

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: P#

Luminaire Tested: **24CZ-LD5-70-S-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-70-S-UNV-L850-CD1-U  
Description: CRUZE 2x4 LED TROFFER

Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7972.4 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')  
CIE Type: Direct

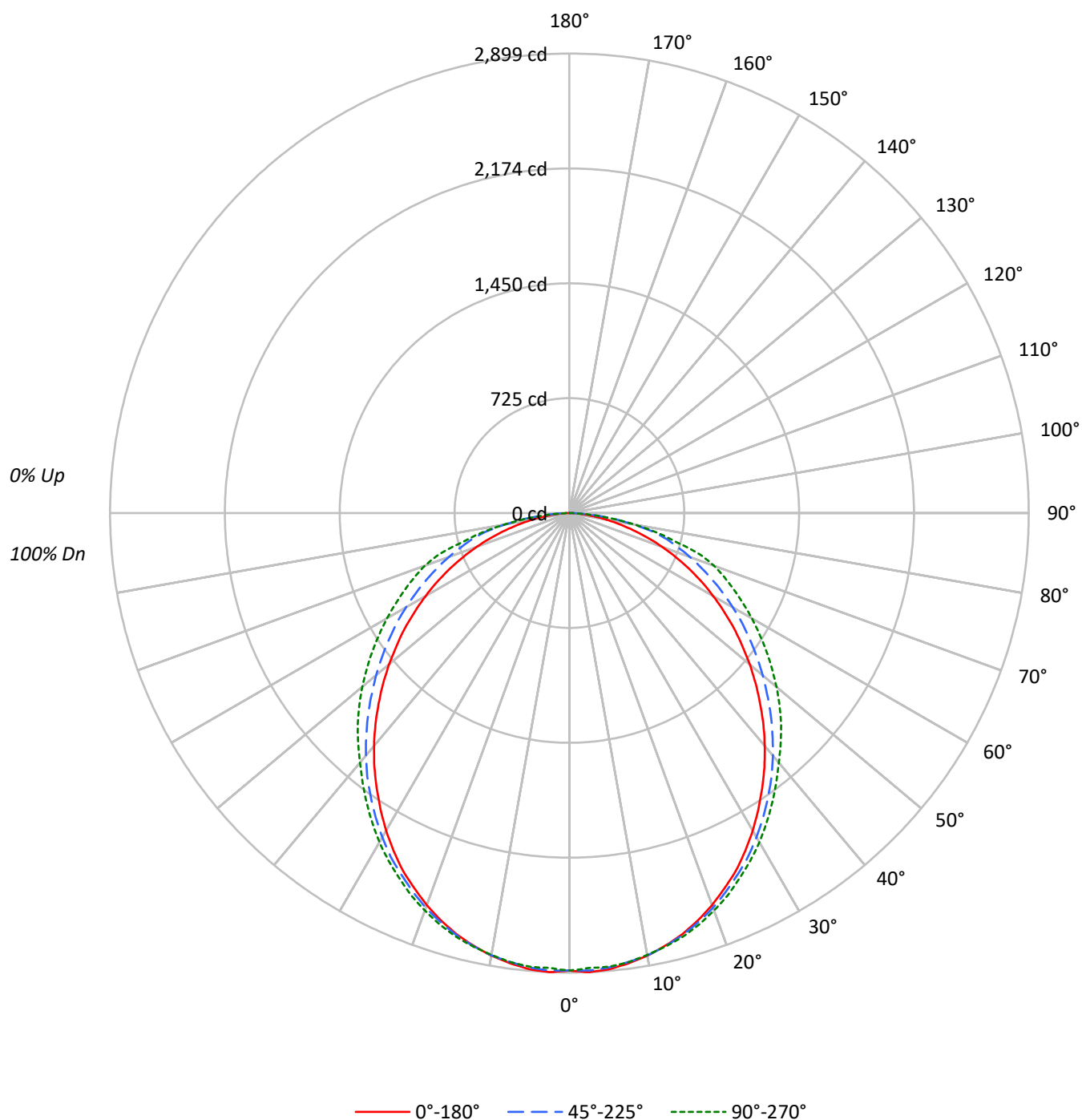
Input Watts (W): 64.22  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 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 | 100 |    |    |
| 1   | 108 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 89  | 87  | 85  | 83  |    |    |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  | 69  |    |    |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 64  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |
| 4   | 82  | 70  | 61  | 54  | 80  | 69  | 60  | 54  | 66  | 59  | 53  | 64  | 58  | 52  | 62  | 56  | 52  | 50  |    |    |
| 5   | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 50  | 45  | 43  |    |    |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 41  | 35  | 46  | 40  | 35  | 33  |    |    |
| 8   | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 30  |    |    |
| 9   | 56  | 43  | 35  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 29  | 27  |    |    |
| 10  | 53  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3883 | 3883 | 3883 |
| 5°  | 3893 | 3869 | 3863 |
| 10° | 3857 | 3835 | 3833 |
| 15° | 3806 | 3785 | 3803 |
| 20° | 3734 | 3723 | 3753 |
| 25° | 3652 | 3643 | 3687 |
| 30° | 3543 | 3559 | 3621 |
| 35° | 3421 | 3462 | 3540 |
| 40° | 3299 | 3359 | 3466 |
| 45° | 3161 | 3245 | 3423 |
| 50° | 3020 | 3134 | 3370 |
| 55° | 2872 | 3031 | 3322 |
| 60° | 2703 | 2936 | 3291 |
| 65° | 2517 | 2844 | 3295 |
| 70° | 2285 | 2778 | 3358 |
| 75° | 1980 | 2751 | 2998 |
| 80° | 1584 | 2402 | 2498 |
| 85° | 1051 | 1555 | 1460 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 272.9  | 3.4       |
| 10°-20°   | 776.1  | 9.7       |
| 20°-30°   | 1156.5 | 14.5      |
| 30°-40°   | 1361.4 | 17.1      |
| 40°-50°   | 1383.5 | 17.4      |
| 50°-60°   | 1243.9 | 15.6      |
| 60°-70°   | 982.7  | 12.3      |
| 70°-80°   | 623.4  | 7.8       |
| 80°-90°   | 172.1  | 2.2       |
| 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°    | 2205.5 | 27.7      |
| 0°-40°    | 3566.9 | 44.7      |
| 0°-60°    | 6194.2 | 77.7      |
| 0°-90°    | 7972.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7972.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2886 | 2886  | 2886 | 2886  | 2886 |      |
| 5°  | 2889 | 2865  | 2878 | 2873  | 2873 | 274  |
| 15° | 2751 | 2738  | 2756 | 2764  | 2767 | 775  |
| 25° | 2488 | 2486  | 2515 | 2531  | 2541 | 1144 |
| 35° | 2120 | 2133  | 2186 | 2210  | 2231 | 1326 |
| 45° | 1703 | 1727  | 1796 | 1849  | 1889 | 1314 |
| 55° | 1268 | 1300  | 1390 | 1480  | 1517 | 1132 |
| 65° | 833  | 875   | 995  | 1104  | 1146 | 825  |
| 75° | 416  | 488   | 634  | 690   | 684  | 443  |
| 85° | 88   | 151   | 162  | 149   | 149  | 107  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2886.2 | 2886.2 | 2886.2 | 2886.2 | 2886.2 |
| 2.5°  | 2899.4 | 2878.2 | 2888.8 | 2883.5 | 2872.9 |
| 5°    | 2888.8 | 2864.9 | 2878.2 | 2872.9 | 2872.9 |
| 7.5°  | 2864.9 | 2846.4 | 2857.0 | 2854.3 | 2857.0 |
| 10°   | 2835.8 | 2817.2 | 2833.1 | 2833.1 | 2830.5 |
| 12.5° | 2796.0 | 2780.0 | 2798.6 | 2798.6 | 2801.3 |
| 15°   | 2750.9 | 2737.6 | 2756.2 | 2764.1 | 2766.8 |
| 17.5° | 2695.2 | 2681.9 | 2705.8 | 2713.7 | 2721.7 |
| 20°   | 2631.5 | 2626.2 | 2650.1 | 2658.0 | 2668.6 |
| 22.5° | 2559.9 | 2559.9 | 2583.7 | 2594.4 | 2610.3 |
| 25°   | 2488.3 | 2485.6 | 2514.8 | 2530.7 | 2541.3 |
| 27.5° | 2403.4 | 2406.0 | 2443.2 | 2459.1 | 2472.3 |
| 30°   | 2313.2 | 2318.5 | 2360.9 | 2379.5 | 2398.1 |
| 32.5° | 2217.7 | 2228.3 | 2276.0 | 2297.3 | 2315.8 |
| 35°   | 2119.5 | 2132.8 | 2185.8 | 2209.7 | 2230.9 |
| 37.5° | 2021.4 | 2039.9 | 2095.6 | 2119.5 | 2143.4 |
| 40°   | 1917.9 | 1933.8 | 1997.5 | 2026.7 | 2055.9 |
| 42.5° | 1811.8 | 1833.0 | 1896.7 | 1939.1 | 1973.6 |
| 45°   | 1703.0 | 1726.9 | 1795.9 | 1848.9 | 1888.7 |
| 47.5° | 1594.3 | 1626.1 | 1692.4 | 1764.1 | 1798.5 |
| 50°   | 1485.5 | 1517.4 | 1591.6 | 1671.2 | 1705.7 |
| 52.5° | 1374.1 | 1405.9 | 1490.8 | 1573.1 | 1610.2 |
| 55°   | 1268.0 | 1299.8 | 1390.0 | 1480.2 | 1517.4 |
| 57.5° | 1156.6 | 1191.1 | 1291.9 | 1384.7 | 1421.9 |
| 60°   | 1047.8 | 1082.3 | 1191.1 | 1289.2 | 1329.0 |
| 62.5° | 941.7  | 978.9  | 1092.9 | 1196.4 | 1236.2 |
| 65°   | 833.0  | 875.4  | 994.8  | 1103.5 | 1146.0 |
| 67.5° | 726.8  | 774.6  | 899.3  | 1013.3 | 1058.4 |
| 70°   | 620.7  | 676.4  | 809.1  | 925.8  | 970.9  |
| 72.5° | 517.3  | 578.3  | 718.9  | 835.6  | 859.5  |
| 75°   | 416.5  | 488.1  | 634.0  | 689.7  | 684.4  |
| 77.5° | 321.0  | 400.6  | 538.5  | 549.1  | 565.0  |
| 80°   | 233.4  | 321.0  | 403.2  | 424.4  | 413.8  |
| 82.5° | 153.9  | 241.4  | 289.1  | 278.5  | 275.9  |
| 85°   | 87.5   | 151.2  | 161.8  | 148.6  | 148.6  |
| 87.5° | 37.1   | 61.0   | 53.1   | 39.8   | 37.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)