

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: P382764

Luminaire Tested: **GLEON-SA1B-735-U-T4W-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P382764
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-19)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA1B-735-U-T4W-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(1) 70 CRI, 3500K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4039.2 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G2

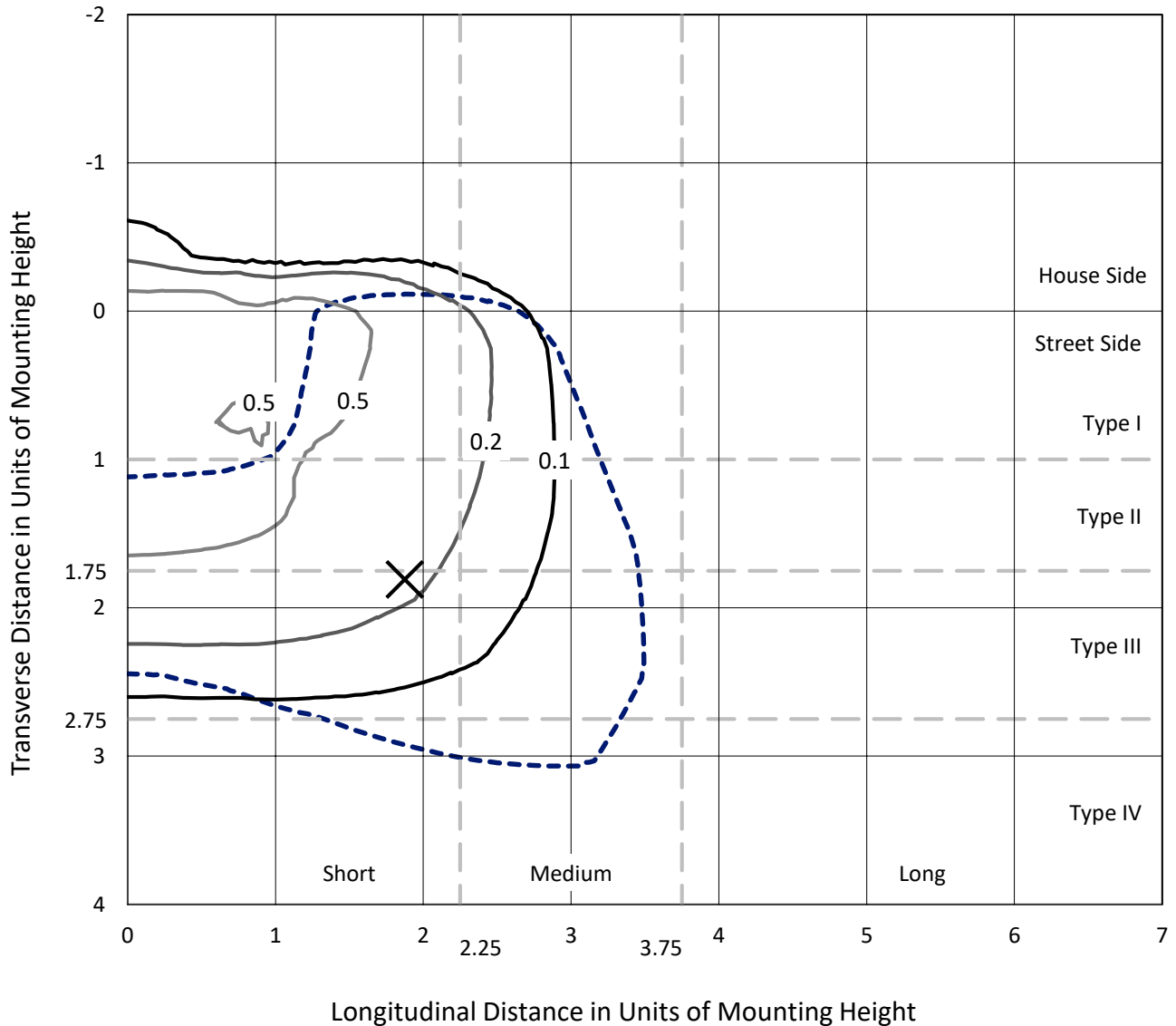
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P382764
 CATALOG NUMBER: GLEON-SA1B-735-U-T4W-HSS

Iso-Footcandle Lines of Horizontal Illumination

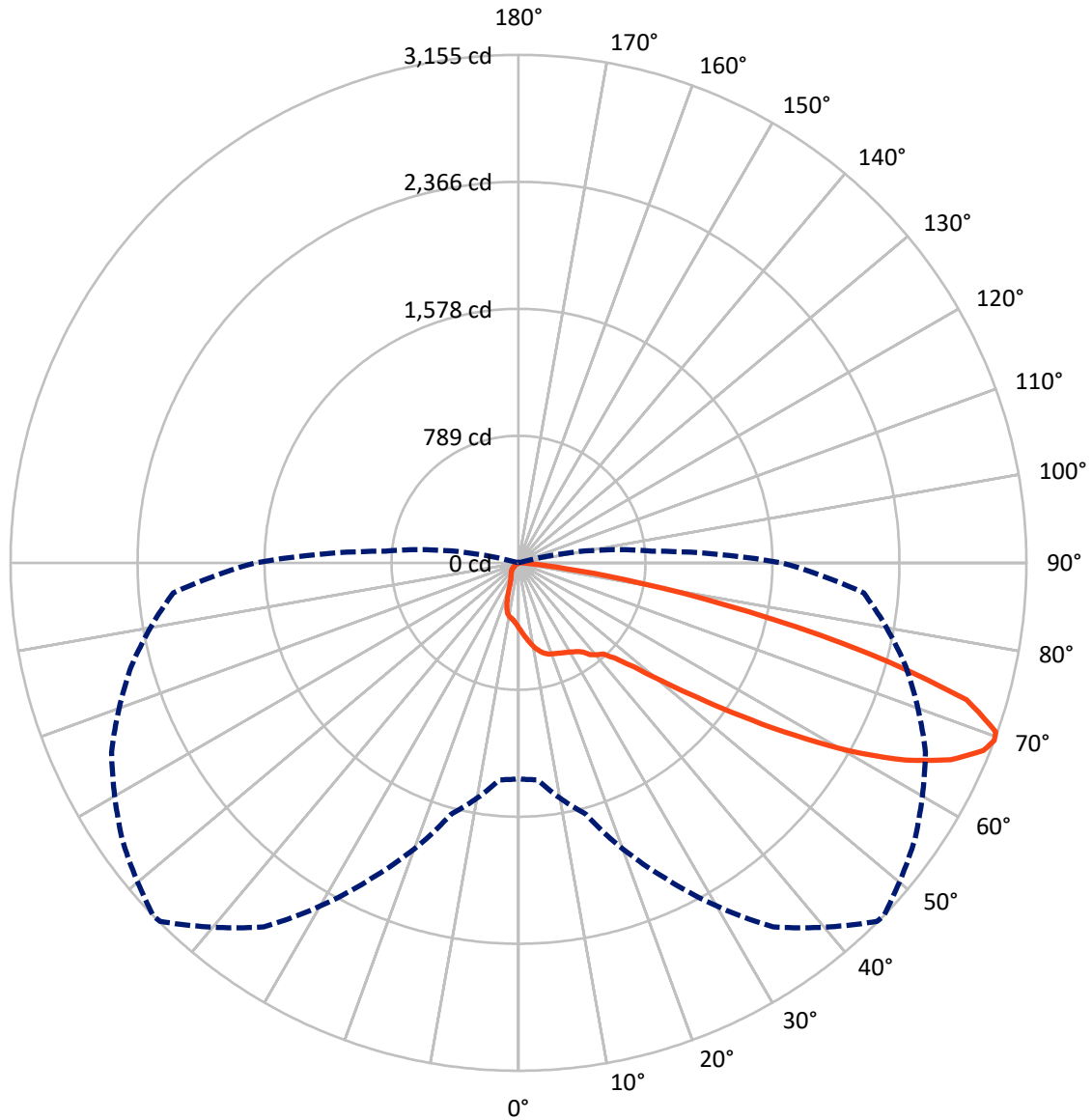
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

REPORT NUMBER: P382764
CATALOG NUMBER: GLEON-SA1B-735-U-T4W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 414.5 | 0.0 | 414.5 |
| | % Fixture | 10.3 | 0.0 | 10.3 |
| Street Side | Lumens | 3624.7 | 0.0 | 3624.7 |
| | % Fixture | 89.7 | 0.0 | 89.7 |
| Total | Lumens | 4039.2 | 0.0 | 4039.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 40.3 | 1.0 |
| 10°-20° | 122.2 | 3.0 |
| 20°-30° | 192.2 | 4.8 |
| 30°-40° | 275.6 | 6.8 |
| 40°-50° | 476.4 | 11.8 |
| 50°-60° | 941.1 | 23.3 |
| 60°-70° | 1315.2 | 32.6 |
| 70°-80° | 635.4 | 15.7 |
| 80°-90° | 40.8 | 1.0 |
| 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° | 4039.2 | 100.0 |
| 0°-180° | 4039.2 | 100.0 |

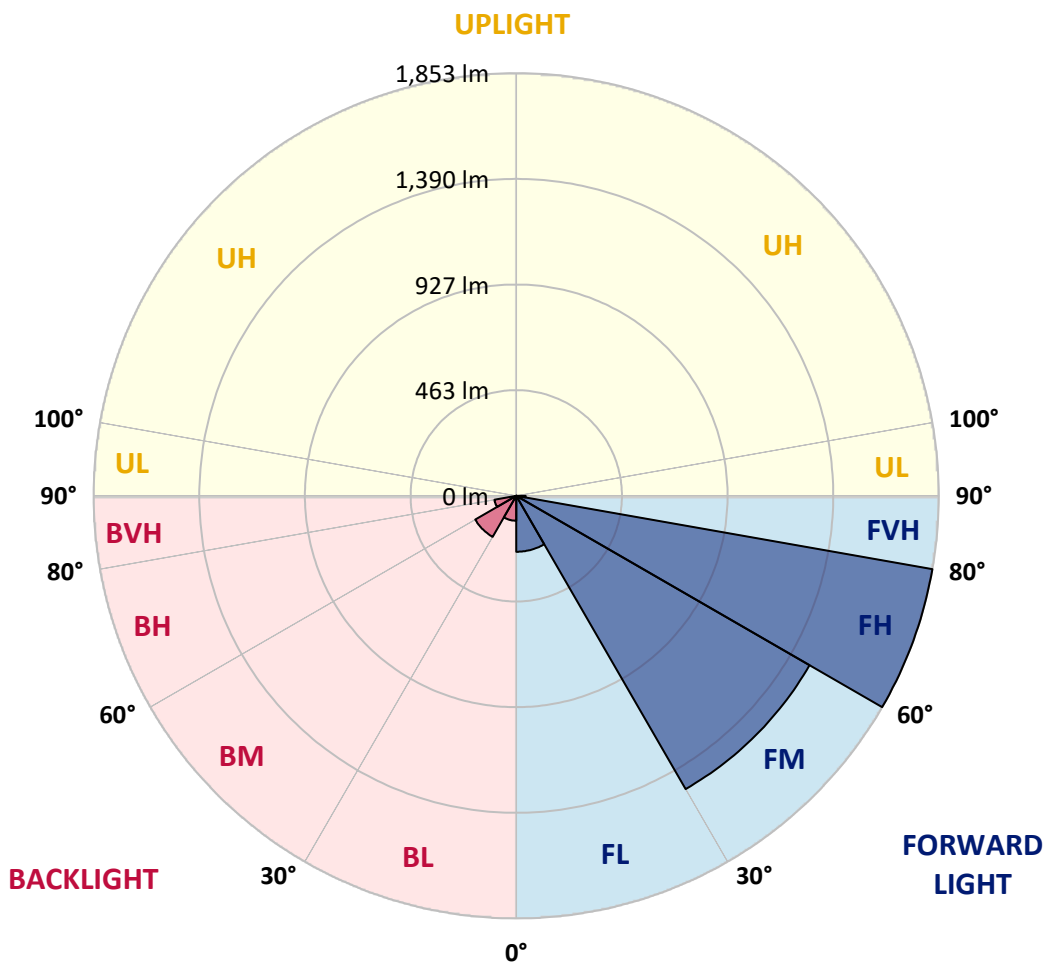


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 245.4 | 6.1 | | | |
| FM (30°-60°) | 1485.3 | 36.8 | | | |
| FH (60°-80°) | 1853.4 | 45.9 | | | G2/5000 |
| FVH (80°-90°) | 40.5 | 1.0 | | | G1/100 |
| BL (0°-30°) | 109.3 | 2.7 | B0/110 | | |
| BM (30°-60°) | 207.7 | 5.1 | B0/220 | | |
| BH (60°-80°) | 97.2 | 2.4 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.3 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G2
 Type IV Short





REPORT NUMBER: P382764

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 46° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 |
| 2.5° | 449.6 | 449.0 | 446.4 | 445.3 | 438.8 | 435.0 | 433.5 | 428.8 | 422.0 | 415.1 | 407.6 |
| 5° | 500.7 | 500.5 | 495.6 | 490.9 | 478.7 | 467.4 | 465.3 | 454.3 | 438.9 | 424.6 | 410.2 |
| 7.5° | 553.0 | 550.5 | 545.6 | 536.5 | 518.9 | 500.7 | 499.0 | 483.5 | 461.7 | 440.9 | 420.2 |
| 10° | 597.3 | 595.8 | 589.4 | 575.5 | 554.9 | 534.2 | 532.2 | 513.0 | 488.4 | 462.9 | 436.5 |
| 12.5° | 631.8 | 630.7 | 622.1 | 604.9 | 583.0 | 561.5 | 558.6 | 541.6 | 515.3 | 486.7 | 455.6 |
| 15° | 652.8 | 652.3 | 641.8 | 623.5 | 601.9 | 583.3 | 580.8 | 565.9 | 541.4 | 511.5 | 476.5 |
| 17.5° | 657.8 | 658.0 | 647.1 | 628.6 | 610.7 | 597.5 | 595.6 | 584.3 | 563.8 | 534.1 | 497.4 |
| 20° | 646.8 | 649.0 | 639.3 | 623.3 | 612.3 | 605.2 | 603.7 | 596.9 | 579.7 | 551.7 | 514.0 |
| 22.5° | 631.2 | 632.3 | 625.7 | 614.9 | 610.3 | 611.7 | 610.9 | 607.2 | 592.6 | 566.8 | 530.4 |
| 25° | 621.7 | 621.7 | 617.8 | 608.7 | 611.7 | 619.9 | 620.0 | 619.3 | 607.7 | 585.4 | 550.5 |
| 27.5° | 621.3 | 620.2 | 615.7 | 608.9 | 617.2 | 629.7 | 630.5 | 635.6 | 628.3 | 607.9 | 575.5 |
| 30° | 636.5 | 635.2 | 625.5 | 616.6 | 627.2 | 640.7 | 642.6 | 653.8 | 650.1 | 632.3 | 603.4 |
| 32.5° | 671.9 | 667.2 | 645.8 | 631.2 | 639.1 | 655.3 | 657.8 | 675.6 | 681.2 | 662.4 | 630.3 |
| 35° | 720.5 | 705.5 | 674.6 | 658.9 | 659.6 | 676.5 | 678.7 | 704.9 | 721.8 | 690.1 | 651.1 |
| 37.5° | 787.3 | 779.9 | 729.7 | 687.7 | 691.0 | 716.6 | 723.3 | 751.7 | 746.9 | 705.3 | 674.8 |
| 40° | 933.9 | 922.3 | 868.9 | 768.3 | 721.2 | 749.2 | 751.3 | 766.5 | 766.8 | 739.6 | 724.0 |
| 42.5° | 1133.4 | 1128.8 | 1072.5 | 914.7 | 780.5 | 770.9 | 774.8 | 800.3 | 828.9 | 811.8 | 811.1 |
| 45° | 1354.5 | 1352.0 | 1292.3 | 1109.0 | 900.3 | 842.4 | 847.1 | 881.4 | 936.1 | 939.9 | 964.0 |
| 47.5° | 1532.3 | 1531.2 | 1496.9 | 1325.9 | 1083.9 | 963.4 | 964.9 | 1001.2 | 1097.5 | 1145.0 | 1183.4 |
| 50° | 1694.4 | 1699.9 | 1672.8 | 1560.5 | 1333.8 | 1153.0 | 1149.3 | 1173.6 | 1328.1 | 1406.0 | 1453.7 |
| 52.5° | 1919.7 | 1927.6 | 1851.6 | 1779.4 | 1596.1 | 1388.2 | 1385.3 | 1410.7 | 1605.4 | 1663.7 | 1672.2 |
| 55° | 2118.8 | 2105.6 | 2045.5 | 2024.7 | 1916.0 | 1678.6 | 1677.9 | 1700.3 | 1873.5 | 1898.4 | 1914.1 |
| 57.5° | 2206.6 | 2201.6 | 2230.6 | 2278.3 | 2251.0 | 2022.0 | 2020.3 | 2003.3 | 2113.5 | 2116.2 | 2164.5 |
| 60° | 2262.2 | 2268.4 | 2357.3 | 2504.4 | 2572.4 | 2391.6 | 2380.6 | 2276.6 | 2342.7 | 2336.8 | 2388.5 |
| 62.5° | 2220.5 | 2232.8 | 2392.7 | 2638.0 | 2812.9 | 2714.1 | 2698.5 | 2526.9 | 2538.5 | 2518.3 | 2566.3 |
| 65° | 1999.3 | 2018.5 | 2280.3 | 2612.7 | 2932.2 | 2966.1 | 2950.4 | 2748.0 | 2693.9 | 2660.7 | 2634.0 |
| 67.5° | 1623.4 | 1634.8 | 1908.2 | 2393.6 | 2878.4 | 3116.5 | 3113.2 | 2941.7 | 2811.4 | 2636.6 | 2429.4 |
| 69° | 1341.6 | 1352.8 | 1616.0 | 2163.0 | 2760.1 | 3148.7 | 3155.0 | 3003.8 | 2789.1 | 2490.4 | 2152.5 |
| 70° | 1136.3 | 1148.2 | 1393.5 | 1965.2 | 2622.8 | 3133.7 | 3144.9 | 2997.9 | 2725.1 | 2321.0 | 1909.6 |
| 72.5° | 596.0 | 606.3 | 857.9 | 1353.9 | 2138.2 | 2877.5 | 2911.4 | 2744.5 | 2309.9 | 1685.7 | 1129.1 |
| 75° | 187.3 | 193.2 | 335.0 | 707.7 | 1463.9 | 2237.4 | 2245.1 | 2152.9 | 1640.3 | 927.3 | 470.2 |
| 77.5° | 71.4 | 69.7 | 111.5 | 260.7 | 740.1 | 1408.8 | 1456.4 | 1345.3 | 860.7 | 327.8 | 108.5 |
| 80° | 38.5 | 38.7 | 57.9 | 108.0 | 316.6 | 724.0 | 764.1 | 652.1 | 305.8 | 102.3 | 25.0 |
| 82.5° | 16.7 | 17.4 | 32.6 | 57.2 | 145.4 | 267.1 | 287.1 | 239.0 | 116.8 | 68.7 | 9.3 |
| 85° | 3.6 | 4.0 | 15.7 | 31.0 | 59.2 | 75.0 | 78.6 | 77.4 | 74.4 | 53.4 | 3.6 |
| 87.5° | 0.0 | 0.0 | 7.0 | 11.2 | 15.0 | 17.0 | 15.0 | 19.5 | 41.1 | 36.0 | 1.9 |
| 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: P382764

CATALOG NUMBER: GLEON-SA1B-735-U-T4W-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 | 404.8 |
| 2.5° | 405.1 | 401.7 | 395.8 | 389.4 | 384.8 | 380.1 | 376.3 | 374.6 | 372.7 | 371.4 | 373.1 |
| 5° | 404.3 | 397.7 | 386.3 | 375.3 | 367.4 | 361.0 | 355.7 | 353.6 | 351.5 | 350.0 | 349.8 |
| 7.5° | 411.0 | 401.7 | 384.3 | 368.1 | 355.9 | 347.1 | 339.9 | 336.9 | 334.4 | 333.3 | 332.4 |
| 10° | 423.7 | 411.7 | 388.5 | 367.4 | 351.5 | 336.8 | 321.2 | 309.3 | 301.5 | 297.9 | 296.6 |
| 12.5° | 440.2 | 425.2 | 396.4 | 371.4 | 348.3 | 319.9 | 286.9 | 258.5 | 240.2 | 234.1 | 230.5 |
| 15° | 459.4 | 440.9 | 406.8 | 376.5 | 336.6 | 284.7 | 228.8 | 191.6 | 174.6 | 171.2 | 167.4 |
| 17.5° | 478.0 | 457.6 | 419.3 | 377.5 | 310.8 | 227.5 | 167.6 | 142.4 | 135.8 | 138.1 | 138.6 |
| 20° | 494.3 | 474.1 | 431.6 | 369.1 | 264.0 | 170.7 | 129.8 | 123.5 | 125.9 | 130.3 | 131.1 |
| 22.5° | 510.8 | 489.9 | 443.0 | 347.1 | 204.2 | 129.6 | 116.8 | 118.4 | 120.8 | 125.2 | 125.9 |
| 25° | 530.8 | 509.3 | 453.6 | 306.8 | 153.2 | 110.2 | 110.9 | 113.3 | 115.7 | 119.7 | 120.1 |
| 27.5° | 554.0 | 533.7 | 460.6 | 254.3 | 113.6 | 101.4 | 103.8 | 107.2 | 109.6 | 113.5 | 114.2 |
| 30° | 584.6 | 565.9 | 462.9 | 200.0 | 95.3 | 93.3 | 94.5 | 98.7 | 102.3 | 105.6 | 106.3 |
| 32.5° | 613.4 | 597.7 | 455.2 | 150.9 | 88.2 | 86.0 | 86.0 | 88.4 | 92.6 | 95.9 | 96.6 |
| 35° | 639.9 | 629.7 | 431.0 | 110.4 | 82.9 | 79.2 | 77.2 | 77.2 | 79.9 | 82.5 | 83.4 |
| 37.5° | 675.0 | 674.6 | 391.8 | 88.0 | 77.9 | 73.5 | 69.5 | 66.5 | 65.5 | 66.1 | 66.5 |
| 40° | 735.0 | 735.5 | 340.7 | 79.0 | 73.5 | 67.6 | 61.6 | 56.1 | 51.0 | 49.3 | 49.1 |
| 42.5° | 828.7 | 820.2 | 287.1 | 74.6 | 69.7 | 61.6 | 52.4 | 45.1 | 37.1 | 34.7 | 34.5 |
| 45° | 977.6 | 927.1 | 230.3 | 70.6 | 65.7 | 54.8 | 43.4 | 33.3 | 26.9 | 25.0 | 25.0 |
| 47.5° | 1194.4 | 1067.4 | 178.4 | 66.3 | 60.5 | 46.9 | 32.8 | 24.0 | 19.7 | 18.7 | 18.9 |
| 50° | 1418.7 | 1204.9 | 136.8 | 60.8 | 53.9 | 38.8 | 24.2 | 17.4 | 15.0 | 15.0 | 15.2 |
| 52.5° | 1617.5 | 1305.6 | 106.7 | 55.0 | 46.0 | 30.5 | 18.4 | 13.6 | 12.5 | 12.3 | 12.5 |
| 55° | 1803.7 | 1370.6 | 81.6 | 48.1 | 36.5 | 22.7 | 14.0 | 11.2 | 10.4 | 10.1 | 9.9 |
| 57.5° | 1983.3 | 1402.7 | 61.2 | 38.8 | 26.5 | 16.5 | 11.2 | 9.5 | 8.8 | 8.1 | 7.9 |
| 60° | 2102.7 | 1376.6 | 42.0 | 28.6 | 18.4 | 11.9 | 9.3 | 8.1 | 7.2 | 6.6 | 6.4 |
| 62.5° | 2170.1 | 1305.2 | 27.1 | 20.7 | 13.0 | 8.9 | 7.4 | 6.8 | 5.5 | 4.9 | 4.9 |
| 65° | 2142.8 | 1187.4 | 18.9 | 14.8 | 9.5 | 6.6 | 5.5 | 5.5 | 4.0 | 3.3 | 3.1 |
| 67.5° | 1899.0 | 1003.2 | 14.4 | 11.0 | 6.8 | 4.9 | 4.2 | 4.8 | 2.4 | 1.5 | 1.5 |
| 69° | 1633.8 | 831.4 | 12.3 | 9.1 | 5.7 | 4.0 | 3.6 | 4.4 | 1.7 | 1.1 | 0.9 |
| 70° | 1420.0 | 717.2 | 11.2 | 7.9 | 4.8 | 3.4 | 3.3 | 4.2 | 1.7 | 0.9 | 0.7 |
| 72.5° | 849.6 | 400.0 | 8.5 | 5.7 | 3.1 | 2.6 | 2.6 | 4.8 | 1.7 | 0.9 | 0.7 |
| 75° | 343.4 | 140.9 | 6.2 | 4.0 | 2.2 | 2.2 | 3.3 | 6.1 | 1.5 | 0.7 | 0.6 |
| 77.5° | 77.9 | 30.8 | 3.6 | 2.4 | 1.5 | 2.2 | 3.8 | 4.8 | 0.9 | 0.4 | 0.0 |
| 80° | 18.9 | 7.5 | 2.2 | 1.5 | 0.9 | 1.7 | 2.8 | 2.6 | 0.2 | 0.0 | 0.0 |
| 82.5° | 6.2 | 2.6 | 0.9 | 0.7 | 0.2 | 0.6 | 1.3 | 0.7 | 0.0 | 0.0 | 0.0 |
| 85° | 2.6 | 1.5 | 0.4 | 0.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 1.7 | 0.6 | 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 | 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 |

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)