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

Scaled data based on original data using

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

Test Report Prepared for

Cooper Lighting Solutions

Brand: METALUX

Report Number: P1590717

Luminaire Tested: 14CGTX-42-L92765-W2A-5000K

Issue Date: 9/7/2026

Report Generated By 670265710 / DESKTOP-98SHLC4

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | P1590717 |
| | TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2510-586-3) |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Issue Date: | 9/7/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | METALUX |
| Catalog Number: | 14CGTX-42-L92765-W2A-5000K |
| Description: | 1X4 4200 LUMEN CGTX TROFFER WITH VividTune LEDS AT 5000K CCT WITH FROSTED SMOOTH LENS |
| Light Source: | 5000K CCT, 90 CRI LEDS |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 4012.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 101.1 lumens/watt |
| Spacing Criteria (0/90/45): | 1.26 / 1.26 / 1.38 |
| Luminous Opening: | Rectangular (W 1' x L: 4' x H: 0') |
| CIE Type: | Direct |
| Input Watts (W): | 39.7 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | NR |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 24 FT |

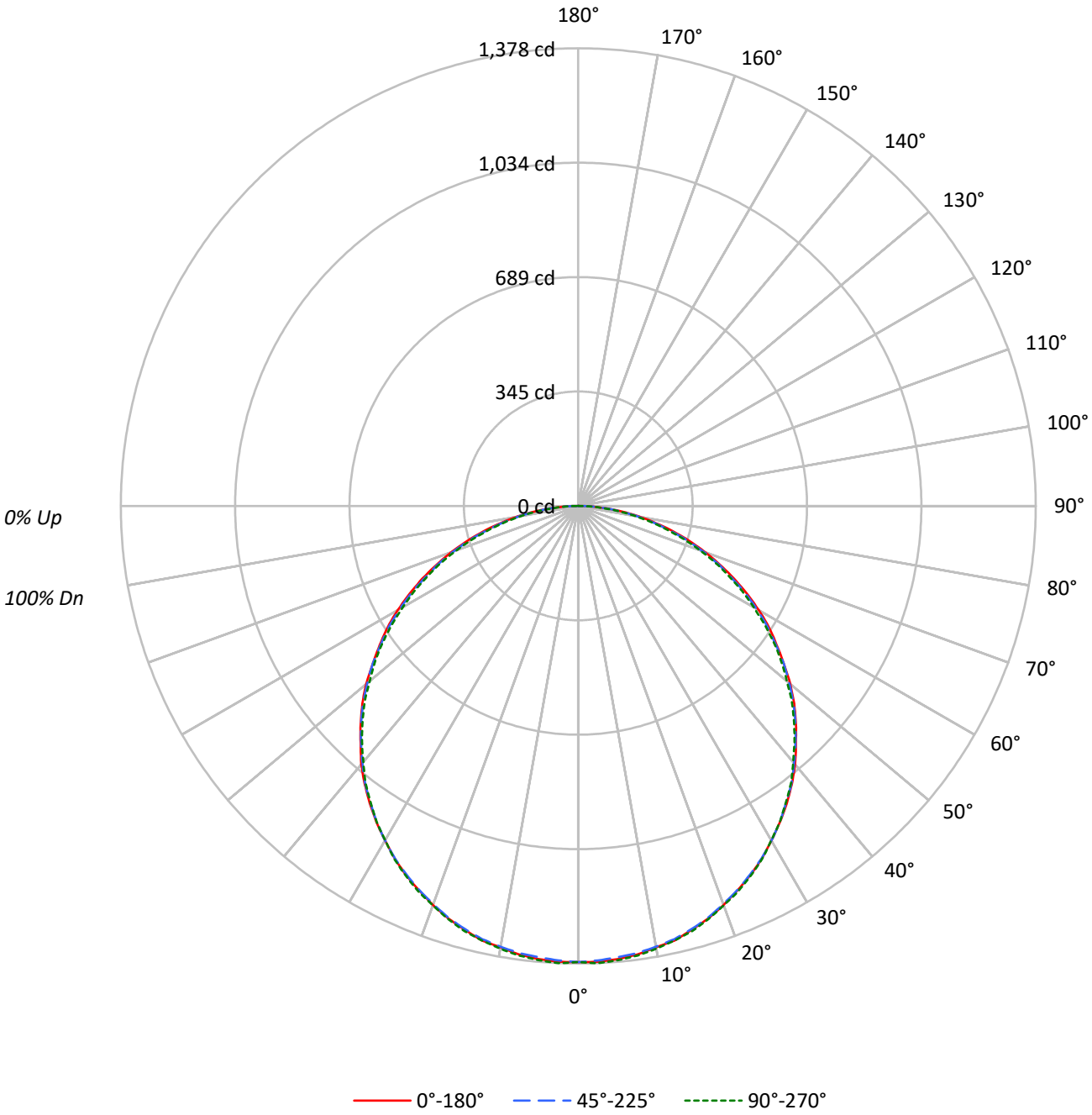


Cooper Lighting Solutions Photometric Lab
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Scaled Data Report

TEST NUMBER: P1590717
CATALOG NUMBER: 14CGTX-42-L92765-W2A-5000K

## Luminous Intensity Polar Plot



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Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P1590717
CATALOG NUMBER: 14CGTX-42-L92765-W2A-5000K

## COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| RF | 20 | | | | 20 | | | | 20 | | | 20 | | | 20 | | | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 53 | 66 | 59 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 47 | 40 | 68 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 45 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 41 | 35 | 48 | 41 | 35 | 47 | 40 | 35 | 45 | 39 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 45 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 55 | 42 | 34 | 28 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 30 | 26 | 37 | 30 | 25 | 36 | 30 | 25 | 24 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|---|---|---|---|
| 0° | 3697 | 3697 | 3697 |
| 5° | 3700 | 3686 | 3709 |
| 10° | 3688 | 3683 | 3700 |
| 15° | 3681 | 3675 | 3693 |
| 20° | 3664 | 3655 | 3667 |
| 25° | 3643 | 3636 | 3649 |
| 30° | 3616 | 3616 | 3613 |
| 35° | 3595 | 3585 | 3581 |
| 40° | 3571 | 3553 | 3538 |
| 45° | 3529 | 3521 | 3497 |
| 50° | 3490 | 3472 | 3432 |
| 55° | 3423 | 3403 | 3378 |
| 60° | 3378 | 3338 | 3281 |
| 65° | 3293 | 3226 | 3186 |
| 70° | 3193 | 3127 | 3060 |
| 75° | 3071 | 2973 | 2885 |
| 80° | 2884 | 2802 | 2672 |
| 85° | 2532 | 2467 | 2303 |

## MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3529 cd/sqm

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Scaled Data Report

TEST NUMBER: P1590717
CATALOG NUMBER: 14CGTX-42-L92765-W2A-5000K

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 130.1 | 3.2 |
| 10°-20° | 373.0 | 9.3 |
| 20°-30° | 565.5 | 14.1 |
| 30°-40° | 683.5 | 17.0 |
| 40°-50° | 712.5 | 17.8 |
| 50°-60° | 649.4 | 16.2 |
| 60°-70° | 504.3 | 12.6 |
| 70°-80° | 303.4 | 7.6 |
| 80°-90° | 90.5 | 2.3 |
| 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°-30° | 1068.6 | 26.6 |
| 0°-40° | 1752.1 | 43.7 |
| 0°-60° | 3114.0 | 77.6 |
| 0°-90° | 4012.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4012.2 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 1374 | 1374 | 1374 | 1374 | 1374 | |
| 5° | 1370 | 1367 | 1364 | 1370 | 1373 | 130 |
| 15° | 1321 | 1321 | 1319 | 1322 | 1326 | 373 |
| 25° | 1227 | 1228 | 1225 | 1228 | 1229 | 565 |
| 35° | 1094 | 1093 | 1091 | 1090 | 1090 | 685 |
| 45° | 927 | 926 | 925 | 923 | 919 | 715 |
| 55° | 730 | 732 | 725 | 722 | 720 | 653 |
| 65° | 517 | 516 | 507 | 502 | 500 | 512 |
| 75° | 295 | 293 | 286 | 281 | 278 | 312 |
| 85° | 82 | 83 | 80 | 77 | 75 | 94 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P1590717
CATALOG NUMBER: 14CGTX-42-L92765-W2A-5000K

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° |
|---|---|---|---|---|---|
| 0° | 1373.9 | 1373.9 | 1373.9 | 1373.9 | *1373.9* |
| 2.5° | *1373.9* | *1373.9* | *1369.7* | *1375.0* | *1378.1* |
| 5° | 1369.7 | 1366.6 | 1364.5 | 1369.7 | *1372.9* |
| 7.5° | 1362.4 | 1361.3 | 1358.2 | 1363.4 | *1365.5* |
| 10° | 1349.8 | 1350.8 | 1347.7 | 1352.9 | *1354.0* |
| 12.5° | 1340.3 | 1338.2 | 1336.1 | 1341.3 | *1340.3* |
| 15° | 1321.4 | 1321.4 | 1319.3 | 1322.4 | *1325.6* |
| 17.5° | 1302.4 | 1301.4 | 1300.3 | 1304.6 | *1304.6* |
| 20° | 1279.3 | 1278.3 | 1276.2 | 1282.5 | *1280.4* |
| 22.5° | 1253.0 | 1254.1 | 1252.0 | 1255.1 | *1257.2* |
| 25° | 1226.8 | 1227.8 | 1224.7 | 1227.8 | *1228.9* |
| 27.5° | 1197.3 | 1197.3 | 1196.3 | 1198.4 | *1199.4* |
| 30° | 1163.7 | 1164.7 | 1163.7 | 1165.8 | *1162.6* |
| 32.5° | 1130.1 | 1130.1 | 1129.0 | 1130.1 | *1129.0* |
| 35° | 1094.3 | 1093.3 | 1091.2 | 1090.1 | *1090.1* |
| 37.5° | 1056.5 | 1055.4 | 1054.4 | 1052.3 | *1052.3* |
| 40° | 1016.5 | 1014.4 | 1011.3 | 1010.2 | *1007.1* |
| 42.5° | 970.3 | 971.3 | 968.2 | 966.1 | *964.0* |
| 45° | 927.2 | 926.1 | 925.1 | 923.0 | *918.8* |
| 47.5° | 882.0 | 879.9 | 878.8 | 873.6 | *872.5* |
| 50° | 833.6 | 833.6 | 829.4 | 823.1 | *819.9* |
| 52.5° | 780.0 | 784.2 | 780.0 | 774.7 | *771.6* |
| 55° | 729.5 | 731.6 | 725.3 | 722.2 | *720.1* |
| 57.5° | 681.2 | 681.2 | 674.9 | 669.6 | *665.4* |
| 60° | 627.6 | 626.5 | 620.2 | 613.9 | *609.7* |
| 62.5° | 572.9 | 572.9 | 565.6 | 559.2 | *557.1* |
| 65° | 517.2 | 516.1 | 506.7 | 502.5 | *500.4* |
| 67.5° | 461.5 | 461.5 | 455.2 | 447.8 | *446.8* |
| 70° | 405.8 | 404.7 | 397.4 | 393.2 | *388.9* |
| 72.5° | 351.1 | 349.0 | 342.7 | 336.4 | *333.2* |
| 75° | 295.4 | 293.3 | 285.9 | 280.7 | *277.5* |
| 77.5° | 239.7 | 237.6 | 232.3 | 226.0 | *223.9* |
| 80° | 186.1 | 186.1 | 180.8 | 176.6 | *172.4* |
| 82.5° | 134.6 | 133.5 | 130.4 | 127.2 | *125.1* |
| 85° | 82.0 | 83.0 | 79.9 | 76.7 | *74.6* |
| 87.5° | 35.7 | 35.7 | 32.6 | 29.4 | *30.5* |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* |

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TEST NUMBER: P1590717
CATALOG NUMBER: 14CGTX-42-L92765-W2A-5000K

**CIE UGR TABLE:**

| Reflectances: | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ceiling | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| | Wall | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| | Reference plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 16.51 | 18.16 | 16.87 | 18.48 | 18.79 | 16.38 | 18.03 | 16.74 | 18.35 | 18.66 |
| | 3H | 18.42 | 19.92 | 18.80 | 20.25 | 20.61 | 18.25 | 19.75 | 18.63 | 20.08 | 20.44 |
| | 4H | 19.18 | 20.59 | 19.58 | 20.94 | 21.32 | 18.96 | 20.38 | 19.36 | 20.73 | 21.10 |
| | 6H | 19.76 | 21.08 | 20.17 | 21.44 | 21.83 | 19.51 | 20.83 | 19.92 | 21.19 | 21.58 |
| | 8H | 19.97 | 21.22 | 20.39 | 21.61 | 22.01 | 19.70 | 20.96 | 20.12 | 21.35 | 21.74 |
| | 12H | 20.11 | 21.31 | 20.54 | 21.69 | 22.12 | 19.83 | 21.03 | 20.26 | 21.41 | 21.84 |
| 4H | 2H | 17.14 | 18.56 | 17.54 | 18.91 | 19.28 | 17.04 | 18.46 | 17.44 | 18.81 | 19.18 |
| | 3H | 19.29 | 20.49 | 19.70 | 20.88 | 21.28 | 19.14 | 20.34 | 19.55 | 20.73 | 21.13 |
| | 4H | 20.19 | 21.27 | 20.62 | 21.68 | 22.12 | 19.99 | 21.07 | 20.42 | 21.49 | 21.92 |
| | 6H | 20.92 | 21.86 | 21.37 | 22.30 | 22.76 | 20.68 | 21.62 | 21.13 | 22.06 | 22.52 |
| | 8H | 21.18 | 22.06 | 21.64 | 22.51 | 22.97 | 20.92 | 21.81 | 21.38 | 22.25 | 22.71 |
| | 12H | 21.37 | 22.17 | 21.85 | 22.64 | 23.11 | 21.10 | 21.89 | 21.57 | 22.37 | 22.84 |
| 8H | 4H | 20.52 | 21.41 | 20.98 | 21.85 | 22.32 | 20.35 | 21.24 | 20.81 | 21.68 | 22.15 |
| | 6H | 21.39 | 22.13 | 21.88 | 22.62 | 23.09 | 21.17 | 21.91 | 21.67 | 22.40 | 22.87 |
| | 8H | 21.74 | 22.40 | 22.25 | 22.91 | 23.39 | 21.50 | 22.16 | 22.01 | 22.67 | 23.15 |
| | 12H | 22.02 | 22.60 | 22.52 | 23.09 | 23.65 | 21.76 | 22.34 | 22.26 | 22.83 | 23.39 |
| 12H | 4H | 20.57 | 21.36 | 21.04 | 21.84 | 22.31 | 20.40 | 21.20 | 20.88 | 21.68 | 22.14 |
| | 6H | 21.46 | 22.13 | 21.97 | 22.63 | 23.12 | 21.25 | 21.92 | 21.76 | 22.42 | 22.91 |
| | 8H | 21.87 | 22.46 | 22.38 | 22.95 | 23.51 | 21.64 | 22.23 | 22.15 | 22.72 | 23.28 |

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

Metalux

Report Number: SP1-2510-566-13-R2

Test Date: 10/14/2025

Luminaire Tested: 22CGTX-50-L92765-W2A-5000K

Data in this report applies to families of products including 22CGTX

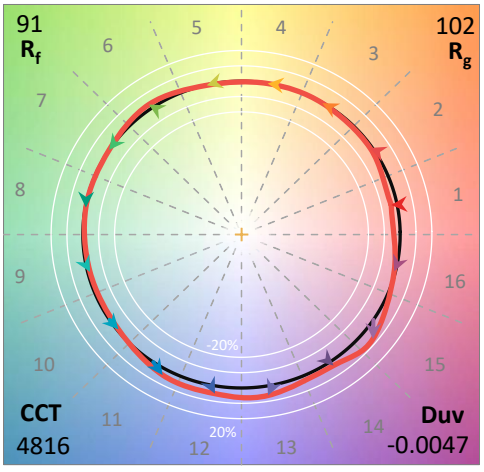
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.05

## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2510-566-13-R2 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 07/28/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | Metalux |
| Catalog Number: | **22CGTX-50-L92765-W2A-5000K** |
| Description: | *THIS IS A REVISION OF REPORT SP1-2512-566-13-R2 TO UPDATE THE CATALOG INFORMATION*2X2 50000 Lumen CGTX TUNABLE WHITE FROM 2700K TO 6500K - 4 V |

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 4816 | CRI (Ra): | 95.9 | | |
| CIE u': | 0.2166 | R1: | 97.7 | R9: | 83.7 |
| CIE v': | 0.4824 | R2: | 98.1 | R10: | 93.6 |
| Duv: | -0.0047 | R3: | 94.7 | R11: | 96.0 |
| CIE x: | 0.3493 | R4: | 97.7 | R12: | 71.1 |
| CIE y: | 0.3457 | R5: | 96.5 | R13: | 99.1 |
| CIE z: | 0.3051 | R6: | 93.1 | R14: | 96.3 |
| Peak Wavelength (nm): | 630 | R7: | 95.9 | R15: | 97.4 |
| Dominant Wavelength (nm): | 581 | R8: | 93.8 | | |
| Purity: | 8.50802 | | | | |
| Rf: | 90.9 | | | | |
| Rg: | 101.8 | | | | |




## Test Conditions

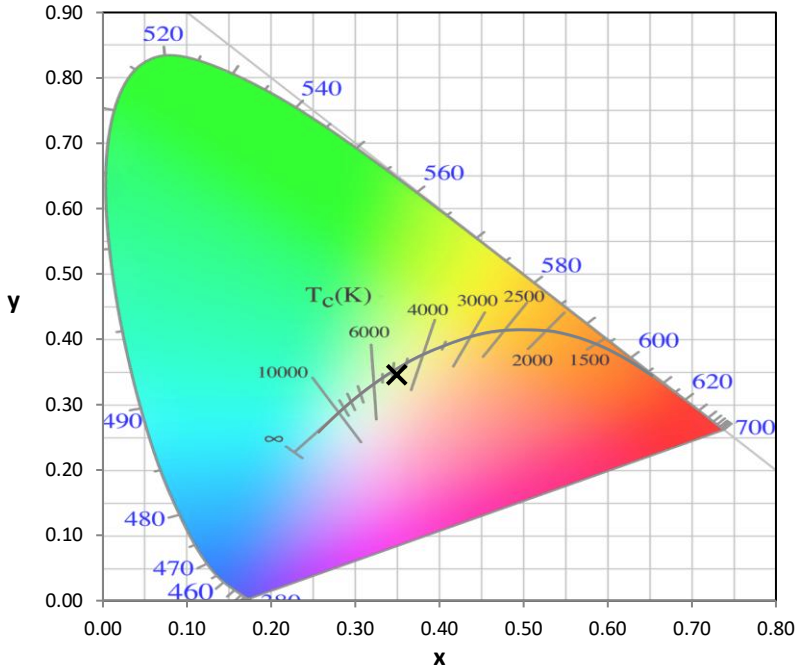
| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| Sphere Temperature (°C): | 25.0 |

REPORT NUMBER: SP1-2510-566-13-R2

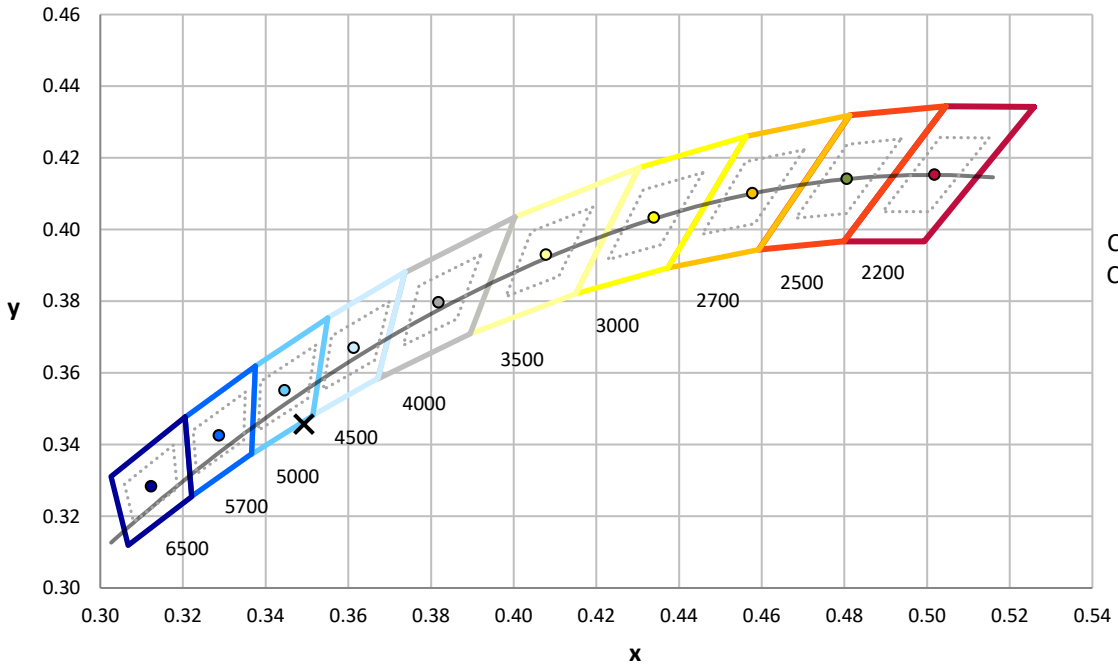
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | XITRON INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | CHROMA 61603 IN0063 | 10/22/2024 | 10/22/2025 |
| DC Power Source | AGILENT E3634A IN0208 | 10/22/2024 | 10/22/2025 |
| Sphere Thermometer | ONSET IN0085 | 10/22/2024 | 10/22/2025 |
| Room Thermometer | ONSET IN0046 | 10/22/2024 | 10/22/2025 |

REPORT NUMBER: SP1-2510-566-13-R2

## CIE 1931 Chromaticity Diagram




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

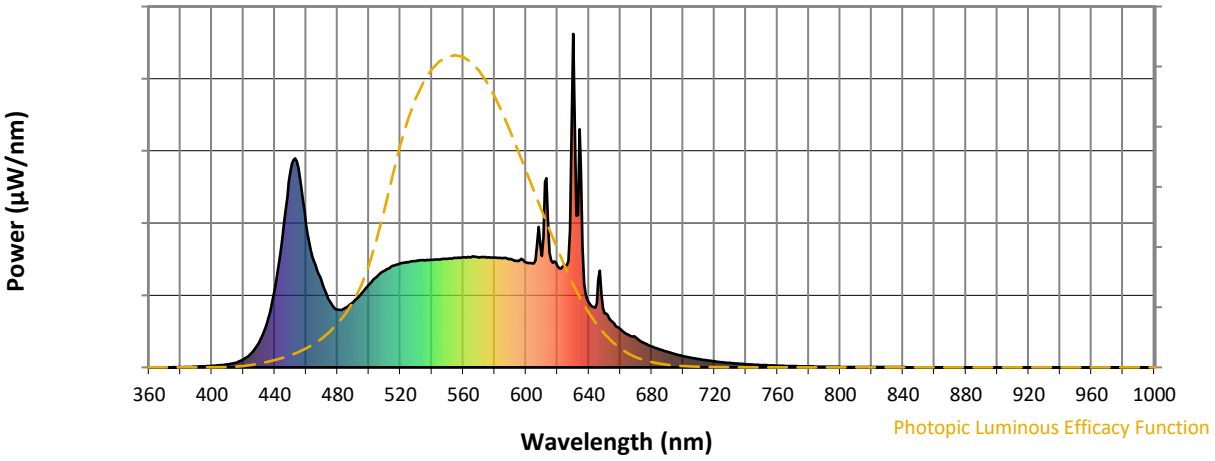



CCT = 4816K
CIE x = 0.3493
CIE y = 0.3457
Duv = -0.0047

Point lies outside the range

REPORT NUMBER: SP1-2510-566-13-R2

## Photopic Flux vs. Wavelength

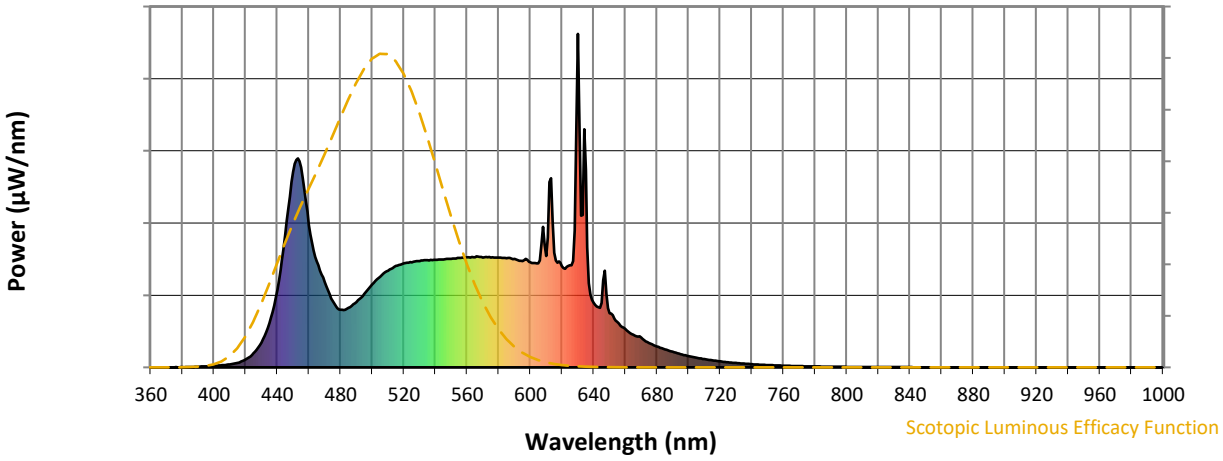



## Photopic Lumens: NR

| 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 | 196 | NR | 620 | 303 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 220 | NR | 625 | 307 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 248 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 272 | NR | 635 | 591 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 290 | NR | 640 | 194 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 305 | NR | 645 | 193 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 312 | NR | 650 | 162 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 315 | NR | 655 | 136 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 318 | NR | 660 | 115 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 321 | NR | 665 | 98 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 323 | NR | 670 | 90 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 14 | NR | 545 | 324 | NR | 675 | 73 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 24 | NR | 550 | 326 | NR | 680 | 63 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 42 | NR | 555 | 329 | NR | 685 | 54 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 74 | NR | 560 | 330 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 133 | NR | 565 | 330 | NR | 695 | 40 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 232 | NR | 570 | 330 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 395 | NR | 575 | 330 | NR | 705 | 29 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 587 | NR | 580 | 330 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 600 | NR | 585 | 328 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 428 | NR | 590 | 325 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 318 | NR | 595 | 319 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 255 | NR | 600 | 315 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 199 | NR | 605 | 312 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 173 | NR | 610 | 334 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 178 | NR | 615 | 344 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2510-566-13-R2

## Scotopic Flux vs. Wavelength

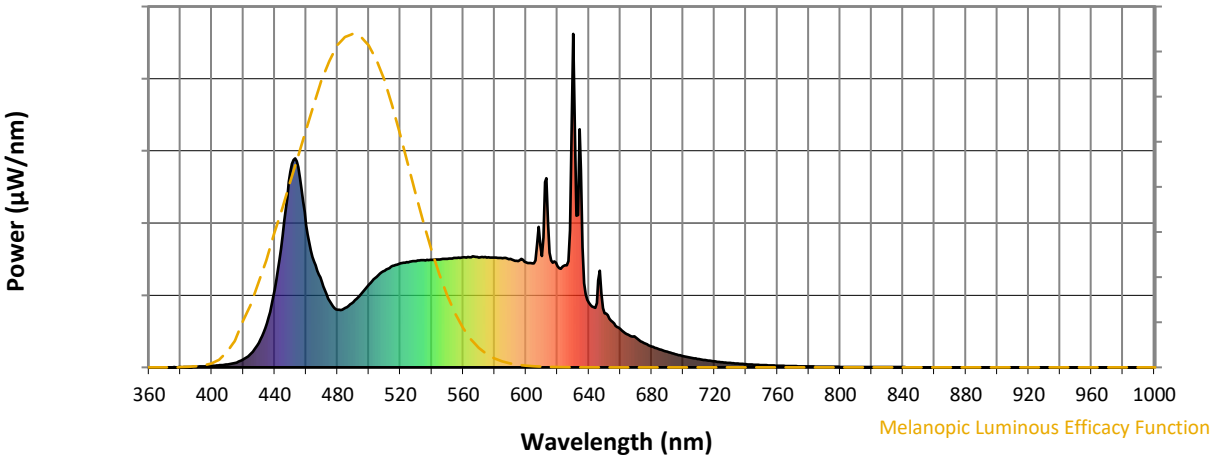



**Scotopic Lumens: NR** **S/P: 2.04**

| 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 | 196 | NR | 620 | 303 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 220 | NR | 625 | 307 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 248 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 272 | NR | 635 | 591 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 290 | NR | 640 | 194 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 305 | NR | 645 | 193 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 312 | NR | 650 | 162 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 315 | NR | 655 | 136 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 318 | NR | 660 | 115 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 321 | NR | 665 | 98 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 323 | NR | 670 | 90 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 14 | NR | 545 | 324 | NR | 675 | 73 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 24 | NR | 550 | 326 | NR | 680 | 63 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 42 | NR | 555 | 329 | NR | 685 | 54 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 74 | NR | 560 | 330 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 133 | NR | 565 | 330 | NR | 695 | 40 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 232 | NR | 570 | 330 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 395 | NR | 575 | 330 | NR | 705 | 29 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 587 | NR | 580 | 330 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 600 | NR | 585 | 328 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 428 | NR | 590 | 325 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 318 | NR | 595 | 319 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 255 | NR | 600 | 315 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 199 | NR | 605 | 312 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 173 | NR | 610 | 334 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 178 | NR | 615 | 344 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 4.45**

| 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 | 196 | NR | 620 | 303 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 220 | NR | 625 | 307 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 248 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 272 | NR | 635 | 591 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 290 | NR | 640 | 194 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 305 | NR | 645 | 193 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 312 | NR | 650 | 162 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 315 | NR | 655 | 136 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 318 | NR | 660 | 115 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 6 | NR | 535 | 321 | NR | 665 | 98 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 323 | NR | 670 | 90 | NR | 800 | 1 | NR | 930 | 0 | NR |
| 415 | 14 | NR | 545 | 324 | NR | 675 | 73 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 24 | NR | 550 | 326 | NR | 680 | 63 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 42 | NR | 555 | 329 | NR | 685 | 54 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 74 | NR | 560 | 330 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 133 | NR | 565 | 330 | NR | 695 | 40 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 232 | NR | 570 | 330 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 395 | NR | 575 | 330 | NR | 705 | 29 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 587 | NR | 580 | 330 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 600 | NR | 585 | 328 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 428 | NR | 590 | 325 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 318 | NR | 595 | 319 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 255 | NR | 600 | 315 | NR | 730 | 13 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 199 | NR | 605 | 312 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 173 | NR | 610 | 334 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 178 | NR | 615 | 344 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

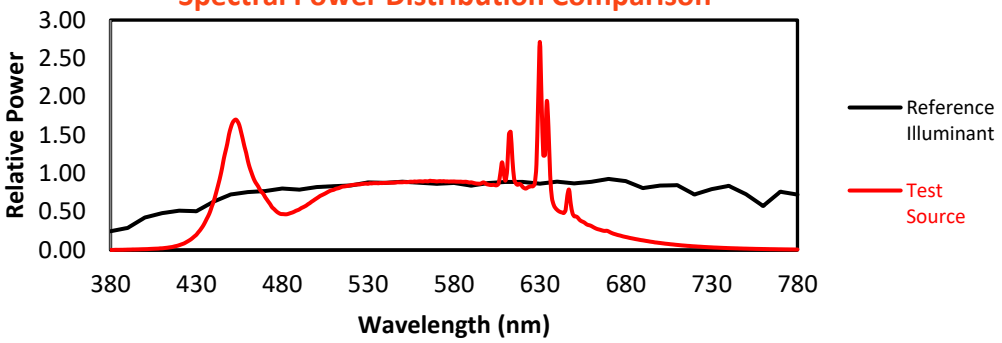
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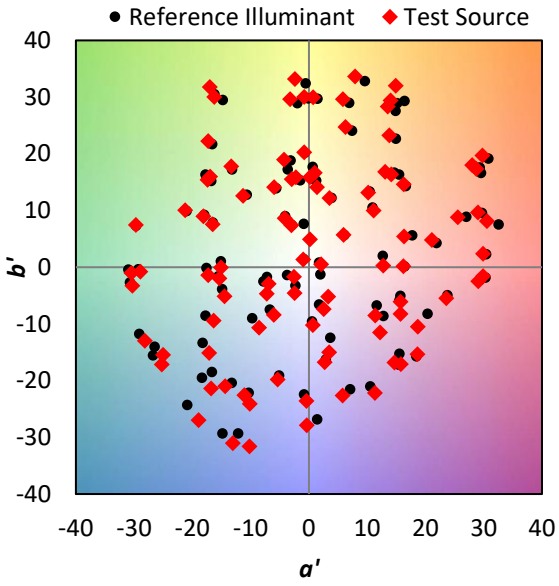
## Summary

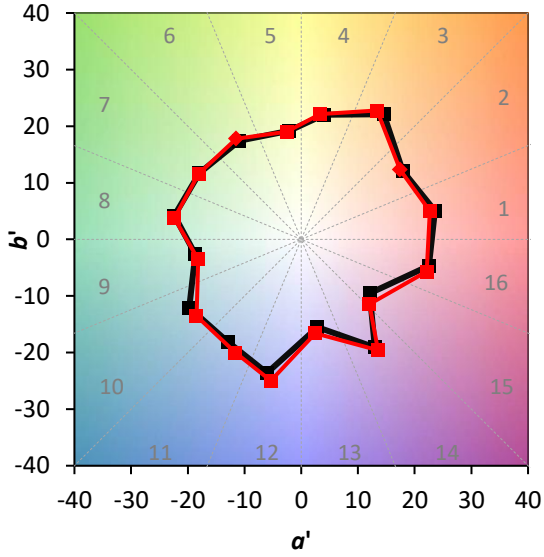
$R_f$ = 90.9
$R_g$ = 101.8
CIE $R_a$ = 95.9
$R_9$ = 83.7

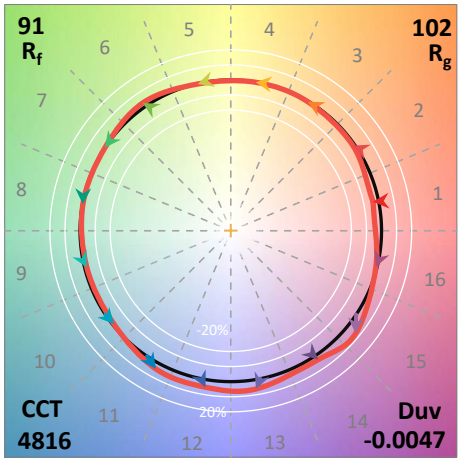
## Spectral Power Distribution Comparison

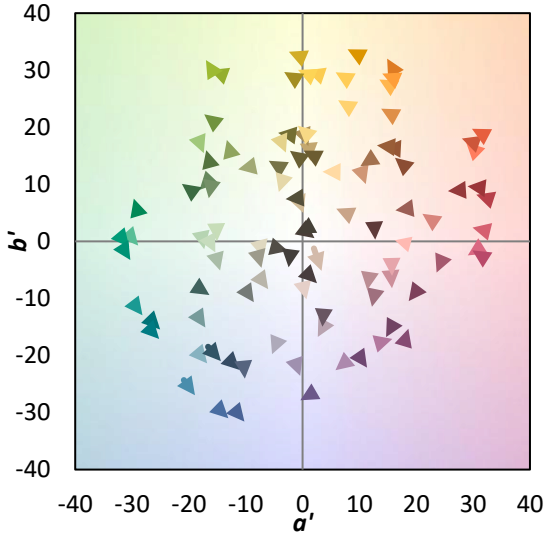



## Color Vector Graphics



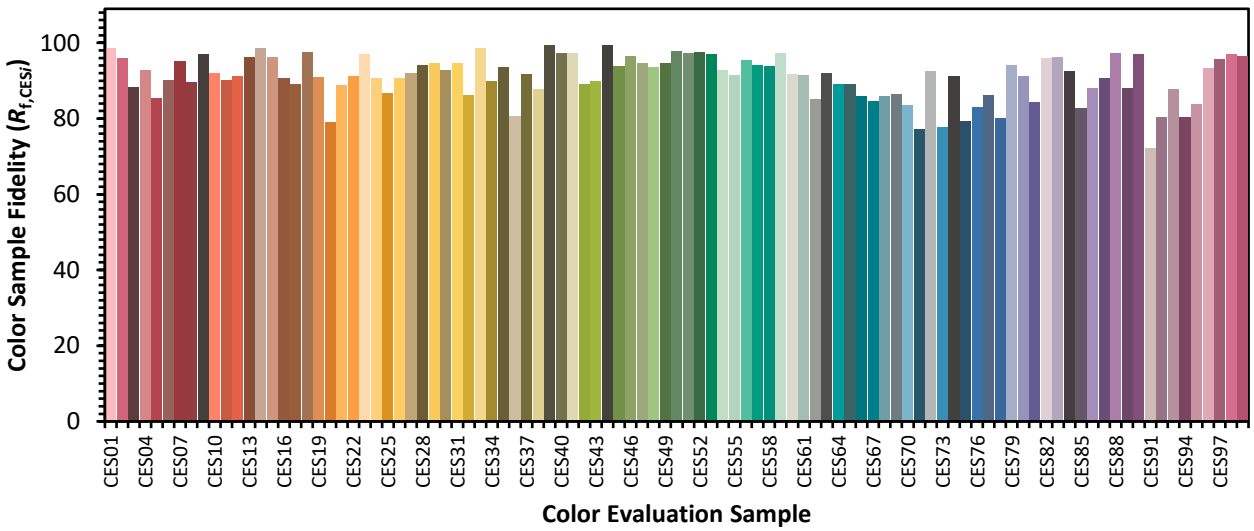



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## Individual Sample Fidelity Index ($R_{f,i}$)

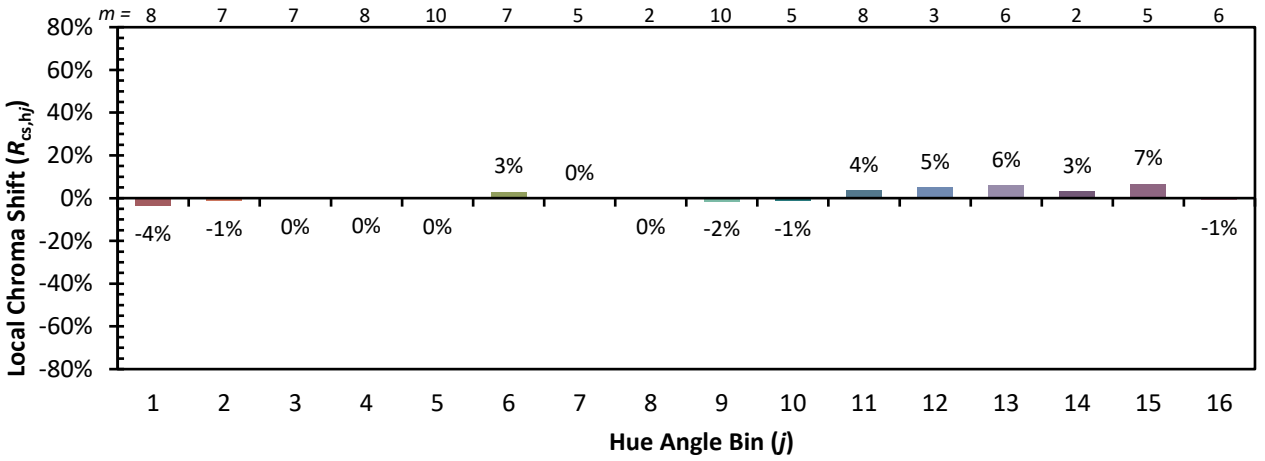
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 91 | CES51 = 97 | CES76 = 83 |
| CES02 = 61 | CES27 = 92 | CES52 = 97 | CES77 = 86 |
| CES03 = 31 | CES28 = 94 | CES53 = 97 | CES78 = 80 |
| CES04 = 69 | CES29 = 95 | CES54 = 93 | CES79 = 94 |
| CES05 = 48 | CES30 = 93 | CES55 = 91 | CES80 = 91 |
| CES06 = 50 | CES31 = 95 | CES56 = 95 | CES81 = 84 |
| CES07 = 41 | CES32 = 86 | CES57 = 94 | CES82 = 96 |
| CES08 = 40 | CES33 = 99 | CES58 = 94 | CES83 = 96 |
| CES09 = 29 | CES34 = 90 | CES59 = 97 | CES84 = 92 |
| CES10 = 74 | CES35 = 94 | CES60 = 92 | CES85 = 83 |
| CES11 = 56 | CES36 = 81 | CES61 = 91 | CES86 = 88 |
| CES12 = 62 | CES37 = 92 | CES62 = 85 | CES87 = 91 |
| CES13 = 43 | CES38 = 88 | CES63 = 92 | CES88 = 97 |
| CES14 = 74 | CES39 = 99 | CES64 = 89 | CES89 = 88 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 97 |
| CES16 = 47 | CES41 = 97 | CES66 = 86 | CES91 = 72 |
| CES17 = 49 | CES42 = 89 | CES67 = 85 | CES92 = 80 |
| CES18 = 56 | CES43 = 90 | CES68 = 86 | CES93 = 88 |
| CES19 = 70 | CES44 = 99 | CES69 = 86 | CES94 = 80 |
| CES20 = 65 | CES45 = 94 | CES70 = 83 | CES95 = 84 |
| CES21 = 85 | CES46 = 96 | CES71 = 77 | CES96 = 93 |
| CES22 = 77 | CES47 = 95 | CES72 = 92 | CES97 = 96 |
| CES23 = 91 | CES48 = 94 | CES73 = 78 | CES98 = 97 |
| CES24 = 90 | CES49 = 95 | CES74 = 91 | CES99 = 96 |
| CES25 = 70 | CES50 = 98 | CES75 = 79 | |

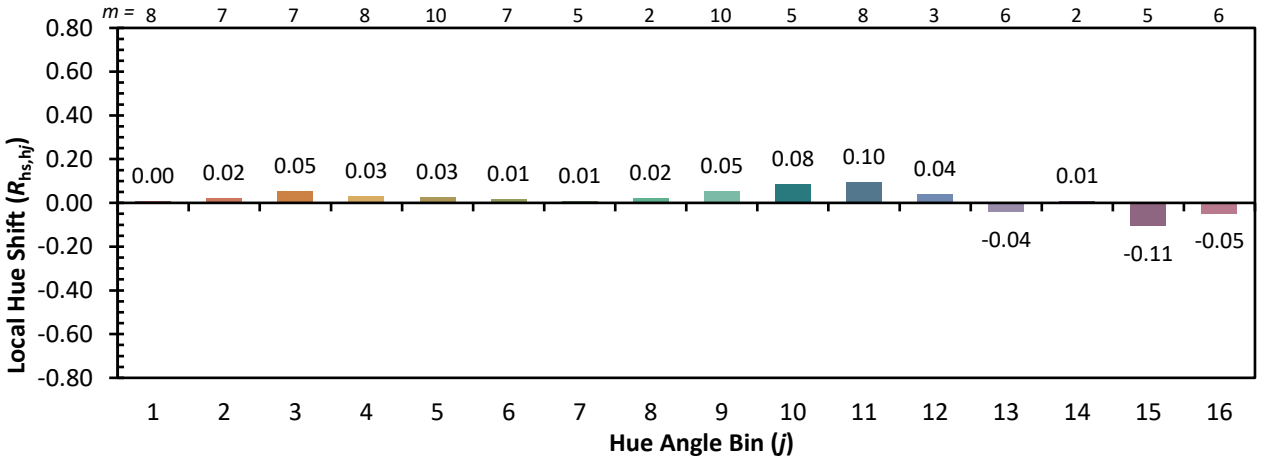


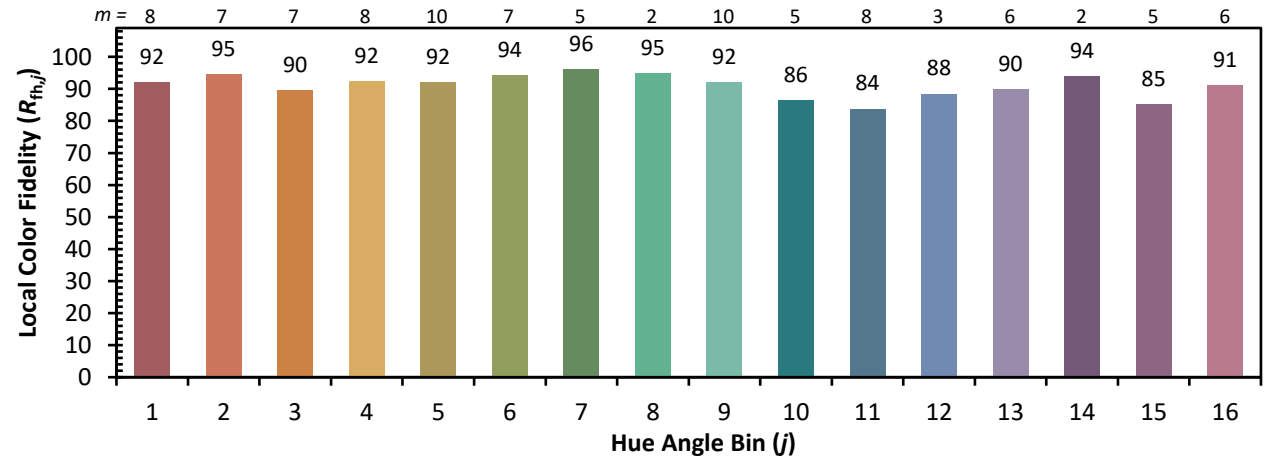
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## Color Rendition by Hue-Angle Bin



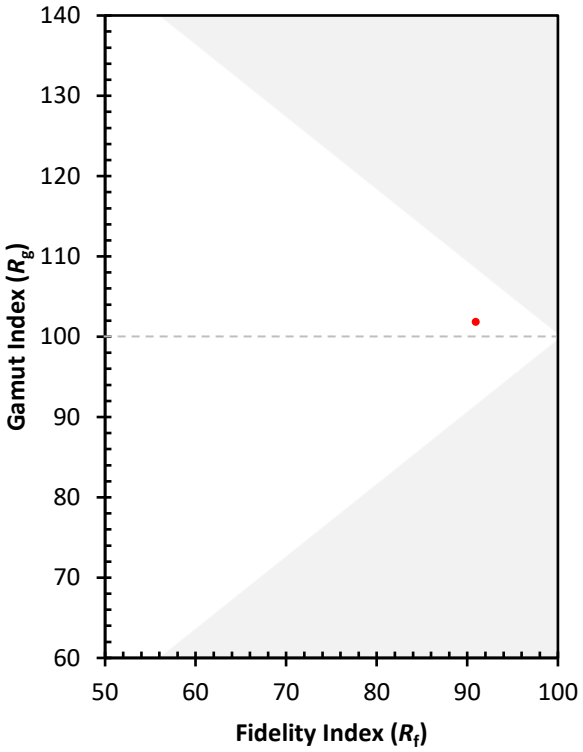



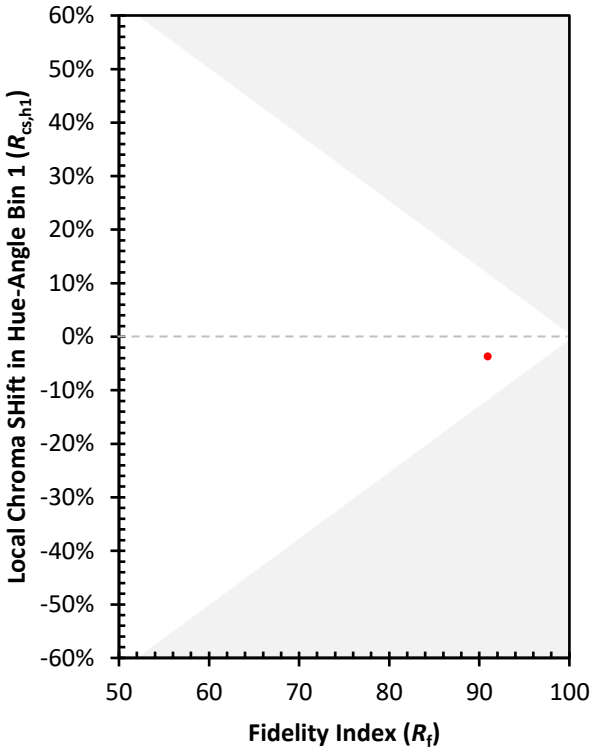



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### Measure Comparisons




(END OF REPORT)