

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: P642241

Luminaire Tested: GWS-SA6C-740-U-T3R-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P642241
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA6C-740-U-T3R-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (96) 4000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24894.6 lumens
Efficiency: N/A
Efficacy: 131.6 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

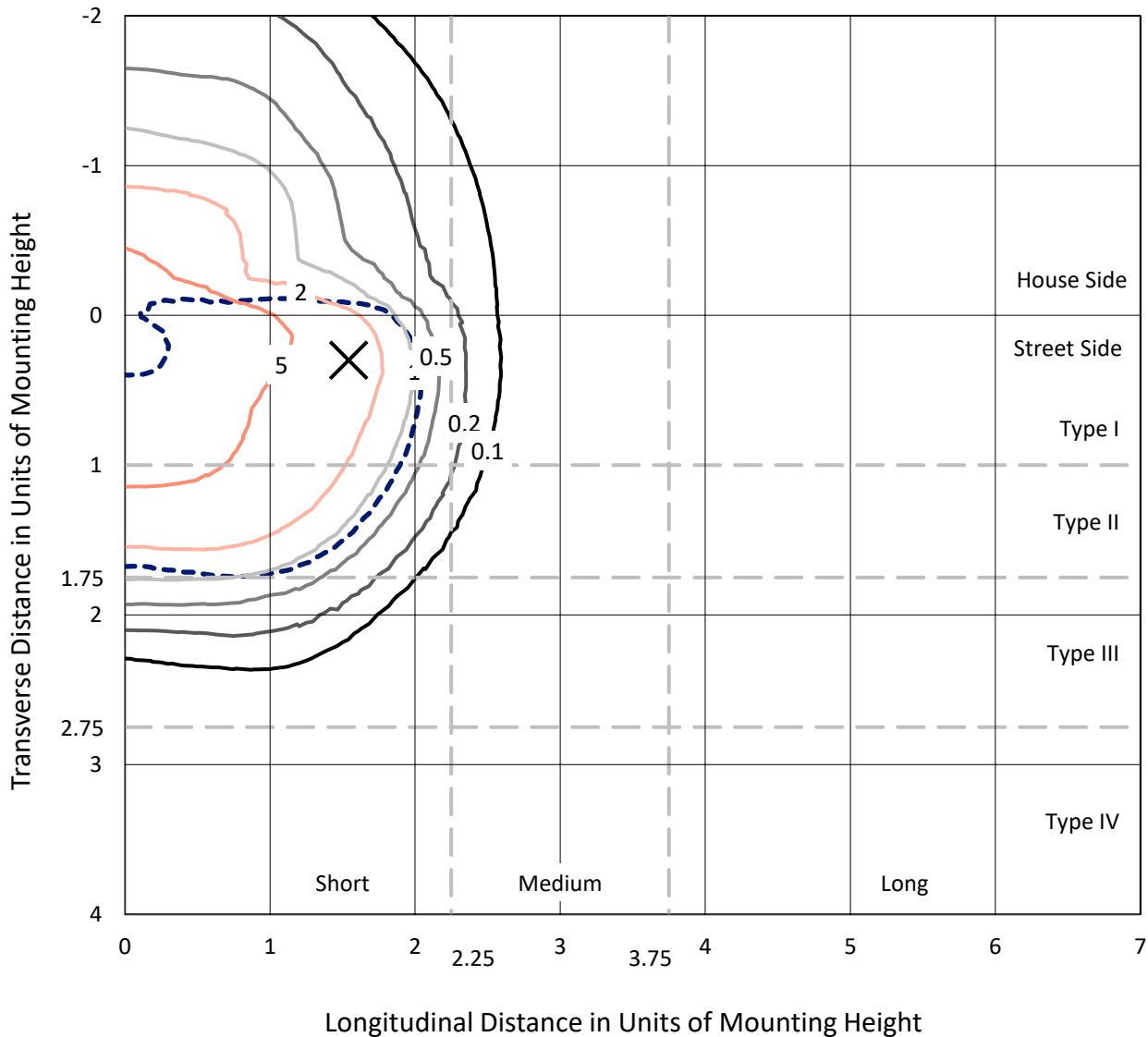
Input Watts (W): 189.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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 CATALOG NUMBER: GWS-SA6C-740-U-T3R-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination

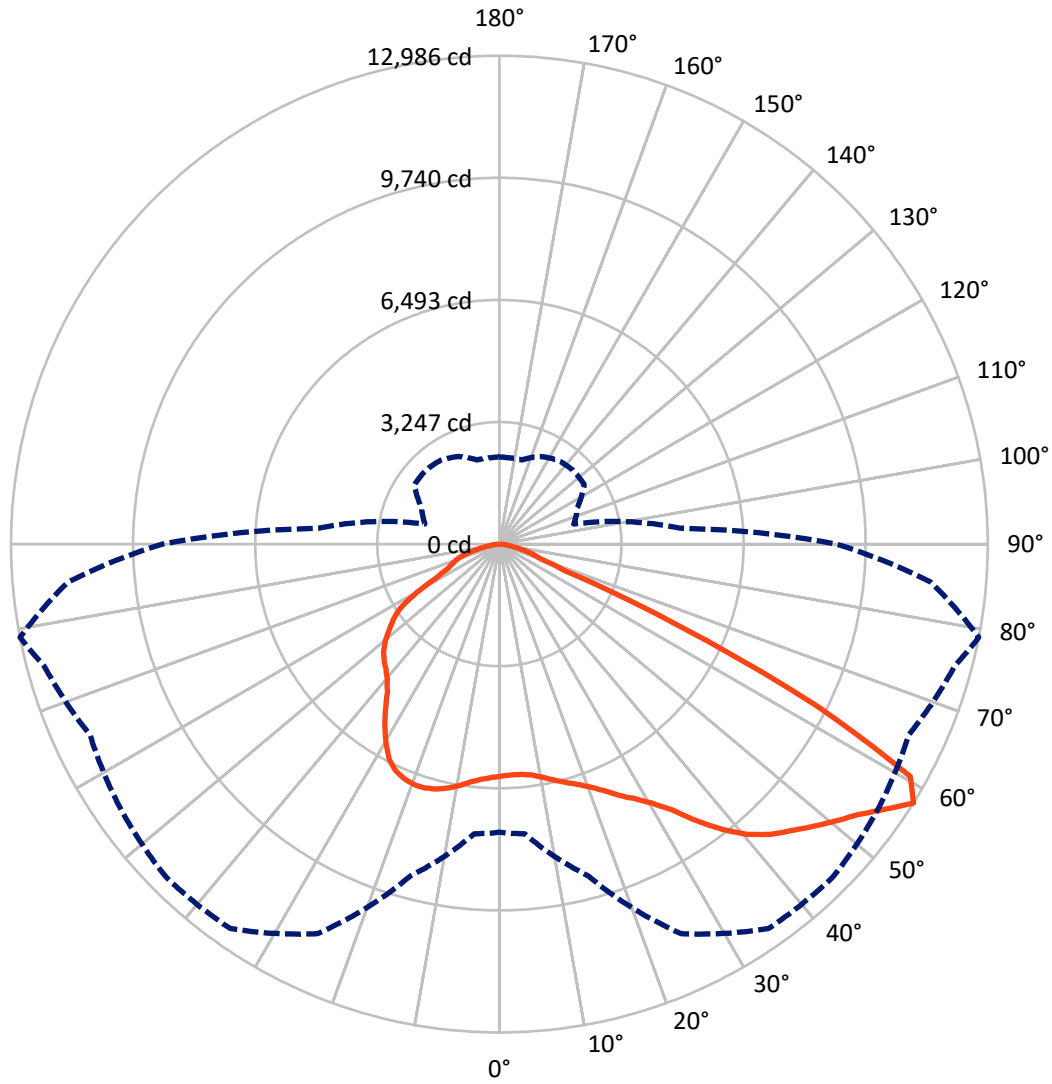
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10 fc
 Type II - Short - N/A

REPORT NUMBER: P642241
CATALOG NUMBER: GWS-SA6C-740-U-T3R-W-GRSWH

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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CATALOG NUMBER: GWS-SA6C-740-U-T3R-W-GRSWH

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7400.0 | 0.0 | 7400.0 |
| | % Fixture | 29.7 | 0.0 | 29.7 |
| Street Side | Lumens | 17494.6 | 0.0 | 17494.6 |
| | % Fixture | 70.3 | 0.0 | 70.3 |
| Total | Lumens | 24894.6 | 0.0 | 24894.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 571.3 | 2.3 |
| 10°-20° | 1587.8 | 6.4 |
| 20°-30° | 2691.3 | 10.8 |
| 30°-40° | 4119.4 | 16.5 |
| 40°-50° | 5492.9 | 22.1 |
| 50°-60° | 6343.9 | 25.5 |
| 60°-70° | 3296.5 | 13.2 |
| 70°-80° | 700.7 | 2.8 |
| 80°-90° | 90.8 | 0.4 |
| 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° | 24894.6 | 100.0 |
| 0°-180° | 24894.6 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P642241

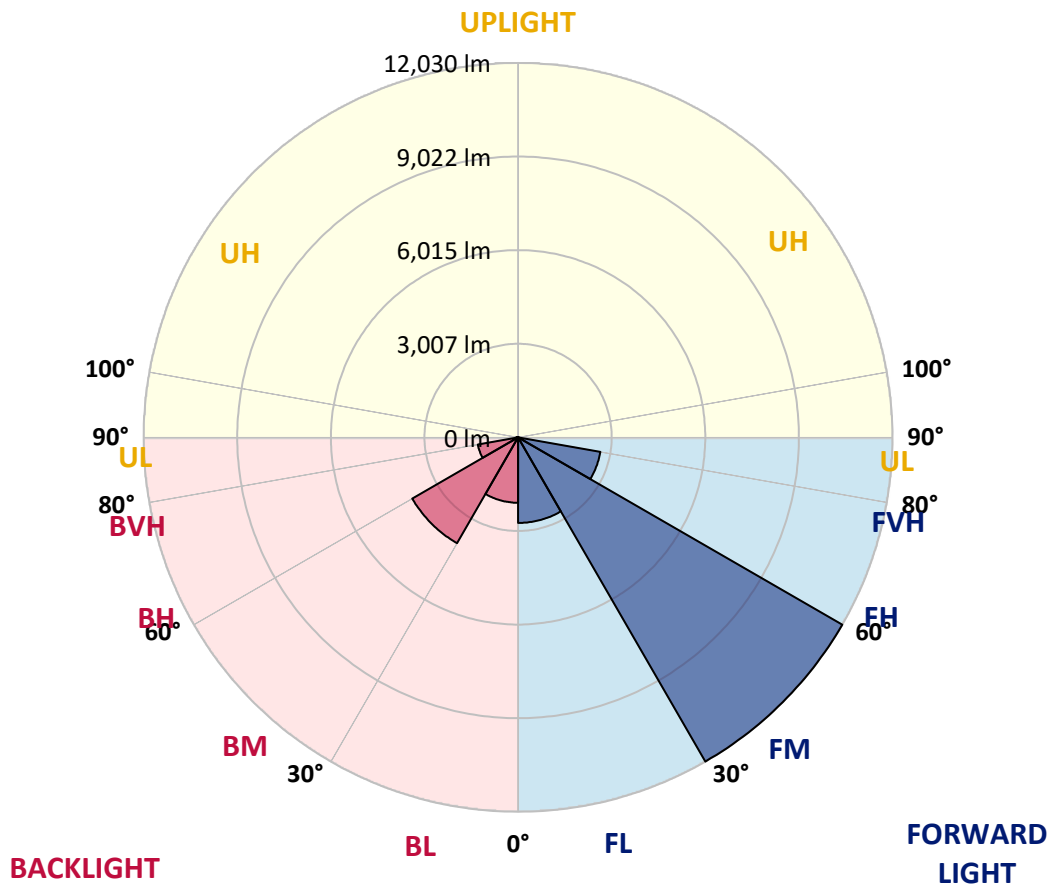
CATALOG NUMBER: GWS-SA6C-740-U-T3R-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2748.9 | 11.0 | | | |
| FM (30°-60°) | 12029.8 | 48.3 | | | |
| FH (60°-80°) | 2684.3 | 10.8 | | | G2/5000 |
| FVH (80°-90°) | 31.6 | 0.1 | | | G1/100 |
| BL (0°-30°) | 2101.5 | 8.4 | B3/2500 | | |
| BM (30°-60°) | 3926.4 | 15.8 | B3/5000 | | |
| BH (60°-80°) | 1313.0 | 5.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 59.1 | 0.2 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 |
| 2.5° | 5888.6 | 5876.4 | 5880.4 | 5896.7 | 5957.8 | 6002.6 | 6049.4 | 6092.1 | 6132.8 | 6145.0 | 6155.2 |
| 5° | 5678.9 | 5656.5 | 5662.6 | 5689.1 | 5760.3 | 5835.6 | 5919.1 | 6020.9 | 6118.6 | 6151.1 | 6193.9 |
| 7.5° | 5530.3 | 5526.3 | 5536.4 | 5577.1 | 5652.5 | 5723.7 | 5831.6 | 5976.1 | 6145.0 | 6200.0 | 6275.3 |
| 10° | 5332.9 | 5324.7 | 5365.5 | 5448.9 | 5573.1 | 5687.1 | 5815.3 | 5986.3 | 6222.4 | 6303.8 | 6419.8 |
| 12.5° | 5176.2 | 5172.1 | 5214.8 | 5330.9 | 5489.6 | 5670.8 | 5847.9 | 6039.2 | 6326.2 | 6438.1 | 6580.6 |
| 15° | 5267.8 | 5249.4 | 5251.5 | 5332.9 | 5475.4 | 5689.1 | 5929.3 | 6134.9 | 6430.0 | 6572.5 | 6755.7 |
| 17.5° | 5534.4 | 5501.8 | 5477.4 | 5491.7 | 5573.1 | 5794.9 | 6053.4 | 6263.1 | 6550.1 | 6717.0 | 6940.9 |
| 20° | 5902.8 | 5884.5 | 5817.3 | 5772.5 | 5790.9 | 5986.3 | 6248.8 | 6444.2 | 6706.8 | 6894.1 | 7134.3 |
| 22.5° | 6397.4 | 6352.6 | 6261.1 | 6189.8 | 6134.9 | 6287.5 | 6529.7 | 6698.7 | 6924.6 | 7120.0 | 7370.4 |
| 25° | 7010.1 | 6945.0 | 6800.4 | 6688.5 | 6570.4 | 6727.2 | 6942.9 | 7071.2 | 7223.8 | 7405.0 | 7643.1 |
| 27.5° | 7635.0 | 7580.0 | 7419.2 | 7268.6 | 7122.0 | 7219.8 | 7476.2 | 7549.5 | 7533.2 | 7665.5 | 7869.1 |
| 30° | 8300.6 | 8231.4 | 8078.7 | 7915.9 | 7726.6 | 7789.7 | 8019.7 | 8056.3 | 7883.3 | 7993.2 | 8131.6 |
| 32.5° | 9002.8 | 8935.6 | 8803.3 | 8614.0 | 8400.3 | 8424.7 | 8487.8 | 8522.4 | 8357.6 | 8420.7 | 8526.5 |
| 35° | 9717.3 | 9654.2 | 9519.8 | 9332.6 | 9175.8 | 9027.2 | 8868.5 | 9006.9 | 8911.2 | 9033.3 | 9025.2 |
| 37.5° | 10370.6 | 10307.5 | 10224.1 | 10079.6 | 9810.9 | 9517.8 | 9151.4 | 9322.4 | 9471.0 | 9625.7 | 9599.2 |
| 40° | 10812.3 | 10769.6 | 10789.9 | 10767.5 | 10421.5 | 9841.4 | 9289.8 | 9477.1 | 9882.1 | 10146.7 | 10132.5 |
| 42.5° | 11193.0 | 11150.2 | 11268.3 | 11353.8 | 10946.7 | 10140.6 | 9357.0 | 9536.1 | 10144.7 | 10557.9 | 10537.5 |
| 45° | 11361.9 | 11349.7 | 11545.1 | 11815.8 | 11427.0 | 10458.2 | 9530.0 | 9658.2 | 10344.2 | 10873.4 | 10796.0 |
| 47.5° | 11160.4 | 11203.1 | 11587.8 | 12045.8 | 11826.0 | 10834.7 | 9884.2 | 9916.7 | 10604.7 | 11215.3 | 10997.6 |
| 50° | 10759.4 | 10853.0 | 11372.1 | 12051.9 | 12117.1 | 11260.1 | 10374.7 | 10293.3 | 10954.8 | 11579.7 | 11103.4 |
| 52.5° | 10175.2 | 10272.9 | 11119.7 | 12005.1 | 12284.0 | 11752.7 | 11028.1 | 10912.1 | 11396.5 | 11944.0 | 11121.7 |
| 55° | 8833.9 | 8966.2 | 10541.6 | 11899.3 | 12446.8 | 12200.5 | 11764.9 | 11528.8 | 11966.4 | 12444.8 | 11302.9 |
| 57.5° | 7663.5 | 7732.7 | 9133.1 | 11429.1 | 12479.4 | 12530.2 | 12290.1 | 12009.2 | 12532.3 | 12986.2 | 11506.4 |
| 60° | 5624.0 | 5640.2 | 6900.2 | 9456.7 | 11480.0 | 12338.9 | 12247.3 | 11830.1 | 12263.6 | 12552.6 | 10574.2 |
| 62.5° | 3177.3 | 3179.4 | 4184.9 | 6311.9 | 8575.4 | 10057.2 | 10114.2 | 9745.7 | 9381.4 | 9466.9 | 7360.2 |
| 65° | 1192.8 | 1304.7 | 1911.3 | 3102.0 | 4944.1 | 5937.4 | 6173.5 | 6259.0 | 5652.5 | 5275.9 | 3946.7 |
| 67.5° | 797.9 | 824.4 | 1115.4 | 1595.8 | 2200.3 | 2540.2 | 2841.5 | 2849.6 | 2084.3 | 1858.4 | 1555.1 |
| 70° | 608.6 | 635.1 | 877.3 | 1141.9 | 1115.4 | 1029.9 | 1113.4 | 1082.9 | 1119.5 | 1150.0 | 1182.6 |
| 72.5° | 453.9 | 480.4 | 679.8 | 806.0 | 669.7 | 659.5 | 747.0 | 830.5 | 907.8 | 940.4 | 991.3 |
| 75° | 301.2 | 321.6 | 458.0 | 431.5 | 370.5 | 437.6 | 545.5 | 629.0 | 673.7 | 712.4 | 751.1 |
| 77.5° | 191.3 | 205.6 | 244.3 | 197.4 | 205.6 | 256.5 | 317.5 | 392.8 | 435.6 | 474.3 | 494.6 |
| 80° | 87.5 | 85.5 | 83.5 | 93.6 | 116.0 | 150.6 | 191.3 | 236.1 | 268.7 | 285.0 | 297.2 |
| 82.5° | 34.6 | 38.7 | 42.7 | 50.9 | 63.1 | 81.4 | 107.9 | 138.4 | 164.9 | 168.9 | 179.1 |
| 85° | 14.2 | 16.3 | 18.3 | 22.4 | 28.5 | 36.6 | 44.8 | 63.1 | 79.4 | 85.5 | 91.6 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 4.1 | 6.1 | 10.2 | 18.3 | 20.4 | 22.4 |
| 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: P642241

CATALOG NUMBER: GWS-SA6C-740-U-T3R-W-GRSWH

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 | 6169.5 |
| 2.5° | 6210.2 | 6183.7 | 6228.5 | 6259.0 | 6287.5 | 6257.0 | 6246.8 | 6220.3 | 6216.3 | 6216.3 | 6230.5 |
| 5° | 6267.2 | 6248.8 | 6295.7 | 6314.0 | 6311.9 | 6244.8 | 6204.1 | 6151.1 | 6124.7 | 6124.7 | 6128.7 |
| 7.5° | 6368.9 | 6358.8 | 6385.2 | 6356.7 | 6291.6 | 6155.2 | 6020.9 | 5908.9 | 5833.6 | 5794.9 | 5807.1 |
| 10° | 6537.9 | 6525.7 | 6503.3 | 6397.4 | 6210.2 | 5927.2 | 5652.5 | 5448.9 | 5326.8 | 5257.6 | 5261.6 |
| 12.5° | 6702.7 | 6682.4 | 6603.0 | 6368.9 | 5984.2 | 5534.4 | 5174.1 | 4946.2 | 4811.8 | 4730.4 | 4712.1 |
| 15° | 6883.9 | 6831.0 | 6660.0 | 6222.4 | 5615.8 | 5054.0 | 4677.5 | 4431.2 | 4286.7 | 4237.8 | 4235.8 |
| 17.5° | 7056.9 | 6963.3 | 6653.9 | 5961.8 | 5174.1 | 4551.3 | 4172.7 | 4020.0 | 3995.6 | 4018.0 | 4024.1 |
| 20° | 7232.0 | 7081.3 | 6586.7 | 5601.6 | 4649.0 | 4050.6 | 3855.1 | 3918.2 | 4009.8 | 4070.9 | 4085.2 |
| 22.5° | 7413.1 | 7179.0 | 6434.1 | 5137.5 | 4095.3 | 3712.7 | 3794.1 | 3932.5 | 4046.5 | 4127.9 | 4136.0 |
| 25° | 7616.7 | 7270.6 | 6206.1 | 4569.6 | 3651.6 | 3619.0 | 3779.8 | 3926.4 | 4048.5 | 4142.1 | 4158.4 |
| 27.5° | 7732.7 | 7272.7 | 5886.5 | 3985.4 | 3448.1 | 3582.4 | 3745.2 | 3883.6 | 4005.8 | 4107.5 | 4125.9 |
| 30° | 7846.7 | 7217.7 | 5379.7 | 3511.2 | 3389.0 | 3539.7 | 3686.2 | 3814.4 | 3930.5 | 4030.2 | 4052.6 |
| 32.5° | 8007.5 | 7166.8 | 4795.5 | 3238.4 | 3354.4 | 3498.9 | 3619.0 | 3733.0 | 3822.6 | 3867.4 | 3879.6 |
| 35° | 8206.9 | 7101.7 | 4174.7 | 3120.3 | 3332.0 | 3466.4 | 3572.2 | 3633.3 | 3517.3 | 3492.8 | 3519.3 |
| 37.5° | 8485.8 | 7040.6 | 3555.9 | 3069.5 | 3317.8 | 3454.2 | 3547.8 | 3391.1 | 3248.6 | 3191.6 | 3211.9 |
| 40° | 8787.0 | 7006.0 | 3136.6 | 3028.8 | 3323.9 | 3466.4 | 3446.0 | 3214.0 | 3008.4 | 2888.3 | 2884.2 |
| 42.5° | 9043.5 | 6953.1 | 2868.0 | 3002.3 | 3340.2 | 3513.2 | 3307.6 | 3057.3 | 2751.9 | 2680.7 | 2682.7 |
| 45° | 9216.5 | 6818.8 | 2725.5 | 2973.8 | 3354.4 | 3523.4 | 3242.5 | 2841.5 | 2623.7 | 2578.9 | 2576.9 |
| 47.5° | 9287.8 | 6574.5 | 2633.9 | 2929.0 | 3352.4 | 3439.9 | 3110.2 | 2751.9 | 2534.1 | 2521.9 | 2530.1 |
| 50° | 9241.0 | 6173.5 | 2540.2 | 2841.5 | 3303.5 | 3352.4 | 2957.5 | 2672.5 | 2473.1 | 2540.2 | 2589.1 |
| 52.5° | 9067.9 | 5654.5 | 2428.3 | 2721.4 | 3216.0 | 3252.7 | 2880.2 | 2623.7 | 2428.3 | 2517.9 | 2556.5 |
| 55° | 9023.2 | 5233.1 | 2285.8 | 2564.7 | 3085.7 | 3075.6 | 2798.7 | 2599.3 | 2397.8 | 2363.2 | 2369.3 |
| 57.5° | 8964.1 | 4822.0 | 2049.7 | 2283.8 | 2756.0 | 2772.3 | 2721.4 | 2570.8 | 2318.4 | 2308.2 | 2318.4 |
| 60° | 7787.6 | 3696.4 | 1827.8 | 1970.3 | 2263.4 | 2350.9 | 2633.9 | 2517.9 | 2190.1 | 2147.4 | 2145.4 |
| 62.5° | 5086.6 | 2239.0 | 1626.3 | 1717.9 | 1844.1 | 1945.9 | 2401.8 | 2365.2 | 2049.7 | 2023.2 | 2041.6 |
| 65° | 2735.6 | 1595.8 | 1479.8 | 1534.7 | 1603.9 | 1681.3 | 1990.7 | 2106.7 | 1852.3 | 1758.6 | 1760.7 |
| 67.5° | 1398.4 | 1357.6 | 1369.9 | 1408.5 | 1461.5 | 1500.1 | 1606.0 | 1707.7 | 1579.5 | 1500.1 | 1498.1 |
| 70° | 1196.8 | 1229.4 | 1247.7 | 1270.1 | 1304.7 | 1298.6 | 1308.8 | 1327.1 | 1316.9 | 1278.3 | 1276.2 |
| 72.5° | 1019.8 | 1070.6 | 1074.7 | 1078.8 | 1091.0 | 1062.5 | 1044.2 | 1013.7 | 1015.7 | 1021.8 | 1023.8 |
| 75° | 775.5 | 824.4 | 836.6 | 830.5 | 842.7 | 806.0 | 781.6 | 751.1 | 714.4 | 708.3 | 712.4 |
| 77.5° | 504.8 | 543.5 | 561.8 | 557.7 | 563.8 | 535.3 | 523.1 | 490.5 | 447.8 | 431.5 | 431.5 |
| 80° | 305.3 | 327.7 | 342.0 | 346.0 | 352.1 | 331.8 | 311.4 | 282.9 | 264.6 | 246.3 | 246.3 |
| 82.5° | 185.2 | 199.5 | 209.7 | 209.7 | 215.8 | 193.4 | 177.1 | 156.7 | 148.6 | 132.3 | 132.3 |
| 85° | 93.6 | 103.8 | 107.9 | 105.8 | 101.8 | 83.5 | 77.3 | 67.2 | 63.1 | 55.0 | 55.0 |
| 87.5° | 22.4 | 28.5 | 28.5 | 20.4 | 20.4 | 10.2 | 6.1 | 2.0 | 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

MCGRAW, INVUE, LUMARK AND STREETWORKS

DATA VALID FOR LUMINIAIRES UTILIZING SA LIGHT ENGINES

Report Number: SP1-2101-121-2

Luminaire Tested: IFLD-S-SA2A-740-U-T3R-HSS

Test Date: 03/05/2021

Test Information

Test Method: LM-79-08
 Report Number: SP1-2101-121-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 03/05/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: **IFLD-S-SA2A-740-U-T3R-HSS**
 Description: STREETWORKS INF FLOOD

SHIELD, DRIVER PROGRAMMED @ 615mA.

Spectral Parameters

| | | | | | |
|---------------------------|---------|-----------|------|------|-------|
| CCT (K): | 3905 | CRI (Ra): | 71.2 | R9: | -29.7 |
| CIE u': | 0.2273 | R1: | 68.9 | R10: | 46.2 |
| CIE v': | 0.5024 | R2: | 77.0 | R11: | 68.8 |
| Duv: | -0.0008 | R3: | 84.0 | R12: | 45.6 |
| CIE x: | 0.3841 | R4: | 71.6 | R13: | 69.5 |
| CIE y: | 0.3774 | R5: | 68.9 | R14: | 90.7 |
| CIE z: | 0.2385 | R6: | 68.3 | | |
| Peak Wavelength (nm): | 443 | R7: | 78.7 | | |
| Dominant Wavelength (nm): | 579 | R8: | 52.2 | | |
| Purity: | 28.7 | | | | |
| Rf: | 71.7 | | | | |
| Rg: | 96.9 | | | | |



Test Conditions

Stabilization Time: 211M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.8/312%
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2101-121-2

| 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: SP1-2101-121-2

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-2

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 | 2304 | 0.0 | 490 | 19043 | 2.7 | 620 | 97577 | 25.4 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 4.8 | 625 | 90158 | 19.9 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 8.0 | 630 | 82240 | 14.9 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 13.3 | 635 | 74361 | 11.2 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 20.2 | 640 | 66994 | 8.0 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 28.5 | 645 | 60405 | 5.8 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 37.4 | 650 | 53806 | 3.9 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 44.9 | 655 | 47610 | 2.7 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 52.6 | 660 | 42018 | 1.8 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.0 | 535 | 94097 | 58.4 | 665 | 36742 | 1.2 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.0 | 540 | 96845 | 63.1 | 670 | 32105 | 0.7 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.0 | 545 | 100829 | 67.1 | 675 | 27946 | 0.5 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 0.1 | 550 | 105648 | 71.8 | 680 | 24146 | 0.3 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 0.2 | 555 | 110017 | 75.1 | 685 | 21191 | 0.2 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 0.5 | 560 | 114586 | 77.9 | 690 | 18544 | 0.1 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 1.2 | 565 | 118987 | 79.1 | 695 | 16058 | 0.1 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 2.1 | 570 | 122326 | 79.5 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 2.9 | 575 | 125968 | 78.4 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 2.7 | 580 | 127613 | 75.8 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 2.0 | 585 | 129466 | 71.9 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 1.5 | 590 | 128813 | 66.6 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 1.3 | 595 | 126387 | 59.9 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 1.0 | 600 | 123477 | 53.2 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 1.1 | 605 | 118718 | 46.0 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 1.2 | 610 | 112091 | 38.5 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 1.7 | 615 | 105039 | 31.7 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-2

Scotopic Flux vs. Wavelength



Scotopic Lumens: 10425.8 S/P: 1.47

| 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 | 2304 | 0.0 | 490 | 19043 | 29.3 | 620 | 97577 | 1.2 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 43.0 | 625 | 90158 | 0.8 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 60.8 | 630 | 82240 | 0.5 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 81.1 | 635 | 74361 | 0.3 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 99.6 | 640 | 66994 | 0.2 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 113.9 | 645 | 60405 | 0.1 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 122.6 | 650 | 53806 | 0.1 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 125.0 | 655 | 47610 | 0.0 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 123.1 | 660 | 42018 | 0.0 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.1 | 535 | 94097 | 117.3 | 665 | 36742 | 0.0 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.2 | 540 | 96845 | 107.0 | 670 | 32105 | 0.0 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.9 | 545 | 100829 | 96.7 | 675 | 27946 | 0.0 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 3.0 | 550 | 105648 | 86.4 | 680 | 24146 | 0.0 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 9.3 | 555 | 110017 | 75.2 | 685 | 21191 | 0.0 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 23.0 | 560 | 114586 | 64.0 | 690 | 18544 | 0.0 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 45.7 | 565 | 118987 | 53.4 | 695 | 16058 | 0.0 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 75.5 | 570 | 122326 | 43.2 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 93.8 | 575 | 125968 | 34.3 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 79.3 | 580 | 127613 | 26.3 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 51.3 | 585 | 129466 | 19.8 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 35.6 | 590 | 128813 | 14.3 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 26.0 | 595 | 126387 | 10.1 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 19.3 | 600 | 123477 | 7.0 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 16.8 | 605 | 118718 | 4.7 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 17.7 | 610 | 112091 | 3.0 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 21.4 | 615 | 105039 | 1.9 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: 3927.2 M/P: 0.55

| 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 | 2304 | 0.0 | 490 | 19043 | 15.8 | 620 | 97577 | 0.1 | 750 | 4830 | 0.0 | 880 | 3505 | 0.0 |
| 365 | 2150 | 0.0 | 495 | 26606 | 22.0 | 625 | 90158 | 0.0 | 755 | 4664 | 0.0 | 885 | 2991 | 0.0 |
| 370 | 2146 | 0.0 | 500 | 36376 | 29.2 | 630 | 82240 | 0.0 | 760 | 4006 | 0.0 | 890 | 2327 | 0.0 |
| 375 | 2332 | 0.0 | 505 | 47714 | 36.6 | 635 | 74361 | 0.0 | 765 | 3715 | 0.0 | 895 | 2775 | 0.0 |
| 380 | 2527 | 0.0 | 510 | 58741 | 42.2 | 640 | 66994 | 0.0 | 770 | 3696 | 0.0 | 900 | 2141 | 0.0 |
| 385 | 2304 | 0.0 | 515 | 68716 | 44.9 | 645 | 60405 | 0.0 | 775 | 3117 | 0.0 | 905 | 2421 | 0.0 |
| 390 | 2064 | 0.0 | 520 | 77136 | 44.9 | 650 | 53806 | 0.0 | 780 | 3062 | 0.0 | 910 | 2200 | 0.0 |
| 395 | 1856 | 0.0 | 525 | 83567 | 42.4 | 655 | 47610 | 0.0 | 785 | 2907 | 0.0 | 915 | 2716 | 0.0 |
| 400 | 1856 | 0.0 | 530 | 89283 | 38.6 | 660 | 42018 | 0.0 | 790 | 2655 | 0.0 | 920 | 2656 | 0.0 |
| 405 | 2374 | 0.0 | 535 | 94097 | 33.9 | 665 | 36742 | 0.0 | 795 | 2467 | 0.0 | 925 | 2671 | 0.0 |
| 410 | 4084 | 0.2 | 540 | 96845 | 28.3 | 670 | 32105 | 0.0 | 800 | 2609 | 0.0 | 930 | 3292 | 0.0 |
| 415 | 8543 | 0.6 | 545 | 100829 | 23.4 | 675 | 27946 | 0.0 | 805 | 2293 | 0.0 | 935 | 3188 | 0.0 |
| 420 | 18394 | 2.1 | 550 | 105648 | 19.0 | 680 | 24146 | 0.0 | 810 | 2188 | 0.0 | 940 | 1997 | 0.0 |
| 425 | 37987 | 5.9 | 555 | 110017 | 14.8 | 685 | 21191 | 0.0 | 815 | 2386 | 0.0 | 945 | 2623 | 0.0 |
| 430 | 67605 | 14.3 | 560 | 114586 | 11.3 | 690 | 18544 | 0.0 | 820 | 2712 | 0.0 | 950 | 2969 | 0.0 |
| 435 | 102160 | 27.3 | 565 | 118987 | 8.4 | 695 | 16058 | 0.0 | 825 | 2473 | 0.0 | 955 | 2277 | 0.0 |
| 440 | 135103 | 45.1 | 570 | 122326 | 6.0 | 700 | 14133 | 0.0 | 830 | 1969 | 0.0 | 960 | 4267 | 0.0 |
| 445 | 140126 | 55.3 | 575 | 125968 | 4.2 | 705 | 12309 | 0.0 | 835 | 1917 | 0.0 | 965 | 2034 | 0.0 |
| 450 | 102339 | 47.2 | 580 | 127613 | 2.9 | 710 | 11142 | 0.0 | 840 | 2248 | 0.0 | 970 | 3586 | 0.0 |
| 455 | 58751 | 30.8 | 585 | 129466 | 1.9 | 715 | 10143 | 0.0 | 845 | 2266 | 0.0 | 975 | 2505 | 0.0 |
| 460 | 36892 | 21.7 | 590 | 128813 | 1.3 | 720 | 9072 | 0.0 | 850 | 2558 | 0.0 | 980 | 2666 | 0.0 |
| 465 | 24637 | 16.1 | 595 | 126387 | 0.8 | 725 | 8130 | 0.0 | 855 | 2767 | 0.0 | 985 | 2934 | 0.0 |
| 470 | 16738 | 12.0 | 600 | 123477 | 0.5 | 730 | 7149 | 0.0 | 860 | 2826 | 0.0 | 990 | 4120 | 0.0 |
| 475 | 13456 | 10.3 | 605 | 118718 | 0.3 | 735 | 6311 | 0.0 | 865 | 2385 | 0.0 | 995 | 3858 | 0.0 |
| 480 | 13081 | 10.5 | 610 | 112091 | 0.2 | 740 | 5711 | 0.0 | 870 | 3194 | 0.0 | 1000 | 3405 | 0.0 |
| 485 | 14734 | 12.1 | 615 | 105039 | 0.1 | 745 | 5111 | 0.0 | 875 | 3189 | 0.0 | | | |

Summary

$R_f = 71.7$
 $R_g = 96.9$
 CIE $R_a = 71.2$
 $R_g = -29.7$



Color Vector Graphics



Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 55 | CES51 = 86 | CES76 = 45 |
| CES02 = 61 | CES27 = 80 | CES52 = 87 | CES77 = 68 |
| CES03 = 30 | CES28 = 79 | CES53 = 74 | CES78 = 49 |
| CES04 = 70 | CES29 = 51 | CES54 = 81 | CES79 = 77 |
| CES05 = 47 | CES30 = 60 | CES55 = 80 | CES80 = 75 |
| CES06 = 50 | CES31 = 56 | CES56 = 69 | CES81 = 75 |
| CES07 = 40 | CES32 = 52 | CES57 = 67 | CES82 = 90 |
| CES08 = 39 | CES33 = 62 | CES58 = 69 | CES83 = 85 |
| CES09 = 29 | CES34 = 65 | CES59 = 86 | CES84 = 87 |
| CES10 = 74 | CES35 = 81 | CES60 = 91 | CES85 = 83 |
| CES11 = 57 | CES36 = 92 | CES61 = 85 | CES86 = 72 |
| CES12 = 63 | CES37 = 74 | CES62 = 81 | CES87 = 77 |
| CES13 = 42 | CES38 = 69 | CES63 = 72 | CES88 = 77 |
| CES14 = 74 | CES39 = 92 | CES64 = 69 | CES89 = 72 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 75 |
| CES16 = 46 | CES41 = 84 | CES66 = 63 | CES91 = 91 |
| CES17 = 49 | CES42 = 75 | CES67 = 60 | CES92 = 66 |
| CES18 = 56 | CES43 = 70 | CES68 = 67 | CES93 = 80 |
| CES19 = 72 | CES44 = 98 | CES69 = 77 | CES94 = 56 |
| CES20 = 65 | CES45 = 80 | CES70 = 57 | CES95 = 72 |
| CES21 = 86 | CES46 = 77 | CES71 = 53 | CES96 = 78 |
| CES22 = 78 | CES47 = 74 | CES72 = 84 | CES97 = 83 |
| CES23 = 92 | CES48 = 66 | CES73 = 47 | CES98 = 73 |
| CES24 = 91 | CES49 = 76 | CES74 = 96 | CES99 = 63 |
| CES25 = 72 | CES50 = 85 | CES75 = 52 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)