

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: STREETWORKS

Report Number: P1057634

Luminaire Tested: **GAP-SA2C-827-U-T4BC**

Issue Date: 08/07/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P1057634  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 08/07/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAP-SA2C-827-U-T4BC  
Description: GALLEON PEDESTRAIAN COMPANION 1050mA 2xLight Square PACKAGE 80CRI  
2700K FIXTURE w/ TYPE IV ANGLED BACKLIGHT CONTROL  
Light Source: (28) 2700K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8006.1 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Luminous Opening: Rectangular (W 1.33' x L: 0.67' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G2

Input Watts (W): 94.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

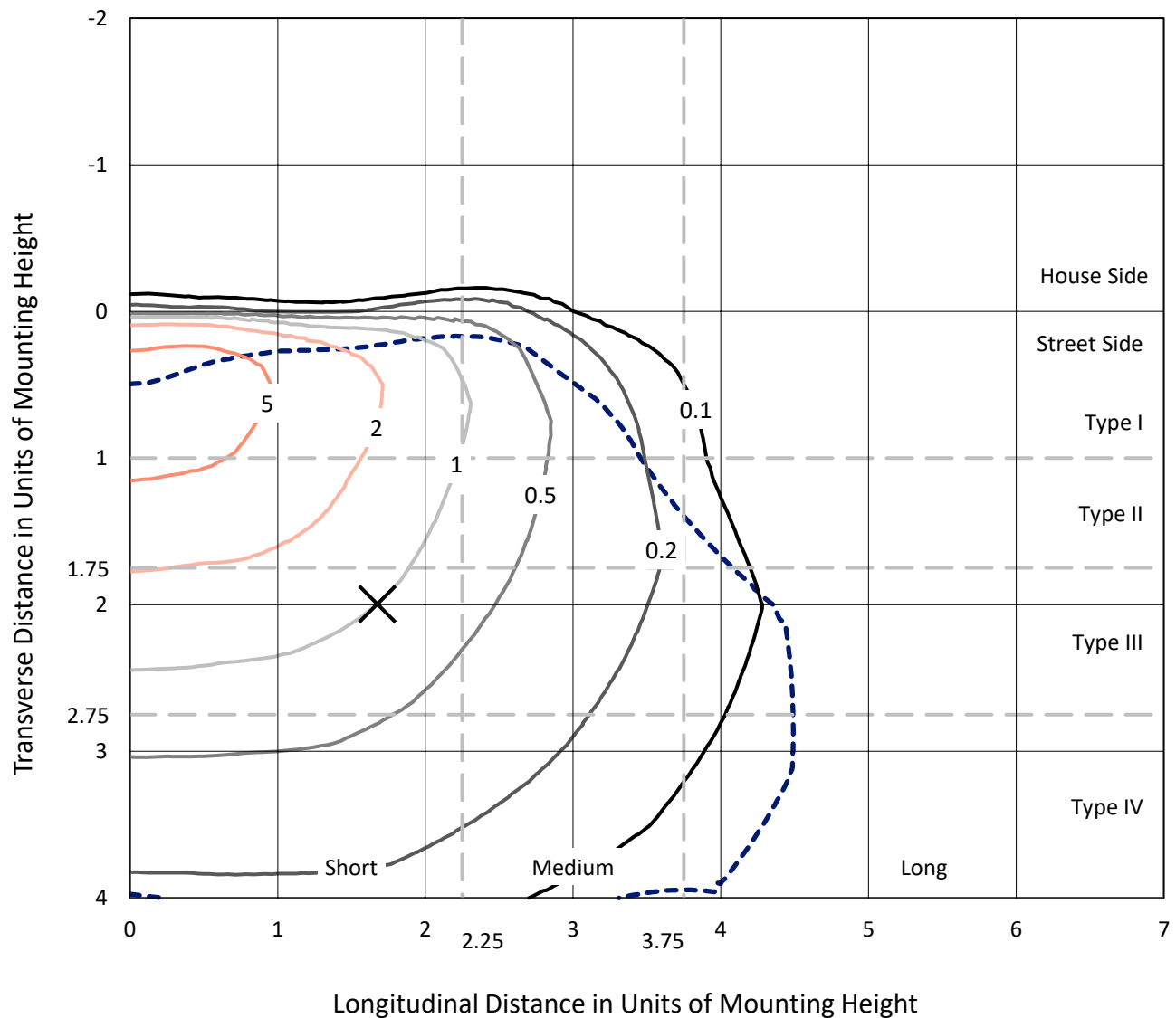


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

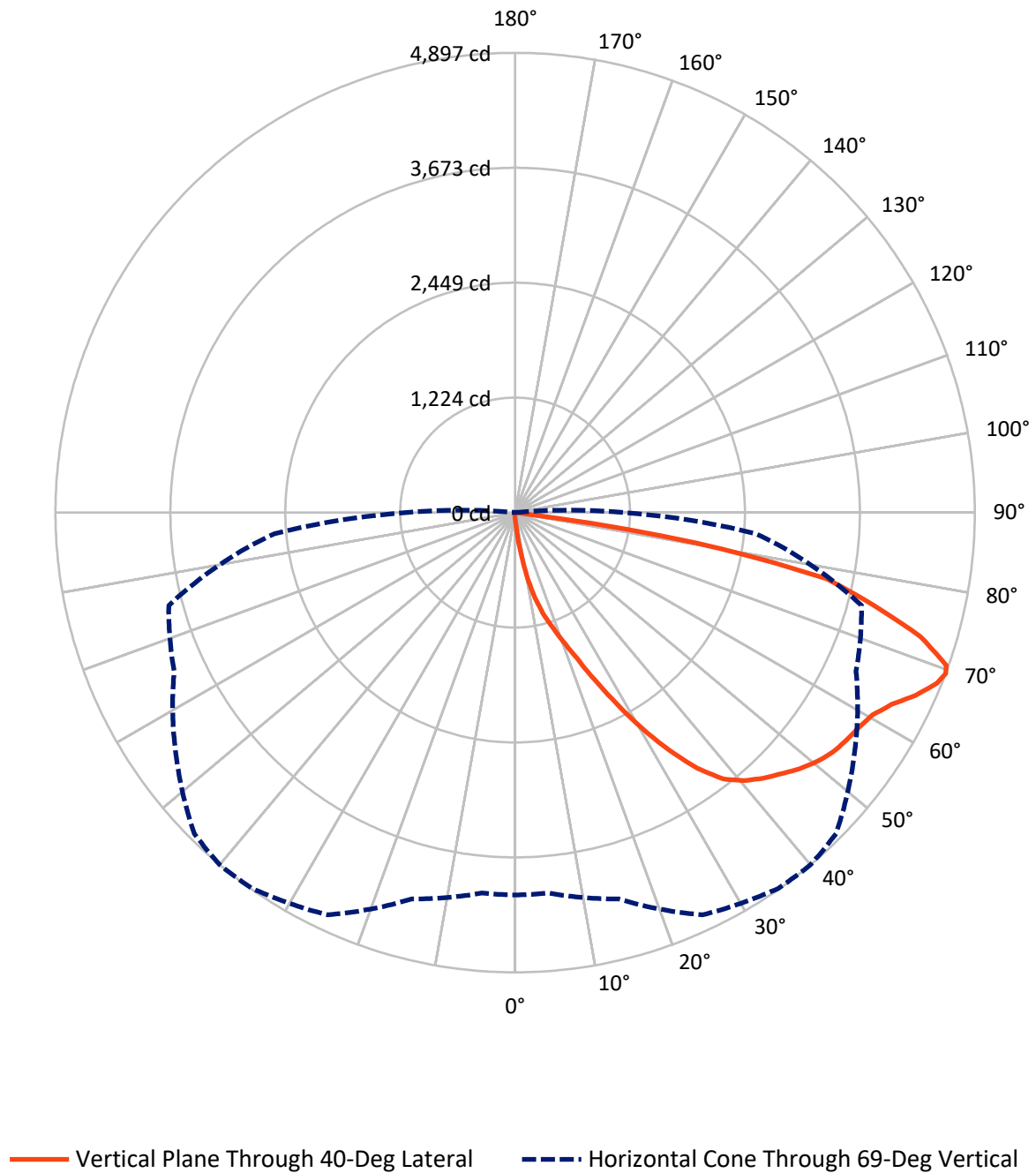


Based on 15 foot mounting height. Maximum calculated value = 9.1 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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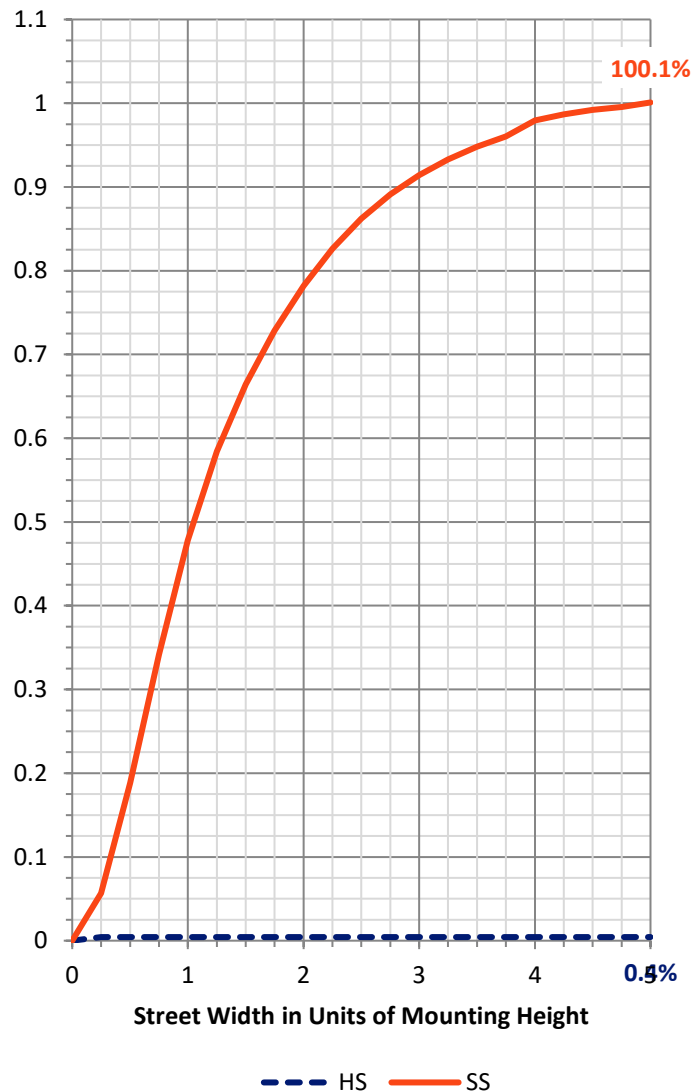
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 35.1     | 0.0    | 35.1   |
|                    | % Fixture | 0.4      | 0.0    | 0.4    |
| <b>Street Side</b> | Lumens    | 7971.0   | 0.0    | 7971.0 |
|                    | % Fixture | 99.6     | 0.0    | 99.6   |
| <b>Total</b>       | Lumens    | 8006.1   | 0.0    | 8006.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 16.9   | 0.2       |
| 10°-20°   | 127.9  | 1.6       |
| 20°-30°   | 385.1  | 4.8       |
| 30°-40°   | 847.9  | 10.6      |
| 40°-50°   | 1303.0 | 16.3      |
| 50°-60°   | 1604.5 | 20.0      |
| 60°-70°   | 2025.7 | 25.3      |
| 70°-80°   | 1558.1 | 19.5      |
| 80°-90°   | 136.9  | 1.7       |
| 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°    | 8006.1 | 100.0     |
| 0°-180°   | 8006.1 | 100.0     |



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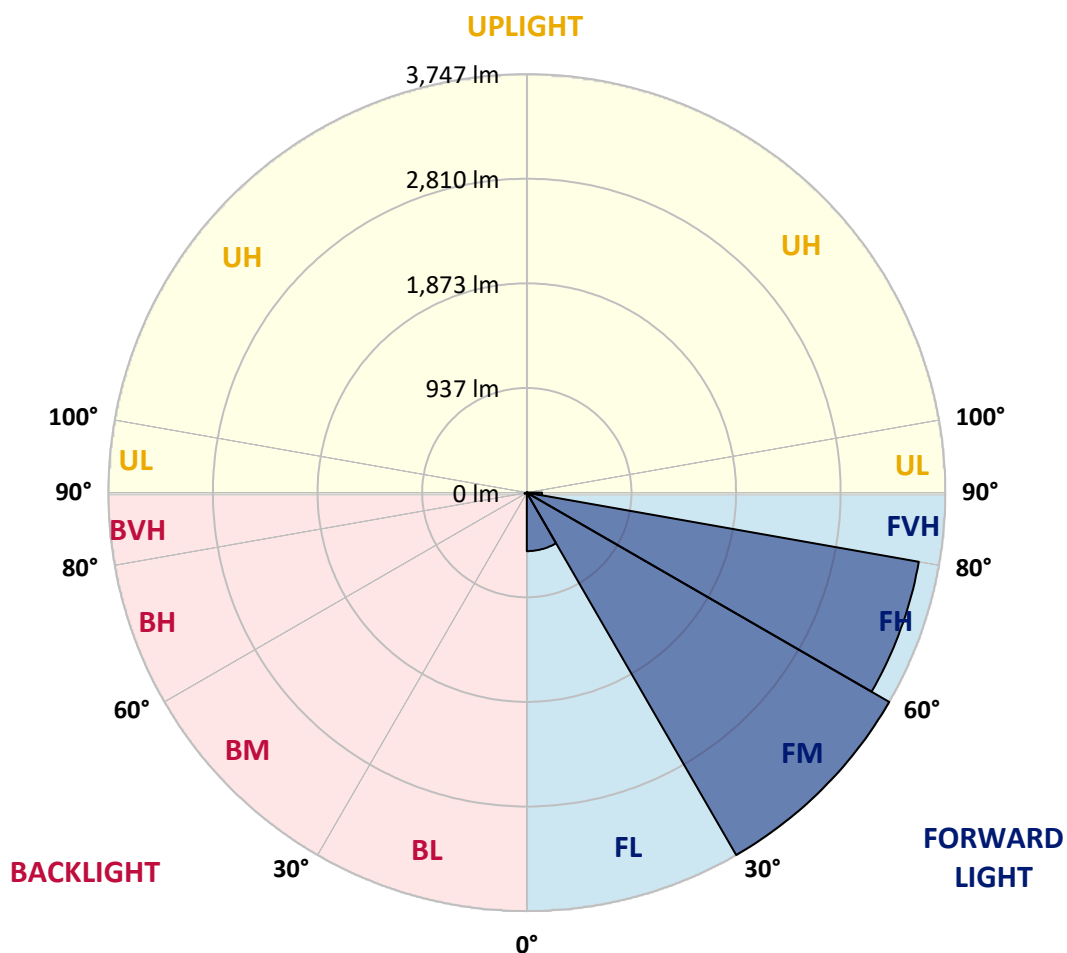
CATALOG NUMBER: GAP-SA2C-827-U-T4BC

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 523.9  | 6.5       |                         |      |         |
| FM   | (30°-60°)   | 3746.9 | 46.8      |                         |      |         |
| FH   | (60°-80°)   | 3563.7 | 44.5      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 136.5  | 1.7       |                         |      | G2/225  |
| BL   | (0°-30°)    | 6.0    | 0.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 8.6    | 0.1       | B0/220                  |      |         |
| BH   | (60°-80°)   | 20.1   | 0.3       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.4    | 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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 40°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 58.6   | 58.6   | 58.6   | 58.6   | 58.6   | 58.6   | 58.6   | 58.6   | 58.6   | 58.6   | 58.6   |
| 2.5°  | 130.6  | 129.1  | 123.1  | 115.6  | 109.6  | 105.1  | 99.1   | 90.1   | 81.1   | 70.6   | 63.1   |
| 5°    | 342.4  | 340.9  | 316.9  | 286.8  | 246.3  | 219.2  | 192.2  | 148.7  | 112.6  | 87.1   | 66.1   |
| 7.5°  | 633.7  | 629.2  | 606.7  | 560.1  | 474.5  | 428.0  | 378.4  | 265.8  | 172.7  | 108.1  | 70.6   |
| 10°   | 922.0  | 919.0  | 890.5  | 822.9  | 729.8  | 683.3  | 617.2  | 453.5  | 271.8  | 141.2  | 76.6   |
| 12.5° | 1091.7 | 1099.2 | 1078.2 | 1046.7 | 967.1  | 923.5  | 848.5  | 659.2  | 417.5  | 193.7  | 84.1   |
| 15°   | 1231.4 | 1234.4 | 1214.9 | 1195.4 | 1151.8 | 1115.8 | 1052.7 | 878.5  | 591.7  | 264.3  | 93.1   |
| 17.5° | 1404.1 | 1399.6 | 1378.6 | 1356.0 | 1308.0 | 1281.0 | 1240.4 | 1081.2 | 777.9  | 364.9  | 105.1  |
| 20°   | 1623.3 | 1611.3 | 1587.3 | 1548.3 | 1495.7 | 1462.7 | 1420.6 | 1288.5 | 964.1  | 476.0  | 120.1  |
| 22.5° | 1904.2 | 1889.1 | 1863.6 | 1827.6 | 1734.5 | 1683.4 | 1629.4 | 1465.7 | 1169.8 | 617.2  | 139.7  |
| 25°   | 2228.5 | 2221.0 | 2194.0 | 2142.9 | 2043.8 | 1976.2 | 1889.1 | 1672.9 | 1374.1 | 767.4  | 163.7  |
| 27.5° | 2610.0 | 2596.5 | 2560.4 | 2500.3 | 2393.7 | 2305.1 | 2197.0 | 1901.2 | 1569.3 | 926.6  | 193.7  |
| 30°   | 3036.5 | 3006.4 | 2932.8 | 2880.3 | 2755.6 | 2668.5 | 2542.4 | 2204.5 | 1770.5 | 1093.2 | 225.3  |
| 32.5° | 3432.9 | 3393.9 | 3287.2 | 3215.2 | 3099.5 | 3021.4 | 2905.8 | 2510.9 | 1997.3 | 1267.4 | 265.8  |
| 35°   | 3791.8 | 3749.8 | 3577.1 | 3467.4 | 3408.9 | 3342.8 | 3225.7 | 2860.8 | 2242.0 | 1453.7 | 312.4  |
| 37.5° | 4095.2 | 4053.1 | 3830.9 | 3658.2 | 3622.1 | 3599.6 | 3505.0 | 3156.6 | 2519.9 | 1663.9 | 366.4  |
| 40°   | 4264.8 | 4237.8 | 4045.6 | 3850.4 | 3781.3 | 3754.3 | 3685.2 | 3404.4 | 2829.2 | 1874.1 | 429.5  |
| 42.5° | 4317.4 | 4300.9 | 4144.7 | 4048.6 | 3922.5 | 3868.4 | 3785.8 | 3593.6 | 3095.0 | 2109.9 | 501.6  |
| 45°   | 4288.9 | 4270.9 | 4156.7 | 4179.3 | 4074.1 | 3969.0 | 3856.4 | 3722.7 | 3318.8 | 2387.7 | 591.7  |
| 47.5° | 4167.2 | 4161.2 | 4083.1 | 4210.8 | 4198.8 | 4078.6 | 3939.0 | 3808.3 | 3511.0 | 2656.5 | 704.3  |
| 50°   | 3869.9 | 3866.9 | 3902.9 | 4167.2 | 4281.4 | 4168.7 | 4029.1 | 3884.9 | 3664.2 | 2925.3 | 848.5  |
| 52.5° | 3468.9 | 3490.0 | 3671.7 | 4086.1 | 4305.4 | 4239.3 | 4119.2 | 3972.0 | 3790.3 | 3194.1 | 1042.2 |
| 55°   | 3257.2 | 3275.2 | 3514.0 | 3997.5 | 4300.9 | 4281.4 | 4210.8 | 4056.1 | 3905.9 | 3414.9 | 1300.5 |
| 57.5° | 3417.9 | 3398.4 | 3508.0 | 3985.5 | 4281.4 | 4317.4 | 4276.9 | 4122.2 | 4011.1 | 3610.1 | 1657.9 |
| 60°   | 3722.7 | 3716.7 | 3730.2 | 4071.1 | 4321.9 | 4376.0 | 4347.4 | 4167.2 | 4114.7 | 3758.8 | 2051.3 |
| 62.5° | 4030.6 | 4014.1 | 4027.6 | 4306.9 | 4463.1 | 4500.6 | 4466.1 | 4240.8 | 4195.8 | 3866.9 | 2477.8 |
| 65°   | 4183.8 | 4171.7 | 4234.8 | 4544.2 | 4664.3 | 4689.8 | 4644.8 | 4359.5 | 4209.3 | 3922.5 | 2746.6 |
| 67.5° | 4164.2 | 4161.2 | 4308.4 | 4710.9 | 4832.5 | 4847.5 | 4810.0 | 4478.1 | 4152.2 | 3921.0 | 2775.2 |
| 69°   | 4072.6 | 4066.6 | 4260.3 | 4727.4 | 4886.6 | 4897.1 | 4835.5 | 4418.0 | 4008.1 | 3820.3 | 2572.4 |
| 70°   | 3964.5 | 3970.5 | 4189.8 | 4697.3 | 4888.1 | 4873.0 | 4730.4 | 4332.4 | 3898.4 | 3704.7 | 2314.1 |
| 72.5° | 3562.0 | 3599.6 | 3899.9 | 4500.6 | 4682.3 | 4514.1 | 4327.9 | 4051.6 | 3689.7 | 3158.1 | 1615.8 |
| 75°   | 2979.4 | 3031.9 | 3419.4 | 4092.2 | 4026.1 | 3942.0 | 3919.5 | 3709.2 | 3342.8 | 2097.9 | 1148.8 |
| 77.5° | 1456.7 | 1630.9 | 2426.8 | 3143.1 | 3303.8 | 3389.4 | 3357.8 | 3066.5 | 2686.6 | 1030.2 | 749.4  |
| 80°   | 76.6   | 79.6   | 127.6  | 300.3  | 1530.2 | 1946.2 | 2393.7 | 2341.2 | 2033.3 | 470.0  | 394.9  |
| 82.5° | 40.5   | 40.5   | 45.1   | 52.6   | 61.6   | 73.6   | 195.2  | 1341.0 | 1208.9 | 241.8  | 147.2  |
| 85°   | 22.5   | 22.5   | 27.0   | 36.0   | 46.6   | 54.1   | 61.6   | 81.1   | 259.8  | 87.1   | 24.0   |
| 87.5° | 10.5   | 13.5   | 18.0   | 25.5   | 33.0   | 42.0   | 48.1   | 60.1   | 76.6   | 73.6   | 4.5    |
| 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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CATALOG NUMBER: GAP-SA2C-827-U-T4BC

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°  | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|------|------|------|------|------|------|------|------|------|------|
| 0°    | 58.6   | 58.6 | 58.6 | 58.6 | 58.6 | 58.6 | 58.6 | 58.6 | 58.6 | 58.6 | 58.6 |
| 2.5°  | 58.6   | 55.6 | 51.1 | 48.1 | 46.6 | 43.5 | 40.5 | 39.0 | 37.5 | 36.0 | 37.5 |
| 5°    | 58.6   | 54.1 | 46.6 | 42.0 | 39.0 | 34.5 | 31.5 | 30.0 | 28.5 | 27.0 | 27.0 |
| 7.5°  | 58.6   | 51.1 | 42.0 | 36.0 | 31.5 | 28.5 | 24.0 | 22.5 | 21.0 | 19.5 | 19.5 |
| 10°   | 60.1   | 48.1 | 37.5 | 31.5 | 27.0 | 22.5 | 19.5 | 16.5 | 15.0 | 15.0 | 15.0 |
| 12.5° | 60.1   | 45.1 | 33.0 | 27.0 | 22.5 | 18.0 | 13.5 | 10.5 | 9.0  | 9.0  | 9.0  |
| 15°   | 60.1   | 42.0 | 30.0 | 22.5 | 18.0 | 13.5 | 7.5  | 4.5  | 3.0  | 3.0  | 1.5  |
| 17.5° | 61.6   | 40.5 | 27.0 | 19.5 | 13.5 | 7.5  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  |
| 20°   | 64.6   | 39.0 | 24.0 | 16.5 | 9.0  | 3.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 22.5° | 67.6   | 37.5 | 21.0 | 12.0 | 4.5  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 25°   | 73.6   | 37.5 | 19.5 | 10.5 | 3.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 27.5° | 79.6   | 37.5 | 15.0 | 6.0  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 30°   | 84.1   | 37.5 | 13.5 | 4.5  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 32.5° | 90.1   | 37.5 | 12.0 | 3.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 35°   | 94.6   | 36.0 | 9.0  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 37.5° | 99.1   | 34.5 | 7.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 40°   | 105.1  | 33.0 | 6.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 42.5° | 111.1  | 30.0 | 4.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 45°   | 118.6  | 28.5 | 3.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 47.5° | 129.1  | 27.0 | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 50°   | 144.2  | 27.0 | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 52.5° | 169.7  | 27.0 | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 55°   | 211.7  | 27.0 | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 57.5° | 285.3  | 27.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 60°   | 429.5  | 27.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 62.5° | 663.8  | 30.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 65°   | 1015.2 | 36.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 67.5° | 1287.0 | 43.5 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 69°   | 1162.3 | 40.5 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 70°   | 985.1  | 31.5 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 72.5° | 548.1  | 16.5 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 75°   | 285.3  | 7.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 77.5° | 121.6  | 4.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 80°   | 36.0   | 3.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 82.5° | 12.0   | 3.0  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 85°   | 4.5    | 3.0  | 1.5  | 1.5  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 87.5° | 3.0    | 1.5  | 1.5  | 1.5  | 1.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 90°   | 0.0    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-8

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-827-U-5WQ

Data in this report applies to families of products including GSS-SB1A-827-U-5WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-8  
 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-827-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI  
 2700K CCT 26 LEDS

### Spectral Parameters

CCT (K): 2756  
 CIE  $u'$ : 0.2599  
 CIE  $v'$ : 0.5271  
 Duv: 0.0006  
 CIE x: 0.4563  
 CIE y: 0.4112  
 CIE z: 0.1325  
 Peak Wavelength (nm): 609  
 Dominant Wavelength (nm): 583  
 Purity: 60.41121  
 R<sub>f</sub>: 82.2  
 R<sub>g</sub>: 99.9

CRI (Ra): 82.9  
 R1: 81.6  
 R2: 88.8  
 R3: 96.0  
 R4: 83.4  
 R5: 81.4  
 R6: 87.0  
 R7: 84.0  
 R8: 60.8  
 R9: 10.8  
 R10: 74.8  
 R11: 84.3  
 R12: 72.1  
 R13: 82.9  
 R14: 97.3  
 R15: 73.7



### Test Conditions

Stabilization Time: 29M  
 Operation Time: 1H 29M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-8

| 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: SP1-2407-184-8

**CIE 1931 Chromaticity Diagram**



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



REPORT NUMBER: SP1-2407-184-8

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| 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       | 158                         | NR               | 620       | 959                         | NR               | 750       | 35                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 211                         | NR               | 625       | 918                         | NR               | 755       | 30                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 264                         | NR               | 630       | 873                         | NR               | 760       | 26                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 318                         | NR               | 635       | 816                         | NR               | 765       | 22                          | NR               | 895       | 1                           | NR               |
| 380       | 0                           | NR               | 510       | 363                         | NR               | 640       | 755                         | NR               | 770       | 19                          | NR               | 900       | 1                           | NR               |
| 385       | 0                           | NR               | 515       | 403                         | NR               | 645       | 689                         | NR               | 775       | 16                          | NR               | 905       | 1                           | NR               |
| 390       | 0                           | NR               | 520       | 435                         | NR               | 650       | 626                         | NR               | 780       | 14                          | NR               | 910       | 0                           | NR               |
| 395       | 1                           | NR               | 525       | 459                         | NR               | 655       | 564                         | NR               | 785       | 12                          | NR               | 915       | 0                           | NR               |
| 400       | 3                           | NR               | 530       | 481                         | NR               | 660       | 503                         | NR               | 790       | 10                          | NR               | 920       | 0                           | NR               |
| 405       | 6                           | NR               | 535       | 501                         | NR               | 665       | 447                         | NR               | 795       | 9                           | NR               | 925       | 0                           | NR               |
| 410       | 13                          | NR               | 540       | 519                         | NR               | 670       | 392                         | NR               | 800       | 8                           | NR               | 930       | 0                           | NR               |
| 415       | 26                          | NR               | 545       | 542                         | NR               | 675       | 343                         | NR               | 805       | 7                           | NR               | 935       | 0                           | NR               |
| 420       | 51                          | NR               | 550       | 565                         | NR               | 680       | 299                         | NR               | 810       | 6                           | NR               | 940       | 0                           | NR               |
| 425       | 93                          | NR               | 555       | 593                         | NR               | 685       | 260                         | NR               | 815       | 5                           | NR               | 945       | 0                           | NR               |
| 430       | 156                         | NR               | 560       | 624                         | NR               | 690       | 225                         | NR               | 820       | 4                           | NR               | 950       | 0                           | NR               |
| 435       | 250                         | NR               | 565       | 662                         | NR               | 695       | 194                         | NR               | 825       | 4                           | NR               | 955       | 0                           | NR               |
| 440       | 391                         | NR               | 570       | 707                         | NR               | 700       | 166                         | NR               | 830       | 3                           | NR               | 960       | 0                           | NR               |
| 445       | 460                         | NR               | 575       | 756                         | NR               | 705       | 143                         | NR               | 835       | 3                           | NR               | 965       | 0                           | NR               |
| 450       | 293                         | NR               | 580       | 810                         | NR               | 710       | 122                         | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 188                         | NR               | 585       | 860                         | NR               | 715       | 105                         | NR               | 845       | 2                           | NR               | 975       | 0                           | NR               |
| 460       | 149                         | NR               | 590       | 910                         | NR               | 720       | 90                          | NR               | 850       | 2                           | NR               | 980       | 0                           | NR               |
| 465       | 103                         | NR               | 595       | 950                         | NR               | 725       | 77                          | NR               | 855       | 2                           | NR               | 985       | 0                           | NR               |
| 470       | 80                          | NR               | 600       | 980                         | NR               | 730       | 66                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 82                          | NR               | 605       | 995                         | NR               | 735       | 56                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 92                          | NR               | 610       | 998                         | NR               | 740       | 48                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 116                         | NR               | 615       | 985                         | NR               | 745       | 41                          | NR               | 875       | 1                           | NR               |           |                             |                  |

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### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.2

| $\lambda$<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               | 158                                  | NR                             | 620               | 959                                  | NR                             | 750               | 35                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 211                                  | NR                             | 625               | 918                                  | NR                             | 755               | 30                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 264                                  | NR                             | 630               | 873                                  | NR                             | 760               | 26                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 318                                  | NR                             | 635               | 816                                  | NR                             | 765               | 22                                   | NR                             | 895               | 1                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 363                                  | NR                             | 640               | 755                                  | NR                             | 770               | 19                                   | NR                             | 900               | 1                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 403                                  | NR                             | 645               | 689                                  | NR                             | 775               | 16                                   | NR                             | 905               | 1                                    | NR                             |
| 390               | 0                                    | NR                             | 520               | 435                                  | NR                             | 650               | 626                                  | NR                             | 780               | 14                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 1                                    | NR                             | 525               | 459                                  | NR                             | 655               | 564                                  | NR                             | 785               | 12                                   | NR                             | 915               | 0                                    | NR                             |
| 400               | 3                                    | NR                             | 530               | 481                                  | NR                             | 660               | 503                                  | NR                             | 790               | 10                                   | NR                             | 920               | 0                                    | NR                             |
| 405               | 6                                    | NR                             | 535               | 501                                  | NR                             | 665               | 447                                  | NR                             | 795               | 9                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 13                                   | NR                             | 540               | 519                                  | NR                             | 670               | 392                                  | NR                             | 800               | 8                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 26                                   | NR                             | 545               | 542                                  | NR                             | 675               | 343                                  | NR                             | 805               | 7                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 51                                   | NR                             | 550               | 565                                  | NR                             | 680               | 299                                  | NR                             | 810               | 6                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 93                                   | NR                             | 555               | 593                                  | NR                             | 685               | 260                                  | NR                             | 815               | 5                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 156                                  | NR                             | 560               | 624                                  | NR                             | 690               | 225                                  | NR                             | 820               | 4                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 250                                  | NR                             | 565               | 662                                  | NR                             | 695               | 194                                  | NR                             | 825               | 4                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 391                                  | NR                             | 570               | 707                                  | NR                             | 700               | 166                                  | NR                             | 830               | 3                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 460                                  | NR                             | 575               | 756                                  | NR                             | 705               | 143                                  | NR                             | 835               | 3                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 293                                  | NR                             | 580               | 810                                  | NR                             | 710               | 122                                  | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 188                                  | NR                             | 585               | 860                                  | NR                             | 715               | 105                                  | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 149                                  | NR                             | 590               | 910                                  | NR                             | 720               | 90                                   | NR                             | 850               | 2                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 103                                  | NR                             | 595               | 950                                  | NR                             | 725               | 77                                   | NR                             | 855               | 2                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 80                                   | NR                             | 600               | 980                                  | NR                             | 730               | 66                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 82                                   | NR                             | 605               | 995                                  | NR                             | 735               | 56                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 92                                   | NR                             | 610               | 998                                  | NR                             | 740               | 48                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 116                                  | NR                             | 615               | 985                                  | NR                             | 745               | 41                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.16

| λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 158                      | NR            | 620    | 959                      | NR            | 750    | 35                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 211                      | NR            | 625    | 918                      | NR            | 755    | 30                       | NR            | 885    | 1                        | NR            |
| 370    | 0                        | NR            | 500    | 264                      | NR            | 630    | 873                      | NR            | 760    | 26                       | NR            | 890    | 1                        | NR            |
| 375    | 0                        | NR            | 505    | 318                      | NR            | 635    | 816                      | NR            | 765    | 22                       | NR            | 895    | 1                        | NR            |
| 380    | 0                        | NR            | 510    | 363                      | NR            | 640    | 755                      | NR            | 770    | 19                       | NR            | 900    | 1                        | NR            |
| 385    | 0                        | NR            | 515    | 403                      | NR            | 645    | 689                      | NR            | 775    | 16                       | NR            | 905    | 1                        | NR            |
| 390    | 0                        | NR            | 520    | 435                      | NR            | 650    | 626                      | NR            | 780    | 14                       | NR            | 910    | 0                        | NR            |
| 395    | 1                        | NR            | 525    | 459                      | NR            | 655    | 564                      | NR            | 785    | 12                       | NR            | 915    | 0                        | NR            |
| 400    | 3                        | NR            | 530    | 481                      | NR            | 660    | 503                      | NR            | 790    | 10                       | NR            | 920    | 0                        | NR            |
| 405    | 6                        | NR            | 535    | 501                      | NR            | 665    | 447                      | NR            | 795    | 9                        | NR            | 925    | 0                        | NR            |
| 410    | 13                       | NR            | 540    | 519                      | NR            | 670    | 392                      | NR            | 800    | 8                        | NR            | 930    | 0                        | NR            |
| 415    | 26                       | NR            | 545    | 542                      | NR            | 675    | 343                      | NR            | 805    | 7                        | NR            | 935    | 0                        | NR            |
| 420    | 51                       | NR            | 550    | 565                      | NR            | 680    | 299                      | NR            | 810    | 6                        | NR            | 940    | 0                        | NR            |
| 425    | 93                       | NR            | 555    | 593                      | NR            | 685    | 260                      | NR            | 815    | 5                        | NR            | 945    | 0                        | NR            |
| 430    | 156                      | NR            | 560    | 624                      | NR            | 690    | 225                      | NR            | 820    | 4                        | NR            | 950    | 0                        | NR            |
| 435    | 250                      | NR            | 565    | 662                      | NR            | 695    | 194                      | NR            | 825    | 4                        | NR            | 955    | 0                        | NR            |
| 440    | 391                      | NR            | 570    | 707                      | NR            | 700    | 166                      | NR            | 830    | 3                        | NR            | 960    | 0                        | NR            |
| 445    | 460                      | NR            | 575    | 756                      | NR            | 705    | 143                      | NR            | 835    | 3                        | NR            | 965    | 0                        | NR            |
| 450    | 293                      | NR            | 580    | 810                      | NR            | 710    | 122                      | NR            | 840    | 2                        | NR            | 970    | 0                        | NR            |
| 455    | 188                      | NR            | 585    | 860                      | NR            | 715    | 105                      | NR            | 845    | 2                        | NR            | 975    | 0                        | NR            |
| 460    | 149                      | NR            | 590    | 910                      | NR            | 720    | 90                       | NR            | 850    | 2                        | NR            | 980    | 0                        | NR            |
| 465    | 103                      | NR            | 595    | 950                      | NR            | 725    | 77                       | NR            | 855    | 2                        | NR            | 985    | 0                        | NR            |
| 470    | 80                       | NR            | 600    | 980                      | NR            | 730    | 66                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 82                       | NR            | 605    | 995                      | NR            | 735    | 56                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 92                       | NR            | 610    | 998                      | NR            | 740    | 48                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 116                      | NR            | 615    | 985                      | NR            | 745    | 41                       | NR            | 875    | 1                        | NR            |        |                          |               |

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TM-30-18

### Summary

$R_f = 82.2$   
 $R_g = 99.9$   
 $CIE R_a = 82.9$   
 $R_9 = 10.8$



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 76 | CES51 = 89 | CES76 = 75 |
| CES02 = 63 | CES27 = 89 | CES52 = 91 | CES77 = 87 |
| CES03 = 31 | CES28 = 90 | CES53 = 82 | CES78 = 76 |
| CES04 = 71 | CES29 = 68 | CES54 = 88 | CES79 = 91 |
| CES05 = 50 | CES30 = 69 | CES55 = 87 | CES80 = 90 |
| CES06 = 52 | CES31 = 72 | CES56 = 80 | CES81 = 74 |
| CES07 = 43 | CES32 = 71 | CES57 = 78 | CES82 = 95 |
| CES08 = 42 | CES33 = 71 | CES58 = 80 | CES83 = 90 |
| CES09 = 29 | CES34 = 84 | CES59 = 93 | CES84 = 94 |
| CES10 = 77 | CES35 = 92 | CES60 = 96 | CES85 = 83 |
| CES11 = 59 | CES36 = 92 | CES61 = 94 | CES86 = 69 |
| CES12 = 66 | CES37 = 89 | CES62 = 84 | CES87 = 85 |
| CES13 = 44 | CES38 = 75 | CES63 = 79 | CES88 = 84 |
| CES14 = 74 | CES39 = 93 | CES64 = 85 | CES89 = 74 |
| CES15 = 72 | CES40 = 89 | CES65 = 79 | CES90 = 81 |
| CES16 = 48 | CES41 = 85 | CES66 = 83 | CES91 = 96 |
| CES17 = 50 | CES42 = 88 | CES67 = 82 | CES92 = 72 |
| CES18 = 57 | CES43 = 81 | CES68 = 86 | CES93 = 84 |
| CES19 = 73 | CES44 = 98 | CES69 = 92 | CES94 = 63 |
| CES20 = 67 | CES45 = 87 | CES70 = 81 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 81 | CES96 = 85 |
| CES22 = 79 | CES47 = 76 | CES72 = 93 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 75 | CES98 = 82 |
| CES24 = 91 | CES49 = 81 | CES74 = 91 | CES99 = 76 |
| CES25 = 72 | CES50 = 88 | CES75 = 79 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)