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: P1358467

Luminaire Tested: **GSS-SB4A-735-U-SL4**

Issue Date: 02/18/2026

Report Generated By 670245763

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: | P1358467 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB4A-735-U-SL4 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 4SQUARE 114W 70CRI 3500K FIXTURE w/ TYPE IV SPILL CONTROL DISTRIBUTION OPTIC |
| Light Source: | (104) 3500K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 16694.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 146.4 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B3 - U0 - G3 |

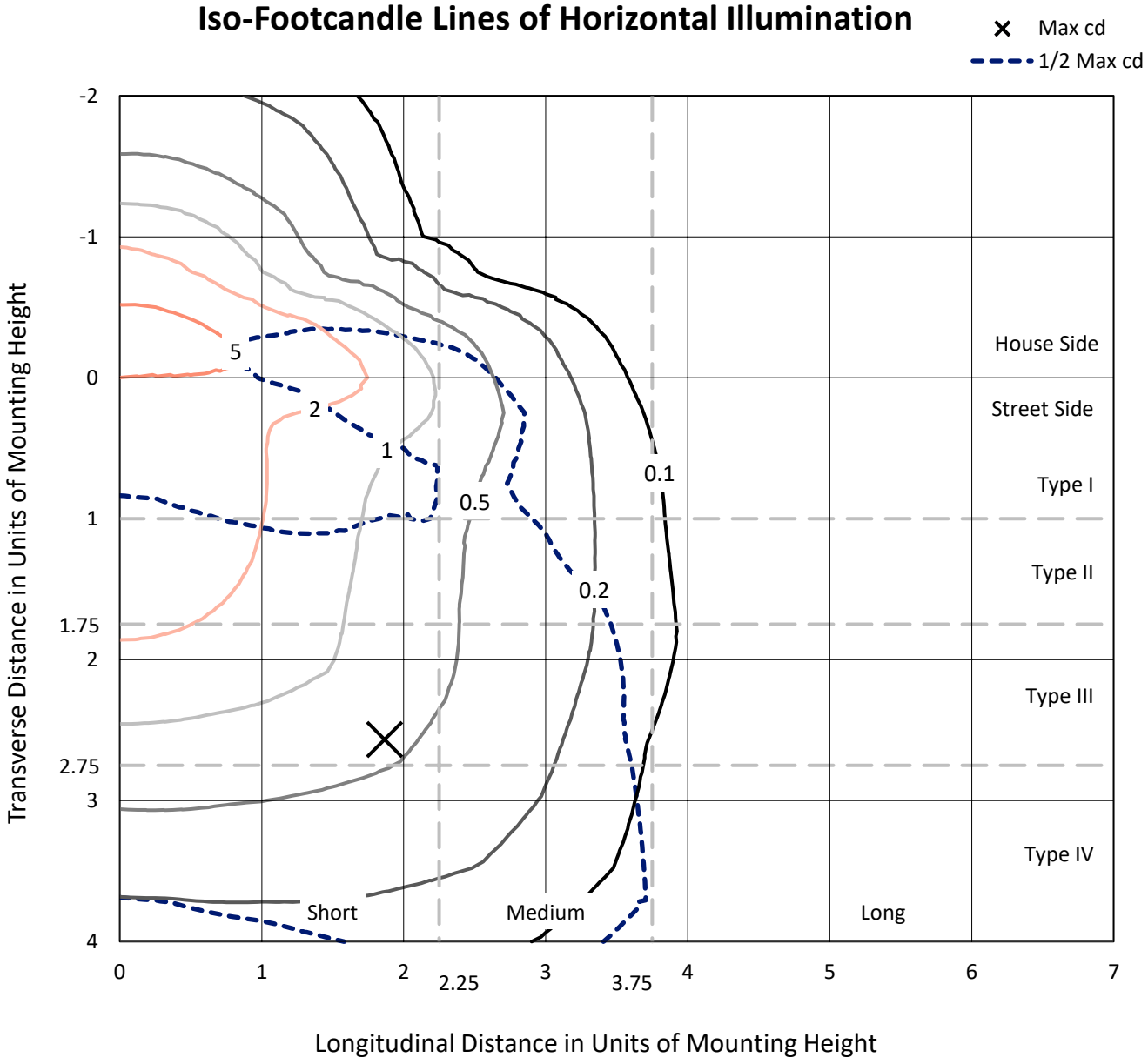
| | |
|---|---|
| Input Watts (W): | 114 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 8.2% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1358467
CATALOG NUMBER: GSS-SB4A-735-U-SL4

## Iso-Footcandle Lines of Horizontal Illumination



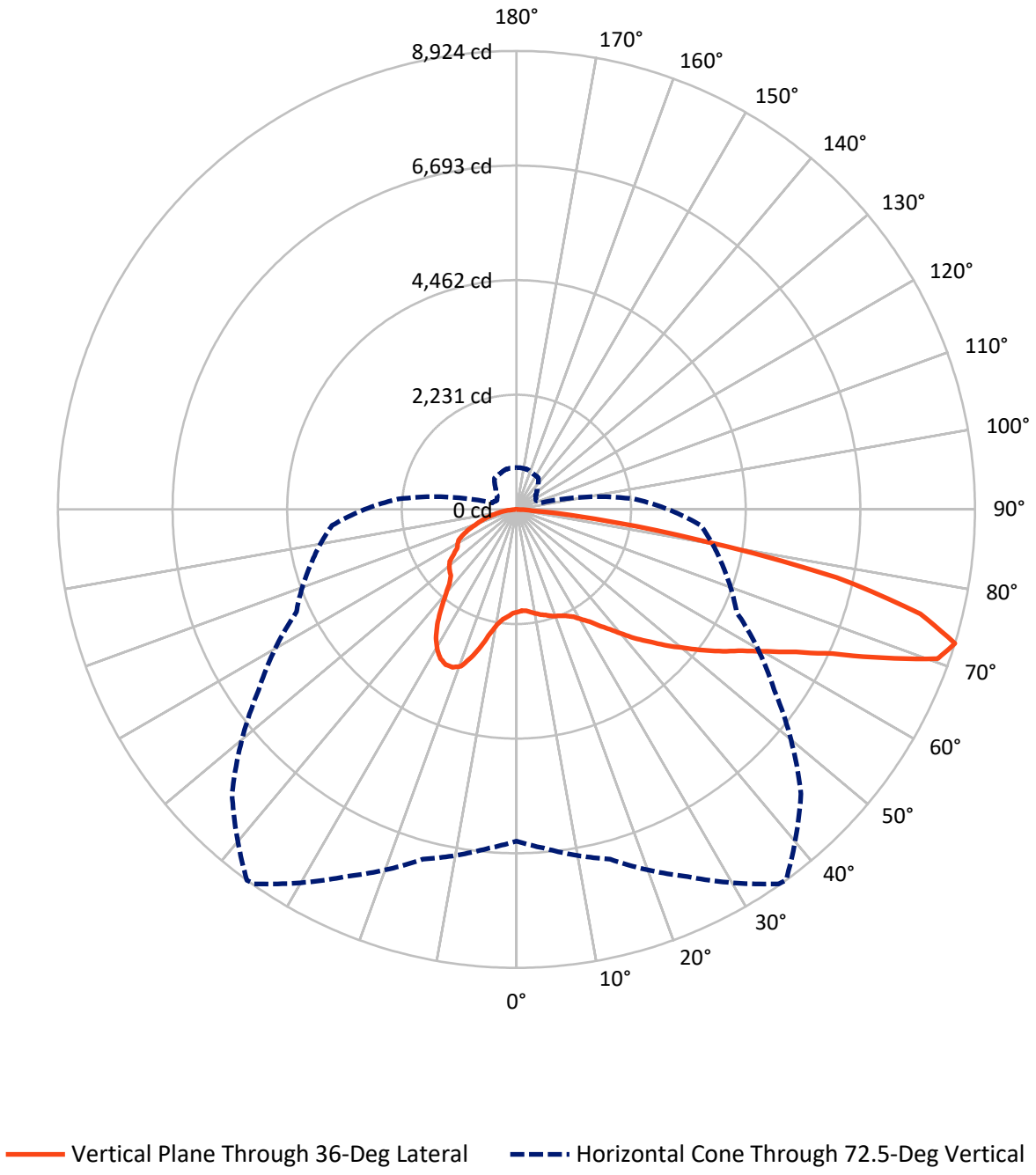

Based on 20 foot mounting height. Maximum calculated value = 6.7 fc
Type IV - Short - N/A

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REPORT NUMBER: P1358467
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## Luminous Intensity Polar Plot



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Scaled Data Report

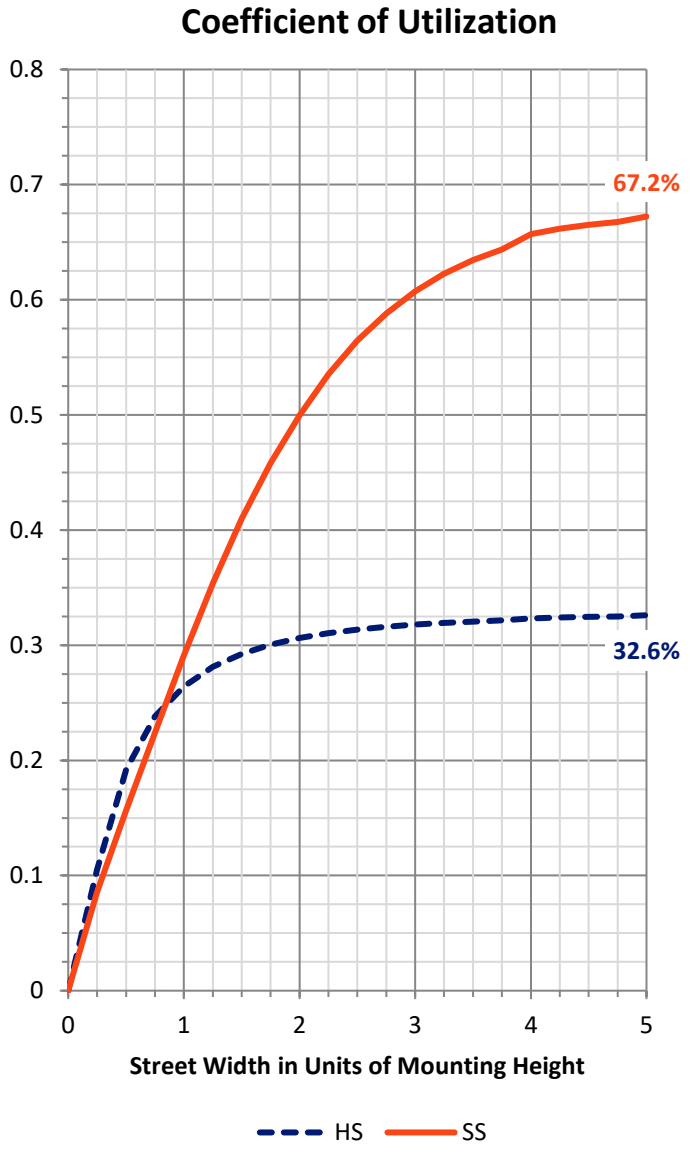
REPORT NUMBER: P1358467
CATALOG NUMBER: GSS-SB4A-735-U-SL4

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5493.9 | 0.0 | 5493.9 |
| | % Fixture | 32.9 | 0.0 | 32.9 |
| **Street Side** | Lumens | 11200.4 | 0.0 | 11200.4 |
| | % Fixture | 67.1 | 0.0 | 67.1 |
| **Total** | Lumens | 16694.4 | 0.0 | 16694.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 197.9 | 1.2 |
| 10°-20° | 682.3 | 4.1 |
| 20°-30° | 1295.5 | 7.8 |
| 30°-40° | 1891.6 | 11.3 |
| 40°-50° | 2516.0 | 15.1 |
| 50°-60° | 3225.9 | 19.3 |
| 60°-70° | 3794.6 | 22.7 |
| 70°-80° | 2842.5 | 17.0 |
| 80°-90° | 248.2 | 1.5 |
| 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° | 16694.4 | 100.0 |
| 0°-180° | 16694.4 | 100.0 |



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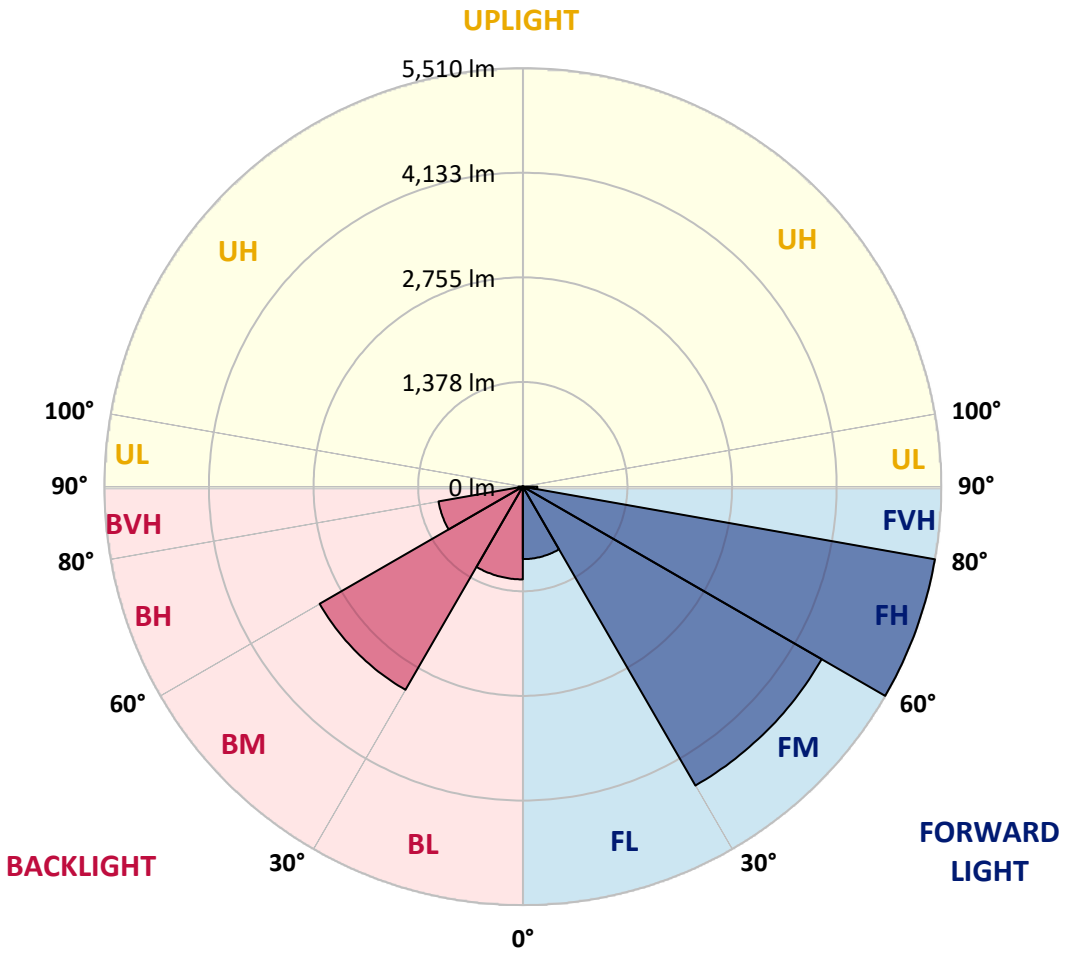
Scaled Data Report

REPORT NUMBER: P1358467
CATALOG NUMBER: GSS-SB4A-735-U-SL4

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 954.4 | 5.7 | | | |
| FM | (30°-60°) | 4544.8 | 27.2 | | | |
| FH | (60°-80°) | 5510.1 | 33.0 | | | G3/7500 |
| FVH | (80°-90°) | 191.1 | 1.1 | | | G2/225 |
| BL | (0°-30°) | 1221.3 | 7.3 | B3/2500 | | |
| BM | (30°-60°) | 3088.7 | 18.5 | B3/5000 | | |
| BH | (60°-80°) | 1127.0 | 6.8 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 57.0 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G3**
Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 | *1999.2* | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 |
| 2.5° | 1984.0 | 1972.6 | 1980.2 | 1972.6 | 1972.6 | *1972.6* | 1980.2 | 1980.2 | 1991.6 | 1991.6 | 1991.6 |
| 5° | 1999.2 | 1995.4 | 1999.2 | 1995.4 | 1984.0 | *1984.0* | 1991.6 | 1984.0 | 2002.9 | 1995.4 | 2006.7 |
| 7.5° | 2040.8 | 2033.2 | 2033.2 | 2021.9 | 2025.7 | *2018.1* | 2025.7 | 2014.3 | 2025.7 | 2018.1 | 2018.1 |
| 10° | 2090.0 | 2078.7 | 2082.4 | 2067.3 | 2055.9 | *2059.7* | 2067.3 | 2055.9 | 2059.7 | 2063.5 | 2063.5 |
| 12.5° | 2131.7 | 2124.1 | 2124.1 | 2093.8 | 2101.4 | *2101.4* | 2109.0 | 2097.6 | 2105.2 | 2101.4 | 2116.5 |
| 15° | 2184.7 | 2173.3 | 2165.7 | 2143.0 | 2139.2 | *2135.5* | 2146.8 | 2135.5 | 2154.4 | 2150.6 | 2169.5 |
| 17.5° | 2233.9 | 2222.5 | 2215.0 | 2177.1 | 2169.5 | *2180.9* | 2184.7 | 2177.1 | 2196.0 | 2203.6 | 2241.5 |
| 20° | 2279.3 | 2283.1 | 2256.6 | 2211.2 | 2211.2 | *2215.0* | 2215.0 | 2215.0 | 2245.3 | 2256.6 | 2298.3 |
| 22.5° | 2358.8 | 2351.3 | 2324.8 | 2271.8 | 2249.0 | *2249.0* | 2283.1 | 2260.4 | 2279.3 | 2305.8 | 2377.8 |
| 25° | 2461.1 | 2445.9 | 2400.5 | 2332.3 | 2294.5 | *2298.3* | 2309.6 | 2294.5 | 2317.2 | 2347.5 | 2457.3 |
| 27.5° | 2642.8 | 2623.9 | 2544.4 | 2408.1 | 2362.6 | *2366.4* | 2370.2 | 2328.6 | 2324.8 | 2374.0 | 2525.4 |
| 30° | 2907.9 | 2885.1 | 2764.0 | 2593.6 | 2472.4 | *2480.0* | 2438.4 | 2362.6 | 2336.1 | 2389.1 | 2605.0 |
| 32.5° | 3195.6 | 3165.3 | 3044.2 | 2801.8 | 2639.0 | *2601.2* | 2521.7 | 2389.1 | 2347.5 | 2404.3 | 2676.9 |
| 35° | 3540.2 | 3513.7 | 3366.0 | 3025.2 | 2801.8 | *2779.1* | 2620.1 | 2445.9 | 2377.8 | 2415.6 | 2745.0 |
| 37.5° | 4028.6 | 3960.4 | 3782.5 | 3313.0 | 2998.7 | *2964.7* | 2748.8 | 2525.4 | 2381.6 | 2408.1 | 2839.7 |
| 40° | 4448.9 | 4380.7 | 4187.6 | 3676.5 | 3248.6 | *3195.6* | 2938.1 | 2620.1 | 2419.4 | 2423.2 | 2960.9 |
| 42.5° | 4888.1 | 4823.7 | 4615.5 | 3983.2 | 3472.0 | *3445.5* | 3104.7 | 2733.7 | 2468.6 | 2464.9 | 3097.2 |
| 45° | 5350.0 | 5353.8 | 5032.0 | 4350.4 | 3737.1 | *3684.0* | 3309.2 | 2885.1 | 2559.5 | 2514.1 | 3320.6 |
| 47.5° | 6001.2 | 5929.3 | 5535.5 | 4702.5 | 4032.4 | *3964.2* | 3525.0 | 3044.2 | 2695.8 | 2627.7 | 3570.5 |
| 50° | 6527.5 | 6474.5 | 5997.5 | 5107.7 | 4308.8 | *4236.8* | 3778.7 | 3218.3 | 2817.0 | 2786.7 | 3903.6 |
| 52.5° | 6966.7 | 6875.9 | 6436.7 | 5490.1 | 4619.3 | *4554.9* | 3986.9 | 3388.7 | 2987.4 | 2972.2 | 4293.6 |
| 55° | 7209.1 | 7114.4 | 6739.6 | 5846.0 | 4971.4 | *4872.9* | 4221.7 | 3593.2 | 3191.8 | 3199.4 | 4729.1 |
| 57.5° | 7398.4 | 7299.9 | 6932.7 | 6114.8 | 5319.7 | *5187.2* | 4479.2 | 3816.6 | 3434.1 | 3506.1 | 5323.5 |
| 60° | 7466.5 | 7368.1 | 7095.5 | 6470.7 | 5694.6 | *5611.3* | 4770.7 | 4093.0 | 3714.3 | 3865.8 | 5902.8 |
| 62.5° | 7565.0 | 7587.7 | 7394.6 | 6906.2 | 6183.0 | *6111.0* | 5145.5 | 4433.7 | 4058.9 | 4180.0 | 6107.3 |
| 65° | 7644.5 | 7633.1 | 7655.8 | 7508.2 | 6864.5 | *6762.3* | 5702.1 | 4876.7 | 4289.8 | 4286.1 | 6005.0 |
| 67.5° | 7459.0 | 7470.3 | 7591.5 | 7955.0 | 7811.1 | *7712.6* | 6421.5 | 5285.6 | 4399.6 | 4486.7 | 5679.4 |
| 70° | 7318.9 | 7352.9 | 7515.8 | 7970.1 | 8689.5 | *8700.9* | 7424.9 | 5634.0 | 4713.9 | 4486.7 | 4770.7 |
| 72.5° | *6455.6* | *6629.8* | *7050.0* | *7886.8* | *8897.7* | *8924.2* | *7830.0* | *6122.4* | *4725.3* | *4146.0* | *3604.5* |
| 75° | 4274.7 | 4411.0 | 5531.7 | 7076.5 | 8159.4 | *8117.8* | 7250.7 | 5887.7 | 4422.4 | 3381.1 | 2294.5 |
| 77.5° | 1260.8 | 1518.3 | 2589.8 | 4388.3 | 6107.3 | *6372.3* | 5948.2 | 4028.6 | 3278.9 | 1586.4 | 817.8 |
| 80° | 359.7 | 401.3 | 723.2 | 1541.0 | 3297.8 | *3581.8* | 3695.4 | 1927.2 | 973.1 | 420.3 | 272.6 |
| 82.5° | 174.2 | 181.7 | 261.3 | 431.6 | 1412.3 | *1544.8* | 1294.9 | 583.1 | 261.3 | 151.5 | 106.0 |
| 85° | 30.3 | 37.9 | 64.4 | 128.7 | 253.7 | *306.7* | 287.8 | 117.4 | 79.5 | 68.2 | 49.2 |
| 87.5° | 7.6 | 7.6 | 11.4 | 11.4 | 15.1 | *15.1* | 15.1 | 18.9 | 18.9 | 18.9 | 18.9 |
| 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: P1358467
CATALOG NUMBER: GSS-SB4A-735-U-SL4

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 | 1999.2 |
| 2.5° | 2010.5 | 2010.5 | 2025.7 | 2033.2 | 2033.2 | 2021.9 | 2021.9 | 2055.9 | 2040.8 | 2048.4 | 2044.6 |
| 5° | 2014.3 | 2029.4 | 2029.4 | 2052.2 | 2063.5 | 2082.4 | 2090.0 | 2105.2 | 2120.3 | 2120.3 | 2116.5 |
| 7.5° | 2037.0 | 2048.4 | 2067.3 | 2082.4 | 2112.7 | 2143.0 | 2154.4 | 2199.8 | 2207.4 | 2226.3 | 2218.8 |
| 10° | 2071.1 | 2090.0 | 2120.3 | 2162.0 | 2199.8 | 2249.0 | 2271.8 | 2321.0 | 2347.5 | 2377.8 | 2358.8 |
| 12.5° | 2124.1 | 2146.8 | 2196.0 | 2252.8 | 2336.1 | 2411.9 | 2472.4 | 2521.7 | 2559.5 | 2593.6 | 2582.2 |
| 15° | 2180.9 | 2226.3 | 2290.7 | 2392.9 | 2540.6 | 2676.9 | 2756.4 | 2839.7 | 2858.6 | 2888.9 | 2885.1 |
| 17.5° | 2279.3 | 2309.6 | 2438.4 | 2642.8 | 2835.9 | 2953.3 | 3021.4 | 3063.1 | 3051.7 | 3063.1 | 3055.5 |
| 20° | 2358.8 | 2434.6 | 2665.5 | 2964.7 | 3154.0 | 3229.7 | 3237.3 | 3199.4 | 3119.9 | 3104.7 | 3074.5 |
| 22.5° | 2476.2 | 2589.8 | 2960.9 | 3271.3 | 3422.8 | 3415.2 | 3305.4 | 3191.8 | 3089.6 | 3047.9 | 3032.8 |
| 25° | 2589.8 | 2794.3 | 3271.3 | 3562.9 | 3604.5 | 3472.0 | 3305.4 | 3157.8 | 3021.4 | 2979.8 | 2945.7 |
| 27.5° | 2733.7 | 3029.0 | 3623.5 | 3809.0 | 3684.0 | 3479.6 | 3233.5 | 3066.9 | 2938.1 | 2870.0 | 2854.8 |
| 30° | 2881.4 | 3301.6 | 3918.8 | 3926.4 | 3706.8 | 3400.1 | 3101.0 | 2953.3 | 2805.6 | 2737.5 | 2741.3 |
| 32.5° | 3082.0 | 3600.7 | 4168.7 | 4013.4 | 3642.4 | 3241.0 | 2923.0 | 2764.0 | 2635.2 | 2601.2 | 2593.6 |
| 35° | 3278.9 | 3937.7 | 4369.4 | 4021.0 | 3490.9 | 3017.7 | 2688.3 | 2510.3 | 2430.8 | 2396.7 | 2411.9 |
| 37.5° | 3559.1 | 4282.3 | 4486.7 | 3949.1 | 3271.3 | 2718.5 | 2411.9 | 2271.8 | 2211.2 | 2199.8 | 2215.0 |
| 40° | 3865.8 | 4600.3 | 4562.5 | 3865.8 | 2972.2 | 2400.5 | 2146.8 | 2059.7 | 2021.9 | 2029.4 | 2055.9 |
| 42.5° | 4195.2 | 4861.6 | 4619.3 | 3676.5 | 2620.1 | 2109.0 | 1934.8 | 1896.9 | 1953.7 | 1987.8 | 2010.5 |
| 45° | 4547.3 | 5100.1 | 4638.2 | 3407.6 | 2290.7 | 1885.6 | 1813.6 | 1885.6 | 1972.6 | 1987.8 | 1999.2 |
| 47.5° | 4895.6 | 5308.4 | 4638.2 | 3051.7 | 1976.4 | 1737.9 | 1775.8 | 1870.4 | 1938.6 | 1912.1 | 1915.9 |
| 50° | 5228.8 | 5474.9 | 4626.8 | 2639.0 | 1756.8 | 1662.2 | 1726.5 | 1787.1 | 1756.8 | 1681.1 | 1688.7 |
| 52.5° | 5531.7 | 5622.6 | 4547.3 | 2215.0 | 1575.1 | 1643.2 | 1647.0 | 1571.3 | 1503.2 | 1465.3 | 1472.9 |
| 55° | 5868.7 | 5758.9 | 4312.6 | 1836.3 | 1457.7 | 1594.0 | 1488.0 | 1389.6 | 1423.6 | 1412.3 | 1408.5 |
| 57.5° | 6220.8 | 5917.9 | 3990.7 | 1510.7 | 1347.9 | 1476.6 | 1359.3 | 1351.7 | 1347.9 | 1332.8 | 1313.8 |
| 60° | 6523.7 | 6046.7 | 3509.9 | 1188.9 | 1185.1 | 1298.7 | 1332.8 | 1313.8 | 1294.9 | 1264.6 | 1249.5 |
| 62.5° | 6349.6 | 5724.8 | 2805.6 | 961.7 | 1018.5 | 1158.6 | 1283.5 | 1245.7 | 1249.5 | 1223.0 | 1211.6 |
| 65° | 5857.4 | 5088.7 | 1912.1 | 802.7 | 859.5 | 1033.7 | 1166.2 | 1132.1 | 1113.2 | 1105.6 | 1098.0 |
| 67.5° | 5221.3 | 4407.2 | 1260.8 | 636.1 | 719.4 | 904.9 | 1029.9 | 988.2 | 1014.7 | 1014.7 | 1010.9 |
| 70° | 4108.1 | 3369.8 | 795.1 | 518.7 | 571.7 | 749.7 | 855.7 | 874.6 | 912.5 | 916.3 | 912.5 |
| 72.5° | *2953.3* | *2305.8* | *496.0* | *416.5* | *454.4* | *571.7* | *745.9* | *764.8* | *806.5* | *814.0* | *814.0* |
| 75° | 1741.7 | 1298.7 | 333.2 | 333.2 | 352.1 | 465.7 | 617.2 | 677.7 | 696.7 | 704.2 | 696.7 |
| 77.5° | 700.5 | 499.8 | 219.6 | 246.1 | 272.6 | 374.8 | 473.3 | 549.0 | 541.4 | 537.7 | 518.7 |
| 80° | 249.9 | 215.8 | 151.5 | 162.8 | 196.9 | 280.2 | 352.1 | 374.8 | 397.6 | 386.2 | 374.8 |
| 82.5° | 102.2 | 98.4 | 94.7 | 106.0 | 117.4 | 170.4 | 246.1 | 246.1 | 249.9 | 246.1 | 242.3 |
| 85° | 37.9 | 37.9 | 45.4 | 53.0 | 64.4 | 79.5 | 109.8 | 140.1 | 117.4 | 83.3 | 87.1 |
| 87.5° | 18.9 | 18.9 | 15.1 | 15.1 | 18.9 | 26.5 | 26.5 | 34.1 | 34.1 | 18.9 | 11.4 |
| 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: SP1-2407-184-5

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-735-U-5WQ

Data in this report applies to families of products including GSS-SB1A-735-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

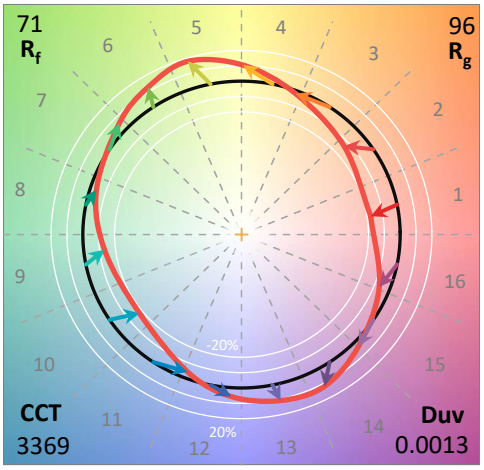
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-5 |
| 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-735-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3500K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3369 |
| CIE u': | 0.2386 |
| CIE v': | 0.5156 |
| Duv: | 0.0013 |
| CIE x: | 0.4143 |
| CIE y: | 0.3980 |
| CIE z: | 0.1877 |
| Peak Wavelength (nm): | 590 |
| Dominant Wavelength (nm): | 580 |
| Purity: | 43.80166 |
| Rf: | 71.4 |
| Rg: | 96 |

| | |
|---|---|
| CRI (Ra): | 70.1 |
| R1: | 66.6 |
| R2: | 77.6 |
| R3: | 88.5 |
| R4: | 69.5 |
| R5: | 66.4 |
| R6: | 69.6 |
| R7: | 77.5 |
| R8: | 44.9 |
| R9: | -40.2 |
| R10: | 49.1 |
| R11: | 66.3 |
| R12: | 45.7 |
| R13: | 68.0 |
| R14: | 93.4 |
| R15: | 57.6 |




## Test Conditions

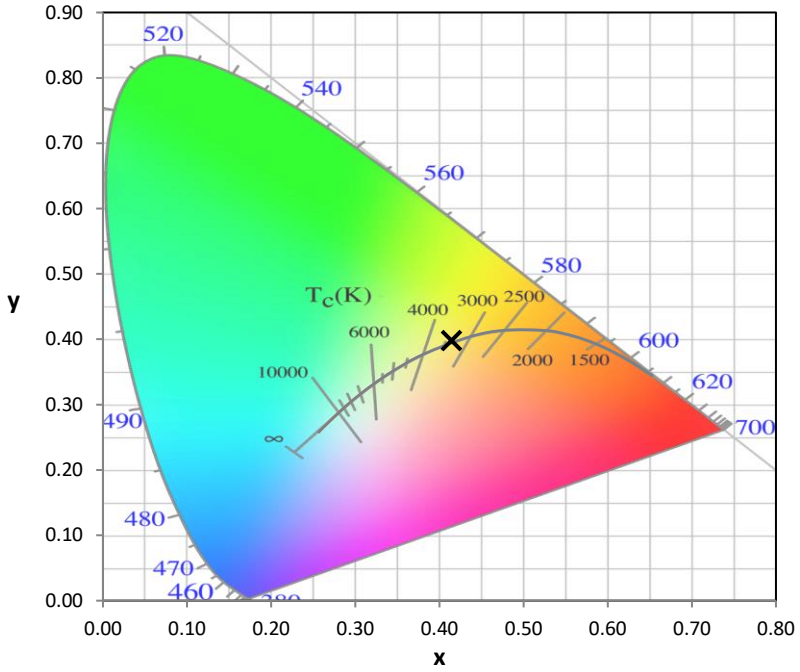
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-5

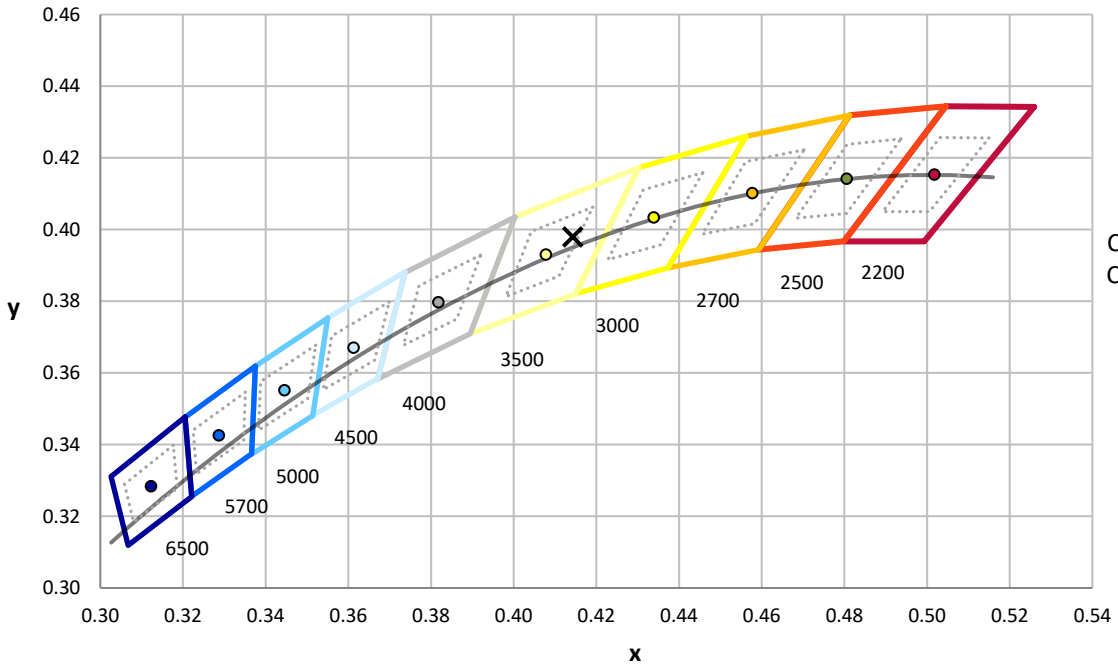
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-5

**CIE 1931 Chromaticity Diagram**




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

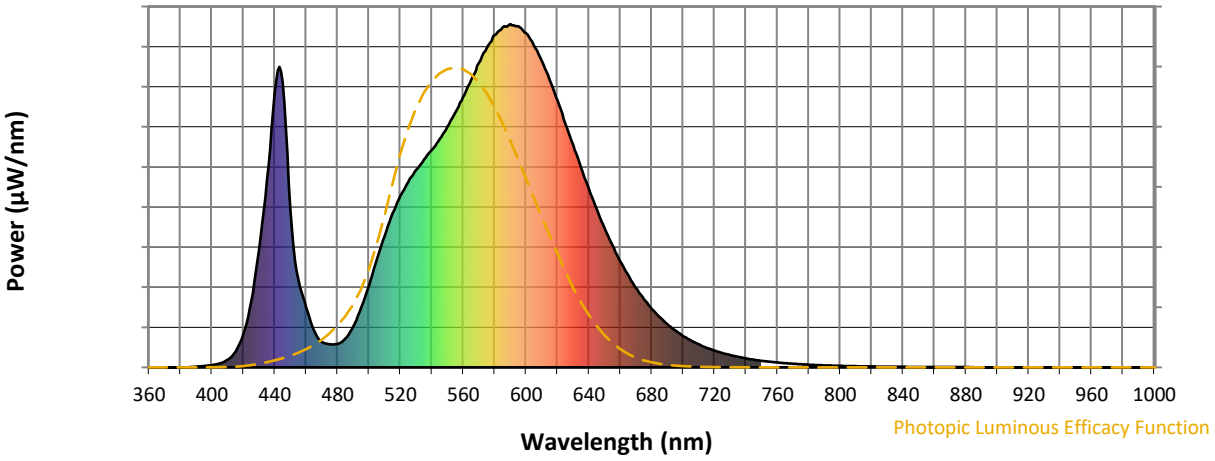



CCT = 3369K
CIE x = 0.4143
CIE y = 0.3980
Duv = 0.0013

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-5

## Photopic Flux vs. Wavelength

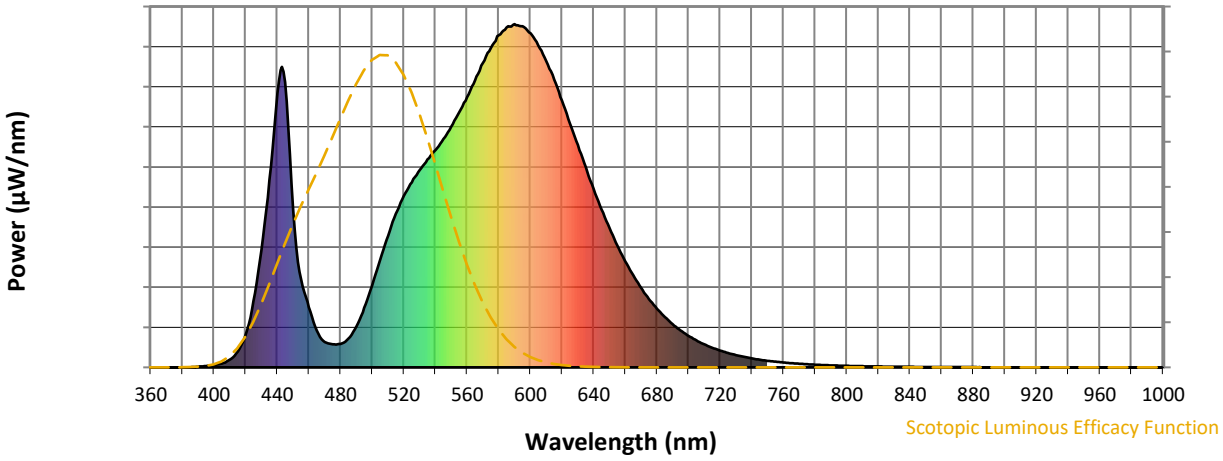



## Photopic Lumens: NR

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-5

## Scotopic Flux vs. Wavelength

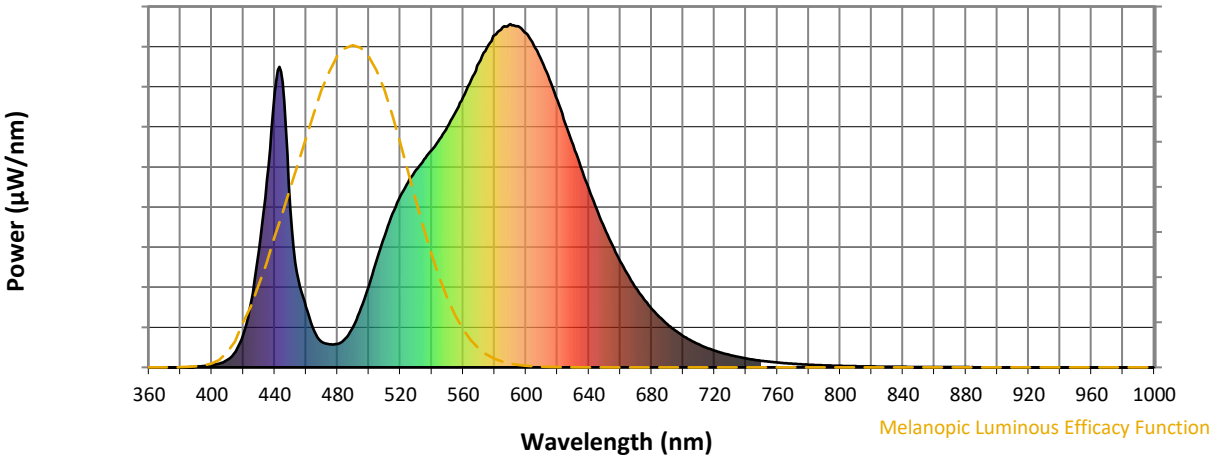



**Scotopic Lumens: NR** **S/P: 1.29**

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-5

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.36**

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

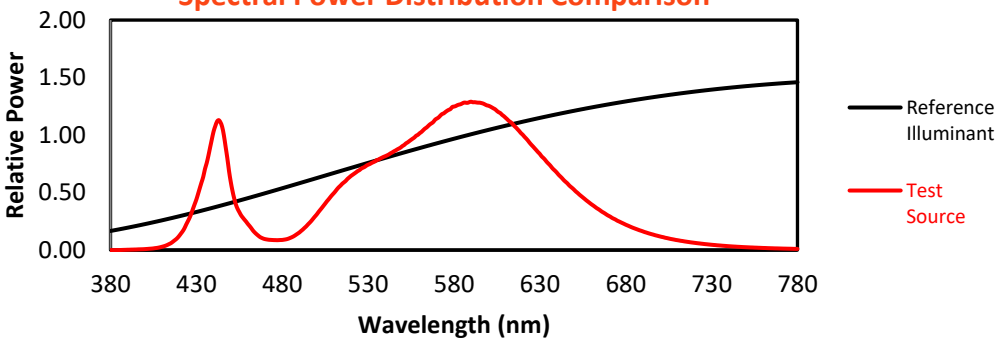
REPORT NUMBER: SP1-2407-184-5

# TM-30-18

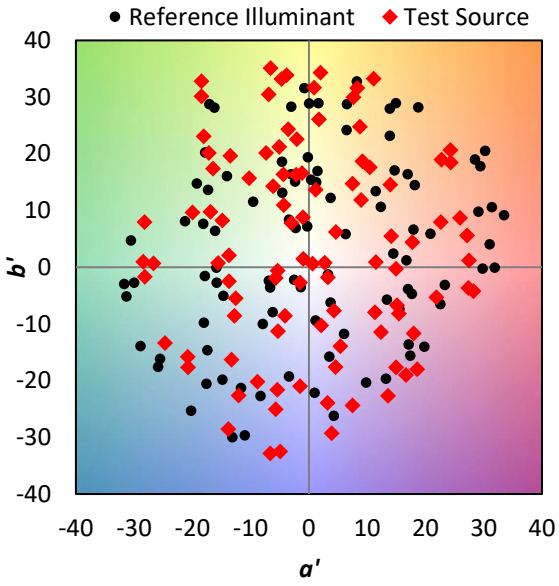
## Summary

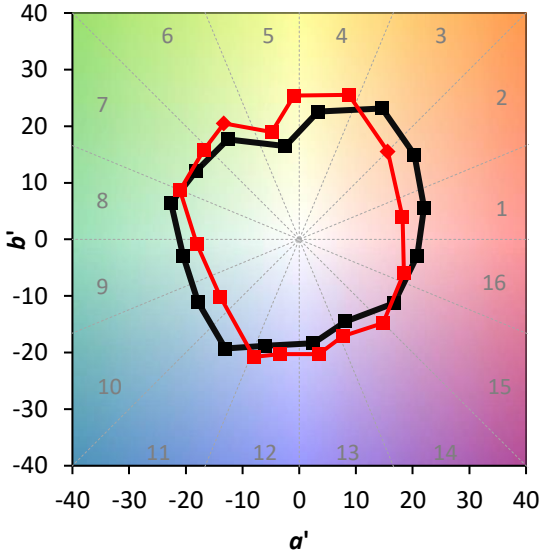
$R_f$ = 71.4
$R_g$ = 96
CIE $R_a$ = 70.1
$R_9$ = -40.2

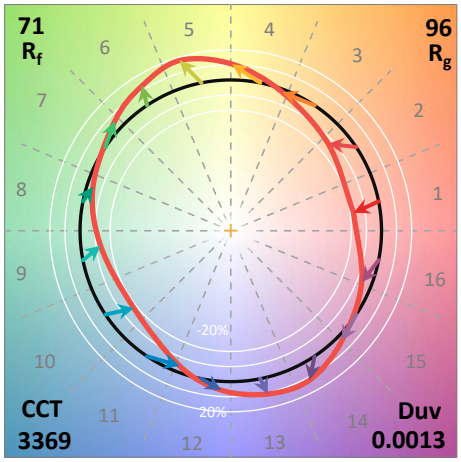
## Spectral Power Distribution Comparison

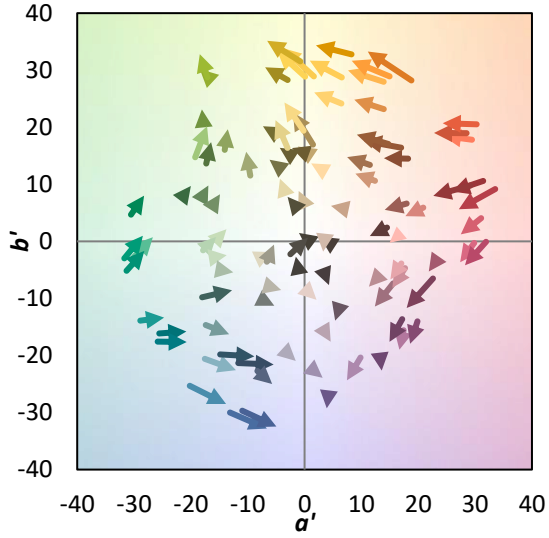



## Color Vector Graphics



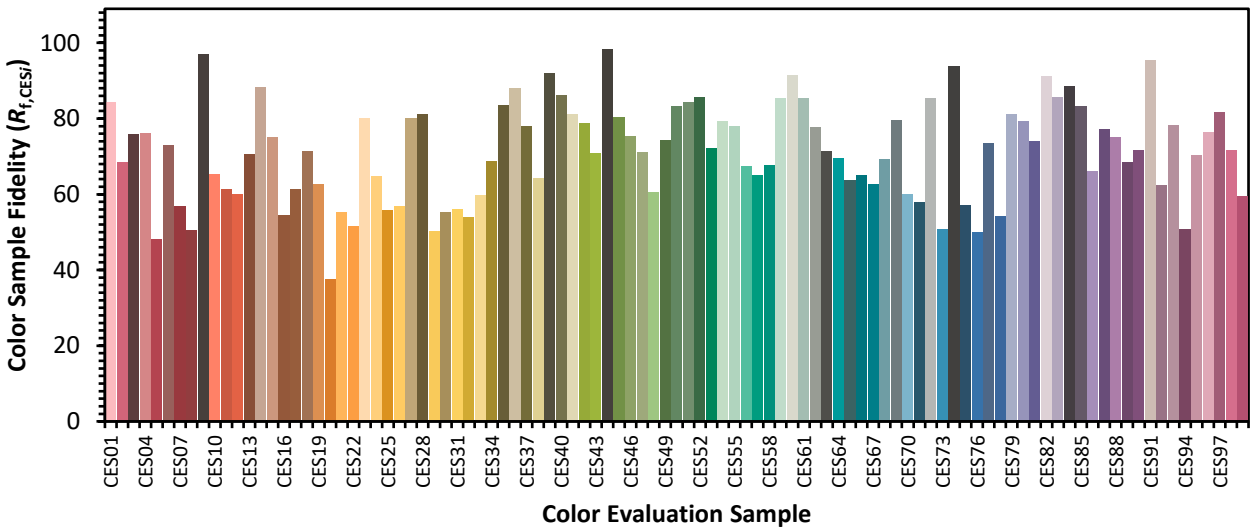



REPORT NUMBER: SP1-2407-184-5

# TM-30-18

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

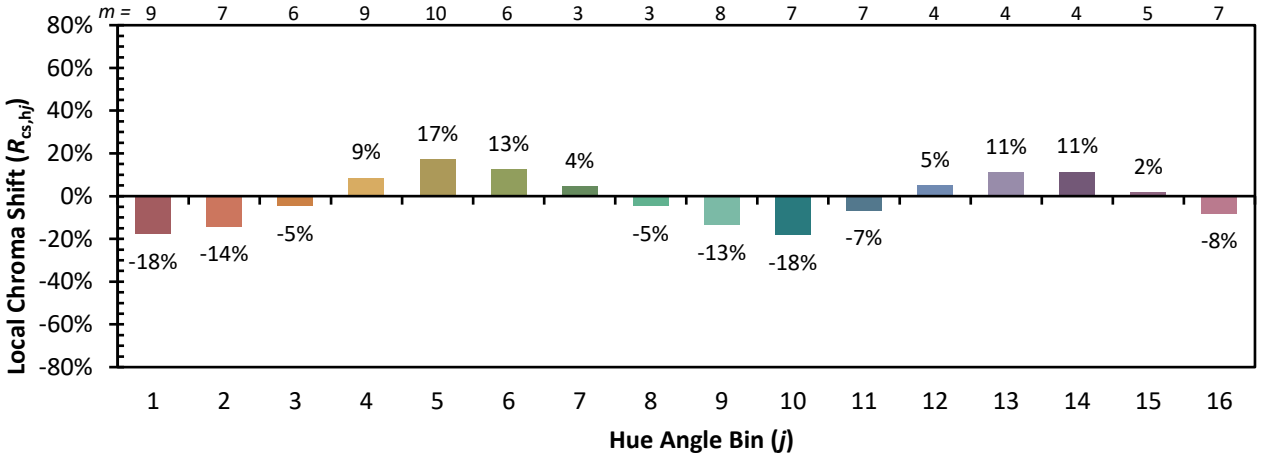
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 51 | CES31 = 56 | CES56 = 67 | CES81 = 74 |
| CES07 = 40 | CES32 = 54 | CES57 = 65 | CES82 = 91 |
| CES08 = 39 | CES33 = 60 | CES58 = 68 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 85 | CES84 = 89 |
| CES10 = 75 | CES35 = 83 | CES60 = 91 | CES85 = 83 |
| CES11 = 58 | CES36 = 88 | CES61 = 85 | CES86 = 66 |
| CES12 = 64 | CES37 = 78 | CES62 = 78 | CES87 = 77 |
| CES13 = 43 | CES38 = 64 | CES63 = 71 | CES88 = 75 |
| CES14 = 74 | CES39 = 92 | CES64 = 70 | CES89 = 68 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 72 |
| CES16 = 47 | CES41 = 81 | CES66 = 65 | CES91 = 95 |
| CES17 = 50 | CES42 = 79 | CES67 = 63 | CES92 = 62 |
| CES18 = 56 | CES43 = 71 | CES68 = 69 | CES93 = 78 |
| CES19 = 72 | CES44 = 98 | CES69 = 80 | CES94 = 51 |
| CES20 = 65 | CES45 = 80 | CES70 = 60 | CES95 = 70 |
| CES21 = 87 | CES46 = 75 | CES71 = 58 | CES96 = 76 |
| CES22 = 79 | CES47 = 71 | CES72 = 85 | CES97 = 82 |
| CES23 = 92 | CES48 = 61 | CES73 = 51 | CES98 = 72 |
| CES24 = 91 | CES49 = 74 | CES74 = 94 | CES99 = 60 |
| CES25 = 72 | CES50 = 83 | CES75 = 57 | |

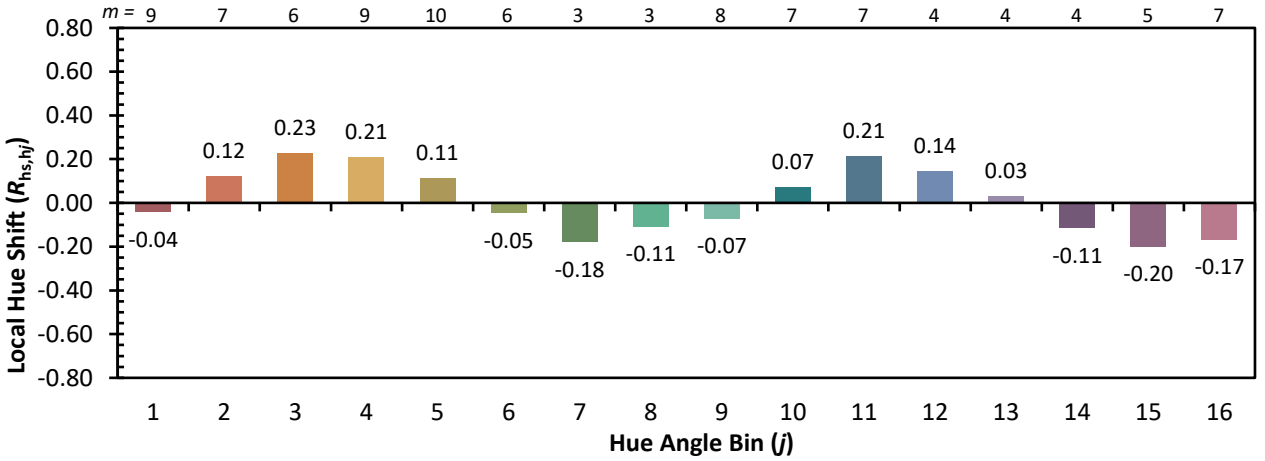


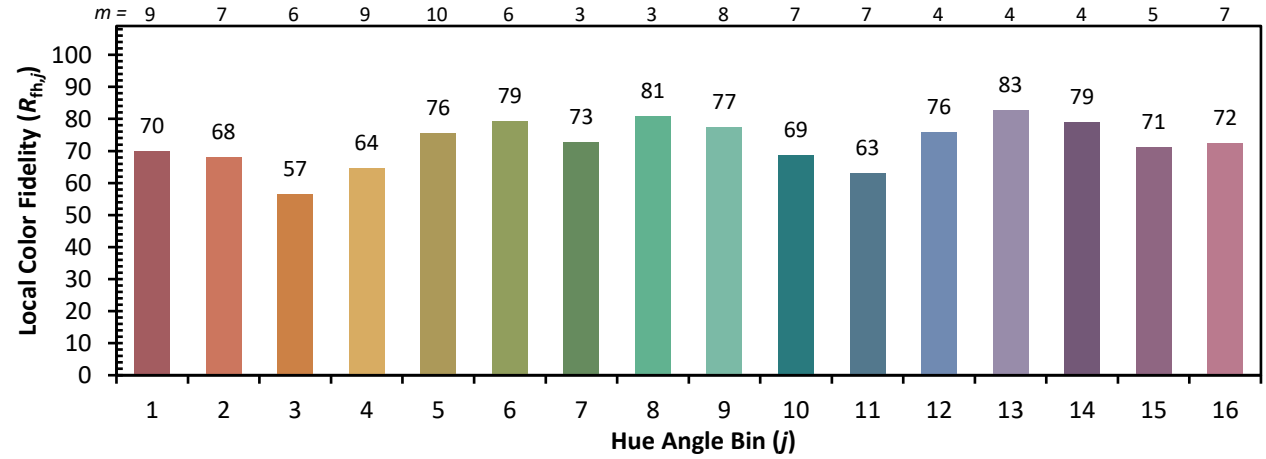
REPORT NUMBER: SP1-2407-184-5

**TM-30-18**

## Color Rendition by Hue-Angle Bin



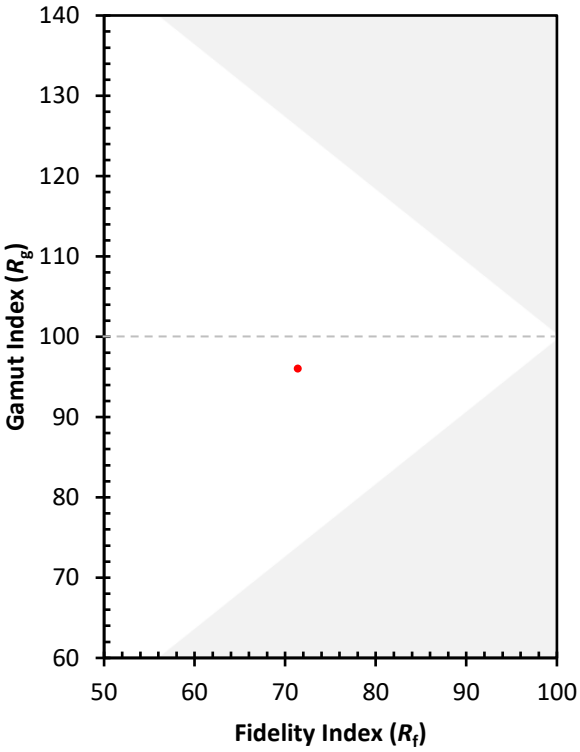



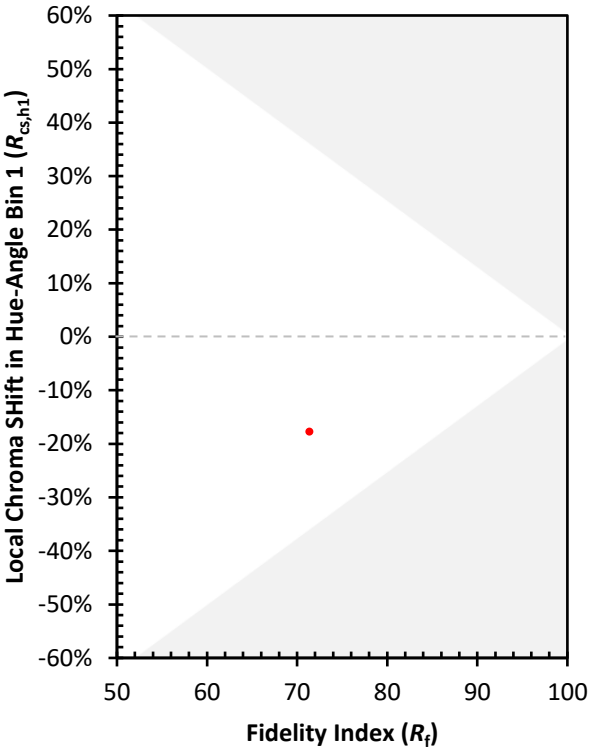



REPORT NUMBER: SP1-2407-184-5

# TM-30-18

## Measure Comparisons




(END OF REPORT)