

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: P238916

Luminaire Tested: **24EN-LD2-74-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238916  
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: 24EN-LD2-74-UNV-L850-CD1-U  
Description: METALUX ENCOUNTER 2X4 LED TROFFER  
STANDARD OPTION  
Light Source: (308)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8307.0 lumens  
Efficiency: N/A  
Efficacy: 130.6 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.29 / 1.4  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

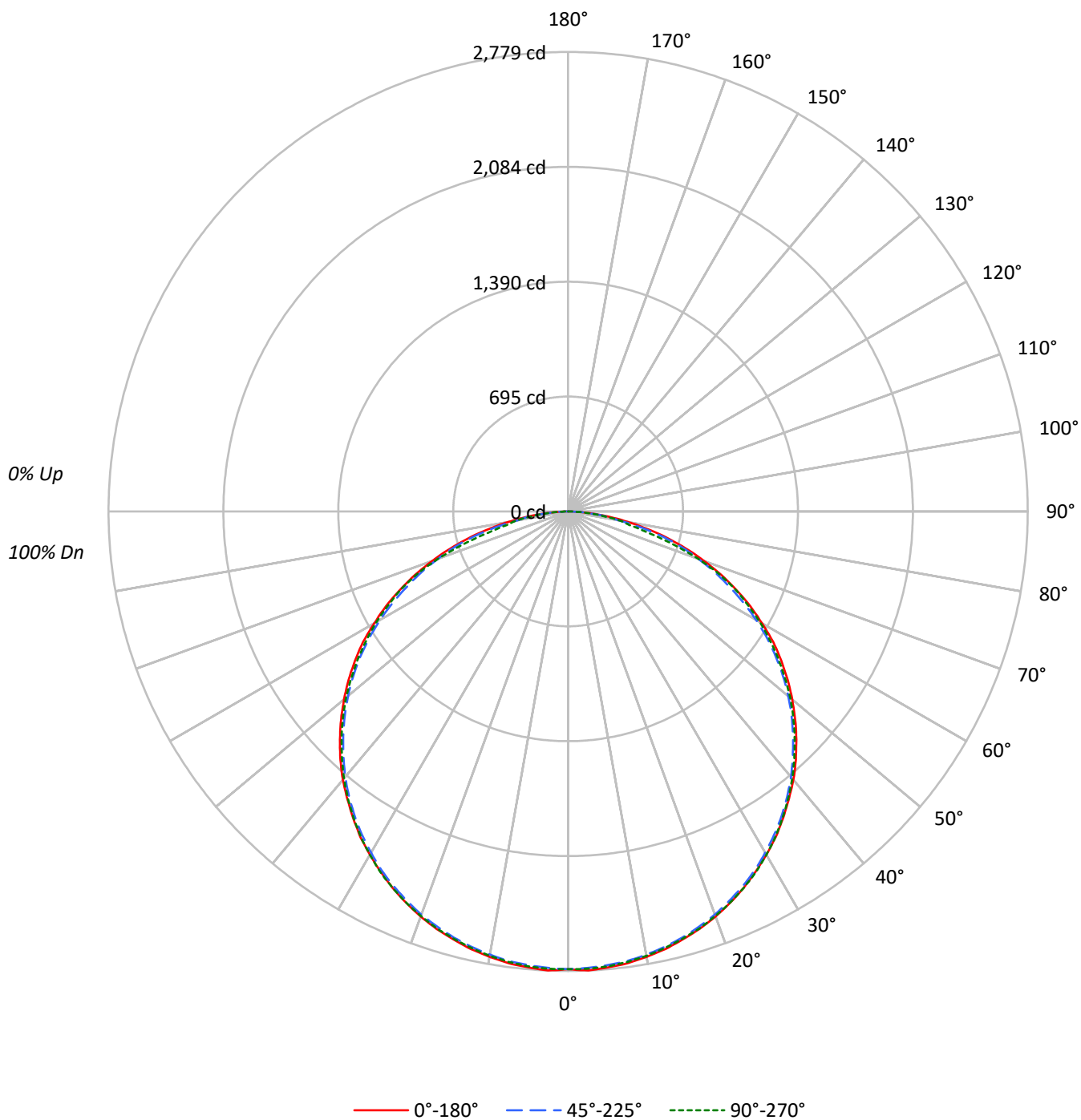
Input Watts (W): 63.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  |  | 106 | 106 | 106 |  |  | 102 |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  |  | 97  | 94  | 91  |  |  | 93  | 90  | 88  |  |  | 90  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  |  | 84  | 79  | 74  |  |  | 81  | 77  | 73  |  |  | 78  |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  |  | 74  | 67  | 62  |  |  | 71  | 66  | 61  |  |  | 69  |
| 4   | 82  | 70  | 61  | 54  | 79  | 68  | 60  | 53  |  | 66  | 58  | 53  |  |  | 63  | 57  | 52  |  |  | 61  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  |  | 59  | 51  | 45  |  |  | 57  | 50  | 45  |  |  | 55  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  |  | 53  | 45  | 40  |  |  | 51  | 44  | 39  |  |  | 50  |
| 7   | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  |  | 48  | 40  | 35  |  |  | 47  | 40  | 35  |  |  | 45  |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  |  | 44  | 36  | 31  |  |  | 43  | 36  | 31  |  |  | 41  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  |  | 40  | 33  | 28  |  |  | 39  | 33  | 28  |  |  | 38  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 25  |  | 37  | 30  | 25  |  |  | 36  | 30  | 25  |  |  | 35  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4240 | 4240 | 4240 |
| 5°  | 4256 | 4235 | 4246 |
| 10° | 4254 | 4233 | 4244 |
| 15° | 4249 | 4230 | 4241 |
| 20° | 4249 | 4229 | 4243 |
| 25° | 4244 | 4224 | 4244 |
| 30° | 4239 | 4215 | 4239 |
| 35° | 4235 | 4206 | 4229 |
| 40° | 4237 | 4192 | 4216 |
| 45° | 4226 | 4166 | 4196 |
| 50° | 4214 | 4140 | 4177 |
| 55° | 4199 | 4097 | 4139 |
| 60° | 4147 | 4020 | 4104 |
| 65° | 4063 | 3894 | 4038 |
| 70° | 3918 | 3754 | 3746 |
| 75° | 3687 | 3523 | 2978 |
| 80° | 3246 | 2755 | 2832 |
| 85° | 2562 | 2409 | 2227 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 262.2  | 3.2       |
| 10°-20°   | 754.1  | 9.1       |
| 20°-30°   | 1154.0 | 13.9      |
| 30°-40°   | 1410.5 | 17.0      |
| 40°-50°   | 1490.5 | 17.9      |
| 50°-60°   | 1381.0 | 16.6      |
| 60°-70°   | 1081.9 | 13.0      |
| 70°-80°   | 611.7  | 7.4       |
| 80°-90°   | 161.1  | 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°    | 2170.3 | 26.1      |
| 0°-40°    | 3580.8 | 43.1      |
| 0°-60°    | 6452.3 | 77.7      |
| 0°-90°    | 8307.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 8307.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2768 | 2768  | 2768 | 2768  | 2768 |      |
| 5°  | 2768 | 2760  | 2754 | 2753  | 2761 | 263  |
| 15° | 2680 | 2669  | 2668 | 2666  | 2675 | 757  |
| 25° | 2512 | 2501  | 2499 | 2499  | 2512 | 1158 |
| 35° | 2265 | 2255  | 2249 | 2249  | 2262 | 1418 |
| 45° | 1951 | 1937  | 1923 | 1923  | 1937 | 1505 |
| 55° | 1572 | 1555  | 1534 | 1538  | 1550 | 1404 |
| 65° | 1121 | 1100  | 1074 | 1088  | 1114 | 1109 |
| 75° | 623  | 606   | 595  | 531   | 503  | 655  |
| 85° | 146  | 137   | 137  | 130   | 127  | 172  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2768.4 | 2768.4 | 2768.4 | 2768.4 | 2768.4 |
| 2.5°  | 2778.8 | 2766.6 | 2763.2 | 2759.7 | 2768.4 |
| 5°    | 2768.4 | 2759.7 | 2754.5 | 2752.8 | 2761.4 |
| 7.5°  | 2756.2 | 2745.8 | 2742.3 | 2738.9 | 2747.6 |
| 10°   | 2735.4 | 2725.0 | 2721.5 | 2719.8 | 2728.5 |
| 12.5° | 2711.1 | 2699.0 | 2697.2 | 2695.5 | 2704.2 |
| 15°   | 2679.9 | 2669.4 | 2667.7 | 2666.0 | 2674.7 |
| 17.5° | 2646.9 | 2636.5 | 2633.0 | 2631.3 | 2643.4 |
| 20°   | 2607.0 | 2596.6 | 2594.8 | 2593.1 | 2603.5 |
| 22.5° | 2561.8 | 2551.4 | 2548.0 | 2549.7 | 2560.1 |
| 25°   | 2511.5 | 2501.1 | 2499.4 | 2499.4 | 2511.5 |
| 27.5° | 2456.0 | 2445.5 | 2445.5 | 2445.5 | 2459.4 |
| 30°   | 2397.0 | 2388.3 | 2383.1 | 2384.8 | 2397.0 |
| 32.5° | 2336.2 | 2322.3 | 2318.8 | 2320.6 | 2332.7 |
| 35°   | 2265.0 | 2254.6 | 2249.4 | 2249.4 | 2261.6 |
| 37.5° | 2192.1 | 2181.7 | 2174.8 | 2174.8 | 2186.9 |
| 40°   | 2119.2 | 2103.6 | 2096.7 | 2093.2 | 2108.8 |
| 42.5° | 2037.7 | 2025.5 | 2009.9 | 2009.9 | 2023.8 |
| 45°   | 1950.9 | 1937.0 | 1923.1 | 1923.1 | 1937.0 |
| 47.5° | 1862.4 | 1848.5 | 1832.9 | 1832.9 | 1846.7 |
| 50°   | 1768.6 | 1754.8 | 1737.4 | 1737.4 | 1753.0 |
| 52.5° | 1673.2 | 1657.6 | 1638.5 | 1636.7 | 1652.4 |
| 55°   | 1572.5 | 1555.2 | 1534.3 | 1537.8 | 1549.9 |
| 57.5° | 1470.1 | 1447.5 | 1426.7 | 1426.7 | 1445.8 |
| 60°   | 1353.8 | 1334.7 | 1312.2 | 1315.6 | 1339.9 |
| 62.5° | 1242.7 | 1218.4 | 1195.9 | 1204.5 | 1225.4 |
| 65°   | 1121.2 | 1100.4 | 1074.4 | 1088.3 | 1114.3 |
| 67.5° | 1001.5 | 978.9  | 958.1  | 975.4  | 987.6  |
| 70°   | 874.8  | 853.9  | 838.3  | 838.3  | 836.6  |
| 72.5° | 748.1  | 729.0  | 725.5  | 692.5  | 671.7  |
| 75°   | 623.1  | 605.7  | 595.3  | 531.1  | 503.3  |
| 77.5° | 492.9  | 487.7  | 454.7  | 387.1  | 378.4  |
| 80°   | 368.0  | 371.4  | 312.4  | 314.2  | 321.1  |
| 82.5° | 253.4  | 248.2  | 234.3  | 223.9  | 220.4  |
| 85°   | 145.8  | 137.1  | 137.1  | 130.2  | 126.7  |
| 87.5° | 48.6   | 53.8   | 53.8   | 53.8   | 55.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)