

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: P386679

Luminaire Tested: **GPC-SA2B-760-U-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P386679
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GPC-SA2B-760-U-T3
Description: GALLEON PEDESTRIAN LUMINAIRE
(2) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11929 lumens
Efficiency: N/A
Efficacy: 138.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

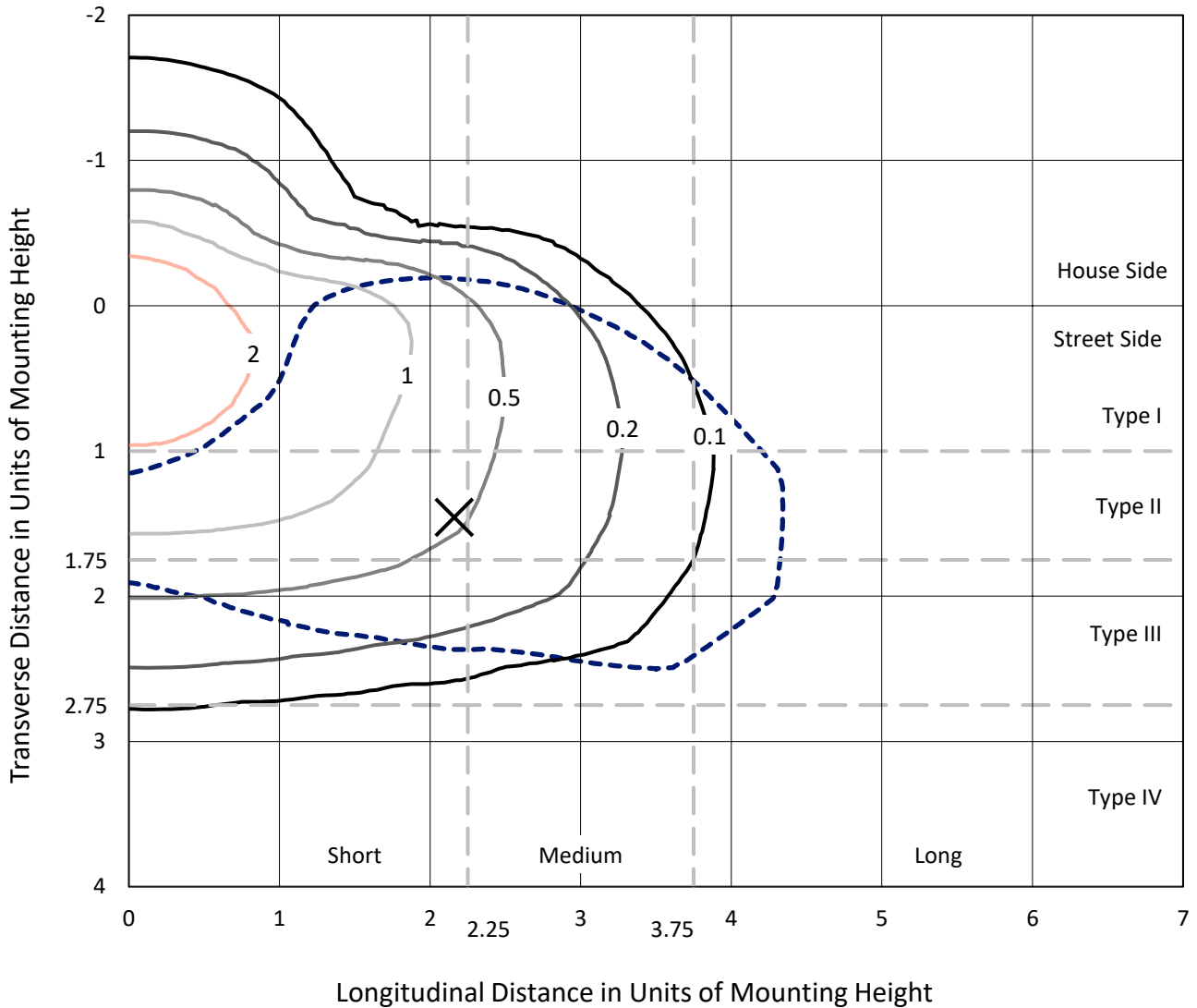
Input Watts (W): 86
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

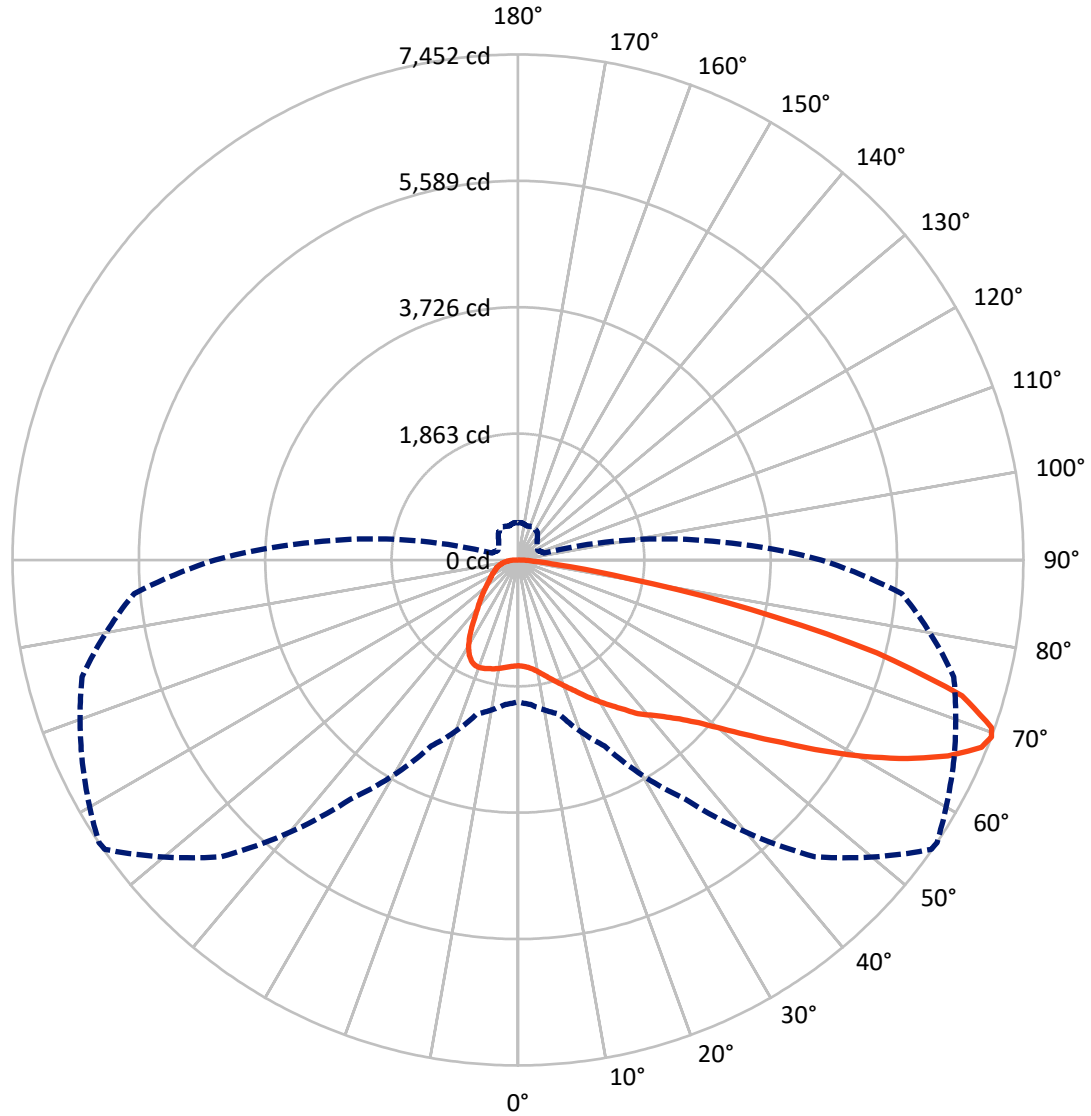
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type III - Short - N/A

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CATALOG NUMBER: GPC-SA2B-760-U-T3

Luminous Intensity Polar Plot



— Vertical Plane Through 56-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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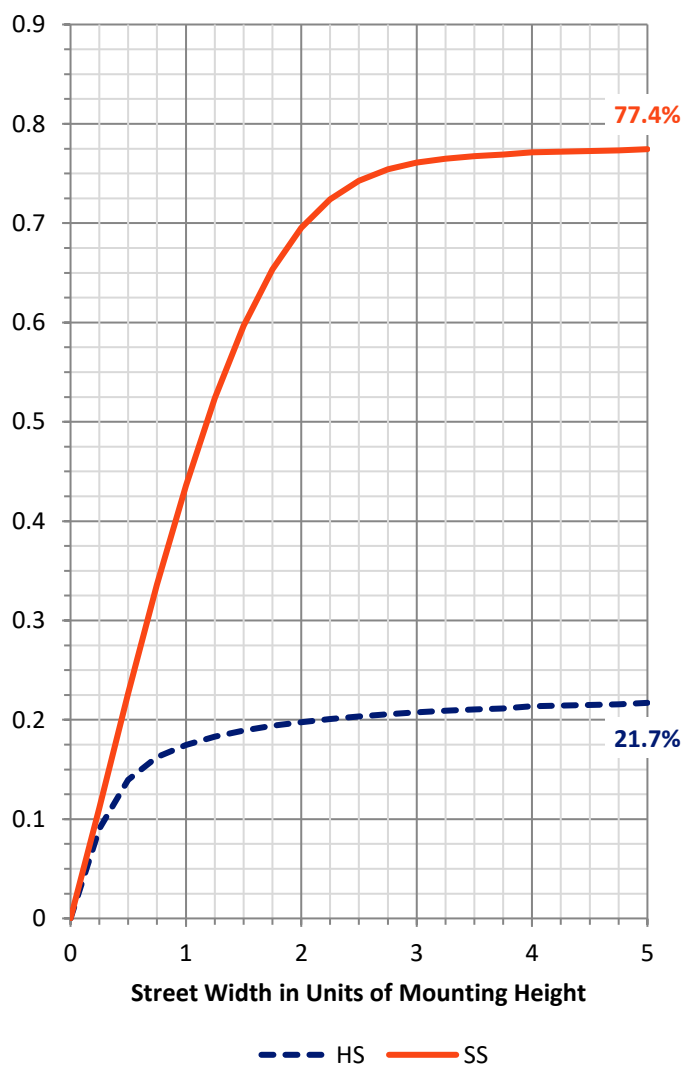
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2656.6 | 0.0 | 2656.6 |
| | % Fixture | 22.3 | 0.0 | 22.3 |
| Street Side | Lumens | 9272.4 | 0.0 | 9272.4 |
| | % Fixture | 77.7 | 0.0 | 77.7 |
| Total | Lumens | 11929.0 | 0.0 | 11929.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 153.2 | 1.3 |
| 10°-20° | 492.5 | 4.1 |
| 20°-30° | 859.8 | 7.2 |
| 30°-40° | 1235.1 | 10.4 |
| 40°-50° | 1709.2 | 14.3 |
| 50°-60° | 2504.3 | 21.0 |
| 60°-70° | 3053.2 | 25.6 |
| 70°-80° | 1688.0 | 14.2 |
| 80°-90° | 233.8 | 2.0 |
| 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° | 11929.0 | 100.0 |
| 0°-180° | 11929.0 | 100.0 |

Coefficient of Utilization

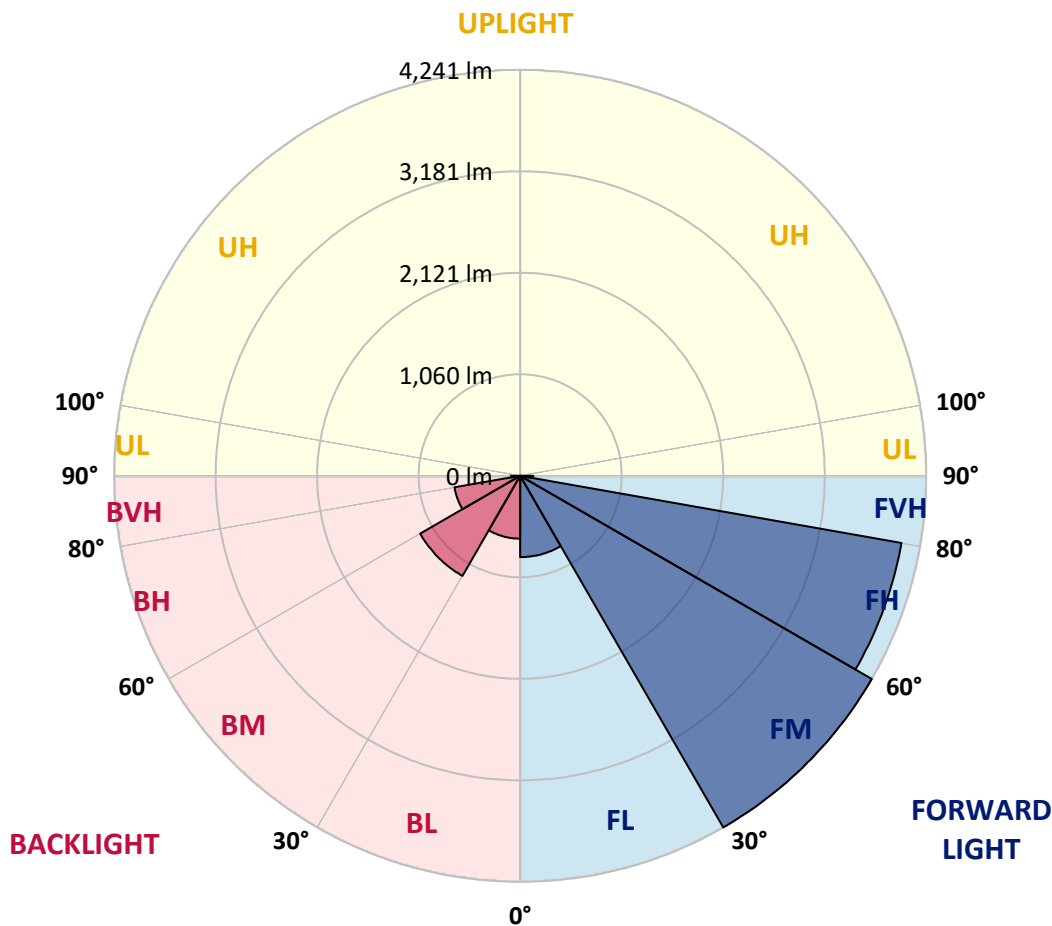


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 849.0 | 7.1 | | | |
| FM (30°-60°) | 4241.2 | 35.6 | | | |
| FH (60°-80°) | 4044.5 | 33.9 | | | G2/5000 |
| FVH (80°-90°) | 137.7 | 1.2 | | | G2/225 |
| BL (0°-30°) | 656.5 | 5.5 | B2/1000 | | |
| BM (30°-60°) | 1207.3 | 10.1 | B2/2500 | | |
| BH (60°-80°) | 696.6 | 5.8 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 96.1 | 0.8 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2
 Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 56° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 |
| 2.5° | 1569.4 | 1571.0 | 1569.8 | 1573.1 | 1569.4 | 1571.9 | 1569.8 | 1569.8 | 1568.6 | 1564.9 | 1560.8 |
| 5° | 1594.1 | 1597.3 | 1595.3 | 1598.6 | 1594.1 | 1594.9 | 1591.2 | 1591.2 | 1587.5 | 1579.7 | 1571.5 |
| 7.5° | 1632.7 | 1636.4 | 1634.7 | 1638.0 | 1631.9 | 1631.9 | 1626.9 | 1626.5 | 1619.1 | 1606.4 | 1596.9 |
| 10° | 1678.7 | 1683.6 | 1682.0 | 1686.9 | 1682.0 | 1683.6 | 1678.7 | 1678.7 | 1668.8 | 1650.8 | 1638.8 |
| 12.5° | 1745.7 | 1751.9 | 1747.3 | 1746.9 | 1744.9 | 1748.2 | 1744.1 | 1743.2 | 1734.2 | 1709.5 | 1693.1 |
| 15° | 1835.3 | 1841.9 | 1832.4 | 1831.6 | 1820.1 | 1818.8 | 1818.8 | 1817.6 | 1811.9 | 1782.3 | 1755.1 |
| 17.5° | 1938.4 | 1940.5 | 1932.3 | 1919.1 | 1904.3 | 1894.9 | 1893.6 | 1896.9 | 1896.9 | 1862.4 | 1819.3 |
| 20° | 2039.5 | 2043.2 | 2036.6 | 2021.9 | 2002.9 | 1989.0 | 1979.1 | 1985.7 | 1985.3 | 1944.2 | 1883.0 |
| 22.5° | 2149.7 | 2158.3 | 2148.4 | 2129.5 | 2107.3 | 2091.7 | 2074.5 | 2080.2 | 2080.6 | 2030.1 | 1945.4 |
| 25° | 2292.3 | 2284.4 | 2278.3 | 2251.6 | 2219.9 | 2203.9 | 2187.9 | 2193.6 | 2192.0 | 2122.5 | 2009.9 |
| 27.5° | 2418.4 | 2420.1 | 2411.8 | 2383.5 | 2346.9 | 2311.6 | 2310.7 | 2314.4 | 2308.3 | 2218.7 | 2070.8 |
| 30° | 2565.1 | 2565.9 | 2554.4 | 2529.0 | 2489.1 | 2443.5 | 2432.8 | 2439.0 | 2425.8 | 2309.9 | 2134.9 |
| 32.5° | 2711.0 | 2715.1 | 2702.4 | 2671.6 | 2639.5 | 2584.0 | 2562.7 | 2566.8 | 2533.9 | 2403.2 | 2201.0 |
| 35° | 2838.8 | 2844.6 | 2840.5 | 2819.9 | 2785.0 | 2737.3 | 2711.8 | 2709.4 | 2668.7 | 2517.5 | 2288.6 |
| 37.5° | 2969.1 | 2974.4 | 2969.9 | 2952.6 | 2938.7 | 2888.1 | 2874.6 | 2874.6 | 2803.9 | 2634.2 | 2399.9 |
| 40° | 3103.0 | 3111.3 | 3105.9 | 3082.1 | 3070.2 | 3047.2 | 3014.7 | 3006.9 | 2930.5 | 2774.3 | 2581.6 |
| 42.5° | 3227.6 | 3238.2 | 3259.6 | 3245.6 | 3221.4 | 3224.7 | 3159.3 | 3155.2 | 3099.3 | 2981.4 | 2809.6 |
| 45° | 3404.3 | 3419.9 | 3456.0 | 3445.4 | 3440.4 | 3422.4 | 3344.7 | 3341.0 | 3319.6 | 3260.0 | 3092.8 |
| 47.5° | 3597.0 | 3618.4 | 3683.7 | 3685.8 | 3738.8 | 3704.7 | 3599.1 | 3586.3 | 3591.3 | 3593.7 | 3438.4 |
| 50° | 3774.5 | 3798.0 | 3905.2 | 3955.8 | 4080.7 | 4088.1 | 3919.2 | 3907.7 | 3927.0 | 3983.7 | 3841.1 |
| 52.5° | 3916.3 | 3945.9 | 4079.9 | 4236.0 | 4450.1 | 4510.9 | 4313.3 | 4304.7 | 4319.0 | 4416.8 | 4296.4 |
| 55° | 4020.3 | 4052.3 | 4198.2 | 4482.6 | 4824.5 | 4931.8 | 4767.0 | 4758.7 | 4767.8 | 4892.3 | 4791.6 |
| 57.5° | 4044.5 | 4052.3 | 4264.0 | 4648.6 | 5140.5 | 5398.2 | 5322.2 | 5305.7 | 5261.3 | 5369.8 | 5338.2 |
| 60° | 3930.7 | 3961.9 | 4209.7 | 4707.0 | 5385.0 | 5858.0 | 5902.4 | 5881.9 | 5757.3 | 5846.1 | 5820.6 |
| 62.5° | 3699.7 | 3755.6 | 4007.1 | 4618.2 | 5480.8 | 6233.6 | 6471.6 | 6446.9 | 6232.4 | 6289.9 | 6167.5 |
| 65° | 3322.5 | 3346.3 | 3610.6 | 4312.0 | 5359.1 | 6474.0 | 6979.1 | 6966.8 | 6696.8 | 6606.8 | 6231.6 |
| 67.5° | 2647.7 | 2692.5 | 2916.9 | 3672.2 | 4861.5 | 6445.7 | 7371.5 | 7370.3 | 7000.0 | 6724.3 | 6004.3 |
| 69° | 2091.7 | 2138.1 | 2351.8 | 3025.0 | 4301.8 | 6186.4 | 7437.3 | 7451.7 | 7085.5 | 6652.8 | 5679.7 |
| 70° | 1667.6 | 1721.4 | 1868.2 | 2547.9 | 3804.9 | 5844.5 | 7382.6 | 7408.5 | 7069.1 | 6534.9 | 5380.1 |
| 72.5° | 709.7 | 753.3 | 857.6 | 1313.4 | 2319.0 | 4364.2 | 6750.2 | 6848.0 | 6688.1 | 5980.9 | 4446.4 |
| 75° | 309.9 | 323.4 | 370.7 | 535.5 | 1029.4 | 2375.3 | 5288.0 | 5468.9 | 5718.7 | 5055.4 | 3312.2 |
| 77.5° | 226.8 | 232.6 | 258.5 | 314.4 | 461.9 | 897.1 | 3400.6 | 3505.8 | 4124.2 | 3678.8 | 2031.7 |
| 80° | 175.5 | 179.6 | 199.7 | 231.0 | 301.6 | 362.9 | 1550.9 | 1641.3 | 2319.0 | 1889.5 | 846.1 |
| 82.5° | 139.7 | 142.6 | 156.6 | 170.1 | 208.3 | 219.9 | 514.9 | 571.2 | 856.0 | 521.9 | 224.0 |
| 85° | 129.9 | 133.1 | 138.1 | 124.1 | 133.6 | 129.0 | 222.7 | 233.0 | 258.5 | 205.1 | 93.7 |
| 87.5° | 58.8 | 69.4 | 136.8 | 96.6 | 71.1 | 56.7 | 91.2 | 95.3 | 107.3 | 107.7 | 41.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: GPC-SA2B-760-U-T3

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 | 1559.5 |
| 2.5° | 1563.2 | 1562.0 | 1564.1 | 1559.1 | 1565.3 | 1564.9 | 1562.8 | 1563.6 | 1567.8 | 1567.3 | 1567.8 |
| 5° | 1572.7 | 1571.9 | 1574.3 | 1570.6 | 1578.0 | 1580.5 | 1580.9 | 1584.6 | 1589.1 | 1590.4 | 1590.4 |
| 7.5° | 1596.5 | 1596.5 | 1597.8 | 1592.8 | 1597.8 | 1597.3 | 1595.3 | 1599.0 | 1603.5 | 1603.9 | 1603.5 |
| 10° | 1637.6 | 1638.0 | 1636.0 | 1623.2 | 1619.1 | 1608.0 | 1597.8 | 1598.2 | 1603.9 | 1608.4 | 1609.7 |
| 12.5° | 1689.4 | 1687.8 | 1678.7 | 1655.3 | 1638.0 | 1615.4 | 1604.7 | 1604.3 | 1610.1 | 1613.8 | 1615.0 |
| 15° | 1748.6 | 1744.1 | 1720.6 | 1682.4 | 1652.0 | 1629.8 | 1612.5 | 1608.4 | 1605.2 | 1601.0 | 1601.5 |
| 17.5° | 1804.5 | 1794.2 | 1755.1 | 1702.1 | 1670.1 | 1640.5 | 1607.2 | 1580.5 | 1562.0 | 1551.3 | 1548.0 |
| 20° | 1861.2 | 1841.0 | 1784.7 | 1720.6 | 1679.9 | 1626.1 | 1562.0 | 1507.8 | 1474.1 | 1458.4 | 1455.6 |
| 22.5° | 1913.0 | 1880.5 | 1812.3 | 1739.9 | 1672.1 | 1577.6 | 1476.9 | 1398.0 | 1351.2 | 1330.2 | 1331.9 |
| 25° | 1963.5 | 1918.3 | 1841.0 | 1753.5 | 1632.7 | 1492.1 | 1358.6 | 1261.6 | 1207.4 | 1183.9 | 1183.1 |
| 27.5° | 2007.9 | 1956.5 | 1872.3 | 1742.4 | 1559.1 | 1370.5 | 1218.5 | 1123.9 | 1078.7 | 1058.6 | 1055.3 |
| 30° | 2058.8 | 2004.6 | 1913.8 | 1700.1 | 1451.5 | 1230.0 | 1081.6 | 1015.0 | 983.0 | 962.8 | 959.1 |
| 32.5° | 2120.9 | 2069.9 | 1947.9 | 1623.2 | 1313.8 | 1083.3 | 974.8 | 928.3 | 899.1 | 876.5 | 872.4 |
| 35° | 2211.3 | 2156.2 | 1956.5 | 1513.1 | 1162.6 | 967.4 | 896.3 | 848.6 | 809.2 | 780.0 | 777.1 |
| 37.5° | 2324.7 | 2264.3 | 1936.8 | 1370.5 | 1015.9 | 892.2 | 830.9 | 772.2 | 720.8 | 679.7 | 673.1 |
| 40° | 2488.3 | 2397.0 | 1882.1 | 1206.1 | 907.8 | 834.2 | 767.2 | 700.3 | 636.6 | 588.5 | 579.0 |
| 42.5° | 2684.7 | 2552.8 | 1798.3 | 1042.6 | 828.5 | 775.5 | 703.9 | 620.9 | 560.1 | 526.0 | 521.1 |
| 45° | 2934.6 | 2714.7 | 1682.0 | 899.6 | 750.4 | 716.7 | 635.7 | 559.3 | 521.5 | 496.4 | 492.3 |
| 47.5° | 3219.8 | 2896.3 | 1559.9 | 783.3 | 684.2 | 661.6 | 581.1 | 531.8 | 501.8 | 482.0 | 478.3 |
| 50° | 3570.3 | 3101.4 | 1430.5 | 687.9 | 617.7 | 595.5 | 555.2 | 516.6 | 492.7 | 477.5 | 473.8 |
| 52.5° | 3965.6 | 3332.8 | 1337.2 | 612.7 | 562.6 | 546.6 | 541.6 | 508.3 | 489.0 | 477.5 | 473.8 |
| 55° | 4391.4 | 3568.2 | 1236.5 | 549.4 | 514.9 | 519.4 | 532.6 | 509.2 | 496.0 | 482.0 | 476.7 |
| 57.5° | 4817.5 | 3811.5 | 1124.3 | 496.0 | 477.1 | 499.3 | 526.4 | 510.8 | 499.7 | 486.1 | 481.2 |
| 60° | 5154.5 | 3965.6 | 950.5 | 451.2 | 447.1 | 477.1 | 511.6 | 498.5 | 484.1 | 484.5 | 483.7 |
| 62.5° | 5311.9 | 3957.4 | 758.6 | 411.4 | 417.1 | 447.1 | 487.8 | 479.2 | 467.2 | 483.3 | 484.5 |
| 65° | 5223.5 | 3760.1 | 590.5 | 375.2 | 385.1 | 415.9 | 463.1 | 469.7 | 473.8 | 504.6 | 508.8 |
| 67.5° | 4852.9 | 3376.3 | 457.4 | 343.6 | 355.9 | 394.5 | 465.6 | 511.6 | 517.0 | 549.4 | 549.0 |
| 69° | 4469.4 | 3016.3 | 397.4 | 327.1 | 341.5 | 399.8 | 497.7 | 538.3 | 518.2 | 552.7 | 547.8 |
| 70° | 4148.1 | 2731.6 | 365.3 | 316.0 | 334.9 | 409.3 | 519.0 | 537.9 | 512.0 | 541.6 | 533.4 |
| 72.5° | 3194.7 | 1965.1 | 309.9 | 295.5 | 312.7 | 391.6 | 525.2 | 526.0 | 497.7 | 503.4 | 489.4 |
| 75° | 2191.2 | 1241.9 | 270.4 | 267.5 | 279.0 | 353.0 | 505.5 | 502.6 | 460.3 | 452.0 | 440.5 |
| 77.5° | 1208.2 | 630.8 | 229.7 | 240.8 | 248.6 | 312.7 | 459.4 | 455.3 | 420.4 | 403.1 | 399.0 |
| 80° | 466.0 | 276.2 | 194.0 | 214.1 | 219.0 | 270.8 | 402.7 | 399.0 | 369.9 | 347.7 | 341.5 |
| 82.5° | 175.9 | 144.7 | 160.3 | 185.3 | 183.7 | 223.6 | 341.1 | 339.0 | 310.7 | 278.2 | 268.3 |
| 85° | 81.4 | 86.7 | 127.0 | 152.9 | 141.0 | 165.6 | 272.9 | 276.6 | 242.0 | 203.4 | 203.4 |
| 87.5° | 34.5 | 48.5 | 90.0 | 115.5 | 94.9 | 111.8 | 200.1 | 191.1 | 175.5 | 121.6 | 114.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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



Test Information

Test Method: LM-79-2008
 Report Number: SP1-1908-441-9-R4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/28/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGRAW-EDISON
 Catalog Number: **SA1C-760-U-5WQ**
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

Spectral Parameters

| | | | | | |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K): | 5474 | CRI (Ra): | 71.7 | R9: | -27.1 |
| CIE u': | 0.2052 | R1: | 70.6 | R10: | 40.8 |
| CIE v': | 0.4804 | R2: | 74.6 | R11: | 74.6 |
| Duv: | 0.0025 | R3: | 78.3 | R12: | 50.4 |
| CIE x: | 0.3330 | R4: | 73.8 | R13: | 70.0 |
| CIE y: | 0.3466 | R5: | 72.4 | R14: | 87.8 |
| CIE z: | 0.3204 | R6: | 67.5 | | |
| Peak Wavelength (nm): | 442 | R7: | 77.5 | | |
| Dominant Wavelength (nm): | 554 | R8: | 58.9 | | |
| Purity: | 4.1 | | | | |
| Rf: | 72.1 | | | | |
| Rg: | 97.2 | | | | |



Test Conditions

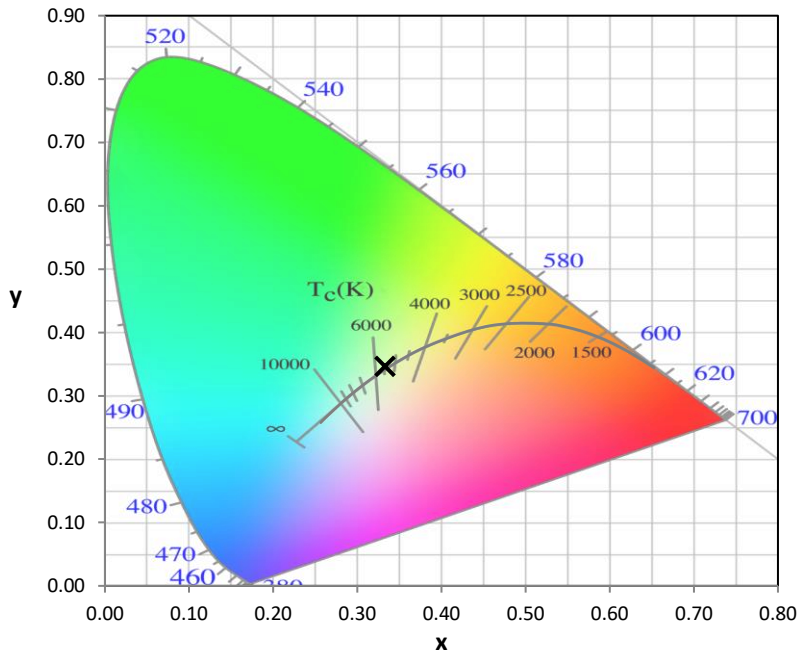
Stabilization Time: 240M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.6/31%
 Sphere Temperature (°C): 25.9

REPORT NUMBER: SP1-1908-441-9-R4

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

REPORT NUMBER: SP1-1908-441-9-R4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5700K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-9-R4

Photopic Flux vs. Wavelength



#####

| 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 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

REPORT NUMBER: SP1-1908-441-9-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 13759.3 S/P: 1.85

| 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 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

REPORT NUMBER: SP1-1908-441-9-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 5527.6 M/P: 0.74

| 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 | 3540 | NR | 490 | 33363 | NR | 620 | 80193 | NR | 750 | 4663 | NR | 880 | 4678 | NR |
| 365 | 2862 | NR | 495 | 44177 | NR | 625 | 73091 | NR | 755 | 4147 | NR | 885 | 4128 | NR |
| 370 | 2865 | NR | 500 | 57019 | NR | 630 | 66269 | NR | 760 | 4040 | NR | 890 | 4504 | NR |
| 375 | 3254 | NR | 505 | 70030 | NR | 635 | 60012 | NR | 765 | 3474 | NR | 895 | 4371 | NR |
| 380 | 3076 | NR | 510 | 81972 | NR | 640 | 53914 | NR | 770 | 3469 | NR | 900 | 4082 | NR |
| 385 | 2904 | NR | 515 | 92590 | NR | 645 | 48385 | NR | 775 | 3181 | NR | 905 | 2982 | NR |
| 390 | 2689 | NR | 520 | 100305 | NR | 650 | 43219 | NR | 780 | 2969 | NR | 910 | 4351 | NR |
| 395 | 2619 | NR | 525 | 107452 | NR | 655 | 38562 | NR | 785 | 3132 | NR | 915 | 3365 | NR |
| 400 | 2679 | NR | 530 | 111373 | NR | 660 | 34110 | NR | 790 | 2507 | NR | 920 | 3430 | NR |
| 405 | 3515 | NR | 535 | 114505 | NR | 665 | 30085 | NR | 795 | 2968 | NR | 925 | 4264 | NR |
| 410 | 6934 | NR | 540 | 116408 | NR | 670 | 26205 | NR | 800 | 2758 | NR | 930 | 4095 | NR |
| 415 | 14943 | NR | 545 | 118700 | NR | 675 | 22906 | NR | 805 | 2872 | NR | 935 | 5048 | NR |
| 420 | 31939 | NR | 550 | 119209 | NR | 680 | 20058 | NR | 810 | 3094 | NR | 940 | 4074 | NR |
| 425 | 64701 | NR | 555 | 120742 | NR | 685 | 17413 | NR | 815 | 3222 | NR | 945 | 4949 | NR |
| 430 | 110939 | NR | 560 | 121594 | NR | 690 | 15447 | NR | 820 | 3238 | NR | 950 | 4387 | NR |
| 435 | 164597 | NR | 565 | 121913 | NR | 695 | 13398 | NR | 825 | 3524 | NR | 955 | 4978 | NR |
| 440 | 207696 | NR | 570 | 122147 | NR | 700 | 11777 | NR | 830 | 2921 | NR | 960 | 4706 | NR |
| 445 | 201830 | NR | 575 | 121605 | NR | 705 | 10412 | NR | 835 | 3595 | NR | 965 | 5083 | NR |
| 450 | 145410 | NR | 580 | 120248 | NR | 710 | 9544 | NR | 840 | 3016 | NR | 970 | 4522 | NR |
| 455 | 89594 | NR | 585 | 117717 | NR | 715 | 8940 | NR | 845 | 4032 | NR | 975 | 4740 | NR |
| 460 | 58321 | NR | 590 | 114359 | NR | 720 | 7897 | NR | 850 | 3579 | NR | 980 | 6122 | NR |
| 465 | 39318 | NR | 595 | 109974 | NR | 725 | 7045 | NR | 855 | 4571 | NR | 985 | 6450 | NR |
| 470 | 27693 | NR | 600 | 105269 | NR | 730 | 6483 | NR | 860 | 4485 | NR | 990 | 4875 | NR |
| 475 | 23081 | NR | 605 | 99453 | NR | 735 | 5838 | NR | 865 | 3978 | NR | 995 | 4764 | NR |
| 480 | 23002 | NR | 610 | 92921 | NR | 740 | 5261 | NR | 870 | 4298 | NR | 1000 | 3640 | NR |
| 485 | 26201 | NR | 615 | 86989 | NR | 745 | 4760 | NR | 875 | 4356 | NR | | | |

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Summary

$R_f = 72.1$
 $R_g = 97.2$
 CIE $R_a = 71.7$
 $R_g = -27.1$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 54 | CES51 = 88 | CES76 = 43 |
| CES02 = 59 | CES27 = 79 | CES52 = 90 | CES77 = 64 |
| CES03 = 30 | CES28 = 77 | CES53 = 77 | CES78 = 46 |
| CES04 = 69 | CES29 = 50 | CES54 = 81 | CES79 = 74 |
| CES05 = 46 | CES30 = 59 | CES55 = 80 | CES80 = 70 |
| CES06 = 50 | CES31 = 55 | CES56 = 70 | CES81 = 71 |
| CES07 = 38 | CES32 = 52 | CES57 = 68 | CES82 = 88 |
| CES08 = 38 | CES33 = 63 | CES58 = 70 | CES83 = 82 |
| CES09 = 29 | CES34 = 63 | CES59 = 88 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 92 | CES85 = 84 |
| CES11 = 55 | CES36 = 90 | CES61 = 88 | CES86 = 76 |
| CES12 = 61 | CES37 = 72 | CES62 = 81 | CES87 = 75 |
| CES13 = 41 | CES38 = 68 | CES63 = 75 | CES88 = 77 |
| CES14 = 74 | CES39 = 91 | CES64 = 72 | CES89 = 76 |
| CES15 = 70 | CES40 = 83 | CES65 = 65 | CES90 = 76 |
| CES16 = 46 | CES41 = 84 | CES66 = 66 | CES91 = 92 |
| CES17 = 48 | CES42 = 70 | CES67 = 64 | CES92 = 70 |
| CES18 = 55 | CES43 = 69 | CES68 = 71 | CES93 = 83 |
| CES19 = 70 | CES44 = 98 | CES69 = 80 | CES94 = 60 |
| CES20 = 64 | CES45 = 79 | CES70 = 58 | CES95 = 73 |
| CES21 = 85 | CES46 = 78 | CES71 = 55 | CES96 = 79 |
| CES22 = 77 | CES47 = 76 | CES72 = 84 | CES97 = 84 |
| CES23 = 91 | CES48 = 68 | CES73 = 47 | CES98 = 73 |
| CES24 = 90 | CES49 = 78 | CES74 = 94 | CES99 = 62 |
| CES25 = 71 | CES50 = 87 | CES75 = 51 | |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)