

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: P229886

Luminaire Tested: **24RLN-LD5-31-UNV-L940-CD1-SVPD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229886
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36062)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-31-UNV-L940-CD1-SVPD1-U
Description: METALUX 2X4 RLN LED TROFFER WITH SENSOR
Light Source: (252)4000K CCT, 90 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2774.0 lumens
Efficiency: N/A
Efficacy: 121.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.22 / 1.31
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

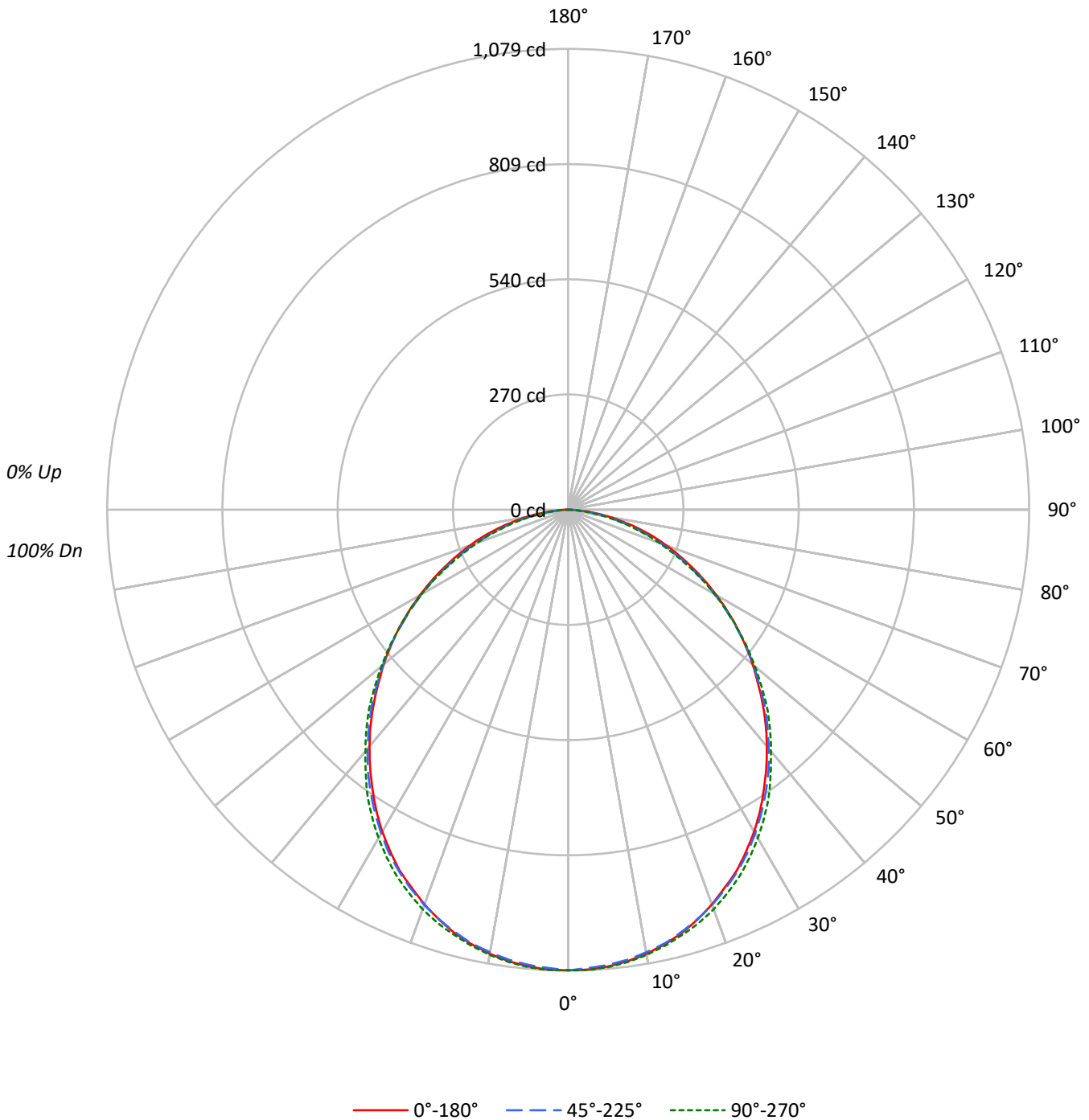
Input Watts (W): 22.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 66 | 63 | 60 |
| 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 | 38 | 49 | 42 | 37 | 48 | 42 | 37 | 35 |
| 8 | 62 | 48 | 40 | 34 | 60 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 31 |
| 9 | 58 | 44 | 36 | 31 | 56 | 44 | 36 | 31 | 43 | 35 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1652 | 1652 | 1652 |
| 5° | 1650 | 1645 | 1653 |
| 10° | 1642 | 1636 | 1646 |
| 15° | 1628 | 1623 | 1635 |
| 20° | 1603 | 1605 | 1623 |
| 25° | 1576 | 1581 | 1602 |
| 30° | 1539 | 1548 | 1570 |
| 35° | 1493 | 1508 | 1531 |
| 40° | 1447 | 1459 | 1477 |
| 45° | 1395 | 1408 | 1427 |
| 50° | 1343 | 1349 | 1360 |
| 55° | 1290 | 1283 | 1288 |
| 60° | 1228 | 1210 | 1215 |
| 65° | 1159 | 1133 | 1114 |
| 70° | 1096 | 1036 | 1013 |
| 75° | 1009 | 920 | 889 |
| 80° | 888 | 779 | 732 |
| 85° | 699 | 543 | 404 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 101.8 | 3.7 |
| 10°-20° | 289.4 | 10.4 |
| 20°-30° | 431.4 | 15.6 |
| 30°-40° | 504.4 | 18.2 |
| 40°-50° | 500.9 | 18.1 |
| 50°-60° | 430.1 | 15.5 |
| 60°-70° | 309.8 | 11.2 |
| 70°-80° | 166.8 | 6.0 |
| 80°-90° | 39.3 | 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° | 822.7 | 29.7 |
| 0°-40° | 1327.1 | 47.8 |
| 0°-60° | 2258.0 | 81.4 |
| 0°-90° | 2774.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2774.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1079 | 1079 | 1079 | 1079 | 1079 | |
| 5° | 1073 | 1072 | 1070 | 1073 | 1075 | 102 |
| 15° | 1026 | 1024 | 1024 | 1030 | 1031 | 289 |
| 25° | 933 | 929 | 936 | 945 | 948 | 429 |
| 35° | 799 | 798 | 806 | 815 | 819 | 500 |
| 45° | 644 | 642 | 650 | 656 | 659 | 497 |
| 55° | 483 | 479 | 480 | 483 | 482 | 432 |
| 65° | 320 | 314 | 313 | 310 | 307 | 318 |
| 75° | 170 | 160 | 156 | 151 | 150 | 181 |
| 85° | 40 | 36 | 31 | 25 | 23 | 48 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P229886

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1078.6 | 1078.6 | 1078.6 | 1078.6 | 1078.6 |
| 2.5° | 1077.7 | 1076.8 | 1074.2 | 1077.7 | 1078.6 |
| 5° | 1073.3 | 1072.4 | 1069.8 | 1073.3 | 1075.1 |
| 7.5° | 1066.2 | 1064.5 | 1062.7 | 1066.2 | 1068.0 |
| 10° | 1055.6 | 1053.9 | 1052.1 | 1056.5 | 1058.3 |
| 12.5° | 1042.4 | 1040.6 | 1040.6 | 1044.1 | 1045.9 |
| 15° | 1026.5 | 1023.8 | 1023.8 | 1030.0 | 1030.9 |
| 17.5° | 1006.1 | 1004.4 | 1005.3 | 1012.3 | 1015.0 |
| 20° | 983.2 | 982.3 | 984.9 | 992.9 | 995.5 |
| 22.5° | 957.6 | 956.7 | 961.1 | 970.8 | 972.6 |
| 25° | 932.8 | 929.3 | 935.5 | 945.2 | 947.8 |
| 27.5° | 901.9 | 899.3 | 907.2 | 916.0 | 918.7 |
| 30° | 870.1 | 867.5 | 875.4 | 885.1 | 887.8 |
| 32.5° | 835.7 | 833.9 | 841.8 | 851.6 | 854.2 |
| 35° | 798.6 | 797.7 | 806.5 | 815.3 | 818.9 |
| 37.5° | 761.5 | 760.6 | 770.3 | 777.4 | 778.2 |
| 40° | 723.5 | 721.7 | 729.7 | 737.6 | 738.5 |
| 42.5° | 684.6 | 682.0 | 690.8 | 697.0 | 699.6 |
| 45° | 644.0 | 642.2 | 650.2 | 655.5 | 659.0 |
| 47.5° | 602.5 | 602.5 | 606.9 | 613.1 | 613.9 |
| 50° | 563.6 | 560.9 | 566.2 | 569.8 | 570.7 |
| 52.5° | 523.0 | 520.3 | 524.7 | 525.6 | 527.4 |
| 55° | 483.2 | 478.8 | 480.5 | 483.2 | 482.3 |
| 57.5° | 441.7 | 434.6 | 438.1 | 438.1 | 439.9 |
| 60° | 401.0 | 394.9 | 394.9 | 394.9 | 396.6 |
| 62.5° | 360.4 | 354.2 | 354.2 | 353.3 | 352.5 |
| 65° | 319.8 | 314.5 | 312.7 | 310.1 | 307.4 |
| 67.5° | 280.9 | 274.7 | 271.2 | 267.7 | 265.0 |
| 70° | 244.7 | 234.1 | 231.4 | 226.1 | 226.1 |
| 72.5° | 208.5 | 197.9 | 192.6 | 189.0 | 188.2 |
| 75° | 170.5 | 159.9 | 155.5 | 151.1 | 150.2 |
| 77.5° | 133.4 | 126.3 | 119.3 | 115.7 | 114.0 |
| 80° | 100.7 | 94.5 | 88.3 | 82.2 | 83.0 |
| 82.5° | 68.9 | 62.7 | 58.3 | 53.0 | 51.2 |
| 85° | 39.8 | 36.2 | 30.9 | 24.7 | 23.0 |
| 87.5° | 16.8 | 12.4 | 8.8 | 8.8 | 8.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)