

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: P1586508

Luminaire Tested: 22CZSP-54HE-L945-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1586508  
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: 22CZSP-54HE-L945-S  
Description: 2x2 CZSP LED Luminaire, 4500K CCT and 5000 lumens, 90CRI, Smooth Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

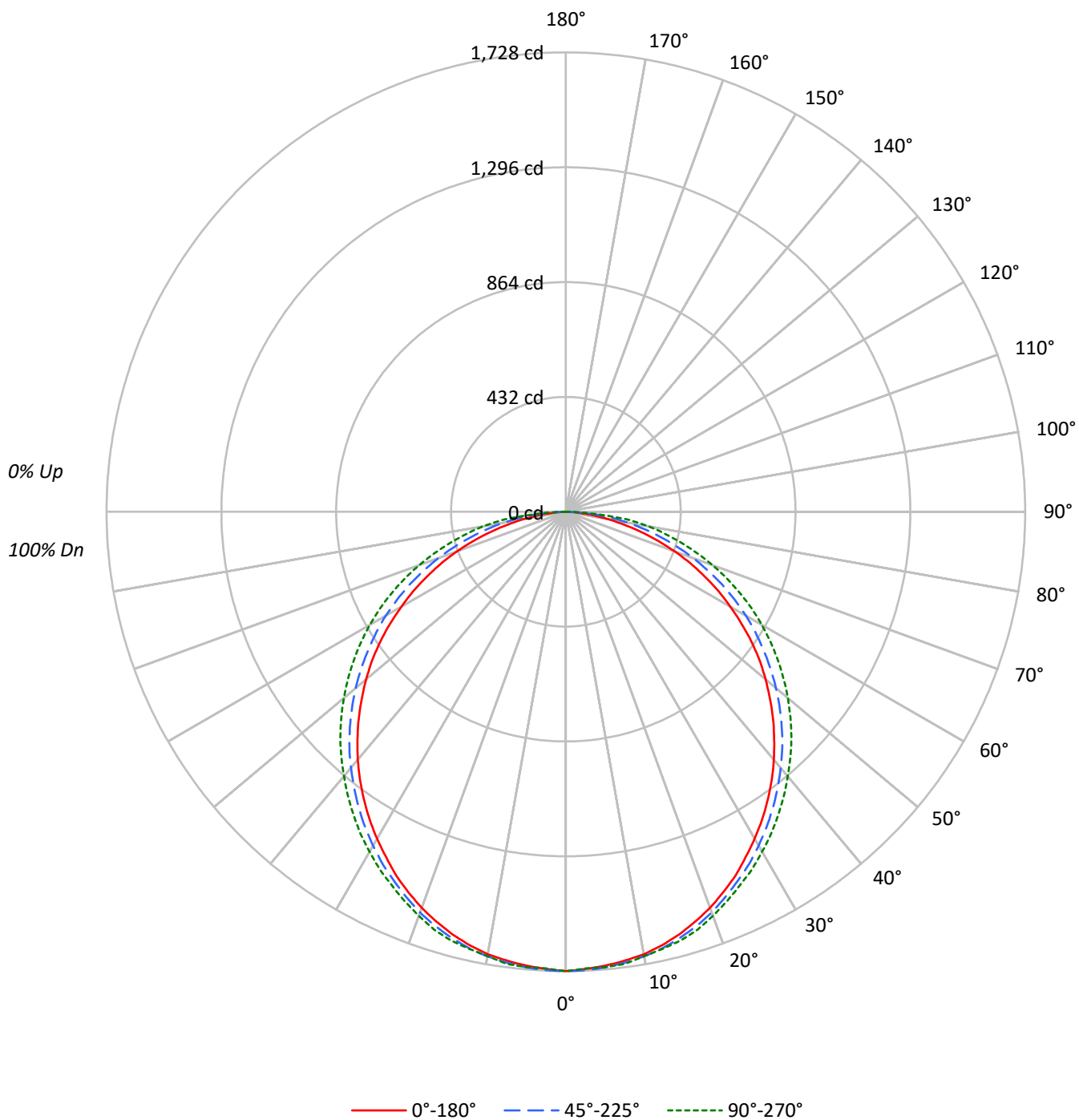
Lumens per Lamp: N/A  
Luminaire Lumens: 5045.0 lumens  
Efficiency: N/A  
Efficacy: 139.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 1.88' x L: 1.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 36.1  
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  | 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°  | 5411 | 5411 | 5411 |
| 5°  | 5387 | 5407 | 5404 |
| 10° | 5375 | 5400 | 5396 |
| 15° | 5336 | 5379 | 5412 |
| 20° | 5282 | 5345 | 5389 |
| 25° | 5217 | 5290 | 5355 |
| 30° | 5135 | 5244 | 5340 |
| 35° | 5061 | 5192 | 5323 |
| 40° | 4978 | 5141 | 5308 |
| 45° | 4883 | 5089 | 5314 |
| 50° | 4778 | 5026 | 5312 |
| 55° | 4654 | 4956 | 5318 |
| 60° | 4478 | 4902 | 5331 |
| 65° | 4274 | 4806 | 5348 |
| 70° | 3984 | 4672 | 5371 |
| 75° | 3550 | 4486 | 5424 |
| 80° | 2934 | 4272 | 5689 |
| 85° | 1908 | 3859 | 4972 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 5868 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 163.4  | 3.2       |
| 10°-20°   | 468.0  | 9.3       |
| 20°-30°   | 705.8  | 14.0      |
| 30°-40°   | 850.1  | 16.8      |
| 40°-50°   | 887.8  | 17.6      |
| 50°-60°   | 815.3  | 16.2      |
| 60°-70°   | 642.2  | 12.7      |
| 70°-80°   | 394.0  | 7.8       |
| 80°-90°   | 118.6  | 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°    | 1337.1 | 26.5      |
| 0°-40°    | 2187.2 | 43.4      |
| 0°-60°    | 3890.3 | 77.1      |
| 0°-90°    | 5045.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5045.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1728 | 1728  | 1728 | 1728  | 1728 |      |
| 5°  | 1714 | 1716  | 1720 | 1726  | 1719 | 163  |
| 15° | 1646 | 1649  | 1659 | 1669  | 1669 | 464  |
| 25° | 1510 | 1513  | 1531 | 1550  | 1550 | 695  |
| 35° | 1324 | 1331  | 1358 | 1386  | 1393 | 828  |
| 45° | 1103 | 1115  | 1149 | 1189  | 1200 | 850  |
| 55° | 852  | 868   | 908  | 959   | 974  | 761  |
| 65° | 577  | 597   | 649  | 703   | 722  | 571  |
| 75° | 293  | 317   | 371  | 430   | 448  | 311  |
| 85° | 53   | 73    | 107  | 136   | 138  | 69   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1728.0 | 1728.0 | 1728.0 | 1728.0 | 1728.0 |
| 2.5°  | 1721.4 | 1724.7 | 1725.8 | 1726.9 | 1719.2 |
| 5°    | 1713.7 | 1715.9 | 1720.3 | 1725.8 | 1719.2 |
| 7.5°  | 1702.6 | 1704.8 | 1710.3 | 1718.1 | 1714.8 |
| 10°   | 1690.4 | 1691.5 | 1698.2 | 1703.7 | 1697.1 |
| 12.5° | 1670.5 | 1673.8 | 1681.6 | 1686.0 | 1683.8 |
| 15°   | 1646.1 | 1649.4 | 1659.4 | 1669.4 | 1669.4 |
| 17.5° | 1617.3 | 1621.8 | 1634.0 | 1647.2 | 1648.3 |
| 20°   | 1585.2 | 1588.6 | 1604.1 | 1617.3 | 1617.3 |
| 22.5° | 1548.7 | 1553.1 | 1568.6 | 1583.0 | 1585.2 |
| 25°   | 1510.0 | 1513.3 | 1531.0 | 1549.8 | 1549.8 |
| 27.5° | 1464.6 | 1471.2 | 1493.4 | 1512.2 | 1516.6 |
| 30°   | 1420.3 | 1425.8 | 1450.2 | 1473.4 | 1476.8 |
| 32.5° | 1373.8 | 1380.4 | 1405.9 | 1431.4 | 1436.9 |
| 35°   | 1324.0 | 1330.6 | 1358.3 | 1386.0 | 1392.6 |
| 37.5° | 1272.0 | 1279.7 | 1308.5 | 1340.6 | 1347.2 |
| 40°   | 1217.7 | 1226.6 | 1257.6 | 1291.9 | 1298.5 |
| 42.5° | 1160.1 | 1172.3 | 1205.5 | 1241.0 | 1250.9 |
| 45°   | 1102.6 | 1114.8 | 1149.1 | 1188.9 | 1200.0 |
| 47.5° | 1041.7 | 1056.1 | 1091.5 | 1133.6 | 1145.8 |
| 50°   | 980.8  | 995.2  | 1031.7 | 1077.1 | 1090.4 |
| 52.5° | 918.8  | 933.2  | 970.9  | 1018.5 | 1032.8 |
| 55°   | 852.4  | 867.9  | 907.8  | 958.7  | 974.2  |
| 57.5° | 783.8  | 803.7  | 845.8  | 897.8  | 913.3  |
| 60°   | 715.1  | 735.1  | 782.7  | 833.6  | 851.3  |
| 62.5° | 647.6  | 666.4  | 715.1  | 769.4  | 788.2  |
| 65°   | 576.8  | 596.7  | 648.7  | 703.0  | 721.8  |
| 67.5° | 507.0  | 526.9  | 579.0  | 635.4  | 655.4  |
| 70°   | 435.1  | 457.2  | 510.3  | 566.8  | 586.7  |
| 72.5° | 363.1  | 386.3  | 440.6  | 498.2  | 517.0  |
| 75°   | 293.4  | 316.6  | 370.8  | 429.5  | 448.3  |
| 77.5° | 224.7  | 250.2  | 303.3  | 363.1  | 380.8  |
| 80°   | 162.7  | 187.1  | 236.9  | 295.6  | 315.5  |
| 82.5° | 104.1  | 125.1  | 174.9  | 230.3  | 244.6  |
| 85°   | 53.1   | 73.1   | 107.4  | 136.2  | 138.4  |
| 87.5° | 16.6   | 23.2   | 35.4   | 53.1   | 54.2   |
| 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 | 17.34            | 19.01 | 17.71 | 19.32 | 19.64 | 18.17          | 19.84 | 18.54 | 20.15 | 20.47 |
|                 | 3H   | 19.10            | 20.61 | 19.48 | 20.93 | 21.29 | 20.29          | 21.80 | 20.67 | 22.12 | 22.48 |
|                 | 4H   | 19.72            | 21.14 | 20.12 | 21.49 | 21.86 | 21.18          | 22.60 | 21.58 | 22.95 | 23.32 |
|                 | 6H   | 20.13            | 21.45 | 20.54 | 21.81 | 22.20 | 21.96          | 23.28 | 22.37 | 23.65 | 24.04 |
|                 | 8H   | 20.24            | 21.50 | 20.66 | 21.89 | 22.29 | 22.28          | 23.54 | 22.70 | 23.93 | 24.33 |
|                 | 12H  | 20.29            | 21.50 | 20.72 | 21.88 | 22.31 | 22.49          | 23.70 | 22.92 | 24.08 | 24.51 |
| 4H              | 2H   | 18.12            | 19.54 | 18.51 | 19.89 | 20.26 | 18.76          | 20.18 | 19.16 | 20.53 | 20.91 |
|                 | 3H   | 20.09            | 21.29 | 20.50 | 21.69 | 22.09 | 21.12          | 22.32 | 21.53 | 22.71 | 23.11 |
|                 | 4H   | 20.83            | 21.92 | 21.26 | 22.33 | 22.76 | 22.17          | 23.26 | 22.60 | 23.67 | 24.10 |
|                 | 6H   | 21.36            | 22.31 | 21.81 | 22.75 | 23.20 | 23.12          | 24.07 | 23.57 | 24.51 | 24.97 |
|                 | 8H   | 21.51            | 22.40 | 21.96 | 22.84 | 23.30 | 23.52          | 24.41 | 23.98 | 24.85 | 25.32 |
|                 | 12H  | 21.59            | 22.39 | 22.07 | 22.87 | 23.33 | 23.80          | 24.60 | 24.27 | 25.07 | 25.54 |
| 8H              | 4H   | 21.29            | 22.18 | 21.75 | 22.62 | 23.09 | 22.46          | 23.35 | 22.92 | 23.79 | 24.26 |
|                 | 6H   | 21.95            | 22.69 | 22.44 | 23.18 | 23.65 | 23.57          | 24.31 | 24.06 | 24.80 | 25.28 |
|                 | 8H   | 22.16            | 22.83 | 22.67 | 23.33 | 23.82 | 24.08          | 24.75 | 24.59 | 25.26 | 25.74 |
|                 | 12H  | 22.30            | 22.89 | 22.81 | 23.38 | 23.94 | 24.47          | 25.06 | 24.97 | 25.55 | 26.11 |
| 12H             | 4H   | 21.38            | 22.18 | 21.86 | 22.66 | 23.12 | 22.48          | 23.29 | 22.96 | 23.76 | 24.23 |
|                 | 6H   | 22.08            | 22.75 | 22.59 | 23.26 | 23.74 | 23.62          | 24.29 | 24.12 | 24.79 | 25.28 |
|                 | 8H   | 22.36            | 22.95 | 22.87 | 23.44 | 24.00 | 24.20          | 24.79 | 24.70 | 25.28 | 25.84 |