

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P1455898

Luminaire Tested: GLAN-SB9D-730-U-T2LG

Issue Date: 05/20/2026

Test Information

Test Method: LM-79-2024
Report Number: P1455898
Test Lab: INNOVATION CENTER(G1)
Issue Date: 5/21/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: STREETWORKS
Catalog Number: GLAN-SB9D-730-U-T2LG
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 900mA 9xLight Square
PACKAGE 70CRI 3000K FIXTURE w/ TYPE II LOW GLARE
Light Source: (234) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 89648.3 lumens
Efficiency: N/A
Efficacy: 136.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B5 - U0 - G5

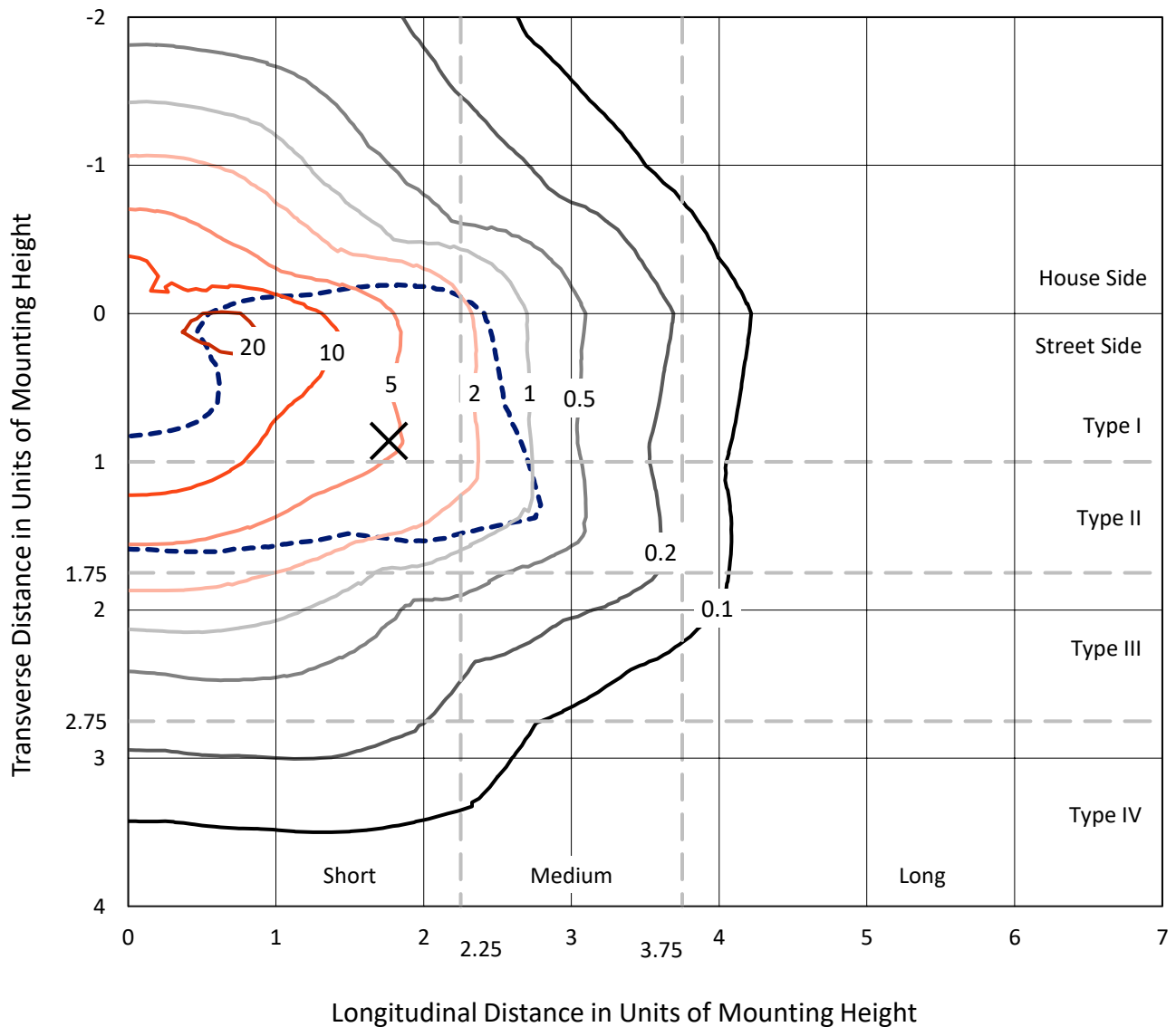
Input Watts (W): 658
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.97
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

REPORT NUMBER: P1455898

CATALOG NUMBER: GLAN-SB9D-730-U-T2LG

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

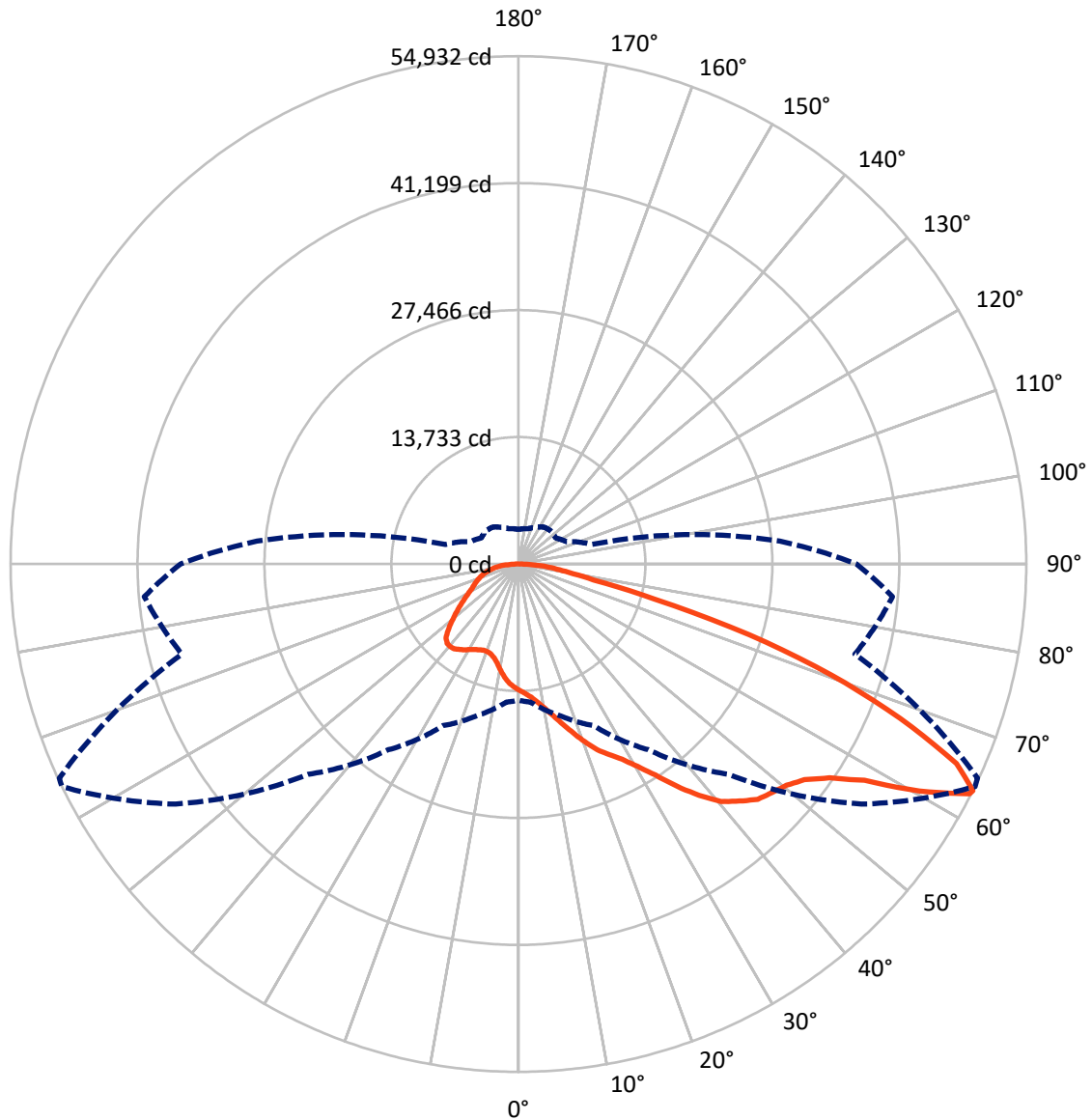


Based on 30 foot mounting height. Maximum calculated value = 23.4 fc
 Type II - Short - N/A

REPORT NUMBER: P1455898

CATALOG NUMBER: GLAN-SB9D-730-U-T2LG

Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical

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CATALOG NUMBER: GLAN-SB9D-730-U-T2LG

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 24086.0 | 0.0 | 24086.0 |
| | % Fixture | 26.9 | 0.0 | 26.9 |
| Street Side | Lumens | 65562.3 | 0.0 | 65562.3 |
| | % Fixture | 73.1 | 0.0 | 73.1 |
| Total | Lumens | 89648.3 | 0.0 | 89648.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1253.5 | 1.4 |
| 10°-20° | 3858.9 | 4.3 |
| 20°-30° | 7056.6 | 7.9 |
| 30°-40° | 12138.4 | 13.5 |
| 40°-50° | 17900.9 | 20.0 |
| 50°-60° | 21455.4 | 23.9 |
| 60°-70° | 17220.0 | 19.2 |
| 70°-80° | 6919.5 | 7.7 |
| 80°-90° | 1845.1 | 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° | 89648.3 | 100.0 |
| 0°-180° | 89648.3 | 100.0 |



REPORT NUMBER: P1455898

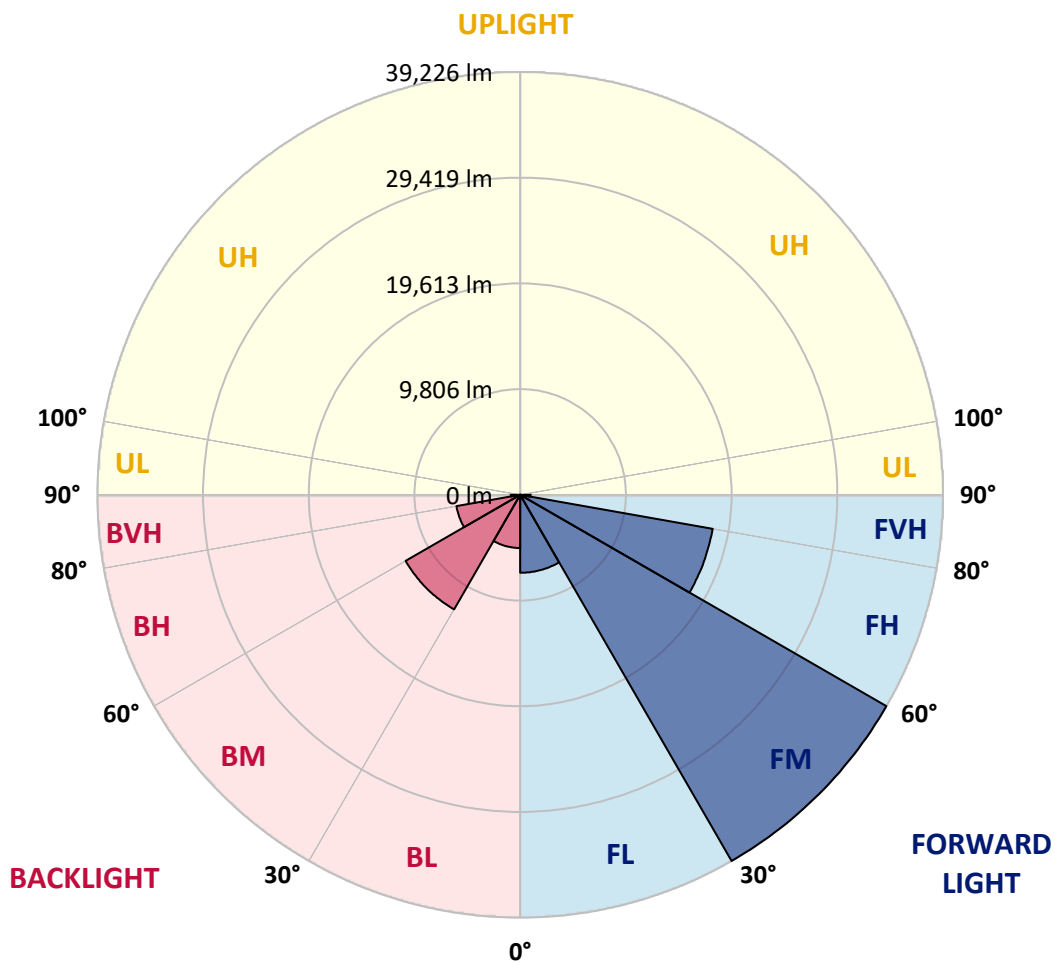
CATALOG NUMBER: GLAN-SB9D-730-U-T2LG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----|
| | | | | B | U | G |
| FL | (0°-30°) | 7232.9 | 8.1 | | | |
| FM | (30°-60°) | 39225.9 | 43.8 | | | |
| FH | (60°-80°) | 18134.1 | 20.2 | | | G5 |
| FVH | (80°-90°) | 969.4 | 1.1 | | | G5 |
| BL | (0°-30°) | 4936.1 | 5.5 | B4/5000 | | |
| BM | (30°-60°) | 12268.9 | 13.7 | B5 | | |
| BH | (60°-80°) | 6005.4 | 6.7 | B5 | | G5 |
| BVH | (80°-90°) | 875.7 | 1.0 | | | G5 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G5

Type II Short





REPORT NUMBER: P1455898

CATALOG NUMBER: GLAN-SB9D-730-U-T2LG

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 |
| 2.5° | 14216.2 | 14236.4 | 14176.0 | 14155.8 | 14196.1 | 14115.5 | 14095.4 | 14014.9 | 13974.6 | 13894.0 | 13793.4 |
| 5° | 14619.0 | 14639.1 | 14598.8 | 14598.8 | 14639.1 | 14578.7 | 14558.5 | 14478.0 | 14437.7 | 14357.2 | 14155.8 |
| 7.5° | 14598.8 | 14619.0 | 14659.2 | 14820.3 | 15021.7 | 15102.2 | 15162.6 | 15102.2 | 15082.1 | 14961.3 | 14759.9 |
| 10° | 14276.6 | 14296.8 | 14397.5 | 14639.1 | 15142.5 | 15505.0 | 15887.5 | 15887.5 | 15927.8 | 15827.1 | 15464.7 |
| 12.5° | 13833.6 | 13853.8 | 14095.4 | 14478.0 | 15142.5 | 15766.7 | 16552.0 | 16874.2 | 16854.1 | 16793.7 | 16370.8 |
| 15° | 12766.4 | 12766.4 | 13128.9 | 13853.8 | 14921.0 | 15948.0 | 17115.9 | 17981.7 | 18001.9 | 18062.3 | 17558.9 |
| 17.5° | 11860.3 | 11880.4 | 12182.5 | 12826.8 | 14216.2 | 15847.3 | 17719.9 | 19210.0 | 19270.4 | 19612.8 | 18887.9 |
| 20° | 11940.8 | 11940.8 | 12041.5 | 12323.4 | 13451.1 | 15444.5 | 18062.3 | 20518.9 | 20720.3 | 21525.7 | 20619.6 |
| 22.5° | 12565.1 | 12565.1 | 12645.6 | 12625.5 | 13310.1 | 15182.8 | 18283.8 | 21827.8 | 22190.2 | 23861.5 | 22693.6 |
| 25° | 13712.8 | 13692.7 | 13612.1 | 13491.3 | 13894.0 | 15464.7 | 18787.2 | 22834.6 | 23539.3 | 26439.0 | 25089.8 |
| 27.5° | 15122.4 | 15082.1 | 14961.3 | 14759.9 | 15041.8 | 16310.4 | 19653.0 | 23901.8 | 24667.0 | 29258.0 | 27627.0 |
| 30° | 16874.2 | 16753.4 | 16632.6 | 16370.8 | 16672.9 | 17699.8 | 20941.8 | 25412.0 | 26136.9 | 32459.7 | 30687.7 |
| 32.5° | 18948.3 | 19089.2 | 18686.5 | 18324.0 | 18646.2 | 19592.6 | 22854.7 | 27204.1 | 27989.5 | 35802.3 | 33869.3 |
| 35° | 22049.3 | 22472.1 | 22351.3 | 20518.9 | 20820.9 | 21868.0 | 25089.8 | 29519.8 | 30224.6 | 38842.9 | 37131.3 |
| 37.5° | 25110.0 | 25009.3 | 25110.0 | 23579.6 | 23096.3 | 24364.9 | 27486.1 | 31734.8 | 32419.4 | 41319.7 | 40010.8 |
| 40° | 27566.6 | 27868.6 | 27868.6 | 26620.2 | 25996.0 | 26841.7 | 29660.8 | 33768.6 | 34433.1 | 42689.0 | 42084.9 |
| 42.5° | 30244.7 | 30285.0 | 30204.5 | 29117.1 | 28875.5 | 29097.0 | 31573.7 | 35057.3 | 35601.0 | 43393.7 | 43494.4 |
| 45° | 33265.2 | 33245.0 | 32902.7 | 31996.6 | 31634.1 | 31432.8 | 32761.8 | 36305.8 | 36849.4 | 43715.9 | 44259.6 |
| 47.5° | 35762.1 | 35862.8 | 35882.9 | 34916.3 | 34312.3 | 33446.4 | 33788.7 | 36930.0 | 37554.2 | 43353.5 | 44420.7 |
| 50° | 35903.0 | 36064.1 | 36829.3 | 37111.2 | 36990.4 | 35601.0 | 34735.1 | 37594.5 | 38218.7 | 43434.0 | 45004.6 |
| 52.5° | 35017.0 | 35178.1 | 36164.8 | 37332.7 | 38742.2 | 38077.7 | 36225.2 | 38742.2 | 39386.6 | 44219.3 | 46333.6 |
| 55° | 32640.9 | 32902.7 | 34372.7 | 36003.7 | 38520.7 | 39467.2 | 38863.1 | 40816.3 | 41420.4 | 44843.5 | 47884.1 |
| 57.5° | 28412.3 | 28734.5 | 30768.3 | 33365.9 | 36809.2 | 39145.0 | 42689.0 | 44138.8 | 44642.2 | 45286.5 | 47904.3 |
| 60° | 21243.8 | 21505.6 | 24687.1 | 28190.8 | 33365.9 | 37131.3 | 44964.4 | 49837.3 | 50119.3 | 42890.3 | 45185.9 |
| 62.5° | 15645.9 | 15907.7 | 18042.1 | 20559.2 | 26217.5 | 33426.3 | 45407.4 | 54770.7 | 54811.0 | 38561.0 | 41440.5 |
| 63° | 14739.8 | 15001.5 | 16934.6 | 19290.6 | 24526.0 | 32177.8 | 45266.4 | 54931.8 | 54790.9 | 37675.0 | 40614.9 |
| 65° | 11477.7 | 11940.8 | 13954.5 | 15746.6 | 18384.4 | 25613.4 | 43454.1 | 52072.5 | 52273.8 | 35057.3 | 36466.8 |
| 67.5° | 7812.9 | 8155.2 | 10712.5 | 12786.6 | 13894.0 | 16310.4 | 35641.3 | 44561.6 | 44883.8 | 32338.9 | 29097.0 |
| 70° | 6040.9 | 6202.0 | 7692.1 | 10128.6 | 11236.1 | 10370.2 | 23237.3 | 35882.9 | 35882.9 | 25250.9 | 20619.6 |
| 72.5° | 4732.0 | 4792.4 | 5799.3 | 7913.6 | 9041.2 | 7974.0 | 12947.6 | 26096.6 | 25130.1 | 14981.4 | 13753.1 |
| 75° | 3382.9 | 3463.4 | 4369.6 | 5899.9 | 7208.8 | 6282.5 | 8276.0 | 15202.9 | 14619.0 | 8618.3 | 9182.2 |
| 77.5° | 2678.1 | 2718.4 | 3262.1 | 4349.4 | 5839.5 | 4792.4 | 6302.7 | 8296.2 | 8215.6 | 6061.0 | 5899.9 |
| 80° | 2114.3 | 2194.9 | 2557.3 | 3121.1 | 4510.5 | 3745.4 | 4691.8 | 5477.1 | 5316.0 | 4168.2 | 3785.6 |
| 82.5° | 1510.2 | 1651.2 | 1973.4 | 2376.1 | 3342.6 | 2678.1 | 3080.9 | 3866.2 | 3866.2 | 3141.3 | 2496.9 |
| 85° | 926.3 | 1047.1 | 1167.9 | 1470.0 | 2376.1 | 1731.7 | 1631.0 | 2496.9 | 2557.3 | 2355.9 | 1610.9 |
| 87.5° | 443.0 | 483.3 | 563.8 | 624.2 | 865.9 | 785.3 | 644.4 | 946.4 | 966.5 | 1047.1 | 664.5 |
| 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: P1455898

CATALOG NUMBER: GLAN-SB9D-730-U-T2LG

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 | 13652.4 |
| 2.5° | 13773.2 | 13733.0 | 13531.6 | 13330.2 | 13108.7 | 12907.4 | 12706.0 | 12544.9 | 12363.7 | 12404.0 | 12424.1 |
| 5° | 14035.0 | 13934.3 | 13491.3 | 12967.8 | 12283.1 | 11638.8 | 11014.6 | 10571.6 | 10289.7 | 10209.1 | 10048.0 |
| 7.5° | 14598.8 | 14357.2 | 13551.7 | 12444.2 | 11175.6 | 10168.8 | 9584.9 | 9323.1 | 9242.6 | 9262.7 | 9222.4 |
| 10° | 15243.2 | 14880.7 | 13632.3 | 11820.0 | 10209.1 | 9524.5 | 9443.9 | 9605.0 | 9685.6 | 9766.1 | 9786.2 |
| 12.5° | 16088.9 | 15505.0 | 13592.0 | 11135.4 | 9746.0 | 9625.2 | 9927.2 | 10229.2 | 10410.5 | 10531.3 | 10511.2 |
| 15° | 17075.6 | 16290.3 | 13471.2 | 10571.6 | 9685.6 | 10007.7 | 10390.3 | 10732.6 | 10954.1 | 11075.0 | 11014.6 |
| 17.5° | 18263.6 | 17216.5 | 13330.2 | 10209.1 | 9866.8 | 10249.4 | 10652.1 | 10994.4 | 11236.1 | 11316.6 | 11256.2 |
| 20° | 19733.6 | 18263.6 | 13088.6 | 10048.0 | 10007.7 | 10350.1 | 10712.5 | 11034.7 | 11236.1 | 11316.6 | 11236.1 |
| 22.5° | 21465.3 | 19512.1 | 12887.2 | 10048.0 | 10068.2 | 10350.1 | 10611.8 | 10853.5 | 11034.7 | 11095.1 | 10994.4 |
| 25° | 23680.3 | 20961.9 | 12806.7 | 10209.1 | 10088.3 | 10249.4 | 10390.3 | 10531.3 | 10632.0 | 10672.2 | 10632.0 |
| 27.5° | 25935.6 | 22633.2 | 12847.0 | 10410.5 | 10068.2 | 10108.4 | 10108.4 | 10128.6 | 10148.7 | 10168.8 | 10148.7 |
| 30° | 28533.1 | 24324.7 | 13008.1 | 10672.2 | 10108.4 | 9907.1 | 9846.7 | 9725.8 | 9625.2 | 9544.6 | 9464.1 |
| 32.5° | 31050.2 | 25935.6 | 13290.0 | 11054.8 | 10068.2 | 9685.6 | 9564.7 | 9262.7 | 8980.8 | 8739.2 | 8739.2 |
| 35° | 33768.6 | 27606.9 | 13793.4 | 11336.7 | 10027.9 | 9484.2 | 9141.9 | 8799.6 | 8497.5 | 8155.2 | 8155.2 |
| 37.5° | 36104.4 | 29036.5 | 14196.1 | 11658.9 | 9987.6 | 9242.6 | 8698.9 | 8316.3 | 7994.1 | 7651.8 | 7611.5 |
| 40° | 37735.4 | 29862.1 | 14437.7 | 11779.7 | 9846.7 | 8920.4 | 8276.0 | 7792.7 | 7329.6 | 6866.5 | 6846.3 |
| 42.5° | 38520.7 | 29821.9 | 14296.8 | 11739.5 | 9584.9 | 8517.7 | 7913.6 | 7269.2 | 6645.0 | 6222.1 | 6181.8 |
| 45° | 38943.6 | 29560.1 | 13753.1 | 11397.1 | 9162.0 | 8094.8 | 7450.4 | 6765.8 | 6141.6 | 5759.0 | 5678.4 |
| 47.5° | 38863.1 | 28915.7 | 13008.1 | 10551.4 | 8598.2 | 7631.7 | 6987.3 | 6282.5 | 5779.1 | 5557.6 | 5557.6 |
| 50° | 39084.6 | 28412.3 | 12162.3 | 9584.9 | 7833.0 | 7088.0 | 6564.4 | 5920.1 | 5618.0 | 5336.1 | 5235.4 |
| 52.5° | 40071.2 | 28835.2 | 11437.4 | 8678.7 | 7108.1 | 6564.4 | 6202.0 | 5658.3 | 5275.7 | 5094.5 | 5034.1 |
| 55° | 41380.1 | 29741.3 | 10752.8 | 7873.3 | 6403.3 | 6101.3 | 5920.1 | 5416.7 | 4973.7 | 4792.4 | 4691.8 |
| 57.5° | 41621.7 | 30365.5 | 10088.3 | 7088.0 | 5819.4 | 5738.8 | 5678.4 | 4993.8 | 4631.3 | 4490.4 | 4409.9 |
| 60° | 39950.4 | 29902.4 | 9222.4 | 6383.2 | 5356.3 | 5396.5 | 5235.4 | 4732.0 | 4309.2 | 4168.2 | 4087.7 |
| 62.5° | 37111.2 | 28694.2 | 8356.6 | 5779.1 | 4993.8 | 5074.3 | 4913.3 | 4409.9 | 3987.0 | 3846.0 | 3805.8 |
| 63° | 36547.4 | 28372.1 | 8155.2 | 5718.7 | 4913.3 | 5013.9 | 4873.0 | 4369.6 | 3946.7 | 3805.8 | 3745.4 |
| 65° | 33184.6 | 26439.0 | 7450.4 | 5396.5 | 4651.5 | 4651.5 | 4671.6 | 4168.2 | 3805.8 | 3745.4 | 3705.1 |
| 67.5° | 27063.2 | 22069.4 | 6685.3 | 5013.9 | 4369.6 | 4430.0 | 4530.7 | 4248.8 | 4107.8 | 4067.5 | 4027.3 |
| 70° | 20458.5 | 16612.4 | 6020.8 | 4651.5 | 4067.5 | 4268.9 | 4953.5 | 4832.7 | 4309.2 | 3946.7 | 3866.2 |
| 72.5° | 14498.1 | 11316.6 | 5436.8 | 4289.0 | 3705.1 | 4208.5 | 5134.8 | 4611.2 | 3886.3 | 3463.4 | 3382.9 |
| 75° | 9705.7 | 7289.3 | 4852.8 | 3906.4 | 3302.4 | 3886.3 | 4852.8 | 4208.5 | 3382.9 | 3282.2 | 3161.4 |
| 77.5° | 6101.3 | 5195.2 | 4268.9 | 3463.4 | 2859.4 | 3463.4 | 4409.9 | 3745.4 | 2919.8 | 2960.0 | 2778.8 |
| 80° | 3725.2 | 3705.1 | 3584.3 | 2939.9 | 2295.5 | 2758.7 | 3705.1 | 3161.4 | 2335.8 | 2335.8 | 2074.0 |
| 82.5° | 2215.0 | 2678.1 | 3040.6 | 2436.5 | 1671.3 | 1973.4 | 2678.1 | 2376.1 | 1953.2 | 1892.8 | 1772.0 |
| 85° | 1490.1 | 1812.3 | 2416.4 | 1872.7 | 1067.2 | 1208.2 | 1852.5 | 1993.5 | 1792.1 | 1570.6 | 1470.0 |
| 87.5° | 543.7 | 724.9 | 1107.5 | 765.2 | 463.1 | 724.9 | 1389.4 | 1449.8 | 1087.4 | 845.7 | 765.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-4

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-730-U-5WQ

Data in this report applies to families of products including GSS-SB1A-730-U-5WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-184-4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGraw-Edison
 Catalog Number: **GSS-SB1A-730-U-5WQ**
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3000K CCT 26 LEDS

Spectral Parameters

CCT (K): 2985
 CIE u': 0.2504
 CIE v': 0.5243
 Duv: 0.0019
 CIE x: 0.4408
 CIE y: 0.4101
 CIE z: 0.1491
 Peak Wavelength (nm): 595
 Dominant Wavelength (nm): 582
 Purity: 55.41818
 Rf: 73.8
 Rg: 94.4

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 70.8 | | |
| R1: | 66.3 | R9: | -43.2 |
| R2: | 80.6 | R10: | 57.6 |
| R3: | 94.5 | R11: | 64.8 |
| R4: | 68.2 | R12: | 53.5 |
| R5: | 66.5 | R13: | 68.7 |
| R6: | 74.7 | R14: | 97.0 |
| R7: | 76.2 | R15: | 56.4 |
| R8: | 39.6 | | |



Test Conditions

Stabilization Time: 36M
 Operation Time: 1H 36M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-4

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

REPORT NUMBER: SP1-2407-184-4

CIE 1931 Chromaticity Diagram



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



CCT = 2985K
 CIE x = 0.4408
 CIE y = 0.4101
 Duv = 0.0019

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-4

Photopic Flux vs. Wavelength



Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-4

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.19

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-4

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.13

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

Summary

$R_f = 73.8$
 $R_g = 94.4$
 CIE $R_a = 70.8$
 $R_g = -43.2$

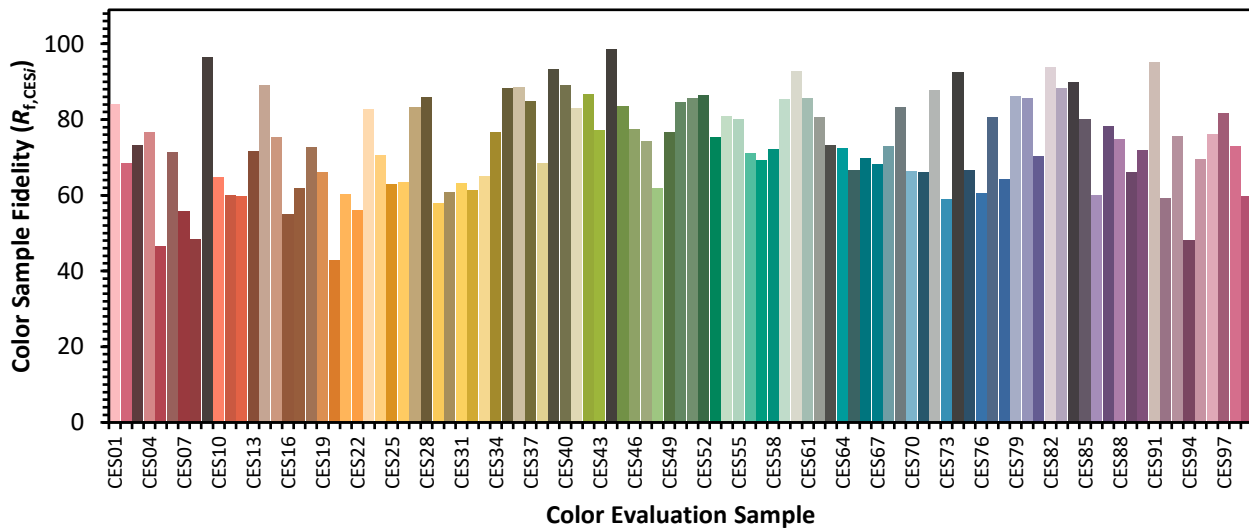


Color Vector Graphics

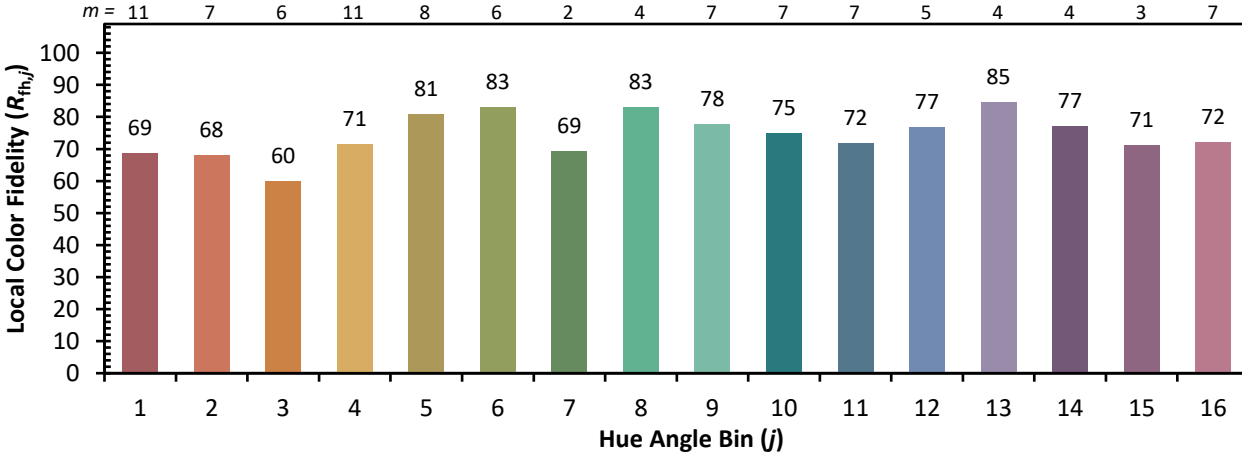


Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06 = 51 | CES31 = 63 | CES56 = 71 | CES81 = 70 |
| CES07 = 41 | CES32 = 61 | CES57 = 69 | CES82 = 94 |
| CES08 = 40 | CES33 = 65 | CES58 = 72 | CES83 = 88 |
| CES09 = 29 | CES34 = 77 | CES59 = 85 | CES84 = 90 |
| CES10 = 76 | CES35 = 88 | CES60 = 93 | CES85 = 80 |
| CES11 = 59 | CES36 = 89 | CES61 = 86 | CES86 = 60 |
| CES12 = 65 | CES37 = 85 | CES62 = 81 | CES87 = 78 |
| CES13 = 43 | CES38 = 69 | CES63 = 73 | CES88 = 75 |
| CES14 = 74 | CES39 = 93 | CES64 = 72 | CES89 = 66 |
| CES15 = 71 | CES40 = 89 | CES65 = 67 | CES90 = 72 |
| CES16 = 47 | CES41 = 83 | CES66 = 70 | CES91 = 95 |
| CES17 = 50 | CES42 = 87 | CES67 = 68 | CES92 = 59 |
| CES18 = 56 | CES43 = 77 | CES68 = 73 | CES93 = 76 |
| CES19 = 73 | CES44 = 99 | CES69 = 83 | CES94 = 48 |
| CES20 = 66 | CES45 = 83 | CES70 = 66 | CES95 = 70 |
| CES21 = 87 | CES46 = 77 | CES71 = 66 | CES96 = 76 |
| CES22 = 79 | CES47 = 74 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 62 | CES73 = 59 | CES98 = 73 |
| CES24 = 91 | CES49 = 77 | CES74 = 93 | CES99 = 60 |
| CES25 = 73 | CES50 = 85 | CES75 = 67 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)