

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: LUMARK

Report Number: P1067921

Luminaire Tested: **NAV-SA2A-727-U-LBC**

Issue Date: 08/07/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P1067921  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/07/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SA2A-727-U-LBC  
Description: Navion AREA AND ROADWAY LUMINAIRE 615mA 2xLight Square PACKAGE  
70CRI 2700K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL  
Light Source: (28) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5201.2 lumens  
Efficiency: N/A  
Efficacy: 94.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G2

Input Watts (W): 55.3  
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

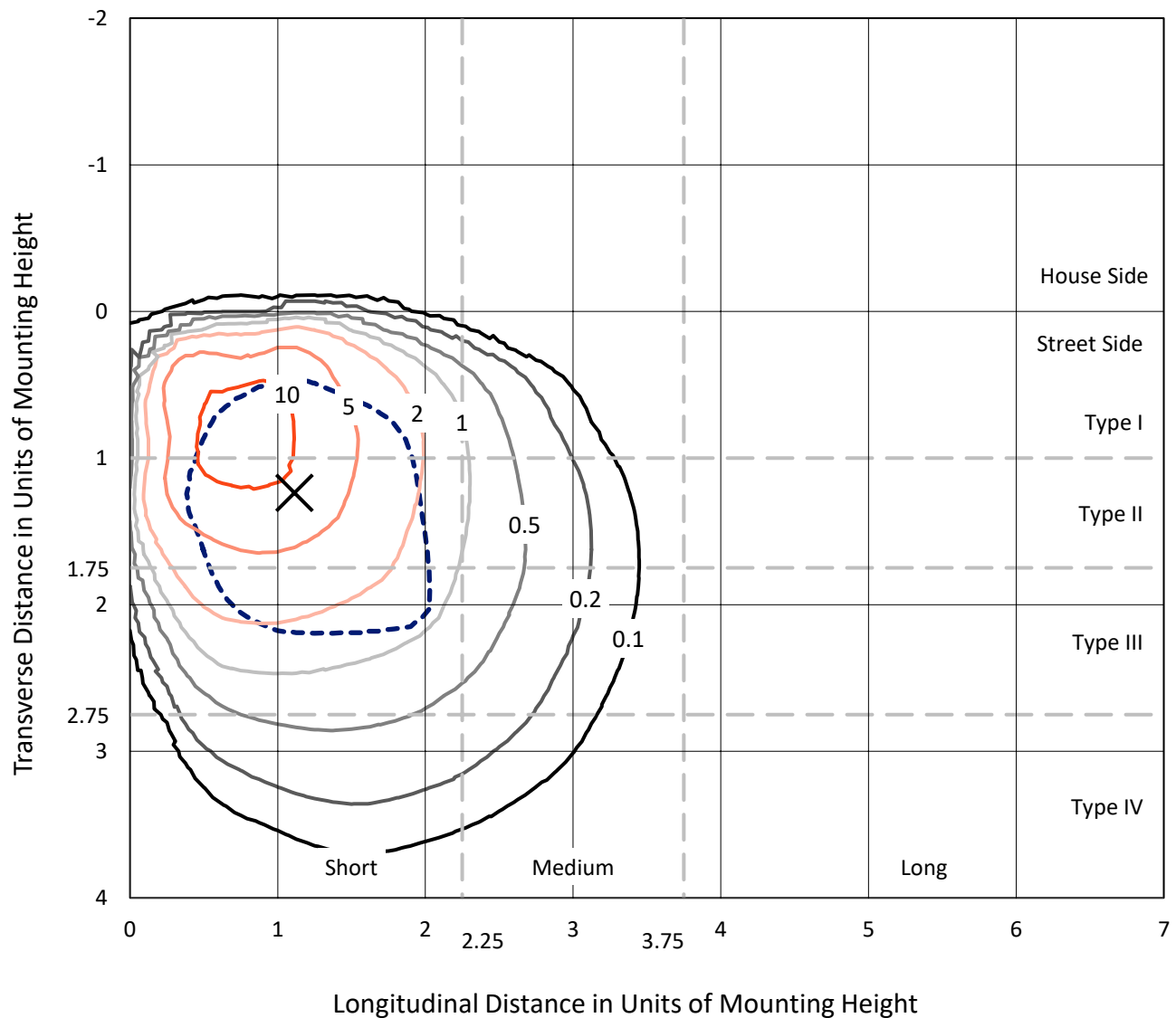


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

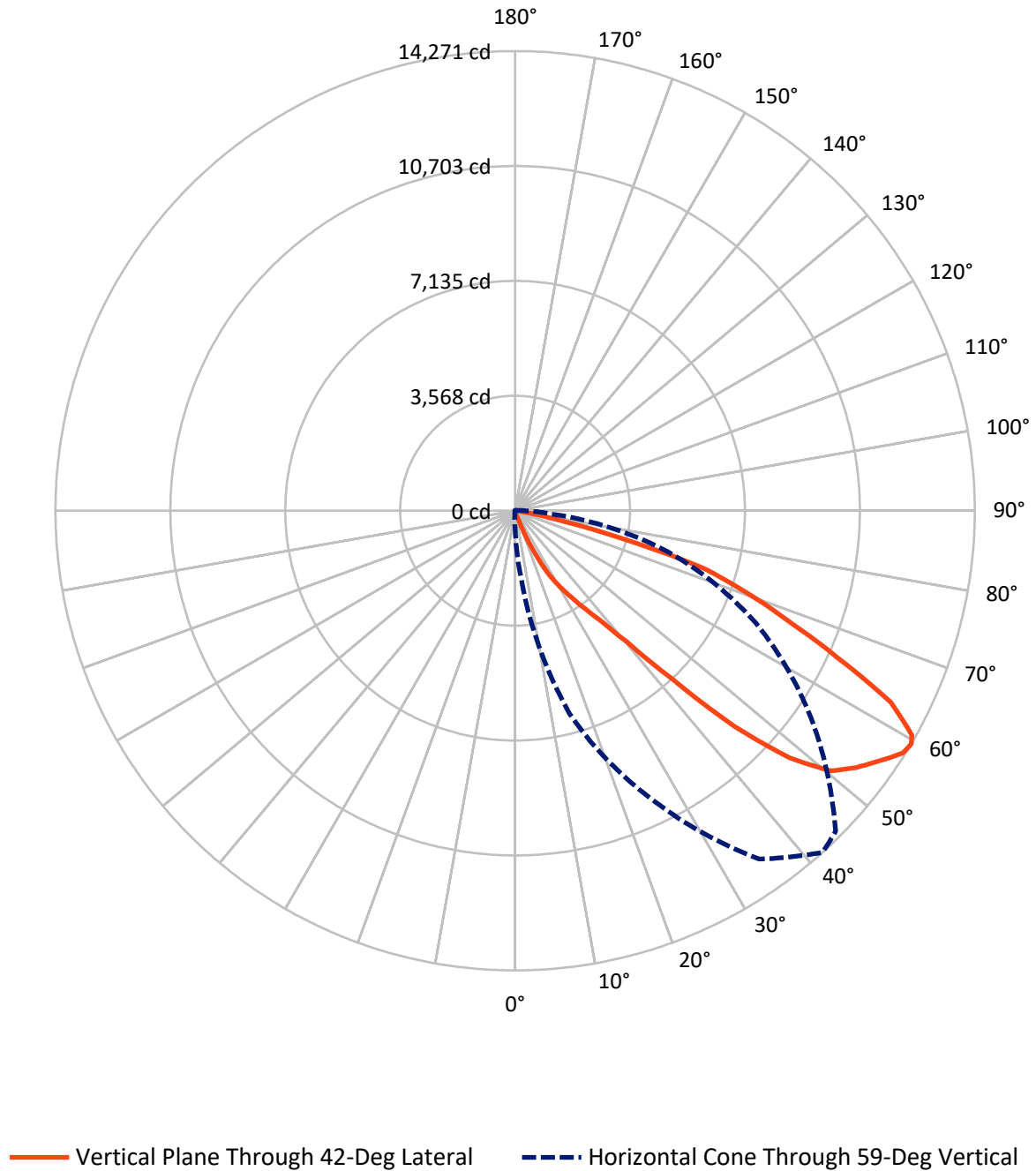


Based on 15 foot mounting height. Maximum calculated value = 15.5 fc  
 Type III - Short - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 25.1     | 0.0    | 25.1   |
|                    | % Fixture | 0.5      | 0.0    | 0.5    |
| <b>Street Side</b> | Lumens    | 5176.2   | 0.0    | 5176.2 |
|                    | % Fixture | 99.5     | 0.0    | 99.5   |
| <b>Total</b>       | Lumens    | 5201.2   | 0.0    | 5201.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1.5    | 0.0       |
| 10°-20°   | 7.6    | 0.1       |
| 20°-30°   | 97.0   | 1.9       |
| 30°-40°   | 327.1  | 6.3       |
| 40°-50°   | 988.0  | 19.0      |
| 50°-60°   | 1744.0 | 33.5      |
| 60°-70°   | 1535.6 | 29.5      |
| 70°-80°   | 488.8  | 9.4       |
| 80°-90°   | 11.7   | 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°    | 5201.2 | 100.0     |
| 0°-180°   | 5201.2 | 100.0     |



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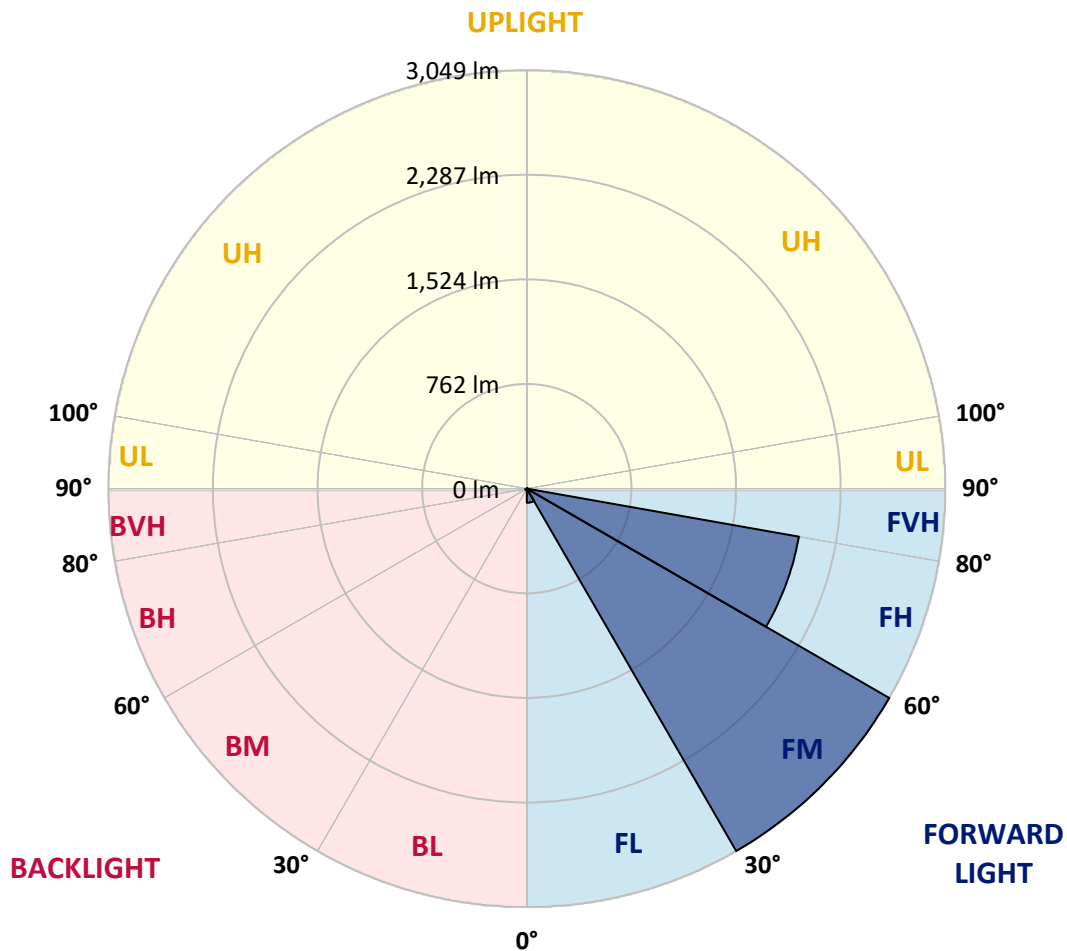
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 103.3  | 2.0       |                         |      |         |
| FM   | (30°-60°)   | 3048.8 | 58.6      |                         |      |         |
| FH   | (60°-80°)   | 2012.9 | 38.7      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 11.1   | 0.2       |                         |      | G1/100  |
| BL   | (0°-30°)    | 2.8    | 0.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 10.2   | 0.2       | B0/220                  |      |         |
| BH   | (60°-80°)   | 11.5   | 0.2       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.6    | 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°     | 42°     | 45°     | 55°     | 65°    | 75°    | 85°    |
|-------|-------|--------|--------|--------|---------|---------|---------|---------|--------|--------|--------|
| 0°    | 14.7  | 14.7   | 14.7   | 14.7   | 14.7    | 14.7    | 14.7    | 14.7    | 14.7   | 14.7   | 14.7   |
| 2.5°  | 22.8  | 22.8   | 21.2   | 19.6   | 17.9    | 16.3    | 16.3    | 16.3    | 14.7   | 14.7   | 13.0   |
| 5°    | 26.1  | 26.1   | 24.5   | 22.8   | 22.8    | 21.2    | 21.2    | 19.6    | 17.9   | 17.9   | 16.3   |
| 7.5°  | 27.7  | 27.7   | 27.7   | 27.7   | 26.1    | 26.1    | 26.1    | 24.5    | 22.8   | 21.2   | 19.6   |
| 10°   | 29.4  | 31.0   | 32.6   | 32.6   | 32.6    | 32.6    | 32.6    | 31.0    | 27.7   | 26.1   | 22.8   |
| 12.5° | 32.6  | 34.2   | 37.5   | 40.8   | 40.8    | 42.4    | 40.8    | 39.1    | 35.9   | 31.0   | 26.1   |
| 15°   | 35.9  | 39.1   | 44.0   | 50.6   | 57.1    | 58.7    | 58.7    | 53.8    | 47.3   | 37.5   | 31.0   |
| 17.5° | 40.8  | 45.7   | 58.7   | 79.9   | 102.7   | 120.7   | 120.7   | 107.6   | 75.0   | 48.9   | 35.9   |
| 20°   | 44.0  | 53.8   | 94.6   | 192.4  | 293.5   | 368.6   | 353.9   | 313.1   | 168.0  | 76.6   | 39.1   |
| 22.5° | 48.9  | 68.5   | 200.6  | 505.5  | 782.8   | 919.7   | 887.1   | 673.5   | 376.7  | 137.0  | 47.3   |
| 25°   | 55.4  | 99.5   | 397.9  | 947.5  | 1454.6  | 1603.0  | 1581.8  | 1257.3  | 686.6  | 229.9  | 60.3   |
| 27.5° | 68.5  | 146.8  | 637.6  | 1436.7 | 2146.1  | 2273.3  | 2265.1  | 1841.1  | 1097.5 | 370.2  | 78.3   |
| 30°   | 86.4  | 213.6  | 945.8  | 1952.0 | 2604.3  | 2733.2  | 2692.4  | 2268.4  | 1480.7 | 565.9  | 101.1  |
| 32.5° | 107.6 | 298.4  | 1224.7 | 2332.0 | 3026.7  | 3196.3  | 3147.4  | 2640.2  | 1788.9 | 732.2  | 150.0  |
| 35°   | 140.2 | 381.6  | 1500.3 | 2667.9 | 3514.3  | 3729.6  | 3648.0  | 3023.4  | 2054.8 | 919.7  | 181.0  |
| 37.5° | 156.6 | 430.5  | 1753.1 | 3033.2 | 4062.2  | 4355.8  | 4293.8  | 3507.8  | 2325.5 | 1159.5 | 221.8  |
| 40°   | 158.2 | 489.2  | 2015.6 | 3509.4 | 4836.8  | 5360.3  | 5249.4  | 4339.5  | 2829.4 | 1467.7 | 285.4  |
| 42.5° | 163.1 | 577.3  | 2356.5 | 4321.5 | 6358.3  | 7110.1  | 6984.6  | 5869.1  | 3972.5 | 2085.7 | 404.4  |
| 45°   | 185.9 | 743.6  | 3051.2 | 5839.8 | 8447.3  | 9549.7  | 9404.6  | 8000.5  | 5569.1 | 3248.5 | 689.8  |
| 47.5° | 265.8 | 1118.7 | 4269.3 | 7478.7 | 10583.6 | 11462.6 | 11426.7 | 9680.2  | 7015.5 | 4440.6 | 1169.3 |
| 50°   | 427.3 | 1717.2 | 5655.5 | 8856.7 | 11943.7 | 12698.7 | 12609.1 | 10381.4 | 7840.7 | 5254.3 | 1498.7 |
| 52.5° | 570.8 | 2289.6 | 6526.3 | 9363.8 | 12349.8 | 13249.9 | 13140.7 | 10637.5 | 8057.6 | 5494.0 | 1590.0 |
| 55°   | 606.6 | 2496.7 | 6785.6 | 9520.4 | 12618.8 | 13716.3 | 13558.2 | 10808.7 | 8085.3 | 5322.8 | 1438.3 |
| 57.5° | 588.7 | 2301.0 | 6617.6 | 9673.7 | 12993.9 | 14195.8 | 13985.4 | 11143.0 | 8178.3 | 5032.5 | 1197.0 |
| 59°   | 557.7 | 2059.7 | 6513.3 | 9796.0 | 13201.0 | 14270.8 | 14073.5 | 11216.4 | 8240.2 | 4900.4 | 1050.2 |
| 60°   | 521.8 | 1896.6 | 6431.7 | 9875.9 | 13188.0 | 14153.4 | 13949.5 | 11182.1 | 8264.7 | 4786.3 | 980.1  |
| 62.5° | 402.8 | 1513.3 | 6314.3 | 9818.8 | 12364.4 | 13082.0 | 12966.2 | 10343.9 | 7905.9 | 4421.0 | 773.0  |
| 65°   | 313.1 | 1157.8 | 5883.8 | 8757.2 | 10521.7 | 11004.4 | 10968.5 | 8758.8  | 6653.5 | 3811.1 | 557.7  |
| 67.5° | 247.9 | 844.7  | 4975.5 | 7092.2 | 8465.3  | 9151.8  | 9125.7  | 7110.1  | 5050.5 | 2912.5 | 401.2  |
| 70°   | 202.2 | 601.8  | 3411.6 | 5347.3 | 6770.9  | 7635.2  | 7597.7  | 5722.3  | 3742.6 | 1847.7 | 291.9  |
| 72.5° | 171.2 | 384.9  | 2069.4 | 4031.2 | 5650.6  | 6144.7  | 6035.5  | 4616.7  | 2721.7 | 1006.2 | 231.6  |
| 75°   | 145.1 | 236.5  | 1025.7 | 2513.0 | 3365.9  | 3362.6  | 3253.4  | 2444.5  | 1461.2 | 492.5  | 184.3  |
| 77.5° | 117.4 | 166.3  | 402.8  | 689.8  | 1061.6  | 1314.4  | 1293.2  | 865.9   | 437.0  | 143.5  | 114.2  |
| 80°   | 76.6  | 78.3   | 107.6  | 189.2  | 291.9   | 322.9   | 366.9   | 264.2   | 127.2  | 68.5   | 47.3   |
| 82.5° | 34.2  | 37.5   | 48.9   | 62.0   | 62.0    | 57.1    | 50.6    | 37.5    | 27.7   | 22.8   | 11.4   |
| 85°   | 8.2   | 11.4   | 8.2    | 9.8    | 8.2     | 6.5     | 6.5     | 3.3     | 0.0    | 0.0    | 0.0    |
| 87.5° | 1.6   | 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    | 0.0    |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°   | 95°   | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 0°    | 14.7  | 14.7  | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 |
| 2.5°  | 13.0  | 13.0  | 13.0 | 11.4 | 11.4 | 11.4 | 9.8  | 9.8  | 9.8  | 8.2  | 8.2  |
| 5°    | 16.3  | 14.7  | 13.0 | 13.0 | 11.4 | 11.4 | 9.8  | 8.2  | 8.2  | 8.2  | 6.5  |
| 7.5°  | 17.9  | 16.3  | 14.7 | 13.0 | 11.4 | 9.8  | 9.8  | 8.2  | 6.5  | 6.5  | 6.5  |
| 10°   | 21.2  | 19.6  | 16.3 | 13.0 | 11.4 | 9.8  | 8.2  | 8.2  | 6.5  | 4.9  | 4.9  |
| 12.5° | 24.5  | 21.2  | 17.9 | 14.7 | 11.4 | 9.8  | 8.2  | 8.2  | 6.5  | 4.9  | 3.3  |
| 15°   | 27.7  | 24.5  | 19.6 | 14.7 | 11.4 | 9.8  | 8.2  | 8.2  | 4.9  | 3.3  | 1.6  |
| 17.5° | 31.0  | 26.1  | 19.6 | 16.3 | 11.4 | 9.8  | 8.2  | 6.5  | 3.3  | 1.6  | 0.0  |
| 20°   | 32.6  | 27.7  | 21.2 | 16.3 | 11.4 | 9.8  | 8.2  | 4.9  | 1.6  | 0.0  | 0.0  |
| 22.5° | 35.9  | 31.0  | 22.8 | 16.3 | 11.4 | 8.2  | 4.9  | 1.6  | 0.0  | 0.0  | 0.0  |
| 25°   | 42.4  | 32.6  | 22.8 | 16.3 | 11.4 | 8.2  | 3.3  | 0.0  | 0.0  | 0.0  | 0.0  |
| 27.5° | 47.3  | 35.9  | 22.8 | 16.3 | 11.4 | 6.5  | 1.6  | 0.0  | 0.0  | 0.0  | 0.0  |
| 30°   | 55.4  | 39.1  | 24.5 | 16.3 | 11.4 | 4.9  | 1.6  | 0.0  | 0.0  | 0.0  | 0.0  |
| 32.5° | 68.5  | 42.4  | 24.5 | 16.3 | 9.8  | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 35°   | 83.2  | 48.9  | 24.5 | 16.3 | 9.8  | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 37.5° | 84.8  | 52.2  | 24.5 | 16.3 | 9.8  | 3.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 40°   | 88.1  | 48.9  | 26.1 | 16.3 | 9.8  | 3.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 42.5° | 101.1 | 45.7  | 27.7 | 16.3 | 9.8  | 3.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 45°   | 150.0 | 47.3  | 27.7 | 17.9 | 9.8  | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 47.5° | 260.9 | 48.9  | 26.1 | 17.9 | 9.8  | 4.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 50°   | 334.3 | 57.1  | 26.1 | 19.6 | 11.4 | 3.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 52.5° | 355.5 | 66.9  | 26.1 | 21.2 | 14.7 | 1.6  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 55°   | 345.7 | 78.3  | 27.7 | 22.8 | 17.9 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 57.5° | 319.6 | 84.8  | 29.4 | 24.5 | 19.6 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 59°   | 291.9 | 89.7  | 34.2 | 26.1 | 19.6 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 60°   | 269.1 | 94.6  | 35.9 | 27.7 | 19.6 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 62.5° | 216.9 | 101.1 | 39.1 | 32.6 | 16.3 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 65°   | 189.2 | 106.0 | 40.8 | 35.9 | 14.7 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 67.5° | 172.9 | 109.3 | 44.0 | 37.5 | 13.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 70°   | 159.8 | 107.6 | 47.3 | 35.9 | 11.4 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 72.5° | 145.1 | 102.7 | 57.1 | 32.6 | 9.8  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 75°   | 130.5 | 93.0  | 62.0 | 29.4 | 6.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 77.5° | 94.6  | 78.3  | 57.1 | 26.1 | 3.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 80°   | 40.8  | 42.4  | 40.8 | 19.6 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 82.5° | 8.2   | 9.8   | 8.2  | 4.9  | 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  | 0.0  |



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**CANDELA DISTRIBUTION (continued):**

|       | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 0°    | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 |
| 2.5°  | 8.2  | 8.2  | 8.2  | 8.2  | 9.8  | 9.8  | 13.0 | 16.3 | 19.6 | 21.2 | 21.2 |
| 5°    | 6.5  | 6.5  | 6.5  | 6.5  | 6.5  | 8.2  | 9.8  | 13.0 | 17.9 | 19.6 | 19.6 |
| 7.5°  | 4.9  | 4.9  | 4.9  | 4.9  | 4.9  | 4.9  | 8.2  | 11.4 | 16.3 | 17.9 | 19.6 |
| 10°   | 4.9  | 3.3  | 3.3  | 1.6  | 1.6  | 3.3  | 4.9  | 9.8  | 14.7 | 16.3 | 17.9 |
| 12.5° | 3.3  | 1.6  | 1.6  | 0.0  | 0.0  | 1.6  | 3.3  | 8.2  | 13.0 | 14.7 | 16.3 |
| 15°   | 1.6  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 6.5  | 11.4 | 13.0 | 16.3 |
| 17.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 4.9  | 9.8  | 13.0 | 14.7 |
| 20°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 3.3  | 8.2  | 11.4 | 13.0 |
| 22.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 6.5  | 9.8  | 11.4 |
| 25°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 4.9  | 6.5  | 8.2  |
| 27.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 3.3  | 4.9  | 6.5  |
| 30°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 3.3  | 4.9  | 6.5  |
| 32.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  | 4.9  |
| 35°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  | 4.9  |
| 37.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  | 3.3  |
| 40°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  |
| 42.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  |
| 45°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  |
| 47.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  |
| 50°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  |
| 52.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 1.6  |
| 55°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 1.6  |
| 57.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  |
| 59°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  |
| 60°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  |
| 62.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  |
| 65°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  |
| 67.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  |
| 70°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  |
| 72.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  |
| 75°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 1.6  |
| 77.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  |
| 80°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 3.3  |
| 82.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 1.6  |
| 85°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 1.6  |
| 87.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 1.6  |
| 90°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |

REPORT NUMBER: P1067921

CATALOG NUMBER: NAV-SA2A-727-U-LBC

**CANDELA DISTRIBUTION (continued):**

|       | 285° | 295° | 305° | 315° | 318° | 325° | 335° | 345° | 355°  | 360°  |
|-------|------|------|------|------|------|------|------|------|-------|-------|
| 0°    | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7  | 14.7  |
| 2.5°  | 22.8 | 22.8 | 21.2 | 19.6 | 19.6 | 19.6 | 21.2 | 22.8 | 22.8  | 22.8  |
| 5°    | 21.2 | 21.2 | 19.6 | 19.6 | 19.6 | 19.6 | 21.2 | 24.5 | 26.1  | 26.1  |
| 7.5°  | 21.2 | 21.2 | 19.6 | 19.6 | 19.6 | 19.6 | 21.2 | 24.5 | 26.1  | 27.7  |
| 10°   | 19.6 | 19.6 | 19.6 | 19.6 | 17.9 | 19.6 | 21.2 | 24.5 | 29.4  | 29.4  |
| 12.5° | 19.6 | 19.6 | 19.6 | 19.6 | 17.9 | 19.6 | 22.8 | 26.1 | 31.0  | 32.6  |
| 15°   | 19.6 | 19.6 | 19.6 | 17.9 | 17.9 | 19.6 | 22.8 | 27.7 | 32.6  | 35.9  |
| 17.5° | 17.9 | 19.6 | 19.6 | 17.9 | 17.9 | 19.6 | 22.8 | 27.7 | 35.9  | 40.8  |
| 20°   | 16.3 | 17.9 | 19.6 | 17.9 | 17.9 | 17.9 | 22.8 | 27.7 | 37.5  | 44.0  |
| 22.5° | 14.7 | 16.3 | 17.9 | 17.9 | 16.3 | 17.9 | 22.8 | 29.4 | 40.8  | 48.9  |
| 25°   | 13.0 | 14.7 | 14.7 | 16.3 | 16.3 | 17.9 | 22.8 | 29.4 | 42.4  | 55.4  |
| 27.5° | 9.8  | 11.4 | 13.0 | 14.7 | 14.7 | 17.9 | 22.8 | 31.0 | 45.7  | 68.5  |
| 30°   | 8.2  | 9.8  | 11.4 | 13.0 | 14.7 | 17.9 | 22.8 | 31.0 | 48.9  | 86.4  |
| 32.5° | 8.2  | 9.8  | 11.4 | 13.0 | 14.7 | 16.3 | 22.8 | 32.6 | 53.8  | 107.6 |
| 35°   | 6.5  | 8.2  | 9.8  | 13.0 | 13.0 | 16.3 | 22.8 | 32.6 | 58.7  | 140.2 |
| 37.5° | 6.5  | 8.2  | 9.8  | 13.0 | 13.0 | 16.3 | 22.8 | 32.6 | 71.8  | 156.6 |
| 40°   | 4.9  | 6.5  | 8.2  | 13.0 | 13.0 | 16.3 | 24.5 | 34.2 | 73.4  | 158.2 |
| 42.5° | 4.9  | 6.5  | 8.2  | 11.4 | 13.0 | 16.3 | 24.5 | 34.2 | 68.5  | 163.1 |
| 45°   | 4.9  | 6.5  | 8.2  | 13.0 | 14.7 | 17.9 | 24.5 | 35.9 | 66.9  | 185.9 |
| 47.5° | 4.9  | 6.5  | 8.2  | 13.0 | 16.3 | 17.9 | 24.5 | 35.9 | 68.5  | 265.8 |
| 50°   | 4.9  | 6.5  | 8.2  | 13.0 | 17.9 | 17.9 | 24.5 | 35.9 | 75.0  | 427.3 |
| 52.5° | 3.3  | 4.9  | 6.5  | 11.4 | 14.7 | 19.6 | 26.1 | 34.2 | 79.9  | 570.8 |
| 55°   | 3.3  | 3.3  | 4.9  | 9.8  | 13.0 | 21.2 | 27.7 | 34.2 | 93.0  | 606.6 |
| 57.5° | 3.3  | 3.3  | 4.9  | 8.2  | 11.4 | 22.8 | 29.4 | 34.2 | 107.6 | 588.7 |
| 59°   | 3.3  | 3.3  | 3.3  | 8.2  | 9.8  | 22.8 | 29.4 | 35.9 | 109.3 | 557.7 |
| 60°   | 3.3  | 3.3  | 3.3  | 6.5  | 9.8  | 22.8 | 31.0 | 37.5 | 110.9 | 521.8 |
| 62.5° | 1.6  | 1.6  | 1.6  | 6.5  | 8.2  | 22.8 | 34.2 | 45.7 | 114.2 | 402.8 |
| 65°   | 3.3  | 3.3  | 1.6  | 4.9  | 8.2  | 19.6 | 39.1 | 48.9 | 115.8 | 313.1 |
| 67.5° | 3.3  | 3.3  | 3.3  | 6.5  | 8.2  | 19.6 | 40.8 | 50.6 | 115.8 | 247.9 |
| 70°   | 3.3  | 3.3  | 3.3  | 6.5  | 9.8  | 19.6 | 40.8 | 52.2 | 114.2 | 202.2 |
| 72.5° | 3.3  | 3.3  | 3.3  | 6.5  | 9.8  | 17.9 | 37.5 | 53.8 | 109.3 | 171.2 |
| 75°   | 3.3  | 3.3  | 3.3  | 4.9  | 8.2  | 16.3 | 35.9 | 58.7 | 99.5  | 145.1 |
| 77.5° | 3.3  | 3.3  | 3.3  | 3.3  | 6.5  | 13.0 | 32.6 | 65.2 | 88.1  | 117.4 |
| 80°   | 4.9  | 3.3  | 3.3  | 3.3  | 4.9  | 11.4 | 31.0 | 63.6 | 73.4  | 76.6  |
| 82.5° | 4.9  | 3.3  | 3.3  | 1.6  | 3.3  | 8.2  | 24.5 | 48.9 | 37.5  | 34.2  |
| 85°   | 3.3  | 3.3  | 3.3  | 1.6  | 1.6  | 4.9  | 11.4 | 14.7 | 11.4  | 8.2   |
| 87.5° | 3.3  | 3.3  | 3.3  | 1.6  | 1.6  | 1.6  | 1.6  | 1.6  | 1.6   | 1.6   |
| 90°   | 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: SP1-2407-184-3

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-727-U-5WQ

Data in this report applies to families of products including GSS-SB1A-727-U-5WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-3  
 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-727-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI  
 2700K CCT 26 LEDS

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 2672     | CRI (Ra): | 71.1 |      |       |
| CIE u':                   | 0.2638   | R1:       | 68.3 | R9:  | -27.8 |
| CIE v':                   | 0.5276   | R2:       | 79.8 | R10: | 54.4  |
| Duv:                      | -0.0002  | R3:       | 91.2 | R11: | 65.8  |
| CIE x:                    | 0.4619   | R4:       | 69.4 | R12: | 45.6  |
| CIE y:                    | 0.4106   | R5:       | 66.5 | R13: | 69.8  |
| CIE z:                    | 0.1275   | R6:       | 72.6 | R14: | 94.5  |
| Peak Wavelength (nm):     | 601      | R7:       | 77.0 | R15: | 60.1  |
| Dominant Wavelength (nm): | 584      | R8:       | 44.1 |      |       |
| Purity:                   | 61.88407 |           |      |      |       |
| Rf:                       | 67.9     |           |      |      |       |
| Rg:                       | 98.6     |           |      |      |       |



### Test Conditions

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

REPORT NUMBER: SP1-2407-184-3

| 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: SP1-2407-184-3

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-3

### 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               | 52                                   | NR                             | 620               | 888                                  | NR                             | 750               | 27                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 87                                   | NR                             | 625               | 834                                  | NR                             | 755               | 23                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 135                                  | NR                             | 630               | 776                                  | NR                             | 760               | 20                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 196                                  | NR                             | 635               | 712                                  | NR                             | 765               | 17                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 258                                  | NR                             | 640               | 648                                  | NR                             | 770               | 15                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 1                                    | NR                             | 515               | 317                                  | NR                             | 645               | 583                                  | NR                             | 775               | 12                                   | NR                             | 905               | 0                                    | NR                             |
| 390               | 2                                    | NR                             | 520               | 368                                  | NR                             | 650               | 523                                  | NR                             | 780               | 11                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 4                                    | NR                             | 525               | 408                                  | NR                             | 655               | 465                                  | NR                             | 785               | 9                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 6                                    | NR                             | 530               | 443                                  | NR                             | 660               | 410                                  | NR                             | 790               | 8                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 11                                   | NR                             | 535               | 473                                  | NR                             | 665               | 360                                  | NR                             | 795               | 7                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 23                                   | NR                             | 540               | 498                                  | NR                             | 670               | 313                                  | NR                             | 800               | 6                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 51                                   | NR                             | 545               | 530                                  | NR                             | 675               | 272                                  | NR                             | 805               | 5                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 111                                  | NR                             | 550               | 563                                  | NR                             | 680               | 236                                  | NR                             | 810               | 4                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 214                                  | NR                             | 555               | 605                                  | NR                             | 685               | 203                                  | NR                             | 815               | 4                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 339                                  | NR                             | 560               | 651                                  | NR                             | 690               | 175                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 467                                  | NR                             | 565               | 705                                  | NR                             | 695               | 150                                  | NR                             | 825               | 3                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 535                                  | NR                             | 570               | 765                                  | NR                             | 700               | 128                                  | NR                             | 830               | 3                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 372                                  | NR                             | 575               | 824                                  | NR                             | 705               | 110                                  | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 160                                  | NR                             | 580               | 882                                  | NR                             | 710               | 94                                   | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 89                                   | NR                             | 585               | 930                                  | NR                             | 715               | 80                                   | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 53                                   | NR                             | 590               | 968                                  | NR                             | 720               | 69                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 31                                   | NR                             | 595               | 991                                  | NR                             | 725               | 59                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 23                                   | NR                             | 600               | 999                                  | NR                             | 730               | 50                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 21                                   | NR                             | 605               | 992                                  | NR                             | 735               | 43                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 23                                   | NR                             | 610               | 969                                  | NR                             | 740               | 36                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 32                                   | NR                             | 615               | 935                                  | NR                             | 745               | 31                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-2407-184-3

### Scotopic Flux vs. Wavelength


**Scotopic Lumens: NR**
**S/P: 1.02**

| $\lambda$<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               | 52                                   | NR                             | 620               | 888                                  | NR                             | 750               | 27                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 87                                   | NR                             | 625               | 834                                  | NR                             | 755               | 23                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 135                                  | NR                             | 630               | 776                                  | NR                             | 760               | 20                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 196                                  | NR                             | 635               | 712                                  | NR                             | 765               | 17                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 258                                  | NR                             | 640               | 648                                  | NR                             | 770               | 15                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 1                                    | NR                             | 515               | 317                                  | NR                             | 645               | 583                                  | NR                             | 775               | 12                                   | NR                             | 905               | 0                                    | NR                             |
| 390               | 2                                    | NR                             | 520               | 368                                  | NR                             | 650               | 523                                  | NR                             | 780               | 11                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 4                                    | NR                             | 525               | 408                                  | NR                             | 655               | 465                                  | NR                             | 785               | 9                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 6                                    | NR                             | 530               | 443                                  | NR                             | 660               | 410                                  | NR                             | 790               | 8                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 11                                   | NR                             | 535               | 473                                  | NR                             | 665               | 360                                  | NR                             | 795               | 7                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 23                                   | NR                             | 540               | 498                                  | NR                             | 670               | 313                                  | NR                             | 800               | 6                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 51                                   | NR                             | 545               | 530                                  | NR                             | 675               | 272                                  | NR                             | 805               | 5                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 111                                  | NR                             | 550               | 563                                  | NR                             | 680               | 236                                  | NR                             | 810               | 4                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 214                                  | NR                             | 555               | 605                                  | NR                             | 685               | 203                                  | NR                             | 815               | 4                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 339                                  | NR                             | 560               | 651                                  | NR                             | 690               | 175                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 467                                  | NR                             | 565               | 705                                  | NR                             | 695               | 150                                  | NR                             | 825               | 3                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 535                                  | NR                             | 570               | 765                                  | NR                             | 700               | 128                                  | NR                             | 830               | 3                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 372                                  | NR                             | 575               | 824                                  | NR                             | 705               | 110                                  | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 160                                  | NR                             | 580               | 882                                  | NR                             | 710               | 94                                   | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 89                                   | NR                             | 585               | 930                                  | NR                             | 715               | 80                                   | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 53                                   | NR                             | 590               | 968                                  | NR                             | 720               | 69                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 31                                   | NR                             | 595               | 991                                  | NR                             | 725               | 59                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 23                                   | NR                             | 600               | 999                                  | NR                             | 730               | 50                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 21                                   | NR                             | 605               | 992                                  | NR                             | 735               | 43                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 23                                   | NR                             | 610               | 969                                  | NR                             | 740               | 36                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 32                                   | NR                             | 615               | 935                                  | NR                             | 745               | 31                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 1.71**

| $\lambda$<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               | 52                                   | NR                             | 620               | 888                                  | NR                             | 750               | 27                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 87                                   | NR                             | 625               | 834                                  | NR                             | 755               | 23                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 135                                  | NR                             | 630               | 776                                  | NR                             | 760               | 20                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 196                                  | NR                             | 635               | 712                                  | NR                             | 765               | 17                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 258                                  | NR                             | 640               | 648                                  | NR                             | 770               | 15                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 1                                    | NR                             | 515               | 317                                  | NR                             | 645               | 583                                  | NR                             | 775               | 12                                   | NR                             | 905               | 0                                    | NR                             |
| 390               | 2                                    | NR                             | 520               | 368                                  | NR                             | 650               | 523                                  | NR                             | 780               | 11                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 4                                    | NR                             | 525               | 408                                  | NR                             | 655               | 465                                  | NR                             | 785               | 9                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 6                                    | NR                             | 530               | 443                                  | NR                             | 660               | 410                                  | NR                             | 790               | 8                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 11                                   | NR                             | 535               | 473                                  | NR                             | 665               | 360                                  | NR                             | 795               | 7                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 23                                   | NR                             | 540               | 498                                  | NR                             | 670               | 313                                  | NR                             | 800               | 6                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 51                                   | NR                             | 545               | 530                                  | NR                             | 675               | 272                                  | NR                             | 805               | 5                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 111                                  | NR                             | 550               | 563                                  | NR                             | 680               | 236                                  | NR                             | 810               | 4                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 214                                  | NR                             | 555               | 605                                  | NR                             | 685               | 203                                  | NR                             | 815               | 4                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 339                                  | NR                             | 560               | 651                                  | NR                             | 690               | 175                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 467                                  | NR                             | 565               | 705                                  | NR                             | 695               | 150                                  | NR                             | 825               | 3                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 535                                  | NR                             | 570               | 765                                  | NR                             | 700               | 128                                  | NR                             | 830               | 3                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 372                                  | NR                             | 575               | 824                                  | NR                             | 705               | 110                                  | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 160                                  | NR                             | 580               | 882                                  | NR                             | 710               | 94                                   | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 89                                   | NR                             | 585               | 930                                  | NR                             | 715               | 80                                   | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 53                                   | NR                             | 590               | 968                                  | NR                             | 720               | 69                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 31                                   | NR                             | 595               | 991                                  | NR                             | 725               | 59                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 23                                   | NR                             | 600               | 999                                  | NR                             | 730               | 50                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 21                                   | NR                             | 605               | 992                                  | NR                             | 735               | 43                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 23                                   | NR                             | 610               | 969                                  | NR                             | 740               | 36                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 32                                   | NR                             | 615               | 935                                  | NR                             | 745               | 31                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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TM-30-18

### Summary

$R_f = 67.9$   
 $R_g = 98.6$   
 $CIE R_a = 71.1$   
 $R_g = -27.8$

### Spectral Power Distribution Comparison

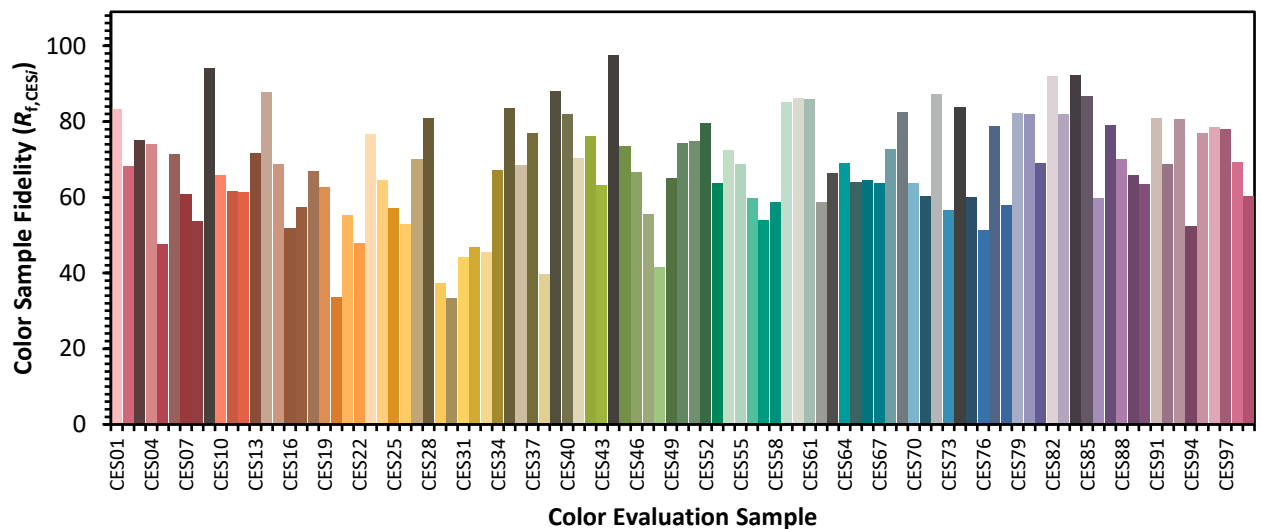


### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 52 | CES31 = 44 | CES56 = 60 | CES81 = 69 |
| CES07 = 42 | CES32 = 47 | CES57 = 54 | CES82 = 92 |
| CES08 = 41 | CES33 = 45 | CES58 = 59 | CES83 = 82 |
| CES09 = 29 | CES34 = 67 | CES59 = 85 | CES84 = 92 |
| CES10 = 77 | CES35 = 84 | CES60 = 86 | CES85 = 87 |
| CES11 = 60 | CES36 = 68 | CES61 = 86 | CES86 = 60 |
| CES12 = 66 | CES37 = 77 | CES62 = 59 | CES87 = 79 |
| CES13 = 44 | CES38 = 40 | CES63 = 66 | CES88 = 70 |
| CES14 = 74 | CES39 = 88 | CES64 = 69 | CES89 = 66 |
| CES15 = 72 | CES40 = 82 | CES65 = 64 | CES90 = 64 |
| CES16 = 48 | CES41 = 70 | CES66 = 65 | CES91 = 81 |
| CES17 = 51 | CES42 = 76 | CES67 = 64 | CES92 = 69 |
| CES18 = 57 | CES43 = 63 | CES68 = 73 | CES93 = 81 |
| CES19 = 73 | CES44 = 97 | CES69 = 83 | CES94 = 53 |
| CES20 = 67 | CES45 = 74 | CES70 = 64 | CES95 = 77 |
| CES21 = 88 | CES46 = 67 | CES71 = 60 | CES96 = 79 |
| CES22 = 80 | CES47 = 55 | CES72 = 87 | CES97 = 78 |
| CES23 = 92 | CES48 = 42 | CES73 = 57 | CES98 = 69 |
| CES24 = 92 | CES49 = 65 | CES74 = 84 | CES99 = 60 |
| CES25 = 73 | CES50 = 74 | CES75 = 60 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)