

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: P387062

Luminaire Tested: **GWC-SA2D-740-U-SLL-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P387062  
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: GWC-SA2D-740-U-SLL-HSS  
Description: GALLEON WALL LUMINAIRE  
(2) 70 CRI, 4000K, 1200mA 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: 12005 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2

Input Watts (W): 129  
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: 28.75 FT



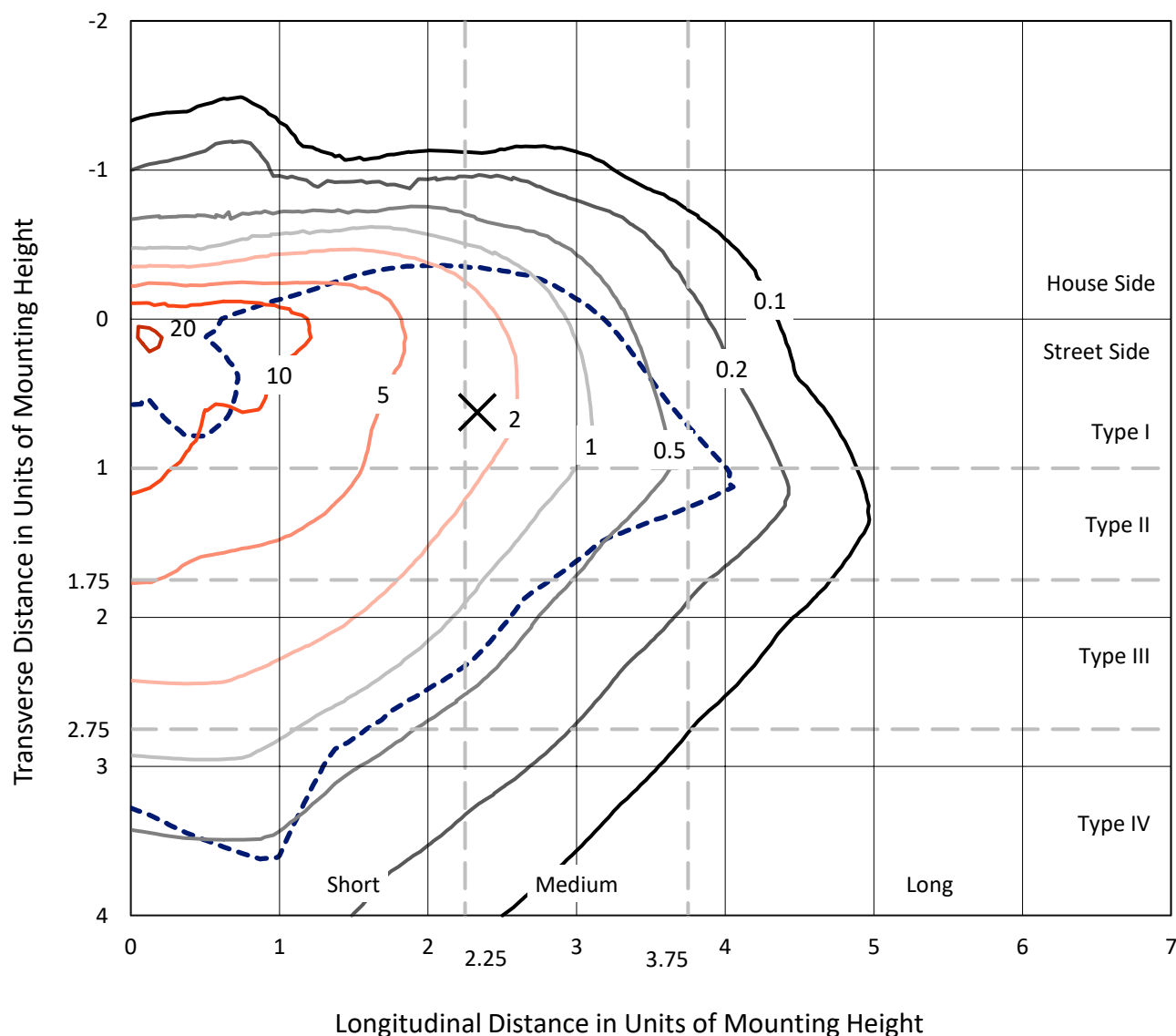
REPORT NUMBER: P387062

CATALOG NUMBER: GWC-SA2D-740-U-SLL-HSS

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

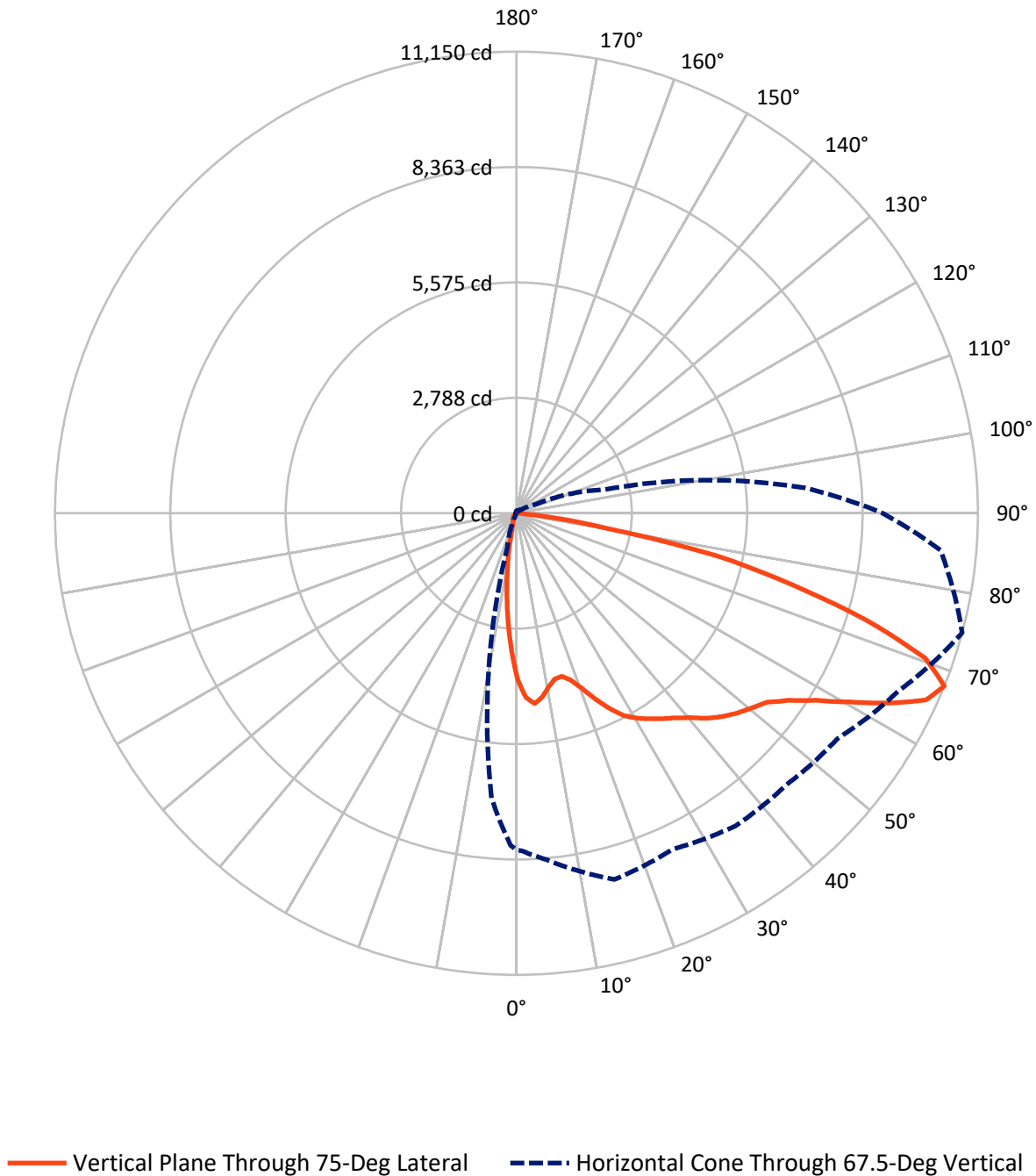


Based on 15 foot mounting height. Maximum calculated value = 23.2 fc  
 Type III - Medium - N/A

REPORT NUMBER: P387062

CATALOG NUMBER: GWC-SA2D-740-U-SLL-HSS

## Luminous Intensity Polar Plot



REPORT NUMBER: P387062

CATALOG NUMBER: GWC-SA2D-740-U-SLL-HSS

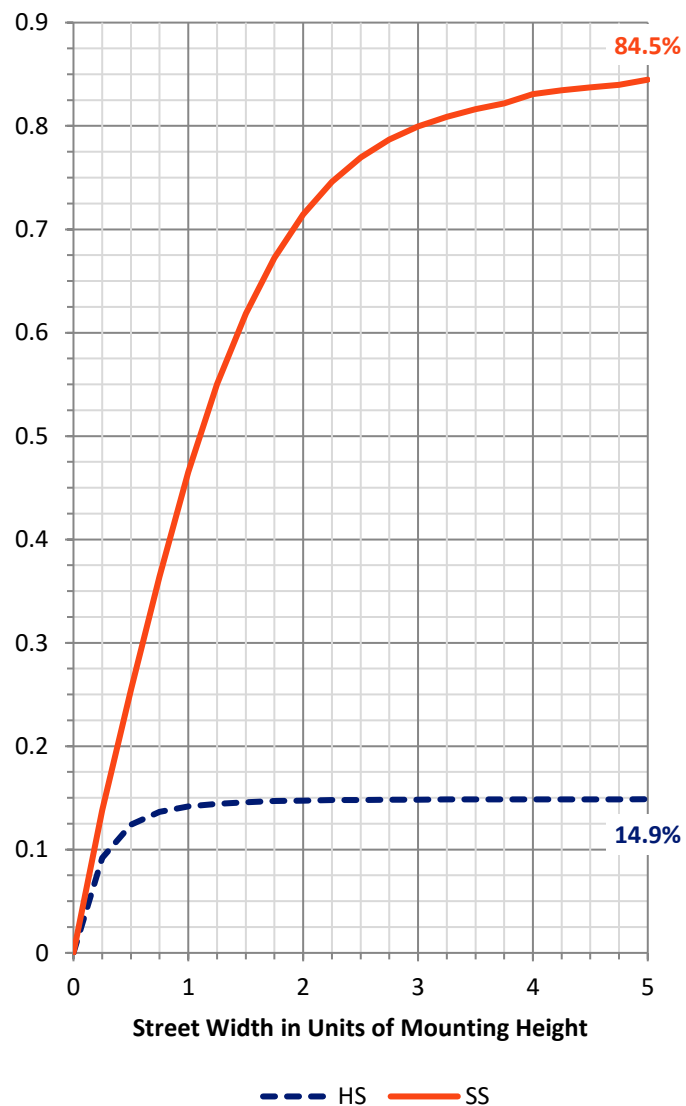
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1801.5   | 0.0    | 1801.5  |
|                    | % Fixture | 15.0     | 0.0    | 15.0    |
| <b>Street Side</b> | Lumens    | 10203.5  | 0.0    | 10203.5 |
|                    | % Fixture | 85.0     | 0.0    | 85.0    |
| <b>Total</b>       | Lumens    | 12005.0  | 0.0    | 12005.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 305.5   | 2.5       |
| 10°-20°   | 601.5   | 5.0       |
| 20°-30°   | 851.0   | 7.1       |
| 30°-40°   | 1251.2  | 10.4      |
| 40°-50°   | 1798.4  | 15.0      |
| 50°-60°   | 2531.7  | 21.1      |
| 60°-70°   | 2956.8  | 24.6      |
| 70°-80°   | 1508.5  | 12.6      |
| 80°-90°   | 200.4   | 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°    | 12005.0 | 100.0     |
| 0°-180°   | 12005.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P387062

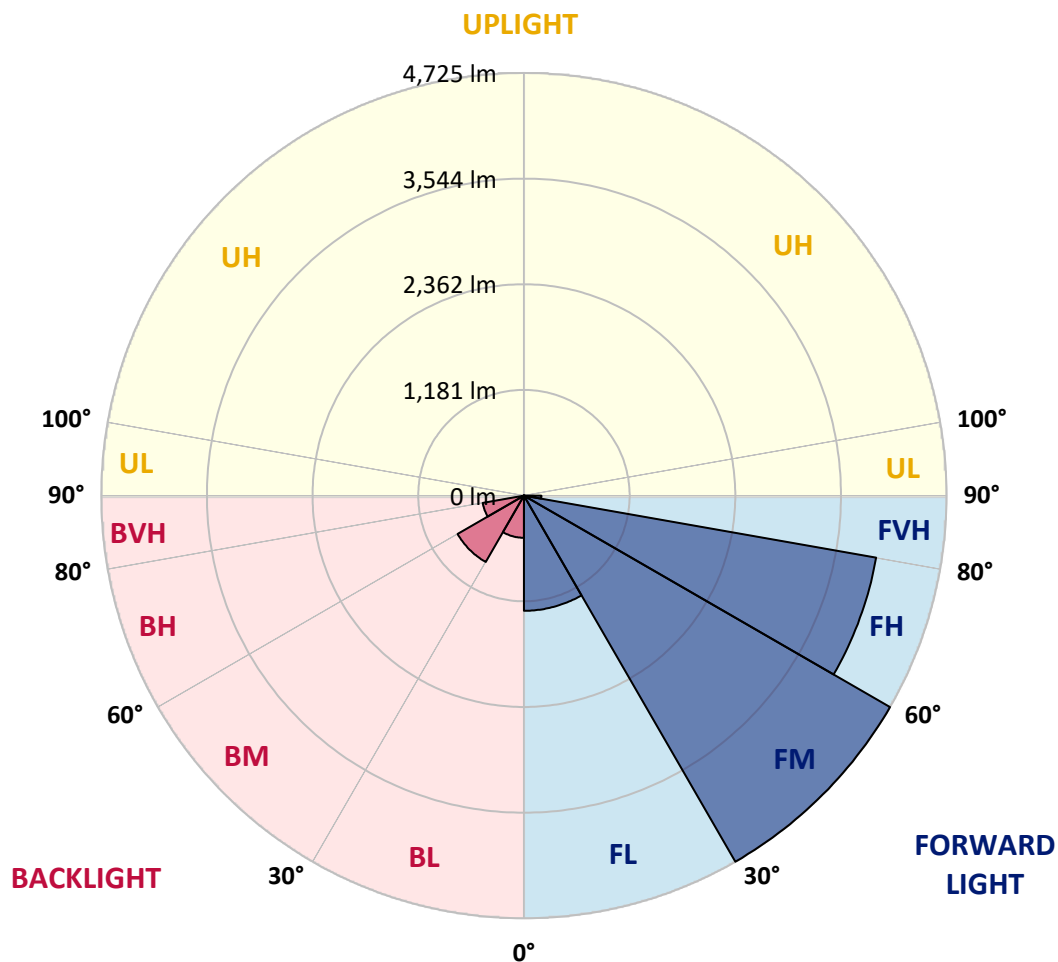
CATALOG NUMBER: GWC-SA2D-740-U-SLL-HSS

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1286.9 | 10.7      |                         |      |         |
| FM   | (30°-60°)   | 4725.0 | 39.4      |                         |      |         |
| FH   | (60°-80°)   | 3997.3 | 33.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 194.3  | 1.6       |                         |      | G2/225  |
| BL   | (0°-30°)    | 471.1  | 3.9       | B1/500                  |      |         |
| BM   | (30°-60°)   | 856.4  | 7.1       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 467.9  | 3.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 6.1    | 0.1       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type III Medium



REPORT NUMBER: P387062

CATALOG NUMBER: GWC-SA2D-740-U-SLL-HSS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0°    | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5  | 4027.5  | 4027.5  | 4027.5  | 4027.5  |
| 2.5°  | 4365.8 | 4372.7 | 4407.9 | 4489.8 | 4579.1 | 4585.9 | 4646.2  | 4584.2  | 4563.2  | 4463.1  | 4359.6  |
| 5°    | 4398.8 | 4425.0 | 4546.1 | 4786.7 | 4995.4 | 5062.5 | 5110.3  | 4988.6  | 4860.6  | 4616.1  | 4355.0  |
| 7.5°  | 4133.2 | 4177.0 | 4367.5 | 4819.1 | 5192.2 | 5357.1 | 5388.4  | 5197.8  | 4884.5  | 4481.9  | 4089.5  |
| 10°   | 3793.2 | 3843.2 | 4073.0 | 4628.0 | 5140.4 | 5423.0 | 5466.3  | 5216.6  | 4766.2  | 4264.6  | 3802.3  |
| 12.5° | 3517.9 | 3576.5 | 3811.4 | 4413.0 | 4962.4 | 5275.2 | 5360.5  | 5153.5  | 4663.8  | 4110.5  | 3606.1  |
| 15°   | 3391.1 | 3458.2 | 3705.0 | 4274.3 | 4765.1 | 5011.3 | 5081.8  | 4992.5  | 4607.0  | 4086.0  | 3560.6  |
| 17.5° | 3463.9 | 3536.7 | 3791.5 | 4286.2 | 4579.7 | 4684.9 | 4741.7  | 4778.1  | 4607.0  | 4233.3  | 3693.7  |
| 20°   | 3762.5 | 3840.9 | 4110.5 | 4407.4 | 4426.1 | 4386.9 | 4447.7  | 4575.7  | 4660.4  | 4513.1  | 4013.3  |
| 22.5° | 4175.3 | 4267.5 | 4571.7 | 4614.9 | 4351.1 | 4202.6 | 4210.6  | 4411.3  | 4757.7  | 4868.0  | 4456.8  |
| 25°   | 4678.6 | 4791.2 | 5100.6 | 4924.3 | 4382.3 | 4092.9 | 4090.0  | 4276.0  | 4852.6  | 5223.4  | 4951.0  |
| 27.5° | 5178.5 | 5302.5 | 5574.3 | 5301.9 | 4511.4 | 4073.0 | 4067.3  | 4235.0  | 4945.3  | 5539.6  | 5490.7  |
| 30°   | 5597.6 | 5718.2 | 5952.5 | 5575.5 | 4650.8 | 4119.6 | 4092.3  | 4278.8  | 5000.5  | 5744.9  | 5884.2  |
| 32.5° | 5938.8 | 6035.5 | 6224.9 | 5763.7 | 4799.8 | 4210.0 | 4150.9  | 4396.0  | 5094.3  | 5918.4  | 6245.9  |
| 35°   | 6314.2 | 6416.0 | 6491.6 | 5942.8 | 4967.0 | 4340.3 | 4255.5  | 4581.9  | 5238.8  | 6094.7  | 6642.3  |
| 37.5° | 6742.4 | 6843.6 | 6834.5 | 6106.6 | 5179.1 | 4555.8 | 4501.8  | 4876.5  | 5463.4  | 6269.3  | 7084.8  |
| 40°   | 7161.5 | 7265.0 | 7191.1 | 6285.7 | 5428.2 | 4911.2 | 4871.4  | 5319.0  | 5764.3  | 6492.7  | 7603.4  |
| 42.5° | 7553.9 | 7666.0 | 7507.9 | 6455.2 | 5725.0 | 5359.3 | 5427.6  | 5888.8  | 6140.7  | 6768.0  | 8050.4  |
| 45°   | 7870.1 | 7984.4 | 7773.4 | 6620.1 | 6037.8 | 5903.0 | 6108.3  | 6520.0  | 6593.4  | 7000.6  | 8352.4  |
| 47.5° | 8099.9 | 8207.9 | 7957.7 | 6785.1 | 6438.2 | 6567.8 | 6925.5  | 7182.0  | 7002.3  | 7202.5  | 8566.8  |
| 50°   | 8246.6 | 8330.8 | 8011.7 | 6991.5 | 6963.6 | 7343.5 | 7776.9  | 7902.0  | 7387.3  | 7384.5  | 8827.2  |
| 52.5° | 8339.9 | 8378.0 | 8051.5 | 7207.0 | 7511.8 | 8188.0 | 8610.6  | 8649.8  | 7783.7  | 7584.6  | 9178.1  |
| 55°   | 8661.2 | 8691.9 | 8333.6 | 7468.1 | 7965.1 | 8927.9 | 9364.6  | 9328.2  | 8232.4  | 7976.5  | 9592.1  |
| 57.5° | 9209.4 | 9241.8 | 8916.5 | 7843.4 | 8331.9 | 9385.1 | 9911.2  | 9976.6  | 8758.4  | 8527.0  | 10035.7 |
| 60°   | 9484.6 | 9544.9 | 9428.9 | 8318.8 | 8687.3 | 9677.4 | 10283.6 | 10492.4 | 9415.8  | 9252.6  | 10465.6 |
| 62.5° | 9235.0 | 9322.6 | 9490.9 | 8846.0 | 9040.5 | 9838.4 | 10399.7 | 10677.2 | 10089.2 | 10098.3 | 10730.6 |
| 65°   | 8736.8 | 8806.8 | 9092.2 | 9134.9 | 9245.2 | 9818.5 | 10113.0 | 10419.0 | 10501.5 | 10875.1 | 10716.4 |
| 67.5° | 8135.1 | 8161.3 | 8403.6 | 9157.6 | 8948.4 | 9220.2 | 9252.0  | 9478.4  | 10175.6 | 11150.3 | 10285.9 |
| 70°   | 7269.0 | 7283.2 | 7494.8 | 8396.2 | 7689.8 | 7749.6 | 7702.4  | 7748.4  | 8748.2  | 10479.8 | 9199.2  |
| 72.5° | 5850.1 | 5886.0 | 6186.8 | 6972.7 | 5602.2 | 5429.9 | 5800.7  | 5780.2  | 6737.3  | 8854.0  | 6832.3  |
| 75°   | 4307.3 | 4369.3 | 4823.6 | 5616.4 | 3931.9 | 3556.6 | 3827.3  | 3899.5  | 4789.5  | 6848.7  | 4272.6  |
| 77.5° | 3015.8 | 3061.8 | 3502.0 | 4128.7 | 2845.7 | 2543.2 | 2445.4  | 2531.2  | 3161.4  | 4954.4  | 2152.5  |
| 80°   | 1737.4 | 1754.4 | 2035.3 | 2384.0 | 1917.6 | 2194.0 | 1987.6  | 2046.7  | 1894.3  | 2204.2  | 925.8   |
| 82.5° | 1136.8 | 1139.7 | 1249.4 | 1418.9 | 1194.3 | 1387.6 | 1027.1  | 1313.1  | 1165.2  | 885.5   | 301.4   |
| 85°   | 614.2  | 617.6  | 724.5  | 1007.2 | 676.2  | 382.2  | 224.6   | 461.2   | 720.5   | 203.0   | 82.5    |
| 87.5° | 67.7   | 62.0   | 218.4  | 366.2  | 187.7  | 34.7   | 11.9    | 51.8    | 115.4   | 13.1    | 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: P387062

CATALOG NUMBER: GWC-SA2D-740-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4027.5  | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 |
| 2.5°  | 4306.7  | 4259.5 | 4141.8 | 4017.2 | 3917.1 | 3823.3 | 3728.9 | 3613.5 | 3524.2 | 3506.0 | 3476.4 |
| 5°    | 4214.6  | 4065.0 | 3818.2 | 3570.2 | 3370.6 | 3118.7 | 2958.9 | 2834.4 | 2712.7 | 2705.3 | 2680.8 |
| 7.5°  | 3892.7  | 3695.9 | 3348.5 | 3005.5 | 2724.6 | 2484.6 | 2242.4 | 2080.3 | 1952.9 | 1908.0 | 1881.2 |
| 10°   | 3583.3  | 3362.1 | 2928.2 | 2536.9 | 2286.1 | 2074.0 | 1903.4 | 1733.9 | 1580.4 | 1474.6 | 1426.8 |
| 12.5° | 3367.2  | 3122.7 | 2644.4 | 2307.2 | 2127.5 | 1926.2 | 1718.0 | 1506.5 | 1329.6 | 1202.2 | 1124.3 |
| 15°   | 3283.6  | 3022.6 | 2549.4 | 2216.2 | 1994.4 | 1739.6 | 1473.5 | 1231.8 | 1035.6 | 920.1  | 850.2  |
| 17.5° | 3383.1  | 3079.5 | 2542.1 | 2105.3 | 1795.4 | 1478.6 | 1184.6 | 899.1  | 714.3  | 626.7  | 581.8  |
| 20°   | 3635.6  | 3260.3 | 2539.2 | 1969.4 | 1558.8 | 1169.2 | 802.4  | 591.4  | 479.4  | 430.5  | 409.5  |
| 22.5° | 3992.8  | 3491.2 | 2562.0 | 1835.2 | 1312.5 | 835.4  | 553.9  | 434.5  | 377.0  | 350.9  | 338.9  |
| 25°   | 4452.3  | 3815.4 | 2626.2 | 1713.5 | 1081.1 | 623.3  | 431.6  | 364.0  | 323.6  | 303.1  | 294.6  |
| 27.5° | 4941.9  | 4188.4 | 2726.3 | 1607.7 | 892.8  | 497.0  | 369.6  | 311.6  | 282.6  | 268.4  | 260.5  |
| 30°   | 5345.7  | 4620.6 | 2827.5 | 1490.0 | 756.4  | 433.3  | 338.4  | 284.3  | 250.8  | 241.7  | 234.3  |
| 32.5° | 5698.9  | 4947.6 | 2899.2 | 1383.6 | 667.1  | 385.0  | 306.0  | 254.2  | 231.5  | 213.8  | 205.9  |
| 35°   | 6064.5  | 5220.0 | 2896.9 | 1309.1 | 605.7  | 348.6  | 278.7  | 227.5  | 200.2  | 179.7  | 173.5  |
| 37.5° | 6460.3  | 5527.7 | 2847.4 | 1245.4 | 578.9  | 319.6  | 263.3  | 213.3  | 186.0  | 165.5  | 157.5  |
| 40°   | 6923.8  | 5850.7 | 2796.8 | 1185.7 | 571.5  | 296.3  | 252.5  | 201.9  | 172.9  | 153.0  | 145.0  |
| 42.5° | 7375.4  | 6141.9 | 2752.5 | 1141.4 | 539.7  | 295.7  | 242.8  | 193.4  | 162.6  | 143.3  | 134.2  |
| 45°   | 7736.5  | 6413.1 | 2743.9 | 1114.6 | 506.1  | 306.0  | 237.7  | 187.7  | 154.7  | 135.3  | 126.8  |
| 47.5° | 8036.7  | 6707.7 | 2798.5 | 1095.9 | 474.3  | 279.2  | 250.2  | 183.7  | 147.3  | 128.5  | 118.9  |
| 50°   | 8393.9  | 7069.4 | 2927.1 | 1065.2 | 440.7  | 251.4  | 286.6  | 184.8  | 141.0  | 121.7  | 111.5  |
| 52.5° | 8892.1  | 7569.9 | 3115.9 | 1013.4 | 394.7  | 225.8  | 282.1  | 186.0  | 134.2  | 114.3  | 104.1  |
| 55°   | 9450.5  | 8194.8 | 3318.9 | 927.5  | 330.4  | 192.2  | 241.7  | 178.0  | 121.1  | 106.3  | 96.7   |
| 57.5° | 10037.4 | 8761.8 | 3439.4 | 825.2  | 262.7  | 166.1  | 193.4  | 162.1  | 106.9  | 95.5   | 89.3   |
| 60°   | 10129.5 | 8977.4 | 3384.3 | 699.5  | 208.7  | 144.4  | 143.3  | 164.9  | 95.5   | 84.2   | 79.6   |
| 62.5° | 9900.3  | 8706.7 | 3117.6 | 587.5  | 174.6  | 126.8  | 117.7  | 143.9  | 86.4   | 75.1   | 70.5   |
| 65°   | 9459.6  | 7974.8 | 2685.4 | 529.5  | 162.1  | 108.6  | 97.8   | 101.2  | 75.6   | 65.4   | 61.4   |
| 67.5° | 8846.6  | 6997.7 | 2204.8 | 496.5  | 160.4  | 93.3   | 83.6   | 76.8   | 65.4   | 56.9   | 53.5   |
| 70°   | 7593.2  | 5829.7 | 1759.0 | 478.3  | 155.8  | 78.5   | 70.5   | 62.6   | 54.6   | 48.3   | 45.5   |
| 72.5° | 5588.5  | 4131.0 | 1368.3 | 458.4  | 157.0  | 62.6   | 61.4   | 51.8   | 43.8   | 37.5   | 36.4   |
| 75°   | 3229.0  | 2360.1 | 897.4  | 371.4  | 149.6  | 48.3   | 51.2   | 36.4   | 30.7   | 26.2   | 26.2   |
| 77.5° | 1720.9  | 1439.4 | 341.8  | 154.7  | 54.6   | 30.7   | 29.0   | 21.6   | 19.3   | 15.9   | 15.4   |
| 80°   | 750.1   | 633.5  | 102.9  | 43.2   | 30.1   | 16.5   | 10.8   | 9.7    | 8.5    | 6.8    | 6.3    |
| 82.5° | 265.6   | 229.2  | 33.6   | 21.0   | 13.1   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 60.3    | 43.2   | 0.0    | 5.1    | 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: P387062

CATALOG NUMBER: GWC-SA2D-740-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 185°   | 195°   | 205°   | 215°   | 225°   | 235°   | 245°   | 255°   | 265°   | 270°   | 275°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 |
| 2.5°  | 3416.1 | 3403.6 | 3329.7 | 3332.5 | 3345.6 | 3364.4 | 3320.0 | 3340.5 | 3395.7 | 3448.5 | 3468.4 |
| 5°    | 2641.6 | 2644.4 | 2599.5 | 2627.4 | 2652.4 | 2669.4 | 2597.8 | 2598.9 | 2642.7 | 2702.4 | 2733.7 |
| 7.5°  | 1861.3 | 1856.8 | 1859.1 | 1925.6 | 1972.8 | 1938.7 | 1965.4 | 1872.7 | 1878.4 | 1921.0 | 1889.2 |
| 10°   | 1383.6 | 1321.1 | 1285.8 | 1335.9 | 1387.6 | 1368.8 | 1322.8 | 1292.6 | 1313.7 | 1360.9 | 1357.5 |
| 12.5° | 1087.3 | 997.5  | 944.6  | 908.8  | 951.4  | 916.2  | 915.0  | 888.9  | 860.4  | 865.5  | 941.2  |
| 15°   | 817.8  | 752.4  | 689.8  | 632.4  | 631.2  | 619.3  | 558.5  | 490.2  | 484.5  | 487.9  | 527.2  |
| 17.5° | 562.4  | 540.3  | 514.7  | 465.2  | 452.1  | 402.1  | 342.9  | 315.6  | 302.0  | 308.2  | 321.3  |
| 20°   | 395.2  | 386.7  | 389.6  | 362.8  | 344.1  | 296.3  | 261.6  | 250.8  | 248.5  | 254.8  | 261.0  |
| 22.5° | 327.6  | 312.2  | 310.5  | 298.6  | 279.8  | 245.1  | 226.3  | 220.1  | 217.2  | 222.9  | 227.5  |
| 25°   | 286.6  | 271.3  | 265.0  | 257.6  | 237.7  | 213.8  | 202.5  | 196.8  | 193.9  | 197.3  | 200.2  |
| 27.5° | 252.5  | 238.3  | 232.6  | 227.5  | 208.1  | 191.1  | 182.0  | 176.9  | 174.6  | 175.7  | 178.6  |
| 30°   | 226.9  | 214.4  | 207.0  | 200.7  | 184.3  | 172.3  | 164.4  | 159.2  | 157.0  | 157.0  | 159.8  |
| 32.5° | 200.2  | 193.4  | 186.5  | 178.6  | 163.2  | 155.3  | 147.3  | 141.6  | 139.3  | 139.9  | 142.2  |
| 35°   | 166.6  | 164.4  | 166.1  | 158.7  | 145.6  | 138.8  | 130.8  | 124.5  | 122.8  | 123.4  | 125.7  |
| 37.5° | 147.9  | 137.6  | 143.9  | 139.9  | 132.5  | 123.4  | 113.2  | 107.5  | 104.6  | 106.3  | 107.5  |
| 40°   | 135.9  | 123.4  | 118.9  | 122.8  | 121.7  | 106.9  | 97.8   | 92.1   | 89.9   | 90.4   | 91.6   |
| 42.5° | 125.7  | 110.9  | 100.7  | 100.1  | 106.9  | 93.3   | 83.6   | 78.5   | 75.6   | 75.6   | 76.8   |
| 45°   | 116.0  | 100.1  | 87.6   | 77.9   | 89.9   | 79.0   | 69.9   | 65.4   | 62.0   | 62.0   | 62.6   |
| 47.5° | 108.6  | 91.0   | 76.2   | 63.7   | 67.7   | 64.8   | 57.4   | 52.9   | 49.5   | 49.5   | 50.0   |
| 50°   | 101.8  | 81.9   | 66.0   | 53.5   | 50.6   | 53.5   | 46.6   | 41.5   | 39.2   | 38.7   | 39.8   |
| 52.5° | 94.4   | 72.8   | 56.3   | 45.5   | 39.8   | 40.4   | 36.4   | 33.0   | 30.1   | 30.1   | 31.3   |
| 55°   | 87.0   | 65.4   | 48.9   | 38.7   | 33.0   | 30.1   | 29.0   | 26.7   | 24.5   | 24.5   | 25.6   |
| 57.5° | 79.6   | 57.4   | 41.5   | 31.8   | 26.2   | 23.9   | 23.9   | 22.2   | 20.5   | 20.5   | 21.6   |
| 60°   | 72.8   | 49.5   | 34.1   | 26.2   | 20.5   | 19.9   | 20.5   | 18.8   | 17.6   | 17.6   | 18.8   |
| 62.5° | 64.8   | 42.1   | 27.9   | 21.6   | 16.5   | 15.9   | 17.6   | 16.5   | 15.4   | 15.4   | 16.5   |
| 65°   | 55.2   | 35.8   | 22.2   | 16.5   | 12.5   | 12.5   | 14.8   | 13.6   | 12.5   | 12.5   | 13.6   |
| 67.5° | 46.6   | 30.1   | 17.1   | 11.9   | 9.1    | 9.7    | 12.5   | 11.4   | 10.8   | 10.8   | 11.9   |
| 70°   | 38.7   | 23.3   | 11.9   | 7.4    | 5.1    | 7.4    | 9.7    | 9.7    | 9.7    | 9.7    | 10.8   |
| 72.5° | 29.0   | 15.9   | 6.8    | 2.8    | 2.3    | 5.1    | 8.0    | 9.1    | 8.5    | 8.5    | 10.2   |
| 75°   | 18.8   | 9.1    | 2.3    | 0.0    | 0.0    | 2.8    | 6.3    | 7.4    | 7.4    | 6.8    | 8.5    |
| 77.5° | 10.8   | 2.8    | 0.0    | 0.0    | 0.0    | 0.0    | 4.0    | 3.4    | 2.8    | 2.3    | 4.0    |
| 80°   | 2.8    | 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: P387062

CATALOG NUMBER: GWC-SA2D-740-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 | 4027.5 |
| 2.5°  | 3548.6 | 3615.7 | 3710.1 | 3810.2 | 3964.3 | 4086.6 | 4206.6 | 4309.5 | 4349.4 | 4365.8 |
| 5°    | 2808.8 | 2907.2 | 3045.3 | 3222.8 | 3500.9 | 3751.1 | 4004.7 | 4260.1 | 4371.0 | 4398.8 |
| 7.5°  | 2015.4 | 2141.1 | 2316.8 | 2539.2 | 2865.1 | 3189.2 | 3543.5 | 3918.3 | 4090.0 | 4133.2 |
| 10°   | 1491.7 | 1645.2 | 1846.5 | 2080.8 | 2391.9 | 2725.2 | 3111.3 | 3539.5 | 3735.7 | 3793.2 |
| 12.5° | 1058.3 | 1265.9 | 1535.5 | 1820.4 | 2089.9 | 2387.4 | 2778.1 | 3250.1 | 3455.9 | 3517.9 |
| 15°   | 621.6  | 822.3  | 1141.4 | 1523.0 | 1868.2 | 2169.6 | 2566.5 | 3101.6 | 3328.6 | 3391.1 |
| 17.5° | 356.6  | 456.7  | 697.8  | 1123.2 | 1591.8 | 2009.2 | 2500.0 | 3138.6 | 3405.9 | 3463.9 |
| 20°   | 272.4  | 304.2  | 402.1  | 723.4  | 1268.8 | 1851.7 | 2500.0 | 3347.9 | 3677.2 | 3762.5 |
| 22.5° | 238.3  | 261.6  | 301.4  | 431.6  | 933.8  | 1682.8 | 2529.0 | 3650.4 | 4080.9 | 4175.3 |
| 25°   | 211.6  | 232.6  | 266.7  | 324.7  | 636.9  | 1482.0 | 2597.8 | 4021.8 | 4556.4 | 4678.6 |
| 27.5° | 189.4  | 209.3  | 240.0  | 284.3  | 435.6  | 1239.7 | 2690.5 | 4457.4 | 5080.7 | 5178.5 |
| 30°   | 169.5  | 188.2  | 216.1  | 247.4  | 336.1  | 965.1  | 2769.5 | 4868.0 | 5492.4 | 5597.6 |
| 32.5° | 150.7  | 167.8  | 192.8  | 216.1  | 275.2  | 713.7  | 2778.1 | 5193.3 | 5834.2 | 5938.8 |
| 35°   | 133.1  | 148.4  | 171.2  | 189.4  | 228.0  | 563.6  | 2645.6 | 5475.4 | 6176.0 | 6314.2 |
| 37.5° | 116.0  | 130.8  | 150.7  | 164.4  | 200.7  | 459.5  | 2443.1 | 5789.8 | 6614.4 | 6742.4 |
| 40°   | 100.1  | 113.2  | 133.6  | 142.7  | 189.9  | 353.2  | 2223.0 | 6119.7 | 7044.4 | 7161.5 |
| 42.5° | 85.3   | 97.8   | 117.7  | 135.3  | 166.6  | 263.9  | 1985.3 | 6429.1 | 7431.1 | 7553.9 |
| 45°   | 71.1   | 84.2   | 104.1  | 143.3  | 138.2  | 197.3  | 1731.1 | 6634.4 | 7736.5 | 7870.1 |
| 47.5° | 57.4   | 72.2   | 99.5   | 136.5  | 110.3  | 145.0  | 1529.8 | 6828.8 | 7967.9 | 8099.9 |
| 50°   | 46.1   | 60.8   | 112.0  | 121.7  | 90.4   | 110.9  | 1445.6 | 7002.9 | 8119.8 | 8246.6 |
| 52.5° | 37.5   | 51.2   | 105.8  | 93.3   | 75.6   | 91.6   | 1491.1 | 7284.9 | 8260.2 | 8339.9 |
| 55°   | 31.3   | 40.4   | 63.7   | 64.8   | 64.3   | 77.9   | 1547.4 | 7689.8 | 8623.6 | 8661.2 |
| 57.5° | 27.3   | 32.4   | 44.4   | 50.0   | 54.0   | 69.4   | 1548.5 | 8271.0 | 9186.1 | 9209.4 |
| 60°   | 23.3   | 28.4   | 37.0   | 40.4   | 46.6   | 62.0   | 1492.2 | 8474.1 | 9407.3 | 9484.6 |
| 62.5° | 20.5   | 25.0   | 30.7   | 33.6   | 39.2   | 55.7   | 1360.3 | 8180.1 | 9103.6 | 9235.0 |
| 65°   | 18.2   | 22.7   | 25.6   | 28.4   | 34.7   | 50.0   | 1143.1 | 7592.0 | 8599.8 | 8736.8 |
| 67.5° | 15.9   | 19.9   | 22.7   | 25.6   | 31.3   | 44.4   | 841.7  | 6909.0 | 8021.4 | 8135.1 |
| 70°   | 14.2   | 17.6   | 20.5   | 22.7   | 27.3   | 37.5   | 510.7  | 5862.6 | 7221.8 | 7269.0 |
| 72.5° | 13.6   | 15.9   | 18.8   | 20.5   | 23.9   | 33.0   | 258.8  | 4308.4 | 5773.4 | 5850.1 |
| 75°   | 11.9   | 14.2   | 17.1   | 18.2   | 21.0   | 28.4   | 105.2  | 2829.8 | 4183.9 | 4307.3 |
| 77.5° | 9.7    | 13.1   | 15.4   | 16.5   | 18.2   | 23.3   | 53.5   | 1808.4 | 2936.2 | 3015.8 |
| 80°   | 3.4    | 9.7    | 13.1   | 13.6   | 15.4   | 17.1   | 35.3   | 990.1  | 1703.2 | 1737.4 |
| 82.5° | 0.0    | 6.3    | 10.2   | 9.7    | 10.8   | 13.1   | 22.7   | 470.9  | 1124.3 | 1136.8 |
| 85°   | 0.0    | 2.8    | 8.0    | 6.3    | 4.5    | 9.1    | 8.0    | 102.9  | 589.7  | 614.2  |
| 87.5° | 0.0    | 0.0    | 0.6    | 2.8    | 2.3    | 3.4    | 1.1    | 0.6    | 53.5   | 67.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

INVUE

Report Number: SP1-2104-224-3

Luminaire Tested: CCW-SA-2A-740-U-SL4

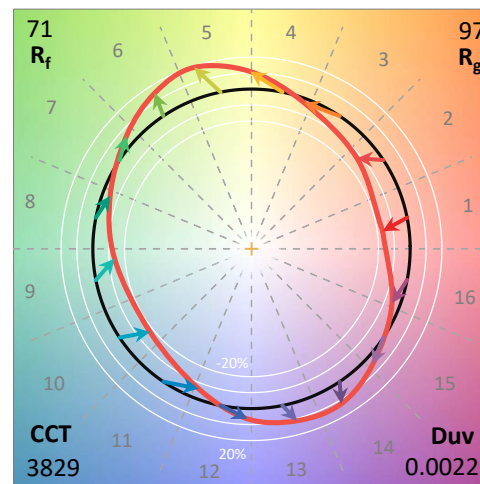
Test Date: 04/26/2021

### Test Information

Test Method: LM-79-08  
 Report Number: SP1-2104-224-3  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry:  $4\pi$   
 Issue Date: 04/26/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: INVUE  
 Catalog Number: **CCW-SA-2A-740-U-SL4**  
 Description: INVUE WALL PACK ClearCurve Light Square

### Spectral Parameters

|                           |        |           |      |      |       |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K):                  | 3829   | CRI (Ra): | 69.8 |      |       |
| CIE u':                   | 0.2271 | R1:       | 67.2 | R9:  | -35.1 |
| CIE v':                   | 0.5076 | R2:       | 75.2 | R10: | 43.1  |
| Duv:                      | 0.0022 | R3:       | 83.2 | R11: | 69.0  |
| CIE x:                    | 0.3900 | R4:       | 71.0 | R12: | 44.3  |
| CIE y:                    | 0.3873 | R5:       | 67.4 | R13: | 67.6  |
| CIE z:                    | 0.2227 | R6:       | 66.8 | R14: | 90.3  |
| Peak Wavelength (nm):     | 440    | R7:       | 77.6 |      |       |
| Dominant Wavelength (nm): | 578    | R8:       | 50.3 |      |       |
| Purity:                   | 33.4   |           |      |      |       |
| Rf:                       | 70.6   |           |      |      |       |
| Rg:                       | 96.7   |           |      |      |       |



### Test Conditions

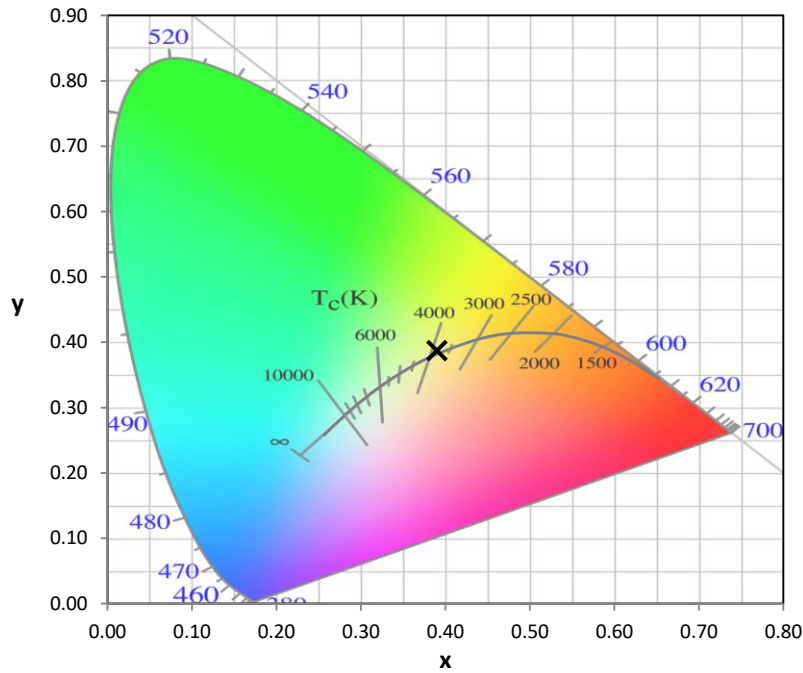
Stabilization Time: 62M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.8/39%  
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2104-224-3

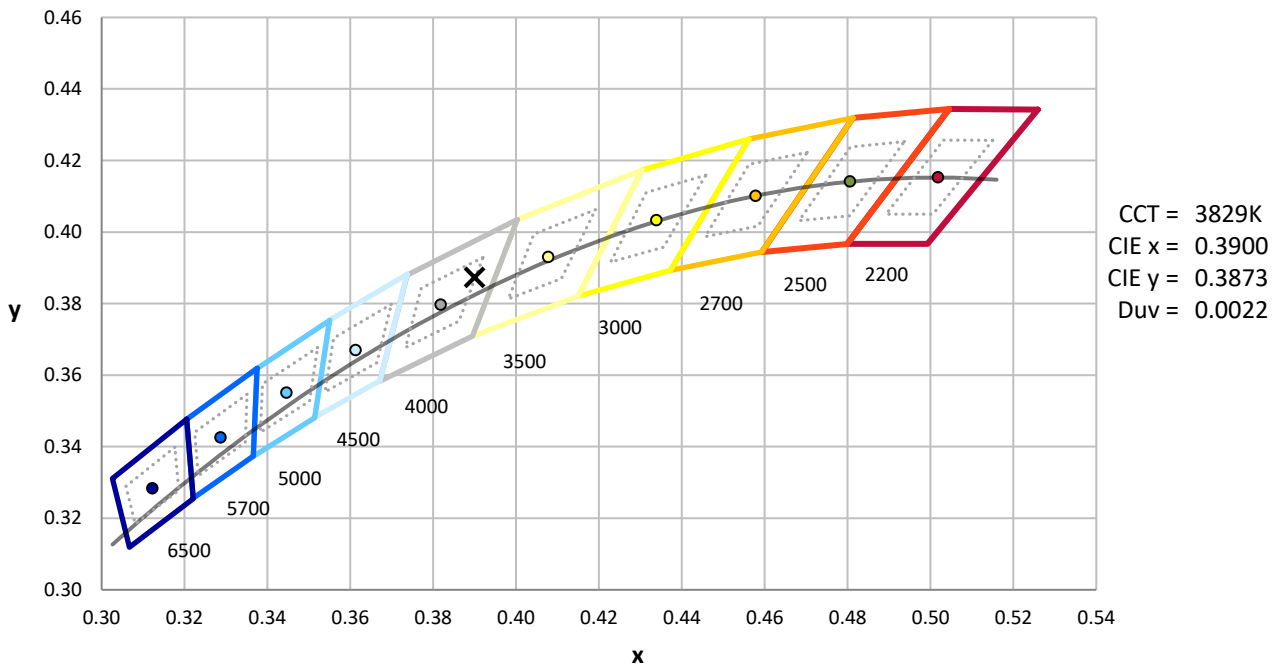
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 1/31/2021        | 7/31/2021            |
| Power Meter                    | IN0071                | 12/1/2020        | 12/1/2021            |
| AC Power Source                | IN0063                | 12/1/2020        | 12/1/2021            |
| DC Power Source                | IN0208                | 12/1/2020        | 12/1/2021            |
| Sphere Thermometer             | IN0085                | 12/1/2020        | 12/1/2021            |
| Room Thermometer               | IN0046                | 12/1/2020        | 12/1/2021            |

REPORT NUMBER: SP1-2104-224-3

**CIE 1931 Chromaticity Diagram**



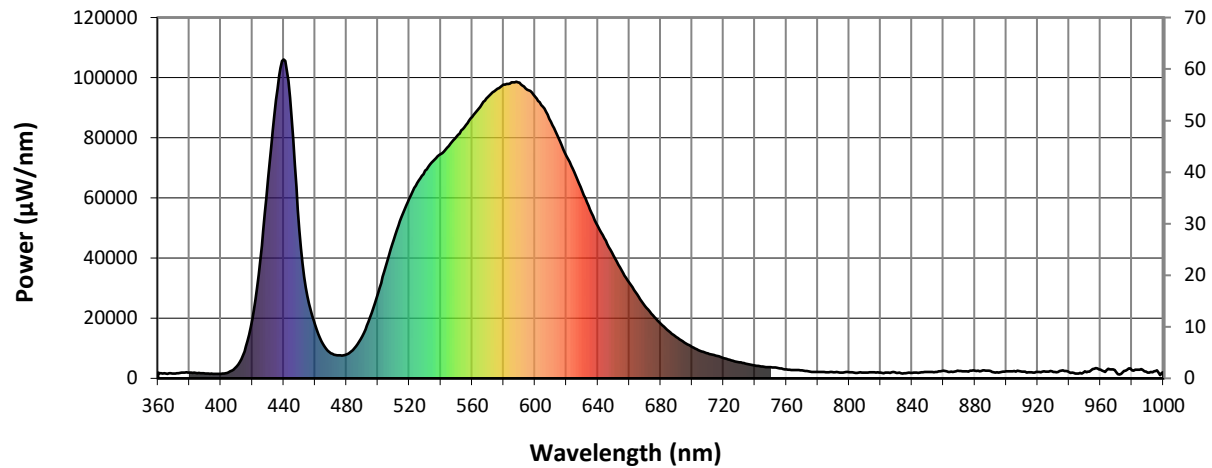
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2104-224-3

### Photopic Flux vs. Wavelength

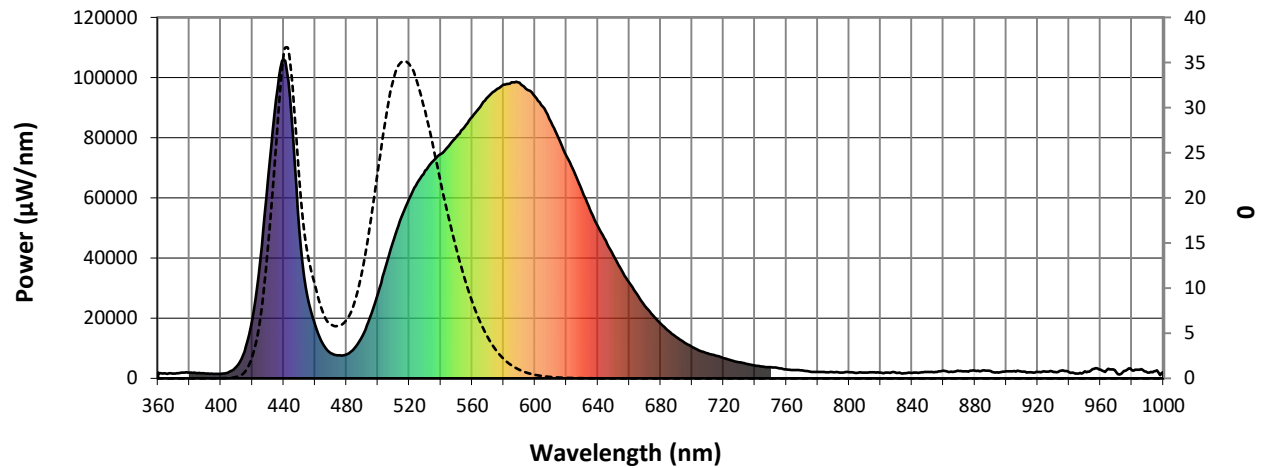


#####

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 1901             | 0.0              | 490       | 14057            | 2.0              | 620       | 73853            | 19.2             | 750       | 3678             | 0.0              | 880       | 2528             | 0.0              |
| 365       | 1585             | 0.0              | 495       | 20304            | 3.7              | 625       | 68653            | 15.1             | 755       | 3385             | 0.0              | 885       | 2638             | 0.0              |
| 370       | 1604             | 0.0              | 500       | 28346            | 6.3              | 630       | 62254            | 11.3             | 760       | 2963             | 0.0              | 890       | 2417             | 0.0              |
| 375       | 1905             | 0.0              | 505       | 37228            | 10.4             | 635       | 56177            | 8.4              | 765       | 2782             | 0.0              | 895       | 1902             | 0.0              |
| 380       | 1882             | 0.0              | 510       | 46037            | 15.8             | 640       | 50521            | 6.0              | 770       | 2657             | 0.0              | 900       | 2330             | 0.0              |
| 385       | 1693             | 0.0              | 515       | 53619            | 22.2             | 645       | 45727            | 4.4              | 775       | 2259             | 0.0              | 905       | 2456             | 0.0              |
| 390       | 1640             | 0.0              | 520       | 59890            | 29.0             | 650       | 40814            | 3.0              | 780       | 2169             | 0.0              | 910       | 2205             | 0.0              |
| 395       | 1513             | 0.0              | 525       | 64946            | 34.9             | 655       | 35925            | 2.1              | 785       | 2065             | 0.0              | 915       | 2002             | 0.0              |
| 400       | 1481             | 0.0              | 530       | 69048            | 40.7             | 660       | 31824            | 1.3              | 790       | 2054             | 0.0              | 920       | 2125             | 0.0              |
| 405       | 2044             | 0.0              | 535       | 72246            | 44.8             | 665       | 27860            | 0.9              | 795       | 1908             | 0.0              | 925       | 2266             | 0.0              |
| 410       | 3966             | 0.0              | 540       | 74621            | 48.6             | 670       | 24069            | 0.5              | 800       | 2026             | 0.0              | 930       | 2159             | 0.0              |
| 415       | 8943             | 0.0              | 545       | 77288            | 51.4             | 675       | 20926            | 0.4              | 805       | 1766             | 0.0              | 935       | 2581             | 0.0              |
| 420       | 19566            | 0.1              | 550       | 80334            | 54.6             | 680       | 18170            | 0.2              | 810       | 1913             | 0.0              | 940       | 2052             | 0.0              |
| 425       | 39243            | 0.2              | 555       | 83561            | 57.1             | 685       | 15785            | 0.1              | 815       | 2019             | 0.0              | 945       | 1631             | 0.0              |
| 430       | 66113            | 0.5              | 560       | 86964            | 59.1             | 690       | 13770            | 0.1              | 820       | 1876             | 0.0              | 950       | 2301             | 0.0              |
| 435       | 92550            | 1.1              | 565       | 90264            | 60.0             | 695       | 11953            | 0.1              | 825       | 1869             | 0.0              | 955       | 3077             | 0.0              |
| 440       | 106034           | 1.7              | 570       | 93519            | 60.8             | 700       | 10452            | 0.0              | 830       | 1862             | 0.0              | 960       | 2911             | 0.0              |
| 445       | 86383            | 1.8              | 575       | 95920            | 59.7             | 705       | 9162             | 0.0              | 835       | 1663             | 0.0              | 965       | 3163             | 0.0              |
| 450       | 49216            | 1.3              | 580       | 97650            | 58.0             | 710       | 8266             | 0.0              | 840       | 1843             | 0.0              | 970       | 1995             | 0.0              |
| 455       | 27376            | 0.9              | 585       | 98486            | 54.7             | 715       | 7583             | 0.0              | 845       | 1921             | 0.0              | 975       | 2418             | 0.0              |
| 460       | 17830            | 0.7              | 590       | 98332            | 50.8             | 720       | 6750             | 0.0              | 850       | 2105             | 0.0              | 980       | 2674             | 0.0              |
| 465       | 11374            | 0.6              | 595       | 96023            | 45.5             | 725       | 5965             | 0.0              | 855       | 2096             | 0.0              | 985       | 2850             | 0.0              |
| 470       | 8344             | 0.5              | 600       | 93650            | 40.4             | 730       | 5310             | 0.0              | 860       | 2601             | 0.0              | 990       | 1972             | 0.0              |
| 475       | 7639             | 0.6              | 605       | 90313            | 35.0             | 735       | 4838             | 0.0              | 865       | 2199             | 0.0              | 995       | 2443             | 0.0              |
| 480       | 7991             | 0.8              | 610       | 85305            | 29.3             | 740       | 4280             | 0.0              | 870       | 2491             | 0.0              | 1000      | 1979             | 0.0              |
| 485       | 9994             | 1.2              | 615       | 79870            | 24.1             | 745       | 3928             | 0.0              | 875       | 2370             | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2104-224-3

### Scotopic Flux vs. Wavelength



Scotopic Lumens: 7682.8

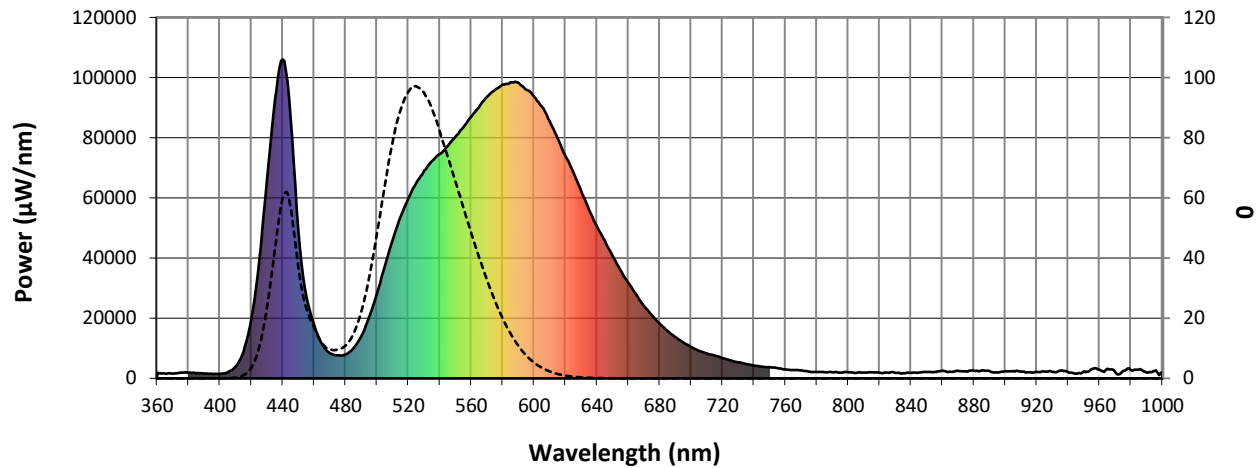
S/P: 1.42

| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 1901             | 0.0              | 490       | 14057            | 21.6             | 620       | 73853            | 0.9              | 750       | 3678             | 0.0              | 880       | 2528             | 0.0              |
| 365       | 1585             | 0.0              | 495       | 20304            | 32.8             | 625       | 68653            | 0.6              | 755       | 3385             | 0.0              | 885       | 2638             | 0.0              |
| 370       | 1604             | 0.0              | 500       | 28346            | 47.4             | 630       | 62254            | 0.4              | 760       | 2963             | 0.0              | 890       | 2417             | 0.0              |
| 375       | 1905             | 0.0              | 505       | 37228            | 63.3             | 635       | 56177            | 0.2              | 765       | 2782             | 0.0              | 895       | 1902             | 0.0              |
| 380       | 1882             | 0.0              | 510       | 46037            | 78.0             | 640       | 50521            | 0.1              | 770       | 2657             | 0.0              | 900       | 2330             | 0.0              |
| 385       | 1693             | 0.0              | 515       | 53619            | 88.9             | 645       | 45727            | 0.1              | 775       | 2259             | 0.0              | 905       | 2456             | 0.0              |
| 390       | 1640             | 0.0              | 520       | 59890            | 95.2             | 650       | 40814            | 0.0              | 780       | 2169             | 0.0              | 910       | 2205             | 0.0              |
| 395       | 1513             | 0.0              | 525       | 64946            | 97.2             | 655       | 35925            | 0.0              | 785       | 2065             | 0.0              | 915       | 2002             | 0.0              |
| 400       | 1481             | 0.0              | 530       | 69048            | 95.2             | 660       | 31824            | 0.0              | 790       | 2054             | 0.0              | 920       | 2125             | 0.0              |
| 405       | 2044             | 0.1              | 535       | 72246            | 90.0             | 665       | 27860            | 0.0              | 795       | 1908             | 0.0              | 925       | 2266             | 0.0              |
| 410       | 3966             | 0.2              | 540       | 74621            | 82.5             | 670       | 24069            | 0.0              | 800       | 2026             | 0.0              | 930       | 2159             | 0.0              |
| 415       | 8943             | 0.9              | 545       | 77288            | 74.1             | 675       | 20926            | 0.0              | 805       | 1766             | 0.0              | 935       | 2581             | 0.0              |
| 420       | 19566            | 3.2              | 550       | 80334            | 65.7             | 680       | 18170            | 0.0              | 810       | 1913             | 0.0              | 940       | 2052             | 0.0              |
| 425       | 39243            | 9.6              | 555       | 83561            | 57.1             | 685       | 15785            | 0.0              | 815       | 2019             | 0.0              | 945       | 1631             | 0.0              |
| 430       | 66113            | 22.5             | 560       | 86964            | 48.6             | 690       | 13770            | 0.0              | 820       | 1876             | 0.0              | 950       | 2301             | 0.0              |
| 435       | 92550            | 41.4             | 565       | 90264            | 40.5             | 695       | 11953            | 0.0              | 825       | 1869             | 0.0              | 955       | 3077             | 0.0              |
| 440       | 106034           | 59.3             | 570       | 93519            | 33.0             | 700       | 10452            | 0.0              | 830       | 1862             | 0.0              | 960       | 2911             | 0.0              |
| 445       | 86383            | 57.8             | 575       | 95920            | 26.1             | 705       | 9162             | 0.0              | 835       | 1663             | 0.0              | 965       | 3163             | 0.0              |
| 450       | 49216            | 38.1             | 580       | 97650            | 20.1             | 710       | 8266             | 0.0              | 840       | 1843             | 0.0              | 970       | 1995             | 0.0              |
| 455       | 27376            | 23.9             | 585       | 98486            | 15.1             | 715       | 7583             | 0.0              | 845       | 1921             | 0.0              | 975       | 2418             | 0.0              |
| 460       | 17830            | 17.2             | 590       | 98332            | 10.9             | 720       | 6750             | 0.0              | 850       | 2105             | 0.0              | 980       | 2674             | 0.0              |
| 465       | 11374            | 12.0             | 595       | 96023            | 7.7              | 725       | 5965             | 0.0              | 855       | 2096             | 0.0              | 985       | 2850             | 0.0              |
| 470       | 8344             | 9.6              | 600       | 93650            | 5.3              | 730       | 5310             | 0.0              | 860       | 2601             | 0.0              | 990       | 1972             | 0.0              |
| 475       | 7639             | 9.6              | 605       | 90313            | 3.5              | 735       | 4838             | 0.0              | 865       | 2199             | 0.0              | 995       | 2443             | 0.0              |
| 480       | 7991             | 10.8             | 610       | 85305            | 2.3              | 740       | 4280             | 0.0              | 870       | 2491             | 0.0              | 1000      | 1979             | 0.0              |
| 485       | 9994             | 14.5             | 615       | 79870            | 1.5              | 745       | 3928             | 0.0              | 875       | 2370             | 0.0              |           |                  |                  |



REPORT NUMBER: SP1-2104-224-3

### Melanopic Flux vs. Wavelength


**Melanopic Lumens: 2823**
**M/P: 0.52**

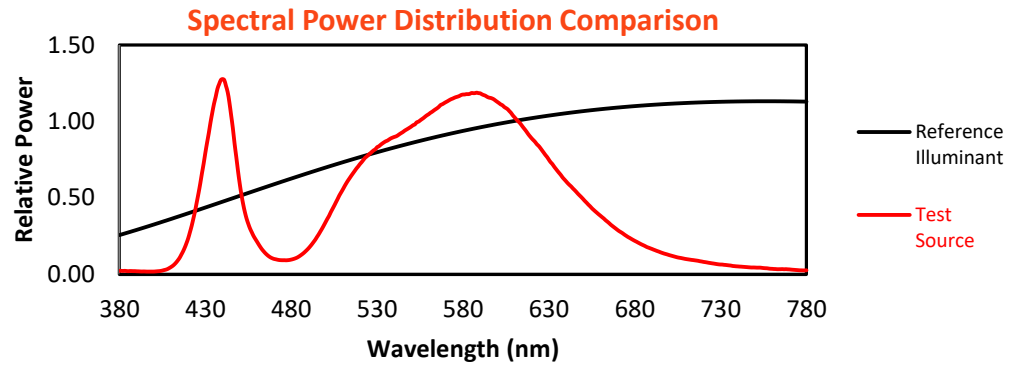
| λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>(μW/nm) | Lumens<br>(Φ/nm) |
|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|-----------|------------------|------------------|
| 360       | 1901             | 0.0              | 490       | 14057            | 11.7             | 620       | 73853            | 0.1              | 750       | 3678             | 0.0              | 880       | 2528             | 0.0              |
| 365       | 1585             | 0.0              | 495       | 20304            | 16.8             | 625       | 68653            | 0.0              | 755       | 3385             | 0.0              | 885       | 2638             | 0.0              |
| 370       | 1604             | 0.0              | 500       | 28346            | 22.8             | 630       | 62254            | 0.0              | 760       | 2963             | 0.0              | 890       | 2417             | 0.0              |
| 375       | 1905             | 0.0              | 505       | 37228            | 28.6             | 635       | 56177            | 0.0              | 765       | 2782             | 0.0              | 895       | 1902             | 0.0              |
| 380       | 1882             | 0.0              | 510       | 46037            | 33.1             | 640       | 50521            | 0.0              | 770       | 2657             | 0.0              | 900       | 2330             | 0.0              |
| 385       | 1693             | 0.0              | 515       | 53619            | 35.0             | 645       | 45727            | 0.0              | 775       | 2259             | 0.0              | 905       | 2456             | 0.0              |
| 390       | 1640             | 0.0              | 520       | 59890            | 34.9             | 650       | 40814            | 0.0              | 780       | 2169             | 0.0              | 910       | 2205             | 0.0              |
| 395       | 1513             | 0.0              | 525       | 64946            | 32.9             | 655       | 35925            | 0.0              | 785       | 2065             | 0.0              | 915       | 2002             | 0.0              |
| 400       | 1481             | 0.0              | 530       | 69048            | 29.8             | 660       | 31824            | 0.0              | 790       | 2054             | 0.0              | 920       | 2125             | 0.0              |
| 405       | 2044             | 0.0              | 535       | 72246            | 26.0             | 665       | 27860            | 0.0              | 795       | 1908             | 0.0              | 925       | 2266             | 0.0              |
| 410       | 3966             | 0.2              | 540       | 74621            | 21.8             | 670       | 24069            | 0.0              | 800       | 2026             | 0.0              | 930       | 2159             | 0.0              |
| 415       | 8943             | 0.6              | 545       | 77288            | 18.0             | 675       | 20926            | 0.0              | 805       | 1766             | 0.0              | 935       | 2581             | 0.0              |
| 420       | 19566            | 2.2              | 550       | 80334            | 14.4             | 680       | 18170            | 0.0              | 810       | 1913             | 0.0              | 940       | 2052             | 0.0              |
| 425       | 39243            | 6.1              | 555       | 83561            | 11.3             | 685       | 15785            | 0.0              | 815       | 2019             | 0.0              | 945       | 1631             | 0.0              |
| 430       | 66113            | 14.0             | 560       | 86964            | 8.6              | 690       | 13770            | 0.0              | 820       | 1876             | 0.0              | 950       | 2301             | 0.0              |
| 435       | 92550            | 24.7             | 565       | 90264            | 6.3              | 695       | 11953            | 0.0              | 825       | 1869             | 0.0              | 955       | 3077             | 0.0              |
| 440       | 106034           | 35.4             | 570       | 93519            | 4.6              | 700       | 10452            | 0.0              | 830       | 1862             | 0.0              | 960       | 2911             | 0.0              |
| 445       | 86383            | 34.1             | 575       | 95920            | 3.2              | 705       | 9162             | 0.0              | 835       | 1663             | 0.0              | 965       | 3163             | 0.0              |
| 450       | 49216            | 22.7             | 580       | 97650            | 2.2              | 710       | 8266             | 0.0              | 840       | 1843             | 0.0              | 970       | 1995             | 0.0              |
| 455       | 27376            | 14.3             | 585       | 98486            | 1.5              | 715       | 7583             | 0.0              | 845       | 1921             | 0.0              | 975       | 2418             | 0.0              |
| 460       | 17830            | 10.5             | 590       | 98332            | 1.0              | 720       | 6750             | 0.0              | 850       | 2105             | 0.0              | 980       | 2674             | 0.0              |
| 465       | 11374            | 7.4              | 595       | 96023            | 0.6              | 725       | 5965             | 0.0              | 855       | 2096             | 0.0              | 985       | 2850             | 0.0              |
| 470       | 8344             | 6.0              | 600       | 93650            | 0.4              | 730       | 5310             | 0.0              | 860       | 2601             | 0.0              | 990       | 1972             | 0.0              |
| 475       | 7639             | 5.8              | 605       | 90313            | 0.2              | 735       | 4838             | 0.0              | 865       | 2199             | 0.0              | 995       | 2443             | 0.0              |
| 480       | 7991             | 6.4              | 610       | 85305            | 0.2              | 740       | 4280             | 0.0              | 870       | 2491             | 0.0              | 1000      | 1979             | 0.0              |
| 485       | 9994             | 8.2              | 615       | 79870            | 0.1              | 745       | 3928             | 0.0              | 875       | 2370             | 0.0              |           |                  |                  |

REPORT NUMBER: SP1-2104-224-3

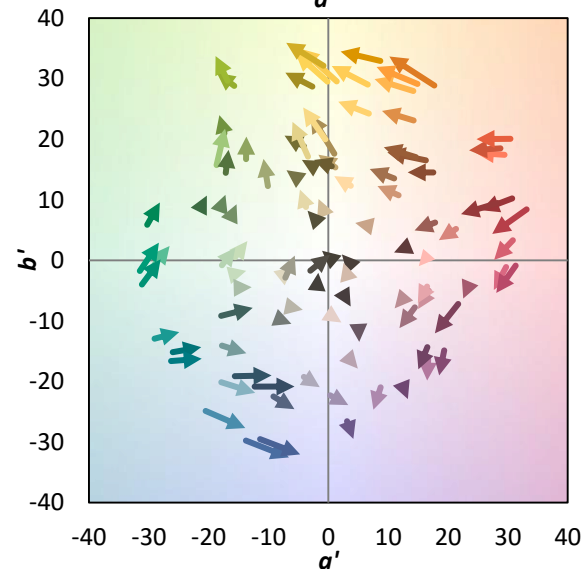
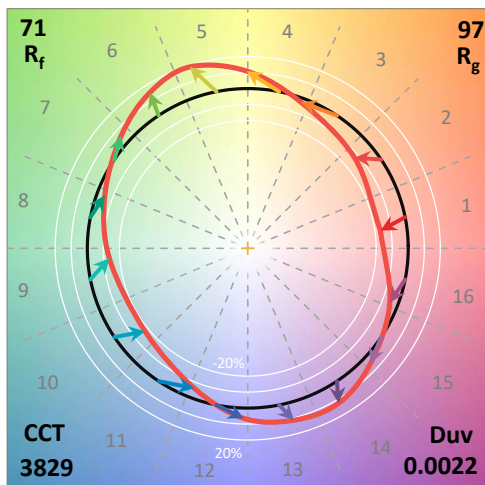
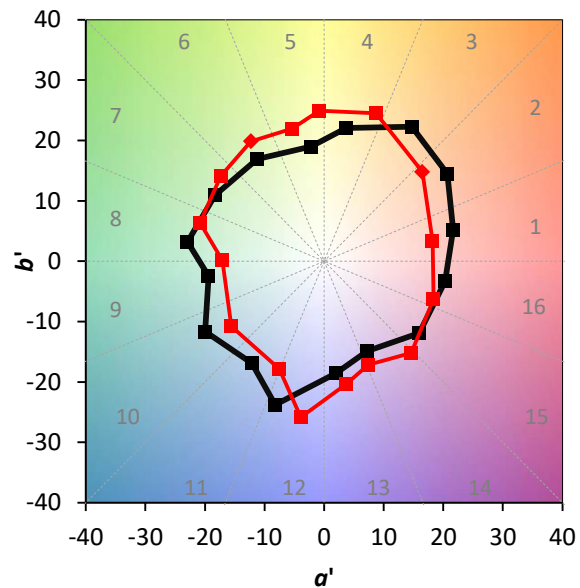
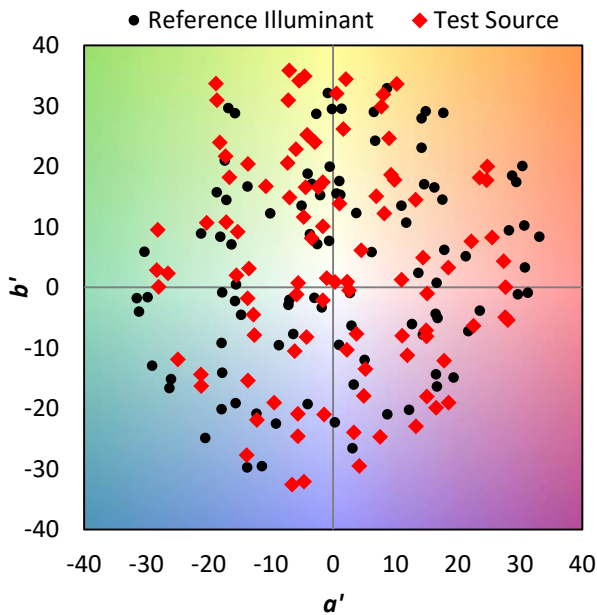
TM-30-18

### Summary

$R_f = 70.6$   
 $R_g = 96.7$   
 CIE  $R_a = 69.8$   
 $R_g = -35.1$

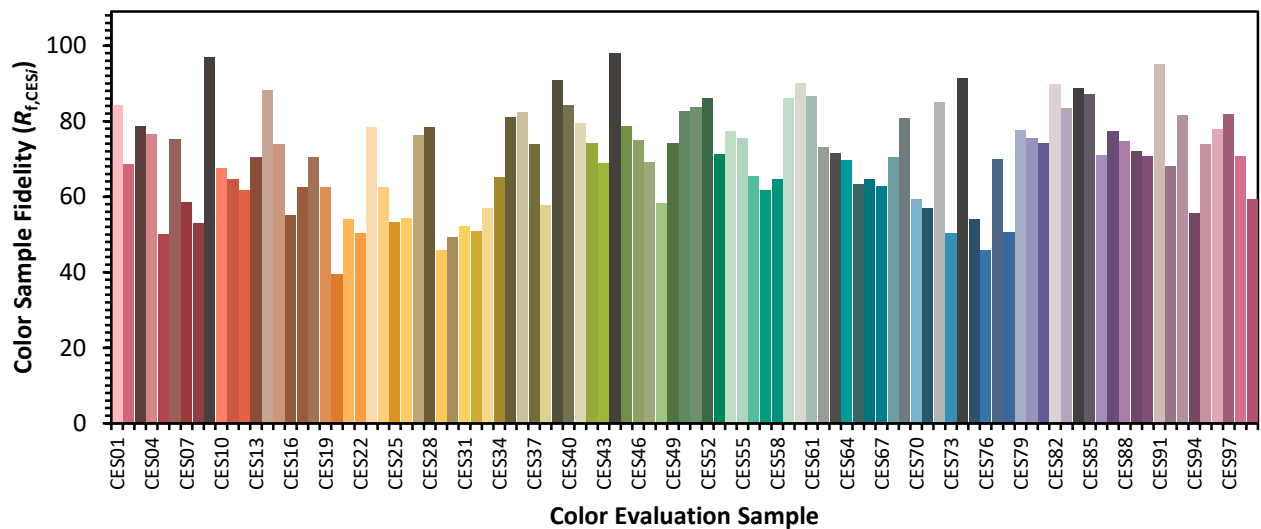


### Color Vector Graphics

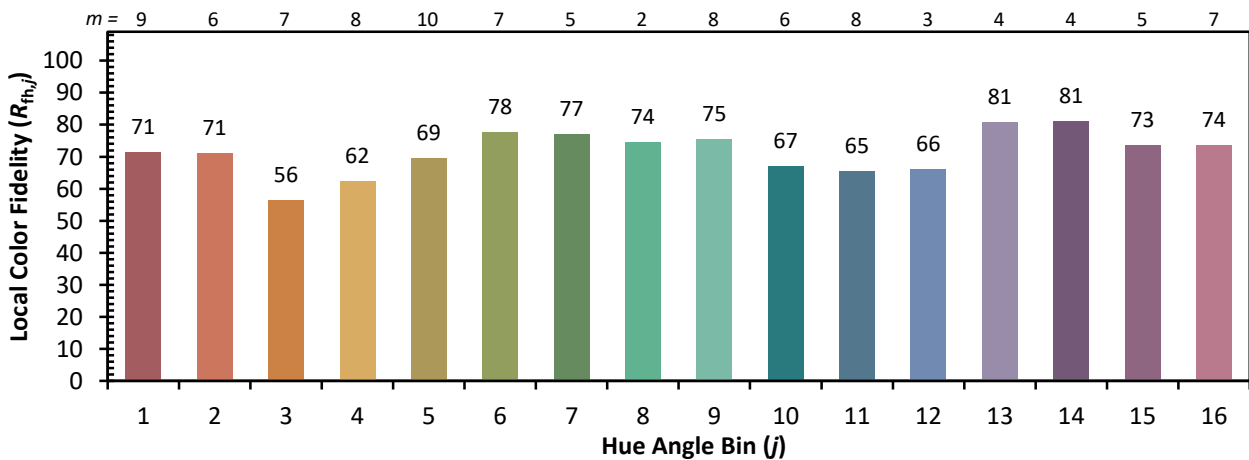
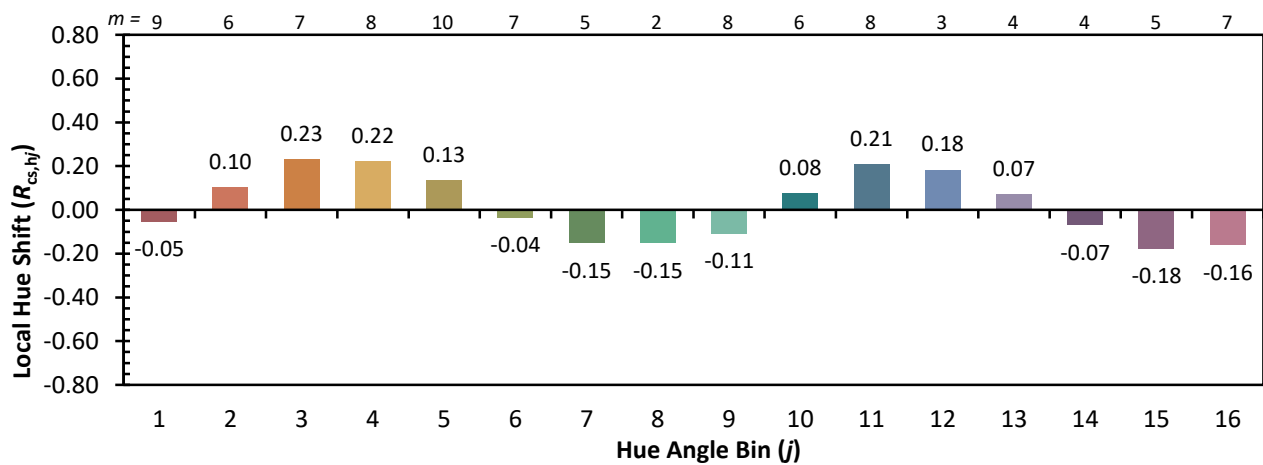
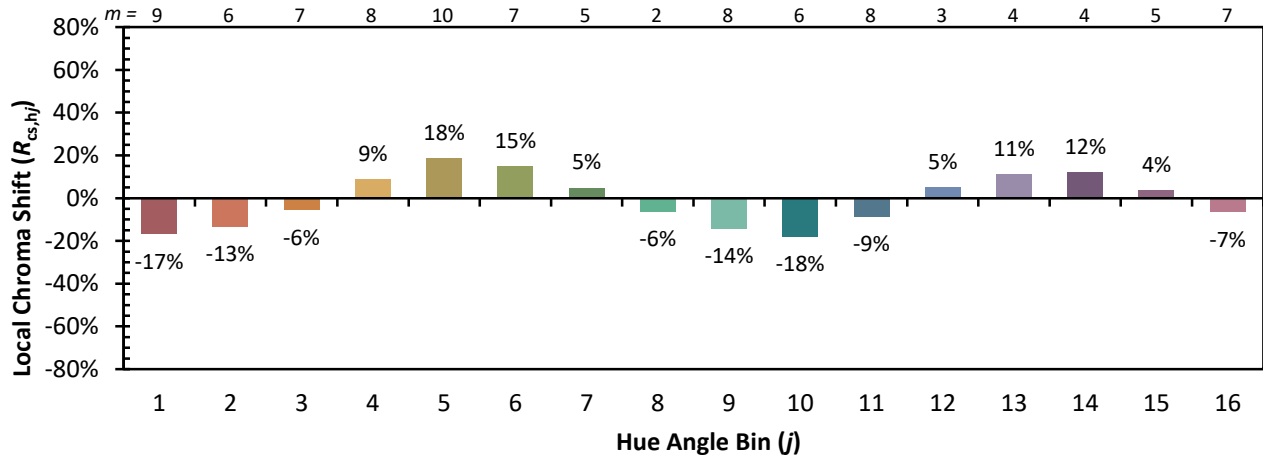


Individual Sample Fidelity Index ( $R_{f,i}$ )

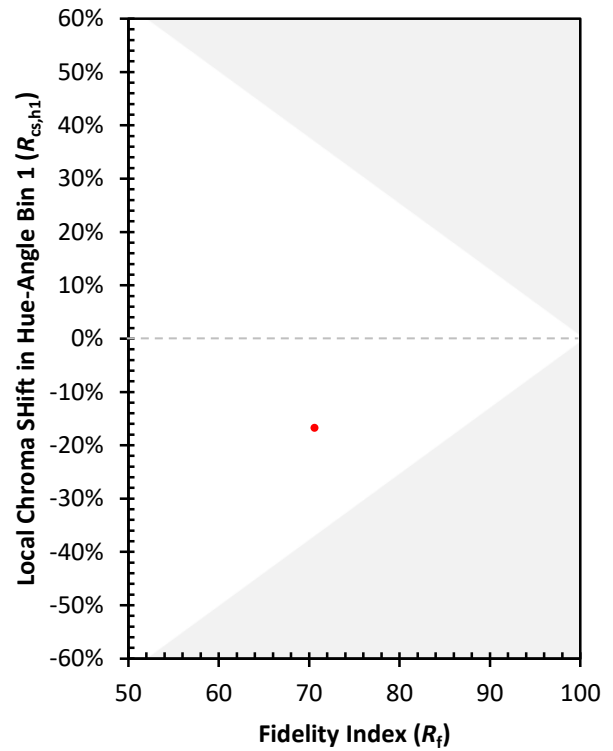
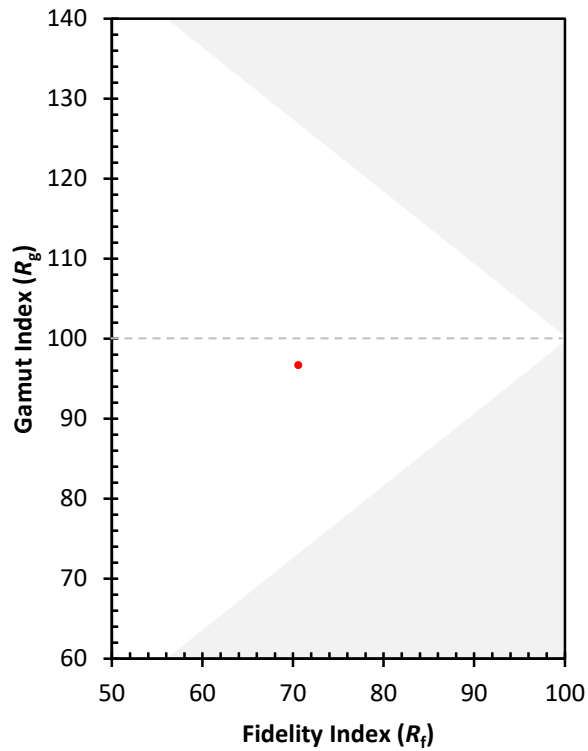
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 54 | CES51 = 84 | CES76 = 46 |
| CES02 = 61 | CES27 = 76 | CES52 = 86 | CES77 = 70 |
| CES03 = 30 | CES28 = 78 | CES53 = 71 | CES78 = 50 |
| CES04 = 70 | CES29 = 46 | CES54 = 77 | CES79 = 77 |
| CES05 = 47 | CES30 = 49 | CES55 = 76 | CES80 = 75 |
| CES06 = 50 | CES31 = 52 | CES56 = 65 | CES81 = 74 |
| CES07 = 40 | CES32 = 51 | CES57 = 62 | CES82 = 90 |
| CES08 = 39 | CES33 = 57 | CES58 = 65 | CES83 = 84 |
| CES09 = 29 | CES34 = 65 | CES59 = 86 | CES84 = 89 |
| CES10 = 74 | CES35 = 81 | CES60 = 90 | CES85 = 87 |
| CES11 = 57 | CES36 = 82 | CES61 = 87 | CES86 = 71 |
| CES12 = 63 | CES37 = 74 | CES62 = 73 | CES87 = 77 |
| CES13 = 42 | CES38 = 58 | CES63 = 72 | CES88 = 75 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 72 |
| CES15 = 71 | CES40 = 84 | CES65 = 63 | CES90 = 71 |
| CES16 = 46 | CES41 = 79 | CES66 = 65 | CES91 = 95 |
| CES17 = 49 | CES42 = 74 | CES67 = 63 | CES92 = 68 |
| CES18 = 56 | CES43 = 69 | CES68 = 70 | CES93 = 82 |
| CES19 = 72 | CES44 = 98 | CES69 = 81 | CES94 = 56 |
| CES20 = 65 | CES45 = 79 | CES70 = 59 | CES95 = 74 |
| CES21 = 86 | CES46 = 75 | CES71 = 57 | CES96 = 78 |
| CES22 = 78 | CES47 = 69 | CES72 = 85 | CES97 = 82 |
| CES23 = 92 | CES48 = 58 | CES73 = 50 | CES98 = 71 |
| CES24 = 91 | CES49 = 74 | CES74 = 91 | CES99 = 59 |
| CES25 = 72 | CES50 = 83 | CES75 = 54 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)