

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

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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: P1456499

Luminaire Tested: GLAN-SB7A-735-U-T3LG

Issue Date: 05/20/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1456499  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 5/21/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: STREETWORKS  
Catalog Number: GLAN-SB7A-735-U-T3LG  
Description: GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 7xLight Square  
PACKAGE 70CRI 3500K FIXTURE w/ TYPE III LOW GLARE  
Light Source: (182) 3500K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

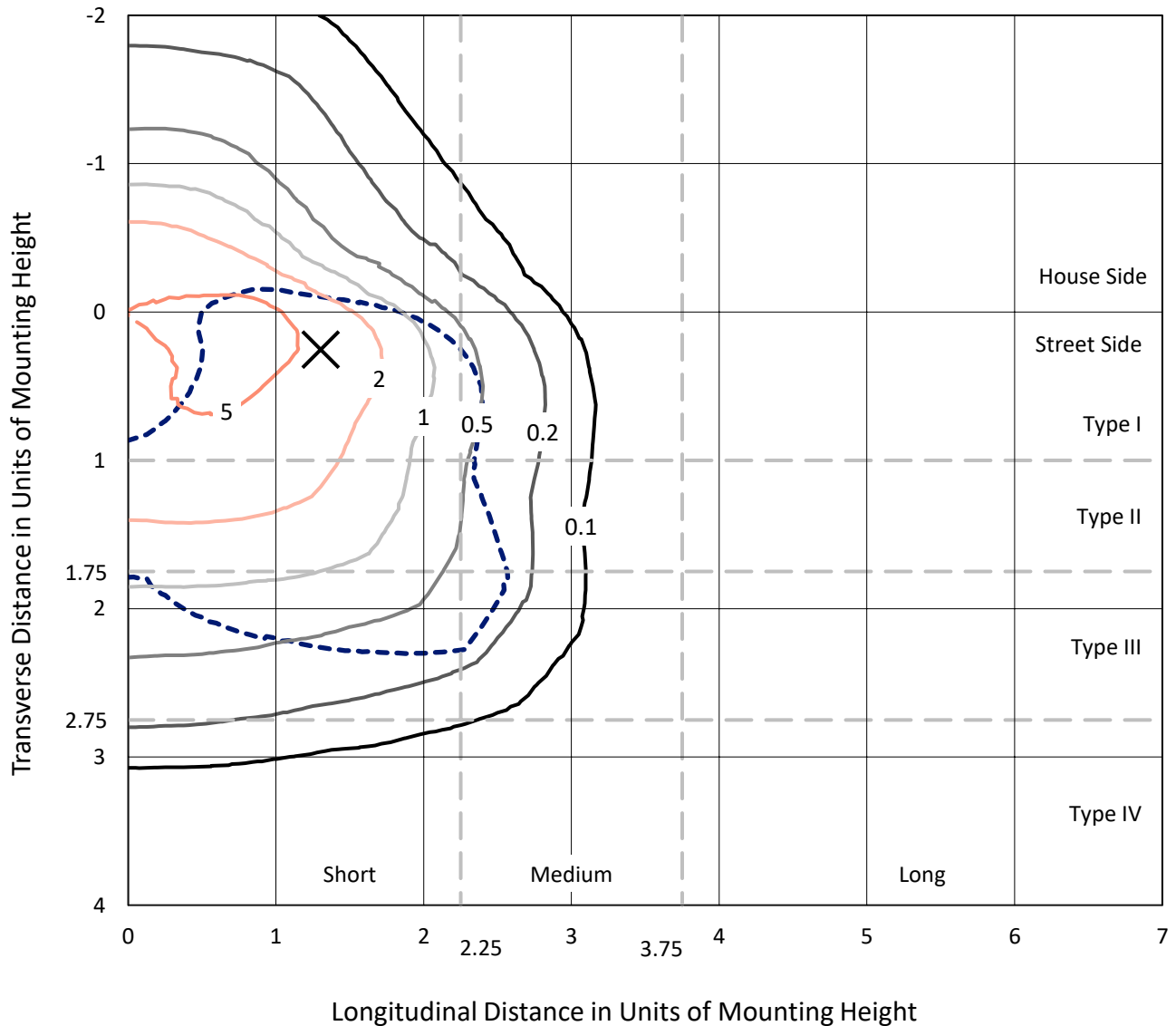
Lumens per Lamp: N/A  
Luminaire Lumens: 31109.8 lumens  
Efficiency: N/A  
Efficacy: 156.3 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 199.1  
Input Voltage (V): 120  
Input Current (Ain): 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

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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

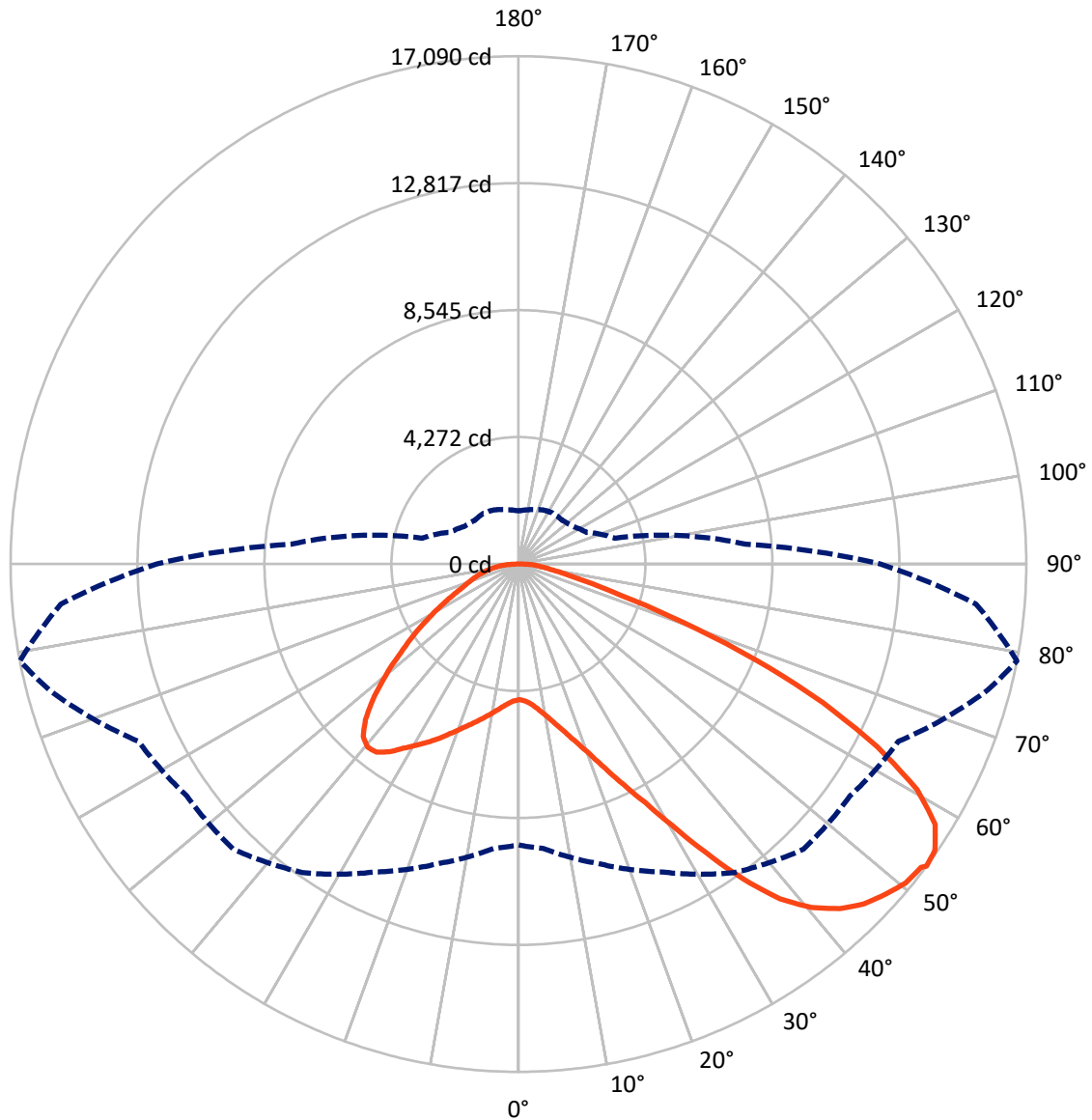


Based on 30 foot mounting height. Maximum calculated value = 7.9 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 53-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 7842.5   | 0.0    | 7842.5  |
|                    | % Fixture | 25.2     | 0.0    | 25.2    |
| <b>Street Side</b> | Lumens    | 23267.2  | 0.0    | 23267.2 |
|                    | % Fixture | 74.8     | 0.0    | 74.8    |
| <b>Total</b>       | Lumens    | 31109.8  | 0.0    | 31109.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 435.2   | 1.4       |
| 10°-20°   | 1347.5  | 4.3       |
| 20°-30°   | 2576.4  | 8.3       |
| 30°-40°   | 4423.4  | 14.2      |
| 40°-50°   | 6195.9  | 19.9      |
| 50°-60°   | 7031.6  | 22.6      |
| 60°-70°   | 6166.2  | 19.8      |
| 70°-80°   | 2411.1  | 7.8       |
| 80°-90°   | 522.4   | 1.7       |
| 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°    | 31109.8 | 100.0     |
| 0°-180°   | 31109.8 | 100.0     |



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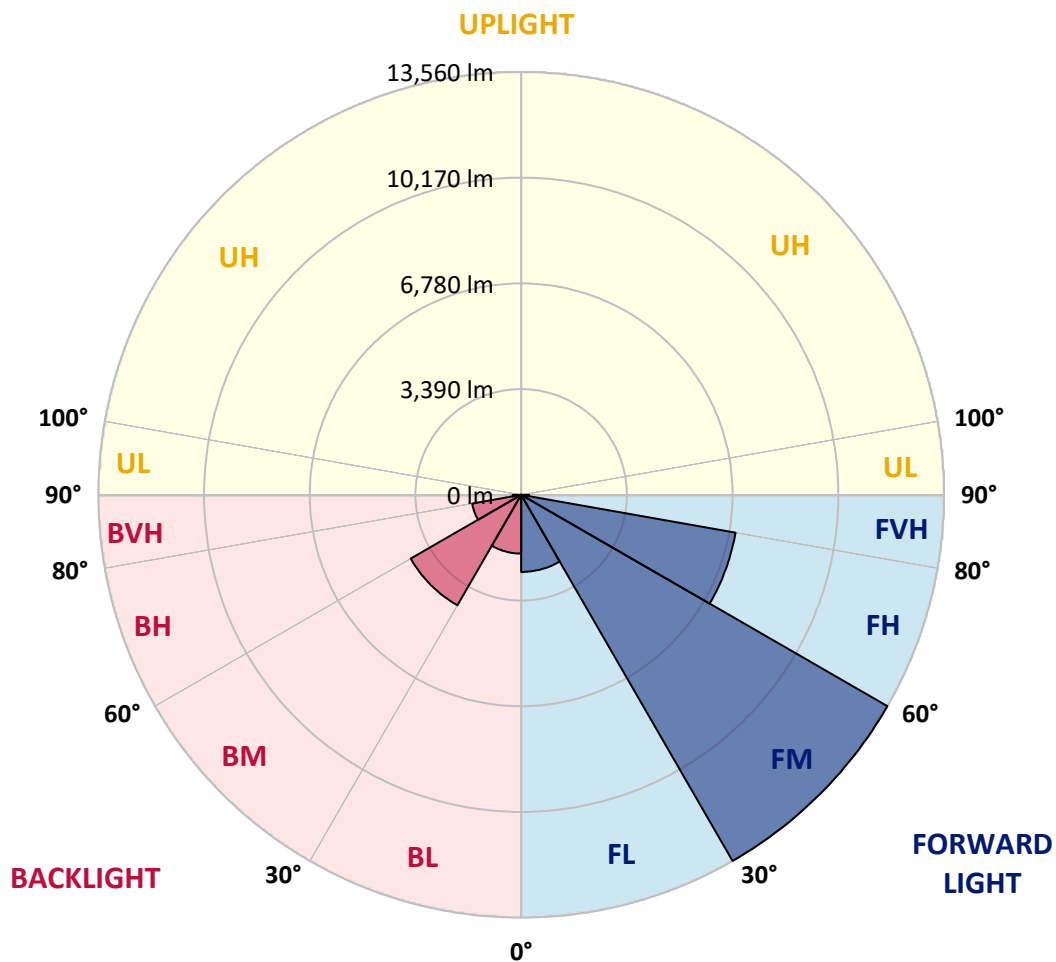
CATALOG NUMBER: GLAN-SB7A-735-U-T3LG

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2472.9  | 7.9       |                         |      |         |
| FM   | (30°-60°)   | 13559.6 | 43.6      |                         |      |         |
| FH   | (60°-80°)   | 6981.3  | 22.4      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 253.4   | 0.8       |                         |      | G3/500  |
| BL   | (0°-30°)    | 1886.2  | 6.1       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 4091.3  | 13.2      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 1596.1  | 5.1       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 269.0   | 0.9       |                         |      | G3/500  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 79°     | 85°     |
|-------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4567.0 | 4567.0 | 4567.0  | 4567.0  | 4567.0  | 4567.0  | 4567.0  | 4567.0  | 4567.0  | 4567.0  | 4567.0  |
| 2.5°  | 4573.9 | 4573.9 | 4546.2  | 4573.9  | 4560.1  | 4580.9  | 4594.7  | 4594.7  | 4622.4  | 4615.5  | 4615.5  |
| 5°    | 4497.7 | 4483.8 | 4476.9  | 4525.4  | 4553.1  | 4608.6  | 4670.9  | 4698.7  | 4747.2  | 4747.2  | 4754.1  |
| 7.5°  | 4296.7 | 4289.8 | 4324.4  | 4421.5  | 4511.6  | 4650.2  | 4781.8  | 4858.1  | 4934.3  | 4948.2  | 4948.2  |
| 10°   | 4172.0 | 4165.0 | 4206.6  | 4324.4  | 4470.0  | 4670.9  | 4878.9  | 5038.2  | 5163.0  | 5197.6  | 5197.6  |
| 12.5° | 4172.0 | 4172.0 | 4206.6  | 4324.4  | 4476.9  | 4719.5  | 5003.6  | 5273.9  | 5467.9  | 5509.5  | 5495.6  |
| 15°   | 4289.8 | 4282.9 | 4324.4  | 4449.2  | 4594.7  | 4823.4  | 5169.9  | 5530.3  | 5793.6  | 5869.9  | 5876.8  |
| 17.5° | 4414.5 | 4407.6 | 4470.0  | 4629.4  | 4802.6  | 5031.3  | 5384.8  | 5828.3  | 6202.5  | 6299.5  | 6320.3  |
| 20°   | 4608.6 | 4601.6 | 4677.9  | 4830.3  | 5045.2  | 5308.5  | 5675.8  | 6181.7  | 6701.5  | 6805.4  | 6833.2  |
| 22.5° | 4830.3 | 4837.3 | 4920.4  | 5107.6  | 5322.4  | 5668.9  | 6119.4  | 6680.7  | 7304.4  | 7463.8  | 7491.5  |
| 25°   | 5294.7 | 5273.9 | 5343.2  | 5474.9  | 5703.5  | 6119.4  | 6673.8  | 7283.6  | 8025.2  | 8219.2  | 8253.9  |
| 27.5° | 5911.5 | 5876.8 | 5953.0  | 6084.7  | 6251.0  | 6639.1  | 7276.7  | 7955.9  | 8849.9  | 9092.4  | 9099.3  |
| 30°   | 6465.9 | 6445.1 | 6549.0  | 6819.3  | 6992.6  | 7290.6  | 7969.7  | 8745.9  | 9868.6  | 10222.0 | 10235.9 |
| 32.5° | 6944.1 | 6937.1 | 7131.2  | 7477.7  | 7872.7  | 8191.5  | 8849.9  | 9743.8  | 11157.6 | 11566.5 | 11476.4 |
| 35°   | 7401.4 | 7422.2 | 7664.8  | 8025.2  | 8551.9  | 9189.4  | 9854.7  | 10873.5 | 12515.9 | 13008.0 | 12862.4 |
| 37.5° | 7865.8 | 7879.6 | 8198.4  | 8662.7  | 9217.2  | 10048.8 | 10942.8 | 12100.1 | 13694.1 | 14303.9 | 13985.1 |
| 40°   | 8295.4 | 8337.0 | 8766.7  | 9265.7  | 9986.4  | 10831.9 | 11829.8 | 12952.5 | 14601.9 | 15204.8 | 14858.3 |
| 42.5° | 8725.1 | 8787.5 | 9251.8  | 9937.9  | 10707.1 | 11587.3 | 12446.6 | 13472.3 | 15184.0 | 15856.3 | 15322.7 |
| 45°   | 9168.6 | 9210.2 | 9785.4  | 10499.2 | 11372.4 | 12183.3 | 12800.1 | 13804.9 | 15586.0 | 16313.7 | 15586.0 |
| 47.5° | 9466.6 | 9549.8 | 10180.4 | 11005.1 | 11878.3 | 12640.7 | 13084.2 | 13943.5 | 15842.4 | 16611.7 | 15683.0 |
| 50°   | 9584.5 | 9702.3 | 10381.4 | 11296.2 | 12294.2 | 13070.3 | 13306.0 | 14019.8 | 16126.6 | 16875.0 | 15662.2 |
| 52.5° | 9563.7 | 9674.5 | 10416.1 | 11427.9 | 12626.8 | 13465.4 | 13520.8 | 14102.9 | 16327.5 | 16965.1 | 15482.0 |
| 53°   | 9452.8 | 9605.2 | 10436.9 | 11434.8 | 12675.3 | 13569.3 | 13617.8 | 14109.9 | 16355.2 | 17089.8 | 15454.3 |
| 55°   | 9071.6 | 9154.8 | 10222.0 | 11427.9 | 12904.0 | 13957.4 | 13888.1 | 14317.8 | 16431.5 | 17006.7 | 15149.4 |
| 57.5° | 8725.1 | 8808.3 | 9736.9  | 11296.2 | 13091.1 | 14504.9 | 14324.7 | 14283.1 | 16015.7 | 16535.4 | 14380.1 |
| 60°   | 8503.3 | 8531.1 | 9314.2  | 10880.4 | 13014.9 | 14886.0 | 14608.8 | 13874.2 | 14990.0 | 15419.7 | 13028.8 |
| 62.5° | 8316.2 | 8309.3 | 9002.3  | 10284.4 | 12723.8 | 14941.5 | 14664.3 | 12862.4 | 13486.2 | 13555.5 | 11226.9 |
| 65°   | 7893.5 | 7845.0 | 8517.2  | 9612.2  | 12120.9 | 14692.0 | 13985.1 | 11330.9 | 11490.3 | 11261.6 | 9016.2  |
| 67.5° | 7054.9 | 6951.0 | 7547.0  | 8586.5  | 10894.3 | 13985.1 | 12689.2 | 9549.8  | 9057.8  | 8600.4  | 6791.6  |
| 70°   | 5052.1 | 5052.1 | 5530.3  | 6569.8  | 8745.9  | 12086.3 | 10894.3 | 7228.2  | 6237.2  | 5828.3  | 4539.3  |
| 72.5° | 2474.1 | 2536.4 | 3035.4  | 3880.9  | 5862.9  | 8773.6  | 8343.9  | 4684.8  | 3783.9  | 3582.9  | 2910.7  |
| 75°   | 1053.4 | 1060.3 | 1295.9  | 1718.7  | 2973.1  | 5190.7  | 5225.4  | 2702.8  | 2425.6  | 2328.5  | 1926.6  |
| 77.5° | 734.6  | 748.5  | 852.4   | 1011.8  | 1413.8  | 2384.0  | 2716.6  | 1635.5  | 1628.6  | 1559.3  | 1372.2  |
| 80°   | 561.3  | 575.2  | 644.5   | 755.4   | 949.4   | 1219.7  | 1406.8  | 1108.8  | 1164.3  | 1095.0  | 991.0   |
| 82.5° | 422.7  | 436.6  | 485.1   | 568.3   | 679.2   | 817.8   | 790.0   | 817.8   | 859.3   | 817.8   | 713.8   |
| 85°   | 284.1  | 291.1  | 325.7   | 395.0   | 436.6   | 492.0   | 492.0   | 596.0   | 623.7   | 609.9   | 561.3   |
| 87.5° | 145.5  | 145.5  | 173.3   | 207.9   | 221.8   | 228.7   | 201.0   | 263.3   | 298.0   | 325.7   | 263.3   |
| 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: P1456499

CATALOG NUMBER: GLAN-SB7A-735-U-T3LG

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°     | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4567.0  | 4567.0  | 4567.0 | 4567.0 | 4567.0 | 4567.0 | 4567.0 | 4567.0 | 4567.0 | 4567.0 | 4567.0 |
| 2.5°  | 4615.5  | 4622.4  | 4601.6 | 4594.7 | 4587.8 | 4553.1 | 4553.1 | 4518.5 | 4511.6 | 4518.5 | 4497.7 |
| 5°    | 4768.0  | 4754.1  | 4698.7 | 4657.1 | 4608.6 | 4511.6 | 4456.1 | 4379.9 | 4359.1 | 4338.3 | 4317.5 |
| 7.5°  | 4955.1  | 4934.3  | 4837.3 | 4726.4 | 4594.7 | 4407.6 | 4303.6 | 4178.9 | 4137.3 | 4102.7 | 4088.8 |
| 10°   | 5190.7  | 5149.1  | 4996.7 | 4761.0 | 4518.5 | 4289.8 | 4144.3 | 3991.8 | 3922.5 | 3908.6 | 3874.0 |
| 12.5° | 5495.6  | 5419.4  | 5135.3 | 4768.0 | 4449.2 | 4151.2 | 3991.8 | 3874.0 | 3846.3 | 3839.3 | 3804.7 |
| 15°   | 5835.2  | 5724.3  | 5266.9 | 4774.9 | 4359.1 | 4033.4 | 3936.3 | 3874.0 | 3874.0 | 3867.0 | 3846.3 |
| 17.5° | 6251.0  | 6070.8  | 5391.7 | 4747.2 | 4248.2 | 3998.7 | 3950.2 | 3894.8 | 3880.9 | 3887.8 | 3860.1 |
| 20°   | 6750.0  | 6452.0  | 5523.4 | 4712.5 | 4199.7 | 4005.7 | 3950.2 | 3874.0 | 3839.3 | 3832.4 | 3811.6 |
| 22.5° | 7325.2  | 6888.6  | 5668.9 | 4657.1 | 4199.7 | 3998.7 | 3908.6 | 3804.7 | 3735.4 | 3707.7 | 3679.9 |
| 25°   | 7983.6  | 7394.5  | 5821.4 | 4636.3 | 4213.6 | 3971.0 | 3825.5 | 3659.1 | 3548.3 | 3506.7 | 3485.9 |
| 27.5° | 8780.6  | 7928.1  | 5932.2 | 4657.1 | 4206.6 | 3908.6 | 3679.9 | 3465.1 | 3340.4 | 3271.0 | 3257.2 |
| 30°   | 9660.7  | 8503.3  | 6008.5 | 4691.7 | 4165.0 | 3790.8 | 3506.7 | 3264.1 | 3090.9 | 3007.7 | 2986.9 |
| 32.5° | 10700.2 | 9147.9  | 6084.7 | 4691.7 | 4061.1 | 3624.5 | 3305.7 | 3042.4 | 2862.2 | 2765.1 | 2751.3 |
| 35°   | 11850.6 | 9937.9  | 6154.0 | 4684.8 | 3936.3 | 3444.3 | 3104.7 | 2834.4 | 2647.3 | 2550.3 | 2543.4 |
| 37.5° | 12827.8 | 10533.9 | 6188.7 | 4615.5 | 3763.1 | 3236.4 | 2917.6 | 2647.3 | 2453.3 | 2349.3 | 2342.4 |
| 40°   | 13430.7 | 10783.4 | 6119.4 | 4476.9 | 3555.2 | 3021.6 | 2709.7 | 2460.2 | 2266.2 | 2141.4 | 2113.7 |
| 42.5° | 13659.4 | 10665.6 | 5897.6 | 4248.2 | 3305.7 | 2806.7 | 2536.4 | 2273.1 | 2016.7 | 1912.7 | 1891.9 |
| 45°   | 13583.2 | 10208.2 | 5426.3 | 3922.5 | 3028.5 | 2612.7 | 2384.0 | 2086.0 | 1919.7 | 1829.6 | 1822.6 |
| 47.5° | 13326.8 | 9501.3  | 4837.3 | 3513.6 | 2737.4 | 2439.4 | 2183.0 | 2037.5 | 1885.0 | 1788.0 | 1781.1 |
| 50°   | 12876.3 | 8745.9  | 4130.4 | 3049.3 | 2474.1 | 2259.2 | 2134.5 | 2016.7 | 1891.9 | 1815.7 | 1801.8 |
| 52.5° | 12301.1 | 7893.5  | 3479.0 | 2598.8 | 2245.4 | 2099.8 | 2086.0 | 2002.8 | 1905.8 | 1822.6 | 1788.0 |
| 53°   | 12169.4 | 7671.7  | 3354.2 | 2522.6 | 2210.7 | 2079.1 | 2072.1 | 2002.8 | 1891.9 | 1815.7 | 1788.0 |
| 55°   | 11538.8 | 6985.6  | 2959.2 | 2252.3 | 2037.5 | 2009.8 | 2072.1 | 1995.9 | 1857.3 | 1794.9 | 1774.1 |
| 57.5° | 10527.0 | 6084.7  | 2578.0 | 2002.8 | 1857.3 | 1926.6 | 2051.3 | 1968.2 | 1815.7 | 1704.8 | 1670.2 |
| 60°   | 9307.2  | 5052.1  | 2287.0 | 1836.5 | 1725.6 | 1822.6 | 1968.2 | 1871.2 | 1663.2 | 1607.8 | 1600.9 |
| 62.5° | 7851.9  | 4088.8  | 2065.2 | 1697.9 | 1614.7 | 1711.8 | 1843.4 | 1677.1 | 1524.6 | 1483.1 | 1469.2 |
| 65°   | 6133.2  | 3250.3  | 1891.9 | 1593.9 | 1503.9 | 1580.1 | 1670.2 | 1566.2 | 1469.2 | 1434.5 | 1427.6 |
| 67.5° | 4560.1  | 2550.3  | 1753.3 | 1503.9 | 1393.0 | 1441.5 | 1545.4 | 1517.7 | 1434.5 | 1413.8 | 1406.8 |
| 70°   | 3146.3  | 2072.1  | 1628.6 | 1420.7 | 1254.4 | 1309.8 | 1469.2 | 1490.0 | 1406.8 | 1393.0 | 1386.0 |
| 72.5° | 2203.8  | 1753.3  | 1496.9 | 1330.6 | 1143.5 | 1198.9 | 1434.5 | 1434.5 | 1344.5 | 1365.2 | 1351.4 |
| 75°   | 1656.3  | 1476.1  | 1344.5 | 1219.7 | 1004.9 | 1088.0 | 1386.0 | 1372.2 | 1282.1 | 1372.2 | 1337.5 |
| 77.5° | 1247.4  | 1192.0  | 1164.3 | 1081.1 | 880.1  | 963.3  | 1289.0 | 1261.3 | 1143.5 | 1150.4 | 1088.0 |
| 80°   | 907.9   | 921.7   | 997.9  | 921.7  | 734.6  | 797.0  | 1088.0 | 1074.2 | 928.6  | 956.4  | 880.1  |
| 82.5° | 651.4   | 686.1   | 852.4  | 741.5  | 533.6  | 568.3  | 748.5  | 810.8  | 727.7  | 686.1  | 699.9  |
| 85°   | 492.0   | 512.8   | 686.1  | 547.5  | 332.6  | 374.2  | 512.8  | 582.1  | 568.3  | 526.7  | 533.6  |
| 87.5° | 207.9   | 235.6   | 318.8  | 256.4  | 194.0  | 194.0  | 318.8  | 408.9  | 367.3  | 311.9  | 325.7  |
| 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: SP1-2407-184-5

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-735-U-5WQ

Data in this report applies to families of products including GSS-SB1A-735-U-5WQ

**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-5  
 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-735-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3500K CCT 26 LEDS

**Spectral Parameters**

CCT (K): 3369  
 CIE u': 0.2386  
 CIE v': 0.5156  
 Duv: 0.0013  
 CIE x: 0.4143  
 CIE y: 0.3980  
 CIE z: 0.1877  
 Peak Wavelength (nm): 590  
 Dominant Wavelength (nm): 580  
 Purity: 43.80166  
 Rf: 71.4  
 Rg: 96

|           |      |      |       |
|-----------|------|------|-------|
| CRI (Ra): | 70.1 |      |       |
| R1:       | 66.6 | R9:  | -40.2 |
| R2:       | 77.6 | R10: | 49.1  |
| R3:       | 88.5 | R11: | 66.3  |
| R4:       | 69.5 | R12: | 45.7  |
| R5:       | 66.4 | R13: | 68.0  |
| R6:       | 69.6 | R14: | 93.4  |
| R7:       | 77.5 | R15: | 57.6  |
| R8:       | 44.9 |      |       |



**Test Conditions**

Stabilization Time: 21M  
 Operation Time: 1H 21M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-5

| 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           |

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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 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-5

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

| $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360               | 0                           | NR                      | 490               | 119                         | NR                      | 620               | 778                         | NR                      | 750               | 19                          | NR                      | 880               | 1                           | NR                      |
| 365               | 0                           | NR                      | 495               | 173                         | NR                      | 625               | 711                         | NR                      | 755               | 16                          | NR                      | 885               | 0                           | NR                      |
| 370               | 0                           | NR                      | 500               | 239                         | NR                      | 630               | 648                         | NR                      | 760               | 14                          | NR                      | 890               | 0                           | NR                      |
| 375               | 0                           | NR                      | 505               | 313                         | NR                      | 635               | 582                         | NR                      | 765               | 12                          | NR                      | 895               | 0                           | NR                      |
| 380               | 0                           | NR                      | 510               | 383                         | NR                      | 640               | 520                         | NR                      | 770               | 11                          | NR                      | 900               | 0                           | NR                      |
| 385               | 0                           | NR                      | 515               | 448                         | NR                      | 645               | 460                         | NR                      | 775               | 9                           | NR                      | 905               | 0                           | NR                      |
| 390               | 2                           | NR                      | 520               | 500                         | NR                      | 650               | 406                         | NR                      | 780               | 8                           | NR                      | 910               | 0                           | NR                      |
| 395               | 4                           | NR                      | 525               | 539                         | NR                      | 655               | 355                         | NR                      | 785               | 7                           | NR                      | 915               | 0                           | NR                      |
| 400               | 6                           | NR                      | 530               | 575                         | NR                      | 660               | 309                         | NR                      | 790               | 6                           | NR                      | 920               | 0                           | NR                      |
| 405               | 11                          | NR                      | 535               | 606                         | NR                      | 665               | 269                         | NR                      | 795               | 5                           | NR                      | 925               | 0                           | NR                      |
| 410               | 22                          | NR                      | 540               | 633                         | NR                      | 670               | 231                         | NR                      | 800               | 4                           | NR                      | 930               | 0                           | NR                      |
| 415               | 45                          | NR                      | 545               | 666                         | NR                      | 675               | 199                         | NR                      | 805               | 4                           | NR                      | 935               | 0                           | NR                      |
| 420               | 96                          | NR                      | 550               | 701                         | NR                      | 680               | 171                         | NR                      | 810               | 3                           | NR                      | 940               | 0                           | NR                      |
| 425               | 193                         | NR                      | 555               | 743                         | NR                      | 685               | 147                         | NR                      | 815               | 3                           | NR                      | 945               | 0                           | NR                      |
| 430               | 341                         | NR                      | 560               | 788                         | NR                      | 690               | 126                         | NR                      | 820               | 3                           | NR                      | 950               | 0                           | NR                      |
| 435               | 547                         | NR                      | 565               | 837                         | NR                      | 695               | 107                         | NR                      | 825               | 2                           | NR                      | 955               | 0                           | NR                      |
| 440               | 799                         | NR                      | 570               | 887                         | NR                      | 700               | 92                          | NR                      | 830               | 2                           | NR                      | 960               | 0                           | NR                      |
| 445               | 831                         | NR                      | 575               | 931                         | NR                      | 705               | 78                          | NR                      | 835               | 2                           | NR                      | 965               | 0                           | NR                      |
| 450               | 461                         | NR                      | 580               | 967                         | NR                      | 710               | 67                          | NR                      | 840               | 2                           | NR                      | 970               | 0                           | NR                      |
| 455               | 256                         | NR                      | 585               | 990                         | NR                      | 715               | 57                          | NR                      | 845               | 1                           | NR                      | 975               | 0                           | NR                      |
| 460               | 176                         | NR                      | 590               | 1000                        | NR                      | 720               | 49                          | NR                      | 850               | 1                           | NR                      | 980               | 0                           | NR                      |
| 465               | 107                         | NR                      | 595               | 994                         | NR                      | 725               | 42                          | NR                      | 855               | 1                           | NR                      | 985               | 0                           | NR                      |
| 470               | 74                          | NR                      | 600               | 973                         | NR                      | 730               | 36                          | NR                      | 860               | 1                           | NR                      | 990               | 0                           | NR                      |
| 475               | 67                          | NR                      | 605               | 938                         | NR                      | 735               | 31                          | NR                      | 865               | 1                           | NR                      | 995               | 0                           | NR                      |
| 480               | 68                          | NR                      | 610               | 892                         | NR                      | 740               | 26                          | NR                      | 870               | 1                           | NR                      | 1000              | 0                           | NR                      |
| 485               | 84                          | NR                      | 615               | 838                         | NR                      | 745               | 22                          | NR                      | 875               | 1                           | NR                      |                   |                             |                         |

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**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.29**

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 119                      | NR            | 620    | 778                      | NR            | 750    | 19                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 173                      | NR            | 625    | 711                      | NR            | 755    | 16                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 239                      | NR            | 630    | 648                      | NR            | 760    | 14                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 313                      | NR            | 635    | 582                      | NR            | 765    | 12                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 383                      | NR            | 640    | 520                      | NR            | 770    | 11                       | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 448                      | NR            | 645    | 460                      | NR            | 775    | 9                        | NR            | 905    | 0                        | NR            |
| 390    | 2                        | NR            | 520    | 500                      | NR            | 650    | 406                      | NR            | 780    | 8                        | NR            | 910    | 0                        | NR            |
| 395    | 4                        | NR            | 525    | 539                      | NR            | 655    | 355                      | NR            | 785    | 7                        | NR            | 915    | 0                        | NR            |
| 400    | 6                        | NR            | 530    | 575                      | NR            | 660    | 309                      | NR            | 790    | 6                        | NR            | 920    | 0                        | NR            |
| 405    | 11                       | NR            | 535    | 606                      | NR            | 665    | 269                      | NR            | 795    | 5                        | NR            | 925    | 0                        | NR            |
| 410    | 22                       | NR            | 540    | 633                      | NR            | 670    | 231                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 45                       | NR            | 545    | 666                      | NR            | 675    | 199                      | NR            | 805    | 4                        | NR            | 935    | 0                        | NR            |
| 420    | 96                       | NR            | 550    | 701                      | NR            | 680    | 171                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 193                      | NR            | 555    | 743                      | NR            | 685    | 147                      | NR            | 815    | 3                        | NR            | 945    | 0                        | NR            |
| 430    | 341                      | NR            | 560    | 788                      | NR            | 690    | 126                      | NR            | 820    | 3                        | NR            | 950    | 0                        | NR            |
| 435    | 547                      | NR            | 565    | 837                      | NR            | 695    | 107                      | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 799                      | NR            | 570    | 887                      | NR            | 700    | 92                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 831                      | NR            | 575    | 931                      | NR            | 705    | 78                       | NR            | 835    | 2                        | NR            | 965    | 0                        | NR            |
| 450    | 461                      | NR            | 580    | 967                      | NR            | 710    | 67                       | NR            | 840    | 2                        | NR            | 970    | 0                        | NR            |
| 455    | 256                      | NR            | 585    | 990                      | NR            | 715    | 57                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 176                      | NR            | 590    | 1000                     | NR            | 720    | 49                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 107                      | NR            | 595    | 994                      | NR            | 725    | 42                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 74                       | NR            | 600    | 973                      | NR            | 730    | 36                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 67                       | NR            | 605    | 938                      | NR            | 735    | 31                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 68                       | NR            | 610    | 892                      | NR            | 740    | 26                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 84                       | NR            | 615    | 838                      | NR            | 745    | 22                       | NR            | 875    | 1                        | NR            |        |                          |               |

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.36

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 119                      | NR            | 620    | 778                      | NR            | 750    | 19                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 173                      | NR            | 625    | 711                      | NR            | 755    | 16                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 239                      | NR            | 630    | 648                      | NR            | 760    | 14                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 313                      | NR            | 635    | 582                      | NR            | 765    | 12                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 383                      | NR            | 640    | 520                      | NR            | 770    | 11                       | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 448                      | NR            | 645    | 460                      | NR            | 775    | 9                        | NR            | 905    | 0                        | NR            |
| 390    | 2                        | NR            | 520    | 500                      | NR            | 650    | 406                      | NR            | 780    | 8                        | NR            | 910    | 0                        | NR            |
| 395    | 4                        | NR            | 525    | 539                      | NR            | 655    | 355                      | NR            | 785    | 7                        | NR            | 915    | 0                        | NR            |
| 400    | 6                        | NR            | 530    | 575                      | NR            | 660    | 309                      | NR            | 790    | 6                        | NR            | 920    | 0                        | NR            |
| 405    | 11                       | NR            | 535    | 606                      | NR            | 665    | 269                      | NR            | 795    | 5                        | NR            | 925    | 0                        | NR            |
| 410    | 22                       | NR            | 540    | 633                      | NR            | 670    | 231                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 45                       | NR            | 545    | 666                      | NR            | 675    | 199                      | NR            | 805    | 4                        | NR            | 935    | 0                        | NR            |
| 420    | 96                       | NR            | 550    | 701                      | NR            | 680    | 171                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 193                      | NR            | 555    | 743                      | NR            | 685    | 147                      | NR            | 815    | 3                        | NR            | 945    | 0                        | NR            |
| 430    | 341                      | NR            | 560    | 788                      | NR            | 690    | 126                      | NR            | 820    | 3                        | NR            | 950    | 0                        | NR            |
| 435    | 547                      | NR            | 565    | 837                      | NR            | 695    | 107                      | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 799                      | NR            | 570    | 887                      | NR            | 700    | 92                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 831                      | NR            | 575    | 931                      | NR            | 705    | 78                       | NR            | 835    | 2                        | NR            | 965    | 0                        | NR            |
| 450    | 461                      | NR            | 580    | 967                      | NR            | 710    | 67                       | NR            | 840    | 2                        | NR            | 970    | 0                        | NR            |
| 455    | 256                      | NR            | 585    | 990                      | NR            | 715    | 57                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 176                      | NR            | 590    | 1000                     | NR            | 720    | 49                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 107                      | NR            | 595    | 994                      | NR            | 725    | 42                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 74                       | NR            | 600    | 973                      | NR            | 730    | 36                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 67                       | NR            | 605    | 938                      | NR            | 735    | 31                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 68                       | NR            | 610    | 892                      | NR            | 740    | 26                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 84                       | NR            | 615    | 838                      | NR            | 745    | 22                       | NR            | 875    | 1                        | NR            |        |                          |               |

**Summary**

$R_f = 71.4$   
 $R_g = 96$   
 $CIE R_a = 70.1$   
 $R_9 = -40.2$



**Color Vector Graphics**

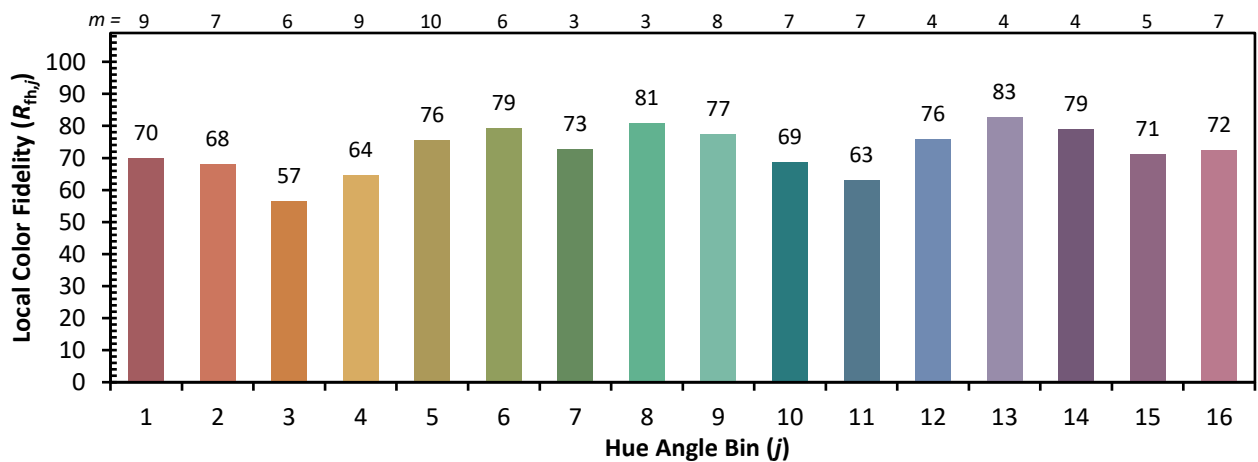


Individual Sample Fidelity Index ( $R_{f,i}$ )

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 51 | CES31 = 56 | CES56 = 67 | CES81 = 74 |
| CES07 = 40 | CES32 = 54 | CES57 = 65 | CES82 = 91 |
| CES08 = 39 | CES33 = 60 | CES58 = 68 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 85 | CES84 = 89 |
| CES10 = 75 | CES35 = 83 | CES60 = 91 | CES85 = 83 |
| CES11 = 58 | CES36 = 88 | CES61 = 85 | CES86 = 66 |
| CES12 = 64 | CES37 = 78 | CES62 = 78 | CES87 = 77 |
| CES13 = 43 | CES38 = 64 | CES63 = 71 | CES88 = 75 |
| CES14 = 74 | CES39 = 92 | CES64 = 70 | CES89 = 68 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 72 |
| CES16 = 47 | CES41 = 81 | CES66 = 65 | CES91 = 95 |
| CES17 = 50 | CES42 = 79 | CES67 = 63 | CES92 = 62 |
| CES18 = 56 | CES43 = 71 | CES68 = 69 | CES93 = 78 |
| CES19 = 72 | CES44 = 98 | CES69 = 80 | CES94 = 51 |
| CES20 = 65 | CES45 = 80 | CES70 = 60 | CES95 = 70 |
| CES21 = 87 | CES46 = 75 | CES71 = 58 | CES96 = 76 |
| CES22 = 79 | CES47 = 71 | CES72 = 85 | CES97 = 82 |
| CES23 = 92 | CES48 = 61 | CES73 = 51 | CES98 = 72 |
| CES24 = 91 | CES49 = 74 | CES74 = 94 | CES99 = 60 |
| CES25 = 72 | CES50 = 83 | CES75 = 57 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)