

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: P324347

Luminaire Tested: **GLEON-SA3A-722-U-SLL-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P324347  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-27)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GLEON-SA3A-722-U-SLL-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(3) 70 CRI, 2200K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7753 lumens  
Efficiency: N/A  
Efficacy: 80.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2

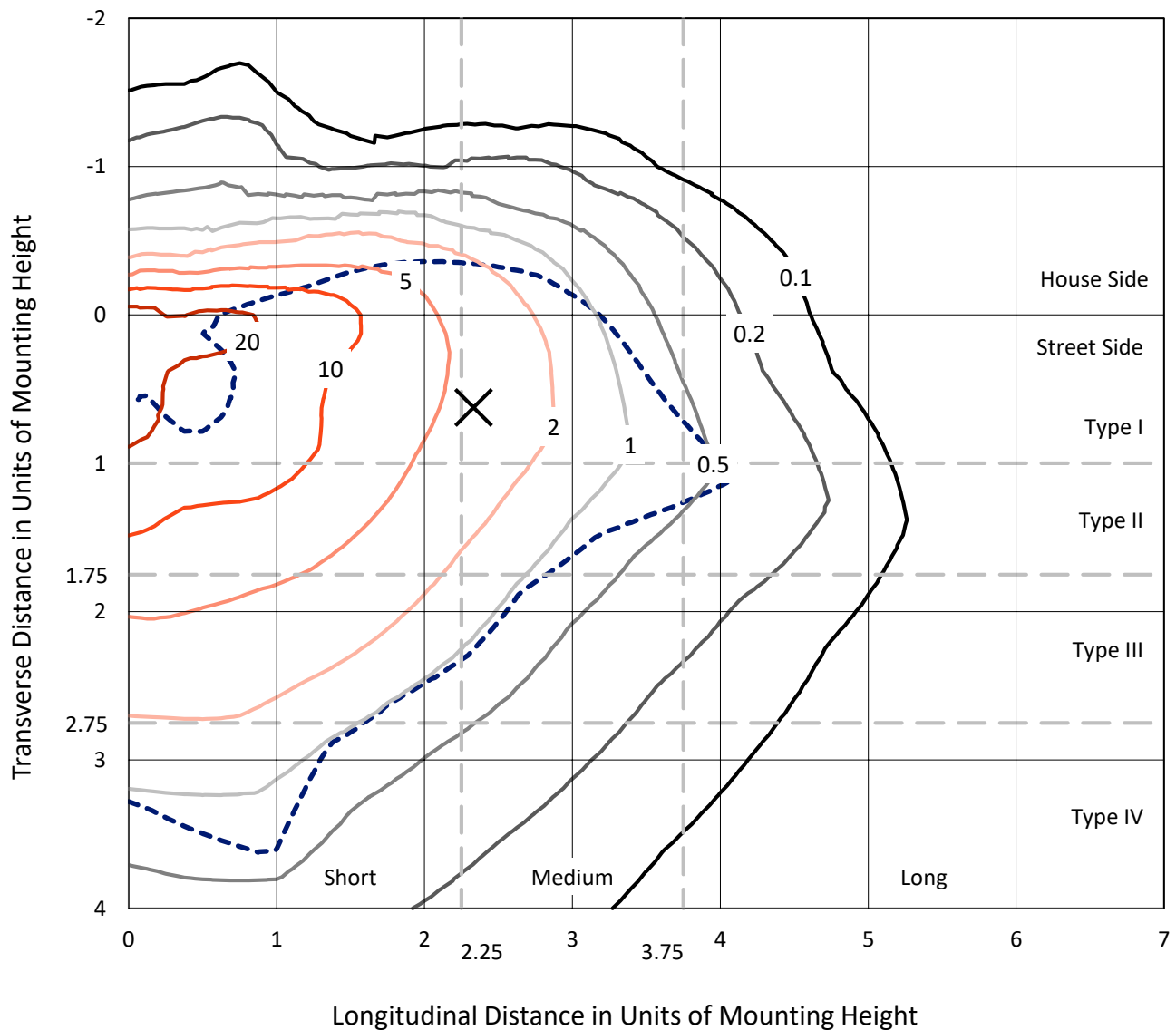
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

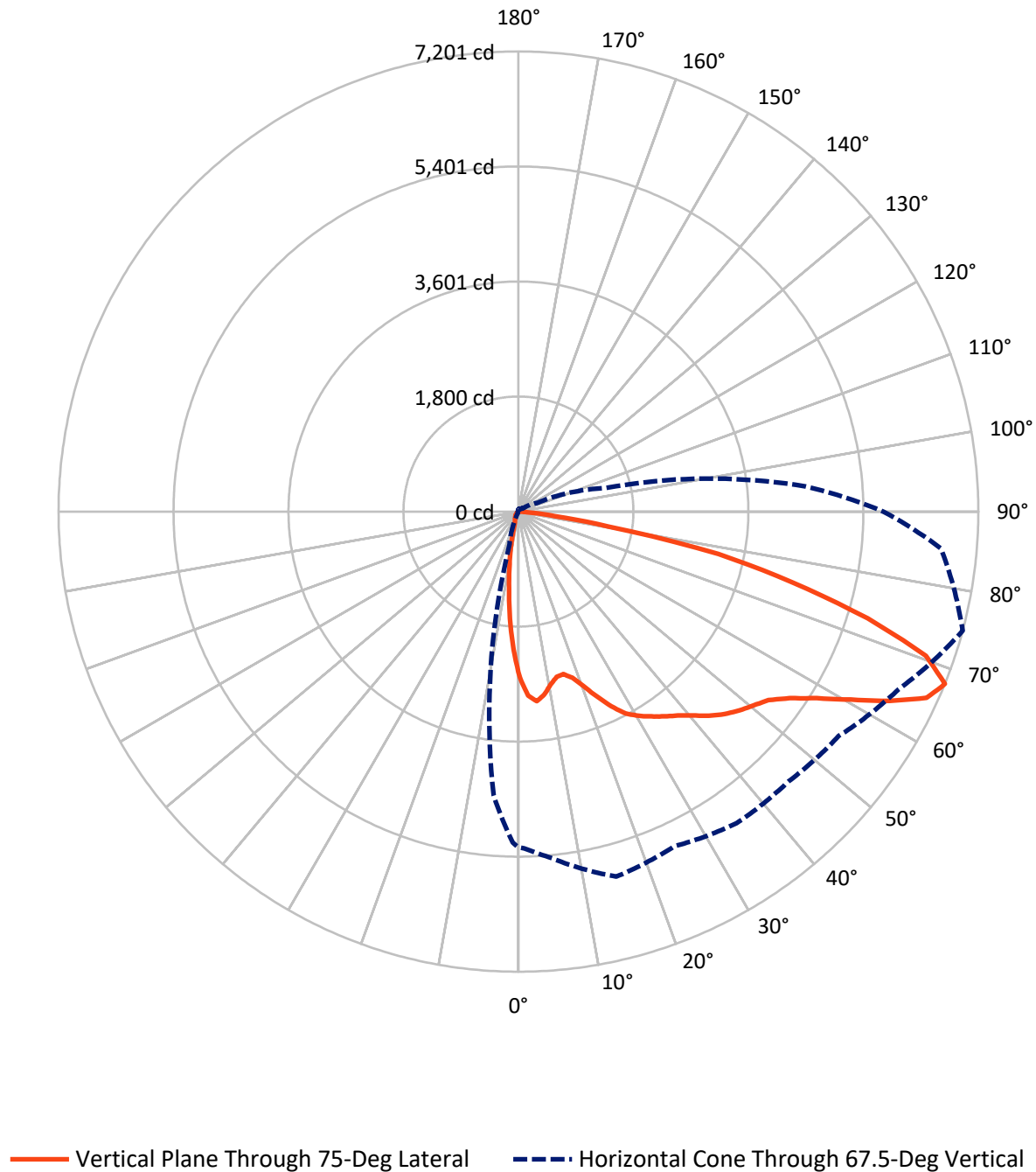
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 33.7 fc  
 Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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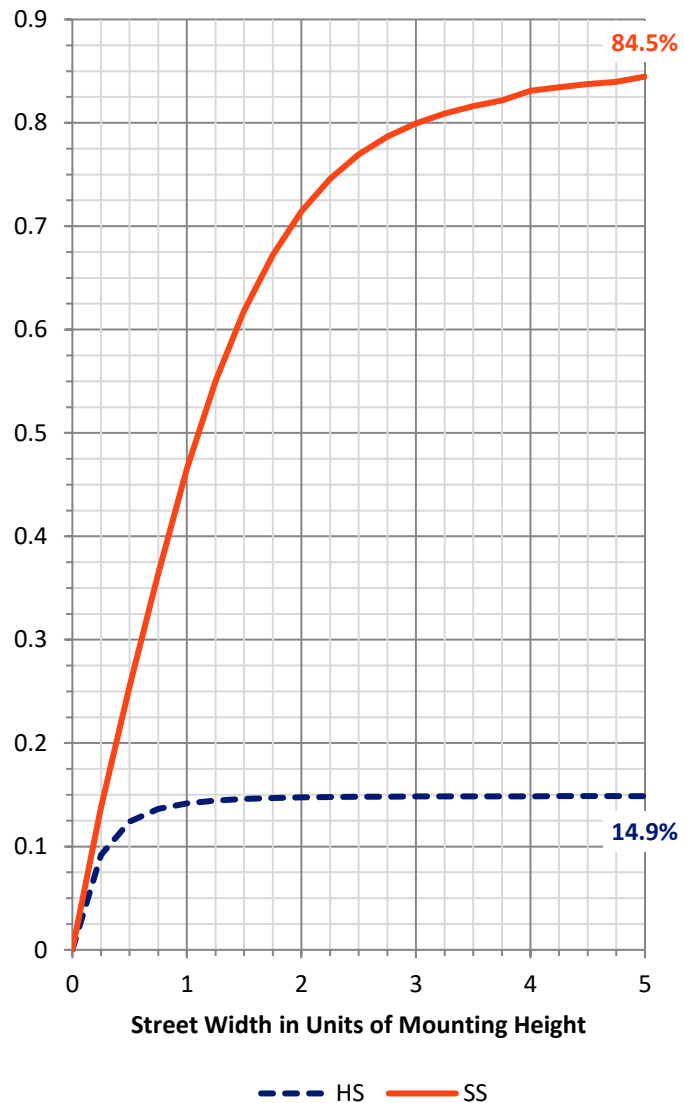
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1163.4   | 0.0    | 1163.4 |
|                    | % Fixture | 15.0     | 0.0    | 15.0   |
| <b>Street Side</b> | Lumens    | 6589.6   | 0.0    | 6589.6 |
|                    | % Fixture | 85.0     | 0.0    | 85.0   |
| <b>Total</b>       | Lumens    | 7753.0   | 0.0    | 7753.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 197.3  | 2.5       |
| 10°-20°   | 388.5  | 5.0       |
| 20°-30°   | 549.6  | 7.1       |
| 30°-40°   | 808.1  | 10.4      |
| 40°-50°   | 1161.4 | 15.0      |
| 50°-60°   | 1635.0 | 21.1      |
| 60°-70°   | 1909.5 | 24.6      |
| 70°-80°   | 974.2  | 12.6      |
| 80°-90°   | 129.4  | 1.7       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 7753.0 | 100.0     |
| 0°-180°   | 7753.0 | 100.0     |

**Coefficient of Utilization**



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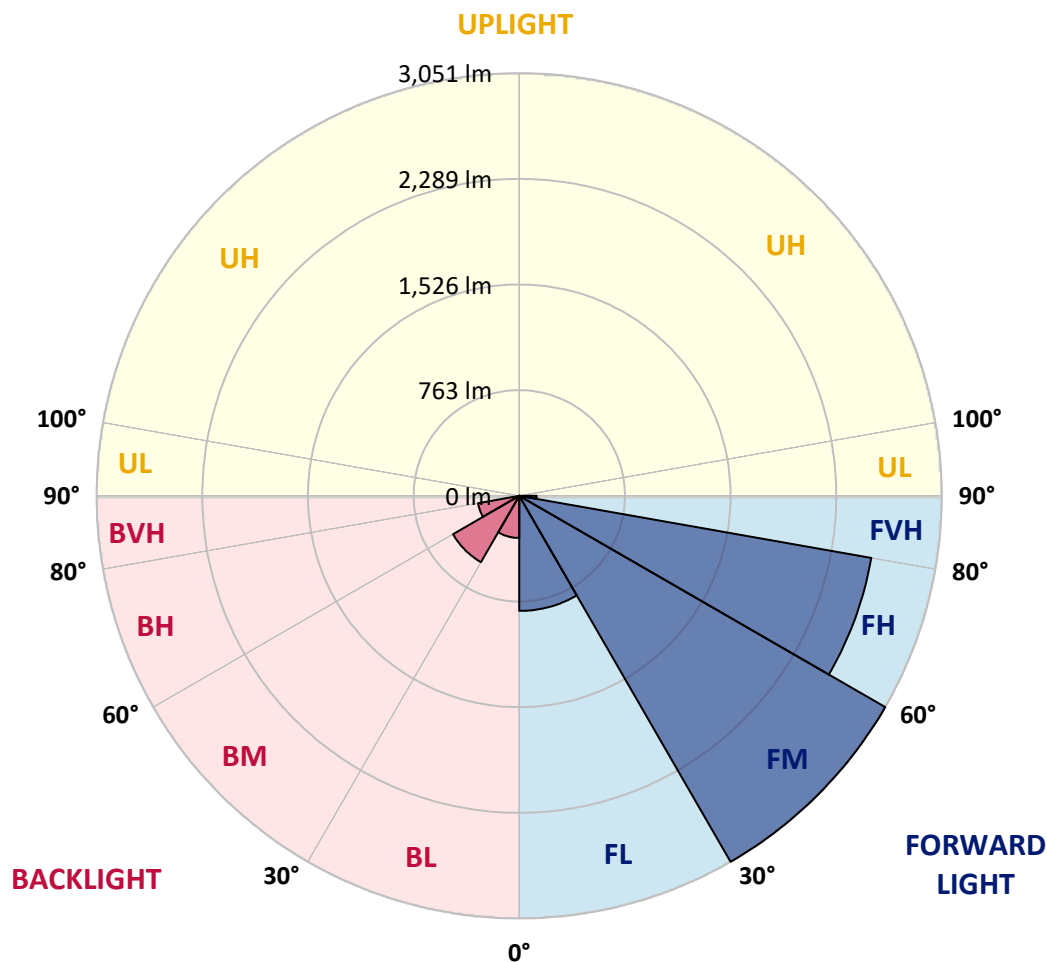
CATALOG NUMBER: GLEON-SA3A-722-U-SLL-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 831.1  | 10.7      |                         |      |         |
| FM   | (30°-60°)   | 3051.4 | 39.4      |                         |      |         |
| FH   | (60°-80°)   | 2581.5 | 33.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 125.5  | 1.6       |                         |      | G2/225  |
| BL   | (0°-30°)    | 304.2  | 3.9       | B1/500                  |      |         |
| BM   | (30°-60°)   | 553.1  | 7.1       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 302.2  | 3.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 3.9    | 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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 |
| 2.5°  | 2819.5 | 2823.9 | 2846.7 | 2899.6 | 2957.2 | 2961.7 | 3000.6 | 2960.6 | 2947.0 | 2882.3 | 2815.5 |
| 5°    | 2840.8 | 2857.7 | 2935.9 | 3091.3 | 3226.1 | 3269.4 | 3300.3 | 3221.7 | 3139.0 | 2981.1 | 2812.5 |
| 7.5°  | 2669.3 | 2697.6 | 2820.6 | 3112.2 | 3353.2 | 3459.7 | 3479.9 | 3356.8 | 3154.5 | 2894.4 | 2641.0 |
| 10°   | 2449.7 | 2482.0 | 2630.4 | 2988.8 | 3319.7 | 3502.3 | 3530.2 | 3369.0 | 3078.1 | 2754.2 | 2455.6 |
| 12.5° | 2271.9 | 2309.8 | 2461.4 | 2850.0 | 3204.8 | 3406.8 | 3461.9 | 3328.2 | 3012.0 | 2654.6 | 2328.9 |
| 15°   | 2190.0 | 2233.4 | 2392.8 | 2760.4 | 3077.3 | 3236.4 | 3281.9 | 3224.3 | 2975.2 | 2638.8 | 2299.5 |
| 17.5° | 2237.0 | 2284.0 | 2448.6 | 2768.1 | 2957.6 | 3025.6 | 3062.3 | 3085.8 | 2975.2 | 2734.0 | 2385.4 |
| 20°   | 2429.9 | 2480.5 | 2654.6 | 2846.3 | 2858.5 | 2833.1 | 2872.4 | 2955.0 | 3009.8 | 2914.6 | 2591.8 |
| 22.5° | 2696.5 | 2756.0 | 2952.5 | 2980.4 | 2810.0 | 2714.1 | 2719.3 | 2848.9 | 3072.6 | 3143.8 | 2878.3 |
| 25°   | 3021.5 | 3094.2 | 3294.0 | 3180.2 | 2830.2 | 2643.2 | 2641.4 | 2761.5 | 3133.9 | 3373.4 | 3197.4 |
| 27.5° | 3344.4 | 3424.4 | 3600.0 | 3424.0 | 2913.5 | 2630.4 | 2626.7 | 2735.1 | 3193.8 | 3577.6 | 3546.0 |
| 30°   | 3615.0 | 3692.9 | 3844.2 | 3600.7 | 3003.5 | 2660.5 | 2642.9 | 2763.3 | 3229.4 | 3710.2 | 3800.1 |
| 32.5° | 3835.4 | 3897.8 | 4020.1 | 3722.3 | 3099.8 | 2718.9 | 2680.7 | 2839.0 | 3290.0 | 3822.2 | 4033.7 |
| 35°   | 4077.8 | 4143.5 | 4192.4 | 3838.0 | 3207.7 | 2803.0 | 2748.3 | 2959.1 | 3383.3 | 3936.0 | 4289.7 |
| 37.5° | 4354.3 | 4419.7 | 4413.8 | 3943.7 | 3344.7 | 2942.2 | 2907.3 | 3149.3 | 3528.4 | 4048.8 | 4575.4 |
| 40°   | 4625.0 | 4691.9 | 4644.1 | 4059.4 | 3505.6 | 3171.7 | 3146.0 | 3435.1 | 3722.6 | 4193.1 | 4910.4 |
| 42.5° | 4878.4 | 4950.8 | 4848.7 | 4168.9 | 3697.3 | 3461.1 | 3505.2 | 3803.1 | 3965.8 | 4370.9 | 5199.1 |
| 45°   | 5082.6 | 5156.5 | 5020.2 | 4275.4 | 3899.3 | 3812.3 | 3944.8 | 4210.7 | 4258.1 | 4521.1 | 5394.1 |
| 47.5° | 5231.0 | 5300.8 | 5139.2 | 4381.9 | 4157.9 | 4241.6 | 4472.6 | 4638.2 | 4522.2 | 4651.5 | 5532.5 |
| 50°   | 5325.8 | 5380.1 | 5174.1 | 4515.2 | 4497.2 | 4742.5 | 5022.4 | 5103.2 | 4770.8 | 4769.0 | 5700.7 |
| 52.5° | 5386.0 | 5410.6 | 5199.8 | 4654.4 | 4851.3 | 5287.9 | 5560.8 | 5586.2 | 5026.8 | 4898.3 | 5927.4 |
| 55°   | 5593.5 | 5613.3 | 5382.0 | 4823.0 | 5144.0 | 5765.8 | 6047.8 | 6024.3 | 5316.6 | 5151.3 | 6194.7 |
| 57.5° | 5947.6 | 5968.5 | 5758.4 | 5065.4 | 5380.9 | 6061.0 | 6400.8 | 6443.0 | 5656.3 | 5506.8 | 6481.2 |
| 60°   | 6125.3 | 6164.2 | 6089.3 | 5372.4 | 5610.4 | 6249.8 | 6641.3 | 6776.1 | 6080.9 | 5975.5 | 6758.9 |
| 62.5° | 5964.1 | 6020.6 | 6129.4 | 5712.9 | 5838.5 | 6353.8 | 6716.2 | 6895.5 | 6515.7 | 6521.6 | 6930.0 |
| 65°   | 5642.4 | 5687.5 | 5871.9 | 5899.4 | 5970.7 | 6340.9 | 6531.1 | 6728.7 | 6782.0 | 7023.3 | 6920.8 |
| 67.5° | 5253.8 | 5270.7 | 5427.1 | 5914.1 | 5779.0 | 5954.5 | 5975.1 | 6121.3 | 6571.5 | 7201.0 | 6642.8 |
| 70°   | 4694.4 | 4703.6 | 4840.2 | 5422.4 | 4966.2 | 5004.8 | 4974.3 | 5004.0 | 5649.7 | 6768.0 | 5940.9 |
| 72.5° | 3778.1 | 3801.2 | 3995.5 | 4503.1 | 3618.0 | 3506.7 | 3746.1 | 3732.9 | 4351.0 | 5718.0 | 4412.4 |
| 75°   | 2781.7 | 2821.7 | 3115.2 | 3627.1 | 2539.3 | 2296.9 | 2471.7 | 2518.4 | 3093.1 | 4423.0 | 2759.3 |
| 77.5° | 1947.6 | 1977.4 | 2261.6 | 2666.4 | 1837.8 | 1642.4 | 1579.3 | 1634.7 | 2041.6 | 3199.6 | 1390.1 |
| 80°   | 1122.0 | 1133.0 | 1314.5 | 1539.6 | 1238.4 | 1416.9 | 1283.6 | 1321.8 | 1223.4 | 1423.5 | 597.9  |
| 82.5° | 734.2  | 736.0  | 806.9  | 916.3  | 771.3  | 896.1  | 663.3  | 848.0  | 752.5  | 571.8  | 194.7  |
| 85°   | 396.7  | 398.9  | 467.9  | 650.4  | 436.7  | 246.8  | 145.1  | 297.9  | 465.3  | 131.1  | 53.3   |
| 87.5° | 43.7   | 40.0   | 141.0  | 236.5  | 121.2  | 22.4   | 7.7    | 33.4   | 74.6   | 8.4    | 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°    | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 |
| 2.5°  | 2781.3 | 2750.8 | 2674.8 | 2594.4 | 2529.7 | 2469.1 | 2408.2 | 2333.6 | 2276.0 | 2264.2 | 2245.1 |
| 5°    | 2721.8 | 2625.2 | 2465.8 | 2305.7 | 2176.8 | 2014.1 | 1910.9 | 1830.5 | 1751.9 | 1747.1 | 1731.3 |
| 7.5°  | 2514.0 | 2386.9 | 2162.5 | 1941.0 | 1759.6 | 1604.6 | 1448.1 | 1343.5 | 1261.2 | 1232.2 | 1214.9 |
| 10°   | 2314.2 | 2171.3 | 1891.1 | 1638.4 | 1476.4 | 1339.4 | 1229.2 | 1119.8 | 1020.6 | 952.3  | 921.5  |
| 12.5° | 2174.6 | 2016.7 | 1707.8 | 1490.0 | 1374.0 | 1243.9 | 1109.5 | 972.9  | 858.7  | 776.4  | 726.1  |
| 15°   | 2120.6 | 1952.0 | 1646.5 | 1431.2 | 1288.0 | 1123.5 | 951.6  | 795.5  | 668.8  | 594.2  | 549.1  |
| 17.5° | 2184.9 | 1988.8 | 1641.7 | 1359.6 | 1159.5 | 954.9  | 765.0  | 580.7  | 461.3  | 404.7  | 375.7  |
| 20°   | 2348.0 | 2105.6 | 1639.9 | 1271.9 | 1006.7 | 755.1  | 518.2  | 382.0  | 309.6  | 278.0  | 264.4  |
| 22.5° | 2578.6 | 2254.7 | 1654.5 | 1185.2 | 847.7  | 539.5  | 357.7  | 280.6  | 243.5  | 226.6  | 218.9  |
| 25°   | 2875.3 | 2464.0 | 1696.0 | 1106.6 | 698.2  | 402.5  | 278.8  | 235.1  | 209.0  | 195.8  | 190.2  |
| 27.5° | 3191.6 | 2704.9 | 1760.7 | 1038.3 | 576.6  | 321.0  | 238.7  | 201.3  | 182.5  | 173.4  | 168.2  |
| 30°   | 3452.3 | 2984.1 | 1826.1 | 962.2  | 488.5  | 279.9  | 218.5  | 183.6  | 162.0  | 156.1  | 151.3  |
| 32.5° | 3680.4 | 3195.2 | 1872.3 | 893.6  | 430.8  | 248.6  | 197.6  | 164.2  | 149.5  | 138.1  | 133.0  |
| 35°   | 3916.6 | 3371.2 | 1870.9 | 845.5  | 391.1  | 225.1  | 180.0  | 146.9  | 129.3  | 116.1  | 112.0  |
| 37.5° | 4172.2 | 3569.9 | 1838.9 | 804.3  | 373.9  | 206.4  | 170.0  | 137.7  | 120.1  | 106.9  | 101.7  |
| 40°   | 4471.5 | 3778.5 | 1806.2 | 765.8  | 369.1  | 191.3  | 163.1  | 130.4  | 111.6  | 98.8   | 93.7   |
| 42.5° | 4763.1 | 3966.5 | 1777.6 | 737.1  | 348.5  | 191.0  | 156.8  | 124.9  | 105.0  | 92.6   | 86.7   |
| 45°   | 4996.3 | 4141.7 | 1772.1 | 719.8  | 326.9  | 197.6  | 153.5  | 121.2  | 99.9   | 87.4   | 81.9   |
| 47.5° | 5190.2 | 4331.9 | 1807.3 | 707.7  | 306.3  | 180.3  | 161.6  | 118.6  | 95.1   | 83.0   | 76.8   |
| 50°   | 5420.9 | 4565.5 | 1890.3 | 687.9  | 284.6  | 162.3  | 185.1  | 119.4  | 91.1   | 78.6   | 72.0   |
| 52.5° | 5742.6 | 4888.7 | 2012.3 | 654.5  | 254.9  | 145.8  | 182.2  | 120.1  | 86.7   | 73.8   | 67.2   |
| 55°   | 6103.3 | 5292.3 | 2143.4 | 599.0  | 213.4  | 124.1  | 156.1  | 115.0  | 78.2   | 68.7   | 62.4   |
| 57.5° | 6482.3 | 5658.5 | 2221.2 | 532.9  | 169.7  | 107.2  | 124.9  | 104.7  | 69.0   | 61.7   | 57.7   |
| 60°   | 6541.8 | 5797.7 | 2185.6 | 451.7  | 134.8  | 93.3   | 92.6   | 106.5  | 61.7   | 54.4   | 51.4   |
| 62.5° | 6393.8 | 5622.9 | 2013.4 | 379.4  | 112.8  | 81.9   | 76.0   | 92.9   | 55.8   | 48.5   | 45.5   |
| 65°   | 6109.2 | 5150.2 | 1734.2 | 341.9  | 104.7  | 70.1   | 63.2   | 65.4   | 48.8   | 42.2   | 39.7   |
| 67.5° | 5713.2 | 4519.2 | 1423.9 | 320.6  | 103.6  | 60.2   | 54.0   | 49.6   | 42.2   | 36.7   | 34.5   |
| 70°   | 4903.8 | 3764.9 | 1136.0 | 308.9  | 100.6  | 50.7   | 45.5   | 40.4   | 35.3   | 31.2   | 29.4   |
| 72.5° | 3609.2 | 2667.8 | 883.6  | 296.0  | 101.4  | 40.4   | 39.7   | 33.4   | 28.3   | 24.2   | 23.5   |
| 75°   | 2085.4 | 1524.2 | 579.6  | 239.8  | 96.6   | 31.2   | 33.1   | 23.5   | 19.8   | 16.9   | 16.9   |
| 77.5° | 1111.4 | 929.6  | 220.7  | 99.9   | 35.3   | 19.8   | 18.7   | 14.0   | 12.5   | 10.3   | 9.9    |
| 80°   | 484.4  | 409.1  | 66.5   | 27.9   | 19.5   | 10.7   | 7.0    | 6.2    | 5.5    | 4.4    | 4.0    |
| 82.5° | 171.5  | 148.0  | 21.7   | 13.6   | 8.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 38.9   | 27.9   | 0.0    | 3.3    | 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°    | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 |
| 2.5°  | 2206.2 | 2198.1 | 2150.4 | 2152.2 | 2160.6 | 2172.8 | 2144.1 | 2157.3 | 2193.0 | 2227.1 | 2240.0 |
| 5°    | 1706.0 | 1707.8 | 1678.8 | 1696.8 | 1712.9 | 1724.0 | 1677.7 | 1678.4 | 1706.7 | 1745.3 | 1765.5 |
| 7.5°  | 1202.1 | 1199.1 | 1200.6 | 1243.6 | 1274.1 | 1252.0 | 1269.3 | 1209.4 | 1213.1 | 1240.6 | 1220.1 |
| 10°   | 893.6  | 853.2  | 830.4  | 862.7  | 896.1  | 884.0  | 854.3  | 834.8  | 848.4  | 878.9  | 876.7  |
| 12.5° | 702.2  | 644.2  | 610.0  | 586.9  | 614.4  | 591.7  | 590.9  | 574.0  | 555.7  | 559.0  | 607.8  |
| 15°   | 528.1  | 485.9  | 445.5  | 408.4  | 407.7  | 400.0  | 360.7  | 316.6  | 312.9  | 315.1  | 340.5  |
| 17.5° | 363.2  | 348.9  | 332.4  | 300.4  | 292.0  | 259.7  | 221.5  | 203.8  | 195.0  | 199.1  | 207.5  |
| 20°   | 255.3  | 249.7  | 251.6  | 234.3  | 222.2  | 191.3  | 168.9  | 162.0  | 160.5  | 164.5  | 168.6  |
| 22.5° | 211.5  | 201.6  | 200.5  | 192.8  | 180.7  | 158.3  | 146.2  | 142.1  | 140.3  | 144.0  | 146.9  |
| 25°   | 185.1  | 175.2  | 171.1  | 166.4  | 153.5  | 138.1  | 130.7  | 127.1  | 125.2  | 127.4  | 129.3  |
| 27.5° | 163.1  | 153.9  | 150.2  | 146.9  | 134.4  | 123.4  | 117.5  | 114.2  | 112.8  | 113.5  | 115.3  |
| 30°   | 146.5  | 138.5  | 133.7  | 129.6  | 119.0  | 111.3  | 106.1  | 102.8  | 101.4  | 101.4  | 103.2  |
| 32.5° | 129.3  | 124.9  | 120.5  | 115.3  | 105.4  | 100.3  | 95.1   | 91.4   | 90.0   | 90.3   | 91.8   |
| 35°   | 107.6  | 106.1  | 107.2  | 102.5  | 94.0   | 89.6   | 84.5   | 80.4   | 79.3   | 79.7   | 81.2   |
| 37.5° | 95.5   | 88.9   | 92.9   | 90.3   | 85.6   | 79.7   | 73.1   | 69.4   | 67.6   | 68.7   | 69.4   |
| 40°   | 87.8   | 79.7   | 76.8   | 79.3   | 78.6   | 69.0   | 63.2   | 59.5   | 58.0   | 58.4   | 59.1   |
| 42.5° | 81.2   | 71.6   | 65.0   | 64.6   | 69.0   | 60.2   | 54.0   | 50.7   | 48.8   | 48.8   | 49.6   |
| 45°   | 74.9   | 64.6   | 56.6   | 50.3   | 58.0   | 51.1   | 45.2   | 42.2   | 40.0   | 40.0   | 40.4   |
| 47.5° | 70.1   | 58.8   | 49.2   | 41.1   | 43.7   | 41.9   | 37.1   | 34.2   | 32.0   | 32.0   | 32.3   |
| 50°   | 65.7   | 52.9   | 42.6   | 34.5   | 32.7   | 34.5   | 30.1   | 26.8   | 25.3   | 25.0   | 25.7   |
| 52.5° | 61.0   | 47.0   | 36.4   | 29.4   | 25.7   | 26.1   | 23.5   | 21.3   | 19.5   | 19.5   | 20.2   |
| 55°   | 56.2   | 42.2   | 31.6   | 25.0   | 21.3   | 19.5   | 18.7   | 17.3   | 15.8   | 15.8   | 16.5   |
| 57.5° | 51.4   | 37.1   | 26.8   | 20.6   | 16.9   | 15.4   | 15.4   | 14.3   | 13.2   | 13.2   | 14.0   |
| 60°   | 47.0   | 32.0   | 22.0   | 16.9   | 13.2   | 12.9   | 13.2   | 12.1   | 11.4   | 11.4   | 12.1   |
| 62.5° | 41.9   | 27.2   | 18.0   | 14.0   | 10.7   | 10.3   | 11.4   | 10.7   | 9.9    | 9.9    | 10.7   |
| 65°   | 35.6   | 23.1   | 14.3   | 10.7   | 8.1    | 8.1    | 9.5    | 8.8    | 8.1    | 8.1    | 8.8    |
| 67.5° | 30.1   | 19.5   | 11.0   | 7.7    | 5.9    | 6.2    | 8.1    | 7.3    | 7.0    | 7.0    | 7.7    |
| 70°   | 25.0   | 15.1   | 7.7    | 4.8    | 3.3    | 4.8    | 6.2    | 6.2    | 6.2    | 6.2    | 7.0    |
| 72.5° | 18.7   | 10.3   | 4.4    | 1.8    | 1.5    | 3.3    | 5.1    | 5.9    | 5.5    | 5.5    | 6.6    |
| 75°   | 12.1   | 5.9    | 1.5    | 0.0    | 0.0    | 1.8    | 4.0    | 4.8    | 4.8    | 4.4    | 5.5    |
| 77.5° | 7.0    | 1.8    | 0.0    | 0.0    | 0.0    | 0.0    | 2.6    | 2.2    | 1.8    | 1.5    | 2.6    |
| 80°   | 1.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 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    |



REPORT NUMBER: P324347

CATALOG NUMBER: GLEON-SA3A-722-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 | 2601.0 |
| 2.5°  | 2291.8 | 2335.1 | 2396.1 | 2460.7 | 2560.2 | 2639.2 | 2716.7 | 2783.2 | 2808.9 | 2819.5 |
| 5°    | 1813.9 | 1877.5 | 1966.7 | 2081.3 | 2260.9 | 2422.5 | 2586.3 | 2751.2 | 2822.8 | 2840.8 |
| 7.5°  | 1301.6 | 1382.8 | 1496.3 | 1639.9 | 1850.3 | 2059.6 | 2288.5 | 2530.5 | 2641.4 | 2669.3 |
| 10°   | 963.3  | 1062.5 | 1192.5 | 1343.8 | 1544.7 | 1760.0 | 2009.3 | 2285.9 | 2412.6 | 2449.7 |
| 12.5° | 683.5  | 817.5  | 991.6  | 1175.6 | 1349.7 | 1541.8 | 1794.1 | 2098.9 | 2231.9 | 2271.9 |
| 15°   | 401.4  | 531.1  | 737.1  | 983.5  | 1206.5 | 1401.1 | 1657.5 | 2003.1 | 2149.6 | 2190.0 |
| 17.5° | 230.3  | 294.9  | 450.6  | 725.4  | 1028.0 | 1297.6 | 1614.5 | 2027.0 | 2199.6 | 2237.0 |
| 20°   | 175.9  | 196.5  | 259.7  | 467.2  | 819.4  | 1195.8 | 1614.5 | 2162.1 | 2374.8 | 2429.9 |
| 22.5° | 153.9  | 168.9  | 194.7  | 278.8  | 603.1  | 1086.7 | 1633.2 | 2357.5 | 2635.5 | 2696.5 |
| 25°   | 136.6  | 150.2  | 172.2  | 209.7  | 411.3  | 957.1  | 1677.7 | 2597.3 | 2942.6 | 3021.5 |
| 27.5° | 122.3  | 135.2  | 155.0  | 183.6  | 281.3  | 800.6  | 1737.5 | 2878.7 | 3281.2 | 3344.4 |
| 30°   | 109.4  | 121.6  | 139.6  | 159.8  | 217.1  | 623.3  | 1788.6 | 3143.8 | 3547.1 | 3615.0 |
| 32.5° | 97.3   | 108.3  | 124.5  | 139.6  | 177.8  | 460.9  | 1794.1 | 3353.9 | 3767.8 | 3835.4 |
| 35°   | 85.9   | 95.9   | 110.5  | 122.3  | 147.3  | 364.0  | 1708.5 | 3536.1 | 3988.5 | 4077.8 |
| 37.5° | 74.9   | 84.5   | 97.3   | 106.1  | 129.6  | 296.8  | 1577.8 | 3739.2 | 4271.7 | 4354.3 |
| 40°   | 64.6   | 73.1   | 86.3   | 92.2   | 122.7  | 228.1  | 1435.7 | 3952.2 | 4549.4 | 4625.0 |
| 42.5° | 55.1   | 63.2   | 76.0   | 87.4   | 107.6  | 170.4  | 1282.1 | 4152.0 | 4799.1 | 4878.4 |
| 45°   | 45.9   | 54.4   | 67.2   | 92.6   | 89.2   | 127.4  | 1118.0 | 4284.6 | 4996.3 | 5082.6 |
| 47.5° | 37.1   | 46.6   | 64.3   | 88.1   | 71.3   | 93.7   | 988.0  | 4410.2 | 5145.8 | 5231.0 |
| 50°   | 29.7   | 39.3   | 72.4   | 78.6   | 58.4   | 71.6   | 933.6  | 4522.6 | 5243.9 | 5325.8 |
| 52.5° | 24.2   | 33.1   | 68.3   | 60.2   | 48.8   | 59.1   | 963.0  | 4704.7 | 5334.6 | 5386.0 |
| 55°   | 20.2   | 26.1   | 41.1   | 41.9   | 41.5   | 50.3   | 999.3  | 4966.2 | 5569.3 | 5593.5 |
| 57.5° | 17.6   | 20.9   | 28.6   | 32.3   | 34.9   | 44.8   | 1000.1 | 5341.6 | 5932.5 | 5947.6 |
| 60°   | 15.1   | 18.4   | 23.9   | 26.1   | 30.1   | 40.0   | 963.7  | 5472.7 | 6075.4 | 6125.3 |
| 62.5° | 13.2   | 16.2   | 19.8   | 21.7   | 25.3   | 36.0   | 878.5  | 5282.8 | 5879.2 | 5964.1 |
| 65°   | 11.8   | 14.7   | 16.5   | 18.4   | 22.4   | 32.3   | 738.2  | 4903.0 | 5553.8 | 5642.4 |
| 67.5° | 10.3   | 12.9   | 14.7   | 16.5   | 20.2   | 28.6   | 543.6  | 4462.0 | 5180.3 | 5253.8 |
| 70°   | 9.2    | 11.4   | 13.2   | 14.7   | 17.6   | 24.2   | 329.8  | 3786.2 | 4663.9 | 4694.4 |
| 72.5° | 8.8    | 10.3   | 12.1   | 13.2   | 15.4   | 21.3   | 167.1  | 2782.4 | 3728.5 | 3778.1 |
| 75°   | 7.7    | 9.2    | 11.0   | 11.8   | 13.6   | 18.4   | 67.9   | 1827.5 | 2702.0 | 2781.7 |
| 77.5° | 6.2    | 8.4    | 9.9    | 10.7   | 11.8   | 15.1   | 34.5   | 1167.9 | 1896.2 | 1947.6 |
| 80°   | 2.2    | 6.2    | 8.4    | 8.8    | 9.9    | 11.0   | 22.8   | 639.4  | 1100.0 | 1122.0 |
| 82.5° | 0.0    | 4.0    | 6.6    | 6.2    | 7.0    | 8.4    | 14.7   | 304.1  | 726.1  | 734.2  |
| 85°   | 0.0    | 1.8    | 5.1    | 4.0    | 2.9    | 5.9    | 5.1    | 66.5   | 380.9  | 396.7  |
| 87.5° | 0.0    | 0.0    | 0.4    | 1.8    | 1.5    | 2.2    | 0.7    | 0.4    | 34.5   | 43.7   |
| 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.

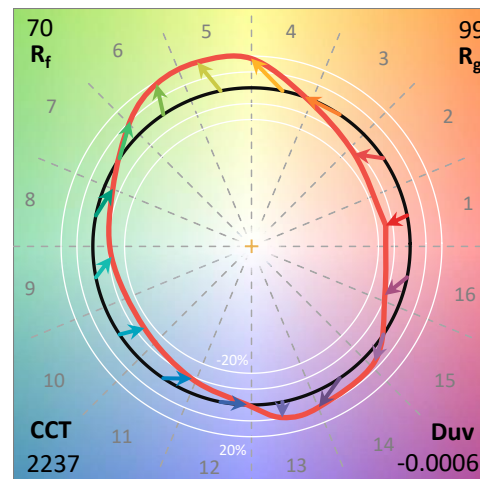
### Test Information

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

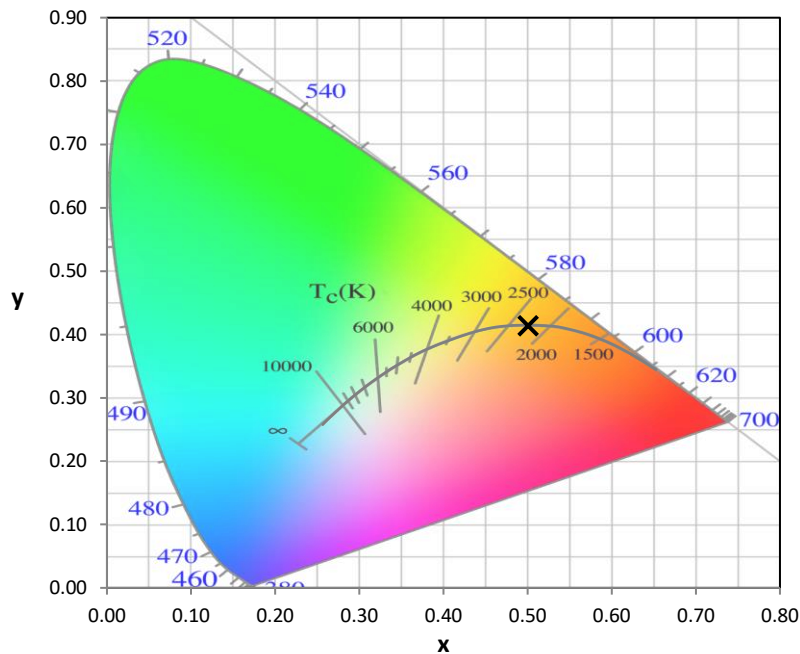
Stabilization Time: 71M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.7/41%  
 Sphere Temperature (°C): 25.6

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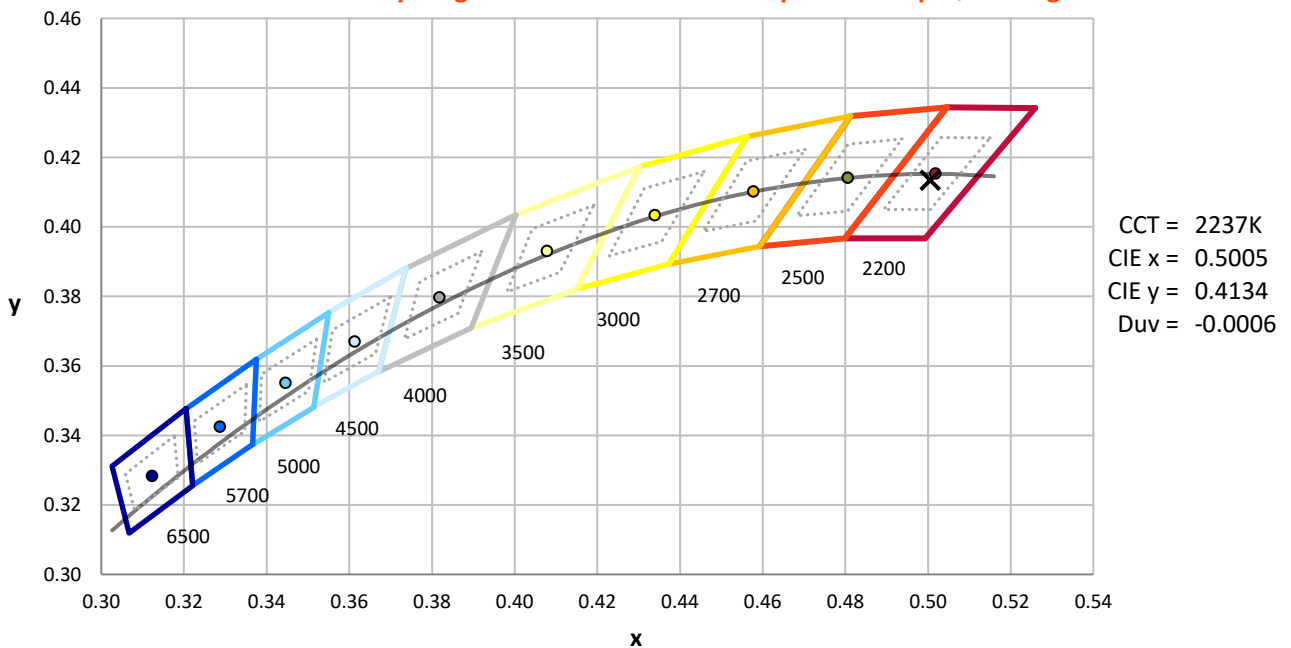
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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            |

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

CIE 1931 Chromaticity Diagram



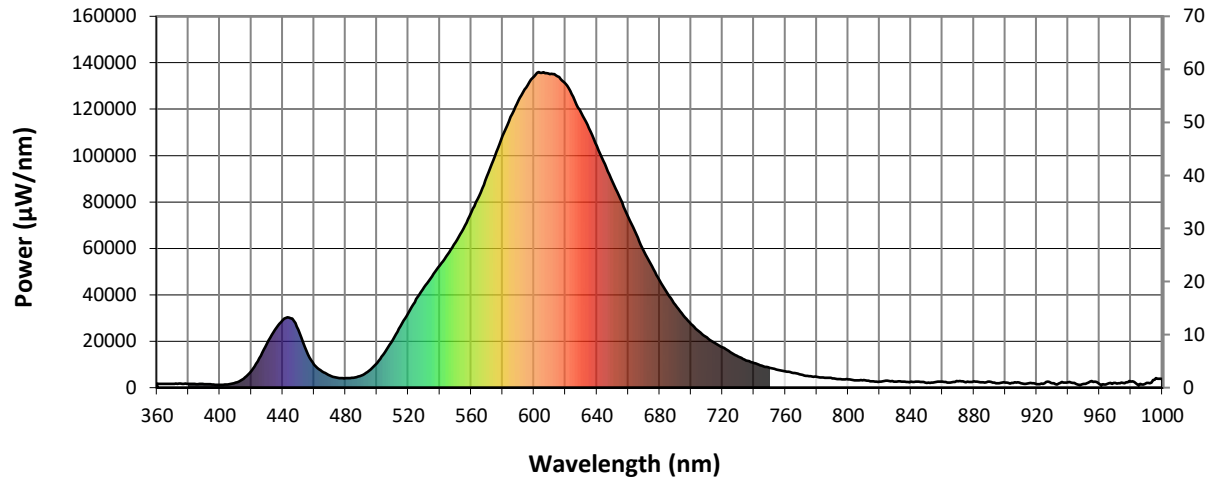
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2200K 4-step quadrangle

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**Photopic Flux vs. Wavelength**

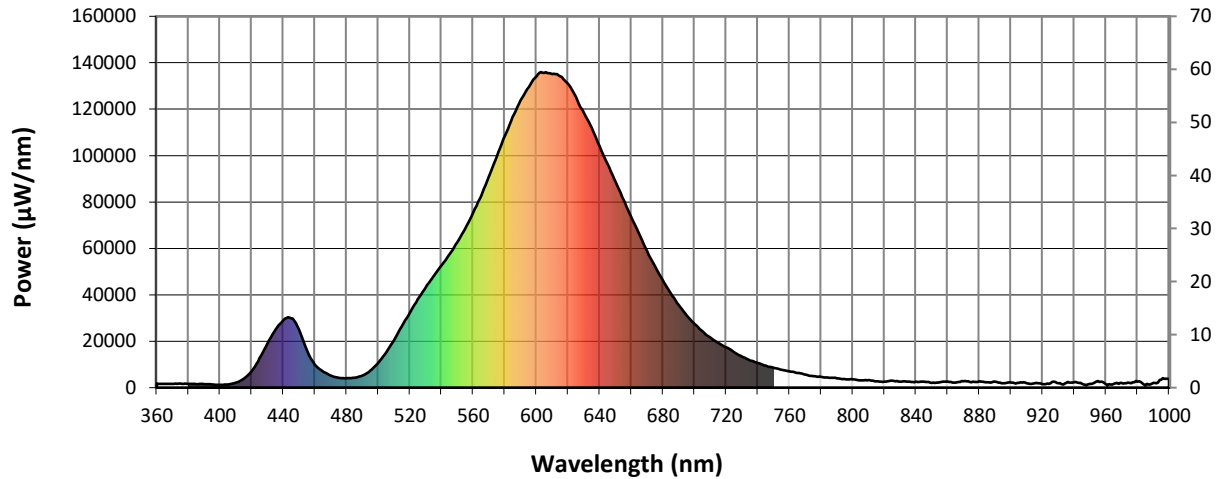


#####

| 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



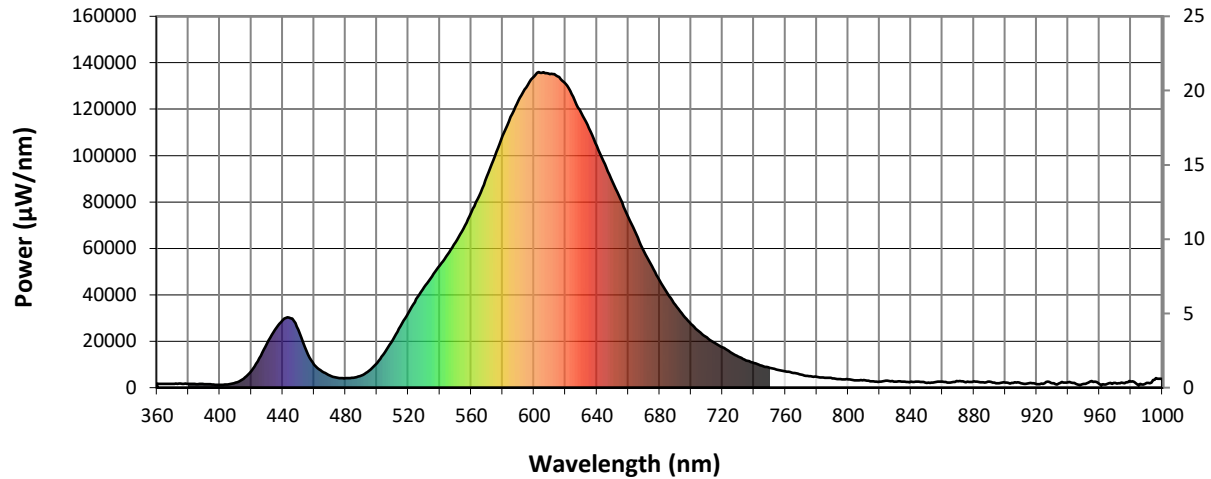
Scotopic Lumens: 4696.9

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**

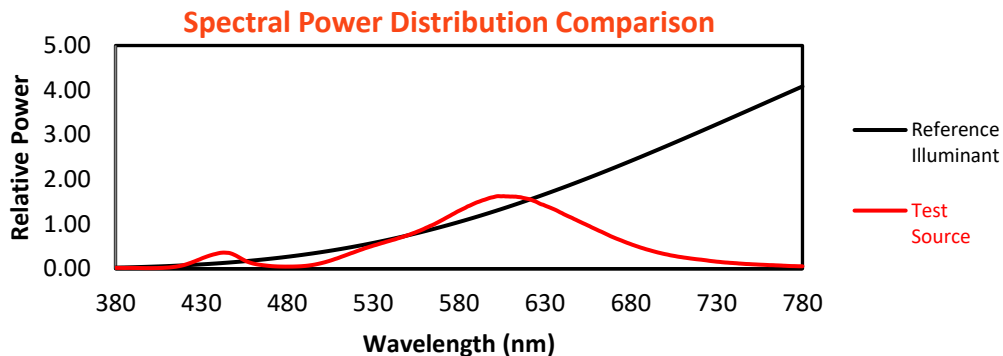
| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 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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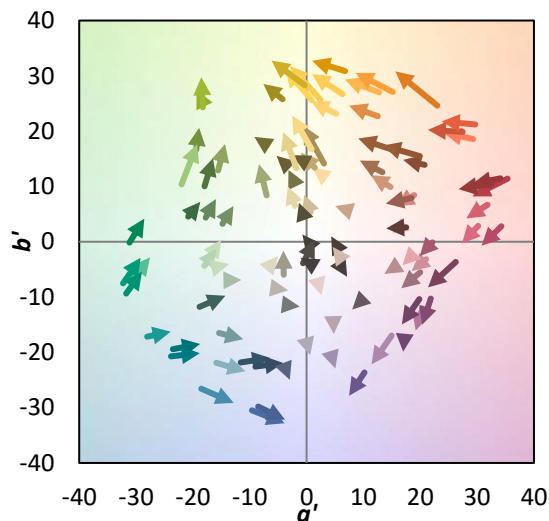
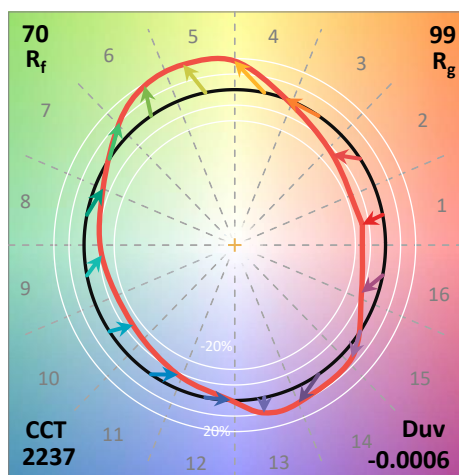
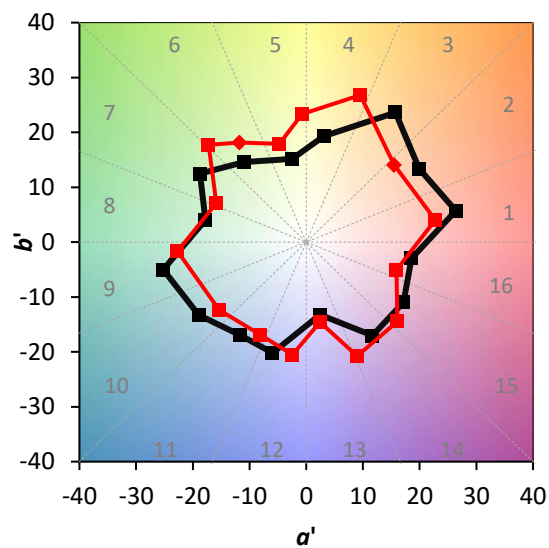
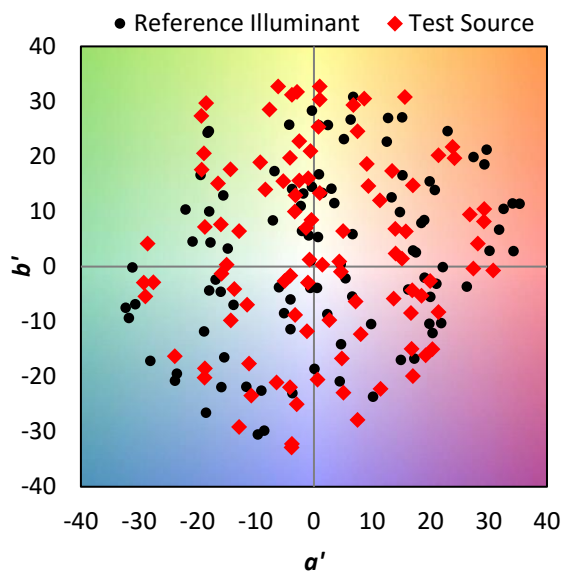
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### Summary

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



### Color Vector Graphics

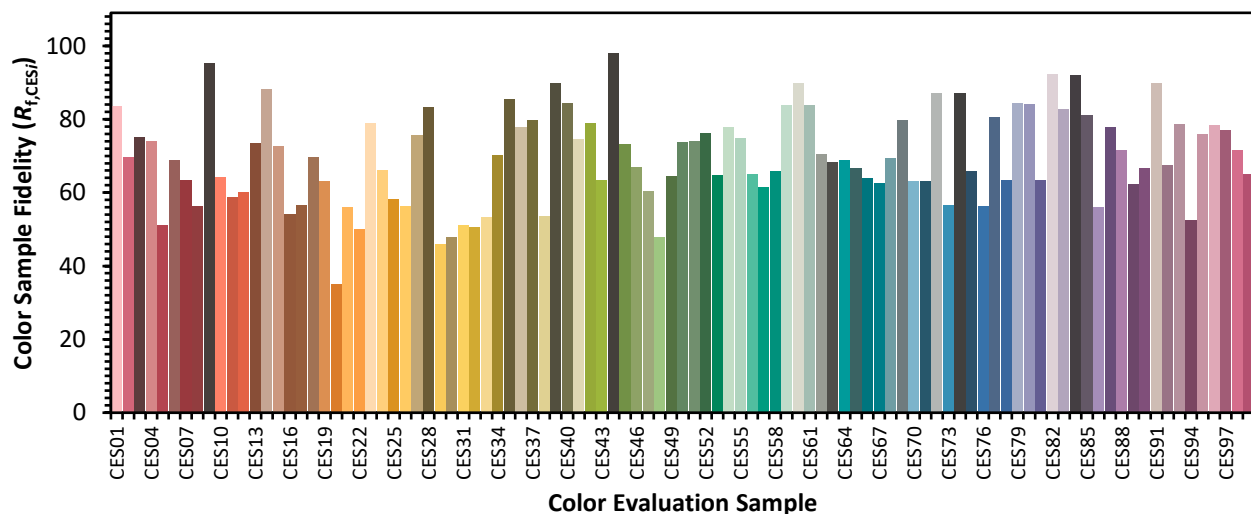


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**Individual Sample Fidelity Index ( $R_{f,i}$ )**

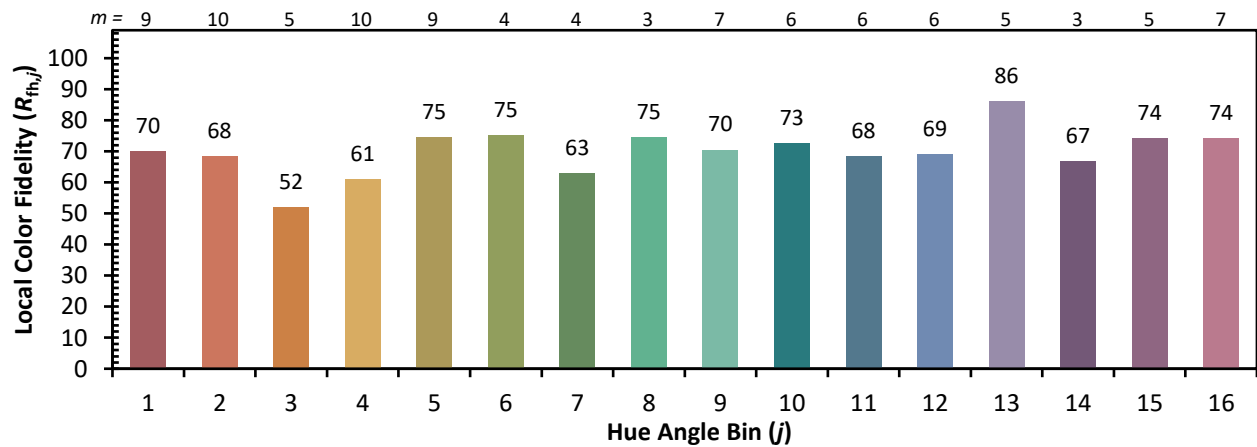
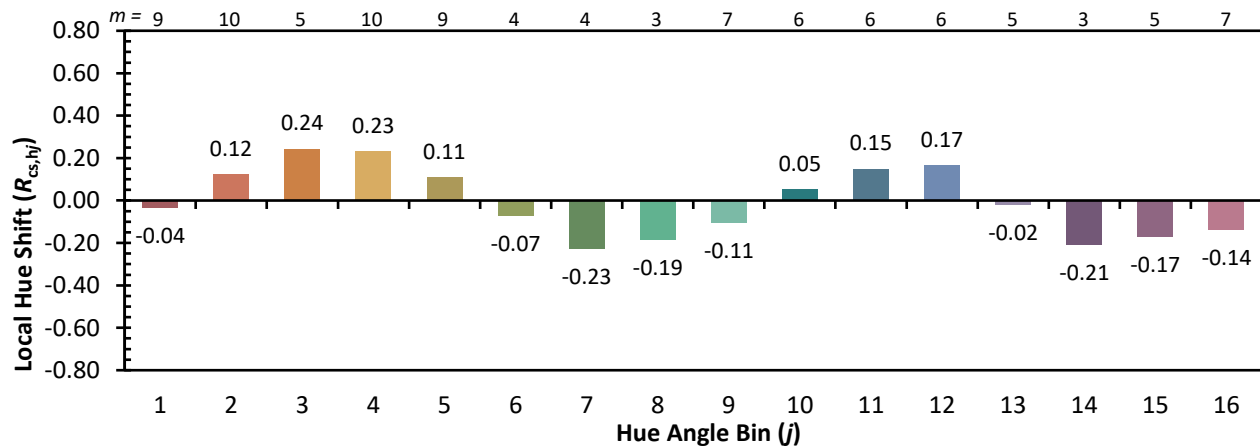
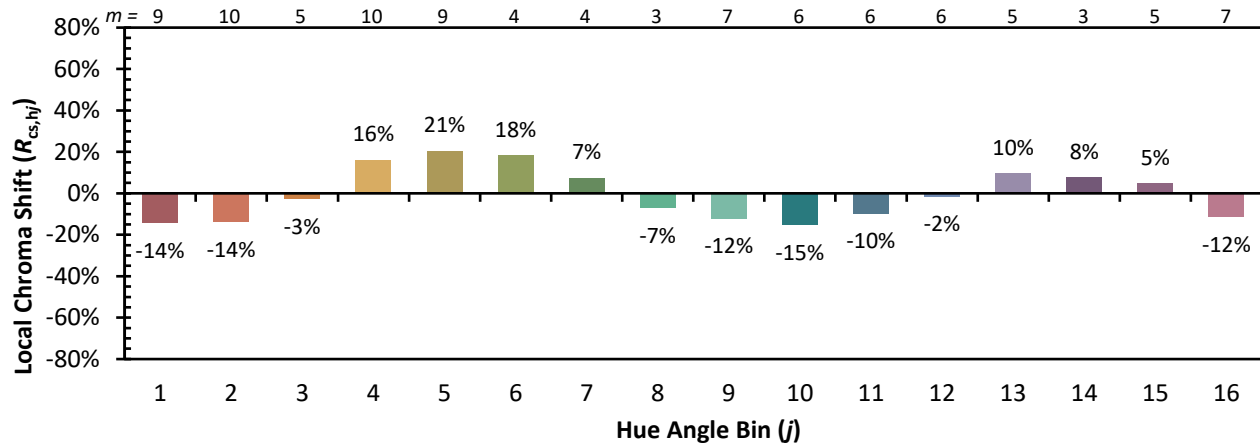
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 87 | CES26 = 56 | CES51 = 74 | CES76 = 56 |
| CES02 = 65 | CES27 = 76 | CES52 = 76 | CES77 = 81 |
| CES03 = 32 | CES28 = 83 | CES53 = 65 | CES78 = 63 |
| CES04 = 72 | CES29 = 46 | CES54 = 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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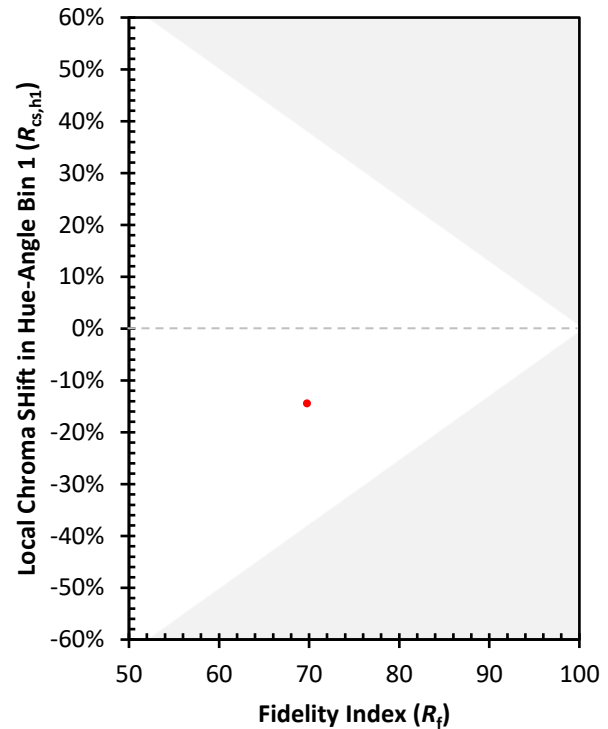
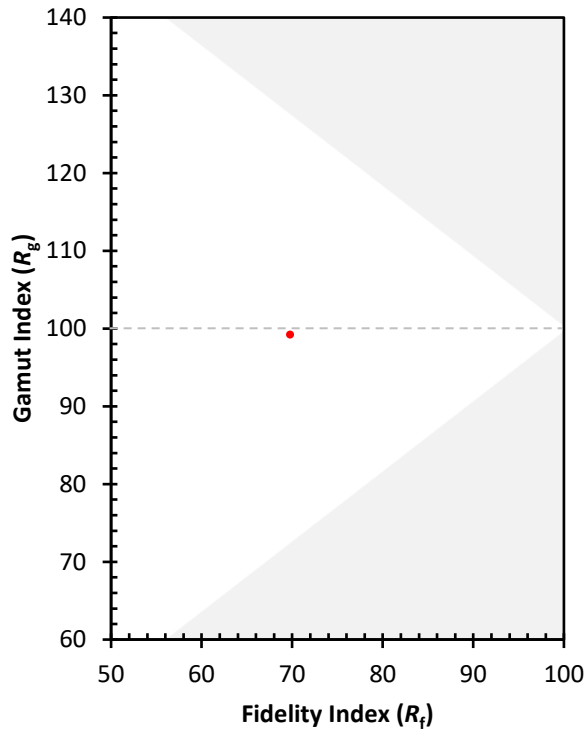
Color Rendition by Hue-Angle Bin



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**Measure Comparisons**



(END OF REPORT)