

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: P976799

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

Issue Date: 03/18/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P976799  
Test Lab: INNOVATION CENTER(P3)  
Issue Date: 03/18/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24SR-LD2-C-64-UNV-L950-CD1-MR-U  
Description: METALUX SKYRIDGE 2x4 6400LM PACKAGE 90CRI 5000K TROFFER with Medium Red SKYTRIM  
Light Source: 5000K CCT, 90+ CRI LEDS  
Ballast/Driver: -

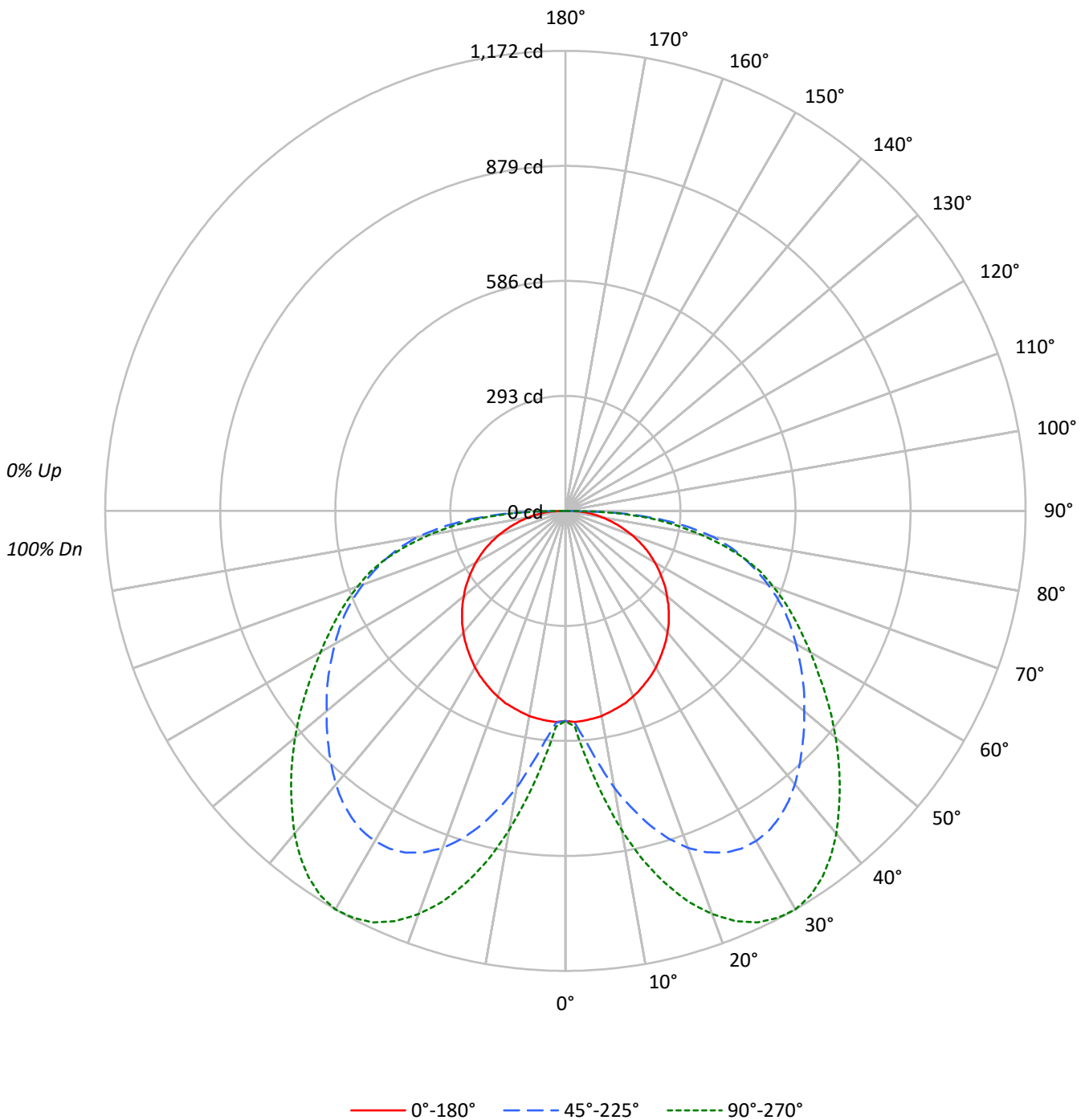
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3620.0 lumens  
Efficiency: N/A  
Efficacy: 76.1 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 2.27 / 2.06  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 47.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: P976799  
CATALOG NUMBER: 24SR-LD2-C-64-UNV-L950-CD1-MR-U

### Luminous Intensity Polar Plot





TEST NUMBER: P976799

CATALOG NUMBER: 24SR-LD2-C-64-UNV-L950-CD1-MR-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 | 102 | 102 | 102 | 100 |
| 1   | 106 | 100 | 95  | 90  | 103 | 98  | 93  | 88  | 93  | 89  | 85  | 89  | 86  | 83  | 86  | 83  | 80  | 86  | 83  | 80  | 78  |
| 2   | 95  | 85  | 77  | 70  | 92  | 83  | 76  | 69  | 79  | 73  | 68  | 76  | 71  | 66  | 73  | 68  | 64  | 73  | 68  | 64  | 62  |
| 3   | 85  | 73  | 64  | 56  | 83  | 72  | 63  | 56  | 69  | 61  | 55  | 66  | 59  | 54  | 63  | 58  | 53  | 63  | 58  | 53  | 50  |
| 4   | 78  | 64  | 54  | 47  | 75  | 63  | 53  | 46  | 60  | 52  | 46  | 58  | 51  | 45  | 55  | 49  | 44  | 55  | 49  | 44  | 42  |
| 5   | 71  | 57  | 47  | 39  | 69  | 55  | 46  | 39  | 53  | 45  | 39  | 51  | 44  | 38  | 49  | 43  | 38  | 49  | 43  | 38  | 35  |
| 6   | 65  | 50  | 41  | 34  | 63  | 49  | 40  | 33  | 48  | 39  | 33  | 46  | 38  | 33  | 44  | 38  | 32  | 44  | 38  | 32  | 30  |
| 7   | 60  | 45  | 36  | 29  | 58  | 45  | 35  | 29  | 43  | 35  | 29  | 41  | 34  | 29  | 40  | 33  | 28  | 40  | 33  | 28  | 26  |
| 8   | 56  | 41  | 32  | 26  | 54  | 40  | 32  | 26  | 39  | 31  | 25  | 38  | 30  | 25  | 36  | 30  | 25  | 36  | 30  | 25  | 23  |
| 9   | 52  | 38  | 29  | 23  | 50  | 37  | 28  | 23  | 36  | 28  | 23  | 35  | 27  | 22  | 33  | 27  | 22  | 33  | 27  | 22  | 20  |
| 10  | 48  | 34  | 26  | 20  | 47  | 34  | 26  | 20  | 33  | 25  | 20  | 32  | 25  | 20  | 31  | 25  | 20  | 31  | 25  | 20  | 18  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°  | 45°  | 90°  |
|-----|-----|------|------|
| 0°  | 720 | 720  | 720  |
| 5°  | 725 | 793  | 862  |
| 10° | 725 | 978  | 1128 |
| 15° | 722 | 1154 | 1368 |
| 20° | 721 | 1308 | 1565 |
| 25° | 717 | 1426 | 1717 |
| 30° | 716 | 1509 | 1821 |
| 35° | 712 | 1563 | 1873 |
| 40° | 710 | 1597 | 1885 |
| 45° | 709 | 1623 | 1880 |
| 50° | 706 | 1661 | 1881 |
| 55° | 706 | 1730 | 1894 |
| 60° | 708 | 1824 | 1939 |
| 65° | 712 | 1970 | 2042 |
| 70° | 712 | 2159 | 2213 |
| 75° | 712 | 2457 | 2466 |
| 80° | 742 | 2957 | 2721 |
| 85° | 869 | 3708 | 3355 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 87.5°  
 Luminance: 4550 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 59.3   | 1.6       |
| 10°-20°   | 224.9  | 6.2       |
| 20°-30°   | 413.8  | 11.4      |
| 30°-40°   | 551.6  | 15.2      |
| 40°-50°   | 604.3  | 16.7      |
| 50°-60°   | 594.2  | 16.4      |
| 60°-70°   | 539.2  | 14.9      |
| 70°-80°   | 429.3  | 11.9      |
| 80°-90°   | 203.5  | 5.6       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 698.0  | 19.3      |
| 0°-40°    | 1249.6 | 34.5      |
| 0°-60°    | 2448.1 | 67.6      |
| 0°-90°    | 3620.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3620.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90°  | Flux |
|-----|-----|-------|-----|-------|------|------|
| 0°  | 535 | 535   | 535 | 535   | 535  |      |
| 5°  | 537 | 541   | 587 | 625   | 638  | 51   |
| 15° | 518 | 642   | 829 | 944   | 982  | 146  |
| 25° | 483 | 712   | 961 | 1104  | 1157 | 223  |
| 35° | 433 | 700   | 952 | 1092  | 1140 | 271  |
| 45° | 372 | 631   | 853 | 956   | 988  | 287  |
| 55° | 301 | 557   | 737 | 793   | 807  | 270  |
| 65° | 224 | 482   | 619 | 632   | 642  | 221  |
| 75° | 137 | 376   | 473 | 470   | 474  | 145  |
| 85° | 56  | 203   | 240 | 217   | 217  | 58   |
| 90° | 0   | 0     | 0   | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°    |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 0°    | 535.1 | 535.1 | 535.1 | 535.1 | 535.1 | 535.1 | 535.1 | 535.1 | 535.1 | 535.1 | 535.1  |
| 2.5°  | 538.2 | 538.2 | 536.6 | 536.6 | 536.6 | 535.1 | 535.1 | 536.6 | 538.2 | 539.6 | 541.3  |
| 5°    | 536.6 | 536.6 | 536.6 | 536.6 | 538.2 | 544.3 | 551.9 | 562.5 | 571.5 | 586.9 | 594.5  |
| 7.5°  | 533.7 | 533.7 | 535.1 | 539.6 | 551.9 | 568.5 | 588.3 | 611.0 | 629.5 | 649.1 | 667.3  |
| 10°   | 530.6 | 530.6 | 533.7 | 548.8 | 573.2 | 602.0 | 630.9 | 659.7 | 685.5 | 716.0 | 738.7  |
| 12.5° | 524.5 | 524.5 | 533.7 | 560.9 | 597.5 | 634.0 | 670.4 | 708.4 | 741.8 | 773.7 | 805.6  |
| 15°   | 518.3 | 518.3 | 536.6 | 574.6 | 620.2 | 664.2 | 706.8 | 751.0 | 790.5 | 828.6 | 861.9  |
| 17.5° | 512.4 | 513.8 | 541.3 | 589.8 | 640.1 | 691.7 | 741.8 | 789.1 | 833.1 | 875.6 | 913.7  |
| 20°   | 503.2 | 506.3 | 544.3 | 600.4 | 656.7 | 714.6 | 767.8 | 819.4 | 868.1 | 913.7 | 953.2  |
| 22.5° | 494.0 | 500.1 | 545.8 | 608.2 | 670.4 | 732.8 | 789.1 | 842.3 | 893.8 | 941.1 | 982.0  |
| 25°   | 483.3 | 491.1 | 547.2 | 612.7 | 679.6 | 743.4 | 802.6 | 858.9 | 912.1 | 960.8 | 1001.9 |
| 27.5° | 472.7 | 483.3 | 544.3 | 612.7 | 682.7 | 749.4 | 808.7 | 866.6 | 922.7 | 970.0 | 1014.0 |
| 30°   | 460.6 | 474.3 | 539.6 | 611.0 | 682.7 | 747.9 | 808.7 | 868.1 | 922.7 | 971.4 | 1014.0 |
| 32.5° | 446.9 | 465.1 | 532.1 | 605.1 | 676.5 | 743.4 | 804.2 | 861.9 | 916.8 | 965.3 | 1006.4 |
| 35°   | 433.2 | 453.1 | 523.0 | 595.9 | 667.3 | 732.8 | 791.9 | 849.9 | 903.1 | 951.8 | 992.7  |
| 37.5° | 419.5 | 442.4 | 512.4 | 585.3 | 653.6 | 717.5 | 776.8 | 834.7 | 886.3 | 933.3 | 971.4  |
| 40°   | 404.4 | 428.7 | 498.7 | 570.1 | 638.5 | 699.2 | 758.6 | 813.2 | 863.6 | 909.2 | 945.6  |
| 42.5° | 389.2 | 415.0 | 483.3 | 555.0 | 620.2 | 681.0 | 738.7 | 791.9 | 840.6 | 881.8 | 915.1  |
| 45°   | 372.4 | 399.9 | 468.2 | 536.6 | 600.4 | 661.4 | 717.5 | 767.8 | 814.9 | 852.9 | 883.2  |
| 47.5° | 355.7 | 384.7 | 451.4 | 520.0 | 582.2 | 641.5 | 696.2 | 744.9 | 787.4 | 823.9 | 852.9  |
| 50°   | 337.4 | 367.9 | 434.9 | 501.8 | 564.0 | 621.7 | 674.9 | 720.5 | 761.7 | 793.6 | 821.0  |
| 52.5° | 320.9 | 352.8 | 418.1 | 485.0 | 545.8 | 603.5 | 655.2 | 697.8 | 735.9 | 766.2 | 789.1  |
| 55°   | 301.0 | 336.0 | 402.9 | 468.2 | 529.0 | 585.3 | 634.0 | 674.9 | 709.9 | 737.3 | 757.2  |
| 57.5° | 282.8 | 319.2 | 386.1 | 451.4 | 510.8 | 567.0 | 612.7 | 652.2 | 682.7 | 706.8 | 725.2  |
| 60°   | 263.0 | 302.5 | 369.4 | 434.9 | 494.0 | 548.8 | 592.8 | 629.5 | 658.3 | 678.0 | 693.3  |
| 62.5° | 243.3 | 284.2 | 354.2 | 418.1 | 475.8 | 527.6 | 570.1 | 603.5 | 629.5 | 649.1 | 658.3  |
| 65°   | 223.5 | 266.0 | 336.0 | 401.3 | 457.6 | 506.3 | 547.2 | 579.1 | 602.0 | 618.8 | 624.8  |
| 67.5° | 202.2 | 247.8 | 317.8 | 380.0 | 436.3 | 483.3 | 521.4 | 551.9 | 571.5 | 585.3 | 588.3  |
| 70°   | 180.9 | 226.5 | 296.5 | 358.7 | 411.9 | 456.1 | 494.0 | 520.0 | 539.6 | 548.8 | 551.9  |
| 72.5° | 158.2 | 205.2 | 275.2 | 334.4 | 384.7 | 428.7 | 462.1 | 489.5 | 506.3 | 512.4 | 512.4  |
| 75°   | 136.9 | 182.3 | 250.9 | 307.2 | 355.7 | 396.8 | 428.7 | 453.1 | 468.2 | 472.7 | 471.3  |
| 77.5° | 115.6 | 161.0 | 224.9 | 278.3 | 322.3 | 360.4 | 390.6 | 413.6 | 427.3 | 431.8 | 430.1  |
| 80°   | 95.8  | 138.3 | 194.6 | 244.7 | 284.2 | 319.2 | 346.7 | 371.0 | 383.1 | 381.6 | 372.4  |
| 82.5° | 75.9  | 112.5 | 162.7 | 206.7 | 241.7 | 273.6 | 301.0 | 316.2 | 320.9 | 316.2 | 307.2  |
| 85°   | 56.3  | 85.1  | 126.3 | 161.0 | 190.1 | 215.9 | 232.7 | 243.3 | 244.7 | 240.2 | 232.7  |
| 87.5° | 33.4  | 50.1  | 74.5  | 95.8  | 117.1 | 129.1 | 138.3 | 145.9 | 147.5 | 142.8 | 139.8  |
| 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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**CANDELA DISTRIBUTION (continued):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 535.1  | 535.1  | 535.1  | 535.1  | 535.1  | 535.1  | 535.1  | 535.1  |
| 2.5°  | 542.7  | 544.3  | 545.8  | 548.8  | 547.2  | 548.8  | 548.8  | 550.3  |
| 5°    | 605.1  | 614.1  | 620.2  | 629.5  | 629.5  | 634.0  | 635.4  | 638.5  |
| 7.5°  | 681.0  | 693.3  | 706.8  | 720.5  | 722.2  | 729.7  | 732.8  | 732.8  |
| 10°   | 758.6  | 775.4  | 791.9  | 807.3  | 811.8  | 821.0  | 825.5  | 825.5  |
| 12.5° | 828.6  | 846.8  | 869.5  | 886.3  | 892.4  | 903.1  | 909.2  | 910.6  |
| 15°   | 889.3  | 912.1  | 935.0  | 953.2  | 963.8  | 974.5  | 980.6  | 982.0  |
| 17.5° | 941.1  | 968.3  | 992.7  | 1010.9 | 1023.2 | 1035.3 | 1042.8 | 1044.5 |
| 20°   | 982.0  | 1012.5 | 1036.9 | 1056.5 | 1070.2 | 1085.4 | 1091.5 | 1093.0 |
| 22.5° | 1014.0 | 1042.8 | 1070.2 | 1091.5 | 1106.7 | 1122.0 | 1129.6 | 1131.0 |
| 25°   | 1035.3 | 1065.7 | 1093.0 | 1115.9 | 1132.7 | 1146.2 | 1153.9 | 1156.8 |
| 27.5° | 1047.5 | 1079.5 | 1106.7 | 1128.0 | 1144.7 | 1159.9 | 1167.4 | 1169.1 |
| 30°   | 1049.0 | 1080.9 | 1108.3 | 1129.6 | 1146.2 | 1161.5 | 1169.1 | 1172.2 |
| 32.5° | 1041.4 | 1073.3 | 1099.1 | 1120.4 | 1137.2 | 1150.9 | 1158.4 | 1161.5 |
| 35°   | 1026.2 | 1056.5 | 1082.3 | 1102.2 | 1117.3 | 1129.6 | 1138.6 | 1140.2 |
| 37.5° | 1005.0 | 1033.8 | 1056.5 | 1074.7 | 1090.1 | 1102.2 | 1109.7 | 1109.7 |
| 40°   | 975.9  | 1003.3 | 1023.2 | 1039.8 | 1055.1 | 1064.1 | 1073.3 | 1073.3 |
| 42.5° | 944.0  | 970.0  | 988.2  | 1003.3 | 1014.0 | 1024.6 | 1030.7 | 1030.7 |
| 45°   | 910.6  | 931.9  | 950.1  | 962.4  | 973.0  | 980.6  | 988.2  | 988.2  |
| 47.5° | 877.3  | 895.5  | 909.2  | 921.3  | 930.5  | 938.0  | 944.0  | 944.0  |
| 50°   | 842.3  | 858.9  | 869.5  | 880.1  | 887.9  | 893.8  | 898.6  | 898.6  |
| 52.5° | 807.3  | 821.0  | 828.6  | 837.6  | 843.7  | 849.9  | 852.9  | 852.9  |
| 55°   | 773.7  | 782.9  | 789.1  | 796.6  | 801.1  | 804.2  | 807.3  | 807.3  |
| 57.5° | 737.3  | 743.4  | 749.4  | 754.1  | 757.2  | 760.0  | 763.1  | 761.7  |
| 60°   | 700.9  | 705.4  | 709.9  | 712.9  | 716.0  | 719.1  | 720.5  | 720.5  |
| 62.5° | 664.2  | 665.9  | 667.3  | 673.5  | 676.5  | 678.0  | 679.6  | 679.6  |
| 65°   | 627.8  | 627.8  | 629.5  | 634.0  | 637.0  | 640.1  | 641.5  | 641.5  |
| 67.5° | 588.3  | 589.8  | 591.4  | 595.9  | 597.5  | 600.4  | 603.5  | 603.5  |
| 70°   | 548.8  | 550.3  | 550.3  | 555.0  | 556.4  | 559.5  | 562.5  | 562.5  |
| 72.5° | 510.8  | 510.8  | 510.8  | 513.8  | 516.9  | 520.0  | 523.0  | 523.0  |
| 75°   | 468.2  | 468.2  | 468.2  | 471.3  | 471.3  | 472.7  | 475.8  | 474.3  |
| 77.5° | 422.6  | 418.1  | 413.6  | 411.9  | 411.9  | 413.6  | 415.0  | 415.0  |
| 80°   | 363.4  | 357.3  | 354.2  | 351.2  | 349.7  | 351.2  | 352.8  | 351.2  |
| 82.5° | 301.0  | 293.4  | 288.9  | 287.3  | 287.3  | 287.3  | 288.9  | 285.9  |
| 85°   | 228.0  | 220.4  | 217.3  | 217.3  | 215.9  | 215.9  | 215.9  | 217.3  |
| 87.5° | 136.9  | 132.2  | 127.7  | 129.1  | 127.7  | 126.3  | 127.7  | 130.8  |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



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**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 | 12.1             | 13.8 | 12.4 | 14.2 | 14.5 | 15.0           | 16.8 | 15.4 | 17.1 | 17.4 |
|                 | 3H   | 14.0             | 15.7 | 14.4 | 16.0 | 16.4 | 17.5           | 19.2 | 17.9 | 19.5 | 19.9 |
|                 | 4H   | 14.8             | 16.4 | 15.2 | 16.7 | 17.1 | 18.8           | 20.3 | 19.2 | 20.7 | 21.0 |
|                 | 6H   | 15.4             | 16.9 | 15.8 | 17.2 | 17.6 | 19.8           | 21.3 | 20.3 | 21.7 | 22.0 |
|                 | 8H   | 15.7             | 17.0 | 16.1 | 17.4 | 17.8 | 20.3           | 21.7 | 20.7 | 22.1 | 22.5 |
|                 | 12H  | 15.8             | 17.2 | 16.3 | 17.6 | 18.0 | 20.7           | 22.1 | 21.2 | 22.5 | 22.9 |
| 4H              | 2H   | 13.8             | 15.4 | 14.2 | 15.7 | 16.1 | 15.8           | 17.3 | 16.2 | 17.7 | 18.1 |
|                 | 3H   | 16.3             | 17.7 | 16.7 | 18.1 | 18.5 | 18.6           | 19.9 | 19.0 | 20.3 | 20.7 |
|                 | 4H   | 17.4             | 18.7 | 17.9 | 19.1 | 19.5 | 20.0           | 21.2 | 20.4 | 21.6 | 22.0 |
|                 | 6H   | 18.3             | 19.4 | 18.8 | 19.9 | 20.3 | 21.2           | 22.3 | 21.7 | 22.8 | 23.2 |
|                 | 8H   | 18.7             | 19.7 | 19.1 | 20.1 | 20.6 | 21.8           | 22.8 | 22.2 | 23.3 | 23.7 |
|                 | 12H  | 18.9             | 19.8 | 19.4 | 20.3 | 20.8 | 22.3           | 23.2 | 22.8 | 23.7 | 24.2 |
| 8H              | 4H   | 18.6             | 19.6 | 19.0 | 20.1 | 20.5 | 20.5           | 21.6 | 21.0 | 22.0 | 22.5 |
|                 | 6H   | 19.9             | 20.8 | 20.4 | 21.3 | 21.8 | 22.0           | 22.9 | 22.5 | 23.4 | 23.8 |
|                 | 8H   | 20.5             | 21.3 | 21.0 | 21.8 | 22.3 | 22.7           | 23.5 | 23.2 | 24.0 | 24.5 |
|                 | 12H  | 21.0             | 21.7 | 21.5 | 22.2 | 22.7 | 23.4           | 24.1 | 23.9 | 24.5 | 25.1 |
| 12H             | 4H   | 18.8             | 19.7 | 19.3 | 20.2 | 20.7 | 20.6           | 21.6 | 21.1 | 22.0 | 22.5 |
|                 | 6H   | 20.3             | 21.1 | 20.8 | 21.6 | 22.1 | 22.2           | 23.0 | 22.7 | 23.5 | 24.0 |
|                 | 8H   | 21.1             | 21.8 | 21.6 | 22.3 | 22.8 | 23.0           | 23.7 | 23.5 | 24.2 | 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



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-8

**Photopic Flux vs. Wavelength**



**Photopic Lumens: NR**

| $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /nm) | $\lambda$<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>( $\phi$ /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**

| $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /nm) | $\lambda$ (nm) | Power W <sup>^</sup> /nm | Lumens ( $\phi$ /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 <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /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 ( $R_{f,i}$ )

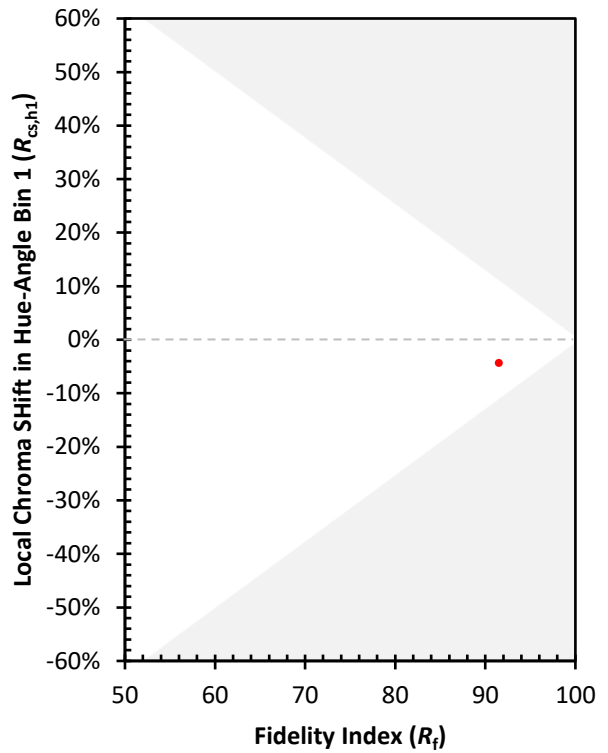
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 91 | CES51 = 98 | CES76 = 84 |
| CES02 = 61 | CES27 = 93 | CES52 = 98 | CES77 = 88 |
| CES03 = 31 | CES28 = 95 | CES53 = 97 | CES78 = 81 |
| CES04 = 69 | CES29 = 94 | CES54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