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

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Scaled data based on original data using

LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P1203723

Luminaire Tested: GWC-SB2D-730-U-RW

Issue Date: 10/30/2025

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1203723 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-19) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/14/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GWC-SB2D-730-U-RW |
| Description: | GALLEON WALL LUMINAIRE |
| | (2) 70 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND RECTANGULAR WIDE OP |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 20952 lumens |
| Efficiency: | N/A |
| Efficacy: | 142.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B4 - U0 - G4 |

| | |
|---|---|
| Input Watts (W): | 147.6 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 1.234 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.999 |
| Total Harmonic Distortion (THDi): | 3.108 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

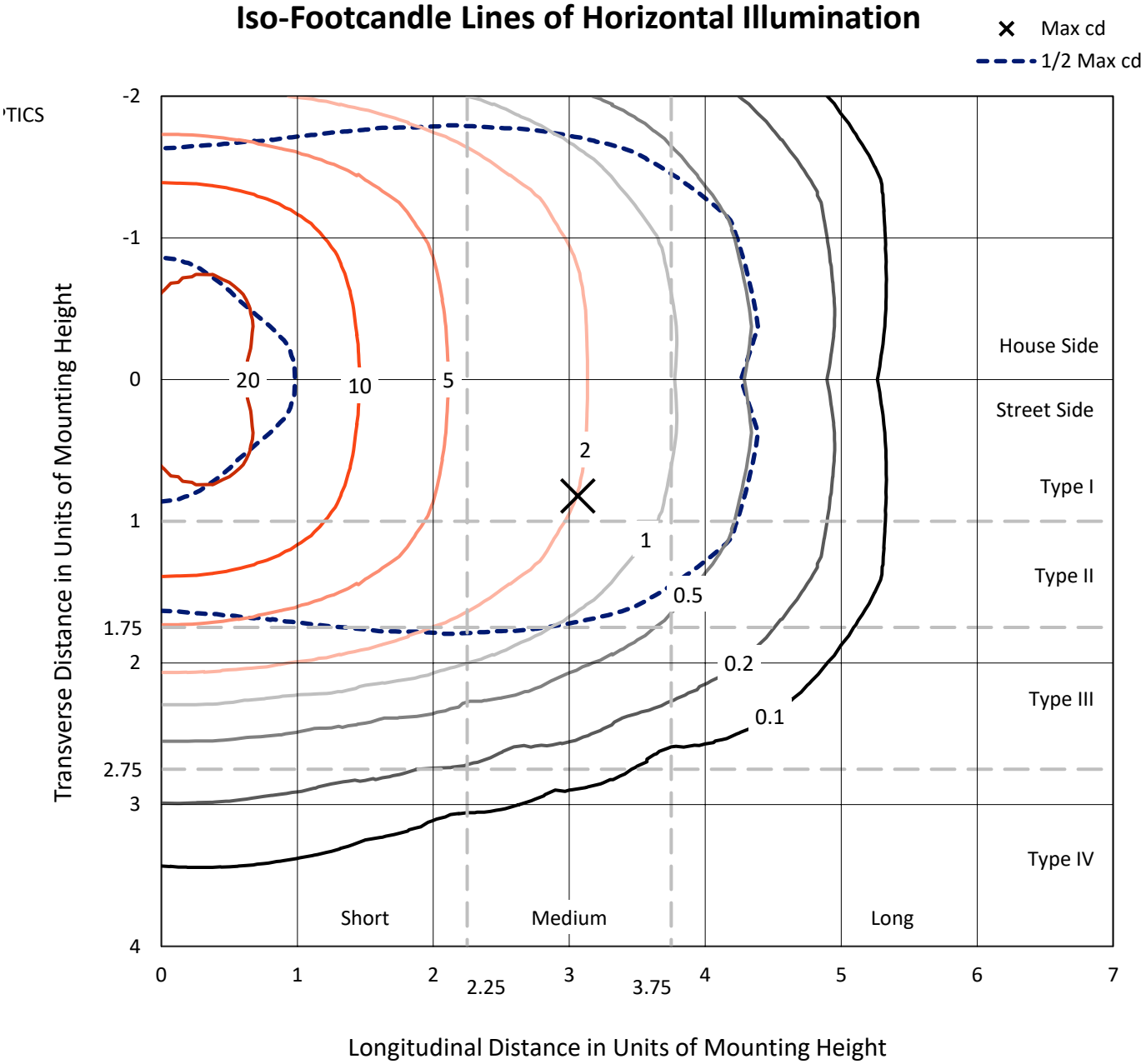


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Scaled Data Report

REPORT NUMBER: P1203723
CATALOG NUMBER: GWC-SB2D-730-U-RW

## Iso-Footcandle Lines of Horizontal Illumination



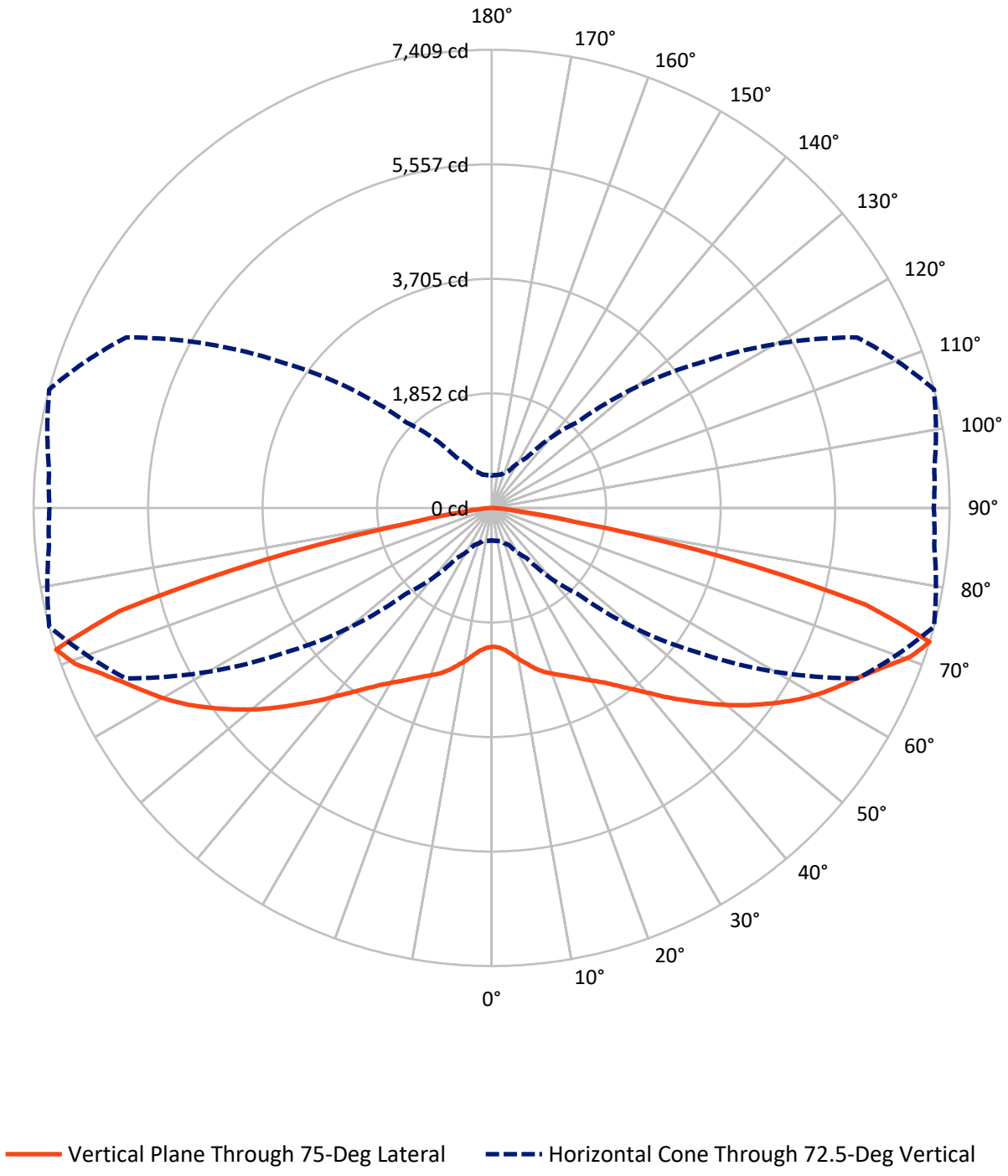

Based on 10 foot mounting height. Maximum calculated value = 18.8 fc
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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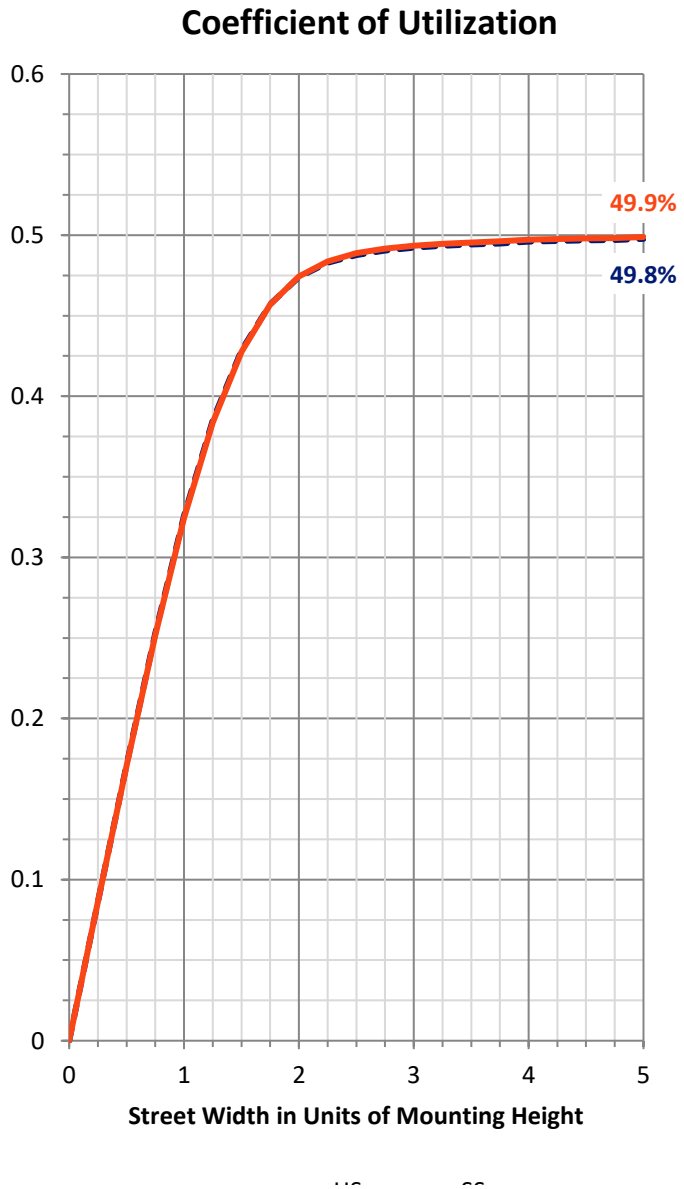
REPORT NUMBER: P1203723
CATALOG NUMBER: GWC-SB2D-730-U-RW

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 10476.0 | 0.0 | 10476.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| **Street Side** | Lumens | 10476.0 | 0.0 | 10476.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| **Total** | Lumens | 20952.0 | 0.0 | 20952.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 219.9 | 1.0 |
| 10°-20° | 725.1 | 3.5 |
| 20°-30° | 1401.1 | 6.7 |
| 30°-40° | 2365.9 | 11.3 |
| 40°-50° | 3752.1 | 17.9 |
| 50°-60° | 5023.6 | 24.0 |
| 60°-70° | 4780.8 | 22.8 |
| 70°-80° | 2494.7 | 11.9 |
| 80°-90° | 188.8 | 0.9 |
| 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° | 20952.0 | 100.0 |
| 0°-180° | 20952.0 | 100.0 |



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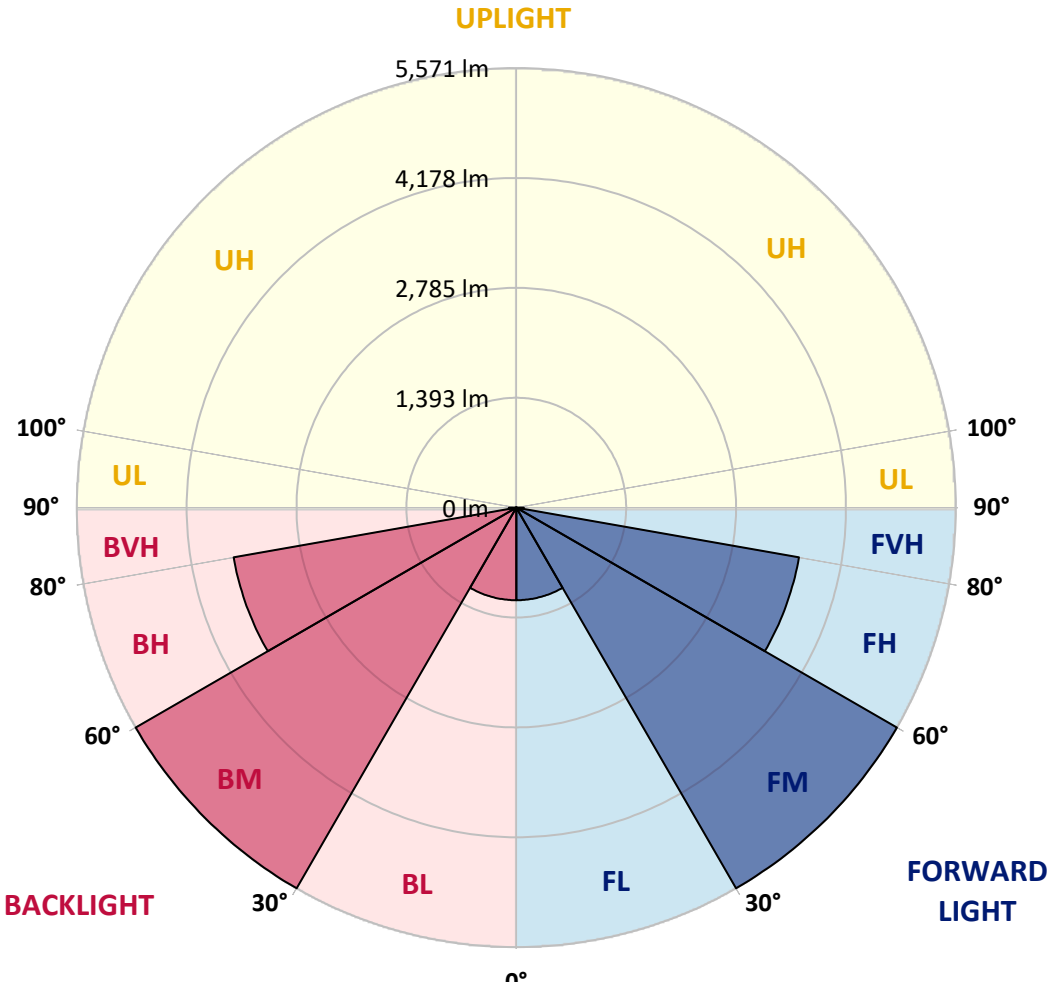
Scaled Data Report

REPORT NUMBER: P1203723
CATALOG NUMBER: GWC-SB2D-730-U-RW

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1173.1 | 5.6 | | | |
| FM | (30°-60°) | 5570.8 | 26.6 | | | |
| FH | (60°-80°) | 3637.8 | 17.4 | | | G2/5000 |
| FVH | (80°-90°) | 94.4 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 1173.1 | 5.6 | B3/2500 | | |
| BM | (30°-60°) | 5570.8 | 26.6 | B4/8500 | | |
| BH | (60°-80°) | 3637.8 | 17.4 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 94.4 | 0.5 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B4-U0-G4**
Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2244.3 | 2244.3 | 2244.3 | 2244.3 | 2244.3 | 2244.3 | 2244.3 | 2244.3 | 2244.3 | 2244.3 | 2244.3 |
| 2.5° | 2244.3 | 2242.2 | 2244.3 | 2246.5 | 2245.4 | 2245.4 | 2250.8 | 2254.0 | 2260.4 | 2259.3 | 2258.2 |
| 5° | 2229.4 | 2228.3 | 2236.8 | 2246.5 | 2254.0 | 2266.8 | 2282.8 | 2294.6 | 2309.6 | 2312.8 | 2312.8 |
| 7.5° | 2221.9 | 2218.7 | 2233.6 | 2250.8 | 2274.3 | 2306.4 | 2337.4 | 2369.5 | 2395.2 | 2403.7 | 2405.9 |
| 10° | 2227.2 | 2228.3 | 2248.6 | 2280.7 | 2318.1 | 2363.1 | 2406.9 | 2461.5 | 2497.9 | 2506.4 | 2515.0 |
| 12.5° | 2251.8 | 2249.7 | 2283.9 | 2335.3 | 2386.6 | 2443.3 | 2494.7 | 2554.6 | 2594.1 | 2614.5 | 2623.0 |
| 15° | 2296.8 | 2292.5 | 2340.6 | 2416.6 | 2491.4 | 2557.8 | 2599.5 | 2656.2 | 2702.2 | 2727.9 | 2737.5 |
| 17.5° | 2350.2 | 2352.4 | 2415.5 | 2513.9 | 2612.3 | 2687.2 | 2726.8 | 2755.7 | 2791.0 | 2813.4 | 2824.1 |
| 20° | 2444.4 | 2448.7 | 2519.3 | 2635.9 | 2748.2 | 2833.8 | 2865.9 | 2855.2 | 2864.8 | 2881.9 | 2894.7 |
| 22.5° | 2570.6 | 2572.7 | 2651.9 | 2778.1 | 2895.8 | 2989.9 | 3011.3 | 2967.5 | 2940.7 | 2952.5 | 2961.1 |
| 25° | 2717.2 | 2731.1 | 2810.2 | 2939.7 | 3060.6 | 3150.4 | 3160.0 | 3093.7 | 3027.4 | 3030.6 | 3035.9 |
| 27.5° | 2895.8 | 2908.6 | 2988.9 | 3117.2 | 3240.3 | 3318.4 | 3317.3 | 3228.5 | 3131.2 | 3106.6 | 3114.0 |
| 30° | 3089.4 | 3103.3 | 3185.7 | 3318.4 | 3432.8 | 3501.3 | 3486.3 | 3380.4 | 3241.3 | 3195.3 | 3200.7 |
| 32.5° | 3319.4 | 3328.0 | 3411.4 | 3544.1 | 3650.0 | 3704.5 | 3673.5 | 3543.0 | 3369.7 | 3317.3 | 3330.1 |
| 35° | 3597.6 | 3610.4 | 3672.4 | 3797.6 | 3890.7 | 3935.6 | 3883.2 | 3729.1 | 3534.5 | 3475.6 | 3484.2 |
| 37.5° | 3915.3 | 3906.7 | 3977.3 | 4088.6 | 4165.6 | 4193.4 | 4121.7 | 3938.8 | 3722.7 | 3653.2 | 3666.0 |
| 40° | 4246.9 | 4242.6 | 4319.6 | 4426.6 | 4468.3 | 4485.5 | 4379.6 | 4179.5 | 3939.9 | 3865.0 | 3889.6 |
| 42.5° | 4547.5 | 4544.3 | 4648.1 | 4766.8 | 4817.1 | 4797.8 | 4664.1 | 4435.2 | 4191.3 | 4105.7 | 4127.1 |
| 45° | 4788.2 | 4783.9 | 4911.2 | 5078.1 | 5176.5 | 5144.4 | 4964.7 | 4717.6 | 4445.9 | 4357.1 | 4377.4 |
| 47.5° | 4973.3 | 4975.4 | 5112.3 | 5318.8 | 5491.0 | 5502.8 | 5271.7 | 5005.4 | 4726.2 | 4625.6 | 4655.5 |
| 50° | 5107.0 | 5113.4 | 5260.0 | 5488.9 | 5724.2 | 5828.0 | 5585.2 | 5300.6 | 5016.1 | 4902.7 | 4936.9 |
| 52.5° | 5140.1 | 5151.9 | 5328.4 | 5596.9 | 5874.0 | 6071.9 | 5903.9 | 5584.1 | 5291.0 | 5182.9 | 5210.7 |
| 55° | 4963.6 | 4987.2 | 5210.7 | 5588.4 | 5966.0 | 6232.4 | 6184.2 | 5871.9 | 5568.0 | 5456.8 | 5487.8 |
| 57.5° | 4558.2 | 4591.4 | 4852.4 | 5345.5 | 5945.7 | 6342.5 | 6401.4 | 6147.8 | 5845.1 | 5738.1 | 5762.7 |
| 60° | 3990.2 | 4029.7 | 4280.1 | 4818.2 | 5659.0 | 6383.2 | 6554.4 | 6416.4 | 6099.7 | 5995.9 | 6018.4 |
| 62.5° | 3133.3 | 3184.6 | 3484.2 | 4115.3 | 5053.5 | 6193.8 | 6684.9 | 6659.2 | 6328.6 | 6199.2 | 6214.2 |
| 65° | 2010.1 | 2064.6 | 2380.2 | 3125.8 | 4245.8 | 5614.0 | 6725.5 | 6895.6 | 6570.4 | 6389.6 | 6412.1 |
| 67.5° | 1212.0 | 1236.6 | 1392.8 | 1894.5 | 3103.3 | 4740.1 | 6381.1 | 7157.7 | 6852.8 | 6628.2 | 6645.3 |
| 70° | 775.6 | 789.5 | 882.5 | 1112.5 | 1754.4 | 3458.5 | 5527.4 | 7206.9 | 7195.1 | 6873.1 | 6871.0 |
| 72.5° | 526.3 | 530.6 | 555.2 | 659.0 | 992.7 | 1965.1 | 4076.8 | 6524.4 | 7409.1 | 7188.7 | 7154.5 |
| 75° | 385.1 | 408.6 | 448.2 | 466.4 | 563.8 | 982.0 | 2336.3 | 4583.9 | 6244.1 | 6340.4 | 6107.2 |
| 77.5° | 286.7 | 287.8 | 342.3 | 363.7 | 402.2 | 523.1 | 988.4 | 2558.8 | 3876.8 | 4070.4 | 3630.7 |
| 80° | 242.8 | 230.0 | 228.9 | 293.1 | 302.7 | 326.3 | 441.8 | 883.6 | 1388.5 | 841.9 | 636.5 |
| 82.5° | 202.2 | 188.3 | 170.1 | 228.9 | 206.5 | 200.0 | 191.5 | 359.4 | 441.8 | 217.2 | 185.1 |
| 85° | 141.2 | 134.8 | 128.4 | 149.8 | 117.7 | 100.6 | 92.0 | 168.0 | 186.1 | 92.0 | 81.3 |
| 87.5° | 61.0 | 63.1 | 64.2 | 66.3 | 49.2 | 35.3 | 35.3 | 47.1 | 47.1 | 36.4 | 26.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |


HS
SS

0

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Peachtree City, GA 30269

Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

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## Test Information

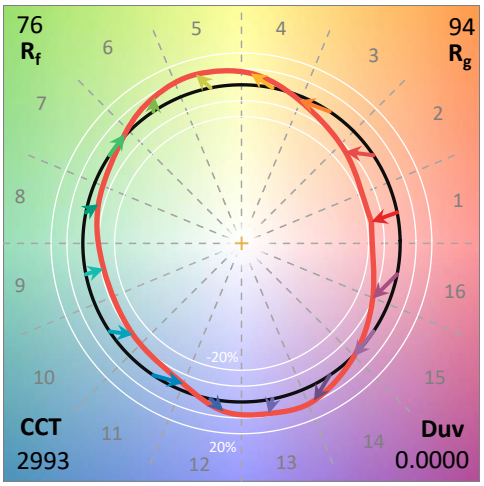
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-2-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | **SA1C-730-U-5WQ** |
| Description: | McGRAW EDISON ROADWAY AND AREA LUMINAIRE |

***THIS IS A REVISION OF SP1-1908-441-2-R3. TO UPDATE THE CATALOG INFORMATION.***TESTED IN SITU. (1) 70 CRI, 3000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 2993 | CRI (Ra): | 71.8 | | |
| CIE u': | 0.2508 | R1: | 67.5 | R9: | -38.3 |
| CIE v': | 0.5215 | R2: | 82.9 | R10: | 62.5 |
| Duv: | 0.0000 | R3: | 94.7 | R11: | 63.7 |
| CIE x: | 0.4374 | R4: | 67.7 | R12: | 57.8 |
| CIE y: | 0.4043 | R5: | 67.9 | R13: | 70.4 |
| CIE z: | 0.1583 | R6: | 77.6 | R14: | 97.3 |
| Peak Wavelength (nm): | 593 | R7: | 76.0 | | |
| Dominant Wavelength (nm): | 582 | R8: | 40.5 | | |
| Purity: | 53 | | | | |

| | |
|---|---|
| Rf: | 75.7 |
| Rg: | 93.9 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 53M |
| Operation Time: | 12H |
| Room Temperature (°C) / RH%: | 25.0./44% |
| Sphere Temperature (°C): | 25.7 |

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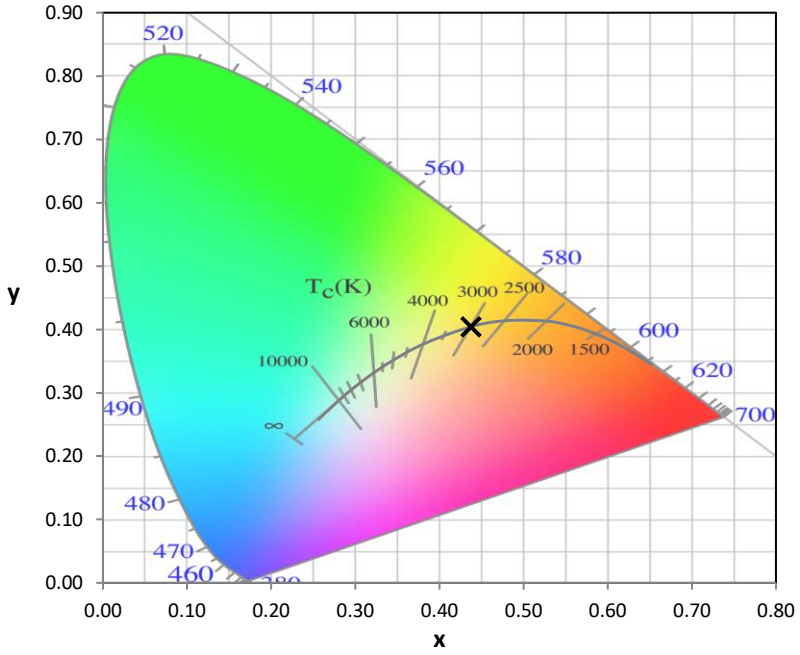
REPORT NUMBER: SP1-1908-441-2-R4

| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

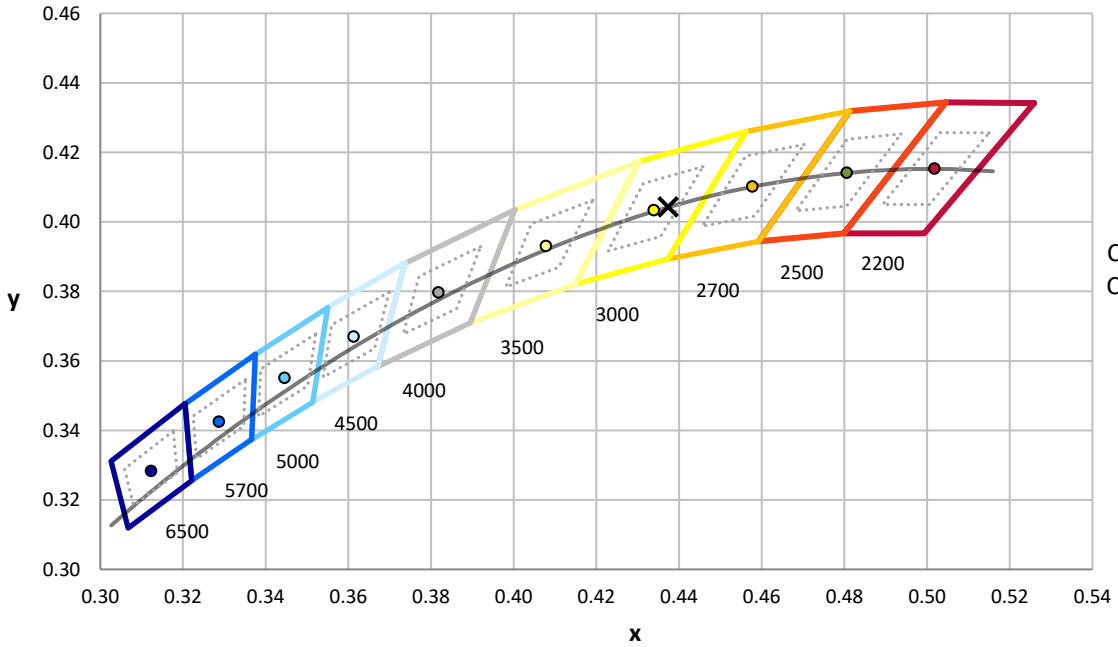
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REPORT NUMBER: SP1-1908-441-2-R4

## CIE 1931 Chromaticity Diagram




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



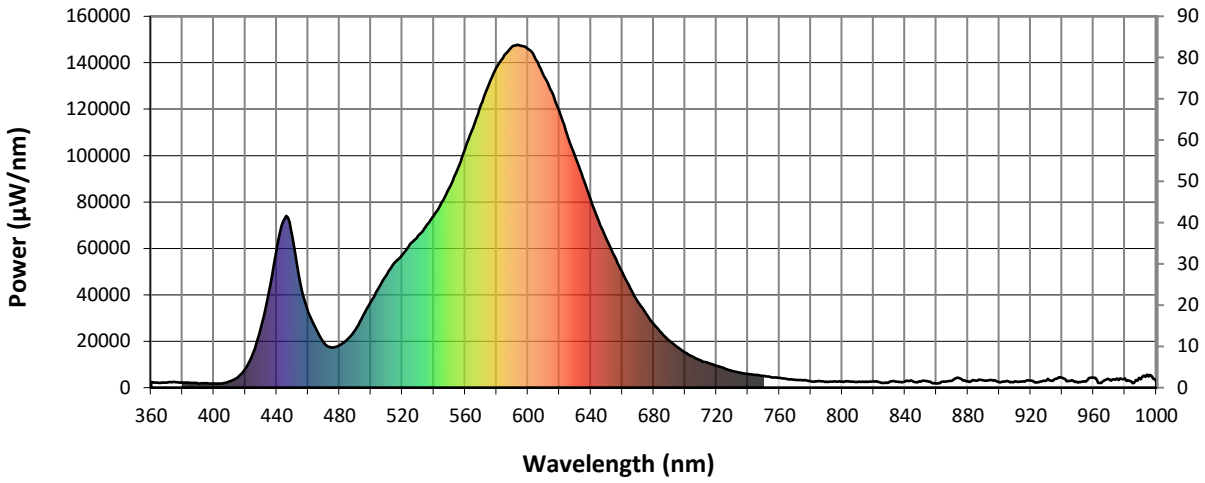

CCT = 2993K
CIE x = 0.4374
CIE y = 0.4043
Duv = 0.0000

Point lies inside the ANSI 3000K 4-step quadrangle

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## Photopic Flux vs. Wavelength



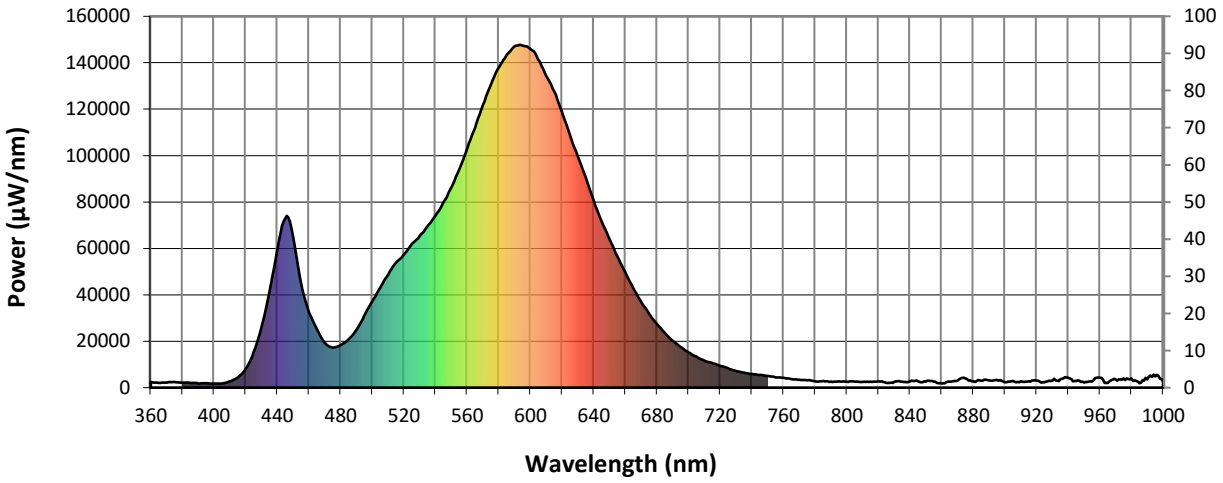

######

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

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## Scotopic Flux vs. Wavelength



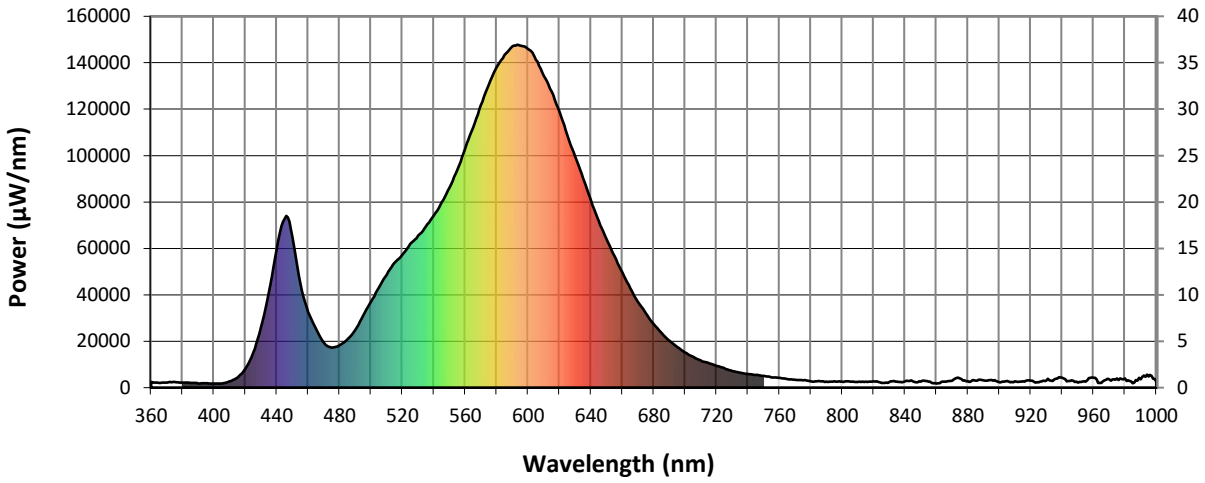

**Scotopic Lumens: 8494.8** **S/P: 1.23**

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: 3101.5** **M/P: 0.45**

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

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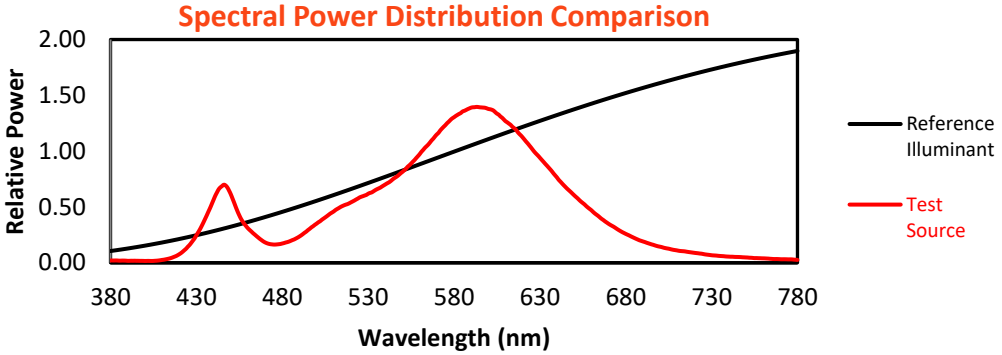
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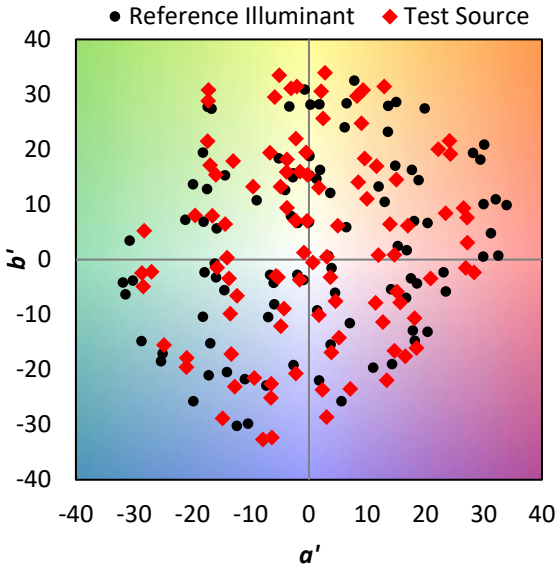
## Summary

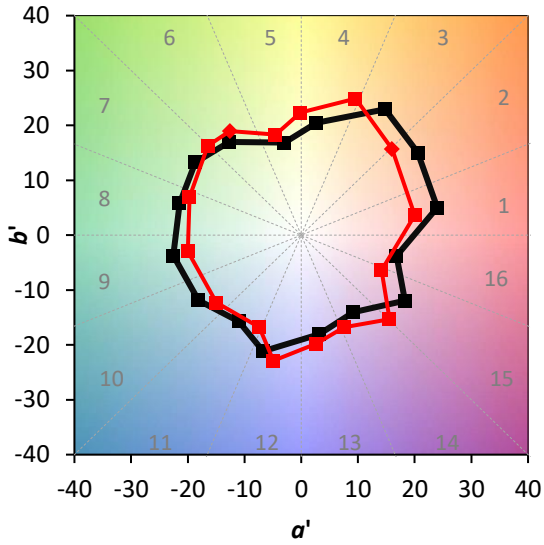
$R_f$ = 75.7
$R_g$ = 93.9
CIE $R_a$ = 71.8
$R_9$ = -38.3

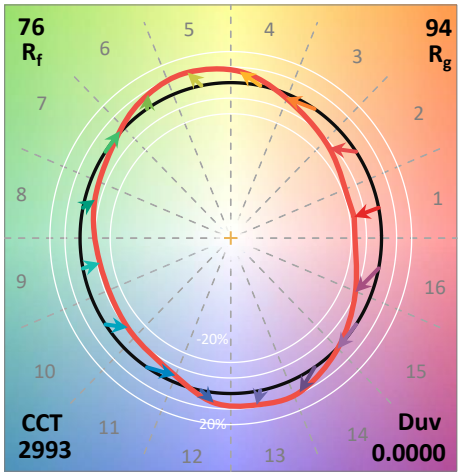
## Spectral Power Distribution Comparison

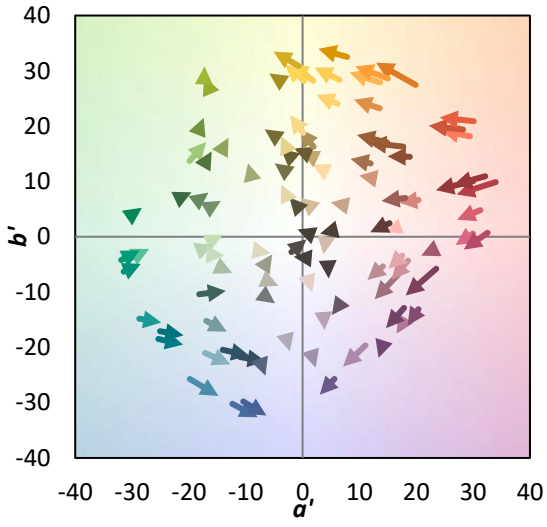



## Color Vector Graphics



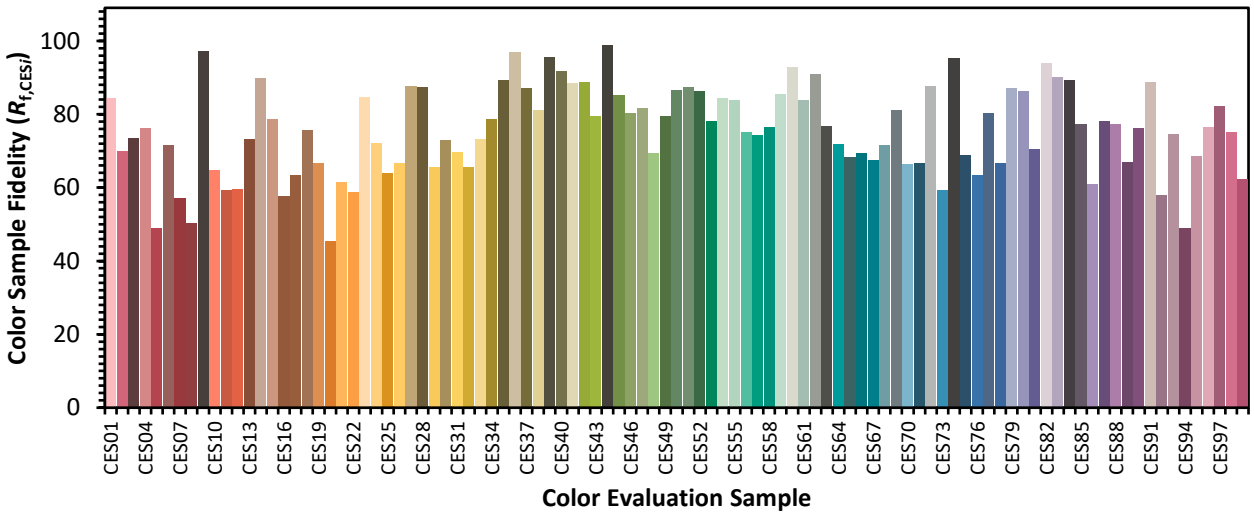
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## Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 67 | CES51 = 87 | CES76 = 63 |
| CES02 = 63 | CES27 = 88 | CES52 = 86 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 78 | CES78 = 67 |
| CES04 = 71 | CES29 = 66 | CES54 = 84 | CES79 = 87 |
| CES05 = 49 | CES30 = 73 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 70 | CES56 = 75 | CES81 = 71 |
| CES07 = 41 | CES32 = 65 | CES57 = 74 | CES82 = 94 |
| CES08 = 40 | CES33 = 73 | CES58 = 76 | CES83 = 90 |
| CES09 = 29 | CES34 = 79 | CES59 = 85 | CES84 = 89 |
| CES10 = 76 | CES35 = 89 | CES60 = 93 | CES85 = 77 |
| CES11 = 59 | CES36 = 97 | CES61 = 84 | CES86 = 61 |
| CES12 = 65 | CES37 = 87 | CES62 = 91 | CES87 = 78 |
| CES13 = 43 | CES38 = 81 | CES63 = 77 | CES88 = 77 |
| CES14 = 74 | CES39 = 95 | CES64 = 72 | CES89 = 67 |
| CES15 = 71 | CES40 = 92 | CES65 = 68 | CES90 = 76 |
| CES16 = 47 | CES41 = 88 | CES66 = 69 | CES91 = 89 |
| CES17 = 50 | CES42 = 89 | CES67 = 67 | CES92 = 58 |
| CES18 = 56 | CES43 = 79 | CES68 = 72 | CES93 = 74 |
| CES19 = 73 | CES44 = 99 | CES69 = 81 | CES94 = 49 |
| CES20 = 66 | CES45 = 85 | CES70 = 66 | CES95 = 68 |
| CES21 = 87 | CES46 = 80 | CES71 = 67 | CES96 = 76 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 69 | CES73 = 59 | CES98 = 75 |
| CES24 = 91 | CES49 = 80 | CES74 = 95 | CES99 = 62 |
| CES25 = 73 | CES50 = 87 | CES75 = 69 | |

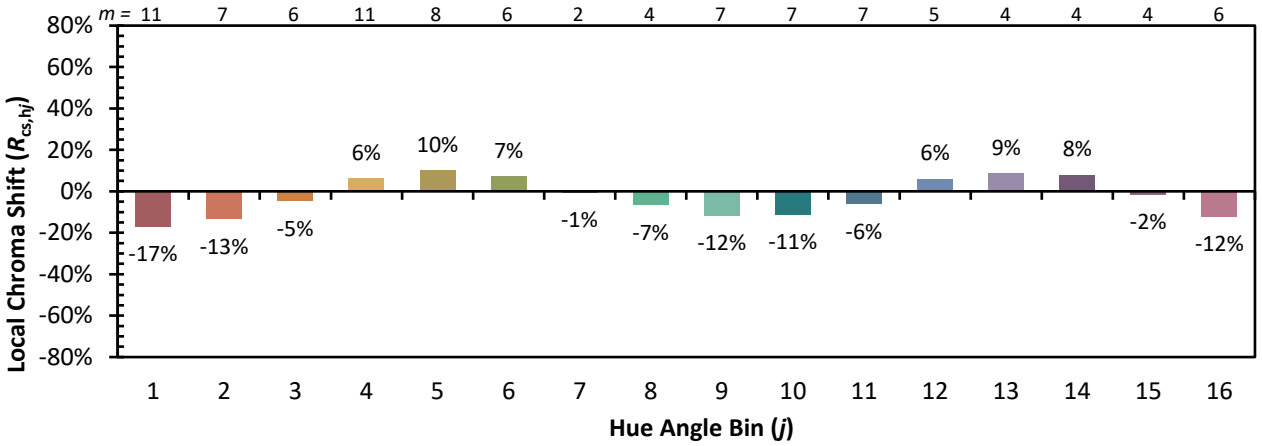


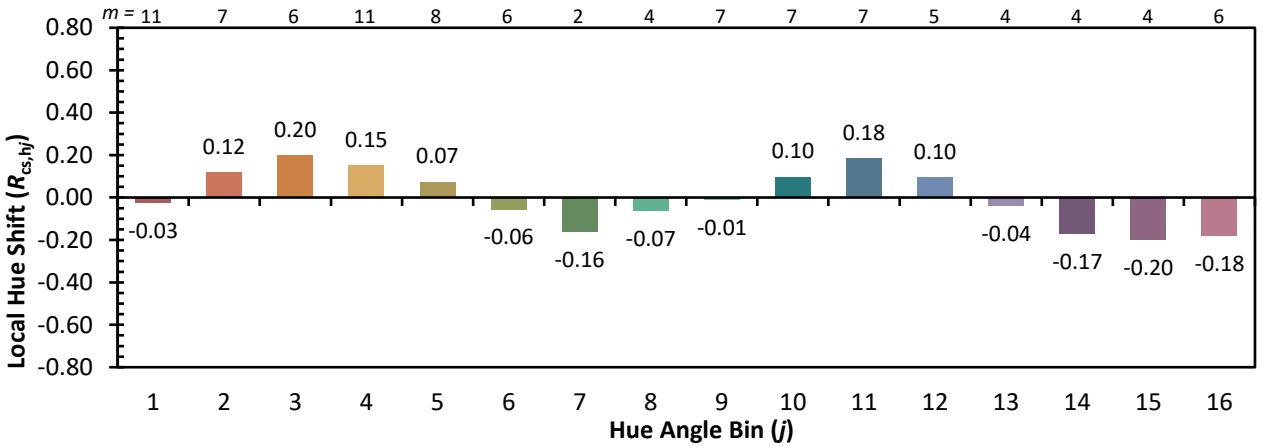
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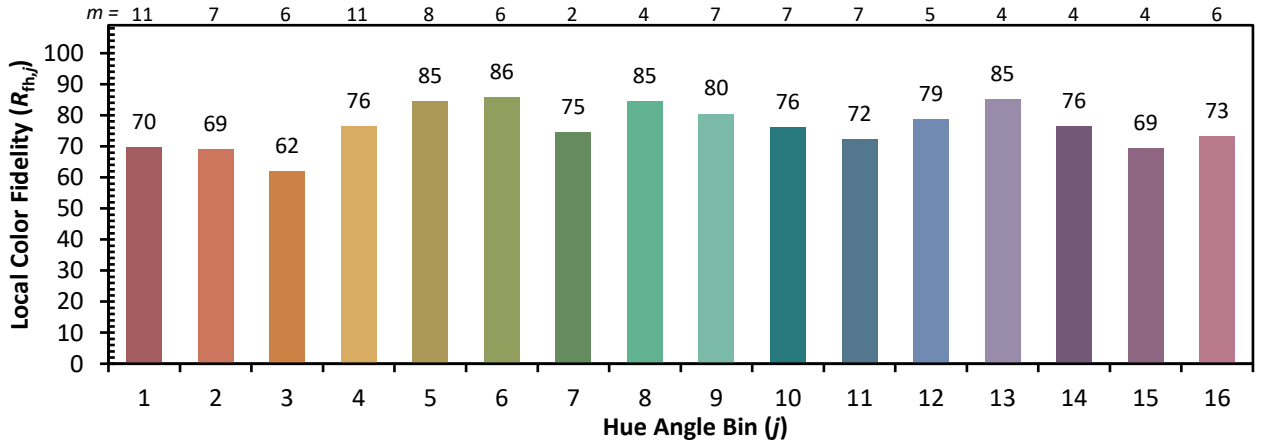
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### Color Rendition by Hue-Angle Bin



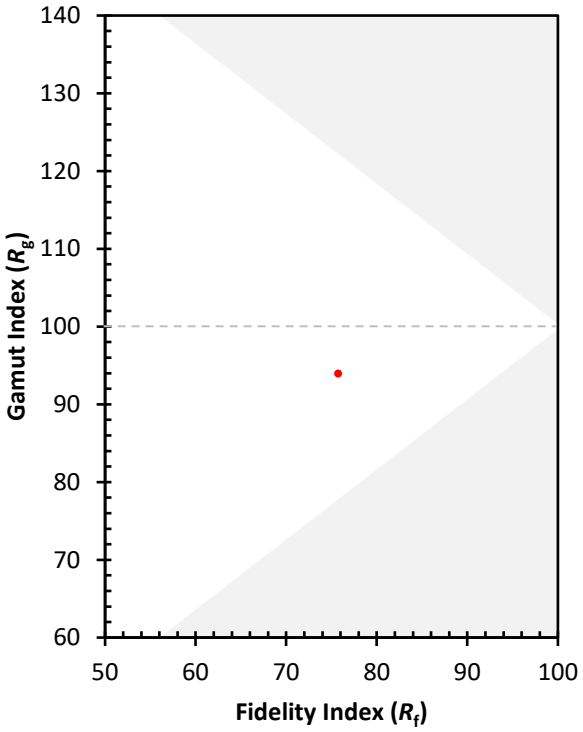



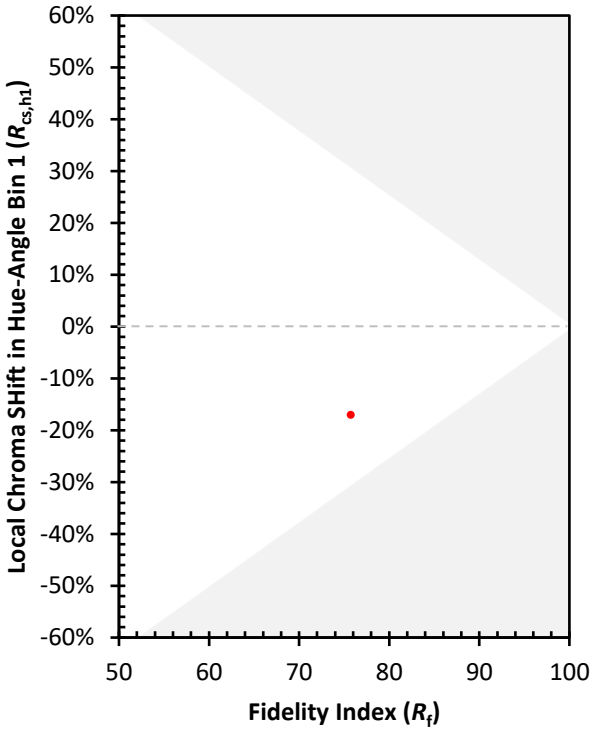
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### Measure Comparisons




(END OF REPORT)