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: P1199172

Luminaire Tested: GPC-SB2A-722-U-T2R

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: | P1199172 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/12/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GPC-SB2A-722-U-T2R |
| Description: | GALLEON PEDESTRIAN LUMINAIRE |
| | (2) 70 CRI, 2200K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II ROADWAY OPTIC |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 7546 lumens |
| Efficiency: | N/A |
| Efficacy: | 131.7 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): | 57.3 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.484 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.994 |
| Total Harmonic Distortion (THDi): | 9.038 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

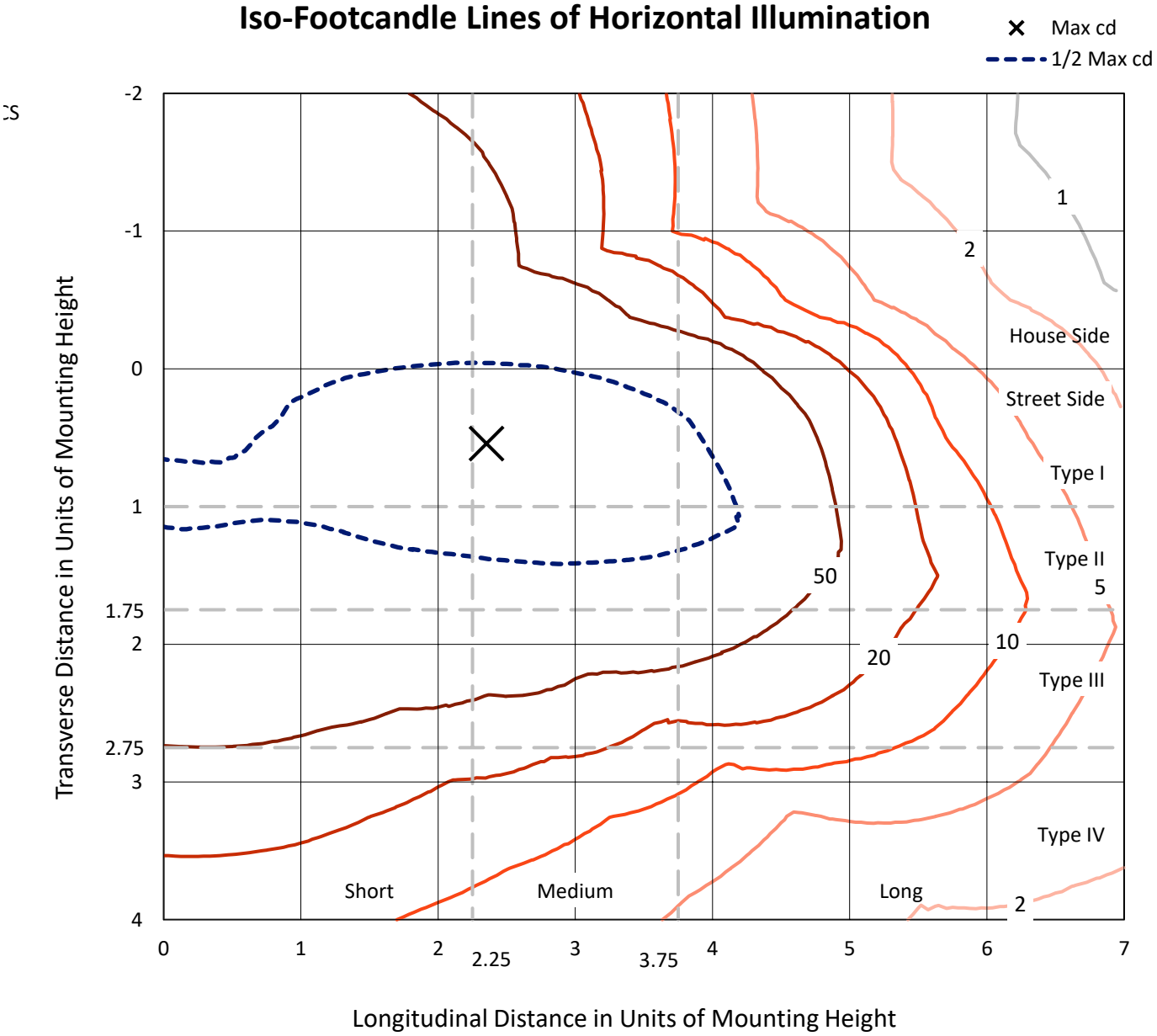


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REPORT NUMBER: P1199172
CATALOG NUMBER: GPC-SB2A-722-U-T2R

## Iso-Footcandle Lines of Horizontal Illumination




Longitudinal Distance in Units of Mounting Height

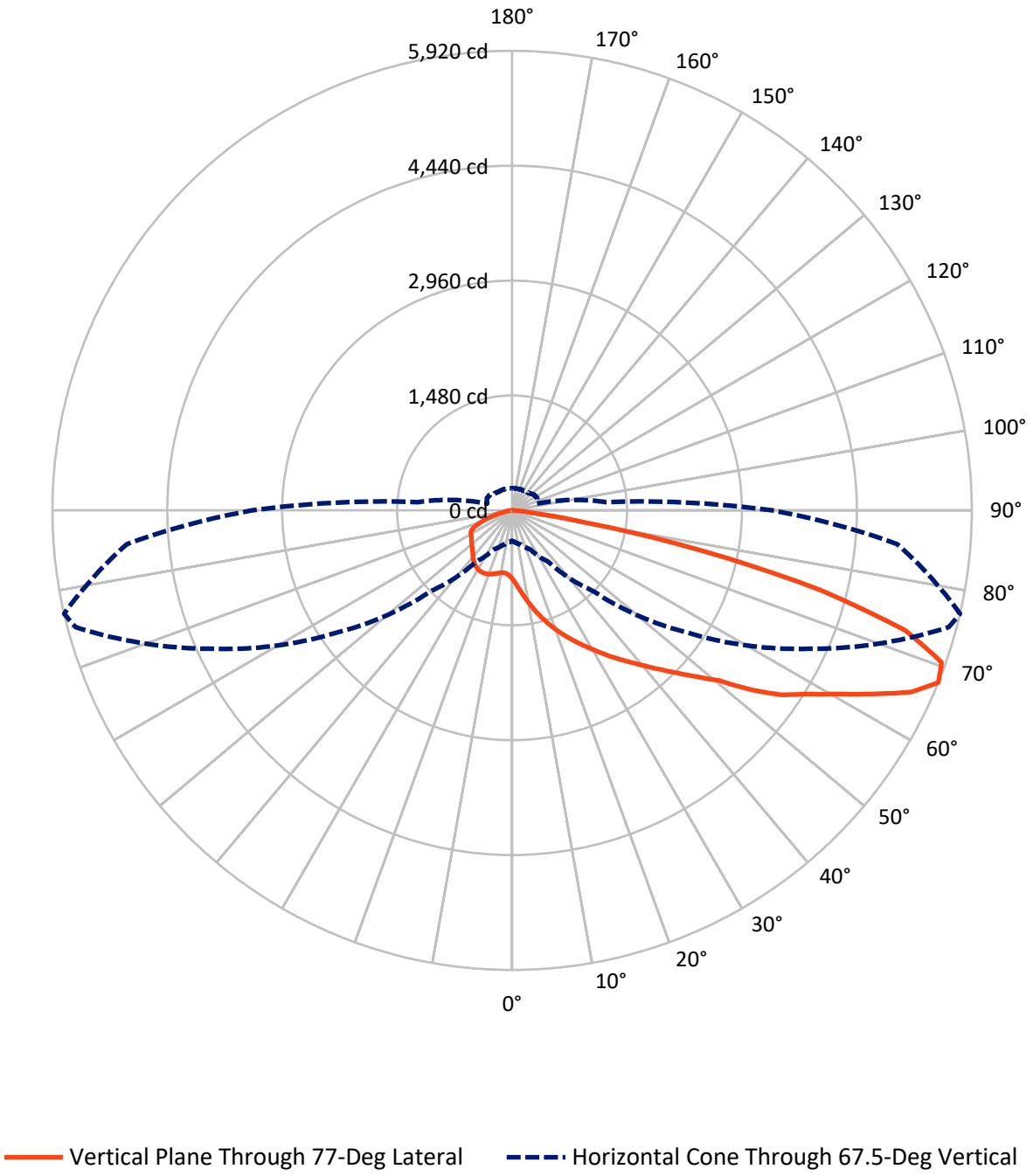
Based on 0.5 foot mounting height. Maximum calculated value = 6913 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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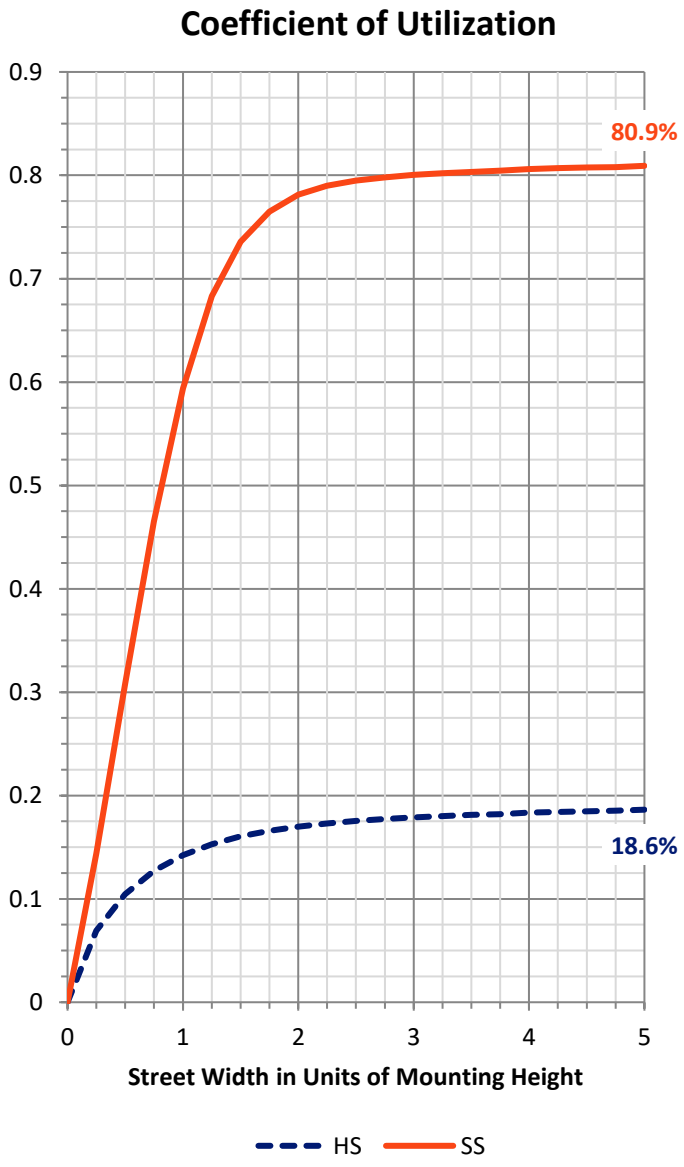
REPORT NUMBER: P1199172
CATALOG NUMBER: GPC-SB2A-722-U-T2R

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1427.4 | 0.0 | 1427.4 |
| | % Fixture | 18.9 | 0.0 | 18.9 |
| **Street Side** | Lumens | 6118.6 | 0.0 | 6118.6 |
| | % Fixture | 81.1 | 0.0 | 81.1 |
| **Total** | Lumens | 7546.0 | 0.0 | 7546.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 94.9 | 1.3 |
| 10°-20° | 340.9 | 4.5 |
| 20°-30° | 643.7 | 8.5 |
| 30°-40° | 1037.0 | 13.7 |
| 40°-50° | 1418.5 | 18.8 |
| 50°-60° | 1600.1 | 21.2 |
| 60°-70° | 1493.5 | 19.8 |
| 70°-80° | 818.7 | 10.8 |
| 80°-90° | 98.8 | 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° | 7546.0 | 100.0 |
| 0°-180° | 7546.0 | 100.0 |



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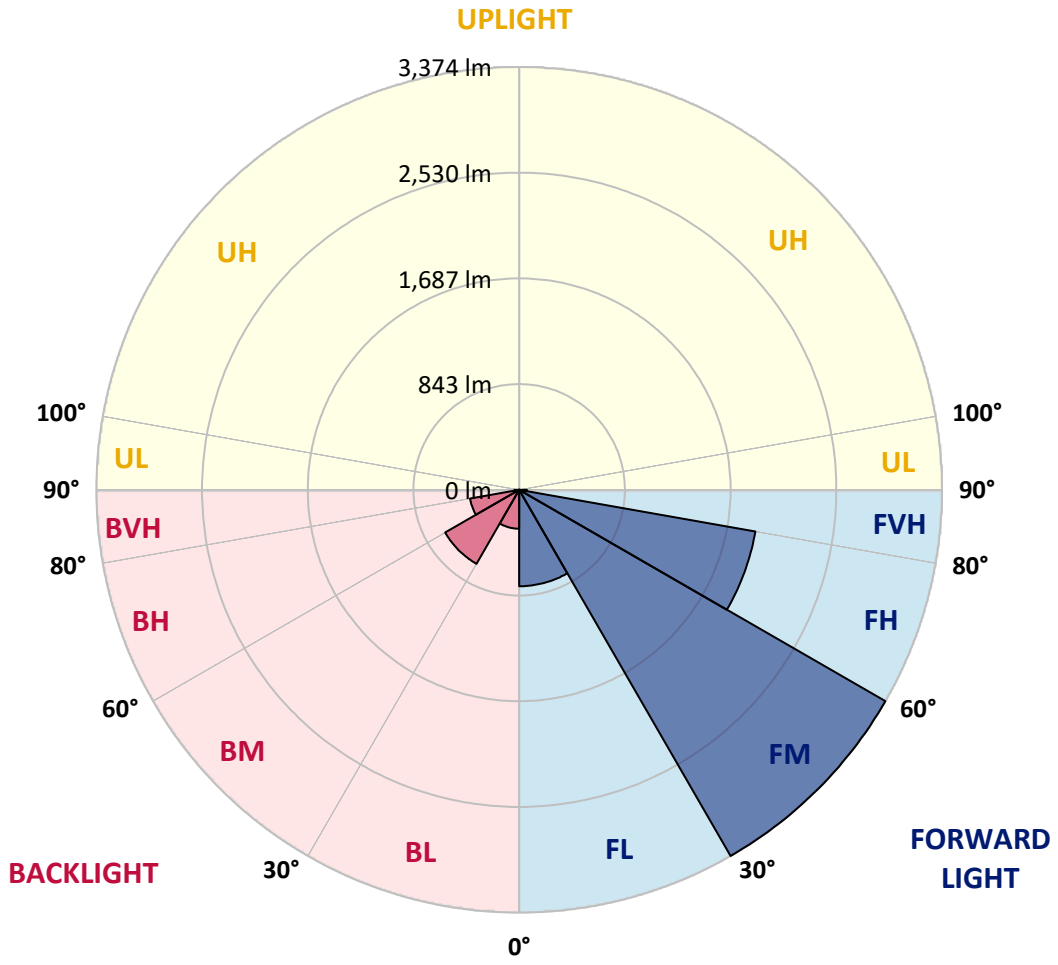
Scaled Data Report

REPORT NUMBER: P1199172
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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°) | 769.2 | 10.2 | | | |
| FM | (30°-60°) | 3373.7 | 44.7 | | | |
| FH | (60°-80°) | 1913.9 | 25.4 | | | G2/5000 |
| FVH | (80°-90°) | 61.8 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 310.4 | 4.1 | B1/500 | | |
| BM | (30°-60°) | 681.8 | 9.0 | B1/1000 | | |
| BH | (60°-80°) | 398.2 | 5.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 37.0 | 0.5 | | | 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° | 77° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | *885.4* | 885.4 |
| 2.5° | 1108.6 | 1116.4 | 1106.6 | 1106.6 | 1073.9 | 1056.8 | 1024.0 | 999.1 | 954.3 | *946.5* | 916.9 |
| 5° | 1310.3 | 1320.1 | 1306.5 | 1300.6 | 1262.0 | 1226.6 | 1171.7 | 1117.5 | 1037.7 | *1029.5* | 959.8 |
| 7.5° | 1466.5 | 1479.0 | 1466.9 | 1460.7 | 1426.4 | 1386.7 | 1322.4 | 1246.9 | 1134.3 | *1118.3* | 1017.4 |
| 10° | 1593.9 | 1595.9 | 1592.0 | 1594.3 | 1567.4 | 1534.7 | 1468.9 | 1380.9 | 1240.2 | *1218.4* | 1087.2 |
| 12.5° | 1666.0 | 1674.9 | 1682.7 | 1696.8 | 1692.1 | 1671.8 | 1612.6 | 1507.4 | 1352.4 | *1324.4* | 1163.1 |
| 15° | 1699.9 | 1715.4 | 1733.0 | 1765.3 | 1791.4 | 1796.5 | 1751.3 | 1643.4 | 1466.5 | *1432.7* | 1239.8 |
| 17.5° | 1711.9 | 1726.7 | 1754.4 | 1801.1 | 1857.2 | 1895.0 | 1874.8 | 1775.4 | 1579.5 | *1540.6* | 1320.5 |
| 20° | 1773.1 | 1777.4 | 1794.1 | 1838.5 | 1899.3 | 1962.0 | 1977.2 | 1902.4 | 1691.3 | *1647.3* | 1403.8 |
| 22.5° | 1904.0 | 1895.4 | 1900.1 | 1920.3 | 1964.0 | 2024.7 | 2059.4 | 2014.6 | 1806.2 | *1755.6* | 1488.0 |
| 25° | 2120.2 | 2095.2 | 2070.3 | 2046.9 | 2069.1 | 2103.4 | 2142.8 | 2126.8 | 1926.6 | *1862.3* | 1572.9 |
| 27.5° | 2393.2 | 2362.8 | 2307.9 | 2231.2 | 2204.3 | 2216.4 | 2233.9 | 2230.8 | 2038.0 | *1972.9* | 1660.5 |
| 30° | 2662.0 | 2626.5 | 2561.1 | 2450.1 | 2379.2 | 2347.3 | 2334.0 | 2325.0 | 2159.1 | *2089.8* | 1748.9 |
| 32.5° | 2876.6 | 2848.6 | 2784.3 | 2660.0 | 2557.2 | 2502.7 | 2458.7 | 2426.7 | 2285.7 | *2216.4* | 1842.4 |
| 35° | 3064.4 | 3038.3 | 2964.6 | 2829.1 | 2717.3 | 2659.3 | 2601.6 | 2533.4 | 2417.4 | *2347.3* | 1942.9 |
| 37.5° | 3235.7 | 3209.6 | 3108.8 | 2967.8 | 2855.2 | 2815.1 | 2763.6 | 2648.0 | 2549.4 | *2483.2* | 2049.3 |
| 40° | 3344.0 | 3338.2 | 3243.9 | 3084.2 | 2967.4 | 2947.5 | 2930.4 | 2780.8 | 2695.9 | *2634.3* | 2166.1 |
| 42.5° | 3371.7 | 3384.5 | 3309.8 | 3178.5 | 3067.1 | 3051.1 | 3091.2 | 2931.1 | 2860.2 | *2801.4* | 2298.6 |
| 45° | 3305.1 | 3342.1 | 3293.0 | 3203.8 | 3138.0 | 3129.4 | 3233.8 | 3095.5 | 3042.2 | *2988.4* | 2458.3 |
| 47.5° | 3136.4 | 3199.1 | 3178.9 | 3166.4 | 3157.1 | 3194.1 | 3359.2 | 3270.0 | 3248.2 | *3201.5* | 2640.6 |
| 50° | 2796.0 | 2914.8 | 2950.2 | 3028.9 | 3119.3 | 3244.3 | 3473.4 | 3460.5 | 3488.9 | *3441.8* | 2862.6 |
| 52.5° | 2207.4 | 2371.0 | 2576.7 | 2773.8 | 3003.2 | 3227.6 | 3598.8 | 3733.9 | 3853.9 | *3828.2* | 3215.5 |
| 55° | 1822.2 | 1895.8 | 2053.9 | 2415.4 | 2778.1 | 3157.1 | 3655.3 | 3954.8 | 4216.2 | *4193.2* | 3483.1 |
| 57.5° | 1526.1 | 1592.0 | 1689.4 | 1991.2 | 2437.6 | 2997.0 | 3690.3 | 4089.6 | 4464.3 | *4462.0* | 3747.2 |
| 60° | 1208.7 | 1278.4 | 1378.1 | 1592.0 | 2039.9 | 2720.4 | 3682.5 | 4243.0 | 4781.0 | *4800.5* | 4069.3 |
| 62.5° | 850.3 | 927.1 | 1037.7 | 1237.1 | 1633.6 | 2362.1 | 3523.6 | 4354.1 | 5153.7 | *5206.7* | 4456.9 |
| 65° | 559.0 | 609.6 | 693.0 | 865.1 | 1217.3 | 1901.2 | 3220.2 | 4368.5 | 5552.6 | *5642.2* | 4820.7 |
| 67.5° | *391.9* | *411.3* | *460.4* | *553.9* | *802.4* | *1458.0* | *2736.8* | *4219.3* | *5818.7* | *5919.5* | *4978.5* |
| 70° | 305.8 | 315.5 | 340.4 | 377.8 | 504.0 | 980.4 | 2097.2 | 3831.3 | 5761.8 | *5867.0* | 4813.7 |
| 72.5° | 264.1 | 273.4 | 282.8 | 287.5 | 338.1 | 605.3 | 1420.6 | 3203.4 | 5226.2 | *5297.5* | 4185.4 |
| 75° | 239.6 | 241.9 | 249.7 | 248.1 | 257.9 | 392.6 | 819.9 | 2334.0 | 4123.5 | *4098.9* | 3089.7 |
| 77.5° | 201.4 | 204.5 | 217.4 | 215.4 | 229.0 | 268.4 | 425.7 | 1506.3 | 2673.3 | *2506.6* | 1719.7 |
| 80° | 170.6 | 172.2 | 186.2 | 183.9 | 199.0 | 194.4 | 217.4 | 767.7 | 1133.9 | *960.6* | 495.9 |
| 82.5° | 59.2 | 73.2 | 142.2 | 146.5 | 151.9 | 117.6 | 125.4 | 313.2 | 346.3 | *265.3* | 104.0 |
| 85° | 28.8 | 30.8 | 72.5 | 102.8 | 102.4 | 59.2 | 61.2 | 111.8 | 109.1 | *85.7* | 34.7 |
| 87.5° | 4.7 | 5.8 | 8.6 | 40.1 | 31.9 | 15.6 | 21.0 | 21.8 | 22.6 | *19.5* | 7.8 |
| 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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Scaled Data Report

REPORT NUMBER: P1199172
CATALOG NUMBER: GPC-SB2A-722-U-T2R

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 | 885.4 |
| 2.5° | 895.1 | 875.6 | 834.7 | 797.0 | 767.4 | 738.9 | 723.0 | 709.3 | 701.5 | 700.0 | 700.0 |
| 5° | 919.3 | 879.1 | 804.7 | 742.0 | 701.1 | 670.8 | 654.8 | 644.7 | 639.6 | 636.5 | 636.1 |
| 7.5° | 953.9 | 895.1 | 789.2 | 717.9 | 675.0 | 653.2 | 645.0 | 643.5 | 643.1 | 643.5 | 644.7 |
| 10° | 1001.8 | 921.2 | 787.6 | 712.0 | 676.2 | 664.1 | 663.7 | 664.1 | 665.7 | 666.1 | 666.5 |
| 12.5° | 1053.7 | 948.1 | 793.8 | 717.1 | 691.0 | 684.4 | 683.2 | 682.8 | 684.0 | 684.8 | 685.2 |
| 15° | 1110.1 | 983.5 | 804.4 | 728.0 | 707.4 | 700.4 | 699.2 | 696.9 | 696.5 | 696.1 | 695.7 |
| 17.5° | 1168.2 | 1018.6 | 816.0 | 739.7 | 717.9 | 708.1 | 703.9 | 698.4 | 694.1 | 693.0 | 694.1 |
| 20° | 1227.0 | 1053.3 | 824.2 | 745.5 | 718.7 | 705.0 | 696.5 | 687.1 | 679.7 | 675.4 | 677.0 |
| 22.5° | 1289.7 | 1089.5 | 829.3 | 744.0 | 711.7 | 693.0 | 677.4 | 666.5 | 655.2 | 647.8 | 648.2 |
| 25° | 1350.9 | 1121.0 | 828.9 | 735.8 | 698.0 | 674.3 | 654.4 | 640.4 | 624.8 | 617.0 | 617.0 |
| 27.5° | 1409.7 | 1149.5 | 819.2 | 721.4 | 678.5 | 652.1 | 628.3 | 611.5 | 596.4 | 589.0 | 588.6 |
| 30° | 1470.4 | 1173.2 | 804.0 | 700.4 | 655.6 | 626.3 | 600.3 | 585.8 | 572.2 | 565.2 | 564.8 |
| 32.5° | 1530.8 | 1195.0 | 782.5 | 674.3 | 629.1 | 601.0 | 575.3 | 562.1 | 553.9 | 553.9 | 554.3 |
| 35° | 1594.7 | 1210.2 | 754.1 | 643.9 | 601.0 | 574.2 | 553.9 | 546.1 | 545.3 | 540.7 | 539.5 |
| 37.5° | 1662.1 | 1220.0 | 719.4 | 612.7 | 573.4 | 548.1 | 541.8 | 532.5 | 524.7 | 514.6 | 513.0 |
| 40° | 1733.0 | 1229.7 | 677.8 | 580.4 | 544.2 | 530.1 | 527.4 | 514.9 | 492.7 | 467.8 | 464.3 |
| 42.5° | 1819.1 | 1236.3 | 634.5 | 548.1 | 513.4 | 508.7 | 512.6 | 491.2 | 455.7 | 437.0 | 437.4 |
| 45° | 1918.8 | 1247.2 | 594.8 | 516.1 | 481.8 | 481.8 | 498.2 | 470.2 | 440.9 | 429.3 | 431.2 |
| 47.5° | 2048.1 | 1272.6 | 557.8 | 481.1 | 452.6 | 460.4 | 466.3 | 444.8 | 428.5 | 414.1 | 413.7 |
| 50° | 2235.1 | 1333.3 | 519.6 | 445.6 | 430.4 | 446.0 | 437.8 | 425.4 | 406.3 | 394.6 | 393.4 |
| 52.5° | 2467.2 | 1369.2 | 485.7 | 413.7 | 411.3 | 426.9 | 415.2 | 403.5 | 389.1 | 373.6 | 370.4 |
| 55° | 2625.4 | 1375.8 | 457.3 | 390.3 | 398.5 | 396.9 | 392.6 | 382.1 | 374.3 | 353.7 | 354.1 |
| 57.5° | 2802.2 | 1389.0 | 433.9 | 376.3 | 390.3 | 373.2 | 371.6 | 362.6 | 352.5 | 338.5 | 333.8 |
| 60° | 3013.7 | 1409.7 | 413.7 | 370.8 | 383.3 | 357.6 | 349.8 | 346.3 | 336.2 | 329.1 | 331.1 |
| 62.5° | 3244.3 | 1428.4 | 393.0 | 371.6 | 375.1 | 342.4 | 330.7 | 329.5 | 323.3 | 321.0 | 321.0 |
| 65° | 3401.7 | 1377.3 | 367.3 | 370.8 | 362.3 | 326.8 | 312.0 | 311.6 | 306.6 | 305.8 | 305.4 |
| 67.5° | *3346.8* | *1215.7* | *332.7* | *359.9* | *349.0* | *311.2* | *294.9* | *293.3* | *286.7* | *287.1* | *287.1* |
| 70° | 3071.8 | 985.1 | 284.7 | 333.0 | 332.7 | 297.2 | 276.9 | 271.9 | 262.9 | 264.5 | 266.0 |
| 72.5° | 2556.0 | 730.0 | 220.5 | 288.2 | 306.6 | 284.4 | 256.3 | 248.1 | 236.8 | 238.4 | 238.0 |
| 75° | 1845.9 | 496.2 | 160.5 | 219.3 | 266.8 | 269.2 | 236.0 | 222.0 | 208.4 | 210.7 | 211.5 |
| 77.5° | 944.6 | 281.2 | 118.0 | 151.1 | 209.6 | 244.6 | 217.7 | 199.0 | 195.9 | 217.7 | 214.6 |
| 80° | 308.1 | 141.0 | 81.8 | 105.9 | 137.5 | 200.2 | 190.9 | 169.4 | 168.7 | 173.7 | 149.2 |
| 82.5° | 91.9 | 59.6 | 52.6 | 69.7 | 76.0 | 153.5 | 164.8 | 128.2 | 110.2 | 116.1 | 120.0 |
| 85° | 31.6 | 28.8 | 30.0 | 34.7 | 36.2 | 90.0 | 115.3 | 84.9 | 80.2 | 88.4 | 87.3 |
| 87.5° | 7.4 | 10.1 | 8.6 | 7.8 | 7.8 | 21.8 | 44.8 | 35.4 | 49.1 | 32.7 | 31.6 |
| 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

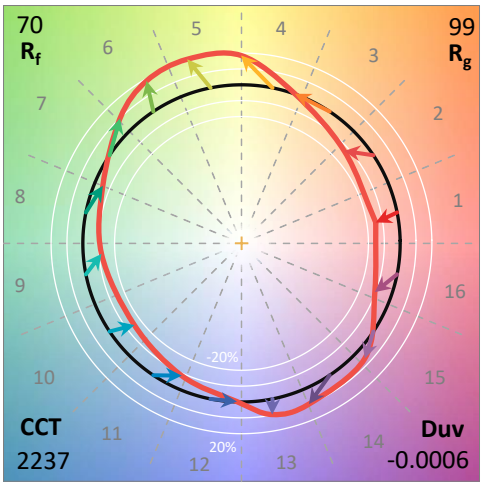
| | |
|---|---|
| Test Method: | LM-79-2008 Report |
| Number: | SP1-1908-441-10-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON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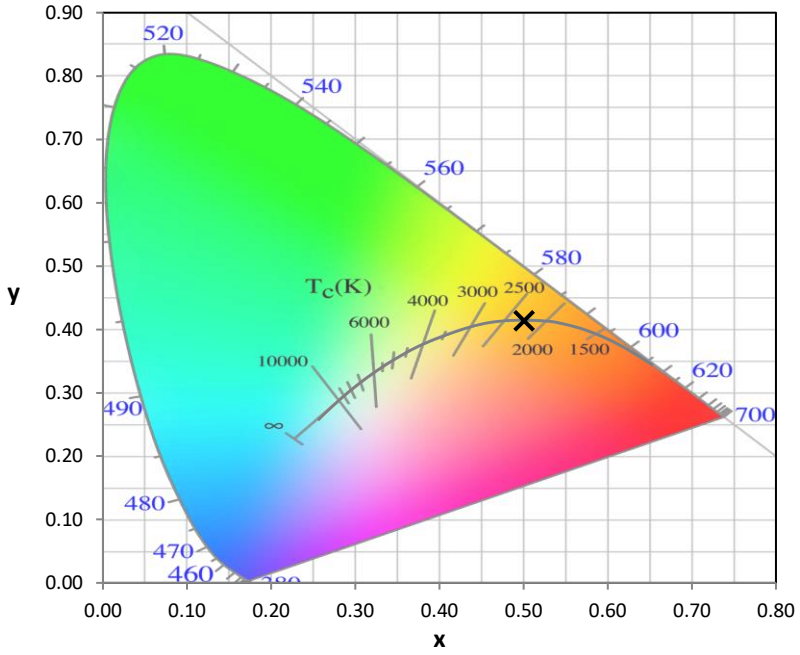
REPORT NUMBER: SP1-1908-441-10-R4

| 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 |

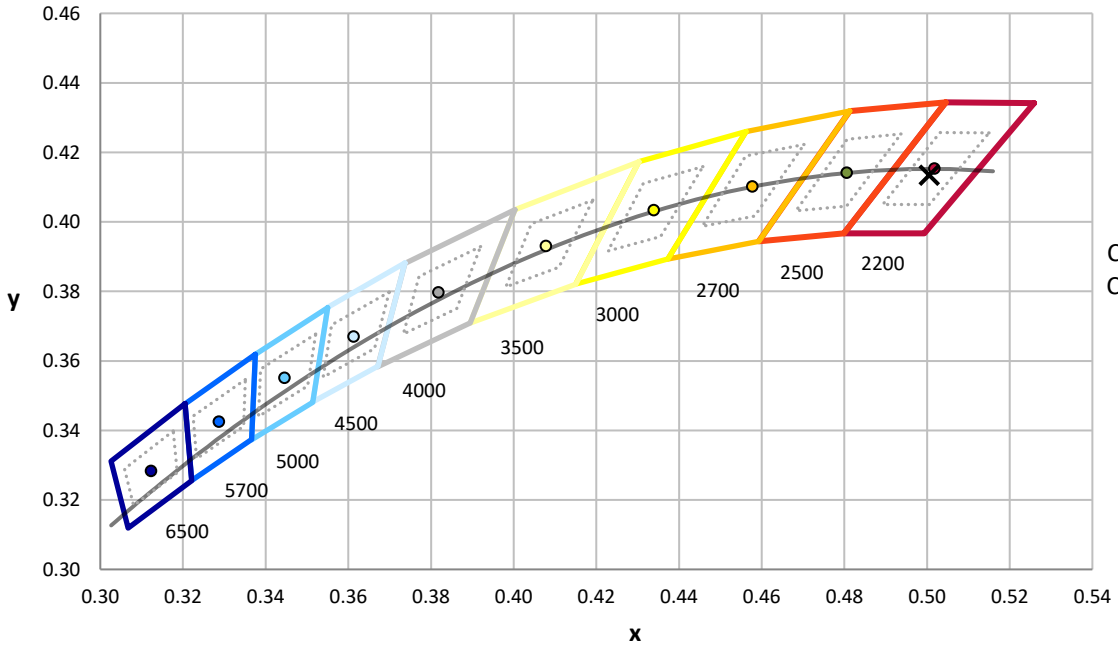
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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

## CIE 1931 Chromaticity Diagram




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



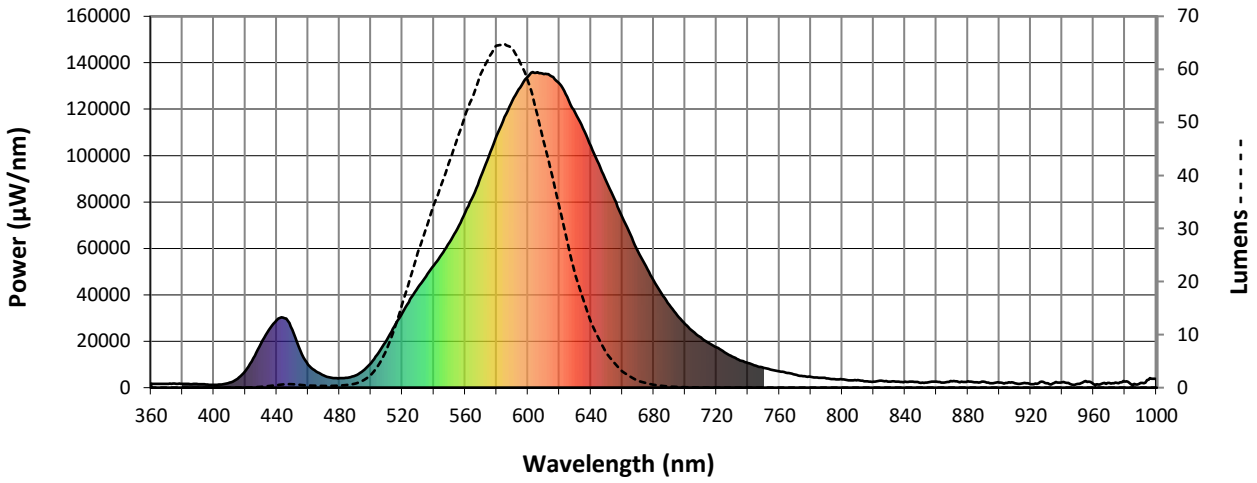

CCT = 2237K
CIE x = 0.5005
CIE y = 0.4134
Duv = -0.0006

Point lies inside the ANSI 2200K 4-step quadrangle

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## Photopic Flux vs. Wavelength



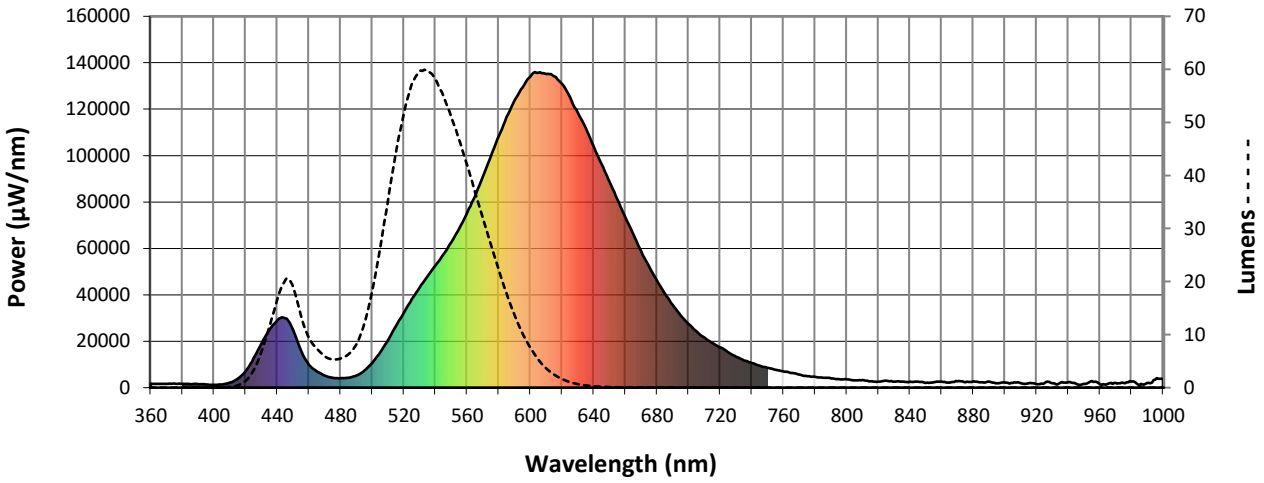

**Photopic Lumens: 5530.5**

| 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



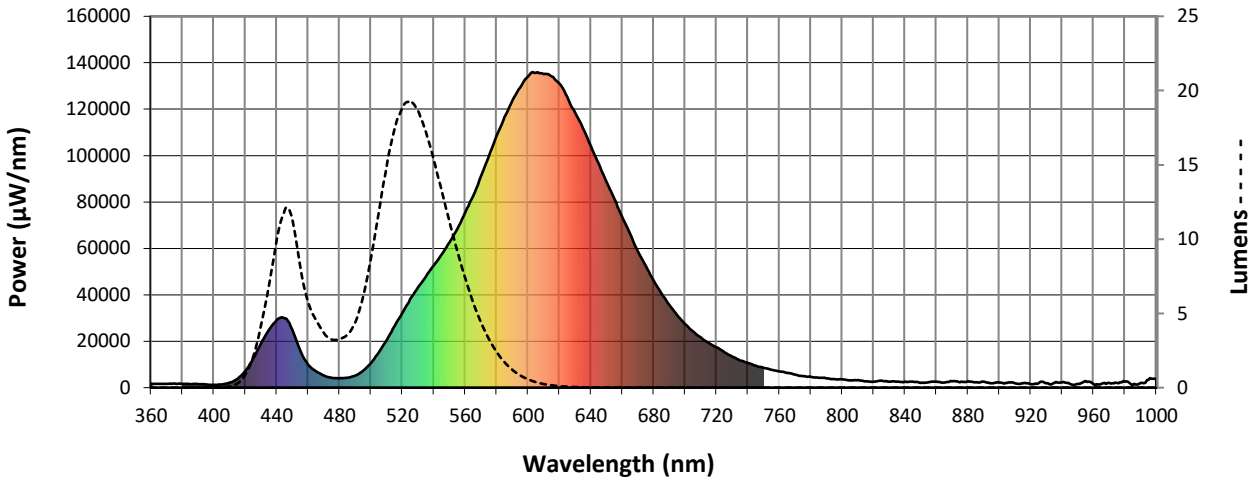

**Scotopic Lumens: 4696.9** **S/P: 0.85**

| 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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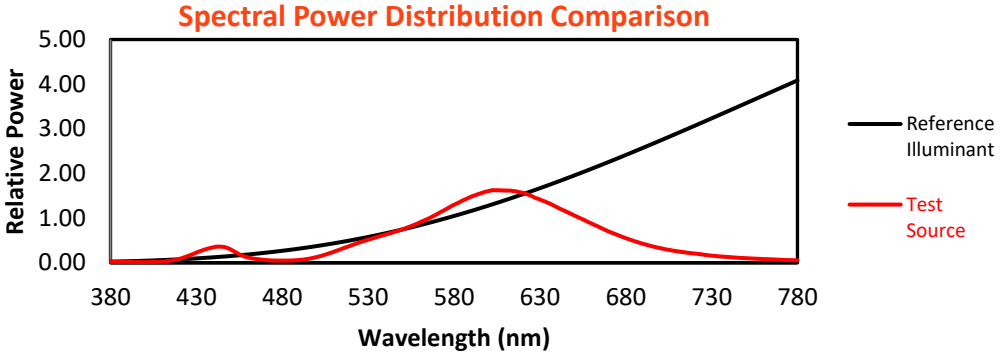
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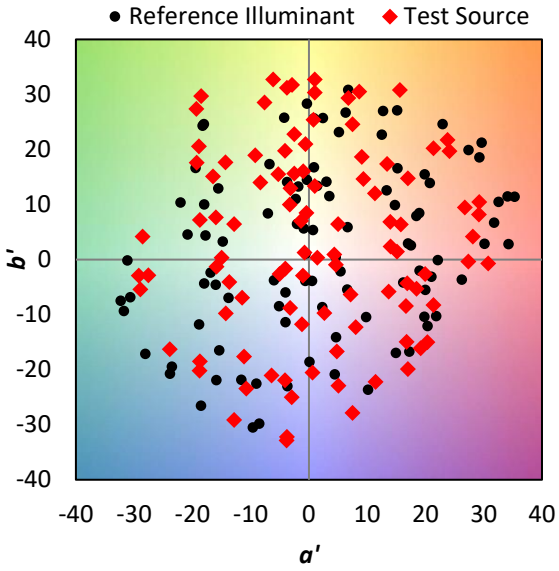
## Summary

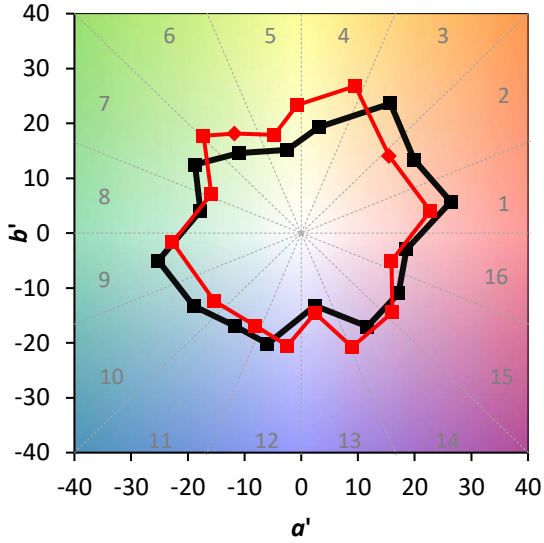
$R_f$ = 69.8
$R_g$ = 99.2
CIE $R_a$ = 72.0
$R_9$ = -17.4

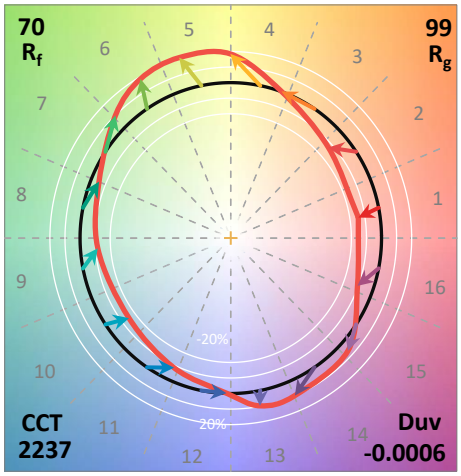
## Spectral Power Distribution Comparison

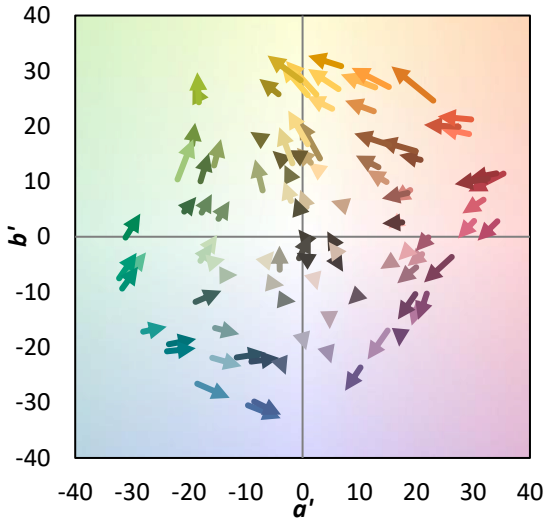



## Color Vector Graphics



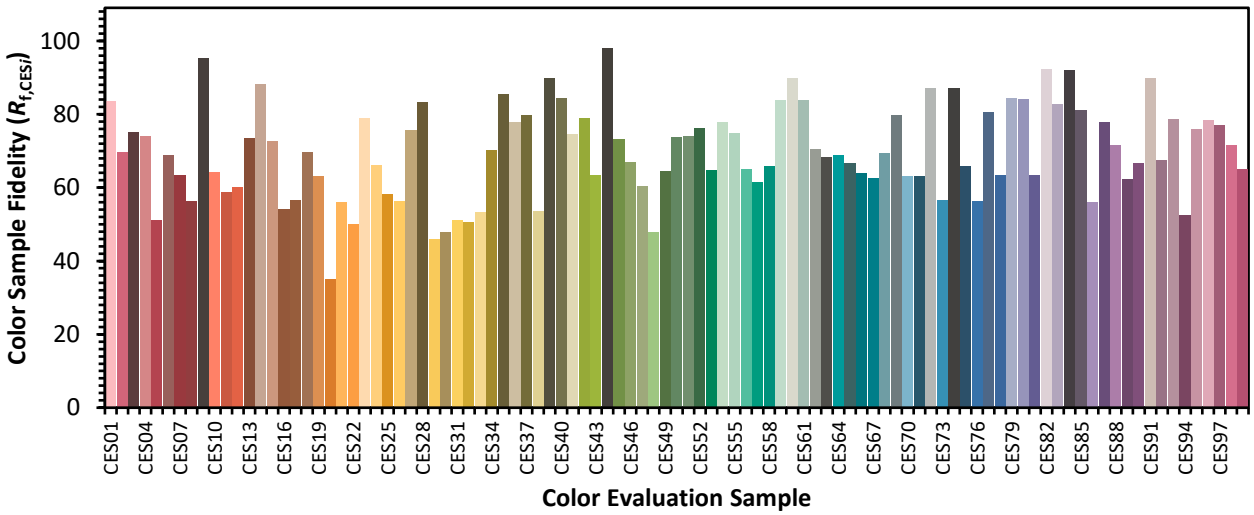
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Peachtree City, GA 30269

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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 | |

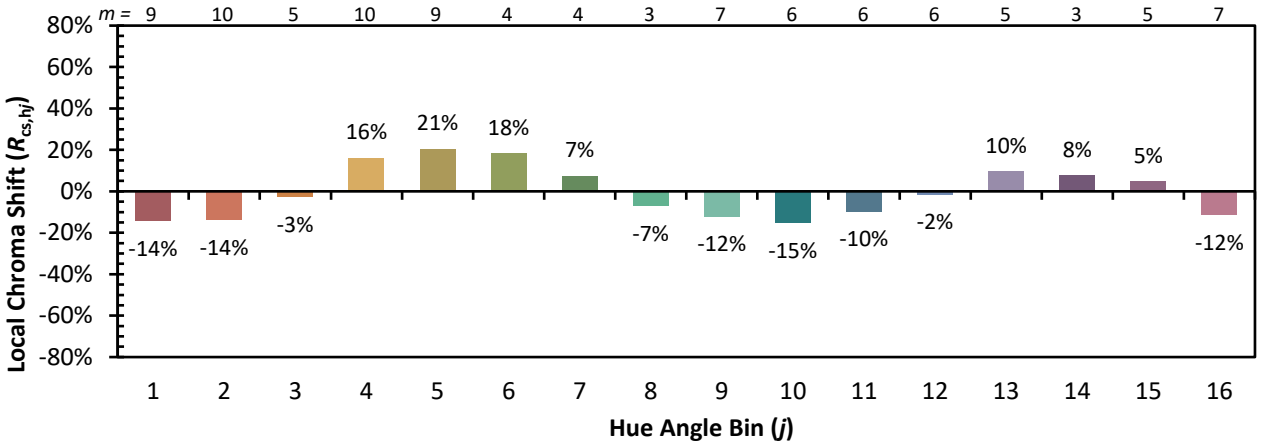


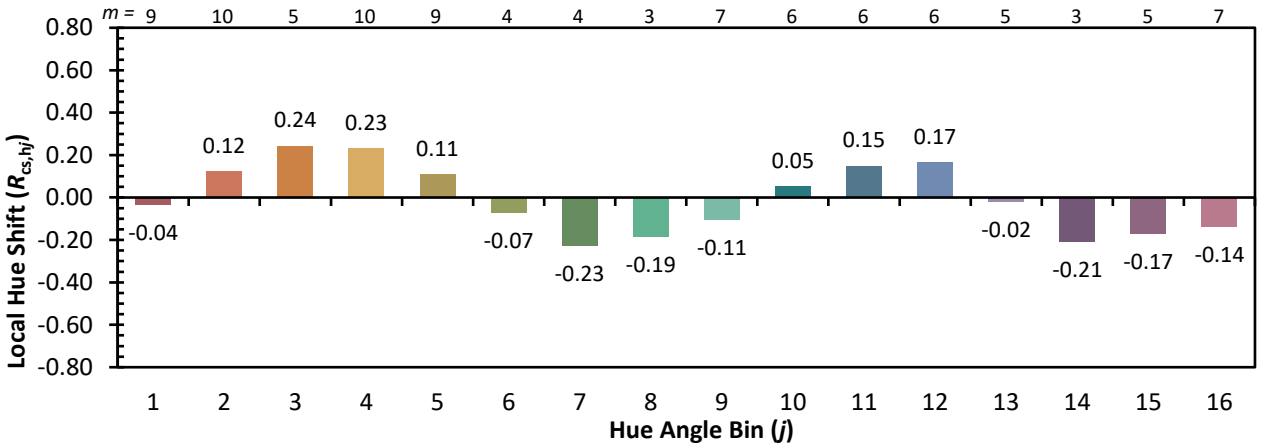
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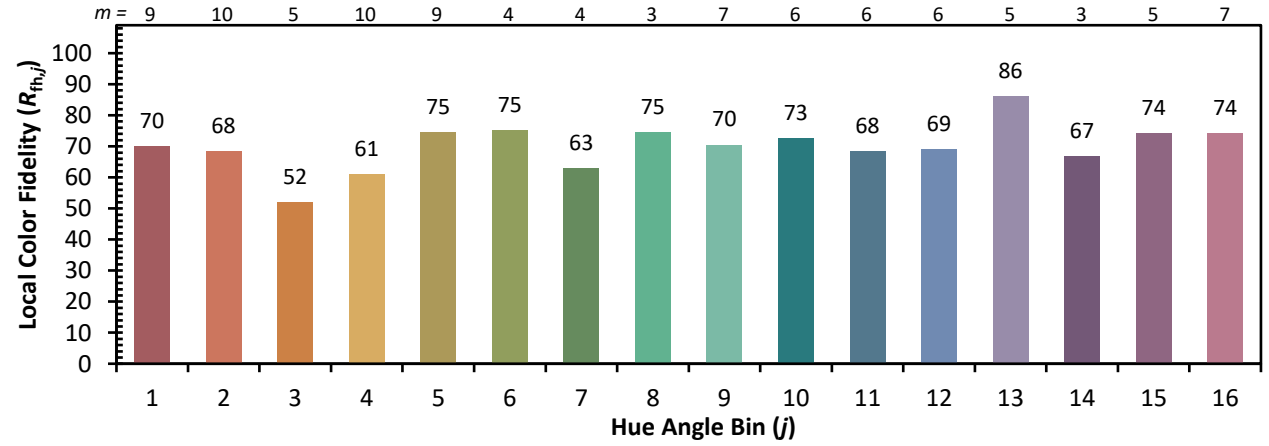
REPORT NUMBER: SP1-1908-441-10-R4

## TM-30-18

### Color Rendition by Hue-Angle Bin



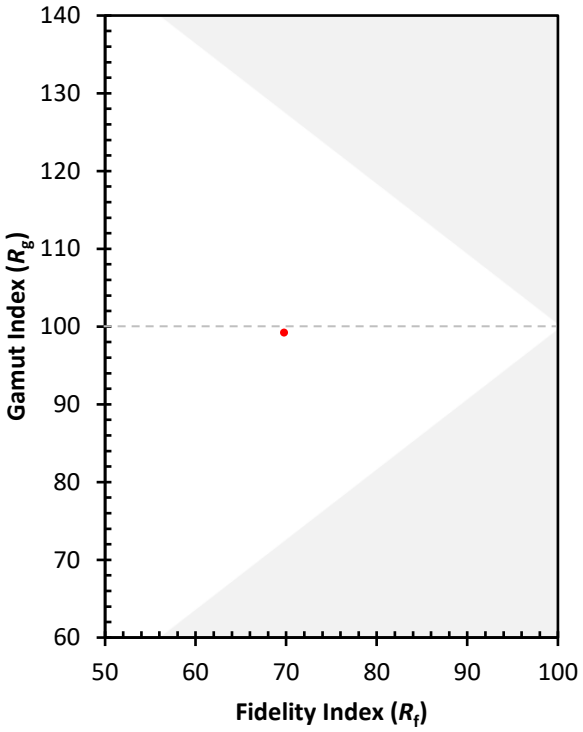



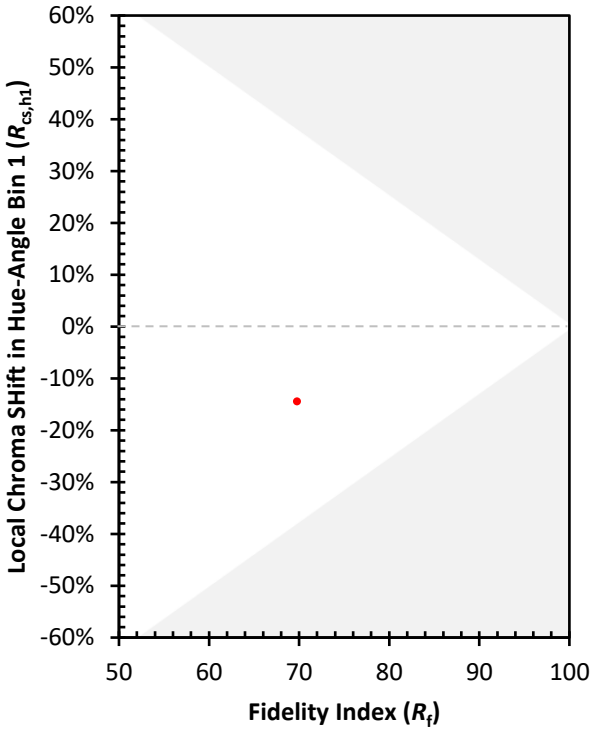
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### Measure Comparisons




(END OF REPORT)