

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: P1587732

Luminaire Tested: 22CZSP-SB-49HE-L830-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1587732  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2608-884-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/3/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 22CZSP-SB-49HE-L830-S  
Description: 2x2 CZSP LED Luminaire, 3000K CCT and 4500 lumens, 80CRI, Smooth Lens, SB housing  
Light Source: -  
Ballast/Driver: -

**Summary**

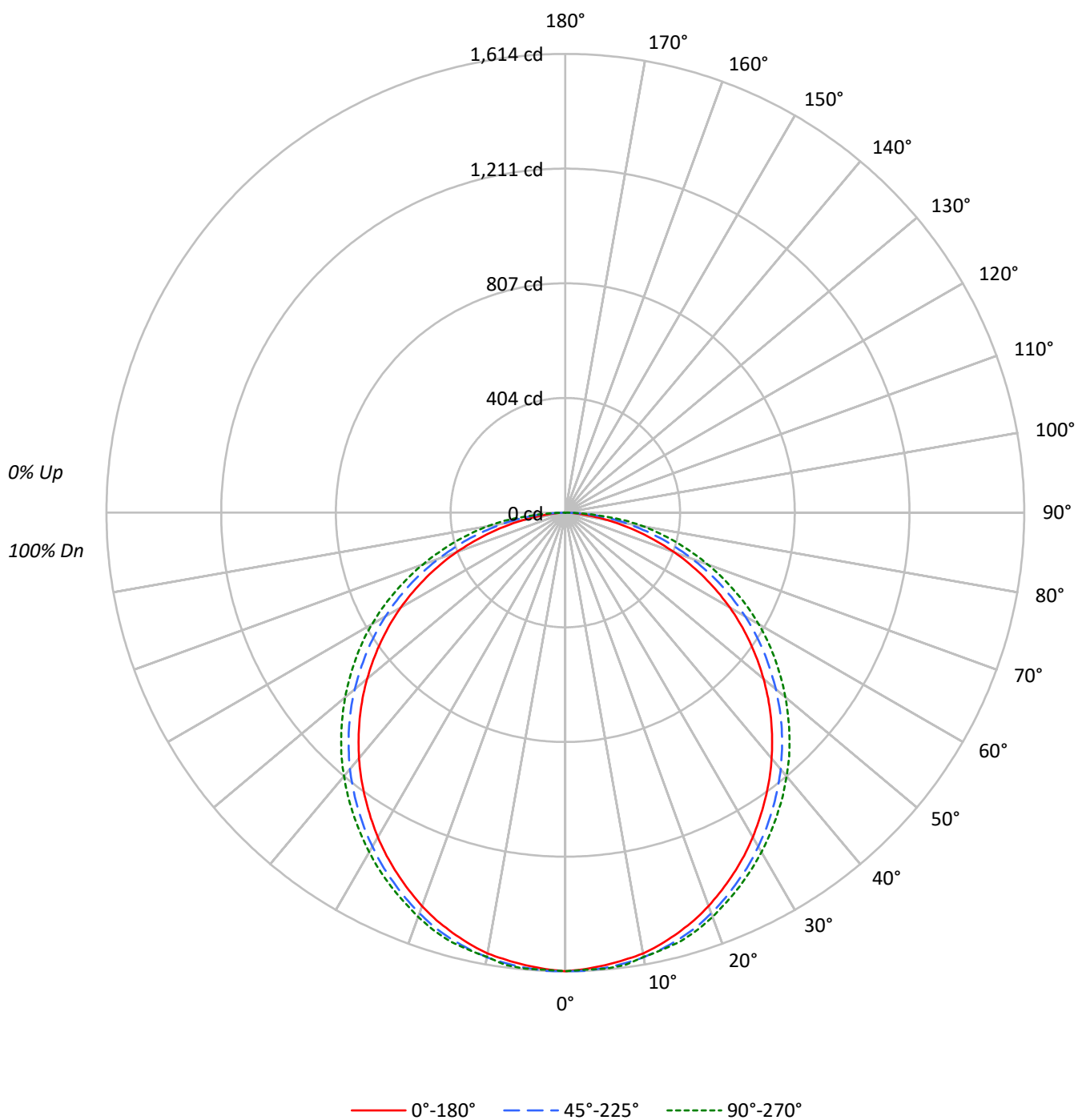
Lumens per Lamp: N/A  
Luminaire Lumens: 4694.0 lumens  
Efficiency: N/A  
Efficacy: 145.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 1.88' x L: 1.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 32.2  
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  | 94  | 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  | 66  | 61  |  | 69  | 64  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 53  |  | 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  | 45  | 39  |  | 50  | 44  | 39  | 37  |
| 7   | 64  | 51  | 42  | 35  | 63  | 50  | 41  | 35  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 45  | 39  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 45  | 37  | 31  | 44  | 37  | 31  |  | 43  | 36  | 31  |  | 42  | 35  | 31  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 41  | 33  | 28  |  | 39  | 33  | 28  |  | 38  | 32  | 28  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 30  | 26  |  | 37  | 30  | 25  |  | 36  | 30  | 25  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5053 | 5053 | 5053 |
| 5°  | 5025 | 5053 | 5063 |
| 10° | 5009 | 5051 | 5047 |
| 15° | 4963 | 5034 | 5064 |
| 20° | 4909 | 5000 | 5044 |
| 25° | 4839 | 4951 | 5014 |
| 30° | 4768 | 4907 | 4988 |
| 35° | 4690 | 4860 | 4964 |
| 40° | 4615 | 4817 | 4949 |
| 45° | 4530 | 4767 | 4937 |
| 50° | 4432 | 4708 | 4924 |
| 55° | 4322 | 4647 | 4917 |
| 60° | 4187 | 4579 | 4920 |
| 65° | 3995 | 4482 | 4893 |
| 70° | 3735 | 4345 | 4882 |
| 75° | 3311 | 4178 | 4899 |
| 80° | 2694 | 3969 | 5044 |
| 85° | 1743 | 3665 | 4354 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 5112 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 152.7  | 3.3       |
| 10°-20°   | 437.3  | 9.3       |
| 20°-30°   | 659.3  | 14.0      |
| 30°-40°   | 793.3  | 16.9      |
| 40°-50°   | 827.5  | 17.6      |
| 50°-60°   | 758.5  | 16.2      |
| 60°-70°   | 595.6  | 12.7      |
| 70°-80°   | 362.5  | 7.7       |
| 80°-90°   | 107.2  | 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°    | 1249.3 | 26.6      |
| 0°-40°    | 2042.6 | 43.5      |
| 0°-60°    | 3628.6 | 77.3      |
| 0°-90°    | 4694.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4694.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1614 | 1614  | 1614 | 1614  | 1614 |      |
| 5°  | 1598 | 1609  | 1608 | 1606  | 1611 | 152  |
| 15° | 1531 | 1546  | 1553 | 1555  | 1562 | 432  |
| 25° | 1401 | 1420  | 1433 | 1442  | 1451 | 645  |
| 35° | 1227 | 1246  | 1271 | 1290  | 1299 | 768  |
| 45° | 1023 | 1044  | 1076 | 1102  | 1115 | 789  |
| 55° | 792  | 812   | 851  | 886   | 901  | 707  |
| 65° | 539  | 559   | 605  | 645   | 660  | 533  |
| 75° | 274  | 299   | 345  | 387   | 405  | 290  |
| 85° | 48   | 69    | 102  | 114   | 121  | 63   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1613.6 | 1613.6 | 1613.6 | 1613.6 | 1613.6 |
| 2.5°  | 1607.6 | 1615.7 | 1613.6 | 1606.6 | 1609.6 |
| 5°    | 1598.5 | 1608.6 | 1607.6 | 1605.6 | 1610.6 |
| 7.5°  | 1587.4 | 1598.5 | 1599.5 | 1599.5 | 1605.6 |
| 10°   | 1575.3 | 1586.4 | 1588.4 | 1585.4 | 1587.4 |
| 12.5° | 1555.1 | 1568.2 | 1572.2 | 1572.2 | 1575.3 |
| 15°   | 1530.8 | 1546.0 | 1553.0 | 1555.1 | 1562.1 |
| 17.5° | 1504.6 | 1520.7 | 1529.8 | 1534.9 | 1540.9 |
| 20°   | 1473.3 | 1490.4 | 1500.5 | 1506.6 | 1513.7 |
| 22.5° | 1437.9 | 1457.1 | 1468.2 | 1474.3 | 1482.4 |
| 25°   | 1400.6 | 1419.8 | 1432.9 | 1442.0 | 1451.1 |
| 27.5° | 1361.2 | 1379.4 | 1397.5 | 1408.6 | 1416.7 |
| 30°   | 1318.8 | 1338.0 | 1357.1 | 1371.3 | 1379.4 |
| 32.5° | 1273.3 | 1293.5 | 1315.7 | 1330.9 | 1340.0 |
| 35°   | 1226.9 | 1246.1 | 1271.3 | 1289.5 | 1298.6 |
| 37.5° | 1179.4 | 1199.6 | 1225.9 | 1245.1 | 1256.2 |
| 40°   | 1128.9 | 1150.1 | 1178.4 | 1199.6 | 1210.7 |
| 42.5° | 1076.4 | 1096.6 | 1127.9 | 1152.2 | 1165.3 |
| 45°   | 1022.9 | 1044.1 | 1076.4 | 1101.7 | 1114.8 |
| 47.5° | 967.4  | 987.6  | 1022.9 | 1052.2 | 1063.3 |
| 50°   | 909.8  | 929.0  | 966.4  | 997.7  | 1010.8 |
| 52.5° | 851.2  | 871.4  | 908.8  | 942.1  | 956.3  |
| 55°   | 791.7  | 811.9  | 851.2  | 885.6  | 900.7  |
| 57.5° | 731.1  | 751.3  | 791.7  | 827.0  | 845.2  |
| 60°   | 668.5  | 688.7  | 731.1  | 767.4  | 785.6  |
| 62.5° | 603.9  | 625.1  | 668.5  | 705.8  | 725.0  |
| 65°   | 539.2  | 559.4  | 604.9  | 645.3  | 660.4  |
| 67.5° | 474.6  | 494.8  | 539.2  | 579.6  | 597.8  |
| 70°   | 408.0  | 431.2  | 474.6  | 517.0  | 533.2  |
| 72.5° | 338.3  | 364.5  | 408.0  | 452.4  | 468.5  |
| 75°   | 273.7  | 298.9  | 345.3  | 386.7  | 404.9  |
| 77.5° | 210.0  | 237.3  | 280.7  | 323.1  | 341.3  |
| 80°   | 149.4  | 175.7  | 220.1  | 260.5  | 279.7  |
| 82.5° | 94.9   | 118.1  | 162.6  | 198.9  | 213.1  |
| 85°   | 48.5   | 68.7   | 102.0  | 114.1  | 121.2  |
| 87.5° | 14.1   | 24.2   | 36.4   | 45.4   | 50.5   |
| 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 | 17.13            | 18.79 | 17.49 | 19.10 | 19.42 | 17.86          | 19.52 | 18.23 | 19.84 | 20.15 |
|                 | 3H   | 18.90            | 20.40 | 19.27 | 20.73 | 21.09 | 19.94          | 21.45 | 20.32 | 21.77 | 22.13 |
|                 | 4H   | 19.52            | 20.94 | 19.91 | 21.28 | 21.66 | 20.81          | 22.23 | 21.20 | 22.57 | 22.95 |
|                 | 6H   | 19.92            | 21.24 | 20.33 | 21.61 | 22.00 | 21.55          | 22.87 | 21.96 | 23.23 | 23.62 |
|                 | 8H   | 20.03            | 21.29 | 20.45 | 21.68 | 22.07 | 21.85          | 23.11 | 22.27 | 23.50 | 23.89 |
|                 | 12H  | 20.08            | 21.28 | 20.50 | 21.67 | 22.09 | 22.04          | 23.25 | 22.47 | 23.63 | 24.06 |
| 4H              | 2H   | 17.90            | 19.32 | 18.29 | 19.66 | 20.04 | 18.47          | 19.89 | 18.87 | 20.23 | 20.61 |
|                 | 3H   | 19.89            | 21.08 | 20.30 | 21.48 | 21.88 | 20.78          | 21.98 | 21.19 | 22.37 | 22.77 |
|                 | 4H   | 20.63            | 21.71 | 21.06 | 22.13 | 22.56 | 21.80          | 22.88 | 22.23 | 23.30 | 23.73 |
|                 | 6H   | 21.16            | 22.11 | 21.61 | 22.55 | 23.00 | 22.70          | 23.65 | 23.16 | 24.09 | 24.55 |
|                 | 8H   | 21.30            | 22.19 | 21.76 | 22.63 | 23.10 | 23.07          | 23.96 | 23.53 | 24.40 | 24.87 |
|                 | 12H  | 21.38            | 22.18 | 21.86 | 22.66 | 23.12 | 23.33          | 24.13 | 23.80 | 24.60 | 25.07 |
| 8H              | 4H   | 21.08            | 21.97 | 21.53 | 22.41 | 22.87 | 22.10          | 22.99 | 22.56 | 23.43 | 23.89 |
|                 | 6H   | 21.74            | 22.48 | 22.23 | 22.97 | 23.44 | 23.15          | 23.90 | 23.65 | 24.38 | 24.86 |
|                 | 8H   | 21.95            | 22.61 | 22.46 | 23.12 | 23.60 | 23.63          | 24.29 | 24.13 | 24.80 | 25.28 |
|                 | 12H  | 22.08            | 22.67 | 22.59 | 23.16 | 23.72 | 23.98          | 24.57 | 24.48 | 25.06 | 25.62 |
| 12H             | 4H   | 21.16            | 21.96 | 21.64 | 22.43 | 22.90 | 22.12          | 22.92 | 22.60 | 23.40 | 23.87 |
|                 | 6H   | 21.86            | 22.53 | 22.37 | 23.03 | 23.52 | 23.20          | 23.87 | 23.71 | 24.38 | 24.86 |
|                 | 8H   | 22.14            | 22.73 | 22.64 | 23.22 | 23.78 | 23.74          | 24.33 | 24.25 | 24.82 | 25.38 |