

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: P685560

Luminaire Tested: **4CZL-7-UNV-FL-L850-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685560  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-7-UNV-FL-L850-CD-U  
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL @80 CRI and 5000K  
Light Source: (392) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

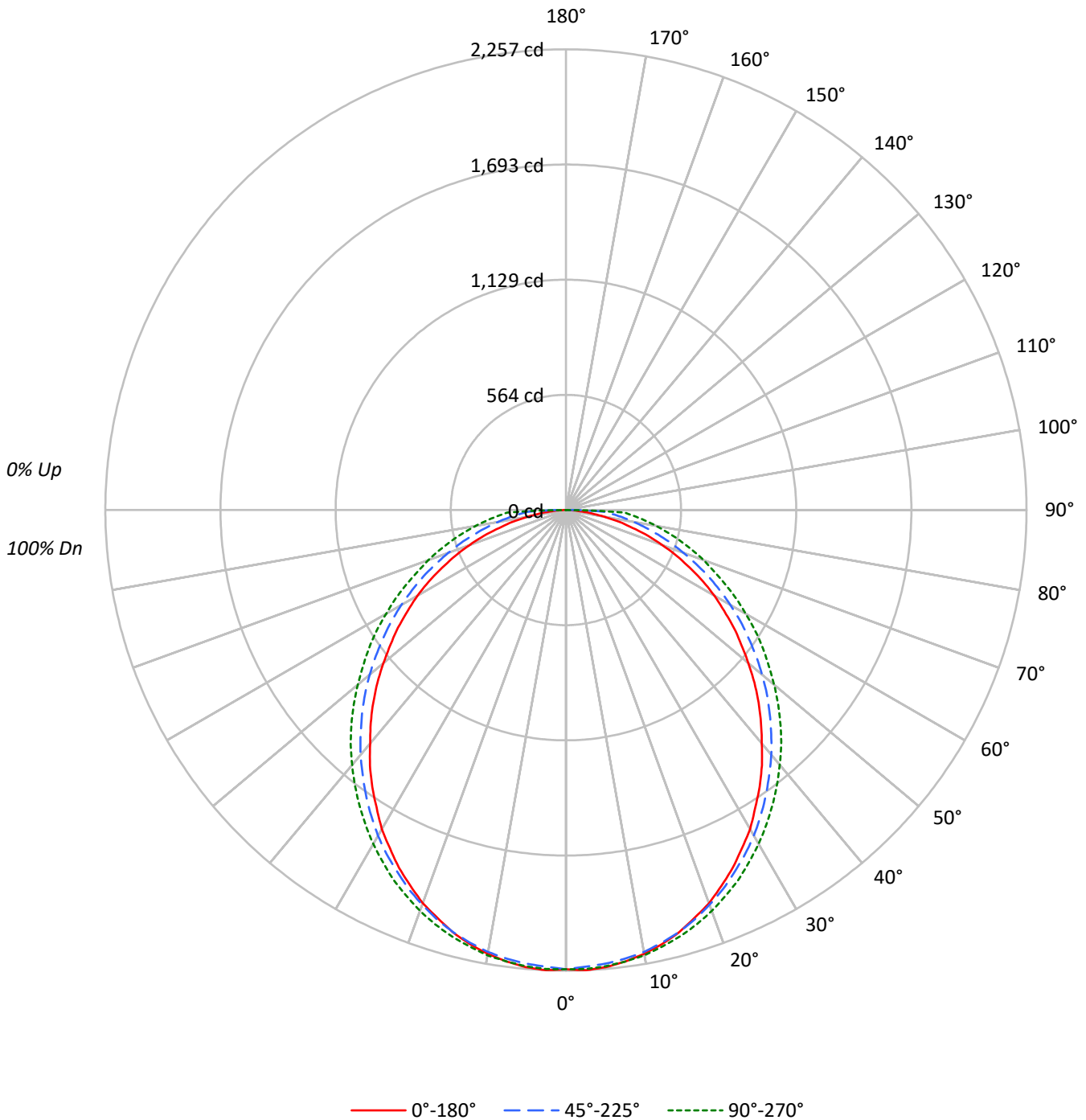
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6338.2 lumens  
Efficiency: N/A  
Efficacy: 144.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 4' x H: 0.08')  
CIE Type: Direct

Input Watts (W): 44  
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  |     |     |     | 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  | 50  | 30  | 10  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 108 | 103 | 98  | 94  | 105 | 101 | 96  | 93  | 96  | 93  | 90  | 92  | 90  | 87  | 89  | 86  | 84  | 84  | 84  | 84  | 82  |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 81  | 75  | 84  | 78  | 74  | 81  | 76  | 72  | 78  | 74  | 70  | 70  | 70  | 70  | 68  |
| 3   | 89  | 78  | 70  | 63  | 87  | 77  | 69  | 63  | 74  | 67  | 62  | 71  | 65  | 61  | 68  | 64  | 59  | 59  | 59  | 59  | 57  |
| 4   | 82  | 69  | 60  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 52  | 63  | 57  | 52  | 61  | 56  | 51  | 51  | 51  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 59  | 51  | 45  | 57  | 50  | 45  | 55  | 49  | 44  | 44  | 44  | 44  | 42  |
| 6   | 69  | 56  | 47  | 40  | 68  | 55  | 46  | 40  | 53  | 45  | 40  | 51  | 45  | 39  | 50  | 44  | 39  | 39  | 39  | 39  | 37  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 41  | 36  | 48  | 41  | 35  | 47  | 40  | 35  | 46  | 39  | 35  | 35  | 35  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 31  | 31  | 31  | 29  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 28  | 28  | 28  | 26  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 26  | 26  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7266 | 7266 | 7266 |
| 5°  | 7274 | 7178 | 7210 |
| 10° | 7213 | 7102 | 7137 |
| 15° | 7120 | 6995 | 7041 |
| 20° | 6993 | 6859 | 6931 |
| 25° | 6826 | 6702 | 6805 |
| 30° | 6649 | 6544 | 6658 |
| 35° | 6430 | 6352 | 6500 |
| 40° | 6184 | 6159 | 6339 |
| 45° | 5975 | 5944 | 6172 |
| 50° | 5724 | 5722 | 5976 |
| 55° | 5490 | 5479 | 5801 |
| 60° | 5234 | 5236 | 5599 |
| 65° | 4892 | 4974 | 5422 |
| 70° | 4496 | 4683 | 5316 |
| 75° | 3912 | 4430 | 5254 |
| 80° | 3158 | 4249 | 5324 |
| 85° | 2023 | 4281 | 5768 |



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 CATALOG NUMBER: 4CZL-7-UNV-FL-L850-CD-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 212.8  | 3.4       |
| 10°-20°   | 605.6  | 9.6       |
| 20°-30°   | 904.6  | 14.3      |
| 30°-40°   | 1069.8 | 16.9      |
| 40°-50°   | 1090.1 | 17.2      |
| 50°-60°   | 976.8  | 15.4      |
| 60°-70°   | 760.8  | 12.0      |
| 70°-80°   | 492.6  | 7.8       |
| 80°-90°   | 225.1  | 3.6       |
| 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°    | 1723.1 | 27.2      |
| 0°-40°    | 2792.9 | 44.1      |
| 0°-60°    | 4859.7 | 76.7      |
| 0°-90°    | 6338.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6338.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2250 | 2250  | 2250 | 2250  | 2250 |      |
| 5°  | 2248 | 2244  | 2231 | 2244  | 2244 | 213  |
| 15° | 2142 | 2142  | 2140 | 2160  | 2162 | 603  |
| 25° | 1934 | 1941  | 1956 | 1990  | 1999 | 890  |
| 35° | 1655 | 1671  | 1708 | 1754  | 1764 | 1034 |
| 45° | 1336 | 1360  | 1413 | 1467  | 1487 | 1029 |
| 55° | 1004 | 1032  | 1092 | 1155  | 1178 | 896  |
| 65° | 669  | 698   | 770  | 835   | 862  | 664  |
| 75° | 338  | 381   | 468  | 546   | 578  | 363  |
| 85° | 68   | 130   | 228  | 311   | 334  | 87   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2250.1 | 2250.1 | 2250.1 | 2250.1 | 2250.1 |
| 2.5°  | 2256.6 | 2252.7 | 2239.0 | 2251.0 | 2250.6 |
| 5°    | 2248.0 | 2244.2 | 2230.9 | 2244.2 | 2243.7 |
| 7.5°  | 2230.5 | 2229.2 | 2217.2 | 2231.8 | 2230.5 |
| 10°   | 2207.8 | 2206.1 | 2198.4 | 2212.9 | 2215.1 |
| 12.5° | 2177.9 | 2177.0 | 2171.0 | 2188.1 | 2189.4 |
| 15°   | 2141.5 | 2141.5 | 2140.2 | 2160.3 | 2162.5 |
| 17.5° | 2094.9 | 2100.9 | 2102.2 | 2124.0 | 2128.7 |
| 20°   | 2050.4 | 2052.1 | 2058.1 | 2084.6 | 2090.2 |
| 22.5° | 1991.8 | 1999.1 | 2011.1 | 2040.1 | 2044.8 |
| 25°   | 1934.5 | 1941.3 | 1955.9 | 1990.5 | 1999.1 |
| 27.5° | 1867.8 | 1881.0 | 1901.1 | 1935.8 | 1944.3 |
| 30°   | 1804.5 | 1815.6 | 1841.7 | 1880.2 | 1888.7 |
| 32.5° | 1727.1 | 1745.9 | 1775.8 | 1816.5 | 1828.0 |
| 35°   | 1654.8 | 1670.6 | 1707.8 | 1754.0 | 1764.3 |
| 37.5° | 1577.4 | 1596.2 | 1635.5 | 1684.7 | 1698.8 |
| 40°   | 1492.7 | 1520.1 | 1565.8 | 1615.0 | 1630.0 |
| 42.5° | 1415.3 | 1440.5 | 1488.8 | 1544.4 | 1561.5 |
| 45°   | 1335.7 | 1359.7 | 1412.7 | 1466.6 | 1486.7 |
| 47.5° | 1252.7 | 1277.5 | 1335.3 | 1392.6 | 1410.6 |
| 50°   | 1167.6 | 1197.1 | 1254.9 | 1315.2 | 1331.4 |
| 52.5° | 1082.9 | 1112.5 | 1173.6 | 1233.9 | 1252.3 |
| 55°   | 1004.2 | 1032.5 | 1091.9 | 1154.8 | 1177.5 |
| 57.5° | 918.7  | 948.6  | 1014.1 | 1074.8 | 1099.2 |
| 60°   | 839.6  | 861.4  | 930.7  | 993.6  | 1017.1 |
| 62.5° | 757.9  | 781.4  | 849.0  | 913.6  | 941.4  |
| 65°   | 668.9  | 698.0  | 770.3  | 834.9  | 861.8  |
| 67.5° | 587.7  | 615.5  | 689.9  | 762.6  | 784.4  |
| 70°   | 503.4  | 535.5  | 612.5  | 686.9  | 717.7  |
| 72.5° | 423.0  | 456.4  | 541.0  | 615.0  | 646.3  |
| 75°   | 337.9  | 381.1  | 468.3  | 546.2  | 578.3  |
| 77.5° | 267.7  | 310.5  | 399.9  | 481.2  | 512.0  |
| 80°   | 189.9  | 242.5  | 339.2  | 421.3  | 448.7  |
| 82.5° | 126.6  | 180.1  | 281.4  | 361.4  | 390.9  |
| 85°   | 67.6   | 130.4  | 228.4  | 310.9  | 333.6  |
| 87.5° | 29.5   | 91.1   | 185.2  | 258.8  | 285.7  |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)