

Report No.:

Test Time: 2014-08-22 10:18

## Luminaire Property

Luminaire Manufacturer:

Luminaire Category: LED STREET LIGHT

Lamp Description: 2\*50W

Current: 0.466 A

Power Factor: 0.981

Lamp Catalog: HIGH POWER COB

Voltage: 230.6 V

Power: 105.40 W

## Photometric Results

IES Classification: Type IV

Total Rated Lamp Lumens: 8521.0 lm

Efficiency: 100%

Upward Ratio: 1%

Central Intensity: 1635.52 cd

Pos of Max. Intensity: H90 V64

Longitudinal Classification: Very Short

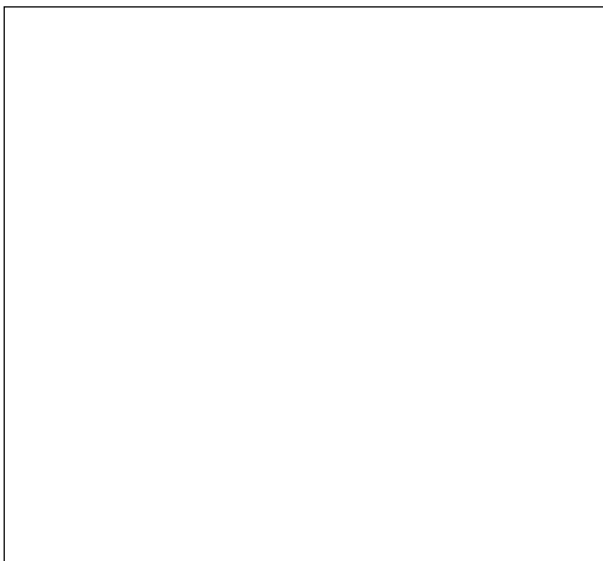
Measurement Flux: 8521 lm

Downward Ratio: 99%

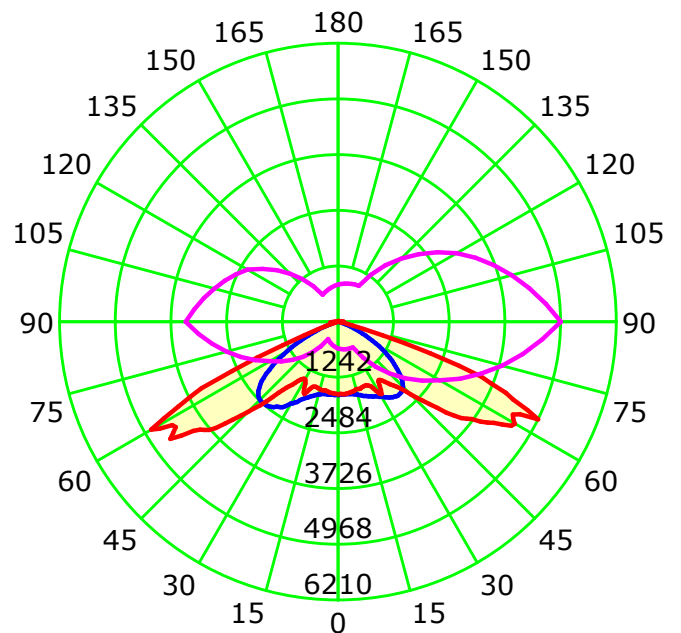
Luminaire Efficacy Rating (LER): 81

Max. Intensity: 4968.19 cd

Picture Of Luminaire



Luminous Intensity Distribution Curve



Unit: cd

— C0-C180 — C90-C270 — G64

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

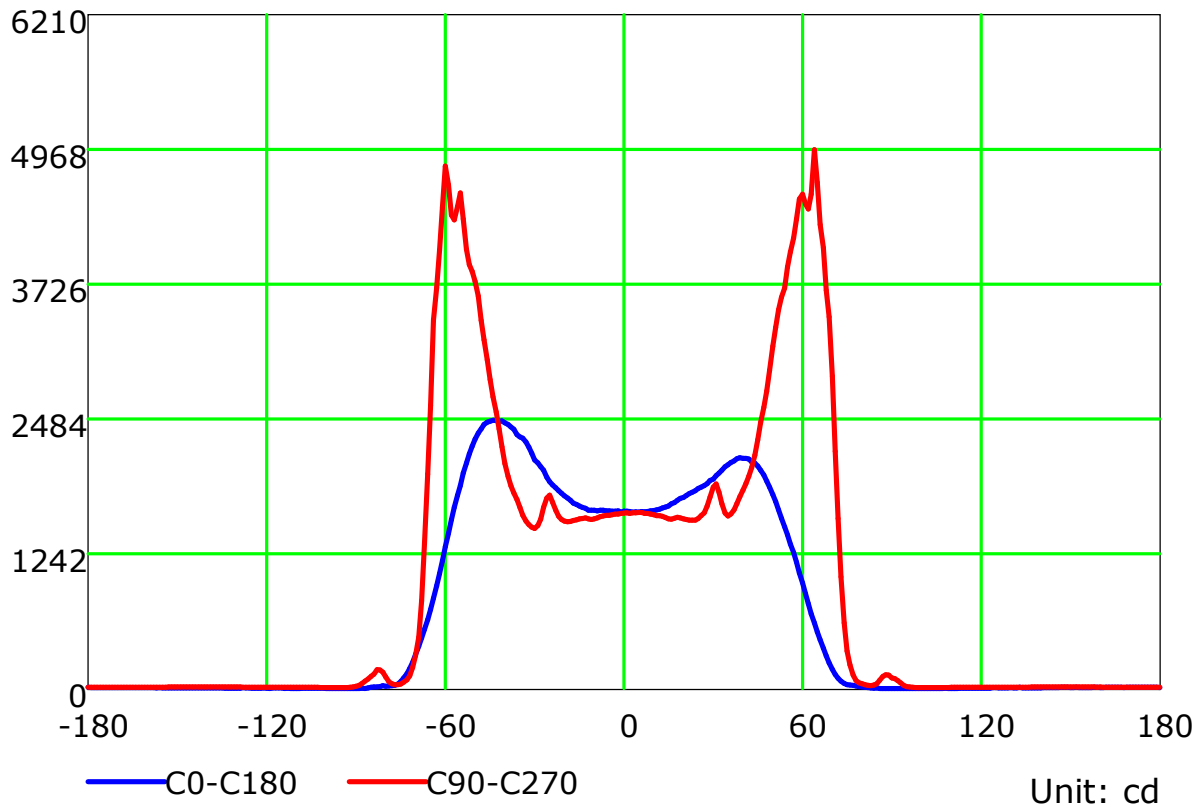
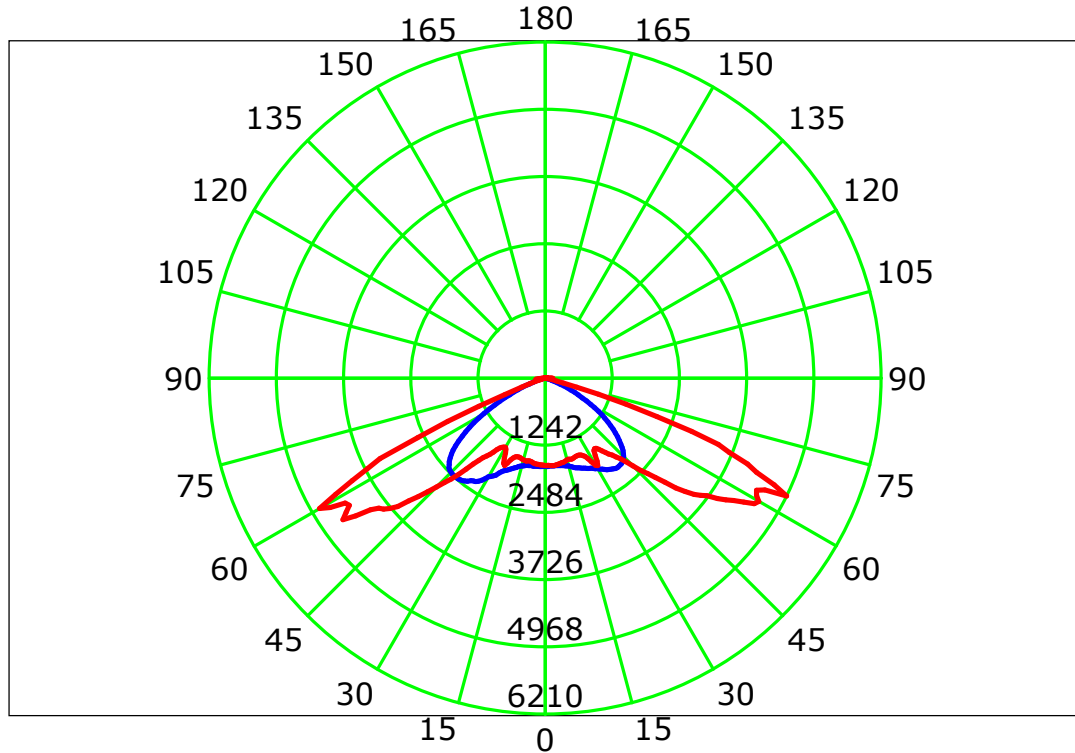
Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:

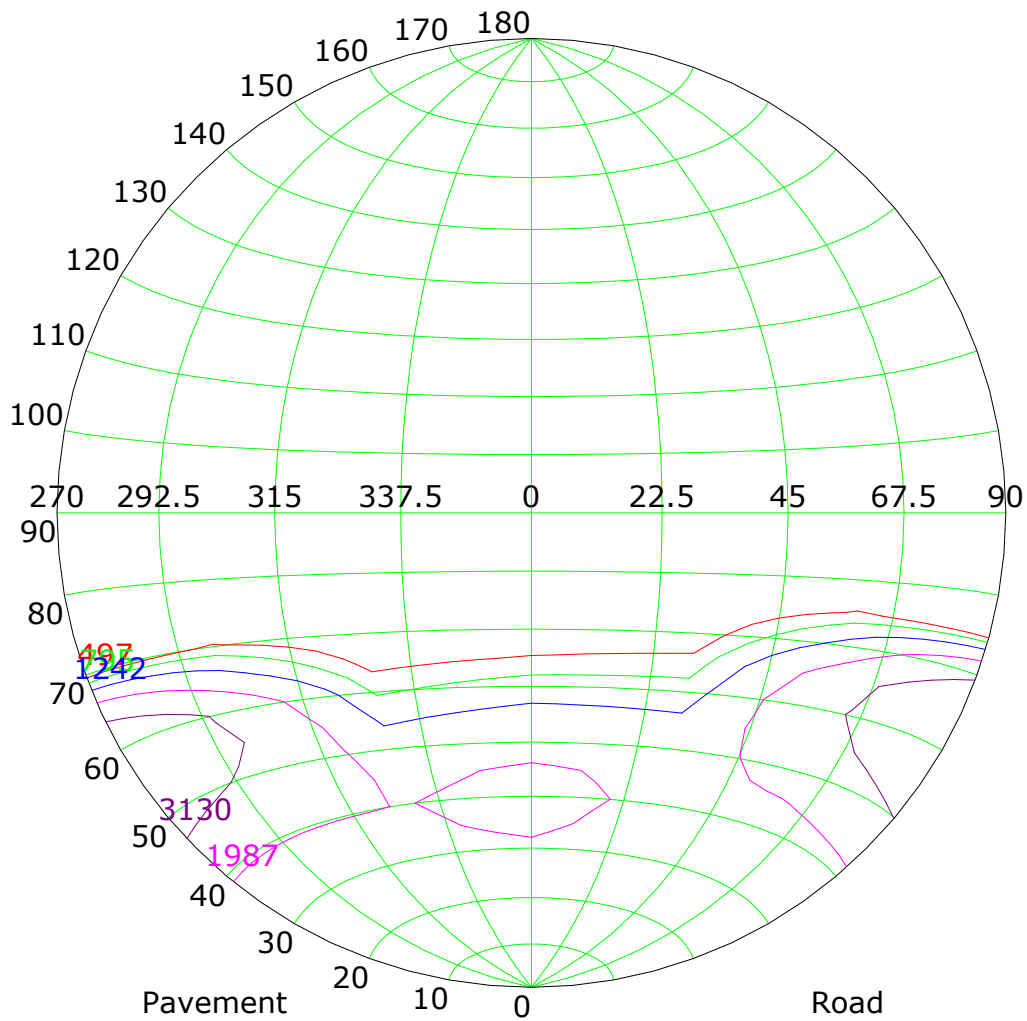
### Luminous Intensity Distribution Curve



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%): 4968 cd

- |                   |                   |
|-------------------|-------------------|
| — ( 10%): 497 cd  | — ( 16%): 795 cd  |
| — ( 25%): 1242 cd | — ( 40%): 1987 cd |
| — ( 63%): 3130 cd | — (100%): 4968 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

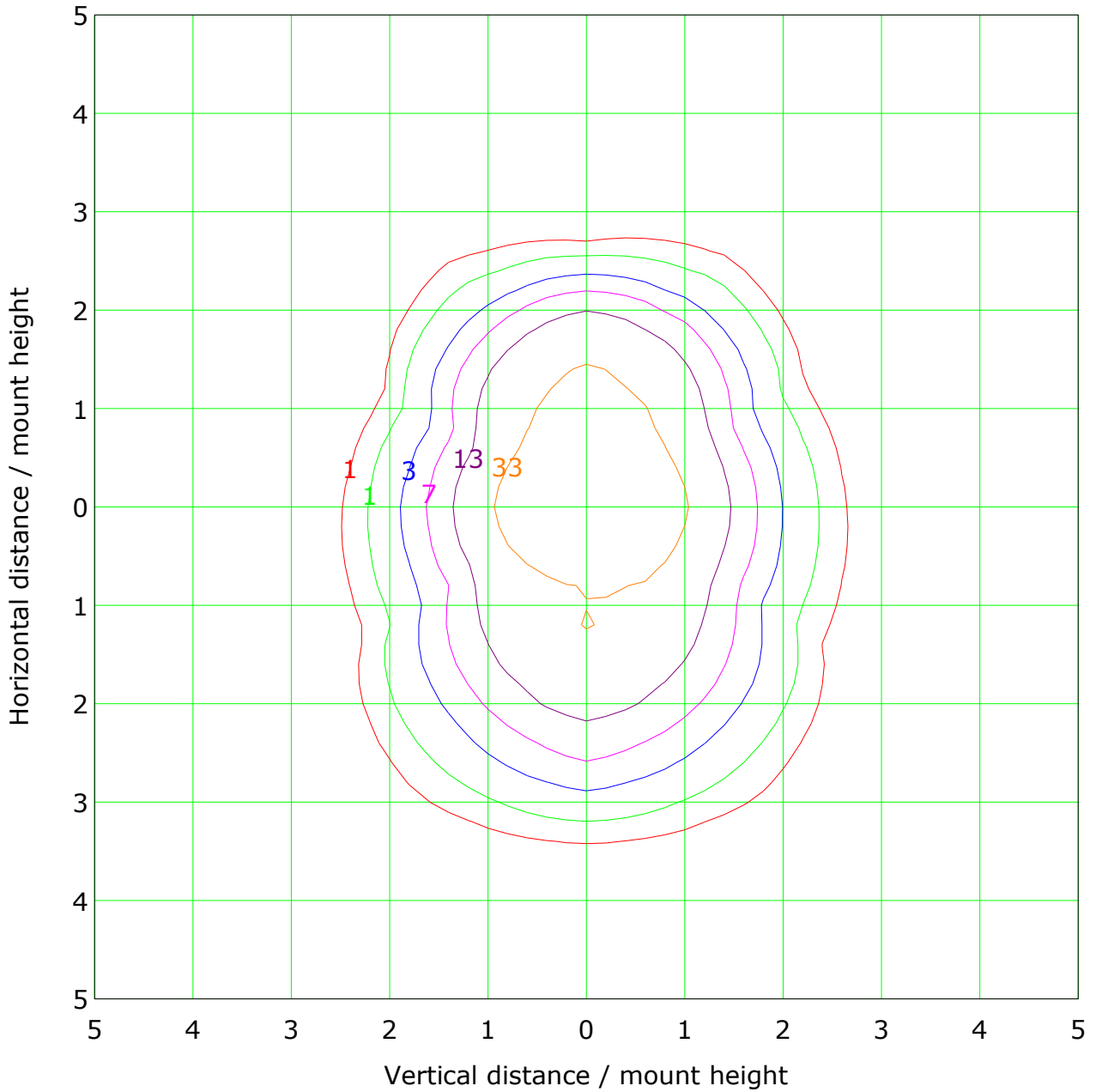
Test Device: GPM-1600

Distance: 9.067 m

Humidity:

Inspector:

### IsoLux Plot



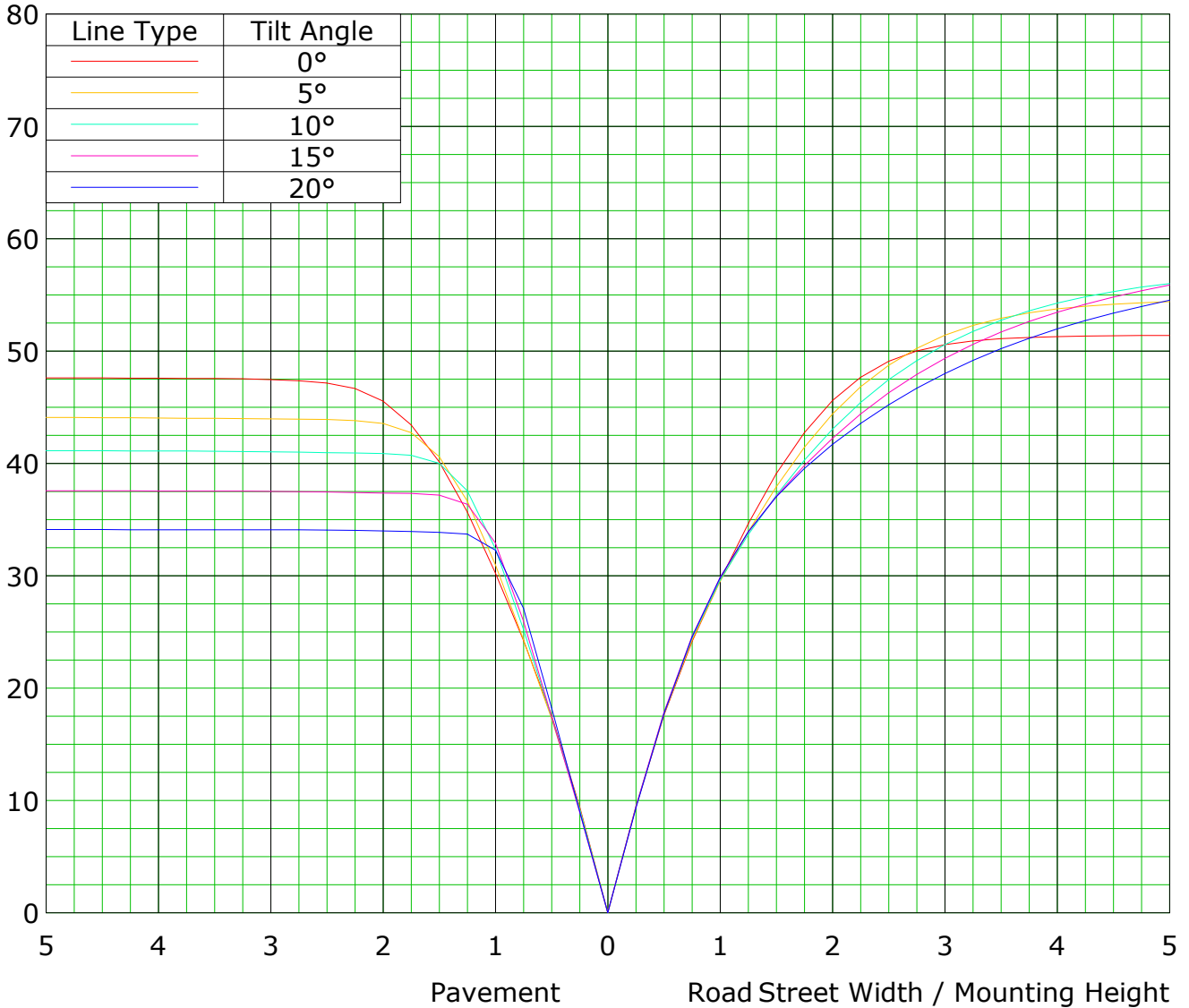
Mounting Height: 5.0m		Max Lux(100%): 65.4 lx
— ( 1%): 0.7 lx	— ( 2%): 1.3 lx	
— ( 5%): 3.3 lx	— ( 10%): 6.5 lx	
— ( 20%): 13.1 lx	— ( 50%): 32.7 lx	
— (100%): 65.4 lx		

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 [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	1620.3	1.6	1.6	0.02	0.02
1.0-2.0	1620.1	4.7	6.2	0.05	0.07
2.0-3.0	1618.7	7.7	13.9	0.09	0.16
3.0-4.0	1617.5	10.8	24.8	0.13	0.29
4.0-5.0	1616.4	13.9	38.7	0.16	0.45
5.0-6.0	1615.8	17.0	55.7	0.20	0.65
6.0-7.0	1614.9	20.0	75.7	0.24	0.89
7.0-8.0	1612.8	23.1	98.8	0.27	1.16
8.0-9.0	1611.3	26.1	124.9	0.31	1.47
9.0-10.0	1609.1	29.1	154.0	0.34	1.81
10.0-11.0	1607.4	32.1	186.2	0.38	2.18
11.0-12.0	1607.7	35.1	221.3	0.41	2.60
12.0-13.0	1610.2	38.2	259.5	0.45	3.05
13.0-14.0	1613.3	41.3	300.8	0.48	3.53
14.0-15.0	1614.6	44.3	345.2	0.52	4.05
15.0-16.0	1616.8	47.4	392.5	0.56	4.61
16.0-17.0	1621.9	50.5	443.1	0.59	5.20
17.0-18.0	1629.1	53.7	496.8	0.63	5.83
18.0-19.0	1635.9	56.9	553.7	0.67	6.50
19.0-20.0	1643.6	60.2	613.9	0.71	7.20
20.0-21.0	1653.0	63.5	677.3	0.74	7.95
21.0-22.0	1663.8	66.9	744.2	0.78	8.73
22.0-23.0	1679.2	70.5	814.7	0.83	9.56
23.0-24.0	1701.3	74.4	889.1	0.87	10.43
24.0-25.0	1726.9	78.5	967.6	0.92	11.36
25.0-26.0	1751.1	82.7	1050.3	0.97	12.33
26.0-27.0	1772.2	86.7	1137.0	1.02	13.34
27.0-28.0	1786.3	90.5	1227.4	1.06	14.40
28.0-29.0	1800.1	94.2	1321.6	1.11	15.51
29.0-30.0	1820.6	98.3	1419.9	1.15	16.66
30.0-31.0	1844.6	102.7	1522.6	1.20	17.87
31.0-32.0	1860.0	106.6	1629.2	1.25	19.12
32.0-33.0	1866.9	110.0	1739.2	1.29	20.41
33.0-34.0	1874.9	113.5	1852.7	1.33	21.74
34.0-35.0	1879.2	116.7	1969.4	1.37	23.11
35.0-36.0	1890.1	120.4	2089.7	1.41	24.52

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 1)

Gamma [°]	Imean [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	1916.1	125.0	2214.7	1.47	25.99
37.0-38.0	1948.4	130.1	2344.8	1.53	27.52
38.0-39.0	1983.8	135.4	2480.2	1.59	29.11
39.0-40.0	2022.4	141.1	2621.3	1.66	30.76
40.0-41.0	2064.5	147.0	2768.3	1.73	32.49
41.0-42.0	2108.9	153.2	2921.6	1.80	34.29
42.0-43.0	2152.0	159.4	3081.0	1.87	36.16
43.0-44.0	2194.2	165.6	3246.6	1.94	38.10
44.0-45.0	2237.6	172.0	3418.6	2.02	40.12
45.0-46.0	2282.5	178.5	3597.1	2.10	42.22
46.0-47.0	2327.0	185.1	3782.2	2.17	44.39
47.0-48.0	2367.2	191.4	3973.6	2.25	46.63
48.0-49.0	2407.1	197.7	4171.3	2.32	48.95
49.0-50.0	2442.5	203.7	4375.0	2.39	51.34
50.0-51.0	2466.7	208.7	4583.7	2.45	53.79
51.0-52.0	2484.9	213.3	4797.0	2.50	56.30
52.0-53.0	2496.4	217.2	5014.2	2.55	58.85
53.0-54.0	2509.0	221.2	5235.3	2.60	61.44
54.0-55.0	2523.4	225.3	5460.6	2.64	64.08
55.0-56.0	2512.0	227.0	5687.6	2.66	66.75
56.0-57.0	2472.2	226.1	5913.7	2.65	69.40
57.0-58.0	2433.1	225.0	6138.7	2.64	72.04
58.0-59.0	2405.3	224.9	6363.6	2.64	74.68
59.0-60.0	2365.2	223.5	6587.1	2.62	77.30
60.0-61.0	2274.9	217.1	6804.2	2.55	79.85
61.0-62.0	2148.4	207.0	7011.3	2.43	82.28
62.0-63.0	2024.2	196.9	7208.2	2.31	84.59
63.0-64.0	1912.8	187.7	7395.9	2.20	86.80
64.0-65.0	1755.7	173.8	7569.7	2.04	88.84
65.0-66.0	1548.9	154.6	7724.2	1.81	90.65
66.0-67.0	1349.9	135.8	7860.0	1.59	92.24
67.0-68.0	1159.7	117.5	7977.5	1.38	93.62
68.0-69.0	988.6	100.9	8078.3	1.18	94.81
69.0-70.0	829.9	85.2	8163.6	1.00	95.81
70.0-71.0	668.9	69.1	8232.7	0.81	96.62
71.0-72.0	519.1	54.0	8286.7	0.63	97.25

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 <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	391.3	40.9	8327.6	0.48	97.73
73.0-74.0	285.2	30.0	8357.6	0.35	98.08
74.0-75.0	204.9	21.7	8379.3	0.25	98.34
75.0-76.0	149.8	15.9	8395.2	0.19	98.52
76.0-77.0	110.8	11.8	8407.0	0.14	98.66
77.0-78.0	80.7	8.6	8415.6	0.10	98.76
78.0-79.0	59.4	6.4	8422.0	0.07	98.84
79.0-80.0	47.9	5.2	8427.2	0.06	98.90
80.0-81.0	42.6	4.6	8431.8	0.05	98.95
81.0-82.0	38.4	4.2	8436.0	0.05	99.00
82.0-83.0	35.1	3.8	8439.8	0.04	99.05
83.0-84.0	31.1	3.4	8443.2	0.04	99.09
84.0-85.0	27.9	3.0	8446.2	0.04	99.12
85.0-86.0	26.6	2.9	8449.1	0.03	99.16
86.0-87.0	26.1	2.9	8452.0	0.03	99.19
87.0-88.0	25.5	2.8	8454.8	0.03	99.22
88.0-89.0	23.5	2.6	8457.3	0.03	99.25
89.0-90.0	20.6	2.3	8459.6	0.03	99.28
90.0-91.0	17.6	1.9	8461.5	0.02	99.30
91.0-92.0	15.1	1.7	8463.2	0.02	99.32
92.0-93.0	12.9	1.4	8464.6	0.02	99.34
93.0-94.0	10.4	1.1	8465.7	0.01	99.35
94.0-95.0	8.2	0.9	8466.6	0.01	99.36
95.0-96.0	6.8	0.7	8467.4	0.01	99.37
96.0-97.0	6.3	0.7	8468.1	0.01	99.38
97.0-98.0	5.9	0.6	8468.7	0.01	99.39
98.0-99.0	5.4	0.6	8469.3	0.01	99.39
99.0-100.0	5.4	0.6	8469.9	0.01	99.40
100.0-101.0	5.3	0.6	8470.4	0.01	99.41
101.0-102.0	5.5	0.6	8471.0	0.01	99.41
102.0-103.0	5.9	0.6	8471.7	0.01	99.42
103.0-104.0	6.1	0.7	8472.3	0.01	99.43
104.0-105.0	6.0	0.6	8473.0	0.01	99.44
105.0-106.0	5.8	0.6	8473.6	0.01	99.44
106.0-107.0	6.1	0.6	8474.2	0.01	99.45
107.0-108.0	6.7	0.7	8474.9	0.01	99.46

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 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	7.0	0.7	8475.6	0.01	99.47
109.0-110.0	7.0	0.7	8476.4	0.01	99.48
110.0-111.0	7.4	0.8	8477.1	0.01	99.49
111.0-112.0	7.8	0.8	8477.9	0.01	99.49
112.0-113.0	8.3	0.8	8478.8	0.01	99.50
113.0-114.0	8.1	0.8	8479.6	0.01	99.51
114.0-115.0	7.7	0.8	8480.4	0.01	99.52
115.0-116.0	8.3	0.8	8481.2	0.01	99.53
116.0-117.0	8.8	0.9	8482.0	0.01	99.54
117.0-118.0	9.0	0.9	8482.9	0.01	99.55
118.0-119.0	9.1	0.9	8483.8	0.01	99.56
119.0-120.0	8.9	0.9	8484.6	0.01	99.57
120.0-121.0	8.9	0.8	8485.5	0.01	99.58
121.0-122.0	9.4	0.9	8486.4	0.01	99.59
122.0-123.0	9.6	0.9	8487.3	0.01	99.60
123.0-124.0	9.9	0.9	8488.2	0.01	99.61
124.0-125.0	10.4	0.9	8489.1	0.01	99.63
125.0-126.0	10.2	0.9	8490.0	0.01	99.64
126.0-127.0	10.0	0.9	8490.9	0.01	99.65
127.0-128.0	10.5	0.9	8491.8	0.01	99.66
128.0-129.0	10.7	0.9	8492.7	0.01	99.67
129.0-130.0	10.9	0.9	8493.7	0.01	99.68
130.0-131.0	10.8	0.9	8494.6	0.01	99.69
131.0-132.0	10.3	0.8	8495.4	0.01	99.70
132.0-133.0	10.9	0.9	8496.3	0.01	99.71
133.0-134.0	11.2	0.9	8497.2	0.01	99.72
134.0-135.0	11.0	0.9	8498.0	0.01	99.73
135.0-136.0	11.4	0.9	8498.9	0.01	99.74
136.0-137.0	11.5	0.9	8499.8	0.01	99.75
137.0-138.0	11.6	0.9	8500.6	0.01	99.76
138.0-139.0	11.6	0.8	8501.5	0.01	99.77
139.0-140.0	11.7	0.8	8502.3	0.01	99.78
140.0-141.0	12.4	0.9	8503.2	0.01	99.79
141.0-142.0	12.5	0.9	8504.0	0.01	99.80
142.0-143.0	12.4	0.8	8504.9	0.01	99.81
143.0-144.0	12.7	0.8	8505.7	0.01	99.82

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 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	13.0	0.8	8506.5	0.01	99.83
145.0-146.0	13.0	0.8	8507.3	0.01	99.84
146.0-147.0	13.2	0.8	8508.1	0.01	99.85
147.0-148.0	13.4	0.8	8508.9	0.01	99.86
148.0-149.0	13.3	0.8	8509.7	0.01	99.87
149.0-150.0	13.1	0.7	8510.4	0.01	99.88
150.0-151.0	12.9	0.7	8511.1	0.01	99.88
151.0-152.0	13.0	0.7	8511.8	0.01	99.89
152.0-153.0	12.8	0.6	8512.4	0.01	99.90
153.0-154.0	12.6	0.6	8513.0	0.01	99.91
154.0-155.0	12.9	0.6	8513.7	0.01	99.91
155.0-156.0	12.5	0.6	8514.2	0.01	99.92
156.0-157.0	12.0	0.5	8514.7	0.01	99.93
157.0-158.0	12.3	0.5	8515.3	0.01	99.93
158.0-159.0	12.6	0.5	8515.8	0.01	99.94
159.0-160.0	12.7	0.5	8516.3	0.01	99.94
160.0-161.0	12.4	0.5	8516.7	0.01	99.95
161.0-162.0	12.3	0.4	8517.1	0.01	99.96
162.0-163.0	12.4	0.4	8517.5	0.00	99.96
163.0-164.0	12.4	0.4	8517.9	0.00	99.96
164.0-165.0	12.6	0.4	8518.3	0.00	99.97
165.0-166.0	12.7	0.3	8518.7	0.00	99.97
166.0-167.0	12.7	0.3	8519.0	0.00	99.98
167.0-168.0	12.1	0.3	8519.3	0.00	99.98
168.0-169.0	12.2	0.3	8519.5	0.00	99.98
169.0-170.0	12.7	0.3	8519.8	0.00	99.99
170.0-171.0	12.9	0.2	8520.0	0.00	99.99
171.0-172.0	12.5	0.2	8520.2	0.00	99.99
172.0-173.0	12.1	0.2	8520.4	0.00	99.99
173.0-174.0	12.2	0.2	8520.5	0.00	99.99
174.0-175.0	12.3	0.1	8520.7	0.00	100.00
175.0-176.0	12.3	0.1	8520.8	0.00	100.00
176.0-177.0	12.3	0.1	8520.9	0.00	100.00
177.0-178.0	12.7	0.1	8520.9	0.00	100.00
178.0-179.0	12.7	0.0	8521.0	0.00	100.00
179.0-180.0	12.7	0.0	8521.0	0.00	100.00

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

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