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: P1501071

Luminaire Tested: GSS-SB3C-750-U-T3LG

Issue Date: 07/20/2026

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: | P1501071 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3C-750-U-T3LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 150W 70CRI 5000K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (78) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 22486.9 lumens |
| Efficiency: | N/A |
| Efficacy: | 149.9 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G2 |

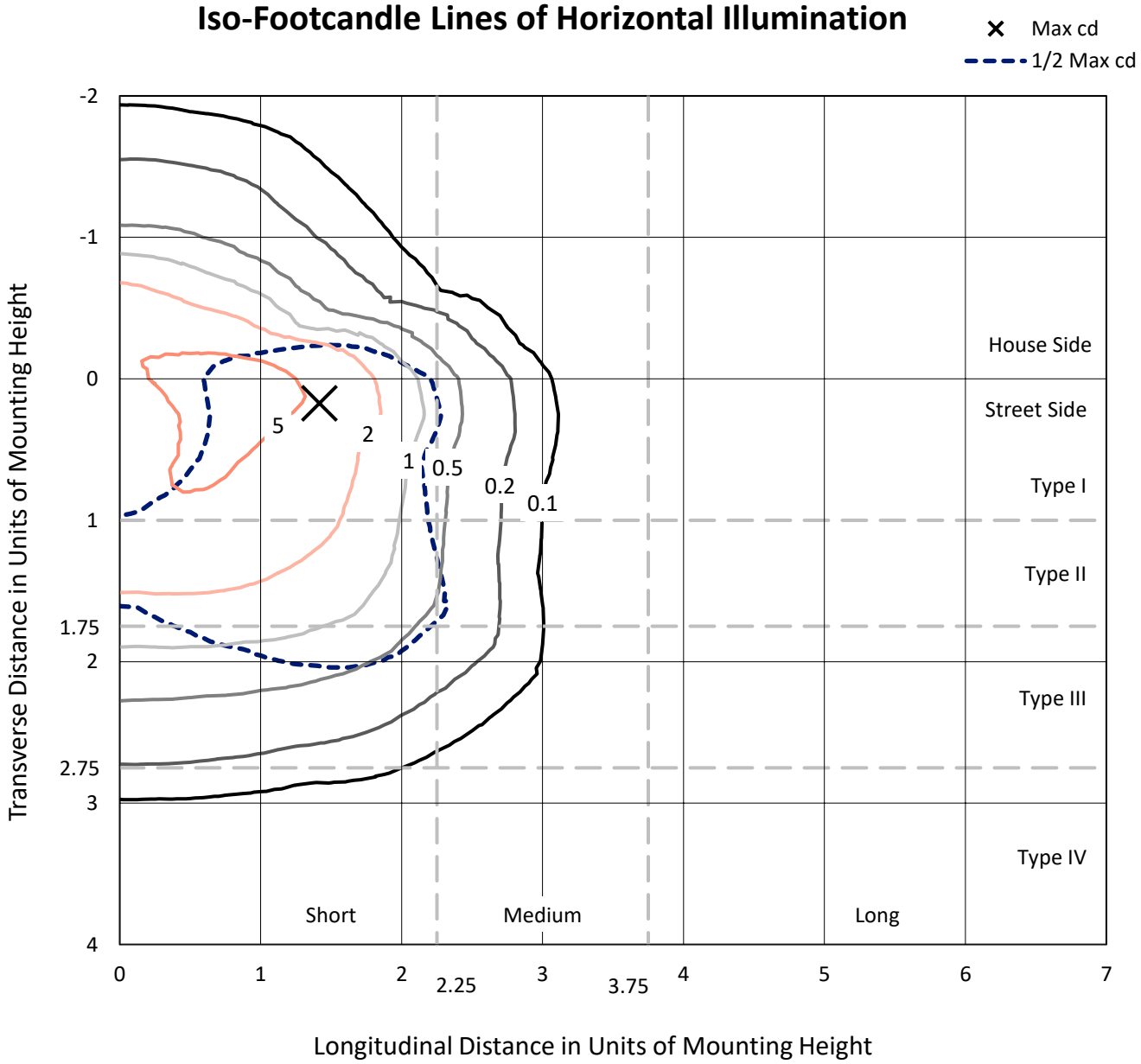
| | |
|---|---|
| Input Watts (W): | 150 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.3% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1501071
CATALOG NUMBER: GSS-SB3C-750-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination



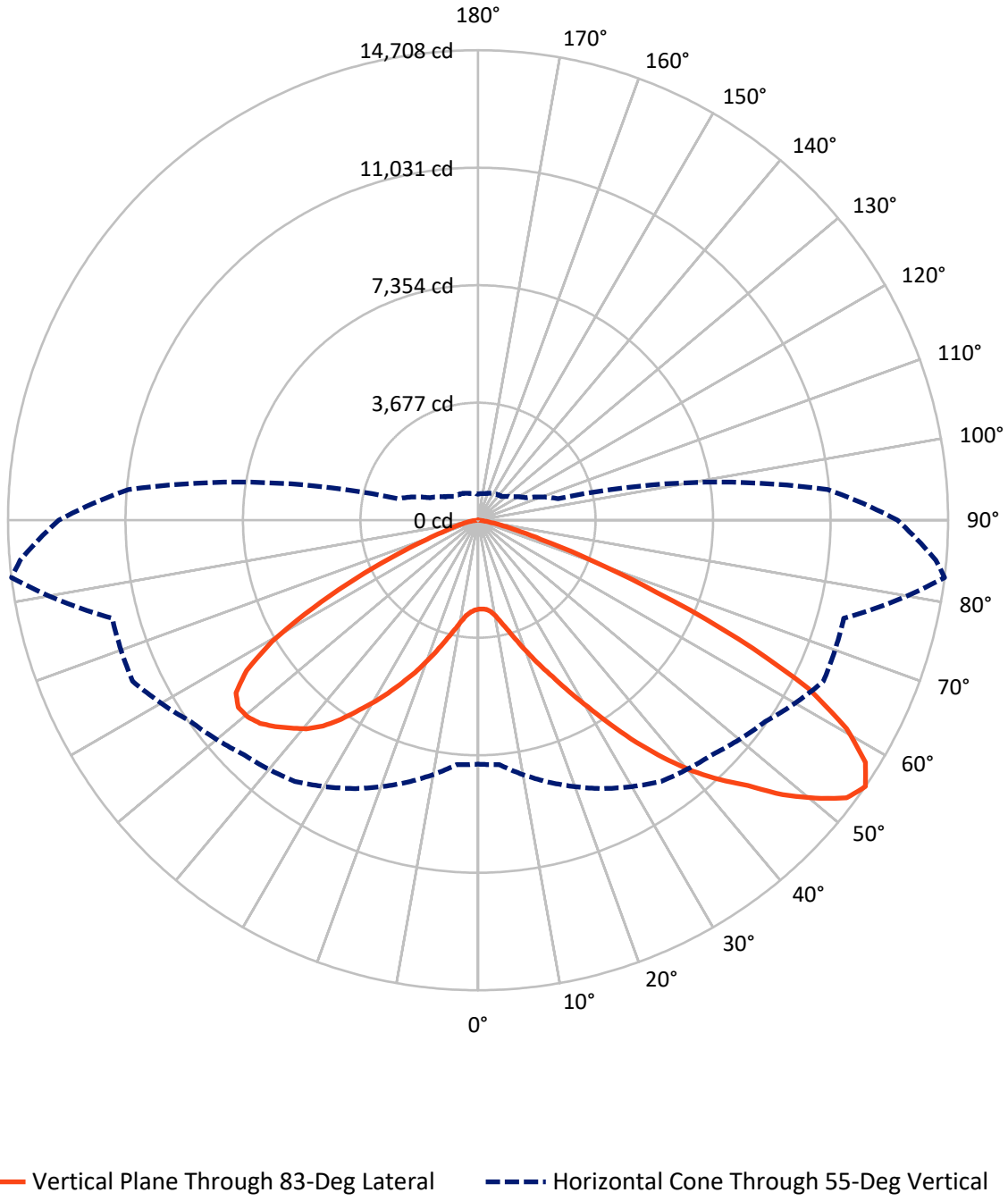

Based on 25 foot mounting height. Maximum calculated value = 7.5 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

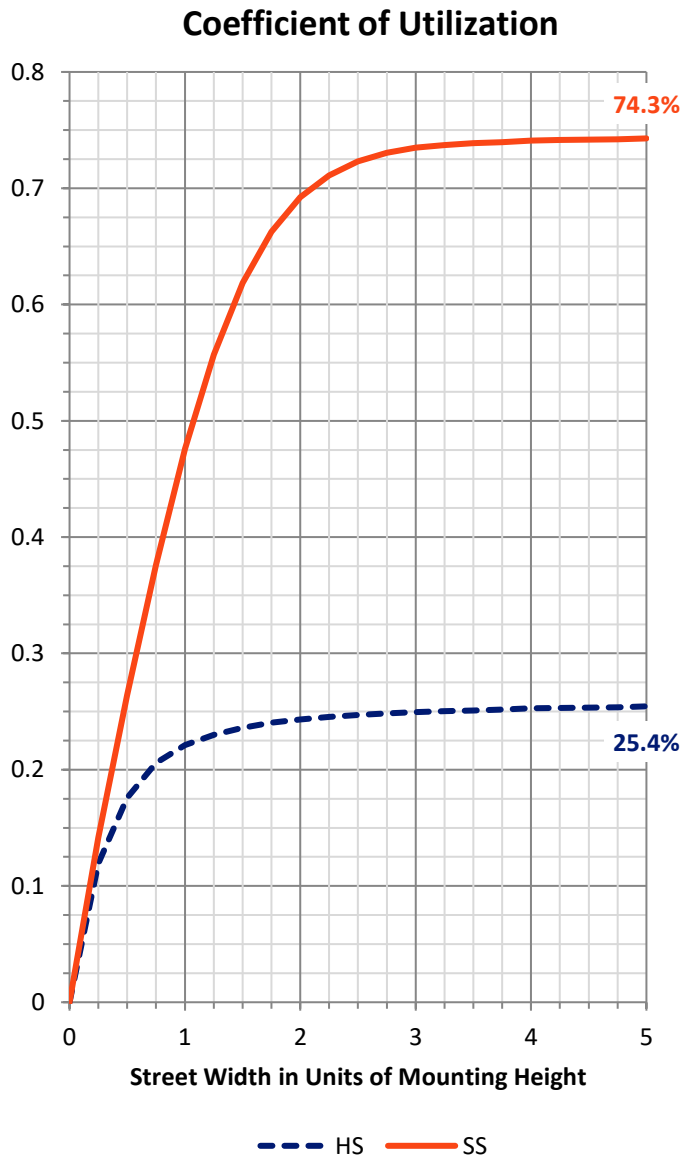
REPORT NUMBER: P1501071
CATALOG NUMBER: GSS-SB3C-750-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5770.6 | 0.0 | 5770.6 |
| | % Fixture | 25.7 | 0.0 | 25.7 |
| **Street Side** | Lumens | 16716.3 | 0.0 | 16716.3 |
| | % Fixture | 74.3 | 0.0 | 74.3 |
| **Total** | Lumens | 22486.9 | 0.0 | 22486.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 269.0 | 1.2 |
| 10°-20° | 876.2 | 3.9 |
| 20°-30° | 1754.1 | 7.8 |
| 30°-40° | 3120.9 | 13.9 |
| 40°-50° | 4703.0 | 20.9 |
| 50°-60° | 5730.9 | 25.5 |
| 60°-70° | 4634.3 | 20.6 |
| 70°-80° | 1269.3 | 5.6 |
| 80°-90° | 129.3 | 0.6 |
| 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° | 22486.9 | 100.0 |
| 0°-180° | 22486.9 | 100.0 |



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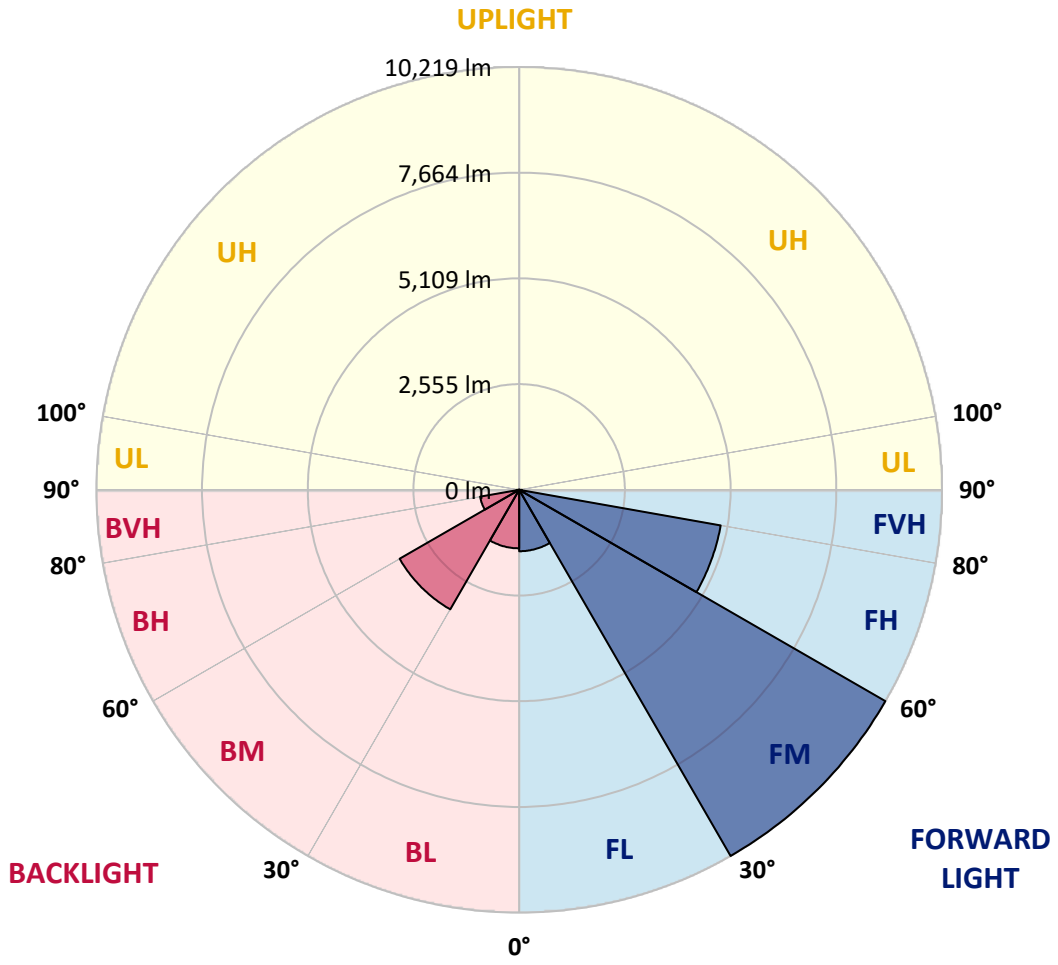
Scaled Data Report

REPORT NUMBER: P1501071
CATALOG NUMBER: GSS-SB3C-750-U-T3LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1484.8 | 6.6 | | | |
| FM | (30°-60°) | 10218.7 | 45.4 | | | |
| FH | (60°-80°) | 4945.5 | 22.0 | | | G2/5000 |
| FVH | (80°-90°) | 67.3 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 1414.5 | 6.3 | B3/2500 | | |
| BM | (30°-60°) | 3336.1 | 14.8 | B3/5000 | | |
| BH | (60°-80°) | 958.1 | 4.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 61.9 | 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-G2**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 83° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | *2783.6* | 2783.6 |
| 2.5° | 2703.7 | 2698.7 | 2693.7 | 2688.7 | 2698.7 | 2713.7 | 2728.7 | 2738.7 | 2763.7 | *2783.6* | 2773.6 |
| 5° | 2488.8 | 2478.8 | 2488.8 | 2528.8 | 2563.7 | 2623.7 | 2683.7 | 2723.7 | 2778.6 | *2803.6* | 2813.6 |
| 7.5° | 2298.9 | 2288.9 | 2298.9 | 2348.9 | 2408.8 | 2503.8 | 2628.7 | 2728.7 | 2828.6 | *2888.6* | 2898.6 |
| 10° | 2298.9 | 2303.9 | 2303.9 | 2323.9 | 2353.9 | 2448.8 | 2598.7 | 2788.6 | 2963.6 | *3048.5* | 3068.5 |
| 12.5° | 2373.8 | 2373.8 | 2373.8 | 2398.8 | 2418.8 | 2493.8 | 2663.7 | 2898.6 | 3178.4 | *3303.4* | 3318.4 |
| 15° | 2473.8 | 2468.8 | 2483.8 | 2498.8 | 2533.8 | 2608.7 | 2778.6 | 3058.5 | 3413.3 | *3603.2* | 3623.2 |
| 17.5° | 2613.7 | 2603.7 | 2618.7 | 2653.7 | 2703.7 | 2788.6 | 2958.6 | 3278.4 | 3738.2 | *3978.1* | 4008.0 |
| 20° | 2768.6 | 2763.7 | 2793.6 | 2848.6 | 2918.6 | 3023.5 | 3218.4 | 3543.3 | 4108.0 | *4412.8* | 4467.8 |
| 22.5° | 2953.6 | 2943.6 | 2998.5 | 3098.5 | 3193.4 | 3313.4 | 3548.3 | 3888.1 | 4532.8 | *4897.6* | 4952.6 |
| 25° | 3163.5 | 3163.5 | 3238.4 | 3358.4 | 3503.3 | 3718.2 | 3953.1 | 4327.9 | 5032.5 | *5422.4* | 5507.3 |
| 27.5° | 3508.3 | 3533.3 | 3563.3 | 3688.2 | 3893.1 | 4183.0 | 4432.8 | 4857.6 | 5577.3 | *6067.0* | 6097.0 |
| 30° | 4068.0 | 4058.0 | 4108.0 | 4193.0 | 4362.9 | 4667.7 | 5042.5 | 5497.3 | 6266.9 | *6781.7* | 6856.7 |
| 32.5° | 4572.8 | 4587.8 | 4657.7 | 4817.6 | 5022.5 | 5282.4 | 5732.2 | 6291.9 | 7016.6 | *7611.3* | 7646.3 |
| 35° | 5082.5 | 5092.5 | 5227.4 | 5467.3 | 5772.2 | 6062.0 | 6551.8 | 7101.5 | 7831.2 | *8535.8* | 8630.8 |
| 37.5° | 5797.2 | 5787.2 | 5922.1 | 6127.0 | 6536.8 | 6986.6 | 7381.4 | 7906.1 | 8610.8 | *9435.4* | 9545.3 |
| 40° | 6331.9 | 6386.9 | 6641.8 | 6901.6 | 7286.4 | 7751.2 | 8086.1 | 8580.8 | 9250.5 | *10315.0* | 10414.9 |
| 42.5° | 6881.6 | 6926.6 | 7266.5 | 7656.3 | 8061.1 | 8375.9 | 8635.8 | 9095.6 | 9760.2 | *11094.6* | 11149.6 |
| 45° | 7336.4 | 7396.4 | 7786.2 | 8281.0 | 8700.8 | 9020.6 | 9110.6 | 9540.3 | 10280.0 | *11844.2* | 11929.2 |
| 47.5° | 7626.3 | 7691.2 | 8151.0 | 8730.7 | 9160.5 | 9500.4 | 9470.4 | 10075.1 | 10834.7 | *12838.7* | 12808.7 |
| 50° | 7826.2 | 7866.2 | 8365.9 | 8985.6 | 9545.3 | 9770.2 | 9900.2 | 10679.8 | 11404.4 | *13673.3* | 13563.4 |
| 52.5° | 7971.1 | 8036.1 | 8490.9 | 9170.5 | 9760.2 | 10055.1 | 10404.9 | 11379.4 | 11799.2 | *14438.0* | 14193.1 |
| 55° | *7631.3* | *7681.2* | *8480.9* | *9265.5* | *9980.1* | *10369.9* | *10979.6* | *11924.2* | *11849.2* | *14707.8* | *14378.0* |
| 57.5° | 7281.4 | 7321.4 | 8061.1 | 9240.5 | 10220.0 | 10759.7 | 11634.3 | 11994.1 | 11404.4 | *14293.0* | 13878.2 |
| 60° | 6841.7 | 6871.6 | 7611.3 | 8975.6 | 10225.0 | 11064.6 | 11969.2 | 11484.4 | 10579.8 | *13248.5* | 12853.7 |
| 62.5° | 6032.1 | 6032.1 | 6846.7 | 8261.0 | 9975.1 | 11219.5 | 11879.2 | 10519.9 | 9475.4 | *11604.3* | 11059.6 |
| 65° | 5232.4 | 5197.5 | 5747.2 | 6986.6 | 9310.5 | 11179.5 | 11204.5 | 9300.5 | 7761.2 | *8950.6* | 8525.8 |
| 67.5° | 4362.9 | 4367.9 | 4692.7 | 5672.2 | 7541.3 | 10344.9 | 9780.2 | 7186.5 | 5407.4 | *6027.1* | 5807.2 |
| 70° | 2953.6 | 3028.5 | 3358.4 | 4118.0 | 5687.2 | 7331.4 | 7786.2 | 4867.6 | 3373.4 | *3743.2* | 3563.3 |
| 72.5° | 1124.5 | 1139.4 | 1524.3 | 2158.9 | 3593.2 | 4407.8 | 5432.3 | 2723.7 | 1974.0 | *2064.0* | 2074.0 |
| 75° | 474.8 | 494.8 | 649.7 | 909.6 | 1594.2 | 2403.8 | 2858.6 | 1379.3 | 1199.4 | *1234.4* | 1224.4 |
| 77.5° | 319.8 | 329.8 | 394.8 | 489.8 | 719.6 | 964.5 | 1194.4 | 779.6 | 734.6 | *689.7* | 669.7 |
| 80° | 239.9 | 239.9 | 284.9 | 329.8 | 404.8 | 494.8 | 519.7 | 394.8 | 439.8 | *364.8* | 354.8 |
| 82.5° | 154.9 | 164.9 | 179.9 | 194.9 | 229.9 | 244.9 | 209.9 | 214.9 | 254.9 | *189.9* | 179.9 |
| 85° | 75.0 | 80.0 | 85.0 | 90.0 | 90.0 | 85.0 | 75.0 | 95.0 | 129.9 | *80.0* | 75.0 |
| 87.5° | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 5.0 | 5.0 | 5.0 | *5.0* | 5.0 |
| 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: P1501071
CATALOG NUMBER: GSS-SB3C-750-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 | 2783.6 |
| 2.5° | 2788.6 | 2808.6 | 2823.6 | 2833.6 | 2858.6 | 2853.6 | 2868.6 | 2878.6 | 2888.6 | 2903.6 | 2883.6 |
| 5° | 2838.6 | 2873.6 | 2913.6 | 2943.6 | 2973.5 | 2988.5 | 2993.5 | 3003.5 | 3008.5 | 3018.5 | 3013.5 |
| 7.5° | 2948.6 | 2988.5 | 3048.5 | 3078.5 | 3103.5 | 3103.5 | 3088.5 | 3083.5 | 3068.5 | 3078.5 | 3078.5 |
| 10° | 3133.5 | 3193.4 | 3258.4 | 3263.4 | 3233.4 | 3198.4 | 3143.5 | 3113.5 | 3073.5 | 3063.5 | 3053.5 |
| 12.5° | 3403.3 | 3483.3 | 3533.3 | 3498.3 | 3393.3 | 3263.4 | 3118.5 | 2983.5 | 2878.6 | 2833.6 | 2823.6 |
| 15° | 3708.2 | 3808.1 | 3818.1 | 3718.2 | 3528.3 | 3213.4 | 2908.6 | 2758.7 | 2703.7 | 2703.7 | 2698.7 |
| 17.5° | 4128.0 | 4198.0 | 4158.0 | 3918.1 | 3493.3 | 2978.5 | 2758.7 | 2733.7 | 2748.7 | 2768.6 | 2768.6 |
| 20° | 4567.8 | 4647.7 | 4482.8 | 4058.0 | 3278.4 | 2838.6 | 2773.6 | 2793.6 | 2828.6 | 2848.6 | 2843.6 |
| 22.5° | 5092.5 | 5132.5 | 4812.7 | 4063.0 | 3048.5 | 2803.6 | 2803.6 | 2828.6 | 2853.6 | 2883.6 | 2883.6 |
| 25° | 5632.3 | 5617.3 | 5117.5 | 3878.1 | 2918.6 | 2793.6 | 2783.6 | 2803.6 | 2813.6 | 2828.6 | 2823.6 |
| 27.5° | 6237.0 | 6157.0 | 5352.4 | 3583.3 | 2878.6 | 2763.7 | 2713.7 | 2693.7 | 2703.7 | 2718.7 | 2723.7 |
| 30° | 6931.6 | 6741.7 | 5542.3 | 3398.3 | 2863.6 | 2693.7 | 2573.7 | 2518.8 | 2508.8 | 2528.8 | 2528.8 |
| 32.5° | 7736.2 | 7326.4 | 5657.2 | 3373.4 | 2848.6 | 2568.7 | 2408.8 | 2303.9 | 2283.9 | 2293.9 | 2318.9 |
| 35° | 8560.8 | 8031.1 | 5627.3 | 3438.3 | 2853.6 | 2468.8 | 2233.9 | 2094.0 | 2074.0 | 2084.0 | 2109.0 |
| 37.5° | 9425.4 | 8700.8 | 5512.3 | 3538.3 | 2813.6 | 2333.9 | 2074.0 | 1904.1 | 1874.1 | 1894.1 | 1904.1 |
| 40° | 10095.1 | 9265.5 | 5227.4 | 3578.3 | 2743.7 | 2163.9 | 1889.1 | 1744.1 | 1664.2 | 1659.2 | 1684.2 |
| 42.5° | 10714.8 | 9710.3 | 4917.6 | 3513.3 | 2598.7 | 1984.0 | 1699.2 | 1554.2 | 1429.3 | 1334.3 | 1334.3 |
| 45° | 11334.5 | 10160.0 | 4602.8 | 3328.4 | 2358.8 | 1794.1 | 1499.3 | 1304.4 | 1159.4 | 1089.5 | 1094.5 |
| 47.5° | 11954.2 | 10594.8 | 4227.9 | 3048.5 | 2119.0 | 1594.2 | 1284.4 | 1129.4 | 1029.5 | 974.5 | 974.5 |
| 50° | 12528.9 | 10909.7 | 3748.2 | 2603.7 | 1844.1 | 1394.3 | 1134.4 | 1044.5 | 969.5 | 919.6 | 909.6 |
| 52.5° | 13033.6 | 11119.6 | 3098.5 | 2064.0 | 1544.2 | 1169.4 | 1054.5 | 984.5 | 929.5 | 874.6 | 859.6 |
| 55° | *13123.6* | *10979.6* | *2593.7* | *1659.2* | *1274.4* | *1049.5* | *994.5* | *934.5* | *859.6* | *834.6* | *819.6* |
| 57.5° | 12568.9 | 10240.0 | 2188.9 | 1399.3 | 1089.5 | 964.5 | 944.5 | 874.6 | 814.6 | 789.6 | 774.6 |
| 60° | 11624.3 | 8895.7 | 1809.1 | 1199.4 | 969.5 | 884.6 | 909.6 | 839.6 | 744.6 | 729.6 | 714.7 |
| 62.5° | 9925.2 | 6941.6 | 1444.3 | 1009.5 | 879.6 | 824.6 | 849.6 | 749.6 | 669.7 | 649.7 | 644.7 |
| 65° | 7716.2 | 4967.6 | 1214.4 | 889.6 | 809.6 | 764.6 | 754.6 | 664.7 | 604.7 | 589.7 | 589.7 |
| 67.5° | 5387.4 | 3158.5 | 1014.5 | 814.6 | 719.6 | 689.7 | 684.7 | 624.7 | 584.7 | 569.7 | 569.7 |
| 70° | 3298.4 | 1914.1 | 854.6 | 744.6 | 634.7 | 579.7 | 614.7 | 604.7 | 544.7 | 529.7 | 524.7 |
| 72.5° | 1714.2 | 1144.4 | 749.6 | 684.7 | 534.7 | 494.8 | 549.7 | 554.7 | 504.8 | 524.7 | 519.7 |
| 75° | 994.5 | 794.6 | 654.7 | 604.7 | 424.8 | 414.8 | 479.8 | 529.7 | 489.8 | 504.8 | 494.8 |
| 77.5° | 569.7 | 509.8 | 504.8 | 494.8 | 334.8 | 339.8 | 429.8 | 474.8 | 419.8 | 434.8 | 399.8 |
| 80° | 314.8 | 329.8 | 349.8 | 309.8 | 234.9 | 264.9 | 344.8 | 379.8 | 319.8 | 314.8 | 289.9 |
| 82.5° | 164.9 | 204.9 | 234.9 | 199.9 | 134.9 | 159.9 | 234.9 | 234.9 | 204.9 | 194.9 | 189.9 |
| 85° | 75.0 | 85.0 | 109.9 | 100.0 | 50.0 | 60.0 | 109.9 | 119.9 | 104.9 | 95.0 | 90.0 |
| 87.5° | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | 15.0 | 5.0 | 5.0 | 5.0 |
| 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: SP1-2407-184-6

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-750-U-5WQ

Data in this report applies to families of products including GSS-SB1A-750-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

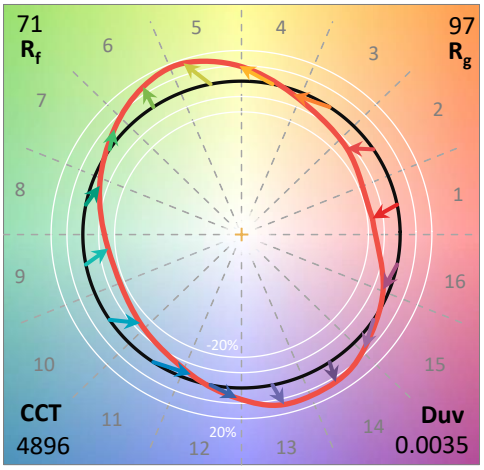
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-6 |
| 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-750-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4896 |
| CIE u': | 0.2101 |
| CIE v': | 0.4901 |
| Duv: | 0.0035 |
| CIE x: | 0.3489 |
| CIE y: | 0.3618 |
| CIE z: | 0.2893 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 570 |
| Purity: | 13.25435 |
| Rf: | 70.7 |
| Rg: | 96.8 |

| | |
|---|---|
| CRI (Ra): | 70.2 |
| R1: | 68.1 |
| R2: | 73.9 |
| R3: | 79.4 |
| R4: | 72.1 |
| R5: | 69.2 |
| R6: | 65.7 |
| R7: | 78.1 |
| R8: | 55.3 |
| R9: | -35.1 |
| R10: | 39.3 |
| R11: | 71.1 |
| R12: | 43.8 |
| R13: | 68.1 |
| R14: | 88.4 |
| R15: | 59.7 |




## Test Conditions

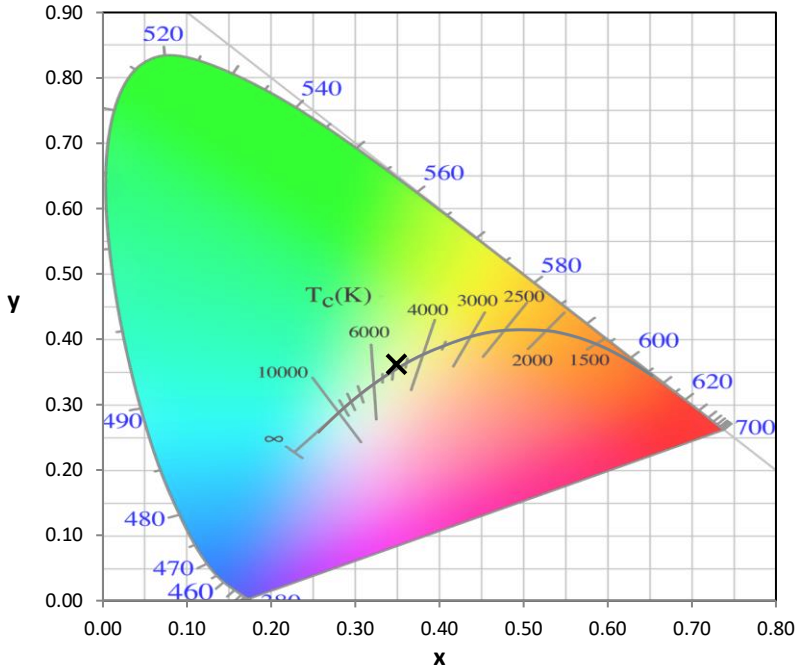
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-6

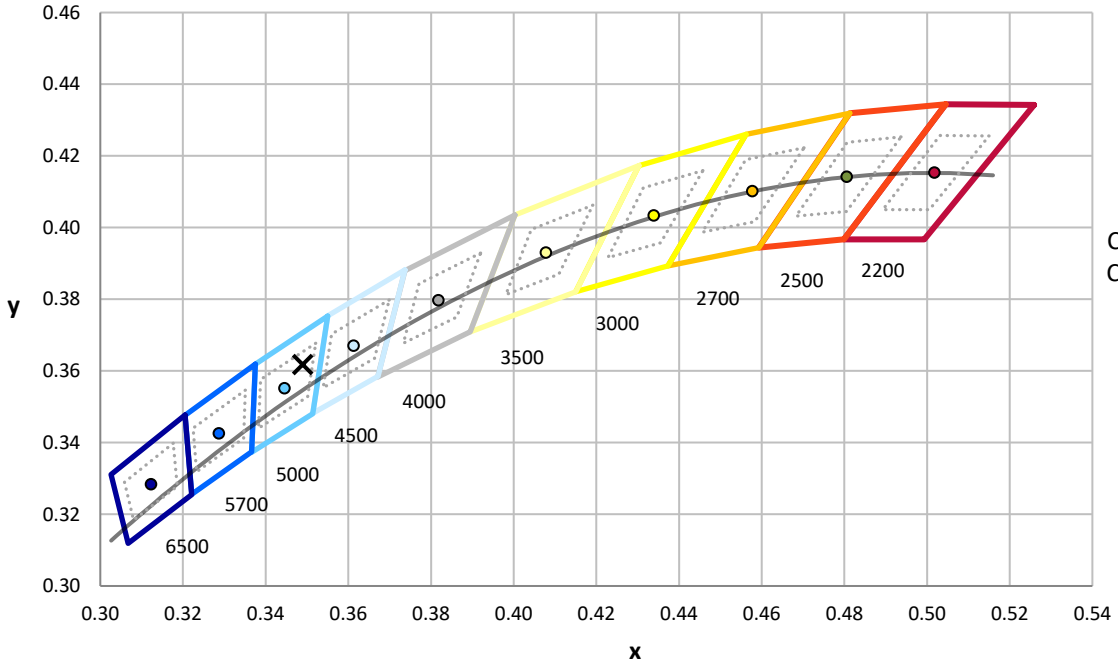
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

## CIE 1931 Chromaticity Diagram




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

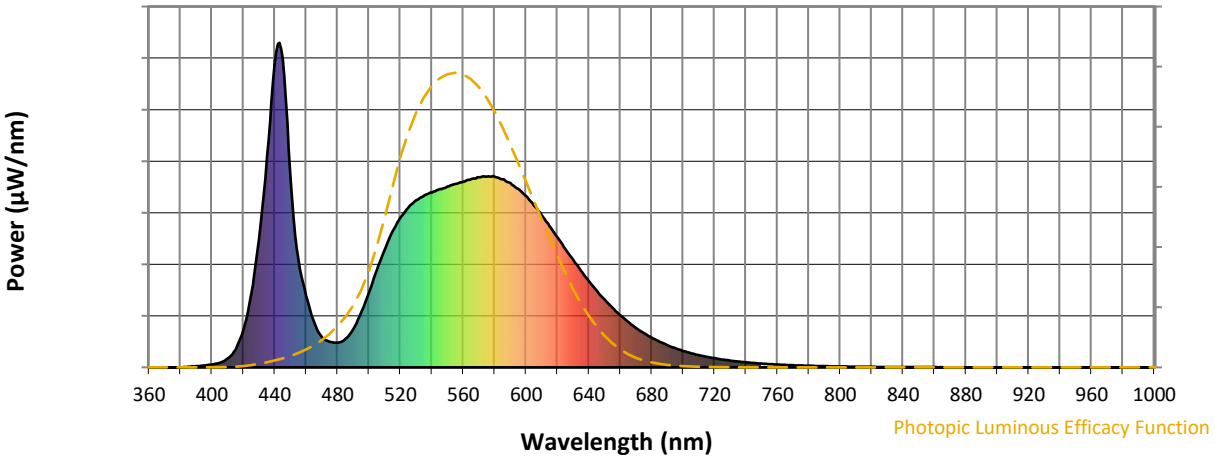



CCT = 4896K
CIE x = 0.3489
CIE y = 0.3618
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-6

## Photopic Flux vs. Wavelength

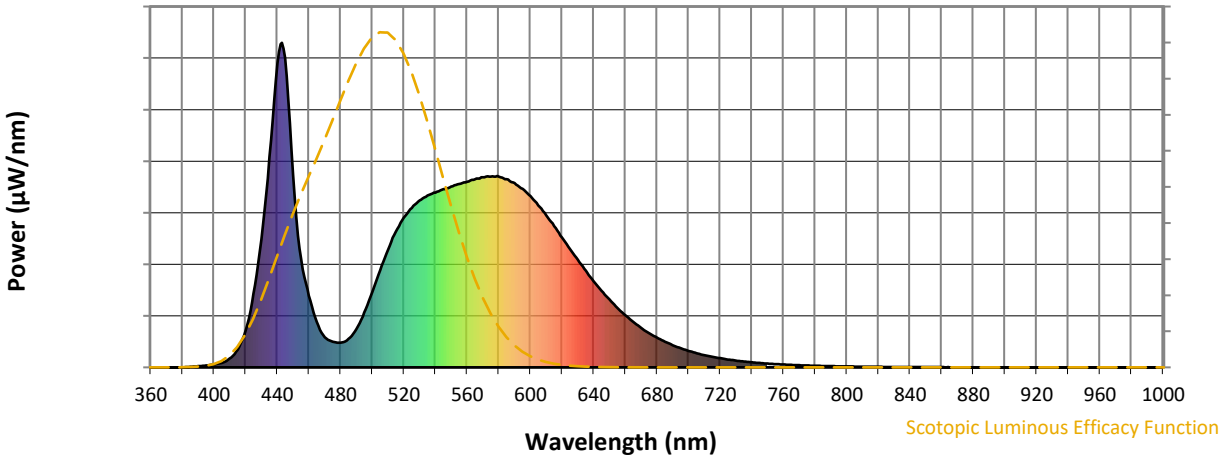



## Photopic Lumens: NR

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2407-184-6

## Scotopic Flux vs. Wavelength

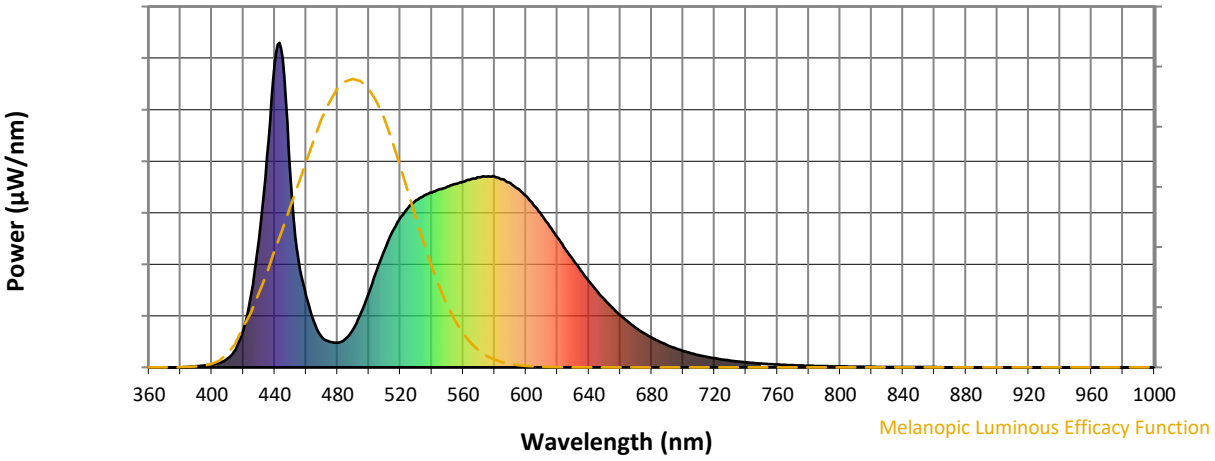



**Scotopic Lumens: NR** **S/P: 1.7**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2407-184-6

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.37**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

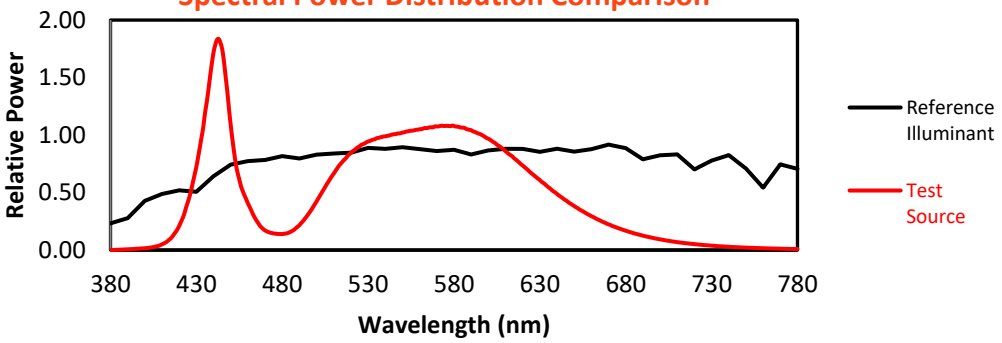
REPORT NUMBER: SP1-2407-184-6

# TM-30-18

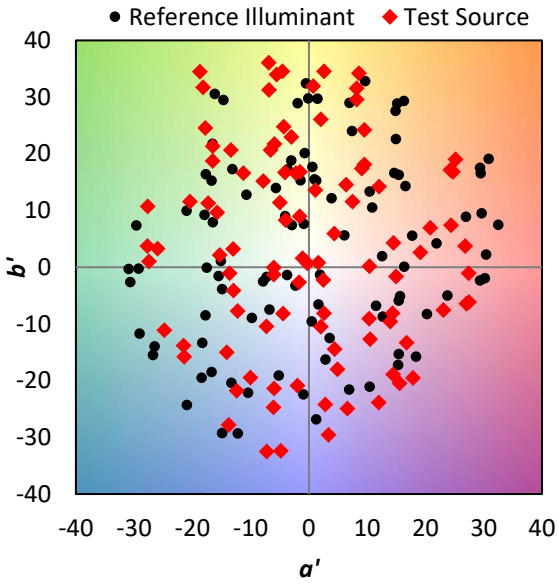
## Summary

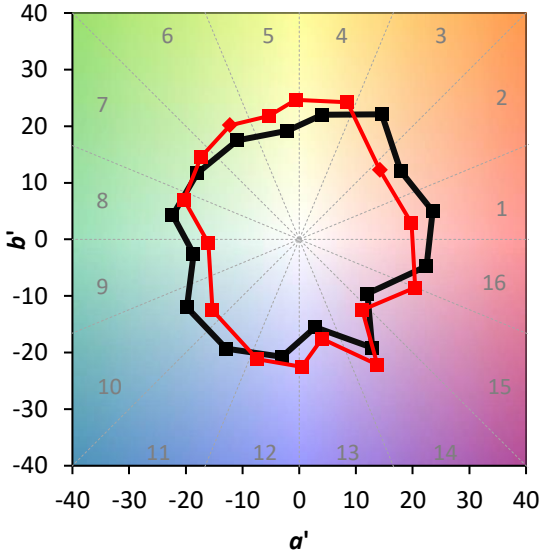
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

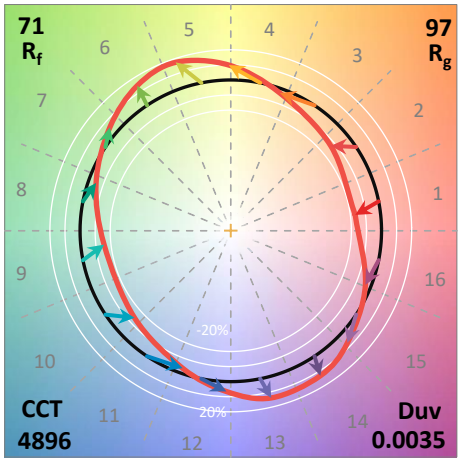
## Spectral Power Distribution Comparison

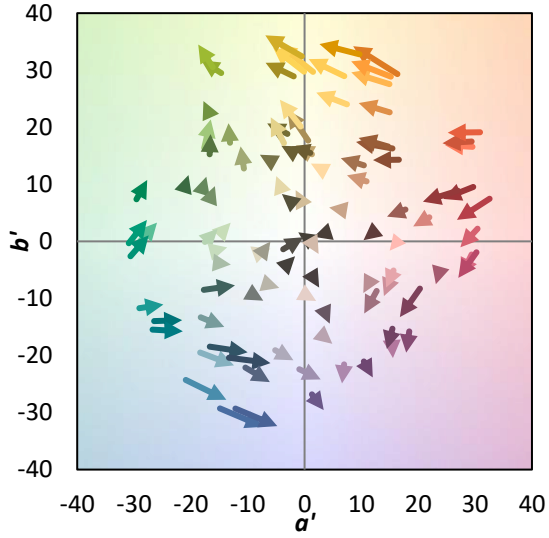



## Color Vector Graphics



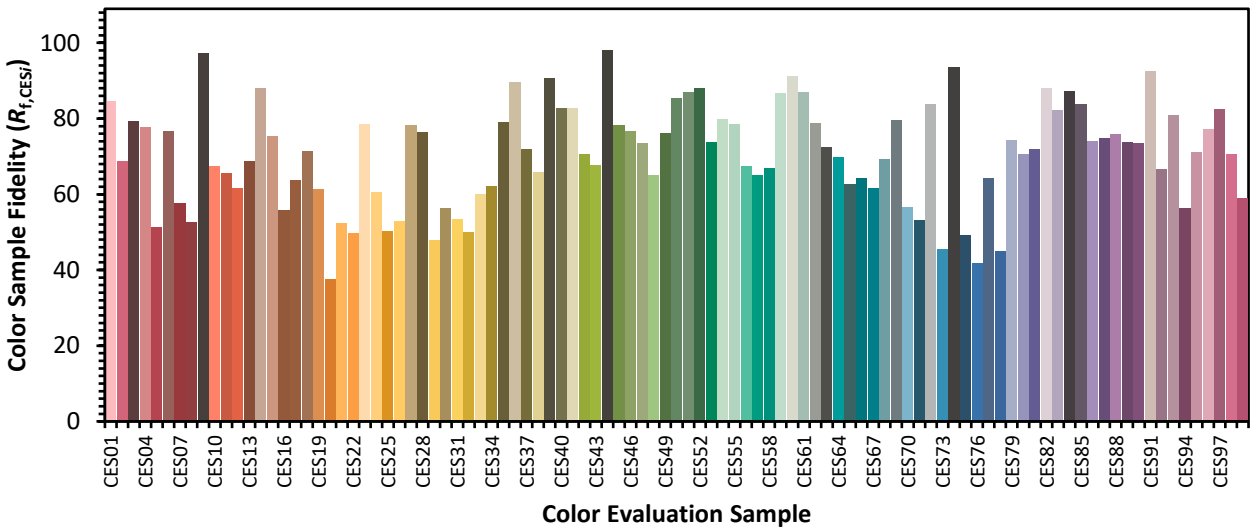



REPORT NUMBER: SP1-2407-184-6

# TM-30-18

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

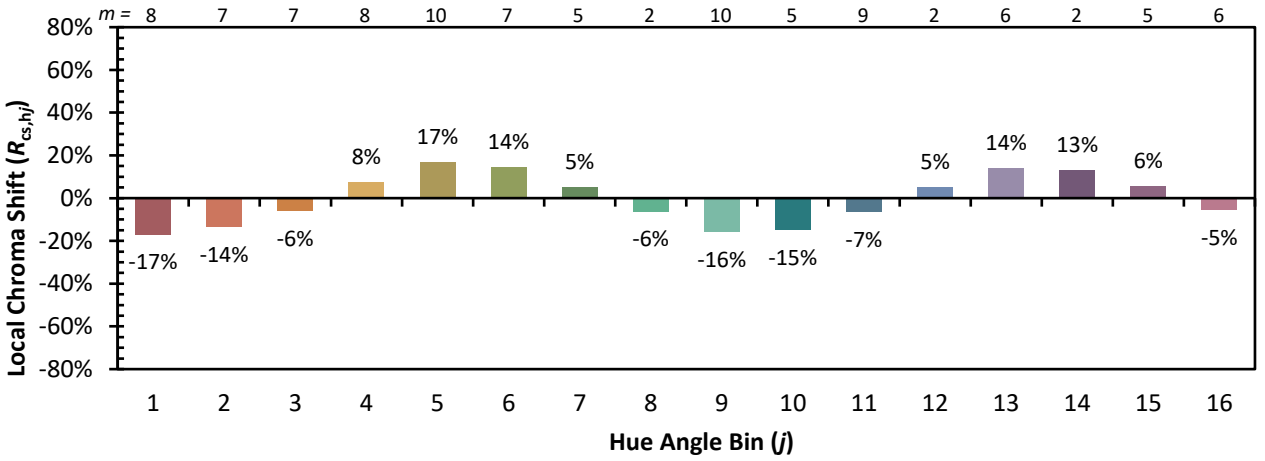
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 50 | CES31 = 54 | CES56 = 68 | CES81 = 72 |
| CES07 = 39 | CES32 = 50 | CES57 = 65 | CES82 = 88 |
| CES08 = 38 | CES33 = 60 | CES58 = 67 | CES83 = 82 |
| CES09 = 29 | CES34 = 62 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 91 | CES85 = 84 |
| CES11 = 56 | CES36 = 90 | CES61 = 87 | CES86 = 74 |
| CES12 = 61 | CES37 = 72 | CES62 = 79 | CES87 = 75 |
| CES13 = 41 | CES38 = 66 | CES63 = 72 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 74 |
| CES15 = 70 | CES40 = 83 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 83 | CES66 = 64 | CES91 = 92 |
| CES17 = 49 | CES42 = 70 | CES67 = 62 | CES92 = 67 |
| CES18 = 55 | CES43 = 68 | CES68 = 69 | CES93 = 81 |
| CES19 = 71 | CES44 = 98 | CES69 = 80 | CES94 = 56 |
| CES20 = 64 | CES45 = 78 | CES70 = 56 | CES95 = 71 |
| CES21 = 85 | CES46 = 77 | CES71 = 53 | CES96 = 77 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 46 | CES98 = 71 |
| CES24 = 90 | CES49 = 76 | CES74 = 94 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 | |

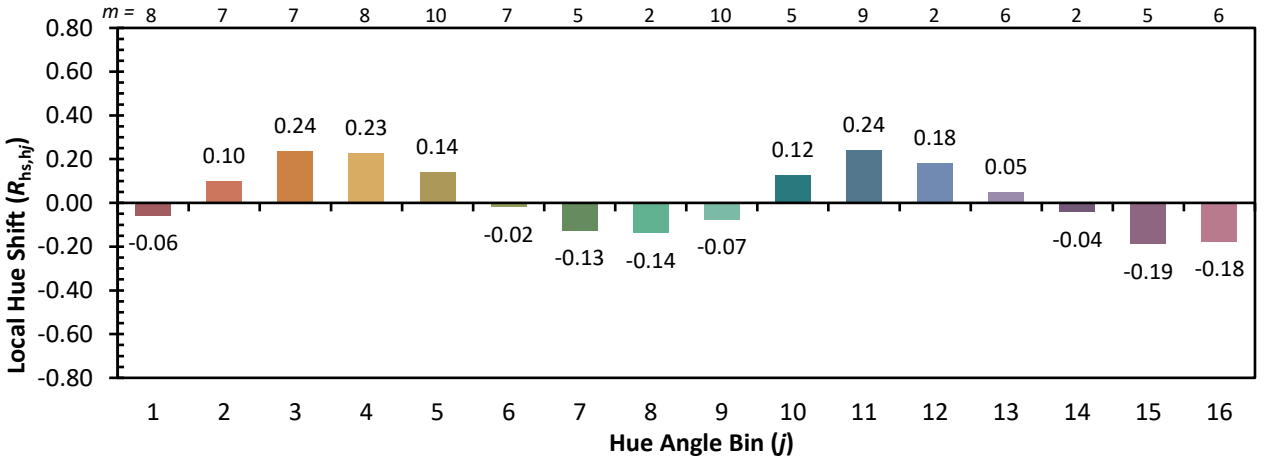


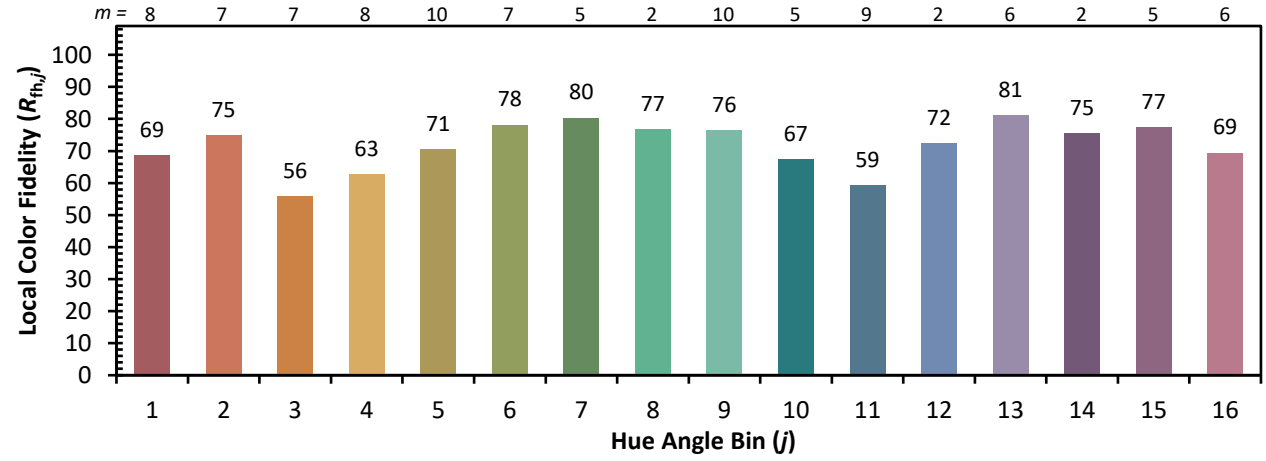
REPORT NUMBER: SP1-2407-184-6

**TM-30-18**

## Color Rendition by Hue-Angle Bin



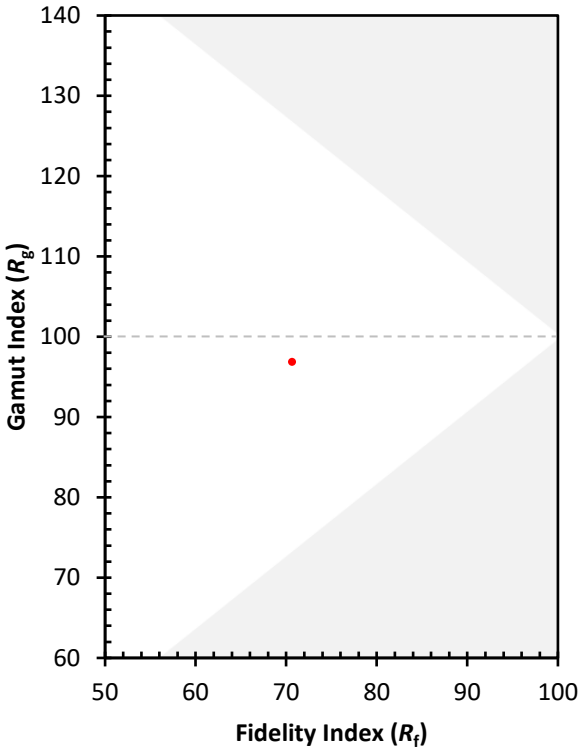



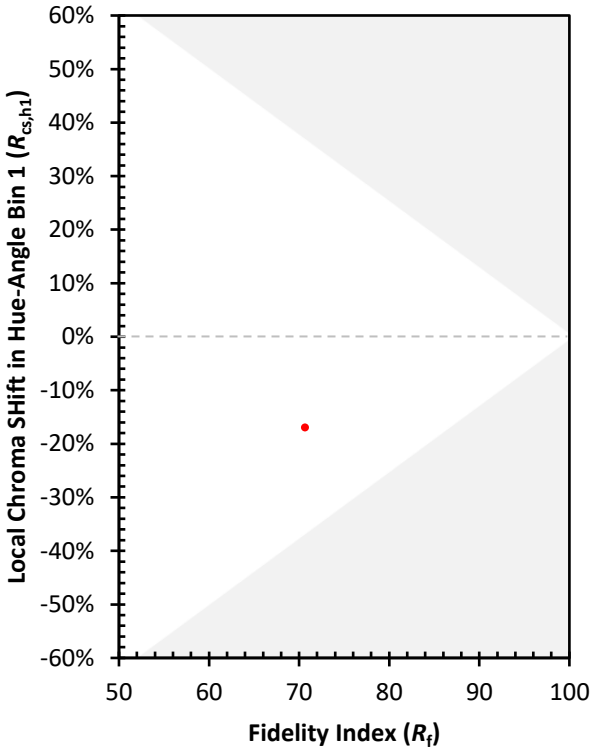



REPORT NUMBER: SP1-2407-184-6

# TM-30-18

## Measure Comparisons




(END OF REPORT)