

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: P229612

Luminaire Tested: **22RLN-LD5-40-RDP-UNV-L830-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P229612  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36060)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22RLN-LD5-40-RDP-UNV-L830-CD1-U  
Description: METALUX 2X2 RLN LED TROFFER WITH RDP LENS  
Light Source: (126)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3149.0 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.38 / 1.41  
Luminous Opening: Rectangular (W 1.83' x L: 1.83' x H: 0')  
CIE Type: Direct

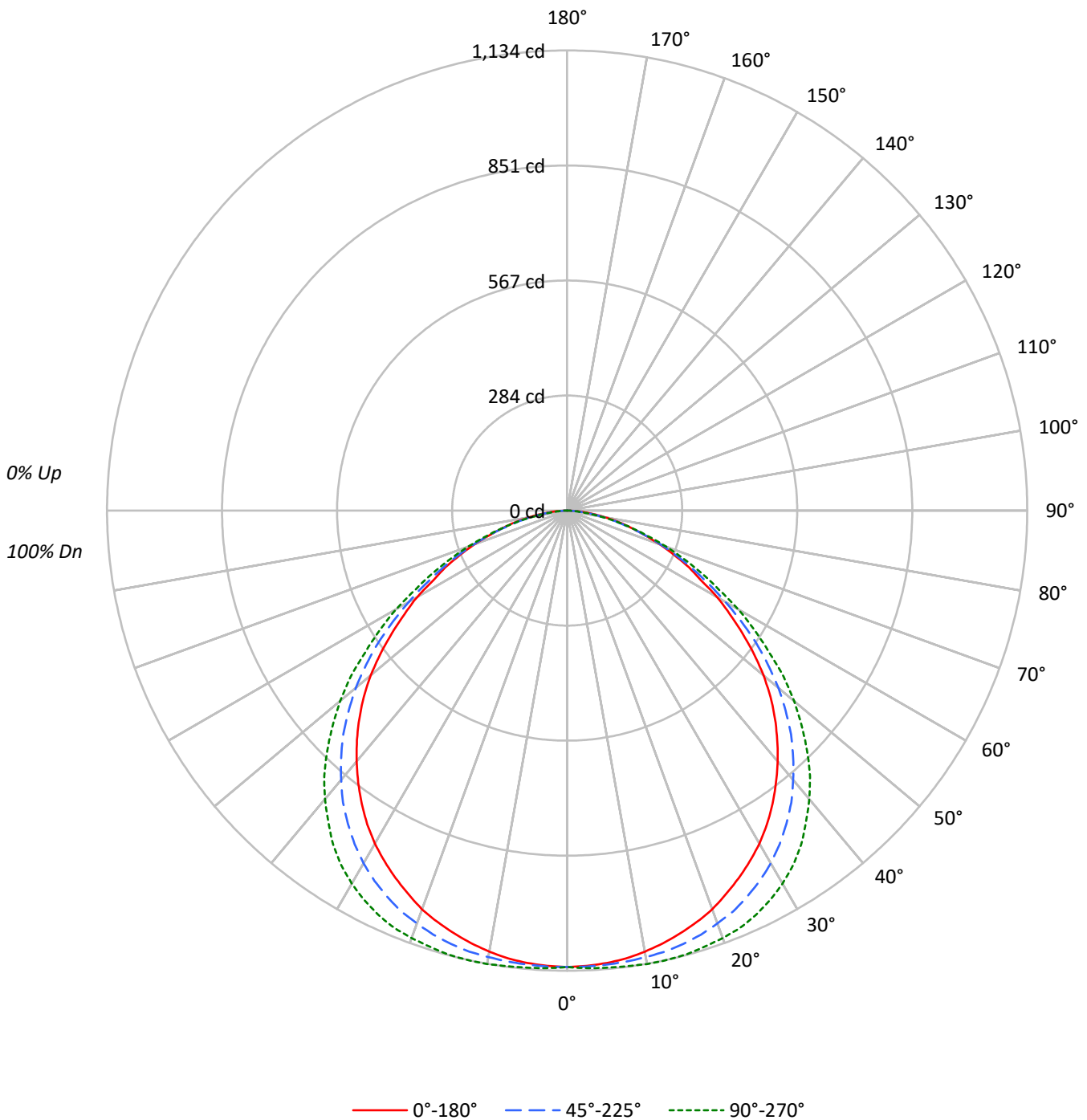
Input Watts (W): 35.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |     | 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 | 101 | 97  | 107 | 103 | 99  | 96  | 98  | 95  | 93  | 94  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 86  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 74  | 72  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 63  | 61  |
| 4   | 84  | 72  | 63  | 57  | 81  | 71  | 63  | 56  | 68  | 61  | 56  | 66  | 60  | 55  | 64  | 58  | 54  | 52  |
| 5   | 77  | 64  | 56  | 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  | 40  |
| 7   | 66  | 53  | 44  | 38  | 64  | 52  | 44  | 38  | 50  | 43  | 37  | 49  | 42  | 37  | 47  | 41  | 37  | 35  |
| 8   | 61  | 48  | 40  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 31  |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 36  | 30  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 28  |
| 10  | 54  | 41  | 33  | 28  | 52  | 40  | 33  | 27  | 39  | 32  | 27  | 38  | 32  | 27  | 37  | 31  | 27  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3602 | 3602 | 3602 |
| 5°  | 3598 | 3610 | 3635 |
| 10° | 3589 | 3633 | 3689 |
| 15° | 3576 | 3666 | 3755 |
| 20° | 3565 | 3689 | 3821 |
| 25° | 3532 | 3709 | 3886 |
| 30° | 3504 | 3711 | 3925 |
| 35° | 3449 | 3683 | 3931 |
| 40° | 3374 | 3623 | 3881 |
| 45° | 3280 | 3533 | 3786 |
| 50° | 3148 | 3388 | 3637 |
| 55° | 2946 | 3173 | 3388 |
| 60° | 2739 | 2887 | 3121 |
| 65° | 2511 | 2598 | 2774 |
| 70° | 2273 | 2308 | 2417 |
| 75° | 2002 | 1954 | 2026 |
| 80° | 1741 | 1599 | 1527 |
| 85° | 1415 | 1062 | 919  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 107.1  | 3.4       |
| 10°-20°   | 312.3  | 9.9       |
| 20°-30°   | 483.9  | 15.4      |
| 30°-40°   | 588.9  | 18.7      |
| 40°-50°   | 599.8  | 19.0      |
| 50°-60°   | 505.8  | 16.1      |
| 60°-70°   | 342.1  | 10.9      |
| 70°-80°   | 171.0  | 5.4       |
| 80°-90°   | 38.0   | 1.2       |
| 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°    | 903.3  | 28.7      |
| 0°-40°    | 1492.2 | 47.4      |
| 0°-60°    | 2597.8 | 82.5      |
| 0°-90°    | 3149.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3149.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1125 | 1125  | 1125 | 1125  | 1125 |      |
| 5°  | 1119 | 1121  | 1123 | 1129  | 1131 | 106  |
| 15° | 1079 | 1086  | 1106 | 1125  | 1132 | 305  |
| 25° | 1000 | 1015  | 1050 | 1084  | 1100 | 461  |
| 35° | 882  | 901   | 942  | 986   | 1005 | 551  |
| 45° | 724  | 738   | 780  | 820   | 836  | 558  |
| 55° | 528  | 536   | 568  | 595   | 607  | 472  |
| 65° | 331  | 326   | 343  | 358   | 366  | 327  |
| 75° | 162  | 156   | 158  | 160   | 164  | 173  |
| 85° | 38   | 33    | 29   | 25    | 25   | 45   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1124.8 | 1124.8 | 1124.8 | 1124.8 | 1124.8 |
| 2.5°  | 1122.9 | 1122.9 | 1124.8 | 1126.8 | 1128.7 |
| 5°    | 1119.1 | 1121.0 | 1122.9 | 1128.7 | 1130.6 |
| 7.5°  | 1113.3 | 1115.2 | 1121.0 | 1128.7 | 1132.5 |
| 10°   | 1103.6 | 1107.5 | 1117.1 | 1128.7 | 1134.5 |
| 12.5° | 1092.1 | 1097.9 | 1113.3 | 1126.8 | 1134.5 |
| 15°   | 1078.6 | 1086.3 | 1105.6 | 1124.8 | 1132.5 |
| 17.5° | 1063.2 | 1072.8 | 1095.9 | 1117.1 | 1126.8 |
| 20°   | 1045.9 | 1057.4 | 1082.5 | 1109.4 | 1121.0 |
| 22.5° | 1022.8 | 1038.2 | 1069.0 | 1099.8 | 1113.3 |
| 25°   | 999.6  | 1015.0 | 1049.7 | 1084.4 | 1099.8 |
| 27.5° | 974.6  | 991.9  | 1028.5 | 1067.1 | 1082.5 |
| 30°   | 947.6  | 963.0  | 1003.5 | 1043.9 | 1061.3 |
| 32.5° | 916.8  | 932.2  | 974.6  | 1017.0 | 1036.2 |
| 35°   | 882.1  | 901.4  | 941.9  | 986.2  | 1005.4 |
| 37.5° | 845.6  | 862.9  | 907.2  | 949.6  | 966.9  |
| 40°   | 807.0  | 824.4  | 866.7  | 911.0  | 928.4  |
| 42.5° | 766.6  | 783.9  | 824.4  | 866.7  | 886.0  |
| 45°   | 724.2  | 737.7  | 780.1  | 820.5  | 835.9  |
| 47.5° | 679.9  | 689.5  | 730.0  | 768.5  | 783.9  |
| 50°   | 631.8  | 641.4  | 679.9  | 714.6  | 730.0  |
| 52.5° | 579.8  | 587.5  | 624.1  | 654.9  | 672.2  |
| 55°   | 527.7  | 535.5  | 568.2  | 595.2  | 606.7  |
| 57.5° | 475.7  | 479.6  | 508.5  | 535.5  | 547.0  |
| 60°   | 427.6  | 427.6  | 450.7  | 471.9  | 487.3  |
| 62.5° | 371.7  | 377.5  | 394.8  | 416.0  | 421.8  |
| 65°   | 331.3  | 325.5  | 342.8  | 358.3  | 366.0  |
| 67.5° | 285.1  | 281.2  | 292.8  | 306.2  | 310.1  |
| 70°   | 242.7  | 236.9  | 246.5  | 254.2  | 258.1  |
| 72.5° | 198.4  | 196.5  | 200.3  | 206.1  | 208.0  |
| 75°   | 161.8  | 156.0  | 157.9  | 159.9  | 163.7  |
| 77.5° | 129.0  | 119.4  | 121.3  | 119.4  | 121.3  |
| 80°   | 94.4   | 86.7   | 86.7   | 84.7   | 82.8   |
| 82.5° | 63.6   | 59.7   | 55.9   | 52.0   | 50.1   |
| 85°   | 38.5   | 32.7   | 28.9   | 25.0   | 25.0   |
| 87.5° | 15.4   | 11.6   | 9.6    | 9.6    | 9.6    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)