

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: P629817

Luminaire Tested: GWS-SA1C-735-U-T4FT-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P629817
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-54)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1C-735-U-T4FT-W
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: (16) 3500K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4579.1 lumens
Efficiency: N/A
Efficacy: 134.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

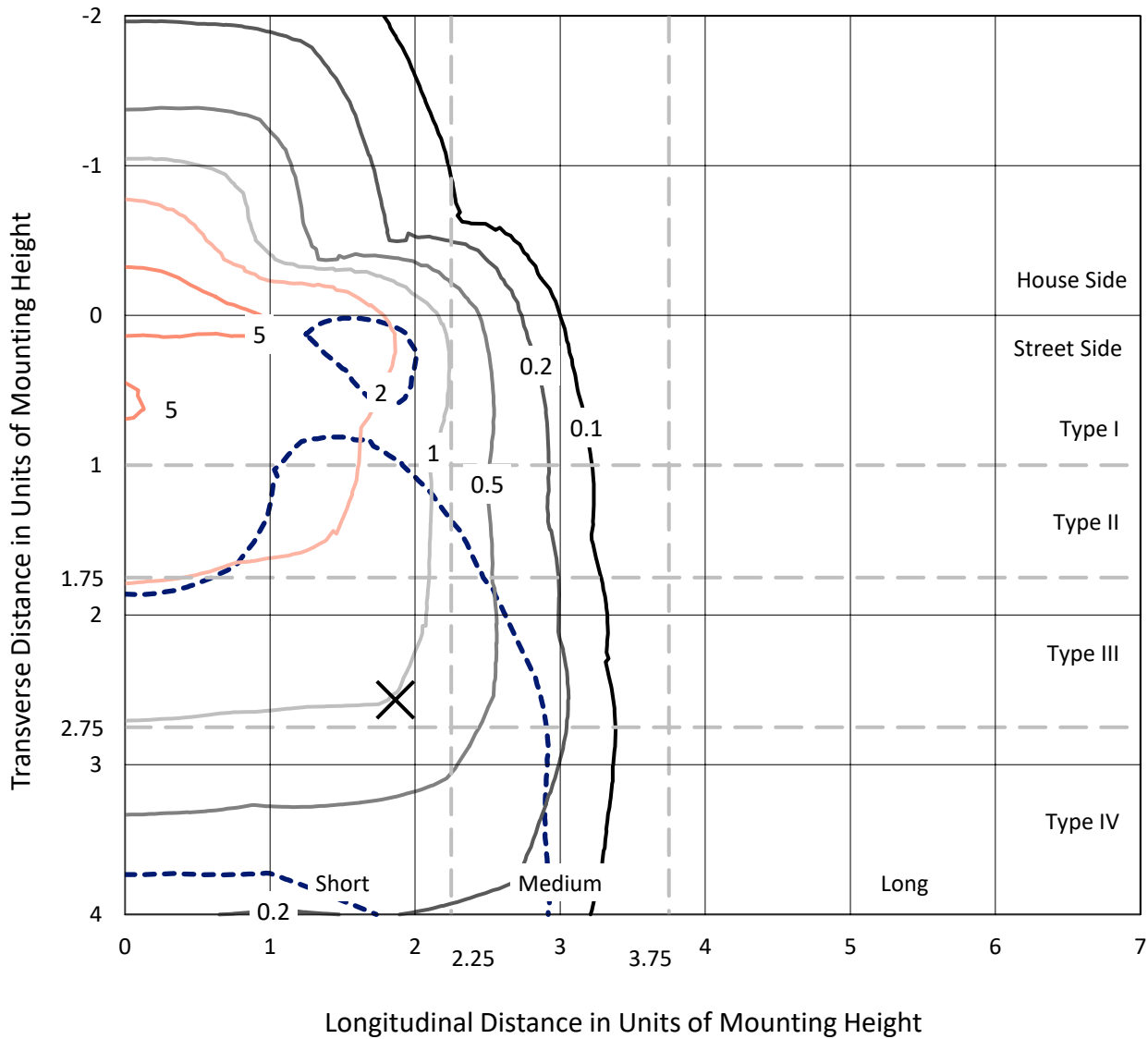
Input Watts (W): 34.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P629817
 CATALOG NUMBER: GWS-SA1C-735-U-T4FT-W

Iso-Footcandle Lines of Horizontal Illumination

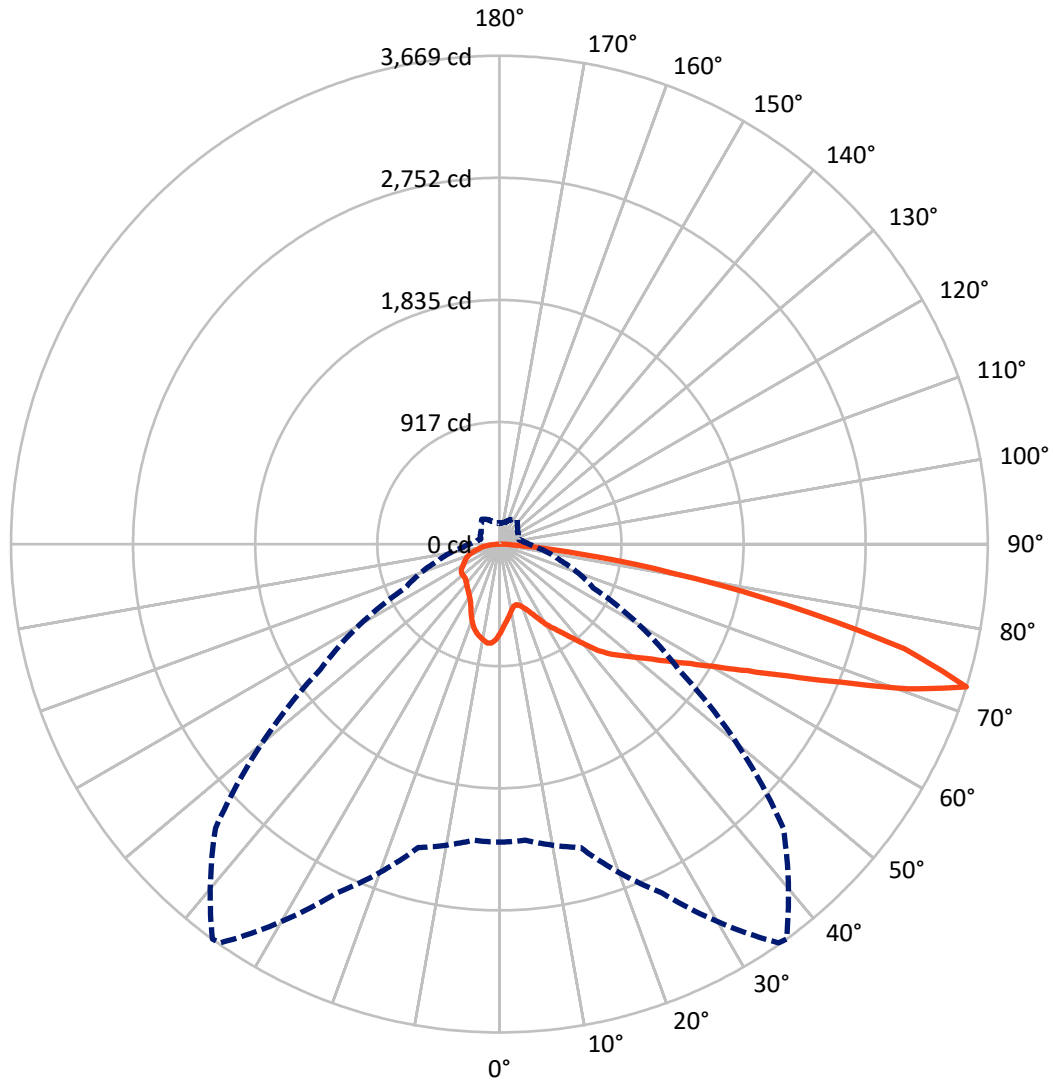
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.1 fc
 Type IV - Short - N/A

REPORT NUMBER: P629817
CATALOG NUMBER: GWS-SA1C-735-U-T4FT-W

Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1055.7 | 0.0 | 1055.7 |
| | % Fixture | 23.1 | 0.0 | 23.1 |
| Street Side | Lumens | 3523.4 | 0.0 | 3523.4 |
| | % Fixture | 76.9 | 0.0 | 76.9 |
| Total | Lumens | 4579.1 | 0.0 | 4579.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 62.6 | 1.4 |
| 10°-20° | 176.7 | 3.9 |
| 20°-30° | 292.7 | 6.4 |
| 30°-40° | 438.3 | 9.6 |
| 40°-50° | 639.5 | 14.0 |
| 50°-60° | 910.2 | 19.9 |
| 60°-70° | 1150.0 | 25.1 |
| 70°-80° | 819.5 | 17.9 |
| 80°-90° | 89.5 | 2.0 |
| 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° | 4579.1 | 100.0 |
| 0°-180° | 4579.1 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P629817

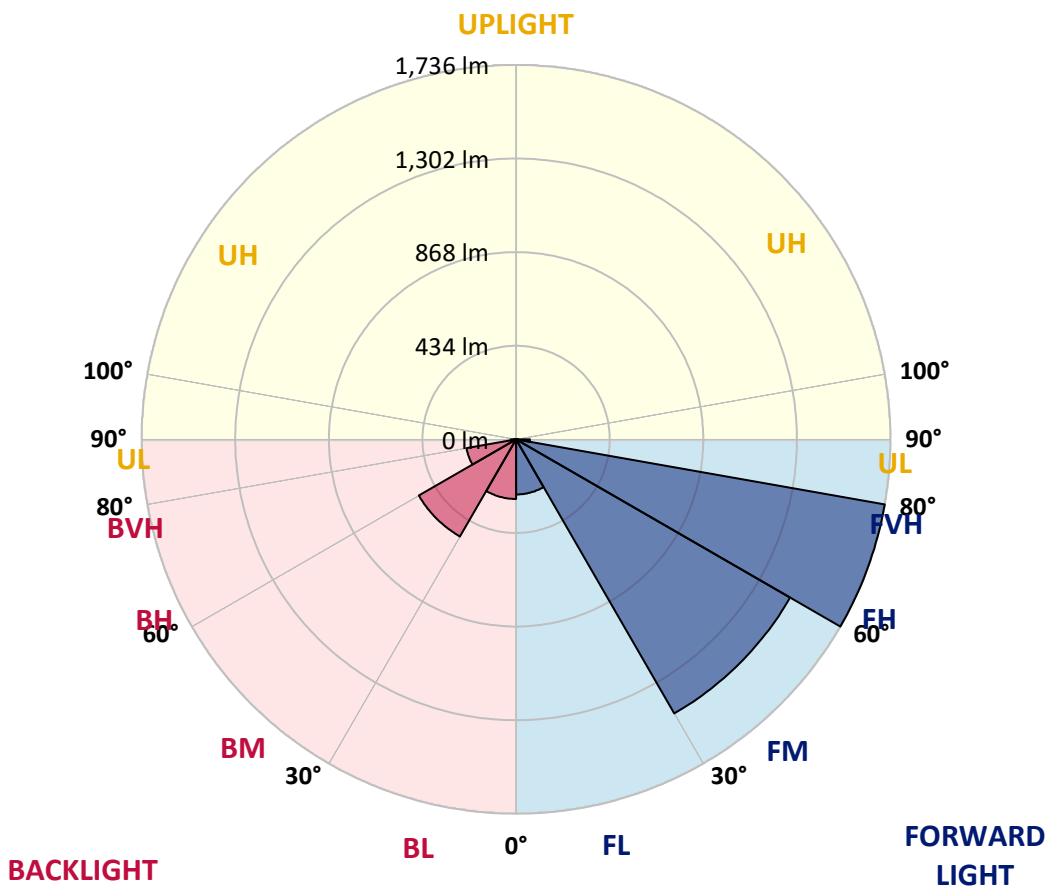
CATALOG NUMBER: GWS-SA1C-735-U-T4FT-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 255.6 | 5.6 | | | |
| FM (30°-60°) | 1467.5 | 32.0 | | | |
| FH (60°-80°) | 1736.1 | 37.9 | | | G1/1800 |
| FVH (80°-90°) | 64.2 | 1.4 | | | G1/100 |
| BL (0°-30°) | 276.4 | 6.0 | B1/500 | | |
| BM (30°-60°) | 520.6 | 11.4 | B1/1000 | | |
| BH (60°-80°) | 233.4 | 5.1 | B1/500 | | G1/500 |
| BVH (80°-90°) | 25.2 | 0.6 | | | G1/100 |
| 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 Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 |
| 2.5° | 611.4 | 610.4 | 608.3 | 614.4 | 620.6 | 619.9 | 628.4 | 636.5 | 645.4 | 654.5 | 666.8 |
| 5° | 562.4 | 561.8 | 560.1 | 569.2 | 578.4 | 578.1 | 592.0 | 605.3 | 623.3 | 643.0 | 667.5 |
| 7.5° | 513.5 | 511.8 | 514.2 | 525.7 | 538.7 | 540.0 | 559.0 | 580.8 | 607.0 | 636.5 | 671.2 |
| 10° | 470.3 | 470.0 | 471.0 | 483.9 | 503.3 | 504.7 | 529.1 | 559.4 | 594.0 | 633.5 | 679.7 |
| 12.5° | 459.1 | 458.4 | 455.7 | 462.2 | 476.8 | 478.8 | 505.7 | 542.7 | 585.2 | 635.2 | 691.2 |
| 15° | 477.5 | 475.8 | 466.3 | 463.2 | 470.3 | 472.0 | 494.8 | 532.9 | 580.1 | 638.2 | 705.9 |
| 17.5° | 509.1 | 508.1 | 490.1 | 477.5 | 482.2 | 483.6 | 500.6 | 531.2 | 578.8 | 644.3 | 723.9 |
| 20° | 555.3 | 550.9 | 522.7 | 503.6 | 503.6 | 505.7 | 515.9 | 538.7 | 580.5 | 651.8 | 744.3 |
| 22.5° | 616.5 | 607.6 | 567.9 | 542.1 | 535.3 | 538.0 | 542.4 | 557.3 | 587.6 | 664.4 | 769.7 |
| 25° | 685.1 | 677.0 | 629.7 | 593.4 | 583.9 | 584.9 | 581.1 | 583.9 | 603.2 | 681.7 | 801.4 |
| 27.5° | 758.2 | 752.8 | 702.5 | 656.2 | 641.3 | 641.3 | 628.0 | 621.6 | 625.0 | 701.4 | 836.7 |
| 30° | 823.4 | 816.0 | 773.5 | 722.8 | 703.1 | 703.1 | 678.0 | 664.1 | 655.9 | 725.6 | 883.9 |
| 32.5° | 857.8 | 853.3 | 825.1 | 786.4 | 762.3 | 758.5 | 736.8 | 720.5 | 701.4 | 761.2 | 947.8 |
| 35° | 902.6 | 901.6 | 884.6 | 854.4 | 823.8 | 818.3 | 803.4 | 790.5 | 757.5 | 805.8 | 1032.8 |
| 37.5° | 959.0 | 957.3 | 954.6 | 936.6 | 899.9 | 898.9 | 885.6 | 870.0 | 827.2 | 870.0 | 1135.8 |
| 40° | 1022.2 | 1019.2 | 1015.8 | 1015.5 | 993.4 | 989.6 | 988.6 | 970.9 | 911.1 | 947.5 | 1243.1 |
| 42.5° | 1109.2 | 1098.7 | 1066.8 | 1081.0 | 1097.4 | 1094.0 | 1106.9 | 1080.4 | 1015.8 | 1039.6 | 1344.8 |
| 45° | 1216.3 | 1190.5 | 1127.3 | 1131.3 | 1172.5 | 1179.3 | 1224.1 | 1217.7 | 1131.0 | 1146.0 | 1451.8 |
| 47.5° | 1280.5 | 1258.1 | 1199.3 | 1195.9 | 1247.2 | 1255.7 | 1353.3 | 1365.5 | 1255.0 | 1274.1 | 1584.0 |
| 50° | 1333.2 | 1317.6 | 1269.3 | 1274.1 | 1328.4 | 1336.9 | 1481.4 | 1507.5 | 1371.9 | 1405.3 | 1737.6 |
| 52.5° | 1396.8 | 1374.3 | 1336.9 | 1359.4 | 1426.0 | 1436.2 | 1623.8 | 1652.0 | 1477.3 | 1549.3 | 1896.7 |
| 55° | 1432.4 | 1423.3 | 1423.9 | 1458.3 | 1541.9 | 1555.8 | 1773.0 | 1768.2 | 1573.8 | 1672.7 | 2016.3 |
| 57.5° | 1514.7 | 1511.3 | 1542.6 | 1555.5 | 1677.1 | 1695.1 | 1922.2 | 1881.4 | 1661.5 | 1768.2 | 2073.7 |
| 60° | 1659.8 | 1651.3 | 1678.5 | 1698.2 | 1844.3 | 1869.8 | 2088.7 | 1992.2 | 1721.0 | 1839.2 | 2054.4 |
| 62.5° | 1863.7 | 1853.2 | 1854.2 | 1885.5 | 2068.3 | 2095.1 | 2273.9 | 2084.6 | 1739.3 | 1850.1 | 1931.7 |
| 65° | 2117.2 | 2101.9 | 2084.6 | 2127.1 | 2365.7 | 2388.1 | 2475.4 | 2151.9 | 1695.5 | 1745.4 | 1675.4 |
| 67.5° | 2384.7 | 2372.1 | 2351.7 | 2440.8 | 2750.7 | 2764.3 | 2701.4 | 2146.1 | 1556.5 | 1465.4 | 1175.2 |
| 70° | 2400.3 | 2403.4 | 2499.9 | 2822.1 | 3253.3 | 3256.7 | 2915.2 | 2029.9 | 1260.5 | 949.9 | 585.6 |
| 72.5° | 2239.2 | 2234.1 | 2359.9 | 2891.7 | 3657.7 | 3669.3 | 3016.1 | 1644.5 | 778.9 | 473.7 | 274.6 |
| 75° | 1818.8 | 1827.7 | 1959.9 | 2530.1 | 3135.1 | 3145.3 | 2458.8 | 969.6 | 370.1 | 231.8 | 175.7 |
| 77.5° | 783.0 | 832.3 | 1092.9 | 1782.5 | 2245.3 | 2213.7 | 1267.3 | 392.9 | 197.4 | 165.2 | 134.6 |
| 80° | 226.0 | 245.4 | 389.5 | 847.6 | 1345.4 | 1321.7 | 501.6 | 147.2 | 137.6 | 124.0 | 96.5 |
| 82.5° | 73.1 | 80.9 | 142.7 | 337.5 | 602.9 | 602.2 | 190.3 | 87.0 | 90.1 | 84.3 | 62.2 |
| 85° | 20.4 | 23.4 | 43.8 | 102.3 | 186.6 | 182.8 | 55.1 | 41.1 | 47.9 | 48.6 | 30.9 |
| 87.5° | 0.0 | 0.0 | 0.3 | 0.7 | 0.7 | 0.7 | 1.4 | 6.1 | 13.9 | 17.7 | 12.6 |
| 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: P629817
 CATALOG NUMBER: GWS-SA1C-735-U-T4FT-W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 | 670.2 |
| 2.5° | 674.2 | 673.2 | 687.2 | 698.0 | 708.2 | 715.0 | 717.1 | 718.4 | 721.1 | 722.5 | 721.1 |
| 5° | 679.0 | 684.1 | 707.2 | 724.2 | 737.8 | 746.0 | 746.3 | 745.6 | 747.7 | 746.0 | 744.9 |
| 7.5° | 689.2 | 699.1 | 728.3 | 746.3 | 755.1 | 755.5 | 747.3 | 737.8 | 733.0 | 729.0 | 727.6 |
| 10° | 702.8 | 717.4 | 749.4 | 761.2 | 758.5 | 746.0 | 727.9 | 713.0 | 704.5 | 698.4 | 697.0 |
| 12.5° | 721.5 | 737.8 | 768.0 | 767.7 | 750.7 | 728.3 | 707.2 | 689.2 | 677.0 | 669.8 | 667.5 |
| 15° | 739.2 | 759.9 | 781.6 | 765.7 | 738.8 | 711.6 | 684.4 | 660.3 | 644.0 | 632.8 | 630.7 |
| 17.5° | 760.9 | 783.0 | 791.5 | 759.2 | 723.9 | 688.9 | 652.5 | 620.9 | 598.8 | 585.6 | 584.5 |
| 20° | 786.1 | 805.8 | 796.3 | 748.0 | 704.5 | 658.6 | 609.3 | 574.0 | 550.2 | 537.3 | 538.3 |
| 22.5° | 815.3 | 829.6 | 797.6 | 732.7 | 677.6 | 615.8 | 560.7 | 526.8 | 510.8 | 504.0 | 504.3 |
| 25° | 846.6 | 855.7 | 795.2 | 712.0 | 636.5 | 563.5 | 510.8 | 495.2 | 493.8 | 492.1 | 492.8 |
| 27.5° | 883.6 | 881.6 | 788.1 | 682.7 | 581.1 | 502.6 | 475.8 | 479.9 | 485.3 | 484.6 | 485.3 |
| 30° | 933.2 | 913.8 | 778.9 | 642.3 | 515.2 | 451.7 | 455.1 | 466.6 | 473.7 | 474.4 | 476.5 |
| 32.5° | 990.0 | 949.5 | 764.3 | 587.2 | 452.3 | 423.1 | 435.7 | 449.6 | 458.1 | 459.8 | 462.5 |
| 35° | 1057.6 | 990.3 | 738.5 | 518.6 | 407.1 | 406.1 | 417.7 | 427.2 | 436.4 | 437.0 | 437.0 |
| 37.5° | 1135.4 | 1031.1 | 697.4 | 442.8 | 379.3 | 391.5 | 402.4 | 404.4 | 406.8 | 404.8 | 405.8 |
| 40° | 1206.8 | 1070.5 | 638.9 | 373.8 | 356.5 | 378.6 | 387.8 | 381.0 | 373.5 | 368.4 | 369.4 |
| 42.5° | 1266.6 | 1097.4 | 561.4 | 325.6 | 333.4 | 367.0 | 374.2 | 360.2 | 345.6 | 336.1 | 337.5 |
| 45° | 1333.9 | 1122.2 | 470.3 | 292.9 | 313.7 | 358.9 | 363.6 | 345.6 | 326.9 | 312.7 | 310.6 |
| 47.5° | 1426.7 | 1172.8 | 389.5 | 270.2 | 299.7 | 354.5 | 362.3 | 337.8 | 313.3 | 291.9 | 289.5 |
| 50° | 1541.2 | 1244.5 | 321.8 | 255.2 | 293.3 | 352.1 | 361.9 | 329.3 | 300.1 | 274.9 | 273.2 |
| 52.5° | 1666.3 | 1314.5 | 271.9 | 243.7 | 286.8 | 344.9 | 360.2 | 319.8 | 286.1 | 259.0 | 256.9 |
| 55° | 1749.5 | 1342.0 | 238.2 | 232.8 | 276.3 | 333.7 | 353.4 | 310.6 | 265.1 | 240.3 | 237.2 |
| 57.5° | 1774.0 | 1306.7 | 214.8 | 222.9 | 262.7 | 318.1 | 340.5 | 291.2 | 252.2 | 232.5 | 230.1 |
| 60° | 1731.8 | 1217.7 | 200.2 | 214.8 | 247.7 | 298.0 | 318.1 | 280.0 | 242.0 | 224.3 | 222.6 |
| 62.5° | 1612.9 | 1080.4 | 189.0 | 206.3 | 232.5 | 277.0 | 303.8 | 266.4 | 230.8 | 216.8 | 214.4 |
| 65° | 1373.6 | 886.0 | 179.8 | 197.4 | 217.8 | 256.9 | 288.2 | 252.8 | 218.5 | 208.0 | 205.3 |
| 67.5° | 960.7 | 622.3 | 169.9 | 186.9 | 203.2 | 237.6 | 271.9 | 240.3 | 205.9 | 198.1 | 195.4 |
| 70° | 469.7 | 330.0 | 158.0 | 174.7 | 187.6 | 217.8 | 255.6 | 225.0 | 189.3 | 184.9 | 181.1 |
| 72.5° | 223.6 | 184.5 | 144.1 | 158.0 | 166.2 | 191.7 | 228.4 | 202.9 | 169.6 | 160.1 | 153.6 |
| 75° | 149.9 | 131.2 | 125.7 | 138.3 | 140.4 | 160.7 | 195.7 | 175.0 | 149.5 | 138.7 | 133.2 |
| 77.5° | 113.5 | 100.3 | 105.7 | 116.9 | 112.8 | 132.2 | 161.1 | 156.0 | 134.9 | 125.1 | 122.3 |
| 80° | 79.9 | 73.1 | 83.9 | 90.7 | 87.7 | 112.5 | 145.1 | 133.6 | 111.1 | 100.3 | 98.2 |
| 82.5° | 50.3 | 48.9 | 61.9 | 62.9 | 63.9 | 89.0 | 119.3 | 105.0 | 86.3 | 71.0 | 65.9 |
| 85° | 25.1 | 27.9 | 37.0 | 37.0 | 36.7 | 45.9 | 68.0 | 59.1 | 46.6 | 37.0 | 36.0 |
| 87.5° | 8.5 | 11.9 | 16.0 | 12.9 | 9.9 | 7.8 | 8.8 | 10.9 | 11.6 | 11.2 | 11.2 |
| 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 ($\mu\text{W}/\text{nm}$) | 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)