

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: P324473

Luminaire Tested: **GLEON-SA9A-740-U-SLR-HSS**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P324473  
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-SA9A-740-U-SLR-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 30883 lumens  
Efficiency: N/A  
Efficacy: 106.5 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B3 - U0 - G4

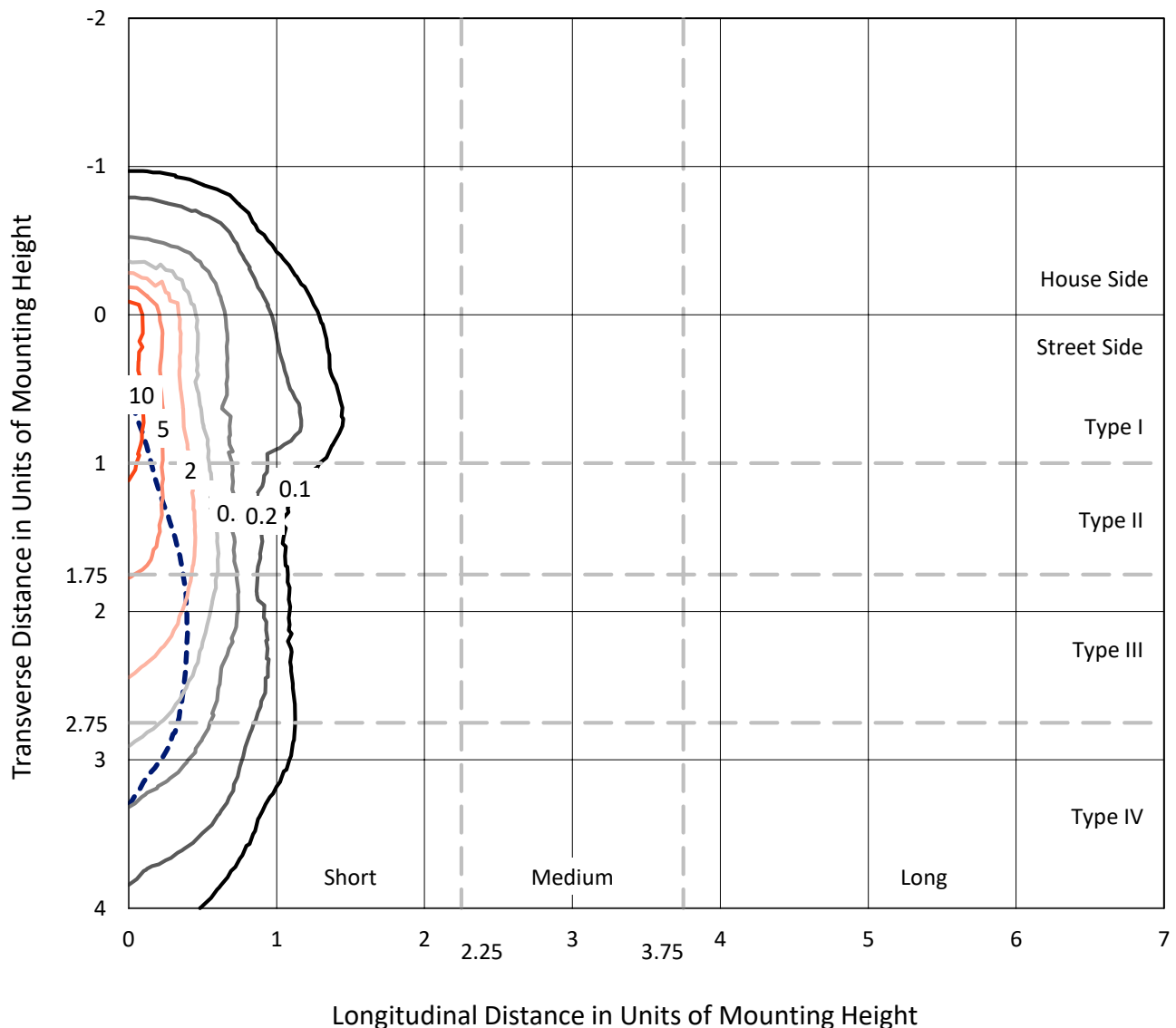
Input Watts (W): 290  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

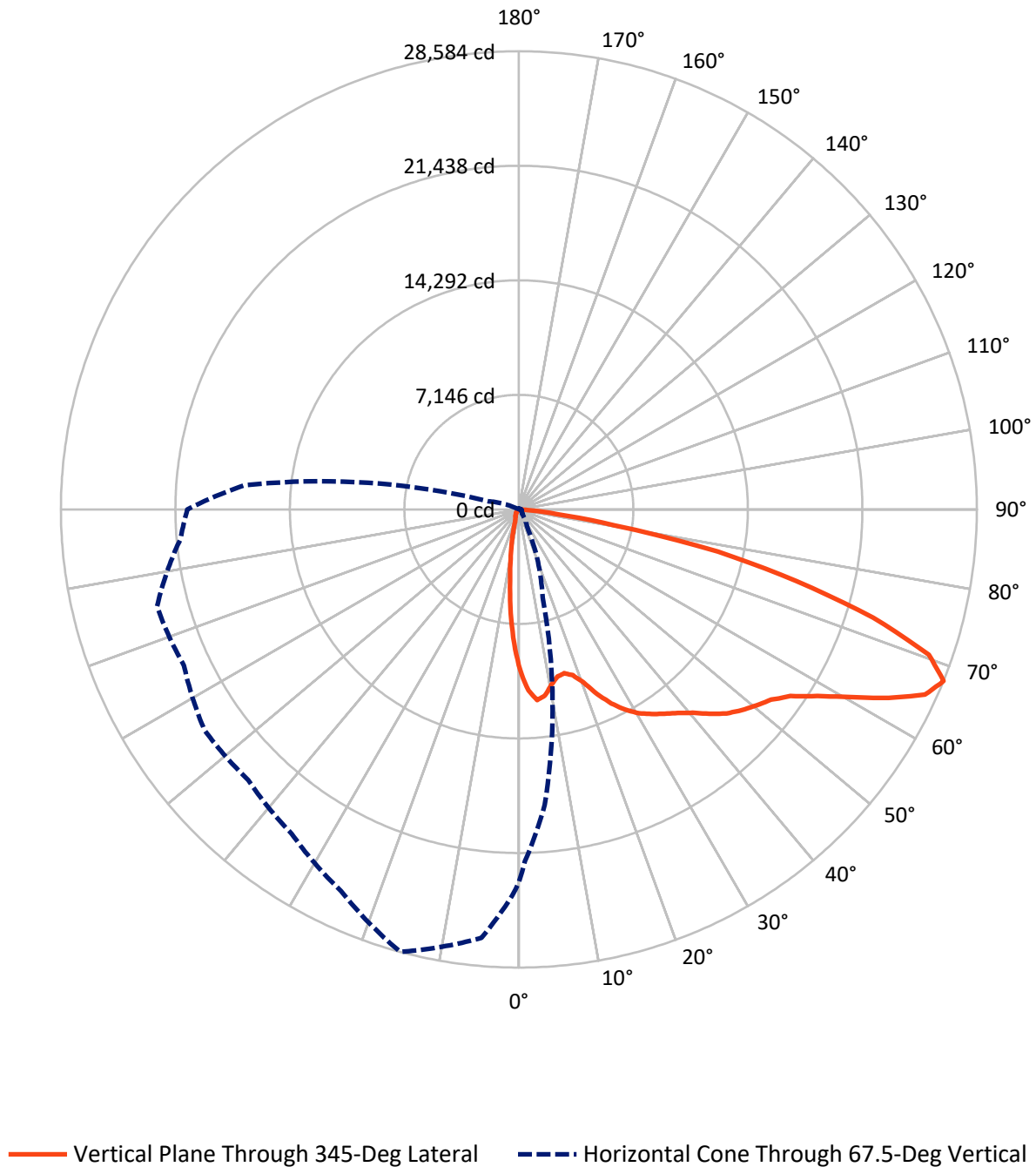
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 16.1 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    | 3737.9   | 0.0    | 3737.9  |
|                    | % Fixture | 12.1     | 0.0    | 12.1    |
| <b>Street Side</b> | Lumens    | 27145.1  | 0.0    | 27145.1 |
|                    | % Fixture | 87.9     | 0.0    | 87.9    |
| <b>Total</b>       | Lumens    | 30883.0  | 0.0    | 30883.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 772.1   | 2.5       |
| 10°-20°   | 1536.8  | 5.0       |
| 20°-30°   | 2182.3  | 7.1       |
| 30°-40°   | 3223.4  | 10.4      |
| 40°-50°   | 4648.9  | 15.1      |
| 50°-60°   | 6526.1  | 21.1      |
| 60°-70°   | 7607.5  | 24.6      |
| 70°-80°   | 3889.1  | 12.6      |
| 80°-90°   | 496.7   | 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°    | 30883.0 | 100.0     |
| 0°-180°   | 30883.0 | 100.0     |

**Coefficient of Utilization**



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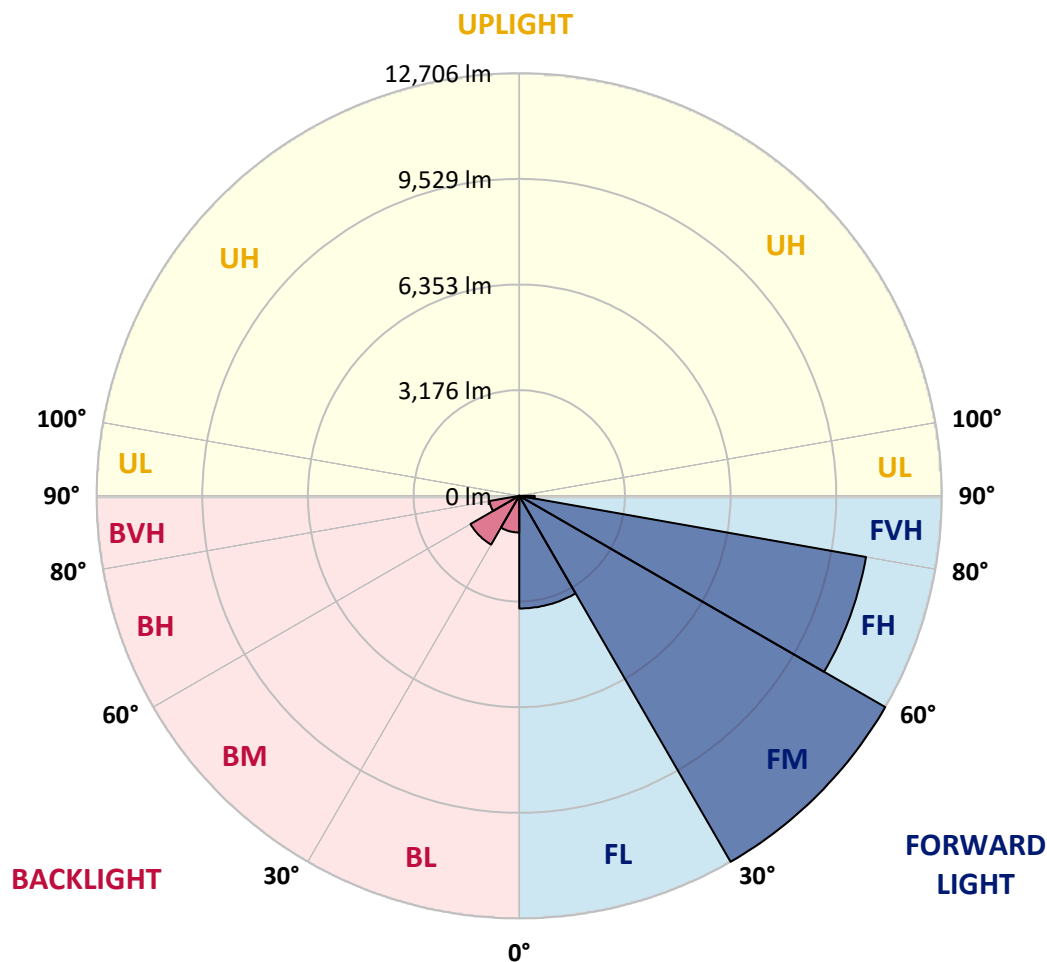
CATALOG NUMBER: GLEON-SA9A-740-U-SLR-HSS

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 3387.3  | 11.0      |                         |      |          |
| FM   | (30°-60°)   | 12705.8 | 41.1      |                         |      |          |
| FH   | (60°-80°)   | 10585.6 | 34.3      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 466.5   | 1.5       |                         |      | G3/500   |
| BL   | (0°-30°)    | 1104.0  | 3.6       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 1692.6  | 5.5       | B2/2500                 |      |          |
| BH   | (60°-80°)   | 911.0   | 2.9       | B2/1000                 |      | G2/1000  |
| BVH  | (80°-90°)   | 30.2    | 0.1       |                         |      | G1/100   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B3-U0-G4**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 1°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 |
| 2.5°  | 11015.5 | 10930.6 | 10837.0 | 10531.2 | 10247.4 | 9922.6  | 9657.7  | 9473.4  | 9242.2  | 8942.3  | 8866.2  |
| 5°    | 10936.5 | 10845.7 | 10551.7 | 9871.3  | 9275.9  | 8696.5  | 8137.6  | 7809.9  | 7403.1  | 6990.6  | 6888.1  |
| 7.5°  | 10142.0 | 10046.9 | 9622.6  | 8690.6  | 7888.9  | 7052.0  | 6326.3  | 5877.2  | 5417.8  | 5040.3  | 4839.8  |
| 10°   | 9315.4  | 9211.5  | 8734.5  | 7603.6  | 6616.0  | 5859.6  | 5327.0  | 4898.4  | 4463.8  | 4060.0  | 3738.1  |
| 12.5° | 8746.2  | 8610.2  | 8092.2  | 6810.6  | 5950.3  | 5436.8  | 4939.3  | 4425.8  | 3837.6  | 3404.6  | 3050.5  |
| 15°   | 8507.8  | 8352.7  | 7805.5  | 6504.8  | 5714.8  | 5112.0  | 4463.8  | 3833.2  | 3144.1  | 2648.2  | 2323.4  |
| 17.5° | 8692.1  | 8490.2  | 7903.5  | 6484.3  | 5419.2  | 4598.4  | 3779.1  | 3038.8  | 2291.2  | 1789.3  | 1558.2  |
| 20°   | 9318.3  | 9053.5  | 8308.8  | 6478.5  | 5060.8  | 3988.3  | 2949.6  | 2112.7  | 1509.9  | 1214.3  | 1092.9  |
| 22.5° | 10304.4 | 9954.7  | 8891.1  | 6525.3  | 4690.6  | 3347.5  | 2130.2  | 1435.3  | 1133.9  | 980.3   | 908.6   |
| 25°   | 11495.4 | 11090.1 | 9729.4  | 6690.6  | 4365.8  | 2724.2  | 1547.9  | 1133.9  | 956.8   | 844.2   | 784.2   |
| 27.5° | 12627.8 | 12298.6 | 10788.7 | 6929.1  | 4114.2  | 2220.9  | 1256.8  | 961.2   | 817.9   | 743.2   | 695.0   |
| 30°   | 13758.7 | 13344.7 | 11875.8 | 7212.9  | 3811.3  | 1880.0  | 1104.6  | 876.4   | 733.0   | 654.0   | 623.3   |
| 32.5° | 14581.0 | 14237.1 | 12727.3 | 7417.8  | 3488.0  | 1657.7  | 987.6   | 801.8   | 684.7   | 604.2   | 558.9   |
| 35°   | 15548.1 | 15158.9 | 13457.3 | 7463.1  | 3280.2  | 1517.2  | 888.1   | 721.3   | 594.0   | 522.3   | 474.0   |
| 37.5° | 16592.7 | 16108.4 | 14300.1 | 7363.6  | 3117.8  | 1448.4  | 813.5   | 684.7   | 554.5   | 481.4   | 430.1   |
| 40°   | 17748.5 | 17201.3 | 15109.1 | 7220.3  | 2958.3  | 1425.0  | 756.4   | 656.9   | 523.8   | 449.2   | 396.5   |
| 42.5° | 18965.8 | 18320.6 | 15810.0 | 7069.6  | 2857.4  | 1344.6  | 750.6   | 629.1   | 500.4   | 419.9   | 367.2   |
| 45°   | 19988.5 | 19334.5 | 16529.8 | 7019.8  | 2785.7  | 1256.8  | 775.4   | 610.1   | 484.3   | 396.5   | 345.3   |
| 47.5° | 20803.4 | 20184.5 | 17267.2 | 7131.0  | 2744.7  | 1176.3  | 706.7   | 635.0   | 475.5   | 376.0   | 326.3   |
| 50°   | 21776.4 | 21075.5 | 18306.0 | 7463.1  | 2684.7  | 1095.8  | 639.4   | 727.1   | 475.5   | 362.8   | 310.2   |
| 52.5° | 22996.6 | 22303.1 | 19464.7 | 7978.1  | 2564.8  | 984.6   | 575.0   | 728.6   | 479.9   | 345.3   | 289.7   |
| 55°   | 24531.3 | 24028.0 | 21119.4 | 8542.9  | 2373.1  | 820.8   | 497.4   | 626.2   | 462.3   | 313.1   | 270.7   |
| 57.5° | 26003.2 | 25592.0 | 22627.9 | 8929.1  | 2117.1  | 640.8   | 433.1   | 504.8   | 422.8   | 275.1   | 241.4   |
| 59°   | 26405.5 | 25956.4 | 23180.9 | 8946.7  | 1925.4  | 558.9   | 400.9   | 417.0   | 414.0   | 257.5   | 223.8   |
| 60°   | 26405.5 | 25928.6 | 23340.4 | 8853.0  | 1786.4  | 513.5   | 380.4   | 371.6   | 431.6   | 245.8   | 213.6   |
| 62.5° | 25927.1 | 25257.0 | 22822.5 | 8219.5  | 1457.2  | 437.5   | 332.1   | 307.2   | 387.7   | 220.9   | 188.7   |
| 65°   | 24932.2 | 23956.3 | 21058.0 | 7074.0  | 1299.2  | 400.9   | 286.8   | 251.6   | 269.2   | 194.6   | 165.3   |
| 67.5° | 23273.1 | 21950.5 | 18513.7 | 5714.8  | 1236.3  | 390.6   | 247.3   | 213.6   | 203.4   | 166.8   | 144.8   |
| 70°   | 20351.3 | 18883.9 | 15425.2 | 4493.1  | 1182.2  | 386.3   | 207.8   | 180.0   | 163.9   | 140.5   | 122.9   |
| 72.5° | 14812.1 | 13281.8 | 10951.1 | 3512.8  | 1150.0  | 395.0   | 166.8   | 150.7   | 134.6   | 109.7   | 95.1    |
| 75°   | 8472.6  | 7470.4  | 6155.1  | 2320.4  | 980.3   | 377.5   | 128.8   | 125.8   | 96.6    | 79.0    | 65.8    |
| 77.5° | 4377.5  | 4244.4  | 3688.4  | 891.0   | 469.6   | 165.3   | 84.9    | 73.2    | 57.1    | 48.3    | 39.5    |
| 80°   | 1888.8  | 1868.3  | 1616.7  | 257.5   | 124.4   | 92.2    | 48.3    | 30.7    | 26.3    | 20.5    | 16.1    |
| 82.5° | 652.5   | 652.5   | 575.0   | 86.3    | 55.6    | 45.4    | 5.9     | 0.0     | 0.0     | 0.0     | 0.0     |
| 85°   | 131.7   | 147.8   | 103.9   | 0.0     | 19.0    | 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):**

|       | 90°     | 95°     | 105°    | 115°    | 125°    | 135°    | 145°    | 155°    | 165°    | 175°    | 180°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 |
| 2.5°  | 8774.0  | 8597.0  | 8585.3  | 8474.1  | 8335.1  | 8272.2  | 8235.6  | 8300.0  | 8379.0  | 8387.8  | 8506.3  |
| 5°    | 6810.6  | 6624.8  | 6702.3  | 6504.8  | 6544.3  | 6504.8  | 6440.4  | 6452.1  | 6487.3  | 6377.5  | 6513.6  |
| 7.5°  | 4782.8  | 4642.3  | 4731.6  | 4678.9  | 4749.1  | 4776.9  | 4737.4  | 4678.9  | 4506.3  | 4485.8  | 4604.3  |
| 10°   | 3605.0  | 3445.5  | 3350.4  | 3250.9  | 3272.9  | 3318.2  | 3303.6  | 3261.2  | 3151.5  | 3157.3  | 3271.4  |
| 12.5° | 2896.9  | 2718.4  | 2529.7  | 2285.3  | 2225.3  | 2259.0  | 2225.3  | 2200.5  | 2095.1  | 2103.9  | 2204.8  |
| 15°   | 2197.5  | 2051.2  | 1853.7  | 1657.7  | 1550.9  | 1561.1  | 1467.5  | 1401.6  | 1335.8  | 1256.8  | 1318.2  |
| 17.5° | 1483.6  | 1394.3  | 1335.8  | 1277.3  | 1150.0  | 1120.7  | 1002.2  | 874.9   | 825.2   | 788.6   | 814.9   |
| 20°   | 1050.5  | 1002.2  | 978.8   | 975.9   | 902.7   | 866.1   | 750.6   | 671.5   | 646.7   | 639.4   | 655.5   |
| 22.5° | 877.8   | 842.7   | 809.1   | 790.1   | 753.5   | 711.1   | 623.3   | 583.8   | 566.2   | 557.4   | 569.1   |
| 25°   | 763.7   | 737.4   | 702.3   | 670.1   | 655.5   | 610.1   | 547.2   | 517.9   | 506.2   | 497.4   | 503.3   |
| 27.5° | 678.9   | 655.5   | 614.5   | 594.0   | 582.3   | 542.8   | 488.7   | 465.3   | 455.0   | 452.1   | 450.6   |
| 30°   | 611.6   | 589.6   | 551.6   | 528.2   | 507.7   | 472.6   | 440.4   | 417.0   | 406.7   | 403.8   | 400.9   |
| 32.5° | 544.3   | 526.7   | 501.8   | 478.4   | 456.5   | 424.3   | 396.5   | 377.5   | 361.4   | 358.5   | 357.0   |
| 35°   | 459.4   | 441.8   | 428.7   | 427.2   | 406.7   | 376.0   | 355.5   | 330.7   | 317.5   | 313.1   | 314.6   |
| 37.5° | 408.2   | 384.8   | 355.5   | 365.8   | 359.9   | 338.0   | 310.2   | 285.3   | 272.1   | 269.2   | 269.2   |
| 40°   | 376.0   | 351.1   | 317.5   | 299.9   | 317.5   | 313.1   | 269.2   | 244.3   | 231.2   | 229.7   | 226.8   |
| 42.5° | 345.3   | 320.4   | 282.4   | 253.1   | 261.9   | 275.1   | 232.6   | 209.2   | 196.1   | 193.1   | 188.7   |
| 45°   | 323.3   | 297.0   | 254.6   | 220.9   | 203.4   | 231.2   | 199.0   | 169.7   | 162.4   | 156.5   | 153.6   |
| 47.5° | 302.9   | 278.0   | 229.7   | 191.7   | 162.4   | 166.8   | 159.5   | 139.0   | 130.2   | 124.4   | 122.9   |
| 50°   | 285.3   | 259.0   | 207.8   | 163.9   | 134.6   | 122.9   | 128.8   | 109.7   | 102.4   | 96.6    | 93.6    |
| 52.5° | 264.8   | 239.9   | 184.3   | 141.9   | 112.7   | 96.6    | 98.0    | 86.3    | 79.0    | 74.6    | 73.2    |
| 55°   | 248.7   | 223.8   | 165.3   | 124.4   | 99.5    | 79.0    | 70.2    | 67.3    | 62.9    | 60.0    | 58.5    |
| 57.5° | 226.8   | 203.4   | 146.3   | 105.3   | 84.9    | 64.4    | 54.1    | 54.1    | 52.7    | 49.7    | 48.3    |
| 59°   | 213.6   | 193.1   | 134.6   | 95.1    | 77.5    | 55.6    | 48.3    | 49.7    | 48.3    | 45.4    | 43.9    |
| 60°   | 203.4   | 184.3   | 125.8   | 87.8    | 73.2    | 51.2    | 43.9    | 46.8    | 45.4    | 42.4    | 41.0    |
| 62.5° | 180.0   | 166.8   | 108.3   | 73.2    | 64.4    | 41.0    | 36.6    | 39.5    | 39.5    | 38.0    | 36.6    |
| 65°   | 158.0   | 143.4   | 92.2    | 61.4    | 60.0    | 35.1    | 29.3    | 35.1    | 36.6    | 33.7    | 30.7    |
| 67.5° | 137.5   | 122.9   | 80.5    | 49.7    | 55.6    | 27.8    | 21.9    | 29.3    | 39.5    | 30.7    | 27.8    |
| 70°   | 117.0   | 102.4   | 62.9    | 39.5    | 58.5    | 19.0    | 17.6    | 26.3    | 46.8    | 33.7    | 26.3    |
| 72.5° | 90.7    | 79.0    | 43.9    | 29.3    | 62.9    | 13.2    | 13.2    | 21.9    | 52.7    | 36.6    | 24.9    |
| 75°   | 62.9    | 51.2    | 26.3    | 17.6    | 51.2    | 8.8     | 8.8     | 20.5    | 49.7    | 33.7    | 23.4    |
| 77.5° | 36.6    | 27.8    | 8.8     | 1.5     | 26.3    | 0.0     | 1.5     | 14.6    | 35.1    | 20.5    | 10.2    |
| 80°   | 13.2    | 5.9     | 0.0     | 0.0     | 16.1    | 0.0     | 0.0     | 0.0     | 2.9     | 0.0     | 0.0     |
| 82.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 85°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 87.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

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**CANDELA DISTRIBUTION (continued):**

|       | 185°    | 195°    | 205°    | 215°    | 225°    | 235°    | 245°    | 255°    | 265°    | 270°    | 275°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 |
| 2.5°  | 8537.0  | 8734.5  | 8911.6  | 9179.3  | 9496.8  | 9862.6  | 10177.1 | 10515.1 | 10832.6 | 10964.3 | 11055.0 |
| 5°    | 6541.4  | 6785.7  | 7071.0  | 7464.6  | 7988.4  | 8633.6  | 9237.8  | 9921.1  | 10655.6 | 11022.8 | 11368.1 |
| 7.5°  | 4624.8  | 4873.5  | 5227.6  | 5646.0  | 6279.5  | 7047.6  | 7837.7  | 8781.4  | 9776.2  | 10357.1 | 10929.1 |
| 10°   | 3325.6  | 3631.3  | 3962.0  | 4534.1  | 5177.8  | 5906.4  | 6719.9  | 7773.3  | 8882.3  | 9526.1  | 10215.2 |
| 12.5° | 2263.4  | 2611.6  | 3112.0  | 3752.8  | 4509.2  | 5223.2  | 5929.8  | 6935.0  | 8222.5  | 8860.4  | 9599.2  |
| 15°   | 1357.7  | 1550.9  | 2080.5  | 2822.3  | 3749.9  | 4639.4  | 5413.4  | 6421.4  | 7793.8  | 8575.1  | 9343.2  |
| 17.5° | 836.9   | 926.1   | 1214.3  | 1823.0  | 2797.4  | 3922.5  | 4983.2  | 6247.3  | 7855.2  | 8806.2  | 9628.5  |
| 20°   | 667.2   | 702.3   | 794.4   | 1076.8  | 1853.7  | 3132.4  | 4498.9  | 6212.2  | 8357.1  | 9527.5  | 10409.8 |
| 22.5° | 579.4   | 613.0   | 674.5   | 782.7   | 1166.1  | 2345.3  | 4039.5  | 6244.4  | 9076.9  | 10608.7 | 11638.7 |
| 25°   | 510.6   | 539.9   | 598.4   | 687.6   | 854.4   | 1651.8  | 3547.9  | 6387.8  | 10014.7 | 11950.4 | 13044.7 |
| 27.5° | 456.5   | 481.4   | 535.5   | 617.4   | 733.0   | 1152.9  | 2990.5  | 6561.9  | 11126.7 | 13322.7 | 14402.5 |
| 30°   | 406.7   | 428.7   | 477.0   | 553.0   | 636.4   | 886.6   | 2379.0  | 6680.4  | 12240.1 | 14402.5 | 15372.5 |
| 32.5° | 364.3   | 380.4   | 424.3   | 488.7   | 553.0   | 706.7   | 1808.4  | 6661.4  | 13066.7 | 15300.8 | 16070.4 |
| 35°   | 320.4   | 336.5   | 374.5   | 430.1   | 481.4   | 583.8   | 1422.1  | 6305.8  | 13786.5 | 16232.8 | 16869.2 |
| 37.5° | 272.1   | 292.6   | 329.2   | 378.9   | 414.0   | 513.5   | 1150.0  | 5877.2  | 14516.6 | 17297.9 | 17760.2 |
| 40°   | 231.2   | 251.6   | 283.8   | 338.0   | 359.9   | 487.2   | 883.7   | 5354.8  | 15337.4 | 18488.8 | 18737.6 |
| 42.5° | 191.7   | 210.7   | 244.3   | 291.2   | 339.4   | 419.9   | 654.0   | 4757.9  | 16126.0 | 19507.1 | 19628.6 |
| 45°   | 155.1   | 174.1   | 209.2   | 256.0   | 362.8   | 348.2   | 506.2   | 4118.5  | 16762.4 | 20354.3 | 20393.8 |
| 47.5° | 122.9   | 140.5   | 177.0   | 241.4   | 338.0   | 278.0   | 361.4   | 3616.7  | 17296.4 | 21015.6 | 20911.7 |
| 50°   | 95.1    | 109.7   | 147.8   | 276.5   | 295.5   | 229.7   | 273.6   | 3449.9  | 17774.9 | 21425.2 | 21156.0 |
| 52.5° | 74.6    | 87.8    | 121.4   | 259.0   | 229.7   | 190.2   | 229.7   | 3606.5  | 18430.3 | 21764.7 | 21293.5 |
| 55°   | 60.0    | 73.2    | 95.1    | 147.8   | 156.5   | 160.9   | 196.1   | 3752.8  | 19561.3 | 22560.6 | 22105.5 |
| 57.5° | 49.7    | 62.9    | 77.5    | 103.9   | 118.5   | 136.1   | 174.1   | 3768.9  | 20894.1 | 23883.2 | 23453.0 |
| 59°   | 45.4    | 57.1    | 70.2    | 92.2    | 103.9   | 124.4   | 163.9   | 3681.1  | 21363.8 | 24364.5 | 24149.5 |
| 60°   | 42.4    | 54.1    | 65.8    | 84.9    | 96.6    | 117.0   | 158.0   | 3597.7  | 21384.3 | 24347.0 | 24446.5 |
| 62.5° | 36.6    | 48.3    | 58.5    | 71.7    | 81.9    | 99.5    | 141.9   | 3289.0  | 20518.1 | 23549.6 | 24268.0 |
| 65°   | 32.2    | 42.4    | 52.7    | 61.4    | 70.2    | 89.2    | 128.8   | 2725.7  | 19039.0 | 22263.6 | 23046.3 |
| 67.5° | 29.3    | 36.6    | 48.3    | 54.1    | 62.9    | 79.0    | 114.1   | 1943.0  | 17191.1 | 20690.8 | 21198.4 |
| 70°   | 26.3    | 35.1    | 43.9    | 49.7    | 57.1    | 68.8    | 98.0    | 1116.3  | 14516.6 | 18387.9 | 18749.3 |
| 72.5° | 24.9    | 33.7    | 39.5    | 46.8    | 51.2    | 61.4    | 89.2    | 525.2   | 10629.2 | 14730.2 | 15673.9 |
| 75°   | 21.9    | 30.7    | 36.6    | 43.9    | 48.3    | 55.6    | 76.1    | 251.6   | 7069.6  | 10659.9 | 11732.4 |
| 77.5° | 13.2    | 24.9    | 33.7    | 39.5    | 42.4    | 48.3    | 62.9    | 144.8   | 4512.1  | 7378.3  | 8690.6  |
| 80°   | 0.0     | 8.8     | 24.9    | 33.7    | 36.6    | 41.0    | 48.3    | 114.1   | 2414.1  | 4215.1  | 5059.3  |
| 82.5° | 0.0     | 0.0     | 17.6    | 26.3    | 24.9    | 27.8    | 36.6    | 71.7    | 1088.5  | 2755.0  | 3104.6  |
| 85°   | 0.0     | 0.0     | 5.9     | 20.5    | 17.6    | 13.2    | 24.9    | 24.9    | 238.5   | 1394.3  | 1739.6  |
| 87.5° | 0.0     | 0.0     | 0.0     | 1.5     | 8.8     | 5.9     | 10.2    | 2.9     | 1.5     | 103.9   | 421.4   |
| 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: P324473

CATALOG NUMBER: GLEON-SA9A-740-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°    | 295°    | 305°    | 315°    | 325°    | 335°    | 345°    | 355°    | 359°    | 360°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 | 10060.1 |
| 2.5°  | 11372.5 | 11480.7 | 11663.6 | 11749.9 | 11707.5 | 11527.5 | 11312.5 | 11093.0 | 10964.3 | 11015.5 |
| 5°    | 12071.8 | 12629.2 | 12951.1 | 13057.9 | 12879.4 | 12475.6 | 11947.4 | 11251.0 | 11003.8 | 10936.5 |
| 7.5°  | 12071.8 | 13120.8 | 13785.1 | 13902.1 | 13504.2 | 12712.6 | 11722.1 | 10635.1 | 10273.7 | 10142.0 |
| 10°   | 11647.5 | 13075.5 | 14001.6 | 14187.4 | 13631.4 | 12447.8 | 11120.8 | 9880.1  | 9451.4  | 9315.4  |
| 12.5° | 11169.1 | 12706.8 | 13682.6 | 13938.7 | 13482.2 | 12184.5 | 10703.8 | 9369.5  | 8864.8  | 8746.2  |
| 15°   | 10875.0 | 12253.2 | 13060.8 | 13246.6 | 13053.5 | 12030.8 | 10604.3 | 9215.9  | 8621.9  | 8507.8  |
| 17.5° | 10980.4 | 11902.1 | 12193.2 | 12301.5 | 12431.7 | 11976.7 | 10875.0 | 9552.4  | 8800.4  | 8692.1  |
| 20°   | 11376.8 | 11531.9 | 11381.2 | 11517.3 | 11868.4 | 12029.4 | 11520.2 | 10365.9 | 9463.1  | 9318.3  |
| 22.5° | 12049.9 | 11340.3 | 10917.4 | 10971.6 | 11398.8 | 12203.5 | 12506.3 | 11527.5 | 10485.8 | 10304.4 |
| 25°   | 12834.1 | 11495.4 | 10659.9 | 10611.7 | 11050.6 | 12433.2 | 13407.6 | 12791.6 | 11695.8 | 11495.4 |
| 27.5° | 13820.2 | 11843.6 | 10607.3 | 10559.0 | 10929.1 | 12648.3 | 14156.7 | 14041.1 | 12970.1 | 12627.8 |
| 30°   | 14581.0 | 12185.9 | 10763.8 | 10652.6 | 11050.6 | 12797.5 | 14758.0 | 15101.8 | 13985.5 | 13758.7 |
| 32.5° | 15126.7 | 12589.7 | 11018.4 | 10857.5 | 11392.9 | 13055.0 | 15221.8 | 16073.3 | 14924.8 | 14581.0 |
| 35°   | 15542.2 | 13028.7 | 11429.5 | 11164.7 | 11864.0 | 13445.6 | 15656.3 | 17107.7 | 15924.1 | 15548.1 |
| 37.5° | 15931.4 | 13644.6 | 12071.8 | 11755.8 | 12602.9 | 14074.7 | 16115.7 | 18281.1 | 17041.9 | 16592.7 |
| 40°   | 16474.2 | 14342.5 | 13062.3 | 12781.4 | 13845.0 | 14932.1 | 16689.3 | 19504.2 | 18313.3 | 17748.5 |
| 42.5° | 17017.0 | 15091.6 | 14076.2 | 14152.3 | 15394.4 | 15973.8 | 17429.6 | 20797.6 | 19568.6 | 18965.8 |
| 45°   | 17513.0 | 15864.1 | 15520.3 | 15871.4 | 16832.6 | 17116.5 | 18165.5 | 21545.2 | 20570.8 | 19988.5 |
| 47.5° | 17954.8 | 16829.7 | 16955.5 | 17890.4 | 18468.4 | 18150.9 | 18715.6 | 22190.4 | 21317.0 | 20803.4 |
| 50°   | 18468.4 | 18079.2 | 18847.3 | 20169.9 | 20351.3 | 19087.2 | 19216.0 | 22954.1 | 22188.9 | 21776.4 |
| 52.5° | 19030.2 | 19395.9 | 20942.4 | 22108.5 | 22050.0 | 20104.1 | 19719.3 | 23810.0 | 23384.3 | 22996.6 |
| 55°   | 19668.1 | 20459.6 | 22787.3 | 23922.7 | 23872.9 | 21239.4 | 20553.2 | 24867.8 | 24882.5 | 24531.3 |
| 57.5° | 20614.7 | 21375.5 | 24039.7 | 25390.1 | 25473.5 | 22550.3 | 21966.6 | 26052.9 | 26237.3 | 26003.2 |
| 59°   | 21293.5 | 21969.5 | 24535.7 | 26003.2 | 26342.6 | 23564.2 | 22999.5 | 26740.6 | 26619.1 | 26405.5 |
| 60°   | 21796.8 | 22347.0 | 24781.5 | 26323.6 | 26847.4 | 24251.9 | 23761.7 | 27144.4 | 26664.5 | 26405.5 |
| 62.5° | 23041.9 | 23169.2 | 25224.8 | 26686.4 | 27428.2 | 25779.3 | 25906.6 | 27832.0 | 26349.9 | 25927.1 |
| 65°   | 23622.8 | 23688.6 | 25219.0 | 26036.8 | 26866.4 | 26968.8 | 27852.5 | 27852.5 | 25581.8 | 24932.2 |
| 67.5° | 23379.9 | 23062.4 | 23968.0 | 23883.2 | 24711.3 | 26262.1 | 28584.0 | 26831.3 | 24112.9 | 23273.1 |
| 70°   | 21404.7 | 20183.1 | 19780.7 | 19817.3 | 20450.8 | 22842.9 | 27135.6 | 23826.1 | 21333.0 | 20351.3 |
| 72.5° | 17810.0 | 14879.4 | 13886.0 | 15019.9 | 15185.2 | 17555.4 | 23125.3 | 17943.1 | 15732.4 | 14812.1 |
| 75°   | 14324.9 | 10488.8 | 8873.5  | 10070.3 | 10351.2 | 12847.2 | 17889.0 | 11174.9 | 9189.6  | 8472.6  |
| 77.5° | 10291.2 | 7529.0  | 6367.3  | 6283.9  | 6646.7  | 8147.8  | 12693.6 | 5624.0  | 4690.6  | 4377.5  |
| 80°   | 5846.4  | 4955.4  | 5335.8  | 5034.4  | 5217.3  | 5094.4  | 6030.8  | 2466.7  | 2020.5  | 1888.8  |
| 82.5° | 3528.9  | 2929.1  | 3171.9  | 2640.8  | 3341.7  | 2910.0  | 2323.4  | 790.1   | 686.2   | 652.5   |
| 85°   | 2295.6  | 1600.6  | 834.0   | 558.9   | 1151.4  | 1859.6  | 519.4   | 215.1   | 165.3   | 131.7   |
| 87.5° | 791.5   | 408.2   | 41.0    | 17.6    | 122.9   | 346.7   | 19.0    | 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     |

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW, INVUE, LUMARK AND STREETWORKS

DATA VALID FOR LUMINAIRES UTILIZING SA LIGHT ENGINES

Report Number: SP1-2101-121-2

Luminaire Tested: IFLD-S-SA2A-740-U-T3R-HSS

Test Date: 03/05/2021

### Test Information

Test Method: LM-79-08  
 Report Number: SP1-2101-121-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry:  $4\pi$   
 Issue Date: 03/05/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: STREETWORKS  
 Catalog Number: **IFLD-S-SA2A-740-U-T3R-HSS**  
 Description: STREETWORKS INF FLOOD

SHIELD, DRIVER PROGRAMMED @ 615mA.

### Spectral Parameters

|                           |         |           |      |      |       |
|---------------------------|---------|-----------|------|------|-------|
| CCT (K):                  | 3905    | CRI (Ra): | 71.2 |      |       |
| CIE u':                   | 0.2273  | R1:       | 68.9 | R9:  | -29.7 |
| CIE v':                   | 0.5024  | R2:       | 77.0 | R10: | 46.2  |
| Duv:                      | -0.0008 | R3:       | 84.0 | R11: | 68.8  |
| CIE x:                    | 0.3841  | R4:       | 71.6 | R12: | 45.6  |
| CIE y:                    | 0.3774  | R5:       | 68.9 | R13: | 69.5  |
| CIE z:                    | 0.2385  | R6:       | 68.3 | R14: | 90.7  |
| Peak Wavelength (nm):     | 443     | R7:       | 78.7 |      |       |
| Dominant Wavelength (nm): | 579     | R8:       | 52.2 |      |       |
| Purity:                   | 28.7    |           |      |      |       |
| Rf:                       | 71.7    |           |      |      |       |
| Rg:                       | 96.9    |           |      |      |       |



### Test Conditions

Stabilization Time: 211M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.8/312%  
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2101-121-2

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 1/31/2021        | 7/31/2021            |
| Power Meter                    | IN0071                | 12/1/2020        | 12/1/2021            |
| AC Power Source                | IN0063                | 12/1/2020        | 12/1/2021            |
| DC Power Source                | IN0208                | 12/1/2020        | 12/1/2021            |
| Sphere Thermometer             | IN0085                | 12/1/2020        | 12/1/2021            |
| Room Thermometer               | IN0046                | 12/1/2020        | 12/1/2021            |

REPORT NUMBER: SP1-2101-121-2

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-2

### Photopic Flux vs. Wavelength

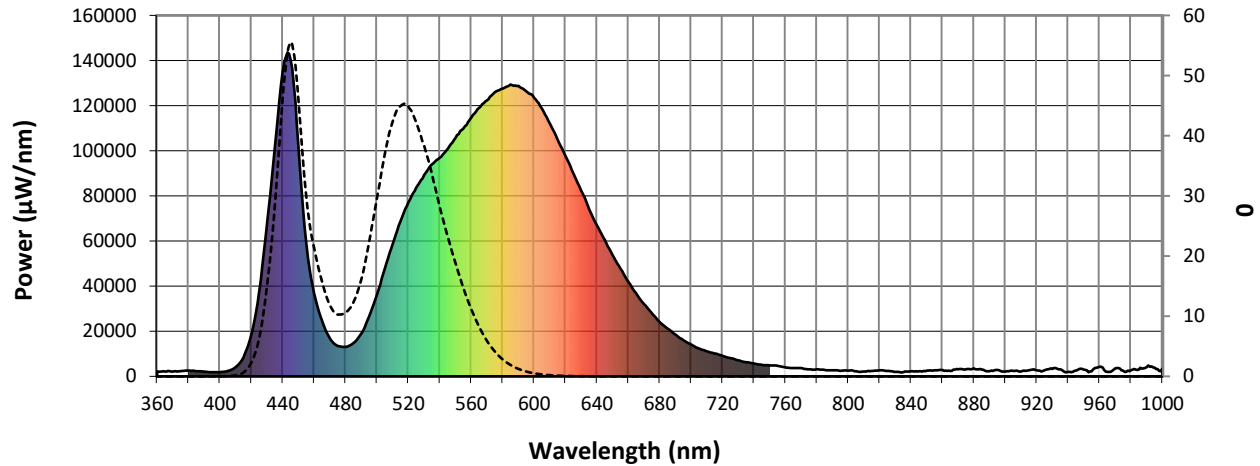


#####

| 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       | 2304             | 0.0              | 490       | 19043            | 2.7              | 620       | 97577            | 25.4             | 750       | 4830             | 0.0              | 880       | 3505             | 0.0              |
| 365       | 2150             | 0.0              | 495       | 26606            | 4.8              | 625       | 90158            | 19.9             | 755       | 4664             | 0.0              | 885       | 2991             | 0.0              |
| 370       | 2146             | 0.0              | 500       | 36376            | 8.0              | 630       | 82240            | 14.9             | 760       | 4006             | 0.0              | 890       | 2327             | 0.0              |
| 375       | 2332             | 0.0              | 505       | 47714            | 13.3             | 635       | 74361            | 11.2             | 765       | 3715             | 0.0              | 895       | 2775             | 0.0              |
| 380       | 2527             | 0.0              | 510       | 58741            | 20.2             | 640       | 66994            | 8.0              | 770       | 3696             | 0.0              | 900       | 2141             | 0.0              |
| 385       | 2304             | 0.0              | 515       | 68716            | 28.5             | 645       | 60405            | 5.8              | 775       | 3117             | 0.0              | 905       | 2421             | 0.0              |
| 390       | 2064             | 0.0              | 520       | 77136            | 37.4             | 650       | 53806            | 3.9              | 780       | 3062             | 0.0              | 910       | 2200             | 0.0              |
| 395       | 1856             | 0.0              | 525       | 83567            | 44.9             | 655       | 47610            | 2.7              | 785       | 2907             | 0.0              | 915       | 2716             | 0.0              |
| 400       | 1856             | 0.0              | 530       | 89283            | 52.6             | 660       | 42018            | 1.8              | 790       | 2655             | 0.0              | 920       | 2656             | 0.0              |
| 405       | 2374             | 0.0              | 535       | 94097            | 58.4             | 665       | 36742            | 1.2              | 795       | 2467             | 0.0              | 925       | 2671             | 0.0              |
| 410       | 4084             | 0.0              | 540       | 96845            | 63.1             | 670       | 32105            | 0.7              | 800       | 2609             | 0.0              | 930       | 3292             | 0.0              |
| 415       | 8543             | 0.0              | 545       | 100829           | 67.1             | 675       | 27946            | 0.5              | 805       | 2293             | 0.0              | 935       | 3188             | 0.0              |
| 420       | 18394            | 0.1              | 550       | 105648           | 71.8             | 680       | 24146            | 0.3              | 810       | 2188             | 0.0              | 940       | 1997             | 0.0              |
| 425       | 37987            | 0.2              | 555       | 110017           | 75.1             | 685       | 21191            | 0.2              | 815       | 2386             | 0.0              | 945       | 2623             | 0.0              |
| 430       | 67605            | 0.5              | 560       | 114586           | 77.9             | 690       | 18544            | 0.1              | 820       | 2712             | 0.0              | 950       | 2969             | 0.0              |
| 435       | 102160           | 1.2              | 565       | 118987           | 79.1             | 695       | 16058            | 0.1              | 825       | 2473             | 0.0              | 955       | 2277             | 0.0              |
| 440       | 135103           | 2.1              | 570       | 122326           | 79.5             | 700       | 14133            | 0.0              | 830       | 1969             | 0.0              | 960       | 4267             | 0.0              |
| 445       | 140126           | 2.9              | 575       | 125968           | 78.4             | 705       | 12309            | 0.0              | 835       | 1917             | 0.0              | 965       | 2034             | 0.0              |
| 450       | 102339           | 2.7              | 580       | 127613           | 75.8             | 710       | 11142            | 0.0              | 840       | 2248             | 0.0              | 970       | 3586             | 0.0              |
| 455       | 58751            | 2.0              | 585       | 129466           | 71.9             | 715       | 10143            | 0.0              | 845       | 2266             | 0.0              | 975       | 2505             | 0.0              |
| 460       | 36892            | 1.5              | 590       | 128813           | 66.6             | 720       | 9072             | 0.0              | 850       | 2558             | 0.0              | 980       | 2666             | 0.0              |
| 465       | 24637            | 1.3              | 595       | 126387           | 59.9             | 725       | 8130             | 0.0              | 855       | 2767             | 0.0              | 985       | 2934             | 0.0              |
| 470       | 16738            | 1.0              | 600       | 123477           | 53.2             | 730       | 7149             | 0.0              | 860       | 2826             | 0.0              | 990       | 4120             | 0.0              |
| 475       | 13456            | 1.1              | 605       | 118718           | 46.0             | 735       | 6311             | 0.0              | 865       | 2385             | 0.0              | 995       | 3858             | 0.0              |
| 480       | 13081            | 1.2              | 610       | 112091           | 38.5             | 740       | 5711             | 0.0              | 870       | 3194             | 0.0              | 1000      | 3405             | 0.0              |
| 485       | 14734            | 1.7              | 615       | 105039           | 31.7             | 745       | 5111             | 0.0              | 875       | 3189             | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2101-121-2

### Scotopic Flux vs. Wavelength



Scotopic Lumens: 10425.8

S/P: 1.47

| 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       | 2304             | 0.0              | 490       | 19043            | 29.3             | 620       | 97577            | 1.2              | 750       | 4830             | 0.0              | 880       | 3505             | 0.0              |
| 365       | 2150             | 0.0              | 495       | 26606            | 43.0             | 625       | 90158            | 0.8              | 755       | 4664             | 0.0              | 885       | 2991             | 0.0              |
| 370       | 2146             | 0.0              | 500       | 36376            | 60.8             | 630       | 82240            | 0.5              | 760       | 4006             | 0.0              | 890       | 2327             | 0.0              |
| 375       | 2332             | 0.0              | 505       | 47714            | 81.1             | 635       | 74361            | 0.3              | 765       | 3715             | 0.0              | 895       | 2775             | 0.0              |
| 380       | 2527             | 0.0              | 510       | 58741            | 99.6             | 640       | 66994            | 0.2              | 770       | 3696             | 0.0              | 900       | 2141             | 0.0              |
| 385       | 2304             | 0.0              | 515       | 68716            | 113.9            | 645       | 60405            | 0.1              | 775       | 3117             | 0.0              | 905       | 2421             | 0.0              |
| 390       | 2064             | 0.0              | 520       | 77136            | 122.6            | 650       | 53806            | 0.1              | 780       | 3062             | 0.0              | 910       | 2200             | 0.0              |
| 395       | 1856             | 0.0              | 525       | 83567            | 125.0            | 655       | 47610            | 0.0              | 785       | 2907             | 0.0              | 915       | 2716             | 0.0              |
| 400       | 1856             | 0.0              | 530       | 89283            | 123.1            | 660       | 42018            | 0.0              | 790       | 2655             | 0.0              | 920       | 2656             | 0.0              |
| 405       | 2374             | 0.1              | 535       | 94097            | 117.3            | 665       | 36742            | 0.0              | 795       | 2467             | 0.0              | 925       | 2671             | 0.0              |
| 410       | 4084             | 0.2              | 540       | 96845            | 107.0            | 670       | 32105            | 0.0              | 800       | 2609             | 0.0              | 930       | 3292             | 0.0              |
| 415       | 8543             | 0.9              | 545       | 100829           | 96.7             | 675       | 27946            | 0.0              | 805       | 2293             | 0.0              | 935       | 3188             | 0.0              |
| 420       | 18394            | 3.0              | 550       | 105648           | 86.4             | 680       | 24146            | 0.0              | 810       | 2188             | 0.0              | 940       | 1997             | 0.0              |
| 425       | 37987            | 9.3              | 555       | 110017           | 75.2             | 685       | 21191            | 0.0              | 815       | 2386             | 0.0              | 945       | 2623             | 0.0              |
| 430       | 67605            | 23.0             | 560       | 114586           | 64.0             | 690       | 18544            | 0.0              | 820       | 2712             | 0.0              | 950       | 2969             | 0.0              |
| 435       | 102160           | 45.7             | 565       | 118987           | 53.4             | 695       | 16058            | 0.0              | 825       | 2473             | 0.0              | 955       | 2277             | 0.0              |
| 440       | 135103           | 75.5             | 570       | 122326           | 43.2             | 700       | 14133            | 0.0              | 830       | 1969             | 0.0              | 960       | 4267             | 0.0              |
| 445       | 140126           | 93.8             | 575       | 125968           | 34.3             | 705       | 12309            | 0.0              | 835       | 1917             | 0.0              | 965       | 2034             | 0.0              |
| 450       | 102339           | 79.3             | 580       | 127613           | 26.3             | 710       | 11142            | 0.0              | 840       | 2248             | 0.0              | 970       | 3586             | 0.0              |
| 455       | 58751            | 51.3             | 585       | 129466           | 19.8             | 715       | 10143            | 0.0              | 845       | 2266             | 0.0              | 975       | 2505             | 0.0              |
| 460       | 36892            | 35.6             | 590       | 128813           | 14.3             | 720       | 9072             | 0.0              | 850       | 2558             | 0.0              | 980       | 2666             | 0.0              |
| 465       | 24637            | 26.0             | 595       | 126387           | 10.1             | 725       | 8130             | 0.0              | 855       | 2767             | 0.0              | 985       | 2934             | 0.0              |
| 470       | 16738            | 19.3             | 600       | 123477           | 7.0              | 730       | 7149             | 0.0              | 860       | 2826             | 0.0              | 990       | 4120             | 0.0              |
| 475       | 13456            | 16.8             | 605       | 118718           | 4.7              | 735       | 6311             | 0.0              | 865       | 2385             | 0.0              | 995       | 3858             | 0.0              |
| 480       | 13081            | 17.7             | 610       | 112091           | 3.0              | 740       | 5711             | 0.0              | 870       | 3194             | 0.0              | 1000      | 3405             | 0.0              |
| 485       | 14734            | 21.4             | 615       | 105039           | 1.9              | 745       | 5111             | 0.0              | 875       | 3189             | 0.0              |           |                  |                  |

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### Melanopic Flux vs. Wavelength



**Melanopic Lumens: 3927.2**

**M/P: 0.55**

| λ (nm) | Power (μW/nm) | Lumens (Φ/nm) | λ (nm) | Power (μW/nm) | Lumens (Φ/nm) | λ (nm) | Power (μW/nm) | Lumens (Φ/nm) | λ (nm) | Power (μW/nm) | Lumens (Φ/nm) | λ (nm) | Power (μW/nm) | Lumens (Φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360    | 2304          | 0.0           | 490    | 19043         | 15.8          | 620    | 97577         | 0.1           | 750    | 4830          | 0.0           | 880    | 3505          | 0.0           |
| 365    | 2150          | 0.0           | 495    | 26606         | 22.0          | 625    | 90158         | 0.0           | 755    | 4664          | 0.0           | 885    | 2991          | 0.0           |
| 370    | 2146          | 0.0           | 500    | 36376         | 29.2          | 630    | 82240         | 0.0           | 760    | 4006          | 0.0           | 890    | 2327          | 0.0           |
| 375    | 2332          | 0.0           | 505    | 47714         | 36.6          | 635    | 74361         | 0.0           | 765    | 3715          | 0.0           | 895    | 2775          | 0.0           |
| 380    | 2527          | 0.0           | 510    | 58741         | 42.2          | 640    | 66994         | 0.0           | 770    | 3696          | 0.0           | 900    | 2141          | 0.0           |
| 385    | 2304          | 0.0           | 515    | 68716         | 44.9          | 645    | 60405         | 0.0           | 775    | 3117          | 0.0           | 905    | 2421          | 0.0           |
| 390    | 2064          | 0.0           | 520    | 77136         | 44.9          | 650    | 53806         | 0.0           | 780    | 3062          | 0.0           | 910    | 2200          | 0.0           |
| 395    | 1856          | 0.0           | 525    | 83567         | 42.4          | 655    | 47610         | 0.0           | 785    | 2907          | 0.0           | 915    | 2716          | 0.0           |
| 400    | 1856          | 0.0           | 530    | 89283         | 38.6          | 660    | 42018         | 0.0           | 790    | 2655          | 0.0           | 920    | 2656          | 0.0           |
| 405    | 2374          | 0.0           | 535    | 94097         | 33.9          | 665    | 36742         | 0.0           | 795    | 2467          | 0.0           | 925    | 2671          | 0.0           |
| 410    | 4084          | 0.2           | 540    | 96845         | 28.3          | 670    | 32105         | 0.0           | 800    | 2609          | 0.0           | 930    | 3292          | 0.0           |
| 415    | 8543          | 0.6           | 545    | 100829        | 23.4          | 675    | 27946         | 0.0           | 805    | 2293          | 0.0           | 935    | 3188          | 0.0           |
| 420    | 18394         | 2.1           | 550    | 105648        | 19.0          | 680    | 24146         | 0.0           | 810    | 2188          | 0.0           | 940    | 1997          | 0.0           |
| 425    | 37987         | 5.9           | 555    | 110017        | 14.8          | 685    | 21191         | 0.0           | 815    | 2386          | 0.0           | 945    | 2623          | 0.0           |
| 430    | 67605         | 14.3          | 560    | 114586        | 11.3          | 690    | 18544         | 0.0           | 820    | 2712          | 0.0           | 950    | 2969          | 0.0           |
| 435    | 102160        | 27.3          | 565    | 118987        | 8.4           | 695    | 16058         | 0.0           | 825    | 2473          | 0.0           | 955    | 2277          | 0.0           |
| 440    | 135103        | 45.1          | 570    | 122326        | 6.0           | 700    | 14133         | 0.0           | 830    | 1969          | 0.0           | 960    | 4267          | 0.0           |
| 445    | 140126        | 55.3          | 575    | 125968        | 4.2           | 705    | 12309         | 0.0           | 835    | 1917          | 0.0           | 965    | 2034          | 0.0           |
| 450    | 102339        | 47.2          | 580    | 127613        | 2.9           | 710    | 11142         | 0.0           | 840    | 2248          | 0.0           | 970    | 3586          | 0.0           |
| 455    | 58751         | 30.8          | 585    | 129466        | 1.9           | 715    | 10143         | 0.0           | 845    | 2266          | 0.0           | 975    | 2505          | 0.0           |
| 460    | 36892         | 21.7          | 590    | 128813        | 1.3           | 720    | 9072          | 0.0           | 850    | 2558          | 0.0           | 980    | 2666          | 0.0           |
| 465    | 24637         | 16.1          | 595    | 126387        | 0.8           | 725    | 8130          | 0.0           | 855    | 2767          | 0.0           | 985    | 2934          | 0.0           |
| 470    | 16738         | 12.0          | 600    | 123477        | 0.5           | 730    | 7149          | 0.0           | 860    | 2826          | 0.0           | 990    | 4120          | 0.0           |
| 475    | 13456         | 10.3          | 605    | 118718        | 0.3           | 735    | 6311          | 0.0           | 865    | 2385          | 0.0           | 995    | 3858          | 0.0           |
| 480    | 13081         | 10.5          | 610    | 112091        | 0.2           | 740    | 5711          | 0.0           | 870    | 3194          | 0.0           | 1000   | 3405          | 0.0           |
| 485    | 14734         | 12.1          | 615    | 105039        | 0.1           | 745    | 5111          | 0.0           | 875    | 3189          | 0.0           |        |               |               |

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TM-30-18

### Summary

$R_f = 71.7$   
 $R_g = 96.9$   
 CIE  $R_a = 71.2$   
 $R_g = -29.7$

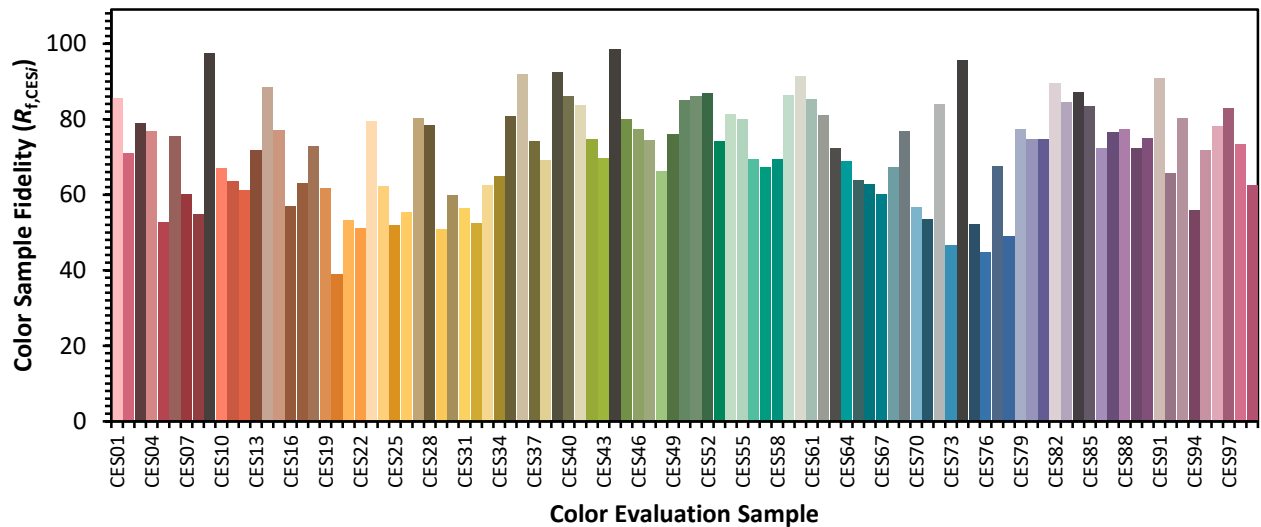


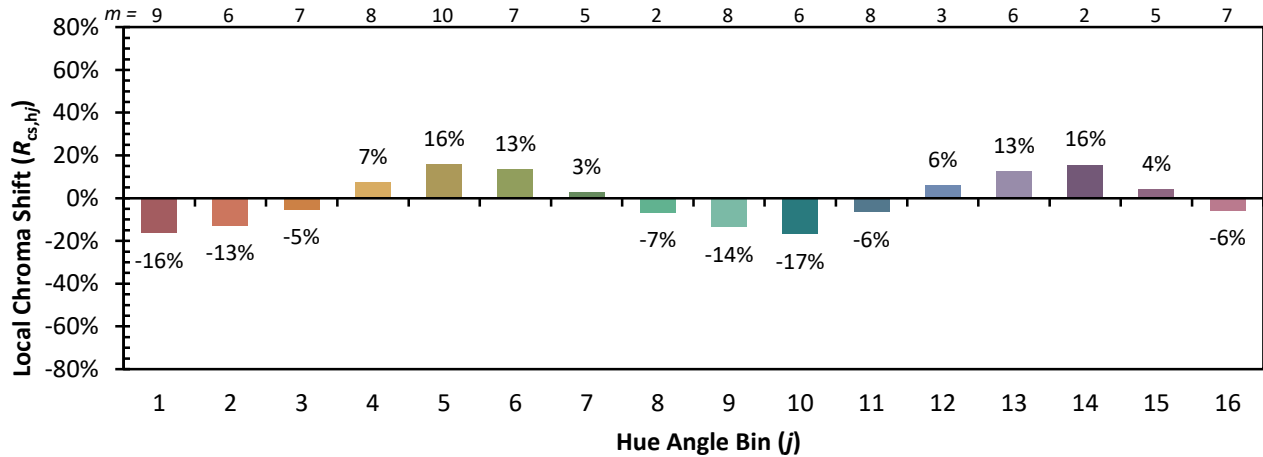
### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 55 | CES51 = 86 | CES76 = 45 |
| CES02 = 61 | CES27 = 80 | CES52 = 87 | CES77 = 68 |
| CES03 = 30 | CES28 = 79 | CES53 = 74 | CES78 = 49 |
| CES04 = 70 | CES29 = 51 | CES54 = 81 | CES79 = 77 |
| CES05 = 47 | CES30 = 60 | CES55 = 80 | CES80 = 75 |
| CES06 = 50 | CES31 = 56 | CES56 = 69 | CES81 = 75 |
| CES07 = 40 | CES32 = 52 | CES57 = 67 | CES82 = 90 |
| CES08 = 39 | CES33 = 62 | CES58 = 69 | CES83 = 85 |
| CES09 = 29 | CES34 = 65 | CES59 = 86 | CES84 = 87 |
| CES10 = 74 | CES35 = 81 | CES60 = 91 | CES85 = 83 |
| CES11 = 57 | CES36 = 92 | CES61 = 85 | CES86 = 72 |
| CES12 = 63 | CES37 = 74 | CES62 = 81 | CES87 = 77 |
| CES13 = 42 | CES38 = 69 | CES63 = 72 | CES88 = 77 |
| CES14 = 74 | CES39 = 92 | CES64 = 69 | CES89 = 72 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 75 |
| CES16 = 46 | CES41 = 84 | CES66 = 63 | CES91 = 91 |
| CES17 = 49 | CES42 = 75 | CES67 = 60 | CES92 = 66 |
| CES18 = 56 | CES43 = 70 | CES68 = 67 | CES93 = 80 |
| CES19 = 72 | CES44 = 98 | CES69 = 77 | CES94 = 56 |
| CES20 = 65 | CES45 = 80 | CES70 = 57 | CES95 = 72 |
| CES21 = 86 | CES46 = 77 | CES71 = 53 | CES96 = 78 |
| CES22 = 78 | CES47 = 74 | CES72 = 84 | CES97 = 83 |
| CES23 = 92 | CES48 = 66 | CES73 = 47 | CES98 = 73 |
| CES24 = 91 | CES49 = 76 | CES74 = 96 | CES99 = 63 |
| CES25 = 72 | CES50 = 85 | CES75 = 52 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)