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: P1197438

Luminaire Tested: GPC-SB1A-760-U-T3-HSS

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: | P1197438 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/15/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GPC-SB1A-760-U-T3-HSS |
| Description: | GALLEON PEDESTRIAN LUMINAIRE |
| | (1) 70 CRI, 5700K, 350mA LIGHTSQUARE WITH 26 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 3742 lumens |
| Efficiency: | N/A |
| Efficacy: | 121.1 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B1 - U0 - G1 |

| | |
|---|---|
| Input Watts (W): | 30.9 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.263 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.995 |
| Total Harmonic Distortion (THDi): | 6.356 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

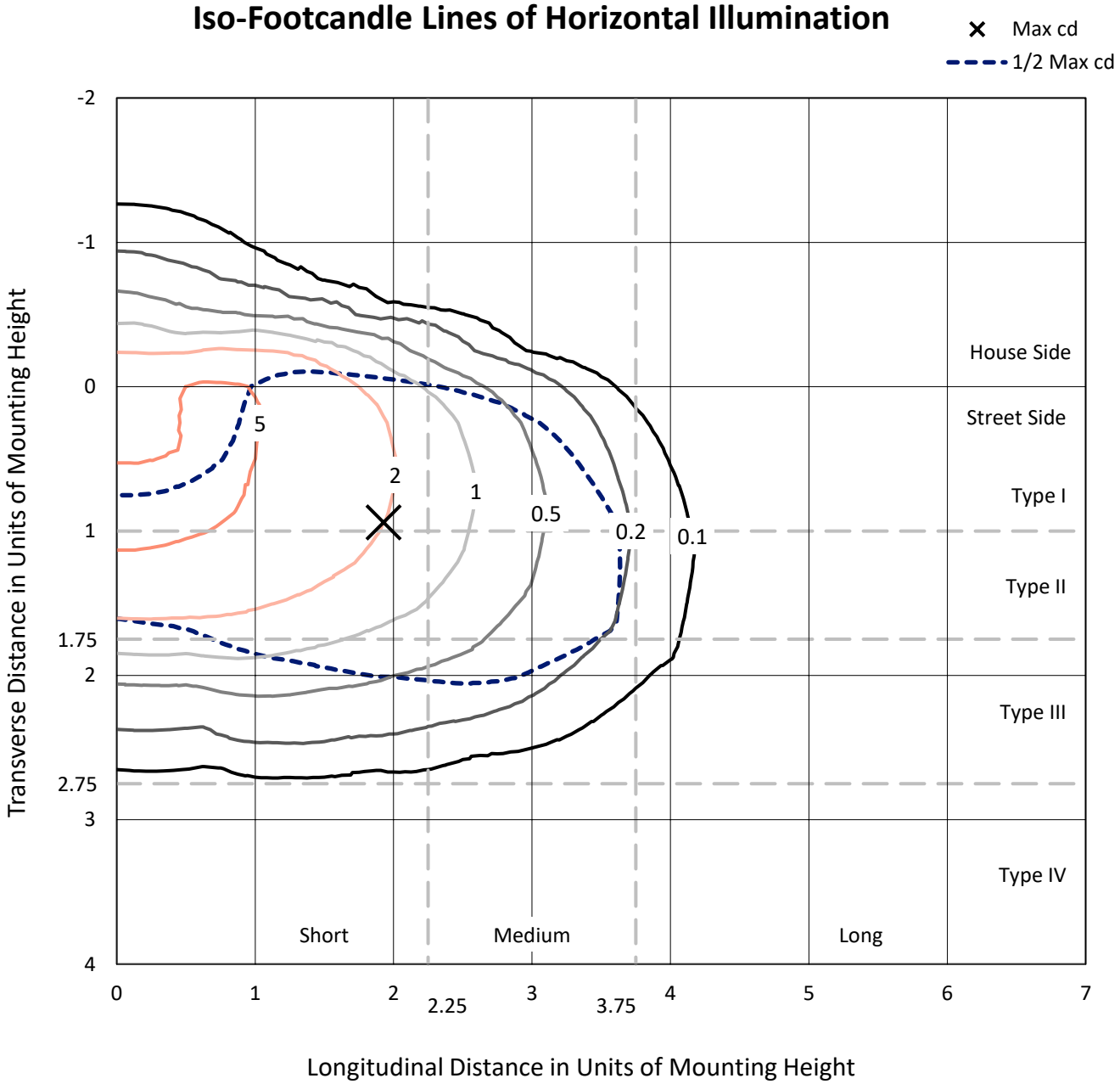


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REPORT NUMBER: P1197438
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## Iso-Footcandle Lines of Horizontal Illumination



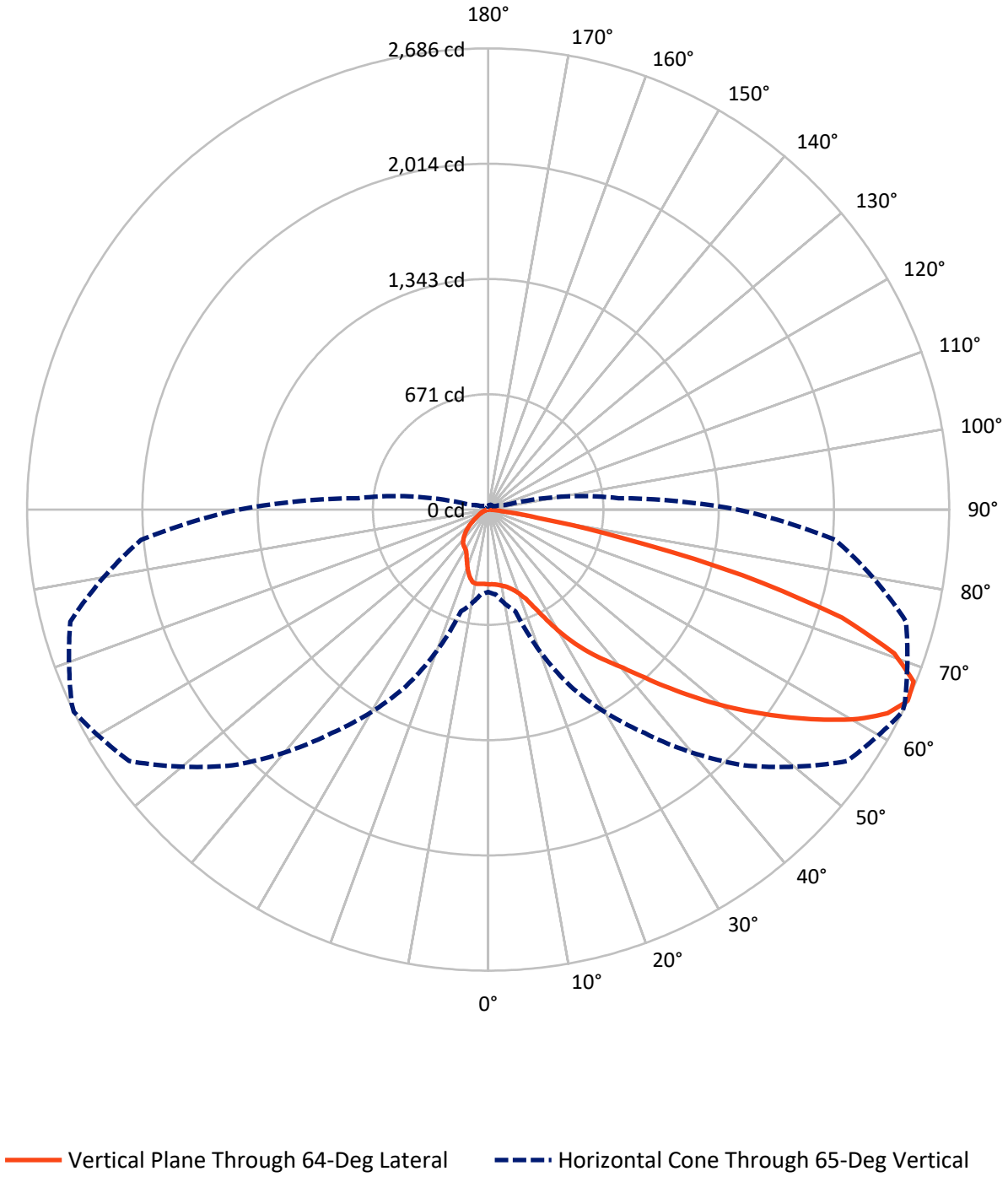

Based on 10 foot mounting height. Maximum calculated value = 6.8 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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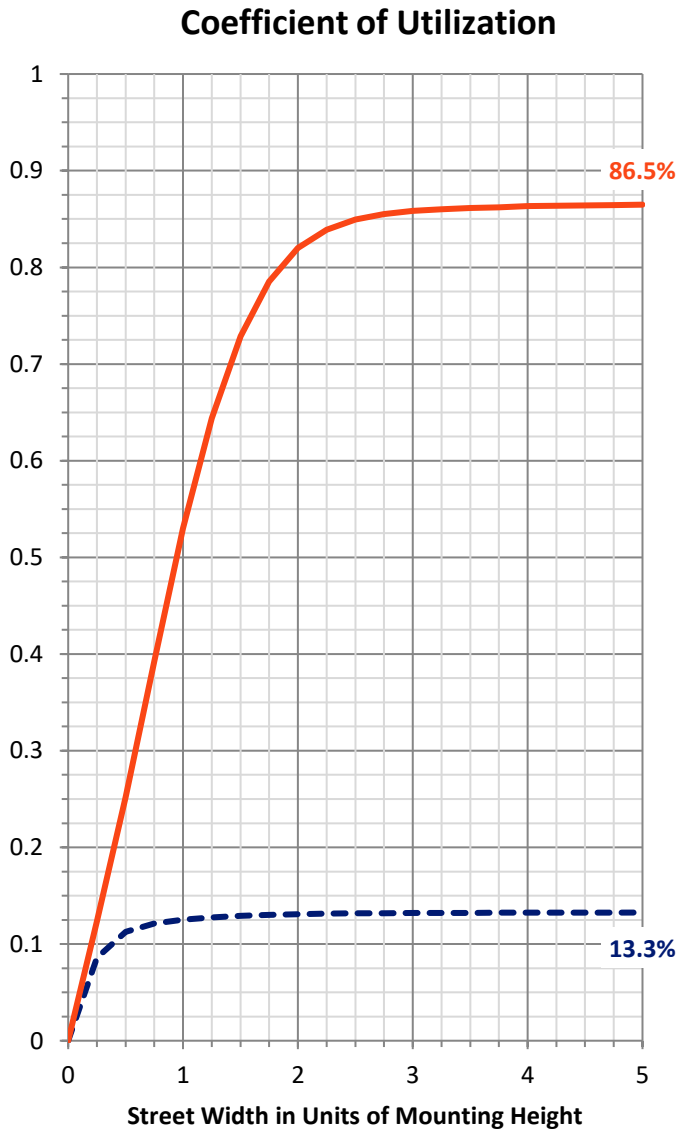
REPORT NUMBER: P1197438
CATALOG NUMBER: GPC-SB1A-760-U-T3-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 500.4 | 0.0 | 500.4 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| **Street Side** | Lumens | 3241.6 | 0.0 | 3241.6 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| **Total** | Lumens | 3742.0 | 0.0 | 3742.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 40.2 | 1.1 |
| 10°-20° | 108.9 | 2.9 |
| 20°-30° | 206.4 | 5.5 |
| 30°-40° | 417.6 | 11.2 |
| 40°-50° | 711.4 | 19.0 |
| 50°-60° | 967.5 | 25.9 |
| 60°-70° | 908.5 | 24.3 |
| 70°-80° | 364.0 | 9.7 |
| 80°-90° | 17.6 | 0.5 |
| 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° | 3742.0 | 100.0 |
| 0°-180° | 3742.0 | 100.0 |



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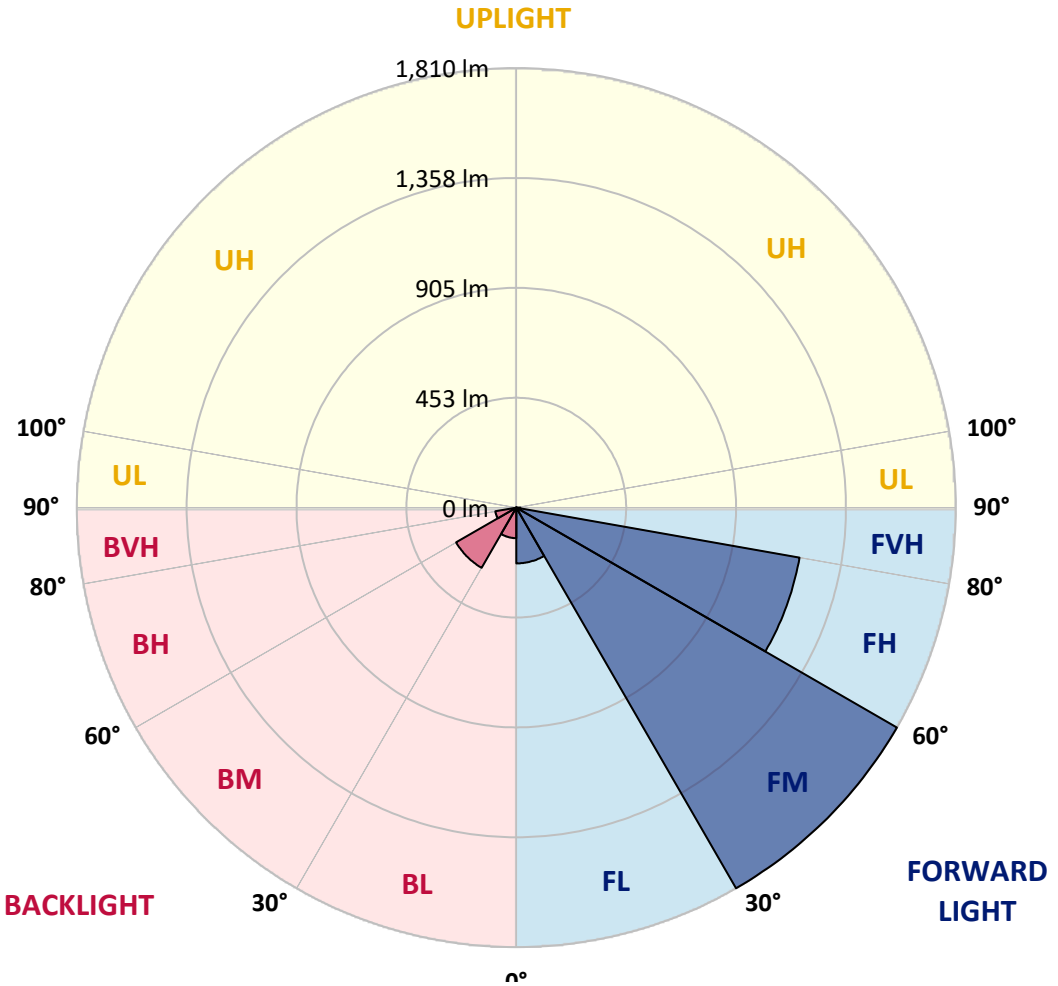
Scaled Data Report

REPORT NUMBER: P1197438
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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°) | 229.8 | 6.1 | | | |
| FM | (30°-60°) | 1810.4 | 48.4 | | | |
| FH | (60°-80°) | 1184.6 | 31.7 | | | G1/1800 |
| FVH | (80°-90°) | 16.8 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 125.6 | 3.4 | B1/500 | | |
| BM | (30°-60°) | 286.1 | 7.6 | B1/1000 | | |
| BH | (60°-80°) | 87.8 | 2.3 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 0.9 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G1**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | *435.2* | 435.2 | 435.2 | 435.2 |
| 2.5° | 433.7 | 436.7 | 436.0 | 435.2 | 435.0 | 435.5 | 435.7 | *435.5* | 435.5 | 435.5 | 435.7 |
| 5° | 425.5 | 428.0 | 428.0 | 429.7 | 432.2 | 435.2 | 437.5 | *438.0* | 438.5 | 439.2 | 439.0 |
| 7.5° | 409.6 | 411.7 | 413.2 | 418.9 | 425.2 | 433.2 | 440.0 | *443.5* | 444.0 | 446.8 | 447.8 |
| 10° | 398.9 | 401.4 | 403.9 | 409.9 | 418.9 | 431.0 | 442.5 | *451.0* | 452.3 | 458.8 | 461.8 |
| 12.5° | 398.4 | 400.9 | 404.1 | 410.6 | 421.2 | 434.0 | 448.0 | *460.3* | 462.6 | 472.1 | 478.4 |
| 15° | 403.6 | 406.6 | 409.6 | 417.7 | 429.0 | 444.5 | 459.6 | *474.9* | 477.1 | 490.7 | 497.4 |
| 17.5° | 414.4 | 418.4 | 420.7 | 428.7 | 440.8 | 458.1 | 477.9 | *495.4* | 497.4 | 513.2 | 521.8 |
| 20° | 435.7 | 440.5 | 441.3 | 447.8 | 459.6 | 478.1 | 501.7 | *523.5* | 526.0 | 544.1 | 553.6 |
| 22.5° | 479.9 | 486.7 | 480.6 | 483.9 | 494.4 | 513.0 | 538.6 | *566.2* | 569.7 | 590.3 | 598.8 |
| 25° | 557.7 | 567.2 | 551.6 | 546.1 | 550.6 | 569.9 | 602.1 | *636.9* | 640.9 | 657.5 | 661.8 |
| 27.5° | 710.4 | 698.1 | 674.5 | 651.5 | 637.9 | 649.0 | 685.1 | *728.2* | 733.2 | 749.3 | 744.3 |
| 30° | 878.2 | 867.5 | 835.6 | 784.4 | 752.3 | 750.6 | 783.9 | *832.1* | 837.9 | 853.2 | 837.9 |
| 32.5° | 1046.3 | 1036.0 | 1001.4 | 938.4 | 882.8 | 855.2 | 878.2 | *931.7* | 934.7 | 944.5 | 921.9 |
| 35° | 1211.6 | 1201.1 | 1166.5 | 1102.0 | 1033.5 | 970.8 | 966.3 | *1026.5* | 1027.5 | 1037.8 | 1004.2 |
| 37.5° | 1377.9 | 1369.2 | 1332.3 | 1269.1 | 1201.6 | 1115.1 | 1073.2 | *1116.3* | 1117.6 | 1127.6 | 1092.7 |
| 40° | 1496.6 | 1500.4 | 1475.0 | 1426.1 | 1368.2 | 1273.6 | 1193.1 | *1211.9* | 1204.4 | 1221.2 | 1200.3 |
| 42.5° | 1598.4 | 1606.0 | 1583.9 | 1559.3 | 1525.7 | 1442.4 | 1341.6 | *1338.3* | 1326.3 | 1335.3 | 1313.7 |
| 45° | 1686.5 | 1692.8 | 1673.0 | 1667.2 | 1666.4 | 1608.0 | 1503.9 | *1484.3* | 1467.5 | 1465.7 | 1439.9 |
| 47.5° | 1718.9 | 1730.9 | 1739.4 | 1758.7 | 1796.4 | 1771.8 | 1671.7 | *1641.3* | 1622.5 | 1608.7 | 1567.8 |
| 50° | 1731.2 | 1743.9 | 1773.0 | 1829.2 | 1918.3 | 1928.8 | 1838.8 | *1804.7* | 1781.6 | 1756.5 | 1696.3 |
| 52.5° | 1714.6 | 1737.4 | 1776.6 | 1871.1 | 2000.3 | 2054.8 | 1999.1 | *1969.2* | 1942.9 | 1902.0 | 1812.7 |
| 55° | 1617.0 | 1639.8 | 1719.9 | 1870.6 | 2041.2 | 2143.1 | 2150.6 | *2137.3* | 2107.7 | 2043.2 | 1906.7 |
| 57.5° | 1411.3 | 1445.2 | 1571.9 | 1806.9 | 2040.5 | 2219.1 | 2299.1 | *2308.6* | 2275.5 | 2183.2 | 1980.8 |
| 60° | 1126.3 | 1172.2 | 1326.8 | 1665.7 | 1977.5 | 2260.2 | 2429.3 | *2476.9* | 2441.8 | 2321.2 | 2040.7 |
| 62.5° | 785.9 | 839.1 | 985.4 | 1444.4 | 1833.5 | 2230.6 | 2524.4 | *2612.4* | 2585.8 | 2444.6 | 2063.8 |
| 65° | *479.4* | *496.4* | *614.3* | *1136.6* | *1588.7* | *2106.7* | *2553.7* | *2685.7* | *2676.9* | *2520.1* | *2029.7* |
| 67.5° | 319.3 | 333.6 | 367.5 | 779.4 | 1233.2 | 1859.1 | 2483.5 | *2672.9* | 2675.4 | 2507.8 | 1904.7 |
| 70° | 192.4 | 204.7 | 226.8 | 453.3 | 799.2 | 1471.5 | 2266.0 | *2509.8* | 2524.4 | 2343.5 | 1667.9 |
| 72.5° | 79.3 | 87.5 | 107.6 | 205.5 | 413.9 | 933.9 | 1804.4 | *2154.8* | 2188.7 | 1970.5 | 1280.1 |
| 75° | 44.9 | 49.2 | 63.2 | 103.1 | 179.6 | 435.2 | 1093.0 | *1529.7* | 1579.6 | 1358.1 | 770.1 |
| 77.5° | 29.9 | 31.9 | 40.9 | 66.7 | 101.1 | 148.5 | 467.1 | *797.0* | 892.3 | 741.8 | 333.4 |
| 80° | 20.1 | 21.8 | 28.1 | 44.7 | 65.7 | 63.7 | 148.8 | *295.3* | 363.2 | 254.9 | 81.3 |
| 82.5° | 13.5 | 13.8 | 20.1 | 29.4 | 41.6 | 30.9 | 43.9 | *91.8* | 115.4 | 73.8 | 30.9 |
| 85° | 7.8 | 7.5 | 14.8 | 17.1 | 18.6 | 12.8 | 13.3 | *27.6* | 36.1 | 31.1 | 17.6 |
| 87.5° | 1.0 | 1.5 | 5.8 | 4.5 | 2.5 | 2.8 | 2.8 | *4.8* | 7.0 | 7.5 | 3.8 |
| 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 NUMBER: P1197438
CATALOG NUMBER: GPC-SB1A-760-U-T3-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 | 435.2 |
| 2.5° | 435.7 | 435.5 | 434.7 | 434.0 | 432.2 | 431.2 | 431.7 | 431.2 | 431.0 | 431.2 | 432.2 |
| 5° | 439.0 | 438.2 | 436.2 | 433.7 | 430.2 | 426.0 | 423.2 | 419.2 | 415.4 | 413.2 | 413.7 |
| 7.5° | 447.8 | 447.0 | 444.3 | 437.2 | 426.0 | 408.1 | 391.8 | 377.5 | 366.8 | 360.5 | 360.7 |
| 10° | 461.8 | 460.6 | 456.3 | 440.8 | 411.2 | 372.3 | 339.9 | 313.1 | 295.5 | 287.2 | 286.5 |
| 12.5° | 478.4 | 476.9 | 469.3 | 437.5 | 383.1 | 322.3 | 277.7 | 247.8 | 231.5 | 224.3 | 223.5 |
| 15° | 497.9 | 495.9 | 481.1 | 421.9 | 342.2 | 267.2 | 226.3 | 203.9 | 193.4 | 186.9 | 187.1 |
| 17.5° | 522.3 | 518.8 | 489.9 | 398.6 | 297.8 | 225.0 | 194.7 | 177.9 | 168.6 | 162.3 | 161.8 |
| 20° | 553.9 | 548.1 | 496.9 | 370.8 | 256.9 | 198.4 | 173.3 | 159.3 | 152.3 | 146.8 | 145.7 |
| 22.5° | 598.0 | 589.8 | 505.5 | 340.7 | 228.0 | 180.1 | 157.5 | 147.3 | 141.5 | 135.2 | 134.2 |
| 25° | 652.7 | 642.9 | 516.0 | 312.8 | 208.2 | 164.3 | 146.0 | 137.5 | 130.7 | 123.4 | 122.7 |
| 27.5° | 729.2 | 711.7 | 528.6 | 290.0 | 191.2 | 150.8 | 135.5 | 125.9 | 118.2 | 112.1 | 110.9 |
| 30° | 814.5 | 785.7 | 539.6 | 276.2 | 175.6 | 138.2 | 121.7 | 112.1 | 104.9 | 100.6 | 99.8 |
| 32.5° | 895.3 | 856.2 | 546.9 | 270.2 | 161.6 | 123.9 | 106.6 | 96.3 | 90.8 | 89.6 | 90.3 |
| 35° | 971.6 | 919.9 | 546.1 | 264.4 | 149.0 | 109.6 | 91.8 | 81.3 | 77.0 | 77.8 | 77.8 |
| 37.5° | 1059.4 | 987.9 | 540.8 | 255.4 | 138.7 | 96.6 | 79.0 | 69.7 | 66.0 | 66.2 | 67.2 |
| 40° | 1161.5 | 1066.4 | 537.6 | 238.3 | 127.4 | 84.5 | 68.5 | 61.0 | 58.2 | 57.2 | 56.9 |
| 42.5° | 1270.3 | 1142.4 | 538.1 | 219.0 | 113.4 | 73.8 | 61.2 | 54.9 | 52.4 | 51.7 | 51.4 |
| 45° | 1379.7 | 1214.9 | 538.8 | 198.9 | 98.6 | 65.5 | 55.9 | 50.7 | 49.2 | 48.2 | 48.2 |
| 47.5° | 1482.6 | 1276.6 | 524.8 | 177.4 | 84.0 | 59.2 | 51.7 | 48.2 | 46.9 | 45.7 | 45.7 |
| 50° | 1578.4 | 1317.7 | 490.9 | 152.3 | 72.5 | 54.2 | 48.4 | 45.9 | 44.7 | 43.4 | 43.4 |
| 52.5° | 1652.9 | 1324.3 | 435.0 | 126.4 | 64.5 | 50.4 | 46.4 | 44.2 | 42.6 | 41.4 | 41.1 |
| 55° | 1686.0 | 1283.4 | 355.5 | 102.3 | 58.2 | 47.2 | 44.4 | 42.1 | 40.4 | 39.1 | 38.9 |
| 57.5° | 1677.5 | 1197.3 | 277.2 | 82.3 | 52.2 | 43.9 | 41.9 | 40.4 | 38.4 | 36.4 | 36.1 |
| 60° | 1635.6 | 1082.2 | 209.0 | 68.5 | 46.7 | 40.4 | 39.1 | 37.9 | 35.1 | 32.1 | 31.6 |
| 62.5° | 1563.1 | 937.4 | 149.0 | 56.7 | 40.6 | 36.4 | 35.9 | 34.9 | 30.9 | 25.3 | 24.8 |
| 65° | *1452.2* | *761.6* | *100.3* | *47.2* | *34.9* | *31.9* | *32.1* | *30.4* | *25.1* | *18.8* | *18.3* |
| 67.5° | 1290.1 | 556.9 | 64.2 | 38.6 | 29.1 | 26.6 | 26.8 | 25.8 | 21.3 | 16.1 | 15.3 |
| 70° | 1083.7 | 368.8 | 41.9 | 29.4 | 23.3 | 20.6 | 22.1 | 22.3 | 18.1 | 13.0 | 12.5 |
| 72.5° | 794.5 | 217.7 | 29.4 | 21.8 | 17.1 | 14.3 | 18.1 | 18.6 | 14.5 | 9.8 | 9.3 |
| 75° | 452.8 | 103.4 | 22.1 | 15.8 | 10.5 | 10.0 | 14.0 | 14.0 | 10.0 | 6.5 | 6.0 |
| 77.5° | 190.1 | 43.1 | 15.6 | 10.3 | 6.0 | 5.8 | 9.5 | 8.8 | 5.0 | 3.0 | 3.0 |
| 80° | 54.9 | 19.3 | 8.3 | 5.0 | 2.5 | 2.3 | 3.8 | 2.8 | 1.3 | 0.5 | 0.5 |
| 82.5° | 21.6 | 8.5 | 3.3 | 2.0 | 1.0 | 1.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 12.8 | 3.5 | 1.5 | 0.8 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 3.3 | 0.8 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |


HS
SS

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Peachtree City, GA 30269

Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

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## Test Information

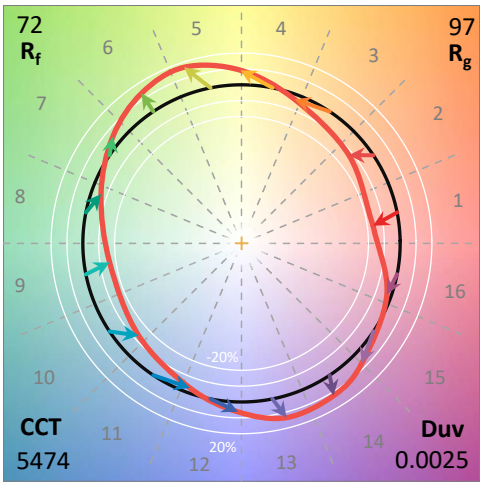
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-9-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| 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 | | |
| CIE u': | 0.2052 | R1: | 70.6 | R9: | -27.1 |
| CIE v': | 0.4804 | R2: | 74.6 | R10: | 40.8 |
| Duv: | 0.0025 | R3: | 78.3 | R11: | 74.6 |
| CIE x: | 0.3330 | R4: | 73.8 | R12: | 50.4 |
| CIE y: | 0.3466 | R5: | 72.4 | R13: | 70.0 |
| CIE z: | 0.3204 | R6: | 67.5 | R14: | 87.8 |
| 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 |

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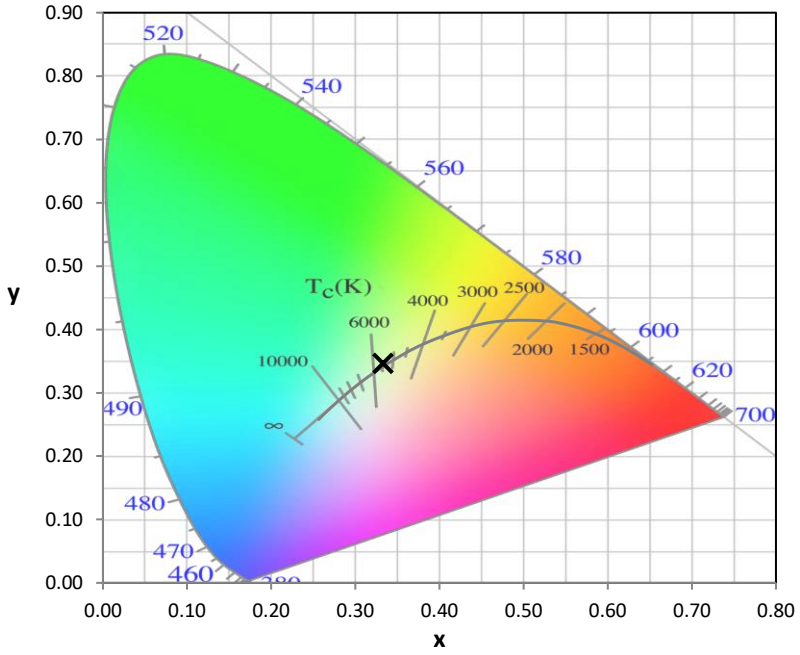
REPORT NUMBER: SP1-1908-441-9-R4

| 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 |

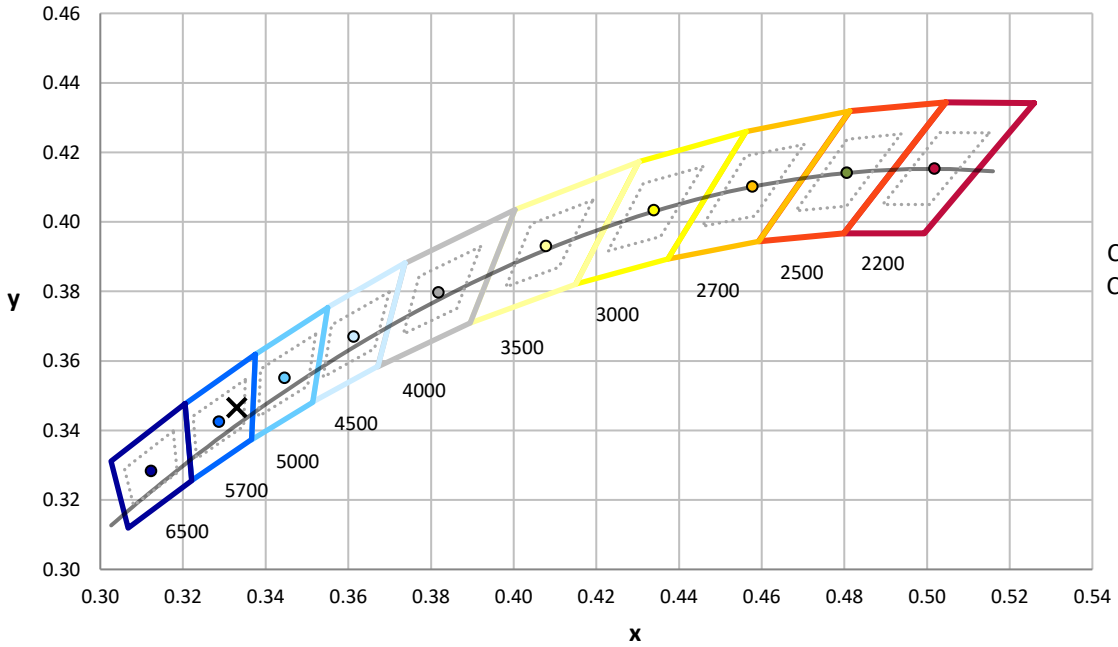
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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

## CIE 1931 Chromaticity Diagram




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



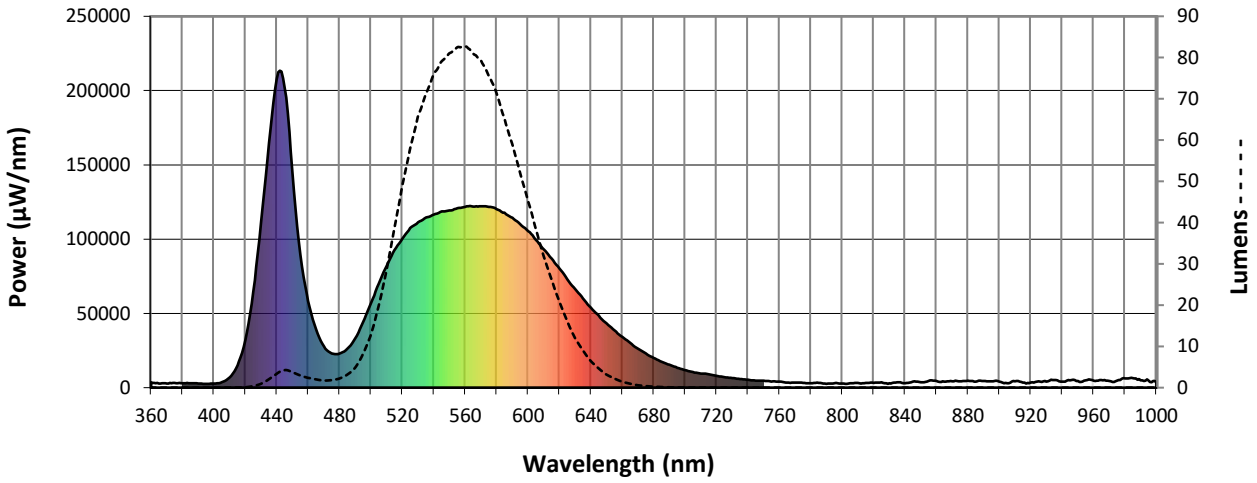

CCT = 5474K
CIE x = 0.3330
CIE y = 0.3466
Duv = 0.0025

Point lies inside the ANSI 5700K 4-step quadrangle

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## Photopic Flux vs. Wavelength



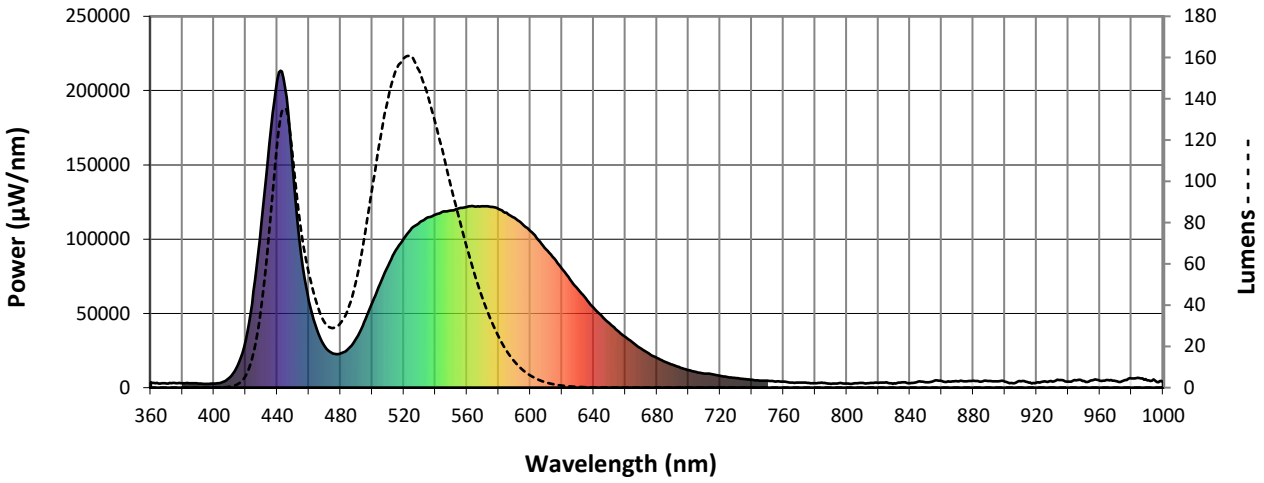

**Photopic Lumens: 7459.9**

| 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 | 0.0 | 490 | 33363 | 4.7 | 620 | 80193 | 20.9 | 750 | 4663 | 0.0 | 880 | 4678 | 0.0 |
| 365 | 2862 | 0.0 | 495 | 44177 | 8.0 | 625 | 73091 | 16.1 | 755 | 4147 | 0.0 | 885 | 4128 | 0.0 |
| 370 | 2865 | 0.0 | 500 | 57019 | 12.6 | 630 | 66269 | 12.0 | 760 | 4040 | 0.0 | 890 | 4504 | 0.0 |
| 375 | 3254 | 0.0 | 505 | 70030 | 19.6 | 635 | 60012 | 9.0 | 765 | 3474 | 0.0 | 895 | 4371 | 0.0 |
| 380 | 3076 | 0.0 | 510 | 81972 | 28.2 | 640 | 53914 | 6.4 | 770 | 3469 | 0.0 | 900 | 4082 | 0.0 |
| 385 | 2904 | 0.0 | 515 | 92590 | 38.4 | 645 | 48385 | 4.7 | 775 | 3181 | 0.0 | 905 | 2982 | 0.0 |
| 390 | 2689 | 0.0 | 520 | 100305 | 48.6 | 650 | 43219 | 3.2 | 780 | 2969 | 0.0 | 910 | 4351 | 0.0 |
| 395 | 2619 | 0.0 | 525 | 107452 | 57.7 | 655 | 38562 | 2.2 | 785 | 3132 | 0.0 | 915 | 3365 | 0.0 |
| 400 | 2679 | 0.0 | 530 | 111373 | 65.6 | 660 | 34110 | 1.4 | 790 | 2507 | 0.0 | 920 | 3430 | 0.0 |
| 405 | 3515 | 0.0 | 535 | 114505 | 71.0 | 665 | 30085 | 1.0 | 795 | 2968 | 0.0 | 925 | 4264 | 0.0 |
| 410 | 6934 | 0.0 | 540 | 116408 | 75.8 | 670 | 26205 | 0.6 | 800 | 2758 | 0.0 | 930 | 4095 | 0.0 |
| 415 | 14943 | 0.0 | 545 | 118700 | 79.0 | 675 | 22906 | 0.4 | 805 | 2872 | 0.0 | 935 | 5048 | 0.0 |
| 420 | 31939 | 0.1 | 550 | 119209 | 81.0 | 680 | 20058 | 0.2 | 810 | 3094 | 0.0 | 940 | 4074 | 0.0 |
| 425 | 64701 | 0.3 | 555 | 120742 | 82.5 | 685 | 17413 | 0.1 | 815 | 3222 | 0.0 | 945 | 4949 | 0.0 |
| 430 | 110939 | 0.9 | 560 | 121594 | 82.6 | 690 | 15447 | 0.1 | 820 | 3238 | 0.0 | 950 | 4387 | 0.0 |
| 435 | 164597 | 1.9 | 565 | 121913 | 81.1 | 695 | 13398 | 0.1 | 825 | 3524 | 0.0 | 955 | 4978 | 0.0 |
| 440 | 207696 | 3.3 | 570 | 122147 | 79.4 | 700 | 11777 | 0.0 | 830 | 2921 | 0.0 | 960 | 4706 | 0.0 |
| 445 | 201830 | 4.2 | 575 | 121605 | 75.7 | 705 | 10412 | 0.0 | 835 | 3595 | 0.0 | 965 | 5083 | 0.0 |
| 450 | 145410 | 3.8 | 580 | 120248 | 71.5 | 710 | 9544 | 0.0 | 840 | 3016 | 0.0 | 970 | 4522 | 0.0 |
| 455 | 89594 | 3.0 | 585 | 117717 | 65.4 | 715 | 8940 | 0.0 | 845 | 4032 | 0.0 | 975 | 4740 | 0.0 |
| 460 | 58321 | 2.4 | 590 | 114359 | 59.1 | 720 | 7897 | 0.0 | 850 | 3579 | 0.0 | 980 | 6122 | 0.0 |
| 465 | 39318 | 2.0 | 595 | 109974 | 52.1 | 725 | 7045 | 0.0 | 855 | 4571 | 0.0 | 985 | 6450 | 0.0 |
| 470 | 27693 | 1.7 | 600 | 105269 | 45.4 | 730 | 6483 | 0.0 | 860 | 4485 | 0.0 | 990 | 4875 | 0.0 |
| 475 | 23081 | 1.8 | 605 | 99453 | 38.5 | 735 | 5838 | 0.0 | 865 | 3978 | 0.0 | 995 | 4764 | 0.0 |
| 480 | 23002 | 2.2 | 610 | 92921 | 31.9 | 740 | 5261 | 0.0 | 870 | 4298 | 0.0 | 1000 | 3640 | 0.0 |
| 485 | 26201 | 3.1 | 615 | 86989 | 26.3 | 745 | 4760 | 0.0 | 875 | 4356 | 0.0 | | | |

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## Scotopic Flux vs. Wavelength



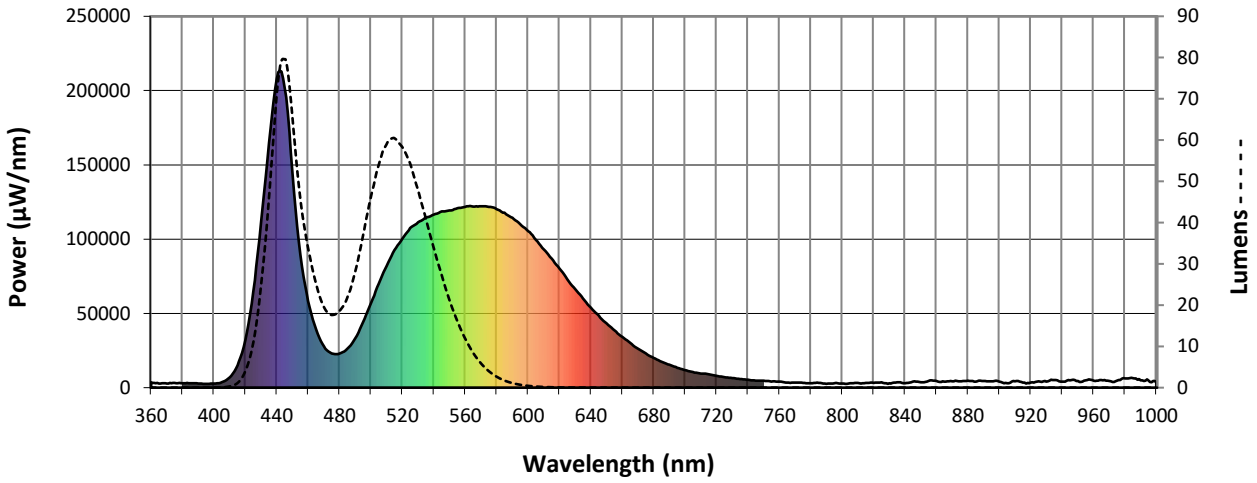

**Scotopic Lumens: 13759.3** **S/P: 1.85**

| 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 | 0.0 | 490 | 33363 | 27.8 | 620 | 80193 | 0.1 | 750 | 4663 | 0.0 | 880 | 4678 | 0.0 |
| 365 | 2862 | 0.0 | 495 | 44177 | 36.5 | 625 | 73091 | 0.0 | 755 | 4147 | 0.0 | 885 | 4128 | 0.0 |
| 370 | 2865 | 0.0 | 500 | 57019 | 45.8 | 630 | 66269 | 0.0 | 760 | 4040 | 0.0 | 890 | 4504 | 0.0 |
| 375 | 3254 | 0.0 | 505 | 70030 | 53.7 | 635 | 60012 | 0.0 | 765 | 3474 | 0.0 | 895 | 4371 | 0.0 |
| 380 | 3076 | 0.0 | 510 | 81972 | 58.9 | 640 | 53914 | 0.0 | 770 | 3469 | 0.0 | 900 | 4082 | 0.0 |
| 385 | 2904 | 0.0 | 515 | 92590 | 60.5 | 645 | 48385 | 0.0 | 775 | 3181 | 0.0 | 905 | 2982 | 0.0 |
| 390 | 2689 | 0.0 | 520 | 100305 | 58.4 | 650 | 43219 | 0.0 | 780 | 2969 | 0.0 | 910 | 4351 | 0.0 |
| 395 | 2619 | 0.0 | 525 | 107452 | 54.5 | 655 | 38562 | 0.0 | 785 | 3132 | 0.0 | 915 | 3365 | 0.0 |
| 400 | 2679 | 0.0 | 530 | 111373 | 48.1 | 660 | 34110 | 0.0 | 790 | 2507 | 0.0 | 920 | 3430 | 0.0 |
| 405 | 3515 | 0.1 | 535 | 114505 | 41.2 | 665 | 30085 | 0.0 | 795 | 2968 | 0.0 | 925 | 4264 | 0.0 |
| 410 | 6934 | 0.3 | 540 | 116408 | 34.1 | 670 | 26205 | 0.0 | 800 | 2758 | 0.0 | 930 | 4095 | 0.0 |
| 415 | 14943 | 1.0 | 545 | 118700 | 27.6 | 675 | 22906 | 0.0 | 805 | 2872 | 0.0 | 935 | 5048 | 0.0 |
| 420 | 31939 | 3.6 | 550 | 119209 | 21.4 | 680 | 20058 | 0.0 | 810 | 3094 | 0.0 | 940 | 4074 | 0.0 |
| 425 | 64701 | 10.1 | 555 | 120742 | 16.3 | 685 | 17413 | 0.0 | 815 | 3222 | 0.0 | 945 | 4949 | 0.0 |
| 430 | 110939 | 23.4 | 560 | 121594 | 12.0 | 690 | 15447 | 0.0 | 820 | 3238 | 0.0 | 950 | 4387 | 0.0 |
| 435 | 164597 | 43.9 | 565 | 121913 | 8.6 | 695 | 13398 | 0.0 | 825 | 3524 | 0.0 | 955 | 4978 | 0.0 |
| 440 | 207696 | 69.4 | 570 | 122147 | 6.0 | 700 | 11777 | 0.0 | 830 | 2921 | 0.0 | 960 | 4706 | 0.0 |
| 445 | 201830 | 79.6 | 575 | 121605 | 4.0 | 705 | 10412 | 0.0 | 835 | 3595 | 0.0 | 965 | 5083 | 0.0 |
| 450 | 145410 | 67.0 | 580 | 120248 | 2.7 | 710 | 9544 | 0.0 | 840 | 3016 | 0.0 | 970 | 4522 | 0.0 |
| 455 | 89594 | 46.9 | 585 | 117717 | 1.7 | 715 | 8940 | 0.0 | 845 | 4032 | 0.0 | 975 | 4740 | 0.0 |
| 460 | 58321 | 34.4 | 590 | 114359 | 1.1 | 720 | 7897 | 0.0 | 850 | 3579 | 0.0 | 980 | 6122 | 0.0 |
| 465 | 39318 | 25.7 | 595 | 109974 | 0.7 | 725 | 7045 | 0.0 | 855 | 4571 | 0.0 | 985 | 6450 | 0.0 |
| 470 | 27693 | 19.8 | 600 | 105269 | 0.4 | 730 | 6483 | 0.0 | 860 | 4485 | 0.0 | 990 | 4875 | 0.0 |
| 475 | 23081 | 17.6 | 605 | 99453 | 0.3 | 735 | 5838 | 0.0 | 865 | 3978 | 0.0 | 995 | 4764 | 0.0 |
| 480 | 23002 | 18.5 | 610 | 92921 | 0.2 | 740 | 5261 | 0.0 | 870 | 4298 | 0.0 | 1000 | 3640 | 0.0 |
| 485 | 26201 | 21.6 | 615 | 86989 | 0.1 | 745 | 4760 | 0.0 | 875 | 4356 | 0.0 | | | |

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## 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 | 0.0 | 490 | 33363 | 51.4 | 620 | 80193 | 1.0 | 750 | 4663 | 0.0 | 880 | 4678 | 0.0 |
| 365 | 2862 | 0.0 | 495 | 44177 | 71.4 | 625 | 73091 | 0.6 | 755 | 4147 | 0.0 | 885 | 4128 | 0.0 |
| 370 | 2865 | 0.0 | 500 | 57019 | 95.4 | 630 | 66269 | 0.4 | 760 | 4040 | 0.0 | 890 | 4504 | 0.0 |
| 375 | 3254 | 0.0 | 505 | 70030 | 119.1 | 635 | 60012 | 0.2 | 765 | 3474 | 0.0 | 895 | 4371 | 0.0 |
| 380 | 3076 | 0.0 | 510 | 81972 | 138.9 | 640 | 53914 | 0.1 | 770 | 3469 | 0.0 | 900 | 4082 | 0.0 |
| 385 | 2904 | 0.0 | 515 | 92590 | 153.5 | 645 | 48385 | 0.1 | 775 | 3181 | 0.0 | 905 | 2982 | 0.0 |
| 390 | 2689 | 0.0 | 520 | 100305 | 159.4 | 650 | 43219 | 0.0 | 780 | 2969 | 0.0 | 910 | 4351 | 0.0 |
| 395 | 2619 | 0.0 | 525 | 107452 | 160.7 | 655 | 38562 | 0.0 | 785 | 3132 | 0.0 | 915 | 3365 | 0.0 |
| 400 | 2679 | 0.0 | 530 | 111373 | 153.5 | 660 | 34110 | 0.0 | 790 | 2507 | 0.0 | 920 | 3430 | 0.0 |
| 405 | 3515 | 0.1 | 535 | 114505 | 142.7 | 665 | 30085 | 0.0 | 795 | 2968 | 0.0 | 925 | 4264 | 0.0 |
| 410 | 6934 | 0.4 | 540 | 116408 | 128.6 | 670 | 26205 | 0.0 | 800 | 2758 | 0.0 | 930 | 4095 | 0.0 |
| 415 | 14943 | 1.5 | 545 | 118700 | 113.8 | 675 | 22906 | 0.0 | 805 | 2872 | 0.0 | 935 | 5048 | 0.0 |
| 420 | 31939 | 5.3 | 550 | 119209 | 97.5 | 680 | 20058 | 0.0 | 810 | 3094 | 0.0 | 940 | 4074 | 0.0 |
| 425 | 64701 | 15.8 | 555 | 120742 | 82.5 | 685 | 17413 | 0.0 | 815 | 3222 | 0.0 | 945 | 4949 | 0.0 |
| 430 | 110939 | 37.8 | 560 | 121594 | 68.0 | 690 | 15447 | 0.0 | 820 | 3238 | 0.0 | 950 | 4387 | 0.0 |
| 435 | 164597 | 73.6 | 565 | 121913 | 54.7 | 695 | 13398 | 0.0 | 825 | 3524 | 0.0 | 955 | 4978 | 0.0 |
| 440 | 207696 | 116.1 | 570 | 122147 | 43.1 | 700 | 11777 | 0.0 | 830 | 2921 | 0.0 | 960 | 4706 | 0.0 |
| 445 | 201830 | 135.1 | 575 | 121605 | 33.1 | 705 | 10412 | 0.0 | 835 | 3595 | 0.0 | 965 | 5083 | 0.0 |
| 450 | 145410 | 112.7 | 580 | 120248 | 24.8 | 710 | 9544 | 0.0 | 840 | 3016 | 0.0 | 970 | 4522 | 0.0 |
| 455 | 89594 | 78.3 | 585 | 117717 | 18.0 | 715 | 8940 | 0.0 | 845 | 4032 | 0.0 | 975 | 4740 | 0.0 |
| 460 | 58321 | 56.3 | 590 | 114359 | 12.7 | 720 | 7897 | 0.0 | 850 | 3579 | 0.0 | 980 | 6122 | 0.0 |
| 465 | 39318 | 41.5 | 595 | 109974 | 8.8 | 725 | 7045 | 0.0 | 855 | 4571 | 0.0 | 985 | 6450 | 0.0 |
| 470 | 27693 | 31.9 | 600 | 105269 | 5.9 | 730 | 6483 | 0.0 | 860 | 4485 | 0.0 | 990 | 4875 | 0.0 |
| 475 | 23081 | 28.9 | 605 | 99453 | 3.9 | 735 | 5838 | 0.0 | 865 | 3978 | 0.0 | 995 | 4764 | 0.0 |
| 480 | 23002 | 31.1 | 610 | 92921 | 2.5 | 740 | 5261 | 0.0 | 870 | 4298 | 0.0 | 1000 | 3640 | 0.0 |
| 485 | 26201 | 38.0 | 615 | 86989 | 1.6 | 745 | 4760 | 0.0 | 875 | 4356 | 0.0 | | | |

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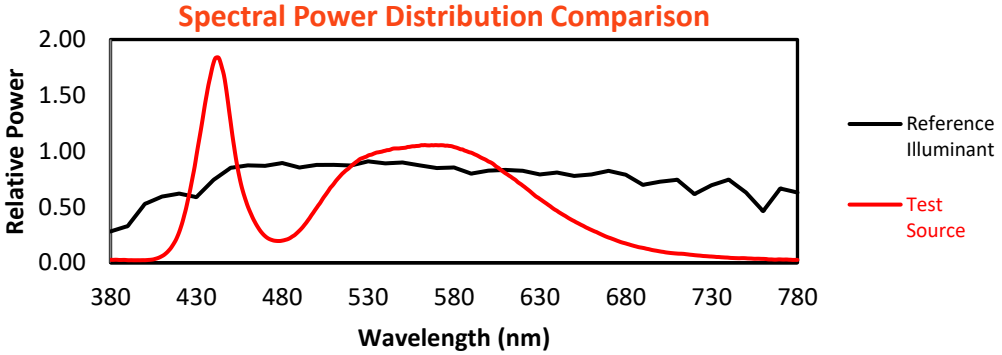
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# TM-30-18

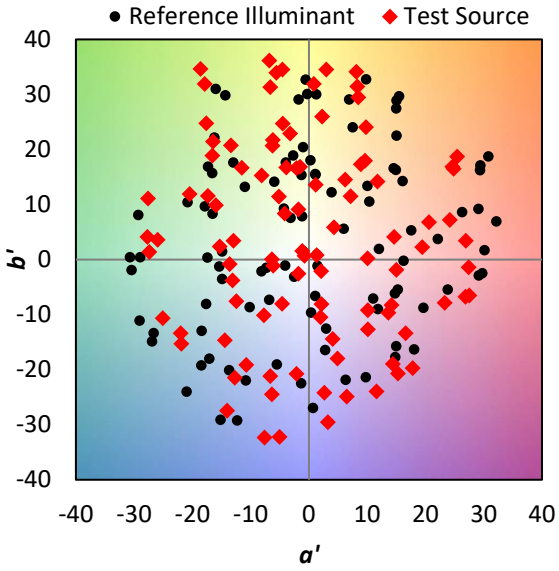
## Summary

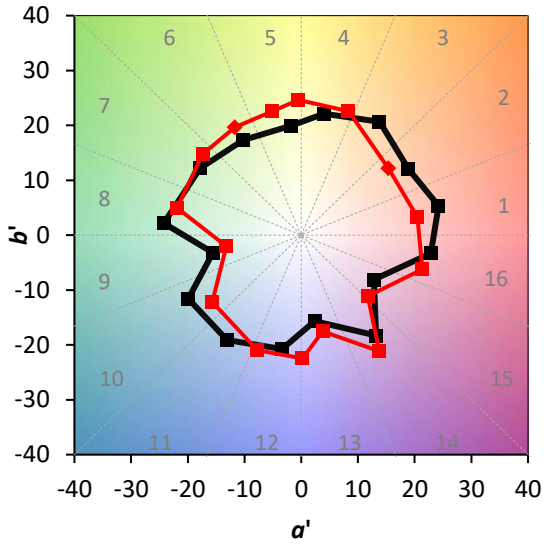
$R_f$ = 72.1
$R_g$ = 97.2
CIE $R_a$ = 71.7
$R_9$ = -27.1

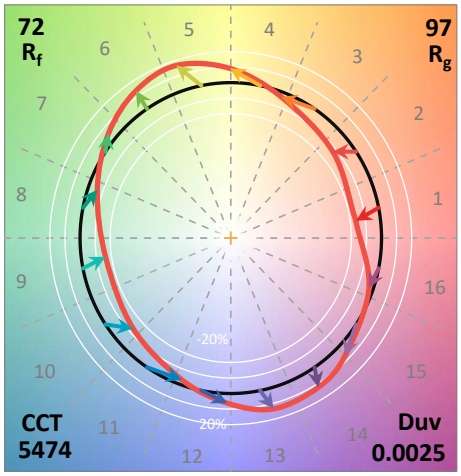
## Spectral Power Distribution Comparison

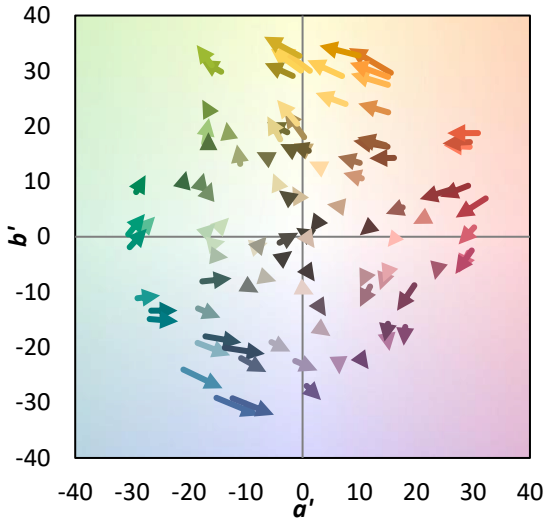



## Color Vector Graphics



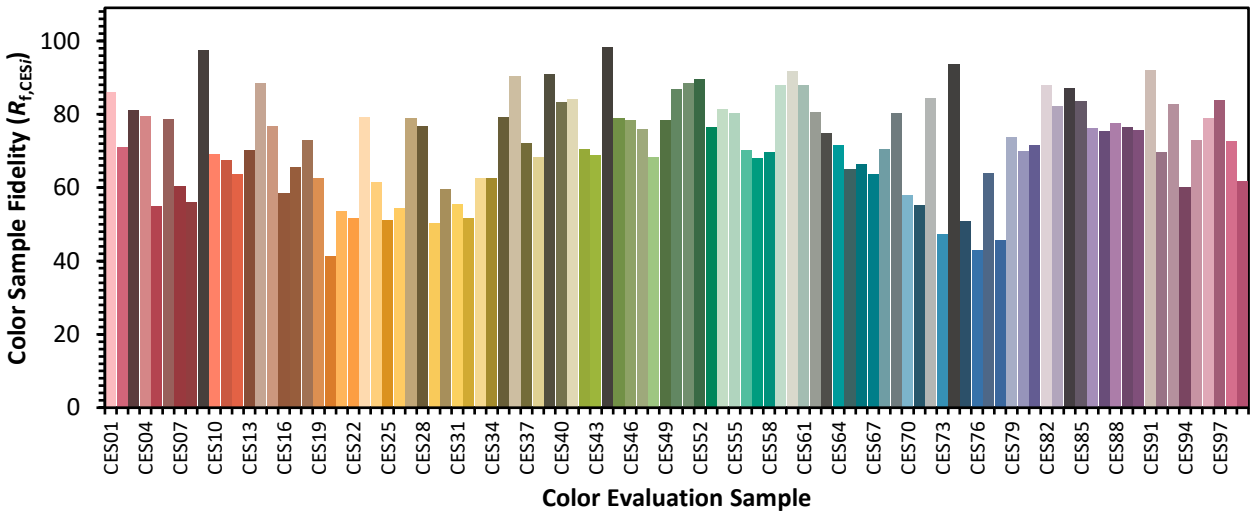
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Peachtree City, GA 30269

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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 | |

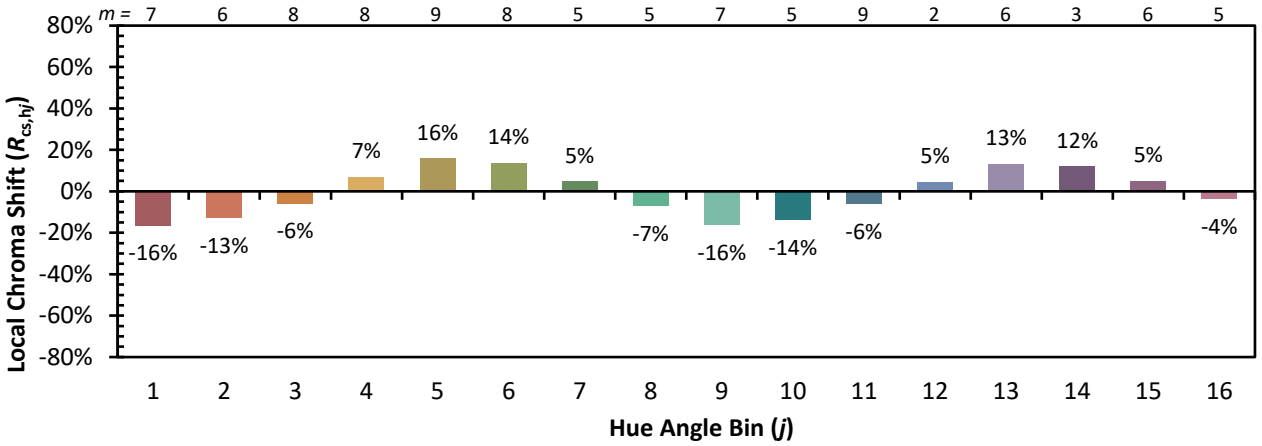


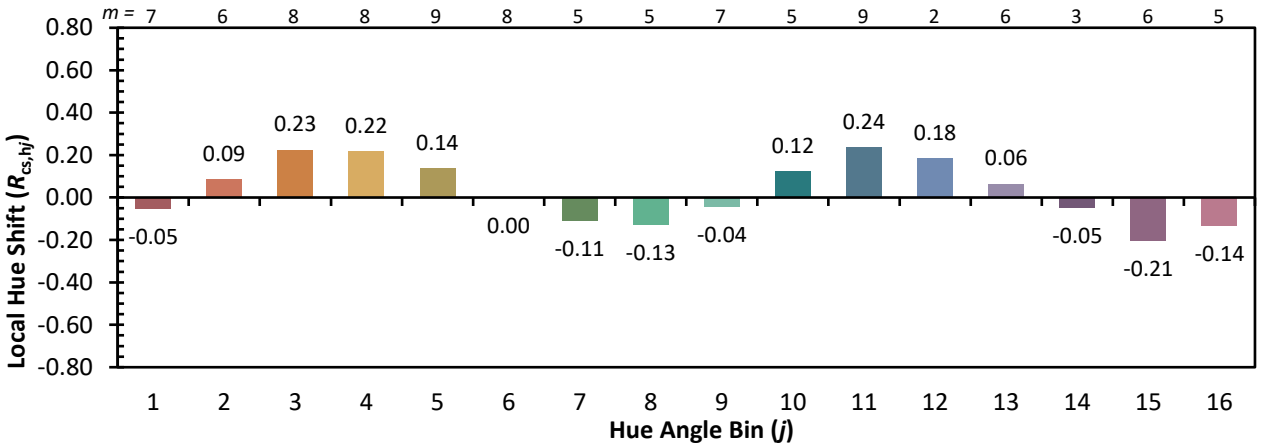
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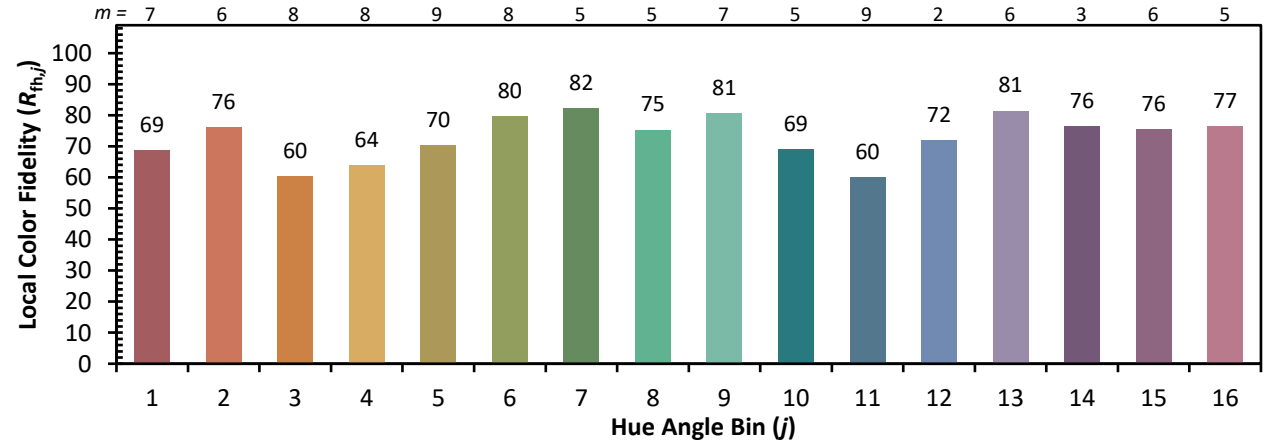
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**TM-30-18**

## Color Rendition by Hue-Angle Bin



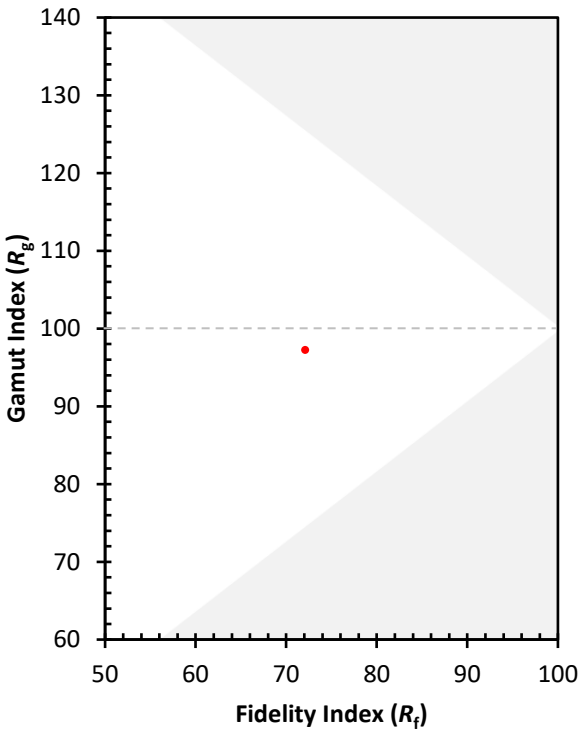



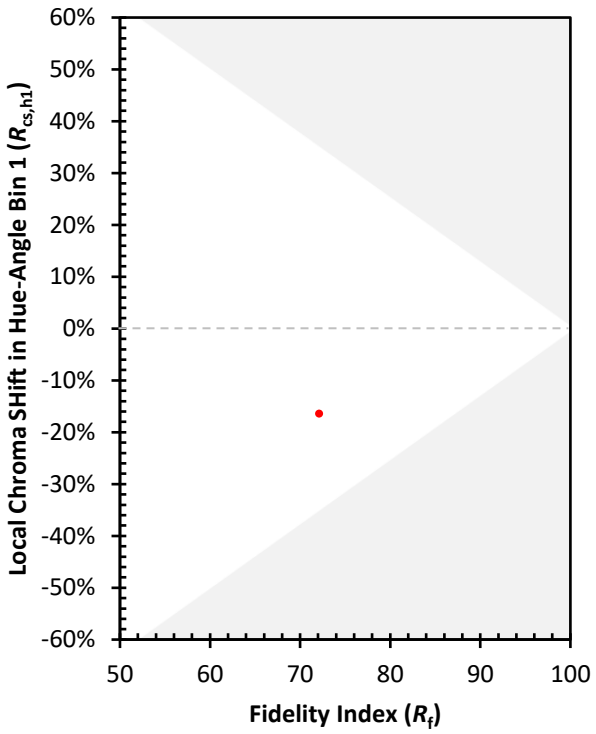
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### Measure Comparisons




(END OF REPORT)