

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: P685706

Luminaire Tested: **8CZL-18-UNV-LVR-L940-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685706
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8CZL-18-UNV-LVR-L940-CD-U
Description: METALUX CRUZE LINEAR 8FT LOUVER MODEL @90 CRI and 4000K
Light Source: (1176) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

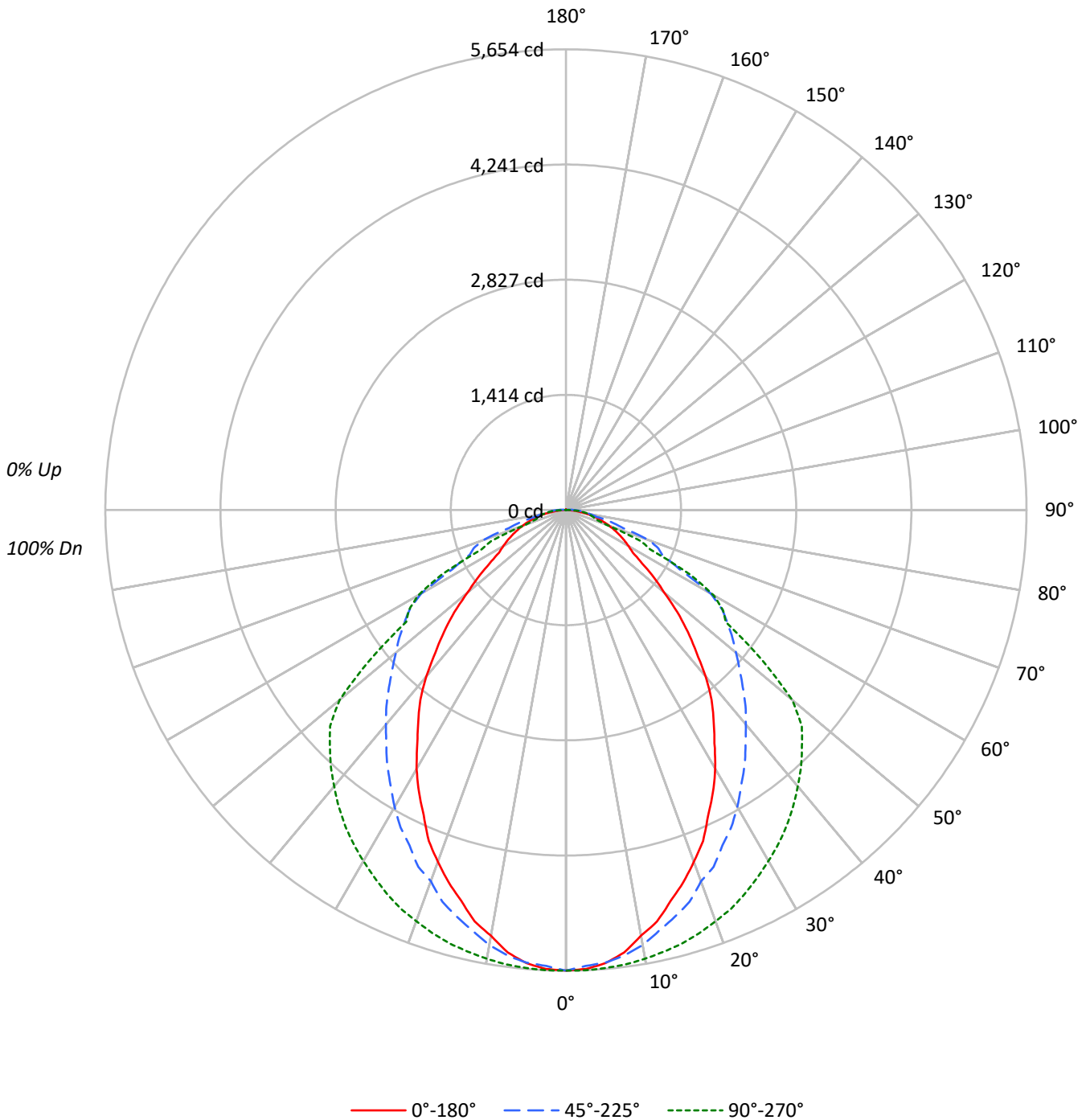
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12801.3 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.31 / 1.26
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

TEST NUMBER: P685706
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Luminous Intensity Polar Plot





TEST NUMBER: P685706

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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 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 88 | 88 | 88 | 88 | 85 |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 88 | 83 | 78 | 84 | 80 | 77 | 81 | 78 | 75 | 75 | 75 | 75 | 73 |
| 3 | 92 | 82 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 68 | 65 | 65 | 65 | 65 | 63 |
| 4 | 85 | 74 | 65 | 59 | 83 | 72 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 65 | 60 | 56 | 56 | 56 | 56 | 54 |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 51 | 61 | 55 | 50 | 59 | 54 | 49 | 49 | 49 | 49 | 47 |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 44 | 44 | 44 | 42 |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 49 | 44 | 39 | 39 | 39 | 39 | 37 |
| 8 | 63 | 50 | 42 | 36 | 61 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 35 | 35 | 35 | 35 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 45 | 38 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 32 | 32 | 32 | 30 |
| 10 | 55 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 39 | 34 | 29 | 29 | 29 | 29 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9127 | 9127 | 9127 |
| 5° | 9048 | 9035 | 9143 |
| 10° | 8696 | 8887 | 9170 |
| 15° | 8301 | 8639 | 9206 |
| 20° | 7893 | 8332 | 9228 |
| 25° | 7361 | 8092 | 9258 |
| 30° | 6835 | 7843 | 9273 |
| 35° | 6231 | 7536 | 9316 |
| 40° | 5621 | 7242 | 9333 |
| 45° | 4835 | 7010 | 9357 |
| 50° | 3951 | 6845 | 9111 |
| 55° | 3217 | 6818 | 6739 |
| 60° | 2869 | 6628 | 6761 |
| 65° | 2774 | 4974 | 4360 |
| 70° | 2665 | 5097 | 2478 |
| 75° | 2568 | 3593 | 2213 |
| 80° | 2342 | 2922 | 2637 |
| 85° | 2097 | 3642 | 3285 |



TEST NUMBER: P685706
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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 529.5 | 4.1 |
| 10°-20° | 1467.8 | 11.5 |
| 20°-30° | 2123.5 | 16.6 |
| 30°-40° | 2423.7 | 18.9 |
| 40°-50° | 2381.5 | 18.6 |
| 50°-60° | 1899.6 | 14.8 |
| 60°-70° | 1196.5 | 9.3 |
| 70°-80° | 530.1 | 4.1 |
| 80°-90° | 203.3 | 1.6 |
| 90°-100° | 40.3 | 0.3 |
| 100°-110° | 2.7 | 0.0 |
| 110°-120° | 0.3 | 0.0 |
| 120°-130° | 0.4 | 0.0 |
| 130°-140° | 0.6 | 0.0 |
| 140°-150° | 0.6 | 0.0 |
| 150°-160° | 0.5 | 0.0 |
| 160°-170° | 0.5 | 0.0 |
| 170°-180° | 0.2 | 0.0 |
| 0°-30° | 4120.7 | 32.2 |
| 0°-40° | 6544.4 | 51.1 |
| 0°-60° | 10825.5 | 84.6 |
| 0°-90° | 12755.3 | 99.6 |
| 90°-120° | 43.3 | 0.3 |
| 90°-150° | 44.9 | 0.4 |
| 90°-180° | 46.0 | 0.4 |
| 0°-180° | 12801.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 5653 | 5653 | 5653 | 5653 | 5653 | |
| 5° | 5582 | 5595 | 5574 | 5621 | 5641 | 524 |
| 15° | 4966 | 5015 | 5168 | 5410 | 5508 | 1398 |
| 25° | 4132 | 4266 | 4542 | 4958 | 5197 | 1904 |
| 35° | 3161 | 3353 | 3823 | 4387 | 4726 | 1976 |
| 45° | 2117 | 2426 | 3070 | 3757 | 4098 | 1627 |
| 55° | 1143 | 1548 | 2422 | 2612 | 2394 | 1051 |
| 65° | 726 | 988 | 1302 | 1387 | 1141 | 719 |
| 75° | 412 | 476 | 576 | 436 | 355 | 432 |
| 85° | 113 | 138 | 197 | 254 | 177 | 120 |
| 90° | 1 | 47 | 104 | 151 | 29 | 7 |
| 95° | 1 | 7 | 43 | 74 | 10 | 1 |
| 105° | 1 | 1 | 1 | 3 | 0 | 1 |
| 115° | 1 | 1 | 0 | 0 | 0 | 1 |
| 125° | 1 | 2 | 0 | 0 | 0 | 1 |
| 135° | 1 | 2 | 1 | 0 | 0 | 1 |
| 145° | 2 | 2 | 1 | 0 | 0 | 1 |
| 155° | 2 | 2 | 1 | 0 | 0 | 1 |
| 165° | 3 | 3 | 2 | 1 | 0 | 1 |
| 175° | 3 | 3 | 2 | 1 | 1 | 0 |
| 180° | 2 | 2 | 2 | 2 | 2 | |

TEST NUMBER: P685706

CATALOG NUMBER: 8CZL-18-UNV-LVR-L940-CD-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 5652.6 | 5652.6 | 5652.6 | 5652.6 | 5652.6 |
| 2.5° | 5637.6 | 5634.1 | 5599.9 | 5648.2 | 5653.5 |
| 5° | 5582.3 | 5594.6 | 5574.4 | 5621.0 | 5641.2 |
| 7.5° | 5476.1 | 5489.3 | 5513.0 | 5598.1 | 5622.7 |
| 10° | 5304.1 | 5337.4 | 5420.8 | 5540.2 | 5592.9 |
| 12.5° | 5172.4 | 5213.6 | 5288.3 | 5491.0 | 5551.6 |
| 15° | 4966.1 | 5015.2 | 5168.0 | 5410.3 | 5507.7 |
| 17.5° | 4790.5 | 4880.1 | 5042.5 | 5308.5 | 5444.5 |
| 20° | 4593.9 | 4665.9 | 4849.3 | 5208.4 | 5370.8 |
| 22.5° | 4397.2 | 4488.5 | 4738.7 | 5074.9 | 5296.2 |
| 25° | 4132.1 | 4265.5 | 4542.1 | 4958.2 | 5197.0 |
| 27.5° | 3907.4 | 4075.9 | 4393.7 | 4820.4 | 5086.4 |
| 30° | 3666.0 | 3796.8 | 4206.7 | 4679.9 | 4974.0 |
| 32.5° | 3393.8 | 3599.2 | 4004.8 | 4519.2 | 4856.3 |
| 35° | 3161.2 | 3352.6 | 3823.1 | 4386.7 | 4726.4 |
| 37.5° | 2936.5 | 3116.4 | 3622.1 | 4236.6 | 4582.5 |
| 40° | 2667.0 | 2904.0 | 3436.0 | 4065.4 | 4428.0 |
| 42.5° | 2368.5 | 2659.1 | 3263.0 | 3903.9 | 4270.8 |
| 45° | 2117.4 | 2425.5 | 3069.9 | 3757.3 | 4097.9 |
| 47.5° | 1856.7 | 2181.5 | 2889.1 | 3579.1 | 3926.7 |
| 50° | 1573.1 | 1968.2 | 2724.9 | 3414.0 | 3627.3 |
| 52.5° | 1366.0 | 1746.1 | 2577.4 | 3115.5 | 3057.6 |
| 55° | 1143.0 | 1547.7 | 2422.0 | 2611.6 | 2393.9 |
| 57.5° | 973.6 | 1368.6 | 2276.3 | 2050.7 | 2285.1 |
| 60° | 888.4 | 1225.5 | 2052.4 | 1952.4 | 2093.7 |
| 62.5° | 808.5 | 1100.0 | 1569.6 | 1831.2 | 1722.4 |
| 65° | 726.0 | 988.5 | 1301.9 | 1387.0 | 1141.2 |
| 67.5° | 646.1 | 891.9 | 1227.3 | 1035.9 | 993.7 |
| 70° | 564.5 | 817.3 | 1079.8 | 883.1 | 525.0 |
| 72.5° | 487.2 | 731.3 | 738.3 | 489.0 | 389.8 |
| 75° | 411.7 | 475.8 | 575.9 | 436.3 | 354.7 |
| 77.5° | 329.2 | 408.2 | 385.4 | 390.6 | 321.3 |
| 80° | 251.9 | 280.9 | 314.3 | 349.4 | 283.6 |
| 82.5° | 178.2 | 208.9 | 254.6 | 305.5 | 232.6 |
| 85° | 113.2 | 137.8 | 196.6 | 253.7 | 177.3 |
| 87.5° | 44.8 | 86.9 | 146.6 | 204.5 | 104.5 |
| 90° | 0.9 | 47.4 | 103.6 | 151.0 | 29.0 |
| 92.5° | 0.9 | 21.9 | 69.4 | 110.6 | 14.9 |
| 95° | 0.9 | 7.0 | 43.0 | 73.7 | 9.7 |
| 97.5° | 0.9 | 2.6 | 22.8 | 45.6 | 5.3 |
| 100° | 0.9 | 0.9 | 9.7 | 24.6 | 2.6 |
| 102.5° | 0.9 | 0.9 | 3.5 | 9.7 | 0.9 |
| 105° | 0.9 | 0.9 | 0.9 | 2.6 | 0.0 |
| 107.5° | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| 110° | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P685706
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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| 115° | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| 120° | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| 125° | 0.9 | 1.8 | 0.0 | 0.0 | 0.0 |
| 127.5° | 0.9 | 0.9 | 0.0 | 0.0 | 0.0 |
| 130° | 0.9 | 1.8 | 0.9 | 0.0 | 0.0 |
| 132.5° | 0.9 | 1.8 | 0.9 | 0.0 | 0.0 |
| 135° | 0.9 | 1.8 | 0.9 | 0.0 | 0.0 |
| 137.5° | 0.9 | 1.8 | 0.9 | 0.0 | 0.0 |
| 140° | 1.8 | 1.8 | 0.9 | 0.0 | 0.0 |
| 142.5° | 1.8 | 1.8 | 0.9 | 0.0 | 0.0 |
| 145° | 1.8 | 1.8 | 0.9 | 0.0 | 0.0 |
| 147.5° | 1.8 | 1.8 | 0.9 | 0.0 | 0.0 |
| 150° | 1.8 | 1.8 | 0.9 | 0.0 | 0.0 |
| 152.5° | 1.8 | 1.8 | 0.9 | 0.0 | 0.0 |
| 155° | 1.8 | 1.8 | 0.9 | 0.0 | 0.0 |
| 157.5° | 1.8 | 2.6 | 0.9 | 0.0 | 0.0 |
| 160° | 2.6 | 2.6 | 0.9 | 0.0 | 0.0 |
| 162.5° | 2.6 | 2.6 | 1.8 | 0.9 | 0.0 |
| 165° | 2.6 | 2.6 | 1.8 | 0.9 | 0.0 |
| 167.5° | 2.6 | 2.6 | 1.8 | 0.9 | 0.0 |
| 170° | 2.6 | 2.6 | 1.8 | 0.9 | 0.9 |
| 172.5° | 2.6 | 2.6 | 1.8 | 0.9 | 0.9 |
| 175° | 2.6 | 2.6 | 1.8 | 0.9 | 0.9 |
| 177.5° | 2.6 | 2.6 | 1.8 | 0.9 | 0.9 |
| 180° | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |

(END OF REPORT)