

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: P1589970

Luminaire Tested: 24CZSP-SB-65VHE-L950-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1589970  
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-65VHE-L950-S  
Description: 2x4 CZSP LED Luminaire, 5000K CCT and 7000 lumens, 90CRI, Smooth Lens, SB housing  
Light Source: -  
Ballast/Driver: -

**Summary**

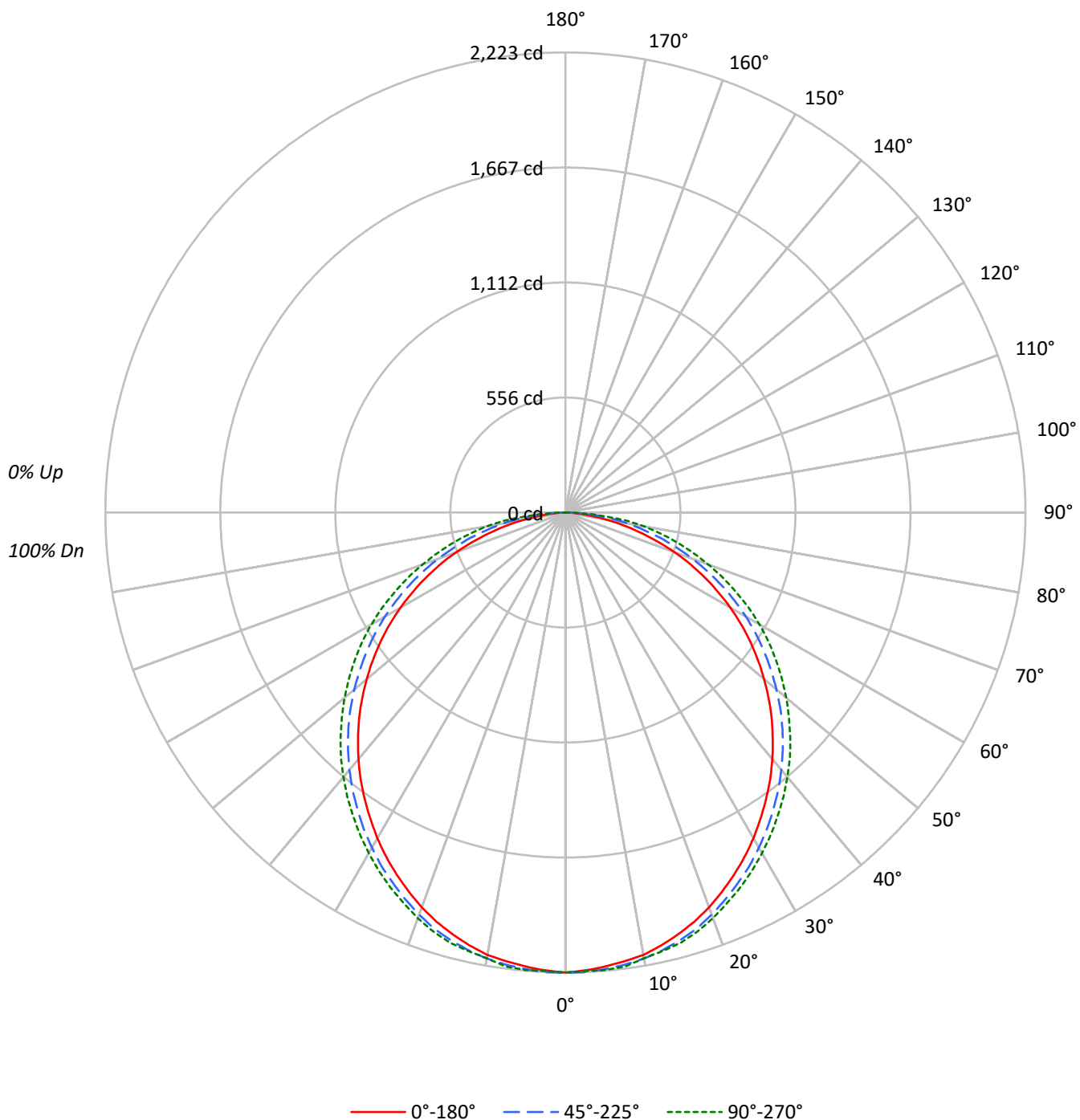
Lumens per Lamp: N/A  
Luminaire Lumens: 6467.0 lumens  
Efficiency: N/A  
Efficacy: 129.1 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 50.1  
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°  | 3405 | 3405 | 3405 |
| 5°  | 3386 | 3405 | 3412 |
| 10° | 3375 | 3404 | 3401 |
| 15° | 3344 | 3393 | 3413 |
| 20° | 3308 | 3370 | 3399 |
| 25° | 3261 | 3336 | 3378 |
| 30° | 3213 | 3307 | 3361 |
| 35° | 3160 | 3275 | 3345 |
| 40° | 3110 | 3246 | 3335 |
| 45° | 3053 | 3212 | 3327 |
| 50° | 2987 | 3172 | 3318 |
| 55° | 2913 | 3132 | 3314 |
| 60° | 2821 | 3085 | 3316 |
| 65° | 2692 | 3020 | 3297 |
| 70° | 2517 | 2928 | 3290 |
| 75° | 2231 | 2816 | 3302 |
| 80° | 1816 | 2675 | 3399 |
| 85° | 1174 | 2469 | 2933 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 3444 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 210.4  | 3.3       |
| 10°-20°   | 602.5  | 9.3       |
| 20°-30°   | 908.3  | 14.0      |
| 30°-40°   | 1093.0 | 16.9      |
| 40°-50°   | 1140.1 | 17.6      |
| 50°-60°   | 1045.0 | 16.2      |
| 60°-70°   | 820.6  | 12.7      |
| 70°-80°   | 499.4  | 7.7       |
| 80°-90°   | 147.8  | 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°    | 1721.2 | 26.6      |
| 0°-40°    | 2814.2 | 43.5      |
| 0°-60°    | 4999.2 | 77.3      |
| 0°-90°    | 6467.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6467.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2223 | 2223  | 2223 | 2223  | 2223 |      |
| 5°  | 2202 | 2216  | 2215 | 2212  | 2219 | 209  |
| 15° | 2109 | 2130  | 2140 | 2142  | 2152 | 595  |
| 25° | 1930 | 1956  | 1974 | 1987  | 1999 | 889  |
| 35° | 1690 | 1717  | 1752 | 1777  | 1789 | 1058 |
| 45° | 1409 | 1438  | 1483 | 1518  | 1536 | 1087 |
| 55° | 1091 | 1118  | 1173 | 1220  | 1241 | 975  |
| 65° | 743  | 771   | 833  | 889   | 910  | 735  |
| 75° | 377  | 412   | 476  | 533   | 558  | 400  |
| 85° | 67   | 95    | 140  | 157   | 167  | 87   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2223.1 | 2223.1 | 2223.1 | 2223.1 | 2223.1 |
| 2.5°  | 2214.8 | 2225.9 | 2223.1 | 2213.4 | 2217.6 |
| 5°    | 2202.3 | 2216.2 | 2214.8 | 2212.0 | 2219.0 |
| 7.5°  | 2187.0 | 2202.3 | 2203.7 | 2203.7 | 2212.0 |
| 10°   | 2170.3 | 2185.6 | 2188.4 | 2184.2 | 2187.0 |
| 12.5° | 2142.4 | 2160.5 | 2166.1 | 2166.1 | 2170.3 |
| 15°   | 2109.1 | 2129.9 | 2139.7 | 2142.4 | 2152.2 |
| 17.5° | 2072.9 | 2095.1 | 2107.7 | 2114.6 | 2123.0 |
| 20°   | 2029.8 | 2053.4 | 2067.3 | 2075.7 | 2085.4 |
| 22.5° | 1981.1 | 2007.5 | 2022.8 | 2031.1 | 2042.3 |
| 25°   | 1929.6 | 1956.0 | 1974.1 | 1986.6 | 1999.1 |
| 27.5° | 1875.3 | 1900.4 | 1925.4 | 1940.7 | 1951.8 |
| 30°   | 1816.9 | 1843.3 | 1869.8 | 1889.2 | 1900.4 |
| 32.5° | 1754.3 | 1782.1 | 1812.7 | 1833.6 | 1846.1 |
| 35°   | 1690.3 | 1716.7 | 1751.5 | 1776.6 | 1789.1 |
| 37.5° | 1624.9 | 1652.7 | 1688.9 | 1715.3 | 1730.6 |
| 40°   | 1555.4 | 1584.6 | 1623.5 | 1652.7 | 1668.0 |
| 42.5° | 1483.0 | 1510.8 | 1554.0 | 1587.4 | 1605.4 |
| 45°   | 1409.3 | 1438.5 | 1483.0 | 1517.8 | 1535.9 |
| 47.5° | 1332.8 | 1360.6 | 1409.3 | 1449.6 | 1464.9 |
| 50°   | 1253.5 | 1279.9 | 1331.4 | 1374.5 | 1392.6 |
| 52.5° | 1172.8 | 1200.6 | 1252.1 | 1298.0 | 1317.5 |
| 55°   | 1090.7 | 1118.5 | 1172.8 | 1220.1 | 1240.9 |
| 57.5° | 1007.2 | 1035.0 | 1090.7 | 1139.4 | 1164.4 |
| 60°   | 921.0  | 948.8  | 1007.2 | 1057.3 | 1082.4 |
| 62.5° | 831.9  | 861.2  | 921.0  | 972.4  | 998.9  |
| 65°   | 742.9  | 770.7  | 833.3  | 889.0  | 909.8  |
| 67.5° | 653.9  | 681.7  | 742.9  | 798.5  | 823.6  |
| 70°   | 562.0  | 594.0  | 653.9  | 712.3  | 734.6  |
| 72.5° | 466.1  | 502.2  | 562.0  | 623.3  | 645.5  |
| 75°   | 377.0  | 411.8  | 475.8  | 532.8  | 557.9  |
| 77.5° | 289.4  | 326.9  | 386.8  | 445.2  | 470.2  |
| 80°   | 205.9  | 242.1  | 303.3  | 358.9  | 385.4  |
| 82.5° | 130.8  | 162.8  | 224.0  | 274.1  | 293.5  |
| 85°   | 66.8   | 94.6   | 140.5  | 157.2  | 166.9  |
| 87.5° | 19.5   | 33.4   | 50.1   | 62.6   | 69.6   |
| 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 | 15.8             | 17.4 | 16.1 | 17.7 | 18.0 | 16.5           | 18.2 | 16.9 | 18.5 | 18.8 |
|                 | 3H   | 17.5             | 19.0 | 17.9 | 19.4 | 19.7 | 18.6           | 20.1 | 18.9 | 20.4 | 20.8 |
|                 | 4H   | 18.1             | 19.6 | 18.5 | 19.9 | 20.3 | 19.4           | 20.9 | 19.8 | 21.2 | 21.6 |
|                 | 6H   | 18.6             | 19.9 | 19.0 | 20.2 | 20.6 | 20.2           | 21.5 | 20.6 | 21.9 | 22.3 |
|                 | 8H   | 18.7             | 19.9 | 19.1 | 20.3 | 20.7 | 20.5           | 21.7 | 20.9 | 22.1 | 22.5 |
|                 | 12H  | 18.7             | 19.9 | 19.1 | 20.3 | 20.7 | 20.7           | 21.9 | 21.1 | 22.3 | 22.7 |
| 4H              | 2H   | 16.5             | 17.9 | 16.9 | 18.3 | 18.7 | 17.1           | 18.5 | 17.5 | 18.9 | 19.2 |
|                 | 3H   | 18.5             | 19.7 | 18.9 | 20.1 | 20.5 | 19.4           | 20.6 | 19.8 | 21.0 | 21.4 |
|                 | 4H   | 19.3             | 20.3 | 19.7 | 20.8 | 21.2 | 20.4           | 21.5 | 20.9 | 21.9 | 22.4 |
|                 | 6H   | 19.8             | 20.7 | 20.2 | 21.2 | 21.6 | 21.3           | 22.3 | 21.8 | 22.7 | 23.2 |
|                 | 8H   | 19.9             | 20.8 | 20.4 | 21.3 | 21.7 | 21.7           | 22.6 | 22.2 | 23.0 | 23.5 |
|                 | 12H  | 20.0             | 20.8 | 20.5 | 21.3 | 21.8 | 22.0           | 22.8 | 22.4 | 23.2 | 23.7 |
| 8H              | 4H   | 19.7             | 20.6 | 20.2 | 21.0 | 21.5 | 20.7           | 21.6 | 21.2 | 22.1 | 22.5 |
|                 | 6H   | 20.4             | 21.1 | 20.9 | 21.6 | 22.1 | 21.8           | 22.5 | 22.3 | 23.0 | 23.5 |
|                 | 8H   | 20.6             | 21.2 | 21.1 | 21.7 | 22.2 | 22.3           | 22.9 | 22.8 | 23.4 | 23.9 |
|                 | 12H  | 20.7             | 21.3 | 21.2 | 21.8 | 22.4 | 22.6           | 23.2 | 23.1 | 23.7 | 24.2 |
| 12H             | 4H   | 19.8             | 20.6 | 20.3 | 21.1 | 21.5 | 20.8           | 21.6 | 21.2 | 22.0 | 22.5 |
|                 | 6H   | 20.5             | 21.2 | 21.0 | 21.6 | 22.2 | 21.8           | 22.5 | 22.4 | 23.0 | 23.5 |
|                 | 8H   | 20.8             | 21.4 | 21.3 | 21.8 | 22.4 | 22.4           | 23.0 | 22.9 | 23.5 | 24.0 |

(END OF REPORT)