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: P1460973

Luminaire Tested: PRV-PC1A-730-U-T3RE

Issue Date: 06/10/2026

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1460973 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 6/10/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | LUMARK |
| Catalog Number: | PRV-PC1A-730-U-T3RE |
| Description: | PREVAIL DISCRETE LED 1 SQUARE AT 425MA 70CRI 3000K FIXTURE w/ TYPE III ROADWAY ILLUMINANCE DISTRIBUTION OPTIC |
| Light Source: | (40) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

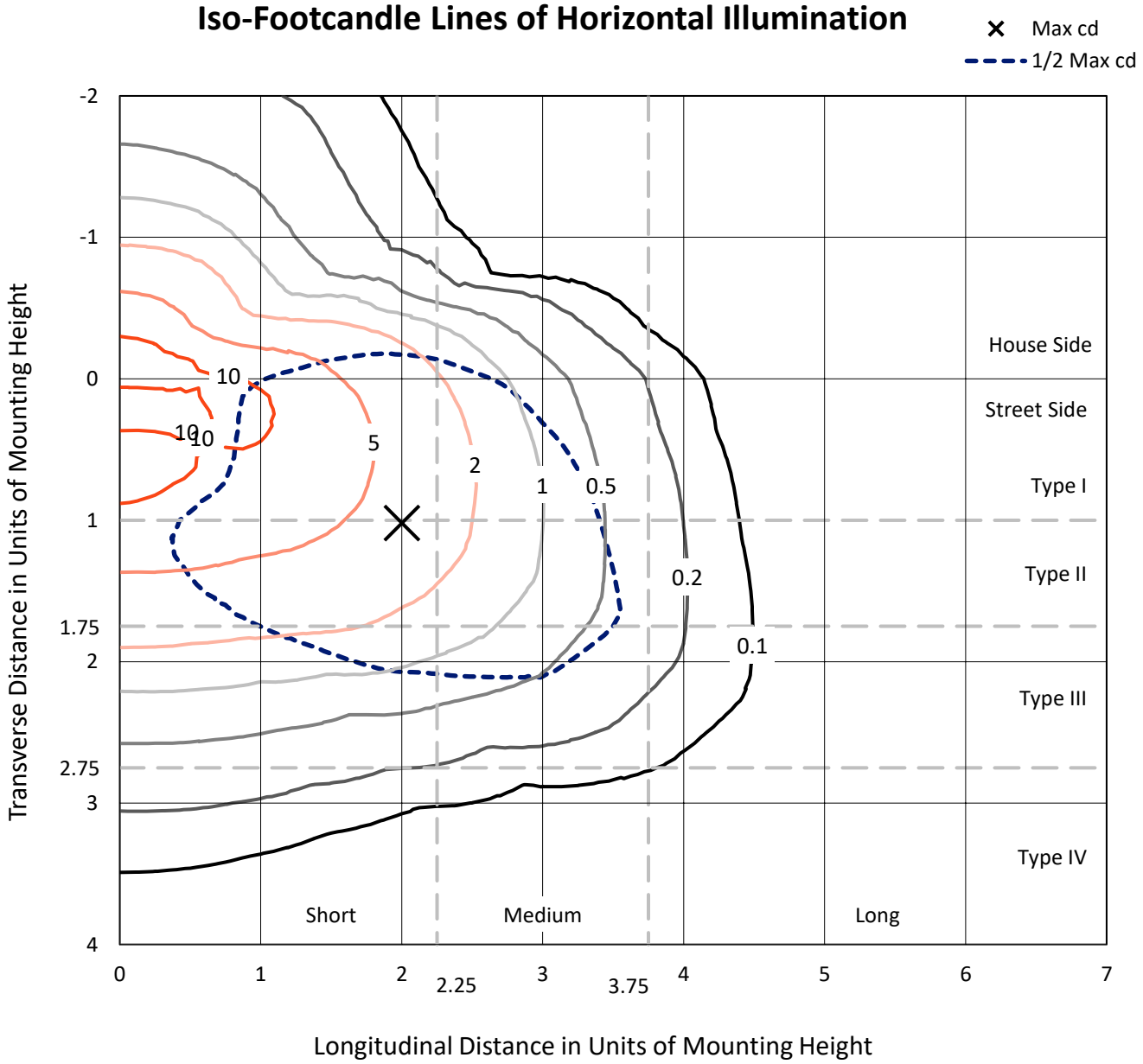
| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 8057 lumens |
| Efficiency: | N/A |
| Efficacy: | 154.9 lumens/watt |
| Luminous Opening: | Rectangular (W 0.67' x L: 0.67' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B1 - U0 - G2 |
| Input Watts (W): | 52 |
| 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 |

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

Scaled Data Report

REPORT NUMBER: P1460973
CATALOG NUMBER: PRV-PC1A-730-U-T3RE

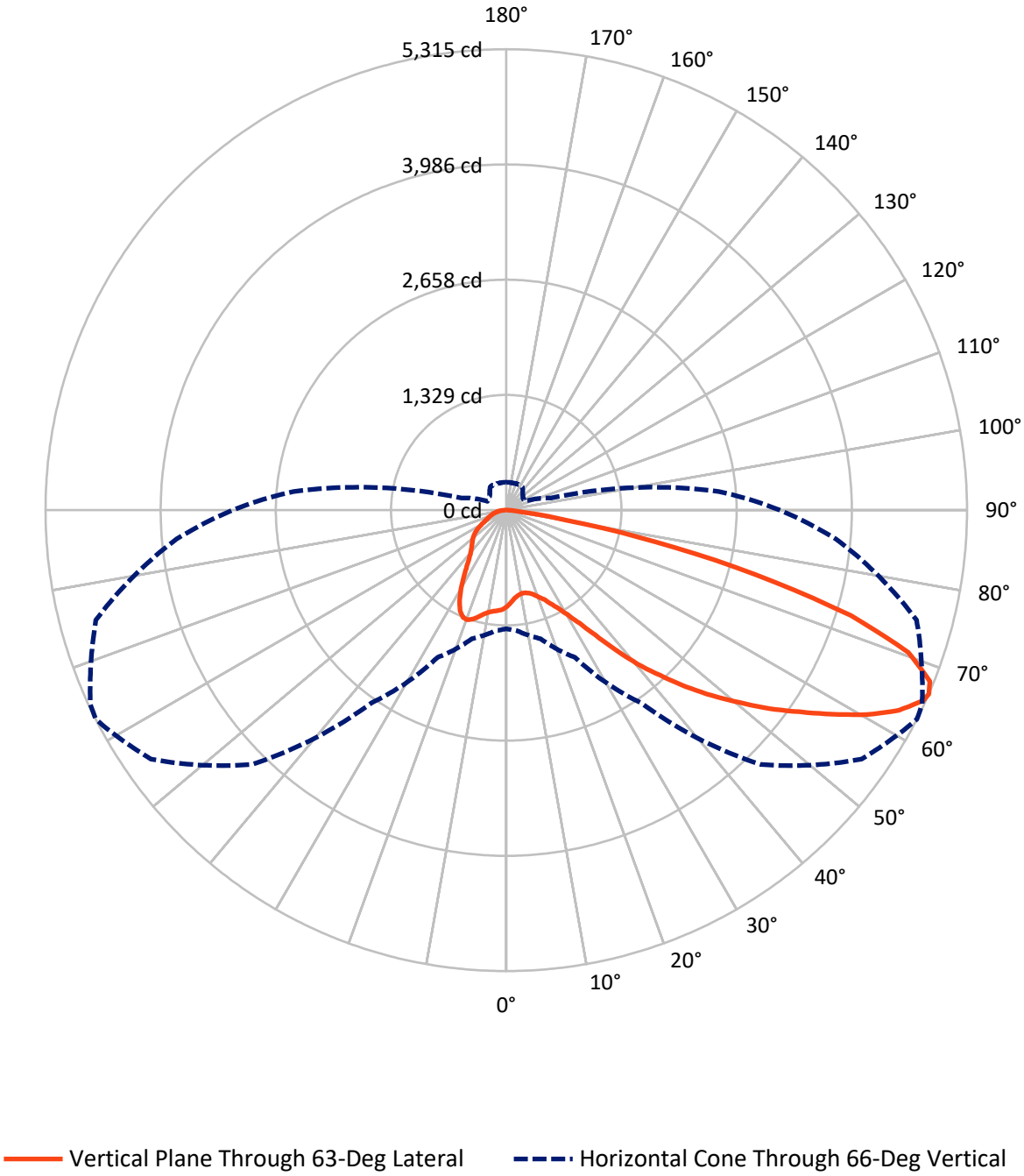
## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 11.8 fc
Type III - Short - N/A

REPORT NUMBER: P1460973
CATALOG NUMBER: PRV-PC1A-730-U-T3RE

## Luminous Intensity Polar Plot



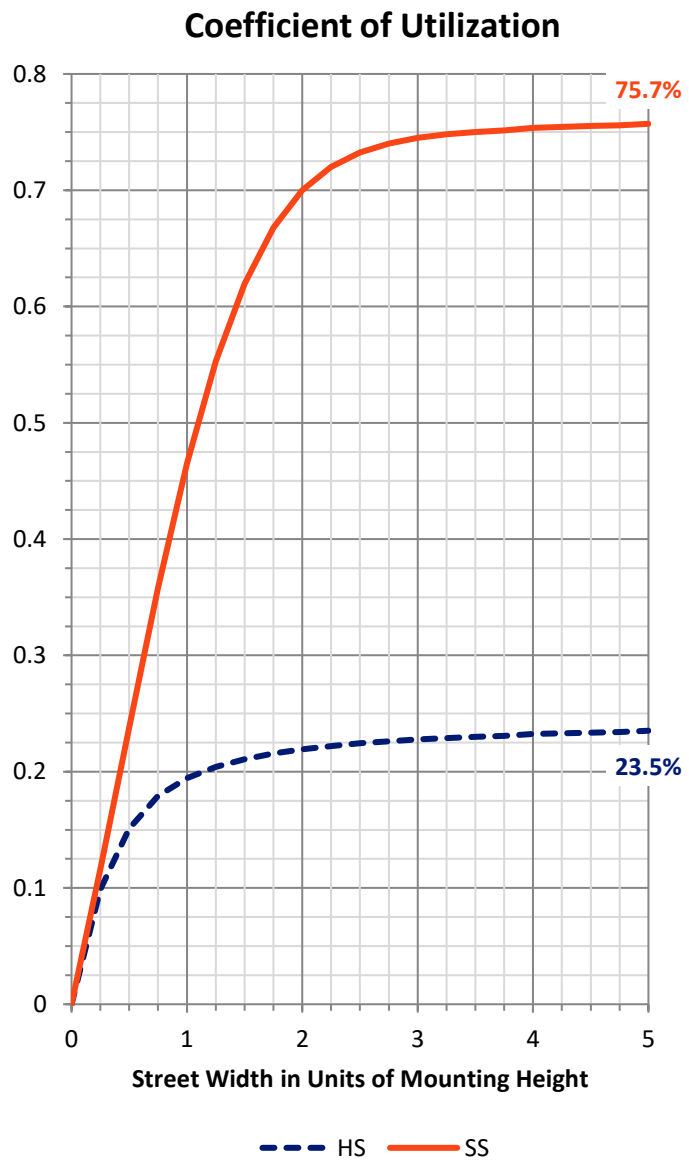
REPORT NUMBER: P1460973
CATALOG NUMBER: PRV-PC1A-730-U-T3RE

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1927.3 | 0.0 | 1927.3 |
| | % Fixture | 23.9 | 0.0 | 23.9 |
| **Street Side** | Lumens | 6129.8 | 0.0 | 6129.8 |
| | % Fixture | 76.1 | 0.0 | 76.1 |
| **Total** | Lumens | 8057.0 | 0.0 | 8057.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 103.3 | 1.3 |
| 10°-20° | 323.5 | 4.0 |
| 20°-30° | 576.3 | 7.2 |
| 30°-40° | 907.4 | 11.3 |
| 40°-50° | 1362.6 | 16.9 |
| 50°-60° | 1829.3 | 22.7 |
| 60°-70° | 1962.8 | 24.4 |
| 70°-80° | 883.1 | 11.0 |
| 80°-90° | 108.8 | 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° | 8057.0 | 100.0 |
| 0°-180° | 8057.0 | 100.0 |

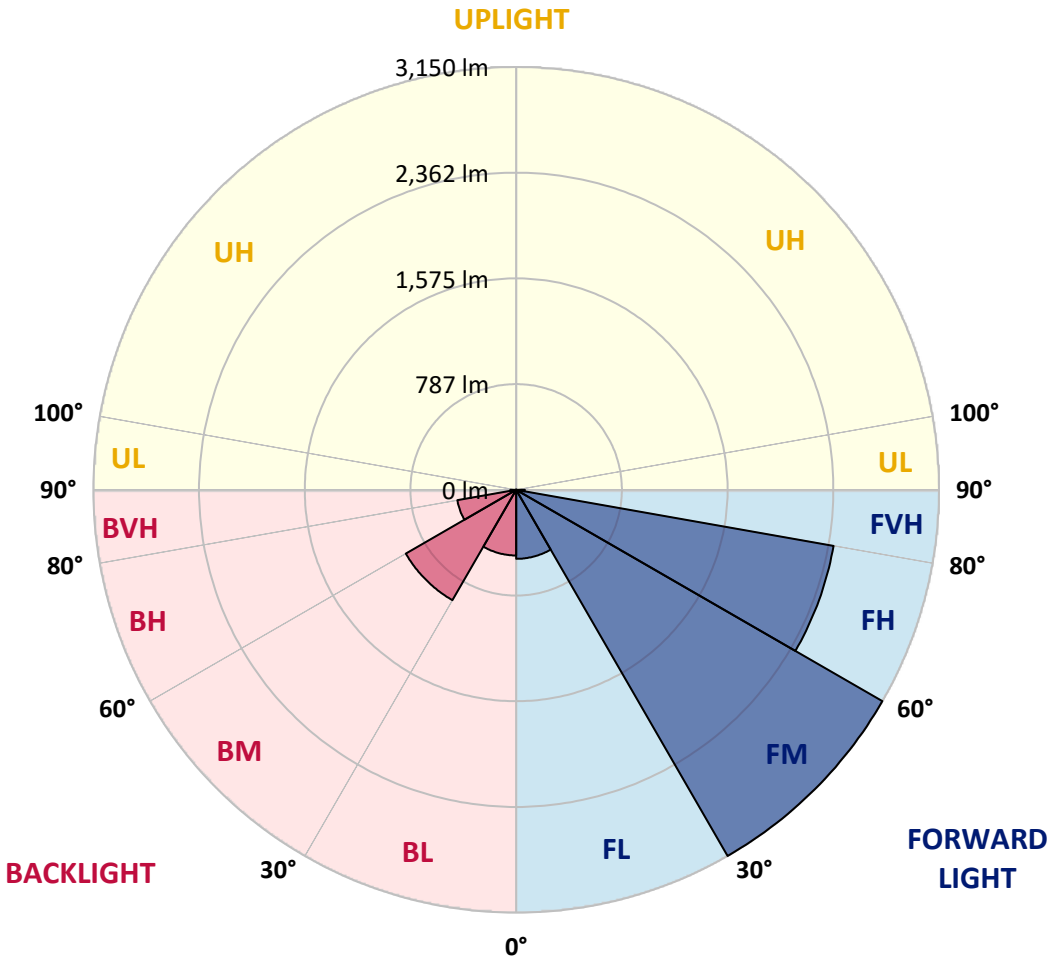


REPORT NUMBER: P1460973
CATALOG NUMBER: PRV-PC1A-730-U-T3RE

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

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 514.1 | 6.4 | | | |
| FM | (30°-60°) | 3150.0 | 39.1 | | | |
| FH | (60°-80°) | 2401.0 | 29.8 | | | G2/5000 |
| FVH | (80°-90°) | 64.7 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 489.0 | 6.1 | B1/500 | | |
| BM | (30°-60°) | 949.3 | 11.8 | B1/1000 | | |
| BH | (60°-80°) | 444.9 | 5.5 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 44.0 | 0.5 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G2**
Type III Short



REPORT NUMBER: P1460973
CATALOG NUMBER: PRV-PC1A-730-U-T3RE

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 63° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | *1110.8* | 1110.8 | 1110.8 | 1110.8 |
| 2.5° | 995.9 | 998.2 | 1001.6 | 1006.6 | 1014.6 | 1029.4 | 1048.8 | *1065.2* | 1068.6 | 1089.1 | 1103.2 |
| 5° | 918.0 | 920.6 | 923.3 | 930.2 | 944.2 | 961.3 | 990.6 | *1020.3* | 1028.3 | 1070.9 | 1108.5 |
| 7.5° | 899.7 | 900.5 | 901.6 | 903.5 | 911.9 | 926.0 | 955.6 | *991.8* | 1000.1 | 1060.6 | 1121.8 |
| 10° | 921.0 | 921.4 | 921.0 | 918.7 | 916.8 | 922.2 | 942.3 | *975.8* | 987.6 | 1060.6 | 1144.2 |
| 12.5° | 964.8 | 968.6 | 965.5 | 957.5 | 946.5 | 943.1 | 952.6 | *977.7* | 988.7 | 1072.8 | 1176.2 |
| 15° | 1026.4 | 1030.2 | 1022.9 | 1011.2 | 994.8 | 980.3 | 977.7 | *994.0* | 1003.5 | 1091.4 | 1219.5 |
| 17.5° | 1101.7 | 1100.1 | 1091.8 | 1075.8 | 1053.4 | 1030.2 | 1016.9 | *1023.3* | 1030.5 | 1119.5 | 1267.1 |
| 20° | 1192.2 | 1197.9 | 1180.4 | 1156.8 | 1130.6 | 1095.2 | 1065.9 | *1068.6* | 1070.9 | 1156.8 | 1324.1 |
| 22.5° | 1341.6 | 1348.5 | 1315.4 | 1270.5 | 1221.8 | 1173.5 | 1136.3 | *1117.2* | 1124.1 | 1199.8 | 1383.1 |
| 25° | 1489.5 | 1490.7 | 1466.3 | 1422.6 | 1350.4 | 1273.2 | 1216.9 | *1194.4* | 1193.3 | 1262.5 | 1463.7 |
| 27.5° | 1644.7 | 1634.4 | 1606.7 | 1559.5 | 1491.4 | 1402.5 | 1317.3 | *1283.4* | 1280.0 | 1350.4 | 1553.4 |
| 30° | 1787.7 | 1782.3 | 1755.0 | 1704.8 | 1626.4 | 1542.4 | 1443.5 | *1400.6* | 1396.8 | 1479.7 | 1680.8 |
| 32.5° | 1920.4 | 1921.9 | 1896.1 | 1843.2 | 1779.7 | 1693.7 | 1595.3 | *1554.6* | 1550.0 | 1666.0 | 1841.3 |
| 35° | 2026.1 | 2022.7 | 2007.1 | 1986.2 | 1934.8 | 1858.8 | 1768.3 | *1767.5* | 1778.2 | 1929.1 | 2047.8 |
| 37.5° | 2129.9 | 2127.6 | 2103.3 | 2090.4 | 2094.2 | 2027.2 | 1990.4 | *2033.0* | 2055.4 | 2212.4 | 2282.4 |
| 40° | 2301.0 | 2288.5 | 2257.3 | 2219.7 | 2224.2 | 2193.0 | 2206.7 | *2331.5* | 2372.2 | 2529.2 | 2529.2 |
| 42.5° | 2429.6 | 2424.6 | 2419.3 | 2404.9 | 2384.7 | 2359.6 | 2438.7 | *2604.9* | 2644.4 | 2803.8 | 2742.5 |
| 45° | 2477.9 | 2484.7 | 2517.4 | 2575.6 | 2571.8 | 2536.1 | 2690.8 | *2903.4* | 2938.8 | 3082.9 | 2955.9 |
| 47.5° | 2519.7 | 2527.3 | 2567.2 | 2687.0 | 2749.8 | 2756.6 | 2963.5 | *3194.7* | 3236.1 | 3376.8 | 3153.2 |
| 50° | 2519.3 | 2535.3 | 2614.8 | 2750.9 | 2869.9 | 2973.4 | 3253.6 | *3488.6* | 3530.5 | 3651.8 | 3324.7 |
| 52.5° | 2465.3 | 2476.4 | 2611.3 | 2803.0 | 2964.6 | 3194.3 | 3555.2 | *3800.5* | 3819.5 | 3912.3 | 3474.2 |
| 55° | 2405.2 | 2414.7 | 2555.4 | 2814.8 | 3064.3 | 3437.7 | 3867.8 | *4105.8* | 4135.9 | 4179.6 | 3625.9 |
| 57.5° | 2335.3 | 2350.5 | 2490.4 | 2779.1 | 3148.3 | 3677.6 | 4188.0 | *4437.8* | 4452.3 | 4437.4 | 3793.6 |
| 60° | 2250.8 | 2256.9 | 2392.3 | 2687.4 | 3196.2 | 3925.6 | 4498.7 | *4786.9* | 4789.9 | 4694.1 | 3930.9 |
| 62.5° | 1951.2 | 1957.7 | 2117.0 | 2496.9 | 3162.0 | 4114.6 | 4768.7 | *5082.8* | 5076.7 | 4888.1 | 3995.6 |
| 65° | 1497.5 | 1524.5 | 1685.4 | 2079.0 | 2900.0 | 4197.5 | 4978.6 | *5289.6* | 5267.6 | 4934.5 | 3906.9 |
| 66° | *1367.1* | *1394.5* | *1534.8* | *1871.7* | *2714.8* | *4145.0* | *5004.8* | *5315.1* | *5293.8* | *4900.6* | *3816.8* |
| 67.5° | 1223.3 | 1228.3 | 1342.4 | 1598.3 | 2327.7 | 3901.6 | 4917.0 | *5271.0* | 5247.0 | 4751.2 | 3603.9 |
| 70° | 891.4 | 914.9 | 1016.9 | 1212.3 | 1642.0 | 3131.2 | 4435.1 | *4922.3* | 4887.3 | 4237.0 | 3064.3 |
| 72.5° | 585.2 | 594.8 | 639.6 | 727.8 | 1045.8 | 2105.6 | 3661.7 | *4157.5* | 4189.5 | 3381.4 | 2281.7 |
| 75° | 408.0 | 402.7 | 383.7 | 392.4 | 522.9 | 1027.1 | 2563.4 | *2968.4* | 3009.1 | 2188.5 | 1349.2 |
| 77.5° | 335.8 | 328.9 | 297.8 | 261.2 | 267.7 | 382.2 | 1357.2 | *1754.6* | 1722.6 | 1072.8 | 609.2 |
| 80° | 289.8 | 283.3 | 249.8 | 217.1 | 197.4 | 182.5 | 427.4 | *714.5* | 662.1 | 360.1 | 211.1 |
| 82.5° | 231.6 | 228.2 | 213.3 | 182.5 | 160.1 | 132.0 | 133.5 | *186.0* | 198.9 | 134.2 | 92.8 |
| 85° | 140.7 | 139.2 | 140.3 | 144.5 | 114.1 | 96.6 | 79.5 | *83.7* | 81.4 | 67.3 | 57.8 |
| 87.5° | 72.6 | 67.3 | 72.3 | 86.3 | 67.7 | 44.5 | 33.5 | *34.6* | 36.5 | 34.6 | 29.7 |
| 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: P1460973
CATALOG NUMBER: PRV-PC1A-730-U-T3RE

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 | 1110.8 |
| 2.5° | 1112.7 | 1121.1 | 1134.4 | 1143.1 | 1148.8 | 1152.2 | 1151.9 | 1151.5 | 1150.3 | 1147.7 | 1149.2 |
| 5° | 1124.9 | 1139.3 | 1156.4 | 1161.7 | 1160.6 | 1158.7 | 1155.7 | 1154.9 | 1156.0 | 1153.8 | 1153.8 |
| 7.5° | 1145.4 | 1161.4 | 1177.3 | 1174.3 | 1169.0 | 1174.7 | 1183.8 | 1196.3 | 1204.0 | 1208.5 | 1214.6 |
| 10° | 1172.8 | 1194.4 | 1199.8 | 1190.6 | 1196.7 | 1219.2 | 1239.7 | 1253.8 | 1262.1 | 1266.3 | 1270.5 |
| 12.5° | 1213.8 | 1232.5 | 1222.2 | 1218.0 | 1244.6 | 1272.8 | 1278.5 | 1268.2 | 1257.2 | 1250.7 | 1251.1 |
| 15° | 1259.5 | 1271.6 | 1250.7 | 1262.9 | 1296.0 | 1293.3 | 1253.8 | 1211.6 | 1181.1 | 1168.2 | 1169.7 |
| 17.5° | 1308.1 | 1310.4 | 1283.0 | 1312.3 | 1315.4 | 1254.1 | 1175.1 | 1115.7 | 1096.0 | 1088.7 | 1089.5 |
| 20° | 1365.2 | 1354.9 | 1326.4 | 1354.9 | 1290.7 | 1168.6 | 1082.3 | 1046.9 | 1038.2 | 1041.6 | 1042.3 |
| 22.5° | 1416.1 | 1392.6 | 1372.0 | 1364.4 | 1210.8 | 1068.2 | 1012.7 | 999.7 | 1002.4 | 1008.5 | 1015.0 |
| 25° | 1477.4 | 1434.8 | 1415.8 | 1324.9 | 1105.8 | 989.1 | 964.8 | 966.3 | 966.7 | 972.0 | 976.9 |
| 27.5° | 1545.4 | 1483.1 | 1445.4 | 1233.2 | 994.4 | 932.4 | 925.6 | 926.7 | 922.9 | 922.9 | 927.5 |
| 30° | 1627.2 | 1540.9 | 1450.4 | 1109.3 | 893.6 | 881.5 | 881.1 | 873.1 | 857.5 | 853.7 | 856.4 |
| 32.5° | 1740.9 | 1627.2 | 1428.7 | 962.9 | 821.4 | 832.0 | 827.9 | 806.9 | 785.6 | 780.7 | 786.4 |
| 35° | 1909.0 | 1753.1 | 1385.7 | 828.2 | 758.6 | 778.4 | 773.5 | 746.1 | 714.5 | 702.4 | 703.9 |
| 37.5° | 2081.2 | 1908.6 | 1331.3 | 717.2 | 702.0 | 730.1 | 718.7 | 682.2 | 648.7 | 626.3 | 629.4 |
| 40° | 2261.9 | 2065.7 | 1267.5 | 645.7 | 652.9 | 678.8 | 668.9 | 624.0 | 580.7 | 560.9 | 570.0 |
| 42.5° | 2439.5 | 2215.9 | 1199.0 | 598.9 | 606.5 | 632.4 | 622.1 | 575.0 | 542.7 | 521.7 | 525.2 |
| 45° | 2598.8 | 2334.9 | 1137.0 | 563.9 | 566.6 | 586.8 | 571.6 | 544.6 | 511.9 | 494.0 | 492.8 |
| 47.5° | 2741.0 | 2423.5 | 1098.2 | 535.8 | 527.1 | 533.1 | 530.9 | 511.9 | 487.5 | 470.8 | 469.3 |
| 50° | 2863.1 | 2490.4 | 1091.4 | 510.3 | 484.5 | 473.4 | 483.7 | 478.0 | 459.0 | 446.8 | 445.7 |
| 52.5° | 2961.6 | 2551.6 | 1121.1 | 484.5 | 430.9 | 425.5 | 440.7 | 442.3 | 427.8 | 422.5 | 422.9 |
| 55° | 3080.6 | 2627.3 | 1181.1 | 448.3 | 383.3 | 384.1 | 404.2 | 405.8 | 397.4 | 398.1 | 399.7 |
| 57.5° | 3210.7 | 2712.9 | 1231.0 | 401.2 | 339.6 | 345.7 | 372.7 | 375.3 | 367.3 | 370.4 | 371.5 |
| 60° | 3320.6 | 2790.5 | 1172.4 | 342.6 | 300.4 | 316.0 | 350.6 | 349.1 | 344.5 | 352.1 | 354.0 |
| 62.5° | 3352.5 | 2770.7 | 962.1 | 291.7 | 269.6 | 292.8 | 335.0 | 335.4 | 344.1 | 357.5 | 359.7 |
| 65° | 3239.6 | 2581.3 | 656.0 | 254.0 | 244.9 | 272.7 | 325.9 | 339.2 | 335.4 | 333.5 | 335.8 |
| 66° | *3155.1* | *2462.7* | *535.8* | *241.1* | *235.8* | *267.0* | *323.6* | *328.9* | *322.1* | *321.7* | *321.7* |
| 67.5° | 2964.6 | 2216.2 | 391.3 | 224.4 | 225.5 | 257.8 | 309.9 | 305.4 | 311.8 | 317.9 | 320.2 |
| 70° | 2513.6 | 1692.6 | 247.6 | 198.5 | 207.6 | 233.9 | 276.8 | 294.7 | 306.5 | 313.7 | 318.7 |
| 72.5° | 1863.0 | 1092.5 | 176.4 | 175.3 | 188.6 | 209.9 | 254.4 | 280.6 | 290.5 | 321.3 | 330.1 |
| 75° | 1141.6 | 607.3 | 148.3 | 155.9 | 161.6 | 190.5 | 230.1 | 265.1 | 262.8 | 271.9 | 274.2 |
| 77.5° | 493.2 | 273.0 | 126.6 | 135.0 | 138.0 | 161.2 | 205.0 | 240.7 | 240.3 | 250.2 | 254.4 |
| 80° | 168.8 | 124.0 | 108.4 | 109.9 | 119.8 | 136.1 | 174.9 | 208.8 | 209.2 | 213.3 | 208.8 |
| 82.5° | 89.7 | 84.4 | 87.1 | 90.1 | 102.3 | 111.0 | 144.5 | 180.6 | 166.6 | 118.3 | 116.4 |
| 85° | 56.7 | 50.6 | 57.4 | 67.7 | 74.9 | 80.6 | 110.3 | 136.1 | 118.6 | 52.1 | 46.4 |
| 87.5° | 22.8 | 22.8 | 26.6 | 35.7 | 32.3 | 35.0 | 58.9 | 77.2 | 63.1 | 20.9 | 11.0 |
| 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

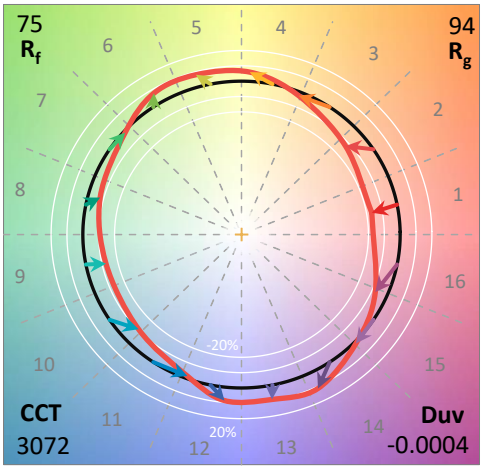
## Test Information

| | |
|---|---|
| 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 |



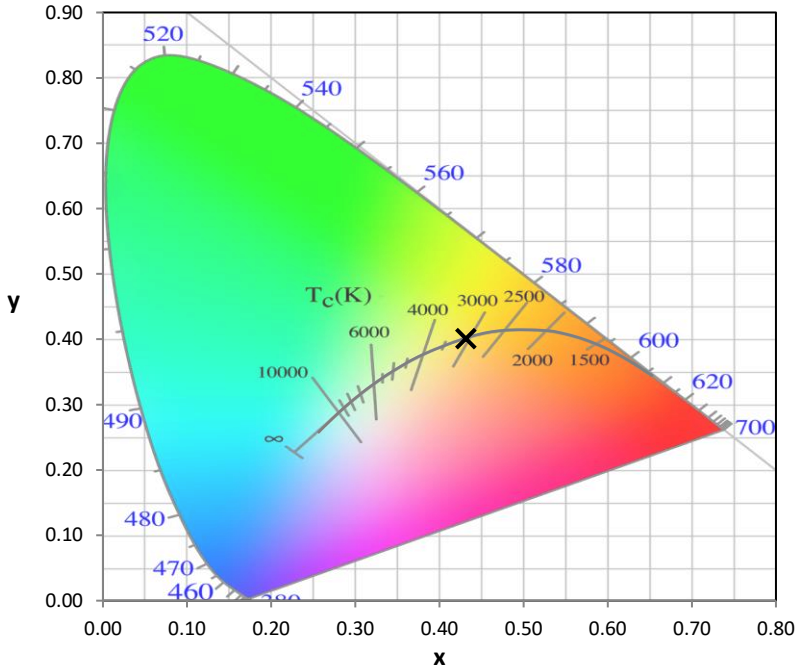

## Test Conditions

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

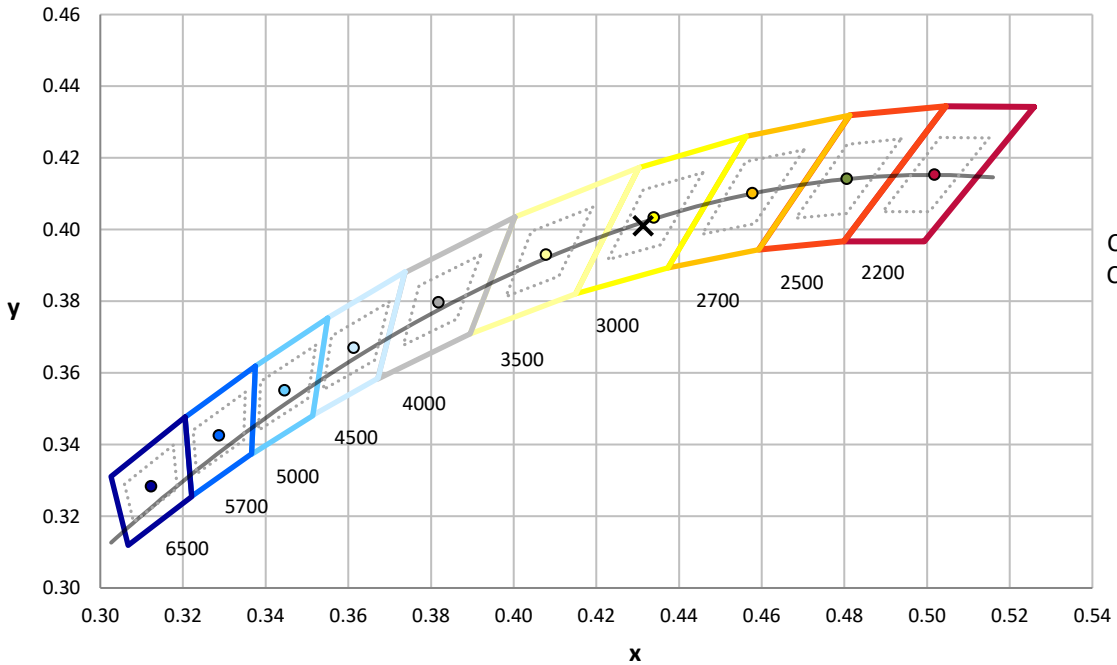
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN2187 | 1/6/2025 | 7/6/2025 |
| Power Meter | INXT2011002 | 1/21/2025 | 1/21/2026 |
| AC Power Source | IN0458 | 10/22/2024 | 10/22/2025 |
| DC Power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

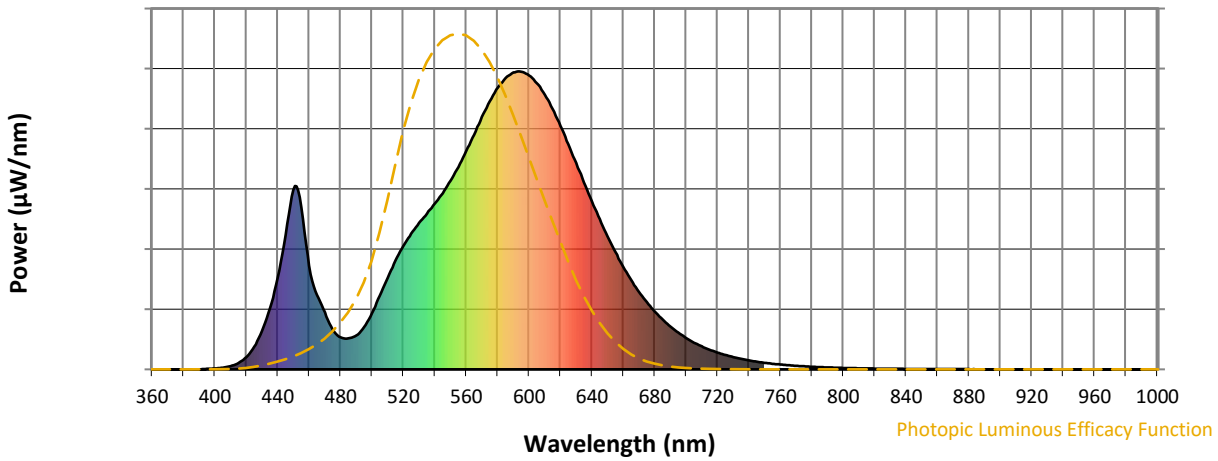



CCT = 3072K
CIE x = 0.4313
CIE y = 0.4010
Duv = -0.0004

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP2-2501-321-4

## Photopic Flux vs. Wavelength

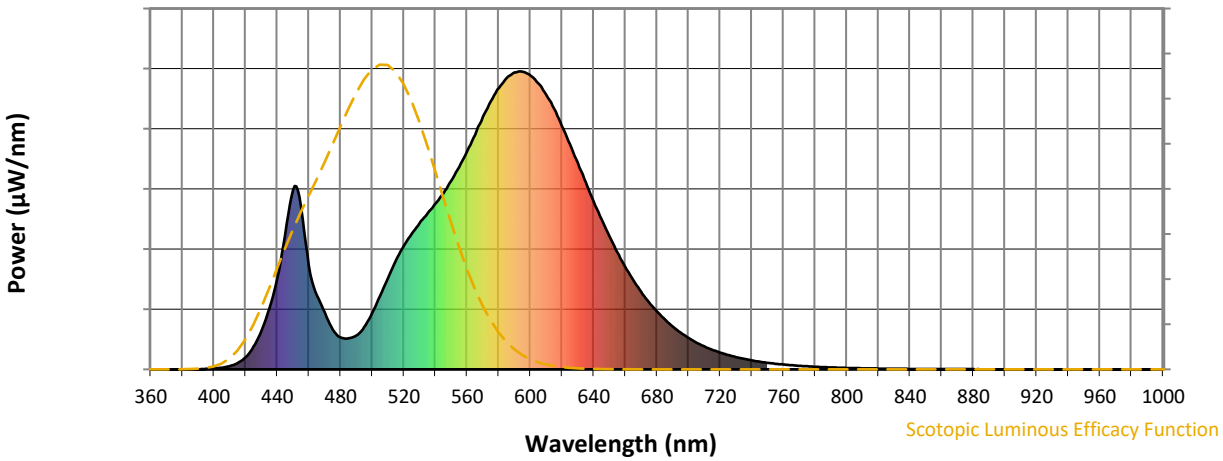



**Photopic Lumens: NR**

| 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 | | | |

REPORT NUMBER: SP2-2501-321-4

## Scotopic Flux vs. Wavelength

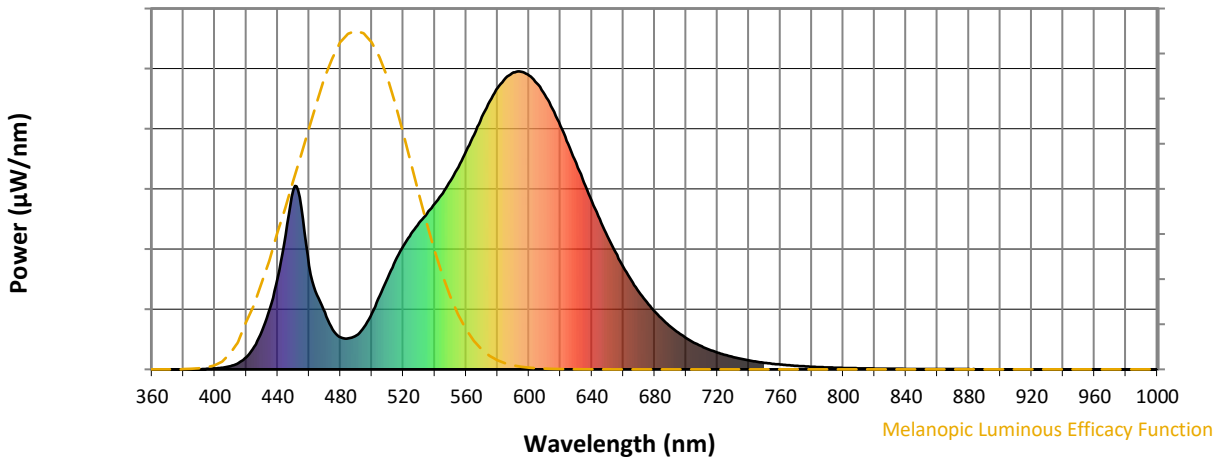



**Scotopic Lumens: NR** **S/P: 1.24**

| 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 | | | |

REPORT NUMBER: SP2-2501-321-4

## 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 | | | |

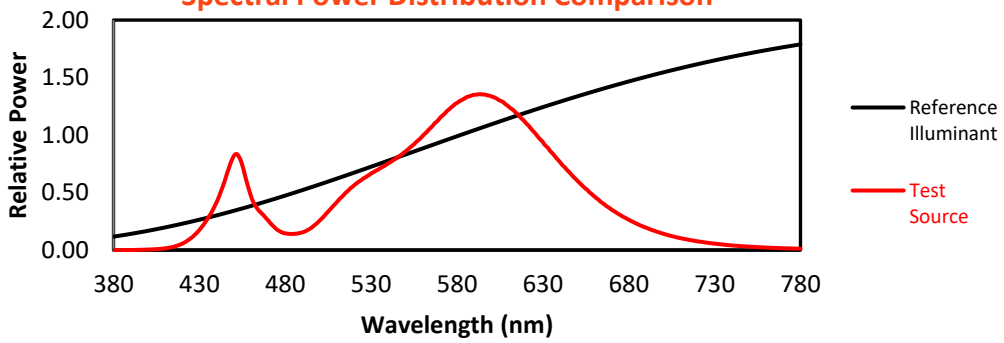
REPORT NUMBER: SP2-2501-321-4

# TM-30-18

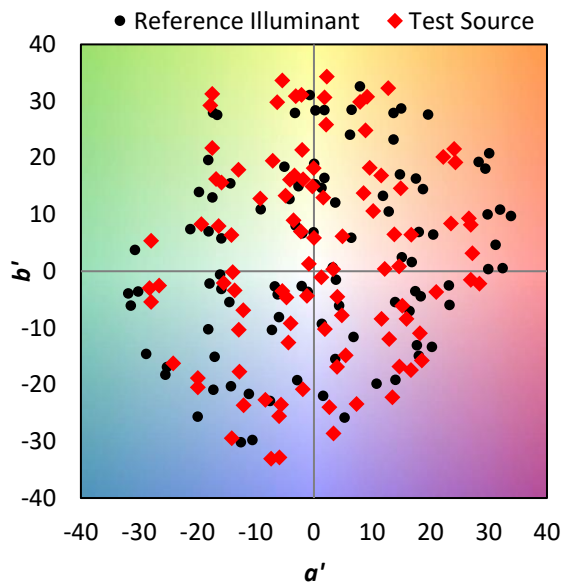
## Summary

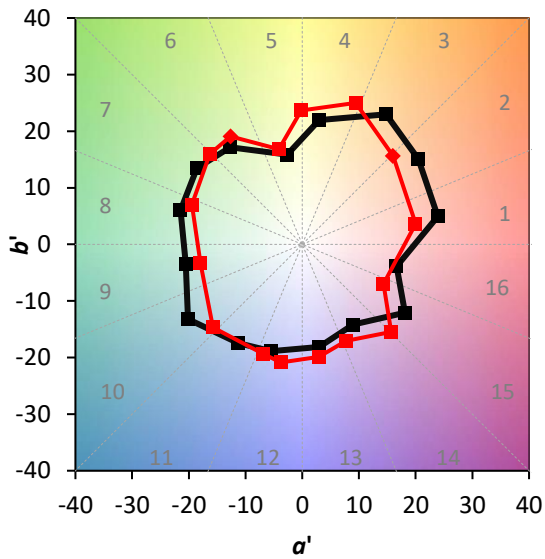
$R_f$ = 74.7
$R_g$ = 94.2
CIE $R_a$ = 71.7
$R_9$ = -33.9

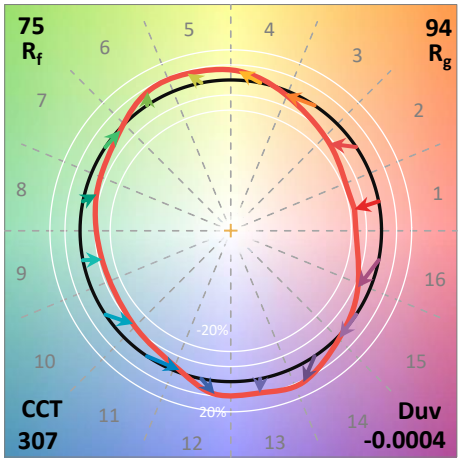
## Spectral Power Distribution Comparison

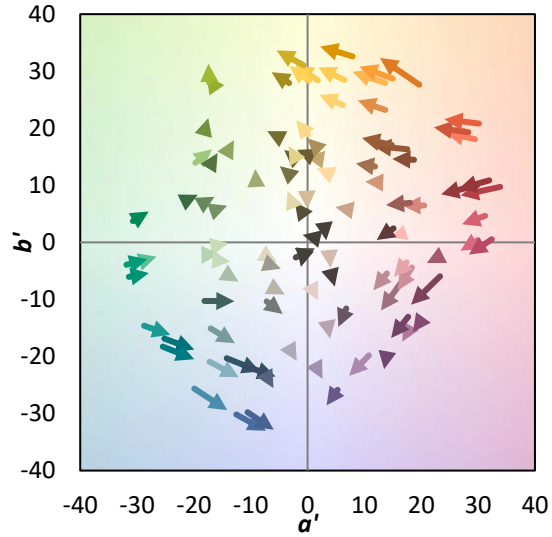



## Color Vector Graphics



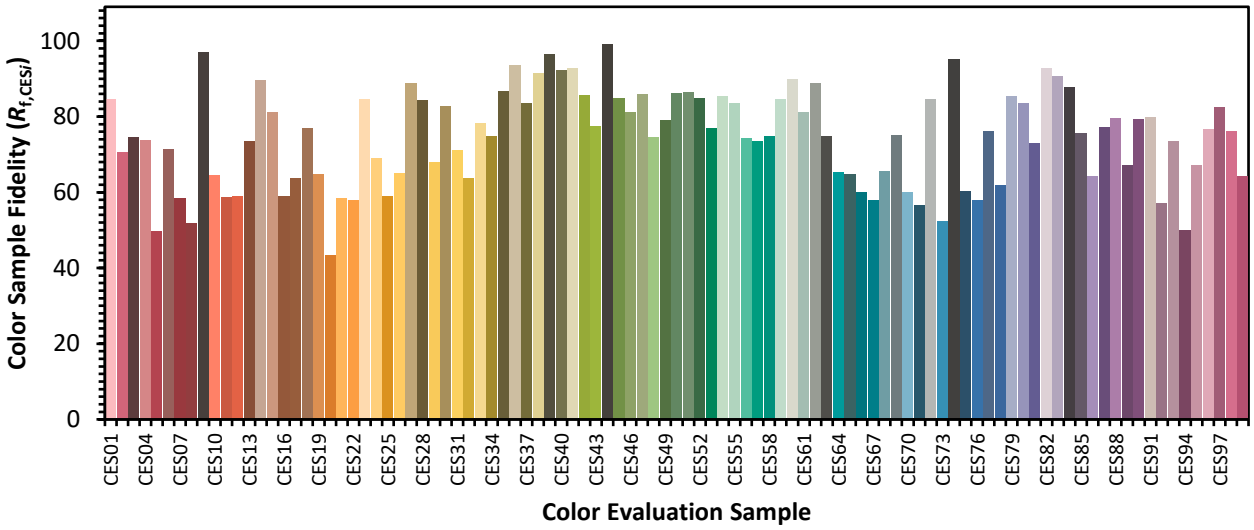



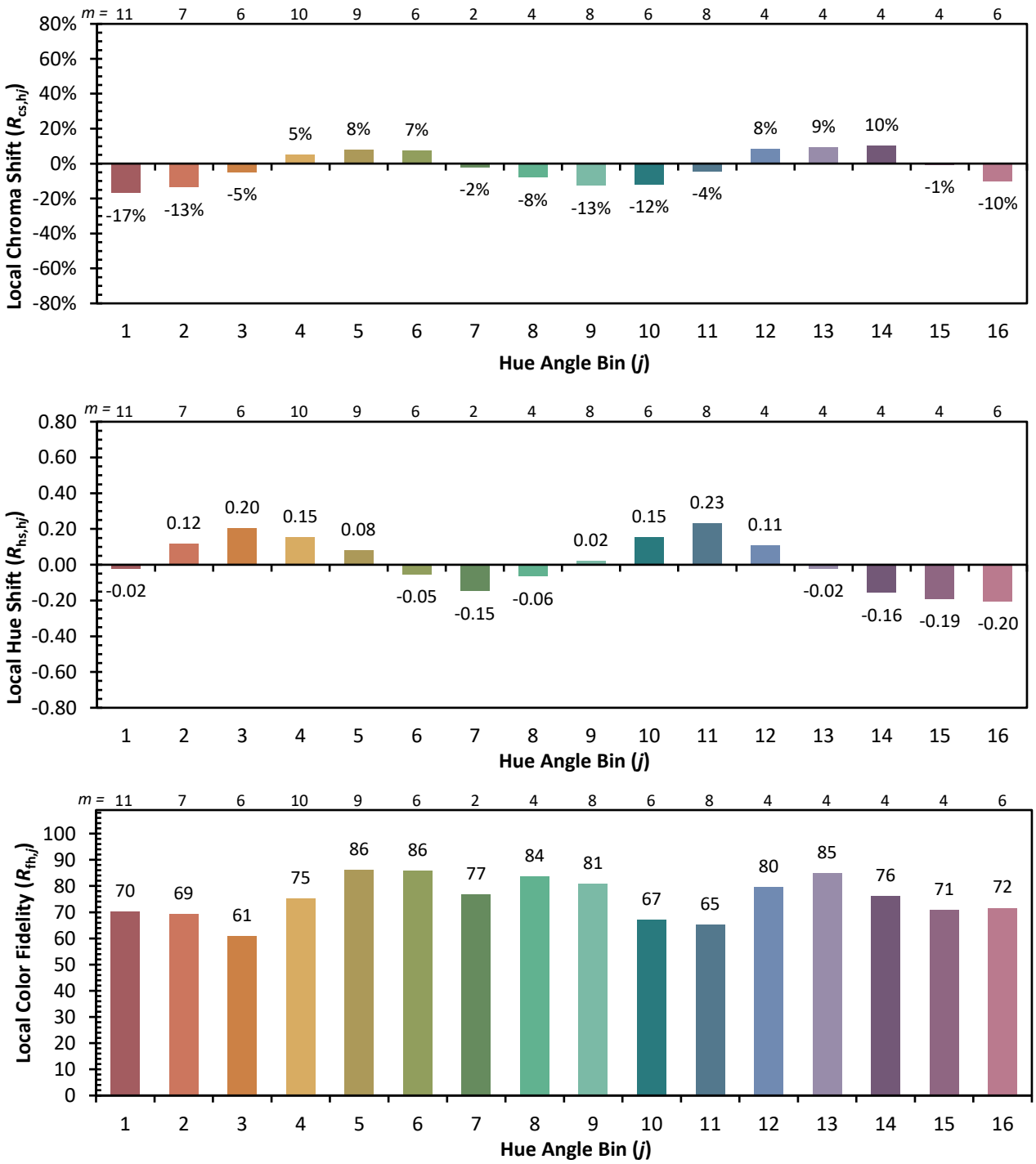



**Individual Sample Fidelity Index ($R_{f,i}$)**

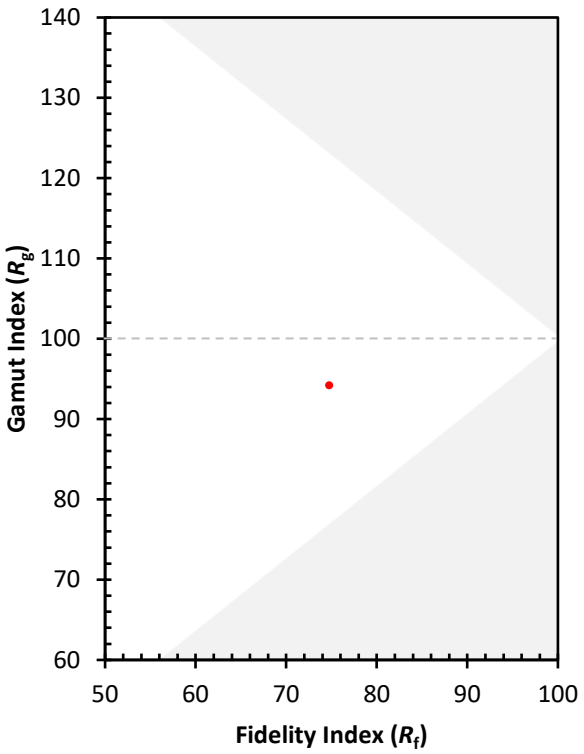
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 65 | CES51 = 86 | CES76 = 58 |
| CES02 = 62 | CES27 = 89 | CES52 = 85 | CES77 = 76 |
| CES03 = 31 | CES28 = 84 | CES53 = 77 | CES78 = 62 |
| CES04 = 71 | CES29 = 68 | CES54 = 85 | CES79 = 85 |
| CES05 = 49 | CES30 = 83 | CES55 = 84 | CES80 = 84 |
| CES06 = 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 | |

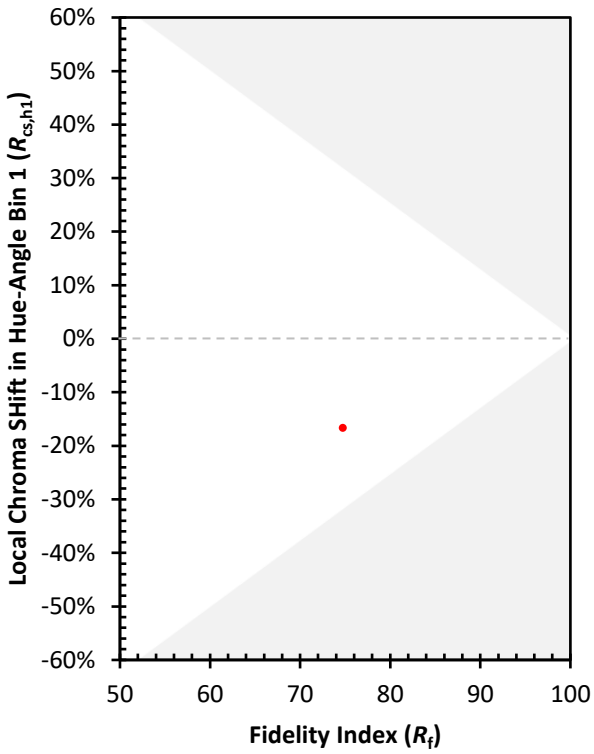


## Color Rendition by Hue-Angle Bin



## Measure Comparisons




(END OF REPORT)