

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: P1588500

Luminaire Tested: 24CZSP-70VHE-L850-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1588500  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2608-884-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/3/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24CZSP-70VHE-L850-S  
Description: 2x4 CZSP LED Luminaire, 5000K CCT and 7500 lumens, 80CRI, Smooth Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

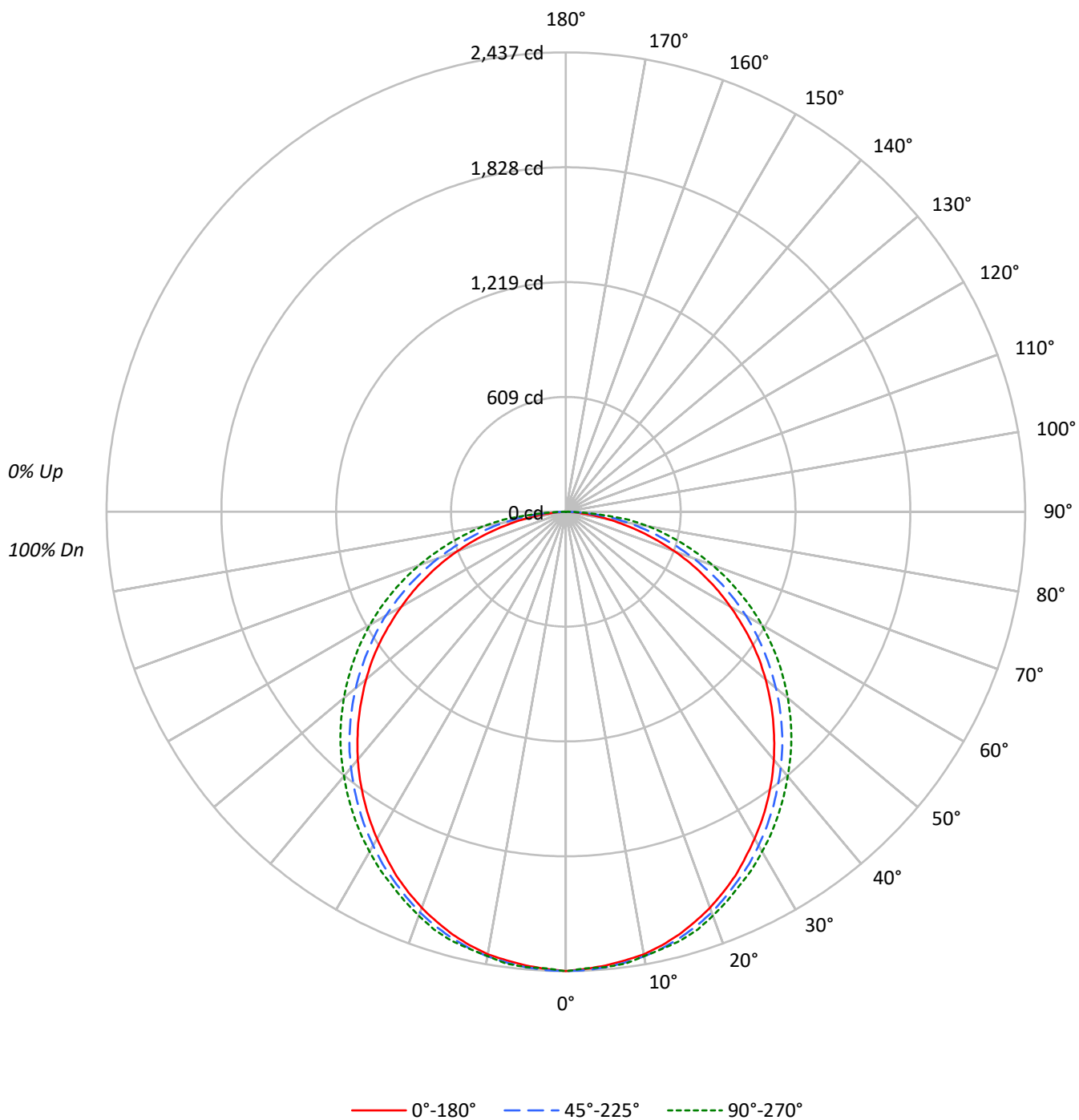
Lumens per Lamp: N/A  
Luminaire Lumens: 7114.0 lumens  
Efficiency: N/A  
Efficacy: 133.5 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 53.3  
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: 24 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 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| 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  | 93  | 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  | 65  | 61  | 69  | 64  | 60  | 57  |    |    |
| 4   | 82  | 69  | 60  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 52  | 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  | 44  | 39  | 50  | 44  | 39  | 37  |    |    |
| 7   | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  | 48  | 40  | 35  | 47  | 40  | 35  | 45  | 39  | 34  | 32  |    |    |
| 8   | 60  | 46  | 37  | 32  | 58  | 45  | 37  | 31  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 29  |    |    |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |    |    |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 26  | 37  | 30  | 25  | 37  | 30  | 25  | 36  | 30  | 25  | 23  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3732 | 3732 | 3732 |
| 5°  | 3715 | 3730 | 3727 |
| 10° | 3707 | 3724 | 3722 |
| 15° | 3681 | 3710 | 3733 |
| 20° | 3644 | 3687 | 3717 |
| 25° | 3598 | 3648 | 3693 |
| 30° | 3542 | 3617 | 3683 |
| 35° | 3491 | 3581 | 3672 |
| 40° | 3433 | 3546 | 3661 |
| 45° | 3368 | 3510 | 3665 |
| 50° | 3296 | 3467 | 3664 |
| 55° | 3210 | 3418 | 3668 |
| 60° | 3089 | 3381 | 3677 |
| 65° | 2948 | 3315 | 3689 |
| 70° | 2747 | 3222 | 3705 |
| 75° | 2448 | 3094 | 3741 |
| 80° | 2024 | 2947 | 3924 |
| 85° | 1316 | 2661 | 3429 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 4048 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 230.4  | 3.2       |
| 10°-20°   | 659.9  | 9.3       |
| 20°-30°   | 995.2  | 14.0      |
| 30°-40°   | 1198.7 | 16.8      |
| 40°-50°   | 1251.9 | 17.6      |
| 50°-60°   | 1149.7 | 16.2      |
| 60°-70°   | 905.5  | 12.7      |
| 70°-80°   | 555.5  | 7.8       |
| 80°-90°   | 167.2  | 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°    | 1885.5 | 26.5      |
| 0°-40°    | 3084.2 | 43.4      |
| 0°-60°    | 5485.8 | 77.1      |
| 0°-90°    | 7114.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7114.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2437 | 2437  | 2437 | 2437  | 2437 |      |
| 5°  | 2416 | 2420  | 2426 | 2434  | 2424 | 230  |
| 15° | 2321 | 2326  | 2340 | 2354  | 2354 | 655  |
| 25° | 2129 | 2134  | 2159 | 2185  | 2185 | 980  |
| 35° | 1867 | 1876  | 1915 | 1954  | 1964 | 1168 |
| 45° | 1555 | 1572  | 1620 | 1676  | 1692 | 1199 |
| 55° | 1202 | 1224  | 1280 | 1352  | 1374 | 1073 |
| 65° | 813  | 841   | 915  | 991   | 1018 | 805  |
| 75° | 414  | 446   | 523  | 606   | 632  | 439  |
| 85° | 75   | 103   | 151  | 192   | 195  | 98   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2436.7 | 2436.7 | 2436.7 | 2436.7 | 2436.7 |
| 2.5°  | 2427.4 | 2432.1 | 2433.6 | 2435.2 | 2424.2 |
| 5°    | 2416.4 | 2419.6 | 2425.8 | 2433.6 | 2424.2 |
| 7.5°  | 2400.8 | 2404.0 | 2411.8 | 2422.7 | 2418.0 |
| 10°   | 2383.7 | 2385.2 | 2394.6 | 2402.4 | 2393.0 |
| 12.5° | 2355.6 | 2360.2 | 2371.2 | 2377.4 | 2374.3 |
| 15°   | 2321.2 | 2325.9 | 2340.0 | 2354.0 | 2354.0 |
| 17.5° | 2280.6 | 2286.9 | 2304.0 | 2322.8 | 2324.3 |
| 20°   | 2235.4 | 2240.0 | 2261.9 | 2280.6 | 2280.6 |
| 22.5° | 2183.9 | 2190.1 | 2211.9 | 2232.2 | 2235.4 |
| 25°   | 2129.2 | 2133.9 | 2158.9 | 2185.4 | 2185.4 |
| 27.5° | 2065.2 | 2074.6 | 2105.8 | 2132.3 | 2138.6 |
| 30°   | 2002.8 | 2010.6 | 2044.9 | 2077.7 | 2082.4 |
| 32.5° | 1937.2 | 1946.6 | 1982.5 | 2018.4 | 2026.2 |
| 35°   | 1867.0 | 1876.3 | 1915.4 | 1954.4 | 1963.7 |
| 37.5° | 1793.6 | 1804.5 | 1845.1 | 1890.4 | 1899.7 |
| 40°   | 1717.1 | 1729.6 | 1773.3 | 1821.7 | 1831.1 |
| 42.5° | 1635.9 | 1653.1 | 1699.9 | 1749.9 | 1763.9 |
| 45°   | 1554.8 | 1571.9 | 1620.3 | 1676.5 | 1692.1 |
| 47.5° | 1468.9 | 1489.2 | 1539.2 | 1598.5 | 1615.6 |
| 50°   | 1383.1 | 1403.3 | 1454.9 | 1518.9 | 1537.6 |
| 52.5° | 1295.6 | 1315.9 | 1369.0 | 1436.1 | 1456.4 |
| 55°   | 1202.0 | 1223.8 | 1280.0 | 1351.8 | 1373.7 |
| 57.5° | 1105.2 | 1133.3 | 1192.6 | 1266.0 | 1287.8 |
| 60°   | 1008.4 | 1036.5 | 1103.6 | 1175.4 | 1200.4 |
| 62.5° | 913.2  | 939.7  | 1008.4 | 1084.9 | 1111.4 |
| 65°   | 813.3  | 841.4  | 914.8  | 991.2  | 1017.8 |
| 67.5° | 714.9  | 743.0  | 816.4  | 896.0  | 924.1  |
| 70°   | 613.5  | 644.7  | 719.6  | 799.2  | 827.3  |
| 72.5° | 512.0  | 544.8  | 621.3  | 702.5  | 729.0  |
| 75°   | 413.7  | 446.4  | 522.9  | 605.7  | 632.2  |
| 77.5° | 316.9  | 352.8  | 427.7  | 512.0  | 537.0  |
| 80°   | 229.5  | 263.8  | 334.1  | 416.8  | 444.9  |
| 82.5° | 146.7  | 176.4  | 246.6  | 324.7  | 345.0  |
| 85°   | 74.9   | 103.0  | 151.4  | 192.0  | 195.1  |
| 87.5° | 23.4   | 32.8   | 50.0   | 74.9   | 76.5   |
| 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 | 16.05            | 17.72 | 16.42 | 18.03 | 18.34 | 16.88          | 18.55 | 17.25 | 18.86 | 19.17 |
|                 | 3H   | 17.81            | 19.32 | 18.19 | 19.64 | 20.00 | 19.00          | 20.51 | 19.38 | 20.83 | 21.19 |
|                 | 4H   | 18.43            | 19.85 | 18.83 | 20.20 | 20.57 | 19.89          | 21.31 | 20.29 | 21.66 | 22.03 |
|                 | 6H   | 18.84            | 20.16 | 19.25 | 20.52 | 20.91 | 20.67          | 21.99 | 21.08 | 22.35 | 22.75 |
|                 | 8H   | 18.95            | 20.21 | 19.37 | 20.60 | 21.00 | 20.99          | 22.25 | 21.41 | 22.64 | 23.04 |
|                 | 12H  | 19.00            | 20.21 | 19.43 | 20.59 | 21.02 | 21.20          | 22.41 | 21.63 | 22.79 | 23.22 |
| 4H              | 2H   | 16.83            | 18.25 | 17.22 | 18.60 | 18.97 | 17.47          | 18.89 | 17.87 | 19.24 | 19.62 |
|                 | 3H   | 18.80            | 20.00 | 19.21 | 20.40 | 20.80 | 19.83          | 21.03 | 20.24 | 21.42 | 21.82 |
|                 | 4H   | 19.54            | 20.63 | 19.97 | 21.04 | 21.47 | 20.88          | 21.97 | 21.31 | 22.38 | 22.81 |
|                 | 6H   | 20.07            | 21.02 | 20.52 | 21.46 | 21.91 | 21.83          | 22.78 | 22.28 | 23.22 | 23.68 |
|                 | 8H   | 20.21            | 21.11 | 20.67 | 21.55 | 22.01 | 22.23          | 23.12 | 22.69 | 23.56 | 24.03 |
|                 | 12H  | 20.30            | 21.10 | 20.78 | 21.58 | 22.04 | 22.51          | 23.31 | 22.98 | 23.78 | 24.25 |
| 8H              | 4H   | 20.00            | 20.89 | 20.46 | 21.33 | 21.80 | 21.17          | 22.06 | 21.63 | 22.50 | 22.97 |
|                 | 6H   | 20.66            | 21.40 | 21.15 | 21.89 | 22.36 | 22.28          | 23.02 | 22.77 | 23.51 | 23.98 |
|                 | 8H   | 20.87            | 21.54 | 21.38 | 22.04 | 22.53 | 22.79          | 23.46 | 23.30 | 23.96 | 24.45 |
|                 | 12H  | 21.01            | 21.60 | 21.51 | 22.09 | 22.65 | 23.18          | 23.77 | 23.68 | 24.26 | 24.82 |
| 12H             | 4H   | 20.09            | 20.89 | 20.57 | 21.37 | 21.83 | 21.19          | 22.00 | 21.67 | 22.47 | 22.94 |
|                 | 6H   | 20.79            | 21.46 | 21.30 | 21.97 | 22.45 | 22.33          | 23.00 | 22.83 | 23.50 | 23.99 |
|                 | 8H   | 21.07            | 21.66 | 21.58 | 22.15 | 22.71 | 22.91          | 23.50 | 23.41 | 23.99 | 24.55 |