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: P1457773

Luminaire Tested: GLAN-SB1C-830-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: | P1457773 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB1C-830-U-T2LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 615mA 1xLight Square PACKAGE 80CRI 3000K FIXTURE w/ TYPE II LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (26) 3000K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 4874.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 89.6 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B1 - U0 - G1 |

| | |
|---|---|
| Input Watts (W): | 54.4 |
| 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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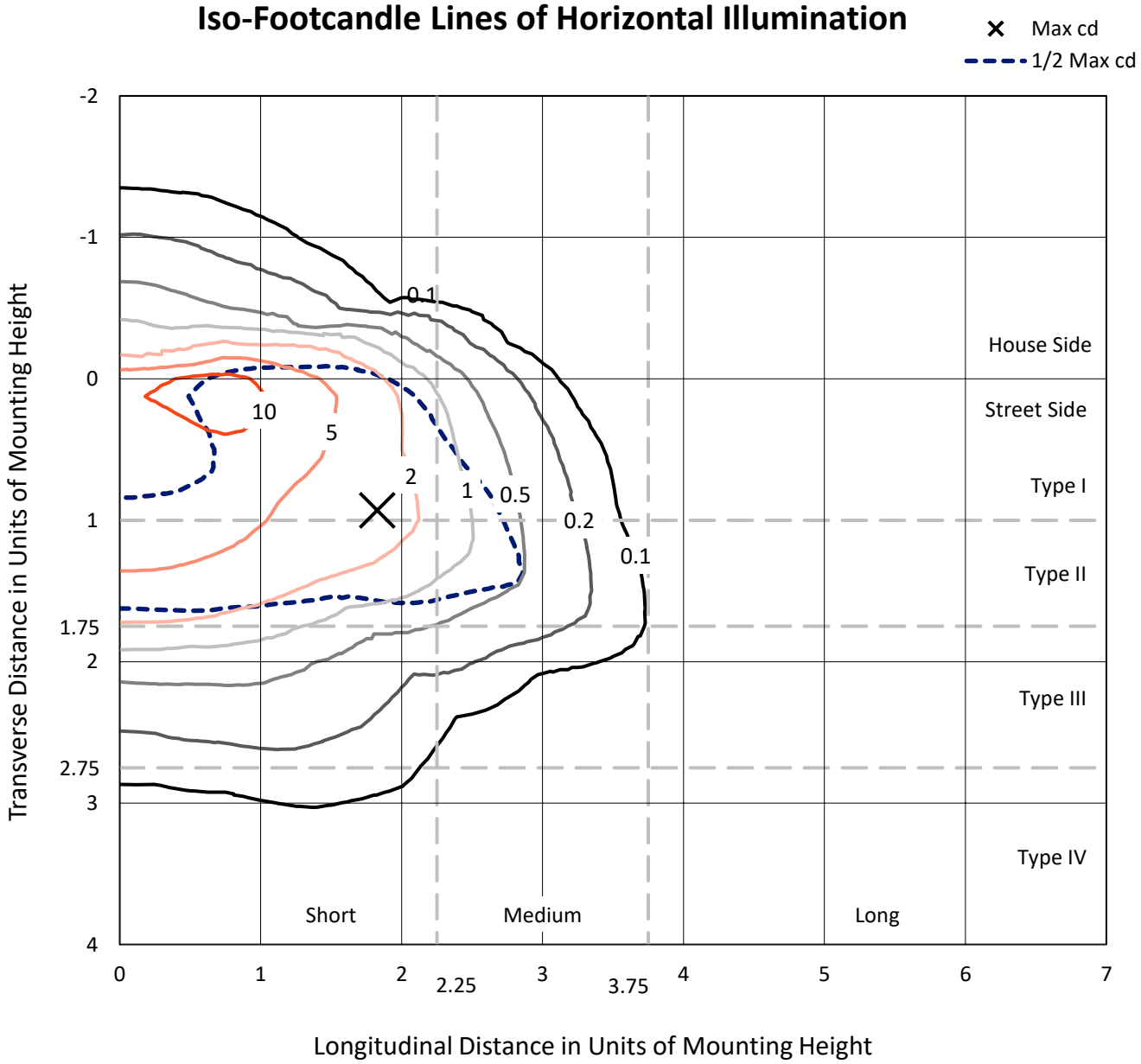
REPORT NUMBER: P1457773
CATALOG NUMBER: GLAN-SB1C-830-U-T2LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 14 fc
Type II - Short - N/A

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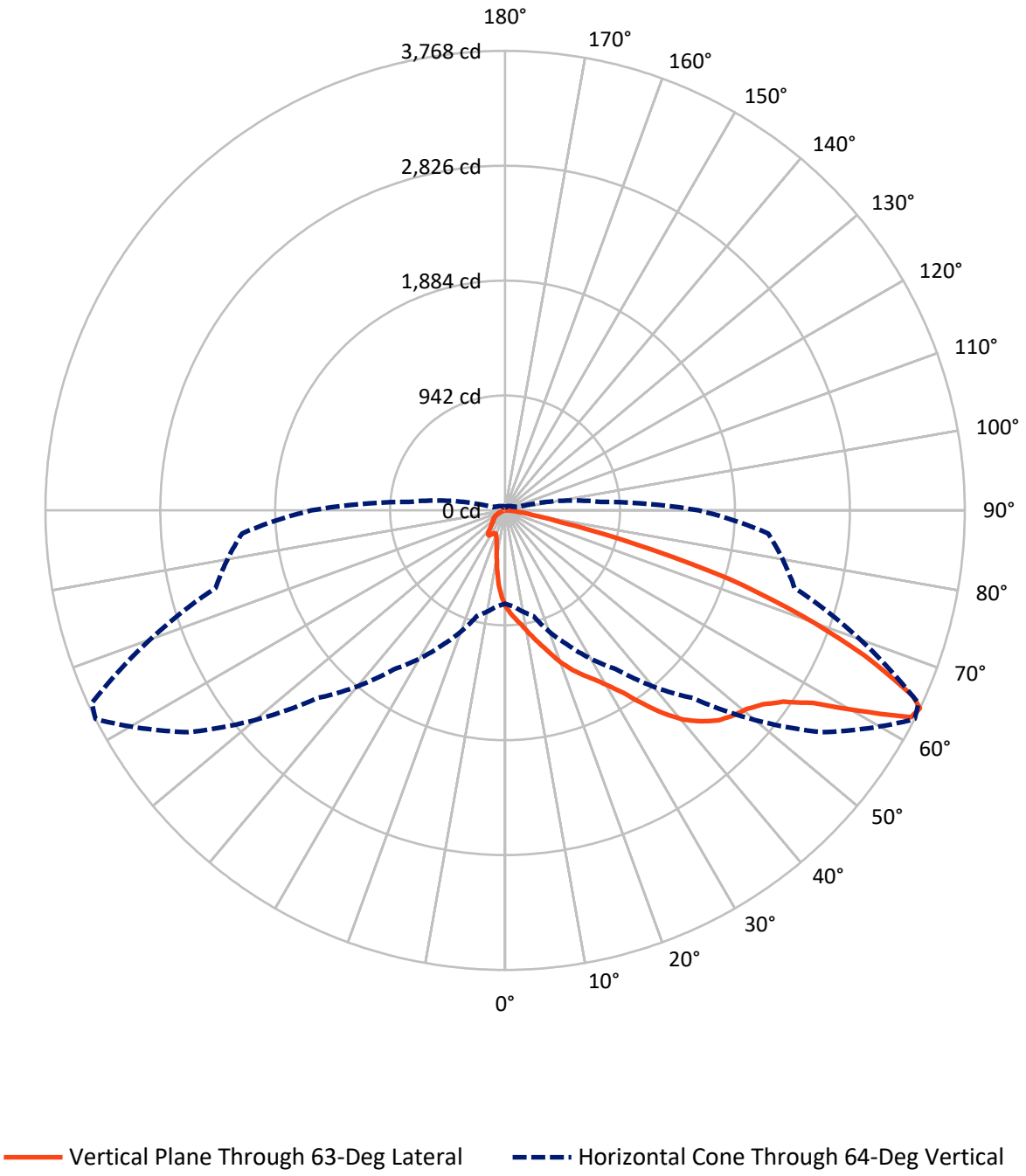
## Luminous Intensity Polar Plot



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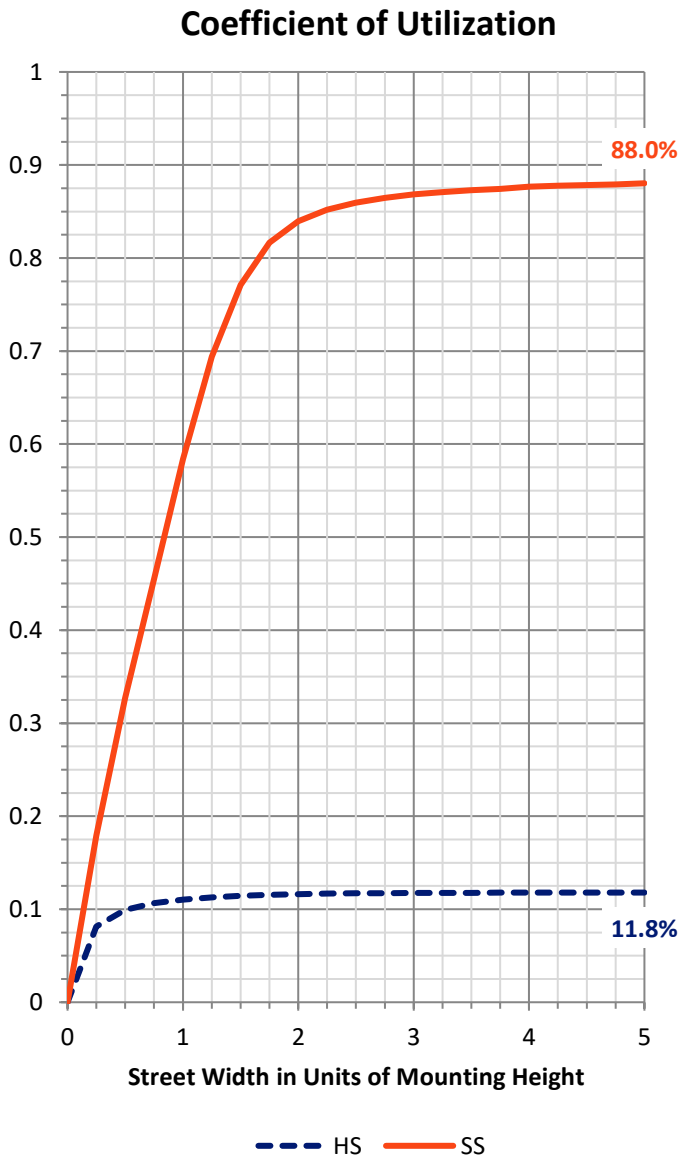
REPORT NUMBER: P1457773
CATALOG NUMBER: GLAN-SB1C-830-U-T2LG-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 578.4 | 0.0 | 578.4 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| **Street Side** | Lumens | 4295.8 | 0.0 | 4295.8 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| **Total** | Lumens | 4874.2 | 0.0 | 4874.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 66.4 | 1.4 |
| 10°-20° | 186.5 | 3.8 |
| 20°-30° | 332.2 | 6.8 |
| 30°-40° | 634.4 | 13.0 |
| 40°-50° | 1051.6 | 21.6 |
| 50°-60° | 1310.8 | 26.9 |
| 60°-70° | 977.4 | 20.1 |
| 70°-80° | 280.3 | 5.8 |
| 80°-90° | 34.7 | 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° | 4874.2 | 100.0 |
| 0°-180° | 4874.2 | 100.0 |



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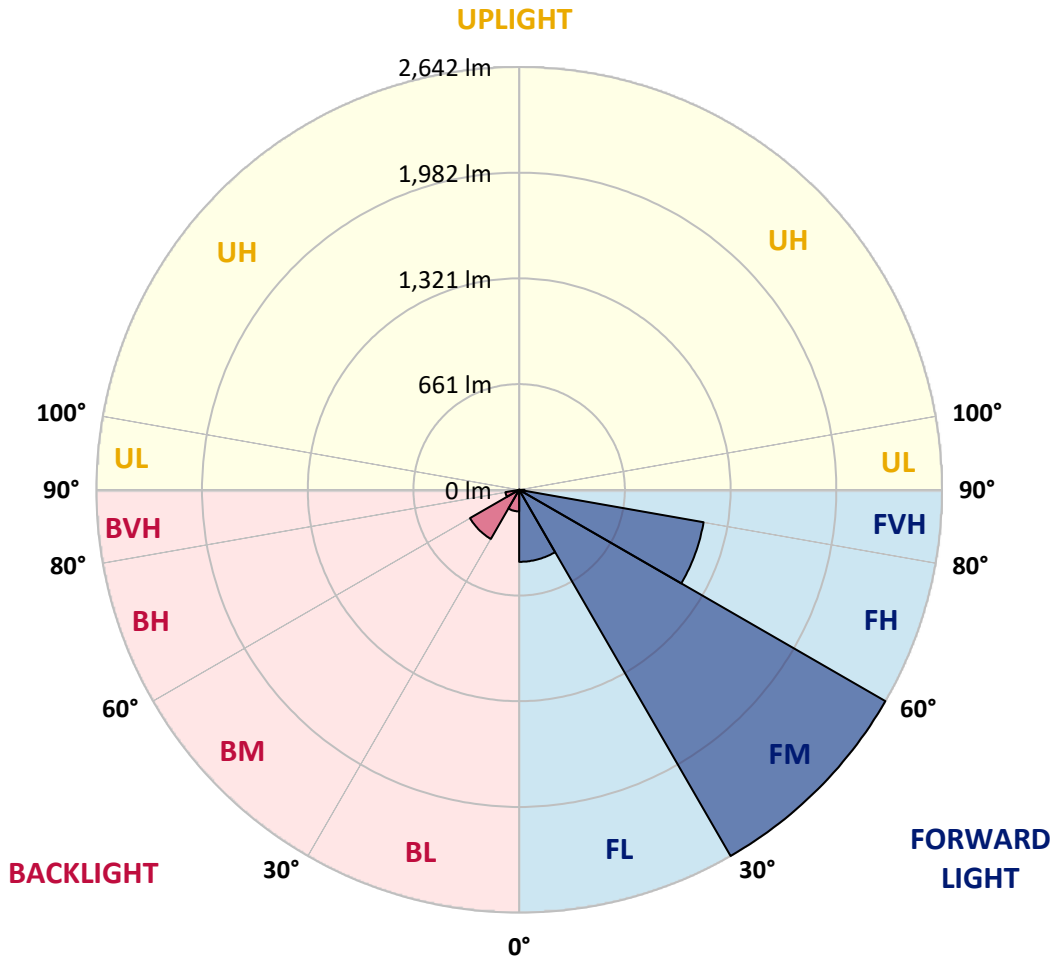
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 450.1 | 9.2 | | | |
| FM | (30°-60°) | 2642.5 | 54.2 | | | |
| FH | (60°-80°) | 1170.2 | 24.0 | | | G1/1800 |
| FVH | (80°-90°) | 33.0 | 0.7 | | | G1/100 |
| BL | (0°-30°) | 134.9 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 354.3 | 7.3 | B1/1000 | | |
| BH | (60°-80°) | 87.5 | 1.8 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.7 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G1**
Type II Short



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REPORT NUMBER: P1457773
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 63° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | *788.1* | 788.1 | 788.1 | 788.1 |
| 2.5° | 883.1 | 880.2 | 877.3 | 872.9 | 867.0 | 861.2 | 853.9 | *843.7* | 839.3 | 824.6 | 807.1 |
| 5° | 928.5 | 928.5 | 927.0 | 924.1 | 921.1 | 915.3 | 906.5 | *893.4* | 887.5 | 867.0 | 836.3 |
| 7.5° | 940.2 | 941.6 | 946.0 | 951.9 | 960.6 | 959.2 | 959.2 | *944.5* | 941.6 | 919.7 | 878.7 |
| 10° | 919.7 | 921.1 | 932.8 | 948.9 | 975.2 | 1000.1 | 1017.6 | *1008.9* | 1004.5 | 982.6 | 931.4 |
| 12.5° | 890.4 | 890.4 | 909.4 | 934.3 | 975.2 | 1022.0 | 1073.2 | *1082.0* | 1083.4 | 1058.6 | 997.2 |
| 15° | 814.4 | 817.3 | 848.0 | 897.8 | 965.0 | 1038.1 | 1124.4 | *1158.0* | 1166.8 | 1150.7 | 1077.6 |
| 17.5° | 713.5 | 716.4 | 747.2 | 814.4 | 915.3 | 1038.1 | 1168.2 | *1245.7* | 1257.4 | 1260.4 | 1179.9 |
| 20° | 671.1 | 671.1 | 688.7 | 739.8 | 845.1 | 1010.3 | 1194.6 | *1339.3* | 1365.6 | 1397.8 | 1292.5 |
| 22.5° | 677.0 | 677.0 | 687.2 | 716.4 | 801.3 | 972.3 | 1210.7 | *1422.7* | 1476.8 | 1558.6 | 1437.3 |
| 25° | 709.1 | 709.1 | 717.9 | 736.9 | 805.6 | 966.5 | 1241.4 | *1497.2* | 1583.5 | 1738.5 | 1602.5 |
| 27.5° | 760.3 | 758.8 | 766.2 | 785.2 | 848.0 | 994.3 | 1292.5 | *1571.8* | 1668.3 | 1940.3 | 1792.6 |
| 30° | 834.9 | 830.5 | 833.4 | 855.4 | 916.8 | 1058.6 | 1367.1 | *1666.8* | 1764.8 | 2161.0 | 2003.1 |
| 32.5° | 1007.4 | 1006.0 | 963.5 | 951.9 | 1017.6 | 1162.4 | 1469.4 | *1785.3* | 1894.9 | 2395.0 | 2219.5 |
| 35° | 1318.8 | 1339.3 | 1279.4 | 1125.8 | 1139.0 | 1301.3 | 1615.7 | *1946.1* | 2047.0 | 2643.5 | 2454.9 |
| 37.5° | 1634.7 | 1634.7 | 1609.8 | 1428.5 | 1336.4 | 1454.8 | 1773.6 | *2111.3* | 2216.6 | 2843.9 | 2681.6 |
| 40° | 1884.7 | 1897.9 | 1868.6 | 1732.6 | 1612.7 | 1630.3 | 1931.5 | *2256.1* | 2352.6 | 2966.7 | 2842.4 |
| 42.5° | 2070.4 | 2067.5 | 2055.8 | 1966.6 | 1899.3 | 1859.8 | 2074.8 | *2364.3* | 2456.4 | 3029.5 | 2943.3 |
| 45° | 2270.7 | 2270.7 | 2254.6 | 2181.5 | 2125.9 | 2092.3 | 2181.5 | *2454.9* | 2551.4 | 3067.6 | 3006.2 |
| 47.5° | 2479.8 | 2476.9 | 2460.8 | 2380.4 | 2320.4 | 2270.7 | 2289.7 | *2513.4* | 2609.9 | 3042.7 | 3016.4 |
| 50° | 2531.0 | 2528.0 | 2564.6 | 2567.5 | 2513.4 | 2418.4 | 2376.0 | *2563.1* | 2647.9 | 3044.2 | 3048.6 |
| 52.5° | 2471.0 | 2488.6 | 2542.7 | 2608.5 | 2669.9 | 2570.4 | 2468.1 | *2642.1* | 2729.8 | 3085.1 | 3129.0 |
| 55° | 2321.9 | 2329.2 | 2433.0 | 2538.3 | 2681.6 | 2716.7 | 2615.8 | *2767.8* | 2845.3 | 3124.6 | 3200.6 |
| 57.5° | 2044.1 | 2071.8 | 2183.0 | 2365.7 | 2583.6 | 2729.8 | 2873.1 | *2978.4* | 3036.9 | 3140.7 | 3161.1 |
| 60° | 1542.6 | 1557.2 | 1798.4 | 2035.3 | 2380.4 | 2624.5 | 3112.9 | *3335.1* | 3327.8 | 2959.4 | 2884.8 |
| 62.5° | 938.7 | 951.9 | 1124.4 | 1500.2 | 1934.4 | 2405.2 | 3193.3 | *3734.3* | 3694.8 | 2653.8 | 2428.6 |
| 64° | *764.7* | *789.6* | *896.3* | *1218.0* | *1590.8* | *2175.7* | *3169.9* | *3767.9* | *3737.2* | *2456.4* | *2164.0* |
| 65° | 653.6 | 687.2 | 796.9 | 1057.1 | 1352.5 | 1928.6 | 3105.6 | *3674.4* | 3653.9 | 2336.5 | 1944.6 |
| 67.5° | 410.9 | 426.9 | 589.2 | 821.7 | 931.4 | 1234.0 | 2669.9 | *3177.2* | 3213.8 | 2082.1 | 1434.4 |
| 70° | 305.6 | 312.9 | 405.0 | 636.0 | 726.7 | 717.9 | 1833.5 | *2573.4* | 2582.1 | 1665.4 | 865.6 |
| 72.5° | 222.2 | 223.7 | 283.7 | 470.8 | 568.8 | 489.8 | 966.5 | *1912.5* | 1849.6 | 975.2 | 472.3 |
| 75° | 147.7 | 153.5 | 198.9 | 331.9 | 443.0 | 359.7 | 440.1 | *1089.3* | 1070.3 | 476.7 | 270.5 |
| 77.5° | 108.2 | 109.7 | 134.5 | 222.2 | 348.0 | 264.6 | 266.1 | *469.3* | 484.0 | 283.7 | 171.1 |
| 80° | 61.4 | 64.3 | 87.7 | 136.0 | 226.6 | 181.3 | 149.1 | *226.6* | 260.3 | 193.0 | 114.0 |
| 82.5° | 36.6 | 39.5 | 62.9 | 89.2 | 155.0 | 74.6 | 76.0 | *124.3* | 155.0 | 138.9 | 61.4 |
| 85° | 21.9 | 23.4 | 39.5 | 48.3 | 92.1 | 49.7 | 27.8 | *61.4* | 80.4 | 81.9 | 33.6 |
| 87.5° | 14.6 | 14.6 | 21.9 | 20.5 | 26.3 | 23.4 | 11.7 | *16.1* | 20.5 | 27.8 | 13.2 |
| 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: P1457773
CATALOG NUMBER: GLAN-SB1C-830-U-T2LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 | 788.1 |
| 2.5° | 792.5 | 783.7 | 757.4 | 722.3 | 690.1 | 665.3 | 634.6 | 614.1 | 595.1 | 595.1 | 579.0 |
| 5° | 811.5 | 788.1 | 723.8 | 643.3 | 557.1 | 475.2 | 422.6 | 364.1 | 345.1 | 329.0 | 331.9 |
| 7.5° | 843.7 | 801.3 | 687.2 | 542.5 | 405.0 | 317.3 | 258.8 | 232.5 | 220.8 | 213.5 | 214.9 |
| 10° | 883.1 | 824.6 | 643.3 | 440.1 | 298.3 | 232.5 | 204.7 | 194.5 | 190.1 | 188.6 | 188.6 |
| 12.5° | 937.2 | 852.4 | 599.5 | 353.8 | 235.4 | 200.3 | 185.7 | 179.8 | 175.5 | 172.5 | 172.5 |
| 15° | 1001.6 | 887.5 | 548.3 | 291.0 | 206.2 | 184.2 | 172.5 | 166.7 | 160.8 | 159.4 | 159.4 |
| 17.5° | 1083.4 | 924.1 | 503.0 | 250.0 | 191.5 | 172.5 | 160.8 | 153.5 | 149.1 | 147.7 | 147.7 |
| 20° | 1174.1 | 969.4 | 457.6 | 226.6 | 181.3 | 160.8 | 149.1 | 143.3 | 138.9 | 136.0 | 137.4 |
| 22.5° | 1289.6 | 1026.4 | 428.4 | 214.9 | 172.5 | 150.6 | 138.9 | 133.1 | 128.7 | 125.7 | 127.2 |
| 25° | 1416.8 | 1098.1 | 412.3 | 214.9 | 166.7 | 143.3 | 130.1 | 124.3 | 119.9 | 117.0 | 117.0 |
| 27.5° | 1571.8 | 1178.5 | 413.8 | 223.7 | 165.2 | 137.4 | 122.8 | 117.0 | 112.6 | 108.2 | 108.2 |
| 30° | 1742.9 | 1273.5 | 429.9 | 239.8 | 168.1 | 131.6 | 117.0 | 108.2 | 105.3 | 100.9 | 100.9 |
| 32.5° | 1924.2 | 1383.2 | 470.8 | 260.3 | 165.2 | 124.3 | 108.2 | 100.9 | 96.5 | 93.6 | 93.6 |
| 35° | 2115.7 | 1507.5 | 522.0 | 269.0 | 150.6 | 114.0 | 100.9 | 93.6 | 90.7 | 89.2 | 87.7 |
| 37.5° | 2298.5 | 1615.7 | 549.8 | 251.5 | 131.6 | 105.3 | 92.1 | 84.8 | 83.3 | 80.4 | 80.4 |
| 40° | 2440.3 | 1704.9 | 533.7 | 214.9 | 121.4 | 96.5 | 84.8 | 77.5 | 74.6 | 71.6 | 71.6 |
| 42.5° | 2523.6 | 1737.0 | 475.2 | 182.8 | 114.0 | 87.7 | 77.5 | 70.2 | 67.3 | 65.8 | 65.8 |
| 45° | 2571.9 | 1732.6 | 406.5 | 163.8 | 106.7 | 80.4 | 70.2 | 65.8 | 61.4 | 59.9 | 58.5 |
| 47.5° | 2570.4 | 1687.3 | 356.8 | 147.7 | 99.4 | 74.6 | 65.8 | 61.4 | 57.0 | 55.6 | 55.6 |
| 50° | 2560.2 | 1620.0 | 301.2 | 136.0 | 93.6 | 70.2 | 61.4 | 58.5 | 54.1 | 52.6 | 51.2 |
| 52.5° | 2585.1 | 1582.0 | 251.5 | 128.7 | 86.3 | 67.3 | 59.9 | 55.6 | 49.7 | 48.3 | 48.3 |
| 55° | 2615.8 | 1560.1 | 201.8 | 121.4 | 80.4 | 65.8 | 57.0 | 52.6 | 46.8 | 45.3 | 45.3 |
| 57.5° | 2526.6 | 1476.8 | 166.7 | 109.7 | 73.1 | 62.9 | 54.1 | 51.2 | 45.3 | 40.9 | 40.9 |
| 60° | 2245.8 | 1220.9 | 137.4 | 96.5 | 67.3 | 58.5 | 51.2 | 46.8 | 40.9 | 35.1 | 35.1 |
| 62.5° | 1826.2 | 931.4 | 114.0 | 81.9 | 62.9 | 54.1 | 46.8 | 42.4 | 35.1 | 27.8 | 27.8 |
| 64° | *1586.4* | *791.0* | *102.3* | *71.6* | *59.9* | *49.7* | *42.4* | *38.0* | *30.7* | *23.4* | *21.9* |
| 65° | 1422.7 | 698.9 | 95.0 | 67.3 | 58.5 | 46.8 | 40.9 | 36.6 | 27.8 | 21.9 | 20.5 |
| 67.5° | 1001.6 | 469.3 | 76.0 | 55.6 | 51.2 | 39.5 | 35.1 | 30.7 | 24.9 | 19.0 | 17.5 |
| 70° | 583.4 | 266.1 | 59.9 | 46.8 | 39.5 | 30.7 | 29.2 | 27.8 | 21.9 | 14.6 | 14.6 |
| 72.5° | 317.3 | 133.1 | 45.3 | 38.0 | 30.7 | 21.9 | 24.9 | 21.9 | 17.5 | 11.7 | 10.2 |
| 75° | 194.5 | 81.9 | 33.6 | 27.8 | 20.5 | 16.1 | 19.0 | 16.1 | 10.2 | 7.3 | 5.8 |
| 77.5° | 130.1 | 52.6 | 24.9 | 19.0 | 13.2 | 10.2 | 13.2 | 8.8 | 4.4 | 1.5 | 1.5 |
| 80° | 80.4 | 36.6 | 16.1 | 11.7 | 7.3 | 4.4 | 2.9 | 1.5 | 1.5 | 0.0 | 0.0 |
| 82.5° | 35.1 | 23.4 | 8.8 | 5.8 | 2.9 | 1.5 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 19.0 | 7.3 | 2.9 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 5.8 | 2.9 | 1.5 | 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: SP1-2407-184-9

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-830-U-5WQ

Data in this report applies to families of products including GSS-SB1A-830-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

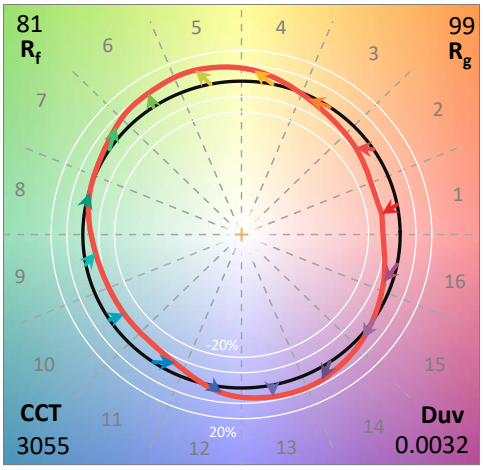
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-9 |
| 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-830-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3055 |
| CIE u': | 0.2475 |
| CIE v': | 0.5247 |
| Duv: | 0.0032 |
| CIE x: | 0.4377 |
| CIE y: | 0.4124 |
| CIE z: | 0.1499 |
| Peak Wavelength (nm): | 604 |
| Dominant Wavelength (nm): | 581 |
| Purity: | 55.16339 |
| Rf: | 81.5 |
| Rg: | 99.2 |

| | |
|---|---|
| CRI (Ra): | 80.9 |
| R1: | 79.5 |
| R2: | 85.6 |
| R3: | 92.1 |
| R4: | 82.4 |
| R5: | 78.9 |
| R6: | 81.7 |
| R7: | 85.1 |
| R8: | 61.9 |
| R9: | 6.8 |
| R10: | 67.1 |
| R11: | 82.5 |
| R12: | 63.4 |
| R13: | 80.2 |
| R14: | 95.1 |
| R15: | 71.7 |




## Test Conditions

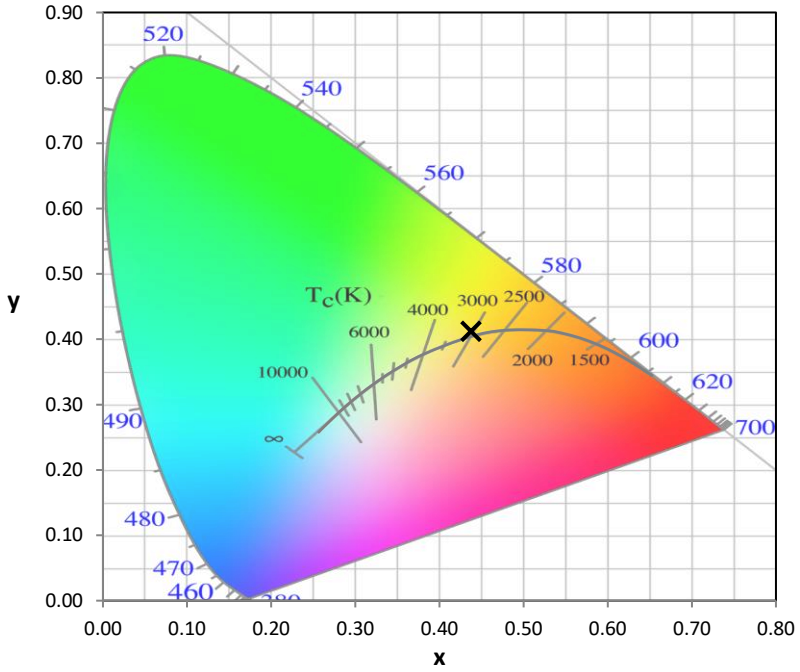
| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-9

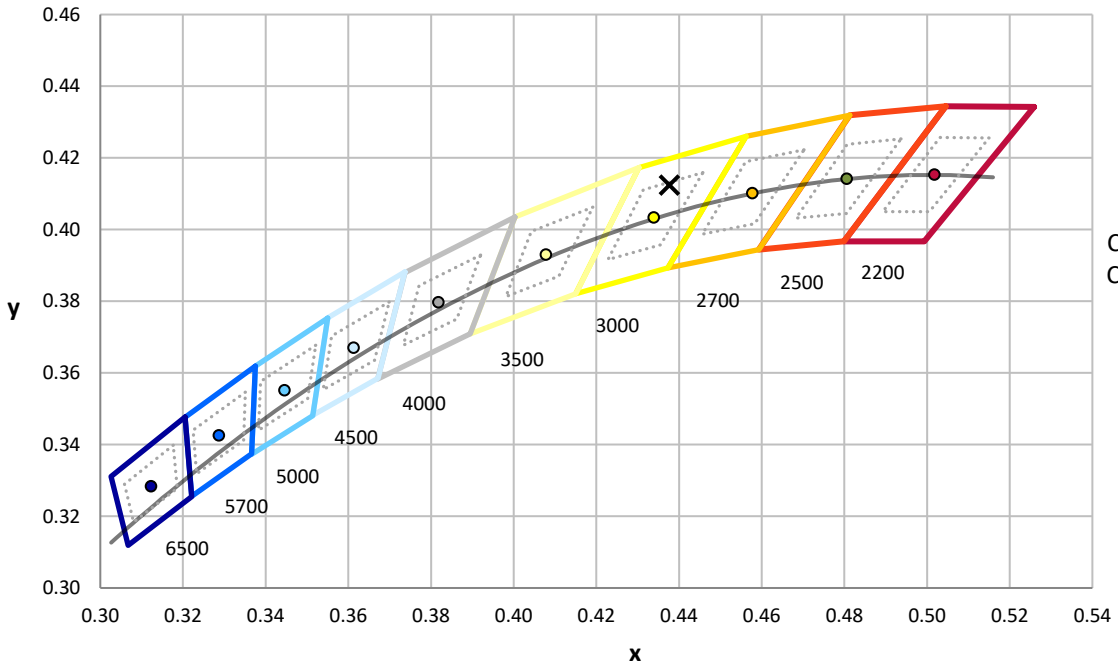
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-9

## CIE 1931 Chromaticity Diagram




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

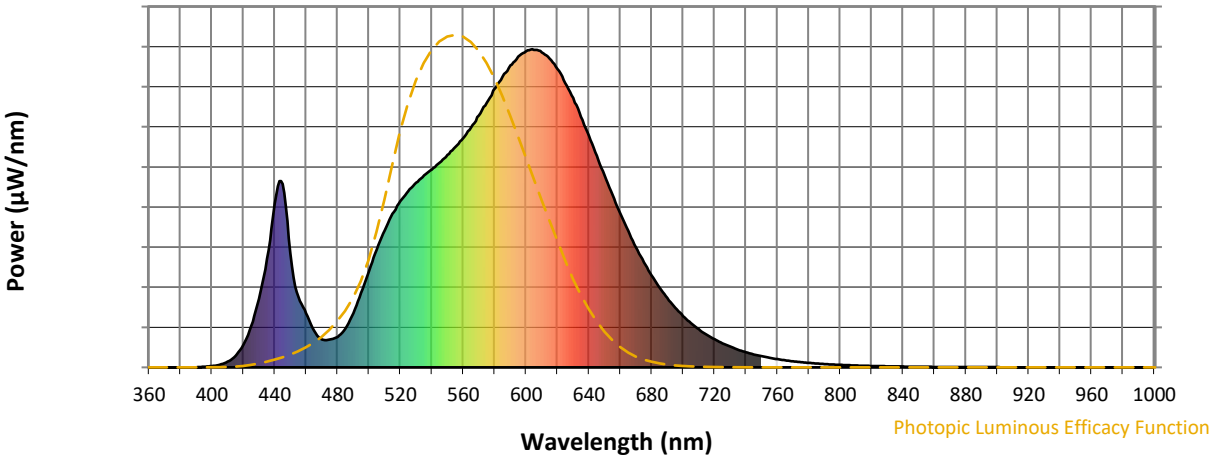



CCT = 3055K
CIE x = 0.4377
CIE y = 0.4124
Duv = 0.0032

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-9

## Photopic Flux vs. Wavelength

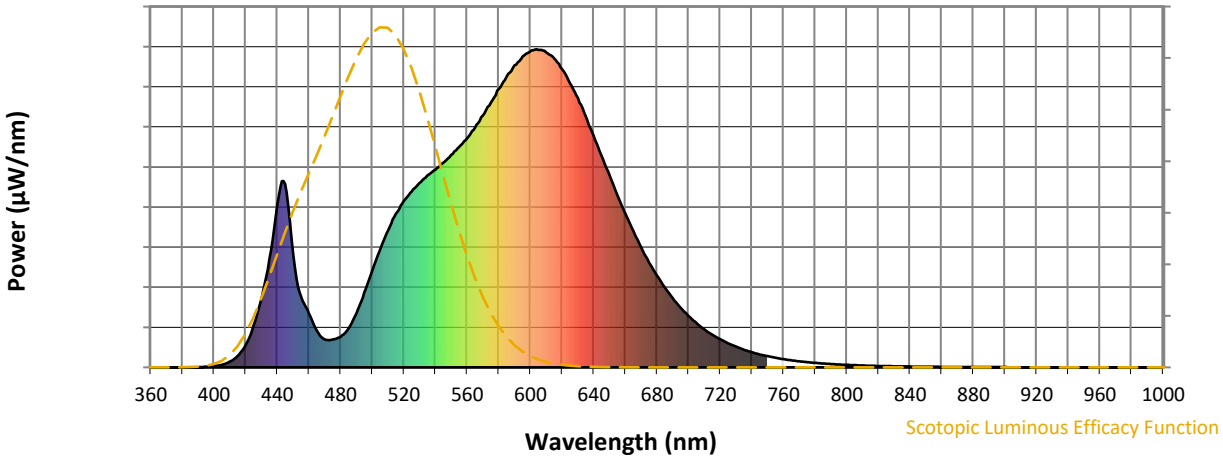



## Photopic Lumens: NR

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-9

## Scotopic Flux vs. Wavelength

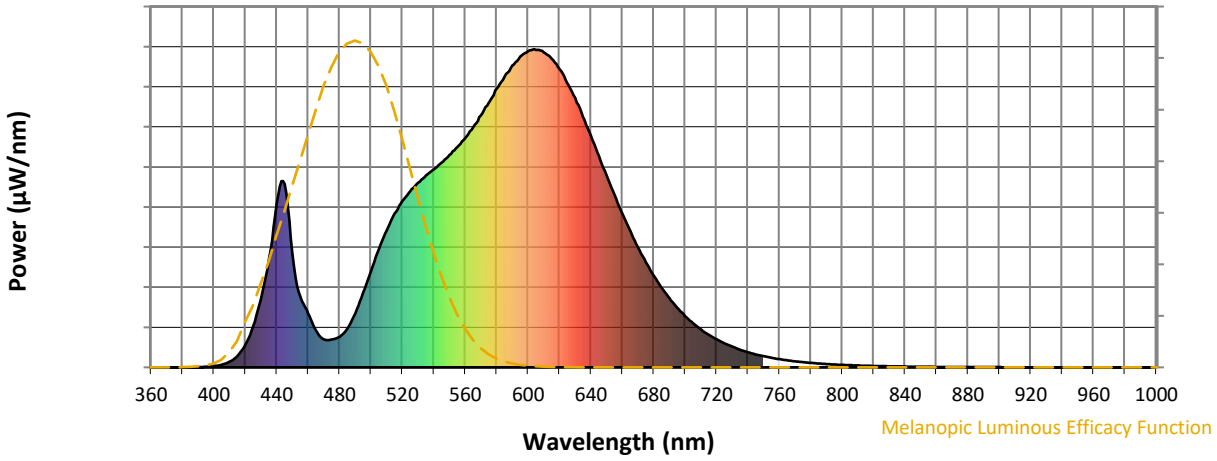



**Scotopic Lumens: NR** **S/P: 1.28**

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-9

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.33**

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

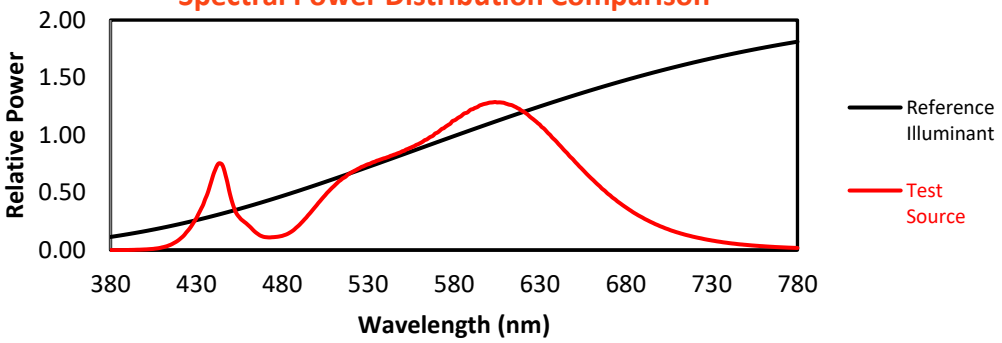
REPORT NUMBER: SP1-2407-184-9

# TM-30-18

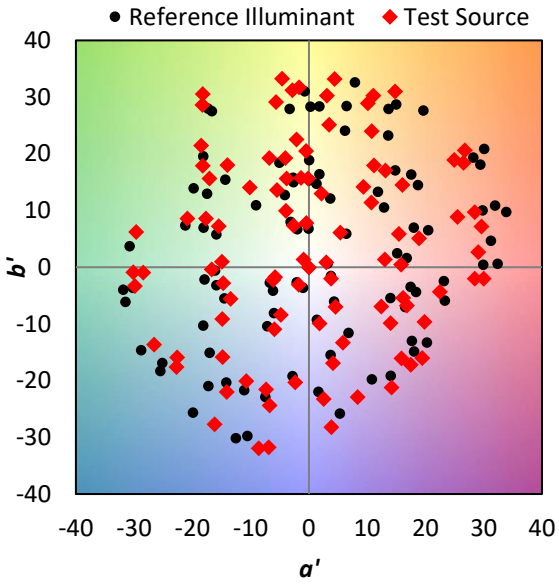
## Summary

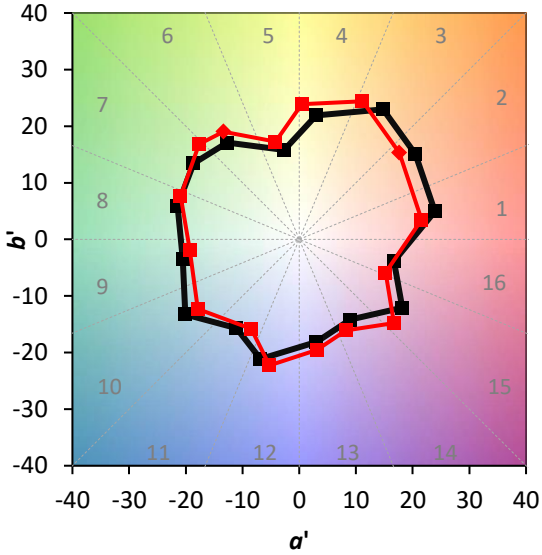
$R_f$ = 81.5
$R_g$ = 99.2
CIE $R_a$ = 80.9
$R_9$ = 6.8

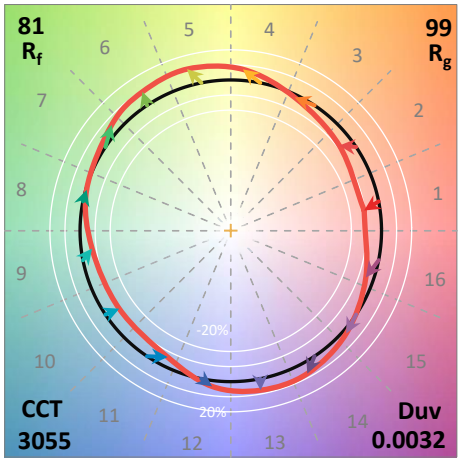
## Spectral Power Distribution Comparison

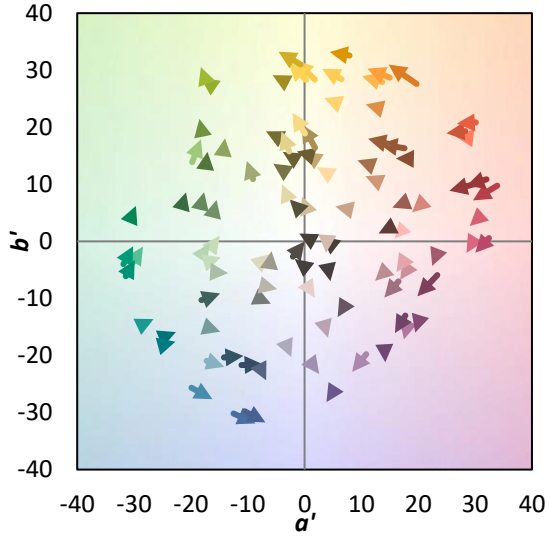



## Color Vector Graphics



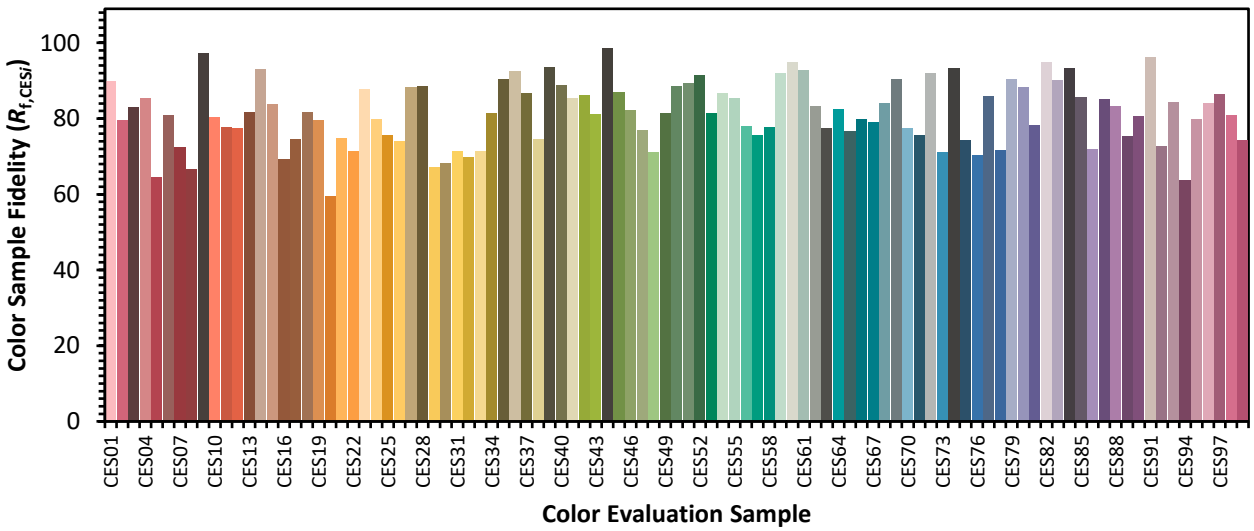



REPORT NUMBER: SP1-2407-184-9

# TM-30-18

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

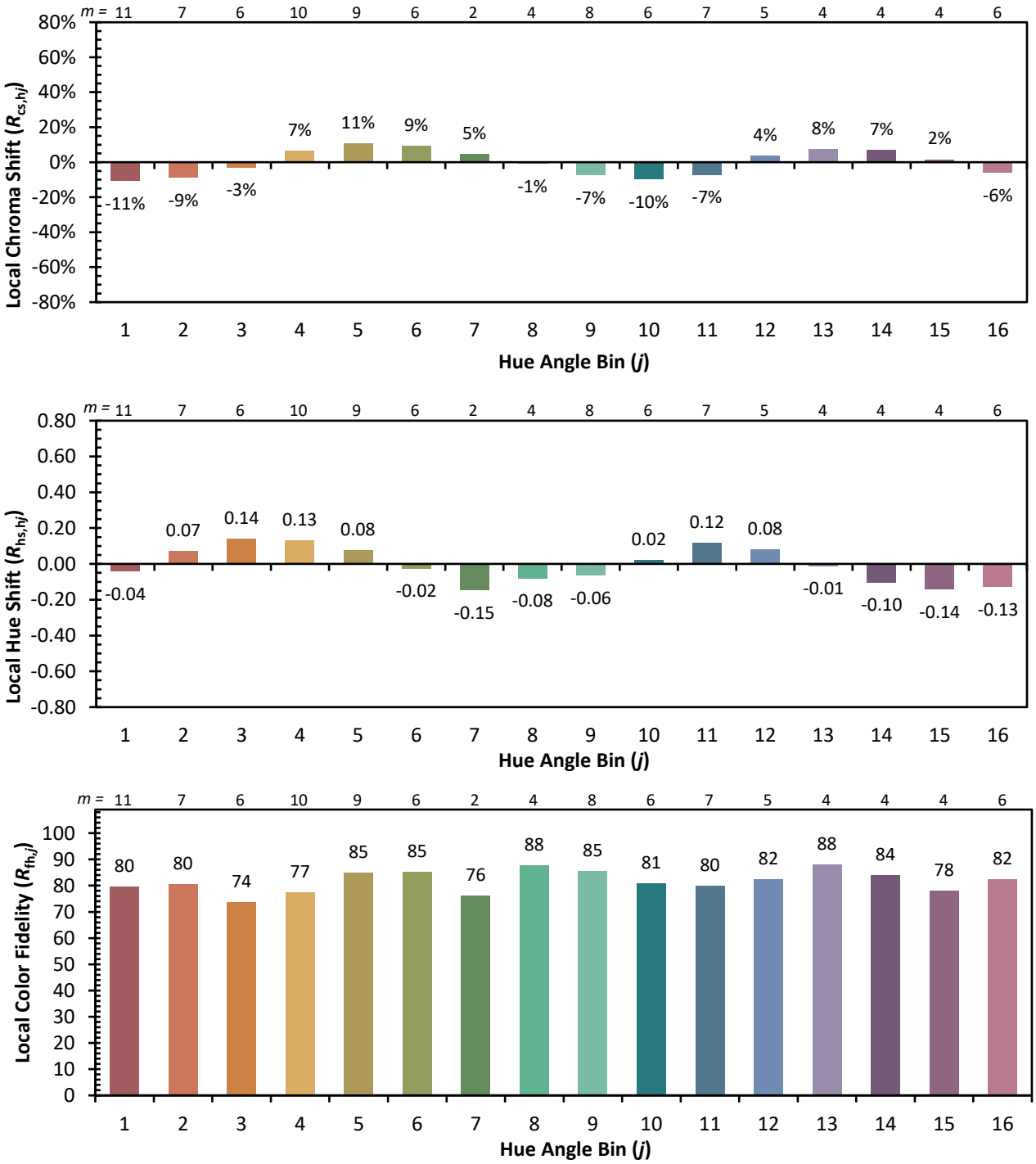
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 91 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 93 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 90 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 77 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 | |



REPORT NUMBER: SP1-2407-184-9

# TM-30-18

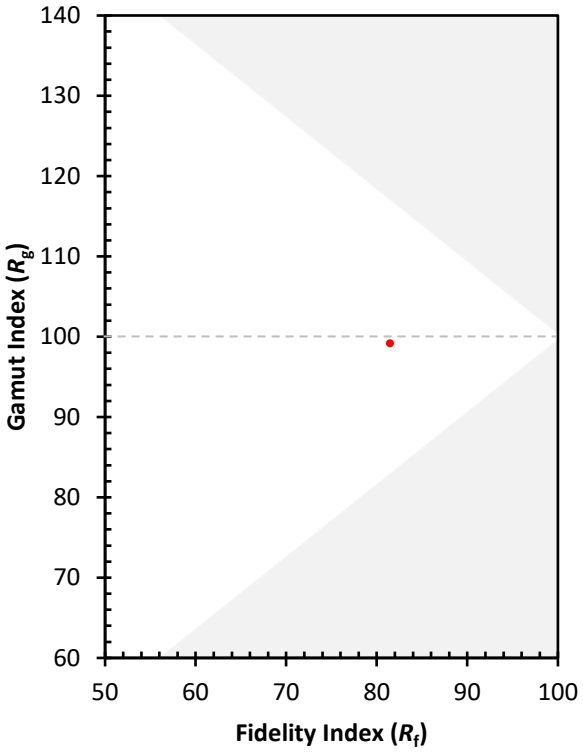
## Color Rendition by Hue-Angle Bin

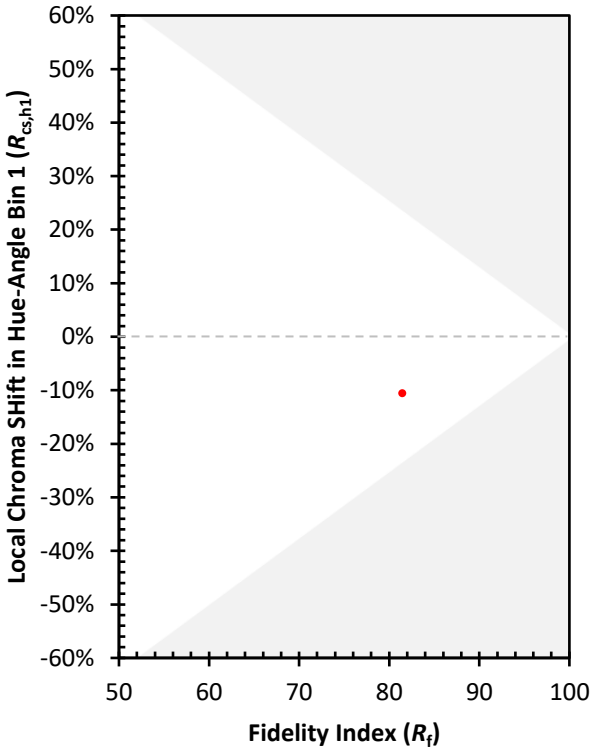


REPORT NUMBER: SP1-2407-184-9

# TM-30-18

## Measure Comparisons

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