

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: P238708

Luminaire Tested: **14EN-LD2-43-UNV-L950-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238708  
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-LD2-43-UNV-L950-CD1-U  
Description: METALUX ENCOUNTER 1X4 LED TROFFER  
STANDARD OPTION  
Light Source: (224)5000K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4138.2 lumens  
Efficiency: N/A  
Efficacy: 110.1 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

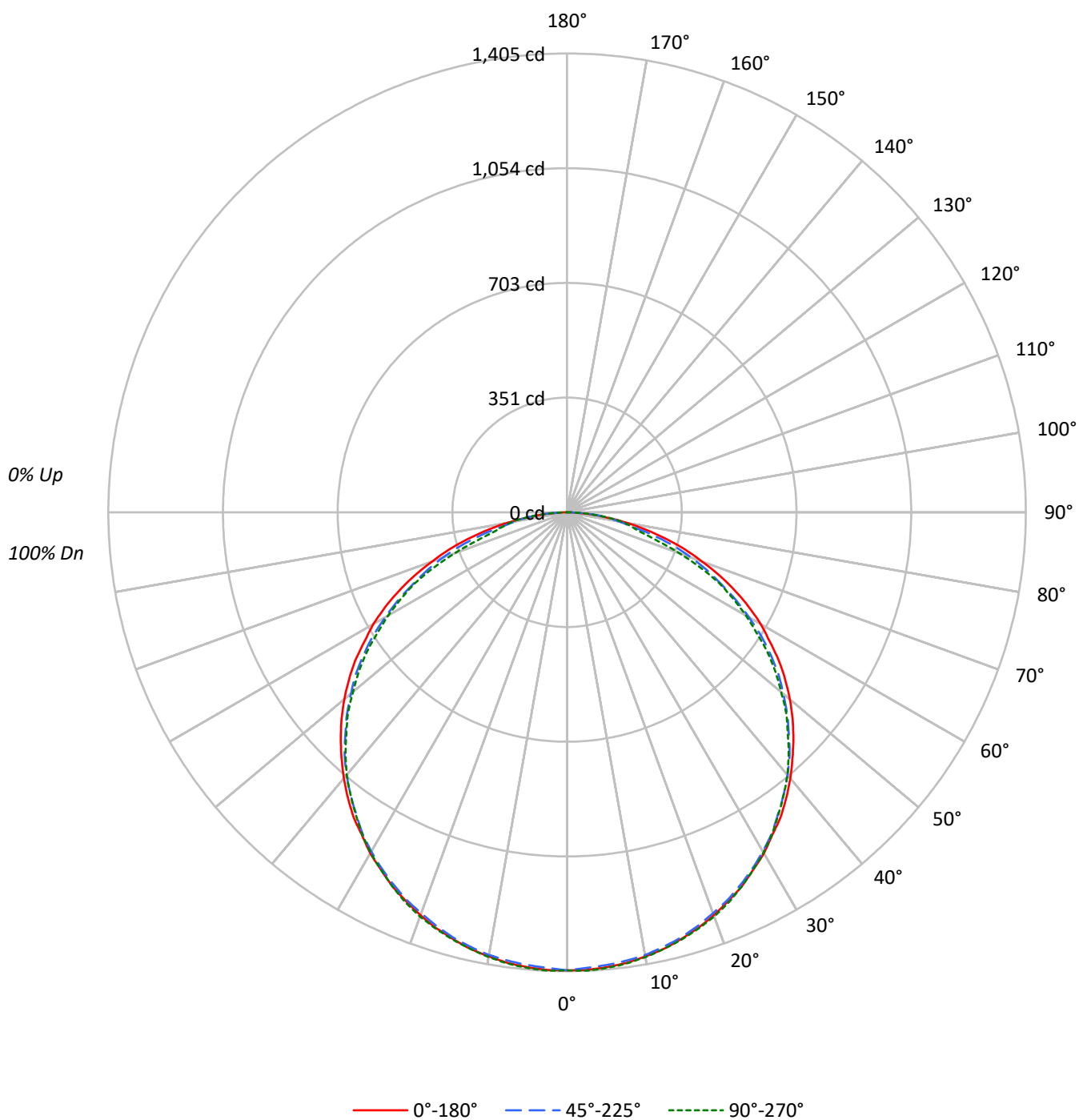
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 3938 | 3938 | 3938 |
| 5°  | 3941 | 3922 | 3947 |
| 10° | 3936 | 3924 | 3943 |
| 15° | 3931 | 3918 | 3937 |
| 20° | 3923 | 3903 | 3936 |
| 25° | 3918 | 3898 | 3918 |
| 30° | 3909 | 3888 | 3902 |
| 35° | 3907 | 3863 | 3870 |
| 40° | 3898 | 3850 | 3850 |
| 45° | 3892 | 3814 | 3797 |
| 50° | 3890 | 3775 | 3737 |
| 55° | 3877 | 3727 | 3674 |
| 60° | 3846 | 3612 | 3551 |
| 65° | 3765 | 3460 | 3416 |
| 70° | 3611 | 3323 | 3000 |
| 75° | 3395 | 2991 | 2516 |
| 80° | 3008 | 2582 | 2830 |
| 85° | 2326 | 2677 | 2539 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 132.8  | 3.2       |
| 10°-20°   | 381.4  | 9.2       |
| 20°-30°   | 581.4  | 14.0      |
| 30°-40°   | 708.0  | 17.1      |
| 40°-50°   | 744.4  | 18.0      |
| 50°-60°   | 683.3  | 16.5      |
| 60°-70°   | 525.0  | 12.7      |
| 70°-80°   | 293.0  | 7.1       |
| 80°-90°   | 89.0   | 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°    | 1095.6 | 26.5      |
| 0°-40°    | 1803.6 | 43.6      |
| 0°-60°    | 3231.3 | 78.1      |
| 0°-90°    | 4138.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4138.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1402 | 1402  | 1402 | 1402  | 1402 |      |
| 5°  | 1398 | 1398  | 1392 | 1398  | 1400 | 133  |
| 15° | 1352 | 1352  | 1348 | 1352  | 1354 | 382  |
| 25° | 1265 | 1260  | 1258 | 1262  | 1265 | 582  |
| 35° | 1140 | 1136  | 1127 | 1129  | 1129 | 712  |
| 45° | 980  | 974   | 960  | 956   | 956  | 756  |
| 55° | 792  | 786   | 761  | 748   | 750  | 706  |
| 65° | 567  | 551   | 521  | 514   | 514  | 560  |
| 75° | 313  | 298   | 276  | 238   | 232  | 331  |
| 85° | 72   | 74    | 83   | 81    | 79   | 87   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1402.4 | 1402.4 | 1402.4 | 1402.4 | 1402.4 |
| 2.5°  | 1402.4 | 1402.4 | 1395.9 | 1402.4 | 1404.6 |
| 5°    | 1398.1 | 1398.1 | 1391.5 | 1398.1 | 1400.3 |
| 7.5°  | 1391.5 | 1391.5 | 1384.9 | 1389.3 | 1393.7 |
| 10°   | 1380.6 | 1380.6 | 1376.2 | 1380.6 | 1382.8 |
| 12.5° | 1369.6 | 1367.4 | 1363.1 | 1367.4 | 1369.6 |
| 15°   | 1352.1 | 1352.1 | 1347.8 | 1352.1 | 1354.3 |
| 17.5° | 1334.6 | 1332.4 | 1328.1 | 1334.6 | 1336.8 |
| 20°   | 1312.7 | 1310.6 | 1306.2 | 1312.7 | 1317.1 |
| 22.5° | 1288.7 | 1286.5 | 1284.3 | 1290.9 | 1293.1 |
| 25°   | 1264.6 | 1260.2 | 1258.0 | 1262.4 | 1264.6 |
| 27.5° | 1234.0 | 1231.8 | 1229.6 | 1231.8 | 1234.0 |
| 30°   | 1205.5 | 1201.2 | 1199.0 | 1199.0 | 1203.3 |
| 32.5° | 1170.5 | 1168.3 | 1166.2 | 1168.3 | 1168.3 |
| 35°   | 1139.9 | 1135.5 | 1126.8 | 1129.0 | 1129.0 |
| 37.5° | 1102.7 | 1096.1 | 1089.6 | 1089.6 | 1089.6 |
| 40°   | 1063.3 | 1058.9 | 1050.2 | 1048.0 | 1050.2 |
| 42.5° | 1021.8 | 1017.4 | 1008.6 | 1002.1 | 1004.3 |
| 45°   | 980.2  | 973.6  | 960.5  | 956.1  | 956.1  |
| 47.5° | 936.4  | 929.9  | 914.5  | 908.0  | 910.2  |
| 50°   | 890.5  | 881.7  | 864.2  | 855.5  | 855.5  |
| 52.5° | 842.3  | 833.6  | 816.1  | 805.2  | 805.2  |
| 55°   | 792.0  | 785.5  | 761.4  | 748.3  | 750.5  |
| 57.5° | 735.1  | 728.6  | 704.5  | 689.2  | 689.2  |
| 60°   | 684.8  | 671.7  | 643.2  | 632.3  | 632.3  |
| 62.5° | 627.9  | 612.6  | 584.2  | 571.0  | 573.2  |
| 65°   | 566.7  | 551.4  | 520.7  | 514.2  | 514.2  |
| 67.5° | 505.4  | 492.3  | 463.8  | 452.9  | 442.0  |
| 70°   | 439.8  | 426.6  | 404.8  | 378.5  | 365.4  |
| 72.5° | 378.5  | 363.2  | 343.5  | 304.1  | 291.0  |
| 75°   | 312.9  | 297.6  | 275.7  | 238.5  | 231.9  |
| 77.5° | 249.4  | 236.3  | 205.7  | 196.9  | 201.3  |
| 80°   | 186.0  | 181.6  | 159.7  | 168.5  | 175.0  |
| 82.5° | 124.7  | 122.5  | 126.9  | 131.3  | 131.3  |
| 85°   | 72.2   | 74.4   | 83.1   | 81.0   | 78.8   |
| 87.5° | 30.6   | 37.2   | 35.0   | 35.0   | 35.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)