

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: P976372

Luminaire Tested: 22SR-LD2-25-S-UNV-L940-CD1-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P976372
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 22SR-LD2-25-S-UNV-L940-CD1-U
Description: METALUX SKYRIDGE 2x2 2500LM PACKAGE 90CRI 4000K STANDARD TROFFER
Light Source: 4000K CCT, 90+ CRI LEDS
Ballast/Driver: -

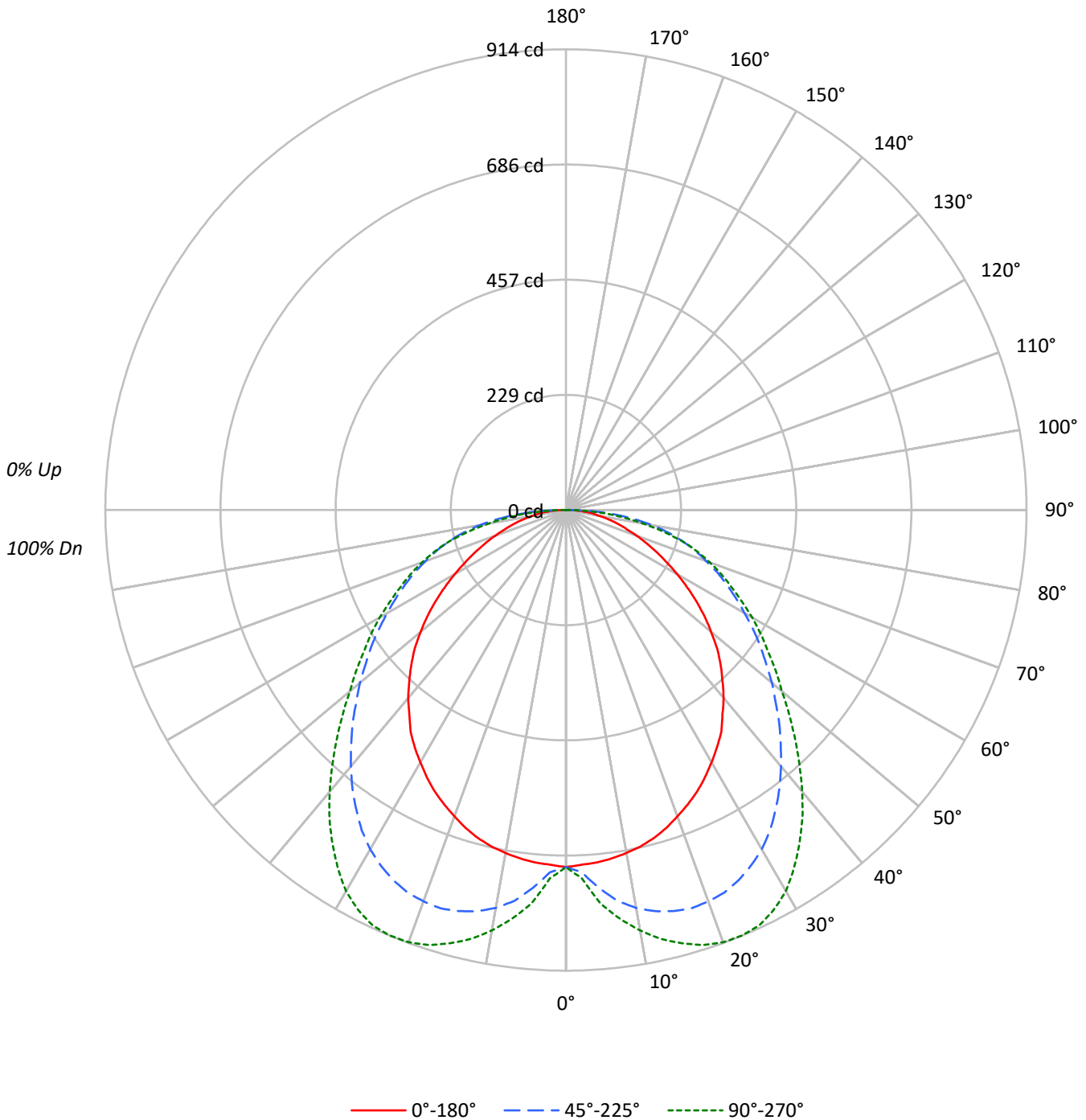
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2561.4 lumens
Efficiency: N/A
Efficacy: 143.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.61 / 1.54
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 17.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

TEST NUMBER: P976372
CATALOG NUMBER: 22SR-LD2-25-S-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P976372

CATALOG NUMBER: 22SR-LD2-25-S-UNV-L940-CD1-U

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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 108 | 103 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 93 | 89 | 92 | 89 | 87 | 88 | 86 | 84 | 82 | | | | 82 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 80 | 75 | 83 | 78 | 73 | 80 | 75 | 71 | 77 | 73 | 70 | 67 | | | | 67 |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 59 | 56 | | | | 56 |
| 4 | 81 | 69 | 60 | 53 | 79 | 67 | 59 | 52 | 65 | 57 | 52 | 63 | 56 | 51 | 60 | 55 | 50 | 48 | | | | 48 |
| 5 | 75 | 61 | 52 | 45 | 72 | 60 | 52 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 43 | 41 | | | | 41 |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 46 | 39 | 52 | 45 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 36 | | | | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 32 | | | | 32 |
| 8 | 59 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 43 | 36 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 28 | | | | 28 |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 | | | | 25 |
| 10 | 52 | 39 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 | | | | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1906 | 1906 | 1906 |
| 5° | 1897 | 2033 | 2116 |
| 10° | 1888 | 2190 | 2315 |
| 15° | 1877 | 2295 | 2480 |
| 20° | 1852 | 2366 | 2613 |
| 25° | 1829 | 2406 | 2698 |
| 30° | 1796 | 2415 | 2713 |
| 35° | 1765 | 2383 | 2654 |
| 40° | 1710 | 2333 | 2561 |
| 45° | 1652 | 2279 | 2447 |
| 50° | 1575 | 2234 | 2342 |
| 55° | 1483 | 2210 | 2296 |
| 60° | 1370 | 2203 | 2296 |
| 65° | 1268 | 2247 | 2310 |
| 70° | 1180 | 2331 | 2389 |
| 75° | 1111 | 2493 | 2481 |
| 80° | 1066 | 2706 | 2421 |
| 85° | 1176 | 2961 | 2393 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 3029 cd/sqm



TEST NUMBER: P976372
 CATALOG NUMBER: 22SR-LD2-25-S-UNV-L940-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 72.5 | 2.8 |
| 10°-20° | 228.4 | 8.9 |
| 20°-30° | 364.3 | 14.2 |
| 30°-40° | 438.5 | 17.1 |
| 40°-50° | 439.8 | 17.2 |
| 50°-60° | 393.2 | 15.4 |
| 60°-70° | 318.6 | 12.4 |
| 70°-80° | 221.8 | 8.7 |
| 80°-90° | 84.3 | 3.3 |
| 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° | 665.2 | 26.0 |
| 0°-40° | 1103.7 | 43.1 |
| 0°-60° | 1936.7 | 75.6 |
| 0°-90° | 2561.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2561.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 708 | 708 | 708 | 708 | 708 | |
| 5° | 702 | 718 | 752 | 777 | 783 | 67 |
| 15° | 674 | 752 | 824 | 873 | 890 | 190 |
| 25° | 616 | 713 | 810 | 883 | 909 | 283 |
| 35° | 537 | 622 | 725 | 789 | 808 | 335 |
| 45° | 434 | 508 | 599 | 634 | 643 | 334 |
| 55° | 316 | 396 | 471 | 486 | 489 | 282 |
| 65° | 199 | 292 | 353 | 358 | 363 | 198 |
| 75° | 107 | 197 | 240 | 239 | 239 | 114 |
| 85° | 38 | 85 | 96 | 82 | 78 | 40 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P976372
 CATALOG NUMBER: 22SR-LD2-25-S-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 708.3 | 708.3 | 708.3 | 708.3 | 708.3 |
| 2.5° | 704.5 | 708.3 | 719.3 | 729.1 | 731.6 |
| 5° | 702.1 | 718.0 | 752.5 | 777.1 | 783.2 |
| 7.5° | 697.1 | 730.3 | 782.0 | 807.8 | 817.7 |
| 10° | 691.0 | 743.9 | 801.6 | 834.9 | 847.1 |
| 12.5° | 683.7 | 752.5 | 815.2 | 857.1 | 871.7 |
| 15° | 673.8 | 752.5 | 823.8 | 873.0 | 890.1 |
| 17.5° | 661.5 | 748.7 | 828.7 | 884.0 | 904.9 |
| 20° | 646.7 | 741.5 | 826.2 | 890.1 | 912.3 |
| 22.5° | 632.0 | 729.1 | 821.3 | 890.1 | 913.6 |
| 25° | 616.0 | 713.1 | 810.3 | 882.9 | 908.7 |
| 27.5° | 597.6 | 694.7 | 795.5 | 869.3 | 893.9 |
| 30° | 577.9 | 672.5 | 777.1 | 849.7 | 873.0 |
| 32.5° | 558.2 | 648.0 | 753.8 | 822.6 | 842.3 |
| 35° | 537.3 | 622.1 | 725.4 | 789.4 | 807.8 |
| 37.5° | 510.3 | 592.7 | 696.0 | 753.8 | 770.9 |
| 40° | 486.9 | 565.6 | 664.0 | 715.7 | 729.1 |
| 42.5° | 459.8 | 536.1 | 630.8 | 675.0 | 686.1 |
| 45° | 434.0 | 507.8 | 598.8 | 634.4 | 643.1 |
| 47.5° | 407.0 | 478.4 | 564.3 | 593.9 | 601.2 |
| 50° | 376.2 | 450.0 | 533.6 | 558.2 | 559.5 |
| 52.5° | 346.7 | 422.9 | 500.4 | 520.1 | 525.0 |
| 55° | 316.0 | 395.9 | 471.0 | 485.6 | 489.4 |
| 57.5° | 285.3 | 370.0 | 440.1 | 452.5 | 458.7 |
| 60° | 254.5 | 343.1 | 409.4 | 420.6 | 426.7 |
| 62.5° | 226.3 | 317.3 | 381.2 | 388.6 | 393.5 |
| 65° | 199.2 | 291.5 | 352.9 | 357.8 | 362.8 |
| 67.5° | 173.4 | 268.0 | 325.8 | 328.3 | 334.4 |
| 70° | 150.0 | 244.7 | 296.3 | 298.7 | 303.7 |
| 72.5° | 126.6 | 220.1 | 269.3 | 268.0 | 273.0 |
| 75° | 106.9 | 196.7 | 239.8 | 238.6 | 238.6 |
| 77.5° | 88.5 | 172.1 | 209.0 | 201.7 | 197.9 |
| 80° | 68.8 | 146.3 | 174.6 | 159.8 | 156.2 |
| 82.5° | 54.2 | 116.8 | 135.3 | 120.5 | 116.8 |
| 85° | 38.1 | 84.9 | 95.9 | 82.4 | 77.5 |
| 87.5° | 19.7 | 45.5 | 49.1 | 41.7 | 35.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976372
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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 | 13.5 | 15.2 | 13.9 | 15.5 | 15.8 | 15.2 | 16.9 | 15.6 | 17.2 | 17.5 |
| | 3H | 15.2 | 16.7 | 15.6 | 17.0 | 17.4 | 17.4 | 18.9 | 17.8 | 19.3 | 19.6 |
| | 4H | 15.8 | 17.3 | 16.2 | 17.6 | 18.0 | 18.4 | 19.8 | 18.8 | 20.2 | 20.6 |
| | 6H | 16.4 | 17.7 | 16.8 | 18.1 | 18.5 | 19.2 | 20.5 | 19.6 | 20.9 | 21.3 |
| | 8H | 16.6 | 17.8 | 17.0 | 18.2 | 18.6 | 19.5 | 20.8 | 19.9 | 21.1 | 21.5 |
| | 12H | 16.7 | 17.9 | 17.1 | 18.3 | 18.7 | 19.7 | 20.9 | 20.1 | 21.3 | 21.7 |
| 4H | 2H | 14.7 | 16.1 | 15.1 | 16.5 | 16.8 | 15.9 | 17.4 | 16.3 | 17.7 | 18.1 |
| | 3H | 16.7 | 18.0 | 17.1 | 18.3 | 18.7 | 18.4 | 19.6 | 18.8 | 20.0 | 20.4 |
| | 4H | 17.6 | 18.7 | 18.1 | 19.2 | 19.6 | 19.5 | 20.6 | 20.0 | 21.0 | 21.5 |
| | 6H | 18.4 | 19.3 | 18.8 | 19.8 | 20.2 | 20.5 | 21.5 | 20.9 | 21.9 | 22.3 |
| | 8H | 18.6 | 19.6 | 19.1 | 20.0 | 20.5 | 20.8 | 21.7 | 21.3 | 22.2 | 22.6 |
| | 12H | 18.8 | 19.7 | 19.3 | 20.1 | 20.6 | 21.1 | 21.9 | 21.6 | 22.4 | 22.9 |
| 8H | 4H | 18.4 | 19.3 | 18.9 | 19.8 | 20.3 | 20.0 | 20.9 | 20.4 | 21.3 | 21.8 |
| | 6H | 19.5 | 20.2 | 20.0 | 20.7 | 21.2 | 21.1 | 21.9 | 21.6 | 22.4 | 22.8 |
| | 8H | 19.9 | 20.6 | 20.4 | 21.1 | 21.6 | 21.6 | 22.3 | 22.1 | 22.8 | 23.2 |
| | 12H | 20.3 | 20.9 | 20.8 | 21.4 | 21.9 | 22.0 | 22.6 | 22.5 | 23.1 | 23.6 |
| 12H | 4H | 18.6 | 19.4 | 19.0 | 19.9 | 20.3 | 20.0 | 20.9 | 20.5 | 21.3 | 21.8 |
| | 6H | 19.7 | 20.4 | 20.2 | 20.9 | 21.4 | 21.2 | 21.9 | 21.8 | 22.4 | 22.9 |
| | 8H | 20.3 | 20.9 | 20.8 | 21.4 | 21.9 | 21.8 | 22.4 | 22.3 | 22.9 | 23.4 |

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: SP1-2506-457-7

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L940-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L940-CD1-U

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-457-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 07/02/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Metalux
 Catalog Number: **24SR-LD2-64-C-UNV-L940-CD1-U**
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K): 3850
 CIE u': 0.2283
 CIE v': 0.5037
 Duv: -0.0006
 CIE x: 0.3868
 CIE y: 0.3794
 CIE z: 0.2338
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 579
 Purity: 29.94798
 Rf: 91.3
 Rg: 99.8

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 94.0 | | |
| R1: | 95.3 | R9: | 65.3 |
| R2: | 96.3 | R10: | 89.6 |
| R3: | 95.7 | R11: | 95.5 |
| R4: | 95.2 | R12: | 76.1 |
| R5: | 94.4 | R13: | 95.5 |
| R6: | 94.3 | R14: | 96.8 |
| R7: | 94.1 | R15: | 92.3 |
| R8: | 86.7 | | |



Test Conditions

Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 24.4

REPORT NUMBER: SP1-2506-457-7

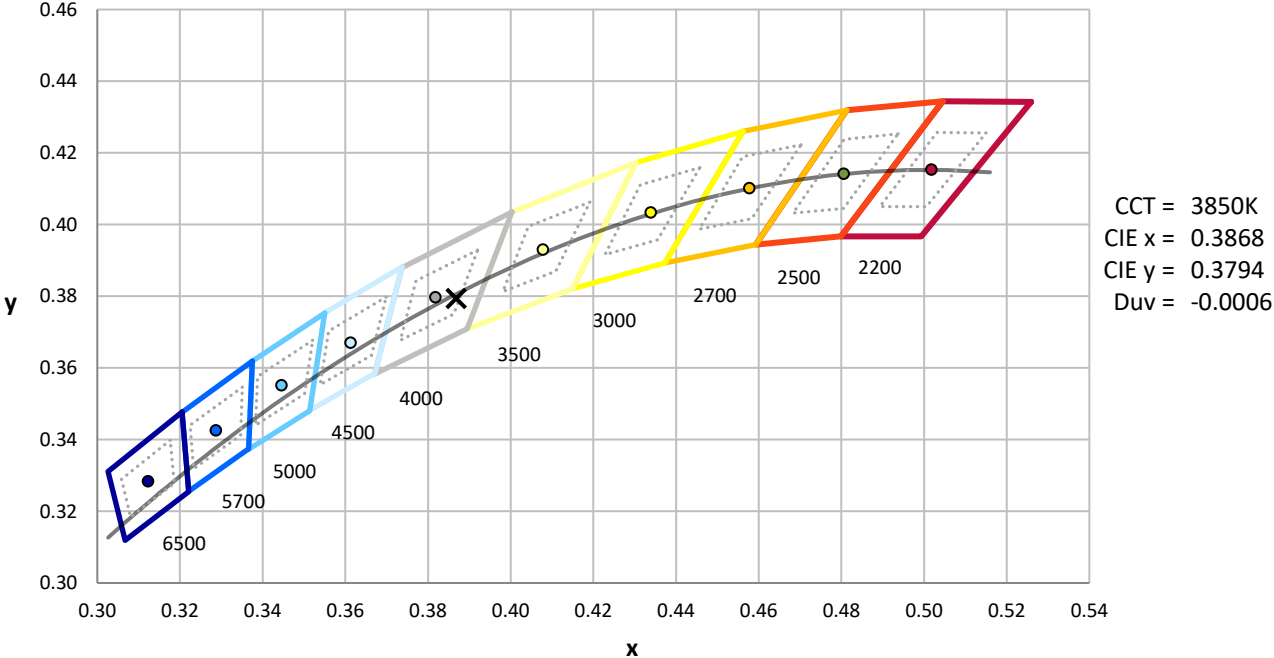
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | 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 |

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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 4000K 4-step quadrangle

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Photopic Flux vs. Wavelength

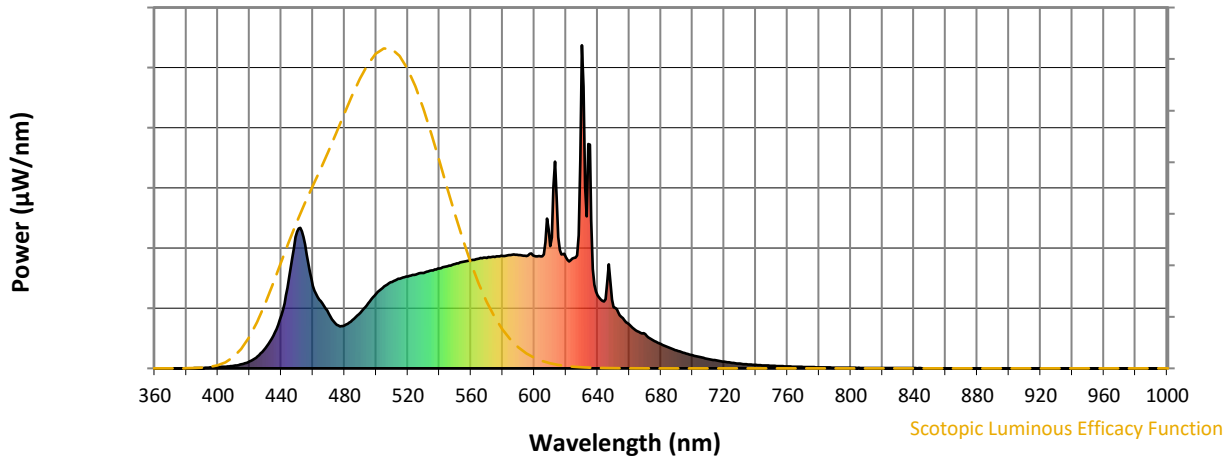


Photopic Lumens: NR

| 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 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-7

Scotopic Flux vs. Wavelength



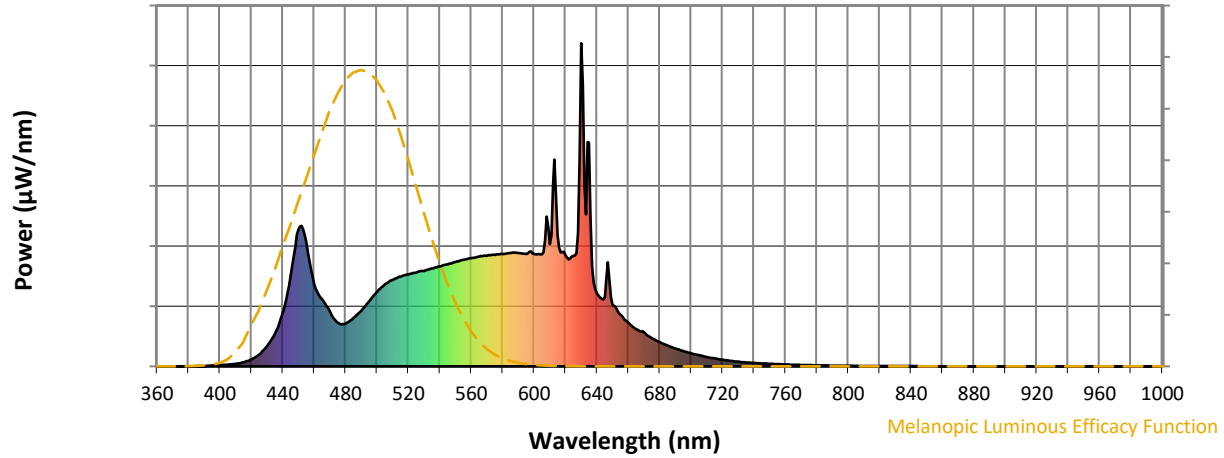
Scotopic Lumens: NR

S/P: 1.74

| 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 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-7

Melanopic Flux vs. Wavelength



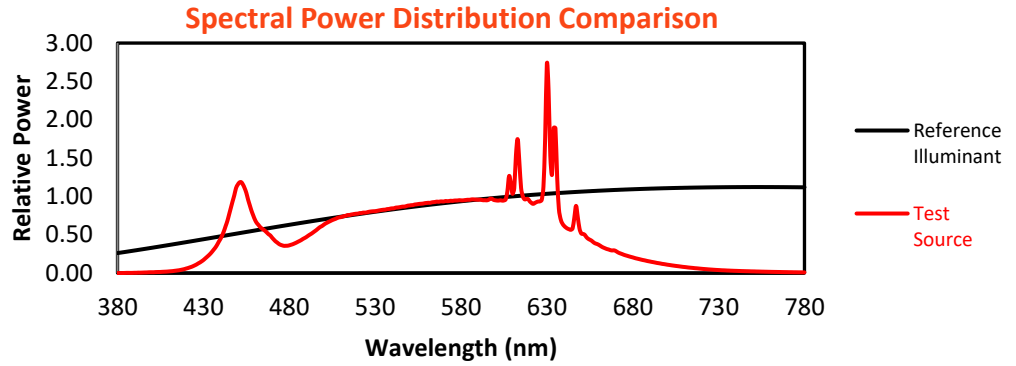
Melanopic Lumens: NR

M/P: 3.6

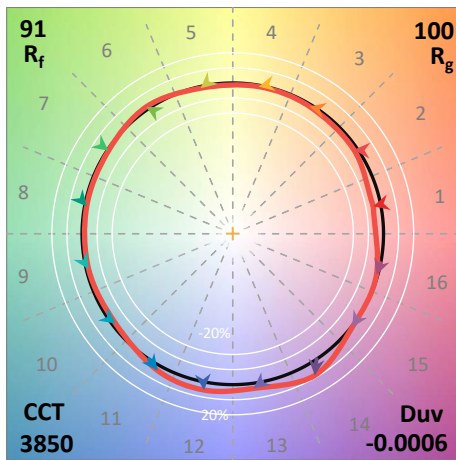
| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.3$
 $R_g = 99.8$
 $CIE R_a = 94.0$
 $R_9 = 65.3$

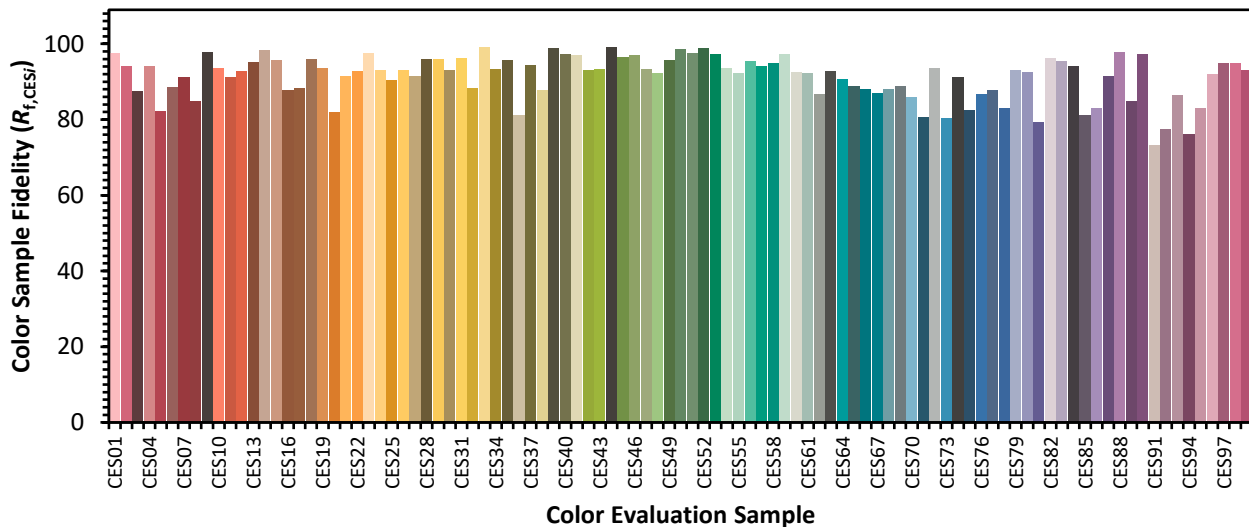


Color Vector Graphics



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

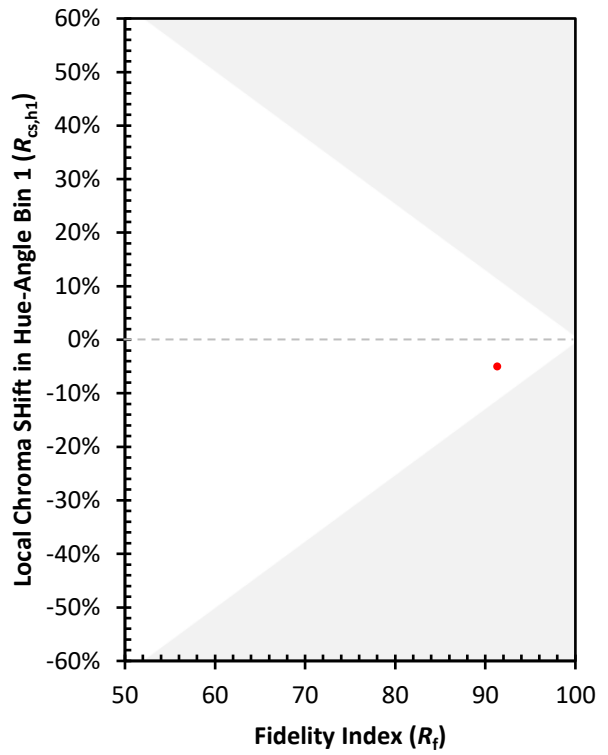
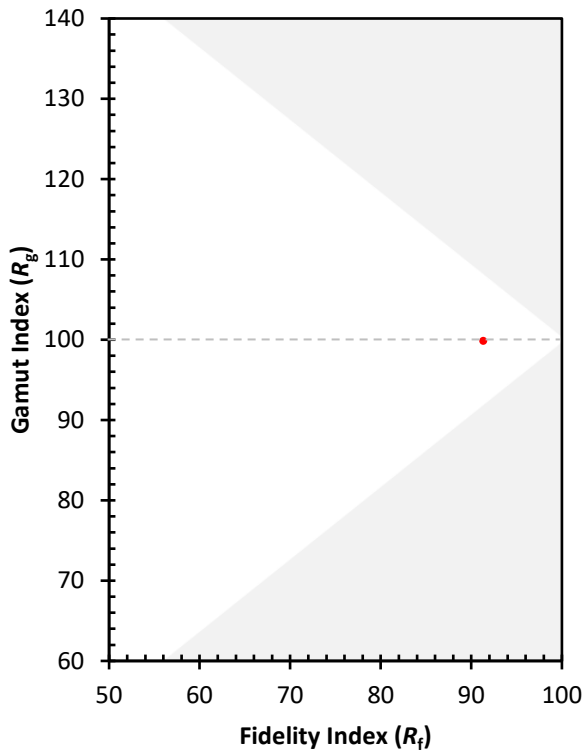
| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 93 | CES51 = 98 | CES76 = 87 |
| CES02 = 62 | CES27 = 91 | CES52 = 99 | CES77 = 88 |
| CES03 = 31 | CES28 = 96 | CES53 = 97 | CES78 = 83 |
| CES04 = 69 | CES29 = 96 | CES54 = 94 | CES79 = 93 |
| CES05 = 49 | CES30 = 93 | CES55 = 92 | CES80 = 92 |
| CES06 = 50 | CES31 = 96 | CES56 = 95 | CES81 = 79 |
| CES07 = 42 | CES32 = 88 | CES57 = 94 | CES82 = 96 |
| CES08 = 41 | CES33 = 99 | CES58 = 95 | CES83 = 95 |
| CES09 = 29 | CES34 = 93 | CES59 = 97 | CES84 = 94 |
| CES10 = 74 | CES35 = 96 | CES60 = 93 | CES85 = 81 |
| CES11 = 57 | CES36 = 81 | CES61 = 92 | CES86 = 83 |
| CES12 = 63 | CES37 = 94 | CES62 = 87 | CES87 = 92 |
| CES13 = 43 | CES38 = 88 | CES63 = 93 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 85 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 97 |
| CES16 = 47 | CES41 = 97 | CES66 = 88 | CES91 = 73 |
| CES17 = 49 | CES42 = 93 | CES67 = 87 | CES92 = 77 |
| CES18 = 56 | CES43 = 93 | CES68 = 88 | CES93 = 86 |
| CES19 = 71 | CES44 = 99 | CES69 = 89 | CES94 = 76 |
| CES20 = 66 | CES45 = 96 | CES70 = 86 | CES95 = 83 |
| CES21 = 85 | CES46 = 97 | CES71 = 81 | CES96 = 92 |
| CES22 = 78 | CES47 = 93 | CES72 = 94 | CES97 = 95 |
| CES23 = 91 | CES48 = 92 | CES73 = 80 | CES98 = 95 |
| CES24 = 90 | CES49 = 96 | CES74 = 91 | CES99 = 93 |
| CES25 = 71 | CES50 = 98 | CES75 = 83 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)