

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: P239003

Luminaire Tested: **24ENA-LD2-34-UNV-L940-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239003  
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-LD2-34-UNV-L940-CD1-U  
Description: METALUX ENCOUNTER 2X4 LED TROFFER  
AIR-VENTED OPTION  
Light Source: (224)4000K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3170.1 lumens  
Efficiency: N/A  
Efficacy: 110.5 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

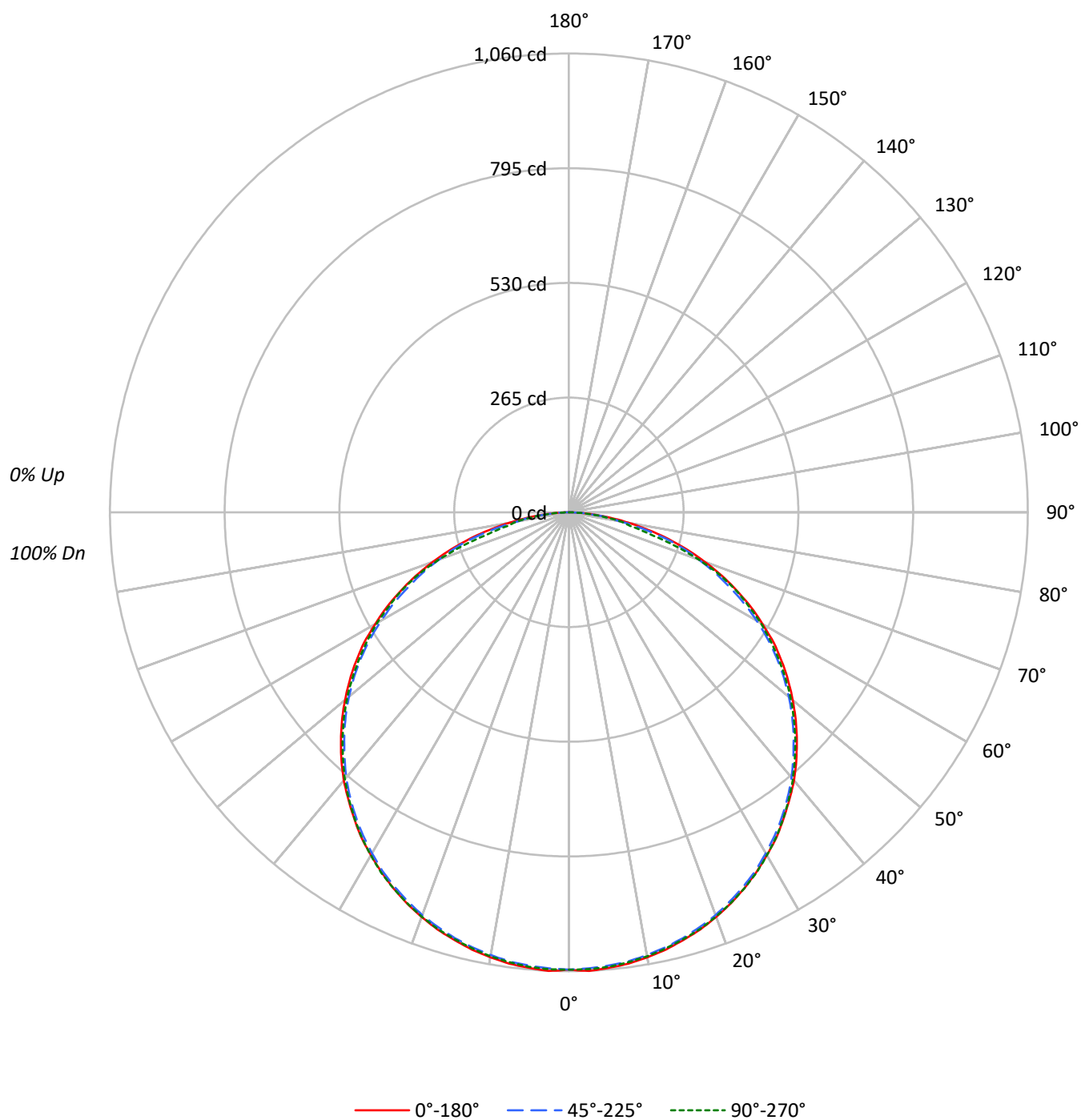
Input Watts (W): 28.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 90  | 87  | 85  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 84  | 79  | 74  | 81  | 77  | 73  | 78  | 74  | 71  |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  |
| 4   | 82  | 70  | 61  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 51  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 59  | 51  | 45  | 57  | 50  | 45  | 55  | 49  | 44  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 40  | 51  | 44  | 39  | 50  | 44  | 39  |
| 7   | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  | 48  | 40  | 35  | 47  | 40  | 35  | 45  | 39  | 34  |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 43  | 36  | 31  | 41  | 35  | 31  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 25  | 37  | 30  | 25  | 36  | 30  | 25  | 35  | 29  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1780 | 1780 | 1780 |
| 5°  | 1787 | 1778 | 1782 |
| 10° | 1786 | 1777 | 1781 |
| 15° | 1784 | 1776 | 1780 |
| 20° | 1784 | 1775 | 1781 |
| 25° | 1782 | 1773 | 1782 |
| 30° | 1779 | 1769 | 1779 |
| 35° | 1778 | 1766 | 1775 |
| 40° | 1779 | 1760 | 1770 |
| 45° | 1774 | 1749 | 1761 |
| 50° | 1769 | 1738 | 1753 |
| 55° | 1763 | 1720 | 1737 |
| 60° | 1741 | 1687 | 1723 |
| 65° | 1706 | 1634 | 1695 |
| 70° | 1644 | 1576 | 1573 |
| 75° | 1548 | 1479 | 1250 |
| 80° | 1362 | 1157 | 1189 |
| 85° | 1075 | 1011 | 936  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 100.1  | 3.2       |
| 10°-20°   | 287.8  | 9.1       |
| 20°-30°   | 440.4  | 13.9      |
| 30°-40°   | 538.3  | 17.0      |
| 40°-50°   | 568.8  | 17.9      |
| 50°-60°   | 527.0  | 16.6      |
| 60°-70°   | 412.9  | 13.0      |
| 70°-80°   | 233.4  | 7.4       |
| 80°-90°   | 61.4   | 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°    | 828.2  | 26.1      |
| 0°-40°    | 1366.5 | 43.1      |
| 0°-60°    | 2462.3 | 77.7      |
| 0°-90°    | 3170.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3170.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1056 | 1056  | 1056 | 1056  | 1056 |      |
| 5°  | 1056 | 1053  | 1051 | 1050  | 1054 | 100  |
| 15° | 1023 | 1019  | 1018 | 1017  | 1021 | 289  |
| 25° | 958  | 954   | 954  | 954   | 958  | 442  |
| 35° | 864  | 860   | 858  | 858   | 863  | 541  |
| 45° | 744  | 739   | 734  | 734   | 739  | 575  |
| 55° | 600  | 594   | 586  | 587   | 592  | 536  |
| 65° | 428  | 420   | 410  | 415   | 425  | 423  |
| 75° | 238  | 231   | 227  | 203   | 192  | 250  |
| 85° | 56   | 52    | 52   | 50    | 48   | 66   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1056.5 | 1056.5 | 1056.5 | 1056.5 | 1056.5 |
| 2.5°  | 1060.5 | 1055.8 | 1054.5 | 1053.2 | 1056.5 |
| 5°    | 1056.5 | 1053.2 | 1051.2 | 1050.5 | 1053.8 |
| 7.5°  | 1051.8 | 1047.9 | 1046.5 | 1045.2 | 1048.5 |
| 10°   | 1043.9 | 1039.9 | 1038.6 | 1037.9 | 1041.2 |
| 12.5° | 1034.6 | 1030.0 | 1029.3 | 1028.7 | 1032.0 |
| 15°   | 1022.7 | 1018.7 | 1018.1 | 1017.4 | 1020.7 |
| 17.5° | 1010.1 | 1006.1 | 1004.8 | 1004.2 | 1008.8 |
| 20°   | 994.9  | 990.9  | 990.2  | 989.6  | 993.6  |
| 22.5° | 977.7  | 973.7  | 972.4  | 973.0  | 977.0  |
| 25°   | 958.4  | 954.5  | 953.8  | 953.8  | 958.4  |
| 27.5° | 937.3  | 933.3  | 933.3  | 933.3  | 938.6  |
| 30°   | 914.7  | 911.4  | 909.4  | 910.1  | 914.7  |
| 32.5° | 891.5  | 886.2  | 884.9  | 885.6  | 890.2  |
| 35°   | 864.4  | 860.4  | 858.4  | 858.4  | 863.1  |
| 37.5° | 836.6  | 832.6  | 829.9  | 829.9  | 834.6  |
| 40°   | 808.8  | 802.8  | 800.1  | 798.8  | 804.8  |
| 42.5° | 777.6  | 773.0  | 767.0  | 767.0  | 772.3  |
| 45°   | 744.5  | 739.2  | 733.9  | 733.9  | 739.2  |
| 47.5° | 710.7  | 705.4  | 699.5  | 699.5  | 704.8  |
| 50°   | 675.0  | 669.7  | 663.0  | 663.0  | 669.0  |
| 52.5° | 638.5  | 632.6  | 625.3  | 624.6  | 630.6  |
| 55°   | 600.1  | 593.5  | 585.5  | 586.9  | 591.5  |
| 57.5° | 561.0  | 552.4  | 544.5  | 544.5  | 551.8  |
| 60°   | 516.6  | 509.4  | 500.8  | 502.1  | 511.3  |
| 62.5° | 474.3  | 465.0  | 456.4  | 459.7  | 467.6  |
| 65°   | 427.9  | 419.9  | 410.0  | 415.3  | 425.2  |
| 67.5° | 382.2  | 373.6  | 365.6  | 372.3  | 376.9  |
| 70°   | 333.8  | 325.9  | 319.9  | 319.9  | 319.3  |
| 72.5° | 285.5  | 278.2  | 276.9  | 264.3  | 256.3  |
| 75°   | 237.8  | 231.2  | 227.2  | 202.7  | 192.1  |
| 77.5° | 188.1  | 186.1  | 173.5  | 147.7  | 144.4  |
| 80°   | 140.4  | 141.7  | 119.2  | 119.9  | 122.5  |
| 82.5° | 96.7   | 94.7   | 89.4   | 85.4   | 84.1   |
| 85°   | 55.6   | 52.3   | 52.3   | 49.7   | 48.4   |
| 87.5° | 18.5   | 20.5   | 20.5   | 20.5   | 21.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)