

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



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

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P1449758

Luminaire Tested: **AXCS2A-C**

Issue Date: 5/12/2026

Test Information

Test Method: LM-79-08
Report Number: P1449758
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2310-196-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/12/2026
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: AXCS2A-C
Description: 2A AXCENT LED FULL CUTOFF WALLPACK WITH 5000K 70CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2589 lumens
Efficiency: N/A
Efficacy: 167.0 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

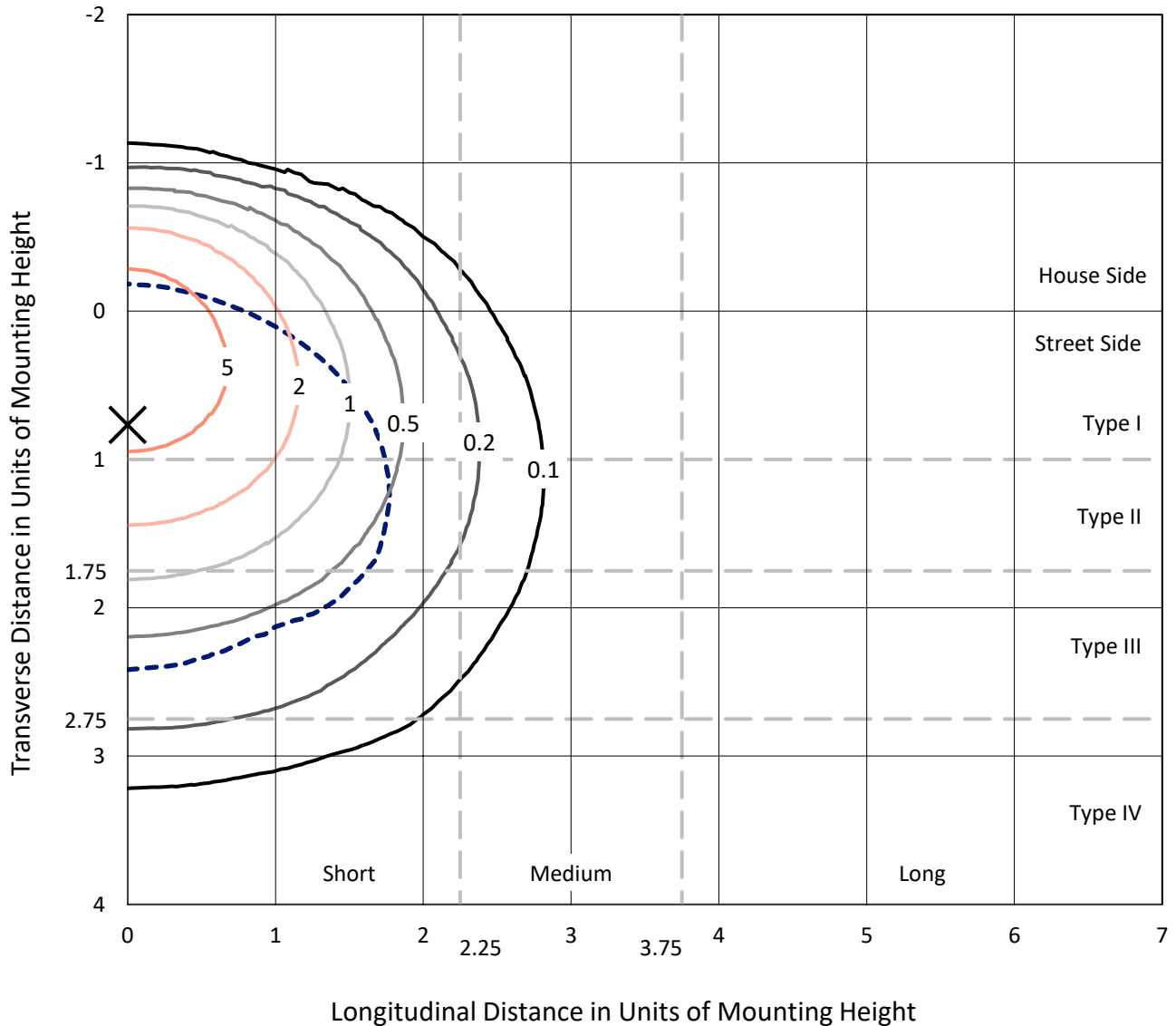
Input Watts (W): 15.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P1449758
 CATALOG NUMBER: AXCS2A-C

Iso-Footcandle Lines of Horizontal Illumination

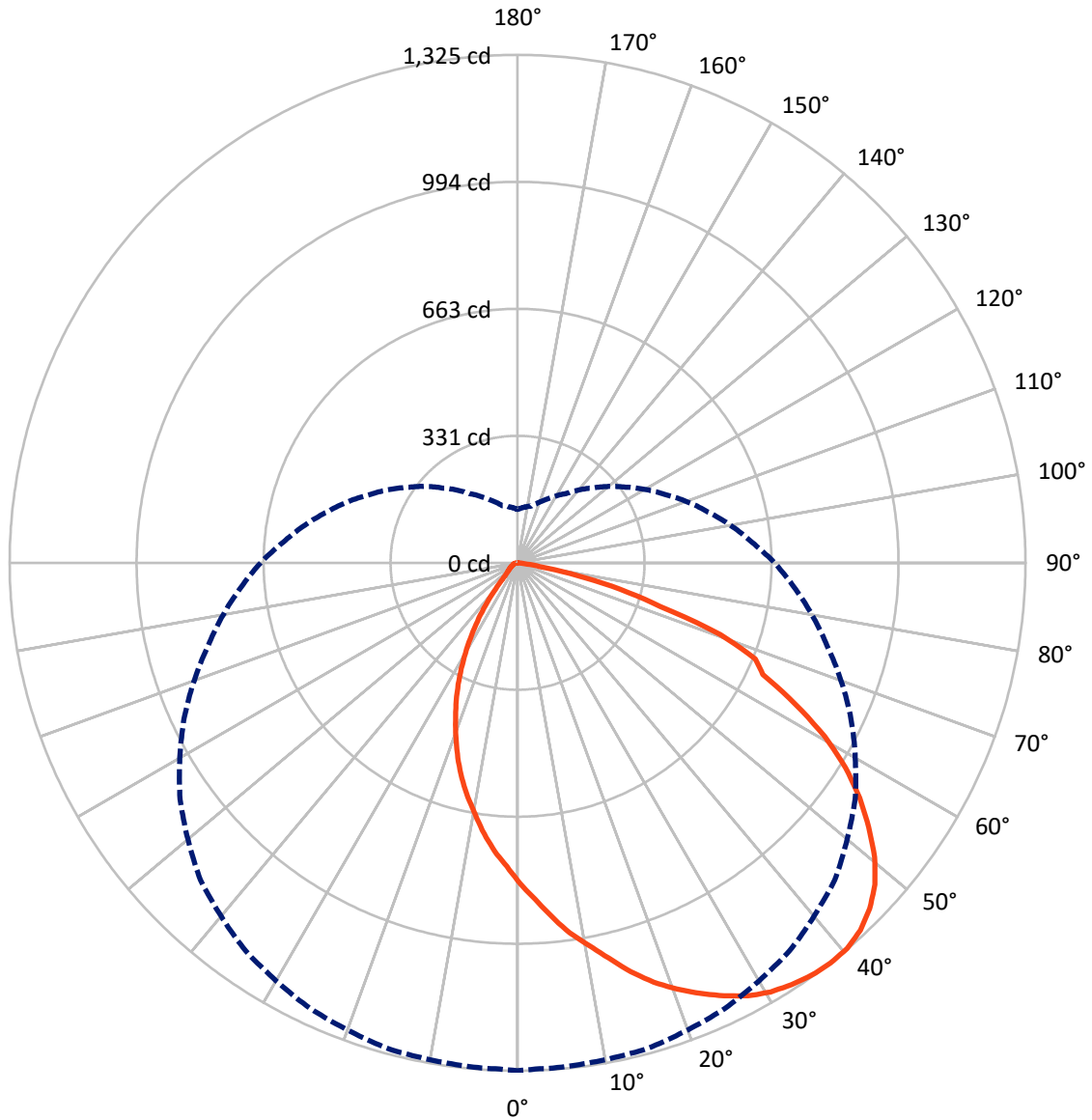
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.9 fc
 Type III - Short - N/A

REPORT NUMBER: P1449758
CATALOG NUMBER: AXCS2A-C

Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 37.5-Deg Vertical

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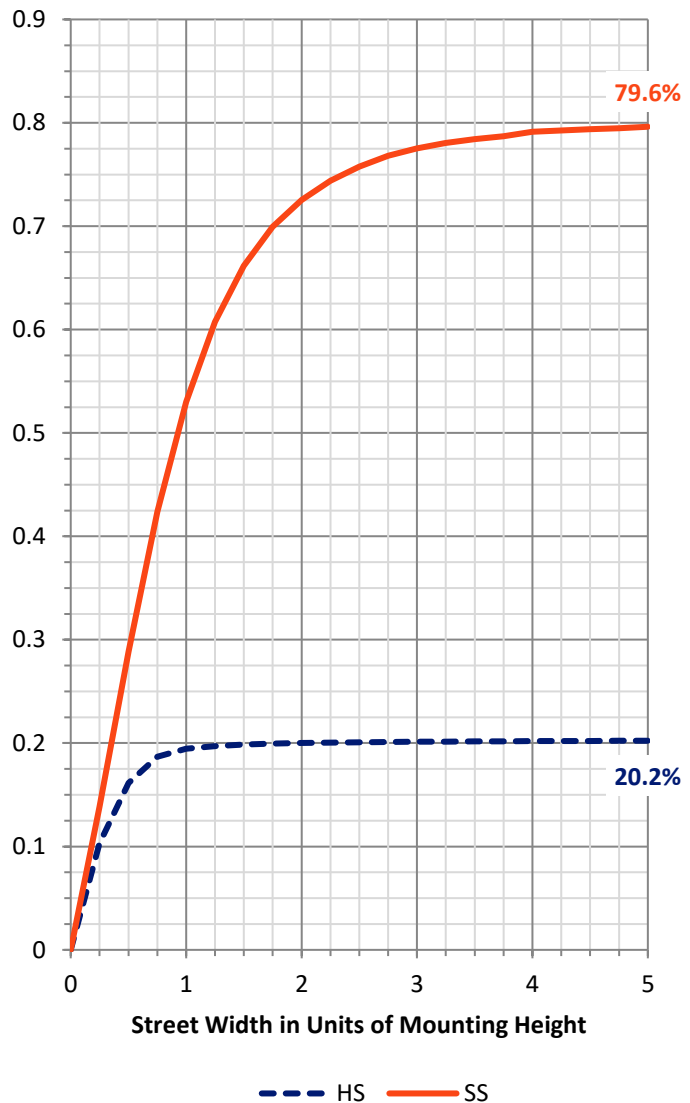
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 528.9 | 0.0 | 528.9 |
| | % Fixture | 20.4 | 0.0 | 20.4 |
| Street Side | Lumens | 2060.1 | 0.0 | 2060.1 |
| | % Fixture | 79.6 | 0.0 | 79.6 |
| Total | Lumens | 2589.0 | 0.0 | 2589.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 79.8 | 3.1 |
| 10°-20° | 234.1 | 9.0 |
| 20°-30° | 366.3 | 14.2 |
| 30°-40° | 457.4 | 17.7 |
| 40°-50° | 492.0 | 19.0 |
| 50°-60° | 456.7 | 17.6 |
| 60°-70° | 336.8 | 13.0 |
| 70°-80° | 152.4 | 5.9 |
| 80°-90° | 13.5 | 0.5 |
| 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° | 2589.0 | 100.0 |
| 0°-180° | 2589.0 | 100.0 |

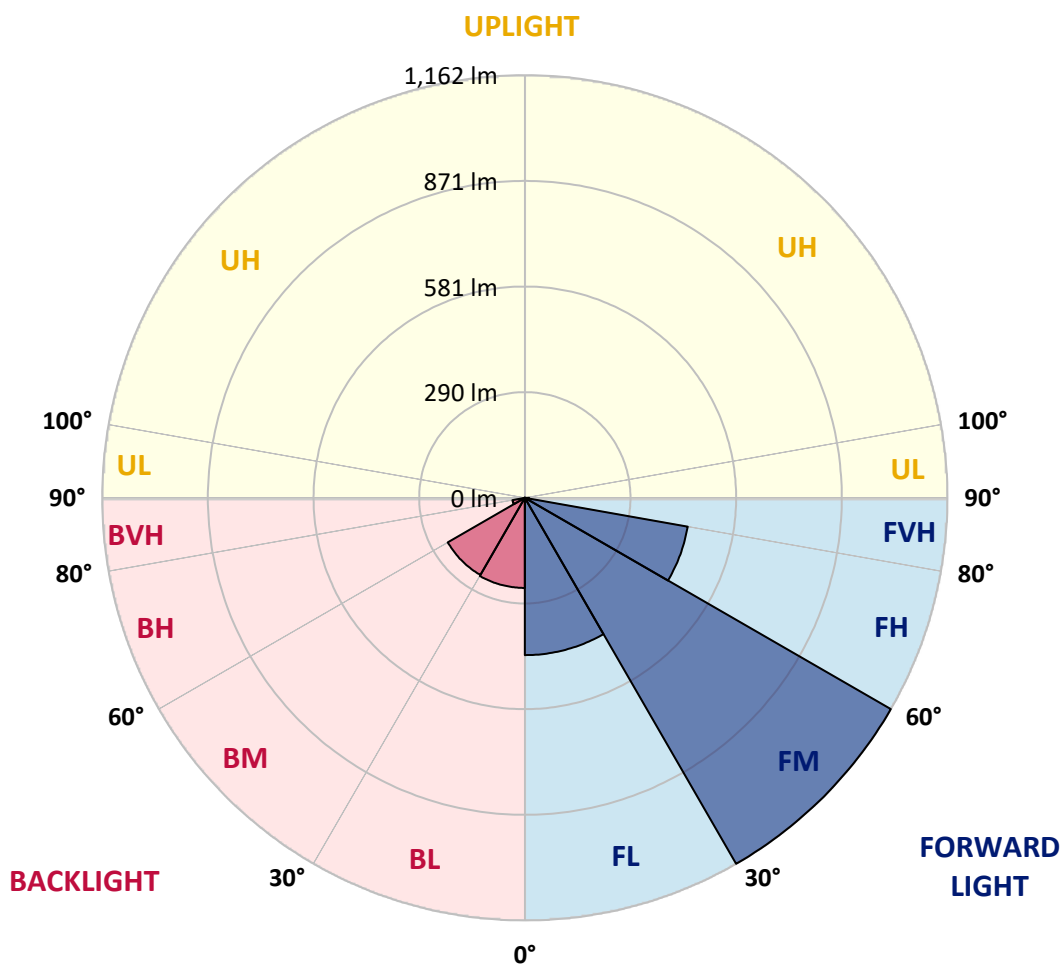


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 432.4 | 16.7 | | | |
| FM (30°-60°) | 1161.5 | 44.9 | | | |
| FH (60°-80°) | 454.7 | 17.6 | | | G0/660 |
| FVH (80°-90°) | 11.5 | 0.4 | | | G1/100 |
| BL (0°-30°) | 247.8 | 9.6 | B1/500 | | |
| BM (30°-60°) | 244.6 | 9.4 | B1/1000 | | |
| BH (60°-80°) | 34.5 | 1.3 | B0/110 | | G0/110 |
| BVH (80°-90°) | 2.0 | 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-G1
 Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 2° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 0° | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 |
| 2.5° | 879.4 | 877.1 | 878.0 | 877.1 | 871.5 | 867.8 | 865.0 | 858.0 | 850.0 | 844.0 | 843.5 |
| 5° | 927.0 | 925.6 | 926.1 | 924.2 | 914.0 | 907.0 | 898.1 | 884.1 | 870.1 | 856.6 | 848.6 |
| 7.5° | 974.7 | 973.3 | 972.8 | 967.2 | 956.9 | 944.3 | 930.3 | 909.3 | 887.4 | 866.4 | 851.0 |
| 10° | 1014.3 | 1012.9 | 1012.0 | 1005.9 | 991.5 | 975.1 | 955.5 | 928.0 | 898.1 | 868.7 | 846.3 |
| 12.5° | 1058.2 | 1057.3 | 1056.3 | 1047.9 | 1030.2 | 1009.2 | 983.5 | 949.0 | 912.1 | 874.8 | 844.0 |
| 15° | 1107.2 | 1102.6 | 1104.0 | 1094.2 | 1073.6 | 1046.5 | 1014.8 | 972.3 | 928.4 | 882.7 | 844.0 |
| 17.5° | 1150.2 | 1147.8 | 1147.4 | 1136.2 | 1111.0 | 1079.7 | 1041.4 | 992.4 | 940.1 | 886.4 | 839.3 |
| 20° | 1187.5 | 1183.8 | 1184.7 | 1171.6 | 1144.6 | 1108.2 | 1064.7 | 1007.8 | 947.6 | 884.6 | 829.0 |
| 22.5° | 1220.2 | 1216.5 | 1217.4 | 1203.9 | 1174.0 | 1134.8 | 1085.3 | 1021.8 | 953.2 | 881.3 | 817.8 |
| 25° | 1251.5 | 1247.3 | 1248.2 | 1234.2 | 1204.3 | 1162.8 | 1108.6 | 1037.7 | 959.3 | 878.5 | 807.1 |
| 27.5° | 1279.5 | 1276.2 | 1276.7 | 1263.1 | 1232.8 | 1187.0 | 1129.2 | 1053.1 | 964.9 | 874.3 | 794.9 |
| 30° | 1299.5 | 1295.8 | 1297.2 | 1283.7 | 1252.9 | 1205.7 | 1145.0 | 1062.9 | 966.7 | 866.8 | 779.1 |
| 32.5° | 1312.1 | 1308.4 | 1308.4 | 1296.7 | 1265.9 | 1219.7 | 1156.7 | 1069.4 | 965.8 | 857.0 | 760.9 |
| 35° | 1321.5 | 1317.8 | 1318.7 | 1307.5 | 1277.1 | 1230.9 | 1166.0 | 1074.1 | 963.9 | 847.2 | 743.1 |
| 37.5° | 1325.2 | 1321.5 | 1321.0 | 1311.7 | 1282.3 | 1236.5 | 1170.2 | 1075.0 | 959.7 | 836.0 | 723.5 |
| 40° | 1323.4 | 1318.7 | 1318.7 | 1309.8 | 1281.3 | 1237.0 | 1169.3 | 1072.2 | 953.2 | 823.0 | 701.6 |
| 42.5° | 1311.2 | 1307.5 | 1307.9 | 1301.9 | 1274.3 | 1230.5 | 1163.2 | 1065.2 | 943.4 | 807.1 | 678.7 |
| 45° | 1287.9 | 1284.6 | 1284.6 | 1282.3 | 1258.0 | 1216.0 | 1150.6 | 1050.3 | 927.0 | 786.5 | 650.7 |
| 47.5° | 1254.3 | 1251.5 | 1251.5 | 1251.9 | 1231.4 | 1196.4 | 1132.0 | 1029.7 | 907.0 | 762.7 | 619.4 |
| 50° | 1207.1 | 1203.9 | 1204.8 | 1208.1 | 1193.1 | 1167.4 | 1105.4 | 1003.6 | 881.3 | 731.9 | 583.5 |
| 52.5° | 1147.4 | 1145.0 | 1146.4 | 1153.9 | 1144.1 | 1125.4 | 1068.5 | 970.5 | 847.2 | 695.1 | 545.2 |
| 55° | 1083.4 | 1080.6 | 1082.0 | 1090.9 | 1088.1 | 1070.8 | 1020.9 | 930.8 | 804.3 | 654.0 | 502.7 |
| 57.5° | 1009.2 | 1006.9 | 1005.9 | 1017.1 | 1020.9 | 1004.1 | 963.9 | 880.8 | 755.7 | 607.8 | 453.3 |
| 60° | 921.0 | 918.2 | 917.2 | 931.2 | 945.3 | 936.8 | 900.9 | 823.0 | 700.2 | 554.5 | 402.4 |
| 62.5° | 815.0 | 812.2 | 818.3 | 831.8 | 855.6 | 862.2 | 824.8 | 753.4 | 637.2 | 496.7 | 349.6 |
| 65° | 703.0 | 700.7 | 704.4 | 717.0 | 745.5 | 771.6 | 739.4 | 669.8 | 568.6 | 433.2 | 294.1 |
| 67.5° | 669.4 | 667.0 | 664.7 | 655.8 | 638.1 | 658.6 | 649.3 | 588.2 | 490.6 | 371.6 | 242.3 |
| 70° | 561.1 | 557.8 | 568.1 | 590.0 | 619.9 | 560.6 | 543.8 | 500.9 | 412.6 | 302.0 | 193.3 |
| 72.5° | 389.3 | 387.9 | 389.3 | 400.0 | 429.4 | 516.7 | 443.9 | 406.6 | 330.0 | 238.1 | 144.7 |
| 75° | 276.3 | 272.1 | 283.8 | 317.4 | 339.4 | 322.6 | 372.5 | 308.1 | 250.2 | 175.5 | 102.7 |
| 77.5° | 159.2 | 158.2 | 160.6 | 159.2 | 159.6 | 216.1 | 222.2 | 250.7 | 169.4 | 119.5 | 68.2 |
| 80° | 58.8 | 57.4 | 62.5 | 71.9 | 84.5 | 103.6 | 99.9 | 129.8 | 109.7 | 71.0 | 39.2 |
| 82.5° | 16.3 | 15.9 | 16.8 | 18.2 | 21.0 | 27.5 | 38.3 | 48.1 | 46.7 | 33.6 | 18.2 |
| 85° | 7.0 | 7.0 | 7.5 | 7.5 | 8.4 | 9.8 | 10.7 | 14.0 | 13.5 | 10.3 | 7.0 |
| 87.5° | 1.4 | 1.9 | 1.9 | 1.9 | 1.9 | 2.3 | 2.3 | 3.3 | 3.3 | 2.8 | 2.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P1449758
 CATALOG NUMBER: AXCS2A-C

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 | 837.4 |
| 2.5° | 840.7 | 834.2 | 820.6 | 814.1 | 808.0 | 804.7 | 798.7 | 795.4 | 791.2 | 790.7 | 792.6 |
| 5° | 842.1 | 832.8 | 811.3 | 798.2 | 786.5 | 776.7 | 767.4 | 760.4 | 754.3 | 752.5 | 755.3 |
| 7.5° | 840.2 | 826.2 | 798.7 | 778.6 | 761.3 | 745.9 | 731.5 | 722.1 | 712.8 | 710.0 | 712.8 |
| 10° | 832.3 | 814.1 | 780.0 | 753.9 | 730.5 | 710.9 | 691.8 | 679.2 | 668.0 | 664.2 | 666.6 |
| 12.5° | 825.3 | 805.2 | 764.1 | 731.9 | 703.0 | 677.8 | 655.4 | 641.4 | 626.9 | 621.3 | 624.1 |
| 15° | 821.6 | 796.3 | 749.2 | 710.5 | 675.4 | 645.1 | 619.0 | 601.7 | 584.9 | 578.8 | 580.2 |
| 17.5° | 812.2 | 784.7 | 729.6 | 684.3 | 643.7 | 609.2 | 578.8 | 558.3 | 538.7 | 531.2 | 532.6 |
| 20° | 798.2 | 766.9 | 705.8 | 655.4 | 608.7 | 569.5 | 535.4 | 511.6 | 489.7 | 480.8 | 482.2 |
| 22.5° | 783.3 | 747.8 | 681.0 | 624.6 | 573.2 | 528.9 | 490.6 | 464.5 | 440.2 | 430.4 | 431.8 |
| 25° | 768.8 | 729.6 | 656.8 | 594.2 | 538.2 | 490.1 | 446.7 | 418.2 | 392.6 | 382.3 | 383.2 |
| 27.5° | 752.9 | 710.9 | 631.6 | 563.4 | 501.8 | 448.6 | 402.4 | 371.1 | 344.0 | 334.7 | 332.8 |
| 30° | 734.7 | 689.0 | 603.6 | 529.8 | 463.1 | 405.6 | 356.2 | 322.6 | 294.5 | 281.9 | 281.9 |
| 32.5° | 713.3 | 665.2 | 573.7 | 495.3 | 423.4 | 362.7 | 309.9 | 274.9 | 246.5 | 237.6 | 232.5 |
| 35° | 691.8 | 640.0 | 543.8 | 460.7 | 384.2 | 319.8 | 264.7 | 228.3 | 199.3 | 190.0 | 184.8 |
| 37.5° | 670.3 | 613.8 | 513.9 | 422.9 | 344.0 | 275.9 | 220.3 | 183.4 | 154.0 | 144.2 | 139.1 |
| 40° | 645.6 | 585.8 | 481.7 | 385.1 | 302.9 | 233.4 | 177.4 | 140.0 | 111.1 | 100.4 | 95.7 |
| 42.5° | 619.0 | 556.9 | 447.2 | 346.8 | 261.9 | 191.9 | 136.3 | 99.4 | 73.3 | 65.4 | 61.6 |
| 45° | 588.6 | 524.7 | 410.8 | 308.1 | 221.3 | 151.7 | 97.1 | 65.8 | 49.0 | 45.3 | 43.9 |
| 47.5° | 555.0 | 489.7 | 373.0 | 268.9 | 182.0 | 114.4 | 65.8 | 45.3 | 38.7 | 36.9 | 36.9 |
| 50° | 515.8 | 449.1 | 332.8 | 228.3 | 146.1 | 79.4 | 43.9 | 36.4 | 32.7 | 31.3 | 31.3 |
| 52.5° | 474.3 | 407.5 | 291.7 | 189.1 | 109.7 | 51.8 | 35.5 | 30.8 | 28.0 | 27.1 | 27.1 |
| 55° | 430.8 | 365.0 | 250.7 | 152.2 | 77.0 | 37.3 | 29.9 | 26.6 | 24.7 | 24.3 | 24.3 |
| 57.5° | 383.7 | 322.1 | 210.5 | 119.0 | 49.9 | 30.8 | 25.7 | 23.3 | 21.9 | 21.5 | 21.5 |
| 60° | 335.2 | 276.3 | 171.8 | 86.4 | 35.0 | 26.1 | 22.4 | 21.0 | 19.6 | 19.6 | 19.6 |
| 62.5° | 286.1 | 232.0 | 134.4 | 58.3 | 28.0 | 22.4 | 20.1 | 18.7 | 17.7 | 17.3 | 17.3 |
| 65° | 237.1 | 189.1 | 99.4 | 36.9 | 23.3 | 19.1 | 17.7 | 16.8 | 15.9 | 15.4 | 15.4 |
| 67.5° | 190.5 | 148.0 | 70.5 | 26.1 | 19.1 | 16.8 | 15.4 | 14.9 | 14.0 | 13.5 | 13.5 |
| 70° | 148.9 | 111.1 | 47.1 | 20.5 | 16.3 | 14.5 | 14.0 | 13.1 | 12.6 | 12.1 | 12.1 |
| 72.5° | 109.2 | 79.4 | 28.9 | 16.3 | 13.5 | 12.6 | 12.1 | 11.2 | 10.7 | 10.7 | 10.7 |
| 75° | 75.2 | 52.3 | 17.7 | 12.6 | 11.2 | 10.7 | 10.3 | 9.8 | 9.3 | 9.3 | 9.3 |
| 77.5° | 48.5 | 32.2 | 12.6 | 9.8 | 8.9 | 8.9 | 8.4 | 7.9 | 7.9 | 7.9 | 7.9 |
| 80° | 27.5 | 17.7 | 8.9 | 7.5 | 7.0 | 7.0 | 6.5 | 6.5 | 6.5 | 6.1 | 6.5 |
| 82.5° | 13.5 | 8.9 | 6.1 | 5.1 | 5.1 | 5.1 | 5.1 | 4.7 | 4.7 | 4.7 | 4.7 |
| 85° | 5.6 | 4.7 | 3.7 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 2.8 | 2.8 | 2.8 |
| 87.5° | 1.9 | 1.9 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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



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

Report Prepared for

Cooper Lighting Solutions

LUMARK

Report Number: SP1-2310-196-1

Test Date: 11/15/2023

Luminaire Tested: AXCS5A-C

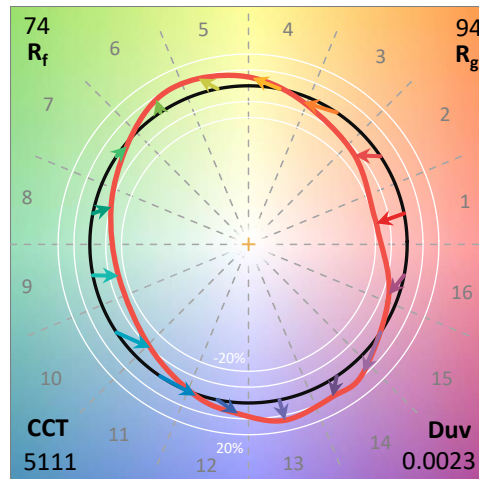
Data in this report applies to families of products including AXCS5A-C.

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2310-196-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/17/2023
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: LUMARK
 Catalog Number: **AXCS5A-C**
 Description: 5A AXCENT SMALL WALLPACK, FULL CUTOFF HOUSING

Spectral Parameters

| | | | | | |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K): | 5111 | CRI (Ra): | 72.2 | R9: | -34.9 |
| CIE u': | 0.2086 | R1: | 69.2 | R10: | 46.6 |
| CIE v': | 0.4854 | R2: | 77.6 | R11: | 69.3 |
| Duv: | 0.0023 | R3: | 83.5 | R12: | 43.0 |
| CIE x: | 0.3423 | R4: | 72.4 | R13: | 70.5 |
| CIE y: | 0.3540 | R5: | 70.3 | R14: | 90.7 |
| CIE z: | 0.3037 | R6: | 68.9 | | |
| Peak Wavelength (nm): | 450 | R7: | 80.7 | | |
| Dominant Wavelength (nm): | 568 | R8: | 54.9 | | |
| Purity: | 9 | | | | |
| Rf: | 73.5 | | | | |
| Rg: | 93.9 | | | | |



Test Conditions

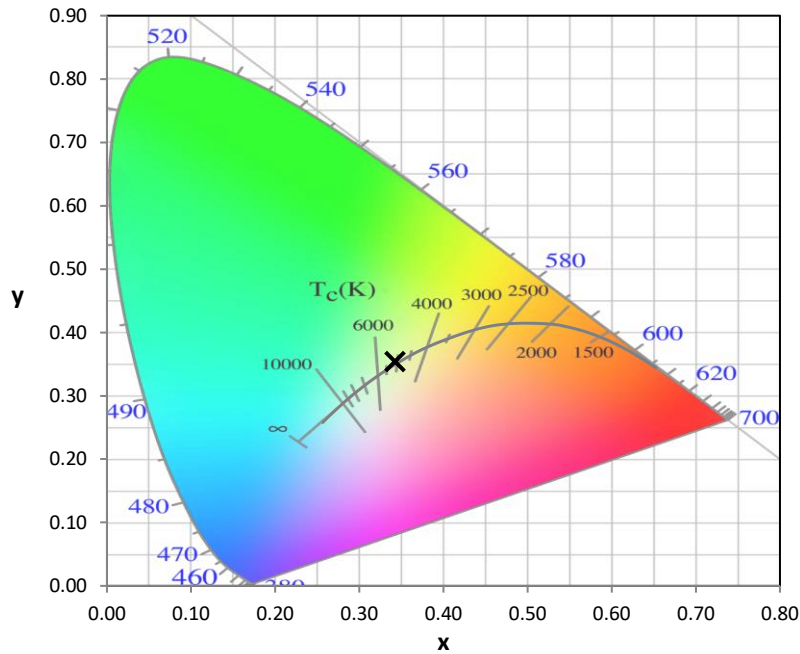
Stabilization Time: 24M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.4/32%
 Sphere Temperature (°C): 24.8

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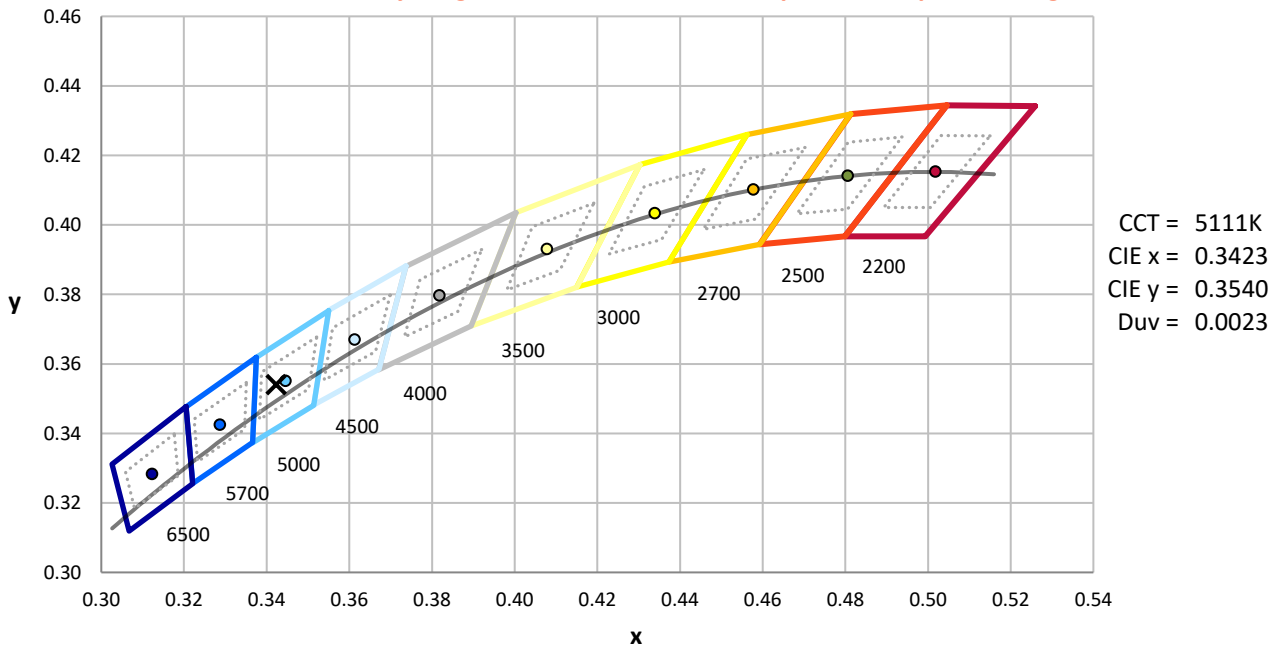
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 8/9/2023 | 2/9/2024 |
| Power Meter | XITRON 2801 IN0071 | 10/23/2023 | 10/23/2024 |
| AC Power Source | CHROMA 61603 IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | AGILENT E3634A IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | ONSET IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | ONSET IN0046 | 10/24/2023 | 10/24/2024 |

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CIE 1931 Chromaticity Diagram



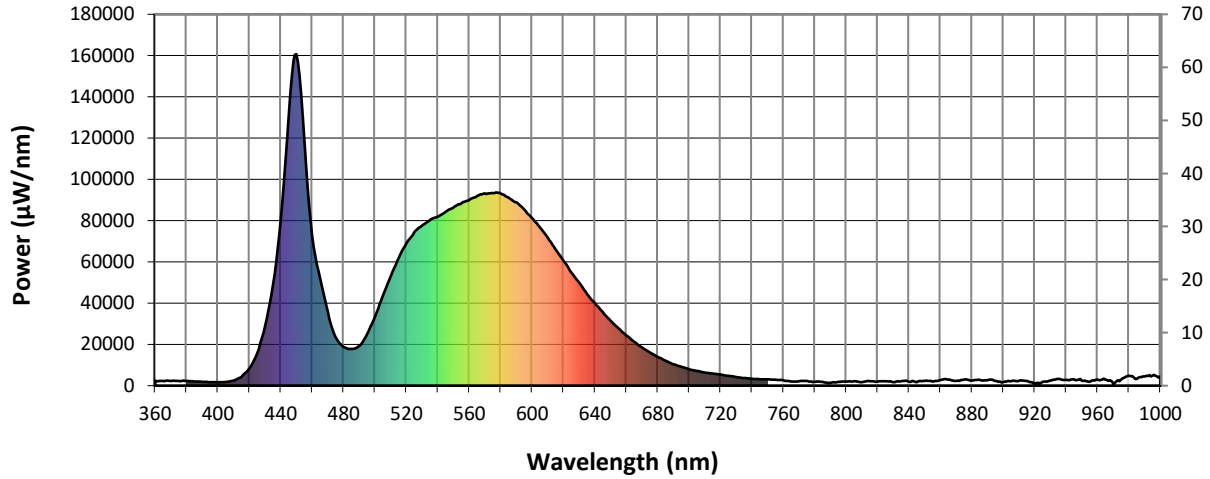
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

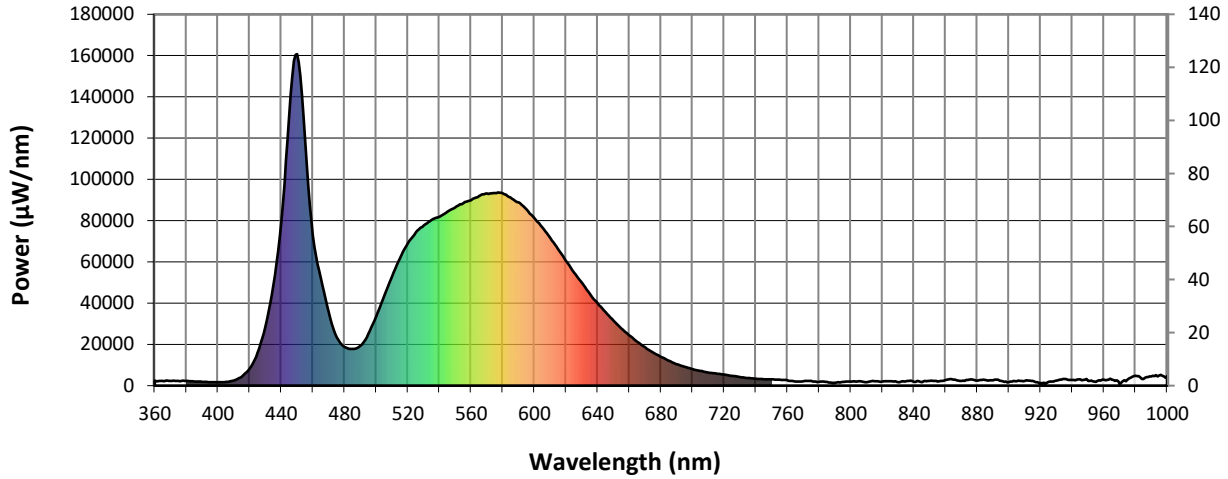


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| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2414 | NR | 490 | 19294 | NR | 620 | 60531 | NR | 750 | 3084 | NR | 880 | 2517 | NR |
| 365 | 2289 | NR | 495 | 24992 | NR | 625 | 54886 | NR | 755 | 2938 | NR | 885 | 2787 | NR |
| 370 | 2262 | NR | 500 | 33456 | NR | 630 | 49854 | NR | 760 | 2534 | NR | 890 | 2555 | NR |
| 375 | 2243 | NR | 505 | 43409 | NR | 635 | 44543 | NR | 765 | 2057 | NR | 895 | 2260 | NR |
| 380 | 2313 | NR | 510 | 52998 | NR | 640 | 39946 | NR | 770 | 2175 | NR | 900 | 1614 | NR |
| 385 | 1989 | NR | 515 | 61608 | NR | 645 | 35595 | NR | 775 | 2222 | NR | 905 | 2161 | NR |
| 390 | 1904 | NR | 520 | 68994 | NR | 650 | 31502 | NR | 780 | 1812 | NR | 910 | 2306 | NR |
| 395 | 1695 | NR | 525 | 74313 | NR | 655 | 27782 | NR | 785 | 1772 | NR | 915 | 2250 | NR |
| 400 | 1611 | NR | 530 | 77617 | NR | 660 | 24390 | NR | 790 | 1378 | NR | 920 | 1194 | NR |
| 405 | 1798 | NR | 535 | 80376 | NR | 665 | 21255 | NR | 795 | 1825 | NR | 925 | 1797 | NR |
| 410 | 2510 | NR | 540 | 81936 | NR | 670 | 18523 | NR | 800 | 2037 | NR | 930 | 2525 | NR |
| 415 | 4375 | NR | 545 | 84366 | NR | 675 | 16040 | NR | 805 | 2110 | NR | 935 | 3196 | NR |
| 420 | 8324 | NR | 550 | 86342 | NR | 680 | 13989 | NR | 810 | 1728 | NR | 940 | 2817 | NR |
| 425 | 15831 | NR | 555 | 88345 | NR | 685 | 12028 | NR | 815 | 2205 | NR | 945 | 3027 | NR |
| 430 | 28665 | NR | 560 | 89997 | NR | 690 | 10355 | NR | 820 | 1948 | NR | 950 | 2285 | NR |
| 435 | 48834 | NR | 565 | 91969 | NR | 695 | 9136 | NR | 825 | 2190 | NR | 955 | 1782 | NR |
| 440 | 80008 | NR | 570 | 93246 | NR | 700 | 8000 | NR | 830 | 1681 | NR | 960 | 2873 | NR |
| 445 | 130352 | NR | 575 | 93397 | NR | 705 | 7163 | NR | 835 | 2187 | NR | 965 | 2892 | NR |
| 450 | 160715 | NR | 580 | 93121 | NR | 710 | 6342 | NR | 840 | 1887 | NR | 970 | 1038 | NR |
| 455 | 119094 | NR | 585 | 91237 | NR | 715 | 5873 | NR | 845 | 1667 | NR | 975 | 2846 | NR |
| 460 | 72943 | NR | 590 | 88872 | NR | 720 | 5332 | NR | 850 | 2302 | NR | 980 | 4828 | NR |
| 465 | 52254 | NR | 595 | 85423 | NR | 725 | 4700 | NR | 855 | 1952 | NR | 985 | 3226 | NR |
| 470 | 35481 | NR | 600 | 81119 | NR | 730 | 4214 | NR | 860 | 2729 | NR | 990 | 4437 | NR |
| 475 | 23416 | NR | 605 | 76778 | NR | 735 | 3708 | NR | 865 | 2986 | NR | 995 | 4972 | NR |
| 480 | 18815 | NR | 610 | 71628 | NR | 740 | 3347 | NR | 870 | 2373 | NR | 1000 | 4552 | NR |
| 485 | 17743 | NR | 615 | 66040 | NR | 745 | 3107 | NR | 875 | 2919 | NR | | | |

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Scotopic Flux vs. Wavelength



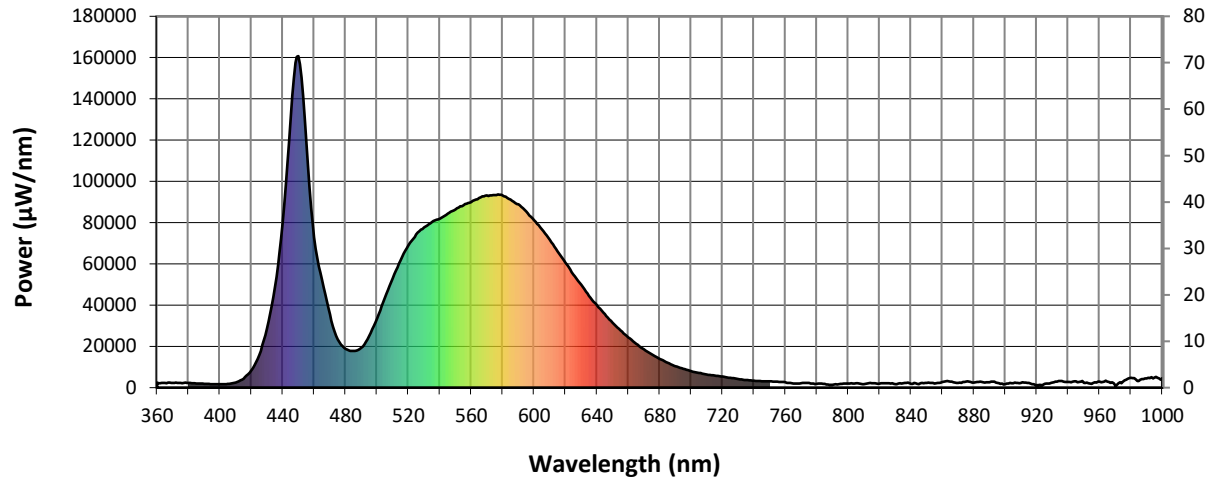
Scotopic Lumens: 9896.6

S/P: 1.81

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2414 | NR | 490 | 19294 | NR | 620 | 60531 | NR | 750 | 3084 | NR | 880 | 2517 | NR |
| 365 | 2289 | NR | 495 | 24992 | NR | 625 | 54886 | NR | 755 | 2938 | NR | 885 | 2787 | NR |
| 370 | 2262 | NR | 500 | 33456 | NR | 630 | 49854 | NR | 760 | 2534 | NR | 890 | 2555 | NR |
| 375 | 2243 | NR | 505 | 43409 | NR | 635 | 44543 | NR | 765 | 2057 | NR | 895 | 2260 | NR |
| 380 | 2313 | NR | 510 | 52998 | NR | 640 | 39946 | NR | 770 | 2175 | NR | 900 | 1614 | NR |
| 385 | 1989 | NR | 515 | 61608 | NR | 645 | 35595 | NR | 775 | 2222 | NR | 905 | 2161 | NR |
| 390 | 1904 | NR | 520 | 68994 | NR | 650 | 31502 | NR | 780 | 1812 | NR | 910 | 2306 | NR |
| 395 | 1695 | NR | 525 | 74313 | NR | 655 | 27782 | NR | 785 | 1772 | NR | 915 | 2250 | NR |
| 400 | 1611 | NR | 530 | 77617 | NR | 660 | 24390 | NR | 790 | 1378 | NR | 920 | 1194 | NR |
| 405 | 1798 | NR | 535 | 80376 | NR | 665 | 21255 | NR | 795 | 1825 | NR | 925 | 1797 | NR |
| 410 | 2510 | NR | 540 | 81936 | NR | 670 | 18523 | NR | 800 | 2037 | NR | 930 | 2525 | NR |
| 415 | 4375 | NR | 545 | 84366 | NR | 675 | 16040 | NR | 805 | 2110 | NR | 935 | 3196 | NR |
| 420 | 8324 | NR | 550 | 86342 | NR | 680 | 13989 | NR | 810 | 1728 | NR | 940 | 2817 | NR |
| 425 | 15831 | NR | 555 | 88345 | NR | 685 | 12028 | NR | 815 | 2205 | NR | 945 | 3027 | NR |
| 430 | 28665 | NR | 560 | 89997 | NR | 690 | 10355 | NR | 820 | 1948 | NR | 950 | 2285 | NR |
| 435 | 48834 | NR | 565 | 91969 | NR | 695 | 9136 | NR | 825 | 2190 | NR | 955 | 1782 | NR |
| 440 | 80008 | NR | 570 | 93246 | NR | 700 | 8000 | NR | 830 | 1681 | NR | 960 | 2873 | NR |
| 445 | 130352 | NR | 575 | 93397 | NR | 705 | 7163 | NR | 835 | 2187 | NR | 965 | 2892 | NR |
| 450 | 160715 | NR | 580 | 93121 | NR | 710 | 6342 | NR | 840 | 1887 | NR | 970 | 1038 | NR |
| 455 | 119094 | NR | 585 | 91237 | NR | 715 | 5873 | NR | 845 | 1667 | NR | 975 | 2846 | NR |
| 460 | 72943 | NR | 590 | 88872 | NR | 720 | 5332 | NR | 850 | 2302 | NR | 980 | 4828 | NR |
| 465 | 52254 | NR | 595 | 85423 | NR | 725 | 4700 | NR | 855 | 1952 | NR | 985 | 3226 | NR |
| 470 | 35481 | NR | 600 | 81119 | NR | 730 | 4214 | NR | 860 | 2729 | NR | 990 | 4437 | NR |
| 475 | 23416 | NR | 605 | 76778 | NR | 735 | 3708 | NR | 865 | 2986 | NR | 995 | 4972 | NR |
| 480 | 18815 | NR | 610 | 71628 | NR | 740 | 3347 | NR | 870 | 2373 | NR | 1000 | 4552 | NR |
| 485 | 17743 | NR | 615 | 66040 | NR | 745 | 3107 | NR | 875 | 2919 | NR | | | |

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 4013.6 M/P: 0.73

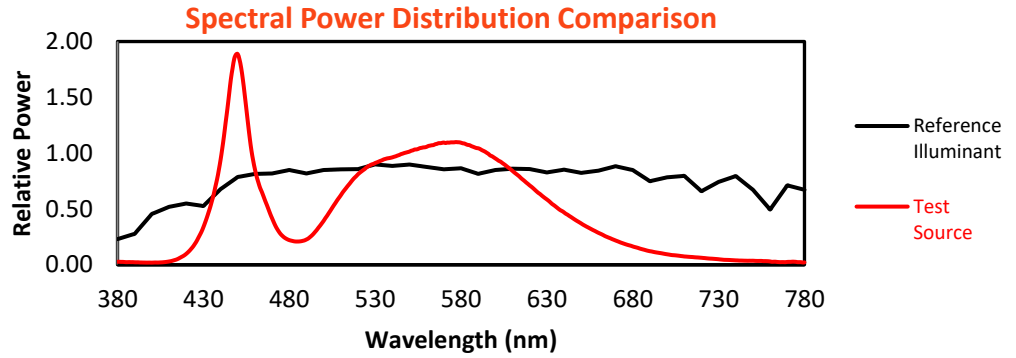
| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2414 | NR | 490 | 19294 | NR | 620 | 60531 | NR | 750 | 3084 | NR | 880 | 2517 | NR |
| 365 | 2289 | NR | 495 | 24992 | NR | 625 | 54886 | NR | 755 | 2938 | NR | 885 | 2787 | NR |
| 370 | 2262 | NR | 500 | 33456 | NR | 630 | 49854 | NR | 760 | 2534 | NR | 890 | 2555 | NR |
| 375 | 2243 | NR | 505 | 43409 | NR | 635 | 44543 | NR | 765 | 2057 | NR | 895 | 2260 | NR |
| 380 | 2313 | NR | 510 | 52998 | NR | 640 | 39946 | NR | 770 | 2175 | NR | 900 | 1614 | NR |
| 385 | 1989 | NR | 515 | 61608 | NR | 645 | 35595 | NR | 775 | 2222 | NR | 905 | 2161 | NR |
| 390 | 1904 | NR | 520 | 68994 | NR | 650 | 31502 | NR | 780 | 1812 | NR | 910 | 2306 | NR |
| 395 | 1695 | NR | 525 | 74313 | NR | 655 | 27782 | NR | 785 | 1772 | NR | 915 | 2250 | NR |
| 400 | 1611 | NR | 530 | 77617 | NR | 660 | 24390 | NR | 790 | 1378 | NR | 920 | 1194 | NR |
| 405 | 1798 | NR | 535 | 80376 | NR | 665 | 21255 | NR | 795 | 1825 | NR | 925 | 1797 | NR |
| 410 | 2510 | NR | 540 | 81936 | NR | 670 | 18523 | NR | 800 | 2037 | NR | 930 | 2525 | NR |
| 415 | 4375 | NR | 545 | 84366 | NR | 675 | 16040 | NR | 805 | 2110 | NR | 935 | 3196 | NR |
| 420 | 8324 | NR | 550 | 86342 | NR | 680 | 13989 | NR | 810 | 1728 | NR | 940 | 2817 | NR |
| 425 | 15831 | NR | 555 | 88345 | NR | 685 | 12028 | NR | 815 | 2205 | NR | 945 | 3027 | NR |
| 430 | 28665 | NR | 560 | 89997 | NR | 690 | 10355 | NR | 820 | 1948 | NR | 950 | 2285 | NR |
| 435 | 48834 | NR | 565 | 91969 | NR | 695 | 9136 | NR | 825 | 2190 | NR | 955 | 1782 | NR |
| 440 | 80008 | NR | 570 | 93246 | NR | 700 | 8000 | NR | 830 | 1681 | NR | 960 | 2873 | NR |
| 445 | 130352 | NR | 575 | 93397 | NR | 705 | 7163 | NR | 835 | 2187 | NR | 965 | 2892 | NR |
| 450 | 160715 | NR | 580 | 93121 | NR | 710 | 6342 | NR | 840 | 1887 | NR | 970 | 1038 | NR |
| 455 | 119094 | NR | 585 | 91237 | NR | 715 | 5873 | NR | 845 | 1667 | NR | 975 | 2846 | NR |
| 460 | 72943 | NR | 590 | 88872 | NR | 720 | 5332 | NR | 850 | 2302 | NR | 980 | 4828 | NR |
| 465 | 52254 | NR | 595 | 85423 | NR | 725 | 4700 | NR | 855 | 1952 | NR | 985 | 3226 | NR |
| 470 | 35481 | NR | 600 | 81119 | NR | 730 | 4214 | NR | 860 | 2729 | NR | 990 | 4437 | NR |
| 475 | 23416 | NR | 605 | 76778 | NR | 735 | 3708 | NR | 865 | 2986 | NR | 995 | 4972 | NR |
| 480 | 18815 | NR | 610 | 71628 | NR | 740 | 3347 | NR | 870 | 2373 | NR | 1000 | 4552 | NR |
| 485 | 17743 | NR | 615 | 66040 | NR | 745 | 3107 | NR | 875 | 2919 | NR | | | |

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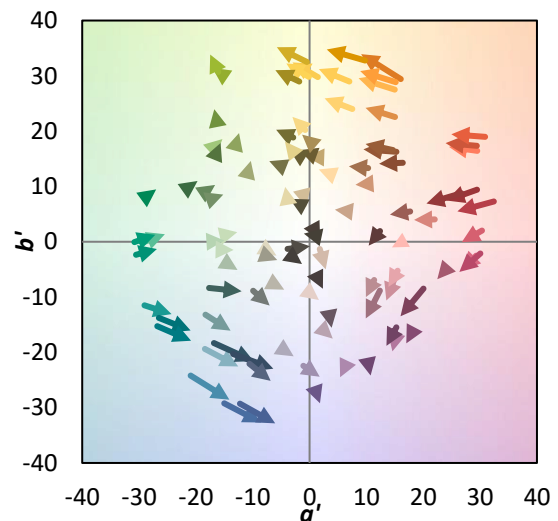
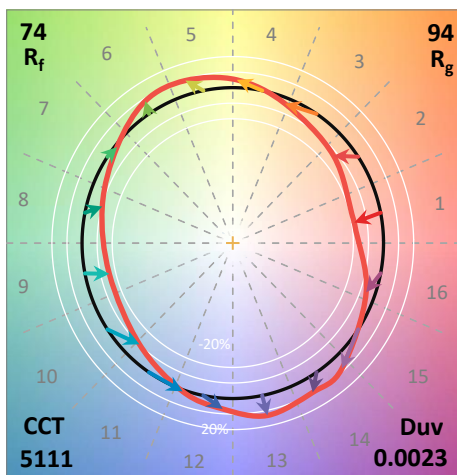
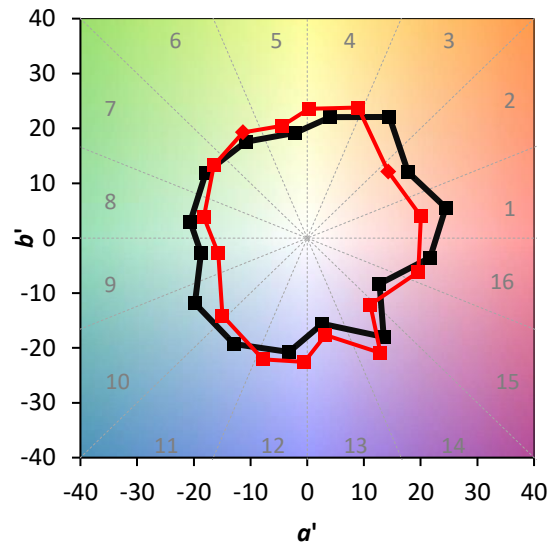
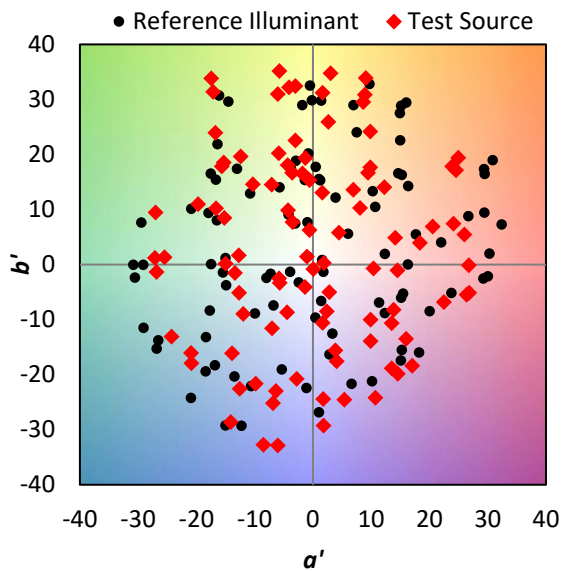
TM-30-18

Summary

$R_f = 73.5$
 $R_g = 93.9$
 CIE $R_a = 72.2$
 $R_g = -34.9$



Color Vector Graphics

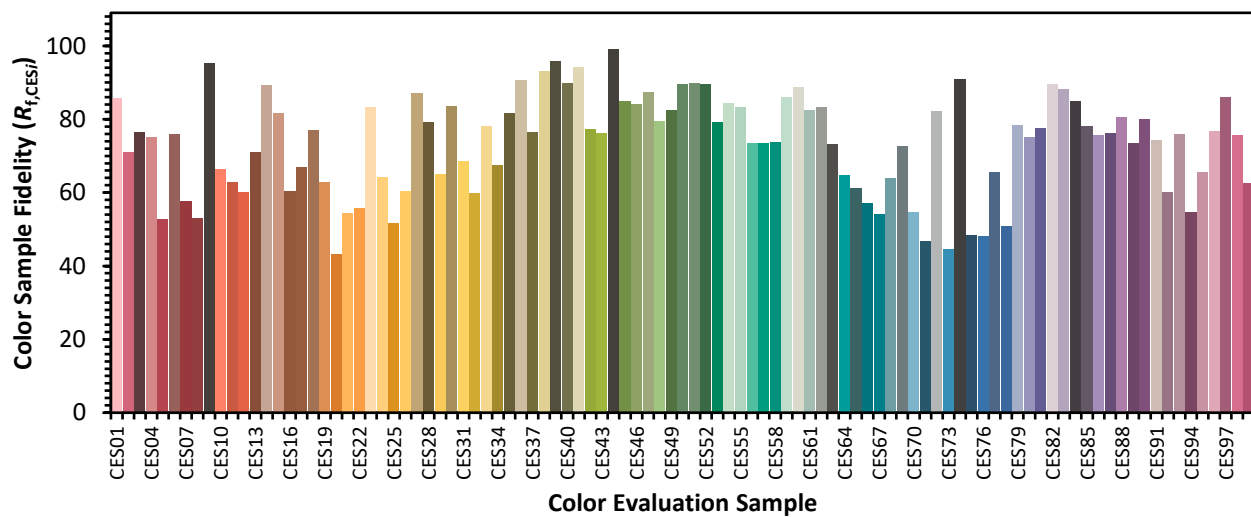


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Individual Sample Fidelity Index ($R_{f,i}$)

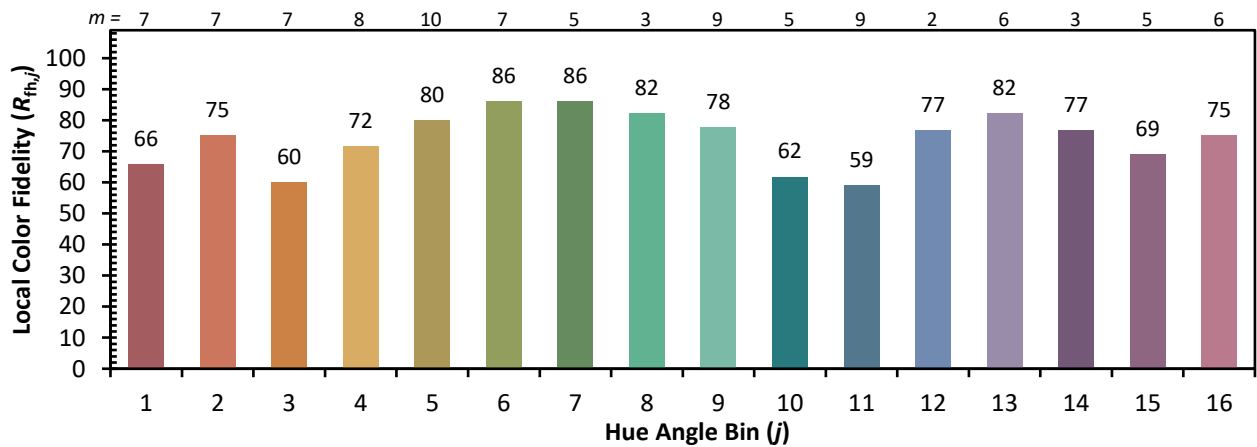
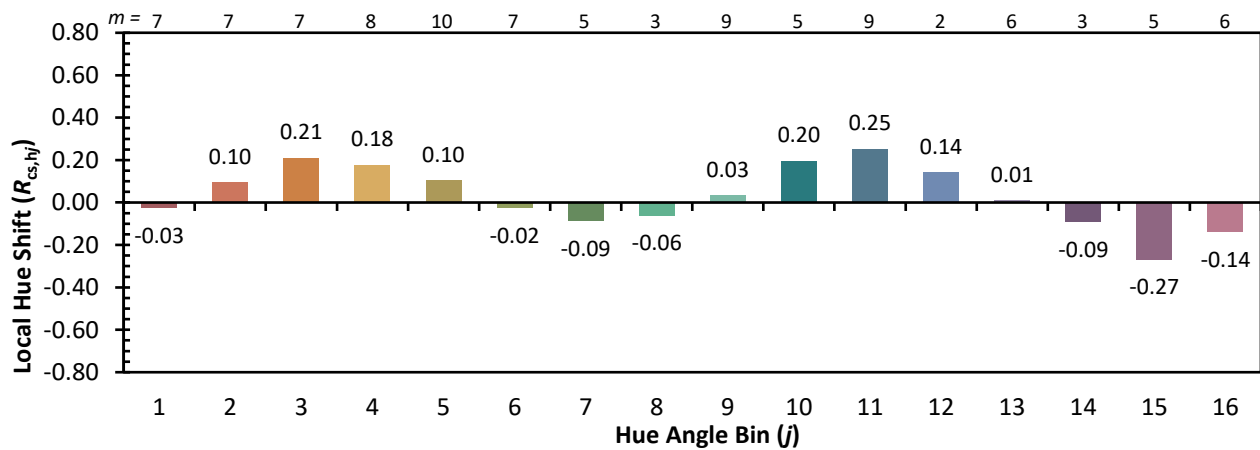
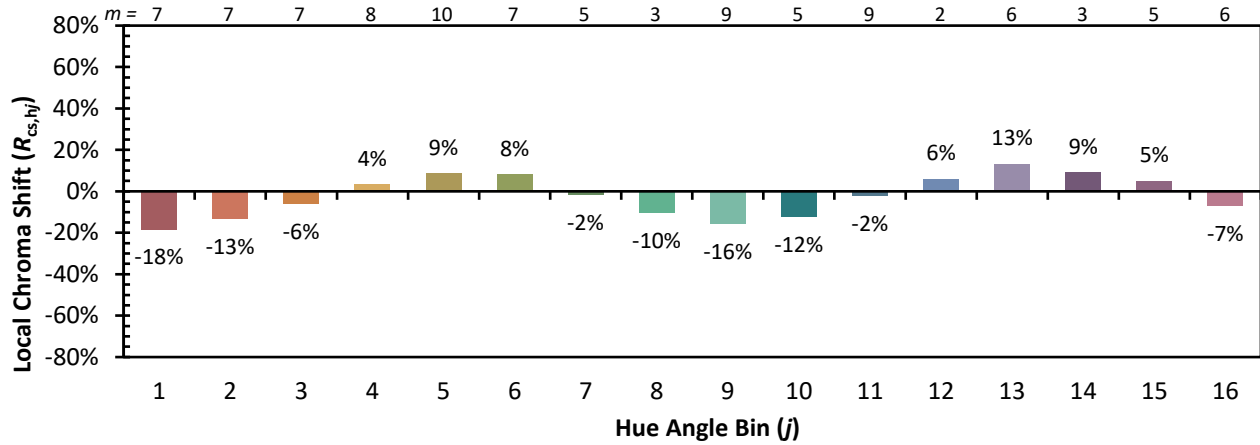
| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 60 | CES51 = 90 | CES76 = 48 |
| CES02 = 59 | CES27 = 87 | CES52 = 90 | CES77 = 65 |
| CES03 = 30 | CES28 = 79 | CES53 = 79 | CES78 = 51 |
| CES04 = 69 | CES29 = 65 | CES54 = 84 | CES79 = 78 |
| CES05 = 46 | CES30 = 83 | CES55 = 83 | CES80 = 75 |
| CES06 = 50 | CES31 = 69 | CES56 = 74 | CES81 = 77 |
| CES07 = 38 | CES32 = 60 | CES57 = 73 | CES82 = 90 |
| CES08 = 38 | CES33 = 78 | CES58 = 74 | CES83 = 88 |
| CES09 = 29 | CES34 = 67 | CES59 = 86 | CES84 = 85 |
| CES10 = 72 | CES35 = 82 | CES60 = 89 | CES85 = 78 |
| CES11 = 56 | CES36 = 91 | CES61 = 82 | CES86 = 76 |
| CES12 = 61 | CES37 = 76 | CES62 = 83 | CES87 = 76 |
| CES13 = 41 | CES38 = 93 | CES63 = 73 | CES88 = 81 |
| CES14 = 74 | CES39 = 96 | CES64 = 65 | CES89 = 74 |
| CES15 = 70 | CES40 = 90 | CES65 = 61 | CES90 = 80 |
| CES16 = 46 | CES41 = 94 | CES66 = 57 | CES91 = 74 |
| CES17 = 49 | CES42 = 77 | CES67 = 54 | CES92 = 60 |
| CES18 = 55 | CES43 = 76 | CES68 = 64 | CES93 = 76 |
| CES19 = 71 | CES44 = 99 | CES69 = 73 | CES94 = 55 |
| CES20 = 64 | CES45 = 85 | CES70 = 55 | CES95 = 65 |
| CES21 = 85 | CES46 = 84 | CES71 = 47 | CES96 = 77 |
| CES22 = 77 | CES47 = 87 | CES72 = 82 | CES97 = 86 |
| CES23 = 91 | CES48 = 80 | CES73 = 45 | CES98 = 76 |
| CES24 = 90 | CES49 = 82 | CES74 = 91 | CES99 = 62 |
| CES25 = 71 | CES50 = 89 | CES75 = 48 | |



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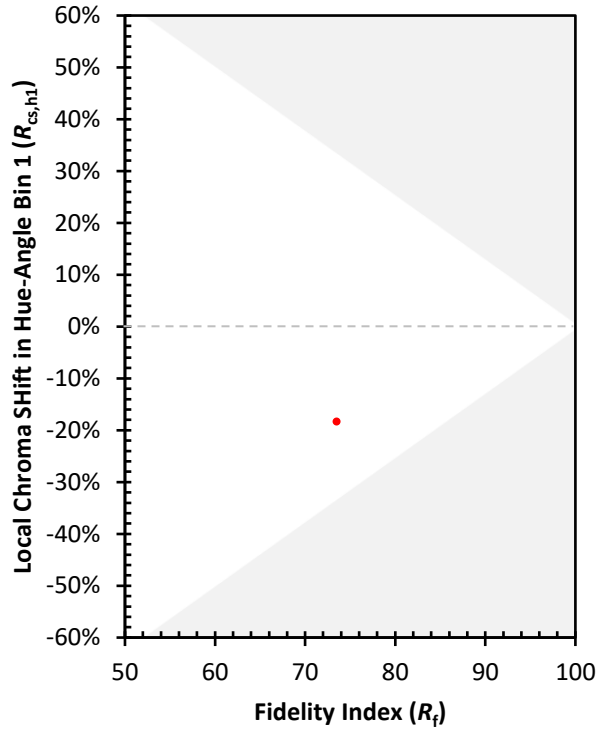
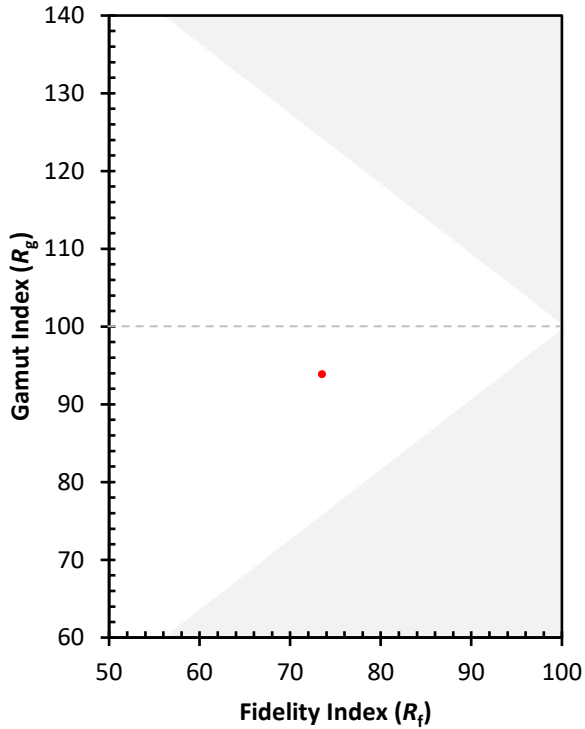
Color Rendition by Hue-Angle Bin



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TM-30-18

Measure Comparisons



(END OF REPORT)