

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: P229846

Luminaire Tested: **24RLN-LD5-31-UNV-L835-CD1-SVPD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229846
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-L835-CD1-SVPD1-U
Description: METALUX 2X4 RLN LED TROFFER WITH SENSOR
Light Source: (252)3500K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3140.0 lumens
Efficiency: N/A
Efficacy: 137.1 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

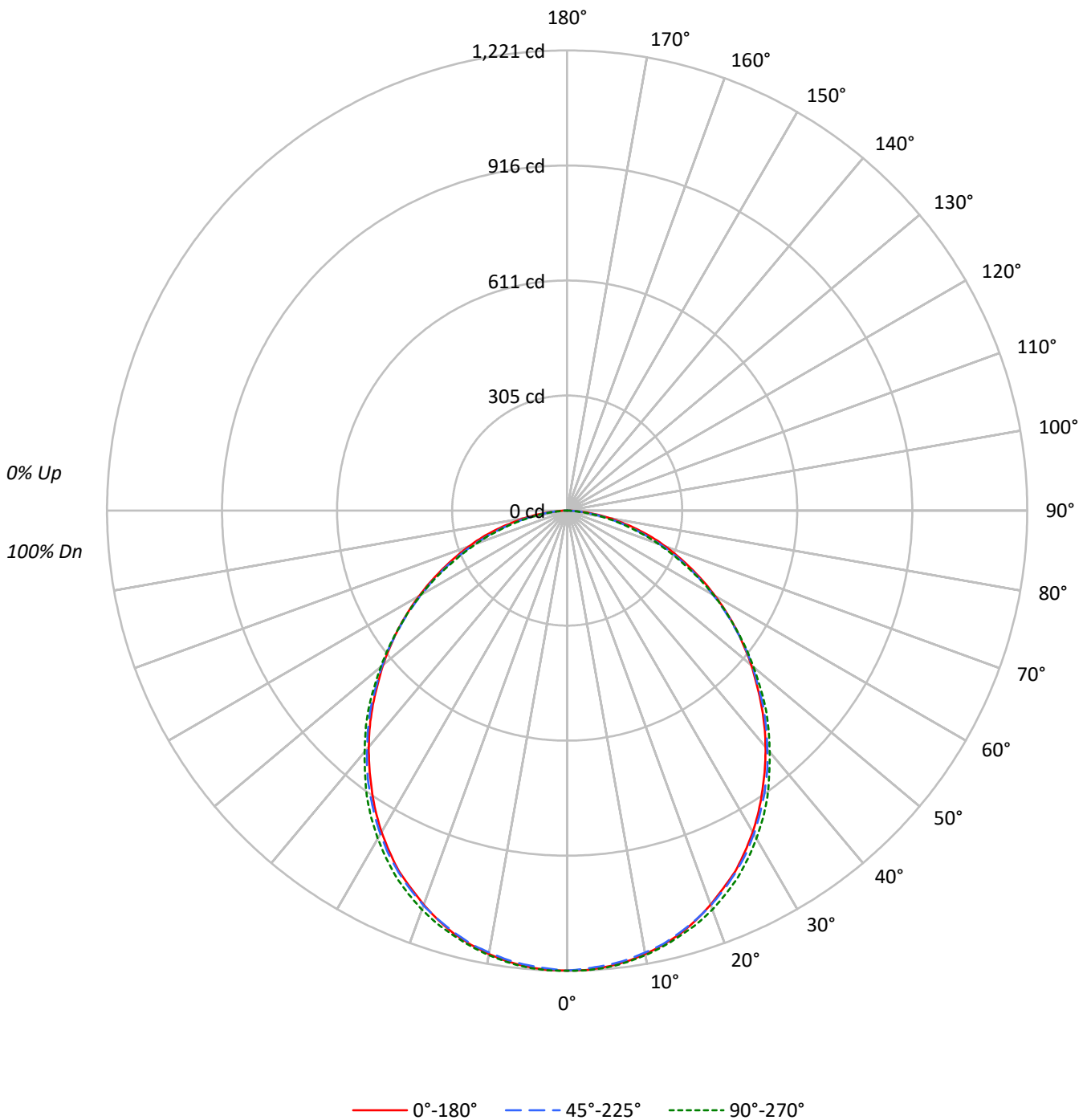
Input Watts (W): 22.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1870 | 1870 | 1870 |
| 5° | 1868 | 1862 | 1871 |
| 10° | 1858 | 1852 | 1863 |
| 15° | 1842 | 1838 | 1850 |
| 20° | 1814 | 1817 | 1837 |
| 25° | 1784 | 1790 | 1813 |
| 30° | 1742 | 1753 | 1777 |
| 35° | 1690 | 1707 | 1733 |
| 40° | 1637 | 1651 | 1671 |
| 45° | 1579 | 1594 | 1616 |
| 50° | 1520 | 1527 | 1539 |
| 55° | 1461 | 1453 | 1458 |
| 60° | 1391 | 1369 | 1375 |
| 65° | 1312 | 1283 | 1261 |
| 70° | 1240 | 1173 | 1146 |
| 75° | 1142 | 1042 | 1006 |
| 80° | 1006 | 882 | 829 |
| 85° | 791 | 615 | 457 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 115.2 | 3.7 |
| 10°-20° | 327.6 | 10.4 |
| 20°-30° | 488.3 | 15.6 |
| 30°-40° | 570.9 | 18.2 |
| 40°-50° | 566.9 | 18.1 |
| 50°-60° | 486.9 | 15.5 |
| 60°-70° | 350.7 | 11.2 |
| 70°-80° | 188.9 | 6.0 |
| 80°-90° | 44.5 | 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° | 931.2 | 29.7 |
| 0°-40° | 1502.1 | 47.8 |
| 0°-60° | 2555.9 | 81.4 |
| 0°-90° | 3140.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3140.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1221 | 1221 | 1221 | 1221 | 1221 | |
| 5° | 1215 | 1214 | 1211 | 1215 | 1217 | 115 |
| 15° | 1162 | 1159 | 1159 | 1166 | 1167 | 327 |
| 25° | 1056 | 1052 | 1059 | 1070 | 1073 | 485 |
| 35° | 904 | 903 | 913 | 923 | 927 | 565 |
| 45° | 729 | 727 | 736 | 742 | 746 | 562 |
| 55° | 547 | 542 | 544 | 547 | 546 | 488 |
| 65° | 362 | 356 | 354 | 351 | 348 | 360 |
| 75° | 193 | 181 | 176 | 171 | 170 | 204 |
| 85° | 45 | 41 | 35 | 28 | 26 | 54 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P229846

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1220.9 | 1220.9 | 1220.9 | 1220.9 | 1220.9 |
| 2.5° | 1219.9 | 1218.9 | 1215.9 | 1219.9 | 1220.9 |
| 5° | 1214.9 | 1213.9 | 1210.9 | 1214.9 | 1216.9 |
| 7.5° | 1206.9 | 1204.9 | 1202.9 | 1206.9 | 1208.9 |
| 10° | 1194.9 | 1192.9 | 1190.9 | 1195.9 | 1197.9 |
| 12.5° | 1179.9 | 1177.9 | 1177.9 | 1181.9 | 1183.9 |
| 15° | 1161.9 | 1158.9 | 1158.9 | 1165.9 | 1166.9 |
| 17.5° | 1138.9 | 1136.9 | 1137.9 | 1145.9 | 1148.9 |
| 20° | 1112.9 | 1111.9 | 1114.9 | 1123.9 | 1126.9 |
| 22.5° | 1083.9 | 1082.9 | 1087.9 | 1098.9 | 1100.9 |
| 25° | 1055.9 | 1051.9 | 1058.9 | 1069.9 | 1072.9 |
| 27.5° | 1020.9 | 1017.9 | 1026.9 | 1036.9 | 1039.9 |
| 30° | 984.9 | 981.9 | 990.9 | 1001.9 | 1004.9 |
| 32.5° | 945.9 | 943.9 | 952.9 | 963.9 | 966.9 |
| 35° | 903.9 | 902.9 | 912.9 | 922.9 | 926.9 |
| 37.5° | 861.9 | 860.9 | 871.9 | 879.9 | 880.9 |
| 40° | 818.9 | 816.9 | 825.9 | 834.9 | 835.9 |
| 42.5° | 774.9 | 771.9 | 781.9 | 788.9 | 791.9 |
| 45° | 728.9 | 726.9 | 735.9 | 741.9 | 745.9 |
| 47.5° | 681.9 | 681.9 | 686.9 | 693.9 | 694.9 |
| 50° | 637.9 | 634.9 | 640.9 | 644.9 | 645.9 |
| 52.5° | 591.9 | 588.9 | 593.9 | 594.9 | 596.9 |
| 55° | 547.0 | 542.0 | 544.0 | 547.0 | 546.0 |
| 57.5° | 500.0 | 492.0 | 496.0 | 496.0 | 498.0 |
| 60° | 454.0 | 447.0 | 447.0 | 447.0 | 449.0 |
| 62.5° | 408.0 | 401.0 | 401.0 | 400.0 | 399.0 |
| 65° | 362.0 | 356.0 | 354.0 | 351.0 | 348.0 |
| 67.5° | 318.0 | 311.0 | 307.0 | 303.0 | 300.0 |
| 70° | 277.0 | 265.0 | 262.0 | 256.0 | 256.0 |
| 72.5° | 236.0 | 224.0 | 218.0 | 214.0 | 213.0 |
| 75° | 193.0 | 181.0 | 176.0 | 171.0 | 170.0 |
| 77.5° | 151.0 | 143.0 | 135.0 | 131.0 | 129.0 |
| 80° | 114.0 | 107.0 | 100.0 | 93.0 | 94.0 |
| 82.5° | 78.0 | 71.0 | 66.0 | 60.0 | 58.0 |
| 85° | 45.0 | 41.0 | 35.0 | 28.0 | 26.0 |
| 87.5° | 19.0 | 14.0 | 10.0 | 10.0 | 10.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)