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

Scaled data based on original data using

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P1047614

Luminaire Tested: **GALN-SA7B-950-U-T3BC**

Issue Date: 07/10/2025

Report Generated By 670347003

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1047614 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 07/10/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GALN-SA7B-950-U-T3BC |
| Description: | GALLEON II AREA AND ROADWAY LUMINAIRE 800mA 7xLight Square PACKAGE 90CRI 5000K FIXTURE w/ TYPE III ANGLED BACKLIGHT CONTROL |
| Light Source: | (98) 5000K CCT, 90 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 25886.1 lumens |
| Efficiency: | N/A |
| Efficacy: | 103.8 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B0 - U0 - G4 |

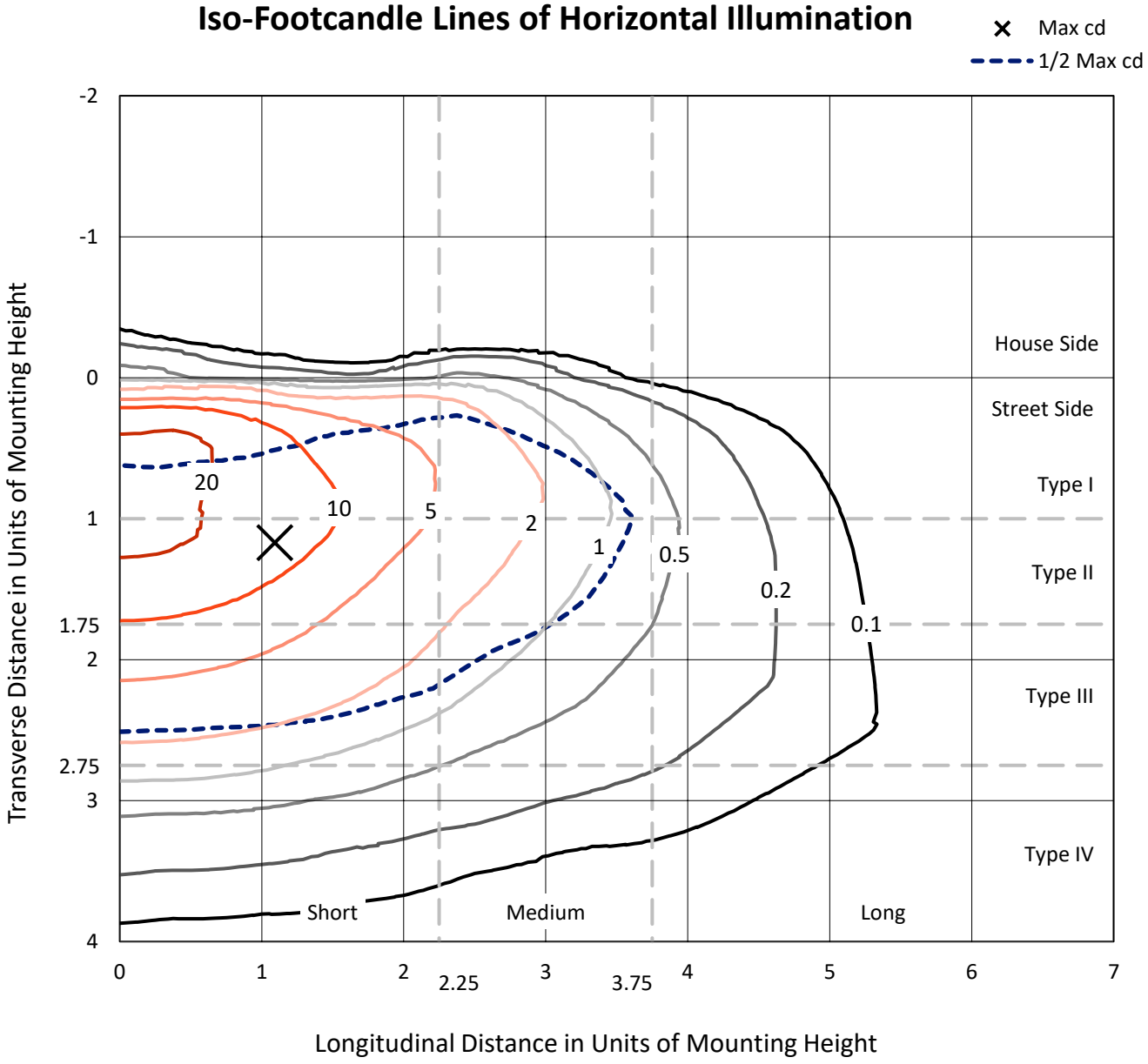
| | |
|---|---|
| Input Watts (W): | 249.5 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.97 |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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

Scaled Data Report

REPORT NUMBER: P1047614
CATALOG NUMBER: GALN-SA7B-950-U-T3BC

## Iso-Footcandle Lines of Horizontal Illumination



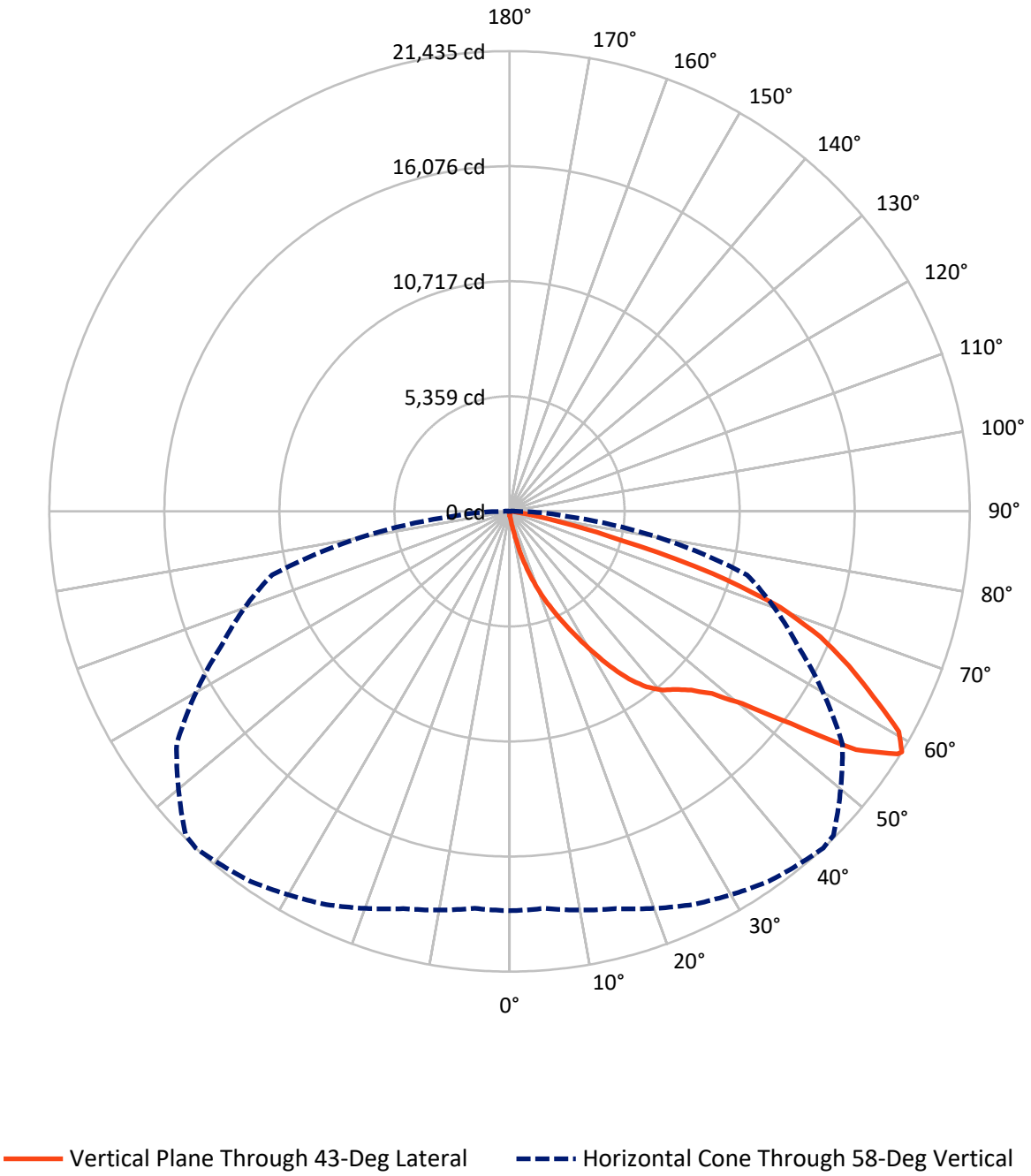

Based on 15 foot mounting height. Maximum calculated value = 29 fc
Type III - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P1047614
CATALOG NUMBER: GALN-SA7B-950-U-T3BC

## Luminous Intensity Polar Plot



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

Scaled Data Report

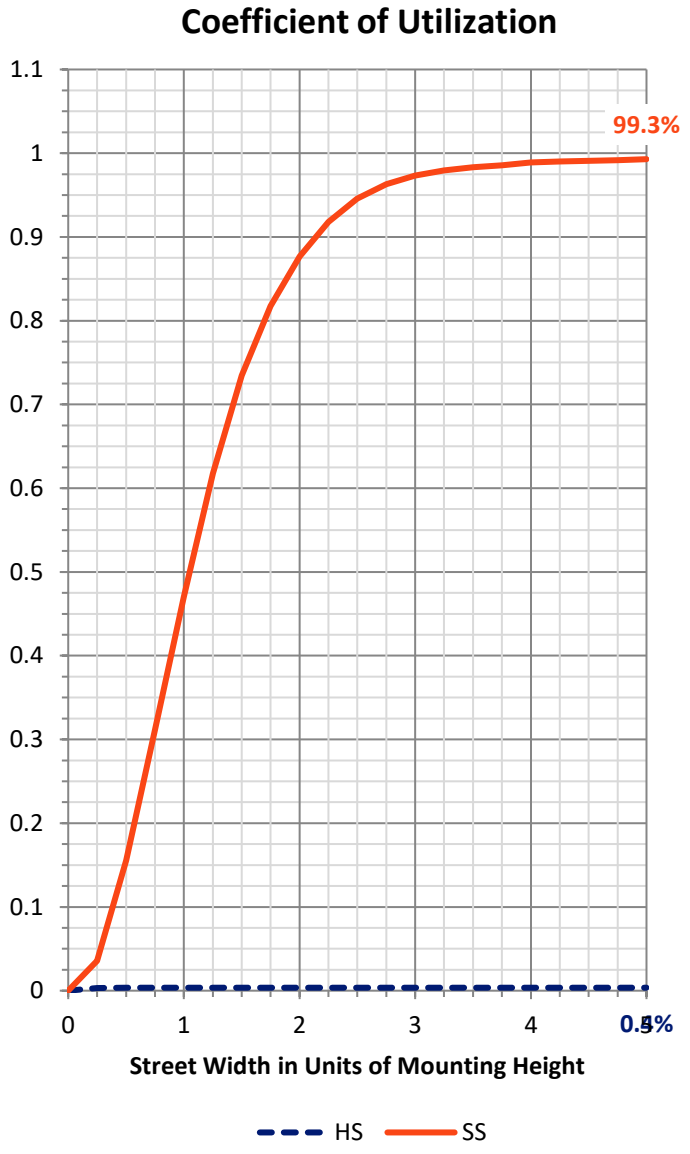
REPORT NUMBER: P1047614
CATALOG NUMBER: GALN-SA7B-950-U-T3BC

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 94.5 | 0.0 | 94.5 |
| | % Fixture | 0.4 | 0.0 | 0.4 |
| **Street Side** | Lumens | 25791.6 | 0.0 | 25791.6 |
| | % Fixture | 99.6 | 0.0 | 99.6 |
| **Total** | Lumens | 25886.1 | 0.0 | 25886.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 24.8 | 0.1 |
| 10°-20° | 297.6 | 1.1 |
| 20°-30° | 1072.5 | 4.1 |
| 30°-40° | 2453.8 | 9.5 |
| 40°-50° | 4138.7 | 16.0 |
| 50°-60° | 6829.8 | 26.4 |
| 60°-70° | 7633.2 | 29.5 |
| 70°-80° | 3151.6 | 12.2 |
| 80°-90° | 284.1 | 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° | 25886.1 | 100.0 |
| 0°-180° | 25886.1 | 100.0 |



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

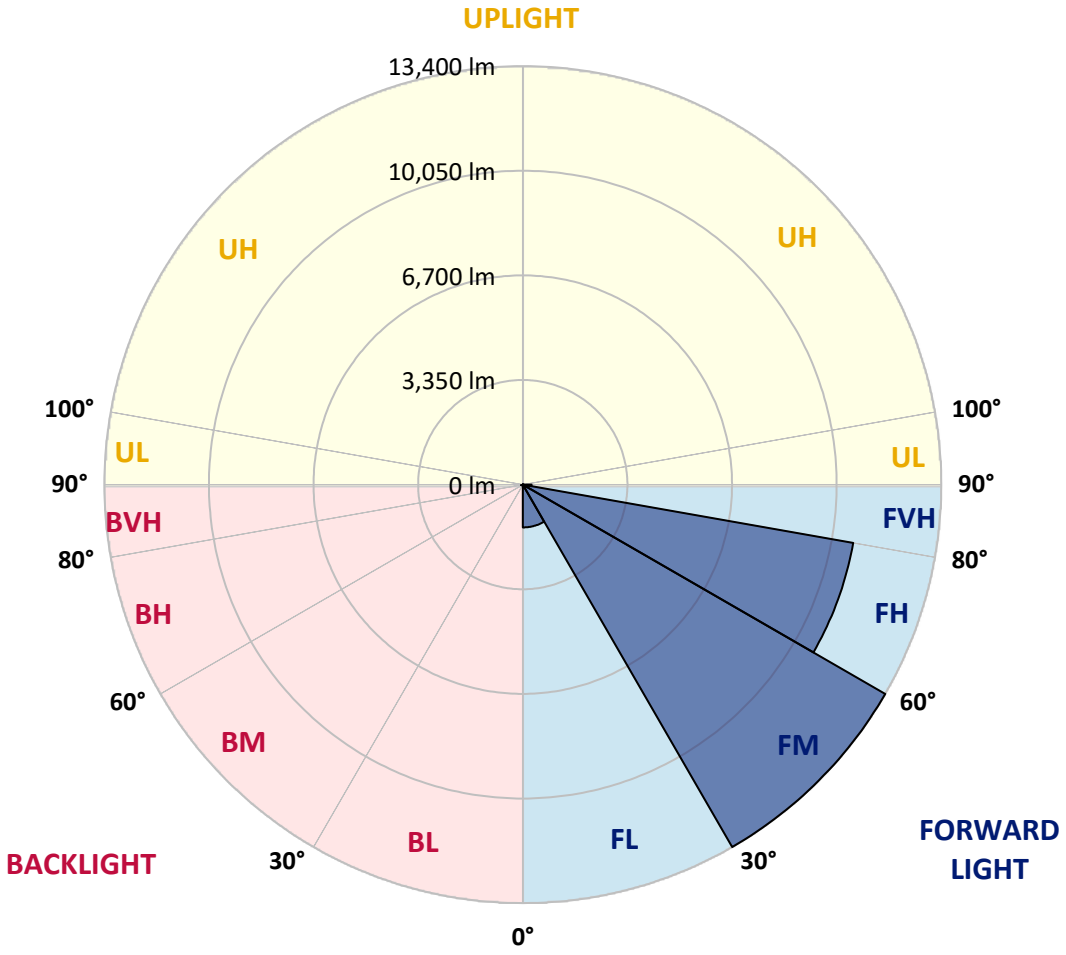
Scaled Data Report

REPORT NUMBER: P1047614
CATALOG NUMBER: GALN-SA7B-950-U-T3BC

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1370.2 | 5.3 | | | |
| FM | (30°-60°) | 13399.6 | 51.8 | | | |
| FH | (60°-80°) | 10741.5 | 41.5 | | | G4/12000 |
| FVH | (80°-90°) | 280.2 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 24.6 | 0.1 | B0/110 | | |
| BM | (30°-60°) | 22.7 | 0.1 | B0/220 | | |
| BH | (60°-80°) | 43.3 | 0.2 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 3.9 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B0-U0-G4**
Type III Short



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

Scaled Data Report

REPORT NUMBER: P1047614
CATALOG NUMBER: GALN-SA7B-950-U-T3BC

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 43° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 |
| 2.5° | 203.1 | 209.9 | 203.1 | 203.1 | 203.1 | 196.3 | 196.3 | 189.6 | 189.6 | 182.8 | 176.0 |
| 5° | 297.9 | 297.9 | 277.6 | 264.0 | 250.5 | 243.7 | 237.0 | 223.4 | 209.9 | 196.3 | 182.8 |
| 7.5° | 663.5 | 663.5 | 602.6 | 521.3 | 413.0 | 352.1 | 338.5 | 277.6 | 237.0 | 209.9 | 182.8 |
| 10° | 1584.2 | 1584.2 | 1448.8 | 1225.4 | 947.8 | 704.1 | 629.6 | 399.4 | 284.4 | 223.4 | 189.6 |
| 12.5° | 2633.6 | 2667.5 | 2498.2 | 2213.9 | 1800.9 | 1374.4 | 1225.4 | 731.2 | 379.1 | 243.7 | 189.6 |
| 15° | 3574.7 | 3493.5 | 3446.1 | 3175.3 | 2782.6 | 2274.8 | 2085.2 | 1232.2 | 548.4 | 277.6 | 189.6 |
| 17.5° | 4211.1 | 4211.1 | 4143.4 | 3960.6 | 3601.8 | 3154.9 | 2999.2 | 1990.5 | 886.9 | 318.2 | 196.3 |
| 20° | 4955.8 | 4955.8 | 4834.0 | 4705.3 | 4387.1 | 4008.0 | 3859.1 | 2830.0 | 1374.4 | 406.2 | 196.3 |
| 22.5° | 5856.3 | 5869.8 | 5734.4 | 5504.2 | 5199.6 | 4779.8 | 4651.2 | 3608.6 | 1990.5 | 541.6 | 203.1 |
| 25° | 6953.1 | 6966.6 | 6770.3 | 6553.6 | 6086.5 | 5632.9 | 5436.5 | 4502.2 | 2742.0 | 758.3 | 203.1 |
| 27.5° | 8165.0 | 8259.7 | 7968.6 | 7596.3 | 7102.0 | 6533.3 | 6384.4 | 5307.9 | 3486.7 | 1069.7 | 216.6 |
| 30° | 9674.7 | 9674.7 | 9288.8 | 8767.5 | 8232.7 | 7528.5 | 7339.0 | 6154.2 | 4278.8 | 1482.7 | 230.2 |
| 32.5° | 10974.6 | 10873.1 | 10378.8 | 9830.4 | 9261.7 | 8605.0 | 8401.9 | 7041.1 | 5091.2 | 1997.2 | 257.3 |
| 35° | 11969.9 | 11881.8 | 11272.5 | 10683.5 | 10189.3 | 9586.7 | 9343.0 | 8002.5 | 5951.1 | 2579.5 | 297.9 |
| 37.5° | 12822.9 | 12789.1 | 11963.1 | 11225.1 | 10900.1 | 10372.1 | 10155.4 | 8909.7 | 6797.4 | 3209.1 | 345.3 |
| 40° | 13757.2 | 13648.9 | 12768.7 | 11854.8 | 11367.3 | 10940.8 | 10744.4 | 9640.9 | 7609.8 | 3947.1 | 413.0 |
| 42.5° | 14556.1 | 14427.5 | 13635.3 | 12741.7 | 11908.9 | 11333.4 | 11143.9 | 10257.0 | 8401.9 | 4685.0 | 501.0 |
| 45° | 15443.0 | 15375.3 | 14576.4 | 13899.4 | 12789.1 | 11868.3 | 11617.8 | 10751.2 | 9126.3 | 5565.2 | 616.1 |
| 47.5° | 16776.7 | 16654.9 | 15910.2 | 15355.0 | 14068.6 | 12680.7 | 12321.9 | 11259.0 | 9823.7 | 6431.8 | 792.1 |
| 50° | 18327.1 | 18245.9 | 17805.8 | 17365.8 | 16086.2 | 14068.6 | 13642.1 | 11990.2 | 10602.3 | 7460.8 | 1022.3 |
| 52.5° | 19593.2 | 19579.6 | 19633.8 | 19640.6 | 18672.4 | 16404.4 | 15768.0 | 13168.2 | 11495.9 | 8476.4 | 1347.3 |
| 55° | 19566.1 | 19627.0 | 20222.8 | 20906.6 | 20981.1 | 19593.2 | 18977.1 | 15151.9 | 12660.4 | 9728.9 | 1800.9 |
| 57.5° | 18834.9 | 18787.5 | 19417.2 | 20446.2 | 21170.7 | 21319.6 | 21218.1 | 18232.4 | 14413.9 | 11238.7 | 2498.2 |
| 58° | 18598.0 | 18557.3 | 19153.1 | 20202.5 | 21035.3 | 21434.7 | 21333.1 | 18929.7 | 14806.6 | 11455.3 | 2687.8 |
| 60° | 17738.1 | 17744.9 | 18097.0 | 19051.6 | 19884.3 | 20832.1 | 20926.9 | 20920.2 | 16763.2 | 12904.1 | 3642.4 |
| 62.5° | 16600.7 | 16546.6 | 16871.5 | 17650.1 | 18381.3 | 19017.7 | 19180.2 | 21055.6 | 19627.0 | 14745.7 | 5463.6 |
| 65° | 15030.0 | 14948.8 | 15294.1 | 16174.2 | 16959.5 | 17372.5 | 17379.3 | 19241.1 | 20974.3 | 16722.6 | 8063.4 |
| 67.5° | 12112.0 | 12044.3 | 12734.9 | 13865.5 | 15077.4 | 15619.0 | 15862.8 | 16695.5 | 19836.9 | 18063.1 | 9552.9 |
| 70° | 7420.2 | 7562.4 | 8523.8 | 10297.6 | 12369.3 | 13364.5 | 13730.1 | 13987.4 | 16891.8 | 17860.0 | 7988.9 |
| 72.5° | 3425.8 | 3256.5 | 4075.7 | 5314.7 | 7677.5 | 9891.4 | 10270.5 | 11279.3 | 13391.6 | 15503.9 | 5957.8 |
| 75° | 1597.8 | 1536.9 | 1726.4 | 2322.2 | 3479.9 | 5341.7 | 6032.3 | 9004.5 | 10270.5 | 10785.1 | 4299.1 |
| 77.5° | 819.2 | 826.0 | 981.7 | 1056.2 | 1435.3 | 2471.2 | 2836.7 | 5924.0 | 7528.5 | 6018.8 | 2884.1 |
| 80° | 358.8 | 372.4 | 379.1 | 413.0 | 582.2 | 954.6 | 1076.5 | 2748.7 | 5145.4 | 3066.9 | 1577.5 |
| 82.5° | 230.2 | 237.0 | 237.0 | 237.0 | 277.6 | 379.1 | 433.3 | 1103.6 | 2565.9 | 1523.3 | 487.5 |
| 85° | 121.9 | 121.9 | 135.4 | 169.3 | 196.3 | 230.2 | 243.7 | 352.1 | 846.3 | 453.6 | 115.1 |
| 87.5° | 67.7 | 74.5 | 81.2 | 101.6 | 128.6 | 155.7 | 169.3 | 243.7 | 325.0 | 311.4 | 27.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

Scaled Data Report

REPORT NUMBER: P1047614
CATALOG NUMBER: GALN-SA7B-950-U-T3BC

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 | 169.3 |
| 2.5° | 176.0 | 169.3 | 162.5 | 155.7 | 148.9 | 142.2 | 142.2 | 142.2 | 142.2 | 142.2 | 142.2 |
| 5° | 169.3 | 162.5 | 155.7 | 142.2 | 128.6 | 121.9 | 115.1 | 108.3 | 108.3 | 108.3 | 108.3 |
| 7.5° | 169.3 | 162.5 | 142.2 | 128.6 | 115.1 | 101.6 | 88.0 | 88.0 | 88.0 | 88.0 | 88.0 |
| 10° | 169.3 | 155.7 | 135.4 | 115.1 | 94.8 | 81.2 | 74.5 | 67.7 | 67.7 | 67.7 | 67.7 |
| 12.5° | 169.3 | 148.9 | 128.6 | 101.6 | 81.2 | 67.7 | 60.9 | 54.2 | 54.2 | 54.2 | 54.2 |
| 15° | 169.3 | 148.9 | 121.9 | 94.8 | 74.5 | 54.2 | 47.4 | 40.6 | 40.6 | 40.6 | 40.6 |
| 17.5° | 162.5 | 142.2 | 115.1 | 81.2 | 60.9 | 40.6 | 33.9 | 27.1 | 27.1 | 33.9 | 33.9 |
| 20° | 155.7 | 135.4 | 101.6 | 67.7 | 47.4 | 33.9 | 20.3 | 20.3 | 20.3 | 20.3 | 20.3 |
| 22.5° | 155.7 | 135.4 | 94.8 | 60.9 | 40.6 | 20.3 | 13.5 | 13.5 | 13.5 | 13.5 | 20.3 |
| 25° | 155.7 | 128.6 | 81.2 | 47.4 | 27.1 | 13.5 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 |
| 27.5° | 155.7 | 128.6 | 74.5 | 40.6 | 20.3 | 13.5 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30° | 148.9 | 121.9 | 67.7 | 33.9 | 13.5 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 32.5° | 148.9 | 115.1 | 54.2 | 27.1 | 13.5 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 35° | 155.7 | 108.3 | 47.4 | 20.3 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.8 |
| 37.5° | 162.5 | 101.6 | 40.6 | 13.5 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40° | 169.3 | 94.8 | 40.6 | 13.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 42.5° | 182.8 | 94.8 | 33.9 | 13.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 45° | 196.3 | 94.8 | 27.1 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 47.5° | 223.4 | 101.6 | 27.1 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50° | 243.7 | 108.3 | 20.3 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 52.5° | 270.8 | 101.6 | 20.3 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 55° | 304.7 | 101.6 | 20.3 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 57.5° | 331.7 | 94.8 | 20.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 58° | *345.3* | *88.0* | *13.5* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* |
| 60° | 413.0 | 81.2 | 13.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62.5° | 643.2 | 67.7 | 13.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 1306.7 | 60.9 | 13.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 2437.3 | 54.2 | 13.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 2728.4 | 60.9 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 1719.7 | 47.4 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 907.2 | 47.4 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 453.6 | 47.4 | 6.8 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 209.9 | 33.9 | 6.8 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 88.0 | 20.3 | 13.5 | 6.8 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 40.6 | 20.3 | 13.5 | 13.5 | 6.8 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 20.3 | 20.3 | 20.3 | 13.5 | 13.5 | 6.8 | 6.8 | 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 |

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

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-17

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-950-U-5WQ

Data in this report applies to families of products including GSS-SB1A-950-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

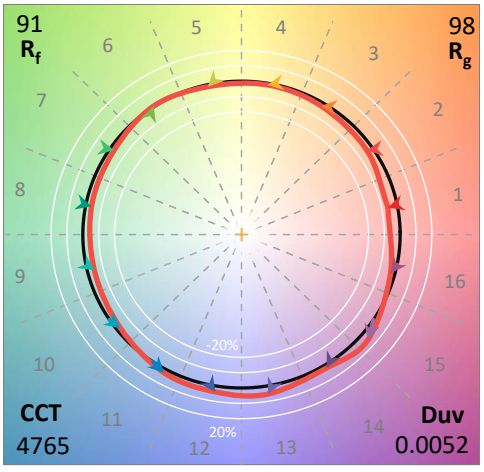
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-17 |
| 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-950-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 90 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4765 |
| CIE u': | 0.2105 |
| CIE v': | 0.4941 |
| Duv: | 0.0052 |
| CIE x: | 0.3536 |
| CIE y: | 0.3689 |
| CIE z: | 0.2775 |
| Peak Wavelength (nm): | 449 |
| Dominant Wavelength (nm): | 571 |
| Purity: | 16.80041 |
| Rf: | 90.7 |
| Rg: | 98 |

| | | | | | |
|---|---|---|---|---|---|
| CRI (Ra): | 90.8 | | | | |
| R1: | 89.8 | R9: | 54.9 | | |
| R2: | 93.1 | R10: | 83.0 | | |
| R3: | 95.3 | R11: | 89.6 | | |
| R4: | 90.3 | R12: | 68.0 | | |
| R5: | 89.0 | R13: | 90.6 | | |
| R6: | 89.7 | R14: | 97.3 | | |
| R7: | 94.9 | R15: | 86.2 | | |
| R8: | 84.0 | | | | |




## Test Conditions

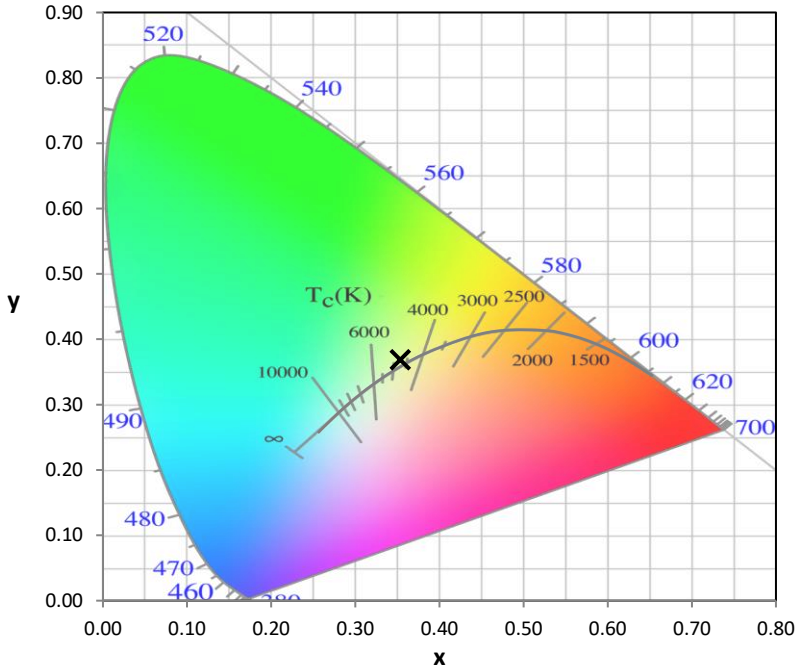
| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-17

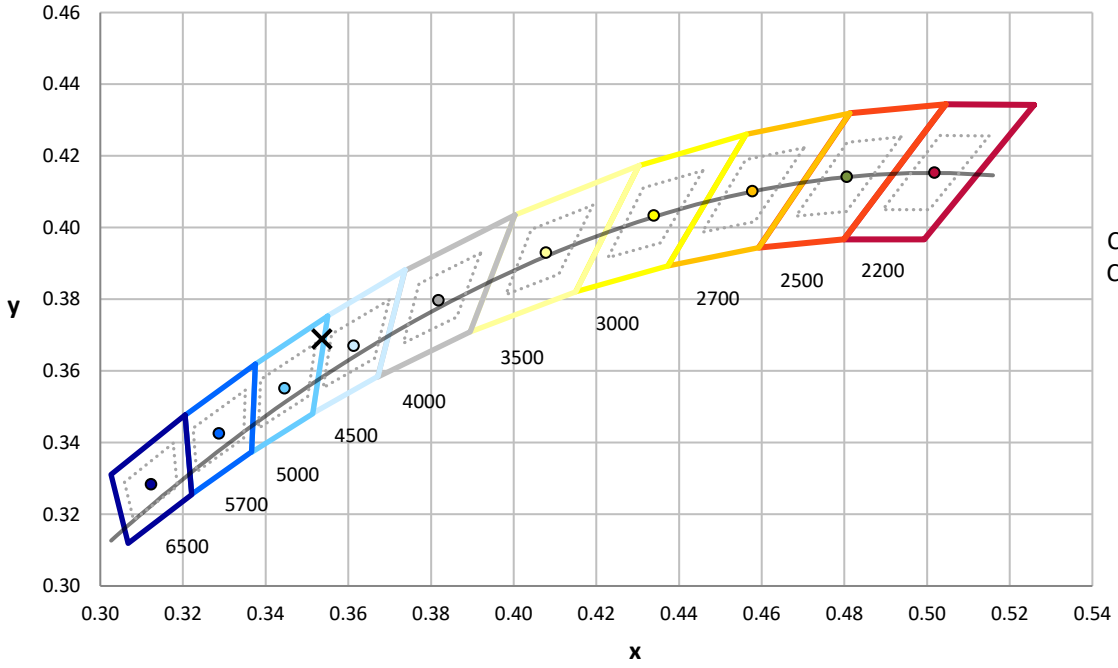
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-17

## CIE 1931 Chromaticity Diagram




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

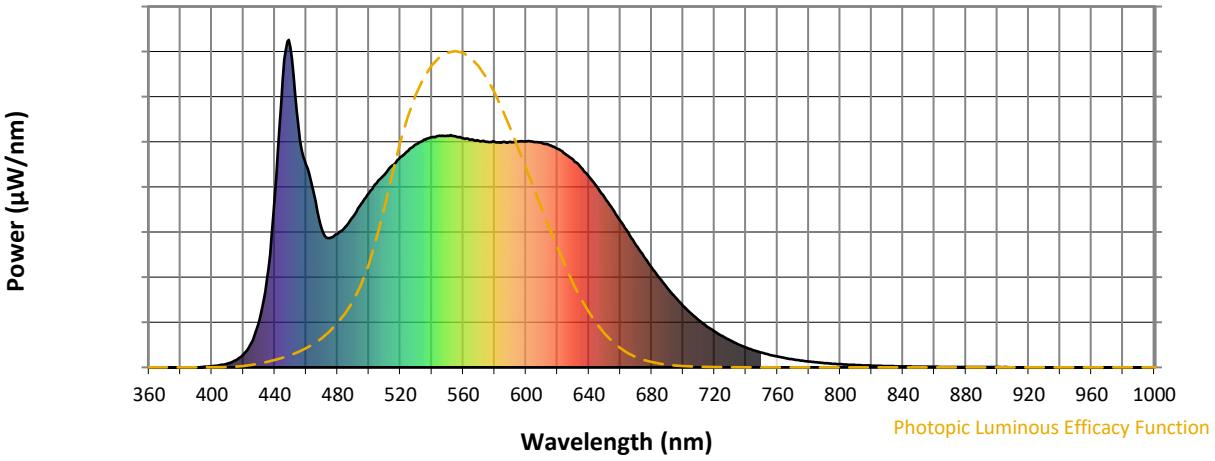



CCT = 4765K
CIE x = 0.3536
CIE y = 0.3689
Duv = 0.0052

Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2407-184-17

## Photopic Flux vs. Wavelength

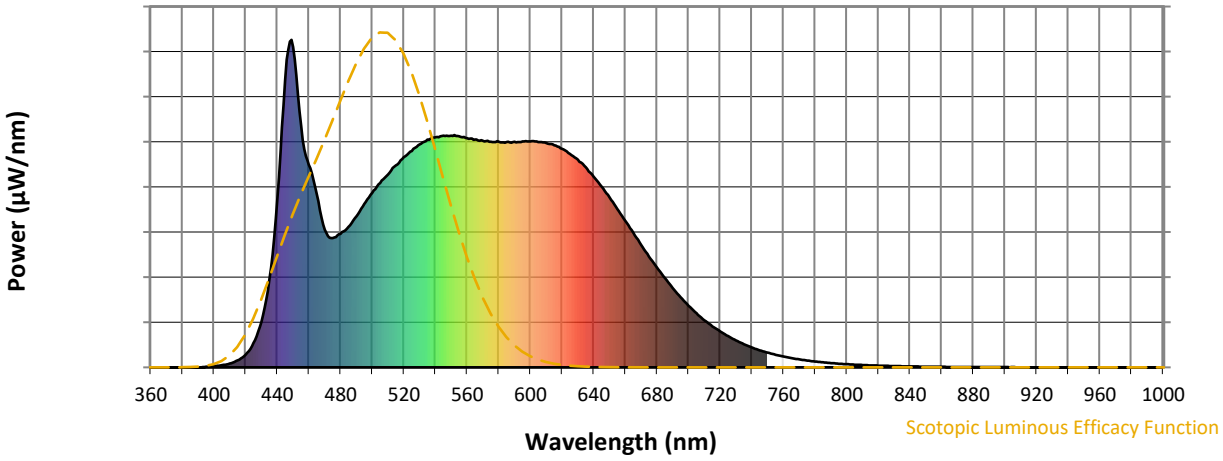



## Photopic Lumens: NR

| 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 | 462 | NR | 620 | 668 | NR | 750 | 45 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 498 | NR | 625 | 652 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 533 | NR | 630 | 634 | NR | 760 | 33 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 562 | NR | 635 | 610 | NR | 765 | 28 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 590 | NR | 640 | 583 | NR | 770 | 24 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 617 | NR | 645 | 552 | NR | 775 | 21 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 642 | NR | 650 | 519 | NR | 780 | 18 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 661 | NR | 655 | 484 | NR | 785 | 15 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 681 | NR | 660 | 448 | NR | 790 | 13 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 695 | NR | 665 | 411 | NR | 795 | 11 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 702 | NR | 670 | 373 | NR | 800 | 10 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 708 | NR | 675 | 338 | NR | 805 | 8 | NR | 935 | 0 | NR |
| 420 | 39 | NR | 550 | 707 | NR | 680 | 305 | NR | 810 | 7 | NR | 940 | 0 | NR |
| 425 | 74 | NR | 555 | 706 | NR | 685 | 272 | NR | 815 | 6 | NR | 945 | 0 | NR |
| 430 | 139 | NR | 560 | 700 | NR | 690 | 243 | NR | 820 | 5 | NR | 950 | 0 | NR |
| 435 | 270 | NR | 565 | 696 | NR | 695 | 214 | NR | 825 | 5 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 692 | NR | 700 | 188 | NR | 830 | 4 | NR | 960 | 0 | NR |
| 445 | 877 | NR | 575 | 689 | NR | 705 | 165 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 978 | NR | 580 | 688 | NR | 710 | 144 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 738 | NR | 585 | 688 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 618 | NR | 590 | 689 | NR | 720 | 110 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 529 | NR | 595 | 690 | NR | 725 | 95 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 420 | NR | 600 | 690 | NR | 730 | 82 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 395 | NR | 605 | 688 | NR | 735 | 71 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 408 | NR | 610 | 685 | NR | 740 | 61 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 429 | NR | 615 | 678 | NR | 745 | 52 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-17

## Scotopic Flux vs. Wavelength

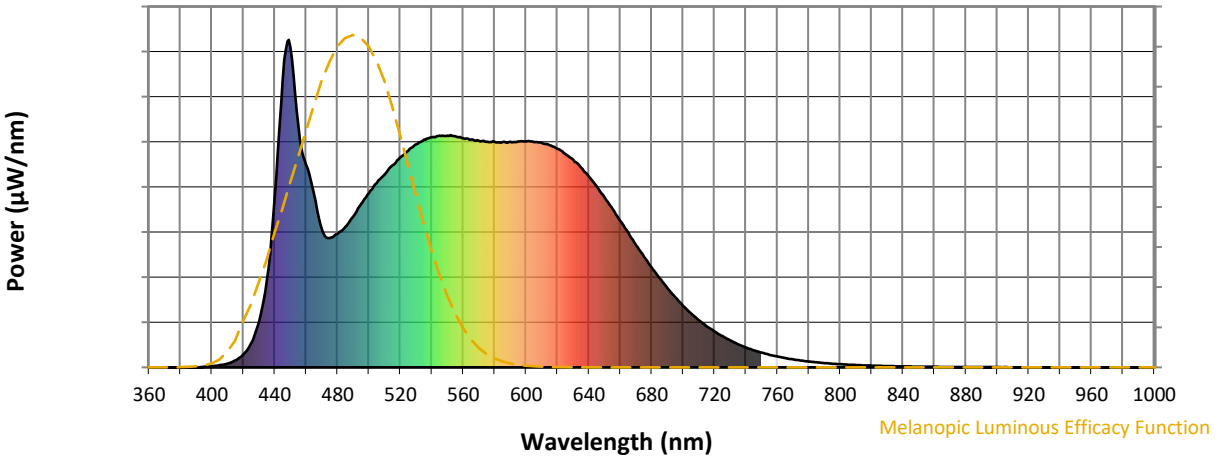



**Scotopic Lumens: NR** **S/P: 1.99**

| 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 | 462 | NR | 620 | 668 | NR | 750 | 45 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 498 | NR | 625 | 652 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 533 | NR | 630 | 634 | NR | 760 | 33 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 562 | NR | 635 | 610 | NR | 765 | 28 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 590 | NR | 640 | 583 | NR | 770 | 24 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 617 | NR | 645 | 552 | NR | 775 | 21 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 642 | NR | 650 | 519 | NR | 780 | 18 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 661 | NR | 655 | 484 | NR | 785 | 15 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 681 | NR | 660 | 448 | NR | 790 | 13 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 695 | NR | 665 | 411 | NR | 795 | 11 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 702 | NR | 670 | 373 | NR | 800 | 10 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 708 | NR | 675 | 338 | NR | 805 | 8 | NR | 935 | 0 | NR |
| 420 | 39 | NR | 550 | 707 | NR | 680 | 305 | NR | 810 | 7 | NR | 940 | 0 | NR |
| 425 | 74 | NR | 555 | 706 | NR | 685 | 272 | NR | 815 | 6 | NR | 945 | 0 | NR |
| 430 | 139 | NR | 560 | 700 | NR | 690 | 243 | NR | 820 | 5 | NR | 950 | 0 | NR |
| 435 | 270 | NR | 565 | 696 | NR | 695 | 214 | NR | 825 | 5 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 692 | NR | 700 | 188 | NR | 830 | 4 | NR | 960 | 0 | NR |
| 445 | 877 | NR | 575 | 689 | NR | 705 | 165 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 978 | NR | 580 | 688 | NR | 710 | 144 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 738 | NR | 585 | 688 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 618 | NR | 590 | 689 | NR | 720 | 110 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 529 | NR | 595 | 690 | NR | 725 | 95 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 420 | NR | 600 | 690 | NR | 730 | 82 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 395 | NR | 605 | 688 | NR | 735 | 71 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 408 | NR | 610 | 685 | NR | 740 | 61 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 429 | NR | 615 | 678 | NR | 745 | 52 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-17

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 4.22**

| 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 | 462 | NR | 620 | 668 | NR | 750 | 45 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 498 | NR | 625 | 652 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 533 | NR | 630 | 634 | NR | 760 | 33 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 562 | NR | 635 | 610 | NR | 765 | 28 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 590 | NR | 640 | 583 | NR | 770 | 24 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 617 | NR | 645 | 552 | NR | 775 | 21 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 642 | NR | 650 | 519 | NR | 780 | 18 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 661 | NR | 655 | 484 | NR | 785 | 15 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 681 | NR | 660 | 448 | NR | 790 | 13 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 695 | NR | 665 | 411 | NR | 795 | 11 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 702 | NR | 670 | 373 | NR | 800 | 10 | NR | 930 | 0 | NR |
| 415 | 21 | NR | 545 | 708 | NR | 675 | 338 | NR | 805 | 8 | NR | 935 | 0 | NR |
| 420 | 39 | NR | 550 | 707 | NR | 680 | 305 | NR | 810 | 7 | NR | 940 | 0 | NR |
| 425 | 74 | NR | 555 | 706 | NR | 685 | 272 | NR | 815 | 6 | NR | 945 | 0 | NR |
| 430 | 139 | NR | 560 | 700 | NR | 690 | 243 | NR | 820 | 5 | NR | 950 | 0 | NR |
| 435 | 270 | NR | 565 | 696 | NR | 695 | 214 | NR | 825 | 5 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 692 | NR | 700 | 188 | NR | 830 | 4 | NR | 960 | 0 | NR |
| 445 | 877 | NR | 575 | 689 | NR | 705 | 165 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 978 | NR | 580 | 688 | NR | 710 | 144 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 738 | NR | 585 | 688 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 618 | NR | 590 | 689 | NR | 720 | 110 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 529 | NR | 595 | 690 | NR | 725 | 95 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 420 | NR | 600 | 690 | NR | 730 | 82 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 395 | NR | 605 | 688 | NR | 735 | 71 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 408 | NR | 610 | 685 | NR | 740 | 61 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 429 | NR | 615 | 678 | NR | 745 | 52 | NR | 875 | 1 | NR | | | |

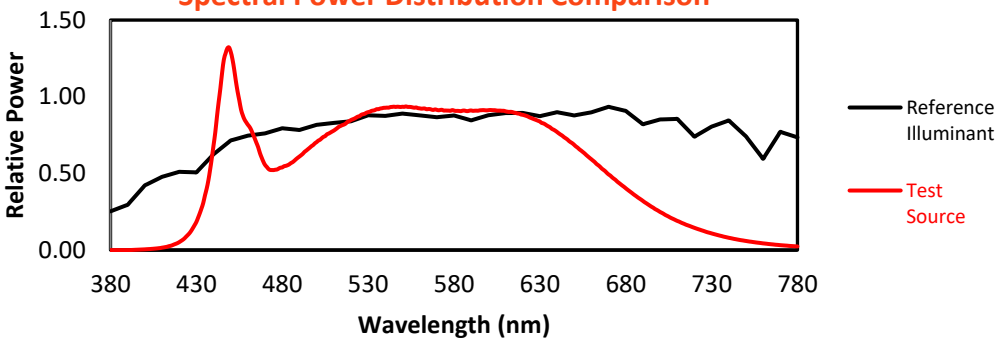
REPORT NUMBER: SP1-2407-184-17

# TM-30-18

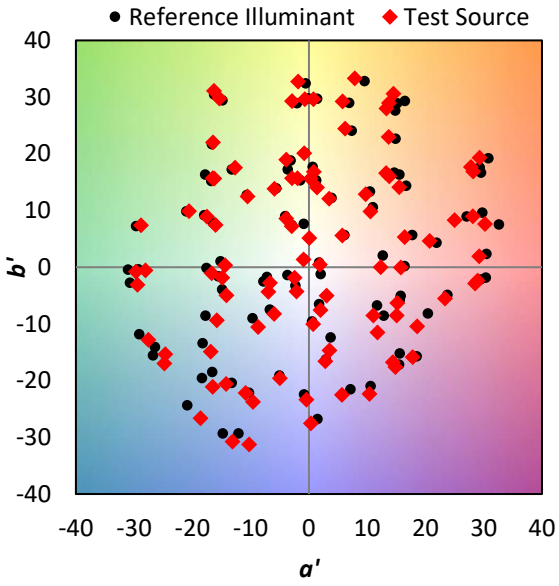
## Summary

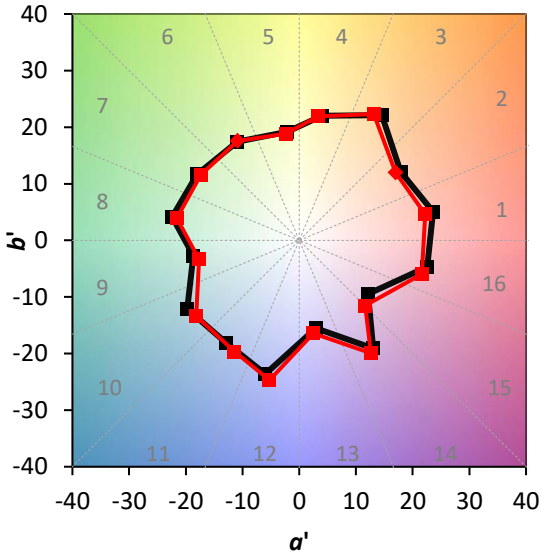
$R_f$ = 90.7
$R_g$ = 98
CIE $R_a$ = 90.8
$R_9$ = 54.9

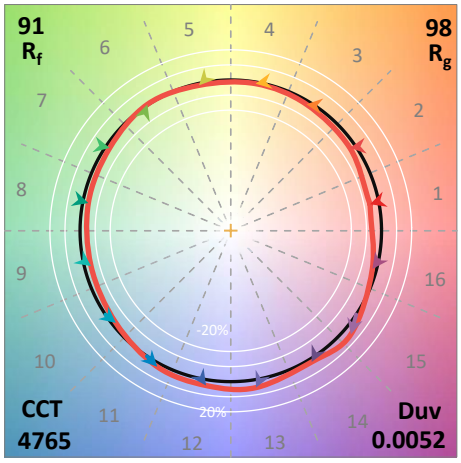
## Spectral Power Distribution Comparison

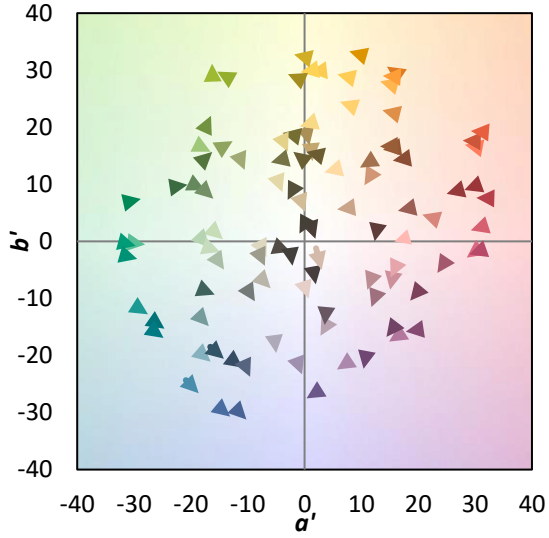



## Color Vector Graphics



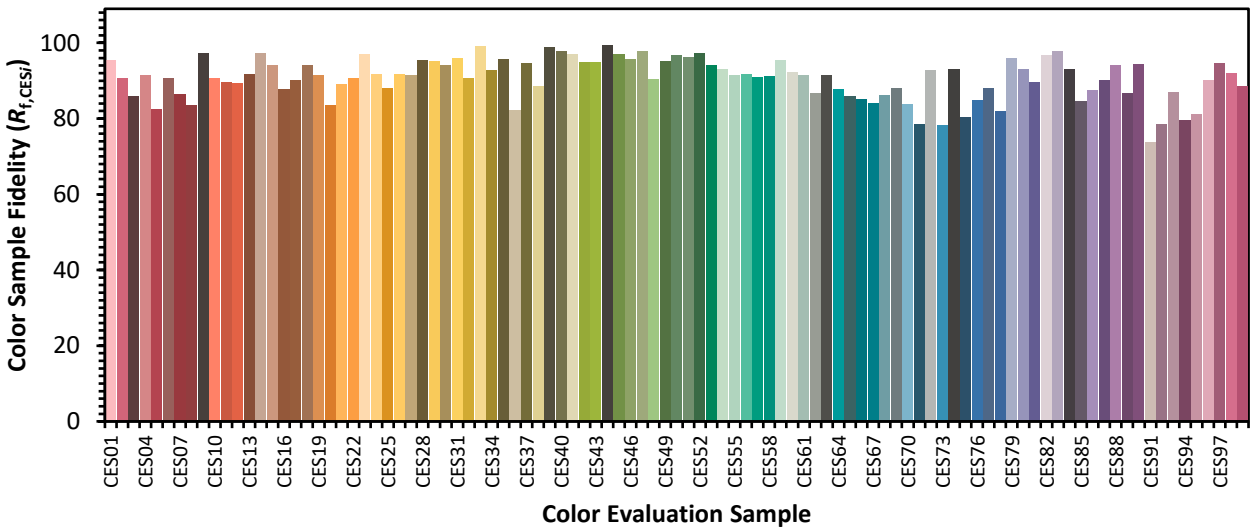



REPORT NUMBER: SP1-2407-184-17

# TM-30-18

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

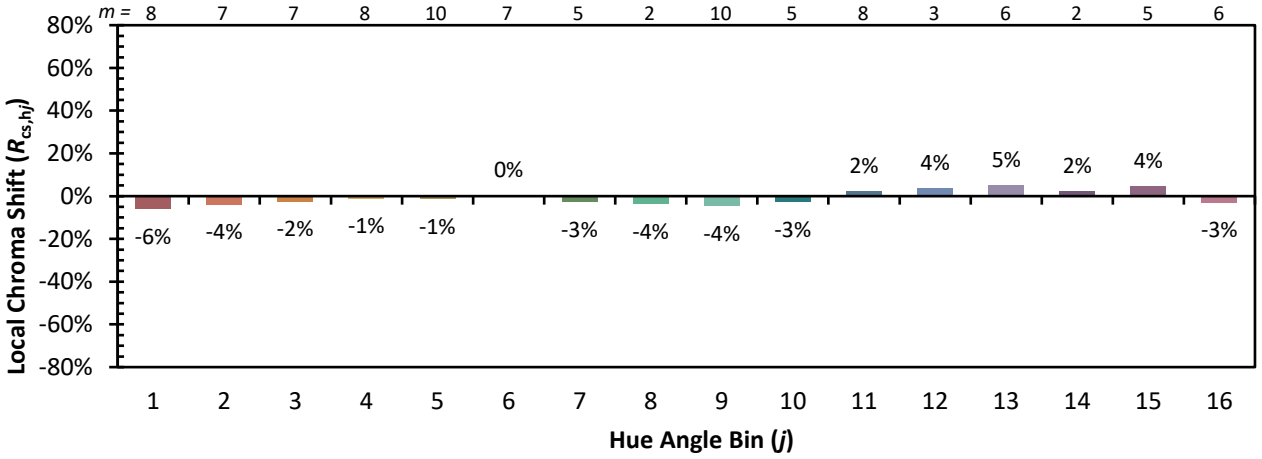
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 92 | CES51 = 96 | CES76 = 85 |
| CES02 = 60 | CES27 = 92 | CES52 = 97 | CES77 = 88 |
| CES03 = 31 | CES28 = 95 | CES53 = 94 | CES78 = 82 |
| CES04 = 69 | CES29 = 95 | CES54 = 93 | CES79 = 96 |
| CES05 = 48 | CES30 = 94 | CES55 = 92 | CES80 = 93 |
| CES06 = 50 | CES31 = 96 | CES56 = 92 | CES81 = 89 |
| CES07 = 41 | CES32 = 91 | CES57 = 91 | CES82 = 97 |
| CES08 = 40 | CES33 = 99 | CES58 = 91 | CES83 = 98 |
| CES09 = 29 | CES34 = 93 | CES59 = 95 | CES84 = 93 |
| CES10 = 73 | CES35 = 96 | CES60 = 92 | CES85 = 85 |
| CES11 = 56 | CES36 = 82 | CES61 = 92 | CES86 = 88 |
| CES12 = 62 | CES37 = 95 | CES62 = 87 | CES87 = 90 |
| CES13 = 42 | CES38 = 89 | CES63 = 91 | CES88 = 94 |
| CES14 = 74 | CES39 = 99 | CES64 = 88 | CES89 = 87 |
| CES15 = 71 | CES40 = 98 | CES65 = 86 | CES90 = 94 |
| CES16 = 46 | CES41 = 97 | CES66 = 85 | CES91 = 74 |
| CES17 = 48 | CES42 = 95 | CES67 = 84 | CES92 = 78 |
| CES18 = 56 | CES43 = 95 | CES68 = 86 | CES93 = 87 |
| CES19 = 70 | CES44 = 100 | CES69 = 88 | CES94 = 80 |
| CES20 = 65 | CES45 = 97 | CES70 = 84 | CES95 = 81 |
| CES21 = 85 | CES46 = 96 | CES71 = 79 | CES96 = 90 |
| CES22 = 77 | CES47 = 98 | CES72 = 93 | CES97 = 95 |
| CES23 = 91 | CES48 = 90 | CES73 = 78 | CES98 = 92 |
| CES24 = 90 | CES49 = 95 | CES74 = 93 | CES99 = 88 |
| CES25 = 70 | CES50 = 97 | CES75 = 80 | |

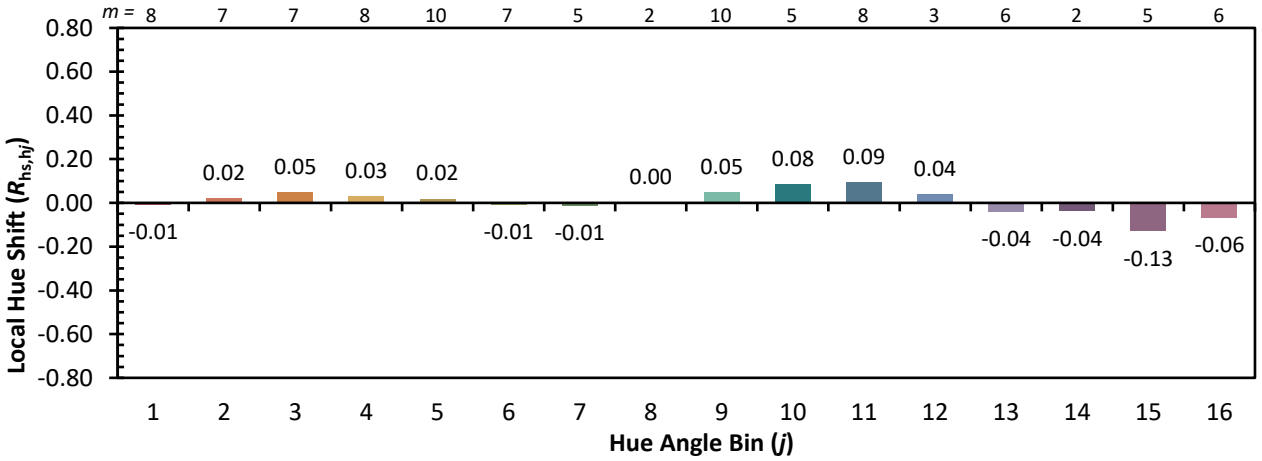


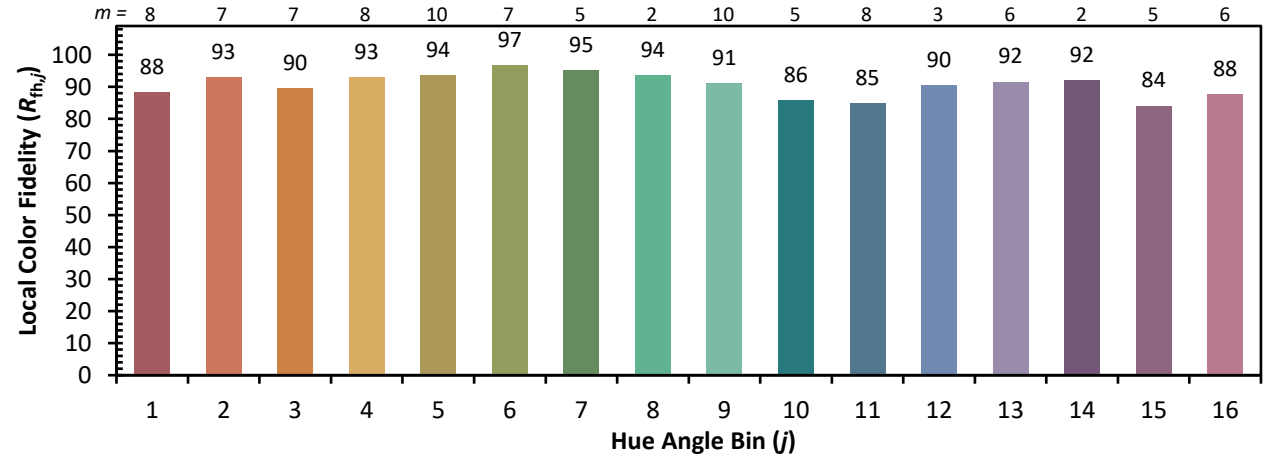
REPORT NUMBER: SP1-2407-184-17

**TM-30-18**

## Color Rendition by Hue-Angle Bin



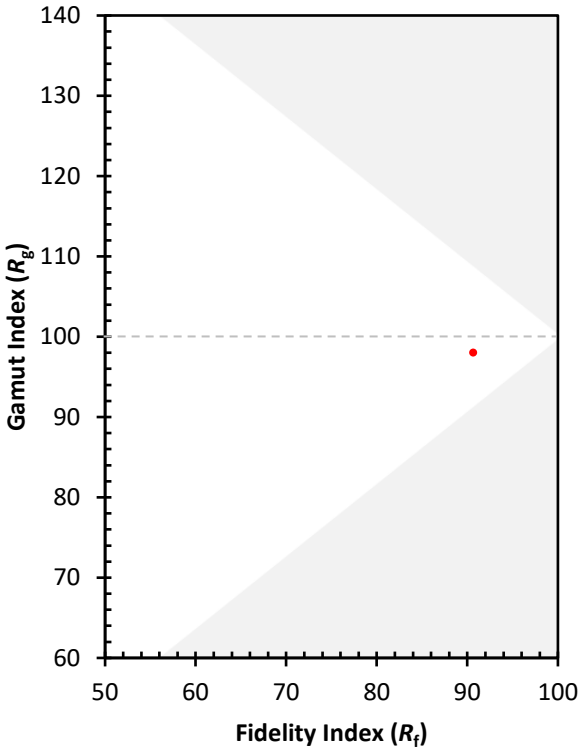



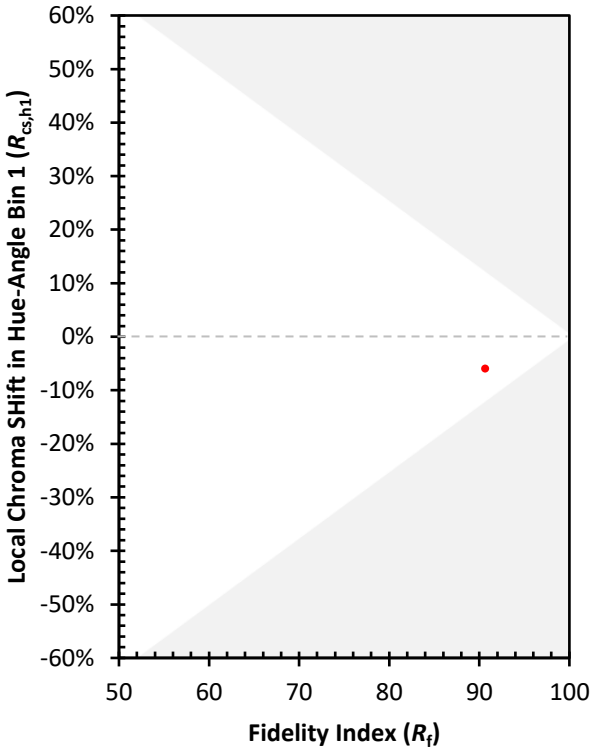



REPORT NUMBER: SP1-2407-184-17

# TM-30-18

## Measure Comparisons




(END OF REPORT)