

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: **24CZ-LD5-35-UNV-L835-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 (P25689)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-35-UNV-L835-CD1-U
Description: CRUZE 2x4 LED TROFFER

Light Source: -
Ballast/Driver: -

Summary

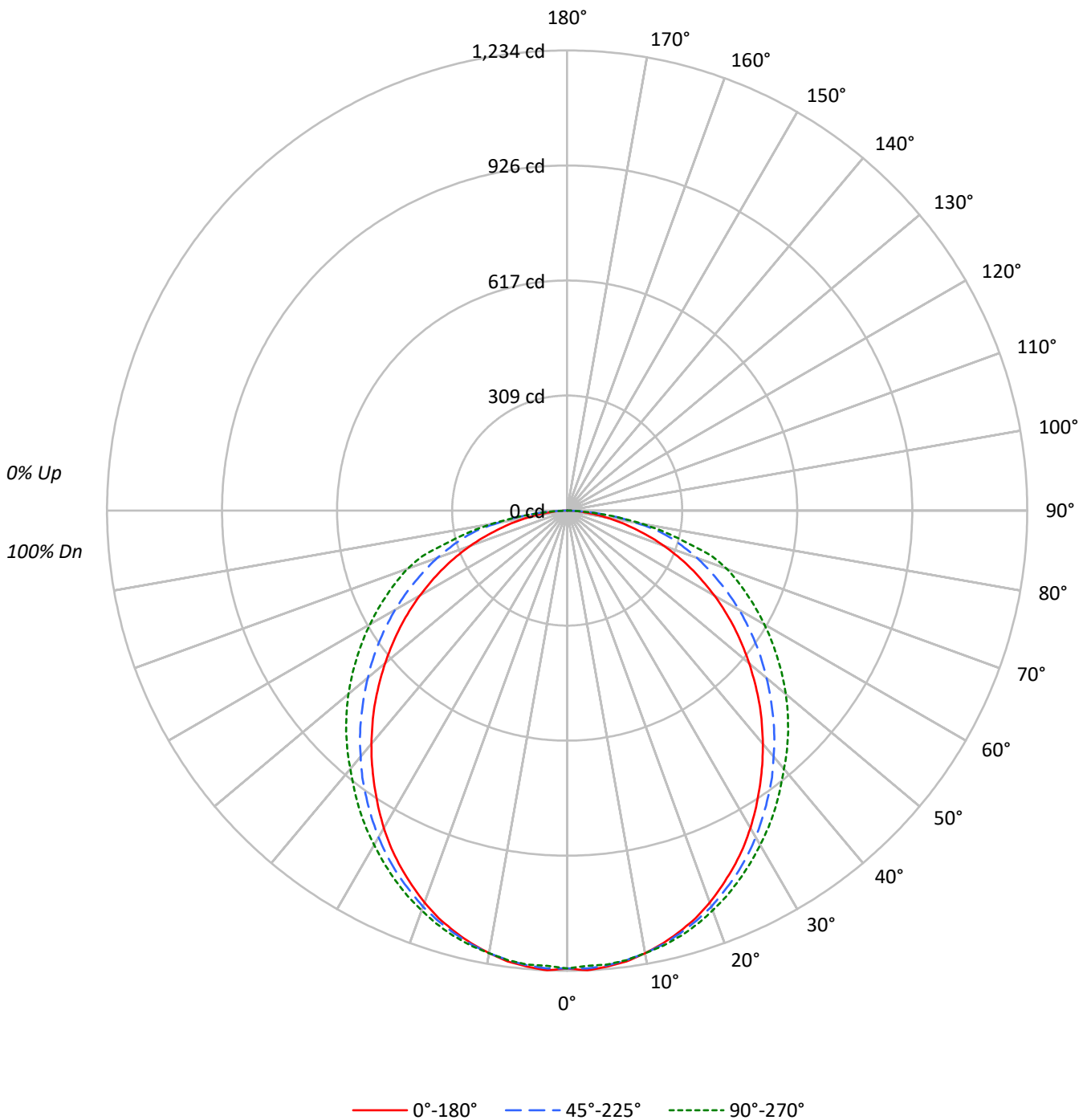
Lumens per Lamp: N/A
Luminaire Lumens: 3494.0 lumens
Efficiency: N/A
Efficacy: 138.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.35
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 25.32
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 | 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 | 68 |
| 3 | 89 | 79 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 65 | 61 | 69 | 64 | 60 | 57 |
| 4 | 82 | 69 | 60 | 54 | 79 | 68 | 60 | 53 | 66 | 58 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 47 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 51 | 42 | 35 | 63 | 50 | 41 | 35 | 48 | 41 | 35 | 47 | 40 | 35 | 45 | 39 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 45 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 55 | 42 | 34 | 28 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 25 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1652 | 1652 | 1652 |
| 5° | 1655 | 1646 | 1643 |
| 10° | 1639 | 1631 | 1632 |
| 15° | 1617 | 1611 | 1622 |
| 20° | 1587 | 1588 | 1605 |
| 25° | 1549 | 1558 | 1585 |
| 30° | 1505 | 1525 | 1563 |
| 35° | 1454 | 1487 | 1545 |
| 40° | 1405 | 1449 | 1525 |
| 45° | 1353 | 1411 | 1519 |
| 50° | 1295 | 1374 | 1512 |
| 55° | 1238 | 1343 | 1507 |
| 60° | 1177 | 1312 | 1513 |
| 65° | 1106 | 1284 | 1531 |
| 70° | 1015 | 1269 | 1574 |
| 75° | 887 | 1264 | 1448 |
| 80° | 726 | 1112 | 1227 |
| 85° | 499 | 720 | 700 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 116.1 | 3.3 |
| 10°-20° | 330.5 | 9.5 |
| 20°-30° | 494.0 | 14.1 |
| 30°-40° | 585.8 | 16.8 |
| 40°-50° | 602.4 | 17.2 |
| 50°-60° | 551.0 | 15.8 |
| 60°-70° | 444.4 | 12.7 |
| 70°-80° | 288.5 | 8.3 |
| 80°-90° | 81.2 | 2.3 |
| 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° | 940.6 | 26.9 |
| 0°-40° | 1526.4 | 43.7 |
| 0°-60° | 2679.8 | 76.7 |
| 0°-90° | 3494.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3494.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1228 | 1228 | 1228 | 1228 | 1228 | |
| 5° | 1228 | 1220 | 1224 | 1222 | 1222 | 117 |
| 15° | 1168 | 1162 | 1173 | 1178 | 1180 | 329 |
| 25° | 1056 | 1056 | 1076 | 1084 | 1092 | 486 |
| 35° | 901 | 909 | 939 | 958 | 974 | 564 |
| 45° | 729 | 742 | 781 | 817 | 838 | 562 |
| 55° | 547 | 565 | 616 | 664 | 688 | 489 |
| 65° | 366 | 388 | 449 | 508 | 532 | 362 |
| 75° | 187 | 221 | 291 | 327 | 330 | 199 |
| 85° | 42 | 69 | 75 | 74 | 71 | 50 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P#

CATALOG NUMBER: 24CZ-LD5-35-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1227.8 | 1227.8 | 1227.8 | 1227.8 | 1227.8 |
| 2.5° | 1233.8 | 1224.3 | 1229.0 | 1226.6 | 1221.9 |
| 5° | 1227.8 | 1219.5 | 1224.3 | 1221.9 | 1221.9 |
| 7.5° | 1219.5 | 1211.2 | 1215.9 | 1215.9 | 1215.9 |
| 10° | 1205.2 | 1198.1 | 1205.2 | 1205.2 | 1205.2 |
| 12.5° | 1188.6 | 1182.7 | 1191.0 | 1192.2 | 1194.5 |
| 15° | 1168.4 | 1162.5 | 1173.1 | 1177.9 | 1180.3 |
| 17.5° | 1145.8 | 1141.1 | 1152.9 | 1158.9 | 1162.5 |
| 20° | 1118.5 | 1114.9 | 1130.4 | 1136.3 | 1141.1 |
| 22.5° | 1087.6 | 1087.6 | 1103.0 | 1110.2 | 1118.5 |
| 25° | 1055.5 | 1055.5 | 1075.7 | 1084.0 | 1092.3 |
| 27.5° | 1021.0 | 1022.2 | 1044.8 | 1056.7 | 1065.0 |
| 30° | 983.0 | 987.7 | 1011.5 | 1025.8 | 1035.3 |
| 32.5° | 942.6 | 948.5 | 975.8 | 993.7 | 1005.6 |
| 35° | 901.0 | 909.3 | 939.0 | 958.0 | 973.5 |
| 37.5° | 859.4 | 870.1 | 902.1 | 923.5 | 939.0 |
| 40° | 816.6 | 828.5 | 861.7 | 886.7 | 904.5 |
| 42.5° | 772.6 | 785.7 | 822.5 | 851.0 | 872.4 |
| 45° | 728.6 | 741.7 | 780.9 | 816.6 | 838.0 |
| 47.5° | 682.3 | 697.7 | 739.3 | 780.9 | 802.3 |
| 50° | 637.1 | 653.7 | 697.7 | 742.9 | 765.5 |
| 52.5° | 591.9 | 610.9 | 657.3 | 704.8 | 727.4 |
| 55° | 546.8 | 564.6 | 615.7 | 664.4 | 688.2 |
| 57.5° | 501.6 | 520.6 | 574.1 | 625.2 | 650.2 |
| 60° | 456.4 | 476.6 | 532.5 | 586.0 | 610.9 |
| 62.5° | 410.1 | 431.5 | 490.9 | 546.8 | 571.7 |
| 65° | 366.1 | 387.5 | 449.3 | 507.5 | 532.5 |
| 67.5° | 320.9 | 344.7 | 408.9 | 468.3 | 494.5 |
| 70° | 275.8 | 301.9 | 369.7 | 429.1 | 455.2 |
| 72.5° | 230.6 | 260.3 | 329.2 | 388.7 | 407.7 |
| 75° | 186.6 | 221.1 | 291.2 | 326.9 | 330.4 |
| 77.5° | 146.2 | 181.9 | 248.4 | 262.7 | 269.8 |
| 80° | 107.0 | 146.2 | 186.6 | 204.4 | 203.3 |
| 82.5° | 71.3 | 111.7 | 134.3 | 136.7 | 134.3 |
| 85° | 41.6 | 68.9 | 74.9 | 73.7 | 71.3 |
| 87.5° | 17.8 | 27.3 | 23.8 | 20.2 | 16.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)