

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: P383559

Luminaire Tested: **GLEON-SA8C-735-U-SL3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P383559
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA8C-735-U-SL3
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(8) 70 CRI, 3500K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 52809.4 lumens
Efficiency: N/A
Efficacy: 118.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B4 - U0 - G5

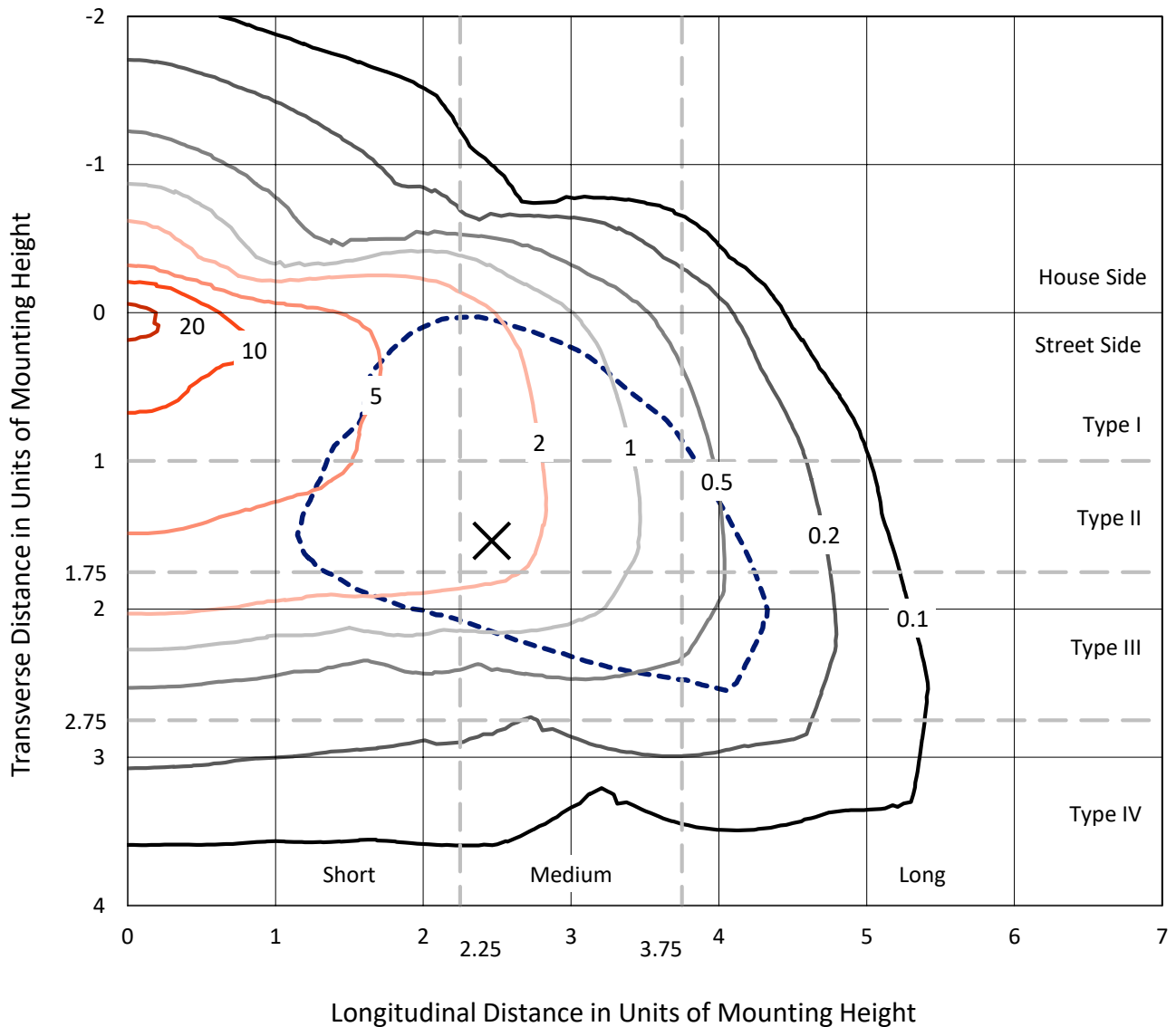
Input Watts (W): 445
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P383559
 CATALOG NUMBER: GLEON-SA8C-735-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

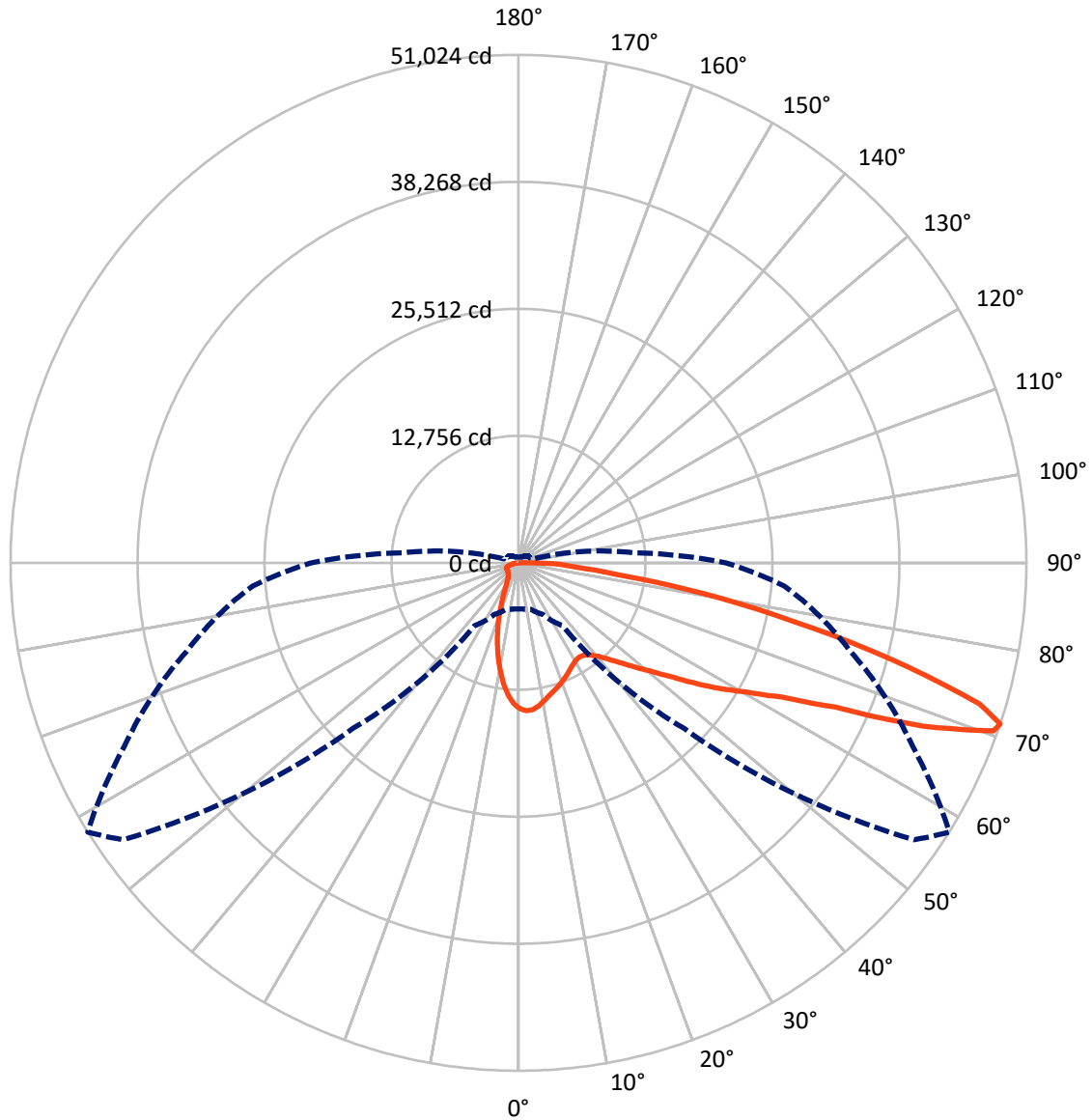
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 23.4 fc
 Type III - Medium - N/A

REPORT NUMBER: P383559
CATALOG NUMBER: GLEON-SA8C-735-U-SL3

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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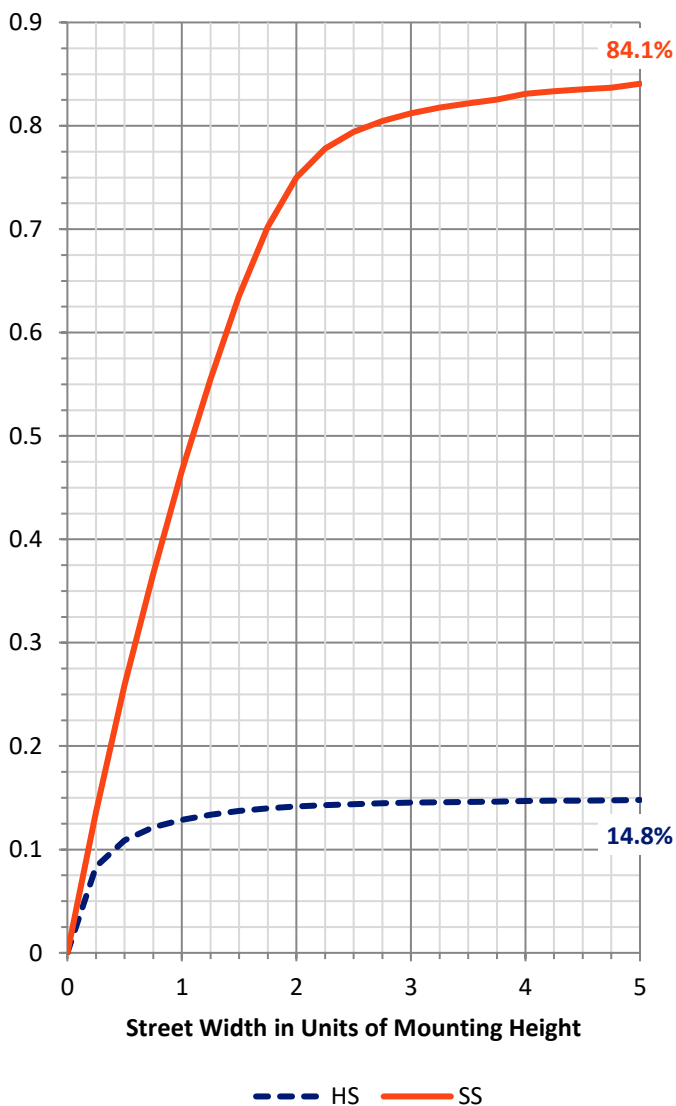
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7895.4 | 0.0 | 7895.4 |
| | % Fixture | 15.0 | 0.0 | 15.0 |
| Street Side | Lumens | 44914.0 | 0.0 | 44914.0 |
| | % Fixture | 85.0 | 0.0 | 85.0 |
| Total | Lumens | 52809.4 | 0.0 | 52809.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1262.3 | 2.4 |
| 10°-20° | 2806.8 | 5.3 |
| 20°-30° | 3567.2 | 6.8 |
| 30°-40° | 4543.9 | 8.6 |
| 40°-50° | 6443.5 | 12.2 |
| 50°-60° | 9971.5 | 18.9 |
| 60°-70° | 13574.9 | 25.7 |
| 70°-80° | 9056.0 | 17.1 |
| 80°-90° | 1583.3 | 3.0 |
| 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° | 52809.4 | 100.0 |
| 0°-180° | 52809.4 | 100.0 |

Coefficient of Utilization

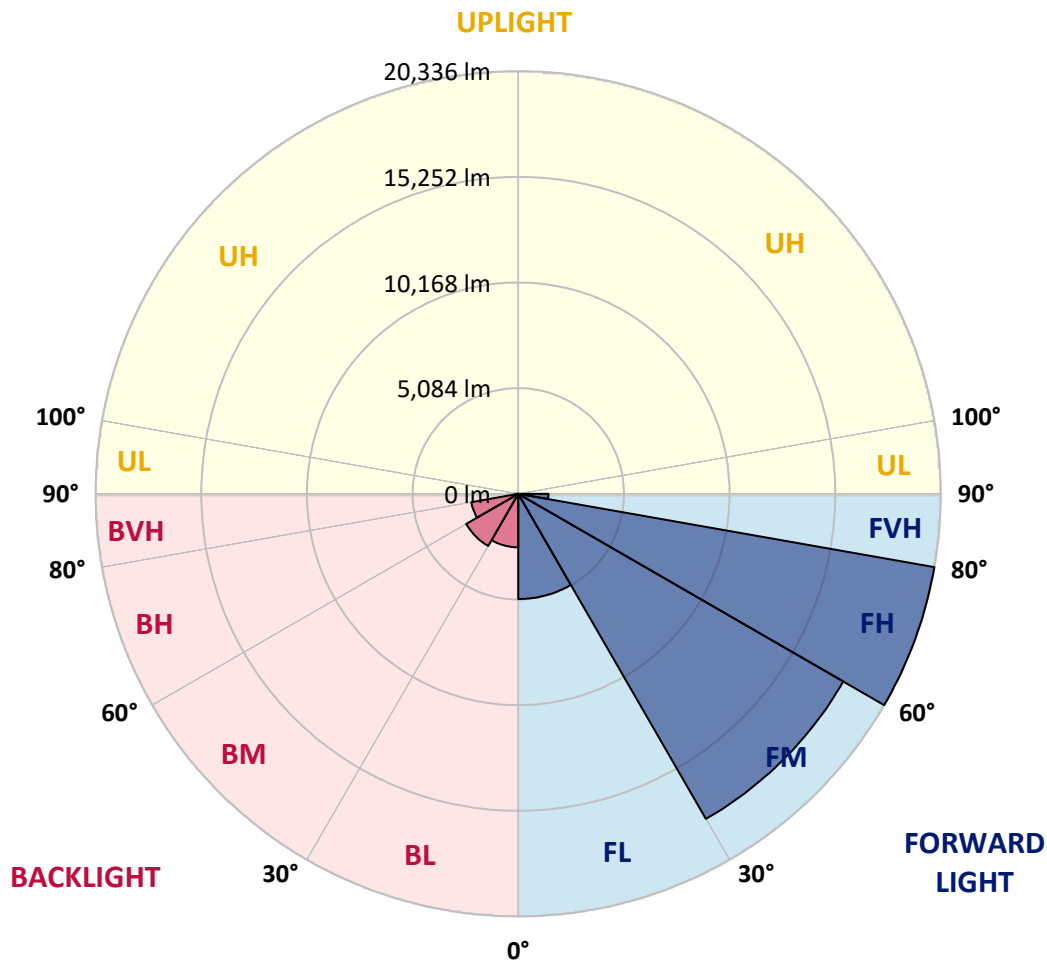


REPORT NUMBER: P383559
 CATALOG NUMBER: GLEON-SA8C-735-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 5062.6 | 9.6 | | | |
| FM (30°-60°) | 18063.4 | 34.2 | | | |
| FH (60°-80°) | 20336.3 | 38.5 | | | G5 |
| FVH (80°-90°) | 1451.8 | 2.7 | | | G5 |
| BL (0°-30°) | 2573.7 | 4.9 | B4/5000 | | |
| BM (30°-60°) | 2895.5 | 5.5 | B3/5000 | | |
| BH (60°-80°) | 2294.7 | 4.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 131.5 | 0.2 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G5
 Type III Medium





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CATALOG NUMBER: GLEON-SA8C-735-U-SL3

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 |
| 2.5° | 15019.9 | 14999.7 | 15007.0 | 14992.3 | 14957.3 | 14922.4 | 14870.9 | 14880.1 | 14808.3 | 14701.7 | 14569.2 |
| 5° | 14736.6 | 14729.3 | 14784.4 | 14815.7 | 14841.4 | 14821.2 | 14806.5 | 14824.9 | 14720.0 | 14572.9 | 14342.9 |
| 7.5° | 14142.4 | 14061.5 | 14131.4 | 14236.3 | 14335.6 | 14411.0 | 14510.3 | 14523.2 | 14457.0 | 14302.4 | 14000.8 |
| 10° | 13298.0 | 13220.8 | 13323.8 | 13487.5 | 13686.2 | 13866.5 | 14067.0 | 14103.8 | 14116.7 | 13976.8 | 13610.8 |
| 12.5° | 12422.5 | 12363.6 | 12466.6 | 12696.5 | 13025.8 | 13303.6 | 13623.7 | 13678.8 | 13792.9 | 13699.1 | 13250.2 |
| 15° | 11638.8 | 11616.8 | 11741.8 | 11968.1 | 12347.0 | 12772.0 | 13233.7 | 13334.8 | 13528.0 | 13496.7 | 12968.8 |
| 17.5° | 10961.9 | 10956.3 | 11052.0 | 11289.3 | 11708.7 | 12245.8 | 12845.6 | 13016.6 | 13303.6 | 13340.4 | 12737.1 |
| 20° | 10457.8 | 10446.7 | 10513.0 | 10687.7 | 11120.1 | 11728.9 | 12426.1 | 12661.6 | 13075.5 | 13204.2 | 12497.8 |
| 22.5° | 10187.4 | 10185.5 | 10187.4 | 10270.2 | 10623.4 | 11189.9 | 12017.7 | 12304.7 | 12852.9 | 13095.7 | 12233.0 |
| 25° | 10141.4 | 10135.9 | 10095.5 | 10086.2 | 10286.7 | 10739.3 | 11613.0 | 11929.5 | 12641.4 | 13020.3 | 11980.9 |
| 27.5° | 10261.0 | 10268.4 | 10215.0 | 10128.5 | 10169.0 | 10443.1 | 11261.7 | 11600.2 | 12472.1 | 13005.6 | 11806.2 |
| 30° | 10509.3 | 10505.6 | 10459.7 | 10369.5 | 10290.4 | 10332.7 | 11011.5 | 11350.0 | 12358.1 | 13070.0 | 11686.6 |
| 32.5° | 10783.4 | 10803.6 | 10794.5 | 10744.7 | 10627.1 | 10457.8 | 10936.1 | 11267.3 | 12324.9 | 13224.5 | 11635.1 |
| 35° | 11112.7 | 11134.8 | 11201.0 | 11239.6 | 11101.6 | 10829.4 | 11098.0 | 11384.9 | 12420.6 | 13515.2 | 11717.9 |
| 37.5° | 11425.4 | 11482.4 | 11668.2 | 11832.0 | 11714.2 | 11410.7 | 11528.5 | 11732.7 | 12716.7 | 13973.2 | 11940.5 |
| 40° | 11785.9 | 11835.6 | 12139.2 | 12486.8 | 12468.4 | 12153.9 | 12221.9 | 12358.1 | 13239.2 | 14629.9 | 12343.4 |
| 42.5° | 12141.0 | 12240.3 | 12679.9 | 13173.0 | 13314.6 | 13036.8 | 13145.3 | 13217.2 | 13975.0 | 15500.0 | 13046.0 |
| 45° | 12613.8 | 12720.5 | 13331.2 | 13925.3 | 14256.5 | 14100.1 | 14273.0 | 14300.7 | 14900.3 | 16684.7 | 14067.0 |
| 47.5° | 13329.3 | 13450.7 | 14162.7 | 14786.3 | 15292.1 | 15308.7 | 15593.8 | 15582.7 | 16055.6 | 18040.4 | 15352.8 |
| 50° | 14444.1 | 14618.9 | 15202.0 | 15785.2 | 16399.5 | 16741.7 | 17122.5 | 17069.1 | 17440.7 | 19484.4 | 16833.7 |
| 52.5° | 15904.7 | 15985.6 | 16418.0 | 16848.4 | 17611.8 | 18378.9 | 18925.2 | 18877.4 | 19011.7 | 20969.0 | 18515.1 |
| 55° | 17418.6 | 17479.4 | 17657.8 | 17893.3 | 18919.7 | 20170.6 | 21325.8 | 21250.5 | 20910.1 | 22510.5 | 20176.1 |
| 57.5° | 18779.9 | 18903.2 | 19026.4 | 19123.9 | 20236.8 | 22043.3 | 23781.7 | 23787.2 | 22970.4 | 24173.5 | 21892.4 |
| 60° | 18991.5 | 19100.0 | 19914.9 | 20683.8 | 22490.3 | 24541.3 | 26410.3 | 26355.2 | 25102.4 | 25978.1 | 23805.5 |
| 62.5° | 16787.7 | 17032.3 | 18393.6 | 20439.2 | 24661.0 | 29110.8 | 29763.9 | 29695.8 | 27652.1 | 28202.0 | 26033.2 |
| 65° | 12030.7 | 12308.4 | 13951.1 | 17025.0 | 23608.8 | 34145.6 | 35816.0 | 34899.9 | 31128.8 | 30937.4 | 28641.7 |
| 67.5° | 6940.6 | 7006.8 | 7718.7 | 10187.4 | 17976.1 | 34408.7 | 45048.6 | 43766.4 | 36527.8 | 34040.8 | 29918.3 |
| 70° | 5132.4 | 5130.5 | 5299.8 | 6269.1 | 9727.5 | 28082.5 | 49439.7 | 50589.4 | 42212.1 | 35061.8 | 28113.7 |
| 71° | 4641.2 | 4646.7 | 4836.1 | 5706.3 | 7704.0 | 23505.7 | 48507.0 | 51023.5 | 43709.4 | 34557.7 | 26807.7 |
| 72.5° | 3969.7 | 3988.1 | 4251.2 | 5117.6 | 6480.7 | 16210.0 | 44489.4 | 48418.7 | 44419.5 | 33314.2 | 24764.0 |
| 75° | 3011.3 | 3053.6 | 3417.8 | 4313.7 | 5923.3 | 8220.9 | 32652.0 | 38663.6 | 39460.1 | 29395.9 | 18401.0 |
| 77.5° | 2148.6 | 2196.4 | 2608.5 | 3627.5 | 5630.8 | 6195.6 | 21866.7 | 28202.0 | 29039.0 | 18838.8 | 8300.0 |
| 80° | 1357.5 | 1414.6 | 1725.5 | 2886.2 | 5290.5 | 5882.9 | 13741.4 | 18956.5 | 15834.8 | 6028.2 | 2111.8 |
| 82.5° | 796.6 | 840.6 | 1070.6 | 1885.5 | 4321.1 | 5665.8 | 8084.8 | 10507.5 | 6162.5 | 1821.2 | 960.2 |
| 85° | 461.8 | 482.0 | 667.7 | 1201.2 | 3138.3 | 5347.5 | 5939.9 | 5873.7 | 2674.7 | 890.4 | 454.4 |
| 87.5° | 215.2 | 239.1 | 395.5 | 627.3 | 1742.1 | 3875.9 | 4694.5 | 4056.2 | 1662.9 | 417.6 | 213.4 |
| 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: P383559
 CATALOG NUMBER: GLEON-SA8C-735-U-SL3

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 | 14631.7 |
| 2.5° | 14504.8 | 14473.5 | 14342.9 | 14227.1 | 14105.6 | 13947.4 | 13772.7 | 13750.6 | 13643.9 | 13664.1 | 13627.3 |
| 5° | 14217.8 | 14138.8 | 13824.2 | 13539.0 | 13202.5 | 12900.7 | 12573.3 | 12422.5 | 12205.4 | 12190.7 | 12135.5 |
| 7.5° | 13807.6 | 13660.5 | 13173.0 | 12632.2 | 12091.3 | 11576.2 | 11066.7 | 10731.9 | 10389.7 | 10244.4 | 10231.6 |
| 10° | 13345.9 | 13095.7 | 12378.3 | 11578.1 | 10798.1 | 10045.7 | 9317.3 | 8778.3 | 8292.6 | 8062.7 | 8053.5 |
| 12.5° | 12908.1 | 12538.4 | 11554.2 | 10465.2 | 9398.2 | 8423.2 | 7424.4 | 6716.2 | 6107.3 | 5903.1 | 5816.7 |
| 15° | 12536.5 | 12015.9 | 10752.1 | 9359.6 | 8064.6 | 6710.7 | 5573.8 | 4828.8 | 4265.9 | 4071.0 | 4034.2 |
| 17.5° | 12176.0 | 11506.4 | 9929.8 | 8243.0 | 6677.5 | 5189.4 | 4050.6 | 3496.9 | 3197.2 | 3118.0 | 3116.2 |
| 20° | 11817.2 | 10982.1 | 9070.8 | 7100.6 | 5336.6 | 3881.5 | 3114.3 | 2866.0 | 2764.8 | 2755.6 | 2740.9 |
| 22.5° | 11410.7 | 10426.5 | 8167.6 | 5954.6 | 4164.8 | 3051.8 | 2647.1 | 2547.8 | 2534.9 | 2568.0 | 2568.0 |
| 25° | 11029.9 | 9874.7 | 7251.4 | 4832.5 | 3239.5 | 2545.9 | 2363.8 | 2343.6 | 2378.5 | 2437.4 | 2442.9 |
| 27.5° | 10674.9 | 9343.0 | 6357.4 | 3835.5 | 2595.6 | 2242.4 | 2167.0 | 2190.9 | 2253.4 | 2321.5 | 2323.4 |
| 30° | 10382.4 | 8840.9 | 5489.2 | 3022.4 | 2192.8 | 2016.1 | 2003.3 | 2051.1 | 2119.2 | 2172.5 | 2185.4 |
| 32.5° | 10156.1 | 8412.2 | 4650.4 | 2430.0 | 1929.7 | 1846.9 | 1858.0 | 1898.4 | 1940.7 | 1970.1 | 1990.3 |
| 35° | 10051.3 | 8044.3 | 3875.9 | 2049.2 | 1762.3 | 1716.3 | 1731.0 | 1753.1 | 1771.5 | 1793.6 | 1810.1 |
| 37.5° | 10069.7 | 7759.2 | 3184.2 | 1812.0 | 1650.1 | 1626.2 | 1626.2 | 1626.2 | 1626.2 | 1637.2 | 1639.1 |
| 40° | 10240.8 | 7595.5 | 2621.4 | 1661.1 | 1574.7 | 1548.9 | 1528.7 | 1510.2 | 1495.5 | 1502.9 | 1499.2 |
| 42.5° | 10678.5 | 7580.7 | 2209.3 | 1565.5 | 1514.0 | 1471.7 | 1431.1 | 1405.4 | 1387.0 | 1394.3 | 1398.1 |
| 45° | 11421.7 | 7764.7 | 1931.6 | 1497.4 | 1456.9 | 1392.6 | 1341.1 | 1313.4 | 1300.5 | 1324.5 | 1328.1 |
| 47.5° | 12383.8 | 8165.8 | 1762.3 | 1447.7 | 1403.6 | 1319.0 | 1263.7 | 1238.0 | 1241.7 | 1276.7 | 1285.8 |
| 50° | 13623.7 | 8816.9 | 1681.4 | 1416.4 | 1366.8 | 1256.4 | 1199.4 | 1177.3 | 1188.4 | 1238.0 | 1249.0 |
| 52.5° | 14985.0 | 9755.1 | 1690.6 | 1407.3 | 1342.8 | 1210.5 | 1149.7 | 1124.0 | 1142.4 | 1188.4 | 1197.5 |
| 55° | 16555.9 | 10882.7 | 1843.3 | 1420.1 | 1307.9 | 1181.0 | 1109.3 | 1065.1 | 1079.8 | 1122.1 | 1129.5 |
| 57.5° | 18301.6 | 12174.1 | 2150.4 | 1416.4 | 1263.7 | 1153.3 | 1066.9 | 1000.7 | 1011.8 | 1037.5 | 1044.8 |
| 60° | 20119.1 | 13734.1 | 2626.9 | 1427.5 | 1243.5 | 1120.3 | 1009.9 | 927.2 | 923.4 | 945.5 | 949.2 |
| 62.5° | 22300.8 | 15538.7 | 3171.4 | 1434.9 | 1256.4 | 1078.0 | 934.5 | 853.6 | 842.5 | 848.0 | 851.7 |
| 65° | 24548.7 | 16844.7 | 2967.2 | 1405.4 | 1296.9 | 1043.1 | 868.3 | 781.8 | 761.5 | 757.9 | 759.8 |
| 67.5° | 24618.7 | 15444.8 | 2080.5 | 1346.6 | 1313.4 | 1024.6 | 818.6 | 721.1 | 687.9 | 675.1 | 673.2 |
| 70° | 22078.2 | 12547.6 | 1620.6 | 1284.0 | 1247.2 | 995.2 | 772.6 | 671.5 | 621.8 | 601.5 | 599.7 |
| 71° | 20838.3 | 11550.5 | 1536.0 | 1252.7 | 1197.5 | 965.7 | 752.4 | 649.4 | 597.9 | 575.8 | 572.1 |
| 72.5° | 18893.9 | 10354.8 | 1433.0 | 1203.1 | 1101.9 | 890.4 | 713.8 | 618.1 | 564.7 | 539.0 | 533.5 |
| 75° | 13559.3 | 6771.3 | 1230.7 | 1072.5 | 912.5 | 710.0 | 625.4 | 555.6 | 509.6 | 478.3 | 474.6 |
| 77.5° | 5224.3 | 2695.0 | 930.8 | 892.1 | 699.0 | 555.6 | 515.1 | 480.1 | 447.0 | 415.7 | 413.9 |
| 80° | 1615.1 | 1204.9 | 678.8 | 671.5 | 505.8 | 413.9 | 401.0 | 391.8 | 379.0 | 345.8 | 338.4 |
| 82.5° | 862.7 | 691.7 | 467.3 | 434.1 | 331.1 | 275.9 | 290.6 | 294.4 | 296.1 | 261.2 | 257.6 |
| 85° | 412.0 | 366.1 | 263.1 | 246.5 | 193.1 | 154.5 | 178.4 | 193.1 | 195.0 | 160.0 | 149.0 |
| 87.5° | 196.8 | 191.3 | 123.2 | 93.8 | 71.7 | 51.5 | 62.5 | 77.2 | 84.6 | 60.7 | 53.4 |
| 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)