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: McGRAW-EDISON

Report Number: P1200748

Luminaire Tested: GPC-SB2D-750-U-T4W-HSS

Issue Date: 10/30/2025

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: | P1200748 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-2) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/15/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GPC-SB2D-750-U-T4W-HSS |
| Description: | GALLEON PEDESTRIAN LUMINAIRE |
| | (2) 70 CRI, 5000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 16581 lumens |
| Efficiency: | N/A |
| Efficacy: | 112.3 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B1 - U0 - G4 |

| | |
|---|---|
| Input Watts (W): | 147.6 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 1.234 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.999 |
| Total Harmonic Distortion (THDi): | 3.108 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

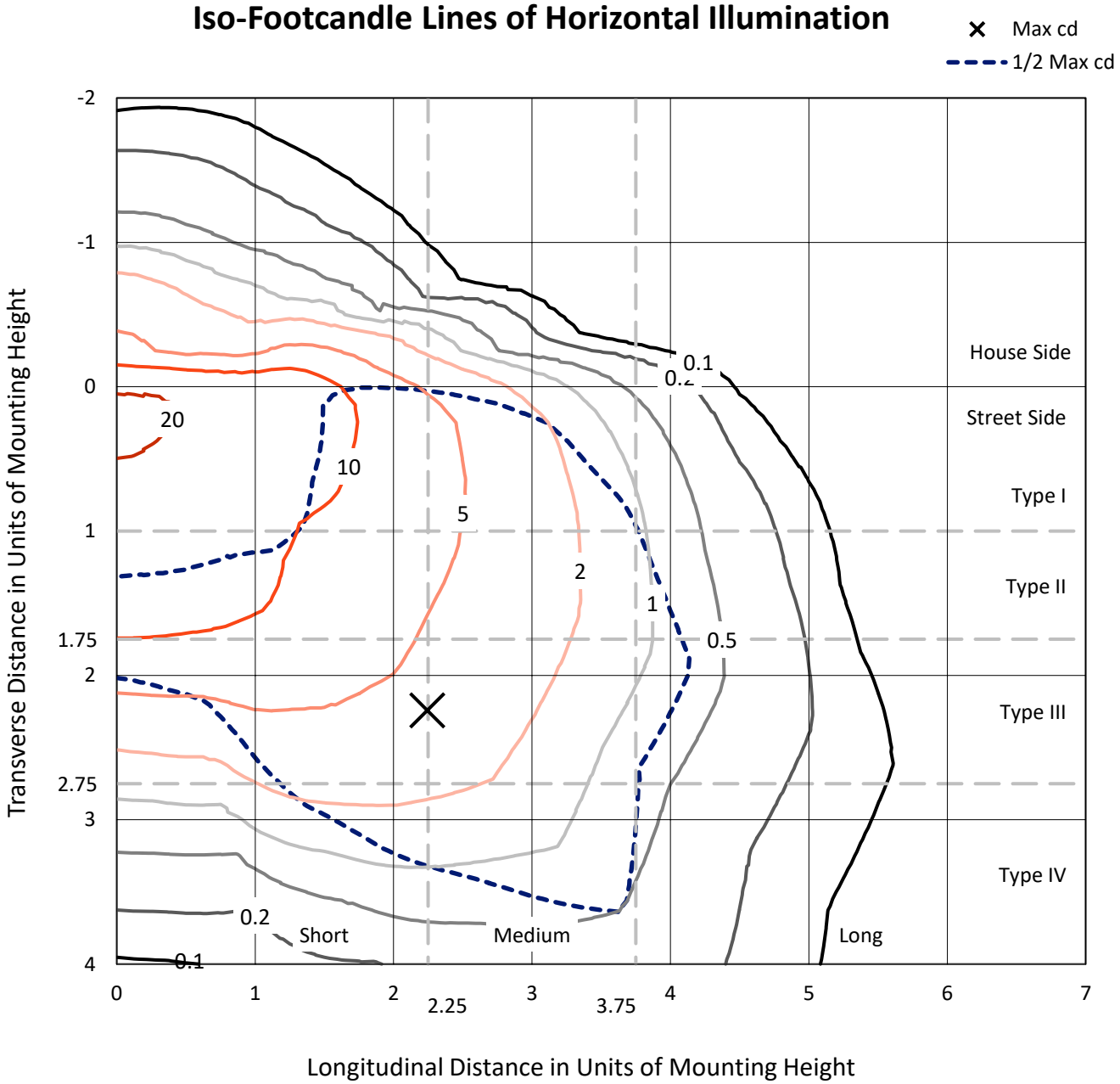


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Scaled Data Report

REPORT NUMBER: P1200748
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## Iso-Footcandle Lines of Horizontal Illumination



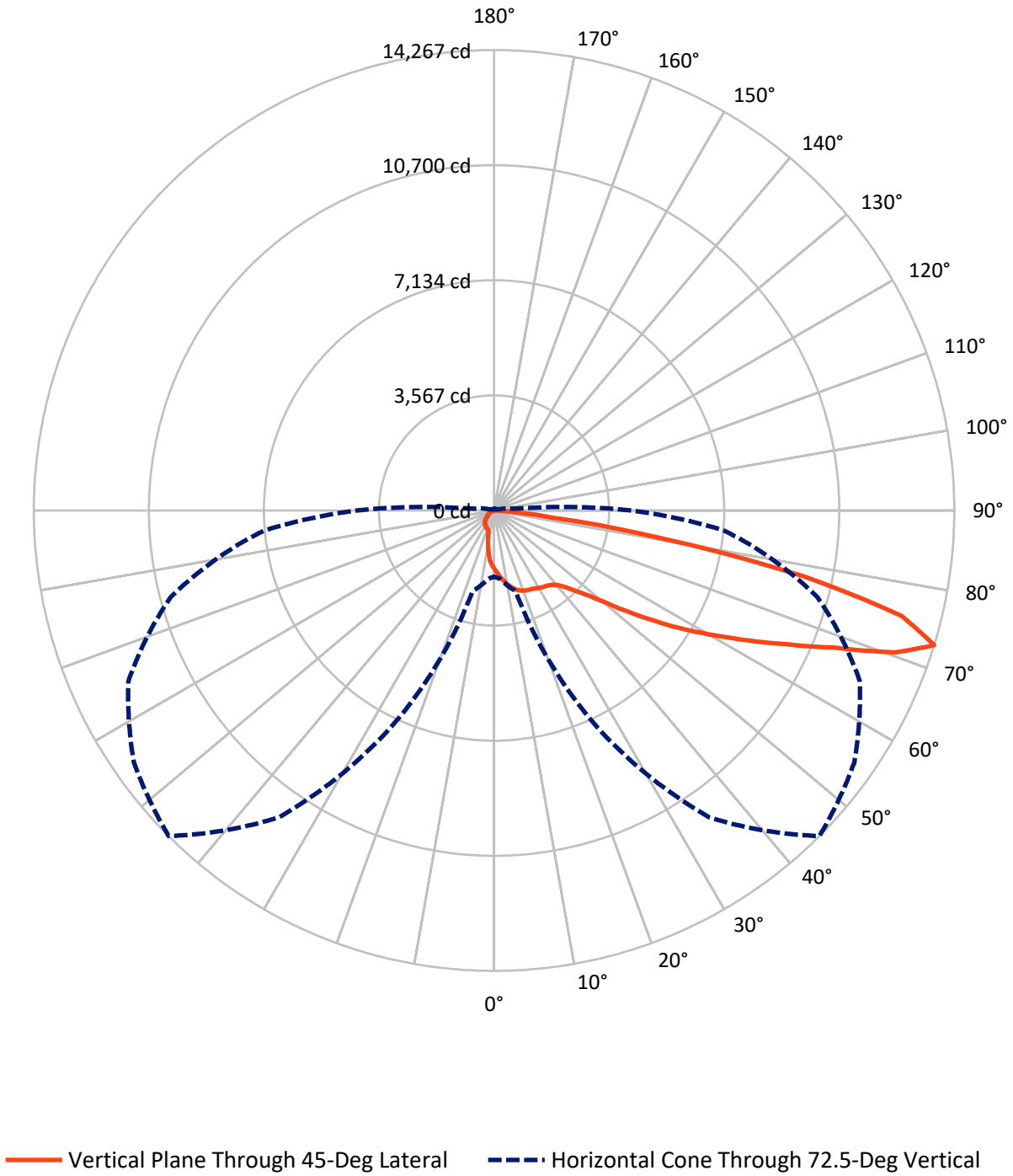

Based on 10 foot mounting height. Maximum calculated value = 25 fc
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

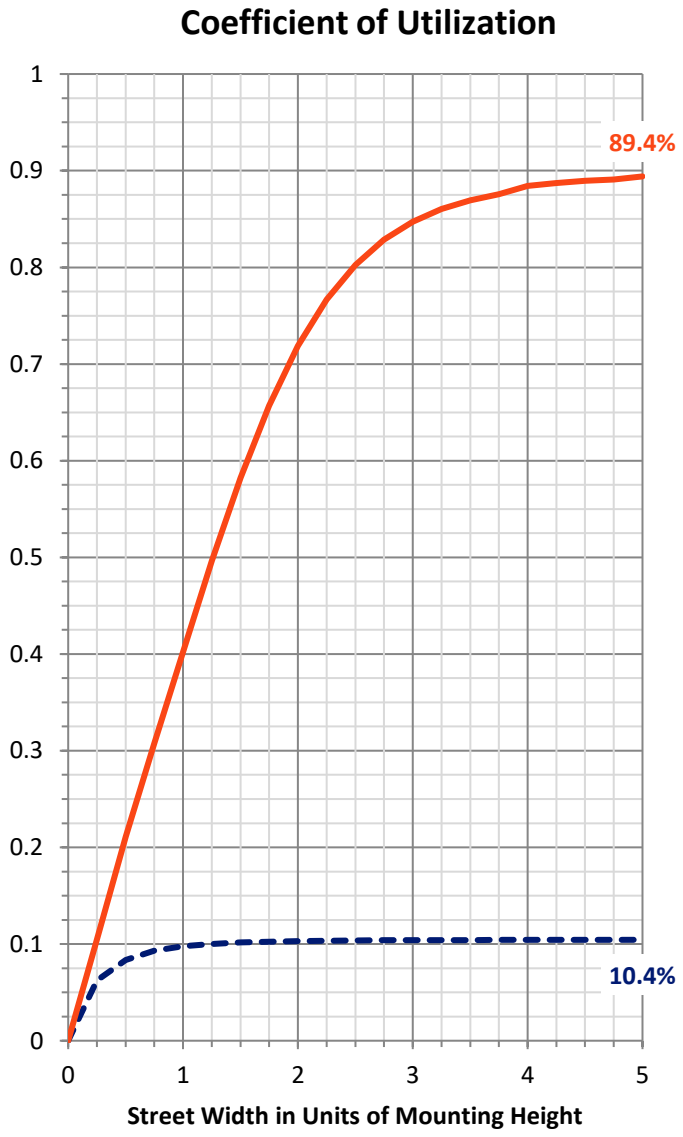
REPORT NUMBER: P1200748
CATALOG NUMBER: GPC-SB2D-750-U-T4W-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1742.2 | 0.0 | 1742.2 |
| | % Fixture | 10.5 | 0.0 | 10.5 |
| **Street Side** | Lumens | 14838.8 | 0.0 | 14838.8 |
| | % Fixture | 89.5 | 0.0 | 89.5 |
| **Total** | Lumens | 16581.0 | 0.0 | 16581.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 171.1 | 1.0 |
| 10°-20° | 500.2 | 3.0 |
| 20°-30° | 821.4 | 5.0 |
| 30°-40° | 1164.9 | 7.0 |
| 40°-50° | 1925.5 | 11.6 |
| 50°-60° | 3459.0 | 20.9 |
| 60°-70° | 4803.0 | 29.0 |
| 70°-80° | 3483.9 | 21.0 |
| 80°-90° | 251.9 | 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° | 16581.0 | 100.0 |
| 0°-180° | 16581.0 | 100.0 |



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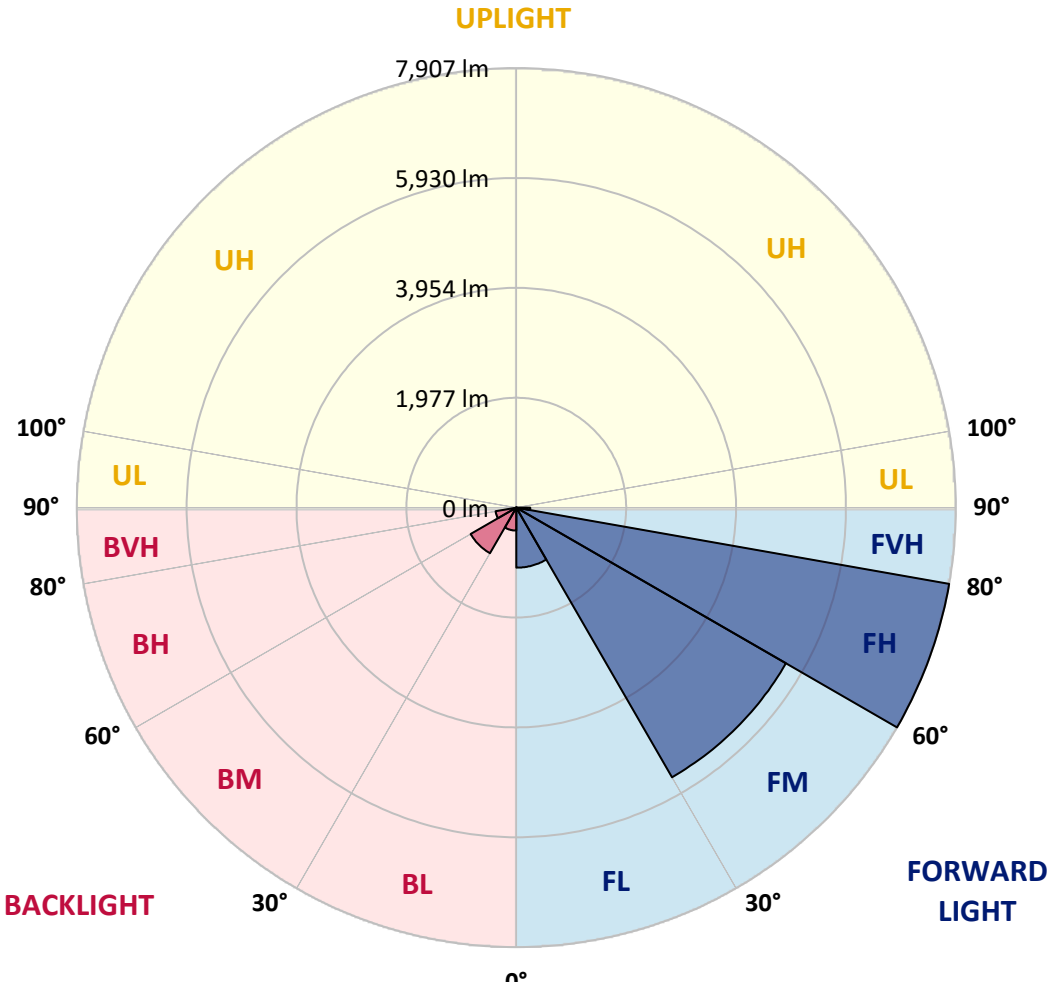
Scaled Data Report

REPORT NUMBER: P1200748
CATALOG NUMBER: GPC-SB2D-750-U-T4W-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1080.1 | 6.5 | | | |
| FM | (30°-60°) | 5601.9 | 33.8 | | | |
| FH | (60°-80°) | 7907.0 | 47.7 | | | G4/12000 |
| FVH | (80°-90°) | 249.8 | 1.5 | | | G3/500 |
| BL | (0°-30°) | 412.7 | 2.5 | B1/500 | | |
| BM | (30°-60°) | 947.5 | 5.7 | B1/1000 | | |
| BH | (60°-80°) | 379.9 | 2.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 2.1 | 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-G4**
Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 | *1816.5* | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 |
| 2.5° | 1984.0 | 1987.4 | 1985.1 | 1971.5 | 1948.9 | *1936.5* | 1929.7 | 1907.0 | 1892.3 | 1866.3 | 1839.1 |
| 5° | 2166.2 | 2179.8 | 2171.9 | 2144.7 | 2101.7 | *2071.1* | 2062.1 | 2015.7 | 1973.8 | 1925.1 | 1868.5 |
| 7.5° | 2359.7 | 2366.5 | 2351.8 | 2316.7 | 2259.0 | *2206.9* | 2199.0 | 2134.5 | 2067.7 | 1993.0 | 1916.1 |
| 10° | 2527.2 | 2535.2 | 2512.5 | 2461.6 | 2395.9 | *2331.4* | 2320.1 | 2248.8 | 2169.6 | 2077.9 | 1979.5 |
| 12.5° | 2667.6 | 2675.5 | 2646.1 | 2585.0 | 2512.5 | *2445.7* | 2434.4 | 2359.7 | 2272.6 | 2170.7 | 2048.5 |
| 15° | 2774.0 | 2788.7 | 2749.1 | 2683.4 | 2605.3 | *2538.6* | 2532.9 | 2459.3 | 2374.4 | 2261.3 | 2131.1 |
| 17.5° | 2836.2 | 2850.9 | 2813.6 | 2734.3 | 2667.6 | *2611.0* | 2604.2 | 2543.1 | 2463.9 | 2355.2 | 2211.5 |
| 20° | 2846.4 | 2860.0 | 2820.4 | 2751.3 | 2695.9 | *2650.6* | 2647.2 | 2603.1 | 2545.3 | 2441.2 | 2298.6 |
| 22.5° | 2815.8 | 2832.8 | 2796.6 | 2741.1 | 2702.7 | *2678.9* | 2674.4 | 2649.5 | 2616.6 | 2528.4 | 2380.1 |
| 25° | 2784.1 | 2797.7 | 2770.6 | 2721.9 | 2701.5 | *2699.3* | 2702.7 | 2698.1 | 2691.3 | 2616.6 | 2475.2 |
| 27.5° | 2781.9 | 2796.6 | 2766.0 | 2719.6 | 2708.3 | *2732.1* | 2735.5 | 2757.0 | 2762.6 | 2697.0 | 2566.8 |
| 30° | 2801.1 | 2811.3 | 2781.9 | 2733.2 | 2727.6 | *2781.9* | 2783.0 | 2821.5 | 2830.5 | 2764.9 | 2657.4 |
| 32.5° | 2843.0 | 2854.3 | 2824.9 | 2753.6 | 2745.7 | *2821.5* | 2824.9 | 2875.8 | 2890.5 | 2837.3 | 2752.5 |
| 35° | 2941.5 | 2955.0 | 2921.1 | 2810.2 | 2781.9 | *2858.8* | 2869.0 | 2929.0 | 2958.4 | 2914.3 | 2850.9 |
| 37.5° | 3187.1 | 3147.4 | 3101.0 | 2924.5 | 2864.5 | *2917.7* | 2934.7 | 3004.8 | 3056.9 | 3006.0 | 2968.6 |
| 40° | 3797.1 | 3672.6 | 3527.7 | 3119.1 | 3009.4 | *3043.3* | 3056.9 | 3127.1 | 3198.4 | 3148.6 | 3130.5 |
| 42.5° | 4712.7 | 4565.5 | 4332.4 | 3567.3 | 3227.8 | *3244.8* | 3255.0 | 3316.1 | 3416.8 | 3377.2 | 3381.7 |
| 45° | 5528.7 | 5475.5 | 5237.8 | 4332.4 | 3636.4 | *3552.6* | 3565.1 | 3596.8 | 3745.0 | 3730.3 | 3759.7 |
| 47.5° | 6155.7 | 6125.1 | 5941.8 | 5210.6 | 4326.7 | *3929.5* | 3964.6 | 3979.3 | 4193.2 | 4245.3 | 4324.5 |
| 50° | 6637.8 | 6626.5 | 6462.4 | 5991.6 | 5228.8 | *4485.2* | 4497.6 | 4465.9 | 4786.2 | 4915.3 | 5065.8 |
| 52.5° | 7092.8 | 7131.3 | 7010.2 | 6717.0 | 6191.9 | *5212.9* | 5210.6 | 5061.3 | 5493.6 | 5688.3 | 5945.2 |
| 55° | 7503.6 | 7517.2 | 7529.6 | 7457.2 | 7160.7 | *6041.4* | 6019.9 | 5775.4 | 6314.1 | 6515.6 | 6794.0 |
| 57.5° | 7889.5 | 7895.2 | 8006.1 | 8154.4 | 8169.1 | *6930.9* | 6891.3 | 6598.2 | 7210.5 | 7354.2 | 7525.1 |
| 60° | 8148.7 | 8174.7 | 8409.0 | 8821.0 | 9000.9 | *7848.8* | 7827.3 | 7528.5 | 8122.7 | 8189.5 | 8157.8 |
| 62.5° | 7775.2 | 7933.7 | 8524.5 | 9341.6 | 9786.4 | *8866.3* | 8856.1 | 8575.4 | 9082.4 | 9028.1 | 8756.5 |
| 65° | 6293.7 | 6562.0 | 7600.9 | 9693.6 | 10557.1 | *10002.5* | 10017.3 | 9718.5 | 10068.2 | 9891.6 | 9243.1 |
| 67.5° | 4402.6 | 4685.5 | 5914.6 | 9721.9 | 11418.4 | *11336.9* | 11421.8 | 10953.2 | 11115.1 | 10719.0 | 9358.6 |
| 70° | 3044.4 | 3190.4 | 3990.6 | 9113.0 | 12089.5 | *13174.9* | 13172.6 | 12469.8 | 12156.3 | 11095.8 | 8770.1 |
| 72.5° | *2047.4* | *2123.2* | *2591.7* | *7229.7* | *11596.1* | *14267.0* | *14201.4* | *13628.7* | *12507.1* | *10377.2* | *7165.2* |
| 75° | 863.5 | 919.0 | 1199.7 | 4063.0 | 9174.1 | *13052.7* | 12875.0 | 12044.2 | 11112.8 | 8171.3 | 4470.5 |
| 77.5° | 273.9 | 297.7 | 473.1 | 1454.3 | 5053.3 | *9811.3* | 9623.4 | 7521.7 | 7448.1 | 4099.3 | 1634.3 |
| 80° | 130.2 | 151.7 | 266.0 | 584.0 | 1988.5 | *5336.3* | 5310.2 | 3412.3 | 3204.0 | 1106.9 | 328.2 |
| 82.5° | 56.6 | 66.8 | 147.1 | 312.4 | 889.6 | *1903.6* | 1942.1 | 1161.2 | 960.9 | 419.9 | 100.7 |
| 85° | 18.1 | 23.8 | 67.9 | 143.7 | 375.7 | *473.1* | 467.4 | 276.2 | 387.1 | 228.6 | 35.1 |
| 87.5° | 0.0 | 0.0 | 22.6 | 32.8 | 38.5 | *27.2* | 30.6 | 23.8 | 107.5 | 63.4 | 12.4 |
| 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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Scaled Data Report

REPORT NUMBER: P1200748
CATALOG NUMBER: GPC-SB2D-750-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 | 1816.5 |
| 2.5° | 1825.5 | 1807.4 | 1775.7 | 1746.3 | 1720.3 | 1694.3 | 1678.4 | 1655.8 | 1653.5 | 1653.5 | 1659.2 |
| 5° | 1838.0 | 1808.6 | 1752.0 | 1692.0 | 1623.0 | 1557.3 | 1491.7 | 1428.3 | 1407.9 | 1393.2 | 1400.0 |
| 7.5° | 1874.2 | 1827.8 | 1738.4 | 1624.1 | 1492.8 | 1349.1 | 1248.3 | 1139.7 | 1097.8 | 1075.2 | 1078.6 |
| 10° | 1926.3 | 1862.9 | 1727.1 | 1526.8 | 1314.0 | 1118.2 | 974.5 | 856.7 | 811.5 | 792.2 | 792.2 |
| 12.5° | 1984.0 | 1905.9 | 1706.7 | 1405.7 | 1118.2 | 883.9 | 743.6 | 689.2 | 682.5 | 682.5 | 682.5 |
| 15° | 2053.0 | 1958.0 | 1671.6 | 1263.1 | 913.3 | 699.4 | 649.6 | 651.9 | 658.7 | 663.2 | 663.2 |
| 17.5° | 2124.3 | 2013.4 | 1616.2 | 1103.5 | 732.3 | 629.3 | 630.4 | 633.8 | 639.4 | 644.0 | 644.0 |
| 20° | 2201.3 | 2068.9 | 1542.6 | 933.7 | 628.1 | 608.9 | 612.3 | 615.7 | 620.2 | 622.5 | 623.6 |
| 22.5° | 2283.9 | 2120.9 | 1455.5 | 767.3 | 593.0 | 591.9 | 593.0 | 596.4 | 602.1 | 602.1 | 604.4 |
| 25° | 2372.2 | 2178.6 | 1355.9 | 646.2 | 574.9 | 574.9 | 577.2 | 579.5 | 584.0 | 584.0 | 585.1 |
| 27.5° | 2462.7 | 2231.8 | 1250.6 | 582.9 | 559.1 | 558.0 | 558.0 | 561.4 | 563.6 | 564.8 | 565.9 |
| 30° | 2562.3 | 2294.1 | 1145.3 | 569.3 | 546.6 | 541.0 | 537.6 | 539.9 | 542.1 | 543.2 | 545.5 |
| 32.5° | 2664.2 | 2354.1 | 1051.4 | 574.9 | 534.2 | 524.0 | 512.7 | 510.4 | 510.4 | 515.0 | 518.3 |
| 35° | 2777.4 | 2419.7 | 979.0 | 594.2 | 527.4 | 499.1 | 481.0 | 470.8 | 471.9 | 478.7 | 482.1 |
| 37.5° | 2913.2 | 2498.9 | 925.8 | 611.2 | 522.9 | 470.8 | 441.4 | 428.9 | 421.0 | 428.9 | 426.7 |
| 40° | 3090.9 | 2615.5 | 887.3 | 624.7 | 517.2 | 438.0 | 398.4 | 378.0 | 363.3 | 367.8 | 365.6 |
| 42.5° | 3352.3 | 2798.9 | 872.6 | 625.9 | 504.8 | 399.5 | 354.2 | 327.1 | 305.6 | 306.7 | 302.2 |
| 45° | 3719.0 | 3088.6 | 948.4 | 611.2 | 477.6 | 357.6 | 307.8 | 271.6 | 258.0 | 254.6 | 250.1 |
| 47.5° | 4221.5 | 3510.7 | 1123.8 | 580.6 | 438.0 | 316.9 | 262.6 | 232.0 | 221.8 | 216.2 | 212.8 |
| 50° | 4894.9 | 4052.9 | 1318.5 | 546.6 | 398.4 | 278.4 | 225.2 | 206.0 | 199.2 | 193.5 | 192.4 |
| 52.5° | 5675.8 | 4602.9 | 1478.1 | 512.7 | 358.8 | 244.5 | 201.5 | 190.1 | 184.5 | 180.0 | 178.8 |
| 55° | 6392.2 | 4982.0 | 1469.0 | 476.5 | 320.3 | 217.3 | 184.5 | 177.7 | 170.9 | 166.4 | 164.1 |
| 57.5° | 6838.1 | 5035.2 | 1211.0 | 436.9 | 276.2 | 195.8 | 168.6 | 164.1 | 156.2 | 150.5 | 149.4 |
| 60° | 7043.0 | 4731.9 | 848.8 | 384.8 | 232.0 | 175.4 | 151.7 | 149.4 | 139.2 | 131.3 | 129.0 |
| 62.5° | 7080.3 | 4168.3 | 565.9 | 320.3 | 193.5 | 156.2 | 134.7 | 131.3 | 117.7 | 104.1 | 97.3 |
| 65° | 6928.7 | 3362.5 | 391.6 | 250.1 | 165.2 | 135.8 | 115.4 | 108.6 | 93.9 | 80.4 | 75.8 |
| 67.5° | 6448.8 | 2360.9 | 272.8 | 180.0 | 140.3 | 107.5 | 91.7 | 89.4 | 78.1 | 66.8 | 63.4 |
| 70° | 5569.4 | 1345.7 | 182.2 | 134.7 | 110.9 | 73.6 | 72.4 | 74.7 | 63.4 | 54.3 | 49.8 |
| 72.5° | *4270.2* | *615.7* | *113.2* | *98.5* | *75.8* | *49.8* | *57.7* | *58.9* | *48.7* | *40.7* | *36.2* |
| 75° | 2513.7 | 263.7 | 71.3 | 63.4 | 38.5 | 32.8 | 41.9 | 43.0 | 32.8 | 26.0 | 22.6 |
| 77.5° | 855.6 | 99.6 | 45.3 | 37.3 | 19.2 | 18.1 | 27.2 | 27.2 | 18.1 | 10.2 | 7.9 |
| 80° | 194.7 | 37.3 | 22.6 | 14.7 | 9.1 | 7.9 | 9.1 | 7.9 | 4.5 | 1.1 | 0.0 |
| 82.5° | 55.5 | 14.7 | 9.1 | 5.7 | 3.4 | 3.4 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 15.8 | 6.8 | 2.3 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 6.8 | 1.1 | 0.0 | 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 |


HS
SS

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# LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-4-R4

Test Date: 10/02/2019

Luminaire Tested: SA1C-750-U-5WQ

Data in this report applies to products using SA and SB light squares

Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

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## Test Information

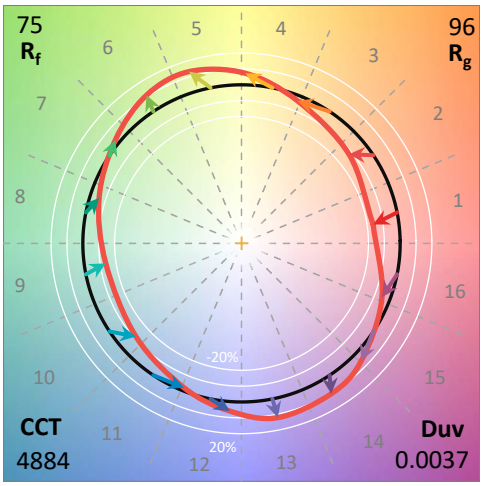
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-4-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | **SA1C-750-U-5WQ** |
| Description: | McGRAW EDISON ROADWAY AND AREA LUMINAIRE |

***THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.***TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 4884 | CRI (Ra): | 73.5 | | |
| CIE u': | 0.2101 | R1: | 70.5 | R9: | -28.4 |
| CIE v': | 0.4904 | R2: | 77.7 | R10: | 48.6 |
| Duv: | 0.0037 | R3: | 84.6 | R11: | 73.2 |
| CIE x: | 0.3493 | R4: | 74.7 | R12: | 50.7 |
| CIE y: | 0.3624 | R5: | 71.9 | R13: | 71.2 |
| CIE z: | 0.2884 | R6: | 70.7 | R14: | 91.4 |
| Peak Wavelength (nm): | 444 | R7: | 81.2 | | |
| Dominant Wavelength (nm): | 571 | R8: | 56.9 | | |
| Purity: | 13.7 | | | | |

| | |
|---|---|
| Rf: | 74.9 |
| Rg: | 96.3 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 240M |
| Operation Time: | 12H |
| Room Temperature (°C) / RH%: | 25.0./44% |
| Sphere Temperature (°C): | 25.7 |

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1121 Highway 74 South
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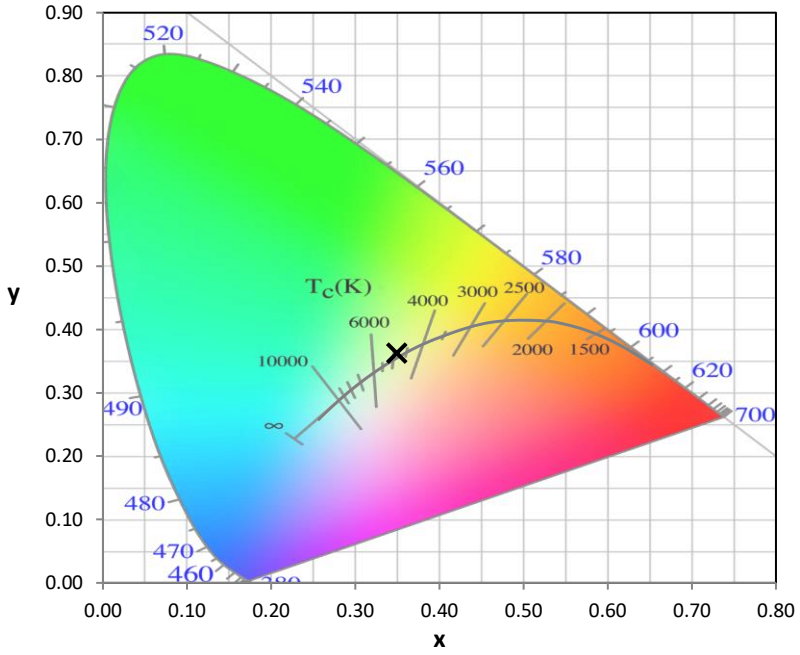
REPORT NUMBER: SP1-1908-441-4-R4

| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

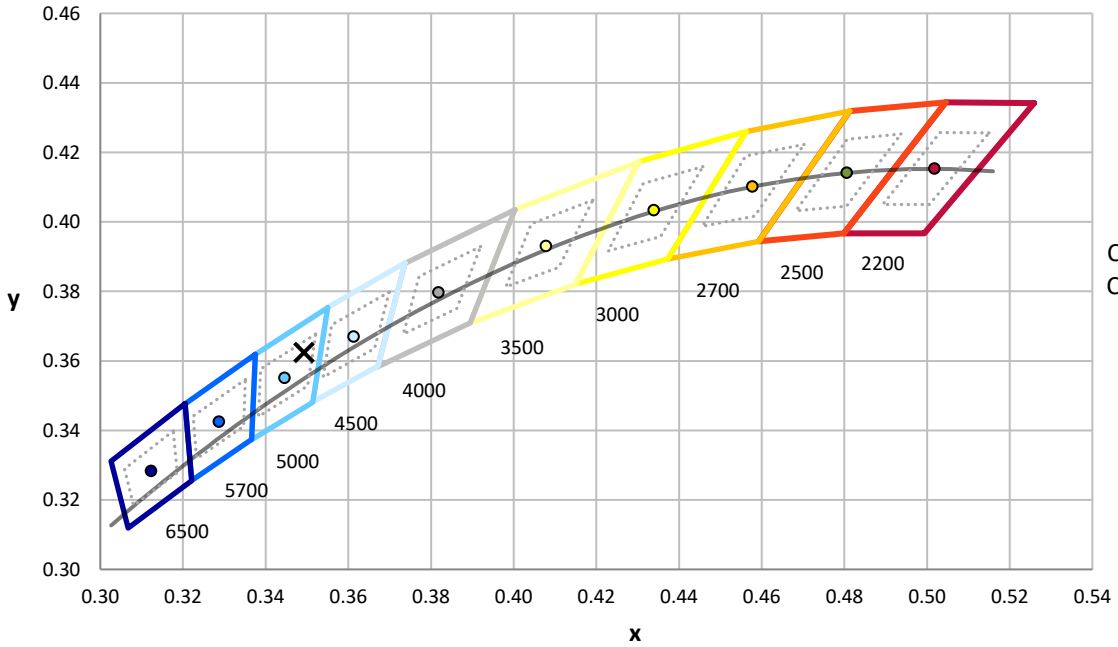
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REPORT NUMBER: SP1-1908-441-4-R4

## CIE 1931 Chromaticity Diagram




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



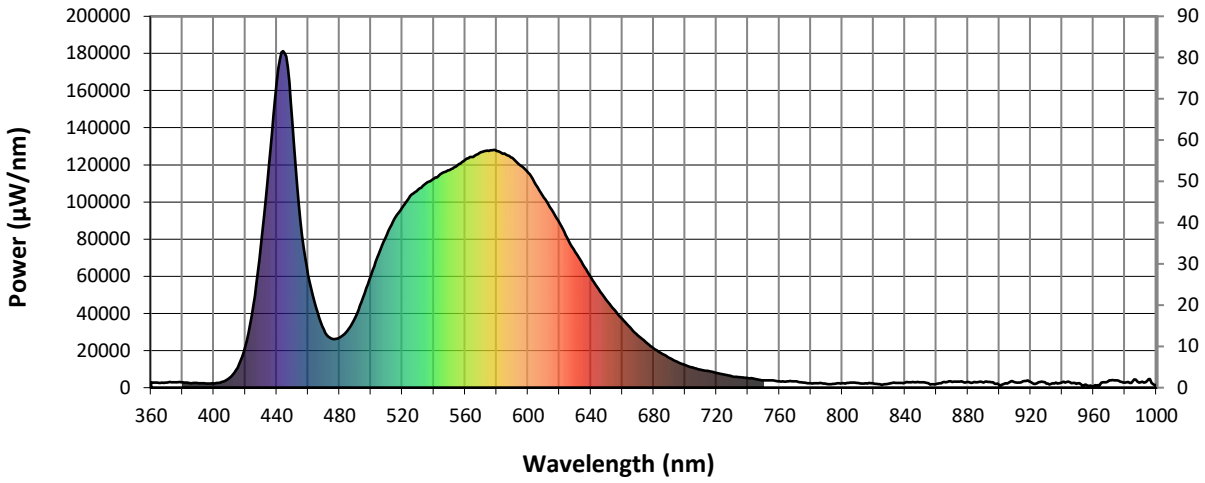

CCT = 4884K
CIE x = 0.3493
CIE y = 0.3624
Duv = 0.0037

Point lies inside the ANSI 5000K 4-step quadrangle

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## Photopic Flux vs. Wavelength



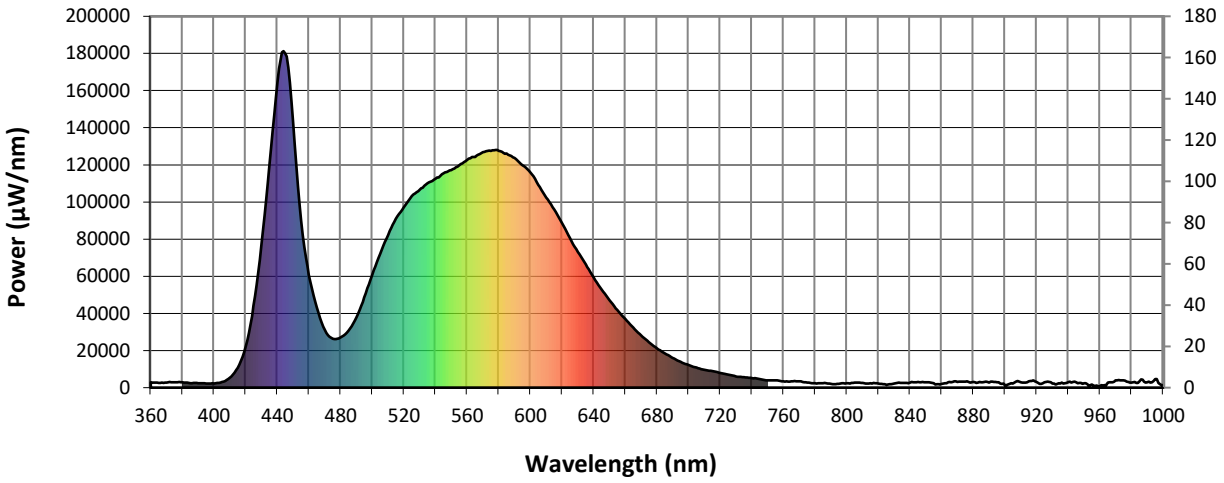

######

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

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## Scotopic Flux vs. Wavelength



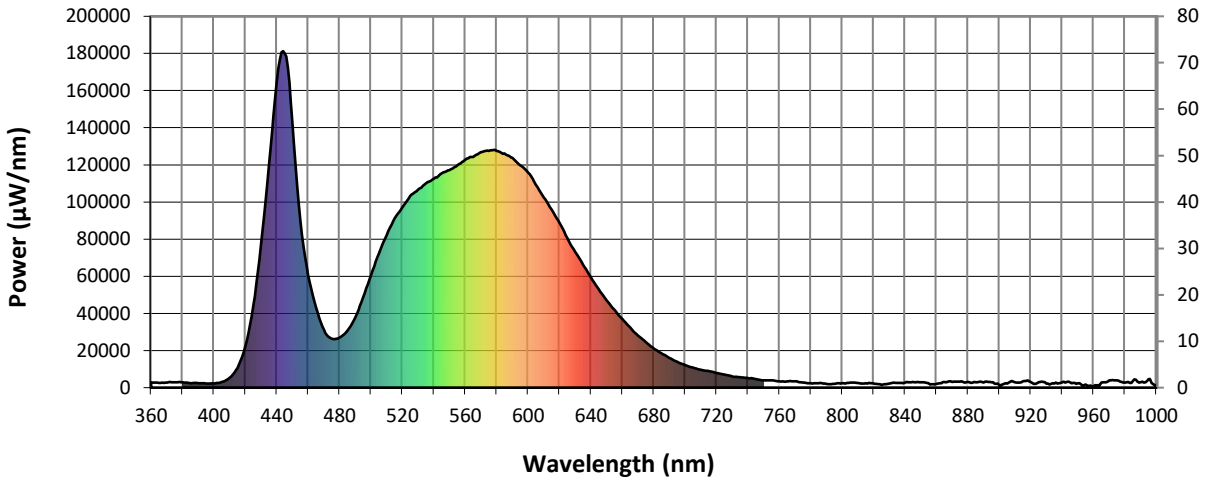

**Scotopic Lumens: 13493.5** **S/P: 1.77**

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: 5378.9** **M/P: 0.71**

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

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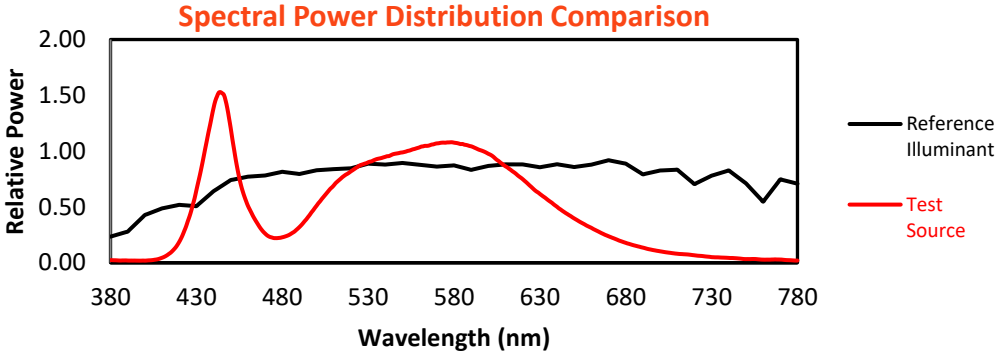
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# TM-30-18

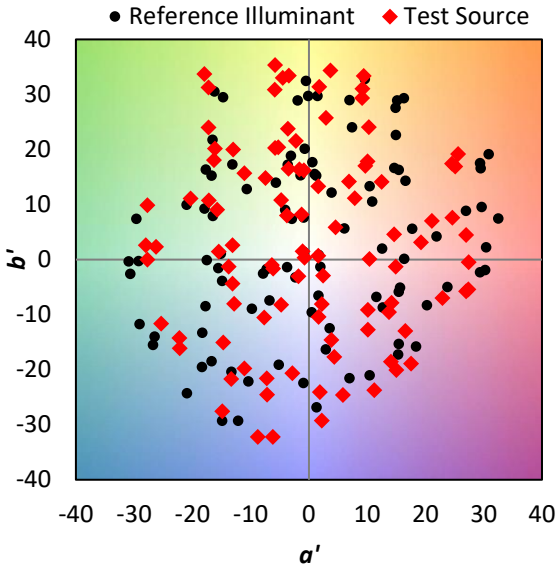
## Summary

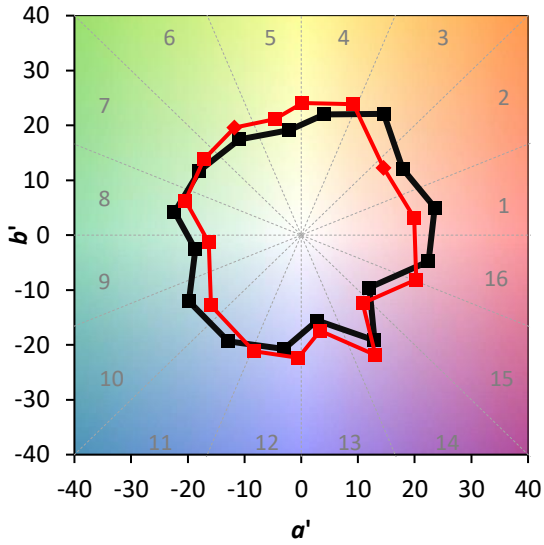
$R_f$ = 74.9
$R_g$ = 96.3
CIE $R_a$ = 73.5
$R_9$ = -28.4

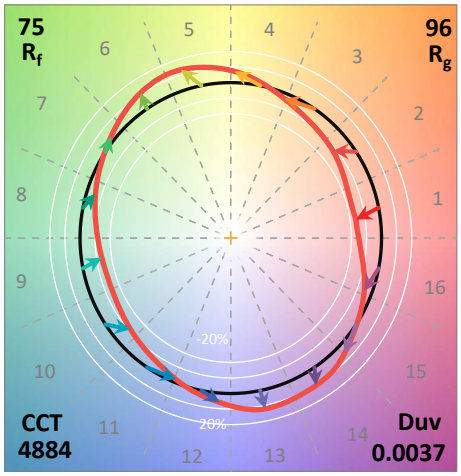
## Spectral Power Distribution Comparison

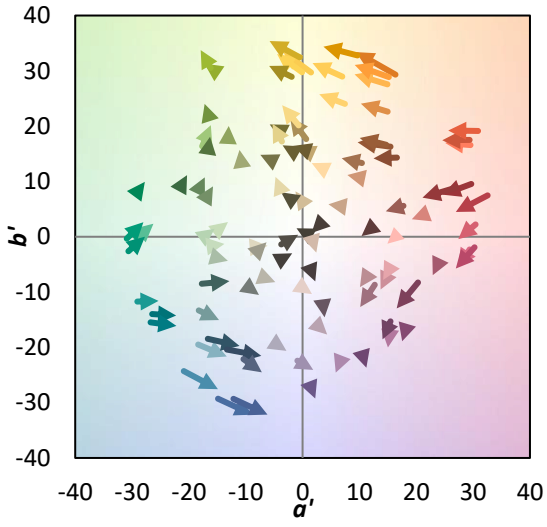



## Color Vector Graphics



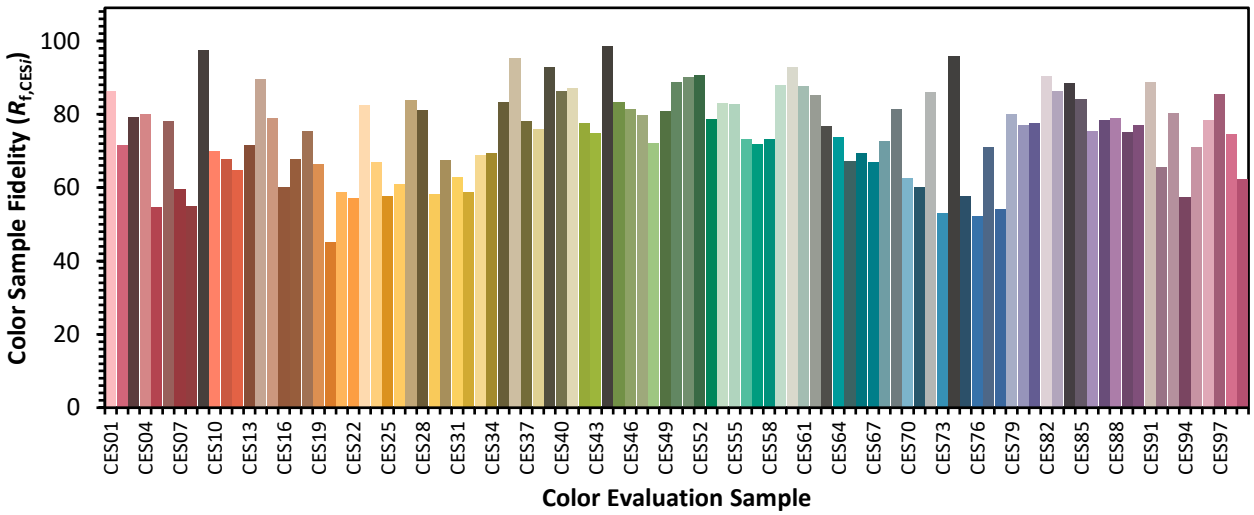
Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

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

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 61 | CES51 = 90 | CES76 = 52 |
| CES02 = 60 | CES27 = 84 | CES52 = 91 | CES77 = 71 |
| CES03 = 30 | CES28 = 81 | CES53 = 79 | CES78 = 54 |
| CES04 = 69 | CES29 = 58 | CES54 = 83 | CES79 = 80 |
| CES05 = 46 | CES30 = 67 | CES55 = 83 | CES80 = 77 |
| CES06 = 50 | CES31 = 63 | CES56 = 73 | CES81 = 77 |
| CES07 = 39 | CES32 = 59 | CES57 = 72 | CES82 = 90 |
| CES08 = 38 | CES33 = 69 | CES58 = 73 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 88 | CES84 = 88 |
| CES10 = 73 | CES35 = 83 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 95 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 78 | CES62 = 85 | CES87 = 78 |
| CES13 = 41 | CES38 = 76 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 93 | CES64 = 74 | CES89 = 75 |
| CES15 = 70 | CES40 = 86 | CES65 = 67 | CES90 = 77 |
| CES16 = 46 | CES41 = 87 | CES66 = 69 | CES91 = 89 |
| CES17 = 49 | CES42 = 78 | CES67 = 67 | CES92 = 66 |
| CES18 = 55 | CES43 = 75 | CES68 = 73 | CES93 = 80 |
| CES19 = 71 | CES44 = 99 | CES69 = 81 | CES94 = 57 |
| CES20 = 64 | CES45 = 83 | CES70 = 63 | CES95 = 71 |
| CES21 = 85 | CES46 = 81 | CES71 = 60 | CES96 = 78 |
| CES22 = 77 | CES47 = 80 | CES72 = 86 | CES97 = 85 |
| CES23 = 91 | CES48 = 72 | CES73 = 53 | CES98 = 75 |
| CES24 = 90 | CES49 = 81 | CES74 = 96 | CES99 = 62 |
| CES25 = 71 | CES50 = 89 | CES75 = 58 | |

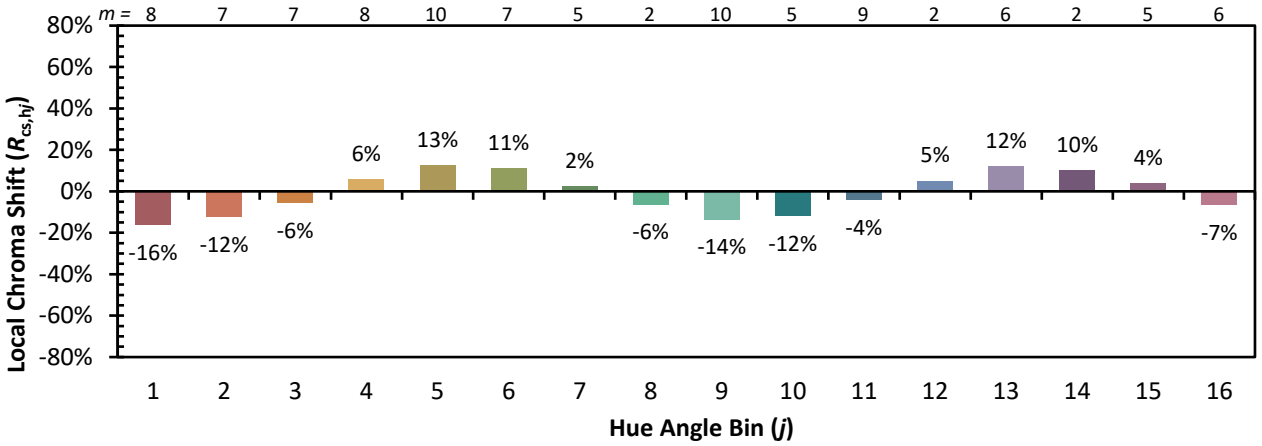


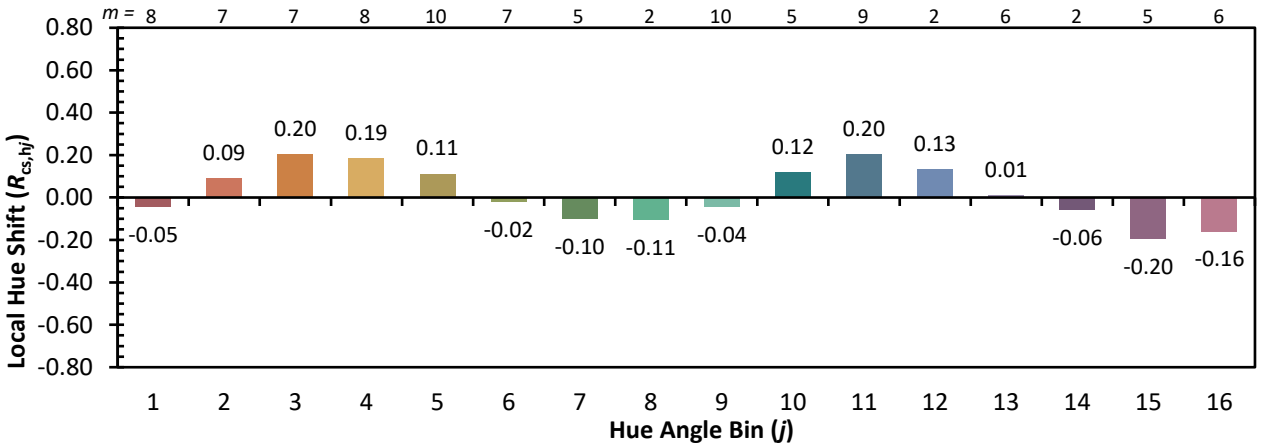
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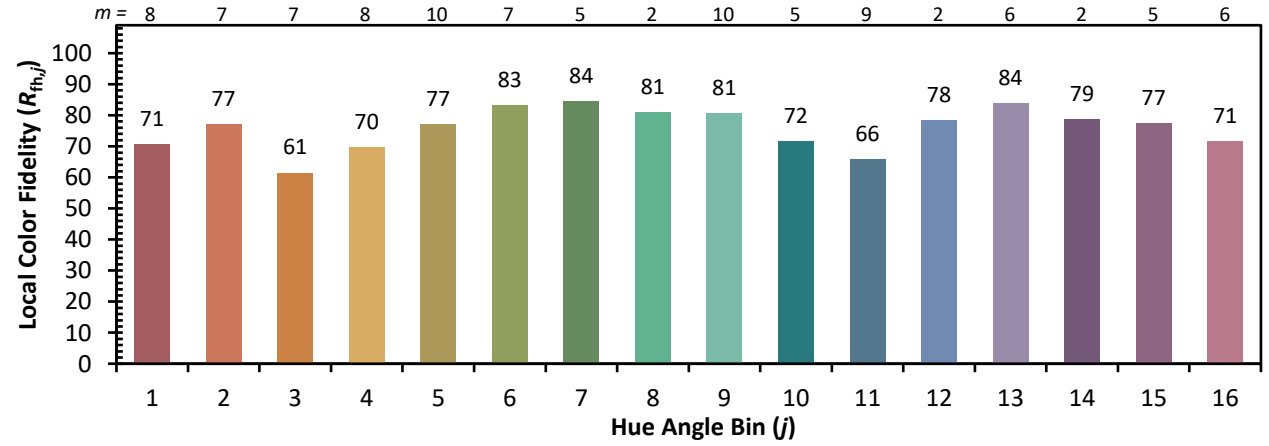
REPORT NUMBER: SP1-1908-441-4-R4

## TM-30-18

### Color Rendition by Hue-Angle Bin



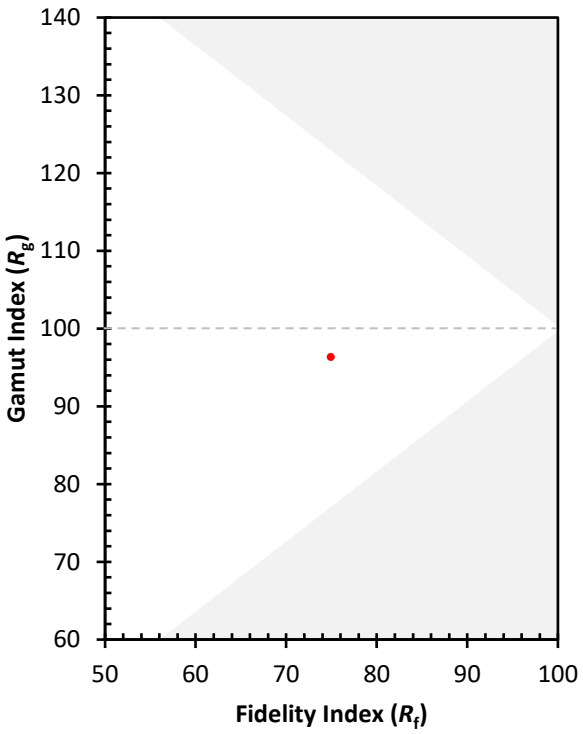



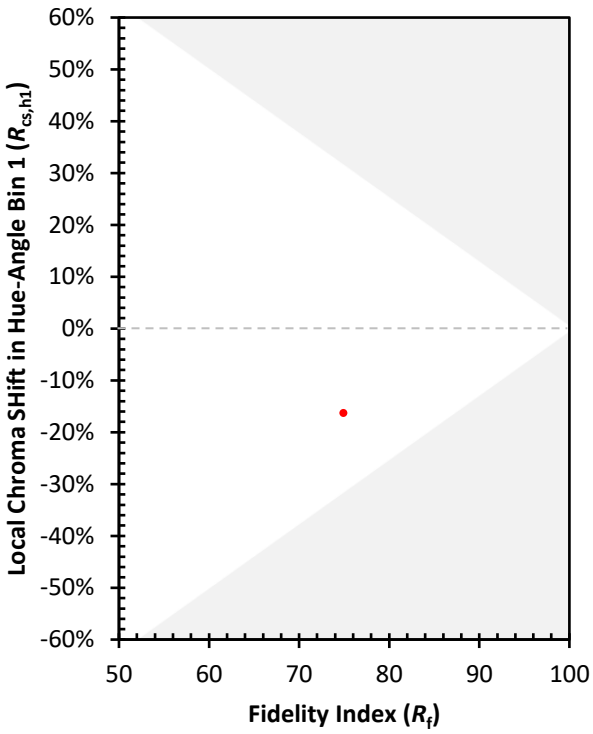
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### Measure Comparisons




(END OF REPORT)