Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P1200128

Luminaire Tested: GPC-SB2C-722-U-T3R

Issue Date: 10/30/2025

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1200128 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/12/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GPC-SB2C-722-U-T3R |
| Description: | GALLEON PEDESTRIAN LUMINAIRE |
| | (2) 70 CRI, 2200K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III ROADWAY OPTI |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 12698 lumens |
| Efficiency: | N/A |
| Efficacy: | 125.8 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B2 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 100.9 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.857 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.994 |
| Total Harmonic Distortion (THDi): | 9.472 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

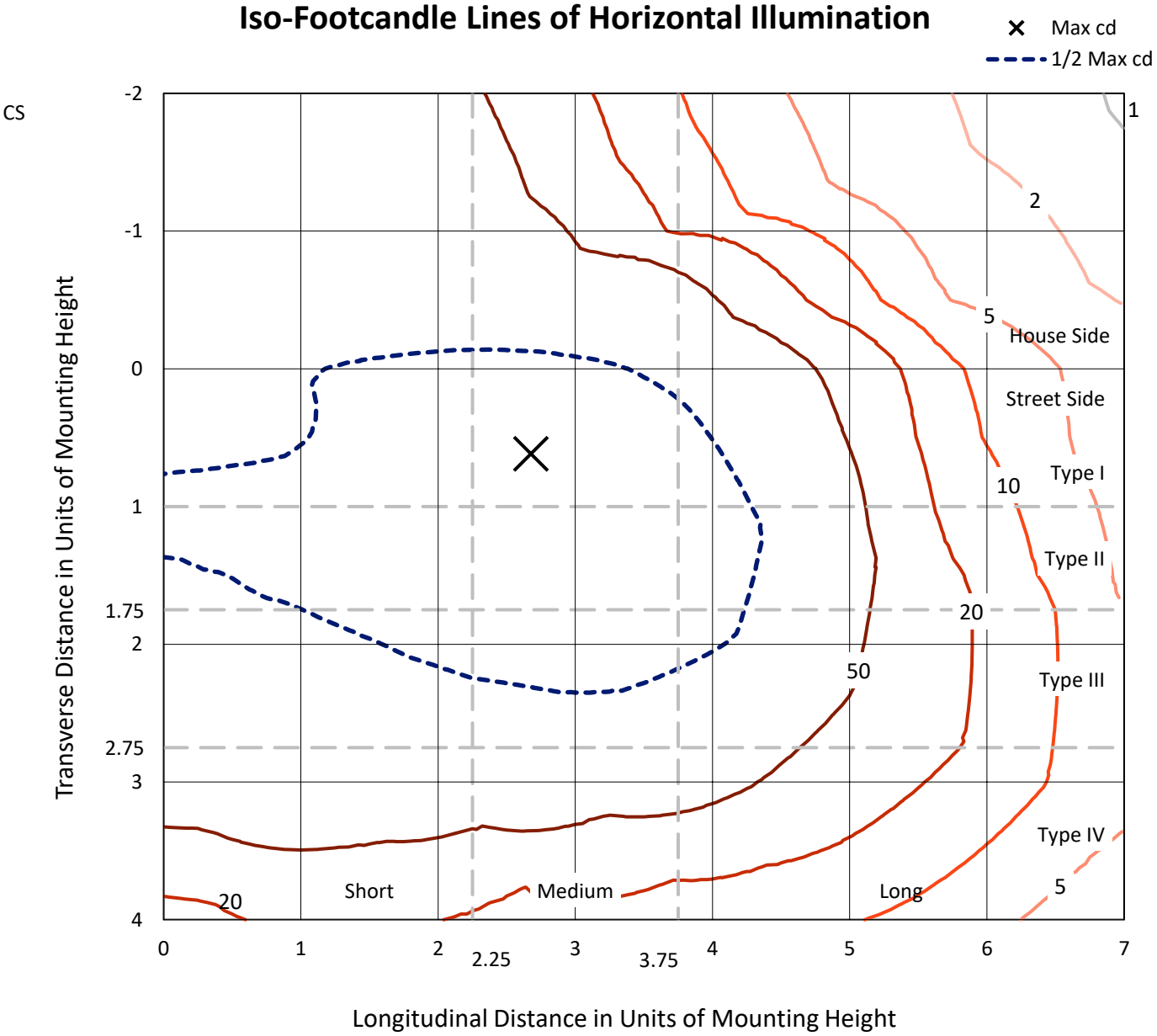


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REPORT NUMBER: P1200128
CATALOG NUMBER: GPC-SB2C-722-U-T3R

## Iso-Footcandle Lines of Horizontal Illumination



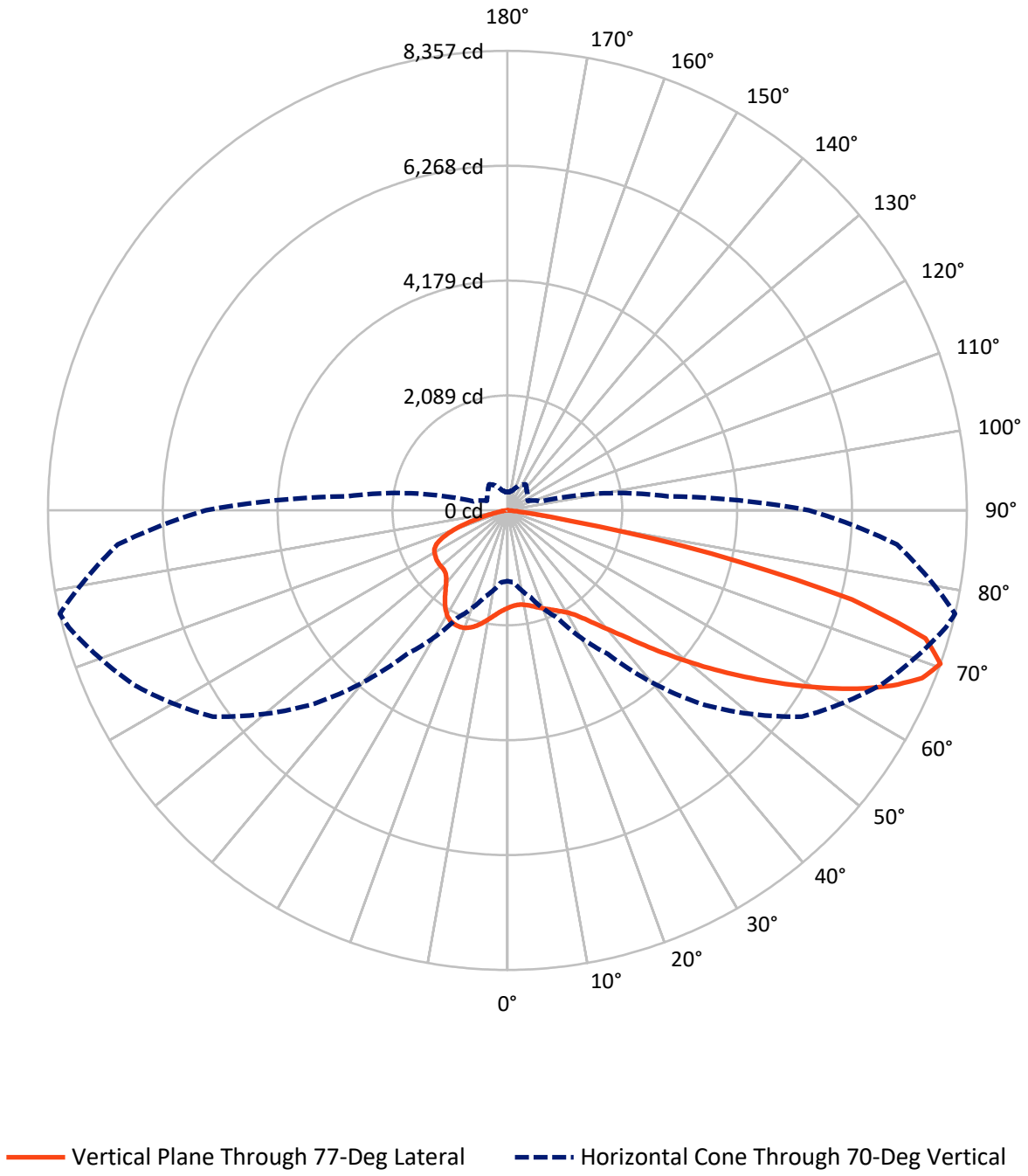

Based on 0.5 foot mounting height. Maximum calculated value = 8406 fc
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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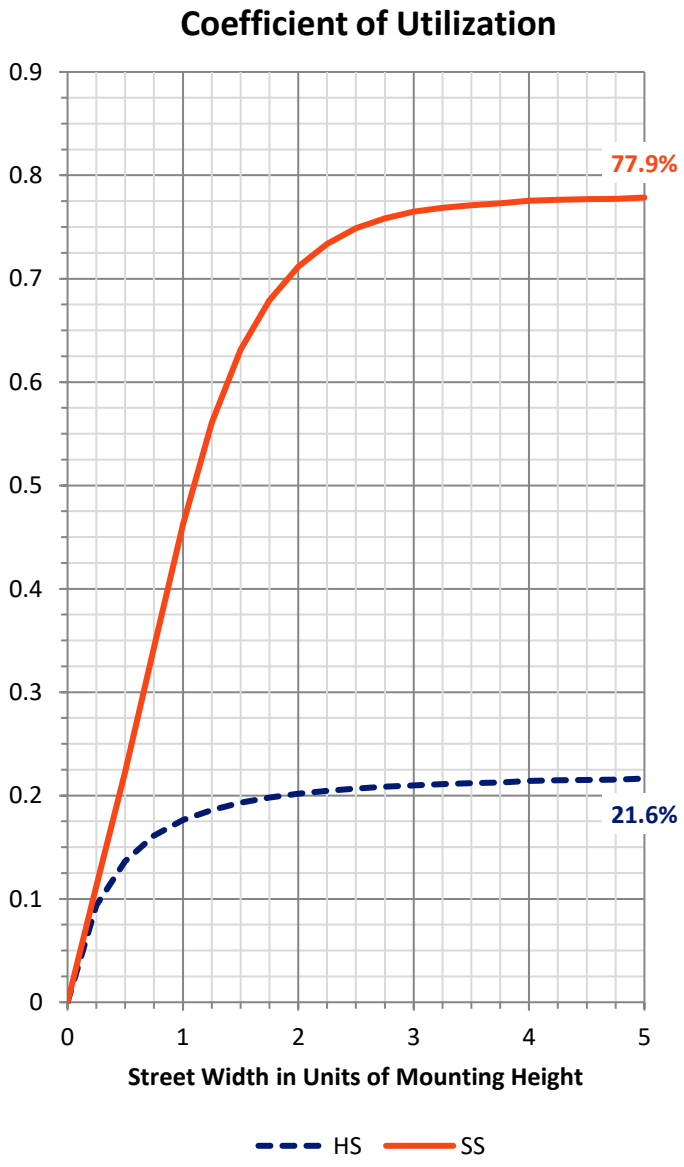
REPORT NUMBER: P1200128
CATALOG NUMBER: GPC-SB2C-722-U-T3R

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2780.7 | 0.0 | 2780.7 |
| | % Fixture | 21.9 | 0.0 | 21.9 |
| **Street Side** | Lumens | 9917.3 | 0.0 | 9917.3 |
| | % Fixture | 78.1 | 0.0 | 78.1 |
| **Total** | Lumens | 12698.0 | 0.0 | 12698.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 169.0 | 1.3 |
| 10°-20° | 487.6 | 3.8 |
| 20°-30° | 833.9 | 6.6 |
| 30°-40° | 1341.0 | 10.6 |
| 40°-50° | 2093.6 | 16.5 |
| 50°-60° | 2796.6 | 22.0 |
| 60°-70° | 2980.7 | 23.5 |
| 70°-80° | 1834.9 | 14.5 |
| 80°-90° | 160.8 | 1.3 |
| 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° | 12698.0 | 100.0 |
| 0°-180° | 12698.0 | 100.0 |



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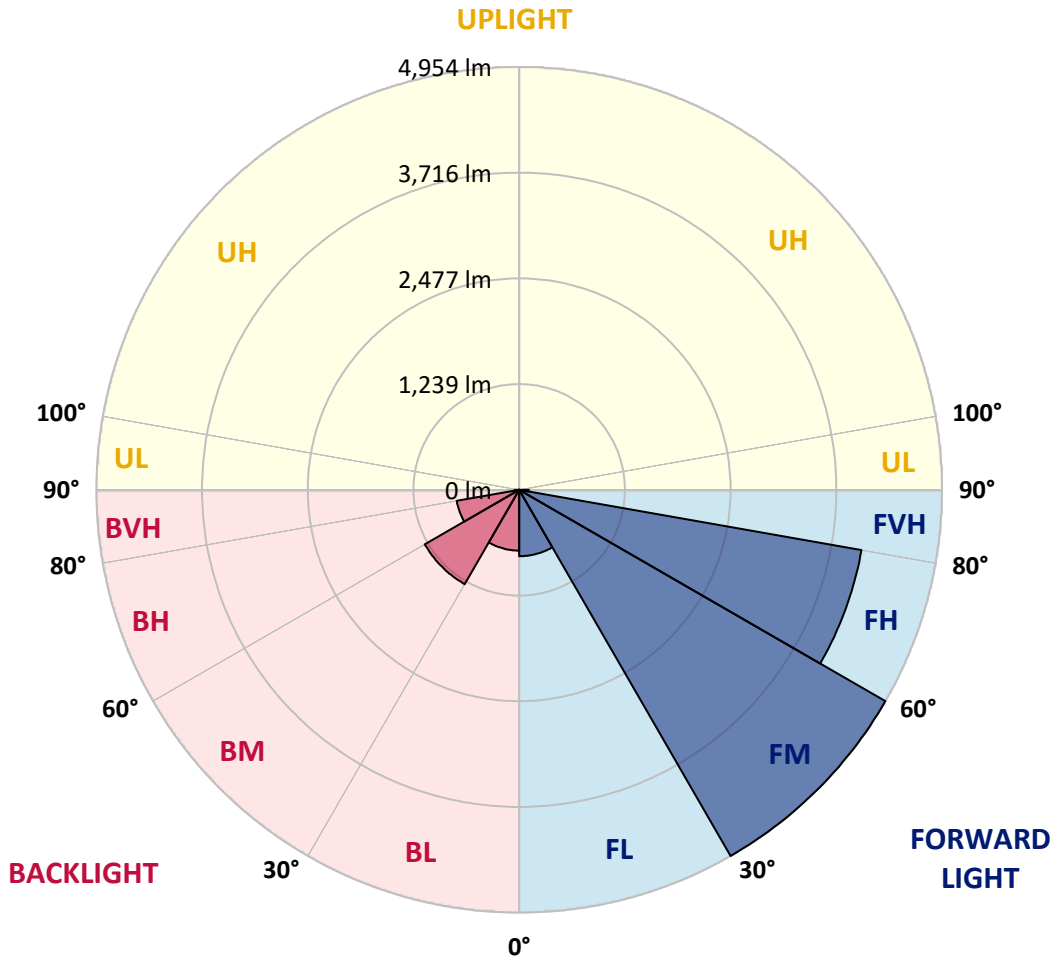
Scaled Data Report

REPORT NUMBER: P1200128
CATALOG NUMBER: GPC-SB2C-722-U-T3R

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 778.0 | 6.1 | | | |
| FM | (30°-60°) | 4954.5 | 39.0 | | | |
| FH | (60°-80°) | 4072.5 | 32.1 | | | G2/5000 |
| FVH | (80°-90°) | 112.4 | 0.9 | | | G2/225 |
| BL | (0°-30°) | 712.5 | 5.6 | B2/1000 | | |
| BM | (30°-60°) | 1276.7 | 10.1 | B2/2500 | | |
| BH | (60°-80°) | 743.2 | 5.9 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 48.4 | 0.4 | | | 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 Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | *1771.5* | 1771.5 |
| 2.5° | 1633.0 | 1632.3 | 1640.8 | 1643.4 | 1659.0 | 1670.0 | 1690.8 | 1713.0 | 1741.6 | *1744.8* | 1762.4 |
| 5° | 1538.7 | 1538.7 | 1548.4 | 1558.8 | 1579.0 | 1601.1 | 1633.0 | 1671.3 | 1720.8 | *1728.6* | 1772.1 |
| 7.5° | 1458.7 | 1463.9 | 1472.3 | 1492.5 | 1515.9 | 1547.8 | 1596.5 | 1651.2 | 1716.2 | *1728.6* | 1798.8 |
| 10° | 1394.3 | 1400.2 | 1410.6 | 1426.8 | 1461.9 | 1506.2 | 1569.9 | 1640.1 | 1727.3 | *1746.8* | 1837.8 |
| 12.5° | 1374.1 | 1380.0 | 1385.8 | 1398.2 | 1430.7 | 1482.7 | 1558.8 | 1645.3 | 1753.9 | *1773.4* | 1891.1 |
| 15° | 1421.0 | 1428.1 | 1423.6 | 1420.3 | 1437.2 | 1484.7 | 1564.0 | 1664.2 | 1787.1 | *1815.1* | 1956.8 |
| 17.5° | 1528.9 | 1531.5 | 1521.1 | 1490.5 | 1487.9 | 1513.3 | 1588.7 | 1690.2 | 1828.7 | *1859.3* | 2023.2 |
| 20° | 1703.2 | 1698.7 | 1677.2 | 1616.7 | 1582.2 | 1577.0 | 1631.0 | 1729.2 | 1871.6 | *1904.2* | 2094.7 |
| 22.5° | 1939.9 | 1934.7 | 1891.8 | 1796.2 | 1719.5 | 1668.7 | 1692.1 | 1779.9 | 1919.8 | *1956.2* | 2164.3 |
| 25° | 2235.2 | 2228.0 | 2164.9 | 2034.9 | 1915.9 | 1790.3 | 1775.4 | 1846.9 | 1978.9 | *2012.8* | 2237.1 |
| 27.5° | 2579.8 | 2574.0 | 2505.7 | 2334.0 | 2162.3 | 1956.8 | 1878.8 | 1925.6 | 2040.7 | *2079.1* | 2319.1 |
| 30° | 2950.5 | 2967.4 | 2846.5 | 2661.8 | 2444.6 | 2174.0 | 2018.0 | 2022.5 | 2120.7 | *2155.2* | 2418.6 |
| 32.5° | 3386.2 | 3415.5 | 3269.8 | 3035.7 | 2739.2 | 2410.1 | 2193.5 | 2157.8 | 2237.1 | *2265.7* | 2544.1 |
| 35° | 3818.1 | 3851.2 | 3730.3 | 3471.4 | 3130.0 | 2688.4 | 2376.9 | 2313.2 | 2391.9 | *2423.1* | 2710.6 |
| 37.5° | 4191.3 | 4235.6 | 4173.1 | 3948.1 | 3548.2 | 3024.0 | 2616.3 | 2495.9 | 2582.4 | *2621.5* | 2934.3 |
| 40° | 4485.9 | 4553.6 | 4549.0 | 4408.6 | 4041.1 | 3431.1 | 2920.0 | 2721.6 | 2819.2 | *2861.4* | 3205.5 |
| 42.5° | 4725.3 | 4783.8 | 4834.5 | 4827.4 | 4555.5 | 3893.5 | 3277.0 | 3014.9 | 3089.0 | *3137.8* | 3510.5 |
| 45° | 4890.4 | 4952.9 | 5062.1 | 5179.8 | 5050.4 | 4388.4 | 3686.0 | 3362.8 | 3430.5 | *3504.0* | 3874.0 |
| 47.5° | 5038.1 | 5109.0 | 5250.7 | 5437.4 | 5470.5 | 4885.2 | 4134.1 | 3768.0 | 3829.8 | *3905.9* | 4238.8 |
| 50° | 5051.1 | 5112.2 | 5332.0 | 5596.7 | 5769.0 | 5362.6 | 4615.4 | 4222.6 | 4280.4 | *4361.7* | 4629.7 |
| 52.5° | 4737.0 | 4833.2 | 5216.9 | 5592.1 | 5906.3 | 5761.9 | 5093.3 | 4695.4 | 4760.4 | *4857.9* | 5034.2 |
| 55° | 3676.9 | 3818.1 | 4879.4 | 5417.9 | 5857.5 | 6020.1 | 5547.9 | 5198.1 | 5281.3 | *5383.4* | 5441.3 |
| 57.5° | 3167.1 | 3228.9 | 3873.3 | 5100.5 | 5635.1 | 6087.0 | 5931.6 | 5706.0 | 5839.9 | *5951.8* | 5871.8 |
| 60° | 2846.5 | 2897.9 | 3278.9 | 4606.9 | 5342.4 | 5981.0 | 6228.2 | 6179.4 | 6410.9 | *6544.2* | 6312.1 |
| 62.5° | 2503.1 | 2551.9 | 2898.5 | 3846.7 | 4967.8 | 5804.8 | 6415.5 | 6616.4 | 6996.2 | *7141.9* | 6727.0 |
| 65° | 2162.3 | 2204.0 | 2536.3 | 3232.1 | 4491.8 | 5628.6 | 6512.4 | 6994.3 | 7537.9 | *7688.8* | 7071.6 |
| 67.5° | 1782.5 | 1817.0 | 2131.1 | 2726.8 | 3913.0 | 5387.3 | 6560.5 | 7291.5 | 8009.4 | *8138.8* | 7242.0 |
| 70° | *1286.3* | *1313.0* | *1637.5* | *2156.5* | *3186.6* | *4972.4* | *6541.0* | *7502.2* | *8253.9* | *8357.3* | *7113.3* |
| 72.5° | 608.1 | 632.1 | 1013.2 | 1400.2 | 2250.8 | 4164.7 | 6146.2 | 7335.0 | 8005.5 | *7954.1* | 6325.1 |
| 75° | 324.5 | 345.3 | 582.0 | 768.0 | 1188.8 | 2854.9 | 5029.6 | 6318.6 | 6722.4 | *6472.7* | 4674.5 |
| 77.5° | 219.8 | 236.1 | 360.3 | 461.1 | 543.0 | 1355.3 | 3232.8 | 4374.7 | 4208.9 | *3796.6* | 2341.2 |
| 80° | 174.3 | 191.2 | 295.2 | 312.2 | 262.7 | 489.7 | 1335.8 | 2025.1 | 1454.8 | *1163.4* | 665.9 |
| 82.5° | 134.0 | 152.8 | 248.4 | 226.3 | 143.1 | 201.0 | 388.9 | 640.6 | 372.6 | *283.5* | 161.3 |
| 85° | 81.9 | 102.1 | 195.1 | 144.4 | 80.6 | 91.7 | 132.0 | 178.2 | 113.8 | *94.9* | 57.9 |
| 87.5° | 41.6 | 58.5 | 98.8 | 52.7 | 36.4 | 21.5 | 35.1 | 35.1 | 29.9 | *26.0* | 15.0 |
| 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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Scaled Data Report

REPORT NUMBER: P1200128
CATALOG NUMBER: GPC-SB2C-722-U-T3R

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 | 1771.5 |
| 2.5° | 1778.0 | 1791.0 | 1813.1 | 1833.9 | 1850.2 | 1865.8 | 1881.4 | 1889.8 | 1892.4 | 1902.9 | 1908.7 |
| 5° | 1798.8 | 1822.9 | 1865.8 | 1906.1 | 1931.5 | 1947.1 | 1958.1 | 1964.6 | 1965.9 | 1969.2 | 1974.4 |
| 7.5° | 1837.2 | 1875.5 | 1935.4 | 1975.7 | 1994.5 | 1993.2 | 1988.7 | 1972.4 | 1965.9 | 1960.1 | 1961.4 |
| 10° | 1891.1 | 1941.9 | 2015.4 | 2043.3 | 2031.6 | 2000.4 | 1960.1 | 1912.6 | 1890.5 | 1869.0 | 1862.5 |
| 12.5° | 1958.1 | 2022.5 | 2094.7 | 2093.4 | 2035.5 | 1955.5 | 1861.9 | 1789.0 | 1742.9 | 1709.7 | 1701.9 |
| 15° | 2039.4 | 2113.6 | 2168.8 | 2124.6 | 1997.8 | 1854.1 | 1716.9 | 1621.9 | 1580.3 | 1543.9 | 1540.0 |
| 17.5° | 2123.3 | 2202.7 | 2228.0 | 2114.9 | 1902.9 | 1703.9 | 1548.4 | 1473.6 | 1432.7 | 1413.2 | 1419.0 |
| 20° | 2205.3 | 2283.9 | 2263.1 | 2058.9 | 1758.5 | 1533.5 | 1394.9 | 1354.0 | 1345.5 | 1350.1 | 1348.1 |
| 22.5° | 2291.7 | 2362.0 | 2270.3 | 1951.0 | 1574.4 | 1359.2 | 1283.1 | 1284.4 | 1303.3 | 1316.9 | 1320.2 |
| 25° | 2380.2 | 2427.7 | 2251.4 | 1794.9 | 1376.7 | 1231.1 | 1212.2 | 1233.0 | 1270.1 | 1296.7 | 1303.9 |
| 27.5° | 2465.4 | 2486.2 | 2210.5 | 1601.8 | 1207.0 | 1139.4 | 1142.6 | 1185.5 | 1241.5 | 1278.5 | 1287.6 |
| 30° | 2561.6 | 2538.2 | 2131.8 | 1384.5 | 1089.3 | 1060.7 | 1088.0 | 1138.1 | 1194.0 | 1227.2 | 1235.0 |
| 32.5° | 2670.2 | 2583.1 | 2006.9 | 1183.6 | 1006.1 | 997.6 | 1042.5 | 1075.0 | 1099.7 | 1109.5 | 1114.7 |
| 35° | 2805.5 | 2646.2 | 1846.9 | 1042.5 | 931.3 | 951.4 | 994.3 | 978.1 | 968.3 | 963.1 | 968.3 |
| 37.5° | 2981.1 | 2731.4 | 1659.6 | 950.8 | 870.8 | 918.3 | 935.8 | 885.1 | 846.7 | 827.9 | 832.4 |
| 40° | 3192.4 | 2856.2 | 1479.5 | 879.9 | 832.4 | 889.6 | 859.1 | 797.9 | 749.2 | 722.5 | 724.5 |
| 42.5° | 3427.2 | 2986.9 | 1328.0 | 826.6 | 811.0 | 866.2 | 802.5 | 729.7 | 651.0 | 642.5 | 651.0 |
| 45° | 3673.7 | 3121.6 | 1224.6 | 785.6 | 800.6 | 846.1 | 770.0 | 652.3 | 596.3 | 630.8 | 649.0 |
| 47.5° | 3920.2 | 3245.1 | 1162.1 | 755.0 | 795.3 | 823.3 | 741.4 | 609.4 | 569.7 | 619.8 | 643.2 |
| 50° | 4194.6 | 3355.7 | 1134.2 | 732.9 | 789.5 | 814.2 | 698.4 | 598.3 | 541.7 | 574.9 | 599.6 |
| 52.5° | 4467.1 | 3441.5 | 1113.4 | 710.8 | 781.0 | 807.1 | 677.6 | 585.3 | 507.9 | 509.9 | 523.5 |
| 55° | 4738.9 | 3497.5 | 1090.6 | 681.5 | 762.2 | 791.4 | 675.7 | 571.0 | 482.5 | 473.4 | 479.9 |
| 57.5° | 5029.0 | 3529.3 | 1062.6 | 649.0 | 729.7 | 751.8 | 673.7 | 559.9 | 474.7 | 459.8 | 461.7 |
| 60° | 5324.2 | 3576.1 | 1026.2 | 609.4 | 686.1 | 704.3 | 669.2 | 556.0 | 470.2 | 444.8 | 446.8 |
| 62.5° | 5588.9 | 3592.4 | 982.6 | 571.6 | 630.2 | 657.5 | 659.4 | 552.8 | 457.8 | 414.3 | 414.3 |
| 65° | 5762.5 | 3522.2 | 906.6 | 528.7 | 569.7 | 609.4 | 640.6 | 541.7 | 435.7 | 392.1 | 392.1 |
| 67.5° | 5755.4 | 3321.9 | 787.5 | 473.4 | 511.2 | 556.0 | 613.3 | 522.9 | 409.1 | 364.8 | 366.8 |
| 70° | *5487.4* | *2926.5* | *636.7* | *409.1* | *446.8* | *498.8* | *578.1* | *494.9* | *377.2* | *334.9* | *338.8* |
| 72.5° | 4706.4 | 2290.4 | 462.4 | 333.6 | 372.0 | 439.6 | 532.6 | 461.1 | 344.7 | 308.3 | 306.3 |
| 75° | 3362.2 | 1449.6 | 313.5 | 256.2 | 289.4 | 372.6 | 476.0 | 421.4 | 314.8 | 309.6 | 292.0 |
| 77.5° | 1717.5 | 692.6 | 207.5 | 187.3 | 201.6 | 293.9 | 400.0 | 376.5 | 319.3 | 255.6 | 227.6 |
| 80° | 558.6 | 255.6 | 130.7 | 127.5 | 134.0 | 195.7 | 309.6 | 308.9 | 241.9 | 173.6 | 153.5 |
| 82.5° | 178.2 | 109.9 | 85.2 | 81.9 | 78.7 | 122.9 | 215.9 | 244.5 | 163.2 | 109.9 | 109.3 |
| 85° | 70.9 | 65.7 | 50.1 | 46.2 | 33.2 | 57.9 | 113.2 | 162.6 | 121.6 | 79.3 | 81.3 |
| 87.5° | 26.0 | 26.0 | 13.7 | 9.8 | 7.2 | 19.5 | 30.6 | 48.8 | 69.6 | 41.0 | 40.3 |
| 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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Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

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## Test Information

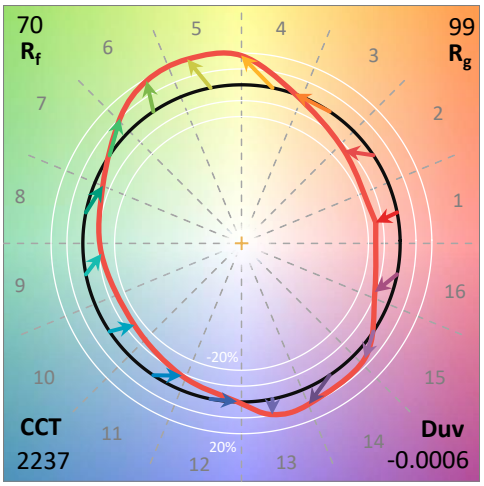
| | |
|---|---|
| Test Method: | LM-79-2008 Report |
| Number: | SP1-1908-441-10-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | **SA1C-722-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): | 2237 | CRI (Ra): | 72.0 | | |
| CIE u': | 0.2876 | R1: | 68.9 | R9: | -17.4 |
| CIE v': | 0.5346 | R2: | 83.0 | R10: | 61.3 |
| Duv: | -0.0006 | R3: | 95.2 | R11: | 59.8 |
| CIE x: | 0.5005 | R4: | 66.2 | R12: | 50.5 |
| CIE y: | 0.4134 | R5: | 65.9 | R13: | 71.1 |
| CIE z: | 0.0860 | R6: | 76.3 | R14: | 96.9 |
| Peak Wavelength (nm): | 603 | R7: | 76.7 | | |
| Dominant Wavelength (nm): | 587 | R8: | 43.8 | | |
| Purity: | 74.5 | | | | |

| | |
|---|---|
| Rf: | 69.8 |
| Rg: | 99.2 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 71M |
| Operation Time: | 12H |
| Room Temperature (°C) / RH%: | 24.7/41% |
| Sphere Temperature (°C): | 25.6 |

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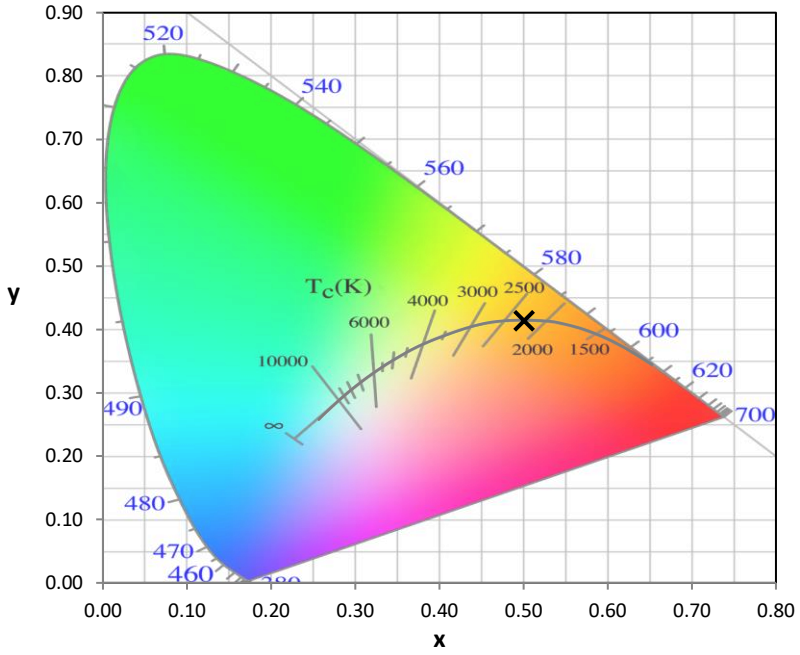
REPORT NUMBER: SP1-1908-441-10-R4

| 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 |

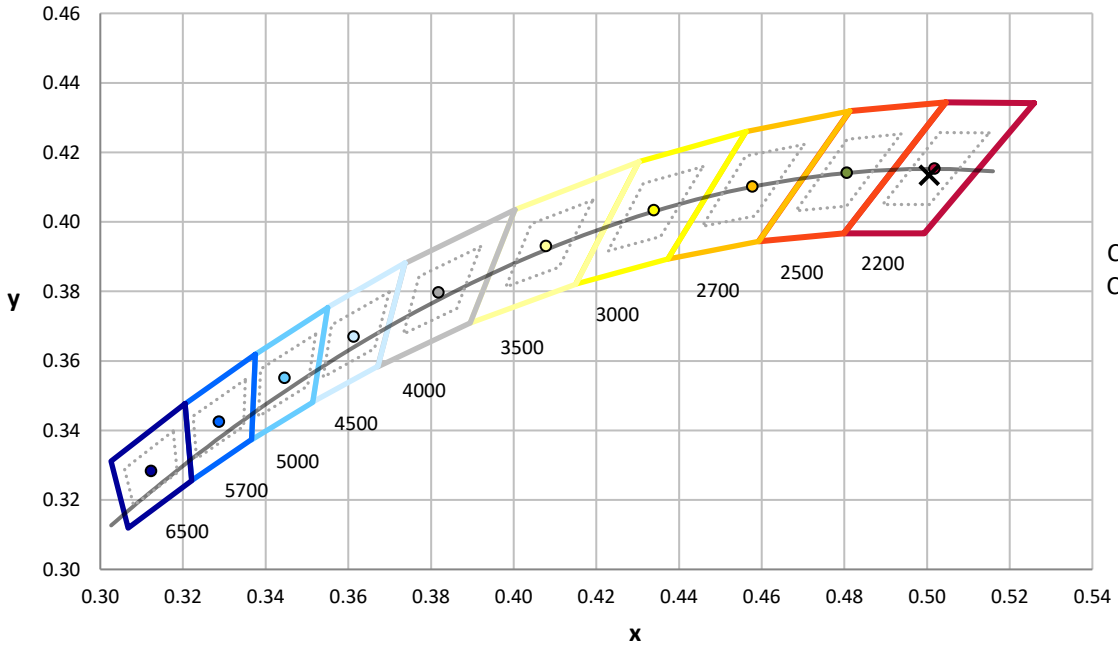
Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

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## CIE 1931 Chromaticity Diagram




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



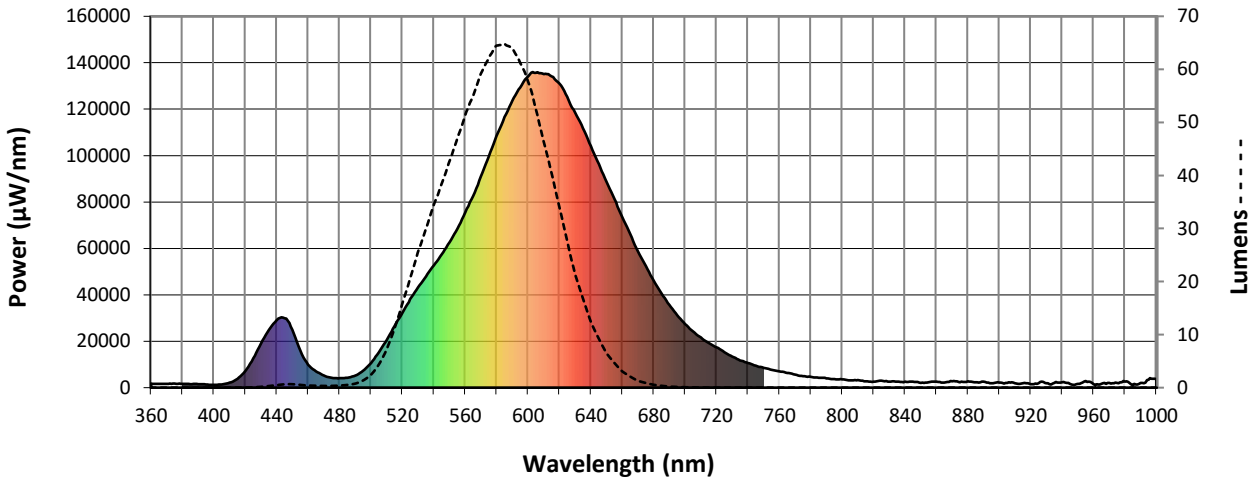

CCT = 2237K
CIE x = 0.5005
CIE y = 0.4134
Duv = -0.0006

Point lies inside the ANSI 2200K 4-step quadrangle

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## Photopic Flux vs. Wavelength



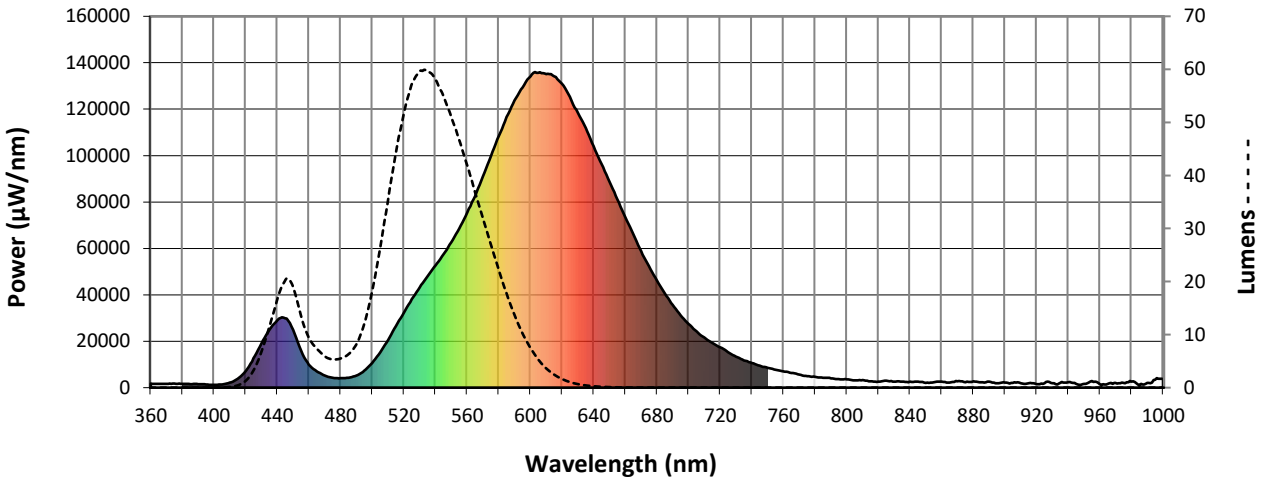

**Photopic Lumens: 5530.5**

| 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 | 1768 | 0.0 | 490 | 5206 | 0.7 | 620 | 130919 | 34.1 | 750 | 8553 | 0.0 | 880 | 2713 | 0.0 |
| 365 | 1569 | 0.0 | 495 | 7286 | 1.3 | 625 | 125335 | 27.7 | 755 | 7696 | 0.0 | 885 | 2316 | 0.0 |
| 370 | 1594 | 0.0 | 500 | 10654 | 2.4 | 630 | 118388 | 21.4 | 760 | 6978 | 0.0 | 890 | 2539 | 0.0 |
| 375 | 1744 | 0.0 | 505 | 15189 | 4.2 | 635 | 111855 | 16.8 | 765 | 6377 | 0.0 | 895 | 1933 | 0.0 |
| 380 | 1659 | 0.0 | 510 | 20541 | 7.1 | 640 | 104062 | 12.4 | 770 | 5600 | 0.0 | 900 | 2216 | 0.0 |
| 385 | 1504 | 0.0 | 515 | 26492 | 11.0 | 645 | 96365 | 9.3 | 775 | 5000 | 0.0 | 905 | 2067 | 0.0 |
| 390 | 1541 | 0.0 | 520 | 32294 | 15.7 | 650 | 88651 | 6.5 | 780 | 4709 | 0.0 | 910 | 1959 | 0.0 |
| 395 | 1355 | 0.0 | 525 | 38123 | 20.5 | 655 | 81152 | 4.7 | 785 | 4305 | 0.0 | 915 | 1874 | 0.0 |
| 400 | 1243 | 0.0 | 530 | 43232 | 25.5 | 660 | 73523 | 3.1 | 790 | 4040 | 0.0 | 920 | 1484 | 0.0 |
| 405 | 1417 | 0.0 | 535 | 48012 | 29.8 | 665 | 66123 | 2.1 | 795 | 3642 | 0.0 | 925 | 1914 | 0.0 |
| 410 | 2147 | 0.0 | 540 | 52623 | 34.3 | 670 | 58677 | 1.3 | 800 | 3594 | 0.0 | 930 | 1948 | 0.0 |
| 415 | 3837 | 0.0 | 545 | 57516 | 38.3 | 675 | 52349 | 0.9 | 805 | 3190 | 0.0 | 935 | 2079 | 0.0 |
| 420 | 7159 | 0.0 | 550 | 62613 | 42.5 | 680 | 46159 | 0.5 | 810 | 3241 | 0.0 | 940 | 2263 | 0.0 |
| 425 | 12599 | 0.1 | 555 | 68554 | 46.8 | 685 | 40525 | 0.3 | 815 | 2732 | 0.0 | 945 | 1688 | 0.0 |
| 430 | 19019 | 0.2 | 560 | 75325 | 51.2 | 690 | 35615 | 0.2 | 820 | 2612 | 0.0 | 950 | 1560 | 0.0 |
| 435 | 24875 | 0.3 | 565 | 82533 | 54.9 | 695 | 31158 | 0.1 | 825 | 2966 | 0.0 | 955 | 2826 | 0.0 |
| 440 | 29103 | 0.5 | 570 | 90909 | 59.1 | 700 | 27409 | 0.1 | 830 | 2574 | 0.0 | 960 | 1477 | 0.0 |
| 445 | 29901 | 0.6 | 575 | 99621 | 62.0 | 705 | 24204 | 0.1 | 835 | 2633 | 0.0 | 965 | 1568 | 0.0 |
| 450 | 24862 | 0.6 | 580 | 108484 | 64.5 | 710 | 21558 | 0.0 | 840 | 2526 | 0.0 | 970 | 2030 | 0.0 |
| 455 | 15942 | 0.5 | 585 | 116679 | 64.8 | 715 | 19222 | 0.0 | 845 | 2631 | 0.0 | 975 | 1986 | 0.0 |
| 460 | 9916 | 0.4 | 590 | 123752 | 64.0 | 720 | 17310 | 0.0 | 850 | 2079 | 0.0 | 980 | 2540 | 0.0 |
| 465 | 7051 | 0.4 | 595 | 129324 | 61.3 | 725 | 15280 | 0.0 | 855 | 2309 | 0.0 | 985 | 1139 | 0.0 |
| 470 | 5227 | 0.3 | 600 | 134082 | 57.8 | 730 | 13282 | 0.0 | 860 | 2528 | 0.0 | 990 | 2018 | 0.0 |
| 475 | 4257 | 0.3 | 605 | 135698 | 52.6 | 735 | 11753 | 0.0 | 865 | 2121 | 0.0 | 995 | 3445 | 0.0 |
| 480 | 4052 | 0.4 | 610 | 135144 | 46.4 | 740 | 10654 | 0.0 | 870 | 2751 | 0.0 | 1000 | 3704 | 0.0 |
| 485 | 4298 | 0.5 | 615 | 134180 | 40.5 | 745 | 9451 | 0.0 | 875 | 2317 | 0.0 | | | |

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## Scotopic Flux vs. Wavelength



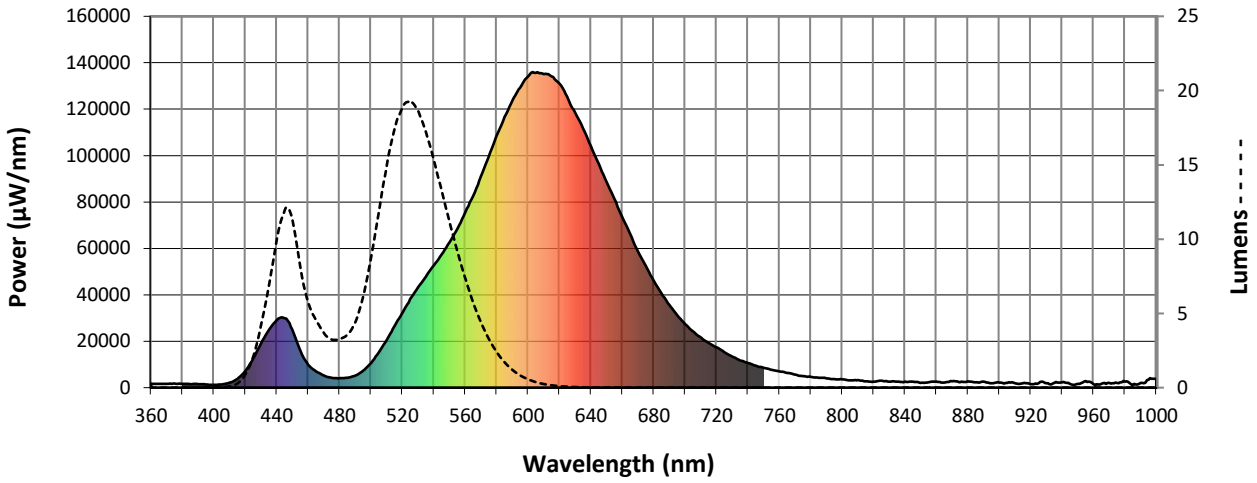

**Scotopic Lumens: 4696.9** **S/P: 0.85**

| 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 | 1768 | 0.0 | 490 | 5206 | 4.3 | 620 | 130919 | 0.1 | 750 | 8553 | 0.0 | 880 | 2713 | 0.0 |
| 365 | 1569 | 0.0 | 495 | 7286 | 6.0 | 625 | 125335 | 0.1 | 755 | 7696 | 0.0 | 885 | 2316 | 0.0 |
| 370 | 1594 | 0.0 | 500 | 10654 | 8.6 | 630 | 118388 | 0.0 | 760 | 6978 | 0.0 | 890 | 2539 | 0.0 |
| 375 | 1744 | 0.0 | 505 | 15189 | 11.7 | 635 | 111855 | 0.0 | 765 | 6377 | 0.0 | 895 | 1933 | 0.0 |
| 380 | 1659 | 0.0 | 510 | 20541 | 14.7 | 640 | 104062 | 0.0 | 770 | 5600 | 0.0 | 900 | 2216 | 0.0 |
| 385 | 1504 | 0.0 | 515 | 26492 | 17.3 | 645 | 96365 | 0.0 | 775 | 5000 | 0.0 | 905 | 2067 | 0.0 |
| 390 | 1541 | 0.0 | 520 | 32294 | 18.8 | 650 | 88651 | 0.0 | 780 | 4709 | 0.0 | 910 | 1959 | 0.0 |
| 395 | 1355 | 0.0 | 525 | 38123 | 19.3 | 655 | 81152 | 0.0 | 785 | 4305 | 0.0 | 915 | 1874 | 0.0 |
| 400 | 1243 | 0.0 | 530 | 43232 | 18.7 | 660 | 73523 | 0.0 | 790 | 4040 | 0.0 | 920 | 1484 | 0.0 |
| 405 | 1417 | 0.0 | 535 | 48012 | 17.3 | 665 | 66123 | 0.0 | 795 | 3642 | 0.0 | 925 | 1914 | 0.0 |
| 410 | 2147 | 0.1 | 540 | 52623 | 15.4 | 670 | 58677 | 0.0 | 800 | 3594 | 0.0 | 930 | 1948 | 0.0 |
| 415 | 3837 | 0.3 | 545 | 57516 | 13.4 | 675 | 52349 | 0.0 | 805 | 3190 | 0.0 | 935 | 2079 | 0.0 |
| 420 | 7159 | 0.8 | 550 | 62613 | 11.2 | 680 | 46159 | 0.0 | 810 | 3241 | 0.0 | 940 | 2263 | 0.0 |
| 425 | 12599 | 2.0 | 555 | 68554 | 9.2 | 685 | 40525 | 0.0 | 815 | 2732 | 0.0 | 945 | 1688 | 0.0 |
| 430 | 19019 | 4.0 | 560 | 75325 | 7.4 | 690 | 35615 | 0.0 | 820 | 2612 | 0.0 | 950 | 1560 | 0.0 |
| 435 | 24875 | 6.6 | 565 | 82533 | 5.8 | 695 | 31158 | 0.0 | 825 | 2966 | 0.0 | 955 | 2826 | 0.0 |
| 440 | 29103 | 9.7 | 570 | 90909 | 4.4 | 700 | 27409 | 0.0 | 830 | 2574 | 0.0 | 960 | 1477 | 0.0 |
| 445 | 29901 | 11.8 | 575 | 99621 | 3.3 | 705 | 24204 | 0.0 | 835 | 2633 | 0.0 | 965 | 1568 | 0.0 |
| 450 | 24862 | 11.5 | 580 | 108484 | 2.4 | 710 | 21558 | 0.0 | 840 | 2526 | 0.0 | 970 | 2030 | 0.0 |
| 455 | 15942 | 8.4 | 585 | 116679 | 1.7 | 715 | 19222 | 0.0 | 845 | 2631 | 0.0 | 975 | 1986 | 0.0 |
| 460 | 9916 | 5.8 | 590 | 123752 | 1.2 | 720 | 17310 | 0.0 | 850 | 2079 | 0.0 | 980 | 2540 | 0.0 |
| 465 | 7051 | 4.6 | 595 | 129324 | 0.8 | 725 | 15280 | 0.0 | 855 | 2309 | 0.0 | 985 | 1139 | 0.0 |
| 470 | 5227 | 3.7 | 600 | 134082 | 0.6 | 730 | 13282 | 0.0 | 860 | 2528 | 0.0 | 990 | 2018 | 0.0 |
| 475 | 4257 | 3.3 | 605 | 135698 | 0.4 | 735 | 11753 | 0.0 | 865 | 2121 | 0.0 | 995 | 3445 | 0.0 |
| 480 | 4052 | 3.3 | 610 | 135144 | 0.2 | 740 | 10654 | 0.0 | 870 | 2751 | 0.0 | 1000 | 3704 | 0.0 |
| 485 | 4298 | 3.5 | 615 | 134180 | 0.2 | 745 | 9451 | 0.0 | 875 | 2317 | 0.0 | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: 1470.8** **M/P: 0.27**

| 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 | 1768 | 0.0 | 490 | 5206 | 8.0 | 620 | 130919 | 1.6 | 750 | 8553 | 0.0 | 880 | 2713 | 0.0 |
| 365 | 1569 | 0.0 | 495 | 7286 | 11.8 | 625 | 125335 | 1.1 | 755 | 7696 | 0.0 | 885 | 2316 | 0.0 |
| 370 | 1594 | 0.0 | 500 | 10654 | 17.8 | 630 | 118388 | 0.7 | 760 | 6978 | 0.0 | 890 | 2539 | 0.0 |
| 375 | 1744 | 0.0 | 505 | 15189 | 25.8 | 635 | 111855 | 0.4 | 765 | 6377 | 0.0 | 895 | 1933 | 0.0 |
| 380 | 1659 | 0.0 | 510 | 20541 | 34.8 | 640 | 104062 | 0.3 | 770 | 5600 | 0.0 | 900 | 2216 | 0.0 |
| 385 | 1504 | 0.0 | 515 | 26492 | 43.9 | 645 | 96365 | 0.2 | 775 | 5000 | 0.0 | 905 | 2067 | 0.0 |
| 390 | 1541 | 0.0 | 520 | 32294 | 51.3 | 650 | 88651 | 0.1 | 780 | 4709 | 0.0 | 910 | 1959 | 0.0 |
| 395 | 1355 | 0.0 | 525 | 38123 | 57.0 | 655 | 81152 | 0.1 | 785 | 4305 | 0.0 | 915 | 1874 | 0.0 |
| 400 | 1243 | 0.0 | 530 | 43232 | 59.6 | 660 | 73523 | 0.0 | 790 | 4040 | 0.0 | 920 | 1484 | 0.0 |
| 405 | 1417 | 0.0 | 535 | 48012 | 59.8 | 665 | 66123 | 0.0 | 795 | 3642 | 0.0 | 925 | 1914 | 0.0 |
| 410 | 2147 | 0.1 | 540 | 52623 | 58.1 | 670 | 58677 | 0.0 | 800 | 3594 | 0.0 | 930 | 1948 | 0.0 |
| 415 | 3837 | 0.4 | 545 | 57516 | 55.1 | 675 | 52349 | 0.0 | 805 | 3190 | 0.0 | 935 | 2079 | 0.0 |
| 420 | 7159 | 1.2 | 550 | 62613 | 51.2 | 680 | 46159 | 0.0 | 810 | 3241 | 0.0 | 940 | 2263 | 0.0 |
| 425 | 12599 | 3.1 | 555 | 68554 | 46.9 | 685 | 40525 | 0.0 | 815 | 2732 | 0.0 | 945 | 1688 | 0.0 |
| 430 | 19019 | 6.5 | 560 | 75325 | 42.1 | 690 | 35615 | 0.0 | 820 | 2612 | 0.0 | 950 | 1560 | 0.0 |
| 435 | 24875 | 11.1 | 565 | 82533 | 37.0 | 695 | 31158 | 0.0 | 825 | 2966 | 0.0 | 955 | 2826 | 0.0 |
| 440 | 29103 | 16.3 | 570 | 90909 | 32.1 | 700 | 27409 | 0.0 | 830 | 2574 | 0.0 | 960 | 1477 | 0.0 |
| 445 | 29901 | 20.0 | 575 | 99621 | 27.1 | 705 | 24204 | 0.0 | 835 | 2633 | 0.0 | 965 | 1568 | 0.0 |
| 450 | 24862 | 19.3 | 580 | 108484 | 22.4 | 710 | 21558 | 0.0 | 840 | 2526 | 0.0 | 970 | 2030 | 0.0 |
| 455 | 15942 | 13.9 | 585 | 116679 | 17.8 | 715 | 19222 | 0.0 | 845 | 2631 | 0.0 | 975 | 1986 | 0.0 |
| 460 | 9916 | 9.6 | 590 | 123752 | 13.8 | 720 | 17310 | 0.0 | 850 | 2079 | 0.0 | 980 | 2540 | 0.0 |
| 465 | 7051 | 7.4 | 595 | 129324 | 10.3 | 725 | 15280 | 0.0 | 855 | 2309 | 0.0 | 985 | 1139 | 0.0 |
| 470 | 5227 | 6.0 | 600 | 134082 | 7.6 | 730 | 13282 | 0.0 | 860 | 2528 | 0.0 | 990 | 2018 | 0.0 |
| 475 | 4257 | 5.3 | 605 | 135698 | 5.3 | 735 | 11753 | 0.0 | 865 | 2121 | 0.0 | 995 | 3445 | 0.0 |
| 480 | 4052 | 5.5 | 610 | 135144 | 3.7 | 740 | 10654 | 0.0 | 870 | 2751 | 0.0 | 1000 | 3704 | 0.0 |
| 485 | 4298 | 6.2 | 615 | 134180 | 2.5 | 745 | 9451 | 0.0 | 875 | 2317 | 0.0 | | | |

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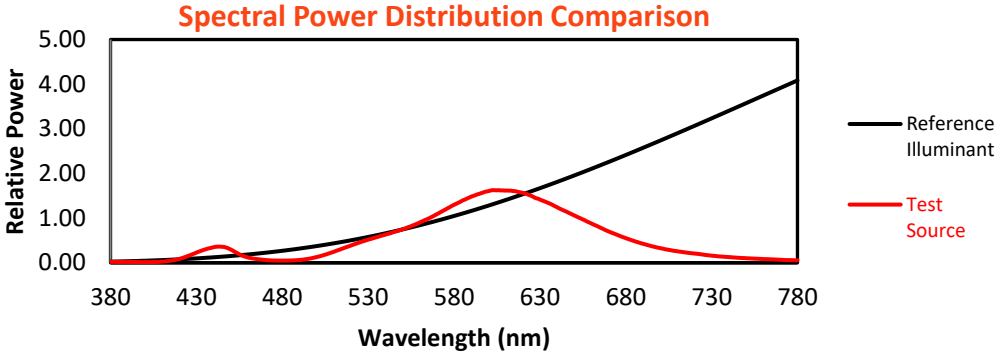
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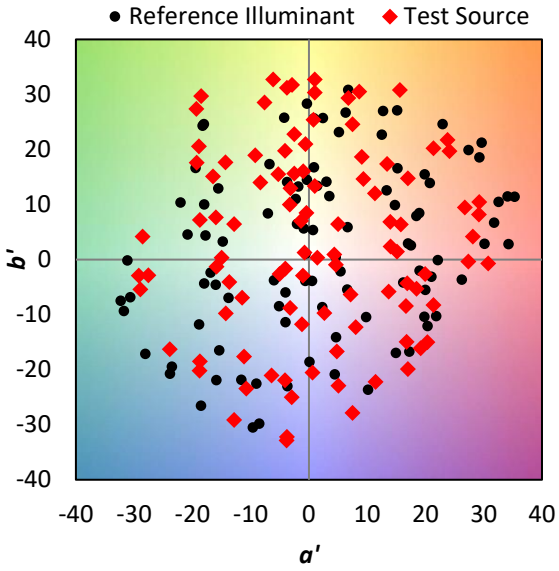
## Summary

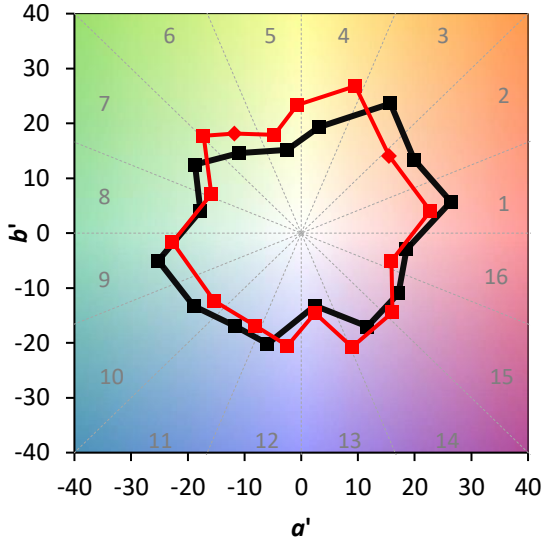
$R_f$ = 69.8
$R_g$ = 99.2
CIE $R_a$ = 72.0
$R_9$ = -17.4

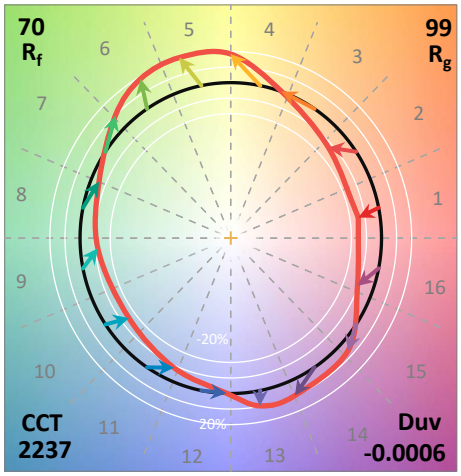
## Spectral Power Distribution Comparison

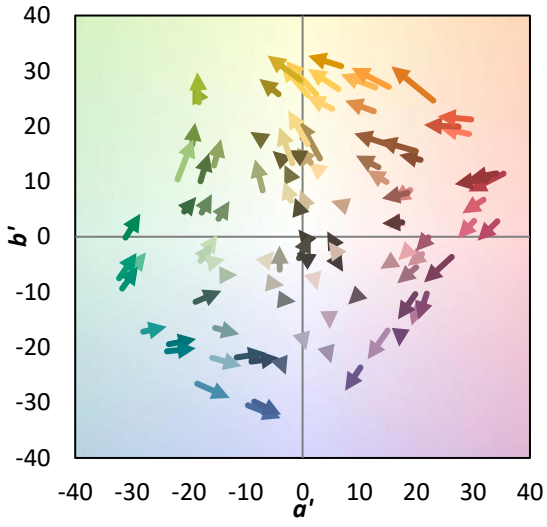



## Color Vector Graphics



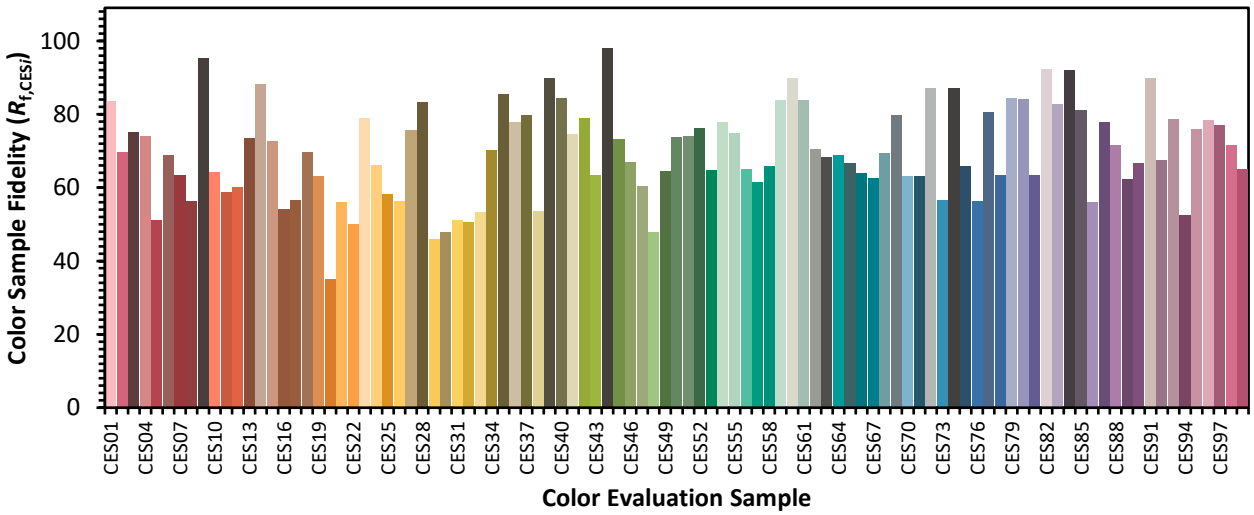
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## Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|---|---|---|---|
| CES01 = 87 | CES26 = 56 | CES51 = 74 | CES76 = 56 |
| CES02 = 65 | CES27 = 76 | CES52 = 76 | CES77 = 81 |
| CES03 = 32 | CES28 = 83 | CES53 = 65 | CES78 = 63 |
| CES04 = 72 | CES29 = 46 | CES54 = 78 | CES79 = 84 |
| CES05 = 52 | CES30 = 48 | CES55 = 75 | CES80 = 84 |
| CES06 = 52 | CES31 = 51 | CES56 = 65 | CES81 = 63 |
| CES07 = 44 | CES32 = 51 | CES57 = 62 | CES82 = 92 |
| CES08 = 42 | CES33 = 53 | CES58 = 66 | CES83 = 83 |
| CES09 = 29 | CES34 = 70 | CES59 = 84 | CES84 = 92 |
| CES10 = 78 | CES35 = 85 | CES60 = 90 | CES85 = 81 |
| CES11 = 61 | CES36 = 78 | CES61 = 84 | CES86 = 56 |
| CES12 = 68 | CES37 = 80 | CES62 = 70 | CES87 = 78 |
| CES13 = 45 | CES38 = 53 | CES63 = 68 | CES88 = 72 |
| CES14 = 75 | CES39 = 90 | CES64 = 69 | CES89 = 62 |
| CES15 = 72 | CES40 = 84 | CES65 = 67 | CES90 = 67 |
| CES16 = 49 | CES41 = 75 | CES66 = 64 | CES91 = 90 |
| CES17 = 51 | CES42 = 79 | CES67 = 63 | CES92 = 67 |
| CES18 = 57 | CES43 = 64 | CES68 = 69 | CES93 = 79 |
| CES19 = 74 | CES44 = 98 | CES69 = 80 | CES94 = 52 |
| CES20 = 68 | CES45 = 73 | CES70 = 63 | CES95 = 76 |
| CES21 = 89 | CES46 = 67 | CES71 = 63 | CES96 = 78 |
| CES22 = 81 | CES47 = 60 | CES72 = 87 | CES97 = 77 |
| CES23 = 92 | CES48 = 48 | CES73 = 56 | CES98 = 71 |
| CES24 = 92 | CES49 = 64 | CES74 = 87 | CES99 = 65 |
| CES25 = 74 | CES50 = 74 | CES75 = 66 | |

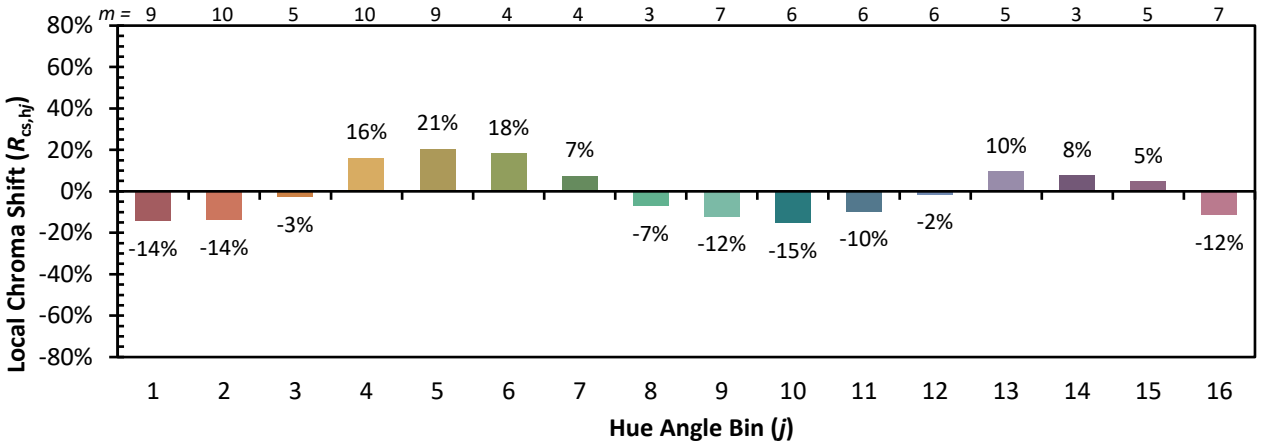


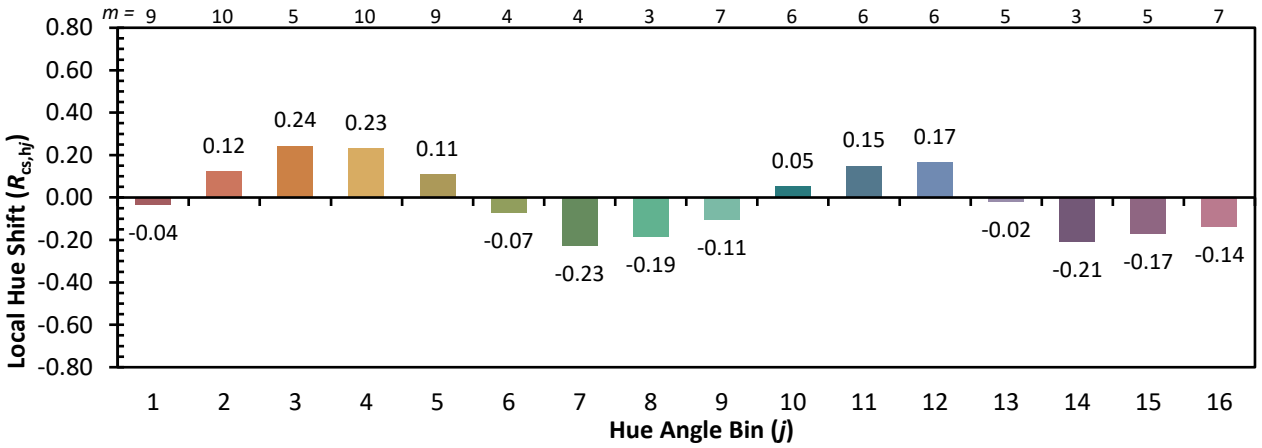
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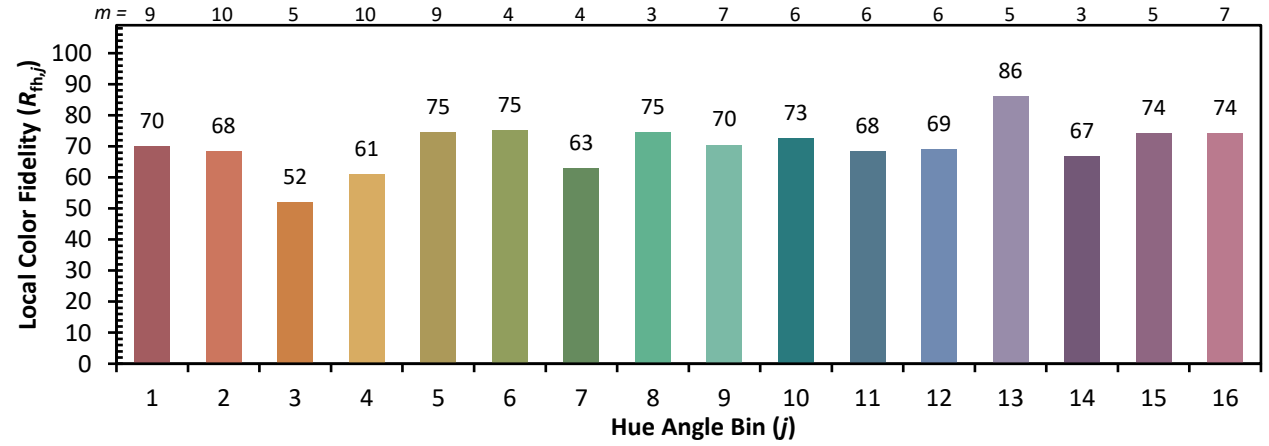
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### Color Rendition by Hue-Angle Bin



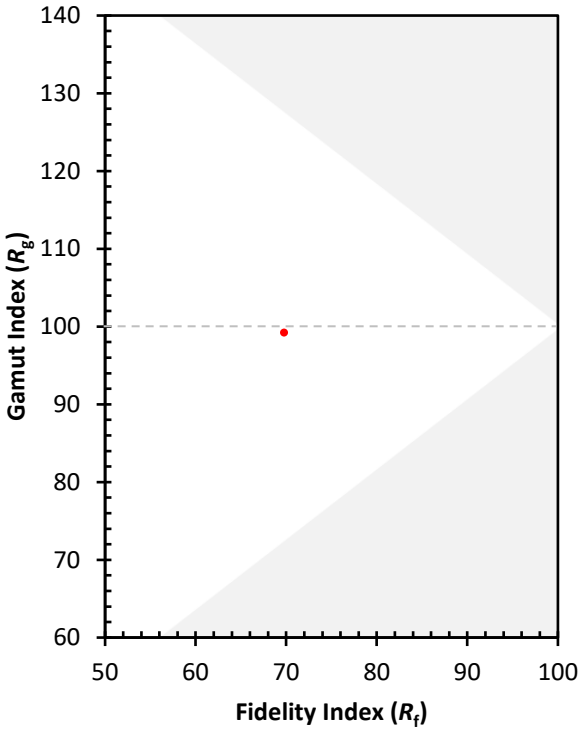



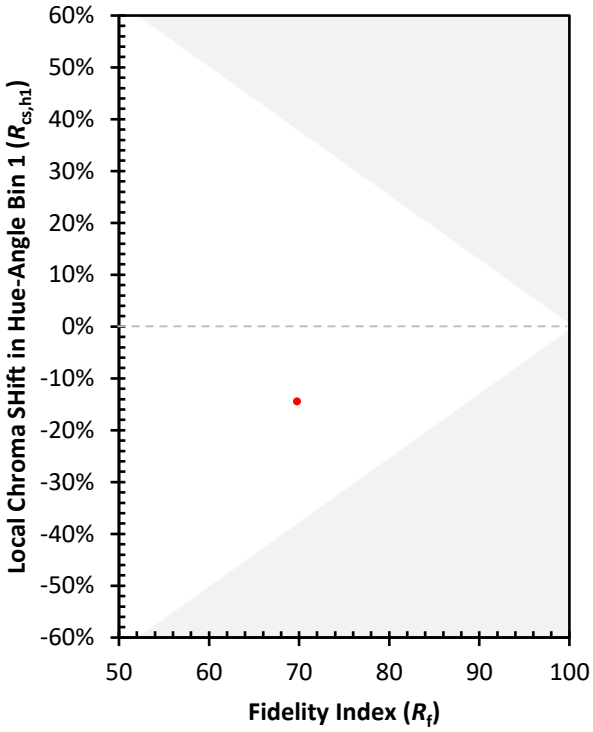
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### Measure Comparisons




(END OF REPORT)