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: P1457972

Luminaire Tested: GLAN-SB6B-930-U-T2LG-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: | P1457972 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB6B-930-U-T2LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 6xLight Square PACKAGE 90CRI 3000K FIXTURE w/ TYPE II LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (156) 3000K CCT, 90 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 17218.6 lumens |
| Efficiency: | N/A |
| Efficacy: | 78.1 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B2 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 220.4 |
| 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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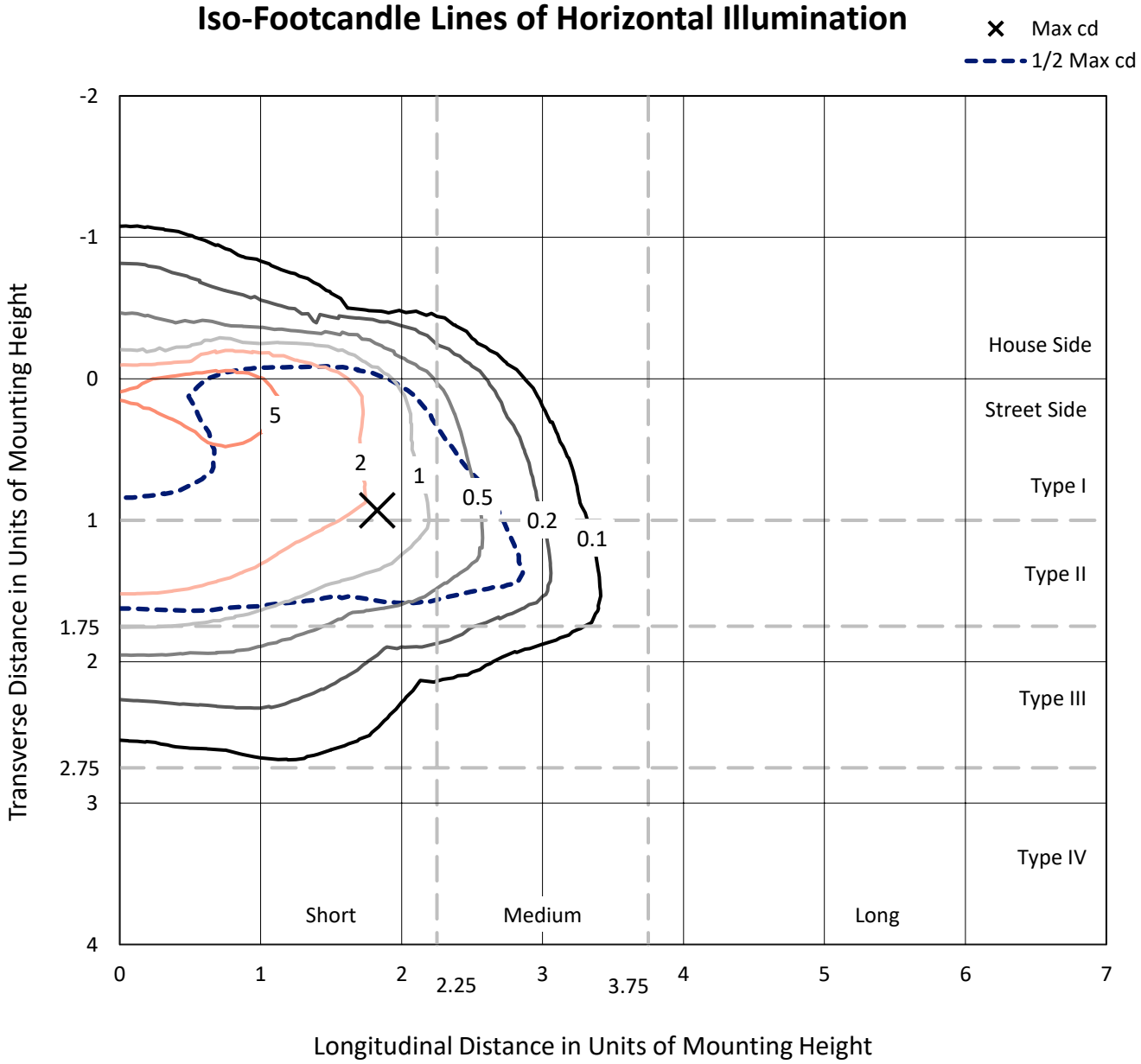
Scaled Data Report

REPORT NUMBER: P1457972
CATALOG NUMBER: GLAN-SB6B-930-U-T2LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 7.9 fc
Type II - Short - N/A

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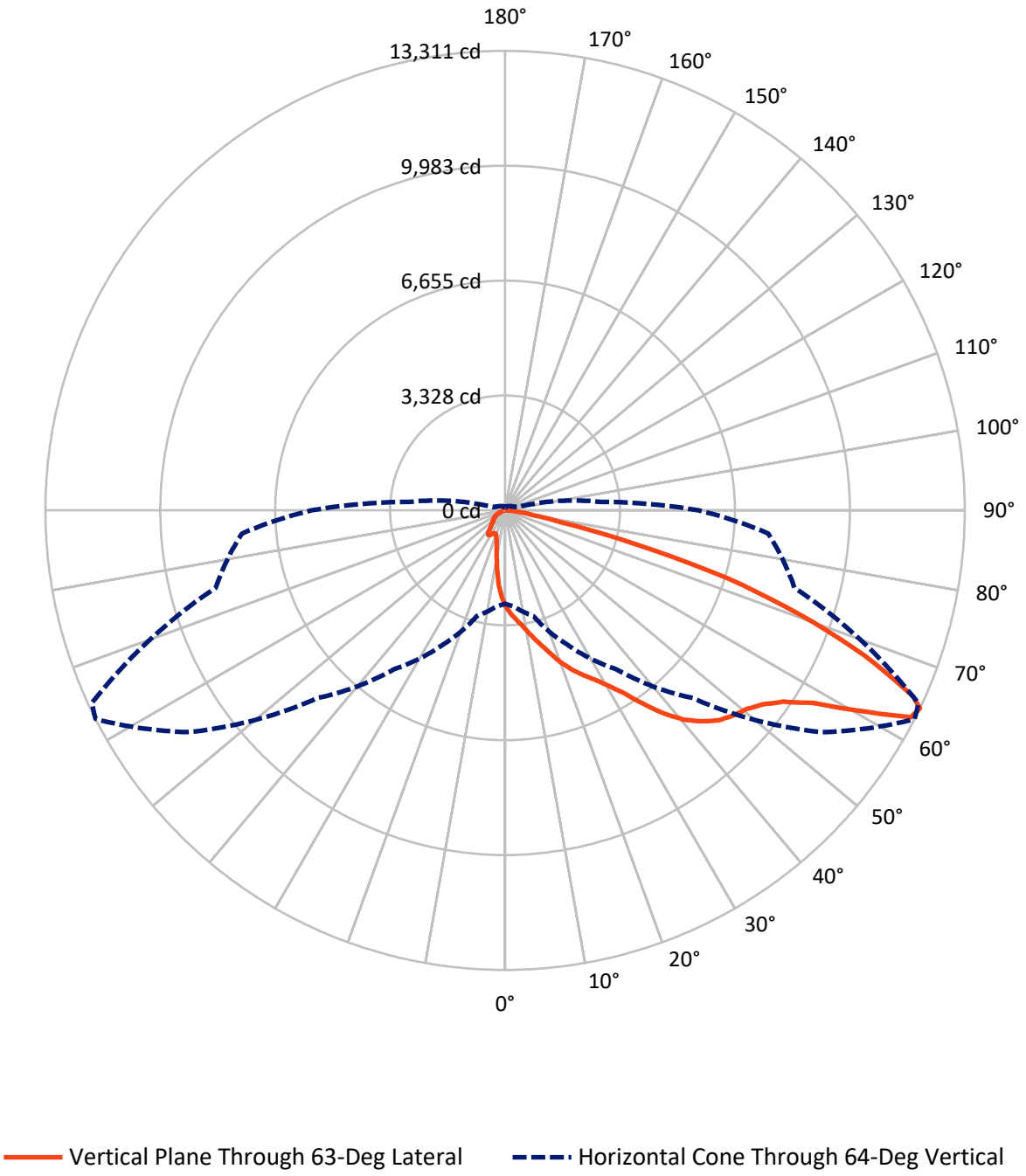
## Luminous Intensity Polar Plot



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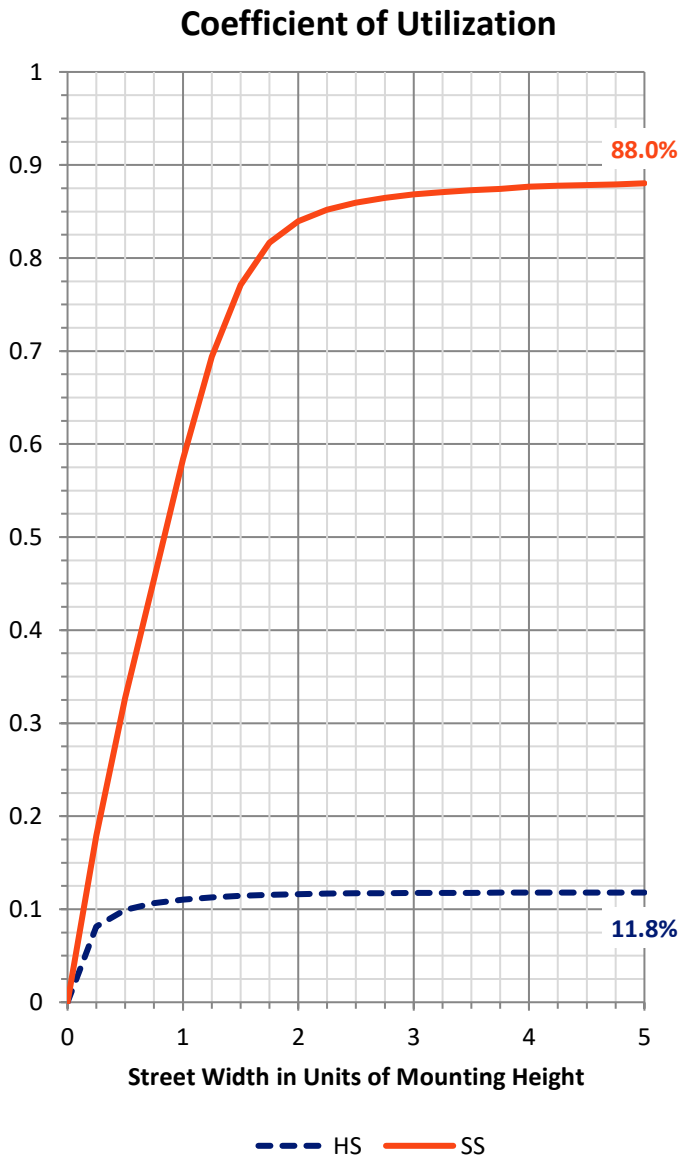
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2043.3 | 0.0 | 2043.3 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| **Street Side** | Lumens | 15175.3 | 0.0 | 15175.3 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| **Total** | Lumens | 17218.6 | 0.0 | 17218.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 234.4 | 1.4 |
| 10°-20° | 658.8 | 3.8 |
| 20°-30° | 1173.4 | 6.8 |
| 30°-40° | 2241.1 | 13.0 |
| 40°-50° | 3714.8 | 21.6 |
| 50°-60° | 4630.5 | 26.9 |
| 60°-70° | 3452.8 | 20.1 |
| 70°-80° | 990.3 | 5.8 |
| 80°-90° | 122.4 | 0.7 |
| 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° | 17218.6 | 100.0 |
| 0°-180° | 17218.6 | 100.0 |



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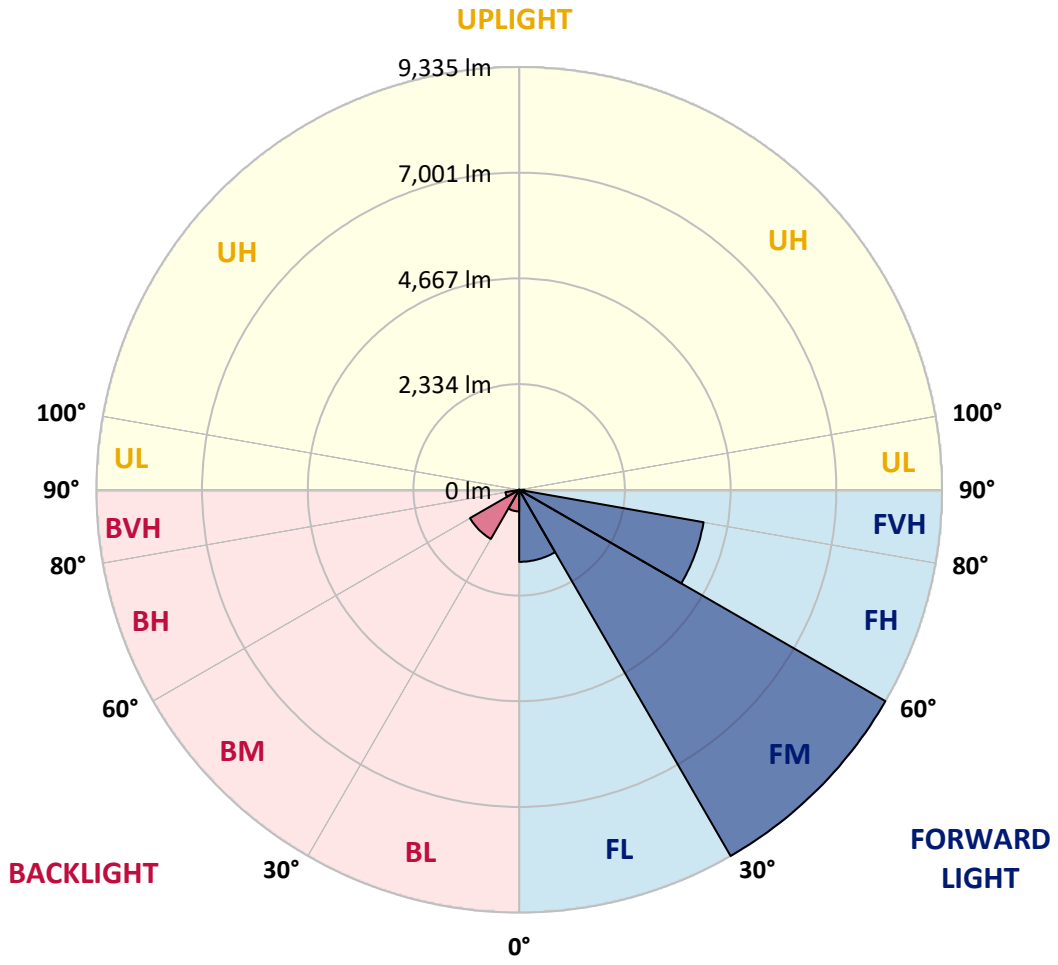
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1589.9 | 9.2 | | | |
| FM | (30°-60°) | 9334.9 | 54.2 | | | |
| FH | (60°-80°) | 4134.0 | 24.0 | | | G2/5000 |
| FVH | (80°-90°) | 116.4 | 0.7 | | | G2/225 |
| BL | (0°-30°) | 476.7 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 1251.5 | 7.3 | B2/2500 | | |
| BH | (60°-80°) | 309.0 | 1.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 6.0 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G2**
Type II Short



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REPORT NUMBER: P1457972
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 63° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | *2784.0* | 2784.0 | 2784.0 | 2784.0 |
| 2.5° | 3119.8 | 3109.4 | 3099.1 | 3083.6 | 3063.0 | 3042.3 | 3016.5 | *2980.3* | 2964.8 | 2913.2 | 2851.2 |
| 5° | 3279.9 | 3279.9 | 3274.7 | 3264.4 | 3254.1 | 3233.4 | 3202.4 | *3155.9* | 3135.3 | 3063.0 | 2954.5 |
| 7.5° | 3321.2 | 3326.4 | 3341.9 | 3362.5 | 3393.5 | 3388.4 | 3388.4 | *3336.7* | 3326.4 | 3248.9 | 3104.3 |
| 10° | 3248.9 | 3254.1 | 3295.4 | 3352.2 | 3445.2 | 3533.0 | 3595.0 | *3564.0* | 3548.5 | 3471.0 | 3290.2 |
| 12.5° | 3145.6 | 3145.6 | 3212.8 | 3300.6 | 3445.2 | 3610.5 | 3791.3 | *3822.2* | 3827.4 | 3739.6 | 3522.7 |
| 15° | 2877.0 | 2887.3 | 2995.8 | 3171.4 | 3409.0 | 3667.3 | 3972.0 | *4090.8* | 4121.8 | 4065.0 | 3806.8 |
| 17.5° | 2520.6 | 2530.9 | 2639.4 | 2877.0 | 3233.4 | 3667.3 | 4127.0 | *4400.7* | 4442.1 | 4452.4 | 4168.3 |
| 20° | 2370.8 | 2370.8 | 2432.8 | 2613.6 | 2985.5 | 3569.2 | 4220.0 | *4731.3* | 4824.3 | 4937.9 | 4566.0 |
| 22.5° | 2391.5 | 2391.5 | 2427.6 | 2530.9 | 2830.5 | 3434.9 | 4276.8 | *5025.7* | 5216.8 | 5506.1 | 5077.4 |
| 25° | 2505.1 | 2505.1 | 2536.1 | 2603.3 | 2846.0 | 3414.2 | 4385.3 | *5289.2* | 5593.9 | 6141.4 | 5661.1 |
| 27.5° | 2685.9 | 2680.7 | 2706.6 | 2773.7 | 2995.8 | 3512.3 | 4566.0 | *5552.6* | 5893.5 | 6854.2 | 6332.5 |
| 30° | 2949.3 | 2933.8 | 2944.2 | 3021.6 | 3238.6 | 3739.6 | 4829.5 | *5888.3* | 6234.4 | 7634.2 | 7076.3 |
| 32.5° | 3558.8 | 3553.7 | 3403.9 | 3362.5 | 3595.0 | 4106.3 | 5191.0 | *6306.7* | 6694.1 | 8460.6 | 7840.8 |
| 35° | 4659.0 | 4731.3 | 4519.5 | 3977.2 | 4023.7 | 4597.0 | 5707.5 | *6874.9* | 7231.3 | 9338.7 | 8672.4 |
| 37.5° | 5774.7 | 5774.7 | 5686.9 | 5046.4 | 4721.0 | 5139.4 | 6265.4 | *7458.5* | 7830.4 | 10046.3 | 9473.0 |
| 40° | 6657.9 | 6704.4 | 6601.1 | 6120.8 | 5697.2 | 5759.2 | 6823.2 | *7969.9* | 8310.8 | 10480.2 | 10041.1 |
| 42.5° | 7313.9 | 7303.6 | 7262.3 | 6947.2 | 6709.6 | 6570.1 | 7329.4 | *8352.1* | 8677.5 | 10702.3 | 10397.5 |
| 45° | 8021.6 | 8021.6 | 7964.7 | 7706.5 | 7510.2 | 7391.4 | 7706.5 | *8672.4* | 9013.3 | 10836.6 | 10619.6 |
| 47.5° | 8760.2 | 8749.8 | 8693.0 | 8408.9 | 8197.2 | 8021.6 | 8088.7 | *8879.0* | 9219.9 | 10748.8 | 10655.8 |
| 50° | 8941.0 | 8930.6 | 9059.8 | 9070.1 | 8879.0 | 8543.2 | 8393.4 | *9054.6* | 9354.2 | 10753.9 | 10769.4 |
| 52.5° | 8729.2 | 8791.2 | 8982.3 | 9214.7 | 9431.7 | 9080.4 | 8718.9 | *9333.5* | 9643.4 | 10898.6 | 11053.5 |
| 55° | 8202.3 | 8228.2 | 8594.9 | 8966.8 | 9473.0 | 9596.9 | 9240.5 | *9777.7* | 10051.5 | 11038.0 | 11306.6 |
| 57.5° | 7220.9 | 7319.1 | 7711.6 | 8357.3 | 9126.9 | 9643.4 | 10149.6 | *10521.5* | 10728.1 | 11094.8 | 11167.2 |
| 60° | 5449.3 | 5500.9 | 6353.2 | 7190.0 | 8408.9 | 9271.5 | 10996.7 | *11781.8* | 11756.0 | 10454.4 | 10190.9 |
| 62.5° | 3316.1 | 3362.5 | 3972.0 | 5299.5 | 6833.6 | 8496.7 | 11280.8 | *13191.9* | 13052.5 | 9374.8 | 8579.4 |
| 64° | *2701.4* | *2789.2* | *3166.3* | *4302.6* | *5619.7* | *7685.8* | *11198.1* | *13310.7* | *13202.2* | *8677.5* | *7644.5* |
| 65° | 2308.8 | 2427.6 | 2815.0 | 3734.4 | 4777.8 | 6812.9 | 10970.9 | *12980.1* | 12907.8 | 8254.0 | 6869.7 |
| 67.5° | 1451.4 | 1508.2 | 2081.6 | 2902.8 | 3290.2 | 4359.4 | 9431.7 | *11224.0* | 11353.1 | 7355.2 | 5067.1 |
| 70° | 1079.5 | 1105.4 | 1430.8 | 2246.9 | 2567.1 | 2536.1 | 6477.2 | *9090.7* | 9121.7 | 5883.2 | 3057.8 |
| 72.5° | 785.1 | 790.3 | 1002.0 | 1663.2 | 2009.3 | 1730.3 | 3414.2 | *6756.1* | 6534.0 | 3445.2 | 1668.4 |
| 75° | 521.7 | 542.3 | 702.5 | 1172.5 | 1565.1 | 1270.6 | 1554.7 | *3848.1* | 3780.9 | 1683.9 | 955.6 |
| 77.5° | 382.2 | 387.4 | 475.2 | 785.1 | 1229.3 | 934.9 | 940.1 | *1658.0* | 1709.7 | 1002.0 | 604.3 |
| 80° | 216.9 | 227.3 | 309.9 | 480.4 | 800.6 | 640.5 | 526.9 | *800.6* | 919.4 | 681.8 | 402.9 |
| 82.5° | 129.1 | 139.5 | 222.1 | 315.1 | 547.5 | 263.4 | 268.6 | *439.0* | 547.5 | 490.7 | 216.9 |
| 85° | 77.5 | 82.6 | 139.5 | 170.5 | 325.4 | 175.6 | 98.1 | *216.9* | 284.1 | 289.3 | 118.8 |
| 87.5° | 51.7 | 51.7 | 77.5 | 72.3 | 93.0 | 82.6 | 41.3 | *56.8* | 72.3 | 98.1 | 46.5 |
| 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: P1457972
CATALOG NUMBER: GLAN-SB6B-930-U-T2LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 | 2784.0 |
| 2.5° | 2799.5 | 2768.5 | 2675.6 | 2551.6 | 2438.0 | 2350.2 | 2241.7 | 2169.4 | 2102.2 | 2102.2 | 2045.4 |
| 5° | 2866.7 | 2784.0 | 2556.8 | 2272.7 | 1967.9 | 1678.7 | 1492.7 | 1286.1 | 1219.0 | 1162.2 | 1172.5 |
| 7.5° | 2980.3 | 2830.5 | 2427.6 | 1916.3 | 1430.8 | 1120.8 | 914.2 | 821.3 | 779.9 | 754.1 | 759.3 |
| 10° | 3119.8 | 2913.2 | 2272.7 | 1554.7 | 1053.7 | 821.3 | 723.1 | 687.0 | 671.5 | 666.3 | 666.3 |
| 12.5° | 3310.9 | 3011.3 | 2117.7 | 1250.0 | 831.6 | 707.6 | 656.0 | 635.3 | 619.8 | 609.5 | 609.5 |
| 15° | 3538.2 | 3135.3 | 1936.9 | 1027.9 | 728.3 | 650.8 | 609.5 | 588.8 | 568.2 | 563.0 | 563.0 |
| 17.5° | 3827.4 | 3264.4 | 1776.8 | 883.2 | 676.6 | 609.5 | 568.2 | 542.3 | 526.9 | 521.7 | 521.7 |
| 20° | 4147.7 | 3424.5 | 1616.7 | 800.6 | 640.5 | 568.2 | 526.9 | 506.2 | 490.7 | 480.4 | 485.5 |
| 22.5° | 4555.7 | 3626.0 | 1513.4 | 759.3 | 609.5 | 532.0 | 490.7 | 470.0 | 454.5 | 444.2 | 449.4 |
| 25° | 5005.1 | 3879.1 | 1456.6 | 759.3 | 588.8 | 506.2 | 459.7 | 439.0 | 423.5 | 413.2 | 413.2 |
| 27.5° | 5552.6 | 4163.1 | 1461.8 | 790.3 | 583.7 | 485.5 | 433.9 | 413.2 | 397.7 | 382.2 | 382.2 |
| 30° | 6156.9 | 4498.9 | 1518.6 | 847.1 | 594.0 | 464.9 | 413.2 | 382.2 | 371.9 | 356.4 | 356.4 |
| 32.5° | 6797.4 | 4886.3 | 1663.2 | 919.4 | 583.7 | 439.0 | 382.2 | 356.4 | 340.9 | 330.6 | 330.6 |
| 35° | 7474.0 | 5325.3 | 1844.0 | 950.4 | 532.0 | 402.9 | 356.4 | 330.6 | 320.2 | 315.1 | 309.9 |
| 37.5° | 8119.7 | 5707.5 | 1942.1 | 888.4 | 464.9 | 371.9 | 325.4 | 299.6 | 294.4 | 284.1 | 284.1 |
| 40° | 8620.7 | 6022.6 | 1885.3 | 759.3 | 428.7 | 340.9 | 299.6 | 273.8 | 263.4 | 253.1 | 253.1 |
| 42.5° | 8915.1 | 6136.3 | 1678.7 | 645.6 | 402.9 | 309.9 | 273.8 | 247.9 | 237.6 | 232.4 | 232.4 |
| 45° | 9085.6 | 6120.8 | 1435.9 | 578.5 | 377.1 | 284.1 | 247.9 | 232.4 | 216.9 | 211.8 | 206.6 |
| 47.5° | 9080.4 | 5960.6 | 1260.3 | 521.7 | 351.2 | 263.4 | 232.4 | 216.9 | 201.4 | 196.3 | 196.3 |
| 50° | 9044.3 | 5723.0 | 1064.0 | 480.4 | 330.6 | 247.9 | 216.9 | 206.6 | 191.1 | 185.9 | 180.8 |
| 52.5° | 9132.1 | 5588.7 | 888.4 | 454.5 | 304.7 | 237.6 | 211.8 | 196.3 | 175.6 | 170.5 | 170.5 |
| 55° | 9240.5 | 5511.3 | 712.8 | 428.7 | 284.1 | 232.4 | 201.4 | 185.9 | 165.3 | 160.1 | 160.1 |
| 57.5° | 8925.5 | 5216.8 | 588.8 | 387.4 | 258.3 | 222.1 | 191.1 | 180.8 | 160.1 | 144.6 | 144.6 |
| 60° | 7933.7 | 4312.9 | 485.5 | 340.9 | 237.6 | 206.6 | 180.8 | 165.3 | 144.6 | 124.0 | 124.0 |
| 62.5° | 6451.3 | 3290.2 | 402.9 | 289.3 | 222.1 | 191.1 | 165.3 | 149.8 | 124.0 | 98.1 | 98.1 |
| 64° | *5604.2* | *2794.4* | *361.6* | *253.1* | *211.8* | *175.6* | *149.8* | *134.3* | *108.5* | *82.6* | *77.5* |
| 65° | 5025.7 | 2469.0 | 335.7 | 237.6 | 206.6 | 165.3 | 144.6 | 129.1 | 98.1 | 77.5 | 72.3 |
| 67.5° | 3538.2 | 1658.0 | 268.6 | 196.3 | 180.8 | 139.5 | 124.0 | 108.5 | 87.8 | 67.1 | 62.0 |
| 70° | 2060.9 | 940.1 | 211.8 | 165.3 | 139.5 | 108.5 | 103.3 | 98.1 | 77.5 | 51.7 | 51.7 |
| 72.5° | 1120.8 | 470.0 | 160.1 | 134.3 | 108.5 | 77.5 | 87.8 | 77.5 | 62.0 | 41.3 | 36.2 |
| 75° | 687.0 | 289.3 | 118.8 | 98.1 | 72.3 | 56.8 | 67.1 | 56.8 | 36.2 | 25.8 | 20.7 |
| 77.5° | 459.7 | 185.9 | 87.8 | 67.1 | 46.5 | 36.2 | 46.5 | 31.0 | 15.5 | 5.2 | 5.2 |
| 80° | 284.1 | 129.1 | 56.8 | 41.3 | 25.8 | 15.5 | 10.3 | 5.2 | 5.2 | 0.0 | 0.0 |
| 82.5° | 124.0 | 82.6 | 31.0 | 20.7 | 10.3 | 5.2 | 5.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 67.1 | 25.8 | 10.3 | 5.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 20.7 | 10.3 | 5.2 | 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: SP1-2407-184-14

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-930-U-5WQ

Data in this report applies to families of products including GSS-SB1A-930-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

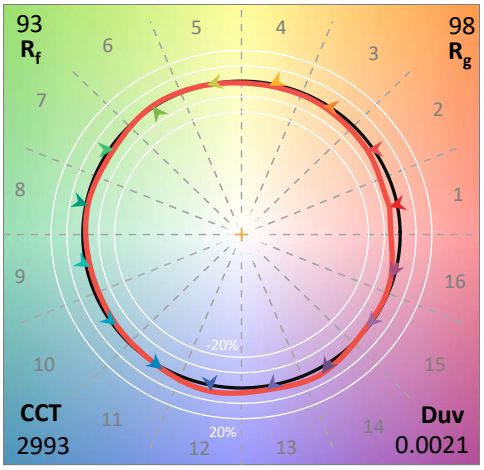
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-14 |
| 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-930-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 90 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2993 |
| CIE u': | 0.2501 |
| CIE v': | 0.5245 |
| Duv: | 0.0021 |
| CIE x: | 0.4406 |
| CIE y: | 0.4107 |
| CIE z: | 0.1487 |
| Peak Wavelength (nm): | 621 |
| Dominant Wavelength (nm): | 582 |
| Purity: | 55.53327 |
| Rf: | 92.6 |
| Rg: | 98.5 |

| | |
|---|---|
| CRI (Ra): | 92.4 |
| R1: | 92.2 |
| R2: | 95.2 |
| R3: | 97.0 |
| R4: | 93.1 |
| R5: | 91.7 |
| R6: | 94.2 |
| R7: | 93.3 |
| R8: | 82.3 |
| R9: | 58.2 |
| R10: | 87.7 |
| R11: | 93.5 |
| R12: | 81.7 |
| R13: | 92.9 |
| R14: | 97.6 |
| R15: | 88.1 |




## Test Conditions

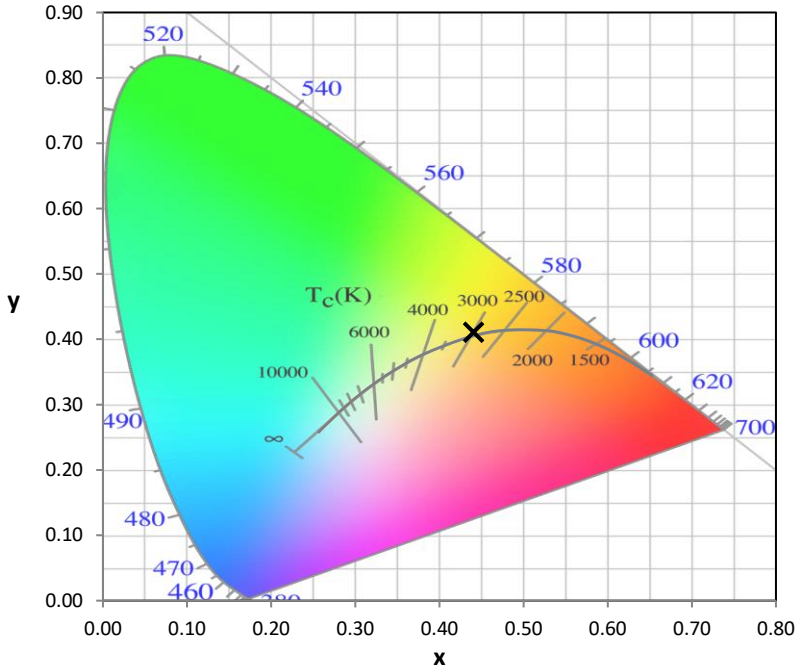
| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-14

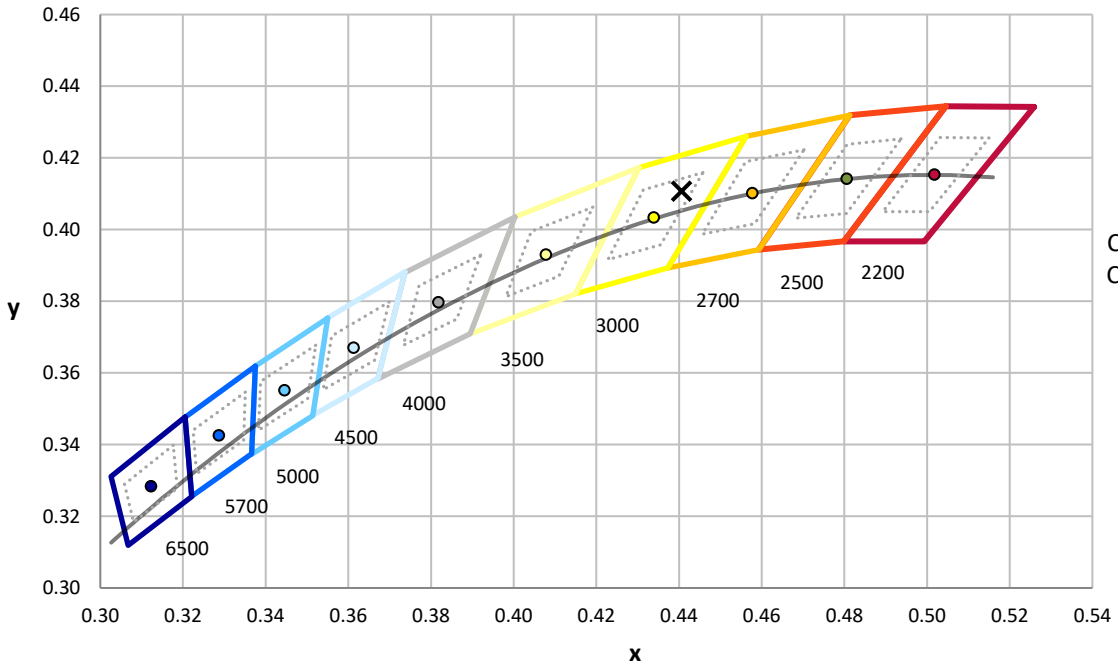
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-14

## CIE 1931 Chromaticity Diagram




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

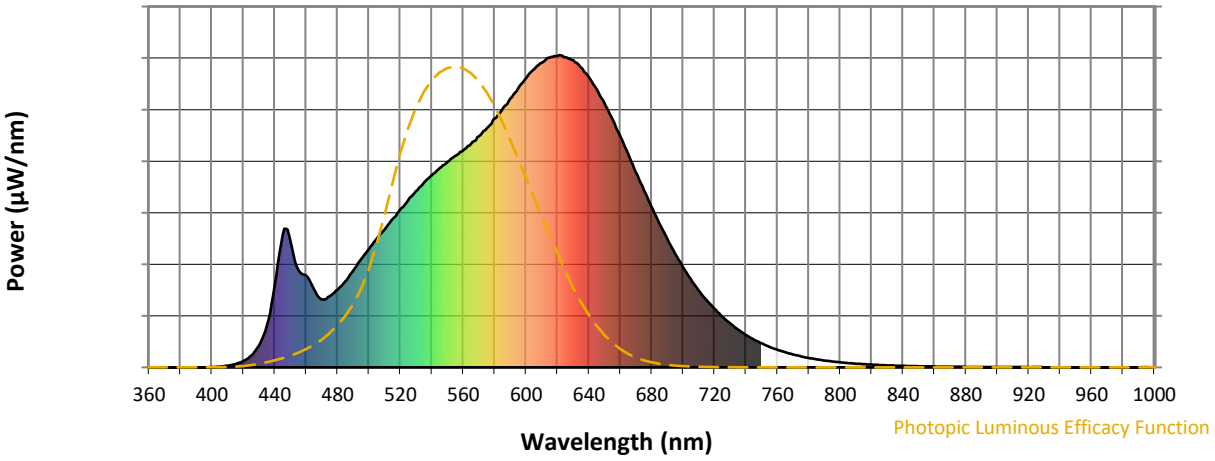



CCT = 2993K
CIE x = 0.4406
CIE y = 0.4107
Duv = 0.0021

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-14

## Photopic Flux vs. Wavelength

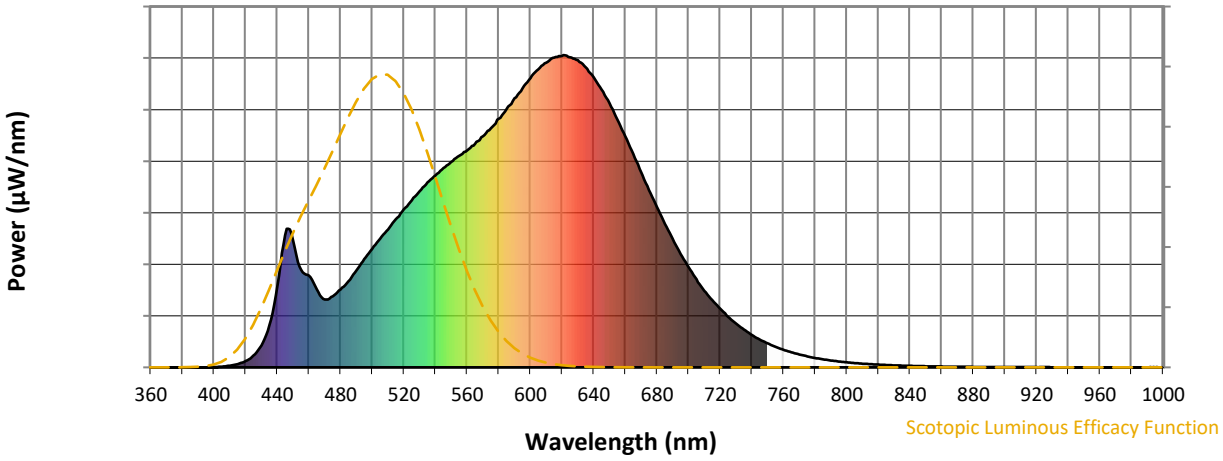



## Photopic Lumens: NR

| 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 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-14

## Scotopic Flux vs. Wavelength

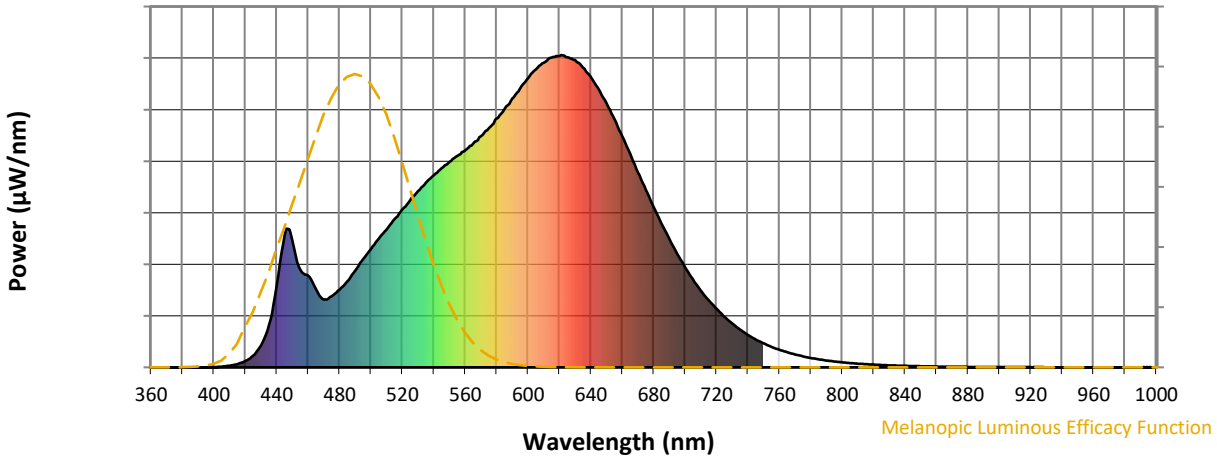



**Scotopic Lumens: NR** **S/P: 1.39**

| 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 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-14

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.69**

| 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 | 310 | NR | 620 | 998 | NR | 750 | 77 | NR | 880 | 2 | NR |
| 365 | 0 | NR | 495 | 347 | NR | 625 | 993 | NR | 755 | 66 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 379 | NR | 630 | 983 | NR | 760 | 56 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 412 | NR | 635 | 960 | NR | 765 | 48 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 442 | NR | 640 | 930 | NR | 770 | 41 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 475 | NR | 645 | 889 | NR | 775 | 35 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 506 | NR | 650 | 846 | NR | 780 | 30 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 535 | NR | 655 | 794 | NR | 785 | 26 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 565 | NR | 660 | 740 | NR | 790 | 22 | NR | 920 | 1 | NR |
| 405 | 2 | NR | 535 | 592 | NR | 665 | 684 | NR | 795 | 19 | NR | 925 | 1 | NR |
| 410 | 6 | NR | 540 | 615 | NR | 670 | 624 | NR | 800 | 16 | NR | 930 | 0 | NR |
| 415 | 10 | NR | 545 | 638 | NR | 675 | 567 | NR | 805 | 14 | NR | 935 | 0 | NR |
| 420 | 20 | NR | 550 | 658 | NR | 680 | 513 | NR | 810 | 12 | NR | 940 | 0 | NR |
| 425 | 38 | NR | 555 | 678 | NR | 685 | 459 | NR | 815 | 10 | NR | 945 | 0 | NR |
| 430 | 70 | NR | 560 | 695 | NR | 690 | 412 | NR | 820 | 9 | NR | 950 | 0 | NR |
| 435 | 136 | NR | 565 | 716 | NR | 695 | 363 | NR | 825 | 8 | NR | 955 | 0 | NR |
| 440 | 262 | NR | 570 | 740 | NR | 700 | 320 | NR | 830 | 7 | NR | 960 | 0 | NR |
| 445 | 424 | NR | 575 | 765 | NR | 705 | 281 | NR | 835 | 6 | NR | 965 | 0 | NR |
| 450 | 406 | NR | 580 | 796 | NR | 710 | 245 | NR | 840 | 5 | NR | 970 | 0 | NR |
| 455 | 313 | NR | 585 | 827 | NR | 715 | 215 | NR | 845 | 4 | NR | 975 | 0 | NR |
| 460 | 294 | NR | 590 | 861 | NR | 720 | 188 | NR | 850 | 4 | NR | 980 | 0 | NR |
| 465 | 250 | NR | 595 | 894 | NR | 725 | 162 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 217 | NR | 600 | 927 | NR | 730 | 140 | NR | 860 | 3 | NR | 990 | 0 | NR |
| 475 | 228 | NR | 605 | 954 | NR | 735 | 121 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 249 | NR | 610 | 976 | NR | 740 | 104 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 276 | NR | 615 | 992 | NR | 745 | 89 | NR | 875 | 2 | NR | | | |

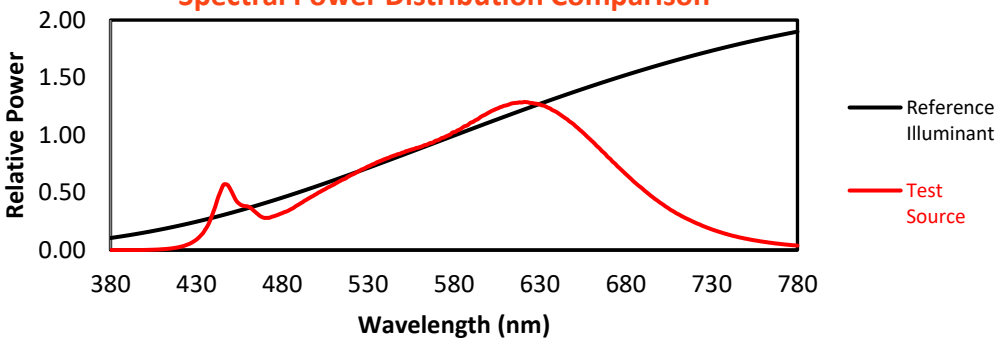
REPORT NUMBER: SP1-2407-184-14

# TM-30-18

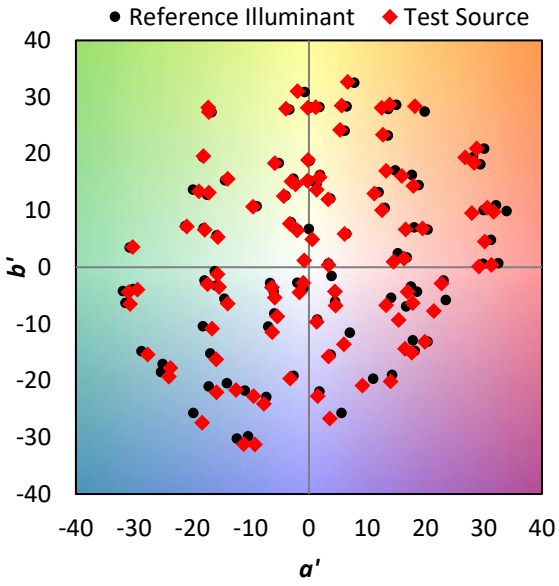
## Summary

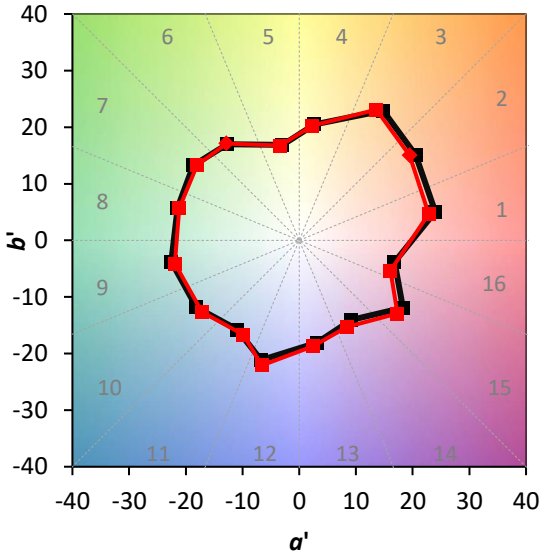
$R_f$ = 92.6
$R_g$ = 98.5
CIE $R_a$ = 92.4
$R_9$ = 58.2

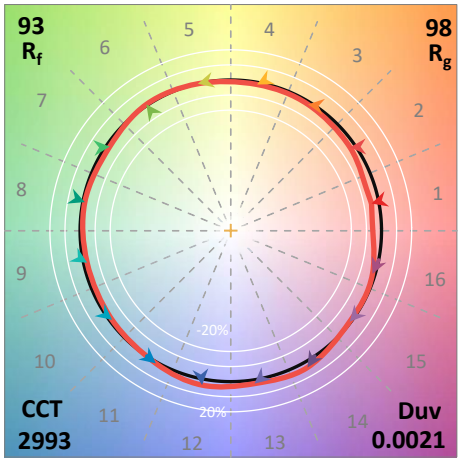
## Spectral Power Distribution Comparison

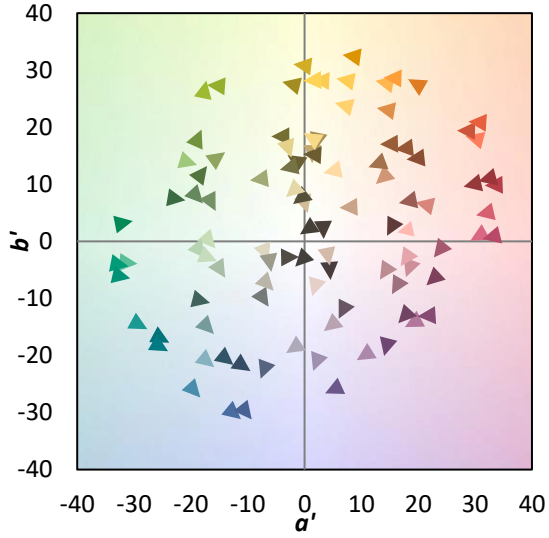



## Color Vector Graphics



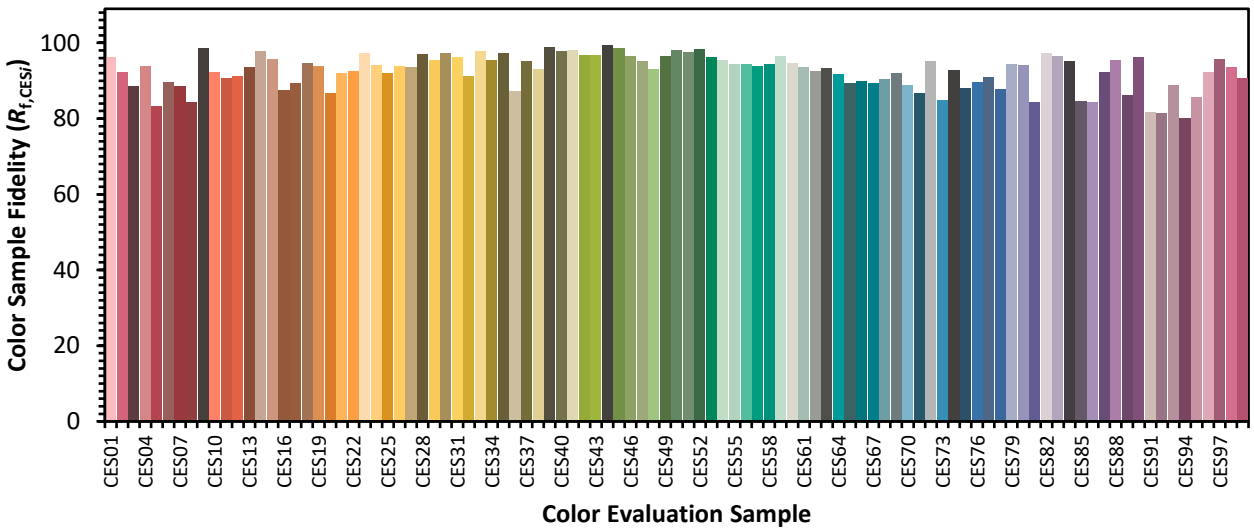



REPORT NUMBER: SP1-2407-184-14

# TM-30-18

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

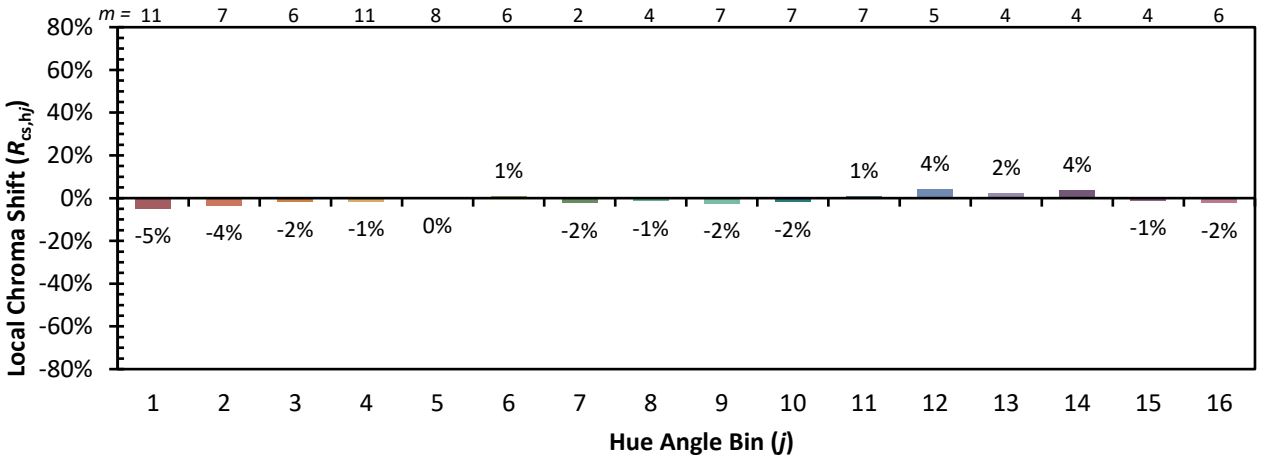
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 94 | CES51 = 98 | CES76 = 90 |
| CES02 = 63 | CES27 = 94 | CES52 = 98 | CES77 = 91 |
| CES03 = 32 | CES28 = 97 | CES53 = 96 | CES78 = 88 |
| CES04 = 70 | CES29 = 95 | CES54 = 95 | CES79 = 94 |
| CES05 = 51 | CES30 = 97 | CES55 = 94 | CES80 = 94 |
| CES06 = 51 | CES31 = 96 | CES56 = 94 | CES81 = 84 |
| CES07 = 43 | CES32 = 91 | CES57 = 94 | CES82 = 97 |
| CES08 = 42 | CES33 = 98 | CES58 = 94 | CES83 = 97 |
| CES09 = 29 | CES34 = 96 | CES59 = 97 | CES84 = 95 |
| CES10 = 76 | CES35 = 97 | CES60 = 95 | CES85 = 85 |
| CES11 = 59 | CES36 = 87 | CES61 = 94 | CES86 = 84 |
| CES12 = 65 | CES37 = 95 | CES62 = 92 | CES87 = 92 |
| CES13 = 44 | CES38 = 93 | CES63 = 93 | CES88 = 95 |
| CES14 = 74 | CES39 = 99 | CES64 = 92 | CES89 = 86 |
| CES15 = 72 | CES40 = 98 | CES65 = 89 | CES90 = 96 |
| CES16 = 48 | CES41 = 98 | CES66 = 90 | CES91 = 82 |
| CES17 = 50 | CES42 = 97 | CES67 = 89 | CES92 = 81 |
| CES18 = 57 | CES43 = 97 | CES68 = 90 | CES93 = 89 |
| CES19 = 72 | CES44 = 99 | CES69 = 92 | CES94 = 80 |
| CES20 = 67 | CES45 = 99 | CES70 = 89 | CES95 = 86 |
| CES21 = 86 | CES46 = 96 | CES71 = 87 | CES96 = 92 |
| CES22 = 79 | CES47 = 95 | CES72 = 95 | CES97 = 96 |
| CES23 = 92 | CES48 = 93 | CES73 = 85 | CES98 = 94 |
| CES24 = 91 | CES49 = 97 | CES74 = 93 | CES99 = 91 |
| CES25 = 72 | CES50 = 98 | CES75 = 88 | |

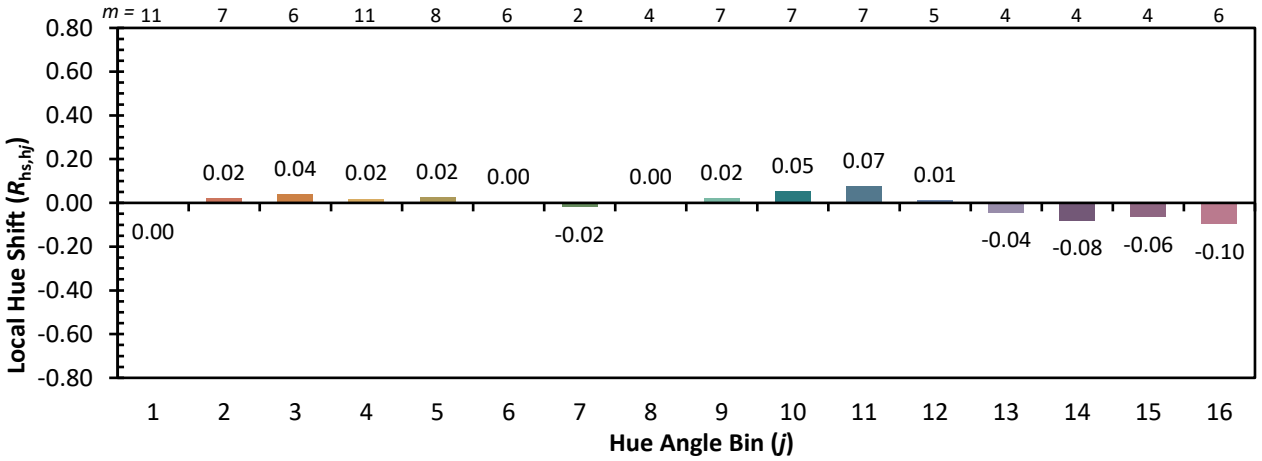


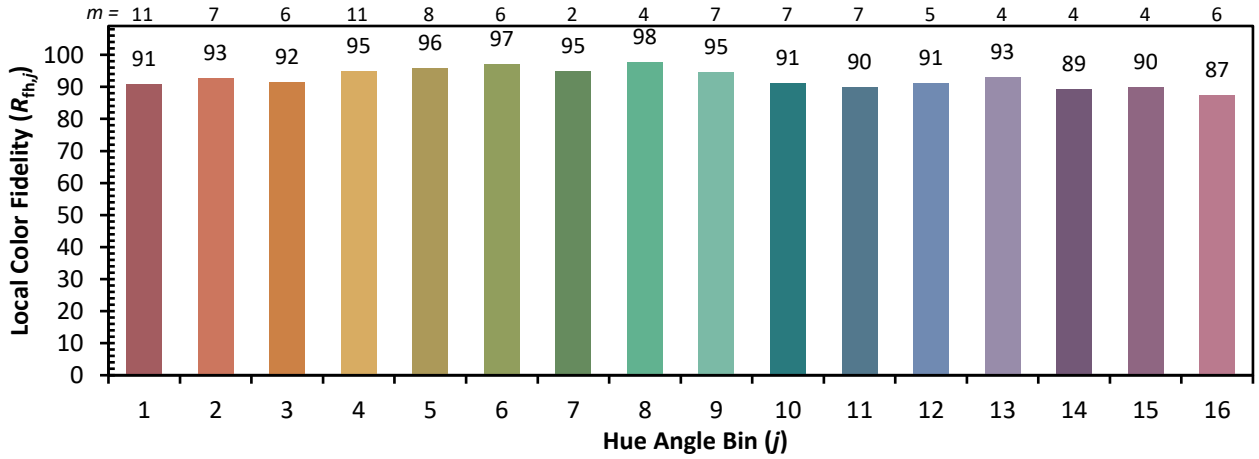
REPORT NUMBER: SP1-2407-184-14

# TM-30-18

## Color Rendition by Hue-Angle Bin



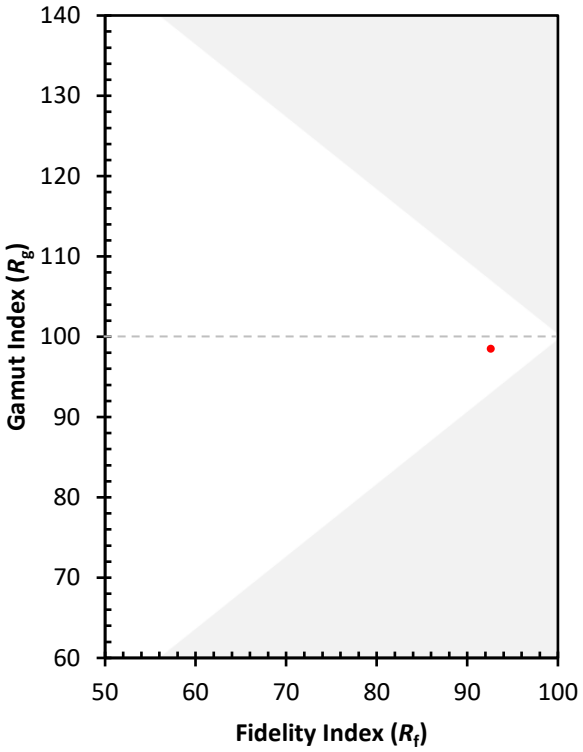



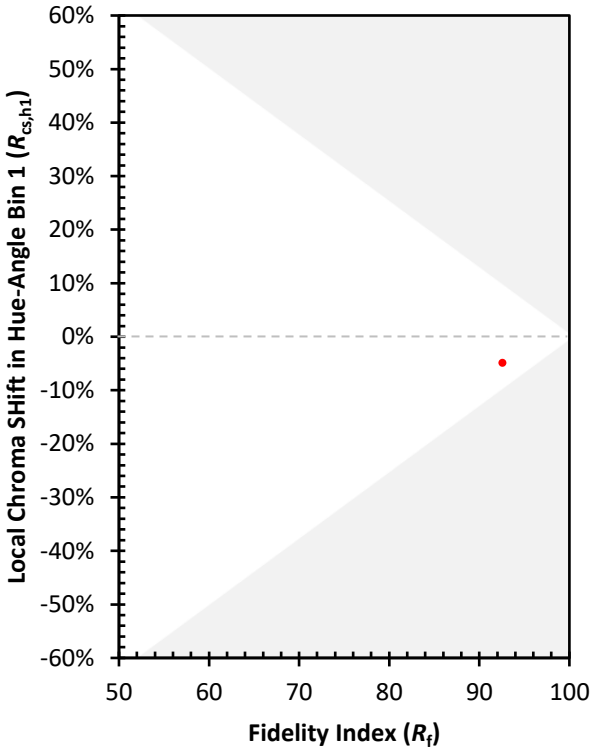



REPORT NUMBER: SP1-2407-184-14

# TM-30-18

## Measure Comparisons




(END OF REPORT)