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: P1360295

Luminaire Tested: **GSS-SB5A-740-U-T3-HSS**

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: | P1360295 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB5A-740-U-T3-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 5SQUARE 143W 70CRI 4000K FIXTURE w/ TYPE III DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (130) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 16708.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 116.8 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B2 - U0 - G3 |

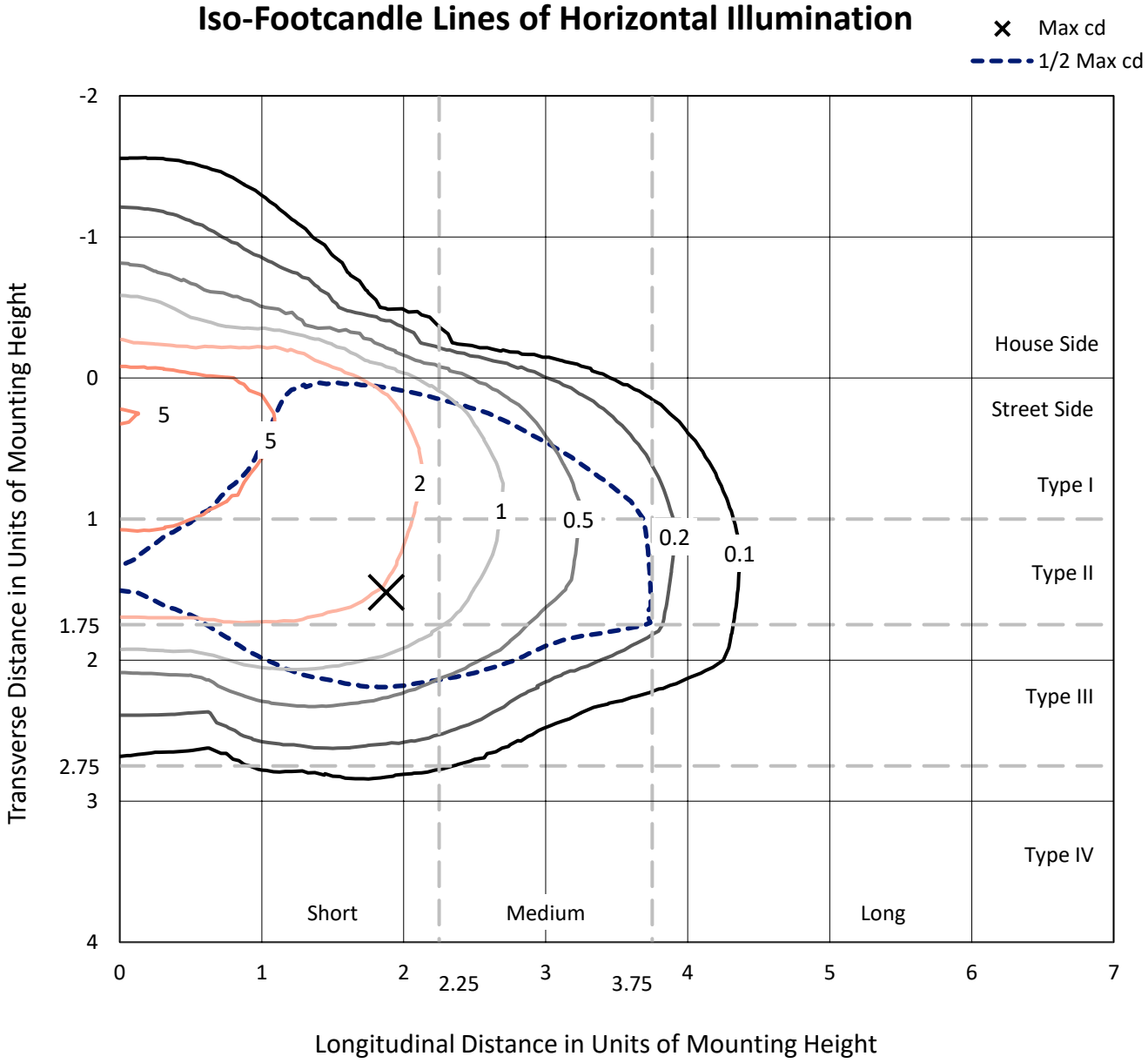
| | |
|---|---|
| Input Watts (W): | 143 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 10.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1360295
CATALOG NUMBER: GSS-SB5A-740-U-T3-HSS

## Iso-Footcandle Lines of Horizontal Illumination



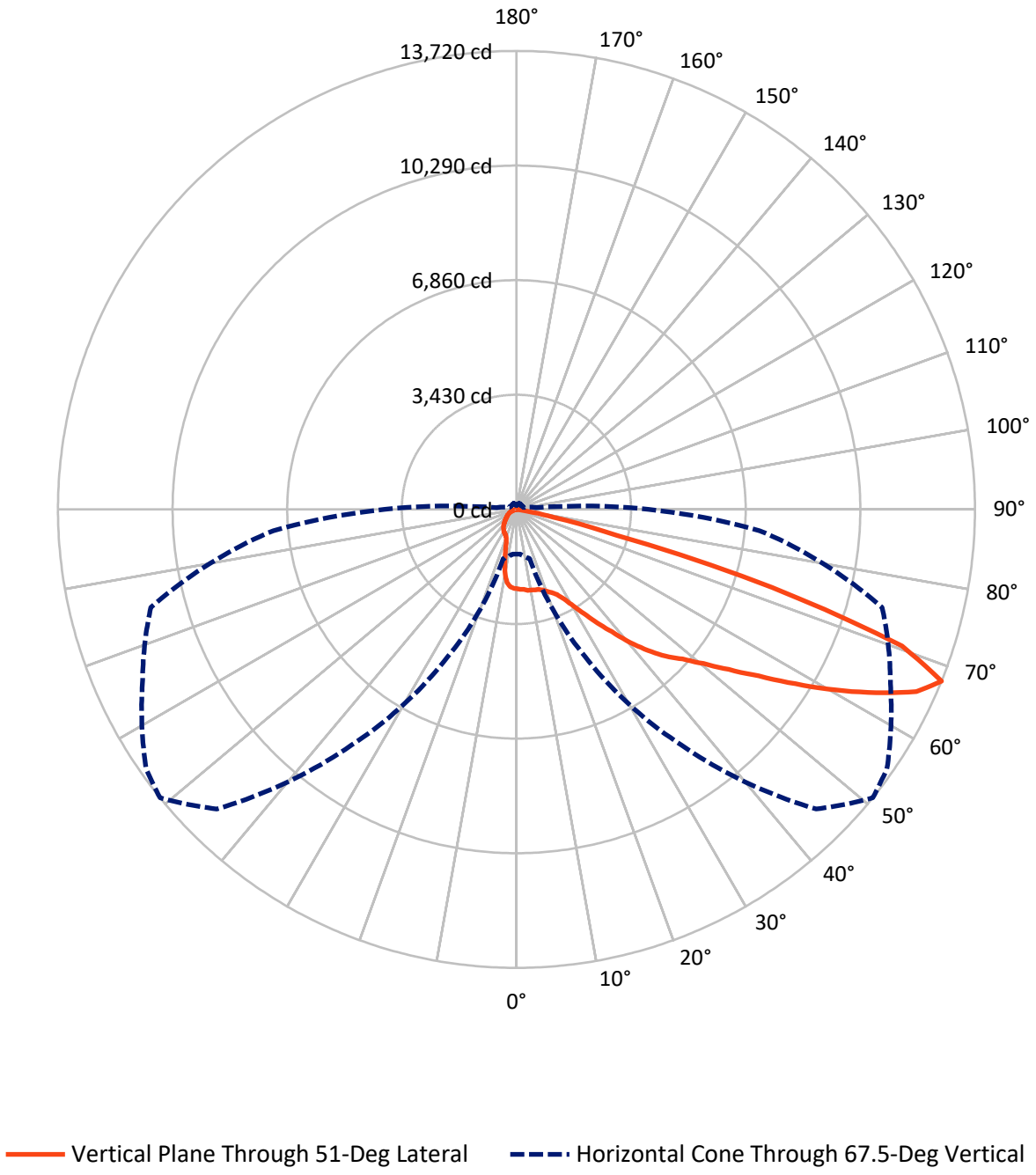

Based on 20 foot mounting height. Maximum calculated value = 7.6 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

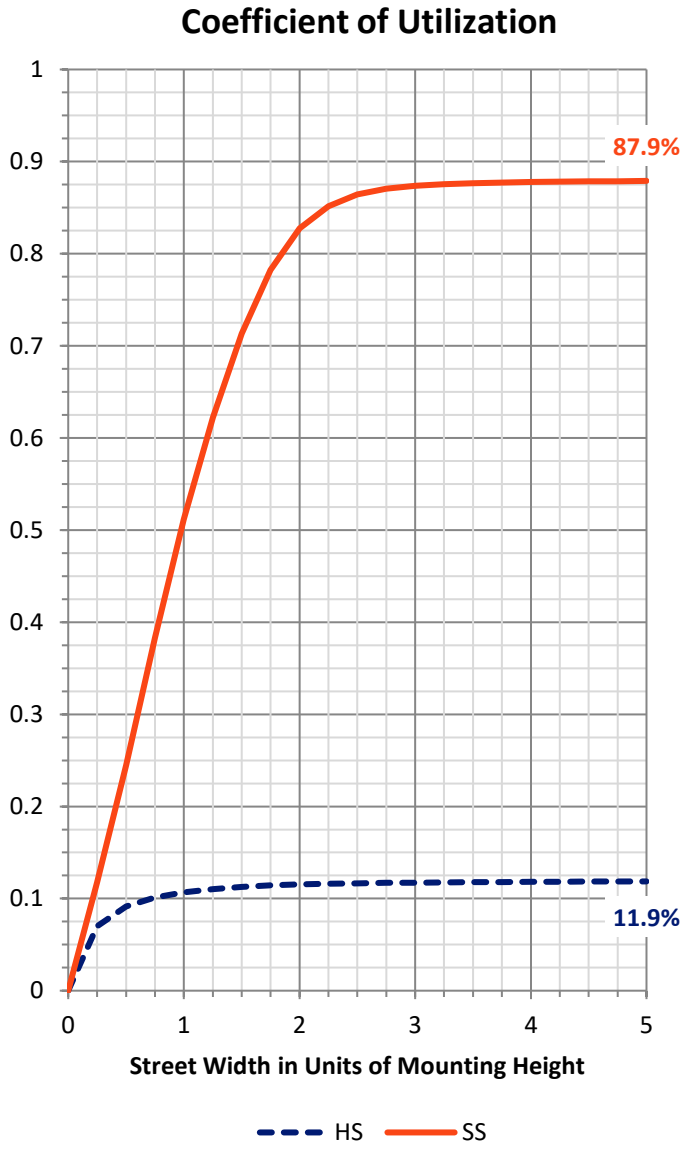
REPORT NUMBER: P1360295
CATALOG NUMBER: GSS-SB5A-740-U-T3-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1997.8 | 0.0 | 1997.8 |
| | % Fixture | 12.0 | 0.0 | 12.0 |
| **Street Side** | Lumens | 14710.5 | 0.0 | 14710.5 |
| | % Fixture | 88.0 | 0.0 | 88.0 |
| **Total** | Lumens | 16708.2 | 0.0 | 16708.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 216.6 | 1.3 |
| 10°-20° | 557.0 | 3.3 |
| 20°-30° | 992.9 | 5.9 |
| 30°-40° | 1777.0 | 10.6 |
| 40°-50° | 2799.2 | 16.8 |
| 50°-60° | 4071.3 | 24.4 |
| 60°-70° | 4429.7 | 26.5 |
| 70°-80° | 1789.5 | 10.7 |
| 80°-90° | 75.2 | 0.4 |
| 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° | 16708.2 | 100.0 |
| 0°-180° | 16708.2 | 100.0 |



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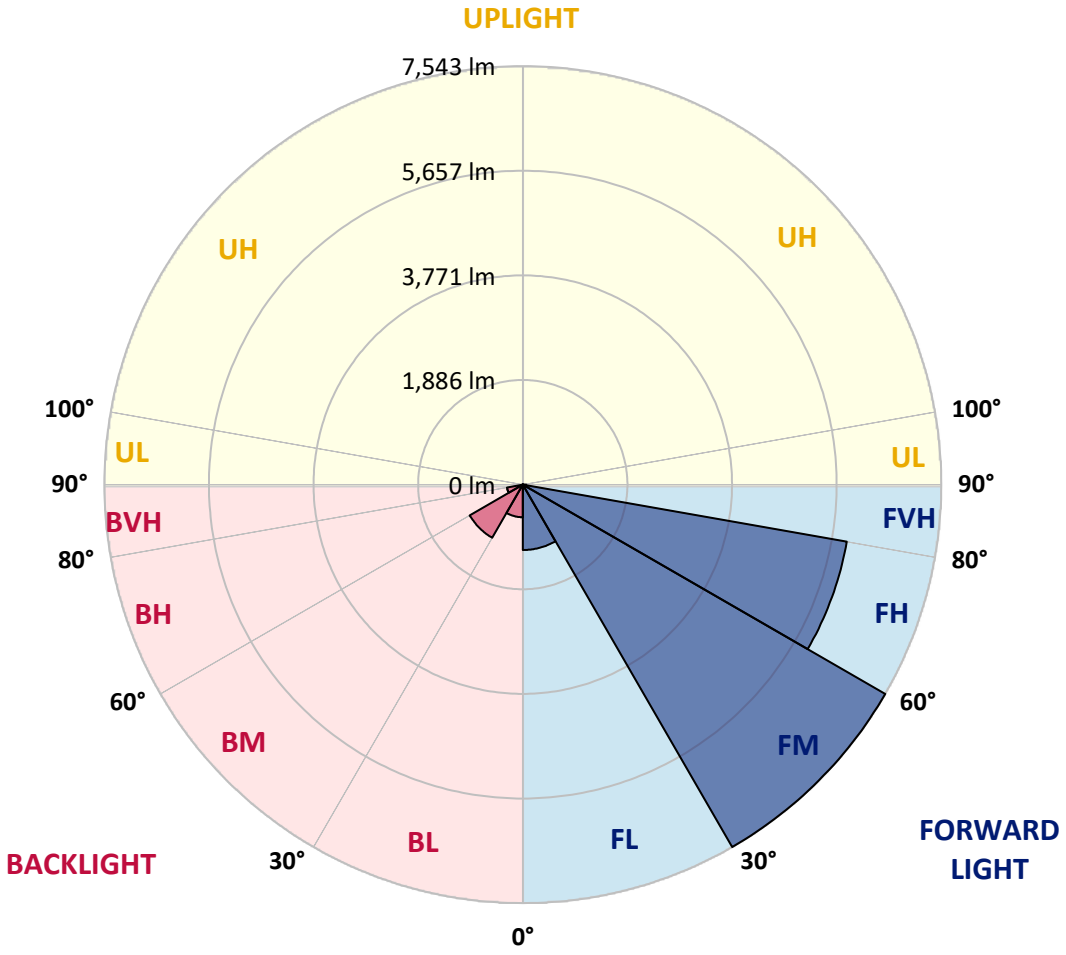
Scaled Data Report

REPORT NUMBER: P1360295
CATALOG NUMBER: GSS-SB5A-740-U-T3-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1178.2 | 7.1 | | | |
| FM | (30°-60°) | 7542.6 | 45.1 | | | |
| FH | (60°-80°) | 5928.7 | 35.5 | | | G3/7500 |
| FVH | (80°-90°) | 61.0 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 588.3 | 3.5 | B2/1000 | | |
| BM | (30°-60°) | 1104.9 | 6.6 | B2/2500 | | |
| BH | (60°-80°) | 290.4 | 1.7 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 14.2 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G3**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 51° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 |
| 2.5° | 2392.6 | 2387.6 | 2392.6 | 2372.5 | 2382.6 | 2387.6 | 2397.6 | 2382.6 | 2377.5 | 2382.6 | 2377.5 |
| 5° | 2382.6 | 2377.5 | 2382.6 | 2387.6 | 2397.6 | 2412.6 | 2407.6 | 2407.6 | 2417.6 | 2397.6 | 2397.6 |
| 7.5° | 2297.5 | 2292.5 | 2322.5 | 2332.5 | 2372.5 | 2407.6 | 2447.6 | 2432.6 | 2452.6 | 2447.6 | 2432.6 |
| 10° | 2192.3 | 2177.3 | 2207.4 | 2262.4 | 2322.5 | 2412.6 | 2452.6 | 2462.6 | 2507.7 | 2527.7 | 2517.7 |
| 12.5° | 2132.3 | 2117.3 | 2157.3 | 2197.4 | 2292.5 | 2402.6 | 2472.6 | 2497.7 | 2547.7 | 2587.8 | 2597.8 |
| 15° | 2087.2 | 2102.3 | 2142.3 | 2217.4 | 2307.5 | 2422.6 | 2482.7 | 2532.7 | 2637.8 | 2677.9 | 2677.9 |
| 17.5° | 2117.3 | 2112.3 | 2147.3 | 2222.4 | 2332.5 | 2447.6 | 2537.7 | 2587.8 | 2712.9 | 2768.0 | 2763.0 |
| 20° | 2412.6 | 2382.6 | 2377.5 | 2337.5 | 2372.5 | 2507.7 | 2617.8 | 2667.9 | 2788.0 | 2863.1 | 2858.1 |
| 22.5° | 2793.0 | 2823.0 | 2742.9 | 2652.8 | 2542.7 | 2587.8 | 2702.9 | 2773.0 | 2893.1 | 2973.2 | 2943.2 |
| 25° | 3308.5 | 3293.5 | 3238.5 | 3058.3 | 2858.1 | 2763.0 | 2823.0 | 2893.1 | 3043.3 | 3108.3 | 3058.3 |
| 27.5° | 3854.1 | 3789.1 | 3719.0 | 3468.7 | 3203.4 | 3028.2 | 3038.3 | 3083.3 | 3258.5 | 3298.5 | 3183.4 |
| 30° | 4439.8 | 4449.8 | 4334.6 | 3994.3 | 3628.9 | 3363.6 | 3343.6 | 3363.6 | 3503.8 | 3498.7 | 3338.6 |
| 32.5° | 5110.5 | 5085.4 | 4975.3 | 4609.9 | 4204.5 | 3769.0 | 3719.0 | 3683.9 | 3744.0 | 3689.0 | 3503.8 |
| 35° | 5581.0 | 5606.0 | 5485.9 | 5245.6 | 4840.2 | 4299.6 | 4179.5 | 4094.4 | 4034.3 | 3974.3 | 3774.0 |
| 37.5° | 6001.4 | 5971.4 | 5901.3 | 5766.2 | 5370.8 | 4875.2 | 4645.0 | 4569.9 | 4439.8 | 4274.6 | 4089.4 |
| 40° | 6096.5 | 6081.5 | 6046.5 | 6051.5 | 5796.2 | 5410.8 | 5245.6 | 5110.5 | 4885.2 | 4750.1 | 4509.8 |
| 42.5° | 6081.5 | 6131.6 | 6141.6 | 6181.6 | 6036.5 | 5941.4 | 5771.2 | 5641.0 | 5430.8 | 5265.6 | 5015.4 |
| 45° | 6161.6 | 6246.7 | 6316.8 | 6351.8 | 6256.7 | 6246.7 | 6266.7 | 6206.6 | 6061.5 | 5891.3 | 5606.0 |
| 47.5° | 6321.8 | 6466.9 | 6577.0 | 6652.1 | 6632.1 | 6797.3 | 6692.2 | 6677.2 | 6737.2 | 6572.0 | 6286.7 |
| 50° | 6622.1 | 6662.1 | 6922.4 | 7032.5 | 7217.7 | 7458.0 | 7252.8 | 7302.8 | 7423.0 | 7438.0 | 6912.4 |
| 52.5° | 6847.3 | 6882.4 | 7142.7 | 7468.0 | 7878.4 | 8143.7 | 7958.5 | 7953.5 | 8168.8 | 8228.8 | 7518.1 |
| 55° | 6907.4 | 6987.5 | 7322.8 | 7888.5 | 8659.3 | 8929.6 | 8799.4 | 8754.4 | 9039.7 | 9144.8 | 8053.6 |
| 57.5° | 6822.3 | 6852.3 | 7332.9 | 8148.7 | 9224.9 | 9810.5 | 9850.6 | 9710.4 | 9970.7 | 9995.7 | 8449.1 |
| 60° | 5901.3 | 6031.5 | 6872.4 | 8313.9 | 9705.4 | 10766.5 | 10976.8 | 10896.7 | 10916.7 | 10871.6 | 8744.4 |
| 62.5° | 4079.4 | 4104.4 | 5340.7 | 8138.7 | 10100.8 | 11732.6 | 12082.9 | 12022.9 | 11852.7 | 11427.2 | 8594.2 |
| 65° | 1942.1 | 2077.2 | 2868.1 | 6887.4 | 10155.9 | 12468.4 | 13149.1 | 13189.1 | 12398.3 | 11432.2 | 8013.6 |
| 67.5° | 1336.4 | 1341.4 | 1526.6 | 4860.2 | 8614.2 | 12678.6 | 13719.7 | 13534.5 | 12348.2 | 11327.1 | 7302.8 |
| 70° | 845.9 | 785.8 | 880.9 | 2773.0 | 5821.2 | 9955.7 | 12238.1 | 12888.8 | 12138.0 | 10641.4 | 6171.6 |
| 72.5° | 335.4 | 360.4 | 415.4 | 911.0 | 2853.1 | 5671.1 | 7993.6 | 9810.5 | 10946.7 | 9204.9 | 4820.2 |
| 75° | 150.2 | 160.2 | 210.2 | 380.4 | 735.8 | 2312.5 | 3093.3 | 4334.6 | 8759.4 | 7267.8 | 3413.7 |
| 77.5° | 100.1 | 105.1 | 135.1 | 220.2 | 335.4 | 645.7 | 1131.2 | 1326.4 | 5250.6 | 3974.3 | 1601.7 |
| 80° | 60.1 | 65.1 | 90.1 | 135.1 | 185.2 | 230.2 | 345.4 | 400.4 | 1386.5 | 1316.4 | 440.5 |
| 82.5° | 40.0 | 35.0 | 60.1 | 75.1 | 110.1 | 95.1 | 110.1 | 130.1 | 380.4 | 335.4 | 120.1 |
| 85° | 15.0 | 15.0 | 25.0 | 30.0 | 40.0 | 50.1 | 45.0 | 55.1 | 90.1 | 90.1 | 55.1 |
| 87.5° | 0.0 | 0.0 | 5.0 | 5.0 | 15.0 | 20.0 | 25.0 | 25.0 | 35.0 | 35.0 | 30.0 |
| 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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Scaled Data Report

REPORT NUMBER: P1360295
CATALOG NUMBER: GSS-SB5A-740-U-T3-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 | 2372.5 |
| 2.5° | 2382.6 | 2367.5 | 2372.5 | 2362.5 | 2367.5 | 2357.5 | 2337.5 | 2357.5 | 2342.5 | 2342.5 | 2357.5 |
| 5° | 2397.6 | 2392.6 | 2377.5 | 2352.5 | 2337.5 | 2302.5 | 2247.4 | 2222.4 | 2197.4 | 2182.3 | 2192.3 |
| 7.5° | 2447.6 | 2427.6 | 2402.6 | 2342.5 | 2262.4 | 2157.3 | 2047.2 | 1922.1 | 1827.0 | 1816.9 | 1781.9 |
| 10° | 2512.7 | 2492.7 | 2437.6 | 2302.5 | 2137.3 | 1837.0 | 1596.7 | 1431.5 | 1331.4 | 1266.4 | 1241.3 |
| 12.5° | 2597.8 | 2572.8 | 2472.6 | 2242.4 | 1837.0 | 1416.5 | 1131.2 | 1011.1 | 976.0 | 961.0 | 956.0 |
| 15° | 2677.9 | 2647.8 | 2472.6 | 2047.2 | 1486.6 | 1066.1 | 921.0 | 891.0 | 885.9 | 891.0 | 885.9 |
| 17.5° | 2752.9 | 2712.9 | 2447.6 | 1781.9 | 1141.2 | 901.0 | 865.9 | 850.9 | 845.9 | 840.9 | 840.9 |
| 20° | 2843.0 | 2778.0 | 2377.5 | 1491.6 | 941.0 | 855.9 | 840.9 | 820.9 | 820.9 | 800.9 | 805.9 |
| 22.5° | 2928.1 | 2838.0 | 2242.4 | 1201.3 | 865.9 | 830.9 | 815.9 | 795.9 | 785.8 | 770.8 | 770.8 |
| 25° | 3013.2 | 2898.1 | 2082.2 | 996.1 | 820.9 | 805.9 | 790.8 | 770.8 | 745.8 | 725.8 | 725.8 |
| 27.5° | 3138.4 | 2978.2 | 1892.0 | 911.0 | 795.9 | 770.8 | 755.8 | 730.8 | 700.8 | 675.7 | 675.7 |
| 30° | 3278.5 | 3088.3 | 1736.9 | 896.0 | 785.8 | 725.8 | 700.8 | 660.7 | 640.7 | 620.7 | 620.7 |
| 32.5° | 3448.7 | 3238.5 | 1621.7 | 921.0 | 760.8 | 665.7 | 625.7 | 585.6 | 570.6 | 570.6 | 570.6 |
| 35° | 3699.0 | 3458.7 | 1496.6 | 926.0 | 730.8 | 605.6 | 540.6 | 500.5 | 500.5 | 520.6 | 520.6 |
| 37.5° | 4034.3 | 3699.0 | 1431.5 | 916.0 | 705.8 | 545.6 | 470.5 | 440.5 | 435.5 | 455.5 | 455.5 |
| 40° | 4419.7 | 3964.2 | 1456.6 | 880.9 | 670.7 | 485.5 | 415.4 | 390.4 | 385.4 | 390.4 | 395.4 |
| 42.5° | 4840.2 | 4249.6 | 1516.6 | 830.9 | 610.7 | 435.5 | 375.4 | 360.4 | 355.4 | 355.4 | 355.4 |
| 45° | 5285.7 | 4444.8 | 1576.7 | 780.8 | 550.6 | 395.4 | 350.4 | 340.4 | 335.4 | 335.4 | 335.4 |
| 47.5° | 5711.1 | 4599.9 | 1536.6 | 735.8 | 500.5 | 370.4 | 330.4 | 330.4 | 325.3 | 325.3 | 325.3 |
| 50° | 6076.5 | 4584.9 | 1366.5 | 690.7 | 445.5 | 350.4 | 320.3 | 315.3 | 315.3 | 310.3 | 310.3 |
| 52.5° | 6281.7 | 4279.6 | 1101.2 | 640.7 | 395.4 | 330.4 | 310.3 | 305.3 | 300.3 | 295.3 | 295.3 |
| 55° | 6361.8 | 3874.2 | 855.9 | 565.6 | 360.4 | 315.3 | 300.3 | 295.3 | 285.3 | 280.3 | 275.3 |
| 57.5° | 6221.7 | 3278.5 | 660.7 | 450.5 | 330.4 | 295.3 | 285.3 | 280.3 | 270.3 | 255.3 | 250.3 |
| 60° | 5936.4 | 2627.8 | 495.5 | 345.4 | 295.3 | 270.3 | 270.3 | 265.3 | 245.3 | 220.2 | 215.2 |
| 62.5° | 5435.8 | 1887.0 | 375.4 | 280.3 | 255.3 | 245.3 | 255.3 | 245.3 | 215.2 | 180.2 | 175.2 |
| 65° | 4730.1 | 1166.2 | 290.3 | 240.3 | 225.2 | 215.2 | 230.2 | 220.2 | 185.2 | 145.2 | 135.1 |
| 67.5° | *3954.2* | *595.6* | *225.2* | *205.2* | *190.2* | *180.2* | *195.2* | *195.2* | *160.2* | *120.1* | *115.1* |
| 70° | 3053.3 | 330.4 | 180.2 | 170.2 | 155.2 | 140.2 | 165.2 | 170.2 | 140.2 | 105.1 | 100.1 |
| 72.5° | 2267.4 | 210.2 | 145.2 | 140.2 | 120.1 | 100.1 | 135.1 | 145.2 | 120.1 | 80.1 | 75.1 |
| 75° | 1481.6 | 165.2 | 110.1 | 110.1 | 85.1 | 80.1 | 115.1 | 125.1 | 105.1 | 60.1 | 60.1 |
| 77.5° | 710.8 | 125.1 | 85.1 | 75.1 | 60.1 | 60.1 | 100.1 | 105.1 | 75.1 | 45.0 | 45.0 |
| 80° | 235.3 | 85.1 | 60.1 | 50.1 | 40.0 | 40.0 | 80.1 | 60.1 | 40.0 | 35.0 | 35.0 |
| 82.5° | 80.1 | 55.1 | 40.0 | 35.0 | 30.0 | 25.0 | 25.0 | 30.0 | 30.0 | 25.0 | 25.0 |
| 85° | 40.0 | 35.0 | 30.0 | 25.0 | 20.0 | 20.0 | 20.0 | 20.0 | 25.0 | 25.0 | 25.0 |
| 87.5° | 25.0 | 25.0 | 20.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 20.0 | 10.0 | 10.0 |
| 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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Peachtree City, GA 30269

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-1

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-740-U-5WQ

Data in this report applies to families of products including GSS-SB1A-740-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

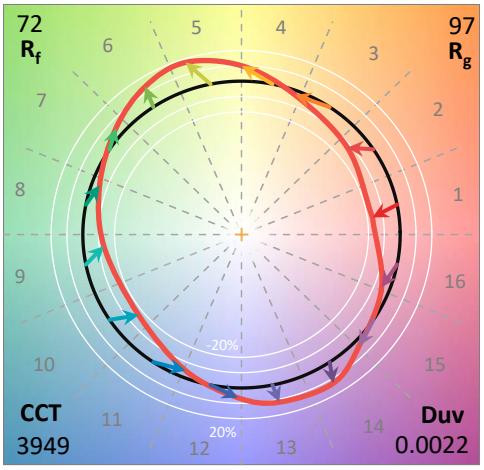
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-1 |
| 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-740-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3949 |
| CIE u': | 0.2248 |
| CIE v': | 0.5053 |
| Duv: | 0.0022 |
| CIE x: | 0.3844 |
| CIE y: | 0.3840 |
| CIE z: | 0.2316 |
| Peak Wavelength (nm): | 440 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 30.60026 |
| Rf: | 71.8 |
| Rg: | 96.5 |

| | |
|---|---|
| CRI (Ra): | 70.7 |
| R1: | 68.0 |
| R2: | 76.0 |
| R3: | 84.3 |
| R4: | 72.0 |
| R5: | 68.6 |
| R6: | 68.3 |
| R7: | 77.9 |
| R8: | 50.3 |
| R9: | -36.7 |
| R10: | 45.1 |
| R11: | 70.7 |
| R12: | 47.1 |
| R13: | 68.5 |
| R14: | 91.1 |
| R15: | 58.7 |




## Test Conditions

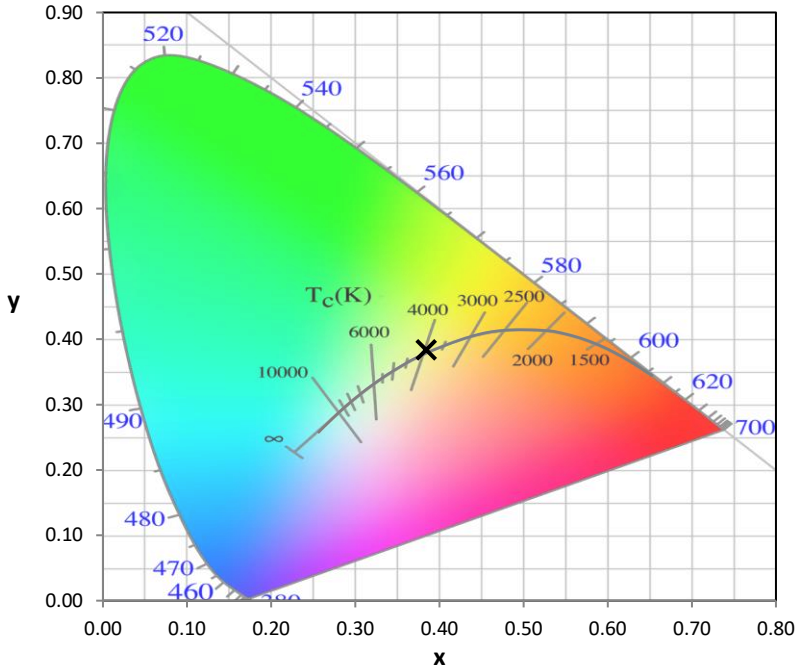
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-1

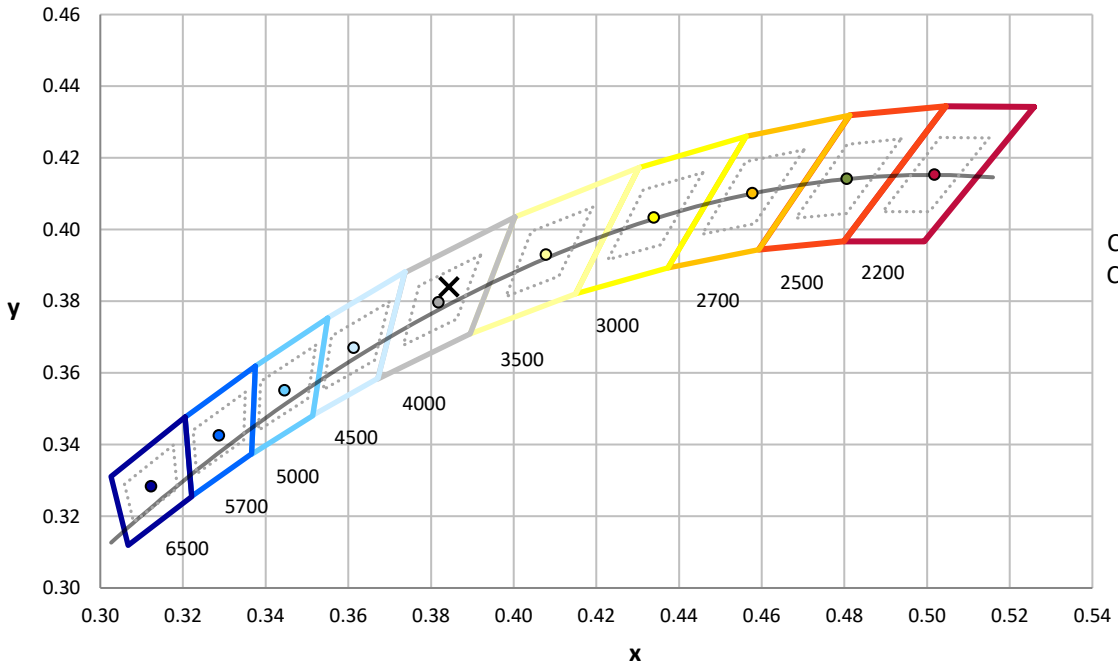
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

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## CIE 1931 Chromaticity Diagram




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

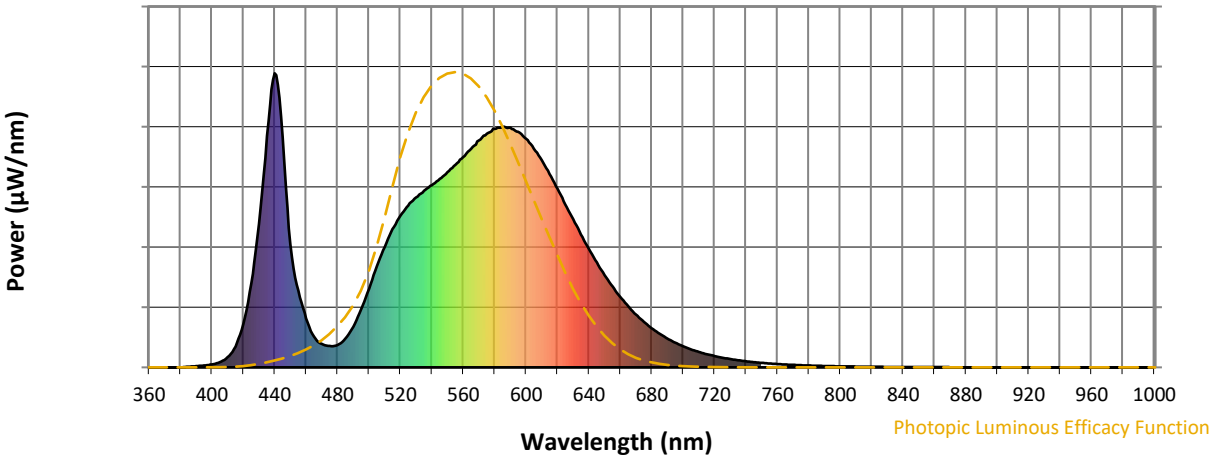



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

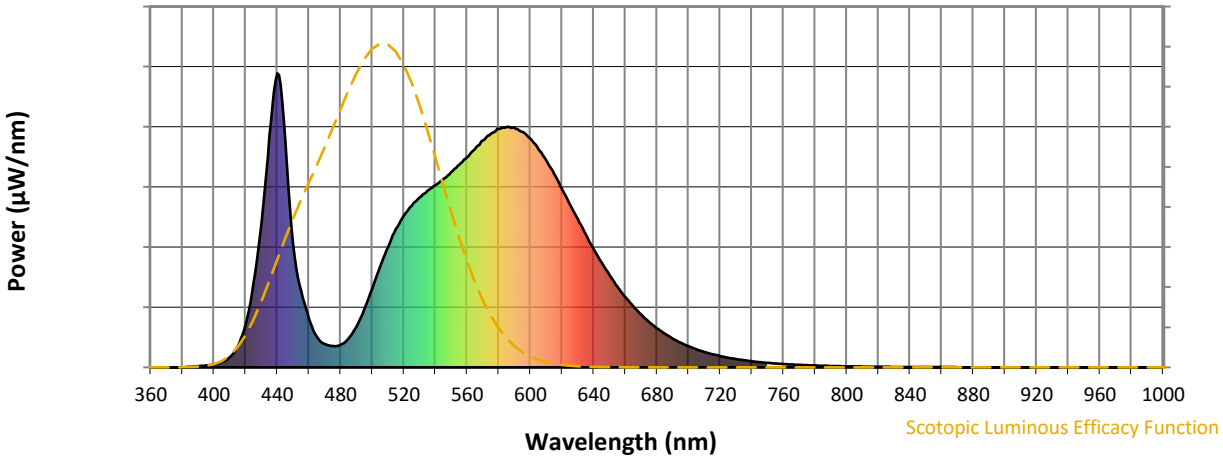



## Photopic Lumens: NR

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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## Scotopic Flux vs. Wavelength

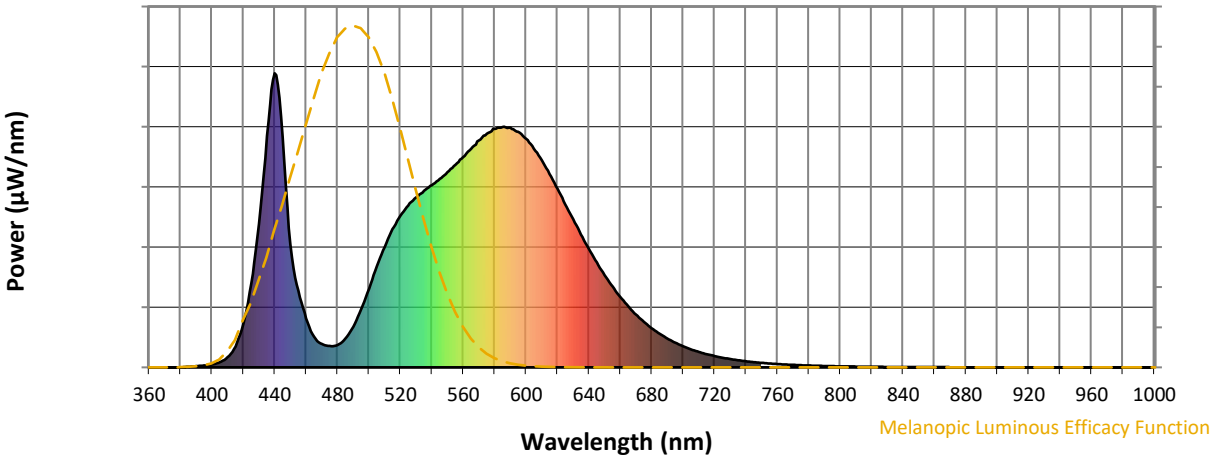



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.78**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

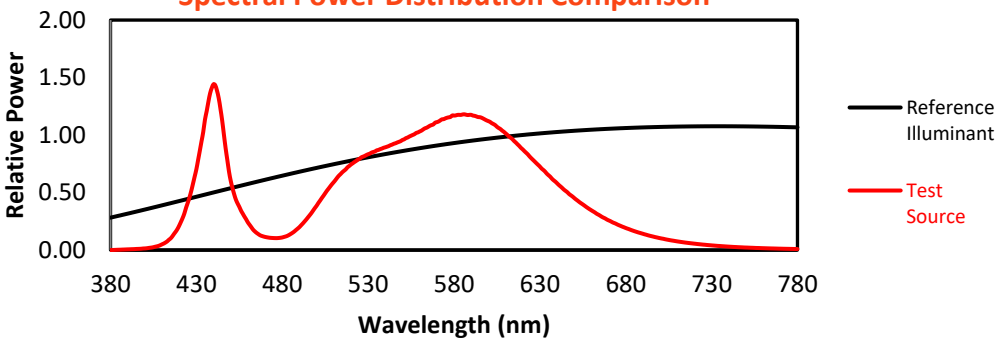
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# TM-30-18

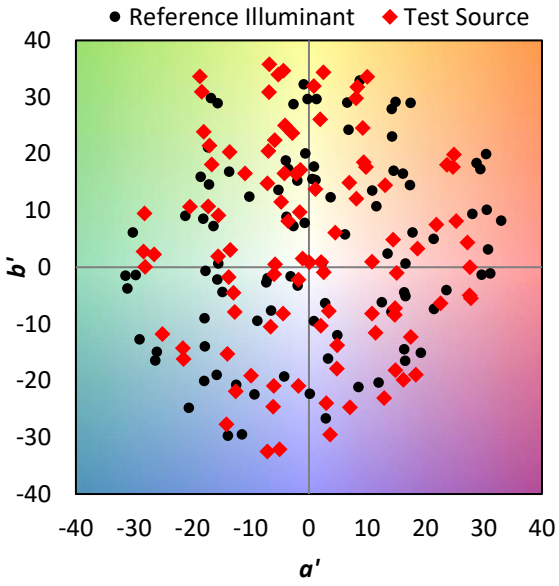
## Summary

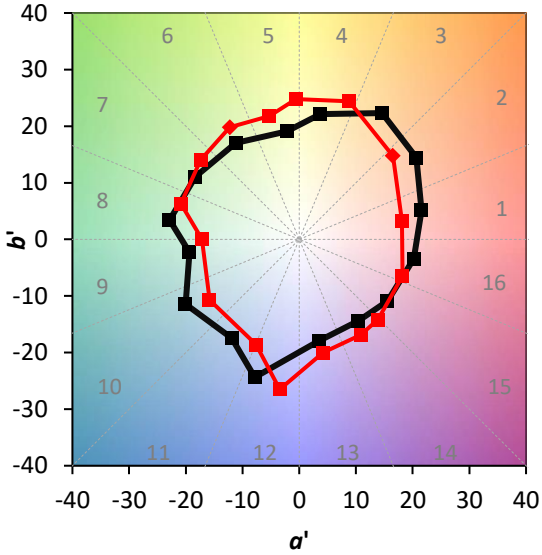
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

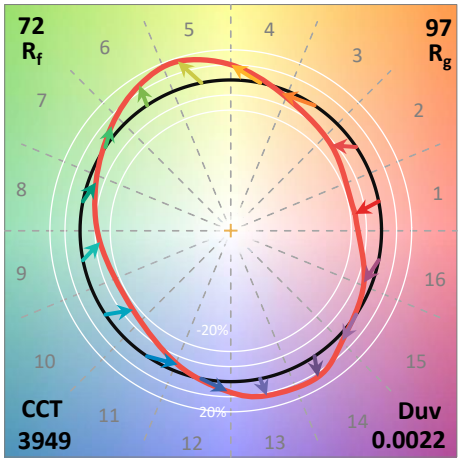
## Spectral Power Distribution Comparison

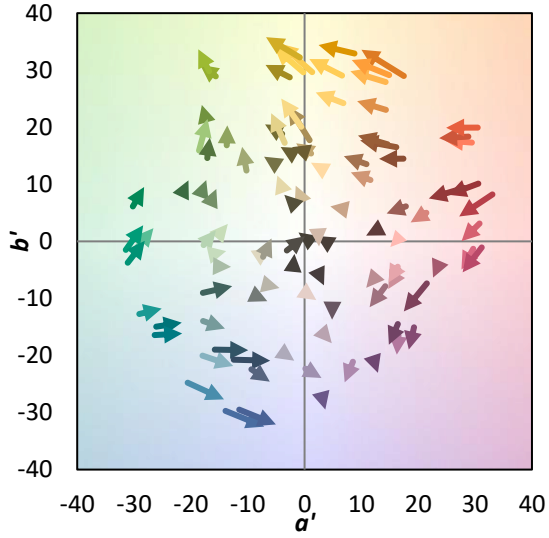



## Color Vector Graphics



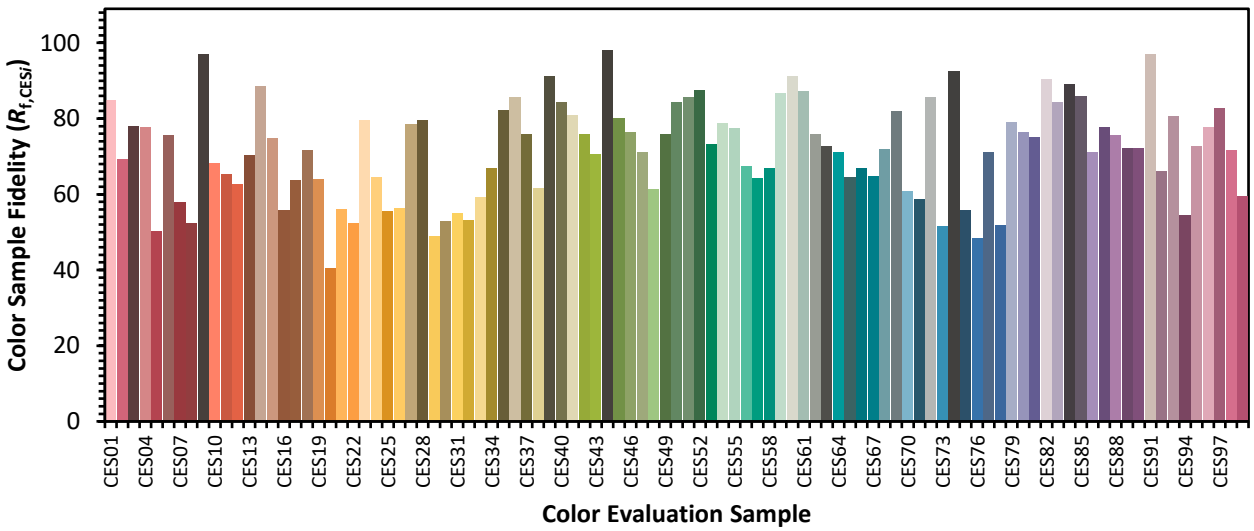



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**Individual Sample Fidelity Index ($R_{f,i}$)**

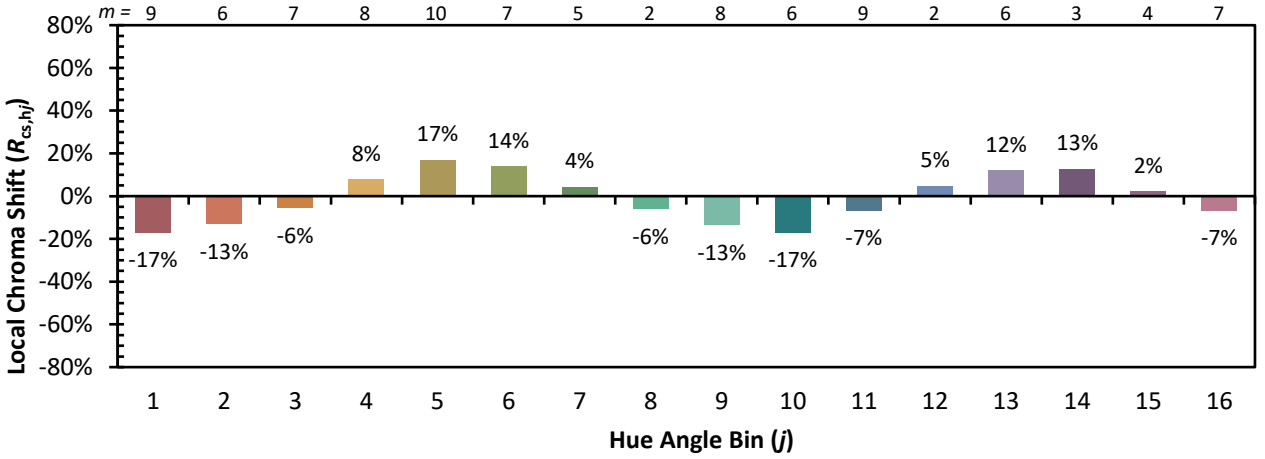
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 50 | CES31 = 55 | CES56 = 67 | CES81 = 75 |
| CES07 = 40 | CES32 = 53 | CES57 = 64 | CES82 = 90 |
| CES08 = 39 | CES33 = 59 | CES58 = 67 | CES83 = 84 |
| CES09 = 29 | CES34 = 67 | CES59 = 87 | CES84 = 89 |
| CES10 = 74 | CES35 = 82 | CES60 = 91 | CES85 = 86 |
| CES11 = 57 | CES36 = 86 | CES61 = 87 | CES86 = 71 |
| CES12 = 63 | CES37 = 76 | CES62 = 76 | CES87 = 78 |
| CES13 = 42 | CES38 = 62 | CES63 = 73 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 71 | CES89 = 72 |
| CES15 = 71 | CES40 = 84 | CES65 = 64 | CES90 = 72 |
| CES16 = 46 | CES41 = 81 | CES66 = 67 | CES91 = 97 |
| CES17 = 49 | CES42 = 76 | CES67 = 65 | CES92 = 66 |
| CES18 = 56 | CES43 = 71 | CES68 = 72 | CES93 = 81 |
| CES19 = 72 | CES44 = 98 | CES69 = 82 | CES94 = 55 |
| CES20 = 65 | CES45 = 80 | CES70 = 61 | CES95 = 73 |
| CES21 = 86 | CES46 = 76 | CES71 = 59 | CES96 = 78 |
| CES22 = 78 | CES47 = 71 | CES72 = 86 | CES97 = 83 |
| CES23 = 92 | CES48 = 61 | CES73 = 52 | CES98 = 72 |
| CES24 = 91 | CES49 = 76 | CES74 = 93 | CES99 = 60 |
| CES25 = 72 | CES50 = 84 | CES75 = 56 | |

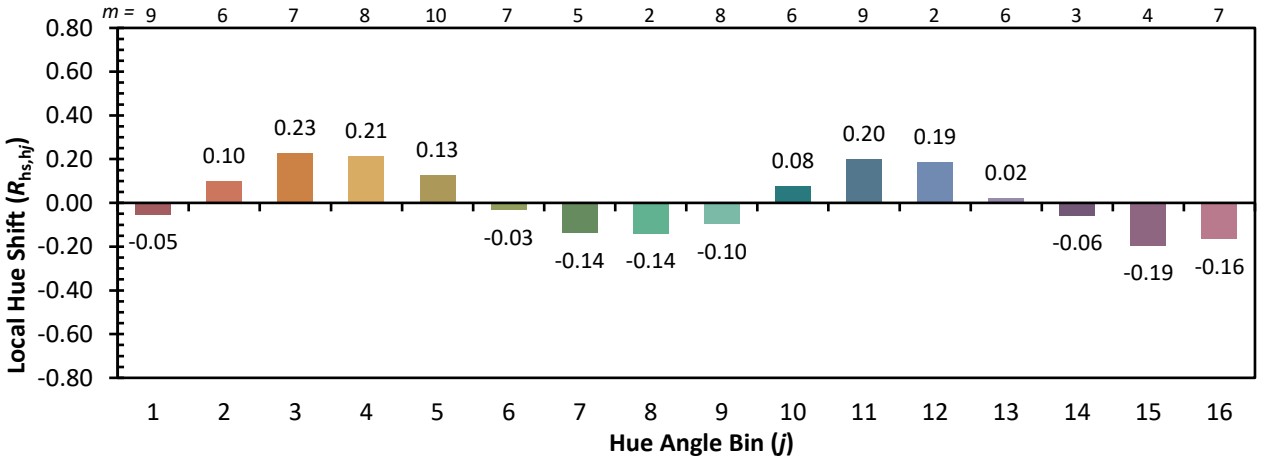


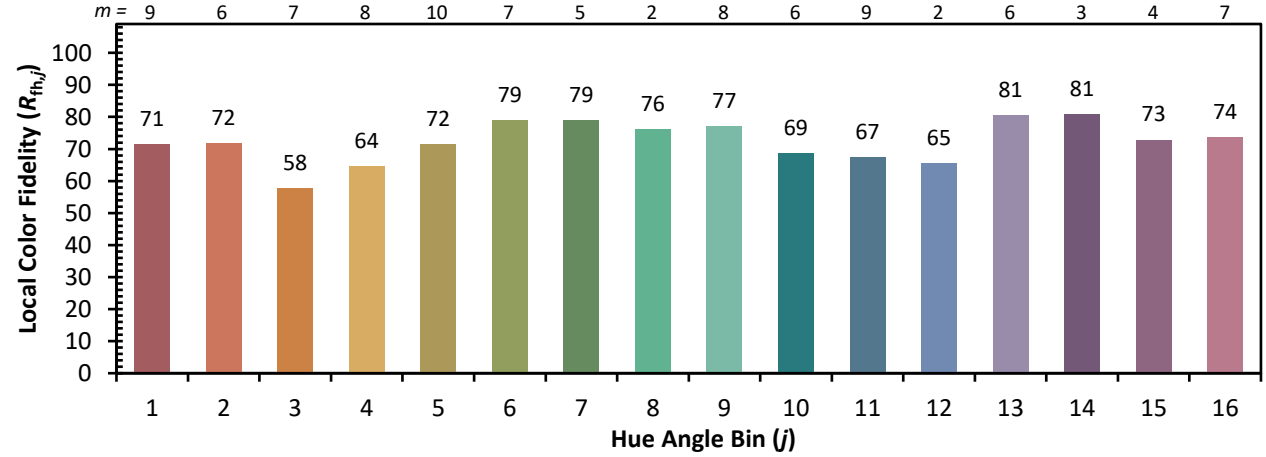
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## Color Rendition by Hue-Angle Bin



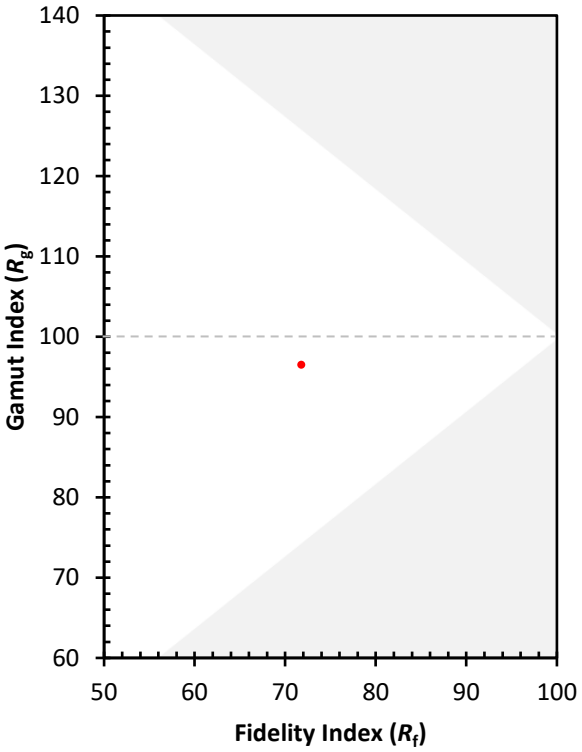



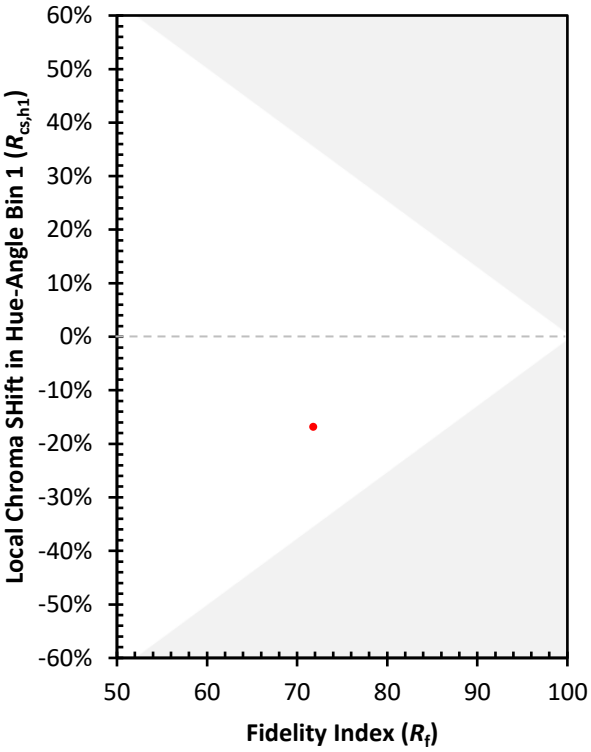



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## Measure Comparisons




(END OF REPORT)