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: P1197744

Luminaire Tested: GPC-SB1B-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: | P1197744 |
| | 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-SB1B-722-U-T2R |
| Description: | GALLEON PEDESTRIAN LUMINAIRE |
| | (1) 70 CRI, 2200K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE II ROADWAY OPTICS |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 4764 lumens |
| Efficiency: | N/A |
| Efficacy: | 119.7 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B1 - U0 - G1 |

| | |
|---|---|
| Input Watts (W): | 39.8 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.33 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.996 |
| Total Harmonic Distortion (THDi): | 5.305 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

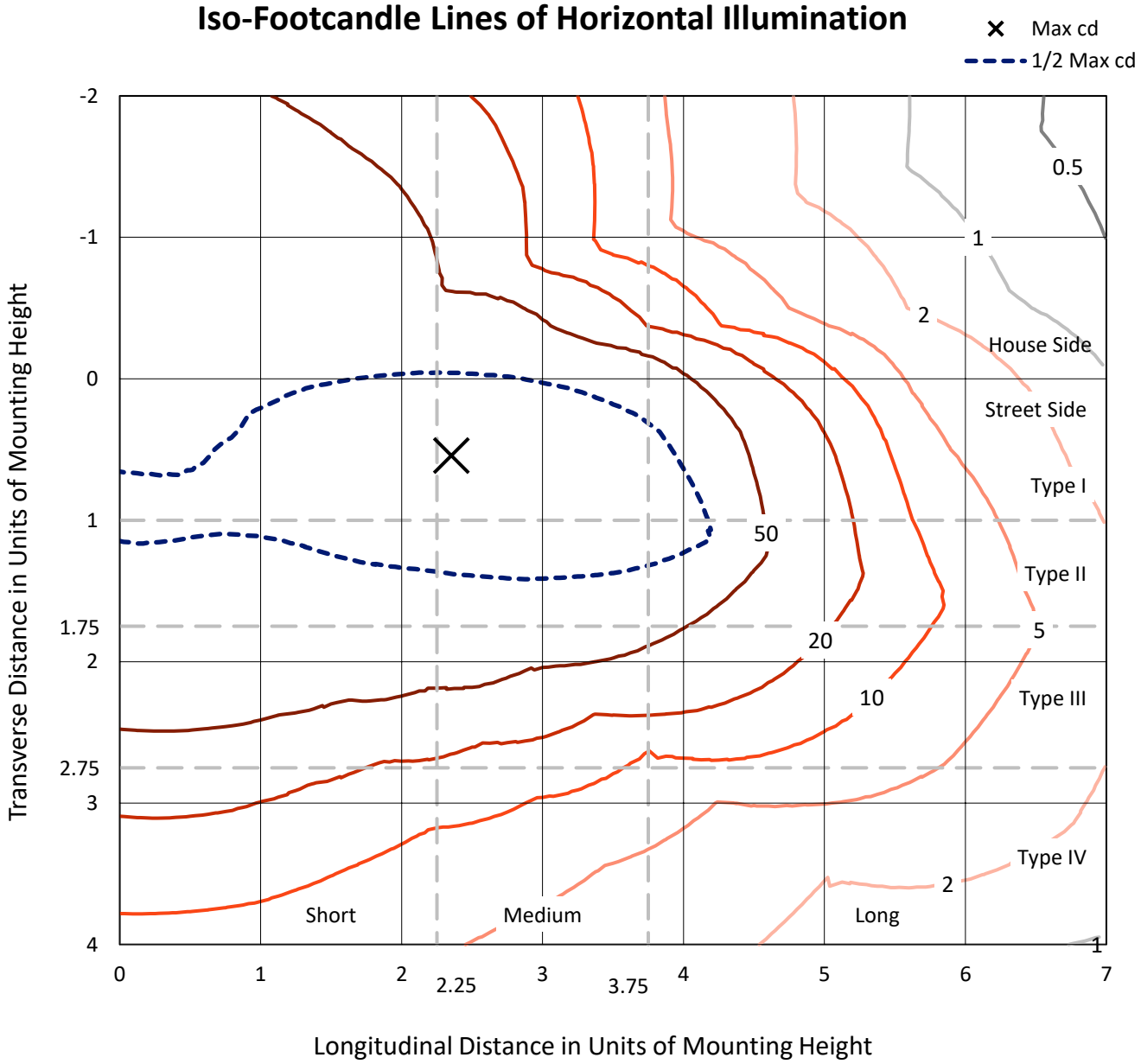


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Scaled Data Report

REPORT NUMBER: P1197744
CATALOG NUMBER: GPC-SB1B-722-U-T2R

## Iso-Footcandle Lines of Horizontal Illumination




Longitudinal Distance in Units of Mounting Height

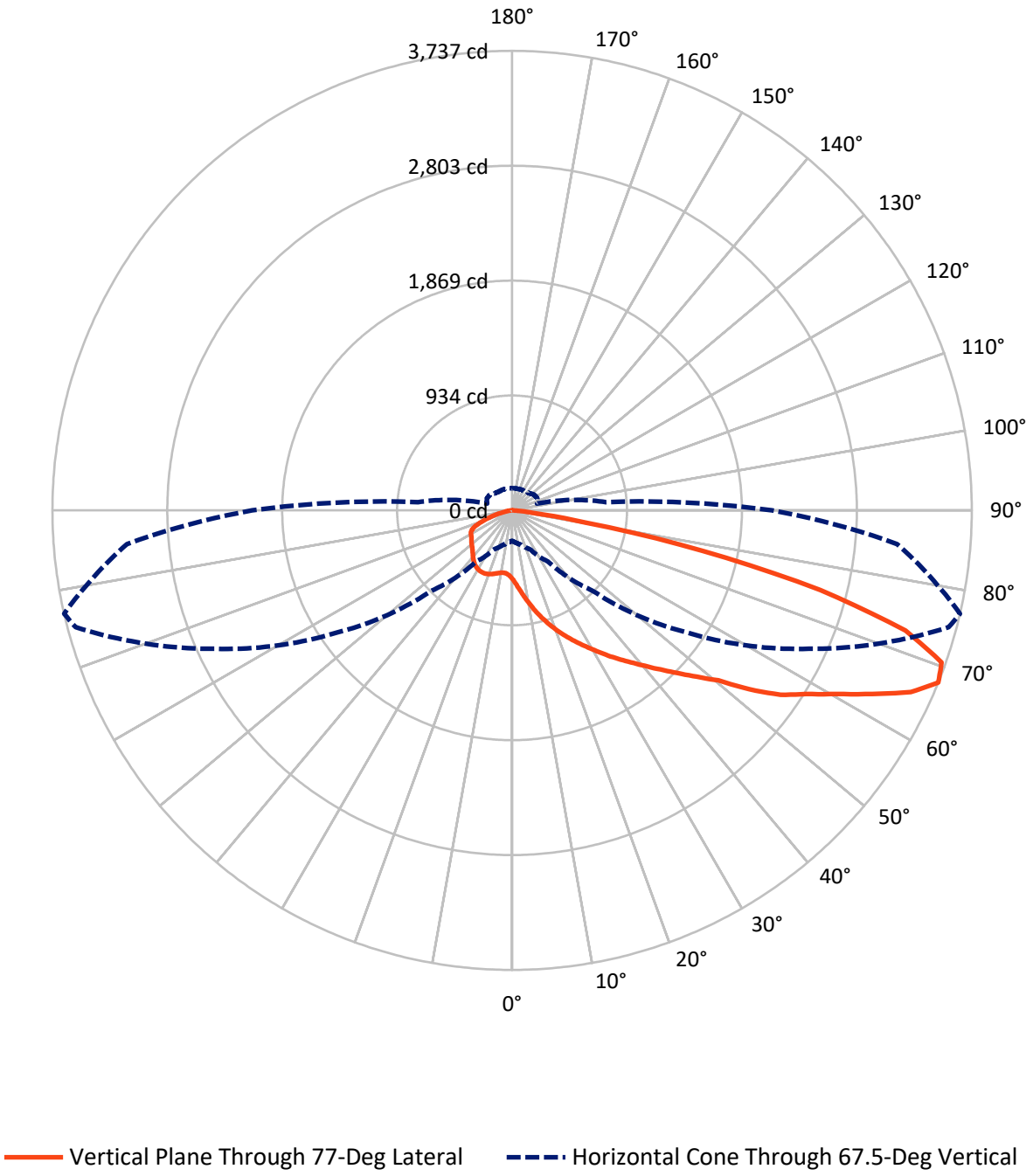
Based on 0.5 foot mounting height. Maximum calculated value = 4364.4 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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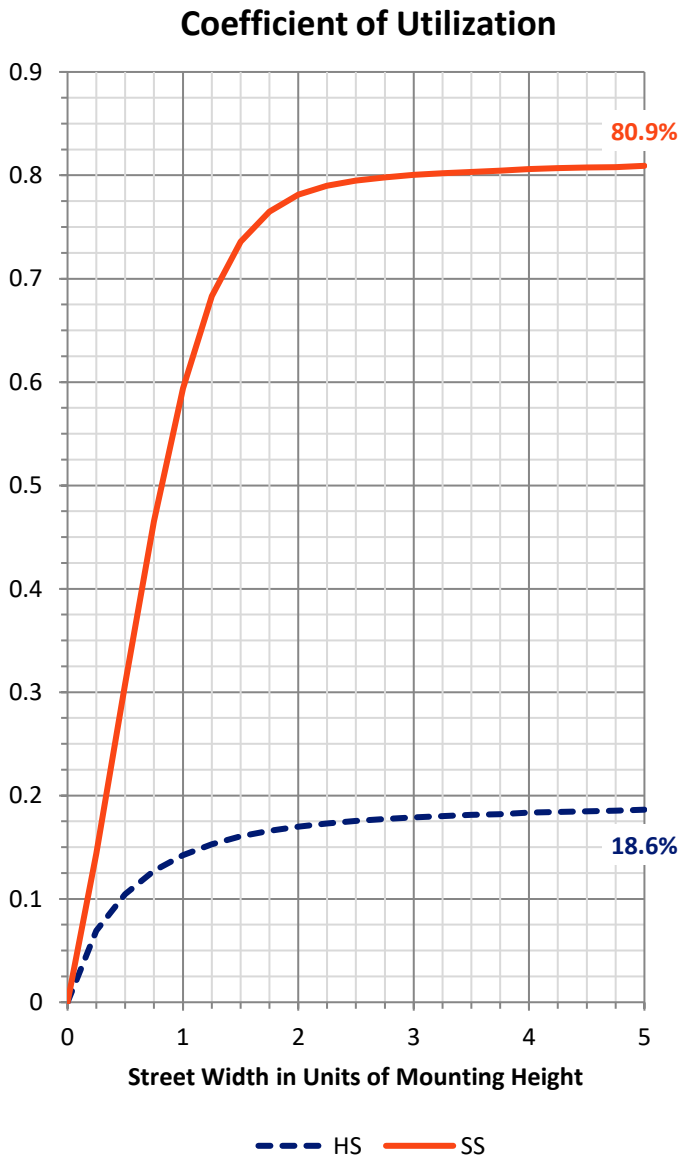
REPORT NUMBER: P1197744
CATALOG NUMBER: GPC-SB1B-722-U-T2R

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 901.2 | 0.0 | 901.2 |
| | % Fixture | 18.9 | 0.0 | 18.9 |
| **Street Side** | Lumens | 3862.9 | 0.0 | 3862.9 |
| | % Fixture | 81.1 | 0.0 | 81.1 |
| **Total** | Lumens | 4764.0 | 0.0 | 4764.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 59.9 | 1.3 |
| 10°-20° | 215.2 | 4.5 |
| 20°-30° | 406.4 | 8.5 |
| 30°-40° | 654.7 | 13.7 |
| 40°-50° | 895.5 | 18.8 |
| 50°-60° | 1010.2 | 21.2 |
| 60°-70° | 942.9 | 19.8 |
| 70°-80° | 516.8 | 10.8 |
| 80°-90° | 62.3 | 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° | 4764.0 | 100.0 |
| 0°-180° | 4764.0 | 100.0 |



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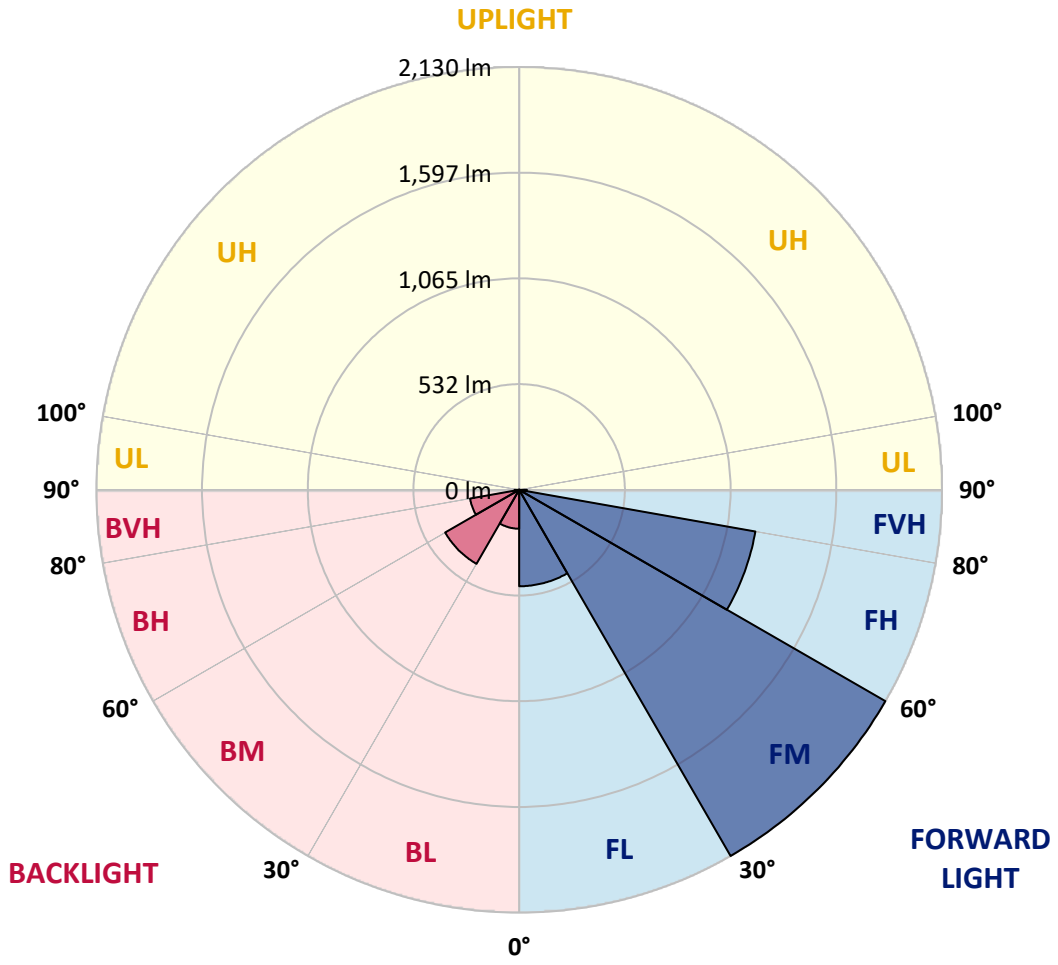
Scaled Data Report

REPORT NUMBER: P1197744
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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°) | 485.6 | 10.2 | | | |
| FM | (30°-60°) | 2129.9 | 44.7 | | | |
| FH | (60°-80°) | 1208.3 | 25.4 | | | G1/1800 |
| FVH | (80°-90°) | 39.0 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 195.9 | 4.1 | B1/500 | | |
| BM | (30°-60°) | 430.5 | 9.0 | B1/1000 | | |
| BH | (60°-80°) | 251.4 | 5.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 23.4 | 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-G1**
Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | *559.0* | 559.0 |
| 2.5° | 699.9 | 704.8 | 698.6 | 698.6 | 678.0 | 667.2 | 646.5 | 630.8 | 602.5 | *597.6* | 578.9 |
| 5° | 827.3 | 833.4 | 824.8 | 821.1 | 796.8 | 774.4 | 739.7 | 705.5 | 655.1 | *650.0* | 605.9 |
| 7.5° | 925.9 | 933.7 | 926.1 | 922.2 | 900.5 | 875.5 | 834.9 | 787.2 | 716.1 | *706.0* | 642.3 |
| 10° | 1006.3 | 1007.5 | 1005.1 | 1006.5 | 989.6 | 968.9 | 927.3 | 871.8 | 783.0 | *769.2* | 686.3 |
| 12.5° | 1051.8 | 1057.4 | 1062.4 | 1071.2 | 1068.3 | 1055.5 | 1018.1 | 951.7 | 853.8 | *836.1* | 734.3 |
| 15° | 1073.2 | 1083.0 | 1094.1 | 1114.5 | 1131.0 | 1134.2 | 1105.6 | 1037.5 | 925.9 | *904.5* | 782.7 |
| 17.5° | 1080.8 | 1090.1 | 1107.6 | 1137.1 | 1172.5 | 1196.4 | 1183.6 | 1120.9 | 997.2 | *972.6* | 833.7 |
| 20° | 1119.4 | 1122.1 | 1132.7 | 1160.7 | 1199.1 | 1238.7 | 1248.3 | 1201.0 | 1067.8 | *1040.0* | 886.3 |
| 22.5° | 1202.0 | 1196.6 | 1199.6 | 1212.4 | 1239.9 | 1278.3 | 1300.2 | 1271.9 | 1140.3 | *1108.3* | 939.4 |
| 25° | 1338.5 | 1322.8 | 1307.0 | 1292.3 | 1306.3 | 1327.9 | 1352.8 | 1342.7 | 1216.3 | *1175.7* | 993.0 |
| 27.5° | 1510.9 | 1491.7 | 1457.0 | 1408.6 | 1391.6 | 1399.3 | 1410.3 | 1408.4 | 1286.6 | *1245.6* | 1048.3 |
| 30° | 1680.6 | 1658.2 | 1616.9 | 1546.8 | 1502.0 | 1481.9 | 1473.5 | 1467.9 | 1363.1 | *1319.3* | 1104.2 |
| 32.5° | 1816.1 | 1798.4 | 1757.8 | 1679.4 | 1614.4 | 1580.0 | 1552.2 | 1532.1 | 1443.0 | *1399.3* | 1163.2 |
| 35° | 1934.6 | 1918.1 | 1871.7 | 1786.1 | 1715.5 | 1678.9 | 1642.5 | 1599.4 | 1526.1 | *1481.9* | 1226.6 |
| 37.5° | 2042.8 | 2026.3 | 1962.6 | 1873.6 | 1802.6 | 1777.2 | 1744.8 | 1671.7 | 1609.5 | *1567.7* | 1293.8 |
| 40° | 2111.2 | 2107.5 | 2048.0 | 1947.2 | 1873.4 | 1860.8 | 1850.0 | 1755.6 | 1702.0 | *1663.1* | 1367.5 |
| 42.5° | 2128.6 | 2136.8 | 2089.5 | 2006.7 | 1936.3 | 1926.3 | 1951.6 | 1850.5 | 1805.8 | *1768.6* | 1451.1 |
| 45° | 2086.6 | 2110.0 | 2079.0 | 2022.7 | 1981.1 | 1975.7 | 2041.6 | 1954.3 | 1920.6 | *1886.7* | 1552.0 |
| 47.5° | 1980.1 | 2019.7 | 2006.9 | 1999.0 | 1993.1 | 2016.5 | 2120.8 | 2064.5 | 2050.7 | *2021.2* | 1667.1 |
| 50° | 1765.2 | 1840.2 | 1862.6 | 1912.2 | 1969.3 | 2048.2 | 2192.8 | 2184.7 | 2202.7 | *2172.9* | 1807.2 |
| 52.5° | 1393.6 | 1496.9 | 1626.7 | 1751.2 | 1896.0 | 2037.7 | 2272.0 | 2357.3 | 2433.1 | *2416.9* | 2030.0 |
| 55° | 1150.4 | 1196.9 | 1296.7 | 1524.9 | 1753.9 | 1993.1 | 2307.7 | 2496.8 | 2661.8 | *2647.3* | 2199.0 |
| 57.5° | 963.5 | 1005.1 | 1066.5 | 1257.1 | 1538.9 | 1892.1 | 2329.8 | 2581.9 | 2818.4 | *2817.0* | 2365.7 |
| 60° | 763.1 | 807.1 | 870.0 | 1005.1 | 1287.9 | 1717.5 | 2324.9 | 2678.8 | 3018.4 | *3030.7* | 2569.1 |
| 62.5° | 536.8 | 585.3 | 655.1 | 781.0 | 1031.4 | 1491.2 | 2224.5 | 2748.8 | 3253.7 | *3287.1* | 2813.8 |
| 65° | 352.9 | 384.9 | 437.5 | 546.2 | 768.5 | 1200.3 | 2033.0 | 2757.9 | 3505.5 | *3562.1* | 3043.4 |
| 67.5° | *247.4* | *259.7* | *290.7* | *349.7* | *506.6* | *920.5* | *1727.8* | *2663.8* | *3673.5* | *3737.2* | *3143.0* |
| 70° | 193.0 | 199.2 | 214.9 | 238.5 | 318.2 | 619.0 | 1324.0 | 2418.8 | 3637.6 | *3704.0* | 3039.0 |
| 72.5° | 166.7 | 172.6 | 178.5 | 181.5 | 213.5 | 382.2 | 896.9 | 2022.4 | 3299.4 | *3344.4* | 2642.4 |
| 75° | 151.2 | 152.7 | 157.6 | 156.6 | 162.8 | 247.9 | 517.7 | 1473.5 | 2603.3 | *2587.8* | 1950.6 |
| 77.5° | 127.1 | 129.1 | 137.2 | 136.0 | 144.6 | 169.4 | 268.8 | 951.0 | 1687.7 | *1582.5* | 1085.7 |
| 80° | 107.7 | 108.7 | 117.5 | 116.1 | 125.7 | 122.7 | 137.2 | 484.7 | 715.9 | *606.4* | 313.1 |
| 82.5° | 37.4 | 46.2 | 89.8 | 92.5 | 95.9 | 74.3 | 79.2 | 197.7 | 218.6 | *167.5* | 65.7 |
| 85° | 18.2 | 19.4 | 45.7 | 64.9 | 64.7 | 37.4 | 38.6 | 70.6 | 68.9 | *54.1* | 21.9 |
| 87.5° | 3.0 | 3.7 | 5.4 | 25.3 | 20.2 | 9.8 | 13.3 | 13.8 | 14.3 | *12.3* | 4.9 |
| 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: P1197744
CATALOG NUMBER: GPC-SB1B-722-U-T2R

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 | 559.0 |
| 2.5° | 565.1 | 552.8 | 527.0 | 503.1 | 484.5 | 466.5 | 456.4 | 447.8 | 442.9 | 441.9 | 441.9 |
| 5° | 580.4 | 555.0 | 508.1 | 468.5 | 442.6 | 423.5 | 413.4 | 407.0 | 403.8 | 401.8 | 401.6 |
| 7.5° | 602.2 | 565.1 | 498.2 | 453.2 | 426.2 | 412.4 | 407.2 | 406.3 | 406.0 | 406.3 | 407.0 |
| 10° | 632.5 | 581.6 | 497.2 | 449.5 | 426.9 | 419.3 | 419.0 | 419.3 | 420.3 | 420.5 | 420.8 |
| 12.5° | 665.2 | 598.6 | 501.2 | 452.7 | 436.3 | 432.1 | 431.3 | 431.1 | 431.8 | 432.3 | 432.6 |
| 15° | 700.9 | 620.9 | 507.8 | 459.6 | 446.6 | 442.2 | 441.4 | 439.9 | 439.7 | 439.5 | 439.2 |
| 17.5° | 737.5 | 643.1 | 515.2 | 467.0 | 453.2 | 447.1 | 444.4 | 440.9 | 438.2 | 437.5 | 438.2 |
| 20° | 774.6 | 665.0 | 520.4 | 470.7 | 453.7 | 445.1 | 439.7 | 433.8 | 429.1 | 426.4 | 427.4 |
| 22.5° | 814.2 | 687.8 | 523.6 | 469.7 | 449.3 | 437.5 | 427.6 | 420.8 | 413.6 | 409.0 | 409.2 |
| 25° | 852.8 | 707.7 | 523.3 | 464.5 | 440.7 | 425.7 | 413.1 | 404.3 | 394.4 | 389.5 | 389.5 |
| 27.5° | 890.0 | 725.7 | 517.2 | 455.4 | 428.4 | 411.7 | 396.7 | 386.1 | 376.5 | 371.8 | 371.6 |
| 30° | 928.3 | 740.7 | 507.6 | 442.2 | 413.9 | 395.4 | 379.0 | 369.9 | 361.2 | 356.8 | 356.6 |
| 32.5° | 966.4 | 754.5 | 494.0 | 425.7 | 397.2 | 379.4 | 363.2 | 354.9 | 349.7 | 349.7 | 349.9 |
| 35° | 1006.8 | 764.1 | 476.1 | 406.5 | 379.4 | 362.5 | 349.7 | 344.8 | 344.3 | 341.3 | 340.6 |
| 37.5° | 1049.3 | 770.2 | 454.2 | 386.8 | 362.0 | 346.0 | 342.1 | 336.2 | 331.2 | 324.9 | 323.9 |
| 40° | 1094.1 | 776.4 | 427.9 | 366.4 | 343.5 | 334.7 | 333.0 | 325.1 | 311.1 | 295.3 | 293.1 |
| 42.5° | 1148.4 | 780.5 | 400.6 | 346.0 | 324.1 | 321.2 | 323.6 | 310.1 | 287.7 | 275.9 | 276.2 |
| 45° | 1211.4 | 787.4 | 375.5 | 325.8 | 304.2 | 304.2 | 314.5 | 296.8 | 278.4 | 271.0 | 272.2 |
| 47.5° | 1293.0 | 803.4 | 352.2 | 303.7 | 285.8 | 290.7 | 294.4 | 280.8 | 270.5 | 261.4 | 261.2 |
| 50° | 1411.1 | 841.8 | 328.1 | 281.3 | 271.7 | 281.6 | 276.4 | 268.5 | 256.5 | 249.1 | 248.4 |
| 52.5° | 1557.6 | 864.4 | 306.7 | 261.2 | 259.7 | 269.5 | 262.1 | 254.8 | 245.7 | 235.8 | 233.9 |
| 55° | 1657.5 | 868.6 | 288.7 | 246.4 | 251.6 | 250.6 | 247.9 | 241.2 | 236.3 | 223.3 | 223.5 |
| 57.5° | 1769.1 | 876.9 | 273.9 | 237.6 | 246.4 | 235.6 | 234.6 | 228.9 | 222.6 | 213.7 | 210.7 |
| 60° | 1902.6 | 890.0 | 261.2 | 234.1 | 242.0 | 225.8 | 220.8 | 218.6 | 212.2 | 207.8 | 209.0 |
| 62.5° | 2048.2 | 901.8 | 248.1 | 234.6 | 236.8 | 216.2 | 208.8 | 208.0 | 204.1 | 202.6 | 202.6 |
| 65° | 2147.6 | 869.6 | 231.9 | 234.1 | 228.7 | 206.3 | 197.0 | 196.7 | 193.5 | 193.0 | 192.8 |
| 67.5° | *2112.9* | *767.5* | *210.0* | *227.2* | *220.3* | *196.5* | *186.2* | *185.2* | *181.0* | *181.2* | *181.2* |
| 70° | 1939.3 | 621.9 | 179.8 | 210.3 | 210.0 | 187.6 | 174.8 | 171.6 | 166.0 | 167.0 | 168.0 |
| 72.5° | 1613.7 | 460.8 | 139.2 | 182.0 | 193.5 | 179.5 | 161.8 | 156.6 | 149.5 | 150.5 | 150.3 |
| 75° | 1165.4 | 313.3 | 101.3 | 138.5 | 168.5 | 169.9 | 149.0 | 140.2 | 131.6 | 133.0 | 133.5 |
| 77.5° | 596.3 | 177.6 | 74.5 | 95.4 | 132.3 | 154.4 | 137.5 | 125.7 | 123.7 | 137.5 | 135.5 |
| 80° | 194.5 | 89.0 | 51.6 | 66.9 | 86.8 | 126.4 | 120.5 | 107.0 | 106.5 | 109.7 | 94.2 |
| 82.5° | 58.0 | 37.6 | 33.2 | 44.0 | 48.0 | 96.9 | 104.0 | 80.9 | 69.6 | 73.3 | 75.7 |
| 85° | 19.9 | 18.2 | 18.9 | 21.9 | 22.9 | 56.8 | 72.8 | 53.6 | 50.7 | 55.8 | 55.1 |
| 87.5° | 4.7 | 6.4 | 5.4 | 4.9 | 4.9 | 13.8 | 28.3 | 22.4 | 31.0 | 20.7 | 19.9 |
| 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

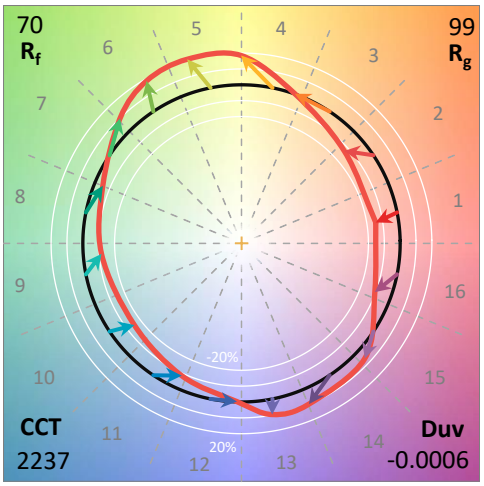
| | |
|---|---|
| Test Method: | LM-79-2008 Report |
| Number: | SP1-1908-441-10-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON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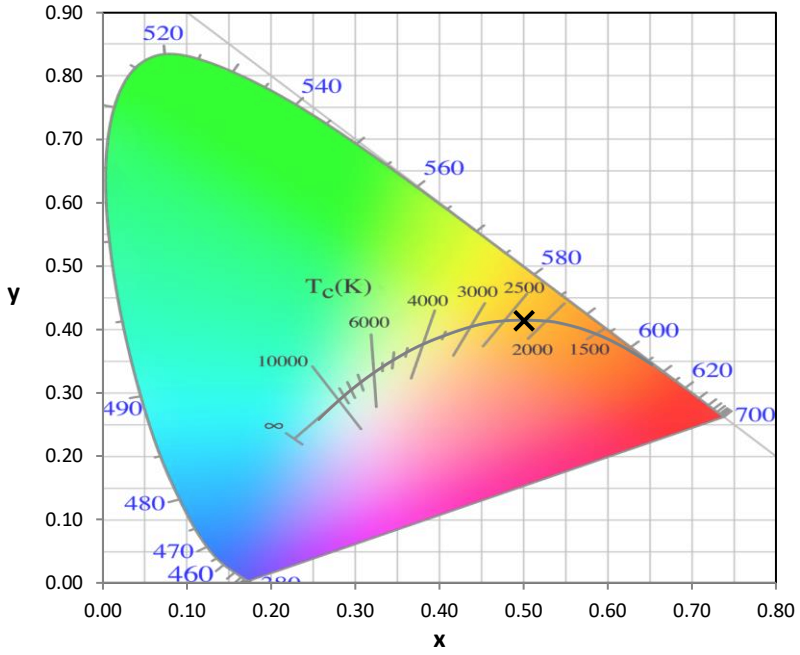
REPORT NUMBER: SP1-1908-441-10-R4

| 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 |

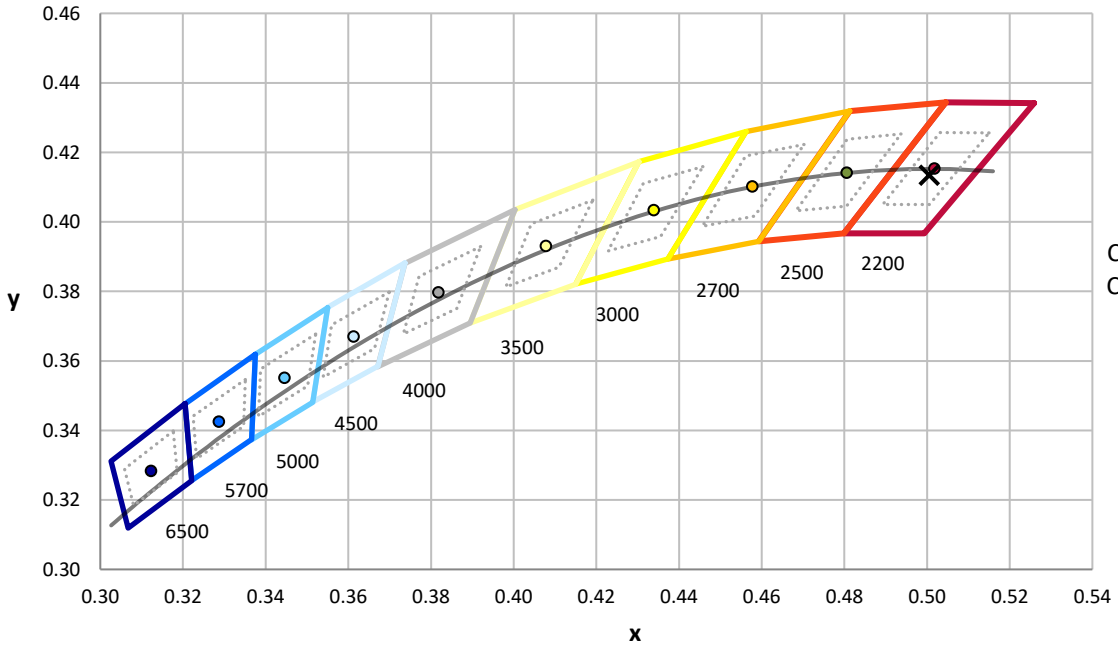
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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

## CIE 1931 Chromaticity Diagram




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



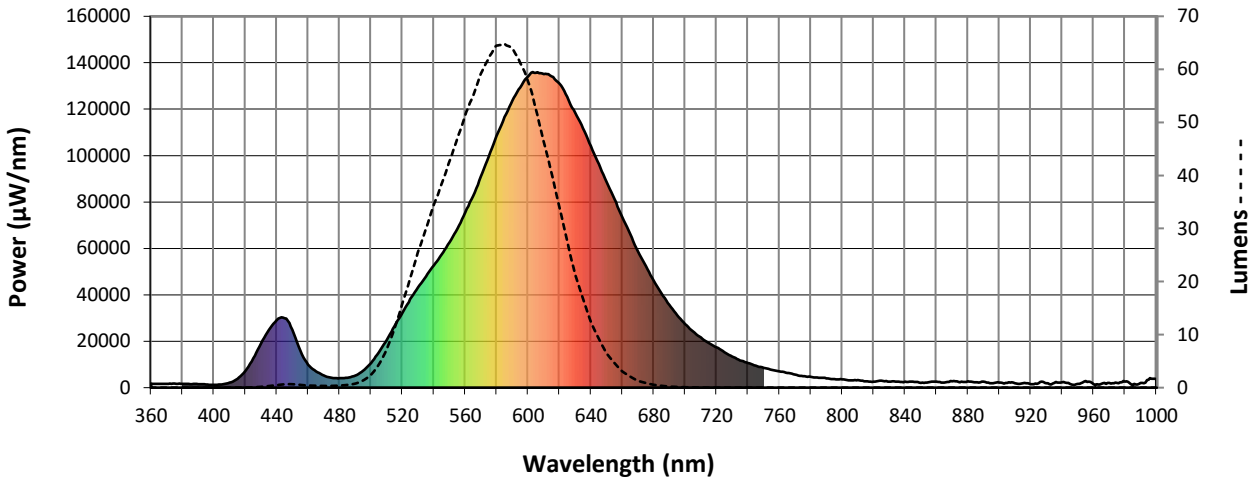

CCT = 2237K
CIE x = 0.5005
CIE y = 0.4134
Duv = -0.0006

Point lies inside the ANSI 2200K 4-step quadrangle

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## Photopic Flux vs. Wavelength



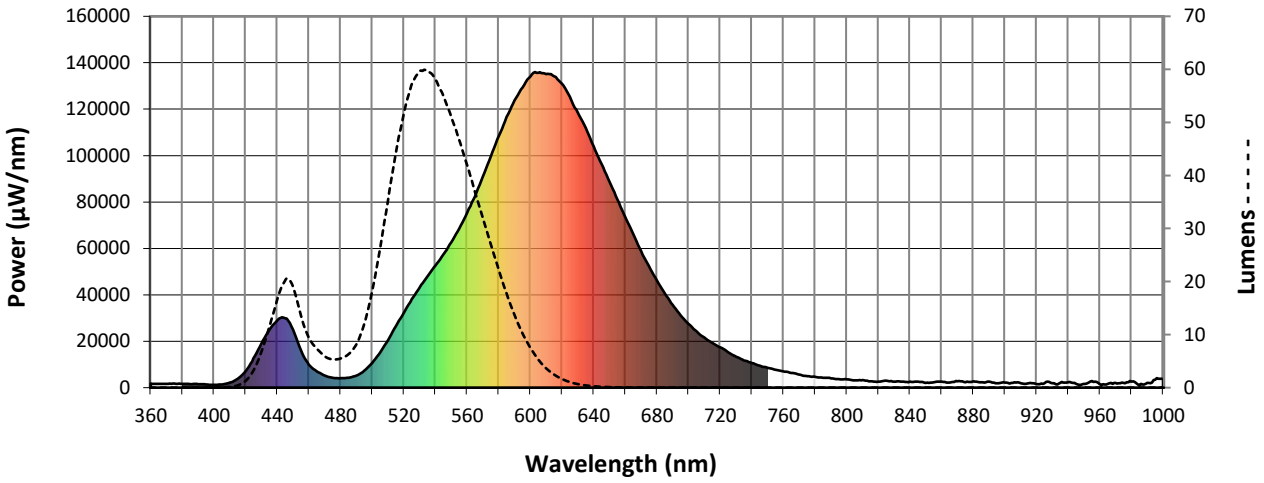

**Photopic Lumens: 5530.5**

| 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



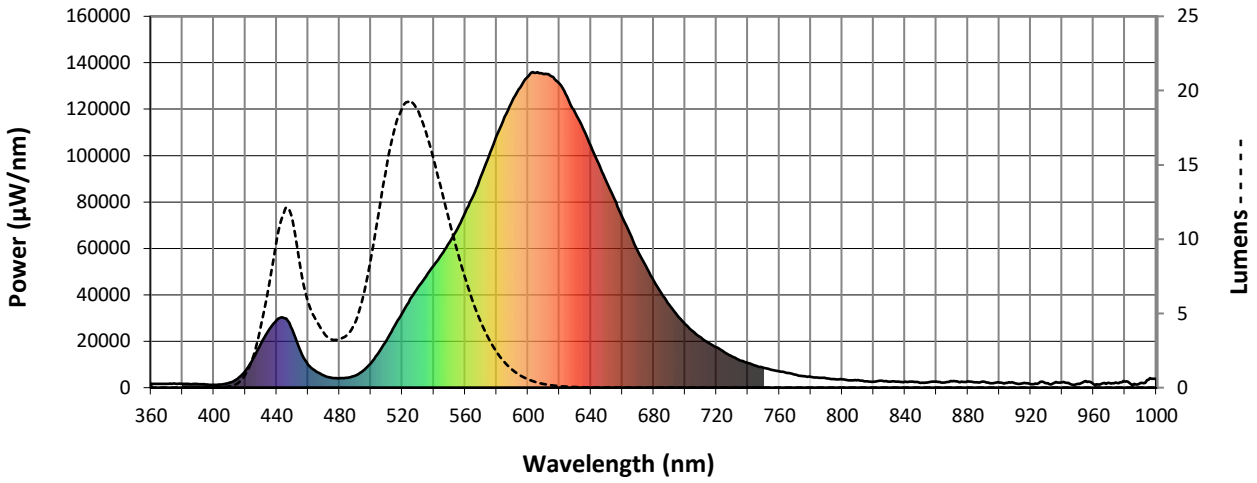

**Scotopic Lumens: 4696.9** **S/P: 0.85**

| 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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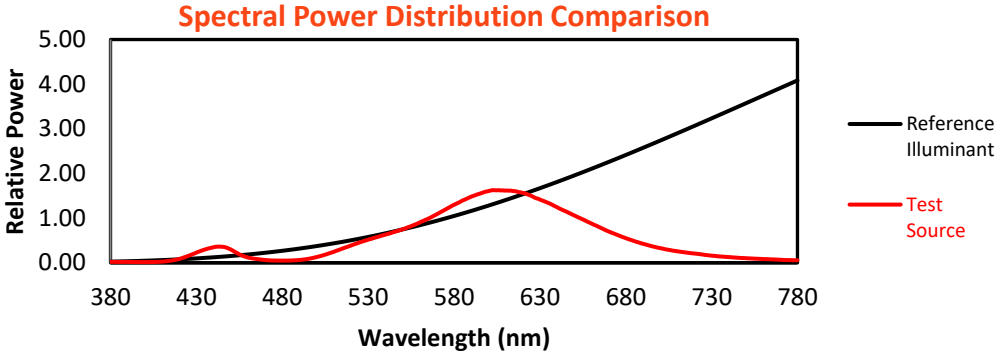
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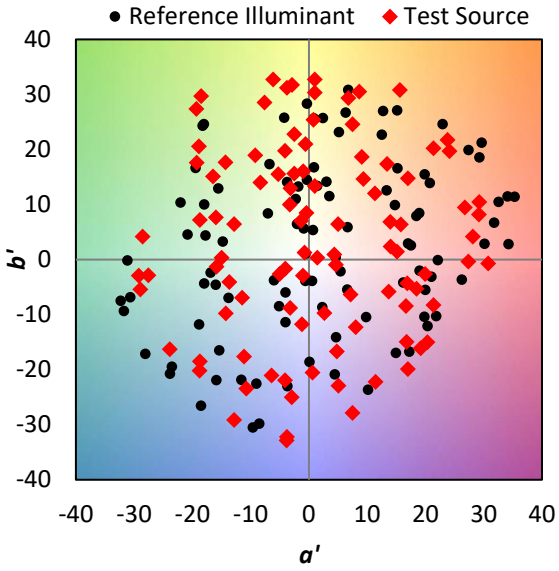
## Summary

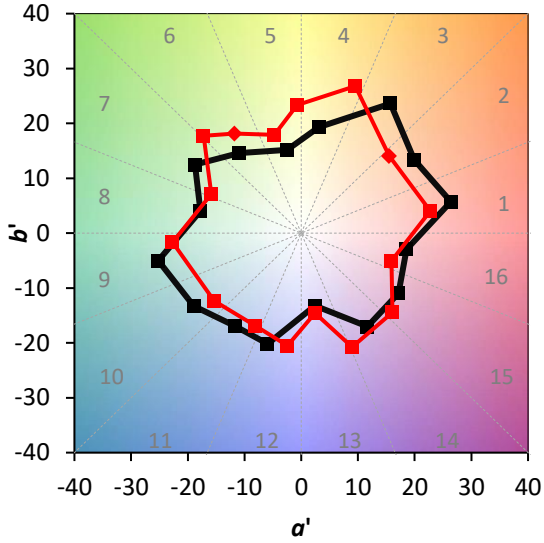
$R_f$ = 69.8
$R_g$ = 99.2
CIE $R_a$ = 72.0
$R_9$ = -17.4

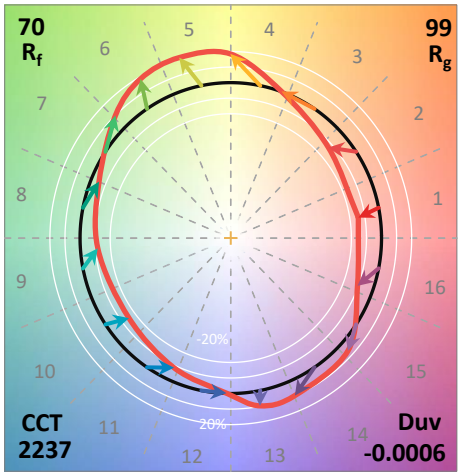
## Spectral Power Distribution Comparison

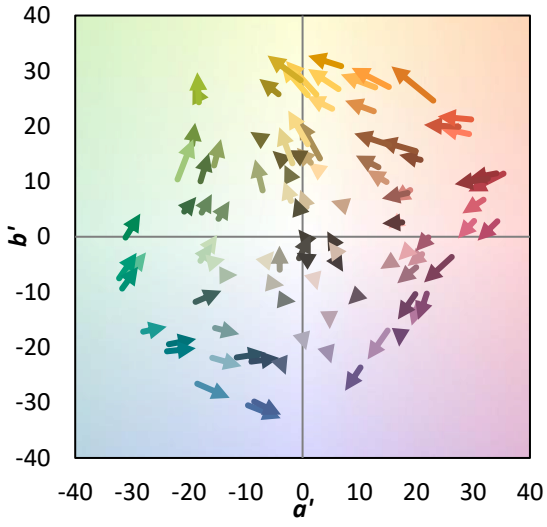



## Color Vector Graphics



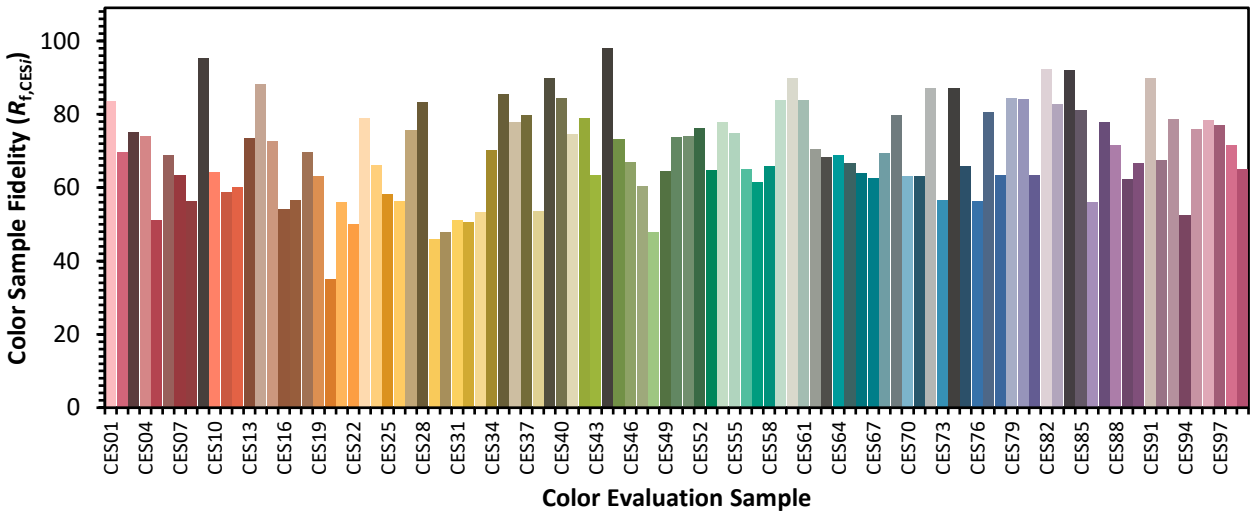
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Peachtree City, GA 30269

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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 | |

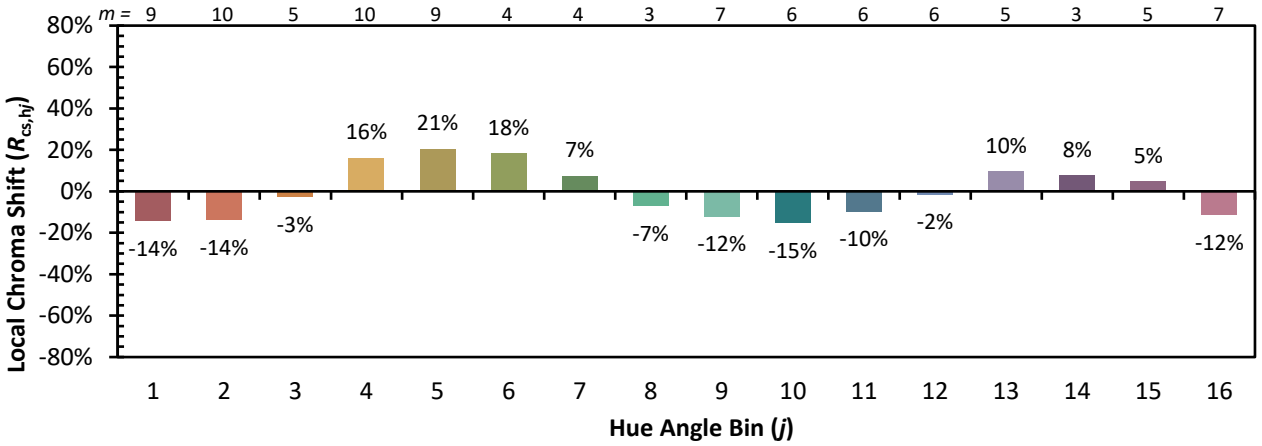


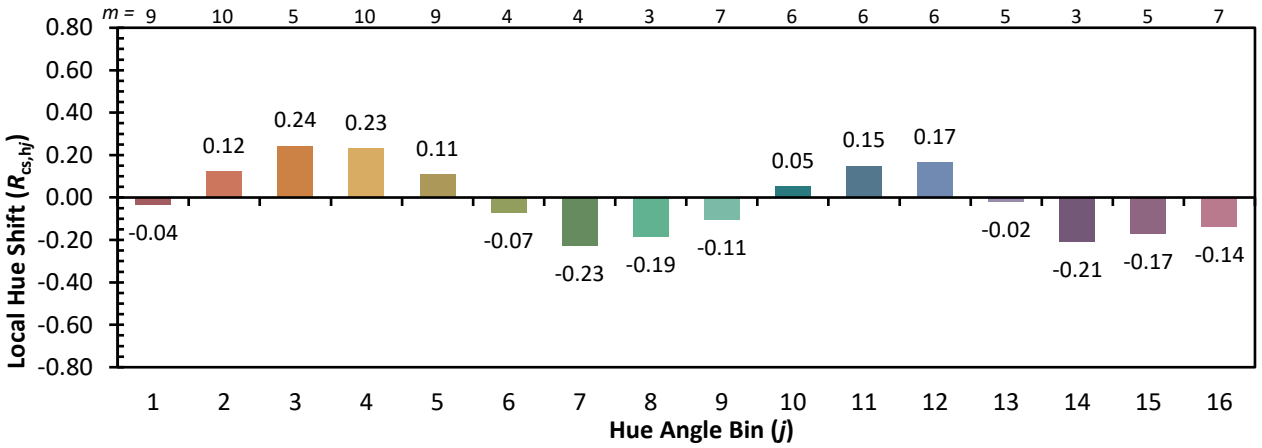
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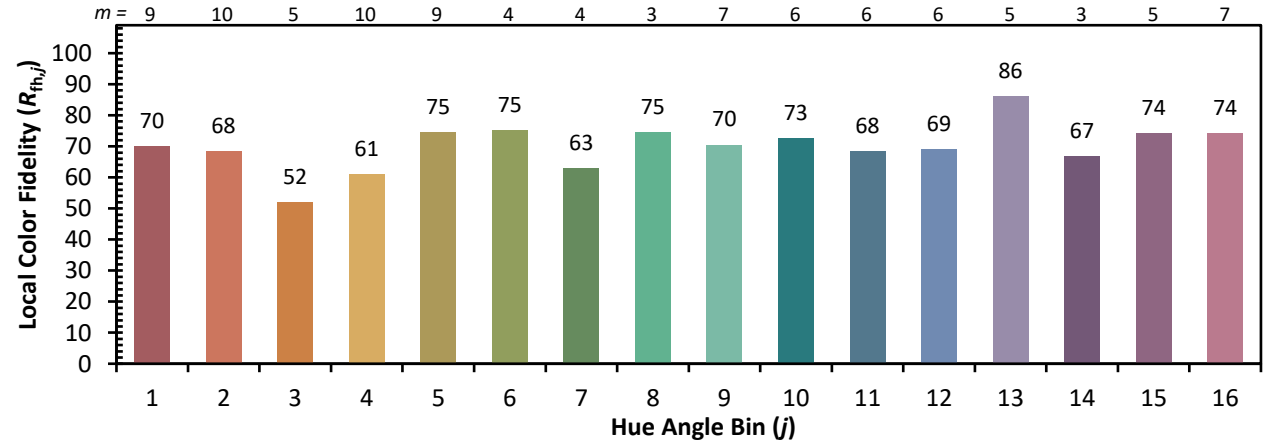
REPORT NUMBER: SP1-1908-441-10-R4

## TM-30-18

### Color Rendition by Hue-Angle Bin



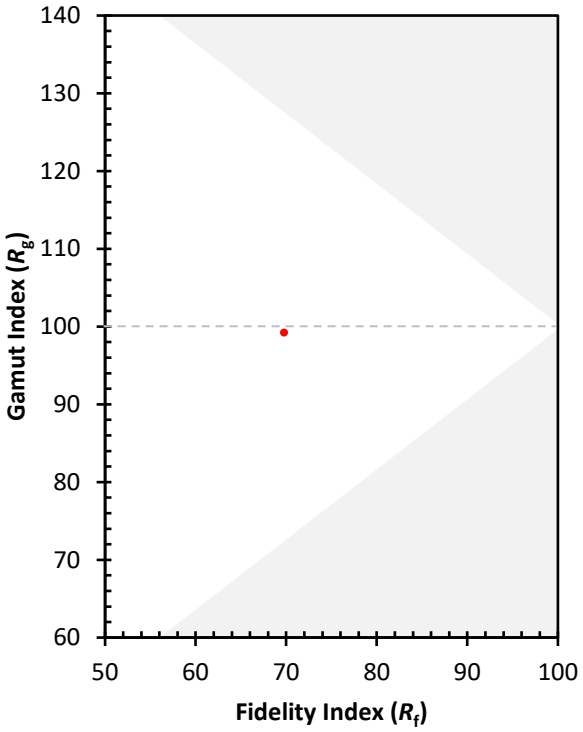



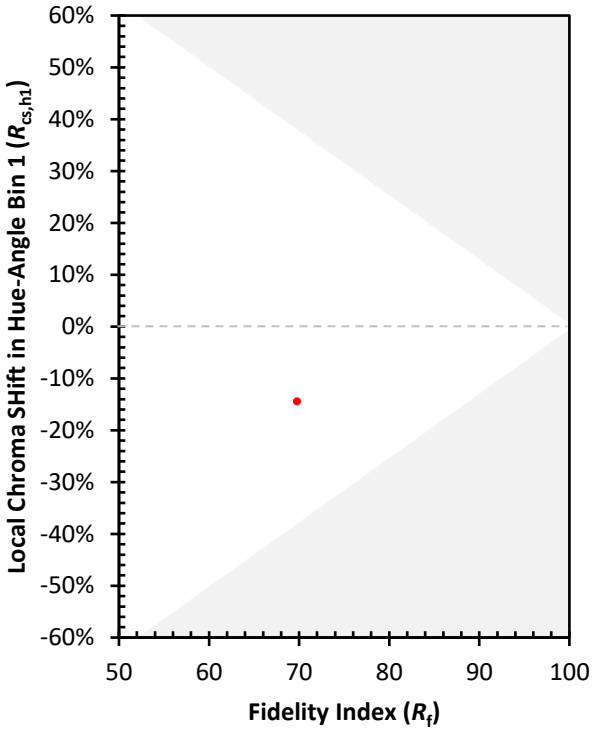
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### Measure Comparisons




(END OF REPORT)