

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: P1589713

Luminaire Tested: 24CZSP-SB-37HE-L830

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1589713  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2608-884-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/3/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 24CZSP-SB-37HE-L830  
Description: 2x4 CZSP LED Luminaire, 3000K CCT and 3500 lumens, 80CRI, Ribbed Lens, SB housing  
Light Source: -  
Ballast/Driver: -

**Summary**

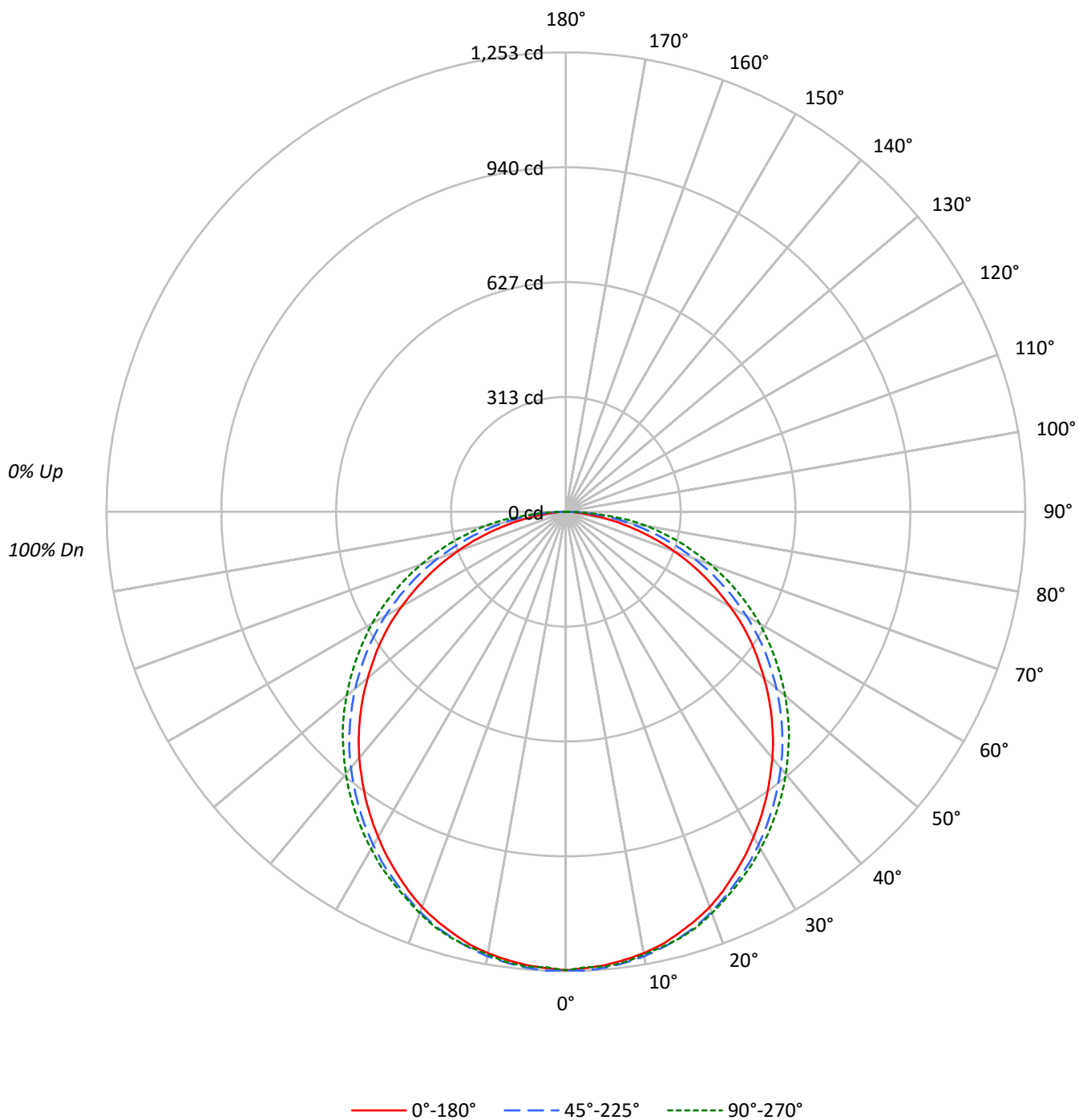
Lumens per Lamp: N/A  
Luminaire Lumens: 3649.0 lumens  
Efficiency: N/A  
Efficacy: 147.7 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.26 / 1.38  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

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  |     |     | 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  | 68  |
| 3   | 89  | 79  | 70  | 63  | 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°  | 1915 | 1915 | 1915 |
| 5°  | 1908 | 1919 | 1914 |
| 10° | 1901 | 1915 | 1907 |
| 15° | 1887 | 1907 | 1909 |
| 20° | 1870 | 1893 | 1900 |
| 25° | 1840 | 1873 | 1886 |
| 30° | 1811 | 1858 | 1878 |
| 35° | 1782 | 1840 | 1871 |
| 40° | 1753 | 1824 | 1867 |
| 45° | 1720 | 1807 | 1865 |
| 50° | 1682 | 1787 | 1860 |
| 55° | 1644 | 1767 | 1860 |
| 60° | 1583 | 1741 | 1871 |
| 65° | 1509 | 1707 | 1873 |
| 70° | 1407 | 1660 | 1878 |
| 75° | 1252 | 1600 | 1910 |
| 80° | 1028 | 1533 | 1982 |
| 85° | 678  | 1439 | 1791 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 2030 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 118.3  | 3.2       |
| 10°-20°   | 338.6  | 9.3       |
| 20°-30°   | 510.3  | 14.0      |
| 30°-40°   | 614.5  | 16.8      |
| 40°-50°   | 642.0  | 17.6      |
| 50°-60°   | 589.8  | 16.2      |
| 60°-70°   | 464.5  | 12.7      |
| 70°-80°   | 284.8  | 7.8       |
| 80°-90°   | 86.3   | 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°    | 967.1  | 26.5      |
| 0°-40°    | 1581.6 | 43.3      |
| 0°-60°    | 2813.4 | 77.1      |
| 0°-90°    | 3649.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3649.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1250 | 1250  | 1250 | 1250  | 1250 |      |
| 5°  | 1241 | 1243  | 1248 | 1246  | 1245 | 118  |
| 15° | 1190 | 1195  | 1202 | 1207  | 1204 | 336  |
| 25° | 1089 | 1096  | 1108 | 1120  | 1116 | 502  |
| 35° | 953  | 965   | 984  | 1002  | 1001 | 596  |
| 45° | 794  | 811   | 834  | 857   | 861  | 612  |
| 55° | 616  | 633   | 662  | 690   | 697  | 549  |
| 65° | 416  | 438   | 471  | 503   | 517  | 412  |
| 75° | 212  | 236   | 270  | 303   | 323  | 225  |
| 85° | 39   | 57    | 82   | 91    | 102  | 50   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1250.4 | 1250.4 | 1250.4 | 1250.4 | 1250.4 |
| 2.5°  | 1245.7 | 1248.8 | 1252.7 | 1246.5 | 1243.4 |
| 5°    | 1241.1 | 1243.4 | 1248.0 | 1246.5 | 1245.0 |
| 7.5°  | 1232.6 | 1234.1 | 1240.3 | 1240.3 | 1238.8 |
| 10°   | 1222.6 | 1225.7 | 1231.1 | 1230.3 | 1226.4 |
| 12.5° | 1209.4 | 1211.8 | 1217.9 | 1217.9 | 1215.6 |
| 15°   | 1190.1 | 1194.8 | 1202.5 | 1207.1 | 1204.0 |
| 17.5° | 1170.0 | 1174.7 | 1184.7 | 1189.4 | 1187.8 |
| 20°   | 1147.6 | 1151.5 | 1161.6 | 1168.5 | 1165.4 |
| 22.5° | 1119.8 | 1124.5 | 1136.1 | 1143.8 | 1140.7 |
| 25°   | 1089.0 | 1095.9 | 1108.3 | 1119.8 | 1116.0 |
| 27.5° | 1058.1 | 1065.8 | 1081.2 | 1092.8 | 1091.3 |
| 30°   | 1024.1 | 1034.1 | 1050.3 | 1065.0 | 1061.9 |
| 32.5° | 989.3  | 1000.9 | 1017.9 | 1033.3 | 1032.6 |
| 35°   | 953.0  | 965.4  | 983.9  | 1001.7 | 1000.9 |
| 37.5° | 914.4  | 929.1  | 948.4  | 967.7  | 968.5  |
| 40°   | 876.6  | 890.5  | 912.1  | 932.9  | 933.7  |
| 42.5° | 836.4  | 851.1  | 874.3  | 895.9  | 896.6  |
| 45°   | 793.9  | 810.9  | 834.1  | 857.3  | 861.1  |
| 47.5° | 750.7  | 768.4  | 792.4  | 817.1  | 821.7  |
| 50°   | 705.9  | 724.4  | 749.9  | 776.2  | 780.8  |
| 52.5° | 660.3  | 679.6  | 705.9  | 732.1  | 739.1  |
| 55°   | 615.5  | 633.3  | 661.9  | 690.4  | 696.6  |
| 57.5° | 568.4  | 584.6  | 615.5  | 645.6  | 653.4  |
| 60°   | 516.7  | 536.8  | 568.4  | 598.5  | 610.9  |
| 62.5° | 466.5  | 488.1  | 520.5  | 550.7  | 564.6  |
| 65°   | 416.3  | 437.9  | 471.1  | 502.8  | 516.7  |
| 67.5° | 365.3  | 387.7  | 423.2  | 453.3  | 468.8  |
| 70°   | 314.3  | 336.7  | 370.7  | 403.1  | 419.4  |
| 72.5° | 263.4  | 287.3  | 320.5  | 353.7  | 369.9  |
| 75°   | 211.6  | 236.3  | 270.3  | 302.7  | 322.8  |
| 77.5° | 163.0  | 186.9  | 220.9  | 254.1  | 271.1  |
| 80°   | 116.6  | 140.6  | 173.8  | 207.0  | 224.7  |
| 82.5° | 74.1   | 96.5   | 129.0  | 156.8  | 173.0  |
| 85°   | 38.6   | 57.2   | 81.9   | 91.1   | 101.9  |
| 87.5° | 11.6   | 22.4   | 31.7   | 35.5   | 44.0   |
| 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 | 13.77            | 15.43 | 14.14 | 15.75 | 16.06 | 14.52          | 16.18 | 14.88 | 16.49 | 16.81 |
|                 | 3H   | 15.53            | 17.04 | 15.91 | 17.37 | 17.73 | 16.61          | 18.12 | 16.99 | 18.45 | 18.81 |
|                 | 4H   | 16.16            | 17.58 | 16.56 | 17.93 | 18.30 | 17.50          | 18.92 | 17.89 | 19.27 | 19.64 |
|                 | 6H   | 16.57            | 17.89 | 16.98 | 18.25 | 18.65 | 18.26          | 19.58 | 18.67 | 19.95 | 20.34 |
|                 | 8H   | 16.68            | 17.94 | 17.10 | 18.33 | 18.73 | 18.58          | 19.84 | 19.00 | 20.23 | 20.62 |
|                 | 12H  | 16.73            | 17.94 | 17.16 | 18.32 | 18.75 | 18.79          | 20.00 | 19.22 | 20.38 | 20.81 |
| 4H              | 2H   | 14.54            | 15.96 | 14.94 | 16.31 | 16.69 | 15.12          | 16.54 | 15.52 | 16.89 | 17.26 |
|                 | 3H   | 16.53            | 17.73 | 16.94 | 18.13 | 18.53 | 17.45          | 18.65 | 17.86 | 19.04 | 19.44 |
|                 | 4H   | 17.29            | 18.37 | 17.72 | 18.79 | 19.22 | 18.48          | 19.57 | 18.91 | 19.98 | 20.42 |
|                 | 6H   | 17.82            | 18.78 | 18.28 | 19.22 | 19.67 | 19.41          | 20.37 | 19.87 | 20.81 | 21.26 |
|                 | 8H   | 17.97            | 18.86 | 18.43 | 19.31 | 19.77 | 19.80          | 20.69 | 20.26 | 21.13 | 21.60 |
|                 | 12H  | 18.06            | 18.86 | 18.54 | 19.34 | 19.80 | 20.07          | 20.88 | 20.55 | 21.35 | 21.82 |
| 8H              | 4H   | 17.74            | 18.63 | 18.20 | 19.07 | 19.54 | 18.78          | 19.68 | 19.24 | 20.12 | 20.58 |
|                 | 6H   | 18.42            | 19.16 | 18.91 | 19.65 | 20.12 | 19.87          | 20.61 | 20.36 | 21.10 | 21.57 |
|                 | 8H   | 18.64            | 19.31 | 19.15 | 19.81 | 20.30 | 20.36          | 21.02 | 20.86 | 21.53 | 22.01 |
|                 | 12H  | 18.79            | 19.38 | 19.29 | 19.87 | 20.43 | 20.73          | 21.32 | 21.24 | 21.81 | 22.37 |
| 12H             | 4H   | 17.82            | 18.63 | 18.30 | 19.10 | 19.57 | 18.81          | 19.62 | 19.29 | 20.09 | 20.56 |
|                 | 6H   | 18.55            | 19.22 | 19.05 | 19.72 | 20.21 | 19.92          | 20.59 | 20.43 | 21.09 | 21.58 |
|                 | 8H   | 18.84            | 19.43 | 19.34 | 19.92 | 20.48 | 20.47          | 21.07 | 20.98 | 21.56 | 22.11 |