

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: P632772

Luminaire Tested: GWS-SA2D-735-U-T2R-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P632772
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-12)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA2D-735-U-T2R-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (32) 3500K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7719.8 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G0

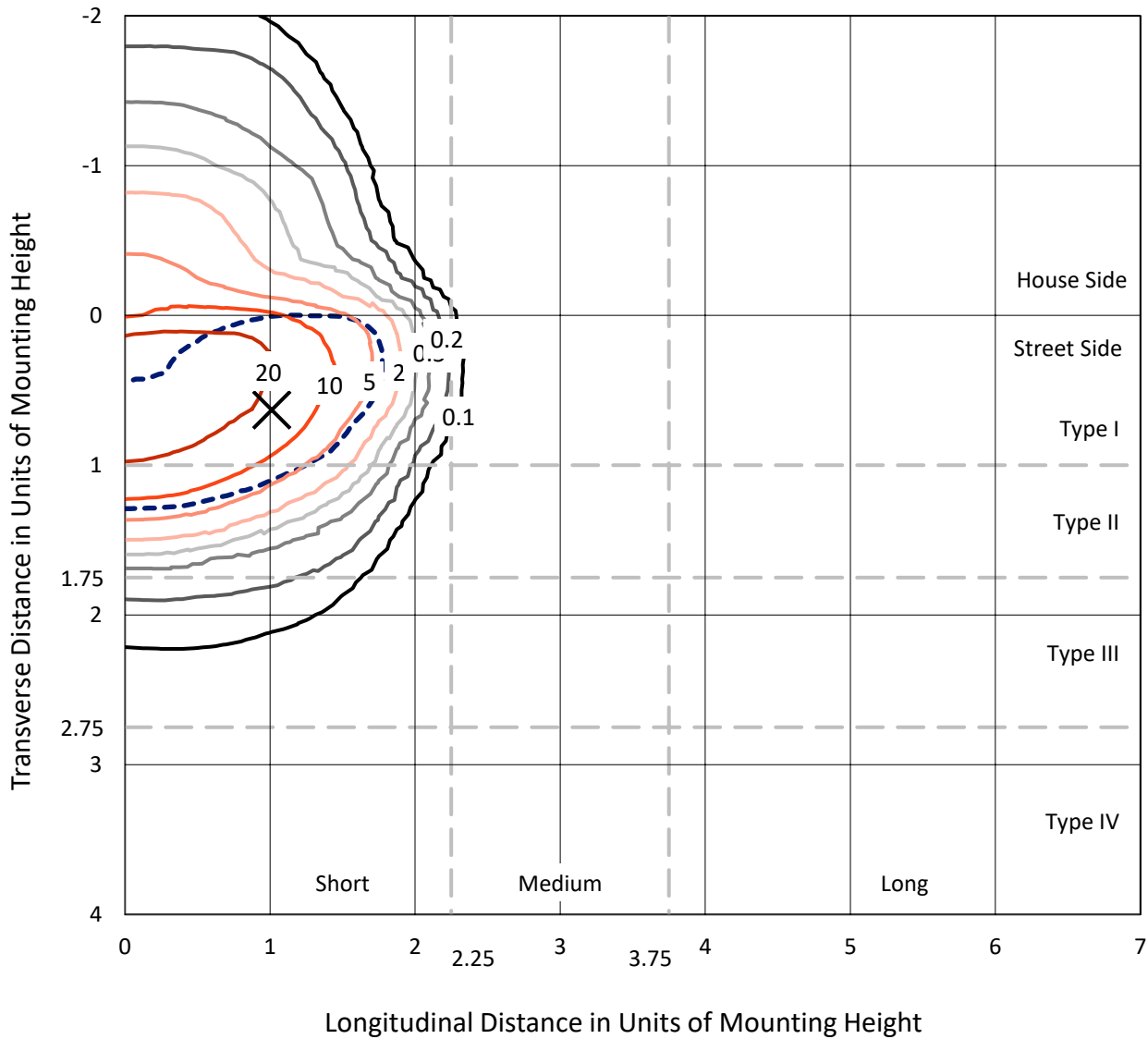
Input Watts (W): 82.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P632772
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Iso-Footcandle Lines of Horizontal Illumination

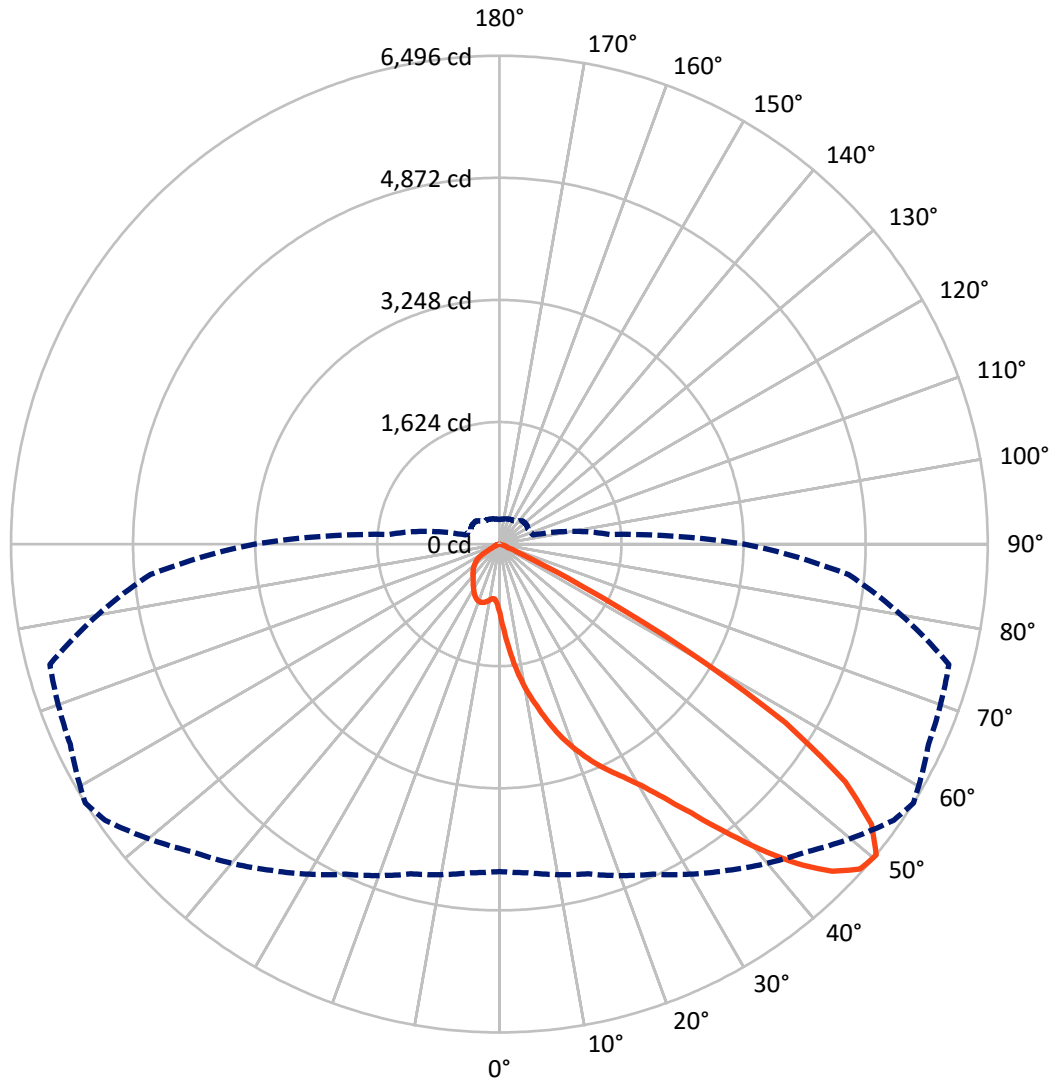
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 28.3 fc
 Type II - Short - N/A

REPORT NUMBER: P632772
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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 50-Deg Vertical

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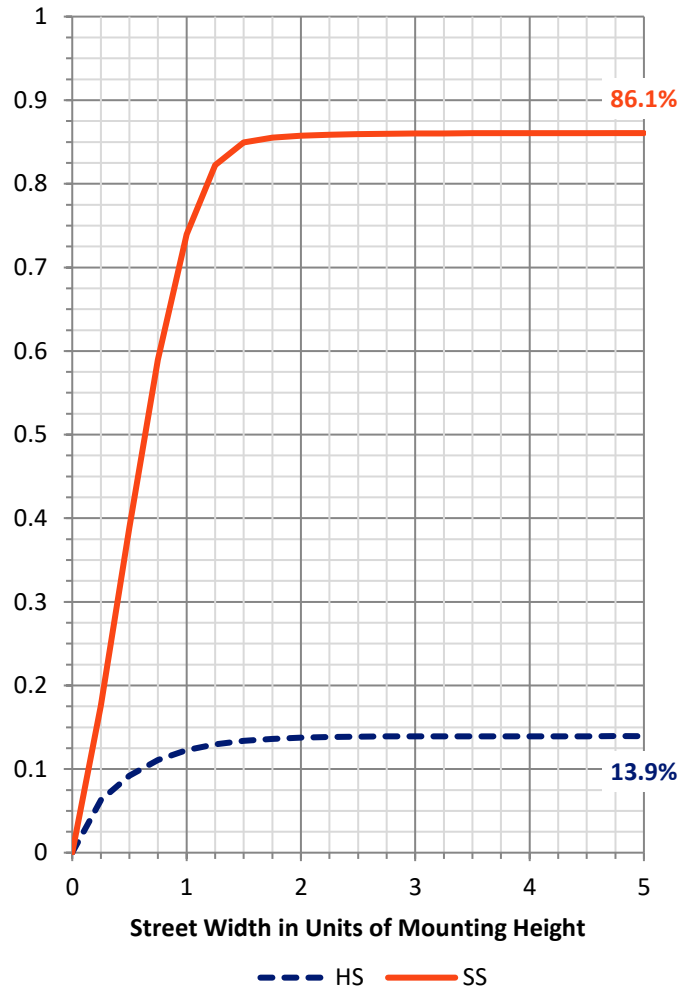
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1081.3 | 0.0 | 1081.3 |
| | % Fixture | 14.0 | 0.0 | 14.0 |
| Street Side | Lumens | 6638.5 | 0.0 | 6638.5 |
| | % Fixture | 86.0 | 0.0 | 86.0 |
| Total | Lumens | 7719.8 | 0.0 | 7719.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 114.2 | 1.5 |
| 10°-20° | 452.2 | 5.9 |
| 20°-30° | 915.1 | 11.9 |
| 30°-40° | 1618.9 | 21.0 |
| 40°-50° | 2360.0 | 30.6 |
| 50°-60° | 1891.6 | 24.5 |
| 60°-70° | 340.8 | 4.4 |
| 70°-80° | 26.9 | 0.3 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 7719.8 | 100.0 |
| 0°-180° | 7719.8 | 100.0 |

Coefficient of Utilization



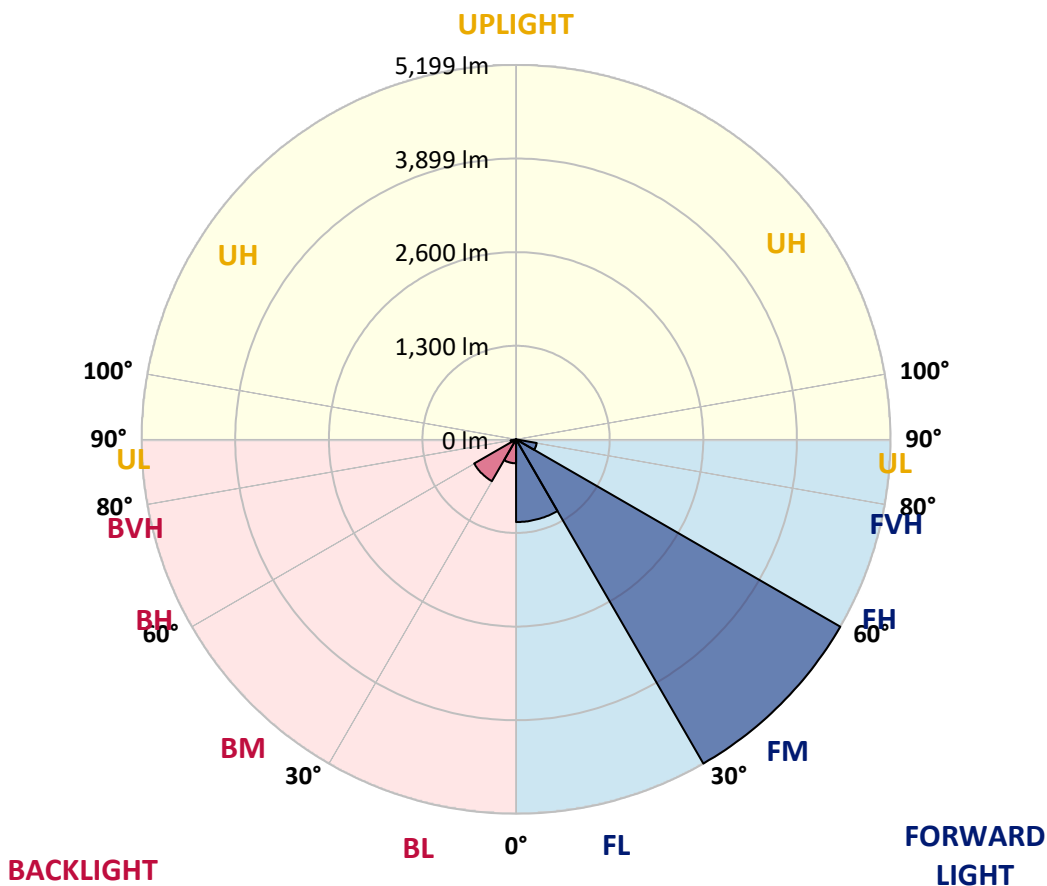
REPORT NUMBER: P632772

CATALOG NUMBER: GWS-SA2D-735-U-T2R-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 1148.7 | 14.9 | | | |
| FM (30°-60°) | 5199.1 | 67.3 | | | |
| FH (60°-80°) | 290.8 | 3.8 | | | G0/660 |
| FVH (80°-90°) | 0.0 | 0.0 | | | G0/10 |
| BL (0°-30°) | 332.9 | 4.3 | B1/500 | | |
| BM (30°-60°) | 671.5 | 8.7 | B1/1000 | | |
| BH (60°-80°) | 76.8 | 1.0 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.0 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G0
 Type II Short





REPORT NUMBER: P632772

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 |
| 2.5° | 1364.6 | 1343.1 | 1330.8 | 1320.8 | 1277.1 | 1207.8 | 1162.3 | 1138.4 | 1098.8 | 1031.9 | 974.1 |
| 5° | 1780.7 | 1765.0 | 1736.1 | 1716.3 | 1660.1 | 1561.9 | 1460.4 | 1419.9 | 1329.9 | 1178.9 | 1043.5 |
| 7.5° | 2056.4 | 2044.8 | 2034.1 | 2007.7 | 1954.9 | 1865.7 | 1753.4 | 1711.3 | 1572.6 | 1358.0 | 1135.9 |
| 10° | 2268.6 | 2259.5 | 2247.1 | 2246.3 | 2205.0 | 2124.9 | 2015.1 | 1971.4 | 1821.1 | 1552.8 | 1244.9 |
| 12.5° | 2455.1 | 2447.7 | 2445.2 | 2468.3 | 2441.9 | 2382.5 | 2263.6 | 2209.1 | 2049.8 | 1751.8 | 1365.4 |
| 15° | 2583.1 | 2581.4 | 2592.2 | 2637.6 | 2652.4 | 2625.2 | 2525.3 | 2466.7 | 2283.4 | 1951.6 | 1498.3 |
| 17.5° | 2641.7 | 2646.6 | 2667.3 | 2745.7 | 2811.8 | 2834.9 | 2758.1 | 2708.6 | 2515.4 | 2153.8 | 1640.3 |
| 20° | 2741.6 | 2739.9 | 2752.3 | 2826.6 | 2907.5 | 2990.1 | 2967.0 | 2924.9 | 2749.8 | 2367.6 | 1798.0 |
| 22.5° | 3023.1 | 2999.1 | 2972.7 | 2984.3 | 3013.2 | 3109.8 | 3152.7 | 3131.2 | 2991.7 | 2587.2 | 1960.6 |
| 25° | 3455.7 | 3430.9 | 3345.9 | 3263.3 | 3208.8 | 3252.6 | 3311.2 | 3321.9 | 3231.9 | 2812.6 | 2130.7 |
| 27.5° | 3914.7 | 3892.4 | 3796.6 | 3672.8 | 3516.8 | 3440.8 | 3484.6 | 3506.0 | 3468.1 | 3080.9 | 2311.5 |
| 30° | 4344.8 | 4315.0 | 4210.2 | 4056.7 | 3875.9 | 3759.5 | 3709.9 | 3724.8 | 3747.1 | 3398.7 | 2523.6 |
| 32.5° | 4717.9 | 4695.6 | 4570.1 | 4408.3 | 4234.1 | 4112.8 | 3997.2 | 4022.0 | 4076.5 | 3787.5 | 2795.2 |
| 35° | 5034.1 | 5022.5 | 4889.6 | 4728.6 | 4544.5 | 4482.6 | 4383.6 | 4388.5 | 4443.0 | 4257.3 | 3126.3 |
| 37.5° | 5309.0 | 5289.2 | 5168.6 | 5019.2 | 4873.1 | 4863.2 | 4836.0 | 4838.4 | 4866.5 | 4804.6 | 3506.9 |
| 40° | 5482.3 | 5464.2 | 5378.3 | 5285.9 | 5181.9 | 5183.5 | 5324.7 | 5335.4 | 5303.2 | 5342.0 | 3908.9 |
| 42.5° | 5547.6 | 5534.4 | 5488.1 | 5488.9 | 5478.2 | 5526.9 | 5791.9 | 5811.7 | 5696.2 | 5763.8 | 4252.3 |
| 45° | 5434.5 | 5428.7 | 5432.0 | 5550.9 | 5679.6 | 5829.9 | 6174.1 | 6208.8 | 6045.4 | 6043.7 | 4520.6 |
| 47.5° | 5069.6 | 5058.0 | 5154.6 | 5356.9 | 5654.9 | 5947.1 | 6405.3 | 6458.9 | 6289.7 | 6203.9 | 4689.0 |
| 50° | 4354.7 | 4387.7 | 4540.4 | 4844.2 | 5297.4 | 5786.1 | 6402.8 | 6496.1 | 6298.8 | 6189.8 | 4660.9 |
| 52.5° | 3154.3 | 3147.7 | 3482.1 | 3899.8 | 4451.3 | 5271.0 | 6062.7 | 6198.9 | 6078.4 | 6052.0 | 4598.2 |
| 55° | 1716.3 | 1776.5 | 2001.9 | 2555.0 | 3243.5 | 4296.1 | 5285.9 | 5583.1 | 5722.6 | 6001.6 | 4711.3 |
| 57.5° | 630.7 | 657.1 | 798.3 | 1189.6 | 1717.1 | 2671.4 | 4037.7 | 4485.9 | 4916.9 | 5861.3 | 4692.3 |
| 60° | 254.3 | 259.2 | 315.4 | 437.5 | 721.5 | 1359.6 | 2422.1 | 2820.0 | 3226.2 | 4486.8 | 3601.0 |
| 62.5° | 184.9 | 191.5 | 213.8 | 255.9 | 364.9 | 594.4 | 1044.3 | 1214.4 | 1327.5 | 2222.3 | 1774.1 |
| 65° | 149.4 | 154.4 | 172.5 | 191.5 | 241.1 | 319.5 | 336.8 | 324.4 | 322.8 | 574.6 | 407.0 |
| 67.5° | 123.8 | 128.8 | 142.0 | 155.2 | 173.4 | 159.3 | 115.6 | 121.4 | 99.1 | 98.2 | 80.1 |
| 70° | 90.8 | 96.6 | 109.8 | 123.8 | 104.0 | 42.9 | 66.9 | 99.1 | 75.1 | 62.7 | 61.1 |
| 72.5° | 68.5 | 72.6 | 85.0 | 80.9 | 30.5 | 16.5 | 44.6 | 71.8 | 57.8 | 46.2 | 45.4 |
| 75° | 51.2 | 53.7 | 42.9 | 13.2 | 3.3 | 4.1 | 16.5 | 29.7 | 32.2 | 26.4 | 26.4 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 2.5 | 3.3 | 4.1 | 5.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 |



REPORT NUMBER: P632772
 CATALOG NUMBER: GWS-SA2D-735-U-T2R-W-GRSBK

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 | 922.1 |
| 2.5° | 941.1 | 906.4 | 856.9 | 815.6 | 784.3 | 753.7 | 730.6 | 707.5 | 706.7 | 695.1 | 692.6 |
| 5° | 980.7 | 918.0 | 827.2 | 762.0 | 722.3 | 698.4 | 681.9 | 673.6 | 669.5 | 665.4 | 663.7 |
| 7.5° | 1037.7 | 947.7 | 822.2 | 752.9 | 719.9 | 704.2 | 692.6 | 687.7 | 685.2 | 681.9 | 681.1 |
| 10° | 1107.9 | 990.6 | 840.4 | 770.2 | 741.3 | 726.5 | 714.1 | 706.7 | 702.5 | 696.7 | 695.1 |
| 12.5° | 1192.1 | 1043.5 | 869.3 | 799.1 | 768.6 | 748.8 | 732.2 | 721.5 | 715.7 | 708.3 | 706.7 |
| 15° | 1282.9 | 1100.4 | 901.5 | 825.5 | 789.2 | 763.6 | 743.0 | 726.5 | 715.7 | 706.7 | 704.2 |
| 17.5° | 1377.0 | 1158.2 | 930.4 | 843.7 | 799.1 | 768.6 | 738.8 | 716.6 | 703.4 | 691.8 | 688.5 |
| 20° | 1482.7 | 1217.7 | 949.4 | 847.0 | 795.8 | 755.4 | 720.7 | 692.6 | 679.4 | 663.7 | 660.4 |
| 22.5° | 1593.3 | 1273.0 | 957.6 | 839.6 | 777.6 | 730.6 | 693.4 | 664.6 | 645.6 | 629.1 | 624.1 |
| 25° | 1700.6 | 1322.5 | 953.5 | 818.9 | 750.4 | 695.9 | 657.9 | 628.2 | 607.6 | 591.1 | 587.0 |
| 27.5° | 1814.5 | 1363.8 | 938.6 | 788.4 | 713.3 | 657.9 | 621.6 | 596.0 | 577.0 | 558.9 | 554.8 |
| 30° | 1942.5 | 1401.7 | 914.7 | 751.2 | 669.5 | 619.1 | 591.1 | 573.7 | 553.1 | 534.1 | 528.3 |
| 32.5° | 2096.8 | 1435.6 | 880.0 | 706.7 | 630.7 | 585.3 | 569.6 | 556.4 | 532.5 | 512.7 | 508.5 |
| 35° | 2273.5 | 1463.7 | 836.3 | 660.4 | 592.7 | 563.8 | 560.5 | 543.2 | 511.8 | 488.7 | 483.8 |
| 37.5° | 2478.2 | 1490.9 | 784.3 | 615.0 | 564.7 | 553.9 | 554.8 | 525.0 | 487.1 | 459.0 | 455.7 |
| 40° | 2698.7 | 1518.1 | 726.5 | 575.4 | 539.1 | 548.2 | 540.7 | 498.6 | 436.7 | 409.5 | 406.2 |
| 42.5° | 2928.2 | 1547.9 | 667.9 | 538.2 | 517.6 | 525.9 | 515.1 | 445.8 | 401.2 | 387.2 | 385.5 |
| 45° | 3135.4 | 1583.4 | 604.3 | 501.1 | 496.1 | 493.7 | 475.5 | 403.7 | 384.7 | 374.8 | 374.0 |
| 47.5° | 3284.8 | 1577.6 | 536.6 | 465.6 | 473.0 | 464.8 | 409.5 | 383.9 | 368.2 | 355.0 | 351.7 |
| 50° | 3257.5 | 1476.9 | 466.4 | 426.0 | 443.3 | 435.9 | 368.2 | 360.8 | 346.7 | 332.7 | 327.7 |
| 52.5° | 3188.2 | 1339.8 | 405.3 | 383.9 | 411.1 | 393.8 | 340.1 | 332.7 | 320.3 | 302.1 | 296.4 |
| 55° | 3225.3 | 1211.1 | 357.5 | 350.0 | 378.1 | 326.1 | 308.7 | 297.2 | 284.0 | 264.2 | 261.7 |
| 57.5° | 3105.6 | 988.2 | 287.3 | 292.2 | 334.3 | 278.2 | 270.8 | 252.6 | 230.3 | 217.1 | 215.5 |
| 60° | 2149.7 | 530.8 | 180.0 | 185.7 | 241.9 | 233.6 | 242.7 | 226.2 | 199.0 | 186.6 | 184.1 |
| 62.5° | 987.3 | 213.0 | 98.2 | 94.1 | 127.1 | 158.5 | 208.0 | 206.4 | 172.5 | 152.7 | 151.1 |
| 65° | 239.4 | 97.4 | 70.2 | 66.0 | 71.8 | 94.9 | 135.4 | 162.6 | 139.5 | 116.4 | 113.9 |
| 67.5° | 77.6 | 79.3 | 64.4 | 60.3 | 63.6 | 71.0 | 80.9 | 90.0 | 89.2 | 81.7 | 80.1 |
| 70° | 61.9 | 71.8 | 59.4 | 54.5 | 54.5 | 57.0 | 54.5 | 43.8 | 38.0 | 41.3 | 42.9 |
| 72.5° | 46.2 | 54.5 | 47.1 | 42.1 | 40.5 | 39.6 | 33.8 | 24.8 | 17.3 | 15.7 | 14.9 |
| 75° | 27.2 | 30.5 | 28.9 | 24.8 | 23.1 | 20.6 | 16.5 | 10.7 | 5.8 | 4.1 | 2.5 |
| 77.5° | 5.0 | 5.8 | 6.6 | 5.0 | 4.1 | 3.3 | 2.5 | 0.8 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.8 | 0.8 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 |

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



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 (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 | 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)