

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P631760

Luminaire Tested: GWS-SA2B-735-U-SL2-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P631760
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-29)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA2B-735-U-SL2-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (32) 3500K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5797.3 lumens
Efficiency: N/A
Efficacy: 124.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G1

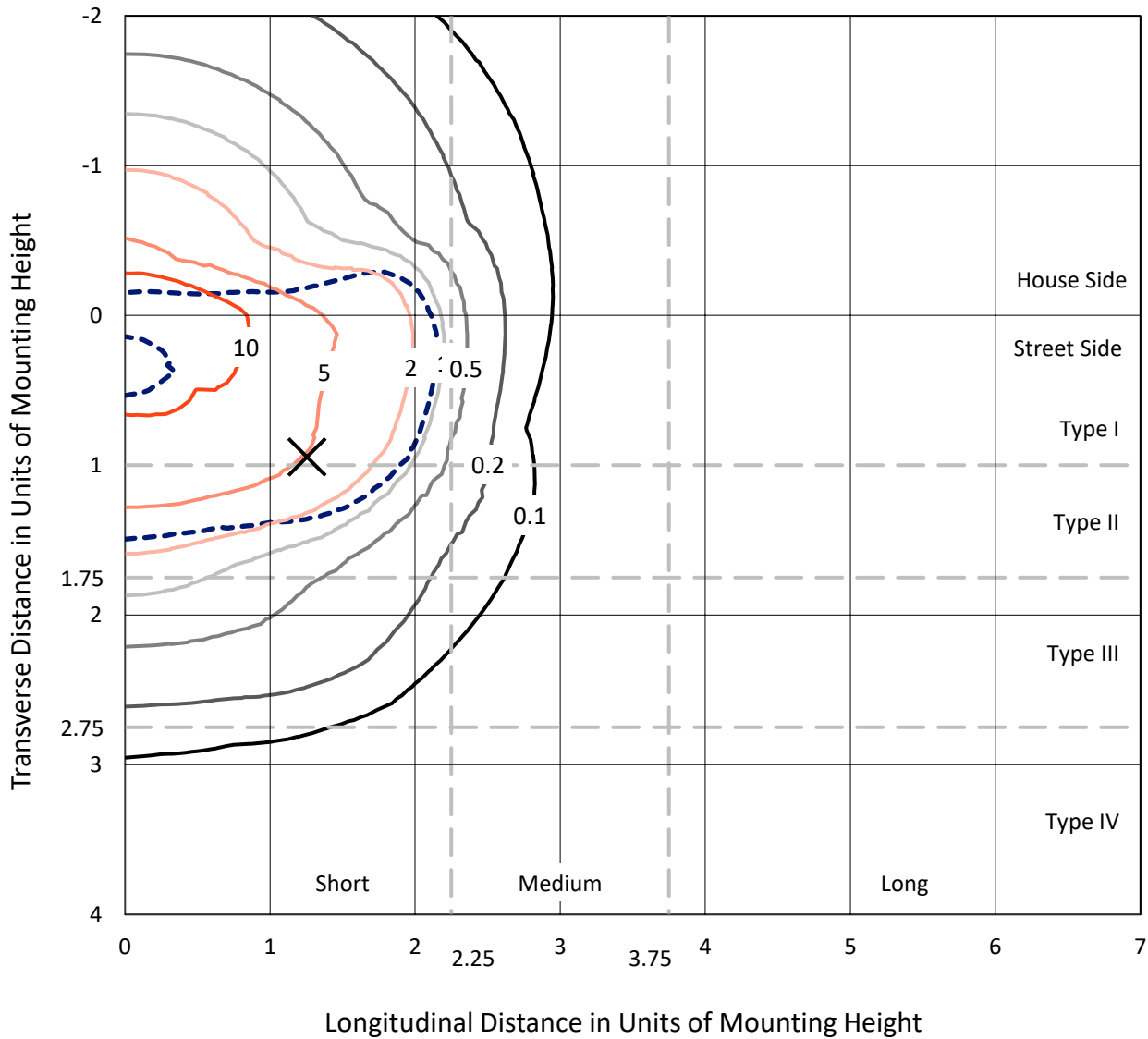
Input Watts (W): 46.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P631760
 CATALOG NUMBER: GWS-SA2B-735-U-SL2-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination

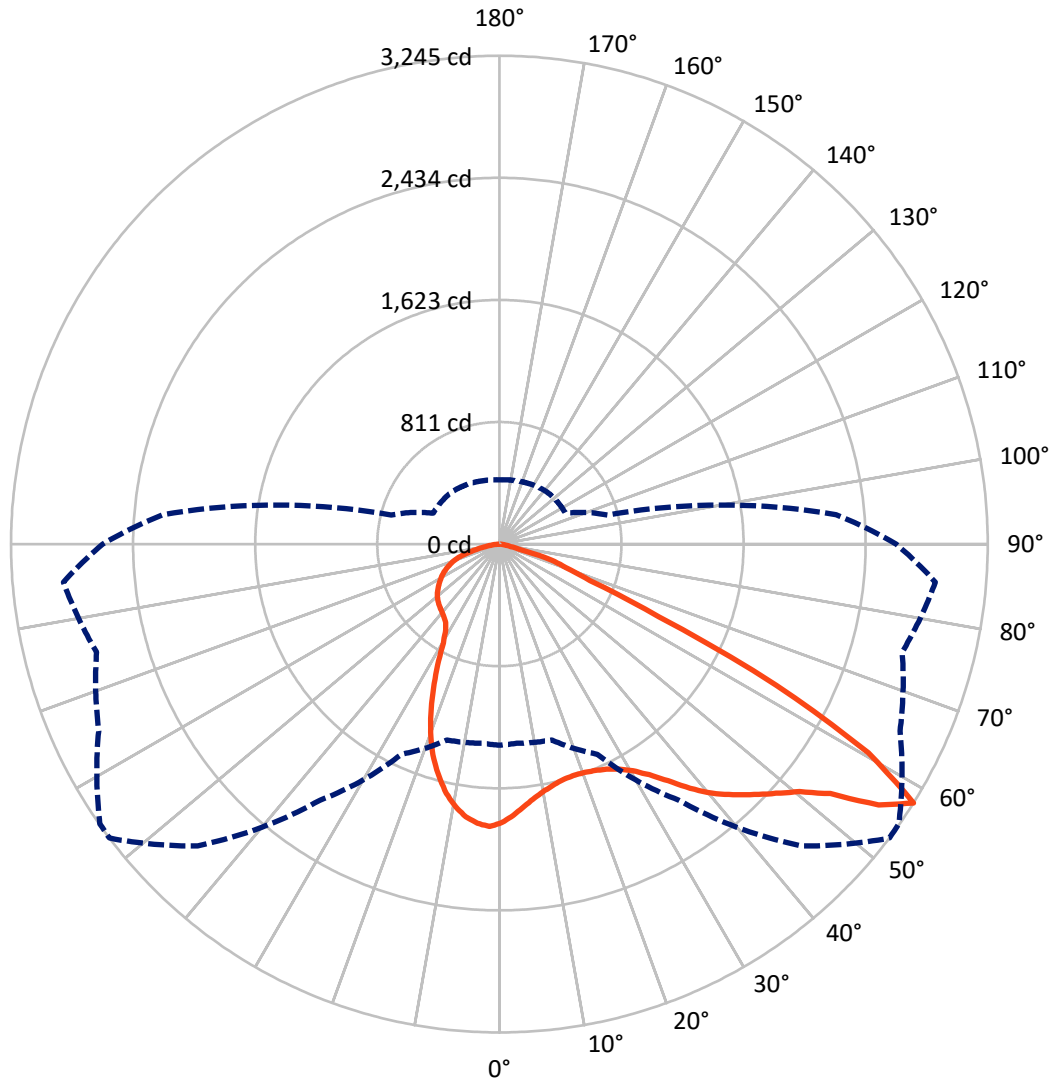
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.5 fc
 Type II - Short - N/A

REPORT NUMBER: P631760
CATALOG NUMBER: GWS-SA2B-735-U-SL2-W-GRSWH

Luminous Intensity Polar Plot



— Vertical Plane Through 53-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1812.6 | 0.0 | 1812.6 |
| | % Fixture | 31.3 | 0.0 | 31.3 |
| Street Side | Lumens | 3984.7 | 0.0 | 3984.7 |
| | % Fixture | 68.7 | 0.0 | 68.7 |
| Total | Lumens | 5797.3 | 0.0 | 5797.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 167.4 | 2.9 |
| 10°-20° | 439.2 | 7.6 |
| 20°-30° | 647.1 | 11.2 |
| 30°-40° | 905.8 | 15.6 |
| 40°-50° | 1190.7 | 20.5 |
| 50°-60° | 1396.1 | 24.1 |
| 60°-70° | 822.5 | 14.2 |
| 70°-80° | 204.6 | 3.5 |
| 80°-90° | 24.0 | 0.4 |
| 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° | 5797.3 | 100.0 |
| 0°-180° | 5797.3 | 100.0 |

Coefficient of Utilization



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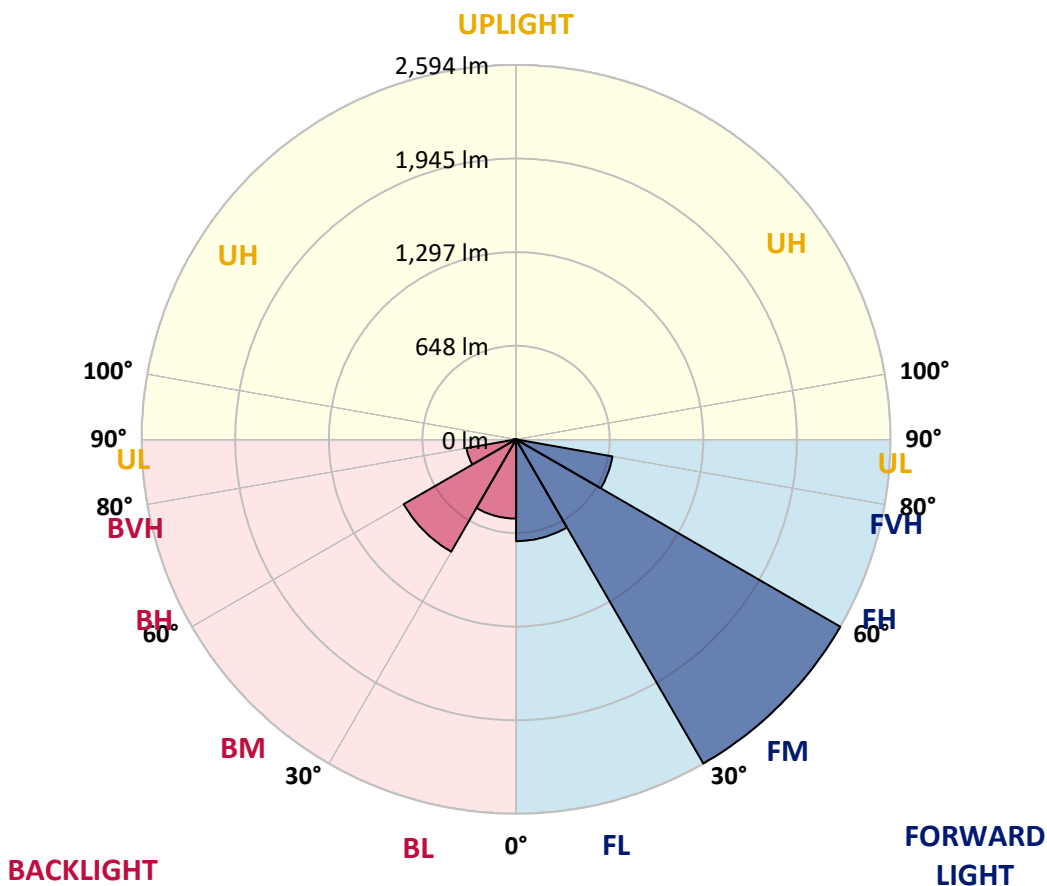
CATALOG NUMBER: GWS-SA2B-735-U-SL2-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 704.8 | 12.2 | | | |
| FM (30°-60°) | 2593.8 | 44.7 | | | |
| FH (60°-80°) | 678.1 | 11.7 | | | G1/1800 |
| FVH (80°-90°) | 8.0 | 0.1 | | | G0/10 |
| BL (0°-30°) | 548.9 | 9.5 | B2/1000 | | |
| BM (30°-60°) | 898.8 | 15.5 | B1/1000 | | |
| BH (60°-80°) | 349.0 | 6.0 | B1/500 | | G1/500 |
| BVH (80°-90°) | 16.0 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 53° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 |
| 2.5° | 1744.9 | 1749.7 | 1750.7 | 1765.8 | 1766.8 | 1788.8 | 1803.4 | 1800.5 | 1815.6 | 1834.2 | 1848.8 |
| 5° | 1661.4 | 1661.9 | 1666.8 | 1684.8 | 1694.6 | 1723.4 | 1747.8 | 1747.8 | 1777.1 | 1815.1 | 1847.8 |
| 7.5° | 1592.6 | 1592.1 | 1596.5 | 1616.5 | 1632.6 | 1667.3 | 1700.5 | 1704.4 | 1745.4 | 1801.0 | 1854.2 |
| 10° | 1528.7 | 1532.1 | 1537.0 | 1561.4 | 1581.9 | 1624.8 | 1664.4 | 1670.7 | 1722.4 | 1791.2 | 1862.9 |
| 12.5° | 1487.7 | 1488.2 | 1495.5 | 1522.9 | 1549.2 | 1595.1 | 1636.5 | 1644.3 | 1703.9 | 1781.9 | 1869.3 |
| 15° | 1461.4 | 1461.9 | 1469.7 | 1499.9 | 1530.7 | 1577.0 | 1619.5 | 1628.2 | 1693.1 | 1780.5 | 1881.5 |
| 17.5° | 1449.7 | 1449.2 | 1456.5 | 1486.7 | 1520.4 | 1568.7 | 1614.1 | 1624.8 | 1698.0 | 1791.7 | 1903.0 |
| 20° | 1449.7 | 1450.1 | 1454.1 | 1481.4 | 1515.5 | 1566.8 | 1619.5 | 1632.6 | 1717.1 | 1817.1 | 1936.1 |
| 22.5° | 1470.2 | 1472.1 | 1474.1 | 1492.6 | 1519.4 | 1569.7 | 1633.6 | 1651.2 | 1758.0 | 1859.5 | 1979.6 |
| 25° | 1510.2 | 1510.7 | 1512.6 | 1527.7 | 1539.9 | 1578.0 | 1657.0 | 1683.4 | 1822.0 | 1921.5 | 2034.2 |
| 27.5° | 1563.8 | 1570.7 | 1572.6 | 1582.4 | 1582.4 | 1598.5 | 1693.6 | 1731.7 | 1908.3 | 2010.8 | 2104.0 |
| 30° | 1639.0 | 1641.4 | 1644.8 | 1655.6 | 1643.9 | 1637.0 | 1747.3 | 1796.1 | 2008.4 | 2118.6 | 2187.9 |
| 32.5° | 1704.9 | 1710.2 | 1728.8 | 1746.3 | 1725.3 | 1703.9 | 1826.3 | 1883.9 | 2104.5 | 2230.8 | 2277.2 |
| 35° | 1761.0 | 1774.1 | 1809.8 | 1848.8 | 1834.2 | 1812.7 | 1931.3 | 1991.3 | 2183.5 | 2311.4 | 2356.2 |
| 37.5° | 1828.8 | 1839.0 | 1887.8 | 1951.3 | 1964.4 | 1954.2 | 2059.1 | 2102.0 | 2236.2 | 2331.9 | 2399.2 |
| 40° | 1897.6 | 1913.2 | 1976.1 | 2064.0 | 2114.2 | 2121.6 | 2177.2 | 2206.0 | 2254.3 | 2291.8 | 2390.9 |
| 42.5° | 1967.9 | 1994.7 | 2081.1 | 2183.5 | 2272.8 | 2289.4 | 2276.7 | 2288.9 | 2248.4 | 2236.7 | 2352.3 |
| 45° | 2053.7 | 2085.4 | 2183.0 | 2313.8 | 2431.4 | 2457.3 | 2374.3 | 2363.1 | 2247.4 | 2215.7 | 2328.4 |
| 47.5° | 2155.2 | 2186.9 | 2280.1 | 2432.4 | 2582.7 | 2601.7 | 2474.3 | 2453.8 | 2281.6 | 2247.9 | 2360.6 |
| 50° | 2245.0 | 2267.0 | 2350.4 | 2520.7 | 2723.7 | 2734.9 | 2584.6 | 2559.7 | 2366.5 | 2337.2 | 2461.2 |
| 52.5° | 2153.8 | 2151.3 | 2239.1 | 2449.0 | 2796.9 | 2932.0 | 2754.4 | 2730.5 | 2530.4 | 2485.6 | 2616.8 |
| 55° | 1827.3 | 1799.5 | 1878.1 | 2084.5 | 2592.4 | 3107.2 | 3058.9 | 3011.1 | 2749.0 | 2634.9 | 2762.7 |
| 57.5° | 1336.0 | 1328.2 | 1347.2 | 1540.9 | 2076.7 | 2835.9 | 3245.3 | 3240.9 | 2937.9 | 2771.5 | 2908.1 |
| 60° | 1044.7 | 1033.0 | 982.2 | 987.6 | 1415.5 | 2215.2 | 2816.4 | 2945.7 | 3055.0 | 2853.5 | 3009.6 |
| 62.5° | 927.6 | 918.8 | 892.4 | 819.7 | 843.2 | 1485.3 | 2064.5 | 2183.0 | 2669.5 | 2520.2 | 2585.1 |
| 65° | 768.0 | 765.6 | 787.5 | 784.6 | 706.5 | 820.2 | 1165.2 | 1284.7 | 1678.5 | 1699.5 | 1678.5 |
| 67.5° | 558.2 | 553.8 | 609.4 | 719.2 | 680.2 | 619.2 | 649.4 | 690.9 | 860.7 | 772.9 | 695.8 |
| 70° | 363.0 | 356.7 | 388.9 | 519.7 | 608.9 | 539.7 | 467.9 | 461.1 | 473.3 | 294.2 | 318.1 |
| 72.5° | 243.5 | 236.2 | 235.7 | 285.9 | 367.9 | 363.5 | 362.5 | 359.1 | 320.6 | 232.3 | 257.6 |
| 75° | 135.6 | 129.8 | 128.3 | 123.4 | 131.7 | 134.2 | 143.0 | 147.8 | 160.0 | 176.1 | 195.2 |
| 77.5° | 22.9 | 22.4 | 28.3 | 36.1 | 49.8 | 63.9 | 79.0 | 83.4 | 103.0 | 122.0 | 134.2 |
| 80° | 12.7 | 13.2 | 17.1 | 21.0 | 27.8 | 38.1 | 48.8 | 51.7 | 63.4 | 73.7 | 83.4 |
| 82.5° | 6.8 | 6.8 | 8.8 | 11.2 | 15.1 | 20.0 | 26.3 | 28.8 | 36.6 | 42.9 | 49.8 |
| 85° | 2.4 | 2.4 | 3.4 | 4.4 | 6.3 | 8.3 | 10.2 | 11.7 | 16.1 | 22.0 | 24.9 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 1.0 | 2.0 | 2.0 | 2.4 | 4.4 | 6.3 |
| 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: P631760

CATALOG NUMBER: GWS-SA2B-735-U-SL2-W-GRSWH

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 | 1851.2 |
| 2.5° | 1861.0 | 1847.8 | 1865.9 | 1874.2 | 1877.1 | 1879.0 | 1866.4 | 1857.6 | 1854.7 | 1845.4 | 1840.0 |
| 5° | 1867.8 | 1859.0 | 1876.1 | 1876.1 | 1863.9 | 1851.2 | 1825.4 | 1807.3 | 1794.6 | 1779.5 | 1777.1 |
| 7.5° | 1879.5 | 1873.2 | 1882.5 | 1863.4 | 1832.7 | 1798.5 | 1753.6 | 1718.5 | 1690.2 | 1671.7 | 1672.2 |
| 10° | 1895.1 | 1887.3 | 1880.0 | 1837.6 | 1781.5 | 1718.5 | 1649.7 | 1598.5 | 1551.6 | 1530.2 | 1518.5 |
| 12.5° | 1905.4 | 1894.2 | 1863.4 | 1793.2 | 1710.7 | 1626.3 | 1529.2 | 1453.1 | 1385.3 | 1354.5 | 1352.1 |
| 15° | 1918.1 | 1897.6 | 1836.1 | 1735.6 | 1620.9 | 1505.8 | 1380.9 | 1275.0 | 1183.2 | 1135.4 | 1133.0 |
| 17.5° | 1934.7 | 1901.0 | 1803.4 | 1669.7 | 1526.3 | 1356.5 | 1199.4 | 1066.1 | 968.6 | 931.5 | 937.8 |
| 20° | 1958.1 | 1904.9 | 1766.3 | 1596.5 | 1408.7 | 1186.7 | 991.0 | 868.5 | 831.0 | 828.5 | 823.6 |
| 22.5° | 1984.4 | 1907.3 | 1725.3 | 1514.6 | 1266.2 | 1005.6 | 818.8 | 766.5 | 766.1 | 778.3 | 781.2 |
| 25° | 2014.2 | 1909.3 | 1679.0 | 1418.9 | 1112.0 | 825.1 | 724.1 | 708.5 | 720.7 | 743.6 | 746.5 |
| 27.5° | 2052.3 | 1913.2 | 1622.9 | 1314.0 | 948.1 | 712.9 | 671.9 | 668.0 | 682.6 | 704.1 | 703.1 |
| 30° | 2108.4 | 1927.4 | 1563.4 | 1193.5 | 779.7 | 659.7 | 640.2 | 640.7 | 646.5 | 656.8 | 658.2 |
| 32.5° | 2165.5 | 1949.3 | 1505.3 | 1057.8 | 683.1 | 629.4 | 620.7 | 619.7 | 619.7 | 624.1 | 625.0 |
| 35° | 2219.6 | 1974.2 | 1442.3 | 916.3 | 636.3 | 611.9 | 606.0 | 603.1 | 601.6 | 600.7 | 599.2 |
| 37.5° | 2249.9 | 1986.4 | 1380.9 | 776.8 | 611.4 | 600.2 | 594.3 | 590.4 | 585.0 | 581.1 | 580.2 |
| 40° | 2236.7 | 1972.2 | 1309.6 | 672.4 | 596.3 | 588.9 | 582.1 | 576.7 | 569.4 | 566.0 | 564.1 |
| 42.5° | 2192.8 | 1928.3 | 1232.0 | 623.1 | 584.1 | 576.7 | 568.4 | 559.7 | 554.8 | 551.9 | 551.4 |
| 45° | 2146.4 | 1875.1 | 1138.4 | 594.3 | 572.4 | 563.6 | 553.8 | 544.1 | 538.7 | 537.2 | 536.7 |
| 47.5° | 2145.0 | 1848.8 | 1038.8 | 571.4 | 558.2 | 549.4 | 537.2 | 527.5 | 521.6 | 519.7 | 517.7 |
| 50° | 2209.4 | 1875.6 | 926.6 | 551.4 | 543.6 | 534.3 | 520.6 | 509.9 | 502.6 | 500.1 | 499.6 |
| 52.5° | 2343.1 | 1976.6 | 826.1 | 531.4 | 524.0 | 513.3 | 502.1 | 491.4 | 482.6 | 478.2 | 477.7 |
| 55° | 2487.5 | 2105.0 | 763.6 | 510.9 | 501.1 | 491.8 | 481.6 | 469.9 | 460.1 | 453.3 | 452.3 |
| 57.5° | 2636.8 | 2245.0 | 744.6 | 485.0 | 477.7 | 471.3 | 459.1 | 446.5 | 435.2 | 428.9 | 427.4 |
| 60° | 2759.8 | 2365.5 | 780.2 | 457.7 | 453.8 | 445.5 | 434.3 | 422.1 | 414.3 | 409.4 | 408.4 |
| 62.5° | 2310.4 | 1925.9 | 629.9 | 427.9 | 427.9 | 419.1 | 406.5 | 397.7 | 392.3 | 388.9 | 387.9 |
| 65° | 1466.3 | 1192.5 | 429.9 | 398.2 | 397.7 | 386.0 | 375.2 | 369.4 | 366.9 | 361.6 | 360.6 |
| 67.5° | 638.7 | 545.0 | 367.4 | 367.9 | 366.0 | 353.3 | 342.5 | 338.1 | 333.3 | 327.4 | 326.9 |
| 70° | 331.3 | 337.7 | 328.9 | 334.2 | 330.8 | 315.7 | 305.4 | 298.6 | 288.4 | 282.5 | 283.0 |
| 72.5° | 267.4 | 274.2 | 284.0 | 292.3 | 285.0 | 272.8 | 256.7 | 248.4 | 235.2 | 228.8 | 229.3 |
| 75° | 204.0 | 211.3 | 220.5 | 229.3 | 223.5 | 208.3 | 198.1 | 189.8 | 174.7 | 167.4 | 168.8 |
| 77.5° | 140.5 | 144.4 | 155.7 | 155.2 | 153.2 | 148.8 | 133.7 | 123.9 | 108.3 | 99.5 | 100.5 |
| 80° | 87.3 | 89.8 | 95.1 | 97.6 | 96.6 | 90.8 | 78.6 | 71.2 | 62.0 | 56.6 | 57.1 |
| 82.5° | 52.7 | 54.2 | 59.0 | 59.5 | 59.0 | 54.6 | 45.4 | 40.0 | 34.2 | 31.2 | 31.2 |
| 85° | 26.8 | 27.8 | 30.7 | 30.7 | 27.8 | 23.4 | 21.0 | 18.5 | 15.1 | 13.7 | 13.7 |
| 87.5° | 7.3 | 7.3 | 9.3 | 7.8 | 6.3 | 5.9 | 2.9 | 2.4 | 1.0 | 0.5 | 0.5 |
| 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
 CIE u': 0.2371
 CIE v': 0.5177
 Duv: 0.0032
 CIE x: 0.4153
 CIE y: 0.4030
 CIE z: 0.1817
 Peak Wavelength (nm): 590
 Dominant Wavelength (nm): 580
 Purity: 45.7

 Rf: 76.9
 Rg: 94.4

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 73.1 | | |
| R1: | 68.9 | R9: | -34.6 |
| R2: | 81.1 | R10: | 57.8 |
| R3: | 93.1 | R11: | 68.6 |
| R4: | 71.6 | R12: | 53.9 |
| R5: | 69.4 | R13: | 70.9 |
| R6: | 75.0 | R14: | 96.2 |
| R7: | 79.5 | | |
| R8: | 46.4 | | |

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 |

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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)