

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-LD5-75-S-UNV-L840-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-LD5-75-S-UNV-L840-CD1-U  
Description: CRUZE 2x4 LED TROFFER

Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7793.7 lumens  
Efficiency: N/A  
Efficacy: 112.9 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

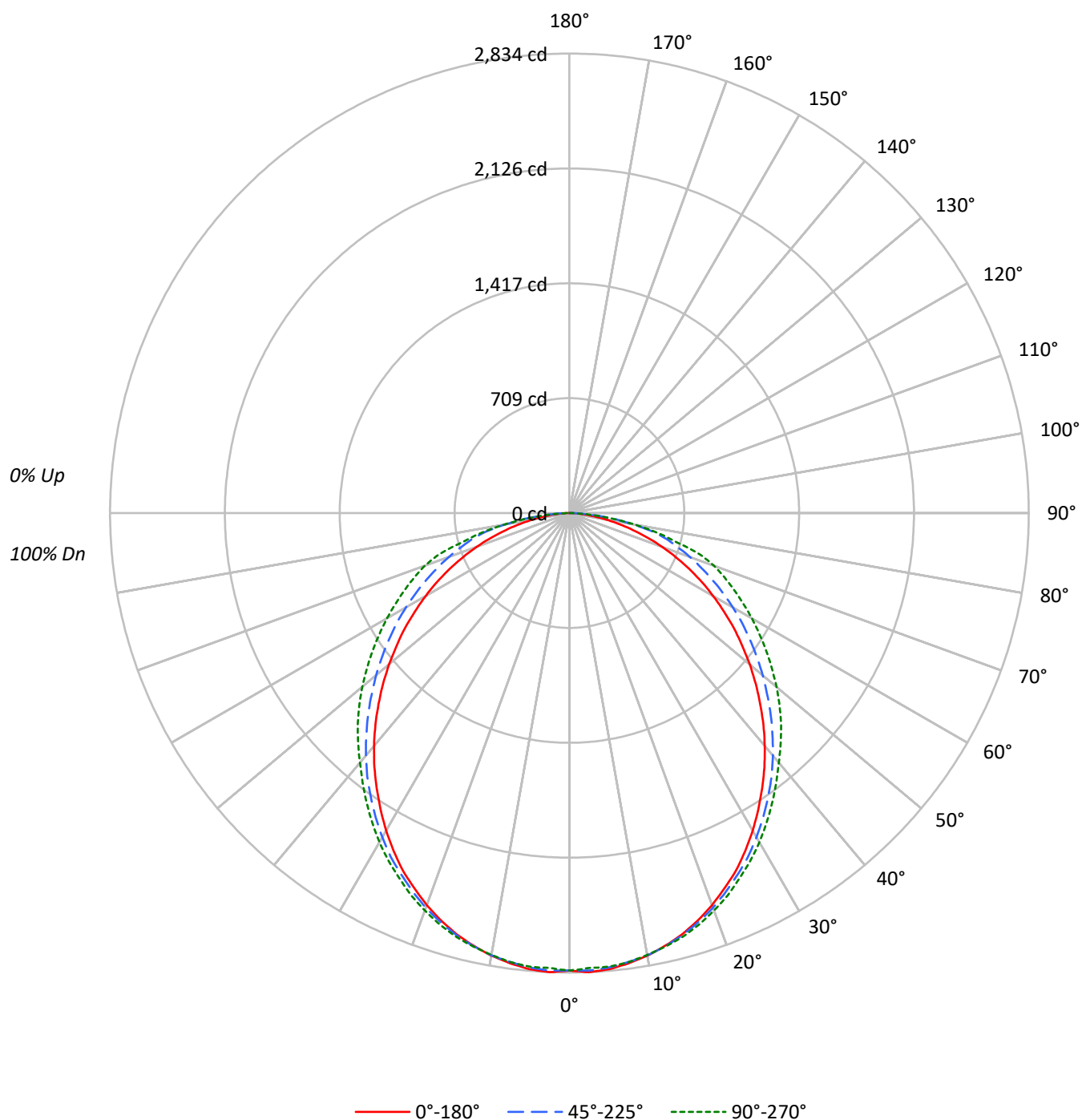
Input Watts (W): 69.06  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 |
| 1   | 108 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 89  | 87  | 85  |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 64  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  |
| 4   | 82  | 70  | 61  | 54  | 80  | 69  | 60  | 54  | 66  | 59  | 53  | 64  | 58  | 52  | 62  | 56  | 52  |
| 5   | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 50  | 45  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 41  | 35  | 46  | 40  | 35  |
| 8   | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  |
| 9   | 56  | 43  | 35  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 29  |
| 10  | 53  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3796 | 3796 | 3796 |
| 5°  | 3806 | 3783 | 3777 |
| 10° | 3771 | 3749 | 3747 |
| 15° | 3721 | 3701 | 3718 |
| 20° | 3650 | 3639 | 3669 |
| 25° | 3570 | 3562 | 3604 |
| 30° | 3463 | 3479 | 3540 |
| 35° | 3345 | 3384 | 3461 |
| 40° | 3225 | 3284 | 3388 |
| 45° | 3091 | 3172 | 3346 |
| 50° | 2952 | 3063 | 3294 |
| 55° | 2808 | 2963 | 3248 |
| 60° | 2642 | 2870 | 3217 |
| 65° | 2461 | 2780 | 3221 |
| 70° | 2234 | 2716 | 3283 |
| 75° | 1936 | 2690 | 2931 |
| 80° | 1549 | 2348 | 2442 |
| 85° | 1028 | 1521 | 1426 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 266.8  | 3.4       |
| 10°-20°   | 758.7  | 9.7       |
| 20°-30°   | 1130.6 | 14.5      |
| 30°-40°   | 1330.9 | 17.1      |
| 40°-50°   | 1352.5 | 17.4      |
| 50°-60°   | 1216.0 | 15.6      |
| 60°-70°   | 960.6  | 12.3      |
| 70°-80°   | 609.4  | 7.8       |
| 80°-90°   | 168.2  | 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°    | 2156.0 | 27.7      |
| 0°-40°    | 3486.9 | 44.7      |
| 0°-60°    | 6055.4 | 77.7      |
| 0°-90°    | 7793.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7793.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2821 | 2821  | 2821 | 2821  | 2821 |      |
| 5°  | 2824 | 2801  | 2814 | 2808  | 2808 | 268  |
| 15° | 2689 | 2676  | 2694 | 2702  | 2705 | 758  |
| 25° | 2432 | 2430  | 2458 | 2474  | 2484 | 1118 |
| 35° | 2072 | 2085  | 2137 | 2160  | 2181 | 1296 |
| 45° | 1665 | 1688  | 1756 | 1808  | 1846 | 1285 |
| 55° | 1240 | 1271  | 1359 | 1447  | 1483 | 1107 |
| 65° | 814  | 856   | 972  | 1079  | 1120 | 807  |
| 75° | 407  | 477   | 620  | 674   | 669  | 433  |
| 85° | 86   | 148   | 158  | 145   | 145  | 105  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2821.4 | 2821.4 | 2821.4 | 2821.4 | 2821.4 |
| 2.5°  | 2834.4 | 2813.7 | 2824.0 | 2818.8 | 2808.5 |
| 5°    | 2824.0 | 2800.7 | 2813.7 | 2808.5 | 2808.5 |
| 7.5°  | 2800.7 | 2782.5 | 2792.9 | 2790.3 | 2792.9 |
| 10°   | 2772.2 | 2754.0 | 2769.6 | 2769.6 | 2767.0 |
| 12.5° | 2733.3 | 2717.7 | 2735.9 | 2735.9 | 2738.5 |
| 15°   | 2689.2 | 2676.2 | 2694.4 | 2702.2 | 2704.7 |
| 17.5° | 2634.7 | 2621.8 | 2645.1 | 2652.9 | 2660.7 |
| 20°   | 2572.5 | 2567.3 | 2590.6 | 2598.4 | 2608.8 |
| 22.5° | 2502.5 | 2502.5 | 2525.8 | 2536.2 | 2551.7 |
| 25°   | 2432.5 | 2429.9 | 2458.4 | 2473.9 | 2484.3 |
| 27.5° | 2349.5 | 2352.1 | 2388.4 | 2403.9 | 2416.9 |
| 30°   | 2261.3 | 2266.5 | 2308.0 | 2326.1 | 2344.3 |
| 32.5° | 2167.9 | 2178.3 | 2225.0 | 2245.7 | 2263.9 |
| 35°   | 2072.0 | 2085.0 | 2136.8 | 2160.2 | 2180.9 |
| 37.5° | 1976.0 | 1994.2 | 2048.7 | 2072.0 | 2095.3 |
| 40°   | 1874.9 | 1890.5 | 1952.7 | 1981.2 | 2009.8 |
| 42.5° | 1771.2 | 1791.9 | 1854.2 | 1895.7 | 1929.4 |
| 45°   | 1664.9 | 1688.2 | 1755.6 | 1807.5 | 1846.4 |
| 47.5° | 1558.5 | 1589.7 | 1654.5 | 1724.5 | 1758.2 |
| 50°   | 1452.2 | 1483.3 | 1555.9 | 1633.7 | 1667.5 |
| 52.5° | 1343.3 | 1374.4 | 1457.4 | 1537.8 | 1574.1 |
| 55°   | 1239.6 | 1270.7 | 1358.9 | 1447.0 | 1483.3 |
| 57.5° | 1130.7 | 1164.4 | 1262.9 | 1353.7 | 1390.0 |
| 60°   | 1024.3 | 1058.0 | 1164.4 | 1260.3 | 1299.2 |
| 62.5° | 920.6  | 956.9  | 1068.4 | 1169.5 | 1208.4 |
| 65°   | 814.3  | 855.8  | 972.5  | 1078.8 | 1120.3 |
| 67.5° | 710.5  | 757.2  | 879.1  | 990.6  | 1034.7 |
| 70°   | 606.8  | 661.3  | 790.9  | 905.0  | 949.1  |
| 72.5° | 505.7  | 565.3  | 702.8  | 816.9  | 840.2  |
| 75°   | 407.1  | 477.2  | 619.8  | 674.2  | 669.1  |
| 77.5° | 313.8  | 391.6  | 526.4  | 536.8  | 552.4  |
| 80°   | 228.2  | 313.8  | 394.2  | 414.9  | 404.5  |
| 82.5° | 150.4  | 236.0  | 282.7  | 272.3  | 269.7  |
| 85°   | 85.6   | 147.8  | 158.2  | 145.2  | 145.2  |
| 87.5° | 36.3   | 59.6   | 51.9   | 38.9   | 36.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)