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

Cooper Lighting Solutions Photometric Lab
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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: LUMARK

Report Number: P1460661

Luminaire Tested: PRV-PC1A-730-U-T2U

Issue Date: 06/10/2026

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1460661 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 6/10/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | LUMARK |
| Catalog Number: | PRV-PC1A-730-U-T2U |
| Description: | PREVAIL DISCRETE LED 1 SQUARE AT 425MA 70CRI 3000K FIXTURE w/ TYPE II URBAN DISTRIBUTION OPTIC |
| Light Source: | (40) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 8179.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 157.3 lumens/watt |
| Luminous Opening: | Rectangular (W 0.67' x L: 0.67' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B2 - U0 - G2 |
| Input Watts (W): | 52 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 3.35% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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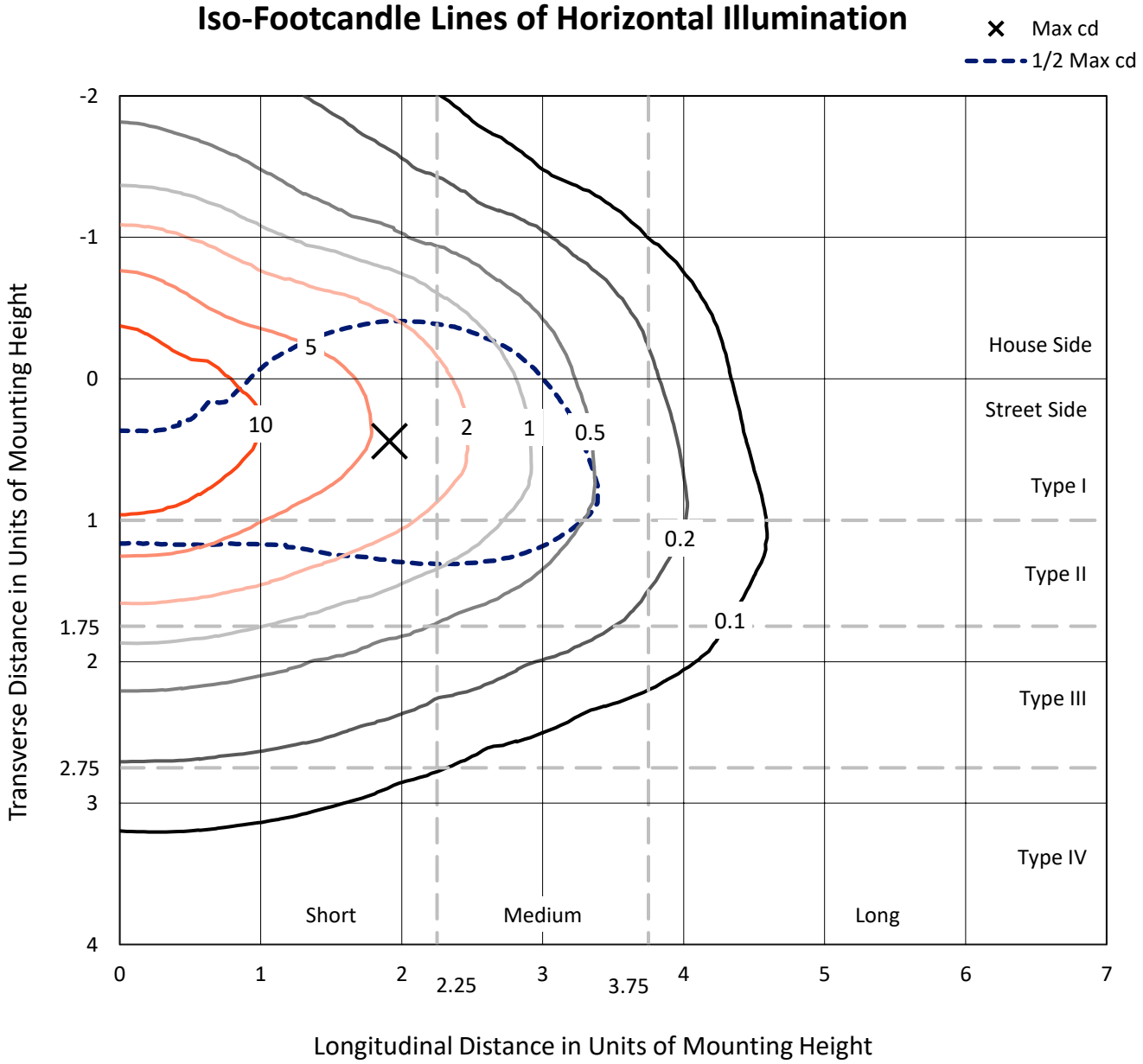
Scaled Data Report

REPORT NUMBER: P1460661
CATALOG NUMBER: PRV-PC1A-730-U-T2U

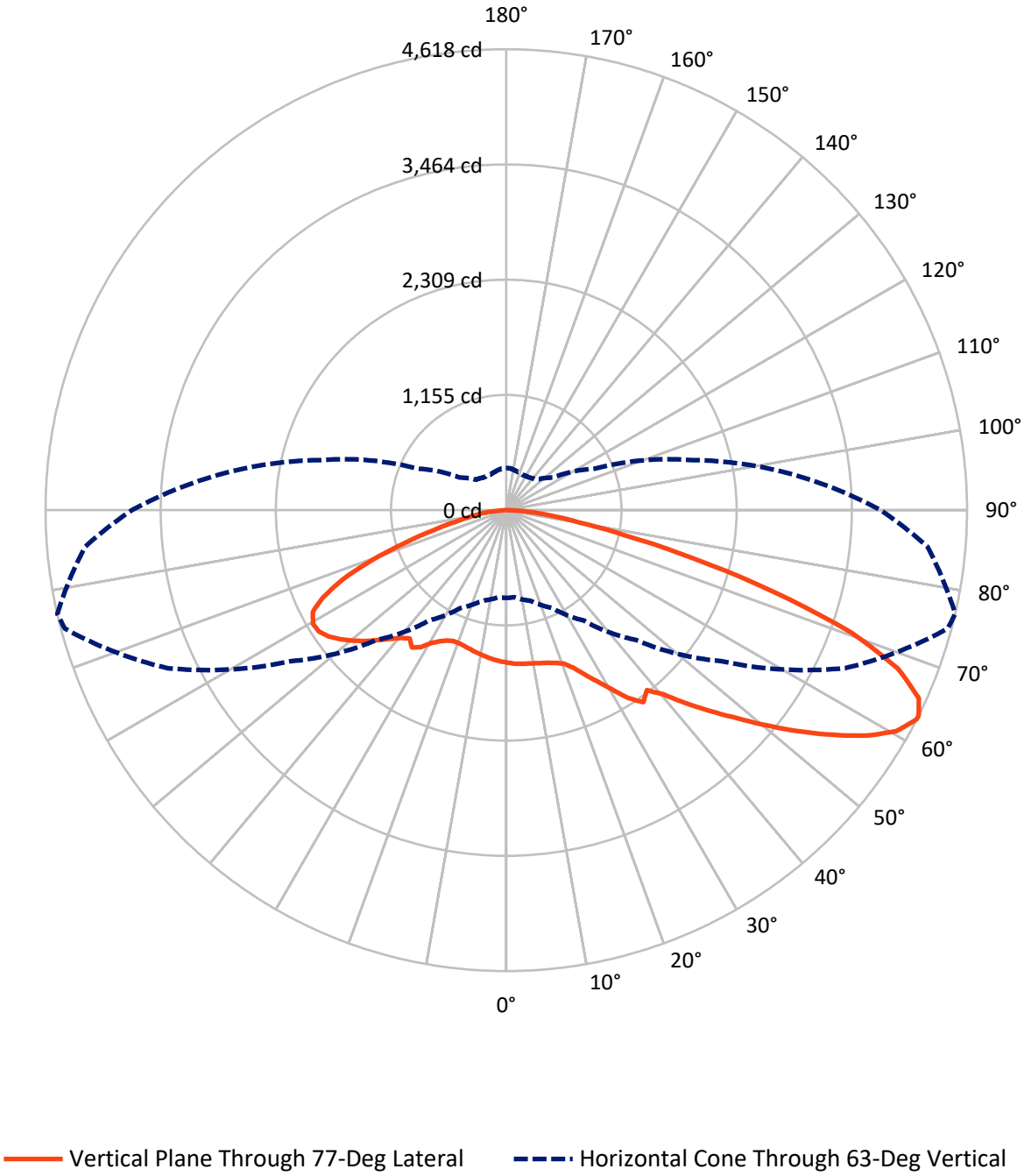
## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 19 fc
Type II - Short - N/A

REPORT NUMBER: P1460661
CATALOG NUMBER: PRV-PC1A-730-U-T2U

## Luminous Intensity Polar Plot



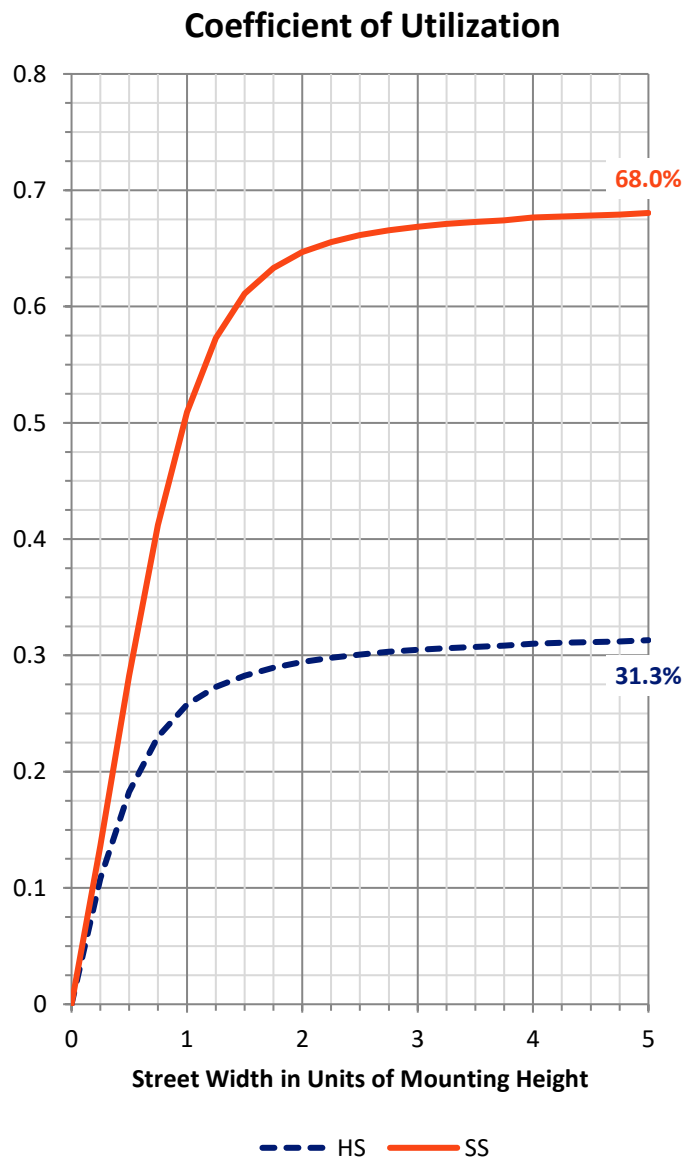
REPORT NUMBER: P1460661
CATALOG NUMBER: PRV-PC1A-730-U-T2U

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2594.3 | 0.0 | 2594.3 |
| | % Fixture | 31.7 | 0.0 | 31.7 |
| **Street Side** | Lumens | 5585.2 | 0.0 | 5585.2 |
| | % Fixture | 68.3 | 0.0 | 68.3 |
| **Total** | Lumens | 8179.5 | 0.0 | 8179.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 146.0 | 1.8 |
| 10°-20° | 447.9 | 5.5 |
| 20°-30° | 795.3 | 9.7 |
| 30°-40° | 1184.8 | 14.5 |
| 40°-50° | 1518.7 | 18.6 |
| 50°-60° | 1706.1 | 20.9 |
| 60°-70° | 1506.5 | 18.4 |
| 70°-80° | 720.3 | 8.8 |
| 80°-90° | 154.0 | 1.9 |
| 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° | 8179.5 | 100.0 |
| 0°-180° | 8179.5 | 100.0 |

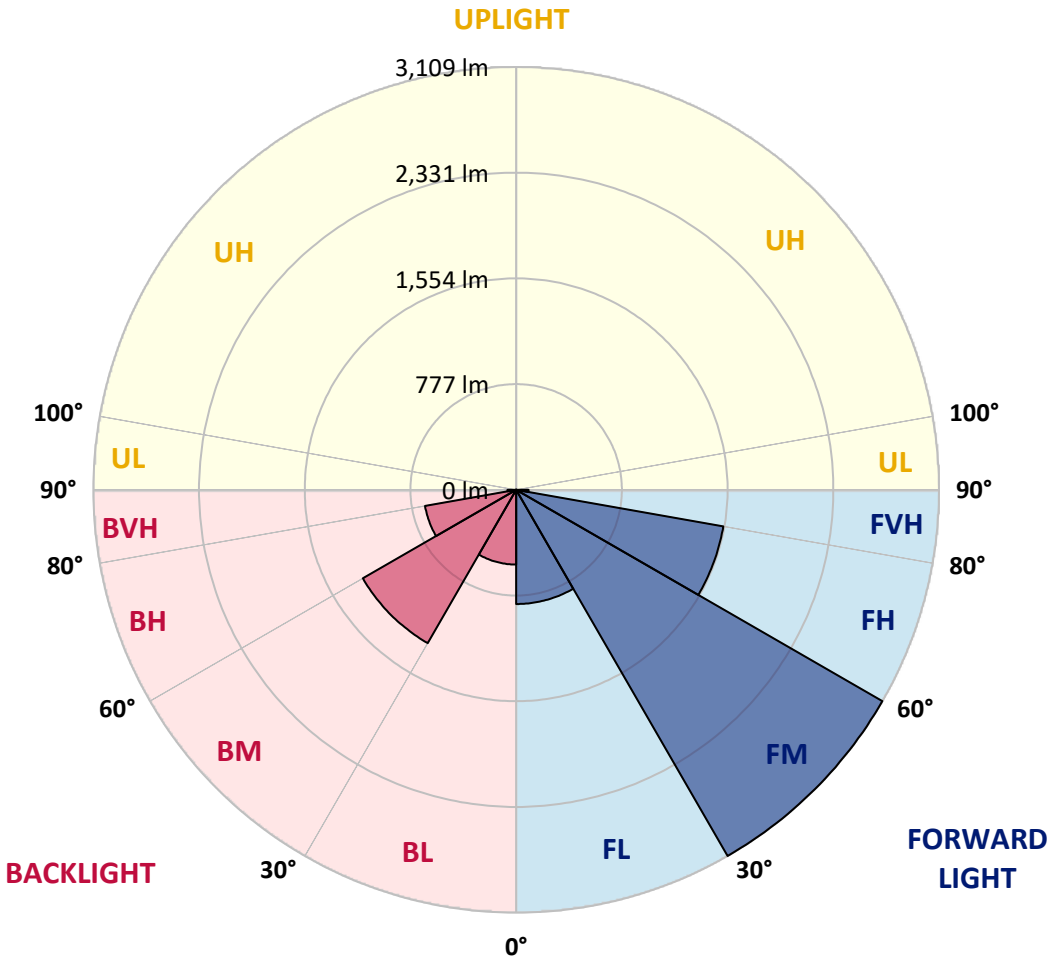


REPORT NUMBER: P1460661
CATALOG NUMBER: PRV-PC1A-730-U-T2U

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

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 839.6 | 10.3 | | | |
| FM | (30°-60°) | 3108.5 | 38.0 | | | |
| FH | (60°-80°) | 1546.6 | 18.9 | | | G1/1800 |
| FVH | (80°-90°) | 90.6 | 1.1 | | | G1/100 |
| BL | (0°-30°) | 549.6 | 6.7 | B2/1000 | | |
| BM | (30°-60°) | 1301.0 | 15.9 | B2/2500 | | |
| BH | (60°-80°) | 680.2 | 8.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 63.5 | 0.8 | | | 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 Short



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Scaled Data Report

REPORT NUMBER: P1460661
CATALOG NUMBER: PRV-PC1A-730-U-T2U

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | *1527.1* | 1527.1 |
| 2.5° | 1564.0 | 1570.8 | 1564.4 | 1563.6 | 1560.9 | 1553.3 | 1553.7 | 1543.8 | 1536.6 | *1540.0* | 1530.5 |
| 5° | 1622.9 | 1623.7 | 1620.3 | 1614.6 | 1604.7 | 1589.5 | 1575.8 | 1561.3 | 1544.2 | *1545.7* | 1530.9 |
| 7.5° | 1701.2 | 1703.1 | 1690.2 | 1678.8 | 1659.0 | 1631.3 | 1607.7 | 1577.3 | 1551.4 | *1552.2* | 1527.9 |
| 10° | 1788.3 | 1790.2 | 1779.2 | 1759.4 | 1727.5 | 1686.8 | 1643.1 | 1602.0 | 1562.5 | *1560.6* | 1525.2 |
| 12.5° | 1886.7 | 1889.0 | 1880.7 | 1846.5 | 1804.6 | 1748.7 | 1690.6 | 1629.8 | 1577.7 | *1572.4* | 1529.4 |
| 15° | 1997.0 | 2001.2 | 1981.0 | 1947.2 | 1892.8 | 1818.3 | 1743.8 | 1664.7 | 1595.2 | *1586.8* | 1533.6 |
| 17.5° | 2156.3 | 2142.6 | 2128.2 | 2081.8 | 2000.0 | 1908.0 | 1803.1 | 1706.9 | 1618.0 | *1608.8* | 1540.8 |
| 20° | 2317.9 | 2319.0 | 2304.2 | 2275.3 | 2175.7 | 2057.1 | 1896.6 | 1768.1 | 1654.1 | *1641.5* | 1563.6 |
| 22.5° | 2305.7 | 2306.1 | 2312.9 | 2326.2 | 2315.2 | 2252.8 | 2105.7 | 1905.4 | 1736.2 | *1711.9* | 1607.7 |
| 25° | 2346.0 | 2352.8 | 2348.3 | 2338.4 | 2290.1 | 2257.8 | 2225.9 | 2077.2 | 1857.1 | *1824.0* | 1690.6 |
| 27.5° | 2441.8 | 2453.2 | 2446.0 | 2437.2 | 2382.1 | 2320.5 | 2227.0 | 2153.6 | 1980.6 | *1940.7* | 1783.7 |
| 30° | 2544.8 | 2549.0 | 2538.7 | 2525.0 | 2485.1 | 2431.5 | 2342.6 | 2214.1 | 2106.9 | *2079.1* | 1916.0 |
| 32.5° | 2622.0 | 2623.1 | 2618.2 | 2621.2 | 2580.5 | 2544.4 | 2482.1 | 2353.2 | 2252.8 | *2243.3* | 2133.5 |
| 35° | 2679.0 | 2691.6 | 2687.8 | 2701.1 | 2676.7 | 2658.5 | 2625.0 | 2561.5 | 2401.9 | *2364.2* | 2197.0 |
| 37.5° | 2734.9 | 2749.0 | 2760.4 | 2767.2 | 2744.4 | 2742.5 | 2736.4 | 2633.8 | 2339.5 | *2288.6* | 2097.7 |
| 40° | 2752.4 | 2760.4 | 2807.9 | 2835.3 | 2800.3 | 2798.4 | 2785.8 | 2655.8 | 2461.2 | *2426.2* | 2231.6 |
| 42.5° | 2734.1 | 2732.6 | 2789.3 | 2810.2 | 2829.2 | 2848.6 | 2872.9 | 2823.5 | 2666.5 | *2645.6* | 2433.0 |
| 45° | 2618.6 | 2601.1 | 2631.5 | 2739.8 | 2805.6 | 2880.5 | 2983.5 | 3005.9 | 2903.3 | *2872.9* | 2654.7 |
| 47.5° | 2470.7 | 2459.3 | 2497.3 | 2625.4 | 2742.1 | 2891.1 | 3072.1 | 3204.0 | 3141.7 | *3113.2* | 2910.5 |
| 50° | 2238.0 | 2251.3 | 2330.4 | 2471.1 | 2638.7 | 2874.4 | 3143.6 | 3395.2 | 3413.1 | *3392.2* | 3168.3 |
| 52.5° | 1933.9 | 1943.4 | 2112.2 | 2292.4 | 2496.1 | 2767.6 | 3174.7 | 3592.5 | 3695.6 | *3683.8* | 3431.7 |
| 55° | 1608.1 | 1636.6 | 1757.9 | 2036.2 | 2281.0 | 2634.1 | 3153.1 | 3751.8 | 3994.0 | *3973.8* | 3708.5 |
| 57.5° | 1331.0 | 1360.6 | 1444.2 | 1696.3 | 2026.6 | 2432.3 | 3072.5 | 3864.7 | 4260.5 | *4262.4* | 3967.0 |
| 60° | 1081.6 | 1107.8 | 1169.4 | 1372.8 | 1728.2 | 2191.6 | 2911.3 | 3887.5 | 4475.7 | *4493.5* | 4154.4 |
| 62.5° | 905.9 | 916.6 | 974.7 | 1120.0 | 1428.3 | 1903.9 | 2685.5 | 3784.5 | 4581.7 | *4616.7* | 4240.3 |
| 63° | *880.1* | *875.1* | *940.5* | *1079.7* | *1348.8* | *1840.0* | *2638.7* | *3745.0* | *4582.1* | *4618.2* | *4240.0* |
| 65° | 747.0 | 754.2 | 796.4 | 914.3 | 1135.5 | 1573.5 | 2370.3 | 3537.0 | 4492.0 | *4544.1* | 4144.5 |
| 67.5° | 585.8 | 592.7 | 650.5 | 746.3 | 903.6 | 1275.8 | 2016.4 | 3169.8 | 4186.7 | *4233.5* | 3820.3 |
| 70° | 464.6 | 467.6 | 504.5 | 591.5 | 734.1 | 994.1 | 1584.5 | 2656.6 | 3628.3 | *3664.8* | 3236.3 |
| 72.5° | 376.7 | 386.6 | 411.0 | 463.8 | 556.2 | 755.4 | 1195.6 | 2095.1 | 2864.9 | *2810.2* | 2379.4 |
| 75° | 315.9 | 319.0 | 343.3 | 369.5 | 417.4 | 544.0 | 862.6 | 1544.6 | 1953.3 | *1949.1* | 1550.7 |
| 77.5° | 266.9 | 273.0 | 278.7 | 291.2 | 318.6 | 387.0 | 606.0 | 1072.8 | 1243.9 | *1222.6* | 894.1 |
| 80° | 225.1 | 227.3 | 225.1 | 227.3 | 237.6 | 261.9 | 393.5 | 702.5 | 793.0 | *737.5* | 544.0 |
| 82.5° | 157.0 | 168.4 | 169.9 | 177.5 | 181.3 | 191.6 | 263.1 | 457.7 | 504.9 | *453.9* | 320.5 |
| 85° | 93.1 | 92.0 | 96.6 | 109.5 | 122.0 | 120.9 | 166.9 | 228.9 | 272.2 | *253.2* | 154.0 |
| 87.5° | 33.1 | 31.2 | 31.2 | 38.4 | 41.4 | 44.9 | 54.7 | 71.5 | 67.7 | *68.0* | 38.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 |

REPORT NUMBER: P1460661
CATALOG NUMBER: PRV-PC1A-730-U-T2U

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 | 1527.1 |
| 2.5° | 1525.6 | 1519.1 | 1516.1 | 1510.8 | 1502.4 | 1497.8 | 1493.7 | 1488.0 | 1486.1 | 1481.1 | 1480.4 |
| 5° | 1520.3 | 1513.8 | 1501.3 | 1487.6 | 1476.2 | 1467.4 | 1451.5 | 1442.0 | 1433.2 | 1431.7 | 1434.0 |
| 7.5° | 1511.9 | 1503.9 | 1484.2 | 1464.4 | 1442.0 | 1427.1 | 1406.6 | 1393.3 | 1385.7 | 1384.2 | 1387.2 |
| 10° | 1508.5 | 1494.0 | 1465.1 | 1437.0 | 1408.9 | 1385.7 | 1363.3 | 1346.5 | 1335.5 | 1334.0 | 1330.6 |
| 12.5° | 1505.1 | 1486.8 | 1447.3 | 1411.9 | 1371.6 | 1344.6 | 1320.3 | 1306.6 | 1295.2 | 1293.7 | 1292.9 |
| 15° | 1503.5 | 1480.4 | 1429.0 | 1381.5 | 1337.0 | 1304.7 | 1280.4 | 1269.4 | 1265.9 | 1263.7 | 1264.8 |
| 17.5° | 1505.8 | 1475.8 | 1413.1 | 1350.7 | 1299.8 | 1267.1 | 1248.1 | 1240.9 | 1239.7 | 1240.5 | 1243.1 |
| 20° | 1518.0 | 1479.2 | 1399.8 | 1324.9 | 1267.1 | 1233.6 | 1219.6 | 1215.8 | 1215.8 | 1219.9 | 1222.6 |
| 22.5° | 1545.4 | 1497.5 | 1392.9 | 1304.0 | 1239.7 | 1208.5 | 1192.2 | 1187.6 | 1192.6 | 1200.2 | 1202.1 |
| 25° | 1617.6 | 1550.3 | 1406.6 | 1292.2 | 1218.4 | 1181.2 | 1163.7 | 1162.9 | 1168.2 | 1175.1 | 1175.8 |
| 27.5° | 1700.1 | 1616.5 | 1438.5 | 1290.3 | 1198.7 | 1153.0 | 1134.4 | 1132.1 | 1134.8 | 1141.6 | 1141.6 |
| 30° | 1813.4 | 1704.7 | 1486.8 | 1304.0 | 1185.0 | 1122.2 | 1100.2 | 1093.0 | 1096.0 | 1104.8 | 1102.1 |
| 32.5° | 1992.8 | 1845.3 | 1561.7 | 1327.9 | 1172.4 | 1091.4 | 1062.2 | 1056.1 | 1056.1 | 1062.9 | 1066.0 |
| 35° | 2079.5 | 1949.5 | 1599.3 | 1318.8 | 1144.3 | 1055.7 | 1020.7 | 1012.0 | 1023.4 | 1036.3 | 1038.2 |
| 37.5° | 1991.3 | 1858.6 | 1546.5 | 1278.9 | 1104.4 | 1013.5 | 980.1 | 972.8 | 982.7 | 995.3 | 996.8 |
| 40° | 2097.0 | 1943.0 | 1587.2 | 1280.0 | 1079.3 | 974.0 | 934.8 | 911.6 | 913.2 | 923.0 | 920.8 |
| 42.5° | 2274.5 | 2087.5 | 1647.2 | 1285.3 | 1048.9 | 931.0 | 872.9 | 832.6 | 826.9 | 828.4 | 830.7 |
| 45° | 2477.9 | 2250.2 | 1718.3 | 1286.5 | 1010.1 | 878.2 | 796.8 | 747.0 | 733.0 | 724.6 | 722.3 |
| 47.5° | 2695.4 | 2424.3 | 1795.9 | 1283.8 | 960.3 | 810.1 | 719.6 | 669.8 | 642.9 | 630.3 | 631.5 |
| 50° | 2931.1 | 2604.5 | 1865.1 | 1271.3 | 907.1 | 737.9 | 646.7 | 598.0 | 567.6 | 560.4 | 556.9 |
| 52.5° | 3154.2 | 2781.3 | 1931.6 | 1253.0 | 847.4 | 664.1 | 577.8 | 536.0 | 510.6 | 503.7 | 502.2 |
| 55° | 3390.3 | 2956.9 | 1987.5 | 1221.5 | 780.1 | 594.6 | 517.4 | 489.3 | 471.4 | 466.8 | 467.6 |
| 57.5° | 3592.5 | 3111.6 | 2017.5 | 1175.5 | 715.5 | 533.0 | 473.3 | 454.7 | 443.7 | 445.9 | 447.5 |
| 60° | 3743.1 | 3189.6 | 2011.4 | 1109.3 | 649.7 | 482.8 | 437.2 | 427.3 | 427.3 | 445.9 | 451.6 |
| 62.5° | 3766.3 | 3174.0 | 1950.2 | 1014.3 | 578.2 | 440.6 | 406.0 | 396.5 | 406.0 | 428.8 | 433.4 |
| 63° | *3752.6* | *3148.1* | *1934.3* | *983.5* | *567.2* | *431.5* | *399.2* | *390.0* | *403.0* | *421.2* | *421.2* |
| 65° | 3617.6 | 3010.5 | 1792.5 | 880.8 | 509.0 | 401.5 | 375.2 | 370.7 | 388.5 | 400.7 | 402.6 |
| 67.5° | 3287.3 | 2728.8 | 1549.9 | 729.2 | 448.2 | 367.2 | 343.7 | 351.7 | 365.0 | 374.5 | 377.5 |
| 70° | 2763.0 | 2260.4 | 1240.1 | 586.6 | 390.8 | 331.5 | 318.2 | 323.1 | 335.3 | 343.7 | 346.7 |
| 72.5° | 2010.7 | 1703.5 | 930.3 | 468.4 | 340.2 | 296.9 | 289.7 | 289.3 | 297.3 | 300.3 | 304.9 |
| 75° | 1303.6 | 1140.1 | 679.4 | 377.9 | 290.4 | 261.6 | 253.6 | 251.3 | 266.5 | 272.6 | 278.7 |
| 77.5° | 777.1 | 706.3 | 485.1 | 310.6 | 247.5 | 214.8 | 219.4 | 219.4 | 234.9 | 253.9 | 262.7 |
| 80° | 469.9 | 431.9 | 359.6 | 257.8 | 194.6 | 175.6 | 180.2 | 182.9 | 220.9 | 257.4 | 260.8 |
| 82.5° | 283.2 | 278.3 | 266.9 | 199.6 | 150.9 | 134.2 | 143.3 | 160.8 | 207.9 | 159.3 | 183.6 |
| 85° | 139.5 | 150.2 | 171.5 | 111.4 | 93.9 | 91.6 | 96.2 | 142.2 | 137.6 | 63.5 | 59.7 |
| 87.5° | 35.7 | 42.6 | 40.3 | 29.7 | 25.5 | 23.6 | 31.9 | 53.2 | 43.7 | 15.2 | 9.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP2-2501-321-4

Test Date: 04/10/2025

Luminaire Tested: GKO-PB1E-730-U-T4W

Data in this report applies to families of products including GKO-PB1E-730-U-T4W

Report Generated By FNC07603 / LDUCLS01DT447
Version: v7.04

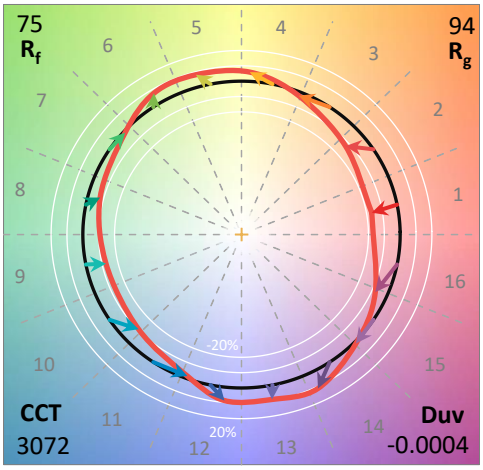
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP2-2501-321-4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP2 - 165CM SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 04/10/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GKO-PB1E-730-U-T4W** |
| Description: | Gekko Wedge Wall Pack Fixture 1 SQ w/ T4W distribution |

## Spectral Parameters

| | | | | | | |
|---|---|---|---|---|---|---|
| CCT (K): | 3072 | CRI (Ra): | 71.7 | | | |
| CIE u': | 0.2482 | R1: | 68.1 | R9: | -33.9 | |
| CIE v': | 0.5193 | R2: | 82.1 | R10: | 58.6 | |
| Duv: | -0.0004 | R3: | 93.4 | R11: | 62.0 | |
| CIE x: | 0.4313 | R4: | 67.3 | R12: | 48.5 | |
| CIE y: | 0.4010 | R5: | 67.2 | R13: | 70.7 | |
| CIE z: | 0.1677 | R6: | 74.9 | R14: | 96.4 | |
| Peak Wavelength (nm): | 593 | R7: | 77.5 | R15: | 60.2 | |
| Dominant Wavelength (nm): | 582 | R8: | 43.4 | | | |
| Purity: | 49.8225 | | | | | |

| | |
|---|---|
| Rf: | 74.7 |
| Rg: | 94.2 |



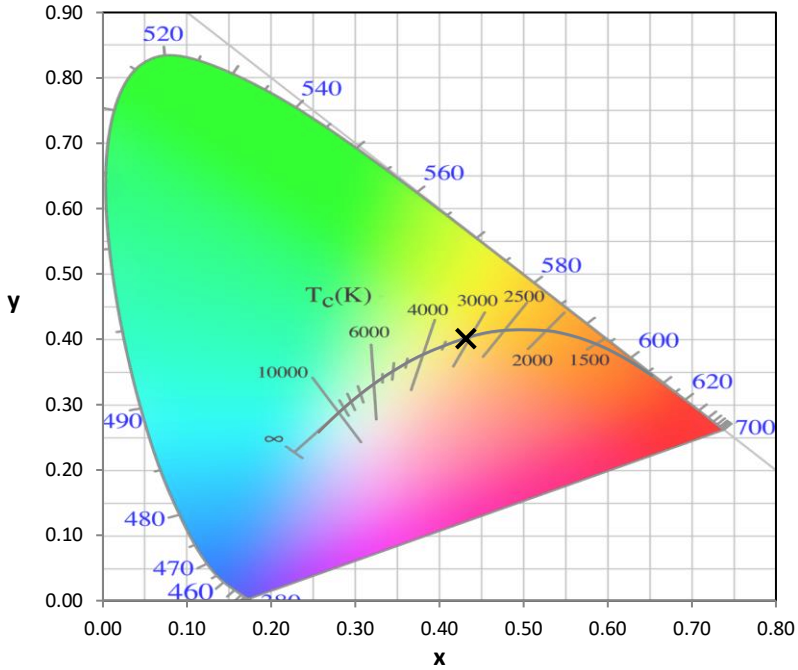

## Test Conditions

| | |
|---|---|
| Stabilization Time: | 30M |
| Operation Time: | 1H 30M |
| Sphere Temperature (°C): | 25.7 |

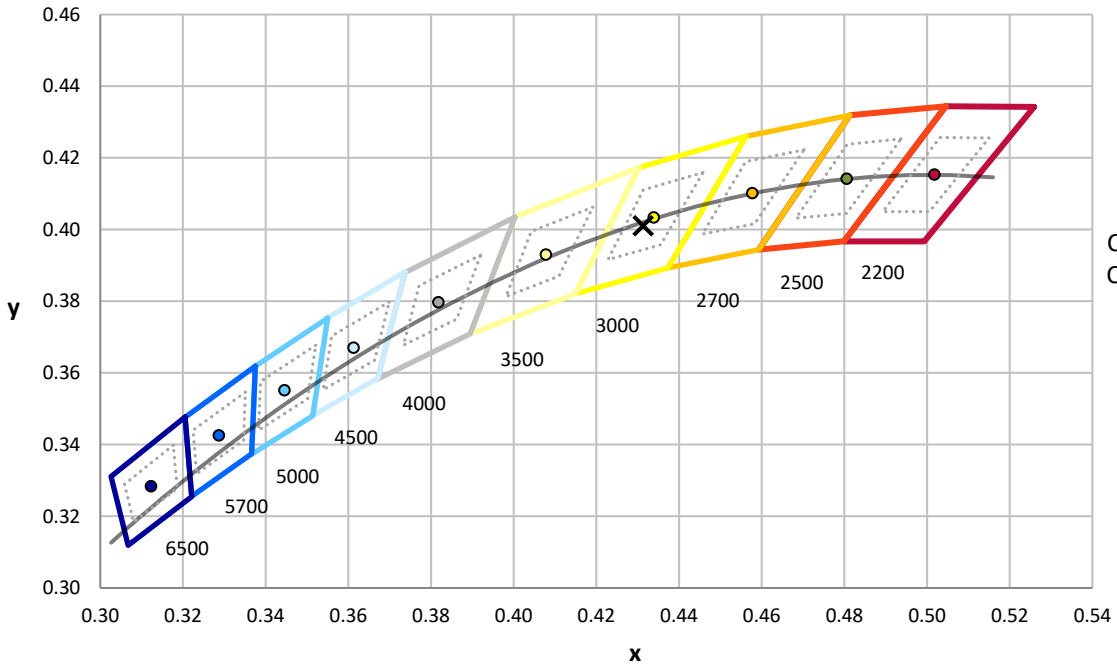
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN2187 | 1/6/2025 | 7/6/2025 |
| Power Meter | INXT2011002 | 1/21/2025 | 1/21/2026 |
| AC Power Source | IN0458 | 10/22/2024 | 10/22/2025 |
| DC Power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

REPORT NUMBER: SP2-2501-321-4

## CIE 1931 Chromaticity Diagram




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




CCT = 3072K
CIE x = 0.4313
CIE y = 0.4010
Duv = -0.0004

Point lies inside the ANSI 3000K 4-step quadrangle

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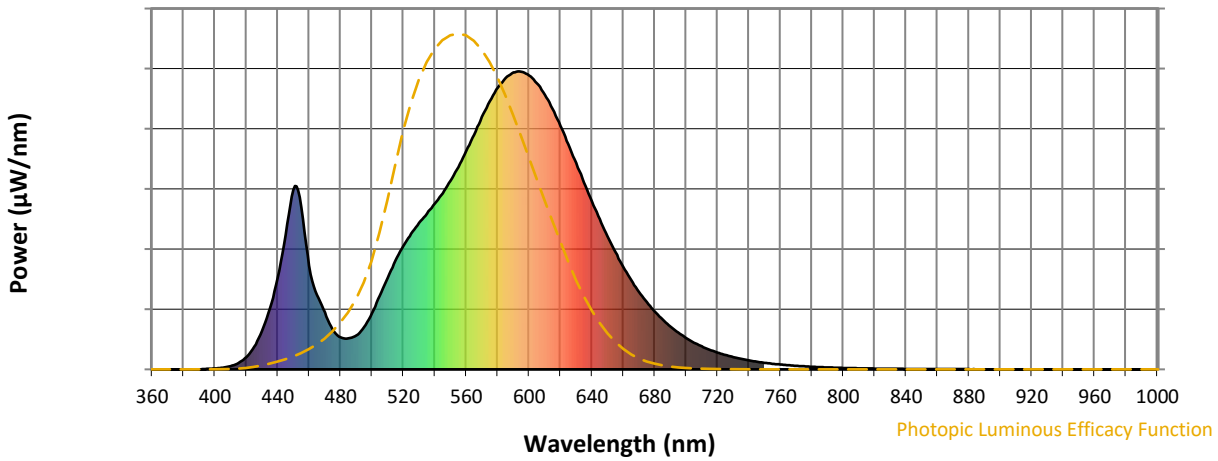
## Photopic Flux vs. Wavelength




**Photopic Lumens: NR**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 114 | NR | 620 | 817 | NR | 750 | 22 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 141 | NR | 625 | 756 | NR | 755 | 19 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 189 | NR | 630 | 693 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 247 | NR | 635 | 628 | NR | 765 | 14 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 307 | NR | 640 | 564 | NR | 770 | 12 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 366 | NR | 645 | 504 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 415 | NR | 650 | 446 | NR | 780 | 9 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 455 | NR | 655 | 393 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 491 | NR | 660 | 344 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 523 | NR | 665 | 300 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 11 | NR | 540 | 556 | NR | 670 | 260 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 591 | NR | 675 | 226 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 41 | NR | 550 | 632 | NR | 680 | 195 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 76 | NR | 555 | 679 | NR | 685 | 167 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 129 | NR | 560 | 732 | NR | 690 | 144 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 205 | NR | 565 | 787 | NR | 695 | 123 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 307 | NR | 570 | 847 | NR | 700 | 105 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 451 | NR | 575 | 900 | NR | 705 | 90 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 603 | NR | 580 | 944 | NR | 710 | 77 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 977 | NR | 715 | 66 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 348 | NR | 590 | 997 | NR | 720 | 56 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 249 | NR | 595 | 998 | NR | 725 | 48 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 191 | NR | 600 | 986 | NR | 730 | 41 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 133 | NR | 605 | 960 | NR | 735 | 35 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 107 | NR | 610 | 921 | NR | 740 | 30 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 104 | NR | 615 | 874 | NR | 745 | 26 | NR | 875 | 1 | NR | | | |

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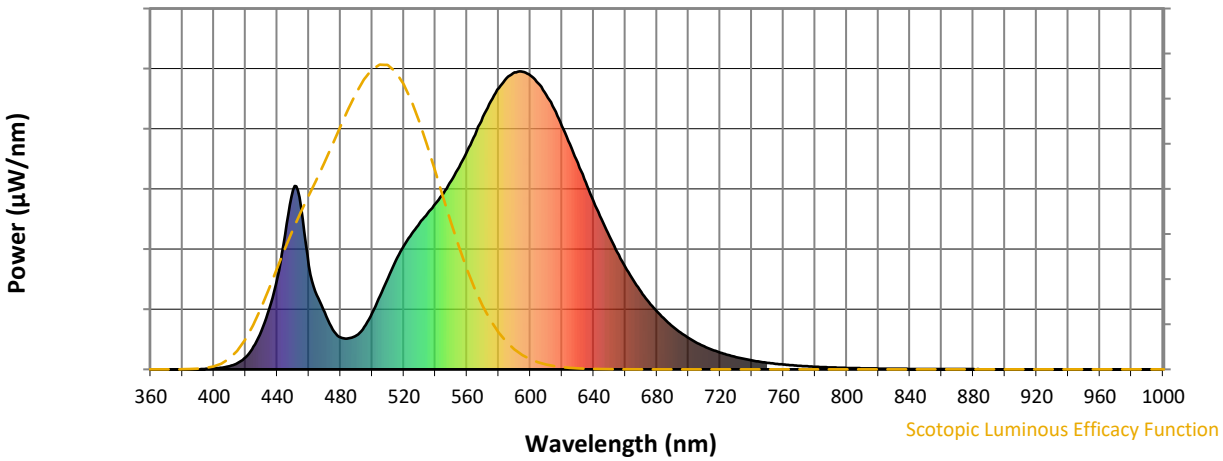
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.24**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 114 | NR | 620 | 817 | NR | 750 | 22 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 141 | NR | 625 | 756 | NR | 755 | 19 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 189 | NR | 630 | 693 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 247 | NR | 635 | 628 | NR | 765 | 14 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 307 | NR | 640 | 564 | NR | 770 | 12 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 366 | NR | 645 | 504 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 415 | NR | 650 | 446 | NR | 780 | 9 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 455 | NR | 655 | 393 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 491 | NR | 660 | 344 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 523 | NR | 665 | 300 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 11 | NR | 540 | 556 | NR | 670 | 260 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 591 | NR | 675 | 226 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 41 | NR | 550 | 632 | NR | 680 | 195 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 76 | NR | 555 | 679 | NR | 685 | 167 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 129 | NR | 560 | 732 | NR | 690 | 144 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 205 | NR | 565 | 787 | NR | 695 | 123 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 307 | NR | 570 | 847 | NR | 700 | 105 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 451 | NR | 575 | 900 | NR | 705 | 90 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 603 | NR | 580 | 944 | NR | 710 | 77 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 977 | NR | 715 | 66 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 348 | NR | 590 | 997 | NR | 720 | 56 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 249 | NR | 595 | 998 | NR | 725 | 48 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 191 | NR | 600 | 986 | NR | 730 | 41 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 133 | NR | 605 | 960 | NR | 735 | 35 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 107 | NR | 610 | 921 | NR | 740 | 30 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 104 | NR | 615 | 874 | NR | 745 | 26 | NR | 875 | 1 | NR | | | |

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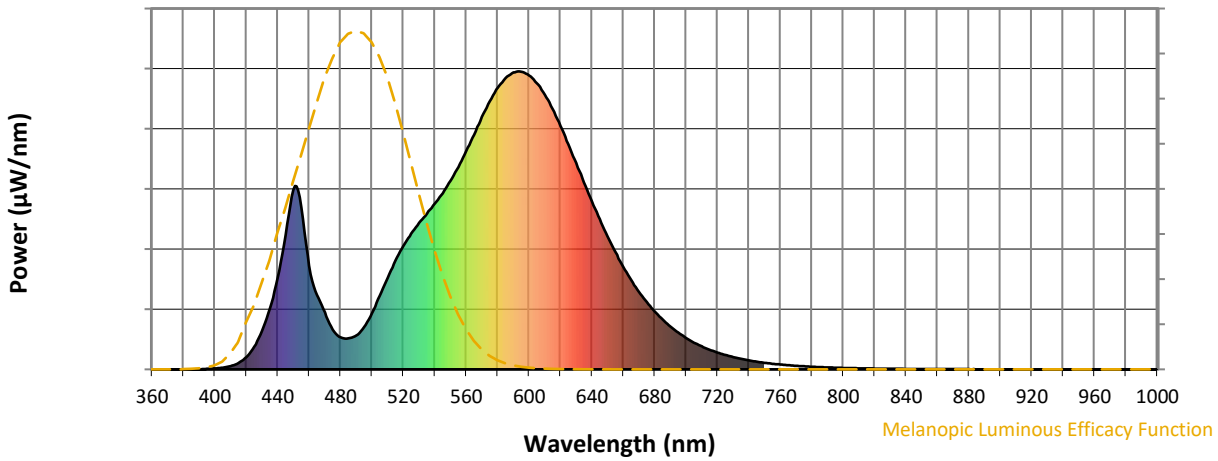
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.3**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 114 | NR | 620 | 817 | NR | 750 | 22 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 141 | NR | 625 | 756 | NR | 755 | 19 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 189 | NR | 630 | 693 | NR | 760 | 16 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 247 | NR | 635 | 628 | NR | 765 | 14 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 307 | NR | 640 | 564 | NR | 770 | 12 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 366 | NR | 645 | 504 | NR | 775 | 10 | NR | 905 | 0 | NR |
| 390 | 0 | NR | 520 | 415 | NR | 650 | 446 | NR | 780 | 9 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 455 | NR | 655 | 393 | NR | 785 | 8 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 491 | NR | 660 | 344 | NR | 790 | 7 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 523 | NR | 665 | 300 | NR | 795 | 6 | NR | 925 | 0 | NR |
| 410 | 11 | NR | 540 | 556 | NR | 670 | 260 | NR | 800 | 5 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 591 | NR | 675 | 226 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 41 | NR | 550 | 632 | NR | 680 | 195 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 76 | NR | 555 | 679 | NR | 685 | 167 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 129 | NR | 560 | 732 | NR | 690 | 144 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 205 | NR | 565 | 787 | NR | 695 | 123 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 307 | NR | 570 | 847 | NR | 700 | 105 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 451 | NR | 575 | 900 | NR | 705 | 90 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 603 | NR | 580 | 944 | NR | 710 | 77 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 977 | NR | 715 | 66 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 348 | NR | 590 | 997 | NR | 720 | 56 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 249 | NR | 595 | 998 | NR | 725 | 48 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 191 | NR | 600 | 986 | NR | 730 | 41 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 133 | NR | 605 | 960 | NR | 735 | 35 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 107 | NR | 610 | 921 | NR | 740 | 30 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 104 | NR | 615 | 874 | NR | 745 | 26 | NR | 875 | 1 | NR | | | |

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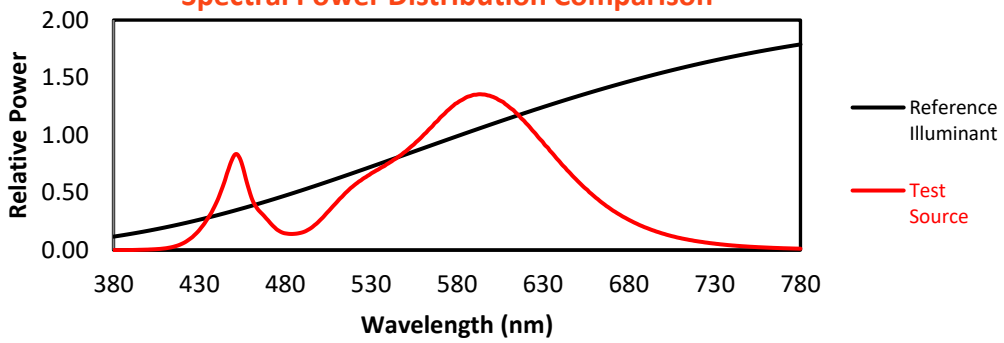
# TM-30-18

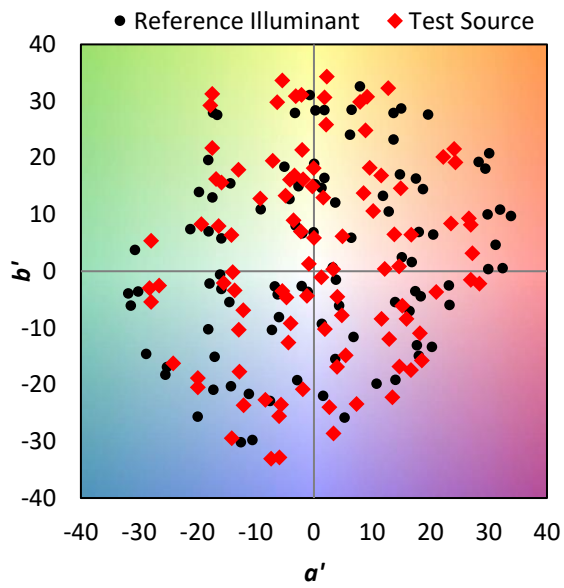
## Summary

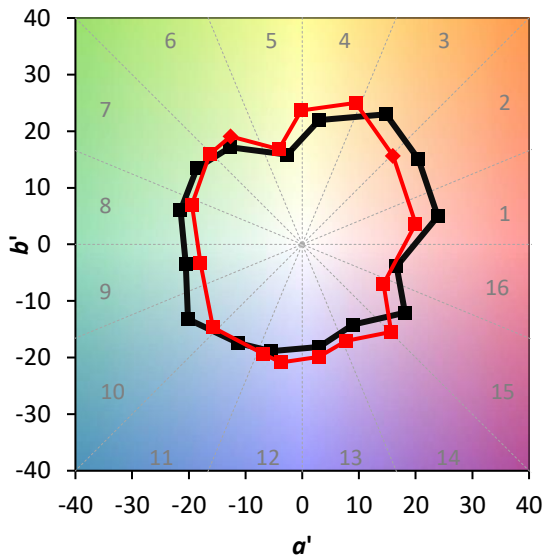
$R_f$ = 74.7
$R_g$ = 94.2
CIE $R_a$ = 71.7
$R_9$ = -33.9

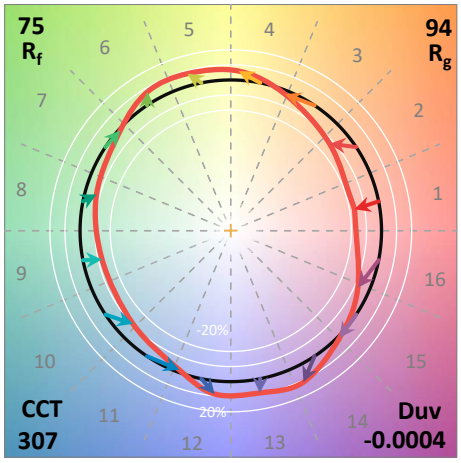
## Spectral Power Distribution Comparison

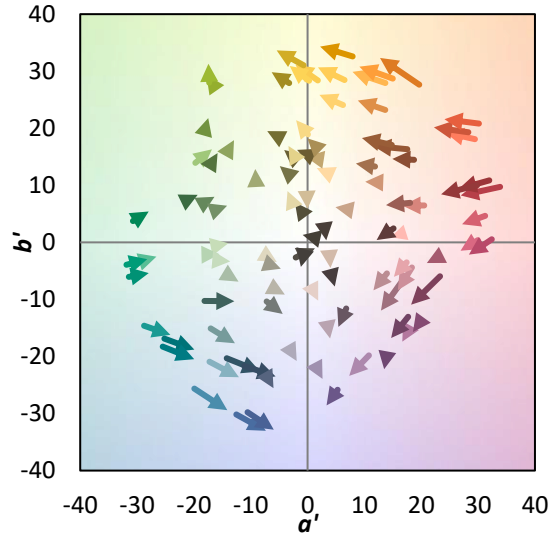



## Color Vector Graphics



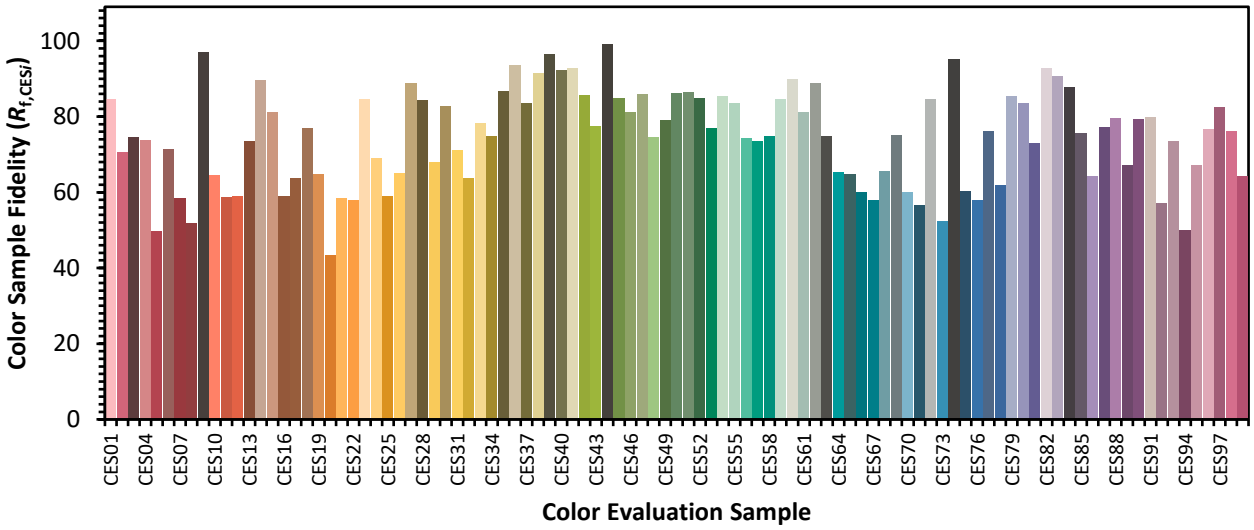



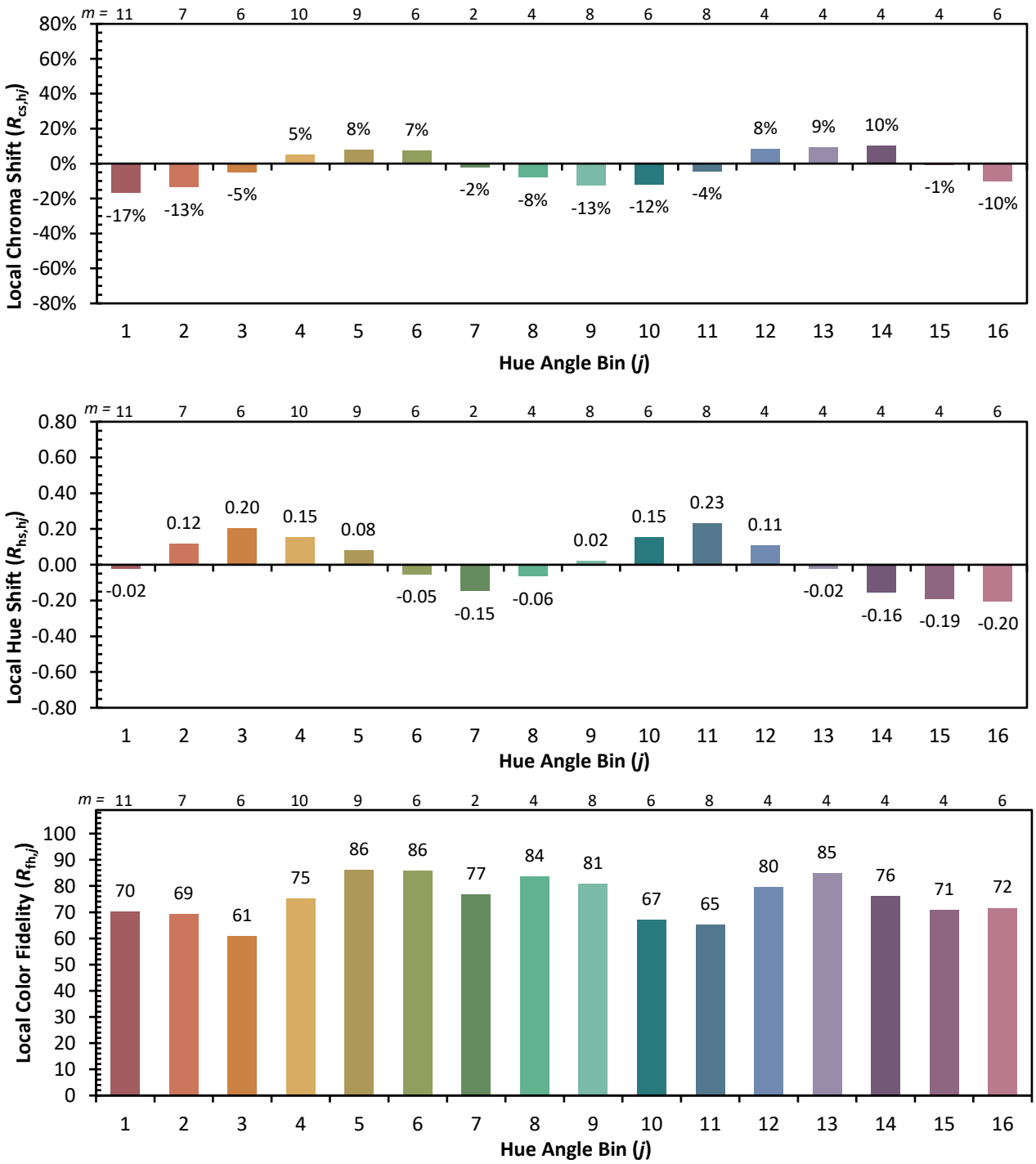



**Individual Sample Fidelity Index ($R_{f,i}$)**

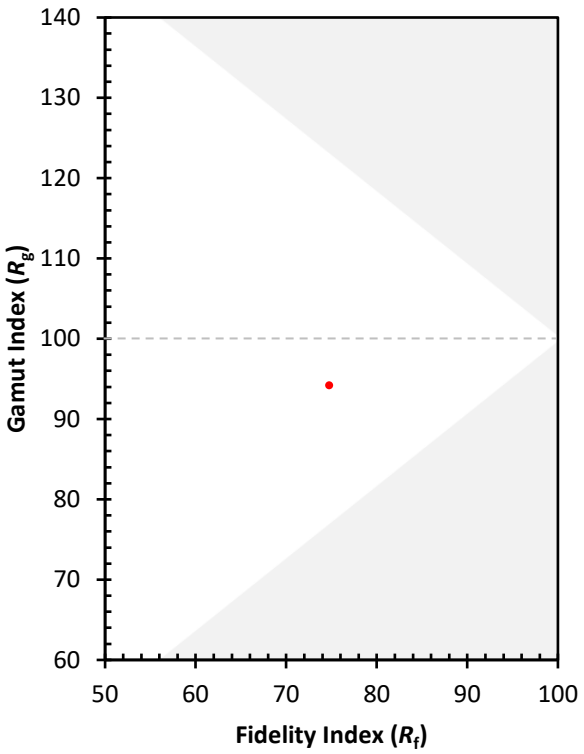
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 65 | CES51 = 86 | CES76 = 58 |
| CES02 = 62 | CES27 = 89 | CES52 = 85 | CES77 = 76 |
| CES03 = 31 | CES28 = 84 | CES53 = 77 | CES78 = 62 |
| CES04 = 71 | CES29 = 68 | CES54 = 85 | CES79 = 85 |
| CES05 = 49 | CES30 = 83 | CES55 = 84 | CES80 = 84 |
| CES06 = 51 | CES31 = 71 | CES56 = 74 | CES81 = 73 |
| CES07 = 41 | CES32 = 64 | CES57 = 74 | CES82 = 93 |
| CES08 = 40 | CES33 = 78 | CES58 = 75 | CES83 = 91 |
| CES09 = 29 | CES34 = 75 | CES59 = 85 | CES84 = 88 |
| CES10 = 76 | CES35 = 87 | CES60 = 90 | CES85 = 76 |
| CES11 = 59 | CES36 = 94 | CES61 = 81 | CES86 = 64 |
| CES12 = 65 | CES37 = 84 | CES62 = 89 | CES87 = 77 |
| CES13 = 43 | CES38 = 92 | CES63 = 75 | CES88 = 80 |
| CES14 = 74 | CES39 = 96 | CES64 = 65 | CES89 = 67 |
| CES15 = 71 | CES40 = 92 | CES65 = 65 | CES90 = 79 |
| CES16 = 47 | CES41 = 93 | CES66 = 60 | CES91 = 80 |
| CES17 = 50 | CES42 = 86 | CES67 = 58 | CES92 = 57 |
| CES18 = 56 | CES43 = 78 | CES68 = 66 | CES93 = 74 |
| CES19 = 73 | CES44 = 99 | CES69 = 75 | CES94 = 50 |
| CES20 = 66 | CES45 = 85 | CES70 = 60 | CES95 = 67 |
| CES21 = 87 | CES46 = 81 | CES71 = 57 | CES96 = 77 |
| CES22 = 79 | CES47 = 86 | CES72 = 85 | CES97 = 83 |
| CES23 = 92 | CES48 = 75 | CES73 = 52 | CES98 = 76 |
| CES24 = 91 | CES49 = 79 | CES74 = 95 | CES99 = 64 |
| CES25 = 73 | CES50 = 86 | CES75 = 60 | |

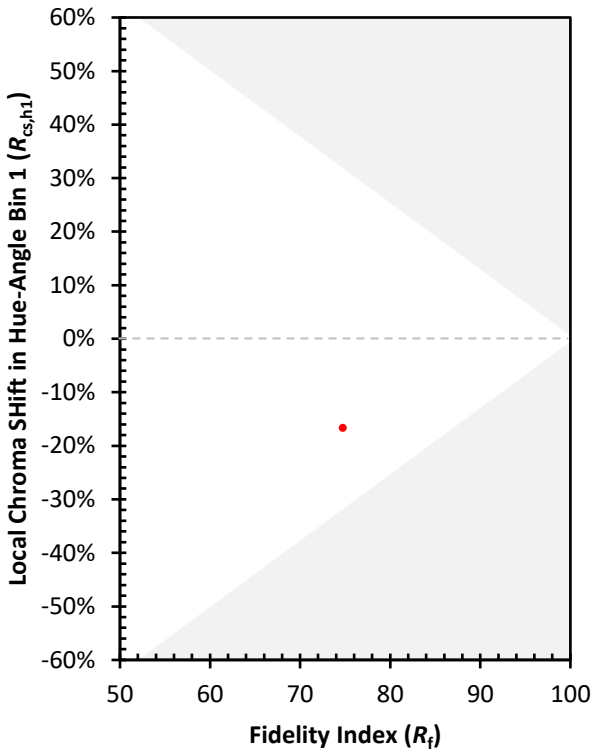


## Color Rendition by Hue-Angle Bin



## Measure Comparisons




(END OF REPORT)