

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: P1589956

Luminaire Tested: 24CZSP-SB-65VHE-L840-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1589956  
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-L840-S  
Description: 2x4 CZSP LED Luminaire, 4000K CCT and 7000 lumens, 80CRI, Smooth Lens, SB housing  
Light Source: -  
Ballast/Driver: -

**Summary**

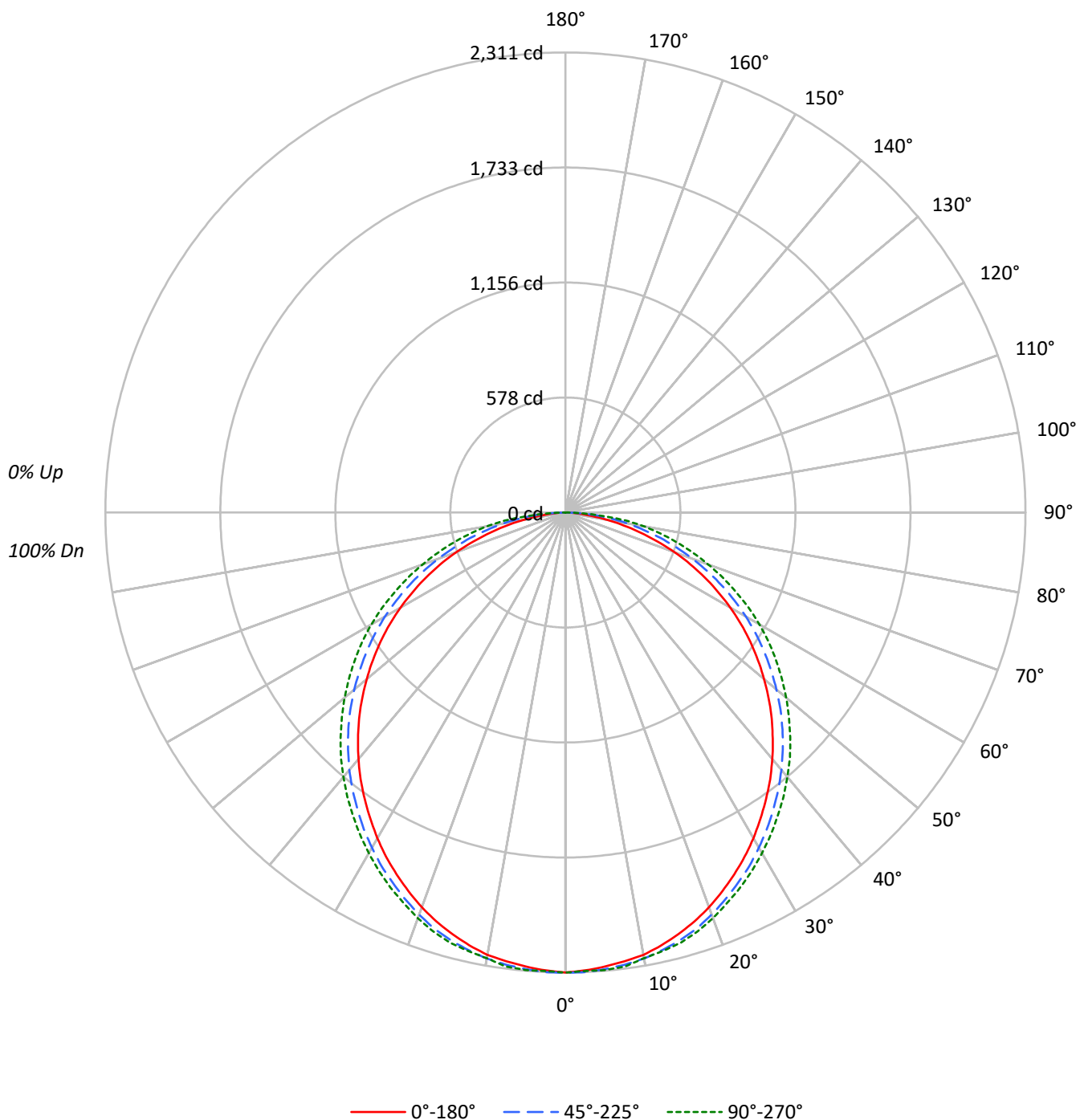
Lumens per Lamp: N/A  
Luminaire Lumens: 6723.0 lumens  
Efficiency: N/A  
Efficacy: 134.2 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

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°  | 3540 | 3540 | 3540 |
| 5°  | 3520 | 3540 | 3547 |
| 10° | 3509 | 3538 | 3536 |
| 15° | 3477 | 3527 | 3548 |
| 20° | 3439 | 3503 | 3534 |
| 25° | 3390 | 3468 | 3512 |
| 30° | 3340 | 3438 | 3494 |
| 35° | 3286 | 3405 | 3478 |
| 40° | 3233 | 3375 | 3467 |
| 45° | 3173 | 3339 | 3459 |
| 50° | 3105 | 3298 | 3450 |
| 55° | 3028 | 3256 | 3445 |
| 60° | 2933 | 3208 | 3447 |
| 65° | 2799 | 3140 | 3428 |
| 70° | 2617 | 3044 | 3420 |
| 75° | 2319 | 2927 | 3432 |
| 80° | 1888 | 2781 | 3533 |
| 85° | 1220 | 2567 | 3051 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 3581 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 218.7  | 3.3       |
| 10°-20°   | 626.3  | 9.3       |
| 20°-30°   | 944.3  | 14.0      |
| 30°-40°   | 1136.2 | 16.9      |
| 40°-50°   | 1185.2 | 17.6      |
| 50°-60°   | 1086.4 | 16.2      |
| 60°-70°   | 853.1  | 12.7      |
| 70°-80°   | 519.2  | 7.7       |
| 80°-90°   | 153.6  | 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°    | 1789.3 | 26.6      |
| 0°-40°    | 2925.6 | 43.5      |
| 0°-60°    | 5197.2 | 77.3      |
| 0°-90°    | 6723.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6723.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2311 | 2311  | 2311 | 2311  | 2311 |      |
| 5°  | 2289 | 2304  | 2302 | 2300  | 2307 | 217  |
| 15° | 2192 | 2214  | 2224 | 2227  | 2237 | 619  |
| 25° | 2006 | 2034  | 2052 | 2065  | 2078 | 924  |
| 35° | 1757 | 1785  | 1821 | 1847  | 1860 | 1100 |
| 45° | 1465 | 1495  | 1542 | 1578  | 1597 | 1130 |
| 55° | 1134 | 1163  | 1219 | 1268  | 1290 | 1013 |
| 65° | 772  | 801   | 866  | 924   | 946  | 764  |
| 75° | 392  | 428   | 495  | 554   | 580  | 415  |
| 85° | 69   | 98    | 146  | 163   | 174  | 90   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2311.1 | 2311.1 | 2311.1 | 2311.1 | 2311.1 |
| 2.5°  | 2302.5 | 2314.0 | 2311.1 | 2301.0 | 2305.3 |
| 5°    | 2289.4 | 2303.9 | 2302.5 | 2299.6 | 2306.8 |
| 7.5°  | 2273.5 | 2289.4 | 2290.9 | 2290.9 | 2299.6 |
| 10°   | 2256.2 | 2272.1 | 2275.0 | 2270.6 | 2273.5 |
| 12.5° | 2227.3 | 2246.1 | 2251.8 | 2251.8 | 2256.2 |
| 15°   | 2192.5 | 2214.2 | 2224.4 | 2227.3 | 2237.4 |
| 17.5° | 2154.9 | 2178.1 | 2191.1 | 2198.3 | 2207.0 |
| 20°   | 2110.1 | 2134.7 | 2149.2 | 2157.8 | 2168.0 |
| 22.5° | 2059.5 | 2087.0 | 2102.9 | 2111.5 | 2123.1 |
| 25°   | 2006.0 | 2033.5 | 2052.3 | 2065.3 | 2078.3 |
| 27.5° | 1949.6 | 1975.6 | 2001.6 | 2017.5 | 2029.1 |
| 30°   | 1888.8 | 1916.3 | 1943.8 | 1964.0 | 1975.6 |
| 32.5° | 1823.7 | 1852.7 | 1884.5 | 1906.2 | 1919.2 |
| 35°   | 1757.2 | 1784.7 | 1820.9 | 1846.9 | 1859.9 |
| 37.5° | 1689.2 | 1718.2 | 1755.8 | 1783.2 | 1799.2 |
| 40°   | 1616.9 | 1647.3 | 1687.8 | 1718.2 | 1734.1 |
| 42.5° | 1541.7 | 1570.6 | 1615.5 | 1650.2 | 1669.0 |
| 45°   | 1465.1 | 1495.4 | 1541.7 | 1577.9 | 1596.7 |
| 47.5° | 1385.5 | 1414.4 | 1465.1 | 1507.0 | 1522.9 |
| 50°   | 1303.1 | 1330.6 | 1384.1 | 1428.9 | 1447.7 |
| 52.5° | 1219.2 | 1248.1 | 1301.6 | 1349.4 | 1369.6 |
| 55°   | 1133.9 | 1162.8 | 1219.2 | 1268.4 | 1290.1 |
| 57.5° | 1047.1 | 1076.0 | 1133.9 | 1184.5 | 1210.5 |
| 60°   | 957.4  | 986.4  | 1047.1 | 1099.2 | 1125.2 |
| 62.5° | 864.9  | 895.2  | 957.4  | 1010.9 | 1038.4 |
| 65°   | 772.3  | 801.2  | 866.3  | 924.2  | 945.9  |
| 67.5° | 679.7  | 708.7  | 772.3  | 830.2  | 856.2  |
| 70°   | 584.3  | 617.6  | 679.7  | 740.5  | 763.6  |
| 72.5° | 484.5  | 522.1  | 584.3  | 647.9  | 671.1  |
| 75°   | 391.9  | 428.1  | 494.6  | 553.9  | 580.0  |
| 77.5° | 300.8  | 339.9  | 402.1  | 462.8  | 488.8  |
| 80°   | 214.0  | 251.7  | 315.3  | 373.1  | 400.6  |
| 82.5° | 135.9  | 169.2  | 232.8  | 284.9  | 305.2  |
| 85°   | 69.4   | 98.3   | 146.1  | 163.4  | 173.6  |
| 87.5° | 20.2   | 34.7   | 52.1   | 65.1   | 72.3   |
| 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 | 15.9             | 17.6 | 16.3 | 17.9 | 18.2 | 16.6           | 18.3 | 17.0 | 18.6 | 18.9 |
|                 | 3H   | 17.7             | 19.2 | 18.0 | 19.5 | 19.9 | 18.7           | 20.2 | 19.1 | 20.5 | 20.9 |
|                 | 4H   | 18.3             | 19.7 | 18.7 | 20.0 | 20.4 | 19.6           | 21.0 | 20.0 | 21.3 | 21.7 |
|                 | 6H   | 18.7             | 20.0 | 19.1 | 20.4 | 20.8 | 20.3           | 21.6 | 20.7 | 22.0 | 22.4 |
|                 | 8H   | 18.8             | 20.1 | 19.2 | 20.4 | 20.8 | 20.6           | 21.9 | 21.0 | 22.3 | 22.7 |
|                 | 12H  | 18.8             | 20.0 | 19.3 | 20.4 | 20.9 | 20.8           | 22.0 | 21.2 | 22.4 | 22.8 |
| 4H              | 2H   | 16.7             | 18.1 | 17.1 | 18.4 | 18.8 | 17.2           | 18.7 | 17.6 | 19.0 | 19.4 |
|                 | 3H   | 18.7             | 19.8 | 19.1 | 20.2 | 20.6 | 19.5           | 20.7 | 20.0 | 21.1 | 21.5 |
|                 | 4H   | 19.4             | 20.5 | 19.8 | 20.9 | 21.3 | 20.6           | 21.6 | 21.0 | 22.1 | 22.5 |
|                 | 6H   | 19.9             | 20.9 | 20.4 | 21.3 | 21.8 | 21.5           | 22.4 | 21.9 | 22.9 | 23.3 |
|                 | 8H   | 20.1             | 21.0 | 20.5 | 21.4 | 21.9 | 21.8           | 22.7 | 22.3 | 23.2 | 23.6 |
|                 | 12H  | 20.1             | 20.9 | 20.6 | 21.4 | 21.9 | 22.1           | 22.9 | 22.6 | 23.4 | 23.8 |
| 8H              | 4H   | 19.8             | 20.7 | 20.3 | 21.2 | 21.6 | 20.9           | 21.7 | 21.3 | 22.2 | 22.7 |
|                 | 6H   | 20.5             | 21.2 | 21.0 | 21.7 | 22.2 | 21.9           | 22.7 | 22.4 | 23.1 | 23.6 |
|                 | 8H   | 20.7             | 21.4 | 21.2 | 21.9 | 22.4 | 22.4           | 23.1 | 22.9 | 23.6 | 24.0 |
|                 | 12H  | 20.8             | 21.4 | 21.4 | 21.9 | 22.5 | 22.7           | 23.3 | 23.2 | 23.8 | 24.4 |
| 12H             | 4H   | 19.9             | 20.7 | 20.4 | 21.2 | 21.7 | 20.9           | 21.7 | 21.4 | 22.2 | 22.6 |
|                 | 6H   | 20.6             | 21.3 | 21.2 | 21.8 | 22.3 | 22.0           | 22.7 | 22.5 | 23.1 | 23.6 |
|                 | 8H   | 20.9             | 21.5 | 21.4 | 22.0 | 22.5 | 22.5           | 23.1 | 23.0 | 23.6 | 24.1 |

(END OF REPORT)