

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: P685928

Luminaire Tested: **8CZL-32-UNV-LVRF-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685928
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8CZL-32-UNV-LVRF-L850-CD-U
Description: METALUX CRUZE LINEAR 8FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 5000K
Light Source: (1176) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

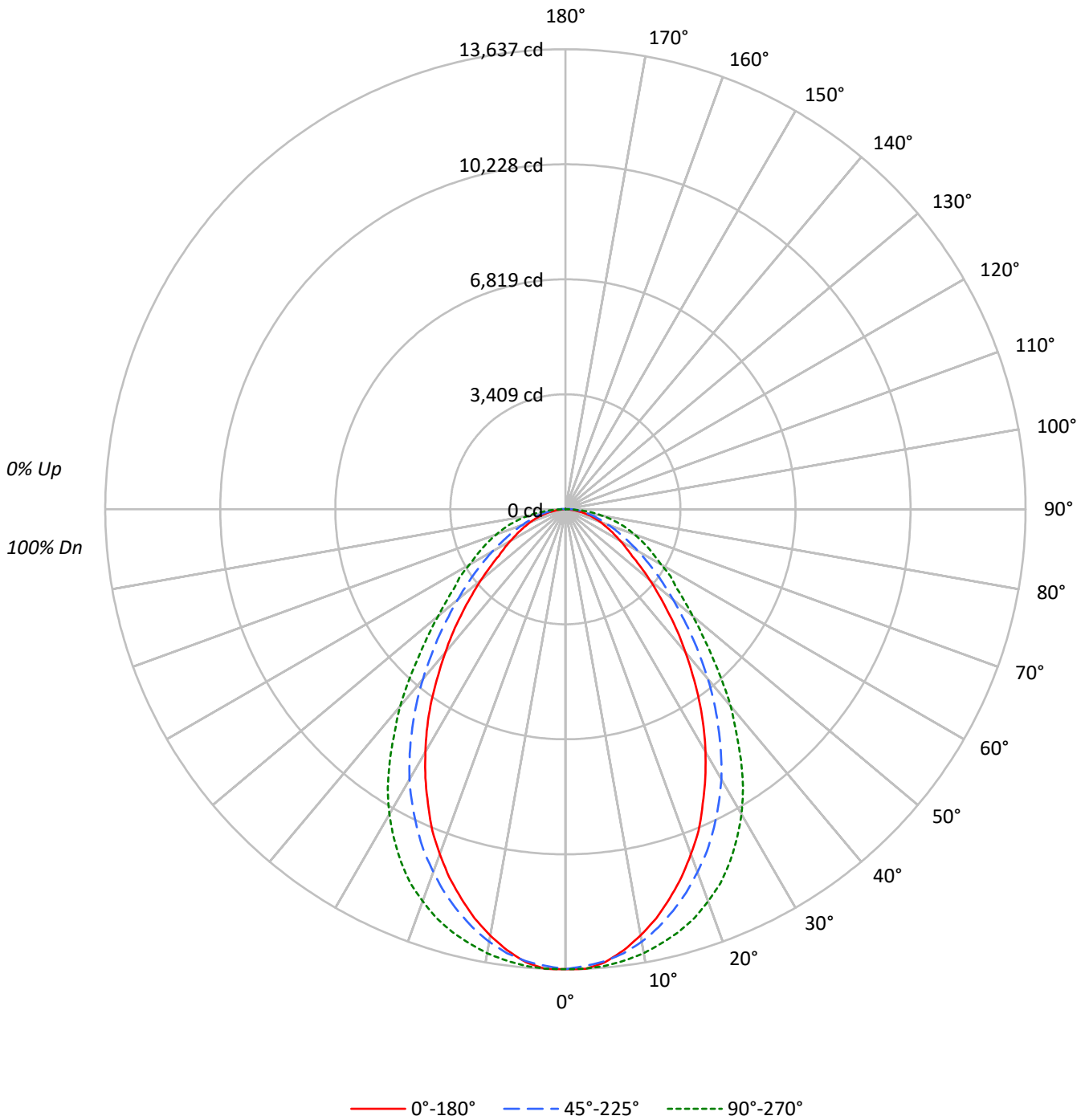
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25144.7 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 0.97 / 1.15 / 1.12
Luminous Opening: Rectangular (W 0.83' x L: 8' x H: 0')
CIE Type: Direct

Input Watts (W): 206
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: P685928
CATALOG NUMBER: 8CZL-32-UNV-LVRF-L850-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685928

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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 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 88 | 88 | 88 | 86 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 89 | 84 | 80 | 85 | 82 | 78 | 82 | 79 | 76 | 76 | 76 | 76 | 74 |
| 3 | 94 | 84 | 77 | 71 | 91 | 83 | 76 | 70 | 80 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 67 | 67 | 67 | 67 | 65 |
| 4 | 87 | 76 | 68 | 62 | 84 | 74 | 67 | 61 | 72 | 66 | 61 | 70 | 64 | 60 | 68 | 63 | 59 | 59 | 59 | 59 | 57 |
| 5 | 80 | 69 | 61 | 55 | 78 | 68 | 60 | 54 | 66 | 59 | 54 | 64 | 58 | 53 | 62 | 57 | 53 | 53 | 53 | 53 | 51 |
| 6 | 75 | 63 | 55 | 49 | 73 | 62 | 54 | 48 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 47 | 47 | 47 | 45 |
| 7 | 70 | 57 | 49 | 44 | 68 | 57 | 49 | 44 | 55 | 48 | 43 | 54 | 48 | 43 | 52 | 47 | 43 | 43 | 43 | 43 | 41 |
| 8 | 65 | 53 | 45 | 40 | 64 | 52 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 39 | 39 | 39 | 37 |
| 9 | 61 | 49 | 41 | 36 | 60 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 36 | 36 | 36 | 34 |
| 10 | 58 | 46 | 38 | 33 | 57 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 33 | 33 | 33 | 33 | 31 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 22008 | 22008 | 22008 |
| 5° | 21848 | 21797 | 22016 |
| 10° | 21031 | 21343 | 21908 |
| 15° | 19955 | 20597 | 21678 |
| 20° | 18688 | 19657 | 21246 |
| 25° | 17160 | 18546 | 20542 |
| 30° | 15468 | 17235 | 19452 |
| 35° | 13623 | 15588 | 17866 |
| 40° | 11660 | 13840 | 16066 |
| 45° | 9823 | 12064 | 13992 |
| 50° | 8203 | 10457 | 12371 |
| 55° | 6788 | 9187 | 11216 |
| 60° | 6117 | 8053 | 10577 |
| 65° | 5561 | 7088 | 10343 |
| 70° | 5179 | 6363 | 10265 |
| 75° | 4803 | 5939 | 10474 |
| 80° | 4353 | 5884 | 10492 |
| 85° | 3738 | 6895 | 10380 |



TEST NUMBER: P685928
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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1275.4 | 5.1 |
| 10°-20° | 3485.5 | 13.9 |
| 20°-30° | 4816.0 | 19.2 |
| 30°-40° | 4954.2 | 19.7 |
| 40°-50° | 4061.5 | 16.2 |
| 50°-60° | 2914.5 | 11.6 |
| 60°-70° | 1960.3 | 7.8 |
| 70°-80° | 1144.1 | 4.6 |
| 80°-90° | 440.9 | 1.8 |
| 90°-100° | 76.4 | 0.3 |
| 100°-110° | 6.5 | 0.0 |
| 110°-120° | 1.2 | 0.0 |
| 120°-130° | 1.1 | 0.0 |
| 130°-140° | 1.6 | 0.0 |
| 140°-150° | 1.9 | 0.0 |
| 150°-160° | 1.7 | 0.0 |
| 160°-170° | 1.3 | 0.0 |
| 170°-180° | 0.5 | 0.0 |
| 0°-30° | 9576.9 | 38.1 |
| 0°-40° | 14531.2 | 57.8 |
| 0°-60° | 21507.2 | 85.5 |
| 0°-90° | 25052.4 | 99.6 |
| 90°-120° | 84.1 | 0.3 |
| 90°-150° | 88.8 | 0.4 |
| 90°-180° | 92.0 | 0.4 |
| 0°-180° | 25144.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-------|-------|-------|-------|-------|------|
| 0° | 13631 | 13631 | 13631 | 13631 | 13631 | |
| 5° | 13480 | 13490 | 13449 | 13574 | 13584 | 1265 |
| 15° | 11938 | 12060 | 12322 | 12800 | 12969 | 3349 |
| 25° | 9632 | 9858 | 10410 | 11135 | 11531 | 4421 |
| 35° | 6911 | 7231 | 7908 | 8649 | 9064 | 4306 |
| 45° | 4302 | 4637 | 5284 | 5803 | 6128 | 3339 |
| 55° | 2412 | 2700 | 3264 | 3710 | 3985 | 2220 |
| 65° | 1456 | 1542 | 1855 | 2382 | 2707 | 1450 |
| 75° | 770 | 797 | 952 | 1322 | 1679 | 817 |
| 85° | 202 | 251 | 372 | 556 | 560 | 218 |
| 90° | 2 | 84 | 190 | 290 | 61 | 12 |
| 95° | 2 | 14 | 80 | 139 | 26 | 1 |
| 105° | 0 | 2 | 4 | 8 | 4 | 0 |
| 115° | 2 | 2 | 2 | 0 | 0 | 1 |
| 125° | 2 | 2 | 2 | 0 | 0 | 2 |
| 135° | 2 | 4 | 2 | 2 | 0 | 2 |
| 145° | 4 | 4 | 4 | 2 | 2 | 2 |
| 155° | 4 | 6 | 4 | 2 | 2 | 2 |
| 165° | 6 | 6 | 6 | 4 | 2 | 2 |
| 175° | 6 | 8 | 6 | 4 | 4 | 1 |
| 180° | 6 | 6 | 6 | 6 | 6 | |

TEST NUMBER: P685928

CATALOG NUMBER: 8CZL-32-UNV-LVRF-L850-CD-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|---------|---------|---------|---------|---------|
| 0° | 13630.8 | 13630.8 | 13630.8 | 13630.8 | 13630.8 |
| 2.5° | 13636.7 | 13625.0 | 13548.5 | 13636.7 | 13632.8 |
| 5° | 13480.0 | 13489.8 | 13448.6 | 13574.0 | 13583.8 |
| 7.5° | 13188.1 | 13227.3 | 13272.3 | 13456.5 | 13489.8 |
| 10° | 12827.6 | 12886.4 | 13017.7 | 13291.9 | 13362.4 |
| 12.5° | 12422.1 | 12486.8 | 12700.3 | 13078.4 | 13176.3 |
| 15° | 11938.2 | 12059.7 | 12322.2 | 12800.2 | 12968.7 |
| 17.5° | 11438.7 | 11587.6 | 11912.8 | 12478.9 | 12706.2 |
| 20° | 10876.5 | 11025.3 | 11440.6 | 12071.5 | 12365.3 |
| 22.5° | 10312.3 | 10457.2 | 10964.6 | 11636.6 | 12002.9 |
| 25° | 9632.5 | 9857.8 | 10410.2 | 11135.0 | 11530.8 |
| 27.5° | 8982.1 | 9221.1 | 9836.2 | 10613.9 | 11007.7 |
| 30° | 8296.4 | 8576.6 | 9244.6 | 9987.1 | 10433.7 |
| 32.5° | 7616.7 | 7900.7 | 8582.4 | 9356.3 | 9799.0 |
| 35° | 6911.4 | 7230.7 | 7908.5 | 8649.1 | 9064.4 |
| 37.5° | 6196.4 | 6545.1 | 7242.5 | 7971.2 | 8306.2 |
| 40° | 5532.3 | 5875.1 | 6566.6 | 7219.0 | 7622.5 |
| 42.5° | 4919.1 | 5256.0 | 5896.6 | 6488.3 | 6850.7 |
| 45° | 4302.0 | 4637.0 | 5283.5 | 5802.6 | 6127.8 |
| 47.5° | 3749.6 | 4092.4 | 4693.8 | 5218.8 | 5491.1 |
| 50° | 3265.7 | 3577.2 | 4162.9 | 4638.9 | 4925.0 |
| 52.5° | 2822.9 | 3107.0 | 3686.9 | 4149.2 | 4425.4 |
| 55° | 2411.5 | 2699.5 | 3263.7 | 3710.4 | 3984.6 |
| 57.5° | 2135.3 | 2341.0 | 2848.4 | 3344.0 | 3696.7 |
| 60° | 1894.4 | 2021.7 | 2493.8 | 3081.5 | 3275.5 |
| 62.5° | 1649.5 | 1765.1 | 2153.0 | 2670.1 | 2971.8 |
| 65° | 1455.5 | 1541.7 | 1855.2 | 2382.2 | 2707.4 |
| 67.5° | 1263.6 | 1328.2 | 1596.6 | 2104.0 | 2433.1 |
| 70° | 1097.0 | 1138.2 | 1347.8 | 1829.7 | 2174.5 |
| 72.5° | 938.4 | 959.9 | 1148.0 | 1579.0 | 1921.8 |
| 75° | 769.9 | 797.3 | 952.1 | 1322.3 | 1678.9 |
| 77.5° | 609.3 | 648.4 | 785.6 | 1102.9 | 1400.7 |
| 80° | 468.2 | 499.5 | 632.8 | 907.0 | 1128.4 |
| 82.5° | 325.2 | 368.3 | 493.7 | 717.0 | 863.9 |
| 85° | 201.8 | 250.8 | 372.2 | 556.4 | 560.3 |
| 87.5° | 84.2 | 156.7 | 272.3 | 411.4 | 286.0 |
| 90° | 2.0 | 84.2 | 190.0 | 289.9 | 60.7 |
| 92.5° | 0.0 | 39.2 | 129.3 | 207.7 | 35.3 |
| 95° | 2.0 | 13.7 | 80.3 | 139.1 | 25.5 |
| 97.5° | 0.0 | 3.9 | 43.1 | 88.2 | 15.7 |
| 100° | 0.0 | 2.0 | 17.6 | 49.0 | 9.8 |
| 102.5° | 0.0 | 2.0 | 7.8 | 21.5 | 5.9 |
| 105° | 0.0 | 2.0 | 3.9 | 7.8 | 3.9 |
| 107.5° | 0.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 110° | 2.0 | 2.0 | 2.0 | 2.0 | 0.0 |



TEST NUMBER: P685928
 CATALOG NUMBER: 8CZL-32-UNV-LVRF-L850-CD-U

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 115° | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 117.5° | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 120° | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 122.5° | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 125° | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 127.5° | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 130° | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 132.5° | 2.0 | 3.9 | 2.0 | 2.0 | 0.0 |
| 135° | 2.0 | 3.9 | 2.0 | 2.0 | 0.0 |
| 137.5° | 2.0 | 3.9 | 2.0 | 2.0 | 0.0 |
| 140° | 2.0 | 3.9 | 2.0 | 2.0 | 2.0 |
| 142.5° | 3.9 | 3.9 | 3.9 | 2.0 | 2.0 |
| 145° | 3.9 | 3.9 | 3.9 | 2.0 | 2.0 |
| 147.5° | 3.9 | 3.9 | 3.9 | 2.0 | 2.0 |
| 150° | 3.9 | 3.9 | 3.9 | 2.0 | 2.0 |
| 152.5° | 3.9 | 5.9 | 3.9 | 2.0 | 2.0 |
| 155° | 3.9 | 5.9 | 3.9 | 2.0 | 2.0 |
| 157.5° | 3.9 | 5.9 | 3.9 | 2.0 | 2.0 |
| 160° | 3.9 | 5.9 | 3.9 | 2.0 | 2.0 |
| 162.5° | 5.9 | 5.9 | 3.9 | 3.9 | 2.0 |
| 165° | 5.9 | 5.9 | 5.9 | 3.9 | 2.0 |
| 167.5° | 5.9 | 5.9 | 5.9 | 3.9 | 2.0 |
| 170° | 5.9 | 5.9 | 5.9 | 3.9 | 3.9 |
| 172.5° | 5.9 | 5.9 | 5.9 | 3.9 | 3.9 |
| 175° | 5.9 | 7.8 | 5.9 | 3.9 | 3.9 |
| 177.5° | 5.9 | 7.8 | 5.9 | 3.9 | 3.9 |
| 180° | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |

(END OF REPORT)