

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: P1584649

Luminaire Tested: 14CZSP-A-49HE-L945

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1584649  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2602-698-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/3/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 14CZSP-A-49HE-L945  
Description: 1x4 CZSP LED Luminaire, 4500K CCT and 4500 lumens, 90CRI, Ribbed Lens, Air Vented Housing  
Light Source: -  
Ballast/Driver: -

**Summary**

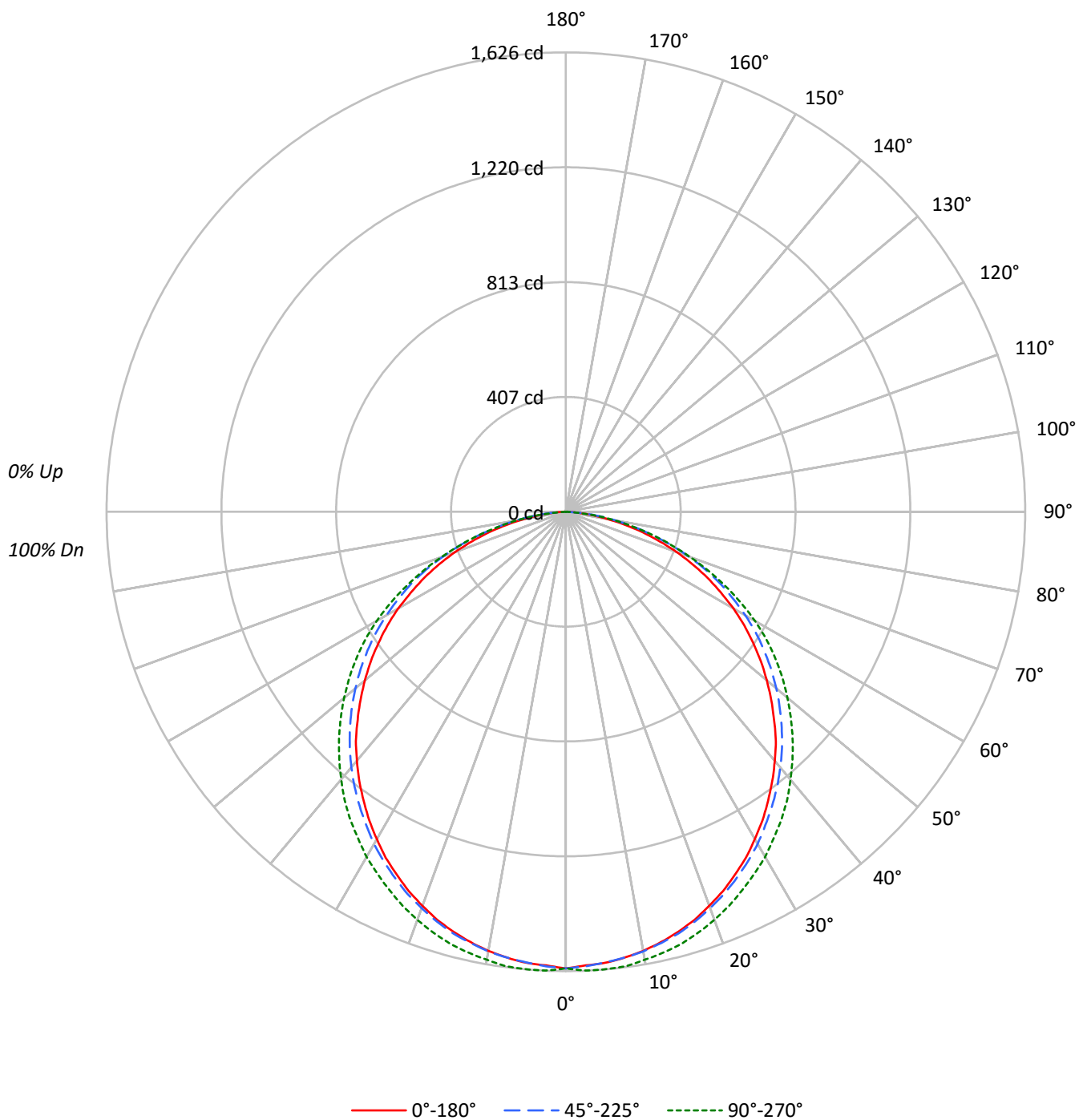
Lumens per Lamp: N/A  
Luminaire Lumens: 4656.0 lumens  
Efficiency: N/A  
Efficacy: 140.7 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 0.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.1  
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  |
| 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 | 102 | 102 | 100 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 94  | 97  | 94  | 91  | 94  | 91  | 88  | 90  | 88  | 86  | 86  | 86  | 84  |
| 2   | 99  | 90  | 84  | 78  | 96  | 89  | 82  | 77  | 85  | 80  | 75  | 82  | 77  | 73  | 79  | 75  | 72  | 72  | 72  | 70  |
| 3   | 90  | 79  | 71  | 65  | 87  | 78  | 70  | 64  | 75  | 68  | 63  | 72  | 66  | 62  | 69  | 65  | 61  | 61  | 61  | 58  |
| 4   | 82  | 70  | 61  | 55  | 80  | 69  | 61  | 54  | 66  | 59  | 53  | 64  | 58  | 53  | 62  | 56  | 52  | 52  | 52  | 50  |
| 5   | 76  | 63  | 54  | 47  | 73  | 61  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 46  | 55  | 50  | 45  | 45  | 45  | 43  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  | 40  | 40  | 37  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 40  | 35  | 46  | 40  | 35  | 35  | 35  | 33  |
| 8   | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 44  | 37  | 32  | 43  | 36  | 32  | 42  | 36  | 31  | 31  | 31  | 29  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 28  | 39  | 33  | 28  | 28  | 28  | 26  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 26  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5447 | 5447 | 5447 |
| 5°  | 5421 | 5416 | 5498 |
| 10° | 5400 | 5406 | 5510 |
| 15° | 5368 | 5389 | 5522 |
| 20° | 5321 | 5354 | 5512 |
| 25° | 5268 | 5319 | 5495 |
| 30° | 5206 | 5282 | 5490 |
| 35° | 5134 | 5234 | 5472 |
| 40° | 5061 | 5195 | 5443 |
| 45° | 4968 | 5149 | 5411 |
| 50° | 4867 | 5098 | 5370 |
| 55° | 4757 | 5034 | 5320 |
| 60° | 4616 | 4944 | 5211 |
| 65° | 4405 | 4817 | 4975 |
| 70° | 4108 | 4544 | 4619 |
| 75° | 3666 | 4102 | 4141 |
| 80° | 2982 | 3456 | 3427 |
| 85° | 1941 | 2412 | 1883 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 5411 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 153.1  | 3.3       |
| 10°-20°   | 438.7  | 9.4       |
| 20°-30°   | 664.4  | 14.3      |
| 30°-40°   | 802.6  | 17.2      |
| 40°-50°   | 838.4  | 18.0      |
| 50°-60°   | 767.7  | 16.5      |
| 60°-70°   | 589.9  | 12.7      |
| 70°-80°   | 328.5  | 7.1       |
| 80°-90°   | 72.7   | 1.6       |
| 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°    | 1256.2 | 27.0      |
| 0°-40°    | 2058.8 | 44.2      |
| 0°-60°    | 3664.9 | 78.7      |
| 0°-90°    | 4656.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4656.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1616 | 1616  | 1616 | 1616  | 1616 |      |
| 5°  | 1603 | 1619  | 1601 | 1610  | 1626 | 152  |
| 15° | 1539 | 1554  | 1545 | 1560  | 1583 | 434  |
| 25° | 1417 | 1434  | 1431 | 1452  | 1478 | 653  |
| 35° | 1248 | 1266  | 1272 | 1303  | 1330 | 781  |
| 45° | 1043 | 1065  | 1081 | 1113  | 1135 | 805  |
| 55° | 810  | 836   | 857  | 887   | 906  | 724  |
| 65° | 552  | 581   | 604  | 616   | 624  | 546  |
| 75° | 282  | 310   | 315  | 315   | 318  | 298  |
| 85° | 50   | 59    | 62   | 52    | 49   | 65   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1616.4 | 1616.4 | 1616.4 | 1616.4 | 1616.4 |
| 2.5°  | 1607.2 | 1622.5 | 1610.3 | 1614.9 | 1625.5 |
| 5°    | 1602.7 | 1619.4 | 1601.2 | 1610.3 | 1625.5 |
| 7.5°  | 1592.0 | 1607.2 | 1592.0 | 1602.7 | 1622.5 |
| 10°   | 1578.3 | 1595.1 | 1579.9 | 1590.5 | 1610.3 |
| 12.5° | 1560.1 | 1573.8 | 1563.1 | 1578.3 | 1598.1 |
| 15°   | 1538.8 | 1554.0 | 1544.8 | 1560.1 | 1582.9 |
| 17.5° | 1514.4 | 1528.1 | 1520.5 | 1540.3 | 1561.6 |
| 20°   | 1484.0 | 1499.2 | 1493.1 | 1512.9 | 1537.2 |
| 22.5° | 1453.5 | 1468.7 | 1464.2 | 1484.0 | 1509.8 |
| 25°   | 1417.0 | 1433.7 | 1430.7 | 1452.0 | 1477.9 |
| 27.5° | 1380.5 | 1397.2 | 1395.7 | 1420.0 | 1444.4 |
| 30°   | 1337.9 | 1354.6 | 1357.6 | 1383.5 | 1410.9 |
| 32.5° | 1295.2 | 1313.5 | 1315.0 | 1343.9 | 1369.8 |
| 35°   | 1248.1 | 1266.3 | 1272.4 | 1302.8 | 1330.2 |
| 37.5° | 1200.9 | 1219.1 | 1228.3 | 1257.2 | 1286.1 |
| 40°   | 1150.6 | 1170.4 | 1181.1 | 1211.5 | 1237.4 |
| 42.5° | 1100.4 | 1120.2 | 1132.4 | 1162.8 | 1187.2 |
| 45°   | 1042.6 | 1065.4 | 1080.6 | 1112.6 | 1135.4 |
| 47.5° | 986.3  | 1010.6 | 1027.4 | 1057.8 | 1080.6 |
| 50°   | 928.4  | 954.3  | 972.6  | 1003.0 | 1024.3 |
| 52.5° | 870.6  | 898.0  | 916.3  | 945.2  | 966.5  |
| 55°   | 809.7  | 835.6  | 856.9  | 887.3  | 905.6  |
| 57.5° | 748.8  | 774.7  | 797.5  | 824.9  | 841.7  |
| 60°   | 684.9  | 712.3  | 733.6  | 761.0  | 773.2  |
| 62.5° | 617.9  | 646.9  | 668.2  | 689.5  | 700.1  |
| 65°   | 552.5  | 581.4  | 604.2  | 616.4  | 624.0  |
| 67.5° | 485.5  | 514.4  | 535.7  | 541.8  | 546.4  |
| 70°   | 417.0  | 446.0  | 461.2  | 464.2  | 468.8  |
| 72.5° | 348.5  | 377.5  | 389.6  | 389.6  | 391.2  |
| 75°   | 281.6  | 310.5  | 315.1  | 315.1  | 318.1  |
| 77.5° | 216.1  | 242.0  | 245.0  | 245.0  | 245.0  |
| 80°   | 153.7  | 173.5  | 178.1  | 178.1  | 176.6  |
| 82.5° | 97.4   | 111.1  | 118.7  | 112.6  | 109.6  |
| 85°   | 50.2   | 59.4   | 62.4   | 51.7   | 48.7   |
| 87.5° | 15.2   | 18.3   | 15.2   | 9.1    | 7.6    |
| 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 | 17.63            | 19.28 | 18.00 | 19.59 | 19.91 | 18.14          | 19.79 | 18.50 | 20.10 | 20.41 |
|                 | 3H   | 19.40            | 20.89 | 19.78 | 21.22 | 21.58 | 19.94          | 21.43 | 20.31 | 21.75 | 22.11 |
|                 | 4H   | 20.03            | 21.43 | 20.43 | 21.78 | 22.15 | 20.57          | 21.97 | 20.97 | 22.32 | 22.69 |
|                 | 6H   | 20.43            | 21.73 | 20.84 | 22.10 | 22.49 | 20.99          | 22.29 | 21.40 | 22.65 | 23.05 |
|                 | 8H   | 20.53            | 21.77 | 20.95 | 22.16 | 22.56 | 21.09          | 22.34 | 21.52 | 22.73 | 23.12 |
|                 | 12H  | 20.57            | 21.77 | 21.00 | 22.15 | 22.58 | 21.13          | 22.32 | 21.56 | 22.71 | 23.14 |
| 4H              | 2H   | 18.35            | 19.76 | 18.75 | 20.11 | 20.48 | 18.75          | 20.15 | 19.15 | 20.50 | 20.88 |
|                 | 3H   | 20.35            | 21.52 | 20.76 | 21.92 | 22.32 | 20.76          | 21.94 | 21.17 | 22.34 | 22.74 |
|                 | 4H   | 21.11            | 22.17 | 21.54 | 22.58 | 23.02 | 21.51          | 22.58 | 21.95 | 22.99 | 23.43 |
|                 | 6H   | 21.63            | 22.56 | 22.08 | 23.00 | 23.45 | 22.05          | 22.98 | 22.51 | 23.42 | 23.88 |
|                 | 8H   | 21.76            | 22.63 | 22.22 | 23.07 | 23.54 | 22.19          | 23.06 | 22.65 | 23.51 | 23.97 |
|                 | 12H  | 21.83            | 22.61 | 22.31 | 23.09 | 23.56 | 22.26          | 23.04 | 22.74 | 23.52 | 23.99 |
| 8H              | 4H   | 21.44            | 22.31 | 21.90 | 22.75 | 23.21 | 21.80          | 22.67 | 22.26 | 23.11 | 23.58 |
|                 | 6H   | 22.07            | 22.79 | 22.56 | 23.28 | 23.76 | 22.44          | 23.16 | 22.93 | 23.65 | 24.13 |
|                 | 8H   | 22.26            | 22.91 | 22.77 | 23.42 | 23.90 | 22.64          | 23.28 | 23.14 | 23.79 | 24.27 |
|                 | 12H  | 22.39            | 22.96 | 22.89 | 23.45 | 24.01 | 22.74          | 23.31 | 23.25 | 23.80 | 24.36 |
| 12H             | 4H   | 21.47            | 22.25 | 21.95 | 22.73 | 23.19 | 21.82          | 22.61 | 22.30 | 23.08 | 23.55 |
|                 | 6H   | 22.12            | 22.77 | 22.63 | 23.28 | 23.76 | 22.48          | 23.13 | 22.99 | 23.64 | 24.12 |
|                 | 8H   | 22.36            | 22.94 | 22.87 | 23.43 | 23.99 | 22.72          | 23.30 | 23.23 | 23.79 | 24.35 |