

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: P166467

Luminaire Tested: **22ALNG-LD4-20-UNV-L830-CD1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P166467
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22ALNG-LD4-20-UNV-L830-CD1
Description: METALUX ARCLINE 2X2 LED FIXTURE
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25824)
Light Source: -
Ballast/Driver: -

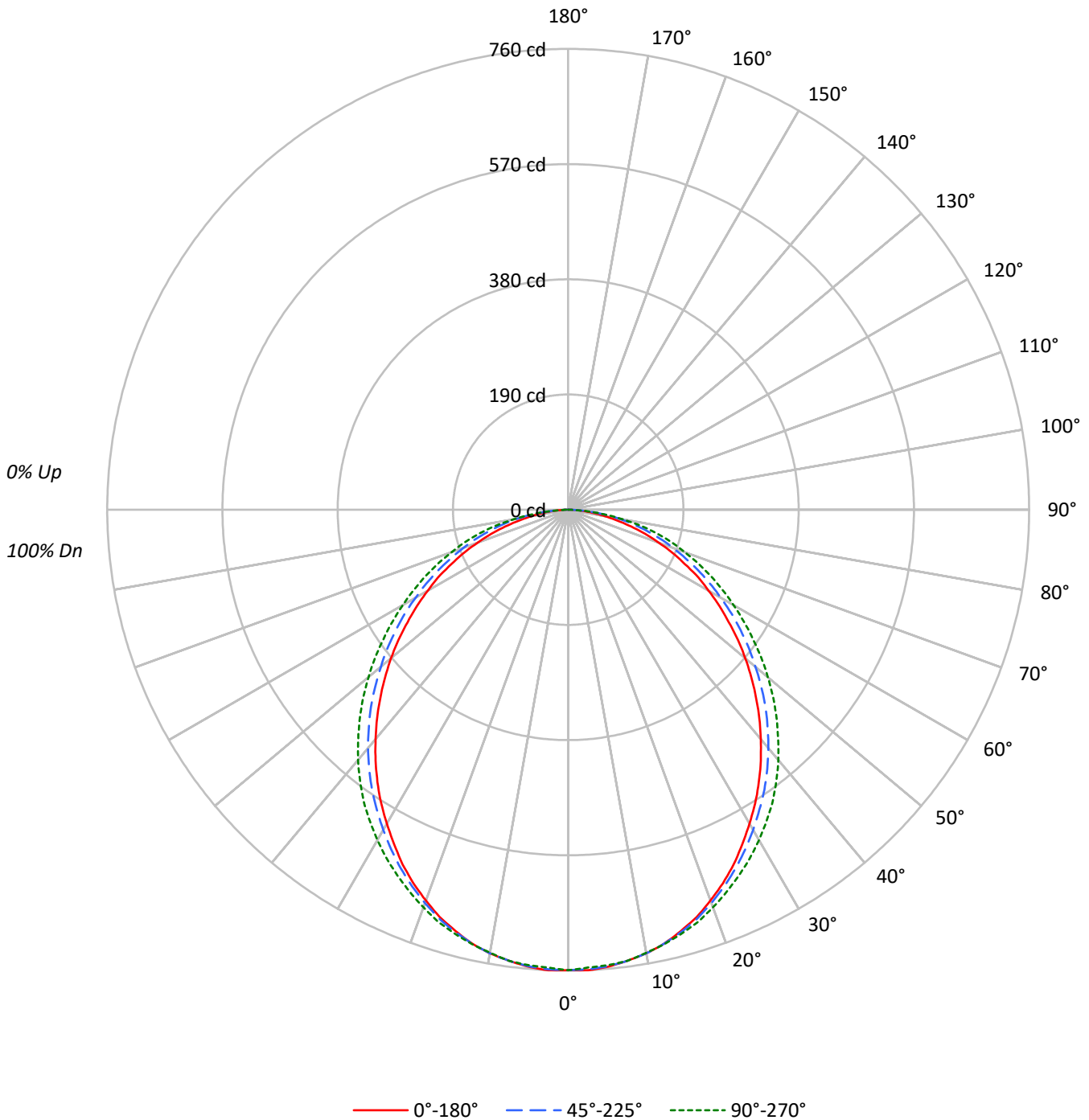
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2006.0 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.23 / 1.32
Luminous Opening: Rectangular (W 1.92' x L: 1.92' x H: 0')
CIE Type: Direct

Input Watts (W): 20.3
Input Voltage (V): NR
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: P166467

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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 | 76 | 82 | 78 | 74 | 79 | 75 | 72 | 70 |
| 3 | 90 | 80 | 72 | 65 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 62 | 70 | 65 | 61 | 59 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 63 | 55 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 56 | 51 | 46 | 44 |
| 6 | 71 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 41 | 39 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 34 |
| 8 | 61 | 48 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 35 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 28 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2225 | 2225 | 2225 |
| 5° | 2226 | 2223 | 2217 |
| 10° | 2210 | 2210 | 2208 |
| 15° | 2181 | 2187 | 2195 |
| 20° | 2139 | 2153 | 2176 |
| 25° | 2087 | 2111 | 2153 |
| 30° | 2023 | 2063 | 2128 |
| 35° | 1961 | 2017 | 2102 |
| 40° | 1890 | 1963 | 2062 |
| 45° | 1815 | 1907 | 2013 |
| 50° | 1737 | 1837 | 1959 |
| 55° | 1651 | 1773 | 1900 |
| 60° | 1566 | 1701 | 1846 |
| 65° | 1471 | 1636 | 1802 |
| 70° | 1361 | 1574 | 1747 |
| 75° | 1216 | 1518 | 1715 |
| 80° | 1038 | 1441 | 1534 |
| 85° | 834 | 1173 | 1143 |



TEST NUMBER: P166467

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 71.7 | 3.6 |
| 10°-20° | 203.3 | 10.1 |
| 20°-30° | 301.3 | 15.0 |
| 30°-40° | 353.7 | 17.6 |
| 40°-50° | 355.1 | 17.7 |
| 50°-60° | 310.5 | 15.5 |
| 60°-70° | 233.4 | 11.6 |
| 70°-80° | 138.9 | 6.9 |
| 80°-90° | 38.1 | 1.9 |
| 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° | 576.3 | 28.7 |
| 0°-40° | 930.0 | 46.4 |
| 0°-60° | 1595.6 | 79.5 |
| 0°-90° | 2006.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2006.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 759 | 759 | 759 | 759 | 759 | |
| 5° | 757 | 757 | 756 | 755 | 754 | 72 |
| 15° | 719 | 720 | 721 | 724 | 724 | 203 |
| 25° | 646 | 646 | 653 | 662 | 666 | 297 |
| 35° | 548 | 552 | 564 | 580 | 588 | 343 |
| 45° | 438 | 444 | 460 | 478 | 486 | 338 |
| 55° | 323 | 330 | 347 | 364 | 372 | 290 |
| 65° | 212 | 219 | 236 | 251 | 260 | 211 |
| 75° | 107 | 117 | 134 | 146 | 152 | 115 |
| 85° | 25 | 30 | 35 | 35 | 34 | 30 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P166467

CATALOG NUMBER: 22ALNG-LD4-20-UNV-L830-CD1

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 759.4 | 759.4 | 759.4 | 759.4 | 759.4 |
| 2.5° | 760.4 | 759.4 | 758.5 | 756.7 | 755.8 |
| 5° | 756.7 | 756.7 | 755.8 | 754.8 | 753.9 |
| 7.5° | 750.3 | 751.2 | 750.3 | 750.3 | 750.3 |
| 10° | 742.9 | 743.8 | 742.9 | 742.9 | 742.0 |
| 12.5° | 732.8 | 732.8 | 732.8 | 733.7 | 733.7 |
| 15° | 719.0 | 719.9 | 720.9 | 723.6 | 723.6 |
| 17.5° | 704.3 | 704.3 | 707.1 | 711.7 | 712.6 |
| 20° | 686.0 | 686.9 | 690.6 | 696.1 | 697.9 |
| 22.5° | 666.7 | 667.6 | 672.2 | 679.5 | 682.3 |
| 25° | 645.6 | 646.5 | 652.9 | 662.1 | 665.8 |
| 27.5° | 621.7 | 623.5 | 631.8 | 643.7 | 648.3 |
| 30° | 597.8 | 600.6 | 609.8 | 623.5 | 629.0 |
| 32.5° | 573.9 | 576.7 | 586.8 | 602.4 | 608.8 |
| 35° | 548.2 | 551.9 | 563.8 | 580.4 | 587.7 |
| 37.5° | 521.6 | 525.3 | 539.0 | 556.5 | 563.8 |
| 40° | 494.0 | 498.6 | 513.3 | 530.8 | 539.0 |
| 42.5° | 466.5 | 471.1 | 486.7 | 504.1 | 512.4 |
| 45° | 438.0 | 443.5 | 460.1 | 477.5 | 485.8 |
| 47.5° | 409.6 | 415.1 | 431.6 | 449.0 | 458.2 |
| 50° | 381.1 | 386.6 | 403.1 | 420.6 | 429.8 |
| 52.5° | 352.6 | 358.1 | 375.6 | 392.1 | 401.3 |
| 55° | 323.2 | 329.7 | 347.1 | 363.6 | 371.9 |
| 57.5° | 295.7 | 301.2 | 319.6 | 335.2 | 343.4 |
| 60° | 267.2 | 273.7 | 290.2 | 305.8 | 315.0 |
| 62.5° | 242.4 | 245.2 | 263.6 | 278.2 | 287.4 |
| 65° | 212.1 | 218.6 | 236.0 | 250.7 | 259.9 |
| 67.5° | 186.4 | 191.9 | 209.4 | 225.0 | 232.3 |
| 70° | 158.9 | 166.2 | 183.7 | 197.4 | 203.9 |
| 72.5° | 133.2 | 140.5 | 158.9 | 172.6 | 179.1 |
| 75° | 107.4 | 116.6 | 134.1 | 146.0 | 151.5 |
| 77.5° | 83.6 | 93.7 | 109.3 | 120.3 | 123.1 |
| 80° | 61.5 | 70.7 | 85.4 | 90.0 | 90.9 |
| 82.5° | 42.2 | 50.5 | 59.7 | 61.5 | 61.5 |
| 85° | 24.8 | 30.3 | 34.9 | 34.9 | 34.0 |
| 87.5° | 11.0 | 12.9 | 11.9 | 11.0 | 9.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)