

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: STREETWORKS

Report Number: P1462106

Luminaire Tested: PRV-P-50-740-U-T2U

Issue Date: 06/10/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1462106  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 6/11/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: STREETWORKS  
Catalog Number: PRV-P-50-740-U-T2U  
Description: PREVAIL PETITE DISCRETE LED 1 SQUARE 50W 70CRI 4000K FIXTURE w/ TYPE II URBAN DISTRIBUTION OPTIC  
Light Source: (10) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6474.9 lumens  
Efficiency: N/A  
Efficacy: 123.3 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2

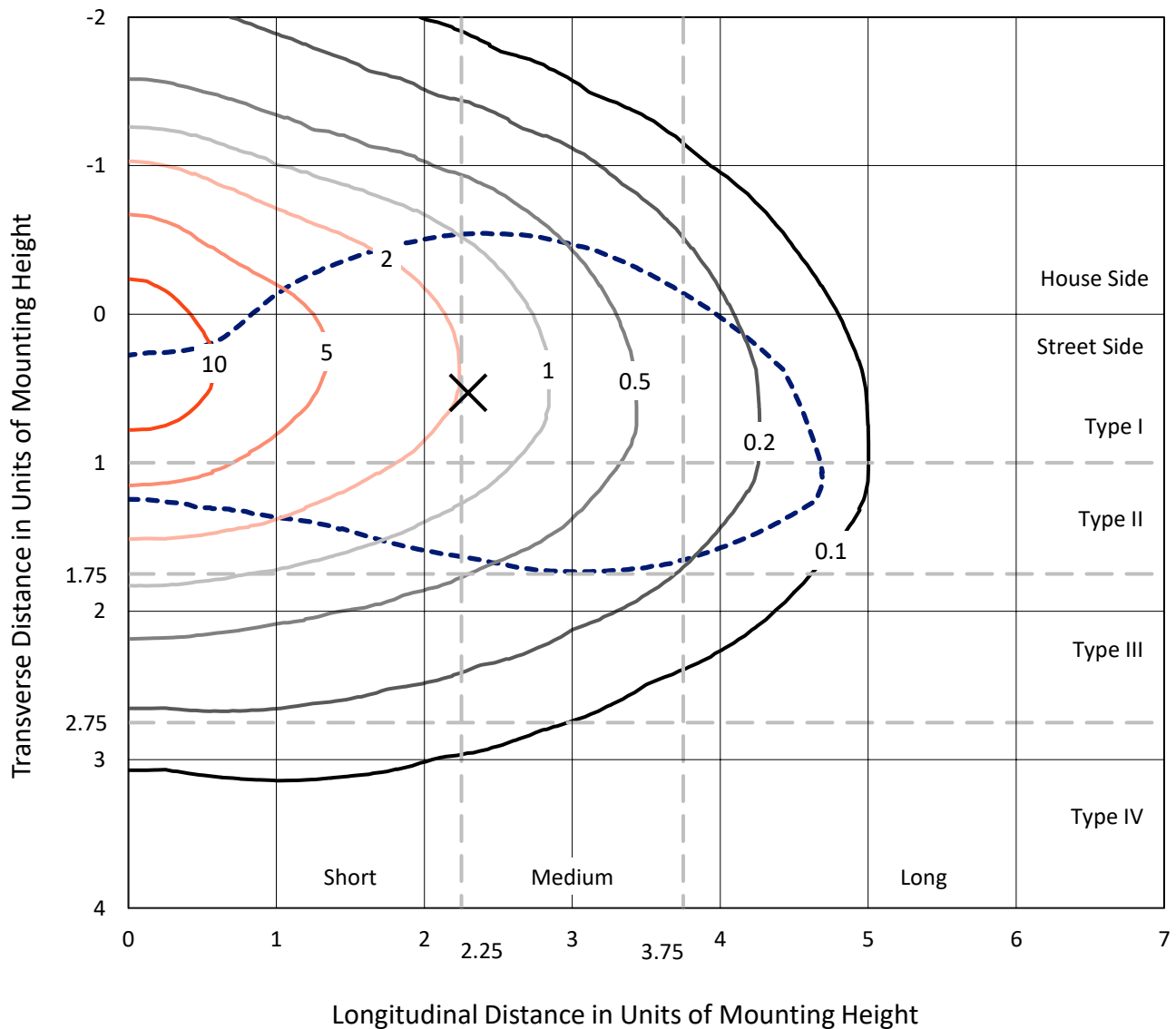
Input Watts (W): 52.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): 6.0%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 --- 1/2 Max cd

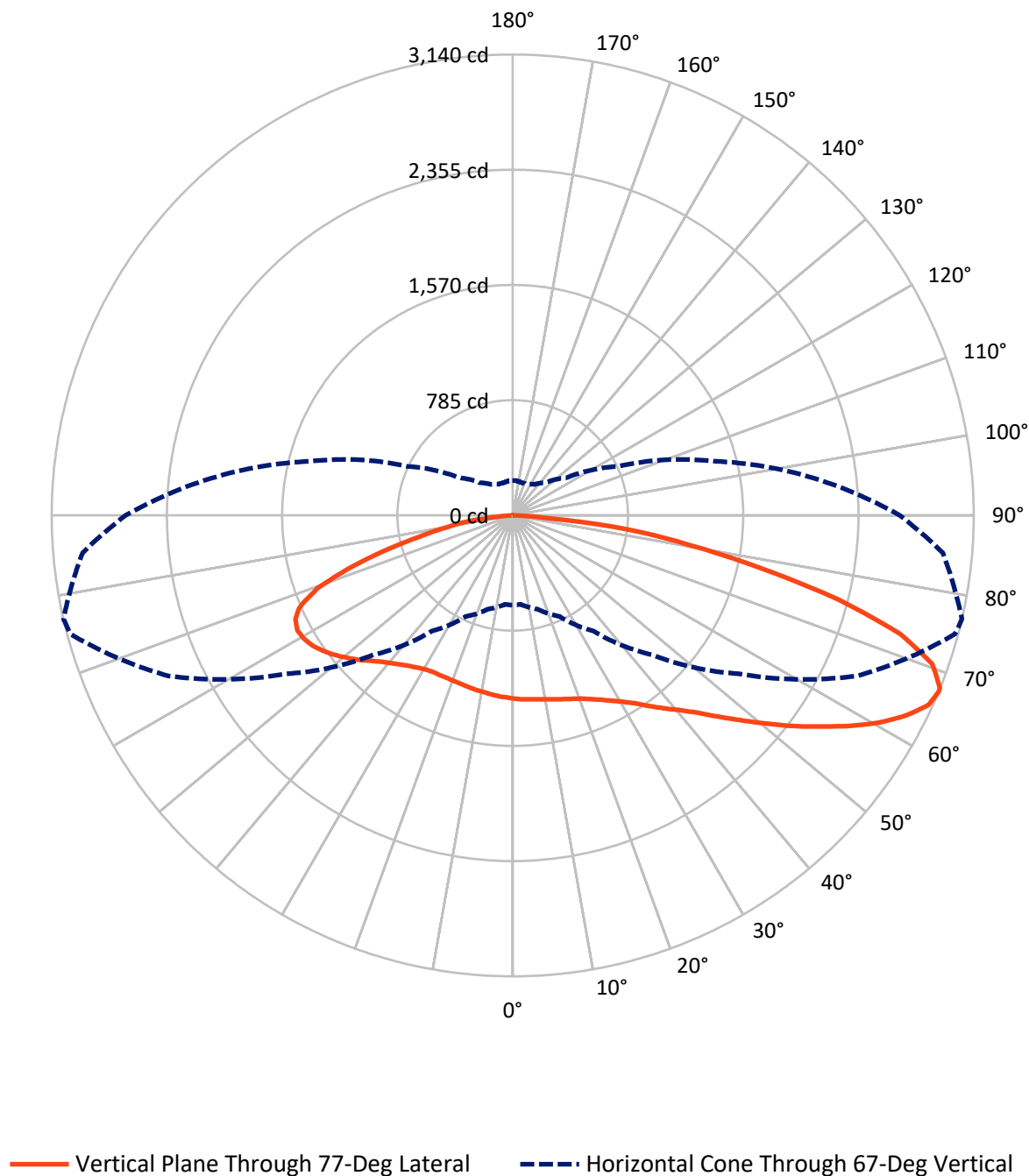


Based on 10 foot mounting height. Maximum calculated value = 14 fc  
 Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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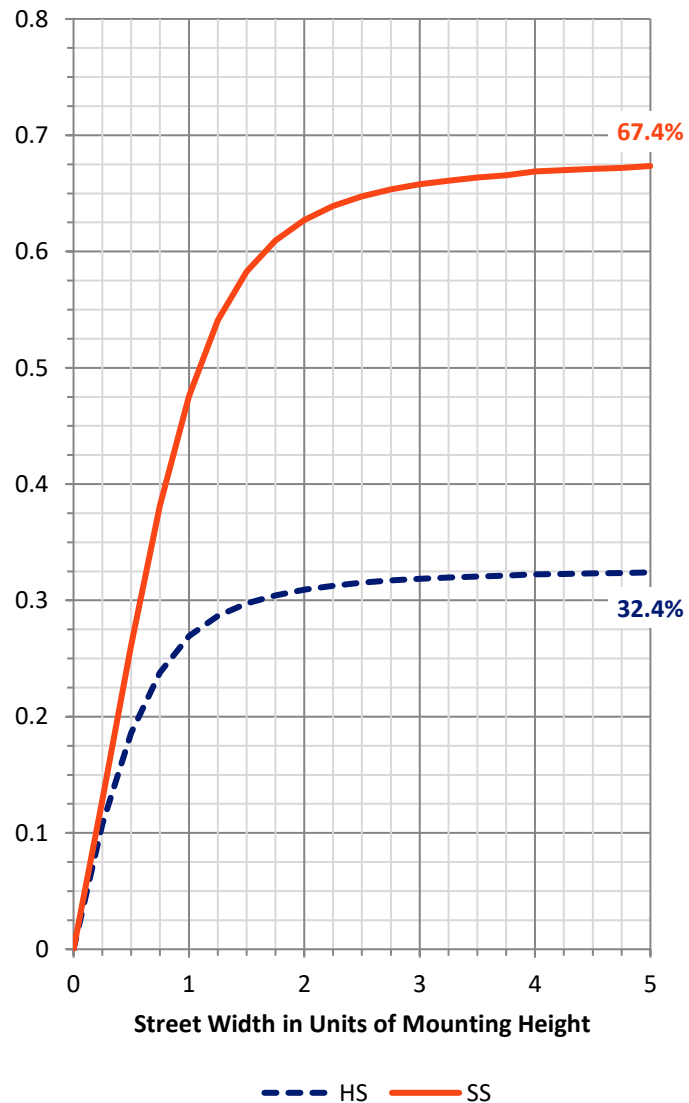
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2109.9   | 0.0    | 2109.9 |
|                    | % Fixture | 32.6     | 0.0    | 32.6   |
| <b>Street Side</b> | Lumens    | 4365.0   | 0.0    | 4365.0 |
|                    | % Fixture | 67.4     | 0.0    | 67.4   |
| <b>Total</b>       | Lumens    | 6474.9   | 0.0    | 6474.9 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 120.0  | 1.9       |
| 10°-20°   | 365.4  | 5.6       |
| 20°-30°   | 621.9  | 9.6       |
| 30°-40°   | 891.9  | 13.8      |
| 40°-50°   | 1132.6 | 17.5      |
| 50°-60°   | 1246.0 | 19.2      |
| 60°-70°   | 1203.5 | 18.6      |
| 70°-80°   | 757.0  | 11.7      |
| 80°-90°   | 136.5  | 2.1       |
| 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°    | 6474.9 | 100.0     |
| 0°-180°   | 6474.9 | 100.0     |

**Coefficient of Utilization**



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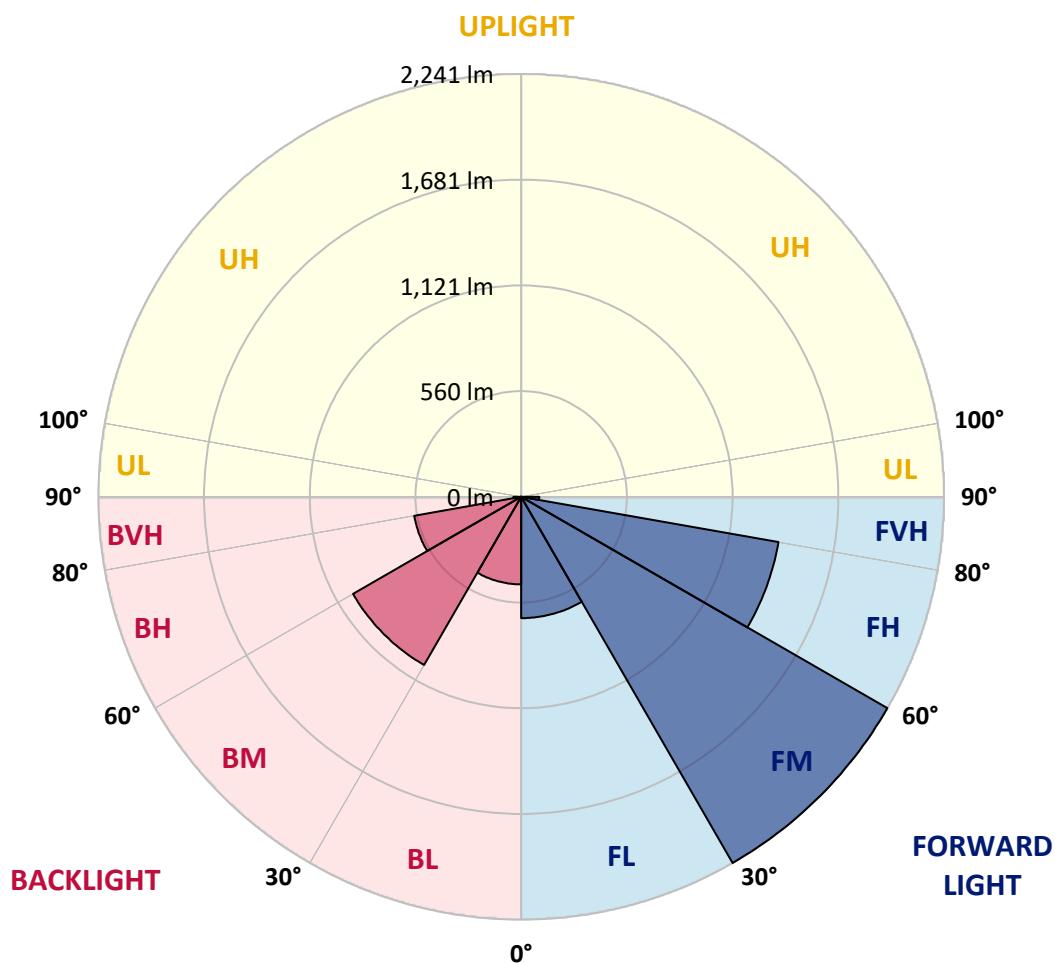
CATALOG NUMBER: PRV-P-50-740-U-T2U

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 643.0  | 9.9       |                         |      |         |
| FM   | (30°-60°)   | 2241.4 | 34.6      |                         |      |         |
| FH   | (60°-80°)   | 1385.0 | 21.4      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 95.6   | 1.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 464.3  | 7.2       | B1/500                  |      |         |
| BM   | (30°-60°)   | 1029.1 | 15.9      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 575.6  | 8.9       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 40.9   | 0.6       |                         |      | 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 II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 77°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 |
| 2.5°  | 1269.9 | 1274.9 | 1276.9 | 1277.9 | 1277.9 | 1270.9 | 1268.9 | 1257.9 | 1255.9 | 1253.9 | 1243.9 |
| 5°    | 1318.9 | 1315.9 | 1320.9 | 1314.9 | 1313.9 | 1298.9 | 1286.9 | 1271.9 | 1257.9 | 1257.9 | 1246.9 |
| 7.5°  | 1372.9 | 1370.9 | 1374.9 | 1368.9 | 1347.9 | 1331.9 | 1315.9 | 1287.9 | 1269.9 | 1264.9 | 1250.9 |
| 10°   | 1441.9 | 1434.9 | 1438.9 | 1416.9 | 1400.9 | 1366.9 | 1339.9 | 1305.9 | 1277.9 | 1273.9 | 1254.9 |
| 12.5° | 1497.9 | 1498.9 | 1501.9 | 1480.9 | 1452.9 | 1416.9 | 1376.9 | 1328.9 | 1296.9 | 1284.9 | 1258.9 |
| 15°   | 1552.9 | 1563.9 | 1558.9 | 1539.9 | 1510.9 | 1461.9 | 1409.9 | 1353.9 | 1307.9 | 1298.9 | 1267.9 |
| 17.5° | 1608.9 | 1606.9 | 1606.9 | 1588.9 | 1553.9 | 1508.9 | 1446.9 | 1378.9 | 1323.9 | 1313.9 | 1276.9 |
| 20°   | 1660.9 | 1655.9 | 1656.9 | 1644.9 | 1609.9 | 1560.9 | 1487.9 | 1414.9 | 1349.9 | 1331.9 | 1288.9 |
| 22.5° | 1703.9 | 1711.9 | 1717.9 | 1700.9 | 1665.9 | 1609.9 | 1540.9 | 1452.9 | 1370.9 | 1358.9 | 1304.9 |
| 25°   | 1755.9 | 1759.9 | 1769.9 | 1761.9 | 1731.9 | 1678.9 | 1596.9 | 1501.9 | 1407.9 | 1390.9 | 1327.9 |
| 27.5° | 1811.9 | 1812.9 | 1826.9 | 1825.9 | 1783.9 | 1734.9 | 1652.9 | 1549.9 | 1448.9 | 1428.9 | 1352.9 |
| 30°   | 1883.9 | 1880.9 | 1894.9 | 1888.9 | 1843.9 | 1790.9 | 1707.9 | 1601.9 | 1489.9 | 1471.9 | 1388.9 |
| 32.5° | 1942.9 | 1948.9 | 1951.9 | 1954.9 | 1909.9 | 1853.9 | 1769.9 | 1665.9 | 1546.9 | 1525.9 | 1435.9 |
| 35°   | 1999.9 | 1999.9 | 2010.9 | 2009.9 | 1970.9 | 1923.9 | 1841.9 | 1733.9 | 1617.9 | 1593.9 | 1499.9 |
| 37.5° | 2039.9 | 2047.9 | 2056.9 | 2059.9 | 2019.9 | 1975.9 | 1911.9 | 1810.9 | 1693.9 | 1666.9 | 1566.9 |
| 40°   | 2046.9 | 2059.9 | 2095.9 | 2104.9 | 2065.9 | 2027.9 | 1980.9 | 1892.9 | 1768.9 | 1743.9 | 1642.9 |
| 42.5° | 2062.9 | 2083.9 | 2110.9 | 2130.9 | 2096.9 | 2062.9 | 2042.9 | 1970.9 | 1858.9 | 1834.9 | 1735.9 |
| 45°   | 1989.9 | 1991.9 | 2038.9 | 2090.9 | 2091.9 | 2082.9 | 2101.9 | 2066.9 | 1970.9 | 1953.9 | 1846.9 |
| 47.5° | 1903.9 | 1887.9 | 1925.9 | 2006.9 | 2056.9 | 2094.9 | 2154.9 | 2161.9 | 2096.9 | 2082.9 | 1970.9 |
| 50°   | 1682.9 | 1695.9 | 1797.9 | 1899.9 | 1989.9 | 2082.9 | 2200.9 | 2276.9 | 2246.9 | 2226.9 | 2104.9 |
| 52.5° | 1444.9 | 1450.9 | 1564.9 | 1779.9 | 1905.9 | 2064.9 | 2229.9 | 2389.9 | 2387.9 | 2383.9 | 2248.9 |
| 55°   | 1290.9 | 1292.9 | 1414.9 | 1588.9 | 1801.9 | 1996.9 | 2245.9 | 2497.9 | 2550.9 | 2537.9 | 2403.9 |
| 57.5° | 1129.0 | 1138.0 | 1233.9 | 1364.9 | 1666.9 | 1903.9 | 2237.9 | 2582.9 | 2713.9 | 2704.9 | 2551.9 |
| 60°   | 971.0  | 994.0  | 1047.0 | 1182.0 | 1492.9 | 1783.9 | 2192.9 | 2655.9 | 2869.9 | 2865.9 | 2709.9 |
| 62.5° | 827.0  | 839.0  | 890.0  | 1023.0 | 1282.9 | 1649.9 | 2116.9 | 2685.9 | 2999.9 | 3003.9 | 2827.9 |
| 65°   | 712.0  | 715.0  | 761.0  | 874.0  | 1097.0 | 1490.9 | 1996.9 | 2657.9 | 3097.9 | 3112.9 | 2919.9 |
| 67°   | 611.0  | 608.0  | 662.0  | 761.0  | 963.0  | 1342.9 | 1879.9 | 2586.9 | 3118.9 | 3139.9 | 2940.9 |
| 67.5° | 573.0  | 579.0  | 641.0  | 734.0  | 937.0  | 1304.9 | 1840.9 | 2560.9 | 3113.9 | 3137.9 | 2928.9 |
| 70°   | 414.0  | 419.0  | 511.0  | 615.0  | 782.0  | 1108.0 | 1632.9 | 2380.9 | 3008.9 | 3031.9 | 2781.9 |
| 72.5° | 314.0  | 317.0  | 404.0  | 507.0  | 650.0  | 914.0  | 1388.9 | 2138.9 | 2723.9 | 2759.9 | 2489.9 |
| 75°   | 251.0  | 248.0  | 312.0  | 411.0  | 523.0  | 736.0  | 1092.0 | 1718.9 | 2240.9 | 2293.9 | 2021.9 |
| 77.5° | 194.0  | 192.0  | 222.0  | 322.0  | 418.0  | 560.0  | 802.0  | 1303.9 | 1730.9 | 1719.9 | 1531.9 |
| 80°   | 122.0  | 125.0  | 133.0  | 212.0  | 297.0  | 389.0  | 537.0  | 837.0  | 1190.0 | 1219.9 | 1085.0 |
| 82.5° | 63.0   | 69.0   | 74.0   | 115.0  | 158.0  | 216.0  | 340.0  | 528.0  | 788.0  | 805.0  | 730.0  |
| 85°   | 13.0   | 12.0   | 17.0   | 29.0   | 45.0   | 71.0   | 102.0  | 170.0  | 229.0  | 253.0  | 224.0  |
| 87.5° | 1.0    | 1.0    | 2.0    | 2.0    | 2.0    | 3.0    | 6.0    | 6.0    | 5.0    | 5.0    | 5.0    |
| 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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CATALOG NUMBER: PRV-P-50-740-U-T2U

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 | 1248.9 |
| 2.5°  | 1247.9 | 1242.9 | 1239.9 | 1234.9 | 1233.9 | 1235.9 | 1229.9 | 1227.9 | 1221.9 | 1217.9 | 1218.9 |
| 5°    | 1247.9 | 1241.9 | 1232.9 | 1219.9 | 1216.9 | 1215.9 | 1208.9 | 1200.0 | 1193.0 | 1191.0 | 1186.0 |
| 7.5°  | 1244.9 | 1238.9 | 1223.9 | 1209.9 | 1197.0 | 1190.0 | 1184.0 | 1176.0 | 1162.0 | 1153.0 | 1154.0 |
| 10°   | 1244.9 | 1234.9 | 1214.9 | 1196.0 | 1179.0 | 1164.0 | 1153.0 | 1143.0 | 1133.0 | 1121.0 | 1123.0 |
| 12.5° | 1247.9 | 1235.9 | 1208.9 | 1182.0 | 1159.0 | 1142.0 | 1127.0 | 1115.0 | 1107.0 | 1093.0 | 1093.0 |
| 15°   | 1251.9 | 1233.9 | 1200.0 | 1168.0 | 1141.0 | 1119.0 | 1099.0 | 1088.0 | 1079.0 | 1072.0 | 1071.0 |
| 17.5° | 1254.9 | 1234.9 | 1192.0 | 1151.0 | 1116.0 | 1090.0 | 1073.0 | 1065.0 | 1060.0 | 1055.0 | 1053.0 |
| 20°   | 1261.9 | 1238.9 | 1187.0 | 1137.0 | 1096.0 | 1065.0 | 1051.0 | 1046.0 | 1047.0 | 1041.0 | 1040.0 |
| 22.5° | 1277.9 | 1243.9 | 1182.0 | 1122.0 | 1070.0 | 1044.0 | 1030.0 | 1023.0 | 1025.0 | 1021.0 | 1021.0 |
| 25°   | 1289.9 | 1255.9 | 1181.0 | 1109.0 | 1053.0 | 1020.0 | 1005.0 | 1000.0 | 1000.0 | 996.0  | 993.0  |
| 27.5° | 1308.9 | 1269.9 | 1178.0 | 1097.0 | 1031.0 | 996.0  | 977.0  | 971.0  | 966.0  | 965.0  | 964.0  |
| 30°   | 1342.9 | 1292.9 | 1184.0 | 1079.0 | 1008.0 | 966.0  | 942.0  | 934.0  | 932.0  | 932.0  | 930.0  |
| 32.5° | 1378.9 | 1326.9 | 1196.0 | 1073.0 | 986.0  | 931.0  | 906.0  | 896.0  | 897.0  | 892.0  | 892.0  |
| 35°   | 1436.9 | 1367.9 | 1213.9 | 1074.0 | 964.0  | 895.0  | 868.0  | 861.0  | 854.0  | 849.0  | 849.0  |
| 37.5° | 1492.9 | 1418.9 | 1234.9 | 1070.0 | 946.0  | 866.0  | 831.0  | 810.0  | 805.0  | 800.0  | 799.0  |
| 40°   | 1561.9 | 1473.9 | 1260.9 | 1060.0 | 922.0  | 829.0  | 782.0  | 753.0  | 753.0  | 751.0  | 749.0  |
| 42.5° | 1645.9 | 1543.9 | 1288.9 | 1059.0 | 896.0  | 792.0  | 724.0  | 694.0  | 689.0  | 688.0  | 693.0  |
| 45°   | 1743.9 | 1631.9 | 1326.9 | 1058.0 | 873.0  | 750.0  | 667.0  | 624.0  | 621.0  | 611.0  | 613.0  |
| 47.5° | 1856.9 | 1725.9 | 1369.9 | 1054.0 | 844.0  | 700.0  | 602.0  | 555.0  | 540.0  | 534.0  | 530.0  |
| 50°   | 1979.9 | 1824.9 | 1407.9 | 1049.0 | 806.0  | 640.0  | 536.0  | 485.0  | 466.0  | 456.0  | 451.0  |
| 52.5° | 2116.9 | 1922.9 | 1446.9 | 1039.0 | 760.0  | 582.0  | 476.0  | 425.0  | 403.0  | 394.0  | 391.0  |
| 55°   | 2246.9 | 2022.9 | 1477.9 | 1025.0 | 714.0  | 521.0  | 420.0  | 374.0  | 356.0  | 352.0  | 351.0  |
| 57.5° | 2369.9 | 2114.9 | 1504.9 | 1002.0 | 662.0  | 470.0  | 377.0  | 338.0  | 324.0  | 328.0  | 327.0  |
| 60°   | 2481.9 | 2194.9 | 1516.9 | 967.0  | 609.0  | 420.0  | 342.0  | 310.0  | 302.0  | 310.0  | 309.0  |
| 62.5° | 2589.9 | 2253.9 | 1513.9 | 923.0  | 554.0  | 381.0  | 310.0  | 285.0  | 283.0  | 300.0  | 301.0  |
| 65°   | 2637.9 | 2265.9 | 1482.9 | 858.0  | 496.0  | 341.0  | 280.0  | 253.0  | 253.0  | 264.0  | 266.0  |
| 67°   | 2635.9 | 2231.9 | 1423.9 | 788.0  | 447.0  | 314.0  | 258.0  | 234.0  | 231.0  | 238.0  | 237.0  |
| 67.5° | 2617.9 | 2211.9 | 1399.9 | 769.0  | 436.0  | 307.0  | 252.0  | 229.0  | 227.0  | 233.0  | 231.0  |
| 70°   | 2455.9 | 2052.9 | 1260.9 | 659.0  | 379.0  | 273.0  | 224.0  | 205.0  | 198.0  | 202.0  | 200.0  |
| 72.5° | 2148.9 | 1772.9 | 1035.0 | 536.0  | 328.0  | 236.0  | 196.0  | 175.0  | 167.0  | 161.0  | 157.0  |
| 75°   | 1707.9 | 1394.9 | 793.0  | 425.0  | 268.0  | 199.0  | 164.0  | 139.0  | 121.0  | 123.0  | 121.0  |
| 77.5° | 1282.9 | 1025.0 | 571.0  | 325.0  | 207.0  | 159.0  | 124.0  | 100.0  | 87.0   | 94.0   | 91.0   |
| 80°   | 915.0  | 719.0  | 411.0  | 237.0  | 147.0  | 106.0  | 86.0   | 67.0   | 71.0   | 71.0   | 39.0   |
| 82.5° | 635.0  | 505.0  | 293.0  | 156.0  | 87.0   | 62.0   | 46.0   | 42.0   | 54.0   | 22.0   | 1.0    |
| 85°   | 194.0  | 164.0  | 114.0  | 56.0   | 28.0   | 17.0   | 10.0   | 17.0   | 6.0    | 1.0    | 0.0    |
| 87.5° | 5.0    | 5.0    | 4.0    | 4.0    | 2.0    | 1.0    | 1.0    | 1.0    | 1.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP2-2501-321-1

Test Date: 04/09/2025

Luminaire Tested: GKO-PB1E-740-U-T4W

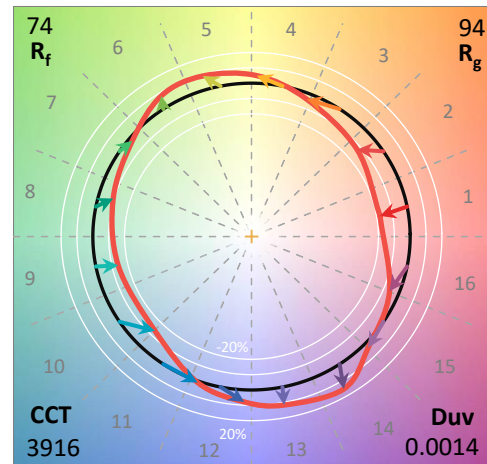
Data in this report applies to families of products including GKO-PB1E-740-U-T4W

### Test Information

Test Method: LM-79-2019  
 Report Number: SP2-2501-321-1  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP2 - 165CM SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 04/10/2025  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GKO-PB1E-740-U-T4W**  
 Description: Gekko Wedge Wall Pack Fixture 1 SQ w/ T4W distribution

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 3916     | CRI (Ra): | 71.0 |      |       |
| CIE u':                   | 0.2259   | R1:       | 67.4 | R9:  | -37.9 |
| CIE v':                   | 0.5049   | R2:       | 78.3 | R10: | 48.9  |
| Duv:                      | 0.0014   | R3:       | 87.2 | R11: | 64.6  |
| CIE x:                    | 0.3853   | R4:       | 69.5 | R12: | 40.9  |
| CIE y:                    | 0.3827   | R5:       | 67.2 | R13: | 69.2  |
| CIE z:                    | 0.2321   | R6:       | 69.3 | R14: | 92.7  |
| Peak Wavelength (nm):     | 449      | R7:       | 79.9 | R15: | 59.8  |
| Dominant Wavelength (nm): | 578      | R8:       | 48.9 |      |       |
| Purity:                   | 30.46652 |           |      |      |       |
| Rf:                       | 73.5     |           |      |      |       |
| Rg:                       | 93.5     |           |      |      |       |



### Test Conditions

Stabilization Time: 33M  
 Operation Time: 1H 33M  
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP2-2501-321-1

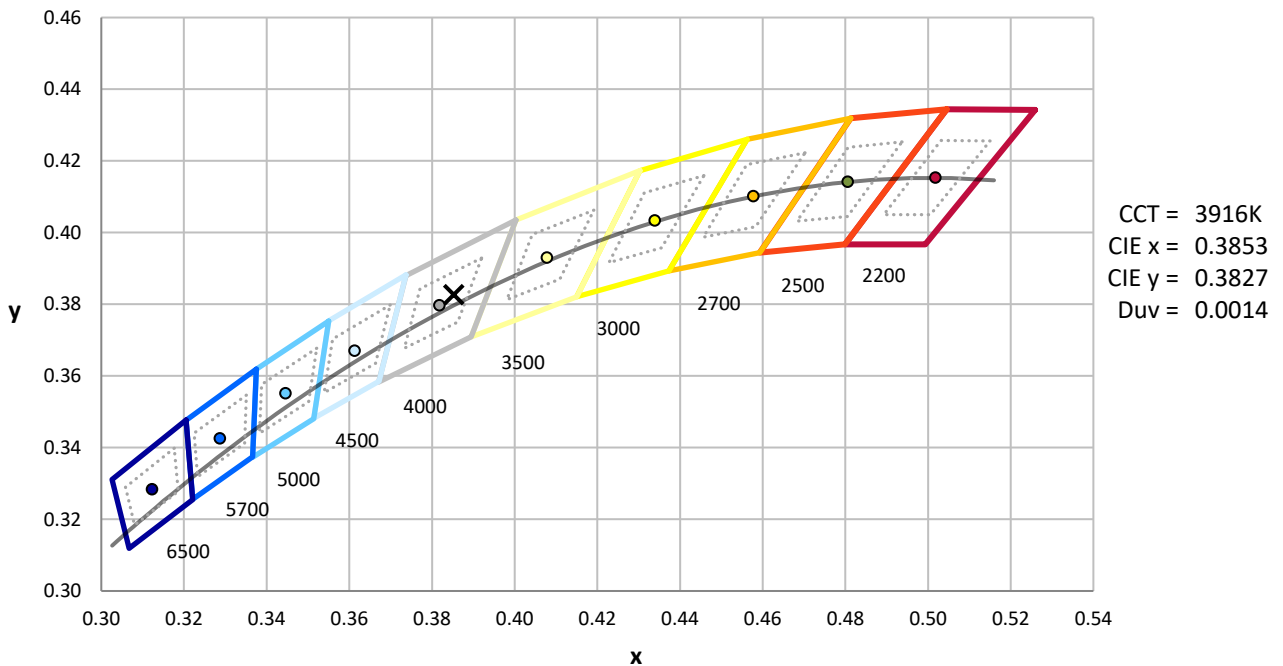
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN2187                | 1/6/2025         | 7/6/2025             |
| Power Meter                    | INXT2011002           | 1/21/2025        | 1/21/2026            |
| AC Power Source                | IN0458                | 10/22/2024       | 10/22/2025           |
| DC Power Source                | IN0212                | 10/22/2024       | 10/22/2025           |
| Sphere Thermometer             | IN4036B               | 10/22/2024       | 10/22/2025           |
| Room Thermometer               | IN0046                | 10/22/2024       | 10/22/2025           |

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**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 4000K 4-step quadrangle

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### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 132                      | NR            | 620    | 668                      | NR            | 750    | 17                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 174                      | NR            | 625    | 611                      | NR            | 755    | 15                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 238                      | NR            | 630    | 554                      | NR            | 760    | 13                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 314                      | NR            | 635    | 498                      | NR            | 765    | 11                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 392                      | NR            | 640    | 445                      | NR            | 770    | 10                       | NR            | 900    | 0                        | NR            |
| 385    | 1                        | NR            | 515    | 467                      | NR            | 645    | 394                      | NR            | 775    | 8                        | NR            | 905    | 0                        | NR            |
| 390    | 2                        | NR            | 520    | 526                      | NR            | 650    | 347                      | NR            | 780    | 7                        | NR            | 910    | 0                        | NR            |
| 395    | 4                        | NR            | 525    | 575                      | NR            | 655    | 305                      | NR            | 785    | 6                        | NR            | 915    | 0                        | NR            |
| 400    | 6                        | NR            | 530    | 613                      | NR            | 660    | 266                      | NR            | 790    | 5                        | NR            | 920    | 0                        | NR            |
| 405    | 10                       | NR            | 535    | 644                      | NR            | 665    | 231                      | NR            | 795    | 5                        | NR            | 925    | 0                        | NR            |
| 410    | 18                       | NR            | 540    | 673                      | NR            | 670    | 200                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 34                       | NR            | 545    | 703                      | NR            | 675    | 174                      | NR            | 805    | 4                        | NR            | 935    | 0                        | NR            |
| 420    | 66                       | NR            | 550    | 734                      | NR            | 680    | 150                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 124                      | NR            | 555    | 768                      | NR            | 685    | 129                      | NR            | 815    | 3                        | NR            | 945    | 0                        | NR            |
| 430    | 216                      | NR            | 560    | 804                      | NR            | 690    | 111                      | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 352                      | NR            | 565    | 838                      | NR            | 695    | 95                       | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 548                      | NR            | 570    | 872                      | NR            | 700    | 81                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 836                      | NR            | 575    | 896                      | NR            | 705    | 69                       | NR            | 835    | 2                        | NR            | 965    | 0                        | NR            |
| 450    | 997                      | NR            | 580    | 913                      | NR            | 710    | 60                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 705                      | NR            | 585    | 917                      | NR            | 715    | 51                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 429                      | NR            | 590    | 911                      | NR            | 720    | 44                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 316                      | NR            | 595    | 891                      | NR            | 725    | 38                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 213                      | NR            | 600    | 862                      | NR            | 730    | 32                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 143                      | NR            | 605    | 822                      | NR            | 735    | 28                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 121                      | NR            | 610    | 776                      | NR            | 740    | 24                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 118                      | NR            | 615    | 725                      | NR            | 745    | 20                       | NR            | 875    | 1                        | NR            |        |                          |               |

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### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.49

| λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 132                         | NR               | 620       | 668                         | NR               | 750       | 17                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 174                         | NR               | 625       | 611                         | NR               | 755       | 15                          | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 238                         | NR               | 630       | 554                         | NR               | 760       | 13                          | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 314                         | NR               | 635       | 498                         | NR               | 765       | 11                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 392                         | NR               | 640       | 445                         | NR               | 770       | 10                          | NR               | 900       | 0                           | NR               |
| 385       | 1                           | NR               | 515       | 467                         | NR               | 645       | 394                         | NR               | 775       | 8                           | NR               | 905       | 0                           | NR               |
| 390       | 2                           | NR               | 520       | 526                         | NR               | 650       | 347                         | NR               | 780       | 7                           | NR               | 910       | 0                           | NR               |
| 395       | 4                           | NR               | 525       | 575                         | NR               | 655       | 305                         | NR               | 785       | 6                           | NR               | 915       | 0                           | NR               |
| 400       | 6                           | NR               | 530       | 613                         | NR               | 660       | 266                         | NR               | 790       | 5                           | NR               | 920       | 0                           | NR               |
| 405       | 10                          | NR               | 535       | 644                         | NR               | 665       | 231                         | NR               | 795       | 5                           | NR               | 925       | 0                           | NR               |
| 410       | 18                          | NR               | 540       | 673                         | NR               | 670       | 200                         | NR               | 800       | 4                           | NR               | 930       | 0                           | NR               |
| 415       | 34                          | NR               | 545       | 703                         | NR               | 675       | 174                         | NR               | 805       | 4                           | NR               | 935       | 0                           | NR               |
| 420       | 66                          | NR               | 550       | 734                         | NR               | 680       | 150                         | NR               | 810       | 3                           | NR               | 940       | 0                           | NR               |
| 425       | 124                         | NR               | 555       | 768                         | NR               | 685       | 129                         | NR               | 815       | 3                           | NR               | 945       | 0                           | NR               |
| 430       | 216                         | NR               | 560       | 804                         | NR               | 690       | 111                         | NR               | 820       | 2                           | NR               | 950       | 0                           | NR               |
| 435       | 352                         | NR               | 565       | 838                         | NR               | 695       | 95                          | NR               | 825       | 2                           | NR               | 955       | 0                           | NR               |
| 440       | 548                         | NR               | 570       | 872                         | NR               | 700       | 81                          | NR               | 830       | 2                           | NR               | 960       | 0                           | NR               |
| 445       | 836                         | NR               | 575       | 896                         | NR               | 705       | 69                          | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 997                         | NR               | 580       | 913                         | NR               | 710       | 60                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 705                         | NR               | 585       | 917                         | NR               | 715       | 51                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 429                         | NR               | 590       | 911                         | NR               | 720       | 44                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 316                         | NR               | 595       | 891                         | NR               | 725       | 38                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 213                         | NR               | 600       | 862                         | NR               | 730       | 32                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 143                         | NR               | 605       | 822                         | NR               | 735       | 28                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 121                         | NR               | 610       | 776                         | NR               | 740       | 24                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 118                         | NR               | 615       | 725                         | NR               | 745       | 20                          | NR               | 875       | 1                           | NR               |           |                             |                  |

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### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.88

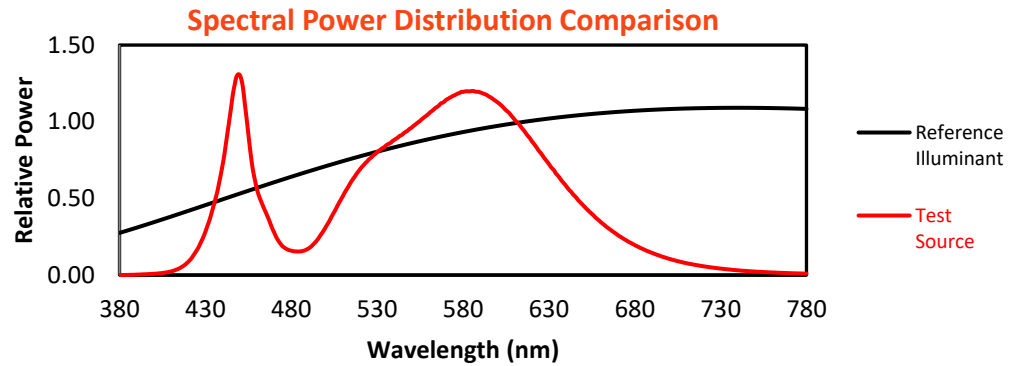
| $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|
| 360               | 0                                      | NR                             | 490               | 132                                    | NR                             | 620               | 668                                    | NR                             | 750               | 17                                     | NR                             | 880               | 1                                      | NR                             |
| 365               | 0                                      | NR                             | 495               | 174                                    | NR                             | 625               | 611                                    | NR                             | 755               | 15                                     | NR                             | 885               | 0                                      | NR                             |
| 370               | 0                                      | NR                             | 500               | 238                                    | NR                             | 630               | 554                                    | NR                             | 760               | 13                                     | NR                             | 890               | 0                                      | NR                             |
| 375               | 0                                      | NR                             | 505               | 314                                    | NR                             | 635               | 498                                    | NR                             | 765               | 11                                     | NR                             | 895               | 0                                      | NR                             |
| 380               | 0                                      | NR                             | 510               | 392                                    | NR                             | 640               | 445                                    | NR                             | 770               | 10                                     | NR                             | 900               | 0                                      | NR                             |
| 385               | 1                                      | NR                             | 515               | 467                                    | NR                             | 645               | 394                                    | NR                             | 775               | 8                                      | NR                             | 905               | 0                                      | NR                             |
| 390               | 2                                      | NR                             | 520               | 526                                    | NR                             | 650               | 347                                    | NR                             | 780               | 7                                      | NR                             | 910               | 0                                      | NR                             |
| 395               | 4                                      | NR                             | 525               | 575                                    | NR                             | 655               | 305                                    | NR                             | 785               | 6                                      | NR                             | 915               | 0                                      | NR                             |
| 400               | 6                                      | NR                             | 530               | 613                                    | NR                             | 660               | 266                                    | NR                             | 790               | 5                                      | NR                             | 920               | 0                                      | NR                             |
| 405               | 10                                     | NR                             | 535               | 644                                    | NR                             | 665               | 231                                    | NR                             | 795               | 5                                      | NR                             | 925               | 0                                      | NR                             |
| 410               | 18                                     | NR                             | 540               | 673                                    | NR                             | 670               | 200                                    | NR                             | 800               | 4                                      | NR                             | 930               | 0                                      | NR                             |
| 415               | 34                                     | NR                             | 545               | 703                                    | NR                             | 675               | 174                                    | NR                             | 805               | 4                                      | NR                             | 935               | 0                                      | NR                             |
| 420               | 66                                     | NR                             | 550               | 734                                    | NR                             | 680               | 150                                    | NR                             | 810               | 3                                      | NR                             | 940               | 0                                      | NR                             |
| 425               | 124                                    | NR                             | 555               | 768                                    | NR                             | 685               | 129                                    | NR                             | 815               | 3                                      | NR                             | 945               | 0                                      | NR                             |
| 430               | 216                                    | NR                             | 560               | 804                                    | NR                             | 690               | 111                                    | NR                             | 820               | 2                                      | NR                             | 950               | 0                                      | NR                             |
| 435               | 352                                    | NR                             | 565               | 838                                    | NR                             | 695               | 95                                     | NR                             | 825               | 2                                      | NR                             | 955               | 0                                      | NR                             |
| 440               | 548                                    | NR                             | 570               | 872                                    | NR                             | 700               | 81                                     | NR                             | 830               | 2                                      | NR                             | 960               | 0                                      | NR                             |
| 445               | 836                                    | NR                             | 575               | 896                                    | NR                             | 705               | 69                                     | NR                             | 835               | 2                                      | NR                             | 965               | 0                                      | NR                             |
| 450               | 997                                    | NR                             | 580               | 913                                    | NR                             | 710               | 60                                     | NR                             | 840               | 1                                      | NR                             | 970               | 0                                      | NR                             |
| 455               | 705                                    | NR                             | 585               | 917                                    | NR                             | 715               | 51                                     | NR                             | 845               | 1                                      | NR                             | 975               | 0                                      | NR                             |
| 460               | 429                                    | NR                             | 590               | 911                                    | NR                             | 720               | 44                                     | NR                             | 850               | 1                                      | NR                             | 980               | 0                                      | NR                             |
| 465               | 316                                    | NR                             | 595               | 891                                    | NR                             | 725               | 38                                     | NR                             | 855               | 1                                      | NR                             | 985               | 0                                      | NR                             |
| 470               | 213                                    | NR                             | 600               | 862                                    | NR                             | 730               | 32                                     | NR                             | 860               | 1                                      | NR                             | 990               | 0                                      | NR                             |
| 475               | 143                                    | NR                             | 605               | 822                                    | NR                             | 735               | 28                                     | NR                             | 865               | 1                                      | NR                             | 995               | 0                                      | NR                             |
| 480               | 121                                    | NR                             | 610               | 776                                    | NR                             | 740               | 24                                     | NR                             | 870               | 1                                      | NR                             | 1000              | 0                                      | NR                             |
| 485               | 118                                    | NR                             | 615               | 725                                    | NR                             | 745               | 20                                     | NR                             | 875               | 1                                      | NR                             |                   |                                        |                                |

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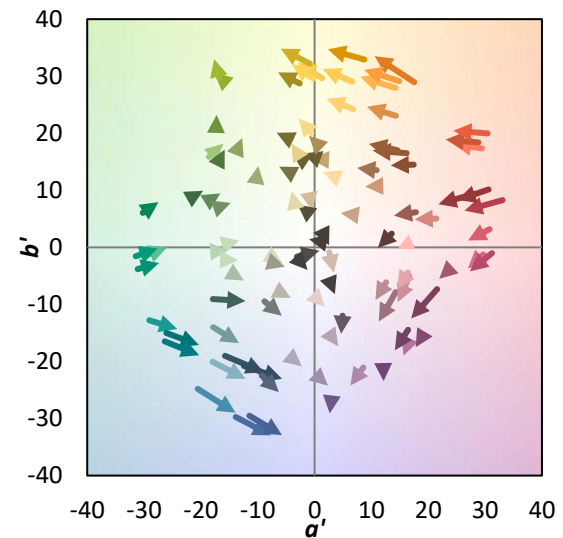
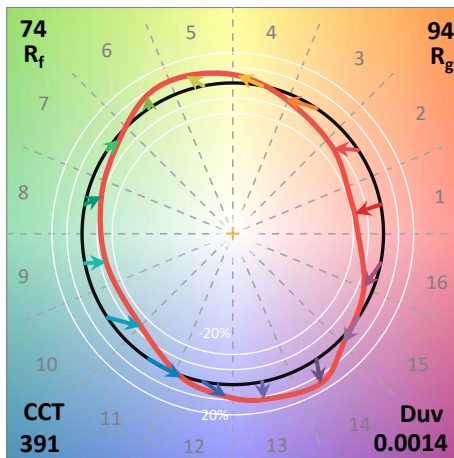
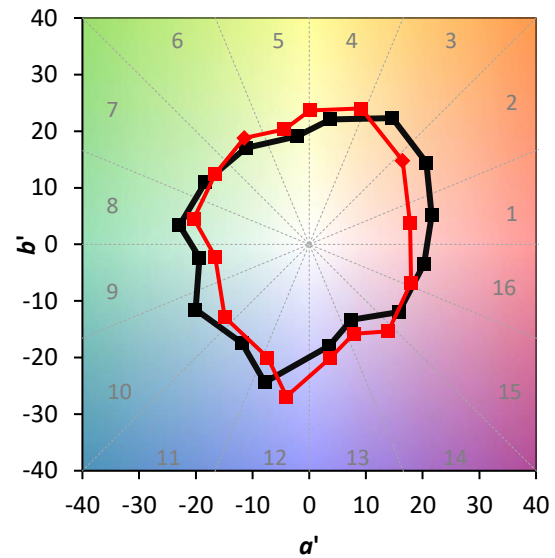
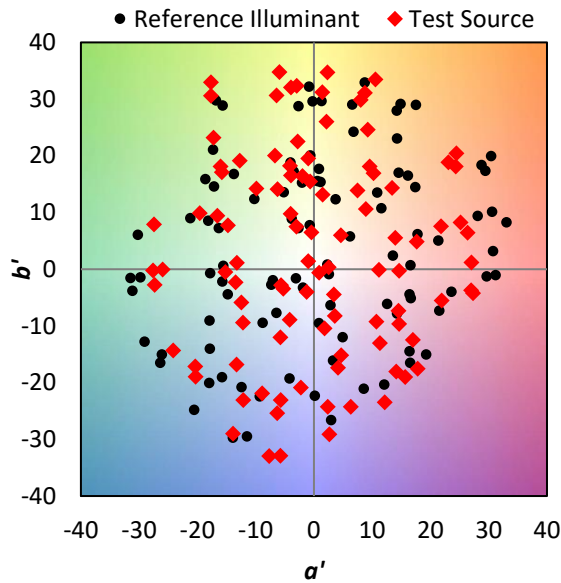
TM-30-18

### Summary

$R_f = 73.5$   
 $R_g = 93.5$   
 $CIE R_a = 71.0$   
 $R_g = -37.9$

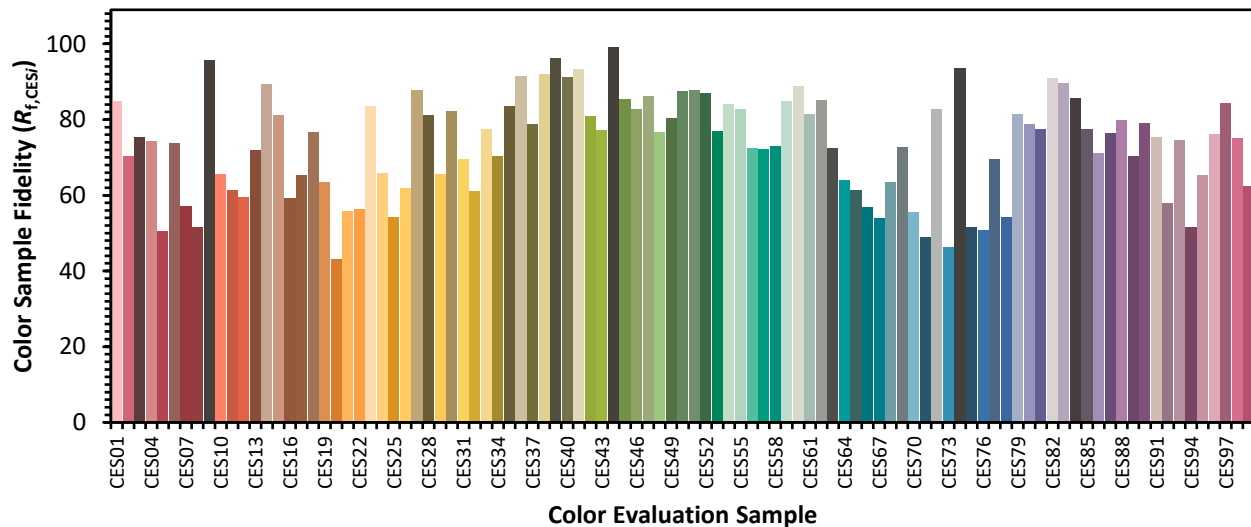


### Color Vector Graphics

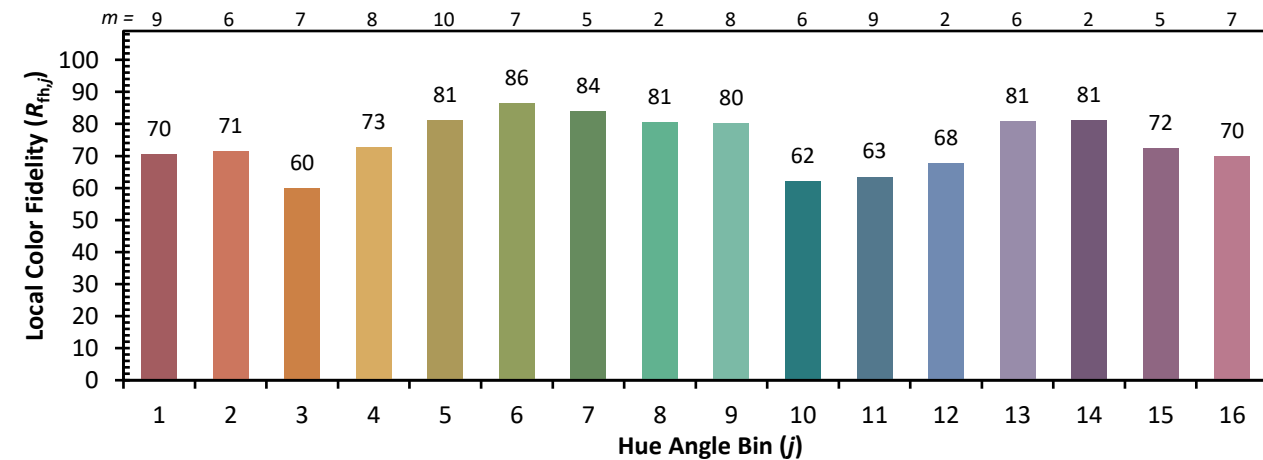
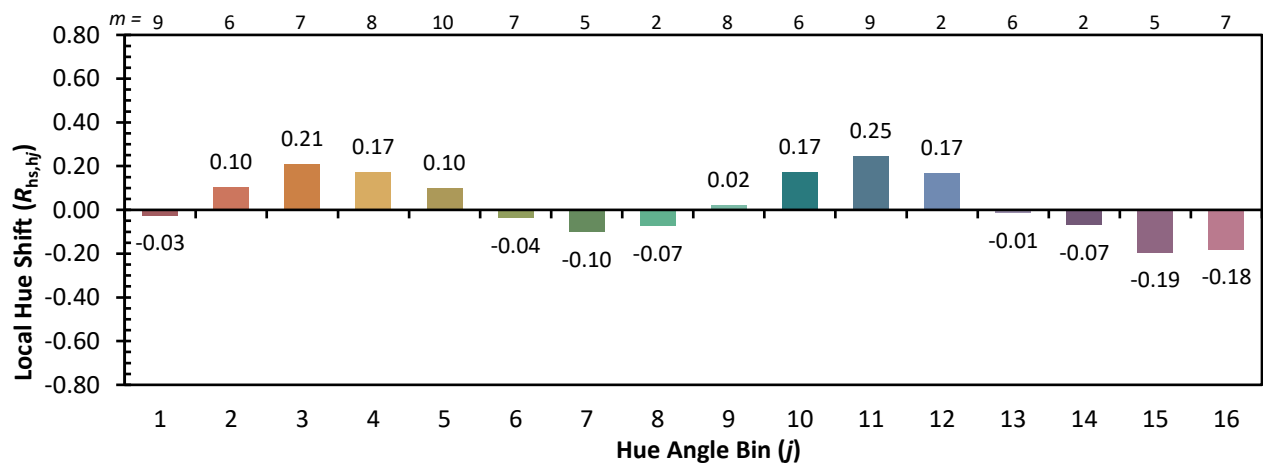
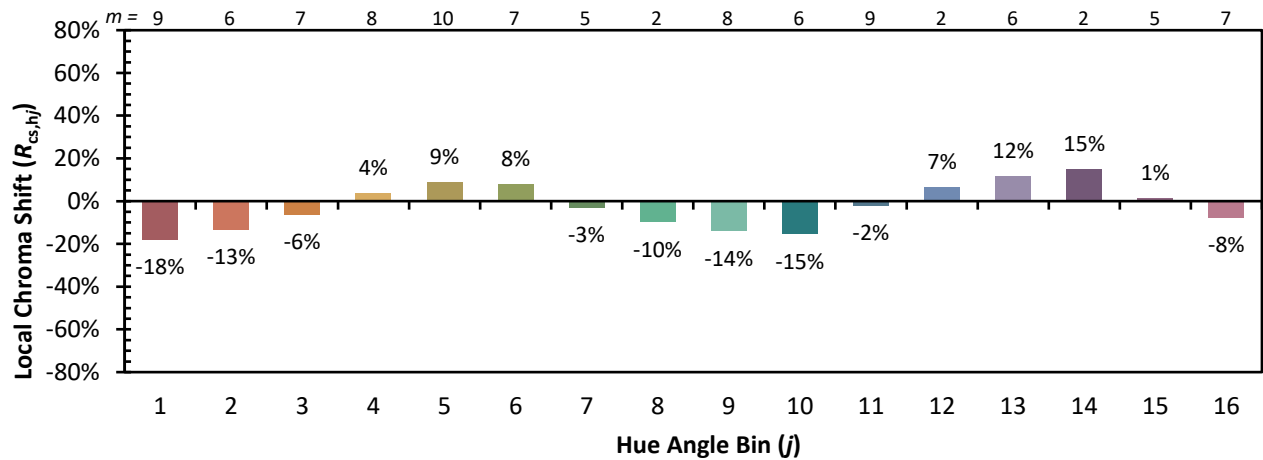


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

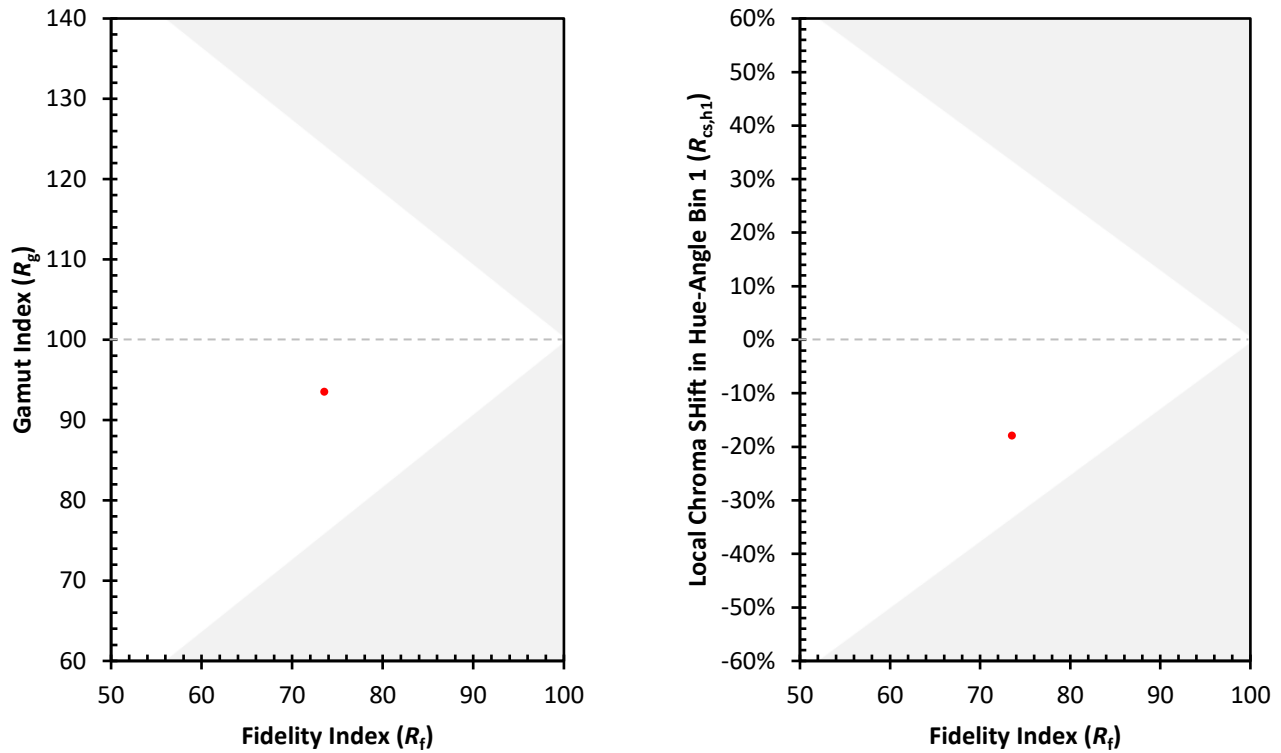
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 62 | CES51 = 88 | CES76 = 51 |
| CES02 = 61 | CES27 = 88 | CES52 = 87 | CES77 = 70 |
| CES03 = 30 | CES28 = 81 | CES53 = 77 | CES78 = 54 |
| CES04 = 70 | CES29 = 66 | CES54 = 84 | CES79 = 81 |
| CES05 = 47 | CES30 = 82 | CES55 = 83 | CES80 = 79 |
| CES06 = 50 | CES31 = 69 | CES56 = 73 | CES81 = 77 |
| CES07 = 40 | CES32 = 61 | CES57 = 72 | CES82 = 91 |
| CES08 = 39 | CES33 = 77 | CES58 = 73 | CES83 = 90 |
| CES09 = 29 | CES34 = 70 | CES59 = 85 | CES84 = 86 |
| CES10 = 74 | CES35 = 84 | CES60 = 89 | CES85 = 77 |
| CES11 = 57 | CES36 = 91 | CES61 = 81 | CES86 = 71 |
| CES12 = 63 | CES37 = 79 | CES62 = 85 | CES87 = 76 |
| CES13 = 42 | CES38 = 92 | CES63 = 72 | CES88 = 80 |
| CES14 = 74 | CES39 = 96 | CES64 = 64 | CES89 = 70 |
| CES15 = 71 | CES40 = 91 | CES65 = 61 | CES90 = 79 |
| CES16 = 46 | CES41 = 93 | CES66 = 57 | CES91 = 75 |
| CES17 = 49 | CES42 = 81 | CES67 = 54 | CES92 = 58 |
| CES18 = 56 | CES43 = 77 | CES68 = 63 | CES93 = 75 |
| CES19 = 72 | CES44 = 99 | CES69 = 73 | CES94 = 52 |
| CES20 = 65 | CES45 = 85 | CES70 = 56 | CES95 = 65 |
| CES21 = 86 | CES46 = 83 | CES71 = 49 | CES96 = 76 |
| CES22 = 78 | CES47 = 86 | CES72 = 83 | CES97 = 84 |
| CES23 = 92 | CES48 = 77 | CES73 = 46 | CES98 = 75 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 62 |
| CES25 = 72 | CES50 = 87 | CES75 = 52 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)