

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: P#

Luminaire Tested: **14CZ-LD5-39-UNV-L840-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35608)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-39-UNV-L840-CD1-U
Description: CRUZE 1x4 LED TROFFER

Light Source: -
Ballast/Driver: -

Summary

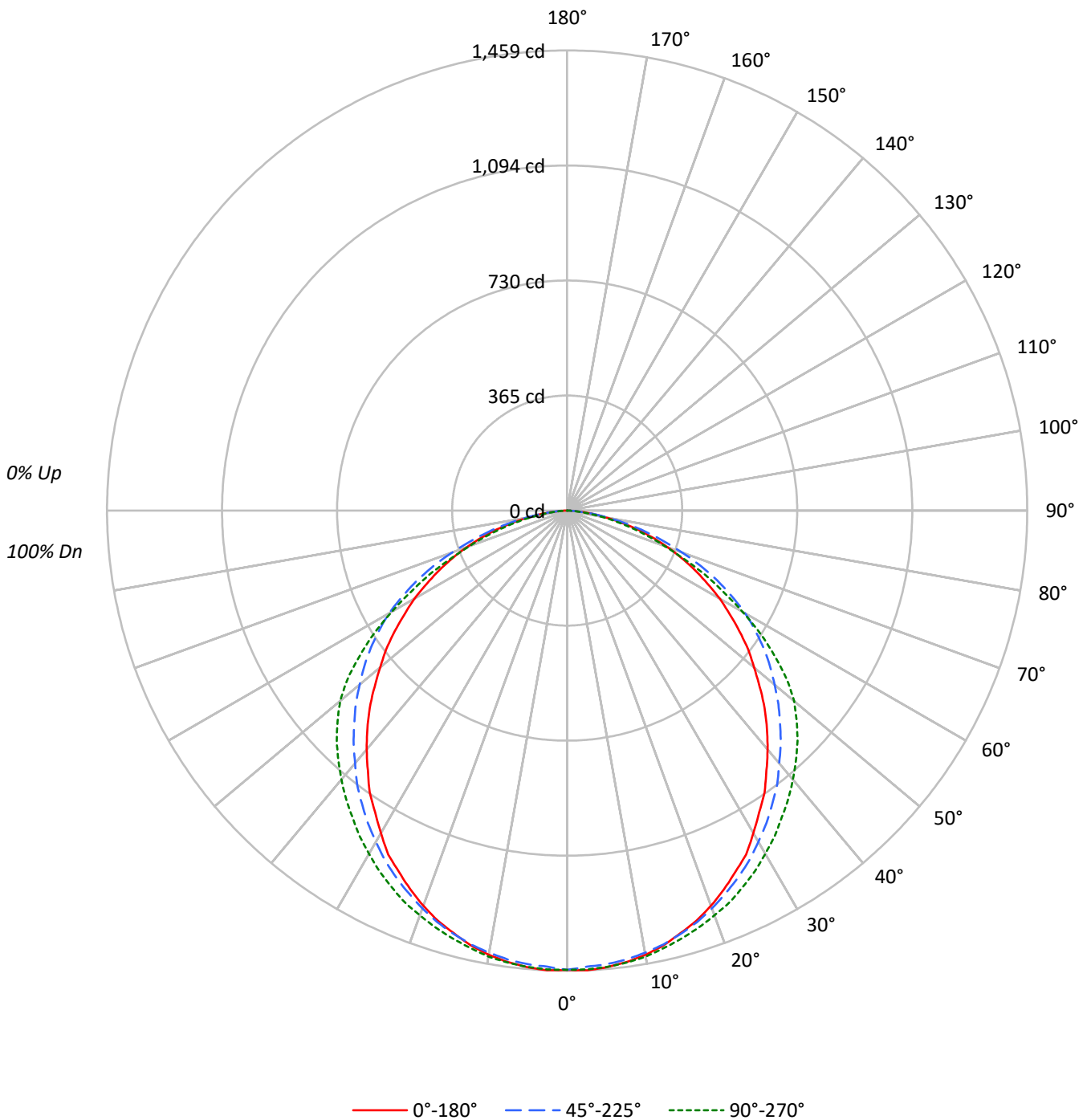
Lumens per Lamp: N/A
Luminaire Lumens: 4038.2 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 35.67
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: P#

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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | | 106 | 106 | 106 | | 102 | 102 | 102 | 100 |
| 1 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | | 94 | 91 | 89 | | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | | 82 | 78 | 74 | | 79 | 76 | 73 | 70 |
| 3 | 90 | 80 | 72 | 66 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | | 73 | 67 | 63 | | 70 | 66 | 62 | 59 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | | 65 | 59 | 54 | | 63 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | | 58 | 52 | 46 | | 56 | 51 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 42 | 54 | 47 | 41 | | 53 | 46 | 41 | | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 43 | 37 | 49 | 42 | 36 | | 48 | 41 | 36 | | 47 | 40 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 46 | 38 | 33 | 45 | 38 | 33 | | 44 | 37 | 32 | | 43 | 37 | 32 | 30 |
| 9 | 57 | 43 | 35 | 30 | 55 | 43 | 35 | 29 | 42 | 34 | 29 | | 40 | 34 | 29 | | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 27 | 38 | 31 | 27 | | 37 | 31 | 26 | | 37 | 31 | 26 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3919 | 3919 | 3919 |
| 5° | 3917 | 3870 | 3889 |
| 10° | 3891 | 3830 | 3856 |
| 15° | 3840 | 3782 | 3809 |
| 20° | 3785 | 3724 | 3773 |
| 25° | 3707 | 3660 | 3736 |
| 30° | 3617 | 3586 | 3691 |
| 35° | 3523 | 3510 | 3644 |
| 40° | 3402 | 3420 | 3608 |
| 45° | 3288 | 3336 | 3575 |
| 50° | 3145 | 3252 | 3515 |
| 55° | 3023 | 3166 | 3298 |
| 60° | 2884 | 3047 | 2946 |
| 65° | 2702 | 2812 | 2531 |
| 70° | 2488 | 2445 | 2038 |
| 75° | 2195 | 1993 | 1586 |
| 80° | 1691 | 1385 | 1060 |
| 85° | 1066 | 593 | 403 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 137.8 | 3.4 |
| 10°-20° | 393.6 | 9.7 |
| 20°-30° | 593.8 | 14.7 |
| 30°-40° | 712.0 | 17.6 |
| 40°-50° | 738.9 | 18.3 |
| 50°-60° | 667.0 | 16.5 |
| 60°-70° | 485.8 | 12.0 |
| 70°-80° | 254.8 | 6.3 |
| 80°-90° | 54.5 | 1.3 |
| 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° | 1125.2 | 27.9 |
| 0°-40° | 1837.2 | 45.5 |
| 0°-60° | 3243.1 | 80.3 |
| 0°-90° | 4038.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4038.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1456 | 1456 | 1456 | 1456 | 1456 | |
| 5° | 1453 | 1450 | 1444 | 1453 | 1452 | 138 |
| 15° | 1388 | 1388 | 1390 | 1405 | 1404 | 392 |
| 25° | 1263 | 1270 | 1283 | 1311 | 1317 | 582 |
| 35° | 1091 | 1102 | 1135 | 1177 | 1187 | 680 |
| 45° | 886 | 905 | 954 | 1014 | 1033 | 682 |
| 55° | 667 | 690 | 760 | 805 | 803 | 597 |
| 65° | 447 | 474 | 525 | 501 | 483 | 443 |
| 75° | 231 | 264 | 255 | 220 | 210 | 243 |
| 85° | 44 | 53 | 39 | 30 | 28 | 57 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P#

CATALOG NUMBER: 14CZ-LD5-39-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1456.2 | 1456.2 | 1456.2 | 1456.2 | 1456.2 |
| 2.5° | 1459.1 | 1455.2 | 1447.5 | 1457.2 | 1456.2 |
| 5° | 1453.3 | 1450.4 | 1443.6 | 1453.3 | 1452.3 |
| 7.5° | 1443.6 | 1441.7 | 1435.9 | 1446.5 | 1445.6 |
| 10° | 1430.1 | 1427.2 | 1423.4 | 1434.9 | 1435.9 |
| 12.5° | 1411.8 | 1410.8 | 1408.9 | 1421.4 | 1420.5 |
| 15° | 1387.6 | 1387.6 | 1389.6 | 1405.0 | 1404.0 |
| 17.5° | 1363.5 | 1363.5 | 1368.3 | 1385.7 | 1386.7 |
| 20° | 1333.6 | 1335.5 | 1342.2 | 1363.5 | 1365.4 |
| 22.5° | 1299.8 | 1301.7 | 1313.3 | 1340.3 | 1345.1 |
| 25° | 1263.1 | 1269.8 | 1283.3 | 1311.3 | 1317.1 |
| 27.5° | 1229.3 | 1230.2 | 1250.5 | 1281.4 | 1289.1 |
| 30° | 1181.0 | 1194.5 | 1212.8 | 1248.6 | 1256.3 |
| 32.5° | 1133.7 | 1147.2 | 1175.2 | 1213.8 | 1224.4 |
| 35° | 1091.2 | 1101.8 | 1134.6 | 1177.1 | 1186.8 |
| 37.5° | 1038.1 | 1055.4 | 1094.1 | 1138.5 | 1152.0 |
| 40° | 988.8 | 1004.3 | 1045.8 | 1096.0 | 1113.4 |
| 42.5° | 937.6 | 955.0 | 1002.3 | 1056.4 | 1073.8 |
| 45° | 885.5 | 904.8 | 954.1 | 1013.9 | 1033.2 |
| 47.5° | 828.5 | 852.7 | 908.7 | 969.5 | 986.9 |
| 50° | 773.5 | 798.6 | 858.5 | 922.2 | 939.6 |
| 52.5° | 723.3 | 745.5 | 811.1 | 870.0 | 877.8 |
| 55° | 667.3 | 690.4 | 760.0 | 805.3 | 803.4 |
| 57.5° | 611.3 | 637.3 | 706.8 | 734.9 | 727.1 |
| 60° | 559.1 | 583.2 | 652.8 | 658.6 | 642.2 |
| 62.5° | 501.2 | 529.2 | 588.1 | 579.4 | 559.1 |
| 65° | 447.1 | 474.1 | 525.3 | 501.2 | 482.8 |
| 67.5° | 392.1 | 421.0 | 457.7 | 422.0 | 400.7 |
| 70° | 338.0 | 372.7 | 386.3 | 347.6 | 330.2 |
| 72.5° | 282.9 | 319.6 | 318.7 | 282.0 | 267.5 |
| 75° | 230.8 | 263.6 | 254.9 | 220.2 | 209.5 |
| 77.5° | 175.7 | 208.6 | 192.2 | 166.1 | 156.4 |
| 80° | 124.6 | 155.5 | 134.2 | 113.9 | 107.2 |
| 82.5° | 85.0 | 103.3 | 84.0 | 66.6 | 63.7 |
| 85° | 44.4 | 53.1 | 38.6 | 29.9 | 28.0 |
| 87.5° | 16.4 | 15.5 | 13.5 | 12.6 | 12.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)