

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: P261268

Luminaire Tested: **24CZ-LD5-35-S-UNV-L92765-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P261268
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-35-S-UNV-L92765-W2A1-U-3500K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED AT 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3071.0 lumens
Efficiency: N/A
Efficacy: 126.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

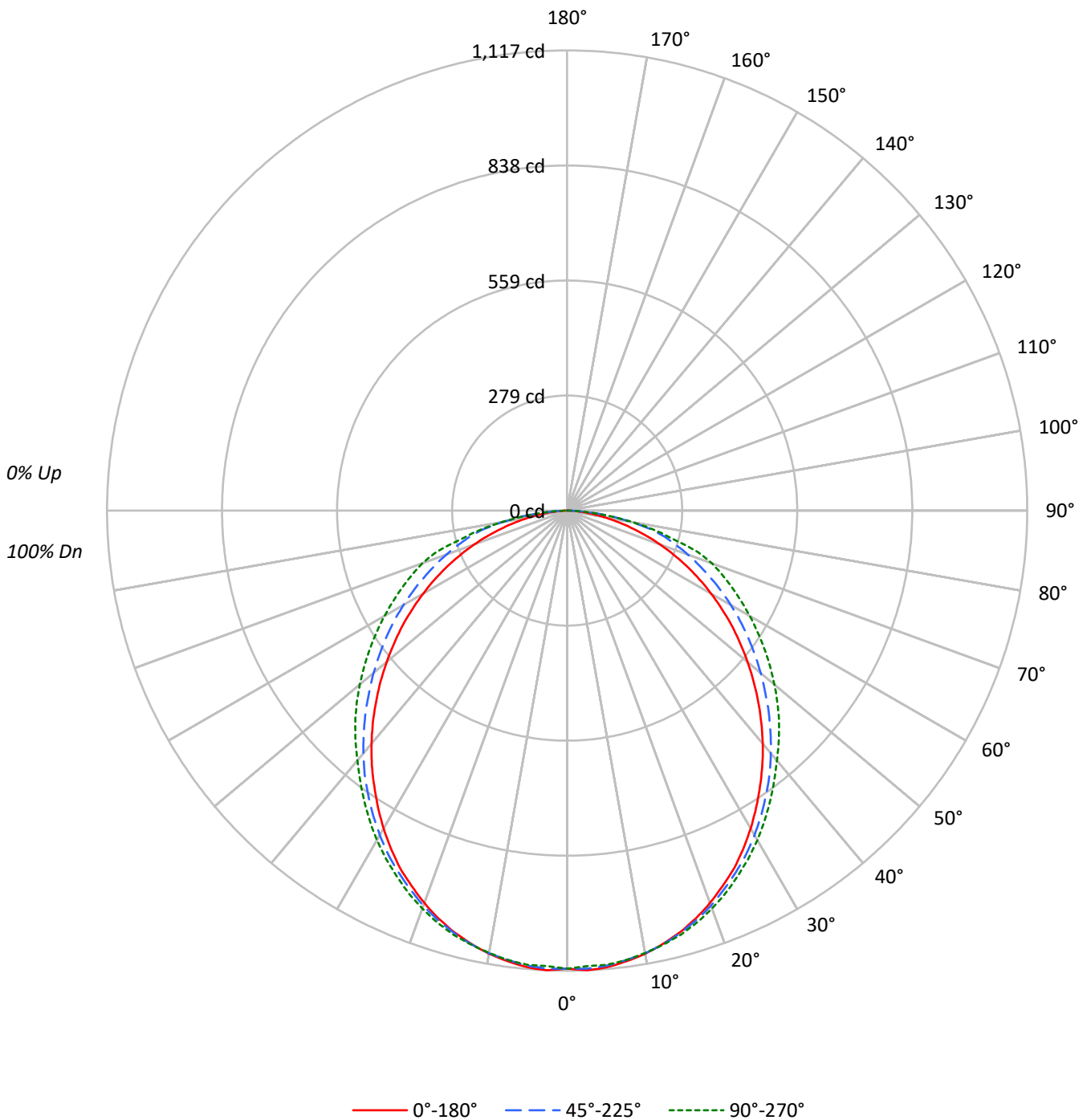
Input Watts (W): 24.273
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 99 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 64 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 58 | 52 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 53 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 50 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 38 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1496 | 1496 | 1496 |
| 5° | 1503 | 1497 | 1495 |
| 10° | 1492 | 1491 | 1490 |
| 15° | 1476 | 1479 | 1485 |
| 20° | 1451 | 1462 | 1472 |
| 25° | 1423 | 1438 | 1453 |
| 30° | 1384 | 1413 | 1435 |
| 35° | 1341 | 1383 | 1412 |
| 40° | 1298 | 1351 | 1391 |
| 45° | 1248 | 1316 | 1384 |
| 50° | 1198 | 1283 | 1375 |
| 55° | 1146 | 1256 | 1371 |
| 60° | 1086 | 1235 | 1378 |
| 65° | 1022 | 1220 | 1405 |
| 70° | 941 | 1226 | 1471 |
| 75° | 834 | 1269 | 1370 |
| 80° | 697 | 1203 | 1235 |
| 85° | 520 | 962 | 883 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 105.1 | 3.4 |
| 10°-20° | 298.9 | 9.7 |
| 20°-30° | 445.5 | 14.5 |
| 30°-40° | 524.4 | 17.1 |
| 40°-50° | 532.9 | 17.4 |
| 50°-60° | 479.1 | 15.6 |
| 60°-70° | 378.5 | 12.3 |
| 70°-80° | 240.1 | 7.8 |
| 80°-90° | 66.3 | 2.2 |
| 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° | 849.6 | 27.7 |
| 0°-40° | 1374.0 | 44.7 |
| 0°-60° | 2386.0 | 77.7 |
| 0°-90° | 3071.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3071.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1112 | 1112 | 1112 | 1112 | 1112 | |
| 5° | 1113 | 1104 | 1109 | 1107 | 1107 | 106 |
| 15° | 1060 | 1054 | 1062 | 1065 | 1066 | 298 |
| 25° | 958 | 958 | 969 | 975 | 979 | 441 |
| 35° | 816 | 822 | 842 | 851 | 859 | 511 |
| 45° | 656 | 665 | 692 | 712 | 728 | 506 |
| 55° | 488 | 501 | 535 | 570 | 584 | 436 |
| 65° | 321 | 337 | 383 | 425 | 441 | 318 |
| 75° | 160 | 188 | 244 | 266 | 264 | 171 |
| 85° | 34 | 58 | 62 | 57 | 57 | 41 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1111.8 | 1111.8 | 1111.8 | 1111.8 | 1111.8 |
| 2.5° | 1116.9 | 1108.7 | 1112.8 | 1110.7 | 1106.6 |
| 5° | 1112.8 | 1103.6 | 1108.7 | 1106.6 | 1106.6 |
| 7.5° | 1103.6 | 1096.4 | 1100.5 | 1099.5 | 1100.5 |
| 10° | 1092.3 | 1085.2 | 1091.3 | 1091.3 | 1090.3 |
| 12.5° | 1077.0 | 1070.9 | 1078.0 | 1078.0 | 1079.1 |
| 15° | 1059.6 | 1054.5 | 1061.7 | 1064.8 | 1065.8 |
| 17.5° | 1038.2 | 1033.1 | 1042.3 | 1045.3 | 1048.4 |
| 20° | 1013.7 | 1011.6 | 1020.8 | 1023.9 | 1028.0 |
| 22.5° | 986.1 | 986.1 | 995.3 | 999.4 | 1005.5 |
| 25° | 958.5 | 957.5 | 968.7 | 974.8 | 978.9 |
| 27.5° | 925.8 | 926.8 | 941.1 | 947.2 | 952.4 |
| 30° | 891.0 | 893.1 | 909.4 | 916.6 | 923.7 |
| 32.5° | 854.3 | 858.3 | 876.7 | 884.9 | 892.1 |
| 35° | 816.4 | 821.6 | 842.0 | 851.2 | 859.4 |
| 37.5° | 778.6 | 785.8 | 807.3 | 816.4 | 825.6 |
| 40° | 738.8 | 744.9 | 769.4 | 780.7 | 791.9 |
| 42.5° | 697.9 | 706.1 | 730.6 | 747.0 | 760.2 |
| 45° | 656.0 | 665.2 | 691.8 | 712.2 | 727.5 |
| 47.5° | 614.1 | 626.4 | 651.9 | 679.5 | 692.8 |
| 50° | 572.2 | 584.5 | 613.1 | 643.8 | 657.0 |
| 52.5° | 529.3 | 541.6 | 574.3 | 605.9 | 620.3 |
| 55° | 488.4 | 500.7 | 535.4 | 570.2 | 584.5 |
| 57.5° | 445.5 | 458.8 | 497.6 | 533.4 | 547.7 |
| 60° | 403.6 | 416.9 | 458.8 | 496.6 | 511.9 |
| 62.5° | 362.8 | 377.1 | 421.0 | 460.8 | 476.2 |
| 65° | 320.9 | 337.2 | 383.2 | 425.1 | 441.4 |
| 67.5° | 280.0 | 298.4 | 346.4 | 390.3 | 407.7 |
| 70° | 239.1 | 260.6 | 311.7 | 356.6 | 374.0 |
| 72.5° | 199.3 | 222.8 | 276.9 | 321.9 | 331.1 |
| 75° | 160.4 | 188.0 | 244.2 | 265.7 | 263.6 |
| 77.5° | 123.6 | 154.3 | 207.4 | 211.5 | 217.7 |
| 80° | 89.9 | 123.6 | 155.3 | 163.5 | 159.4 |
| 82.5° | 59.3 | 93.0 | 111.4 | 107.3 | 106.3 |
| 85° | 33.7 | 58.2 | 62.3 | 57.2 | 57.2 |
| 87.5° | 14.3 | 23.5 | 20.4 | 15.3 | 14.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)