

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: P229676

Luminaire Tested: **22RLN-LD5-31-UNV-L940-CD1-SVPD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P229676  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36063)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22RLN-LD5-31-UNV-L940-CD1-SVPD1-U  
Description: METALUX 2X2 RLN LED TROFFER WITH SENSOR  
Light Source: (126)4000K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2685.0 lumens  
Efficiency: N/A  
Efficacy: 100.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.21 / 1.29  
Luminous Opening: Rectangular (W 1.83' x L: 1.83' x H: 0')  
CIE Type: Direct

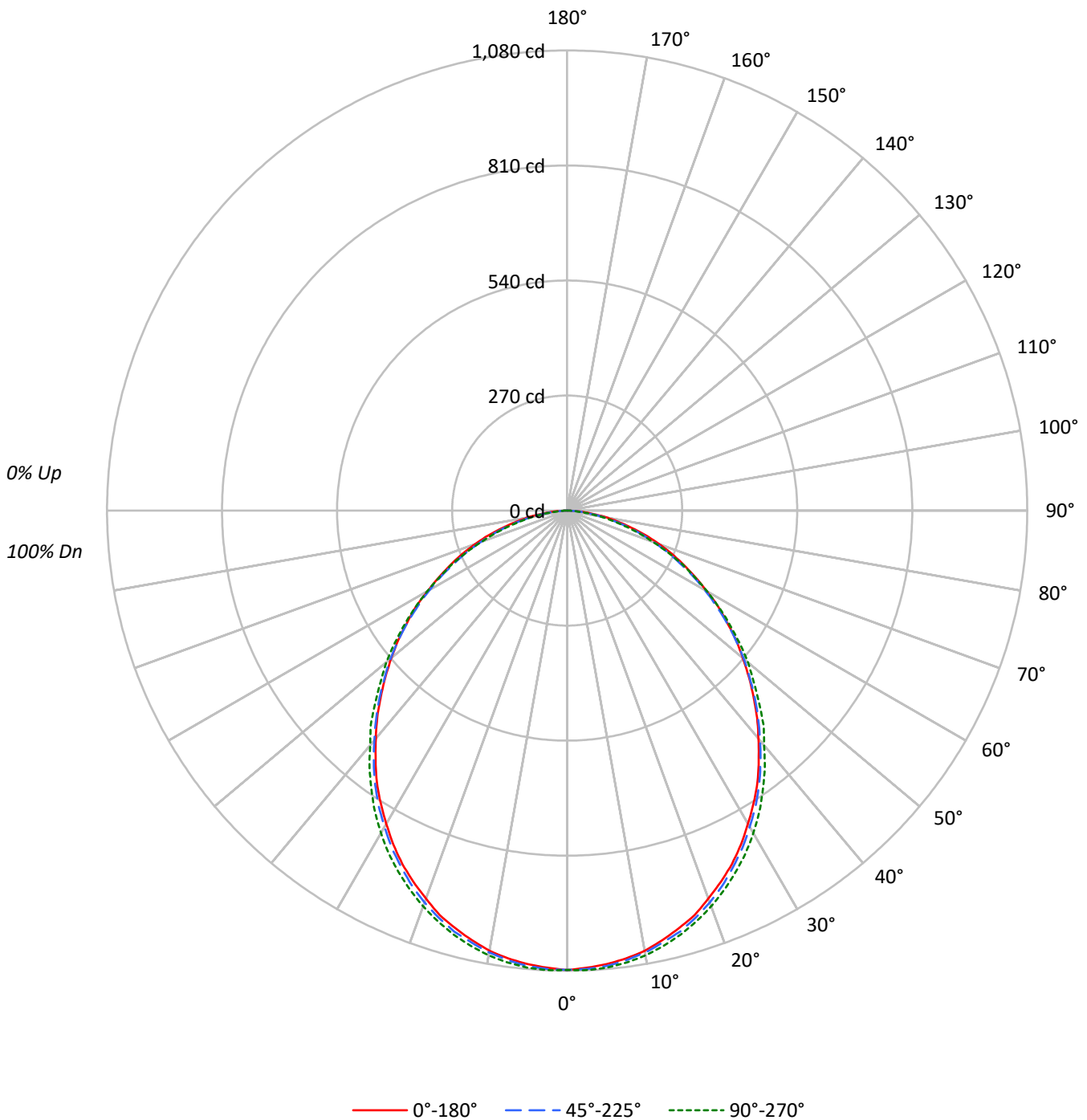
Input Watts (W): 26.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P229676

CATALOG NUMBER: 22RLN-LD5-31-UNV-L940-CD1-SVPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P229676

CATALOG NUMBER: 22RLN-LD5-31-UNV-L940-CD1-SVPD1-U

**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  | 95  | 98  | 95  | 92  | 94  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 87  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 74  | 72  |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  | 74  | 69  | 64  | 71  | 67  | 63  | 61  |
| 4   | 84  | 72  | 64  | 57  | 82  | 71  | 63  | 57  | 68  | 62  | 56  | 66  | 60  | 55  | 64  | 59  | 55  | 52  |
| 5   | 77  | 65  | 56  | 50  | 75  | 64  | 55  | 49  | 62  | 54  | 49  | 60  | 53  | 48  | 58  | 52  | 48  | 46  |
| 6   | 72  | 58  | 50  | 44  | 70  | 58  | 49  | 43  | 56  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 42  | 40  |
| 7   | 66  | 53  | 45  | 39  | 65  | 52  | 44  | 38  | 51  | 44  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |
| 8   | 62  | 49  | 40  | 35  | 60  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 9   | 58  | 45  | 37  | 31  | 57  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 29  |
| 10  | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3453 | 3453 | 3453 |
| 5°  | 3435 | 3448 | 3462 |
| 10° | 3412 | 3425 | 3448 |
| 15° | 3364 | 3392 | 3415 |
| 20° | 3303 | 3336 | 3369 |
| 25° | 3234 | 3259 | 3308 |
| 30° | 3140 | 3170 | 3232 |
| 35° | 3044 | 3071 | 3130 |
| 40° | 2920 | 2944 | 3007 |
| 45° | 2801 | 2820 | 2882 |
| 50° | 2683 | 2696 | 2758 |
| 55° | 2559 | 2551 | 2597 |
| 60° | 2423 | 2387 | 2431 |
| 65° | 2291 | 2207 | 2260 |
| 70° | 2146 | 2029 | 1991 |
| 75° | 1948 | 1794 | 1725 |
| 80° | 1758 | 1527 | 1426 |
| 85° | 1371 | 1066 | 911  |



TEST NUMBER: P229676

CATALOG NUMBER: 22RLN-LD5-31-UNV-L940-CD1-SVPD1-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 101.8  | 3.8       |
| 10°-20°   | 288.1  | 10.7      |
| 20°-30°   | 425.4  | 15.8      |
| 30°-40°   | 491.9  | 18.3      |
| 40°-50°   | 482.4  | 18.0      |
| 50°-60°   | 410.3  | 15.3      |
| 60°-70°   | 292.3  | 10.9      |
| 70°-80°   | 155.9  | 5.8       |
| 80°-90°   | 37.0   | 1.4       |
| 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°    | 815.2  | 30.4      |
| 0°-40°    | 1307.0 | 48.7      |
| 0°-60°    | 2199.8 | 81.9      |
| 0°-90°    | 2685.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2685.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1078 | 1078  | 1078 | 1078  | 1078 |      |
| 5°  | 1068 | 1070  | 1073 | 1075  | 1077 | 101  |
| 15° | 1015 | 1016  | 1023 | 1028  | 1030 | 286  |
| 25° | 915  | 917   | 922  | 932   | 936  | 421  |
| 35° | 779  | 776   | 786  | 798   | 801  | 486  |
| 45° | 618  | 617   | 623  | 634   | 636  | 478  |
| 55° | 458  | 454   | 457  | 462   | 465  | 411  |
| 65° | 302  | 293   | 291  | 293   | 298  | 300  |
| 75° | 157  | 149   | 145  | 142   | 139  | 168  |
| 85° | 37   | 33    | 29   | 25    | 25   | 44   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P229676

CATALOG NUMBER: 22RLN-LD5-31-UNV-L940-CD1-SVPD1-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1078.2 | 1078.2 | 1078.2 | 1078.2 | 1078.2 |
| 2.5°  | 1074.0 | 1075.4 | 1076.8 | 1079.5 | 1079.5 |
| 5°    | 1068.5 | 1069.9 | 1072.6 | 1075.4 | 1076.8 |
| 7.5°  | 1060.2 | 1060.2 | 1064.4 | 1067.1 | 1069.9 |
| 10°   | 1049.2 | 1050.6 | 1053.3 | 1057.5 | 1060.2 |
| 12.5° | 1032.6 | 1035.4 | 1038.1 | 1043.7 | 1046.4 |
| 15°   | 1014.7 | 1016.0 | 1022.9 | 1028.5 | 1029.9 |
| 17.5° | 995.3  | 995.3  | 1002.2 | 1007.8 | 1010.5 |
| 20°   | 969.1  | 971.9  | 978.8  | 985.7  | 988.4  |
| 22.5° | 942.9  | 945.6  | 952.5  | 959.4  | 963.6  |
| 25°   | 915.3  | 916.7  | 922.2  | 931.8  | 936.0  |
| 27.5° | 883.5  | 886.3  | 891.8  | 901.5  | 907.0  |
| 30°   | 849.0  | 851.8  | 857.3  | 868.3  | 873.9  |
| 32.5° | 814.5  | 817.3  | 822.8  | 833.8  | 839.3  |
| 35°   | 778.6  | 775.8  | 785.5  | 797.9  | 800.7  |
| 37.5° | 738.6  | 739.9  | 745.5  | 756.5  | 762.0  |
| 40°   | 698.5  | 698.5  | 704.1  | 716.5  | 719.2  |
| 42.5° | 659.9  | 658.5  | 664.0  | 675.1  | 682.0  |
| 45°   | 618.5  | 617.1  | 622.6  | 633.6  | 636.4  |
| 47.5° | 578.4  | 575.7  | 581.2  | 590.9  | 593.6  |
| 50°   | 538.4  | 535.6  | 541.2  | 549.4  | 553.6  |
| 52.5° | 499.7  | 494.2  | 498.4  | 505.3  | 509.4  |
| 55°   | 458.3  | 454.2  | 456.9  | 462.5  | 465.2  |
| 57.5° | 421.1  | 412.8  | 414.1  | 419.7  | 422.4  |
| 60°   | 378.3  | 371.4  | 372.7  | 378.3  | 379.6  |
| 62.5° | 339.6  | 332.7  | 332.7  | 334.1  | 336.8  |
| 65°   | 302.3  | 292.7  | 291.3  | 292.7  | 298.2  |
| 67.5° | 266.4  | 256.8  | 254.0  | 254.0  | 255.4  |
| 70°   | 229.2  | 219.5  | 216.7  | 215.4  | 212.6  |
| 72.5° | 194.7  | 182.2  | 180.8  | 176.7  | 178.1  |
| 75°   | 157.4  | 149.1  | 145.0  | 142.2  | 139.4  |
| 77.5° | 124.2  | 117.3  | 111.8  | 107.7  | 107.7  |
| 80°   | 95.3   | 85.6   | 82.8   | 77.3   | 77.3   |
| 82.5° | 63.5   | 59.4   | 53.8   | 49.7   | 48.3   |
| 85°   | 37.3   | 33.1   | 29.0   | 24.8   | 24.8   |
| 87.5° | 13.8   | 11.0   | 9.7    | 9.7    | 9.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)