

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: P1589838

Luminaire Tested: 24CZSP-SB-52HE-L845-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1589838  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2608-884-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/3/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24CZSP-SB-52HE-L845-S  
Description: 2x4 CZSP LED Luminaire, 4500K CCT and 5000 lumens, 80CRI, Smooth Lens, SB housing  
Light Source: -  
Ballast/Driver: -

**Summary**

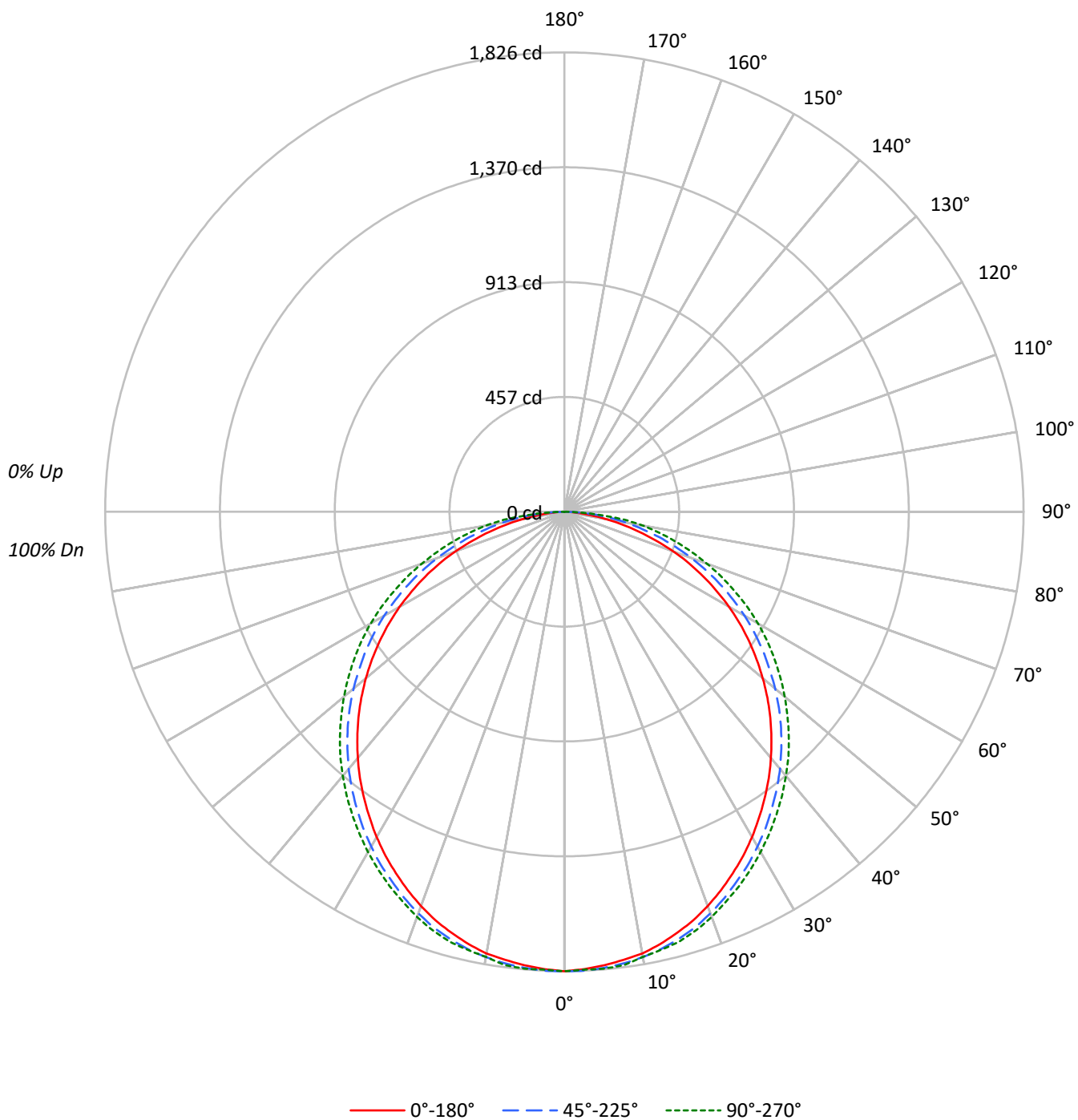
Lumens per Lamp: N/A  
Luminaire Lumens: 5313.0 lumens  
Efficiency: N/A  
Efficacy: 144.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 36.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

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### Luminous Intensity Polar Plot



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**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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 | 100 |
| 1   | 108 | 103 | 99  | 95  | 106 | 101 | 97  | 93  | 97  | 94  | 90  |  | 93  | 90  | 88  |  | 89  | 87  | 85  | 83  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 81  | 76  | 84  | 79  | 74  |  | 81  | 76  | 72  |  | 78  | 74  | 71  | 69  |
| 3   | 89  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 67  | 62  |  | 71  | 66  | 61  |  | 69  | 64  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 53  |  | 63  | 57  | 52  |  | 61  | 56  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 59  | 51  | 45  |  | 57  | 50  | 45  |  | 55  | 49  | 44  | 42  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 40  |  | 51  | 45  | 39  |  | 50  | 44  | 39  | 37  |
| 7   | 64  | 51  | 42  | 35  | 63  | 50  | 41  | 35  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 45  | 39  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 45  | 37  | 31  | 44  | 37  | 31  |  | 43  | 36  | 31  |  | 42  | 35  | 31  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 41  | 33  | 28  |  | 39  | 33  | 28  |  | 38  | 32  | 28  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 30  | 26  |  | 37  | 30  | 25  |  | 36  | 30  | 25  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2797 | 2797 | 2797 |
| 5°  | 2782 | 2798 | 2803 |
| 10° | 2773 | 2796 | 2794 |
| 15° | 2747 | 2787 | 2804 |
| 20° | 2718 | 2768 | 2793 |
| 25° | 2679 | 2741 | 2776 |
| 30° | 2640 | 2717 | 2761 |
| 35° | 2597 | 2691 | 2748 |
| 40° | 2555 | 2667 | 2740 |
| 45° | 2508 | 2639 | 2733 |
| 50° | 2454 | 2606 | 2726 |
| 55° | 2393 | 2573 | 2722 |
| 60° | 2318 | 2535 | 2724 |
| 65° | 2212 | 2481 | 2709 |
| 70° | 2068 | 2406 | 2703 |
| 75° | 1833 | 2313 | 2712 |
| 80° | 1492 | 2198 | 2793 |
| 85° | 965  | 2028 | 2411 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2830 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 172.8  | 3.3       |
| 10°-20°   | 495.0  | 9.3       |
| 20°-30°   | 746.3  | 14.0      |
| 30°-40°   | 897.9  | 16.9      |
| 40°-50°   | 936.6  | 17.6      |
| 50°-60°   | 858.5  | 16.2      |
| 60°-70°   | 674.1  | 12.7      |
| 70°-80°   | 410.3  | 7.7       |
| 80°-90°   | 121.4  | 2.3       |
| 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°    | 1414.1 | 26.6      |
| 0°-40°    | 2312.0 | 43.5      |
| 0°-60°    | 4107.2 | 77.3      |
| 0°-90°    | 5313.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5313.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1826 | 1826  | 1826 | 1826  | 1826 |      |
| 5°  | 1809 | 1821  | 1820 | 1817  | 1823 | 172  |
| 15° | 1733 | 1750  | 1758 | 1760  | 1768 | 489  |
| 25° | 1585 | 1607  | 1622 | 1632  | 1642 | 731  |
| 35° | 1389 | 1410  | 1439 | 1460  | 1470 | 869  |
| 45° | 1158 | 1182  | 1218 | 1247  | 1262 | 893  |
| 55° | 896  | 919   | 964  | 1002  | 1020 | 801  |
| 65° | 610  | 633   | 685  | 730   | 748  | 604  |
| 75° | 310  | 338   | 391  | 438   | 458  | 328  |
| 85° | 55   | 78    | 115  | 129   | 137  | 71   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1826.4 | 1826.4 | 1826.4 | 1826.4 | 1826.4 |
| 2.5°  | 1819.6 | 1828.7 | 1826.4 | 1818.4 | 1821.9 |
| 5°    | 1809.3 | 1820.7 | 1819.6 | 1817.3 | 1823.0 |
| 7.5°  | 1796.7 | 1809.3 | 1810.4 | 1810.4 | 1817.3 |
| 10°   | 1783.0 | 1795.6 | 1797.9 | 1794.4 | 1796.7 |
| 12.5° | 1760.1 | 1775.0 | 1779.6 | 1779.6 | 1783.0 |
| 15°   | 1732.7 | 1749.8 | 1757.8 | 1760.1 | 1768.1 |
| 17.5° | 1703.0 | 1721.3 | 1731.6 | 1737.3 | 1744.1 |
| 20°   | 1667.6 | 1687.0 | 1698.4 | 1705.3 | 1713.3 |
| 22.5° | 1627.6 | 1649.3 | 1661.8 | 1668.7 | 1677.8 |
| 25°   | 1585.3 | 1607.0 | 1621.8 | 1632.1 | 1642.4 |
| 27.5° | 1540.7 | 1561.3 | 1581.8 | 1594.4 | 1603.6 |
| 30°   | 1492.7 | 1514.4 | 1536.1 | 1552.1 | 1561.3 |
| 32.5° | 1441.3 | 1464.1 | 1489.3 | 1506.4 | 1516.7 |
| 35°   | 1388.7 | 1410.4 | 1439.0 | 1459.5 | 1469.8 |
| 37.5° | 1335.0 | 1357.8 | 1387.5 | 1409.3 | 1421.8 |
| 40°   | 1277.8 | 1301.8 | 1333.8 | 1357.8 | 1370.4 |
| 42.5° | 1218.4 | 1241.2 | 1276.7 | 1304.1 | 1319.0 |
| 45°   | 1157.8 | 1181.8 | 1218.4 | 1247.0 | 1261.8 |
| 47.5° | 1094.9 | 1117.8 | 1157.8 | 1190.9 | 1203.5 |
| 50°   | 1029.8 | 1051.5 | 1093.8 | 1129.2 | 1144.1 |
| 52.5° | 963.5  | 986.4  | 1028.7 | 1066.4 | 1082.4 |
| 55°   | 896.1  | 918.9  | 963.5  | 1002.4 | 1019.5 |
| 57.5° | 827.5  | 850.4  | 896.1  | 936.1  | 956.6  |
| 60°   | 756.6  | 779.5  | 827.5  | 868.6  | 889.2  |
| 62.5° | 683.5  | 707.5  | 756.6  | 798.9  | 820.6  |
| 65°   | 610.3  | 633.2  | 684.6  | 730.3  | 747.5  |
| 67.5° | 537.2  | 560.0  | 610.3  | 656.1  | 676.6  |
| 70°   | 461.7  | 488.0  | 537.2  | 585.2  | 603.5  |
| 72.5° | 382.9  | 412.6  | 461.7  | 512.0  | 530.3  |
| 75°   | 309.7  | 338.3  | 390.9  | 437.7  | 458.3  |
| 77.5° | 237.7  | 268.6  | 317.7  | 365.7  | 386.3  |
| 80°   | 169.2  | 198.9  | 249.2  | 294.9  | 316.6  |
| 82.5° | 107.4  | 133.7  | 184.0  | 225.2  | 241.2  |
| 85°   | 54.9   | 77.7   | 115.4  | 129.2  | 137.2  |
| 87.5° | 16.0   | 27.4   | 41.1   | 51.4   | 57.1   |
| 90°   | 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 | 15.1             | 16.7 | 15.4 | 17.0 | 17.4 | 15.8           | 17.5 | 16.2 | 17.8 | 18.1 |
|                 | 3H   | 16.8             | 18.3 | 17.2 | 18.7 | 19.0 | 17.9           | 19.4 | 18.3 | 19.7 | 20.1 |
|                 | 4H   | 17.5             | 18.9 | 17.9 | 19.2 | 19.6 | 18.8           | 20.2 | 19.2 | 20.5 | 20.9 |
|                 | 6H   | 17.9             | 19.2 | 18.3 | 19.6 | 19.9 | 19.5           | 20.8 | 19.9 | 21.2 | 21.6 |
|                 | 8H   | 18.0             | 19.2 | 18.4 | 19.6 | 20.0 | 19.8           | 21.1 | 20.2 | 21.4 | 21.8 |
|                 | 12H  | 18.0             | 19.2 | 18.5 | 19.6 | 20.0 | 20.0           | 21.2 | 20.4 | 21.6 | 22.0 |
| 4H              | 2H   | 15.8             | 17.3 | 16.2 | 17.6 | 18.0 | 16.4           | 17.8 | 16.8 | 18.2 | 18.6 |
|                 | 3H   | 17.8             | 19.0 | 18.2 | 19.4 | 19.8 | 18.7           | 19.9 | 19.1 | 20.3 | 20.7 |
|                 | 4H   | 18.6             | 19.7 | 19.0 | 20.1 | 20.5 | 19.7           | 20.8 | 20.2 | 21.2 | 21.7 |
|                 | 6H   | 19.1             | 20.1 | 19.6 | 20.5 | 20.9 | 20.7           | 21.6 | 21.1 | 22.0 | 22.5 |
|                 | 8H   | 19.2             | 20.1 | 19.7 | 20.6 | 21.0 | 21.0           | 21.9 | 21.5 | 22.3 | 22.8 |
|                 | 12H  | 19.3             | 20.1 | 19.8 | 20.6 | 21.1 | 21.3           | 22.1 | 21.8 | 22.5 | 23.0 |
| 8H              | 4H   | 19.0             | 19.9 | 19.5 | 20.4 | 20.8 | 20.0           | 20.9 | 20.5 | 21.4 | 21.8 |
|                 | 6H   | 19.7             | 20.4 | 20.2 | 20.9 | 21.4 | 21.1           | 21.8 | 21.6 | 22.3 | 22.8 |
|                 | 8H   | 19.9             | 20.6 | 20.4 | 21.1 | 21.5 | 21.6           | 22.2 | 22.1 | 22.7 | 23.2 |
|                 | 12H  | 20.0             | 20.6 | 20.5 | 21.1 | 21.7 | 21.9           | 22.5 | 22.4 | 23.0 | 23.6 |
| 12H             | 4H   | 19.1             | 19.9 | 19.6 | 20.4 | 20.8 | 20.1           | 20.9 | 20.5 | 21.3 | 21.8 |
|                 | 6H   | 19.8             | 20.5 | 20.3 | 20.9 | 21.5 | 21.2           | 21.8 | 21.7 | 22.3 | 22.8 |
|                 | 8H   | 20.1             | 20.7 | 20.6 | 21.2 | 21.7 | 21.7           | 22.3 | 22.2 | 22.8 | 23.3 |

(END OF REPORT)