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: P976608

Luminaire Tested: 22SR-LD2-C-25-UNV-L840-CD1-SO-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: | P976608 |
| Test Lab: | INNOVATION CENTER(P3) |
| Issue Date: | 03/18/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | METALUX |
| Catalog Number: | 22SR-LD2-C-25-UNV-L840-CD1-SO-U |
| Description: | METALUX SKYRIDGE 2x2 2500LM PACKAGE 80CRI 4000K TROFFER with Storaro Orange SKYTR |
| Light Source: | 4000K CCT, 80+ CRI LEDS |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 1734.0 lumens |
| Efficiency: | N/A |
| Efficacy: | 96.9 lumens/watt |
| Spacing Criteria (0/90/45): | 1.2 / 1.85 / 1.71 |
| Luminous Opening: | Rectangular (W 2' x L: 2' x H: 0') |
| CIE Type: | Direct |

| | |
|---|---|
| Input Watts (W): | 17.9 |
| 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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TEST NUMBER: P976608
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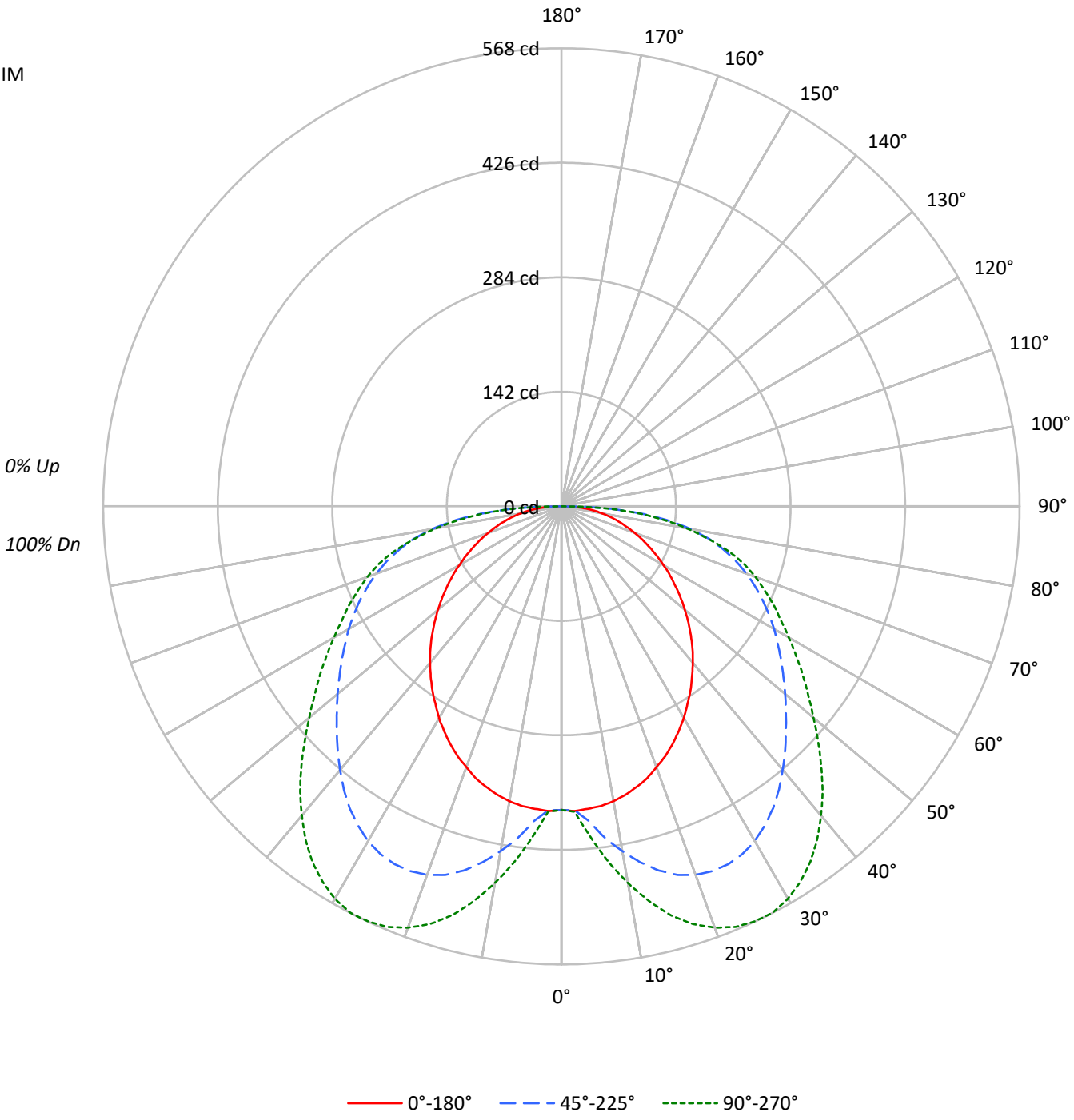
## Luminous Intensity Polar Plot



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TEST NUMBER: P976608
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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 | 107 | 101 | 96 | 91 | 104 | 99 | 94 | 90 | 94 | 90 | 87 | 90 | 87 | 84 | 87 | 84 | 82 | 79 |
| 2 | 96 | 86 | 79 | 72 | 93 | 85 | 77 | 71 | 81 | 75 | 70 | 77 | 72 | 68 | 74 | 70 | 66 | 64 |
| 3 | 87 | 75 | 66 | 59 | 84 | 73 | 65 | 58 | 70 | 63 | 57 | 67 | 61 | 56 | 65 | 60 | 55 | 53 |
| 4 | 79 | 66 | 56 | 49 | 77 | 64 | 56 | 49 | 62 | 54 | 48 | 59 | 53 | 47 | 57 | 51 | 46 | 44 |
| 5 | 72 | 58 | 49 | 42 | 70 | 57 | 48 | 41 | 55 | 47 | 41 | 53 | 46 | 40 | 51 | 45 | 40 | 38 |
| 6 | 67 | 52 | 43 | 36 | 65 | 51 | 42 | 36 | 49 | 41 | 35 | 48 | 41 | 35 | 46 | 40 | 35 | 32 |
| 7 | 62 | 47 | 38 | 31 | 60 | 46 | 38 | 31 | 45 | 37 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 28 |
| 8 | 57 | 43 | 34 | 28 | 56 | 42 | 34 | 28 | 41 | 33 | 27 | 40 | 32 | 27 | 38 | 32 | 27 | 25 |
| 9 | 53 | 39 | 31 | 25 | 52 | 39 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 24 | 35 | 29 | 24 | 22 |
| 10 | 50 | 36 | 28 | 22 | 49 | 36 | 28 | 22 | 35 | 27 | 22 | 34 | 27 | 22 | 33 | 26 | 22 | 20 |

## AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|---|---|---|---|
| 0° | 1013 | 1013 | 1013 |
| 5° | 1017 | 1058 | 1111 |
| 10° | 1015 | 1187 | 1296 |
| 15° | 1004 | 1302 | 1463 |
| 20° | 986 | 1392 | 1592 |
| 25° | 966 | 1453 | 1686 |
| 30° | 943 | 1489 | 1745 |
| 35° | 916 | 1502 | 1767 |
| 40° | 890 | 1499 | 1759 |
| 45° | 864 | 1498 | 1734 |
| 50° | 836 | 1516 | 1708 |
| 55° | 809 | 1559 | 1714 |
| 60° | 787 | 1638 | 1752 |
| 65° | 769 | 1753 | 1850 |
| 70° | 762 | 1919 | 2013 |
| 75° | 769 | 2165 | 2227 |
| 80° | 803 | 2515 | 2450 |
| 85° | 868 | 2967 | 2859 |

## MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
Vertical Angle: 87.5°
Luminance: 3307 cd/sqm

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TEST NUMBER: P976608
CATALOG NUMBER: 22SR-LD2-C-25-UNV-L840-CD1-SO-U

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 38.6 | 2.2 |
| 10°-20° | 128.9 | 7.4 |
| 20°-30° | 216.8 | 12.5 |
| 30°-40° | 273.2 | 15.8 |
| 40°-50° | 288.1 | 16.6 |
| 50°-60° | 274.5 | 15.8 |
| 60°-70° | 242.9 | 14.0 |
| 70°-80° | 188.7 | 10.9 |
| 80°-90° | 82.5 | 4.8 |
| 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° | 384.3 | 22.2 |
| 0°-40° | 657.5 | 37.9 |
| 0°-60° | 1220.0 | 70.4 |
| 0°-90° | 1734.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1734.0 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 376 | 376 | 376 | 376 | 376 | |
| 5° | 376 | 377 | 392 | 406 | 411 | 36 |
| 15° | 360 | 403 | 468 | 510 | 525 | 102 |
| 25° | 326 | 401 | 490 | 547 | 568 | 150 |
| 35° | 279 | 367 | 457 | 517 | 538 | 174 |
| 45° | 227 | 313 | 394 | 440 | 456 | 175 |
| 55° | 172 | 260 | 332 | 360 | 365 | 155 |
| 65° | 121 | 209 | 275 | 286 | 291 | 120 |
| 75° | 74 | 153 | 208 | 212 | 214 | 78 |
| 85° | 28 | 69 | 96 | 93 | 93 | 30 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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TEST NUMBER: P976608
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 |
| 2.5° | 378.2 | 378.2 | 377.4 | 377.4 | 377.4 | 377.4 | 376.5 | 376.5 | 377.4 | 377.4 | 377.4 |
| 5° | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 378.2 | 379.9 | 384.1 | 387.6 | 391.8 | 396.0 |
| 7.5° | 374.8 | 373.9 | 373.9 | 375.6 | 379.0 | 385.0 | 391.8 | 400.2 | 408.0 | 414.8 | 420.6 |
| 10° | 371.4 | 371.4 | 371.4 | 376.5 | 385.0 | 396.0 | 406.2 | 415.5 | 425.0 | 434.3 | 443.6 |
| 12.5° | 366.3 | 366.3 | 368.1 | 378.2 | 390.9 | 404.6 | 416.4 | 429.2 | 441.9 | 452.1 | 463.1 |
| 15° | 360.3 | 360.3 | 364.6 | 379.0 | 395.2 | 410.4 | 425.7 | 440.3 | 454.7 | 467.5 | 479.3 |
| 17.5° | 353.5 | 352.6 | 361.2 | 379.0 | 396.9 | 414.8 | 431.7 | 448.7 | 464.9 | 479.3 | 492.1 |
| 20° | 344.2 | 345.1 | 357.0 | 377.4 | 396.9 | 417.3 | 435.2 | 453.0 | 470.9 | 486.1 | 499.7 |
| 22.5° | 335.7 | 337.4 | 351.9 | 373.9 | 395.2 | 416.4 | 436.0 | 454.7 | 473.3 | 489.5 | 504.0 |
| 25° | *325.5* | *327.2* | *344.2* | *368.1* | *390.1* | *412.2* | *432.6* | *453.0* | *471.7* | *489.5* | *504.8* |
| 27.5° | 314.5 | 317.0 | 336.6 | 360.3 | 384.1 | 406.2 | 427.5 | 447.9 | 468.2 | 486.1 | 501.4 |
| 30° | 303.4 | 306.8 | 328.0 | 352.6 | 375.6 | 398.6 | 420.6 | 441.1 | 461.5 | 479.3 | 495.5 |
| 32.5° | 290.6 | 295.0 | 317.8 | 342.4 | 366.3 | 388.4 | 410.4 | 431.7 | 451.3 | 469.1 | 485.3 |
| 35° | 278.8 | 283.9 | 306.8 | 331.5 | 355.3 | 378.2 | 399.5 | 420.6 | 439.4 | 457.2 | 473.3 |
| 37.5° | 266.0 | 271.1 | 295.0 | 319.6 | 342.4 | 365.4 | 386.7 | 407.1 | 425.7 | 442.8 | 458.0 |
| 40° | 253.3 | 259.2 | 282.2 | 306.8 | 328.9 | 351.9 | 372.3 | 392.7 | 410.4 | 426.6 | 441.9 |
| 42.5° | 240.5 | 247.4 | 270.2 | 294.1 | 316.1 | 338.2 | 358.6 | 378.2 | 395.2 | 410.4 | 424.1 |
| 45° | 227.0 | 234.6 | 256.7 | 280.4 | 302.5 | 323.8 | 344.2 | 363.0 | 379.0 | 393.5 | 407.1 |
| 47.5° | 213.3 | 221.9 | 243.9 | 267.7 | 289.0 | 310.3 | 328.9 | 347.5 | 363.0 | 377.4 | 389.2 |
| 50° | 199.8 | 209.1 | 231.2 | 254.1 | 275.3 | 296.6 | 315.4 | 333.1 | 347.5 | 362.1 | 373.2 |
| 52.5° | 186.1 | 197.1 | 219.3 | 241.4 | 262.6 | 283.0 | 301.7 | 318.7 | 333.1 | 346.8 | 357.0 |
| 55° | 172.5 | 184.5 | 206.5 | 228.6 | 249.8 | 270.2 | 288.1 | 305.9 | 319.6 | 332.3 | 341.7 |
| 57.5° | 159.7 | 171.7 | 193.8 | 215.9 | 237.2 | 257.6 | 275.3 | 292.4 | 305.9 | 317.8 | 327.2 |
| 60° | 146.2 | 159.7 | 181.0 | 203.1 | 224.4 | 244.7 | 262.6 | 279.6 | 293.2 | 304.3 | 311.9 |
| 62.5° | 133.4 | 147.0 | 169.2 | 190.4 | 211.6 | 232.1 | 249.8 | 266.9 | 279.6 | 289.9 | 296.6 |
| 65° | 120.7 | 135.1 | 156.4 | 177.6 | 198.9 | 219.3 | 237.2 | 253.3 | 266.0 | 275.3 | 281.3 |
| 67.5° | 108.8 | 123.2 | 144.4 | 164.8 | 186.1 | 205.7 | 224.4 | 239.7 | 250.7 | 260.0 | 264.3 |
| 70° | 96.8 | 111.4 | 131.8 | 152.1 | 172.5 | 192.0 | 209.9 | 225.2 | 236.3 | 243.9 | 248.1 |
| 72.5° | 85.0 | 99.4 | 119.0 | 138.5 | 159.0 | 177.6 | 195.5 | 209.9 | 220.1 | 227.0 | 230.3 |
| 75° | 74.0 | 87.5 | 106.3 | 124.9 | 143.7 | 162.3 | 179.4 | 192.9 | 202.2 | 208.2 | 211.6 |
| 77.5° | 62.9 | 76.4 | 93.5 | 110.5 | 128.3 | 146.2 | 162.3 | 174.3 | 183.6 | 187.8 | 191.2 |
| 80° | 51.8 | 63.8 | 79.1 | 94.3 | 111.4 | 126.7 | 142.0 | 152.1 | 159.7 | 162.3 | 163.2 |
| 82.5° | 40.8 | 50.1 | 62.9 | 75.7 | 90.1 | 103.7 | 116.5 | 124.1 | 130.9 | 131.8 | 132.6 |
| 85° | 28.1 | 33.9 | 43.4 | 52.7 | 63.8 | 74.8 | 85.0 | 91.0 | 96.1 | 96.1 | 96.8 |
| 87.5° | 14.4 | 16.2 | 20.4 | 26.4 | 33.2 | 39.2 | 46.7 | 49.3 | 52.7 | 53.6 | 53.6 |
| 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: P976608
CATALOG NUMBER: 22SR-LD2-C-25-UNV-L840-CD1-SO-U

**CANDELA DISTRIBUTION (continued):**

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|---|---|---|---|---|---|---|---|---|
| 0° | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | 376.5 | *376.5* |
| 2.5° | 378.2 | 378.2 | 378.2 | 379.0 | 379.0 | 379.0 | 379.0 | *379.0* |
| 5° | 399.5 | 402.0 | 405.3 | 407.1 | 408.8 | 410.4 | 411.3 | *411.3* |
| 7.5° | 425.0 | 429.2 | 434.3 | 437.7 | 440.3 | 442.8 | 444.5 | *444.5* |
| 10° | 449.6 | 456.4 | 460.7 | 466.6 | 470.0 | 471.7 | 474.2 | *474.2* |
| 12.5° | 470.9 | 478.4 | 485.3 | 492.1 | 495.5 | 498.1 | 501.4 | *501.4* |
| 15° | 488.6 | 498.8 | 506.5 | 514.2 | 518.5 | 521.8 | 524.4 | *525.2* |
| 17.5° | 503.2 | 513.4 | 521.8 | 530.3 | 535.5 | 539.7 | 542.2 | *543.1* |
| 20° | 511.6 | 523.6 | 532.9 | 541.3 | 547.3 | 552.4 | 555.0 | *555.9* |
| 22.5° | 517.6 | 529.5 | 539.7 | 549.0 | 555.9 | 561.0 | 563.5 | *564.3* |
| 25° | *518.5* | *531.1* | *542.2* | *551.5* | *559.2* | *564.3* | *566.8* | *567.7* |
| 27.5° | 515.8 | 529.5 | 540.6 | 550.8 | 558.4 | 563.5 | 566.8 | *567.7* |
| 30° | 509.9 | 523.6 | 535.5 | 545.7 | 552.4 | 558.4 | 561.0 | *561.7* |
| 32.5° | 499.7 | 513.4 | 525.2 | 534.6 | 542.2 | 548.2 | 550.8 | *551.5* |
| 35° | 487.9 | 500.6 | 511.6 | 521.8 | 528.7 | 534.6 | 538.0 | *538.0* |
| 37.5° | 471.7 | 484.4 | 495.5 | 504.8 | 511.6 | 517.6 | 520.1 | *520.9* |
| 40° | 454.7 | 466.6 | 476.8 | 486.1 | 493.0 | 498.1 | 500.6 | *500.6* |
| 42.5° | 436.8 | 448.7 | 458.0 | 465.8 | 471.7 | 476.8 | 478.4 | *479.3* |
| 45° | 418.1 | 428.3 | 436.8 | 443.6 | 448.7 | 453.0 | 454.7 | *455.6* |
| 47.5° | 400.2 | 409.7 | 417.3 | 423.2 | 427.5 | 430.1 | 431.0 | *431.7* |
| 50° | 382.5 | 390.9 | 396.9 | 402.0 | 404.6 | 407.1 | 408.0 | *408.0* |
| 52.5° | 365.4 | 373.2 | 377.4 | 380.7 | 383.3 | 385.8 | 385.8 | *385.8* |
| 55° | 349.3 | 355.3 | 358.6 | 361.2 | 363.0 | 364.6 | 365.4 | *365.4* |
| 57.5° | 333.1 | 337.4 | 340.0 | 342.4 | 343.3 | 344.2 | 344.2 | *345.1* |
| 60° | 317.0 | 320.4 | 322.1 | 323.8 | 323.8 | 324.7 | 325.5 | *325.5* |
| 62.5° | 300.8 | 302.5 | 304.3 | 305.2 | 305.2 | 306.8 | 306.8 | *306.8* |
| 65° | 283.9 | 285.5 | 286.4 | 286.4 | 287.3 | 289.0 | 289.0 | *290.6* |
| 67.5° | 266.9 | 267.7 | 267.7 | 268.6 | 269.4 | 271.1 | 271.1 | *272.8* |
| 70° | 249.8 | 250.7 | 249.8 | 251.6 | 251.6 | 253.3 | 254.1 | *255.8* |
| 72.5° | 232.1 | 232.1 | 232.1 | 232.8 | 233.7 | 235.4 | 236.3 | *237.2* |
| 75° | 211.6 | 212.4 | 212.4 | 212.4 | 211.6 | 212.4 | 212.4 | *214.2* |
| 77.5° | 188.7 | 186.9 | 185.3 | 185.3 | 183.6 | 184.5 | 184.5 | *186.1* |
| 80° | 160.6 | 159.0 | 157.2 | 157.2 | 155.5 | 157.2 | 158.1 | *158.1* |
| 82.5° | 130.0 | 129.1 | 127.5 | 127.5 | 126.7 | 126.7 | 126.7 | *127.5* |
| 85° | 95.2 | 94.3 | 92.6 | 92.6 | 91.7 | 91.7 | 92.6 | *92.6* |
| 87.5° | 52.7 | 51.8 | 51.0 | 51.0 | 49.3 | 50.1 | 51.8 | *51.0* |
| 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: P976608
CATALOG NUMBER: 22SR-LD2-C-25-UNV-L840-CD1-SO-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 | 11.8 | 13.5 | 12.2 | 13.9 | 14.2 | 14.5 | 16.3 | 14.9 | 16.6 | 16.9 |
| | 3H | 13.6 | 15.2 | 14.0 | 15.5 | 15.9 | 17.1 | 18.7 | 17.4 | 19.0 | 19.3 |
| | 4H | 14.4 | 15.9 | 14.8 | 16.2 | 16.6 | 18.3 | 19.8 | 18.7 | 20.1 | 20.5 |
| | 6H | 15.0 | 16.4 | 15.4 | 16.7 | 17.1 | 19.3 | 20.7 | 19.7 | 21.1 | 21.5 |
| | 8H | 15.2 | 16.5 | 15.6 | 16.9 | 17.3 | 19.8 | 21.1 | 20.2 | 21.5 | 21.9 |
| | 12H | 15.4 | 16.7 | 15.8 | 17.0 | 17.5 | 20.2 | 21.5 | 20.6 | 21.8 | 22.3 |
| 4H | 2H | 13.4 | 14.9 | 13.8 | 15.3 | 15.6 | 15.3 | 16.8 | 15.7 | 17.1 | 17.5 |
| | 3H | 15.7 | 17.0 | 16.1 | 17.4 | 17.8 | 18.1 | 19.4 | 18.5 | 19.8 | 20.2 |
| | 4H | 16.7 | 17.9 | 17.1 | 18.3 | 18.7 | 19.5 | 20.7 | 19.9 | 21.1 | 21.5 |
| | 6H | 17.5 | 18.6 | 18.0 | 19.0 | 19.4 | 20.7 | 21.7 | 21.2 | 22.2 | 22.6 |
| | 8H | 17.8 | 18.8 | 18.3 | 19.2 | 19.7 | 21.2 | 22.2 | 21.7 | 22.7 | 23.1 |
| | 12H | 18.0 | 18.9 | 18.5 | 19.4 | 19.8 | 21.7 | 22.6 | 22.2 | 23.1 | 23.5 |
| 8H | 4H | 17.9 | 18.8 | 18.3 | 19.3 | 19.7 | 20.0 | 21.0 | 20.4 | 21.4 | 21.9 |
| | 6H | 19.1 | 19.9 | 19.5 | 20.4 | 20.8 | 21.4 | 22.3 | 21.9 | 22.8 | 23.2 |
| | 8H | 19.5 | 20.3 | 20.0 | 20.8 | 21.3 | 22.1 | 22.9 | 22.6 | 23.4 | 23.8 |
| | 12H | 19.9 | 20.5 | 20.4 | 21.0 | 21.6 | 22.7 | 23.4 | 23.2 | 23.9 | 24.4 |
| 12H | 4H | 18.1 | 19.0 | 18.6 | 19.4 | 19.9 | 20.1 | 21.0 | 20.6 | 21.4 | 21.9 |
| | 6H | 19.4 | 20.2 | 20.0 | 20.7 | 21.2 | 21.6 | 22.4 | 22.1 | 22.8 | 23.4 |
| | 8H | 20.1 | 20.7 | 20.6 | 21.2 | 21.8 | 22.4 | 23.0 | 22.9 | 23.5 | 24.1 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-7

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L940-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L940-CD1-U

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

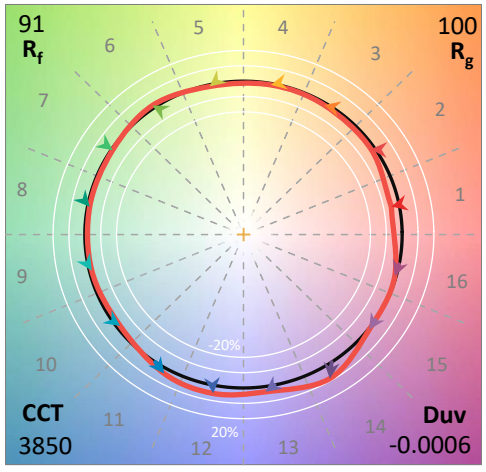
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2506-457-7 |
| 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-L940-CD1-U** |
| Description: | 2X4 SKYRIDGE 6400LM Fixture with new LTN chip |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3850 |
| CIE u': | 0.2283 |
| CIE v': | 0.5037 |
| Duv: | -0.0006 |
| CIE x: | 0.3868 |
| CIE y: | 0.3794 |
| CIE z: | 0.2338 |
| Peak Wavelength (nm): | 630 |
| Dominant Wavelength (nm): | 579 |
| Purity: | 29.94798 |
| Rf: | 91.3 |
| Rg: | 99.8 |

| | |
|---|---|
| CRI (Ra): | 94.0 |
| R1: | 95.3 |
| R2: | 96.3 |
| R3: | 95.7 |
| R4: | 95.2 |
| R5: | 94.4 |
| R6: | 94.3 |
| R7: | 94.1 |
| R8: | 86.7 |
| R9: | 65.3 |
| R10: | 89.6 |
| R11: | 95.5 |
| R12: | 76.1 |
| R13: | 95.5 |
| R14: | 96.8 |
| R15: | 92.3 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 38M |
| Operation Time: | 1H 38M |
| Sphere Temperature (°C): | 24.4 |

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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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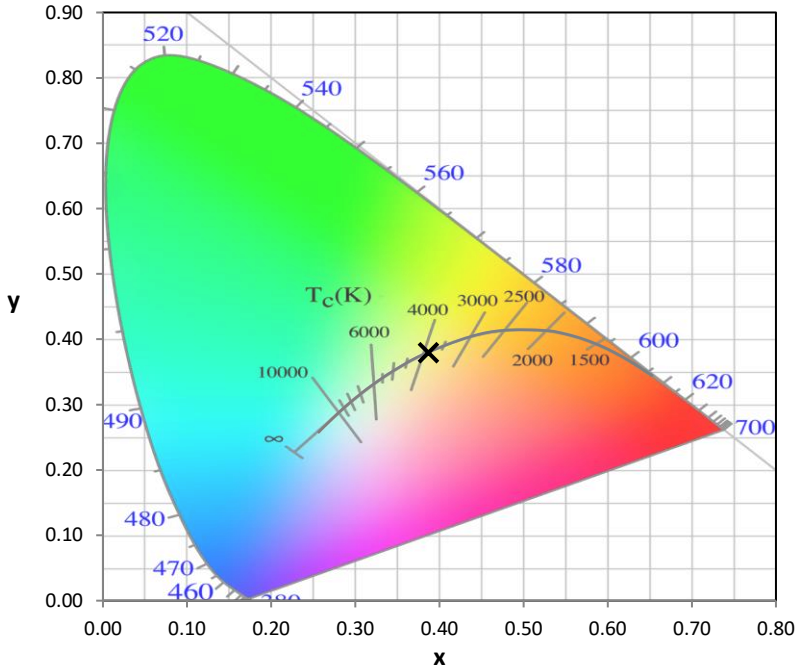
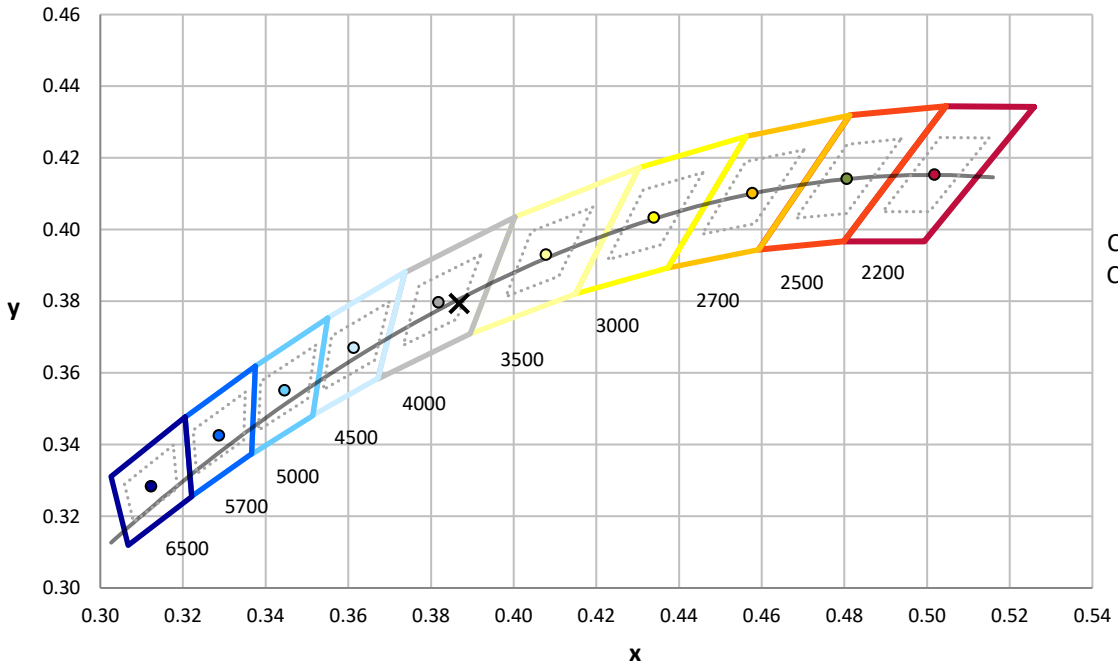
## CIE 1931 Chromaticity Diagram




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




CCT = 3850K
CIE x = 0.3868
CIE y = 0.3794
Duv = -0.0006

Point lies inside the ANSI 4000K 4-step quadrangle

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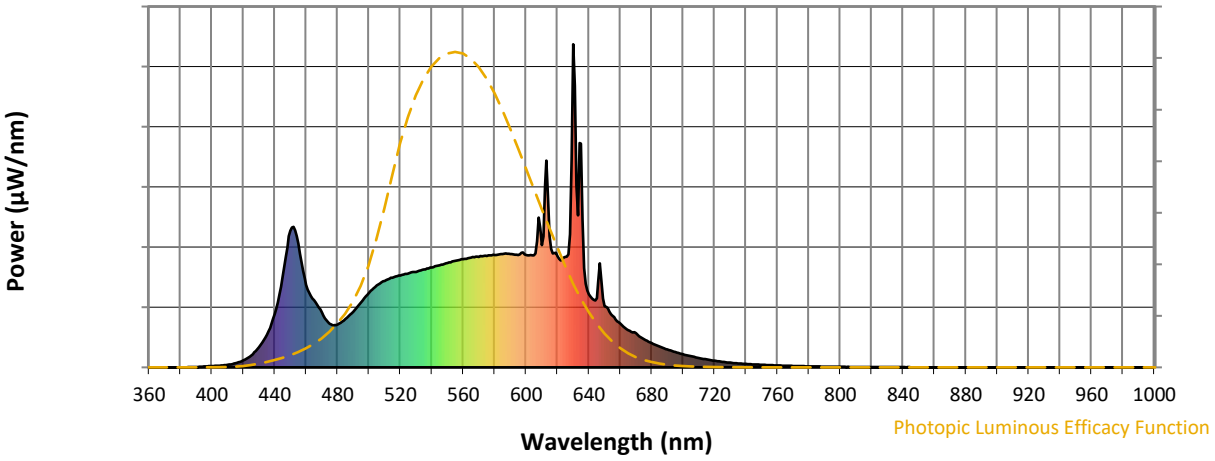
## Photopic Flux vs. Wavelength




## 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 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

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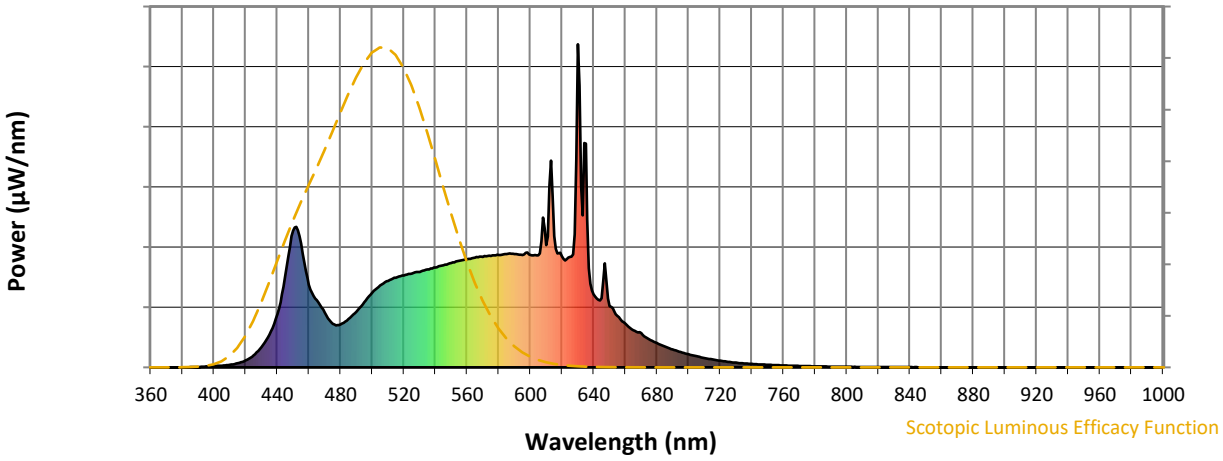
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.74**

| 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 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

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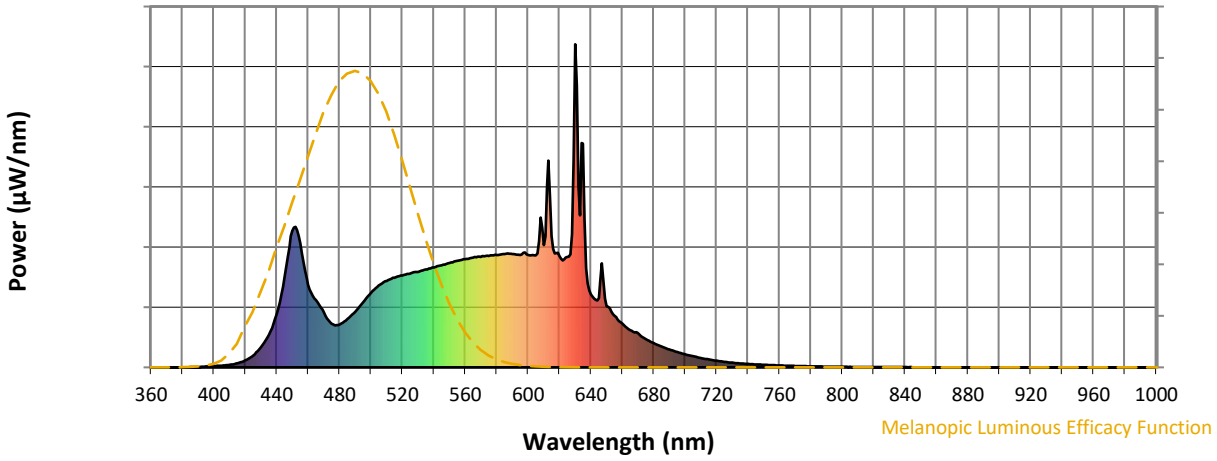
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.6**

| 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 | 173 | NR | 620 | 343 | NR | 750 | 8 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 201 | NR | 625 | 342 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 231 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 253 | NR | 635 | 692 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 268 | NR | 640 | 226 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 277 | NR | 645 | 214 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 284 | NR | 650 | 190 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 3 | NR | 525 | 290 | NR | 655 | 160 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 296 | NR | 660 | 136 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 5 | NR | 535 | 303 | NR | 665 | 115 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 8 | NR | 540 | 310 | NR | 670 | 106 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 13 | NR | 545 | 316 | NR | 675 | 87 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 22 | NR | 550 | 323 | NR | 680 | 75 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 37 | NR | 555 | 330 | NR | 685 | 64 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 62 | NR | 560 | 335 | NR | 690 | 55 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 102 | NR | 565 | 340 | NR | 695 | 47 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 164 | NR | 570 | 342 | NR | 700 | 40 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 281 | NR | 575 | 345 | NR | 705 | 34 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 423 | NR | 580 | 348 | NR | 710 | 29 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 384 | NR | 585 | 350 | NR | 715 | 25 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 256 | NR | 590 | 351 | NR | 720 | 21 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 208 | NR | 595 | 348 | NR | 725 | 17 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 169 | NR | 600 | 348 | NR | 730 | 14 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 135 | NR | 605 | 347 | NR | 735 | 12 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 133 | NR | 610 | 379 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 149 | NR | 615 | 406 | NR | 745 | 9 | NR | 875 | 0 | NR | | | |

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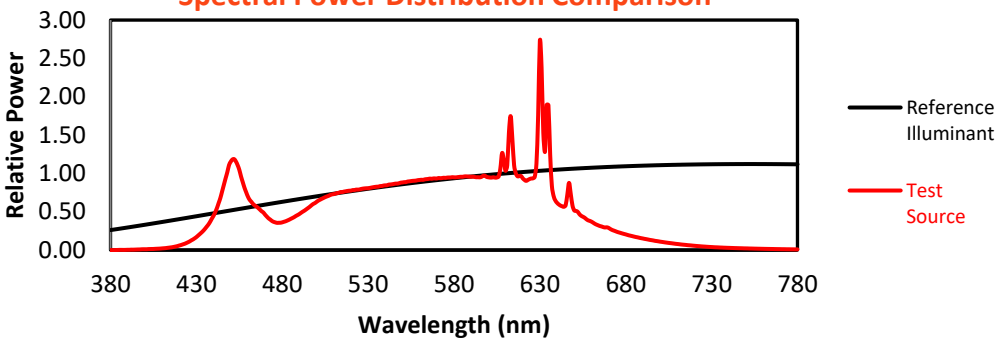
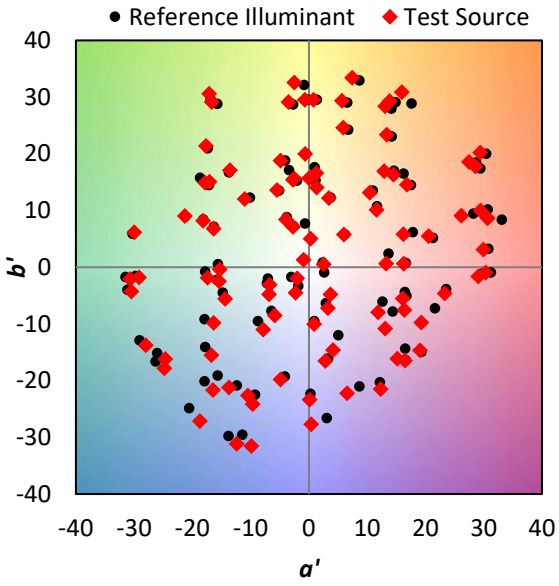
## Summary

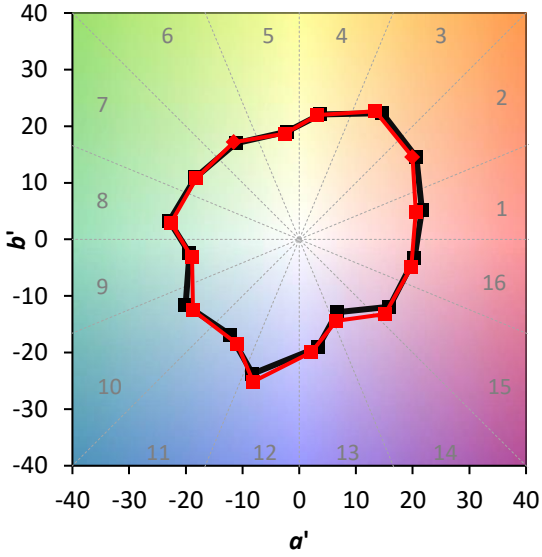
$R_f$ = 91.3
$R_g$ = 99.8
CIE $R_a$ = 94.0
$R_9$ = 65.3

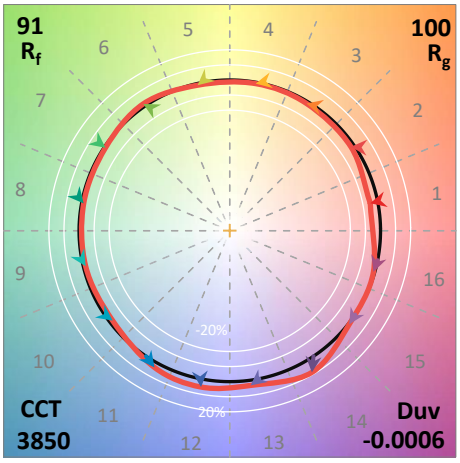
## Spectral Power Distribution Comparison

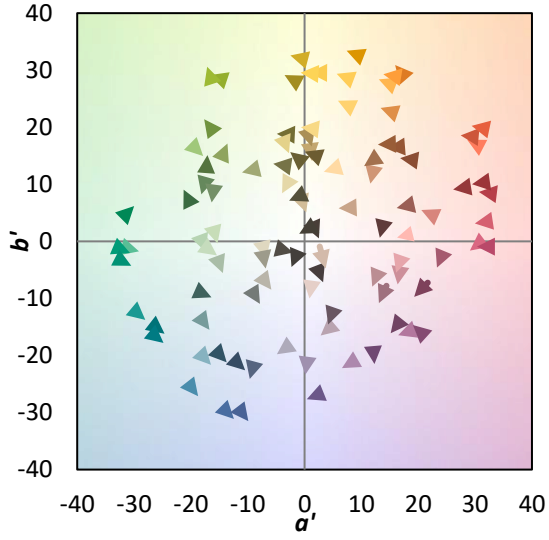



## Color Vector Graphics



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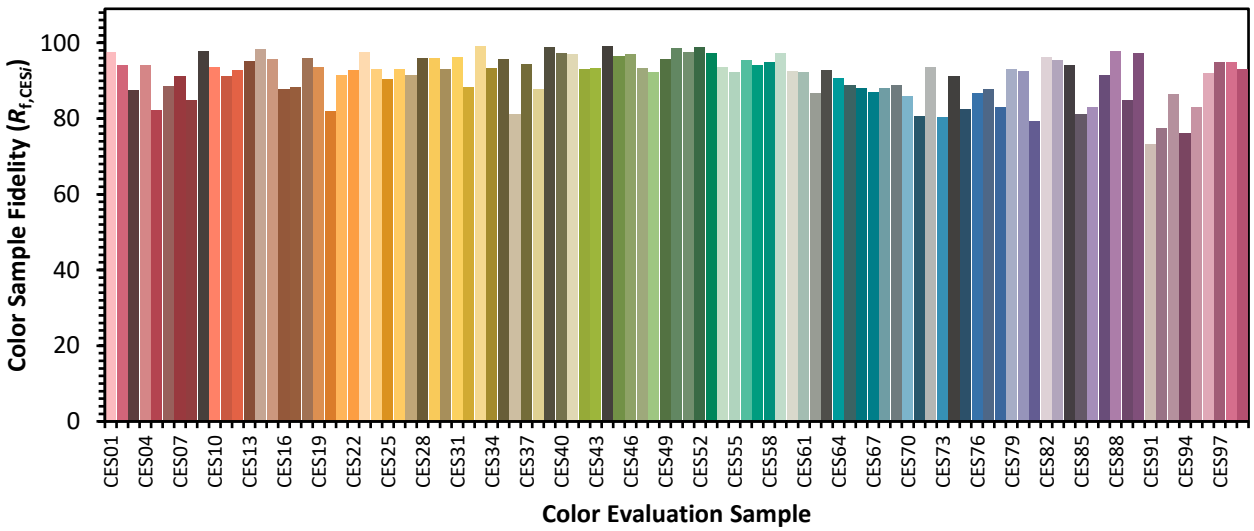
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 93 | CES51 = 98 | CES76 = 87 |
| CES02 = 62 | CES27 = 91 | CES52 = 99 | CES77 = 88 |
| CES03 = 31 | CES28 = 96 | CES53 = 97 | CES78 = 83 |
| CES04 = 69 | CES29 = 96 | CES54 = 94 | CES79 = 93 |
| CES05 = 49 | CES30 = 93 | CES55 = 92 | CES80 = 92 |
| CES06 = 50 | CES31 = 96 | CES56 = 95 | CES81 = 79 |
| CES07 = 42 | CES32 = 88 | CES57 = 94 | CES82 = 96 |
| CES08 = 41 | CES33 = 99 | CES58 = 95 | CES83 = 95 |
| CES09 = 29 | CES34 = 93 | CES59 = 97 | CES84 = 94 |
| CES10 = 74 | CES35 = 96 | CES60 = 93 | CES85 = 81 |
| CES11 = 57 | CES36 = 81 | CES61 = 92 | CES86 = 83 |
| CES12 = 63 | CES37 = 94 | CES62 = 87 | CES87 = 92 |
| CES13 = 43 | CES38 = 88 | CES63 = 93 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 85 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 97 |
| CES16 = 47 | CES41 = 97 | CES66 = 88 | CES91 = 73 |
| CES17 = 49 | CES42 = 93 | CES67 = 87 | CES92 = 77 |
| CES18 = 56 | CES43 = 93 | CES68 = 88 | CES93 = 86 |
| CES19 = 71 | CES44 = 99 | CES69 = 89 | CES94 = 76 |
| CES20 = 66 | CES45 = 96 | CES70 = 86 | CES95 = 83 |
| CES21 = 85 | CES46 = 97 | CES71 = 81 | CES96 = 92 |
| CES22 = 78 | CES47 = 93 | CES72 = 94 | CES97 = 95 |
| CES23 = 91 | CES48 = 92 | CES73 = 80 | CES98 = 95 |
| CES24 = 90 | CES49 = 96 | CES74 = 91 | CES99 = 93 |
| CES25 = 71 | CES50 = 98 | CES75 = 83 | |



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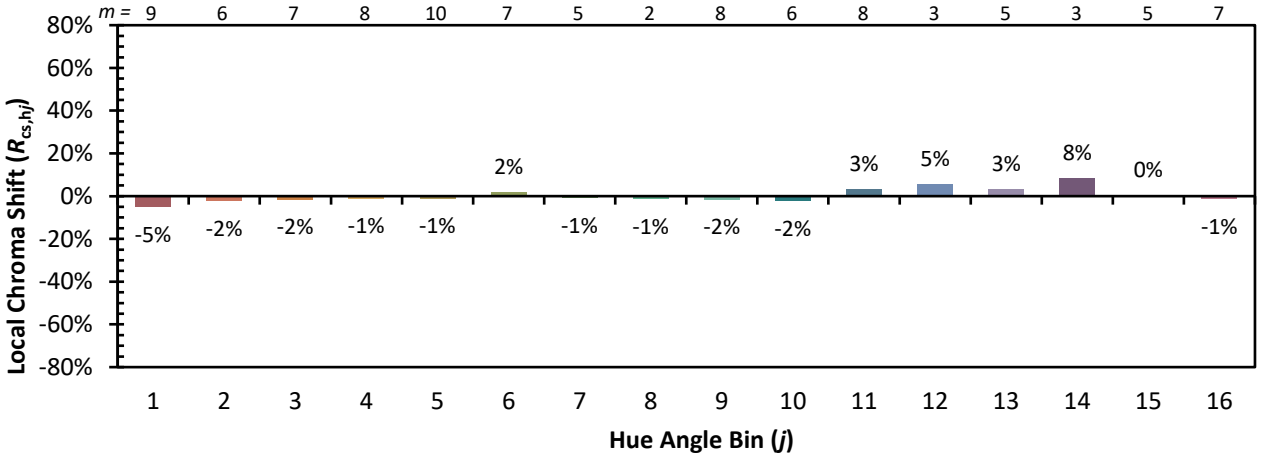
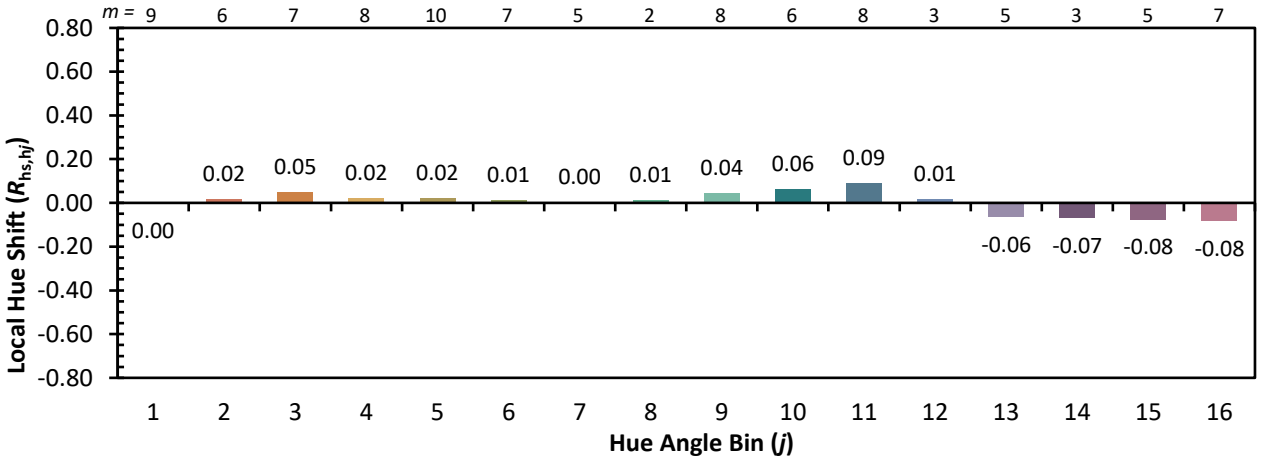
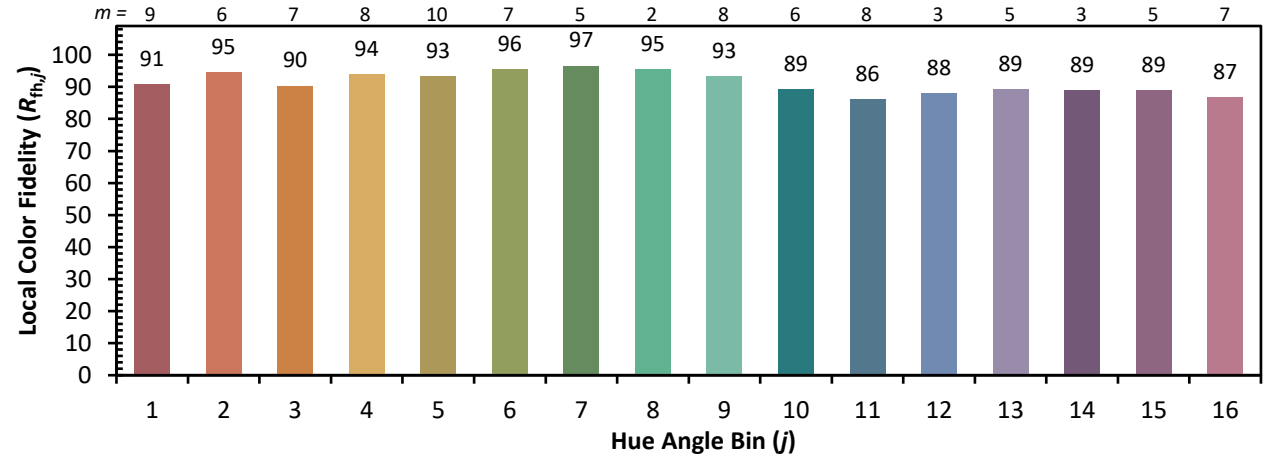
## Color Rendition by Hue-Angle Bin



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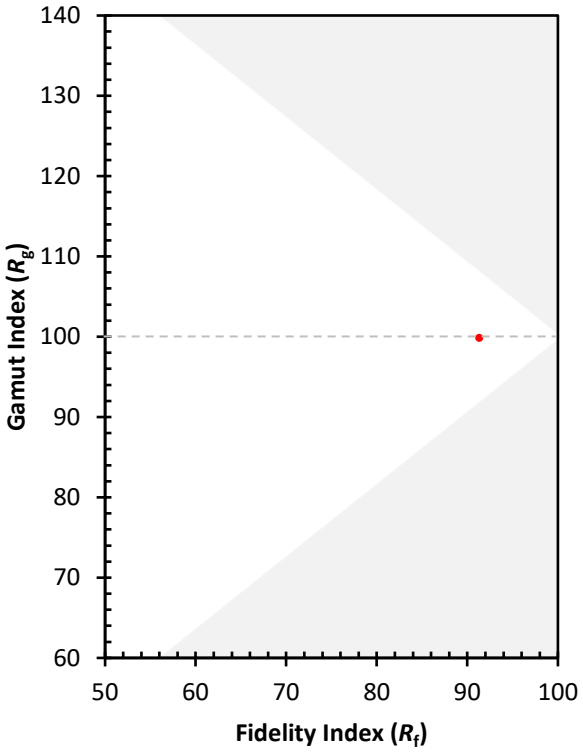
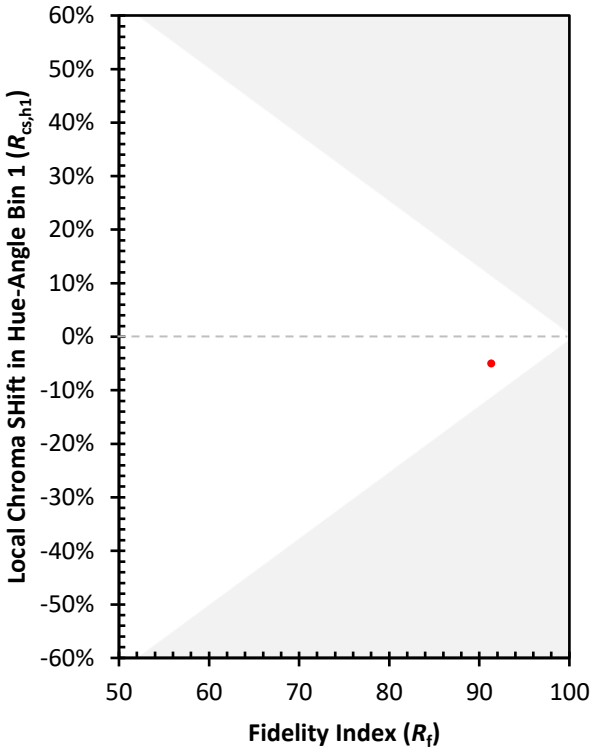
## Measure Comparisons




(END OF REPORT)