

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: P238668

Luminaire Tested: **14ENA-LD2-33-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238668  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-395-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14ENA-LD2-33-UNV-L850-CD1-U  
Description: METALUX ENCOUNTER 1X4 LED TROFFER  
AIR-VENTED OPTION  
Light Source: (224)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3177.9 lumens  
Efficiency: N/A  
Efficacy: 113.1 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 0.67' x L: 3.83' x H: 0')  
CIE Type: Direct

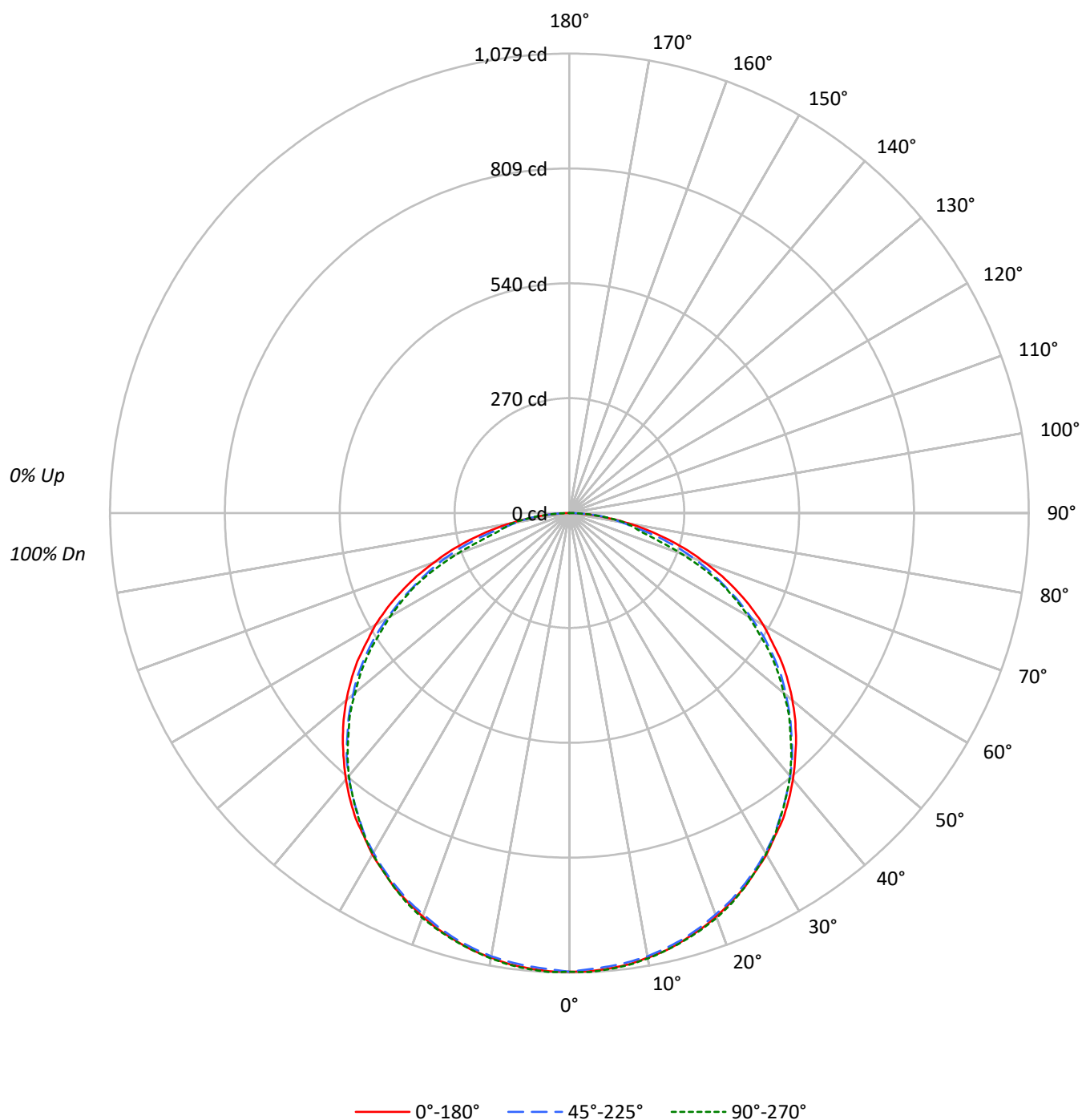
Input Watts (W): 28.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  | 69  |    |    |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 61  | 56  | 51  | 49  |    |    |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 42  |    |    |
| 6   | 69  | 56  | 47  | 40  | 68  | 55  | 46  | 40  | 53  | 46  | 40  | 51  | 45  | 39  | 50  | 44  | 39  | 37  |    |    |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 41  | 35  | 48  | 41  | 35  | 47  | 40  | 35  | 45  | 39  | 35  | 33  |    |    |
| 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  | 30  | 26  | 37  | 30  | 25  | 36  | 30  | 25  | 24  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4536 | 4536 | 4536 |
| 5°  | 4539 | 4518 | 4546 |
| 10° | 4534 | 4520 | 4542 |
| 15° | 4528 | 4513 | 4535 |
| 20° | 4519 | 4496 | 4534 |
| 25° | 4513 | 4490 | 4513 |
| 30° | 4503 | 4478 | 4494 |
| 35° | 4501 | 4449 | 4458 |
| 40° | 4490 | 4434 | 4434 |
| 45° | 4484 | 4394 | 4373 |
| 50° | 4481 | 4349 | 4304 |
| 55° | 4466 | 4294 | 4232 |
| 60° | 4430 | 4161 | 4091 |
| 65° | 4337 | 3986 | 3935 |
| 70° | 4159 | 3827 | 3456 |
| 75° | 3911 | 3445 | 2898 |
| 80° | 3464 | 2976 | 3260 |
| 85° | 2677 | 3083 | 2924 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 102.0  | 3.2       |
| 10°-20°   | 292.9  | 9.2       |
| 20°-30°   | 446.5  | 14.0      |
| 30°-40°   | 543.7  | 17.1      |
| 40°-50°   | 571.6  | 18.0      |
| 50°-60°   | 524.7  | 16.5      |
| 60°-70°   | 403.1  | 12.7      |
| 70°-80°   | 225.0  | 7.1       |
| 80°-90°   | 68.3   | 2.1       |
| 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°    | 841.3  | 26.5      |
| 0°-40°    | 1385.0 | 43.6      |
| 0°-60°    | 2481.4 | 78.1      |
| 0°-90°    | 3177.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3177.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1077 | 1077  | 1077 | 1077  | 1077 |      |
| 5°  | 1074 | 1074  | 1069 | 1074  | 1075 | 102  |
| 15° | 1038 | 1038  | 1035 | 1038  | 1040 | 293  |
| 25° | 971  | 968   | 966  | 970   | 971  | 447  |
| 35° | 875  | 872   | 865  | 867   | 867  | 547  |
| 45° | 753  | 748   | 738  | 734   | 734  | 581  |
| 55° | 608  | 603   | 585  | 575   | 576  | 542  |
| 65° | 435  | 423   | 400  | 395   | 395  | 430  |
| 75° | 240  | 228   | 212  | 183   | 178  | 254  |
| 85° | 55   | 57    | 64   | 62    | 60   | 67   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1077.0 | 1077.0 | 1077.0 | 1077.0 | 1077.0 |
| 2.5°  | 1077.0 | 1077.0 | 1072.0 | 1077.0 | 1078.7 |
| 5°    | 1073.6 | 1073.6 | 1068.6 | 1073.6 | 1075.3 |
| 7.5°  | 1068.6 | 1068.6 | 1063.5 | 1066.9 | 1070.3 |
| 10°   | 1060.2 | 1060.2 | 1056.8 | 1060.2 | 1061.9 |
| 12.5° | 1051.8 | 1050.1 | 1046.7 | 1050.1 | 1051.8 |
| 15°   | 1038.3 | 1038.3 | 1035.0 | 1038.3 | 1040.0 |
| 17.5° | 1024.9 | 1023.2 | 1019.9 | 1024.9 | 1026.6 |
| 20°   | 1008.1 | 1006.4 | 1003.1 | 1008.1 | 1011.5 |
| 22.5° | 989.6  | 987.9  | 986.3  | 991.3  | 993.0  |
| 25°   | 971.1  | 967.8  | 966.1  | 969.5  | 971.1  |
| 27.5° | 947.6  | 945.9  | 944.3  | 945.9  | 947.6  |
| 30°   | 925.8  | 922.4  | 920.7  | 920.7  | 924.1  |
| 32.5° | 898.9  | 897.2  | 895.5  | 897.2  | 897.2  |
| 35°   | 875.4  | 872.0  | 865.3  | 867.0  | 867.0  |
| 37.5° | 846.8  | 841.8  | 836.7  | 836.7  | 836.7  |
| 40°   | 816.6  | 813.2  | 806.5  | 804.8  | 806.5  |
| 42.5° | 784.6  | 781.3  | 774.6  | 769.5  | 771.2  |
| 45°   | 752.7  | 747.7  | 737.6  | 734.2  | 734.2  |
| 47.5° | 719.1  | 714.1  | 702.3  | 697.3  | 699.0  |
| 50°   | 683.8  | 677.1  | 663.7  | 656.9  | 656.9  |
| 52.5° | 646.9  | 640.1  | 626.7  | 618.3  | 618.3  |
| 55°   | 608.2  | 603.2  | 584.7  | 574.6  | 576.3  |
| 57.5° | 564.5  | 559.5  | 541.0  | 529.3  | 529.3  |
| 60°   | 525.9  | 515.8  | 494.0  | 485.6  | 485.6  |
| 62.5° | 482.2  | 470.4  | 448.6  | 438.5  | 440.2  |
| 65°   | 435.2  | 423.4  | 399.9  | 394.8  | 394.8  |
| 67.5° | 388.1  | 378.0  | 356.2  | 347.8  | 339.4  |
| 70°   | 337.7  | 327.6  | 310.8  | 290.7  | 280.6  |
| 72.5° | 290.7  | 278.9  | 263.8  | 233.5  | 223.5  |
| 75°   | 240.3  | 228.5  | 211.7  | 183.1  | 178.1  |
| 77.5° | 191.5  | 181.5  | 157.9  | 151.2  | 154.6  |
| 80°   | 142.8  | 139.5  | 122.7  | 129.4  | 134.4  |
| 82.5° | 95.8   | 94.1   | 97.5   | 100.8  | 100.8  |
| 85°   | 55.4   | 57.1   | 63.8   | 62.2   | 60.5   |
| 87.5° | 23.5   | 28.6   | 26.9   | 26.9   | 26.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)