

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: P260887

Luminaire Tested: **24CZ-LD5-55-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260887  
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-LD5-55-UNV-L92765-W2A1-U-5000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (336) 90 CRI LEDS TUNED AT 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5130.0 lumens  
Efficiency: N/A  
Efficacy: 125.1 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

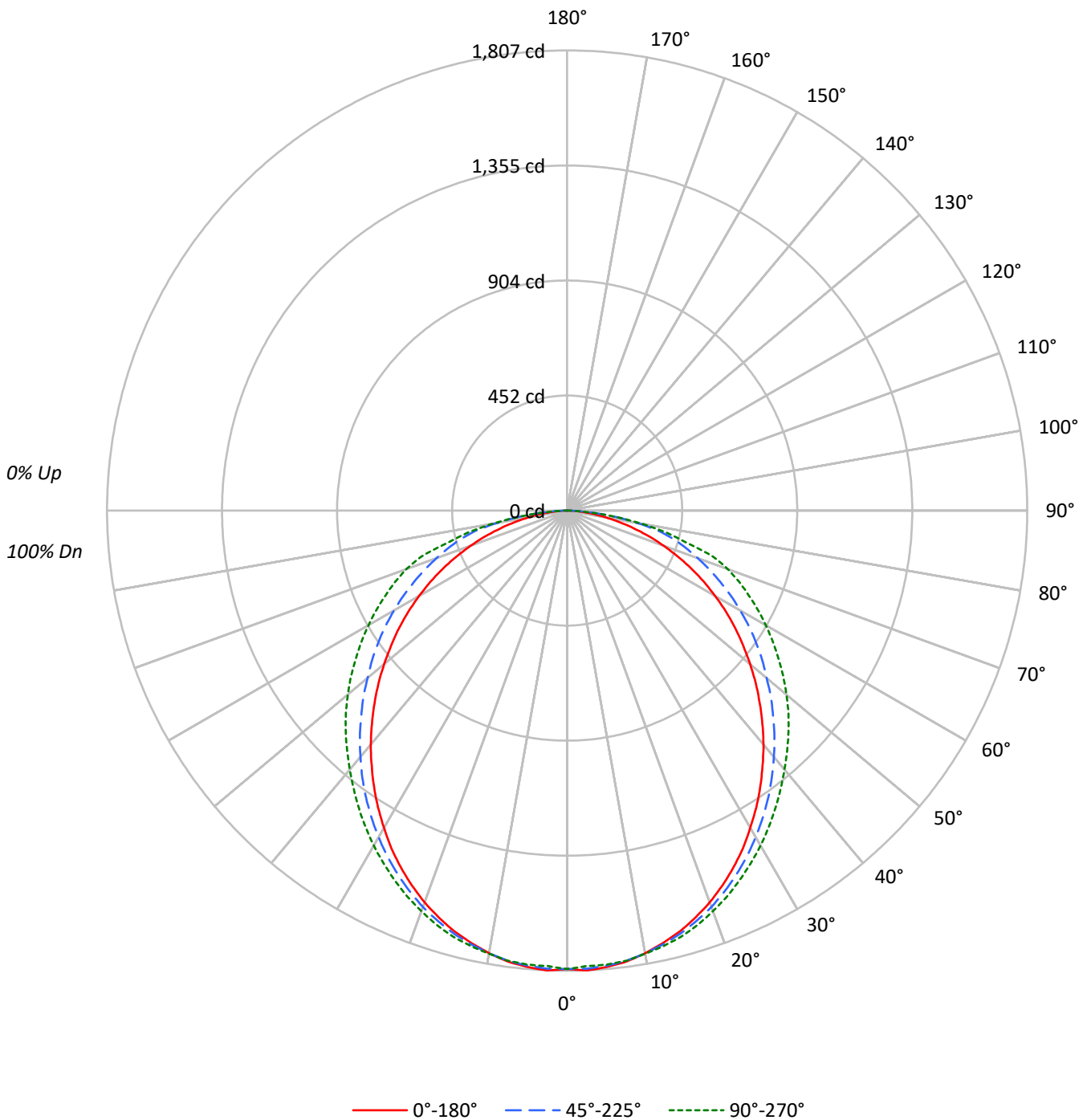
Input Watts (W): 41.013  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 2422 | 2422 | 2422 |
| 5°  | 2429 | 2422 | 2417 |
| 10° | 2412 | 2412 | 2414 |
| 15° | 2383 | 2395 | 2412 |
| 20° | 2344 | 2372 | 2397 |
| 25° | 2295 | 2339 | 2378 |
| 30° | 2235 | 2300 | 2360 |
| 35° | 2172 | 2262 | 2343 |
| 40° | 2107 | 2218 | 2332 |
| 45° | 2035 | 2176 | 2340 |
| 50° | 1963 | 2140 | 2353 |
| 55° | 1891 | 2126 | 2377 |
| 60° | 1806 | 2113 | 2425 |
| 65° | 1711 | 2114 | 2505 |
| 70° | 1582 | 2149 | 2640 |
| 75° | 1416 | 2246 | 2511 |
| 80° | 1184 | 2150 | 2300 |
| 85° | 895  | 1653 | 1573 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 170.1  | 3.3       |
| 10°-20°   | 484.2  | 9.4       |
| 20°-30°   | 723.9  | 14.1      |
| 30°-40°   | 858.7  | 16.7      |
| 40°-50°   | 883.9  | 17.2      |
| 50°-60°   | 810.8  | 15.8      |
| 60°-70°   | 655.6  | 12.8      |
| 70°-80°   | 425.5  | 8.3       |
| 80°-90°   | 117.3  | 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°    | 1378.2 | 26.9      |
| 0°-40°    | 2236.9 | 43.6      |
| 0°-60°    | 3931.6 | 76.6      |
| 0°-90°    | 5130.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5130.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1800 | 1800  | 1800 | 1800  | 1800 |      |
| 5°  | 1799 | 1786  | 1793 | 1792  | 1790 | 171  |
| 15° | 1711 | 1704  | 1720 | 1727  | 1732 | 482  |
| 25° | 1546 | 1547  | 1576 | 1590  | 1602 | 711  |
| 35° | 1323 | 1333  | 1377 | 1407  | 1426 | 827  |
| 45° | 1070 | 1087  | 1144 | 1198  | 1230 | 825  |
| 55° | 806  | 831   | 906  | 980   | 1014 | 720  |
| 65° | 538  | 569   | 664  | 752   | 787  | 531  |
| 75° | 272  | 323   | 432  | 483   | 483  | 289  |
| 85° | 58   | 98    | 107  | 104   | 102  | 71   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1800.4 | 1800.4 | 1800.4 | 1800.4 | 1800.4 |
| 2.5°  | 1807.4 | 1793.3 | 1800.4 | 1798.6 | 1789.8 |
| 5°    | 1798.6 | 1786.3 | 1793.3 | 1791.6 | 1789.8 |
| 7.5°  | 1786.3 | 1774.0 | 1782.8 | 1781.0 | 1782.8 |
| 10°   | 1765.2 | 1754.7 | 1765.2 | 1767.0 | 1767.0 |
| 12.5° | 1738.9 | 1730.1 | 1744.2 | 1747.7 | 1751.2 |
| 15°   | 1710.8 | 1703.8 | 1719.6 | 1726.6 | 1731.9 |
| 17.5° | 1675.7 | 1670.4 | 1689.7 | 1698.5 | 1705.5 |
| 20°   | 1637.0 | 1635.3 | 1656.3 | 1665.1 | 1673.9 |
| 22.5° | 1593.1 | 1593.1 | 1617.7 | 1628.2 | 1640.5 |
| 25°   | 1545.7 | 1547.4 | 1575.5 | 1589.6 | 1601.9 |
| 27.5° | 1494.7 | 1496.5 | 1529.9 | 1547.4 | 1561.5 |
| 30°   | 1438.5 | 1445.6 | 1480.7 | 1503.5 | 1519.3 |
| 32.5° | 1382.3 | 1391.1 | 1429.8 | 1456.1 | 1473.7 |
| 35°   | 1322.6 | 1333.1 | 1377.1 | 1406.9 | 1426.2 |
| 37.5° | 1261.1 | 1273.4 | 1320.9 | 1354.2 | 1377.1 |
| 40°   | 1199.7 | 1213.7 | 1262.9 | 1301.5 | 1327.9 |
| 42.5° | 1134.7 | 1150.5 | 1204.9 | 1250.6 | 1278.7 |
| 45°   | 1069.7 | 1087.2 | 1143.5 | 1197.9 | 1229.5 |
| 47.5° | 1004.7 | 1025.8 | 1085.5 | 1145.2 | 1178.6 |
| 50°   | 937.9  | 959.0  | 1022.3 | 1090.8 | 1124.1 |
| 52.5° | 871.2  | 895.8  | 966.0  | 1036.3 | 1069.7 |
| 55°   | 806.2  | 830.8  | 906.3  | 980.1  | 1013.5 |
| 57.5° | 739.5  | 764.1  | 846.6  | 923.9  | 957.3  |
| 60°   | 671.0  | 699.1  | 785.1  | 864.2  | 901.1  |
| 62.5° | 604.2  | 634.1  | 725.4  | 809.7  | 844.9  |
| 65°   | 537.5  | 569.1  | 663.9  | 751.8  | 786.9  |
| 67.5° | 469.0  | 505.9  | 604.2  | 693.8  | 730.7  |
| 70°   | 402.2  | 442.6  | 546.3  | 635.8  | 671.0  |
| 72.5° | 337.2  | 381.2  | 488.3  | 579.6  | 600.7  |
| 75°   | 272.3  | 323.2  | 432.1  | 483.0  | 483.0  |
| 77.5° | 210.8  | 267.0  | 368.9  | 388.2  | 398.7  |
| 80°   | 152.8  | 214.3  | 277.5  | 300.4  | 296.8  |
| 82.5° | 101.9  | 163.4  | 198.5  | 198.5  | 193.2  |
| 85°   | 58.0   | 98.4   | 107.1  | 103.6  | 101.9  |
| 87.5° | 24.6   | 36.9   | 33.4   | 26.3   | 22.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)