

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: P685365

Luminaire Tested: **8CZL-14-UNV-N-L835-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685365
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8CZL-14-UNV-N-L835-CD-U
Description: METALUX CRUZE LINEAR 8FT NARROW LENS MODEL @80 CRI and 3500K
Light Source: (784) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

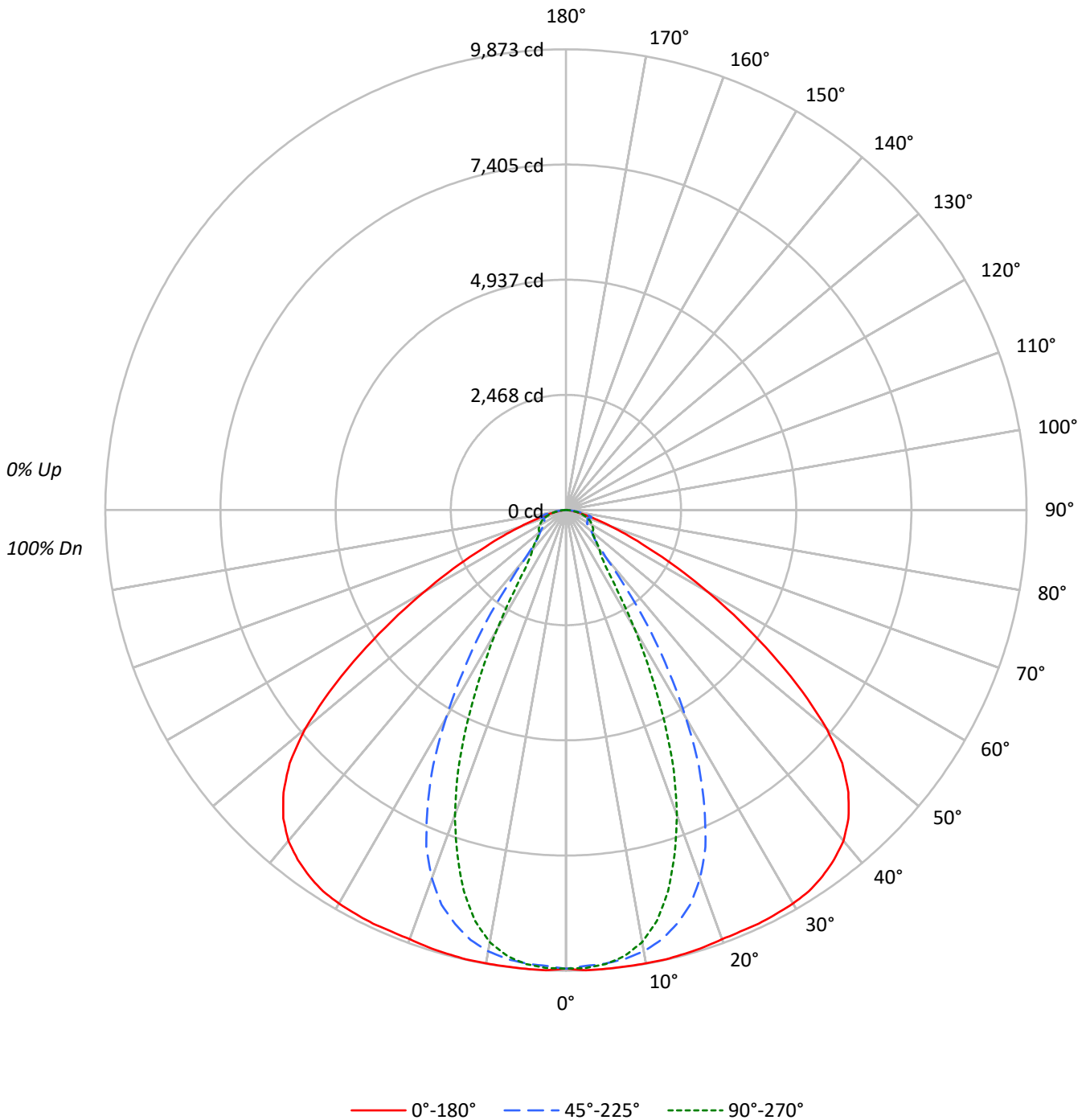
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13877.5 lumens
Efficiency: N/A
Efficacy: 155.9 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 0.81 / 0.89
Luminous Opening: Rectangular (W 0.83' x L: 8' x H: 0')
CIE Type: Direct

Input Watts (W): 89
Input Voltage (V): 120
Input Current (A_{in}): 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 | 50 | 30 | 10 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | |
| 1 | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 99 | 101 | 99 | 96 | 97 | 95 | 93 | 94 | 92 | 91 | 89 | | |
| 2 | 104 | 97 | 92 | 87 | 101 | 95 | 90 | 86 | 92 | 88 | 84 | 89 | 85 | 82 | 86 | 83 | 80 | 79 | | |
| 3 | 96 | 88 | 81 | 76 | 94 | 86 | 80 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 79 | 75 | 72 | 70 | | |
| 4 | 90 | 80 | 73 | 68 | 88 | 79 | 72 | 67 | 77 | 71 | 66 | 74 | 70 | 66 | 72 | 68 | 65 | 63 | | |
| 5 | 84 | 74 | 66 | 61 | 82 | 73 | 66 | 60 | 71 | 64 | 60 | 69 | 63 | 59 | 67 | 62 | 59 | 57 | | |
| 6 | 79 | 68 | 60 | 55 | 77 | 67 | 60 | 55 | 65 | 59 | 54 | 64 | 58 | 54 | 62 | 57 | 53 | 52 | | |
| 7 | 74 | 63 | 55 | 50 | 73 | 62 | 55 | 50 | 61 | 54 | 50 | 59 | 54 | 49 | 58 | 53 | 49 | 47 | | |
| 8 | 70 | 58 | 51 | 46 | 68 | 58 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 45 | 54 | 49 | 45 | 44 | | |
| 9 | 66 | 54 | 47 | 42 | 65 | 54 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 | | |
| 10 | 62 | 51 | 44 | 39 | 61 | 50 | 44 | 39 | 49 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 15871 | 15871 | 15871 |
| 5° | 15994 | 15810 | 15835 |
| 10° | 16172 | 15743 | 15417 |
| 15° | 16455 | 15353 | 14135 |
| 20° | 16817 | 14438 | 11949 |
| 25° | 17422 | 12514 | 8879 |
| 30° | 18150 | 9584 | 5508 |
| 35° | 18896 | 6196 | 2955 |
| 40° | 19508 | 2885 | 2366 |
| 45° | 19551 | 1957 | 2015 |
| 50° | 18330 | 1793 | 1854 |
| 55° | 15154 | 1616 | 2012 |
| 60° | 11343 | 1703 | 2065 |
| 65° | 7647 | 1948 | 2212 |
| 70° | 4853 | 2375 | 2275 |
| 75° | 2928 | 3538 | 2271 |
| 80° | 1786 | 3158 | 2115 |
| 85° | 1156 | 2045 | 1452 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 930.6 | 6.7 |
| 10°-20° | 2569.1 | 18.5 |
| 20°-30° | 3281.2 | 23.6 |
| 30°-40° | 2661.2 | 19.2 |
| 40°-50° | 1883.0 | 13.6 |
| 50°-60° | 1226.4 | 8.8 |
| 60°-70° | 753.1 | 5.4 |
| 70°-80° | 447.3 | 3.2 |
| 80°-90° | 125.7 | 0.9 |
| 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° | 6780.9 | 48.9 |
| 0°-40° | 9442.1 | 68.0 |
| 0°-60° | 12551.4 | 90.4 |
| 0°-90° | 13877.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 13877.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 9830 | 9830 | 9830 | 9830 | 9830 | |
| 5° | 9868 | 9847 | 9755 | 9794 | 9770 | 942 |
| 15° | 9844 | 9711 | 9185 | 8708 | 8456 | 2788 |
| 25° | 9779 | 8972 | 7024 | 5461 | 4984 | 4521 |
| 35° | 9587 | 6508 | 3143 | 1686 | 1499 | 5996 |
| 45° | 8562 | 3276 | 857 | 911 | 882 | 6531 |
| 55° | 5383 | 1103 | 574 | 670 | 715 | 4811 |
| 65° | 2002 | 566 | 510 | 612 | 579 | 2079 |
| 75° | 469 | 321 | 567 | 416 | 364 | 548 |
| 85° | 62 | 125 | 110 | 99 | 78 | 87 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P685365

CATALOG NUMBER: 8CZL-14-UNV-N-L835-CD-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 9829.6 | 9829.6 | 9829.6 | 9829.6 | 9829.6 |
| 2.5° | 9873.4 | 9854.1 | 9779.1 | 9838.0 | 9821.2 |
| 5° | 9868.4 | 9847.3 | 9754.6 | 9794.2 | 9769.8 |
| 7.5° | 9865.0 | 9833.8 | 9702.4 | 9690.6 | 9640.0 |
| 10° | 9864.2 | 9809.4 | 9602.1 | 9488.3 | 9403.2 |
| 12.5° | 9865.9 | 9768.9 | 9437.8 | 9186.6 | 9013.9 |
| 15° | 9843.9 | 9710.8 | 9184.9 | 8707.9 | 8456.0 |
| 17.5° | 9823.7 | 9577.6 | 8866.4 | 8122.2 | 7743.9 |
| 20° | 9787.5 | 9446.2 | 8402.9 | 7404.2 | 6954.2 |
| 22.5° | 9777.4 | 9247.3 | 7817.2 | 6479.8 | 6034.0 |
| 25° | 9779.1 | 8971.7 | 7024.2 | 5460.9 | 4983.9 |
| 27.5° | 9760.5 | 8604.3 | 6160.4 | 4475.7 | 3911.1 |
| 30° | 9735.2 | 8083.5 | 5140.7 | 3419.8 | 2954.6 |
| 32.5° | 9690.6 | 7352.8 | 4096.5 | 2437.2 | 2051.2 |
| 35° | 9586.9 | 6508.4 | 3143.4 | 1686.3 | 1499.2 |
| 37.5° | 9442.8 | 5569.6 | 2119.5 | 1265.8 | 1235.4 |
| 40° | 9255.7 | 4717.6 | 1368.6 | 1106.5 | 1122.5 |
| 42.5° | 8965.8 | 3981.9 | 999.5 | 1006.2 | 1007.9 |
| 45° | 8562.2 | 3276.5 | 857.1 | 911.0 | 882.3 |
| 47.5° | 8031.2 | 2572.9 | 778.7 | 793.9 | 789.6 |
| 50° | 7297.2 | 1926.5 | 713.8 | 710.4 | 738.2 |
| 52.5° | 6389.6 | 1425.1 | 647.2 | 675.9 | 728.1 |
| 55° | 5383.4 | 1103.1 | 573.9 | 670.0 | 714.6 |
| 57.5° | 4418.4 | 894.1 | 531.8 | 653.1 | 679.2 |
| 60° | 3512.5 | 745.0 | 527.5 | 621.9 | 639.6 |
| 62.5° | 2713.6 | 638.8 | 525.0 | 606.8 | 613.5 |
| 65° | 2001.5 | 565.5 | 509.9 | 611.8 | 579.0 |
| 67.5° | 1457.9 | 541.9 | 498.1 | 603.4 | 533.4 |
| 70° | 1028.1 | 476.1 | 503.1 | 557.0 | 482.0 |
| 72.5° | 697.8 | 397.8 | 559.6 | 491.3 | 422.2 |
| 75° | 469.4 | 321.1 | 567.2 | 415.5 | 364.1 |
| 77.5° | 305.1 | 267.1 | 482.0 | 339.6 | 301.7 |
| 80° | 192.1 | 222.5 | 339.6 | 261.2 | 227.5 |
| 82.5° | 124.7 | 171.1 | 214.9 | 184.6 | 156.7 |
| 85° | 62.4 | 124.7 | 110.4 | 98.6 | 78.4 |
| 87.5° | 37.1 | 75.8 | 59.0 | 43.0 | 39.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)