

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: P843022

Luminaire Tested: **24CZ2-35-UNV-B35**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P843022
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P272125)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 1/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35-UNV-B35
Description: 2X4 3500 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 3500K CCT AND RIBBED LENS

Light Source: -
Ballast/Driver: -

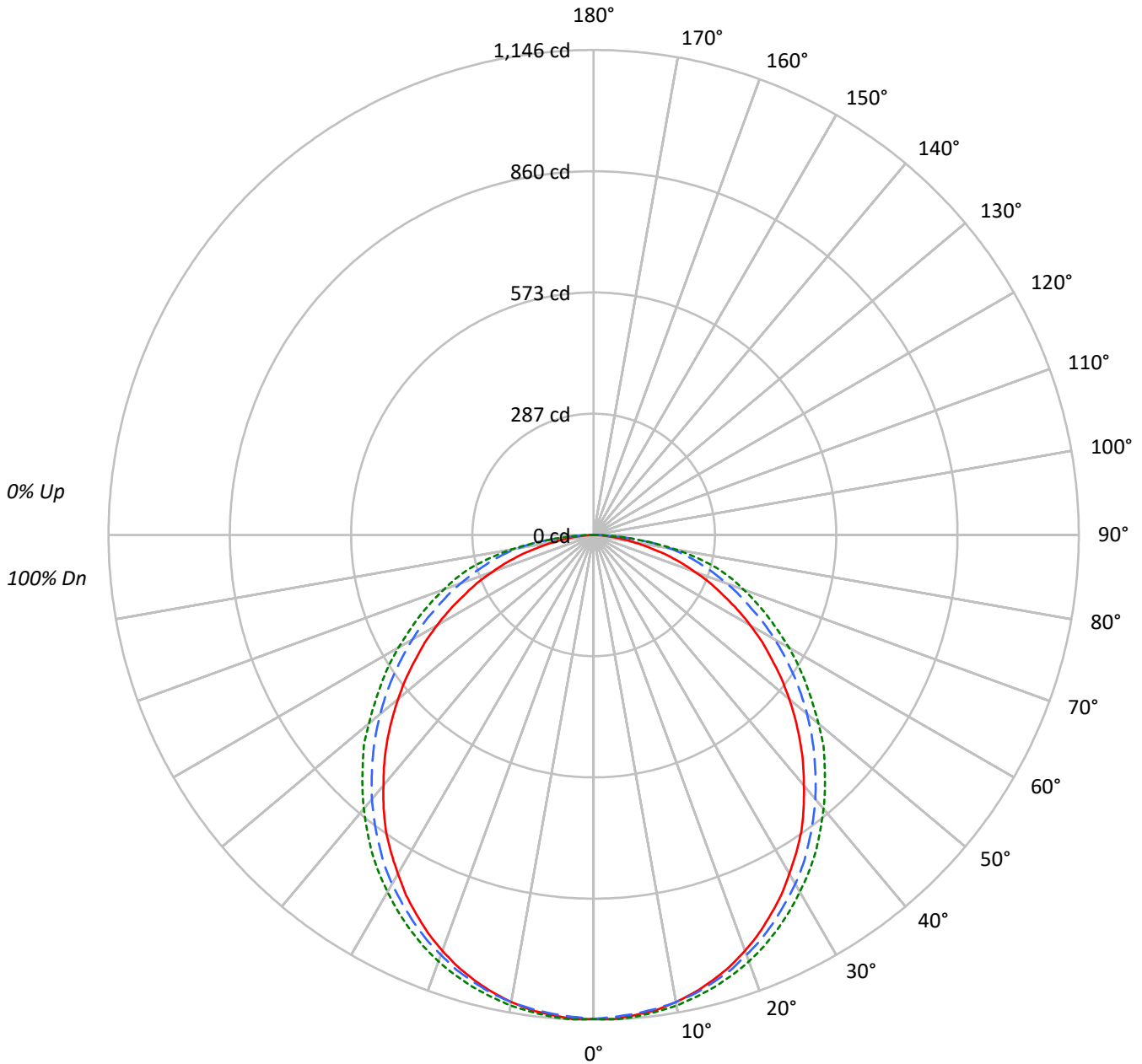
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3256.0 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 28
Input Voltage (V): NR
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





TEST NUMBER: P843022

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 100 | | | | | | | | | | | | | | | | | | | |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | | | | | | | | | | | | | | | | |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | | | | | | | | | | | | | | | |
| 3 | 89 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | | | | | | | | | | | | | | | | |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 | | | | | | | | | | | | | | | | | | | |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 42 | | | | | | | | | | | | | | | | | | | |
| 6 | 70 | 56 | 47 | 40 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 | | | | | | | | | | | | | | | | | | | |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 39 | 35 | 33 | | | | | | | | | | | | | | | | | | | |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 | | | | | | | | | | | | | | | | | | | |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 | | | | | | | | | | | | | | | | | | | |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 26 | 24 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1614 | 1614 | 1614 |
| 5° | 1613 | 1609 | 1619 |
| 10° | 1607 | 1607 | 1618 |
| 15° | 1591 | 1599 | 1616 |
| 20° | 1570 | 1586 | 1611 |
| 25° | 1541 | 1570 | 1601 |
| 30° | 1507 | 1552 | 1588 |
| 35° | 1474 | 1527 | 1575 |
| 40° | 1423 | 1501 | 1557 |
| 45° | 1377 | 1472 | 1540 |
| 50° | 1324 | 1444 | 1521 |
| 55° | 1265 | 1418 | 1507 |
| 60° | 1206 | 1395 | 1503 |
| 65° | 1129 | 1371 | 1513 |
| 70° | 1045 | 1379 | 1553 |
| 75° | 936 | 1405 | 1641 |
| 80° | 757 | 1488 | 1605 |
| 85° | 568 | 1305 | 1273 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 108.3 | 3.3 |
| 10°-20° | 309.4 | 9.5 |
| 20°-30° | 465.1 | 14.3 |
| 30°-40° | 554.0 | 17.0 |
| 40°-50° | 567.0 | 17.4 |
| 50°-60° | 510.5 | 15.7 |
| 60°-70° | 400.9 | 12.3 |
| 70°-80° | 260.2 | 8.0 |
| 80°-90° | 80.5 | 2.5 |
| 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° | 882.8 | 27.1 |
| 0°-40° | 1436.9 | 44.1 |
| 0°-60° | 2514.4 | 77.2 |
| 0°-90° | 3256.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3256.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1144 | 1144 | 1144 | 1144 | 1144 | |
| 5° | 1139 | 1141 | 1136 | 1142 | 1143 | 108 |
| 15° | 1089 | 1092 | 1094 | 1104 | 1106 | 307 |
| 25° | 990 | 998 | 1008 | 1025 | 1028 | 456 |
| 35° | 855 | 866 | 886 | 908 | 914 | 534 |
| 45° | 690 | 706 | 737 | 765 | 772 | 532 |
| 55° | 514 | 537 | 576 | 606 | 612 | 461 |
| 65° | 338 | 364 | 411 | 445 | 453 | 337 |
| 75° | 172 | 205 | 258 | 293 | 301 | 182 |
| 85° | 35 | 65 | 81 | 79 | 79 | 42 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P843022

CATALOG NUMBER: 24CZ2-35-UNV-B35

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|---------------|---------------|---------------|---------------|---------------|
| 0° | 1143.9 | 1143.9 | 1143.9 | 1143.9 | <i>1143.9</i> |
| 2.5° | <i>1144.9</i> | <i>1144.9</i> | <i>1139.7</i> | <i>1144.9</i> | <i>1145.9</i> |
| 5° | 1138.7 | 1140.8 | 1135.6 | 1141.8 | <i>1142.8</i> |
| 7.5° | 1132.4 | 1132.4 | 1129.3 | 1135.6 | <i>1136.7</i> |
| 10° | 1121.1 | 1122.1 | 1121.1 | 1128.3 | <i>1129.3</i> |
| 12.5° | 1106.6 | 1108.6 | 1109.8 | 1117.0 | <i>1118.0</i> |
| 15° | 1089.1 | 1092.2 | 1094.2 | 1103.5 | <i>1105.7</i> |
| 17.5° | 1069.4 | 1072.5 | 1077.6 | 1088.0 | <i>1090.1</i> |
| 20° | 1045.6 | 1049.7 | 1055.9 | 1069.4 | <i>1072.5</i> |
| 22.5° | 1019.8 | 1023.9 | 1034.3 | 1046.6 | <i>1051.8</i> |
| 25° | 989.8 | 998.0 | 1008.3 | 1024.9 | <i>1028.0</i> |
| 27.5° | 959.7 | 967.0 | 980.4 | 998.0 | <i>1002.2</i> |
| 30° | 924.6 | 935.9 | 952.5 | 970.1 | <i>974.2</i> |
| 32.5° | 890.5 | 901.8 | 921.5 | 940.2 | <i>945.3</i> |
| 35° | 855.3 | 865.7 | 886.3 | 908.0 | <i>914.3</i> |
| 37.5° | 814.9 | 828.4 | 851.2 | 872.9 | <i>879.1</i> |
| 40° | 772.6 | 789.1 | 814.9 | 837.7 | <i>845.0</i> |
| 42.5° | 732.2 | 749.8 | 775.7 | 800.5 | <i>808.7</i> |
| 45° | 689.8 | 706.4 | 737.4 | 765.3 | <i>771.6</i> |
| 47.5° | 646.3 | 665.0 | 698.1 | 726.0 | <i>736.3</i> |
| 50° | 603.0 | 622.7 | 657.8 | 686.7 | <i>692.9</i> |
| 52.5° | 559.5 | 580.2 | 617.4 | 648.5 | <i>651.6</i> |
| 55° | 514.0 | 536.8 | 576.1 | 606.1 | <i>612.3</i> |
| 57.5° | 472.6 | 492.3 | 534.7 | 565.7 | <i>573.0</i> |
| 60° | 427.2 | 448.8 | 494.3 | 523.4 | <i>532.6</i> |
| 62.5° | 383.7 | 406.5 | 454.1 | 483.0 | <i>491.2</i> |
| 65° | 338.2 | 364.1 | 410.6 | 444.7 | <i>453.0</i> |
| 67.5° | 298.9 | 323.7 | 373.3 | 406.5 | <i>414.7</i> |
| 70° | 253.3 | 281.4 | 334.1 | 368.2 | <i>376.4</i> |
| 72.5° | 214.1 | 243.0 | 295.8 | 328.8 | <i>341.3</i> |
| 75° | 171.7 | 204.7 | 257.6 | 292.7 | <i>300.9</i> |
| 77.5° | 130.3 | 168.6 | 222.3 | 249.2 | <i>249.2</i> |
| 80° | 93.1 | 133.5 | 183.1 | 195.5 | <i>197.5</i> |
| 82.5° | 61.1 | 100.3 | 135.4 | 134.5 | <i>134.5</i> |
| 85° | 35.1 | 65.2 | 80.6 | 78.6 | <i>78.6</i> |
| 87.5° | 13.5 | 26.9 | 28.9 | 28.9 | <i>27.9</i> |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | <i>0.0</i> |



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)