

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: P260674

Luminaire Tested: **24CZ-LD5-75-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260674  
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-LD5-75-UNV-L93050-W2A1-U-4000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (336) 90 CRI LEDS TUNED AT 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6919.9 lumens  
Efficiency: N/A  
Efficacy: 115.5 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

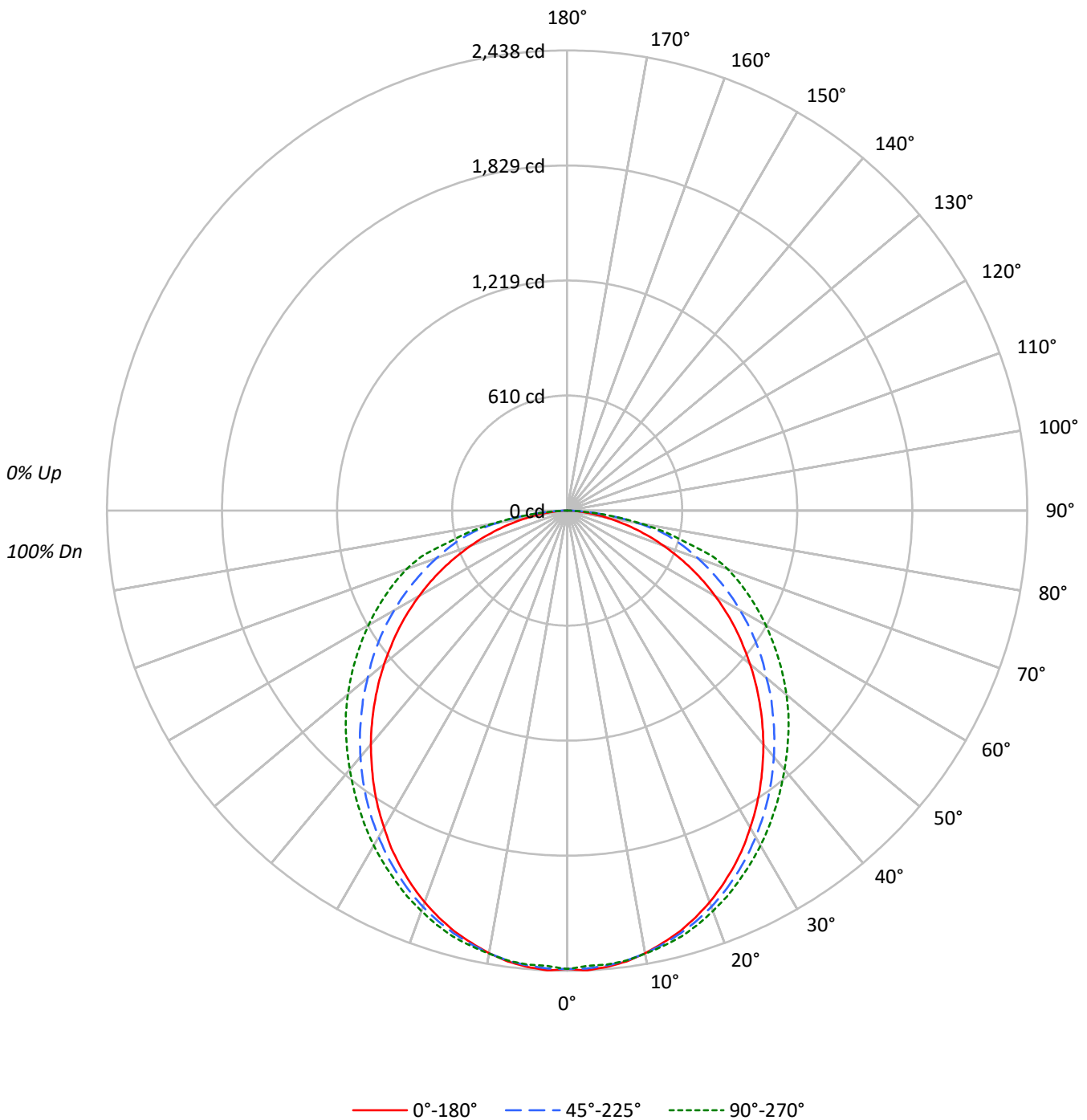
Input Watts (W): 59.922504  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 3268 | 3268 | 3268 |
| 5°  | 3277 | 3267 | 3261 |
| 10° | 3253 | 3253 | 3256 |
| 15° | 3215 | 3231 | 3254 |
| 20° | 3162 | 3199 | 3233 |
| 25° | 3095 | 3155 | 3208 |
| 30° | 3015 | 3103 | 3184 |
| 35° | 2930 | 3051 | 3160 |
| 40° | 2842 | 2992 | 3146 |
| 45° | 2746 | 2935 | 3156 |
| 50° | 2648 | 2886 | 3174 |
| 55° | 2551 | 2868 | 3207 |
| 60° | 2436 | 2850 | 3271 |
| 65° | 2308 | 2851 | 3379 |
| 70° | 2135 | 2899 | 3561 |
| 75° | 1909 | 3030 | 3387 |
| 80° | 1597 | 2900 | 3102 |
| 85° | 1207 | 2231 | 2121 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 229.5  | 3.3       |
| 10°-20°   | 653.1  | 9.4       |
| 20°-30°   | 976.4  | 14.1      |
| 30°-40°   | 1158.3 | 16.7      |
| 40°-50°   | 1192.2 | 17.2      |
| 50°-60°   | 1093.7 | 15.8      |
| 60°-70°   | 884.3  | 12.8      |
| 70°-80°   | 573.9  | 8.3       |
| 80°-90°   | 158.2  | 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°    | 1859.1 | 26.9      |
| 0°-40°    | 3017.4 | 43.6      |
| 0°-60°    | 5303.4 | 76.6      |
| 0°-90°    | 6919.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6919.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2428 | 2428  | 2428 | 2428  | 2428 |      |
| 5°  | 2426 | 2410  | 2419 | 2417  | 2414 | 230  |
| 15° | 2308 | 2298  | 2320 | 2329  | 2336 | 650  |
| 25° | 2085 | 2087  | 2125 | 2144  | 2161 | 960  |
| 35° | 1784 | 1798  | 1858 | 1898  | 1924 | 1116 |
| 45° | 1443 | 1467  | 1542 | 1616  | 1658 | 1113 |
| 55° | 1088 | 1121  | 1223 | 1322  | 1367 | 972  |
| 65° | 725  | 768   | 896  | 1014  | 1061 | 716  |
| 75° | 367  | 436   | 583  | 652   | 652  | 390  |
| 85° | 78   | 133   | 144  | 140   | 137  | 96   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2428.5 | 2428.5 | 2428.5 | 2428.5 | 2428.5 |
| 2.5°  | 2438.0 | 2419.0 | 2428.5 | 2426.2 | 2414.3 |
| 5°    | 2426.2 | 2409.6 | 2419.0 | 2416.7 | 2414.3 |
| 7.5°  | 2409.6 | 2393.0 | 2404.8 | 2402.5 | 2404.8 |
| 10°   | 2381.1 | 2366.9 | 2381.1 | 2383.5 | 2383.5 |
| 12.5° | 2345.6 | 2333.7 | 2352.7 | 2357.4 | 2362.2 |
| 15°   | 2307.7 | 2298.2 | 2319.5 | 2329.0 | 2336.1 |
| 17.5° | 2260.3 | 2253.2 | 2279.3 | 2291.1 | 2300.6 |
| 20°   | 2208.2 | 2205.8 | 2234.2 | 2246.1 | 2257.9 |
| 22.5° | 2148.9 | 2148.9 | 2182.1 | 2196.3 | 2212.9 |
| 25°   | 2085.0 | 2087.3 | 2125.3 | 2144.2 | 2160.8 |
| 27.5° | 2016.3 | 2018.6 | 2063.6 | 2087.3 | 2106.3 |
| 30°   | 1940.4 | 1949.9 | 1997.3 | 2028.1 | 2049.4 |
| 32.5° | 1864.6 | 1876.5 | 1928.6 | 1964.1 | 1987.8 |
| 35°   | 1784.1 | 1798.3 | 1857.5 | 1897.8 | 1923.9 |
| 37.5° | 1701.1 | 1717.7 | 1781.7 | 1826.7 | 1857.5 |
| 40°   | 1618.2 | 1637.2 | 1703.5 | 1755.6 | 1791.2 |
| 42.5° | 1530.6 | 1551.9 | 1625.3 | 1686.9 | 1724.8 |
| 45°   | 1442.9 | 1466.6 | 1542.4 | 1615.9 | 1658.5 |
| 47.5° | 1355.2 | 1383.7 | 1464.2 | 1544.8 | 1589.8 |
| 50°   | 1265.2 | 1293.6 | 1378.9 | 1471.3 | 1516.3 |
| 52.5° | 1175.2 | 1208.3 | 1303.1 | 1397.9 | 1442.9 |
| 55°   | 1087.5 | 1120.7 | 1222.6 | 1322.1 | 1367.1 |
| 57.5° | 997.5  | 1030.6 | 1142.0 | 1246.2 | 1291.3 |
| 60°   | 905.1  | 943.0  | 1059.1 | 1165.7 | 1215.4 |
| 62.5° | 815.0  | 855.3  | 978.5  | 1092.2 | 1139.6 |
| 65°   | 725.0  | 767.6  | 895.6  | 1014.1 | 1061.4 |
| 67.5° | 632.6  | 682.4  | 815.0  | 935.9  | 985.6  |
| 70°   | 542.6  | 597.1  | 736.8  | 857.7  | 905.1  |
| 72.5° | 454.9  | 514.1  | 658.7  | 781.9  | 810.3  |
| 75°   | 367.2  | 435.9  | 582.8  | 651.6  | 651.6  |
| 77.5° | 284.3  | 360.1  | 497.6  | 523.6  | 537.8  |
| 80°   | 206.1  | 289.1  | 374.3  | 405.1  | 400.4  |
| 82.5° | 137.4  | 220.3  | 267.7  | 267.7  | 260.6  |
| 85°   | 78.2   | 132.7  | 144.5  | 139.8  | 137.4  |
| 87.5° | 33.2   | 49.8   | 45.0   | 35.5   | 30.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)