

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: P976923

Luminaire Tested: 24SR-LD2-C-39-UNV-L950-CD1-PL-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P976923
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24SR-LD2-C-39-UNV-L950-CD1-PL-U
Description: METALUX SKYRIDGE 2x4 3900LM PACKAGE 90CRI 5000K TROFFER with Pearl SKYTRIM
Light Source: 5000K CCT, 90+ CRI LEDS
Ballast/Driver: -

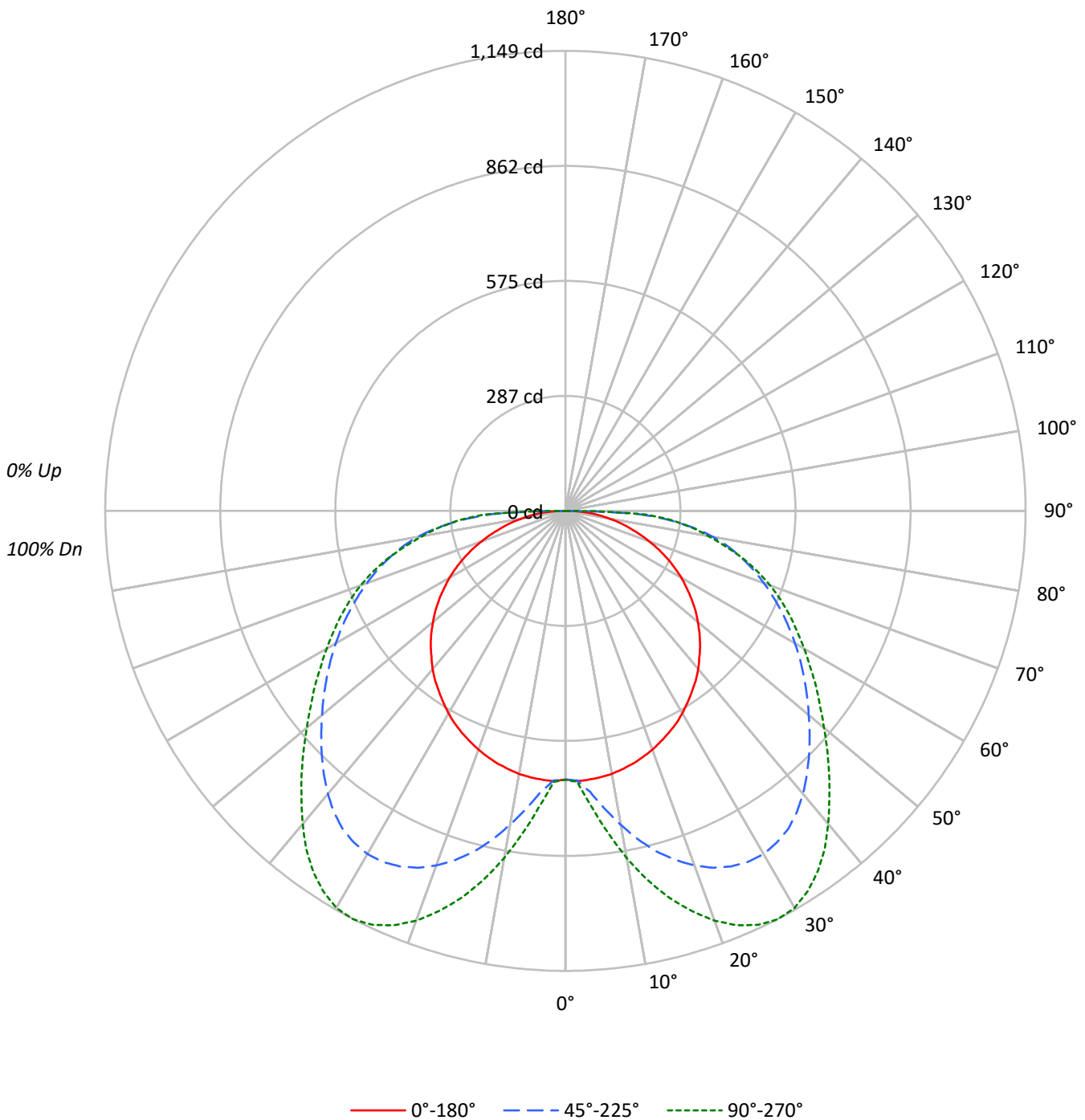
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3699.0 lumens
Efficiency: N/A
Efficacy: 133.5 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.98 / 1.87
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 27.7
Input Voltage (V): 120
Input Current (A_{in}): 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

TEST NUMBER: P976923
CATALOG NUMBER: 24SR-LD2-C-39-UNV-L950-CD1-PL-U

Luminous Intensity Polar Plot





TEST NUMBER: P976923

CATALOG NUMBER: 24SR-LD2-C-39-UNV-L950-CD1-PL-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 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 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
| 1 | 106 | 100 | 95 | 90 | 103 | 98 | 93 | 88 | 93 | 89 | 85 | 89 | 86 | 83 | 86 | 83 | 80 | 78 | 78 | 78 | 78 |
| 2 | 95 | 85 | 77 | 70 | 92 | 83 | 76 | 70 | 80 | 73 | 68 | 76 | 71 | 66 | 73 | 69 | 65 | 62 | 62 | 62 | 62 |
| 3 | 86 | 74 | 64 | 57 | 83 | 72 | 63 | 56 | 69 | 61 | 55 | 66 | 60 | 54 | 63 | 58 | 53 | 51 | 51 | 51 | 51 |
| 4 | 78 | 64 | 55 | 47 | 75 | 63 | 54 | 47 | 60 | 52 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 42 | 42 | 42 | 42 |
| 5 | 71 | 57 | 47 | 40 | 69 | 56 | 47 | 40 | 54 | 45 | 39 | 52 | 44 | 39 | 50 | 43 | 38 | 36 | 36 | 36 | 36 |
| 6 | 65 | 51 | 41 | 34 | 63 | 50 | 41 | 34 | 48 | 40 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 31 | 31 | 31 | 31 |
| 7 | 60 | 46 | 36 | 30 | 59 | 45 | 36 | 30 | 43 | 35 | 29 | 42 | 35 | 29 | 40 | 34 | 29 | 27 | 27 | 27 | 27 |
| 8 | 56 | 42 | 32 | 26 | 54 | 41 | 32 | 26 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 23 | 23 | 23 | 23 |
| 9 | 52 | 38 | 29 | 23 | 51 | 37 | 29 | 23 | 36 | 28 | 23 | 35 | 28 | 23 | 34 | 27 | 23 | 21 | 21 | 21 | 21 |
| 10 | 49 | 35 | 26 | 21 | 48 | 34 | 26 | 21 | 33 | 26 | 21 | 32 | 25 | 21 | 31 | 25 | 20 | 19 | 19 | 19 | 19 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|------|------|
| 0° | 903 | 903 | 903 |
| 5° | 910 | 951 | 1000 |
| 10° | 911 | 1087 | 1202 |
| 15° | 910 | 1227 | 1393 |
| 20° | 909 | 1349 | 1559 |
| 25° | 908 | 1454 | 1693 |
| 30° | 907 | 1537 | 1778 |
| 35° | 905 | 1593 | 1804 |
| 40° | 906 | 1621 | 1792 |
| 45° | 905 | 1637 | 1772 |
| 50° | 904 | 1660 | 1764 |
| 55° | 902 | 1706 | 1791 |
| 60° | 899 | 1781 | 1852 |
| 65° | 892 | 1897 | 1968 |
| 70° | 876 | 2074 | 2140 |
| 75° | 863 | 2371 | 2386 |
| 80° | 870 | 2906 | 2814 |
| 85° | 949 | 4025 | 4100 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 6117 cd/sqm



TEST NUMBER: P976923
 CATALOG NUMBER: 24SR-LD2-C-39-UNV-L950-CD1-PL-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 69.8 | 1.9 |
| 10°-20° | 242.3 | 6.5 |
| 20°-30° | 429.4 | 11.6 |
| 30°-40° | 565.1 | 15.3 |
| 40°-50° | 612.8 | 16.6 |
| 50°-60° | 596.5 | 16.1 |
| 60°-70° | 536.0 | 14.5 |
| 70°-80° | 424.6 | 11.5 |
| 80°-90° | 222.5 | 6.0 |
| 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° | 741.5 | 20.0 |
| 0°-40° | 1306.6 | 35.3 |
| 0°-60° | 2515.9 | 68.0 |
| 0°-90° | 3699.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3699.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|------|------|
| 0° | 671 | 671 | 671 | 671 | 671 | |
| 5° | 674 | 674 | 704 | 731 | 740 | 64 |
| 15° | 653 | 738 | 881 | 969 | 1000 | 184 |
| 25° | 611 | 778 | 980 | 1098 | 1141 | 282 |
| 35° | 551 | 758 | 970 | 1068 | 1098 | 345 |
| 45° | 476 | 688 | 860 | 917 | 932 | 367 |
| 55° | 385 | 598 | 727 | 753 | 764 | 344 |
| 65° | 280 | 501 | 596 | 607 | 618 | 277 |
| 75° | 166 | 377 | 456 | 456 | 459 | 177 |
| 85° | 62 | 200 | 261 | 261 | 266 | 66 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P976923

CATALOG NUMBER: 24SR-LD2-C-39-UNV-L950-CD1-PL-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 0° | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 |
| 2.5° | 675.7 | 674.8 | 673.8 | 672.8 | 671.9 | 670.8 | 670.8 | 670.8 | 671.9 | 673.8 | 676.7 |
| 5° | 673.8 | 672.8 | 671.9 | 671.9 | 672.8 | 674.8 | 680.7 | 687.5 | 694.3 | 704.1 | 714.8 |
| 7.5° | 670.8 | 669.9 | 669.9 | 671.9 | 679.6 | 691.3 | 705.0 | 719.7 | 734.3 | 749.9 | 764.6 |
| 10° | 667.0 | 666.0 | 667.0 | 675.7 | 693.3 | 712.9 | 733.4 | 753.9 | 773.4 | 795.9 | 816.4 |
| 12.5° | 660.2 | 660.2 | 665.0 | 682.5 | 708.0 | 734.3 | 760.7 | 788.0 | 813.4 | 840.7 | 864.2 |
| 15° | 653.3 | 653.3 | 664.0 | 690.4 | 722.6 | 753.9 | 787.1 | 819.3 | 849.5 | 880.8 | 908.1 |
| 17.5° | 644.5 | 644.5 | 663.1 | 696.3 | 733.4 | 771.5 | 809.6 | 845.7 | 879.9 | 914.0 | 943.3 |
| 20° | 634.7 | 636.6 | 661.1 | 701.2 | 743.1 | 786.1 | 827.1 | 867.1 | 905.2 | 942.3 | 974.5 |
| 22.5° | 623.0 | 626.9 | 658.2 | 703.1 | 751.0 | 795.9 | 840.7 | 883.7 | 923.8 | 964.8 | 997.0 |
| 25° | 611.3 | 617.2 | 654.3 | 703.1 | 753.9 | 802.7 | 849.5 | 894.5 | 937.4 | 979.5 | 1014.6 |
| 27.5° | 598.5 | 606.4 | 648.3 | 700.1 | 754.8 | 804.6 | 853.5 | 900.4 | 945.3 | 988.2 | 1024.3 |
| 30° | 584.0 | 593.7 | 639.7 | 694.3 | 751.0 | 801.7 | 852.5 | 901.3 | 946.2 | 989.2 | 1024.3 |
| 32.5° | 567.4 | 580.0 | 628.9 | 685.5 | 743.1 | 794.9 | 845.7 | 894.5 | 940.3 | 982.4 | 1015.6 |
| 35° | 550.7 | 566.3 | 617.2 | 674.8 | 732.3 | 784.1 | 834.9 | 884.7 | 929.7 | 969.6 | 998.9 |
| 37.5° | 534.2 | 550.7 | 602.5 | 660.2 | 717.7 | 769.5 | 821.3 | 869.1 | 912.1 | 949.1 | 975.5 |
| 40° | 515.6 | 534.2 | 585.9 | 644.5 | 701.2 | 752.9 | 803.7 | 849.5 | 888.7 | 922.8 | 947.2 |
| 42.5° | 495.1 | 515.6 | 568.3 | 626.9 | 682.5 | 733.4 | 782.1 | 825.1 | 862.3 | 892.5 | 913.0 |
| 45° | 475.5 | 497.1 | 549.8 | 608.4 | 663.1 | 712.9 | 759.8 | 799.7 | 833.0 | 860.3 | 877.9 |
| 47.5° | 454.1 | 476.5 | 531.3 | 587.9 | 641.5 | 690.4 | 735.3 | 771.5 | 803.7 | 827.1 | 842.7 |
| 50° | 431.7 | 456.0 | 510.8 | 567.4 | 620.1 | 667.9 | 710.9 | 744.1 | 773.4 | 792.9 | 807.6 |
| 52.5° | 409.2 | 434.6 | 489.2 | 545.8 | 598.5 | 644.5 | 685.5 | 717.7 | 743.1 | 760.7 | 773.4 |
| 55° | 384.7 | 413.0 | 467.8 | 524.4 | 575.2 | 621.0 | 660.2 | 689.5 | 712.9 | 727.4 | 739.3 |
| 57.5° | 359.4 | 389.6 | 446.2 | 502.9 | 553.7 | 597.6 | 634.7 | 662.0 | 682.5 | 695.3 | 704.1 |
| 60° | 334.0 | 366.2 | 422.9 | 479.5 | 529.3 | 573.2 | 608.4 | 633.8 | 652.3 | 662.0 | 668.8 |
| 62.5° | 307.6 | 341.8 | 399.3 | 456.0 | 506.8 | 547.8 | 581.1 | 604.5 | 621.0 | 628.9 | 635.7 |
| 65° | 280.3 | 316.4 | 375.0 | 431.7 | 482.4 | 520.5 | 552.7 | 574.2 | 588.8 | 595.7 | 599.6 |
| 67.5° | 251.9 | 290.0 | 349.5 | 406.2 | 455.0 | 492.1 | 522.5 | 543.9 | 555.6 | 561.5 | 564.4 |
| 70° | 222.6 | 262.7 | 322.2 | 378.8 | 425.7 | 461.0 | 490.3 | 509.7 | 521.4 | 527.3 | 528.2 |
| 72.5° | 195.3 | 234.4 | 294.9 | 349.5 | 394.5 | 428.6 | 456.0 | 476.5 | 488.3 | 493.2 | 493.2 |
| 75° | 166.0 | 205.1 | 264.6 | 317.3 | 360.3 | 393.6 | 420.9 | 440.5 | 451.1 | 456.0 | 456.0 |
| 77.5° | 140.6 | 176.7 | 232.5 | 283.2 | 323.3 | 355.4 | 381.9 | 402.4 | 414.1 | 418.9 | 418.9 |
| 80° | 112.3 | 147.4 | 199.2 | 246.1 | 283.2 | 312.5 | 339.8 | 361.4 | 373.1 | 375.0 | 372.0 |
| 82.5° | 86.9 | 119.2 | 163.1 | 205.1 | 239.3 | 266.6 | 293.9 | 311.6 | 320.2 | 322.2 | 321.3 |
| 85° | 61.5 | 87.9 | 125.0 | 159.1 | 187.5 | 212.9 | 232.5 | 249.0 | 257.8 | 260.7 | 262.7 |
| 87.5° | 36.1 | 50.7 | 74.2 | 100.5 | 122.1 | 138.6 | 150.3 | 165.0 | 173.8 | 179.6 | 185.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976923

CATALOG NUMBER: 24SR-LD2-C-39-UNV-L950-CD1-PL-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 | 670.8 |
| 2.5° | 675.7 | 676.7 | 677.6 | 677.6 | 677.6 | 678.7 | 677.6 | 677.6 |
| 5° | 718.6 | 724.6 | 729.4 | 732.3 | 735.3 | 740.2 | 739.3 | 740.2 |
| 7.5° | 772.4 | 782.1 | 792.9 | 798.8 | 802.7 | 808.5 | 810.5 | 810.5 |
| 10° | 828.1 | 841.8 | 854.4 | 863.2 | 869.1 | 877.9 | 878.8 | 879.9 |
| 12.5° | 880.8 | 897.4 | 912.1 | 921.8 | 930.6 | 938.4 | 942.3 | 943.3 |
| 15° | 925.7 | 946.2 | 962.8 | 975.5 | 984.3 | 993.1 | 998.0 | 1000.0 |
| 17.5° | 965.8 | 987.2 | 1005.8 | 1020.5 | 1031.1 | 1039.9 | 1045.8 | 1047.8 |
| 20° | 997.0 | 1020.5 | 1041.0 | 1056.6 | 1069.2 | 1079.1 | 1086.8 | 1088.8 |
| 22.5° | 1022.4 | 1046.8 | 1068.3 | 1085.9 | 1098.5 | 1110.2 | 1117.1 | 1120.1 |
| 25° | 1041.0 | 1067.3 | 1089.7 | 1106.4 | 1120.1 | 1130.7 | 1137.6 | 1140.6 |
| 27.5° | 1051.8 | 1078.0 | 1099.6 | 1116.1 | 1129.8 | 1139.5 | 1146.4 | 1149.4 |
| 30° | 1051.8 | 1077.1 | 1098.5 | 1114.2 | 1126.9 | 1136.6 | 1141.5 | 1144.5 |
| 32.5° | 1041.0 | 1065.4 | 1084.9 | 1098.5 | 1110.2 | 1120.1 | 1123.9 | 1125.9 |
| 35° | 1023.4 | 1044.9 | 1062.4 | 1074.1 | 1083.9 | 1092.7 | 1096.6 | 1098.5 |
| 37.5° | 998.0 | 1017.5 | 1031.1 | 1041.9 | 1049.8 | 1058.6 | 1061.5 | 1063.4 |
| 40° | 965.8 | 984.3 | 994.1 | 1003.8 | 1010.6 | 1018.5 | 1020.5 | 1020.5 |
| 42.5° | 930.6 | 946.2 | 956.0 | 962.8 | 967.7 | 972.6 | 975.5 | 975.5 |
| 45° | 893.5 | 907.2 | 914.0 | 919.8 | 924.7 | 928.6 | 931.5 | 931.5 |
| 47.5° | 856.4 | 867.1 | 873.0 | 876.9 | 880.8 | 884.7 | 886.7 | 886.7 |
| 50° | 819.3 | 827.1 | 831.9 | 834.9 | 838.9 | 841.8 | 843.7 | 842.7 |
| 52.5° | 782.1 | 788.0 | 792.0 | 794.9 | 796.8 | 799.7 | 800.8 | 801.7 |
| 55° | 745.1 | 749.0 | 751.9 | 753.9 | 757.8 | 760.7 | 761.6 | 763.6 |
| 57.5° | 708.9 | 710.9 | 714.8 | 715.8 | 719.7 | 722.6 | 723.6 | 724.6 |
| 60° | 671.9 | 673.8 | 676.7 | 678.7 | 683.6 | 685.5 | 686.5 | 688.4 |
| 62.5° | 635.7 | 636.6 | 640.6 | 644.5 | 648.3 | 650.3 | 651.4 | 652.3 |
| 65° | 599.6 | 602.5 | 605.4 | 608.4 | 612.2 | 615.2 | 616.1 | 618.1 |
| 67.5° | 564.4 | 566.3 | 570.3 | 573.2 | 576.1 | 579.1 | 581.1 | 582.0 |
| 70° | 528.2 | 530.2 | 533.2 | 535.1 | 538.1 | 541.0 | 543.9 | 543.9 |
| 72.5° | 493.2 | 493.2 | 495.1 | 497.1 | 500.0 | 502.0 | 502.9 | 502.9 |
| 75° | 455.0 | 454.1 | 456.0 | 457.0 | 457.0 | 457.0 | 457.9 | 459.0 |
| 77.5° | 414.1 | 410.1 | 408.1 | 408.1 | 409.2 | 407.2 | 408.1 | 409.2 |
| 80° | 367.1 | 363.2 | 362.3 | 362.3 | 363.2 | 362.3 | 363.2 | 363.2 |
| 82.5° | 317.3 | 317.3 | 314.4 | 315.4 | 316.4 | 314.4 | 316.4 | 318.4 |
| 85° | 259.8 | 260.7 | 259.8 | 262.7 | 262.7 | 262.7 | 263.6 | 265.6 |
| 87.5° | 186.5 | 192.4 | 190.4 | 194.3 | 193.3 | 194.3 | 195.3 | 198.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976923

CATALOG NUMBER: 24SR-LD2-C-39-UNV-L950-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 | 12.6 | 14.4 | 13.0 | 14.7 | 15.0 | 14.6 | 16.4 | 15.0 | 16.7 | 17.0 |
| | 3H | 14.6 | 16.2 | 14.9 | 16.5 | 16.9 | 17.2 | 18.8 | 17.6 | 19.1 | 19.5 |
| | 4H | 15.3 | 16.9 | 15.7 | 17.2 | 17.6 | 18.4 | 20.0 | 18.8 | 20.3 | 20.7 |
| | 6H | 15.9 | 17.4 | 16.3 | 17.7 | 18.1 | 19.6 | 21.0 | 20.0 | 21.4 | 21.8 |
| | 8H | 16.1 | 17.5 | 16.6 | 17.9 | 18.3 | 20.2 | 21.5 | 20.6 | 21.9 | 22.3 |
| | 12H | 16.3 | 17.7 | 16.7 | 18.0 | 18.5 | 20.7 | 22.1 | 21.2 | 22.5 | 22.9 |
| 4H | 2H | 14.0 | 15.6 | 14.4 | 15.9 | 16.3 | 15.4 | 16.9 | 15.8 | 17.3 | 17.7 |
| | 3H | 16.5 | 17.8 | 16.9 | 18.2 | 18.6 | 18.2 | 19.6 | 18.6 | 20.0 | 20.4 |
| | 4H | 17.6 | 18.8 | 18.0 | 19.2 | 19.6 | 19.6 | 20.9 | 20.1 | 21.3 | 21.7 |
| | 6H | 18.5 | 19.6 | 18.9 | 20.0 | 20.4 | 21.0 | 22.1 | 21.5 | 22.5 | 23.0 |
| | 8H | 18.8 | 19.8 | 19.2 | 20.3 | 20.7 | 21.7 | 22.7 | 22.1 | 23.1 | 23.6 |
| | 12H | 19.0 | 20.0 | 19.5 | 20.4 | 20.9 | 22.4 | 23.3 | 22.8 | 23.8 | 24.2 |
| 8H | 4H | 18.6 | 19.6 | 19.1 | 20.1 | 20.5 | 20.2 | 21.2 | 20.7 | 21.7 | 22.1 |
| | 6H | 19.9 | 20.8 | 20.4 | 21.3 | 21.8 | 21.8 | 22.7 | 22.3 | 23.2 | 23.6 |
| | 8H | 20.5 | 21.3 | 21.0 | 21.8 | 22.3 | 22.6 | 23.4 | 23.1 | 23.9 | 24.4 |
| | 12H | 21.0 | 21.7 | 21.5 | 22.2 | 22.7 | 23.5 | 24.2 | 24.0 | 24.7 | 25.2 |
| 12H | 4H | 18.8 | 19.8 | 19.3 | 20.2 | 20.7 | 20.3 | 21.3 | 20.8 | 21.7 | 22.2 |
| | 6H | 20.3 | 21.1 | 20.8 | 21.6 | 22.1 | 22.0 | 22.8 | 22.5 | 23.3 | 23.8 |
| | 8H | 21.1 | 21.8 | 21.6 | 22.2 | 22.8 | 22.9 | 23.6 | 23.4 | 24.1 | 24.7 |

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

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



Test Conditions

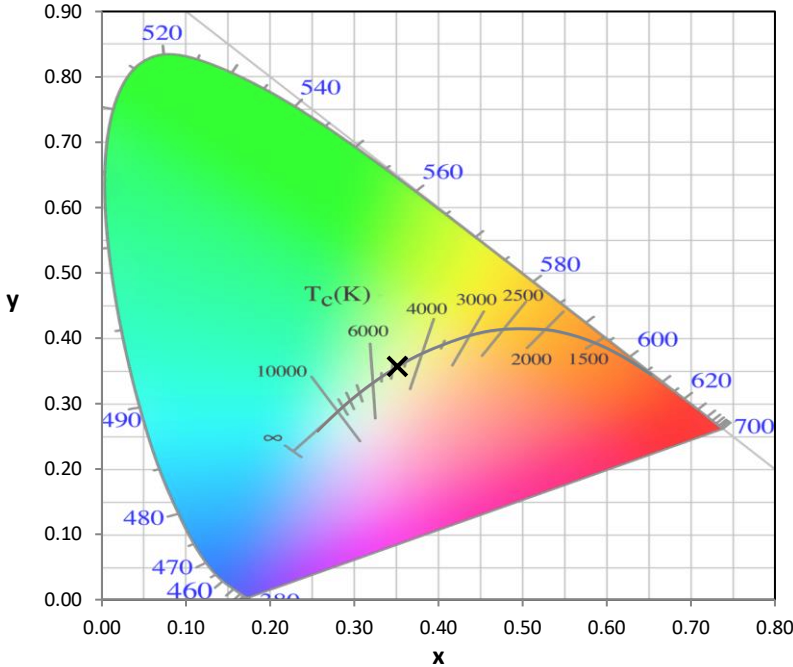
Stabilization Time: 43M
 Operation Time: 1H 43M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2506-457-8

| 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 |

REPORT NUMBER: SP1-2506-457-8

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

REPORT NUMBER: SP1-2506-457-8

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 | | | |

REPORT NUMBER: SP1-2506-457-8

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 | | | |

REPORT NUMBER: SP1-2506-457-8

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 | | | |

Summary

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



Color Vector Graphics



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

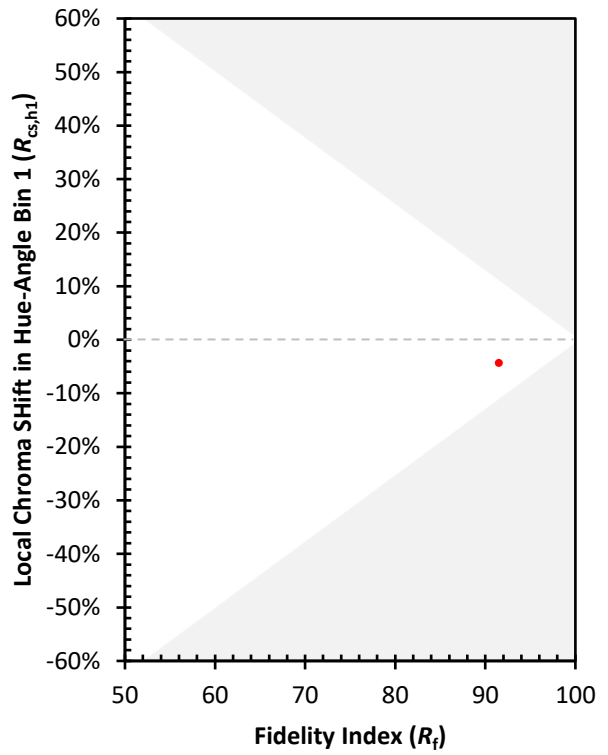
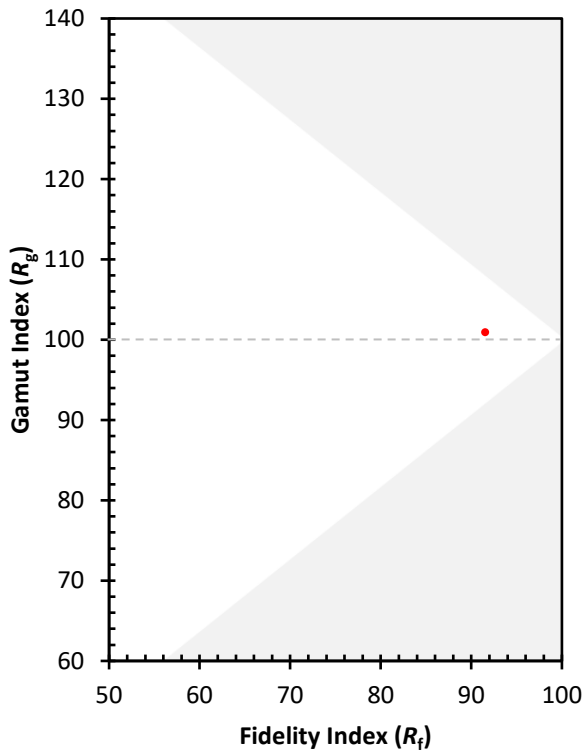
| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 91 | CES51 = 98 | CES76 = 84 |
| CES02 = 61 | CES27 = 93 | CES52 = 98 | CES77 = 88 |
| CES03 = 31 | CES28 = 95 | CES53 = 97 | CES78 = 81 |
| CES04 = 69 | CES29 = 94 | CES54 = 95 | CES79 = 95 |
| CES05 = 48 | CES30 = 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 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)