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

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Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P1455874

Luminaire Tested: GLAN-SB3D-730-U-T2LG

Issue Date: 05/20/2026

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1455874 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB3D-730-U-T2LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 900mA 3xLight Square PACKAGE 70CRI 3000K FIXTURE w/ TYPE II LOW GLARE |
| Light Source: | (78) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 29530.3 lumens |
| Efficiency: | N/A |
| Efficacy: | 135.4 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 1' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B3 - U0 - G3 |

| | |
|---|---|
| Input Watts (W): | 218.1 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.97 |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1455874
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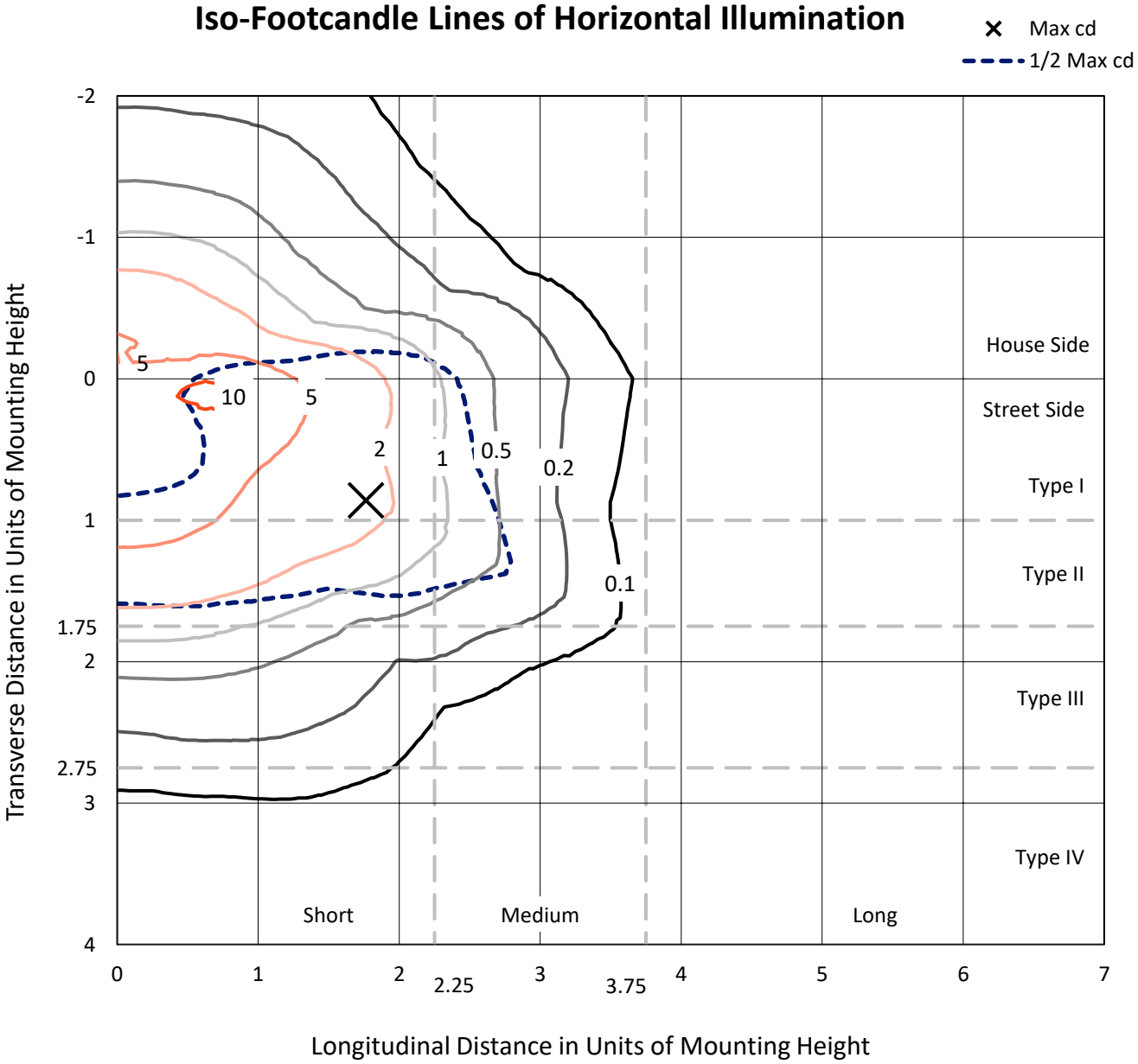
## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 11.1 fc
Type II - Short - N/A

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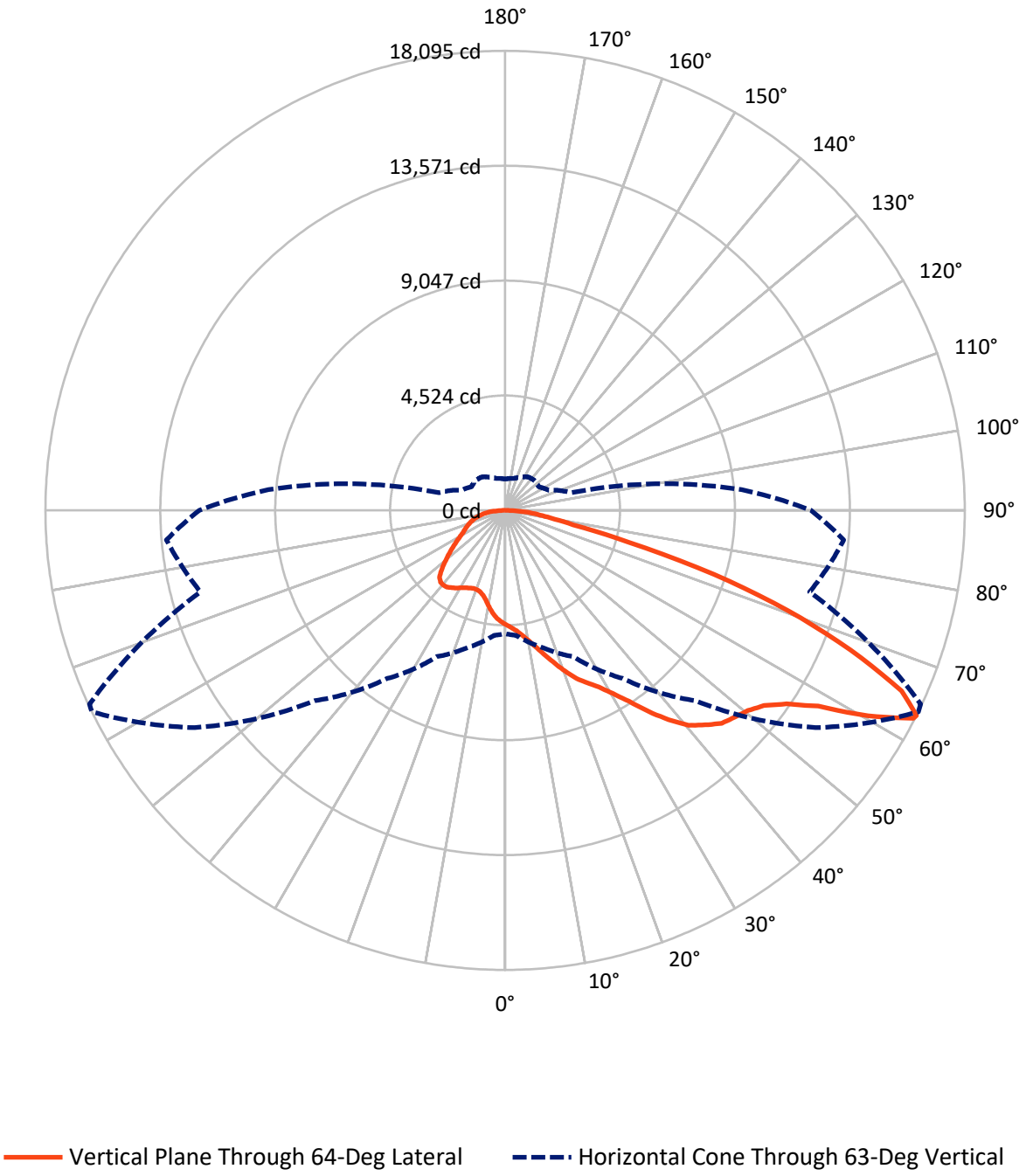
## Luminous Intensity Polar Plot



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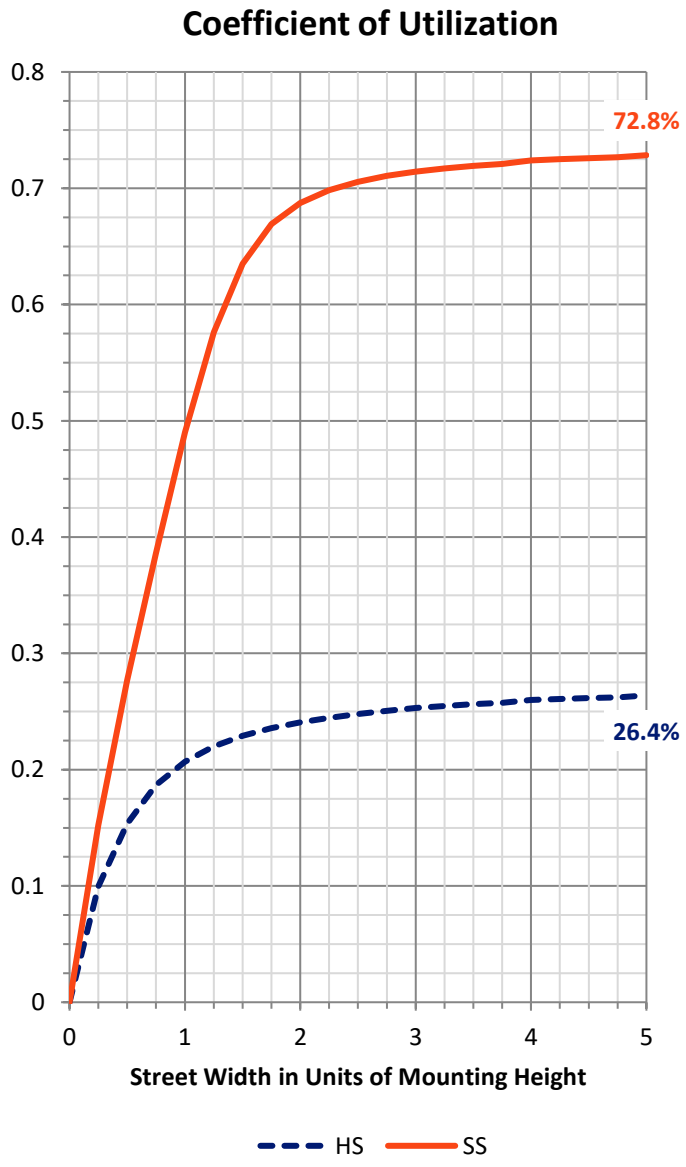
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 7934.0 | 0.0 | 7934.0 |
| | % Fixture | 26.9 | 0.0 | 26.9 |
| **Street Side** | Lumens | 21596.3 | 0.0 | 21596.3 |
| | % Fixture | 73.1 | 0.0 | 73.1 |
| **Total** | Lumens | 29530.3 | 0.0 | 29530.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 412.9 | 1.4 |
| 10°-20° | 1271.1 | 4.3 |
| 20°-30° | 2324.4 | 7.9 |
| 30°-40° | 3998.4 | 13.5 |
| 40°-50° | 5896.6 | 20.0 |
| 50°-60° | 7067.4 | 23.9 |
| 60°-70° | 5672.3 | 19.2 |
| 70°-80° | 2279.3 | 7.7 |
| 80°-90° | 607.8 | 2.1 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 29530.3 | 100.0 |
| 0°-180° | 29530.3 | 100.0 |



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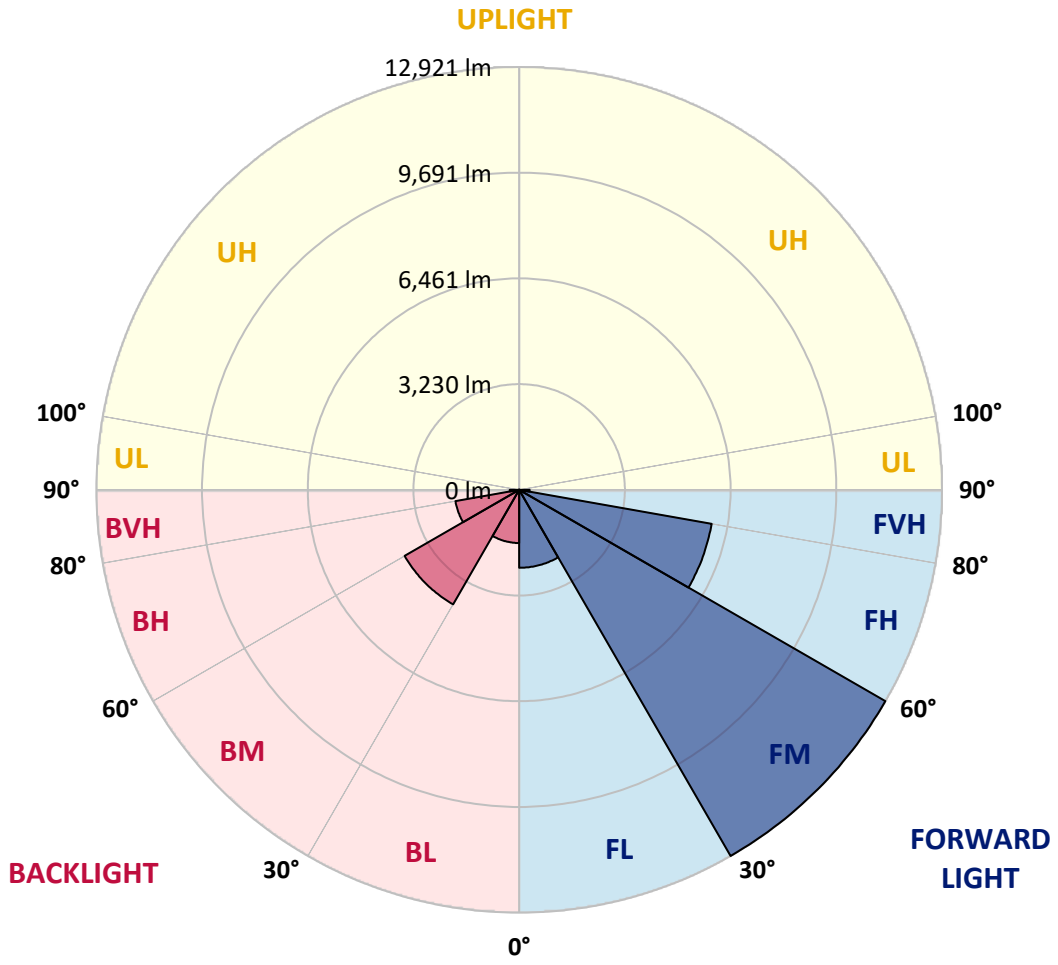
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2382.5 | 8.1 | | | |
| FM | (30°-60°) | 12921.1 | 43.8 | | | |
| FH | (60°-80°) | 5973.4 | 20.2 | | | G3/7500 |
| FVH | (80°-90°) | 319.3 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 1625.9 | 5.5 | B3/2500 | | |
| BM | (30°-60°) | 4041.4 | 13.7 | B3/5000 | | |
| BH | (60°-80°) | 1978.2 | 6.7 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 288.5 | 1.0 | | | G3/500 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G3**
Type II Short



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REPORT NUMBER: P1455874
CATALOG NUMBER: GLAN-SB3D-730-U-T2LG

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | *4497.1* | 4497.1 | 4497.1 | 4497.1 |
| 2.5° | 4682.8 | 4689.5 | 4669.6 | 4662.9 | 4676.2 | 4649.7 | 4643.0 | *4616.5* | 4603.3 | 4576.7 | 4543.6 |
| 5° | 4815.5 | 4822.1 | 4808.9 | 4808.9 | 4822.1 | 4802.2 | 4795.6 | *4769.1* | 4755.8 | 4729.3 | 4662.9 |
| 7.5° | 4808.9 | 4815.5 | 4828.8 | 4881.8 | 4948.2 | 4974.7 | 4994.6 | *4974.7* | 4968.1 | 4928.3 | 4861.9 |
| 10° | 4702.7 | 4709.4 | 4742.5 | 4822.1 | 4988.0 | 5107.4 | 5233.4 | *5233.4* | 5246.6 | 5213.5 | 5094.1 |
| 12.5° | 4556.8 | 4563.5 | 4643.0 | 4769.1 | 4988.0 | 5193.6 | 5452.3 | *5558.4* | 5551.8 | 5531.9 | 5392.6 |
| 15° | 4205.3 | 4205.3 | 4324.7 | 4563.5 | 4915.0 | 5253.3 | 5638.0 | *5923.2* | 5929.8 | 5949.7 | 5783.9 |
| 17.5° | 3906.8 | 3913.4 | 4012.9 | 4225.2 | 4682.8 | 5220.1 | 5837.0 | *6327.8* | 6347.7 | 6460.5 | 6221.7 |
| 20° | 3933.3 | 3933.3 | 3966.5 | 4059.4 | 4430.8 | 5087.5 | 5949.7 | *6759.0* | 6825.3 | 7090.6 | 6792.1 |
| 22.5° | 4138.9 | 4138.9 | 4165.5 | 4158.8 | 4384.4 | 5001.2 | 6022.7 | *7190.1* | 7309.5 | 7860.0 | 7475.3 |
| 25° | 4517.0 | 4510.4 | 4483.9 | 4444.1 | 4576.7 | 5094.1 | 6188.5 | *7521.7* | 7753.9 | 8709.0 | 8264.6 |
| 27.5° | 4981.3 | 4968.1 | 4928.3 | 4861.9 | 4954.8 | 5372.7 | 6473.7 | *7873.3* | 8125.3 | 9637.6 | 9100.4 |
| 30° | 5558.4 | 5518.6 | 5478.8 | 5392.6 | 5492.1 | 5830.3 | 6898.2 | *8370.8* | 8609.5 | 10692.3 | 10108.6 |
| 32.5° | 6241.6 | 6288.0 | 6155.4 | 6036.0 | 6142.1 | 6453.8 | 7528.4 | *8961.1* | 9219.8 | 11793.3 | 11156.6 |
| 35° | 7263.1 | 7402.3 | 7362.5 | 6759.0 | 6858.4 | 7203.4 | 8264.6 | *9723.9* | 9956.0 | 12794.9 | 12231.1 |
| 37.5° | 8271.3 | 8238.1 | 8271.3 | 7767.2 | 7608.0 | 8025.8 | 9053.9 | *10453.5* | 10679.0 | 13610.8 | 13179.6 |
| 40° | 9080.5 | 9180.0 | 9180.0 | 8768.7 | 8563.1 | 8841.7 | 9770.3 | *11123.4* | 11342.3 | 14061.8 | 13862.8 |
| 42.5° | 9962.7 | 9975.9 | 9949.4 | 9591.2 | 9511.6 | 9584.6 | 10400.4 | *11547.9* | 11727.0 | 14294.0 | 14327.1 |
| 45° | 10957.6 | 10951.0 | 10838.2 | 10539.7 | 10420.3 | 10354.0 | 10791.8 | *11959.2* | 12138.3 | 14400.1 | 14579.2 |
| 47.5° | 11780.1 | 11813.2 | 11819.9 | 11501.5 | 11302.5 | 11017.3 | 11130.1 | *12164.8* | 12370.4 | 14280.7 | 14632.2 |
| 50° | 11826.5 | 11879.6 | 12131.6 | 12224.5 | 12184.7 | 11727.0 | 11441.8 | *12383.7* | 12589.3 | 14307.2 | 14824.6 |
| 52.5° | 11534.7 | 11587.7 | 11912.7 | 12297.4 | 12761.8 | 12542.9 | 11932.6 | *12761.8* | 12974.0 | 14565.9 | 15262.4 |
| 55° | 10752.0 | 10838.2 | 11322.4 | 11859.7 | 12688.8 | 13000.5 | 12801.5 | *13444.9* | 13643.9 | 14771.5 | 15773.1 |
| 57.5° | 9359.1 | 9465.2 | 10135.1 | 10990.8 | 12125.0 | 12894.4 | 14061.8 | *14539.4* | 14705.2 | 14917.5 | 15779.7 |
| 60° | 6997.7 | 7084.0 | 8132.0 | 9286.1 | 10990.8 | 12231.1 | 14811.3 | *16416.5* | 16509.4 | 14128.1 | 14884.3 |
| 62.5° | 5153.8 | 5240.0 | 5943.1 | 6772.2 | 8636.1 | 11010.7 | 14957.3 | *18041.6* | 18054.8 | 12702.1 | 13650.6 |
| 63° | *4855.3* | *4941.5* | *5578.3* | *6354.3* | *8078.9* | *10599.4* | *14910.8* | *18094.6* | *18048.2* | *12410.2* | *13378.6* |
| 65° | 3780.8 | 3933.3 | 4596.6 | 5186.9 | 6055.9 | 8437.1 | 14313.9 | *17152.7* | 17219.1 | 11547.9 | 12012.2 |
| 67.5° | 2573.6 | 2686.3 | 3528.7 | 4211.9 | 4576.7 | 5372.7 | 11740.3 | *14678.7* | 14784.8 | 10652.5 | 9584.6 |
| 70° | 1989.9 | 2042.9 | 2533.8 | 3336.4 | 3701.2 | 3416.0 | 7654.4 | *11819.9* | 11819.9 | 8317.7 | 6792.1 |
| 72.5° | 1558.7 | 1578.6 | 1910.3 | 2606.7 | 2978.2 | 2626.6 | 4265.0 | *8596.3* | 8277.9 | 4934.9 | 4530.3 |
| 75° | 1114.3 | 1140.9 | 1439.3 | 1943.4 | 2374.6 | 2069.5 | 2726.1 | *5007.9* | 4815.5 | 2838.9 | 3024.6 |
| 77.5° | 882.2 | 895.4 | 1074.5 | 1432.7 | 1923.5 | 1578.6 | 2076.1 | *2732.8* | 2706.2 | 1996.5 | 1943.4 |
| 80° | 696.5 | 723.0 | 842.4 | 1028.1 | 1485.8 | 1233.7 | 1545.5 | *1804.2* | 1751.1 | 1373.0 | 1247.0 |
| 82.5° | 497.5 | 543.9 | 650.0 | 782.7 | 1101.1 | 882.2 | 1014.8 | *1273.5* | 1273.5 | 1034.7 | 822.5 |
| 85° | 305.1 | 344.9 | 384.7 | 484.2 | 782.7 | 570.4 | 537.3 | *822.5* | 842.4 | 776.1 | 530.6 |
| 87.5° | 145.9 | 159.2 | 185.7 | 205.6 | 285.2 | 258.7 | 212.3 | *311.7* | 318.4 | 344.9 | 218.9 |
| 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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Scaled Data Report

REPORT NUMBER: P1455874
CATALOG NUMBER: GLAN-SB3D-730-U-T2LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 | 4497.1 |
| 2.5° | 4536.9 | 4523.7 | 4457.3 | 4391.0 | 4318.0 | 4251.7 | 4185.4 | 4132.3 | 4072.6 | 4085.9 | 4092.5 |
| 5° | 4623.2 | 4590.0 | 4444.1 | 4271.6 | 4046.1 | 3833.8 | 3628.2 | 3482.3 | 3389.4 | 3362.9 | 3309.8 |
| 7.5° | 4808.9 | 4729.3 | 4464.0 | 4099.1 | 3681.3 | 3349.6 | 3157.3 | 3071.0 | 3044.5 | 3051.1 | 3037.9 |
| 10° | 5021.1 | 4901.7 | 4490.5 | 3893.5 | 3362.9 | 3137.4 | 3110.8 | 3163.9 | 3190.4 | 3217.0 | 3223.6 |
| 12.5° | 5299.7 | 5107.4 | 4477.2 | 3668.0 | 3210.3 | 3170.5 | 3270.0 | 3369.5 | 3429.2 | 3469.0 | 3462.4 |
| 15° | 5624.7 | 5366.0 | 4437.4 | 3482.3 | 3190.4 | 3296.6 | 3422.6 | 3535.4 | 3608.3 | 3648.1 | 3628.2 |
| 17.5° | 6016.1 | 5671.2 | 4391.0 | 3362.9 | 3250.1 | 3376.2 | 3508.8 | 3621.6 | 3701.2 | 3727.7 | 3707.8 |
| 20° | 6500.3 | 6016.1 | 4311.4 | 3309.8 | 3296.6 | 3409.3 | 3528.7 | 3634.8 | 3701.2 | 3727.7 | 3701.2 |
| 22.5° | 7070.7 | 6427.3 | 4245.1 | 3309.8 | 3316.5 | 3409.3 | 3495.6 | 3575.1 | 3634.8 | 3654.7 | 3621.6 |
| 25° | 7800.3 | 6904.9 | 4218.5 | 3362.9 | 3323.1 | 3376.2 | 3422.6 | 3469.0 | 3502.2 | 3515.5 | 3502.2 |
| 27.5° | 8543.2 | 7455.4 | 4231.8 | 3429.2 | 3316.5 | 3329.7 | 3329.7 | 3336.4 | 3343.0 | 3349.6 | 3343.0 |
| 30° | 9398.9 | 8012.6 | 4284.9 | 3515.5 | 3329.7 | 3263.4 | 3243.5 | 3203.7 | 3170.5 | 3144.0 | 3117.5 |
| 32.5° | 10228.0 | 8543.2 | 4377.7 | 3641.5 | 3316.5 | 3190.4 | 3150.6 | 3051.1 | 2958.3 | 2878.7 | 2878.7 |
| 35° | 11123.4 | 9093.7 | 4543.6 | 3734.3 | 3303.2 | 3124.1 | 3011.3 | 2898.6 | 2799.1 | 2686.3 | 2686.3 |
| 37.5° | 11892.8 | 9564.7 | 4676.2 | 3840.5 | 3289.9 | 3044.5 | 2865.4 | 2739.4 | 2633.3 | 2520.5 | 2507.2 |
| 40° | 12430.1 | 9836.6 | 4755.8 | 3880.3 | 3243.5 | 2938.4 | 2726.1 | 2566.9 | 2414.4 | 2261.8 | 2255.2 |
| 42.5° | 12688.8 | 9823.4 | 4709.4 | 3867.0 | 3157.3 | 2805.7 | 2606.7 | 2394.5 | 2188.9 | 2049.6 | 2036.3 |
| 45° | 12828.1 | 9737.1 | 4530.3 | 3754.2 | 3018.0 | 2666.4 | 2454.2 | 2228.7 | 2023.0 | 1897.0 | 1870.5 |
| 47.5° | 12801.5 | 9524.9 | 4284.9 | 3475.7 | 2832.3 | 2513.9 | 2301.6 | 2069.5 | 1903.7 | 1830.7 | 1830.7 |
| 50° | 12874.5 | 9359.1 | 4006.3 | 3157.3 | 2580.2 | 2334.8 | 2162.3 | 1950.1 | 1850.6 | 1757.7 | 1724.6 |
| 52.5° | 13199.5 | 9498.4 | 3767.5 | 2858.8 | 2341.4 | 2162.3 | 2042.9 | 1863.9 | 1737.8 | 1678.1 | 1658.2 |
| 55° | 13630.7 | 9796.8 | 3542.0 | 2593.5 | 2109.3 | 2009.8 | 1950.1 | 1784.3 | 1638.3 | 1578.6 | 1545.5 |
| 57.5° | 13710.3 | 10002.5 | 3323.1 | 2334.8 | 1916.9 | 1890.4 | 1870.5 | 1645.0 | 1525.6 | 1479.1 | 1452.6 |
| 60° | 13159.7 | 9849.9 | 3037.9 | 2102.6 | 1764.4 | 1777.6 | 1724.6 | 1558.7 | 1419.4 | 1373.0 | 1346.5 |
| 62.5° | 12224.5 | 9451.9 | 2752.7 | 1903.7 | 1645.0 | 1671.5 | 1618.4 | 1452.6 | 1313.3 | 1266.9 | 1253.6 |
| 63° | *12038.8* | *9345.8* | *2686.3* | *1883.8* | *1618.4* | *1651.6* | *1605.2* | *1439.3* | *1300.1* | *1253.6* | *1233.7* |
| 65° | 10931.1 | 8709.0 | 2454.2 | 1777.6 | 1532.2 | 1532.2 | 1538.8 | 1373.0 | 1253.6 | 1233.7 | 1220.5 |
| 67.5° | 8914.7 | 7269.7 | 2202.1 | 1651.6 | 1439.3 | 1459.2 | 1492.4 | 1399.5 | 1353.1 | 1339.9 | 1326.6 |
| 70° | 6739.1 | 5472.2 | 1983.2 | 1532.2 | 1339.9 | 1406.2 | 1631.7 | 1591.9 | 1419.4 | 1300.1 | 1273.5 |
| 72.5° | 4775.7 | 3727.7 | 1790.9 | 1412.8 | 1220.5 | 1386.3 | 1691.4 | 1518.9 | 1280.2 | 1140.9 | 1114.3 |
| 75° | 3197.1 | 2401.1 | 1598.5 | 1286.8 | 1087.8 | 1280.2 | 1598.5 | 1386.3 | 1114.3 | 1081.2 | 1041.4 |
| 77.5° | 2009.8 | 1711.3 | 1406.2 | 1140.9 | 941.9 | 1140.9 | 1452.6 | 1233.7 | 961.8 | 975.0 | 915.3 |
| 80° | 1227.1 | 1220.5 | 1180.7 | 968.4 | 756.2 | 908.7 | 1220.5 | 1041.4 | 769.4 | 769.4 | 683.2 |
| 82.5° | 729.6 | 882.2 | 1001.6 | 802.6 | 550.5 | 650.0 | 882.2 | 782.7 | 643.4 | 623.5 | 583.7 |
| 85° | 490.8 | 597.0 | 796.0 | 616.9 | 351.5 | 398.0 | 610.2 | 656.7 | 590.3 | 517.4 | 484.2 |
| 87.5° | 179.1 | 238.8 | 364.8 | 252.1 | 152.6 | 238.8 | 457.7 | 477.6 | 358.2 | 278.6 | 252.1 |
| 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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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-4

Test Date: 10/10/2024

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

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

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

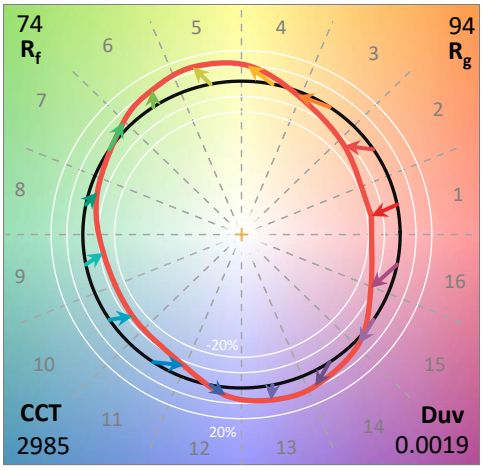
## Test Information

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

## Spectral Parameters

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

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




## Test Conditions

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

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

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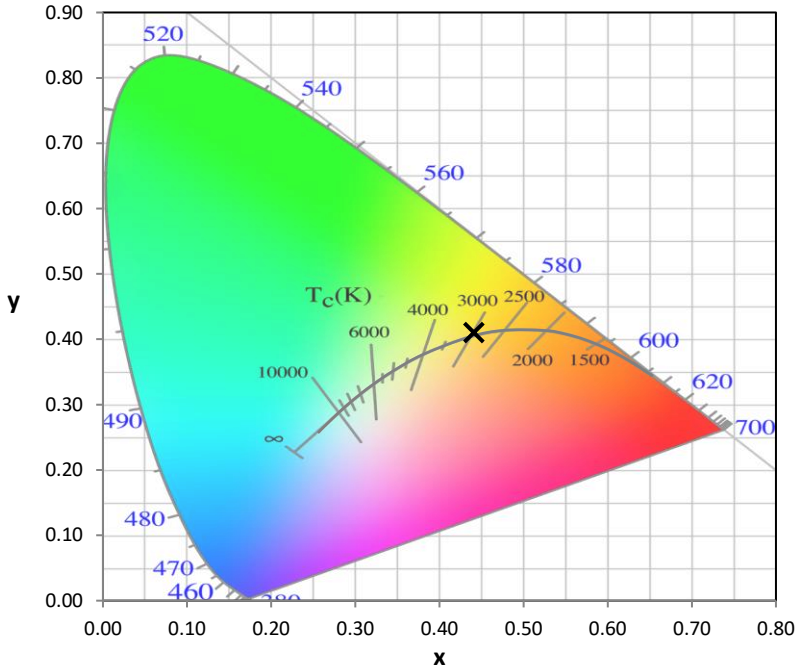
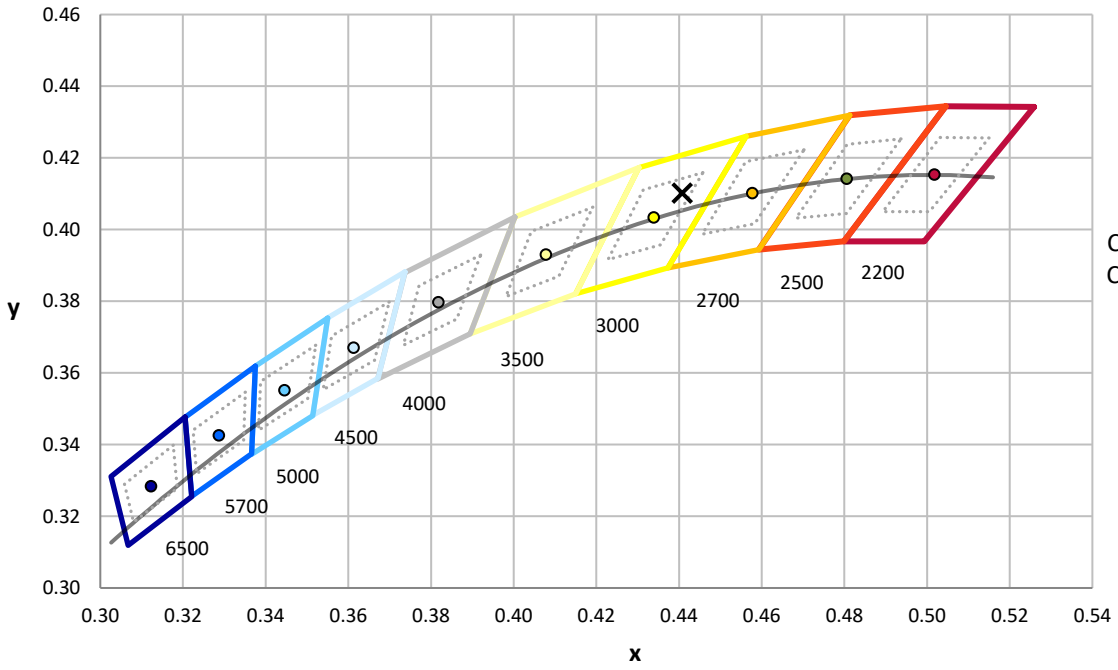
## CIE 1931 Chromaticity Diagram




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




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

Point lies inside the ANSI 3000K 4-step quadrangle

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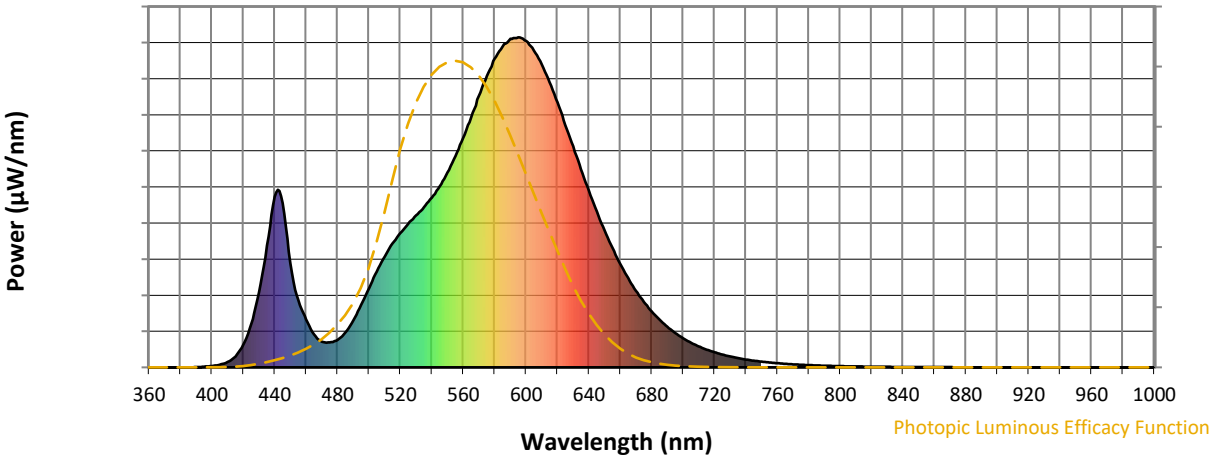
## Photopic Flux vs. Wavelength




## Photopic Lumens: NR

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

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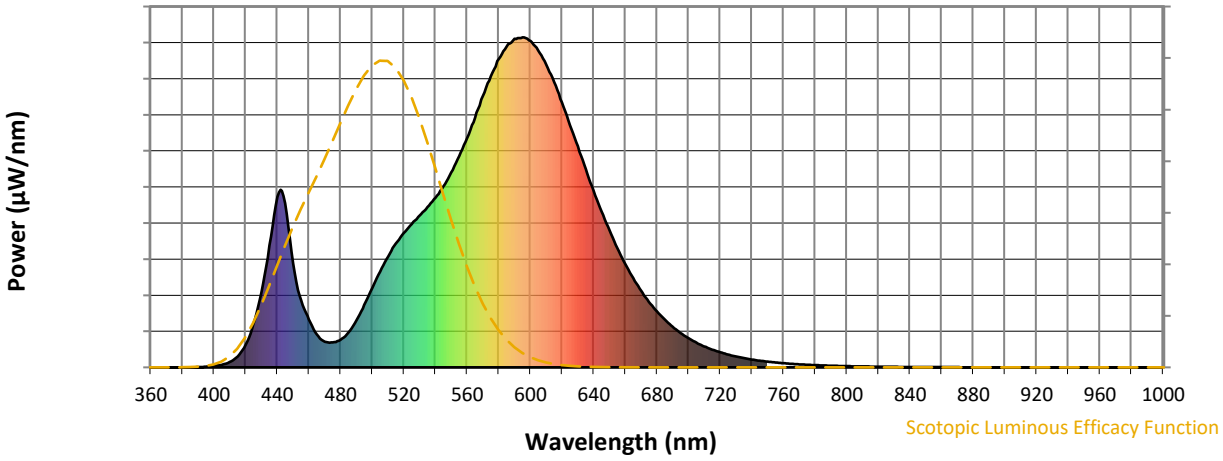
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.19**

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

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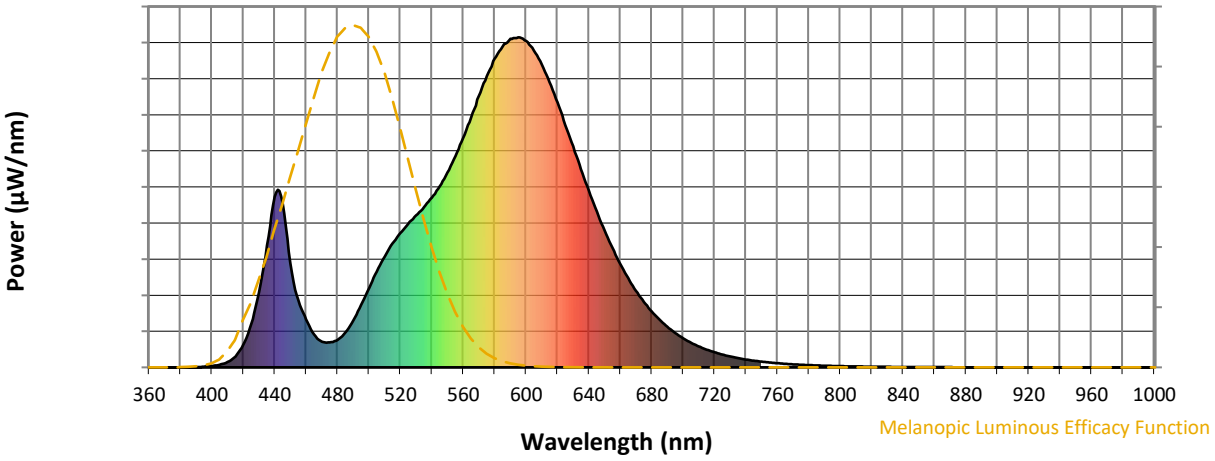
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.13**

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

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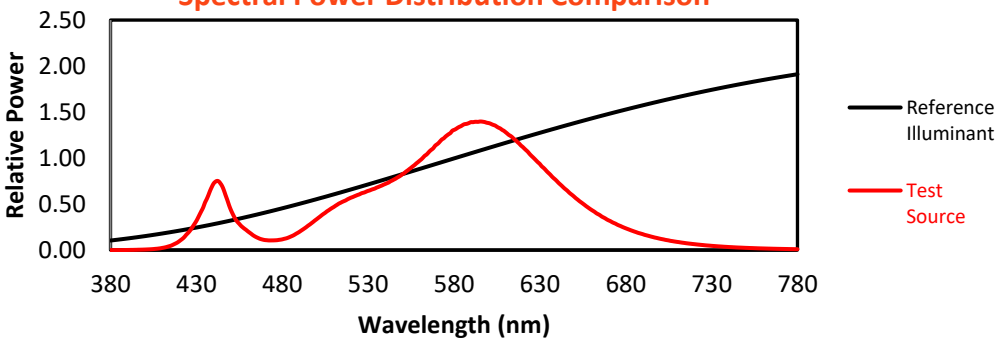
# TM-30-18

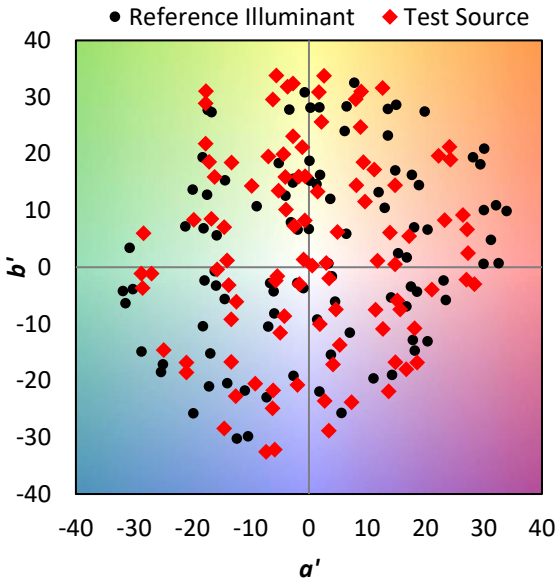
## Summary

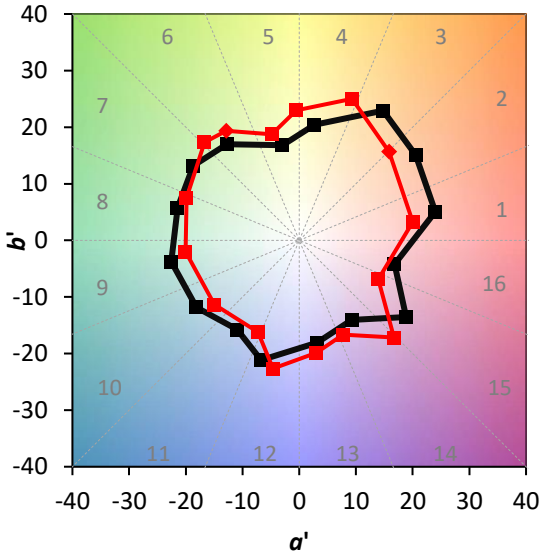
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

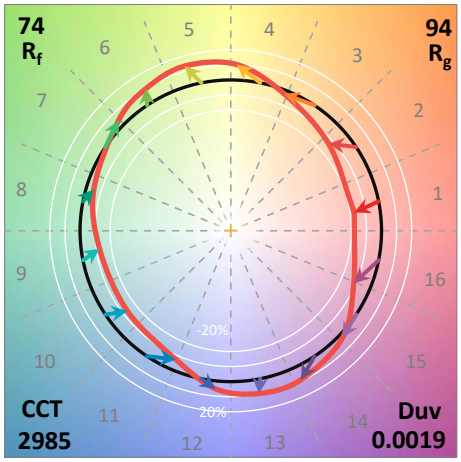
## Spectral Power Distribution Comparison

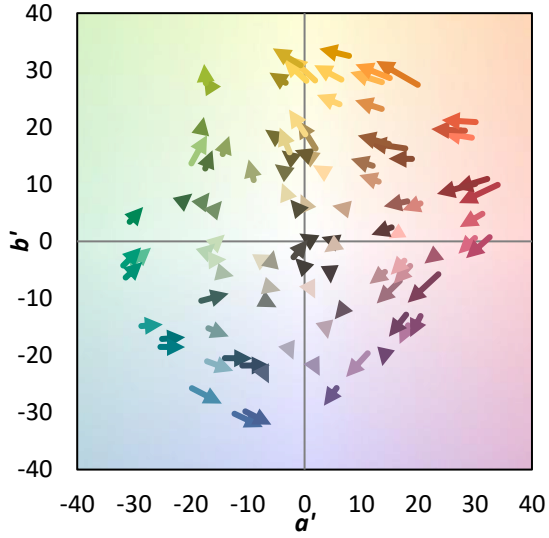



## Color Vector Graphics



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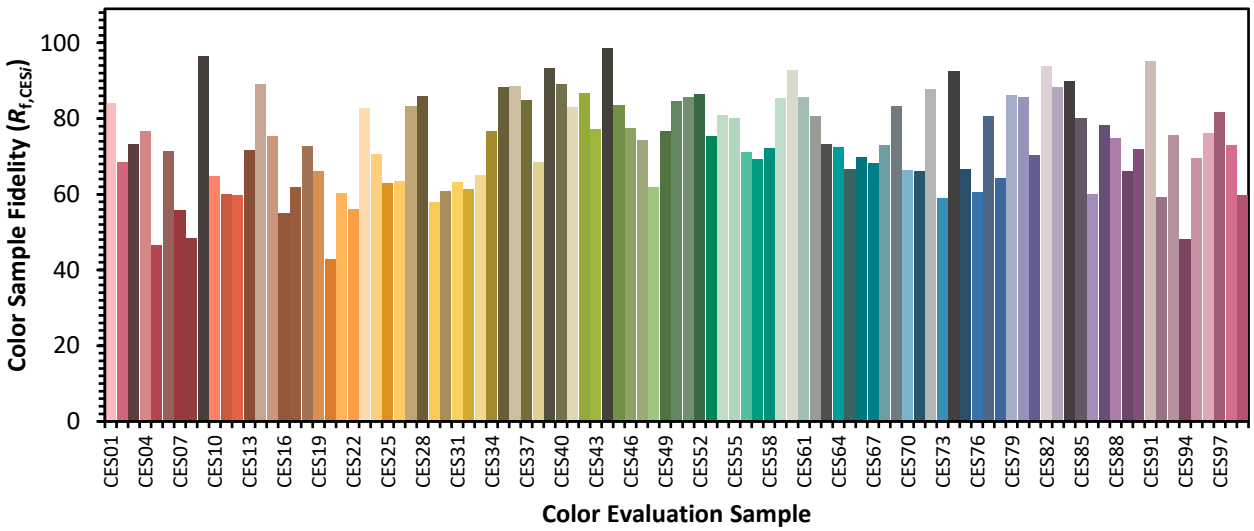
# TM-30-18

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

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



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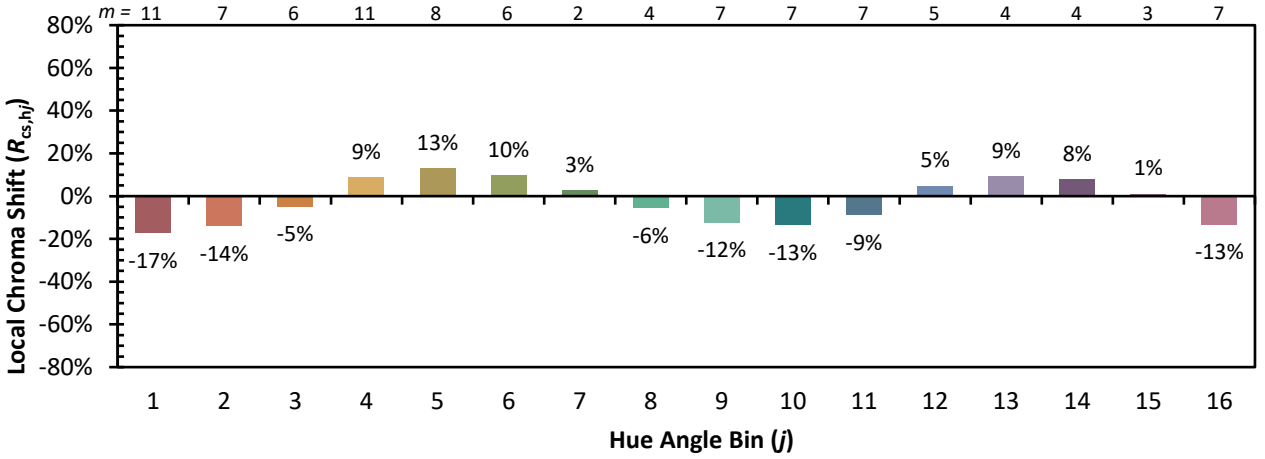
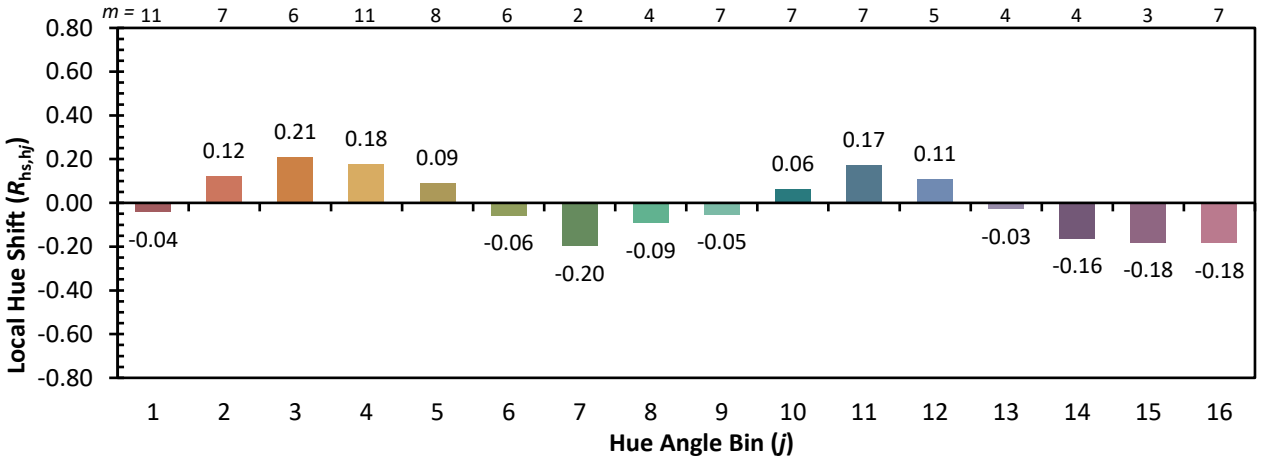
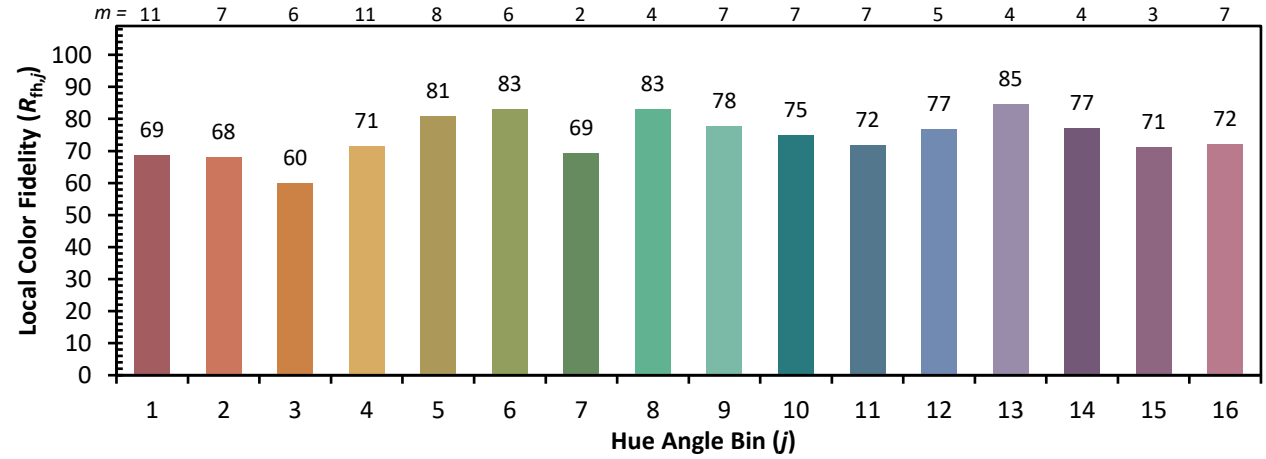
**TM-30-18**

## Color Rendition by Hue-Angle Bin



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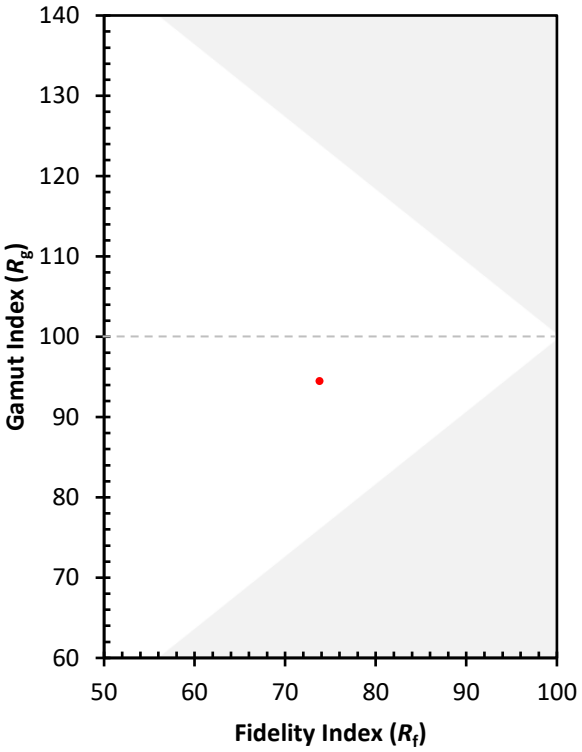
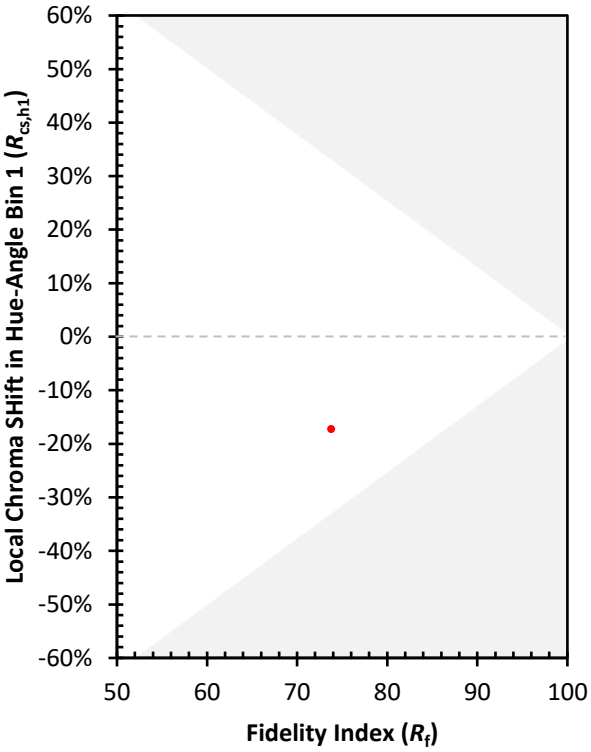
## Measure Comparisons




(END OF REPORT)