

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: P35326

Luminaire Tested: **24ENA-LD2-30HP-UNV-L827-CD1-SVPD1-U**

Test Date: 10/20/16

**Test Information**

Test Method: LM-79-08  
Report Number: P35326  
Test Lab: INNOVATION CENTER-P3  
Test Date: 10/20/16  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24ENA-LD2-30HP-UNV-L827-CD1-SVPD1-U  
Description: ENCOUNTER AIR 2X4 LED TROFFER WITH SENSOR  
Light Source: (308) EATON 2700K LEDS  
EL236N077E827  
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER @ 500 mA  
OT50W/PRG1400C/UNV/DIM/L

**Summary**

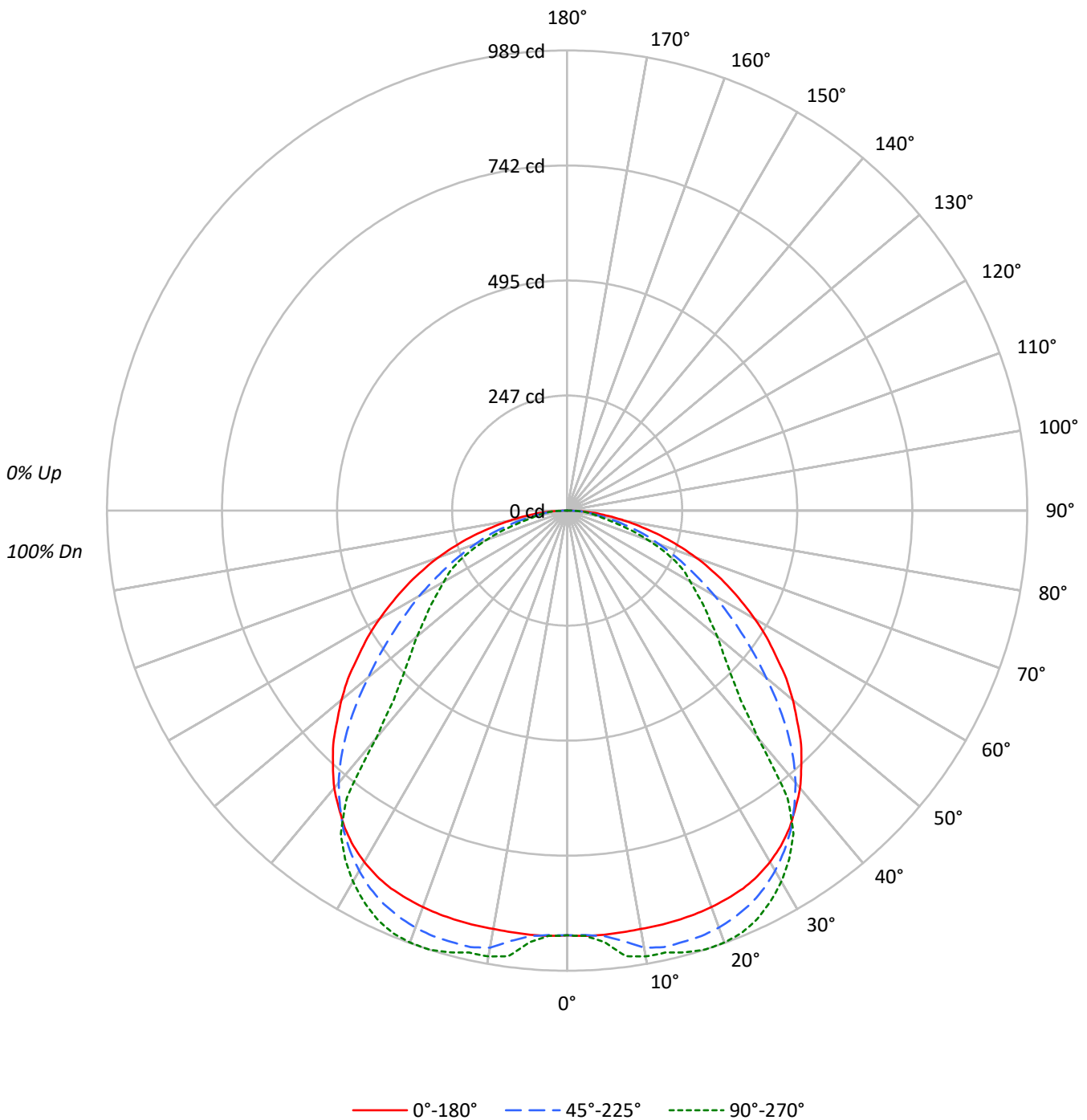
Lumens per Lamp: N/A  
Luminaire Lumens: 2704.9 lumens  
Efficiency: N/A  
Efficacy: 121.8 lumens/watt  
Spacing Criteria (0/90/45): 1.4 / 1.42 / 1.42  
Luminous Opening: Rectangular (W 1.79' x L: 3.83' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.2  
Input Voltage (V): 120.0  
Input Current (Ain): 0.186  
Voltage Rise (V): NR  
Power Factor: 0.9974  
Total Harmonic Distortion (THDi): 7.50%  
Frequency (hertz): 60  
Stabilization Time: 0.5 HR  
Operation Time: 5 HR  
Ambient Temperature (°C): 24.3  
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  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 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 | 102 | 102 | 102 | 100 |
| 1   | 109 | 105 | 100 | 97  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 88  | 87  | 85  |
| 2   | 100 | 92  | 85  | 79  | 97  | 90  | 84  | 78  | 86  | 81  | 77  | 83  | 79  | 75  | 80  | 76  | 73  | 71  |
| 3   | 91  | 81  | 73  | 66  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 73  | 68  | 64  | 71  | 66  | 62  | 60  |
| 4   | 83  | 72  | 63  | 57  | 81  | 70  | 62  | 56  | 68  | 61  | 55  | 66  | 60  | 55  | 63  | 58  | 54  | 52  |
| 5   | 77  | 64  | 55  | 49  | 75  | 63  | 55  | 49  | 61  | 54  | 48  | 59  | 53  | 48  | 57  | 52  | 47  | 45  |
| 6   | 71  | 58  | 49  | 43  | 69  | 57  | 49  | 43  | 55  | 48  | 42  | 54  | 47  | 42  | 52  | 46  | 42  | 39  |
| 7   | 66  | 53  | 44  | 38  | 64  | 52  | 44  | 38  | 50  | 43  | 37  | 49  | 42  | 37  | 47  | 42  | 37  | 35  |
| 8   | 61  | 48  | 40  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 34  | 45  | 38  | 33  | 44  | 38  | 33  | 31  |
| 9   | 57  | 44  | 36  | 30  | 56  | 44  | 36  | 30  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 28  |
| 10  | 54  | 41  | 33  | 28  | 53  | 40  | 33  | 28  | 39  | 32  | 27  | 38  | 32  | 27  | 37  | 31  | 27  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1431 | 1431 | 1431 |
| 5°  | 1440 | 1444 | 1465 |
| 10° | 1453 | 1518 | 1548 |
| 15° | 1480 | 1558 | 1595 |
| 20° | 1513 | 1591 | 1648 |
| 25° | 1549 | 1613 | 1674 |
| 30° | 1578 | 1618 | 1667 |
| 35° | 1594 | 1603 | 1622 |
| 40° | 1594 | 1563 | 1305 |
| 45° | 1576 | 1483 | 1102 |
| 50° | 1543 | 1361 | 1026 |
| 55° | 1500 | 1249 | 981  |
| 60° | 1461 | 1147 | 959  |
| 65° | 1409 | 1049 | 949  |
| 70° | 1352 | 958  | 843  |
| 75° | 1260 | 860  | 684  |
| 80° | 1137 | 704  | 614  |
| 85° | 1079 | 719  | 755  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 88.9   | 3.3       |
| 10°-20°   | 269.6  | 10.0      |
| 20°-30°   | 429.3  | 15.9      |
| 30°-40°   | 519.5  | 19.2      |
| 40°-50°   | 488.8  | 18.1      |
| 50°-60°   | 405.6  | 15.0      |
| 60°-70°   | 295.7  | 10.9      |
| 70°-80°   | 160.1  | 5.9       |
| 80°-90°   | 47.5   | 1.8       |
| 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°    | 787.8  | 29.1      |
| 0°-40°    | 1307.3 | 48.3      |
| 0°-60°    | 2201.7 | 81.4      |
| 0°-90°    | 2704.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2704.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 913 | 913   | 913 | 913   | 913 |      |
| 5°  | 915 | 914   | 918 | 924   | 931 | 87   |
| 15° | 912 | 929   | 960 | 972   | 983 | 258  |
| 25° | 896 | 909   | 933 | 958   | 968 | 413  |
| 35° | 833 | 826   | 838 | 847   | 848 | 520  |
| 45° | 711 | 690   | 669 | 567   | 497 | 547  |
| 55° | 549 | 522   | 457 | 377   | 359 | 492  |
| 65° | 380 | 343   | 283 | 250   | 256 | 376  |
| 75° | 208 | 175   | 142 | 120   | 113 | 220  |
| 85° | 60  | 44    | 40  | 40    | 42  | 65   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°  | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 0°    | 913 | 913   | 913 | 913   | 913 |
| 2.5°  | 915 | 913   | 913 | 912   | 915 |
| 5°    | 915 | 914   | 918 | 924   | 931 |
| 7.5°  | 914 | 917   | 933 | 956   | 966 |
| 10°   | 913 | 922   | 954 | 970   | 973 |
| 12.5° | 913 | 927   | 961 | 967   | 973 |
| 15°   | 912 | 929   | 960 | 972   | 983 |
| 17.5° | 910 | 929   | 959 | 976   | 989 |
| 20°   | 907 | 926   | 954 | 975   | 988 |
| 22.5° | 902 | 920   | 945 | 970   | 982 |
| 25°   | 896 | 909   | 933 | 958   | 968 |
| 27.5° | 886 | 895   | 916 | 938   | 947 |
| 30°   | 872 | 876   | 894 | 912   | 921 |
| 32.5° | 855 | 853   | 868 | 882   | 888 |
| 35°   | 833 | 826   | 838 | 847   | 848 |
| 37.5° | 806 | 796   | 802 | 798   | 778 |
| 40°   | 779 | 762   | 764 | 716   | 638 |
| 42.5° | 745 | 727   | 719 | 632   | 551 |
| 45°   | 711 | 690   | 669 | 567   | 497 |
| 47.5° | 671 | 650   | 614 | 508   | 455 |
| 50°   | 633 | 609   | 558 | 458   | 421 |
| 52.5° | 594 | 565   | 507 | 415   | 387 |
| 55°   | 549 | 522   | 457 | 377   | 359 |
| 57.5° | 509 | 477   | 409 | 341   | 330 |
| 60°   | 466 | 433   | 366 | 311   | 306 |
| 62.5° | 422 | 390   | 322 | 281   | 284 |
| 65°   | 380 | 343   | 283 | 250   | 256 |
| 67.5° | 337 | 300   | 245 | 222   | 222 |
| 70°   | 295 | 259   | 209 | 186   | 184 |
| 72.5° | 251 | 217   | 178 | 153   | 150 |
| 75°   | 208 | 175   | 142 | 120   | 113 |
| 77.5° | 165 | 140   | 110 | 88    | 83  |
| 80°   | 126 | 107   | 78  | 68    | 68  |
| 82.5° | 90  | 74    | 55  | 54    | 54  |
| 85°   | 60  | 44    | 40  | 40    | 42  |
| 87.5° | 26  | 22    | 23  | 23    | 24  |
| 90°   | 0   | 0     | 0   | 0     | 0   |

(END OF REPORT)