

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: P977035

Luminaire Tested: 24SR-LD2-C-39-UNV-L935-CD1-ST-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P977035
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 24SR-LD2-C-39-UNV-L935-CD1-ST-U
Description: METALUX SKYRIDGE 2x4 3900LM PACKAGE 90CRI 3500K TROFFER with Straw SKYTRIM
Light Source: 3500K CCT, 90+ CRI LEDS
Ballast/Driver: -

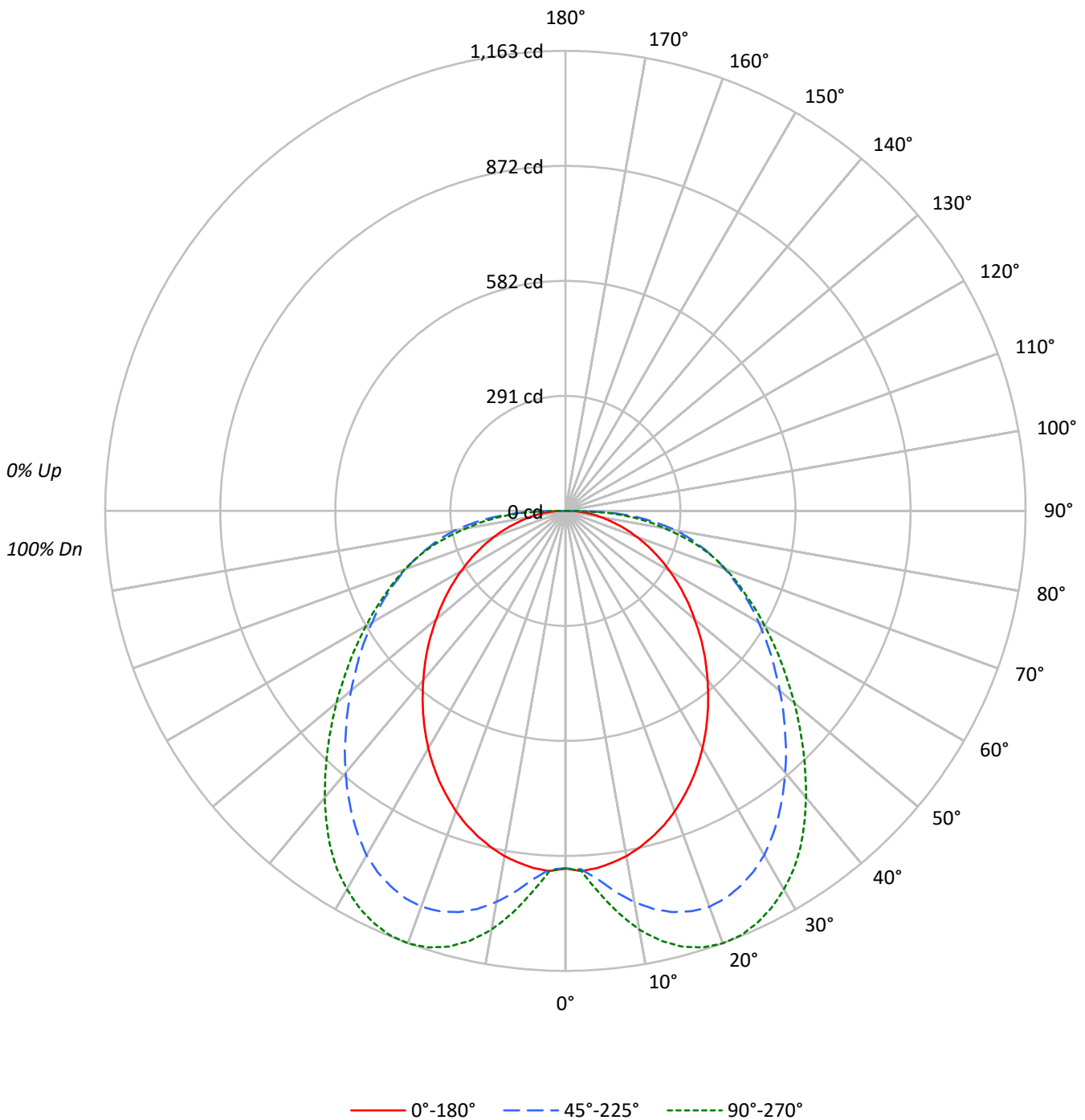
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3431.0 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.62 / 1.56
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: P977035
CATALOG NUMBER: 24SR-LD2-C-39-UNV-L935-CD1-ST-U

Luminous Intensity Polar Plot





TEST NUMBER: P977035

CATALOG NUMBER: 24SR-LD2-C-39-UNV-L935-CD1-ST-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 | 107 | 102 | 97 | 92 | 104 | 99 | 95 | 91 | 95 | 91 | 88 | 91 | 88 | 85 | 87 | 85 | 83 | 80 | 80 | 80 | 80 |
| 2 | 97 | 88 | 80 | 74 | 94 | 86 | 79 | 73 | 82 | 76 | 71 | 79 | 74 | 69 | 76 | 71 | 68 | 66 | 66 | 66 | 66 |
| 3 | 88 | 76 | 68 | 61 | 85 | 75 | 67 | 60 | 72 | 65 | 59 | 69 | 63 | 58 | 66 | 61 | 57 | 54 | 54 | 54 | 54 |
| 4 | 80 | 67 | 58 | 51 | 78 | 66 | 57 | 50 | 63 | 56 | 50 | 61 | 54 | 49 | 59 | 53 | 48 | 46 | 46 | 46 | 46 |
| 5 | 74 | 60 | 50 | 43 | 71 | 59 | 50 | 43 | 57 | 49 | 43 | 55 | 48 | 42 | 53 | 47 | 42 | 40 | 40 | 40 | 40 |
| 6 | 68 | 54 | 44 | 38 | 66 | 53 | 44 | 38 | 51 | 43 | 37 | 49 | 42 | 37 | 48 | 41 | 37 | 34 | 34 | 34 | 34 |
| 7 | 63 | 49 | 40 | 33 | 61 | 48 | 39 | 33 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 32 | 30 | 30 | 30 | 30 |
| 8 | 58 | 44 | 36 | 30 | 57 | 44 | 35 | 29 | 42 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 27 | 27 | 27 | 27 |
| 9 | 55 | 41 | 32 | 26 | 53 | 40 | 32 | 26 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 24 | 24 | 24 | 24 |
| 10 | 51 | 37 | 29 | 24 | 50 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 28 | 24 | 34 | 28 | 24 | 22 | 22 | 22 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1216 | 1216 | 1216 |
| 5° | 1224 | 1262 | 1308 |
| 10° | 1211 | 1372 | 1469 |
| 15° | 1187 | 1463 | 1588 |
| 20° | 1157 | 1525 | 1666 |
| 25° | 1119 | 1553 | 1705 |
| 30° | 1077 | 1561 | 1716 |
| 35° | 1029 | 1543 | 1702 |
| 40° | 981 | 1518 | 1662 |
| 45° | 937 | 1492 | 1616 |
| 50° | 892 | 1479 | 1582 |
| 55° | 855 | 1487 | 1561 |
| 60° | 820 | 1518 | 1565 |
| 65° | 785 | 1582 | 1603 |
| 70° | 753 | 1687 | 1698 |
| 75° | 718 | 1861 | 1832 |
| 80° | 713 | 2197 | 1983 |
| 85° | 783 | 2828 | 2473 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 87.5°
 Luminance: 3748 cd/sqm



TEST NUMBER: P977035
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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 90.8 | 2.6 |
| 10°-20° | 288.4 | 8.4 |
| 20°-30° | 461.1 | 13.4 |
| 30°-40° | 558.2 | 16.3 |
| 40°-50° | 570.1 | 16.6 |
| 50°-60° | 525.3 | 15.3 |
| 60°-70° | 446.8 | 13.0 |
| 70°-80° | 334.1 | 9.7 |
| 80°-90° | 156.1 | 4.5 |
| 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° | 840.3 | 24.5 |
| 0°-40° | 1398.6 | 40.8 |
| 0°-60° | 2494.0 | 72.7 |
| 0°-90° | 3431.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3431.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|------|-------|------|------|
| 0° | 904 | 904 | 904 | 904 | 904 | |
| 5° | 907 | 901 | 934 | 958 | 968 | 86 |
| 15° | 852 | 929 | 1050 | 1116 | 1140 | 240 |
| 25° | 754 | 896 | 1046 | 1121 | 1149 | 347 |
| 35° | 627 | 792 | 940 | 1011 | 1036 | 392 |
| 45° | 492 | 655 | 784 | 835 | 850 | 380 |
| 55° | 364 | 530 | 634 | 658 | 665 | 326 |
| 65° | 247 | 419 | 497 | 500 | 503 | 245 |
| 75° | 138 | 303 | 358 | 352 | 352 | 148 |
| 85° | 51 | 160 | 183 | 162 | 160 | 53 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P977035

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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 0° | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 |
| 2.5° | 911.1 | 909.3 | 906.6 | 902.8 | 902.0 | 902.0 | 901.0 | 901.0 | 902.8 | 906.6 | 912.0 |
| 5° | 906.6 | 904.7 | 902.0 | 899.1 | 900.1 | 902.8 | 908.4 | 914.9 | 924.0 | 934.2 | 945.2 |
| 7.5° | 897.4 | 896.4 | 894.5 | 894.5 | 902.0 | 914.9 | 927.7 | 940.6 | 955.4 | 971.0 | 987.6 |
| 10° | 886.2 | 885.4 | 884.4 | 891.8 | 908.4 | 927.7 | 946.1 | 963.5 | 983.8 | 1004.0 | 1023.4 |
| 12.5° | 870.6 | 870.6 | 873.4 | 890.0 | 913.0 | 936.9 | 959.9 | 983.0 | 1006.9 | 1030.8 | 1052.0 |
| 15° | 852.2 | 852.2 | 861.5 | 885.4 | 914.9 | 942.5 | 970.1 | 995.9 | 1023.4 | 1050.1 | 1072.2 |
| 17.5° | 832.0 | 831.1 | 848.6 | 877.9 | 911.1 | 943.3 | 974.7 | 1003.2 | 1031.7 | 1061.1 | 1084.2 |
| 20° | 808.1 | 809.9 | 832.9 | 866.9 | 903.8 | 939.6 | 972.8 | 1003.2 | 1033.5 | 1064.8 | 1086.9 |
| 22.5° | 781.3 | 785.0 | 813.5 | 851.3 | 892.7 | 929.6 | 964.5 | 996.7 | 1028.1 | 1059.3 | 1081.4 |
| 25° | 753.7 | 758.4 | 793.3 | 832.9 | 877.1 | 914.9 | 949.8 | 983.8 | 1015.2 | 1046.4 | 1068.6 |
| 27.5° | 724.3 | 730.8 | 770.3 | 811.8 | 855.9 | 895.5 | 930.5 | 965.4 | 996.7 | 1028.9 | 1049.2 |
| 30° | 693.0 | 701.3 | 743.7 | 785.9 | 832.0 | 870.6 | 905.6 | 941.5 | 973.7 | 1005.0 | 1024.3 |
| 32.5° | 659.9 | 670.0 | 713.2 | 759.3 | 804.4 | 842.1 | 877.1 | 913.9 | 944.2 | 973.7 | 993.0 |
| 35° | 626.7 | 638.8 | 682.9 | 728.9 | 773.0 | 810.8 | 844.9 | 881.7 | 912.0 | 939.6 | 958.1 |
| 37.5° | 592.7 | 607.4 | 651.6 | 696.7 | 740.0 | 777.7 | 812.7 | 846.7 | 877.1 | 902.8 | 921.3 |
| 40° | 558.6 | 575.2 | 619.4 | 663.5 | 706.8 | 742.7 | 776.7 | 810.8 | 841.2 | 864.2 | 881.7 |
| 42.5° | 525.5 | 542.0 | 587.2 | 631.3 | 671.0 | 707.8 | 741.8 | 774.9 | 802.5 | 825.5 | 841.2 |
| 45° | 492.4 | 509.8 | 554.0 | 597.3 | 636.9 | 673.7 | 707.8 | 738.1 | 764.9 | 784.2 | 799.8 |
| 47.5° | 459.3 | 477.6 | 521.8 | 565.1 | 602.8 | 638.8 | 673.7 | 701.3 | 727.1 | 746.4 | 759.3 |
| 50° | 426.1 | 446.4 | 489.6 | 533.8 | 570.6 | 606.6 | 639.6 | 665.4 | 689.3 | 706.8 | 718.8 |
| 52.5° | 395.7 | 415.1 | 459.3 | 503.4 | 540.3 | 576.1 | 607.4 | 632.3 | 653.4 | 669.1 | 681.0 |
| 55° | 364.4 | 385.6 | 431.7 | 474.0 | 511.7 | 547.6 | 576.1 | 599.1 | 618.4 | 634.1 | 643.3 |
| 57.5° | 334.1 | 358.0 | 403.0 | 445.4 | 484.1 | 518.1 | 545.7 | 567.8 | 585.4 | 598.3 | 606.6 |
| 60° | 304.6 | 329.5 | 376.4 | 418.8 | 457.4 | 490.5 | 517.3 | 537.4 | 553.2 | 564.2 | 571.5 |
| 62.5° | 275.2 | 303.7 | 349.8 | 393.9 | 430.7 | 462.9 | 487.8 | 506.2 | 521.0 | 531.0 | 535.6 |
| 65° | 246.6 | 276.1 | 323.9 | 367.3 | 404.0 | 434.4 | 458.3 | 474.9 | 488.6 | 496.9 | 498.8 |
| 67.5° | 219.0 | 250.3 | 298.1 | 341.5 | 377.3 | 405.9 | 428.9 | 444.5 | 456.4 | 462.0 | 463.9 |
| 70° | 191.4 | 223.7 | 272.4 | 315.7 | 349.8 | 377.3 | 398.5 | 413.2 | 423.4 | 428.9 | 428.9 |
| 72.5° | 165.6 | 197.9 | 246.6 | 289.0 | 320.3 | 347.9 | 367.3 | 381.0 | 390.2 | 393.9 | 393.0 |
| 75° | 138.1 | 171.2 | 219.0 | 259.5 | 290.0 | 315.7 | 335.0 | 348.8 | 355.2 | 358.0 | 357.1 |
| 77.5° | 114.1 | 145.4 | 191.4 | 229.1 | 261.4 | 282.5 | 301.9 | 314.7 | 321.2 | 323.0 | 322.2 |
| 80° | 92.0 | 121.5 | 162.0 | 197.9 | 225.4 | 248.5 | 265.9 | 279.8 | 285.3 | 283.5 | 275.2 |
| 82.5° | 70.8 | 97.6 | 133.4 | 164.7 | 190.5 | 211.7 | 230.1 | 238.3 | 239.3 | 234.7 | 227.3 |
| 85° | 50.7 | 70.8 | 101.2 | 128.0 | 151.9 | 167.5 | 178.5 | 184.9 | 186.8 | 183.2 | 174.9 |
| 87.5° | 28.5 | 41.4 | 59.8 | 79.1 | 97.6 | 108.6 | 115.1 | 118.8 | 121.5 | 117.8 | 112.2 |
| 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: P977035

CATALOG NUMBER: 24SR-LD2-C-39-UNV-L935-CD1-ST-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 | 903.8 |
| 2.5° | 906.6 | 909.3 | 908.4 | 910.3 | 911.1 | 911.1 | 908.4 | 910.3 |
| 5° | 946.1 | 951.6 | 955.4 | 960.8 | 964.5 | 964.5 | 965.4 | 968.2 |
| 7.5° | 989.4 | 998.6 | 1006.9 | 1013.3 | 1017.9 | 1019.8 | 1022.5 | 1025.2 |
| 10° | 1029.8 | 1040.9 | 1050.1 | 1058.4 | 1063.9 | 1067.6 | 1070.3 | 1075.0 |
| 12.5° | 1061.1 | 1074.0 | 1084.2 | 1093.3 | 1100.8 | 1106.2 | 1108.9 | 1112.7 |
| 15° | 1084.2 | 1098.9 | 1110.8 | 1121.0 | 1127.4 | 1133.8 | 1136.6 | 1140.3 |
| 17.5° | 1097.9 | 1112.7 | 1125.5 | 1135.7 | 1143.0 | 1149.4 | 1153.2 | 1156.9 |
| 20° | 1101.6 | 1116.4 | 1130.1 | 1140.3 | 1147.7 | 1155.9 | 1159.6 | 1163.3 |
| 22.5° | 1096.1 | 1110.8 | 1125.5 | 1136.6 | 1144.9 | 1153.2 | 1156.9 | 1160.6 |
| 25° | 1085.0 | 1100.8 | 1115.4 | 1126.5 | 1133.8 | 1142.1 | 1146.7 | 1148.6 |
| 27.5° | 1067.6 | 1083.2 | 1097.9 | 1108.1 | 1116.4 | 1124.7 | 1129.3 | 1130.1 |
| 30° | 1042.8 | 1058.4 | 1073.1 | 1083.2 | 1092.5 | 1099.8 | 1104.4 | 1104.4 |
| 32.5° | 1012.3 | 1027.1 | 1042.8 | 1052.0 | 1060.3 | 1067.6 | 1072.2 | 1074.0 |
| 35° | 977.4 | 992.1 | 1006.9 | 1015.2 | 1024.3 | 1029.8 | 1033.5 | 1036.2 |
| 37.5° | 939.6 | 954.4 | 966.4 | 973.7 | 983.8 | 987.6 | 993.0 | 992.1 |
| 40° | 899.1 | 911.1 | 922.2 | 928.6 | 936.9 | 941.5 | 947.1 | 946.1 |
| 42.5° | 856.9 | 868.8 | 877.9 | 885.4 | 890.0 | 894.5 | 898.3 | 897.4 |
| 45° | 813.5 | 824.7 | 832.9 | 836.6 | 844.0 | 845.7 | 849.5 | 849.5 |
| 47.5° | 770.3 | 779.5 | 786.9 | 792.4 | 796.1 | 797.9 | 801.6 | 801.6 |
| 50° | 728.9 | 737.2 | 741.8 | 746.4 | 750.1 | 752.8 | 754.7 | 755.6 |
| 52.5° | 688.4 | 694.9 | 698.6 | 702.2 | 705.9 | 707.8 | 709.6 | 708.6 |
| 55° | 649.8 | 654.4 | 657.1 | 659.9 | 662.7 | 665.4 | 665.4 | 665.4 |
| 57.5° | 611.1 | 613.9 | 616.6 | 618.4 | 621.2 | 623.0 | 623.0 | 623.0 |
| 60° | 573.4 | 576.1 | 577.1 | 578.9 | 581.7 | 582.5 | 583.5 | 581.7 |
| 62.5° | 536.6 | 537.4 | 538.4 | 539.3 | 542.0 | 543.9 | 543.9 | 543.0 |
| 65° | 498.8 | 498.8 | 499.8 | 500.7 | 502.5 | 504.4 | 505.2 | 503.4 |
| 67.5° | 462.0 | 462.0 | 462.9 | 462.9 | 465.7 | 467.6 | 468.4 | 468.4 |
| 70° | 426.1 | 425.2 | 427.1 | 427.9 | 429.8 | 429.8 | 431.7 | 431.7 |
| 72.5° | 390.2 | 389.3 | 391.2 | 391.2 | 393.0 | 393.9 | 393.9 | 393.9 |
| 75° | 355.2 | 352.5 | 353.4 | 351.5 | 353.4 | 353.4 | 352.5 | 352.5 |
| 77.5° | 317.5 | 311.0 | 309.3 | 305.6 | 305.6 | 305.6 | 303.7 | 303.7 |
| 80° | 269.6 | 263.2 | 260.5 | 257.6 | 257.6 | 256.8 | 255.9 | 255.9 |
| 82.5° | 221.8 | 216.3 | 213.5 | 210.8 | 212.5 | 209.8 | 210.8 | 211.7 |
| 85° | 170.3 | 165.6 | 163.9 | 161.0 | 160.2 | 160.2 | 161.0 | 160.2 |
| 87.5° | 110.5 | 105.8 | 105.8 | 103.1 | 104.9 | 102.2 | 99.3 | 101.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P977035
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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 | 12.0 | 13.7 | 12.4 | 14.1 | 14.4 | 13.9 | 15.6 | 14.3 | 15.9 | 16.3 |
| | 3H | 13.9 | 15.5 | 14.3 | 15.8 | 16.1 | 16.3 | 17.8 | 16.6 | 18.1 | 18.5 |
| | 4H | 14.6 | 16.1 | 15.0 | 16.4 | 16.8 | 17.3 | 18.8 | 17.7 | 19.2 | 19.5 |
| | 6H | 15.2 | 16.5 | 15.6 | 16.9 | 17.3 | 18.3 | 19.7 | 18.7 | 20.0 | 20.4 |
| | 8H | 15.4 | 16.7 | 15.8 | 17.1 | 17.5 | 18.7 | 20.0 | 19.1 | 20.4 | 20.8 |
| | 12H | 15.5 | 16.8 | 15.9 | 17.2 | 17.6 | 19.1 | 20.4 | 19.5 | 20.7 | 21.2 |
| 4H | 2H | 13.3 | 14.8 | 13.7 | 15.1 | 15.5 | 14.7 | 16.1 | 15.1 | 16.5 | 16.9 |
| | 3H | 15.7 | 16.9 | 16.1 | 17.3 | 17.7 | 17.3 | 18.5 | 17.7 | 18.9 | 19.3 |
| | 4H | 16.7 | 17.8 | 17.1 | 18.2 | 18.7 | 18.5 | 19.7 | 18.9 | 20.1 | 20.5 |
| | 6H | 17.5 | 18.5 | 18.0 | 19.0 | 19.4 | 19.6 | 20.7 | 20.1 | 21.1 | 21.5 |
| | 8H | 17.8 | 18.8 | 18.3 | 19.2 | 19.7 | 20.1 | 21.1 | 20.6 | 21.5 | 22.0 |
| | 12H | 18.1 | 18.9 | 18.5 | 19.4 | 19.9 | 20.6 | 21.5 | 21.1 | 22.0 | 22.4 |
| 8H | 4H | 17.6 | 18.5 | 18.0 | 19.0 | 19.4 | 19.0 | 20.0 | 19.5 | 20.4 | 20.9 |
| | 6H | 18.8 | 19.6 | 19.3 | 20.1 | 20.6 | 20.4 | 21.2 | 20.9 | 21.7 | 22.1 |
| | 8H | 19.4 | 20.1 | 19.9 | 20.6 | 21.1 | 21.0 | 21.7 | 21.5 | 22.2 | 22.7 |
| | 12H | 19.8 | 20.5 | 20.3 | 21.0 | 21.5 | 21.6 | 22.3 | 22.1 | 22.8 | 23.3 |
| 12H | 4H | 17.8 | 18.6 | 18.2 | 19.1 | 19.6 | 19.1 | 20.0 | 19.6 | 20.5 | 20.9 |
| | 6H | 19.1 | 19.9 | 19.7 | 20.3 | 20.9 | 20.6 | 21.3 | 21.1 | 21.8 | 22.3 |
| | 8H | 19.8 | 20.5 | 20.4 | 21.0 | 21.5 | 21.3 | 21.9 | 21.8 | 22.4 | 23.0 |

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



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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-6

Test Date: 07/01/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L935-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L935-CD1-U

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-457-6
 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-L935-CD1-U**
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K): 3329
 CIE u': 0.2411
 CIE v': 0.5118
 Duv: -0.0021
 CIE x: 0.4128
 CIE y: 0.3894
 CIE z: 0.1979
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 582
 Purity: 40.74075
 Rf: 91.4
 Rg: 100.2

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 93.9 | | |
| R1: | 95.4 | R9: | 60.5 |
| R2: | 97.4 | R10: | 92.5 |
| R3: | 97.7 | R11: | 95.9 |
| R4: | 94.9 | R12: | 82.0 |
| R5: | 95.1 | R13: | 96.0 |
| R6: | 95.7 | R14: | 98.0 |
| R7: | 91.7 | R15: | 91.5 |
| R8: | 83.2 | | |



Test Conditions

Stabilization Time: 48M
 Operation Time: 1H 48M
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2506-457-6

| 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: SP1-2506-457-6

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3500K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-6

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 | 143 | NR | 620 | 358 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 166 | NR | 625 | 357 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 191 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 210 | NR | 635 | 705 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 223 | NR | 640 | 239 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 233 | NR | 645 | 226 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 240 | NR | 650 | 201 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 246 | NR | 655 | 170 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 251 | NR | 660 | 145 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 260 | NR | 665 | 123 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 267 | NR | 670 | 113 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 9 | NR | 545 | 276 | NR | 675 | 93 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 16 | NR | 550 | 284 | NR | 680 | 80 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 28 | NR | 555 | 294 | NR | 685 | 69 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 46 | NR | 560 | 303 | NR | 690 | 59 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 75 | NR | 565 | 313 | NR | 695 | 51 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 120 | NR | 570 | 319 | NR | 700 | 43 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 203 | NR | 575 | 327 | NR | 705 | 37 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 311 | NR | 580 | 336 | NR | 710 | 31 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 290 | NR | 585 | 344 | NR | 715 | 26 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 197 | NR | 590 | 349 | NR | 720 | 22 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 163 | NR | 595 | 350 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 135 | NR | 600 | 355 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 110 | NR | 605 | 357 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 108 | NR | 610 | 391 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 123 | NR | 615 | 421 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-6

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.57

| 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 | 143 | NR | 620 | 358 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 166 | NR | 625 | 357 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 191 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 210 | NR | 635 | 705 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 223 | NR | 640 | 239 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 233 | NR | 645 | 226 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 240 | NR | 650 | 201 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 246 | NR | 655 | 170 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 251 | NR | 660 | 145 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 260 | NR | 665 | 123 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 267 | NR | 670 | 113 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 9 | NR | 545 | 276 | NR | 675 | 93 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 16 | NR | 550 | 284 | NR | 680 | 80 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 28 | NR | 555 | 294 | NR | 685 | 69 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 46 | NR | 560 | 303 | NR | 690 | 59 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 75 | NR | 565 | 313 | NR | 695 | 51 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 120 | NR | 570 | 319 | NR | 700 | 43 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 203 | NR | 575 | 327 | NR | 705 | 37 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 311 | NR | 580 | 336 | NR | 710 | 31 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 290 | NR | 585 | 344 | NR | 715 | 26 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 197 | NR | 590 | 349 | NR | 720 | 22 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 163 | NR | 595 | 350 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 135 | NR | 600 | 355 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 110 | NR | 605 | 357 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 108 | NR | 610 | 391 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 123 | NR | 615 | 421 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-6

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.17

| 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 | 143 | NR | 620 | 358 | NR | 750 | 9 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 166 | NR | 625 | 357 | NR | 755 | 7 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 191 | NR | 630 | 1000 | NR | 760 | 6 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 210 | NR | 635 | 705 | NR | 765 | 5 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 223 | NR | 640 | 239 | NR | 770 | 5 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 233 | NR | 645 | 226 | NR | 775 | 4 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 240 | NR | 650 | 201 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 246 | NR | 655 | 170 | NR | 785 | 3 | NR | 915 | 0 | NR |
| 400 | 3 | NR | 530 | 251 | NR | 660 | 145 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 4 | NR | 535 | 260 | NR | 665 | 123 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 6 | NR | 540 | 267 | NR | 670 | 113 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 9 | NR | 545 | 276 | NR | 675 | 93 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 16 | NR | 550 | 284 | NR | 680 | 80 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 28 | NR | 555 | 294 | NR | 685 | 69 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 46 | NR | 560 | 303 | NR | 690 | 59 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 75 | NR | 565 | 313 | NR | 695 | 51 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 120 | NR | 570 | 319 | NR | 700 | 43 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 203 | NR | 575 | 327 | NR | 705 | 37 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 311 | NR | 580 | 336 | NR | 710 | 31 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 290 | NR | 585 | 344 | NR | 715 | 26 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 197 | NR | 590 | 349 | NR | 720 | 22 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 163 | NR | 595 | 350 | NR | 725 | 18 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 135 | NR | 600 | 355 | NR | 730 | 15 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 110 | NR | 605 | 357 | NR | 735 | 13 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 108 | NR | 610 | 391 | NR | 740 | 11 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 123 | NR | 615 | 421 | NR | 745 | 10 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.4$
 $R_g = 100.2$
 $CIE R_a = 93.9$
 $R_9 = 60.5$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 93 | CES51 = 98 | CES76 = 88 |
| CES02 = 63 | CES27 = 93 | CES52 = 98 | CES77 = 87 |
| CES03 = 31 | CES28 = 96 | CES53 = 97 | CES78 = 85 |
| CES04 = 70 | CES29 = 95 | CES54 = 95 | CES79 = 91 |
| CES05 = 50 | CES30 = 96 | CES55 = 94 | CES80 = 92 |
| CES06 = 51 | CES31 = 95 | CES56 = 96 | CES81 = 75 |
| CES07 = 43 | CES32 = 87 | CES57 = 95 | CES82 = 96 |
| CES08 = 42 | CES33 = 97 | CES58 = 96 | CES83 = 94 |
| CES09 = 29 | CES34 = 94 | CES59 = 98 | CES84 = 95 |
| CES10 = 75 | CES35 = 96 | CES60 = 94 | CES85 = 80 |
| CES11 = 58 | CES36 = 84 | CES61 = 93 | CES86 = 79 |
| CES12 = 64 | CES37 = 95 | CES62 = 89 | CES87 = 91 |
| CES13 = 44 | CES38 = 91 | CES63 = 94 | CES88 = 97 |
| CES14 = 74 | CES39 = 99 | CES64 = 92 | CES89 = 83 |
| CES15 = 72 | CES40 = 97 | CES65 = 90 | CES90 = 98 |
| CES16 = 48 | CES41 = 97 | CES66 = 90 | CES91 = 77 |
| CES17 = 49 | CES42 = 93 | CES67 = 89 | CES92 = 77 |
| CES18 = 56 | CES43 = 92 | CES68 = 89 | CES93 = 86 |
| CES19 = 71 | CES44 = 99 | CES69 = 91 | CES94 = 74 |
| CES20 = 67 | CES45 = 96 | CES70 = 88 | CES95 = 84 |
| CES21 = 86 | CES46 = 96 | CES71 = 84 | CES96 = 92 |
| CES22 = 78 | CES47 = 91 | CES72 = 94 | CES97 = 95 |
| CES23 = 91 | CES48 = 94 | CES73 = 83 | CES98 = 94 |
| CES24 = 90 | CES49 = 94 | CES74 = 91 | CES99 = 92 |
| CES25 = 71 | CES50 = 98 | CES75 = 86 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)