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: P1199652

Luminaire Tested: GPC-SB2B-722-U-T3R

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: | P1199652 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/12/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GPC-SB2B-722-U-T3R |
| Description: | GALLEON PEDESTRIAN LUMINAIRE |
| | (2) 70 CRI, 2200K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III ROADWAY OPTI |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 9548 lumens |
| Efficiency: | N/A |
| Efficacy: | 129.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B2 - U0 - G2 |

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

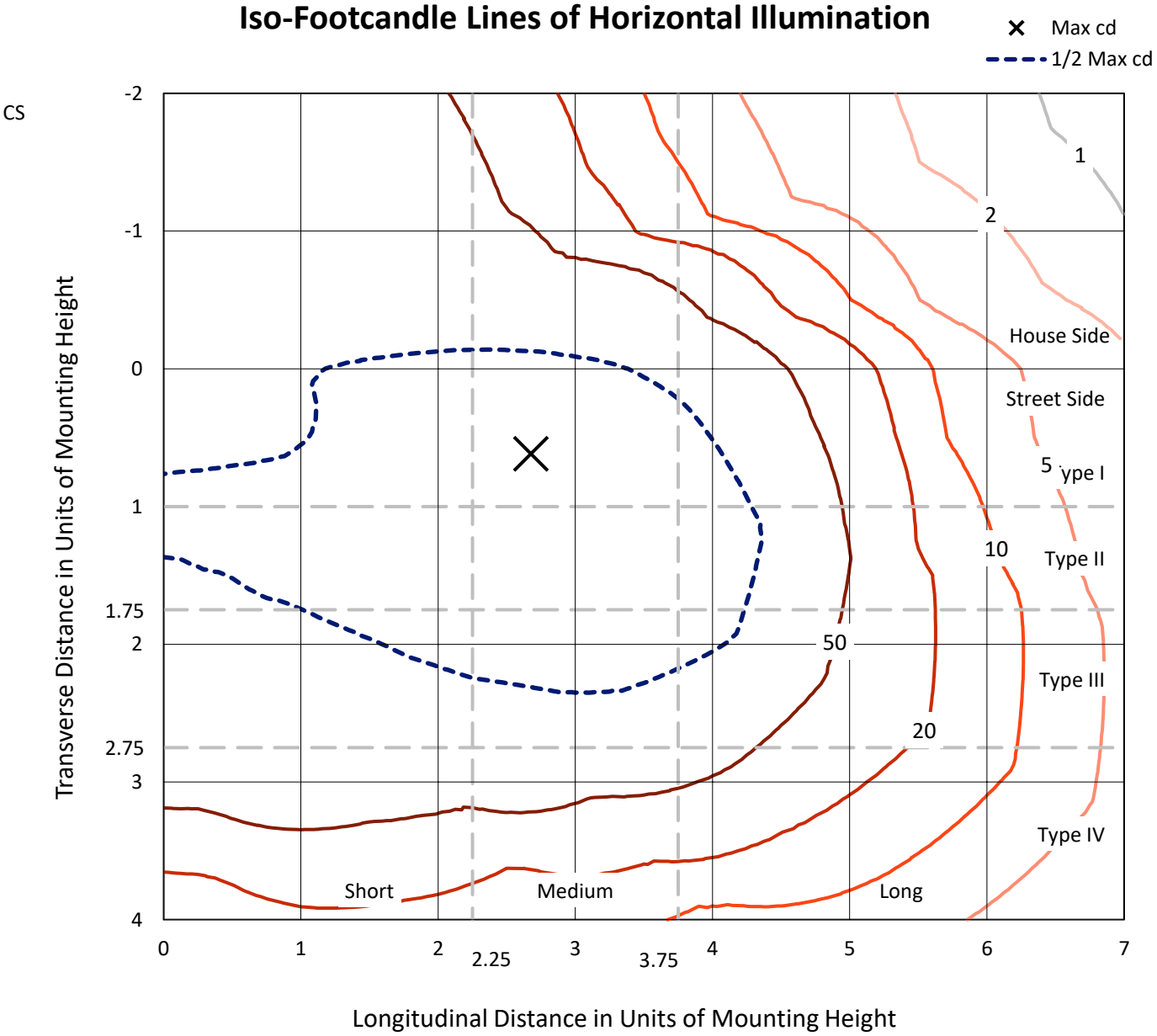


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REPORT NUMBER: P1199652
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## Iso-Footcandle Lines of Horizontal Illumination



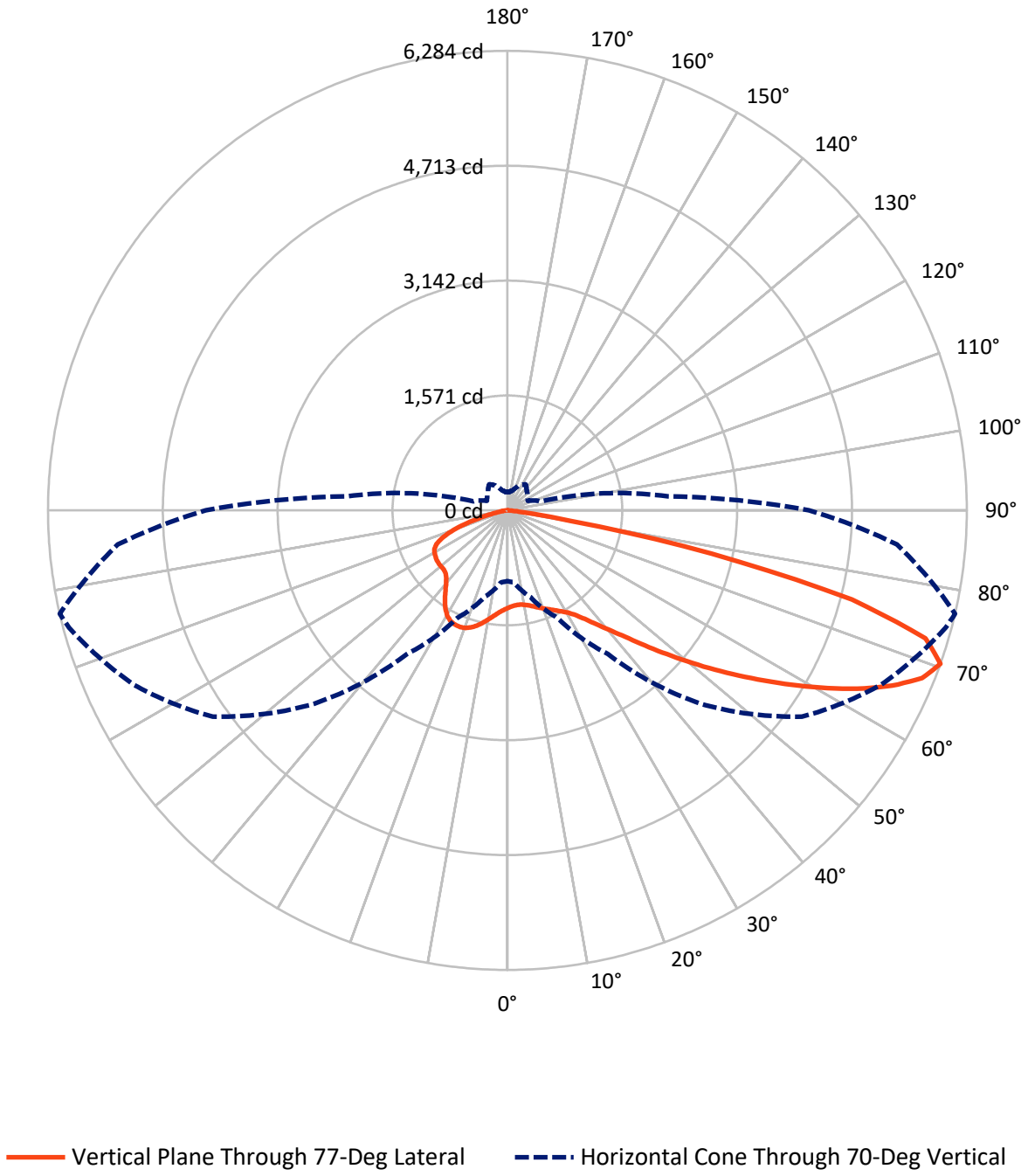

Based on 0.5 foot mounting height. Maximum calculated value = 6320.8 fc
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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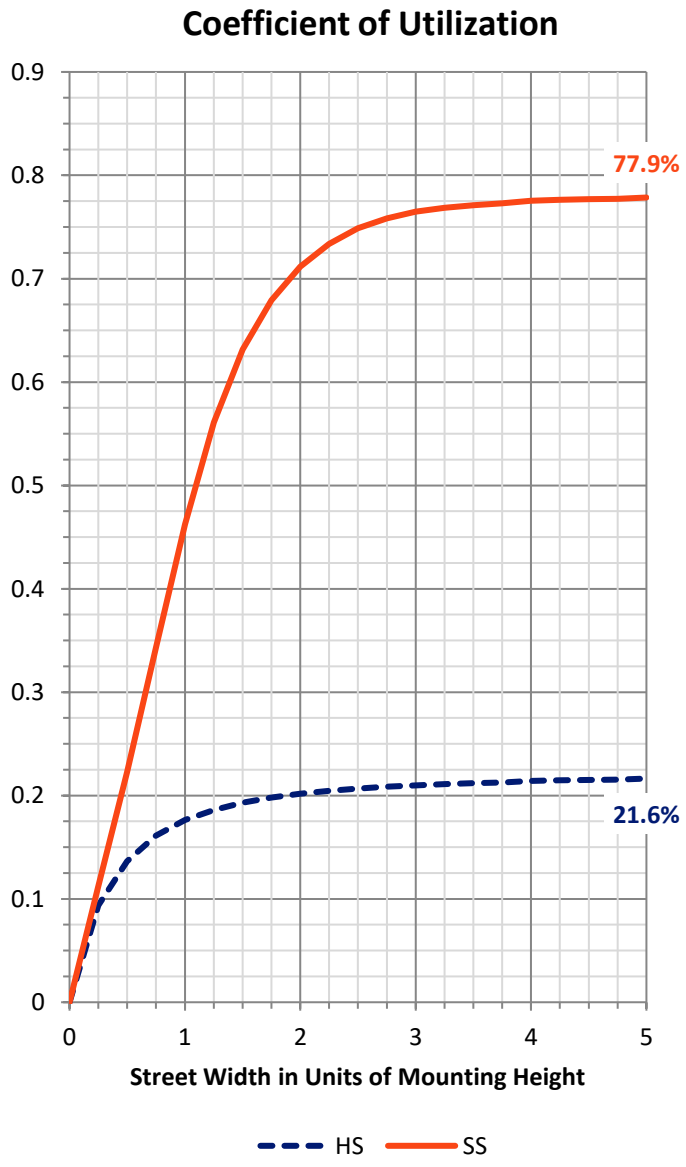
REPORT NUMBER: P1199652
CATALOG NUMBER: GPC-SB2B-722-U-T3R

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2090.9 | 0.0 | 2090.9 |
| | % Fixture | 21.9 | 0.0 | 21.9 |
| **Street Side** | Lumens | 7457.1 | 0.0 | 7457.1 |
| | % Fixture | 78.1 | 0.0 | 78.1 |
| **Total** | Lumens | 9548.0 | 0.0 | 9548.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 127.0 | 1.3 |
| 10°-20° | 366.7 | 3.8 |
| 20°-30° | 627.0 | 6.6 |
| 30°-40° | 1008.3 | 10.6 |
| 40°-50° | 1574.2 | 16.5 |
| 50°-60° | 2102.8 | 22.0 |
| 60°-70° | 2241.3 | 23.5 |
| 70°-80° | 1379.7 | 14.5 |
| 80°-90° | 120.9 | 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° | 9548.0 | 100.0 |
| 0°-180° | 9548.0 | 100.0 |



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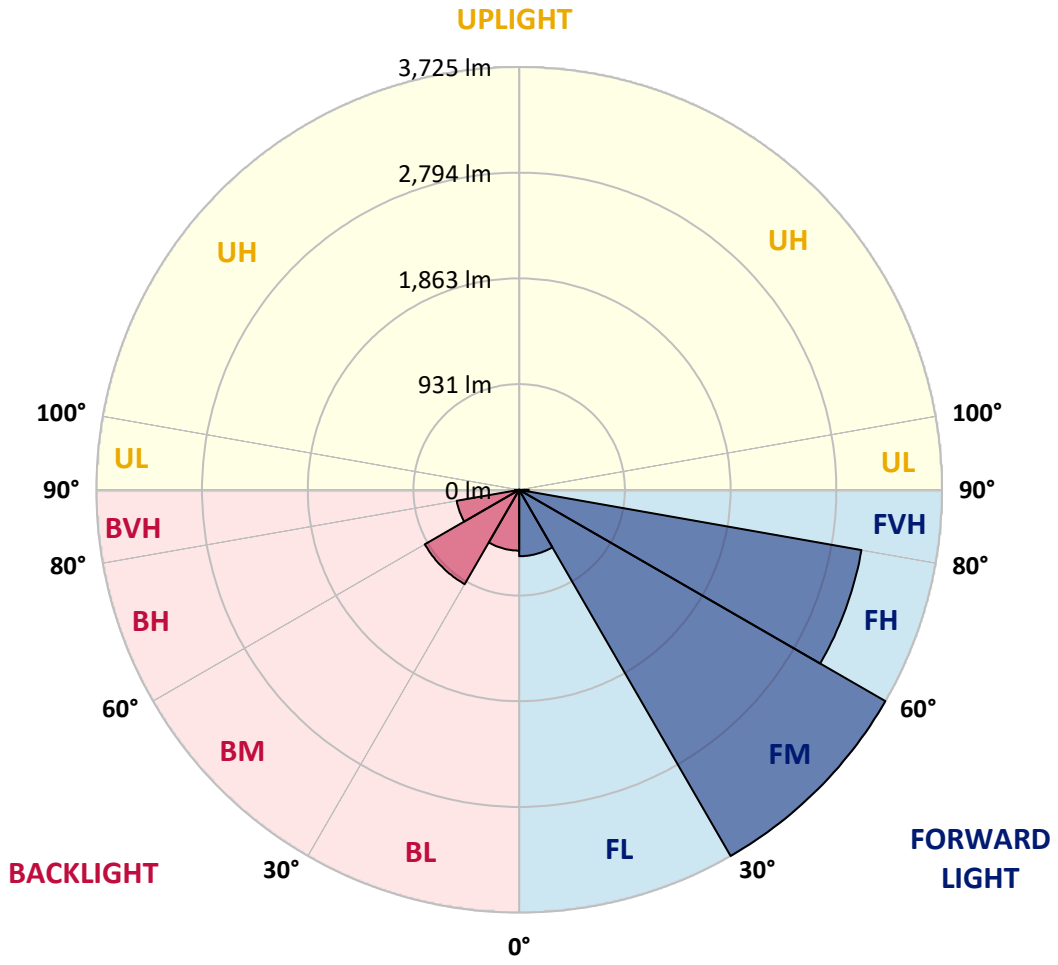
Scaled Data Report

REPORT NUMBER: P1199652
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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°) | 585.0 | 6.1 | | | |
| FM | (30°-60°) | 3725.4 | 39.0 | | | |
| FH | (60°-80°) | 3062.2 | 32.1 | | | G2/5000 |
| FVH | (80°-90°) | 84.5 | 0.9 | | | G1/100 |
| BL | (0°-30°) | 535.7 | 5.6 | B2/1000 | | |
| BM | (30°-60°) | 960.0 | 10.1 | B1/1000 | | |
| BH | (60°-80°) | 558.8 | 5.9 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 36.4 | 0.4 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G2**
Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | *1332.0* | 1332.0 |
| 2.5° | 1227.9 | 1227.4 | 1233.7 | 1235.7 | 1247.4 | 1255.7 | 1271.4 | 1288.0 | 1309.5 | *1312.0* | 1325.2 |
| 5° | 1157.0 | 1157.0 | 1164.3 | 1172.1 | 1187.3 | 1203.9 | 1227.9 | 1256.7 | 1293.9 | *1299.8* | 1332.5 |
| 7.5° | 1096.8 | 1100.7 | 1107.1 | 1122.3 | 1139.9 | 1163.8 | 1200.5 | 1241.6 | 1290.5 | *1299.8* | 1352.6 |
| 10° | 1048.4 | 1052.8 | 1060.6 | 1072.9 | 1099.3 | 1132.5 | 1180.4 | 1233.3 | 1298.8 | *1313.5* | 1381.9 |
| 12.5° | 1033.3 | 1037.7 | 1042.1 | 1051.3 | 1075.8 | 1114.9 | 1172.1 | 1237.2 | 1318.8 | *1333.5* | 1422.0 |
| 15° | 1068.5 | 1073.8 | 1070.4 | 1068.0 | 1080.7 | 1116.4 | 1176.0 | 1251.3 | 1343.8 | *1364.8* | 1471.4 |
| 17.5° | 1149.6 | 1151.6 | 1143.8 | 1120.8 | 1118.8 | 1137.9 | 1194.6 | 1270.9 | 1375.1 | *1398.0* | 1521.3 |
| 20° | 1280.7 | 1277.3 | 1261.1 | 1215.7 | 1189.7 | 1185.8 | 1226.4 | 1300.2 | 1407.3 | *1431.8* | 1575.1 |
| 22.5° | 1458.7 | 1454.8 | 1422.5 | 1350.6 | 1292.9 | 1254.8 | 1272.4 | 1338.4 | 1443.5 | *1470.9* | 1627.4 |
| 25° | 1680.7 | 1675.3 | 1627.9 | 1530.1 | 1440.6 | 1346.2 | 1335.0 | 1388.8 | 1488.0 | *1513.5* | 1682.2 |
| 27.5° | 1939.9 | 1935.5 | 1884.1 | 1755.0 | 1625.9 | 1471.4 | 1412.7 | 1447.9 | 1534.5 | *1563.3* | 1743.8 |
| 30° | 2218.6 | 2231.3 | 2140.3 | 2001.5 | 1838.1 | 1634.7 | 1517.4 | 1520.8 | 1594.6 | *1620.5* | 1818.6 |
| 32.5° | 2546.2 | 2568.2 | 2458.7 | 2282.6 | 2059.7 | 1812.2 | 1649.4 | 1622.5 | 1682.2 | *1703.7* | 1913.0 |
| 35° | 2870.9 | 2895.9 | 2804.9 | 2610.3 | 2353.6 | 2021.5 | 1787.3 | 1739.4 | 1798.5 | *1822.0* | 2038.1 |
| 37.5° | 3151.6 | 3184.9 | 3137.9 | 2968.7 | 2668.0 | 2273.8 | 1967.2 | 1876.8 | 1941.8 | *1971.2* | 2206.4 |
| 40° | 3373.1 | 3424.0 | 3420.5 | 3314.9 | 3038.6 | 2580.0 | 2195.6 | 2046.5 | 2119.8 | *2151.6* | 2410.3 |
| 42.5° | 3553.1 | 3597.1 | 3635.2 | 3629.8 | 3425.4 | 2927.6 | 2464.1 | 2267.0 | 2322.7 | *2359.4* | 2639.6 |
| 45° | 3677.3 | 3724.2 | 3806.4 | 3894.9 | 3797.6 | 3299.8 | 2771.6 | 2528.6 | 2579.5 | *2634.7* | 2913.0 |
| 47.5° | 3788.3 | 3841.6 | 3948.2 | 4088.5 | 4113.5 | 3673.4 | 3108.6 | 2833.3 | 2879.7 | *2936.9* | 3187.3 |
| 50° | 3798.1 | 3844.0 | 4009.3 | 4208.3 | 4337.9 | 4032.3 | 3470.4 | 3175.1 | 3218.6 | *3279.7* | 3481.2 |
| 52.5° | 3561.9 | 3634.2 | 3922.7 | 4204.9 | 4441.1 | 4332.5 | 3829.8 | 3530.6 | 3579.5 | *3652.8* | 3785.3 |
| 55° | 2764.8 | 2870.9 | 3669.0 | 4073.9 | 4404.4 | 4526.7 | 4171.6 | 3908.6 | 3971.2 | *4047.9* | 4091.5 |
| 57.5° | 2381.4 | 2427.9 | 2912.5 | 3835.2 | 4237.2 | 4577.0 | 4460.2 | 4290.5 | 4391.2 | *4475.3* | 4415.2 |
| 60° | 2140.3 | 2179.0 | 2465.5 | 3464.1 | 4017.1 | 4497.3 | 4683.1 | 4646.5 | 4820.6 | *4920.8* | 4746.2 |
| 62.5° | 1882.2 | 1918.8 | 2179.5 | 2892.4 | 3735.5 | 4364.8 | 4824.0 | 4975.1 | 5260.7 | *5370.2* | 5058.2 |
| 65° | 1625.9 | 1657.2 | 1907.1 | 2430.3 | 3377.5 | 4232.3 | 4896.8 | 5259.2 | 5668.0 | *5781.4* | 5317.4 |
| 67.5° | 1340.3 | 1366.3 | 1602.4 | 2050.4 | 2942.3 | 4050.9 | 4933.0 | 5482.7 | 6022.5 | *6119.8* | 5445.5 |
| 70° | *967.2* | *987.3* | *1231.3* | *1621.5* | *2396.1* | *3738.9* | *4918.4* | *5641.1* | *6206.4* | *6284.1* | *5348.7* |
| 72.5° | 457.2 | 475.3 | 761.9 | 1052.8 | 1692.4 | 3131.5 | 4621.5 | 5515.4 | 6019.6 | *5980.9* | 4756.0 |
| 75° | 244.0 | 259.7 | 437.7 | 577.5 | 893.9 | 2146.7 | 3781.9 | 4751.1 | 5054.8 | *4867.0* | 3514.9 |
| 77.5° | 165.3 | 177.5 | 270.9 | 346.7 | 408.3 | 1019.1 | 2430.8 | 3289.5 | 3164.8 | *2854.8* | 1760.4 |
| 80° | 131.1 | 143.8 | 222.0 | 234.7 | 197.6 | 368.2 | 1004.4 | 1522.7 | 1093.9 | *874.8* | 500.7 |
| 82.5° | 100.7 | 114.9 | 186.8 | 170.2 | 107.6 | 151.1 | 292.4 | 481.7 | 280.2 | *213.2* | 121.3 |
| 85° | 61.6 | 76.8 | 146.7 | 108.6 | 60.6 | 68.9 | 99.3 | 134.0 | 85.6 | *71.4* | 43.5 |
| 87.5° | 31.3 | 44.0 | 74.3 | 39.6 | 27.4 | 16.1 | 26.4 | 26.4 | 22.5 | *19.6* | 11.2 |
| 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: P1199652
CATALOG NUMBER: GPC-SB2B-722-U-T3R

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 | 1332.0 |
| 2.5° | 1336.9 | 1346.7 | 1363.3 | 1379.0 | 1391.2 | 1402.9 | 1414.7 | 1421.0 | 1423.0 | 1430.8 | 1435.2 |
| 5° | 1352.6 | 1370.7 | 1402.9 | 1433.3 | 1452.3 | 1464.1 | 1472.4 | 1477.3 | 1478.2 | 1480.7 | 1484.6 |
| 7.5° | 1381.4 | 1410.3 | 1455.3 | 1485.6 | 1499.8 | 1498.8 | 1495.4 | 1483.1 | 1478.2 | 1473.8 | 1474.8 |
| 10° | 1422.0 | 1460.2 | 1515.4 | 1536.4 | 1527.6 | 1504.2 | 1473.8 | 1438.1 | 1421.5 | 1405.4 | 1400.5 |
| 12.5° | 1472.4 | 1520.8 | 1575.1 | 1574.1 | 1530.6 | 1470.4 | 1400.0 | 1345.2 | 1310.5 | 1285.6 | 1279.7 |
| 15° | 1533.5 | 1589.2 | 1630.8 | 1597.6 | 1502.2 | 1394.1 | 1291.0 | 1219.6 | 1188.3 | 1160.9 | 1157.9 |
| 17.5° | 1596.6 | 1656.2 | 1675.3 | 1590.2 | 1430.8 | 1281.2 | 1164.3 | 1108.1 | 1077.3 | 1062.6 | 1067.0 |
| 20° | 1658.2 | 1717.4 | 1701.7 | 1548.2 | 1322.3 | 1153.1 | 1048.9 | 1018.1 | 1011.7 | 1015.2 | 1013.7 |
| 22.5° | 1723.2 | 1776.0 | 1707.1 | 1467.0 | 1183.9 | 1022.0 | 964.8 | 965.8 | 980.0 | 990.2 | 992.7 |
| 25° | 1789.7 | 1825.4 | 1692.9 | 1349.6 | 1035.2 | 925.7 | 911.5 | 927.1 | 955.0 | 975.1 | 980.4 |
| 27.5° | 1853.8 | 1869.4 | 1662.1 | 1204.4 | 907.6 | 856.7 | 859.2 | 891.4 | 933.5 | 961.4 | 968.2 |
| 30° | 1926.2 | 1908.6 | 1602.9 | 1041.1 | 819.1 | 797.6 | 818.1 | 855.7 | 897.8 | 922.7 | 928.6 |
| 32.5° | 2007.8 | 1942.3 | 1509.1 | 890.0 | 756.5 | 750.1 | 783.9 | 808.3 | 826.9 | 834.2 | 838.1 |
| 35° | 2109.5 | 1989.7 | 1388.8 | 783.9 | 700.2 | 715.4 | 747.7 | 735.5 | 728.1 | 724.2 | 728.1 |
| 37.5° | 2241.6 | 2053.8 | 1247.9 | 714.9 | 654.8 | 690.5 | 703.7 | 665.5 | 636.7 | 622.5 | 625.9 |
| 40° | 2400.5 | 2147.7 | 1112.5 | 661.6 | 625.9 | 669.0 | 646.0 | 600.0 | 563.3 | 543.3 | 544.7 |
| 42.5° | 2577.0 | 2246.0 | 998.5 | 621.5 | 609.8 | 651.3 | 603.4 | 548.7 | 489.5 | 483.1 | 489.5 |
| 45° | 2762.4 | 2347.2 | 920.8 | 590.7 | 602.0 | 636.2 | 579.0 | 490.5 | 448.4 | 474.3 | 488.0 |
| 47.5° | 2947.7 | 2440.1 | 873.8 | 567.7 | 598.0 | 619.1 | 557.5 | 458.2 | 428.4 | 466.0 | 483.6 |
| 50° | 3154.0 | 2523.2 | 852.8 | 551.1 | 593.6 | 612.2 | 525.2 | 449.9 | 407.3 | 432.3 | 450.9 |
| 52.5° | 3358.9 | 2587.8 | 837.2 | 534.5 | 587.3 | 606.8 | 509.5 | 440.1 | 381.9 | 383.4 | 393.6 |
| 55° | 3563.3 | 2629.8 | 820.1 | 512.5 | 573.1 | 595.1 | 508.1 | 429.3 | 362.8 | 356.0 | 360.9 |
| 57.5° | 3781.4 | 2653.8 | 799.0 | 488.0 | 548.7 | 565.3 | 506.6 | 421.0 | 357.0 | 345.7 | 347.2 |
| 60° | 4003.4 | 2689.0 | 771.6 | 458.2 | 515.9 | 529.6 | 503.2 | 418.1 | 353.5 | 334.5 | 335.9 |
| 62.5° | 4202.5 | 2701.2 | 738.9 | 429.8 | 473.8 | 494.4 | 495.8 | 415.6 | 344.3 | 311.5 | 311.5 |
| 65° | 4333.0 | 2648.4 | 681.7 | 397.6 | 428.4 | 458.2 | 481.7 | 407.3 | 327.6 | 294.9 | 294.9 |
| 67.5° | 4327.6 | 2497.8 | 592.2 | 356.0 | 384.4 | 418.1 | 461.1 | 393.2 | 307.6 | 274.3 | 275.8 |
| 70° | *4126.2* | *2200.5* | *478.7* | *307.6* | *335.9* | *375.1* | *434.7* | *372.1* | *283.6* | *251.8* | *254.8* |
| 72.5° | 3538.9 | 1722.3 | 347.7 | 250.9 | 279.7 | 330.6 | 400.5 | 346.7 | 259.2 | 231.8 | 230.3 |
| 75° | 2528.1 | 1090.0 | 235.7 | 192.7 | 217.6 | 280.2 | 357.9 | 316.9 | 236.7 | 232.8 | 219.6 |
| 77.5° | 1291.4 | 520.8 | 156.0 | 140.8 | 151.6 | 221.0 | 300.7 | 283.1 | 240.1 | 192.2 | 171.1 |
| 80° | 420.1 | 192.2 | 98.3 | 95.8 | 100.7 | 147.2 | 232.8 | 232.3 | 181.9 | 130.6 | 115.4 |
| 82.5° | 134.0 | 82.6 | 64.1 | 61.6 | 59.2 | 92.4 | 162.3 | 183.9 | 122.7 | 82.6 | 82.2 |
| 85° | 53.3 | 49.4 | 37.7 | 34.7 | 24.9 | 43.5 | 85.1 | 122.2 | 91.4 | 59.7 | 61.1 |
| 87.5° | 19.6 | 19.6 | 10.3 | 7.3 | 5.4 | 14.7 | 23.0 | 36.7 | 52.3 | 30.8 | 30.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

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## Test Information

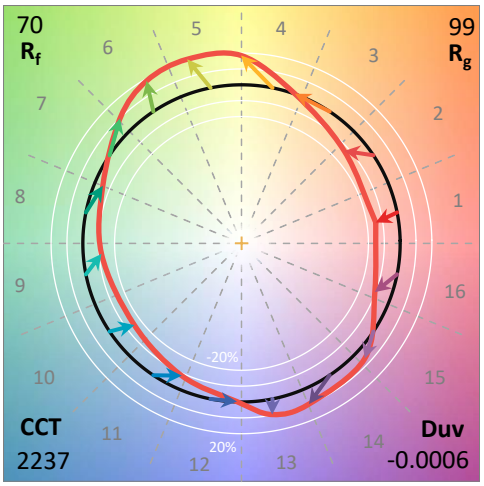
| | |
|---|---|
| Test Method: | LM-79-2008 Report |
| Number: | SP1-1908-441-10-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON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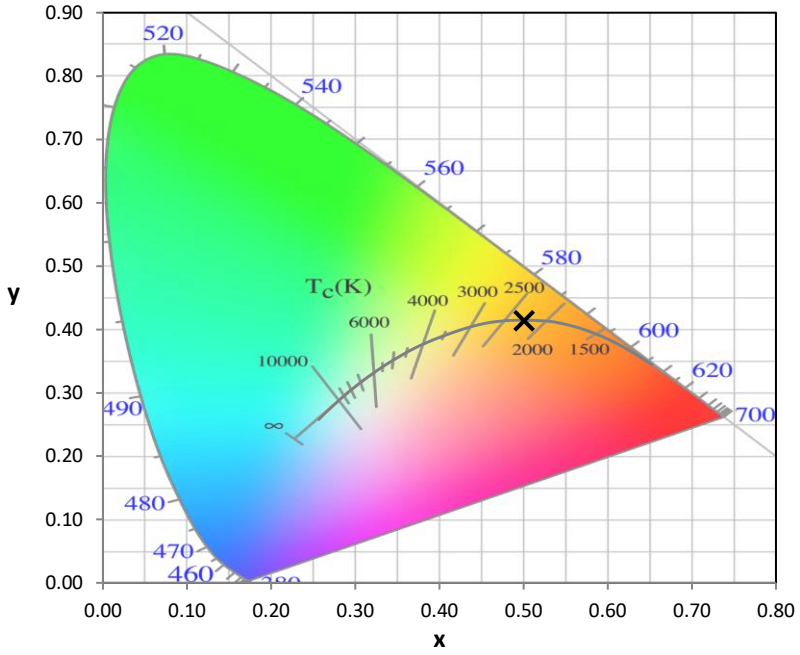
REPORT NUMBER: SP1-1908-441-10-R4

| 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 |

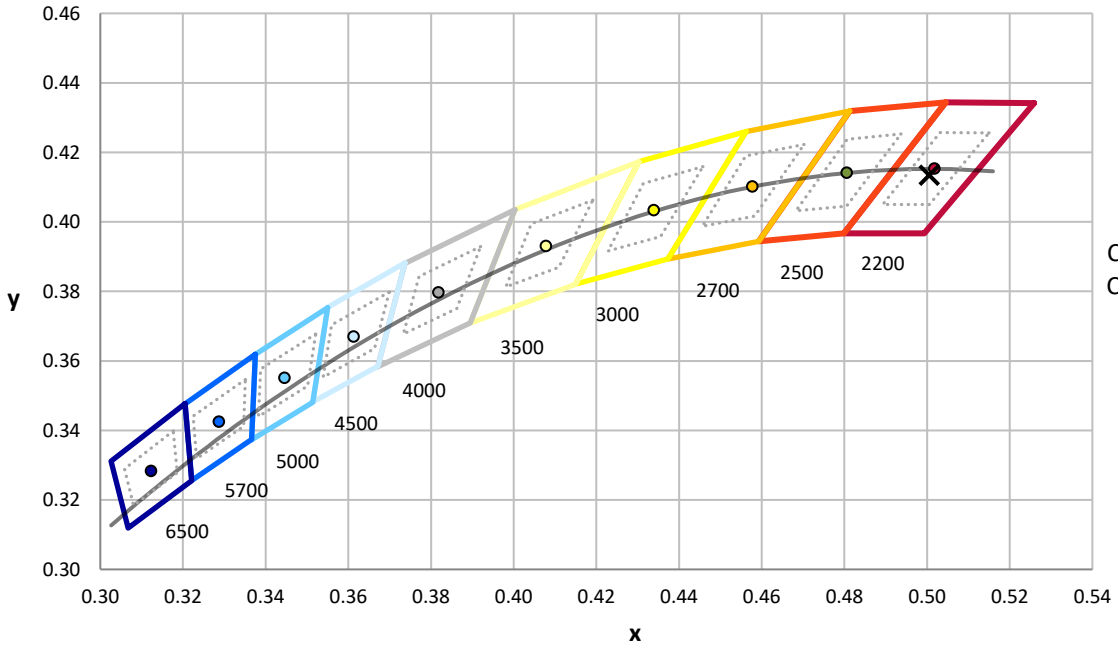
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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

## CIE 1931 Chromaticity Diagram




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



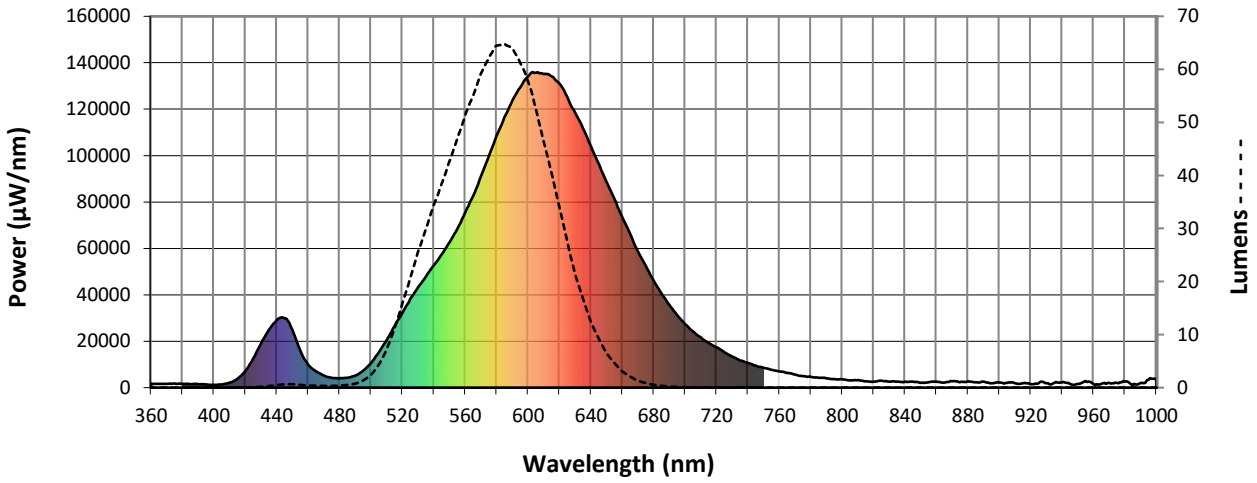

CCT = 2237K
CIE x = 0.5005
CIE y = 0.4134
Duv = -0.0006

Point lies inside the ANSI 2200K 4-step quadrangle

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## Photopic Flux vs. Wavelength



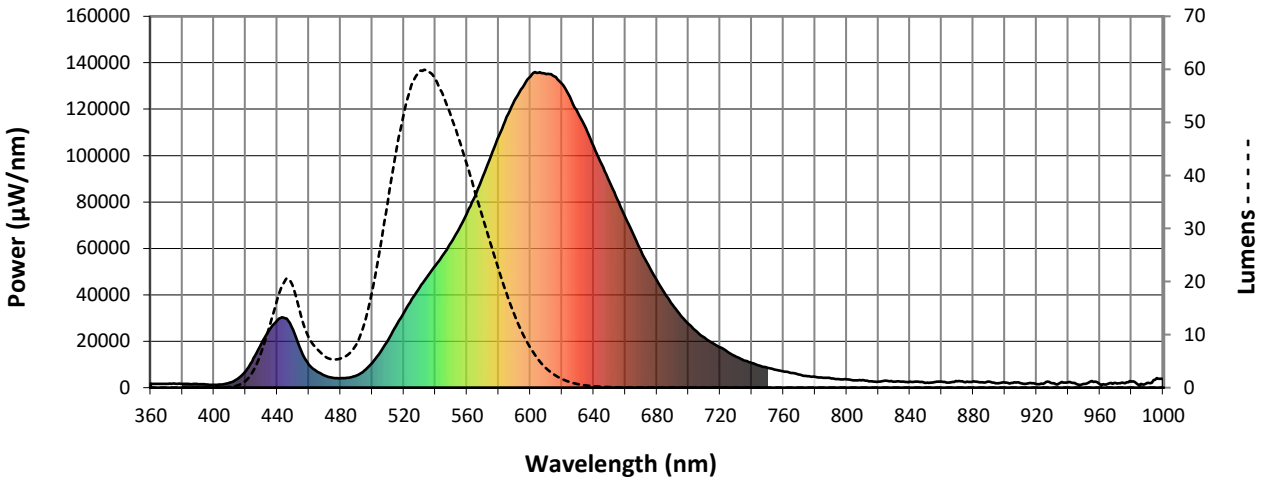

**Photopic Lumens: 5530.5**

| 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



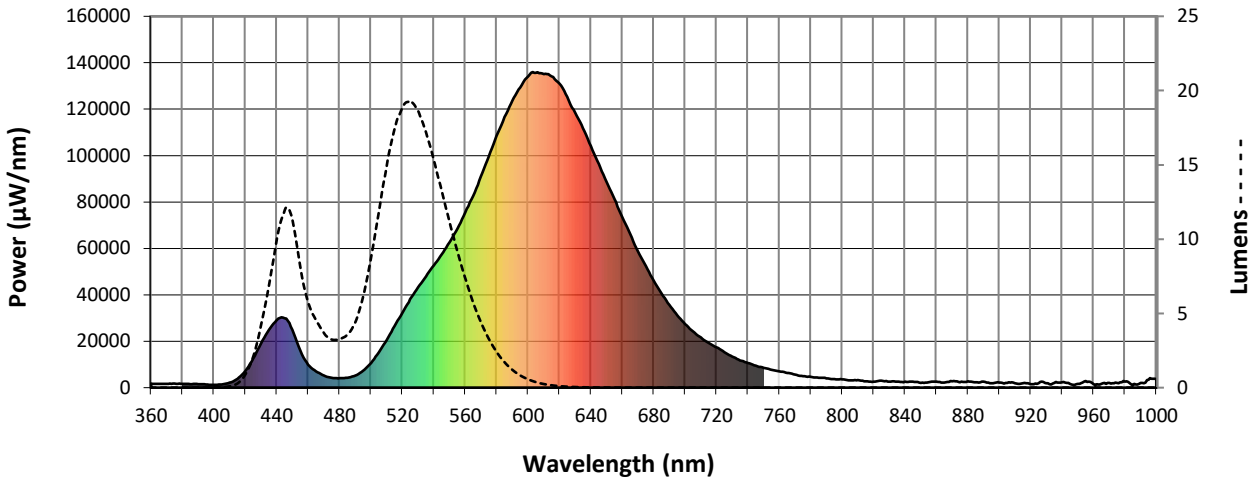

**Scotopic Lumens: 4696.9** **S/P: 0.85**

| 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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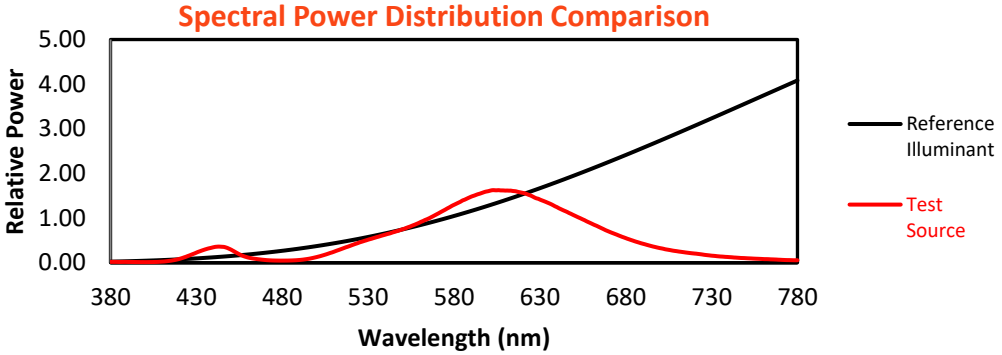
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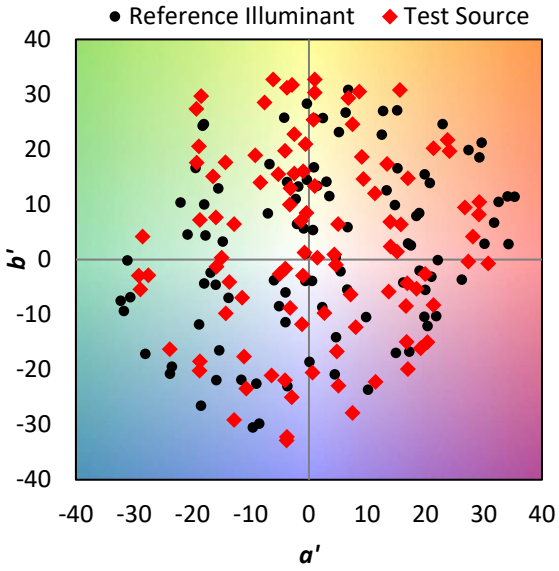
## Summary

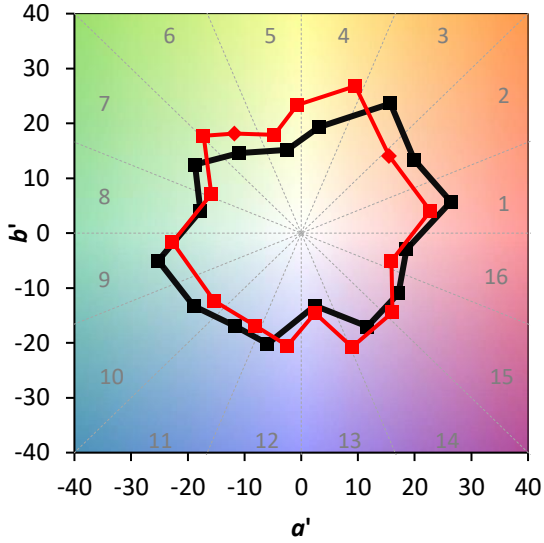
$R_f$ = 69.8
$R_g$ = 99.2
CIE $R_a$ = 72.0
$R_9$ = -17.4

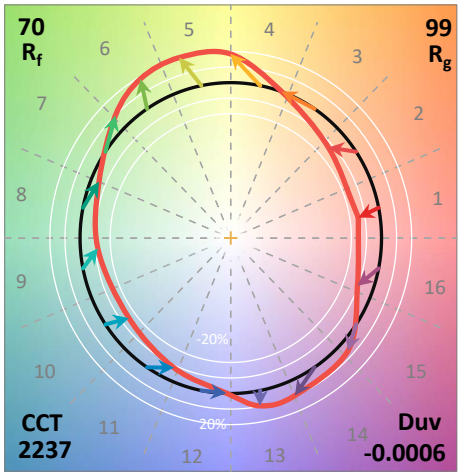
## Spectral Power Distribution Comparison

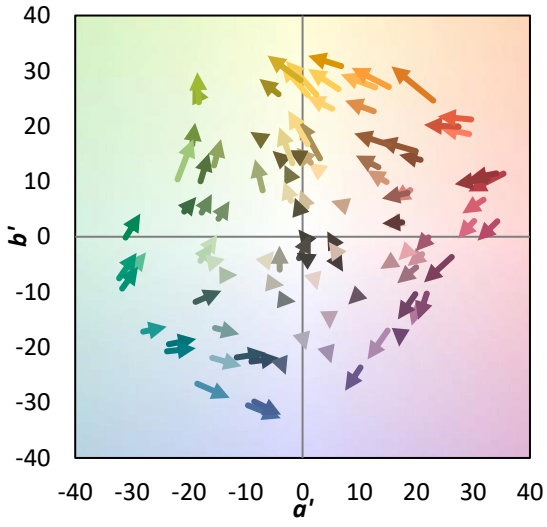



## Color Vector Graphics



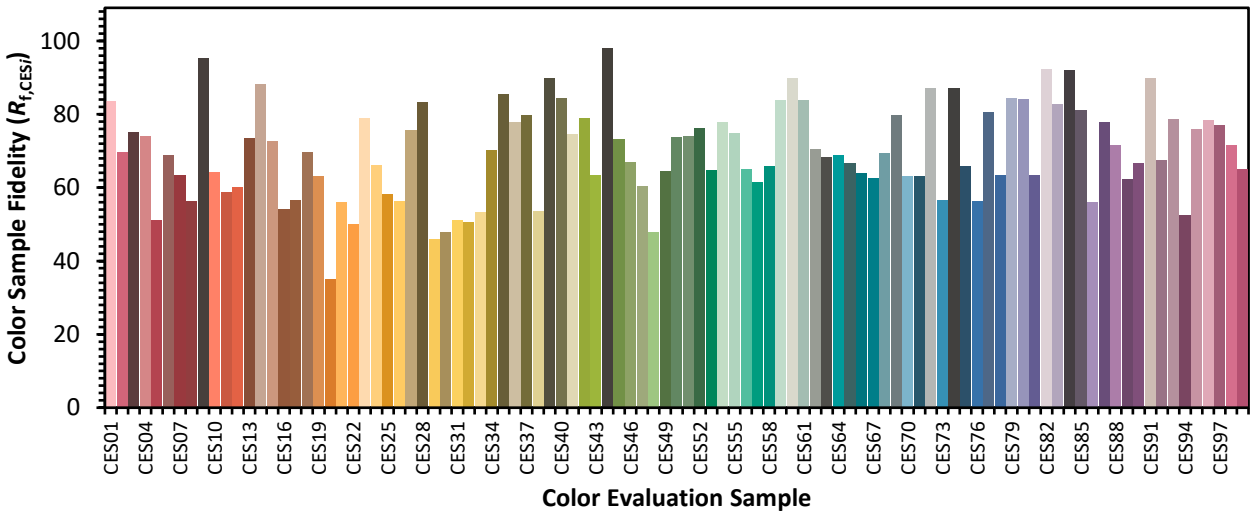
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Peachtree City, GA 30269

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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 | |

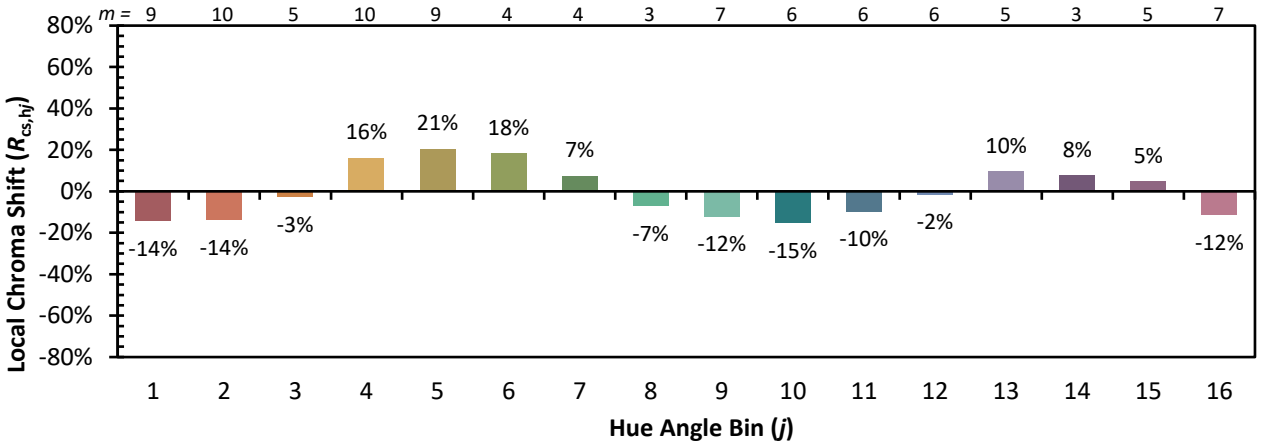


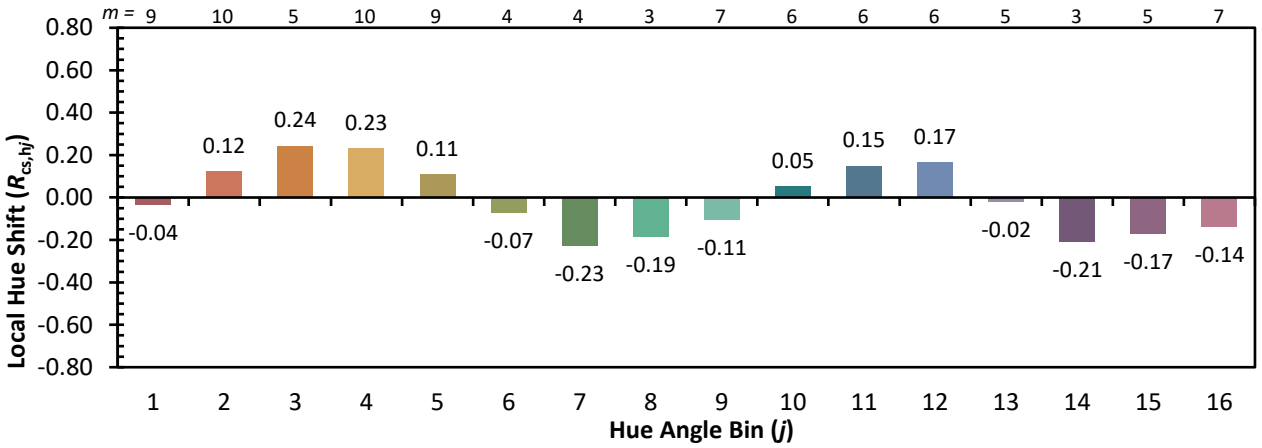
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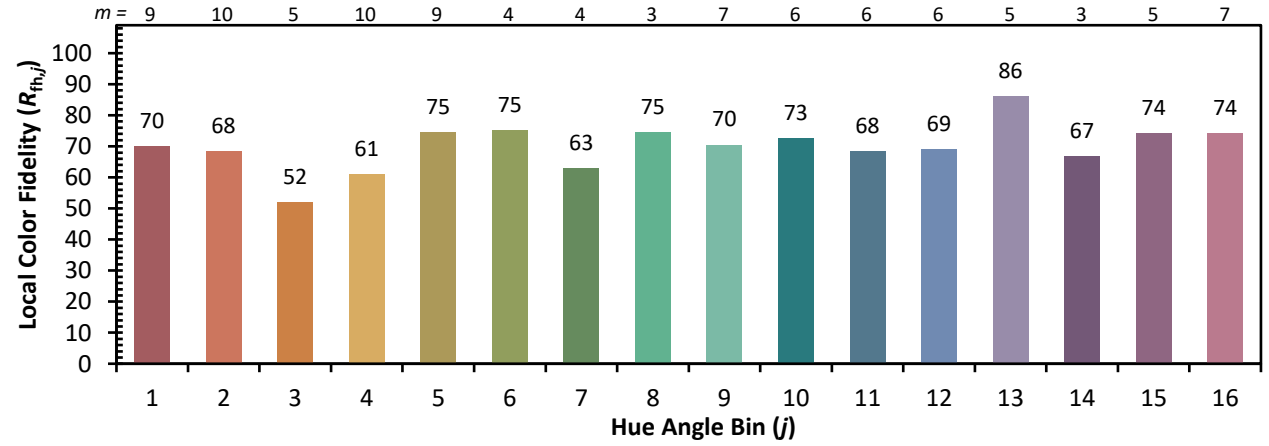
REPORT NUMBER: SP1-1908-441-10-R4

## TM-30-18

### Color Rendition by Hue-Angle Bin



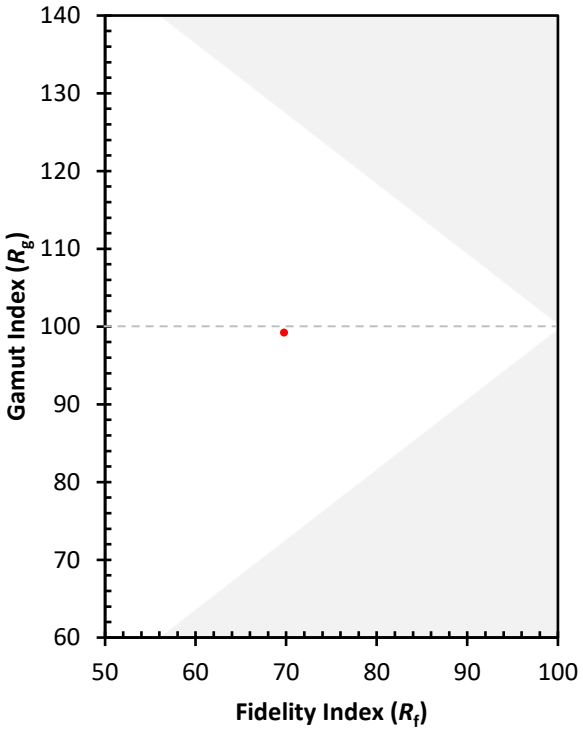



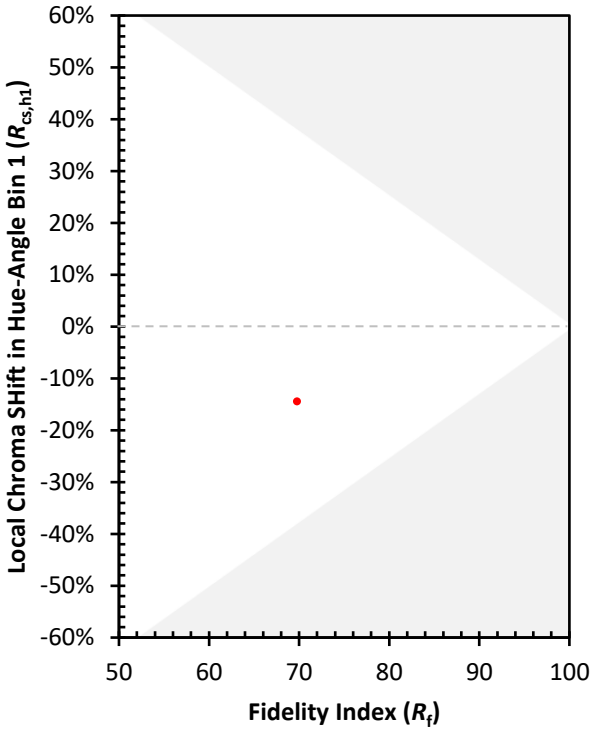
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### Measure Comparisons




(END OF REPORT)