

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P383205

Luminaire Tested: **GLEON-SA5B-735-U-T2R**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P383205
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-8)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA5B-735-U-T2R
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 3500K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27719.1 lumens
Efficiency: N/A
Efficacy: 132.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

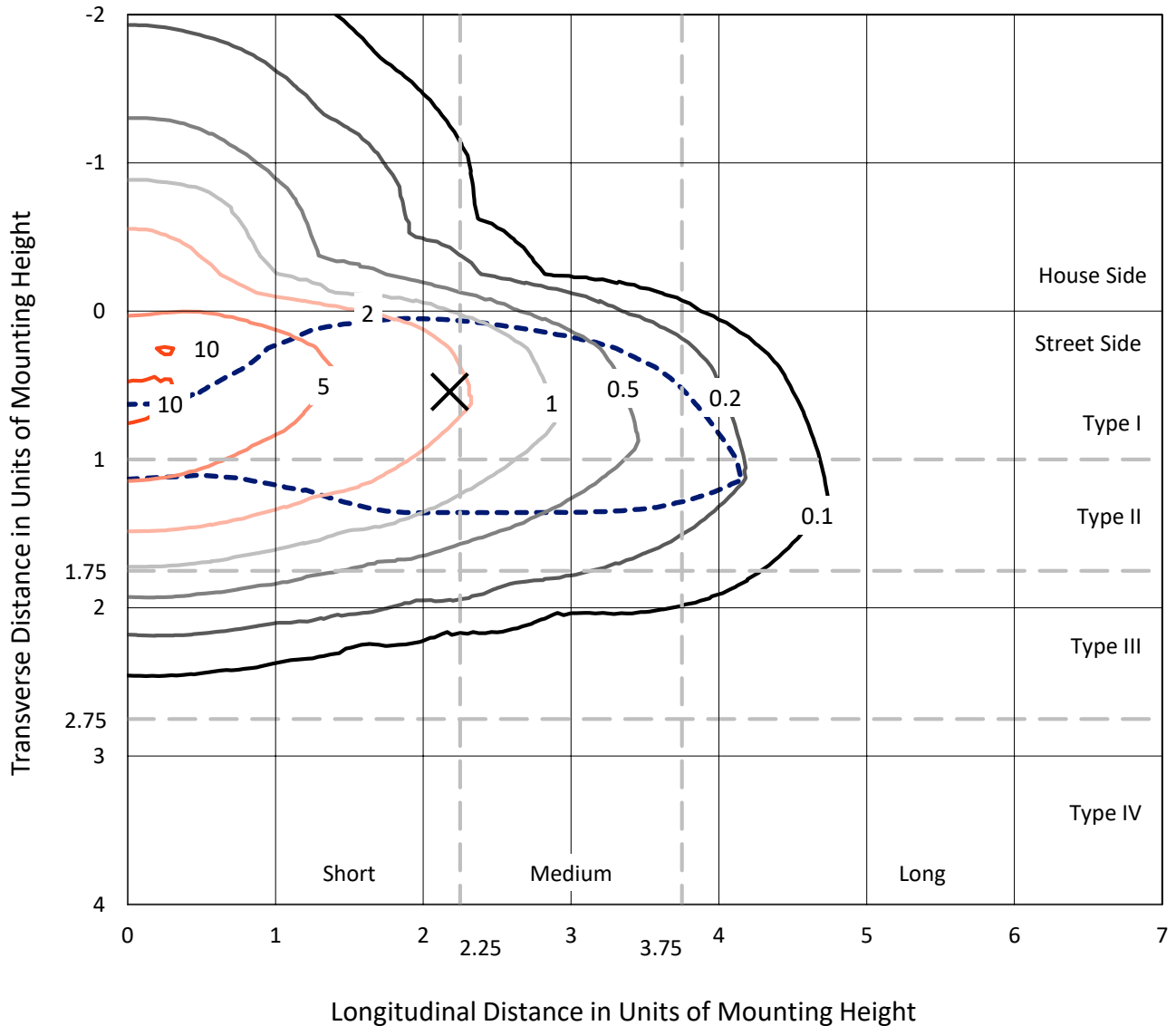
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P383205
 CATALOG NUMBER: GLEON-SA5B-735-U-T2R

Iso-Footcandle Lines of Horizontal Illumination

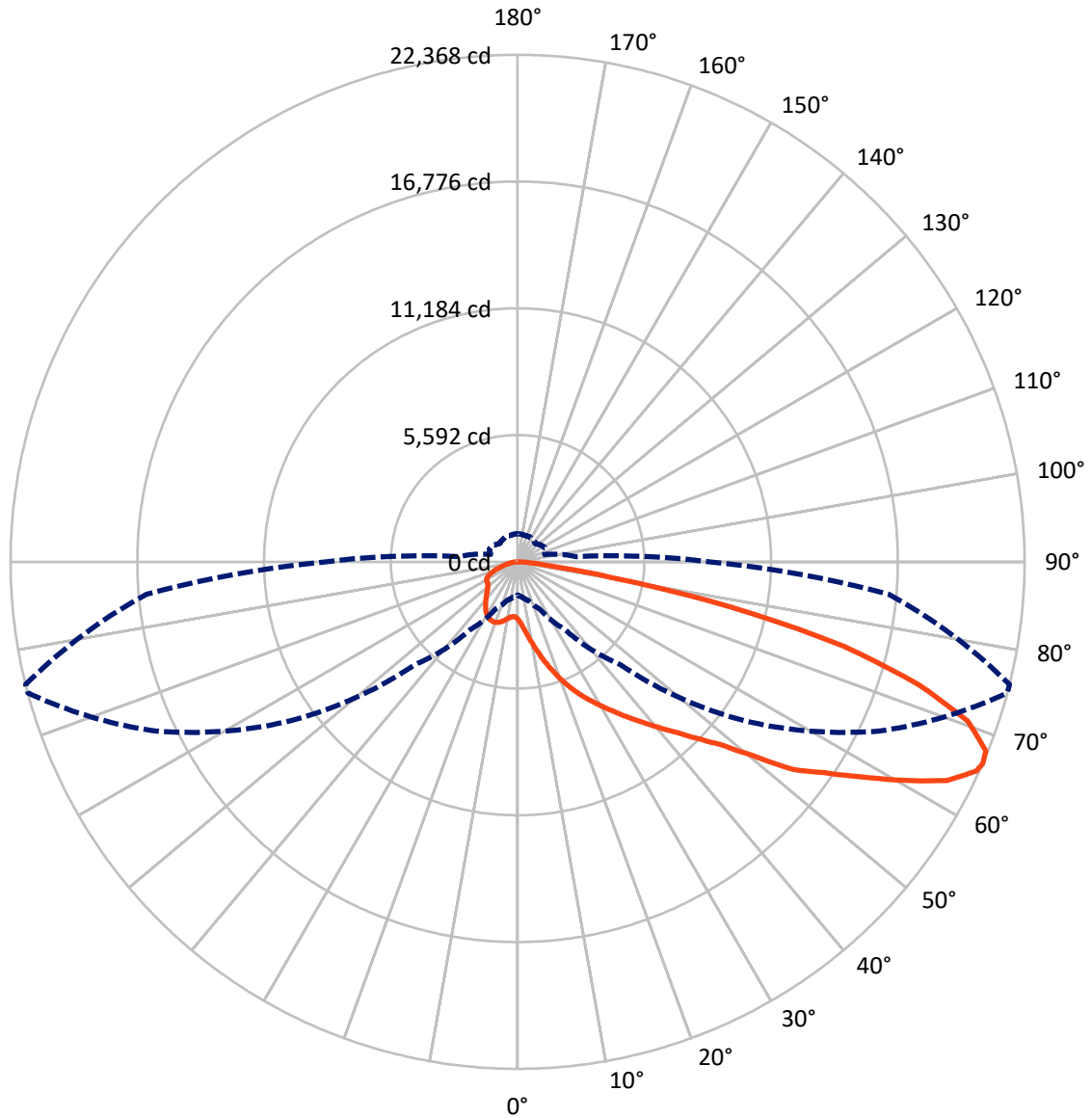
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.7 fc
 Type II - Short - N/A

REPORT NUMBER: P383205
CATALOG NUMBER: GLEON-SA5B-735-U-T2R

Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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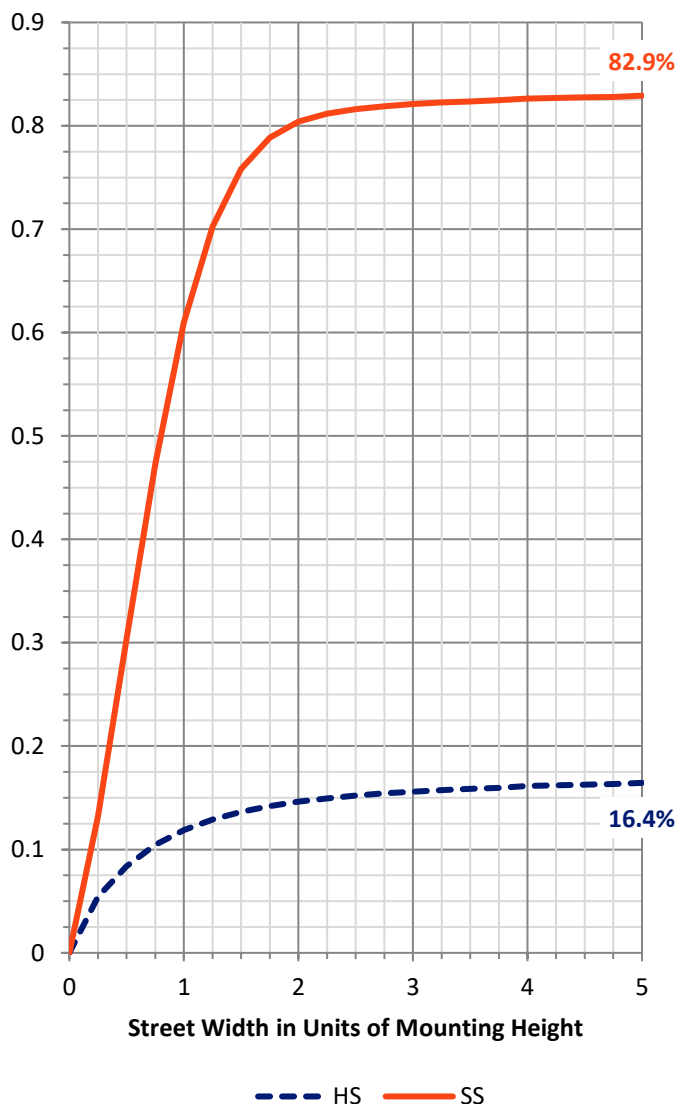
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4664.2 | 0.0 | 4664.2 |
| | % Fixture | 16.8 | 0.0 | 16.8 |
| Street Side | Lumens | 23055.0 | 0.0 | 23055.0 |
| | % Fixture | 83.2 | 0.0 | 83.2 |
| Total | Lumens | 27719.1 | 0.0 | 27719.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 306.1 | 1.1 |
| 10°-20° | 1208.8 | 4.4 |
| 20°-30° | 2349.0 | 8.5 |
| 30°-40° | 3834.1 | 13.8 |
| 40°-50° | 5238.4 | 18.9 |
| 50°-60° | 6101.6 | 22.0 |
| 60°-70° | 5470.2 | 19.7 |
| 70°-80° | 2764.4 | 10.0 |
| 80°-90° | 446.4 | 1.6 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 27719.1 | 100.0 |
| 0°-180° | 27719.1 | 100.0 |

Coefficient of Utilization



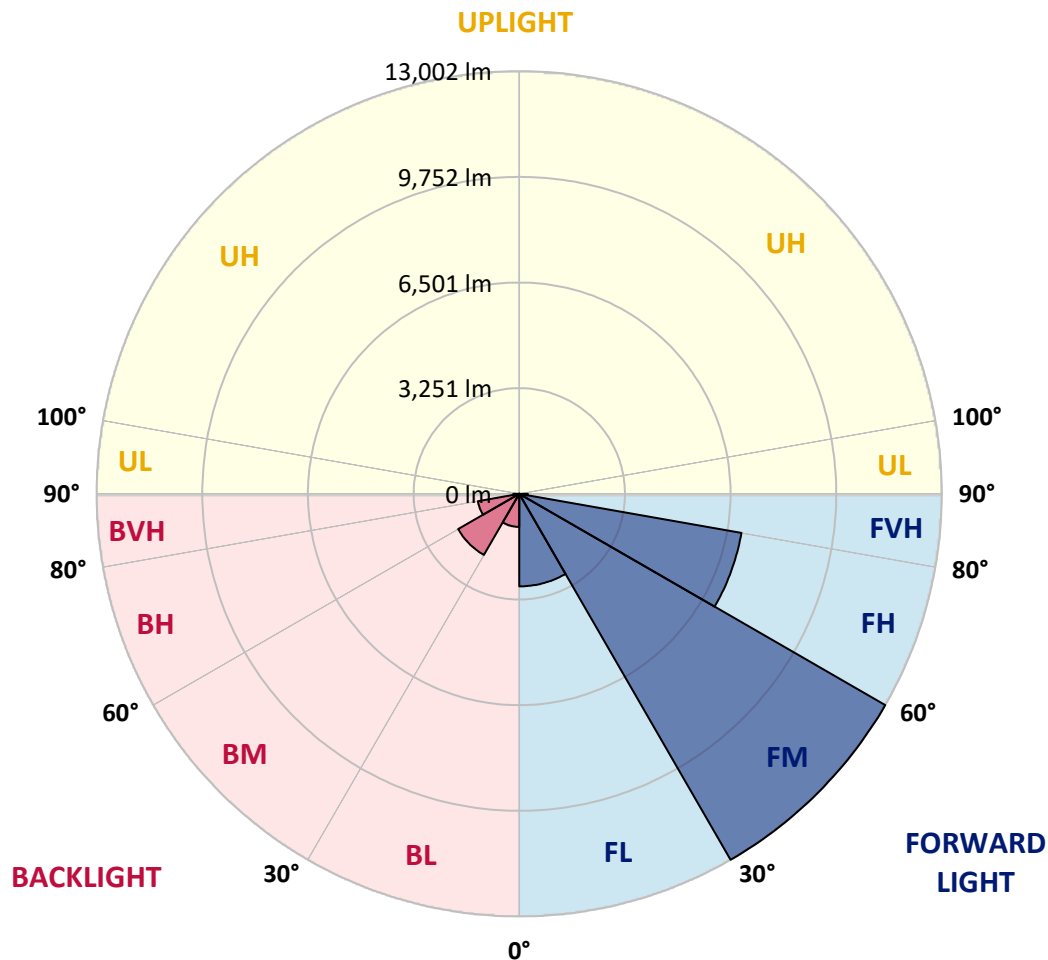
REPORT NUMBER: P383205
 CATALOG NUMBER: GLEON-SA5B-735-U-T2R

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2846.7 | 10.3 | | | |
| FM (30°-60°) | 13002.2 | 46.9 | | | |
| FH (60°-80°) | 6942.4 | 25.0 | | | G3/7500 |
| FVH (80°-90°) | 263.6 | 1.0 | | | G3/500 |
| BL (0°-30°) | 1017.3 | 3.7 | B3/2500 | | |
| BM (30°-60°) | 2171.9 | 7.8 | B2/2500 | | |
| BH (60°-80°) | 1292.2 | 4.7 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 182.8 | 0.7 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 |
| 2.5° | 3360.5 | 3309.6 | 3304.9 | 3230.6 | 3213.7 | 3071.5 | 2967.1 | 2857.9 | 2733.7 | 2709.2 | 2611.4 |
| 5° | 4316.5 | 4311.9 | 4246.9 | 4125.5 | 4030.4 | 3787.7 | 3547.7 | 3293.6 | 3015.0 | 2969.9 | 2749.7 |
| 7.5° | 5176.6 | 5169.1 | 5119.2 | 4988.4 | 4851.0 | 4552.8 | 4210.2 | 3820.6 | 3368.9 | 3302.1 | 2937.0 |
| 10° | 5829.7 | 5826.9 | 5810.0 | 5713.9 | 5597.3 | 5311.2 | 4932.9 | 4401.2 | 3780.1 | 3688.8 | 3171.3 |
| 12.5° | 6334.1 | 6339.7 | 6351.0 | 6317.2 | 6261.7 | 6017.9 | 5630.2 | 5016.7 | 4218.7 | 4128.3 | 3431.9 |
| 15° | 6675.7 | 6692.6 | 6751.0 | 6799.0 | 6828.2 | 6678.5 | 6303.0 | 5646.2 | 4709.9 | 4601.7 | 3720.9 |
| 17.5° | 6847.9 | 6866.7 | 6967.4 | 7112.4 | 7245.9 | 7231.0 | 6932.6 | 6246.6 | 5181.4 | 5076.8 | 4031.4 |
| 20° | 6996.6 | 7010.7 | 7123.6 | 7297.7 | 7533.9 | 7638.4 | 7470.8 | 6824.4 | 5698.0 | 5573.7 | 4360.8 |
| 22.5° | 7427.6 | 7445.5 | 7479.3 | 7578.1 | 7787.1 | 7979.0 | 7898.1 | 7371.1 | 6171.3 | 6055.5 | 4673.2 |
| 25° | 8259.5 | 8281.1 | 8207.7 | 8123.9 | 8163.4 | 8297.1 | 8312.2 | 7869.9 | 6651.2 | 6520.5 | 5009.1 |
| 27.5° | 9261.6 | 9292.7 | 9167.5 | 8952.1 | 8763.8 | 8712.1 | 8694.2 | 8278.3 | 7109.5 | 6958.0 | 5341.3 |
| 30° | 10243.1 | 10296.8 | 10134.0 | 9854.5 | 9509.1 | 9266.4 | 9086.6 | 8678.2 | 7561.2 | 7416.3 | 5654.7 |
| 32.5° | 11202.0 | 11180.4 | 10944.2 | 10671.3 | 10266.7 | 9962.7 | 9528.0 | 9107.4 | 8069.3 | 7902.8 | 5966.2 |
| 35° | 11858.9 | 11866.4 | 11647.1 | 11323.4 | 10937.7 | 10704.2 | 10118.9 | 9570.3 | 8587.8 | 8434.5 | 6320.0 |
| 37.5° | 12417.9 | 12383.1 | 12134.6 | 11832.5 | 11500.4 | 11400.7 | 10810.6 | 10080.4 | 9149.7 | 8982.2 | 6696.4 |
| 40° | 12604.2 | 12563.8 | 12400.9 | 12183.5 | 11917.3 | 11908.8 | 11573.7 | 10658.1 | 9784.9 | 9619.3 | 7120.8 |
| 42.5° | 12491.3 | 12439.5 | 12372.7 | 12313.5 | 12231.6 | 12269.2 | 12290.8 | 11335.7 | 10483.1 | 10297.7 | 7612.0 |
| 45° | 12074.4 | 11996.3 | 12043.3 | 12172.3 | 12350.1 | 12562.9 | 12938.3 | 12085.7 | 11265.1 | 11109.8 | 8188.9 |
| 47.5° | 11433.5 | 11363.0 | 11509.8 | 11785.5 | 12269.2 | 12807.5 | 13550.9 | 12913.8 | 12198.6 | 12044.3 | 9010.4 |
| 50° | 10532.1 | 10552.8 | 10762.6 | 11264.2 | 11995.4 | 12920.4 | 14305.6 | 14010.1 | 13555.6 | 13411.6 | 10131.1 |
| 52.5° | 9052.8 | 9056.5 | 9647.5 | 10470.9 | 11509.8 | 12862.1 | 14724.3 | 15411.3 | 15408.4 | 15234.4 | 11198.3 |
| 55° | 7678.8 | 7762.6 | 8230.3 | 9324.7 | 10723.0 | 12628.7 | 15017.0 | 16092.6 | 16625.2 | 16421.0 | 12192.9 |
| 57.5° | 6336.9 | 6385.9 | 6829.1 | 7928.2 | 9600.4 | 12006.6 | 15317.3 | 16910.4 | 18027.4 | 17898.5 | 13429.5 |
| 60° | 4810.6 | 4885.9 | 5344.1 | 6359.5 | 8164.5 | 10902.8 | 15345.5 | 17763.9 | 19703.3 | 19573.5 | 14810.0 |
| 62.5° | 3122.4 | 3252.2 | 3681.3 | 4632.7 | 6427.3 | 9315.3 | 14690.5 | 18322.0 | 21291.8 | 21245.7 | 16035.2 |
| 65° | 1794.5 | 1892.4 | 2190.7 | 2924.8 | 4434.2 | 7322.2 | 13133.1 | 18107.4 | 22269.6 | 22243.2 | 16493.5 |
| 66° | 1466.2 | 1527.3 | 1756.0 | 2285.7 | 3658.7 | 6430.1 | 12227.8 | 17654.8 | 22366.5 | 22367.5 | 16440.8 |
| 67.5° | 1172.5 | 1199.8 | 1302.4 | 1636.4 | 2699.8 | 5096.7 | 10610.1 | 16656.3 | 22246.0 | 22279.0 | 16101.1 |
| 70° | 970.2 | 984.4 | 1016.3 | 1097.3 | 1473.6 | 3073.5 | 7531.1 | 14061.9 | 21036.9 | 21062.2 | 14775.2 |
| 72.5° | 870.4 | 878.9 | 891.1 | 902.5 | 1039.9 | 1717.4 | 4599.8 | 11249.1 | 18444.3 | 18477.2 | 12754.7 |
| 75° | 788.6 | 793.3 | 791.4 | 792.4 | 872.3 | 1094.4 | 2377.0 | 8398.7 | 14913.5 | 14847.7 | 9770.7 |
| 77.5° | 692.6 | 697.3 | 687.9 | 689.8 | 771.7 | 841.3 | 1182.9 | 5879.6 | 10064.3 | 9599.5 | 5505.1 |
| 80° | 585.3 | 589.1 | 585.3 | 591.9 | 671.9 | 635.2 | 687.9 | 3307.7 | 4450.2 | 4209.3 | 1957.4 |
| 82.5° | 442.3 | 458.3 | 469.6 | 496.0 | 553.3 | 451.7 | 460.2 | 1288.2 | 1355.1 | 1290.2 | 600.4 |
| 85° | 193.9 | 236.2 | 353.8 | 379.2 | 415.9 | 271.0 | 302.1 | 525.1 | 551.5 | 534.5 | 218.4 |
| 87.5° | 50.8 | 55.5 | 175.0 | 220.2 | 230.6 | 122.3 | 157.2 | 239.0 | 252.2 | 239.0 | 72.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P383205
 CATALOG NUMBER: GLEON-SA5B-735-U-T2R

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 | 2531.4 |
| 2.5° | 2559.6 | 2513.5 | 2430.7 | 2357.3 | 2301.8 | 2264.1 | 2226.5 | 2207.7 | 2196.4 | 2185.0 | 2187.0 |
| 5° | 2641.5 | 2548.3 | 2406.2 | 2305.5 | 2249.0 | 2213.4 | 2194.4 | 2187.0 | 2182.2 | 2171.0 | 2171.0 |
| 7.5° | 2764.7 | 2633.0 | 2437.3 | 2333.8 | 2289.6 | 2262.3 | 2251.0 | 2247.2 | 2241.6 | 2228.4 | 2230.2 |
| 10° | 2920.0 | 2735.6 | 2502.2 | 2401.5 | 2361.1 | 2330.9 | 2315.0 | 2309.3 | 2299.0 | 2283.9 | 2285.7 |
| 12.5° | 3102.6 | 2862.6 | 2587.8 | 2482.5 | 2433.5 | 2393.1 | 2366.7 | 2350.7 | 2332.8 | 2313.0 | 2314.0 |
| 15° | 3302.1 | 3001.0 | 2680.1 | 2554.9 | 2488.1 | 2431.6 | 2389.3 | 2362.0 | 2333.8 | 2309.3 | 2308.4 |
| 17.5° | 3504.4 | 3134.6 | 2750.7 | 2594.5 | 2504.1 | 2429.8 | 2372.4 | 2330.0 | 2295.1 | 2265.1 | 2262.3 |
| 20° | 3722.7 | 3255.0 | 2790.2 | 2590.6 | 2474.0 | 2385.5 | 2309.3 | 2256.6 | 2218.0 | 2187.9 | 2183.2 |
| 22.5° | 3944.8 | 3367.9 | 2796.8 | 2552.1 | 2407.1 | 2299.0 | 2218.9 | 2160.6 | 2121.1 | 2090.0 | 2078.7 |
| 25° | 4148.1 | 3455.5 | 2769.5 | 2477.7 | 2314.0 | 2197.3 | 2119.2 | 2059.9 | 2027.9 | 1991.2 | 1979.9 |
| 27.5° | 4333.5 | 3516.7 | 2714.9 | 2382.7 | 2209.5 | 2094.8 | 2021.4 | 1970.5 | 1935.7 | 1907.4 | 1898.0 |
| 30° | 4500.0 | 3549.6 | 2625.5 | 2269.8 | 2102.3 | 1997.8 | 1935.7 | 1900.9 | 1870.7 | 1835.1 | 1828.4 |
| 32.5° | 4658.1 | 3549.6 | 2510.7 | 2146.5 | 1995.9 | 1912.2 | 1875.5 | 1853.9 | 1820.0 | 1785.1 | 1775.7 |
| 35° | 4816.2 | 3528.0 | 2375.2 | 2017.5 | 1898.0 | 1851.0 | 1849.1 | 1823.7 | 1772.0 | 1724.9 | 1712.7 |
| 37.5° | 4982.8 | 3483.7 | 2222.8 | 1897.1 | 1818.1 | 1823.7 | 1839.7 | 1783.3 | 1709.9 | 1643.1 | 1625.2 |
| 40° | 5171.0 | 3422.5 | 2064.6 | 1792.7 | 1751.3 | 1811.5 | 1814.3 | 1724.9 | 1581.9 | 1520.8 | 1504.7 |
| 42.5° | 5392.2 | 3361.4 | 1917.9 | 1700.4 | 1698.6 | 1774.8 | 1766.3 | 1598.8 | 1513.2 | 1482.1 | 1473.6 |
| 45° | 5682.9 | 3326.6 | 1778.5 | 1613.0 | 1657.1 | 1715.5 | 1684.4 | 1529.1 | 1493.5 | 1475.6 | 1468.0 |
| 47.5° | 6141.2 | 3344.4 | 1650.6 | 1543.3 | 1615.8 | 1656.2 | 1532.0 | 1500.9 | 1475.6 | 1453.9 | 1446.4 |
| 50° | 6715.2 | 3334.1 | 1547.0 | 1495.3 | 1568.7 | 1594.2 | 1463.3 | 1464.2 | 1451.1 | 1426.6 | 1415.3 |
| 52.5° | 7147.1 | 3253.2 | 1480.2 | 1468.0 | 1527.3 | 1484.0 | 1420.1 | 1428.5 | 1421.9 | 1386.1 | 1373.9 |
| 55° | 7564.1 | 3183.6 | 1446.4 | 1457.7 | 1497.2 | 1346.6 | 1369.2 | 1389.9 | 1383.3 | 1348.5 | 1342.8 |
| 57.5° | 8082.6 | 3170.3 | 1425.6 | 1460.5 | 1471.8 | 1277.9 | 1320.3 | 1347.6 | 1342.8 | 1327.8 | 1324.9 |
| 60° | 8717.7 | 3174.1 | 1406.8 | 1465.2 | 1443.5 | 1227.1 | 1274.2 | 1309.0 | 1311.8 | 1309.0 | 1307.1 |
| 62.5° | 9066.8 | 3071.5 | 1359.8 | 1452.0 | 1393.7 | 1182.9 | 1226.2 | 1277.0 | 1277.9 | 1283.6 | 1282.6 |
| 65° | 8770.4 | 2764.7 | 1272.3 | 1405.9 | 1309.9 | 1146.2 | 1184.7 | 1240.3 | 1226.2 | 1251.5 | 1251.5 |
| 66° | 8482.5 | 2587.8 | 1229.0 | 1375.8 | 1274.2 | 1132.1 | 1171.6 | 1221.4 | 1203.6 | 1238.4 | 1238.4 |
| 67.5° | 7894.3 | 2289.6 | 1150.9 | 1311.8 | 1223.3 | 1112.3 | 1156.5 | 1190.4 | 1165.9 | 1217.7 | 1213.9 |
| 70° | 6819.7 | 1771.1 | 993.8 | 1166.9 | 1139.6 | 1083.1 | 1135.8 | 1128.3 | 1092.5 | 1171.6 | 1156.5 |
| 72.5° | 5749.7 | 1345.7 | 798.0 | 976.8 | 1012.6 | 1046.4 | 1106.7 | 1049.3 | 1004.1 | 1059.6 | 1026.7 |
| 75° | 4461.5 | 1011.6 | 630.5 | 759.4 | 855.4 | 989.0 | 1071.8 | 958.0 | 893.1 | 887.4 | 869.5 |
| 77.5° | 2411.9 | 694.5 | 499.7 | 579.7 | 679.5 | 917.5 | 1048.3 | 860.1 | 762.2 | 739.6 | 725.6 |
| 80° | 955.1 | 451.7 | 363.2 | 439.5 | 475.2 | 814.0 | 991.8 | 746.3 | 628.6 | 606.1 | 584.4 |
| 82.5° | 394.3 | 267.3 | 234.3 | 294.6 | 309.6 | 696.3 | 890.2 | 611.7 | 485.6 | 671.9 | 713.3 |
| 85° | 169.4 | 146.8 | 139.3 | 152.4 | 175.0 | 488.4 | 708.6 | 466.8 | 524.2 | 467.7 | 371.7 |
| 87.5° | 50.8 | 62.1 | 59.2 | 58.3 | 64.0 | 116.7 | 377.4 | 259.7 | 384.9 | 145.9 | 109.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

All Brands

Data applicable to all product families using SA light engines

Report Number: SP1-2101-121-7

Luminaire Tested: IFLD-S-SA2A-735-U-T2

Test Date: 03/04/2021

Test Information

Test Method: LM-79-08
 Report Number: SP1-2101-121-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 03/04/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: **IFLD-S-SA2A-735-U-T2**
 Description: STREETWORKS INF FLOOD

PROGRAMMED @ 615mA.

Spectral Parameters

| | | | | | |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K): | 3388 | CRI (Ra): | 73.1 | R9: | -34.6 |
| CIE u': | 0.2371 | R1: | 68.9 | R10: | 57.8 |
| CIE v': | 0.5177 | R2: | 81.1 | R11: | 68.6 |
| Duv: | 0.0032 | R3: | 93.1 | R12: | 53.9 |
| CIE x: | 0.4153 | R4: | 71.6 | R13: | 70.9 |
| CIE y: | 0.4030 | R5: | 69.4 | R14: | 96.2 |
| CIE z: | 0.1817 | R6: | 75.0 | | |
| Peak Wavelength (nm): | 590 | R7: | 79.5 | | |
| Dominant Wavelength (nm): | 580 | R8: | 46.4 | | |
| Purity: | 45.7 | | | | |
| Rf: | 76.9 | | | | |
| Rg: | 94.4 | | | | |



Test Conditions

Stabilization Time: 81M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0/30%
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2101-121-7

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 1/31/2021 | 7/31/2021 |
| Power Meter | IN0071 | 12/1/2020 | 12/1/2021 |
| AC Power Source | IN0063 | 12/1/2020 | 12/1/2021 |
| DC Power Source | IN0208 | 12/1/2020 | 12/1/2021 |
| Sphere Thermometer | IN0085 | 12/1/2020 | 12/1/2021 |
| Room Thermometer | IN0046 | 12/1/2020 | 12/1/2021 |

REPORT NUMBER: SP1-2101-121-7

CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-7

Photopic Flux vs. Wavelength



#####

| λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2672 | 0.0 | 490 | 34553 | 4.9 | 620 | 136720 | 35.6 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 8.0 | 625 | 126308 | 27.9 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 12.1 | 630 | 114625 | 20.7 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 18.1 | 635 | 103216 | 15.5 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 25.4 | 640 | 92605 | 11.1 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 33.9 | 645 | 83234 | 8.0 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 43.0 | 650 | 73263 | 5.4 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 50.1 | 655 | 64627 | 3.7 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 57.9 | 660 | 56614 | 2.4 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.0 | 535 | 103269 | 64.0 | 665 | 49537 | 1.6 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.0 | 540 | 107316 | 69.9 | 670 | 42866 | 0.9 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.0 | 545 | 113101 | 75.3 | 675 | 36708 | 0.6 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 0.0 | 550 | 120690 | 82.0 | 680 | 31814 | 0.4 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 0.1 | 555 | 128583 | 87.8 | 685 | 27485 | 0.2 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 0.3 | 560 | 137796 | 93.6 | 690 | 23698 | 0.1 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 0.8 | 565 | 146577 | 97.5 | 695 | 20309 | 0.1 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 1.6 | 570 | 154581 | 100.5 | 700 | 17890 | 0.1 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 2.4 | 575 | 162633 | 101.2 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 2.5 | 580 | 168101 | 99.9 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 2.1 | 585 | 173145 | 96.2 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 1.8 | 590 | 174675 | 90.3 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 1.7 | 595 | 173724 | 82.3 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 1.5 | 600 | 171241 | 73.8 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 1.7 | 605 | 165134 | 64.0 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 2.2 | 610 | 156652 | 53.8 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 3.3 | 615 | 147879 | 44.6 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-7

Scotopic Flux vs. Wavelength



Scotopic Lumens: 12126

S/P: 1.36

| λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360 | 2672 | 0.0 | 490 | 34553 | 53.2 | 620 | 136720 | 1.7 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 71.7 | 625 | 126308 | 1.1 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 91.4 | 630 | 114625 | 0.6 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 110.0 | 635 | 103216 | 0.4 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 125.1 | 640 | 92605 | 0.2 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 135.7 | 645 | 83234 | 0.1 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 140.8 | 650 | 73263 | 0.1 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 139.6 | 655 | 64627 | 0.1 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 135.7 | 660 | 56614 | 0.0 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.1 | 535 | 103269 | 128.7 | 665 | 49537 | 0.0 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.2 | 540 | 107316 | 118.6 | 670 | 42866 | 0.0 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.6 | 545 | 113101 | 108.4 | 675 | 36708 | 0.0 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 2.0 | 550 | 120690 | 98.7 | 680 | 31814 | 0.0 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 5.9 | 555 | 128583 | 87.9 | 685 | 27485 | 0.0 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 14.3 | 560 | 137796 | 77.0 | 690 | 23698 | 0.0 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 30.5 | 565 | 146577 | 65.8 | 695 | 20309 | 0.0 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 55.5 | 570 | 154581 | 54.6 | 700 | 17890 | 0.0 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 77.4 | 575 | 162633 | 44.3 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 73.6 | 580 | 168101 | 34.6 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 53.7 | 585 | 173145 | 26.5 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 41.9 | 590 | 174675 | 19.5 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 34.3 | 595 | 173724 | 13.9 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 27.9 | 600 | 171241 | 9.7 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 27.1 | 605 | 165134 | 6.5 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 31.3 | 610 | 156652 | 4.2 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 40.0 | 615 | 147879 | 2.7 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: 4490.7 M/P: 0.5

| λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2672 | 0.0 | 490 | 34553 | 28.8 | 620 | 136720 | 0.1 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 36.6 | 625 | 126308 | 0.1 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 43.9 | 630 | 114625 | 0.0 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 49.6 | 635 | 103216 | 0.0 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 53.0 | 640 | 92605 | 0.0 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 53.5 | 645 | 83234 | 0.0 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 51.6 | 650 | 73263 | 0.0 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 47.3 | 655 | 64627 | 0.0 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 42.5 | 660 | 56614 | 0.0 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.0 | 535 | 103269 | 37.2 | 665 | 49537 | 0.0 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.1 | 540 | 107316 | 31.4 | 670 | 42866 | 0.0 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.4 | 545 | 113101 | 26.3 | 675 | 36708 | 0.0 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 1.4 | 550 | 120690 | 21.7 | 680 | 31814 | 0.0 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 3.7 | 555 | 128583 | 17.3 | 685 | 27485 | 0.0 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 8.9 | 560 | 137796 | 13.6 | 690 | 23698 | 0.0 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 18.2 | 565 | 146577 | 10.3 | 695 | 20309 | 0.0 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 33.2 | 570 | 154581 | 7.6 | 700 | 17890 | 0.0 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 45.6 | 575 | 162633 | 5.4 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 43.8 | 580 | 168101 | 3.8 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 32.2 | 585 | 173145 | 2.6 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 25.6 | 590 | 174675 | 1.7 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 21.2 | 595 | 173724 | 1.1 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 17.4 | 600 | 171241 | 0.7 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 16.6 | 605 | 165134 | 0.5 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 18.6 | 610 | 156652 | 0.3 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 22.7 | 615 | 147879 | 0.2 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

Summary

$R_f = 76.9$
 $R_g = 94.4$
 $CIE R_a = 73.1$
 $R_g = -34.6$



Color Vector Graphics



Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 68 | CES51 = 90 | CES76 = 63 |
| CES02 = 62 | CES27 = 88 | CES52 = 89 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 80 | CES78 = 65 |
| CES04 = 70 | CES29 = 67 | CES54 = 84 | CES79 = 87 |
| CES05 = 48 | CES30 = 74 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 71 | CES56 = 75 | CES81 = 75 |
| CES07 = 40 | CES32 = 67 | CES57 = 74 | CES82 = 94 |
| CES08 = 39 | CES33 = 74 | CES58 = 76 | CES83 = 91 |
| CES09 = 29 | CES34 = 78 | CES59 = 87 | CES84 = 89 |
| CES10 = 75 | CES35 = 89 | CES60 = 93 | CES85 = 80 |
| CES11 = 58 | CES36 = 98 | CES61 = 86 | CES86 = 66 |
| CES12 = 64 | CES37 = 86 | CES62 = 89 | CES87 = 79 |
| CES13 = 43 | CES38 = 82 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 95 | CES64 = 74 | CES89 = 70 |
| CES15 = 71 | CES40 = 91 | CES65 = 68 | CES90 = 77 |
| CES16 = 47 | CES41 = 89 | CES66 = 71 | CES91 = 88 |
| CES17 = 50 | CES42 = 88 | CES67 = 69 | CES92 = 60 |
| CES18 = 56 | CES43 = 82 | CES68 = 74 | CES93 = 77 |
| CES19 = 72 | CES44 = 99 | CES69 = 82 | CES94 = 52 |
| CES20 = 65 | CES45 = 87 | CES70 = 67 | CES95 = 69 |
| CES21 = 86 | CES46 = 82 | CES71 = 66 | CES96 = 78 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 85 |
| CES23 = 92 | CES48 = 72 | CES73 = 59 | CES98 = 76 |
| CES24 = 91 | CES49 = 82 | CES74 = 97 | CES99 = 63 |
| CES25 = 72 | CES50 = 88 | CES75 = 66 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)