

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: P1588572

Luminaire Tested: 24CZSP-A-37HE-L830-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1588572  
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-A-37HE-L830-S  
Description: 2x4 CZSP LED Luminaire, 3000K CCT and 3500 lumens, 80CRI, Smooth Lens, Air Vented Housing  
Light Source: -  
Ballast/Driver: -

**Summary**

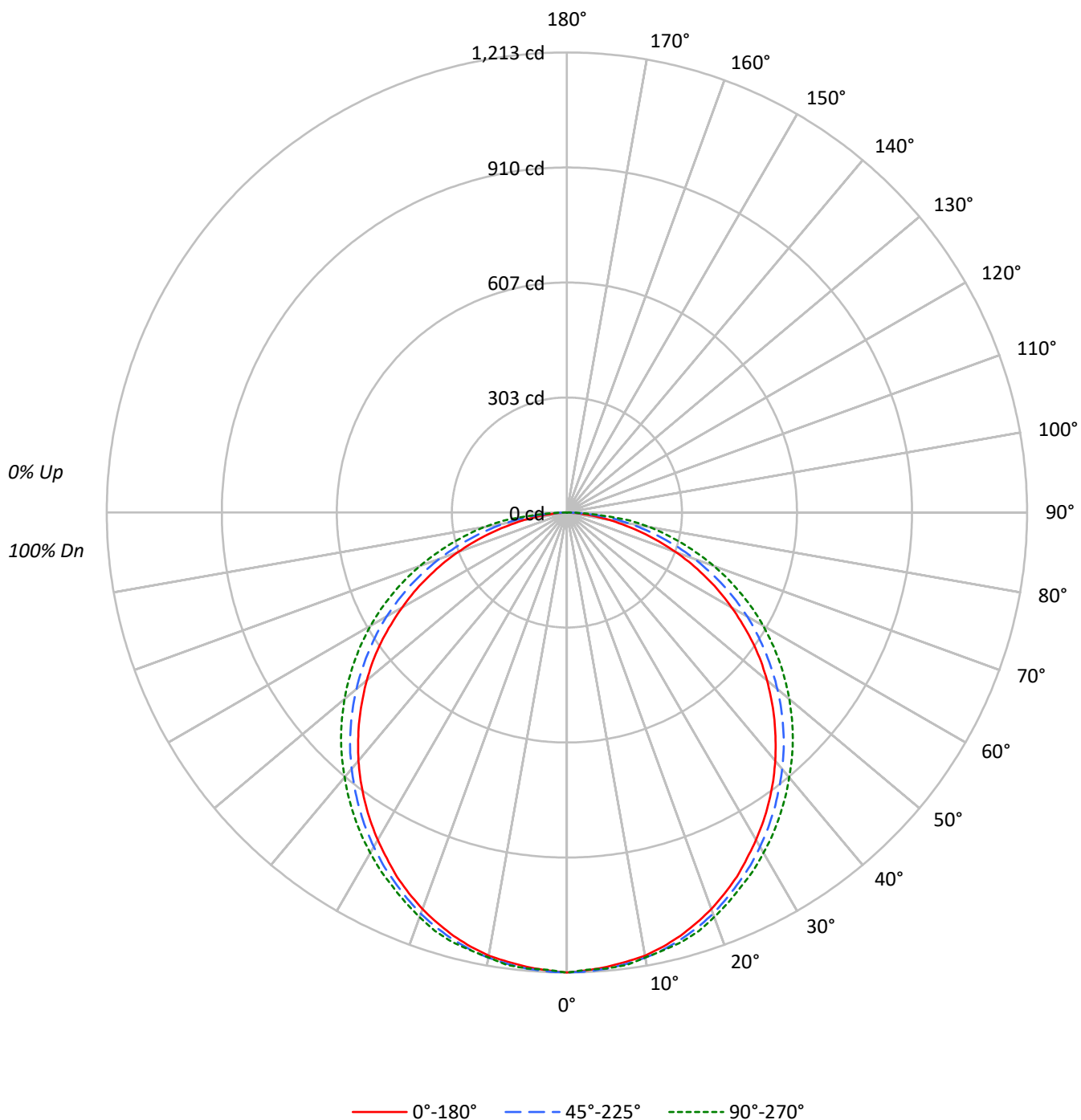
Lumens per Lamp: N/A  
Luminaire Lumens: 3541.0 lumens  
Efficiency: N/A  
Efficacy: 143.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 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  |     |     |  | 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°  | 1858 | 1858 | 1858 |
| 5°  | 1849 | 1856 | 1855 |
| 10° | 1845 | 1854 | 1852 |
| 15° | 1832 | 1847 | 1858 |
| 20° | 1814 | 1835 | 1850 |
| 25° | 1791 | 1816 | 1838 |
| 30° | 1763 | 1800 | 1833 |
| 35° | 1738 | 1783 | 1828 |
| 40° | 1709 | 1765 | 1822 |
| 45° | 1676 | 1747 | 1824 |
| 50° | 1640 | 1726 | 1824 |
| 55° | 1598 | 1701 | 1826 |
| 60° | 1537 | 1683 | 1830 |
| 65° | 1467 | 1650 | 1836 |
| 70° | 1368 | 1604 | 1844 |
| 75° | 1218 | 1540 | 1862 |
| 80° | 1007 | 1467 | 1953 |
| 85° | 655  | 1325 | 1706 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2015 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 114.7  | 3.2       |
| 10°-20°   | 328.5  | 9.3       |
| 20°-30°   | 495.4  | 14.0      |
| 30°-40°   | 596.7  | 16.8      |
| 40°-50°   | 623.1  | 17.6      |
| 50°-60°   | 572.2  | 16.2      |
| 60°-70°   | 450.7  | 12.7      |
| 70°-80°   | 276.5  | 7.8       |
| 80°-90°   | 83.2   | 2.4       |
| 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°    | 938.5  | 26.5      |
| 0°-40°    | 1535.2 | 43.4      |
| 0°-60°    | 2730.5 | 77.1      |
| 0°-90°    | 3541.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3541.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1213 | 1213  | 1213 | 1213  | 1213 |      |
| 5°  | 1203 | 1204  | 1207 | 1211  | 1207 | 114  |
| 15° | 1155 | 1158  | 1165 | 1172  | 1172 | 326  |
| 25° | 1060 | 1062  | 1075 | 1088  | 1088 | 488  |
| 35° | 929  | 934   | 953  | 973   | 978  | 581  |
| 45° | 774  | 782   | 806  | 834   | 842  | 597  |
| 55° | 598  | 609   | 637  | 673   | 684  | 534  |
| 65° | 405  | 419   | 455  | 493   | 507  | 400  |
| 75° | 206  | 222   | 260  | 302   | 315  | 218  |
| 85° | 37   | 51    | 75   | 96    | 97   | 49   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1212.9 | 1212.9 | 1212.9 | 1212.9 | 1212.9 |
| 2.5°  | 1208.2 | 1210.6 | 1211.3 | 1212.1 | 1206.7 |
| 5°    | 1202.8 | 1204.3 | 1207.4 | 1211.3 | 1206.7 |
| 7.5°  | 1195.0 | 1196.6 | 1200.5 | 1205.9 | 1203.6 |
| 10°   | 1186.5 | 1187.2 | 1191.9 | 1195.8 | 1191.1 |
| 12.5° | 1172.5 | 1174.8 | 1180.3 | 1183.4 | 1181.8 |
| 15°   | 1155.4 | 1157.7 | 1164.7 | 1171.7 | 1171.7 |
| 17.5° | 1135.2 | 1138.3 | 1146.8 | 1156.2 | 1156.9 |
| 20°   | 1112.7 | 1115.0 | 1125.9 | 1135.2 | 1135.2 |
| 22.5° | 1087.0 | 1090.1 | 1101.0 | 1111.1 | 1112.7 |
| 25°   | 1059.8 | 1062.2 | 1074.6 | 1087.8 | 1087.8 |
| 27.5° | 1028.0 | 1032.6 | 1048.2 | 1061.4 | 1064.5 |
| 30°   | 996.9  | 1000.8 | 1017.9 | 1034.2 | 1036.5 |
| 32.5° | 964.2  | 968.9  | 986.8  | 1004.7 | 1008.5 |
| 35°   | 929.3  | 933.9  | 953.4  | 972.8  | 977.5  |
| 37.5° | 892.8  | 898.2  | 918.4  | 940.9  | 945.6  |
| 40°   | 854.7  | 860.9  | 882.7  | 906.8  | 911.4  |
| 42.5° | 814.3  | 822.8  | 846.1  | 871.0  | 878.0  |
| 45°   | 773.9  | 782.4  | 806.5  | 834.5  | 842.3  |
| 47.5° | 731.2  | 741.3  | 766.1  | 795.6  | 804.2  |
| 50°   | 688.4  | 698.5  | 724.2  | 756.0  | 765.3  |
| 52.5° | 644.9  | 655.0  | 681.4  | 714.8  | 724.9  |
| 55°   | 598.3  | 609.2  | 637.1  | 672.9  | 683.8  |
| 57.5° | 550.1  | 564.1  | 593.6  | 630.1  | 641.0  |
| 60°   | 501.9  | 515.9  | 549.3  | 585.1  | 597.5  |
| 62.5° | 454.5  | 467.8  | 501.9  | 540.0  | 553.2  |
| 65°   | 404.8  | 418.8  | 455.3  | 493.4  | 506.6  |
| 67.5° | 355.9  | 369.8  | 406.4  | 446.0  | 460.0  |
| 70°   | 305.4  | 320.9  | 358.2  | 397.8  | 411.8  |
| 72.5° | 254.9  | 271.2  | 309.2  | 349.6  | 362.9  |
| 75°   | 205.9  | 222.2  | 260.3  | 301.5  | 314.7  |
| 77.5° | 157.7  | 175.6  | 212.9  | 254.9  | 267.3  |
| 80°   | 114.2  | 131.3  | 166.3  | 207.5  | 221.4  |
| 82.5° | 73.0   | 87.8   | 122.8  | 161.6  | 171.7  |
| 85°   | 37.3   | 51.3   | 75.4   | 95.6   | 97.1   |
| 87.5° | 11.7   | 16.3   | 24.9   | 37.3   | 38.1   |
| 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 | 13.63            | 15.29 | 13.99 | 15.61 | 15.92 | 14.46          | 16.12 | 14.82 | 16.44 | 16.75 |
|                 | 3H   | 15.39            | 16.89 | 15.76 | 17.22 | 17.58 | 16.58          | 18.08 | 16.95 | 18.41 | 18.77 |
|                 | 4H   | 16.00            | 17.43 | 16.40 | 17.77 | 18.15 | 17.47          | 18.89 | 17.86 | 19.23 | 19.61 |
|                 | 6H   | 16.41            | 17.74 | 16.83 | 18.10 | 18.49 | 18.25          | 19.57 | 18.66 | 19.93 | 20.32 |
|                 | 8H   | 16.52            | 17.78 | 16.95 | 18.17 | 18.57 | 18.57          | 19.83 | 18.99 | 20.22 | 20.62 |
|                 | 12H  | 16.57            | 17.78 | 17.00 | 18.17 | 18.59 | 18.78          | 19.99 | 19.21 | 20.37 | 20.80 |
| 4H              | 2H   | 14.40            | 15.82 | 14.80 | 16.17 | 16.55 | 15.05          | 16.47 | 15.45 | 16.82 | 17.19 |
|                 | 3H   | 16.38            | 17.58 | 16.79 | 17.97 | 18.37 | 17.40          | 18.60 | 17.81 | 19.00 | 19.40 |
|                 | 4H   | 17.12            | 18.20 | 17.55 | 18.61 | 19.05 | 18.45          | 19.54 | 18.89 | 19.95 | 20.39 |
|                 | 6H   | 17.64            | 18.60 | 18.10 | 19.04 | 19.49 | 19.41          | 20.36 | 19.86 | 20.80 | 21.25 |
|                 | 8H   | 17.79            | 18.68 | 18.25 | 19.12 | 19.59 | 19.80          | 20.70 | 20.26 | 21.14 | 21.60 |
|                 | 12H  | 17.87            | 18.68 | 18.35 | 19.15 | 19.62 | 20.08          | 20.89 | 20.56 | 21.36 | 21.83 |
| 8H              | 4H   | 17.57            | 18.47 | 18.03 | 18.91 | 19.37 | 18.74          | 19.64 | 19.20 | 20.08 | 20.54 |
|                 | 6H   | 18.24            | 18.98 | 18.73 | 19.47 | 19.94 | 19.86          | 20.60 | 20.35 | 21.09 | 21.56 |
|                 | 8H   | 18.45            | 19.11 | 18.95 | 19.62 | 20.10 | 20.37          | 21.04 | 20.88 | 21.54 | 22.03 |
|                 | 12H  | 18.59            | 19.18 | 19.09 | 19.67 | 20.23 | 20.75          | 21.35 | 21.26 | 21.83 | 22.39 |
| 12H             | 4H   | 17.66            | 18.47 | 18.14 | 18.94 | 19.41 | 18.77          | 19.57 | 19.25 | 20.05 | 20.51 |
|                 | 6H   | 18.37            | 19.04 | 18.87 | 19.54 | 20.03 | 19.90          | 20.57 | 20.41 | 21.08 | 21.56 |
|                 | 8H   | 18.65            | 19.24 | 19.15 | 19.73 | 20.29 | 20.48          | 21.07 | 20.99 | 21.56 | 22.12 |