

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: P229806

Luminaire Tested: **24RLN-LD5-31-RDP-UNV-L930-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229806
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36059)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-31-RDP-UNV-L930-CD1-U
Description: METALUX 2X4 RLN LED TROFFER WITH RDP LENS
Light Source: (252)3000K CCT, 90 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2188.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

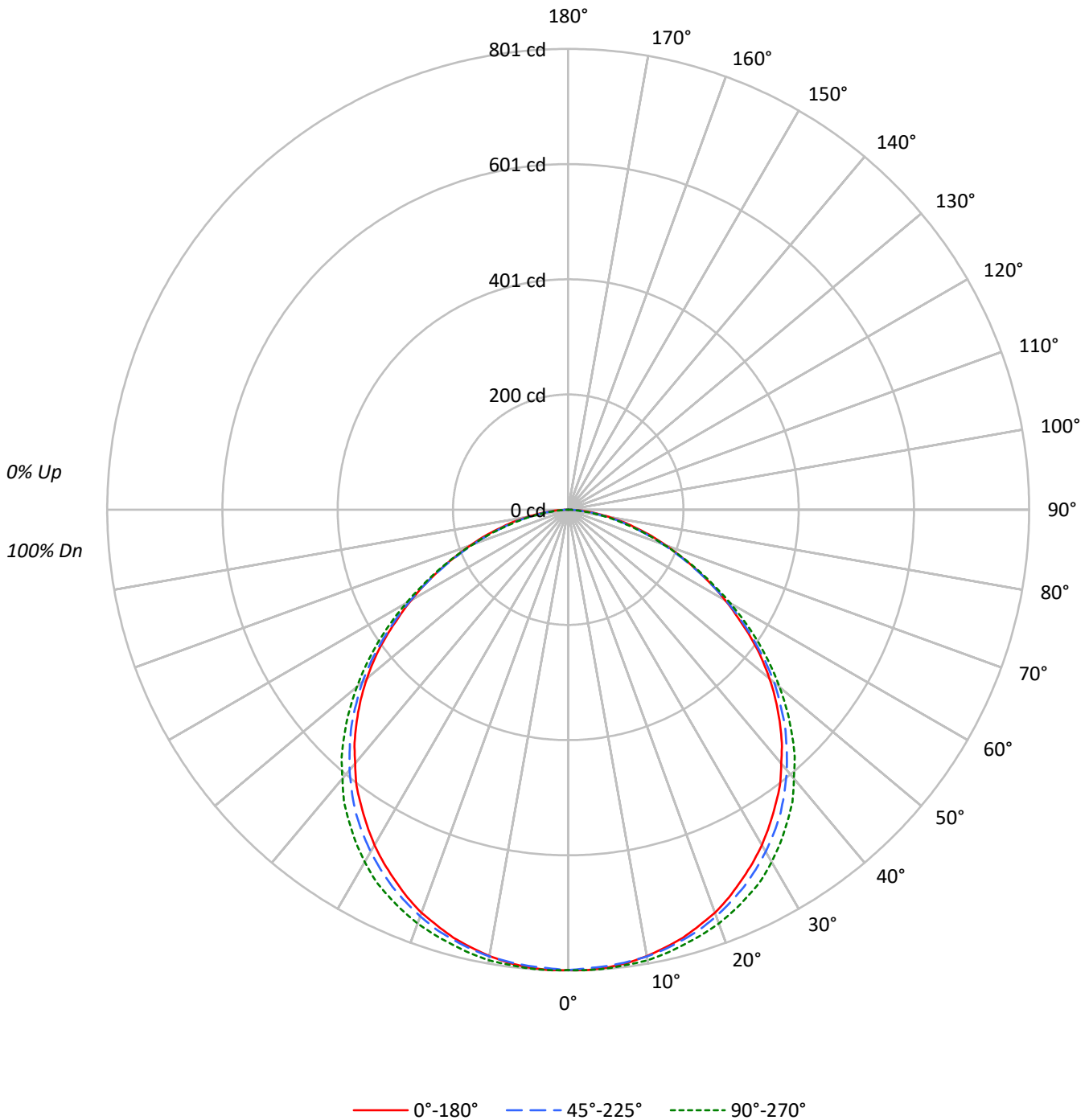
Input Watts (W): 22.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 66 | 63 | 60 |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 66 | 60 | 55 | 63 | 58 | 54 | 52 |
| 5 | 77 | 64 | 55 | 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 | 53 | 47 | 42 | 52 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 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 | 27 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1226 | 1226 | 1226 |
| 5° | 1228 | 1224 | 1230 |
| 10° | 1225 | 1226 | 1237 |
| 15° | 1221 | 1227 | 1240 |
| 20° | 1215 | 1226 | 1247 |
| 25° | 1202 | 1222 | 1251 |
| 30° | 1191 | 1214 | 1251 |
| 35° | 1173 | 1203 | 1240 |
| 40° | 1152 | 1182 | 1220 |
| 45° | 1126 | 1154 | 1190 |
| 50° | 1088 | 1114 | 1143 |
| 55° | 1035 | 1048 | 1079 |
| 60° | 966 | 971 | 997 |
| 65° | 888 | 881 | 902 |
| 70° | 807 | 784 | 788 |
| 75° | 717 | 678 | 673 |
| 80° | 623 | 557 | 542 |
| 85° | 511 | 394 | 306 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.9 | 3.5 |
| 10°-20° | 218.8 | 10.0 |
| 20°-30° | 333.9 | 15.3 |
| 30°-40° | 402.6 | 18.4 |
| 40°-50° | 410.5 | 18.8 |
| 50°-60° | 351.3 | 16.1 |
| 60°-70° | 242.0 | 11.1 |
| 70°-80° | 124.1 | 5.7 |
| 80°-90° | 28.9 | 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° | 628.6 | 28.7 |
| 0°-40° | 1031.2 | 47.1 |
| 0°-60° | 1793.0 | 81.9 |
| 0°-90° | 2188.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2188.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 800 | 800 | 800 | 800 | 800 | |
| 5° | 798 | 797 | 796 | 798 | 800 | 76 |
| 15° | 770 | 769 | 774 | 779 | 782 | 217 |
| 25° | 711 | 714 | 723 | 735 | 740 | 328 |
| 35° | 628 | 630 | 643 | 657 | 663 | 393 |
| 45° | 520 | 520 | 533 | 546 | 550 | 400 |
| 55° | 388 | 385 | 393 | 401 | 404 | 346 |
| 65° | 245 | 239 | 243 | 245 | 249 | 243 |
| 75° | 121 | 116 | 114 | 114 | 114 | 131 |
| 85° | 29 | 26 | 22 | 20 | 17 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 800.2 | 800.2 | 800.2 | 800.2 | 800.2 |
| 2.5° | 801.0 | 799.3 | 797.7 | 799.3 | 801.0 |
| 5° | 798.5 | 796.8 | 796.0 | 798.5 | 800.2 |
| 7.5° | 794.3 | 792.7 | 792.7 | 796.0 | 797.7 |
| 10° | 787.7 | 786.9 | 788.5 | 791.9 | 795.2 |
| 12.5° | 779.4 | 779.4 | 781.9 | 786.0 | 789.4 |
| 15° | 770.3 | 769.4 | 773.6 | 779.4 | 781.9 |
| 17.5° | 757.8 | 758.7 | 764.5 | 771.1 | 774.4 |
| 20° | 745.4 | 746.2 | 752.0 | 761.1 | 765.3 |
| 22.5° | 729.6 | 731.3 | 737.9 | 749.5 | 753.7 |
| 25° | 711.3 | 713.8 | 723.0 | 735.4 | 740.4 |
| 27.5° | 693.1 | 695.6 | 705.5 | 719.6 | 726.3 |
| 30° | 673.2 | 676.5 | 686.4 | 701.4 | 707.2 |
| 32.5° | 650.8 | 653.2 | 665.7 | 680.6 | 686.4 |
| 35° | 627.5 | 630.0 | 643.3 | 657.4 | 663.2 |
| 37.5° | 604.3 | 604.3 | 617.6 | 634.2 | 640.0 |
| 40° | 576.0 | 576.9 | 591.0 | 606.8 | 610.1 |
| 42.5° | 549.5 | 549.5 | 561.9 | 576.9 | 582.7 |
| 45° | 519.6 | 520.4 | 532.9 | 546.2 | 549.5 |
| 47.5° | 488.9 | 488.9 | 499.7 | 512.1 | 515.5 |
| 50° | 456.5 | 454.9 | 467.3 | 477.3 | 479.8 |
| 52.5° | 423.3 | 420.8 | 430.8 | 439.1 | 442.4 |
| 55° | 387.6 | 385.1 | 392.6 | 400.9 | 404.2 |
| 57.5° | 350.3 | 347.0 | 355.3 | 362.7 | 364.4 |
| 60° | 315.4 | 310.4 | 317.1 | 321.2 | 325.4 |
| 62.5° | 280.6 | 274.7 | 279.7 | 282.2 | 285.5 |
| 65° | 244.9 | 239.1 | 243.2 | 244.9 | 249.0 |
| 67.5° | 210.8 | 206.7 | 207.5 | 210.0 | 211.7 |
| 70° | 180.1 | 175.1 | 175.1 | 175.1 | 176.0 |
| 72.5° | 151.9 | 144.4 | 143.6 | 144.4 | 144.4 |
| 75° | 121.2 | 116.2 | 114.5 | 114.5 | 113.7 |
| 77.5° | 97.1 | 90.5 | 89.6 | 88.0 | 86.3 |
| 80° | 70.6 | 64.7 | 63.1 | 62.3 | 61.4 |
| 82.5° | 49.0 | 44.0 | 42.3 | 40.7 | 38.2 |
| 85° | 29.1 | 25.7 | 22.4 | 19.9 | 17.4 |
| 87.5° | 10.8 | 10.0 | 8.3 | 7.5 | 7.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)