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: P1358375

Luminaire Tested: **GSS-SB5A-740-U-SL4**

Issue Date: 02/18/2026

Report Generated By 670245763

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1358375 |
| 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-SL4 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 5SQUARE 143W 70CRI 4000K FIXTURE w/ TYPE IV SPILL CONTROL DISTRIBUTION OPTIC |
| Light Source: | (130) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 22070.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 154.3 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B3 - U0 - G3 |

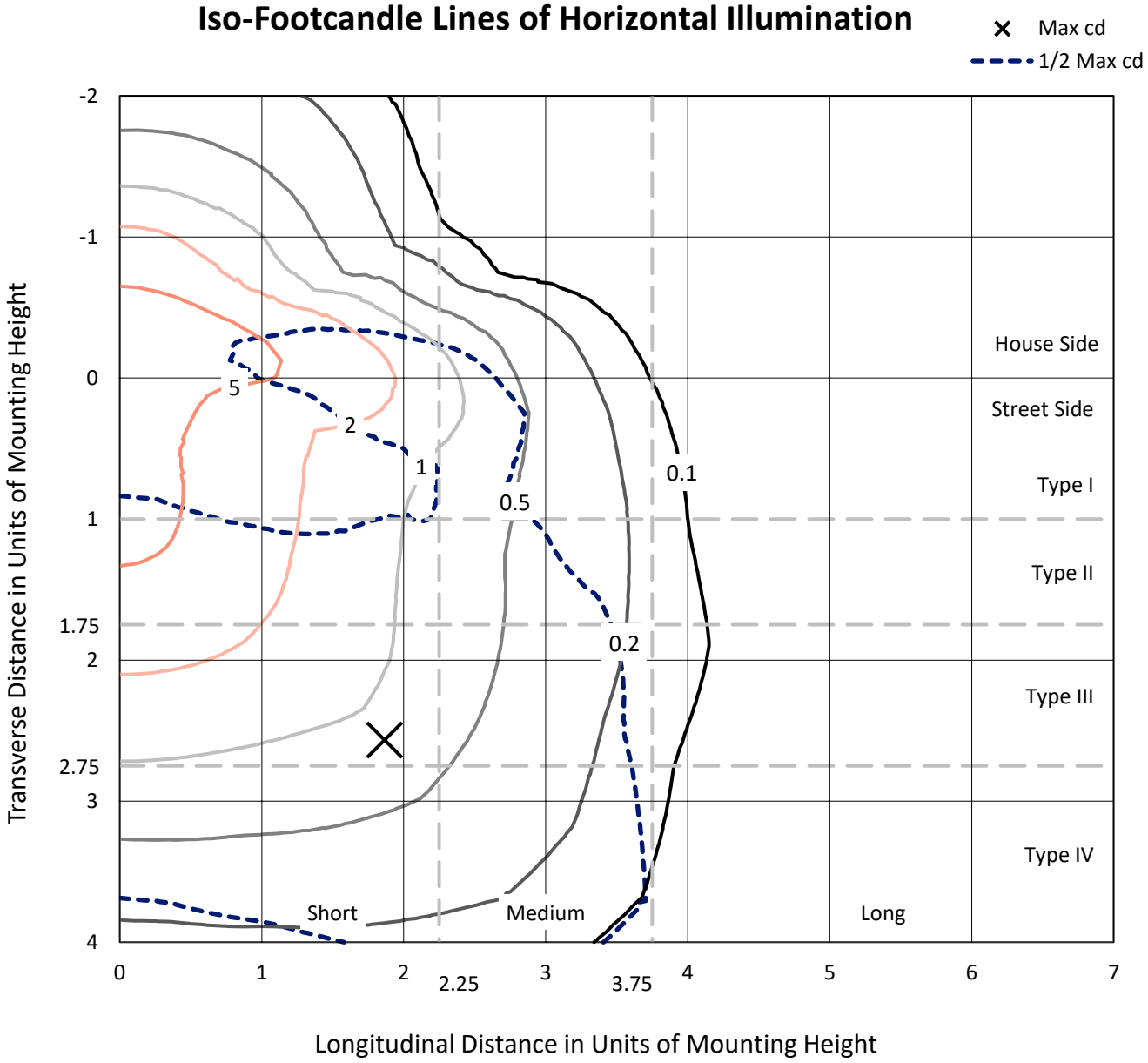
| | |
|---|---|
| Input Watts (W): | 143 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 10.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature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

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Scaled Data Report

REPORT NUMBER: P1358375
CATALOG NUMBER: GSS-SB5A-740-U-SL4

## Iso-Footcandle Lines of Horizontal Illumination



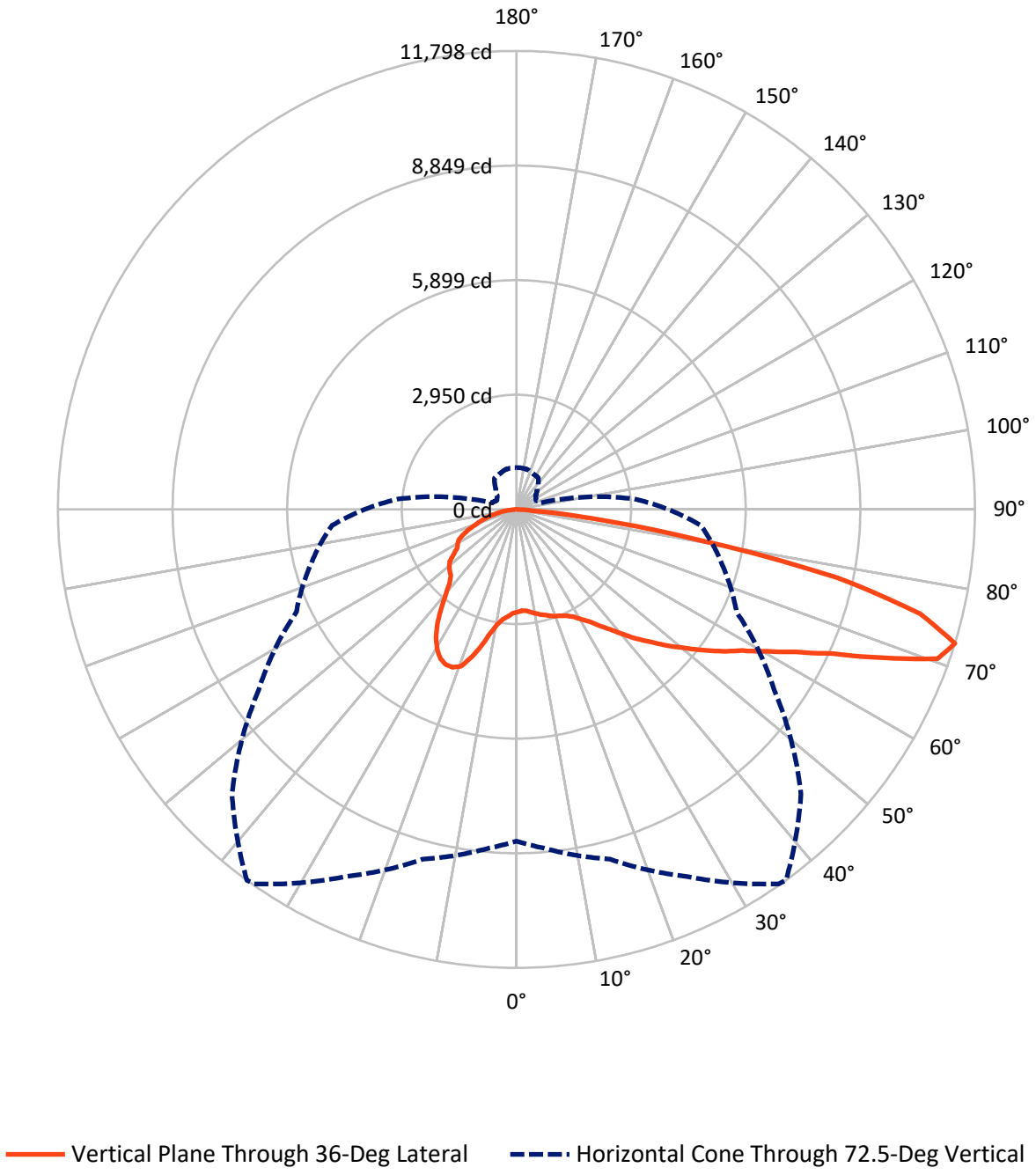

Based on 20 foot mounting height. Maximum calculated value = 8.9 fc
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

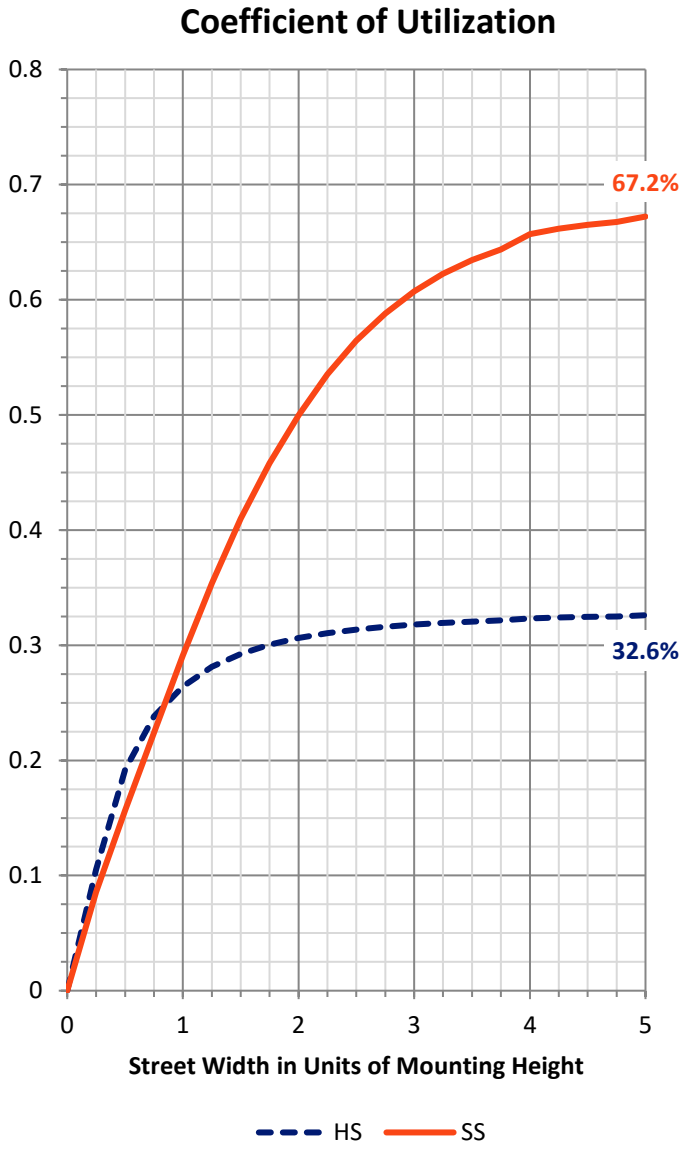
REPORT NUMBER: P1358375
CATALOG NUMBER: GSS-SB5A-740-U-SL4

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 7263.1 | 0.0 | 7263.1 |
| | % Fixture | 32.9 | 0.0 | 32.9 |
| **Street Side** | Lumens | 14807.2 | 0.0 | 14807.2 |
| | % Fixture | 67.1 | 0.0 | 67.1 |
| **Total** | Lumens | 22070.4 | 0.0 | 22070.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 261.6 | 1.2 |
| 10°-20° | 902.0 | 4.1 |
| 20°-30° | 1712.7 | 7.8 |
| 30°-40° | 2500.8 | 11.3 |
| 40°-50° | 3326.2 | 15.1 |
| 50°-60° | 4264.7 | 19.3 |
| 60°-70° | 5016.6 | 22.7 |
| 70°-80° | 3757.8 | 17.0 |
| 80°-90° | 328.1 | 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° | 22070.4 | 100.0 |
| 0°-180° | 22070.4 | 100.0 |



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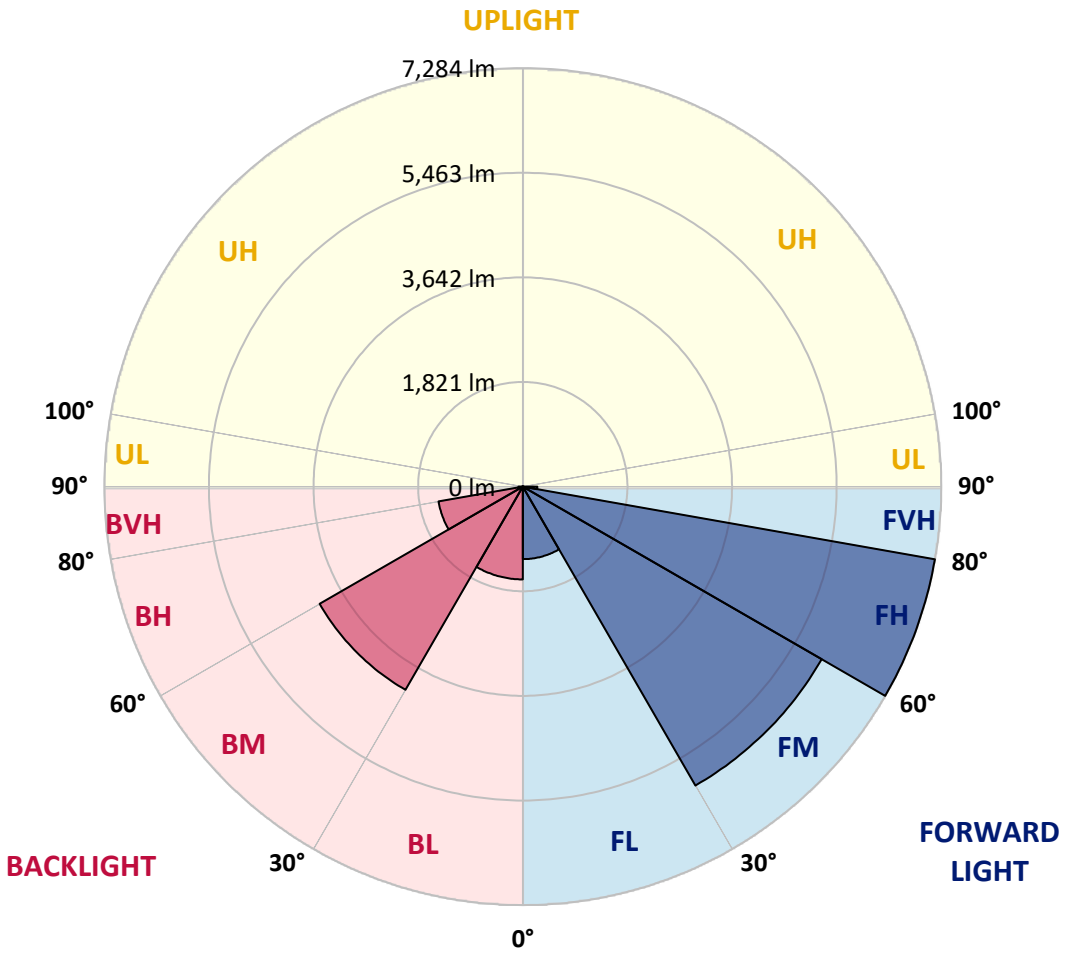
Scaled Data Report

REPORT NUMBER: P1358375
CATALOG NUMBER: GSS-SB5A-740-U-SL4

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1261.7 | 5.7 | | | |
| FM | (30°-60°) | 6008.3 | 27.2 | | | |
| FH | (60°-80°) | 7284.5 | 33.0 | | | G3/7500 |
| FVH | (80°-90°) | 252.7 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 1614.6 | 7.3 | B3/2500 | | |
| BM | (30°-60°) | 4083.3 | 18.5 | B3/5000 | | |
| BH | (60°-80°) | 1489.9 | 6.8 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 75.4 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

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



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Scaled Data Report

REPORT NUMBER: P1358375
CATALOG NUMBER: GSS-SB5A-740-U-SL4

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 | *2642.9* | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 |
| 2.5° | 2622.9 | 2607.9 | 2617.9 | 2607.9 | 2607.9 | *2607.9* | 2617.9 | 2617.9 | 2632.9 | 2632.9 | 2632.9 |
| 5° | 2642.9 | 2637.9 | 2642.9 | 2637.9 | 2622.9 | *2622.9* | 2632.9 | 2622.9 | 2647.9 | 2637.9 | 2652.9 |
| 7.5° | 2698.0 | 2688.0 | 2688.0 | 2673.0 | 2678.0 | *2668.0* | 2678.0 | 2663.0 | 2678.0 | 2668.0 | 2668.0 |
| 10° | 2763.1 | 2748.0 | 2753.1 | 2733.0 | 2718.0 | *2723.0* | 2733.0 | 2718.0 | 2723.0 | 2728.0 | 2728.0 |
| 12.5° | 2818.1 | 2808.1 | 2808.1 | 2768.1 | 2778.1 | *2778.1* | 2788.1 | 2773.1 | 2783.1 | 2778.1 | 2798.1 |
| 15° | 2888.2 | 2873.2 | 2863.2 | 2833.1 | 2828.1 | *2823.1* | 2838.1 | 2823.1 | 2848.2 | 2843.2 | 2868.2 |
| 17.5° | 2953.3 | 2938.3 | 2928.2 | 2878.2 | 2868.2 | *2883.2* | 2888.2 | 2878.2 | 2903.2 | 2913.2 | 2963.3 |
| 20° | 3013.3 | 3018.3 | 2983.3 | 2923.2 | 2923.2 | *2928.2* | 2928.2 | 2928.2 | 2968.3 | 2983.3 | 3038.4 |
| 22.5° | 3118.5 | 3108.4 | 3073.4 | 3003.3 | 2973.3 | *2973.3* | 3018.3 | 2988.3 | 3013.3 | 3048.4 | 3143.5 |
| 25° | 3253.6 | 3233.6 | 3173.5 | 3083.4 | 3033.4 | *3038.4* | 3053.4 | 3033.4 | 3063.4 | 3103.4 | 3248.6 |
| 27.5° | 3493.9 | 3468.8 | 3363.7 | 3183.5 | 3123.5 | *3128.5* | 3133.5 | 3078.4 | 3073.4 | 3138.5 | 3338.7 |
| 30° | 3844.3 | 3814.2 | 3654.1 | 3428.8 | 3268.6 | *3278.6* | 3223.6 | 3123.5 | 3088.4 | 3158.5 | 3443.8 |
| 32.5° | 4224.7 | 4184.6 | 4024.5 | 3704.1 | 3488.9 | *3438.8* | 3333.7 | 3158.5 | 3103.4 | 3178.5 | 3538.9 |
| 35° | 4680.2 | 4645.2 | 4449.9 | 3999.4 | 3704.1 | *3674.1* | 3463.8 | 3233.6 | 3143.5 | 3193.5 | 3629.0 |
| 37.5° | 5325.9 | 5235.8 | 5000.5 | 4379.9 | 3964.4 | *3919.3* | 3634.0 | 3338.7 | 3148.5 | 3183.5 | 3754.2 |
| 40° | 5881.5 | 5791.4 | 5536.1 | 4860.4 | 4294.8 | *4224.7* | 3884.3 | 3463.8 | 3198.5 | 3203.6 | 3914.3 |
| 42.5° | 6462.2 | 6377.1 | 6101.8 | 5265.8 | 4590.1 | *4555.1* | 4104.6 | 3614.0 | 3263.6 | 3258.6 | 4094.5 |
| 45° | 7072.8 | 7077.9 | 6652.4 | 5751.4 | 4940.5 | *4870.4* | 4374.9 | 3814.2 | 3383.8 | 3323.7 | 4389.9 |
| 47.5° | 7933.8 | 7838.7 | 7318.1 | 6216.9 | 5330.9 | *5240.8* | 4660.2 | 4024.5 | 3564.0 | 3473.9 | 4720.2 |
| 50° | 8629.6 | 8559.5 | 7928.8 | 6752.5 | 5696.3 | *5601.2* | 4995.5 | 4254.7 | 3724.1 | 3684.1 | 5160.7 |
| 52.5° | 9210.2 | 9090.1 | 8509.4 | 7258.1 | 6106.8 | *6021.7* | 5270.8 | 4480.0 | 3949.4 | 3929.4 | 5676.3 |
| 55° | 9530.6 | 9405.4 | 8909.9 | 7728.6 | 6572.3 | *6442.1* | 5581.2 | 4750.3 | 4219.7 | 4229.7 | 6251.9 |
| 57.5° | 9780.9 | 9650.7 | 9165.2 | 8084.0 | 7032.8 | *6857.6* | 5921.6 | 5045.6 | 4540.0 | 4635.1 | 7037.8 |
| 60° | 9871.0 | 9740.8 | 9380.4 | 8554.5 | 7528.4 | *7418.2* | 6307.0 | 5411.0 | 4910.4 | 5110.7 | 7803.7 |
| 62.5° | 10001.1 | 10031.1 | 9775.8 | 9130.1 | 8174.1 | *8079.0* | 6802.5 | 5861.5 | 5366.0 | 5526.1 | 8074.0 |
| 65° | 10106.2 | 10091.2 | 10121.2 | 9926.0 | 9075.1 | *8939.9* | 7538.4 | 6447.2 | 5671.3 | 5666.3 | 7938.8 |
| 67.5° | 9860.9 | 9876.0 | 10036.1 | 10516.7 | 10326.5 | *10196.3* | 8489.4 | 6987.8 | 5816.5 | 5931.6 | 7508.3 |
| 70° | 9675.7 | 9720.8 | 9936.0 | 10536.7 | 11487.7 | *11502.8* | 9815.9 | 7448.3 | 6231.9 | 5931.6 | 6307.0 |
| 72.5° | *8534.5* | *8764.7* | *9320.3* | *10426.6* | *11763.1* | *11798.1* | *10351.5* | *8094.0* | *6246.9* | *5481.1* | *4765.3* |
| 75° | 5651.3 | 5831.5 | 7313.1 | 9355.4 | 10787.0 | *10731.9* | 9585.6 | 7783.6 | 5846.5 | 4470.0 | 3033.4 |
| 77.5° | 1666.8 | 2007.2 | 3423.8 | 5801.4 | 8074.0 | *8424.3* | 7863.7 | 5325.9 | 4334.8 | 2097.3 | 1081.2 |
| 80° | 475.5 | 530.6 | 956.1 | 2037.3 | 4359.8 | *4735.3* | 4885.4 | 2547.8 | 1286.4 | 555.6 | 360.4 |
| 82.5° | 230.3 | 240.3 | 345.4 | 570.6 | 1867.1 | *2042.3* | 1711.9 | 770.9 | 345.4 | 200.2 | 140.2 |
| 85° | 40.0 | 50.1 | 85.1 | 170.2 | 335.4 | *405.4* | 380.4 | 155.2 | 105.1 | 90.1 | 65.1 |
| 87.5° | 10.0 | 10.0 | 15.0 | 15.0 | 20.0 | *20.0* | 20.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| 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: P1358375
CATALOG NUMBER: GSS-SB5A-740-U-SL4

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 | 2642.9 |
| 2.5° | 2657.9 | 2657.9 | 2678.0 | 2688.0 | 2688.0 | 2673.0 | 2673.0 | 2718.0 | 2698.0 | 2708.0 | 2703.0 |
| 5° | 2663.0 | 2683.0 | 2683.0 | 2713.0 | 2728.0 | 2753.1 | 2763.1 | 2783.1 | 2803.1 | 2803.1 | 2798.1 |
| 7.5° | 2693.0 | 2708.0 | 2733.0 | 2753.1 | 2793.1 | 2833.1 | 2848.2 | 2908.2 | 2918.2 | 2943.3 | 2933.3 |
| 10° | 2738.0 | 2763.1 | 2803.1 | 2858.2 | 2908.2 | 2973.3 | 3003.3 | 3068.4 | 3103.4 | 3143.5 | 3118.5 |
| 12.5° | 2808.1 | 2838.1 | 2903.2 | 2978.3 | 3088.4 | 3188.5 | 3268.6 | 3333.7 | 3383.8 | 3428.8 | 3413.8 |
| 15° | 2883.2 | 2943.3 | 3028.4 | 3163.5 | 3358.7 | 3538.9 | 3644.0 | 3754.2 | 3779.2 | 3819.2 | 3814.2 |
| 17.5° | 3013.3 | 3053.4 | 3223.6 | 3493.9 | 3749.2 | 3904.3 | 3994.4 | 4049.5 | 4034.5 | 4049.5 | 4039.5 |
| 20° | 3118.5 | 3218.6 | 3523.9 | 3919.3 | 4169.6 | 4269.7 | 4279.7 | 4229.7 | 4124.6 | 4104.6 | 4064.5 |
| 22.5° | 3273.6 | 3423.8 | 3914.3 | 4324.8 | 4525.0 | 4515.0 | 4369.8 | 4219.7 | 4084.5 | 4029.5 | 4009.4 |
| 25° | 3423.8 | 3694.1 | 4324.8 | 4710.2 | 4765.3 | 4590.1 | 4369.8 | 4174.6 | 3994.4 | 3939.4 | 3894.3 |
| 27.5° | 3614.0 | 4004.4 | 4790.3 | 5035.6 | 4870.4 | 4600.1 | 4274.7 | 4054.5 | 3884.3 | 3794.2 | 3774.2 |
| 30° | 3809.2 | 4364.8 | 5180.7 | 5190.8 | 4900.4 | 4495.0 | 4099.5 | 3904.3 | 3709.1 | 3619.0 | 3624.0 |
| 32.5° | 4074.5 | 4760.3 | 5511.1 | 5305.9 | 4815.3 | 4284.8 | 3864.3 | 3654.1 | 3483.9 | 3438.8 | 3428.8 |
| 35° | 4334.8 | 5205.8 | 5776.4 | 5315.9 | 4615.1 | 3989.4 | 3553.9 | 3318.7 | 3213.6 | 3168.5 | 3188.5 |
| 37.5° | 4705.2 | 5661.3 | 5931.6 | 5220.8 | 4324.8 | 3594.0 | 3188.5 | 3003.3 | 2923.2 | 2908.2 | 2928.2 |
| 40° | 5110.7 | 6081.7 | 6031.7 | 5110.7 | 3929.4 | 3173.5 | 2838.1 | 2723.0 | 2673.0 | 2683.0 | 2718.0 |
| 42.5° | 5546.2 | 6427.1 | 6106.8 | 4860.4 | 3463.8 | 2788.1 | 2557.8 | 2507.8 | 2582.9 | 2627.9 | 2657.9 |
| 45° | 6011.7 | 6742.5 | 6131.8 | 4505.0 | 3028.4 | 2492.8 | 2397.7 | 2492.8 | 2607.9 | 2627.9 | 2642.9 |
| 47.5° | 6472.2 | 7017.8 | 6131.8 | 4034.5 | 2612.9 | 2297.5 | 2347.6 | 2472.7 | 2562.8 | 2527.8 | 2532.8 |
| 50° | 6912.7 | 7238.0 | 6116.8 | 3488.9 | 2322.6 | 2197.4 | 2282.5 | 2362.6 | 2322.6 | 2222.5 | 2232.5 |
| 52.5° | 7313.1 | 7433.2 | 6011.7 | 2928.2 | 2082.3 | 2172.4 | 2177.4 | 2077.3 | 1987.2 | 1937.1 | 1947.2 |
| 55° | 7758.6 | 7613.4 | 5701.3 | 2427.7 | 1927.1 | 2107.3 | 1967.2 | 1837.0 | 1882.1 | 1867.1 | 1862.1 |
| 57.5° | 8224.1 | 7823.7 | 5275.9 | 1997.2 | 1782.0 | 1952.2 | 1797.0 | 1787.0 | 1782.0 | 1762.0 | 1736.9 |
| 60° | 8624.6 | 7993.9 | 4640.1 | 1571.7 | 1566.7 | 1716.9 | 1762.0 | 1736.9 | 1711.9 | 1671.9 | 1651.8 |
| 62.5° | 8394.3 | 7568.4 | 3709.1 | 1271.4 | 1346.5 | 1531.7 | 1696.9 | 1646.8 | 1651.8 | 1616.8 | 1601.8 |
| 65° | 7743.6 | 6727.5 | 2527.8 | 1061.2 | 1136.3 | 1366.5 | 1541.7 | 1496.7 | 1471.6 | 1461.6 | 1451.6 |
| 67.5° | 6902.7 | 5826.5 | 1666.8 | 840.9 | 951.1 | 1196.3 | 1361.5 | 1306.4 | 1341.5 | 1341.5 | 1336.5 |
| 70° | 5431.0 | 4454.9 | 1051.2 | 685.8 | 755.8 | 991.1 | 1131.3 | 1156.3 | 1206.3 | 1211.3 | 1206.3 |
| 72.5° | *3904.3* | *3048.4* | *655.7* | *550.6* | *600.7* | *755.8* | *986.1* | *1011.1* | *1066.2* | *1076.2* | *1076.2* |
| 75° | 2302.6 | 1716.9 | 440.5 | 440.5 | 465.5 | 615.7 | 815.9 | 896.0 | 921.0 | 931.0 | 921.0 |
| 77.5° | 926.0 | 660.7 | 290.3 | 325.4 | 360.4 | 495.5 | 625.7 | 725.8 | 715.8 | 710.8 | 685.8 |
| 80° | 330.4 | 285.3 | 200.2 | 215.2 | 260.3 | 370.4 | 465.5 | 495.5 | 525.6 | 510.6 | 495.5 |
| 82.5° | 135.1 | 130.1 | 125.1 | 140.2 | 155.2 | 225.2 | 325.4 | 325.4 | 330.4 | 325.4 | 320.4 |
| 85° | 50.1 | 50.1 | 60.1 | 70.1 | 85.1 | 105.1 | 145.2 | 185.2 | 155.2 | 110.1 | 115.1 |
| 87.5° | 25.0 | 25.0 | 20.0 | 20.0 | 25.0 | 35.0 | 35.0 | 45.0 | 45.0 | 25.0 | 15.0 |
| 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: SP1-2407-184-1

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

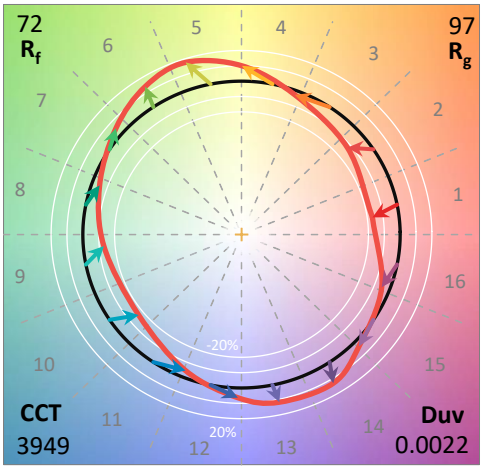
## Test Information

| | |
|---|---|
| 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

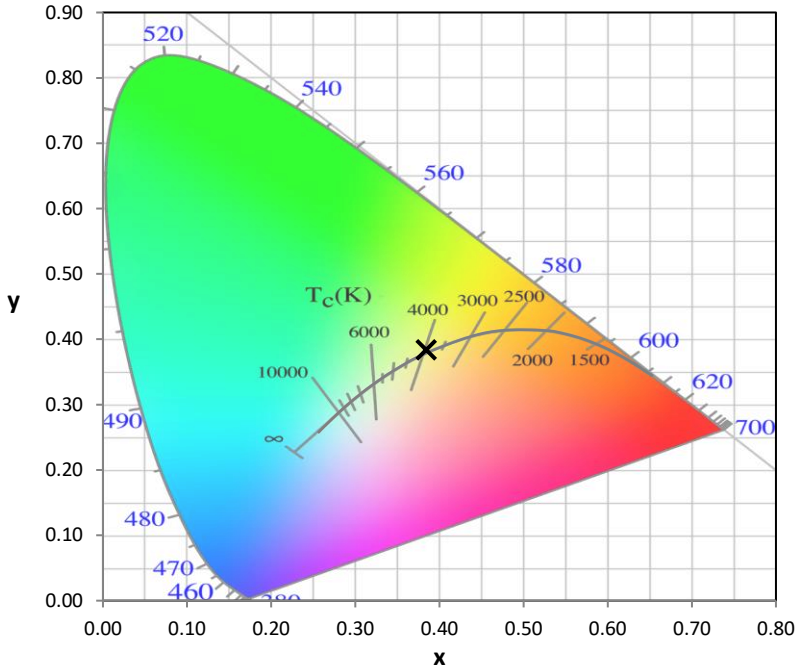
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-1

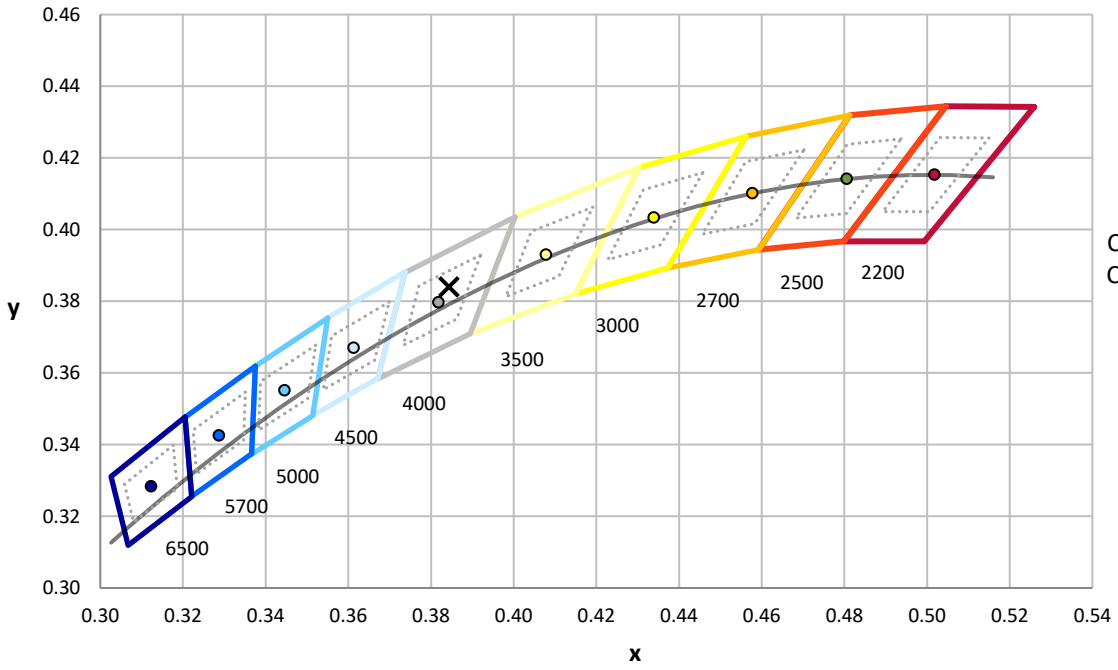
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

REPORT NUMBER: SP1-2407-184-1

## CIE 1931 Chromaticity Diagram




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

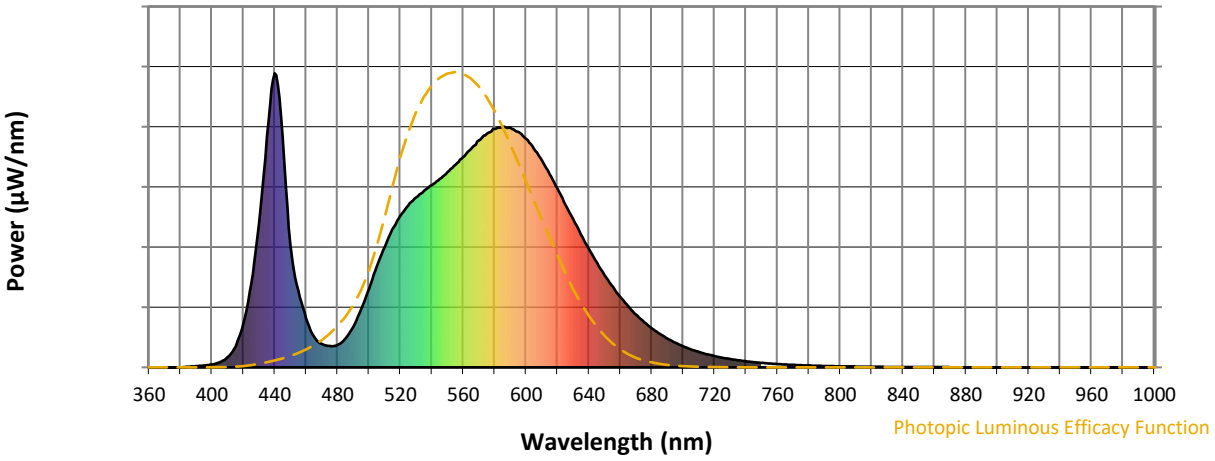



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-1

## Photopic Flux vs. Wavelength

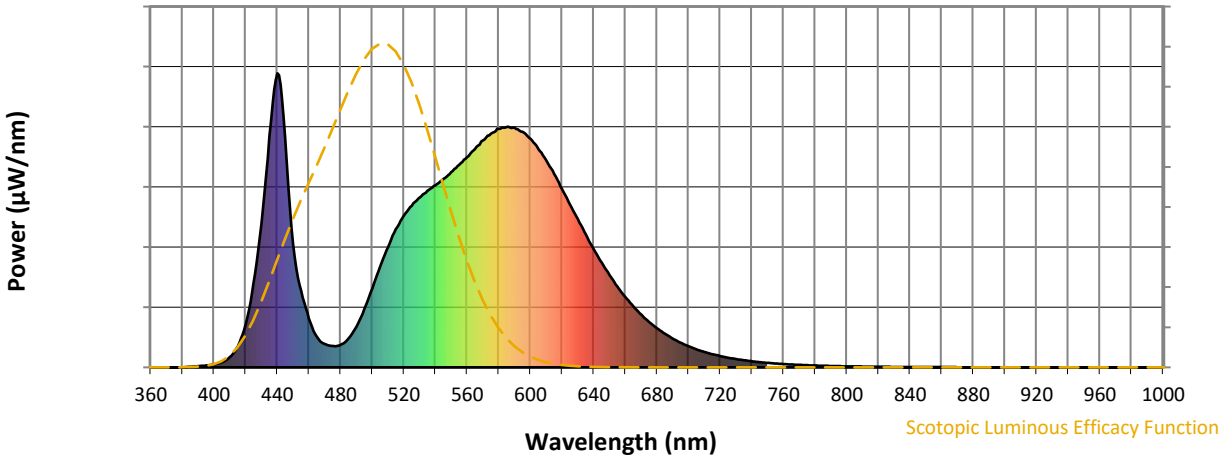



## Photopic Lumens: NR

| 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 | | | |

REPORT NUMBER: SP1-2407-184-1

## Scotopic Flux vs. Wavelength

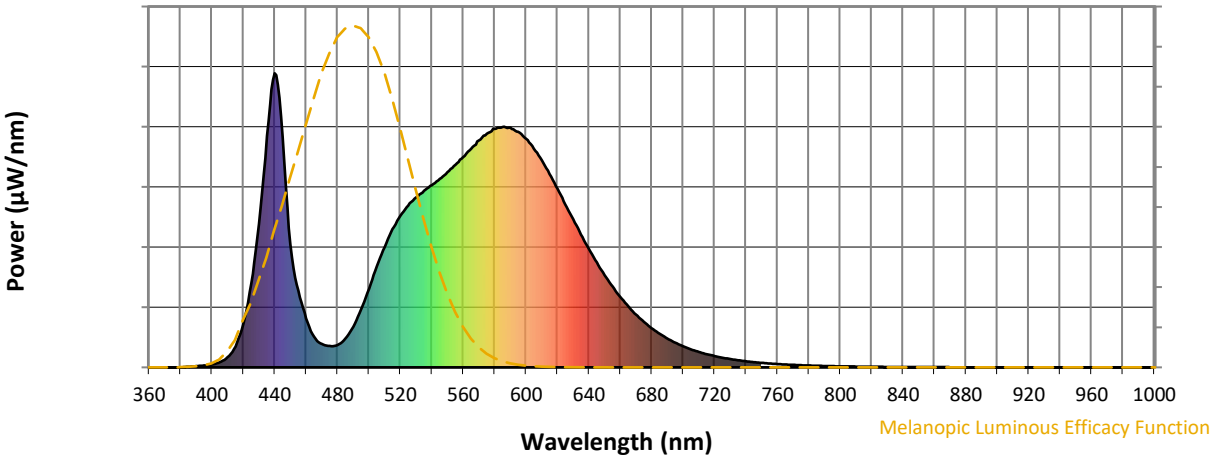



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | | | |

REPORT NUMBER: SP1-2407-184-1

## 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 | | | |

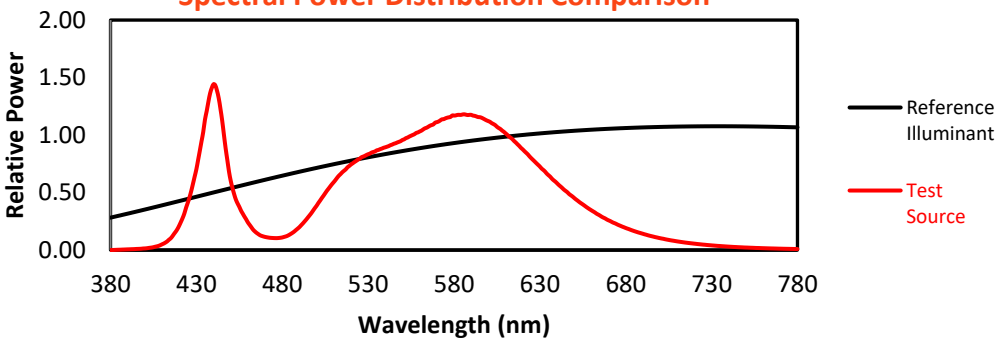
REPORT NUMBER: SP1-2407-184-1

# TM-30-18

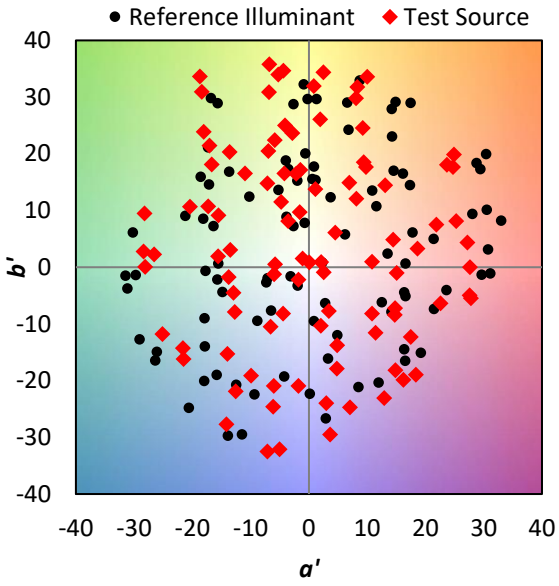
## Summary

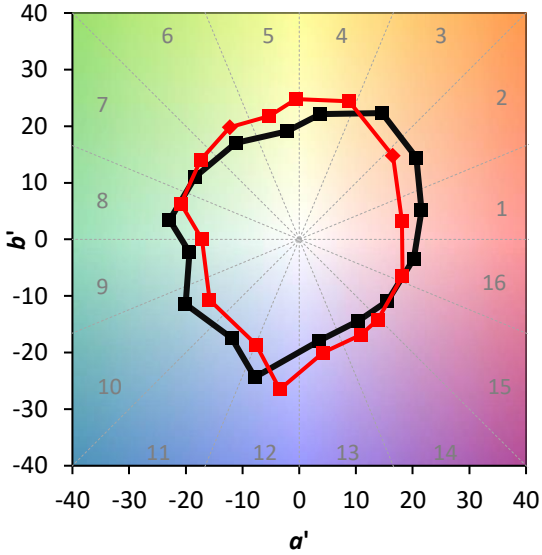
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

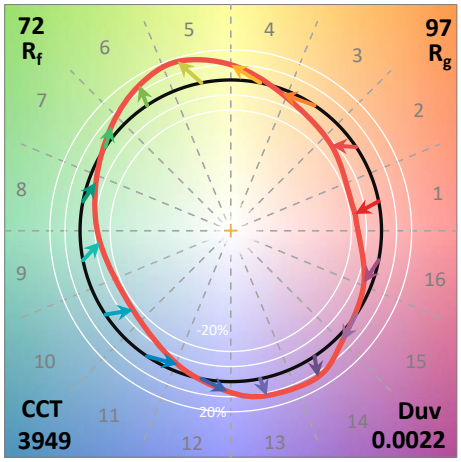
## Spectral Power Distribution Comparison

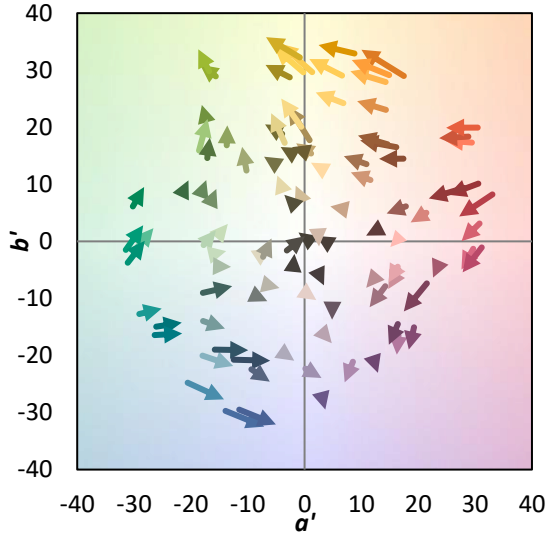



## Color Vector Graphics



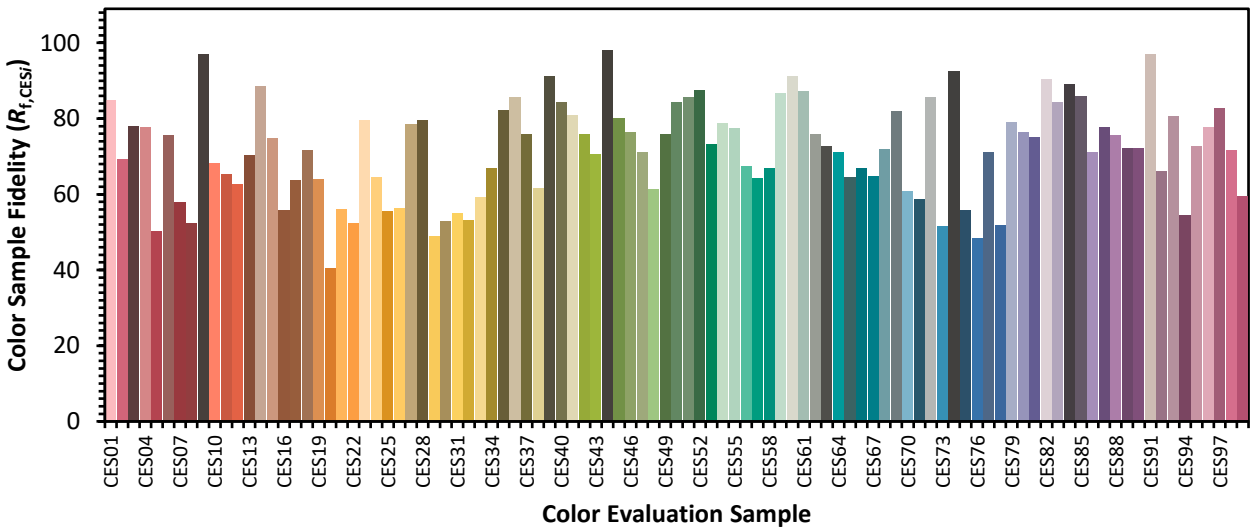



REPORT NUMBER: SP1-2407-184-1

# TM-30-18

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

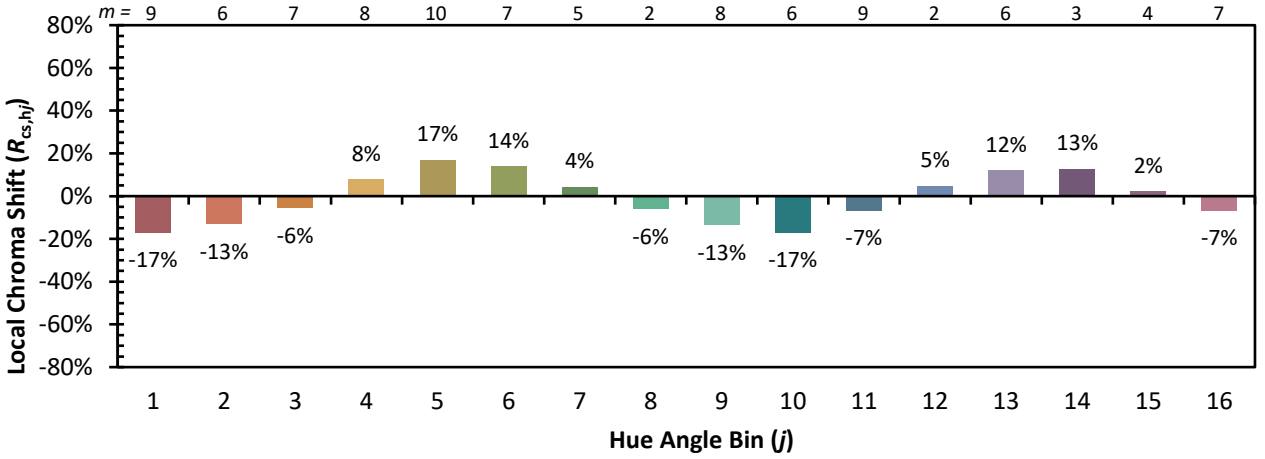
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 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 | |

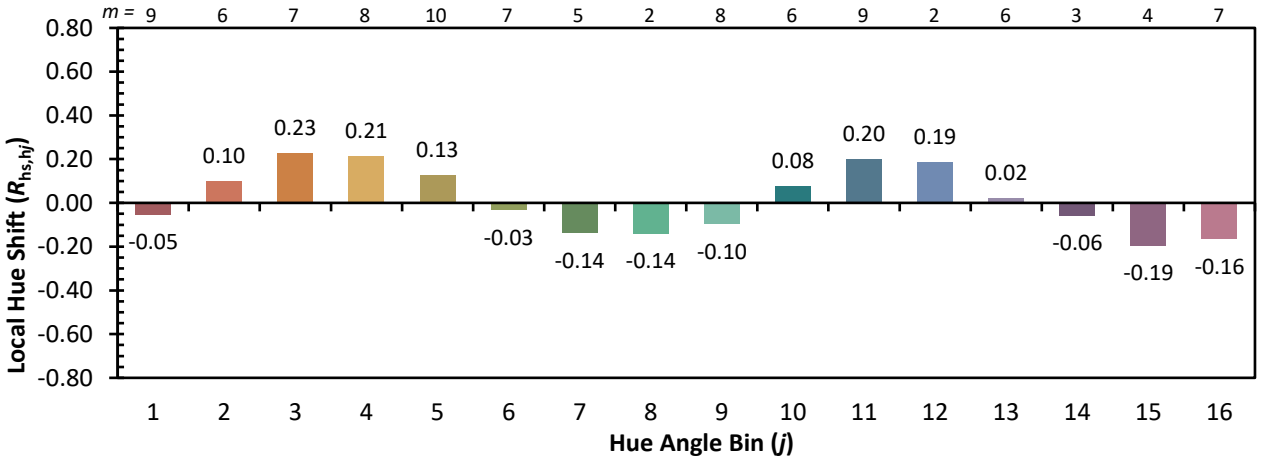


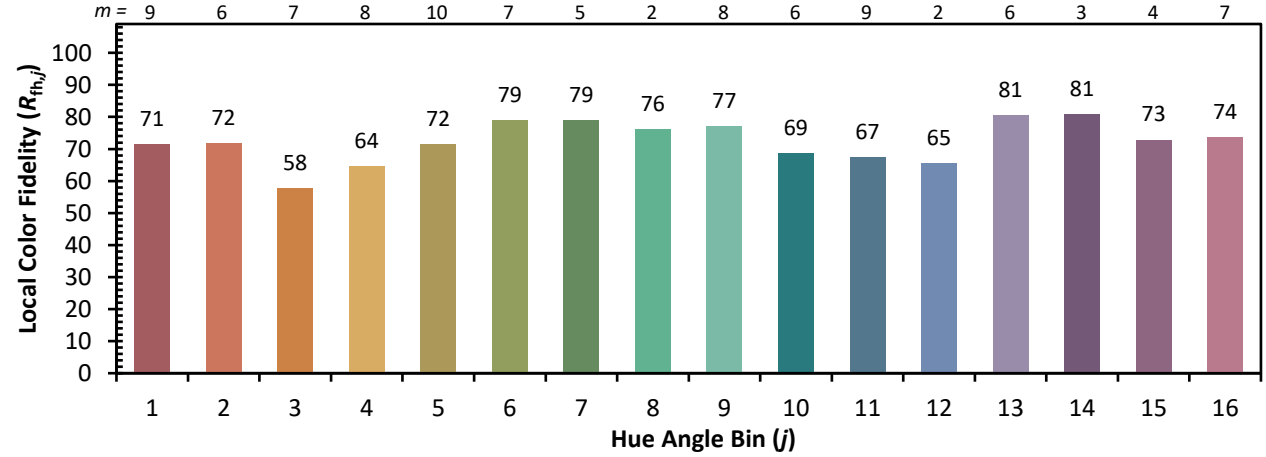
REPORT NUMBER: SP1-2407-184-1

**TM-30-18**

## Color Rendition by Hue-Angle Bin



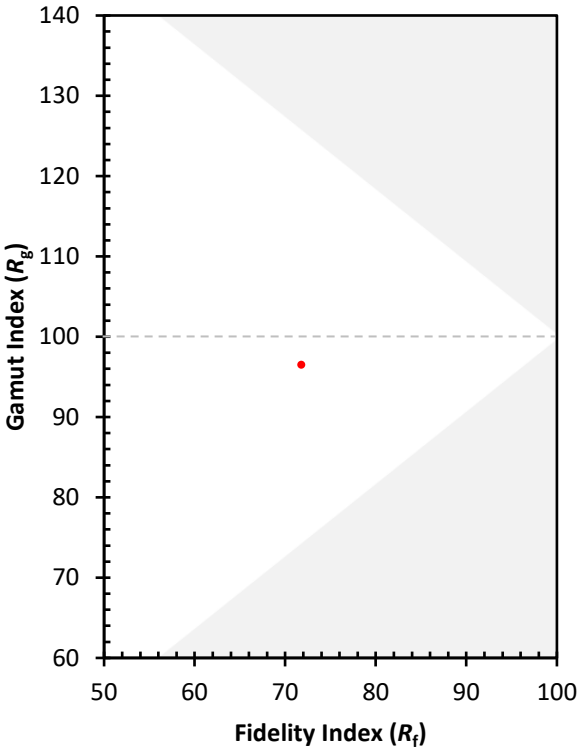



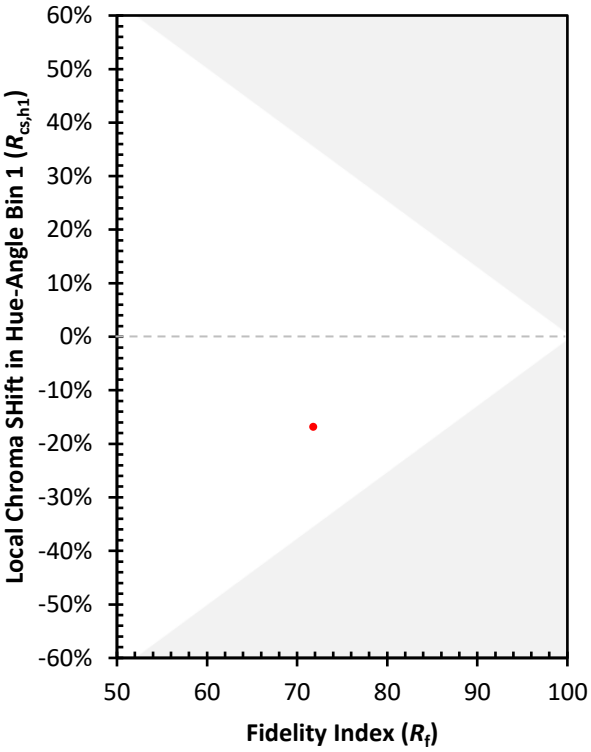



REPORT NUMBER: SP1-2407-184-1

# TM-30-18

## Measure Comparisons




(END OF REPORT)