

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: P324668

Luminaire Tested: **GLEON-SA4A-722-U-SLR-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P324668  
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-SA4A-722-U-SLR-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 2200K, 615mA 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: 10244 lumens  
Efficiency: N/A  
Efficacy: 79.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B1 - U0 - G2

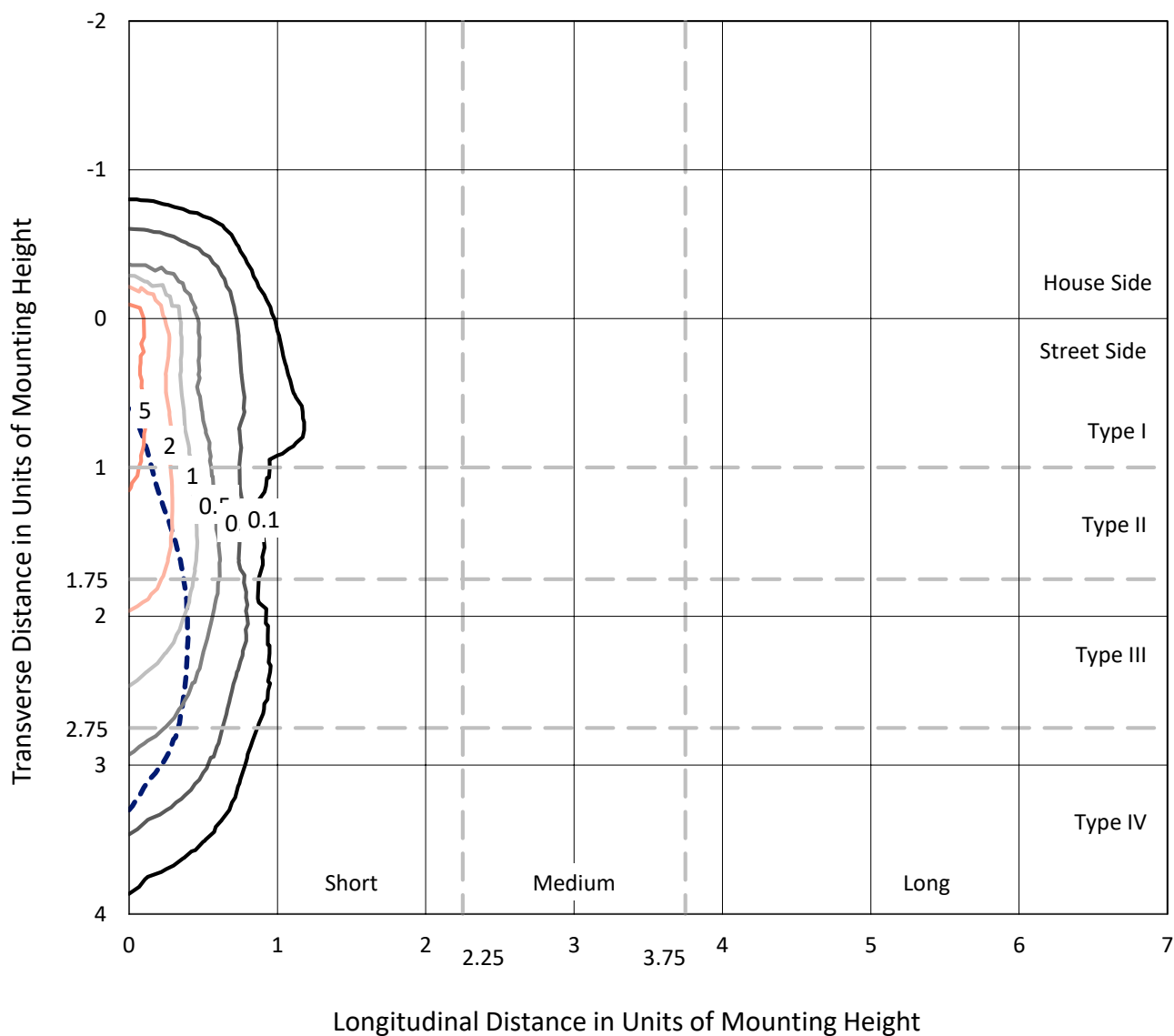
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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 CATALOG NUMBER: GLEON-SA4A-722-U-SLR-HSS

## Iso-Footcandle Lines of Horizontal Illumination

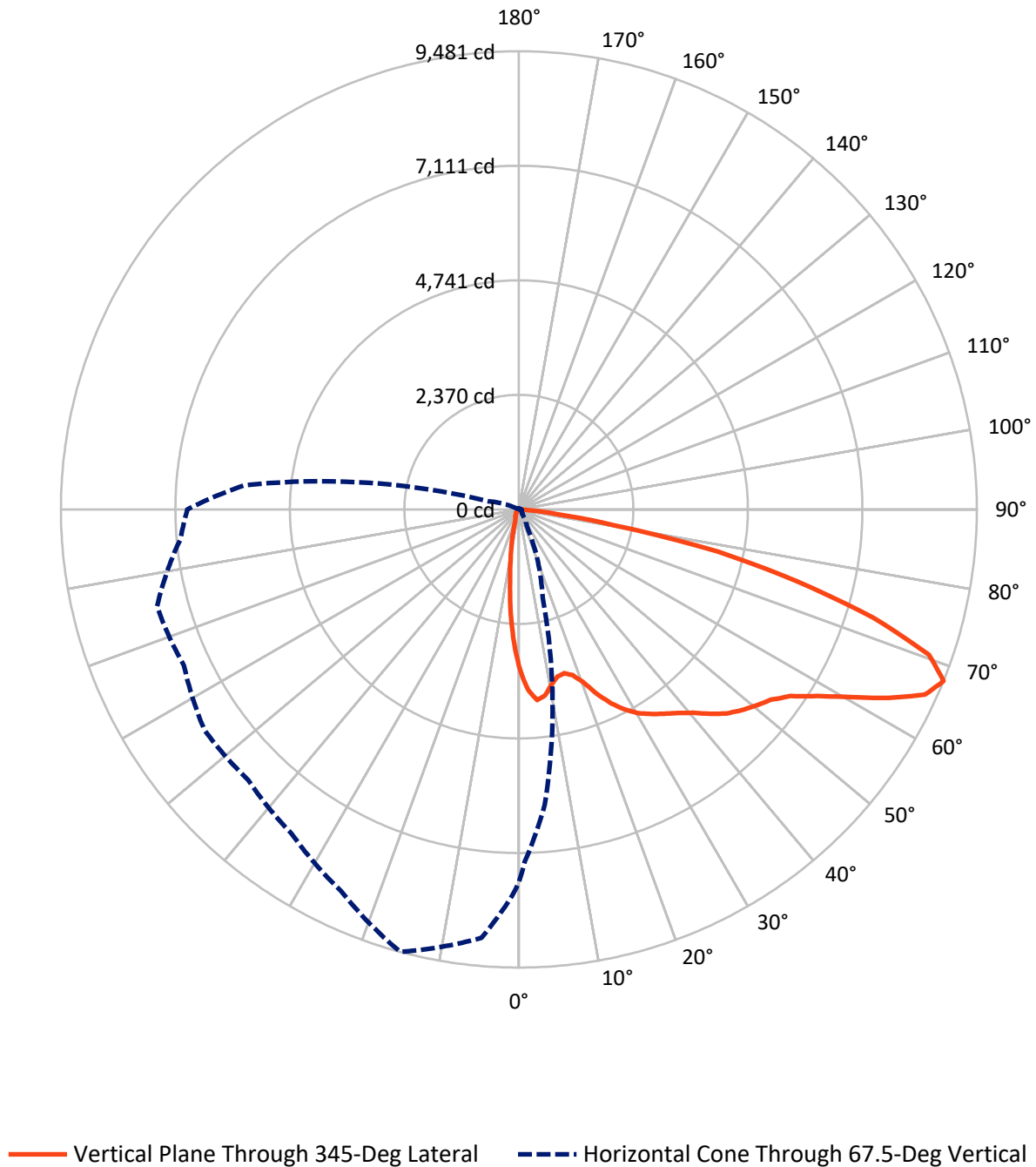
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.3 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    | 1239.9   | 0.0    | 1239.9  |
|                    | % Fixture | 12.1     | 0.0    | 12.1    |
| <b>Street Side</b> | Lumens    | 9004.1   | 0.0    | 9004.1  |
|                    | % Fixture | 87.9     | 0.0    | 87.9    |
| <b>Total</b>       | Lumens    | 10244.0  | 0.0    | 10244.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 256.1   | 2.5       |
| 10°-20°   | 509.8   | 5.0       |
| 20°-30°   | 723.9   | 7.1       |
| 30°-40°   | 1069.2  | 10.4      |
| 40°-50°   | 1542.1  | 15.1      |
| 50°-60°   | 2164.7  | 21.1      |
| 60°-70°   | 2523.4  | 24.6      |
| 70°-80°   | 1290.0  | 12.6      |
| 80°-90°   | 164.8   | 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°    | 10244.0 | 100.0     |
| 0°-180°   | 10244.0 | 100.0     |

**Coefficient of Utilization**



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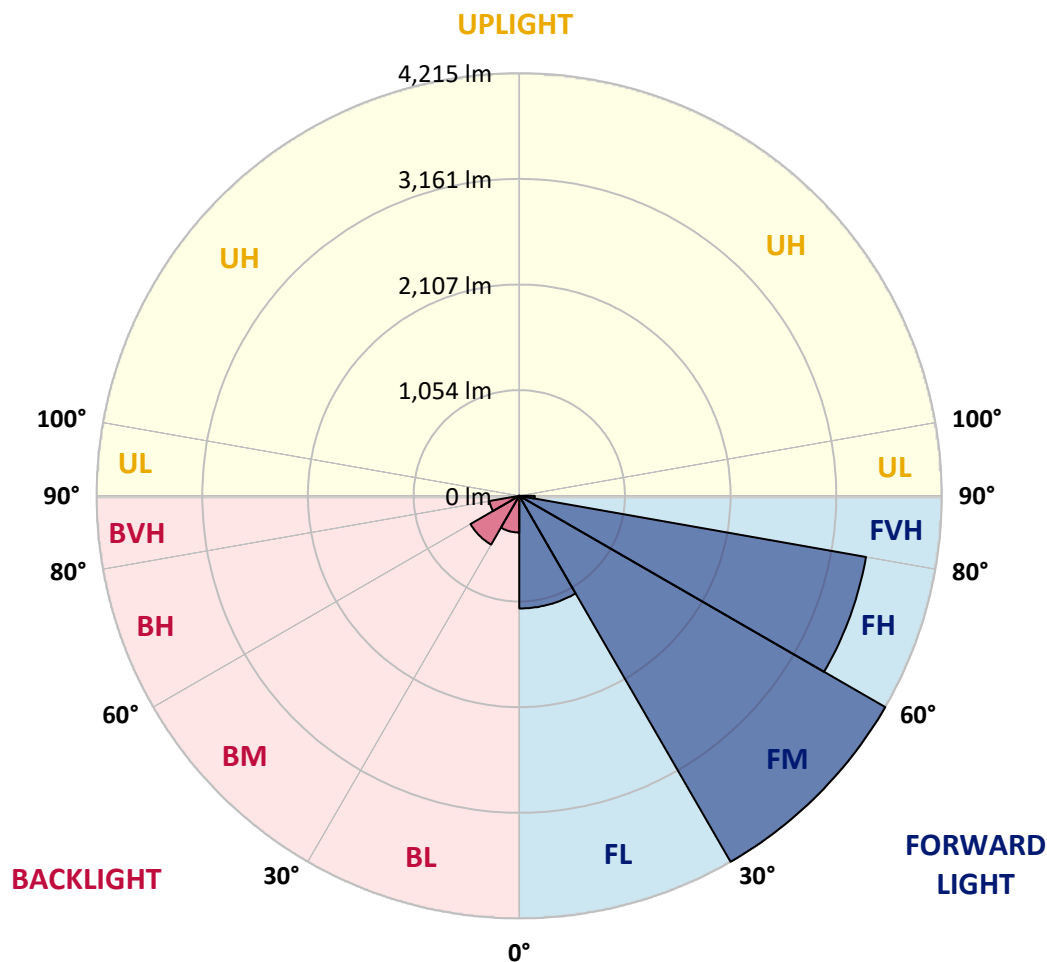
CATALOG NUMBER: GLEON-SA4A-722-U-SLR-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1123.6 | 11.0      |                         |      |         |
| FM   | (30°-60°)   | 4214.5 | 41.1      |                         |      |         |
| FH   | (60°-80°)   | 3511.3 | 34.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 154.7  | 1.5       |                         |      | G2/225  |
| BL   | (0°-30°)    | 366.2  | 3.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 561.5  | 5.5       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 302.2  | 2.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 10.0   | 0.1       |                         |      | G1/100  |
| 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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CATALOG NUMBER: GLEON-SA4A-722-U-SLR-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 |
| 2.5°  | 3653.9 | 3625.7 | 3594.7 | 3493.2 | 3399.1 | 3291.3 | 3203.5 | 3142.4 | 3065.7 | 2966.2 | 2941.0 |
| 5°    | 3627.7 | 3597.6 | 3500.0 | 3274.4 | 3076.8 | 2884.7 | 2699.3 | 2590.6 | 2455.6 | 2318.8 | 2284.8 |
| 7.5°  | 3364.1 | 3332.6 | 3191.9 | 2882.7 | 2616.8 | 2339.2 | 2098.5 | 1949.5 | 1797.1 | 1671.9 | 1605.4 |
| 10°   | 3089.9 | 3055.5 | 2897.3 | 2522.1 | 2194.6 | 1943.7 | 1767.0 | 1624.8 | 1480.7 | 1346.7 | 1240.0 |
| 12.5° | 2901.2 | 2856.0 | 2684.2 | 2259.1 | 1973.7 | 1803.4 | 1638.4 | 1468.1 | 1273.0 | 1129.3 | 1011.9 |
| 15°   | 2822.1 | 2770.6 | 2589.1 | 2157.7 | 1895.6 | 1695.7 | 1480.7 | 1271.5 | 1042.9 | 878.4  | 770.7  |
| 17.5° | 2883.2 | 2816.2 | 2621.6 | 2150.9 | 1797.6 | 1525.3 | 1253.5 | 1008.0 | 760.0  | 593.5  | 516.9  |
| 20°   | 3090.9 | 3003.1 | 2756.1 | 2148.9 | 1678.7 | 1322.9 | 978.4  | 700.8  | 500.8  | 402.8  | 362.5  |
| 22.5° | 3418.0 | 3302.0 | 2949.2 | 2164.5 | 1555.9 | 1110.4 | 706.6  | 476.1  | 376.1  | 325.2  | 301.4  |
| 25°   | 3813.0 | 3678.6 | 3227.3 | 2219.3 | 1448.2 | 903.6  | 513.5  | 376.1  | 317.4  | 280.0  | 260.1  |
| 27.5° | 4188.7 | 4079.5 | 3578.6 | 2298.4 | 1364.7 | 736.7  | 416.9  | 318.8  | 271.3  | 246.5  | 230.5  |
| 30°   | 4563.8 | 4426.5 | 3939.2 | 2392.6 | 1264.2 | 623.6  | 366.4  | 290.7  | 243.1  | 216.9  | 206.7  |
| 32.5° | 4836.6 | 4722.5 | 4221.7 | 2460.5 | 1157.0 | 549.9  | 327.6  | 265.9  | 227.1  | 200.4  | 185.4  |
| 35°   | 5157.3 | 5028.3 | 4463.8 | 2475.5 | 1088.1 | 503.3  | 294.6  | 239.3  | 197.0  | 173.3  | 157.2  |
| 37.5° | 5503.9 | 5343.2 | 4743.4 | 2442.5 | 1034.2 | 480.5  | 269.8  | 227.1  | 183.9  | 159.7  | 142.7  |
| 40°   | 5887.2 | 5705.7 | 5011.8 | 2395.0 | 981.3  | 472.7  | 250.9  | 217.9  | 173.7  | 149.0  | 131.5  |
| 42.5° | 6291.0 | 6077.0 | 5244.2 | 2345.0 | 947.8  | 446.0  | 249.0  | 208.7  | 166.0  | 139.3  | 121.8  |
| 45°   | 6630.3 | 6413.3 | 5483.0 | 2328.5 | 924.0  | 416.9  | 257.2  | 202.4  | 160.6  | 131.5  | 114.5  |
| 47.5° | 6900.6 | 6695.3 | 5727.6 | 2365.4 | 910.4  | 390.2  | 234.4  | 210.6  | 157.7  | 124.7  | 108.2  |
| 50°   | 7223.3 | 6990.8 | 6072.1 | 2475.5 | 890.5  | 363.5  | 212.1  | 241.2  | 157.7  | 120.4  | 102.9  |
| 52.5° | 7628.0 | 7398.0 | 6456.5 | 2646.4 | 850.7  | 326.6  | 190.7  | 241.7  | 159.2  | 114.5  | 96.1   |
| 55°   | 8137.1 | 7970.2 | 7005.4 | 2833.7 | 787.2  | 272.3  | 165.0  | 207.7  | 153.4  | 103.9  | 89.8   |
| 57.5° | 8625.3 | 8489.0 | 7505.7 | 2961.8 | 702.2  | 212.6  | 143.7  | 167.4  | 140.3  | 91.2   | 80.1   |
| 59°   | 8758.8 | 8609.8 | 7689.2 | 2967.6 | 638.7  | 185.4  | 133.0  | 138.3  | 137.3  | 85.4   | 74.3   |
| 60°   | 8758.8 | 8600.6 | 7742.1 | 2936.6 | 592.6  | 170.3  | 126.2  | 123.3  | 143.2  | 81.5   | 70.9   |
| 62.5° | 8600.1 | 8377.8 | 7570.3 | 2726.4 | 483.4  | 145.1  | 110.2  | 101.9  | 128.6  | 73.3   | 62.6   |
| 65°   | 8270.1 | 7946.4 | 6985.0 | 2346.5 | 431.0  | 133.0  | 95.1   | 83.5   | 89.3   | 64.5   | 54.8   |
| 67.5° | 7719.8 | 7281.0 | 6141.1 | 1895.6 | 410.1  | 129.6  | 82.0   | 70.9   | 67.5   | 55.3   | 48.0   |
| 70°   | 6750.6 | 6263.8 | 5116.6 | 1490.4 | 392.1  | 128.1  | 68.9   | 59.7   | 54.4   | 46.6   | 40.8   |
| 72.5° | 4913.2 | 4405.6 | 3632.5 | 1165.2 | 381.5  | 131.0  | 55.3   | 50.0   | 44.6   | 36.4   | 31.5   |
| 75°   | 2810.4 | 2478.0 | 2041.7 | 769.7  | 325.2  | 125.2  | 42.7   | 41.7   | 32.0   | 26.2   | 21.8   |
| 77.5° | 1452.0 | 1407.9 | 1223.5 | 295.6  | 155.8  | 54.8   | 28.1   | 24.3   | 18.9   | 16.0   | 13.1   |
| 80°   | 626.5  | 619.7  | 536.3  | 85.4   | 41.3   | 30.6   | 16.0   | 10.2   | 8.7    | 6.8    | 5.3    |
| 82.5° | 216.4  | 216.4  | 190.7  | 28.6   | 18.4   | 15.0   | 1.9    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 43.7   | 49.0   | 34.5   | 0.0    | 6.3    | 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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CATALOG NUMBER: GLEON-SA4A-722-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 |
| 2.5°  | 2910.4 | 2851.7 | 2847.8 | 2810.9 | 2764.8 | 2743.9 | 2731.8 | 2753.1 | 2779.3 | 2782.3 | 2821.6 |
| 5°    | 2259.1 | 2197.5 | 2223.2 | 2157.7 | 2170.8 | 2157.7 | 2136.3 | 2140.2 | 2151.8 | 2115.4 | 2160.6 |
| 7.5°  | 1586.5 | 1539.9 | 1569.5 | 1552.0 | 1575.3 | 1584.5 | 1571.4 | 1552.0 | 1494.7 | 1487.9 | 1527.3 |
| 10°   | 1195.8 | 1142.9 | 1111.4 | 1078.3 | 1085.6 | 1100.7 | 1095.8 | 1081.7 | 1045.3 | 1047.3 | 1085.1 |
| 12.5° | 960.9  | 901.7  | 839.1  | 758.0  | 738.2  | 749.3  | 738.2  | 729.9  | 695.0  | 697.9  | 731.4  |
| 15°   | 728.9  | 680.4  | 614.9  | 549.9  | 514.4  | 517.8  | 486.8  | 464.9  | 443.1  | 416.9  | 437.3  |
| 17.5° | 492.1  | 462.5  | 443.1  | 423.7  | 381.5  | 371.7  | 332.4  | 290.2  | 273.7  | 261.6  | 270.3  |
| 20°   | 348.4  | 332.4  | 324.7  | 323.7  | 299.4  | 287.3  | 249.0  | 222.8  | 214.5  | 212.1  | 217.4  |
| 22.5° | 291.2  | 279.5  | 268.4  | 262.1  | 249.9  | 235.9  | 206.7  | 193.6  | 187.8  | 184.9  | 188.8  |
| 25°   | 253.3  | 244.6  | 232.9  | 222.3  | 217.4  | 202.4  | 181.5  | 171.8  | 167.9  | 165.0  | 166.9  |
| 27.5° | 225.2  | 217.4  | 203.8  | 197.0  | 193.2  | 180.0  | 162.1  | 154.3  | 150.9  | 150.0  | 149.5  |
| 30°   | 202.9  | 195.6  | 183.0  | 175.2  | 168.4  | 156.8  | 146.1  | 138.3  | 134.9  | 133.9  | 133.0  |
| 32.5° | 180.5  | 174.7  | 166.5  | 158.7  | 151.4  | 140.7  | 131.5  | 125.2  | 119.9  | 118.9  | 118.4  |
| 35°   | 152.4  | 146.6  | 142.2  | 141.7  | 134.9  | 124.7  | 117.9  | 109.7  | 105.3  | 103.9  | 104.3  |
| 37.5° | 135.4  | 127.6  | 117.9  | 121.3  | 119.4  | 112.1  | 102.9  | 94.6   | 90.3   | 89.3   | 89.3   |
| 40°   | 124.7  | 116.5  | 105.3  | 99.5   | 105.3  | 103.9  | 89.3   | 81.0   | 76.7   | 76.2   | 75.2   |
| 42.5° | 114.5  | 106.3  | 93.7   | 84.0   | 86.9   | 91.2   | 77.2   | 69.4   | 65.0   | 64.1   | 62.6   |
| 45°   | 107.3  | 98.5   | 84.4   | 73.3   | 67.5   | 76.7   | 66.0   | 56.3   | 53.9   | 51.9   | 51.0   |
| 47.5° | 100.5  | 92.2   | 76.2   | 63.6   | 53.9   | 55.3   | 52.9   | 46.1   | 43.2   | 41.3   | 40.8   |
| 50°   | 94.6   | 85.9   | 68.9   | 54.4   | 44.6   | 40.8   | 42.7   | 36.4   | 34.0   | 32.0   | 31.1   |
| 52.5° | 87.8   | 79.6   | 61.1   | 47.1   | 37.4   | 32.0   | 32.5   | 28.6   | 26.2   | 24.8   | 24.3   |
| 55°   | 82.5   | 74.3   | 54.8   | 41.3   | 33.0   | 26.2   | 23.3   | 22.3   | 20.9   | 19.9   | 19.4   |
| 57.5° | 75.2   | 67.5   | 48.5   | 34.9   | 28.1   | 21.4   | 18.0   | 18.0   | 17.5   | 16.5   | 16.0   |
| 59°   | 70.9   | 64.1   | 44.6   | 31.5   | 25.7   | 18.4   | 16.0   | 16.5   | 16.0   | 15.0   | 14.6   |
| 60°   | 67.5   | 61.1   | 41.7   | 29.1   | 24.3   | 17.0   | 14.6   | 15.5   | 15.0   | 14.1   | 13.6   |
| 62.5° | 59.7   | 55.3   | 35.9   | 24.3   | 21.4   | 13.6   | 12.1   | 13.1   | 13.1   | 12.6   | 12.1   |
| 65°   | 52.4   | 47.6   | 30.6   | 20.4   | 19.9   | 11.6   | 9.7    | 11.6   | 12.1   | 11.2   | 10.2   |
| 67.5° | 45.6   | 40.8   | 26.7   | 16.5   | 18.4   | 9.2    | 7.3    | 9.7    | 13.1   | 10.2   | 9.2    |
| 70°   | 38.8   | 34.0   | 20.9   | 13.1   | 19.4   | 6.3    | 5.8    | 8.7    | 15.5   | 11.2   | 8.7    |
| 72.5° | 30.1   | 26.2   | 14.6   | 9.7    | 20.9   | 4.4    | 4.4    | 7.3    | 17.5   | 12.1   | 8.3    |
| 75°   | 20.9   | 17.0   | 8.7    | 5.8    | 17.0   | 2.9    | 2.9    | 6.8    | 16.5   | 11.2   | 7.8    |
| 77.5° | 12.1   | 9.2    | 2.9    | 0.5    | 8.7    | 0.0    | 0.5    | 4.9    | 11.6   | 6.8    | 3.4    |
| 80°   | 4.4    | 1.9    | 0.0    | 0.0    | 5.3    | 0.0    | 0.0    | 0.0    | 1.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 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°    | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 |
| 2.5°  | 2831.8 | 2897.3 | 2956.0 | 3044.8 | 3150.1 | 3271.4 | 3375.8 | 3487.9 | 3593.2 | 3636.9 | 3667.0 |
| 5°    | 2169.8 | 2250.8 | 2345.5 | 2476.0 | 2649.8 | 2863.8 | 3064.2 | 3290.9 | 3534.5 | 3656.3 | 3770.8 |
| 7.5°  | 1534.1 | 1616.6 | 1734.0 | 1872.8 | 2082.9 | 2337.7 | 2599.8 | 2912.8 | 3242.8 | 3435.5 | 3625.2 |
| 10°   | 1103.1 | 1204.5 | 1314.2 | 1504.0 | 1717.5 | 1959.2 | 2229.0 | 2578.4 | 2946.3 | 3159.8 | 3388.4 |
| 12.5° | 750.8  | 866.3  | 1032.2 | 1244.8 | 1495.7 | 1732.5 | 1966.9 | 2300.4 | 2727.4 | 2939.0 | 3184.1 |
| 15°   | 450.4  | 514.4  | 690.1  | 936.2  | 1243.8 | 1538.9 | 1795.6 | 2130.0 | 2585.2 | 2844.4 | 3099.2 |
| 17.5° | 277.6  | 307.2  | 402.8  | 604.7  | 927.9  | 1301.1 | 1653.0 | 2072.3 | 2605.6 | 2921.1 | 3193.8 |
| 20°   | 221.3  | 232.9  | 263.5  | 357.2  | 614.9  | 1039.0 | 1492.3 | 2060.6 | 2772.1 | 3160.3 | 3453.0 |
| 22.5° | 192.2  | 203.3  | 223.7  | 259.6  | 386.8  | 777.9  | 1339.9 | 2071.3 | 3010.8 | 3519.0 | 3860.6 |
| 25°   | 169.4  | 179.1  | 198.5  | 228.1  | 283.4  | 547.9  | 1176.9 | 2118.8 | 3321.9 | 3964.0 | 4327.0 |
| 27.5° | 151.4  | 159.7  | 177.6  | 204.8  | 243.1  | 382.4  | 992.0  | 2176.6 | 3690.8 | 4419.2 | 4777.4 |
| 30°   | 134.9  | 142.2  | 158.2  | 183.4  | 211.1  | 294.1  | 789.1  | 2215.9 | 4060.1 | 4777.4 | 5099.1 |
| 32.5° | 120.8  | 126.2  | 140.7  | 162.1  | 183.4  | 234.4  | 599.8  | 2209.6 | 4334.3 | 5075.3 | 5330.6 |
| 35°   | 106.3  | 111.6  | 124.2  | 142.7  | 159.7  | 193.6  | 471.7  | 2091.7 | 4573.0 | 5384.5 | 5595.6 |
| 37.5° | 90.3   | 97.1   | 109.2  | 125.7  | 137.3  | 170.3  | 381.5  | 1949.5 | 4815.2 | 5737.8 | 5891.1 |
| 40°   | 76.7   | 83.5   | 94.1   | 112.1  | 119.4  | 161.6  | 293.1  | 1776.2 | 5087.5 | 6132.8 | 6215.3 |
| 42.5° | 63.6   | 69.9   | 81.0   | 96.6   | 112.6  | 139.3  | 216.9  | 1578.2 | 5349.0 | 6470.6 | 6510.9 |
| 45°   | 51.4   | 57.8   | 69.4   | 84.9   | 120.4  | 115.5  | 167.9  | 1366.1 | 5560.2 | 6751.6 | 6764.7 |
| 47.5° | 40.8   | 46.6   | 58.7   | 80.1   | 112.1  | 92.2   | 119.9  | 1199.7 | 5737.3 | 6970.9 | 6936.5 |
| 50°   | 31.5   | 36.4   | 49.0   | 91.7   | 98.0   | 76.2   | 90.8   | 1144.4 | 5896.0 | 7106.8 | 7017.5 |
| 52.5° | 24.8   | 29.1   | 40.3   | 85.9   | 76.2   | 63.1   | 76.2   | 1196.3 | 6113.4 | 7219.4 | 7063.1 |
| 55°   | 19.9   | 24.3   | 31.5   | 49.0   | 51.9   | 53.4   | 65.0   | 1244.8 | 6488.5 | 7483.4 | 7332.5 |
| 57.5° | 16.5   | 20.9   | 25.7   | 34.5   | 39.3   | 45.1   | 57.8   | 1250.1 | 6930.7 | 7922.1 | 7779.5 |
| 59°   | 15.0   | 18.9   | 23.3   | 30.6   | 34.5   | 41.3   | 54.4   | 1221.0 | 7086.4 | 8081.8 | 8010.5 |
| 60°   | 14.1   | 18.0   | 21.8   | 28.1   | 32.0   | 38.8   | 52.4   | 1193.4 | 7093.2 | 8076.0 | 8109.0 |
| 62.5° | 12.1   | 16.0   | 19.4   | 23.8   | 27.2   | 33.0   | 47.1   | 1091.0 | 6805.9 | 7811.5 | 8049.8 |
| 65°   | 10.7   | 14.1   | 17.5   | 20.4   | 23.3   | 29.6   | 42.7   | 904.1  | 6315.3 | 7384.9 | 7644.5 |
| 67.5° | 9.7    | 12.1   | 16.0   | 18.0   | 20.9   | 26.2   | 37.9   | 644.5  | 5702.3 | 6863.2 | 7031.6 |
| 70°   | 8.7    | 11.6   | 14.6   | 16.5   | 18.9   | 22.8   | 32.5   | 370.3  | 4815.2 | 6099.3 | 6219.2 |
| 72.5° | 8.3    | 11.2   | 13.1   | 15.5   | 17.0   | 20.4   | 29.6   | 174.2  | 3525.7 | 4886.1 | 5199.1 |
| 75°   | 7.3    | 10.2   | 12.1   | 14.6   | 16.0   | 18.4   | 25.2   | 83.5   | 2345.0 | 3535.9 | 3891.7 |
| 77.5° | 4.4    | 8.3    | 11.2   | 13.1   | 14.1   | 16.0   | 20.9   | 48.0   | 1496.7 | 2447.4 | 2882.7 |
| 80°   | 0.0    | 2.9    | 8.3    | 11.2   | 12.1   | 13.6   | 16.0   | 37.9   | 800.8  | 1398.2 | 1678.2 |
| 82.5° | 0.0    | 0.0    | 5.8    | 8.7    | 8.3    | 9.2    | 12.1   | 23.8   | 361.1  | 913.8  | 1029.8 |
| 85°   | 0.0    | 0.0    | 1.9    | 6.8    | 5.8    | 4.4    | 8.3    | 8.3    | 79.1   | 462.5  | 577.0  |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.5    | 2.9    | 1.9    | 3.4    | 1.0    | 0.5    | 34.5   | 139.8  |
| 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: P324668

CATALOG NUMBER: GLEON-SA4A-722-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 | 3337.0 |
| 2.5°  | 3772.3 | 3808.2 | 3868.9 | 3897.5 | 3883.4 | 3823.7 | 3752.4 | 3679.6 | 3636.9 | 3653.9 |
| 5°    | 4004.3 | 4189.2 | 4295.9 | 4331.4 | 4272.1 | 4138.2 | 3963.0 | 3732.0 | 3650.0 | 3627.7 |
| 7.5°  | 4004.3 | 4352.2 | 4572.6 | 4611.4 | 4479.4 | 4216.8 | 3888.3 | 3527.7 | 3407.8 | 3364.1 |
| 10°   | 3863.5 | 4337.2 | 4644.4 | 4706.0 | 4521.6 | 4129.0 | 3688.8 | 3277.3 | 3135.1 | 3089.9 |
| 12.5° | 3704.8 | 4214.9 | 4538.6 | 4623.5 | 4472.1 | 4041.6 | 3550.5 | 3107.9 | 2940.5 | 2901.2 |
| 15°   | 3607.3 | 4064.4 | 4332.3 | 4394.0 | 4329.9 | 3990.7 | 3517.5 | 3056.9 | 2859.9 | 2822.1 |
| 17.5° | 3642.2 | 3948.0 | 4044.5 | 4080.5 | 4123.6 | 3972.7 | 3607.3 | 3168.6 | 2919.1 | 2883.2 |
| 20°   | 3773.7 | 3825.2 | 3775.2 | 3820.3 | 3936.8 | 3990.2 | 3821.3 | 3438.4 | 3139.0 | 3090.9 |
| 22.5° | 3997.0 | 3761.6 | 3621.4 | 3639.3 | 3781.0 | 4047.9 | 4148.4 | 3823.7 | 3478.2 | 3418.0 |
| 25°   | 4257.1 | 3813.0 | 3535.9 | 3519.9 | 3665.5 | 4124.1 | 4447.3 | 4243.0 | 3879.5 | 3813.0 |
| 27.5° | 4584.2 | 3928.6 | 3518.5 | 3502.5 | 3625.2 | 4195.5 | 4695.8 | 4657.5 | 4302.2 | 4188.7 |
| 30°   | 4836.6 | 4042.1 | 3570.4 | 3533.5 | 3665.5 | 4245.0 | 4895.3 | 5009.3 | 4639.0 | 4563.8 |
| 32.5° | 5017.6 | 4176.1 | 3654.8 | 3601.5 | 3779.1 | 4330.4 | 5049.1 | 5331.6 | 4950.6 | 4836.6 |
| 35°   | 5155.4 | 4321.6 | 3791.2 | 3703.4 | 3935.3 | 4460.0 | 5193.3 | 5674.7 | 5282.1 | 5157.3 |
| 37.5° | 5284.5 | 4526.0 | 4004.3 | 3899.4 | 4180.4 | 4668.6 | 5345.6 | 6063.9 | 5652.8 | 5503.9 |
| 40°   | 5464.5 | 4757.5 | 4332.8 | 4239.6 | 4592.5 | 4953.0 | 5535.9 | 6469.6 | 6074.6 | 5887.2 |
| 42.5° | 5644.6 | 5005.9 | 4669.1 | 4694.4 | 5106.4 | 5298.6 | 5781.5 | 6898.6 | 6491.0 | 6291.0 |
| 45°   | 5809.1 | 5262.2 | 5148.1 | 5264.6 | 5583.4 | 5677.6 | 6025.6 | 7146.6 | 6823.4 | 6630.3 |
| 47.5° | 5955.7 | 5582.5 | 5624.2 | 5934.3 | 6126.0 | 6020.7 | 6208.0 | 7360.6 | 7070.9 | 6900.6 |
| 50°   | 6126.0 | 5996.9 | 6251.7 | 6690.4 | 6750.6 | 6331.3 | 6374.0 | 7614.0 | 7360.2 | 7223.3 |
| 52.5° | 6312.4 | 6433.7 | 6946.7 | 7333.5 | 7314.0 | 6668.6 | 6541.0 | 7897.9 | 7756.6 | 7628.0 |
| 55°   | 6524.0 | 6786.5 | 7558.6 | 7935.2 | 7918.7 | 7045.2 | 6817.6 | 8248.7 | 8253.6 | 8137.1 |
| 57.5° | 6838.0 | 7090.3 | 7974.1 | 8422.0 | 8449.7 | 7480.0 | 7286.4 | 8641.8 | 8703.0 | 8625.3 |
| 59°   | 7063.1 | 7287.4 | 8138.6 | 8625.3 | 8737.9 | 7816.3 | 7629.0 | 8869.9 | 8829.7 | 8758.8 |
| 60°   | 7230.1 | 7412.6 | 8220.1 | 8731.6 | 8905.4 | 8044.4 | 7881.9 | 9003.9 | 8844.7 | 8758.8 |
| 62.5° | 7643.1 | 7685.3 | 8367.2 | 8852.0 | 9098.0 | 8551.1 | 8593.3 | 9232.0 | 8740.4 | 8600.1 |
| 65°   | 7835.8 | 7857.6 | 8365.2 | 8636.5 | 8911.7 | 8945.6 | 9238.8 | 9238.8 | 8485.6 | 8270.1 |
| 67.5° | 7755.2 | 7649.9 | 7950.3 | 7922.1 | 8196.8 | 8711.2 | 9481.4 | 8900.0 | 7998.3 | 7719.8 |
| 70°   | 7100.0 | 6694.8 | 6561.3 | 6573.5 | 6783.6 | 7577.1 | 9001.0 | 7903.2 | 7076.2 | 6750.6 |
| 72.5° | 5907.6 | 4935.6 | 4606.0 | 4982.2 | 5037.0 | 5823.2 | 7670.7 | 5951.8 | 5218.5 | 4913.2 |
| 75°   | 4751.6 | 3479.2 | 2943.4 | 3340.4 | 3433.5 | 4261.5 | 5933.8 | 3706.8 | 3048.2 | 2810.4 |
| 77.5° | 3413.6 | 2497.4 | 2112.1 | 2084.4 | 2204.7 | 2702.7 | 4210.5 | 1865.5 | 1555.9 | 1452.0 |
| 80°   | 1939.3 | 1643.7 | 1769.9 | 1669.9 | 1730.6 | 1689.8 | 2000.4 | 818.2  | 670.2  | 626.5  |
| 82.5° | 1170.6 | 971.6  | 1052.1 | 876.0  | 1108.4 | 965.3  | 770.7  | 262.1  | 227.6  | 216.4  |
| 85°   | 761.4  | 530.9  | 276.6  | 185.4  | 381.9  | 616.8  | 172.3  | 71.3   | 54.8   | 43.7   |
| 87.5° | 262.6  | 135.4  | 13.6   | 5.8    | 40.8   | 115.0  | 6.3    | 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-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-10-R4

Test Date: 10/25/2019

Luminaire Tested: SA1C-722-U-5WQ

Data in this report applies to families of products SA1C-722-U-5WQ.

### Test Information

Test Method: LM-79-2008 Report  
 Number: SP1-1908-441-10-R4  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 10/28/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: MCGRAW-EDISON  
 Catalog Number: **SA1C-722-U-5WQ**  
 Description: MCGRAW EDISON ROADWAY AND AREA LUMINAIRE

\*\*\*THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.\*\*\*TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

### Spectral Parameters

|                           |         |           |      |      |       |
|---------------------------|---------|-----------|------|------|-------|
| CCT (K):                  | 2237    | CRI (Ra): | 72.0 |      |       |
| CIE u':                   | 0.2876  | R1:       | 68.9 | R9:  | -17.4 |
| CIE v':                   | 0.5346  | R2:       | 83.0 | R10: | 61.3  |
| Duv:                      | -0.0006 | R3:       | 95.2 | R11: | 59.8  |
| CIE x:                    | 0.5005  | R4:       | 66.2 | R12: | 50.5  |
| CIE y:                    | 0.4134  | R5:       | 65.9 | R13: | 71.1  |
| CIE z:                    | 0.0860  | R6:       | 76.3 | R14: | 96.9  |
| Peak Wavelength (nm):     | 603     | R7:       | 76.7 |      |       |
| Dominant Wavelength (nm): | 587     | R8:       | 43.8 |      |       |
| Purity:                   | 74.5    |           |      |      |       |
| Rf:                       | 69.8    |           |      |      |       |
| Rg:                       | 99.2    |           |      |      |       |



### Test Conditions

Stabilization Time: 71M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.7/41%  
 Sphere Temperature (°C): 25.6

REPORT NUMBER: SP1-1908-441-10-R4

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 6/28/2019        | 12/28/2019           |
| Power Meter                    | IN0071                | 12/5/2018        | 12/5/2019            |
| AC Power Source                | IN0063                | 12/5/2018        | 12/5/2019            |
| DC Power Source                | IN0208                | 12/5/2018        | 12/5/2019            |
| Sphere Thermometer             | IN0085                | 12/5/2018        | 12/5/2019            |
| Room Thermometer               | IN0046                | 12/5/2018        | 12/5/2019            |

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CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 2200K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-10-R4

**Photopic Flux vs. Wavelength**



#####

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 1768             | NR               | 490       | 5206             | NR               | 620       | 130919           | NR               | 750       | 8553             | NR               | 880       | 2713             | NR               |
| 365       | 1569             | NR               | 495       | 7286             | NR               | 625       | 125335           | NR               | 755       | 7696             | NR               | 885       | 2316             | NR               |
| 370       | 1594             | NR               | 500       | 10654            | NR               | 630       | 118388           | NR               | 760       | 6978             | NR               | 890       | 2539             | NR               |
| 375       | 1744             | NR               | 505       | 15189            | NR               | 635       | 111855           | NR               | 765       | 6377             | NR               | 895       | 1933             | NR               |
| 380       | 1659             | NR               | 510       | 20541            | NR               | 640       | 104062           | NR               | 770       | 5600             | NR               | 900       | 2216             | NR               |
| 385       | 1504             | NR               | 515       | 26492            | NR               | 645       | 96365            | NR               | 775       | 5000             | NR               | 905       | 2067             | NR               |
| 390       | 1541             | NR               | 520       | 32294            | NR               | 650       | 88651            | NR               | 780       | 4709             | NR               | 910       | 1959             | NR               |
| 395       | 1355             | NR               | 525       | 38123            | NR               | 655       | 81152            | NR               | 785       | 4305             | NR               | 915       | 1874             | NR               |
| 400       | 1243             | NR               | 530       | 43232            | NR               | 660       | 73523            | NR               | 790       | 4040             | NR               | 920       | 1484             | NR               |
| 405       | 1417             | NR               | 535       | 48012            | NR               | 665       | 66123            | NR               | 795       | 3642             | NR               | 925       | 1914             | NR               |
| 410       | 2147             | NR               | 540       | 52623            | NR               | 670       | 58677            | NR               | 800       | 3594             | NR               | 930       | 1948             | NR               |
| 415       | 3837             | NR               | 545       | 57516            | NR               | 675       | 52349            | NR               | 805       | 3190             | NR               | 935       | 2079             | NR               |
| 420       | 7159             | NR               | 550       | 62613            | NR               | 680       | 46159            | NR               | 810       | 3241             | NR               | 940       | 2263             | NR               |
| 425       | 12599            | NR               | 555       | 68554            | NR               | 685       | 40525            | NR               | 815       | 2732             | NR               | 945       | 1688             | NR               |
| 430       | 19019            | NR               | 560       | 75325            | NR               | 690       | 35615            | NR               | 820       | 2612             | NR               | 950       | 1560             | NR               |
| 435       | 24875            | NR               | 565       | 82533            | NR               | 695       | 31158            | NR               | 825       | 2966             | NR               | 955       | 2826             | NR               |
| 440       | 29103            | NR               | 570       | 90909            | NR               | 700       | 27409            | NR               | 830       | 2574             | NR               | 960       | 1477             | NR               |
| 445       | 29901            | NR               | 575       | 99621            | NR               | 705       | 24204            | NR               | 835       | 2633             | NR               | 965       | 1568             | NR               |
| 450       | 24862            | NR               | 580       | 108484           | NR               | 710       | 21558            | NR               | 840       | 2526             | NR               | 970       | 2030             | NR               |
| 455       | 15942            | NR               | 585       | 116679           | NR               | 715       | 19222            | NR               | 845       | 2631             | NR               | 975       | 1986             | NR               |
| 460       | 9916             | NR               | 590       | 123752           | NR               | 720       | 17310            | NR               | 850       | 2079             | NR               | 980       | 2540             | NR               |
| 465       | 7051             | NR               | 595       | 129324           | NR               | 725       | 15280            | NR               | 855       | 2309             | NR               | 985       | 1139             | NR               |
| 470       | 5227             | NR               | 600       | 134082           | NR               | 730       | 13282            | NR               | 860       | 2528             | NR               | 990       | 2018             | NR               |
| 475       | 4257             | NR               | 605       | 135698           | NR               | 735       | 11753            | NR               | 865       | 2121             | NR               | 995       | 3445             | NR               |
| 480       | 4052             | NR               | 610       | 135144           | NR               | 740       | 10654            | NR               | 870       | 2751             | NR               | 1000      | 3704             | NR               |
| 485       | 4298             | NR               | 615       | 134180           | NR               | 745       | 9451             | NR               | 875       | 2317             | NR               |           |                  |                  |

REPORT NUMBER: SP1-1908-441-10-R4

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: 4696.9**

**S/P: 0.85**

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 1768             | NR               | 490       | 5206             | NR               | 620       | 130919           | NR               | 750       | 8553             | NR               | 880       | 2713             | NR               |
| 365       | 1569             | NR               | 495       | 7286             | NR               | 625       | 125335           | NR               | 755       | 7696             | NR               | 885       | 2316             | NR               |
| 370       | 1594             | NR               | 500       | 10654            | NR               | 630       | 118388           | NR               | 760       | 6978             | NR               | 890       | 2539             | NR               |
| 375       | 1744             | NR               | 505       | 15189            | NR               | 635       | 111855           | NR               | 765       | 6377             | NR               | 895       | 1933             | NR               |
| 380       | 1659             | NR               | 510       | 20541            | NR               | 640       | 104062           | NR               | 770       | 5600             | NR               | 900       | 2216             | NR               |
| 385       | 1504             | NR               | 515       | 26492            | NR               | 645       | 96365            | NR               | 775       | 5000             | NR               | 905       | 2067             | NR               |
| 390       | 1541             | NR               | 520       | 32294            | NR               | 650       | 88651            | NR               | 780       | 4709             | NR               | 910       | 1959             | NR               |
| 395       | 1355             | NR               | 525       | 38123            | NR               | 655       | 81152            | NR               | 785       | 4305             | NR               | 915       | 1874             | NR               |
| 400       | 1243             | NR               | 530       | 43232            | NR               | 660       | 73523            | NR               | 790       | 4040             | NR               | 920       | 1484             | NR               |
| 405       | 1417             | NR               | 535       | 48012            | NR               | 665       | 66123            | NR               | 795       | 3642             | NR               | 925       | 1914             | NR               |
| 410       | 2147             | NR               | 540       | 52623            | NR               | 670       | 58677            | NR               | 800       | 3594             | NR               | 930       | 1948             | NR               |
| 415       | 3837             | NR               | 545       | 57516            | NR               | 675       | 52349            | NR               | 805       | 3190             | NR               | 935       | 2079             | NR               |
| 420       | 7159             | NR               | 550       | 62613            | NR               | 680       | 46159            | NR               | 810       | 3241             | NR               | 940       | 2263             | NR               |
| 425       | 12599            | NR               | 555       | 68554            | NR               | 685       | 40525            | NR               | 815       | 2732             | NR               | 945       | 1688             | NR               |
| 430       | 19019            | NR               | 560       | 75325            | NR               | 690       | 35615            | NR               | 820       | 2612             | NR               | 950       | 1560             | NR               |
| 435       | 24875            | NR               | 565       | 82533            | NR               | 695       | 31158            | NR               | 825       | 2966             | NR               | 955       | 2826             | NR               |
| 440       | 29103            | NR               | 570       | 90909            | NR               | 700       | 27409            | NR               | 830       | 2574             | NR               | 960       | 1477             | NR               |
| 445       | 29901            | NR               | 575       | 99621            | NR               | 705       | 24204            | NR               | 835       | 2633             | NR               | 965       | 1568             | NR               |
| 450       | 24862            | NR               | 580       | 108484           | NR               | 710       | 21558            | NR               | 840       | 2526             | NR               | 970       | 2030             | NR               |
| 455       | 15942            | NR               | 585       | 116679           | NR               | 715       | 19222            | NR               | 845       | 2631             | NR               | 975       | 1986             | NR               |
| 460       | 9916             | NR               | 590       | 123752           | NR               | 720       | 17310            | NR               | 850       | 2079             | NR               | 980       | 2540             | NR               |
| 465       | 7051             | NR               | 595       | 129324           | NR               | 725       | 15280            | NR               | 855       | 2309             | NR               | 985       | 1139             | NR               |
| 470       | 5227             | NR               | 600       | 134082           | NR               | 730       | 13282            | NR               | 860       | 2528             | NR               | 990       | 2018             | NR               |
| 475       | 4257             | NR               | 605       | 135698           | NR               | 735       | 11753            | NR               | 865       | 2121             | NR               | 995       | 3445             | NR               |
| 480       | 4052             | NR               | 610       | 135144           | NR               | 740       | 10654            | NR               | 870       | 2751             | NR               | 1000      | 3704             | NR               |
| 485       | 4298             | NR               | 615       | 134180           | NR               | 745       | 9451             | NR               | 875       | 2317             | NR               |           |                  |                  |

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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: 1470.8 M/P: 0.27**

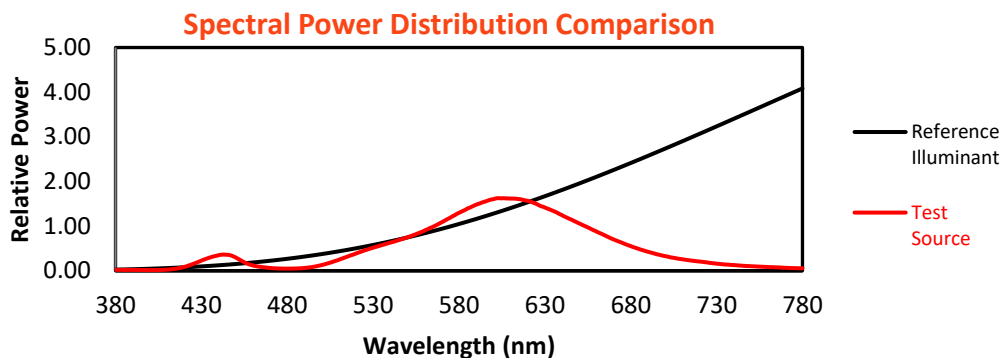
| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 1768             | NR               | 490       | 5206             | NR               | 620       | 130919           | NR               | 750       | 8553             | NR               | 880       | 2713             | NR               |
| 365       | 1569             | NR               | 495       | 7286             | NR               | 625       | 125335           | NR               | 755       | 7696             | NR               | 885       | 2316             | NR               |
| 370       | 1594             | NR               | 500       | 10654            | NR               | 630       | 118388           | NR               | 760       | 6978             | NR               | 890       | 2539             | NR               |
| 375       | 1744             | NR               | 505       | 15189            | NR               | 635       | 111855           | NR               | 765       | 6377             | NR               | 895       | 1933             | NR               |
| 380       | 1659             | NR               | 510       | 20541            | NR               | 640       | 104062           | NR               | 770       | 5600             | NR               | 900       | 2216             | NR               |
| 385       | 1504             | NR               | 515       | 26492            | NR               | 645       | 96365            | NR               | 775       | 5000             | NR               | 905       | 2067             | NR               |
| 390       | 1541             | NR               | 520       | 32294            | NR               | 650       | 88651            | NR               | 780       | 4709             | NR               | 910       | 1959             | NR               |
| 395       | 1355             | NR               | 525       | 38123            | NR               | 655       | 81152            | NR               | 785       | 4305             | NR               | 915       | 1874             | NR               |
| 400       | 1243             | NR               | 530       | 43232            | NR               | 660       | 73523            | NR               | 790       | 4040             | NR               | 920       | 1484             | NR               |
| 405       | 1417             | NR               | 535       | 48012            | NR               | 665       | 66123            | NR               | 795       | 3642             | NR               | 925       | 1914             | NR               |
| 410       | 2147             | NR               | 540       | 52623            | NR               | 670       | 58677            | NR               | 800       | 3594             | NR               | 930       | 1948             | NR               |
| 415       | 3837             | NR               | 545       | 57516            | NR               | 675       | 52349            | NR               | 805       | 3190             | NR               | 935       | 2079             | NR               |
| 420       | 7159             | NR               | 550       | 62613            | NR               | 680       | 46159            | NR               | 810       | 3241             | NR               | 940       | 2263             | NR               |
| 425       | 12599            | NR               | 555       | 68554            | NR               | 685       | 40525            | NR               | 815       | 2732             | NR               | 945       | 1688             | NR               |
| 430       | 19019            | NR               | 560       | 75325            | NR               | 690       | 35615            | NR               | 820       | 2612             | NR               | 950       | 1560             | NR               |
| 435       | 24875            | NR               | 565       | 82533            | NR               | 695       | 31158            | NR               | 825       | 2966             | NR               | 955       | 2826             | NR               |
| 440       | 29103            | NR               | 570       | 90909            | NR               | 700       | 27409            | NR               | 830       | 2574             | NR               | 960       | 1477             | NR               |
| 445       | 29901            | NR               | 575       | 99621            | NR               | 705       | 24204            | NR               | 835       | 2633             | NR               | 965       | 1568             | NR               |
| 450       | 24862            | NR               | 580       | 108484           | NR               | 710       | 21558            | NR               | 840       | 2526             | NR               | 970       | 2030             | NR               |
| 455       | 15942            | NR               | 585       | 116679           | NR               | 715       | 19222            | NR               | 845       | 2631             | NR               | 975       | 1986             | NR               |
| 460       | 9916             | NR               | 590       | 123752           | NR               | 720       | 17310            | NR               | 850       | 2079             | NR               | 980       | 2540             | NR               |
| 465       | 7051             | NR               | 595       | 129324           | NR               | 725       | 15280            | NR               | 855       | 2309             | NR               | 985       | 1139             | NR               |
| 470       | 5227             | NR               | 600       | 134082           | NR               | 730       | 13282            | NR               | 860       | 2528             | NR               | 990       | 2018             | NR               |
| 475       | 4257             | NR               | 605       | 135698           | NR               | 735       | 11753            | NR               | 865       | 2121             | NR               | 995       | 3445             | NR               |
| 480       | 4052             | NR               | 610       | 135144           | NR               | 740       | 10654            | NR               | 870       | 2751             | NR               | 1000      | 3704             | NR               |
| 485       | 4298             | NR               | 615       | 134180           | NR               | 745       | 9451             | NR               | 875       | 2317             | NR               |           |                  |                  |

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### Summary

$R_f = 69.8$   
 $R_g = 99.2$   
 CIE  $R_a = 72.0$   
 $R_g = -17.4$



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 87 | CES26 = 56 | CES51 = 74 | CES76 = 56 |
| CES02 = 65 | CES27 = 76 | CES52 = 76 | CES77 = 81 |
| CES03 = 32 | CES28 = 83 | CES53 = 65 | CES78 = 63 |
| CES04 = 72 | CES29 = 46 | CES54 = 78 | CES79 = 84 |
| CES05 = 52 | CES30 = 48 | CES55 = 75 | CES80 = 84 |
| CES06 = 52 | CES31 = 51 | CES56 = 65 | CES81 = 63 |
| CES07 = 44 | CES32 = 51 | CES57 = 62 | CES82 = 92 |
| CES08 = 42 | CES33 = 53 | CES58 = 66 | CES83 = 83 |
| CES09 = 29 | CES34 = 70 | CES59 = 84 | CES84 = 92 |
| CES10 = 78 | CES35 = 85 | CES60 = 90 | CES85 = 81 |
| CES11 = 61 | CES36 = 78 | CES61 = 84 | CES86 = 56 |
| CES12 = 68 | CES37 = 80 | CES62 = 70 | CES87 = 78 |
| CES13 = 45 | CES38 = 53 | CES63 = 68 | CES88 = 72 |
| CES14 = 75 | CES39 = 90 | CES64 = 69 | CES89 = 62 |
| CES15 = 72 | CES40 = 84 | CES65 = 67 | CES90 = 67 |
| CES16 = 49 | CES41 = 75 | CES66 = 64 | CES91 = 90 |
| CES17 = 51 | CES42 = 79 | CES67 = 63 | CES92 = 67 |
| CES18 = 57 | CES43 = 64 | CES68 = 69 | CES93 = 79 |
| CES19 = 74 | CES44 = 98 | CES69 = 80 | CES94 = 52 |
| CES20 = 68 | CES45 = 73 | CES70 = 63 | CES95 = 76 |
| CES21 = 89 | CES46 = 67 | CES71 = 63 | CES96 = 78 |
| CES22 = 81 | CES47 = 60 | CES72 = 87 | CES97 = 77 |
| CES23 = 92 | CES48 = 48 | CES73 = 56 | CES98 = 71 |
| CES24 = 92 | CES49 = 64 | CES74 = 87 | CES99 = 65 |
| CES25 = 74 | CES50 = 74 | CES75 = 66 |            |



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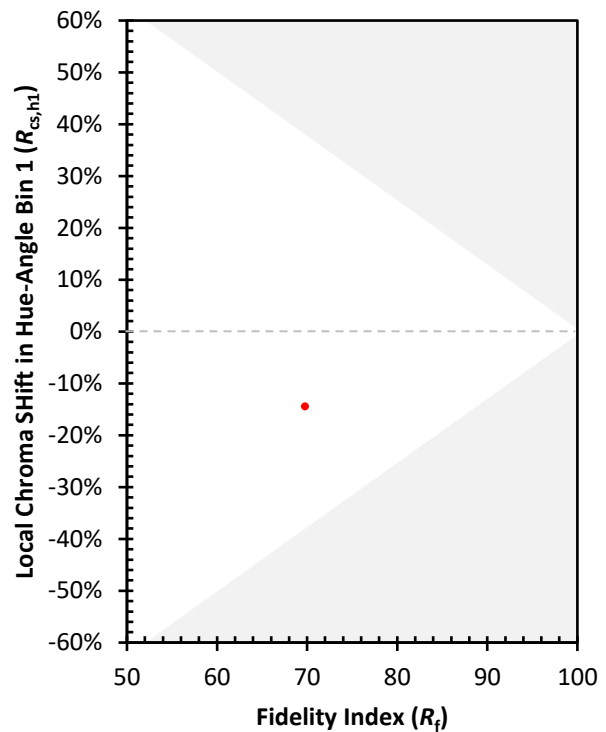
Color Rendition by Hue-Angle Bin



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**Measure Comparisons**



(END OF REPORT)