

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: P258710

Luminaire Tested: **14CZ-LD5-25-S-UNV-L83050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258710
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35112)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-25-S-UNV-L83050-W2A1-U-3500K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED AT 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2509.2 lumens
Efficiency: N/A
Efficacy: 137.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

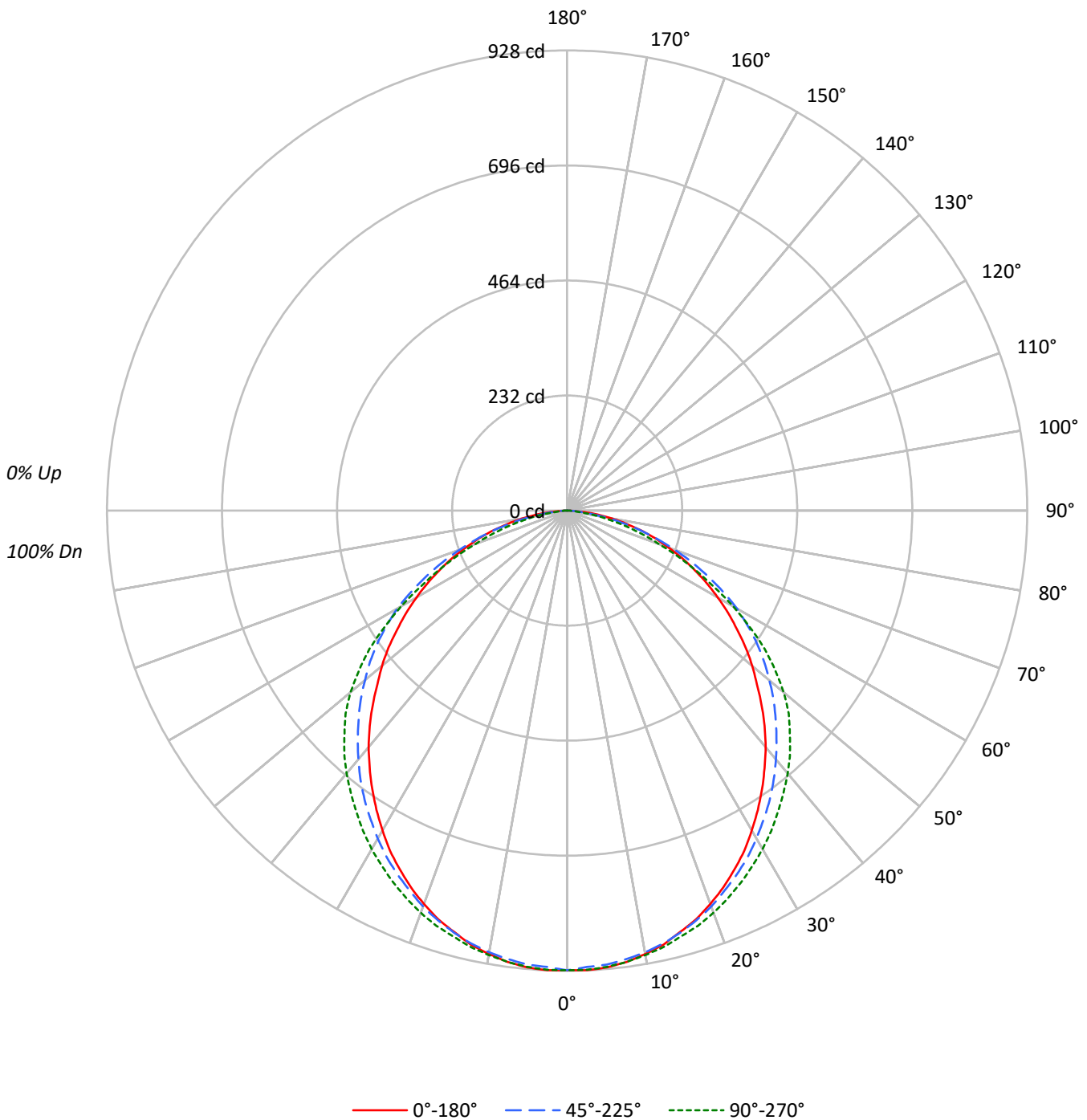
Input Watts (W): 18.228
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 105 | 100 | 97 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 46 | 44 |
| 6 | 71 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 45 | 41 | 39 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 31 |
| 9 | 57 | 44 | 35 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 28 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2494 | 2494 | 2494 |
| 5° | 2498 | 2483 | 2495 |
| 10° | 2481 | 2472 | 2487 |
| 15° | 2451 | 2455 | 2476 |
| 20° | 2418 | 2434 | 2472 |
| 25° | 2370 | 2404 | 2460 |
| 30° | 2314 | 2373 | 2449 |
| 35° | 2252 | 2340 | 2435 |
| 40° | 2188 | 2302 | 2431 |
| 45° | 2111 | 2264 | 2417 |
| 50° | 2041 | 2228 | 2387 |
| 55° | 1962 | 2193 | 2282 |
| 60° | 1890 | 2130 | 2082 |
| 65° | 1808 | 1994 | 1829 |
| 70° | 1707 | 1812 | 1548 |
| 75° | 1593 | 1569 | 1279 |
| 80° | 1404 | 1213 | 936 |
| 85° | 1105 | 587 | 519 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 87.6 | 3.5 |
| 10°-20° | 249.5 | 9.9 |
| 20°-30° | 374.5 | 14.9 |
| 30°-40° | 446.4 | 17.8 |
| 40°-50° | 459.8 | 18.3 |
| 50°-60° | 409.8 | 16.3 |
| 60°-70° | 295.3 | 11.8 |
| 70°-80° | 154.4 | 6.2 |
| 80°-90° | 31.9 | 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° | 711.6 | 28.4 |
| 0°-40° | 1158.0 | 46.1 |
| 0°-60° | 2027.6 | 80.8 |
| 0°-90° | 2509.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2509.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 927 | 927 | 927 | 927 | 927 | |
| 5° | 925 | 922 | 919 | 925 | 924 | 88 |
| 15° | 880 | 881 | 881 | 890 | 889 | 248 |
| 25° | 798 | 803 | 810 | 825 | 828 | 368 |
| 35° | 685 | 694 | 712 | 736 | 741 | 429 |
| 45° | 555 | 567 | 595 | 628 | 635 | 428 |
| 55° | 418 | 432 | 467 | 489 | 486 | 375 |
| 65° | 284 | 294 | 313 | 298 | 287 | 281 |
| 75° | 153 | 161 | 151 | 131 | 123 | 162 |
| 85° | 36 | 31 | 19 | 17 | 17 | 42 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 926.9 | 926.9 | 926.9 | 926.9 | 926.9 |
| 2.5° | 928.0 | 925.8 | 921.3 | 926.9 | 926.9 |
| 5° | 924.7 | 922.4 | 919.1 | 924.7 | 923.5 |
| 7.5° | 918.0 | 915.7 | 912.4 | 919.1 | 918.0 |
| 10° | 907.9 | 906.8 | 904.5 | 911.2 | 910.1 |
| 12.5° | 896.7 | 895.6 | 894.5 | 901.2 | 901.2 |
| 15° | 879.9 | 881.1 | 881.1 | 890.0 | 888.9 |
| 17.5° | 864.3 | 865.4 | 866.5 | 877.7 | 877.7 |
| 20° | 844.2 | 845.3 | 849.8 | 862.0 | 863.2 |
| 22.5° | 822.9 | 824.0 | 829.6 | 844.2 | 846.4 |
| 25° | 798.3 | 802.8 | 809.5 | 825.2 | 828.5 |
| 27.5° | 773.7 | 777.1 | 788.3 | 806.1 | 808.4 |
| 30° | 744.7 | 751.4 | 763.7 | 783.8 | 788.3 |
| 32.5° | 715.6 | 723.4 | 737.9 | 760.3 | 765.9 |
| 35° | 685.4 | 694.3 | 712.2 | 735.7 | 741.3 |
| 37.5° | 654.1 | 661.9 | 684.3 | 708.9 | 716.7 |
| 40° | 622.8 | 630.6 | 655.2 | 683.2 | 692.1 |
| 42.5° | 589.2 | 600.4 | 625.0 | 656.3 | 665.3 |
| 45° | 554.6 | 566.9 | 594.8 | 628.4 | 635.1 |
| 47.5° | 518.8 | 532.2 | 564.6 | 598.2 | 606.0 |
| 50° | 487.5 | 499.8 | 532.2 | 564.6 | 570.2 |
| 52.5° | 453.9 | 465.1 | 500.9 | 527.7 | 528.9 |
| 55° | 418.2 | 431.6 | 467.4 | 488.6 | 486.4 |
| 57.5° | 385.7 | 396.9 | 431.6 | 442.8 | 436.1 |
| 60° | 351.1 | 361.1 | 395.8 | 396.9 | 386.9 |
| 62.5° | 317.5 | 327.6 | 354.4 | 346.6 | 334.3 |
| 65° | 284.0 | 294.1 | 313.1 | 298.5 | 287.3 |
| 67.5° | 251.6 | 260.5 | 271.7 | 252.7 | 241.5 |
| 70° | 216.9 | 229.2 | 230.3 | 208.0 | 196.8 |
| 72.5° | 186.7 | 193.4 | 191.2 | 170.0 | 159.9 |
| 75° | 153.2 | 161.0 | 150.9 | 130.8 | 123.0 |
| 77.5° | 121.9 | 127.5 | 114.0 | 95.0 | 89.4 |
| 80° | 90.6 | 93.9 | 78.3 | 63.7 | 60.4 |
| 82.5° | 61.5 | 61.5 | 44.7 | 34.7 | 31.3 |
| 85° | 35.8 | 31.3 | 19.0 | 16.8 | 16.8 |
| 87.5° | 12.3 | 7.8 | 7.8 | 7.8 | 7.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)