

Signify Classified - Internal  
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: P1049945

Luminaire Tested: **GALN-SA5A-930-U-LBC**

Issue Date: 07/10/2025



**Test Information**

Test Method: LM-79-08  
Report Number: P1049945  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 07/10/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GALN-SA5A-930-U-LBC  
Description: GALLEON II AREA AND ROADWAY LUMINAIRE 615mA 5xLight Square PACKAGE  
90CRI 3000K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL  
Light Source: (70) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11210.2 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G2

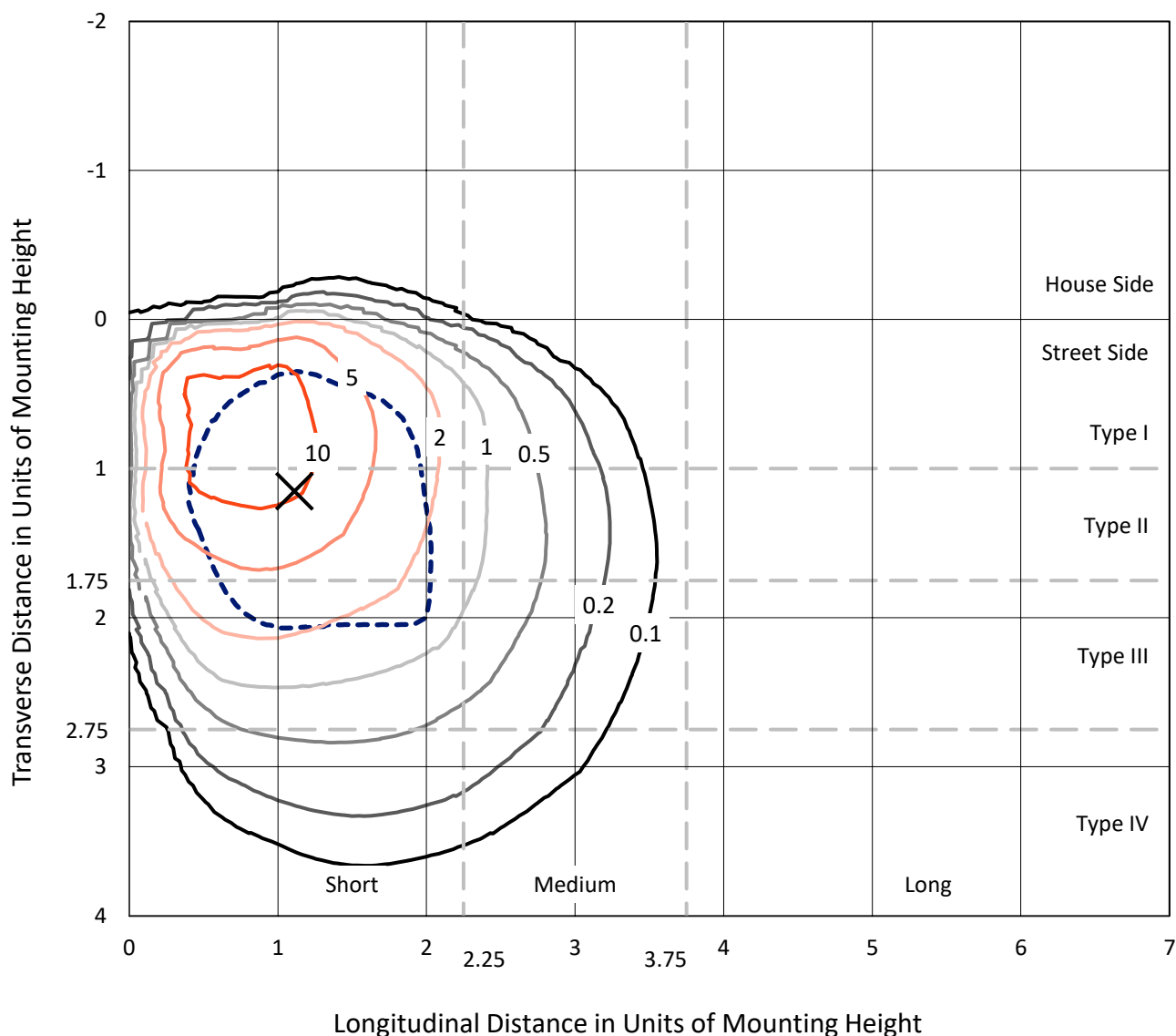
Input Watts (W): 136.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

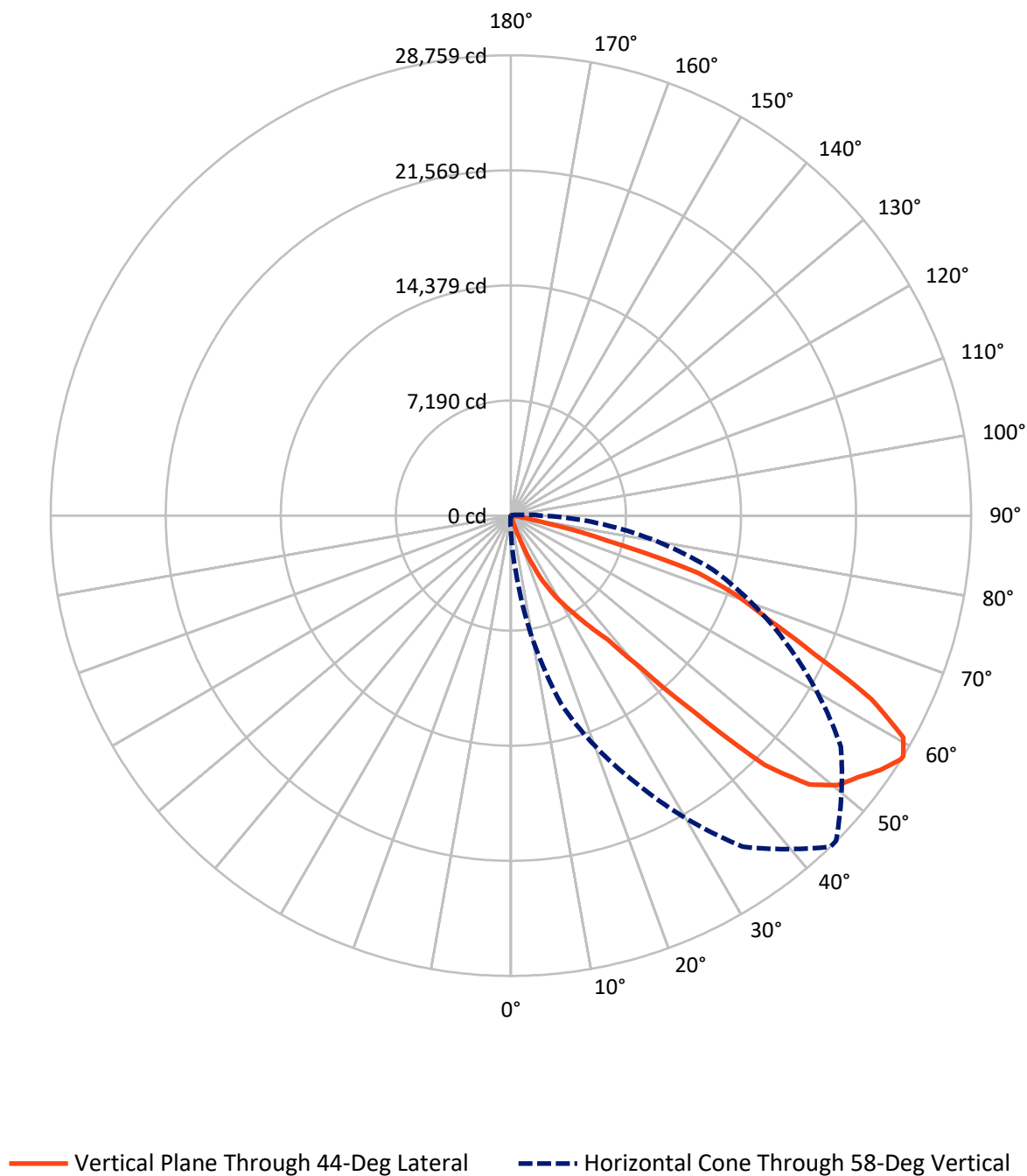
--- 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 19.5 fc  
 Type III - Short - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 76.5     | 0.0    | 76.5    |
|                    | % Fixture | 0.7      | 0.0    | 0.7     |
| <b>Street Side</b> | Lumens    | 11133.7  | 0.0    | 11133.7 |
|                    | % Fixture | 99.3     | 0.0    | 99.3    |
| <b>Total</b>       | Lumens    | 11210.2  | 0.0    | 11210.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 4.4     | 0.0       |
| 10°-20°   | 24.6    | 0.2       |
| 20°-30°   | 265.6   | 2.4       |
| 30°-40°   | 785.4   | 7.0       |
| 40°-50°   | 2340.9  | 20.9      |
| 50°-60°   | 3714.4  | 33.1      |
| 60°-70°   | 3098.3  | 27.6      |
| 70°-80°   | 955.6   | 8.5       |
| 80°-90°   | 21.2    | 0.2       |
| 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°    | 11210.2 | 100.0     |
| 0°-180°   | 11210.2 | 100.0     |



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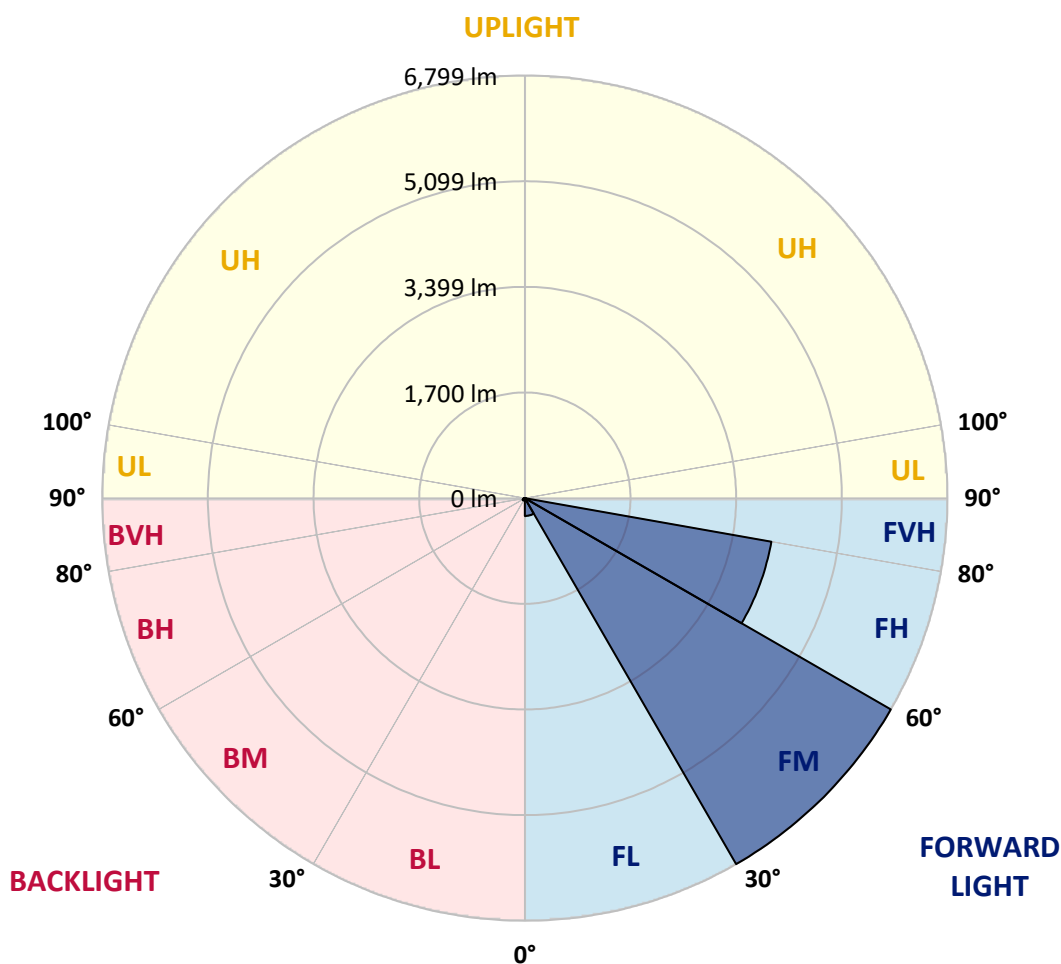
CATALOG NUMBER: GALN-SA5A-930-U-LBC

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 287.0  | 2.6       |                         |      |         |
| FM   | (30°-60°)   | 6798.8 | 60.6      |                         |      |         |
| FH   | (60°-80°)   | 4027.7 | 35.9      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 20.2   | 0.2       |                         |      | G1/100  |
| BL   | (0°-30°)    | 7.5    | 0.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 41.9   | 0.4       | B0/220                  |      |         |
| BH   | (60°-80°)   | 26.1   | 0.2       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 1.0    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B0-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°     | 15°     | 25°     | 35°     | 44°     | 45°     | 55°     | 65°     | 75°     |
|-------|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 49.1  | 49.1   | 49.1    | 49.1    | 49.1    | 49.1    | 49.1    | 49.1    | 49.1    | 49.1    |
| 2.5°  | 63.5  | 63.5   | 61.0    | 57.6    | 54.2    | 50.8    | 50.0    | 48.3    | 47.4    | 46.6    |
| 5°    | 66.1  | 66.1   | 65.2    | 62.7    | 59.3    | 56.7    | 56.7    | 54.2    | 52.5    | 50.8    |
| 7.5°  | 67.7  | 68.6   | 70.3    | 69.4    | 67.7    | 65.2    | 65.2    | 63.5    | 61.0    | 56.7    |
| 10°   | 70.3  | 72.8   | 76.2    | 77.9    | 78.8    | 78.8    | 77.9    | 77.1    | 72.8    | 66.9    |
| 12.5° | 72.8  | 77.9   | 86.4    | 94.8    | 99.9    | 106.7   | 105.9   | 104.2   | 93.2    | 80.4    |
| 15°   | 77.9  | 85.5   | 103.3   | 127.9   | 166.0   | 189.7   | 199.0   | 190.5   | 154.1   | 108.4   |
| 17.5° | 83.8  | 96.5   | 149.9   | 267.6   | 438.7   | 520.0   | 569.1   | 529.3   | 350.6   | 205.8   |
| 20°   | 89.8  | 117.7  | 278.6   | 693.6   | 1138.1  | 1404.1  | 1477.7  | 1362.6  | 874.8   | 392.1   |
| 22.5° | 99.9  | 165.1  | 564.8   | 1433.7  | 2452.4  | 2851.3  | 2926.7  | 2558.3  | 1652.2  | 774.0   |
| 25°   | 121.1 | 239.7  | 973.9   | 2336.4  | 3660.0  | 4333.3  | 4301.9  | 3819.2  | 2680.2  | 1236.4  |
| 27.5° | 151.6 | 348.9  | 1472.7  | 3319.6  | 4816.8  | 5410.4  | 5481.6  | 4884.6  | 3572.8  | 1818.2  |
| 30°   | 195.6 | 483.5  | 2007.9  | 4107.2  | 5744.1  | 6386.0  | 6397.9  | 5780.5  | 4371.4  | 2328.8  |
| 32.5° | 238.0 | 610.6  | 2476.2  | 4868.5  | 6657.8  | 7361.6  | 7414.1  | 6654.5  | 4967.5  | 2860.6  |
| 35°   | 270.1 | 693.6  | 2950.4  | 5537.5  | 7579.2  | 8548.8  | 8545.4  | 7643.6  | 5673.8  | 3335.7  |
| 37.5° | 272.7 | 776.6  | 3379.7  | 6221.7  | 8746.1  | 9831.8  | 9939.3  | 8945.1  | 6527.4  | 3923.4  |
| 40°   | 266.8 | 869.7  | 3923.4  | 7288.7  | 10848.8 | 12514.6 | 12609.4 | 11356.1 | 8239.7  | 4929.4  |
| 42.5° | 273.5 | 1031.4 | 4805.8  | 9259.3  | 14340.3 | 16732.7 | 16915.6 | 15597.9 | 11387.4 | 6982.2  |
| 45°   | 309.1 | 1335.5 | 6654.5  | 12556.1 | 19317.2 | 22233.7 | 22172.8 | 20275.0 | 15050.0 | 10107.0 |
| 47.5° | 426.8 | 2079.8 | 9394.8  | 15764.7 | 22497.9 | 25095.2 | 25147.7 | 22828.2 | 17187.4 | 12509.5 |
| 50°   | 656.3 | 3182.4 | 11697.4 | 17460.9 | 23865.6 | 26471.3 | 26422.2 | 23741.9 | 17999.5 | 13692.5 |
| 52.5° | 853.6 | 3980.1 | 12852.5 | 18056.3 | 24040.9 | 27151.3 | 27147.9 | 23982.4 | 18125.7 | 13794.1 |
| 55°   | 902.7 | 4040.3 | 12861.8 | 18088.5 | 24433.8 | 28041.3 | 28153.1 | 24574.4 | 18289.2 | 13350.4 |
| 57.5° | 883.3 | 3577.0 | 12324.9 | 18274.8 | 25133.3 | 28729.8 | 28735.7 | 25147.7 | 18704.1 | 13078.6 |
| 58°   | 866.3 | 3504.2 | 12216.5 | 18380.6 | 25253.5 | 28758.6 | 28744.2 | 25173.9 | 19042.0 | 13068.4 |
| 60°   | 771.5 | 3042.7 | 11793.9 | 18650.8 | 25074.9 | 28167.5 | 28032.9 | 24600.6 | 18992.0 | 12964.2 |
| 62.5° | 606.3 | 2373.7 | 11378.1 | 18338.3 | 23159.3 | 25306.0 | 25361.9 | 21779.8 | 17313.6 | 12357.1 |
| 65°   | 482.7 | 1769.0 | 10510.9 | 16085.7 | 19070.8 | 20781.4 | 20989.7 | 17710.8 | 14451.3 | 10463.5 |
| 67.5° | 384.5 | 1278.7 | 8817.3  | 12806.7 | 15090.6 | 17344.1 | 17495.7 | 14869.6 | 11196.0 | 8017.0  |
| 70°   | 312.5 | 864.6  | 6086.2  | 9366.0  | 12446.8 | 14980.6 | 14989.9 | 12352.8 | 8356.6  | 5252.9  |
| 72.5° | 276.9 | 598.7  | 3533.0  | 6830.6  | 10092.6 | 12207.2 | 11960.7 | 10024.0 | 6422.4  | 3111.3  |
| 75°   | 239.7 | 397.2  | 1732.6  | 4175.8  | 6119.2  | 6160.7  | 6254.7  | 4650.0  | 3210.4  | 1479.4  |
| 77.5° | 197.3 | 282.0  | 682.6   | 1140.7  | 1835.1  | 2349.1  | 2436.4  | 1846.1  | 1067.9  | 364.1   |
| 80°   | 135.5 | 133.8  | 183.8   | 349.7   | 525.0   | 658.0   | 614.0   | 475.1   | 279.5   | 139.7   |
| 82.5° | 58.4  | 63.5   | 83.0    | 99.9    | 81.3    | 78.8    | 75.4    | 48.3    | 37.3    | 28.8    |
| 85°   | 18.6  | 16.9   | 17.8    | 17.8    | 14.4    | 11.0    | 11.0    | 5.1     | 0.0     | 0.0     |
| 87.5° | 9.3   | 7.6    | 7.6     | 6.8     | 4.2     | 1.7     | 0.8     | 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     |

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**CANDELA DISTRIBUTION (continued):**

| 85°    |       | 90°    | 95°   | 105°  | 115° | 125° | 135° | 145° | 155° | 165° | 175° |
|--------|-------|--------|-------|-------|------|------|------|------|------|------|------|
| 49.1   | 0°    | 49.1   | 49.1  | 49.1  | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 |
| 45.7   | 2.5°  | 44.9   | 44.9  | 43.2  | 41.5 | 40.6 | 39.0 | 38.1 | 37.3 | 36.4 | 35.6 |
| 49.1   | 5°    | 47.4   | 46.6  | 44.0  | 41.5 | 39.0 | 36.4 | 34.7 | 33.0 | 31.3 | 30.5 |
| 54.2   | 7.5°  | 51.7   | 50.0  | 44.9  | 40.6 | 37.3 | 33.9 | 32.2 | 29.6 | 27.9 | 25.4 |
| 60.1   | 10°   | 56.7   | 53.4  | 46.6  | 41.5 | 36.4 | 32.2 | 29.6 | 27.1 | 24.6 | 21.2 |
| 68.6   | 12.5° | 63.5   | 57.6  | 49.1  | 40.6 | 34.7 | 29.6 | 27.1 | 23.7 | 21.2 | 18.6 |
| 79.6   | 15°   | 69.4   | 61.8  | 50.0  | 40.6 | 33.0 | 27.1 | 23.7 | 20.3 | 17.8 | 14.4 |
| 99.9   | 17.5° | 77.9   | 65.2  | 49.1  | 38.1 | 30.5 | 23.7 | 20.3 | 17.8 | 13.5 | 8.5  |
| 148.2  | 20°   | 92.3   | 67.7  | 47.4  | 35.6 | 26.3 | 19.5 | 15.2 | 11.9 | 5.9  | 1.7  |
| 222.7  | 22.5° | 115.2  | 74.5  | 45.7  | 32.2 | 22.9 | 15.2 | 10.2 | 4.2  | 0.0  | 0.0  |
| 338.7  | 25°   | 159.2  | 86.4  | 45.7  | 30.5 | 20.3 | 11.0 | 3.4  | 0.0  | 0.0  | 0.0  |
| 481.0  | 27.5° | 211.7  | 102.5 | 45.7  | 26.3 | 16.1 | 5.9  | 0.0  | 0.0  | 0.0  | 0.0  |
| 655.5  | 30°   | 265.1  | 120.3 | 45.7  | 22.9 | 12.7 | 0.8  | 0.0  | 0.0  | 0.0  | 0.0  |
| 807.0  | 32.5° | 315.9  | 135.5 | 46.6  | 19.5 | 8.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 1017.1 | 35°   | 367.5  | 138.0 | 45.7  | 16.9 | 5.1  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 1274.5 | 37.5° | 433.6  | 133.0 | 43.2  | 15.2 | 2.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 1676.7 | 40°   | 533.5  | 135.5 | 40.6  | 14.4 | 0.8  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 2394.0 | 42.5° | 718.1  | 146.5 | 37.3  | 14.4 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 3813.3 | 45°   | 1241.5 | 196.5 | 33.9  | 15.2 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 5724.6 | 47.5° | 2053.6 | 353.1 | 33.0  | 15.2 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 6895.8 | 50°   | 2621.0 | 444.6 | 34.7  | 16.1 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 7042.3 | 52.5° | 2616.7 | 495.4 | 36.4  | 16.9 | 3.4  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 6491.0 | 55°   | 2326.3 | 504.7 | 39.0  | 18.6 | 11.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 5578.1 | 57.5° | 1944.3 | 460.7 | 44.9  | 22.9 | 20.3 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 5435.0 | 58°   | 1876.6 | 440.4 | 46.6  | 23.7 | 22.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 4714.3 | 60°   | 1537.9 | 359.1 | 59.3  | 29.6 | 29.6 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 3865.0 | 62.5° | 1061.9 | 313.3 | 67.7  | 38.1 | 30.5 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 2849.6 | 65°   | 751.1  | 282.8 | 73.7  | 40.6 | 24.6 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 2024.8 | 67.5° | 561.5  | 260.8 | 81.3  | 41.5 | 12.7 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 1270.3 | 70°   | 430.2  | 244.7 | 99.9  | 44.0 | 3.4  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 757.1  | 72.5° | 350.6  | 226.1 | 121.1 | 45.7 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 453.9  | 75°   | 290.5  | 204.1 | 116.9 | 50.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 242.2  | 77.5° | 193.1  | 158.4 | 106.7 | 50.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 86.4   | 80°   | 67.7   | 62.7  | 83.0  | 44.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 17.8   | 82.5° | 10.2   | 8.5   | 11.9  | 15.2 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0    | 85°   | 0.0    | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0    | 87.5° | 0.0    | 0.0   | 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  |

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**CANDELA DISTRIBUTION (continued):**

| 180° |       | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° |
|------|-------|------|------|------|------|------|------|------|------|------|------|
| 49.1 | 0°    | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 |
| 34.7 | 2.5°  | 34.7 | 34.7 | 33.9 | 34.7 | 34.7 | 36.4 | 40.6 | 46.6 | 53.4 | 55.9 |
| 29.6 | 5°    | 28.8 | 27.9 | 27.1 | 27.1 | 27.1 | 29.6 | 33.0 | 39.8 | 47.4 | 50.8 |
| 24.6 | 7.5°  | 23.7 | 22.9 | 22.0 | 21.2 | 21.2 | 22.9 | 27.1 | 34.7 | 42.3 | 45.7 |
| 20.3 | 10°   | 19.5 | 17.8 | 16.9 | 16.1 | 16.1 | 17.8 | 22.0 | 29.6 | 38.1 | 41.5 |
| 16.9 | 12.5° | 16.1 | 13.5 | 11.9 | 11.0 | 10.2 | 12.7 | 16.9 | 23.7 | 33.0 | 37.3 |
| 12.7 | 15°   | 11.0 | 8.5  | 5.9  | 5.1  | 4.2  | 6.8  | 11.0 | 18.6 | 27.9 | 33.0 |
| 6.8  | 17.5° | 5.9  | 2.5  | 0.8  | 0.0  | 0.0  | 1.7  | 5.1  | 13.5 | 22.9 | 27.1 |
| 0.0  | 20°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 6.8  | 16.9 | 21.2 |
| 0.0  | 22.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.8  | 10.2 | 14.4 |
| 0.0  | 25°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 4.2  | 7.6  |
| 0.0  | 27.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.7  |
| 0.0  | 30°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 32.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 35°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 37.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 40°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 42.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 45°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 47.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 50°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 52.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 55°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 57.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 58°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 60°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 62.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 65°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 67.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 70°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 72.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 75°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 77.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 80°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 82.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 0.0  | 85°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 2.5  |
| 0.0  | 87.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 3.4  | 6.8  |
| 0.0  | 90°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |



REPORT NUMBER: P1049945

CATALOG NUMBER: GALN-SA5A-930-U-LBC

**CANDELA DISTRIBUTION (continued):**

| 275° |       | 285° | 295° | 305° | 315° | 316° | 325° | 335° | 345°  | 355°  | 360°  |
|------|-------|------|------|------|------|------|------|------|-------|-------|-------|
| 49.1 | 0°    | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1 | 49.1  | 49.1  | 49.1  |
| 58.4 | 2.5°  | 60.1 | 59.3 | 57.6 | 55.9 | 55.9 | 55.9 | 58.4 | 61.0  | 63.5  | 63.5  |
| 52.5 | 5°    | 55.9 | 55.9 | 55.0 | 53.4 | 53.4 | 54.2 | 57.6 | 61.8  | 65.2  | 66.1  |
| 48.3 | 7.5°  | 51.7 | 53.4 | 51.7 | 50.8 | 51.7 | 52.5 | 55.9 | 61.0  | 66.1  | 67.7  |
| 44.9 | 10°   | 49.1 | 50.0 | 50.0 | 49.1 | 49.1 | 50.8 | 54.2 | 61.0  | 67.7  | 70.3  |
| 40.6 | 12.5° | 45.7 | 47.4 | 46.6 | 46.6 | 46.6 | 48.3 | 52.5 | 60.1  | 69.4  | 72.8  |
| 36.4 | 15°   | 42.3 | 44.9 | 44.9 | 44.0 | 44.0 | 44.9 | 50.8 | 59.3  | 72.0  | 77.9  |
| 31.3 | 17.5° | 39.0 | 41.5 | 42.3 | 40.6 | 40.6 | 42.3 | 48.3 | 59.3  | 73.7  | 83.8  |
| 25.4 | 20°   | 32.2 | 36.4 | 39.0 | 36.4 | 36.4 | 38.1 | 44.0 | 55.9  | 74.5  | 89.8  |
| 18.6 | 22.5° | 25.4 | 29.6 | 33.0 | 32.2 | 32.2 | 33.0 | 40.6 | 53.4  | 75.4  | 99.9  |
| 11.0 | 25°   | 18.6 | 22.9 | 25.4 | 27.1 | 27.1 | 29.6 | 37.3 | 51.7  | 78.8  | 121.1 |
| 5.1  | 27.5° | 11.0 | 16.1 | 19.5 | 21.2 | 22.0 | 25.4 | 34.7 | 50.0  | 84.7  | 151.6 |
| 0.0  | 30°   | 5.1  | 9.3  | 13.5 | 16.9 | 16.9 | 22.9 | 32.2 | 48.3  | 92.3  | 195.6 |
| 0.0  | 32.5° | 0.0  | 4.2  | 6.8  | 11.9 | 12.7 | 18.6 | 29.6 | 46.6  | 103.3 | 238.0 |
| 0.0  | 35°   | 0.0  | 0.0  | 3.4  | 9.3  | 9.3  | 15.2 | 27.1 | 44.9  | 120.3 | 270.1 |
| 0.0  | 37.5° | 0.0  | 0.0  | 0.0  | 6.8  | 7.6  | 13.5 | 26.3 | 44.0  | 123.6 | 272.7 |
| 0.0  | 40°   | 0.0  | 0.0  | 0.0  | 5.1  | 5.9  | 12.7 | 26.3 | 44.9  | 111.8 | 266.8 |
| 0.0  | 42.5° | 0.0  | 0.0  | 0.0  | 3.4  | 4.2  | 12.7 | 26.3 | 46.6  | 100.8 | 273.5 |
| 0.0  | 45°   | 0.0  | 0.0  | 0.0  | 2.5  | 3.4  | 13.5 | 25.4 | 45.7  | 94.8  | 309.1 |
| 0.0  | 47.5° | 0.0  | 0.0  | 0.0  | 3.4  | 5.1  | 13.5 | 24.6 | 44.9  | 95.7  | 426.8 |
| 0.0  | 50°   | 0.0  | 0.0  | 0.0  | 4.2  | 5.9  | 13.5 | 25.4 | 43.2  | 105.0 | 656.3 |
| 0.0  | 52.5° | 0.0  | 0.0  | 0.0  | 3.4  | 5.1  | 15.2 | 27.9 | 42.3  | 114.3 | 853.6 |
| 0.0  | 55°   | 0.0  | 0.0  | 0.0  | 0.8  | 2.5  | 19.5 | 30.5 | 42.3  | 128.7 | 902.7 |
| 0.0  | 57.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 22.0 | 34.7 | 44.9  | 152.4 | 883.3 |
| 0.0  | 58°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 22.0 | 35.6 | 44.9  | 154.1 | 866.3 |
| 0.0  | 60°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 22.0 | 39.0 | 50.0  | 166.0 | 771.5 |
| 0.0  | 62.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 18.6 | 46.6 | 62.7  | 172.8 | 606.3 |
| 0.0  | 65°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 15.2 | 55.0 | 68.6  | 177.8 | 482.7 |
| 0.0  | 67.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 14.4 | 56.7 | 69.4  | 180.4 | 384.5 |
| 0.0  | 70°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 15.2 | 55.9 | 74.5  | 188.8 | 312.5 |
| 0.0  | 72.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 16.9 | 50.8 | 82.1  | 188.8 | 276.9 |
| 0.0  | 75°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 17.8 | 47.4 | 92.3  | 171.9 | 239.7 |
| 0.0  | 77.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 16.9 | 46.6 | 107.5 | 153.3 | 197.3 |
| 0.0  | 80°   | 1.7  | 2.5  | 2.5  | 1.7  | 1.7  | 14.4 | 45.7 | 109.2 | 130.4 | 135.5 |
| 0.8  | 82.5° | 5.1  | 6.8  | 5.9  | 4.2  | 4.2  | 12.7 | 40.6 | 91.5  | 67.7  | 58.4  |
| 5.1  | 85°   | 9.3  | 11.0 | 11.0 | 9.3  | 9.3  | 11.9 | 25.4 | 33.0  | 22.9  | 18.6  |
| 9.3  | 87.5° | 12.7 | 14.4 | 14.4 | 12.7 | 12.7 | 11.9 | 11.0 | 10.2  | 9.3   | 9.3   |
| 0.0  | 90°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0   | 0.0   |

(END OF RI



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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-14

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-930-U-5WQ

Data in this report applies to families of products including GSS-SB1A-930-U-5WQ

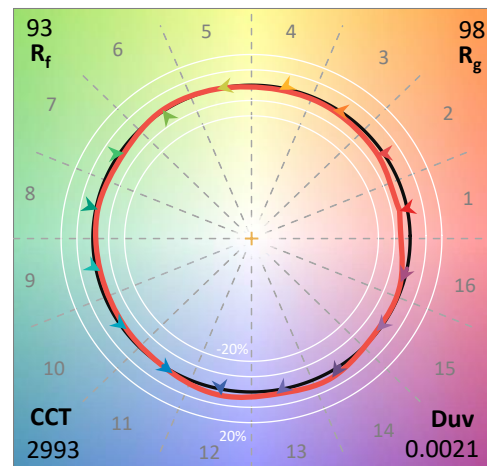
### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-14  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 10/15/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GSS-SB1A-930-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 90 CRI  
 3000K CCT 26 LEDS

### Spectral Parameters

CCT (K): 2993  
 CIE  $u'$ : 0.2501  
 CIE  $v'$ : 0.5245  
 Duv: 0.0021  
 CIE x: 0.4406  
 CIE y: 0.4107  
 CIE z: 0.1487  
 Peak Wavelength (nm): 621  
 Dominant Wavelength (nm): 582  
 Purity: 55.53327  
 R<sub>f</sub>: 92.6  
 R<sub>g</sub>: 98.5

CRI (Ra): 92.4  
 R1: 92.2  
 R2: 95.2  
 R3: 97.0  
 R4: 93.1  
 R5: 91.7  
 R6: 94.2  
 R7: 93.3  
 R8: 82.3  
 R9: 58.2  
 R10: 87.7  
 R11: 93.5  
 R12: 81.7  
 R13: 92.9  
 R14: 97.6  
 R15: 88.1



### Test Conditions

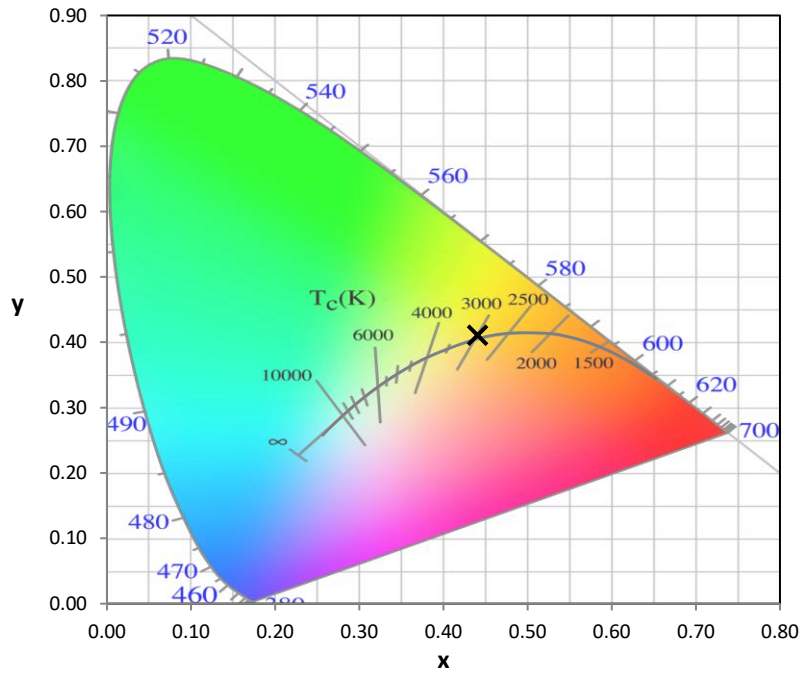
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-14

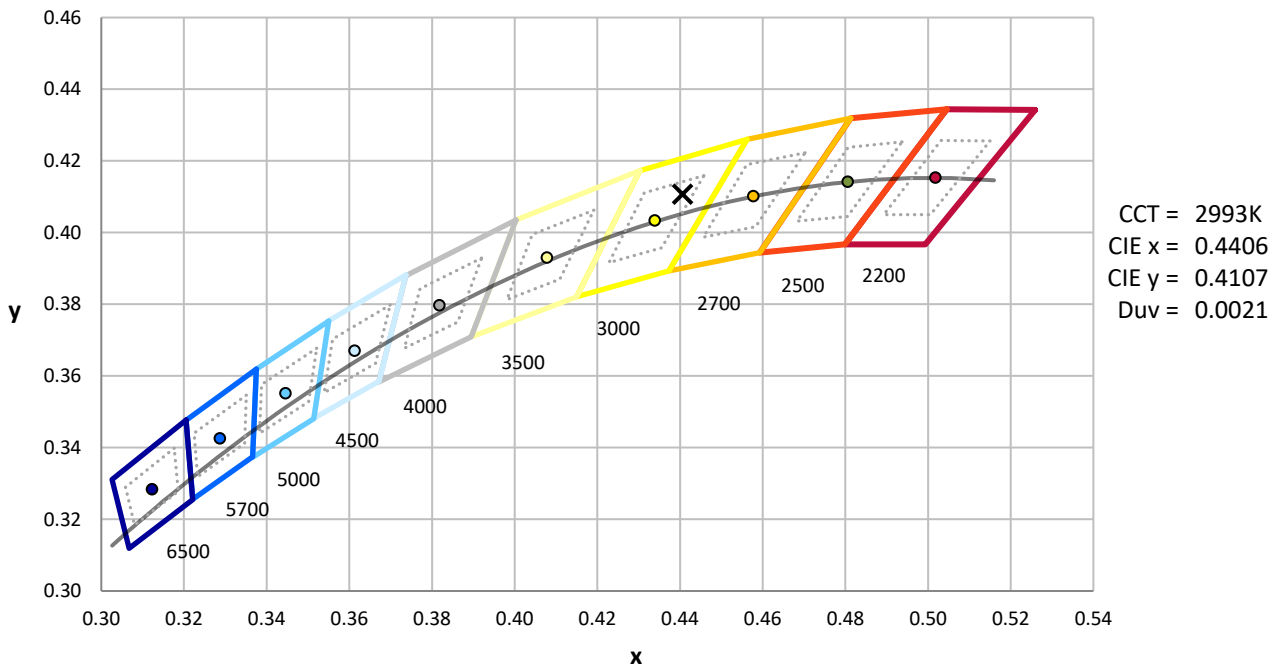
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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: SP1-2407-184-14

**CIE 1931 Chromaticity Diagram**



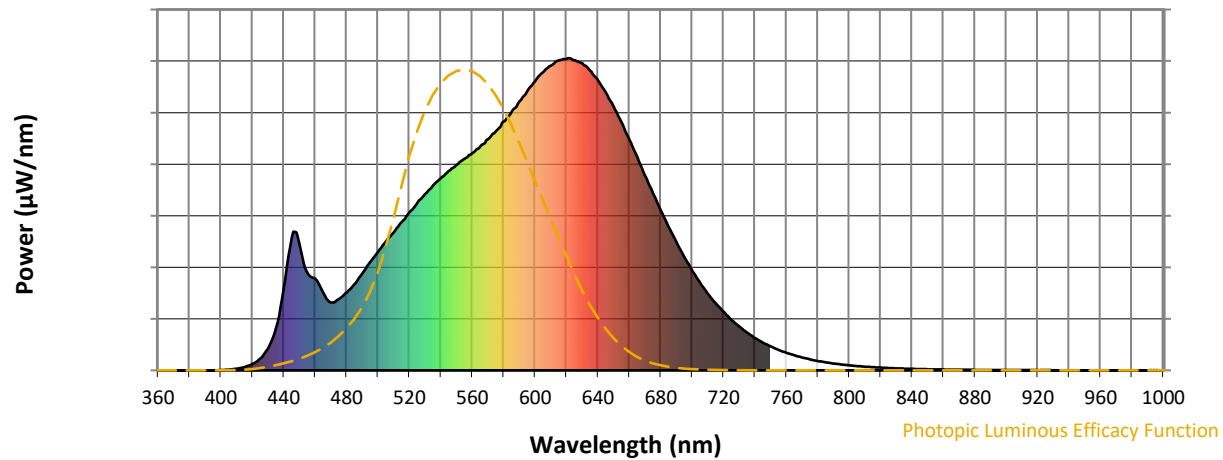
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-14

### Photopic Flux vs. Wavelength

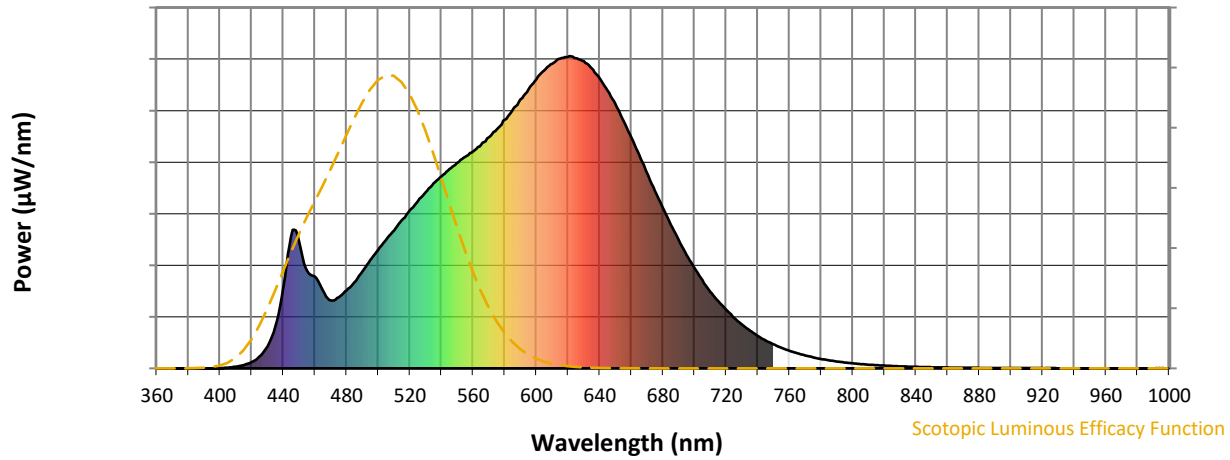


### Photopic Lumens: NR

| $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|
| 360               | 0                                      | NR                             | 490               | 310                                    | NR                             | 620               | 998                                    | NR                             | 750               | 77                                     | NR                             | 880               | 2                                      | NR                             |
| 365               | 0                                      | NR                             | 495               | 347                                    | NR                             | 625               | 993                                    | NR                             | 755               | 66                                     | NR                             | 885               | 1                                      | NR                             |
| 370               | 0                                      | NR                             | 500               | 379                                    | NR                             | 630               | 983                                    | NR                             | 760               | 56                                     | NR                             | 890               | 1                                      | NR                             |
| 375               | 0                                      | NR                             | 505               | 412                                    | NR                             | 635               | 960                                    | NR                             | 765               | 48                                     | NR                             | 895               | 1                                      | NR                             |
| 380               | 0                                      | NR                             | 510               | 442                                    | NR                             | 640               | 930                                    | NR                             | 770               | 41                                     | NR                             | 900               | 1                                      | NR                             |
| 385               | 0                                      | NR                             | 515               | 475                                    | NR                             | 645               | 889                                    | NR                             | 775               | 35                                     | NR                             | 905               | 1                                      | NR                             |
| 390               | 0                                      | NR                             | 520               | 506                                    | NR                             | 650               | 846                                    | NR                             | 780               | 30                                     | NR                             | 910               | 1                                      | NR                             |
| 395               | 0                                      | NR                             | 525               | 535                                    | NR                             | 655               | 794                                    | NR                             | 785               | 26                                     | NR                             | 915               | 1                                      | NR                             |
| 400               | 1                                      | NR                             | 530               | 565                                    | NR                             | 660               | 740                                    | NR                             | 790               | 22                                     | NR                             | 920               | 1                                      | NR                             |
| 405               | 2                                      | NR                             | 535               | 592                                    | NR                             | 665               | 684                                    | NR                             | 795               | 19                                     | NR                             | 925               | 1                                      | NR                             |
| 410               | 6                                      | NR                             | 540               | 615                                    | NR                             | 670               | 624                                    | NR                             | 800               | 16                                     | NR                             | 930               | 0                                      | NR                             |
| 415               | 10                                     | NR                             | 545               | 638                                    | NR                             | 675               | 567                                    | NR                             | 805               | 14                                     | NR                             | 935               | 0                                      | NR                             |
| 420               | 20                                     | NR                             | 550               | 658                                    | NR                             | 680               | 513                                    | NR                             | 810               | 12                                     | NR                             | 940               | 0                                      | NR                             |
| 425               | 38                                     | NR                             | 555               | 678                                    | NR                             | 685               | 459                                    | NR                             | 815               | 10                                     | NR                             | 945               | 0                                      | NR                             |
| 430               | 70                                     | NR                             | 560               | 695                                    | NR                             | 690               | 412                                    | NR                             | 820               | 9                                      | NR                             | 950               | 0                                      | NR                             |
| 435               | 136                                    | NR                             | 565               | 716                                    | NR                             | 695               | 363                                    | NR                             | 825               | 8                                      | NR                             | 955               | 0                                      | NR                             |
| 440               | 262                                    | NR                             | 570               | 740                                    | NR                             | 700               | 320                                    | NR                             | 830               | 7                                      | NR                             | 960               | 0                                      | NR                             |
| 445               | 424                                    | NR                             | 575               | 765                                    | NR                             | 705               | 281                                    | NR                             | 835               | 6                                      | NR                             | 965               | 0                                      | NR                             |
| 450               | 406                                    | NR                             | 580               | 796                                    | NR                             | 710               | 245                                    | NR                             | 840               | 5                                      | NR                             | 970               | 0                                      | NR                             |
| 455               | 313                                    | NR                             | 585               | 827                                    | NR                             | 715               | 215                                    | NR                             | 845               | 4                                      | NR                             | 975               | 0                                      | NR                             |
| 460               | 294                                    | NR                             | 590               | 861                                    | NR                             | 720               | 188                                    | NR                             | 850               | 4                                      | NR                             | 980               | 0                                      | NR                             |
| 465               | 250                                    | NR                             | 595               | 894                                    | NR                             | 725               | 162                                    | NR                             | 855               | 3                                      | NR                             | 985               | 0                                      | NR                             |
| 470               | 217                                    | NR                             | 600               | 927                                    | NR                             | 730               | 140                                    | NR                             | 860               | 3                                      | NR                             | 990               | 0                                      | NR                             |
| 475               | 228                                    | NR                             | 605               | 954                                    | NR                             | 735               | 121                                    | NR                             | 865               | 2                                      | NR                             | 995               | 0                                      | NR                             |
| 480               | 249                                    | NR                             | 610               | 976                                    | NR                             | 740               | 104                                    | NR                             | 870               | 2                                      | NR                             | 1000              | 0                                      | NR                             |
| 485               | 276                                    | NR                             | 615               | 992                                    | NR                             | 745               | 89                                     | NR                             | 875               | 2                                      | NR                             |                   |                                        |                                |

REPORT NUMBER: SP1-2407-184-14

### Scotopic Flux vs. Wavelength



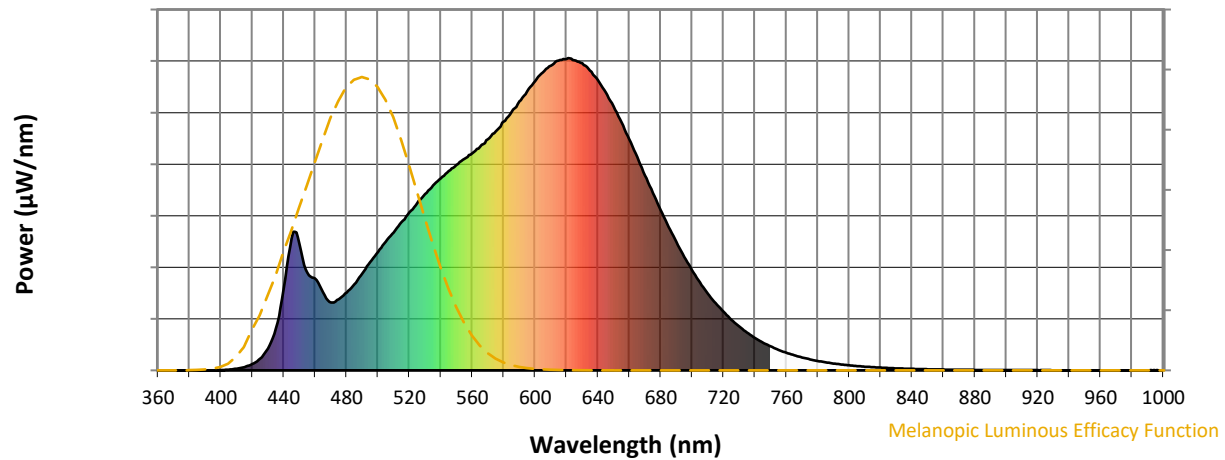
Scotopic Lumens: NR

S/P: 1.39

| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 310                                  | NR                             | 620               | 998                                  | NR                             | 750               | 77                                   | NR                             | 880               | 2                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 347                                  | NR                             | 625               | 993                                  | NR                             | 755               | 66                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 379                                  | NR                             | 630               | 983                                  | NR                             | 760               | 56                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 412                                  | NR                             | 635               | 960                                  | NR                             | 765               | 48                                   | NR                             | 895               | 1                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 442                                  | NR                             | 640               | 930                                  | NR                             | 770               | 41                                   | NR                             | 900               | 1                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 475                                  | NR                             | 645               | 889                                  | NR                             | 775               | 35                                   | NR                             | 905               | 1                                    | NR                             |
| 390               | 0                                    | NR                             | 520               | 506                                  | NR                             | 650               | 846                                  | NR                             | 780               | 30                                   | NR                             | 910               | 1                                    | NR                             |
| 395               | 0                                    | NR                             | 525               | 535                                  | NR                             | 655               | 794                                  | NR                             | 785               | 26                                   | NR                             | 915               | 1                                    | NR                             |
| 400               | 1                                    | NR                             | 530               | 565                                  | NR                             | 660               | 740                                  | NR                             | 790               | 22                                   | NR                             | 920               | 1                                    | NR                             |
| 405               | 2                                    | NR                             | 535               | 592                                  | NR                             | 665               | 684                                  | NR                             | 795               | 19                                   | NR                             | 925               | 1                                    | NR                             |
| 410               | 6                                    | NR                             | 540               | 615                                  | NR                             | 670               | 624                                  | NR                             | 800               | 16                                   | NR                             | 930               | 0                                    | NR                             |
| 415               | 10                                   | NR                             | 545               | 638                                  | NR                             | 675               | 567                                  | NR                             | 805               | 14                                   | NR                             | 935               | 0                                    | NR                             |
| 420               | 20                                   | NR                             | 550               | 658                                  | NR                             | 680               | 513                                  | NR                             | 810               | 12                                   | NR                             | 940               | 0                                    | NR                             |
| 425               | 38                                   | NR                             | 555               | 678                                  | NR                             | 685               | 459                                  | NR                             | 815               | 10                                   | NR                             | 945               | 0                                    | NR                             |
| 430               | 70                                   | NR                             | 560               | 695                                  | NR                             | 690               | 412                                  | NR                             | 820               | 9                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 136                                  | NR                             | 565               | 716                                  | NR                             | 695               | 363                                  | NR                             | 825               | 8                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 262                                  | NR                             | 570               | 740                                  | NR                             | 700               | 320                                  | NR                             | 830               | 7                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 424                                  | NR                             | 575               | 765                                  | NR                             | 705               | 281                                  | NR                             | 835               | 6                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 406                                  | NR                             | 580               | 796                                  | NR                             | 710               | 245                                  | NR                             | 840               | 5                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 313                                  | NR                             | 585               | 827                                  | NR                             | 715               | 215                                  | NR                             | 845               | 4                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 294                                  | NR                             | 590               | 861                                  | NR                             | 720               | 188                                  | NR                             | 850               | 4                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 250                                  | NR                             | 595               | 894                                  | NR                             | 725               | 162                                  | NR                             | 855               | 3                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 217                                  | NR                             | 600               | 927                                  | NR                             | 730               | 140                                  | NR                             | 860               | 3                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 228                                  | NR                             | 605               | 954                                  | NR                             | 735               | 121                                  | NR                             | 865               | 2                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 249                                  | NR                             | 610               | 976                                  | NR                             | 740               | 104                                  | NR                             | 870               | 2                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 276                                  | NR                             | 615               | 992                                  | NR                             | 745               | 89                                   | NR                             | 875               | 2                                    | NR                             |                   |                                      |                                |

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### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.69

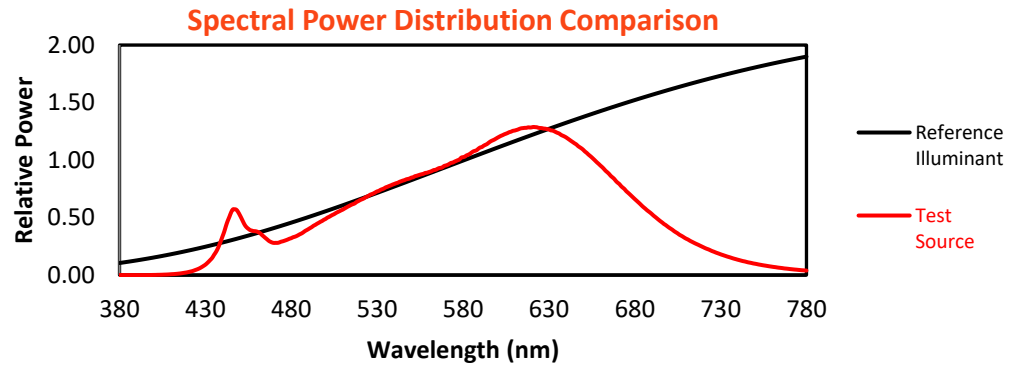
| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 310                         | NR               | 620       | 998                         | NR               | 750       | 77                          | NR               | 880       | 2                           | NR               |
| 365       | 0                           | NR               | 495       | 347                         | NR               | 625       | 993                         | NR               | 755       | 66                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 379                         | NR               | 630       | 983                         | NR               | 760       | 56                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 412                         | NR               | 635       | 960                         | NR               | 765       | 48                          | NR               | 895       | 1                           | NR               |
| 380       | 0                           | NR               | 510       | 442                         | NR               | 640       | 930                         | NR               | 770       | 41                          | NR               | 900       | 1                           | NR               |
| 385       | 0                           | NR               | 515       | 475                         | NR               | 645       | 889                         | NR               | 775       | 35                          | NR               | 905       | 1                           | NR               |
| 390       | 0                           | NR               | 520       | 506                         | NR               | 650       | 846                         | NR               | 780       | 30                          | NR               | 910       | 1                           | NR               |
| 395       | 0                           | NR               | 525       | 535                         | NR               | 655       | 794                         | NR               | 785       | 26                          | NR               | 915       | 1                           | NR               |
| 400       | 1                           | NR               | 530       | 565                         | NR               | 660       | 740                         | NR               | 790       | 22                          | NR               | 920       | 1                           | NR               |
| 405       | 2                           | NR               | 535       | 592                         | NR               | 665       | 684                         | NR               | 795       | 19                          | NR               | 925       | 1                           | NR               |
| 410       | 6                           | NR               | 540       | 615                         | NR               | 670       | 624                         | NR               | 800       | 16                          | NR               | 930       | 0                           | NR               |
| 415       | 10                          | NR               | 545       | 638                         | NR               | 675       | 567                         | NR               | 805       | 14                          | NR               | 935       | 0                           | NR               |
| 420       | 20                          | NR               | 550       | 658                         | NR               | 680       | 513                         | NR               | 810       | 12                          | NR               | 940       | 0                           | NR               |
| 425       | 38                          | NR               | 555       | 678                         | NR               | 685       | 459                         | NR               | 815       | 10                          | NR               | 945       | 0                           | NR               |
| 430       | 70                          | NR               | 560       | 695                         | NR               | 690       | 412                         | NR               | 820       | 9                           | NR               | 950       | 0                           | NR               |
| 435       | 136                         | NR               | 565       | 716                         | NR               | 695       | 363                         | NR               | 825       | 8                           | NR               | 955       | 0                           | NR               |
| 440       | 262                         | NR               | 570       | 740                         | NR               | 700       | 320                         | NR               | 830       | 7                           | NR               | 960       | 0                           | NR               |
| 445       | 424                         | NR               | 575       | 765                         | NR               | 705       | 281                         | NR               | 835       | 6                           | NR               | 965       | 0                           | NR               |
| 450       | 406                         | NR               | 580       | 796                         | NR               | 710       | 245                         | NR               | 840       | 5                           | NR               | 970       | 0                           | NR               |
| 455       | 313                         | NR               | 585       | 827                         | NR               | 715       | 215                         | NR               | 845       | 4                           | NR               | 975       | 0                           | NR               |
| 460       | 294                         | NR               | 590       | 861                         | NR               | 720       | 188                         | NR               | 850       | 4                           | NR               | 980       | 0                           | NR               |
| 465       | 250                         | NR               | 595       | 894                         | NR               | 725       | 162                         | NR               | 855       | 3                           | NR               | 985       | 0                           | NR               |
| 470       | 217                         | NR               | 600       | 927                         | NR               | 730       | 140                         | NR               | 860       | 3                           | NR               | 990       | 0                           | NR               |
| 475       | 228                         | NR               | 605       | 954                         | NR               | 735       | 121                         | NR               | 865       | 2                           | NR               | 995       | 0                           | NR               |
| 480       | 249                         | NR               | 610       | 976                         | NR               | 740       | 104                         | NR               | 870       | 2                           | NR               | 1000      | 0                           | NR               |
| 485       | 276                         | NR               | 615       | 992                         | NR               | 745       | 89                          | NR               | 875       | 2                           | NR               |           |                             |                  |

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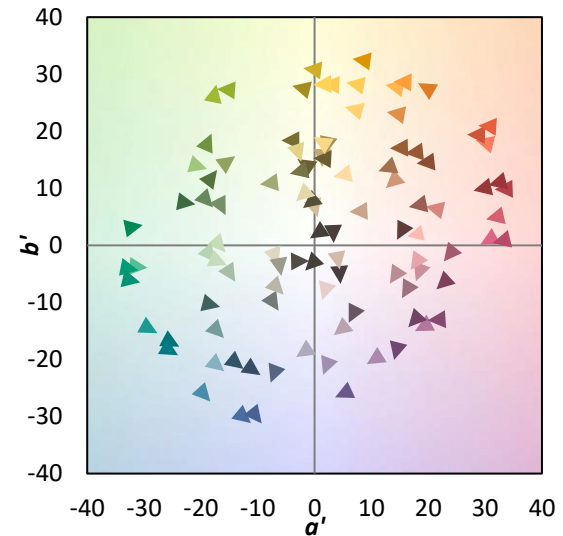
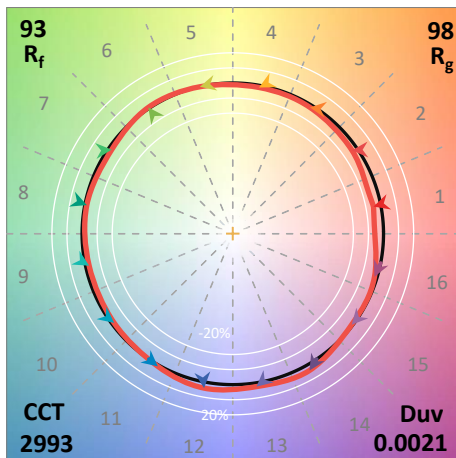
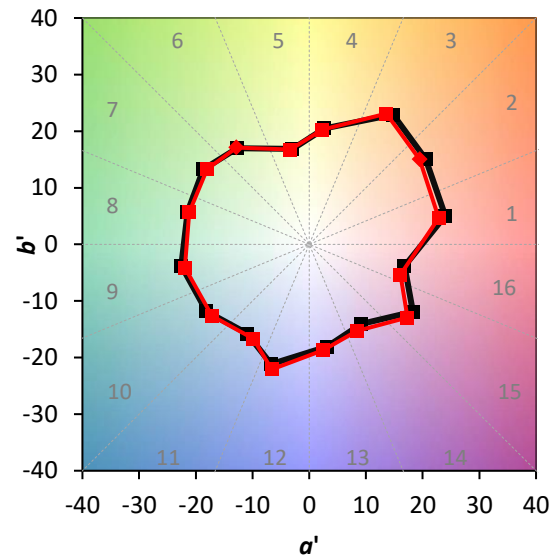
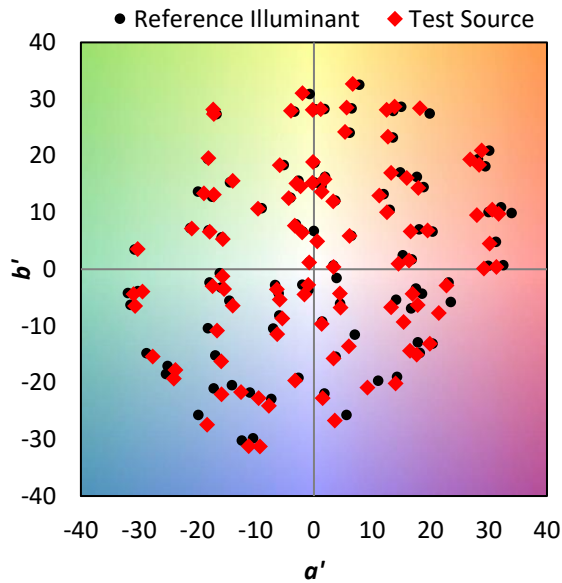
TM-30-18

### Summary

$R_f = 92.6$   
 $R_g = 98.5$   
 $CIE R_a = 92.4$   
 $R_9 = 58.2$

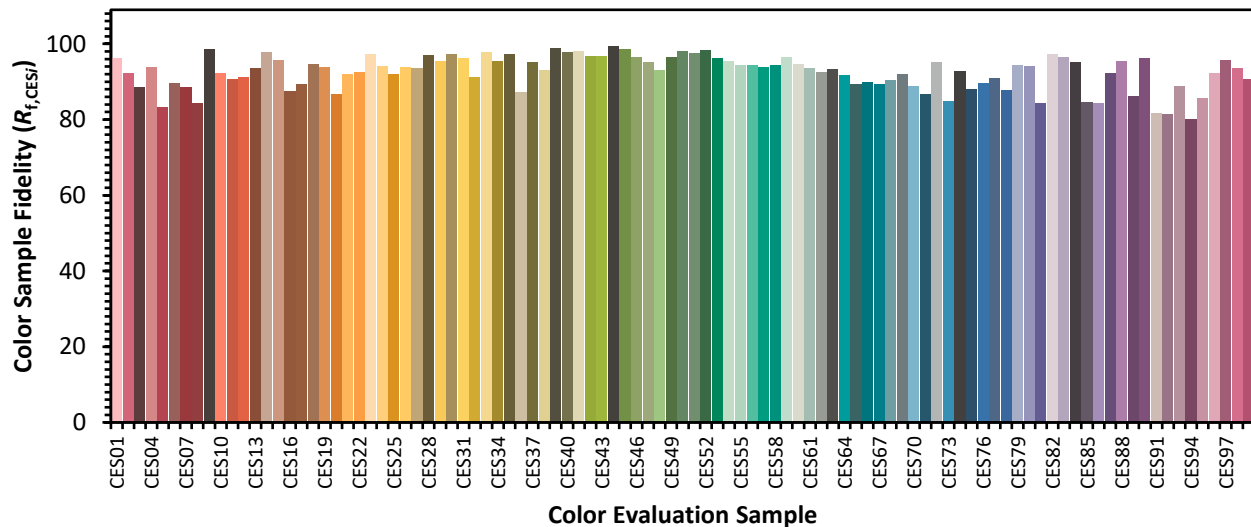


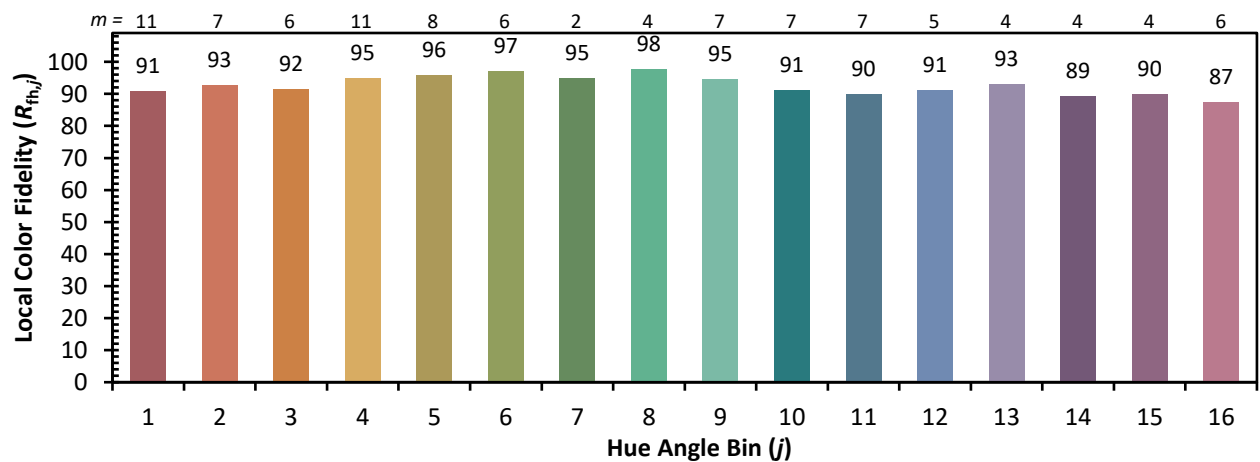
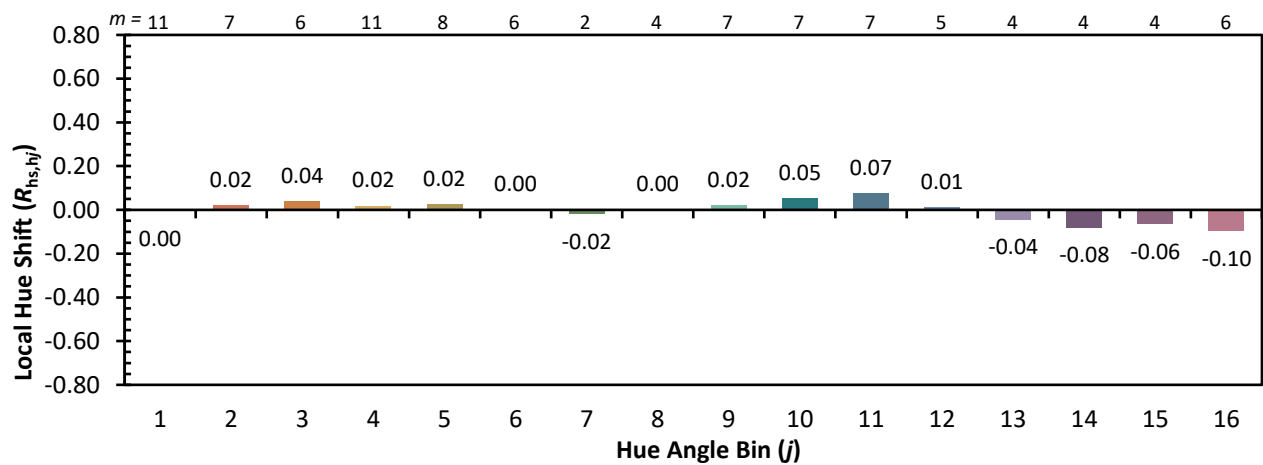
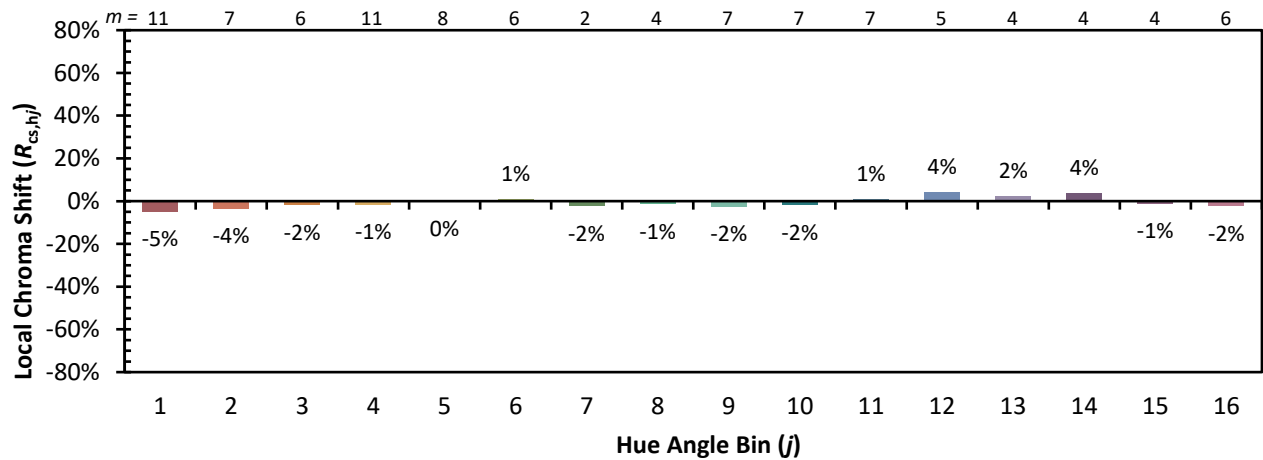
### Color Vector Graphics



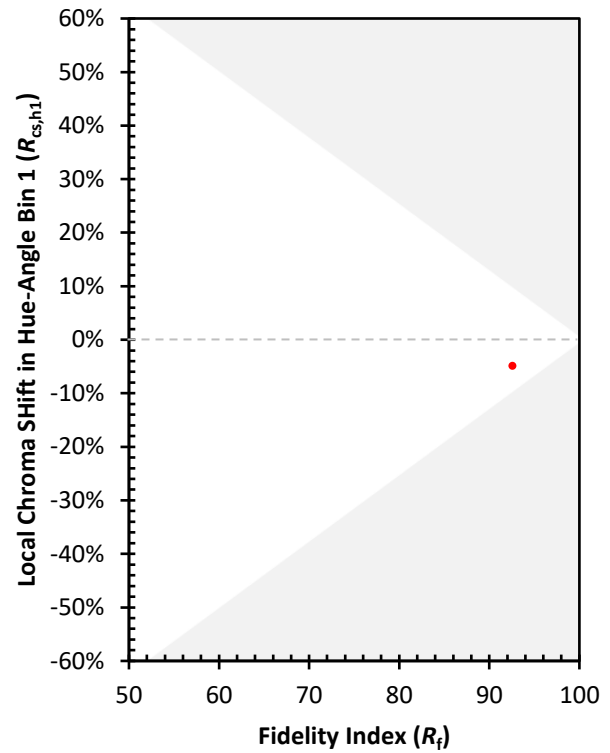
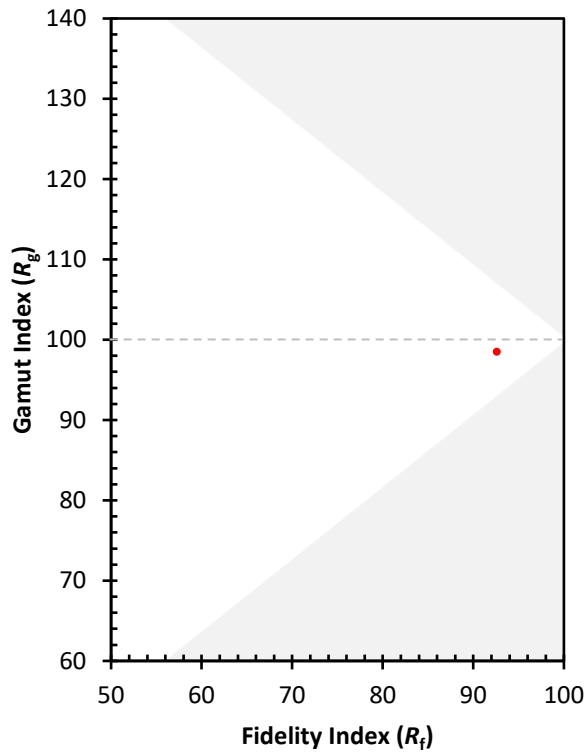
Individual Sample Fidelity Index ( $R_{f,i}$ )

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 94 | CES51 = 98 | CES76 = 90 |
| CES02 = 63 | CES27 = 94 | CES52 = 98 | CES77 = 91 |
| CES03 = 32 | CES28 = 97 | CES53 = 96 | CES78 = 88 |
| CES04 = 70 | CES29 = 95 | CES54 = 95 | CES79 = 94 |
| CES05 = 51 | CES30 = 97 | CES55 = 94 | CES80 = 94 |
| CES06 = 51 | CES31 = 96 | CES56 = 94 | CES81 = 84 |
| CES07 = 43 | CES32 = 91 | CES57 = 94 | CES82 = 97 |
| CES08 = 42 | CES33 = 98 | CES58 = 94 | CES83 = 97 |
| CES09 = 29 | CES34 = 96 | CES59 = 97 | CES84 = 95 |
| CES10 = 76 | CES35 = 97 | CES60 = 95 | CES85 = 85 |
| CES11 = 59 | CES36 = 87 | CES61 = 94 | CES86 = 84 |
| CES12 = 65 | CES37 = 95 | CES62 = 92 | CES87 = 92 |
| CES13 = 44 | CES38 = 93 | CES63 = 93 | CES88 = 95 |
| CES14 = 74 | CES39 = 99 | CES64 = 92 | CES89 = 86 |
| CES15 = 72 | CES40 = 98 | CES65 = 89 | CES90 = 96 |
| CES16 = 48 | CES41 = 98 | CES66 = 90 | CES91 = 82 |
| CES17 = 50 | CES42 = 97 | CES67 = 89 | CES92 = 81 |
| CES18 = 57 | CES43 = 97 | CES68 = 90 | CES93 = 89 |
| CES19 = 72 | CES44 = 99 | CES69 = 92 | CES94 = 80 |
| CES20 = 67 | CES45 = 99 | CES70 = 89 | CES95 = 86 |
| CES21 = 86 | CES46 = 96 | CES71 = 87 | CES96 = 92 |
| CES22 = 79 | CES47 = 95 | CES72 = 95 | CES97 = 96 |
| CES23 = 92 | CES48 = 93 | CES73 = 85 | CES98 = 94 |
| CES24 = 91 | CES49 = 97 | CES74 = 93 | CES99 = 91 |
| CES25 = 72 | CES50 = 98 | CES75 = 88 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)