

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: P1588554

Luminaire Tested: 24CZSP-80-L835-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1588554  
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: 24CZSP-80-L835-S  
Description: 2x4 CZSP LED Luminaire, 3500K CCT and 8000 lumens, 80CRI, Smooth Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

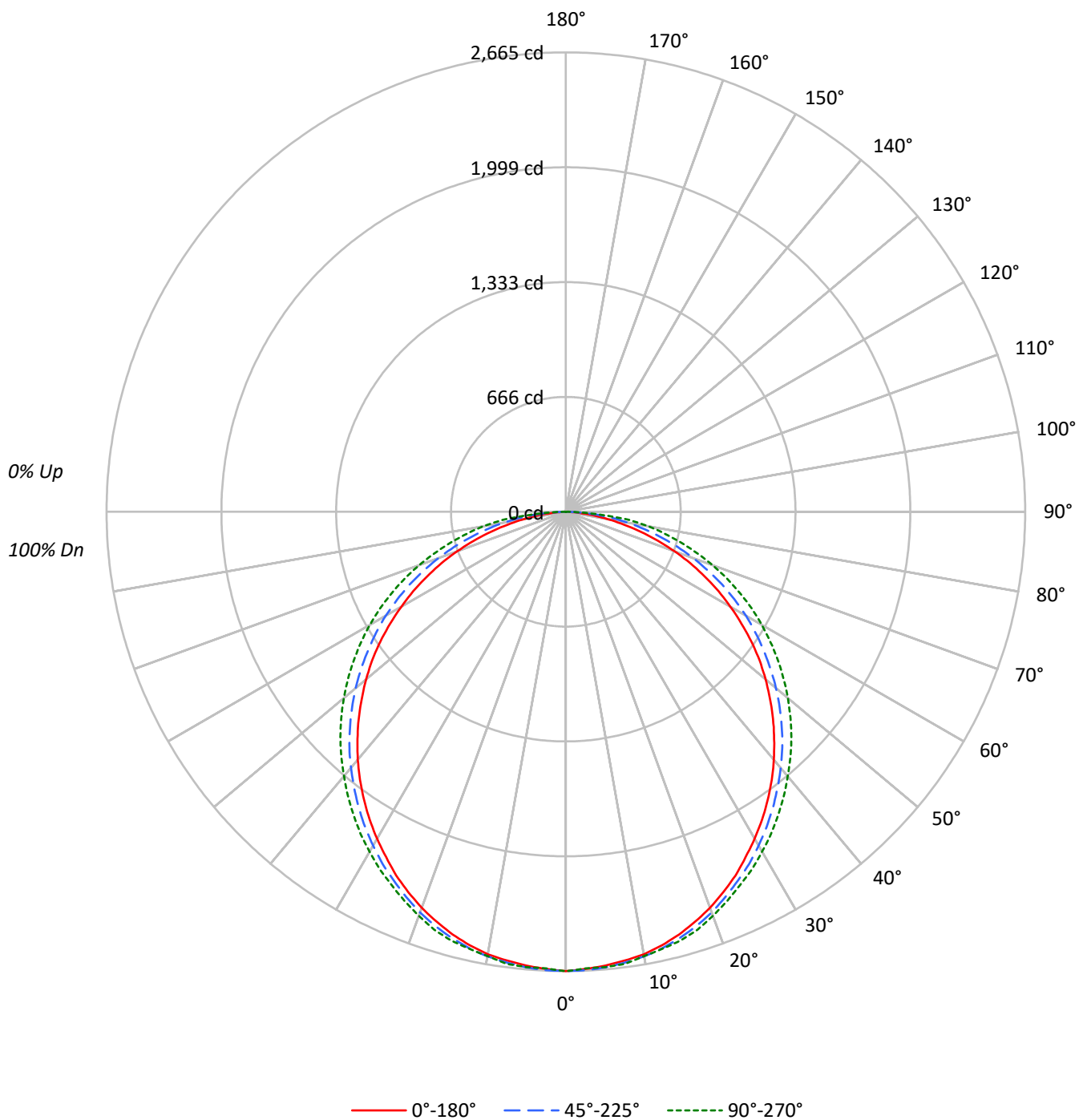
Lumens per Lamp: N/A  
Luminaire Lumens: 7780.0 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 62.7  
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  | 93  | 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  | 65  | 61  |  | 69  |
| 4   | 82  | 69  | 60  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 52  |  | 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  | 44  | 39  |  | 50  |
| 7   | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  | 48  | 40  | 35  |  | 47  | 40  | 35  |  | 45  |
| 8   | 60  | 46  | 37  | 32  | 58  | 45  | 37  | 31  | 44  | 37  | 31  |  | 43  | 36  | 31  |  | 42  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 40  | 33  | 28  |  | 39  | 33  | 28  |  | 38  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 26  | 37  | 30  | 25  |  | 37  | 30  | 25  |  | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4082 | 4082 | 4082 |
| 5°  | 4063 | 4079 | 4076 |
| 10° | 4054 | 4073 | 4070 |
| 15° | 4025 | 4058 | 4082 |
| 20° | 3985 | 4032 | 4065 |
| 25° | 3935 | 3990 | 4039 |
| 30° | 3874 | 3955 | 4028 |
| 35° | 3818 | 3917 | 4016 |
| 40° | 3755 | 3877 | 4004 |
| 45° | 3683 | 3838 | 4008 |
| 50° | 3604 | 3791 | 4007 |
| 55° | 3510 | 3738 | 4012 |
| 60° | 3378 | 3697 | 4021 |
| 65° | 3223 | 3626 | 4034 |
| 70° | 3004 | 3524 | 4052 |
| 75° | 2677 | 3384 | 4092 |
| 80° | 2214 | 3222 | 4291 |
| 85° | 1439 | 2910 | 3750 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 4427 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 252.0  | 3.2       |
| 10°-20°   | 721.7  | 9.3       |
| 20°-30°   | 1088.4 | 14.0      |
| 30°-40°   | 1310.9 | 16.8      |
| 40°-50°   | 1369.1 | 17.6      |
| 50°-60°   | 1257.3 | 16.2      |
| 60°-70°   | 990.3  | 12.7      |
| 70°-80°   | 607.5  | 7.8       |
| 80°-90°   | 182.8  | 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°    | 2062.0 | 26.5      |
| 0°-40°    | 3373.0 | 43.4      |
| 0°-60°    | 5999.3 | 77.1      |
| 0°-90°    | 7780.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7780.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2665 | 2665  | 2665 | 2665  | 2665 |      |
| 5°  | 2643 | 2646  | 2653 | 2661  | 2651 | 251  |
| 15° | 2538 | 2544  | 2559 | 2574  | 2574 | 716  |
| 25° | 2328 | 2334  | 2361 | 2390  | 2390 | 1072 |
| 35° | 2042 | 2052  | 2095 | 2137  | 2148 | 1277 |
| 45° | 1700 | 1719  | 1772 | 1834  | 1850 | 1311 |
| 55° | 1314 | 1338  | 1400 | 1478  | 1502 | 1173 |
| 65° | 889  | 920   | 1000 | 1084  | 1113 | 880  |
| 75° | 452  | 488   | 572  | 662   | 691  | 480  |
| 85° | 82   | 113   | 166  | 210   | 213  | 107  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2664.9 | 2664.9 | 2664.9 | 2664.9 | 2664.9 |
| 2.5°  | 2654.6 | 2659.7 | 2661.4 | 2663.2 | 2651.2 |
| 5°    | 2642.7 | 2646.1 | 2652.9 | 2661.4 | 2651.2 |
| 7.5°  | 2625.6 | 2629.0 | 2637.5 | 2649.5 | 2644.4 |
| 10°   | 2606.8 | 2608.5 | 2618.8 | 2627.3 | 2617.1 |
| 12.5° | 2576.1 | 2581.2 | 2593.2 | 2600.0 | 2596.6 |
| 15°   | 2538.5 | 2543.7 | 2559.0 | 2574.4 | 2574.4 |
| 17.5° | 2494.1 | 2501.0 | 2519.8 | 2540.2 | 2541.9 |
| 20°   | 2444.6 | 2449.8 | 2473.7 | 2494.1 | 2494.1 |
| 22.5° | 2388.3 | 2395.1 | 2419.0 | 2441.2 | 2444.6 |
| 25°   | 2328.5 | 2333.7 | 2361.0 | 2390.0 | 2390.0 |
| 27.5° | 2258.6 | 2268.8 | 2302.9 | 2332.0 | 2338.8 |
| 30°   | 2190.3 | 2198.8 | 2236.4 | 2272.2 | 2277.3 |
| 32.5° | 2118.6 | 2128.8 | 2168.1 | 2207.3 | 2215.9 |
| 35°   | 2041.7 | 2052.0 | 2094.7 | 2137.3 | 2147.6 |
| 37.5° | 1961.5 | 1973.5 | 2017.8 | 2067.4 | 2077.6 |
| 40°   | 1877.9 | 1891.5 | 1939.3 | 1992.2 | 2002.5 |
| 42.5° | 1789.1 | 1807.9 | 1859.1 | 1913.7 | 1929.1 |
| 45°   | 1700.3 | 1719.1 | 1772.0 | 1833.5 | 1850.5 |
| 47.5° | 1606.4 | 1628.6 | 1683.2 | 1748.1 | 1766.9 |
| 50°   | 1512.5 | 1534.7 | 1591.1 | 1661.1 | 1681.5 |
| 52.5° | 1416.9 | 1439.1 | 1497.2 | 1570.6 | 1592.8 |
| 55°   | 1314.5 | 1338.4 | 1399.9 | 1478.4 | 1502.3 |
| 57.5° | 1208.7 | 1239.4 | 1304.3 | 1384.5 | 1408.4 |
| 60°   | 1102.8 | 1133.5 | 1207.0 | 1285.5 | 1312.8 |
| 62.5° | 998.7  | 1027.7 | 1102.8 | 1186.5 | 1215.5 |
| 65°   | 889.4  | 920.2  | 1000.4 | 1084.0 | 1113.1 |
| 67.5° | 781.9  | 812.6  | 892.8  | 979.9  | 1010.6 |
| 70°   | 670.9  | 705.1  | 787.0  | 874.1  | 904.8  |
| 72.5° | 559.9  | 595.8  | 679.4  | 768.2  | 797.2  |
| 75°   | 452.4  | 488.2  | 571.9  | 662.4  | 691.4  |
| 77.5° | 346.6  | 385.8  | 467.8  | 559.9  | 587.3  |
| 80°   | 251.0  | 288.5  | 365.3  | 455.8  | 486.5  |
| 82.5° | 160.5  | 192.9  | 269.7  | 355.1  | 377.3  |
| 85°   | 81.9   | 112.7  | 165.6  | 210.0  | 213.4  |
| 87.5° | 25.6   | 35.9   | 54.6   | 81.9   | 83.7   |
| 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 | 16.36            | 18.03 | 16.73 | 18.34 | 18.66 | 17.19          | 18.86 | 17.56 | 19.17 | 19.49 |
|                 | 3H   | 18.12            | 19.63 | 18.50 | 19.95 | 20.31 | 19.31          | 20.82 | 19.69 | 21.14 | 21.50 |
|                 | 4H   | 18.74            | 20.16 | 19.14 | 20.51 | 20.88 | 20.20          | 21.62 | 20.60 | 21.97 | 22.34 |
|                 | 6H   | 19.15            | 20.47 | 19.56 | 20.83 | 21.22 | 20.98          | 22.30 | 21.39 | 22.67 | 23.06 |
|                 | 8H   | 19.26            | 20.52 | 19.68 | 20.91 | 21.31 | 21.30          | 22.56 | 21.73 | 22.95 | 23.35 |
|                 | 12H  | 19.31            | 20.52 | 19.74 | 20.90 | 21.33 | 21.51          | 22.72 | 21.94 | 23.10 | 23.53 |
| 4H              | 2H   | 17.14            | 18.56 | 17.53 | 18.91 | 19.28 | 17.78          | 19.21 | 18.18 | 19.55 | 19.93 |
|                 | 3H   | 19.11            | 20.31 | 19.52 | 20.71 | 21.11 | 20.14          | 21.34 | 20.55 | 21.73 | 22.13 |
|                 | 4H   | 19.85            | 20.94 | 20.28 | 21.35 | 21.78 | 21.19          | 22.28 | 21.62 | 22.69 | 23.12 |
|                 | 6H   | 20.38            | 21.33 | 20.83 | 21.77 | 22.22 | 22.14          | 23.09 | 22.59 | 23.53 | 23.99 |
|                 | 8H   | 20.53            | 21.42 | 20.98 | 21.86 | 22.32 | 22.54          | 23.43 | 23.00 | 23.87 | 24.34 |
|                 | 12H  | 20.61            | 21.41 | 21.09 | 21.89 | 22.36 | 22.82          | 23.62 | 23.30 | 24.09 | 24.56 |
| 8H              | 4H   | 20.31            | 21.20 | 20.77 | 21.64 | 22.11 | 21.48          | 22.37 | 21.94 | 22.81 | 23.28 |
|                 | 6H   | 20.97            | 21.72 | 21.46 | 22.20 | 22.68 | 22.59          | 23.34 | 23.08 | 23.82 | 24.30 |
|                 | 8H   | 21.18            | 21.85 | 21.69 | 22.35 | 22.84 | 23.10          | 23.77 | 23.61 | 24.28 | 24.76 |
|                 | 12H  | 21.32            | 21.91 | 21.83 | 22.40 | 22.96 | 23.49          | 24.08 | 23.99 | 24.57 | 25.13 |
| 12H             | 4H   | 20.40            | 21.20 | 20.88 | 21.68 | 22.15 | 21.50          | 22.31 | 21.98 | 22.78 | 23.25 |
|                 | 6H   | 21.10            | 21.77 | 21.61 | 22.28 | 22.76 | 22.64          | 23.31 | 23.14 | 23.81 | 24.30 |
|                 | 8H   | 21.38            | 21.97 | 21.89 | 22.46 | 23.02 | 23.22          | 23.81 | 23.72 | 24.30 | 24.86 |