

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: P642266

Luminaire Tested: GWS-SA6C-750-U-SL2-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P642266
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-30)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA6C-750-U-SL2-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: (96) 5000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23024.8 lumens
Efficiency: N/A
Efficacy: 121.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G4

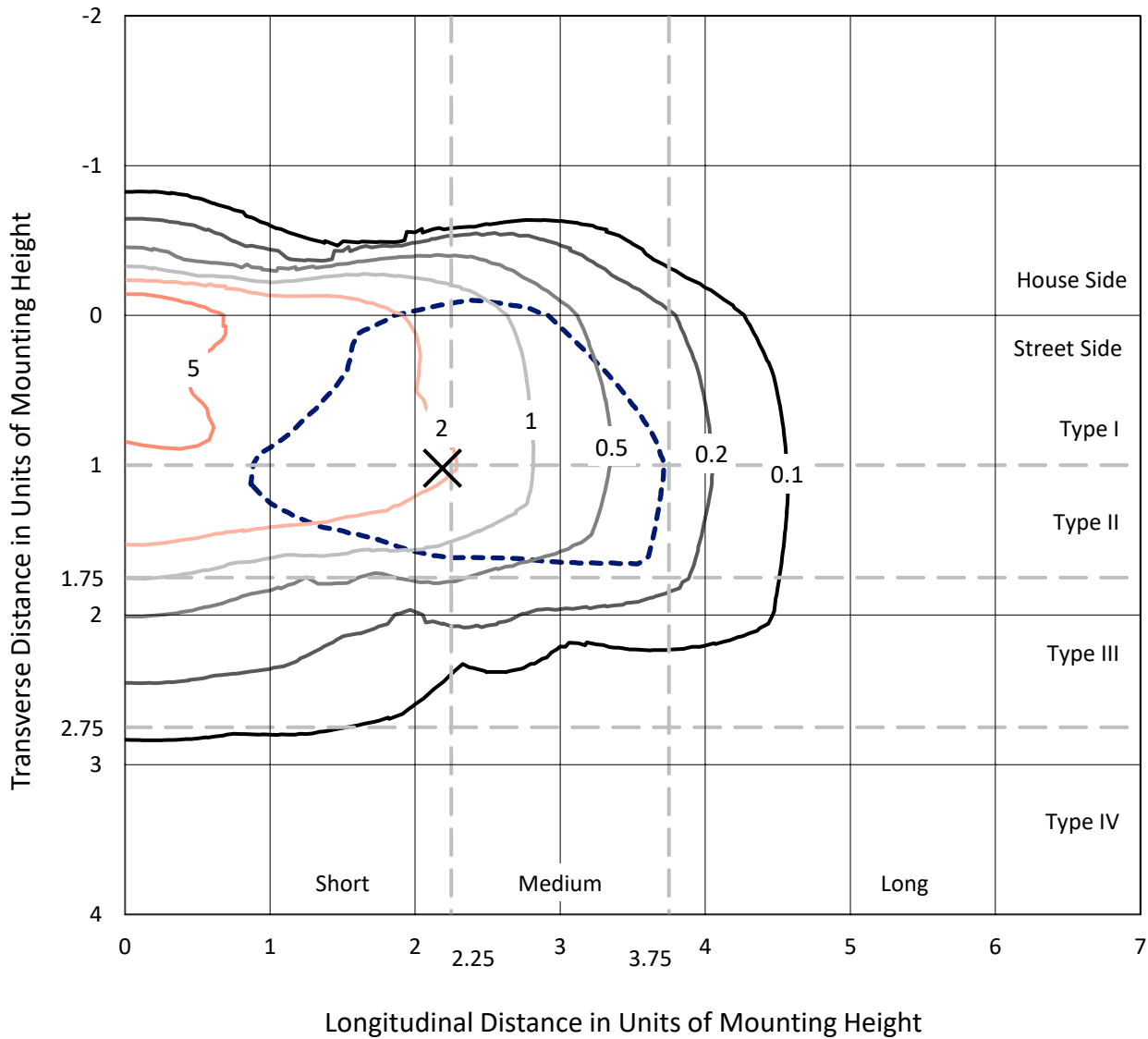
Input Watts (W): 189.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P642266
 CATALOG NUMBER: GWS-SA6C-750-U-SL2-W-HSS

Iso-Footcandle Lines of Horizontal Illumination

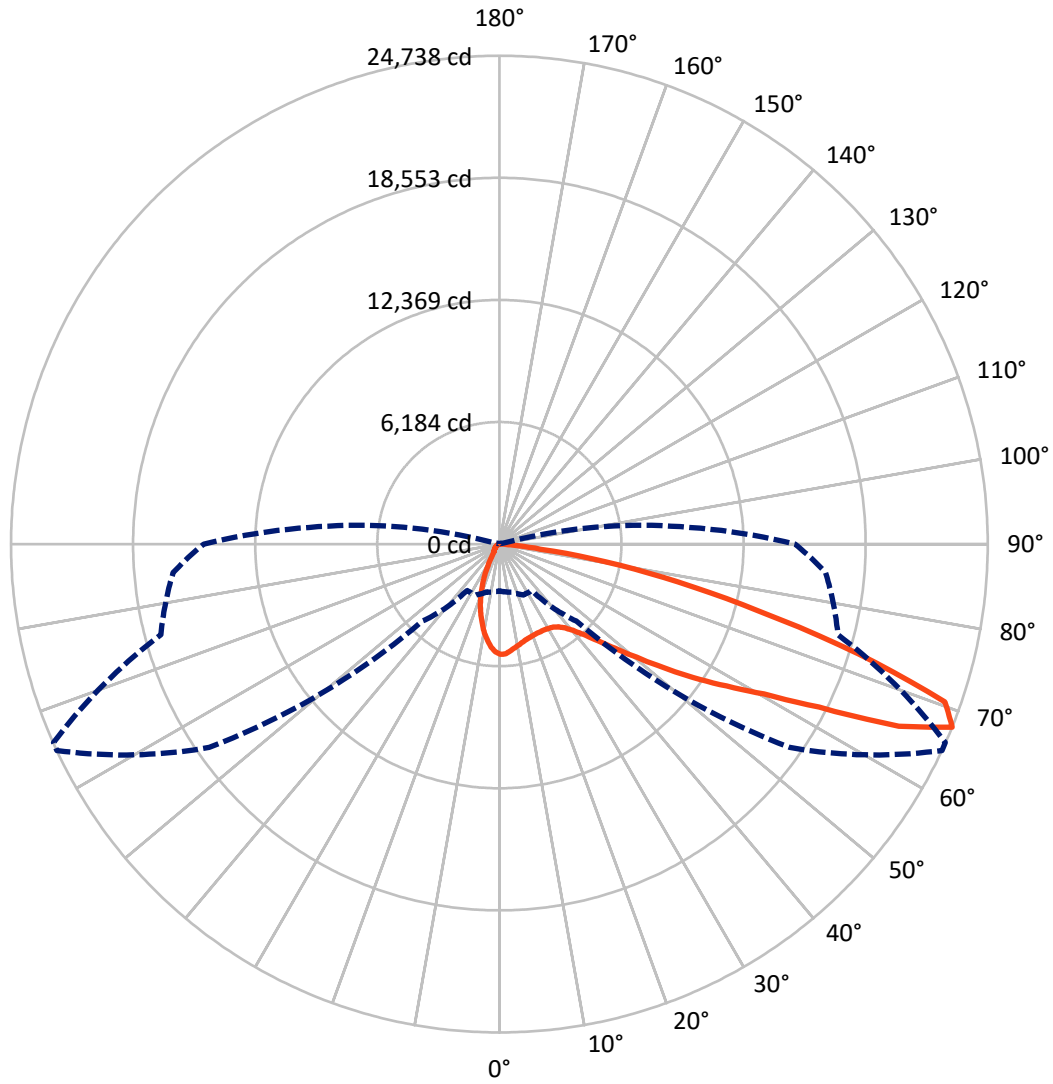
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc
 Type II - Short - N/A

REPORT NUMBER: P642266
CATALOG NUMBER: GWS-SA6C-750-U-SL2-W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2875.1 | 0.0 | 2875.1 |
| | % Fixture | 12.5 | 0.0 | 12.5 |
| Street Side | Lumens | 20149.7 | 0.0 | 20149.7 |
| | % Fixture | 87.5 | 0.0 | 87.5 |
| Total | Lumens | 23024.8 | 0.0 | 23024.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 463.8 | 2.0 |
| 10°-20° | 1042.6 | 4.5 |
| 20°-30° | 1489.8 | 6.5 |
| 30°-40° | 2167.5 | 9.4 |
| 40°-50° | 3394.6 | 14.7 |
| 50°-60° | 5295.8 | 23.0 |
| 60°-70° | 5817.1 | 25.3 |
| 70°-80° | 3095.8 | 13.4 |
| 80°-90° | 257.7 | 1.1 |
| 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° | 23024.8 | 100.0 |
| 0°-180° | 23024.8 | 100.0 |

Coefficient of Utilization



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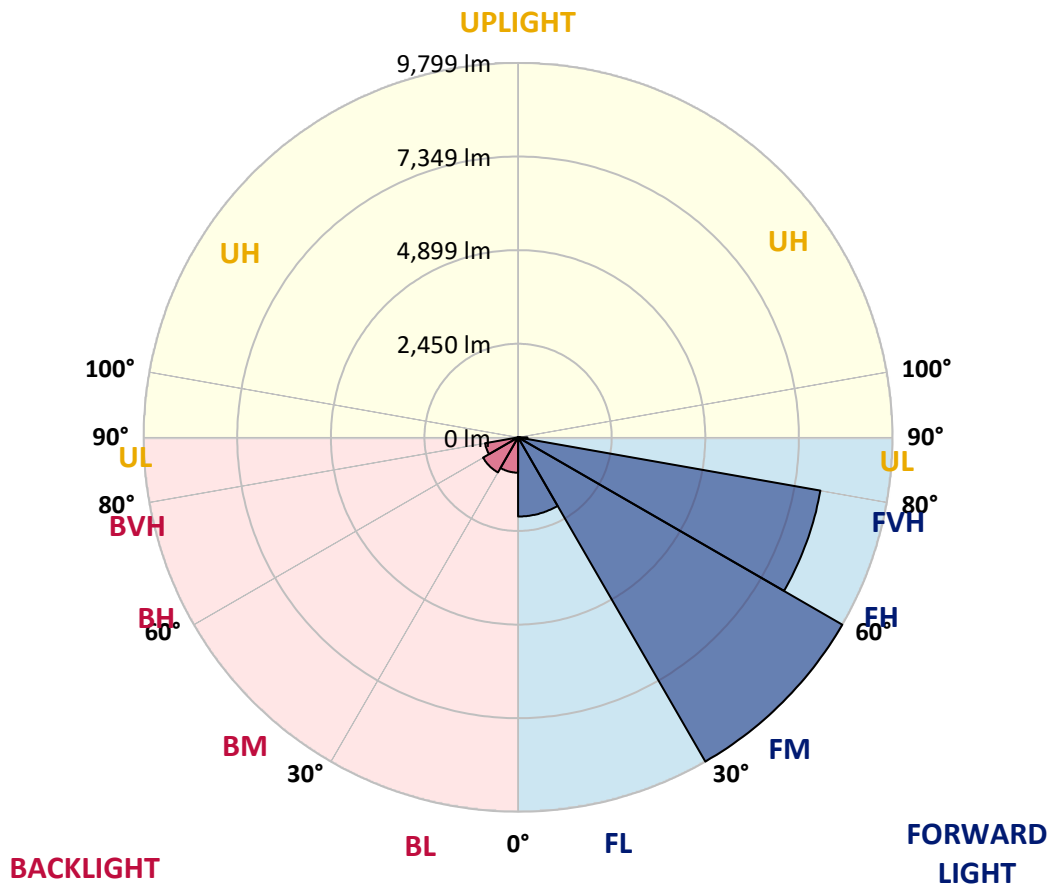
CATALOG NUMBER: GWS-SA6C-750-U-SL2-W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2072.1 | 9.0 | | | |
| FM (30°-60°) | 9798.9 | 42.6 | | | |
| FH (60°-80°) | 8034.8 | 34.9 | | | G4/12000 |
| FVH (80°-90°) | 244.0 | 1.1 | | | G3/500 |
| BL (0°-30°) | 924.1 | 4.0 | B2/1000 | | |
| BM (30°-60°) | 1059.0 | 4.6 | B2/2500 | | |
| BH (60°-80°) | 878.2 | 3.8 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 13.8 | 0.1 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 75° | 85° |
|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 |
| 2.5° | 5390.6 | 5407.3 | 5384.4 | 5440.6 | 5451.0 | 5513.4 | 5548.8 | 5573.8 | 5571.7 | 5603.0 | 5603.0 |
| 5° | 5074.1 | 5090.8 | 5078.3 | 5138.7 | 5186.6 | 5284.4 | 5365.6 | 5459.3 | 5463.5 | 5559.3 | 5594.6 |
| 7.5° | 4805.5 | 4807.6 | 4807.6 | 4882.6 | 4945.0 | 5065.8 | 5186.6 | 5330.2 | 5346.9 | 5494.7 | 5588.4 |
| 10° | 4584.8 | 4591.1 | 4593.2 | 4678.5 | 4747.2 | 4893.0 | 5047.1 | 5219.9 | 5238.6 | 5438.5 | 5584.2 |
| 12.5° | 4432.8 | 4434.9 | 4443.2 | 4532.8 | 4607.7 | 4759.7 | 4915.9 | 5113.7 | 5138.7 | 5373.9 | 5565.5 |
| 15° | 4360.0 | 4355.8 | 4360.0 | 4434.9 | 4509.9 | 4655.6 | 4815.9 | 5028.3 | 5055.4 | 5319.8 | 5567.6 |
| 17.5° | 4355.8 | 4349.5 | 4345.4 | 4401.6 | 4449.5 | 4578.6 | 4741.0 | 4972.1 | 5001.2 | 5294.8 | 5590.5 |
| 20° | 4416.2 | 4412.0 | 4391.2 | 4416.2 | 4426.6 | 4532.8 | 4693.1 | 4928.4 | 4957.5 | 5290.7 | 5640.5 |
| 22.5° | 4574.4 | 4564.0 | 4532.8 | 4509.9 | 4453.6 | 4516.1 | 4659.8 | 4897.1 | 4930.5 | 5301.1 | 5705.0 |
| 25° | 4809.7 | 4805.5 | 4766.0 | 4709.7 | 4566.1 | 4541.1 | 4661.9 | 4897.1 | 4928.4 | 5313.6 | 5773.7 |
| 27.5° | 5163.7 | 5138.7 | 5088.7 | 4990.8 | 4784.7 | 4639.0 | 4703.5 | 4909.6 | 4940.9 | 5330.2 | 5829.9 |
| 30° | 5523.9 | 5521.8 | 5505.1 | 5405.2 | 5099.1 | 4826.3 | 4791.0 | 4942.9 | 4972.1 | 5344.8 | 5882.0 |
| 32.5° | 5896.6 | 5902.8 | 5944.4 | 5867.4 | 5532.2 | 5105.4 | 4949.2 | 5011.7 | 5032.5 | 5373.9 | 5927.8 |
| 35° | 6250.5 | 6263.0 | 6373.4 | 6400.4 | 6059.0 | 5528.0 | 5207.4 | 5149.1 | 5151.2 | 5438.5 | 5988.2 |
| 37.5° | 6589.9 | 6631.5 | 6808.5 | 6939.7 | 6714.8 | 6040.2 | 5580.1 | 5382.3 | 5365.6 | 5567.6 | 6079.8 |
| 40° | 6975.1 | 7054.2 | 7277.0 | 7499.8 | 7429.0 | 6716.9 | 6088.1 | 5740.4 | 5705.0 | 5804.9 | 6244.3 |
| 42.5° | 7401.9 | 7487.3 | 7783.0 | 8095.3 | 8128.6 | 7535.2 | 6723.2 | 6263.0 | 6202.6 | 6204.7 | 6552.4 |
| 45° | 7860.0 | 7974.5 | 8318.1 | 8767.8 | 8969.8 | 8447.2 | 7506.0 | 6968.8 | 6908.5 | 6818.9 | 7048.0 |
| 47.5° | 8461.7 | 8561.7 | 8892.7 | 9411.2 | 9798.4 | 9425.7 | 8532.5 | 7876.7 | 7766.3 | 7635.1 | 7818.4 |
| 50° | 8980.2 | 9067.6 | 9352.9 | 10002.5 | 10808.3 | 10687.5 | 9696.4 | 9011.4 | 8905.2 | 8682.4 | 8834.4 |
| 52.5° | 9094.7 | 9163.4 | 9425.7 | 10156.6 | 11580.7 | 12280.3 | 11122.7 | 10383.5 | 10308.6 | 9896.3 | 9954.6 |
| 55° | 8580.4 | 8684.5 | 8919.8 | 9731.8 | 11782.7 | 13837.8 | 12973.7 | 11930.5 | 11774.4 | 11116.4 | 11220.5 |
| 57.5° | 7281.2 | 7466.5 | 7687.2 | 8742.8 | 11235.1 | 14666.4 | 15559.7 | 13569.2 | 13427.6 | 12290.7 | 12292.8 |
| 60° | 5336.5 | 5486.4 | 5634.2 | 6600.3 | 9935.9 | 14610.2 | 17906.2 | 15409.8 | 15151.6 | 13250.6 | 13215.2 |
| 62.5° | 3881.1 | 3958.1 | 3956.0 | 4299.6 | 6823.1 | 13648.3 | 19138.8 | 18183.1 | 17581.4 | 14277.1 | 14075.1 |
| 65° | 3052.4 | 3050.3 | 3139.8 | 3252.3 | 3810.3 | 10535.5 | 19290.8 | 22232.9 | 21583.2 | 15653.4 | 15232.8 |
| 67.5° | 2375.7 | 2421.5 | 2511.0 | 2842.1 | 2862.9 | 5513.4 | 17954.1 | 24737.6 | 24725.1 | 17754.2 | 16588.2 |
| 70° | 1832.3 | 1894.7 | 2021.7 | 2504.8 | 2644.3 | 3085.7 | 13433.8 | 23944.4 | 24146.3 | 18693.3 | 15628.4 |
| 72.5° | 1176.4 | 1172.2 | 1359.6 | 2023.8 | 2540.2 | 2571.4 | 7429.0 | 19020.1 | 19249.2 | 16931.8 | 12636.4 |
| 75° | 657.9 | 662.1 | 768.3 | 1238.9 | 2367.4 | 2419.4 | 3679.1 | 13562.9 | 13744.1 | 13200.6 | 9708.9 |
| 77.5° | 258.2 | 266.5 | 360.2 | 651.7 | 1561.6 | 2161.2 | 2186.2 | 9248.8 | 9275.8 | 8180.6 | 5954.9 |
| 80° | 104.1 | 110.4 | 183.2 | 403.9 | 951.5 | 1455.4 | 1561.6 | 5448.9 | 5338.5 | 3166.9 | 1732.3 |
| 82.5° | 31.2 | 33.3 | 72.9 | 229.0 | 497.6 | 1034.8 | 1053.6 | 2090.4 | 1973.8 | 680.9 | 441.4 |
| 85° | 2.1 | 2.1 | 16.7 | 70.8 | 177.0 | 260.3 | 701.7 | 680.9 | 603.8 | 170.7 | 195.7 |
| 87.5° | 0.0 | 0.0 | 2.1 | 2.1 | 4.2 | 8.3 | 75.0 | 124.9 | 127.0 | 31.2 | 87.4 |
| 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: P642266

CATALOG NUMBER: GWS-SA6C-750-U-SL2-W-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 | 5584.2 |
| 2.5° | 5603.0 | 5528.0 | 5521.8 | 5463.5 | 5405.2 | 5332.3 | 5246.9 | 5184.5 | 5140.7 | 5063.7 | 5049.1 |
| 5° | 5594.6 | 5494.7 | 5401.0 | 5234.4 | 5049.1 | 4849.3 | 4674.4 | 4511.9 | 4409.9 | 4341.2 | 4312.1 |
| 7.5° | 5578.0 | 5451.0 | 5234.4 | 4920.0 | 4609.8 | 4260.0 | 3987.3 | 3737.4 | 3566.7 | 3466.7 | 3423.0 |
| 10° | 5565.5 | 5394.8 | 5042.9 | 4566.1 | 4085.1 | 3602.1 | 3187.7 | 2817.1 | 2611.0 | 2448.6 | 2421.5 |
| 12.5° | 5540.5 | 5313.6 | 4797.2 | 4151.7 | 3531.3 | 2890.0 | 2361.1 | 1907.2 | 1592.8 | 1451.2 | 1401.3 |
| 15° | 5515.5 | 5228.2 | 4551.5 | 3714.5 | 2927.5 | 2136.3 | 1495.0 | 1057.7 | 841.2 | 774.5 | 770.4 |
| 17.5° | 5511.4 | 5151.2 | 4285.0 | 3300.2 | 2294.5 | 1399.2 | 851.6 | 685.0 | 639.2 | 622.6 | 622.6 |
| 20° | 5523.9 | 5086.6 | 4022.7 | 2823.4 | 1671.9 | 851.6 | 635.0 | 593.4 | 566.3 | 551.8 | 551.8 |
| 22.5° | 5536.4 | 5020.0 | 3770.7 | 2342.4 | 1109.8 | 622.6 | 560.1 | 524.7 | 493.5 | 476.8 | 468.5 |
| 25° | 5544.7 | 4947.1 | 3491.7 | 1859.3 | 724.6 | 541.4 | 491.4 | 445.6 | 408.1 | 387.3 | 387.3 |
| 27.5° | 5542.6 | 4859.7 | 3210.6 | 1386.7 | 562.2 | 481.0 | 420.6 | 372.7 | 335.2 | 312.3 | 314.4 |
| 30° | 5525.9 | 4763.9 | 2919.1 | 968.2 | 491.4 | 420.6 | 360.2 | 310.2 | 272.8 | 254.0 | 251.9 |
| 32.5° | 5513.4 | 4661.9 | 2581.8 | 680.9 | 441.4 | 368.5 | 306.1 | 258.2 | 227.0 | 212.4 | 210.3 |
| 35° | 5498.9 | 4561.9 | 2261.2 | 518.4 | 397.7 | 318.6 | 258.2 | 218.6 | 193.6 | 181.1 | 181.1 |
| 37.5° | 5503.0 | 4457.8 | 1913.5 | 445.6 | 354.0 | 276.9 | 220.7 | 187.4 | 166.6 | 154.1 | 152.0 |
| 40° | 5567.6 | 4395.4 | 1572.0 | 403.9 | 314.4 | 239.4 | 191.6 | 162.4 | 141.6 | 129.1 | 127.0 |
| 42.5° | 5727.9 | 4397.4 | 1245.1 | 372.7 | 279.0 | 204.0 | 166.6 | 139.5 | 120.8 | 106.2 | 104.1 |
| 45° | 6048.6 | 4484.9 | 955.7 | 339.4 | 241.5 | 177.0 | 143.7 | 118.7 | 99.9 | 87.4 | 85.4 |
| 47.5° | 6573.2 | 4745.1 | 724.6 | 310.2 | 210.3 | 154.1 | 122.8 | 99.9 | 83.3 | 72.9 | 70.8 |
| 50° | 7408.2 | 5215.7 | 570.5 | 274.8 | 177.0 | 133.3 | 104.1 | 83.3 | 68.7 | 58.3 | 56.2 |
| 52.5° | 8411.8 | 5921.5 | 489.3 | 243.6 | 152.0 | 116.6 | 89.5 | 68.7 | 56.2 | 47.9 | 45.8 |
| 55° | 9565.2 | 6764.8 | 451.8 | 212.4 | 129.1 | 99.9 | 72.9 | 56.2 | 45.8 | 39.6 | 35.4 |
| 57.5° | 10623.0 | 7524.8 | 449.7 | 181.1 | 110.4 | 85.4 | 60.4 | 47.9 | 39.6 | 31.2 | 29.1 |
| 60° | 11653.6 | 8159.8 | 422.7 | 149.9 | 95.8 | 70.8 | 52.1 | 39.6 | 33.3 | 27.1 | 25.0 |
| 62.5° | 12588.5 | 8676.2 | 354.0 | 120.8 | 81.2 | 58.3 | 43.7 | 35.4 | 29.1 | 22.9 | 22.9 |
| 65° | 13762.8 | 9334.1 | 270.7 | 97.9 | 66.6 | 47.9 | 37.5 | 31.2 | 27.1 | 20.8 | 20.8 |
| 67.5° | 14976.7 | 9681.8 | 193.6 | 81.2 | 54.1 | 41.6 | 33.3 | 29.1 | 22.9 | 18.7 | 18.7 |
| 70° | 13565.0 | 8180.6 | 139.5 | 66.6 | 45.8 | 35.4 | 29.1 | 27.1 | 22.9 | 18.7 | 16.7 |
| 72.5° | 10593.8 | 5898.6 | 104.1 | 52.1 | 39.6 | 33.3 | 27.1 | 25.0 | 20.8 | 16.7 | 16.7 |
| 75° | 7855.8 | 3439.7 | 79.1 | 41.6 | 31.2 | 27.1 | 27.1 | 25.0 | 20.8 | 16.7 | 14.6 |
| 77.5° | 4270.4 | 1199.3 | 60.4 | 33.3 | 25.0 | 20.8 | 22.9 | 22.9 | 18.7 | 14.6 | 12.5 |
| 80° | 1130.6 | 329.0 | 41.6 | 25.0 | 20.8 | 16.7 | 16.7 | 20.8 | 16.7 | 12.5 | 12.5 |
| 82.5° | 329.0 | 95.8 | 29.1 | 20.8 | 16.7 | 14.6 | 14.6 | 14.6 | 12.5 | 10.4 | 8.3 |
| 85° | 160.3 | 35.4 | 20.8 | 16.7 | 14.6 | 12.5 | 10.4 | 10.4 | 8.3 | 6.2 | 6.2 |
| 87.5° | 70.8 | 14.6 | 16.7 | 14.6 | 14.6 | 10.4 | 8.3 | 6.2 | 6.2 | 4.2 | 2.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-4-R4

Test Date: 10/02/2019

Luminaire Tested: SA1C-750-U-5WQ

Data in this report applies to families of products SA1C-760-U-5WQ .

Test Information

Test Method: LM-79-2008
 Report Number: SP1-1908-441-4-R4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/28/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGRAW-EDISON
 Catalog Number: **SA1C-750-U-5WQ**
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

Spectral Parameters

| | | | | | |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K): | 4884 | CRI (Ra): | 73.5 | R9: | -28.4 |
| CIE u': | 0.2101 | R1: | 70.5 | R10: | 48.6 |
| CIE v': | 0.4904 | R2: | 77.7 | R11: | 73.2 |
| Duv: | 0.0037 | R3: | 84.6 | R12: | 50.7 |
| CIE x: | 0.3493 | R4: | 74.7 | R13: | 71.2 |
| CIE y: | 0.3624 | R5: | 71.9 | R14: | 91.4 |
| CIE z: | 0.2884 | R6: | 70.7 | | |
| Peak Wavelength (nm): | 444 | R7: | 81.2 | | |
| Dominant Wavelength (nm): | 571 | R8: | 56.9 | | |
| Purity: | 13.7 | | | | |
| Rf: | 74.9 | | | | |
| Rg: | 96.3 | | | | |



Test Conditions

Stabilization Time: 240M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0./44%
 Sphere Temperature (°C): 25.7

REPORT NUMBER: SP1-1908-441-4-R4

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

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CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength



#####

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

REPORT NUMBER: SP1-1908-441-4-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 13493.5 S/P: 1.77

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

REPORT NUMBER: SP1-1908-441-4-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 5378.9 M/P: 0.71

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

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TM-30-18

Summary

$R_f = 74.9$
 $R_g = 96.3$
 CIE $R_a = 73.5$
 $R_g = -28.4$



Color Vector Graphics



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TM-30-18

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

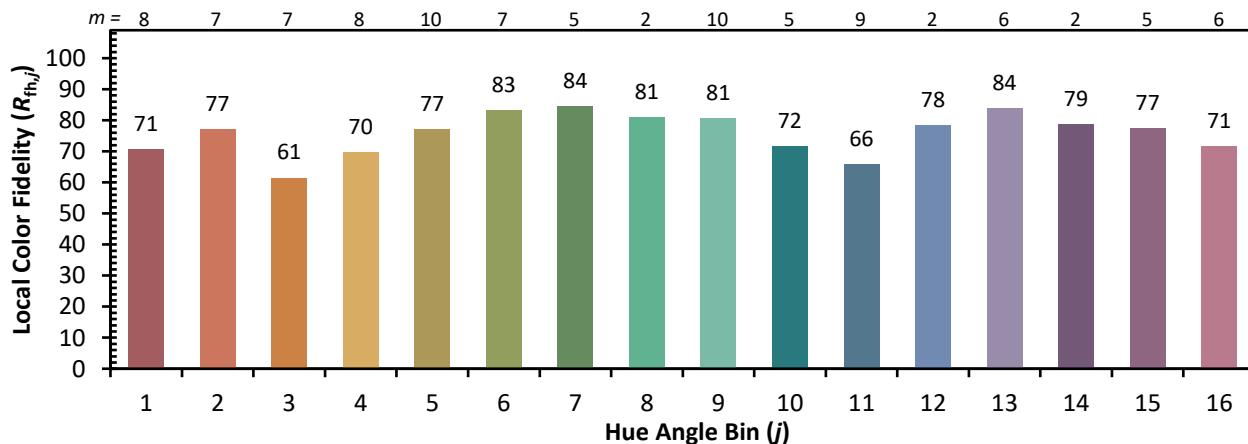
| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 61 | CES51 = 90 | CES76 = 52 |
| CES02 = 60 | CES27 = 84 | CES52 = 91 | CES77 = 71 |
| CES03 = 30 | CES28 = 81 | CES53 = 79 | CES78 = 54 |
| CES04 = 69 | CES29 = 58 | CES54 = 83 | CES79 = 80 |
| CES05 = 46 | CES30 = 67 | CES55 = 83 | CES80 = 77 |
| CES06 = 50 | CES31 = 63 | CES56 = 73 | CES81 = 77 |
| CES07 = 39 | CES32 = 59 | CES57 = 72 | CES82 = 90 |
| CES08 = 38 | CES33 = 69 | CES58 = 73 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 88 | CES84 = 88 |
| CES10 = 73 | CES35 = 83 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 95 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 78 | CES62 = 85 | CES87 = 78 |
| CES13 = 41 | CES38 = 76 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 93 | CES64 = 74 | CES89 = 75 |
| CES15 = 70 | CES40 = 86 | CES65 = 67 | CES90 = 77 |
| CES16 = 46 | CES41 = 87 | CES66 = 69 | CES91 = 89 |
| CES17 = 49 | CES42 = 78 | CES67 = 67 | CES92 = 66 |
| CES18 = 55 | CES43 = 75 | CES68 = 73 | CES93 = 80 |
| CES19 = 71 | CES44 = 99 | CES69 = 81 | CES94 = 57 |
| CES20 = 64 | CES45 = 83 | CES70 = 63 | CES95 = 71 |
| CES21 = 85 | CES46 = 81 | CES71 = 60 | CES96 = 78 |
| CES22 = 77 | CES47 = 80 | CES72 = 86 | CES97 = 85 |
| CES23 = 91 | CES48 = 72 | CES73 = 53 | CES98 = 75 |
| CES24 = 90 | CES49 = 81 | CES74 = 96 | CES99 = 62 |
| CES25 = 71 | CES50 = 89 | CES75 = 58 | |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)