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: McGRAW-EDISON

Report Number: P1367575

Luminaire Tested: **GSS-SB1A-740-U-T4W-HSS**

Issue Date: 02/18/2026

Report Generated By 670245763

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1367575 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1A-740-U-T4W-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 31W 70CRI 4000K FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (26) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 3114.6 lumens |
| Efficiency: | N/A |
| Efficacy: | 100.5 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B0 - U0 - G1 |

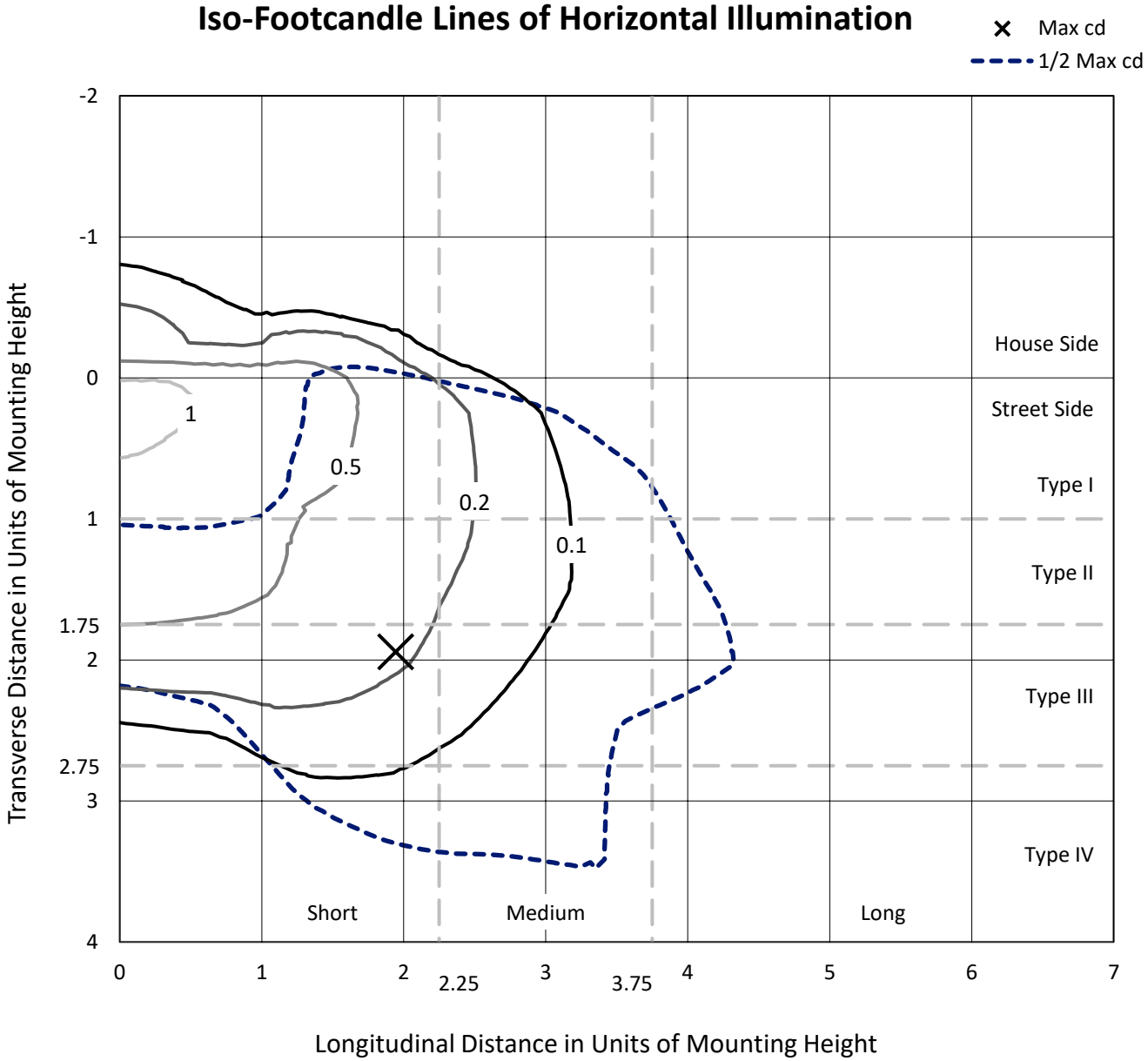
| | |
|---|---|
| Input Watts (W): | 31 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.4% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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REPORT NUMBER: P1367575
CATALOG NUMBER: GSS-SB1A-740-U-T4W-HSS

## Iso-Footcandle Lines of Horizontal Illumination



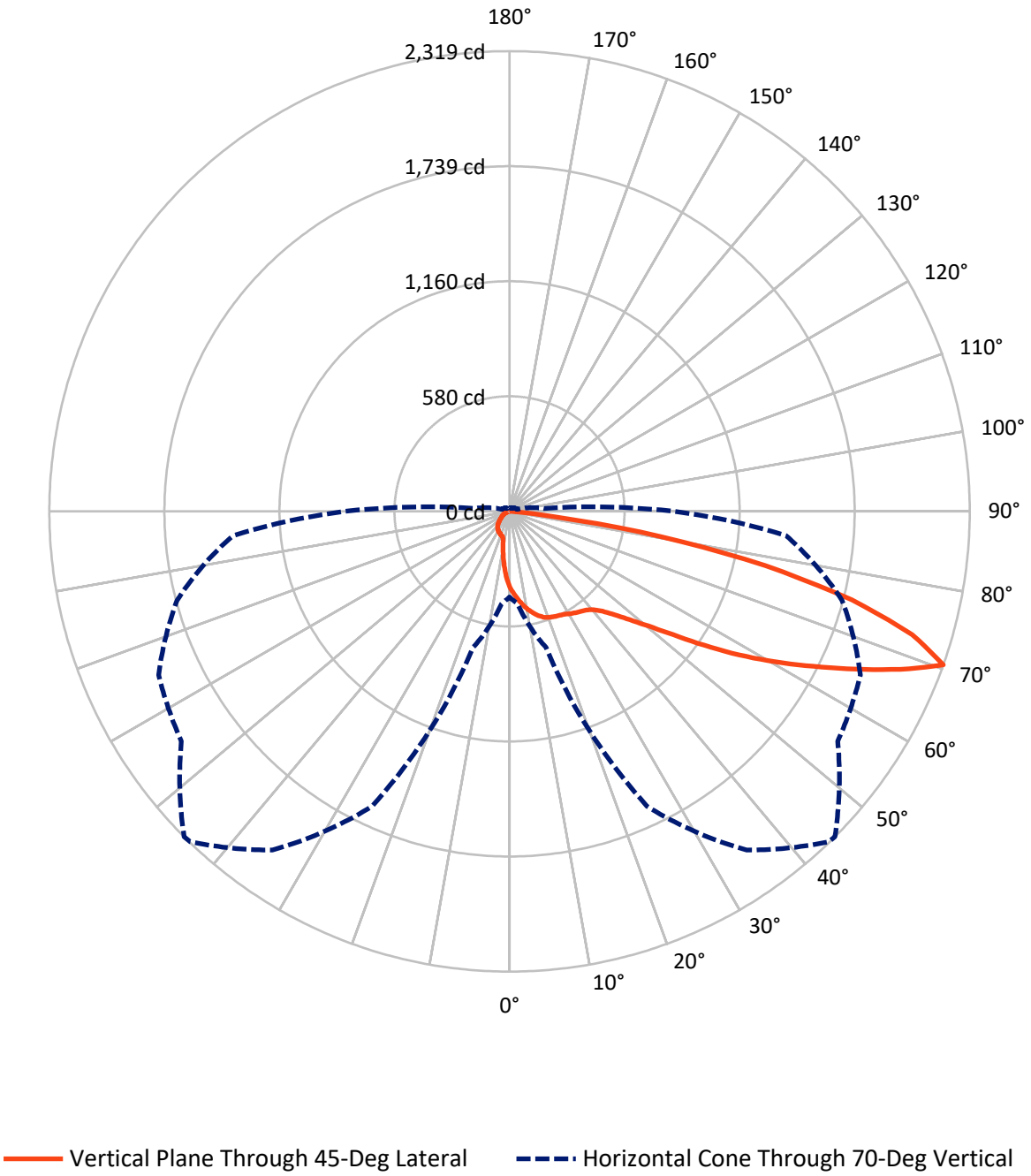

Based on 20 foot mounting height. Maximum calculated value = 1.3 fc
Type IV - Short - N/A

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REPORT NUMBER: P1367575
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## Luminous Intensity Polar Plot



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Scaled Data Report

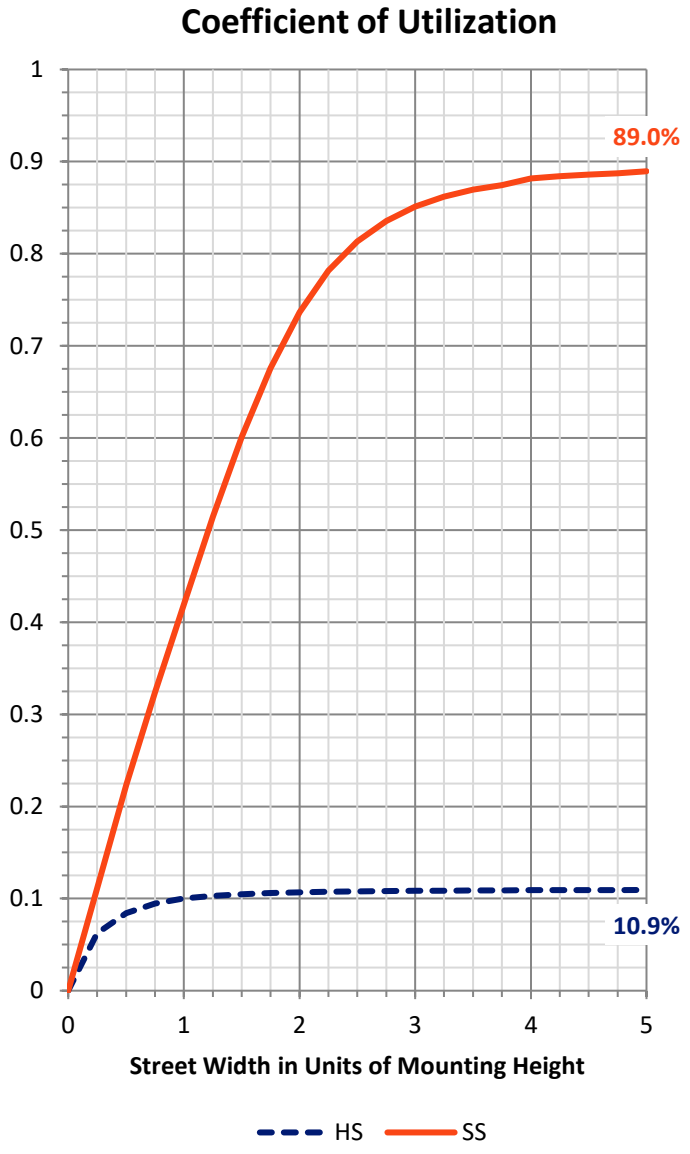
REPORT NUMBER: P1367575
CATALOG NUMBER: GSS-SB1A-740-U-T4W-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 343.9 | 0.0 | 343.9 |
| | % Fixture | 11.0 | 0.0 | 11.0 |
| **Street Side** | Lumens | 2770.6 | 0.0 | 2770.6 |
| | % Fixture | 89.0 | 0.0 | 89.0 |
| **Total** | Lumens | 3114.6 | 0.0 | 3114.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 35.2 | 1.1 |
| 10°-20° | 104.0 | 3.3 |
| 20°-30° | 172.6 | 5.5 |
| 30°-40° | 244.7 | 7.9 |
| 40°-50° | 388.1 | 12.5 |
| 50°-60° | 683.4 | 21.9 |
| 60°-70° | 885.9 | 28.4 |
| 70°-80° | 565.9 | 18.2 |
| 80°-90° | 34.7 | 1.1 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 3114.6 | 100.0 |
| 0°-180° | 3114.6 | 100.0 |



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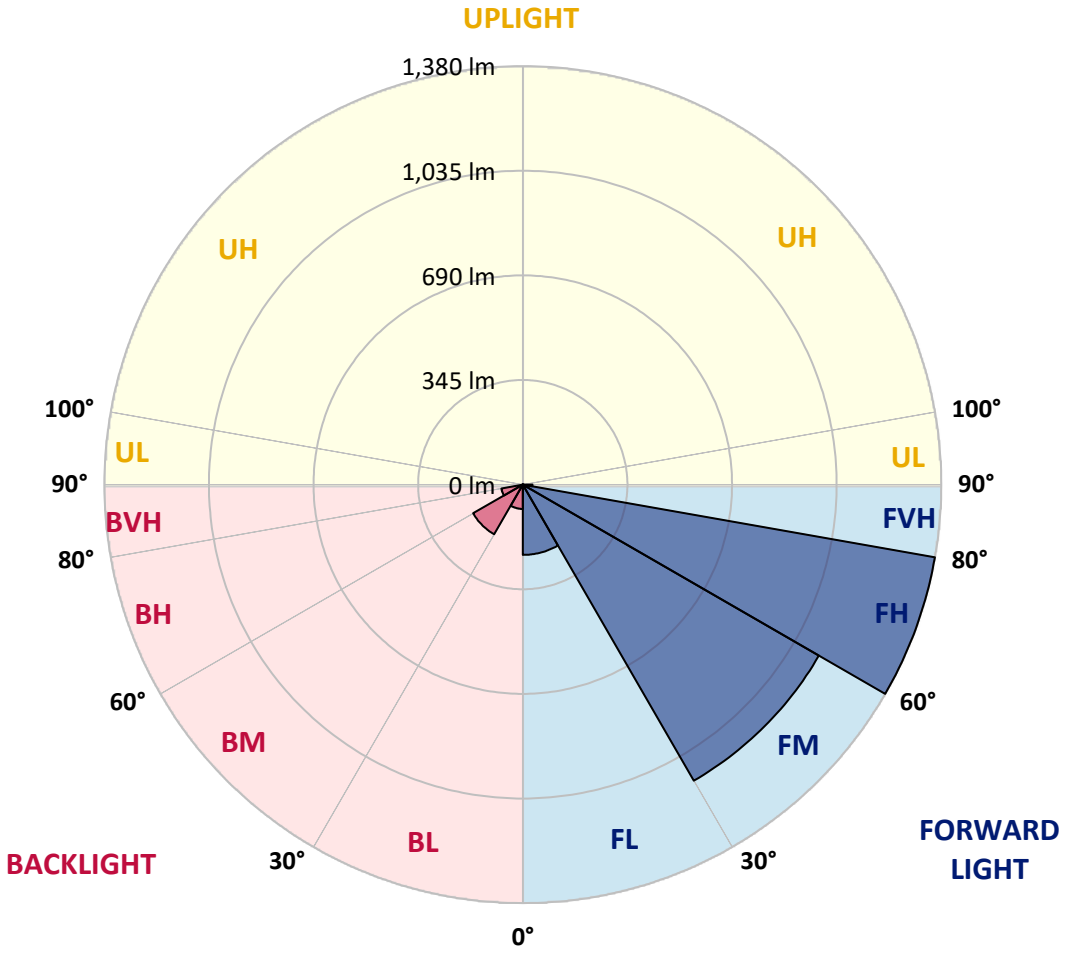
Scaled Data Report

REPORT NUMBER: P1367575
CATALOG NUMBER: GSS-SB1A-740-U-T4W-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 231.7 | 7.4 | | | |
| FM | (30°-60°) | 1127.2 | 36.2 | | | |
| FH | (60°-80°) | 1380.0 | 44.3 | | | G1/1800 |
| FVH | (80°-90°) | 31.7 | 1.0 | | | G1/100 |
| BL | (0°-30°) | 80.1 | 2.6 | B0/110 | | |
| BM | (30°-60°) | 189.0 | 6.1 | B0/220 | | |
| BH | (60°-80°) | 71.8 | 2.3 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 3.0 | 0.1 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B0-U0-G1**
Type IV Short



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REPORT NUMBER: P1367575
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 |
| 2.5° | 430 | 430 | 426 | 424 | 421 | 415 | 415 | 411 | 403 | 397 | 390 |
| 5° | 474 | 472 | 466 | 462 | 454 | 445 | 445 | 434 | 422 | 413 | 398 |
| 7.5° | 510 | 509 | 505 | 498 | 487 | 476 | 474 | 461 | 444 | 428 | 410 |
| 10° | 545 | 545 | 536 | 528 | 516 | 502 | 502 | 485 | 465 | 446 | 423 |
| 12.5° | 575 | 571 | 564 | 551 | 539 | 525 | 524 | 507 | 486 | 466 | 439 |
| 15° | 598 | 596 | 587 | 573 | 559 | 545 | 545 | 527 | 507 | 484 | 455 |
| 17.5° | 614 | 613 | 603 | 587 | 572 | 560 | 561 | 545 | 527 | 503 | 473 |
| 20° | 618 | 615 | 607 | 592 | 580 | 569 | 570 | 558 | 542 | 523 | 490 |
| 22.5° | 612 | 611 | 602 | 590 | 583 | 575 | 576 | 569 | 559 | 539 | 510 |
| 25° | 605 | 603 | 597 | 587 | 583 | 579 | 581 | 578 | 574 | 558 | 530 |
| 27.5° | 603 | 601 | 594 | 585 | 585 | 585 | 587 | 591 | 590 | 577 | 550 |
| 30° | 606 | 607 | 600 | 591 | 589 | 595 | 599 | 608 | 608 | 594 | 572 |
| 32.5° | 615 | 614 | 608 | 596 | 595 | 605 | 609 | 622 | 619 | 608 | 591 |
| 35° | 633 | 633 | 624 | 606 | 602 | 615 | 619 | 635 | 635 | 625 | 610 |
| 37.5° | 666 | 670 | 659 | 630 | 617 | 624 | 630 | 649 | 656 | 644 | 633 |
| 40° | 725 | 717 | 706 | 666 | 642 | 648 | 651 | 672 | 682 | 667 | 660 |
| 42.5° | 869 | 860 | 812 | 721 | 683 | 684 | 687 | 707 | 726 | 709 | 703 |
| 45° | 1082 | 1074 | 993 | 838 | 744 | 739 | 743 | 760 | 786 | 774 | 768 |
| 47.5° | 1245 | 1235 | 1174 | 1010 | 842 | 812 | 815 | 828 | 872 | 862 | 861 |
| 50° | 1324 | 1318 | 1282 | 1195 | 1007 | 907 | 906 | 918 | 978 | 977 | 980 |
| 52.5° | 1403 | 1403 | 1375 | 1334 | 1205 | 1038 | 1032 | 1021 | 1103 | 1109 | 1141 |
| 55° | 1489 | 1491 | 1490 | 1479 | 1401 | 1209 | 1190 | 1151 | 1248 | 1266 | 1305 |
| 57.5° | 1576 | 1580 | 1588 | 1631 | 1609 | 1389 | 1365 | 1293 | 1418 | 1414 | 1439 |
| 60° | 1644 | 1648 | 1681 | 1761 | 1779 | 1571 | 1538 | 1456 | 1587 | 1564 | 1548 |
| 62.5° | 1603 | 1613 | 1730 | 1869 | 1928 | 1741 | 1720 | 1640 | 1754 | 1681 | 1590 |
| 65° | 1220 | 1270 | 1529 | 1890 | 2063 | 1934 | 1916 | 1836 | 1868 | 1699 | 1557 |
| 67.5° | 754 | 823 | 1104 | 1761 | 2132 | 2144 | 2124 | 1981 | 1877 | 1714 | 1519 |
| 70° | 432 | 467 | 709 | 1639 | 2083 | 2315 | 2319 | 2019 | 1951 | 1735 | 1398 |
| 72.5° | 285 | 295 | 389 | 1371 | 2019 | 2099 | 2122 | 2159 | 2001 | 1639 | 1153 |
| 75° | 130 | 135 | 196 | 877 | 1536 | 1804 | 1782 | 1798 | 1900 | 1432 | 846 |
| 77.5° | 41 | 47 | 79 | 334 | 817 | 1334 | 1318 | 927 | 1408 | 784 | 265 |
| 80° | 20 | 23 | 47 | 101 | 302 | 756 | 775 | 316 | 446 | 177 | 54 |
| 82.5° | 9 | 10 | 27 | 48 | 118 | 222 | 236 | 103 | 116 | 55 | 20 |
| 85° | 4 | 5 | 11 | 19 | 33 | 36 | 39 | 22 | 43 | 31 | 10 |
| 87.5° | 0 | 1 | 1 | 3 | 3 | 4 | 4 | 5 | 6 | 7 | 6 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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REPORT NUMBER: P1367575
CATALOG NUMBER: GSS-SB1A-740-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 | 385 |
| 2.5° | 386 | 381 | 374 | 364 | 357 | 346 | 338 | 332 | 325 | 327 | 328 |
| 5° | 389 | 381 | 362 | 338 | 317 | 296 | 281 | 267 | 258 | 257 | 253 |
| 7.5° | 397 | 383 | 351 | 312 | 275 | 247 | 222 | 203 | 191 | 187 | 185 |
| 10° | 408 | 388 | 338 | 283 | 234 | 196 | 167 | 152 | 146 | 145 | 145 |
| 12.5° | 420 | 395 | 325 | 254 | 194 | 153 | 140 | 138 | 138 | 139 | 139 |
| 15° | 434 | 400 | 310 | 220 | 155 | 135 | 134 | 134 | 134 | 136 | 135 |
| 17.5° | 448 | 407 | 292 | 186 | 134 | 130 | 130 | 130 | 130 | 132 | 131 |
| 20° | 463 | 412 | 273 | 155 | 128 | 127 | 127 | 126 | 126 | 128 | 128 |
| 22.5° | 480 | 416 | 252 | 134 | 125 | 123 | 123 | 123 | 122 | 124 | 124 |
| 25° | 497 | 422 | 228 | 123 | 121 | 120 | 119 | 119 | 118 | 120 | 119 |
| 27.5° | 516 | 429 | 205 | 119 | 118 | 117 | 116 | 115 | 114 | 116 | 115 |
| 30° | 538 | 436 | 183 | 117 | 115 | 114 | 112 | 111 | 109 | 111 | 111 |
| 32.5° | 558 | 443 | 166 | 116 | 113 | 109 | 106 | 104 | 103 | 105 | 106 |
| 35° | 579 | 454 | 157 | 118 | 111 | 105 | 100 | 97 | 96 | 98 | 99 |
| 37.5° | 604 | 467 | 155 | 122 | 109 | 100 | 93 | 88 | 87 | 89 | 90 |
| 40° | 639 | 485 | 159 | 124 | 106 | 94 | 84 | 79 | 76 | 76 | 77 |
| 42.5° | 684 | 523 | 162 | 126 | 101 | 87 | 76 | 69 | 64 | 64 | 65 |
| 45° | 753 | 586 | 177 | 124 | 96 | 78 | 67 | 58 | 54 | 54 | 55 |
| 47.5° | 846 | 674 | 219 | 120 | 89 | 70 | 58 | 50 | 47 | 47 | 47 |
| 50° | 969 | 784 | 264 | 113 | 81 | 62 | 50 | 45 | 43 | 42 | 41 |
| 52.5° | 1116 | 900 | 296 | 106 | 74 | 55 | 45 | 41 | 39 | 38 | 38 |
| 55° | 1258 | 982 | 307 | 99 | 67 | 49 | 42 | 39 | 37 | 36 | 36 |
| 57.5° | 1344 | 998 | 262 | 91 | 60 | 45 | 38 | 36 | 34 | 33 | 33 |
| 60° | 1364 | 929 | 185 | 80 | 52 | 40 | 35 | 33 | 31 | 29 | 29 |
| 62.5° | 1293 | 768 | 129 | 65 | 46 | 36 | 32 | 30 | 27 | 25 | 24 |
| 65° | 1150 | 561 | 91 | 51 | 40 | 32 | 28 | 26 | 23 | 20 | 19 |
| 67.5° | 1004 | 340 | 59 | 42 | 35 | 26 | 24 | 23 | 20 | 17 | 17 |
| 70° | *831* | *174* | *41* | *34* | *29* | *21* | *20* | *20* | *18* | *15* | *15* |
| 72.5° | 641 | 64 | 28 | 27 | 22 | 16 | 18 | 17 | 15 | 13 | 13 |
| 75° | 435 | 31 | 21 | 19 | 15 | 13 | 14 | 14 | 13 | 11 | 10 |
| 77.5° | 138 | 20 | 16 | 15 | 12 | 11 | 12 | 12 | 10 | 9 | 8 |
| 80° | 35 | 14 | 13 | 11 | 9 | 9 | 10 | 8 | 8 | 7 | 7 |
| 82.5° | 15 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 |
| 85° | 8 | 7 | 6 | 6 | 6 | 5 | 5 | 6 | 5 | 5 | 5 |
| 87.5° | 5 | 5 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-1

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-740-U-5WQ

Data in this report applies to families of products including GSS-SB1A-740-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

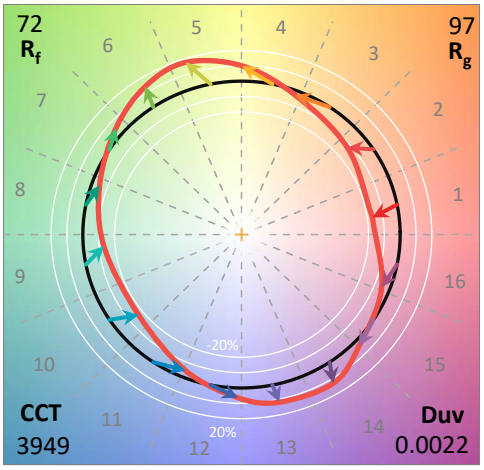
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-1 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-740-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3949 |
| CIE u': | 0.2248 |
| CIE v': | 0.5053 |
| Duv: | 0.0022 |
| CIE x: | 0.3844 |
| CIE y: | 0.3840 |
| CIE z: | 0.2316 |
| Peak Wavelength (nm): | 440 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 30.60026 |
| Rf: | 71.8 |
| Rg: | 96.5 |

| | |
|---|---|
| CRI (Ra): | 70.7 |
| R1: | 68.0 |
| R2: | 76.0 |
| R3: | 84.3 |
| R4: | 72.0 |
| R5: | 68.6 |
| R6: | 68.3 |
| R7: | 77.9 |
| R8: | 50.3 |
| R9: | -36.7 |
| R10: | 45.1 |
| R11: | 70.7 |
| R12: | 47.1 |
| R13: | 68.5 |
| R14: | 91.1 |
| R15: | 58.7 |




## Test Conditions

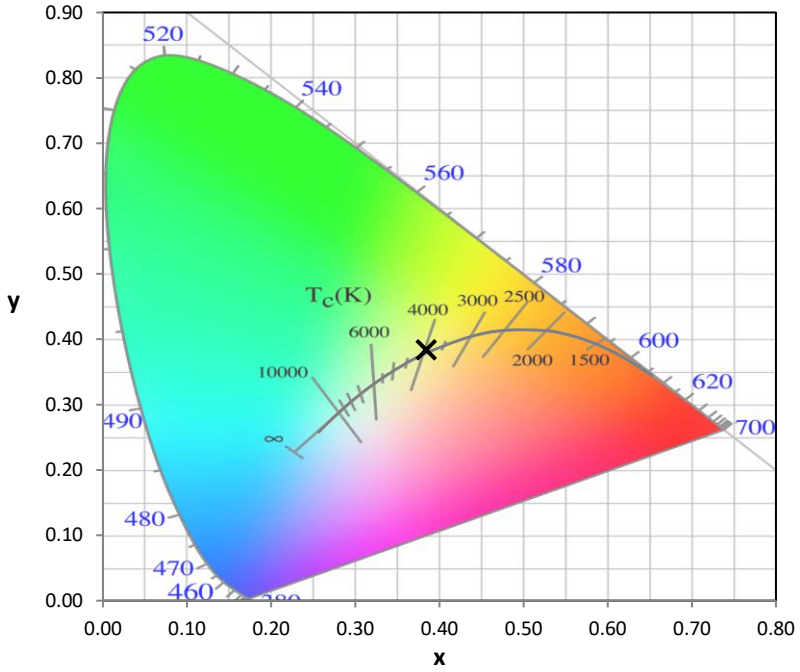
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-1

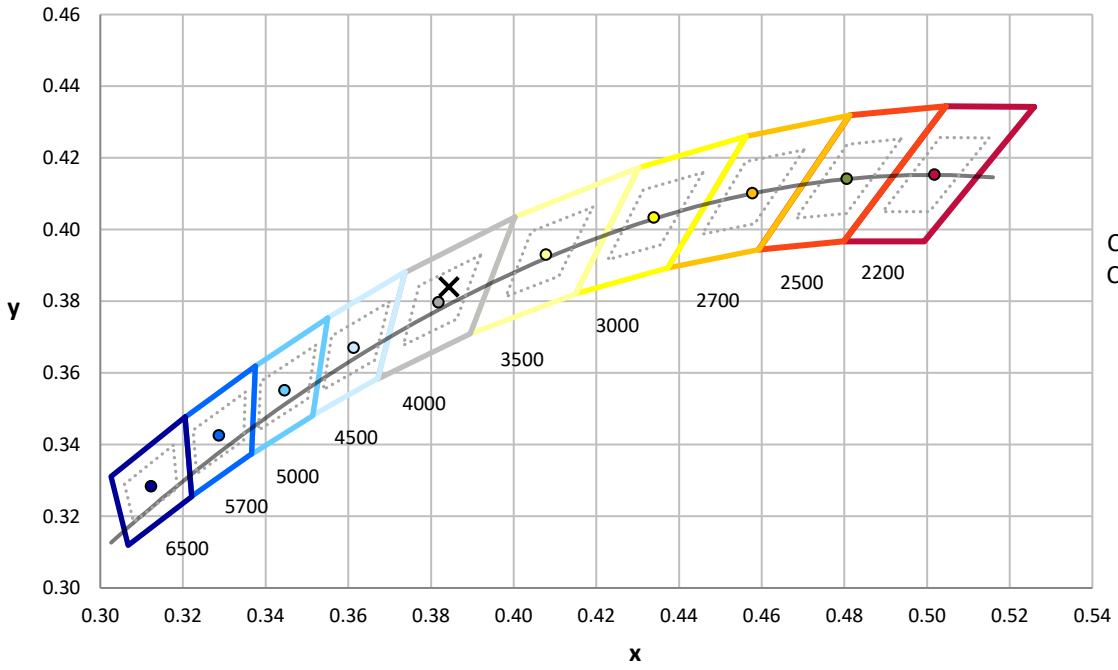
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

REPORT NUMBER: SP1-2407-184-1

## CIE 1931 Chromaticity Diagram




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

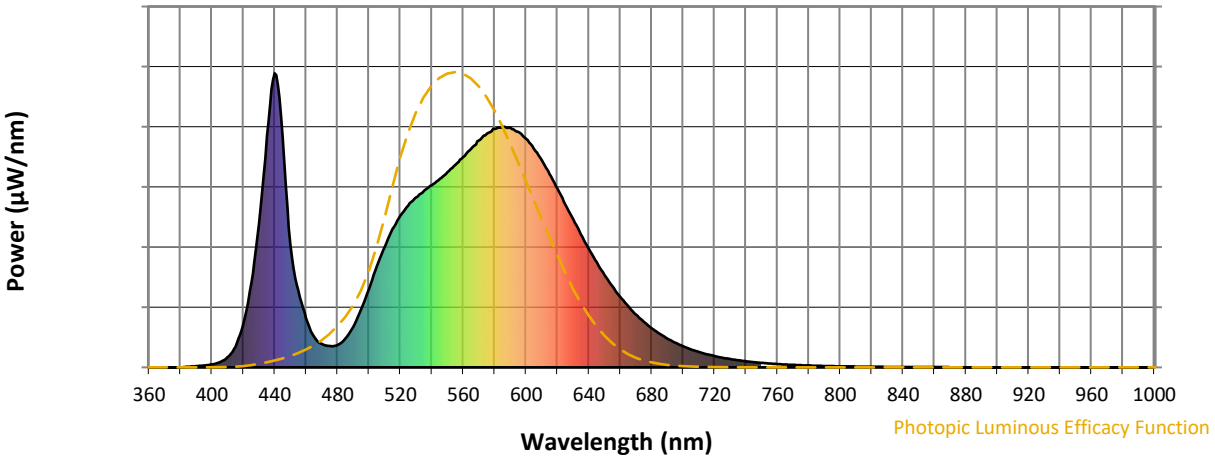



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-1

## Photopic Flux vs. Wavelength

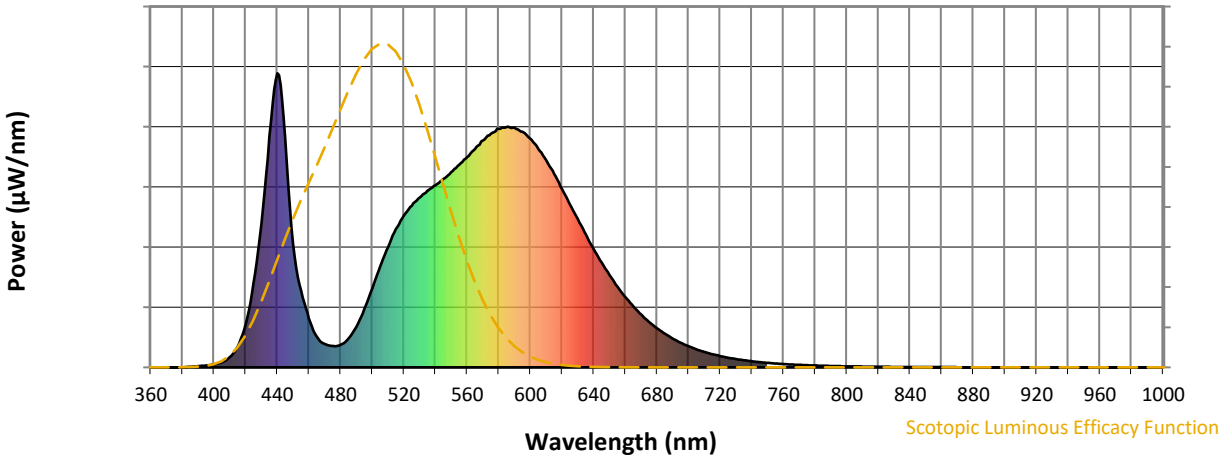



## Photopic Lumens: NR

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-1

## Scotopic Flux vs. Wavelength

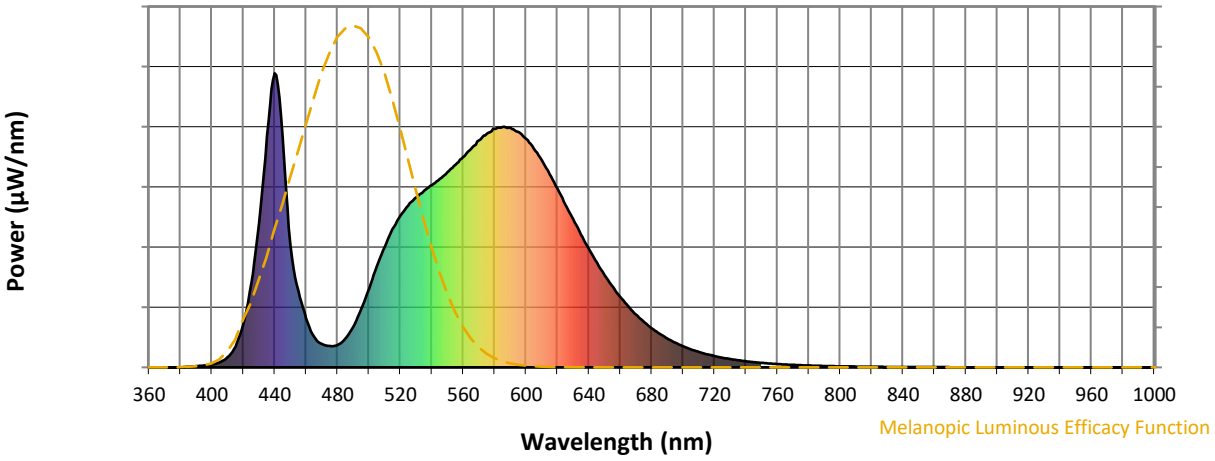



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.78**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

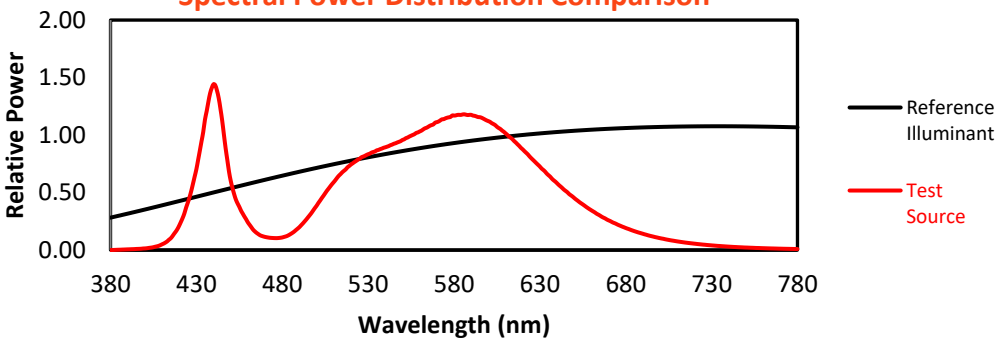
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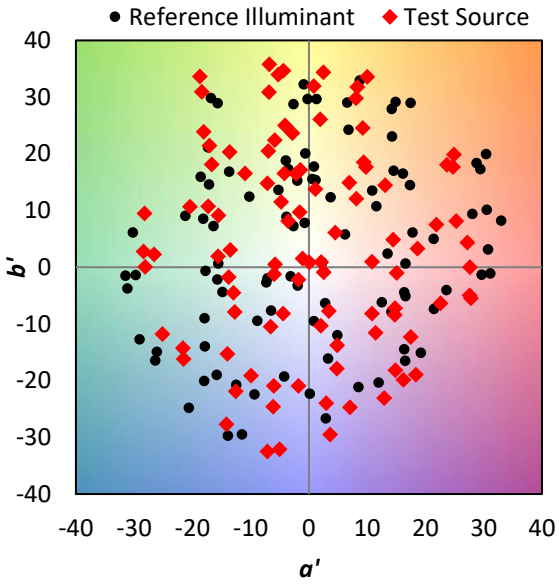
## Summary

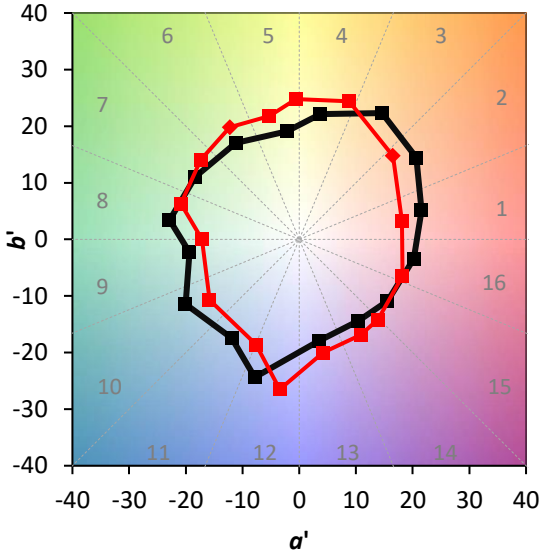
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

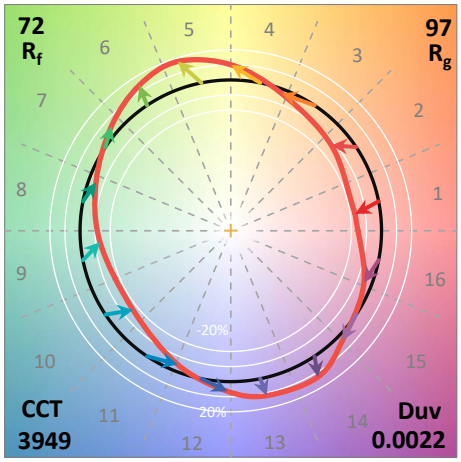
## Spectral Power Distribution Comparison

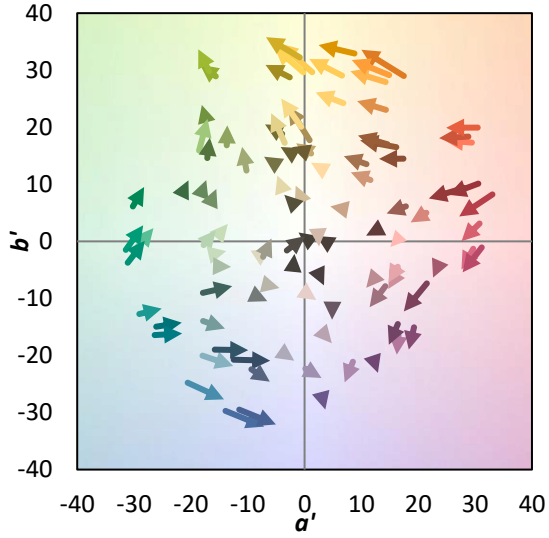



## Color Vector Graphics



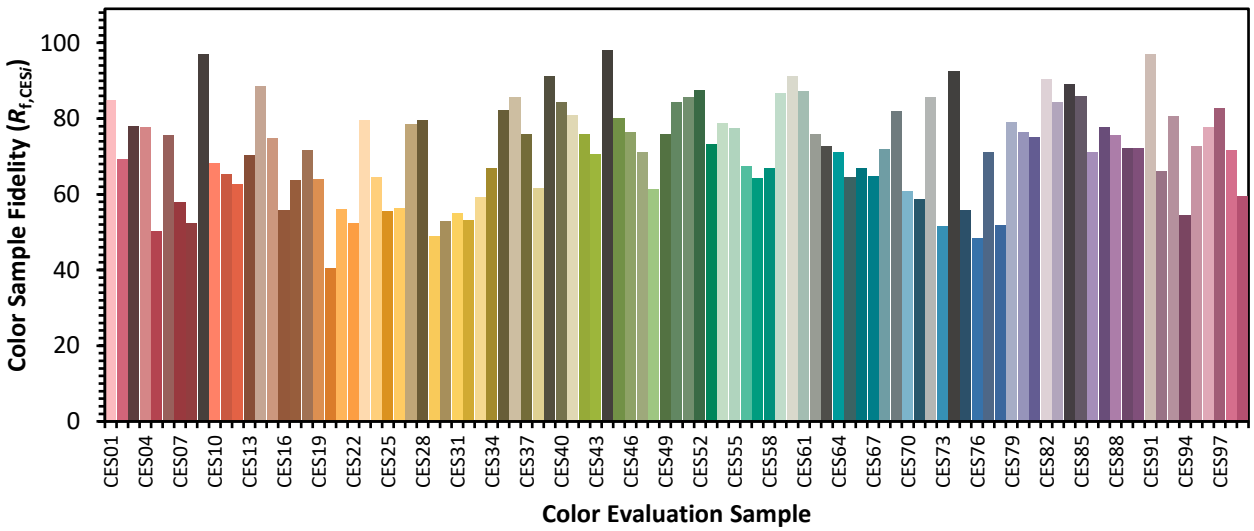



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**Individual Sample Fidelity Index ($R_{f,i}$)**

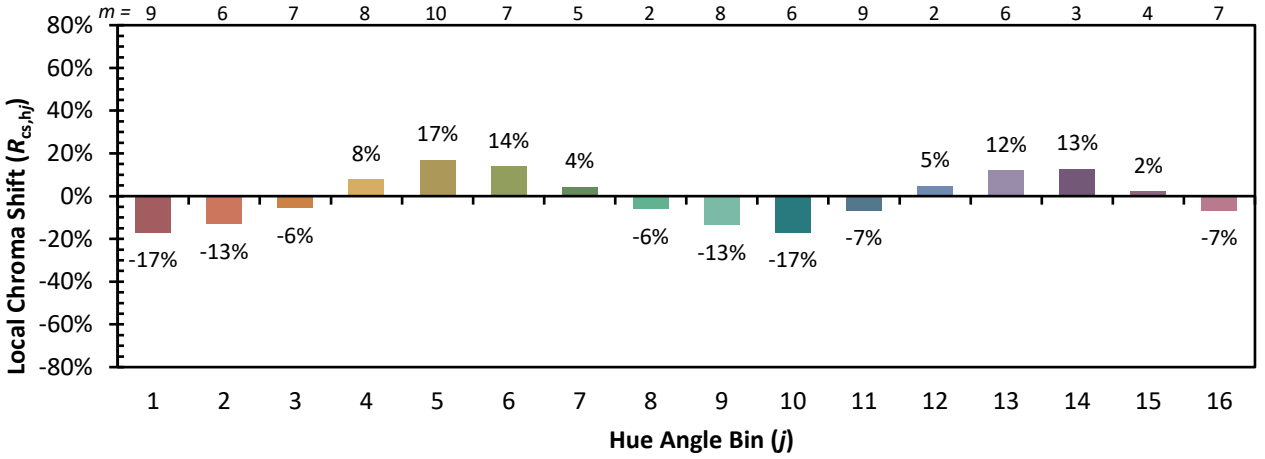
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 50 | CES31 = 55 | CES56 = 67 | CES81 = 75 |
| CES07 = 40 | CES32 = 53 | CES57 = 64 | CES82 = 90 |
| CES08 = 39 | CES33 = 59 | CES58 = 67 | CES83 = 84 |
| CES09 = 29 | CES34 = 67 | CES59 = 87 | CES84 = 89 |
| CES10 = 74 | CES35 = 82 | CES60 = 91 | CES85 = 86 |
| CES11 = 57 | CES36 = 86 | CES61 = 87 | CES86 = 71 |
| CES12 = 63 | CES37 = 76 | CES62 = 76 | CES87 = 78 |
| CES13 = 42 | CES38 = 62 | CES63 = 73 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 71 | CES89 = 72 |
| CES15 = 71 | CES40 = 84 | CES65 = 64 | CES90 = 72 |
| CES16 = 46 | CES41 = 81 | CES66 = 67 | CES91 = 97 |
| CES17 = 49 | CES42 = 76 | CES67 = 65 | CES92 = 66 |
| CES18 = 56 | CES43 = 71 | CES68 = 72 | CES93 = 81 |
| CES19 = 72 | CES44 = 98 | CES69 = 82 | CES94 = 55 |
| CES20 = 65 | CES45 = 80 | CES70 = 61 | CES95 = 73 |
| CES21 = 86 | CES46 = 76 | CES71 = 59 | CES96 = 78 |
| CES22 = 78 | CES47 = 71 | CES72 = 86 | CES97 = 83 |
| CES23 = 92 | CES48 = 61 | CES73 = 52 | CES98 = 72 |
| CES24 = 91 | CES49 = 76 | CES74 = 93 | CES99 = 60 |
| CES25 = 72 | CES50 = 84 | CES75 = 56 | |

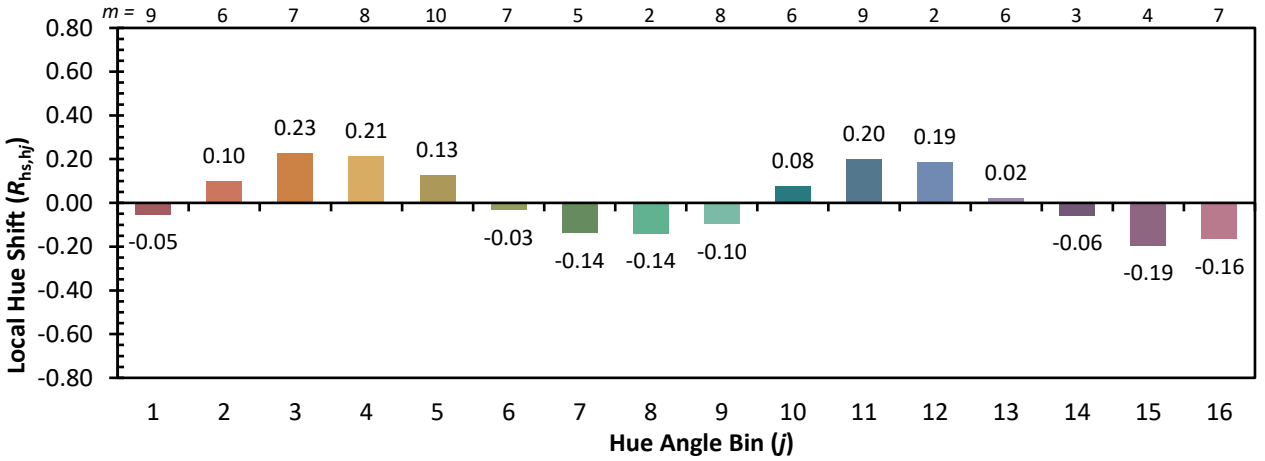


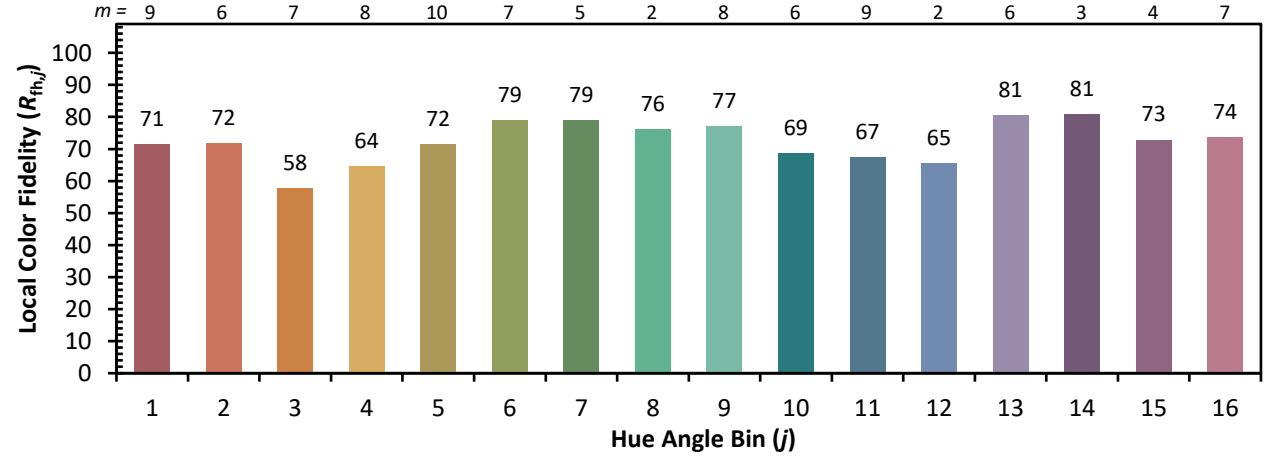
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## Color Rendition by Hue-Angle Bin



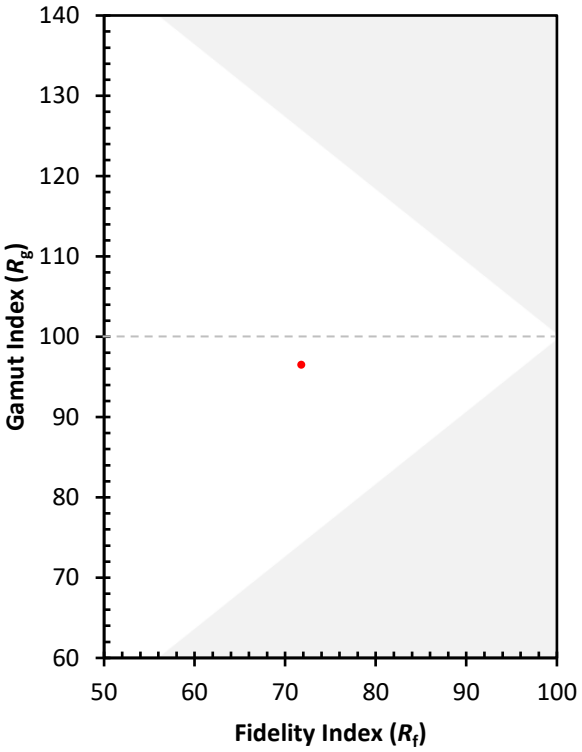



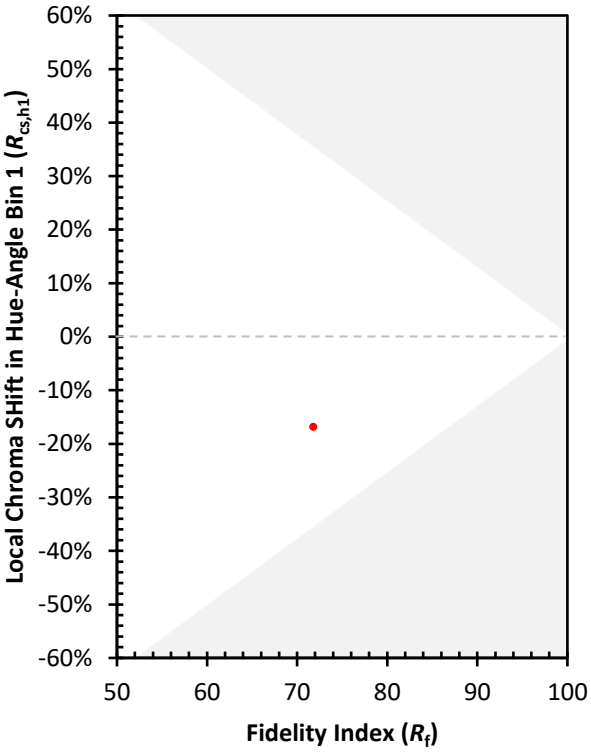



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## Measure Comparisons




(END OF REPORT)