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: LUMARK

Report Number: P1460612

Luminaire Tested: PRV-PC1D-730-U-T2U-HSS

Issue Date: 06/10/2026

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1460612 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 6/10/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | LUMARK |
| Catalog Number: | PRV-PC1D-730-U-T2U-HSS |
| Description: | PREVAIL DISCRETE LED 1 SQUARE AT 1170MA 70CRI 3000K FIXTURE w/ TYPE II URBAN DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (40) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 14011.6 lumens |
| Efficiency: | N/A |
| Efficacy: | 92.2 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): | 152 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 2.75% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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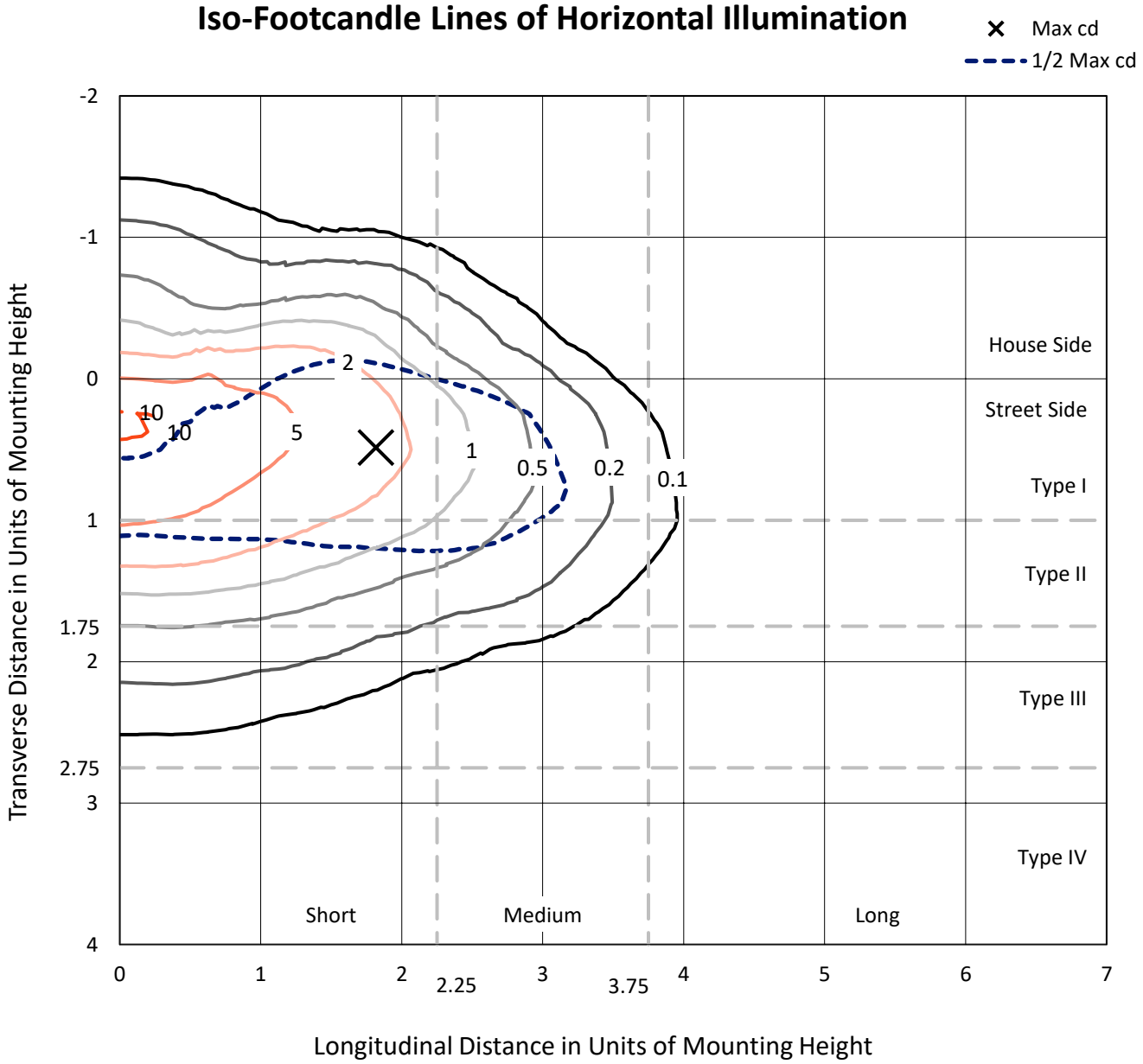
Scaled Data Report

REPORT NUMBER: P1460612
CATALOG NUMBER: PRV-PC1D-730-U-T2U-HSS

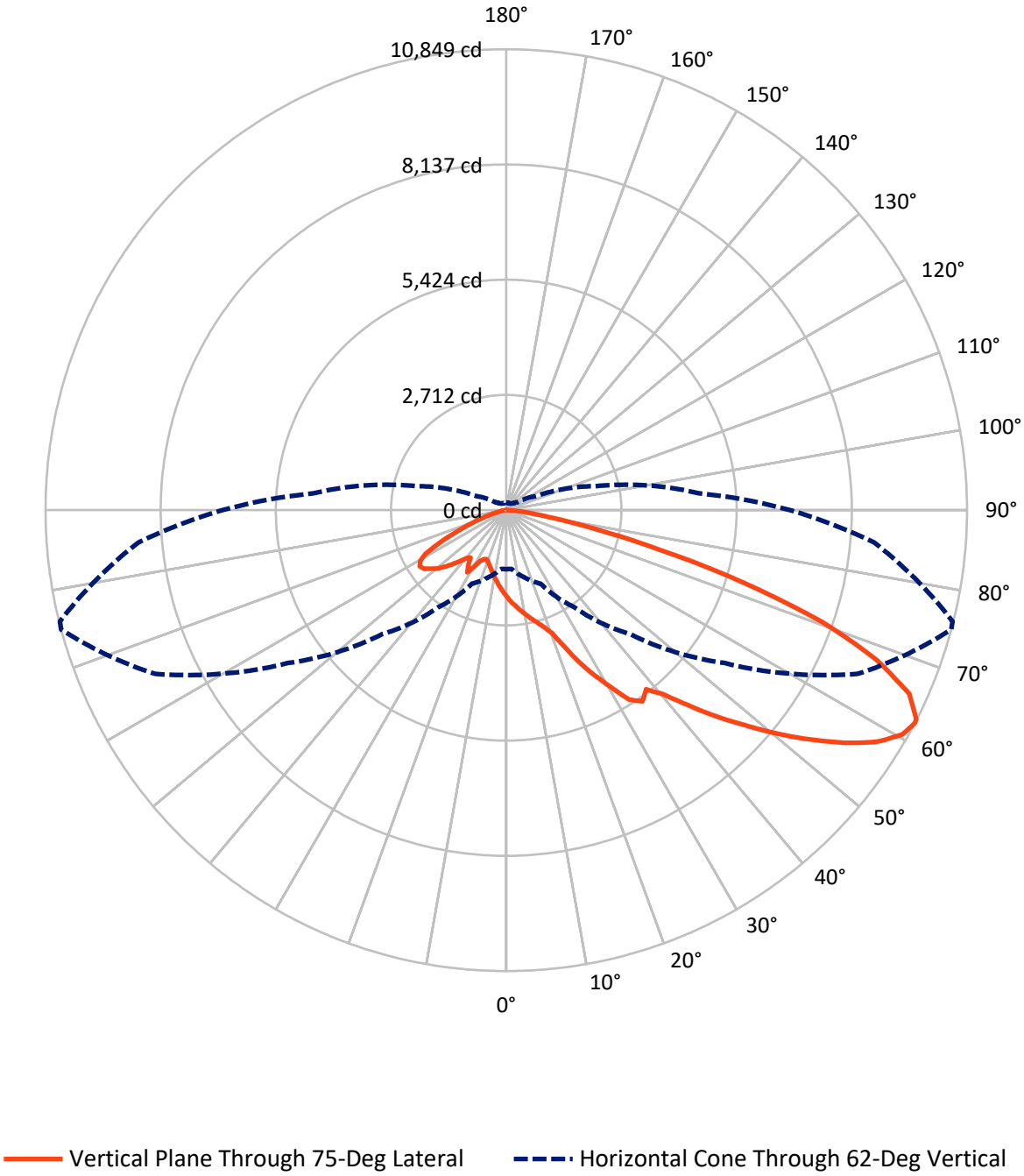
## Iso-Footcandle Lines of Horizontal Illumination




Based on 20 foot mounting height. Maximum calculated value = 10.7 fc
Type II - Short - N/A

REPORT NUMBER: P1460612
CATALOG NUMBER: PRV-PC1D-730-U-T2U-HSS

## Luminous Intensity Polar Plot



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Scaled Data Report

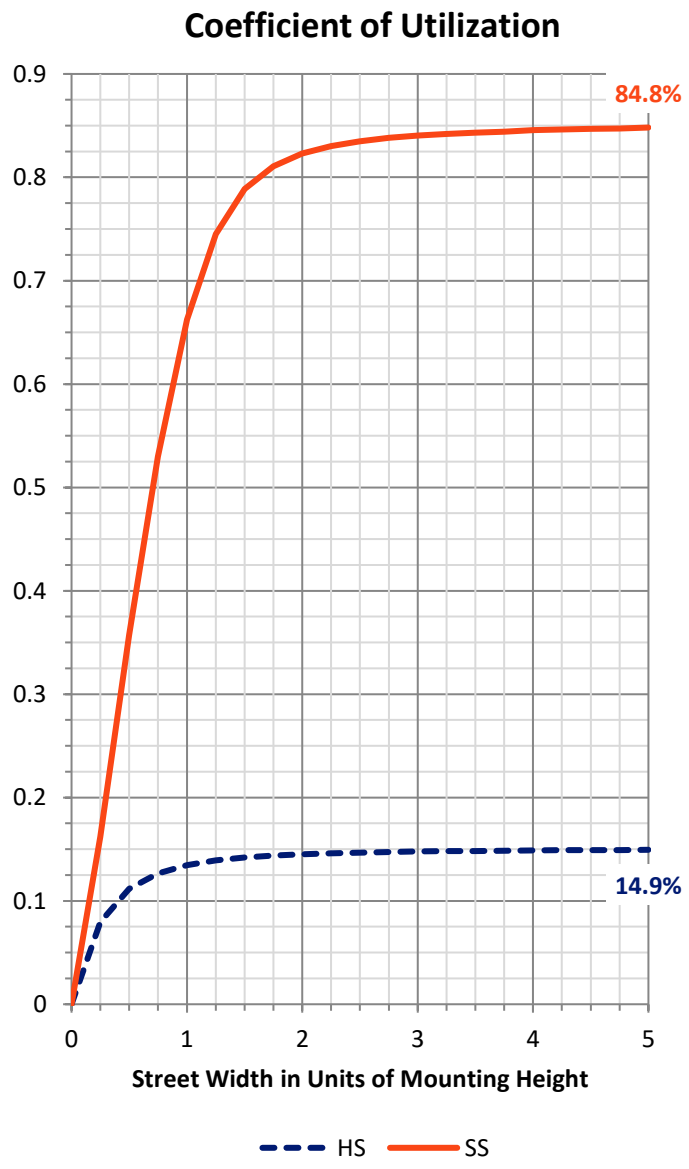
REPORT NUMBER: P1460612
CATALOG NUMBER: PRV-PC1D-730-U-T2U-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2112.3 | 0.0 | 2112.3 |
| | % Fixture | 15.1 | 0.0 | 15.1 |
| **Street Side** | Lumens | 11899.3 | 0.0 | 11899.3 |
| | % Fixture | 84.9 | 0.0 | 84.9 |
| **Total** | Lumens | 14011.6 | 0.0 | 14011.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 201.0 | 1.4 |
| 10°-20° | 678.5 | 4.8 |
| 20°-30° | 1283.8 | 9.2 |
| 30°-40° | 2071.3 | 14.8 |
| 40°-50° | 2881.7 | 20.6 |
| 50°-60° | 3272.2 | 23.4 |
| 60°-70° | 2567.0 | 18.3 |
| 70°-80° | 934.1 | 6.7 |
| 80°-90° | 122.0 | 0.9 |
| 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° | 14011.6 | 100.0 |
| 0°-180° | 14011.6 | 100.0 |



REPORT NUMBER: P1460612
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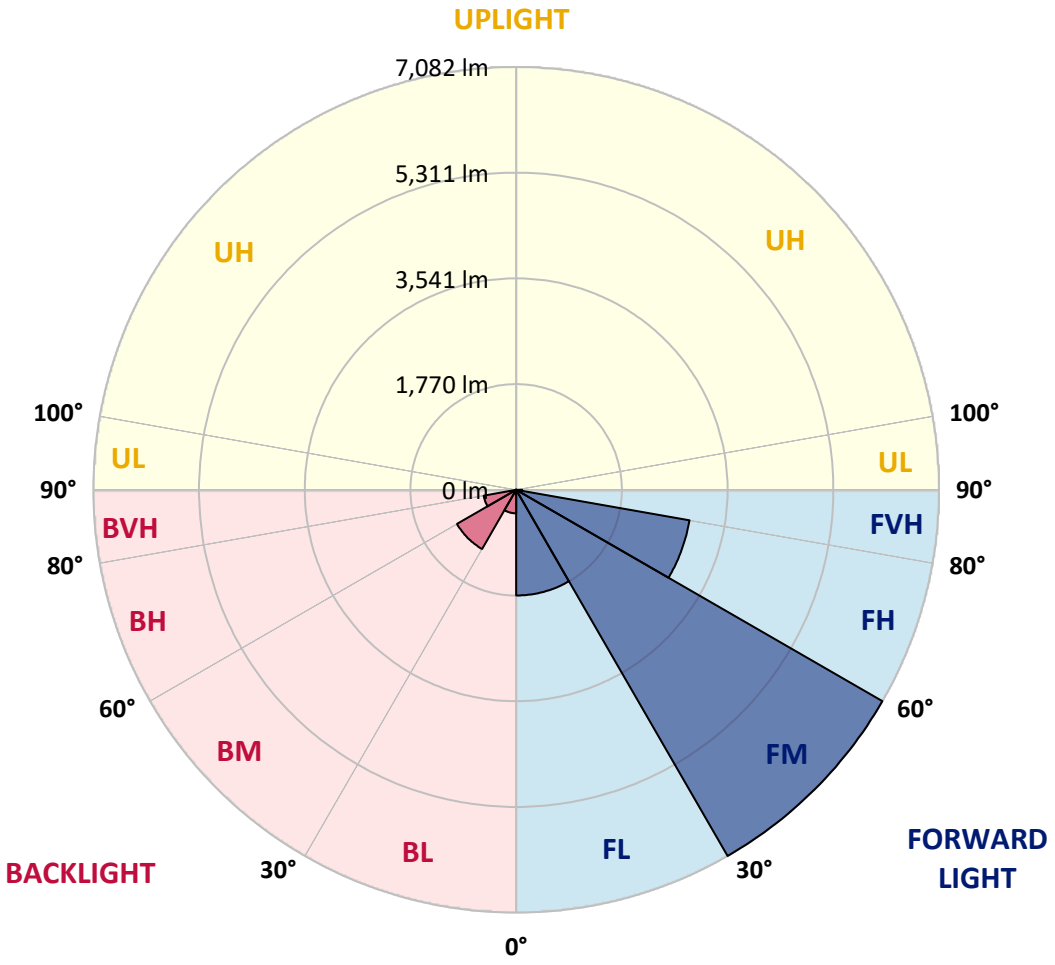
**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1769.3 | 12.6 | | | |
| FM | (30°-60°) | 7081.9 | 50.5 | | | |
| FH | (60°-80°) | 2948.2 | 21.0 | | | G2/5000 |
| FVH | (80°-90°) | 99.9 | 0.7 | | | G1/100 |
| BL | (0°-30°) | 394.0 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 1143.3 | 8.2 | B2/2500 | | |
| BH | (60°-80°) | 552.9 | 3.9 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 22.0 | 0.2 | | | 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



REPORT NUMBER: P1460612
CATALOG NUMBER: PRV-PC1D-730-U-T2U-HSS

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | *2038.3* | 2038.3 | 2038.3 |
| 2.5° | 2485.0 | 2475.5 | 2466.0 | 2446.9 | 2415.5 | 2349.8 | 2287.8 | 2231.6 | *2159.3* | 2144.0 | 2082.1 |
| 5° | 2927.9 | 2934.6 | 2888.9 | 2857.4 | 2774.6 | 2666.0 | 2550.7 | 2411.7 | *2260.2* | 2248.8 | 2115.4 |
| 7.5° | 3412.7 | 3413.7 | 3351.8 | 3287.9 | 3165.1 | 2991.7 | 2795.5 | 2595.5 | *2376.4* | 2350.7 | 2146.9 |
| 10° | 3912.8 | 3871.8 | 3840.4 | 3746.1 | 3572.7 | 3327.9 | 3076.5 | 2790.7 | *2493.6* | 2456.4 | 2185.9 |
| 12.5° | 4259.5 | 4245.2 | 4193.7 | 4086.1 | 3932.8 | 3688.0 | 3369.9 | 2988.9 | *2618.3* | 2568.8 | 2232.6 |
| 15° | 4664.3 | 4618.5 | 4537.6 | 4419.5 | 4251.8 | 3998.5 | 3650.8 | 3215.5 | *2746.0* | 2695.5 | 2287.8 |
| 17.5° | 5080.5 | 5033.8 | 4995.7 | 4873.8 | 4670.9 | 4321.4 | 3937.5 | 3465.1 | *2898.4* | 2831.7 | 2351.7 |
| 20° | 5241.5 | 5222.4 | 5239.6 | 5222.4 | 5116.7 | 4867.1 | 4386.1 | 3753.7 | *3091.7* | 3013.6 | 2450.7 |
| 22.5° | 5041.4 | 5029.1 | 5094.8 | 5177.6 | 5239.6 | 5223.4 | 4938.6 | 4335.7 | *3476.5* | 3372.7 | 2644.1 |
| 25° | 4999.5 | 4998.6 | 5034.8 | 5081.4 | 5087.2 | 5134.8 | 5150.0 | 4813.8 | *3940.4* | 3821.3 | 2951.7 |
| 27.5° | 5162.4 | 5127.2 | 5147.2 | 5213.8 | 5223.4 | 5229.1 | 5144.3 | 4985.2 | *4376.6* | 4271.8 | 3298.4 |
| 30° | 5401.5 | 5364.3 | 5345.3 | 5372.9 | 5395.8 | 5453.9 | 5428.1 | 5207.2 | *4815.7* | 4747.1 | 3856.6 |
| 32.5° | 5778.7 | 5736.7 | 5665.3 | 5616.7 | 5574.8 | 5693.9 | 5772.9 | 5677.7 | *5318.6* | 5243.4 | 4421.4 |
| 35° | 6107.3 | 6090.1 | 6050.1 | 5949.1 | 5852.0 | 5948.2 | 6199.6 | 6209.2 | *5527.2* | 5411.0 | 4343.3 |
| 37.5° | 6434.0 | 6403.5 | 6392.0 | 6318.7 | 6195.8 | 6162.5 | 6373.0 | 6206.3 | *5350.0* | 5219.6 | 4089.0 |
| 40° | 6589.2 | 6562.5 | 6650.2 | 6650.2 | 6492.1 | 6372.0 | 6462.5 | 6306.3 | *5696.7* | 5601.5 | 4464.2 |
| 42.5° | 6552.1 | 6532.1 | 6645.4 | 6688.3 | 6684.5 | 6625.4 | 6732.1 | 6744.5 | *6269.2* | 6165.4 | 5041.4 |
| 45° | 6167.3 | 6089.2 | 6228.2 | 6538.7 | 6693.0 | 6792.1 | 7073.1 | 7275.9 | *6919.7* | 6803.5 | 5647.2 |
| 47.5° | 5621.5 | 5552.0 | 5766.3 | 6210.1 | 6547.3 | 6868.3 | 7339.8 | 7780.8 | *7564.5* | 7451.2 | 6306.3 |
| 50° | 4712.8 | 4763.3 | 5136.7 | 5693.9 | 6253.0 | 6835.9 | 7543.6 | 8253.2 | *8268.4* | 8151.3 | 6993.1 |
| 52.5° | 3739.4 | 3787.0 | 4389.9 | 5042.4 | 5833.9 | 6586.4 | 7627.4 | 8752.3 | *8973.2* | 8866.6 | 7650.3 |
| 55° | 2811.7 | 2886.0 | 3396.5 | 4224.2 | 5147.2 | 6186.3 | 7549.3 | 9138.0 | *9669.5* | 9609.5 | 8247.5 |
| 57.5° | 2147.8 | 2202.1 | 2551.7 | 3316.5 | 4264.2 | 5620.5 | 7282.6 | 9375.2 | *10290.5* | 10230.5 | 8649.4 |
| 60° | 1645.9 | 1674.4 | 1977.3 | 2431.7 | 3428.0 | 4848.1 | 6816.9 | 9358.0 | *10717.2* | 10674.4 | 8792.3 |
| 62° | *1387.8* | *1388.7* | *1636.3* | *1909.7* | *2787.9* | *4127.1* | *6273.0* | *9121.8* | *10848.7* | *10831.5* | *8689.4* |
| 62.5° | 1326.8 | 1363.0 | 1568.7 | 1815.4 | 2593.6 | 3943.2 | 6082.5 | 9012.3 | *10835.3* | 10819.1 | 8625.6 |
| 65° | 1055.3 | 1083.0 | 1236.3 | 1386.8 | 1970.7 | 2892.7 | 5057.6 | 8287.5 | *10427.7* | 10427.7 | 8166.5 |
| 67.5° | 858.2 | 862.9 | 977.2 | 1065.8 | 1435.4 | 1964.0 | 3747.0 | 7216.9 | *9405.7* | 9462.8 | 7363.6 |
| 70° | 654.3 | 667.7 | 728.6 | 809.6 | 1037.2 | 1394.4 | 2528.8 | 5719.6 | *7902.7* | 7820.8 | 6126.3 |
| 72.5° | 518.1 | 518.1 | 549.6 | 583.9 | 726.7 | 984.9 | 1732.5 | 4147.1 | *5861.5* | 5805.3 | 4501.4 |
| 75° | 424.8 | 427.7 | 434.3 | 430.5 | 497.2 | 674.4 | 1134.4 | 2566.9 | *3752.7* | 3740.4 | 2731.7 |
| 77.5° | 319.1 | 322.9 | 344.8 | 339.1 | 337.2 | 416.2 | 717.2 | 1391.6 | *2130.7* | 2126.9 | 1431.6 |
| 80° | 241.9 | 241.9 | 250.5 | 247.6 | 237.2 | 261.0 | 434.3 | 755.3 | *1084.9* | 1093.4 | 762.9 |
| 82.5° | 172.4 | 172.4 | 183.8 | 181.0 | 169.5 | 179.1 | 247.6 | 416.2 | *580.1* | 565.8 | 436.2 |
| 85° | 97.2 | 100.0 | 102.9 | 110.5 | 107.6 | 112.4 | 145.7 | 206.7 | *285.7* | 299.1 | 242.9 |
| 87.5° | 47.6 | 52.4 | 53.3 | 58.1 | 56.2 | 58.1 | 67.6 | 91.4 | *84.8* | 84.8 | 62.9 |
| 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: P1460612
CATALOG NUMBER: PRV-PC1D-730-U-T2U-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 | 2038.3 |
| 2.5° | 2042.1 | 1999.2 | 1931.6 | 1857.3 | 1791.6 | 1744.0 | 1680.2 | 1639.2 | 1610.6 | 1604.0 | 1643.0 |
| 5° | 2040.2 | 1963.0 | 1819.2 | 1687.8 | 1566.8 | 1470.6 | 1381.1 | 1312.5 | 1268.7 | 1242.0 | 1265.8 |
| 7.5° | 2033.5 | 1928.8 | 1712.5 | 1521.1 | 1353.5 | 1223.9 | 1115.3 | 1049.6 | 998.2 | 982.0 | 973.4 |
| 10° | 2043.1 | 1895.4 | 1615.4 | 1364.9 | 1173.4 | 1011.5 | 916.3 | 858.2 | 826.7 | 801.0 | 806.7 |
| 12.5° | 2048.8 | 1864.0 | 1522.1 | 1236.3 | 1010.6 | 865.8 | 782.0 | 740.1 | 717.2 | 705.8 | 699.1 |
| 15° | 2055.4 | 1840.2 | 1430.6 | 1100.1 | 874.4 | 758.2 | 691.5 | 659.1 | 638.2 | 634.3 | 627.7 |
| 17.5° | 2086.9 | 1825.9 | 1351.6 | 987.7 | 769.6 | 669.6 | 622.0 | 597.2 | 582.9 | 580.1 | 577.2 |
| 20° | 2139.3 | 1836.4 | 1286.8 | 893.4 | 690.5 | 607.7 | 566.7 | 548.6 | 541.0 | 538.1 | 536.2 |
| 22.5° | 2268.8 | 1890.7 | 1243.9 | 818.2 | 627.7 | 554.3 | 522.9 | 511.5 | 506.7 | 504.8 | 502.9 |
| 25° | 2513.6 | 2067.8 | 1267.7 | 769.6 | 582.9 | 506.7 | 484.8 | 479.1 | 474.3 | 473.4 | 473.4 |
| 27.5° | 2779.3 | 2255.5 | 1342.0 | 765.8 | 552.4 | 472.4 | 452.4 | 448.6 | 446.7 | 446.7 | 446.7 |
| 30° | 3267.9 | 2608.8 | 1504.9 | 844.8 | 558.1 | 444.8 | 422.9 | 421.0 | 422.9 | 425.8 | 425.8 |
| 32.5° | 3755.6 | 3038.4 | 1727.8 | 919.1 | 570.5 | 421.9 | 397.2 | 397.2 | 401.9 | 407.7 | 407.7 |
| 35° | 3726.1 | 3005.1 | 1578.2 | 798.2 | 503.9 | 394.3 | 373.4 | 374.3 | 384.8 | 390.5 | 390.5 |
| 37.5° | 3420.3 | 2697.4 | 1400.1 | 701.0 | 462.9 | 373.4 | 351.5 | 353.4 | 364.8 | 371.5 | 372.4 |
| 40° | 3679.4 | 2882.2 | 1464.0 | 715.3 | 448.6 | 358.1 | 332.4 | 335.3 | 344.8 | 350.5 | 349.6 |
| 42.5° | 4157.5 | 3219.4 | 1602.1 | 742.0 | 437.2 | 345.7 | 317.2 | 317.2 | 322.9 | 326.7 | 325.7 |
| 45° | 4669.0 | 3602.3 | 1769.7 | 764.8 | 424.8 | 335.3 | 304.8 | 300.0 | 301.9 | 302.9 | 301.0 |
| 47.5° | 5235.7 | 4044.2 | 1941.1 | 793.4 | 413.4 | 325.7 | 288.6 | 282.9 | 281.0 | 278.1 | 280.0 |
| 50° | 5814.8 | 4446.1 | 2108.8 | 812.5 | 402.9 | 313.4 | 274.3 | 263.8 | 259.1 | 255.3 | 254.3 |
| 52.5° | 6390.1 | 4907.1 | 2242.1 | 823.9 | 391.5 | 299.1 | 258.1 | 243.8 | 237.2 | 231.5 | 229.5 |
| 55° | 6890.2 | 5261.5 | 2371.7 | 829.6 | 379.1 | 283.8 | 240.0 | 222.9 | 211.4 | 204.8 | 203.8 |
| 57.5° | 7156.9 | 5377.7 | 2427.9 | 829.6 | 364.8 | 266.7 | 221.9 | 201.9 | 194.3 | 188.6 | 187.6 |
| 60° | 7053.1 | 5089.1 | 2345.0 | 818.2 | 344.8 | 246.7 | 201.9 | 186.7 | 181.9 | 184.8 | 184.8 |
| 62° | *6680.6* | *4546.2* | *2169.7* | *783.9* | *324.8* | *225.7* | *188.6* | *176.2* | *173.4* | *177.2* | *179.1* |
| 62.5° | 6558.7 | 4394.7 | 2083.1 | 772.5 | 318.1 | 221.9 | 185.7 | 172.4 | 171.4 | 175.3 | 174.3 |
| 65° | 5733.9 | 3437.5 | 1638.3 | 686.7 | 286.7 | 201.0 | 170.5 | 161.9 | 166.7 | 166.7 | 165.7 |
| 67.5° | 4849.0 | 2635.5 | 1189.6 | 573.4 | 255.3 | 182.9 | 155.3 | 155.3 | 154.3 | 151.4 | 150.5 |
| 70° | 3811.8 | 1940.2 | 826.7 | 438.1 | 219.1 | 163.8 | 141.0 | 137.2 | 133.3 | 131.4 | 132.4 |
| 72.5° | 2620.3 | 1366.8 | 546.7 | 326.7 | 177.2 | 137.2 | 121.9 | 116.2 | 111.4 | 108.6 | 107.6 |
| 75° | 1560.2 | 835.3 | 363.8 | 219.1 | 135.3 | 115.2 | 100.0 | 93.3 | 90.5 | 85.7 | 85.7 |
| 77.5° | 855.3 | 503.9 | 212.4 | 150.5 | 106.7 | 95.2 | 81.9 | 72.4 | 73.3 | 69.5 | 69.5 |
| 80° | 455.3 | 263.8 | 131.4 | 101.9 | 81.0 | 78.1 | 67.6 | 60.0 | 58.1 | 49.5 | 47.6 |
| 82.5° | 270.5 | 148.6 | 82.9 | 69.5 | 59.1 | 60.0 | 53.3 | 46.7 | 41.0 | 17.1 | 13.3 |
| 85° | 154.3 | 73.3 | 39.1 | 34.3 | 29.5 | 35.2 | 31.4 | 23.8 | 15.2 | 2.9 | 3.8 |
| 87.5° | 46.7 | 15.2 | 10.5 | 10.5 | 9.5 | 8.6 | 6.7 | 4.8 | 3.8 | 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 |

Cooper Lighting Solutions Photometric Lab
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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

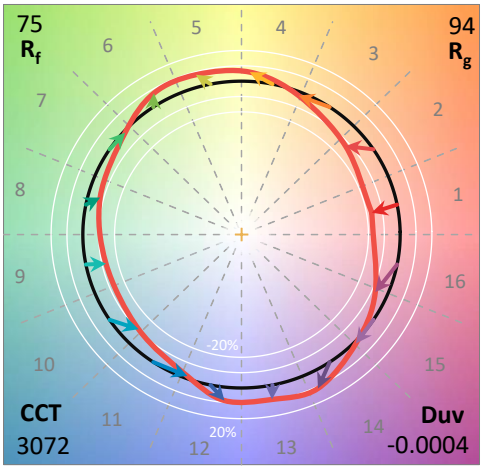
## Test Information

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



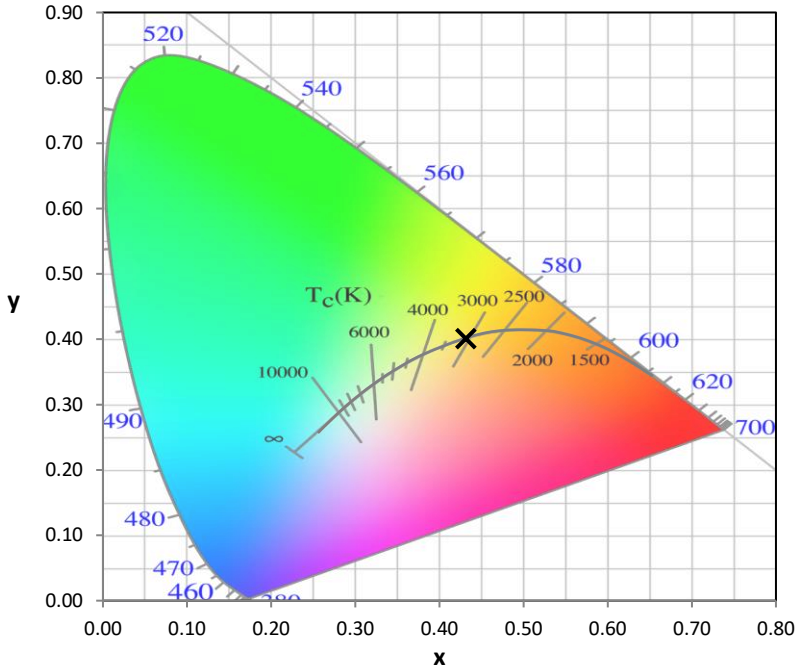

## Test Conditions

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

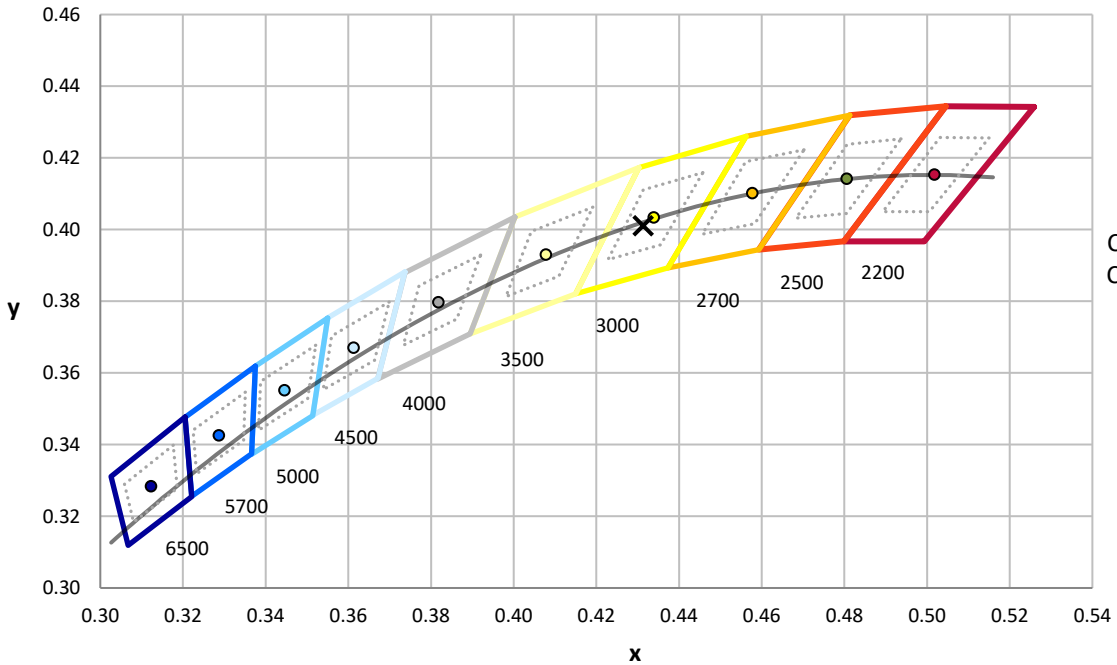
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN2187 | 1/6/2025 | 7/6/2025 |
| Power Meter | INXT2011002 | 1/21/2025 | 1/21/2026 |
| AC Power Source | IN0458 | 10/22/2024 | 10/22/2025 |
| DC Power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

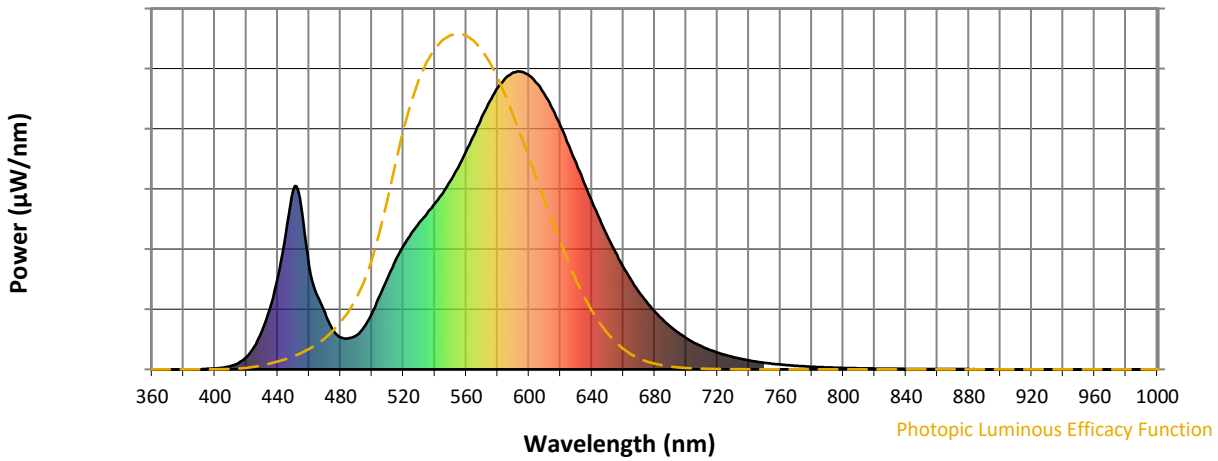



CCT = 3072K
CIE x = 0.4313
CIE y = 0.4010
Duv = -0.0004

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP2-2501-321-4

## Photopic Flux vs. Wavelength

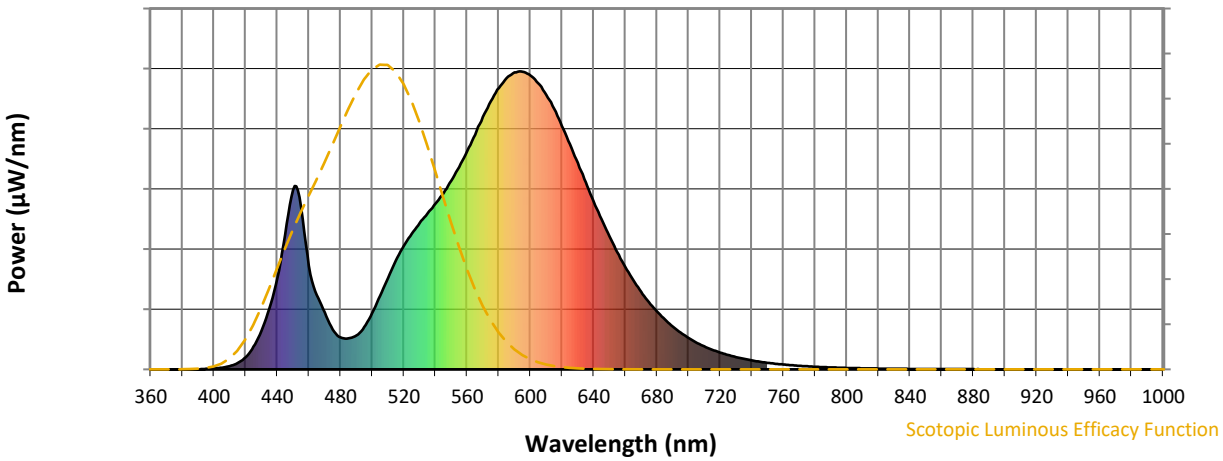



**Photopic Lumens: NR**

| 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

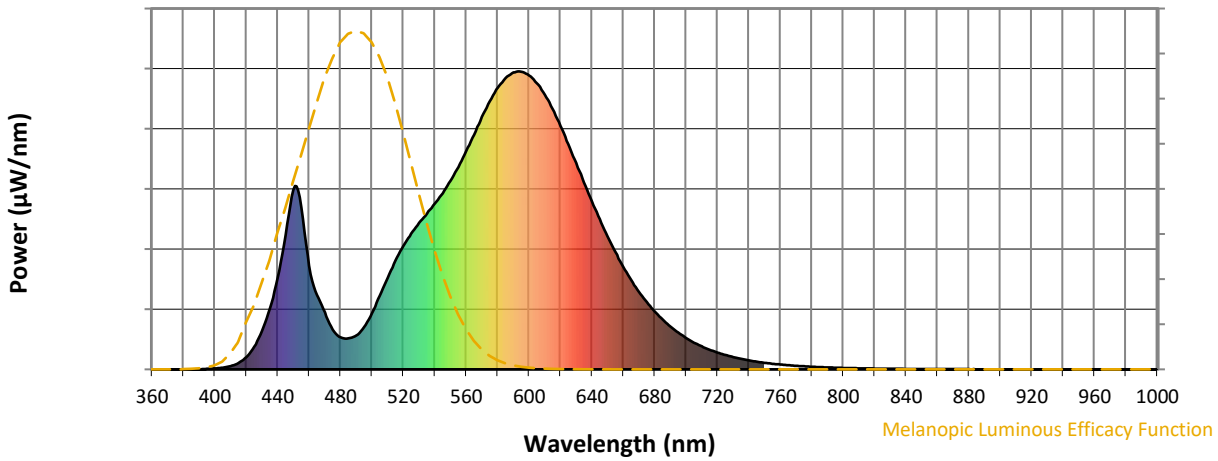



**Scotopic Lumens: NR** **S/P: 1.24**

| 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 | | | |

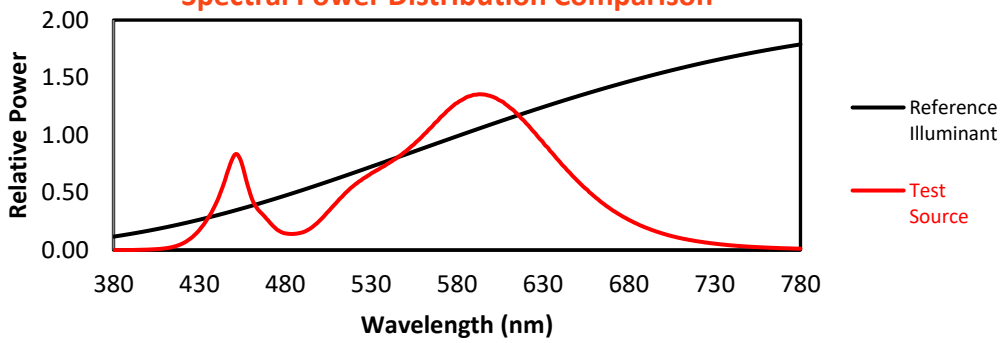
REPORT NUMBER: SP2-2501-321-4

# TM-30-18

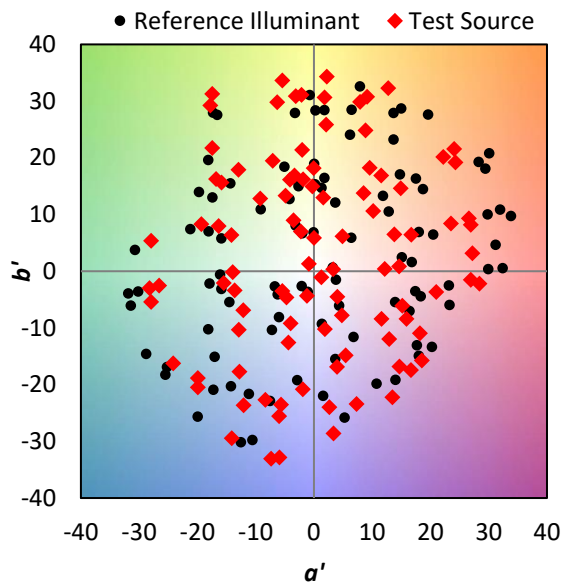
## Summary

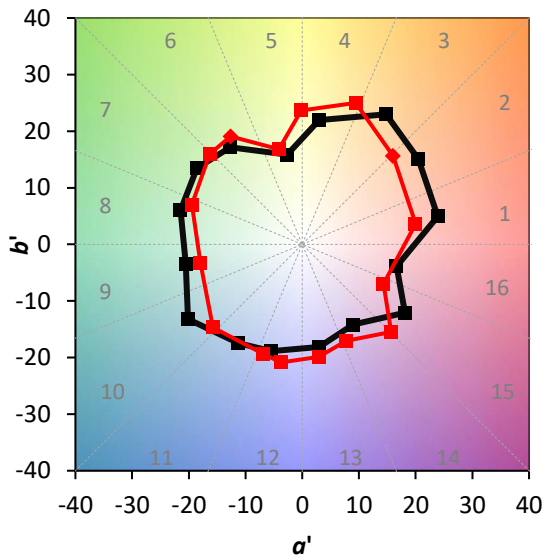
$R_f$ = 74.7
$R_g$ = 94.2
CIE $R_a$ = 71.7
$R_9$ = -33.9

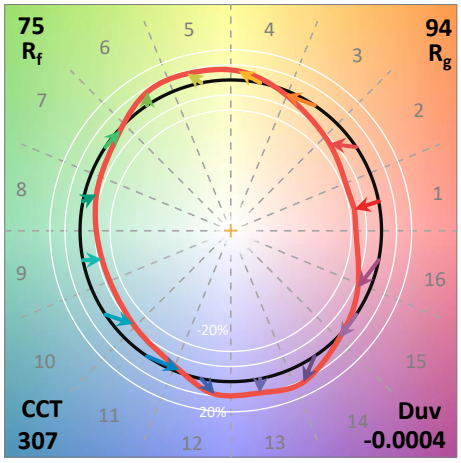
## Spectral Power Distribution Comparison

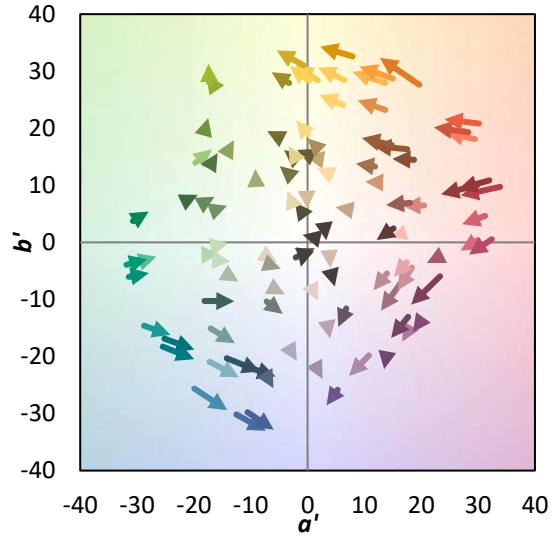



## Color Vector Graphics



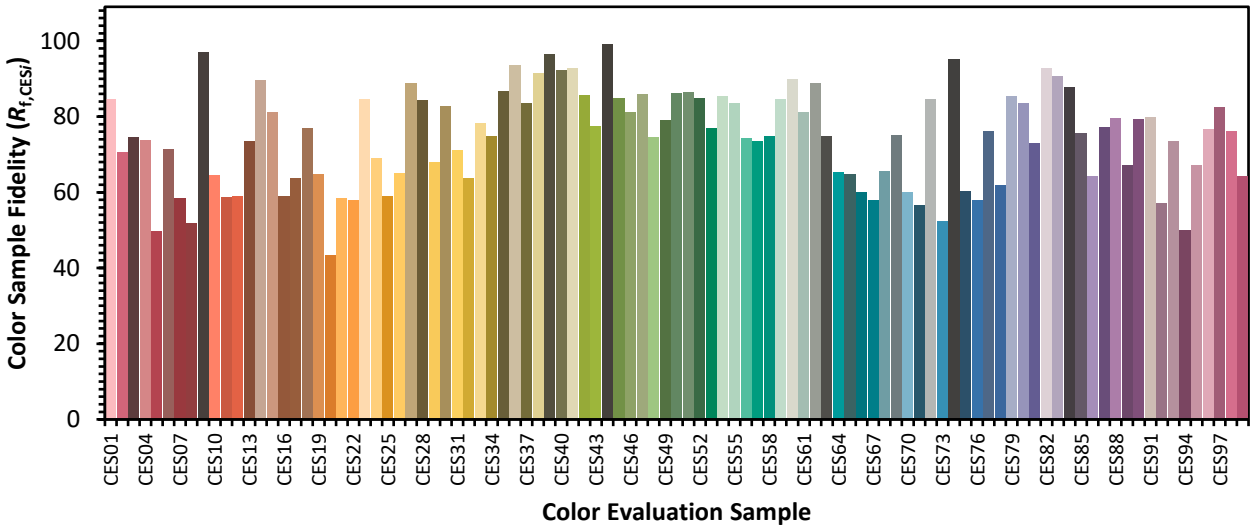



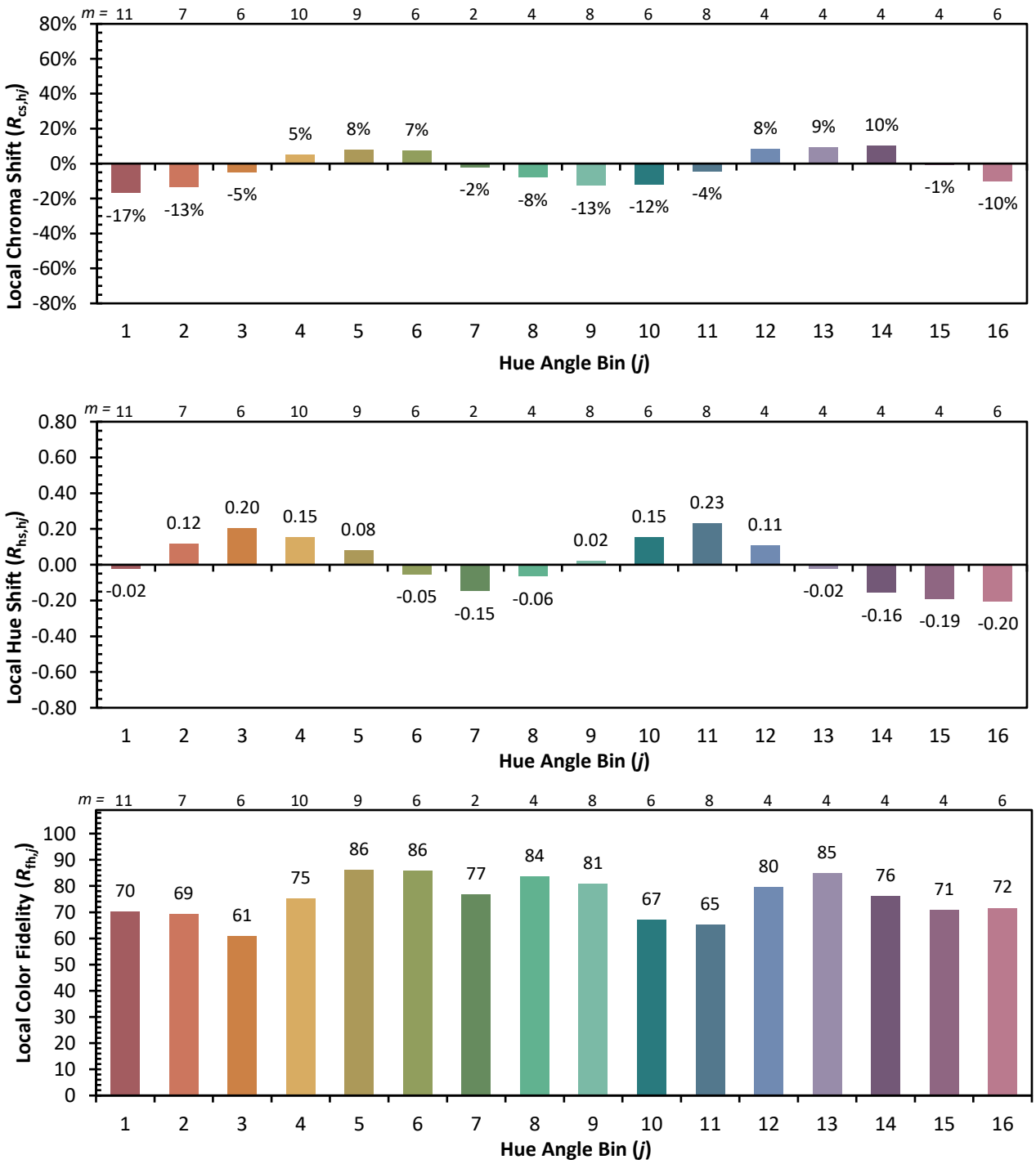



**Individual Sample Fidelity Index ($R_{f,i}$)**

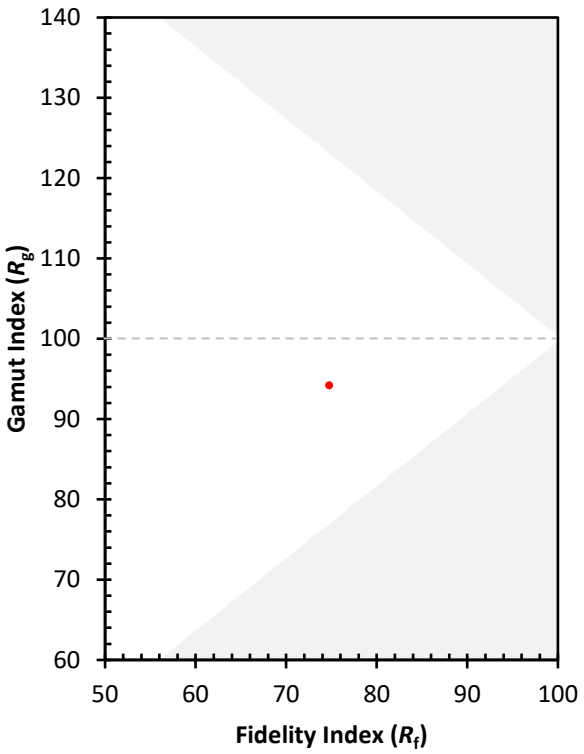
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 65 | CES51 = 86 | CES76 = 58 |
| CES02 = 62 | CES27 = 89 | CES52 = 85 | CES77 = 76 |
| CES03 = 31 | CES28 = 84 | CES53 = 77 | CES78 = 62 |
| CES04 = 71 | CES29 = 68 | CES54 = 85 | CES79 = 85 |
| CES05 = 49 | CES30 = 83 | CES55 = 84 | CES80 = 84 |
| CES06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

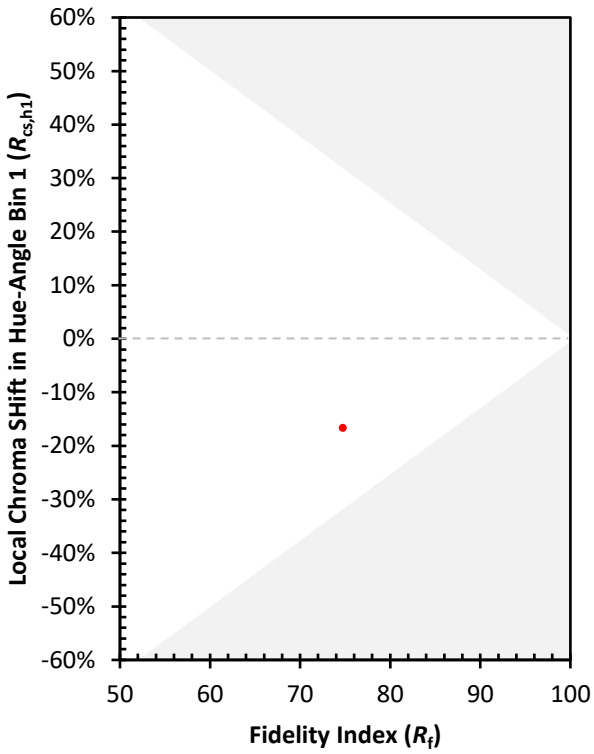


## Color Rendition by Hue-Angle Bin



## Measure Comparisons




(END OF REPORT)