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

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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: P1203074

Luminaire Tested: GWC-SB2B-760-U-T2-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: | P1203074 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/14/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GWC-SB2B-760-U-T2-HSS |
| Description: | GALLEON WALL LUMINAIRE |
| | (2) 70 CRI, 5700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 8698 lumens |
| Efficiency: | N/A |
| Efficacy: | 117.7 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B1 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 73.9 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.627 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.988 |
| Total Harmonic Distortion (THDi): | 13.593 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

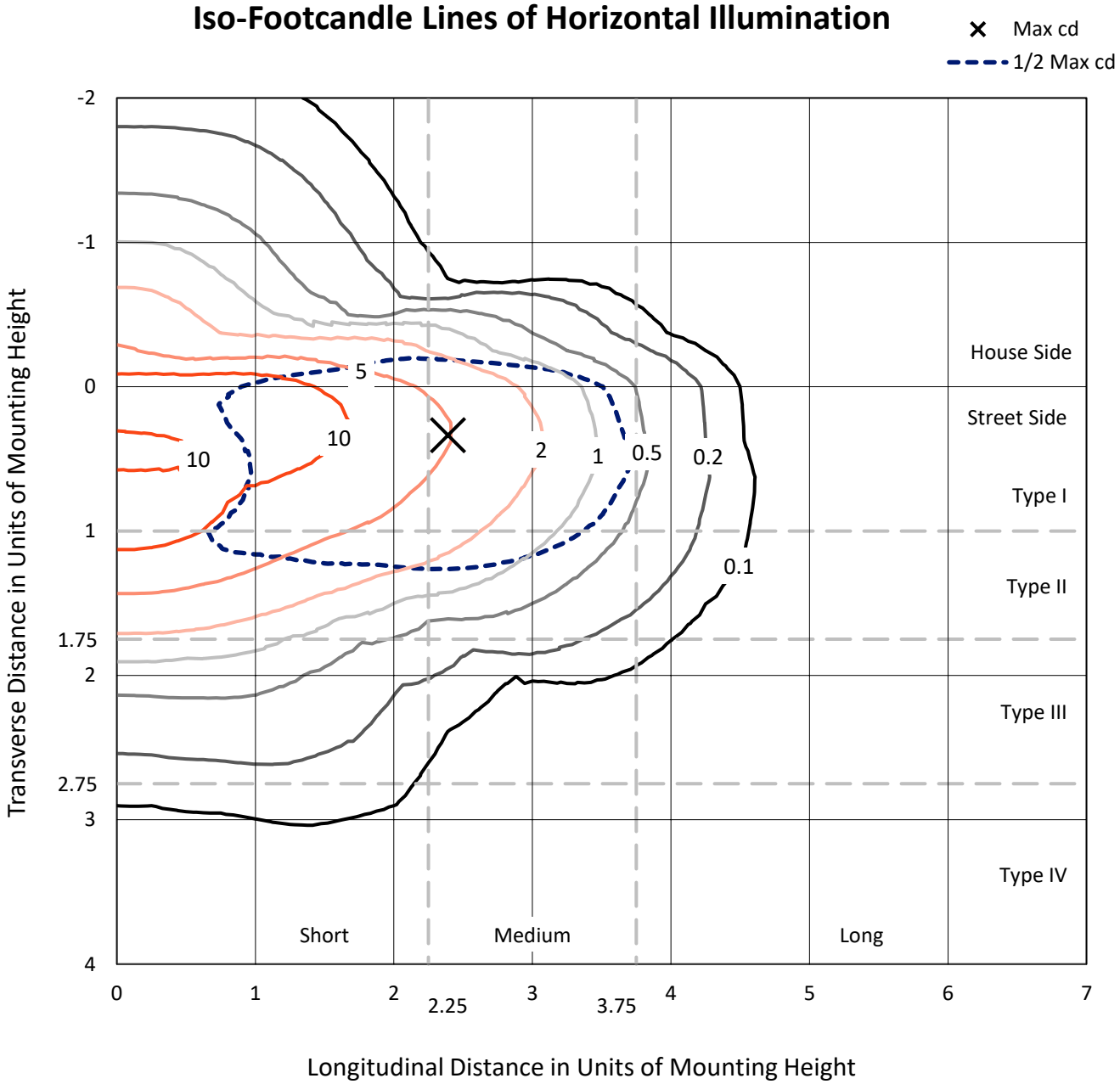


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REPORT NUMBER: P1203074
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## Iso-Footcandle Lines of Horizontal Illumination



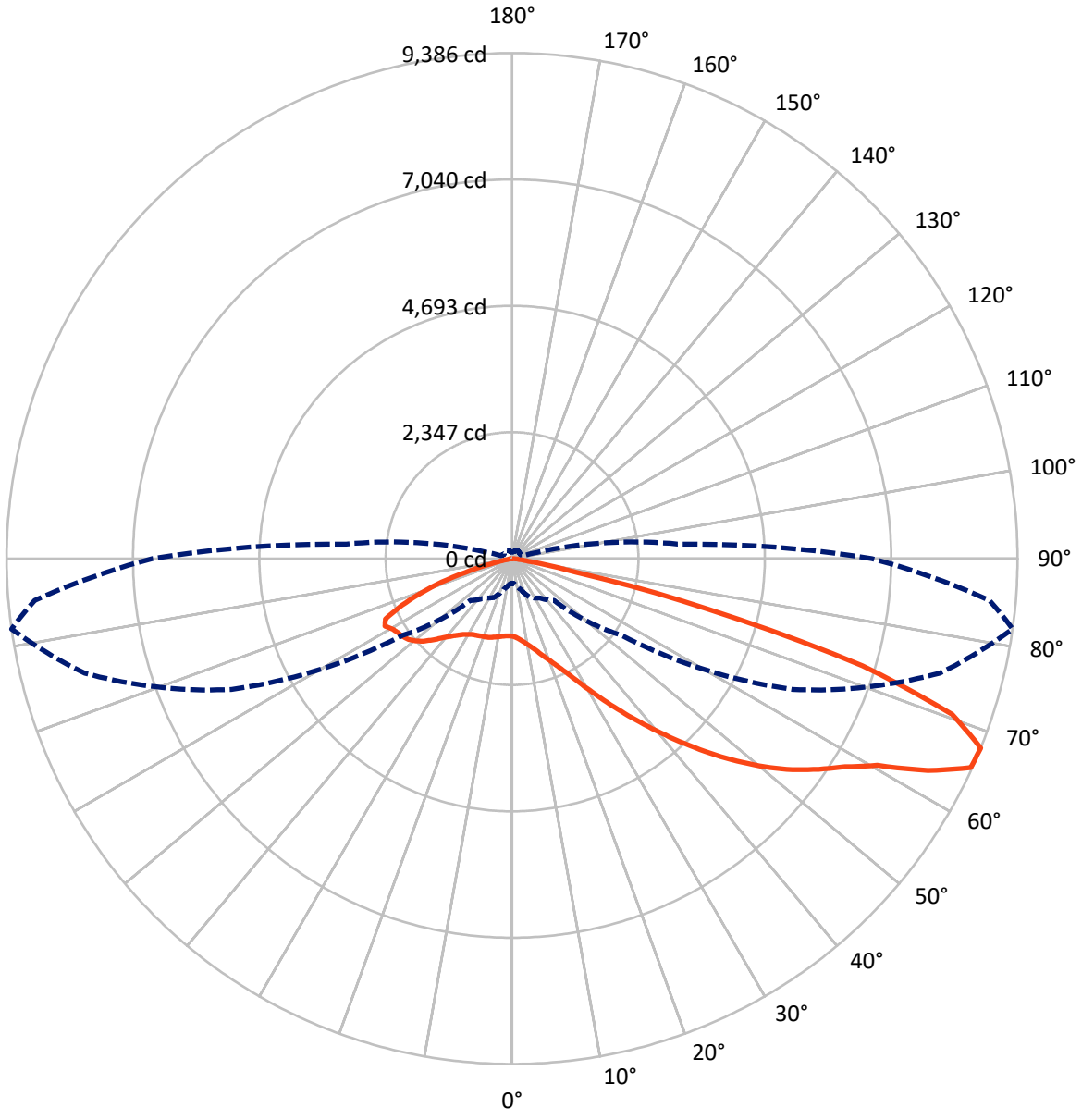

Based on 10 foot mounting height. Maximum calculated value = 20.2 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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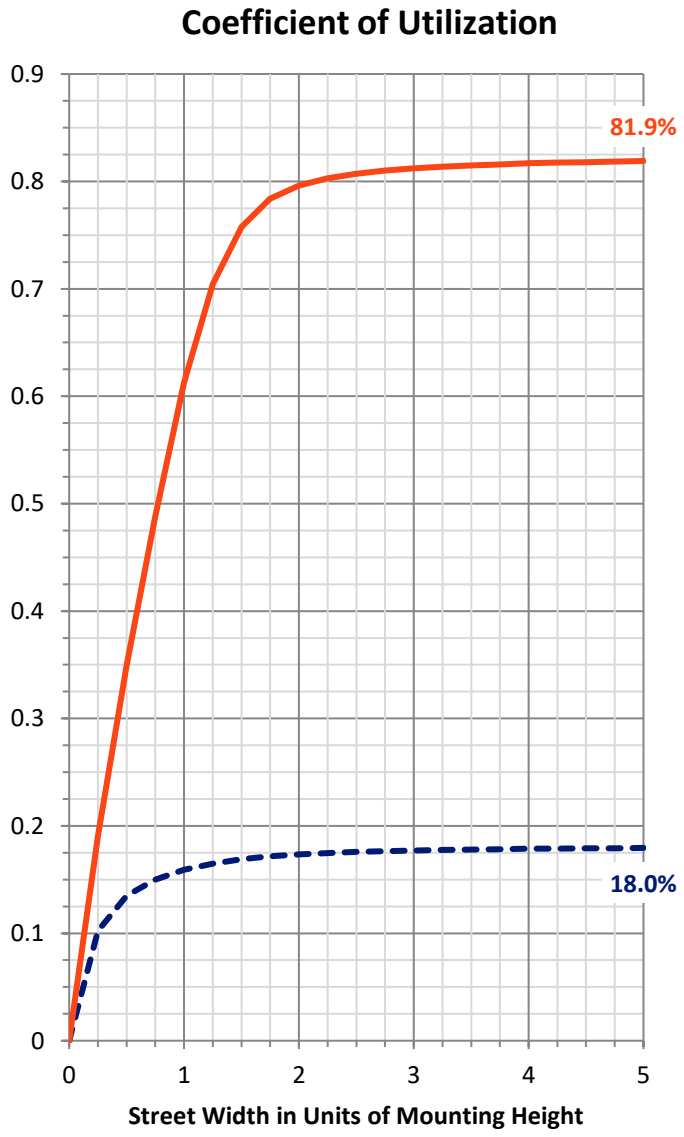
REPORT NUMBER: P1203074
CATALOG NUMBER: GWC-SB2B-760-U-T2-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1575.6 | 0.0 | 1575.6 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| **Street Side** | Lumens | 7122.4 | 0.0 | 7122.4 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| **Total** | Lumens | 8698.0 | 0.0 | 8698.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 128.4 | 1.5 |
| 10°-20° | 333.6 | 3.8 |
| 20°-30° | 534.3 | 6.1 |
| 30°-40° | 944.9 | 10.9 |
| 40°-50° | 1655.5 | 19.0 |
| 50°-60° | 2208.0 | 25.4 |
| 60°-70° | 2055.5 | 23.6 |
| 70°-80° | 788.9 | 9.1 |
| 80°-90° | 49.0 | 0.6 |
| 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° | 8698.0 | 100.0 |
| 0°-180° | 8698.0 | 100.0 |



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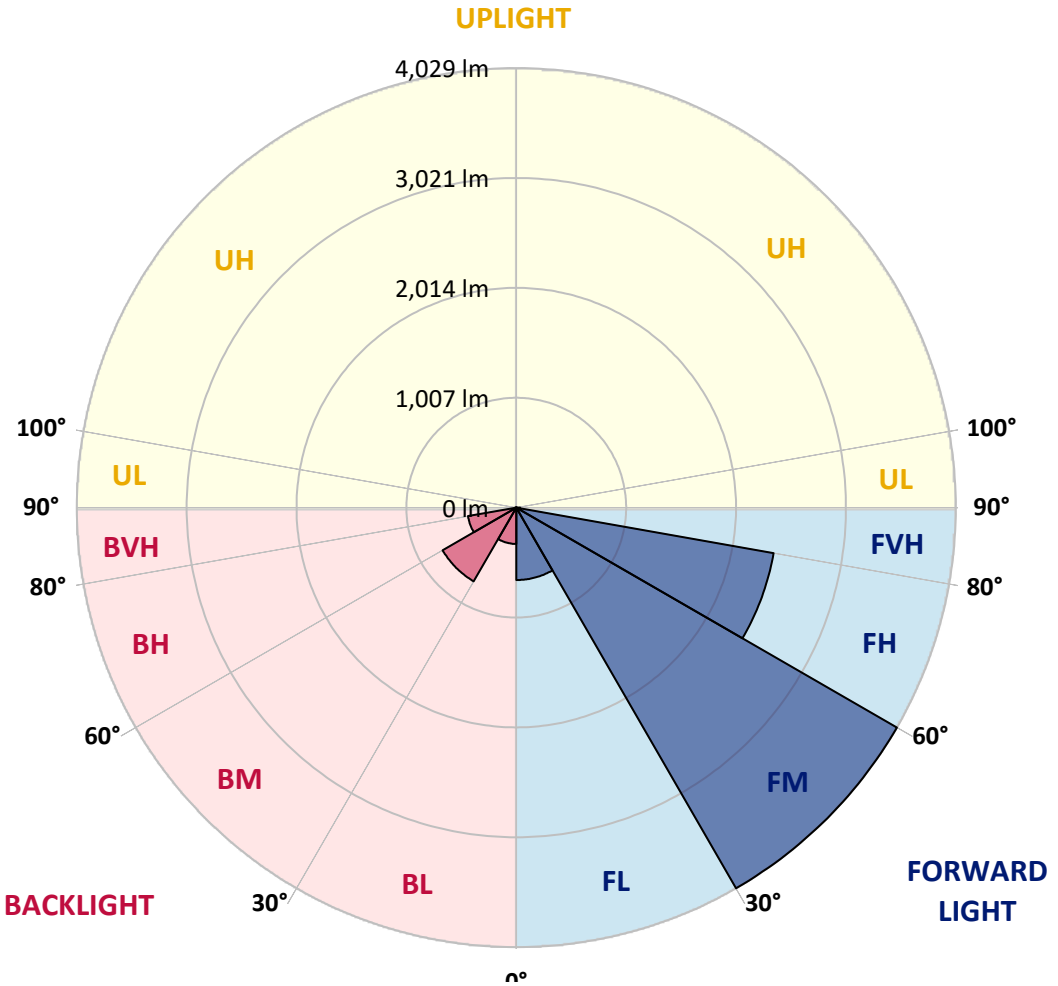
Scaled Data Report

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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°) | 663.6 | 7.6 | | | |
| FM | (30°-60°) | 4028.6 | 46.3 | | | |
| FH | (60°-80°) | 2394.7 | 27.5 | | | G2/5000 |
| FVH | (80°-90°) | 35.6 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 332.8 | 3.8 | B1/500 | | |
| BM | (30°-60°) | 779.7 | 9.0 | B1/1000 | | |
| BH | (60°-80°) | 449.7 | 5.2 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 13.4 | 0.2 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G2**
Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | *1441.0* | 1441.0 |
| 2.5° | 1523.0 | 1531.8 | 1526.8 | 1524.3 | 1519.9 | 1513.6 | 1508.6 | 1492.9 | 1476.7 | *1466.0* | 1462.3 |
| 5° | 1553.7 | 1562.5 | 1561.8 | 1564.3 | 1567.5 | 1569.3 | 1568.1 | 1550.6 | 1527.4 | *1509.2* | 1498.6 |
| 7.5° | 1527.4 | 1537.4 | 1545.5 | 1558.1 | 1580.0 | 1603.2 | 1614.4 | 1610.7 | 1586.9 | *1561.8* | 1548.7 |
| 10° | 1452.9 | 1463.5 | 1482.9 | 1512.4 | 1558.7 | 1608.8 | 1650.8 | 1670.2 | 1655.1 | *1627.6* | 1609.4 |
| 12.5° | 1316.3 | 1327.0 | 1365.2 | 1429.1 | 1506.7 | 1593.8 | 1673.9 | 1725.9 | 1729.7 | *1702.1* | 1680.8 |
| 15° | 1162.9 | 1173.6 | 1214.3 | 1294.4 | 1412.8 | 1552.4 | 1686.4 | 1784.8 | 1818.0 | *1794.2* | 1768.5 |
| 17.5° | 1067.7 | 1077.1 | 1107.8 | 1172.3 | 1295.7 | 1469.8 | 1682.1 | 1847.4 | 1923.2 | *1904.4* | 1873.7 |
| 20° | 1038.9 | 1047.1 | 1061.5 | 1106.6 | 1209.3 | 1384.0 | 1653.3 | 1906.3 | 2036.5 | *2025.9* | 1991.4 |
| 22.5° | 1069.6 | 1077.1 | 1081.5 | 1101.5 | 1166.0 | 1327.6 | 1616.9 | 1966.4 | 2168.0 | *2169.3* | 2127.3 |
| 25° | 1140.4 | 1147.9 | 1142.9 | 1155.4 | 1183.6 | 1310.1 | 1603.2 | 2037.1 | 2333.3 | *2347.1* | 2299.5 |
| 27.5° | 1256.9 | 1257.5 | 1245.6 | 1245.0 | 1249.3 | 1336.4 | 1617.6 | 2112.9 | 2541.9 | *2567.6* | 2508.7 |
| 30° | 1490.4 | 1481.0 | 1435.3 | 1385.9 | 1363.3 | 1415.3 | 1657.6 | 2202.5 | 2788.0 | *2833.7* | 2759.8 |
| 32.5° | 1850.5 | 1836.7 | 1752.8 | 1634.5 | 1515.5 | 1542.4 | 1729.7 | 2304.5 | 3056.0 | *3138.7* | 3048.5 |
| 35° | 2241.3 | 2237.5 | 2149.9 | 1973.9 | 1766.0 | 1723.4 | 1846.8 | 2438.6 | 3348.5 | *3480.0* | 3372.9 |
| 37.5° | 2604.5 | 2602.6 | 2552.5 | 2345.2 | 2092.2 | 1975.8 | 2034.6 | 2613.9 | 3661.6 | *3852.0* | 3725.5 |
| 40° | 2936.4 | 2942.0 | 2891.9 | 2706.6 | 2451.7 | 2299.5 | 2290.1 | 2830.6 | 4009.8 | *4257.1* | 4106.8 |
| 42.5° | 3223.2 | 3229.5 | 3178.8 | 3041.6 | 2806.8 | 2657.7 | 2603.9 | 3096.1 | 4349.8 | *4692.4* | 4514.5 |
| 45° | 3418.0 | 3456.8 | 3449.3 | 3339.7 | 3171.2 | 3016.6 | 2980.9 | 3429.3 | 4737.5 | *5153.9* | 4945.4 |
| 47.5° | 3473.1 | 3508.8 | 3565.1 | 3580.2 | 3477.5 | 3325.3 | 3367.9 | 3830.7 | 5129.5 | *5616.1* | 5378.7 |
| 50° | 3337.2 | 3370.4 | 3487.5 | 3643.4 | 3714.8 | 3667.9 | 3744.3 | 4260.9 | 5530.9 | *6077.0* | 5803.9 |
| 52.5° | 3069.2 | 3103.0 | 3250.8 | 3497.5 | 3788.7 | 3936.5 | 4121.9 | 4684.9 | 5919.8 | *6513.5* | 6206.6 |
| 55° | 2681.5 | 2717.2 | 2907.0 | 3186.3 | 3647.8 | 4047.3 | 4436.9 | 5108.2 | 6276.1 | *6906.1* | 6569.8 |
| 57.5° | 2154.2 | 2180.5 | 2377.8 | 2768.6 | 3293.4 | 3937.1 | 4669.2 | 5570.4 | 6611.8 | *7291.9* | 6929.9 |
| 60° | 1404.0 | 1427.2 | 1656.4 | 2092.2 | 2706.0 | 3568.9 | 4715.5 | 6085.7 | 7057.7 | *7793.5* | 7415.2 |
| 62.5° | 933.7 | 949.4 | 1085.3 | 1405.3 | 1905.6 | 2861.9 | 4444.4 | 6497.2 | 7711.4 | *8666.5* | 8247.5 |
| 65° | 640.6 | 656.3 | 792.2 | 1015.1 | 1231.2 | 1893.1 | 3664.7 | 6442.7 | 8303.9 | *9359.7* | 8864.3 |
| 67.5° | *457.2* | *470.3* | *585.5* | *795.9* | *891.1* | *1099.7* | *2484.3* | *5746.3* | *8218.7* | *9386.0* | *8897.5* |
| 70° | 327.5 | 335.0 | 430.2 | 620.0 | 708.3 | 660.7 | 1381.5 | 4394.9 | 7196.1 | *8667.1* | 8219.9 |
| 72.5° | 229.2 | 231.7 | 298.7 | 472.2 | 570.5 | 482.2 | 657.5 | 2930.1 | 5442.6 | *6802.8* | 6372.6 |
| 75° | 155.3 | 158.4 | 201.0 | 346.3 | 457.8 | 368.2 | 348.2 | 1571.2 | 3195.0 | *3765.5* | 3375.4 |
| 77.5° | 95.2 | 96.4 | 129.6 | 236.7 | 342.5 | 280.6 | 224.2 | 665.7 | 1236.2 | *1213.6* | 1034.5 |
| 80° | 53.9 | 53.9 | 82.7 | 147.2 | 233.6 | 181.0 | 157.2 | 283.1 | 391.4 | *343.8* | 303.1 |
| 82.5° | 30.1 | 30.7 | 60.1 | 91.4 | 154.7 | 107.1 | 86.4 | 130.9 | 169.1 | *149.7* | 130.3 |
| 85° | 12.5 | 13.8 | 36.9 | 43.2 | 73.9 | 53.2 | 35.1 | 55.1 | 62.6 | *55.7* | 40.7 |
| 87.5° | 1.3 | 1.9 | 11.3 | 8.1 | 8.8 | 10.6 | 5.0 | 10.6 | 8.8 | *8.8* | 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 |

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Scaled Data Report

REPORT NUMBER: P1203074
CATALOG NUMBER: GWC-SB2B-760-U-T2-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 | 1441.0 |
| 2.5° | 1450.4 | 1441.0 | 1417.2 | 1389.6 | 1353.3 | 1335.8 | 1312.0 | 1295.7 | 1281.9 | 1283.2 | 1270.6 |
| 5° | 1478.5 | 1454.7 | 1401.5 | 1335.1 | 1252.5 | 1193.6 | 1131.0 | 1087.8 | 1052.7 | 1045.2 | 1028.3 |
| 7.5° | 1517.4 | 1479.8 | 1386.5 | 1266.9 | 1127.2 | 1021.4 | 926.8 | 866.1 | 822.9 | 809.1 | 795.3 |
| 10° | 1567.5 | 1513.0 | 1367.1 | 1181.1 | 980.1 | 845.4 | 744.0 | 696.4 | 666.9 | 656.9 | 649.4 |
| 12.5° | 1625.7 | 1551.2 | 1341.4 | 1076.5 | 828.5 | 698.9 | 634.4 | 610.6 | 601.2 | 598.1 | 596.2 |
| 15° | 1699.0 | 1598.8 | 1302.6 | 952.5 | 700.1 | 609.3 | 581.8 | 578.6 | 579.9 | 578.6 | 578.0 |
| 17.5° | 1786.0 | 1650.8 | 1239.3 | 824.8 | 613.7 | 563.6 | 553.6 | 556.1 | 559.2 | 558.6 | 557.3 |
| 20° | 1881.2 | 1702.1 | 1158.5 | 711.4 | 554.8 | 531.0 | 525.4 | 527.9 | 530.4 | 529.2 | 528.5 |
| 22.5° | 1989.5 | 1757.2 | 1069.0 | 623.1 | 515.4 | 501.0 | 494.7 | 495.4 | 495.4 | 492.8 | 491.6 |
| 25° | 2119.2 | 1818.0 | 975.0 | 560.5 | 485.3 | 474.1 | 466.5 | 464.0 | 460.3 | 452.8 | 451.5 |
| 27.5° | 2273.9 | 1882.5 | 884.9 | 516.6 | 461.5 | 450.9 | 442.1 | 435.9 | 426.5 | 413.9 | 412.7 |
| 30° | 2447.9 | 1960.7 | 808.5 | 489.1 | 442.7 | 432.1 | 422.1 | 412.7 | 398.9 | 383.3 | 382.0 |
| 32.5° | 2652.7 | 2044.7 | 752.7 | 470.9 | 425.8 | 414.6 | 402.7 | 391.4 | 376.4 | 360.7 | 361.3 |
| 35° | 2897.0 | 2146.1 | 720.2 | 458.4 | 412.7 | 397.7 | 384.5 | 372.0 | 360.7 | 346.9 | 345.7 |
| 37.5° | 3161.9 | 2253.8 | 710.1 | 452.1 | 403.9 | 380.8 | 365.7 | 357.0 | 355.7 | 347.6 | 346.9 |
| 40° | 3451.8 | 2381.6 | 717.7 | 448.4 | 394.5 | 364.5 | 348.2 | 346.3 | 349.4 | 335.0 | 335.7 |
| 42.5° | 3758.7 | 2533.1 | 730.2 | 444.0 | 381.4 | 348.2 | 332.5 | 332.5 | 330.0 | 310.0 | 310.0 |
| 45° | 4090.6 | 2707.8 | 742.7 | 433.4 | 365.7 | 331.9 | 320.0 | 315.6 | 305.0 | 285.6 | 284.9 |
| 47.5° | 4425.0 | 2885.7 | 752.1 | 413.9 | 346.9 | 318.1 | 307.5 | 297.5 | 281.8 | 264.3 | 263.6 |
| 50° | 4742.5 | 3045.4 | 742.1 | 385.1 | 325.6 | 305.0 | 293.7 | 279.9 | 263.0 | 251.1 | 249.2 |
| 52.5° | 5026.2 | 3183.8 | 699.5 | 351.3 | 303.1 | 291.2 | 281.2 | 266.8 | 253.0 | 240.5 | 239.2 |
| 55° | 5272.9 | 3295.9 | 624.4 | 319.4 | 283.1 | 279.3 | 269.3 | 251.1 | 232.3 | 221.7 | 220.4 |
| 57.5° | 5509.6 | 3381.0 | 530.4 | 293.1 | 264.9 | 266.1 | 251.1 | 234.8 | 217.3 | 206.0 | 204.8 |
| 60° | 5824.6 | 3495.0 | 435.2 | 268.7 | 245.5 | 249.2 | 233.0 | 221.1 | 199.1 | 184.7 | 182.9 |
| 62.5° | 6328.1 | 3672.2 | 345.7 | 238.6 | 222.9 | 224.2 | 217.3 | 202.9 | 176.6 | 159.7 | 158.4 |
| 65° | 6727.6 | 3607.1 | 272.4 | 206.0 | 197.3 | 199.1 | 199.1 | 183.5 | 155.3 | 135.9 | 134.0 |
| 67.5° | *6682.5* | *3088.6* | *217.3* | *174.1* | *172.8* | *174.1* | *178.5* | *165.3* | *137.8* | *122.1* | *119.6* |
| 70° | 6155.9 | 2456.7 | 174.1 | 144.7 | 150.3 | 147.2 | 159.7 | 150.9 | 124.0 | 108.3 | 106.5 |
| 72.5° | 5023.0 | 1769.7 | 132.8 | 119.6 | 115.2 | 120.2 | 144.0 | 135.9 | 103.3 | 85.8 | 83.9 |
| 75° | 2935.2 | 944.4 | 98.9 | 94.6 | 83.3 | 100.2 | 127.8 | 115.9 | 78.9 | 63.2 | 61.4 |
| 77.5° | 955.6 | 329.4 | 72.6 | 69.5 | 62.0 | 80.8 | 109.0 | 97.7 | 64.5 | 50.1 | 48.2 |
| 80° | 256.1 | 99.6 | 49.5 | 45.7 | 40.1 | 60.1 | 86.4 | 77.7 | 46.3 | 32.6 | 31.9 |
| 82.5° | 102.7 | 42.0 | 28.8 | 25.7 | 21.9 | 41.3 | 68.3 | 62.6 | 34.4 | 20.7 | 20.7 |
| 85° | 33.2 | 13.8 | 10.6 | 8.1 | 10.0 | 25.7 | 40.7 | 42.6 | 24.4 | 10.6 | 8.1 |
| 87.5° | 4.4 | 1.9 | 1.9 | 2.5 | 1.9 | 4.4 | 12.5 | 11.9 | 6.9 | 1.3 | 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

0

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Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

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## Test Information

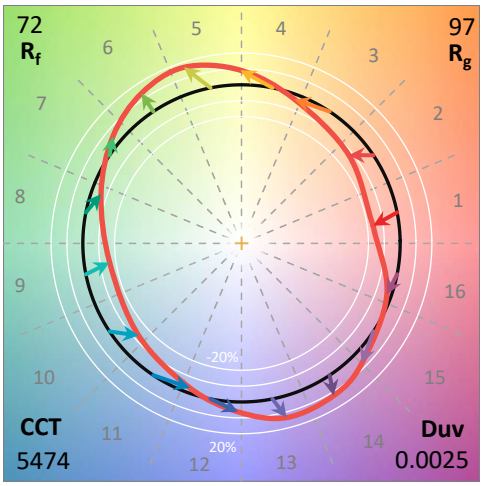
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-9-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| 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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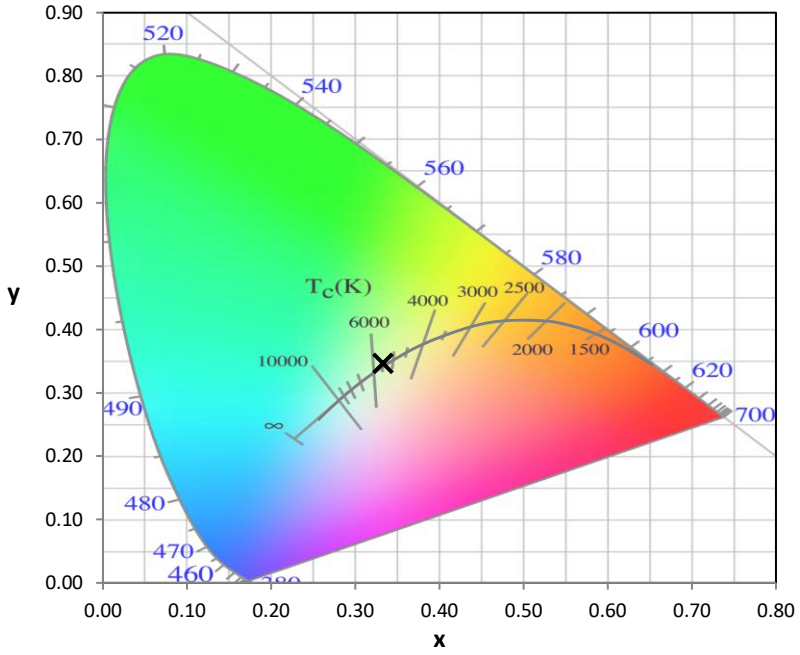
REPORT NUMBER: SP1-1908-441-9-R4

| 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 |

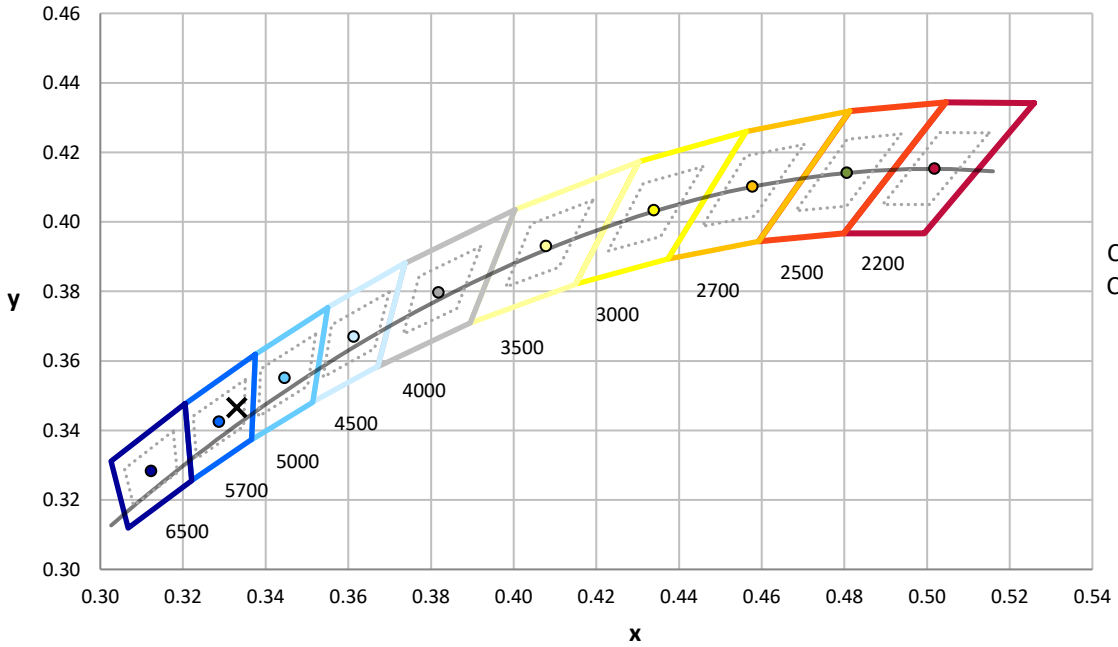
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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

## CIE 1931 Chromaticity Diagram




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



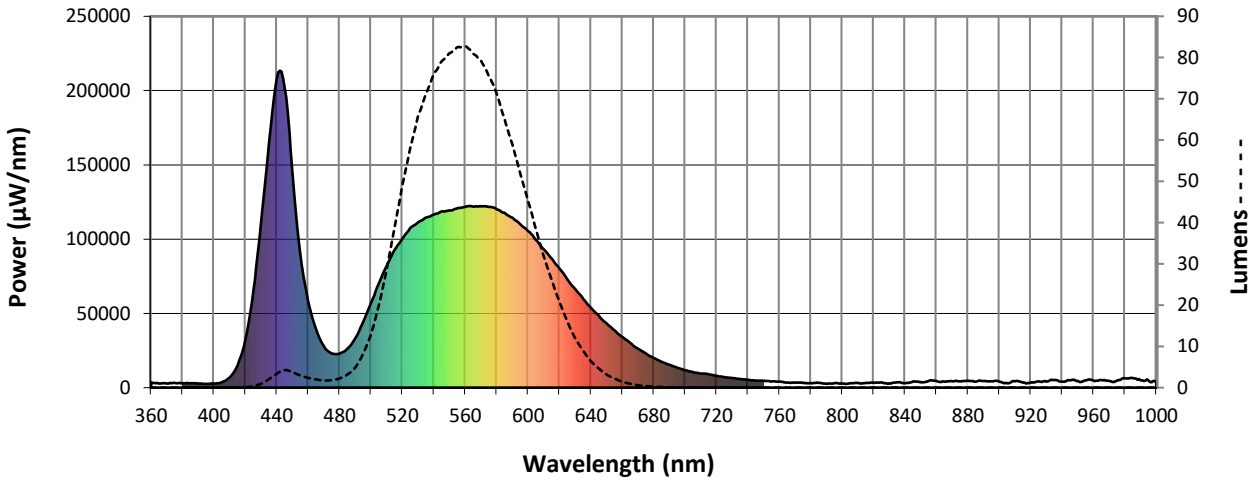

CCT = 5474K
CIE x = 0.3330
CIE y = 0.3466
Duv = 0.0025

Point lies inside the ANSI 5700K 4-step quadrangle

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## Photopic Flux vs. Wavelength



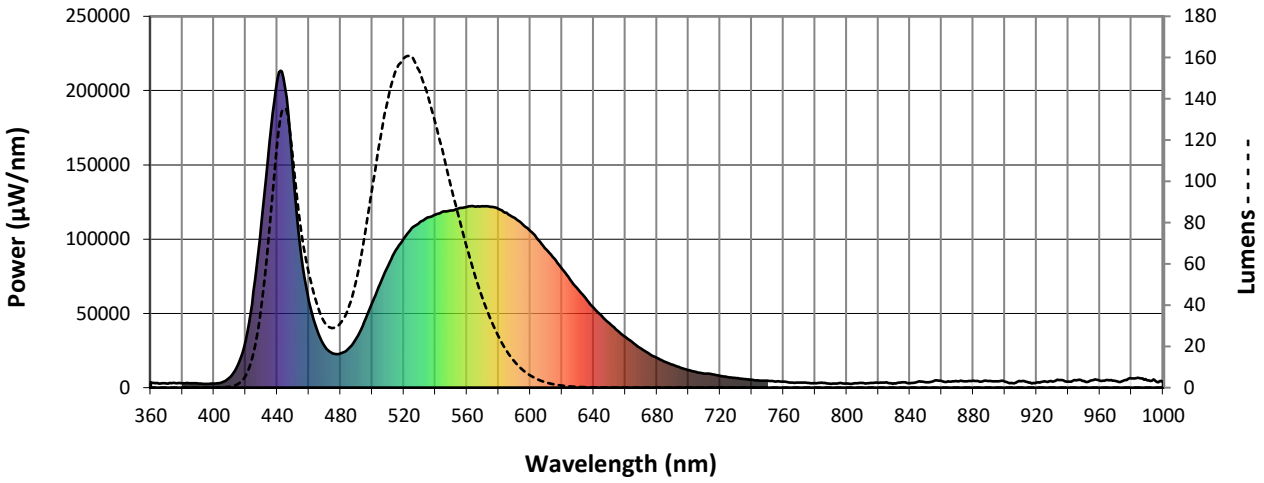

**Photopic Lumens: 7459.9**

| 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



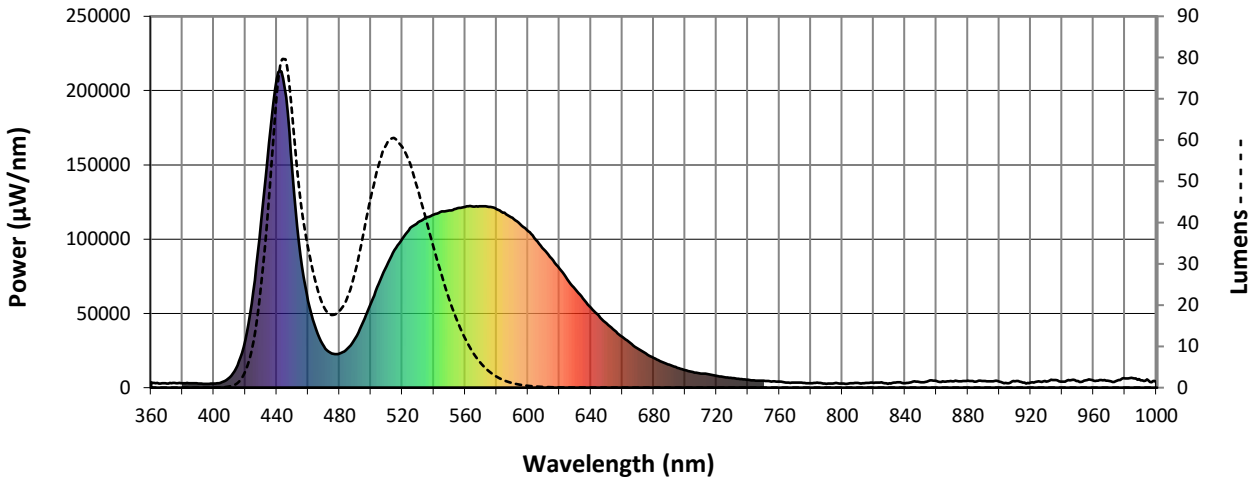

**Scotopic Lumens: 13759.3** **S/P: 1.85**

| 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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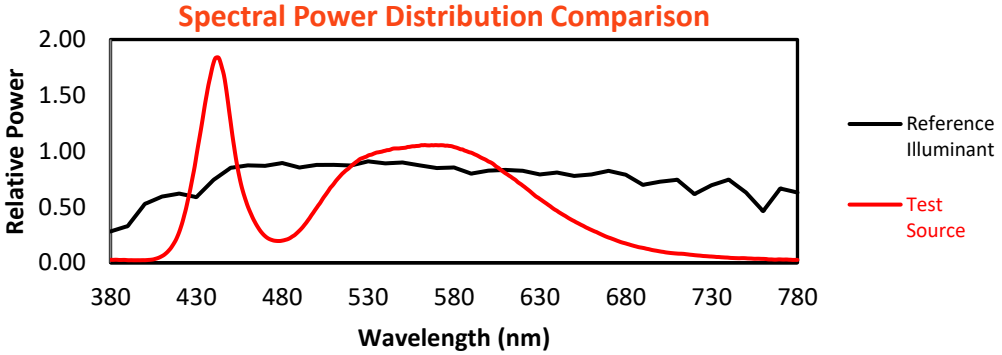
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# TM-30-18

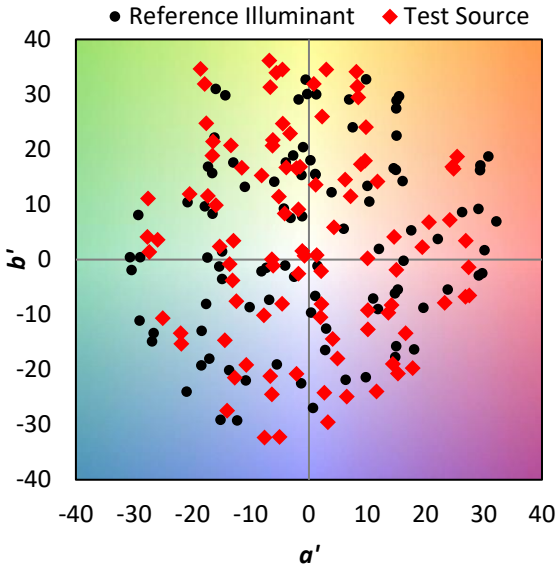
## Summary

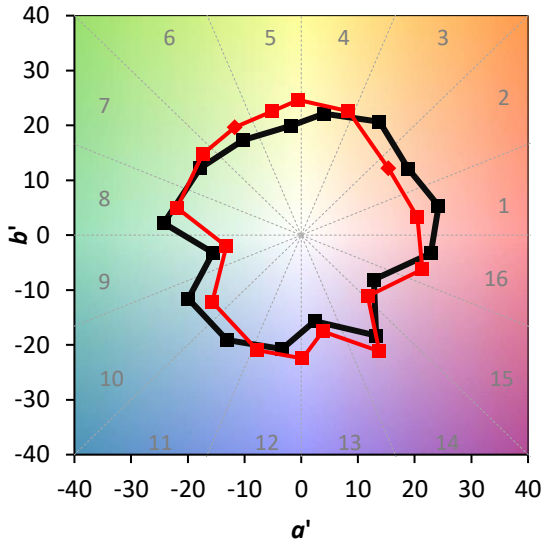
$R_f$ = 72.1
$R_g$ = 97.2
CIE $R_a$ = 71.7
$R_9$ = -27.1

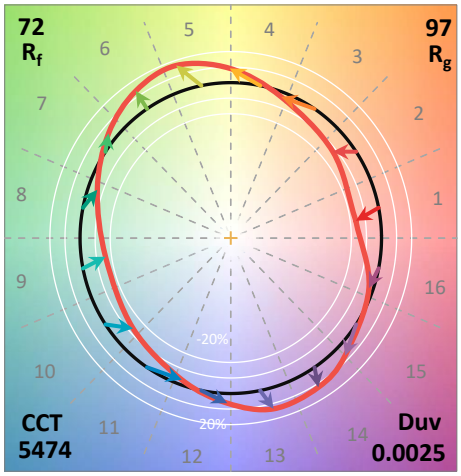
## Spectral Power Distribution Comparison

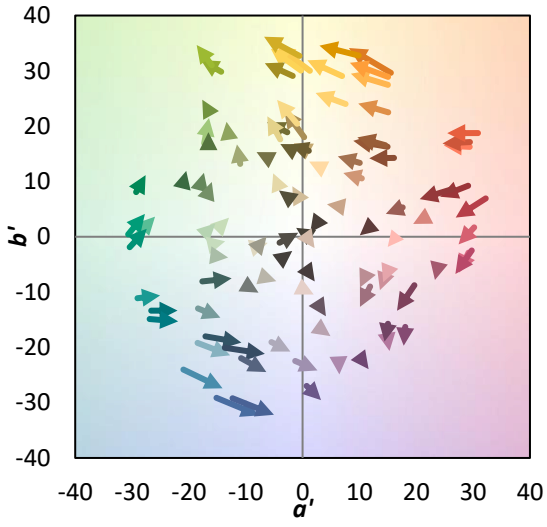



## Color Vector Graphics



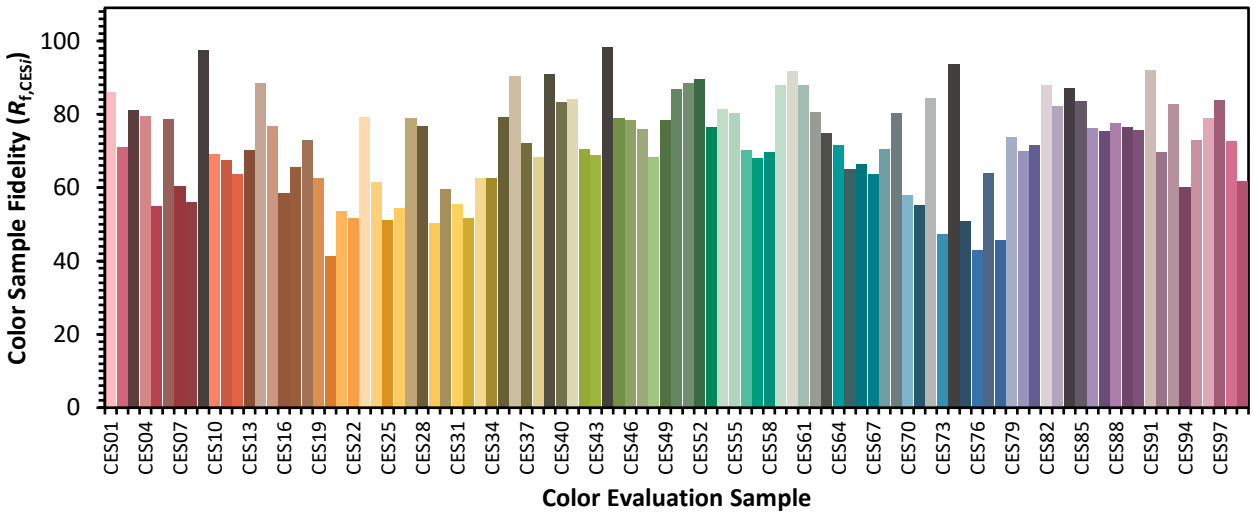
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Peachtree City, GA 30269

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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 | |

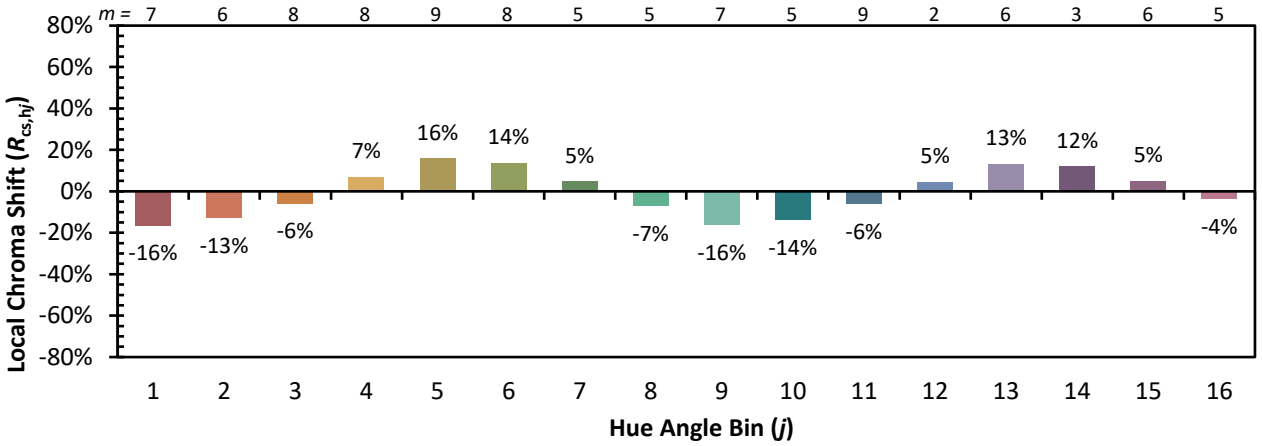


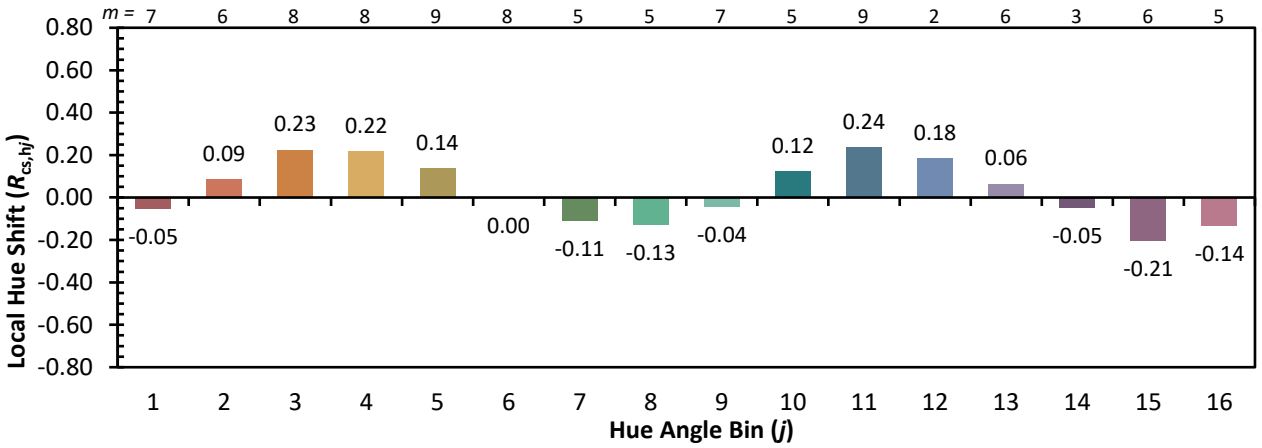
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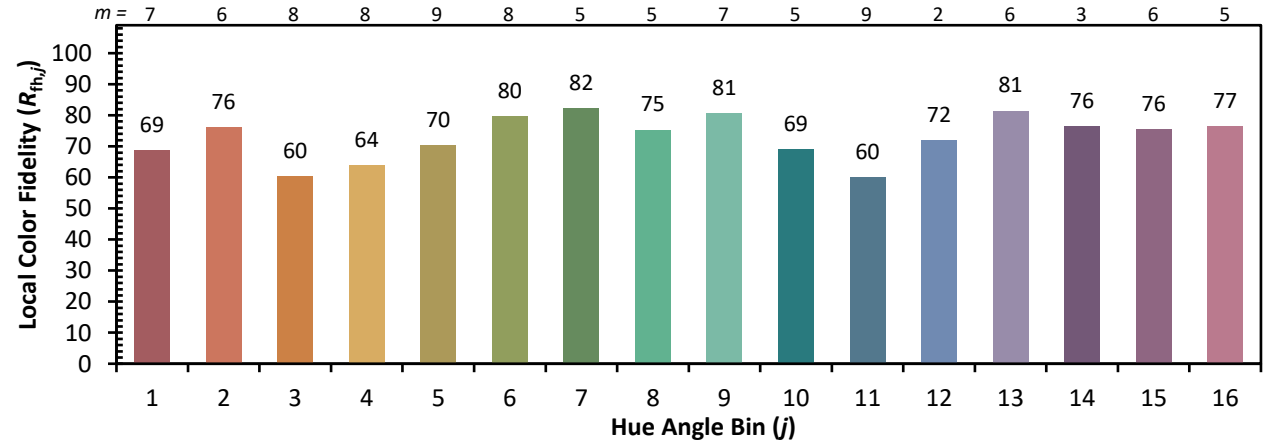
REPORT NUMBER: SP1-1908-441-9-R4

**TM-30-18**

## Color Rendition by Hue-Angle Bin



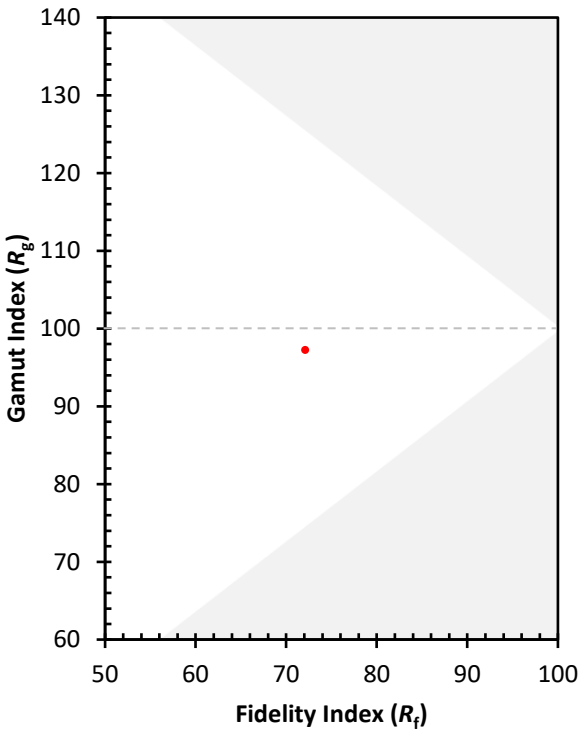



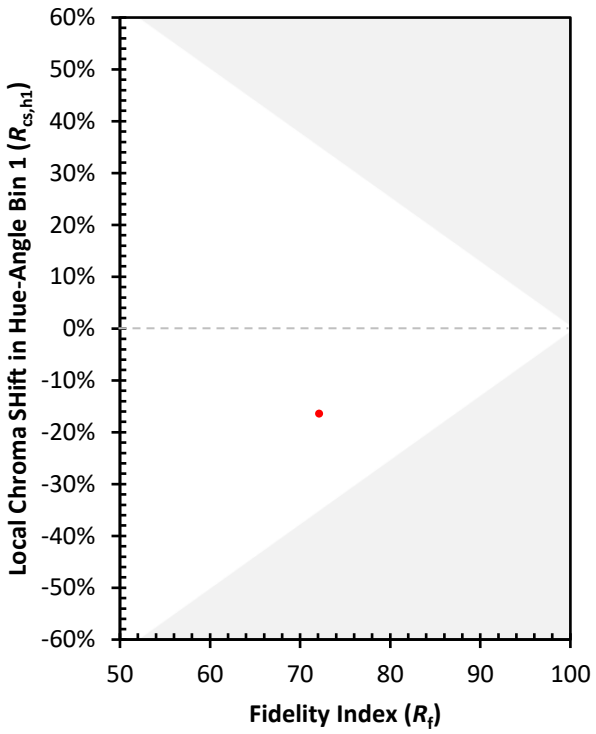
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### Measure Comparisons




(END OF REPORT)