

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P634737

Luminaire Tested: GWS-SA3C-735-U-SL4-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P634737
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-36)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA3C-735-U-SL4-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: (48) 3500K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10840.4 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

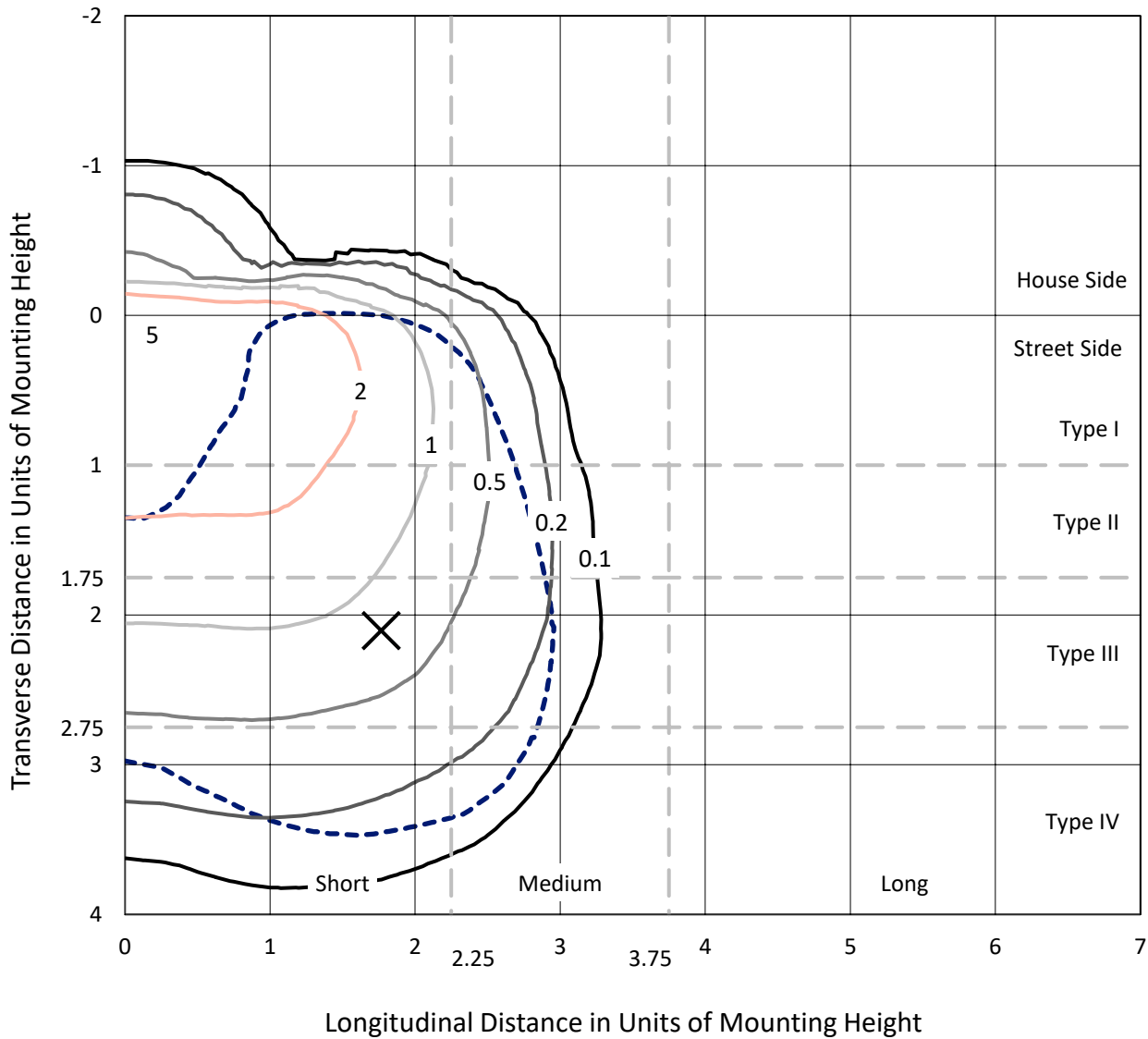
Input Watts (W): 93
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P634737
 CATALOG NUMBER: GWS-SA3C-735-U-SL4-W-HSS

Iso-Footcandle Lines of Horizontal Illumination

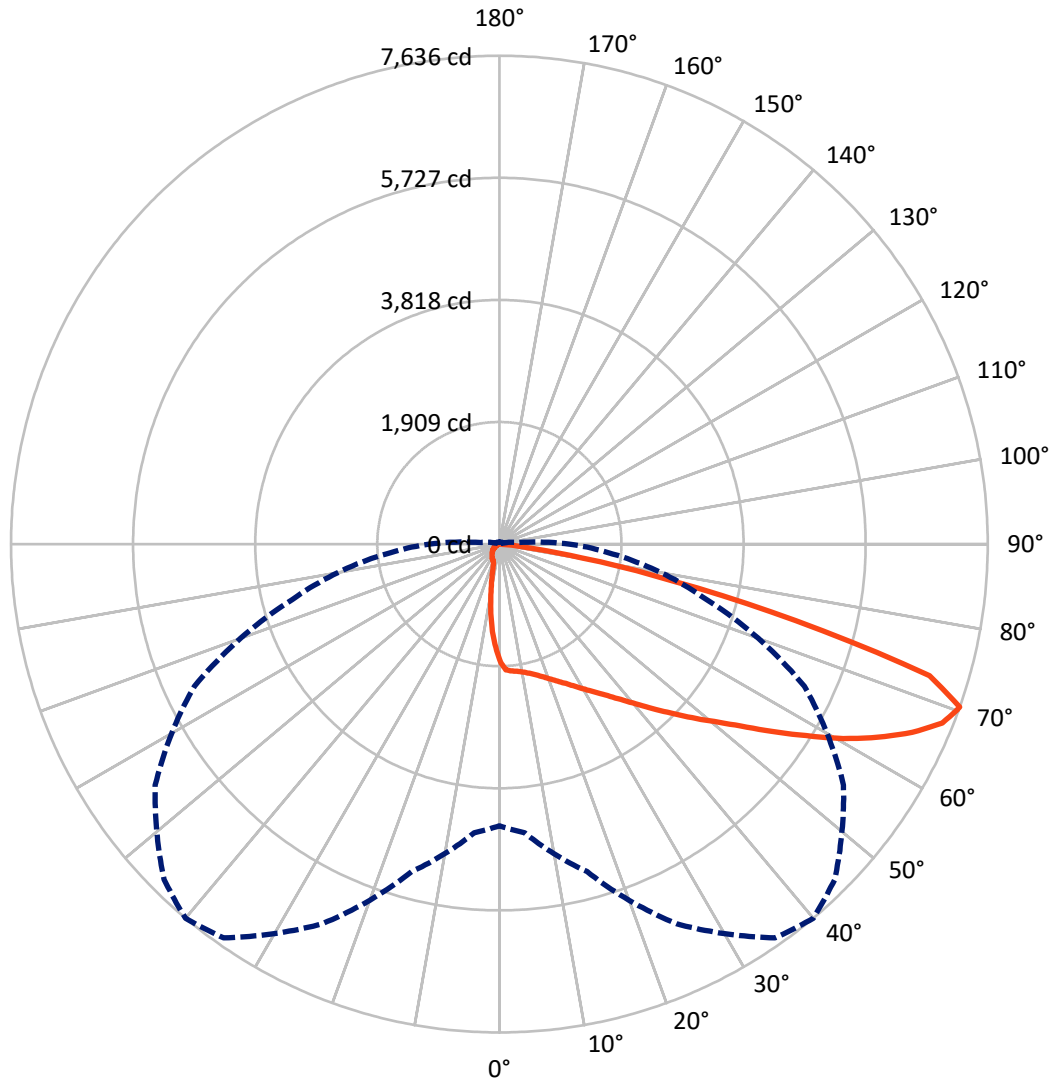
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5 fc
 Type IV - Short - N/A

REPORT NUMBER: P634737
CATALOG NUMBER: GWS-SA3C-735-U-SL4-W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P634737
 CATALOG NUMBER: GWS-SA3C-735-U-SL4-W-HSS

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 886.5 | 0.0 | 886.5 |
| | % Fixture | 8.2 | 0.0 | 8.2 |
| Street Side | Lumens | 9953.9 | 0.0 | 9953.9 |
| | % Fixture | 91.8 | 0.0 | 91.8 |
| Total | Lumens | 10840.4 | 0.0 | 10840.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 155.5 | 1.4 |
| 10°-20° | 394.3 | 3.6 |
| 20°-30° | 660.0 | 6.1 |
| 30°-40° | 1036.5 | 9.6 |
| 40°-50° | 1639.6 | 15.1 |
| 50°-60° | 2391.7 | 22.1 |
| 60°-70° | 2964.9 | 27.4 |
| 70°-80° | 1500.0 | 13.8 |
| 80°-90° | 97.9 | 0.9 |
| 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° | 10840.4 | 100.0 |
| 0°-180° | 10840.4 | 100.0 |

Coefficient of Utilization



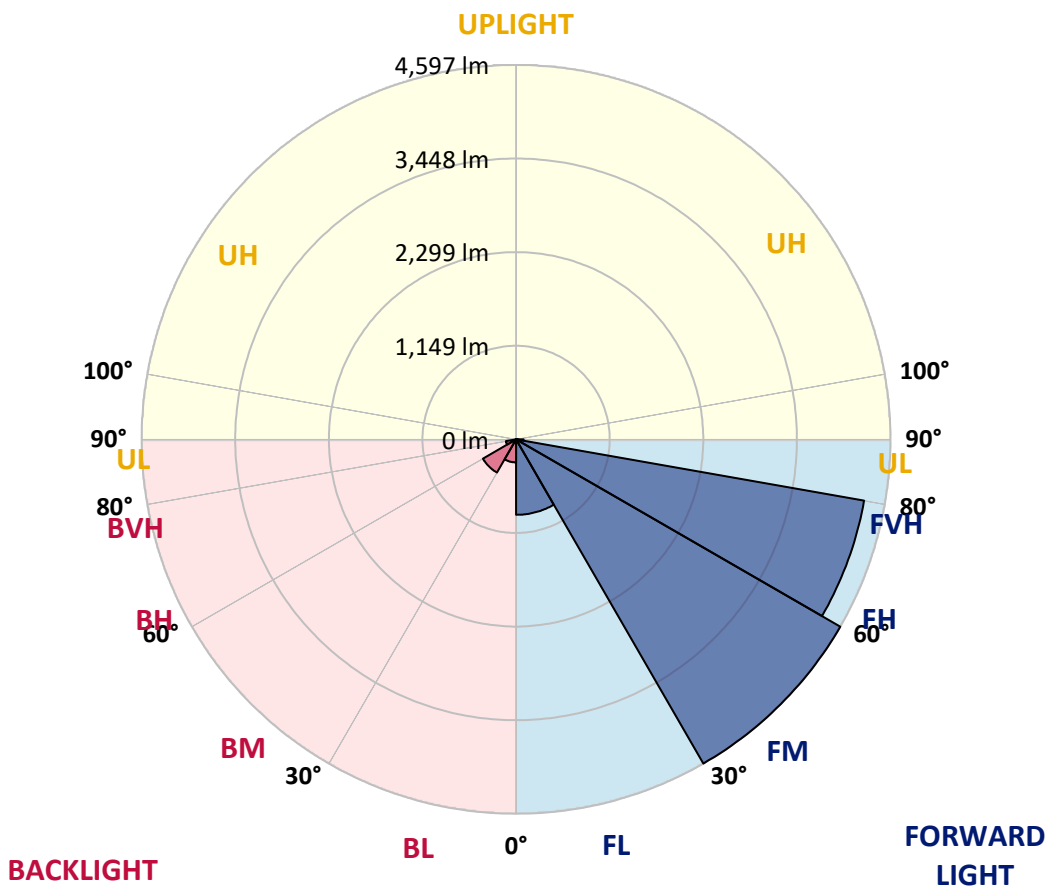
REPORT NUMBER: P634737

CATALOG NUMBER: GWS-SA3C-735-U-SL4-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 926.7 | 8.5 | | | |
| FM (30°-60°) | 4597.3 | 42.4 | | | |
| FH (60°-80°) | 4338.5 | 40.0 | | | G2/5000 |
| FVH (80°-90°) | 91.5 | 0.8 | | | G1/100 |
| BL (0°-30°) | 283.1 | 2.6 | B1/500 | | |
| BM (30°-60°) | 470.5 | 4.3 | B1/1000 | | |
| BH (60°-80°) | 126.4 | 1.2 | B1/500 | | G1/500 |
| BVH (80°-90°) | 6.5 | 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-G2
 Type IV Short





REPORT NUMBER: P634737

CATALOG NUMBER: GWS-SA3C-735-U-SL4-W-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 |
| 2.5° | 1977.6 | 1984.5 | 1983.5 | 1986.4 | 1979.5 | 1968.7 | 1966.7 | 1951.9 | 1925.3 | 1891.8 | 1854.3 |
| 5° | 2018.0 | 2025.9 | 2020.0 | 2017.0 | 2004.2 | 1992.4 | 1989.4 | 1973.6 | 1943.0 | 1897.7 | 1832.6 |
| 7.5° | 2052.5 | 2054.5 | 2050.6 | 2043.7 | 2024.9 | 2009.1 | 1998.3 | 1976.6 | 1940.1 | 1894.7 | 1819.8 |
| 10° | 2058.4 | 2057.5 | 2059.4 | 2060.4 | 2048.6 | 2034.8 | 2025.9 | 1996.3 | 1950.0 | 1901.6 | 1820.7 |
| 12.5° | 2051.5 | 2051.5 | 2064.4 | 2079.2 | 2079.2 | 2072.3 | 2063.4 | 2036.7 | 1982.5 | 1925.3 | 1840.5 |
| 15° | 2060.4 | 2063.4 | 2088.0 | 2115.7 | 2124.5 | 2117.6 | 2113.7 | 2086.1 | 2029.8 | 1966.7 | 1876.0 |
| 17.5° | 2092.0 | 2094.9 | 2134.4 | 2175.8 | 2186.7 | 2178.8 | 2170.9 | 2143.3 | 2083.1 | 2014.1 | 1916.4 |
| 20° | 2138.3 | 2146.2 | 2196.5 | 2249.8 | 2259.7 | 2249.8 | 2234.0 | 2195.5 | 2135.4 | 2065.4 | 1954.9 |
| 22.5° | 2223.2 | 2228.1 | 2282.3 | 2338.6 | 2343.5 | 2327.7 | 2304.0 | 2250.8 | 2187.7 | 2119.6 | 1998.3 |
| 25° | 2335.6 | 2342.5 | 2396.8 | 2451.0 | 2438.2 | 2414.5 | 2382.0 | 2321.8 | 2249.8 | 2183.7 | 2053.5 |
| 27.5° | 2469.7 | 2477.6 | 2530.9 | 2578.2 | 2544.7 | 2517.1 | 2480.6 | 2405.6 | 2332.6 | 2272.5 | 2124.5 |
| 30° | 2614.7 | 2621.6 | 2669.0 | 2711.4 | 2667.0 | 2634.5 | 2591.1 | 2514.1 | 2440.2 | 2394.8 | 2225.1 |
| 32.5° | 2754.8 | 2753.8 | 2799.2 | 2833.7 | 2788.3 | 2762.7 | 2723.2 | 2645.3 | 2586.1 | 2566.4 | 2375.1 |
| 35° | 2885.0 | 2885.0 | 2922.5 | 2957.0 | 2924.4 | 2910.6 | 2874.1 | 2812.0 | 2778.5 | 2802.1 | 2575.3 |
| 37.5° | 3016.2 | 3009.3 | 3044.8 | 3083.2 | 3080.3 | 3081.3 | 3060.5 | 3031.0 | 3032.9 | 3116.8 | 2850.5 |
| 40° | 3124.7 | 3121.7 | 3163.1 | 3213.4 | 3252.9 | 3284.4 | 3271.6 | 3282.5 | 3344.6 | 3501.4 | 3202.6 |
| 42.5° | 3211.5 | 3218.4 | 3271.6 | 3351.5 | 3451.1 | 3515.2 | 3524.1 | 3568.5 | 3728.3 | 3970.9 | 3600.1 |
| 45° | 3311.1 | 3312.1 | 3386.0 | 3508.3 | 3667.1 | 3768.7 | 3804.2 | 3918.6 | 4145.5 | 4458.2 | 4036.0 |
| 47.5° | 3433.4 | 3421.5 | 3504.4 | 3676.0 | 3905.8 | 4055.7 | 4118.9 | 4261.9 | 4613.0 | 4933.6 | 4391.1 |
| 50° | 3568.5 | 3546.8 | 3640.5 | 3874.3 | 4173.1 | 4360.5 | 4488.7 | 4697.8 | 5076.6 | 5324.2 | 4655.4 |
| 52.5° | 3725.3 | 3704.6 | 3811.1 | 4102.1 | 4493.7 | 4721.5 | 4886.2 | 5097.3 | 5474.1 | 5622.0 | 4813.2 |
| 55° | 3924.6 | 3903.9 | 4016.3 | 4375.3 | 4872.4 | 5168.3 | 5340.9 | 5518.5 | 5843.9 | 5842.0 | 4927.7 |
| 57.5° | 4145.5 | 4116.9 | 4272.7 | 4720.5 | 5344.9 | 5652.6 | 5828.2 | 5915.0 | 6125.0 | 6012.6 | 5004.6 |
| 60° | 4399.0 | 4373.3 | 4589.3 | 5131.8 | 5890.3 | 6175.3 | 6285.8 | 6250.3 | 6355.8 | 6113.2 | 4978.0 |
| 62.5° | 4627.8 | 4616.0 | 4884.3 | 5567.8 | 6410.1 | 6650.8 | 6681.3 | 6526.5 | 6525.5 | 6115.2 | 4798.4 |
| 65° | 4865.5 | 4888.2 | 5286.7 | 6069.8 | 6932.8 | 7094.6 | 7042.3 | 6800.7 | 6593.5 | 5873.5 | 4267.8 |
| 67.5° | 4954.3 | 5020.4 | 5552.0 | 6523.5 | 7345.1 | 7471.4 | 7379.6 | 6937.8 | 6310.5 | 5060.8 | 3249.9 |
| 70° | 4405.9 | 4530.2 | 5301.5 | 6549.2 | 7515.8 | 7636.1 | 7416.1 | 6568.9 | 5261.0 | 3352.5 | 1780.3 |
| 72.5° | 3350.5 | 3495.5 | 4417.7 | 5362.6 | 6759.2 | 7033.4 | 6657.7 | 5351.8 | 3391.0 | 1468.6 | 597.7 |
| 75° | 1875.0 | 2031.8 | 3290.4 | 4038.0 | 4538.1 | 4788.6 | 4650.5 | 3433.4 | 1502.2 | 383.7 | 178.5 |
| 77.5° | 634.2 | 686.5 | 1530.8 | 2498.3 | 2995.5 | 2770.6 | 2345.5 | 1705.3 | 552.3 | 146.0 | 94.7 |
| 80° | 375.8 | 395.5 | 570.1 | 1243.7 | 1576.1 | 1306.9 | 1031.7 | 630.3 | 281.1 | 77.9 | 66.1 |
| 82.5° | 112.4 | 133.2 | 314.6 | 461.6 | 617.4 | 384.7 | 325.5 | 360.0 | 146.0 | 42.4 | 55.2 |
| 85° | 0.0 | 0.0 | 67.1 | 143.0 | 161.8 | 63.1 | 63.1 | 204.2 | 26.6 | 17.8 | 40.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 4.9 | 3.0 | 3.9 | 8.9 |
| 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: P634737

CATALOG NUMBER: GWS-SA3C-735-U-SL4-W-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 | 1839.5 |
| 2.5° | 1827.7 | 1793.1 | 1752.7 | 1714.2 | 1677.7 | 1630.4 | 1607.7 | 1580.1 | 1556.4 | 1543.6 | 1550.5 |
| 5° | 1791.2 | 1736.9 | 1654.1 | 1570.2 | 1485.4 | 1405.5 | 1333.5 | 1285.2 | 1241.8 | 1219.1 | 1224.0 |
| 7.5° | 1759.6 | 1686.6 | 1557.4 | 1420.3 | 1284.2 | 1147.1 | 1035.6 | 948.8 | 881.8 | 854.2 | 849.2 |
| 10° | 1745.8 | 1654.1 | 1471.6 | 1274.3 | 1065.2 | 880.8 | 723.0 | 627.3 | 559.2 | 525.7 | 531.6 |
| 12.5° | 1752.7 | 1637.3 | 1398.6 | 1131.3 | 860.1 | 645.1 | 494.1 | 404.4 | 356.1 | 336.3 | 331.4 |
| 15° | 1772.4 | 1633.3 | 1333.5 | 985.3 | 663.8 | 450.7 | 341.3 | 304.8 | 294.9 | 292.9 | 292.9 |
| 17.5° | 1795.1 | 1634.3 | 1266.4 | 837.4 | 504.0 | 334.4 | 292.0 | 285.0 | 282.1 | 280.1 | 281.1 |
| 20° | 1817.8 | 1634.3 | 1189.5 | 687.5 | 378.7 | 289.0 | 278.1 | 273.2 | 270.3 | 269.3 | 269.3 |
| 22.5° | 1845.4 | 1634.3 | 1103.7 | 548.4 | 303.8 | 274.2 | 265.3 | 262.4 | 259.4 | 258.4 | 257.4 |
| 25° | 1878.9 | 1635.3 | 1009.0 | 429.0 | 276.2 | 261.4 | 254.5 | 251.5 | 248.6 | 246.6 | 246.6 |
| 27.5° | 1927.3 | 1643.2 | 904.5 | 334.4 | 260.4 | 249.5 | 243.6 | 240.7 | 237.7 | 234.7 | 234.7 |
| 30° | 1997.3 | 1662.9 | 787.1 | 276.2 | 245.6 | 236.7 | 230.8 | 228.8 | 225.9 | 222.9 | 221.9 |
| 32.5° | 2101.8 | 1697.5 | 665.8 | 247.6 | 231.8 | 222.9 | 216.0 | 214.0 | 211.1 | 208.1 | 207.1 |
| 35° | 2247.8 | 1760.6 | 547.4 | 229.8 | 214.0 | 205.2 | 201.2 | 200.2 | 196.3 | 193.3 | 193.3 |
| 37.5° | 2461.9 | 1863.2 | 434.0 | 212.1 | 199.2 | 192.3 | 187.4 | 185.4 | 181.5 | 178.5 | 177.5 |
| 40° | 2723.2 | 1996.3 | 337.3 | 198.3 | 185.4 | 178.5 | 173.6 | 170.6 | 165.7 | 161.8 | 159.8 |
| 42.5° | 3056.6 | 2159.1 | 266.3 | 183.5 | 172.6 | 165.7 | 161.8 | 155.8 | 148.9 | 143.0 | 142.0 |
| 45° | 3403.8 | 2326.7 | 219.9 | 169.6 | 160.8 | 154.9 | 149.9 | 142.0 | 132.2 | 125.3 | 123.3 |
| 47.5° | 3670.1 | 2431.3 | 192.3 | 154.9 | 147.9 | 143.0 | 137.1 | 127.2 | 115.4 | 107.5 | 105.5 |
| 50° | 3860.5 | 2447.1 | 171.6 | 141.0 | 137.1 | 132.2 | 123.3 | 111.5 | 98.6 | 90.7 | 88.8 |
| 52.5° | 3954.2 | 2376.0 | 154.9 | 128.2 | 125.3 | 120.3 | 109.5 | 96.7 | 82.9 | 75.0 | 73.0 |
| 55° | 3996.6 | 2241.9 | 139.1 | 117.4 | 113.4 | 107.5 | 95.7 | 81.9 | 68.1 | 61.2 | 59.2 |
| 57.5° | 3979.8 | 2043.7 | 125.3 | 106.5 | 101.6 | 94.7 | 81.9 | 67.1 | 56.2 | 49.3 | 48.3 |
| 60° | 3855.5 | 1765.5 | 111.5 | 95.7 | 89.8 | 81.9 | 69.0 | 55.2 | 45.4 | 40.4 | 39.5 |
| 62.5° | 3587.2 | 1420.3 | 97.6 | 82.9 | 78.9 | 71.0 | 59.2 | 45.4 | 37.5 | 34.5 | 33.5 |
| 65° | 3037.9 | 1004.1 | 83.8 | 70.0 | 68.1 | 60.2 | 49.3 | 37.5 | 32.5 | 30.6 | 29.6 |
| 67.5° | 2183.7 | 610.5 | 71.0 | 60.2 | 58.2 | 51.3 | 41.4 | 32.5 | 29.6 | 28.6 | 28.6 |
| 70° | 1097.8 | 289.0 | 56.2 | 49.3 | 49.3 | 42.4 | 35.5 | 29.6 | 28.6 | 27.6 | 27.6 |
| 72.5° | 372.8 | 123.3 | 42.4 | 38.5 | 40.4 | 36.5 | 30.6 | 27.6 | 27.6 | 27.6 | 27.6 |
| 75° | 127.2 | 65.1 | 29.6 | 27.6 | 29.6 | 29.6 | 26.6 | 26.6 | 27.6 | 27.6 | 27.6 |
| 77.5° | 82.9 | 43.4 | 20.7 | 18.7 | 22.7 | 22.7 | 22.7 | 24.7 | 26.6 | 26.6 | 26.6 |
| 80° | 68.1 | 23.7 | 13.8 | 12.8 | 16.8 | 16.8 | 18.7 | 22.7 | 24.7 | 24.7 | 24.7 |
| 82.5° | 58.2 | 14.8 | 7.9 | 8.9 | 11.8 | 12.8 | 15.8 | 18.7 | 21.7 | 22.7 | 22.7 |
| 85° | 39.5 | 7.9 | 5.9 | 6.9 | 7.9 | 9.9 | 12.8 | 15.8 | 17.8 | 19.7 | 19.7 |
| 87.5° | 10.8 | 3.0 | 3.9 | 4.9 | 4.9 | 6.9 | 9.9 | 11.8 | 13.8 | 14.8 | 14.8 |
| 90° | 0.0 | 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

All Brands

Data applicable to all product families using SA light engines

Report Number: SP1-2101-121-7

Luminaire Tested: IFLD-S-SA2A-735-U-T2

Test Date: 03/04/2021

Test Information

Test Method: LM-79-08
 Report Number: SP1-2101-121-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 03/04/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: **IFLD-S-SA2A-735-U-T2**
 Description: STREETWORKS INF FLOOD

PROGRAMMED @ 615mA.

Spectral Parameters

CCT (K): 3388
 CIE u': 0.2371
 CIE v': 0.5177
 Duv: 0.0032
 CIE x: 0.4153
 CIE y: 0.4030
 CIE z: 0.1817
 Peak Wavelength (nm): 590
 Dominant Wavelength (nm): 580
 Purity: 45.7

 Rf: 76.9
 Rg: 94.4

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 73.1 | | |
| R1: | 68.9 | R9: | -34.6 |
| R2: | 81.1 | R10: | 57.8 |
| R3: | 93.1 | R11: | 68.6 |
| R4: | 71.6 | R12: | 53.9 |
| R5: | 69.4 | R13: | 70.9 |
| R6: | 75.0 | R14: | 96.2 |
| R7: | 79.5 | | |
| R8: | 46.4 | | |

Test Conditions

Stabilization Time: 81M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0/30%
 Sphere Temperature (°C): 24.1



REPORT NUMBER: SP1-2101-121-7

| 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: SP1-2101-121-7

CIE 1931 Chromaticity Diagram



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



CCT = 3388K
 CIE x = 0.4153
 CIE y = 0.4030
 Duv = 0.0032

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-7

Photopic Flux vs. Wavelength



#####

| 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 | 2672 | 0.0 | 490 | 34553 | 4.9 | 620 | 136720 | 35.6 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 8.0 | 625 | 126308 | 27.9 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 12.1 | 630 | 114625 | 20.7 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 18.1 | 635 | 103216 | 15.5 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 25.4 | 640 | 92605 | 11.1 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 33.9 | 645 | 83234 | 8.0 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 43.0 | 650 | 73263 | 5.4 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 50.1 | 655 | 64627 | 3.7 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 57.9 | 660 | 56614 | 2.4 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.0 | 535 | 103269 | 64.0 | 665 | 49537 | 1.6 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.0 | 540 | 107316 | 69.9 | 670 | 42866 | 0.9 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.0 | 545 | 113101 | 75.3 | 675 | 36708 | 0.6 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 0.0 | 550 | 120690 | 82.0 | 680 | 31814 | 0.4 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 0.1 | 555 | 128583 | 87.8 | 685 | 27485 | 0.2 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 0.3 | 560 | 137796 | 93.6 | 690 | 23698 | 0.1 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 0.8 | 565 | 146577 | 97.5 | 695 | 20309 | 0.1 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 1.6 | 570 | 154581 | 100.5 | 700 | 17890 | 0.1 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 2.4 | 575 | 162633 | 101.2 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 2.5 | 580 | 168101 | 99.9 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 2.1 | 585 | 173145 | 96.2 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 1.8 | 590 | 174675 | 90.3 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 1.7 | 595 | 173724 | 82.3 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 1.5 | 600 | 171241 | 73.8 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 1.7 | 605 | 165134 | 64.0 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 2.2 | 610 | 156652 | 53.8 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 3.3 | 615 | 147879 | 44.6 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-7

Scotopic Flux vs. Wavelength



Scotopic Lumens: 12126

S/P: 1.36

| λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360 | 2672 | 0.0 | 490 | 34553 | 53.2 | 620 | 136720 | 1.7 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 71.7 | 625 | 126308 | 1.1 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 91.4 | 630 | 114625 | 0.6 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 110.0 | 635 | 103216 | 0.4 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 125.1 | 640 | 92605 | 0.2 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 135.7 | 645 | 83234 | 0.1 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 140.8 | 650 | 73263 | 0.1 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 139.6 | 655 | 64627 | 0.1 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 135.7 | 660 | 56614 | 0.0 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.1 | 535 | 103269 | 128.7 | 665 | 49537 | 0.0 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.2 | 540 | 107316 | 118.6 | 670 | 42866 | 0.0 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.6 | 545 | 113101 | 108.4 | 675 | 36708 | 0.0 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 2.0 | 550 | 120690 | 98.7 | 680 | 31814 | 0.0 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 5.9 | 555 | 128583 | 87.9 | 685 | 27485 | 0.0 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 14.3 | 560 | 137796 | 77.0 | 690 | 23698 | 0.0 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 30.5 | 565 | 146577 | 65.8 | 695 | 20309 | 0.0 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 55.5 | 570 | 154581 | 54.6 | 700 | 17890 | 0.0 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 77.4 | 575 | 162633 | 44.3 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 73.6 | 580 | 168101 | 34.6 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 53.7 | 585 | 173145 | 26.5 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 41.9 | 590 | 174675 | 19.5 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 34.3 | 595 | 173724 | 13.9 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 27.9 | 600 | 171241 | 9.7 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 27.1 | 605 | 165134 | 6.5 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 31.3 | 610 | 156652 | 4.2 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 40.0 | 615 | 147879 | 2.7 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: 4490.7 M/P: 0.5

| 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 | 2672 | 0.0 | 490 | 34553 | 28.8 | 620 | 136720 | 0.1 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 36.6 | 625 | 126308 | 0.1 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 43.9 | 630 | 114625 | 0.0 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 49.6 | 635 | 103216 | 0.0 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 53.0 | 640 | 92605 | 0.0 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 53.5 | 645 | 83234 | 0.0 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 51.6 | 650 | 73263 | 0.0 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 47.3 | 655 | 64627 | 0.0 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 42.5 | 660 | 56614 | 0.0 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.0 | 535 | 103269 | 37.2 | 665 | 49537 | 0.0 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.1 | 540 | 107316 | 31.4 | 670 | 42866 | 0.0 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.4 | 545 | 113101 | 26.3 | 675 | 36708 | 0.0 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 1.4 | 550 | 120690 | 21.7 | 680 | 31814 | 0.0 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 3.7 | 555 | 128583 | 17.3 | 685 | 27485 | 0.0 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 8.9 | 560 | 137796 | 13.6 | 690 | 23698 | 0.0 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 18.2 | 565 | 146577 | 10.3 | 695 | 20309 | 0.0 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 33.2 | 570 | 154581 | 7.6 | 700 | 17890 | 0.0 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 45.6 | 575 | 162633 | 5.4 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 43.8 | 580 | 168101 | 3.8 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 32.2 | 585 | 173145 | 2.6 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 25.6 | 590 | 174675 | 1.7 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 21.2 | 595 | 173724 | 1.1 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 17.4 | 600 | 171241 | 0.7 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 16.6 | 605 | 165134 | 0.5 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 18.6 | 610 | 156652 | 0.3 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 22.7 | 615 | 147879 | 0.2 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

Summary

$R_f = 76.9$
 $R_g = 94.4$
 CIE $R_a = 73.1$
 $R_g = -34.6$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 68 | CES51 = 90 | CES76 = 63 |
| CES02 = 62 | CES27 = 88 | CES52 = 89 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 80 | CES78 = 65 |
| CES04 = 70 | CES29 = 67 | CES54 = 84 | CES79 = 87 |
| CES05 = 48 | CES30 = 74 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 71 | CES56 = 75 | CES81 = 75 |
| CES07 = 40 | CES32 = 67 | CES57 = 74 | CES82 = 94 |
| CES08 = 39 | CES33 = 74 | CES58 = 76 | CES83 = 91 |
| CES09 = 29 | CES34 = 78 | CES59 = 87 | CES84 = 89 |
| CES10 = 75 | CES35 = 89 | CES60 = 93 | CES85 = 80 |
| CES11 = 58 | CES36 = 98 | CES61 = 86 | CES86 = 66 |
| CES12 = 64 | CES37 = 86 | CES62 = 89 | CES87 = 79 |
| CES13 = 43 | CES38 = 82 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 95 | CES64 = 74 | CES89 = 70 |
| CES15 = 71 | CES40 = 91 | CES65 = 68 | CES90 = 77 |
| CES16 = 47 | CES41 = 89 | CES66 = 71 | CES91 = 88 |
| CES17 = 50 | CES42 = 88 | CES67 = 69 | CES92 = 60 |
| CES18 = 56 | CES43 = 82 | CES68 = 74 | CES93 = 77 |
| CES19 = 72 | CES44 = 99 | CES69 = 82 | CES94 = 52 |
| CES20 = 65 | CES45 = 87 | CES70 = 67 | CES95 = 69 |
| CES21 = 86 | CES46 = 82 | CES71 = 66 | CES96 = 78 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 85 |
| CES23 = 92 | CES48 = 72 | CES73 = 59 | CES98 = 76 |
| CES24 = 91 | CES49 = 82 | CES74 = 97 | CES99 = 63 |
| CES25 = 72 | CES50 = 88 | CES75 = 66 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)