

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P324656

Luminaire Tested: **GLEON-SA2D-830-U-SLR-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P324656  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GLEON-SA2D-830-U-SLR-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(2) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9351 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B1 - U0 - G2

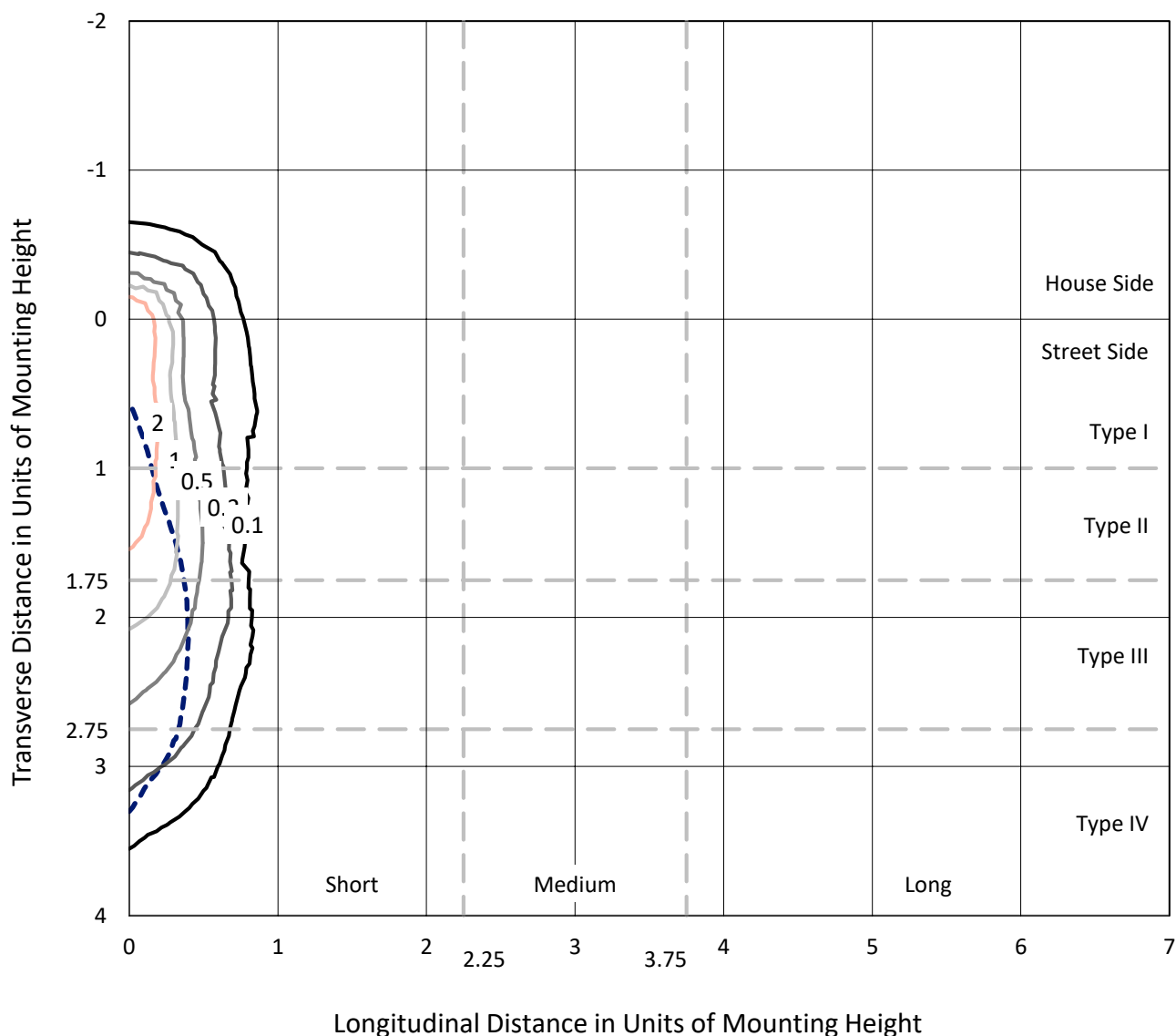
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

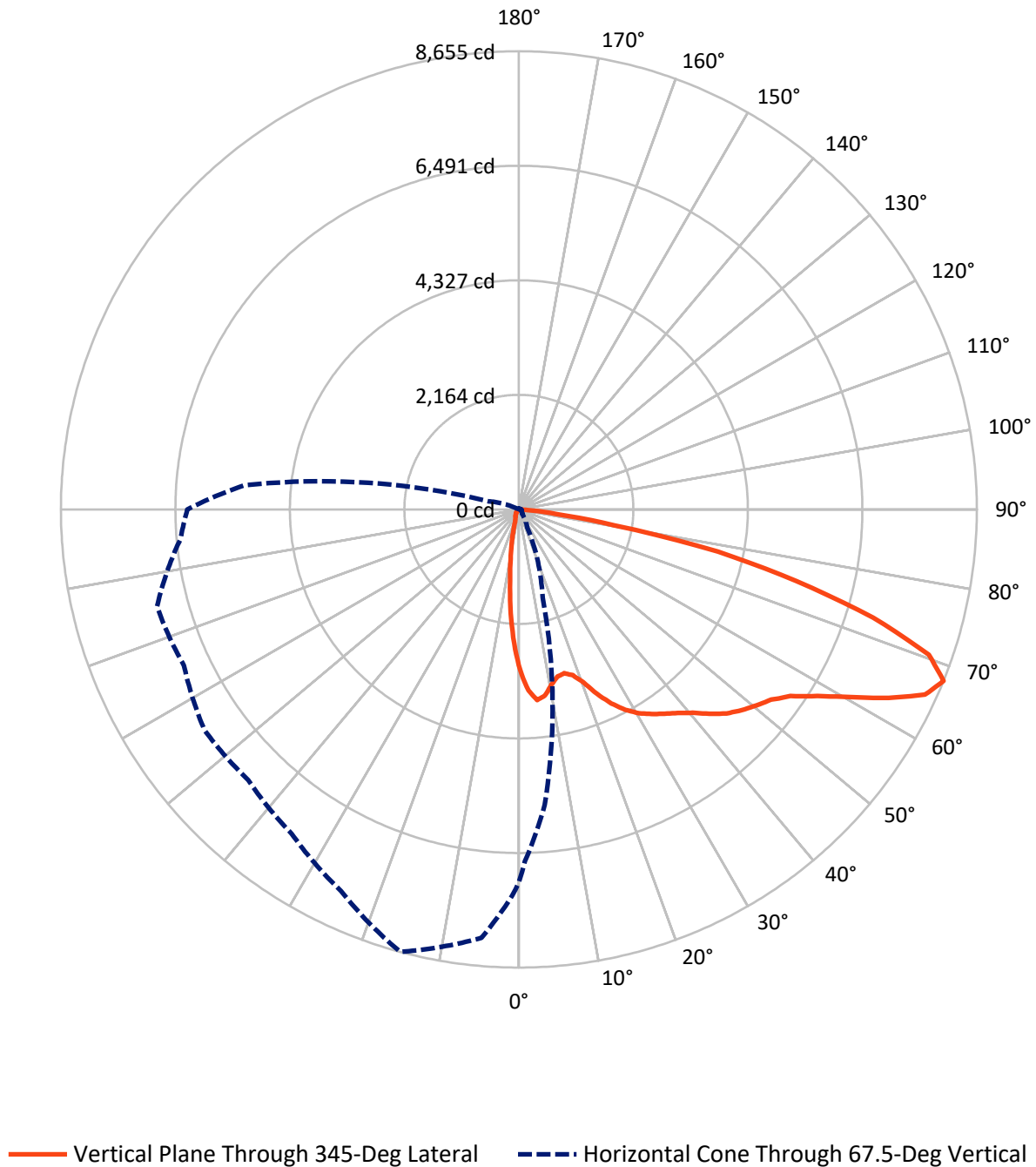
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc  
 Type IV - Medium - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1131.8   | 0.0    | 1131.8 |
|                    | % Fixture | 12.1     | 0.0    | 12.1   |
| <b>Street Side</b> | Lumens    | 8219.2   | 0.0    | 8219.2 |
|                    | % Fixture | 87.9     | 0.0    | 87.9   |
| <b>Total</b>       | Lumens    | 9351.0   | 0.0    | 9351.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 233.8  | 2.5       |
| 10°-20°   | 465.3  | 5.0       |
| 20°-30°   | 660.8  | 7.1       |
| 30°-40°   | 976.0  | 10.4      |
| 40°-50°   | 1407.6 | 15.1      |
| 50°-60°   | 1976.0 | 21.1      |
| 60°-70°   | 2303.5 | 24.6      |
| 70°-80°   | 1177.6 | 12.6      |
| 80°-90°   | 150.4  | 1.6       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 9351.0 | 100.0     |
| 0°-180°   | 9351.0 | 100.0     |

**Coefficient of Utilization**



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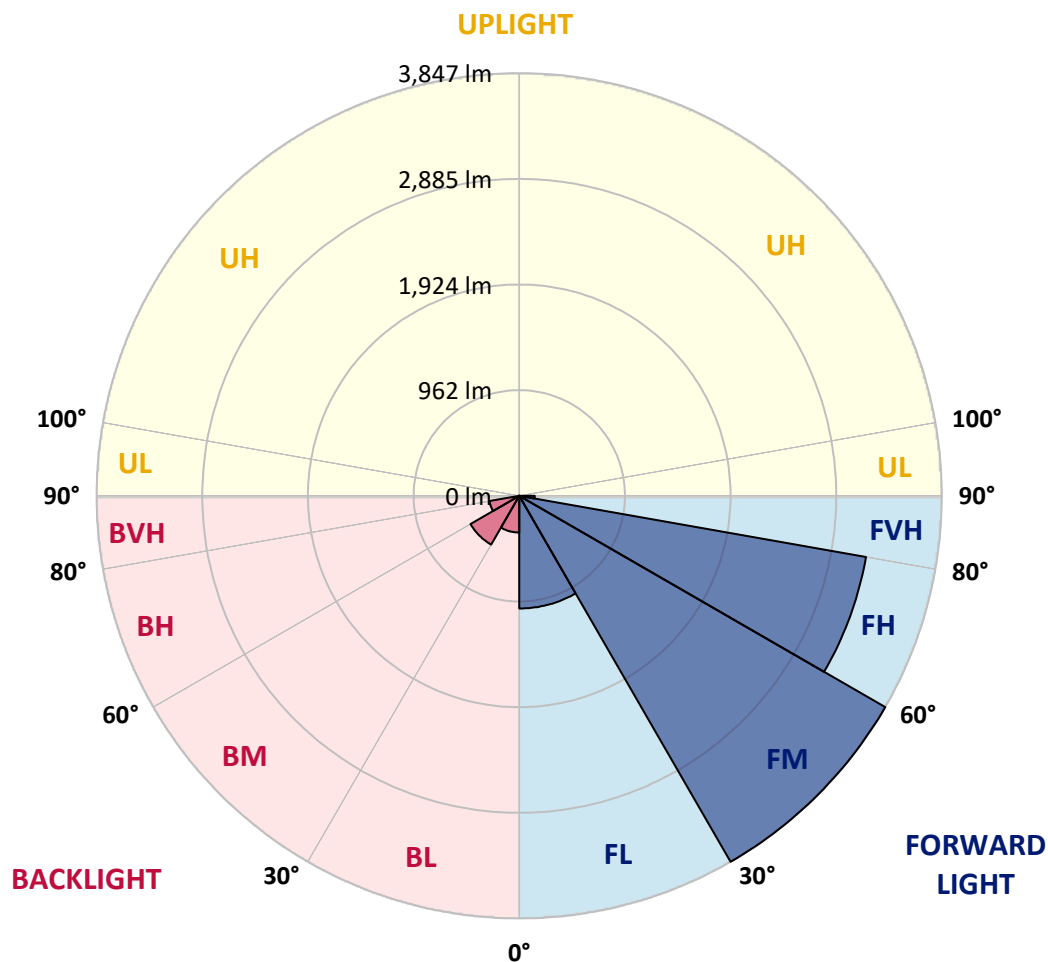
CATALOG NUMBER: GLEON-SA2D-830-U-SLR-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1025.6 | 11.0      |                         |      |         |
| FM   | (30°-60°)   | 3847.2 | 41.1      |                         |      |         |
| FH   | (60°-80°)   | 3205.2 | 34.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 141.3  | 1.5       |                         |      | G2/225  |
| BL   | (0°-30°)    | 334.3  | 3.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 512.5  | 5.5       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 275.8  | 2.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 9.1    | 0.1       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 |
| 2.5°  | 3335.4 | 3309.7 | 3281.3 | 3188.7 | 3102.8 | 3004.4 | 2924.2 | 2868.4 | 2798.4 | 2707.6 | 2684.6 |
| 5°    | 3311.4 | 3284.0 | 3194.9 | 2988.9 | 2808.6 | 2633.2 | 2464.0 | 2364.7 | 2241.6 | 2116.7 | 2085.6 |
| 7.5°  | 3070.9 | 3042.1 | 2913.6 | 2631.4 | 2388.7 | 2135.3 | 1915.5 | 1779.5 | 1640.4 | 1526.1 | 1465.4 |
| 10°   | 2820.6 | 2789.1 | 2644.7 | 2302.3 | 2003.2 | 1774.2 | 1613.0 | 1483.2 | 1351.6 | 1229.3 | 1131.9 |
| 12.5° | 2648.3 | 2607.1 | 2450.2 | 2062.2 | 1801.7 | 1646.2 | 1495.6 | 1340.1 | 1162.0 | 1030.9 | 923.7  |
| 15°   | 2576.0 | 2529.1 | 2363.4 | 1969.6 | 1730.4 | 1547.8 | 1351.6 | 1160.7 | 952.0  | 801.8  | 703.5  |
| 17.5° | 2631.9 | 2570.7 | 2393.1 | 1963.4 | 1640.9 | 1392.4 | 1144.3 | 920.1  | 693.7  | 541.8  | 471.8  |
| 20°   | 2821.5 | 2741.3 | 2515.8 | 1961.6 | 1532.3 | 1207.6 | 893.1  | 639.7  | 457.2  | 367.7  | 330.9  |
| 22.5° | 3120.1 | 3014.2 | 2692.1 | 1975.8 | 1420.3 | 1013.6 | 645.0  | 434.6  | 343.3  | 296.8  | 275.1  |
| 25°   | 3480.7 | 3357.9 | 2946.0 | 2025.8 | 1321.9 | 824.9  | 468.7  | 343.3  | 289.7  | 255.6  | 237.4  |
| 27.5° | 3823.5 | 3723.9 | 3266.7 | 2098.1 | 1245.7 | 672.5  | 380.5  | 291.1  | 247.6  | 225.0  | 210.4  |
| 30°   | 4166.0 | 4040.6 | 3595.8 | 2184.0 | 1154.0 | 569.3  | 334.5  | 265.4  | 221.9  | 198.0  | 188.7  |
| 32.5° | 4414.9 | 4310.8 | 3853.7 | 2246.0 | 1056.1 | 501.9  | 299.0  | 242.8  | 207.3  | 183.0  | 169.2  |
| 35°   | 4707.8 | 4589.9 | 4074.7 | 2259.7 | 993.2  | 459.4  | 268.9  | 218.4  | 179.9  | 158.2  | 143.5  |
| 37.5° | 5024.1 | 4877.4 | 4329.9 | 2229.6 | 944.0  | 438.6  | 246.3  | 207.3  | 167.9  | 145.7  | 130.2  |
| 40°   | 5374.0 | 5208.4 | 4574.9 | 2186.2 | 895.7  | 431.5  | 229.0  | 198.9  | 158.6  | 136.0  | 120.1  |
| 42.5° | 5742.6 | 5547.3 | 4787.1 | 2140.6 | 865.2  | 407.1  | 227.3  | 190.5  | 151.5  | 127.1  | 111.2  |
| 45°   | 6052.3 | 5854.3 | 5005.0 | 2125.5 | 843.5  | 380.5  | 234.8  | 184.7  | 146.6  | 120.1  | 104.5  |
| 47.5° | 6299.0 | 6111.6 | 5228.3 | 2159.2 | 831.1  | 356.2  | 214.0  | 192.3  | 144.0  | 113.9  | 98.8   |
| 50°   | 6593.6 | 6381.4 | 5542.8 | 2259.7 | 812.9  | 331.8  | 193.6  | 220.2  | 144.0  | 109.9  | 93.9   |
| 52.5° | 6963.1 | 6753.1 | 5893.7 | 2415.7 | 776.6  | 298.1  | 174.1  | 220.6  | 145.3  | 104.5  | 87.7   |
| 55°   | 7427.8 | 7275.4 | 6394.7 | 2586.7 | 718.5  | 248.5  | 150.6  | 189.6  | 140.0  | 94.8   | 82.0   |
| 57.5° | 7873.4 | 7749.0 | 6851.4 | 2703.6 | 641.0  | 194.0  | 131.1  | 152.8  | 128.0  | 83.3   | 73.1   |
| 59°   | 7995.3 | 7859.3 | 7018.9 | 2708.9 | 583.0  | 169.2  | 121.4  | 126.3  | 125.4  | 78.0   | 67.8   |
| 60°   | 7995.3 | 7850.9 | 7067.2 | 2680.6 | 540.9  | 155.5  | 115.2  | 112.5  | 130.7  | 74.4   | 64.7   |
| 62.5° | 7850.4 | 7647.5 | 6910.4 | 2488.8 | 441.2  | 132.5  | 100.6  | 93.0   | 117.4  | 66.9   | 57.1   |
| 65°   | 7549.2 | 7253.7 | 6376.1 | 2141.9 | 393.4  | 121.4  | 86.8   | 76.2   | 81.5   | 58.9   | 50.1   |
| 67.5° | 7046.8 | 6646.3 | 5605.7 | 1730.4 | 374.3  | 118.3  | 74.9   | 64.7   | 61.6   | 50.5   | 43.9   |
| 70°   | 6162.1 | 5717.8 | 4670.6 | 1360.5 | 357.9  | 117.0  | 62.9   | 54.5   | 49.6   | 42.5   | 37.2   |
| 72.5° | 4484.9 | 4021.6 | 3315.9 | 1063.6 | 348.2  | 119.6  | 50.5   | 45.6   | 40.8   | 33.2   | 28.8   |
| 75°   | 2565.4 | 2262.0 | 1863.7 | 702.6  | 296.8  | 114.3  | 39.0   | 38.1   | 29.2   | 23.9   | 19.9   |
| 77.5° | 1325.5 | 1285.1 | 1116.8 | 269.8  | 142.2  | 50.1   | 25.7   | 22.2   | 17.3   | 14.6   | 12.0   |
| 80°   | 571.9  | 565.7  | 489.5  | 78.0   | 37.7   | 27.9   | 14.6   | 9.3    | 8.0    | 6.2    | 4.9    |
| 82.5° | 197.6  | 197.6  | 174.1  | 26.1   | 16.8   | 13.7   | 1.8    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 39.9   | 44.7   | 31.5   | 0.0    | 5.8    | 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 |
| 2.5°  | 2656.7 | 2603.1 | 2599.5 | 2565.9 | 2523.8 | 2504.7 | 2493.6 | 2513.1 | 2537.1 | 2539.7 | 2575.6 |
| 5°    | 2062.2 | 2005.9 | 2029.4 | 1969.6 | 1981.5 | 1969.6 | 1950.1 | 1953.6 | 1964.3 | 1931.0 | 1972.2 |
| 7.5°  | 1448.2 | 1405.6 | 1432.7 | 1416.7 | 1438.0 | 1446.4 | 1434.4 | 1416.7 | 1364.4 | 1358.2 | 1394.1 |
| 10°   | 1091.6 | 1043.3 | 1014.5 | 984.3  | 991.0  | 1004.7 | 1000.3 | 987.4  | 954.2  | 956.0  | 990.5  |
| 12.5° | 877.1  | 823.1  | 765.9  | 692.0  | 673.8  | 684.0  | 673.8  | 666.3  | 634.4  | 637.0  | 667.6  |
| 15°   | 665.4  | 621.1  | 561.3  | 501.9  | 469.6  | 472.7  | 444.3  | 424.4  | 404.5  | 380.5  | 399.1  |
| 17.5° | 449.2  | 422.2  | 404.5  | 386.7  | 348.2  | 339.3  | 303.5  | 264.9  | 249.9  | 238.8  | 246.8  |
| 20°   | 318.1  | 303.5  | 296.4  | 295.5  | 273.3  | 262.3  | 227.3  | 203.3  | 195.8  | 193.6  | 198.5  |
| 22.5° | 265.8  | 255.2  | 245.0  | 239.2  | 228.1  | 215.3  | 188.7  | 176.8  | 171.4  | 168.8  | 172.3  |
| 25°   | 231.2  | 223.3  | 212.6  | 202.9  | 198.5  | 184.7  | 165.7  | 156.8  | 153.3  | 150.6  | 152.4  |
| 27.5° | 205.6  | 198.5  | 186.1  | 179.9  | 176.3  | 164.4  | 148.0  | 140.9  | 137.8  | 136.9  | 136.4  |
| 30°   | 185.2  | 178.5  | 167.0  | 159.9  | 153.7  | 143.1  | 133.3  | 126.3  | 123.2  | 122.3  | 121.4  |
| 32.5° | 164.8  | 159.5  | 151.9  | 144.9  | 138.2  | 128.5  | 120.1  | 114.3  | 109.4  | 108.5  | 108.1  |
| 35°   | 139.1  | 133.8  | 129.8  | 129.4  | 123.2  | 113.9  | 107.6  | 100.1  | 96.1   | 94.8   | 95.2   |
| 37.5° | 123.6  | 116.5  | 107.6  | 110.8  | 109.0  | 102.3  | 93.9   | 86.4   | 82.4   | 81.5   | 81.5   |
| 40°   | 113.9  | 106.3  | 96.1   | 90.8   | 96.1   | 94.8   | 81.5   | 74.0   | 70.0   | 69.6   | 68.7   |
| 42.5° | 104.5  | 97.0   | 85.5   | 76.6   | 79.3   | 83.3   | 70.4   | 63.3   | 59.4   | 58.5   | 57.1   |
| 45°   | 97.9   | 89.9   | 77.1   | 66.9   | 61.6   | 70.0   | 60.2   | 51.4   | 49.2   | 47.4   | 46.5   |
| 47.5° | 91.7   | 84.2   | 69.6   | 58.0   | 49.2   | 50.5   | 48.3   | 42.1   | 39.4   | 37.7   | 37.2   |
| 50°   | 86.4   | 78.4   | 62.9   | 49.6   | 40.8   | 37.2   | 39.0   | 33.2   | 31.0   | 29.2   | 28.4   |
| 52.5° | 80.2   | 72.7   | 55.8   | 43.0   | 34.1   | 29.2   | 29.7   | 26.1   | 23.9   | 22.6   | 22.2   |
| 55°   | 75.3   | 67.8   | 50.1   | 37.7   | 30.1   | 23.9   | 21.3   | 20.4   | 19.0   | 18.2   | 17.7   |
| 57.5° | 68.7   | 61.6   | 44.3   | 31.9   | 25.7   | 19.5   | 16.4   | 16.4   | 15.9   | 15.1   | 14.6   |
| 59°   | 64.7   | 58.5   | 40.8   | 28.8   | 23.5   | 16.8   | 14.6   | 15.1   | 14.6   | 13.7   | 13.3   |
| 60°   | 61.6   | 55.8   | 38.1   | 26.6   | 22.2   | 15.5   | 13.3   | 14.2   | 13.7   | 12.8   | 12.4   |
| 62.5° | 54.5   | 50.5   | 32.8   | 22.2   | 19.5   | 12.4   | 11.1   | 12.0   | 12.0   | 11.5   | 11.1   |
| 65°   | 47.8   | 43.4   | 27.9   | 18.6   | 18.2   | 10.6   | 8.9    | 10.6   | 11.1   | 10.2   | 9.3    |
| 67.5° | 41.6   | 37.2   | 24.4   | 15.1   | 16.8   | 8.4    | 6.6    | 8.9    | 12.0   | 9.3    | 8.4    |
| 70°   | 35.4   | 31.0   | 19.0   | 12.0   | 17.7   | 5.8    | 5.3    | 8.0    | 14.2   | 10.2   | 8.0    |
| 72.5° | 27.5   | 23.9   | 13.3   | 8.9    | 19.0   | 4.0    | 4.0    | 6.6    | 15.9   | 11.1   | 7.5    |
| 75°   | 19.0   | 15.5   | 8.0    | 5.3    | 15.5   | 2.7    | 2.7    | 6.2    | 15.1   | 10.2   | 7.1    |
| 77.5° | 11.1   | 8.4    | 2.7    | 0.4    | 8.0    | 0.0    | 0.4    | 4.4    | 10.6   | 6.2    | 3.1    |
| 80°   | 4.0    | 1.8    | 0.0    | 0.0    | 4.9    | 0.0    | 0.0    | 0.0    | 0.9    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 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°    | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 |
| 2.5°  | 2584.9 | 2644.7 | 2698.3 | 2779.4 | 2875.5 | 2986.3 | 3081.5 | 3183.8 | 3280.0 | 3319.8 | 3347.3 |
| 5°    | 1980.7 | 2054.6 | 2141.0 | 2260.2 | 2418.8 | 2614.1 | 2797.1 | 3004.0 | 3226.4 | 3337.6 | 3442.1 |
| 7.5°  | 1400.3 | 1475.6 | 1582.8 | 1709.5 | 1901.4 | 2133.9 | 2373.2 | 2658.9 | 2960.1 | 3136.0 | 3309.2 |
| 10°   | 1006.9 | 1099.5 | 1199.6 | 1372.9 | 1567.8 | 1788.4 | 2034.7 | 2353.7 | 2689.5 | 2884.4 | 3093.0 |
| 12.5° | 685.3  | 790.8  | 942.3  | 1136.3 | 1365.3 | 1581.5 | 1795.5 | 2099.8 | 2489.7 | 2682.8 | 2906.5 |
| 15°   | 411.1  | 469.6  | 629.9  | 854.5  | 1135.4 | 1404.8 | 1639.1 | 1944.3 | 2359.9 | 2596.4 | 2829.0 |
| 17.5° | 253.4  | 280.4  | 367.7  | 552.0  | 847.0  | 1187.7 | 1508.9 | 1891.6 | 2378.5 | 2666.4 | 2915.4 |
| 20°   | 202.0  | 212.6  | 240.5  | 326.0  | 561.3  | 948.5  | 1362.2 | 1881.0 | 2530.4 | 2884.8 | 3151.9 |
| 22.5° | 175.4  | 185.6  | 204.2  | 237.0  | 353.1  | 710.1  | 1223.1 | 1890.7 | 2748.4 | 3212.2 | 3524.1 |
| 25°   | 154.6  | 163.5  | 181.2  | 208.2  | 258.7  | 500.1  | 1074.3 | 1934.1 | 3032.3 | 3618.4 | 3949.8 |
| 27.5° | 138.2  | 145.7  | 162.1  | 186.9  | 221.9  | 349.1  | 905.5  | 1986.9 | 3369.0 | 4034.0 | 4360.9 |
| 30°   | 123.2  | 129.8  | 144.4  | 167.5  | 192.7  | 268.5  | 720.3  | 2022.7 | 3706.1 | 4360.9 | 4654.6 |
| 32.5° | 110.3  | 115.2  | 128.5  | 148.0  | 167.5  | 214.0  | 547.5  | 2017.0 | 3956.4 | 4632.9 | 4865.9 |
| 35°   | 97.0   | 101.9  | 113.4  | 130.2  | 145.7  | 176.8  | 430.6  | 1909.3 | 4174.4 | 4915.1 | 5107.8 |
| 37.5° | 82.4   | 88.6   | 99.7   | 114.7  | 125.4  | 155.5  | 348.2  | 1779.5 | 4395.5 | 5237.6 | 5377.6 |
| 40°   | 70.0   | 76.2   | 85.9   | 102.3  | 109.0  | 147.5  | 267.6  | 1621.4 | 4644.0 | 5598.2 | 5673.5 |
| 42.5° | 58.0   | 63.8   | 74.0   | 88.2   | 102.8  | 127.1  | 198.0  | 1440.6 | 4882.8 | 5906.5 | 5943.3 |
| 45°   | 47.0   | 52.7   | 63.3   | 77.5   | 109.9  | 105.4  | 153.3  | 1247.0 | 5075.5 | 6163.0 | 6175.0 |
| 47.5° | 37.2   | 42.5   | 53.6   | 73.1   | 102.3  | 84.2   | 109.4  | 1095.1 | 5237.2 | 6363.3 | 6331.8 |
| 50°   | 28.8   | 33.2   | 44.7   | 83.7   | 89.5   | 69.6   | 82.8   | 1044.6 | 5382.0 | 6487.3 | 6405.8 |
| 52.5° | 22.6   | 26.6   | 36.8   | 78.4   | 69.6   | 57.6   | 69.6   | 1092.0 | 5580.5 | 6590.1 | 6447.4 |
| 55°   | 18.2   | 22.2   | 28.8   | 44.7   | 47.4   | 48.7   | 59.4   | 1136.3 | 5922.9 | 6831.1 | 6693.3 |
| 57.5° | 15.1   | 19.0   | 23.5   | 31.5   | 35.9   | 41.2   | 52.7   | 1141.2 | 6326.5 | 7231.5 | 7101.3 |
| 59°   | 13.7   | 17.3   | 21.3   | 27.9   | 31.5   | 37.7   | 49.6   | 1114.6 | 6468.7 | 7377.3 | 7312.2 |
| 60°   | 12.8   | 16.4   | 19.9   | 25.7   | 29.2   | 35.4   | 47.8   | 1089.3 | 6474.9 | 7372.0 | 7402.1 |
| 62.5° | 11.1   | 14.6   | 17.7   | 21.7   | 24.8   | 30.1   | 43.0   | 995.9  | 6212.6 | 7130.5 | 7348.0 |
| 65°   | 9.7    | 12.8   | 15.9   | 18.6   | 21.3   | 27.0   | 39.0   | 825.3  | 5764.8 | 6741.1 | 6978.1 |
| 67.5° | 8.9    | 11.1   | 14.6   | 16.4   | 19.0   | 23.9   | 34.6   | 588.3  | 5205.3 | 6264.9 | 6418.6 |
| 70°   | 8.0    | 10.6   | 13.3   | 15.1   | 17.3   | 20.8   | 29.7   | 338.0  | 4395.5 | 5567.6 | 5677.1 |
| 72.5° | 7.5    | 10.2   | 12.0   | 14.2   | 15.5   | 18.6   | 27.0   | 159.0  | 3218.4 | 4460.1 | 4745.9 |
| 75°   | 6.6    | 9.3    | 11.1   | 13.3   | 14.6   | 16.8   | 23.0   | 76.2   | 2140.6 | 3227.7 | 3552.4 |
| 77.5° | 4.0    | 7.5    | 10.2   | 12.0   | 12.8   | 14.6   | 19.0   | 43.9   | 1366.2 | 2234.1 | 2631.4 |
| 80°   | 0.0    | 2.7    | 7.5    | 10.2   | 11.1   | 12.4   | 14.6   | 34.6   | 731.0  | 1276.3 | 1531.9 |
| 82.5° | 0.0    | 0.0    | 5.3    | 8.0    | 7.5    | 8.4    | 11.1   | 21.7   | 329.6  | 834.2  | 940.0  |
| 85°   | 0.0    | 0.0    | 1.8    | 6.2    | 5.3    | 4.0    | 7.5    | 7.5    | 72.2   | 422.2  | 526.7  |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.4    | 2.7    | 1.8    | 3.1    | 0.9    | 0.4    | 31.5   | 127.6  |
| 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: P324656

CATALOG NUMBER: GLEON-SA2D-830-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 | 3046.1 |
| 2.5°  | 3443.4 | 3476.2 | 3531.6 | 3557.7 | 3544.9 | 3490.4 | 3425.3 | 3358.8 | 3319.8 | 3335.4 |
| 5°    | 3655.2 | 3824.0 | 3921.4 | 3953.8 | 3899.7 | 3777.5 | 3617.5 | 3406.7 | 3331.8 | 3311.4 |
| 7.5°  | 3655.2 | 3972.8 | 4173.9 | 4209.4 | 4088.9 | 3849.2 | 3549.3 | 3220.2 | 3110.7 | 3070.9 |
| 10°   | 3526.7 | 3959.1 | 4239.5 | 4295.8 | 4127.4 | 3769.0 | 3367.2 | 2991.6 | 2861.8 | 2820.6 |
| 12.5° | 3381.9 | 3847.5 | 4142.9 | 4220.5 | 4082.2 | 3689.3 | 3241.0 | 2837.0 | 2684.1 | 2648.3 |
| 15°   | 3292.8 | 3710.1 | 3954.7 | 4010.9 | 3952.4 | 3642.8 | 3210.9 | 2790.5 | 2610.6 | 2576.0 |
| 17.5° | 3324.7 | 3603.8 | 3692.0 | 3724.7 | 3764.2 | 3626.4 | 3292.8 | 2892.3 | 2664.6 | 2631.9 |
| 20°   | 3444.8 | 3491.7 | 3446.1 | 3487.3 | 3593.6 | 3642.3 | 3488.2 | 3138.7 | 2865.3 | 2821.5 |
| 22.5° | 3648.6 | 3433.7 | 3305.7 | 3322.1 | 3451.4 | 3695.1 | 3786.8 | 3490.4 | 3175.0 | 3120.1 |
| 25°   | 3886.0 | 3480.7 | 3227.7 | 3213.1 | 3346.0 | 3764.6 | 4059.7 | 3873.2 | 3541.3 | 3480.7 |
| 27.5° | 4184.6 | 3586.1 | 3211.8 | 3197.1 | 3309.2 | 3829.7 | 4286.5 | 4251.5 | 3927.2 | 3823.5 |
| 30°   | 4414.9 | 3689.8 | 3259.2 | 3225.5 | 3346.0 | 3874.9 | 4468.5 | 4572.7 | 4234.6 | 4166.0 |
| 32.5° | 4580.2 | 3812.0 | 3336.2 | 3287.5 | 3449.6 | 3952.9 | 4609.0 | 4866.8 | 4519.0 | 4414.9 |
| 35°   | 4706.0 | 3944.9 | 3460.7 | 3380.5 | 3592.3 | 4071.2 | 4740.5 | 5180.0 | 4821.6 | 4707.8 |
| 37.5° | 4823.8 | 4131.4 | 3655.2 | 3559.5 | 3816.0 | 4261.7 | 4879.6 | 5535.3 | 5160.1 | 5024.1 |
| 40°   | 4988.2 | 4342.7 | 3955.1 | 3870.1 | 4192.1 | 4521.3 | 5053.3 | 5905.6 | 5545.0 | 5374.0 |
| 42.5° | 5152.5 | 4569.5 | 4262.1 | 4285.1 | 4661.3 | 4836.7 | 5277.5 | 6297.3 | 5925.1 | 5742.6 |
| 45°   | 5302.7 | 4803.5 | 4699.3 | 4805.7 | 5096.7 | 5182.7 | 5500.3 | 6523.6 | 6228.6 | 6052.3 |
| 47.5° | 5436.5 | 5095.8 | 5133.9 | 5417.0 | 5592.0 | 5495.9 | 5666.9 | 6719.0 | 6454.5 | 6299.0 |
| 50°   | 5592.0 | 5474.2 | 5706.7 | 6107.2 | 6162.1 | 5779.4 | 5818.4 | 6950.2 | 6718.5 | 6593.6 |
| 52.5° | 5762.1 | 5872.9 | 6341.1 | 6694.2 | 6676.5 | 6087.3 | 5970.8 | 7209.4 | 7080.5 | 6963.1 |
| 55°   | 5955.3 | 6194.9 | 6899.7 | 7243.5 | 7228.4 | 6431.0 | 6223.3 | 7529.7 | 7534.1 | 7427.8 |
| 57.5° | 6241.9 | 6472.2 | 7278.9 | 7687.8 | 7713.1 | 6828.0 | 6651.2 | 7888.5 | 7944.3 | 7873.4 |
| 59°   | 6447.4 | 6652.1 | 7429.1 | 7873.4 | 7976.2 | 7135.0 | 6964.0 | 8096.7 | 8059.9 | 7995.3 |
| 60°   | 6599.8 | 6766.4 | 7503.5 | 7970.5 | 8129.1 | 7343.2 | 7194.8 | 8219.0 | 8073.7 | 7995.3 |
| 62.5° | 6976.8 | 7015.4 | 7637.8 | 8080.3 | 8304.9 | 7805.7 | 7844.2 | 8427.2 | 7978.4 | 7850.4 |
| 65°   | 7152.7 | 7172.6 | 7636.0 | 7883.6 | 8134.8 | 8165.8 | 8433.4 | 8433.4 | 7745.9 | 7549.2 |
| 67.5° | 7079.1 | 6983.0 | 7257.2 | 7231.5 | 7482.3 | 7951.9 | 8654.9 | 8124.2 | 7301.1 | 7046.8 |
| 70°   | 6481.1 | 6111.2 | 5989.4 | 6000.4 | 6192.3 | 6916.6 | 8216.3 | 7214.3 | 6459.4 | 6162.1 |
| 72.5° | 5392.6 | 4505.3 | 4204.5 | 4547.8 | 4597.9 | 5315.6 | 7002.1 | 5433.0 | 4763.6 | 4484.9 |
| 75°   | 4337.4 | 3175.9 | 2686.8 | 3049.2 | 3134.2 | 3890.0 | 5416.6 | 3383.6 | 2782.5 | 2565.4 |
| 77.5° | 3116.1 | 2279.7 | 1927.9 | 1902.7 | 2012.6 | 2467.1 | 3843.5 | 1702.9 | 1420.3 | 1325.5 |
| 80°   | 1770.2 | 1500.4 | 1615.6 | 1524.4 | 1579.7 | 1542.5 | 1826.0 | 746.9  | 611.8  | 571.9  |
| 82.5° | 1068.5 | 886.9  | 960.4  | 799.6  | 1011.8 | 881.1  | 703.5  | 239.2  | 207.8  | 197.6  |
| 85°   | 695.1  | 484.6  | 252.5  | 169.2  | 348.6  | 563.1  | 157.3  | 65.1   | 50.1   | 39.9   |
| 87.5° | 239.7  | 123.6  | 12.4   | 5.3    | 37.2   | 105.0  | 5.8    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2408-195-9  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 08/07/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: MCGRAW EDISON  
 Catalog Number: **GALN-SB1A-830-U-5WQ**  
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

### Spectral Parameters

CCT (K): 3050  
 CIE  $u'$ : 0.2476  
 CIE  $v'$ : 0.5251  
 Duv: 0.0034  
 CIE x: 0.4383  
 CIE y: 0.4131  
 CIE z: 0.1487  
 Peak Wavelength (nm): 603  
 Dominant Wavelength (nm): 581  
 Purity: 55.55201  
 R<sub>f</sub>: 81.5  
 R<sub>g</sub>: 99.2

CRI (Ra): 81.0  
 R1: 79.6  
 R2: 85.6  
 R3: 92.0  
 R4: 82.6  
 R5: 78.9  
 R6: 81.7  
 R7: 85.2  
 R8: 62.0  
 R9: 7.1  
 R10: 67.0  
 R11: 82.7  
 R12: 63.2  
 R13: 80.3  
 R14: 95.0  
 R15: 71.7



### Test Conditions

Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

| 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: SP1-2408-195-9

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| 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    | 168                      | NR            | 620    | 940                      | NR            | 750    | 35                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 233                      | NR            | 625    | 897                      | NR            | 755    | 30                       | NR            | 885    | 1                        | NR            |
| 370    | 0                        | NR            | 500    | 300                      | NR            | 630    | 847                      | NR            | 760    | 26                       | NR            | 890    | 1                        | NR            |
| 375    | 0                        | NR            | 505    | 372                      | NR            | 635    | 790                      | NR            | 765    | 22                       | NR            | 895    | 1                        | NR            |
| 380    | 0                        | NR            | 510    | 430                      | NR            | 640    | 730                      | NR            | 770    | 19                       | NR            | 900    | 1                        | NR            |
| 385    | 0                        | NR            | 515    | 483                      | NR            | 645    | 668                      | NR            | 775    | 16                       | NR            | 905    | 1                        | NR            |
| 390    | 0                        | NR            | 520    | 524                      | NR            | 650    | 605                      | NR            | 780    | 14                       | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 555                      | NR            | 655    | 545                      | NR            | 785    | 12                       | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 581                      | NR            | 660    | 485                      | NR            | 790    | 10                       | NR            | 920    | 0                        | NR            |
| 405    | 7                        | NR            | 535    | 604                      | NR            | 665    | 430                      | NR            | 795    | 9                        | NR            | 925    | 0                        | NR            |
| 410    | 17                       | NR            | 540    | 623                      | NR            | 670    | 378                      | NR            | 800    | 8                        | NR            | 930    | 0                        | NR            |
| 415    | 34                       | NR            | 545    | 645                      | NR            | 675    | 331                      | NR            | 805    | 7                        | NR            | 935    | 0                        | NR            |
| 420    | 68                       | NR            | 550    | 667                      | NR            | 680    | 290                      | NR            | 810    | 6                        | NR            | 940    | 0                        | NR            |
| 425    | 128                      | NR            | 555    | 693                      | NR            | 685    | 251                      | NR            | 815    | 5                        | NR            | 945    | 0                        | NR            |
| 430    | 214                      | NR            | 560    | 719                      | NR            | 690    | 218                      | NR            | 820    | 4                        | NR            | 950    | 0                        | NR            |
| 435    | 339                      | NR            | 565    | 754                      | NR            | 695    | 188                      | NR            | 825    | 4                        | NR            | 955    | 0                        | NR            |
| 440    | 507                      | NR            | 570    | 791                      | NR            | 700    | 162                      | NR            | 830    | 3                        | NR            | 960    | 0                        | NR            |
| 445    | 573                      | NR            | 575    | 830                      | NR            | 705    | 139                      | NR            | 835    | 3                        | NR            | 965    | 0                        | NR            |
| 450    | 356                      | NR            | 580    | 873                      | NR            | 710    | 119                      | NR            | 840    | 3                        | NR            | 970    | 0                        | NR            |
| 455    | 217                      | NR            | 585    | 913                      | NR            | 715    | 102                      | NR            | 845    | 2                        | NR            | 975    | 0                        | NR            |
| 460    | 168                      | NR            | 590    | 948                      | NR            | 720    | 88                       | NR            | 850    | 2                        | NR            | 980    | 0                        | NR            |
| 465    | 113                      | NR            | 595    | 974                      | NR            | 725    | 76                       | NR            | 855    | 2                        | NR            | 985    | 0                        | NR            |
| 470    | 85                       | NR            | 600    | 994                      | NR            | 730    | 65                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 85                       | NR            | 605    | 998                      | NR            | 735    | 55                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 94                       | NR            | 610    | 994                      | NR            | 740    | 47                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 120                      | NR            | 615    | 973                      | NR            | 745    | 41                       | NR            | 875    | 1                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2408-195-9

### Scotopic Flux vs. Wavelength


**Scotopic Lumens: NR**
**S/P: 1.27**

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 168                      | NR            | 620    | 940                      | NR            | 750    | 35                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 233                      | NR            | 625    | 897                      | NR            | 755    | 30                       | NR            | 885    | 1                        | NR            |
| 370    | 0                        | NR            | 500    | 300                      | NR            | 630    | 847                      | NR            | 760    | 26                       | NR            | 890    | 1                        | NR            |
| 375    | 0                        | NR            | 505    | 372                      | NR            | 635    | 790                      | NR            | 765    | 22                       | NR            | 895    | 1                        | NR            |
| 380    | 0                        | NR            | 510    | 430                      | NR            | 640    | 730                      | NR            | 770    | 19                       | NR            | 900    | 1                        | NR            |
| 385    | 0                        | NR            | 515    | 483                      | NR            | 645    | 668                      | NR            | 775    | 16                       | NR            | 905    | 1                        | NR            |
| 390    | 0                        | NR            | 520    | 524                      | NR            | 650    | 605                      | NR            | 780    | 14                       | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 555                      | NR            | 655    | 545                      | NR            | 785    | 12                       | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 581                      | NR            | 660    | 485                      | NR            | 790    | 10                       | NR            | 920    | 0                        | NR            |
| 405    | 7                        | NR            | 535    | 604                      | NR            | 665    | 430                      | NR            | 795    | 9                        | NR            | 925    | 0                        | NR            |
| 410    | 17                       | NR            | 540    | 623                      | NR            | 670    | 378                      | NR            | 800    | 8                        | NR            | 930    | 0                        | NR            |
| 415    | 34                       | NR            | 545    | 645                      | NR            | 675    | 331                      | NR            | 805    | 7                        | NR            | 935    | 0                        | NR            |
| 420    | 68                       | NR            | 550    | 667                      | NR            | 680    | 290                      | NR            | 810    | 6                        | NR            | 940    | 0                        | NR            |
| 425    | 128                      | NR            | 555    | 693                      | NR            | 685    | 251                      | NR            | 815    | 5                        | NR            | 945    | 0                        | NR            |
| 430    | 214                      | NR            | 560    | 719                      | NR            | 690    | 218                      | NR            | 820    | 4                        | NR            | 950    | 0                        | NR            |
| 435    | 339                      | NR            | 565    | 754                      | NR            | 695    | 188                      | NR            | 825    | 4                        | NR            | 955    | 0                        | NR            |
| 440    | 507                      | NR            | 570    | 791                      | NR            | 700    | 162                      | NR            | 830    | 3                        | NR            | 960    | 0                        | NR            |
| 445    | 573                      | NR            | 575    | 830                      | NR            | 705    | 139                      | NR            | 835    | 3                        | NR            | 965    | 0                        | NR            |
| 450    | 356                      | NR            | 580    | 873                      | NR            | 710    | 119                      | NR            | 840    | 3                        | NR            | 970    | 0                        | NR            |
| 455    | 217                      | NR            | 585    | 913                      | NR            | 715    | 102                      | NR            | 845    | 2                        | NR            | 975    | 0                        | NR            |
| 460    | 168                      | NR            | 590    | 948                      | NR            | 720    | 88                       | NR            | 850    | 2                        | NR            | 980    | 0                        | NR            |
| 465    | 113                      | NR            | 595    | 974                      | NR            | 725    | 76                       | NR            | 855    | 2                        | NR            | 985    | 0                        | NR            |
| 470    | 85                       | NR            | 600    | 994                      | NR            | 730    | 65                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 85                       | NR            | 605    | 998                      | NR            | 735    | 55                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 94                       | NR            | 610    | 994                      | NR            | 740    | 47                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 120                      | NR            | 615    | 973                      | NR            | 745    | 41                       | NR            | 875    | 1                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2408-195-9

### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 2.32**

| $\lambda$<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               | 168                                  | NR                             | 620               | 940                                  | NR                             | 750               | 35                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 233                                  | NR                             | 625               | 897                                  | NR                             | 755               | 30                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 300                                  | NR                             | 630               | 847                                  | NR                             | 760               | 26                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 372                                  | NR                             | 635               | 790                                  | NR                             | 765               | 22                                   | NR                             | 895               | 1                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 430                                  | NR                             | 640               | 730                                  | NR                             | 770               | 19                                   | NR                             | 900               | 1                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 483                                  | NR                             | 645               | 668                                  | NR                             | 775               | 16                                   | NR                             | 905               | 1                                    | NR                             |
| 390               | 0                                    | NR                             | 520               | 524                                  | NR                             | 650               | 605                                  | NR                             | 780               | 14                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 2                                    | NR                             | 525               | 555                                  | NR                             | 655               | 545                                  | NR                             | 785               | 12                                   | NR                             | 915               | 0                                    | NR                             |
| 400               | 4                                    | NR                             | 530               | 581                                  | NR                             | 660               | 485                                  | NR                             | 790               | 10                                   | NR                             | 920               | 0                                    | NR                             |
| 405               | 7                                    | NR                             | 535               | 604                                  | NR                             | 665               | 430                                  | NR                             | 795               | 9                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 17                                   | NR                             | 540               | 623                                  | NR                             | 670               | 378                                  | NR                             | 800               | 8                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 34                                   | NR                             | 545               | 645                                  | NR                             | 675               | 331                                  | NR                             | 805               | 7                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 68                                   | NR                             | 550               | 667                                  | NR                             | 680               | 290                                  | NR                             | 810               | 6                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 128                                  | NR                             | 555               | 693                                  | NR                             | 685               | 251                                  | NR                             | 815               | 5                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 214                                  | NR                             | 560               | 719                                  | NR                             | 690               | 218                                  | NR                             | 820               | 4                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 339                                  | NR                             | 565               | 754                                  | NR                             | 695               | 188                                  | NR                             | 825               | 4                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 507                                  | NR                             | 570               | 791                                  | NR                             | 700               | 162                                  | NR                             | 830               | 3                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 573                                  | NR                             | 575               | 830                                  | NR                             | 705               | 139                                  | NR                             | 835               | 3                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 356                                  | NR                             | 580               | 873                                  | NR                             | 710               | 119                                  | NR                             | 840               | 3                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 217                                  | NR                             | 585               | 913                                  | NR                             | 715               | 102                                  | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 168                                  | NR                             | 590               | 948                                  | NR                             | 720               | 88                                   | NR                             | 850               | 2                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 113                                  | NR                             | 595               | 974                                  | NR                             | 725               | 76                                   | NR                             | 855               | 2                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 85                                   | NR                             | 600               | 994                                  | NR                             | 730               | 65                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 85                                   | NR                             | 605               | 998                                  | NR                             | 735               | 55                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 94                                   | NR                             | 610               | 994                                  | NR                             | 740               | 47                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 120                                  | NR                             | 615               | 973                                  | NR                             | 745               | 41                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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### Summary

$R_f = 81.5$   
 $R_g = 99.2$   
 $CIE R_a = 81.0$   
 $R_9 = 7.1$



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 92 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 94 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 91 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 78 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 |            |



### Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)