

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: P685858

Luminaire Tested: **8CZL-32-UNV-W-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685858
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8CZL-32-UNV-W-LVR-L840-CD-U
Description: METALUX CRUZE LINEAR 8FT LOUVER MODEL WITH WIDE LENS @80 CRI and 4000K
Light Source: (1176) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

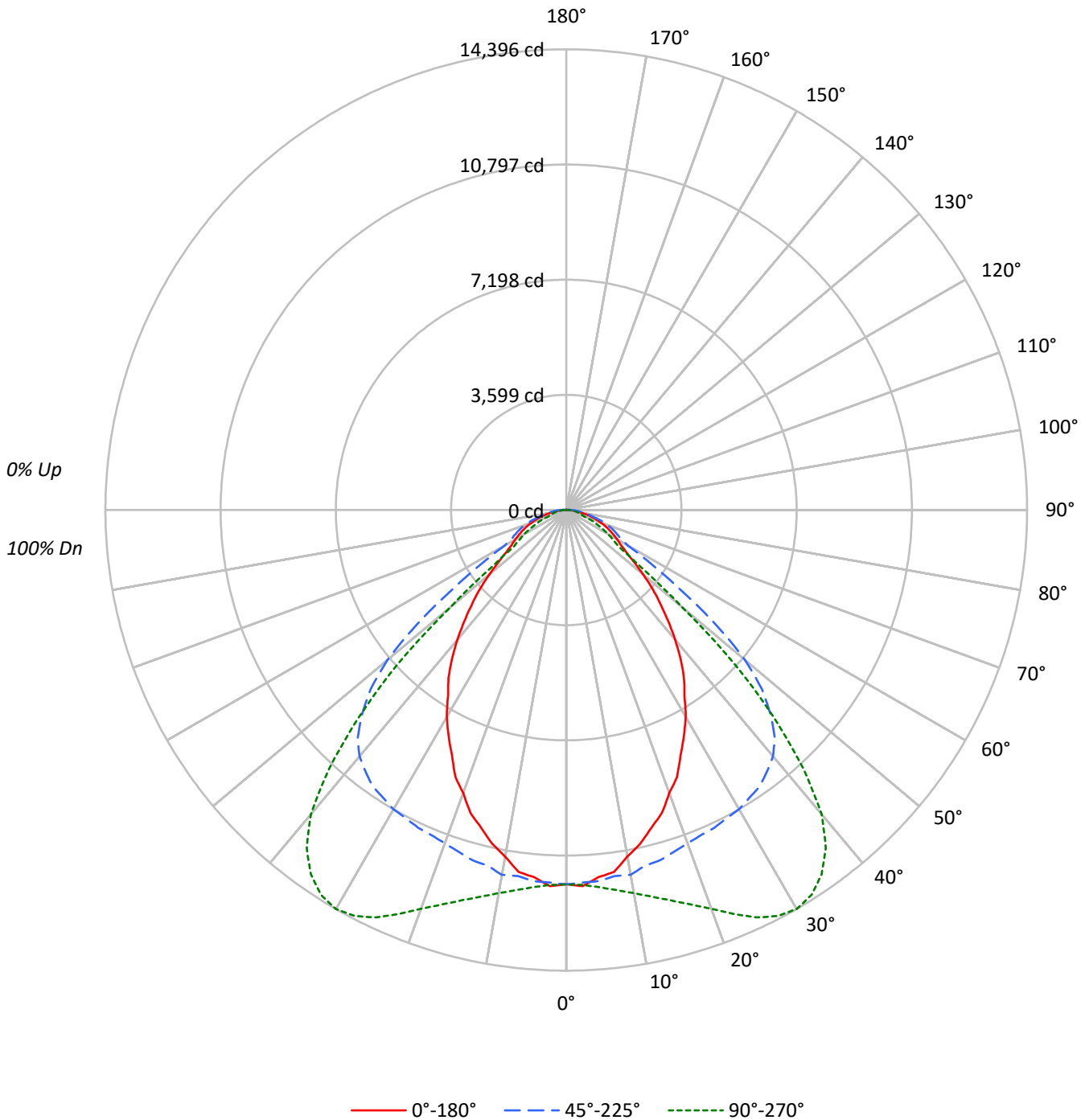
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27825.8 lumens
Efficiency: N/A
Efficacy: 135.1 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.64 / 1.46
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 (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

TEST NUMBER: P685858
CATALOG NUMBER: 8CZL-32-UNV-W-LVR-L840-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685858

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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 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 92 | 91 | 89 | 89 | 89 | 89 | 87 |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 77 | 77 | 77 | 75 |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 68 | 68 | 68 | 66 |
| 4 | 87 | 76 | 68 | 62 | 85 | 75 | 68 | 62 | 72 | 66 | 61 | 70 | 65 | 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 | 62 | 54 | 48 | 73 | 62 | 54 | 48 | 60 | 53 | 48 | 58 | 52 | 47 | 57 | 51 | 47 | 47 | 47 | 47 | 45 |
| 7 | 69 | 57 | 49 | 43 | 68 | 56 | 48 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 52 | 46 | 42 | 42 | 42 | 42 | 40 |
| 8 | 65 | 52 | 44 | 39 | 63 | 51 | 44 | 39 | 50 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 38 | 38 | 38 | 36 |
| 9 | 61 | 48 | 40 | 35 | 59 | 47 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 34 | 34 | 34 | 34 | 33 |
| 10 | 57 | 44 | 37 | 32 | 56 | 44 | 37 | 32 | 43 | 36 | 32 | 42 | 36 | 32 | 41 | 35 | 31 | 31 | 31 | 31 | 30 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 18884 | 18884 | 18884 |
| 5° | 18668 | 18861 | 19171 |
| 10° | 18023 | 18977 | 19933 |
| 15° | 17176 | 18940 | 21105 |
| 20° | 16167 | 19043 | 22780 |
| 25° | 15052 | 19512 | 25020 |
| 30° | 13916 | 20128 | 26839 |
| 35° | 12643 | 20780 | 27402 |
| 40° | 11147 | 21172 | 26143 |
| 45° | 9502 | 20594 | 20959 |
| 50° | 7875 | 18313 | 11893 |
| 55° | 6414 | 12373 | 5689 |
| 60° | 5922 | 7194 | 4914 |
| 65° | 5709 | 6619 | 3995 |
| 70° | 5388 | 6493 | 2855 |
| 75° | 5014 | 5927 | 2775 |
| 80° | 4571 | 5822 | 3047 |
| 85° | 3505 | 6975 | 3361 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 1112.0 | 4.0 |
| 10°-20° | 3228.1 | 11.6 |
| 20°-30° | 5122.9 | 18.4 |
| 30°-40° | 6398.3 | 23.0 |
| 40°-50° | 5876.7 | 21.1 |
| 50°-60° | 3136.3 | 11.3 |
| 60°-70° | 1614.2 | 5.8 |
| 70°-80° | 887.5 | 3.2 |
| 80°-90° | 366.1 | 1.3 |
| 90°-100° | 70.6 | 0.3 |
| 100°-110° | 3.9 | 0.0 |
| 110°-120° | 1.0 | 0.0 |
| 120°-130° | 1.2 | 0.0 |
| 130°-140° | 2.2 | 0.0 |
| 140°-150° | 1.9 | 0.0 |
| 150°-160° | 1.5 | 0.0 |
| 160°-170° | 1.0 | 0.0 |
| 170°-180° | 0.4 | 0.0 |
| 0°-30° | 9463.0 | 34.0 |
| 0°-40° | 15861.3 | 57.0 |
| 0°-60° | 24874.3 | 89.4 |
| 0°-90° | 27742.1 | 99.7 |
| 90°-120° | 75.5 | 0.3 |
| 90°-150° | 80.8 | 0.3 |
| 90°-180° | 84.0 | 0.3 |
| 0°-180° | 27825.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-------|-------|-------|-------|-------|------|
| 0° | 11696 | 11696 | 11696 | 11696 | 11696 | |
| 5° | 11518 | 11547 | 11637 | 11816 | 11828 | 1088 |
| 15° | 10275 | 10611 | 11331 | 12254 | 12626 | 2889 |
| 25° | 8449 | 9243 | 10952 | 12958 | 14044 | 3893 |
| 35° | 6414 | 7599 | 10543 | 12843 | 13902 | 3982 |
| 45° | 4161 | 5999 | 9019 | 9347 | 9179 | 3221 |
| 55° | 2279 | 4085 | 4395 | 2462 | 2021 | 2104 |
| 65° | 1494 | 1959 | 1732 | 1412 | 1046 | 1476 |
| 75° | 804 | 892 | 950 | 845 | 445 | 853 |
| 85° | 189 | 248 | 376 | 496 | 181 | 217 |
| 90° | 0 | 70 | 185 | 300 | 39 | 7 |
| 95° | 0 | 8 | 70 | 138 | 18 | 0 |
| 105° | 0 | 2 | 2 | 2 | 0 | 0 |
| 115° | 0 | 2 | 2 | 0 | 0 | 0 |
| 125° | 0 | 2 | 2 | 0 | 0 | 1 |
| 135° | 2 | 4 | 4 | 2 | 2 | 2 |
| 145° | 2 | 4 | 4 | 2 | 2 | 1 |
| 155° | 4 | 4 | 4 | 2 | 2 | 2 |
| 165° | 4 | 6 | 4 | 2 | 2 | 1 |
| 175° | 6 | 6 | 4 | 2 | 2 | 0 |
| 180° | 4 | 4 | 4 | 4 | 4 | |



TEST NUMBER: P685858

CATALOG NUMBER: 8CZL-32-UNV-W-LVR-L840-CD-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|---------|---------|---------|---------|---------|
| 0° | 11695.6 | 11695.6 | 11695.6 | 11695.6 | 11695.6 |
| 2.5° | 11763.8 | 11738.5 | 11654.6 | 11730.7 | 11724.8 |
| 5° | 11518.0 | 11547.3 | 11637.0 | 11816.5 | 11828.2 |
| 7.5° | 11408.8 | 11488.8 | 11539.5 | 11927.7 | 11978.4 |
| 10° | 10993.2 | 11118.1 | 11574.6 | 11978.4 | 12157.9 |
| 12.5° | 10681.1 | 10932.8 | 11375.6 | 12060.4 | 12372.5 |
| 15° | 10275.3 | 10610.9 | 11330.7 | 12253.5 | 12626.1 |
| 17.5° | 9930.0 | 10273.4 | 11194.2 | 12399.8 | 12920.7 |
| 20° | 9409.1 | 10031.5 | 11083.0 | 12552.0 | 13258.2 |
| 22.5° | 9036.5 | 9666.6 | 10997.1 | 12686.6 | 13658.1 |
| 25° | 8449.3 | 9243.3 | 10952.3 | 12957.8 | 14044.4 |
| 27.5° | 7957.7 | 8886.3 | 10852.8 | 13131.4 | 14300.0 |
| 30° | 7464.1 | 8449.3 | 10796.2 | 13162.6 | 14395.6 |
| 32.5° | 6869.1 | 8094.2 | 10653.8 | 13090.4 | 14259.0 |
| 35° | 6414.5 | 7598.7 | 10542.6 | 12842.7 | 13902.0 |
| 37.5° | 5860.5 | 7208.5 | 10298.7 | 12394.0 | 13316.7 |
| 40° | 5288.9 | 6847.6 | 10045.1 | 11693.6 | 12403.7 |
| 42.5° | 4711.4 | 6441.8 | 9639.3 | 10759.1 | 10975.7 |
| 45° | 4161.2 | 5999.0 | 9018.9 | 9346.7 | 9178.9 |
| 47.5° | 3667.7 | 5523.0 | 8285.4 | 7575.3 | 7181.2 |
| 50° | 3135.1 | 5039.1 | 7290.5 | 5766.8 | 4734.8 |
| 52.5° | 2655.2 | 4635.3 | 5920.9 | 3905.7 | 2945.8 |
| 55° | 2278.6 | 4085.2 | 4395.3 | 2462.0 | 2021.1 |
| 57.5° | 2011.4 | 3663.8 | 3172.1 | 1947.0 | 1730.4 |
| 60° | 1833.8 | 3137.0 | 2227.9 | 1787.0 | 1521.7 |
| 62.5° | 1658.3 | 2481.5 | 1906.0 | 1629.0 | 1279.8 |
| 65° | 1494.4 | 1958.7 | 1732.4 | 1412.4 | 1045.7 |
| 67.5° | 1324.7 | 1590.0 | 1564.6 | 1281.7 | 872.0 |
| 70° | 1141.3 | 1307.1 | 1375.4 | 1073.0 | 604.8 |
| 72.5° | 977.4 | 1096.4 | 1170.5 | 916.9 | 513.1 |
| 75° | 803.8 | 891.6 | 950.1 | 844.7 | 444.8 |
| 77.5° | 637.9 | 717.9 | 774.5 | 764.7 | 390.2 |
| 80° | 491.6 | 544.3 | 626.2 | 684.8 | 327.7 |
| 82.5° | 335.6 | 374.6 | 493.6 | 591.1 | 255.6 |
| 85° | 189.2 | 247.8 | 376.5 | 495.5 | 181.4 |
| 87.5° | 54.6 | 146.3 | 273.1 | 398.0 | 105.3 |
| 90° | 0.0 | 70.2 | 185.3 | 300.4 | 39.0 |
| 92.5° | 0.0 | 27.3 | 121.0 | 210.7 | 27.3 |
| 95° | 0.0 | 7.8 | 70.2 | 138.5 | 17.6 |
| 97.5° | 0.0 | 2.0 | 33.2 | 81.9 | 7.8 |
| 100° | 0.0 | 2.0 | 11.7 | 39.0 | 2.0 |
| 102.5° | 0.0 | 2.0 | 3.9 | 13.7 | 0.0 |
| 105° | 0.0 | 2.0 | 2.0 | 2.0 | 0.0 |
| 107.5° | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 |
| 110° | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)