

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



Scaled data based on original data using
LM-79-08 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: P387075

Luminaire Tested: **GPC-SA2D-735-U-T4FT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P387075
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-16)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GPC-SA2D-735-U-T4FT
Description: GALLEON PEDESTRIAN LUMINAIRE
(2) 70 CRI, 3500K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15302.7 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

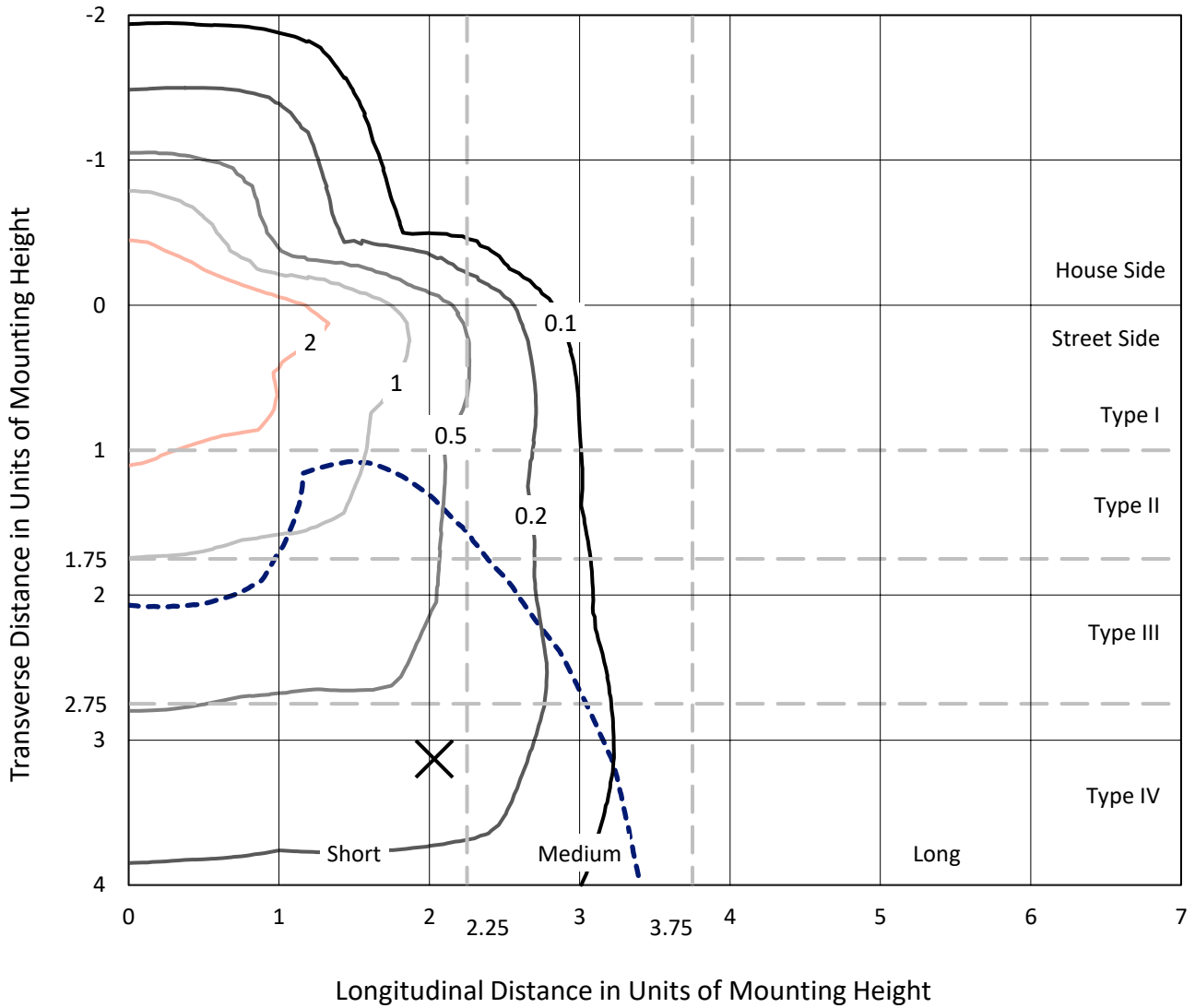
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

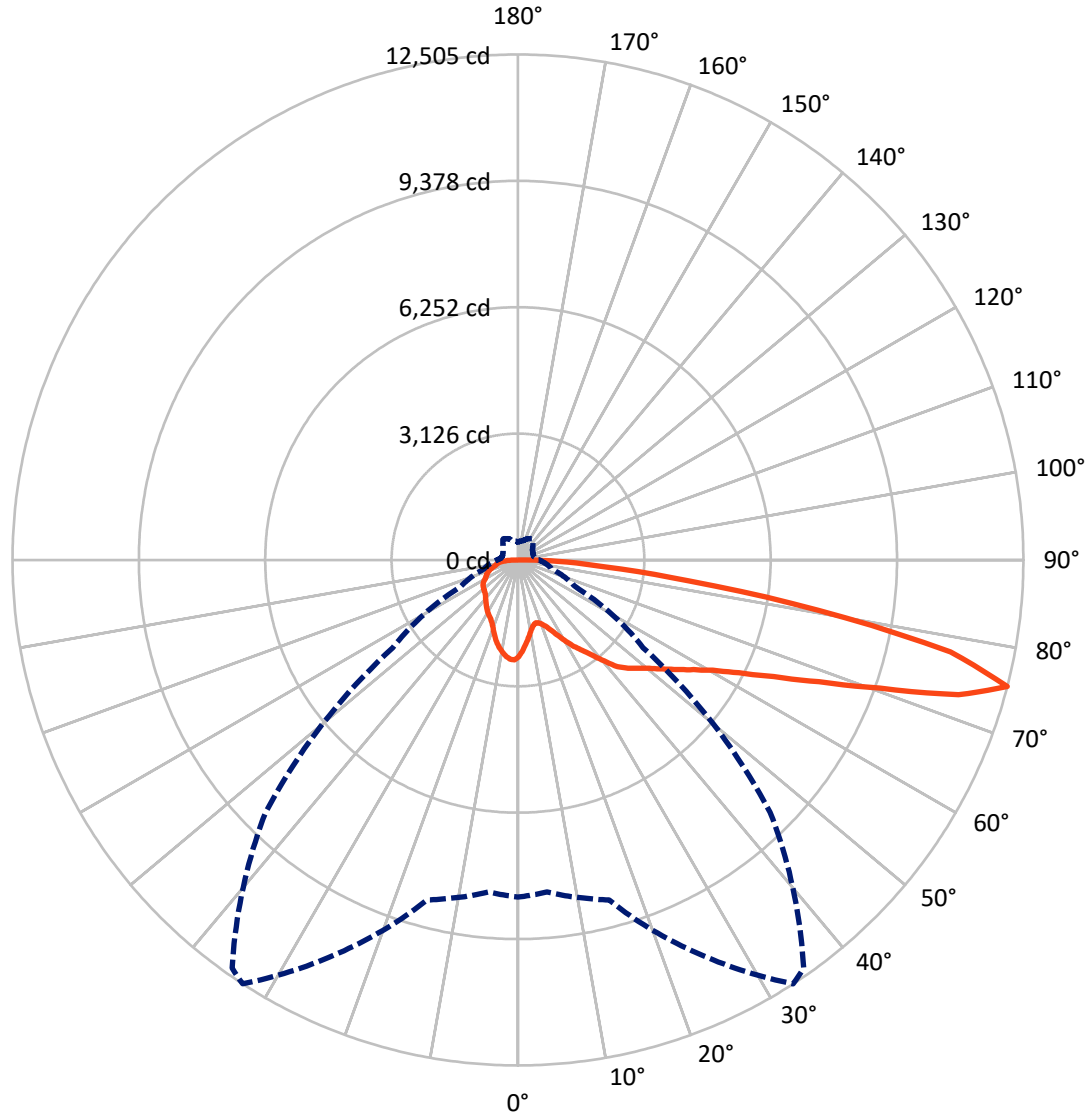
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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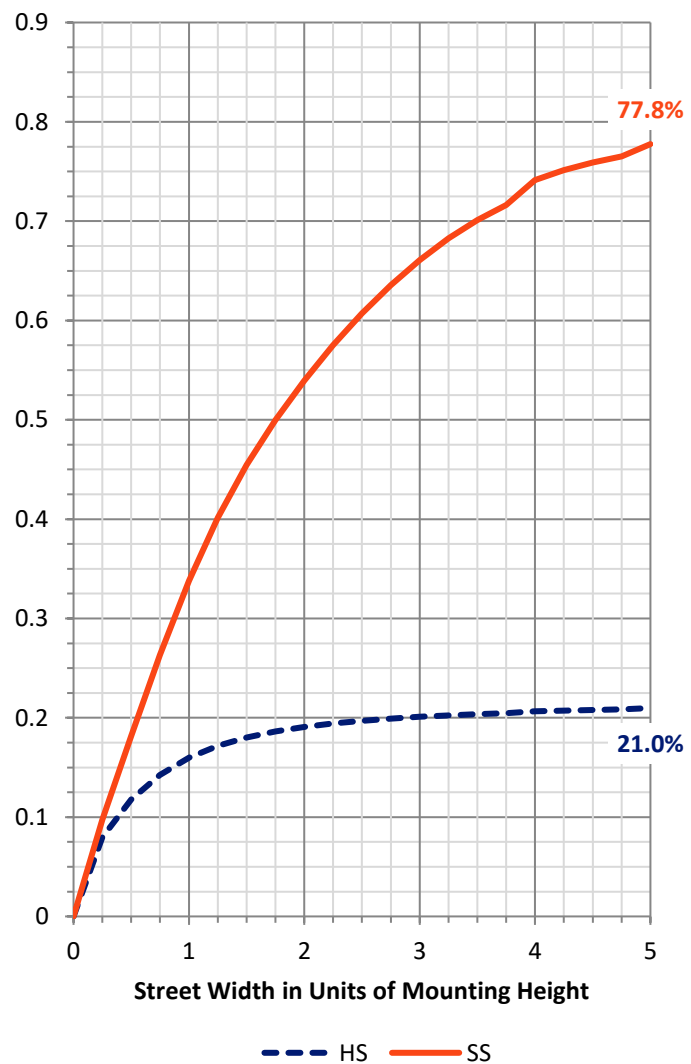
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3285.9 | 0.0 | 3285.9 |
| | % Fixture | 21.5 | 0.0 | 21.5 |
| Street Side | Lumens | 12016.8 | 0.0 | 12016.8 |
| | % Fixture | 78.5 | 0.0 | 78.5 |
| Total | Lumens | 15302.7 | 0.0 | 15302.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 216.3 | 1.4 |
| 10°-20° | 585.9 | 3.8 |
| 20°-30° | 956.8 | 6.3 |
| 30°-40° | 1424.9 | 9.3 |
| 40°-50° | 2043.7 | 13.4 |
| 50°-60° | 2805.8 | 18.3 |
| 60°-70° | 3512.7 | 23.0 |
| 70°-80° | 3177.7 | 20.8 |
| 80°-90° | 578.8 | 3.8 |
| 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° | 15302.7 | 100.0 |
| 0°-180° | 15302.7 | 100.0 |



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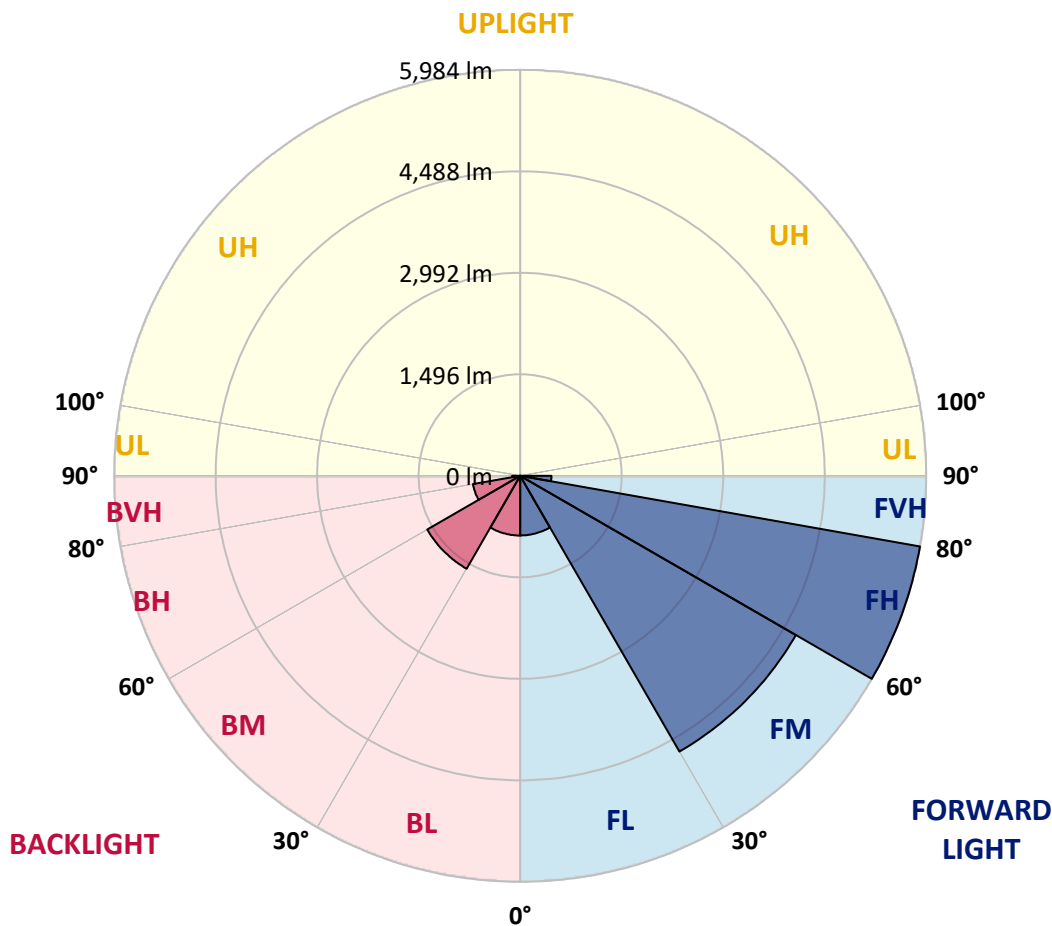
CATALOG NUMBER: GPC-SA2D-735-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 878.9 | 5.7 | | | |
| FM (30°-60°) | 4693.0 | 30.7 | | | |
| FH (60°-80°) | 5983.9 | 39.1 | | | G3/7500 |
| FVH (80°-90°) | 461.0 | 3.0 | | | G3/500 |
| BL (0°-30°) | 880.1 | 5.8 | B2/1000 | | |
| BM (30°-60°) | 1581.4 | 10.3 | B2/2500 | | |
| BH (60°-80°) | 706.5 | 4.6 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 117.8 | 0.8 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|---------|---------|---------|--------|--------|--------|--------|--------|
| 0° | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 |
| 2.5° | 2221.2 | 2212.7 | 2228.5 | 2230.7 | 2244.4 | 2249.8 | 2268.7 | 2298.3 | 2322.7 | 2350.6 | 2376.0 |
| 5° | 2019.8 | 2014.0 | 2036.1 | 2052.0 | 2082.2 | 2094.8 | 2139.8 | 2202.7 | 2258.7 | 2322.1 | 2379.8 |
| 7.5° | 1828.4 | 1825.2 | 1850.1 | 1886.0 | 1921.0 | 1938.3 | 2016.0 | 2107.5 | 2201.1 | 2303.6 | 2391.9 |
| 10° | 1667.2 | 1666.1 | 1690.0 | 1725.4 | 1776.6 | 1796.2 | 1896.6 | 2017.2 | 2148.2 | 2289.4 | 2412.6 |
| 12.5° | 1576.8 | 1580.5 | 1591.6 | 1621.2 | 1668.7 | 1688.4 | 1799.9 | 1941.5 | 2103.8 | 2284.6 | 2442.6 |
| 15° | 1599.0 | 1604.9 | 1585.8 | 1584.8 | 1618.6 | 1633.9 | 1738.5 | 1887.6 | 2072.1 | 2292.5 | 2486.5 |
| 17.5° | 1693.6 | 1694.7 | 1644.5 | 1612.8 | 1633.3 | 1641.3 | 1719.6 | 1857.0 | 2053.6 | 2310.5 | 2541.5 |
| 20° | 1826.8 | 1824.2 | 1735.3 | 1682.5 | 1693.6 | 1695.7 | 1746.5 | 1857.5 | 2052.0 | 2341.7 | 2612.8 |
| 22.5° | 2003.4 | 1983.8 | 1864.3 | 1792.5 | 1789.8 | 1786.6 | 1815.8 | 1896.6 | 2075.3 | 2392.4 | 2697.9 |
| 25° | 2233.9 | 2215.4 | 2051.0 | 1952.6 | 1931.5 | 1923.6 | 1927.8 | 1980.1 | 2121.2 | 2446.8 | 2793.1 |
| 27.5° | 2490.2 | 2458.0 | 2299.4 | 2160.4 | 2116.5 | 2105.4 | 2080.0 | 2098.0 | 2171.5 | 2499.2 | 2906.2 |
| 30° | 2704.8 | 2687.4 | 2548.9 | 2384.0 | 2332.1 | 2316.4 | 2249.8 | 2230.1 | 2243.9 | 2570.6 | 3049.0 |
| 32.5° | 2824.9 | 2813.2 | 2729.1 | 2595.9 | 2547.8 | 2525.7 | 2431.5 | 2392.4 | 2360.2 | 2683.2 | 3242.4 |
| 35° | 2970.2 | 2962.8 | 2912.0 | 2815.3 | 2744.0 | 2720.7 | 2647.8 | 2607.0 | 2524.1 | 2838.0 | 3492.5 |
| 37.5° | 3155.2 | 3147.3 | 3148.3 | 3070.1 | 2985.0 | 2963.3 | 2915.2 | 2872.4 | 2736.5 | 3041.6 | 3764.2 |
| 40° | 3364.5 | 3349.2 | 3343.4 | 3339.6 | 3285.7 | 3273.6 | 3248.2 | 3190.1 | 3003.0 | 3284.7 | 4032.2 |
| 42.5° | 3679.6 | 3625.1 | 3508.8 | 3552.7 | 3606.1 | 3599.8 | 3620.3 | 3536.8 | 3299.0 | 3572.2 | 4293.8 |
| 45° | 3983.5 | 3894.2 | 3693.3 | 3702.8 | 3819.7 | 3855.1 | 4009.4 | 3950.2 | 3619.9 | 3887.3 | 4564.4 |
| 47.5° | 4122.0 | 4054.3 | 3883.6 | 3884.1 | 3999.9 | 4073.4 | 4411.7 | 4369.4 | 3957.1 | 4245.1 | 4894.8 |
| 50° | 4276.9 | 4209.2 | 4055.9 | 4113.5 | 4214.5 | 4292.7 | 4800.2 | 4778.5 | 4277.9 | 4636.8 | 5290.8 |
| 52.5° | 4446.1 | 4331.4 | 4234.0 | 4337.2 | 4478.8 | 4569.7 | 5189.2 | 5130.0 | 4572.4 | 5031.2 | 5745.9 |
| 55° | 4448.1 | 4416.9 | 4491.0 | 4566.6 | 4778.5 | 4890.0 | 5596.8 | 5440.3 | 4812.3 | 5418.6 | 6116.4 |
| 57.5° | 4701.4 | 4650.6 | 4807.6 | 4842.5 | 5119.5 | 5245.3 | 6002.3 | 5710.5 | 5056.6 | 5715.7 | 6316.2 |
| 60° | 5036.5 | 4993.2 | 5121.6 | 5213.5 | 5541.3 | 5709.4 | 6435.1 | 5988.0 | 5248.5 | 5939.9 | 6306.7 |
| 62.5° | 5615.3 | 5566.1 | 5564.5 | 5693.5 | 6134.9 | 6330.5 | 6920.9 | 6260.2 | 5324.6 | 5984.2 | 6037.7 |
| 65° | 6462.7 | 6384.4 | 6236.9 | 6298.3 | 6954.7 | 7149.8 | 7463.8 | 6457.3 | 5224.2 | 5746.4 | 5344.7 |
| 67.5° | 7287.3 | 7284.6 | 7103.3 | 7229.1 | 8037.4 | 8193.8 | 8082.3 | 6476.9 | 4910.7 | 4918.1 | 4115.1 |
| 70° | 8109.2 | 8119.7 | 8089.1 | 8526.8 | 9499.9 | 9662.8 | 8740.9 | 6214.2 | 4206.0 | 3551.7 | 2465.3 |
| 72.5° | 8760.4 | 8757.8 | 8912.1 | 10040.7 | 11398.1 | 11361.7 | 9295.9 | 5418.1 | 3019.9 | 1917.2 | 1178.3 |
| 75° | 8338.6 | 8246.7 | 8706.5 | 10790.3 | 12504.5 | 12326.4 | 8823.9 | 3779.5 | 1567.3 | 872.7 | 634.3 |
| 77.5° | 5438.7 | 5526.0 | 6200.9 | 8913.7 | 10937.7 | 10721.0 | 6473.7 | 1763.4 | 738.5 | 572.5 | 459.8 |
| 80° | 1969.5 | 2061.5 | 2903.6 | 5049.1 | 7535.7 | 7500.3 | 3187.9 | 724.7 | 499.6 | 432.4 | 335.2 |
| 82.5° | 677.7 | 711.5 | 1145.5 | 2242.3 | 4254.7 | 4413.3 | 1199.4 | 411.7 | 363.2 | 306.6 | 229.4 |
| 85° | 265.8 | 304.5 | 523.8 | 1078.9 | 2146.1 | 2161.9 | 485.8 | 246.3 | 252.7 | 200.8 | 125.8 |
| 87.5° | 101.0 | 122.6 | 250.5 | 501.1 | 980.0 | 900.2 | 173.9 | 117.3 | 143.8 | 119.5 | 59.7 |
| 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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CATALOG NUMBER: GPC-SA2D-735-U-T4FT

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 | 2391.9 |
| 2.5° | 2395.6 | 2406.7 | 2429.9 | 2445.8 | 2462.7 | 2467.5 | 2469.6 | 2473.8 | 2478.0 | 2476.5 | 2477.0 |
| 5° | 2410.4 | 2432.1 | 2469.6 | 2485.4 | 2492.9 | 2484.4 | 2468.0 | 2454.8 | 2445.3 | 2440.0 | 2438.4 |
| 7.5° | 2434.7 | 2465.3 | 2505.6 | 2502.9 | 2486.0 | 2448.4 | 2406.2 | 2374.4 | 2348.0 | 2338.5 | 2333.3 |
| 10° | 2466.9 | 2502.9 | 2530.9 | 2500.8 | 2451.6 | 2386.6 | 2323.2 | 2274.0 | 2234.3 | 2219.0 | 2216.4 |
| 12.5° | 2508.2 | 2544.6 | 2550.0 | 2486.0 | 2404.6 | 2315.8 | 2229.7 | 2164.6 | 2105.4 | 2086.4 | 2082.2 |
| 15° | 2561.5 | 2595.9 | 2563.1 | 2460.1 | 2346.4 | 2227.0 | 2115.4 | 2027.2 | 1964.8 | 1941.5 | 1933.1 |
| 17.5° | 2617.6 | 2650.4 | 2565.8 | 2417.2 | 2270.3 | 2121.8 | 1981.7 | 1891.3 | 1820.0 | 1793.0 | 1789.8 |
| 20° | 2684.8 | 2699.5 | 2554.7 | 2356.0 | 2165.7 | 1985.4 | 1837.9 | 1752.8 | 1714.8 | 1695.7 | 1693.6 |
| 22.5° | 2767.7 | 2751.9 | 2529.3 | 2273.0 | 2032.9 | 1827.9 | 1707.9 | 1668.3 | 1658.8 | 1654.6 | 1656.1 |
| 25° | 2855.5 | 2806.8 | 2491.8 | 2164.6 | 1865.4 | 1670.3 | 1612.8 | 1623.8 | 1636.5 | 1634.9 | 1634.9 |
| 27.5° | 2952.2 | 2862.9 | 2434.2 | 2020.8 | 1679.9 | 1541.4 | 1548.2 | 1589.0 | 1608.0 | 1607.5 | 1606.9 |
| 30° | 3076.4 | 2926.3 | 2360.7 | 1848.0 | 1506.5 | 1450.4 | 1492.2 | 1541.9 | 1567.8 | 1566.7 | 1567.3 |
| 32.5° | 3229.2 | 2996.1 | 2260.8 | 1655.0 | 1381.2 | 1383.4 | 1431.4 | 1480.6 | 1510.7 | 1508.1 | 1508.6 |
| 35° | 3407.8 | 3074.4 | 2125.5 | 1464.7 | 1298.2 | 1330.0 | 1368.0 | 1402.3 | 1430.9 | 1427.2 | 1423.6 |
| 37.5° | 3602.4 | 3151.0 | 1945.8 | 1294.6 | 1230.6 | 1280.3 | 1312.0 | 1317.8 | 1331.0 | 1321.5 | 1314.6 |
| 40° | 3787.4 | 3209.6 | 1714.2 | 1155.0 | 1162.4 | 1237.9 | 1258.6 | 1235.3 | 1211.5 | 1208.3 | 1198.9 |
| 42.5° | 3948.6 | 3229.2 | 1480.1 | 1043.5 | 1090.5 | 1193.6 | 1206.3 | 1157.6 | 1114.8 | 1094.8 | 1086.2 |
| 45° | 4118.9 | 3236.1 | 1261.8 | 949.9 | 1021.2 | 1154.0 | 1167.7 | 1102.7 | 1042.4 | 999.0 | 984.8 |
| 47.5° | 4341.4 | 3285.7 | 1092.0 | 880.7 | 968.4 | 1127.5 | 1147.1 | 1058.8 | 980.5 | 918.7 | 905.5 |
| 50° | 4632.6 | 3384.1 | 954.1 | 827.8 | 934.0 | 1110.1 | 1132.3 | 1016.0 | 929.8 | 855.2 | 842.1 |
| 52.5° | 4956.1 | 3474.4 | 842.5 | 785.0 | 900.7 | 1079.4 | 1113.2 | 985.3 | 882.2 | 796.6 | 782.3 |
| 55° | 5182.4 | 3405.2 | 752.7 | 740.5 | 857.4 | 1035.5 | 1086.8 | 959.4 | 814.1 | 739.5 | 726.8 |
| 57.5° | 5225.8 | 3168.4 | 684.5 | 694.6 | 805.1 | 980.5 | 1046.1 | 901.8 | 777.1 | 714.7 | 701.4 |
| 60° | 5107.3 | 2838.6 | 633.8 | 652.3 | 749.0 | 911.3 | 970.0 | 861.0 | 741.7 | 688.2 | 677.1 |
| 62.5° | 4809.7 | 2500.8 | 596.2 | 614.3 | 696.7 | 841.0 | 922.4 | 818.3 | 705.7 | 658.1 | 647.0 |
| 65° | 4208.7 | 2099.5 | 560.3 | 580.4 | 648.1 | 780.2 | 879.6 | 778.7 | 670.3 | 633.8 | 623.2 |
| 67.5° | 3176.8 | 1572.5 | 526.4 | 544.5 | 604.7 | 727.4 | 833.1 | 739.5 | 635.9 | 612.7 | 600.0 |
| 70° | 1870.7 | 984.8 | 487.9 | 506.9 | 559.2 | 672.4 | 783.4 | 696.7 | 593.0 | 582.5 | 566.2 |
| 72.5° | 870.6 | 592.6 | 444.1 | 462.6 | 502.2 | 598.9 | 719.4 | 640.7 | 542.3 | 519.1 | 496.8 |
| 75° | 519.6 | 433.4 | 392.2 | 408.6 | 436.6 | 520.7 | 639.1 | 583.6 | 494.2 | 463.6 | 440.3 |
| 77.5° | 388.5 | 331.4 | 335.2 | 352.6 | 375.3 | 455.6 | 566.2 | 538.6 | 457.2 | 433.4 | 417.6 |
| 80° | 279.7 | 251.6 | 273.3 | 292.3 | 316.1 | 414.5 | 542.3 | 498.0 | 413.3 | 381.7 | 366.8 |
| 82.5° | 186.6 | 180.7 | 205.6 | 225.2 | 248.5 | 362.6 | 509.5 | 436.1 | 353.1 | 312.9 | 280.1 |
| 85° | 103.1 | 108.9 | 138.5 | 146.9 | 167.0 | 255.3 | 417.6 | 350.5 | 265.8 | 214.1 | 204.6 |
| 87.5° | 42.8 | 50.3 | 74.5 | 71.9 | 88.8 | 152.3 | 274.9 | 211.5 | 169.2 | 126.3 | 98.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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 | CRI (Ra): | 73.1 | R9: | -34.6 |
| CIE u': | 0.2371 | R1: | 68.9 | R10: | 57.8 |
| CIE v': | 0.5177 | R2: | 81.1 | R11: | 68.6 |
| Duv: | 0.0032 | R3: | 93.1 | R12: | 53.9 |
| CIE x: | 0.4153 | R4: | 71.6 | R13: | 70.9 |
| CIE y: | 0.4030 | R5: | 69.4 | R14: | 96.2 |
| CIE z: | 0.1817 | R6: | 75.0 | | |
| Peak Wavelength (nm): | 590 | R7: | 79.5 | | |
| Dominant Wavelength (nm): | 580 | R8: | 46.4 | | |
| Purity: | 45.7 | | | | |
| Rf: | 76.9 | | | | |
| Rg: | 94.4 | | | | |



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 |

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CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3500K 4-step quadrangle

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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)