

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: P383574

Luminaire Tested: **GLEON-SA8C-735-U-T4FT-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P383574
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-17)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA8C-735-U-T4FT-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(8) 70 CRI, 3500K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37501.3 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

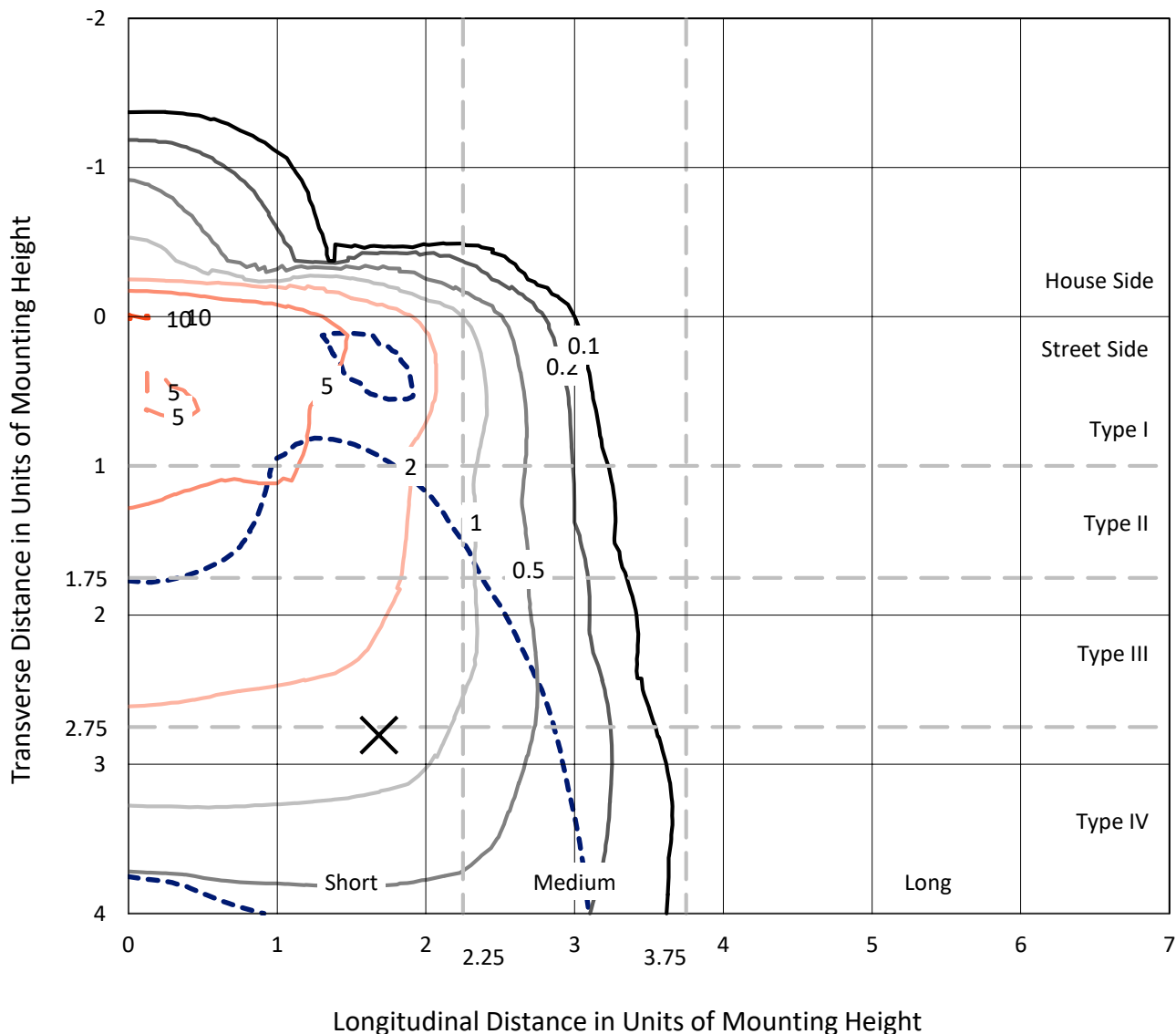
Input Watts (W): 445
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P383574
 CATALOG NUMBER: GLEON-SA8C-735-U-T4FT-HSS

Iso-Footcandle Lines of Horizontal Illumination

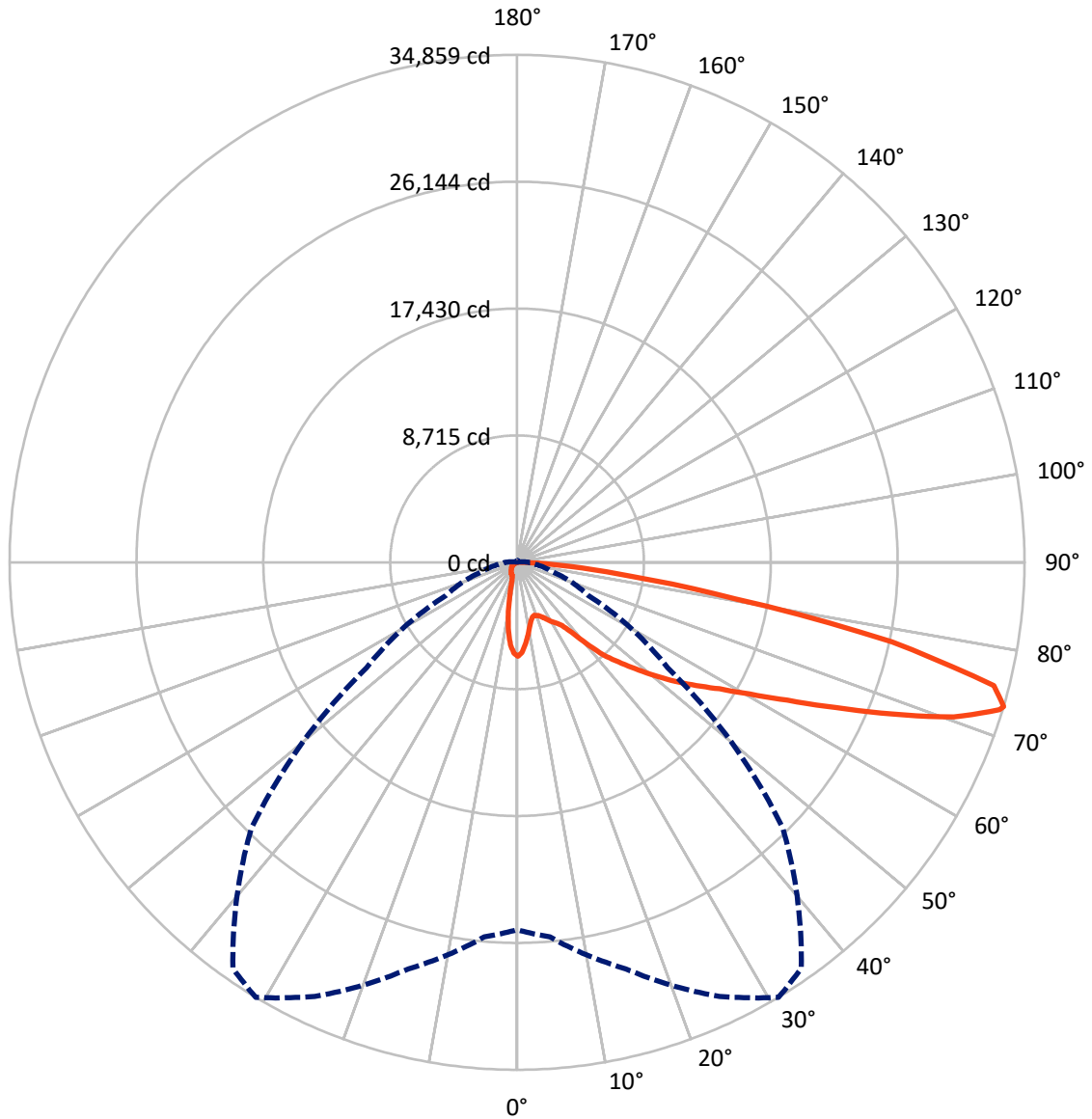
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 31-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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 CATALOG NUMBER: GLEON-SA8C-735-U-T4FT-HSS

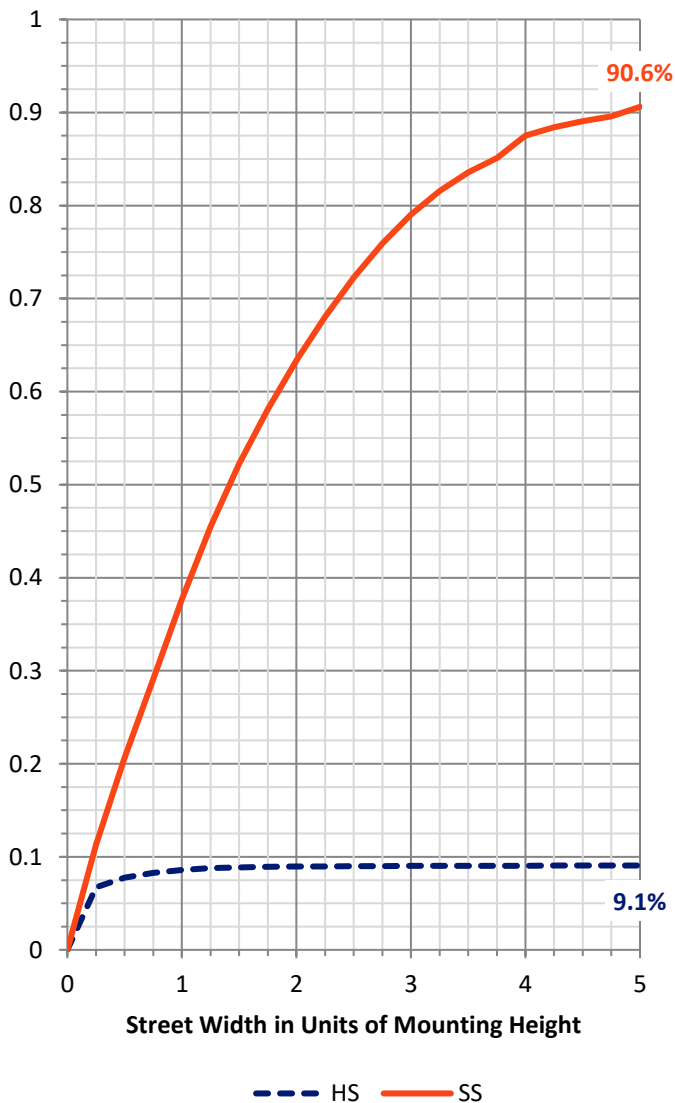
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3418.4 | 0.0 | 3418.4 |
| | % Fixture | 9.1 | 0.0 | 9.1 |
| Street Side | Lumens | 34082.9 | 0.0 | 34082.9 |
| | % Fixture | 90.9 | 0.0 | 90.9 |
| Total | Lumens | 37501.3 | 0.0 | 37501.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 535.0 | 1.4 |
| 10°-20° | 1161.6 | 3.1 |
| 20°-30° | 1740.4 | 4.6 |
| 30°-40° | 2769.0 | 7.4 |
| 40°-50° | 4944.6 | 13.2 |
| 50°-60° | 7672.6 | 20.5 |
| 60°-70° | 10199.7 | 27.2 |
| 70°-80° | 7672.3 | 20.5 |
| 80°-90° | 806.2 | 2.1 |
| 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° | 37501.3 | 100.0 |
| 0°-180° | 37501.3 | 100.0 |

Coefficient of Utilization

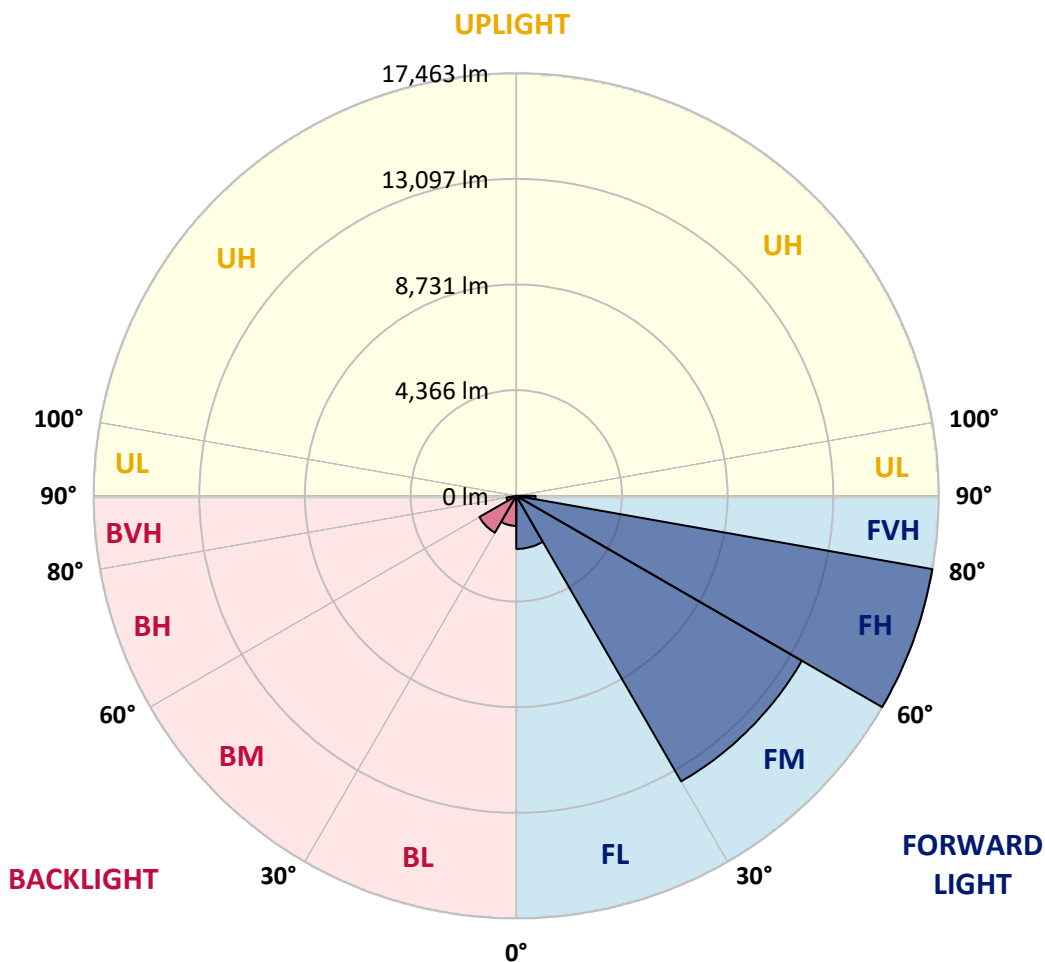


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 CATALOG NUMBER: GLEON-SA8C-735-U-T4FT-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 2193.9 | 5.9 | | | |
| FM (30°-60°) | 13626.7 | 36.3 | | | |
| FH (60°-80°) | 17463.0 | 46.6 | | | G5 |
| FVH (80°-90°) | 799.4 | 2.1 | | | G5 |
| BL (0°-30°) | 1243.1 | 3.3 | B3/2500 | | |
| BM (30°-60°) | 1759.5 | 4.7 | B2/2500 | | |
| BH (60°-80°) | 409.0 | 1.1 | B1/500 | | G1/500 |
| BVH (80°-90°) | 6.8 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5
 Type IV Short





REPORT NUMBER: P383574

CATALOG NUMBER: GLEON-SA8C-735-U-T4FT-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 31° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 |
| 2.5° | 6114.5 | 6140.2 | 6167.8 | 6173.3 | 6219.1 | 6221.0 | 6287.0 | 6336.6 | 6386.1 | 6433.8 | 6450.3 |
| 5° | 5486.9 | 5529.1 | 5578.7 | 5628.2 | 5725.5 | 5764.0 | 5925.5 | 6090.6 | 6248.4 | 6399.0 | 6472.4 |
| 7.5° | 4817.1 | 4864.8 | 4934.6 | 5057.5 | 5165.8 | 5241.0 | 5496.1 | 5789.8 | 6083.3 | 6360.4 | 6520.1 |
| 10° | 4206.0 | 4250.1 | 4323.5 | 4453.7 | 4620.8 | 4723.5 | 5066.7 | 5474.1 | 5905.4 | 6325.6 | 6591.6 |
| 12.5° | 3817.0 | 3840.9 | 3881.2 | 4020.7 | 4171.2 | 4286.8 | 4690.5 | 5195.1 | 5758.5 | 6323.7 | 6707.2 |
| 15° | 3745.4 | 3752.7 | 3719.8 | 3782.1 | 3899.6 | 4011.5 | 4420.8 | 4969.4 | 5646.6 | 6353.1 | 6857.8 |
| 17.5° | 3859.2 | 3855.5 | 3745.4 | 3738.1 | 3831.6 | 3923.4 | 4288.6 | 4813.4 | 5567.7 | 6421.0 | 7052.3 |
| 20° | 4031.7 | 4018.9 | 3828.0 | 3793.2 | 3892.2 | 3978.5 | 4279.4 | 4754.7 | 5538.3 | 6534.7 | 7289.0 |
| 22.5° | 4261.1 | 4239.1 | 3940.0 | 3903.3 | 4009.7 | 4099.6 | 4393.2 | 4811.6 | 5563.9 | 6687.1 | 7564.3 |
| 25° | 4545.5 | 4512.5 | 4132.6 | 4092.3 | 4200.5 | 4290.4 | 4596.9 | 4974.9 | 5641.1 | 6872.4 | 7912.9 |
| 27.5° | 4866.7 | 4819.0 | 4440.9 | 4336.4 | 4459.2 | 4552.8 | 4868.5 | 5224.5 | 5762.2 | 7068.8 | 8340.5 |
| 30° | 5169.4 | 5107.0 | 4765.7 | 4593.3 | 4743.7 | 4848.3 | 5162.1 | 5521.7 | 5956.7 | 7371.5 | 8925.9 |
| 32.5° | 5474.1 | 5404.4 | 5055.7 | 4850.1 | 4985.9 | 5099.8 | 5464.9 | 5931.0 | 6321.9 | 7834.0 | 9703.9 |
| 35° | 6175.0 | 6101.6 | 5674.1 | 5334.6 | 5332.7 | 5397.0 | 5888.8 | 6490.7 | 6804.5 | 8478.1 | 10632.5 |
| 37.5° | 7355.0 | 7312.8 | 6905.5 | 6261.3 | 6088.9 | 6017.2 | 6466.9 | 7158.7 | 7498.2 | 9364.5 | 11680.4 |
| 40° | 8646.9 | 8610.2 | 8153.3 | 7569.8 | 7307.3 | 7131.2 | 7296.3 | 8089.1 | 8478.1 | 10447.2 | 12750.2 |
| 42.5° | 10105.8 | 9931.5 | 9116.7 | 8942.4 | 8707.5 | 8573.5 | 8424.9 | 9236.0 | 9681.9 | 11625.3 | 13810.8 |
| 45° | 11430.7 | 11137.1 | 10080.2 | 9815.9 | 9762.7 | 9795.7 | 9878.3 | 10777.4 | 11036.2 | 13025.5 | 14867.9 |
| 47.5° | 12219.9 | 11988.6 | 11177.5 | 10924.3 | 10909.6 | 11128.0 | 11751.9 | 12519.0 | 12385.0 | 14245.8 | 15798.3 |
| 50° | 12970.4 | 12761.2 | 12087.8 | 12150.2 | 12218.0 | 12515.3 | 13878.8 | 14310.1 | 13616.3 | 15352.4 | 16651.6 |
| 52.5° | 13577.9 | 13258.5 | 12906.2 | 13256.7 | 13590.7 | 14069.6 | 16073.6 | 15917.5 | 14489.9 | 16233.2 | 17381.9 |
| 55° | 13928.3 | 13783.4 | 13954.0 | 14306.3 | 14933.9 | 15712.0 | 18145.3 | 17255.3 | 15128.5 | 17037.0 | 17868.3 |
| 57.5° | 15212.9 | 14928.4 | 15268.0 | 15572.6 | 16391.0 | 17479.3 | 19919.9 | 18251.8 | 15589.1 | 17534.3 | 17980.2 |
| 60° | 16767.2 | 16537.9 | 16737.9 | 17244.3 | 18349.1 | 19628.1 | 21578.8 | 19064.8 | 15829.5 | 17853.6 | 17690.3 |
| 62.5° | 19240.9 | 18938.2 | 18813.3 | 19380.4 | 20844.8 | 22241.3 | 22837.7 | 19628.1 | 15776.3 | 17712.3 | 16695.7 |
| 65° | 22555.1 | 22241.3 | 21683.4 | 22197.3 | 24059.8 | 25045.3 | 24245.2 | 19747.4 | 15409.3 | 16569.1 | 14181.6 |
| 67.5° | 25950.0 | 25722.5 | 25245.3 | 26111.5 | 27792.4 | 28109.9 | 25733.4 | 19457.4 | 14227.4 | 13434.7 | 10019.6 |
| 70° | 28192.4 | 28095.2 | 28405.4 | 30321.2 | 31820.5 | 31728.7 | 27098.8 | 17899.5 | 11089.4 | 8261.6 | 4956.6 |
| 72.5° | 26575.7 | 27041.9 | 29332.1 | 32805.9 | 34637.4 | 33888.6 | 26397.7 | 13744.8 | 6338.4 | 3178.3 | 1433.2 |
| 73° | 25236.2 | 25832.6 | 28915.5 | 32899.5 | 34859.3 | 34039.1 | 25808.7 | 12616.2 | 5402.5 | 2508.6 | 1086.4 |
| 75° | 17556.3 | 18288.5 | 23938.7 | 30640.5 | 33820.7 | 32431.6 | 21512.8 | 7722.1 | 2503.1 | 1112.1 | 438.6 |
| 77.5° | 8524.0 | 9065.4 | 13181.5 | 22138.5 | 26302.3 | 25338.9 | 13392.5 | 2877.5 | 1130.4 | 695.5 | 201.9 |
| 80° | 3182.1 | 3538.0 | 5721.8 | 11267.4 | 15200.1 | 15598.3 | 5890.6 | 1088.2 | 752.4 | 559.7 | 102.7 |
| 82.5° | 833.2 | 928.6 | 2110.3 | 5024.5 | 7790.0 | 8153.3 | 1857.1 | 548.7 | 550.5 | 460.7 | 62.4 |
| 85° | 266.0 | 304.6 | 658.8 | 2255.4 | 3670.2 | 3222.4 | 484.5 | 266.0 | 400.0 | 343.2 | 34.8 |
| 87.5° | 33.1 | 42.2 | 209.2 | 530.3 | 809.2 | 449.6 | 75.3 | 78.9 | 170.7 | 190.9 | 20.2 |
| 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: P383574

CATALOG NUMBER: GLEON-SA8C-735-U-T4FT-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 | 6452.2 |
| 2.5° | 6466.9 | 6457.7 | 6459.5 | 6411.8 | 6380.6 | 6318.2 | 6253.9 | 6224.6 | 6193.4 | 6180.5 | 6193.4 |
| 5° | 6499.9 | 6483.4 | 6435.7 | 6288.9 | 6132.8 | 5931.0 | 5742.0 | 5598.9 | 5419.0 | 5369.4 | 5420.9 |
| 7.5° | 6551.3 | 6518.2 | 6378.8 | 6079.7 | 5732.8 | 5347.5 | 4914.4 | 4598.8 | 4340.0 | 4173.0 | 4233.5 |
| 10° | 6626.5 | 6564.2 | 6283.4 | 5775.0 | 5154.8 | 4472.1 | 3857.4 | 3378.4 | 3038.9 | 2899.4 | 2893.9 |
| 12.5° | 6753.2 | 6635.7 | 6165.9 | 5378.7 | 4448.2 | 3538.0 | 2732.4 | 2213.1 | 1937.9 | 1759.9 | 1756.2 |
| 15° | 6892.6 | 6720.1 | 6017.2 | 4903.4 | 3626.1 | 2534.3 | 1759.9 | 1365.3 | 1187.3 | 1130.4 | 1123.1 |
| 17.5° | 7063.3 | 6817.3 | 5824.6 | 4318.0 | 2765.5 | 1679.1 | 1148.8 | 1034.9 | 1027.7 | 1022.2 | 1022.2 |
| 20° | 7278.0 | 6932.9 | 5576.8 | 3648.1 | 1961.7 | 1121.2 | 976.3 | 983.6 | 987.3 | 979.9 | 981.8 |
| 22.5° | 7527.6 | 7050.4 | 5281.4 | 2928.8 | 1326.8 | 937.7 | 934.1 | 943.2 | 946.9 | 943.2 | 945.1 |
| 25° | 7817.5 | 7186.2 | 4921.7 | 2174.6 | 957.9 | 890.0 | 899.2 | 912.1 | 921.2 | 921.2 | 921.2 |
| 27.5° | 8177.1 | 7351.4 | 4488.7 | 1517.6 | 827.6 | 840.4 | 866.2 | 890.0 | 902.9 | 906.5 | 906.5 |
| 30° | 8645.1 | 7556.9 | 3969.3 | 1040.5 | 752.4 | 774.4 | 822.1 | 868.0 | 891.9 | 895.5 | 897.4 |
| 32.5° | 9236.0 | 7788.1 | 3367.4 | 768.9 | 688.1 | 704.7 | 756.0 | 833.2 | 879.0 | 886.4 | 886.4 |
| 35° | 9913.2 | 8056.0 | 2719.6 | 669.8 | 642.3 | 647.8 | 688.1 | 776.3 | 857.0 | 877.1 | 879.0 |
| 37.5° | 10654.6 | 8320.3 | 2068.1 | 625.7 | 603.7 | 603.7 | 633.1 | 708.3 | 803.7 | 866.2 | 873.5 |
| 40° | 11346.3 | 8480.0 | 1449.8 | 590.9 | 568.9 | 568.9 | 594.6 | 649.7 | 739.6 | 833.2 | 853.3 |
| 42.5° | 11985.0 | 8535.0 | 1009.3 | 557.9 | 535.8 | 541.3 | 563.4 | 607.4 | 675.3 | 768.9 | 787.3 |
| 45° | 12641.9 | 8525.8 | 735.8 | 519.3 | 502.8 | 519.3 | 535.8 | 568.9 | 618.5 | 671.6 | 675.3 |
| 47.5° | 13137.4 | 8448.8 | 583.5 | 482.6 | 471.6 | 493.6 | 508.3 | 530.3 | 557.9 | 554.2 | 554.2 |
| 50° | 13601.7 | 8261.6 | 469.8 | 433.1 | 440.4 | 466.1 | 473.4 | 480.8 | 482.6 | 447.8 | 444.1 |
| 52.5° | 13954.0 | 7969.8 | 376.2 | 379.9 | 409.2 | 434.9 | 427.6 | 416.6 | 398.2 | 356.0 | 348.7 |
| 55° | 14071.5 | 7408.2 | 295.5 | 313.8 | 363.3 | 396.4 | 368.9 | 345.0 | 310.1 | 275.3 | 267.9 |
| 57.5° | 13858.6 | 6683.4 | 240.4 | 244.1 | 306.5 | 334.0 | 302.8 | 275.3 | 236.7 | 207.4 | 201.9 |
| 60° | 13407.2 | 5877.8 | 198.2 | 183.5 | 236.7 | 260.6 | 240.4 | 212.9 | 178.0 | 155.9 | 154.2 |
| 62.5° | 12511.6 | 5019.0 | 163.3 | 143.2 | 179.9 | 200.0 | 187.1 | 167.0 | 137.6 | 123.0 | 121.1 |
| 65° | 10628.9 | 4015.2 | 132.1 | 115.6 | 139.5 | 155.9 | 144.9 | 130.3 | 108.2 | 97.3 | 95.4 |
| 67.5° | 7419.3 | 2714.1 | 108.2 | 95.4 | 110.1 | 123.0 | 113.7 | 106.5 | 86.3 | 84.4 | 86.3 |
| 70° | 3578.4 | 1308.5 | 89.9 | 77.0 | 86.3 | 95.4 | 91.8 | 86.3 | 82.5 | 95.4 | 110.1 |
| 72.5° | 1025.8 | 438.6 | 71.5 | 64.2 | 69.8 | 75.3 | 78.9 | 77.0 | 89.9 | 115.6 | 134.0 |
| 73° | 789.1 | 354.2 | 67.9 | 60.6 | 66.0 | 73.4 | 77.0 | 75.3 | 91.8 | 117.5 | 134.0 |
| 75° | 337.7 | 170.7 | 51.4 | 49.6 | 55.1 | 64.2 | 67.9 | 67.9 | 91.8 | 119.2 | 128.5 |
| 77.5° | 152.3 | 91.8 | 33.1 | 38.6 | 47.7 | 51.4 | 56.9 | 56.9 | 73.4 | 91.8 | 91.8 |
| 80° | 86.3 | 49.6 | 25.7 | 29.3 | 34.8 | 34.8 | 34.8 | 31.2 | 33.1 | 36.7 | 40.3 |
| 82.5° | 55.1 | 33.1 | 20.2 | 23.8 | 22.0 | 18.4 | 14.7 | 14.7 | 12.9 | 14.7 | 18.4 |
| 85° | 31.2 | 18.4 | 18.4 | 14.7 | 9.1 | 7.4 | 9.1 | 7.4 | 1.9 | 0.0 | 1.9 |
| 87.5° | 18.4 | 11.0 | 5.5 | 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)