

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: P238719

Luminaire Tested: **14ENA-LD2-18-UNV-L940-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238719  
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-LD2-18-UNV-L940-CD1-U  
Description: METALUX ENCOUNTER 1X4 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: 1437.6 lumens  
Efficiency: N/A  
Efficacy: 89.8 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

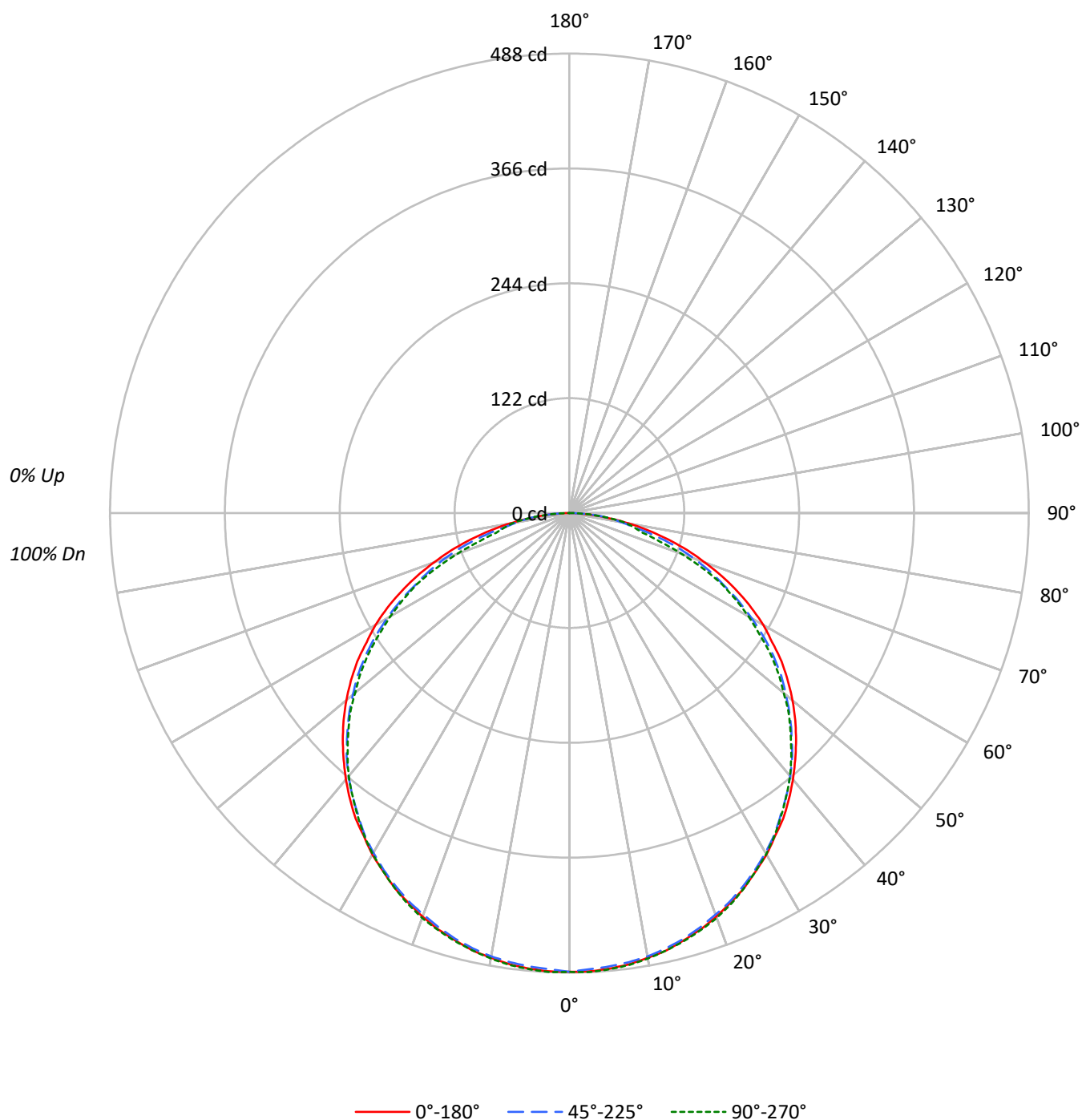
Input Watts (W): 16  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  |  | 85  | 79  | 75  |  |  | 81  | 77  | 73  |  |  | 78  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  |  | 74  | 68  | 62  |  |  | 72  | 66  | 61  |  |  | 69  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  |  | 66  | 59  | 53  |  |  | 64  | 57  | 52  |  |  | 61  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  |  | 59  | 51  | 46  |  |  | 57  | 50  | 45  |  |  | 55  |
| 6   | 69  | 56  | 47  | 40  | 68  | 55  | 46  | 40  |  | 53  | 46  | 40  |  |  | 51  | 45  | 39  |  |  | 50  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 41  | 35  |  | 48  | 41  | 35  |  |  | 47  | 40  | 35  |  |  | 45  |
| 8   | 60  | 46  | 38  | 32  | 58  | 45  | 37  | 32  |  | 44  | 37  | 31  |  |  | 43  | 36  | 31  |  |  | 42  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  |  | 41  | 33  | 28  |  |  | 40  | 33  | 28  |  |  | 38  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  |  | 38  | 30  | 26  |  |  | 37  | 30  | 25  |  |  | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2052 | 2052 | 2052 |
| 5°  | 2054 | 2044 | 2057 |
| 10° | 2051 | 2045 | 2055 |
| 15° | 2048 | 2042 | 2052 |
| 20° | 2044 | 2034 | 2051 |
| 25° | 2042 | 2031 | 2042 |
| 30° | 2037 | 2026 | 2033 |
| 35° | 2036 | 2013 | 2017 |
| 40° | 2031 | 2006 | 2006 |
| 45° | 2028 | 1988 | 1979 |
| 50° | 2027 | 1967 | 1947 |
| 55° | 2020 | 1942 | 1914 |
| 60° | 2004 | 1883 | 1851 |
| 65° | 1962 | 1803 | 1780 |
| 70° | 1882 | 1731 | 1563 |
| 75° | 1769 | 1559 | 1312 |
| 80° | 1567 | 1346 | 1475 |
| 85° | 1213 | 1397 | 1324 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 46.1   | 3.2       |
| 10°-20°   | 132.5  | 9.2       |
| 20°-30°   | 202.0  | 14.0      |
| 30°-40°   | 245.9  | 17.1      |
| 40°-50°   | 258.6  | 18.0      |
| 50°-60°   | 237.4  | 16.5      |
| 60°-70°   | 182.4  | 12.7      |
| 70°-80°   | 101.8  | 7.1       |
| 80°-90°   | 30.9   | 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°    | 380.6  | 26.5      |
| 0°-40°    | 626.6  | 43.6      |
| 0°-60°    | 1122.5 | 78.1      |
| 0°-90°    | 1437.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1437.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 487 | 487   | 487 | 487   | 487 |      |
| 5°  | 486 | 486   | 483 | 486   | 486 | 46   |
| 15° | 470 | 470   | 468 | 470   | 470 | 133  |
| 25° | 439 | 438   | 437 | 439   | 439 | 202  |
| 35° | 396 | 394   | 391 | 392   | 392 | 248  |
| 45° | 340 | 338   | 334 | 332   | 332 | 263  |
| 55° | 275 | 273   | 264 | 260   | 261 | 245  |
| 65° | 197 | 192   | 181 | 179   | 179 | 195  |
| 75° | 109 | 103   | 96  | 83    | 81  | 115  |
| 85° | 25  | 26    | 29  | 28    | 27  | 30   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 487.2 | 487.2 | 487.2 | 487.2 | 487.2 |
| 2.5°  | 487.2 | 487.2 | 484.9 | 487.2 | 488.0 |
| 5°    | 485.7 | 485.7 | 483.4 | 485.7 | 486.4 |
| 7.5°  | 483.4 | 483.4 | 481.1 | 482.6 | 484.2 |
| 10°   | 479.6 | 479.6 | 478.1 | 479.6 | 480.4 |
| 12.5° | 475.8 | 475.0 | 473.5 | 475.0 | 475.8 |
| 15°   | 469.7 | 469.7 | 468.2 | 469.7 | 470.5 |
| 17.5° | 463.6 | 462.9 | 461.4 | 463.6 | 464.4 |
| 20°   | 456.0 | 455.3 | 453.8 | 456.0 | 457.6 |
| 22.5° | 447.7 | 446.9 | 446.2 | 448.4 | 449.2 |
| 25°   | 439.3 | 437.8 | 437.0 | 438.6 | 439.3 |
| 27.5° | 428.7 | 427.9 | 427.2 | 427.9 | 428.7 |
| 30°   | 418.8 | 417.3 | 416.5 | 416.5 | 418.0 |
| 32.5° | 406.6 | 405.9 | 405.1 | 405.9 | 405.9 |
| 35°   | 396.0 | 394.5 | 391.4 | 392.2 | 392.2 |
| 37.5° | 383.1 | 380.8 | 378.5 | 378.5 | 378.5 |
| 40°   | 369.4 | 367.9 | 364.8 | 364.1 | 364.8 |
| 42.5° | 355.0 | 353.4 | 350.4 | 348.1 | 348.9 |
| 45°   | 340.5 | 338.2 | 333.7 | 332.2 | 332.2 |
| 47.5° | 325.3 | 323.0 | 317.7 | 315.4 | 316.2 |
| 50°   | 309.4 | 306.3 | 300.2 | 297.2 | 297.2 |
| 52.5° | 292.6 | 289.6 | 283.5 | 279.7 | 279.7 |
| 55°   | 275.1 | 272.9 | 264.5 | 259.9 | 260.7 |
| 57.5° | 255.4 | 253.1 | 244.7 | 239.4 | 239.4 |
| 60°   | 237.9 | 233.3 | 223.5 | 219.7 | 219.7 |
| 62.5° | 218.1 | 212.8 | 202.9 | 198.4 | 199.1 |
| 65°   | 196.9 | 191.5 | 180.9 | 178.6 | 178.6 |
| 67.5° | 175.6 | 171.0 | 161.1 | 157.3 | 153.5 |
| 70°   | 152.8 | 148.2 | 140.6 | 131.5 | 126.9 |
| 72.5° | 131.5 | 126.2 | 119.3 | 105.7 | 101.1 |
| 75°   | 108.7 | 103.4 | 95.8  | 82.8  | 80.6  |
| 77.5° | 86.6  | 82.1  | 71.4  | 68.4  | 69.9  |
| 80°   | 64.6  | 63.1  | 55.5  | 58.5  | 60.8  |
| 82.5° | 43.3  | 42.6  | 44.1  | 45.6  | 45.6  |
| 85°   | 25.1  | 25.8  | 28.9  | 28.1  | 27.4  |
| 87.5° | 10.6  | 12.9  | 12.2  | 12.2  | 12.2  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)