

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: P1587748

Luminaire Tested: 22CZSP-SB-49HE-L945-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1587748  
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-L945-S  
Description: 2x2 CZSP LED Luminaire, 4500K CCT and 4500 lumens, 90CRI, Smooth Lens, SB housing  
Light Source: -  
Ballast/Driver: -

**Summary**

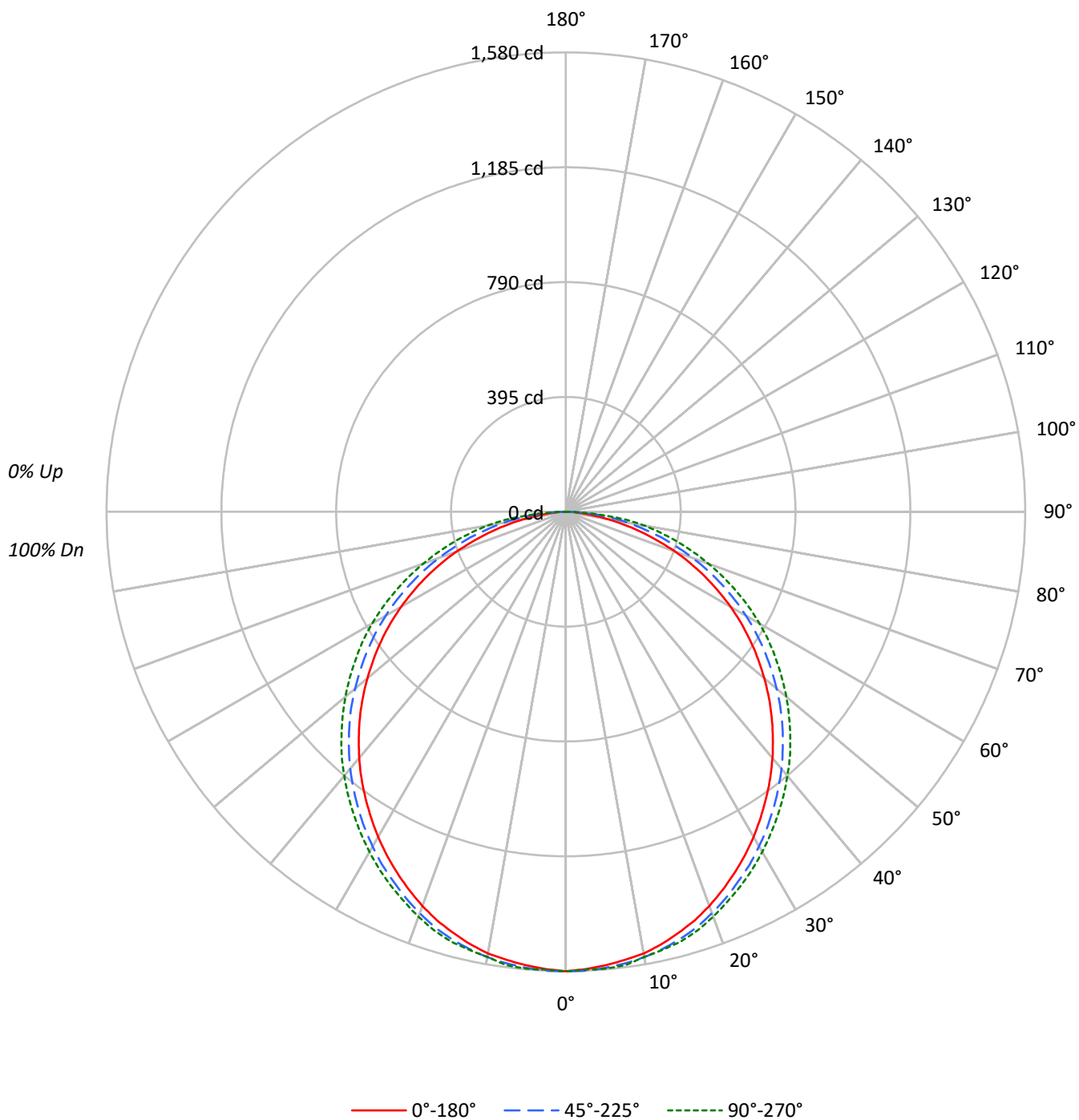
Lumens per Lamp: N/A  
Luminaire Lumens: 4597.0 lumens  
Efficiency: N/A  
Efficacy: 142.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.38  
Luminous Opening: Rectangular (W 1.88' x L: 1.83' x H: 0')  
CIE Type: Direct

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  |
| 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 | 99  | 95  | 106 | 101 | 97  | 93  | 97  | 94  | 90  |  | 93  | 90  | 88  |  | 89  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 81  | 76  | 84  | 79  | 74  |  | 81  | 76  | 72  |  | 78  |
| 3   | 89  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 67  | 62  |  | 71  | 66  | 61  |  | 69  |
| 4   | 82  | 70  | 61  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 53  |  | 63  | 57  | 52  |  | 61  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 59  | 51  | 45  |  | 57  | 50  | 45  |  | 55  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 40  |  | 51  | 45  | 39  |  | 50  |
| 7   | 64  | 51  | 42  | 35  | 63  | 50  | 41  | 35  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 45  |
| 8   | 60  | 46  | 38  | 32  | 58  | 45  | 37  | 31  | 44  | 37  | 31  |  | 43  | 36  | 31  |  | 42  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 41  | 33  | 28  |  | 39  | 33  | 28  |  | 38  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 30  | 26  |  | 37  | 30  | 25  |  | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4948 | 4948 | 4948 |
| 5°  | 4921 | 4949 | 4958 |
| 10° | 4905 | 4946 | 4943 |
| 15° | 4860 | 4931 | 4960 |
| 20° | 4808 | 4897 | 4940 |
| 25° | 4739 | 4848 | 4910 |
| 30° | 4670 | 4806 | 4885 |
| 35° | 4593 | 4759 | 4861 |
| 40° | 4519 | 4718 | 4847 |
| 45° | 4436 | 4668 | 4835 |
| 50° | 4340 | 4610 | 4822 |
| 55° | 4233 | 4551 | 4816 |
| 60° | 4100 | 4484 | 4818 |
| 65° | 3913 | 4389 | 4792 |
| 70° | 3658 | 4255 | 4780 |
| 75° | 3242 | 4092 | 4798 |
| 80° | 2640 | 3888 | 4939 |
| 85° | 1707 | 3589 | 4265 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 5007 cd/sqm

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CATALOG NUMBER: 22CZSP-SB-49HE-L945-S

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 149.5  | 3.3       |
| 10°-20°   | 428.3  | 9.3       |
| 20°-30°   | 645.7  | 14.0      |
| 30°-40°   | 776.9  | 16.9      |
| 40°-50°   | 810.4  | 17.6      |
| 50°-60°   | 742.8  | 16.2      |
| 60°-70°   | 583.3  | 12.7      |
| 70°-80°   | 355.0  | 7.7       |
| 80°-90°   | 105.0  | 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°    | 1223.5 | 26.6      |
| 0°-40°    | 2000.4 | 43.5      |
| 0°-60°    | 3553.7 | 77.3      |
| 0°-90°    | 4597.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4597.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1580 | 1580  | 1580 | 1580  | 1580 |      |
| 5°  | 1566 | 1575  | 1574 | 1572  | 1577 | 149  |
| 15° | 1499 | 1514  | 1521 | 1523  | 1530 | 423  |
| 25° | 1372 | 1390  | 1403 | 1412  | 1421 | 632  |
| 35° | 1202 | 1220  | 1245 | 1263  | 1272 | 752  |
| 45° | 1002 | 1022  | 1054 | 1079  | 1092 | 773  |
| 55° | 775  | 795   | 834  | 867   | 882  | 693  |
| 65° | 528  | 548   | 592  | 632   | 647  | 522  |
| 75° | 268  | 293   | 338  | 379   | 397  | 284  |
| 85° | 48   | 67    | 100  | 112   | 119  | 62   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

TEST NUMBER: P1587748

CATALOG NUMBER: 22CZSP-SB-49HE-L945-S

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1580.3 | 1580.3 | 1580.3 | 1580.3 | 1580.3 |
| 2.5°  | 1574.4 | 1582.3 | 1580.3 | 1573.4 | 1576.3 |
| 5°    | 1565.5 | 1575.3 | 1574.4 | 1572.4 | 1577.3 |
| 7.5°  | 1554.6 | 1565.5 | 1566.4 | 1566.4 | 1572.4 |
| 10°   | 1542.7 | 1553.6 | 1555.6 | 1552.6 | 1554.6 |
| 12.5° | 1522.9 | 1535.8 | 1539.7 | 1539.7 | 1542.7 |
| 15°   | 1499.2 | 1514.0 | 1521.0 | 1522.9 | 1529.9 |
| 17.5° | 1473.5 | 1489.3 | 1498.2 | 1503.2 | 1509.1 |
| 20°   | 1442.8 | 1459.6 | 1469.5 | 1475.5 | 1482.4 |
| 22.5° | 1408.2 | 1427.0 | 1437.9 | 1443.8 | 1451.7 |
| 25°   | 1371.6 | 1390.4 | 1403.3 | 1412.2 | 1421.1 |
| 27.5° | 1333.1 | 1350.9 | 1368.7 | 1379.5 | 1387.5 |
| 30°   | 1291.5 | 1310.3 | 1329.1 | 1342.9 | 1350.9 |
| 32.5° | 1247.0 | 1266.8 | 1288.6 | 1303.4 | 1312.3 |
| 35°   | 1201.5 | 1220.3 | 1245.0 | 1262.8 | 1271.7 |
| 37.5° | 1155.1 | 1174.8 | 1200.5 | 1219.3 | 1230.2 |
| 40°   | 1105.6 | 1126.4 | 1154.1 | 1174.8 | 1185.7 |
| 42.5° | 1054.2 | 1074.0 | 1104.6 | 1128.4 | 1141.2 |
| 45°   | 1001.8 | 1022.5 | 1054.2 | 1078.9 | 1091.8 |
| 47.5° | 947.4  | 967.2  | 1001.8 | 1030.5 | 1041.3 |
| 50°   | 891.0  | 909.8  | 946.4  | 977.1  | 989.9  |
| 52.5° | 833.7  | 853.4  | 890.0  | 922.7  | 936.5  |
| 55°   | 775.3  | 795.1  | 833.7  | 867.3  | 882.1  |
| 57.5° | 716.0  | 735.8  | 775.3  | 809.9  | 827.7  |
| 60°   | 654.7  | 674.4  | 716.0  | 751.6  | 769.4  |
| 62.5° | 591.4  | 612.1  | 654.7  | 691.3  | 710.0  |
| 65°   | 528.1  | 547.9  | 592.4  | 631.9  | 646.8  |
| 67.5° | 464.8  | 484.6  | 528.1  | 567.6  | 585.4  |
| 70°   | 399.5  | 422.3  | 464.8  | 506.3  | 522.1  |
| 72.5° | 331.3  | 357.0  | 399.5  | 443.0  | 458.9  |
| 75°   | 268.0  | 292.7  | 338.2  | 378.8  | 396.6  |
| 77.5° | 205.7  | 232.4  | 274.9  | 316.5  | 334.3  |
| 80°   | 146.4  | 172.1  | 215.6  | 255.1  | 273.9  |
| 82.5° | 93.0   | 115.7  | 159.2  | 194.8  | 208.7  |
| 85°   | 47.5   | 67.2   | 99.9   | 111.7  | 118.7  |
| 87.5° | 13.8   | 23.7   | 35.6   | 44.5   | 49.4   |
| 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 | 17.06            | 18.72 | 17.42 | 19.03 | 19.34 | 17.79          | 19.45 | 18.15 | 19.76 | 20.08 |
|                 | 3H   | 18.82            | 20.33 | 19.20 | 20.65 | 21.01 | 19.87          | 21.37 | 20.25 | 21.70 | 22.06 |
|                 | 4H   | 19.44            | 20.86 | 19.84 | 21.21 | 21.58 | 20.73          | 22.15 | 21.13 | 22.50 | 22.88 |
|                 | 6H   | 19.85            | 21.17 | 20.26 | 21.53 | 21.92 | 21.48          | 22.80 | 21.89 | 23.16 | 23.55 |
|                 | 8H   | 19.96            | 21.22 | 20.38 | 21.60 | 22.00 | 21.77          | 23.03 | 22.20 | 23.42 | 23.82 |
|                 | 12H  | 20.00            | 21.21 | 20.43 | 21.59 | 22.02 | 21.97          | 23.18 | 22.40 | 23.56 | 23.99 |
| 4H              | 2H   | 17.82            | 19.24 | 18.22 | 19.59 | 19.97 | 18.39          | 19.81 | 18.79 | 20.16 | 20.54 |
|                 | 3H   | 19.82            | 21.01 | 20.22 | 21.41 | 21.81 | 20.71          | 21.90 | 21.12 | 22.30 | 22.70 |
|                 | 4H   | 20.56            | 21.64 | 20.99 | 22.05 | 22.49 | 21.73          | 22.81 | 22.16 | 23.22 | 23.66 |
|                 | 6H   | 21.09            | 22.04 | 21.54 | 22.48 | 22.93 | 22.63          | 23.58 | 23.08 | 24.02 | 24.48 |
|                 | 8H   | 21.23            | 22.12 | 21.69 | 22.56 | 23.02 | 23.00          | 23.89 | 23.46 | 24.33 | 24.79 |
|                 | 12H  | 21.31            | 22.11 | 21.79 | 22.58 | 23.05 | 23.25          | 24.05 | 23.73 | 24.53 | 25.00 |
| 8H              | 4H   | 21.00            | 21.89 | 21.46 | 22.33 | 22.80 | 22.02          | 22.91 | 22.48 | 23.35 | 23.82 |
|                 | 6H   | 21.67            | 22.41 | 22.16 | 22.89 | 23.37 | 23.08          | 23.82 | 23.57 | 24.31 | 24.78 |
|                 | 8H   | 21.88            | 22.54 | 22.38 | 23.05 | 23.53 | 23.55          | 24.22 | 24.06 | 24.72 | 25.21 |
|                 | 12H  | 22.01            | 22.60 | 22.52 | 23.09 | 23.65 | 23.91          | 24.49 | 24.41 | 24.98 | 25.54 |
| 12H             | 4H   | 21.08            | 21.88 | 21.56 | 22.36 | 22.83 | 22.05          | 22.85 | 22.53 | 23.33 | 23.79 |
|                 | 6H   | 21.79            | 22.46 | 22.30 | 22.96 | 23.45 | 23.13          | 23.80 | 23.64 | 24.30 | 24.79 |
|                 | 8H   | 22.07            | 22.66 | 22.57 | 23.15 | 23.71 | 23.67          | 24.26 | 24.18 | 24.75 | 25.31 |