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: P1458197

Luminaire Tested: GLAN-SB8C-730-U-T3LG-HSS

Issue Date: 05/20/2026

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1458197 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB8C-730-U-T3LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 615mA 8xLight Square PACKAGE 70CRI 3000K FIXTURE w/ TYPE III LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (208) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 46275.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 115.7 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G5 |

| | |
|---|---|
| Input Watts (W): | 399.8 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.97 |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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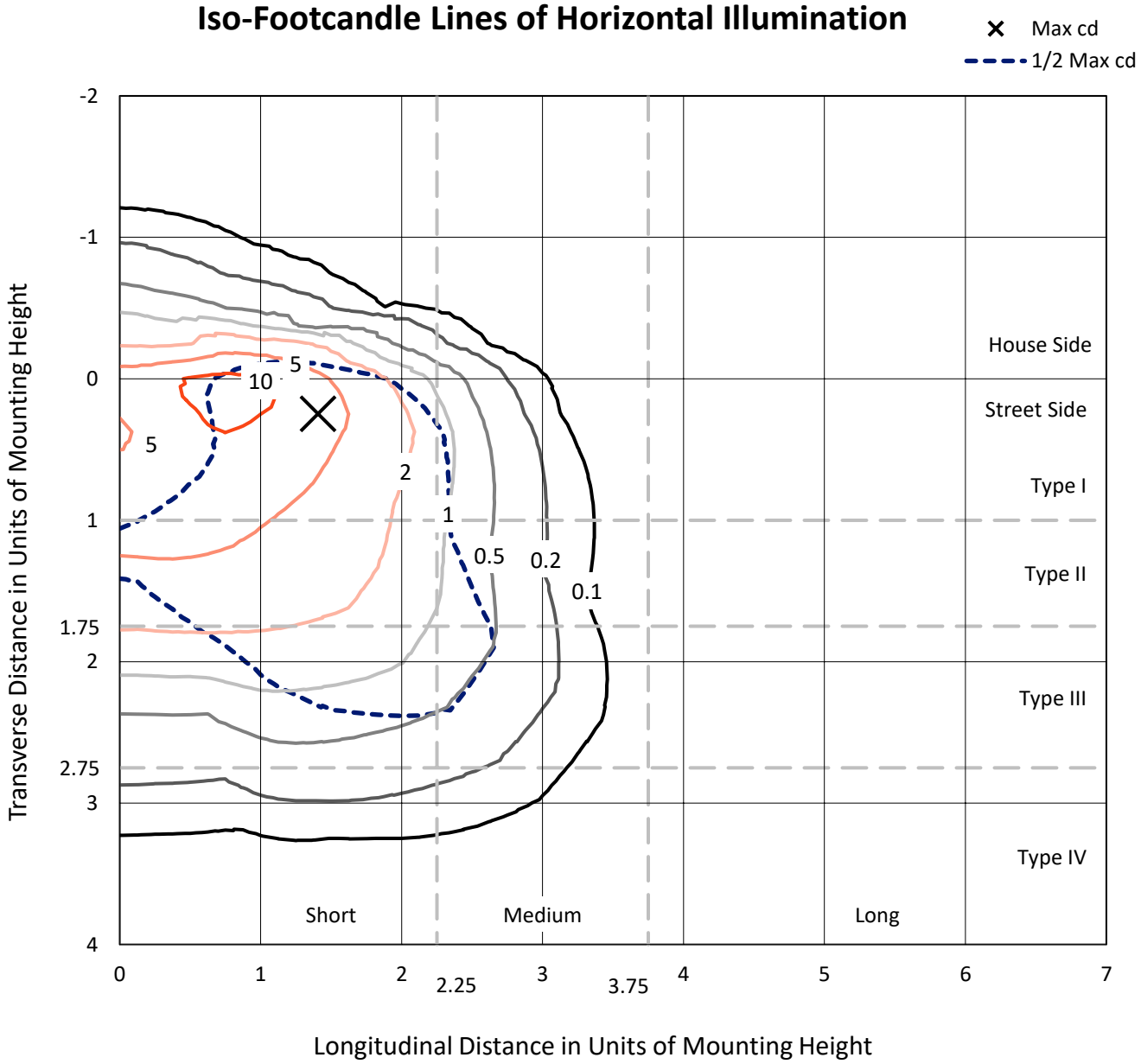
Scaled Data Report

REPORT NUMBER: P1458197
CATALOG NUMBER: GLAN-SB8C-730-U-T3LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 30 foot mounting height. Maximum calculated value = 12.7 fc
Type III - Short - N/A

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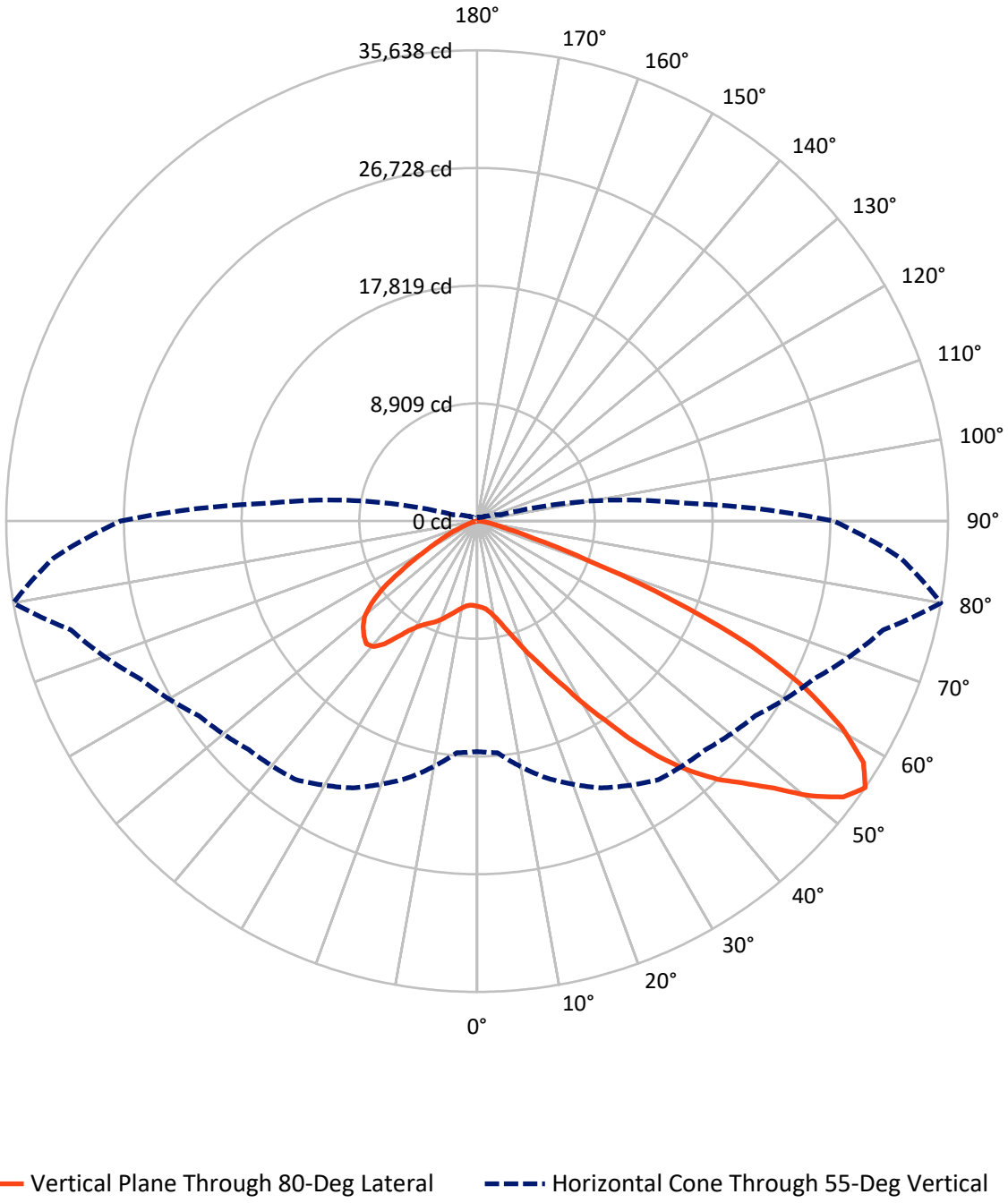
## Luminous Intensity Polar Plot



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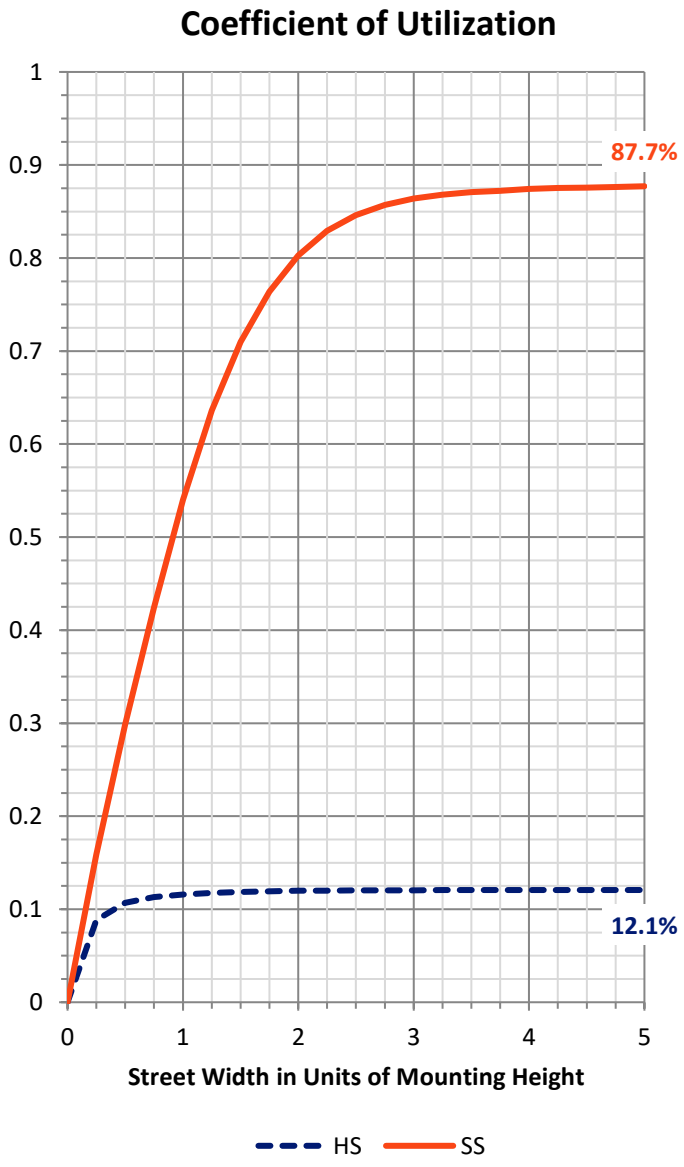
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5625.3 | 0.0 | 5625.3 |
| | % Fixture | 12.2 | 0.0 | 12.2 |
| **Street Side** | Lumens | 40650.1 | 0.0 | 40650.1 |
| | % Fixture | 87.8 | 0.0 | 87.8 |
| **Total** | Lumens | 46275.4 | 0.0 | 46275.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 541.0 | 1.2 |
| 10°-20° | 1426.2 | 3.1 |
| 20°-30° | 2792.0 | 6.0 |
| 30°-40° | 5680.2 | 12.3 |
| 40°-50° | 9575.9 | 20.7 |
| 50°-60° | 12235.1 | 26.4 |
| 60°-70° | 10445.9 | 22.6 |
| 70°-80° | 3338.1 | 7.2 |
| 80°-90° | 241.0 | 0.5 |
| 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° | 46275.4 | 100.0 |
| 0°-180° | 46275.4 | 100.0 |



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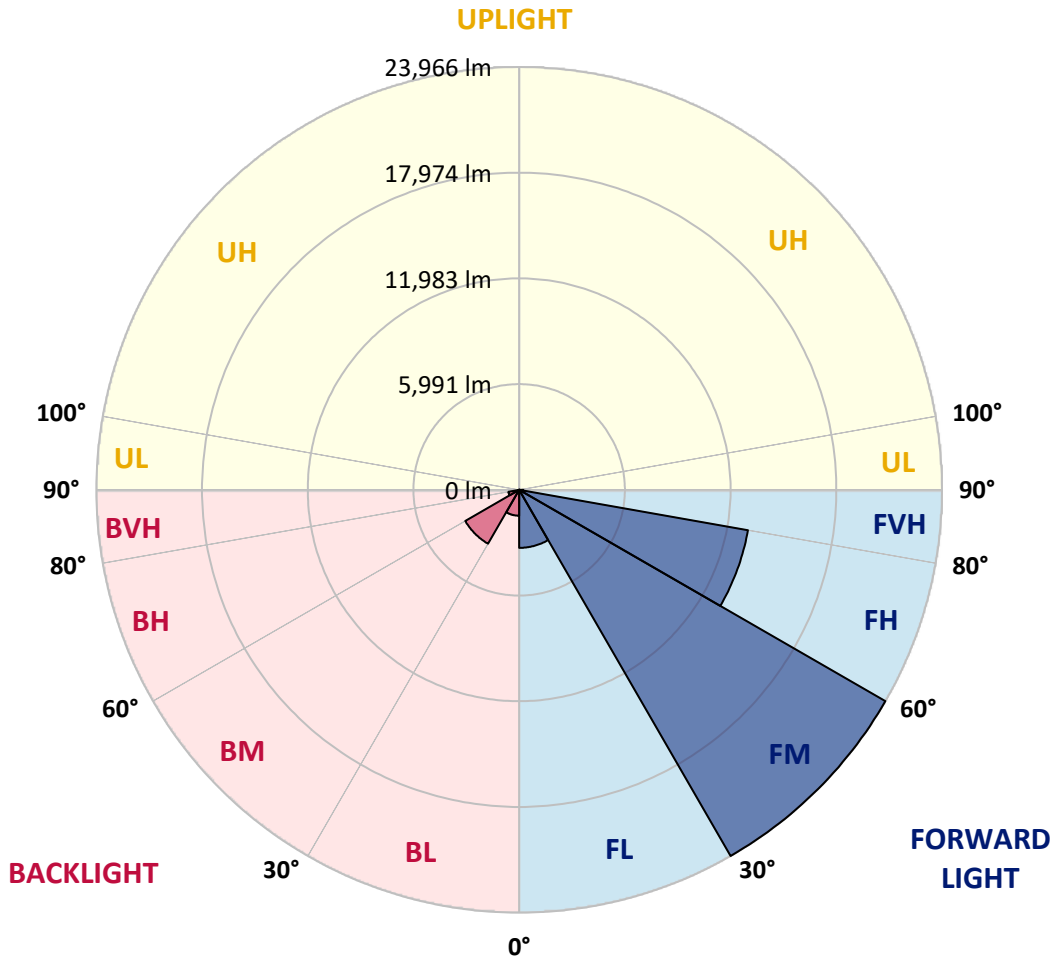
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 3290.3 | 7.1 | | | |
| FM | (30°-60°) | 23965.7 | 51.8 | | | |
| FH | (60°-80°) | 13165.7 | 28.5 | | | G5 |
| FVH | (80°-90°) | 228.5 | 0.5 | | | G3/500 |
| BL | (0°-30°) | 1468.9 | 3.2 | B3/2500 | | |
| BM | (30°-60°) | 3525.5 | 7.6 | B3/5000 | | |
| BH | (60°-80°) | 618.3 | 1.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 12.6 | 0.0 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G5**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | *6446.1* | 6446.1 |
| 2.5° | 6485.6 | 6498.7 | 6485.6 | 6498.7 | 6525.0 | 6511.9 | 6564.5 | 6551.3 | 6551.3 | *6538.2* | 6485.6 |
| 5° | 6117.2 | 6130.4 | 6156.7 | 6222.5 | 6314.5 | 6406.6 | 6525.0 | 6604.0 | 6682.9 | *6669.7* | 6617.1 |
| 7.5° | 5393.7 | 5420.0 | 5525.2 | 5656.8 | 5959.3 | 6235.6 | 6538.2 | 6735.5 | 6906.5 | *6959.2* | 6919.7 |
| 10° | 4985.9 | 5012.2 | 5077.9 | 5209.5 | 5485.8 | 5946.2 | 6538.2 | 6946.0 | 7248.6 | *7353.8* | 7367.0 |
| 12.5° | 4946.4 | 4959.5 | 5012.2 | 5156.9 | 5393.7 | 5788.3 | 6525.0 | 7222.3 | 7735.3 | *7893.2* | 7945.8 |
| 15° | 4972.7 | 4999.0 | 5051.6 | 5170.0 | 5446.3 | 5893.6 | 6630.3 | 7656.4 | 8379.9 | *8603.6* | 8616.7 |
| 17.5° | 5077.9 | 5104.3 | 5170.0 | 5301.6 | 5604.2 | 6169.8 | 6959.2 | 8103.7 | 9156.1 | *9406.0* | 9550.7 |
| 20° | 5288.4 | 5301.6 | 5380.5 | 5551.5 | 5893.6 | 6511.9 | 7445.9 | 8708.8 | 10090.1 | *10458.5* | 10563.7 |
| 22.5° | 5564.7 | 5604.2 | 5709.4 | 5919.9 | 6354.0 | 6985.5 | 8116.8 | 9445.5 | 11116.2 | *11497.7* | 11681.9 |
| 25° | 5867.3 | 5919.9 | 6077.7 | 6419.8 | 6972.3 | 7709.0 | 8945.6 | 10419.0 | 12326.5 | *12786.9* | 13036.9 |
| 27.5° | 6485.6 | 6498.7 | 6604.0 | 7038.1 | 7748.5 | 8656.2 | 9998.0 | 11668.7 | 13747.3 | *14286.7* | 14562.9 |
| 30° | 7840.6 | 7853.7 | 7761.6 | 7880.0 | 8603.6 | 9774.4 | 11234.6 | 13129.0 | 15404.9 | *16154.7* | 16378.3 |
| 32.5° | 9498.1 | 9563.9 | 9550.7 | 9471.8 | 9800.7 | 10892.6 | 12708.0 | 14878.6 | 17351.8 | *18141.2* | 18351.6 |
| 35° | 11379.3 | 11537.2 | 11497.7 | 11471.4 | 11510.9 | 12326.5 | 14391.9 | 16812.5 | 19561.9 | *20522.3* | 20693.3 |
| 37.5° | 13221.1 | 13260.5 | 13444.7 | 13668.4 | 13694.7 | 14260.3 | 16338.9 | 18864.7 | 21614.2 | *22837.6* | 23100.7 |
| 40° | 14641.8 | 14773.4 | 15233.8 | 15681.1 | 16141.5 | 16588.8 | 17943.8 | 20522.3 | 23245.4 | *24889.8* | 25008.2 |
| 42.5° | 15746.9 | 16062.6 | 16733.5 | 17430.8 | 18364.8 | 18864.7 | 19469.8 | 21693.1 | 24574.1 | *26718.4* | 26665.8 |
| 45° | 17088.7 | 17220.3 | 18167.5 | 19088.3 | 20035.5 | 20798.5 | 20785.4 | 22679.7 | 25613.4 | *28283.9* | 27955.0 |
| 47.5° | 17996.4 | 18154.3 | 19443.5 | 20522.3 | 21495.8 | 21877.3 | 21956.2 | 23745.3 | 27047.3 | *30178.2* | 29402.1 |
| 50° | 18483.2 | 18759.5 | 20167.1 | 21535.2 | 22587.6 | 22706.0 | 23061.2 | 25139.8 | 28928.5 | *32690.9* | 31230.7 |
| 52.5° | 18535.8 | 18798.9 | 20417.0 | 22179.8 | 23324.3 | 23561.1 | 24166.3 | 26718.4 | 30757.1 | *34703.7* | 32283.1 |
| 55° | *17443.9* | *17601.8* | *20114.4* | *22285.1* | *23903.2* | *24455.7* | *25692.3* | *28178.6* | *31822.7* | *35637.7* | *32191.0* |
| 57.5° | 16417.8 | 16575.7 | 18759.5 | 22100.9 | 24495.2 | 25626.5 | 27323.5 | 29178.4 | 30993.9 | *34480.0* | 30138.8 |
| 60° | 15536.4 | 15615.3 | 17601.8 | 21245.8 | 24718.8 | 26771.0 | 28731.2 | 28191.8 | 28849.6 | *31704.3* | 26626.3 |
| 62.5° | 13878.8 | 13931.5 | 16286.3 | 19706.6 | 24271.5 | 27652.4 | 29217.9 | 26100.1 | 26494.8 | *27876.1* | 22495.6 |
| 65° | 10484.8 | 10682.1 | 12839.6 | 18549.0 | 23534.8 | 28060.2 | 28086.6 | 23548.0 | 23140.2 | *22811.3* | 17693.9 |
| 67.5° | 7117.0 | 7340.7 | 8643.0 | 16680.9 | 22337.7 | 28231.3 | 25889.6 | 20246.0 | 17628.1 | *15931.1* | 11589.8 |
| 70° | 5683.1 | 5683.1 | 6130.4 | 13405.2 | 19496.1 | 26047.5 | 23166.5 | 15286.5 | 11195.2 | *8800.9* | 6209.3 |
| 72.5° | 3736.1 | 3749.3 | 4170.2 | 8511.5 | 13826.2 | 19864.5 | 18891.0 | 8840.4 | 5814.6 | *4486.0* | 3065.2 |
| 75° | 1355.0 | 1355.0 | 1828.6 | 3407.2 | 7314.3 | 11826.6 | 11510.9 | 4222.8 | 3157.3 | *2446.9* | 1854.9 |
| 77.5° | 723.5 | 749.9 | 881.4 | 1407.6 | 2802.1 | 4814.8 | 4499.1 | 2157.5 | 1789.1 | *1526.0* | 1157.7 |
| 80° | 486.7 | 499.9 | 592.0 | 868.2 | 1355.0 | 1854.9 | 1447.1 | 1210.3 | 1210.3 | *1026.1* | 776.2 |
| 82.5° | 263.1 | 276.3 | 394.7 | 565.7 | 723.5 | 868.2 | 697.2 | 710.4 | 855.1 | *697.2* | 447.3 |
| 85° | 184.2 | 184.2 | 302.6 | 407.8 | 407.8 | 421.0 | 302.6 | 447.3 | 499.9 | *434.1* | 302.6 |
| 87.5° | 105.2 | 105.2 | 171.0 | 197.3 | 197.3 | 184.2 | 92.1 | 157.9 | 197.3 | *223.6* | 131.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 |

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Scaled Data Report

REPORT NUMBER: P1458197
CATALOG NUMBER: GLAN-SB8C-730-U-T3LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 | 6446.1 |
| 2.5° | 6472.4 | 6432.9 | 6354.0 | 6196.1 | 6117.2 | 6012.0 | 5919.9 | 5801.5 | 5775.2 | 5762.0 | 5709.4 |
| 5° | 6577.6 | 6498.7 | 6261.9 | 5919.9 | 5630.5 | 5354.2 | 5077.9 | 4920.1 | 4788.5 | 4722.8 | 4709.6 |
| 7.5° | 6840.8 | 6682.9 | 6248.8 | 5643.6 | 5104.3 | 4630.7 | 4222.8 | 3867.7 | 3683.5 | 3525.6 | 3538.8 |
| 10° | 7235.4 | 6985.5 | 6275.1 | 5380.5 | 4578.0 | 3815.0 | 3223.0 | 2710.0 | 2341.6 | 2170.6 | 2157.5 |
| 12.5° | 7761.6 | 7406.4 | 6367.2 | 5117.4 | 3933.4 | 2867.9 | 2118.0 | 1815.4 | 1736.5 | 1723.3 | 1710.2 |
| 15° | 8406.2 | 7906.3 | 6459.3 | 4775.4 | 3065.2 | 1986.4 | 1723.3 | 1657.6 | 1644.4 | 1631.3 | 1631.3 |
| 17.5° | 9182.4 | 8485.2 | 6511.9 | 4196.5 | 2236.4 | 1710.2 | 1618.1 | 1578.6 | 1565.5 | 1552.3 | 1552.3 |
| 20° | 10155.9 | 9129.8 | 6577.6 | 3459.8 | 1894.4 | 1644.4 | 1539.2 | 1486.5 | 1473.4 | 1473.4 | 1460.2 |
| 22.5° | 11116.2 | 9853.3 | 6525.0 | 2815.2 | 1828.6 | 1565.5 | 1447.1 | 1394.5 | 1368.2 | 1368.2 | 1355.0 |
| 25° | 12221.3 | 10590.0 | 6367.2 | 2539.0 | 1815.4 | 1499.7 | 1355.0 | 1276.1 | 1236.6 | 1223.4 | 1223.4 |
| 27.5° | 13484.2 | 11432.0 | 6117.2 | 2552.1 | 1815.4 | 1447.1 | 1236.6 | 1131.4 | 1105.0 | 1078.7 | 1078.7 |
| 30° | 14931.3 | 12458.1 | 5933.0 | 2723.1 | 1841.7 | 1394.5 | 1131.4 | 999.8 | 960.3 | 934.0 | 947.2 |
| 32.5° | 16588.8 | 13602.6 | 5919.9 | 2999.4 | 1881.2 | 1315.5 | 1013.0 | 868.2 | 828.8 | 815.6 | 828.8 |
| 35° | 18470.0 | 15023.3 | 6222.5 | 3209.9 | 1776.0 | 1144.5 | 868.2 | 749.9 | 710.4 | 710.4 | 723.5 |
| 37.5° | 20561.7 | 16654.6 | 6630.3 | 3157.3 | 1433.9 | 907.7 | 749.9 | 657.8 | 618.3 | 631.5 | 644.6 |
| 40° | 22469.2 | 17930.7 | 6696.0 | 2696.8 | 1078.7 | 776.2 | 644.6 | 578.8 | 552.5 | 565.7 | 578.8 |
| 42.5° | 23916.3 | 18956.8 | 6064.6 | 2091.7 | 907.7 | 657.8 | 552.5 | 499.9 | 486.7 | 513.1 | 513.1 |
| 45° | 25087.1 | 19364.6 | 5064.8 | 1552.3 | 802.5 | 565.7 | 486.7 | 460.4 | 434.1 | 447.3 | 447.3 |
| 47.5° | 26310.6 | 19430.4 | 4130.8 | 1249.8 | 710.4 | 513.1 | 447.3 | 421.0 | 394.7 | 394.7 | 394.7 |
| 50° | 27494.6 | 19272.5 | 3157.3 | 1105.0 | 657.8 | 460.4 | 407.8 | 381.5 | 355.2 | 342.0 | 342.0 |
| 52.5° | 27784.0 | 18009.6 | 2315.3 | 1026.1 | 605.1 | 434.1 | 381.5 | 355.2 | 328.9 | 315.7 | 315.7 |
| 55° | *26981.5* | *15615.3* | *1815.4* | *920.9* | *552.5* | *394.7* | *355.2* | *328.9* | *289.4* | *276.3* | *276.3* |
| 57.5° | 24337.3 | 11905.5 | 1447.1 | 789.3 | 499.9 | 381.5 | 328.9 | 302.6 | 263.1 | 250.0 | 250.0 |
| 60° | 20903.8 | 8445.7 | 1170.8 | 644.6 | 460.4 | 342.0 | 302.6 | 263.1 | 236.8 | 210.5 | 210.5 |
| 62.5° | 17101.9 | 6064.6 | 947.2 | 539.4 | 434.1 | 302.6 | 276.3 | 236.8 | 184.2 | 144.7 | 144.7 |
| 65° | 13115.8 | 4354.4 | 736.7 | 434.1 | 394.7 | 263.1 | 236.8 | 197.3 | 144.7 | 105.2 | 105.2 |
| 67.5° | 8485.2 | 2815.2 | 552.5 | 381.5 | 302.6 | 223.6 | 184.2 | 157.9 | 131.6 | 92.1 | 78.9 |
| 70° | 4472.8 | 1644.4 | 407.8 | 328.9 | 223.6 | 171.0 | 157.9 | 131.6 | 105.2 | 65.8 | 65.8 |
| 72.5° | 2315.3 | 1078.7 | 302.6 | 289.4 | 171.0 | 118.4 | 131.6 | 105.2 | 78.9 | 39.5 | 39.5 |
| 75° | 1486.5 | 723.5 | 223.6 | 236.8 | 105.2 | 92.1 | 92.1 | 65.8 | 39.5 | 26.3 | 13.2 |
| 77.5° | 960.3 | 486.7 | 157.9 | 197.3 | 65.8 | 52.6 | 52.6 | 26.3 | 13.2 | 0.0 | 0.0 |
| 80° | 565.7 | 302.6 | 105.2 | 131.6 | 26.3 | 26.3 | 13.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 289.4 | 157.9 | 52.6 | 52.6 | 13.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 184.2 | 78.9 | 13.2 | 13.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 92.1 | 26.3 | 13.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-4

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-730-U-5WQ

Data in this report applies to families of products including GSS-SB1A-730-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

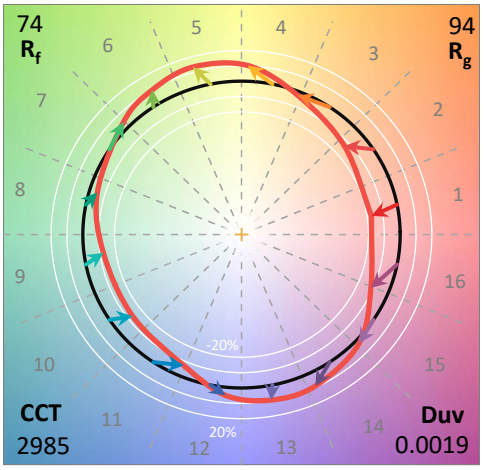
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-730-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2985 |
| CIE u': | 0.2504 |
| CIE v': | 0.5243 |
| Duv: | 0.0019 |
| CIE x: | 0.4408 |
| CIE y: | 0.4101 |
| CIE z: | 0.1491 |
| Peak Wavelength (nm): | 595 |
| Dominant Wavelength (nm): | 582 |
| Purity: | 55.41818 |
| Rf: | 73.8 |
| Rg: | 94.4 |

| | |
|---|---|
| CRI (Ra): | 70.8 |
| R1: | 66.3 |
| R2: | 80.6 |
| R3: | 94.5 |
| R4: | 68.2 |
| R5: | 66.5 |
| R6: | 74.7 |
| R7: | 76.2 |
| R8: | 39.6 |
| R9: | -43.2 |
| R10: | 57.6 |
| R11: | 64.8 |
| R12: | 53.5 |
| R13: | 68.7 |
| R14: | 97.0 |
| R15: | 56.4 |




## Test Conditions

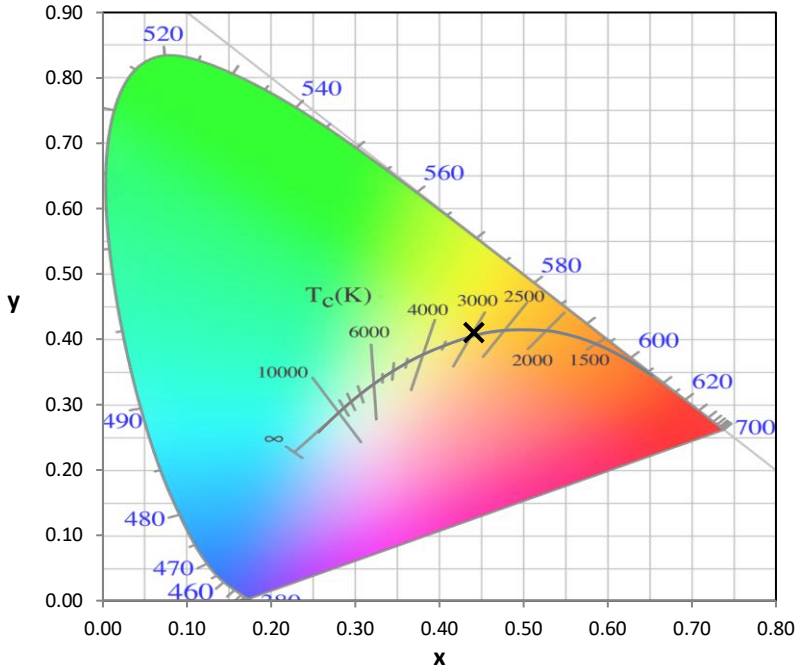
| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-4

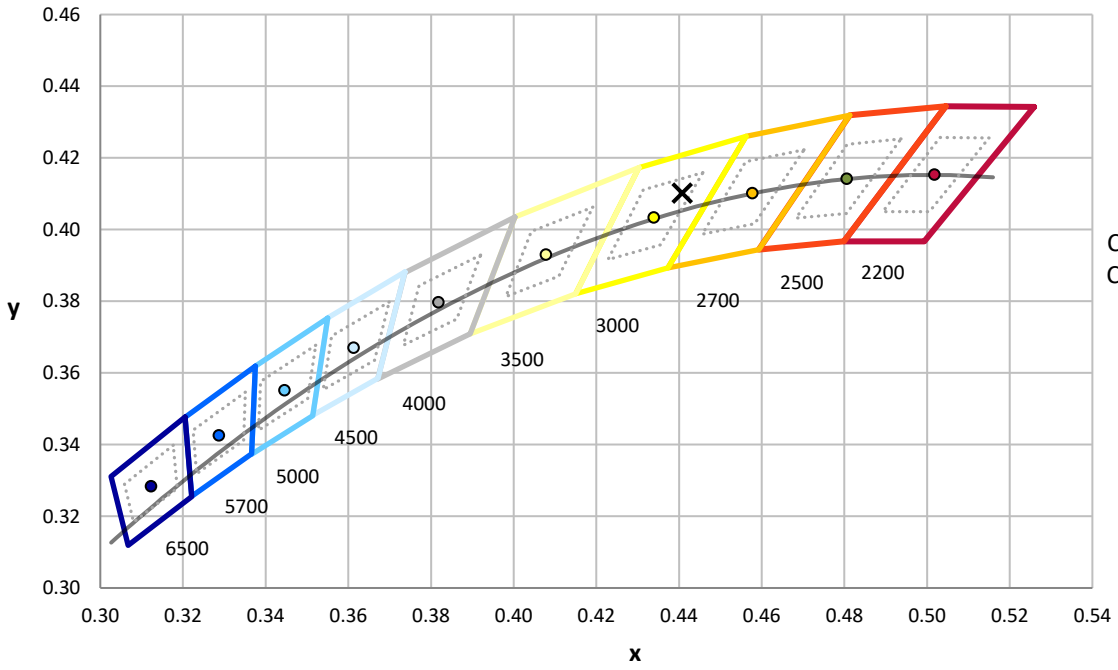
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

REPORT NUMBER: SP1-2407-184-4

## CIE 1931 Chromaticity Diagram




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

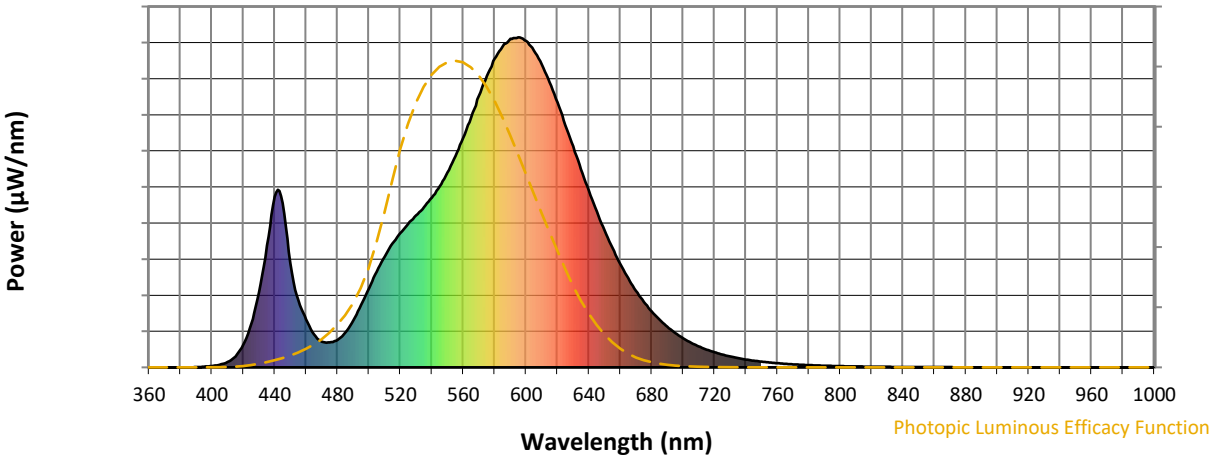



CCT = 2985K
CIE x = 0.4408
CIE y = 0.4101
Duv = 0.0019

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-4

## Photopic Flux vs. Wavelength

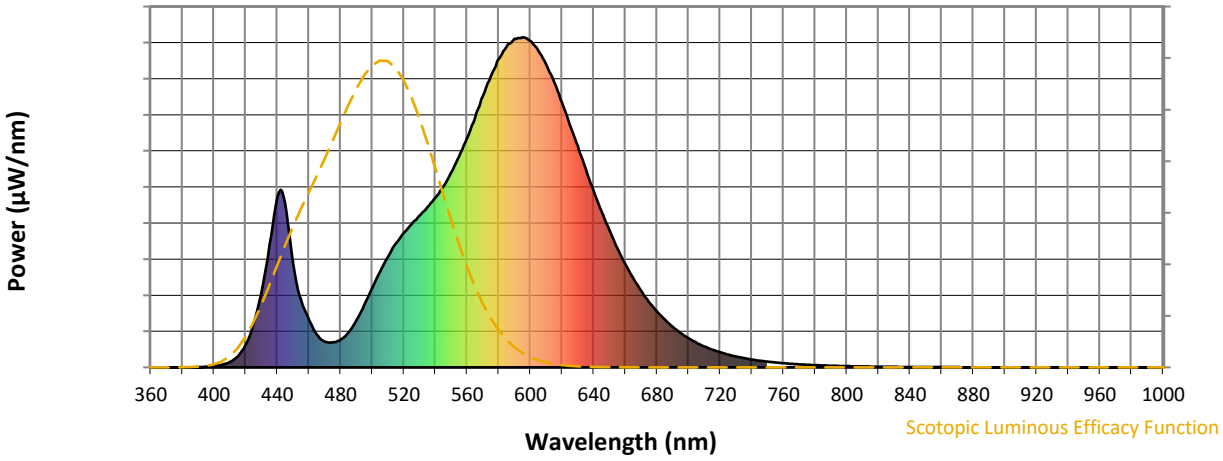



## Photopic Lumens: NR

| 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-4

## Scotopic Flux vs. Wavelength

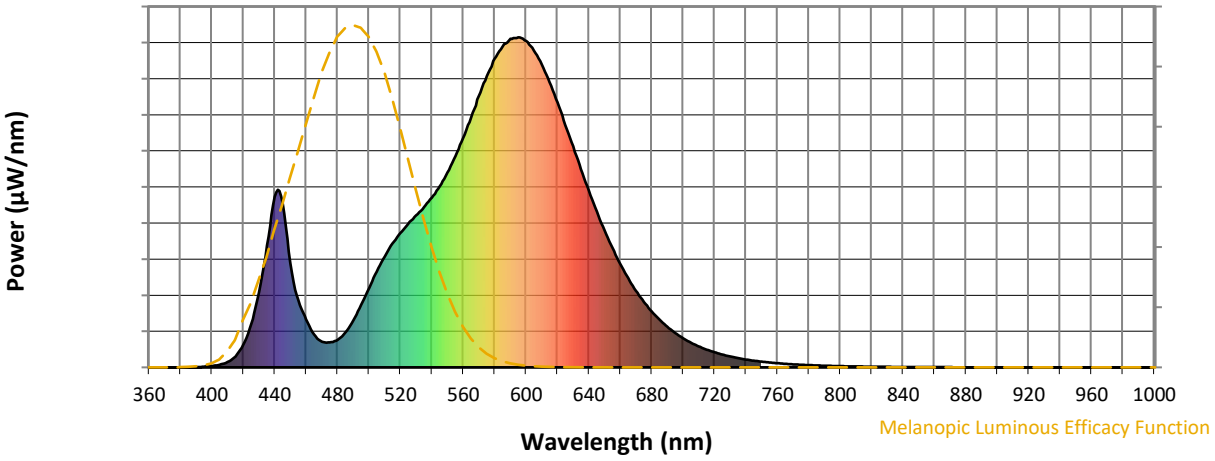



**Scotopic Lumens: NR** **S/P: 1.19**

| 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-4

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.13**

| 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

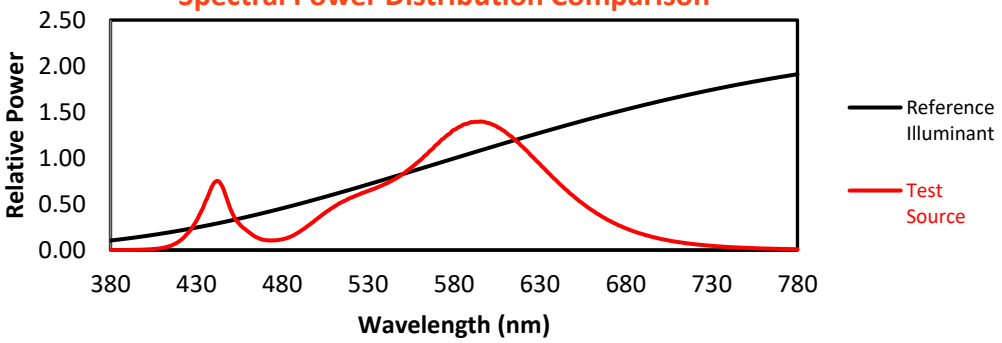
REPORT NUMBER: SP1-2407-184-4

# TM-30-18

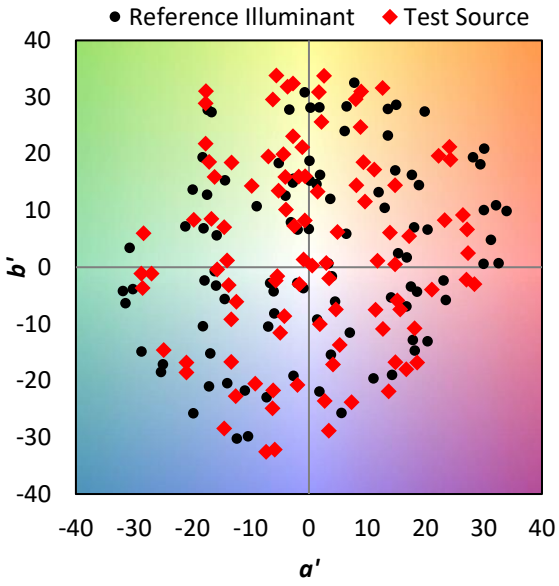
## Summary

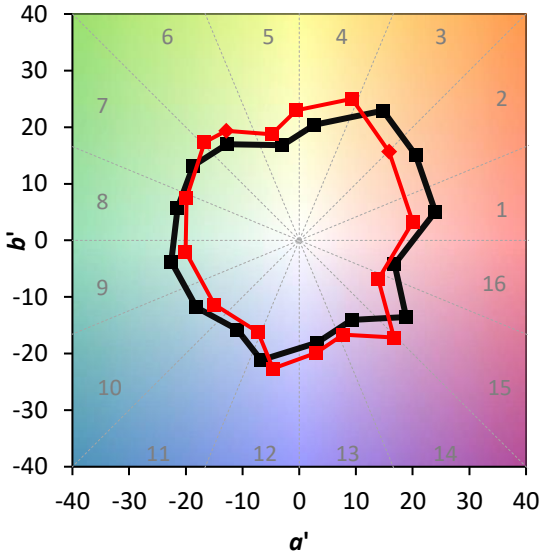
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

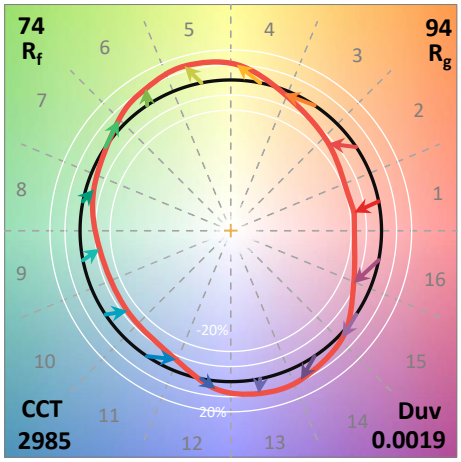
## Spectral Power Distribution Comparison

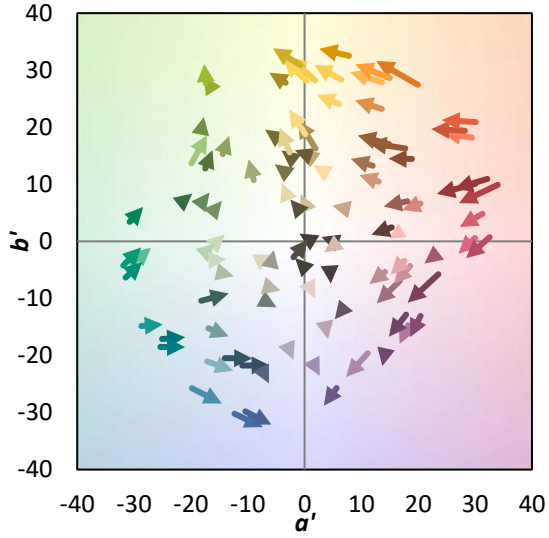



## Color Vector Graphics



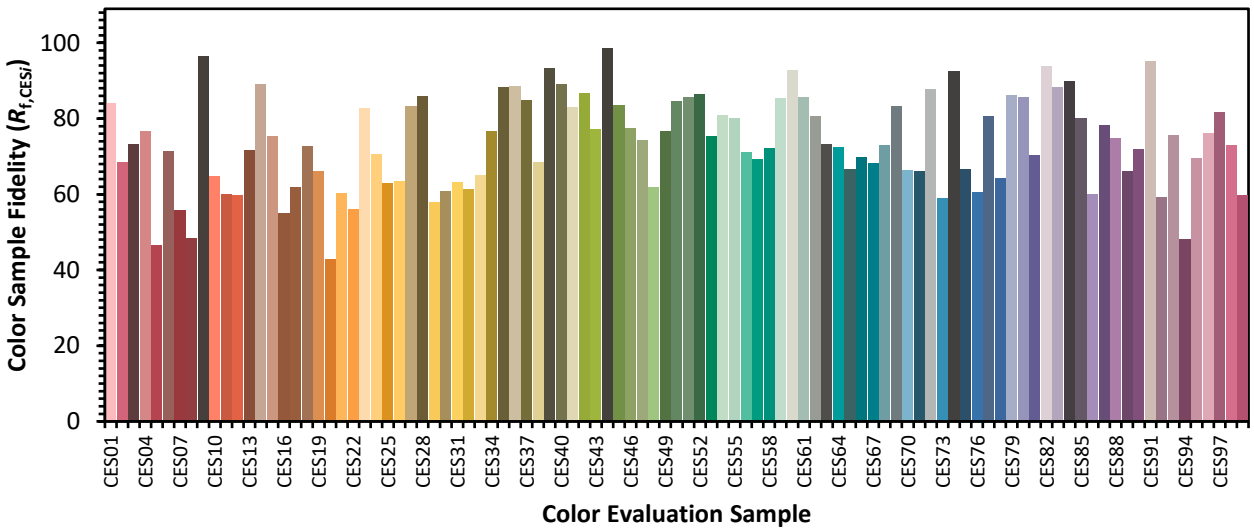



REPORT NUMBER: SP1-2407-184-4

# TM-30-18

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

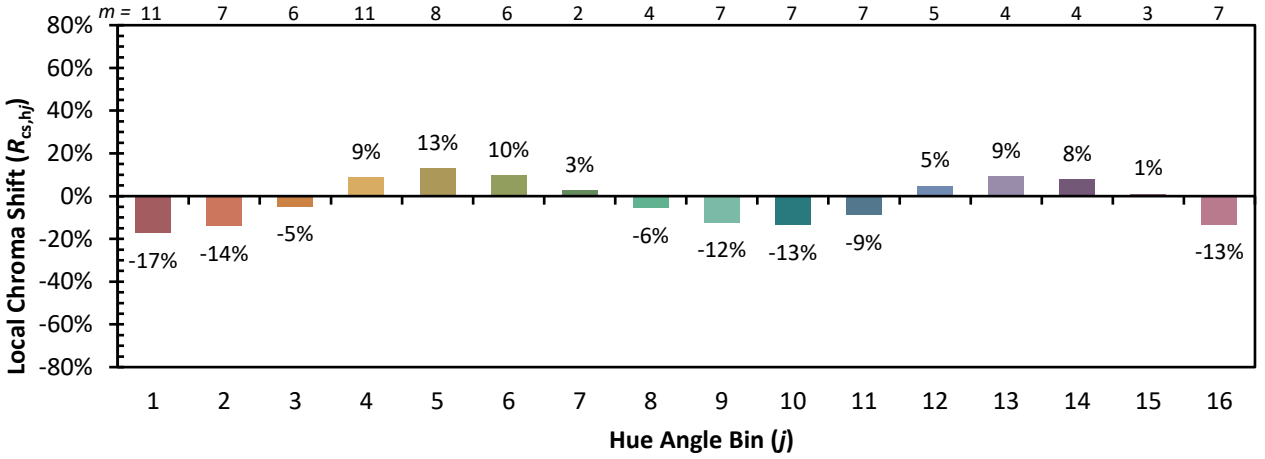
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06 = 51 | CES31 = 63 | CES56 = 71 | CES81 = 70 |
| CES07 = 41 | CES32 = 61 | CES57 = 69 | CES82 = 94 |
| CES08 = 40 | CES33 = 65 | CES58 = 72 | CES83 = 88 |
| CES09 = 29 | CES34 = 77 | CES59 = 85 | CES84 = 90 |
| CES10 = 76 | CES35 = 88 | CES60 = 93 | CES85 = 80 |
| CES11 = 59 | CES36 = 89 | CES61 = 86 | CES86 = 60 |
| CES12 = 65 | CES37 = 85 | CES62 = 81 | CES87 = 78 |
| CES13 = 43 | CES38 = 69 | CES63 = 73 | CES88 = 75 |
| CES14 = 74 | CES39 = 93 | CES64 = 72 | CES89 = 66 |
| CES15 = 71 | CES40 = 89 | CES65 = 67 | CES90 = 72 |
| CES16 = 47 | CES41 = 83 | CES66 = 70 | CES91 = 95 |
| CES17 = 50 | CES42 = 87 | CES67 = 68 | CES92 = 59 |
| CES18 = 56 | CES43 = 77 | CES68 = 73 | CES93 = 76 |
| CES19 = 73 | CES44 = 99 | CES69 = 83 | CES94 = 48 |
| CES20 = 66 | CES45 = 83 | CES70 = 66 | CES95 = 70 |
| CES21 = 87 | CES46 = 77 | CES71 = 66 | CES96 = 76 |
| CES22 = 79 | CES47 = 74 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 62 | CES73 = 59 | CES98 = 73 |
| CES24 = 91 | CES49 = 77 | CES74 = 93 | CES99 = 60 |
| CES25 = 73 | CES50 = 85 | CES75 = 67 | |

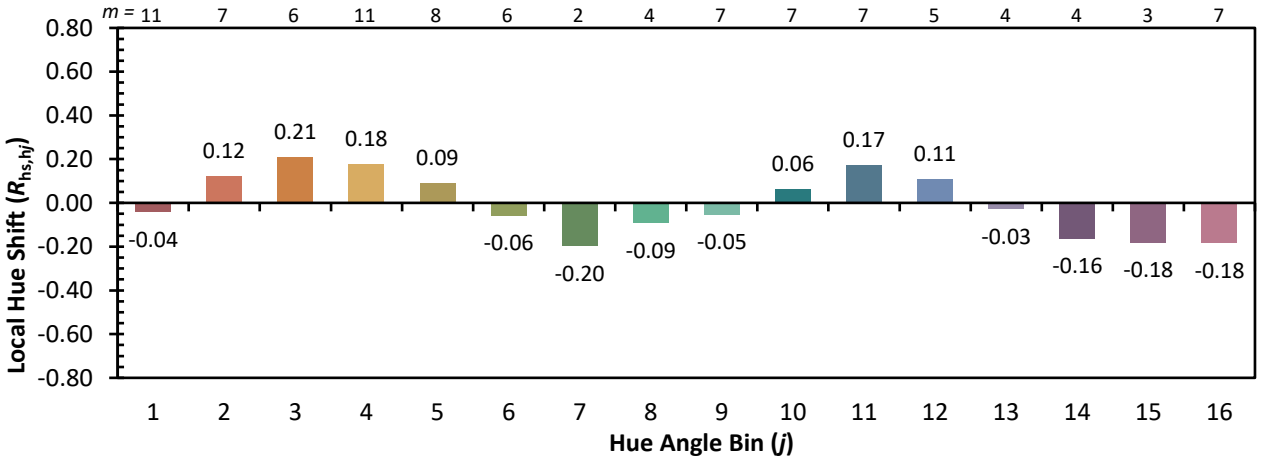


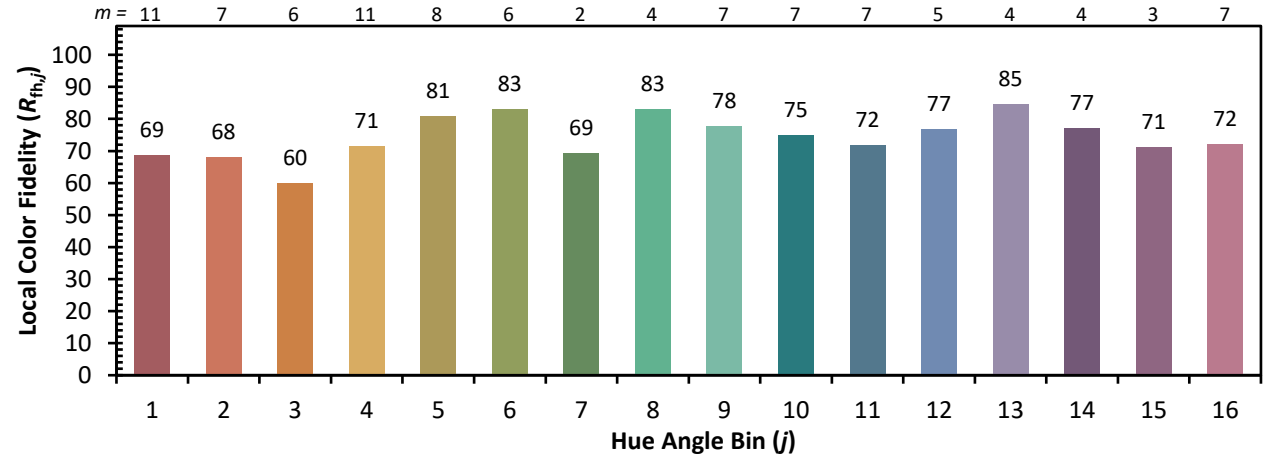
REPORT NUMBER: SP1-2407-184-4

**TM-30-18**

## Color Rendition by Hue-Angle Bin



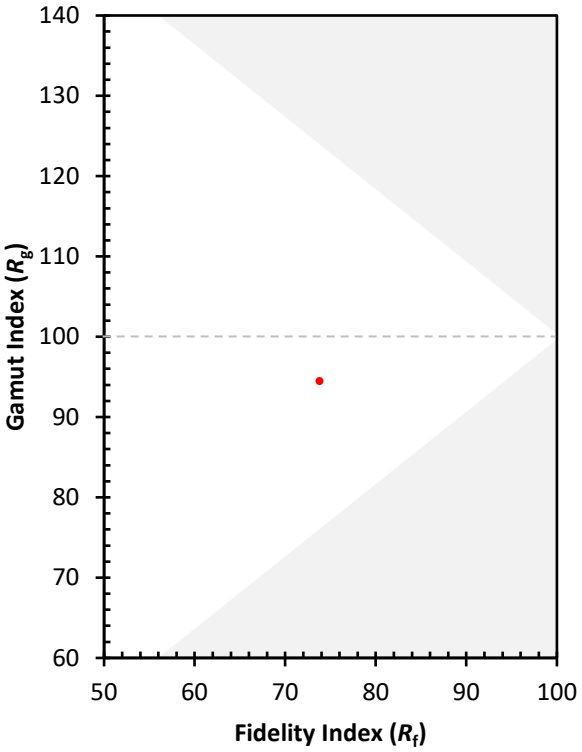



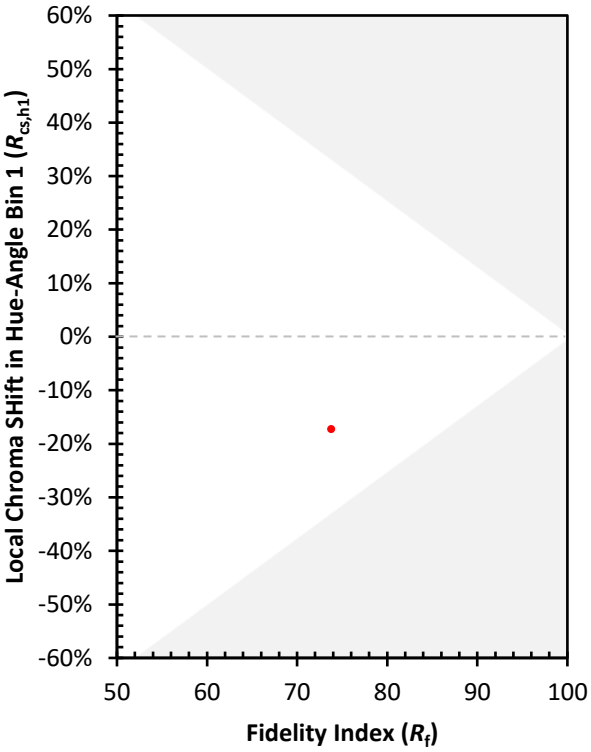



REPORT NUMBER: SP1-2407-184-4

# TM-30-18

## Measure Comparisons




(END OF REPORT)