

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: P183161

Luminaire Tested: **12EN-LD2-39-UNV-L840-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P183161  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P34480)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 12EN-LD2-39-UNV-L840-CD1-U  
Description: METALUX ENCOUNTER 1X2 TROFFER  
  
Light Source: EATON LED 4000K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4054.5 lumens  
Efficiency: N/A  
Efficacy: 114.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.38  
Luminous Opening: Rectangular (W 0.92' x L: 1.92' x H: 0')  
CIE Type: Direct

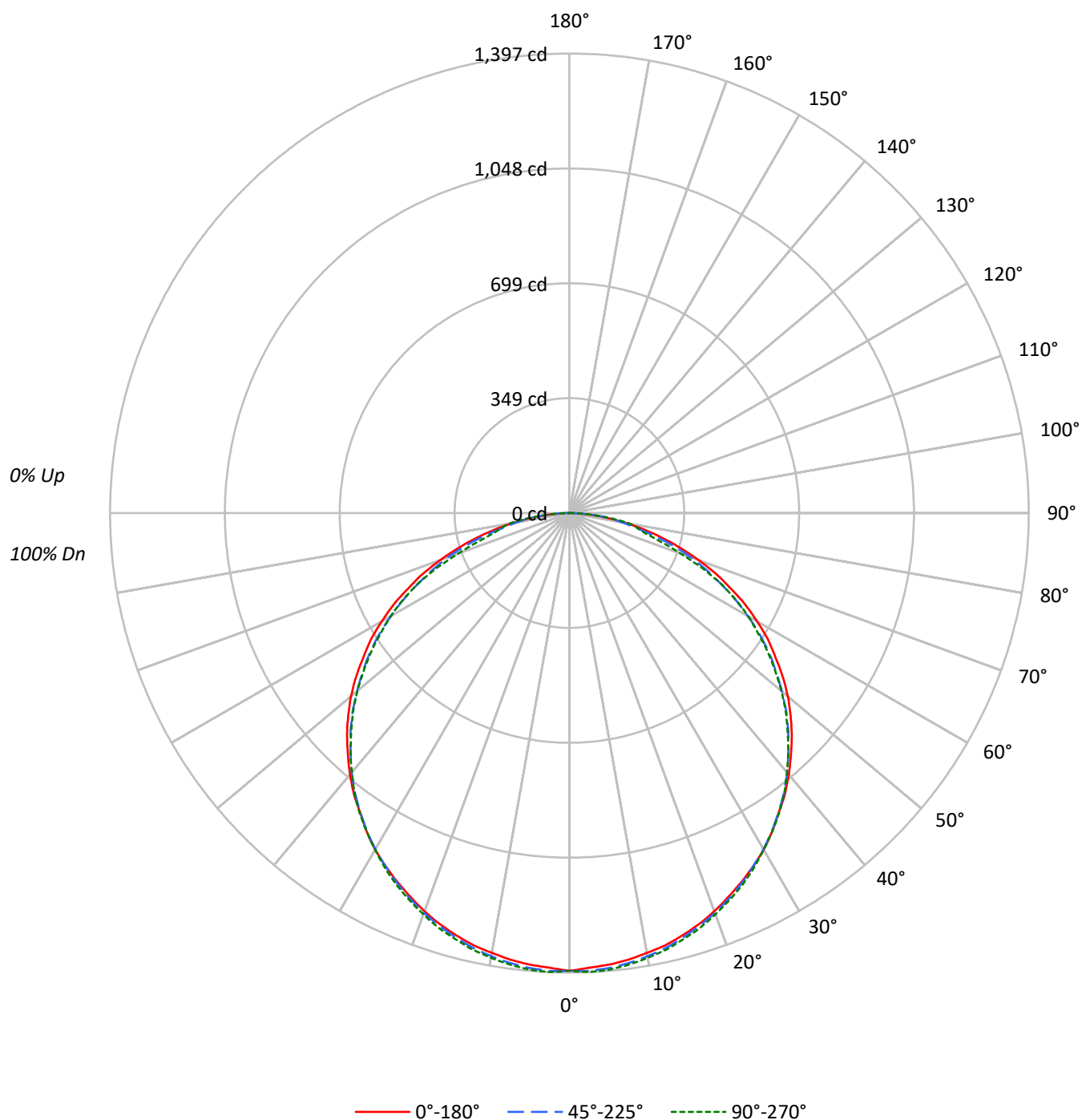
Input Watts (W): 35.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 69  | 60  | 54  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 52  | 46  |  | 57  | 50  | 45  |  | 43  |
| 6   | 70  | 56  | 47  | 40  | 68  | 55  | 47  | 40  | 53  | 46  | 40  |  | 52  | 45  | 40  |  | 37  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  | 44  | 37  | 31  |  | 43  | 36  | 31  |  | 29  |
| 9   | 56  | 42  | 34  | 29  | 55  | 42  | 34  | 28  | 41  | 33  | 28  |  | 40  | 33  | 28  |  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  |  | 37  | 30  | 26  |  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 8526 | 8526 | 8526 |
| 5°  | 8476 | 8538 | 8569 |
| 10° | 8448 | 8510 | 8542 |
| 15° | 8430 | 8473 | 8505 |
| 20° | 8401 | 8433 | 8466 |
| 25° | 8367 | 8389 | 8423 |
| 30° | 8360 | 8348 | 8360 |
| 35° | 8307 | 8294 | 8320 |
| 40° | 8301 | 8233 | 8233 |
| 45° | 8288 | 8156 | 8127 |
| 50° | 8263 | 8037 | 8020 |
| 55° | 8174 | 7921 | 7867 |
| 60° | 8070 | 7676 | 7696 |
| 65° | 7830 | 7338 | 7363 |
| 70° | 7491 | 7036 | 6429 |
| 75° | 6933 | 6332 | 5650 |
| 80° | 6213 | 5617 | 6569 |
| 85° | 4998 | 5595 | 5595 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 131.8  | 3.2       |
| 10°-20°   | 376.9  | 9.3       |
| 20°-30°   | 572.1  | 14.1      |
| 30°-40°   | 694.7  | 17.1      |
| 40°-50°   | 728.2  | 18.0      |
| 50°-60°   | 666.2  | 16.4      |
| 60°-70°   | 510.1  | 12.6      |
| 70°-80°   | 286.3  | 7.1       |
| 80°-90°   | 88.2   | 2.2       |
| 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°    | 1080.8 | 26.7      |
| 0°-40°    | 1775.5 | 43.8      |
| 0°-60°    | 3169.9 | 78.2      |
| 0°-90°    | 4054.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4054.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1392 | 1392  | 1392 | 1392  | 1392 |      |
| 5°  | 1378 | 1382  | 1388 | 1392  | 1393 | 131  |
| 15° | 1329 | 1331  | 1336 | 1339  | 1341 | 375  |
| 25° | 1238 | 1238  | 1241 | 1243  | 1246 | 571  |
| 35° | 1111 | 1111  | 1109 | 1109  | 1112 | 696  |
| 45° | 957  | 952   | 941  | 938   | 938  | 738  |
| 55° | 765  | 760   | 742  | 733   | 736  | 685  |
| 65° | 540  | 528   | 506  | 510   | 508  | 535  |
| 75° | 293  | 283   | 268  | 242   | 239  | 311  |
| 85° | 71   | 73    | 80   | 80    | 80   | 84   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1391.7 | 1391.7 | 1391.7 | 1391.7 | 1391.7 |
| 2.5°  | 1383.3 | 1386.7 | 1393.4 | 1396.8 | 1396.8 |
| 5°    | 1378.2 | 1381.6 | 1388.3 | 1391.7 | 1393.4 |
| 7.5°  | 1369.7 | 1373.1 | 1379.9 | 1385.0 | 1385.0 |
| 10°   | 1357.9 | 1361.3 | 1368.0 | 1373.1 | 1373.1 |
| 12.5° | 1346.0 | 1347.7 | 1354.5 | 1357.9 | 1359.6 |
| 15°   | 1329.1 | 1330.8 | 1335.9 | 1339.2 | 1340.9 |
| 17.5° | 1310.5 | 1310.5 | 1315.5 | 1318.9 | 1322.3 |
| 20°   | 1288.5 | 1290.1 | 1293.5 | 1296.9 | 1298.6 |
| 22.5° | 1263.1 | 1264.8 | 1268.1 | 1271.5 | 1273.2 |
| 25°   | 1237.7 | 1237.7 | 1241.0 | 1242.7 | 1246.1 |
| 27.5° | 1210.6 | 1210.6 | 1210.6 | 1212.3 | 1215.7 |
| 30°   | 1181.8 | 1180.1 | 1180.1 | 1178.4 | 1181.8 |
| 32.5° | 1147.9 | 1147.9 | 1146.2 | 1144.5 | 1147.9 |
| 35°   | 1110.7 | 1110.7 | 1109.0 | 1109.0 | 1112.4 |
| 37.5° | 1076.8 | 1075.1 | 1071.7 | 1068.4 | 1073.4 |
| 40°   | 1037.9 | 1036.2 | 1029.4 | 1026.0 | 1029.4 |
| 42.5° | 997.2  | 993.9  | 985.4  | 982.0  | 985.4  |
| 45°   | 956.6  | 951.5  | 941.4  | 938.0  | 938.0  |
| 47.5° | 912.6  | 907.5  | 894.0  | 888.9  | 892.3  |
| 50°   | 866.9  | 860.1  | 843.2  | 839.8  | 841.5  |
| 52.5° | 817.8  | 809.3  | 792.4  | 789.0  | 789.0  |
| 55°   | 765.3  | 760.2  | 741.6  | 733.1  | 736.5  |
| 57.5° | 716.2  | 706.0  | 685.7  | 675.6  | 680.6  |
| 60°   | 658.6  | 646.8  | 626.5  | 621.4  | 628.1  |
| 62.5° | 602.7  | 589.2  | 568.9  | 565.5  | 570.6  |
| 65°   | 540.1  | 528.3  | 506.2  | 509.6  | 507.9  |
| 67.5° | 482.5  | 469.0  | 450.4  | 441.9  | 436.8  |
| 70°   | 418.2  | 406.3  | 392.8  | 369.1  | 358.9  |
| 72.5° | 355.6  | 345.4  | 331.8  | 299.7  | 292.9  |
| 75°   | 292.9  | 282.7  | 267.5  | 242.1  | 238.7  |
| 77.5° | 233.6  | 226.9  | 204.9  | 204.9  | 213.3  |
| 80°   | 176.1  | 172.7  | 159.2  | 177.8  | 186.2  |
| 82.5° | 118.5  | 115.1  | 128.7  | 135.4  | 133.8  |
| 85°   | 71.1   | 72.8   | 79.6   | 79.6   | 79.6   |
| 87.5° | 30.5   | 33.9   | 35.6   | 35.6   | 37.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)