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

Scaled data based on original data using

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

Test Report Prepared for

Cooper Lighting Solutions

Brand: METALUX

Report Number: P976588

Luminaire Tested: 22SR-LD2-C-29-UNV-L850-CD1-PL-U

Issue Date: 03/18/2025

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | P976588 |
| Test Lab: | INNOVATION CENTER(P3) |
| Issue Date: | 03/18/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | METALUX |
| Catalog Number: | 22SR-LD2-C-29-UNV-L850-CD1-PL-U |
| Description: | METALUX SKYRIDGE 2x2 2900LM PACKAGE 80CRI 5000K TROFFER with Pearl SKYTRIM |
| Light Source: | 5000K CCT, 80+ CRI LEDS |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 2622.0 lumens |
| Efficiency: | N/A |
| Efficacy: | 129.2 lumens/watt |
| Spacing Criteria (0/90/45): | 1.31 / 2 / 1.87 |
| Luminous Opening: | Rectangular (W 2' x L: 2' x H: 0') |
| CIE Type: | Direct |

| | |
|---|---|
| Input Watts (W): | 20.3 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | NR |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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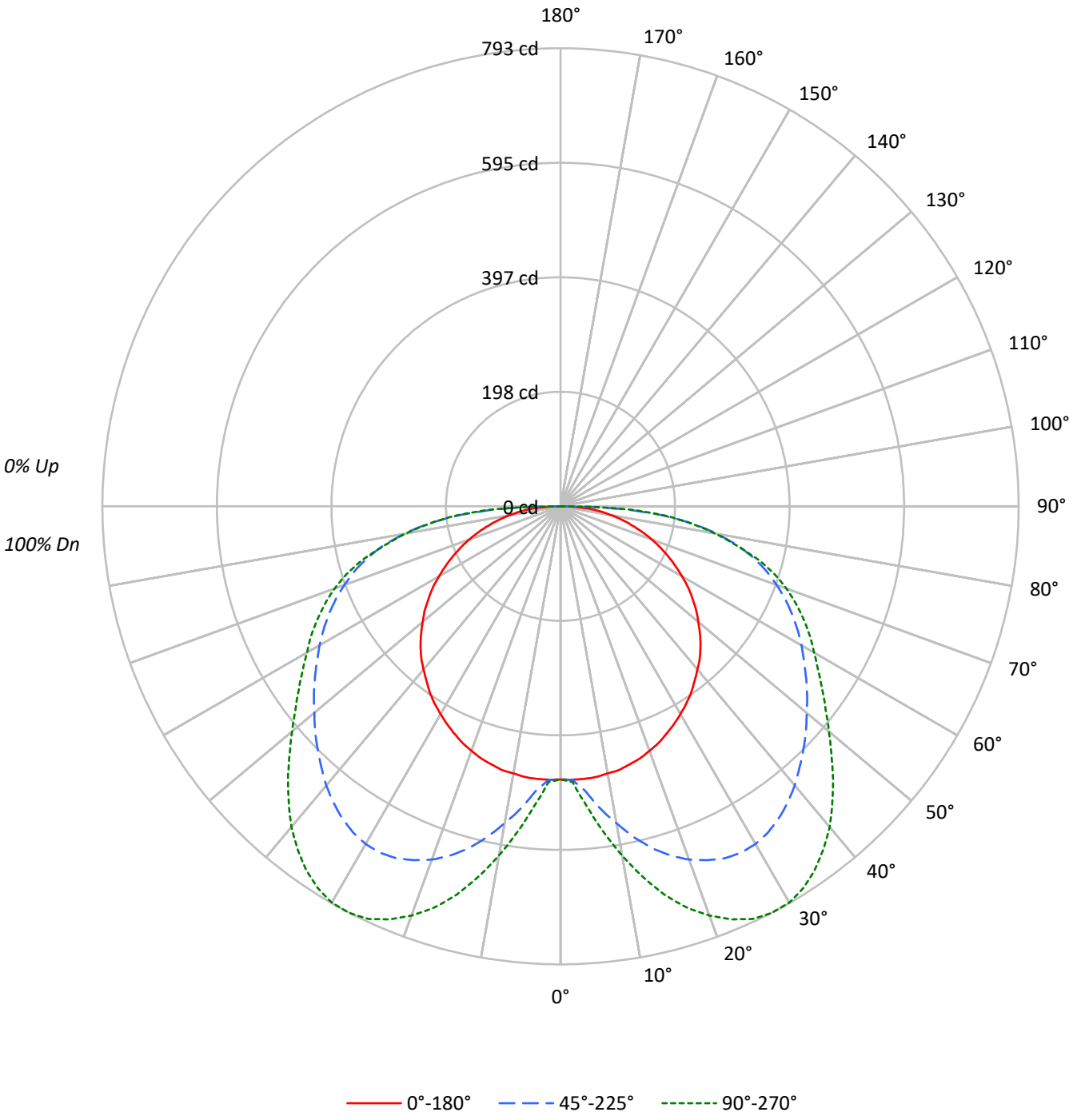
Scaled Data Report

TEST NUMBER: P976588
CATALOG NUMBER: 22SR-LD2-C-29-UNV-L850-CD1-PL-U

## Luminous Intensity Polar Plot



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TEST NUMBER: P976588
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## 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 106 | 100 | 95 | 90 | 103 | 98 | 93 | 88 | 93 | 89 | 85 | 89 | 86 | 83 | 85 | 83 | 80 | 78 |
| 2 | 95 | 85 | 77 | 70 | 92 | 83 | 76 | 69 | 79 | 73 | 68 | 76 | 71 | 66 | 73 | 68 | 64 | 62 |
| 3 | 85 | 73 | 64 | 56 | 83 | 72 | 63 | 56 | 69 | 61 | 55 | 66 | 59 | 54 | 63 | 57 | 53 | 50 |
| 4 | 78 | 64 | 54 | 47 | 75 | 63 | 53 | 46 | 60 | 52 | 46 | 58 | 51 | 45 | 55 | 49 | 44 | 42 |
| 5 | 71 | 57 | 47 | 39 | 69 | 55 | 46 | 39 | 53 | 45 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 35 |
| 6 | 65 | 51 | 41 | 34 | 63 | 50 | 40 | 34 | 48 | 39 | 33 | 46 | 39 | 33 | 44 | 38 | 33 | 30 |
| 7 | 60 | 46 | 36 | 29 | 58 | 45 | 36 | 29 | 43 | 35 | 29 | 42 | 34 | 29 | 40 | 34 | 28 | 26 |
| 8 | 56 | 41 | 32 | 26 | 54 | 41 | 32 | 26 | 39 | 31 | 26 | 38 | 31 | 25 | 37 | 30 | 25 | 23 |
| 9 | 52 | 38 | 29 | 23 | 51 | 37 | 29 | 23 | 36 | 28 | 23 | 35 | 28 | 23 | 34 | 27 | 22 | 20 |
| 10 | 49 | 35 | 26 | 21 | 47 | 34 | 26 | 21 | 33 | 26 | 20 | 32 | 25 | 20 | 31 | 25 | 20 | 18 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|---|---|---|---|
| 0° | 1272 | 1272 | 1272 |
| 5° | 1280 | 1337 | 1407 |
| 10° | 1283 | 1523 | 1677 |
| 15° | 1288 | 1707 | 1940 |
| 20° | 1290 | 1864 | 2159 |
| 25° | 1290 | 1996 | 2340 |
| 30° | 1290 | 2098 | 2461 |
| 35° | 1295 | 2165 | 2523 |
| 40° | 1296 | 2216 | 2545 |
| 45° | 1304 | 2263 | 2539 |
| 50° | 1304 | 2328 | 2539 |
| 55° | 1309 | 2434 | 2596 |
| 60° | 1307 | 2592 | 2728 |
| 65° | 1309 | 2818 | 2958 |
| 70° | 1324 | 3132 | 3275 |
| 75° | 1341 | 3605 | 3667 |
| 80° | 1404 | 4265 | 4217 |
| 85° | 1556 | 5446 | 5570 |

## MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 85°
Vertical Angle: 87.5°
Luminance: 7274 cd/sqm

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1121 Highway 74 South
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Scaled Data Report

TEST NUMBER: P976588
CATALOG NUMBER: 22SR-LD2-C-29-UNV-L850-CD1-PL-U

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 49.0 | 1.9 |
| 10°-20° | 169.3 | 6.5 |
| 20°-30° | 297.4 | 11.3 |
| 30°-40° | 391.5 | 14.9 |
| 40°-50° | 430.6 | 16.4 |
| 50°-60° | 426.7 | 16.3 |
| 60°-70° | 392.7 | 15.0 |
| 70°-80° | 314.8 | 12.0 |
| 80°-90° | 149.7 | 5.7 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 515.8 | 19.7 |
| 0°-40° | 907.3 | 34.6 |
| 0°-60° | 1764.7 | 67.3 |
| 0°-90° | 2622.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2622.0 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 473 | 473 | 473 | 473 | 473 | |
| 5° | 474 | 475 | 495 | 515 | 521 | 45 |
| 15° | 462 | 523 | 613 | 673 | 696 | 131 |
| 25° | 434 | 543 | 672 | 757 | 788 | 200 |
| 35° | 394 | 524 | 659 | 741 | 768 | 246 |
| 45° | 343 | 476 | 595 | 652 | 667 | 264 |
| 55° | 279 | 415 | 519 | 549 | 553 | 249 |
| 65° | 206 | 346 | 442 | 457 | 465 | 204 |
| 75° | 129 | 260 | 347 | 352 | 353 | 137 |
| 85° | 50 | 122 | 176 | 177 | 180 | 53 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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TEST NUMBER: P976588
CATALOG NUMBER: 22SR-LD2-C-29-UNV-L850-CD1-PL-U

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 |
| 2.5° | 473.7 | 474.7 | 473.7 | 473.7 | 473.7 | 473.7 | 473.7 | 473.7 | 473.7 | 473.7 | 474.7 |
| 5° | 473.7 | 473.7 | 473.7 | 473.7 | 473.7 | 476.6 | 479.7 | 483.7 | 489.8 | 494.8 | 500.8 |
| 7.5° | 472.7 | 472.7 | 472.7 | 473.7 | 479.7 | 487.7 | 497.9 | 507.9 | 518.9 | 528.1 | 536.2 |
| 10° | 469.6 | 469.6 | 470.6 | 477.7 | 488.7 | 503.9 | 518.1 | 532.1 | 544.1 | 557.3 | 570.4 |
| 12.5° | 467.7 | 467.7 | 470.6 | 483.7 | 500.8 | 520.0 | 537.1 | 554.3 | 571.4 | 586.4 | 601.6 |
| 15° | 462.5 | 462.5 | 469.6 | 488.7 | 512.0 | 533.1 | 554.3 | 574.4 | 594.6 | 612.7 | 629.9 |
| 17.5° | 457.5 | 457.5 | 468.5 | 493.7 | 518.9 | 543.1 | 567.4 | 591.6 | 613.7 | 633.9 | 653.1 |
| 20° | 450.4 | 451.4 | 467.7 | 495.8 | 523.1 | 551.2 | 578.5 | 603.7 | 628.9 | 651.0 | 672.2 |
| 22.5° | 443.5 | 444.4 | 465.6 | 496.8 | 526.0 | 556.2 | 585.6 | 613.7 | 640.0 | 663.1 | 686.2 |
| 25° | 434.3 | 437.4 | 461.6 | 494.8 | 527.1 | 558.3 | 589.5 | 618.7 | 647.0 | 672.2 | 695.4 |
| 27.5° | *425.2* | *429.3* | *456.5* | *490.8* | *525.0* | *557.3* | *589.5* | *620.8* | *648.9* | *676.2* | *699.3* |
| 30° | 415.2 | 420.2 | 450.4 | 485.8 | 521.0 | 554.3 | 587.5 | 618.7 | 648.1 | 675.2 | 698.3 |
| 32.5° | 405.2 | 410.2 | 442.5 | 478.7 | 513.9 | 548.3 | 581.4 | 613.7 | 642.0 | 669.1 | 693.3 |
| 35° | 394.1 | 401.0 | 434.3 | 470.6 | 506.9 | 541.2 | 574.4 | 605.6 | 633.9 | 659.1 | 682.3 |
| 37.5° | 381.0 | 390.0 | 423.3 | 460.6 | 496.8 | 531.0 | 563.3 | 594.6 | 621.8 | 646.0 | 668.1 |
| 40° | 368.9 | 378.9 | 413.1 | 449.5 | 485.8 | 520.0 | 551.2 | 581.4 | 607.7 | 630.8 | 652.0 |
| 42.5° | 356.8 | 367.9 | 401.0 | 437.4 | 472.7 | 506.9 | 538.1 | 566.4 | 591.6 | 612.7 | 632.9 |
| 45° | 342.7 | 354.8 | 387.9 | 424.3 | 459.6 | 492.9 | 523.1 | 550.2 | 575.4 | 594.6 | 612.7 |
| 47.5° | 327.5 | 341.6 | 375.0 | 411.2 | 445.4 | 477.7 | 507.9 | 533.1 | 556.2 | 576.4 | 592.6 |
| 50° | 311.4 | 327.5 | 360.8 | 397.1 | 430.4 | 462.5 | 491.8 | 517.0 | 538.1 | 556.2 | 571.4 |
| 52.5° | 296.2 | 312.5 | 345.6 | 381.0 | 415.2 | 447.5 | 475.6 | 499.8 | 520.0 | 538.1 | 551.2 |
| 55° | 279.1 | 296.2 | 330.6 | 364.8 | 399.1 | 430.4 | 458.5 | 482.7 | 501.8 | 518.9 | 531.0 |
| 57.5° | 262.1 | 280.2 | 313.3 | 348.7 | 381.9 | 414.2 | 442.5 | 465.6 | 484.8 | 499.8 | 511.0 |
| 60° | 242.9 | 263.1 | 296.2 | 331.6 | 365.8 | 397.1 | 425.2 | 448.5 | 466.6 | 481.7 | 490.8 |
| 62.5° | 224.8 | 245.0 | 280.2 | 314.4 | 347.7 | 380.0 | 408.1 | 430.4 | 448.5 | 462.5 | 470.6 |
| 65° | 205.6 | 226.7 | 261.0 | 296.2 | 329.6 | 361.8 | 389.0 | 412.2 | 429.3 | 442.5 | 450.4 |
| 67.5° | 187.5 | 208.6 | 241.9 | 276.2 | 309.4 | 342.7 | 368.9 | 391.0 | 408.1 | 421.2 | 428.3 |
| 70° | 168.3 | 189.4 | 222.7 | 255.0 | 289.2 | 320.4 | 347.7 | 369.8 | 386.0 | 398.1 | 405.2 |
| 72.5° | 149.2 | 171.3 | 201.6 | 234.8 | 267.1 | 299.3 | 324.5 | 346.7 | 362.9 | 373.9 | 380.0 |
| 75° | 129.0 | 151.2 | 181.4 | 210.6 | 243.9 | 275.2 | 300.4 | 321.4 | 336.6 | 346.7 | 351.7 |
| 77.5° | 109.8 | 130.0 | 159.2 | 188.5 | 217.7 | 247.9 | 272.1 | 293.3 | 305.4 | 314.4 | 319.5 |
| 80° | 90.6 | 108.8 | 135.0 | 162.3 | 188.5 | 216.7 | 238.9 | 257.9 | 270.0 | 275.2 | 278.1 |
| 82.5° | 71.5 | 87.7 | 107.9 | 132.1 | 155.2 | 178.3 | 198.5 | 214.6 | 223.7 | 230.8 | 232.7 |
| 85° | 50.4 | 60.4 | 76.6 | 93.7 | 112.9 | 132.1 | 150.2 | 162.3 | 171.3 | 176.4 | 177.3 |
| 87.5° | 26.2 | 30.2 | 38.3 | 48.3 | 62.5 | 75.6 | 85.6 | 93.7 | 100.8 | 105.8 | 110.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report

TEST NUMBER: P976588
CATALOG NUMBER: 22SR-LD2-C-29-UNV-L850-CD1-PL-U

**CANDELA DISTRIBUTION (continued):**

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|---|---|---|---|---|---|---|---|---|
| 0° | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | 472.7 | *472.7* |
| 2.5° | 474.7 | 474.7 | 476.6 | 476.6 | 477.7 | 477.7 | 476.6 | *477.7* |
| 5° | 504.9 | 508.9 | 515.0 | 515.0 | 518.9 | 521.0 | 521.0 | *521.0* |
| 7.5° | 542.2 | 548.3 | 555.4 | 559.3 | 564.3 | 567.4 | 568.3 | *568.3* |
| 10° | 578.5 | 587.5 | 595.6 | 601.6 | 607.7 | 610.8 | 613.7 | *613.7* |
| 12.5° | 612.7 | 623.7 | 633.9 | 642.0 | 648.9 | 653.1 | 656.0 | *657.0* |
| 15° | 643.9 | 658.1 | 668.1 | 678.3 | 686.2 | 691.4 | 694.3 | *696.4* |
| 17.5° | 670.2 | 685.3 | 697.4 | 707.5 | 716.6 | 722.6 | 727.6 | *728.7* |
| 20° | 690.4 | 706.4 | 720.6 | 731.6 | 741.6 | 747.8 | 752.8 | *753.9* |
| 22.5° | 705.4 | 723.5 | 738.7 | 750.8 | 760.8 | 767.9 | 772.0 | *773.9* |
| 25° | 715.6 | 733.7 | 750.8 | 763.9 | 775.0 | 782.0 | 785.1 | *788.1* |
| 27.5° | *720.6* | *739.7* | *756.8* | *769.9* | *781.0* | *788.1* | *792.1* | *793.1* |
| 30° | 720.6 | 738.7 | 755.8 | 768.9 | 778.9 | 786.0 | 790.1 | *792.1* |
| 32.5° | 713.5 | 731.6 | 747.8 | 760.8 | 769.9 | 777.0 | 781.0 | *783.1* |
| 35° | 702.4 | 719.5 | 735.6 | 746.8 | 756.8 | 761.8 | 766.9 | *767.9* |
| 37.5° | 687.3 | 703.5 | 718.5 | 728.7 | 737.7 | 742.7 | 746.8 | *747.8* |
| 40° | 669.1 | 684.3 | 697.4 | 706.4 | 714.5 | 719.5 | 722.6 | *724.6* |
| 42.5° | 648.9 | 662.1 | 673.3 | 681.2 | 687.3 | 692.3 | 694.3 | *696.4* |
| 45° | 626.8 | 637.9 | 648.1 | 655.0 | 660.1 | 663.1 | 666.2 | *667.2* |
| 47.5° | 604.7 | 614.7 | 622.9 | 628.9 | 630.8 | 633.9 | 634.9 | *636.0* |
| 50° | 582.5 | 590.6 | 597.7 | 600.6 | 603.7 | 605.6 | 605.6 | *606.6* |
| 52.5° | 560.4 | 568.3 | 571.4 | 575.4 | 577.5 | 578.5 | 578.5 | *578.5* |
| 55° | 539.1 | 545.2 | 548.3 | 550.2 | 551.2 | 553.3 | 553.3 | *553.3* |
| 57.5° | 518.9 | 523.1 | 524.1 | 526.0 | 527.1 | 529.1 | 529.1 | *529.1* |
| 60° | 496.8 | 500.8 | 501.8 | 502.9 | 503.9 | 505.8 | 506.9 | *506.9* |
| 62.5° | 476.6 | 479.7 | 478.7 | 480.8 | 481.7 | 483.7 | 485.8 | *486.8* |
| 65° | 454.5 | 456.5 | 456.5 | 457.5 | 460.6 | 461.6 | 463.5 | *464.6* |
| 67.5° | 432.3 | 433.3 | 433.3 | 435.4 | 437.4 | 439.4 | 440.4 | *441.4* |
| 70° | 407.1 | 409.1 | 408.1 | 410.2 | 412.2 | 414.2 | 416.2 | *416.2* |
| 72.5° | 381.0 | 381.9 | 382.9 | 381.9 | 383.9 | 386.0 | 387.0 | *387.9* |
| 75° | 350.6 | 352.7 | 352.7 | 350.6 | 351.7 | 351.7 | 352.7 | *352.7* |
| 77.5° | 315.4 | 314.4 | 311.4 | 309.4 | 309.4 | 310.4 | 310.4 | *311.4* |
| 80° | 275.2 | 273.1 | 271.0 | 269.1 | 269.1 | 270.0 | 270.0 | *272.1* |
| 82.5° | 230.8 | 228.7 | 226.7 | 225.8 | 226.7 | 226.7 | 227.7 | *228.7* |
| 85° | 178.3 | 175.4 | 178.3 | 176.4 | 178.3 | 178.3 | 178.3 | *180.4* |
| 87.5° | 110.8 | 111.9 | 114.8 | 113.9 | 112.9 | 113.9 | 117.9 | *115.8* |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* |

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Scaled Data Report

TEST NUMBER: P976588
CATALOG NUMBER: 22SR-LD2-C-29-UNV-L850-CD1-PL-U

**CIE UGR TABLE:**

| Reflectances: | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ceiling | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| | Wall | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| | Reference plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room Dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H | Y=2H | 13.6 | 15.4 | 14.0 | 15.7 | 16.0 | 16.0 | 17.8 | 16.4 | 18.1 | 18.5 |
| | 3H | 15.6 | 17.2 | 16.0 | 17.5 | 17.9 | 18.8 | 20.4 | 19.1 | 20.7 | 21.1 |
| | 4H | 16.4 | 17.9 | 16.8 | 18.3 | 18.6 | 20.1 | 21.6 | 20.5 | 22.0 | 22.3 |
| | 6H | 17.0 | 18.5 | 17.4 | 18.8 | 19.2 | 21.2 | 22.7 | 21.6 | 23.0 | 23.4 |
| | 8H | 17.3 | 18.7 | 17.7 | 19.1 | 19.4 | 21.8 | 23.2 | 22.2 | 23.5 | 23.9 |
| | 12H | 17.5 | 18.8 | 17.9 | 19.2 | 19.6 | 22.3 | 23.6 | 22.7 | 24.0 | 24.4 |
| 4H | 2H | 15.2 | 16.8 | 15.6 | 17.1 | 17.5 | 16.9 | 18.4 | 17.3 | 18.8 | 19.1 |
| | 3H | 17.7 | 19.0 | 18.1 | 19.4 | 19.8 | 19.9 | 21.2 | 20.3 | 21.6 | 22.0 |
| | 4H | 18.7 | 19.9 | 19.2 | 20.4 | 20.8 | 21.3 | 22.5 | 21.7 | 23.0 | 23.4 |
| | 6H | 19.6 | 20.7 | 20.0 | 21.1 | 21.5 | 22.7 | 23.8 | 23.1 | 24.2 | 24.6 |
| | 8H | 19.9 | 20.9 | 20.3 | 21.4 | 21.8 | 23.3 | 24.3 | 23.7 | 24.7 | 25.2 |
| | 12H | 20.1 | 21.1 | 20.6 | 21.5 | 22.0 | 23.9 | 24.8 | 24.4 | 25.3 | 25.8 |
| 8H | 4H | 19.9 | 20.9 | 20.3 | 21.4 | 21.8 | 21.9 | 22.9 | 22.3 | 23.3 | 23.8 |
| | 6H | 21.1 | 22.0 | 21.6 | 22.5 | 23.0 | 23.4 | 24.3 | 23.9 | 24.8 | 25.3 |
| | 8H | 21.6 | 22.4 | 22.1 | 22.9 | 23.4 | 24.2 | 25.0 | 24.7 | 25.5 | 26.0 |
| | 12H | 22.0 | 22.7 | 22.5 | 23.2 | 23.8 | 25.0 | 25.7 | 25.5 | 26.2 | 26.7 |
| 12H | 4H | 20.1 | 21.1 | 20.6 | 21.5 | 22.0 | 22.0 | 22.9 | 22.5 | 23.4 | 23.8 |
| | 6H | 21.6 | 22.3 | 22.1 | 22.8 | 23.3 | 23.6 | 24.4 | 24.2 | 24.9 | 25.4 |
| | 8H | 22.2 | 22.9 | 22.7 | 23.4 | 24.0 | 24.5 | 25.2 | 25.0 | 25.7 | 26.2 |

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

Metalux

Report Number: SP1-2506-457-8

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L950-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L950-CD1-U

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

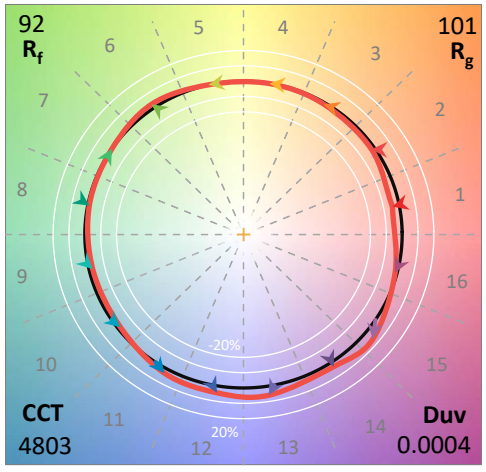
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2506-457-8 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 07/02/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | Metalux |
| Catalog Number: | **24SR-LD2-64-C-UNV-L950-CD1-U** |
| Description: | 2X4 SKYRIDGE 6400LM Fixture with new LTN chip |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4803 |
| CIE u': | 0.2133 |
| CIE v': | 0.4881 |
| Duv: | 0.0004 |
| CIE x: | 0.3510 |
| CIE y: | 0.3570 |
| CIE z: | 0.2921 |
| Peak Wavelength (nm): | 630 |
| Dominant Wavelength (nm): | 574 |
| Purity: | 12.41797 |
| Rf: | 91.5 |
| Rg: | 100.9 |

| | |
|---|---|
| CRI (Ra): | 94.6 |
| R1: | 95.9 |
| R2: | 96.0 |
| R3: | 94.0 |
| R4: | 95.8 |
| R5: | 94.6 |
| R6: | 92.9 |
| R7: | 96.3 |
| R8: | 91.2 |
| R9: | 74.3 |
| R10: | 88.6 |
| R11: | 95.2 |
| R12: | 71.3 |
| R13: | 96.0 |
| R14: | 96.1 |
| R15: | 94.1 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 43M |
| Operation Time: | 1H 43M |
| Sphere Temperature (°C): | 24.9 |

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| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 6/16/2025 | 12/16/2025 |
| Power Meter | XITRON INXT2011004 | 1/21/2025 | 1/21/2026 |
| AC Power Source | CHROMA 61603 IN0063 | 10/22/2024 | 10/22/2025 |
| DC Power Source | AGILENT E3634A IN0208 | 10/22/2024 | 10/22/2025 |
| Sphere Thermometer | ONSET IN0085 | 10/22/2024 | 10/22/2025 |
| Room Thermometer | ONSET IN0046 | 10/22/2024 | 10/22/2025 |

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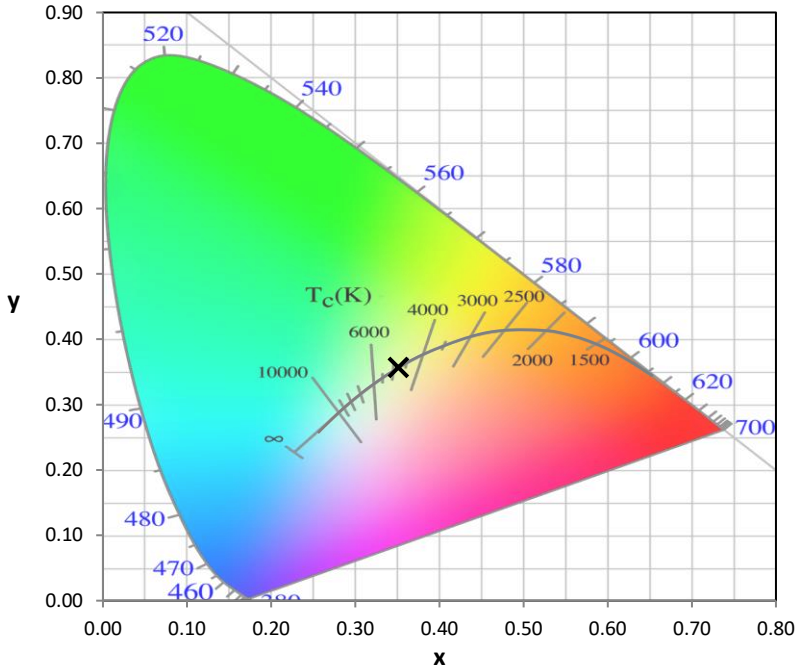
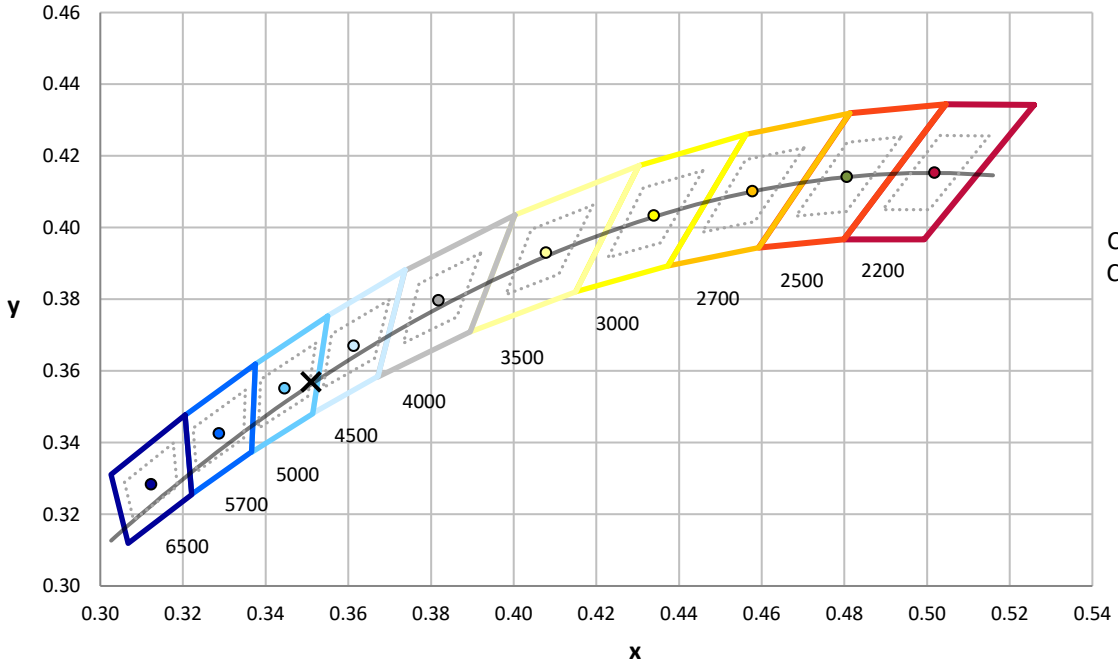
## CIE 1931 Chromaticity Diagram




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




CCT = 4803K
CIE x = 0.3510
CIE y = 0.3570
Duv = 0.0004

Point lies inside the ANSI 5000K 7-step quadrangle

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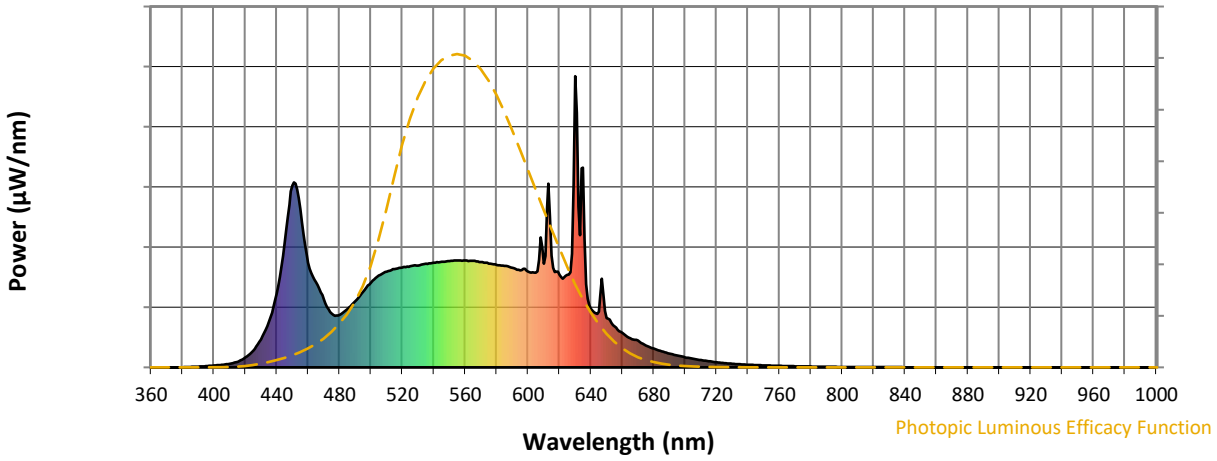
## Photopic Flux vs. Wavelength




## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

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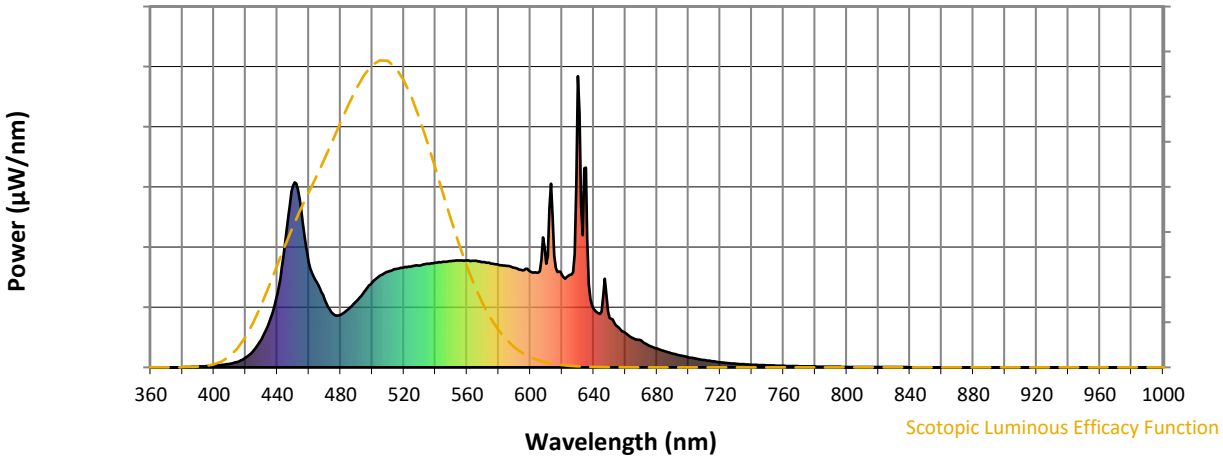
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 2.02**

| 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 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

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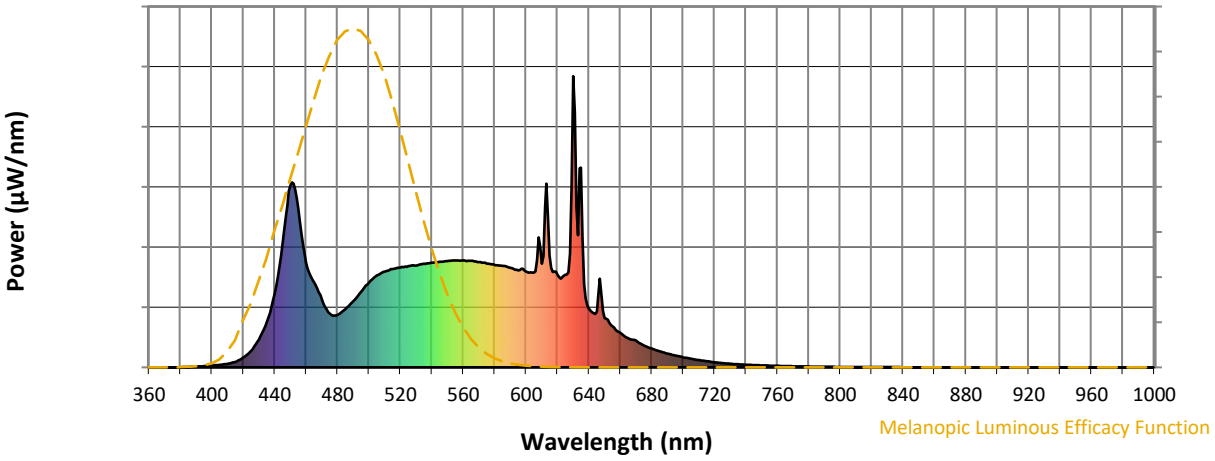
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 4.33**

| 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 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

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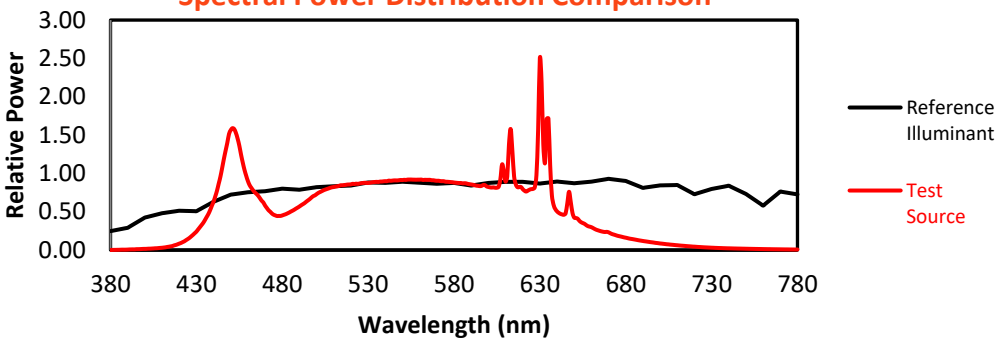
# TM-30-18

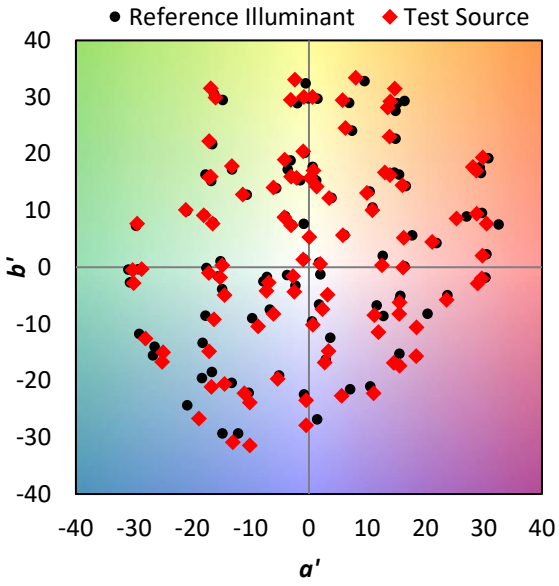
## Summary

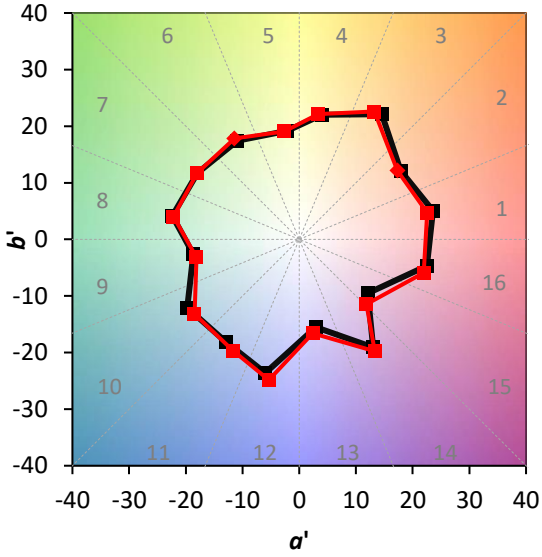
$R_f$ = 91.5
$R_g$ = 100.9
CIE $R_a$ = 94.6
$R_9$ = 74.3

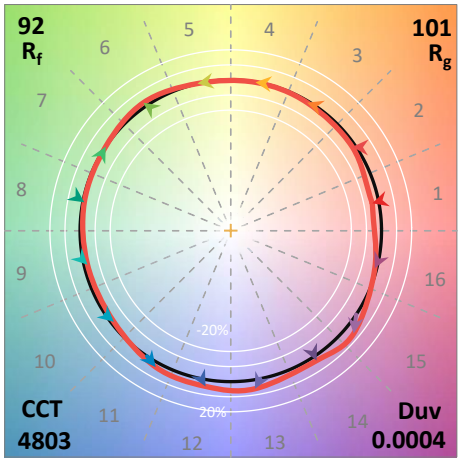
## Spectral Power Distribution Comparison

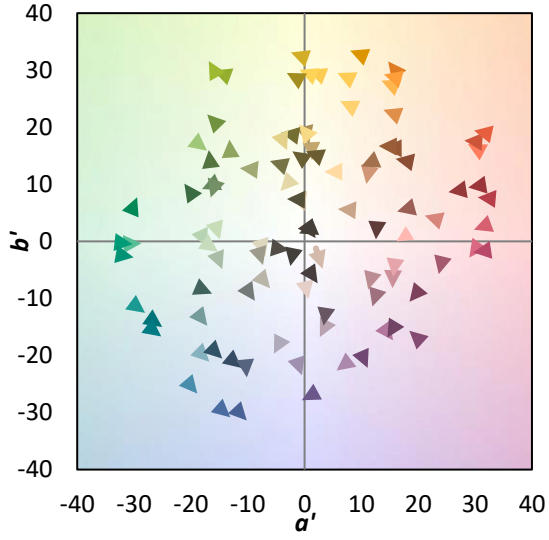



## Color Vector Graphics



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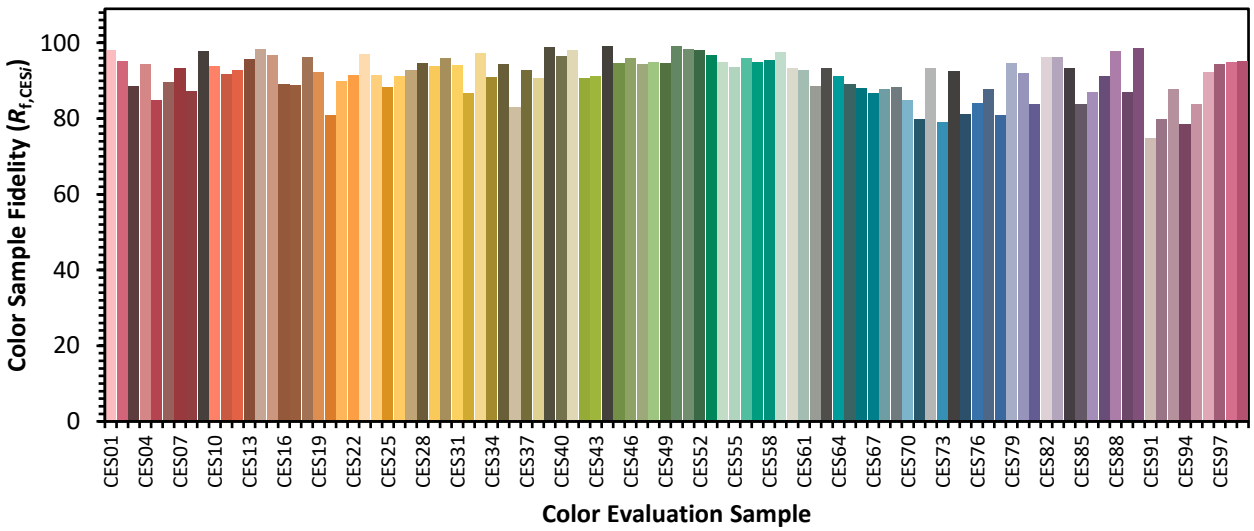
# TM-30-18

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

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 91 | CES51 = 98 | CES76 = 84 |
| CES02 = 61 | CES27 = 93 | CES52 = 98 | CES77 = 88 |
| CES03 = 31 | CES28 = 95 | CES53 = 97 | CES78 = 81 |
| CES04 = 69 | CES29 = 94 | CES54 = 95 | CES79 = 95 |
| CES05 = 48 | CES30 = 96 | CES55 = 94 | CES80 = 92 |
| CES06 = 50 | CES31 = 94 | CES56 = 96 | CES81 = 84 |
| CES07 = 41 | CES32 = 87 | CES57 = 95 | CES82 = 96 |
| CES08 = 40 | CES33 = 97 | CES58 = 95 | CES83 = 96 |
| CES09 = 29 | CES34 = 91 | CES59 = 98 | CES84 = 93 |
| CES10 = 73 | CES35 = 94 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 83 | CES61 = 93 | CES86 = 87 |
| CES12 = 62 | CES37 = 93 | CES62 = 89 | CES87 = 91 |
| CES13 = 43 | CES38 = 91 | CES63 = 93 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 87 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 99 |
| CES16 = 47 | CES41 = 98 | CES66 = 88 | CES91 = 75 |
| CES17 = 48 | CES42 = 91 | CES67 = 87 | CES92 = 80 |
| CES18 = 56 | CES43 = 91 | CES68 = 88 | CES93 = 88 |
| CES19 = 70 | CES44 = 99 | CES69 = 88 | CES94 = 79 |
| CES20 = 65 | CES45 = 95 | CES70 = 85 | CES95 = 84 |
| CES21 = 85 | CES46 = 96 | CES71 = 80 | CES96 = 92 |
| CES22 = 77 | CES47 = 94 | CES72 = 93 | CES97 = 94 |
| CES23 = 91 | CES48 = 95 | CES73 = 79 | CES98 = 95 |
| CES24 = 90 | CES49 = 95 | CES74 = 93 | CES99 = 95 |
| CES25 = 70 | CES50 = 99 | CES75 = 81 | |



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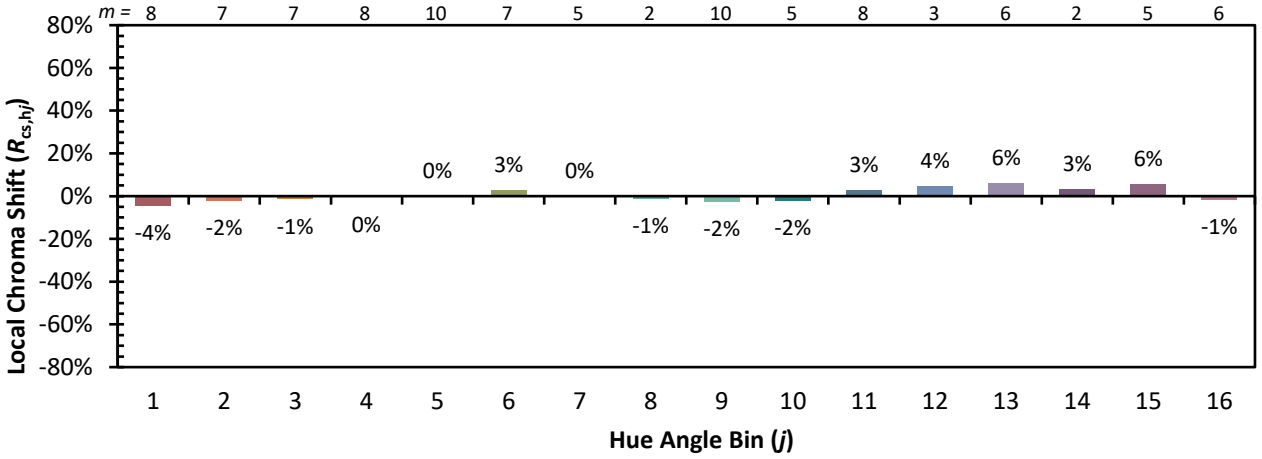
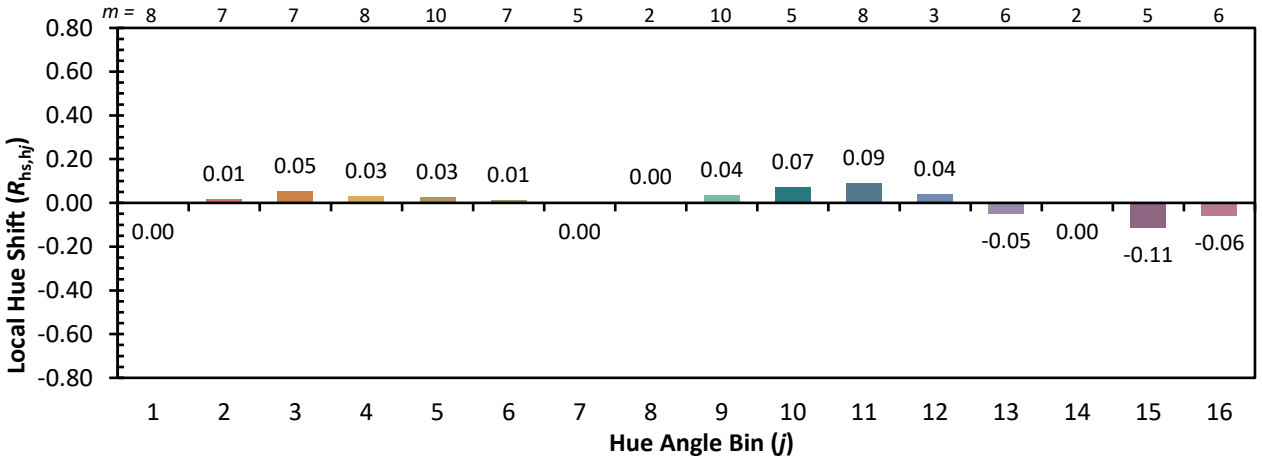
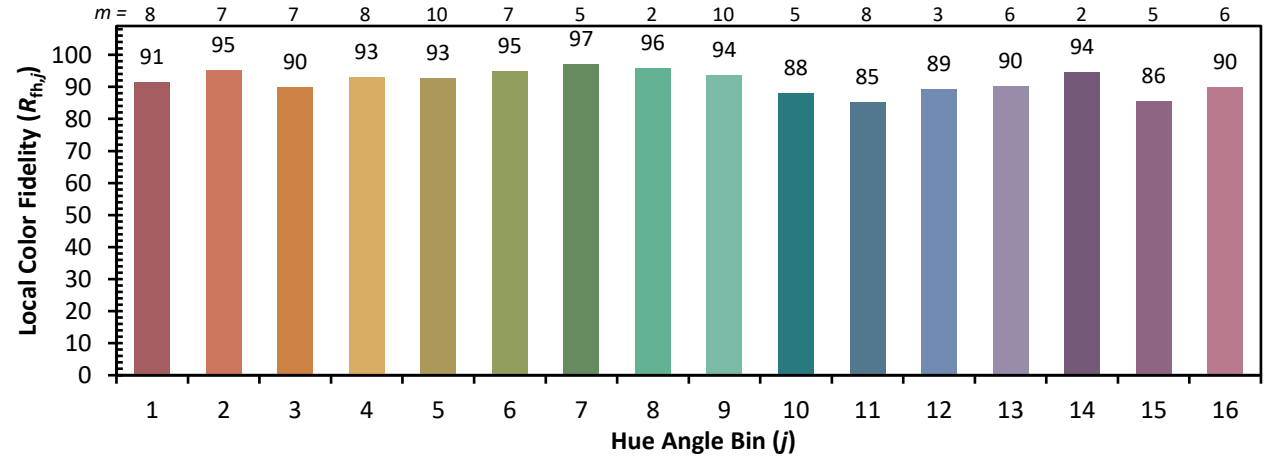
**TM-30-18**

## Color Rendition by Hue-Angle Bin



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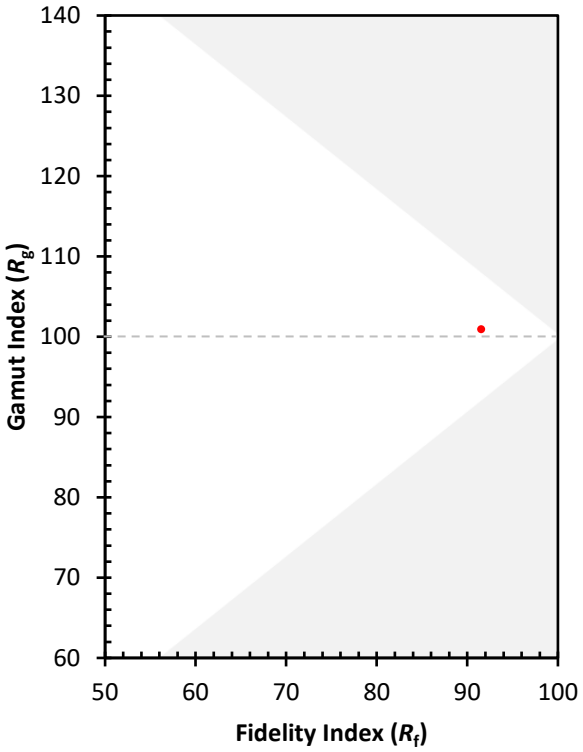
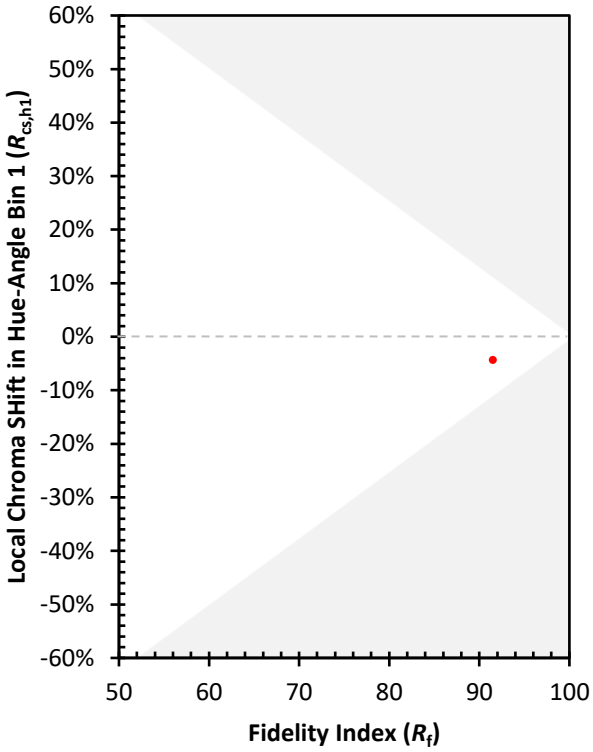
## Measure Comparisons




(END OF REPORT)