

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: P1586465

Luminaire Tested: 22CZSP-49HE-L935

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1586465  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2601-668-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/3/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 22CZSP-49HE-L935  
Description: 2x2 CZSP LED Luminaire, 3500K CCT and 4500 lumens, 90CRI, Ribbed Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

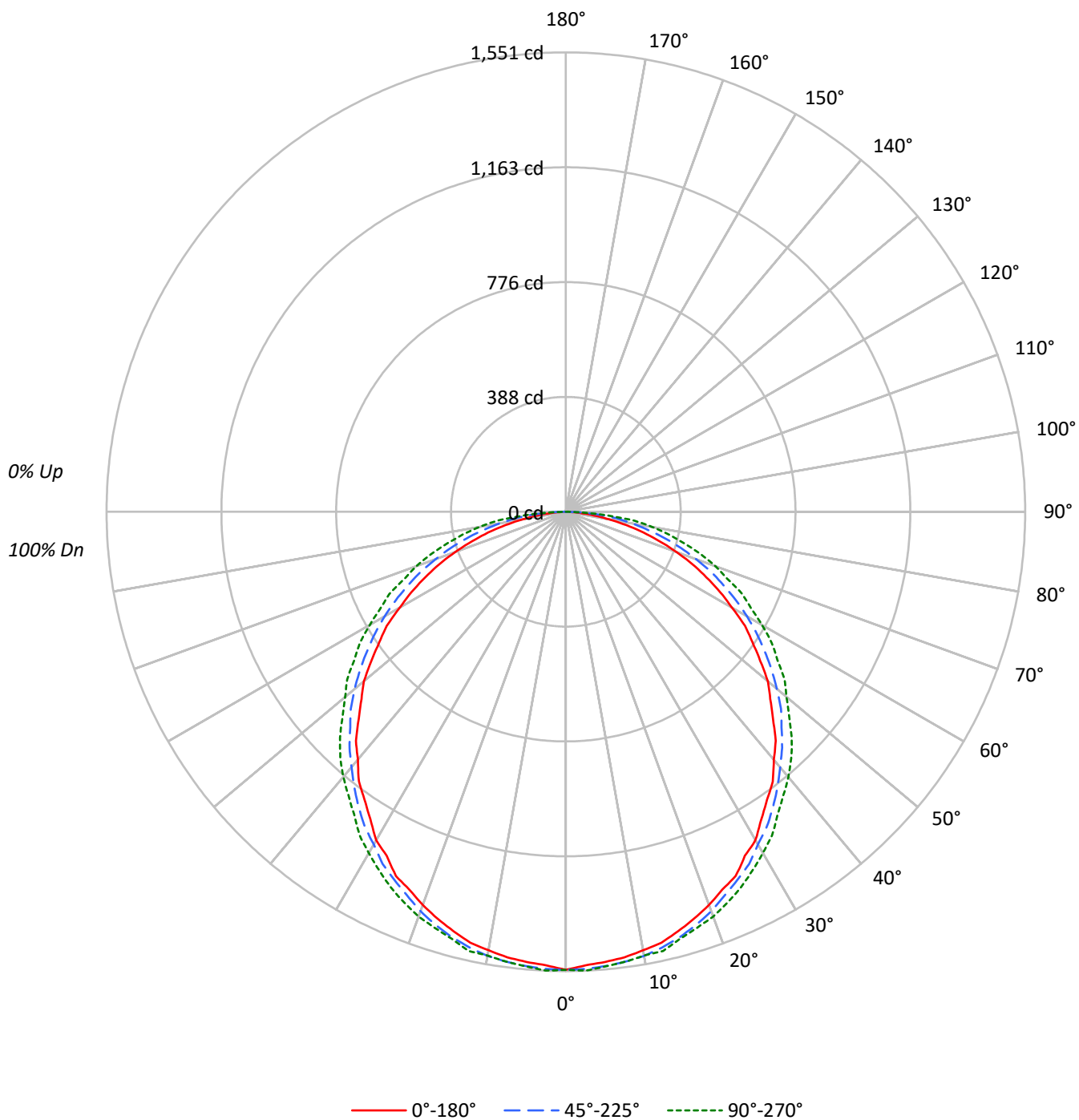
Lumens per Lamp: N/A  
Luminaire Lumens: 4555.0 lumens  
Efficiency: N/A  
Efficacy: 141.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.38  
Luminous Opening: Rectangular (W 1.88' x L: 1.83' x H: 0')  
CIE Type: Direct

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  | 50  | 30 | 10 |
| 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  | 105 | 101 | 97  | 93  | 97  | 93  | 90  | 93  | 90  | 87  | 89  | 87  | 85  | 83  |    |    |
| 2   | 98  | 90  | 82  | 76  | 95  | 88  | 81  | 76  | 84  | 79  | 74  | 81  | 76  | 72  | 78  | 74  | 70  | 68  |    |    |
| 3   | 89  | 78  | 70  | 63  | 87  | 77  | 69  | 63  | 74  | 67  | 62  | 71  | 65  | 60  | 68  | 64  | 59  | 57  |    |    |
| 4   | 82  | 69  | 60  | 53  | 79  | 68  | 59  | 53  | 65  | 58  | 52  | 63  | 57  | 51  | 61  | 55  | 51  | 49  |    |    |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 58  | 51  | 45  | 56  | 50  | 44  | 55  | 49  | 44  | 42  |    |    |
| 6   | 69  | 56  | 46  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 39  | 51  | 44  | 39  | 49  | 43  | 39  | 36  |    |    |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 48  | 40  | 35  | 46  | 40  | 34  | 45  | 39  | 34  | 32  |    |    |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 43  | 36  | 31  | 41  | 35  | 31  | 29  |    |    |
| 9   | 56  | 42  | 34  | 28  | 54  | 41  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |    |    |
| 10  | 52  | 39  | 31  | 25  | 51  | 38  | 31  | 25  | 37  | 30  | 25  | 36  | 30  | 25  | 35  | 29  | 25  | 23  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4843 | 4843 | 4843 |
| 5°  | 4795 | 4839 | 4843 |
| 10° | 4780 | 4842 | 4837 |
| 15° | 4751 | 4819 | 4837 |
| 20° | 4708 | 4782 | 4847 |
| 25° | 4688 | 4737 | 4833 |
| 30° | 4630 | 4690 | 4811 |
| 35° | 4532 | 4660 | 4766 |
| 40° | 4465 | 4601 | 4778 |
| 45° | 4381 | 4559 | 4775 |
| 50° | 4337 | 4534 | 4738 |
| 55° | 4199 | 4472 | 4762 |
| 60° | 4057 | 4424 | 4790 |
| 65° | 3881 | 4356 | 4872 |
| 70° | 3648 | 4273 | 4924 |
| 75° | 3287 | 4197 | 5023 |
| 80° | 2689 | 4120 | 5352 |
| 85° | 1753 | 4103 | 5005 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 5616 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 146.2  | 3.2       |
| 10°-20°   | 418.6  | 9.2       |
| 20°-30°   | 632.6  | 13.9      |
| 30°-40°   | 763.0  | 16.8      |
| 40°-50°   | 797.6  | 17.5      |
| 50°-60°   | 735.5  | 16.1      |
| 60°-70°   | 582.8  | 12.8      |
| 70°-80°   | 364.4  | 8.0       |
| 80°-90°   | 114.3  | 2.5       |
| 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°    | 1197.3 | 26.3      |
| 0°-40°    | 1960.3 | 43.0      |
| 0°-60°    | 3493.5 | 76.7      |
| 0°-90°    | 4555.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4555.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1546 | 1546  | 1546 | 1546  | 1546 |      |
| 5°  | 1526 | 1532  | 1540 | 1545  | 1541 | 145  |
| 15° | 1466 | 1473  | 1487 | 1496  | 1492 | 414  |
| 25° | 1357 | 1353  | 1371 | 1390  | 1399 | 622  |
| 35° | 1186 | 1200  | 1219 | 1240  | 1247 | 744  |
| 45° | 989  | 1003  | 1030 | 1056  | 1078 | 766  |
| 55° | 769  | 787   | 819  | 864   | 872  | 690  |
| 65° | 524  | 546   | 588  | 634   | 658  | 519  |
| 75° | 272  | 294   | 347  | 396   | 415  | 286  |
| 85° | 49   | 70    | 114  | 134   | 139  | 64   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1546.5 | 1546.5 | 1546.5 | 1546.5 | 1546.5 |
| 2.5°  | 1532.5 | 1539.5 | 1545.1 | 1543.7 | 1550.6 |
| 5°    | 1525.6 | 1532.5 | 1539.5 | 1545.1 | 1540.9 |
| 7.5°  | 1517.2 | 1524.2 | 1532.5 | 1540.9 | 1532.5 |
| 10°   | 1503.3 | 1507.5 | 1522.8 | 1524.2 | 1521.4 |
| 12.5° | 1490.7 | 1494.9 | 1506.1 | 1515.8 | 1518.6 |
| 15°   | 1465.7 | 1472.6 | 1486.6 | 1496.3 | 1492.1 |
| 17.5° | 1440.6 | 1450.3 | 1462.9 | 1472.6 | 1472.6 |
| 20°   | 1412.7 | 1419.7 | 1435.0 | 1442.0 | 1454.5 |
| 22.5° | 1380.7 | 1389.0 | 1401.6 | 1421.1 | 1428.0 |
| 25°   | 1357.0 | 1352.8 | 1370.9 | 1390.4 | 1398.8 |
| 27.5° | 1309.6 | 1315.2 | 1340.3 | 1358.4 | 1365.3 |
| 30°   | 1280.4 | 1283.1 | 1297.1 | 1322.2 | 1330.5 |
| 32.5° | 1228.8 | 1237.2 | 1262.2 | 1280.4 | 1295.7 |
| 35°   | 1185.6 | 1199.6 | 1219.1 | 1240.0 | 1246.9 |
| 37.5° | 1148.0 | 1150.8 | 1173.1 | 1200.9 | 1206.5 |
| 40°   | 1092.3 | 1109.0 | 1125.7 | 1160.5 | 1168.9 |
| 42.5° | 1049.1 | 1057.4 | 1081.1 | 1114.6 | 1127.1 |
| 45°   | 989.2  | 1003.1 | 1029.6 | 1056.1 | 1078.3 |
| 47.5° | 936.2  | 950.2  | 985.0  | 1018.4 | 1022.6 |
| 50°   | 890.3  | 895.8  | 930.7  | 968.3  | 972.5  |
| 52.5° | 827.6  | 841.5  | 874.9  | 916.7  | 930.7  |
| 55°   | 769.1  | 787.2  | 819.2  | 863.8  | 872.2  |
| 57.5° | 717.5  | 725.9  | 763.5  | 808.1  | 824.8  |
| 60°   | 647.8  | 671.5  | 706.4  | 749.5  | 764.9  |
| 62.5° | 587.9  | 610.2  | 647.8  | 688.2  | 705.0  |
| 65°   | 523.8  | 546.1  | 587.9  | 633.9  | 657.6  |
| 67.5° | 462.5  | 480.7  | 530.8  | 578.2  | 589.3  |
| 70°   | 398.5  | 419.4  | 466.7  | 515.5  | 537.8  |
| 72.5° | 331.6  | 355.3  | 408.2  | 454.2  | 477.9  |
| 75°   | 271.7  | 294.0  | 346.9  | 395.7  | 415.2  |
| 77.5° | 209.0  | 234.1  | 285.6  | 334.4  | 356.7  |
| 80°   | 149.1  | 174.2  | 228.5  | 277.2  | 296.8  |
| 82.5° | 96.1   | 122.6  | 174.2  | 217.3  | 234.1  |
| 85°   | 48.8   | 69.7   | 114.2  | 133.7  | 139.3  |
| 87.5° | 15.3   | 25.1   | 39.0   | 44.6   | 44.6   |
| 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 | 17.01            | 18.67 | 17.37 | 18.99 | 19.30 | 17.80          | 19.46 | 18.16 | 19.78 | 20.09 |
|                 | 3H   | 18.79            | 20.30 | 19.16 | 20.63 | 20.99 | 19.94          | 21.45 | 20.32 | 21.78 | 22.14 |
|                 | 4H   | 19.42            | 20.85 | 19.82 | 21.20 | 21.57 | 20.86          | 22.29 | 21.26 | 22.64 | 23.01 |
|                 | 6H   | 19.85            | 21.18 | 20.26 | 21.54 | 21.93 | 21.69          | 23.01 | 22.10 | 23.38 | 23.77 |
|                 | 8H   | 19.96            | 21.23 | 20.39 | 21.62 | 22.02 | 22.03          | 23.30 | 22.46 | 23.69 | 24.09 |
|                 | 12H  | 20.02            | 21.23 | 20.45 | 21.62 | 22.04 | 22.28          | 23.49 | 22.71 | 23.87 | 24.30 |
| 4H              | 2H   | 17.78            | 19.21 | 18.18 | 19.55 | 19.93 | 18.39          | 19.82 | 18.79 | 20.17 | 20.54 |
|                 | 3H   | 19.79            | 20.99 | 20.20 | 21.39 | 21.79 | 20.78          | 21.98 | 21.19 | 22.38 | 22.78 |
|                 | 4H   | 20.55            | 21.64 | 20.98 | 22.05 | 22.49 | 21.86          | 22.96 | 22.30 | 23.37 | 23.80 |
|                 | 6H   | 21.10            | 22.06 | 21.55 | 22.49 | 22.95 | 22.86          | 23.82 | 23.32 | 24.26 | 24.71 |
|                 | 8H   | 21.25            | 22.15 | 21.71 | 22.59 | 23.05 | 23.29          | 24.19 | 23.75 | 24.63 | 25.09 |
|                 | 12H  | 21.34            | 22.15 | 21.82 | 22.62 | 23.09 | 23.60          | 24.41 | 24.08 | 24.89 | 25.35 |
| 8H              | 4H   | 21.03            | 21.93 | 21.49 | 22.37 | 22.83 | 22.17          | 23.07 | 22.63 | 23.51 | 23.98 |
|                 | 6H   | 21.72            | 22.47 | 22.21 | 22.96 | 23.43 | 23.34          | 24.09 | 23.83 | 24.57 | 25.05 |
|                 | 8H   | 21.95            | 22.62 | 22.45 | 23.13 | 23.61 | 23.88          | 24.55 | 24.39 | 25.06 | 25.54 |
|                 | 12H  | 22.09            | 22.69 | 22.60 | 23.18 | 23.74 | 24.31          | 24.91 | 24.82 | 25.40 | 25.95 |
| 12H             | 4H   | 21.13            | 21.94 | 21.60 | 22.41 | 22.88 | 22.20          | 23.01 | 22.68 | 23.48 | 23.95 |
|                 | 6H   | 21.87            | 22.54 | 22.37 | 23.05 | 23.53 | 23.39          | 24.07 | 23.90 | 24.57 | 25.06 |
|                 | 8H   | 22.17            | 22.77 | 22.68 | 23.26 | 23.82 | 24.01          | 24.61 | 24.51 | 25.10 | 25.65 |