

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: P260874

Luminaire Tested: **24CZ-LD5-50-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260874  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-50-UNV-L92765-W2A1-U-3000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (336) 90 CRI LEDS TUNED AT 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4095.0 lumens  
Efficiency: N/A  
Efficacy: 115.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

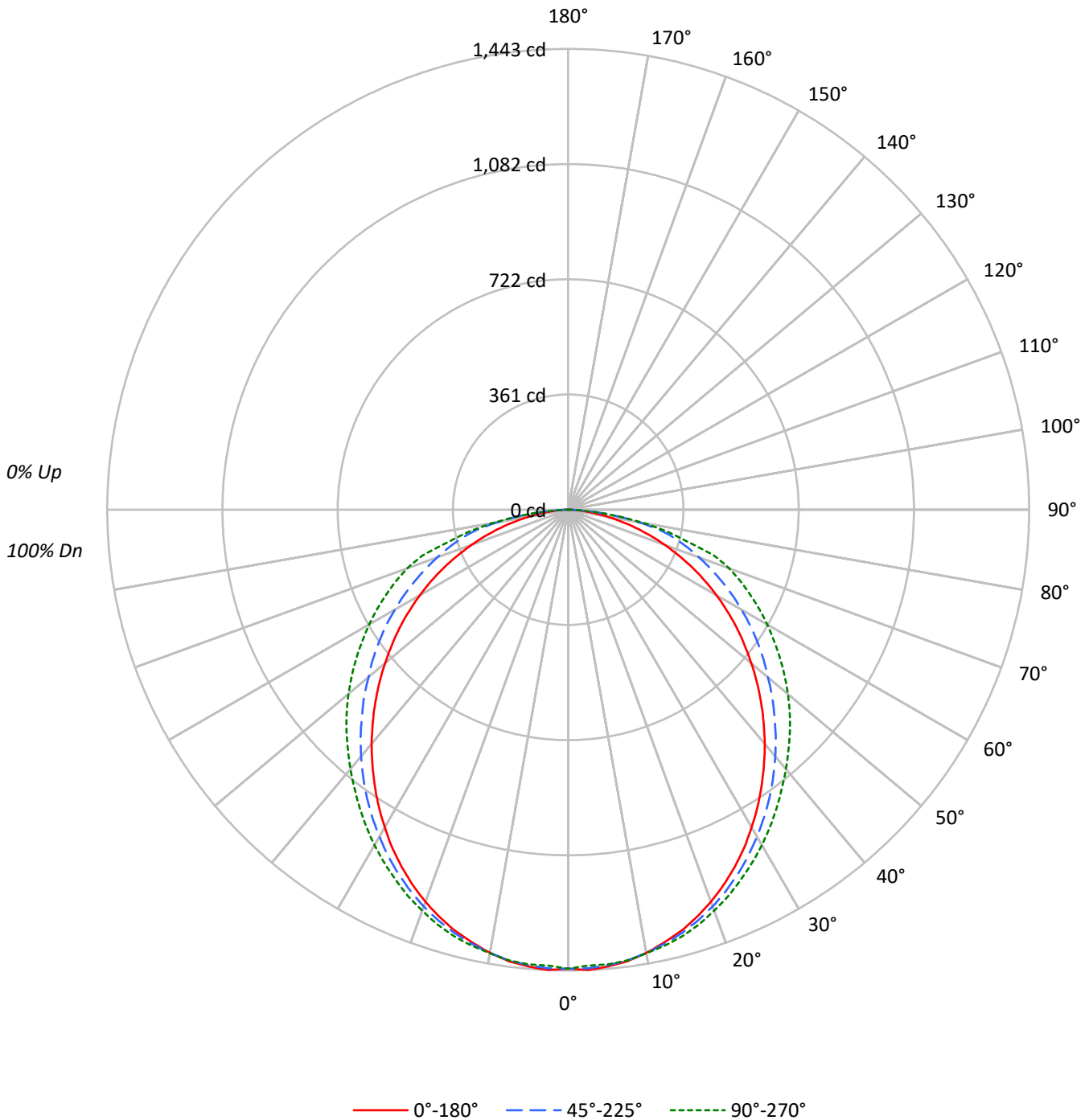
Input Watts (W): 35.34  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |     | 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  | 95  | 88  | 81  | 76  | 84  | 79  | 74  | 81  | 76  | 72  | 78  | 74  | 71  | 68  |
| 3   | 89  | 78  | 70  | 63  | 87  | 77  | 69  | 63  | 74  | 67  | 62  | 71  | 65  | 61  | 68  | 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  | 51  | 42  | 35  | 63  | 50  | 41  | 35  | 48  | 41  | 35  | 47  | 40  | 35  | 45  | 39  | 35  | 32  |
| 8   | 60  | 46  | 38  | 32  | 58  | 45  | 37  | 32  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 41  | 33  | 28  | 40  | 33  | 28  | 38  | 32  | 28  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 25  | 36  | 30  | 25  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1934 | 1934 | 1934 |
| 5°  | 1939 | 1933 | 1930 |
| 10° | 1925 | 1925 | 1927 |
| 15° | 1902 | 1912 | 1926 |
| 20° | 1871 | 1893 | 1913 |
| 25° | 1832 | 1867 | 1898 |
| 30° | 1784 | 1836 | 1884 |
| 35° | 1734 | 1805 | 1870 |
| 40° | 1682 | 1771 | 1862 |
| 45° | 1625 | 1737 | 1868 |
| 50° | 1567 | 1708 | 1878 |
| 55° | 1510 | 1697 | 1898 |
| 60° | 1441 | 1686 | 1936 |
| 65° | 1366 | 1687 | 2000 |
| 70° | 1263 | 1715 | 2107 |
| 75° | 1130 | 1793 | 2005 |
| 80° | 945  | 1716 | 1836 |
| 85° | 715  | 1320 | 1255 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 135.8  | 3.3       |
| 10°-20°   | 386.5  | 9.4       |
| 20°-30°   | 577.8  | 14.1      |
| 30°-40°   | 685.5  | 16.7      |
| 40°-50°   | 705.5  | 17.2      |
| 50°-60°   | 647.2  | 15.8      |
| 60°-70°   | 523.3  | 12.8      |
| 70°-80°   | 339.6  | 8.3       |
| 80°-90°   | 93.6   | 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°    | 1100.1 | 26.9      |
| 0°-40°    | 1785.6 | 43.6      |
| 0°-60°    | 3138.4 | 76.6      |
| 0°-90°    | 4095.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4095.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1437 | 1437  | 1437 | 1437  | 1437 |      |
| 5°  | 1436 | 1426  | 1432 | 1430  | 1429 | 136  |
| 15° | 1366 | 1360  | 1373 | 1378  | 1382 | 385  |
| 25° | 1234 | 1235  | 1258 | 1269  | 1279 | 568  |
| 35° | 1056 | 1064  | 1099 | 1123  | 1138 | 660  |
| 45° | 854  | 868   | 913  | 956   | 982  | 659  |
| 55° | 644  | 663   | 724  | 782   | 809  | 575  |
| 65° | 429  | 454   | 530  | 600   | 628  | 424  |
| 75° | 217  | 258   | 345  | 386   | 386  | 231  |
| 85° | 46   | 78    | 86   | 83    | 81   | 57   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1437.1 | 1437.1 | 1437.1 | 1437.1 | 1437.1 |
| 2.5°  | 1442.7 | 1431.5 | 1437.1 | 1435.7 | 1428.7 |
| 5°    | 1435.7 | 1425.9 | 1431.5 | 1430.1 | 1428.7 |
| 7.5°  | 1425.9 | 1416.1 | 1423.1 | 1421.7 | 1423.1 |
| 10°   | 1409.1 | 1400.7 | 1409.1 | 1410.5 | 1410.5 |
| 12.5° | 1388.1 | 1381.0 | 1392.3 | 1395.1 | 1397.9 |
| 15°   | 1365.6 | 1360.0 | 1372.6 | 1378.2 | 1382.5 |
| 17.5° | 1337.6 | 1333.4 | 1348.8 | 1355.8 | 1361.4 |
| 20°   | 1306.7 | 1305.3 | 1322.2 | 1329.2 | 1336.2 |
| 22.5° | 1271.7 | 1271.7 | 1291.3 | 1299.7 | 1309.5 |
| 25°   | 1233.8 | 1235.2 | 1257.7 | 1268.9 | 1278.7 |
| 27.5° | 1193.2 | 1194.6 | 1221.2 | 1235.2 | 1246.4 |
| 30°   | 1148.3 | 1153.9 | 1182.0 | 1200.2 | 1212.8 |
| 32.5° | 1103.4 | 1110.4 | 1141.3 | 1162.3 | 1176.3 |
| 35°   | 1055.8 | 1064.2 | 1099.2 | 1123.1 | 1138.5 |
| 37.5° | 1006.7 | 1016.5 | 1054.4 | 1081.0 | 1099.2 |
| 40°   | 957.6  | 968.8  | 1008.1 | 1038.9 | 1060.0 |
| 42.5° | 905.7  | 918.4  | 961.8  | 998.3  | 1020.7 |
| 45°   | 853.9  | 867.9  | 912.8  | 956.2  | 981.5  |
| 47.5° | 802.0  | 818.8  | 866.5  | 914.2  | 940.8  |
| 50°   | 748.7  | 765.5  | 816.0  | 870.7  | 897.3  |
| 52.5° | 695.4  | 715.1  | 771.1  | 827.2  | 853.9  |
| 55°   | 643.6  | 663.2  | 723.5  | 782.4  | 809.0  |
| 57.5° | 590.3  | 609.9  | 675.8  | 737.5  | 764.1  |
| 60°   | 535.6  | 558.0  | 626.7  | 689.8  | 719.3  |
| 62.5° | 482.3  | 506.2  | 579.1  | 646.4  | 674.4  |
| 65°   | 429.0  | 454.3  | 530.0  | 600.1  | 628.1  |
| 67.5° | 374.4  | 403.8  | 482.3  | 553.8  | 583.3  |
| 70°   | 321.1  | 353.3  | 436.0  | 507.6  | 535.6  |
| 72.5° | 269.2  | 304.3  | 389.8  | 462.7  | 479.5  |
| 75°   | 217.3  | 258.0  | 344.9  | 385.6  | 385.6  |
| 77.5° | 168.2  | 213.1  | 294.4  | 309.9  | 318.3  |
| 80°   | 122.0  | 171.1  | 221.5  | 239.8  | 237.0  |
| 82.5° | 81.3   | 130.4  | 158.4  | 158.4  | 154.2  |
| 85°   | 46.3   | 78.5   | 85.5   | 82.7   | 81.3   |
| 87.5° | 19.6   | 29.4   | 26.6   | 21.0   | 18.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)