

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: P238756

Luminaire Tested: **14EN-LD2-25-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238756  
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: 14EN-LD2-25-UNV-L850-CD1-U  
Description: METALUX ENCOUNTER 1X4 LED TROFFER  
STANDARD OPTION  
Light Source: (224)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2782.8 lumens  
Efficiency: N/A  
Efficacy: 133.1 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 1' x L: 3.83' x H: 0')  
CIE Type: Direct

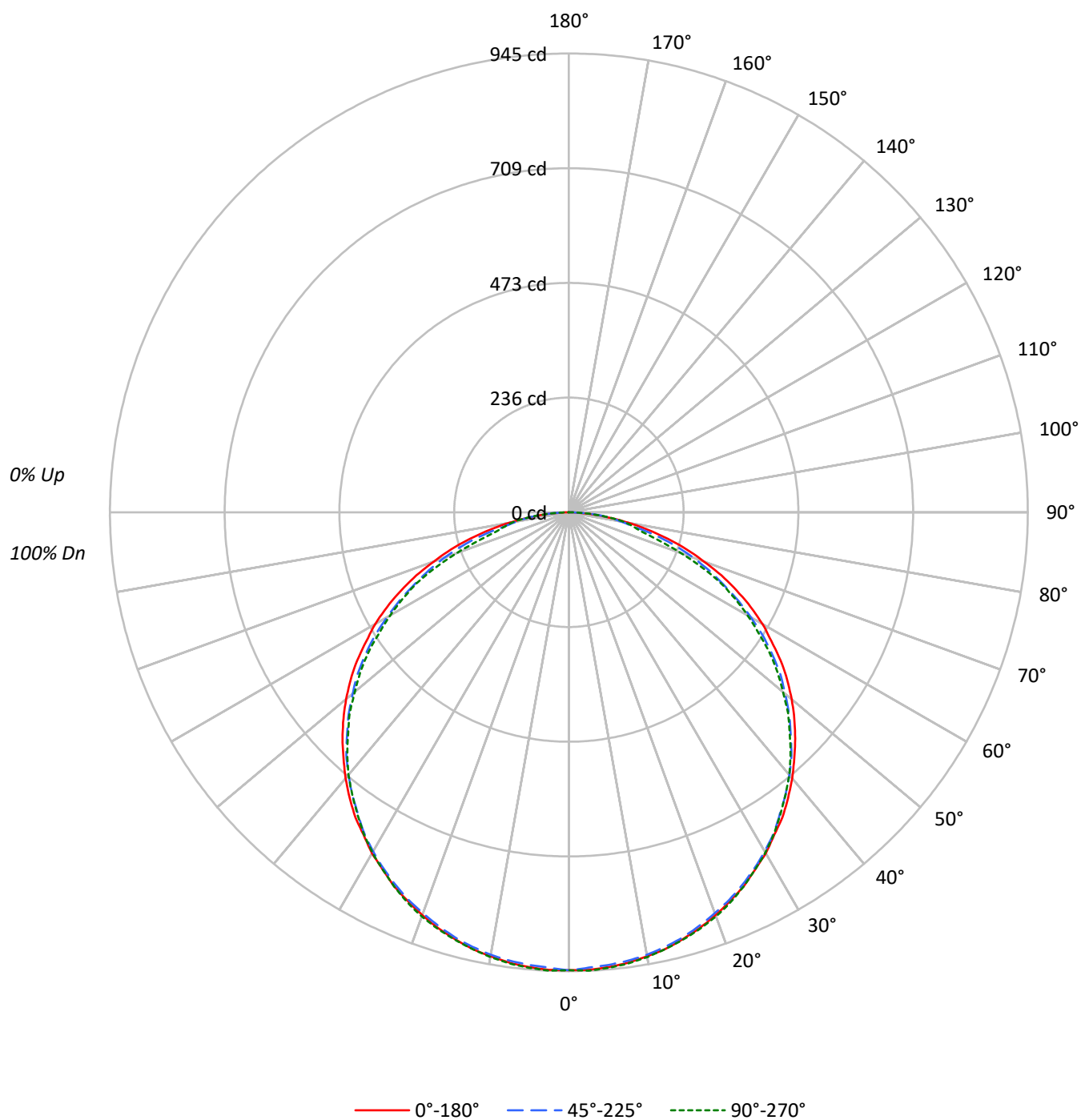
Input Watts (W): 20.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |  |  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 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 |  |  | 100 |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  |  | 97  | 94  | 91  |  |  | 93  | 90  | 88  |  |  | 83  |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  |  | 85  | 79  | 75  |  |  | 81  | 77  | 73  |  |  | 69  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  |  | 74  | 68  | 62  |  |  | 72  | 66  | 61  |  |  | 58  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  |  | 66  | 59  | 53  |  |  | 64  | 57  | 52  |  |  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  |  | 59  | 51  | 46  |  |  | 57  | 50  | 45  |  |  | 42  |
| 6   | 69  | 56  | 47  | 40  | 68  | 55  | 46  | 40  |  | 53  | 46  | 40  |  |  | 51  | 45  | 39  |  |  | 37  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 41  | 35  |  | 48  | 41  | 35  |  |  | 47  | 40  | 35  |  |  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 45  | 37  | 32  |  | 44  | 37  | 31  |  |  | 43  | 36  | 31  |  |  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  |  | 41  | 33  | 28  |  |  | 40  | 33  | 28  |  |  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  |  | 38  | 30  | 26  |  |  | 37  | 30  | 25  |  |  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2648 | 2648 | 2648 |
| 5°  | 2650 | 2637 | 2654 |
| 10° | 2647 | 2639 | 2651 |
| 15° | 2643 | 2635 | 2647 |
| 20° | 2638 | 2625 | 2647 |
| 25° | 2635 | 2621 | 2635 |
| 30° | 2629 | 2614 | 2624 |
| 35° | 2627 | 2597 | 2602 |
| 40° | 2621 | 2589 | 2589 |
| 45° | 2617 | 2565 | 2553 |
| 50° | 2616 | 2539 | 2513 |
| 55° | 2607 | 2507 | 2470 |
| 60° | 2586 | 2429 | 2388 |
| 65° | 2532 | 2327 | 2298 |
| 70° | 2428 | 2235 | 2017 |
| 75° | 2283 | 2011 | 1692 |
| 80° | 2023 | 1737 | 1903 |
| 85° | 1566 | 1801 | 1708 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 89.3   | 3.2       |
| 10°-20°   | 256.5  | 9.2       |
| 20°-30°   | 391.0  | 14.0      |
| 30°-40°   | 476.1  | 17.1      |
| 40°-50°   | 500.6  | 18.0      |
| 50°-60°   | 459.5  | 16.5      |
| 60°-70°   | 353.0  | 12.7      |
| 70°-80°   | 197.0  | 7.1       |
| 80°-90°   | 59.8   | 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°    | 736.8  | 26.5      |
| 0°-40°    | 1212.8 | 43.6      |
| 0°-60°    | 2172.9 | 78.1      |
| 0°-90°    | 2782.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2782.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 943 | 943   | 943 | 943   | 943 |      |
| 5°  | 940 | 940   | 936 | 940   | 942 | 89   |
| 15° | 909 | 909   | 906 | 909   | 911 | 257  |
| 25° | 850 | 848   | 846 | 849   | 850 | 392  |
| 35° | 766 | 764   | 758 | 759   | 759 | 479  |
| 45° | 659 | 655   | 646 | 643   | 643 | 509  |
| 55° | 533 | 528   | 512 | 503   | 505 | 475  |
| 65° | 381 | 371   | 350 | 346   | 346 | 377  |
| 75° | 210 | 200   | 185 | 160   | 156 | 222  |
| 85° | 49  | 50    | 56  | 54    | 53  | 59   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 943.1 | 943.1 | 943.1 | 943.1 | 943.1 |
| 2.5°  | 943.1 | 943.1 | 938.7 | 943.1 | 944.6 |
| 5°    | 940.1 | 940.1 | 935.7 | 940.1 | 941.6 |
| 7.5°  | 935.7 | 935.7 | 931.3 | 934.3 | 937.2 |
| 10°   | 928.4 | 928.4 | 925.4 | 928.4 | 929.9 |
| 12.5° | 921.0 | 919.6 | 916.6 | 919.6 | 921.0 |
| 15°   | 909.3 | 909.3 | 906.3 | 909.3 | 910.7 |
| 17.5° | 897.5 | 896.0 | 893.1 | 897.5 | 899.0 |
| 20°   | 882.8 | 881.3 | 878.4 | 882.8 | 885.7 |
| 22.5° | 866.6 | 865.1 | 863.6 | 868.1 | 869.5 |
| 25°   | 850.4 | 847.5 | 846.0 | 848.9 | 850.4 |
| 27.5° | 829.8 | 828.3 | 826.9 | 828.3 | 829.8 |
| 30°   | 810.7 | 807.7 | 806.3 | 806.3 | 809.2 |
| 32.5° | 787.1 | 785.7 | 784.2 | 785.7 | 785.7 |
| 35°   | 766.5 | 763.6 | 757.7 | 759.2 | 759.2 |
| 37.5° | 741.5 | 737.1 | 732.7 | 732.7 | 732.7 |
| 40°   | 715.0 | 712.1 | 706.2 | 704.7 | 706.2 |
| 42.5° | 687.1 | 684.1 | 678.3 | 673.8 | 675.3 |
| 45°   | 659.1 | 654.7 | 645.9 | 643.0 | 643.0 |
| 47.5° | 629.7 | 625.3 | 615.0 | 610.6 | 612.1 |
| 50°   | 598.8 | 592.9 | 581.2 | 575.3 | 575.3 |
| 52.5° | 566.4 | 560.6 | 548.8 | 541.4 | 541.4 |
| 55°   | 532.6 | 528.2 | 512.0 | 503.2 | 504.6 |
| 57.5° | 494.4 | 489.9 | 473.8 | 463.5 | 463.5 |
| 60°   | 460.5 | 451.7 | 432.6 | 425.2 | 425.2 |
| 62.5° | 422.3 | 412.0 | 392.8 | 384.0 | 385.5 |
| 65°   | 381.1 | 370.8 | 350.2 | 345.8 | 345.8 |
| 67.5° | 339.9 | 331.0 | 311.9 | 304.6 | 297.2 |
| 70°   | 295.7 | 286.9 | 272.2 | 254.5 | 245.7 |
| 72.5° | 254.5 | 244.2 | 231.0 | 204.5 | 195.7 |
| 75°   | 210.4 | 200.1 | 185.4 | 160.4 | 156.0 |
| 77.5° | 167.7 | 158.9 | 138.3 | 132.4 | 135.4 |
| 80°   | 125.1 | 122.1 | 107.4 | 113.3 | 117.7 |
| 82.5° | 83.9  | 82.4  | 85.3  | 88.3  | 88.3  |
| 85°   | 48.6  | 50.0  | 55.9  | 54.4  | 53.0  |
| 87.5° | 20.6  | 25.0  | 23.5  | 23.5  | 23.5  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)