

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: P1462315

Luminaire Tested: PRV-P-70-740-U-T2R-HSS

Issue Date: 06/10/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1462315  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 6/11/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: STREETWORKS  
Catalog Number: PRV-P-70-740-U-T2R-HSS  
Description: PREVAIL PETITE DISCRETE LED 2 SQUARES 70W 70CRI 4000K FIXTURE w/ TYPE II  
ROADWAY DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD  
Light Source: (20) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7275.8 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.33' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

Input Watts (W): 74  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): 8.0%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

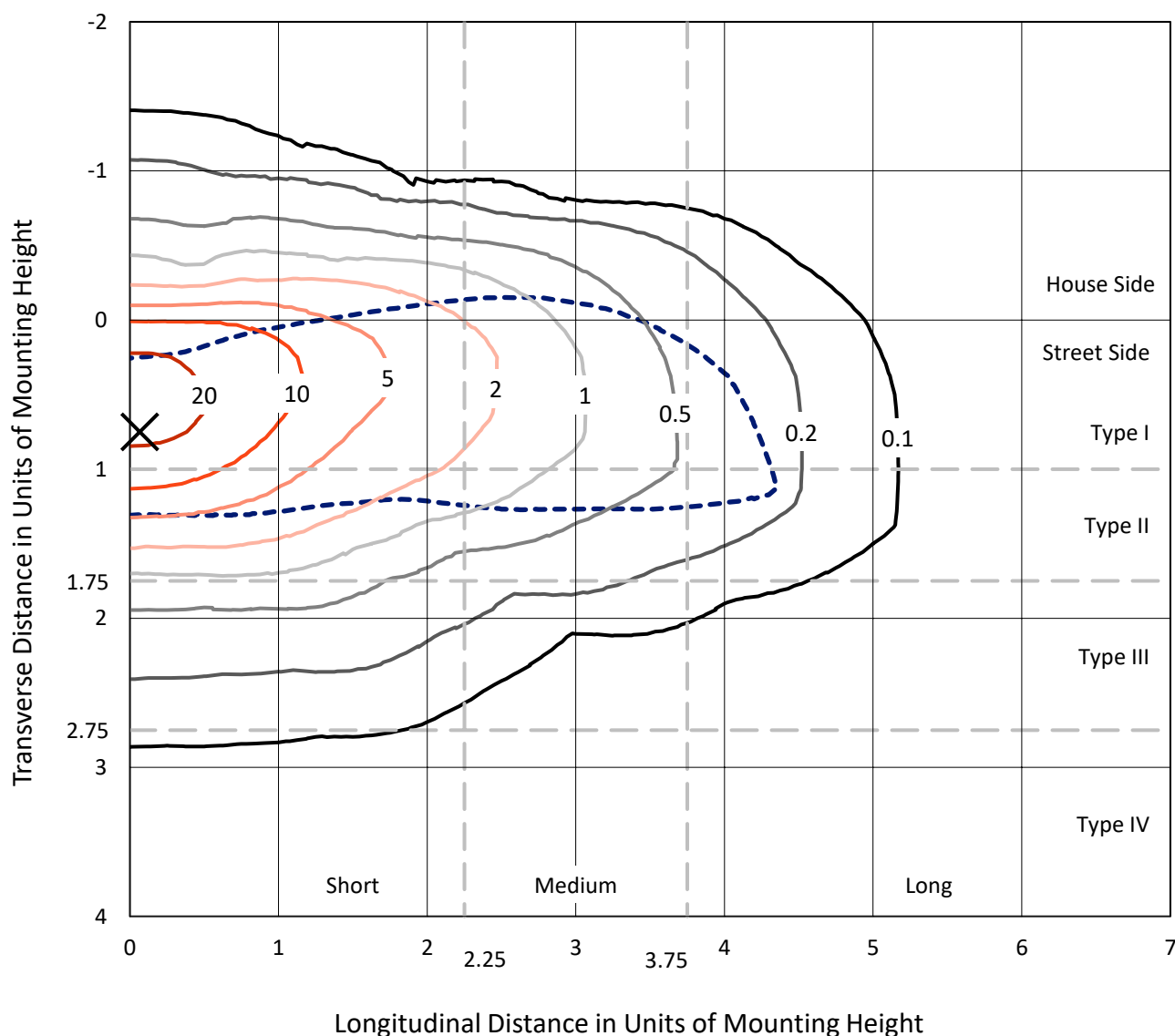
REPORT NUMBER: P1462315

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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd



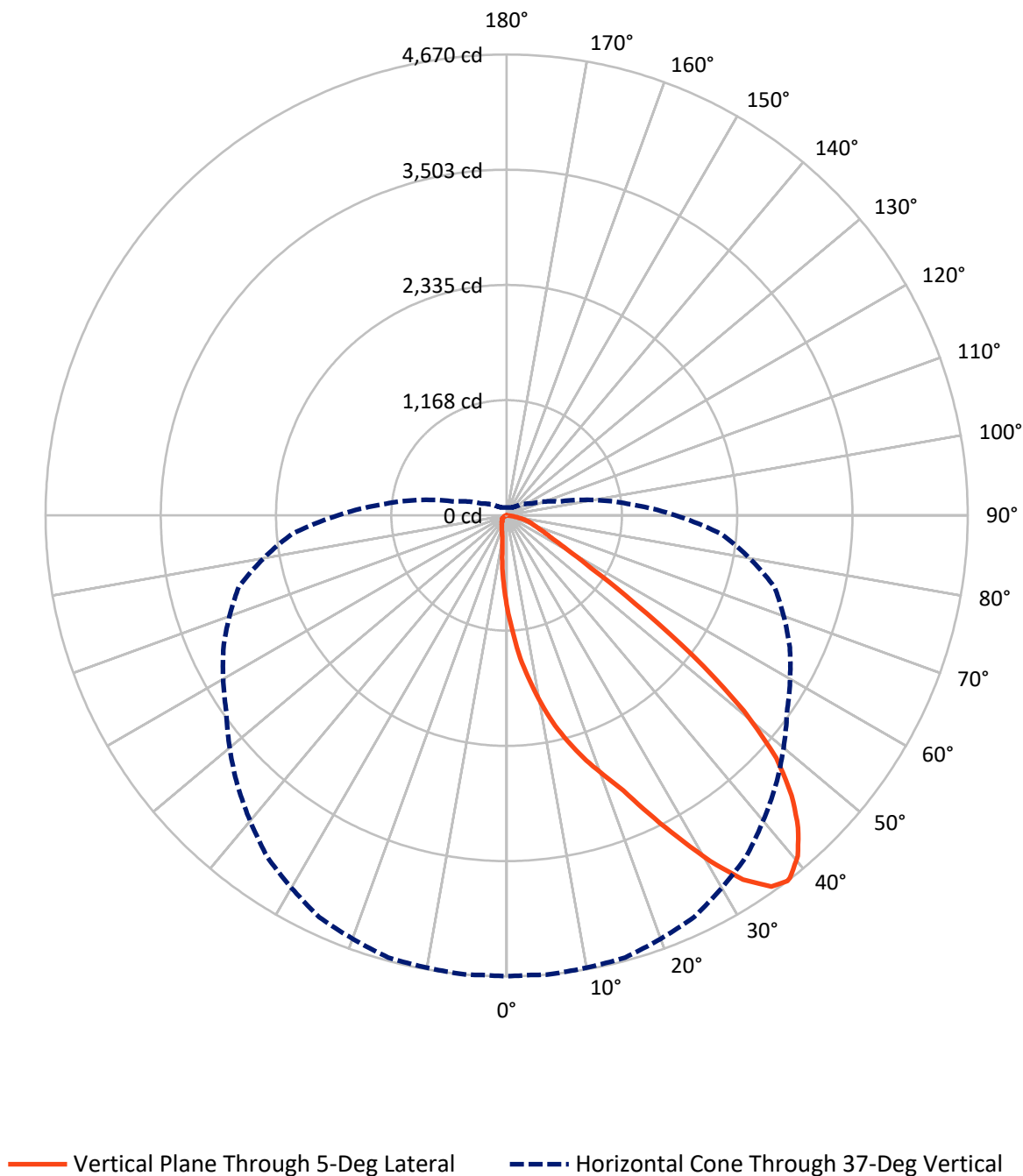
Based on 10 foot mounting height. Maximum calculated value = 26.5 fc

Type II - Short - N/A

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## Luminous Intensity Polar Plot



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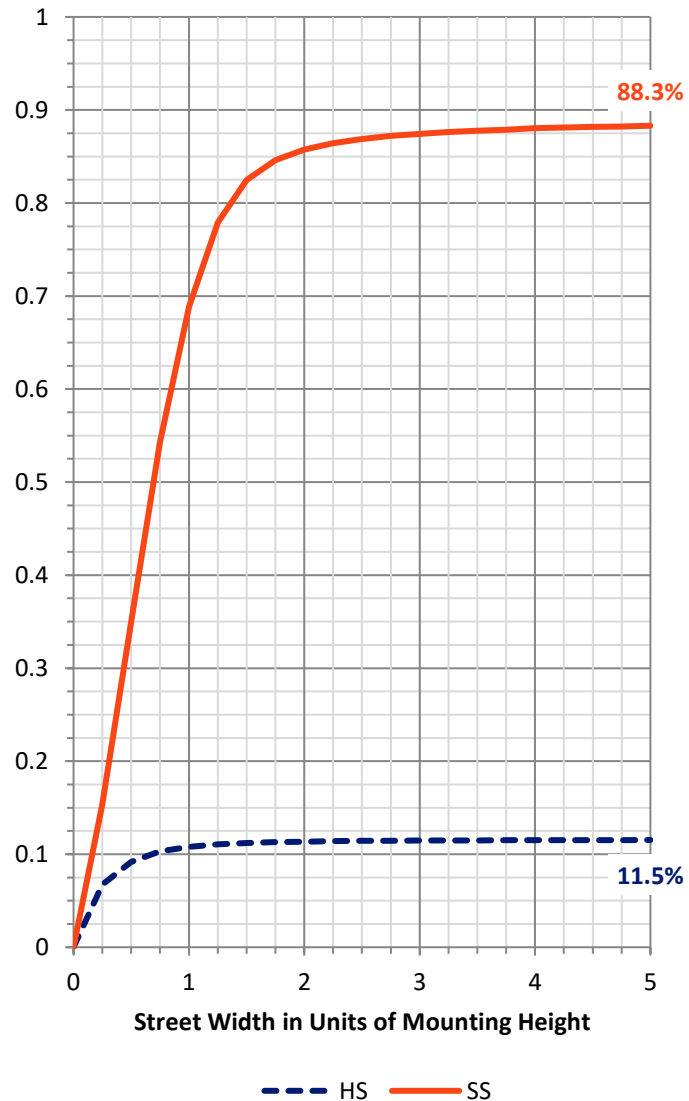
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 845.0    | 0.0    | 845.0  |
|                    | % Fixture | 11.6     | 0.0    | 11.6   |
| <b>Street Side</b> | Lumens    | 6430.7   | 0.0    | 6430.7 |
|                    | % Fixture | 88.4     | 0.0    | 88.4   |
| <b>Total</b>       | Lumens    | 7275.8   | 0.0    | 7275.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 95.5   | 1.3       |
| 10°-20°   | 336.9  | 4.6       |
| 20°-30°   | 697.8  | 9.6       |
| 30°-40°   | 1213.2 | 16.7      |
| 40°-50°   | 1584.1 | 21.8      |
| 50°-60°   | 1496.0 | 20.6      |
| 60°-70°   | 1137.8 | 15.6      |
| 70°-80°   | 634.9  | 8.7       |
| 80°-90°   | 79.5   | 1.1       |
| 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°    | 7275.8 | 100.0     |
| 0°-180°   | 7275.8 | 100.0     |

**Coefficient of Utilization**



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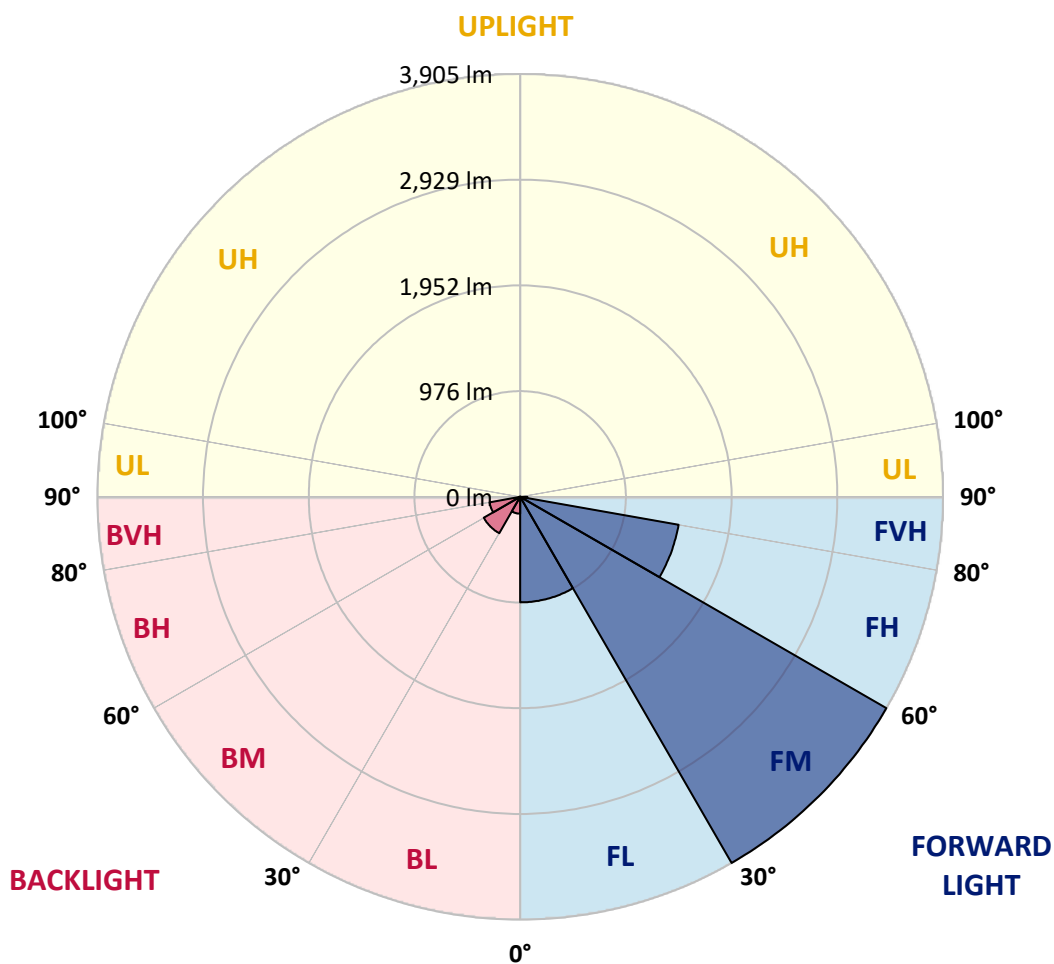
CATALOG NUMBER: PRV-P-70-740-U-T2R-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 974.7  | 13.4      |                         |      |         |
| FM   | (30°-60°)   | 3904.8 | 53.7      |                         |      |         |
| FH   | (60°-80°)   | 1485.3 | 20.4      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 66.0   | 0.9       |                         |      | G1/100  |
| BL   | (0°-30°)    | 155.6  | 2.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 388.5  | 5.3       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 287.4  | 4.0       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 13.5   | 0.2       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 3°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 946.2  | 946.2  | 946.2  | 946.2  | 946.2  | 946.2  | 946.2  | 946.2  | 946.2  | 946.2  | 946.2  |
| 2.5°  | 1197.4 | 1176.7 | 1179.9 | 1189.4 | 1178.3 | 1152.9 | 1117.9 | 1090.9 | 1052.7 | 1012.9 | 971.6  |
| 5°    | 1440.7 | 1447.1 | 1455.0 | 1448.6 | 1415.3 | 1383.5 | 1313.5 | 1253.1 | 1167.2 | 1081.3 | 1000.2 |
| 7.5°  | 1688.8 | 1684.0 | 1693.5 | 1687.2 | 1645.8 | 1588.6 | 1499.5 | 1402.5 | 1286.4 | 1159.2 | 1033.6 |
| 10°   | 1944.8 | 1935.2 | 1944.8 | 1922.5 | 1882.8 | 1803.3 | 1695.1 | 1577.5 | 1428.0 | 1245.1 | 1081.3 |
| 12.5° | 2176.9 | 2180.1 | 2186.5 | 2167.4 | 2102.2 | 2014.7 | 1885.9 | 1741.2 | 1560.0 | 1354.8 | 1125.8 |
| 15°   | 2394.8 | 2401.2 | 2399.6 | 2386.8 | 2326.4 | 2226.2 | 2083.1 | 1911.4 | 1704.7 | 1464.5 | 1187.9 |
| 17.5° | 2604.7 | 2607.9 | 2609.5 | 2590.4 | 2534.7 | 2421.8 | 2272.4 | 2075.2 | 1851.0 | 1585.4 | 1261.0 |
| 20°   | 2814.6 | 2801.9 | 2806.7 | 2784.4 | 2714.4 | 2609.5 | 2453.6 | 2261.2 | 2005.2 | 1717.4 | 1342.1 |
| 22.5° | 3015.0 | 3018.1 | 3026.1 | 2991.1 | 2913.2 | 2790.8 | 2623.8 | 2423.4 | 2167.4 | 1862.1 | 1437.5 |
| 25°   | 3329.8 | 3325.1 | 3345.7 | 3285.3 | 3135.8 | 2975.2 | 2806.7 | 2609.5 | 2340.7 | 2013.2 | 1548.8 |
| 27.5° | 3697.2 | 3692.4 | 3690.8 | 3630.4 | 3441.1 | 3209.0 | 2983.2 | 2765.3 | 2515.7 | 2176.9 | 1666.5 |
| 30°   | 4086.7 | 4083.6 | 4064.5 | 3983.4 | 3751.2 | 3468.2 | 3181.9 | 2930.7 | 2684.2 | 2326.4 | 1788.9 |
| 32.5° | 4404.8 | 4393.6 | 4398.4 | 4318.9 | 4075.6 | 3744.9 | 3410.9 | 3108.8 | 2844.8 | 2498.2 | 1920.9 |
| 35°   | 4624.2 | 4613.1 | 4619.5 | 4552.7 | 4345.9 | 4043.8 | 3651.0 | 3286.9 | 3013.4 | 2677.9 | 2060.9 |
| 37°   | 4668.7 | 4662.4 | 4670.3 | 4636.9 | 4490.6 | 4225.1 | 3857.8 | 3466.6 | 3164.4 | 2809.8 | 2184.9 |
| 37.5° | 4660.8 | 4654.4 | 4662.4 | 4638.5 | 4506.6 | 4239.4 | 3881.6 | 3500.0 | 3201.0 | 2852.8 | 2211.9 |
| 40°   | 4530.4 | 4525.6 | 4539.9 | 4555.8 | 4500.2 | 4361.8 | 4072.4 | 3698.7 | 3396.6 | 3046.8 | 2369.4 |
| 42.5° | 4314.1 | 4322.1 | 4330.0 | 4366.6 | 4355.5 | 4315.7 | 4164.7 | 3870.5 | 3571.5 | 3237.6 | 2506.1 |
| 45°   | 4032.7 | 4027.9 | 4048.6 | 4097.9 | 4117.0 | 4137.6 | 4142.4 | 3983.4 | 3746.4 | 3430.0 | 2644.5 |
| 47.5° | 3679.7 | 3686.0 | 3676.5 | 3757.6 | 3833.9 | 3915.0 | 4004.1 | 4005.6 | 3876.8 | 3641.5 | 2806.7 |
| 50°   | 3115.1 | 3086.5 | 3113.6 | 3283.7 | 3504.7 | 3659.0 | 3779.8 | 3929.3 | 3975.4 | 3857.8 | 2975.2 |
| 52.5° | 2355.0 | 2356.6 | 2361.4 | 2627.0 | 2987.9 | 3344.1 | 3552.4 | 3770.3 | 3997.7 | 4047.0 | 3164.4 |
| 55°   | 1637.9 | 1583.8 | 1577.5 | 1900.3 | 2393.2 | 2921.1 | 3290.1 | 3555.6 | 3934.1 | 4223.5 | 3363.2 |
| 57.5° | 1011.3 | 985.9  | 1009.8 | 1241.9 | 1808.0 | 2364.6 | 2922.7 | 3360.0 | 3814.8 | 4355.5 | 3576.3 |
| 60°   | 685.4  | 691.7  | 704.4  | 839.6  | 1264.2 | 1816.0 | 2445.7 | 3154.9 | 3684.4 | 4439.8 | 3775.1 |
| 62.5° | 523.2  | 524.8  | 527.9  | 594.7  | 879.4  | 1324.6 | 1868.5 | 2773.3 | 3593.8 | 4398.4 | 3889.6 |
| 65°   | 423.0  | 426.2  | 427.8  | 461.2  | 613.8  | 982.7  | 1343.7 | 2223.1 | 3474.5 | 4206.0 | 3921.4 |
| 67.5° | 351.4  | 348.2  | 351.4  | 381.6  | 470.7  | 741.0  | 968.4  | 1612.4 | 3210.6 | 4032.7 | 3857.8 |
| 70°   | 291.0  | 291.0  | 291.0  | 322.8  | 384.8  | 574.1  | 702.9  | 1090.9 | 2720.8 | 3903.9 | 3649.4 |
| 72.5° | 249.7  | 249.7  | 251.2  | 273.5  | 324.4  | 453.2  | 531.1  | 721.9  | 2116.5 | 3660.6 | 3218.5 |
| 75°   | 206.7  | 206.7  | 208.3  | 230.6  | 273.5  | 354.6  | 411.9  | 505.7  | 1475.7 | 3150.1 | 2603.1 |
| 77.5° | 147.9  | 147.9  | 146.3  | 176.5  | 217.9  | 260.8  | 302.1  | 356.2  | 911.2  | 2339.1 | 1954.3 |
| 80°   | 84.3   | 89.0   | 90.6   | 103.4  | 152.7  | 184.5  | 208.3  | 241.7  | 478.6  | 1346.9 | 1129.0 |
| 82.5° | 41.3   | 49.3   | 49.3   | 65.2   | 92.2   | 111.3  | 125.6  | 146.3  | 213.1  | 545.4  | 494.5  |
| 85°   | 15.9   | 17.5   | 20.7   | 23.9   | 33.4   | 44.5   | 52.5   | 54.1   | 66.8   | 136.8  | 133.6  |
| 87.5° | 1.6    | 1.6    | 1.6    | 3.2    | 4.8    | 8.0    | 8.0    | 8.0    | 11.1   | 9.5    | 6.4    |
| 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: P1462315

CATALOG NUMBER: PRV-P-70-740-U-T2R-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 946.2  | 946.2  | 946.2 | 946.2 | 946.2 | 946.2 | 946.2 | 946.2 | 946.2 | 946.2 | 946.2 |
| 2.5°  | 952.5  | 931.8  | 893.7 | 855.5 | 822.1 | 791.9 | 771.2 | 744.2 | 733.1 | 723.5 | 718.8 |
| 5°    | 957.3  | 919.1  | 844.4 | 771.2 | 709.2 | 655.2 | 604.3 | 580.4 | 545.4 | 537.5 | 527.9 |
| 7.5°  | 970.0  | 911.2  | 798.3 | 693.3 | 599.5 | 518.4 | 451.6 | 407.1 | 372.1 | 354.6 | 357.8 |
| 10°   | 992.3  | 912.8  | 755.3 | 612.2 | 494.5 | 396.0 | 321.2 | 284.6 | 262.4 | 252.8 | 254.4 |
| 12.5° | 1014.5 | 912.8  | 718.8 | 543.8 | 399.1 | 297.4 | 249.7 | 227.4 | 217.9 | 211.5 | 209.9 |
| 15°   | 1049.5 | 920.7  | 683.8 | 469.1 | 314.9 | 241.7 | 209.9 | 195.6 | 187.6 | 182.9 | 184.5 |
| 17.5° | 1089.3 | 930.3  | 650.4 | 400.7 | 257.6 | 208.3 | 187.6 | 174.9 | 167.0 | 163.8 | 162.2 |
| 20°   | 1133.8 | 950.9  | 615.4 | 340.3 | 221.0 | 186.1 | 168.6 | 157.4 | 147.9 | 146.3 | 146.3 |
| 22.5° | 1194.2 | 976.4  | 586.8 | 297.4 | 197.2 | 168.6 | 152.7 | 143.1 | 135.2 | 132.0 | 132.0 |
| 25°   | 1267.4 | 1011.3 | 567.7 | 265.6 | 181.3 | 154.2 | 138.3 | 128.8 | 122.4 | 119.3 | 119.3 |
| 27.5° | 1350.1 | 1057.5 | 553.4 | 251.2 | 171.7 | 143.1 | 128.8 | 119.3 | 112.9 | 109.7 | 109.7 |
| 30°   | 1435.9 | 1109.9 | 543.8 | 249.7 | 168.6 | 133.6 | 119.3 | 109.7 | 103.4 | 100.2 | 100.2 |
| 32.5° | 1529.7 | 1162.4 | 542.2 | 257.6 | 173.3 | 127.2 | 111.3 | 101.8 | 95.4  | 90.6  | 92.2  |
| 35°   | 1622.0 | 1219.7 | 542.2 | 270.3 | 182.9 | 125.6 | 103.4 | 93.8  | 87.5  | 84.3  | 84.3  |
| 37°   | 1709.4 | 1267.4 | 539.1 | 281.5 | 192.4 | 125.6 | 98.6  | 89.0  | 82.7  | 79.5  | 79.5  |
| 37.5° | 1726.9 | 1278.5 | 537.5 | 283.1 | 194.0 | 127.2 | 97.0  | 87.5  | 81.1  | 79.5  | 77.9  |
| 40°   | 1841.4 | 1346.9 | 539.1 | 291.0 | 202.0 | 127.2 | 90.6  | 81.1  | 76.3  | 73.1  | 73.1  |
| 42.5° | 1948.0 | 1408.9 | 543.8 | 295.8 | 205.1 | 125.6 | 84.3  | 76.3  | 71.6  | 68.4  | 68.4  |
| 45°   | 2029.1 | 1445.5 | 540.7 | 295.8 | 203.5 | 120.9 | 79.5  | 71.6  | 68.4  | 65.2  | 65.2  |
| 47.5° | 2127.7 | 1496.4 | 537.5 | 295.8 | 195.6 | 114.5 | 74.7  | 68.4  | 65.2  | 62.0  | 62.0  |
| 50°   | 2227.8 | 1556.8 | 545.4 | 294.2 | 181.3 | 105.0 | 70.0  | 65.2  | 62.0  | 60.4  | 58.8  |
| 52.5° | 2345.5 | 1620.4 | 555.0 | 291.0 | 167.0 | 93.8  | 66.8  | 62.0  | 58.8  | 55.7  | 55.7  |
| 55°   | 2477.5 | 1687.2 | 570.9 | 283.1 | 147.9 | 82.7  | 63.6  | 60.4  | 54.1  | 50.9  | 50.9  |
| 57.5° | 2617.4 | 1760.3 | 585.2 | 265.6 | 128.8 | 73.1  | 62.0  | 55.7  | 47.7  | 41.3  | 41.3  |
| 60°   | 2760.5 | 1852.6 | 594.7 | 232.2 | 111.3 | 66.8  | 58.8  | 50.9  | 39.8  | 35.0  | 35.0  |
| 62.5° | 2867.1 | 1949.6 | 596.3 | 171.7 | 92.2  | 62.0  | 55.7  | 44.5  | 35.0  | 31.8  | 30.2  |
| 65°   | 2945.0 | 2032.2 | 574.1 | 117.7 | 74.7  | 57.2  | 52.5  | 39.8  | 30.2  | 25.4  | 25.4  |
| 67.5° | 2951.4 | 2079.9 | 508.9 | 81.1  | 62.0  | 54.1  | 47.7  | 35.0  | 19.1  | 15.9  | 14.3  |
| 70°   | 2856.0 | 2027.5 | 389.6 | 66.8  | 54.1  | 47.7  | 38.2  | 25.4  | 15.9  | 12.7  | 12.7  |
| 72.5° | 2563.4 | 1819.2 | 251.2 | 58.8  | 47.7  | 41.3  | 33.4  | 22.3  | 14.3  | 9.5   | 9.5   |
| 75°   | 2095.8 | 1474.1 | 165.4 | 52.5  | 39.8  | 33.4  | 27.0  | 17.5  | 11.1  | 6.4   | 6.4   |
| 77.5° | 1552.0 | 971.6  | 106.5 | 44.5  | 31.8  | 27.0  | 20.7  | 12.7  | 8.0   | 4.8   | 3.2   |
| 80°   | 912.8  | 537.5  | 68.4  | 35.0  | 25.4  | 20.7  | 14.3  | 8.0   | 4.8   | 1.6   | 1.6   |
| 82.5° | 402.3  | 217.9  | 42.9  | 23.9  | 14.3  | 12.7  | 6.4   | 3.2   | 1.6   | 0.0   | 0.0   |
| 85°   | 98.6   | 49.3   | 15.9  | 6.4   | 4.8   | 3.2   | 1.6   | 1.6   | 0.0   | 0.0   | 0.0   |
| 87.5° | 6.4    | 6.4    | 4.8   | 4.8   | 3.2   | 3.2   | 1.6   | 1.6   | 0.0   | 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

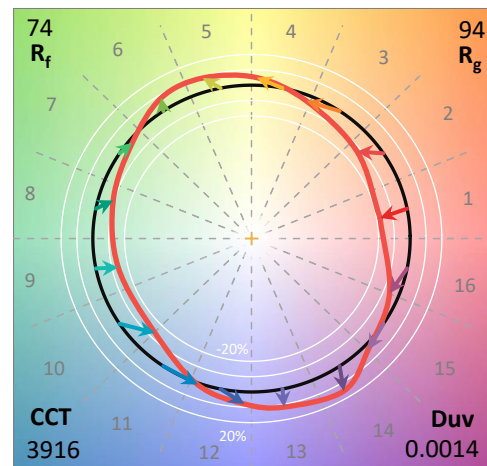
Data in this report applies to families of products including GKO-PB1E-740-U-T4W

### 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

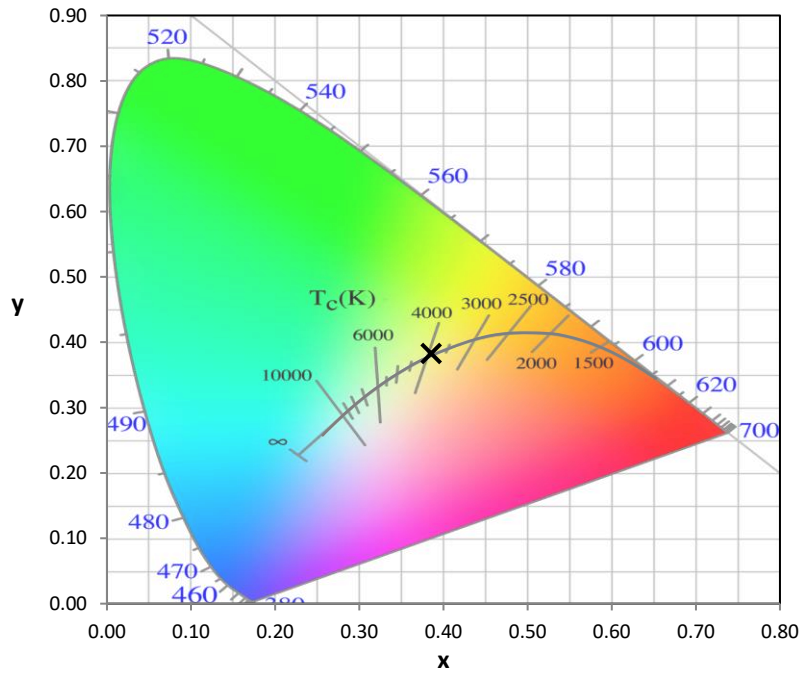
Stabilization Time: 33M  
 Operation Time: 1H 33M  
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP2-2501-321-1

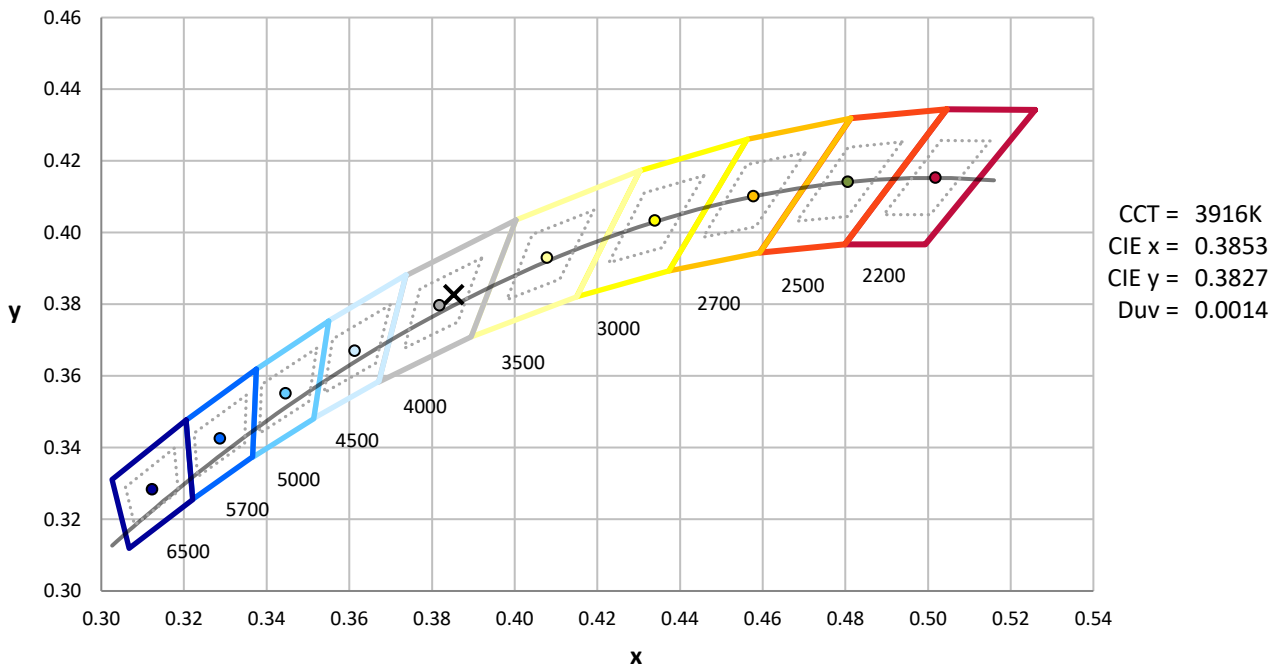
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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**



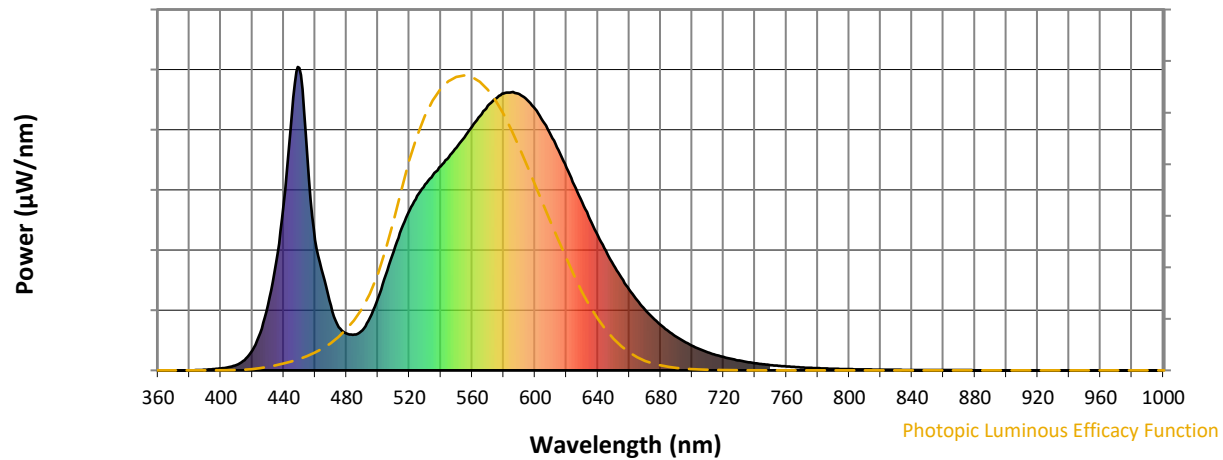
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 4000K 4-step quadrangle

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### Photopic Flux vs. Wavelength

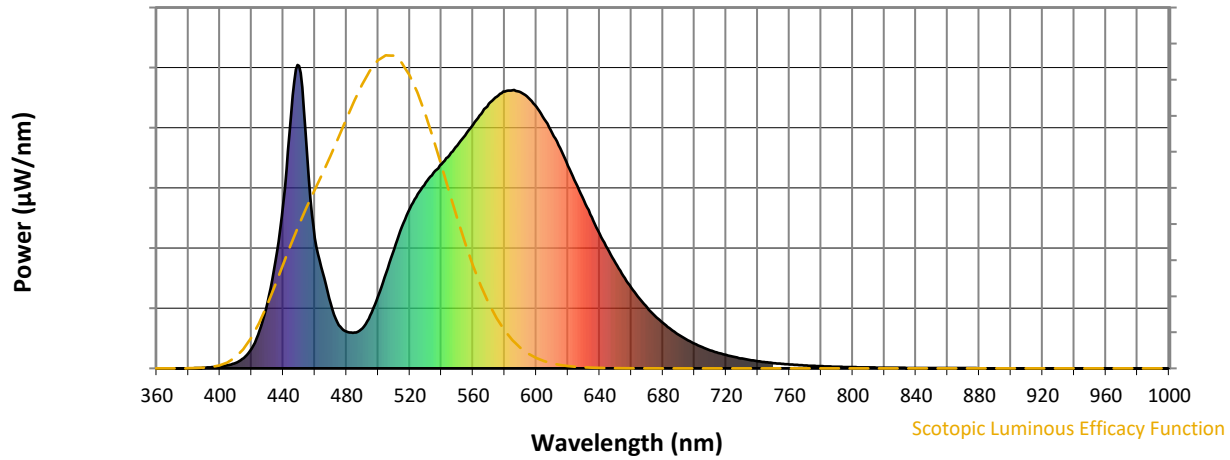


### Photopic Lumens: NR

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</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



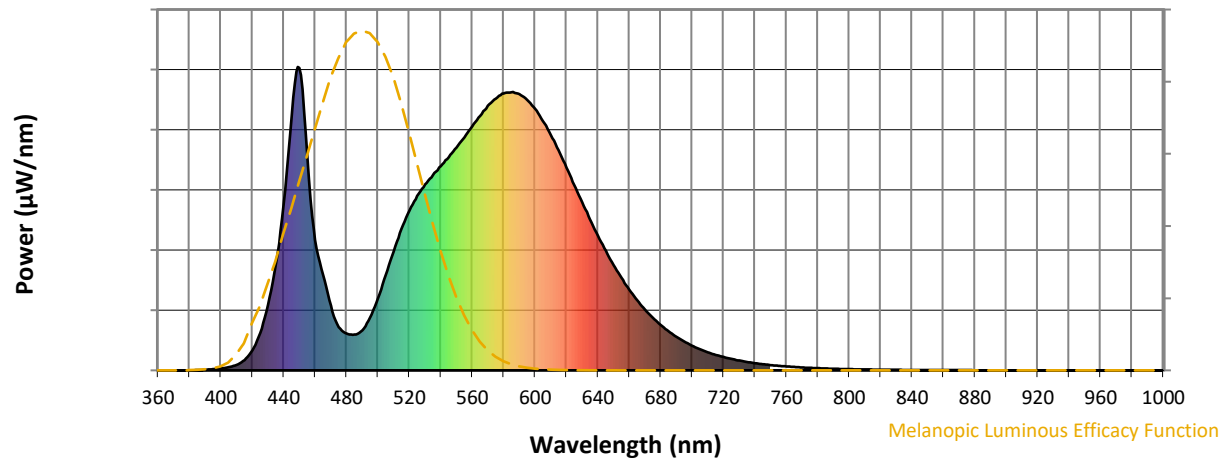
Scotopic Lumens: NR

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

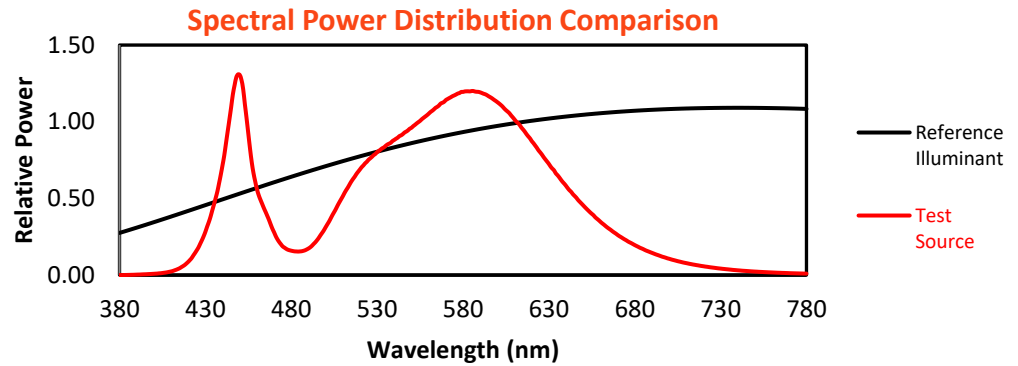
| $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | 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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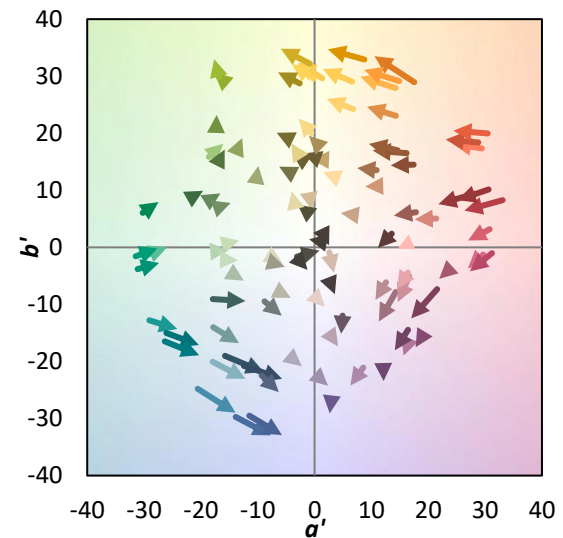
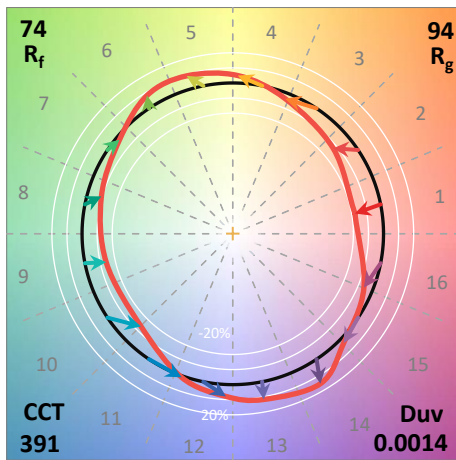
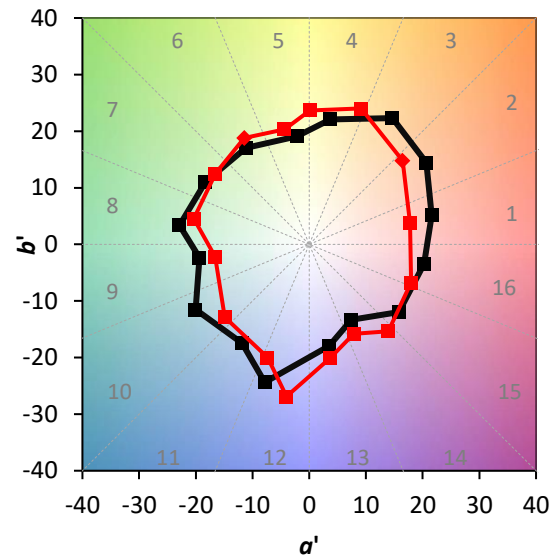
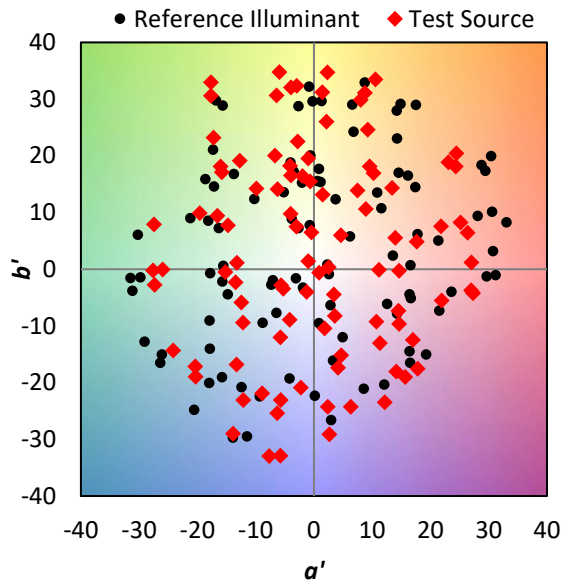
TM-30-18

### Summary

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

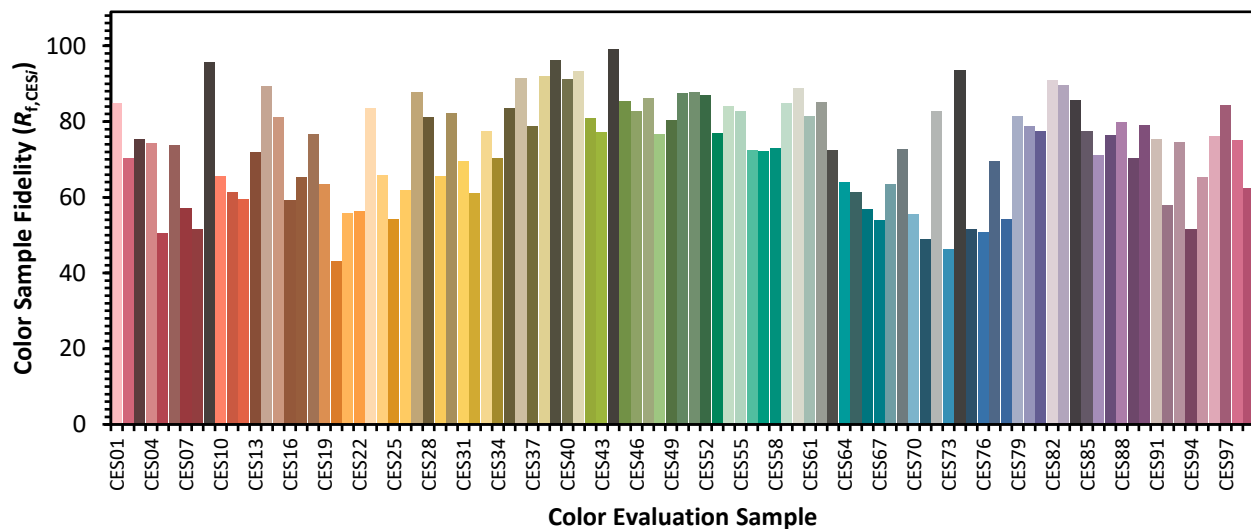


### Color Vector Graphics

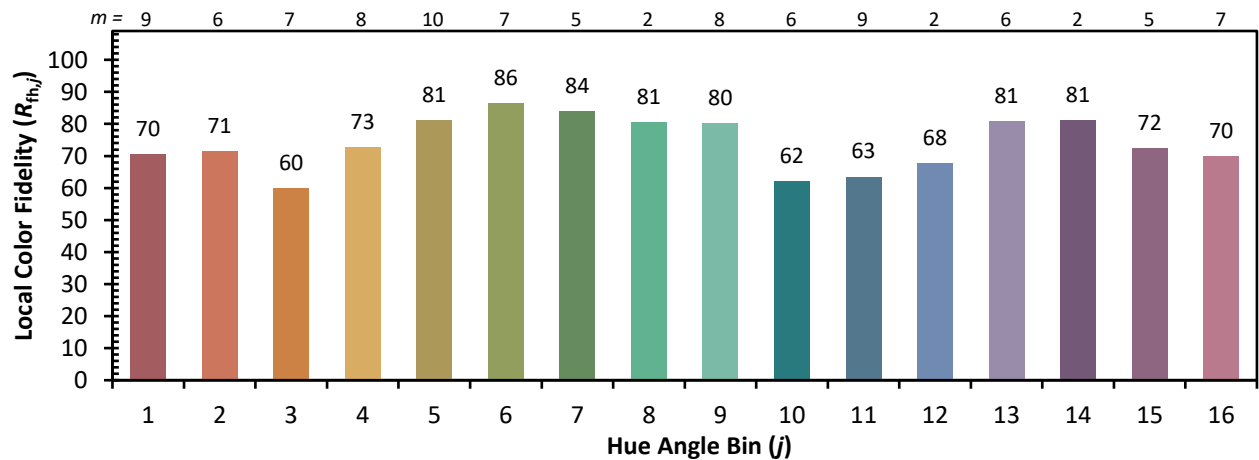
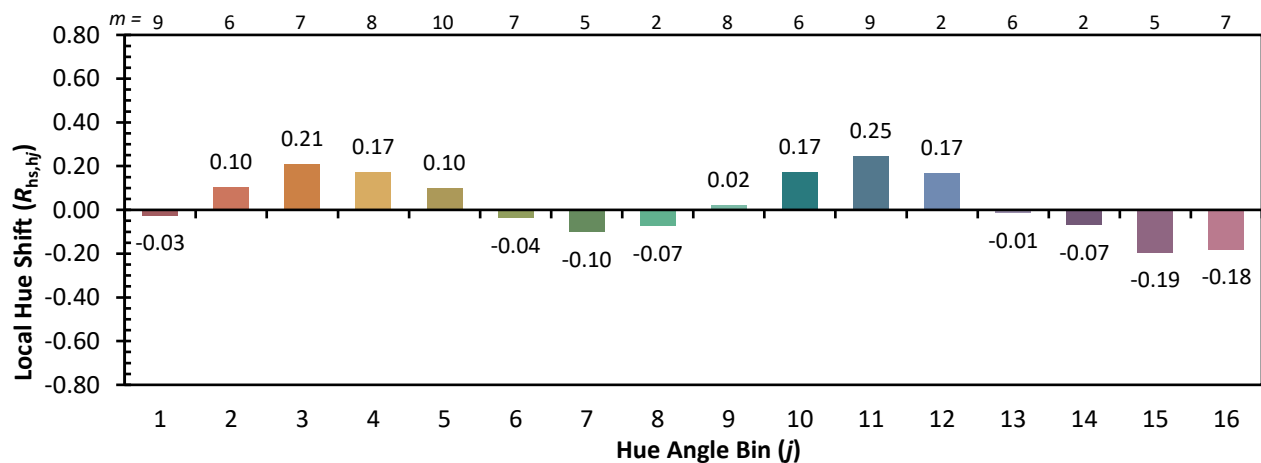
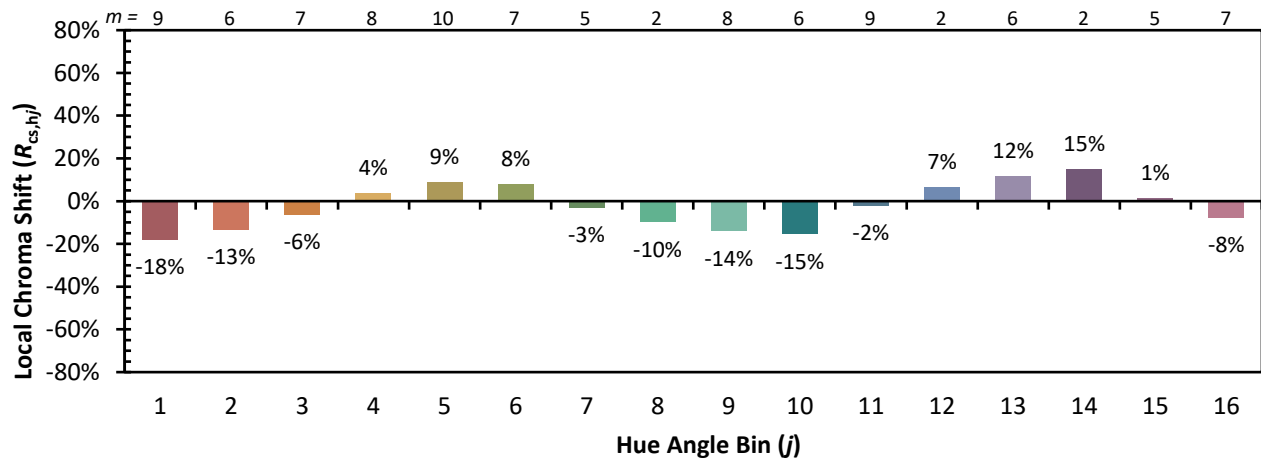


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

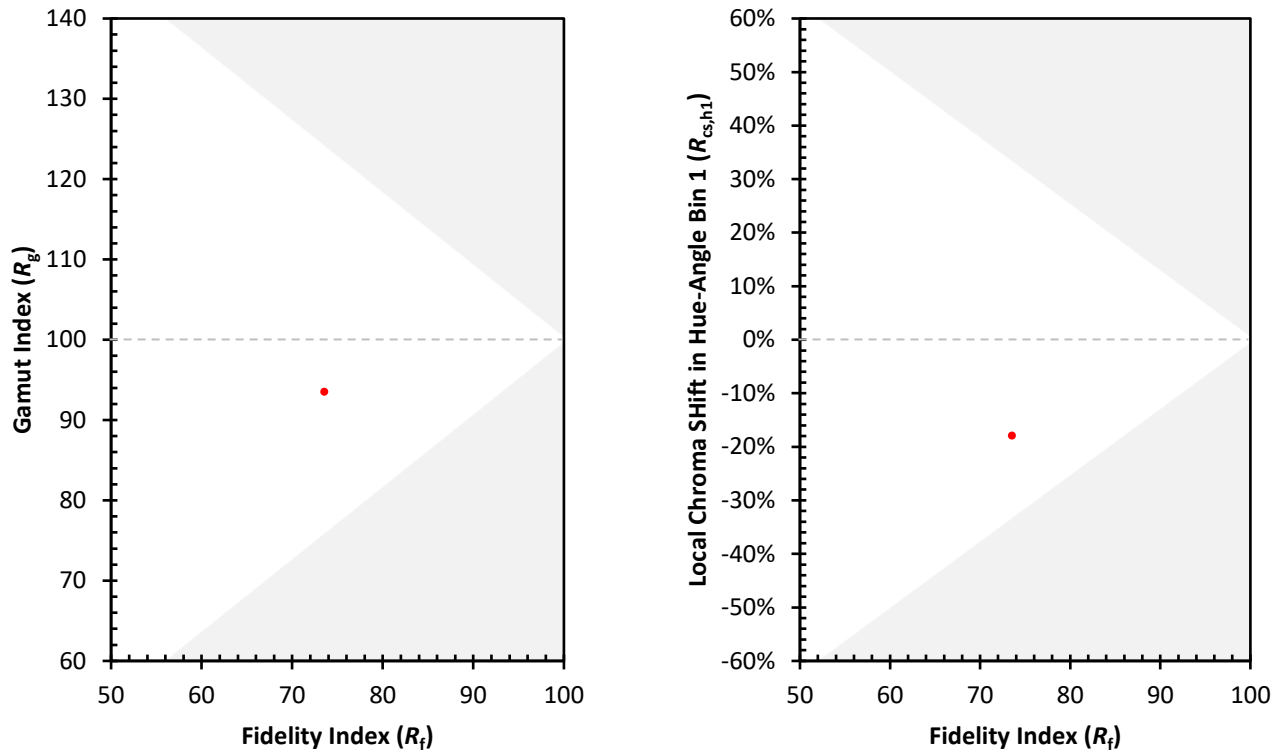
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 62 | CES51 = 88 | CES76 = 51 |
| CES02 = 61 | CES27 = 88 | CES52 = 87 | CES77 = 70 |
| CES03 = 30 | CES28 = 81 | CES53 = 77 | CES78 = 54 |
| CES04 = 70 | CES29 = 66 | CES54 = 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)