

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: P1588251

Luminaire Tested: 24CZSP-37HE-L950

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1588251  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2603-711-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/3/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24CZSP-37HE-L950  
Description: 2x4 CZSP LED Luminaire, 5000K CCT and 3500 lumens, 90CRI, Ribbed Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

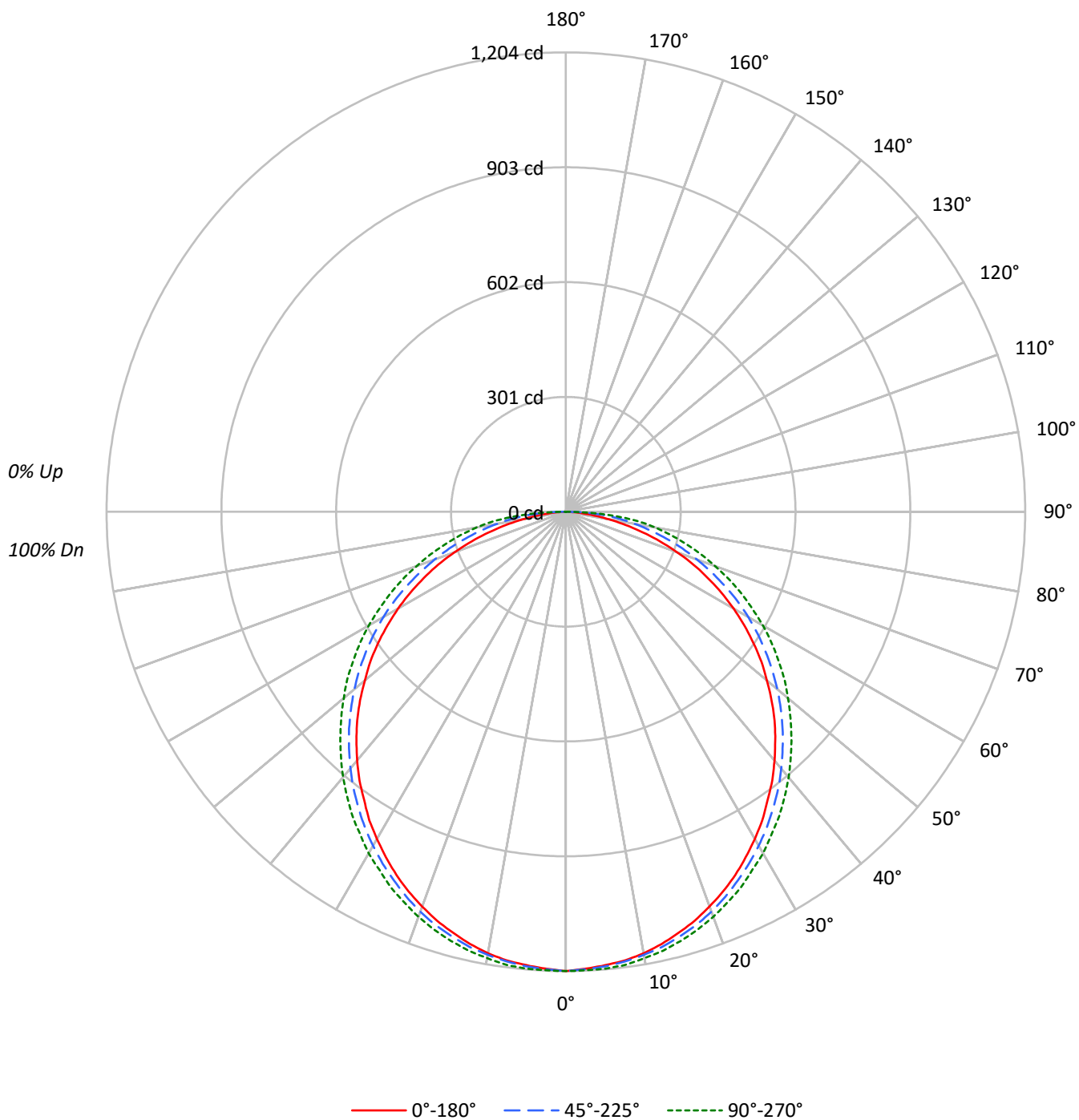
Lumens per Lamp: N/A  
Luminaire Lumens: 3571.0 lumens  
Efficiency: N/A  
Efficacy: 144.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 24.7  
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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 108 | 103 | 98  | 94  | 105 | 101 | 97  | 93  | 96  | 93  | 90  |  | 92  | 90  | 87  |  | 89  |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 81  | 75  | 84  | 78  | 73  |  | 81  | 76  | 72  |  | 77  |
| 3   | 89  | 78  | 70  | 63  | 87  | 77  | 69  | 62  | 74  | 67  | 61  |  | 71  | 65  | 60  |  | 68  |
| 4   | 81  | 69  | 60  | 53  | 79  | 68  | 59  | 53  | 65  | 58  | 52  |  | 63  | 56  | 51  |  | 61  |
| 5   | 75  | 62  | 52  | 46  | 73  | 60  | 52  | 45  | 58  | 51  | 45  |  | 56  | 50  | 44  |  | 54  |
| 6   | 69  | 55  | 46  | 40  | 67  | 54  | 46  | 39  | 53  | 45  | 39  |  | 51  | 44  | 39  |  | 49  |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 48  | 40  | 35  |  | 46  | 39  | 34  |  | 45  |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  |  | 42  | 36  | 31  |  | 41  |
| 9   | 56  | 42  | 34  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 28  |  | 39  | 32  | 28  |  | 38  |
| 10  | 52  | 39  | 31  | 25  | 51  | 38  | 30  | 25  | 37  | 30  | 25  |  | 36  | 30  | 25  |  | 35  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1844 | 1844 | 1844 |
| 5°  | 1834 | 1839 | 1848 |
| 10° | 1828 | 1834 | 1848 |
| 15° | 1812 | 1827 | 1846 |
| 20° | 1795 | 1819 | 1841 |
| 25° | 1775 | 1802 | 1836 |
| 30° | 1751 | 1788 | 1828 |
| 35° | 1724 | 1772 | 1822 |
| 40° | 1701 | 1757 | 1816 |
| 45° | 1676 | 1740 | 1811 |
| 50° | 1639 | 1724 | 1811 |
| 55° | 1605 | 1708 | 1816 |
| 60° | 1556 | 1692 | 1829 |
| 65° | 1490 | 1666 | 1841 |
| 70° | 1394 | 1638 | 1863 |
| 75° | 1240 | 1614 | 1924 |
| 80° | 1020 | 1621 | 2092 |
| 85° | 694  | 1807 | 2309 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 85°

Luminance: 2309 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 113.9  | 3.2       |
| 10°-20°   | 326.2  | 9.1       |
| 20°-30°   | 493.3  | 13.8      |
| 30°-40°   | 595.2  | 16.7      |
| 40°-50°   | 622.4  | 17.4      |
| 50°-60°   | 574.2  | 16.1      |
| 60°-70°   | 456.6  | 12.8      |
| 70°-80°   | 288.2  | 8.1       |
| 80°-90°   | 101.0  | 2.8       |
| 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°    | 933.4  | 26.1      |
| 0°-40°    | 1528.6 | 42.8      |
| 0°-60°    | 2725.2 | 76.3      |
| 0°-90°    | 3571.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3571.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1204 | 1204  | 1204 | 1204  | 1204 |      |
| 5°  | 1193 | 1202  | 1196 | 1199  | 1202 | 113  |
| 15° | 1142 | 1155  | 1152 | 1161  | 1164 | 322  |
| 25° | 1051 | 1066  | 1066 | 1080  | 1086 | 484  |
| 35° | 922  | 942   | 948  | 967   | 974  | 578  |
| 45° | 774  | 791   | 804  | 827   | 836  | 596  |
| 55° | 601  | 619   | 640  | 670   | 680  | 537  |
| 65° | 411  | 430   | 460  | 498   | 508  | 406  |
| 75° | 210  | 233   | 273  | 313   | 325  | 222  |
| 85° | 40   | 65    | 103  | 128   | 131  | 50   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1203.8 | 1203.8 | 1203.8 | 1203.8 | 1203.8 |
| 2.5°  | 1198.9 | 1206.8 | 1199.8 | 1203.8 | 1202.8 |
| 5°    | 1192.9 | 1201.8 | 1195.9 | 1198.9 | 1201.8 |
| 7.5°  | 1186.0 | 1195.9 | 1189.0 | 1193.9 | 1197.9 |
| 10°   | 1175.1 | 1185.0 | 1179.1 | 1185.0 | 1188.0 |
| 12.5° | 1160.3 | 1172.2 | 1168.2 | 1175.1 | 1178.1 |
| 15°   | 1142.5 | 1155.4 | 1152.4 | 1161.3 | 1164.3 |
| 17.5° | 1123.7 | 1137.6 | 1135.6 | 1145.5 | 1148.4 |
| 20°   | 1101.0 | 1116.8 | 1115.8 | 1125.7 | 1129.7 |
| 22.5° | 1077.3 | 1093.1 | 1092.1 | 1103.0 | 1107.9 |
| 25°   | 1050.6 | 1066.4 | 1066.4 | 1080.3 | 1086.2 |
| 27.5° | 1021.0 | 1038.7 | 1039.7 | 1053.6 | 1058.5 |
| 30°   | 990.3  | 1008.1 | 1011.1 | 1025.9 | 1033.8 |
| 32.5° | 958.7  | 975.5  | 980.4  | 997.2  | 1003.2 |
| 35°   | 922.1  | 941.9  | 947.8  | 966.6  | 974.5  |
| 37.5° | 888.5  | 906.3  | 914.2  | 934.0  | 941.9  |
| 40°   | 851.0  | 869.7  | 878.6  | 900.4  | 908.3  |
| 42.5° | 812.4  | 831.2  | 841.1  | 864.8  | 872.7  |
| 45°   | 773.9  | 790.7  | 803.5  | 827.2  | 836.1  |
| 47.5° | 731.4  | 750.1  | 764.0  | 789.7  | 798.6  |
| 50°   | 687.9  | 707.7  | 723.5  | 751.1  | 760.0  |
| 52.5° | 646.4  | 664.2  | 682.0  | 712.6  | 722.5  |
| 55°   | 600.9  | 618.7  | 639.5  | 670.1  | 680.0  |
| 57.5° | 554.5  | 572.2  | 596.0  | 628.6  | 639.5  |
| 60°   | 508.0  | 525.8  | 552.5  | 586.1  | 597.0  |
| 62.5° | 459.6  | 477.4  | 507.0  | 541.6  | 551.5  |
| 65°   | 411.1  | 429.9  | 459.6  | 498.1  | 508.0  |
| 67.5° | 361.7  | 380.5  | 412.1  | 452.7  | 463.5  |
| 70°   | 311.3  | 332.1  | 365.7  | 406.2  | 416.1  |
| 72.5° | 258.9  | 282.7  | 320.2  | 359.8  | 371.6  |
| 75°   | 209.5  | 233.2  | 272.8  | 313.3  | 325.2  |
| 77.5° | 161.1  | 187.8  | 227.3  | 269.8  | 282.7  |
| 80°   | 115.6  | 142.3  | 183.8  | 225.3  | 237.2  |
| 82.5° | 74.1   | 101.8  | 143.3  | 182.8  | 192.7  |
| 85°   | 39.5   | 65.2   | 102.8  | 127.5  | 131.4  |
| 87.5° | 12.8   | 33.6   | 46.5   | 61.3   | 62.3   |
| 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 | 13.68            | 15.35 | 14.05 | 15.67 | 15.98 | 14.40          | 16.08 | 14.77 | 16.39 | 16.70 |
|                 | 3H   | 15.47            | 16.99 | 15.85 | 17.31 | 17.67 | 16.57          | 18.09 | 16.95 | 18.41 | 18.77 |
|                 | 4H   | 16.10            | 17.53 | 16.50 | 17.88 | 18.25 | 17.50          | 18.94 | 17.90 | 19.28 | 19.66 |
|                 | 6H   | 16.52            | 17.85 | 16.93 | 18.22 | 18.61 | 18.36          | 19.69 | 18.77 | 20.06 | 20.45 |
|                 | 8H   | 16.63            | 17.91 | 17.06 | 18.30 | 18.69 | 18.74          | 20.01 | 19.16 | 20.40 | 20.80 |
|                 | 12H  | 16.69            | 17.91 | 17.12 | 18.30 | 18.72 | 19.05          | 20.27 | 19.48 | 20.65 | 21.08 |
| 4H              | 2H   | 14.45            | 15.88 | 14.84 | 16.23 | 16.60 | 15.01          | 16.44 | 15.40 | 16.79 | 17.16 |
|                 | 3H   | 16.47            | 17.68 | 16.88 | 18.07 | 18.47 | 17.42          | 18.63 | 17.83 | 19.03 | 19.42 |
|                 | 4H   | 17.23            | 18.33 | 17.66 | 18.74 | 19.18 | 18.52          | 19.62 | 18.95 | 20.03 | 20.47 |
|                 | 6H   | 17.79            | 18.75 | 18.24 | 19.19 | 19.64 | 19.56          | 20.53 | 20.02 | 20.97 | 21.42 |
|                 | 8H   | 17.94            | 18.85 | 18.40 | 19.29 | 19.75 | 20.03          | 20.93 | 20.49 | 21.37 | 21.84 |
|                 | 12H  | 18.04            | 18.86 | 18.52 | 19.33 | 19.80 | 20.42          | 21.24 | 20.90 | 21.71 | 22.18 |
| 8H              | 4H   | 17.72            | 18.62 | 18.18 | 19.06 | 19.53 | 18.84          | 19.74 | 19.30 | 20.18 | 20.65 |
|                 | 6H   | 18.43            | 19.18 | 18.92 | 19.67 | 20.14 | 20.06          | 20.81 | 20.55 | 21.30 | 21.77 |
|                 | 8H   | 18.67            | 19.35 | 19.18 | 19.85 | 20.34 | 20.65          | 21.33 | 21.16 | 21.84 | 22.32 |
|                 | 12H  | 18.84            | 19.44 | 19.35 | 19.93 | 20.49 | 21.20          | 21.80 | 21.70 | 22.29 | 22.85 |
| 12H             | 4H   | 17.82            | 18.64 | 18.30 | 19.11 | 19.58 | 18.87          | 19.69 | 19.35 | 20.16 | 20.63 |
|                 | 6H   | 18.59            | 19.27 | 19.09 | 19.77 | 20.26 | 20.12          | 20.80 | 20.63 | 21.31 | 21.79 |
|                 | 8H   | 18.91            | 19.52 | 19.42 | 20.01 | 20.56 | 20.80          | 21.40 | 21.30 | 21.89 | 22.45 |