

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: P1588346

Luminaire Tested: 24CZSP-52-L940-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1588346  
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-52-L940-S  
Description: 2x4 CZSP LED Luminaire, 4000K CCT and 4500 lumens, 90CRI, Smooth Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

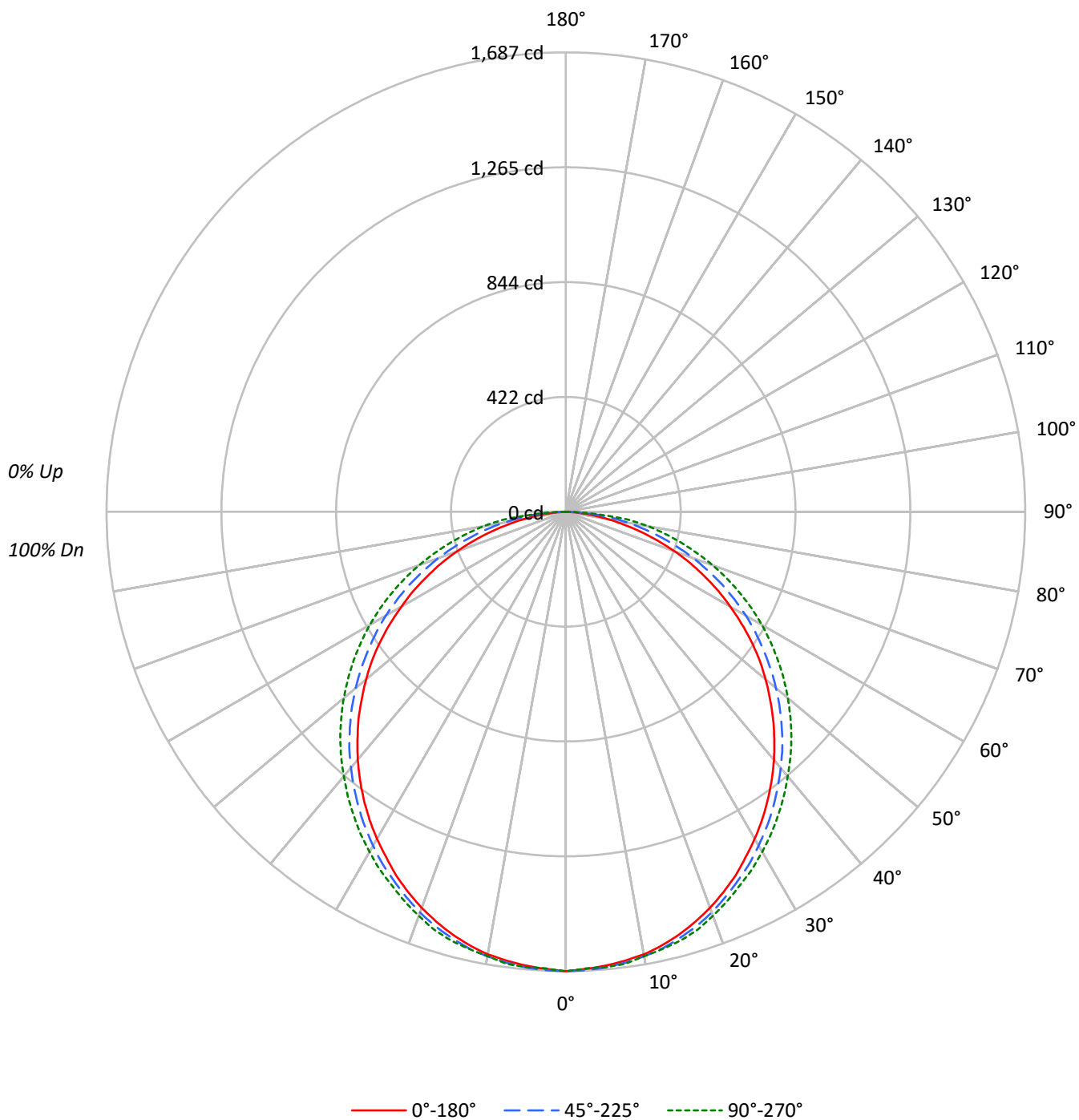
Lumens per Lamp: N/A  
Luminaire Lumens: 4926.0 lumens  
Efficiency: N/A  
Efficacy: 134.2 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 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: 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  |     |     | 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  | 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°  | 2584 | 2584 | 2584 |
| 5°  | 2573 | 2582 | 2581 |
| 10° | 2567 | 2579 | 2577 |
| 15° | 2549 | 2569 | 2585 |
| 20° | 2523 | 2553 | 2574 |
| 25° | 2492 | 2526 | 2557 |
| 30° | 2453 | 2504 | 2550 |
| 35° | 2417 | 2480 | 2543 |
| 40° | 2377 | 2455 | 2535 |
| 45° | 2332 | 2430 | 2538 |
| 50° | 2282 | 2400 | 2537 |
| 55° | 2222 | 2367 | 2540 |
| 60° | 2139 | 2341 | 2546 |
| 65° | 2041 | 2296 | 2554 |
| 70° | 1902 | 2231 | 2566 |
| 75° | 1695 | 2143 | 2591 |
| 80° | 1402 | 2040 | 2718 |
| 85° | 912  | 1842 | 2374 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2803 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 159.6  | 3.2       |
| 10°-20°   | 456.9  | 9.3       |
| 20°-30°   | 689.1  | 14.0      |
| 30°-40°   | 830.0  | 16.8      |
| 40°-50°   | 866.8  | 17.6      |
| 50°-60°   | 796.1  | 16.2      |
| 60°-70°   | 627.0  | 12.7      |
| 70°-80°   | 384.7  | 7.8       |
| 80°-90°   | 115.8  | 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°    | 1305.6 | 26.5      |
| 0°-40°    | 2135.6 | 43.4      |
| 0°-60°    | 3798.5 | 77.1      |
| 0°-90°    | 4926.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4926.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1687 | 1687  | 1687 | 1687  | 1687 |      |
| 5°  | 1673 | 1675  | 1680 | 1685  | 1679 | 159  |
| 15° | 1607 | 1610  | 1620 | 1630  | 1630 | 453  |
| 25° | 1474 | 1478  | 1495 | 1513  | 1513 | 679  |
| 35° | 1293 | 1299  | 1326 | 1353  | 1360 | 809  |
| 45° | 1077 | 1088  | 1122 | 1161  | 1172 | 830  |
| 55° | 832  | 847   | 886  | 936   | 951  | 743  |
| 65° | 563  | 583   | 633  | 686   | 705  | 557  |
| 75° | 286  | 309   | 362  | 419   | 438  | 304  |
| 85° | 52   | 71    | 105  | 133   | 135  | 68   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1687.3 | 1687.3 | 1687.3 | 1687.3 | 1687.3 |
| 2.5°  | 1680.8 | 1684.0 | 1685.1 | 1686.2 | 1678.6 |
| 5°    | 1673.2 | 1675.4 | 1679.7 | 1685.1 | 1678.6 |
| 7.5°  | 1662.4 | 1664.6 | 1670.0 | 1677.6 | 1674.3 |
| 10°   | 1650.5 | 1651.6 | 1658.1 | 1663.5 | 1657.0 |
| 12.5° | 1631.1 | 1634.3 | 1641.9 | 1646.2 | 1644.1 |
| 15°   | 1607.3 | 1610.5 | 1620.3 | 1630.0 | 1630.0 |
| 17.5° | 1579.2 | 1583.5 | 1595.4 | 1608.4 | 1609.5 |
| 20°   | 1547.9 | 1551.1 | 1566.2 | 1579.2 | 1579.2 |
| 22.5° | 1512.2 | 1516.5 | 1531.6 | 1545.7 | 1547.9 |
| 25°   | 1474.3 | 1477.6 | 1494.9 | 1513.3 | 1513.3 |
| 27.5° | 1430.0 | 1436.5 | 1458.1 | 1476.5 | 1480.8 |
| 30°   | 1386.8 | 1392.2 | 1416.0 | 1438.7 | 1441.9 |
| 32.5° | 1341.4 | 1347.9 | 1372.7 | 1397.6 | 1403.0 |
| 35°   | 1292.8 | 1299.2 | 1326.3 | 1353.3 | 1359.8 |
| 37.5° | 1242.0 | 1249.5 | 1277.6 | 1309.0 | 1315.5 |
| 40°   | 1189.0 | 1197.6 | 1227.9 | 1261.4 | 1267.9 |
| 42.5° | 1132.8 | 1144.7 | 1177.1 | 1211.7 | 1221.4 |
| 45°   | 1076.6 | 1088.5 | 1122.0 | 1160.9 | 1171.7 |
| 47.5° | 1017.1 | 1031.2 | 1065.8 | 1106.8 | 1118.7 |
| 50°   | 957.7  | 971.7  | 1007.4 | 1051.7 | 1064.7 |
| 52.5° | 897.1  | 911.2  | 948.0  | 994.4  | 1008.5 |
| 55°   | 832.3  | 847.4  | 886.3  | 936.1  | 951.2  |
| 57.5° | 765.3  | 784.7  | 825.8  | 876.6  | 891.7  |
| 60°   | 698.3  | 717.7  | 764.2  | 813.9  | 831.2  |
| 62.5° | 632.3  | 650.7  | 698.3  | 751.2  | 769.6  |
| 65°   | 563.1  | 582.6  | 633.4  | 686.4  | 704.7  |
| 67.5° | 495.1  | 514.5  | 565.3  | 620.4  | 639.9  |
| 70°   | 424.8  | 446.4  | 498.3  | 553.4  | 572.9  |
| 72.5° | 354.5  | 377.2  | 430.2  | 486.4  | 504.8  |
| 75°   | 286.4  | 309.1  | 362.1  | 419.4  | 437.8  |
| 77.5° | 219.4  | 244.3  | 296.2  | 354.5  | 371.8  |
| 80°   | 158.9  | 182.7  | 231.3  | 288.6  | 308.1  |
| 82.5° | 101.6  | 122.1  | 170.8  | 224.8  | 238.9  |
| 85°   | 51.9   | 71.3   | 104.8  | 133.0  | 135.1  |
| 87.5° | 16.2   | 22.7   | 34.6   | 51.9   | 53.0   |
| 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 | 14.78            | 16.44 | 15.14 | 16.75 | 17.07 | 15.61          | 17.27 | 15.97 | 17.58 | 17.90 |
|                 | 3H   | 16.53            | 18.04 | 16.91 | 18.37 | 18.73 | 17.72          | 19.23 | 18.10 | 19.56 | 19.92 |
|                 | 4H   | 17.15            | 18.57 | 17.55 | 18.92 | 19.30 | 18.61          | 20.03 | 19.01 | 20.38 | 20.76 |
|                 | 6H   | 17.56            | 18.88 | 17.97 | 19.25 | 19.64 | 19.39          | 20.71 | 19.80 | 21.08 | 21.47 |
|                 | 8H   | 17.67            | 18.93 | 18.09 | 19.32 | 19.72 | 19.71          | 20.98 | 20.14 | 21.36 | 21.76 |
|                 | 12H  | 17.72            | 18.93 | 18.15 | 19.31 | 19.74 | 19.92          | 21.14 | 20.35 | 21.52 | 21.95 |
| 4H              | 2H   | 15.55            | 16.97 | 15.95 | 17.32 | 17.69 | 16.19          | 17.62 | 16.59 | 17.96 | 18.34 |
|                 | 3H   | 17.53            | 18.72 | 17.93 | 19.12 | 19.52 | 18.55          | 19.75 | 18.96 | 20.14 | 20.54 |
|                 | 4H   | 18.26            | 19.35 | 18.69 | 19.76 | 20.20 | 19.60          | 20.69 | 20.03 | 21.10 | 21.54 |
|                 | 6H   | 18.79            | 19.74 | 19.24 | 20.18 | 20.64 | 20.55          | 21.51 | 21.01 | 21.95 | 22.40 |
|                 | 8H   | 18.94            | 19.83 | 19.40 | 20.27 | 20.73 | 20.95          | 21.84 | 21.41 | 22.29 | 22.75 |
|                 | 12H  | 19.02            | 19.82 | 19.50 | 20.30 | 20.77 | 21.23          | 22.03 | 21.71 | 22.51 | 22.97 |
| 8H              | 4H   | 18.72            | 19.61 | 19.18 | 20.05 | 20.52 | 19.89          | 20.78 | 20.35 | 21.22 | 21.69 |
|                 | 6H   | 19.38            | 20.13 | 19.87 | 20.61 | 21.09 | 21.00          | 21.75 | 21.49 | 22.23 | 22.71 |
|                 | 8H   | 19.59            | 20.26 | 20.10 | 20.77 | 21.25 | 21.51          | 22.18 | 22.02 | 22.69 | 23.17 |
|                 | 12H  | 19.73            | 20.32 | 20.24 | 20.81 | 21.37 | 21.90          | 22.49 | 22.41 | 22.98 | 23.54 |
| 12H             | 4H   | 18.81            | 19.61 | 19.29 | 20.09 | 20.56 | 19.92          | 20.72 | 20.39 | 21.19 | 21.66 |
|                 | 6H   | 19.51            | 20.18 | 20.02 | 20.69 | 21.17 | 21.05          | 21.72 | 21.56 | 22.22 | 22.71 |
|                 | 8H   | 19.79            | 20.38 | 20.30 | 20.87 | 21.43 | 21.63          | 22.22 | 22.13 | 22.71 | 23.27 |