

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: P685446

Luminaire Tested: **8CZL-18-UNV-M-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685446
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8CZL-18-UNV-M-L850-CD-U
Description: METALUX CRUZE LINEAR 8FT MEDIUM LENS MODEL @80 CRI and 5000K
Light Source: (1176) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

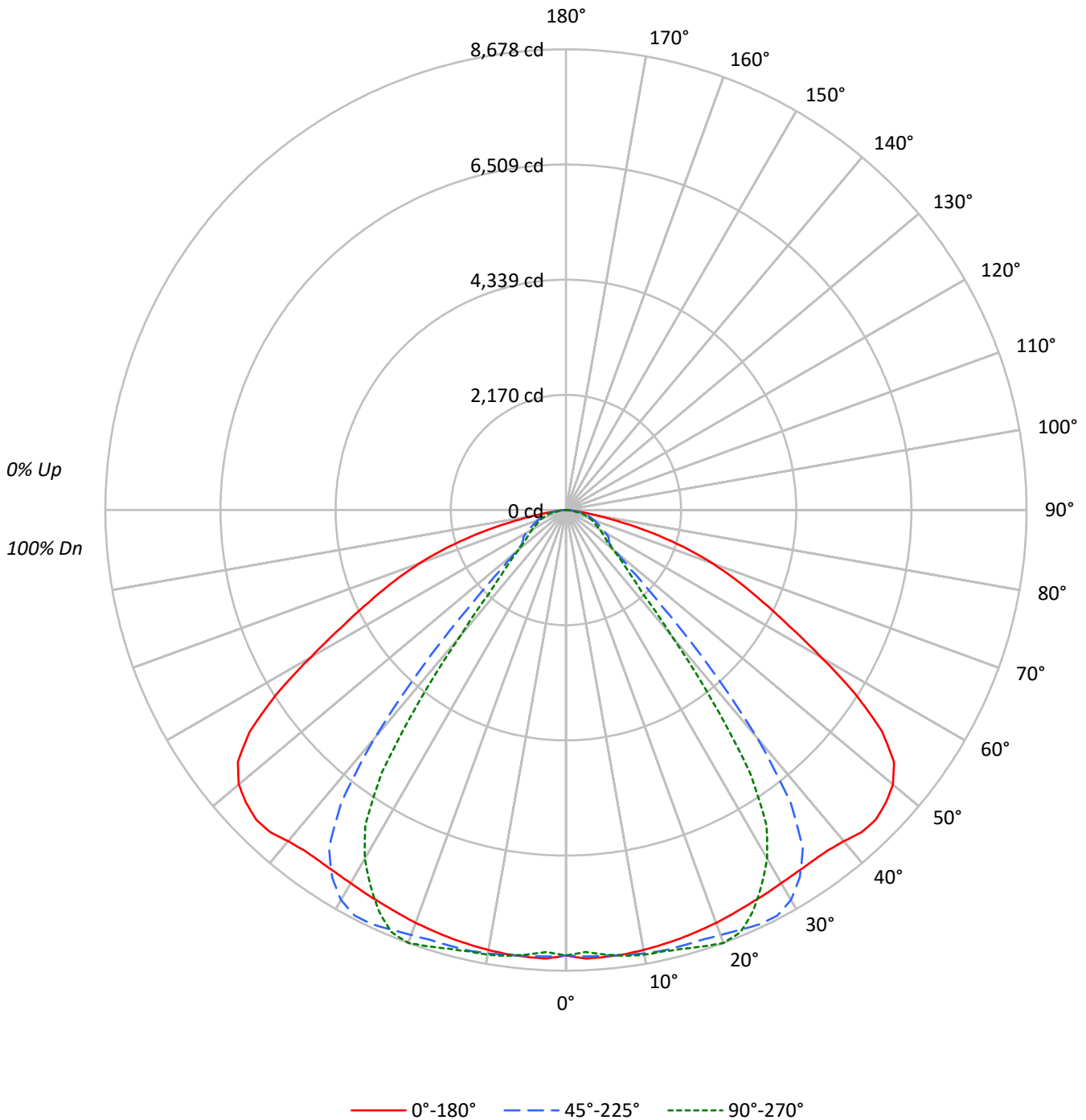
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18125.9 lumens
Efficiency: N/A
Efficacy: 166.3 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 1.28 / 1.22
Luminous Opening: Rectangular (W 0.83' x L: 8' x H: 0')
CIE Type: Direct

Input Watts (W): 109
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 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 90 | 90 | 90 | 88 |
| 2 | 103 | 96 | 90 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 79 | 79 | 79 | 77 |
| 3 | 95 | 86 | 80 | 74 | 93 | 85 | 79 | 73 | 82 | 77 | 72 | 79 | 75 | 71 | 77 | 73 | 70 | 70 | 70 | 70 | 68 |
| 4 | 88 | 78 | 71 | 65 | 86 | 77 | 70 | 64 | 74 | 68 | 64 | 72 | 67 | 63 | 70 | 66 | 62 | 62 | 62 | 62 | 60 |
| 5 | 82 | 71 | 63 | 57 | 80 | 70 | 63 | 57 | 68 | 61 | 56 | 66 | 60 | 56 | 64 | 59 | 55 | 55 | 55 | 55 | 53 |
| 6 | 76 | 65 | 57 | 51 | 75 | 64 | 56 | 51 | 62 | 55 | 51 | 61 | 55 | 50 | 59 | 54 | 50 | 50 | 50 | 50 | 48 |
| 7 | 71 | 59 | 51 | 46 | 70 | 59 | 51 | 46 | 57 | 50 | 46 | 56 | 50 | 45 | 54 | 49 | 45 | 45 | 45 | 45 | 43 |
| 8 | 67 | 55 | 47 | 42 | 65 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 41 | 41 | 41 | 39 |
| 9 | 63 | 50 | 43 | 38 | 61 | 50 | 43 | 38 | 49 | 42 | 38 | 48 | 42 | 37 | 47 | 41 | 37 | 37 | 37 | 37 | 36 |
| 10 | 59 | 47 | 39 | 35 | 58 | 46 | 39 | 35 | 45 | 39 | 34 | 44 | 38 | 34 | 44 | 38 | 34 | 34 | 34 | 34 | 33 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13546 | 13546 | 13546 |
| 5° | 13698 | 13659 | 13621 |
| 10° | 13798 | 13905 | 13944 |
| 15° | 13961 | 14200 | 14300 |
| 20° | 14218 | 14634 | 14910 |
| 25° | 14582 | 15346 | 14855 |
| 30° | 15131 | 15808 | 14131 |
| 35° | 15926 | 15335 | 11933 |
| 40° | 17164 | 11827 | 6527 |
| 45° | 18844 | 5814 | 3900 |
| 50° | 20206 | 3038 | 2909 |
| 55° | 20464 | 2773 | 2510 |
| 60° | 17946 | 2765 | 2367 |
| 65° | 15617 | 2656 | 2292 |
| 70° | 13859 | 2691 | 2307 |
| 75° | 10631 | 2763 | 2342 |
| 80° | 5411 | 2807 | 1940 |
| 85° | 2134 | 1582 | 552 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 803.9 | 4.4 |
| 10°-20° | 2395.9 | 13.2 |
| 20°-30° | 3866.8 | 21.3 |
| 30°-40° | 4528.6 | 25.0 |
| 40°-50° | 3082.9 | 17.0 |
| 50°-60° | 1785.1 | 9.8 |
| 60°-70° | 1020.6 | 5.6 |
| 70°-80° | 525.3 | 2.9 |
| 80°-90° | 117.0 | 0.6 |
| 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° | 7066.6 | 39.0 |
| 0°-40° | 11595.1 | 64.0 |
| 0°-60° | 16463.1 | 90.8 |
| 0°-90° | 18125.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 18125.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 8390 | 8390 | 8390 | 8390 | 8390 | |
| 5° | 8451 | 8368 | 8428 | 8418 | 8404 | 805 |
| 15° | 8352 | 8340 | 8495 | 8517 | 8555 | 2364 |
| 25° | 8185 | 8300 | 8614 | 8482 | 8338 | 3789 |
| 35° | 8080 | 8479 | 7780 | 6561 | 6054 | 5087 |
| 45° | 8253 | 6140 | 2546 | 1715 | 1708 | 6340 |
| 55° | 7270 | 2107 | 985 | 917 | 892 | 6334 |
| 65° | 4088 | 752 | 695 | 614 | 600 | 4098 |
| 75° | 1704 | 464 | 443 | 386 | 375 | 1812 |
| 85° | 115 | 141 | 85 | 40 | 30 | 195 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P685446

CATALOG NUMBER: 8CZL-18-UNV-M-L850-CD-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 8389.9 | 8389.9 | 8389.9 | 8389.9 | 8389.9 | 8389.9 | 8389.9 | 8389.9 | 8389.9 | 8389.9 | 8389.9 |
| 2.5° | 8457.4 | 8433.6 | 8385.9 | 8366.0 | 8366.0 | 8417.7 | 8425.6 | 8393.8 | 8387.9 | 8360.1 | 8334.2 |
| 5° | 8451.4 | 8427.6 | 8381.9 | 8364.0 | 8370.0 | 8427.6 | 8441.5 | 8415.7 | 8423.6 | 8415.7 | 8403.8 |
| 7.5° | 8439.5 | 8413.7 | 8372.0 | 8360.1 | 8377.9 | 8451.4 | 8475.3 | 8461.4 | 8479.2 | 8475.3 | 8471.3 |
| 10° | 8415.7 | 8395.8 | 8356.1 | 8354.1 | 8389.9 | 8481.2 | 8511.0 | 8493.1 | 8499.1 | 8497.1 | 8505.1 |
| 12.5° | 8383.9 | 8366.0 | 8332.3 | 8350.1 | 8401.8 | 8499.1 | 8519.0 | 8491.2 | 8499.1 | 8501.1 | 8515.0 |
| 15° | 8352.1 | 8330.3 | 8308.4 | 8350.1 | 8403.8 | 8495.1 | 8515.0 | 8511.0 | 8534.9 | 8536.8 | 8554.7 |
| 17.5° | 8312.4 | 8298.5 | 8292.5 | 8348.1 | 8389.9 | 8491.2 | 8536.8 | 8560.7 | 8592.5 | 8600.4 | 8618.3 |
| 20° | 8274.7 | 8262.7 | 8276.6 | 8338.2 | 8383.9 | 8517.0 | 8580.5 | 8616.3 | 8650.1 | 8660.0 | 8677.9 |
| 22.5° | 8229.0 | 8221.0 | 8258.8 | 8324.3 | 8393.8 | 8556.7 | 8628.2 | 8632.2 | 8618.3 | 8592.5 | 8604.4 |
| 25° | 8185.3 | 8185.3 | 8240.9 | 8320.3 | 8423.6 | 8614.3 | 8620.3 | 8507.0 | 8405.8 | 8338.2 | 8338.2 |
| 27.5° | 8149.5 | 8157.5 | 8227.0 | 8338.2 | 8481.2 | 8618.3 | 8453.4 | 8229.0 | 8080.0 | 7982.7 | 7976.7 |
| 30° | 8115.8 | 8129.7 | 8227.0 | 8387.9 | 8522.9 | 8479.2 | 8159.5 | 7887.3 | 7680.8 | 7587.4 | 7579.5 |
| 32.5° | 8091.9 | 8113.8 | 8262.7 | 8463.4 | 8473.3 | 8199.2 | 7782.1 | 7438.5 | 7194.1 | 7055.1 | 7031.3 |
| 35° | 8080.0 | 8105.8 | 8330.3 | 8528.9 | 8272.7 | 7780.1 | 7188.2 | 6657.9 | 6270.5 | 6091.8 | 6054.0 |
| 37.5° | 8088.0 | 8133.6 | 8423.6 | 8473.3 | 7770.2 | 6955.8 | 6105.7 | 5345.0 | 4812.6 | 4643.8 | 4526.6 |
| 40° | 8143.6 | 8221.0 | 8497.1 | 8020.4 | 6715.5 | 5611.1 | 4484.9 | 3666.6 | 3299.1 | 3178.0 | 3096.5 |
| 42.5° | 8236.9 | 8314.4 | 8304.5 | 6983.6 | 5245.6 | 3986.4 | 2890.0 | 2399.4 | 2220.6 | 2200.7 | 2163.0 |
| 45° | 8252.8 | 8282.6 | 7680.8 | 5627.0 | 3815.6 | 2546.4 | 1861.1 | 1716.1 | 1712.1 | 1726.0 | 1708.2 |
| 47.5° | 8169.4 | 8111.8 | 6781.0 | 4304.2 | 2627.8 | 1646.6 | 1400.3 | 1424.1 | 1436.0 | 1426.1 | 1412.2 |
| 50° | 8044.3 | 7831.7 | 5772.0 | 3164.1 | 1751.9 | 1209.6 | 1221.5 | 1243.4 | 1201.7 | 1173.9 | 1158.0 |
| 52.5° | 7790.0 | 7376.9 | 4651.8 | 2242.5 | 1211.6 | 1032.8 | 1128.2 | 1064.6 | 1005.0 | 989.1 | 987.2 |
| 55° | 7269.6 | 6701.6 | 3579.2 | 1616.8 | 925.6 | 985.2 | 1003.0 | 921.6 | 903.7 | 895.8 | 891.8 |
| 57.5° | 6477.1 | 5861.4 | 2691.3 | 1167.9 | 812.4 | 951.4 | 872.0 | 840.2 | 822.3 | 816.3 | 810.4 |
| 60° | 5557.5 | 4921.9 | 2006.1 | 858.1 | 788.5 | 856.1 | 790.5 | 760.7 | 740.9 | 732.9 | 732.9 |
| 62.5° | 4743.1 | 4073.8 | 1483.7 | 697.2 | 782.6 | 772.6 | 713.1 | 681.3 | 669.4 | 665.4 | 661.4 |
| 65° | 4087.7 | 3277.3 | 1070.6 | 645.5 | 730.9 | 695.2 | 637.6 | 615.7 | 607.8 | 599.8 | 599.8 |
| 67.5° | 3503.7 | 2566.2 | 788.5 | 633.6 | 671.3 | 625.7 | 582.0 | 564.1 | 554.2 | 552.2 | 550.2 |
| 70° | 2935.7 | 1890.9 | 599.8 | 619.7 | 637.6 | 570.0 | 528.3 | 506.5 | 494.6 | 488.6 | 488.6 |
| 72.5° | 2337.8 | 1297.0 | 478.7 | 570.0 | 584.0 | 504.5 | 462.8 | 446.9 | 437.0 | 431.0 | 429.0 |
| 75° | 1704.2 | 814.4 | 421.1 | 478.7 | 502.5 | 442.9 | 401.2 | 387.3 | 383.3 | 377.4 | 375.4 |
| 77.5° | 1084.5 | 486.6 | 359.5 | 391.3 | 411.2 | 373.4 | 341.6 | 323.8 | 321.8 | 315.8 | 313.8 |
| 80° | 582.0 | 311.8 | 288.0 | 307.9 | 319.8 | 301.9 | 264.2 | 228.4 | 218.5 | 210.5 | 208.6 |
| 82.5° | 270.1 | 198.6 | 214.5 | 232.4 | 238.3 | 192.7 | 158.9 | 143.0 | 133.1 | 123.1 | 117.2 |
| 85° | 115.2 | 107.3 | 133.1 | 143.0 | 117.2 | 85.4 | 55.6 | 41.7 | 33.8 | 31.8 | 29.8 |
| 87.5° | 41.7 | 41.7 | 49.7 | 33.8 | 19.9 | 15.9 | 15.9 | 13.9 | 11.9 | 9.9 | 9.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)