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: P1455785

Luminaire Tested: GLAN-SB8C-740-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: | P1455785 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB8C-740-U-T2LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 615mA 8xLight Square PACKAGE 70CRI 4000K FIXTURE w/ TYPE II LOW GLARE |
| Light Source: | (208) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 61981.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 155.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B4 - U0 - G5 |

| | |
|---|---|
| Input Watts (W): | 399.8 |
| 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: P1455785
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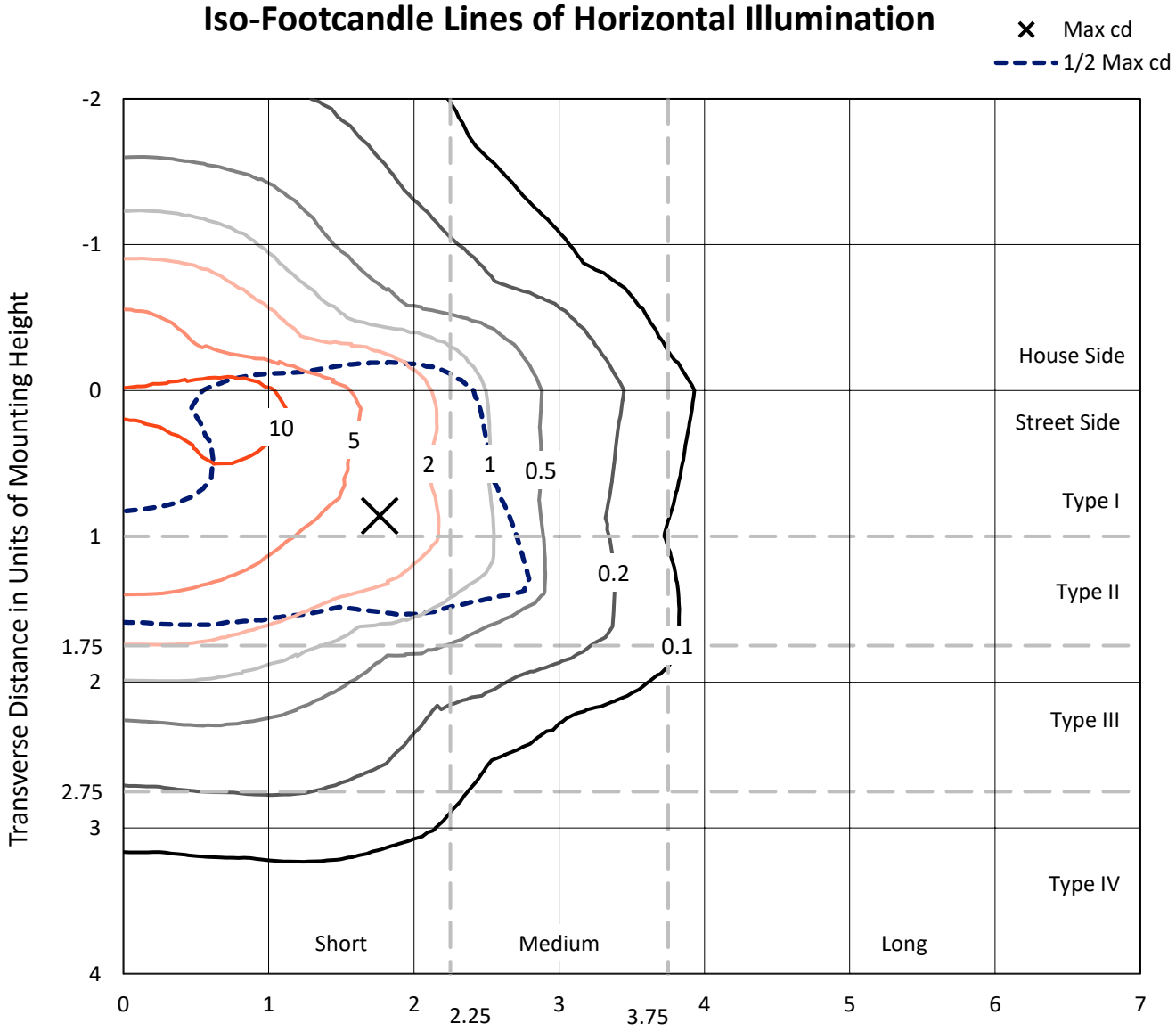
## Iso-Footcandle Lines of Horizontal Illumination




Based on 30 foot mounting height. Maximum calculated value = 16.2 fc
Type II - Short - N/A

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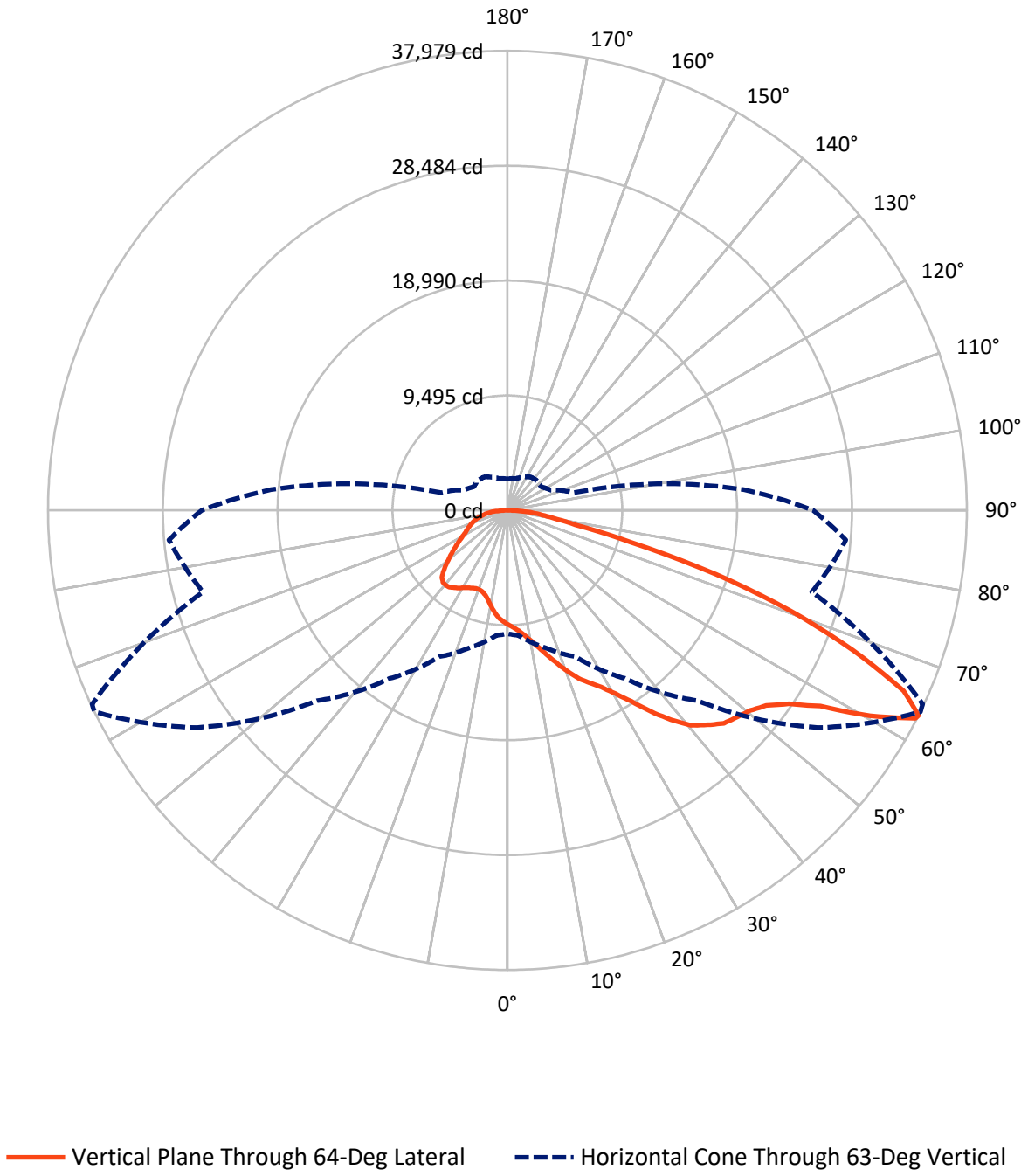
## Luminous Intensity Polar Plot



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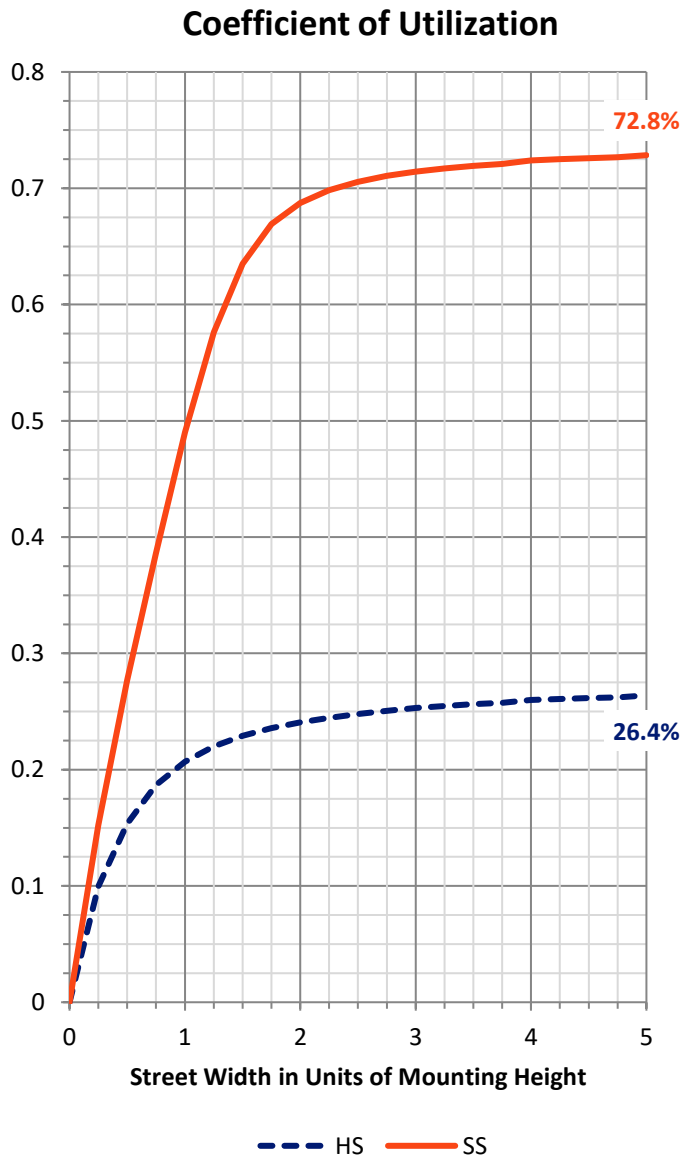
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 16652.7 | 0.0 | 16652.7 |
| | % Fixture | 26.9 | 0.0 | 26.9 |
| **Street Side** | Lumens | 45328.8 | 0.0 | 45328.8 |
| | % Fixture | 73.1 | 0.0 | 73.1 |
| **Total** | Lumens | 61981.5 | 0.0 | 61981.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 866.6 | 1.4 |
| 10°-20° | 2668.0 | 4.3 |
| 20°-30° | 4878.8 | 7.9 |
| 30°-40° | 8392.3 | 13.5 |
| 40°-50° | 12376.4 | 20.0 |
| 50°-60° | 14833.9 | 23.9 |
| 60°-70° | 11905.7 | 19.2 |
| 70°-80° | 4784.0 | 7.7 |
| 80°-90° | 1275.6 | 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° | 61981.5 | 100.0 |
| 0°-180° | 61981.5 | 100.0 |



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REPORT NUMBER: P1455785
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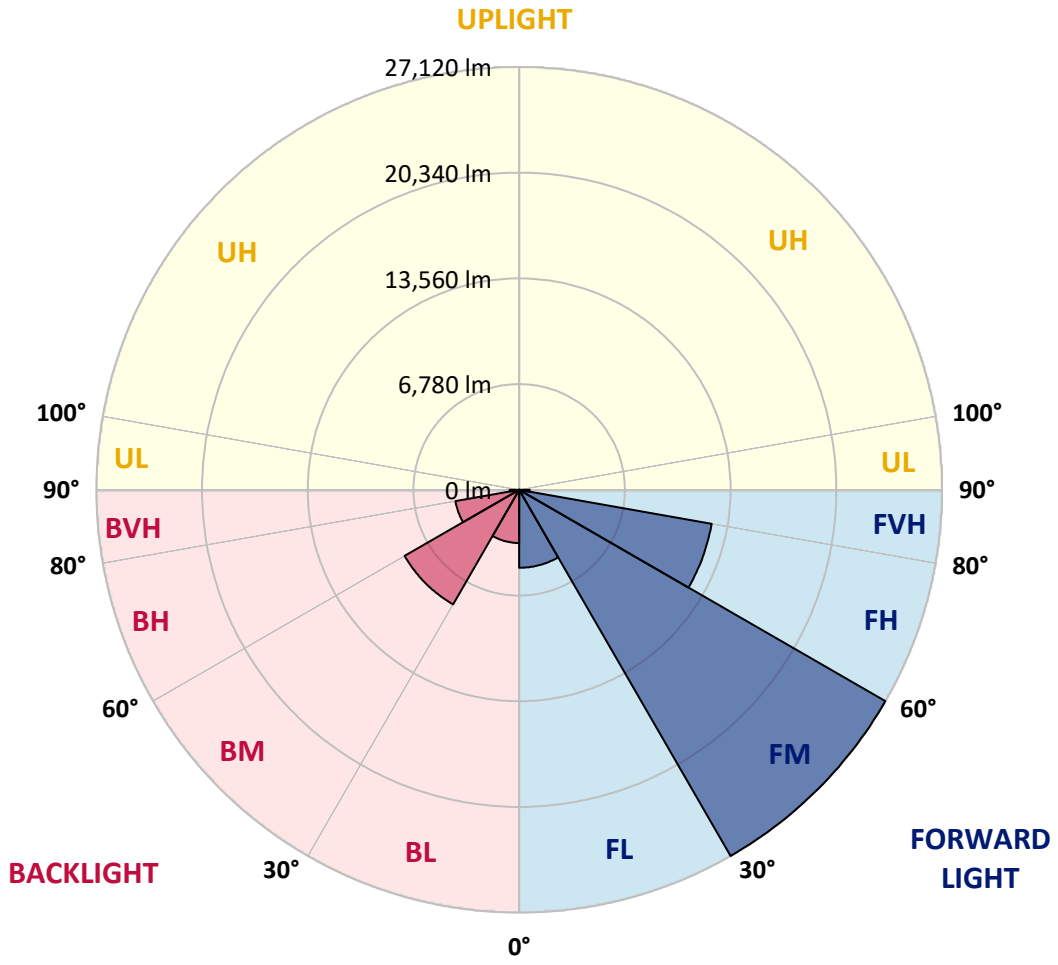
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 5000.7 | 8.1 | | | |
| FM | (30°-60°) | 27120.2 | 43.8 | | | |
| FH | (60°-80°) | 12537.7 | 20.2 | | | G5 |
| FVH | (80°-90°) | 670.2 | 1.1 | | | G4/750 |
| BL | (0°-30°) | 3412.7 | 5.5 | B4/5000 | | |
| BM | (30°-60°) | 8482.5 | 13.7 | B4/8500 | | |
| BH | (60°-80°) | 4152.0 | 6.7 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 605.4 | 1.0 | | | G4/750 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B4-U0-G5**
Type II Short



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REPORT NUMBER: P1455785
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | *9439.1* | 9439.1 | 9439.1 | 9439.1 |
| 2.5° | 9828.9 | 9842.8 | 9801.0 | 9787.1 | 9815.0 | 9759.3 | 9745.4 | *9689.7* | 9661.8 | 9606.1 | 9536.5 |
| 5° | 10107.3 | 10121.2 | 10093.4 | 10093.4 | 10121.2 | 10079.5 | 10065.6 | *10009.9* | 9982.0 | 9926.3 | 9787.1 |
| 7.5° | 10093.4 | 10107.3 | 10135.2 | 10246.5 | 10385.8 | 10441.5 | 10483.2 | *10441.5* | 10427.5 | 10344.0 | 10204.8 |
| 10° | 9870.7 | 9884.6 | 9954.2 | 10121.2 | 10469.3 | 10719.9 | 10984.4 | *10984.4* | 11012.3 | 10942.6 | 10692.0 |
| 12.5° | 9564.4 | 9578.3 | 9745.4 | 10009.9 | 10469.3 | 10900.9 | 11443.8 | *11666.6* | 11652.7 | 11610.9 | 11318.5 |
| 15° | 8826.5 | 8826.5 | 9077.1 | 9578.3 | 10316.2 | 11026.2 | 11833.6 | *12432.3* | 12446.2 | 12488.0 | 12139.9 |
| 17.5° | 8200.0 | 8213.9 | 8422.8 | 8868.3 | 9828.9 | 10956.6 | 12251.3 | *13281.5* | 13323.3 | 13560.0 | 13058.8 |
| 20° | 8255.7 | 8255.7 | 8325.3 | 8520.2 | 9299.9 | 10678.1 | 12488.0 | *14186.5* | 14325.7 | 14882.5 | 14256.1 |
| 22.5° | 8687.3 | 8687.3 | 8743.0 | 8729.1 | 9202.4 | 10497.1 | 12641.1 | *15091.4* | 15342.0 | 16497.5 | 15690.0 |
| 25° | 9480.8 | 9466.9 | 9411.2 | 9327.7 | 9606.1 | 10692.0 | 12989.2 | *15787.5* | 16274.7 | 18279.5 | 17346.7 |
| 27.5° | 10455.4 | 10427.5 | 10344.0 | 10204.8 | 10399.7 | 11276.8 | 13587.8 | *16525.3* | 17054.4 | 20228.6 | 19100.9 |
| 30° | 11666.6 | 11583.1 | 11499.5 | 11318.5 | 11527.4 | 12237.4 | 14478.8 | *17569.5* | 18070.7 | 22442.2 | 21217.0 |
| 32.5° | 13100.5 | 13198.0 | 12919.6 | 12669.0 | 12891.7 | 13546.0 | 15801.4 | *18808.5* | 19351.5 | 24753.2 | 23416.7 |
| 35° | 15244.5 | 15536.9 | 15453.3 | 14186.5 | 14395.3 | 15119.2 | 17346.7 | *20409.6* | 20896.8 | 26855.4 | 25672.0 |
| 37.5° | 17360.7 | 17291.0 | 17360.7 | 16302.6 | 15968.5 | 16845.5 | 19003.4 | *21941.0* | 22414.3 | 28567.8 | 27662.9 |
| 40° | 19059.1 | 19268.0 | 19268.0 | 18404.8 | 17973.2 | 18557.9 | 20507.0 | *23347.1* | 23806.5 | 29514.5 | 29096.8 |
| 42.5° | 20910.7 | 20938.6 | 20882.9 | 20131.1 | 19964.1 | 20117.2 | 21829.6 | *24238.1* | 24614.0 | 30001.8 | 30071.4 |
| 45° | 22999.0 | 22985.1 | 22748.4 | 22122.0 | 21871.4 | 21732.1 | 22651.0 | *25101.3* | 25477.1 | 30224.5 | 30600.4 |
| 47.5° | 24725.4 | 24795.0 | 24808.9 | 24140.6 | 23723.0 | 23124.3 | 23361.0 | *25532.8* | 25964.4 | 29973.9 | 30711.8 |
| 50° | 24822.8 | 24934.2 | 25463.2 | 25658.1 | 25574.6 | 24614.0 | 24015.3 | *25992.3* | 26423.8 | 30029.6 | 31115.5 |
| 52.5° | 24210.2 | 24321.6 | 25003.8 | 25811.3 | 26785.8 | 26326.4 | 25045.6 | *26785.8* | 27231.3 | 30572.6 | 32034.4 |
| 55° | 22567.5 | 22748.4 | 23764.7 | 24892.4 | 26632.7 | 27287.0 | 26869.3 | *28219.8* | 28637.4 | 31004.2 | 33106.4 |
| 57.5° | 19643.9 | 19866.6 | 21272.7 | 23068.6 | 25449.3 | 27064.2 | 29514.5 | *30516.9* | 30864.9 | 31310.4 | 33120.3 |
| 60° | 14687.6 | 14868.6 | 17068.3 | 19490.7 | 23068.6 | 25672.0 | 31087.7 | *34456.8* | 34651.7 | 29653.7 | 31240.8 |
| 62.5° | 10817.3 | 10998.3 | 12474.1 | 14214.3 | 18126.4 | 23110.4 | 31394.0 | *37867.7* | 37895.5 | 26660.5 | 28651.3 |
| 63° | *10190.9* | *10371.8* | *11708.3* | *13337.2* | *16956.9* | *22247.3* | *31296.5* | *37979.0* | *37881.6* | *26047.9* | *28080.5* |
| 65° | 7935.5 | 8255.7 | 9647.9 | 10887.0 | 12710.7 | 17708.7 | 30043.5 | *36002.1* | 36141.3 | 24238.1 | 25212.6 |
| 67.5° | 5401.7 | 5638.4 | 7406.5 | 8840.4 | 9606.1 | 11276.8 | 24641.8 | *30809.2* | 31032.0 | 22358.6 | 20117.2 |
| 70° | 4176.6 | 4288.0 | 5318.2 | 7002.7 | 7768.4 | 7169.8 | 16065.9 | *24808.9* | 24808.9 | 17458.1 | 14256.1 |
| 72.5° | 3271.7 | 3313.4 | 4009.5 | 5471.3 | 6250.9 | 5513.1 | 8951.8 | *18042.8* | 17374.6 | 10357.9 | 9508.7 |
| 75° | 2338.9 | 2394.6 | 3021.1 | 4079.1 | 4984.1 | 4343.6 | 5721.9 | *10511.1* | 10107.3 | 5958.6 | 6348.4 |
| 77.5° | 1851.6 | 1879.5 | 2255.4 | 3007.1 | 4037.4 | 3313.4 | 4357.6 | *5735.8* | 5680.1 | 4190.5 | 4079.1 |
| 80° | 1461.8 | 1517.5 | 1768.1 | 2157.9 | 3118.5 | 2589.5 | 3243.8 | *3786.8* | 3675.4 | 2881.8 | 2617.3 |
| 82.5° | 1044.1 | 1141.6 | 1364.3 | 1642.8 | 2311.0 | 1851.6 | 2130.1 | *2673.0* | 2673.0 | 2171.8 | 1726.3 |
| 85° | 640.4 | 723.9 | 807.5 | 1016.3 | 1642.8 | 1197.3 | 1127.7 | *1726.3* | 1768.1 | 1628.9 | 1113.8 |
| 87.5° | 306.3 | 334.1 | 389.8 | 431.6 | 598.6 | 543.0 | 445.5 | *654.3* | 668.3 | 723.9 | 459.4 |
| 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: P1455785
CATALOG NUMBER: GLAN-SB8C-740-U-T2LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 | 9439.1 |
| 2.5° | 9522.6 | 9494.8 | 9355.5 | 9216.3 | 9063.2 | 8924.0 | 8784.7 | 8673.4 | 8548.1 | 8575.9 | 8589.8 |
| 5° | 9703.6 | 9634.0 | 9327.7 | 8965.7 | 8492.4 | 8046.9 | 7615.3 | 7309.0 | 7114.1 | 7058.4 | 6947.0 |
| 7.5° | 10093.4 | 9926.3 | 9369.5 | 8603.8 | 7726.7 | 7030.6 | 6626.8 | 6445.9 | 6390.2 | 6404.1 | 6376.2 |
| 10° | 10538.9 | 10288.3 | 9425.2 | 8172.2 | 7058.4 | 6585.1 | 6529.4 | 6640.8 | 6696.5 | 6752.1 | 6766.1 |
| 12.5° | 11123.6 | 10719.9 | 9397.3 | 7698.8 | 6738.2 | 6654.7 | 6863.5 | 7072.3 | 7197.6 | 7281.2 | 7267.3 |
| 15° | 11805.8 | 11262.8 | 9313.8 | 7309.0 | 6696.5 | 6919.2 | 7183.7 | 7420.4 | 7573.5 | 7657.1 | 7615.3 |
| 17.5° | 12627.2 | 11903.3 | 9216.3 | 7058.4 | 6821.7 | 7086.3 | 7364.7 | 7601.4 | 7768.4 | 7824.1 | 7782.4 |
| 20° | 13643.5 | 12627.2 | 9049.3 | 6947.0 | 6919.2 | 7155.9 | 7406.5 | 7629.2 | 7768.4 | 7824.1 | 7768.4 |
| 22.5° | 14840.8 | 13490.4 | 8910.0 | 6947.0 | 6961.0 | 7155.9 | 7336.9 | 7503.9 | 7629.2 | 7671.0 | 7601.4 |
| 25° | 16372.2 | 14492.7 | 8854.4 | 7058.4 | 6974.9 | 7086.3 | 7183.7 | 7281.2 | 7350.8 | 7378.6 | 7350.8 |
| 27.5° | 17931.5 | 15648.3 | 8882.2 | 7197.6 | 6961.0 | 6988.8 | 6988.8 | 7002.7 | 7016.7 | 7030.6 | 7016.7 |
| 30° | 19727.4 | 16817.7 | 8993.6 | 7378.6 | 6988.8 | 6849.6 | 6807.8 | 6724.3 | 6654.7 | 6599.0 | 6543.3 |
| 32.5° | 21467.6 | 17931.5 | 9188.5 | 7643.1 | 6961.0 | 6696.5 | 6612.9 | 6404.1 | 6209.2 | 6042.1 | 6042.1 |
| 35° | 23347.1 | 19087.0 | 9536.5 | 7838.0 | 6933.1 | 6557.2 | 6320.6 | 6083.9 | 5875.1 | 5638.4 | 5638.4 |
| 37.5° | 24962.0 | 20075.4 | 9815.0 | 8060.8 | 6905.3 | 6390.2 | 6014.3 | 5749.8 | 5527.0 | 5290.3 | 5262.5 |
| 40° | 26089.7 | 20646.2 | 9982.0 | 8144.3 | 6807.8 | 6167.4 | 5721.9 | 5387.8 | 5067.6 | 4747.4 | 4733.5 |
| 42.5° | 26632.7 | 20618.4 | 9884.6 | 8116.5 | 6626.8 | 5889.0 | 5471.3 | 5025.8 | 4594.2 | 4301.9 | 4274.0 |
| 45° | 26925.0 | 20437.4 | 9508.7 | 7879.8 | 6334.5 | 5596.6 | 5151.1 | 4677.8 | 4246.2 | 3981.7 | 3926.0 |
| 47.5° | 26869.3 | 19991.9 | 8993.6 | 7295.1 | 5944.7 | 5276.4 | 4830.9 | 4343.6 | 3995.6 | 3842.5 | 3842.5 |
| 50° | 27022.5 | 19643.9 | 8408.8 | 6626.8 | 5415.6 | 4900.5 | 4538.6 | 4093.0 | 3884.2 | 3689.3 | 3619.7 |
| 52.5° | 27704.7 | 19936.2 | 7907.7 | 6000.4 | 4914.4 | 4538.6 | 4288.0 | 3912.1 | 3647.5 | 3522.2 | 3480.5 |
| 55° | 28609.6 | 20562.7 | 7434.3 | 5443.5 | 4427.2 | 4218.3 | 4093.0 | 3745.0 | 3438.7 | 3313.4 | 3243.8 |
| 57.5° | 28776.6 | 20994.3 | 6974.9 | 4900.5 | 4023.4 | 3967.8 | 3926.0 | 3452.6 | 3202.0 | 3104.6 | 3048.9 |
| 60° | 27621.1 | 20674.1 | 6376.2 | 4413.3 | 3703.2 | 3731.1 | 3619.7 | 3271.7 | 2979.3 | 2881.8 | 2826.2 |
| 62.5° | 25658.1 | 19838.8 | 5777.6 | 3995.6 | 3452.6 | 3508.3 | 3397.0 | 3048.9 | 2756.5 | 2659.1 | 2631.2 |
| 63° | *25268.3* | *19616.0* | *5638.4* | *3953.8* | *3397.0* | *3466.6* | *3369.1* | *3021.1* | *2728.7* | *2631.2* | *2589.5* |
| 65° | 22943.4 | 18279.5 | 5151.1 | 3731.1 | 3216.0 | 3216.0 | 3229.9 | 2881.8 | 2631.2 | 2589.5 | 2561.6 |
| 67.5° | 18711.1 | 15258.4 | 4622.1 | 3466.6 | 3021.1 | 3062.8 | 3132.4 | 2937.5 | 2840.1 | 2812.2 | 2784.4 |
| 70° | 14144.7 | 11485.6 | 4162.7 | 3216.0 | 2812.2 | 2951.5 | 3424.8 | 3341.3 | 2979.3 | 2728.7 | 2673.0 |
| 72.5° | 10023.8 | 7824.1 | 3758.9 | 2965.4 | 2561.6 | 2909.7 | 3550.1 | 3188.1 | 2686.9 | 2394.6 | 2338.9 |
| 75° | 6710.4 | 5039.7 | 3355.2 | 2700.9 | 2283.2 | 2686.9 | 3355.2 | 2909.7 | 2338.9 | 2269.3 | 2185.7 |
| 77.5° | 4218.3 | 3591.9 | 2951.5 | 2394.6 | 1976.9 | 2394.6 | 3048.9 | 2589.5 | 2018.7 | 2046.5 | 1921.2 |
| 80° | 2575.6 | 2561.6 | 2478.1 | 2032.6 | 1587.1 | 1907.3 | 2561.6 | 2185.7 | 1614.9 | 1614.9 | 1434.0 |
| 82.5° | 1531.4 | 1851.6 | 2102.2 | 1684.6 | 1155.5 | 1364.3 | 1851.6 | 1642.8 | 1350.4 | 1308.7 | 1225.1 |
| 85° | 1030.2 | 1253.0 | 1670.6 | 1294.7 | 737.9 | 835.3 | 1280.8 | 1378.3 | 1239.1 | 1085.9 | 1016.3 |
| 87.5° | 375.9 | 501.2 | 765.7 | 529.0 | 320.2 | 501.2 | 960.6 | 1002.4 | 751.8 | 584.7 | 529.0 |
| 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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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-1

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-740-U-5WQ

Data in this report applies to families of products including GSS-SB1A-740-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

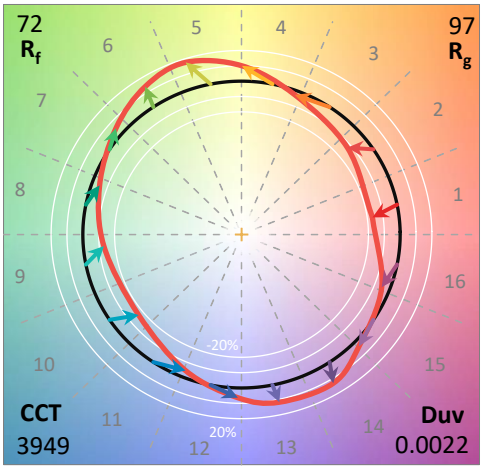
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-1 |
| 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-740-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3949 |
| CIE u': | 0.2248 |
| CIE v': | 0.5053 |
| Duv: | 0.0022 |
| CIE x: | 0.3844 |
| CIE y: | 0.3840 |
| CIE z: | 0.2316 |
| Peak Wavelength (nm): | 440 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 30.60026 |
| Rf: | 71.8 |
| Rg: | 96.5 |

| | |
|---|---|
| CRI (Ra): | 70.7 |
| R1: | 68.0 |
| R2: | 76.0 |
| R3: | 84.3 |
| R4: | 72.0 |
| R5: | 68.6 |
| R6: | 68.3 |
| R7: | 77.9 |
| R8: | 50.3 |
| R9: | -36.7 |
| R10: | 45.1 |
| R11: | 70.7 |
| R12: | 47.1 |
| R13: | 68.5 |
| R14: | 91.1 |
| R15: | 58.7 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| 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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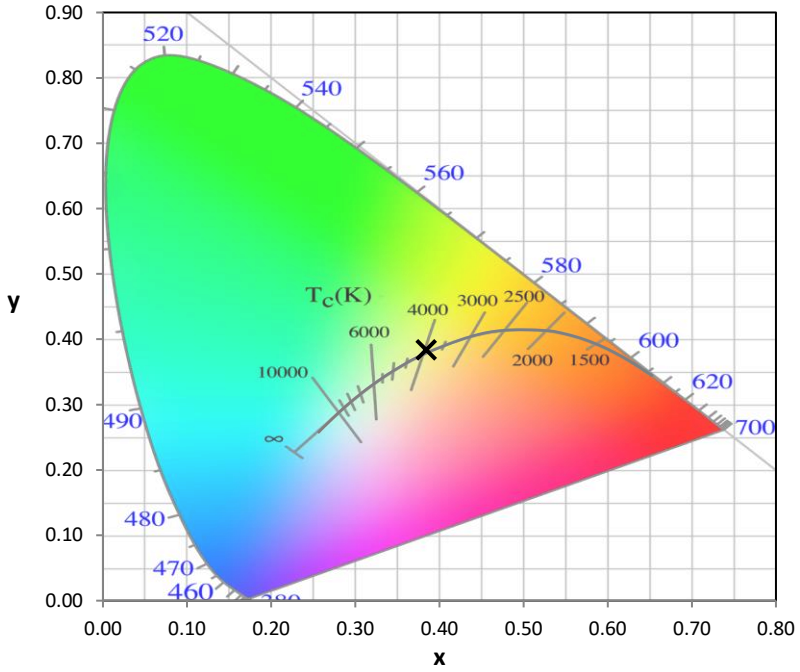
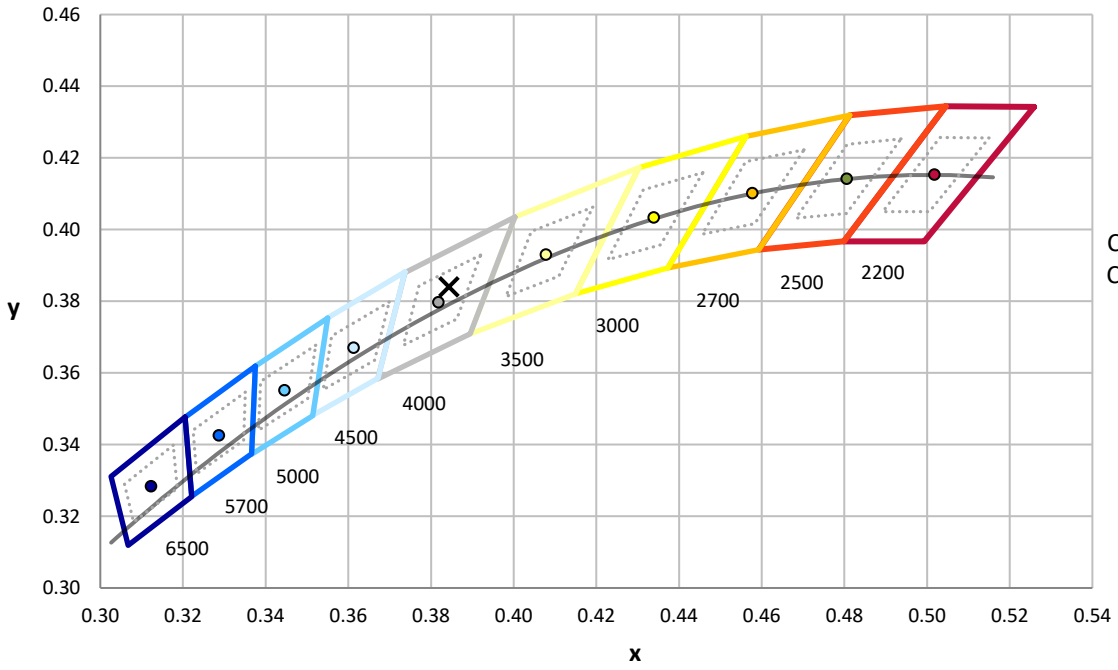
## CIE 1931 Chromaticity Diagram




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




CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

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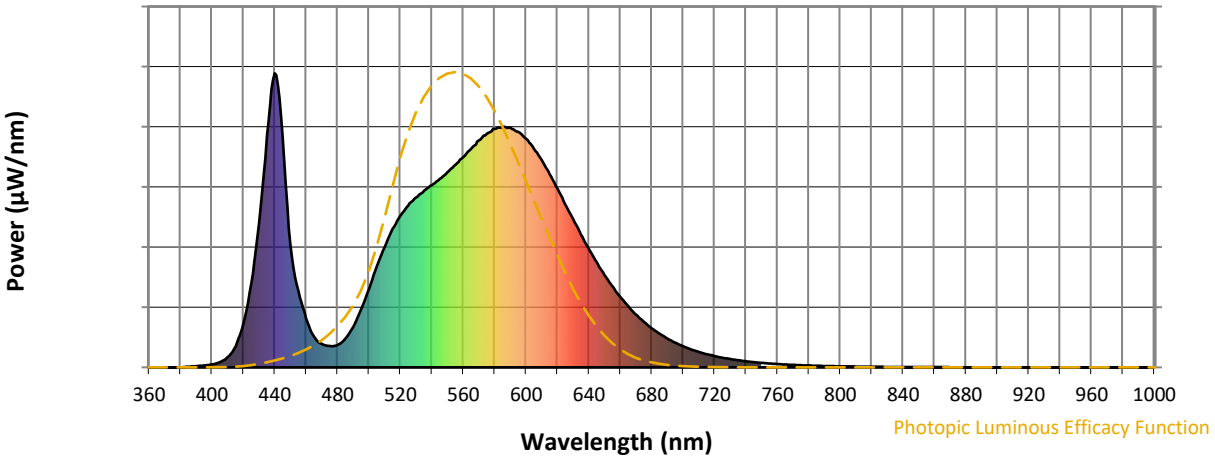
## Photopic Flux vs. Wavelength




## 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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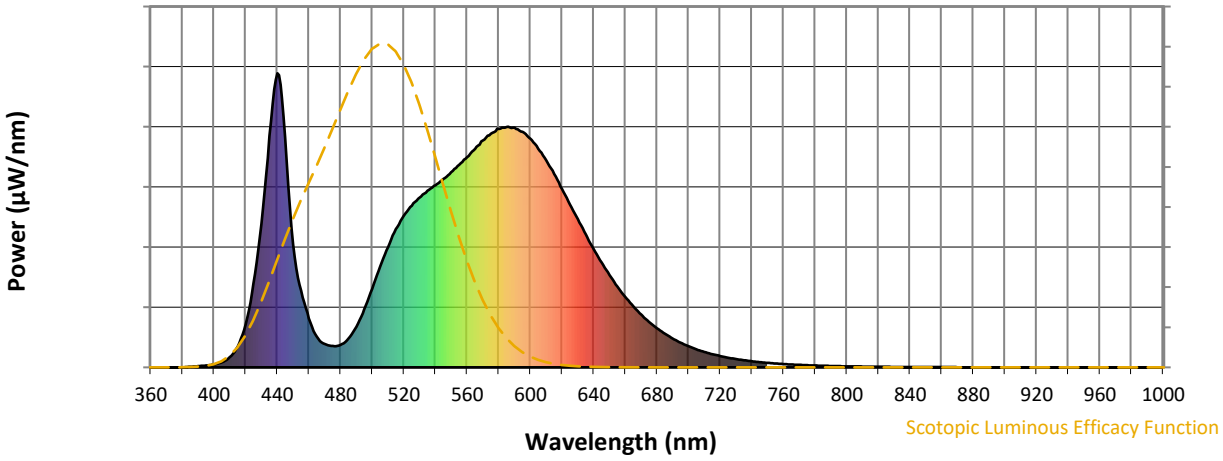
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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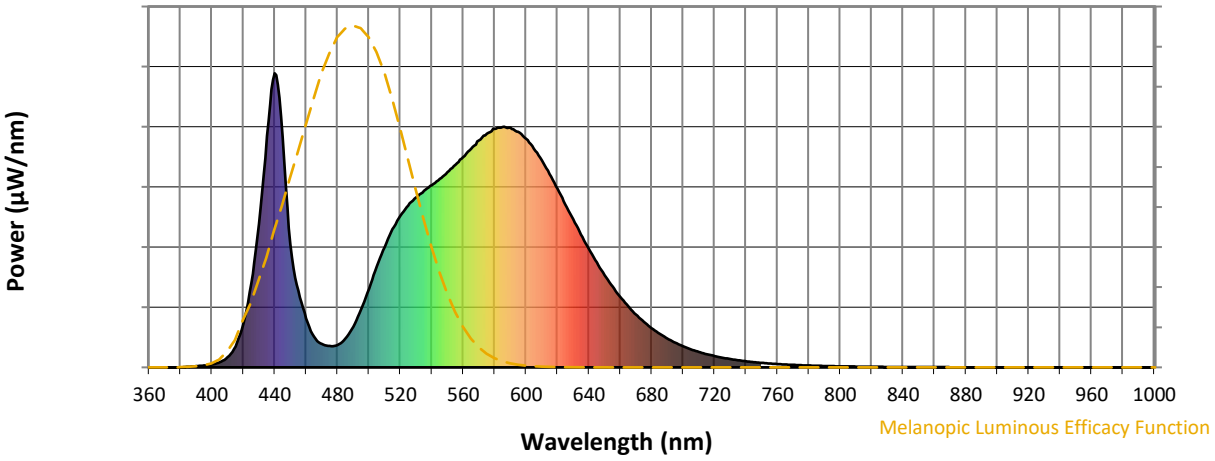
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.78**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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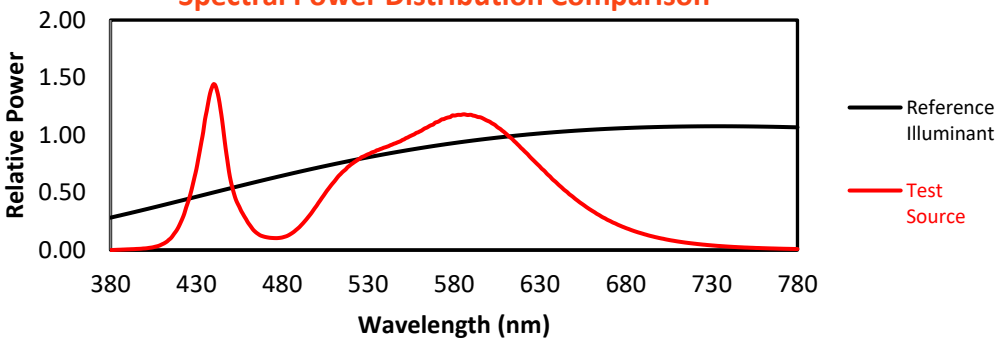
# TM-30-18

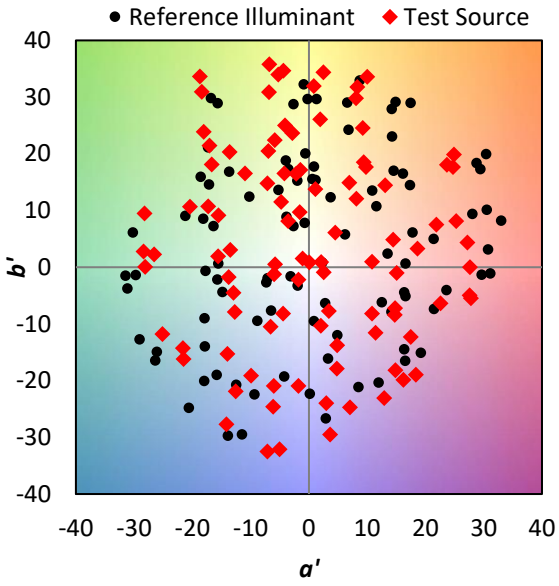
## Summary

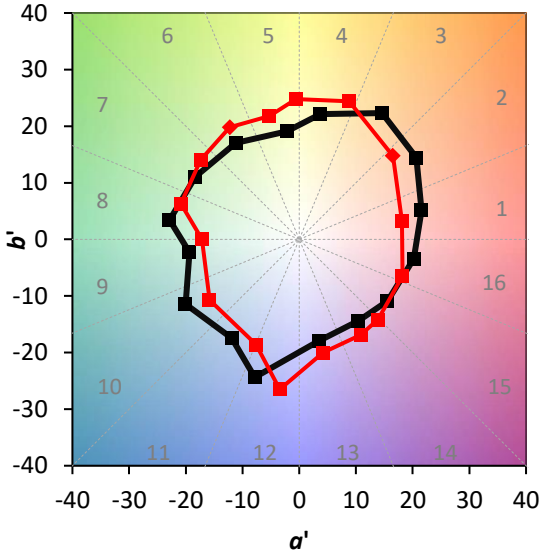
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

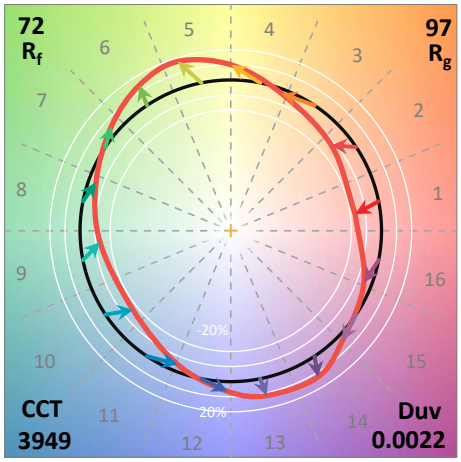
## Spectral Power Distribution Comparison

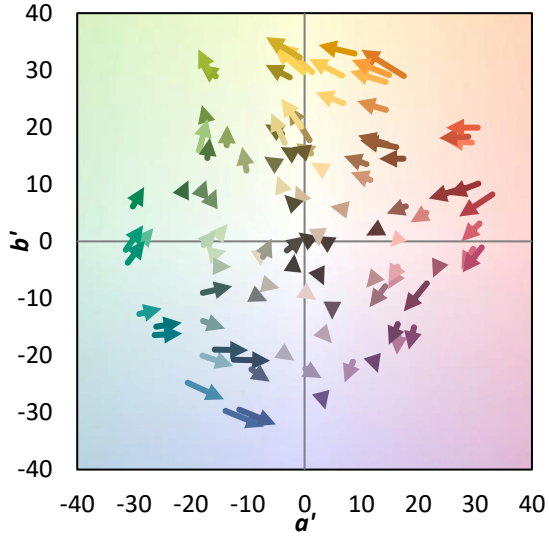



## Color Vector Graphics



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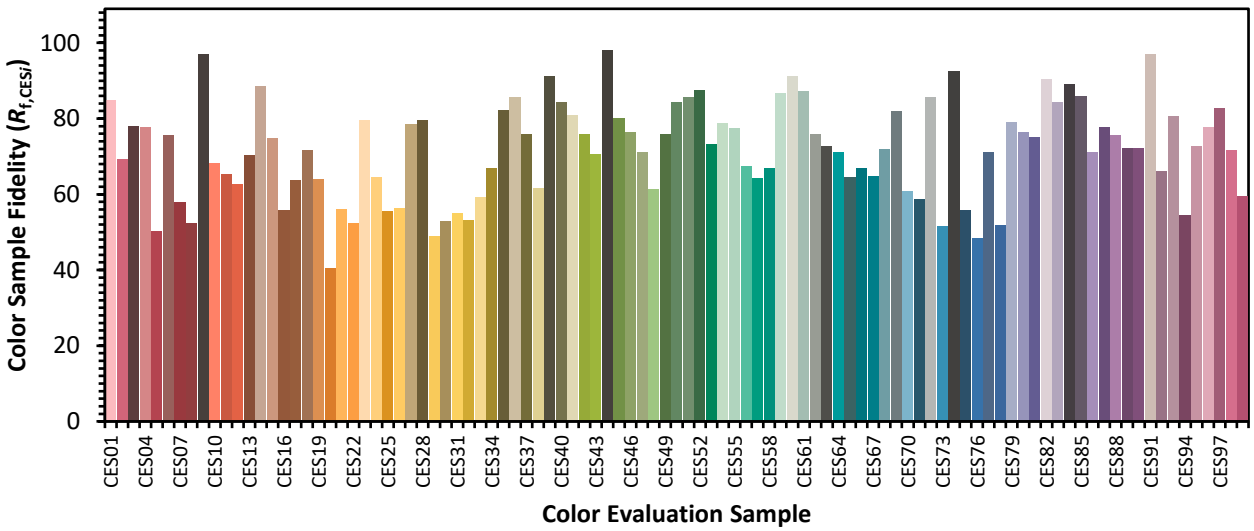
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 50 | CES31 = 55 | CES56 = 67 | CES81 = 75 |
| CES07 = 40 | CES32 = 53 | CES57 = 64 | CES82 = 90 |
| CES08 = 39 | CES33 = 59 | CES58 = 67 | CES83 = 84 |
| CES09 = 29 | CES34 = 67 | CES59 = 87 | CES84 = 89 |
| CES10 = 74 | CES35 = 82 | CES60 = 91 | CES85 = 86 |
| CES11 = 57 | CES36 = 86 | CES61 = 87 | CES86 = 71 |
| CES12 = 63 | CES37 = 76 | CES62 = 76 | CES87 = 78 |
| CES13 = 42 | CES38 = 62 | CES63 = 73 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 71 | CES89 = 72 |
| CES15 = 71 | CES40 = 84 | CES65 = 64 | CES90 = 72 |
| CES16 = 46 | CES41 = 81 | CES66 = 67 | CES91 = 97 |
| CES17 = 49 | CES42 = 76 | CES67 = 65 | CES92 = 66 |
| CES18 = 56 | CES43 = 71 | CES68 = 72 | CES93 = 81 |
| CES19 = 72 | CES44 = 98 | CES69 = 82 | CES94 = 55 |
| CES20 = 65 | CES45 = 80 | CES70 = 61 | CES95 = 73 |
| CES21 = 86 | CES46 = 76 | CES71 = 59 | CES96 = 78 |
| CES22 = 78 | CES47 = 71 | CES72 = 86 | CES97 = 83 |
| CES23 = 92 | CES48 = 61 | CES73 = 52 | CES98 = 72 |
| CES24 = 91 | CES49 = 76 | CES74 = 93 | CES99 = 60 |
| CES25 = 72 | CES50 = 84 | CES75 = 56 | |



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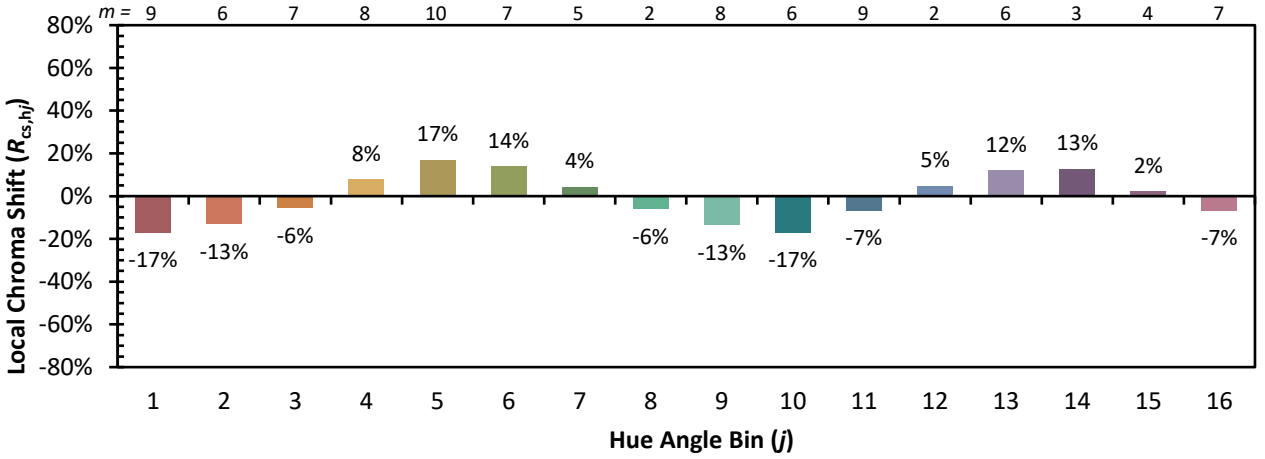
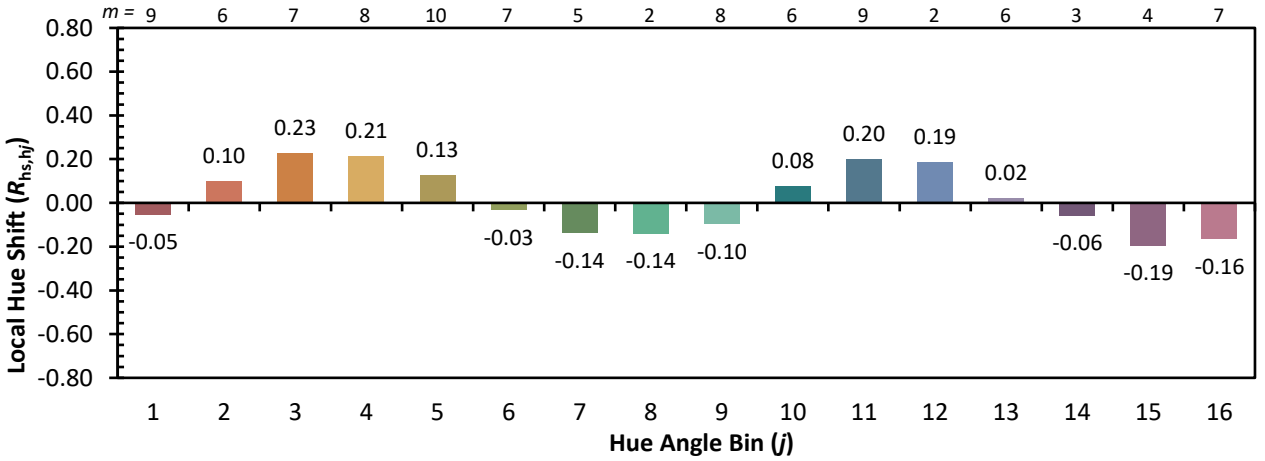
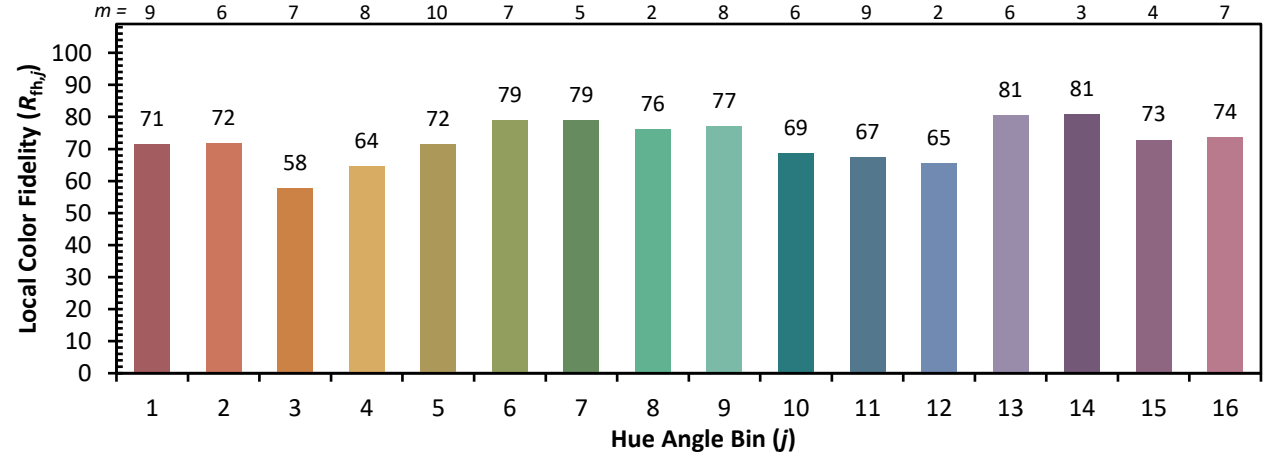
**TM-30-18**

## Color Rendition by Hue-Angle Bin



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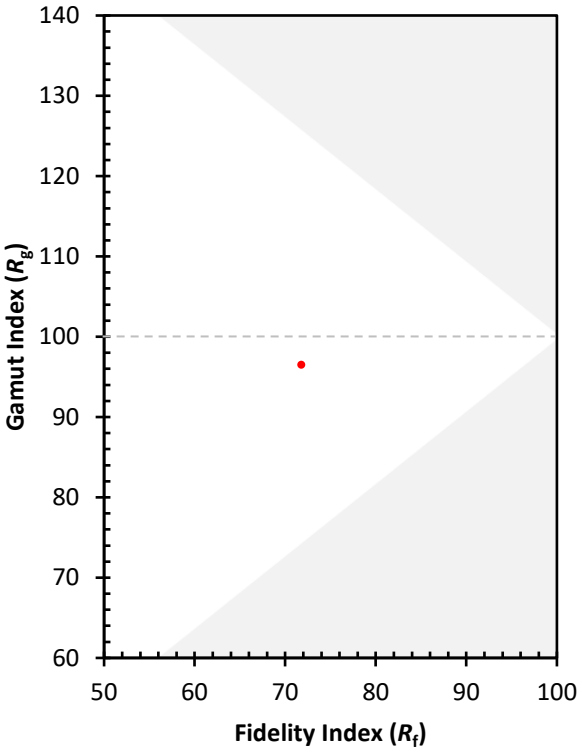
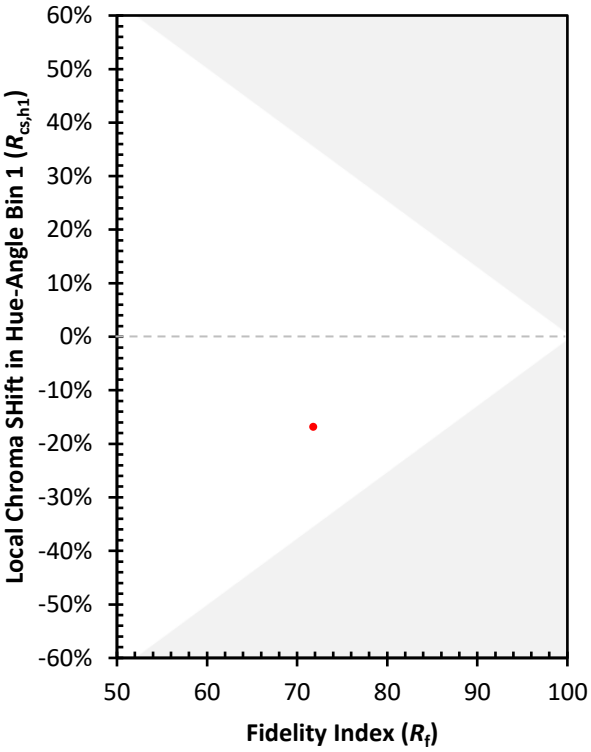
## Measure Comparisons




(END OF REPORT)