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: P1362214

Luminaire Tested: **GSS-SB4D-740-U-RW**

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: | P1362214 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB4D-740-U-RW |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 4SQUARE 238W 70CRI 4000K FIXTURE w/ RECTANGULAR WIDE DISTRIBUTION OPTIC |
| Light Source: | (104) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 34347.3 lumens |
| Efficiency: | N/A |
| Efficacy: | 144.3 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B5 - U0 - G5 |

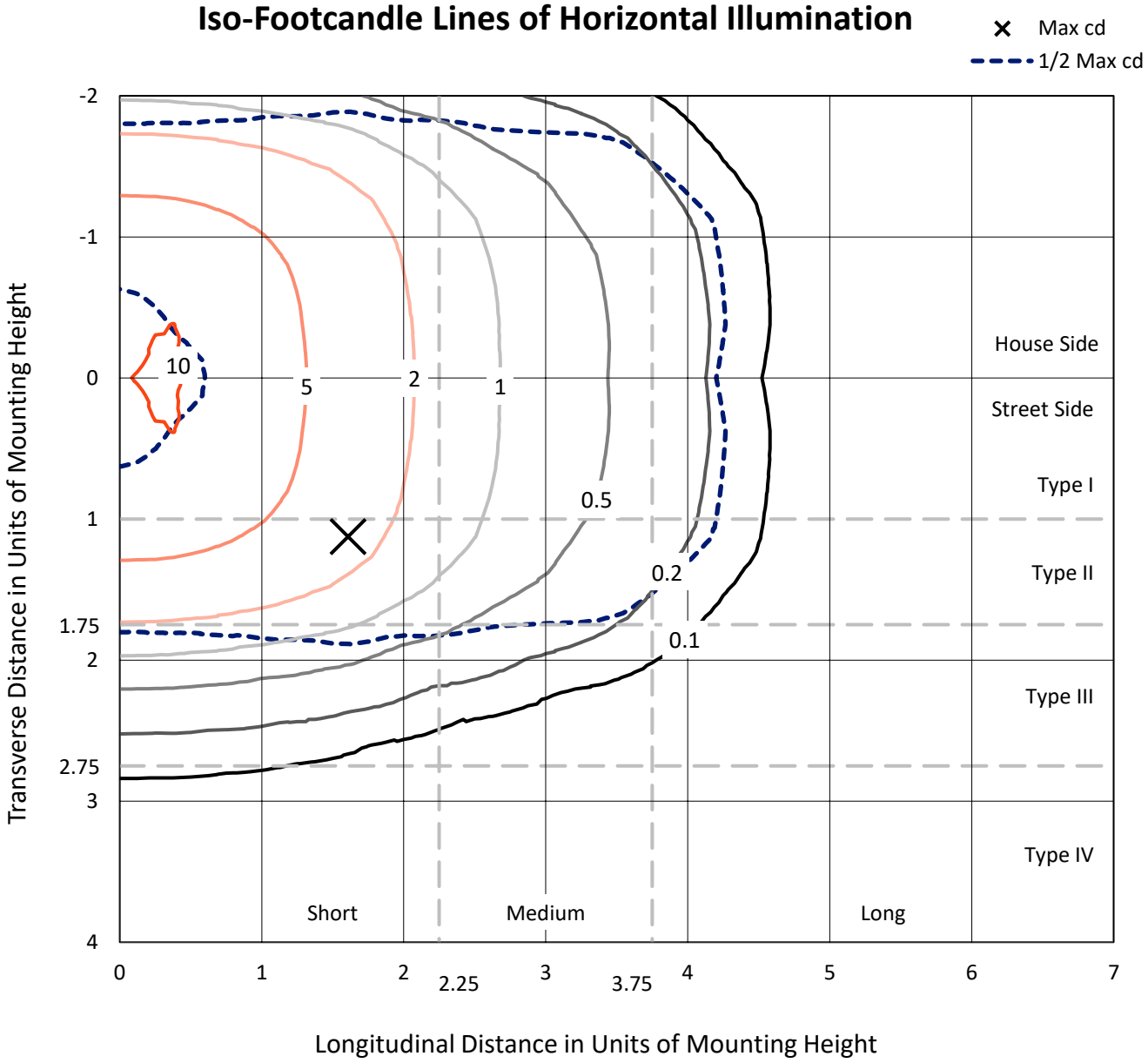
| | |
|---|---|
| Input Watts (W): | 238 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | -- |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1362214
CATALOG NUMBER: GSS-SB4D-740-U-RW

## Iso-Footcandle Lines of Horizontal Illumination



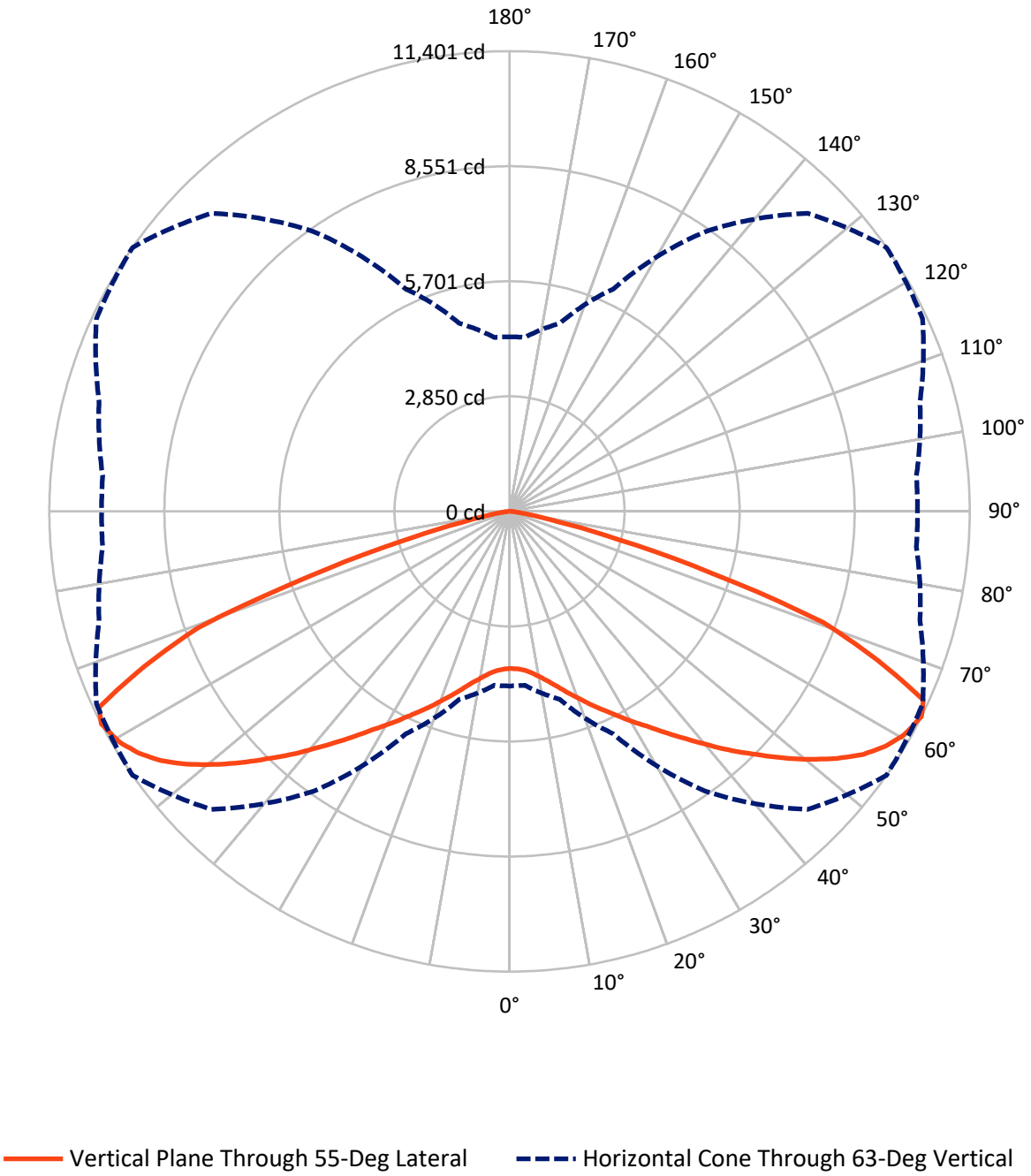

Based on 20 foot mounting height. Maximum calculated value = 10.6 fc
Type III - Short - N/A

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Scaled Data Report

REPORT NUMBER: P1362214
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## Luminous Intensity Polar Plot



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Scaled Data Report

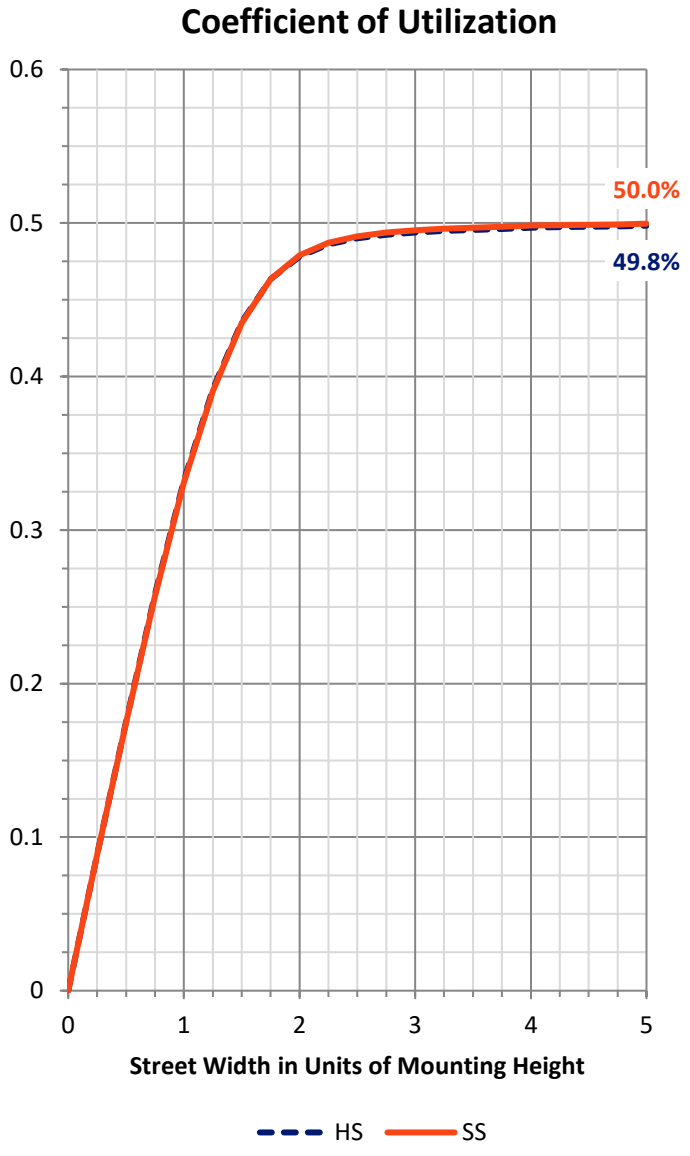
REPORT NUMBER: P1362214
CATALOG NUMBER: GSS-SB4D-740-U-RW

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 17173.7 | 0.0 | 17173.7 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| **Street Side** | Lumens | 17173.7 | 0.0 | 17173.7 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| **Total** | Lumens | 34347.3 | 0.0 | 34347.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 379.5 | 1.1 |
| 10°-20° | 1254.2 | 3.7 |
| 20°-30° | 2426.6 | 7.1 |
| 30°-40° | 4108.6 | 12.0 |
| 40°-50° | 6480.9 | 18.9 |
| 50°-60° | 8619.3 | 25.1 |
| 60°-70° | 7540.7 | 22.0 |
| 70°-80° | 3348.3 | 9.7 |
| 80°-90° | 189.1 | 0.6 |
| 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° | 34347.3 | 100.0 |
| 0°-180° | 34347.3 | 100.0 |



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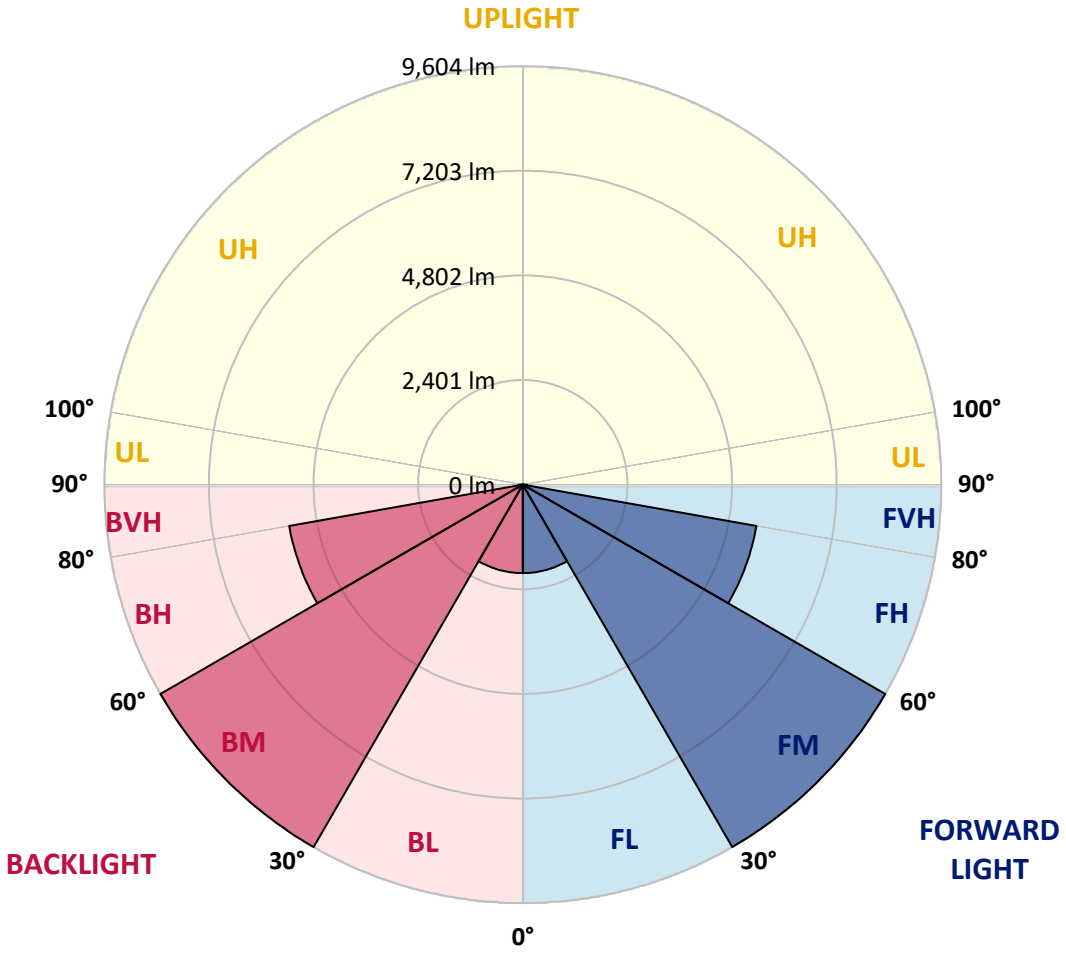
Scaled Data Report

REPORT NUMBER: P1362214
CATALOG NUMBER: GSS-SB4D-740-U-RW

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2030.2 | 5.9 | | | |
| FM | (30°-60°) | 9604.4 | 28.0 | | | |
| FH | (60°-80°) | 5444.5 | 15.9 | | | G3/7500 |
| FVH | (80°-90°) | 94.5 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 2030.2 | 5.9 | B3/2500 | | |
| BM | (30°-60°) | 9604.4 | 28.0 | B5 | | |
| BH | (60°-80°) | 5444.5 | 15.9 | B5 | | G5 |
| BVH | (80°-90°) | 94.5 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B5-U0-G5**
Type III Short



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REPORT NUMBER: P1362214
CATALOG NUMBER: GSS-SB4D-740-U-RW

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3892.1 | 3892.1 | 3892.1 | 3892.1 | 3892.1 | 3892.1 | *3892.1* | 3892.1 | 3892.1 | 3892.1 | 3892.1 |
| 2.5° | 3892.1 | 3868.6 | 3860.7 | 3876.4 | 3876.4 | 3892.1 | *3907.9* | 3900.0 | 3923.6 | 3923.6 | 3907.9 |
| 5° | 3852.8 | 3837.1 | 3837.1 | 3860.7 | 3884.3 | 3923.6 | *3955.0* | 3962.9 | 4002.2 | 4002.2 | 4010.1 |
| 7.5° | 3829.2 | 3821.4 | 3829.2 | 3860.7 | 3915.7 | 3978.6 | *4041.5* | 4080.9 | 4143.8 | 4159.5 | 4175.2 |
| 10° | 3868.6 | 3845.0 | 3876.4 | 3923.6 | 3994.4 | 4080.9 | *4175.2* | 4238.1 | 4308.9 | 4348.2 | 4356.1 |
| 12.5° | 3939.3 | 3923.6 | 3962.9 | 4041.5 | 4135.9 | 4238.1 | *4324.6* | 4403.2 | 4481.9 | 4536.9 | 4544.8 |
| 15° | 3978.6 | 3970.8 | 4057.3 | 4175.2 | 4316.7 | 4426.8 | *4513.3* | 4576.2 | 4654.8 | 4717.7 | 4741.3 |
| 17.5° | 4065.1 | 4065.1 | 4183.1 | 4340.3 | 4521.2 | 4647.0 | *4733.5* | 4764.9 | 4804.2 | 4859.3 | 4906.5 |
| 20° | 4214.5 | 4222.4 | 4348.2 | 4544.8 | 4749.2 | 4898.6 | *4953.6* | 4953.6 | 4945.8 | 4992.9 | 5016.5 |
| 22.5° | 4426.8 | 4426.8 | 4591.9 | 4788.5 | 5000.8 | 5173.8 | *5213.1* | 5142.3 | 5095.2 | 5126.6 | 5142.3 |
| 25° | 4702.0 | 4694.2 | 4867.1 | 5079.4 | 5291.7 | 5464.7 | *5464.7* | 5354.6 | 5252.4 | 5268.1 | 5291.7 |
| 27.5° | 4992.9 | 5008.7 | 5189.5 | 5394.0 | 5614.1 | 5771.4 | *5739.9* | 5590.5 | 5433.3 | 5409.7 | 5433.3 |
| 30° | 5338.9 | 5346.8 | 5527.6 | 5755.7 | 5952.2 | 6085.9 | *6054.4* | 5850.0 | 5637.7 | 5574.8 | 5598.4 |
| 32.5° | 5747.8 | 5747.8 | 5928.6 | 6133.1 | 6329.6 | 6455.4 | *6369.0* | 6140.9 | 5865.7 | 5802.8 | 5818.6 |
| 35° | 6203.8 | 6227.4 | 6400.4 | 6581.3 | 6754.2 | 6856.5 | *6754.2* | 6471.2 | 6148.8 | 6078.0 | 6085.9 |
| 37.5° | 6722.8 | 6746.4 | 6911.5 | 7084.5 | 7226.0 | 7304.6 | *7163.1* | 6840.7 | 6471.2 | 6384.7 | 6400.4 |
| 40° | 7265.3 | 7288.9 | 7477.6 | 7627.0 | 7760.7 | 7807.9 | *7619.2* | 7265.3 | 6856.5 | 6777.8 | 6777.8 |
| 42.5° | 7784.3 | 7807.9 | 7988.7 | 8201.0 | 8319.0 | 8334.7 | *8106.7* | 7705.7 | 7281.1 | 7186.7 | 7218.2 |
| 45° | 8216.7 | 8216.7 | 8460.5 | 8712.1 | 8900.8 | 8908.7 | *8594.2* | 8161.7 | 7705.7 | 7611.3 | 7642.7 |
| 47.5° | 8515.5 | 8531.3 | 8814.3 | 9144.6 | 9396.2 | 9466.9 | *9128.8* | 8680.7 | 8169.6 | 8051.6 | 8098.8 |
| 50° | 8704.2 | 8727.8 | 9034.5 | 9443.4 | 9820.8 | 9985.9 | *9655.7* | 9160.3 | 8657.1 | 8531.3 | 8570.6 |
| 52.5° | 8767.1 | 8767.1 | 9113.1 | 9592.8 | 10096.0 | 10410.5 | *10166.7* | 9639.9 | 9128.8 | 8979.4 | 9026.6 |
| 55° | 8515.5 | 8554.8 | 8955.9 | 9561.3 | 10206.1 | 10701.4 | *10630.7* | 10088.1 | 9569.2 | 9411.9 | 9506.3 |
| 57.5° | 7862.9 | 7941.5 | 8421.2 | 9231.1 | 10151.0 | 10890.1 | *10976.6* | 10512.7 | 9985.9 | 9844.4 | 9899.4 |
| 60° | 6384.7 | 6416.1 | 7100.2 | 8421.2 | 9734.3 | 10890.1 | *11236.1* | 10921.6 | 10394.8 | 10253.2 | 10300.4 |
| 62.5° | 4568.4 | 4631.3 | 5118.8 | 6526.2 | 8837.9 | 10583.5 | *11369.8* | 11259.7 | 10591.3 | 10261.1 | 10261.1 |
| 63° | *4324.6* | *4324.6* | *4820.0* | *6078.0* | *8460.5* | *10441.9* | *11401.2* | *11291.1* | *10528.4* | *10119.6* | *10103.8* |
| 65° | 3121.6 | 3145.2 | 3609.1 | 4615.5 | 6659.9 | 9710.7 | *11267.6* | 10898.0 | 9962.3 | 9545.6 | 9545.6 |
| 67.5° | 1816.3 | 1832.1 | 2107.3 | 2964.3 | 4497.6 | 7721.4 | *9820.8* | 10339.7 | 9915.1 | 9577.0 | 9592.8 |
| 70° | 1171.6 | 1187.3 | 1321.0 | 1666.9 | 2681.3 | 4395.4 | *8248.2* | 10025.2 | 9797.2 | 9309.7 | 9294.0 |
| 72.5° | 809.9 | 809.9 | 872.8 | 1061.5 | 1383.9 | 2398.2 | *5236.7* | 8853.6 | 9891.5 | 9616.3 | 9592.8 |
| 75° | 526.8 | 581.9 | 629.0 | 715.5 | 794.2 | 1148.0 | *2759.9* | 6730.7 | 9003.0 | 9097.4 | 8743.6 |
| 77.5° | 369.6 | 369.6 | 479.6 | 503.2 | 503.2 | 684.1 | *1226.6* | 3145.2 | 4820.0 | 4505.4 | 4002.2 |
| 80° | 290.9 | 275.2 | 290.9 | 353.8 | 361.7 | 385.3 | *503.2* | 825.6 | 1643.3 | 802.0 | 589.7 |
| 82.5° | 188.7 | 180.8 | 188.7 | 228.0 | 212.3 | 196.6 | *212.3* | 361.7 | 456.0 | 259.5 | 235.9 |
| 85° | 55.0 | 62.9 | 78.6 | 86.5 | 86.5 | 86.5 | *102.2* | 141.5 | 157.3 | 117.9 | 110.1 |
| 87.5° | 15.7 | 23.6 | 23.6 | 23.6 | 31.5 | 31.5 | *47.2* | 55.0 | 62.9 | 62.9 | 62.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 |

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

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

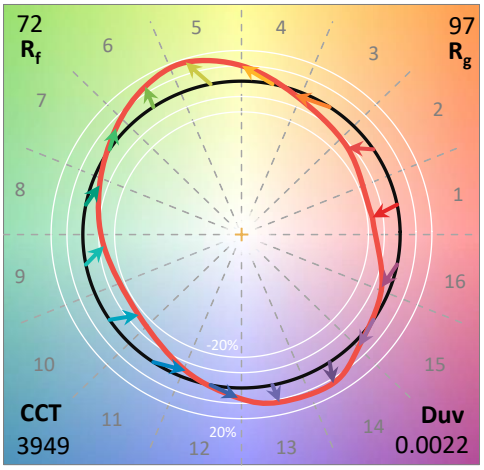
## Test Information

| | |
|---|---|
| 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

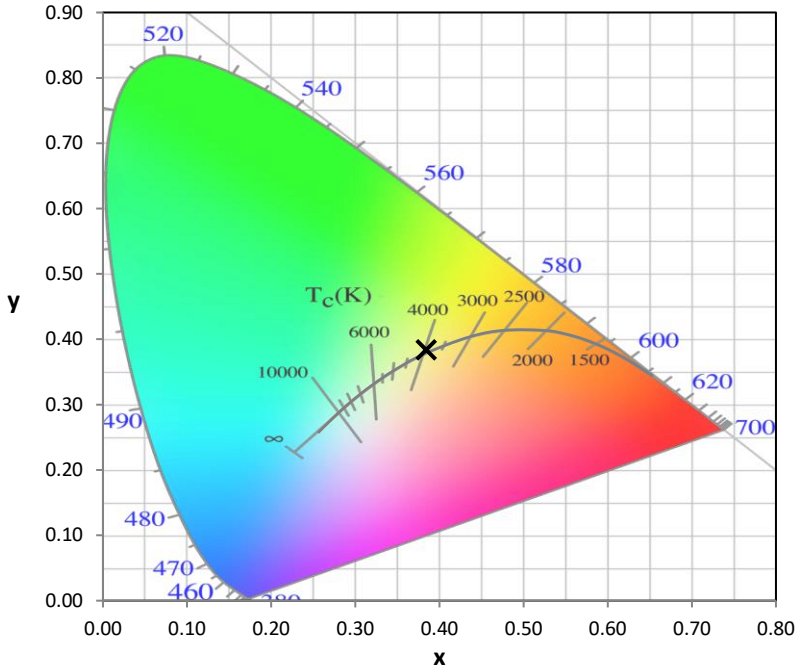
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-1

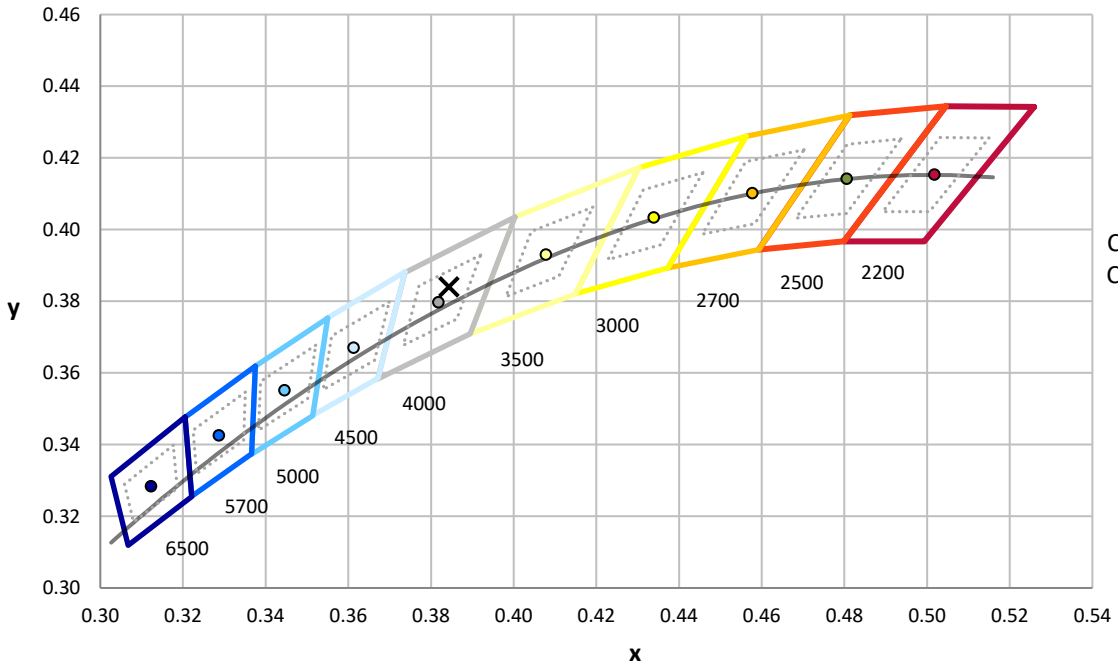
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

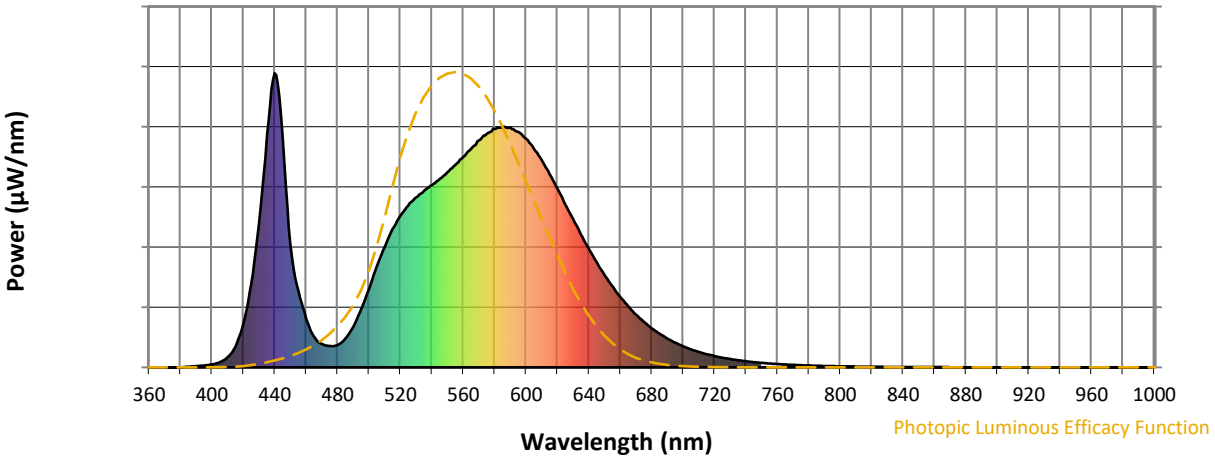



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-1

## Photopic Flux vs. Wavelength

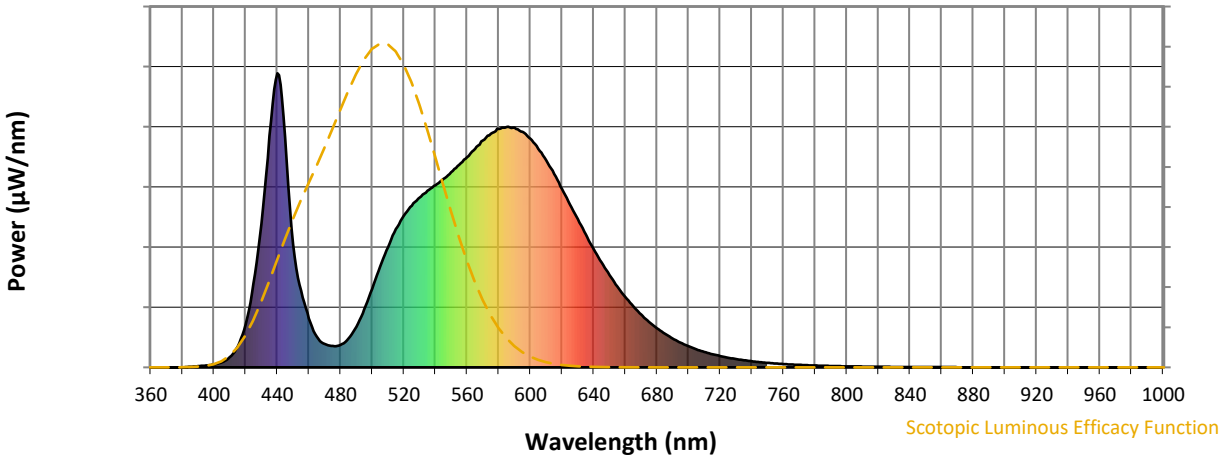



## Photopic Lumens: NR

| 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

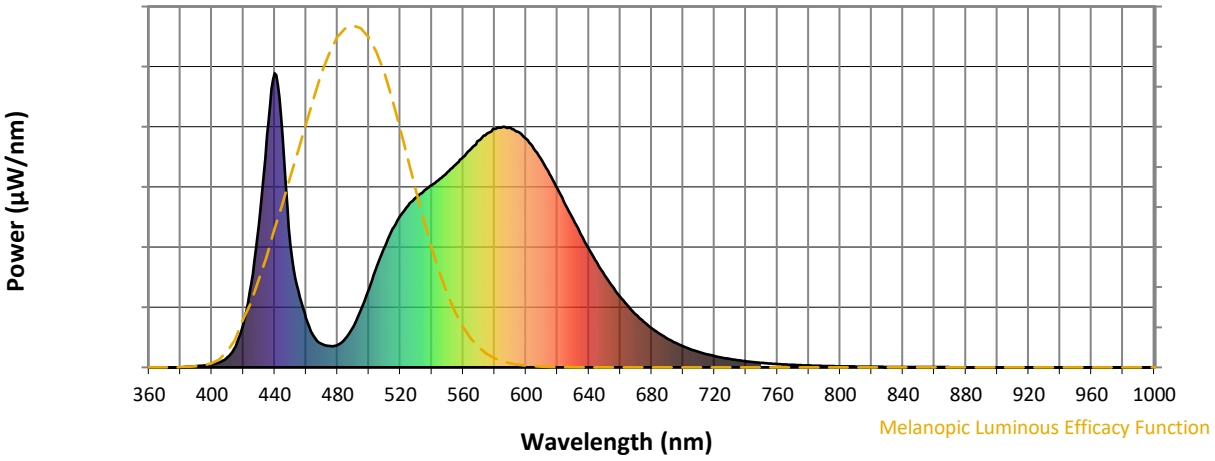



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | | | |

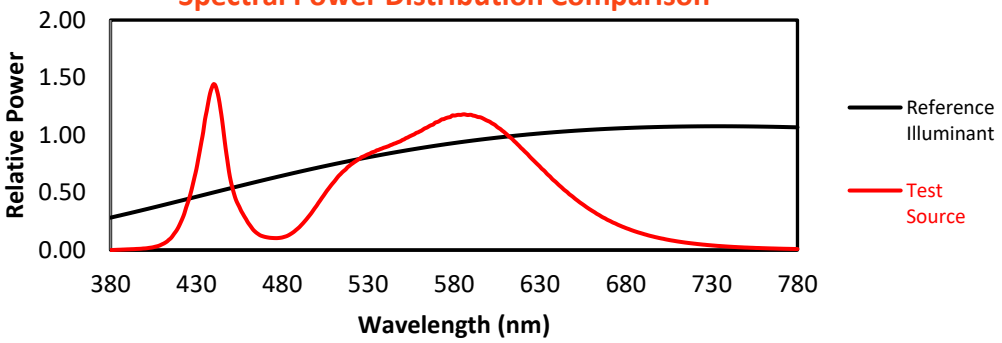
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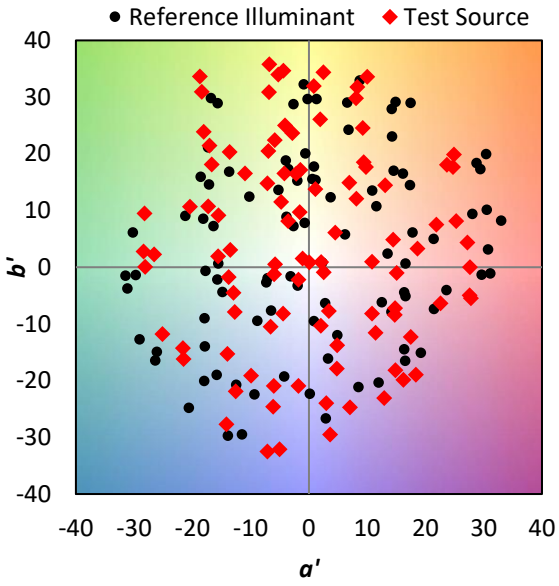
## Summary

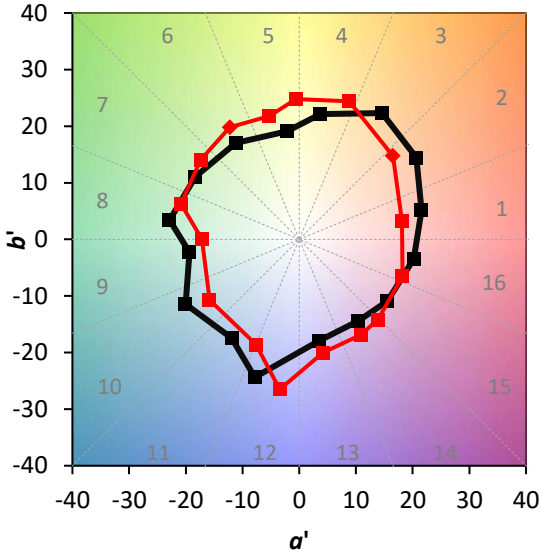
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

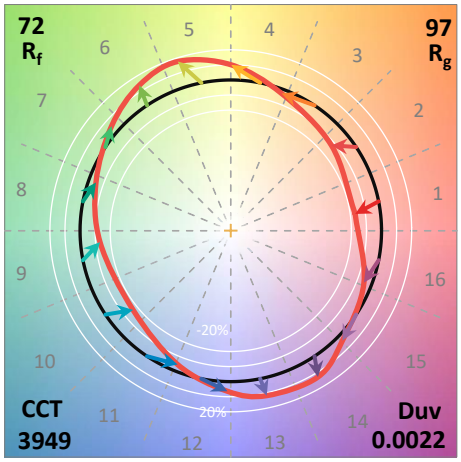
## Spectral Power Distribution Comparison

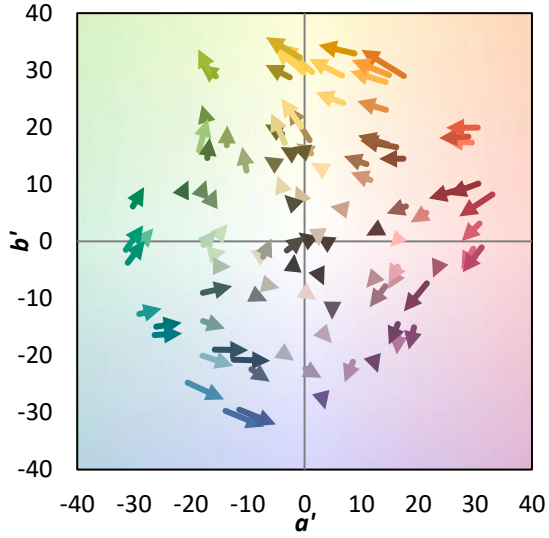



## Color Vector Graphics



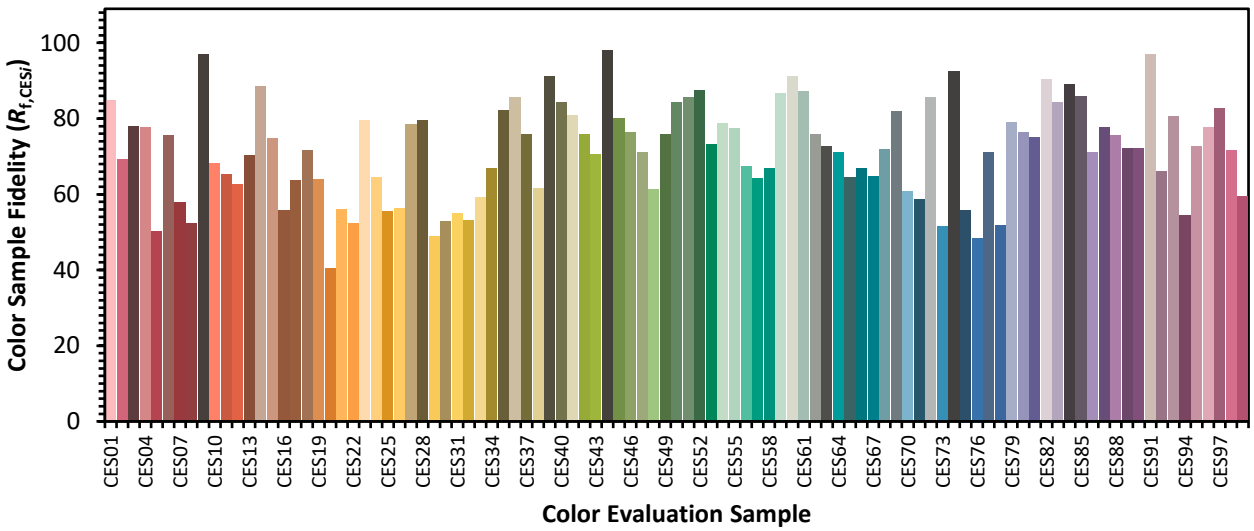



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**Individual Sample Fidelity Index ($R_{f,i}$)**

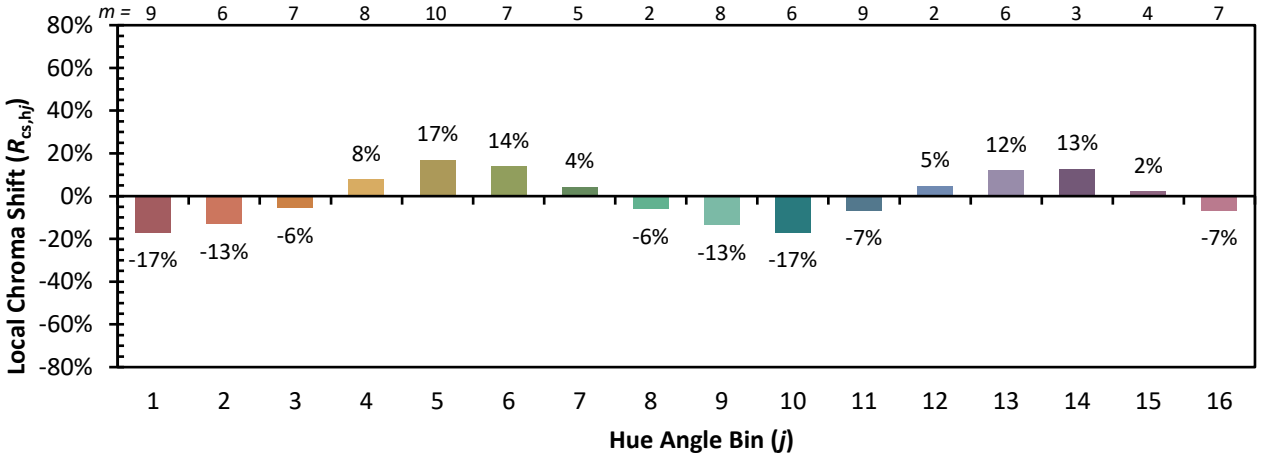
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 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 | |

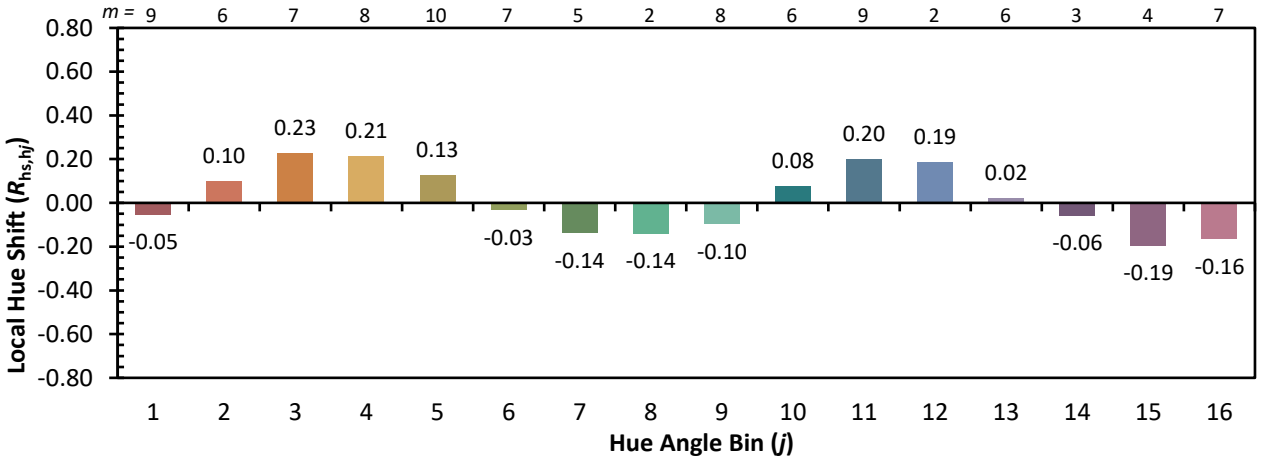


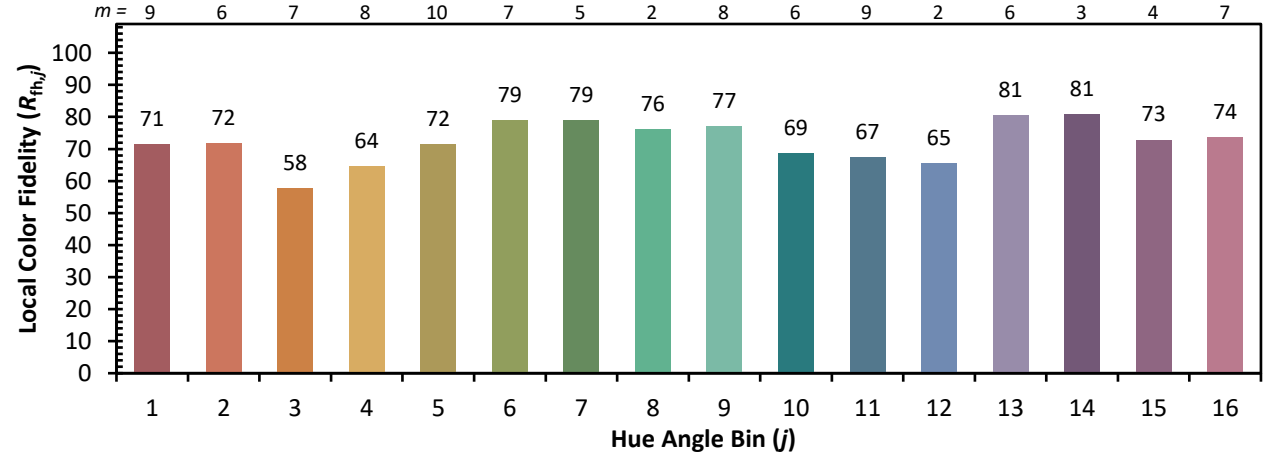
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## Color Rendition by Hue-Angle Bin



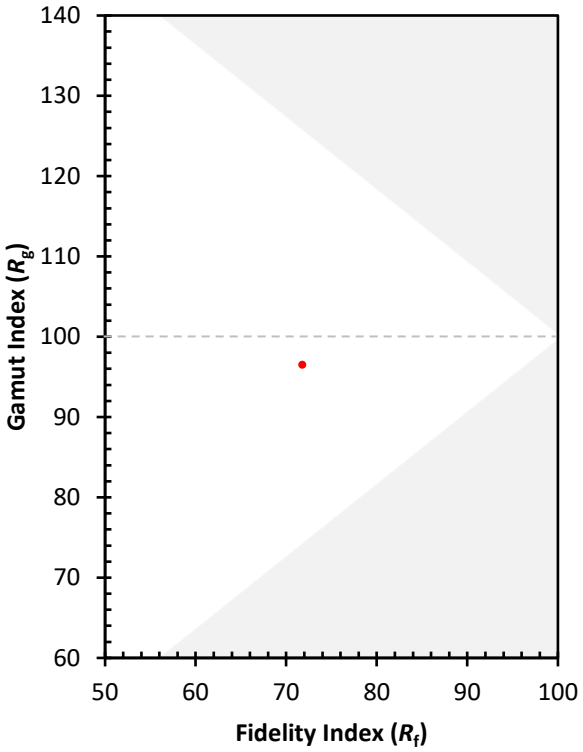



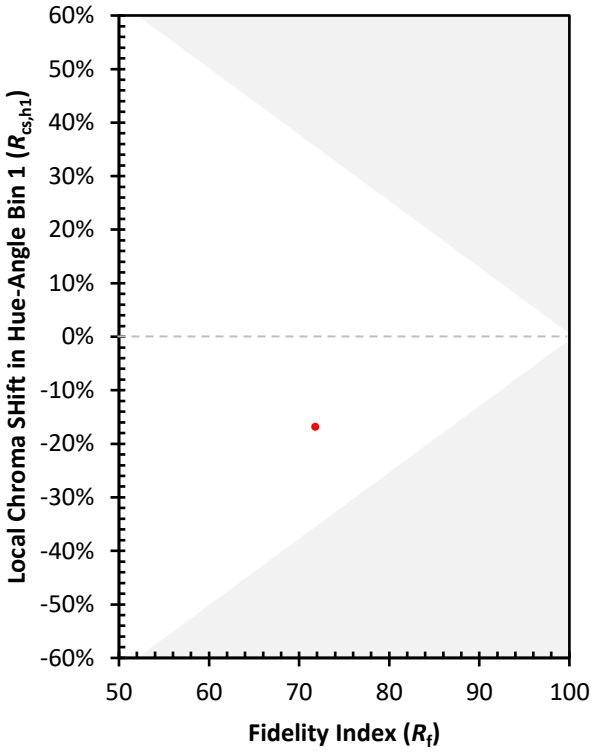



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## Measure Comparisons




(END OF REPORT)