

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: P239026

Luminaire Tested: **24ENA-LD2-67-UNV-L935-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239026  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1708-234-34)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24ENA-LD2-67-UNV-L935-CD1-U  
Description: METALUX ENCOUNTER 2X4 LED TROFFER  
AIR-VENTED OPTION  
Light Source: (308)3500K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5650.5 lumens  
Efficiency: N/A  
Efficacy: 100.7 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.4  
Luminous Opening: Rectangular (W 1.67' x L: 3.83' x H: 0')  
CIE Type: Direct

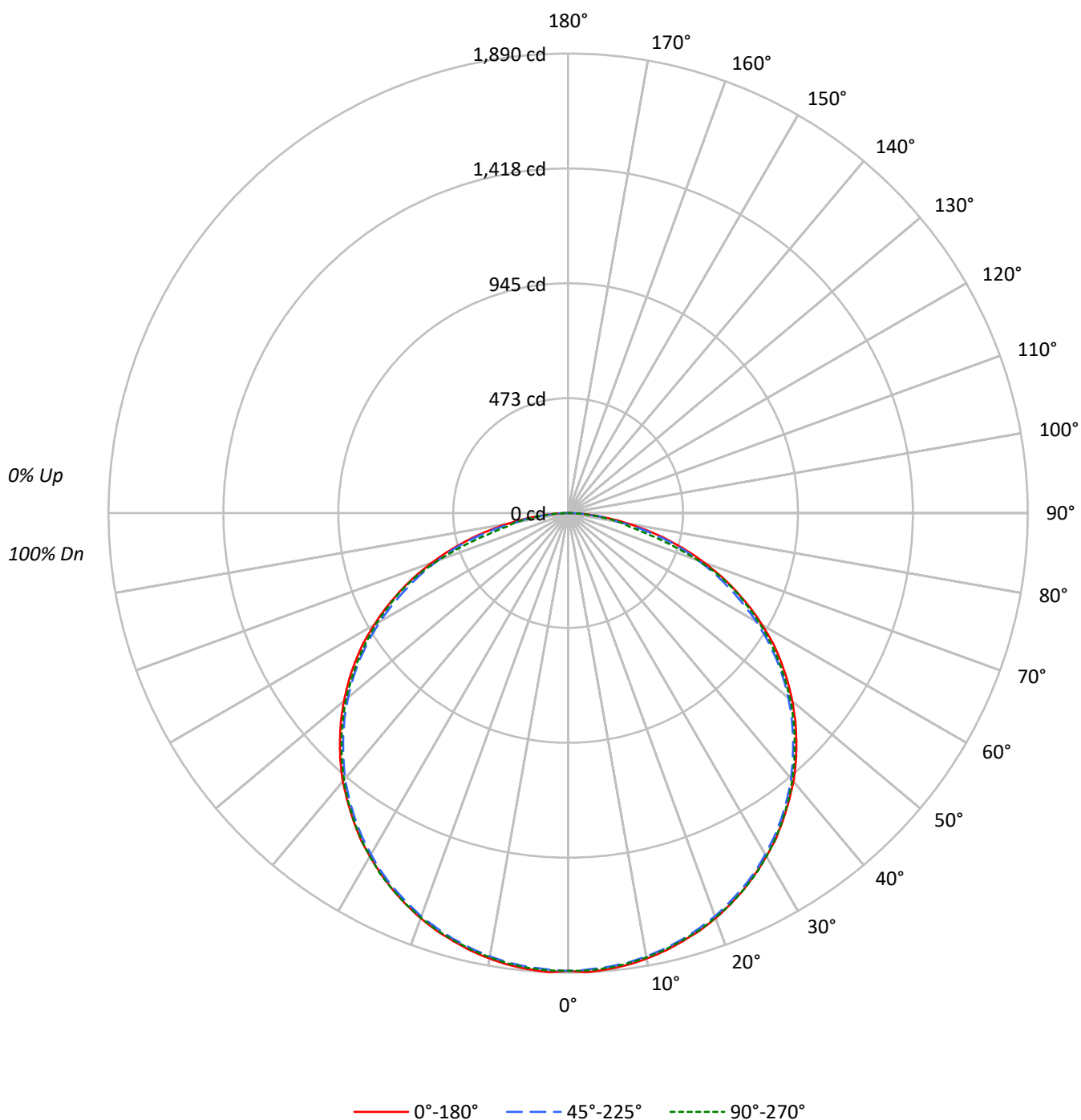
Input Watts (W): 56.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 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 | 100 |    |    |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 90  | 87  | 85  | 83  |    |    |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 84  | 79  | 74  | 81  | 77  | 73  | 78  | 74  | 71  | 69  |    |    |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |
| 4   | 82  | 70  | 61  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 53  | 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  | 50  | 42  | 35  | 62  | 50  | 41  | 35  | 48  | 40  | 35  | 47  | 40  | 35  | 45  | 39  | 34  | 32  |    |    |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 43  | 36  | 31  | 41  | 35  | 31  | 29  |    |    |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |    |    |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 25  | 37  | 30  | 25  | 36  | 30  | 25  | 35  | 29  | 25  | 23  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3173 | 3173 | 3173 |
| 5°  | 3185 | 3169 | 3177 |
| 10° | 3183 | 3167 | 3175 |
| 15° | 3180 | 3165 | 3173 |
| 20° | 3179 | 3164 | 3175 |
| 25° | 3176 | 3160 | 3176 |
| 30° | 3172 | 3154 | 3172 |
| 35° | 3169 | 3147 | 3164 |
| 40° | 3170 | 3137 | 3155 |
| 45° | 3162 | 3117 | 3139 |
| 50° | 3153 | 3098 | 3125 |
| 55° | 3142 | 3066 | 3097 |
| 60° | 3103 | 3007 | 3071 |
| 65° | 3041 | 2913 | 3022 |
| 70° | 2931 | 2809 | 2803 |
| 75° | 2759 | 2636 | 2229 |
| 80° | 2428 | 2062 | 2119 |
| 85° | 1918 | 1804 | 1666 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 178.4  | 3.2       |
| 10°-20°   | 513.0  | 9.1       |
| 20°-30°   | 784.9  | 13.9      |
| 30°-40°   | 959.4  | 17.0      |
| 40°-50°   | 1013.9 | 17.9      |
| 50°-60°   | 939.4  | 16.6      |
| 60°-70°   | 735.9  | 13.0      |
| 70°-80°   | 416.1  | 7.4       |
| 80°-90°   | 109.6  | 1.9       |
| 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°    | 1476.3 | 26.1      |
| 0°-40°    | 2435.7 | 43.1      |
| 0°-60°    | 4388.9 | 77.7      |
| 0°-90°    | 5650.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5650.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1883 | 1883  | 1883 | 1883  | 1883 |      |
| 5°  | 1883 | 1877  | 1874 | 1872  | 1878 | 179  |
| 15° | 1823 | 1816  | 1815 | 1813  | 1819 | 515  |
| 25° | 1708 | 1701  | 1700 | 1700  | 1708 | 788  |
| 35° | 1541 | 1534  | 1530 | 1530  | 1538 | 965  |
| 45° | 1327 | 1318  | 1308 | 1308  | 1318 | 1024 |
| 55° | 1070 | 1058  | 1044 | 1046  | 1054 | 955  |
| 65° | 763  | 748   | 731  | 740   | 758  | 754  |
| 75° | 424  | 412   | 405  | 361   | 342  | 446  |
| 85° | 99   | 93    | 93   | 88    | 86   | 117  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1883.1 | 1883.1 | 1883.1 | 1883.1 | 1883.1 |
| 2.5°  | 1890.2 | 1881.9 | 1879.5 | 1877.2 | 1883.1 |
| 5°    | 1883.1 | 1877.2 | 1873.6 | 1872.5 | 1878.4 |
| 7.5°  | 1874.8 | 1867.7 | 1865.4 | 1863.0 | 1868.9 |
| 10°   | 1860.7 | 1853.6 | 1851.2 | 1850.0 | 1855.9 |
| 12.5° | 1844.1 | 1835.9 | 1834.7 | 1833.5 | 1839.4 |
| 15°   | 1822.9 | 1815.8 | 1814.6 | 1813.4 | 1819.3 |
| 17.5° | 1800.4 | 1793.4 | 1791.0 | 1789.8 | 1798.1 |
| 20°   | 1773.3 | 1766.2 | 1765.0 | 1763.8 | 1770.9 |
| 22.5° | 1742.6 | 1735.5 | 1733.1 | 1734.3 | 1741.4 |
| 25°   | 1708.4 | 1701.3 | 1700.1 | 1700.1 | 1708.4 |
| 27.5° | 1670.6 | 1663.5 | 1663.5 | 1663.5 | 1672.9 |
| 30°   | 1630.4 | 1624.5 | 1621.0 | 1622.2 | 1630.4 |
| 32.5° | 1589.1 | 1579.7 | 1577.3 | 1578.5 | 1586.7 |
| 35°   | 1540.7 | 1533.6 | 1530.1 | 1530.1 | 1538.3 |
| 37.5° | 1491.1 | 1484.0 | 1479.3 | 1479.3 | 1487.6 |
| 40°   | 1441.5 | 1430.9 | 1426.2 | 1423.8 | 1434.4 |
| 42.5° | 1386.0 | 1377.8 | 1367.2 | 1367.2 | 1376.6 |
| 45°   | 1327.0 | 1317.6 | 1308.1 | 1308.1 | 1317.6 |
| 47.5° | 1266.8 | 1257.4 | 1246.7 | 1246.7 | 1256.2 |
| 50°   | 1203.0 | 1193.6 | 1181.8 | 1181.8 | 1192.4 |
| 52.5° | 1138.1 | 1127.5 | 1114.5 | 1113.3 | 1123.9 |
| 55°   | 1069.6 | 1057.8 | 1043.7 | 1046.0 | 1054.3 |
| 57.5° | 1000.0 | 984.6  | 970.5  | 970.5  | 983.5  |
| 60°   | 920.9  | 907.9  | 892.5  | 894.9  | 911.4  |
| 62.5° | 845.3  | 828.8  | 813.4  | 819.3  | 833.5  |
| 65°   | 762.7  | 748.5  | 730.8  | 740.2  | 758.0  |
| 67.5° | 681.2  | 665.9  | 651.7  | 663.5  | 671.8  |
| 70°   | 595.0  | 580.9  | 570.2  | 570.2  | 569.1  |
| 72.5° | 508.8  | 495.9  | 493.5  | 471.1  | 456.9  |
| 75°   | 423.8  | 412.0  | 405.0  | 361.3  | 342.4  |
| 77.5° | 335.3  | 331.8  | 309.3  | 263.3  | 257.4  |
| 80°   | 250.3  | 252.7  | 212.5  | 213.7  | 218.4  |
| 82.5° | 172.4  | 168.8  | 159.4  | 152.3  | 149.9  |
| 85°   | 99.2   | 93.3   | 93.3   | 88.5   | 86.2   |
| 87.5° | 33.1   | 36.6   | 36.6   | 36.6   | 37.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)