58	81.41
60.0-61.0	1086.2	103.7	3527.7	2.47	83.88
61.0-62.0	1025.7	98.8	3626.5	2.35	86.23
62.0-63.0	951.7	92.6	3719.1	2.20	88.43
63.0-64.0	860.6	84.5	3803.5	2.01	90.44
64.0-65.0	762.4	75.5	3879.0	1.79	92.23
65.0-66.0	661.0	66.0	3945.0	1.57	93.80
66.0-67.0	559.7	56.3	4001.2	1.34	95.14
67.0-68.0	448.3	45.4	4046.7	1.08	96.22
68.0-69.0	340.8	34.8	4081.4	0.83	97.04
69.0-70.0	253.6	26.0	4107.5	0.62	97.66
70.0-71.0	184.9	19.1	4126.6	0.45	98.12
71.0-72.0	134.0	13.9	4140.5	0.33	98.45

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 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	98.4	10.3	4150.8	0.24	98.69
73.0-74.0	70.9	7.5	4158.3	0.18	98.87
74.0-75.0	50.1	5.3	4163.6	0.13	99.00
75.0-76.0	35.6	3.8	4167.3	0.09	99.09
76.0-77.0	26.6	2.8	4170.2	0.07	99.15
77.0-78.0	21.0	2.2	4172.4	0.05	99.21
78.0-79.0	17.4	1.9	4174.3	0.04	99.25
79.0-80.0	15.2	1.6	4175.9	0.04	99.29
80.0-81.0	13.4	1.4	4177.4	0.03	99.32
81.0-82.0	12.0	1.3	4178.7	0.03	99.36
82.0-83.0	11.5	1.3	4179.9	0.03	99.39
83.0-84.0	10.8	1.2	4181.1	0.03	99.41
84.0-85.0	9.7	1.1	4182.2	0.03	99.44
85.0-86.0	8.3	0.9	4183.1	0.02	99.46
86.0-87.0	7.1	0.8	4183.8	0.02	99.48
87.0-88.0	6.1	0.7	4184.5	0.02	99.49
88.0-89.0	5.5	0.6	4185.1	0.01	99.51
89.0-90.0	4.7	0.5	4185.6	0.01	99.52
90.0-91.0	4.0	0.4	4186.1	0.01	99.53
91.0-92.0	3.7	0.4	4186.5	0.01	99.54
92.0-93.0	3.3	0.4	4186.8	0.01	99.55
93.0-94.0	2.6	0.3	4187.1	0.01	99.56
94.0-95.0	2.2	0.2	4187.4	0.01	99.56
95.0-96.0	2.0	0.2	4187.6	0.01	99.57
96.0-97.0	1.8	0.2	4187.8	0.00	99.57
97.0-98.0	1.5	0.2	4187.9	0.00	99.58
98.0-99.0	1.4	0.1	4188.1	0.00	99.58
99.0-100.0	1.3	0.1	4188.2	0.00	99.58
100.0-101.0	1.2	0.1	4188.4	0.00	99.59
101.0-102.0	1.2	0.1	4188.5	0.00	99.59
102.0-103.0	1.3	0.1	4188.6	0.00	99.59
103.0-104.0	1.4	0.1	4188.8	0.00	99.60
104.0-105.0	1.3	0.1	4188.9	0.00	99.60
105.0-106.0	1.5	0.2	4189.1	0.00	99.60
106.0-107.0	1.7	0.2	4189.2	0.00	99.61
107.0-108.0	1.8	0.2	4189.4	0.00	99.61

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	1.9	0.2	4189.6	0.00	99.62
109.0-110.0	2.0	0.2	4189.8	0.00	99.62
110.0-111.0	1.9	0.2	4190.0	0.00	99.63
111.0-112.0	2.1	0.2	4190.2	0.00	99.63
112.0-113.0	2.3	0.2	4190.5	0.01	99.64
113.0-114.0	2.4	0.2	4190.7	0.01	99.64
114.0-115.0	2.5	0.2	4191.0	0.01	99.65
115.0-116.0	2.6	0.3	4191.2	0.01	99.65
116.0-117.0	2.6	0.3	4191.5	0.01	99.66
117.0-118.0	2.7	0.3	4191.8	0.01	99.67
118.0-119.0	2.8	0.3	4192.0	0.01	99.67
119.0-120.0	2.7	0.3	4192.3	0.01	99.68
120.0-121.0	2.8	0.3	4192.6	0.01	99.69
121.0-122.0	3.1	0.3	4192.8	0.01	99.69
122.0-123.0	3.1	0.3	4193.1	0.01	99.70
123.0-124.0	3.4	0.3	4193.4	0.01	99.71
124.0-125.0	3.6	0.3	4193.8	0.01	99.71
125.0-126.0	3.6	0.3	4194.1	0.01	99.72
126.0-127.0	3.7	0.3	4194.4	0.01	99.73
127.0-128.0	3.8	0.3	4194.8	0.01	99.74
128.0-129.0	3.7	0.3	4195.1	0.01	99.75
129.0-130.0	3.8	0.3	4195.4	0.01	99.75
130.0-131.0	4.0	0.3	4195.7	0.01	99.76
131.0-132.0	4.1	0.3	4196.1	0.01	99.77
132.0-133.0	4.0	0.3	4196.4	0.01	99.78
133.0-134.0	4.0	0.3	4196.7	0.01	99.78
134.0-135.0	4.0	0.3	4197.0	0.01	99.79
135.0-136.0	4.2	0.3	4197.4	0.01	99.80
136.0-137.0	4.3	0.3	4197.7	0.01	99.81
137.0-138.0	4.2	0.3	4198.0	0.01	99.81
138.0-139.0	4.1	0.3	4198.3	0.01	99.82
139.0-140.0	4.4	0.3	4198.6	0.01	99.83
140.0-141.0	4.7	0.3	4198.9	0.01	99.84
141.0-142.0	4.8	0.3	4199.3	0.01	99.84
142.0-143.0	4.8	0.3	4199.6	0.01	99.85
143.0-144.0	5.1	0.3	4199.9	0.01	99.86

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 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	5.3	0.3	4200.3	0.01	99.87
145.0-146.0	5.2	0.3	4200.6	0.01	99.88
146.0-147.0	5.0	0.3	4200.9	0.01	99.88
147.0-148.0	5.0	0.3	4201.2	0.01	99.89
148.0-149.0	5.0	0.3	4201.5	0.01	99.90
149.0-150.0	5.0	0.3	4201.7	0.01	99.90
150.0-151.0	5.0	0.3	4202.0	0.01	99.91
151.0-152.0	5.2	0.3	4202.3	0.01	99.92
152.0-153.0	5.1	0.3	4202.5	0.01	99.92
153.0-154.0	4.8	0.2	4202.8	0.01	99.93
154.0-155.0	4.8	0.2	4203.0	0.01	99.93
155.0-156.0	4.9	0.2	4203.2	0.01	99.94
156.0-157.0	4.8	0.2	4203.4	0.01	99.94
157.0-158.0	4.8	0.2	4203.6	0.00	99.95
158.0-159.0	5.0	0.2	4203.8	0.00	99.95
159.0-160.0	4.9	0.2	4204.0	0.00	99.96
160.0-161.0	4.9	0.2	4204.2	0.00	99.96
161.0-162.0	4.7	0.2	4204.4	0.00	99.97
162.0-163.0	4.4	0.1	4204.5	0.00	99.97
163.0-164.0	4.6	0.1	4204.7	0.00	99.97
164.0-165.0	4.5	0.1	4204.8	0.00	99.98
165.0-166.0	4.6	0.1	4204.9	0.00	99.98
166.0-167.0	4.7	0.1	4205.0	0.00	99.98
167.0-168.0	4.6	0.1	4205.1	0.00	99.98
168.0-169.0	4.9	0.1	4205.2	0.00	99.99
169.0-170.0	4.8	0.1	4205.3	0.00	99.99
170.0-171.0	4.3	0.1	4205.4	0.00	99.99
171.0-172.0	4.3	0.1	4205.5	0.00	99.99
172.0-173.0	4.4	0.1	4205.6	0.00	99.99
173.0-174.0	4.6	0.1	4205.6	0.00	100.00
174.0-175.0	4.9	0.1	4205.7	0.00	100.00
175.0-176.0	5.1	0.0	4205.7	0.00	100.00
176.0-177.0	5.4	0.0	4205.7	0.00	100.00
177.0-178.0	5.4	0.0	4205.8	0.00	100.00
178.0-179.0	4.8	0.0	4205.8	0.00	100.00
179.0-180.0	5.0	0.0	4205.8	0.00	100.00

C Plane (°):0.0-360.0: 10.0  
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