

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-LD5-55-S-UNV-L835-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-LD5-55-S-UNV-L835-CD1-U  
Description: CRUZE 2x4 LED TROFFER

Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5614.1 lumens  
Efficiency: N/A  
Efficacy: 122.6 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

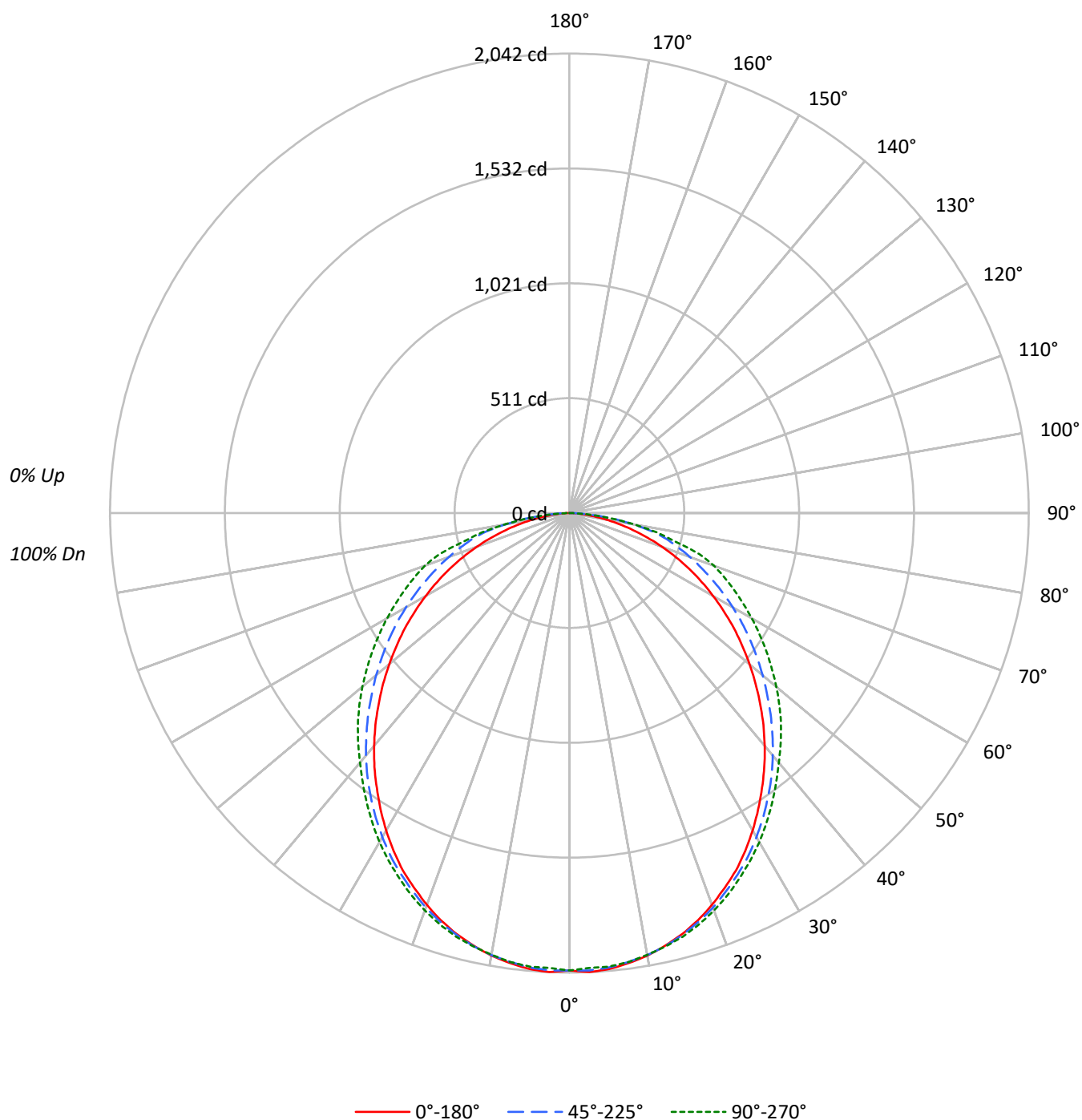
Input Watts (W): 45.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2735 | 2735 | 2735 |
| 5°  | 2742 | 2725 | 2721 |
| 10° | 2716 | 2700 | 2699 |
| 15° | 2680 | 2666 | 2678 |
| 20° | 2629 | 2621 | 2643 |
| 25° | 2571 | 2566 | 2596 |
| 30° | 2495 | 2506 | 2550 |
| 35° | 2409 | 2438 | 2493 |
| 40° | 2323 | 2365 | 2440 |
| 45° | 2226 | 2285 | 2410 |
| 50° | 2126 | 2207 | 2373 |
| 55° | 2022 | 2134 | 2339 |
| 60° | 1903 | 2067 | 2318 |
| 65° | 1773 | 2002 | 2320 |
| 70° | 1609 | 1956 | 2365 |
| 75° | 1395 | 1938 | 2111 |
| 80° | 1116 | 1691 | 1759 |
| 85° | 740  | 1095 | 1028 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 192.2  | 3.4       |
| 10°-20°   | 546.5  | 9.7       |
| 20°-30°   | 814.4  | 14.5      |
| 30°-40°   | 958.7  | 17.1      |
| 40°-50°   | 974.2  | 17.4      |
| 50°-60°   | 875.9  | 15.6      |
| 60°-70°   | 692.0  | 12.3      |
| 70°-80°   | 439.0  | 7.8       |
| 80°-90°   | 121.2  | 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°    | 1553.1 | 27.7      |
| 0°-40°    | 2511.8 | 44.7      |
| 0°-60°    | 4361.9 | 77.7      |
| 0°-90°    | 5614.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5614.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2032 | 2032  | 2032 | 2032  | 2032 |      |
| 5°  | 2034 | 2018  | 2027 | 2023  | 2023 | 193  |
| 15° | 1937 | 1928  | 1941 | 1946  | 1948 | 546  |
| 25° | 1752 | 1750  | 1771 | 1782  | 1790 | 806  |
| 35° | 1492 | 1502  | 1539 | 1556  | 1571 | 934  |
| 45° | 1199 | 1216  | 1265 | 1302  | 1330 | 925  |
| 55° | 893  | 915   | 979  | 1042  | 1068 | 797  |
| 65° | 587  | 616   | 700  | 777   | 807  | 581  |
| 75° | 293  | 344   | 446  | 486   | 482  | 312  |
| 85° | 62   | 106   | 114  | 105   | 105  | 76   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2032.4 | 2032.4 | 2032.4 | 2032.4 | 2032.4 |
| 2.5°  | 2041.7 | 2026.8 | 2034.3 | 2030.5 | 2023.1 |
| 5°    | 2034.3 | 2017.5 | 2026.8 | 2023.1 | 2023.1 |
| 7.5°  | 2017.5 | 2004.4 | 2011.9 | 2010.0 | 2011.9 |
| 10°   | 1996.9 | 1983.8 | 1995.0 | 1995.0 | 1993.2 |
| 12.5° | 1968.9 | 1957.7 | 1970.8 | 1970.8 | 1972.6 |
| 15°   | 1937.1 | 1927.8 | 1940.9 | 1946.5 | 1948.3 |
| 17.5° | 1897.9 | 1888.6 | 1905.4 | 1911.0 | 1916.6 |
| 20°   | 1853.1 | 1849.3 | 1866.1 | 1871.8 | 1879.2 |
| 22.5° | 1802.6 | 1802.6 | 1819.4 | 1826.9 | 1838.1 |
| 25°   | 1752.2 | 1750.3 | 1770.9 | 1782.1 | 1789.6 |
| 27.5° | 1692.4 | 1694.3 | 1720.4 | 1731.6 | 1741.0 |
| 30°   | 1628.9 | 1632.6 | 1662.5 | 1675.6 | 1688.7 |
| 32.5° | 1561.7 | 1569.1 | 1602.8 | 1617.7 | 1630.8 |
| 35°   | 1492.5 | 1501.9 | 1539.2 | 1556.1 | 1571.0 |
| 37.5° | 1423.4 | 1436.5 | 1475.7 | 1492.5 | 1509.4 |
| 40°   | 1350.6 | 1361.8 | 1406.6 | 1427.2 | 1447.7 |
| 42.5° | 1275.9 | 1290.8 | 1335.6 | 1365.5 | 1389.8 |
| 45°   | 1199.3 | 1216.1 | 1264.6 | 1302.0 | 1330.0 |
| 47.5° | 1122.7 | 1145.1 | 1191.8 | 1242.2 | 1266.5 |
| 50°   | 1046.1 | 1068.5 | 1120.8 | 1176.8 | 1201.1 |
| 52.5° | 967.6  | 990.0  | 1049.8 | 1107.7 | 1133.9 |
| 55°   | 892.9  | 915.3  | 978.8  | 1042.4 | 1068.5 |
| 57.5° | 814.5  | 838.7  | 909.7  | 975.1  | 1001.3 |
| 60°   | 737.9  | 762.2  | 838.7  | 907.9  | 935.9  |
| 62.5° | 663.1  | 689.3  | 769.6  | 842.5  | 870.5  |
| 65°   | 586.6  | 616.4  | 700.5  | 777.1  | 807.0  |
| 67.5° | 511.8  | 545.5  | 633.3  | 713.6  | 745.3  |
| 70°   | 437.1  | 476.3  | 569.7  | 651.9  | 683.7  |
| 72.5° | 364.3  | 407.2  | 506.2  | 588.4  | 605.2  |
| 75°   | 293.3  | 343.7  | 446.5  | 485.7  | 481.9  |
| 77.5° | 226.0  | 282.1  | 379.2  | 386.7  | 397.9  |
| 80°   | 164.4  | 226.0  | 283.9  | 298.9  | 291.4  |
| 82.5° | 108.3  | 170.0  | 203.6  | 196.1  | 194.3  |
| 85°   | 61.6   | 106.5  | 113.9  | 104.6  | 104.6  |
| 87.5° | 26.2   | 43.0   | 37.4   | 28.0   | 26.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)