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: P1201813

Luminaire Tested: GWC-SB1C-722-U-SL3

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: | P1201813 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-12) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/14/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GWC-SB1C-722-U-SL3 |
| Description: | GALLEON WALL LUMINAIRE |
| | (1) 70 CRI, 2200K, 615mA LIGHTSQUARE WITH 26 LEDS AND TYPE III SPILL LIGHT ELIMINATOR OPTICS |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 6078 lumens |
| Efficiency: | N/A |
| Efficacy: | 111.7 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Medium |
| BUG Rating: | B1 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 54.4 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.437 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.993 |
| Total Harmonic Distortion (THDi): | 9.314 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

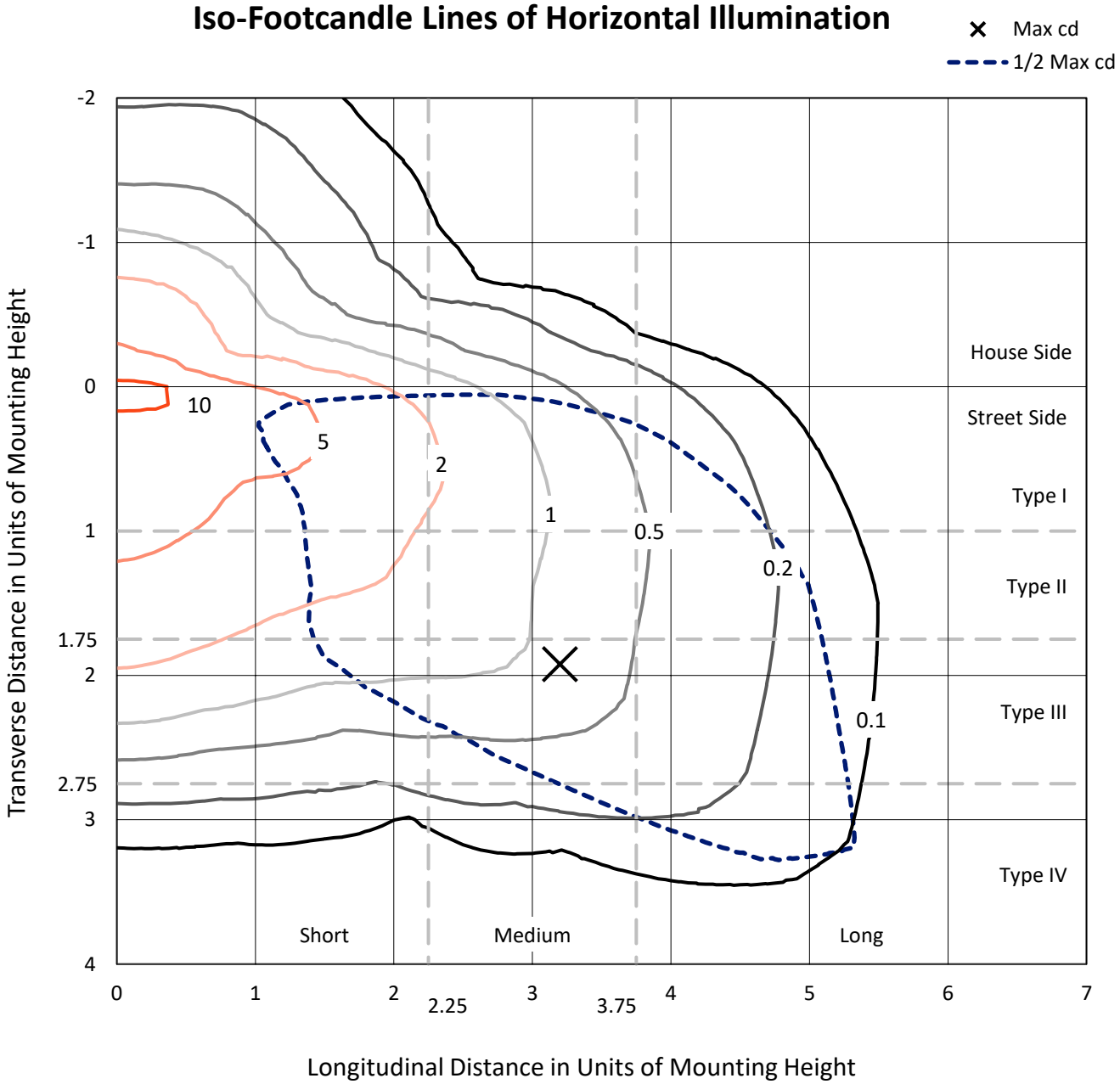


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REPORT NUMBER: P1201813
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## Iso-Footcandle Lines of Horizontal Illumination



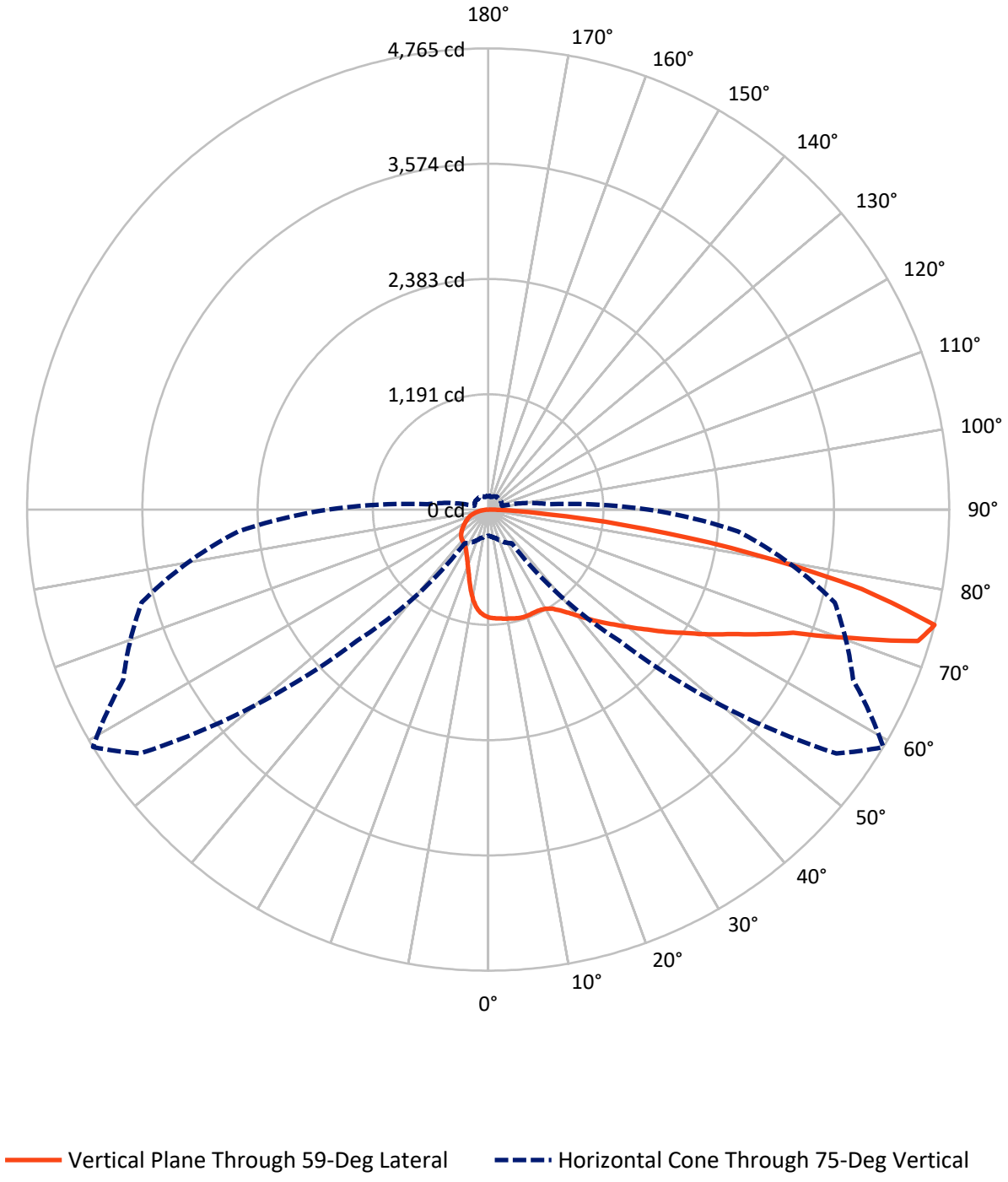

Based on 10 foot mounting height. Maximum calculated value = 11.2 fc
Type IV - Medium - N/A

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## Luminous Intensity Polar Plot



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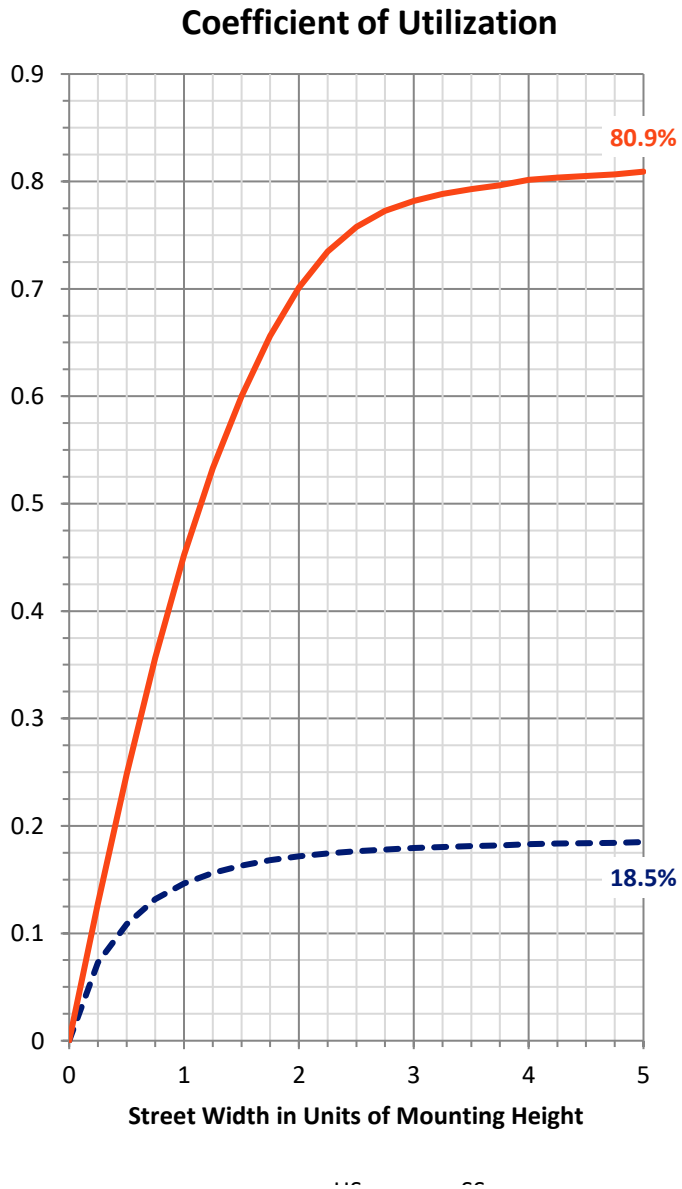
REPORT NUMBER: P1201813
CATALOG NUMBER: GWC-SB1C-722-U-SL3

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1140.0 | 0.0 | 1140.0 |
| | % Fixture | 18.8 | 0.0 | 18.8 |
| **Street Side** | Lumens | 4938.0 | 0.0 | 4938.0 |
| | % Fixture | 81.2 | 0.0 | 81.2 |
| **Total** | Lumens | 6078.0 | 0.0 | 6078.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 100.0 | 1.6 |
| 10°-20° | 255.7 | 4.2 |
| 20°-30° | 388.4 | 6.4 |
| 30°-40° | 577.3 | 9.5 |
| 40°-50° | 858.5 | 14.1 |
| 50°-60° | 1165.4 | 19.2 |
| 60°-70° | 1422.7 | 23.4 |
| 70°-80° | 1116.5 | 18.4 |
| 80°-90° | 193.4 | 3.2 |
| 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° | 6078.0 | 100.0 |
| 0°-180° | 6078.0 | 100.0 |



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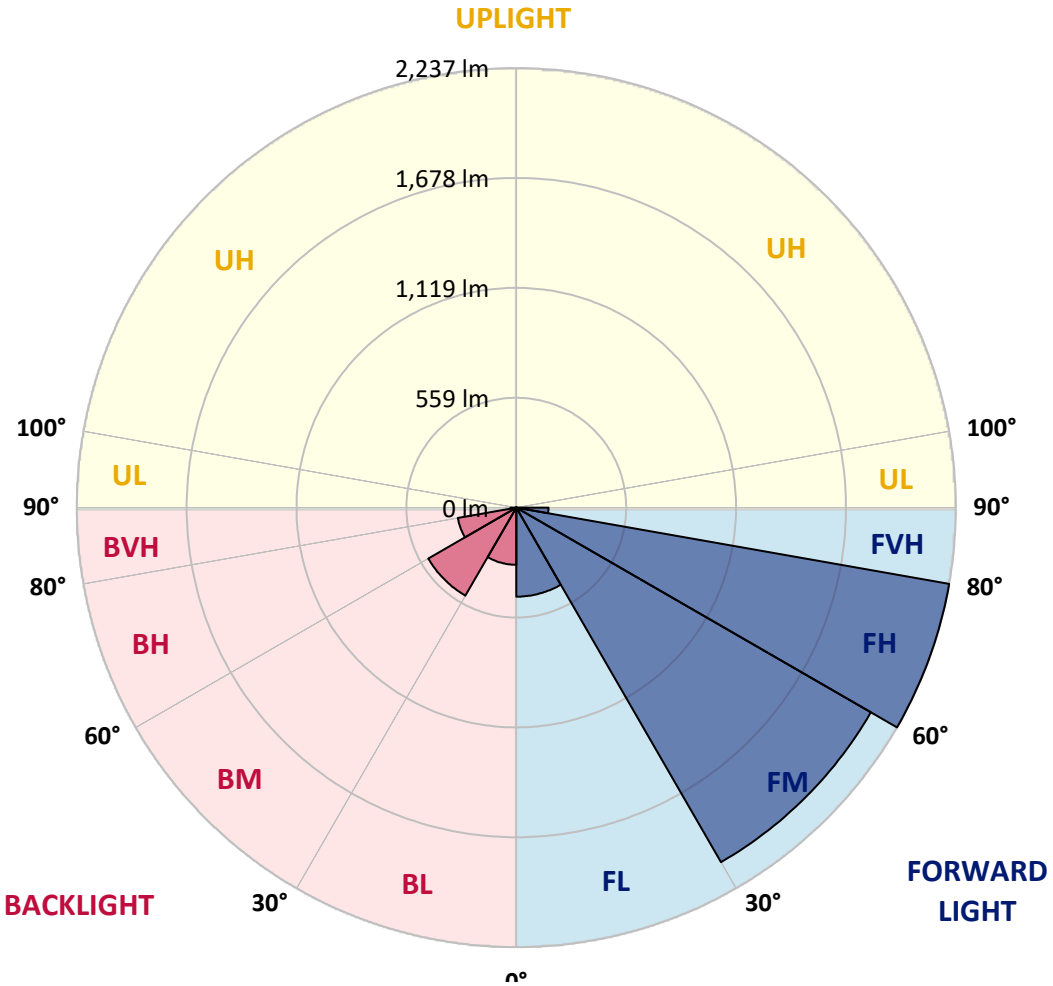
Scaled Data Report

REPORT NUMBER: P1201813
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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°) | 453.2 | 7.5 | | | |
| FM | (30°-60°) | 2083.8 | 34.3 | | | |
| FH | (60°-80°) | 2237.2 | 36.8 | | | G2/5000 |
| FVH | (80°-90°) | 163.8 | 2.7 | | | G2/225 |
| BL | (0°-30°) | 290.9 | 4.8 | B1/500 | | |
| BM | (30°-60°) | 517.4 | 8.5 | B1/1000 | | |
| BH | (60°-80°) | 302.0 | 5.0 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 29.6 | 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 IV Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | *1115.6* | 1115.6 | 1115.6 | 1115.6 |
| 2.5° | 1125.1 | 1121.2 | 1125.1 | 1123.5 | 1122.8 | 1121.5 | 1121.8 | *1124.1* | 1122.8 | 1124.4 | 1118.9 |
| 5° | 1117.6 | 1115.3 | 1119.2 | 1118.2 | 1122.5 | 1123.1 | 1127.4 | *1130.0* | 1131.6 | 1132.0 | 1127.7 |
| 7.5° | 1105.1 | 1102.9 | 1108.4 | 1113.0 | 1122.1 | 1124.8 | 1133.6 | *1137.8* | 1140.1 | 1144.0 | 1137.8 |
| 10° | 1059.7 | 1058.7 | 1072.4 | 1089.8 | 1111.4 | 1124.8 | 1138.2 | *1145.4* | 1149.0 | 1159.4 | 1152.2 |
| 12.5° | 979.3 | 980.6 | 998.6 | 1031.9 | 1075.1 | 1118.2 | 1143.4 | *1153.9* | 1159.4 | 1172.5 | 1169.2 |
| 15° | 902.4 | 902.1 | 921.7 | 957.4 | 1017.8 | 1089.4 | 1146.0 | *1164.0* | 1173.5 | 1192.8 | 1190.2 |
| 17.5° | 858.0 | 856.6 | 870.4 | 897.5 | 953.8 | 1045.3 | 1139.5 | *1169.6* | 1189.8 | 1214.0 | 1211.7 |
| 20° | 849.8 | 847.2 | 854.4 | 867.8 | 907.7 | 996.9 | 1122.5 | *1169.6* | 1202.9 | 1234.3 | 1233.0 |
| 22.5° | 879.5 | 875.3 | 872.3 | 870.7 | 888.4 | 957.0 | 1103.2 | *1165.6* | 1222.2 | 1263.4 | 1261.1 |
| 25° | 939.4 | 932.8 | 917.8 | 903.1 | 897.8 | 939.0 | 1086.2 | *1164.6* | 1251.0 | 1302.6 | 1294.1 |
| 27.5° | 1036.2 | 1028.0 | 997.6 | 962.3 | 930.5 | 948.2 | 1078.7 | *1170.5* | 1282.7 | 1344.2 | 1327.1 |
| 30° | 1156.1 | 1147.3 | 1109.1 | 1054.8 | 997.9 | 982.2 | 1088.1 | *1187.9* | 1323.2 | 1399.4 | 1366.1 |
| 32.5° | 1263.7 | 1253.9 | 1221.2 | 1166.0 | 1089.1 | 1041.1 | 1118.2 | *1220.9* | 1387.0 | 1476.2 | 1424.6 |
| 35° | 1359.2 | 1347.7 | 1318.3 | 1267.3 | 1200.9 | 1123.8 | 1172.5 | *1279.4* | 1477.6 | 1601.1 | 1504.0 |
| 37.5° | 1452.7 | 1439.3 | 1407.3 | 1353.3 | 1306.9 | 1234.0 | 1247.4 | *1354.6* | 1597.9 | 1752.9 | 1609.3 |
| 40° | 1557.3 | 1538.0 | 1499.1 | 1445.8 | 1400.7 | 1363.1 | 1345.8 | *1446.8* | 1720.2 | 1922.2 | 1740.8 |
| 42.5° | 1658.7 | 1640.4 | 1594.0 | 1548.5 | 1491.9 | 1481.1 | 1459.9 | *1554.7* | 1853.9 | 2108.3 | 1874.2 |
| 45° | 1767.9 | 1746.0 | 1689.8 | 1632.2 | 1596.6 | 1559.6 | 1570.4 | *1662.6* | 1985.0 | 2297.9 | 2014.1 |
| 47.5° | 1870.2 | 1845.7 | 1779.3 | 1715.3 | 1695.6 | 1625.7 | 1671.8 | *1781.3* | 2121.3 | 2490.2 | 2152.7 |
| 50° | 1925.5 | 1901.3 | 1846.0 | 1788.2 | 1772.8 | 1707.1 | 1781.6 | *1911.8* | 2264.2 | 2681.8 | 2285.8 |
| 52.5° | 1971.6 | 1945.4 | 1873.2 | 1841.1 | 1836.6 | 1795.7 | 1917.0 | *2060.9* | 2407.1 | 2851.1 | 2414.3 |
| 55° | 2020.6 | 1991.5 | 1899.3 | 1870.6 | 1891.5 | 1895.1 | 2077.5 | *2229.9* | 2558.2 | 3016.2 | 2535.6 |
| 57.5° | 2077.2 | 2040.3 | 1924.5 | 1895.4 | 1945.1 | 2011.5 | 2261.9 | *2405.2* | 2706.6 | 3169.3 | 2643.5 |
| 60° | 2130.5 | 2093.2 | 1972.9 | 1935.0 | 2003.0 | 2146.5 | 2473.5 | *2617.4* | 2874.7 | 3305.6 | 2745.5 |
| 62.5° | 2141.0 | 2110.2 | 2011.5 | 2011.2 | 2081.5 | 2304.1 | 2723.9 | *2831.5* | 3021.5 | 3440.3 | 2837.1 |
| 65° | 1959.8 | 1940.5 | 1882.0 | 2008.2 | 2193.9 | 2531.0 | 3002.8 | *3105.5* | 3208.2 | 3558.0 | 2917.5 |
| 67.5° | 1491.6 | 1494.2 | 1490.0 | 1733.6 | 2103.0 | 2857.0 | 3406.6 | *3398.8* | 3438.7 | 3690.1 | 3010.0 |
| 70° | 682.0 | 697.4 | 797.5 | 1196.7 | 1684.8 | 2894.6 | 4074.3 | *3972.6* | 3728.1 | 3861.1 | 3090.1 |
| 72.5° | 368.5 | 380.3 | 421.1 | 579.7 | 1012.9 | 2573.5 | 4573.3 | *4645.5* | 4112.9 | 3976.2 | 3002.2 |
| 75° | *270.4* | *276.9* | *305.4* | *368.5* | *425.4* | *1912.7* | *4394.4* | *4765.2* | *4161.0* | *3707.8* | *2592.5* |
| 77.5° | 202.4 | 205.3 | 228.5 | 292.0 | 217.8 | 1008.4 | 3511.3 | *3946.5* | 3562.0 | 3046.3 | 1915.0 |
| 80° | 146.8 | 150.1 | 167.4 | 219.1 | 152.7 | 368.8 | 2411.0 | *2770.0* | 2439.5 | 1941.8 | 954.4 |
| 82.5° | 101.4 | 102.7 | 110.2 | 149.1 | 106.6 | 143.2 | 1368.0 | *1624.4* | 1361.8 | 681.4 | 257.6 |
| 85° | 61.1 | 62.8 | 66.0 | 87.0 | 60.5 | 68.0 | 590.5 | *610.8* | 407.1 | 162.8 | 80.1 |
| 87.5° | 25.2 | 26.8 | 29.4 | 36.6 | 23.9 | 19.0 | 97.4 | *122.3* | 76.2 | 47.7 | 24.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 |

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REPORT NUMBER: P1201813
CATALOG NUMBER: GWC-SB1C-722-U-SL3

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 | 1115.6 |
| 2.5° | 1117.2 | 1114.9 | 1108.7 | 1100.2 | 1092.4 | 1082.6 | 1078.3 | 1074.7 | 1071.5 | 1065.3 | 1062.3 |
| 5° | 1124.1 | 1117.9 | 1101.2 | 1079.6 | 1055.1 | 1028.3 | 1002.1 | 984.2 | 968.8 | 957.4 | 947.9 |
| 7.5° | 1134.6 | 1122.8 | 1092.4 | 1048.2 | 992.0 | 934.5 | 882.5 | 845.5 | 817.7 | 807.6 | 789.9 |
| 10° | 1145.4 | 1131.3 | 1078.3 | 1000.5 | 903.4 | 814.8 | 745.8 | 707.9 | 685.6 | 678.5 | 667.3 |
| 12.5° | 1158.1 | 1137.5 | 1056.4 | 934.1 | 804.3 | 707.2 | 647.1 | 624.8 | 613.4 | 609.5 | 610.4 |
| 15° | 1176.7 | 1142.7 | 1023.4 | 851.1 | 709.8 | 628.8 | 589.8 | 574.5 | 568.6 | 568.3 | 569.6 |
| 17.5° | 1190.8 | 1143.7 | 972.1 | 762.2 | 637.3 | 581.3 | 549.3 | 543.4 | 547.3 | 553.2 | 555.5 |
| 20° | 1206.5 | 1134.9 | 904.7 | 681.1 | 586.2 | 539.8 | 526.4 | 530.3 | 539.8 | 548.3 | 551.3 |
| 22.5° | 1217.6 | 1118.9 | 823.3 | 618.0 | 542.1 | 516.0 | 515.3 | 523.5 | 528.7 | 533.0 | 535.2 |
| 25° | 1227.4 | 1091.7 | 737.0 | 565.0 | 505.8 | 501.6 | 508.8 | 506.1 | 502.5 | 506.1 | 508.4 |
| 27.5° | 1234.6 | 1048.9 | 659.8 | 518.6 | 480.3 | 491.8 | 487.5 | 481.6 | 481.3 | 483.3 | 486.5 |
| 30° | 1232.3 | 991.7 | 596.4 | 474.4 | 462.3 | 473.4 | 463.3 | 462.3 | 461.3 | 462.3 | 465.9 |
| 32.5° | 1232.3 | 926.6 | 547.7 | 444.0 | 450.9 | 446.6 | 445.7 | 443.4 | 439.4 | 439.1 | 443.4 |
| 35° | 1239.2 | 861.6 | 505.8 | 427.7 | 441.4 | 431.3 | 431.9 | 426.4 | 418.2 | 414.3 | 418.2 |
| 37.5° | 1253.3 | 809.2 | 464.3 | 419.8 | 424.7 | 424.4 | 421.8 | 412.3 | 397.9 | 385.5 | 389.7 |
| 40° | 1287.3 | 793.9 | 435.8 | 416.2 | 416.9 | 420.8 | 413.9 | 395.6 | 362.9 | 342.7 | 345.3 |
| 42.5° | 1340.6 | 819.7 | 429.6 | 407.4 | 411.6 | 415.6 | 402.2 | 359.7 | 336.4 | 324.3 | 324.3 |
| 45° | 1408.2 | 864.8 | 443.0 | 394.6 | 399.2 | 406.1 | 366.2 | 345.9 | 335.5 | 335.8 | 337.4 |
| 47.5° | 1493.9 | 912.2 | 467.9 | 383.5 | 381.2 | 385.2 | 342.3 | 329.9 | 315.5 | 319.1 | 328.3 |
| 50° | 1593.0 | 960.3 | 491.4 | 368.5 | 361.3 | 348.5 | 327.0 | 315.2 | 296.9 | 288.4 | 290.7 |
| 52.5° | 1700.2 | 1006.7 | 500.9 | 350.2 | 339.7 | 325.0 | 316.5 | 302.1 | 279.9 | 265.8 | 265.5 |
| 55° | 1801.9 | 1048.9 | 490.4 | 328.3 | 318.1 | 306.7 | 305.4 | 296.6 | 272.7 | 253.1 | 253.1 |
| 57.5° | 1898.0 | 1084.2 | 464.3 | 306.0 | 296.2 | 289.4 | 298.2 | 293.9 | 263.9 | 238.7 | 237.4 |
| 60° | 1979.4 | 1108.4 | 426.4 | 283.5 | 276.6 | 273.0 | 286.4 | 285.1 | 251.4 | 223.3 | 222.3 |
| 62.5° | 2044.2 | 1117.9 | 384.5 | 261.9 | 260.3 | 253.7 | 270.1 | 270.1 | 235.7 | 208.3 | 207.3 |
| 65° | 2094.9 | 1108.7 | 342.0 | 240.6 | 243.9 | 234.1 | 250.1 | 248.2 | 219.1 | 194.9 | 193.6 |
| 67.5° | 2139.7 | 1078.7 | 294.9 | 219.7 | 227.2 | 214.8 | 229.2 | 224.6 | 200.8 | 181.5 | 180.2 |
| 70° | 2159.6 | 1008.7 | 241.3 | 198.8 | 207.9 | 195.9 | 208.3 | 199.8 | 180.2 | 167.1 | 164.5 |
| 72.5° | 1999.4 | 838.3 | 190.0 | 176.9 | 184.7 | 174.9 | 185.7 | 175.9 | 157.9 | 152.0 | 147.1 |
| 75° | *1654.1* | *629.1* | *146.2* | *153.0* | *158.9* | *151.4* | *158.6* | *151.4* | *135.0* | *139.3* | *127.2* |
| 77.5° | 1201.3 | 424.7 | 111.8 | 127.8 | 130.5 | 126.5 | 132.7 | 124.6 | 109.9 | 108.9 | 104.0 |
| 80° | 597.4 | 248.8 | 87.6 | 101.0 | 100.1 | 97.4 | 104.6 | 100.7 | 88.3 | 93.5 | 92.5 |
| 82.5° | 173.0 | 106.6 | 63.8 | 71.0 | 69.0 | 69.6 | 74.9 | 76.8 | 115.1 | 114.1 | 116.7 |
| 85° | 54.3 | 41.9 | 38.3 | 39.6 | 37.6 | 38.6 | 44.1 | 87.6 | 81.1 | 47.4 | 51.3 |
| 87.5° | 14.1 | 14.4 | 9.5 | 10.1 | 10.5 | 12.4 | 14.1 | 53.3 | 25.5 | 16.7 | 17.7 |
| 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

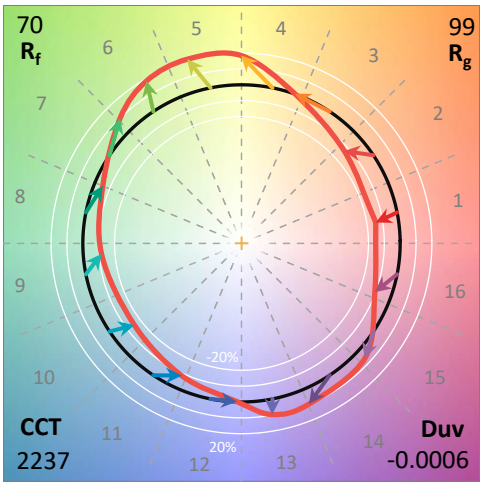
| | |
|---|---|
| Test Method: | LM-79-2008 Report |
| Number: | SP1-1908-441-10-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON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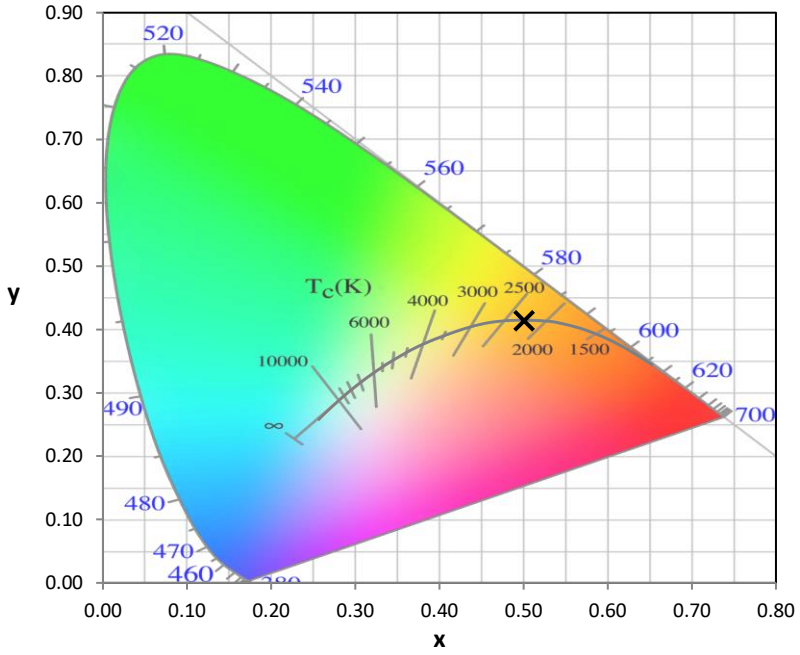
REPORT NUMBER: SP1-1908-441-10-R4

| 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 |

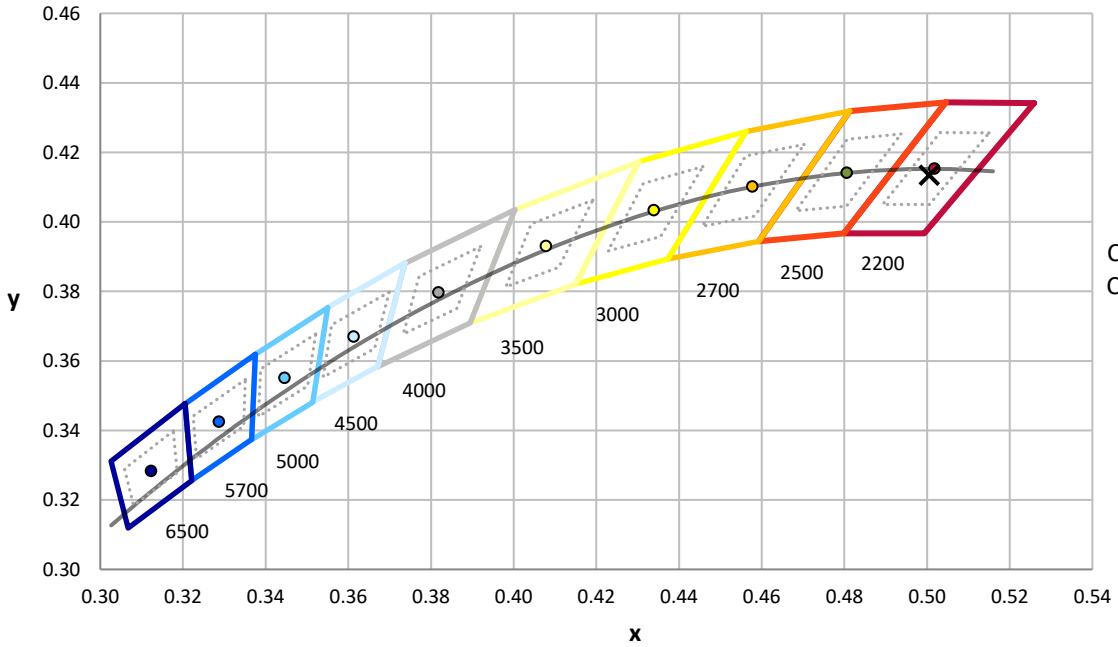
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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## CIE 1931 Chromaticity Diagram




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



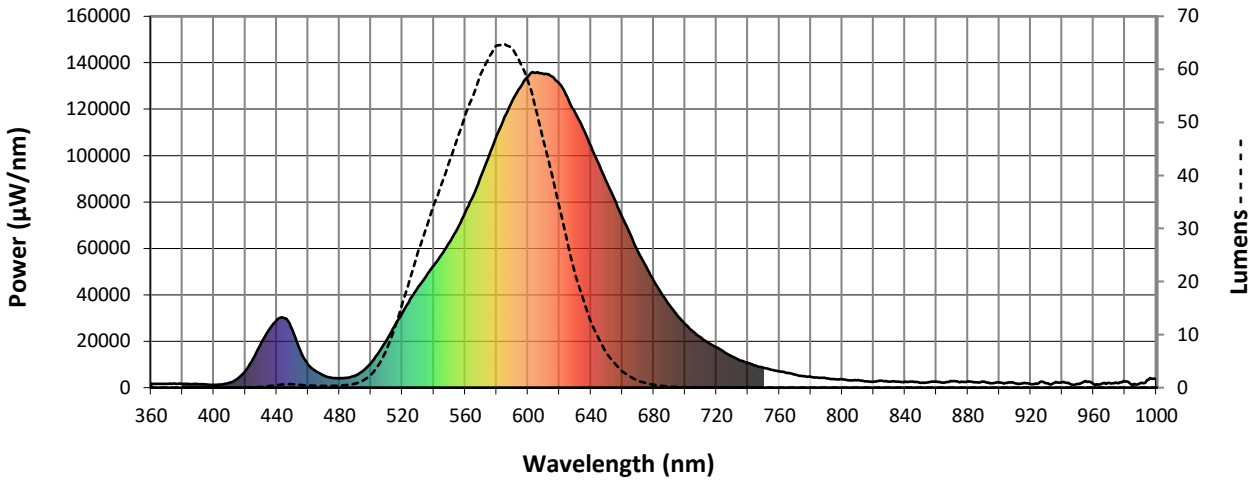

CCT = 2237K
CIE x = 0.5005
CIE y = 0.4134
Duv = -0.0006

Point lies inside the ANSI 2200K 4-step quadrangle

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## Photopic Flux vs. Wavelength



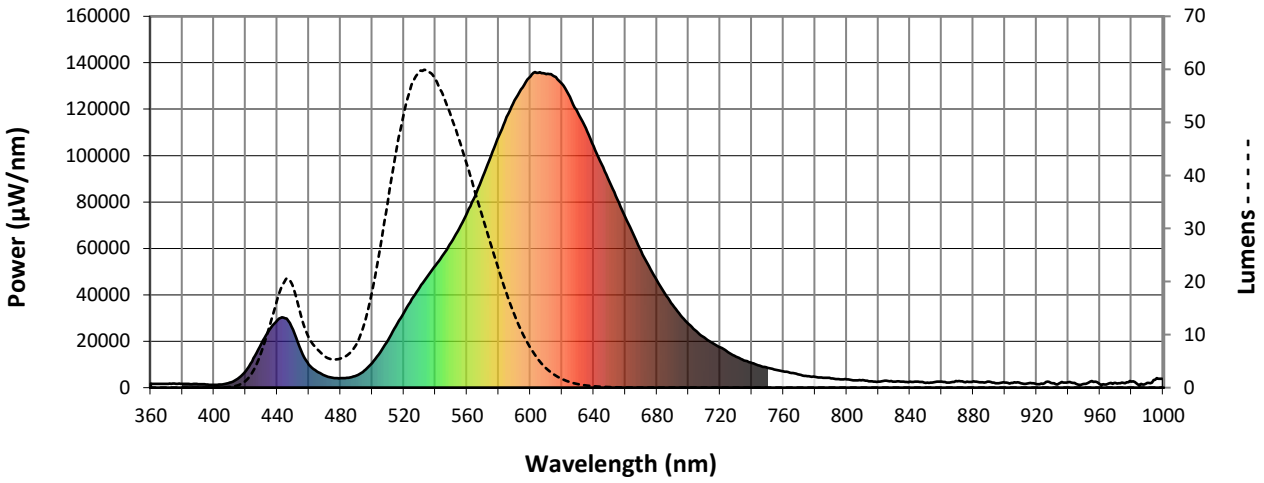

**Photopic Lumens: 5530.5**

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 1768 | 0.0 | 490 | 5206 | 0.7 | 620 | 130919 | 34.1 | 750 | 8553 | 0.0 | 880 | 2713 | 0.0 |
| 365 | 1569 | 0.0 | 495 | 7286 | 1.3 | 625 | 125335 | 27.7 | 755 | 7696 | 0.0 | 885 | 2316 | 0.0 |
| 370 | 1594 | 0.0 | 500 | 10654 | 2.4 | 630 | 118388 | 21.4 | 760 | 6978 | 0.0 | 890 | 2539 | 0.0 |
| 375 | 1744 | 0.0 | 505 | 15189 | 4.2 | 635 | 111855 | 16.8 | 765 | 6377 | 0.0 | 895 | 1933 | 0.0 |
| 380 | 1659 | 0.0 | 510 | 20541 | 7.1 | 640 | 104062 | 12.4 | 770 | 5600 | 0.0 | 900 | 2216 | 0.0 |
| 385 | 1504 | 0.0 | 515 | 26492 | 11.0 | 645 | 96365 | 9.3 | 775 | 5000 | 0.0 | 905 | 2067 | 0.0 |
| 390 | 1541 | 0.0 | 520 | 32294 | 15.7 | 650 | 88651 | 6.5 | 780 | 4709 | 0.0 | 910 | 1959 | 0.0 |
| 395 | 1355 | 0.0 | 525 | 38123 | 20.5 | 655 | 81152 | 4.7 | 785 | 4305 | 0.0 | 915 | 1874 | 0.0 |
| 400 | 1243 | 0.0 | 530 | 43232 | 25.5 | 660 | 73523 | 3.1 | 790 | 4040 | 0.0 | 920 | 1484 | 0.0 |
| 405 | 1417 | 0.0 | 535 | 48012 | 29.8 | 665 | 66123 | 2.1 | 795 | 3642 | 0.0 | 925 | 1914 | 0.0 |
| 410 | 2147 | 0.0 | 540 | 52623 | 34.3 | 670 | 58677 | 1.3 | 800 | 3594 | 0.0 | 930 | 1948 | 0.0 |
| 415 | 3837 | 0.0 | 545 | 57516 | 38.3 | 675 | 52349 | 0.9 | 805 | 3190 | 0.0 | 935 | 2079 | 0.0 |
| 420 | 7159 | 0.0 | 550 | 62613 | 42.5 | 680 | 46159 | 0.5 | 810 | 3241 | 0.0 | 940 | 2263 | 0.0 |
| 425 | 12599 | 0.1 | 555 | 68554 | 46.8 | 685 | 40525 | 0.3 | 815 | 2732 | 0.0 | 945 | 1688 | 0.0 |
| 430 | 19019 | 0.2 | 560 | 75325 | 51.2 | 690 | 35615 | 0.2 | 820 | 2612 | 0.0 | 950 | 1560 | 0.0 |
| 435 | 24875 | 0.3 | 565 | 82533 | 54.9 | 695 | 31158 | 0.1 | 825 | 2966 | 0.0 | 955 | 2826 | 0.0 |
| 440 | 29103 | 0.5 | 570 | 90909 | 59.1 | 700 | 27409 | 0.1 | 830 | 2574 | 0.0 | 960 | 1477 | 0.0 |
| 445 | 29901 | 0.6 | 575 | 99621 | 62.0 | 705 | 24204 | 0.1 | 835 | 2633 | 0.0 | 965 | 1568 | 0.0 |
| 450 | 24862 | 0.6 | 580 | 108484 | 64.5 | 710 | 21558 | 0.0 | 840 | 2526 | 0.0 | 970 | 2030 | 0.0 |
| 455 | 15942 | 0.5 | 585 | 116679 | 64.8 | 715 | 19222 | 0.0 | 845 | 2631 | 0.0 | 975 | 1986 | 0.0 |
| 460 | 9916 | 0.4 | 590 | 123752 | 64.0 | 720 | 17310 | 0.0 | 850 | 2079 | 0.0 | 980 | 2540 | 0.0 |
| 465 | 7051 | 0.4 | 595 | 129324 | 61.3 | 725 | 15280 | 0.0 | 855 | 2309 | 0.0 | 985 | 1139 | 0.0 |
| 470 | 5227 | 0.3 | 600 | 134082 | 57.8 | 730 | 13282 | 0.0 | 860 | 2528 | 0.0 | 990 | 2018 | 0.0 |
| 475 | 4257 | 0.3 | 605 | 135698 | 52.6 | 735 | 11753 | 0.0 | 865 | 2121 | 0.0 | 995 | 3445 | 0.0 |
| 480 | 4052 | 0.4 | 610 | 135144 | 46.4 | 740 | 10654 | 0.0 | 870 | 2751 | 0.0 | 1000 | 3704 | 0.0 |
| 485 | 4298 | 0.5 | 615 | 134180 | 40.5 | 745 | 9451 | 0.0 | 875 | 2317 | 0.0 | | | |

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## Scotopic Flux vs. Wavelength



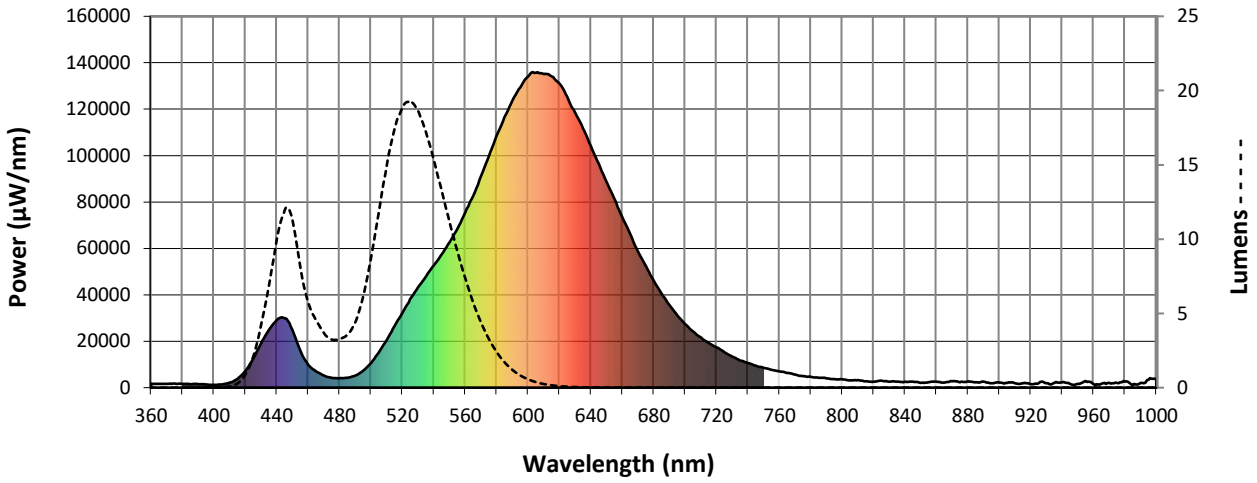

**Scotopic Lumens: 4696.9** **S/P: 0.85**

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 1768 | 0.0 | 490 | 5206 | 4.3 | 620 | 130919 | 0.1 | 750 | 8553 | 0.0 | 880 | 2713 | 0.0 |
| 365 | 1569 | 0.0 | 495 | 7286 | 6.0 | 625 | 125335 | 0.1 | 755 | 7696 | 0.0 | 885 | 2316 | 0.0 |
| 370 | 1594 | 0.0 | 500 | 10654 | 8.6 | 630 | 118388 | 0.0 | 760 | 6978 | 0.0 | 890 | 2539 | 0.0 |
| 375 | 1744 | 0.0 | 505 | 15189 | 11.7 | 635 | 111855 | 0.0 | 765 | 6377 | 0.0 | 895 | 1933 | 0.0 |
| 380 | 1659 | 0.0 | 510 | 20541 | 14.7 | 640 | 104062 | 0.0 | 770 | 5600 | 0.0 | 900 | 2216 | 0.0 |
| 385 | 1504 | 0.0 | 515 | 26492 | 17.3 | 645 | 96365 | 0.0 | 775 | 5000 | 0.0 | 905 | 2067 | 0.0 |
| 390 | 1541 | 0.0 | 520 | 32294 | 18.8 | 650 | 88651 | 0.0 | 780 | 4709 | 0.0 | 910 | 1959 | 0.0 |
| 395 | 1355 | 0.0 | 525 | 38123 | 19.3 | 655 | 81152 | 0.0 | 785 | 4305 | 0.0 | 915 | 1874 | 0.0 |
| 400 | 1243 | 0.0 | 530 | 43232 | 18.7 | 660 | 73523 | 0.0 | 790 | 4040 | 0.0 | 920 | 1484 | 0.0 |
| 405 | 1417 | 0.0 | 535 | 48012 | 17.3 | 665 | 66123 | 0.0 | 795 | 3642 | 0.0 | 925 | 1914 | 0.0 |
| 410 | 2147 | 0.1 | 540 | 52623 | 15.4 | 670 | 58677 | 0.0 | 800 | 3594 | 0.0 | 930 | 1948 | 0.0 |
| 415 | 3837 | 0.3 | 545 | 57516 | 13.4 | 675 | 52349 | 0.0 | 805 | 3190 | 0.0 | 935 | 2079 | 0.0 |
| 420 | 7159 | 0.8 | 550 | 62613 | 11.2 | 680 | 46159 | 0.0 | 810 | 3241 | 0.0 | 940 | 2263 | 0.0 |
| 425 | 12599 | 2.0 | 555 | 68554 | 9.2 | 685 | 40525 | 0.0 | 815 | 2732 | 0.0 | 945 | 1688 | 0.0 |
| 430 | 19019 | 4.0 | 560 | 75325 | 7.4 | 690 | 35615 | 0.0 | 820 | 2612 | 0.0 | 950 | 1560 | 0.0 |
| 435 | 24875 | 6.6 | 565 | 82533 | 5.8 | 695 | 31158 | 0.0 | 825 | 2966 | 0.0 | 955 | 2826 | 0.0 |
| 440 | 29103 | 9.7 | 570 | 90909 | 4.4 | 700 | 27409 | 0.0 | 830 | 2574 | 0.0 | 960 | 1477 | 0.0 |
| 445 | 29901 | 11.8 | 575 | 99621 | 3.3 | 705 | 24204 | 0.0 | 835 | 2633 | 0.0 | 965 | 1568 | 0.0 |
| 450 | 24862 | 11.5 | 580 | 108484 | 2.4 | 710 | 21558 | 0.0 | 840 | 2526 | 0.0 | 970 | 2030 | 0.0 |
| 455 | 15942 | 8.4 | 585 | 116679 | 1.7 | 715 | 19222 | 0.0 | 845 | 2631 | 0.0 | 975 | 1986 | 0.0 |
| 460 | 9916 | 5.8 | 590 | 123752 | 1.2 | 720 | 17310 | 0.0 | 850 | 2079 | 0.0 | 980 | 2540 | 0.0 |
| 465 | 7051 | 4.6 | 595 | 129324 | 0.8 | 725 | 15280 | 0.0 | 855 | 2309 | 0.0 | 985 | 1139 | 0.0 |
| 470 | 5227 | 3.7 | 600 | 134082 | 0.6 | 730 | 13282 | 0.0 | 860 | 2528 | 0.0 | 990 | 2018 | 0.0 |
| 475 | 4257 | 3.3 | 605 | 135698 | 0.4 | 735 | 11753 | 0.0 | 865 | 2121 | 0.0 | 995 | 3445 | 0.0 |
| 480 | 4052 | 3.3 | 610 | 135144 | 0.2 | 740 | 10654 | 0.0 | 870 | 2751 | 0.0 | 1000 | 3704 | 0.0 |
| 485 | 4298 | 3.5 | 615 | 134180 | 0.2 | 745 | 9451 | 0.0 | 875 | 2317 | 0.0 | | | |

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## Melanopic Flux vs. Wavelength




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

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 1768 | 0.0 | 490 | 5206 | 8.0 | 620 | 130919 | 1.6 | 750 | 8553 | 0.0 | 880 | 2713 | 0.0 |
| 365 | 1569 | 0.0 | 495 | 7286 | 11.8 | 625 | 125335 | 1.1 | 755 | 7696 | 0.0 | 885 | 2316 | 0.0 |
| 370 | 1594 | 0.0 | 500 | 10654 | 17.8 | 630 | 118388 | 0.7 | 760 | 6978 | 0.0 | 890 | 2539 | 0.0 |
| 375 | 1744 | 0.0 | 505 | 15189 | 25.8 | 635 | 111855 | 0.4 | 765 | 6377 | 0.0 | 895 | 1933 | 0.0 |
| 380 | 1659 | 0.0 | 510 | 20541 | 34.8 | 640 | 104062 | 0.3 | 770 | 5600 | 0.0 | 900 | 2216 | 0.0 |
| 385 | 1504 | 0.0 | 515 | 26492 | 43.9 | 645 | 96365 | 0.2 | 775 | 5000 | 0.0 | 905 | 2067 | 0.0 |
| 390 | 1541 | 0.0 | 520 | 32294 | 51.3 | 650 | 88651 | 0.1 | 780 | 4709 | 0.0 | 910 | 1959 | 0.0 |
| 395 | 1355 | 0.0 | 525 | 38123 | 57.0 | 655 | 81152 | 0.1 | 785 | 4305 | 0.0 | 915 | 1874 | 0.0 |
| 400 | 1243 | 0.0 | 530 | 43232 | 59.6 | 660 | 73523 | 0.0 | 790 | 4040 | 0.0 | 920 | 1484 | 0.0 |
| 405 | 1417 | 0.0 | 535 | 48012 | 59.8 | 665 | 66123 | 0.0 | 795 | 3642 | 0.0 | 925 | 1914 | 0.0 |
| 410 | 2147 | 0.1 | 540 | 52623 | 58.1 | 670 | 58677 | 0.0 | 800 | 3594 | 0.0 | 930 | 1948 | 0.0 |
| 415 | 3837 | 0.4 | 545 | 57516 | 55.1 | 675 | 52349 | 0.0 | 805 | 3190 | 0.0 | 935 | 2079 | 0.0 |
| 420 | 7159 | 1.2 | 550 | 62613 | 51.2 | 680 | 46159 | 0.0 | 810 | 3241 | 0.0 | 940 | 2263 | 0.0 |
| 425 | 12599 | 3.1 | 555 | 68554 | 46.9 | 685 | 40525 | 0.0 | 815 | 2732 | 0.0 | 945 | 1688 | 0.0 |
| 430 | 19019 | 6.5 | 560 | 75325 | 42.1 | 690 | 35615 | 0.0 | 820 | 2612 | 0.0 | 950 | 1560 | 0.0 |
| 435 | 24875 | 11.1 | 565 | 82533 | 37.0 | 695 | 31158 | 0.0 | 825 | 2966 | 0.0 | 955 | 2826 | 0.0 |
| 440 | 29103 | 16.3 | 570 | 90909 | 32.1 | 700 | 27409 | 0.0 | 830 | 2574 | 0.0 | 960 | 1477 | 0.0 |
| 445 | 29901 | 20.0 | 575 | 99621 | 27.1 | 705 | 24204 | 0.0 | 835 | 2633 | 0.0 | 965 | 1568 | 0.0 |
| 450 | 24862 | 19.3 | 580 | 108484 | 22.4 | 710 | 21558 | 0.0 | 840 | 2526 | 0.0 | 970 | 2030 | 0.0 |
| 455 | 15942 | 13.9 | 585 | 116679 | 17.8 | 715 | 19222 | 0.0 | 845 | 2631 | 0.0 | 975 | 1986 | 0.0 |
| 460 | 9916 | 9.6 | 590 | 123752 | 13.8 | 720 | 17310 | 0.0 | 850 | 2079 | 0.0 | 980 | 2540 | 0.0 |
| 465 | 7051 | 7.4 | 595 | 129324 | 10.3 | 725 | 15280 | 0.0 | 855 | 2309 | 0.0 | 985 | 1139 | 0.0 |
| 470 | 5227 | 6.0 | 600 | 134082 | 7.6 | 730 | 13282 | 0.0 | 860 | 2528 | 0.0 | 990 | 2018 | 0.0 |
| 475 | 4257 | 5.3 | 605 | 135698 | 5.3 | 735 | 11753 | 0.0 | 865 | 2121 | 0.0 | 995 | 3445 | 0.0 |
| 480 | 4052 | 5.5 | 610 | 135144 | 3.7 | 740 | 10654 | 0.0 | 870 | 2751 | 0.0 | 1000 | 3704 | 0.0 |
| 485 | 4298 | 6.2 | 615 | 134180 | 2.5 | 745 | 9451 | 0.0 | 875 | 2317 | 0.0 | | | |

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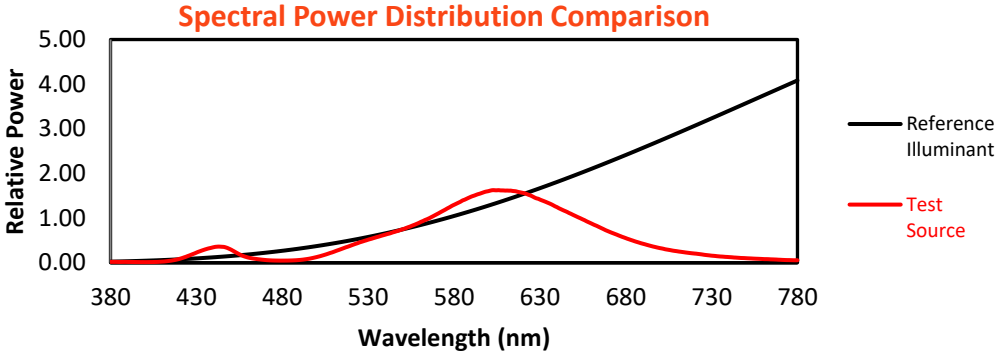
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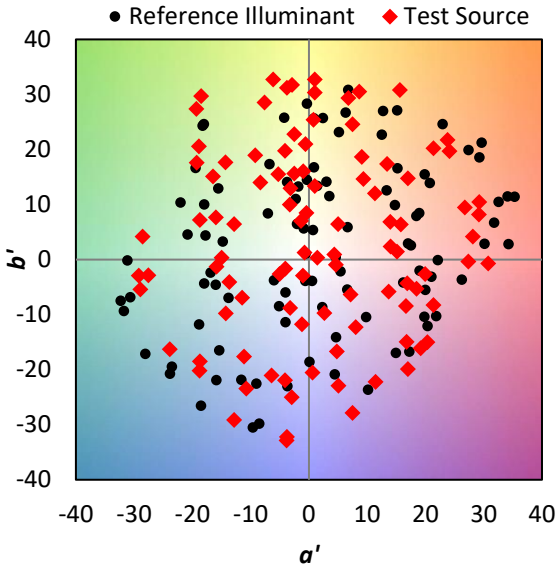
## Summary

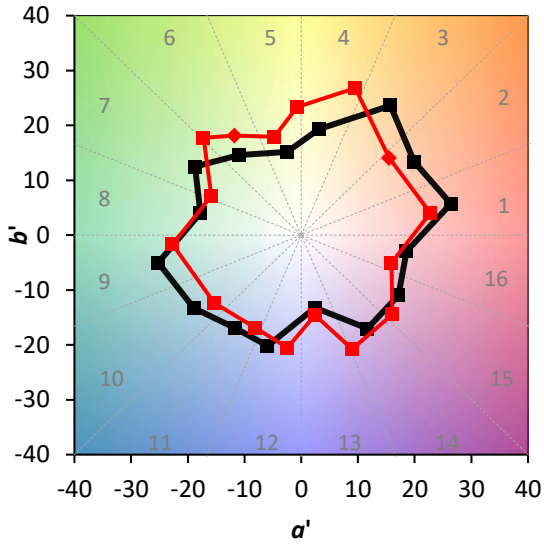
$R_f$ = 69.8
$R_g$ = 99.2
CIE $R_a$ = 72.0
$R_9$ = -17.4

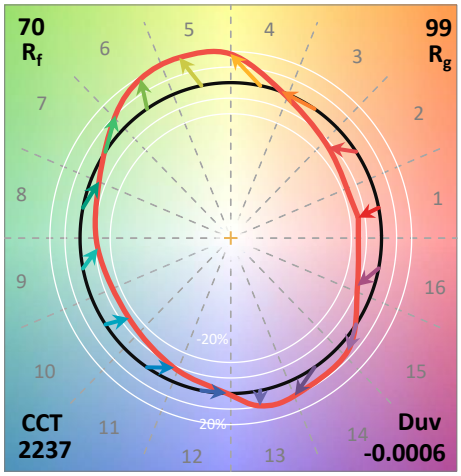
## Spectral Power Distribution Comparison

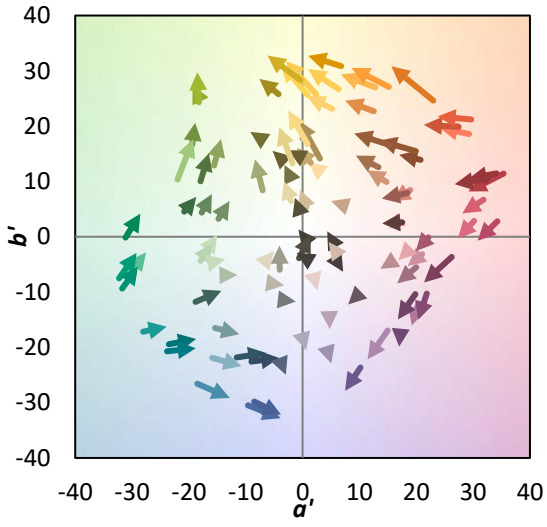



## Color Vector Graphics



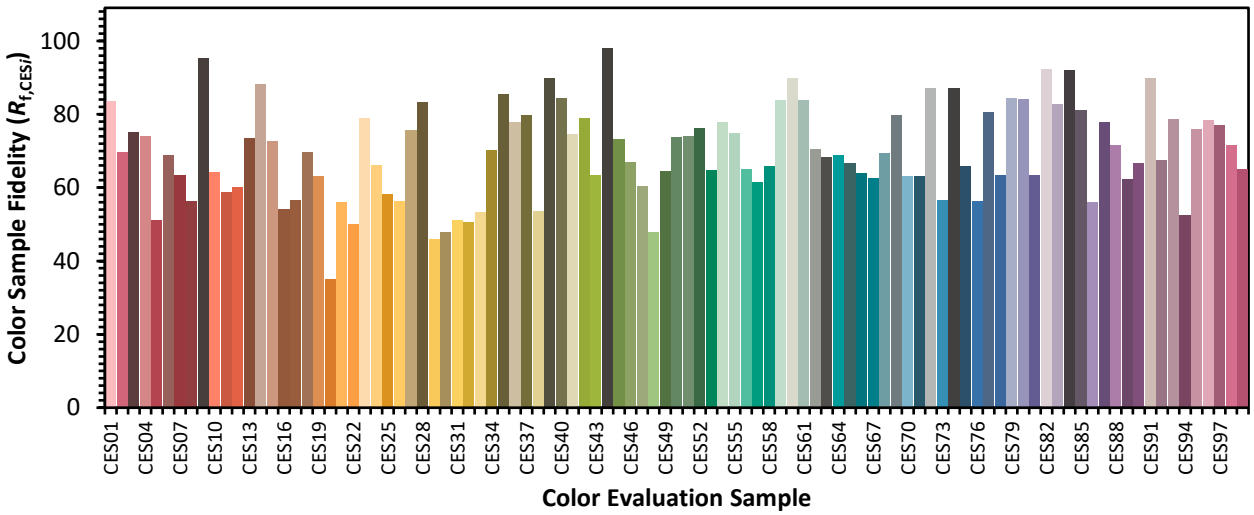
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Peachtree City, GA 30269

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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 | |

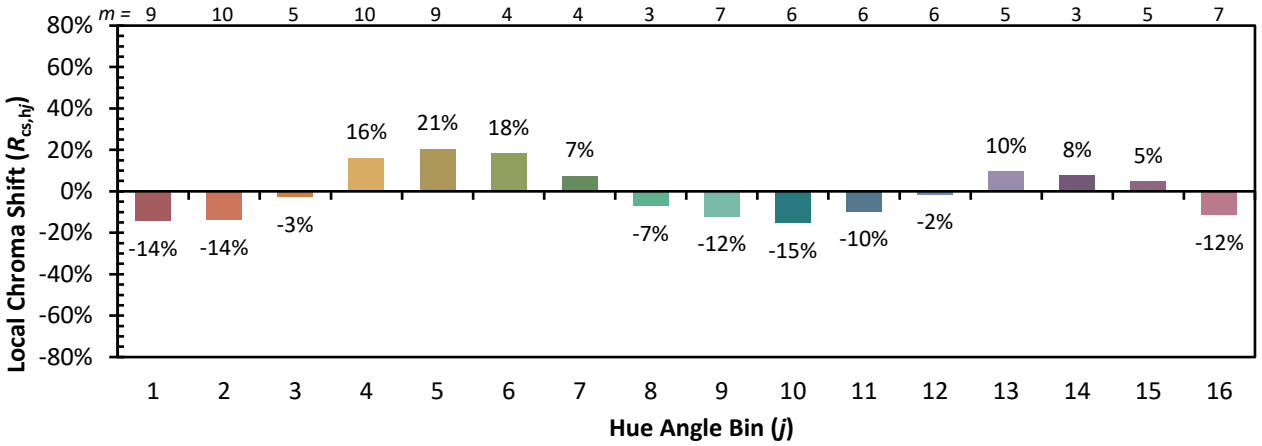


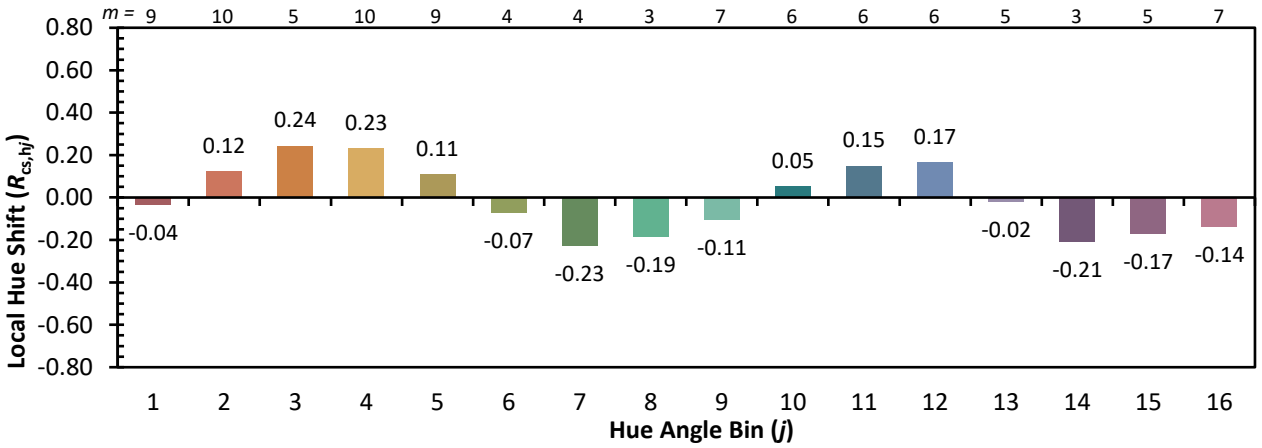
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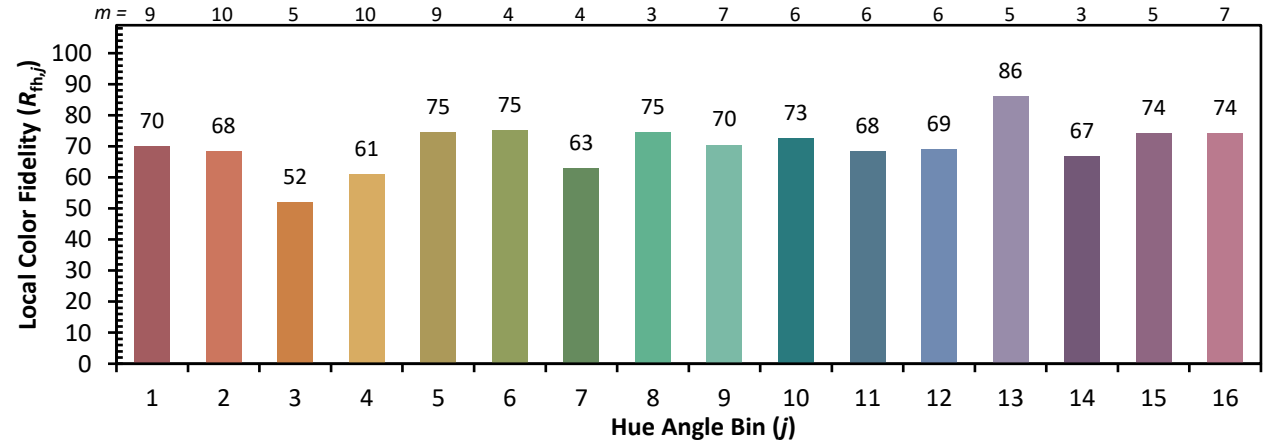
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## TM-30-18

### Color Rendition by Hue-Angle Bin



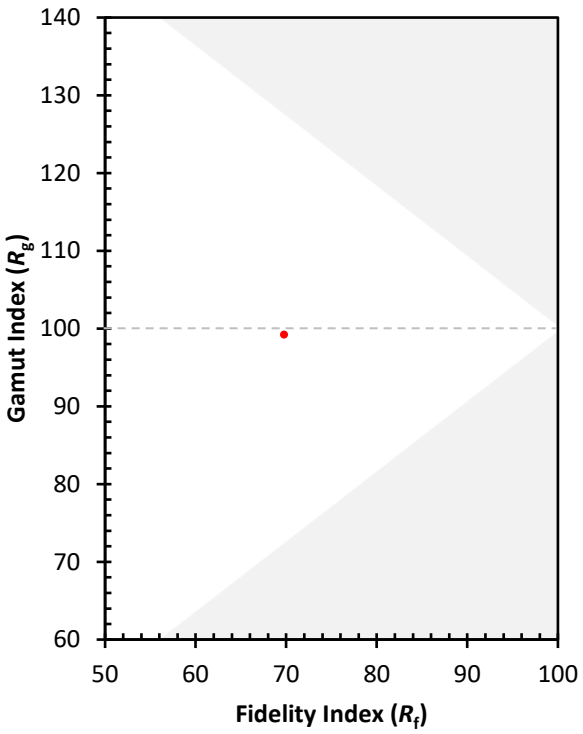



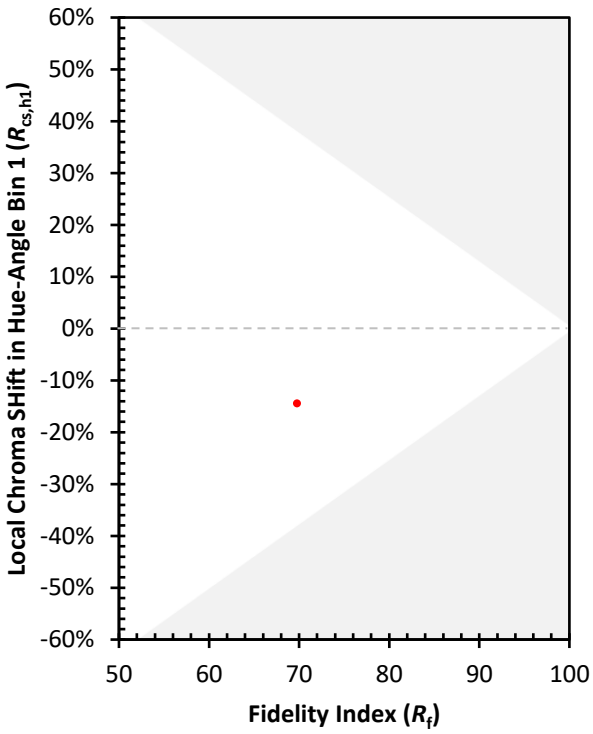
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### Measure Comparisons




(END OF REPORT)