

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: P324687

Luminaire Tested: **GLEON-SA3C-722-U-SLR-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P324687  
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-SA3C-722-U-SLR-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(3) 70 CRI, 2200K, 1050mA 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: 11767 lumens  
Efficiency: N/A  
Efficacy: 70.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B1 - U0 - G2

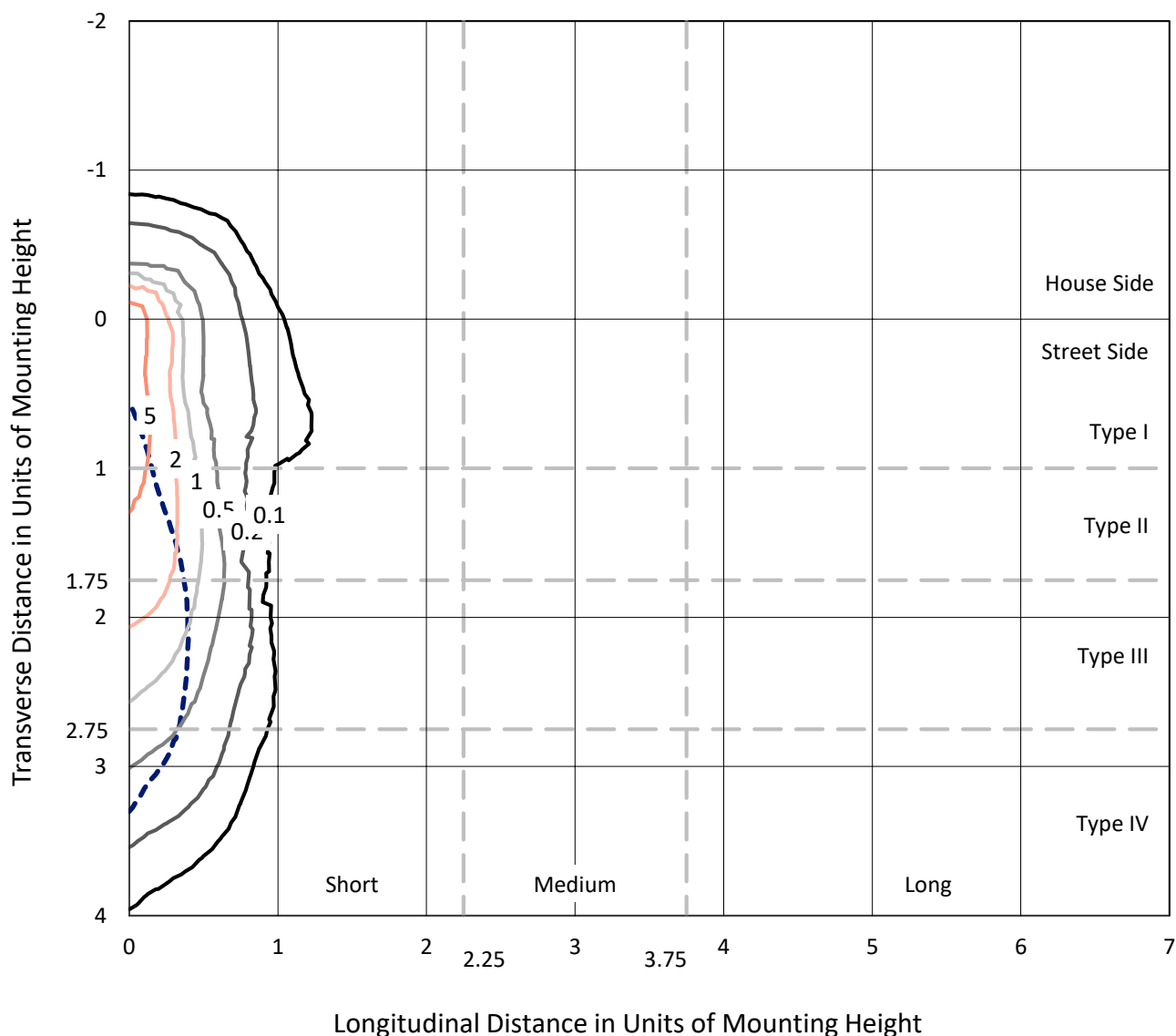
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

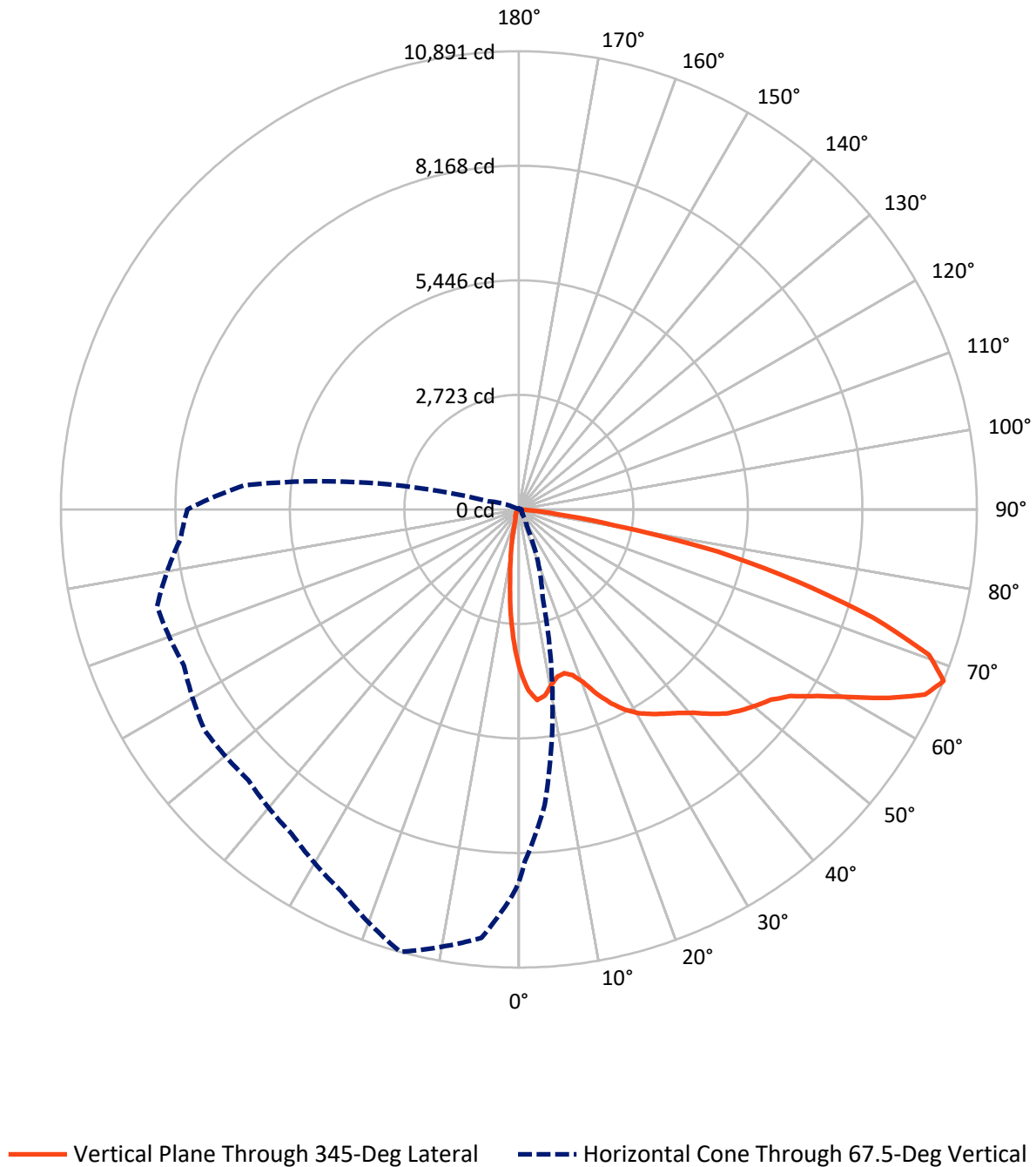
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.6 fc  
 Type IV - Medium - N/A

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## Luminous Intensity Polar Plot



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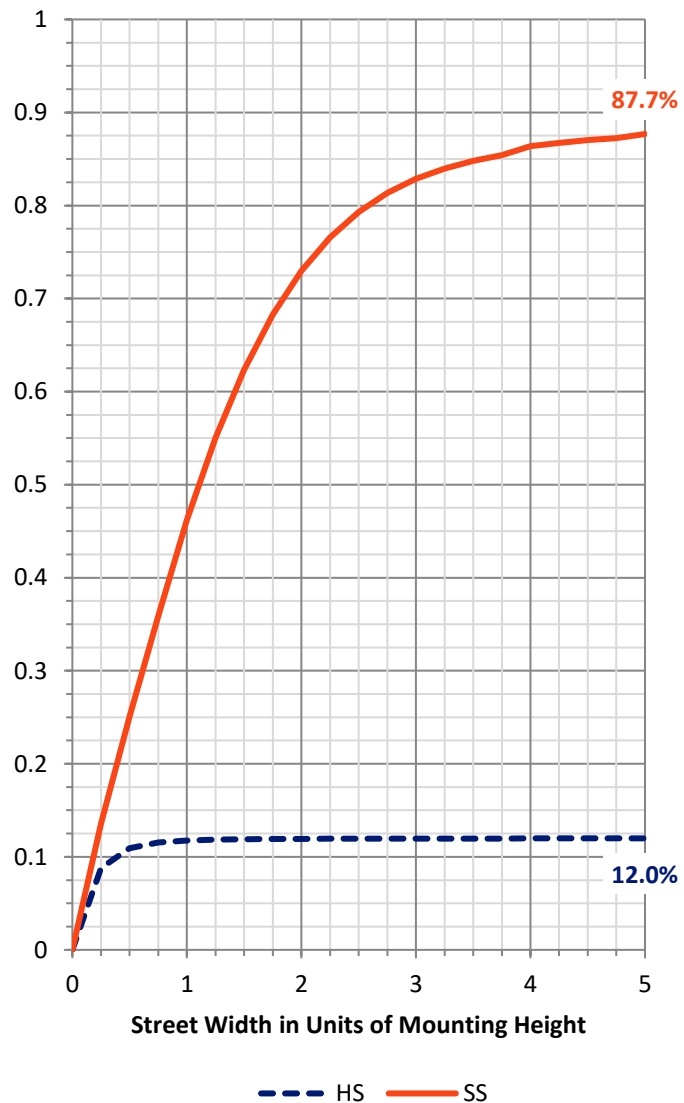
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1424.2   | 0.0    | 1424.2  |
|                    | % Fixture | 12.1     | 0.0    | 12.1    |
| <b>Street Side</b> | Lumens    | 10342.8  | 0.0    | 10342.8 |
|                    | % Fixture | 87.9     | 0.0    | 87.9    |
| <b>Total</b>       | Lumens    | 11767.0  | 0.0    | 11767.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 294.2   | 2.5       |
| 10°-20°   | 585.6   | 5.0       |
| 20°-30°   | 831.5   | 7.1       |
| 30°-40°   | 1228.2  | 10.4      |
| 40°-50°   | 1771.3  | 15.1      |
| 50°-60°   | 2486.6  | 21.1      |
| 60°-70°   | 2898.6  | 24.6      |
| 70°-80°   | 1481.8  | 12.6      |
| 80°-90°   | 189.2   | 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°    | 11767.0 | 100.0     |
| 0°-180°   | 11767.0 | 100.0     |

**Coefficient of Utilization**



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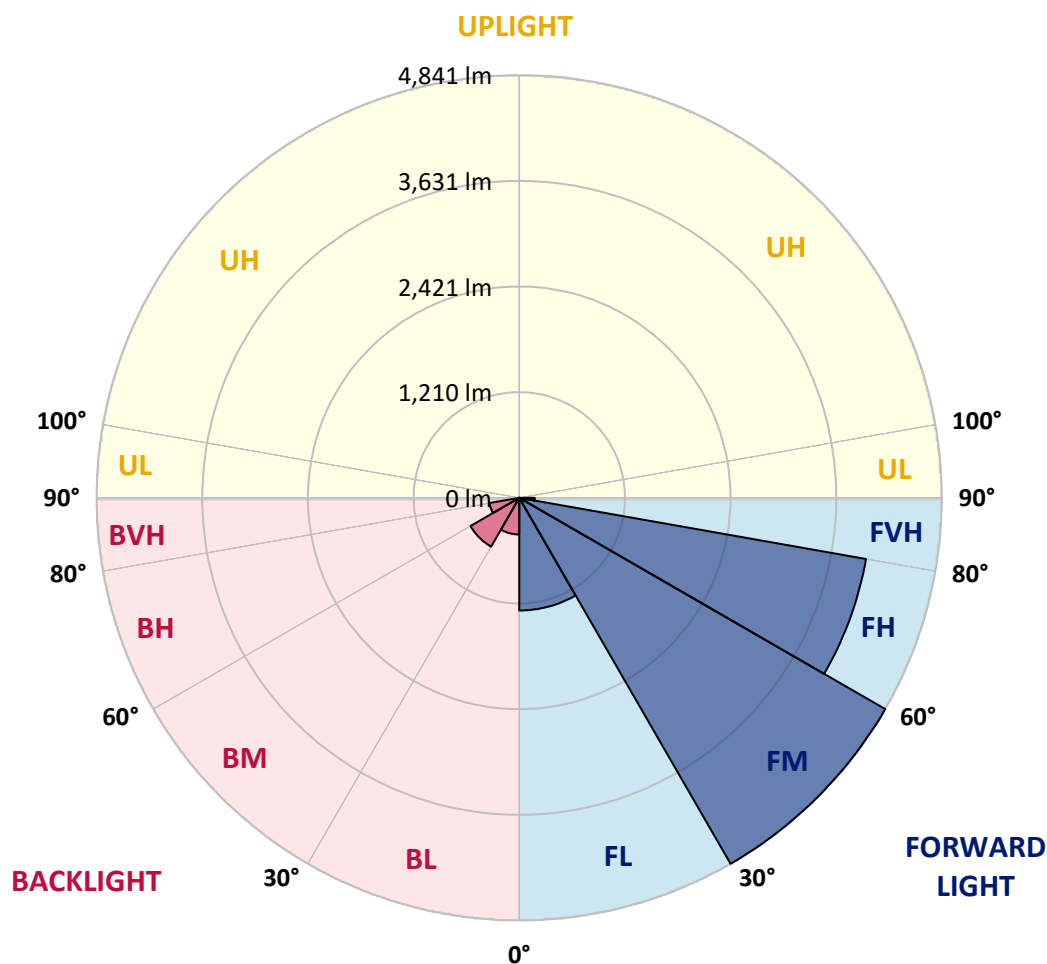
CATALOG NUMBER: GLEON-SA3C-722-U-SLR-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1290.6 | 11.0      |                         |      |         |
| FM   | (30°-60°)   | 4841.1 | 41.1      |                         |      |         |
| FH   | (60°-80°)   | 4033.3 | 34.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 177.7  | 1.5       |                         |      | G2/225  |
| BL   | (0°-30°)    | 420.7  | 3.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 644.9  | 5.5       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 347.1  | 2.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 11.5   | 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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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3833.1  | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 |
| 2.5°  | 4197.1  | 4164.8 | 4129.1 | 4012.6 | 3904.4 | 3780.7 | 3679.8 | 3609.5 | 3521.5 | 3407.2 | 3378.2 |
| 5°    | 4167.0  | 4132.4 | 4020.4 | 3761.2 | 3534.3 | 3313.5 | 3100.6 | 2975.7 | 2820.7 | 2663.5 | 2624.5 |
| 7.5°  | 3864.3  | 3828.1 | 3666.4 | 3311.3 | 3005.8 | 2686.9 | 2410.4 | 2239.3 | 2064.3 | 1920.4 | 1844.1 |
| 10°   | 3549.3  | 3509.8 | 3328.0 | 2897.1 | 2520.8 | 2232.6 | 2029.7 | 1866.4 | 1700.8 | 1546.9 | 1424.3 |
| 12.5° | 3332.5  | 3280.6 | 3083.3 | 2595.0 | 2267.2 | 2071.5 | 1882.0 | 1686.3 | 1462.2 | 1297.2 | 1162.3 |
| 15°   | 3241.6  | 3182.5 | 2974.0 | 2478.5 | 2177.4 | 1947.8 | 1700.8 | 1460.5 | 1198.0 | 1009.0 | 885.2  |
| 17.5° | 3311.9  | 3234.9 | 3011.4 | 2470.7 | 2064.8 | 1752.1 | 1439.9 | 1157.8 | 873.0  | 681.8  | 593.7  |
| 20°   | 3550.4  | 3449.5 | 3165.8 | 2468.4 | 1928.2 | 1519.6 | 1123.8 | 805.0  | 575.3  | 462.7  | 416.4  |
| 22.5° | 3926.2  | 3792.9 | 3387.7 | 2486.3 | 1787.2 | 1275.5 | 811.7  | 546.9  | 432.0  | 373.5  | 346.2  |
| 25°   | 4379.9  | 4225.5 | 3707.1 | 2549.3 | 1663.5 | 1038.0 | 589.8  | 432.0  | 364.6  | 321.7  | 298.8  |
| 27.5° | 4811.4  | 4686.0 | 4110.7 | 2640.1 | 1567.6 | 846.2  | 478.9  | 366.2  | 311.6  | 283.2  | 264.8  |
| 30°   | 5242.3  | 5084.6 | 4524.9 | 2748.3 | 1452.2 | 716.3  | 420.9  | 333.9  | 279.3  | 249.2  | 237.5  |
| 32.5° | 5555.6  | 5424.6 | 4849.3 | 2826.3 | 1329.0 | 631.6  | 376.3  | 305.5  | 260.9  | 230.2  | 212.9  |
| 35°   | 5924.1  | 5775.8 | 5127.5 | 2843.6 | 1249.8 | 578.1  | 338.4  | 274.8  | 226.3  | 199.0  | 180.6  |
| 37.5° | 6322.1  | 6137.6 | 5448.6 | 2805.7 | 1187.9 | 551.9  | 309.9  | 260.9  | 211.3  | 183.4  | 163.9  |
| 40°   | 6762.5  | 6554.0 | 5756.9 | 2751.1 | 1127.2 | 543.0  | 288.2  | 250.3  | 199.6  | 171.1  | 151.1  |
| 42.5° | 7226.3  | 6980.5 | 6023.9 | 2693.6 | 1088.7 | 512.3  | 286.0  | 239.7  | 190.7  | 160.0  | 139.9  |
| 45°   | 7616.0  | 7366.8 | 6298.2 | 2674.7 | 1061.4 | 478.9  | 295.5  | 232.5  | 184.5  | 151.1  | 131.6  |
| 47.5° | 7926.5  | 7690.7 | 6579.1 | 2717.0 | 1045.8 | 448.2  | 269.3  | 241.9  | 181.2  | 143.3  | 124.3  |
| 50°   | 8297.2  | 8030.2 | 6974.9 | 2843.6 | 1022.9 | 417.5  | 243.6  | 277.1  | 181.2  | 138.2  | 118.2  |
| 52.5° | 8762.1  | 8497.9 | 7416.4 | 3039.8 | 977.2  | 375.2  | 219.1  | 277.6  | 182.8  | 131.6  | 110.4  |
| 55°   | 9346.9  | 9155.1 | 8046.9 | 3255.0 | 904.2  | 312.7  | 189.5  | 238.6  | 176.2  | 119.3  | 103.1  |
| 57.5° | 9907.7  | 9751.0 | 8621.6 | 3402.2 | 806.6  | 244.2  | 165.0  | 192.3  | 161.1  | 104.8  | 92.0   |
| 59°   | 10061.0 | 9889.9 | 8832.4 | 3408.9 | 733.6  | 212.9  | 152.7  | 158.9  | 157.8  | 98.1   | 85.3   |
| 60°   | 10061.0 | 9879.3 | 8893.1 | 3373.2 | 680.7  | 195.7  | 144.9  | 141.6  | 164.4  | 93.7   | 81.4   |
| 62.5° | 9878.7  | 9623.4 | 8695.8 | 3131.8 | 555.2  | 166.7  | 126.5  | 117.1  | 147.7  | 84.2   | 71.9   |
| 65°   | 9499.6  | 9127.8 | 8023.5 | 2695.3 | 495.0  | 152.7  | 109.3  | 95.9   | 102.6  | 74.1   | 63.0   |
| 67.5° | 8867.5  | 8363.5 | 7054.1 | 2177.4 | 471.1  | 148.8  | 94.2   | 81.4   | 77.5   | 63.6   | 55.2   |
| 70°   | 7754.2  | 7195.1 | 5877.3 | 1712.0 | 450.4  | 147.2  | 79.2   | 68.6   | 62.4   | 53.5   | 46.8   |
| 72.5° | 5643.7  | 5060.6 | 4172.6 | 1338.5 | 438.2  | 150.5  | 63.6   | 57.4   | 51.3   | 41.8   | 36.2   |
| 75°   | 3228.2  | 2846.4 | 2345.2 | 884.1  | 373.5  | 143.8  | 49.1   | 47.9   | 36.8   | 30.1   | 25.1   |
| 77.5° | 1667.9  | 1617.2 | 1405.4 | 339.5  | 178.9  | 63.0   | 32.3   | 27.9   | 21.7   | 18.4   | 15.1   |
| 80°   | 719.7   | 711.9  | 616.0  | 98.1   | 47.4   | 35.1   | 18.4   | 11.7   | 10.0   | 7.8    | 6.1    |
| 82.5° | 248.6   | 248.6  | 219.1  | 32.9   | 21.2   | 17.3   | 2.2    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 50.2    | 56.3   | 39.6   | 0.0    | 7.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 |
| 2.5°  | 3343.1 | 3275.6 | 3271.2 | 3228.8 | 3175.8 | 3151.9 | 3137.9 | 3162.5 | 3192.6 | 3195.9 | 3241.1 |
| 5°    | 2595.0 | 2524.2 | 2553.7 | 2478.5 | 2493.5 | 2478.5 | 2453.9 | 2458.4 | 2471.8 | 2430.0 | 2481.8 |
| 7.5°  | 1822.3 | 1768.8 | 1802.8 | 1782.7 | 1809.5 | 1820.1 | 1805.0 | 1782.7 | 1717.0 | 1709.2 | 1754.3 |
| 10°   | 1373.6 | 1312.8 | 1276.6 | 1238.7 | 1247.0 | 1264.3 | 1258.7 | 1242.6 | 1200.8 | 1203.0 | 1246.5 |
| 12.5° | 1103.8 | 1035.8 | 963.8  | 870.7  | 847.9  | 860.7  | 847.9  | 838.4  | 798.3  | 801.6  | 840.1  |
| 15°   | 837.3  | 781.6  | 706.3  | 631.6  | 590.9  | 594.8  | 559.1  | 534.0  | 509.0  | 478.9  | 502.3  |
| 17.5° | 565.3  | 531.3  | 509.0  | 486.7  | 438.2  | 427.0  | 381.9  | 333.4  | 314.4  | 300.5  | 310.5  |
| 20°   | 400.3  | 381.9  | 372.9  | 371.8  | 344.0  | 330.0  | 286.0  | 255.9  | 246.4  | 243.6  | 249.7  |
| 22.5° | 334.5  | 321.1  | 308.3  | 301.0  | 287.1  | 270.9  | 237.5  | 222.4  | 215.7  | 212.4  | 216.9  |
| 25°   | 291.0  | 281.0  | 267.6  | 255.3  | 249.7  | 232.5  | 208.5  | 197.3  | 192.9  | 189.5  | 191.8  |
| 27.5° | 258.7  | 249.7  | 234.1  | 226.3  | 221.9  | 206.8  | 186.2  | 177.3  | 173.4  | 172.3  | 171.7  |
| 30°   | 233.0  | 224.7  | 210.2  | 201.2  | 193.4  | 180.1  | 167.8  | 158.9  | 155.0  | 153.9  | 152.7  |
| 32.5° | 207.4  | 200.7  | 191.2  | 182.3  | 173.9  | 161.7  | 151.1  | 143.8  | 137.7  | 136.6  | 136.0  |
| 35°   | 175.0  | 168.4  | 163.3  | 162.8  | 155.0  | 143.3  | 135.5  | 126.0  | 121.0  | 119.3  | 119.9  |
| 37.5° | 155.5  | 146.6  | 135.5  | 139.4  | 137.1  | 128.8  | 118.2  | 108.7  | 103.7  | 102.6  | 102.6  |
| 40°   | 143.3  | 133.8  | 121.0  | 114.3  | 121.0  | 119.3  | 102.6  | 93.1   | 88.1   | 87.5   | 86.4   |
| 42.5° | 131.6  | 122.1  | 107.6  | 96.4   | 99.8   | 104.8  | 88.6   | 79.7   | 74.7   | 73.6   | 71.9   |
| 45°   | 123.2  | 113.2  | 97.0   | 84.2   | 77.5   | 88.1   | 75.8   | 64.7   | 61.9   | 59.6   | 58.5   |
| 47.5° | 115.4  | 105.9  | 87.5   | 73.0   | 61.9   | 63.6   | 60.8   | 53.0   | 49.6   | 47.4   | 46.8   |
| 50°   | 108.7  | 98.7   | 79.2   | 62.4   | 51.3   | 46.8   | 49.1   | 41.8   | 39.0   | 36.8   | 35.7   |
| 52.5° | 100.9  | 91.4   | 70.2   | 54.1   | 42.9   | 36.8   | 37.3   | 32.9   | 30.1   | 28.4   | 27.9   |
| 55°   | 94.8   | 85.3   | 63.0   | 47.4   | 37.9   | 30.1   | 26.8   | 25.6   | 24.0   | 22.9   | 22.3   |
| 57.5° | 86.4   | 77.5   | 55.7   | 40.1   | 32.3   | 24.5   | 20.6   | 20.6   | 20.1   | 19.0   | 18.4   |
| 59°   | 81.4   | 73.6   | 51.3   | 36.2   | 29.5   | 21.2   | 18.4   | 19.0   | 18.4   | 17.3   | 16.7   |
| 60°   | 77.5   | 70.2   | 47.9   | 33.4   | 27.9   | 19.5   | 16.7   | 17.8   | 17.3   | 16.2   | 15.6   |
| 62.5° | 68.6   | 63.6   | 41.3   | 27.9   | 24.5   | 15.6   | 13.9   | 15.1   | 15.1   | 14.5   | 13.9   |
| 65°   | 60.2   | 54.6   | 35.1   | 23.4   | 22.9   | 13.4   | 11.1   | 13.4   | 13.9   | 12.8   | 11.7   |
| 67.5° | 52.4   | 46.8   | 30.7   | 19.0   | 21.2   | 10.6   | 8.4    | 11.1   | 15.1   | 11.7   | 10.6   |
| 70°   | 44.6   | 39.0   | 24.0   | 15.1   | 22.3   | 7.2    | 6.7    | 10.0   | 17.8   | 12.8   | 10.0   |
| 72.5° | 34.6   | 30.1   | 16.7   | 11.1   | 24.0   | 5.0    | 5.0    | 8.4    | 20.1   | 13.9   | 9.5    |
| 75°   | 24.0   | 19.5   | 10.0   | 6.7    | 19.5   | 3.3    | 3.3    | 7.8    | 19.0   | 12.8   | 8.9    |
| 77.5° | 13.9   | 10.6   | 3.3    | 0.6    | 10.0   | 0.0    | 0.6    | 5.6    | 13.4   | 7.8    | 3.9    |
| 80°   | 5.0    | 2.2    | 0.0    | 0.0    | 6.1    | 0.0    | 0.0    | 0.0    | 1.1    | 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°    | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 | 3833.1 |
| 2.5°  | 3252.8 | 3328.0 | 3395.5 | 3497.5 | 3618.5 | 3757.8 | 3877.7 | 4006.4 | 4127.4 | 4177.6 | 4212.1 |
| 5°    | 2492.4 | 2585.5 | 2694.2 | 2844.1 | 3043.7 | 3289.6 | 3519.8 | 3780.1 | 4060.0 | 4199.9 | 4331.4 |
| 7.5°  | 1762.1 | 1856.9 | 1991.8 | 2151.2 | 2392.6 | 2685.3 | 2986.3 | 3345.9 | 3724.9 | 3946.2 | 4164.2 |
| 10°   | 1267.1 | 1383.6 | 1509.6 | 1727.6 | 1972.8 | 2250.5 | 2560.4 | 2961.8 | 3384.3 | 3629.6 | 3892.2 |
| 12.5° | 862.4  | 995.1  | 1185.7 | 1429.9 | 1718.1 | 1990.1 | 2259.4 | 2642.3 | 3132.9 | 3376.0 | 3657.5 |
| 15°   | 517.3  | 590.9  | 792.7  | 1075.3 | 1428.8 | 1767.7 | 2062.6 | 2446.7 | 2969.6 | 3267.3 | 3559.9 |
| 17.5° | 318.9  | 352.9  | 462.7  | 694.6  | 1065.9 | 1494.5 | 1898.7 | 2380.3 | 2993.0 | 3355.3 | 3668.6 |
| 20°   | 254.2  | 267.6  | 302.7  | 410.3  | 706.3  | 1193.5 | 1714.2 | 2367.0 | 3184.2 | 3630.2 | 3966.3 |
| 22.5° | 220.8  | 233.6  | 257.0  | 298.2  | 444.3  | 893.6  | 1539.1 | 2379.2 | 3458.5 | 4042.1 | 4434.6 |
| 25°   | 194.6  | 205.7  | 228.0  | 262.0  | 325.6  | 629.4  | 1351.8 | 2433.9 | 3815.8 | 4553.3 | 4970.3 |
| 27.5° | 173.9  | 183.4  | 204.0  | 235.2  | 279.3  | 439.3  | 1139.4 | 2500.2 | 4239.5 | 5076.2 | 5487.6 |
| 30°   | 155.0  | 163.3  | 181.7  | 210.7  | 242.5  | 337.8  | 906.4  | 2545.4 | 4663.7 | 5487.6 | 5857.2 |
| 32.5° | 138.8  | 144.9  | 161.7  | 186.2  | 210.7  | 269.3  | 689.0  | 2538.1 | 4978.7 | 5829.9 | 6123.1 |
| 35°   | 122.1  | 128.2  | 142.7  | 163.9  | 183.4  | 222.4  | 541.8  | 2402.6 | 5252.9 | 6185.0 | 6427.5 |
| 37.5° | 103.7  | 111.5  | 125.4  | 144.4  | 157.8  | 195.7  | 438.2  | 2239.3 | 5531.1 | 6590.8 | 6767.0 |
| 40°   | 88.1   | 95.9   | 108.1  | 128.8  | 137.1  | 185.6  | 336.7  | 2040.3 | 5843.8 | 7044.6 | 7139.4 |
| 42.5° | 73.0   | 80.3   | 93.1   | 110.9  | 129.3  | 160.0  | 249.2  | 1812.9 | 6144.3 | 7432.6 | 7478.9 |
| 45°   | 59.1   | 66.3   | 79.7   | 97.6   | 138.2  | 132.7  | 192.9  | 1569.2 | 6386.8 | 7755.4 | 7770.4 |
| 47.5° | 46.8   | 53.5   | 67.5   | 92.0   | 128.8  | 105.9  | 137.7  | 1378.0 | 6590.3 | 8007.3 | 7967.7 |
| 50°   | 36.2   | 41.8   | 56.3   | 105.4  | 112.6  | 87.5   | 104.2  | 1314.5 | 6772.6 | 8163.4 | 8060.8 |
| 52.5° | 28.4   | 33.4   | 46.3   | 98.7   | 87.5   | 72.5   | 87.5   | 1374.1 | 7022.3 | 8292.7 | 8113.2 |
| 55°   | 22.9   | 27.9   | 36.2   | 56.3   | 59.6   | 61.3   | 74.7   | 1429.9 | 7453.2 | 8596.0 | 8422.6 |
| 57.5° | 19.0   | 24.0   | 29.5   | 39.6   | 45.2   | 51.8   | 66.3   | 1436.0 | 7961.1 | 9099.9 | 8936.0 |
| 59°   | 17.3   | 21.7   | 26.8   | 35.1   | 39.6   | 47.4   | 62.4   | 1402.6 | 8140.0 | 9283.3 | 9201.4 |
| 60°   | 16.2   | 20.6   | 25.1   | 32.3   | 36.8   | 44.6   | 60.2   | 1370.8 | 8147.8 | 9276.7 | 9314.6 |
| 62.5° | 13.9   | 18.4   | 22.3   | 27.3   | 31.2   | 37.9   | 54.1   | 1253.2 | 7817.8 | 8972.8 | 9246.5 |
| 65°   | 12.3   | 16.2   | 20.1   | 23.4   | 26.8   | 34.0   | 49.1   | 1038.5 | 7254.2 | 8482.8 | 8781.1 |
| 67.5° | 11.1   | 13.9   | 18.4   | 20.6   | 24.0   | 30.1   | 43.5   | 740.3  | 6550.1 | 7883.6 | 8077.0 |
| 70°   | 10.0   | 13.4   | 16.7   | 19.0   | 21.7   | 26.2   | 37.3   | 425.3  | 5531.1 | 7006.1 | 7143.8 |
| 72.5° | 9.5    | 12.8   | 15.1   | 17.8   | 19.5   | 23.4   | 34.0   | 200.1  | 4049.9 | 5612.5 | 5972.0 |
| 75°   | 8.4    | 11.7   | 13.9   | 16.7   | 18.4   | 21.2   | 29.0   | 95.9   | 2693.6 | 4061.6 | 4470.3 |
| 77.5° | 5.0    | 9.5    | 12.8   | 15.1   | 16.2   | 18.4   | 24.0   | 55.2   | 1719.2 | 2811.3 | 3311.3 |
| 80°   | 0.0    | 3.3    | 9.5    | 12.8   | 13.9   | 15.6   | 18.4   | 43.5   | 919.8  | 1606.0 | 1927.7 |
| 82.5° | 0.0    | 0.0    | 6.7    | 10.0   | 9.5    | 10.6   | 13.9   | 27.3   | 414.7  | 1049.7 | 1182.9 |
| 85°   | 0.0    | 0.0    | 2.2    | 7.8    | 6.7    | 5.0    | 9.5    | 9.5    | 90.9   | 531.3  | 662.8  |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.6    | 3.3    | 2.2    | 3.9    | 1.1    | 0.6    | 39.6   | 160.5  |
| 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: P324687

CATALOG NUMBER: GLEON-SA3C-722-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°    | 325°    | 335°    | 345°    | 355°    | 359°    | 360°    |
|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 3833.1 | 3833.1 | 3833.1 | 3833.1  | 3833.1  | 3833.1  | 3833.1  | 3833.1  | 3833.1  | 3833.1  |
| 2.5°  | 4333.1 | 4374.4 | 4444.1 | 4476.9  | 4460.8  | 4392.2  | 4310.3  | 4226.6  | 4177.6  | 4197.1  |
| 5°    | 4599.6 | 4812.0 | 4934.6 | 4975.3  | 4907.3  | 4753.4  | 4552.2  | 4286.8  | 4192.6  | 4167.0  |
| 7.5°  | 4599.6 | 4999.3 | 5252.4 | 5297.0  | 5145.3  | 4843.7  | 4466.4  | 4052.2  | 3914.5  | 3864.3  |
| 10°   | 4437.9 | 4982.0 | 5334.9 | 5405.7  | 5193.8  | 4742.8  | 4237.2  | 3764.5  | 3601.2  | 3549.3  |
| 12.5° | 4255.6 | 4841.5 | 5213.3 | 5310.9  | 5137.0  | 4642.5  | 4078.4  | 3570.0  | 3377.6  | 3332.5  |
| 15°   | 4143.6 | 4668.7 | 4976.4 | 5047.2  | 4973.6  | 4584.0  | 4040.5  | 3511.4  | 3285.1  | 3241.6  |
| 17.5° | 4183.7 | 4534.9 | 4645.9 | 4687.1  | 4736.7  | 4563.3  | 4143.6  | 3639.6  | 3353.1  | 3311.9  |
| 20°   | 4334.8 | 4393.9 | 4336.5 | 4388.3  | 4522.1  | 4583.4  | 4389.4  | 3949.6  | 3605.6  | 3550.4  |
| 22.5° | 4591.2 | 4320.9 | 4159.7 | 4180.4  | 4343.2  | 4649.8  | 4765.1  | 4392.2  | 3995.3  | 3926.2  |
| 25°   | 4890.0 | 4379.9 | 4061.6 | 4043.2  | 4210.5  | 4737.3  | 5108.5  | 4873.9  | 4456.3  | 4379.9  |
| 27.5° | 5265.7 | 4512.6 | 4041.6 | 4023.2  | 4164.2  | 4819.2  | 5394.0  | 5349.9  | 4941.9  | 4811.4  |
| 30°   | 5555.6 | 4643.1 | 4101.2 | 4058.8  | 4210.5  | 4876.1  | 5623.1  | 5754.1  | 5328.7  | 5242.3  |
| 32.5° | 5763.6 | 4796.9 | 4198.2 | 4136.9  | 4340.9  | 4974.2  | 5799.8  | 6124.2  | 5686.6  | 5555.6  |
| 35°   | 5921.9 | 4964.2 | 4354.9 | 4254.0  | 4520.4  | 5123.0  | 5965.4  | 6518.4  | 6067.4  | 5924.1  |
| 37.5° | 6070.2 | 5198.8 | 4599.6 | 4479.2  | 4801.9  | 5362.7  | 6140.4  | 6965.4  | 6493.3  | 6322.1  |
| 40°   | 6277.0 | 5464.8 | 4977.0 | 4869.9  | 5275.2  | 5689.4  | 6358.9  | 7431.5  | 6977.7  | 6762.5  |
| 42.5° | 6483.8 | 5750.2 | 5363.3 | 5392.3  | 5865.6  | 6086.3  | 6641.0  | 7924.3  | 7456.0  | 7226.3  |
| 45°   | 6672.8 | 6044.5 | 5913.5 | 6047.3  | 6413.5  | 6521.7  | 6921.4  | 8209.1  | 7837.9  | 7616.0  |
| 47.5° | 6841.1 | 6412.4 | 6460.4 | 6816.6  | 7036.8  | 6915.8  | 7131.0  | 8455.0  | 8122.2  | 7926.5  |
| 50°   | 7036.8 | 6888.5 | 7181.2 | 7685.1  | 7754.2  | 7272.6  | 7321.6  | 8746.0  | 8454.4  | 8297.2  |
| 52.5° | 7250.9 | 7390.2 | 7979.4 | 8423.7  | 8401.4  | 7660.0  | 7513.4  | 9072.1  | 8909.8  | 8762.1  |
| 55°   | 7493.9 | 7795.5 | 8682.4 | 9115.0  | 9096.0  | 8092.6  | 7831.2  | 9475.1  | 9480.7  | 9346.9  |
| 57.5° | 7854.6 | 8144.5 | 9159.6 | 9674.1  | 9705.9  | 8592.1  | 8369.7  | 9926.6  | 9996.9  | 9907.7  |
| 59°   | 8113.2 | 8370.8 | 9348.6 | 9907.7  | 10037.0 | 8978.4  | 8763.2  | 10188.7 | 10142.4 | 10061.0 |
| 60°   | 8305.0 | 8514.6 | 9442.2 | 10029.8 | 10229.3 | 9240.4  | 9053.7  | 10342.5 | 10159.7 | 10061.0 |
| 62.5° | 8779.4 | 8827.9 | 9611.1 | 10168.0 | 10450.7 | 9822.4  | 9870.9  | 10604.5 | 10039.8 | 9878.7  |
| 65°   | 9000.7 | 9025.8 | 9608.9 | 9920.5  | 10236.6 | 10275.6 | 10612.3 | 10612.3 | 9747.1  | 9499.6  |
| 67.5° | 8908.2 | 8787.2 | 9132.3 | 9099.9  | 9415.5  | 10006.4 | 10891.0 | 10223.2 | 9187.5  | 8867.5  |
| 70°   | 8155.6 | 7690.1 | 7536.8 | 7550.8  | 7792.1  | 8703.6  | 10339.2 | 9078.2  | 8128.3  | 7754.2  |
| 72.5° | 6785.9 | 5669.3 | 5290.8 | 5722.9  | 5785.9  | 6688.9  | 8811.2  | 6836.7  | 5994.3  | 5643.7  |
| 75°   | 5458.1 | 3996.4 | 3381.0 | 3837.0  | 3944.0  | 4895.0  | 6816.0  | 4257.9  | 3501.4  | 3228.2  |
| 77.5° | 3921.2 | 2868.7 | 2426.1 | 2394.3  | 2532.5  | 3104.5  | 4836.5  | 2142.9  | 1787.2  | 1667.9  |
| 80°   | 2227.6 | 1888.1 | 2033.0 | 1918.2  | 1987.9  | 1941.1  | 2297.8  | 939.9   | 769.8   | 719.7   |
| 82.5° | 1344.6 | 1116.0 | 1208.6 | 1006.2  | 1273.2  | 1108.8  | 885.2   | 301.0   | 261.4   | 248.6   |
| 85°   | 874.7  | 609.9  | 317.8  | 212.9   | 438.7   | 708.5   | 197.9   | 81.9    | 63.0    | 50.2    |
| 87.5° | 301.6  | 155.5  | 15.6   | 6.7     | 46.8    | 132.1   | 7.2     | 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.

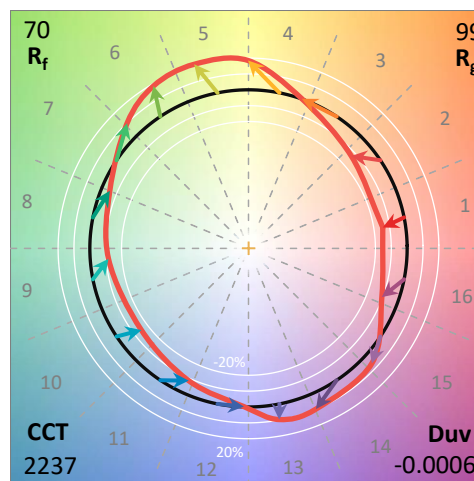
### Test Information

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

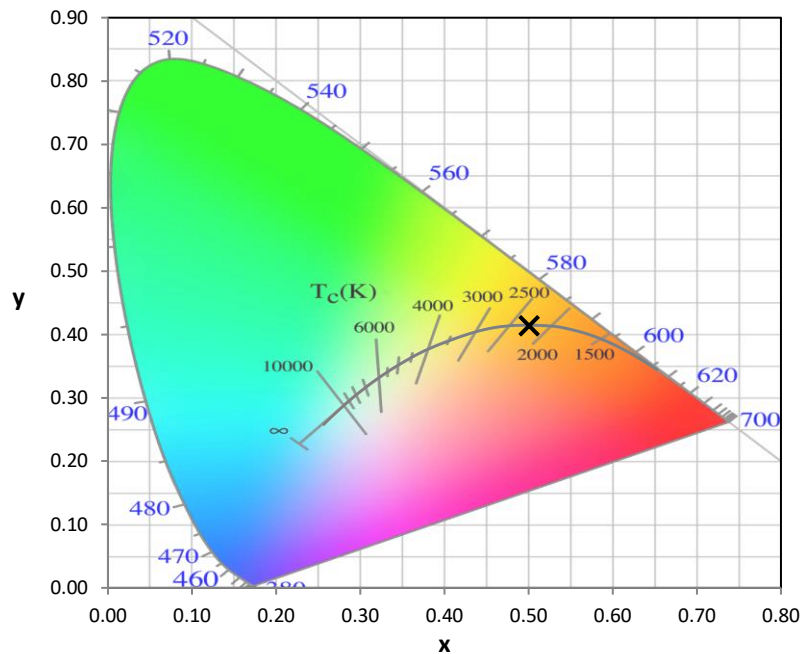
Stabilization Time: 71M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.7/41%  
 Sphere Temperature (°C): 25.6

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

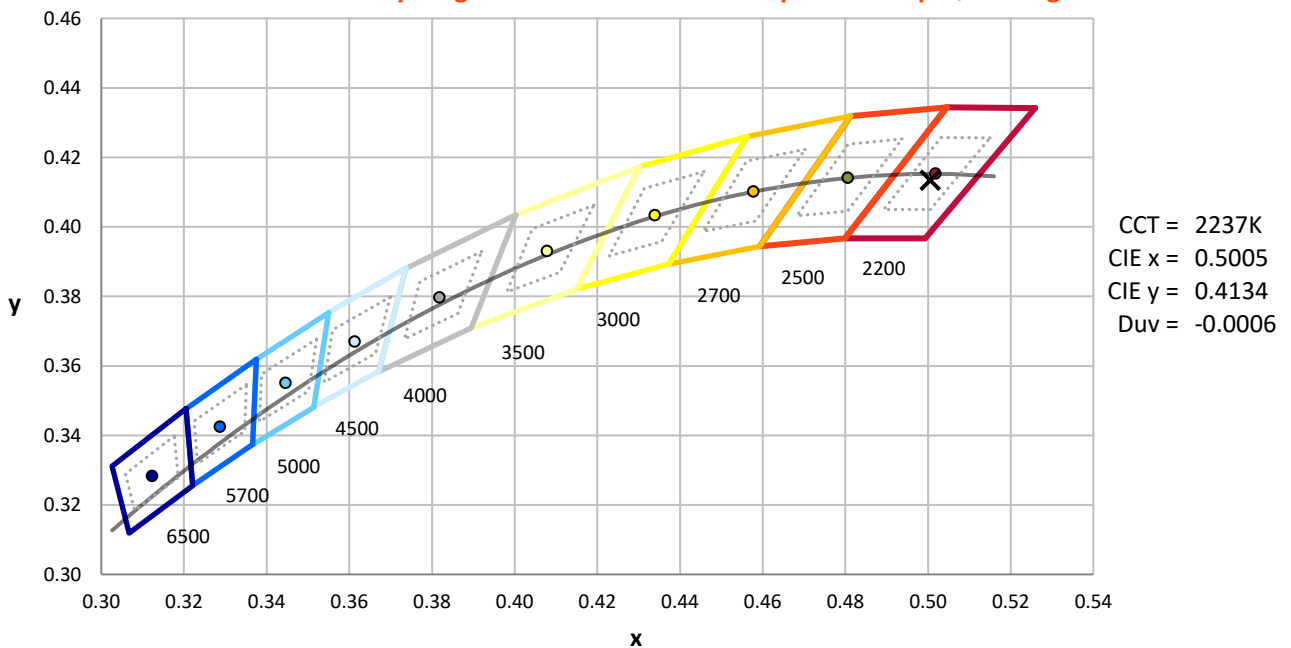
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date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

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

CIE 1931 Chromaticity Diagram



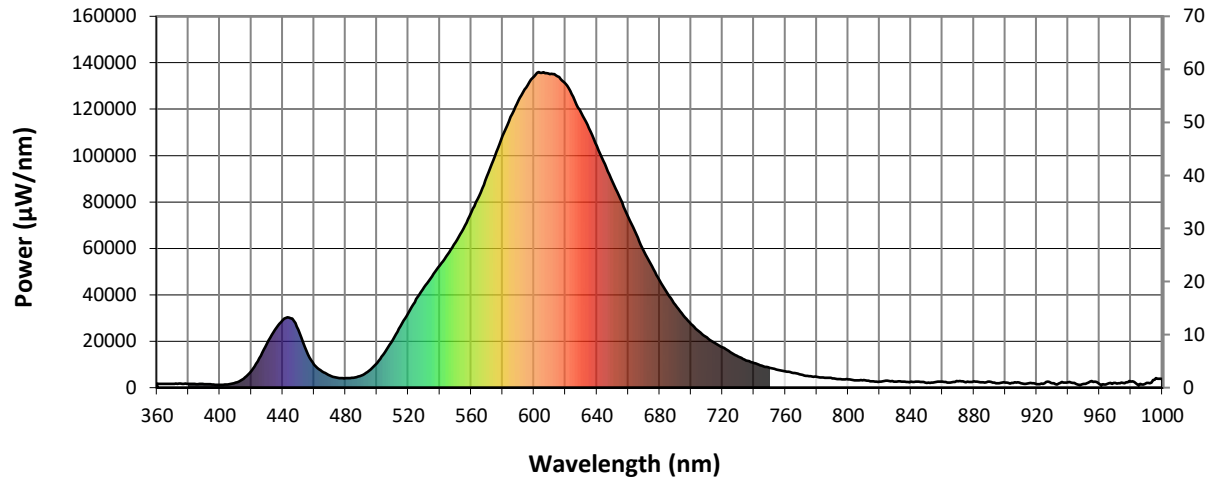
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2200K 4-step quadrangle

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**Photopic Flux vs. Wavelength**

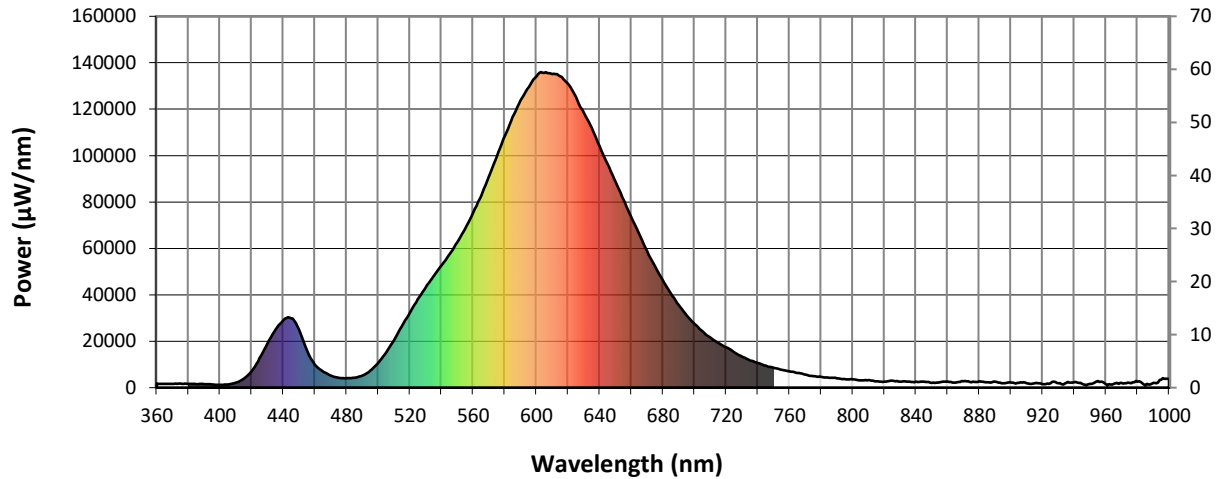


#####

| 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



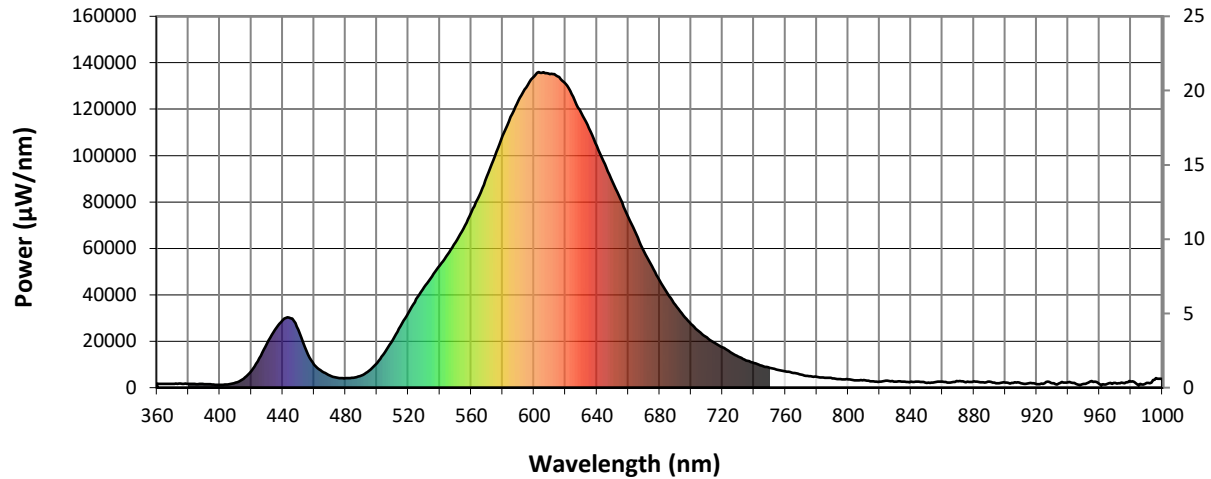
Scotopic Lumens: 4696.9

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**

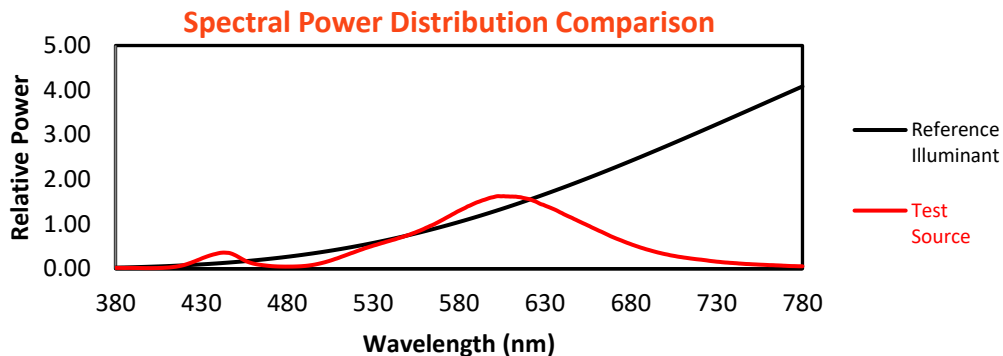
| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 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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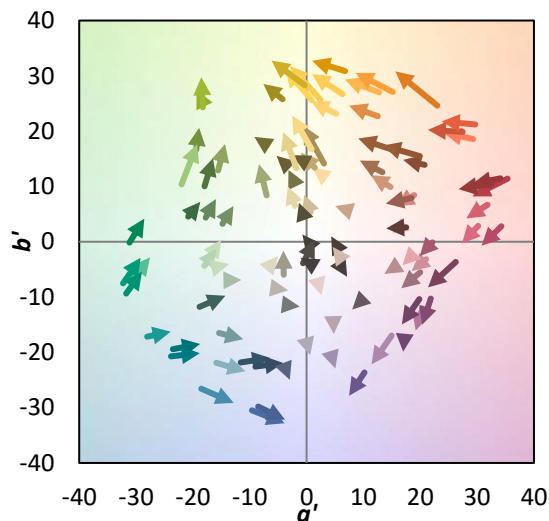
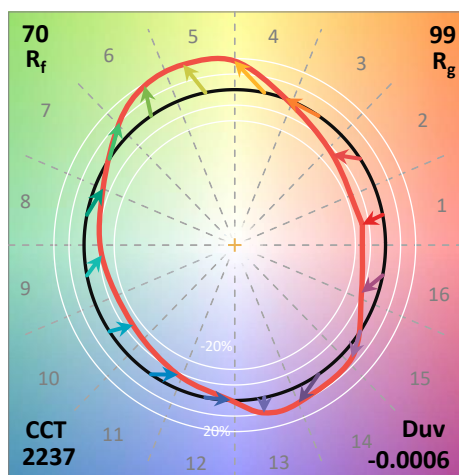
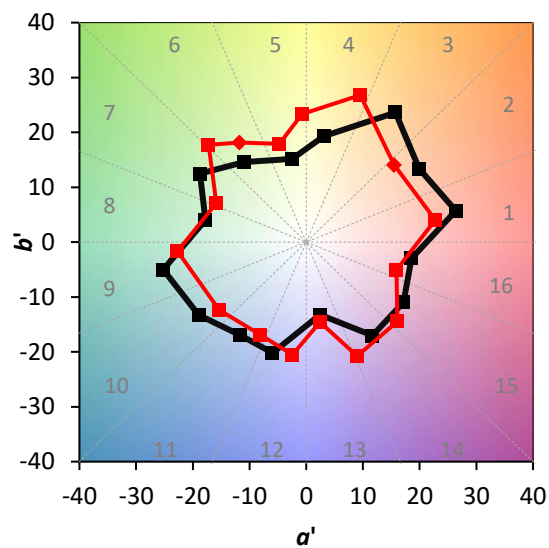
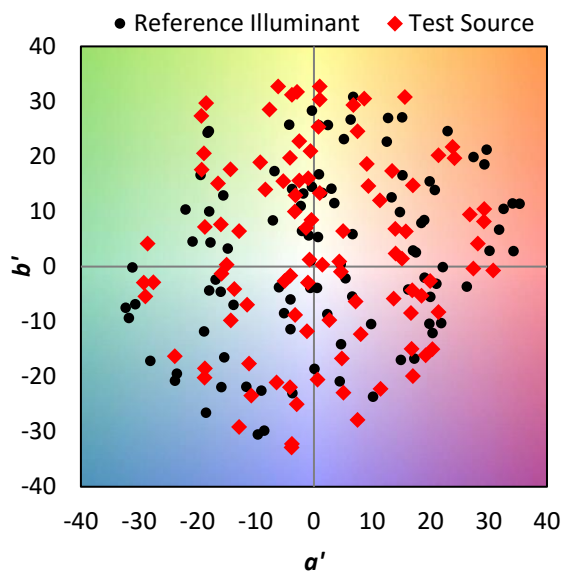
**TM-30-18**

### Summary

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



### Color Vector Graphics

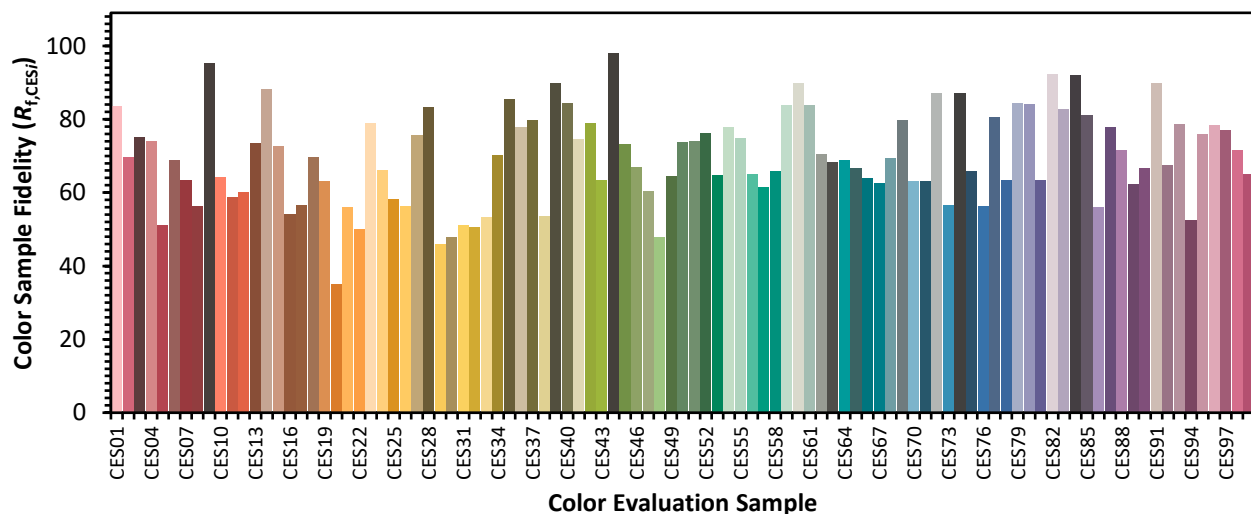


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**Individual Sample Fidelity Index ( $R_{f,i}$ )**

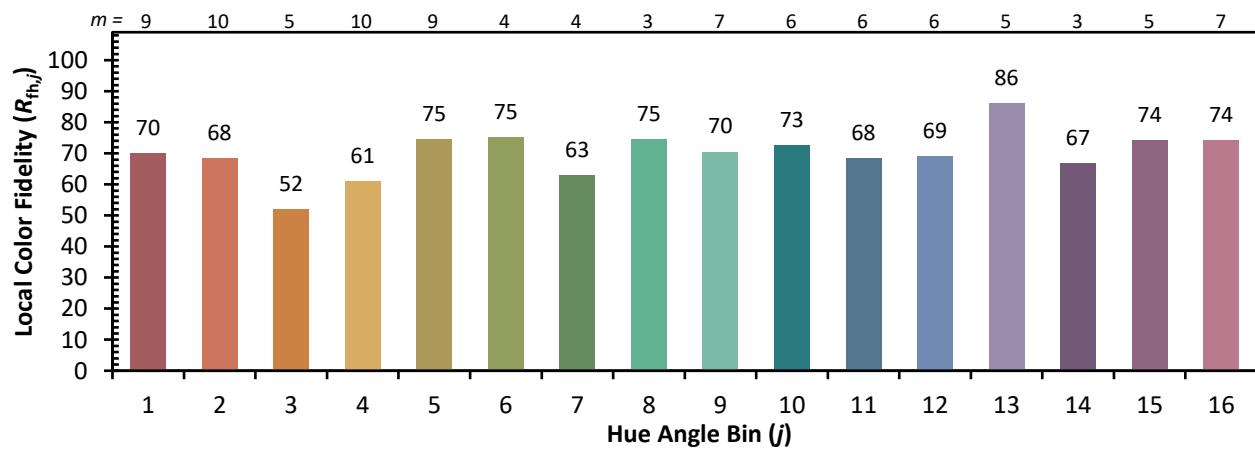
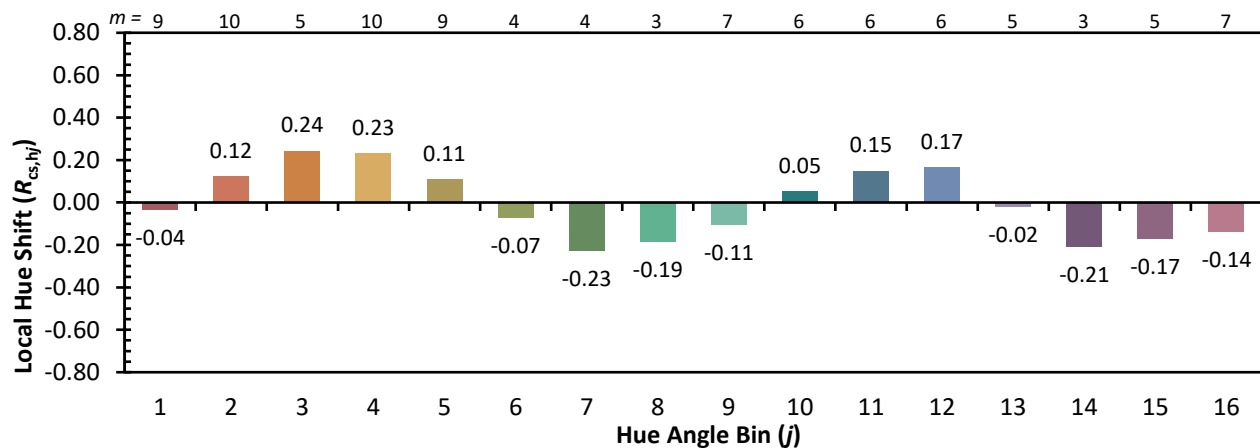
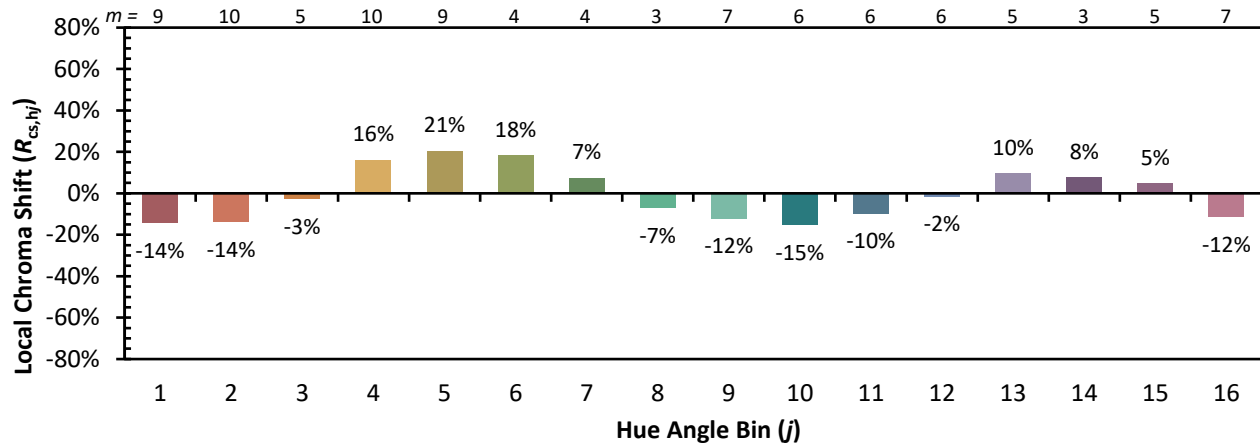
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|------------|------------|------------|------------|
| CES01 = 87 | CES26 = 56 | CES51 = 74 | CES76 = 56 |
| CES02 = 65 | CES27 = 76 | CES52 = 76 | CES77 = 81 |
| CES03 = 32 | CES28 = 83 | CES53 = 65 | CES78 = 63 |
| CES04 = 72 | CES29 = 46 | CES54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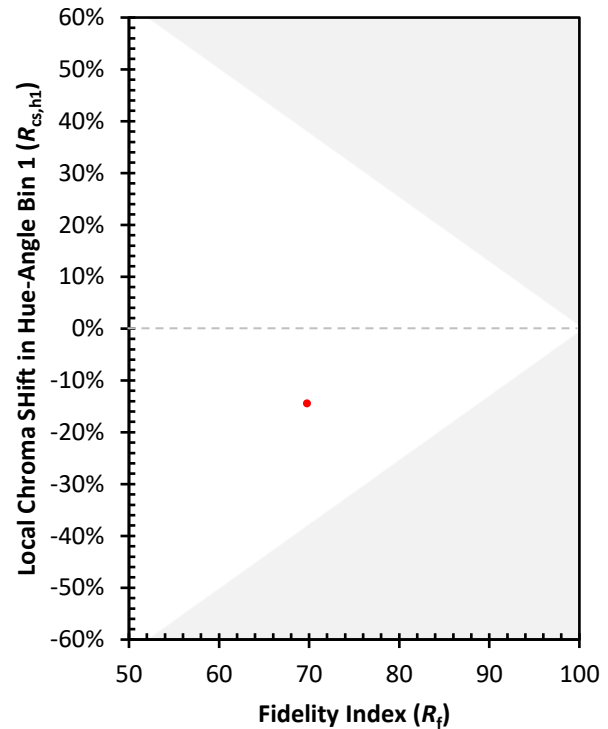
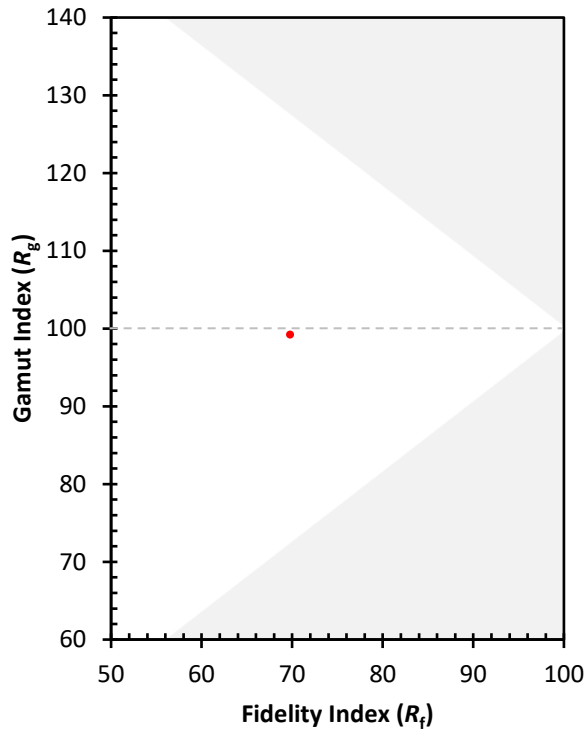
Color Rendition by Hue-Angle Bin



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**Measure Comparisons**



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