

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: P229431

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229431
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36086)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24ALNG-LD5-31-UNV-L835-CD1-SVPD1-U
Description: METALUX 2X4 ARCLINE LED TROFFER WITH CURVED LENS AND SENSOR
Light Source: (252)3500K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3034.0 lumens
Efficiency: N/A
Efficacy: 137.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.24 / 1.33
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

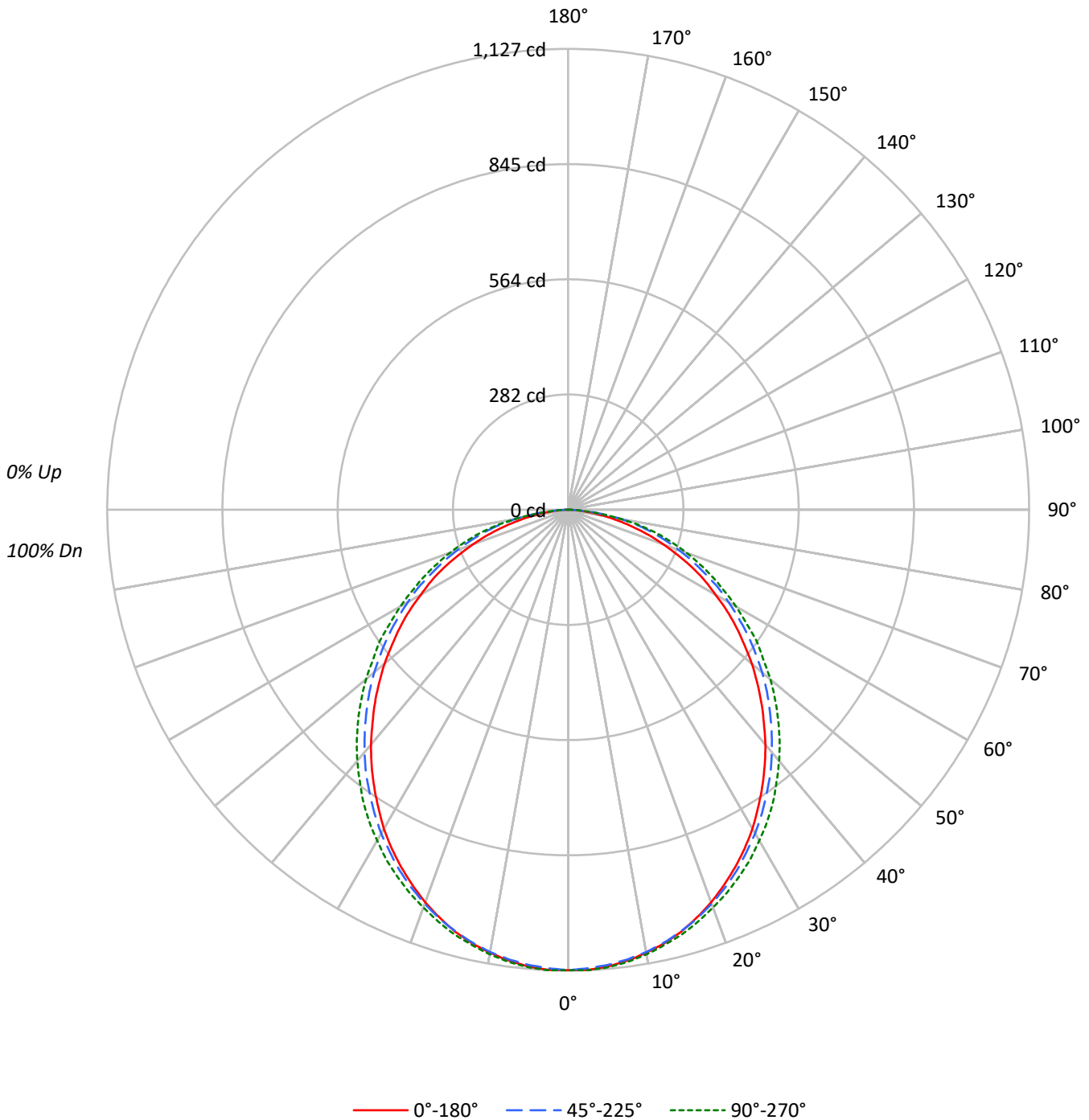
Input Watts (W): 22.13
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 98 | 94 | 91 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 78 | 96 | 89 | 83 | 77 | 85 | 80 | 75 | 82 | 78 | 74 | 79 | 75 | 72 | 70 |
| 3 | 90 | 80 | 72 | 65 | 88 | 78 | 71 | 64 | 75 | 69 | 63 | 72 | 67 | 62 | 70 | 65 | 61 | 59 |
| 4 | 83 | 71 | 62 | 55 | 80 | 69 | 61 | 55 | 67 | 60 | 54 | 65 | 58 | 53 | 62 | 57 | 53 | 50 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 47 | 60 | 53 | 47 | 58 | 51 | 46 | 56 | 50 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 41 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 43 | 37 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 38 | 33 | 45 | 38 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 30 |
| 9 | 57 | 43 | 35 | 30 | 55 | 43 | 35 | 30 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 26 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1725 | 1725 | 1725 |
| 5° | 1724 | 1718 | 1727 |
| 10° | 1711 | 1708 | 1717 |
| 15° | 1694 | 1692 | 1705 |
| 20° | 1666 | 1671 | 1687 |
| 25° | 1631 | 1646 | 1672 |
| 30° | 1594 | 1617 | 1652 |
| 35° | 1546 | 1582 | 1632 |
| 40° | 1500 | 1548 | 1604 |
| 45° | 1447 | 1510 | 1573 |
| 50° | 1397 | 1475 | 1537 |
| 55° | 1341 | 1432 | 1504 |
| 60° | 1275 | 1388 | 1452 |
| 65° | 1214 | 1334 | 1414 |
| 70° | 1111 | 1285 | 1375 |
| 75° | 971 | 1243 | 1337 |
| 80° | 811 | 1164 | 1155 |
| 85° | 562 | 826 | 738 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 106.3 | 3.5 |
| 10°-20° | 301.6 | 9.9 |
| 20°-30° | 449.6 | 14.8 |
| 30°-40° | 530.8 | 17.5 |
| 40°-50° | 538.1 | 17.7 |
| 50°-60° | 477.2 | 15.7 |
| 60°-70° | 361.9 | 11.9 |
| 70°-80° | 214.3 | 7.1 |
| 80°-90° | 54.1 | 1.8 |
| 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° | 857.5 | 28.3 |
| 0°-40° | 1388.4 | 45.8 |
| 0°-60° | 2403.6 | 79.2 |
| 0°-90° | 3034.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3034.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1126 | 1126 | 1126 | 1126 | 1126 | |
| 5° | 1121 | 1120 | 1117 | 1121 | 1123 | 106 |
| 15° | 1068 | 1068 | 1067 | 1072 | 1075 | 301 |
| 25° | 965 | 967 | 974 | 986 | 989 | 444 |
| 35° | 827 | 834 | 846 | 865 | 873 | 517 |
| 45° | 668 | 677 | 697 | 718 | 726 | 515 |
| 55° | 502 | 512 | 536 | 556 | 563 | 449 |
| 65° | 335 | 345 | 368 | 384 | 390 | 330 |
| 75° | 164 | 186 | 210 | 221 | 226 | 176 |
| 85° | 32 | 48 | 47 | 43 | 42 | 41 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P229431

CATALOG NUMBER: 24ALNG-LD5-31-UNV-L835-CD1-SVPD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|---------------|---------------|---------------|---------------|---------------|
| 0° | 1126.2 | 1126.2 | 1126.2 | 1126.2 | <i>1126.2</i> |
| 2.5° | <i>1126.2</i> | <i>1125.2</i> | <i>1122.2</i> | <i>1126.2</i> | <i>1127.2</i> |
| 5° | 1121.2 | 1120.2 | 1117.2 | 1121.2 | <i>1123.2</i> |
| 7.5° | 1112.2 | 1112.2 | 1109.2 | 1113.2 | <i>1115.2</i> |
| 10° | 1100.2 | 1100.2 | 1098.2 | 1102.2 | <i>1104.2</i> |
| 12.5° | 1086.2 | 1086.2 | 1084.2 | 1089.2 | <i>1090.2</i> |
| 15° | 1068.1 | 1068.1 | 1067.1 | 1072.1 | <i>1075.1</i> |
| 17.5° | 1046.1 | 1046.1 | 1048.1 | 1055.1 | <i>1056.1</i> |
| 20° | 1022.1 | 1023.1 | 1025.1 | 1034.1 | <i>1035.1</i> |
| 22.5° | 994.1 | 997.1 | 1001.1 | 1011.1 | <i>1014.1</i> |
| 25° | 965.1 | 967.1 | 974.1 | 986.1 | <i>989.1</i> |
| 27.5° | 934.1 | 937.1 | 944.1 | 959.1 | <i>964.1</i> |
| 30° | 901.1 | 903.1 | 914.1 | 929.1 | <i>934.1</i> |
| 32.5° | 864.1 | 869.1 | 881.1 | 899.1 | <i>905.1</i> |
| 35° | 827.1 | 834.1 | 846.1 | 865.1 | <i>873.1</i> |
| 37.5° | 789.1 | 795.1 | 812.1 | 831.1 | <i>837.1</i> |
| 40° | 750.1 | 756.1 | 774.1 | 795.1 | <i>802.1</i> |
| 42.5° | 708.1 | 717.1 | 736.1 | 757.1 | <i>765.1</i> |
| 45° | 668.1 | 677.1 | 697.1 | 718.1 | <i>726.1</i> |
| 47.5° | 627.1 | 636.1 | 659.1 | 677.1 | <i>686.1</i> |
| 50° | 586.1 | 597.1 | 619.1 | 638.1 | <i>645.1</i> |
| 52.5° | 543.1 | 554.1 | 577.1 | 596.1 | <i>601.1</i> |
| 55° | 502.1 | 512.1 | 536.1 | 556.1 | <i>563.1</i> |
| 57.5° | 460.1 | 471.1 | 494.1 | 514.1 | <i>516.1</i> |
| 60° | 416.1 | 428.1 | 453.1 | 469.1 | <i>474.1</i> |
| 62.5° | 377.1 | 387.1 | 414.1 | 427.1 | <i>430.1</i> |
| 65° | 335.0 | 345.0 | 368.1 | 384.1 | <i>390.1</i> |
| 67.5° | 290.0 | 304.0 | 328.0 | 344.0 | <i>348.0</i> |
| 70° | 248.0 | 265.0 | 287.0 | 304.0 | <i>307.0</i> |
| 72.5° | 206.0 | 224.0 | 249.0 | 263.0 | <i>266.0</i> |
| 75° | 164.0 | 186.0 | 210.0 | 221.0 | <i>226.0</i> |
| 77.5° | 127.0 | 148.0 | 172.0 | 182.0 | <i>181.0</i> |
| 80° | 92.0 | 113.0 | 132.0 | 132.0 | <i>131.0</i> |
| 82.5° | 59.0 | 80.0 | 90.0 | 87.0 | <i>85.0</i> |
| 85° | 32.0 | 48.0 | 47.0 | 43.0 | <i>42.0</i> |
| 87.5° | 13.0 | 16.0 | 12.0 | 9.0 | <i>7.0</i> |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | <i>0.0</i> |

(END OF REPORT)