

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: P229511

Luminaire Tested: **14RLN-LD5-40-RDP-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36061)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14RLN-LD5-40-RDP-UNV-L940-CD1-U
Description: METALUX 1X4 RLN LED TROFFER WITH RDP LENS
Light Source: (112)4000K CCT, 90 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3050.0 lumens
Efficiency: N/A
Efficacy: 72.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.35 / 1.39
Luminous Opening: Rectangular (W 0.83' x L: 3.83' x H: 0')
CIE Type: Direct

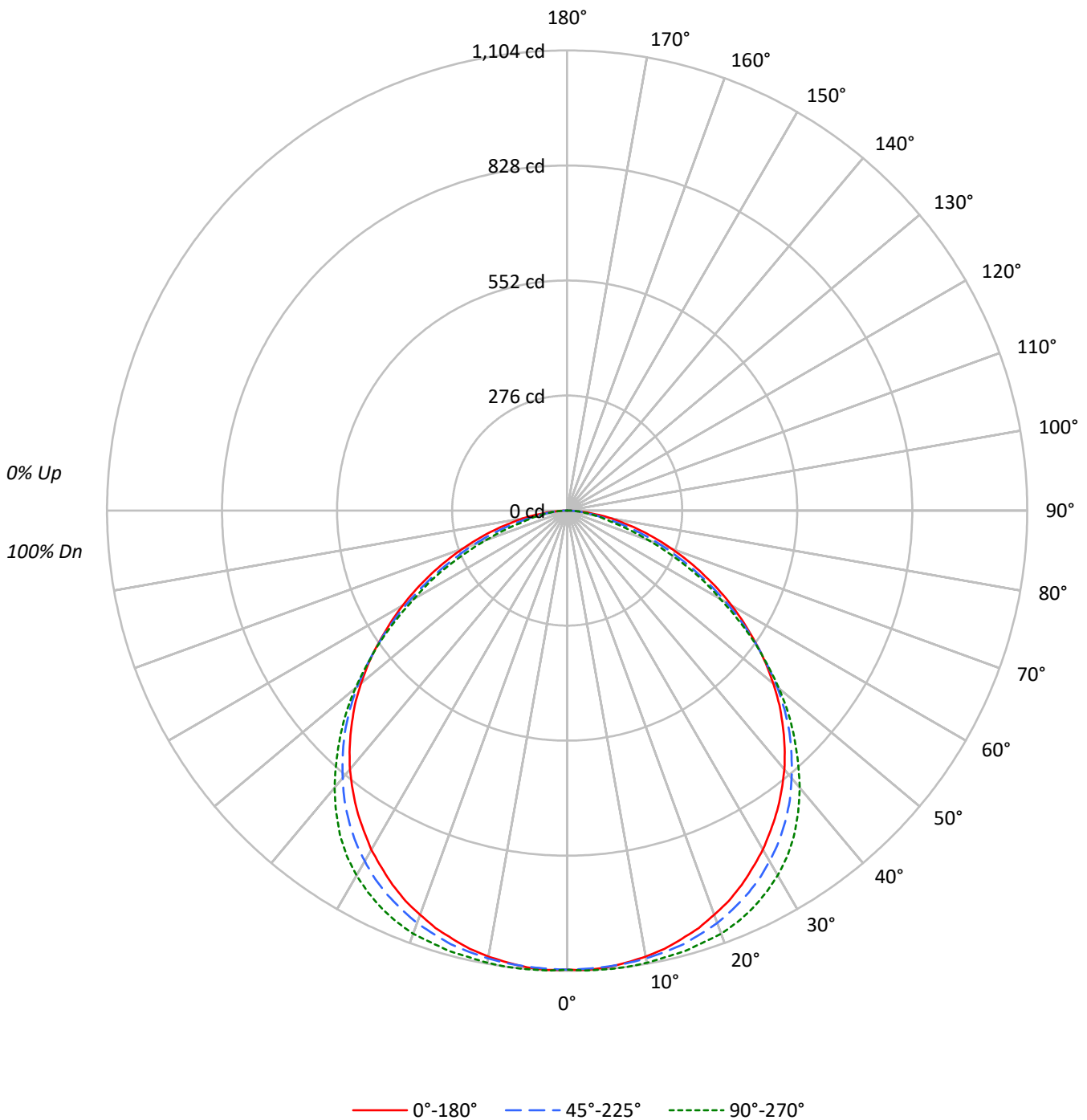
Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P229511

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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 | 87 | 81 | 77 | | 83 | 79 | 75 | | 80 | 77 | 74 | 72 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 77 | 70 | 65 | | 74 | 68 | 64 | | 71 | 67 | 63 | 61 |
| 4 | 84 | 72 | 63 | 57 | 81 | 71 | 63 | 57 | 68 | 61 | 56 | | 66 | 60 | 55 | | 64 | 59 | 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 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 34 | | 45 | 38 | 33 | | 44 | 38 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 44 | 36 | 30 | 42 | 35 | 30 | | 41 | 35 | 30 | | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 32 | 27 | | 38 | 32 | 27 | | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3712 | 3712 | 3712 |
| 5° | 3721 | 3715 | 3736 |
| 10° | 3717 | 3733 | 3769 |
| 15° | 3710 | 3758 | 3816 |
| 20° | 3700 | 3776 | 3874 |
| 25° | 3684 | 3785 | 3915 |
| 30° | 3655 | 3779 | 3932 |
| 35° | 3615 | 3752 | 3908 |
| 40° | 3566 | 3685 | 3819 |
| 45° | 3487 | 3595 | 3675 |
| 50° | 3383 | 3447 | 3479 |
| 55° | 3240 | 3231 | 3213 |
| 60° | 3073 | 2971 | 2859 |
| 65° | 2863 | 2657 | 2512 |
| 70° | 2612 | 2329 | 2031 |
| 75° | 2347 | 1933 | 1519 |
| 80° | 2088 | 1411 | 1323 |
| 85° | 1639 | 1171 | 1171 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 104.8 | 3.4 |
| 10°-20° | 304.7 | 10.0 |
| 20°-30° | 470.3 | 15.4 |
| 30°-40° | 570.4 | 18.7 |
| 40°-50° | 579.1 | 19.0 |
| 50°-60° | 489.9 | 16.1 |
| 60°-70° | 331.4 | 10.9 |
| 70°-80° | 160.3 | 5.3 |
| 80°-90° | 39.1 | 1.3 |
| 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° | 879.9 | 28.8 |
| 0°-40° | 1450.2 | 47.5 |
| 0°-60° | 2519.2 | 82.6 |
| 0°-90° | 3050.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3050.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1102 | 1102 | 1102 | 1102 | 1102 | |
| 5° | 1100 | 1100 | 1098 | 1103 | 1104 | 105 |
| 15° | 1064 | 1070 | 1077 | 1089 | 1094 | 300 |
| 25° | 991 | 998 | 1018 | 1044 | 1053 | 456 |
| 35° | 879 | 888 | 912 | 941 | 950 | 549 |
| 45° | 732 | 733 | 754 | 770 | 771 | 564 |
| 55° | 552 | 547 | 550 | 550 | 547 | 493 |
| 65° | 359 | 344 | 333 | 320 | 315 | 356 |
| 75° | 180 | 167 | 148 | 129 | 117 | 192 |
| 85° | 42 | 33 | 30 | 30 | 30 | 50 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P229511

CATALOG NUMBER: 14RLN-LD5-40-RDP-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|---------------|---------------|---------------|---------------|---------------|
| 0° | 1101.5 | 1101.5 | 1101.5 | 1101.5 | <i>1101.5</i> |
| 2.5° | <i>1103.0</i> | <i>1103.0</i> | <i>1100.0</i> | <i>1103.0</i> | <i>1104.5</i> |
| 5° | 1100.0 | 1100.0 | 1098.4 | 1103.0 | <i>1104.5</i> |
| 7.5° | 1093.9 | 1095.4 | 1095.4 | 1101.5 | <i>1104.5</i> |
| 10° | 1086.3 | 1089.3 | 1090.9 | 1100.0 | <i>1101.5</i> |
| 12.5° | 1077.2 | 1080.3 | 1084.8 | 1095.4 | <i>1096.9</i> |
| 15° | 1063.6 | 1069.6 | 1077.2 | 1089.3 | <i>1093.9</i> |
| 17.5° | 1050.0 | 1056.0 | 1065.1 | 1081.8 | <i>1086.3</i> |
| 20° | 1031.8 | 1039.3 | 1053.0 | 1072.7 | <i>1080.3</i> |
| 22.5° | 1013.6 | 1019.7 | 1036.3 | 1060.6 | <i>1068.1</i> |
| 25° | 990.9 | 998.4 | 1018.1 | 1043.9 | <i>1053.0</i> |
| 27.5° | 965.1 | 975.7 | 996.9 | 1024.2 | <i>1033.3</i> |
| 30° | 939.4 | 948.4 | 971.2 | 1001.5 | <i>1010.6</i> |
| 32.5° | 909.1 | 918.1 | 943.9 | 972.7 | <i>983.3</i> |
| 35° | 878.7 | 887.8 | 912.1 | 940.9 | <i>950.0</i> |
| 37.5° | 845.4 | 851.5 | 877.2 | 901.5 | <i>910.6</i> |
| 40° | 810.6 | 815.1 | 837.8 | 862.1 | <i>868.1</i> |
| 42.5° | 772.7 | 775.7 | 796.9 | 818.1 | <i>819.7</i> |
| 45° | 731.8 | 733.3 | 754.5 | 769.7 | <i>771.2</i> |
| 47.5° | 690.9 | 689.4 | 707.5 | 718.2 | <i>719.7</i> |
| 50° | 645.4 | 645.4 | 657.5 | 663.6 | <i>663.6</i> |
| 52.5° | 600.0 | 596.9 | 603.0 | 607.5 | <i>603.0</i> |
| 55° | 551.5 | 546.9 | 550.0 | 550.0 | <i>546.9</i> |
| 57.5° | 503.0 | 493.9 | 495.4 | 492.4 | <i>484.8</i> |
| 60° | 456.0 | 445.4 | 440.9 | 430.3 | <i>424.2</i> |
| 62.5° | 407.6 | 395.4 | 386.3 | 374.2 | <i>372.7</i> |
| 65° | 359.1 | 343.9 | 333.3 | 319.7 | <i>315.1</i> |
| 67.5° | 312.1 | 298.5 | 283.3 | 268.2 | <i>259.1</i> |
| 70° | 265.1 | 250.0 | 236.4 | 216.7 | <i>206.1</i> |
| 72.5° | 222.7 | 209.1 | 192.4 | 169.7 | <i>162.1</i> |
| 75° | 180.3 | 166.7 | 148.5 | 128.8 | <i>116.7</i> |
| 77.5° | 139.4 | 128.8 | 109.1 | 92.4 | <i>90.9</i> |
| 80° | 107.6 | 95.5 | 72.7 | 68.2 | <i>68.2</i> |
| 82.5° | 69.7 | 62.1 | 51.5 | 48.5 | <i>48.5</i> |
| 85° | 42.4 | 33.3 | 30.3 | 30.3 | <i>30.3</i> |
| 87.5° | 16.7 | 15.2 | 15.2 | 15.2 | <i>15.2</i> |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | <i>0.0</i> |

(END OF REPORT)