

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: P1588456

Luminaire Tested: 24CZSP-65-L840-S

Issue Date: 9/3/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1588456  
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-65-L840-S  
Description: 2x4 CZSP LED Luminaire, 4000K CCT and 6000 lumens, 80CRI, Smooth Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

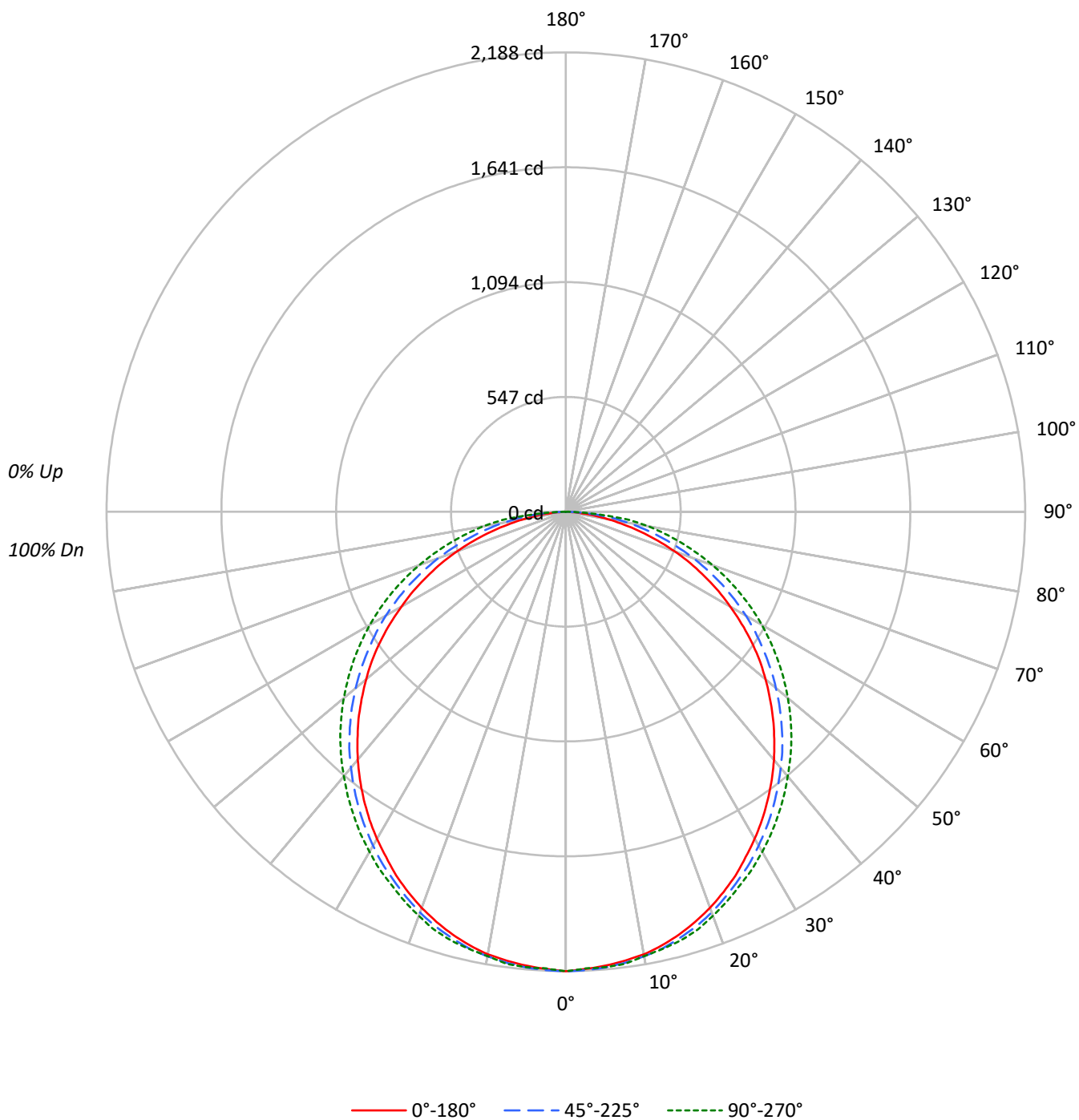
Lumens per Lamp: N/A  
Luminaire Lumens: 6389.0 lumens  
Efficiency: N/A  
Efficacy: 133.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 47.9  
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°  | 3352 | 3352 | 3352 |
| 5°  | 3337 | 3350 | 3347 |
| 10° | 3329 | 3345 | 3342 |
| 15° | 3306 | 3332 | 3352 |
| 20° | 3272 | 3311 | 3338 |
| 25° | 3232 | 3277 | 3317 |
| 30° | 3181 | 3248 | 3308 |
| 35° | 3135 | 3216 | 3298 |
| 40° | 3083 | 3184 | 3288 |
| 45° | 3024 | 3152 | 3292 |
| 50° | 2960 | 3113 | 3290 |
| 55° | 2883 | 3070 | 3294 |
| 60° | 2774 | 3036 | 3302 |
| 65° | 2647 | 2977 | 3313 |
| 70° | 2467 | 2894 | 3327 |
| 75° | 2198 | 2779 | 3360 |
| 80° | 1818 | 2646 | 3524 |
| 85° | 1183 | 2390 | 3079 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 82.5°

Luminance: 3635 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 207.0  | 3.2       |
| 10°-20°   | 592.6  | 9.3       |
| 20°-30°   | 893.8  | 14.0      |
| 30°-40°   | 1076.5 | 16.8      |
| 40°-50°   | 1124.3 | 17.6      |
| 50°-60°   | 1032.5 | 16.2      |
| 60°-70°   | 813.2  | 12.7      |
| 70°-80°   | 498.9  | 7.8       |
| 80°-90°   | 150.1  | 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°    | 1693.4 | 26.5      |
| 0°-40°    | 2769.9 | 43.4      |
| 0°-60°    | 4926.7 | 77.1      |
| 0°-90°    | 6389.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6389.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2188 | 2188  | 2188 | 2188  | 2188 |      |
| 5°  | 2170 | 2173  | 2179 | 2186  | 2177 | 206  |
| 15° | 2085 | 2089  | 2102 | 2114  | 2114 | 588  |
| 25° | 1912 | 1916  | 1939 | 1963  | 1963 | 880  |
| 35° | 1677 | 1685  | 1720 | 1755  | 1764 | 1049 |
| 45° | 1396 | 1412  | 1455 | 1506  | 1520 | 1077 |
| 55° | 1080 | 1099  | 1150 | 1214  | 1234 | 964  |
| 65° | 730  | 756   | 822  | 890   | 914  | 723  |
| 75° | 372  | 401   | 470  | 544   | 568  | 394  |
| 85° | 67   | 92    | 136  | 172   | 175  | 88   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2188.4 | 2188.4 | 2188.4 | 2188.4 | 2188.4 |
| 2.5°  | 2180.0 | 2184.2 | 2185.6 | 2187.0 | 2177.2 |
| 5°    | 2170.2 | 2173.0 | 2178.6 | 2185.6 | 2177.2 |
| 7.5°  | 2156.2 | 2159.0 | 2166.0 | 2175.8 | 2171.6 |
| 10°   | 2140.7 | 2142.1 | 2150.6 | 2157.6 | 2149.1 |
| 12.5° | 2115.5 | 2119.7 | 2129.5 | 2135.1 | 2132.3 |
| 15°   | 2084.7 | 2088.9 | 2101.5 | 2114.1 | 2114.1 |
| 17.5° | 2048.2 | 2053.8 | 2069.2 | 2086.1 | 2087.5 |
| 20°   | 2007.6 | 2011.8 | 2031.4 | 2048.2 | 2048.2 |
| 22.5° | 1961.3 | 1966.9 | 1986.5 | 2004.8 | 2007.6 |
| 25°   | 1912.2 | 1916.4 | 1938.9 | 1962.7 | 1962.7 |
| 27.5° | 1854.7 | 1863.2 | 1891.2 | 1915.0 | 1920.6 |
| 30°   | 1798.7 | 1805.7 | 1836.5 | 1866.0 | 1870.2 |
| 32.5° | 1739.8 | 1748.2 | 1780.4 | 1812.7 | 1819.7 |
| 35°   | 1676.7 | 1685.1 | 1720.2 | 1755.2 | 1763.6 |
| 37.5° | 1610.8 | 1620.6 | 1657.1 | 1697.7 | 1706.1 |
| 40°   | 1542.1 | 1553.3 | 1592.6 | 1636.0 | 1644.5 |
| 42.5° | 1469.2 | 1484.6 | 1526.7 | 1571.6 | 1584.2 |
| 45°   | 1396.3 | 1411.7 | 1455.2 | 1505.7 | 1519.7 |
| 47.5° | 1319.2 | 1337.4 | 1382.3 | 1435.6 | 1451.0 |
| 50°   | 1242.1 | 1260.3 | 1306.6 | 1364.1 | 1380.9 |
| 52.5° | 1163.6 | 1181.8 | 1229.5 | 1289.8 | 1308.0 |
| 55°   | 1079.5 | 1099.1 | 1149.6 | 1214.1 | 1233.7 |
| 57.5° | 992.6  | 1017.8 | 1071.1 | 1137.0 | 1156.6 |
| 60°   | 905.6  | 930.9  | 991.2  | 1055.6 | 1078.1 |
| 62.5° | 820.1  | 844.0  | 905.6  | 974.3  | 998.2  |
| 65°   | 730.4  | 755.6  | 821.5  | 890.2  | 914.1  |
| 67.5° | 642.1  | 667.3  | 733.2  | 804.7  | 829.9  |
| 70°   | 551.0  | 579.0  | 646.3  | 717.8  | 743.0  |
| 72.5° | 459.8  | 489.3  | 558.0  | 630.9  | 654.7  |
| 75°   | 371.5  | 401.0  | 469.6  | 543.9  | 567.8  |
| 77.5° | 284.6  | 316.8  | 384.1  | 459.8  | 482.3  |
| 80°   | 206.1  | 236.9  | 300.0  | 374.3  | 399.5  |
| 82.5° | 131.8  | 158.4  | 221.5  | 291.6  | 309.8  |
| 85°   | 67.3   | 92.5   | 136.0  | 172.4  | 175.2  |
| 87.5° | 21.0   | 29.4   | 44.9   | 67.3   | 68.7   |
| 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 | 15.68            | 17.34 | 16.05 | 17.66 | 17.97 | 16.51          | 18.17 | 16.88 | 18.49 | 18.80 |
|                 | 3H   | 17.44            | 18.94 | 17.81 | 19.27 | 19.63 | 18.63          | 20.13 | 19.00 | 20.46 | 20.82 |
|                 | 4H   | 18.05            | 19.48 | 18.45 | 19.82 | 20.20 | 19.52          | 20.94 | 19.91 | 21.29 | 21.66 |
|                 | 6H   | 18.47            | 19.79 | 18.88 | 20.15 | 20.54 | 20.30          | 21.62 | 20.71 | 21.98 | 22.37 |
|                 | 8H   | 18.57            | 19.84 | 19.00 | 20.22 | 20.62 | 20.62          | 21.88 | 21.04 | 22.27 | 22.67 |
|                 | 12H  | 18.62            | 19.84 | 19.05 | 20.22 | 20.65 | 20.83          | 22.04 | 21.26 | 22.42 | 22.85 |
| 4H              | 2H   | 16.45            | 17.87 | 16.85 | 18.22 | 18.60 | 17.10          | 18.52 | 17.50 | 18.87 | 19.24 |
|                 | 3H   | 18.43            | 19.63 | 18.84 | 20.02 | 20.42 | 19.45          | 20.65 | 19.86 | 21.05 | 21.45 |
|                 | 4H   | 19.17            | 20.25 | 19.60 | 20.66 | 21.10 | 20.51          | 21.59 | 20.94 | 22.00 | 22.44 |
|                 | 6H   | 19.69            | 20.65 | 20.15 | 21.09 | 21.54 | 21.46          | 22.41 | 21.91 | 22.85 | 23.30 |
|                 | 8H   | 19.84            | 20.73 | 20.30 | 21.17 | 21.64 | 21.86          | 22.75 | 22.31 | 23.19 | 23.65 |
|                 | 12H  | 19.92            | 20.73 | 20.40 | 21.20 | 21.67 | 22.13          | 22.94 | 22.61 | 23.41 | 23.88 |
| 8H              | 4H   | 19.63            | 20.52 | 20.08 | 20.96 | 21.42 | 20.79          | 21.69 | 21.25 | 22.13 | 22.59 |
|                 | 6H   | 20.29            | 21.03 | 20.78 | 21.52 | 21.99 | 21.91          | 22.65 | 22.40 | 23.14 | 23.61 |
|                 | 8H   | 20.50            | 21.17 | 21.00 | 21.67 | 22.15 | 22.42          | 23.09 | 22.93 | 23.59 | 24.08 |
|                 | 12H  | 20.64            | 21.23 | 21.14 | 21.72 | 22.28 | 22.80          | 23.40 | 23.31 | 23.88 | 24.44 |
| 12H             | 4H   | 19.71            | 20.52 | 20.19 | 20.99 | 21.46 | 20.82          | 21.62 | 21.30 | 22.10 | 22.57 |
|                 | 6H   | 20.42            | 21.09 | 20.93 | 21.59 | 22.08 | 21.95          | 22.62 | 22.46 | 23.13 | 23.61 |
|                 | 8H   | 20.70            | 21.29 | 21.20 | 21.78 | 22.34 | 22.53          | 23.12 | 23.04 | 23.61 | 24.17 |