

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: P1432986

Luminaire Tested: EHBR1-36-UNV-N-L850

Issue Date: 3/13/2026

Test Information

Test Method: LM-79-2019
Report Number: P1432986
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2601-654-3)
Test Lab: INNOVATION CENTER
Issue Date: 3/13/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: EHBR1-36-UNV-N-L850
Description: Elevate Round Highbay at, 36000 lumens, 5000K 80CRI LEDs with N lens
Light Source: -
Ballast/Driver: -

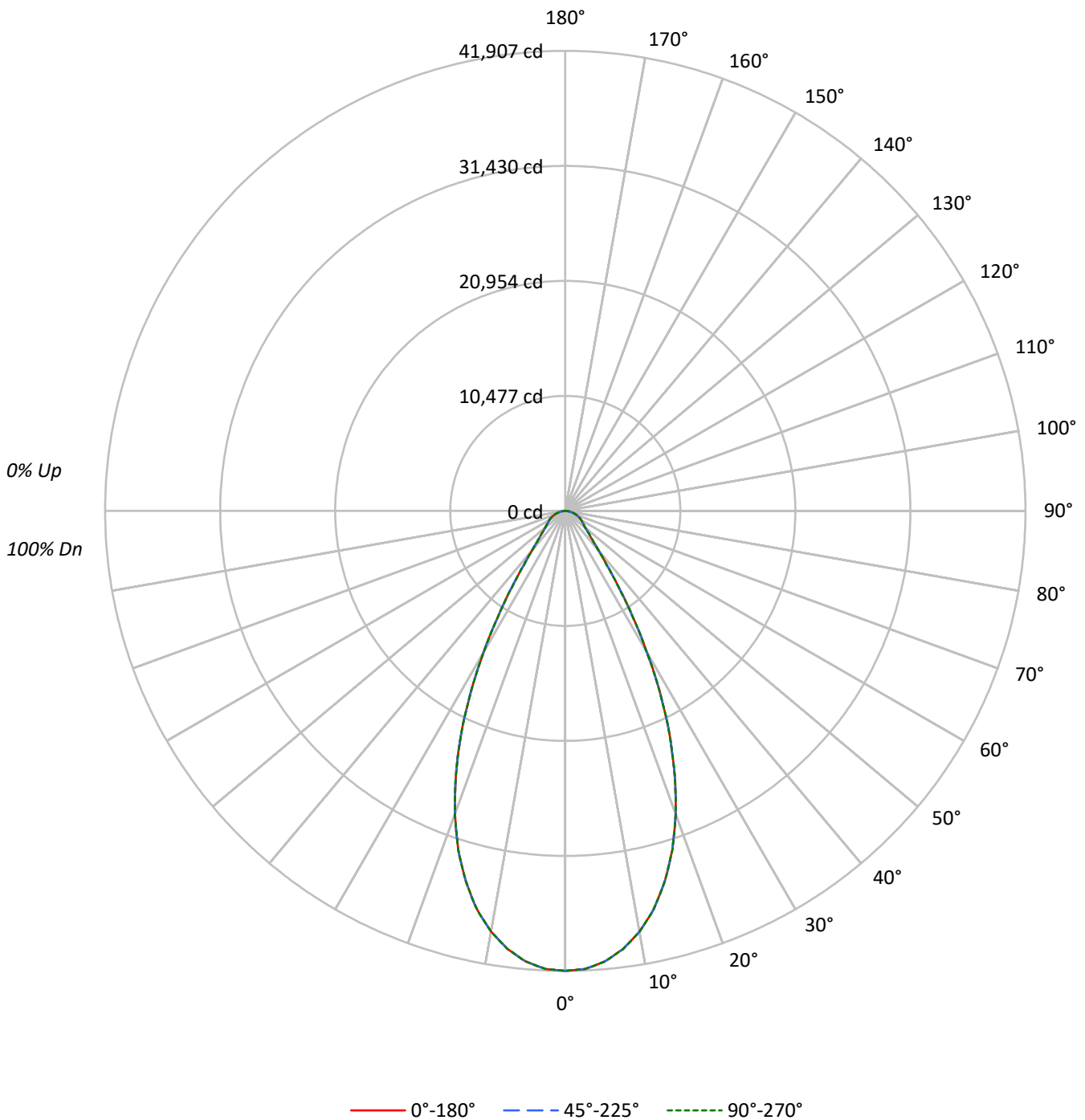
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35910.9 lumens
Efficiency: N/A
Efficacy: 187.6 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.82 / 0.8
Luminous Opening: Circular (Dia: 1.71' x H: 0')
CIE Type: Direct

Input Watts (W): 191.4
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: 24 FT

TEST NUMBER: P1432986
CATALOG NUMBER: EHBR1-36-UNV-N-L850

Luminous Intensity Polar Plot





TEST NUMBER: P1432986
 CATALOG NUMBER: EHBR1-36-UNV-N-L850

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 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 | 100 | 100 |
| 1 | 112 | 109 | 106 | 104 | 110 | 107 | 104 | 102 | 103 | 101 | 99 | 99 | 97 | 96 | 96 | 94 | 93 | 91 | 91 | 91 | 91 |
| 2 | 106 | 100 | 96 | 92 | 104 | 98 | 94 | 91 | 95 | 92 | 89 | 92 | 89 | 87 | 89 | 87 | 85 | 83 | 83 | 83 | 83 |
| 3 | 100 | 92 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | 86 | 82 | 79 | 84 | 80 | 78 | 76 | 76 | 76 | 76 |
| 4 | 94 | 86 | 80 | 75 | 92 | 85 | 79 | 74 | 82 | 77 | 74 | 80 | 76 | 73 | 78 | 75 | 72 | 70 | 70 | 70 | 70 |
| 5 | 89 | 80 | 74 | 69 | 87 | 79 | 73 | 68 | 77 | 72 | 68 | 75 | 71 | 67 | 74 | 70 | 67 | 65 | 65 | 65 | 65 |
| 6 | 85 | 75 | 68 | 64 | 83 | 74 | 68 | 63 | 72 | 67 | 63 | 71 | 66 | 63 | 70 | 65 | 62 | 61 | 61 | 61 | 61 |
| 7 | 80 | 70 | 64 | 59 | 79 | 70 | 63 | 59 | 68 | 63 | 59 | 67 | 62 | 58 | 66 | 61 | 58 | 57 | 57 | 57 | 57 |
| 8 | 76 | 66 | 60 | 55 | 75 | 66 | 59 | 55 | 64 | 59 | 55 | 63 | 58 | 55 | 62 | 58 | 55 | 53 | 53 | 53 | 53 |
| 9 | 73 | 62 | 56 | 52 | 72 | 62 | 56 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 59 | 55 | 51 | 50 | 50 | 50 | 50 |
| 10 | 69 | 59 | 53 | 49 | 68 | 59 | 53 | 49 | 58 | 52 | 49 | 57 | 52 | 49 | 56 | 52 | 48 | 47 | 47 | 47 | 47 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 196798 | 196798 | 196798 |
| 5° | 194236 | 194236 | 194236 |
| 10° | 185566 | 185566 | 185566 |
| 15° | 169978 | 169978 | 169978 |
| 20° | 146827 | 146827 | 146827 |
| 25° | 116360 | 116360 | 116360 |
| 30° | 80491 | 80491 | 80491 |
| 35° | 48235 | 48235 | 48235 |
| 40° | 28820 | 28820 | 28820 |
| 45° | 20921 | 20921 | 20921 |
| 50° | 17426 | 17426 | 17426 |
| 55° | 16094 | 16094 | 16094 |
| 60° | 15722 | 15722 | 15722 |
| 65° | 15403 | 15403 | 15403 |
| 70° | 14880 | 14880 | 14880 |
| 75° | 14271 | 14271 | 14271 |
| 80° | 13184 | 13184 | 13184 |
| 85° | 10868 | 10868 | 10868 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20921 cd/sqm



TEST NUMBER: P1432986
 CATALOG NUMBER: EHBR1-36-UNV-N-L850

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 3860.3 | 10.7 |
| 10°-20° | 9689.9 | 27.0 |
| 20°-30° | 10131.8 | 28.2 |
| 30°-40° | 5489.7 | 15.3 |
| 40°-50° | 2525.5 | 7.0 |
| 50°-60° | 1779.8 | 5.0 |
| 60°-70° | 1369.7 | 3.8 |
| 70°-80° | 830.3 | 2.3 |
| 80°-90° | 233.8 | 0.7 |
| 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° | 23682.0 | 65.9 |
| 0°-40° | 29171.8 | 81.2 |
| 0°-60° | 33477.1 | 93.2 |
| 0°-90° | 35910.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 35910.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-------|-------|-------|-------|-------|-------|
| 0° | 41907 | 41907 | 41907 | 41907 | 41907 | |
| 5° | 41204 | 41204 | 41204 | 41204 | 41204 | 3860 |
| 15° | 34962 | 34962 | 34962 | 34962 | 34962 | 9690 |
| 25° | 22457 | 22457 | 22457 | 22457 | 22457 | 10132 |
| 35° | 8414 | 8414 | 8414 | 8414 | 8414 | 5490 |
| 45° | 3150 | 3150 | 3150 | 3150 | 3150 | 2526 |
| 55° | 1966 | 1966 | 1966 | 1966 | 1966 | 1780 |
| 65° | 1386 | 1386 | 1386 | 1386 | 1386 | 1370 |
| 75° | 786 | 786 | 786 | 786 | 786 | 830 |
| 85° | 202 | 202 | 202 | 202 | 202 | 234 |
| 90° | 1 | 1 | 1 | 1 | 1 | |



TEST NUMBER: P1432986
 CATALOG NUMBER: EHBR1-36-UNV-N-L850

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|---------|---------|---------|---------|---------|
| 0° | 41906.7 | 41906.7 | 41906.7 | 41906.7 | 41906.7 |
| 2.5° | 41758.2 | 41758.2 | 41758.2 | 41758.2 | 41758.2 |
| 5° | 41203.8 | 41203.8 | 41203.8 | 41203.8 | 41203.8 |
| 7.5° | 40257.3 | 40257.3 | 40257.3 | 40257.3 | 40257.3 |
| 10° | 38914.6 | 38914.6 | 38914.6 | 38914.6 | 38914.6 |
| 12.5° | 37179.2 | 37179.2 | 37179.2 | 37179.2 | 37179.2 |
| 15° | 34962.2 | 34962.2 | 34962.2 | 34962.2 | 34962.2 |
| 17.5° | 32390.3 | 32390.3 | 32390.3 | 32390.3 | 32390.3 |
| 20° | 29380.2 | 29380.2 | 29380.2 | 29380.2 | 29380.2 |
| 22.5° | 26028.8 | 26028.8 | 26028.8 | 26028.8 | 26028.8 |
| 25° | 22456.6 | 22456.6 | 22456.6 | 22456.6 | 22456.6 |
| 27.5° | 18669.6 | 18669.6 | 18669.6 | 18669.6 | 18669.6 |
| 30° | 14843.7 | 14843.7 | 14843.7 | 14843.7 | 14843.7 |
| 32.5° | 11392.1 | 11392.1 | 11392.1 | 11392.1 | 11392.1 |
| 35° | 8413.7 | 8413.7 | 8413.7 | 8413.7 | 8413.7 |
| 37.5° | 6177.7 | 6177.7 | 6177.7 | 6177.7 | 6177.7 |
| 40° | 4701.3 | 4701.3 | 4701.3 | 4701.3 | 4701.3 |
| 42.5° | 3769.7 | 3769.7 | 3769.7 | 3769.7 | 3769.7 |
| 45° | 3150.2 | 3150.2 | 3150.2 | 3150.2 | 3150.2 |
| 47.5° | 2703.9 | 2703.9 | 2703.9 | 2703.9 | 2703.9 |
| 50° | 2385.2 | 2385.2 | 2385.2 | 2385.2 | 2385.2 |
| 52.5° | 2152.5 | 2152.5 | 2152.5 | 2152.5 | 2152.5 |
| 55° | 1965.7 | 1965.7 | 1965.7 | 1965.7 | 1965.7 |
| 57.5° | 1814.1 | 1814.1 | 1814.1 | 1814.1 | 1814.1 |
| 60° | 1673.9 | 1673.9 | 1673.9 | 1673.9 | 1673.9 |
| 62.5° | 1533.7 | 1533.7 | 1533.7 | 1533.7 | 1533.7 |
| 65° | 1386.2 | 1386.2 | 1386.2 | 1386.2 | 1386.2 |
| 67.5° | 1235.9 | 1235.9 | 1235.9 | 1235.9 | 1235.9 |
| 70° | 1083.7 | 1083.7 | 1083.7 | 1083.7 | 1083.7 |
| 72.5° | 935.7 | 935.7 | 935.7 | 935.7 | 935.7 |
| 75° | 786.5 | 786.5 | 786.5 | 786.5 | 786.5 |
| 77.5° | 640.4 | 640.4 | 640.4 | 640.4 | 640.4 |
| 80° | 487.5 | 487.5 | 487.5 | 487.5 | 487.5 |
| 82.5° | 341.3 | 341.3 | 341.3 | 341.3 | 341.3 |
| 85° | 201.7 | 201.7 | 201.7 | 201.7 | 201.7 |
| 87.5° | 72.2 | 72.2 | 72.2 | 72.2 | 72.2 |
| 90° | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |



TEST NUMBER: P1432986
 CATALOG NUMBER: EHBR1-36-UNV-N-L850

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 | 18.26 | 19.43 | 18.63 | 19.74 | 20.05 | 18.26 | 19.43 | 18.63 | 19.74 | 20.05 |
| | 3H | 20.14 | 21.18 | 20.52 | 21.51 | 21.87 | 20.14 | 21.18 | 20.52 | 21.51 | 21.87 |
| | 4H | 20.87 | 21.83 | 21.27 | 22.18 | 22.57 | 20.87 | 21.83 | 21.27 | 22.18 | 22.57 |
| | 6H | 21.41 | 22.30 | 21.83 | 22.67 | 23.07 | 21.41 | 22.30 | 21.83 | 22.67 | 23.07 |
| | 8H | 21.58 | 22.42 | 22.02 | 22.81 | 23.22 | 21.58 | 22.42 | 22.02 | 22.81 | 23.22 |
| | 12H | 21.68 | 22.48 | 22.11 | 22.86 | 23.29 | 21.68 | 22.48 | 22.11 | 22.86 | 23.29 |
| 4H | 2H | 18.86 | 19.82 | 19.26 | 20.17 | 20.56 | 18.86 | 19.82 | 19.26 | 20.17 | 20.56 |
| | 3H | 20.94 | 21.74 | 21.36 | 22.14 | 22.55 | 20.94 | 21.74 | 21.36 | 22.14 | 22.55 |
| | 4H | 21.80 | 22.51 | 22.23 | 22.93 | 23.37 | 21.80 | 22.51 | 22.23 | 22.93 | 23.37 |
| | 6H | 22.47 | 23.08 | 22.93 | 23.53 | 24.00 | 22.47 | 23.08 | 22.93 | 23.53 | 24.00 |
| | 8H | 22.68 | 23.25 | 23.15 | 23.70 | 24.17 | 22.68 | 23.25 | 23.15 | 23.70 | 24.17 |
| | 12H | 22.81 | 23.31 | 23.30 | 23.80 | 24.28 | 22.81 | 23.31 | 23.30 | 23.80 | 24.28 |
| 8H | 4H | 22.08 | 22.65 | 22.55 | 23.10 | 23.57 | 22.08 | 22.65 | 22.55 | 23.10 | 23.57 |
| | 6H | 22.89 | 23.35 | 23.39 | 23.85 | 24.33 | 22.89 | 23.35 | 23.39 | 23.85 | 24.33 |
| | 8H | 23.18 | 23.59 | 23.71 | 24.11 | 24.60 | 23.18 | 23.59 | 23.71 | 24.11 | 24.60 |
| | 12H | 23.39 | 23.75 | 23.91 | 24.25 | 24.82 | 23.39 | 23.75 | 23.91 | 24.25 | 24.82 |
| 12H | 4H | 22.09 | 22.59 | 22.58 | 23.08 | 23.55 | 22.09 | 22.59 | 22.58 | 23.08 | 23.55 |
| | 6H | 22.93 | 23.34 | 23.46 | 23.86 | 24.36 | 22.93 | 23.34 | 23.46 | 23.86 | 24.36 |
| | 8H | 23.28 | 23.64 | 23.80 | 24.14 | 24.71 | 23.28 | 23.64 | 23.80 | 24.14 | 24.71 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-472-4

Test Date: 07/31/2025

Luminaire Tested: EHBR-60-L850-N

Data in this report applies to families of products including EHBR-60-L850-N

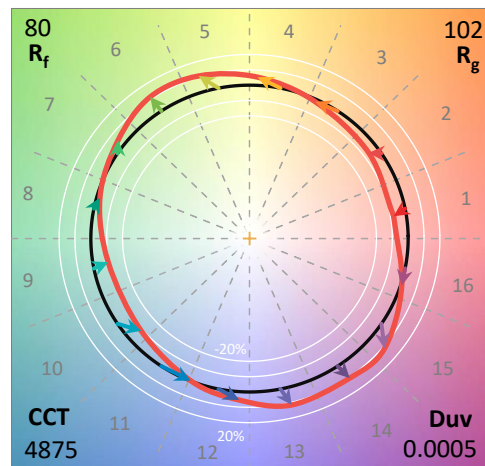
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-472-4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/05/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Metalux
 Catalog Number: **EHBR-60-L850-N**
 Description: Elevate Round Highbay at, 60000 lumens, 5000K 80CRI LEDs with N lens

Spectral Parameters

CCT (K): 4875
 CIE u': 0.2124
 CIE v': 0.4871
 Duv: 0.0005
 CIE x: 0.3488
 CIE y: 0.3555
 CIE z: 0.2957
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 573
 Purity: 11.33556
 Rf: 80
 Rg: 102.3

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 82.3 | | |
| R1: | 85.0 | R9: | 43.9 |
| R2: | 83.1 | R10: | 57.4 |
| R3: | 78.8 | R11: | 83.1 |
| R4: | 84.0 | R12: | 51.0 |
| R5: | 83.0 | R13: | 83.4 |
| R6: | 76.3 | R14: | 87.4 |
| R7: | 86.8 | R15: | 83.4 |
| R8: | 81.7 | | |



Test Conditions

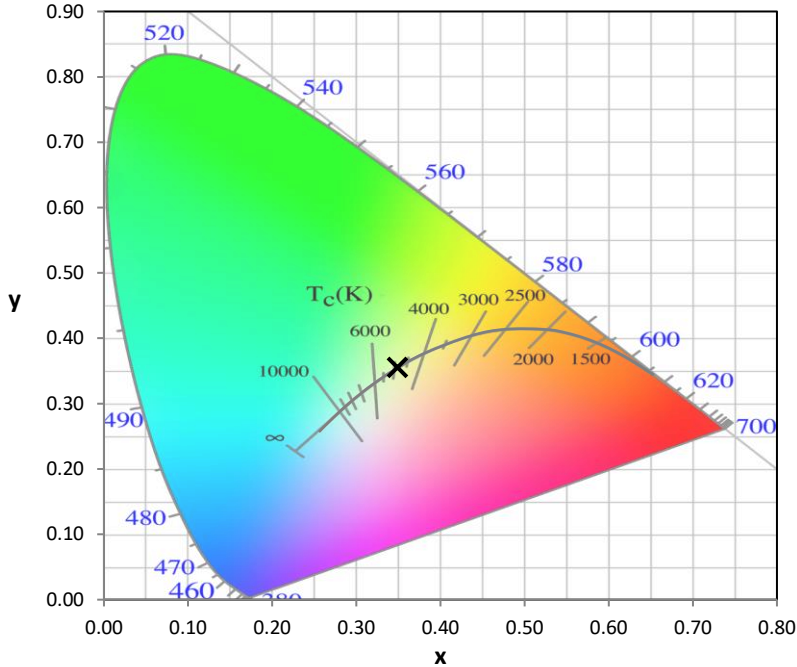
Stabilization Time: 39M
 Operation Time: 1H 39M
 Sphere Temperature (°C): 25.0

REPORT NUMBER: SP1-2506-472-4

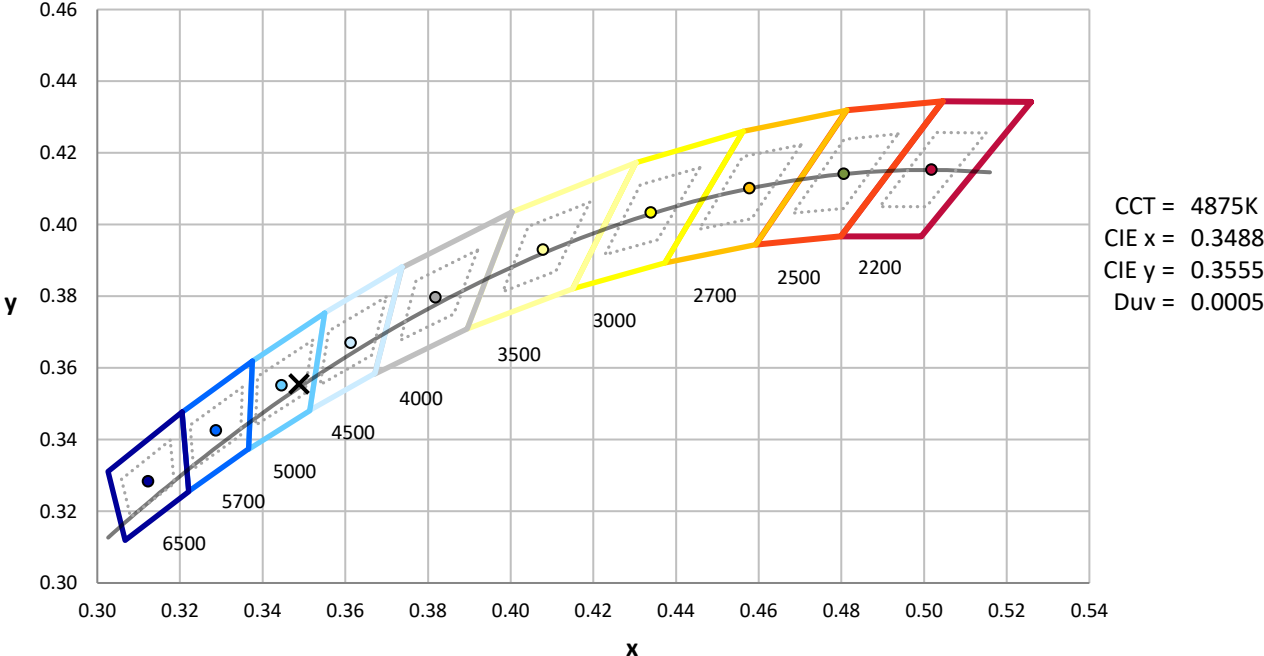
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter |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



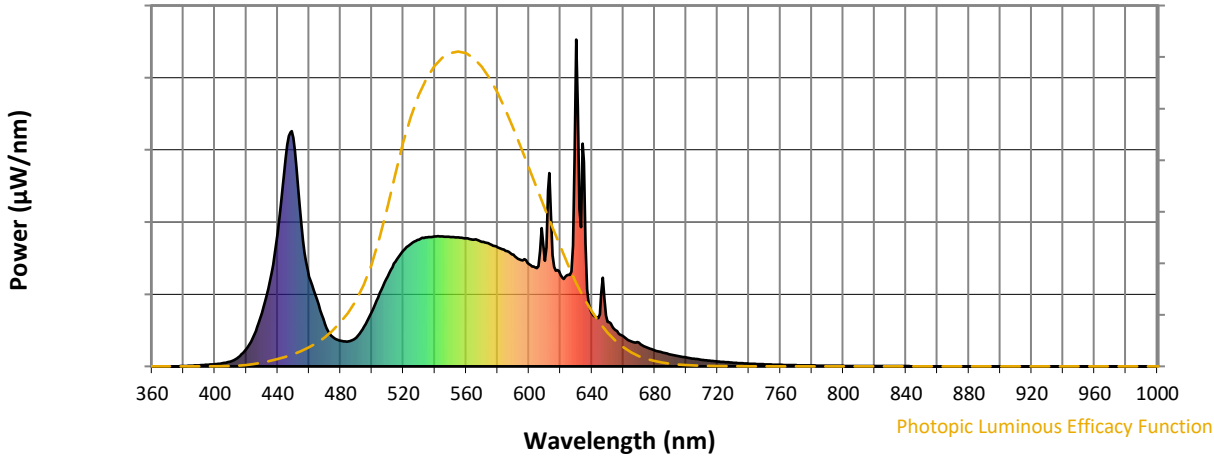
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

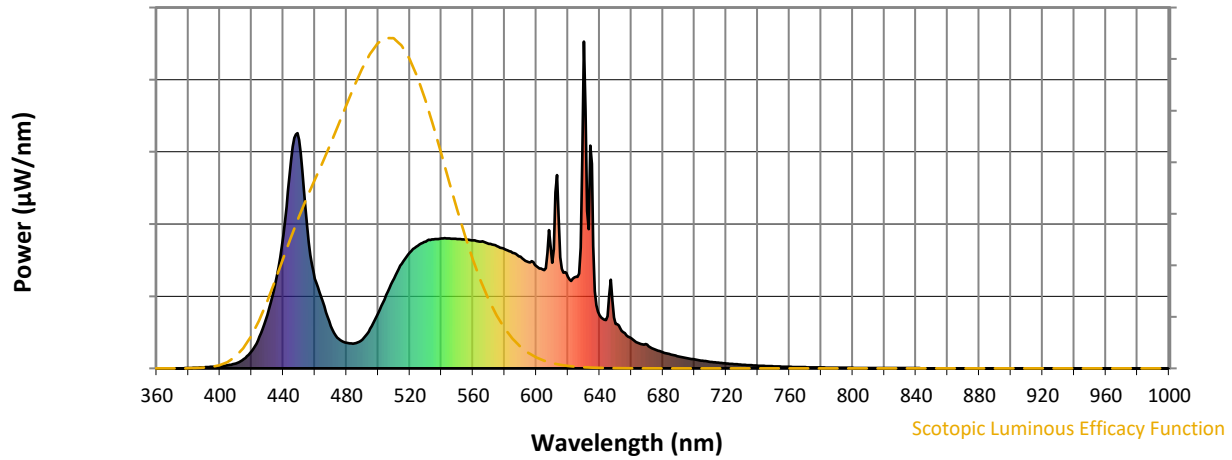


Photopic Lumens: NR

| 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 | 89 | NR | 620 | 280 | NR | 750 | 6 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 280 | NR | 755 | 5 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 168 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 224 | NR | 635 | 626 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 275 | NR | 640 | 163 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 321 | NR | 645 | 160 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 354 | NR | 650 | 136 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 375 | NR | 655 | 111 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 388 | NR | 660 | 93 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 10 | NR | 535 | 395 | NR | 665 | 76 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 15 | NR | 540 | 397 | NR | 670 | 72 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 28 | NR | 545 | 398 | NR | 675 | 57 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 53 | NR | 550 | 396 | NR | 680 | 49 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 97 | NR | 555 | 395 | NR | 685 | 42 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 163 | NR | 560 | 392 | NR | 690 | 37 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 261 | NR | 565 | 388 | NR | 695 | 32 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 409 | NR | 570 | 381 | NR | 700 | 27 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 637 | NR | 575 | 374 | NR | 705 | 23 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 699 | NR | 580 | 365 | NR | 710 | 20 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 436 | NR | 585 | 354 | NR | 715 | 17 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 274 | NR | 590 | 342 | NR | 720 | 15 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 205 | NR | 595 | 325 | NR | 725 | 13 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 130 | NR | 600 | 313 | NR | 730 | 11 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 90 | NR | 605 | 301 | NR | 735 | 10 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 78 | NR | 610 | 323 | NR | 740 | 8 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 77 | NR | 615 | 340 | NR | 745 | 7 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-4

Scotopic Flux vs. Wavelength



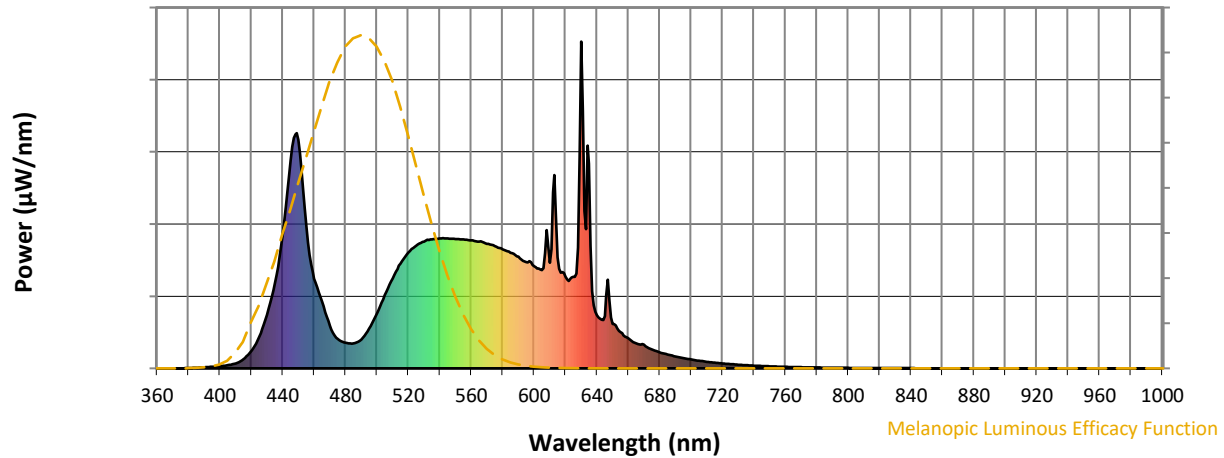
Scotopic Lumens: NR

S/P: 1.82

| 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 | 89 | NR | 620 | 280 | NR | 750 | 6 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 280 | NR | 755 | 5 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 168 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 224 | NR | 635 | 626 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 275 | NR | 640 | 163 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 321 | NR | 645 | 160 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 354 | NR | 650 | 136 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 375 | NR | 655 | 111 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 388 | NR | 660 | 93 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 10 | NR | 535 | 395 | NR | 665 | 76 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 15 | NR | 540 | 397 | NR | 670 | 72 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 28 | NR | 545 | 398 | NR | 675 | 57 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 53 | NR | 550 | 396 | NR | 680 | 49 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 97 | NR | 555 | 395 | NR | 685 | 42 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 163 | NR | 560 | 392 | NR | 690 | 37 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 261 | NR | 565 | 388 | NR | 695 | 32 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 409 | NR | 570 | 381 | NR | 700 | 27 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 637 | NR | 575 | 374 | NR | 705 | 23 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 699 | NR | 580 | 365 | NR | 710 | 20 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 436 | NR | 585 | 354 | NR | 715 | 17 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 274 | NR | 590 | 342 | NR | 720 | 15 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 205 | NR | 595 | 325 | NR | 725 | 13 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 130 | NR | 600 | 313 | NR | 730 | 11 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 90 | NR | 605 | 301 | NR | 735 | 10 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 78 | NR | 610 | 323 | NR | 740 | 8 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 77 | NR | 615 | 340 | NR | 745 | 7 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-472-4

Melanopic Flux vs. Wavelength



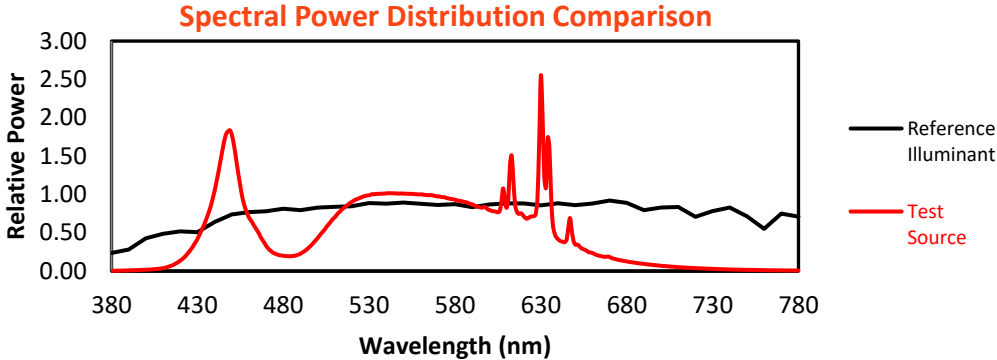
Melanopic Lumens: NR

M/P: 3.71

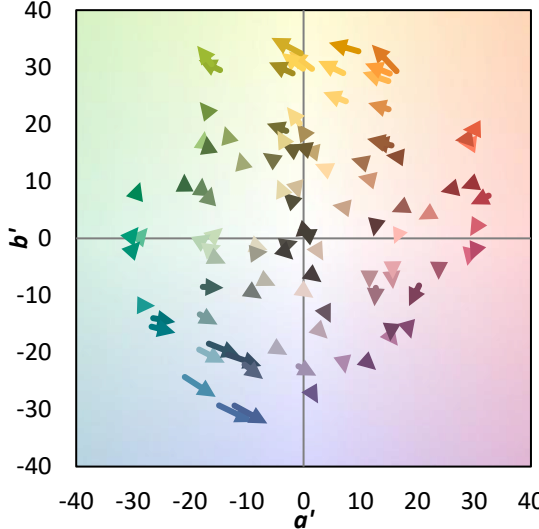
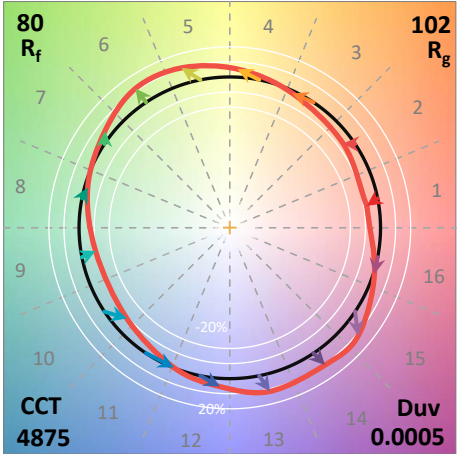
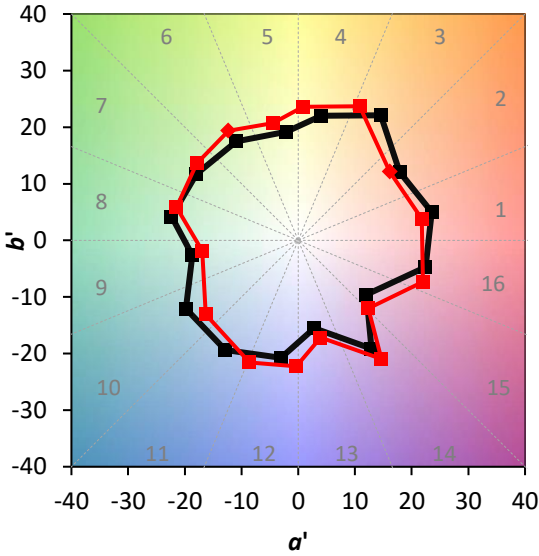
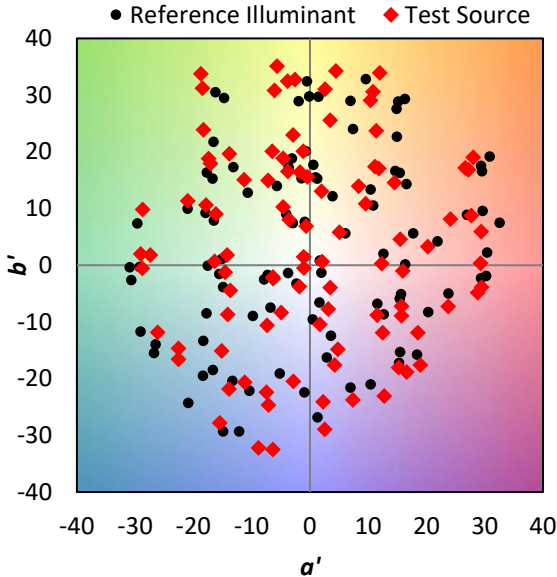
| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 89 | NR | 620 | 280 | NR | 750 | 6 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 121 | NR | 625 | 280 | NR | 755 | 5 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 168 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 224 | NR | 635 | 626 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 1 | NR | 510 | 275 | NR | 640 | 163 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 321 | NR | 645 | 160 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 354 | NR | 650 | 136 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 375 | NR | 655 | 111 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 388 | NR | 660 | 93 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 10 | NR | 535 | 395 | NR | 665 | 76 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 15 | NR | 540 | 397 | NR | 670 | 72 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 28 | NR | 545 | 398 | NR | 675 | 57 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 53 | NR | 550 | 396 | NR | 680 | 49 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 97 | NR | 555 | 395 | NR | 685 | 42 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 163 | NR | 560 | 392 | NR | 690 | 37 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 261 | NR | 565 | 388 | NR | 695 | 32 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 409 | NR | 570 | 381 | NR | 700 | 27 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 637 | NR | 575 | 374 | NR | 705 | 23 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 699 | NR | 580 | 365 | NR | 710 | 20 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 436 | NR | 585 | 354 | NR | 715 | 17 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 274 | NR | 590 | 342 | NR | 720 | 15 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 205 | NR | 595 | 325 | NR | 725 | 13 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 130 | NR | 600 | 313 | NR | 730 | 11 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 90 | NR | 605 | 301 | NR | 735 | 10 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 78 | NR | 610 | 323 | NR | 740 | 8 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 77 | NR | 615 | 340 | NR | 745 | 7 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 80$
 $R_g = 102.3$
 $CIE R_a = 82.3$
 $R_9 = 43.9$

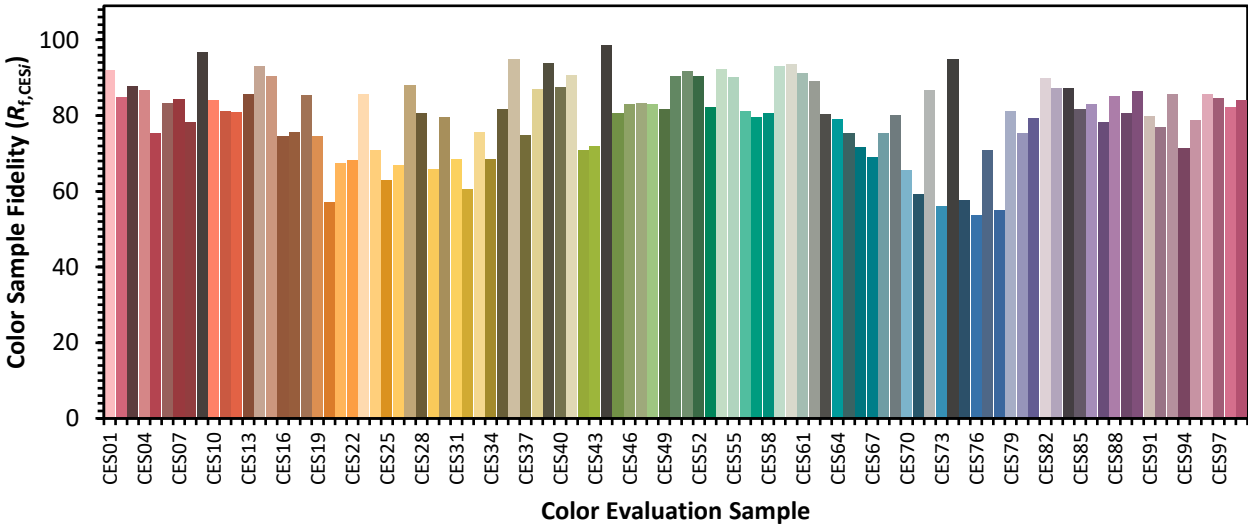


Color Vector Graphics

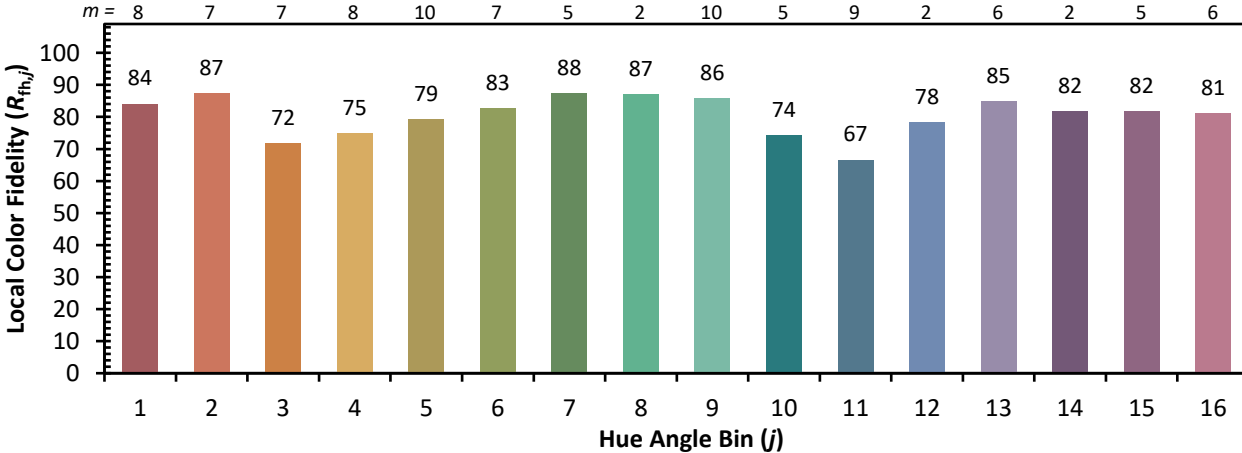
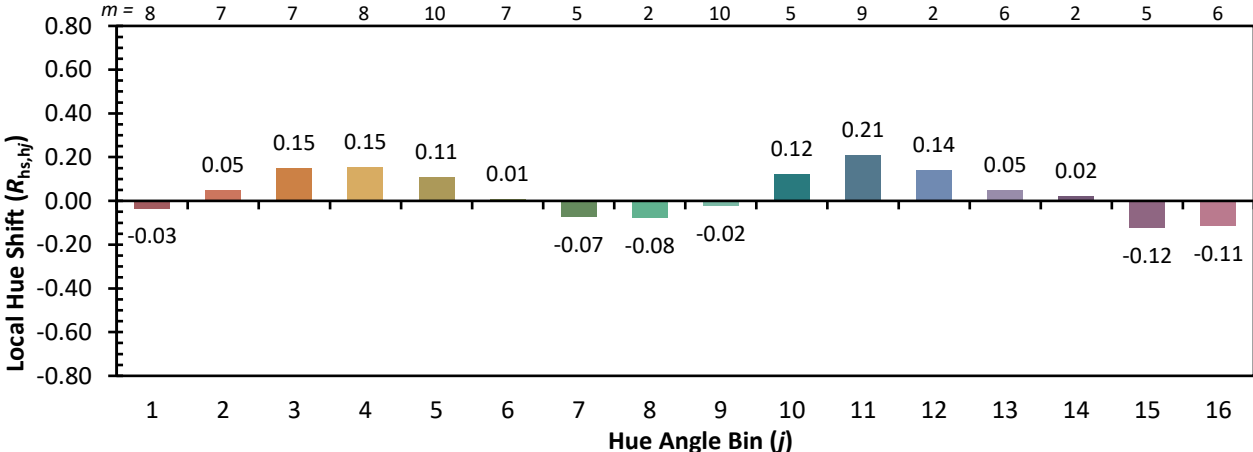
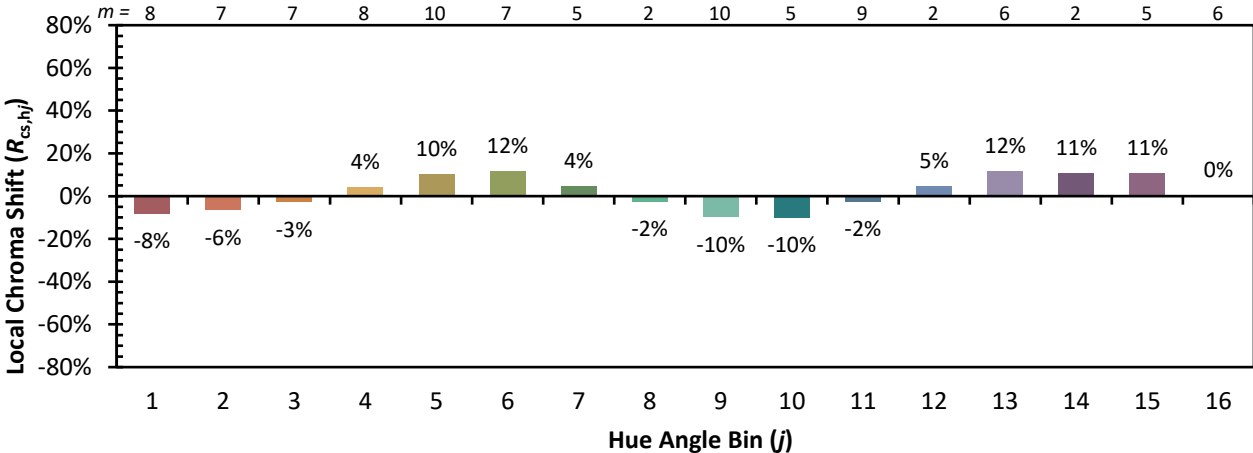


Individual Sample Fidelity Index ($R_{f,i}$)

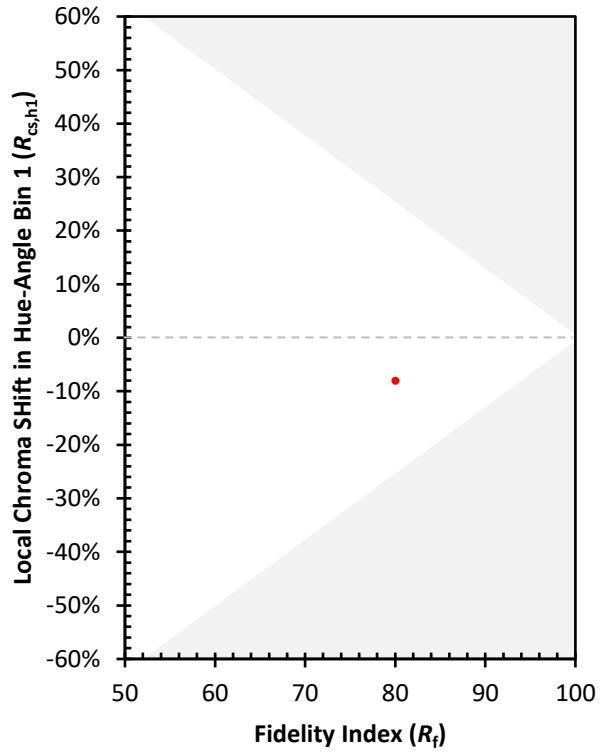
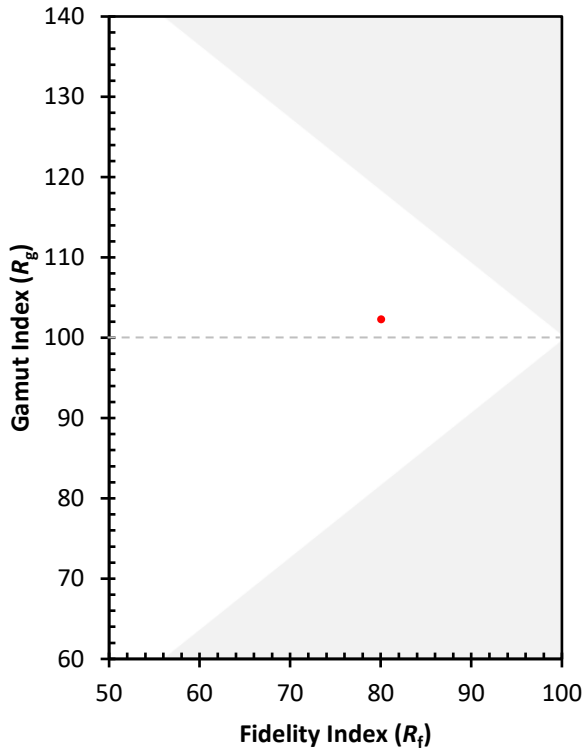
| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 67 | CES51 = 92 | CES76 = 54 |
| CES02 = 60 | CES27 = 88 | CES52 = 91 | CES77 = 71 |
| CES03 = 31 | CES28 = 81 | CES53 = 82 | CES78 = 55 |
| CES04 = 69 | CES29 = 66 | CES54 = 92 | CES79 = 81 |
| CES05 = 47 | CES30 = 80 | CES55 = 90 | CES80 = 75 |
| CES06 = 50 | CES31 = 69 | CES56 = 81 | CES81 = 79 |
| CES07 = 40 | CES32 = 61 | CES57 = 80 | CES82 = 90 |
| CES08 = 39 | CES33 = 76 | CES58 = 81 | CES83 = 87 |
| CES09 = 29 | CES34 = 68 | CES59 = 93 | CES84 = 87 |
| CES10 = 73 | CES35 = 82 | CES60 = 94 | CES85 = 82 |
| CES11 = 56 | CES36 = 95 | CES61 = 91 | CES86 = 83 |
| CES12 = 62 | CES37 = 75 | CES62 = 89 | CES87 = 78 |
| CES13 = 42 | CES38 = 87 | CES63 = 80 | CES88 = 85 |
| CES14 = 74 | CES39 = 94 | CES64 = 79 | CES89 = 81 |
| CES15 = 71 | CES40 = 87 | CES65 = 75 | CES90 = 86 |
| CES16 = 46 | CES41 = 91 | CES66 = 72 | CES91 = 80 |
| CES17 = 48 | CES42 = 71 | CES67 = 69 | CES92 = 77 |
| CES18 = 56 | CES43 = 72 | CES68 = 75 | CES93 = 86 |
| CES19 = 70 | CES44 = 99 | CES69 = 80 | CES94 = 71 |
| CES20 = 65 | CES45 = 81 | CES70 = 66 | CES95 = 79 |
| CES21 = 85 | CES46 = 83 | CES71 = 59 | CES96 = 86 |
| CES22 = 77 | CES47 = 83 | CES72 = 87 | CES97 = 85 |
| CES23 = 91 | CES48 = 83 | CES73 = 56 | CES98 = 82 |
| CES24 = 90 | CES49 = 82 | CES74 = 95 | CES99 = 84 |
| CES25 = 71 | CES50 = 91 | CES75 = 58 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)