

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: P324465

Luminaire Tested: **GLEON-SA1A-740-U-SLR-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P324465  
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-SA1A-740-U-SLR-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3617 lumens  
Efficiency: N/A  
Efficacy: 106.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B1 - U0 - G1

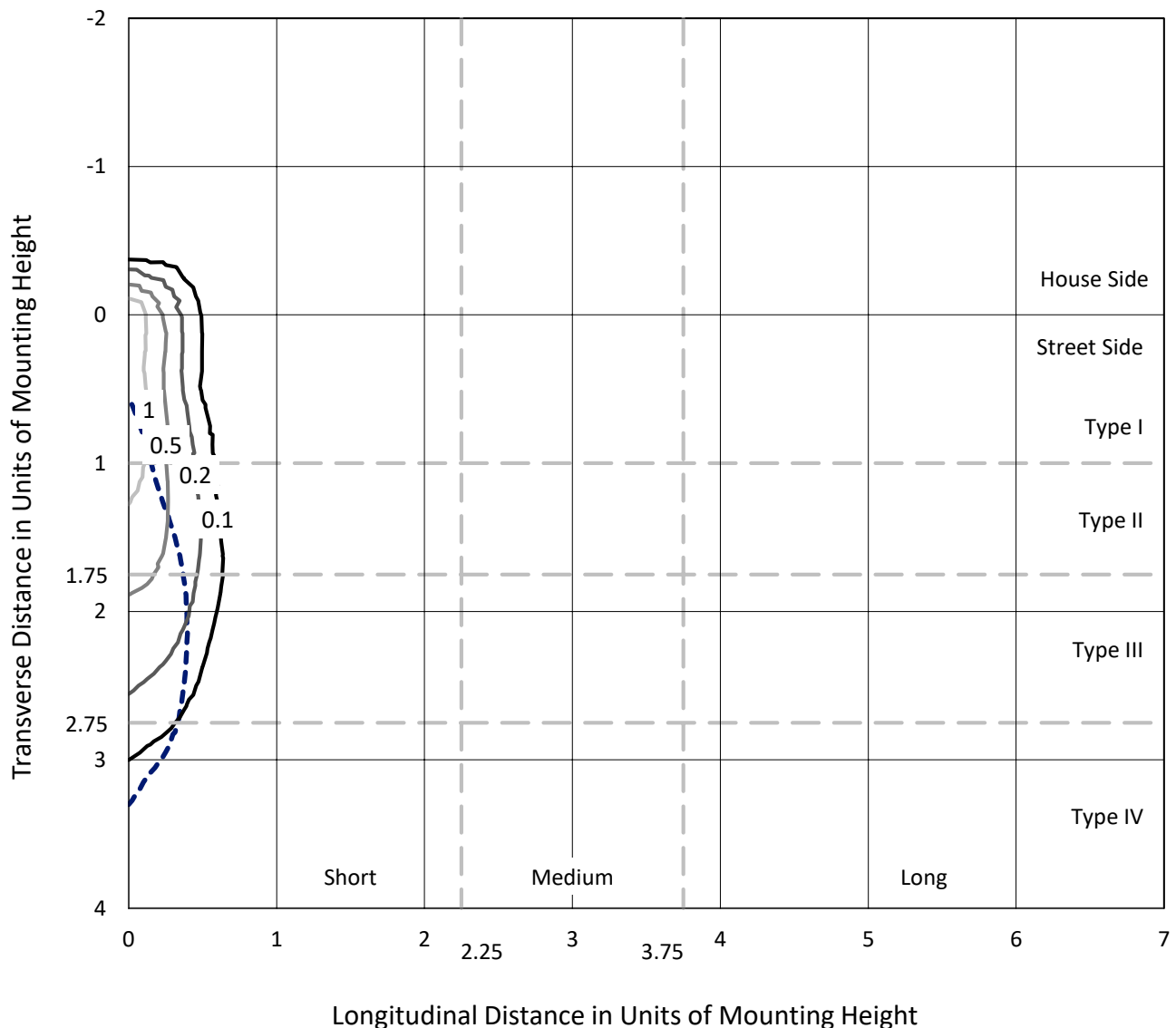
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

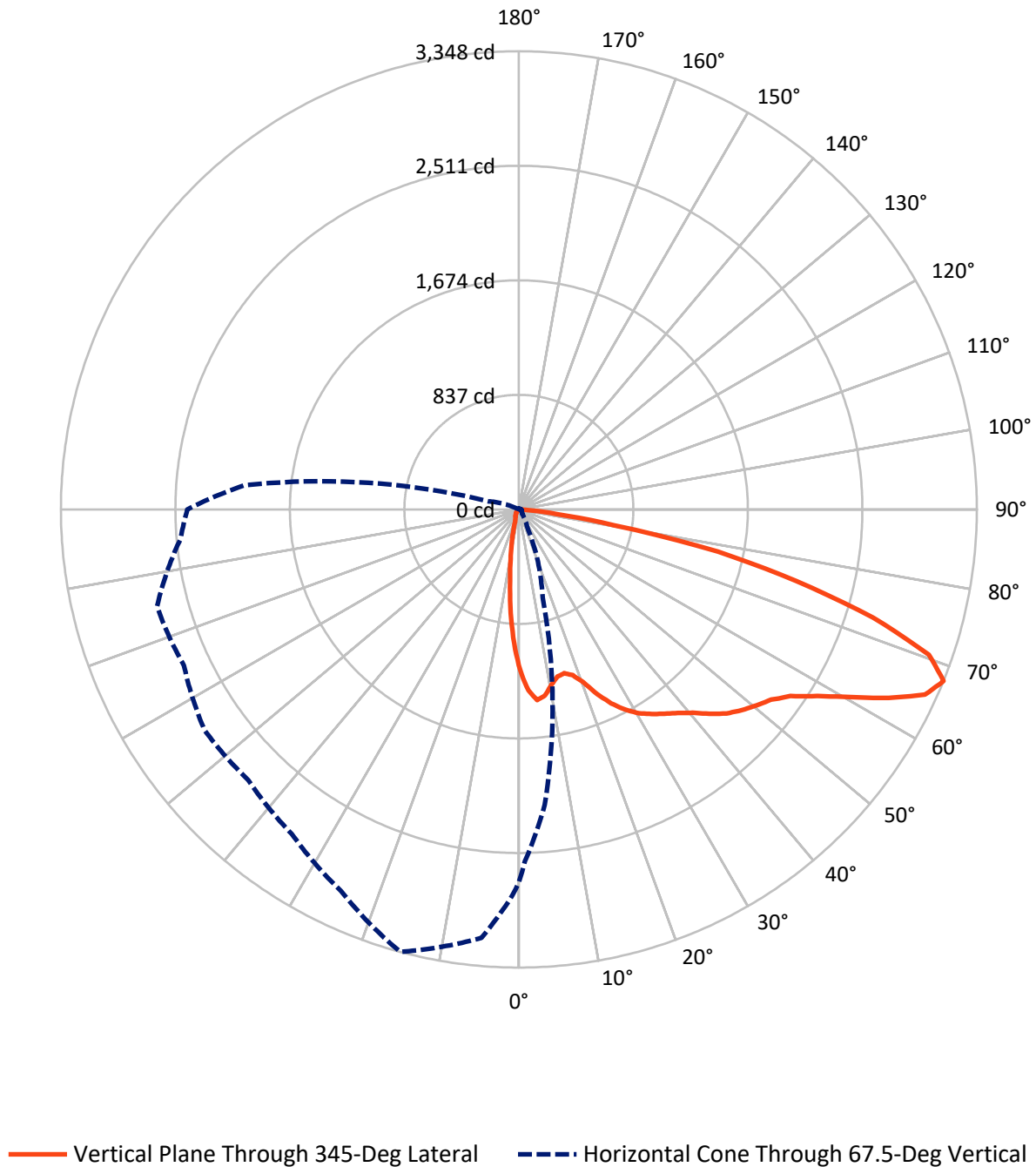
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc  
 Type IV - Medium - N/A

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## Luminous Intensity Polar Plot



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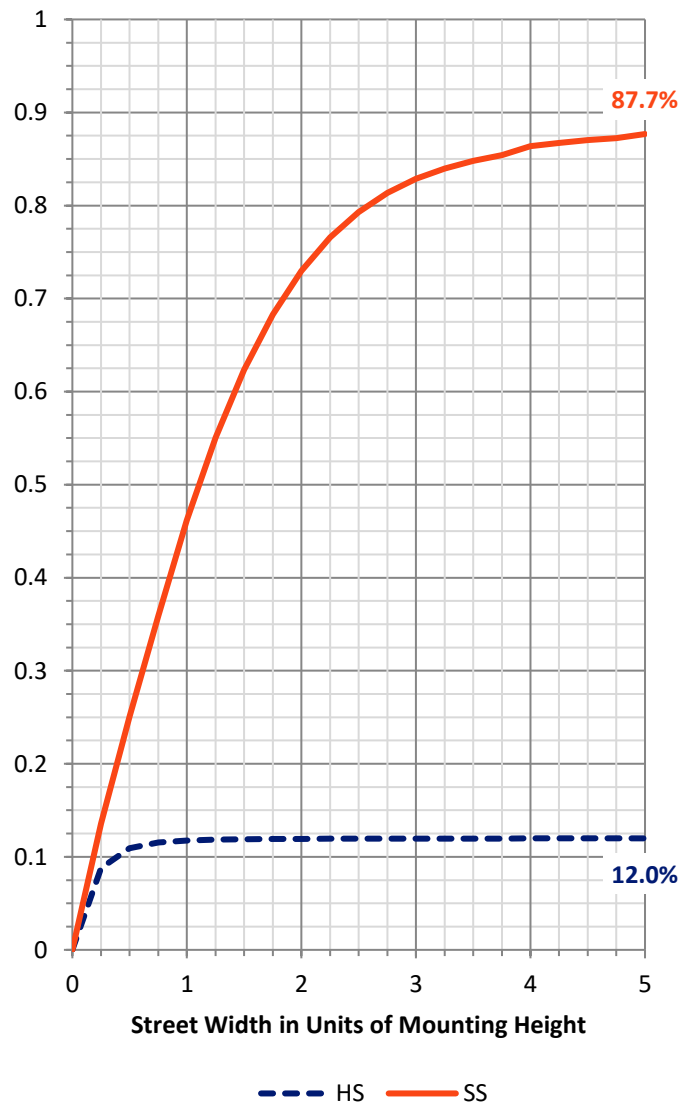
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 437.8    | 0.0    | 437.8  |
|                    | % Fixture | 12.1     | 0.0    | 12.1   |
| <b>Street Side</b> | Lumens    | 3179.2   | 0.0    | 3179.2 |
|                    | % Fixture | 87.9     | 0.0    | 87.9   |
| <b>Total</b>       | Lumens    | 3617.0   | 0.0    | 3617.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.4   | 2.5       |
| 10°-20°   | 180.0  | 5.0       |
| 20°-30°   | 255.6  | 7.1       |
| 30°-40°   | 377.5  | 10.4      |
| 40°-50°   | 544.5  | 15.1      |
| 50°-60°   | 764.3  | 21.1      |
| 60°-70°   | 891.0  | 24.6      |
| 70°-80°   | 455.5  | 12.6      |
| 80°-90°   | 58.2   | 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°    | 3617.0 | 100.0     |
| 0°-180°   | 3617.0 | 100.0     |

**Coefficient of Utilization**



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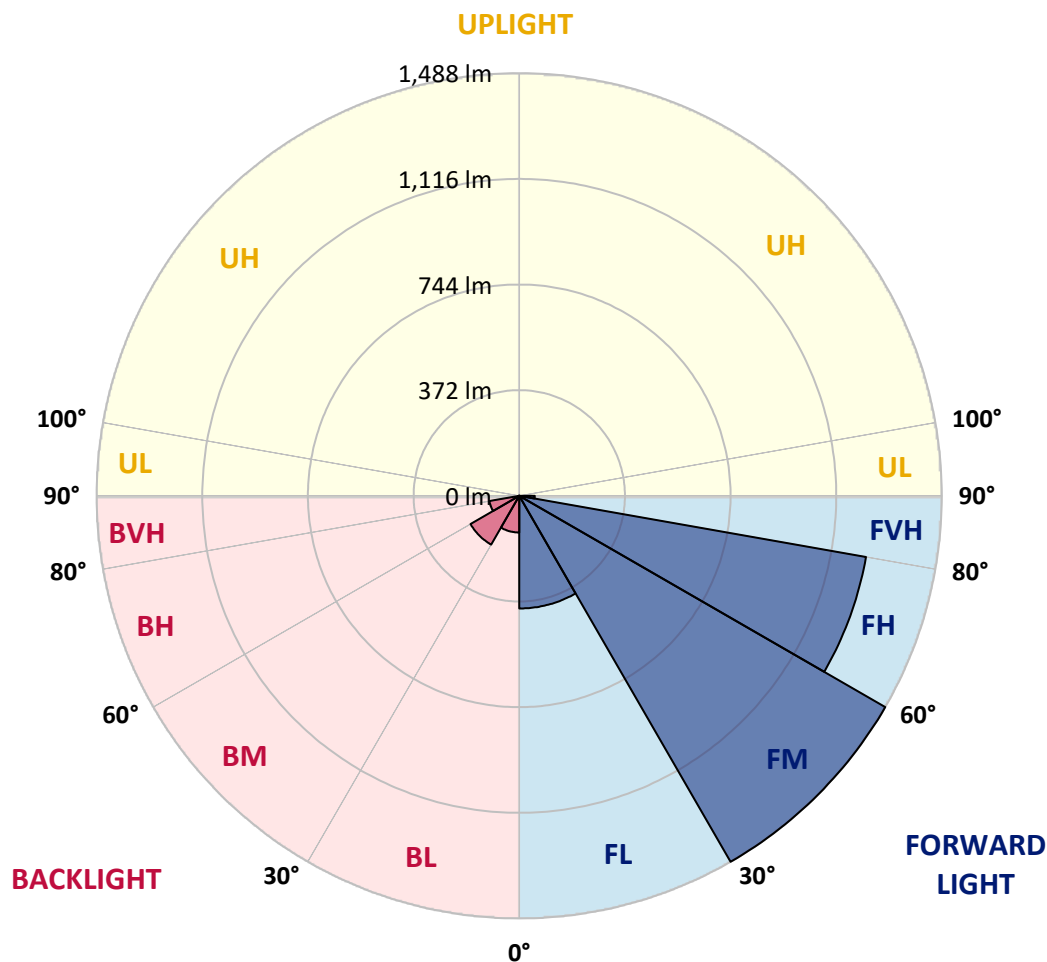
CATALOG NUMBER: GLEON-SA1A-740-U-SLR-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 396.7  | 11.0      |                         |      |         |
| FM   | (30°-60°)   | 1488.1 | 41.1      |                         |      |         |
| FH   | (60°-80°)   | 1239.8 | 34.3      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 54.6   | 1.5       |                         |      | G1/100  |
| BL   | (0°-30°)    | 129.3  | 3.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 198.2  | 5.5       | B0/220                  |      |         |
| BH   | (60°-80°)   | 106.7  | 2.9       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 3.5    | 0.1       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 |
| 2.5°  | 1290.1 | 1280.2 | 1269.2 | 1233.4 | 1200.2 | 1162.1 | 1131.1 | 1109.5 | 1082.4 | 1047.3 | 1038.4 |
| 5°    | 1280.9 | 1270.2 | 1235.8 | 1156.1 | 1086.4 | 1018.5 | 953.1  | 914.7  | 867.1  | 818.7  | 806.7  |
| 7.5°  | 1187.8 | 1176.7 | 1127.0 | 1017.8 | 923.9  | 825.9  | 740.9  | 688.3  | 634.5  | 590.3  | 566.8  |
| 10°   | 1091.0 | 1078.8 | 1023.0 | 890.5  | 774.9  | 686.3  | 623.9  | 573.7  | 522.8  | 475.5  | 437.8  |
| 12.5° | 1024.4 | 1008.4 | 947.8  | 797.7  | 696.9  | 636.8  | 578.5  | 518.3  | 449.5  | 398.7  | 357.3  |
| 15°   | 996.4  | 978.3  | 914.2  | 761.8  | 669.3  | 598.7  | 522.8  | 448.9  | 368.2  | 310.2  | 272.1  |
| 17.5° | 1018.0 | 994.4  | 925.7  | 759.4  | 634.7  | 538.6  | 442.6  | 355.9  | 268.3  | 209.6  | 182.5  |
| 20°   | 1091.4 | 1060.3 | 973.1  | 758.8  | 592.7  | 467.1  | 345.4  | 247.4  | 176.8  | 142.2  | 128.0  |
| 22.5° | 1206.8 | 1165.9 | 1041.3 | 764.2  | 549.4  | 392.1  | 249.5  | 168.1  | 132.8  | 114.8  | 106.4  |
| 25°   | 1346.3 | 1298.9 | 1139.5 | 783.6  | 511.3  | 319.1  | 181.3  | 132.8  | 112.1  | 98.9   | 91.8   |
| 27.5° | 1479.0 | 1440.4 | 1263.6 | 811.5  | 481.8  | 260.1  | 147.2  | 112.6  | 95.8   | 87.0   | 81.4   |
| 30°   | 1611.4 | 1562.9 | 1390.9 | 844.8  | 446.4  | 220.2  | 129.4  | 102.6  | 85.8   | 76.6   | 73.0   |
| 32.5° | 1707.7 | 1667.4 | 1490.6 | 868.8  | 408.5  | 194.1  | 115.7  | 93.9   | 80.2   | 70.8   | 65.5   |
| 35°   | 1821.0 | 1775.4 | 1576.1 | 874.1  | 384.2  | 177.7  | 104.0  | 84.5   | 69.6   | 61.2   | 55.5   |
| 37.5° | 1943.3 | 1886.6 | 1674.8 | 862.4  | 365.2  | 169.6  | 95.3   | 80.2   | 64.9   | 56.4   | 50.4   |
| 40°   | 2078.7 | 2014.6 | 1769.6 | 845.6  | 346.5  | 166.9  | 88.6   | 76.9   | 61.3   | 52.6   | 46.4   |
| 42.5° | 2221.3 | 2145.7 | 1851.7 | 828.0  | 334.7  | 157.5  | 87.9   | 73.7   | 58.6   | 49.2   | 43.0   |
| 45°   | 2341.0 | 2264.4 | 1936.0 | 822.2  | 326.3  | 147.2  | 90.8   | 71.5   | 56.7   | 46.4   | 40.4   |
| 47.5° | 2436.5 | 2364.0 | 2022.3 | 835.2  | 321.5  | 137.8  | 82.8   | 74.4   | 55.7   | 44.0   | 38.2   |
| 50°   | 2550.4 | 2468.4 | 2144.0 | 874.1  | 314.4  | 128.3  | 74.9   | 85.2   | 55.7   | 42.5   | 36.3   |
| 52.5° | 2693.3 | 2612.1 | 2279.7 | 934.4  | 300.4  | 115.3  | 67.3   | 85.3   | 56.2   | 40.4   | 33.9   |
| 55°   | 2873.1 | 2814.1 | 2473.5 | 1000.5 | 277.9  | 96.1   | 58.3   | 73.3   | 54.1   | 36.7   | 31.7   |
| 57.5° | 3045.5 | 2997.3 | 2650.2 | 1045.8 | 247.9  | 75.1   | 50.7   | 59.1   | 49.5   | 32.2   | 28.3   |
| 59°   | 3092.6 | 3040.0 | 2714.9 | 1047.8 | 225.5  | 65.5   | 47.0   | 48.8   | 48.5   | 30.2   | 26.2   |
| 60°   | 3092.6 | 3036.7 | 2733.6 | 1036.9 | 209.2  | 60.1   | 44.6   | 43.5   | 50.5   | 28.8   | 25.0   |
| 62.5° | 3036.6 | 2958.1 | 2673.0 | 962.7  | 170.7  | 51.2   | 38.9   | 36.0   | 45.4   | 25.9   | 22.1   |
| 65°   | 2920.0 | 2805.8 | 2466.3 | 828.5  | 152.2  | 47.0   | 33.6   | 29.5   | 31.5   | 22.8   | 19.4   |
| 67.5° | 2725.7 | 2570.8 | 2168.3 | 669.3  | 144.8  | 45.8   | 29.0   | 25.0   | 23.8   | 19.5   | 17.0   |
| 70°   | 2383.5 | 2211.7 | 1806.6 | 526.2  | 138.5  | 45.2   | 24.3   | 21.1   | 19.2   | 16.4   | 14.4   |
| 72.5° | 1734.8 | 1555.6 | 1282.6 | 411.4  | 134.7  | 46.3   | 19.5   | 17.6   | 15.8   | 12.9   | 11.1   |
| 75°   | 992.3  | 874.9  | 720.9  | 271.8  | 114.8  | 44.2   | 15.1   | 14.7   | 11.3   | 9.3    | 7.7    |
| 77.5° | 512.7  | 497.1  | 432.0  | 104.4  | 55.0   | 19.4   | 9.9    | 8.6    | 6.7    | 5.7    | 4.6    |
| 80°   | 221.2  | 218.8  | 189.3  | 30.2   | 14.6   | 10.8   | 5.7    | 3.6    | 3.1    | 2.4    | 1.9    |
| 82.5° | 76.4   | 76.4   | 67.3   | 10.1   | 6.5    | 5.3    | 0.7    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 15.4   | 17.3   | 12.2   | 0.0    | 2.2    | 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°    | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 |
| 2.5°  | 1027.6 | 1006.9 | 1005.5 | 992.5  | 976.2  | 968.8  | 964.6  | 972.1  | 981.3  | 982.4  | 996.3  |
| 5°    | 797.7  | 775.9  | 785.0  | 761.8  | 766.5  | 761.8  | 754.3  | 755.7  | 759.8  | 746.9  | 762.9  |
| 7.5°  | 560.2  | 543.7  | 554.2  | 548.0  | 556.2  | 559.5  | 554.8  | 548.0  | 527.8  | 525.4  | 539.3  |
| 10°   | 422.2  | 403.5  | 392.4  | 380.7  | 383.3  | 388.6  | 386.9  | 381.9  | 369.1  | 369.8  | 383.1  |
| 12.5° | 339.3  | 318.4  | 296.3  | 267.7  | 260.6  | 264.6  | 260.6  | 257.7  | 245.4  | 246.4  | 258.2  |
| 15°   | 257.4  | 240.2  | 217.1  | 194.1  | 181.6  | 182.8  | 171.9  | 164.2  | 156.4  | 147.2  | 154.4  |
| 17.5° | 173.8  | 163.3  | 156.4  | 149.6  | 134.7  | 131.3  | 117.4  | 102.5  | 96.6   | 92.4   | 95.4   |
| 20°   | 123.0  | 117.4  | 114.6  | 114.3  | 105.7  | 101.4  | 87.9   | 78.7   | 75.7   | 74.9   | 76.8   |
| 22.5° | 102.8  | 98.7   | 94.8   | 92.5   | 88.2   | 83.3   | 73.0   | 68.4   | 66.3   | 65.3   | 66.7   |
| 25°   | 89.4   | 86.4   | 82.2   | 78.5   | 76.8   | 71.5   | 64.1   | 60.7   | 59.3   | 58.3   | 58.9   |
| 27.5° | 79.5   | 76.8   | 72.0   | 69.6   | 68.2   | 63.6   | 57.2   | 54.5   | 53.3   | 52.9   | 52.8   |
| 30°   | 71.6   | 69.1   | 64.6   | 61.9   | 59.5   | 55.3   | 51.6   | 48.8   | 47.6   | 47.3   | 47.0   |
| 32.5° | 63.7   | 61.7   | 58.8   | 56.0   | 53.5   | 49.7   | 46.4   | 44.2   | 42.3   | 42.0   | 41.8   |
| 35°   | 53.8   | 51.7   | 50.2   | 50.0   | 47.6   | 44.0   | 41.6   | 38.7   | 37.2   | 36.7   | 36.8   |
| 37.5° | 47.8   | 45.1   | 41.6   | 42.8   | 42.2   | 39.6   | 36.3   | 33.4   | 31.9   | 31.5   | 31.5   |
| 40°   | 44.0   | 41.1   | 37.2   | 35.1   | 37.2   | 36.7   | 31.5   | 28.6   | 27.1   | 26.9   | 26.6   |
| 42.5° | 40.4   | 37.5   | 33.1   | 29.6   | 30.7   | 32.2   | 27.2   | 24.5   | 23.0   | 22.6   | 22.1   |
| 45°   | 37.9   | 34.8   | 29.8   | 25.9   | 23.8   | 27.1   | 23.3   | 19.9   | 19.0   | 18.3   | 18.0   |
| 47.5° | 35.5   | 32.6   | 26.9   | 22.4   | 19.0   | 19.5   | 18.7   | 16.3   | 15.3   | 14.6   | 14.4   |
| 50°   | 33.4   | 30.3   | 24.3   | 19.2   | 15.8   | 14.4   | 15.1   | 12.9   | 12.0   | 11.3   | 11.0   |
| 52.5° | 31.0   | 28.1   | 21.6   | 16.6   | 13.2   | 11.3   | 11.5   | 10.1   | 9.3    | 8.7    | 8.6    |
| 55°   | 29.1   | 26.2   | 19.4   | 14.6   | 11.7   | 9.3    | 8.2    | 7.9    | 7.4    | 7.0    | 6.9    |
| 57.5° | 26.6   | 23.8   | 17.1   | 12.3   | 9.9    | 7.5    | 6.3    | 6.3    | 6.2    | 5.8    | 5.7    |
| 59°   | 25.0   | 22.6   | 15.8   | 11.1   | 9.1    | 6.5    | 5.7    | 5.8    | 5.7    | 5.3    | 5.1    |
| 60°   | 23.8   | 21.6   | 14.7   | 10.3   | 8.6    | 6.0    | 5.1    | 5.5    | 5.3    | 5.0    | 4.8    |
| 62.5° | 21.1   | 19.5   | 12.7   | 8.6    | 7.5    | 4.8    | 4.3    | 4.6    | 4.6    | 4.5    | 4.3    |
| 65°   | 18.5   | 16.8   | 10.8   | 7.2    | 7.0    | 4.1    | 3.4    | 4.1    | 4.3    | 3.9    | 3.6    |
| 67.5° | 16.1   | 14.4   | 9.4    | 5.8    | 6.5    | 3.3    | 2.6    | 3.4    | 4.6    | 3.6    | 3.3    |
| 70°   | 13.7   | 12.0   | 7.4    | 4.6    | 6.9    | 2.2    | 2.1    | 3.1    | 5.5    | 3.9    | 3.1    |
| 72.5° | 10.6   | 9.3    | 5.1    | 3.4    | 7.4    | 1.5    | 1.5    | 2.6    | 6.2    | 4.3    | 2.9    |
| 75°   | 7.4    | 6.0    | 3.1    | 2.1    | 6.0    | 1.0    | 1.0    | 2.4    | 5.8    | 3.9    | 2.7    |
| 77.5° | 4.3    | 3.3    | 1.0    | 0.2    | 3.1    | 0.0    | 0.2    | 1.7    | 4.1    | 2.4    | 1.2    |
| 80°   | 1.5    | 0.7    | 0.0    | 0.0    | 1.9    | 0.0    | 0.0    | 0.0    | 0.3    | 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°    | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 |
| 2.5°  | 999.9  | 1023.0 | 1043.7 | 1075.1 | 1112.3 | 1155.1 | 1191.9 | 1231.5 | 1268.7 | 1284.1 | 1294.8 |
| 5°    | 766.1  | 794.7  | 828.2  | 874.2  | 935.6  | 1011.2 | 1081.9 | 1162.0 | 1248.0 | 1291.0 | 1331.4 |
| 7.5°  | 541.7  | 570.8  | 612.2  | 661.3  | 735.5  | 825.4  | 917.9  | 1028.5 | 1145.0 | 1213.0 | 1280.0 |
| 10°   | 389.5  | 425.3  | 464.0  | 531.0  | 606.4  | 691.8  | 787.0  | 910.4  | 1040.3 | 1115.7 | 1196.4 |
| 12.5° | 265.1  | 305.9  | 364.5  | 439.5  | 528.1  | 611.7  | 694.5  | 812.2  | 963.0  | 1037.7 | 1124.3 |
| 15°   | 159.0  | 181.6  | 243.7  | 330.5  | 439.2  | 543.4  | 634.0  | 752.1  | 912.8  | 1004.3 | 1094.3 |
| 17.5° | 98.0   | 108.5  | 142.2  | 213.5  | 327.6  | 459.4  | 583.6  | 731.7  | 920.0  | 1031.4 | 1127.7 |
| 20°   | 78.1   | 82.2   | 93.0   | 126.1  | 217.1  | 366.9  | 526.9  | 727.6  | 978.8  | 1115.9 | 1219.2 |
| 22.5° | 67.9   | 71.8   | 79.0   | 91.7   | 136.6  | 274.7  | 473.1  | 731.3  | 1063.1 | 1242.5 | 1363.1 |
| 25°   | 59.8   | 63.2   | 70.1   | 80.5   | 100.1  | 193.5  | 415.5  | 748.1  | 1172.9 | 1399.6 | 1527.8 |
| 27.5° | 53.5   | 56.4   | 62.7   | 72.3   | 85.8   | 135.0  | 350.2  | 768.5  | 1303.1 | 1560.4 | 1686.8 |
| 30°   | 47.6   | 50.2   | 55.9   | 64.8   | 74.5   | 103.8  | 278.6  | 782.4  | 1433.5 | 1686.8 | 1800.4 |
| 32.5° | 42.7   | 44.6   | 49.7   | 57.2   | 64.8   | 82.8   | 211.8  | 780.2  | 1530.4 | 1792.0 | 1882.2 |
| 35°   | 37.5   | 39.4   | 43.9   | 50.4   | 56.4   | 68.4   | 166.6  | 738.5  | 1614.7 | 1901.2 | 1975.7 |
| 37.5° | 31.9   | 34.3   | 38.6   | 44.4   | 48.5   | 60.1   | 134.7  | 688.3  | 1700.2 | 2025.9 | 2080.1 |
| 40°   | 27.1   | 29.5   | 33.2   | 39.6   | 42.2   | 57.1   | 103.5  | 627.2  | 1796.3 | 2165.4 | 2194.5 |
| 42.5° | 22.4   | 24.7   | 28.6   | 34.1   | 39.8   | 49.2   | 76.6   | 557.2  | 1888.7 | 2284.7 | 2298.9 |
| 45°   | 18.2   | 20.4   | 24.5   | 30.0   | 42.5   | 40.8   | 59.3   | 482.4  | 1963.2 | 2383.9 | 2388.5 |
| 47.5° | 14.4   | 16.4   | 20.7   | 28.3   | 39.6   | 32.6   | 42.3   | 423.6  | 2025.7 | 2461.3 | 2449.2 |
| 50°   | 11.1   | 12.9   | 17.3   | 32.4   | 34.6   | 26.9   | 32.0   | 404.1  | 2081.8 | 2509.3 | 2477.8 |
| 52.5° | 8.7    | 10.3   | 14.2   | 30.3   | 26.9   | 22.3   | 26.9   | 422.4  | 2158.5 | 2549.1 | 2493.9 |
| 55°   | 7.0    | 8.6    | 11.1   | 17.3   | 18.3   | 18.8   | 23.0   | 439.5  | 2291.0 | 2642.3 | 2589.0 |
| 57.5° | 5.8    | 7.4    | 9.1    | 12.2   | 13.9   | 15.9   | 20.4   | 441.4  | 2447.1 | 2797.2 | 2746.8 |
| 59°   | 5.3    | 6.7    | 8.2    | 10.8   | 12.2   | 14.6   | 19.2   | 431.1  | 2502.1 | 2853.6 | 2828.4 |
| 60°   | 5.0    | 6.3    | 7.7    | 9.9    | 11.3   | 13.7   | 18.5   | 421.4  | 2504.5 | 2851.5 | 2863.2 |
| 62.5° | 4.3    | 5.7    | 6.9    | 8.4    | 9.6    | 11.7   | 16.6   | 385.2  | 2403.1 | 2758.1 | 2842.3 |
| 65°   | 3.8    | 5.0    | 6.2    | 7.2    | 8.2    | 10.5   | 15.1   | 319.2  | 2229.8 | 2607.5 | 2699.2 |
| 67.5° | 3.4    | 4.3    | 5.7    | 6.3    | 7.4    | 9.3    | 13.4   | 227.6  | 2013.4 | 2423.3 | 2482.8 |
| 70°   | 3.1    | 4.1    | 5.1    | 5.8    | 6.7    | 8.1    | 11.5   | 130.7  | 1700.2 | 2153.6 | 2195.9 |
| 72.5° | 2.9    | 3.9    | 4.6    | 5.5    | 6.0    | 7.2    | 10.5   | 61.5   | 1244.9 | 1725.2 | 1835.7 |
| 75°   | 2.6    | 3.6    | 4.3    | 5.1    | 5.7    | 6.5    | 8.9    | 29.5   | 828.0  | 1248.5 | 1374.1 |
| 77.5° | 1.5    | 2.9    | 3.9    | 4.6    | 5.0    | 5.7    | 7.4    | 17.0   | 528.5  | 864.1  | 1017.8 |
| 80°   | 0.0    | 1.0    | 2.9    | 3.9    | 4.3    | 4.8    | 5.7    | 13.4   | 282.7  | 493.7  | 592.5  |
| 82.5° | 0.0    | 0.0    | 2.1    | 3.1    | 2.9    | 3.3    | 4.3    | 8.4    | 127.5  | 322.7  | 363.6  |
| 85°   | 0.0    | 0.0    | 0.7    | 2.4    | 2.1    | 1.5    | 2.9    | 2.9    | 27.9   | 163.3  | 203.7  |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.2    | 1.0    | 0.7    | 1.2    | 0.3    | 0.2    | 12.2   | 49.3   |
| 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: P324465

CATALOG NUMBER: GLEON-SA1A-740-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 | 1178.2 |
| 2.5°  | 1331.9 | 1344.6 | 1366.0 | 1376.1 | 1371.2 | 1350.1 | 1324.9 | 1299.2 | 1284.1 | 1290.1 |
| 5°    | 1413.8 | 1479.1 | 1516.8 | 1529.3 | 1508.4 | 1461.1 | 1399.3 | 1317.7 | 1288.8 | 1280.9 |
| 7.5°  | 1413.8 | 1536.7 | 1614.5 | 1628.2 | 1581.6 | 1488.9 | 1372.9 | 1245.6 | 1203.2 | 1187.8 |
| 10°   | 1364.2 | 1531.4 | 1639.9 | 1661.6 | 1596.5 | 1457.9 | 1302.5 | 1157.2 | 1106.9 | 1091.0 |
| 12.5° | 1308.1 | 1488.2 | 1602.5 | 1632.5 | 1579.0 | 1427.0 | 1253.6 | 1097.4 | 1038.2 | 1024.4 |
| 15°   | 1273.7 | 1435.1 | 1529.7 | 1551.4 | 1528.8 | 1409.0 | 1242.0 | 1079.4 | 1009.8 | 996.4  |
| 17.5° | 1286.0 | 1394.0 | 1428.1 | 1440.7 | 1456.0 | 1402.7 | 1273.7 | 1118.8 | 1030.7 | 1018.0 |
| 20°   | 1332.4 | 1350.6 | 1333.0 | 1348.9 | 1390.0 | 1408.9 | 1349.2 | 1214.0 | 1108.3 | 1091.4 |
| 22.5° | 1411.3 | 1328.2 | 1278.6 | 1285.0 | 1335.0 | 1429.3 | 1464.7 | 1350.1 | 1228.1 | 1206.8 |
| 25°   | 1503.1 | 1346.3 | 1248.5 | 1242.8 | 1294.2 | 1456.2 | 1570.3 | 1498.1 | 1369.8 | 1346.3 |
| 27.5° | 1618.6 | 1387.1 | 1242.3 | 1236.7 | 1280.0 | 1481.4 | 1658.0 | 1644.5 | 1519.1 | 1479.0 |
| 30°   | 1707.7 | 1427.2 | 1260.7 | 1247.6 | 1294.2 | 1498.8 | 1728.4 | 1768.7 | 1638.0 | 1611.4 |
| 32.5° | 1771.6 | 1474.5 | 1290.5 | 1271.6 | 1334.3 | 1529.0 | 1782.8 | 1882.5 | 1748.0 | 1707.7 |
| 35°   | 1820.3 | 1525.9 | 1338.6 | 1307.6 | 1389.5 | 1574.7 | 1833.7 | 2003.6 | 1865.0 | 1821.0 |
| 37.5° | 1865.9 | 1598.0 | 1413.8 | 1376.8 | 1476.0 | 1648.4 | 1887.5 | 2141.1 | 1995.9 | 1943.3 |
| 40°   | 1929.4 | 1679.8 | 1529.8 | 1496.9 | 1621.5 | 1748.8 | 1954.6 | 2284.3 | 2144.8 | 2078.7 |
| 42.5° | 1993.0 | 1767.5 | 1648.6 | 1657.5 | 1803.0 | 1870.8 | 2041.3 | 2435.8 | 2291.9 | 2221.3 |
| 45°   | 2051.1 | 1858.0 | 1817.7 | 1858.8 | 1971.4 | 2004.7 | 2127.5 | 2523.4 | 2409.2 | 2341.0 |
| 47.5° | 2102.9 | 1971.1 | 1985.8 | 2095.3 | 2163.0 | 2125.8 | 2192.0 | 2598.9 | 2496.6 | 2436.5 |
| 50°   | 2163.0 | 2117.4 | 2207.4 | 2362.3 | 2383.5 | 2235.5 | 2250.6 | 2688.4 | 2598.8 | 2550.4 |
| 52.5° | 2228.8 | 2271.6 | 2452.8 | 2589.3 | 2582.5 | 2354.6 | 2309.5 | 2788.6 | 2738.8 | 2693.3 |
| 55°   | 2303.5 | 2396.2 | 2668.8 | 2801.8 | 2796.0 | 2487.5 | 2407.2 | 2912.5 | 2914.2 | 2873.1 |
| 57.5° | 2414.4 | 2503.5 | 2815.5 | 2973.7 | 2983.4 | 2641.1 | 2572.7 | 3051.3 | 3072.9 | 3045.5 |
| 59°   | 2493.9 | 2573.1 | 2873.6 | 3045.5 | 3085.2 | 2759.8 | 2693.7 | 3131.8 | 3117.6 | 3092.6 |
| 60°   | 2552.8 | 2617.3 | 2902.4 | 3083.0 | 3144.3 | 2840.4 | 2783.0 | 3179.1 | 3122.9 | 3092.6 |
| 62.5° | 2698.7 | 2713.6 | 2954.3 | 3125.5 | 3212.4 | 3019.3 | 3034.2 | 3259.7 | 3086.1 | 3036.6 |
| 65°   | 2766.7 | 2774.4 | 2953.6 | 3049.4 | 3146.6 | 3158.6 | 3262.1 | 3262.1 | 2996.1 | 2920.0 |
| 67.5° | 2738.2 | 2701.1 | 2807.1 | 2797.2 | 2894.2 | 3075.8 | 3347.7 | 3142.5 | 2824.1 | 2725.7 |
| 70°   | 2506.9 | 2363.8 | 2316.7 | 2321.0 | 2395.2 | 2675.4 | 3178.1 | 2790.5 | 2498.5 | 2383.5 |
| 72.5° | 2085.9 | 1742.7 | 1626.3 | 1759.1 | 1778.5 | 2056.1 | 2708.4 | 2101.5 | 1842.6 | 1734.8 |
| 75°   | 1677.7 | 1228.4 | 1039.3 | 1179.4 | 1212.3 | 1504.7 | 2095.1 | 1308.8 | 1076.3 | 992.3  |
| 77.5° | 1205.3 | 881.8  | 745.7  | 736.0  | 778.5  | 954.3  | 1486.7 | 658.7  | 549.4  | 512.7  |
| 80°   | 684.7  | 580.4  | 624.9  | 589.6  | 611.0  | 596.7  | 706.3  | 288.9  | 236.6  | 221.2  |
| 82.5° | 413.3  | 343.1  | 371.5  | 309.3  | 391.4  | 340.8  | 272.1  | 92.5   | 80.4   | 76.4   |
| 85°   | 268.9  | 187.5  | 97.7   | 65.5   | 134.9  | 217.8  | 60.8   | 25.2   | 19.4   | 15.4   |
| 87.5° | 92.7   | 47.8   | 4.8    | 2.1    | 14.4   | 40.6   | 2.2    | 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-79-08: 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**



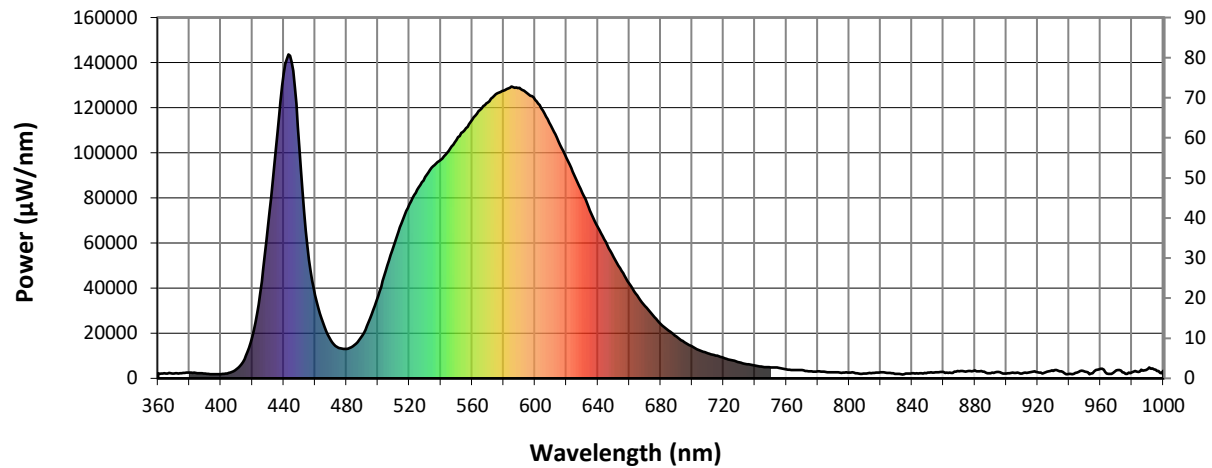
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-2

### Photopic Flux vs. Wavelength

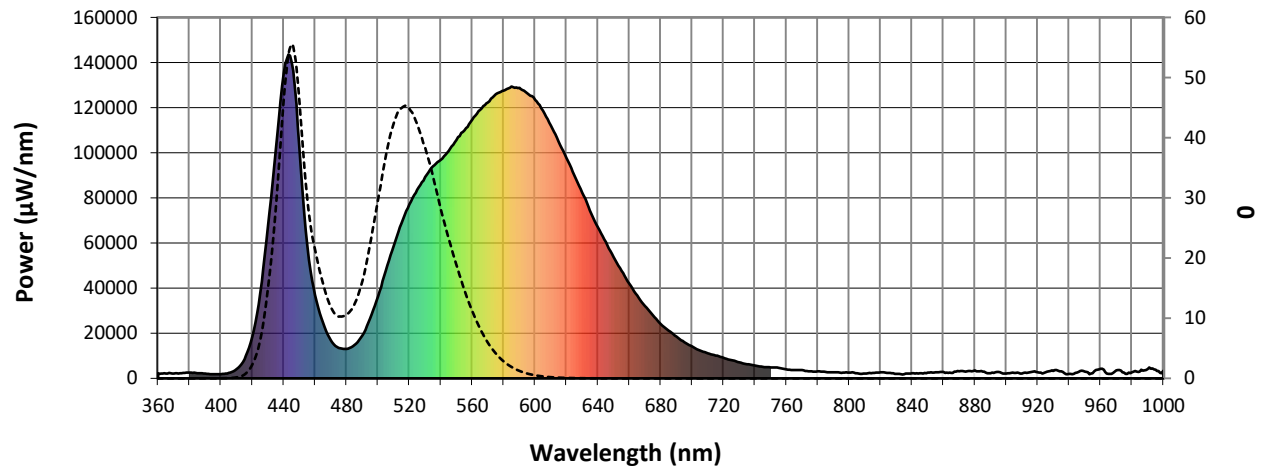


#####

| 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



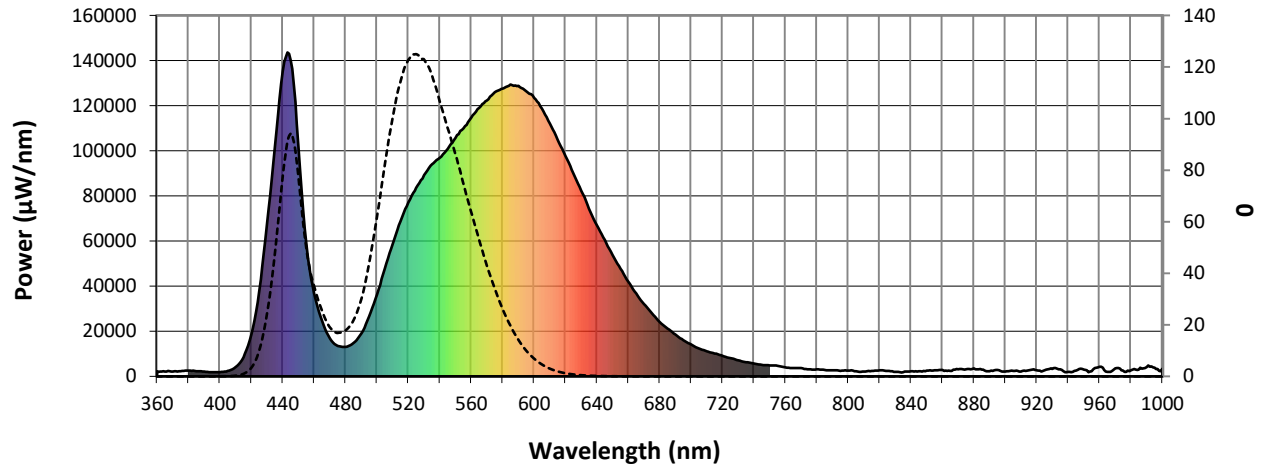
Scotopic Lumens: 10425.8

S/P: 1.47

| $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W/nm}$ ) | Lumens<br>( $\Phi/\text{nm}$ ) |
|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|
| 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<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            | 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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### 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



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**Measure Comparisons**



(END OF REPORT)