

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



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P324312

Luminaire Tested: **GLEON-SA8A-830-U-SLL-HSS**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P324312  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-27)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GLEON-SA8A-830-U-SLL-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(8) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 22003 lumens  
Efficiency: N/A  
Efficacy: 85.6 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G3

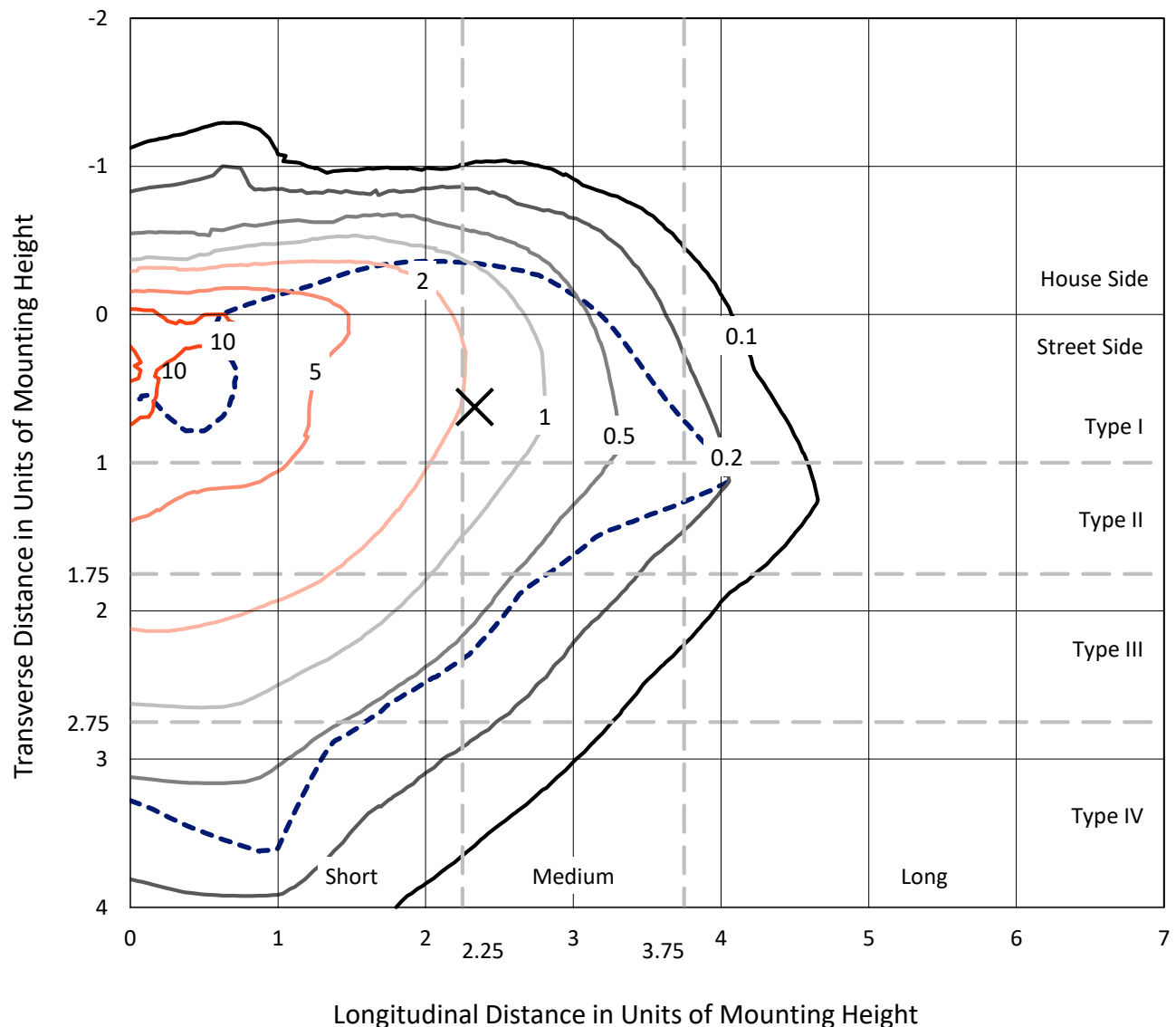
Input Watts (W): 257  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

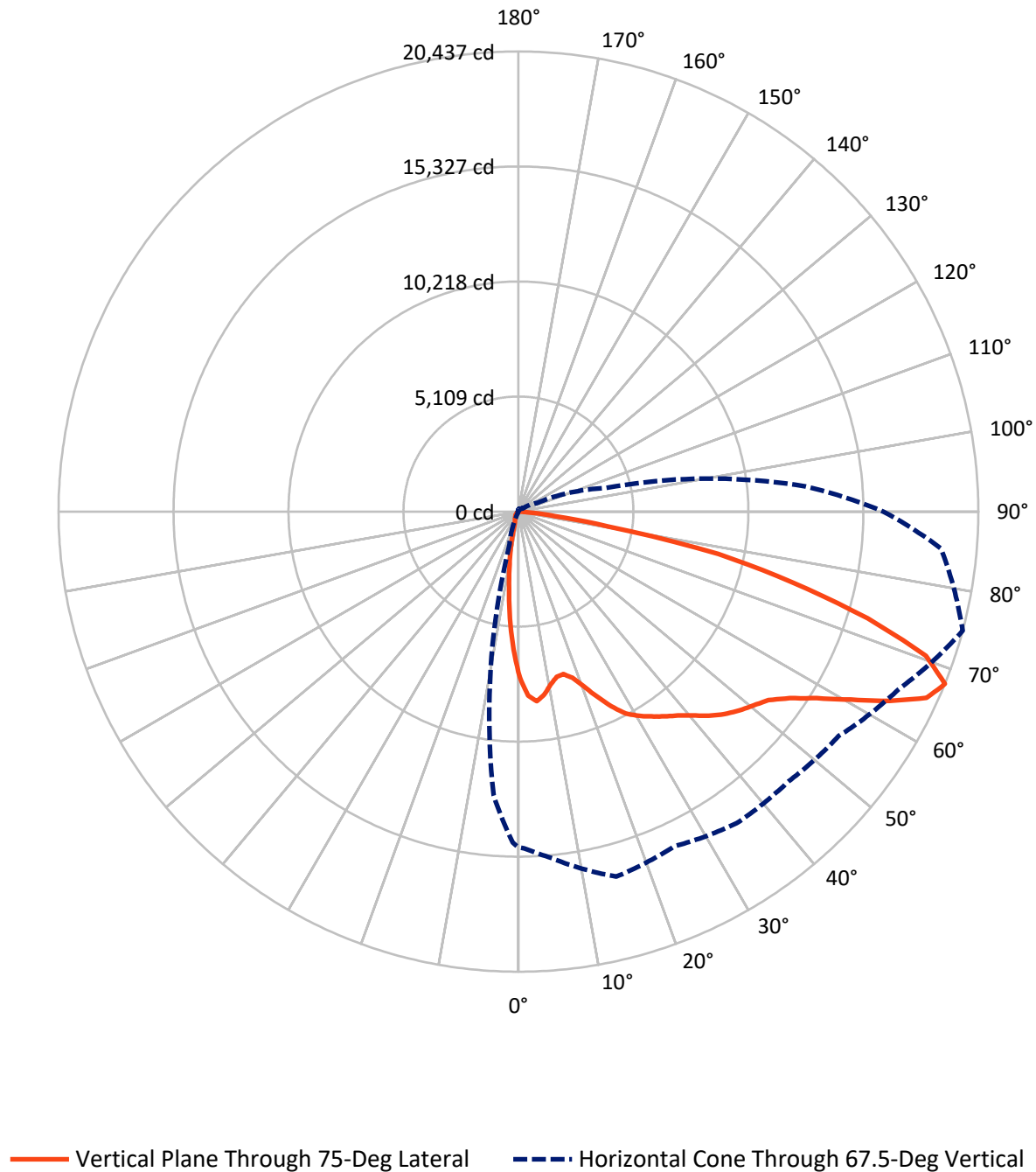
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.3 fc  
 Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3301.8   | 0.0    | 3301.8  |
|                    | % Fixture | 15.0     | 0.0    | 15.0    |
| <b>Street Side</b> | Lumens    | 18701.2  | 0.0    | 18701.2 |
|                    | % Fixture | 85.0     | 0.0    | 85.0    |
| <b>Total</b>       | Lumens    | 22003.0  | 0.0    | 22003.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 559.9   | 2.5       |
| 10°-20°   | 1102.5  | 5.0       |
| 20°-30°   | 1559.7  | 7.1       |
| 30°-40°   | 2293.3  | 10.4      |
| 40°-50°   | 3296.2  | 15.0      |
| 50°-60°   | 4640.1  | 21.1      |
| 60°-70°   | 5419.3  | 24.6      |
| 70°-80°   | 2764.7  | 12.6      |
| 80°-90°   | 367.3   | 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°    | 22003.0 | 100.0     |
| 0°-180°   | 22003.0 | 100.0     |

**Coefficient of Utilization**



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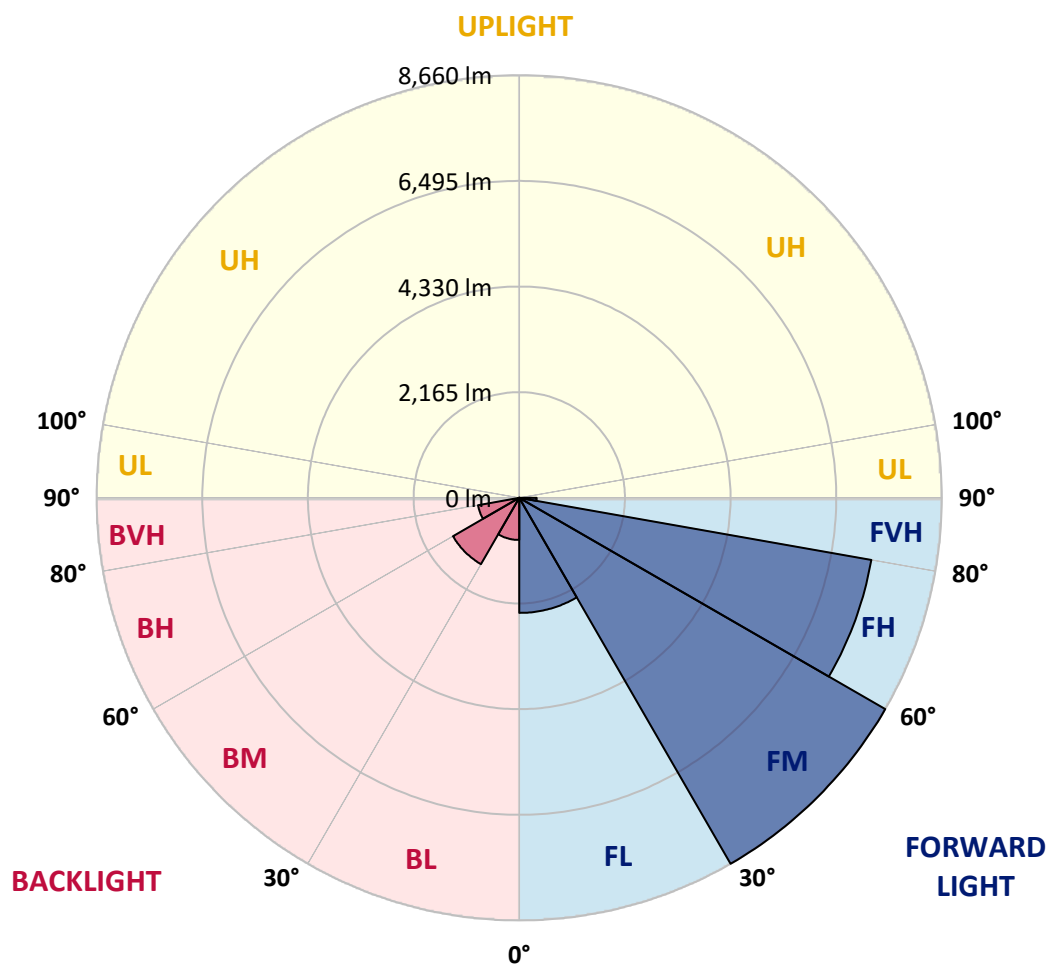
CATALOG NUMBER: GLEON-SA8A-830-U-SLL-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2358.7 | 10.7      |                         |      |         |
| FM   | (30°-60°)   | 8660.0 | 39.4      |                         |      |         |
| FH   | (60°-80°)   | 7326.4 | 33.3      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 356.1  | 1.6       |                         |      | G3/500  |
| BL   | (0°-30°)    | 863.5  | 3.9       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1569.6 | 7.1       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 857.6  | 3.9       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 11.1   | 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-G3**

Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 1°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 7381.6  | 7381.6  | 7381.6  | 7381.6  | 7381.6  | 7381.6  | 7381.6  | 7381.6  | 7381.6  | 7381.6  | 7381.6  |
| 2.5°  | 8001.8  | 8014.3  | 8078.9  | 8229.0  | 8392.7  | 8405.2  | 8515.7  | 8402.1  | 8363.5  | 8180.0  | 7990.3  |
| 5°    | 8062.3  | 8110.2  | 8332.2  | 8773.1  | 9155.6  | 9278.6  | 9366.2  | 9143.1  | 8908.6  | 8460.4  | 7982.0  |
| 7.5°  | 7575.5  | 7655.8  | 8004.9  | 8832.5  | 9516.3  | 9818.5  | 9875.9  | 9526.7  | 8952.4  | 8214.4  | 7495.2  |
| 10°   | 6952.2  | 7043.9  | 7465.0  | 8482.3  | 9421.4  | 9939.5  | 10018.7 | 9561.1  | 8735.6  | 7816.3  | 6968.9  |
| 12.5° | 6447.7  | 6555.1  | 6985.6  | 8088.3  | 9095.2  | 9668.5  | 9824.8  | 9445.4  | 8548.0  | 7533.8  | 6609.3  |
| 15°   | 6215.3  | 6338.3  | 6790.6  | 7834.0  | 8733.5  | 9184.8  | 9314.1  | 9150.4  | 8443.7  | 7489.0  | 6525.9  |
| 17.5° | 6348.7  | 6482.1  | 6949.1  | 7855.9  | 8393.7  | 8586.5  | 8690.8  | 8757.5  | 8443.7  | 7758.9  | 6769.8  |
| 20°   | 6895.9  | 7039.8  | 7533.8  | 8077.9  | 8112.3  | 8040.4  | 8151.9  | 8386.4  | 8541.7  | 8271.8  | 7355.6  |
| 22.5° | 7652.6  | 7821.5  | 8379.1  | 8458.3  | 7974.7  | 7702.7  | 7717.3  | 8085.2  | 8720.0  | 8922.2  | 8168.6  |
| 25°   | 8575.1  | 8781.5  | 9348.5  | 9025.4  | 8032.0  | 7501.5  | 7496.3  | 7837.1  | 8894.0  | 9573.6  | 9074.3  |
| 27.5° | 9491.3  | 9718.5  | 10216.7 | 9717.4  | 8268.6  | 7465.0  | 7454.6  | 7762.1  | 9063.9  | 10153.1 | 10063.5 |
| 30°   | 10259.4 | 10480.4 | 10909.8 | 10218.8 | 8524.0  | 7550.5  | 7500.5  | 7842.3  | 9165.0  | 10529.4 | 10784.8 |
| 32.5° | 10884.8 | 11062.0 | 11409.1 | 10563.8 | 8797.1  | 7716.2  | 7607.8  | 8057.0  | 9337.0  | 10847.3 | 11447.7 |
| 35°   | 11572.8 | 11759.3 | 11898.0 | 10892.1 | 9103.5  | 7954.9  | 7799.6  | 8397.9  | 9601.7  | 11170.4 | 12174.2 |
| 37.5° | 12357.6 | 12543.1 | 12526.5 | 11192.3 | 9492.3  | 8349.9  | 8250.9  | 8937.8  | 10013.5 | 11490.4 | 12985.1 |
| 40°   | 13125.8 | 13315.5 | 13180.0 | 11520.6 | 9948.8  | 9001.4  | 8928.4  | 9748.7  | 10564.8 | 11900.0 | 13935.7 |
| 42.5° | 13845.0 | 14050.3 | 13760.6 | 11831.2 | 10492.9 | 9822.7  | 9947.8  | 10793.1 | 11254.8 | 12404.5 | 14754.9 |
| 45°   | 14424.5 | 14634.0 | 14247.3 | 12133.5 | 11066.2 | 10819.2 | 11195.4 | 11950.1 | 12084.5 | 12830.8 | 15308.4 |
| 47.5° | 14845.6 | 15043.6 | 14585.0 | 12435.8 | 11800.0 | 12037.6 | 12693.2 | 13163.3 | 12833.9 | 13200.8 | 15701.3 |
| 50°   | 15114.5 | 15268.8 | 14684.0 | 12814.1 | 12763.1 | 13459.3 | 14253.6 | 14482.9 | 13539.6 | 13534.4 | 16178.7 |
| 52.5° | 15285.5 | 15355.3 | 14757.0 | 13209.2 | 13767.9 | 15007.2 | 15781.6 | 15853.5 | 14266.1 | 13901.3 | 16821.8 |
| 55°   | 15874.4 | 15930.6 | 15274.0 | 13687.6 | 14598.6 | 16363.2 | 17163.7 | 17097.0 | 15088.5 | 14619.4 | 17580.6 |
| 57.5° | 16879.1 | 16938.6 | 16342.4 | 14375.5 | 15270.9 | 17201.2 | 18165.4 | 18285.2 | 16052.6 | 15628.4 | 18393.6 |
| 60°   | 17383.6 | 17494.1 | 17281.5 | 15246.9 | 15922.3 | 17737.0 | 18848.1 | 19230.6 | 17257.5 | 16958.4 | 19181.6 |
| 62.5° | 16926.1 | 17086.6 | 17395.1 | 16213.1 | 16569.6 | 18031.9 | 19060.7 | 19569.3 | 18491.6 | 18508.3 | 19667.3 |
| 65°   | 16013.0 | 16141.2 | 16664.4 | 16742.6 | 16944.8 | 17995.5 | 18535.4 | 19096.1 | 19247.3 | 19932.1 | 19641.3 |
| 67.5° | 14910.2 | 14958.2 | 15402.2 | 16784.3 | 16400.7 | 16899.0 | 16957.3 | 17372.2 | 18650.0 | 20436.5 | 18852.2 |
| 70°   | 13322.8 | 13348.8 | 13736.6 | 15388.6 | 14094.1 | 14203.5 | 14117.0 | 14201.5 | 16033.8 | 19207.7 | 16860.4 |
| 72.5° | 10722.2 | 10787.9 | 11339.3 | 12779.7 | 10267.8 | 9952.0  | 10631.5 | 10594.0 | 12348.2 | 16227.7 | 12522.3 |
| 75°   | 7894.4  | 8008.1  | 8840.9  | 10293.8 | 7206.5  | 6518.6  | 7014.7  | 7147.1  | 8778.3  | 12552.5 | 7830.9  |
| 77.5° | 5527.4  | 5611.8  | 6418.5  | 7567.2  | 5215.7  | 4661.2  | 4481.9  | 4639.3  | 5794.2  | 9080.6  | 3945.1  |
| 80°   | 3184.3  | 3215.5  | 3730.4  | 4369.4  | 3514.7  | 4021.2  | 3642.9  | 3751.3  | 3471.9  | 4040.0  | 1696.9  |
| 82.5° | 2083.6  | 2088.8  | 2290.0  | 2600.6  | 2188.8  | 2543.2  | 1882.4  | 2406.7  | 2135.7  | 1622.9  | 552.4   |
| 85°   | 1125.7  | 1131.9  | 1327.9  | 1845.9  | 1239.3  | 700.4   | 411.7   | 845.3   | 1320.6  | 372.1   | 151.1   |
| 87.5° | 124.0   | 113.6   | 400.2   | 671.2   | 344.0   | 63.6    | 21.9    | 94.9    | 211.6   | 24.0    | 0.0     |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

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**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°     | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 7381.6  | 7381.6  | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 |
| 2.5°  | 7893.4  | 7806.9  | 7591.1 | 7362.9 | 7179.4 | 7007.4 | 6834.4 | 6622.8 | 6459.2 | 6425.8 | 6371.6 |
| 5°    | 7724.5  | 7450.4  | 6998.1 | 6543.6 | 6177.8 | 5716.0 | 5423.1 | 5194.9 | 4971.8 | 4958.3 | 4913.4 |
| 7.5°  | 7134.6  | 6774.0  | 6137.1 | 5508.6 | 4993.7 | 4553.8 | 4109.8 | 3812.8 | 3579.3 | 3496.9 | 3448.0 |
| 10°   | 6567.6  | 6162.1  | 5366.8 | 4649.7 | 4190.1 | 3801.3 | 3488.6 | 3178.0 | 2896.6 | 2702.7 | 2615.2 |
| 12.5° | 6171.5  | 5723.3  | 4846.7 | 4228.6 | 3899.3 | 3530.3 | 3148.8 | 2761.1 | 2436.9 | 2203.4 | 2060.6 |
| 15°   | 6018.3  | 5539.9  | 4672.7 | 4061.9 | 3655.4 | 3188.4 | 2700.6 | 2257.6 | 1898.0 | 1686.5 | 1558.3 |
| 17.5° | 6200.7  | 5644.1  | 4659.1 | 3858.6 | 3290.6 | 2710.0 | 2171.1 | 1647.9 | 1309.1 | 1148.6 | 1066.3 |
| 20°   | 6663.5  | 5975.6  | 4653.9 | 3609.5 | 2857.0 | 2143.0 | 1470.7 | 1084.0 | 878.7  | 789.0  | 750.5  |
| 22.5° | 7318.0  | 6398.7  | 4695.6 | 3363.5 | 2405.6 | 1531.2 | 1015.2 | 796.3  | 691.1  | 643.1  | 621.2  |
| 25°   | 8160.2  | 6992.8  | 4813.4 | 3140.5 | 1981.4 | 1142.4 | 791.1  | 667.1  | 593.1  | 555.6  | 539.9  |
| 27.5° | 9057.7  | 7676.6  | 4996.8 | 2946.6 | 1636.4 | 911.0  | 677.5  | 571.2  | 518.0  | 492.0  | 477.4  |
| 30°   | 9797.7  | 8468.8  | 5182.4 | 2730.8 | 1386.3 | 794.2  | 620.2  | 521.2  | 459.7  | 443.0  | 429.4  |
| 32.5° | 10445.0 | 9068.1  | 5313.7 | 2535.9 | 1222.6 | 705.6  | 560.8  | 465.9  | 424.2  | 391.9  | 377.3  |
| 35°   | 11115.2 | 9567.4  | 5309.5 | 2399.4 | 1110.1 | 638.9  | 510.7  | 416.9  | 366.9  | 329.4  | 317.9  |
| 37.5° | 11840.6 | 10131.2 | 5218.8 | 2282.7 | 1061.1 | 585.8  | 482.6  | 390.9  | 340.8  | 303.3  | 288.7  |
| 40°   | 12690.1 | 10723.3 | 5126.1 | 2173.2 | 1047.5 | 543.0  | 462.8  | 370.0  | 316.9  | 280.4  | 265.8  |
| 42.5° | 13517.7 | 11256.9 | 5044.8 | 2091.9 | 989.2  | 542.0  | 445.1  | 354.4  | 298.1  | 262.7  | 246.0  |
| 45°   | 14179.6 | 11754.1 | 5029.1 | 2042.9 | 927.7  | 560.8  | 435.7  | 344.0  | 283.5  | 248.1  | 232.4  |
| 47.5° | 14729.9 | 12294.0 | 5129.2 | 2008.5 | 869.3  | 511.8  | 458.6  | 336.7  | 270.0  | 235.6  | 217.8  |
| 50°   | 15384.5 | 12956.9 | 5364.8 | 1952.2 | 807.8  | 460.7  | 525.3  | 338.8  | 258.5  | 223.1  | 204.3  |
| 52.5° | 16297.5 | 13874.2 | 5710.8 | 1857.4 | 723.4  | 413.8  | 517.0  | 340.8  | 246.0  | 209.5  | 190.7  |
| 55°   | 17321.1 | 15019.7 | 6082.9 | 1700.0 | 605.6  | 352.3  | 443.0  | 326.2  | 222.0  | 194.9  | 177.2  |
| 57.5° | 18396.7 | 16058.9 | 6303.9 | 1512.4 | 481.5  | 304.4  | 354.4  | 297.1  | 196.0  | 175.1  | 163.6  |
| 60°   | 18565.6 | 16453.9 | 6202.8 | 1282.0 | 382.5  | 264.7  | 262.7  | 302.3  | 175.1  | 154.3  | 145.9  |
| 62.5° | 18145.6 | 15957.7 | 5713.9 | 1076.7 | 320.0  | 232.4  | 215.8  | 263.7  | 158.4  | 137.6  | 129.2  |
| 65°   | 17337.8 | 14616.3 | 4921.8 | 970.4  | 297.1  | 199.1  | 179.3  | 185.5  | 138.6  | 119.9  | 112.6  |
| 67.5° | 16214.2 | 12825.6 | 4041.0 | 909.9  | 293.9  | 170.9  | 153.2  | 140.7  | 119.9  | 104.2  | 98.0   |
| 70°   | 13916.9 | 10684.7 | 3223.9 | 876.6  | 285.6  | 143.8  | 129.2  | 114.7  | 100.1  | 88.6   | 83.4   |
| 72.5° | 10242.8 | 7571.3  | 2507.8 | 840.1  | 287.7  | 114.7  | 112.6  | 94.9   | 80.3   | 68.8   | 66.7   |
| 75°   | 5918.2  | 4325.6  | 1644.8 | 680.6  | 274.1  | 88.6   | 93.8   | 66.7   | 56.3   | 47.9   | 47.9   |
| 77.5° | 3154.0  | 2638.1  | 626.4  | 283.5  | 100.1  | 56.3   | 53.2   | 39.6   | 35.4   | 29.2   | 28.1   |
| 80°   | 1374.8  | 1161.1  | 188.7  | 79.2   | 55.2   | 30.2   | 19.8   | 17.7   | 15.6   | 12.5   | 11.5   |
| 82.5° | 486.8   | 420.1   | 61.5   | 38.6   | 24.0   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 110.5   | 79.2    | 0.0    | 9.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



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**CANDELA DISTRIBUTION (continued):**

|       | 185°   | 195°   | 205°   | 215°   | 225°   | 235°   | 245°   | 255°   | 265°   | 270°   | 275°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 |
| 2.5°  | 6261.1 | 6238.2 | 6102.7 | 6107.9 | 6131.9 | 6166.3 | 6085.0 | 6122.5 | 6223.6 | 6320.6 | 6357.0 |
| 5°    | 4841.5 | 4846.7 | 4764.4 | 4815.5 | 4861.3 | 4892.6 | 4761.3 | 4763.4 | 4843.6 | 4953.1 | 5010.4 |
| 7.5°  | 3411.5 | 3403.1 | 3407.3 | 3529.3 | 3615.8 | 3553.2 | 3602.2 | 3432.3 | 3442.7 | 3520.9 | 3462.5 |
| 10°   | 2535.9 | 2421.3 | 2356.7 | 2448.4 | 2543.2 | 2508.8 | 2424.4 | 2369.2 | 2407.7 | 2494.2 | 2488.0 |
| 12.5° | 1992.9 | 1828.2 | 1731.3 | 1665.6 | 1743.8 | 1679.2 | 1677.1 | 1629.1 | 1577.0 | 1586.4 | 1725.0 |
| 15°   | 1498.8 | 1379.0 | 1264.3 | 1159.0 | 1157.0 | 1135.1 | 1023.5 | 898.5  | 888.0  | 894.3  | 966.2  |
| 17.5° | 1030.8 | 990.2  | 943.3  | 852.6  | 828.6  | 736.9  | 628.5  | 578.5  | 553.5  | 564.9  | 588.9  |
| 20°   | 724.4  | 708.8  | 714.0  | 665.0  | 630.6  | 543.0  | 479.5  | 459.7  | 455.5  | 467.0  | 478.4  |
| 22.5° | 600.4  | 572.2  | 569.1  | 547.2  | 512.8  | 449.2  | 414.8  | 403.4  | 398.2  | 408.6  | 416.9  |
| 25°   | 525.3  | 497.2  | 485.7  | 472.2  | 435.7  | 391.9  | 371.1  | 360.6  | 355.4  | 361.7  | 366.9  |
| 27.5° | 462.8  | 436.7  | 426.3  | 416.9  | 381.5  | 350.2  | 333.5  | 324.2  | 320.0  | 322.1  | 327.3  |
| 30°   | 415.9  | 393.0  | 379.4  | 367.9  | 337.7  | 315.8  | 301.2  | 291.8  | 287.7  | 287.7  | 292.9  |
| 32.5° | 366.9  | 354.4  | 341.9  | 327.3  | 299.1  | 284.6  | 270.0  | 259.5  | 255.4  | 256.4  | 260.6  |
| 35°   | 305.4  | 301.2  | 304.4  | 290.8  | 266.8  | 254.3  | 239.7  | 228.3  | 225.1  | 226.2  | 230.4  |
| 37.5° | 271.0  | 252.2  | 263.7  | 256.4  | 242.9  | 226.2  | 207.4  | 197.0  | 191.8  | 194.9  | 197.0  |
| 40°   | 249.1  | 226.2  | 217.8  | 225.1  | 223.1  | 196.0  | 179.3  | 168.9  | 164.7  | 165.7  | 167.8  |
| 42.5° | 230.4  | 203.3  | 184.5  | 183.4  | 196.0  | 170.9  | 153.2  | 143.8  | 138.6  | 138.6  | 140.7  |
| 45°   | 212.6  | 183.4  | 160.5  | 142.8  | 164.7  | 144.9  | 128.2  | 119.9  | 113.6  | 113.6  | 114.7  |
| 47.5° | 199.1  | 166.8  | 139.7  | 116.7  | 124.0  | 118.8  | 105.3  | 96.9   | 90.7   | 90.7   | 91.7   |
| 50°   | 186.6  | 150.1  | 120.9  | 98.0   | 92.8   | 98.0   | 85.5   | 76.1   | 71.9   | 70.9   | 73.0   |
| 52.5° | 173.0  | 133.4  | 103.2  | 83.4   | 73.0   | 74.0   | 66.7   | 60.5   | 55.2   | 55.2   | 57.3   |
| 55°   | 159.5  | 119.9  | 89.6   | 70.9   | 60.5   | 55.2   | 53.2   | 49.0   | 44.8   | 44.8   | 46.9   |
| 57.5° | 145.9  | 105.3  | 76.1   | 58.4   | 47.9   | 43.8   | 43.8   | 40.7   | 37.5   | 37.5   | 39.6   |
| 60°   | 133.4  | 90.7   | 62.5   | 47.9   | 37.5   | 36.5   | 37.5   | 34.4   | 32.3   | 32.3   | 34.4   |
| 62.5° | 118.8  | 77.1   | 51.1   | 39.6   | 30.2   | 29.2   | 32.3   | 30.2   | 28.1   | 28.1   | 30.2   |
| 65°   | 101.1  | 65.7   | 40.7   | 30.2   | 22.9   | 22.9   | 27.1   | 25.0   | 22.9   | 22.9   | 25.0   |
| 67.5° | 85.5   | 55.2   | 31.3   | 21.9   | 16.7   | 17.7   | 22.9   | 20.8   | 19.8   | 19.8   | 21.9   |
| 70°   | 70.9   | 42.7   | 21.9   | 13.6   | 9.4    | 13.6   | 17.7   | 17.7   | 17.7   | 17.7   | 19.8   |
| 72.5° | 53.2   | 29.2   | 12.5   | 5.2    | 4.2    | 9.4    | 14.6   | 16.7   | 15.6   | 15.6   | 18.8   |
| 75°   | 34.4   | 16.7   | 4.2    | 0.0    | 0.0    | 5.2    | 11.5   | 13.6   | 13.6   | 12.5   | 15.6   |
| 77.5° | 19.8   | 5.2    | 0.0    | 0.0    | 0.0    | 0.0    | 7.3    | 6.3    | 5.2    | 4.2    | 7.3    |
| 80°   | 5.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P324312

CATALOG NUMBER: GLEON-SA8A-830-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°    | 359°    | 360°    |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0°    | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6 | 7381.6  | 7381.6  | 7381.6  |
| 2.5°  | 6504.0 | 6627.0 | 6800.0 | 6983.5 | 7265.9 | 7490.0 | 7710.0 | 7898.6  | 7971.6  | 8001.8  |
| 5°    | 5148.0 | 5328.3 | 5581.6 | 5906.8 | 6416.5 | 6875.1 | 7339.9 | 7807.9  | 8011.2  | 8062.3  |
| 7.5°  | 3693.9 | 3924.3 | 4246.4 | 4653.9 | 5251.2 | 5845.3 | 6494.6 | 7181.5  | 7496.3  | 7575.5  |
| 10°   | 2734.0 | 3015.4 | 3384.4 | 3813.8 | 4384.0 | 4994.7 | 5702.5 | 6487.3  | 6846.9  | 6952.2  |
| 12.5° | 1939.7 | 2320.2 | 2814.2 | 3336.4 | 3830.5 | 4375.6 | 5091.7 | 5956.8  | 6334.1  | 6447.7  |
| 15°   | 1139.2 | 1507.2 | 2091.9 | 2791.3 | 3424.0 | 3976.4 | 4703.9 | 5684.8  | 6100.6  | 6215.3  |
| 17.5° | 653.5  | 837.0  | 1278.9 | 2058.6 | 2917.4 | 3682.5 | 4582.0 | 5752.5  | 6242.4  | 6348.7  |
| 20°   | 499.3  | 557.6  | 736.9  | 1325.8 | 2325.4 | 3393.8 | 4582.0 | 6136.1  | 6739.6  | 6895.9  |
| 22.5° | 436.7  | 479.5  | 552.4  | 791.1  | 1711.5 | 3084.2 | 4635.1 | 6690.6  | 7479.6  | 7652.6  |
| 25°   | 387.7  | 426.3  | 488.8  | 595.2  | 1167.4 | 2716.3 | 4761.3 | 7371.2  | 8351.0  | 8575.1  |
| 27.5° | 347.1  | 383.6  | 439.9  | 521.2  | 798.4  | 2272.2 | 4931.2 | 8169.6  | 9312.0  | 9491.3  |
| 30°   | 310.6  | 345.0  | 396.1  | 453.4  | 616.0  | 1768.8 | 5076.0 | 8922.2  | 10066.6 | 10259.4 |
| 32.5° | 276.2  | 307.5  | 353.3  | 396.1  | 504.5  | 1308.1 | 5091.7 | 9518.4  | 10693.0 | 10884.8 |
| 35°   | 243.9  | 272.0  | 313.7  | 347.1  | 418.0  | 1032.9 | 4848.8 | 10035.3 | 11319.5 | 11572.8 |
| 37.5° | 212.6  | 239.7  | 276.2  | 301.2  | 367.9  | 842.2  | 4477.8 | 10611.7 | 12123.1 | 12357.6 |
| 40°   | 183.4  | 207.4  | 244.9  | 261.6  | 348.1  | 647.3  | 4074.4 | 11216.3 | 12911.1 | 13125.8 |
| 42.5° | 156.3  | 179.3  | 215.8  | 248.1  | 305.4  | 483.6  | 3638.7 | 11783.3 | 13619.8 | 13845.0 |
| 45°   | 130.3  | 154.3  | 190.7  | 262.7  | 253.3  | 361.7  | 3172.8 | 12159.6 | 14179.6 | 14424.5 |
| 47.5° | 105.3  | 132.4  | 182.4  | 250.2  | 202.2  | 265.8  | 2803.8 | 12516.0 | 14603.8 | 14845.6 |
| 50°   | 84.4   | 111.5  | 205.3  | 223.1  | 165.7  | 203.3  | 2649.5 | 12835.0 | 14882.1 | 15114.5 |
| 52.5° | 68.8   | 93.8   | 193.9  | 170.9  | 138.6  | 167.8  | 2732.9 | 13352.0 | 15139.5 | 15285.5 |
| 55°   | 57.3   | 74.0   | 116.7  | 118.8  | 117.8  | 142.8  | 2836.1 | 14094.1 | 15805.6 | 15874.4 |
| 57.5° | 50.0   | 59.4   | 81.3   | 91.7   | 99.0   | 127.2  | 2838.2 | 15159.3 | 16836.4 | 16879.1 |
| 60°   | 42.7   | 52.1   | 67.8   | 74.0   | 85.5   | 113.6  | 2735.0 | 15531.4 | 17241.9 | 17383.6 |
| 62.5° | 37.5   | 45.9   | 56.3   | 61.5   | 71.9   | 102.1  | 2493.2 | 14992.6 | 16685.3 | 16926.1 |
| 65°   | 33.4   | 41.7   | 46.9   | 52.1   | 63.6   | 91.7   | 2095.0 | 13914.8 | 15761.8 | 16013.0 |
| 67.5° | 29.2   | 36.5   | 41.7   | 46.9   | 57.3   | 81.3   | 1542.6 | 12663.0 | 14701.8 | 14910.2 |
| 70°   | 26.1   | 32.3   | 37.5   | 41.7   | 50.0   | 68.8   | 936.0  | 10745.2 | 13236.3 | 13322.8 |
| 72.5° | 25.0   | 29.2   | 34.4   | 37.5   | 43.8   | 60.5   | 474.3  | 7896.5  | 10581.5 | 10722.2 |
| 75°   | 21.9   | 26.1   | 31.3   | 33.4   | 38.6   | 52.1   | 192.8  | 5186.5  | 7668.3  | 7894.4  |
| 77.5° | 17.7   | 24.0   | 28.1   | 30.2   | 33.4   | 42.7   | 98.0   | 3314.5  | 5381.4  | 5527.4  |
| 80°   | 6.3    | 17.7   | 24.0   | 25.0   | 28.1   | 31.3   | 64.6   | 1814.7  | 3121.7  | 3184.3  |
| 82.5° | 0.0    | 11.5   | 18.8   | 17.7   | 19.8   | 24.0   | 41.7   | 863.0   | 2060.6  | 2083.6  |
| 85°   | 0.0    | 5.2    | 14.6   | 11.5   | 8.3    | 16.7   | 14.6   | 188.7   | 1080.9  | 1125.7  |
| 87.5° | 0.0    | 0.0    | 1.0    | 5.2    | 4.2    | 6.3    | 2.1    | 1.0     | 98.0    | 124.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0     |

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

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2408-195-9  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 08/07/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: MCGRAW EDISON  
 Catalog Number: **GALN-SB1A-830-U-5WQ**  
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

### Spectral Parameters

CCT (K): 3050  
 CIE  $u'$ : 0.2476  
 CIE  $v'$ : 0.5251  
 Duv: 0.0034  
 CIE x: 0.4383  
 CIE y: 0.4131  
 CIE z: 0.1487  
 Peak Wavelength (nm): 603  
 Dominant Wavelength (nm): 581  
 Purity: 55.55201  
 R<sub>f</sub>: 81.5  
 R<sub>g</sub>: 99.2

CRI (Ra): 81.0  
 R1: 79.6  
 R2: 85.6  
 R3: 92.0  
 R4: 82.6  
 R5: 78.9  
 R6: 81.7  
 R7: 85.2  
 R8: 62.0  
 R9: 7.1  
 R10: 67.0  
 R11: 82.7  
 R12: 63.2  
 R13: 80.3  
 R14: 95.0  
 R15: 71.7



### Test Conditions

Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

| 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: SP1-2408-195-9

**CIE 1931 Chromaticity Diagram**



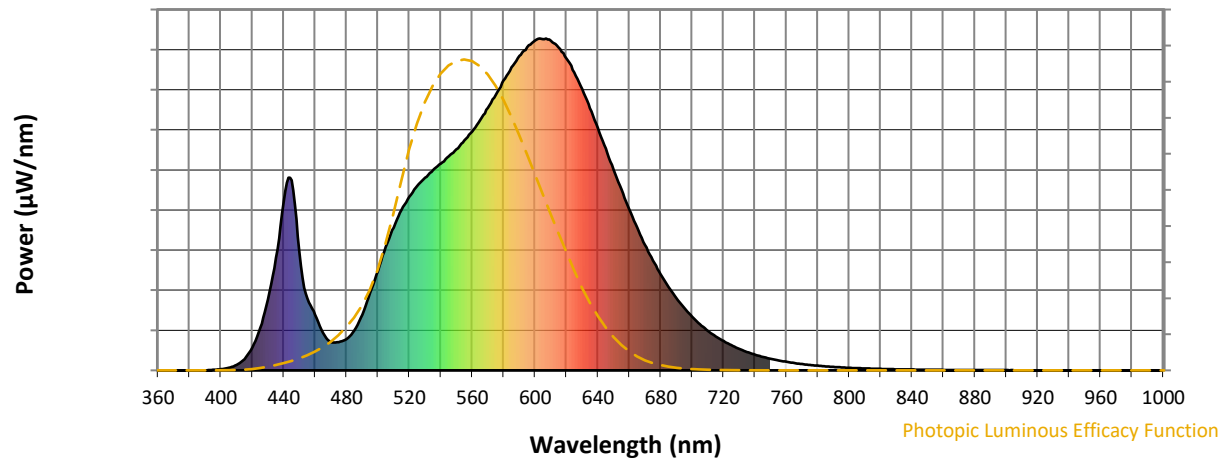
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>λ</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 168                      | NR            | 620    | 940                      | NR            | 750    | 35                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 233                      | NR            | 625    | 897                      | NR            | 755    | 30                       | NR            | 885    | 1                        | NR            |
| 370    | 0                        | NR            | 500    | 300                      | NR            | 630    | 847                      | NR            | 760    | 26                       | NR            | 890    | 1                        | NR            |
| 375    | 0                        | NR            | 505    | 372                      | NR            | 635    | 790                      | NR            | 765    | 22                       | NR            | 895    | 1                        | NR            |
| 380    | 0                        | NR            | 510    | 430                      | NR            | 640    | 730                      | NR            | 770    | 19                       | NR            | 900    | 1                        | NR            |
| 385    | 0                        | NR            | 515    | 483                      | NR            | 645    | 668                      | NR            | 775    | 16                       | NR            | 905    | 1                        | NR            |
| 390    | 0                        | NR            | 520    | 524                      | NR            | 650    | 605                      | NR            | 780    | 14                       | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 555                      | NR            | 655    | 545                      | NR            | 785    | 12                       | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 581                      | NR            | 660    | 485                      | NR            | 790    | 10                       | NR            | 920    | 0                        | NR            |
| 405    | 7                        | NR            | 535    | 604                      | NR            | 665    | 430                      | NR            | 795    | 9                        | NR            | 925    | 0                        | NR            |
| 410    | 17                       | NR            | 540    | 623                      | NR            | 670    | 378                      | NR            | 800    | 8                        | NR            | 930    | 0                        | NR            |
| 415    | 34                       | NR            | 545    | 645                      | NR            | 675    | 331                      | NR            | 805    | 7                        | NR            | 935    | 0                        | NR            |
| 420    | 68                       | NR            | 550    | 667                      | NR            | 680    | 290                      | NR            | 810    | 6                        | NR            | 940    | 0                        | NR            |
| 425    | 128                      | NR            | 555    | 693                      | NR            | 685    | 251                      | NR            | 815    | 5                        | NR            | 945    | 0                        | NR            |
| 430    | 214                      | NR            | 560    | 719                      | NR            | 690    | 218                      | NR            | 820    | 4                        | NR            | 950    | 0                        | NR            |
| 435    | 339                      | NR            | 565    | 754                      | NR            | 695    | 188                      | NR            | 825    | 4                        | NR            | 955    | 0                        | NR            |
| 440    | 507                      | NR            | 570    | 791                      | NR            | 700    | 162                      | NR            | 830    | 3                        | NR            | 960    | 0                        | NR            |
| 445    | 573                      | NR            | 575    | 830                      | NR            | 705    | 139                      | NR            | 835    | 3                        | NR            | 965    | 0                        | NR            |
| 450    | 356                      | NR            | 580    | 873                      | NR            | 710    | 119                      | NR            | 840    | 3                        | NR            | 970    | 0                        | NR            |
| 455    | 217                      | NR            | 585    | 913                      | NR            | 715    | 102                      | NR            | 845    | 2                        | NR            | 975    | 0                        | NR            |
| 460    | 168                      | NR            | 590    | 948                      | NR            | 720    | 88                       | NR            | 850    | 2                        | NR            | 980    | 0                        | NR            |
| 465    | 113                      | NR            | 595    | 974                      | NR            | 725    | 76                       | NR            | 855    | 2                        | NR            | 985    | 0                        | NR            |
| 470    | 85                       | NR            | 600    | 994                      | NR            | 730    | 65                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 85                       | NR            | 605    | 998                      | NR            | 735    | 55                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 94                       | NR            | 610    | 994                      | NR            | 740    | 47                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 120                      | NR            | 615    | 973                      | NR            | 745    | 41                       | NR            | 875    | 1                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2408-195-9

### Scotopic Flux vs. Wavelength


**Scotopic Lumens: NR**
**S/P: 1.27**

| 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    | 168                      | NR            | 620    | 940                      | NR            | 750    | 35                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 233                      | NR            | 625    | 897                      | NR            | 755    | 30                       | NR            | 885    | 1                        | NR            |
| 370    | 0                        | NR            | 500    | 300                      | NR            | 630    | 847                      | NR            | 760    | 26                       | NR            | 890    | 1                        | NR            |
| 375    | 0                        | NR            | 505    | 372                      | NR            | 635    | 790                      | NR            | 765    | 22                       | NR            | 895    | 1                        | NR            |
| 380    | 0                        | NR            | 510    | 430                      | NR            | 640    | 730                      | NR            | 770    | 19                       | NR            | 900    | 1                        | NR            |
| 385    | 0                        | NR            | 515    | 483                      | NR            | 645    | 668                      | NR            | 775    | 16                       | NR            | 905    | 1                        | NR            |
| 390    | 0                        | NR            | 520    | 524                      | NR            | 650    | 605                      | NR            | 780    | 14                       | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 555                      | NR            | 655    | 545                      | NR            | 785    | 12                       | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 581                      | NR            | 660    | 485                      | NR            | 790    | 10                       | NR            | 920    | 0                        | NR            |
| 405    | 7                        | NR            | 535    | 604                      | NR            | 665    | 430                      | NR            | 795    | 9                        | NR            | 925    | 0                        | NR            |
| 410    | 17                       | NR            | 540    | 623                      | NR            | 670    | 378                      | NR            | 800    | 8                        | NR            | 930    | 0                        | NR            |
| 415    | 34                       | NR            | 545    | 645                      | NR            | 675    | 331                      | NR            | 805    | 7                        | NR            | 935    | 0                        | NR            |
| 420    | 68                       | NR            | 550    | 667                      | NR            | 680    | 290                      | NR            | 810    | 6                        | NR            | 940    | 0                        | NR            |
| 425    | 128                      | NR            | 555    | 693                      | NR            | 685    | 251                      | NR            | 815    | 5                        | NR            | 945    | 0                        | NR            |
| 430    | 214                      | NR            | 560    | 719                      | NR            | 690    | 218                      | NR            | 820    | 4                        | NR            | 950    | 0                        | NR            |
| 435    | 339                      | NR            | 565    | 754                      | NR            | 695    | 188                      | NR            | 825    | 4                        | NR            | 955    | 0                        | NR            |
| 440    | 507                      | NR            | 570    | 791                      | NR            | 700    | 162                      | NR            | 830    | 3                        | NR            | 960    | 0                        | NR            |
| 445    | 573                      | NR            | 575    | 830                      | NR            | 705    | 139                      | NR            | 835    | 3                        | NR            | 965    | 0                        | NR            |
| 450    | 356                      | NR            | 580    | 873                      | NR            | 710    | 119                      | NR            | 840    | 3                        | NR            | 970    | 0                        | NR            |
| 455    | 217                      | NR            | 585    | 913                      | NR            | 715    | 102                      | NR            | 845    | 2                        | NR            | 975    | 0                        | NR            |
| 460    | 168                      | NR            | 590    | 948                      | NR            | 720    | 88                       | NR            | 850    | 2                        | NR            | 980    | 0                        | NR            |
| 465    | 113                      | NR            | 595    | 974                      | NR            | 725    | 76                       | NR            | 855    | 2                        | NR            | 985    | 0                        | NR            |
| 470    | 85                       | NR            | 600    | 994                      | NR            | 730    | 65                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 85                       | NR            | 605    | 998                      | NR            | 735    | 55                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 94                       | NR            | 610    | 994                      | NR            | 740    | 47                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 120                      | NR            | 615    | 973                      | NR            | 745    | 41                       | NR            | 875    | 1                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2408-195-9

### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 2.32**

| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 168                                  | NR                             | 620               | 940                                  | NR                             | 750               | 35                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 233                                  | NR                             | 625               | 897                                  | NR                             | 755               | 30                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 300                                  | NR                             | 630               | 847                                  | NR                             | 760               | 26                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 372                                  | NR                             | 635               | 790                                  | NR                             | 765               | 22                                   | NR                             | 895               | 1                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 430                                  | NR                             | 640               | 730                                  | NR                             | 770               | 19                                   | NR                             | 900               | 1                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 483                                  | NR                             | 645               | 668                                  | NR                             | 775               | 16                                   | NR                             | 905               | 1                                    | NR                             |
| 390               | 0                                    | NR                             | 520               | 524                                  | NR                             | 650               | 605                                  | NR                             | 780               | 14                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 2                                    | NR                             | 525               | 555                                  | NR                             | 655               | 545                                  | NR                             | 785               | 12                                   | NR                             | 915               | 0                                    | NR                             |
| 400               | 4                                    | NR                             | 530               | 581                                  | NR                             | 660               | 485                                  | NR                             | 790               | 10                                   | NR                             | 920               | 0                                    | NR                             |
| 405               | 7                                    | NR                             | 535               | 604                                  | NR                             | 665               | 430                                  | NR                             | 795               | 9                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 17                                   | NR                             | 540               | 623                                  | NR                             | 670               | 378                                  | NR                             | 800               | 8                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 34                                   | NR                             | 545               | 645                                  | NR                             | 675               | 331                                  | NR                             | 805               | 7                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 68                                   | NR                             | 550               | 667                                  | NR                             | 680               | 290                                  | NR                             | 810               | 6                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 128                                  | NR                             | 555               | 693                                  | NR                             | 685               | 251                                  | NR                             | 815               | 5                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 214                                  | NR                             | 560               | 719                                  | NR                             | 690               | 218                                  | NR                             | 820               | 4                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 339                                  | NR                             | 565               | 754                                  | NR                             | 695               | 188                                  | NR                             | 825               | 4                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 507                                  | NR                             | 570               | 791                                  | NR                             | 700               | 162                                  | NR                             | 830               | 3                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 573                                  | NR                             | 575               | 830                                  | NR                             | 705               | 139                                  | NR                             | 835               | 3                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 356                                  | NR                             | 580               | 873                                  | NR                             | 710               | 119                                  | NR                             | 840               | 3                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 217                                  | NR                             | 585               | 913                                  | NR                             | 715               | 102                                  | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 168                                  | NR                             | 590               | 948                                  | NR                             | 720               | 88                                   | NR                             | 850               | 2                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 113                                  | NR                             | 595               | 974                                  | NR                             | 725               | 76                                   | NR                             | 855               | 2                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 85                                   | NR                             | 600               | 994                                  | NR                             | 730               | 65                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 85                                   | NR                             | 605               | 998                                  | NR                             | 735               | 55                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 94                                   | NR                             | 610               | 994                                  | NR                             | 740               | 47                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 120                                  | NR                             | 615               | 973                                  | NR                             | 745               | 41                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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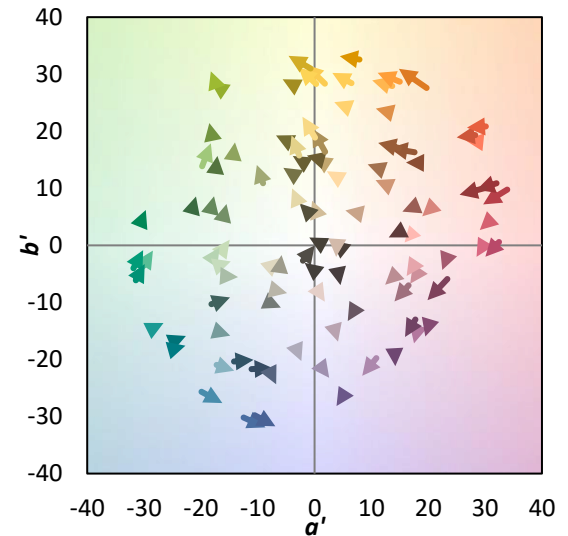
TM-30-18

### Summary

$R_f = 81.5$   
 $R_g = 99.2$   
 $CIE R_a = 81.0$   
 $R_9 = 7.1$



### Color Vector Graphics



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

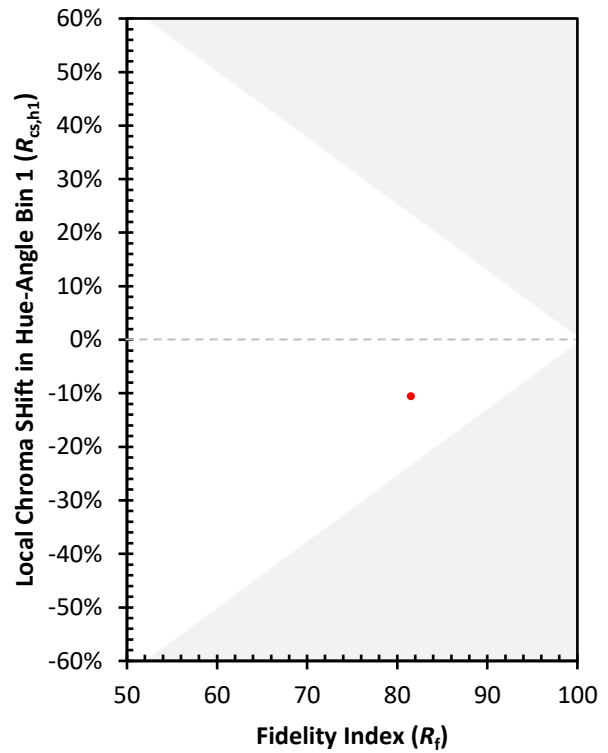
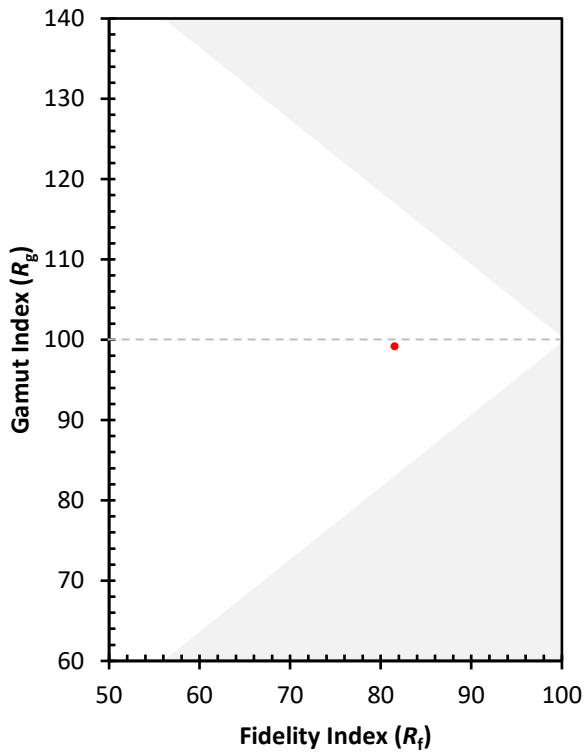
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 92 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 94 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 91 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 78 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 |            |



### Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)