

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P259371

Luminaire Tested: **22CZ-LD5-44-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259371  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-44-UNV-L92765-W2A1-U-4500K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4003.0 lumens  
Efficiency: N/A  
Efficacy: 113.6 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

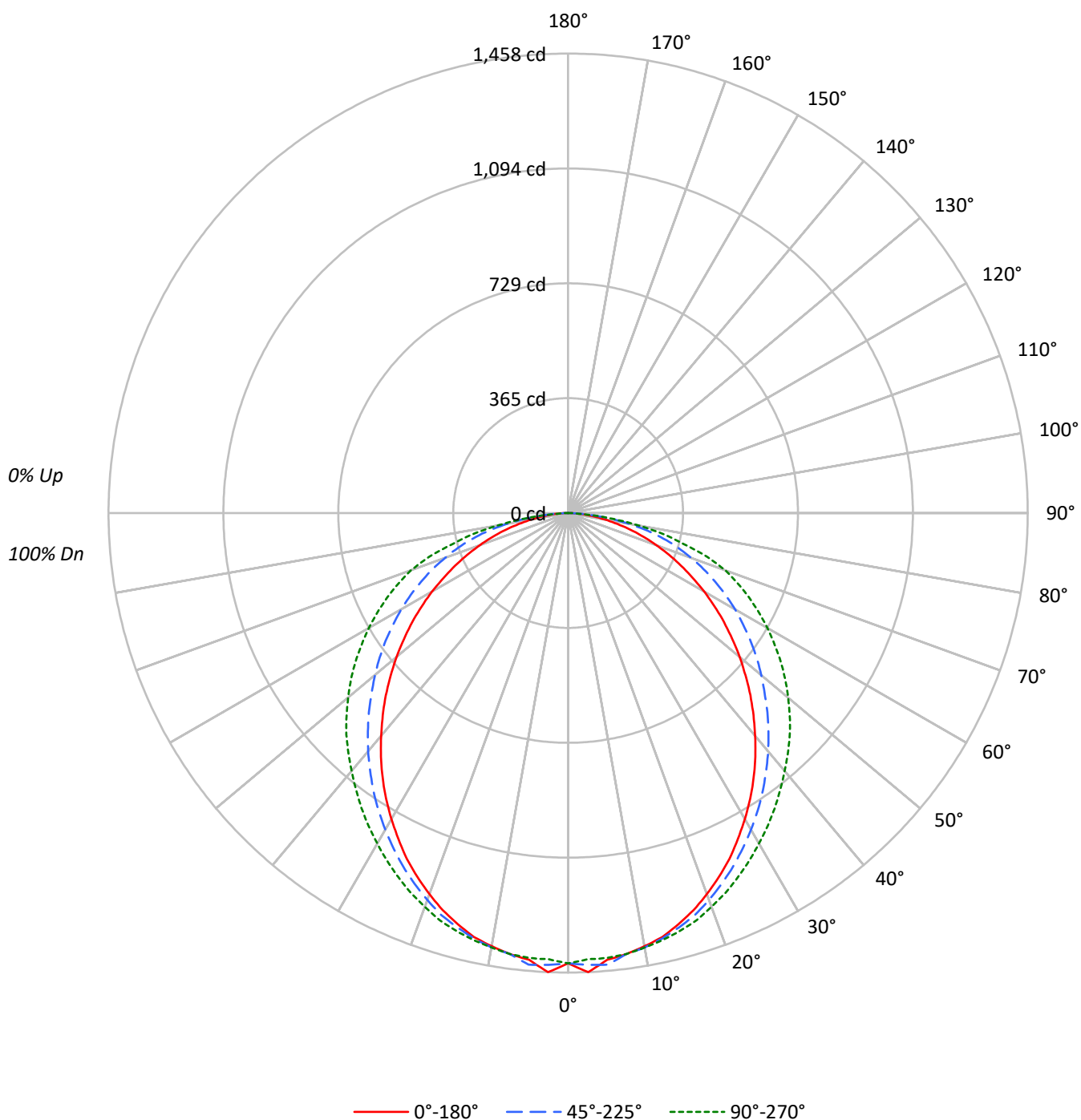
Input Watts (W): 35.247  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 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 |  | 100 |
| 1   | 108 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  |  | 93  | 90  | 88  |  | 83  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 84  | 79  | 74  |  | 81  | 77  | 73  |  | 69  |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 68  | 62  |  | 71  | 66  | 61  |  | 58  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  |  | 57  | 50  | 45  |  | 43  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  | 53  | 46  | 40  |  | 52  | 45  | 40  |  | 37  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 38  | 32  | 44  | 37  | 32  |  | 43  | 36  | 31  |  | 29  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  |  | 40  | 33  | 28  |  | 26  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  |  | 37  | 30  | 26  |  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3845 | 3845 | 3845 |
| 5°  | 3844 | 3886 | 3828 |
| 10° | 3814 | 3824 | 3824 |
| 15° | 3763 | 3791 | 3823 |
| 20° | 3685 | 3741 | 3807 |
| 25° | 3595 | 3676 | 3786 |
| 30° | 3484 | 3605 | 3762 |
| 35° | 3370 | 3536 | 3754 |
| 40° | 3241 | 3467 | 3754 |
| 45° | 3111 | 3400 | 3785 |
| 50° | 2974 | 3350 | 3814 |
| 55° | 2831 | 3315 | 3863 |
| 60° | 2682 | 3289 | 3929 |
| 65° | 2516 | 3272 | 4028 |
| 70° | 2343 | 3262 | 4166 |
| 75° | 2125 | 3258 | 3947 |
| 80° | 1839 | 3017 | 3499 |
| 85° | 1562 | 2285 | 2223 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 135.5  | 3.4       |
| 10°-20°   | 383.9  | 9.6       |
| 20°-30°   | 571.0  | 14.3      |
| 30°-40°   | 675.4  | 16.9      |
| 40°-50°   | 694.2  | 17.3      |
| 50°-60°   | 634.3  | 15.8      |
| 60°-70°   | 507.4  | 12.7      |
| 70°-80°   | 318.4  | 8.0       |
| 80°-90°   | 82.9   | 2.1       |
| 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°    | 1090.4 | 27.2      |
| 0°-40°    | 1765.8 | 44.1      |
| 0°-60°    | 3094.2 | 77.3      |
| 0°-90°    | 4003.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4003.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1429 | 1429  | 1429 | 1429  | 1429 |      |
| 5°  | 1423 | 1423  | 1438 | 1429  | 1417 | 135  |
| 15° | 1351 | 1353  | 1361 | 1368  | 1372 | 381  |
| 25° | 1211 | 1219  | 1238 | 1260  | 1275 | 557  |
| 35° | 1026 | 1040  | 1076 | 1117  | 1143 | 641  |
| 45° | 818  | 839   | 894  | 960   | 995  | 630  |
| 55° | 603  | 633   | 707  | 784   | 823  | 540  |
| 65° | 395  | 430   | 514  | 592   | 633  | 392  |
| 75° | 204  | 243   | 313  | 360   | 380  | 217  |
| 85° | 51   | 64    | 74   | 72    | 72   | 59   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1428.8 | 1428.8 | 1428.8 | 1428.8 | 1428.8 |
| 2.5°  | 1458.0 | 1452.2 | 1434.6 | 1423.0 | 1417.1 |
| 5°    | 1423.0 | 1423.0 | 1438.5 | 1428.8 | 1417.1 |
| 7.5°  | 1411.3 | 1411.3 | 1411.3 | 1440.5 | 1411.3 |
| 10°   | 1395.7 | 1397.7 | 1399.6 | 1411.3 | 1399.6 |
| 12.5° | 1378.2 | 1378.2 | 1382.1 | 1386.0 | 1387.9 |
| 15°   | 1350.9 | 1352.9 | 1360.7 | 1368.5 | 1372.4 |
| 17.5° | 1321.7 | 1327.6 | 1337.3 | 1347.0 | 1354.8 |
| 20°   | 1286.7 | 1294.5 | 1306.2 | 1321.7 | 1329.5 |
| 22.5° | 1249.7 | 1257.5 | 1273.1 | 1290.6 | 1304.2 |
| 25°   | 1210.8 | 1218.6 | 1238.0 | 1259.5 | 1275.0 |
| 27.5° | 1166.0 | 1175.7 | 1199.1 | 1228.3 | 1243.9 |
| 30°   | 1121.2 | 1132.9 | 1160.2 | 1193.3 | 1210.8 |
| 32.5° | 1074.5 | 1088.2 | 1119.3 | 1156.3 | 1177.7 |
| 35°   | 1025.9 | 1039.5 | 1076.5 | 1117.3 | 1142.7 |
| 37.5° | 975.2  | 990.8  | 1031.7 | 1078.4 | 1105.7 |
| 40°   | 922.7  | 940.2  | 986.9  | 1037.5 | 1068.7 |
| 42.5° | 870.1  | 889.6  | 940.2  | 1000.6 | 1031.7 |
| 45°   | 817.6  | 839.0  | 893.5  | 959.7  | 994.7  |
| 47.5° | 763.1  | 788.4  | 844.8  | 918.8  | 953.8  |
| 50°   | 710.5  | 735.8  | 800.1  | 876.0  | 911.0  |
| 52.5° | 656.0  | 685.2  | 753.3  | 831.2  | 868.2  |
| 55°   | 603.4  | 632.6  | 706.6  | 784.5  | 823.4  |
| 57.5° | 550.9  | 580.1  | 658.0  | 737.8  | 776.7  |
| 60°   | 498.3  | 529.5  | 611.2  | 689.1  | 730.0  |
| 62.5° | 445.8  | 478.9  | 562.6  | 642.4  | 681.3  |
| 65°   | 395.2  | 430.2  | 513.9  | 591.8  | 632.6  |
| 67.5° | 346.5  | 383.5  | 465.2  | 541.2  | 582.0  |
| 70°   | 297.8  | 334.8  | 414.6  | 488.6  | 529.5  |
| 72.5° | 251.1  | 288.1  | 366.0  | 432.1  | 463.3  |
| 75°   | 204.4  | 243.3  | 313.4  | 360.1  | 379.6  |
| 77.5° | 159.6  | 198.6  | 258.9  | 290.0  | 311.5  |
| 80°   | 118.7  | 151.8  | 194.7  | 218.0  | 225.8  |
| 82.5° | 81.8   | 109.0  | 136.3  | 142.1  | 146.0  |
| 85°   | 50.6   | 64.2   | 74.0   | 72.0   | 72.0   |
| 87.5° | 23.4   | 25.3   | 21.4   | 15.6   | 9.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)