

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: LUMIERE

Report Number: P871405

Luminaire Tested: **650-RD-8LED2725-12-***

Issue Date: 09/10/2024



Test Information

Test Method: LM-79-08
Report Number: P871405
Test Lab: INNOVATION CENTER(G3)
Issue Date: 09/10/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMIERE
Catalog Number: 650-RD-8LED2725-12-
Description: LUMIERE BOCA IN GROUND UPLIGHT 650 ROUND W/ 25 DEG NARROW
Light Source: 1 SORAA
SM16-07-25D-927-03. SORAA
Ballast/Driver: -

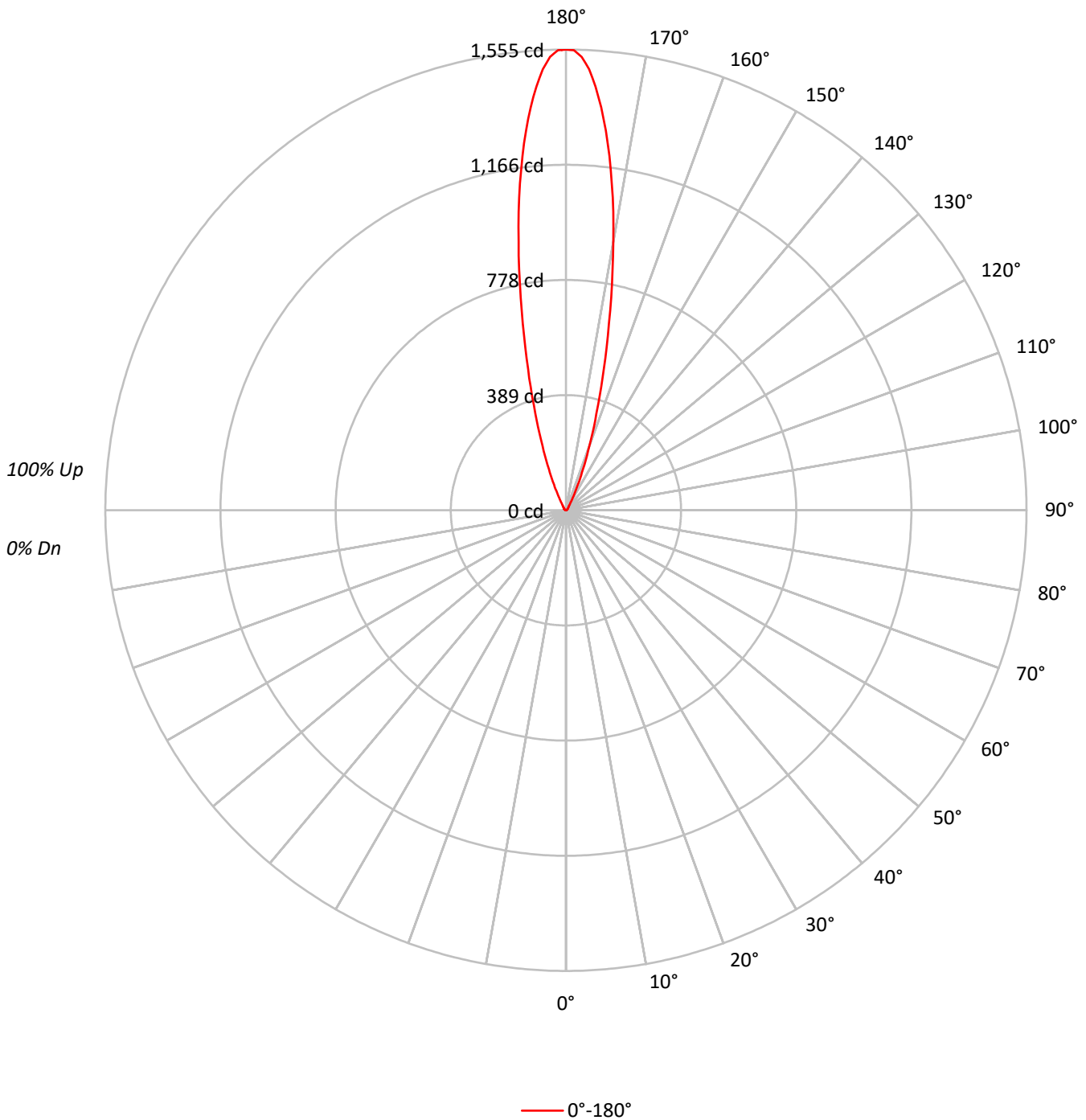
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 332.6 lumens
Efficiency: N/A
Efficacy: 47.5 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Indirect

Input Watts (W): 7
Input Voltage (V): 12.0
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 1
Total Harmonic Distortion (THDi): 0.0
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

TEST NUMBER: P871405
CATALOG NUMBER: 650-RD-8LED2725-12-*

Luminous Intensity Polar Plot





TEST NUMBER: P871405
 CATALOG NUMBER: 650-RD-8LED2725-12-*

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 | 95 | 95 | 95 | 95 | 81 | 81 | 81 | 81 | 56 | 56 | 56 | 32 | 32 | 32 | 10 | 10 | 10 | | | | 0 |
| 1 | 87 | 83 | 79 | 76 | 74 | 71 | 68 | 65 | 48 | 47 | 45 | 28 | 27 | 26 | 9 | 9 | 8 | | | | 0 |
| 2 | 79 | 72 | 66 | 62 | 67 | 62 | 57 | 53 | 42 | 40 | 37 | 24 | 23 | 22 | 8 | 7 | 7 | | | | 0 |
| 3 | 72 | 63 | 57 | 51 | 61 | 54 | 49 | 44 | 37 | 34 | 31 | 21 | 20 | 18 | 7 | 6 | 6 | | | | 0 |
| 4 | 65 | 56 | 48 | 43 | 56 | 48 | 42 | 37 | 33 | 29 | 26 | 19 | 17 | 16 | 6 | 6 | 5 | | | | 0 |
| 5 | 60 | 49 | 42 | 36 | 51 | 42 | 36 | 32 | 29 | 25 | 22 | 17 | 15 | 13 | 5 | 5 | 4 | | | | 0 |
| 6 | 55 | 44 | 36 | 31 | 47 | 38 | 32 | 27 | 26 | 22 | 19 | 15 | 13 | 11 | 5 | 4 | 4 | | | | 0 |
| 7 | 50 | 39 | 32 | 27 | 43 | 34 | 28 | 23 | 23 | 19 | 17 | 14 | 11 | 10 | 4 | 4 | 3 | | | | 0 |
| 8 | 47 | 35 | 28 | 23 | 40 | 30 | 24 | 20 | 21 | 17 | 14 | 12 | 10 | 9 | 4 | 3 | 3 | | | | 0 |
| 9 | 43 | 32 | 25 | 20 | 37 | 27 | 22 | 18 | 19 | 15 | 13 | 11 | 9 | 8 | 4 | 3 | 3 | | | | 0 |
| 10 | 40 | 29 | 22 | 18 | 34 | 25 | 19 | 16 | 17 | 14 | 11 | 10 | 8 | 7 | 3 | 3 | 2 | | | | 0 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|----|
| | 0° |
| 0° | 0 |
| 5° | 0 |
| 10° | 0 |
| 15° | 0 |
| 20° | 0 |
| 25° | 0 |
| 30° | 0 |
| 35° | 0 |
| 40° | 0 |
| 45° | 0 |
| 50° | 0 |
| 55° | 0 |
| 60° | 0 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



TEST NUMBER: P871405
 CATALOG NUMBER: 650-RD-8LED2725-12-*

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 0.0 | 0.0 |
| 10°-20° | 0.0 | 0.0 |
| 20°-30° | 0.0 | 0.0 |
| 30°-40° | 0.0 | 0.0 |
| 40°-50° | 0.0 | 0.0 |
| 50°-60° | 0.0 | 0.0 |
| 60°-70° | 0.0 | 0.0 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.7 | 0.2 |
| 110°-120° | 3.3 | 1.0 |
| 120°-130° | 6.2 | 1.9 |
| 130°-140° | 8.0 | 2.4 |
| 140°-150° | 12.3 | 3.7 |
| 150°-160° | 47.9 | 14.4 |
| 160°-170° | 138.3 | 41.6 |
| 170°-180° | 115.9 | 34.8 |
| 0°-30° | 0.0 | 0.0 |
| 0°-40° | 0.0 | 0.0 |
| 0°-60° | 0.0 | 0.0 |
| 0°-90° | 0.0 | 0.0 |
| 90°-120° | 4.0 | 1.2 |
| 90°-150° | 30.6 | 9.2 |
| 90°-180° | 333.0 | 100.1 |
| 0°-180° | 332.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|------|------|------|
| 0° | 0 | |
| 5° | 0 | 0 |
| 15° | 0 | 0 |
| 25° | 0 | 0 |
| 35° | 0 | 0 |
| 45° | 0 | 0 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | 0 |
| 95° | 0 | 0 |
| 105° | 1 | 1 |
| 115° | 3 | 3 |
| 125° | 7 | 6 |
| 135° | 10 | 8 |
| 145° | 18 | 12 |
| 155° | 95 | 48 |
| 165° | 493 | 138 |
| 175° | 1365 | 116 |
| 180° | 1555 | |



TEST NUMBER: P871405
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CANDELA DISTRIBUTION (FULL):

| | 0° |
|--------|-----|
| 0° | 0.0 |
| 2.5° | 0.0 |
| 5° | 0.0 |
| 7.5° | 0.0 |
| 10° | 0.0 |
| 12.5° | 0.0 |
| 15° | 0.0 |
| 17.5° | 0.0 |
| 20° | 0.0 |
| 22.5° | 0.0 |
| 25° | 0.0 |
| 27.5° | 0.0 |
| 30° | 0.0 |
| 32.5° | 0.0 |
| 35° | 0.0 |
| 37.5° | 0.0 |
| 40° | 0.0 |
| 42.5° | 0.0 |
| 45° | 0.0 |
| 47.5° | 0.0 |
| 50° | 0.0 |
| 52.5° | 0.0 |
| 55° | 0.0 |
| 57.5° | 0.0 |
| 60° | 0.0 |
| 62.5° | 0.0 |
| 65° | 0.0 |
| 67.5° | 0.0 |
| 70° | 0.0 |
| 72.5° | 0.0 |
| 75° | 0.0 |
| 77.5° | 0.0 |
| 80° | 0.0 |
| 82.5° | 0.0 |
| 85° | 0.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |
| 92.5° | 0.0 |
| 95° | 0.0 |
| 97.5° | 0.0 |
| 100° | 0.0 |
| 102.5° | 0.0 |
| 105° | 0.9 |
| 107.5° | 0.9 |
| 110° | 1.9 |



TEST NUMBER: P871405
CATALOG NUMBER: 650-RD-8LED2725-12-*

CANDELA DISTRIBUTION (continued):

| | 0° |
|--------|--------|
| 112.5° | 2.8 |
| 115° | 2.8 |
| 117.5° | 3.8 |
| 120° | 5.7 |
| 122.5° | 6.6 |
| 125° | 6.6 |
| 127.5° | 7.6 |
| 130° | 8.5 |
| 132.5° | 9.5 |
| 135° | 10.4 |
| 137.5° | 11.4 |
| 140° | 12.3 |
| 142.5° | 14.2 |
| 145° | 18.1 |
| 147.5° | 23.8 |
| 150° | 36.1 |
| 152.5° | 57.9 |
| 155° | 95.0 |
| 157.5° | 150.1 |
| 160° | 230.8 |
| 162.5° | 342.0 |
| 165° | 493.0 |
| 166° | 566.2 |
| 167° | 646.9 |
| 168° | 734.3 |
| 169° | 826.5 |
| 170° | 921.5 |
| 171° | 1020.3 |
| 172° | 1114.3 |
| 173° | 1205.5 |
| 174° | 1289.1 |
| 175° | 1365.1 |
| 176° | 1433.5 |
| 177° | 1490.5 |
| 178° | 1531.4 |
| 179° | 1553.2 |
| 180° | 1555.1 |

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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

LUMIERE

Report Number: SP1-2403-332-2

Test Date: 03/20/2024

Luminaire Tested: 650-RD-8LED2736-12-*

Data in this report applies to families of products 650-RD-8LED2736-12-*.

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2403-332-2
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 03/21/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: LUMIERE
 Catalog Number: **650-RD-8LED2736-12-***
 Description: BOCA 650 ROUND W/36 DEG SPOT.

Spectral Parameters

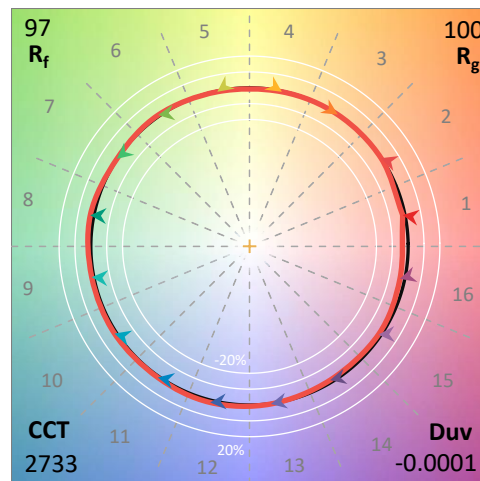
CCT (K): 2733
 CIE u': 0.2610
 CIE v': 0.5265
 Duv: -0.0001
 CIE x: 0.4569
 CIE y: 0.4096
 CIE z: 0.1335
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 584
 Purity: 60.2

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 96.7 | | |
| R1: | 98.0 | R9: | 85.9 |
| R2: | 98.1 | R10: | 96.9 |
| R3: | 99.3 | R11: | 93.5 |
| R4: | 97.2 | R12: | 93.2 |
| R5: | 97.4 | R13: | 97.5 |
| R6: | 94.3 | R14: | 98.7 |
| R7: | 96.0 | | |
| R8: | 93.5 | | |

Rf: 96.6
 Rg: 99.7

Test Conditions

Stabilization Time: 22M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 24.8/43%
 Sphere Temperature (°C): 25.0

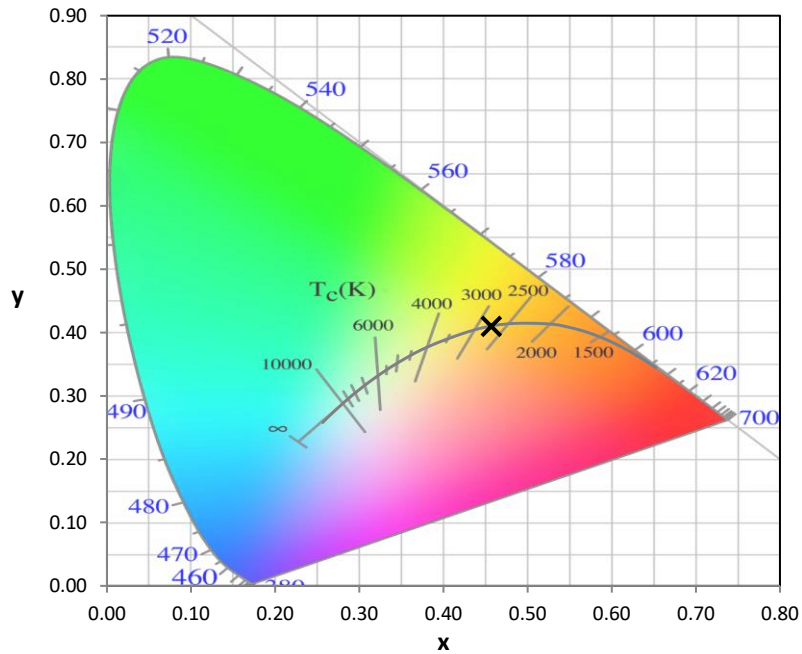


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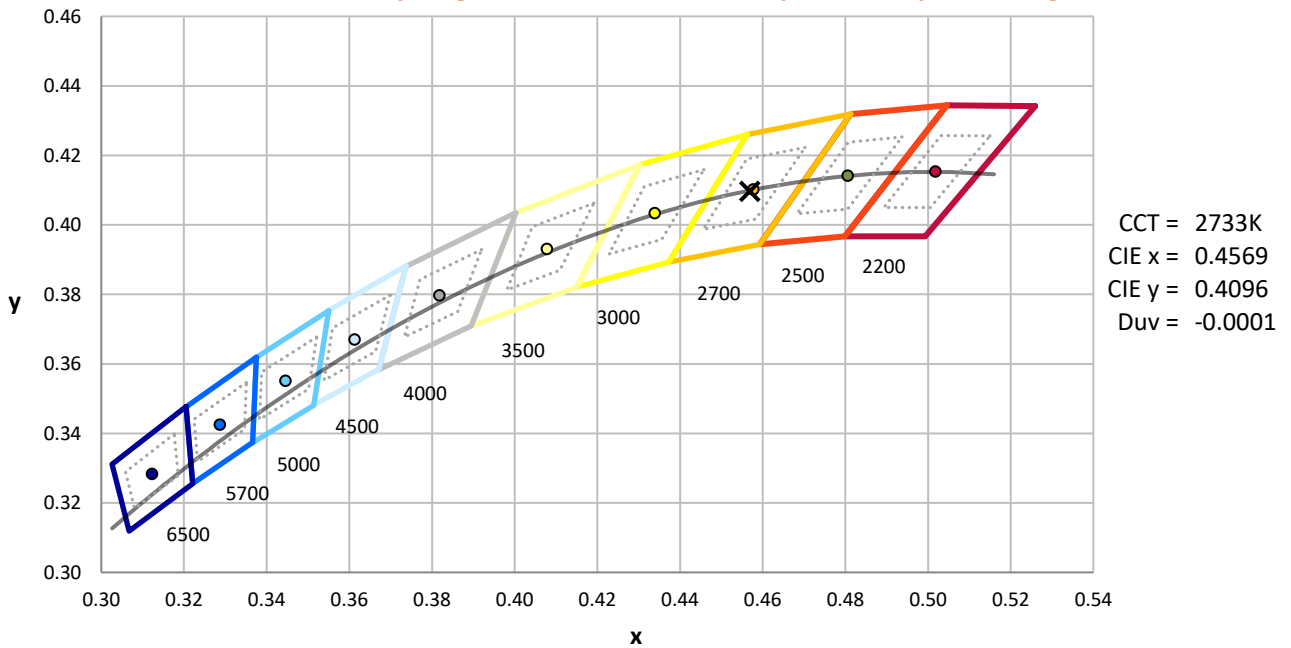
| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 2/12/2024 | 8/12/2024 |
| Power Meter | 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



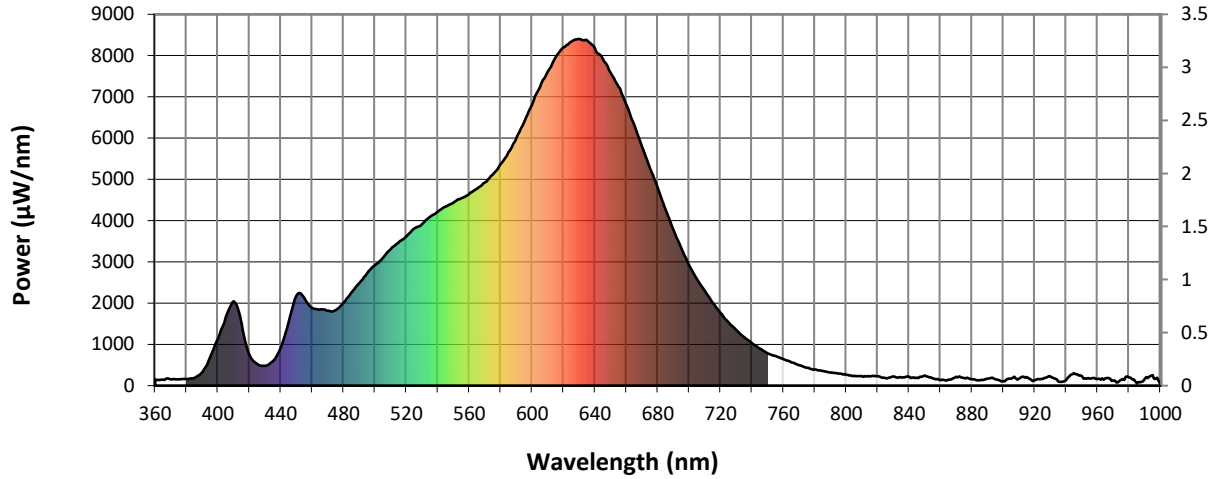
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2403-332-2

Photopic Flux vs. Wavelength

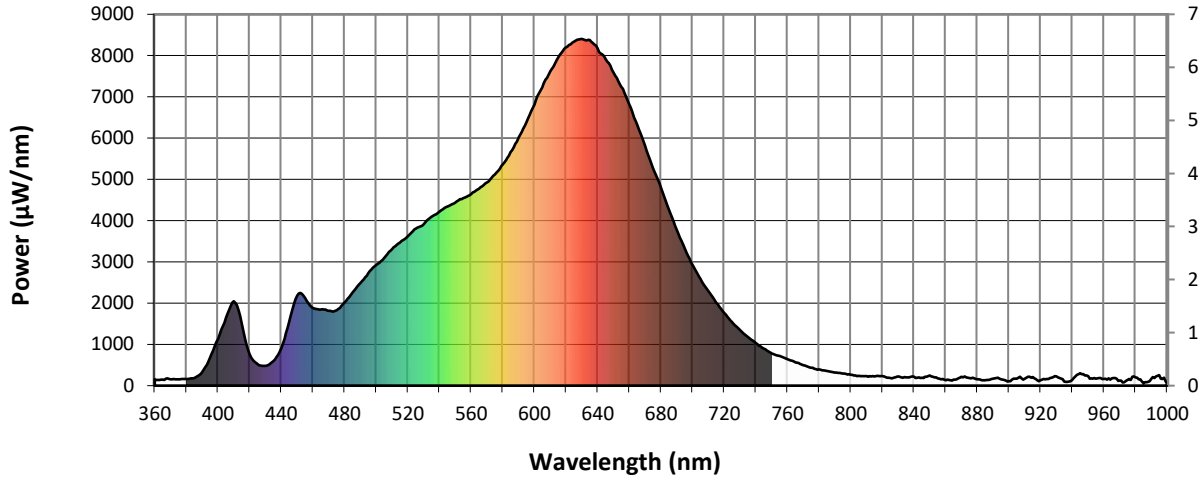


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| λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360 | 150 | NR | 490 | 2490 | NR | 620 | 8194 | NR | 750 | 783 | NR | 880 | 155 | NR |
| 365 | 145 | NR | 495 | 2721 | NR | 625 | 8335 | NR | 755 | 716 | NR | 885 | 131 | NR |
| 370 | 154 | NR | 500 | 2919 | NR | 630 | 8403 | NR | 760 | 641 | NR | 890 | 171 | NR |
| 375 | 157 | NR | 505 | 3091 | NR | 635 | 8378 | NR | 765 | 565 | NR | 895 | 157 | NR |
| 380 | 164 | NR | 510 | 3307 | NR | 640 | 8171 | NR | 770 | 494 | NR | 900 | 105 | NR |
| 385 | 187 | NR | 515 | 3466 | NR | 645 | 7919 | NR | 775 | 436 | NR | 905 | 169 | NR |
| 390 | 322 | NR | 520 | 3620 | NR | 650 | 7580 | NR | 780 | 392 | NR | 910 | 171 | NR |
| 395 | 679 | NR | 525 | 3806 | NR | 655 | 7241 | NR | 785 | 357 | NR | 915 | 205 | NR |
| 400 | 1130 | NR | 530 | 3913 | NR | 660 | 6814 | NR | 790 | 313 | NR | 920 | 131 | NR |
| 405 | 1648 | NR | 535 | 4095 | NR | 665 | 6319 | NR | 795 | 295 | NR | 925 | 159 | NR |
| 410 | 2049 | NR | 540 | 4220 | NR | 670 | 5802 | NR | 800 | 264 | NR | 930 | 220 | NR |
| 415 | 1501 | NR | 545 | 4345 | NR | 675 | 5270 | NR | 805 | 237 | NR | 935 | 98 | NR |
| 420 | 754 | NR | 550 | 4438 | NR | 680 | 4796 | NR | 810 | 232 | NR | 940 | 140 | NR |
| 425 | 522 | NR | 555 | 4540 | NR | 685 | 4263 | NR | 815 | 221 | NR | 945 | 300 | NR |
| 430 | 482 | NR | 560 | 4648 | NR | 690 | 3784 | NR | 820 | 231 | NR | 950 | 230 | NR |
| 435 | 594 | NR | 565 | 4780 | NR | 695 | 3334 | NR | 825 | 182 | NR | 955 | 169 | NR |
| 440 | 915 | NR | 570 | 4921 | NR | 700 | 2926 | NR | 830 | 221 | NR | 960 | 160 | NR |
| 445 | 1542 | NR | 575 | 5120 | NR | 705 | 2579 | NR | 835 | 200 | NR | 965 | 175 | NR |
| 450 | 2180 | NR | 580 | 5366 | NR | 710 | 2294 | NR | 840 | 213 | NR | 970 | 122 | NR |
| 455 | 2122 | NR | 585 | 5660 | NR | 715 | 2010 | NR | 845 | 189 | NR | 975 | 140 | NR |
| 460 | 1885 | NR | 590 | 6007 | NR | 720 | 1759 | NR | 850 | 243 | NR | 980 | 198 | NR |
| 465 | 1847 | NR | 595 | 6393 | NR | 725 | 1538 | NR | 855 | 177 | NR | 985 | 61 | NR |
| 470 | 1813 | NR | 600 | 6818 | NR | 730 | 1351 | NR | 860 | 131 | NR | 990 | 160 | NR |
| 475 | 1830 | NR | 605 | 7230 | NR | 735 | 1175 | NR | 865 | 149 | NR | 995 | 254 | NR |
| 480 | 2015 | NR | 610 | 7613 | NR | 740 | 1028 | NR | 870 | 215 | NR | 1000 | 43 | NR |
| 485 | 2252 | NR | 615 | 7957 | NR | 745 | 897 | NR | 875 | 184 | NR | | | |

REPORT NUMBER: SP1-2403-332-2

Scotopic Flux vs. Wavelength



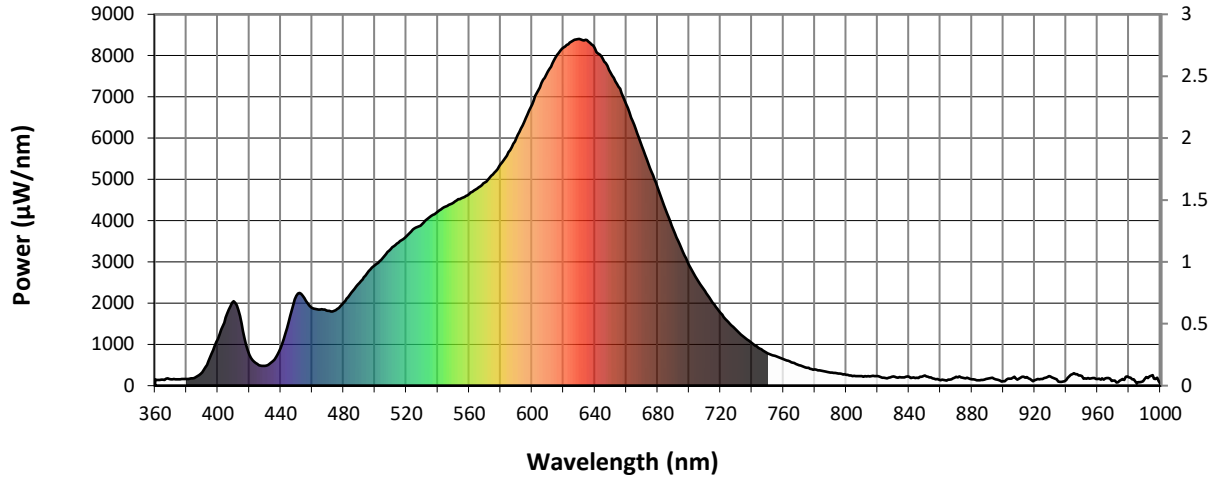
Scotopic Lumens: 499.3

S/P: 1.37

| 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 | 150 | NR | 490 | 2490 | NR | 620 | 8194 | NR | 750 | 783 | NR | 880 | 155 | NR |
| 365 | 145 | NR | 495 | 2721 | NR | 625 | 8335 | NR | 755 | 716 | NR | 885 | 131 | NR |
| 370 | 154 | NR | 500 | 2919 | NR | 630 | 8403 | NR | 760 | 641 | NR | 890 | 171 | NR |
| 375 | 157 | NR | 505 | 3091 | NR | 635 | 8378 | NR | 765 | 565 | NR | 895 | 157 | NR |
| 380 | 164 | NR | 510 | 3307 | NR | 640 | 8171 | NR | 770 | 494 | NR | 900 | 105 | NR |
| 385 | 187 | NR | 515 | 3466 | NR | 645 | 7919 | NR | 775 | 436 | NR | 905 | 169 | NR |
| 390 | 322 | NR | 520 | 3620 | NR | 650 | 7580 | NR | 780 | 392 | NR | 910 | 171 | NR |
| 395 | 679 | NR | 525 | 3806 | NR | 655 | 7241 | NR | 785 | 357 | NR | 915 | 205 | NR |
| 400 | 1130 | NR | 530 | 3913 | NR | 660 | 6814 | NR | 790 | 313 | NR | 920 | 131 | NR |
| 405 | 1648 | NR | 535 | 4095 | NR | 665 | 6319 | NR | 795 | 295 | NR | 925 | 159 | NR |
| 410 | 2049 | NR | 540 | 4220 | NR | 670 | 5802 | NR | 800 | 264 | NR | 930 | 220 | NR |
| 415 | 1501 | NR | 545 | 4345 | NR | 675 | 5270 | NR | 805 | 237 | NR | 935 | 98 | NR |
| 420 | 754 | NR | 550 | 4438 | NR | 680 | 4796 | NR | 810 | 232 | NR | 940 | 140 | NR |
| 425 | 522 | NR | 555 | 4540 | NR | 685 | 4263 | NR | 815 | 221 | NR | 945 | 300 | NR |
| 430 | 482 | NR | 560 | 4648 | NR | 690 | 3784 | NR | 820 | 231 | NR | 950 | 230 | NR |
| 435 | 594 | NR | 565 | 4780 | NR | 695 | 3334 | NR | 825 | 182 | NR | 955 | 169 | NR |
| 440 | 915 | NR | 570 | 4921 | NR | 700 | 2926 | NR | 830 | 221 | NR | 960 | 160 | NR |
| 445 | 1542 | NR | 575 | 5120 | NR | 705 | 2579 | NR | 835 | 200 | NR | 965 | 175 | NR |
| 450 | 2180 | NR | 580 | 5366 | NR | 710 | 2294 | NR | 840 | 213 | NR | 970 | 122 | NR |
| 455 | 2122 | NR | 585 | 5660 | NR | 715 | 2010 | NR | 845 | 189 | NR | 975 | 140 | NR |
| 460 | 1885 | NR | 590 | 6007 | NR | 720 | 1759 | NR | 850 | 243 | NR | 980 | 198 | NR |
| 465 | 1847 | NR | 595 | 6393 | NR | 725 | 1538 | NR | 855 | 177 | NR | 985 | 61 | NR |
| 470 | 1813 | NR | 600 | 6818 | NR | 730 | 1351 | NR | 860 | 131 | NR | 990 | 160 | NR |
| 475 | 1830 | NR | 605 | 7230 | NR | 735 | 1175 | NR | 865 | 149 | NR | 995 | 254 | NR |
| 480 | 2015 | NR | 610 | 7613 | NR | 740 | 1028 | NR | 870 | 215 | NR | 1000 | 43 | NR |
| 485 | 2252 | NR | 615 | 7957 | NR | 745 | 897 | NR | 875 | 184 | NR | | | |

REPORT NUMBER: SP1-2403-332-2

Melanopic Flux vs. Wavelength



Melanopic Lumens: 191.6 M/P: 0.53

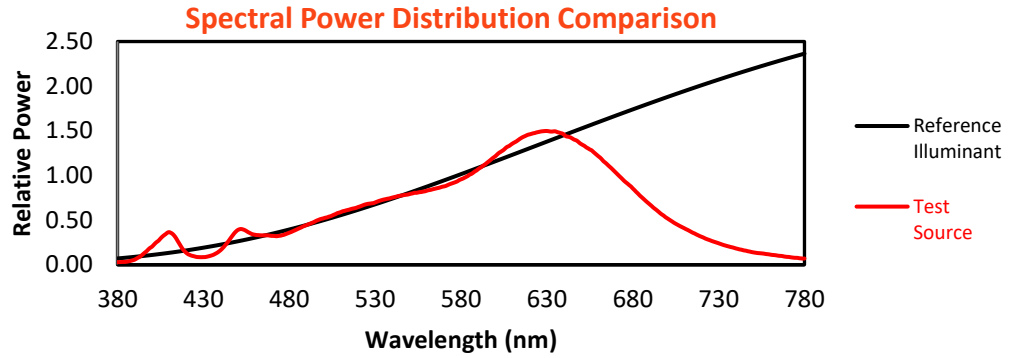
| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 150 | NR | 490 | 2490 | NR | 620 | 8194 | NR | 750 | 783 | NR | 880 | 155 | NR |
| 365 | 145 | NR | 495 | 2721 | NR | 625 | 8335 | NR | 755 | 716 | NR | 885 | 131 | NR |
| 370 | 154 | NR | 500 | 2919 | NR | 630 | 8403 | NR | 760 | 641 | NR | 890 | 171 | NR |
| 375 | 157 | NR | 505 | 3091 | NR | 635 | 8378 | NR | 765 | 565 | NR | 895 | 157 | NR |
| 380 | 164 | NR | 510 | 3307 | NR | 640 | 8171 | NR | 770 | 494 | NR | 900 | 105 | NR |
| 385 | 187 | NR | 515 | 3466 | NR | 645 | 7919 | NR | 775 | 436 | NR | 905 | 169 | NR |
| 390 | 322 | NR | 520 | 3620 | NR | 650 | 7580 | NR | 780 | 392 | NR | 910 | 171 | NR |
| 395 | 679 | NR | 525 | 3806 | NR | 655 | 7241 | NR | 785 | 357 | NR | 915 | 205 | NR |
| 400 | 1130 | NR | 530 | 3913 | NR | 660 | 6814 | NR | 790 | 313 | NR | 920 | 131 | NR |
| 405 | 1648 | NR | 535 | 4095 | NR | 665 | 6319 | NR | 795 | 295 | NR | 925 | 159 | NR |
| 410 | 2049 | NR | 540 | 4220 | NR | 670 | 5802 | NR | 800 | 264 | NR | 930 | 220 | NR |
| 415 | 1501 | NR | 545 | 4345 | NR | 675 | 5270 | NR | 805 | 237 | NR | 935 | 98 | NR |
| 420 | 754 | NR | 550 | 4438 | NR | 680 | 4796 | NR | 810 | 232 | NR | 940 | 140 | NR |
| 425 | 522 | NR | 555 | 4540 | NR | 685 | 4263 | NR | 815 | 221 | NR | 945 | 300 | NR |
| 430 | 482 | NR | 560 | 4648 | NR | 690 | 3784 | NR | 820 | 231 | NR | 950 | 230 | NR |
| 435 | 594 | NR | 565 | 4780 | NR | 695 | 3334 | NR | 825 | 182 | NR | 955 | 169 | NR |
| 440 | 915 | NR | 570 | 4921 | NR | 700 | 2926 | NR | 830 | 221 | NR | 960 | 160 | NR |
| 445 | 1542 | NR | 575 | 5120 | NR | 705 | 2579 | NR | 835 | 200 | NR | 965 | 175 | NR |
| 450 | 2180 | NR | 580 | 5366 | NR | 710 | 2294 | NR | 840 | 213 | NR | 970 | 122 | NR |
| 455 | 2122 | NR | 585 | 5660 | NR | 715 | 2010 | NR | 845 | 189 | NR | 975 | 140 | NR |
| 460 | 1885 | NR | 590 | 6007 | NR | 720 | 1759 | NR | 850 | 243 | NR | 980 | 198 | NR |
| 465 | 1847 | NR | 595 | 6393 | NR | 725 | 1538 | NR | 855 | 177 | NR | 985 | 61 | NR |
| 470 | 1813 | NR | 600 | 6818 | NR | 730 | 1351 | NR | 860 | 131 | NR | 990 | 160 | NR |
| 475 | 1830 | NR | 605 | 7230 | NR | 735 | 1175 | NR | 865 | 149 | NR | 995 | 254 | NR |
| 480 | 2015 | NR | 610 | 7613 | NR | 740 | 1028 | NR | 870 | 215 | NR | 1000 | 43 | NR |
| 485 | 2252 | NR | 615 | 7957 | NR | 745 | 897 | NR | 875 | 184 | NR | | | |

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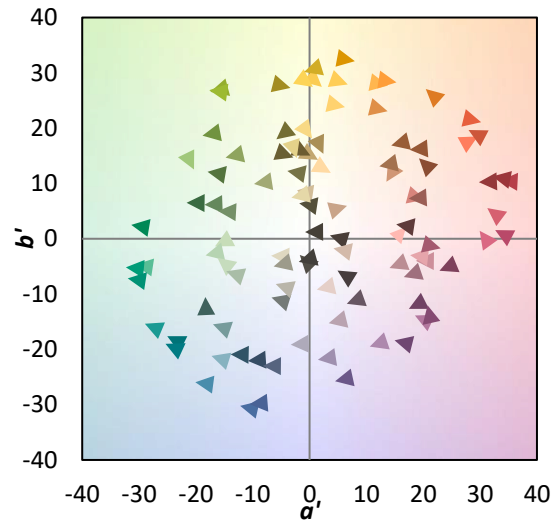
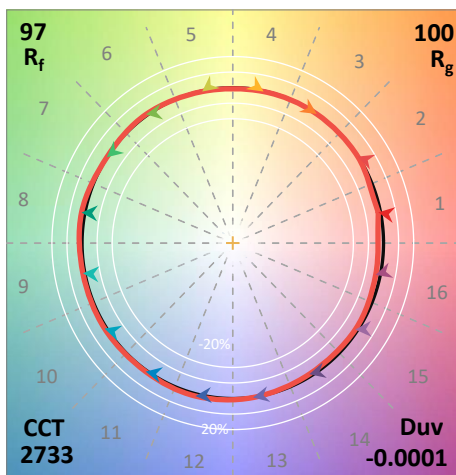
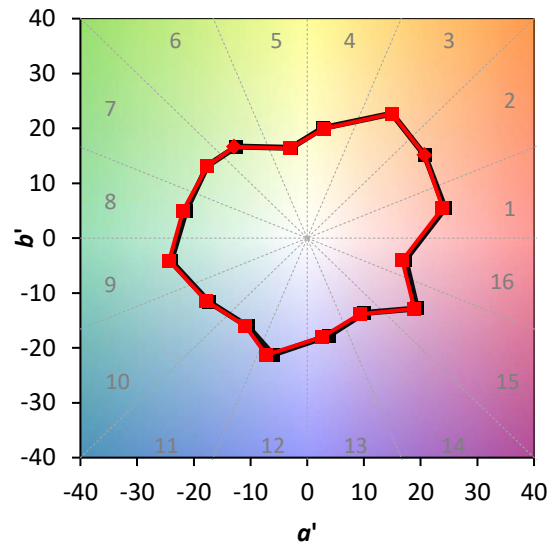
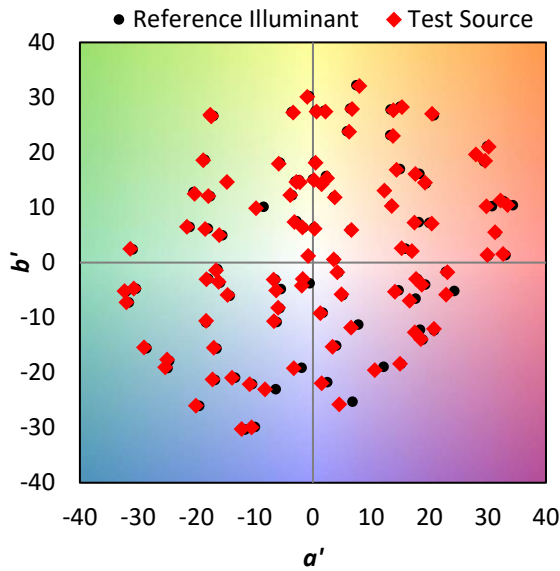
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Summary

$R_f = 96.6$
 $R_g = 99.7$
 CIE $R_a = 96.7$
 $R_9 = 85.9$



Color Vector Graphics

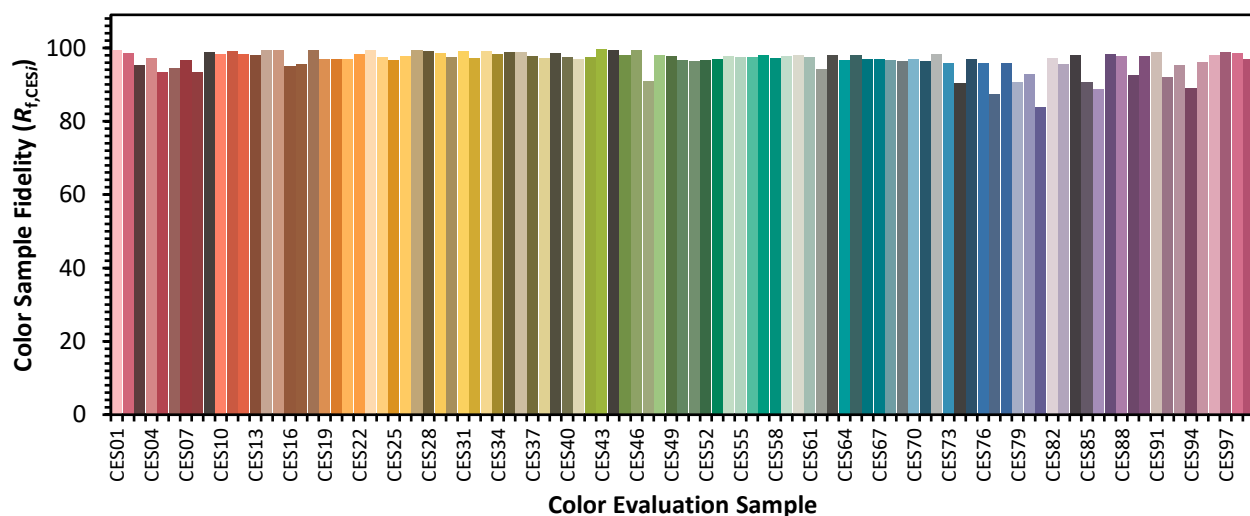


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Individual Sample Fidelity Index ($R_{f,i}$)

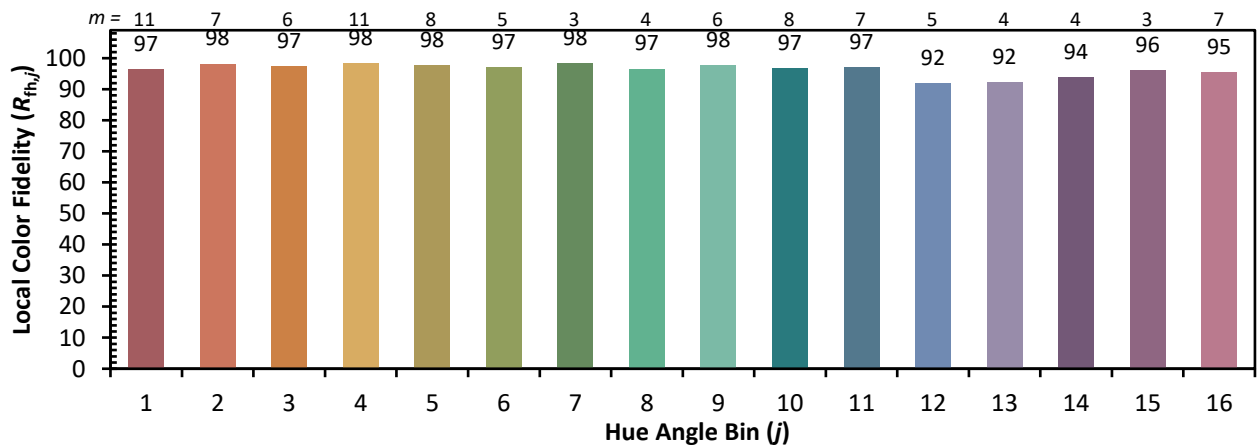
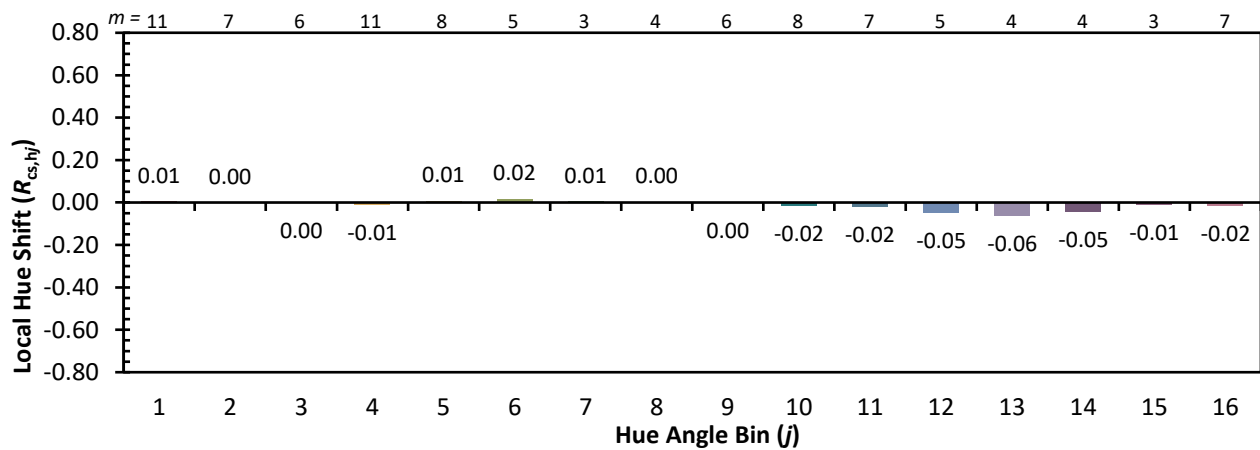
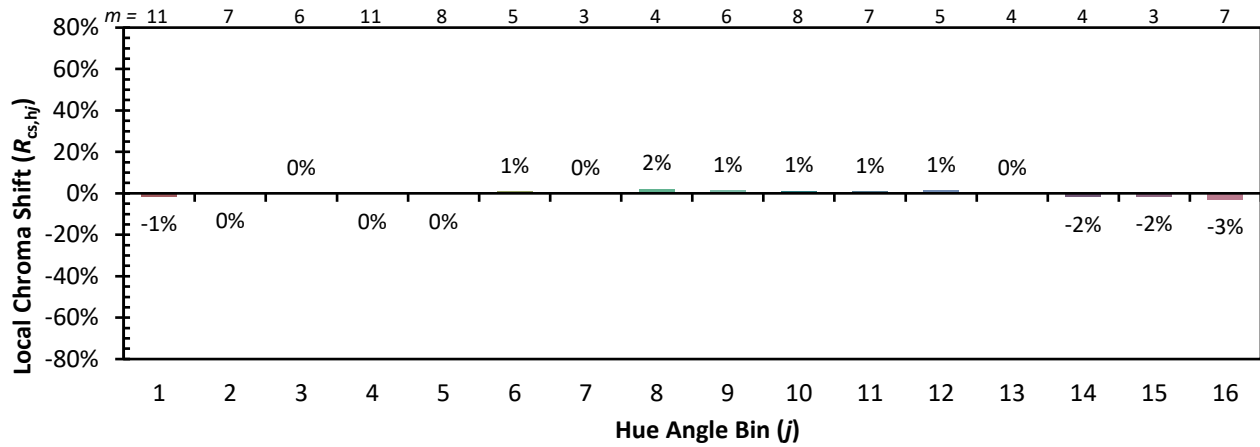
| | | | |
|------------|-------------|------------|------------|
| CES01 = 86 | CES26 = 98 | CES51 = 96 | CES76 = 96 |
| CES02 = 64 | CES27 = 99 | CES52 = 97 | CES77 = 87 |
| CES03 = 32 | CES28 = 99 | CES53 = 97 | CES78 = 96 |
| CES04 = 70 | CES29 = 99 | CES54 = 98 | CES79 = 91 |
| CES05 = 52 | CES30 = 97 | CES55 = 98 | CES80 = 93 |
| CES06 = 52 | CES31 = 99 | CES56 = 97 | CES81 = 84 |
| CES07 = 45 | CES32 = 97 | CES57 = 98 | CES82 = 97 |
| CES08 = 43 | CES33 = 99 | CES58 = 97 | CES83 = 96 |
| CES09 = 29 | CES34 = 98 | CES59 = 98 | CES84 = 98 |
| CES10 = 77 | CES35 = 99 | CES60 = 98 | CES85 = 91 |
| CES11 = 59 | CES36 = 99 | CES61 = 97 | CES86 = 89 |
| CES12 = 66 | CES37 = 98 | CES62 = 94 | CES87 = 98 |
| CES13 = 45 | CES38 = 97 | CES63 = 98 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 97 | CES89 = 93 |
| CES15 = 72 | CES40 = 97 | CES65 = 98 | CES90 = 98 |
| CES16 = 49 | CES41 = 97 | CES66 = 97 | CES91 = 99 |
| CES17 = 50 | CES42 = 97 | CES67 = 97 | CES92 = 92 |
| CES18 = 57 | CES43 = 100 | CES68 = 97 | CES93 = 95 |
| CES19 = 72 | CES44 = 99 | CES69 = 96 | CES94 = 89 |
| CES20 = 68 | CES45 = 98 | CES70 = 97 | CES95 = 96 |
| CES21 = 86 | CES46 = 99 | CES71 = 96 | CES96 = 98 |
| CES22 = 79 | CES47 = 91 | CES72 = 98 | CES97 = 99 |
| CES23 = 92 | CES48 = 98 | CES73 = 96 | CES98 = 98 |
| CES24 = 90 | CES49 = 98 | CES74 = 90 | CES99 = 97 |
| CES25 = 72 | CES50 = 97 | CES75 = 97 | |



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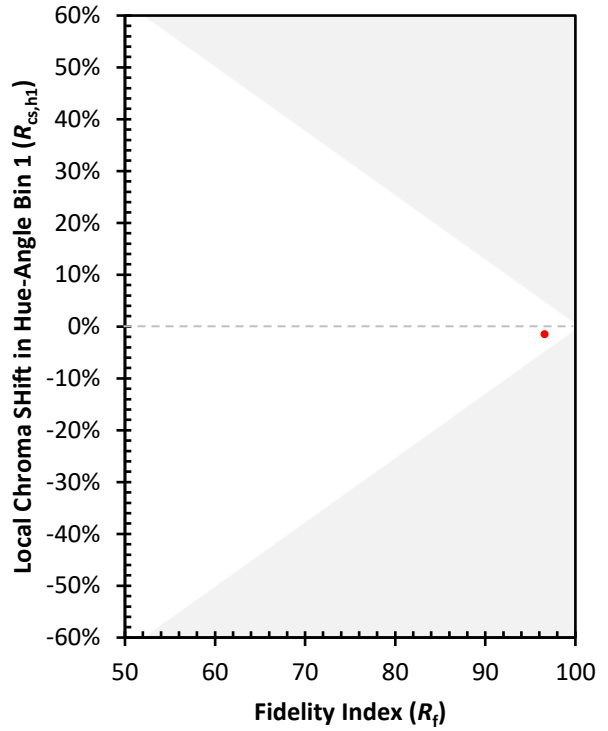
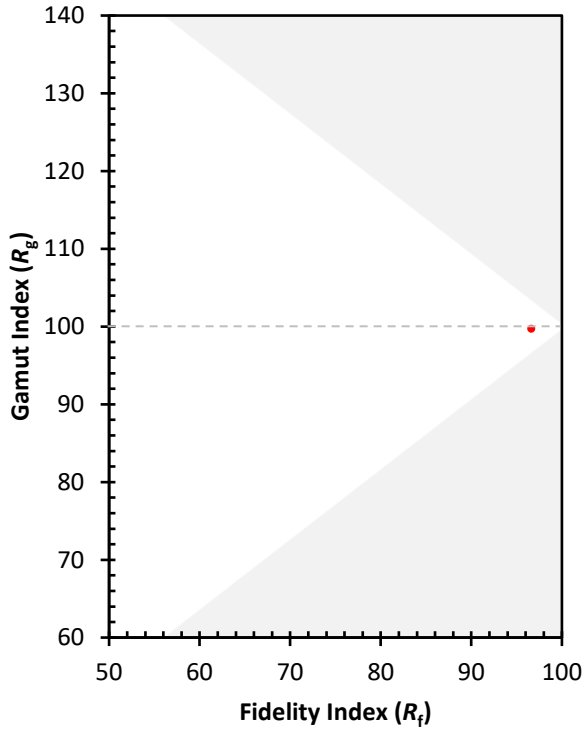
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)