

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: P258929

Luminaire Tested: **14CZ-LD5-44-RDP-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258929
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35909)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-44-RDP-UNV-L93050-W2A1-U-4000K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER
WITH RDP LENS
Light Source: (168) 90 CRI LEDS TUNED AT 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2685.0 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

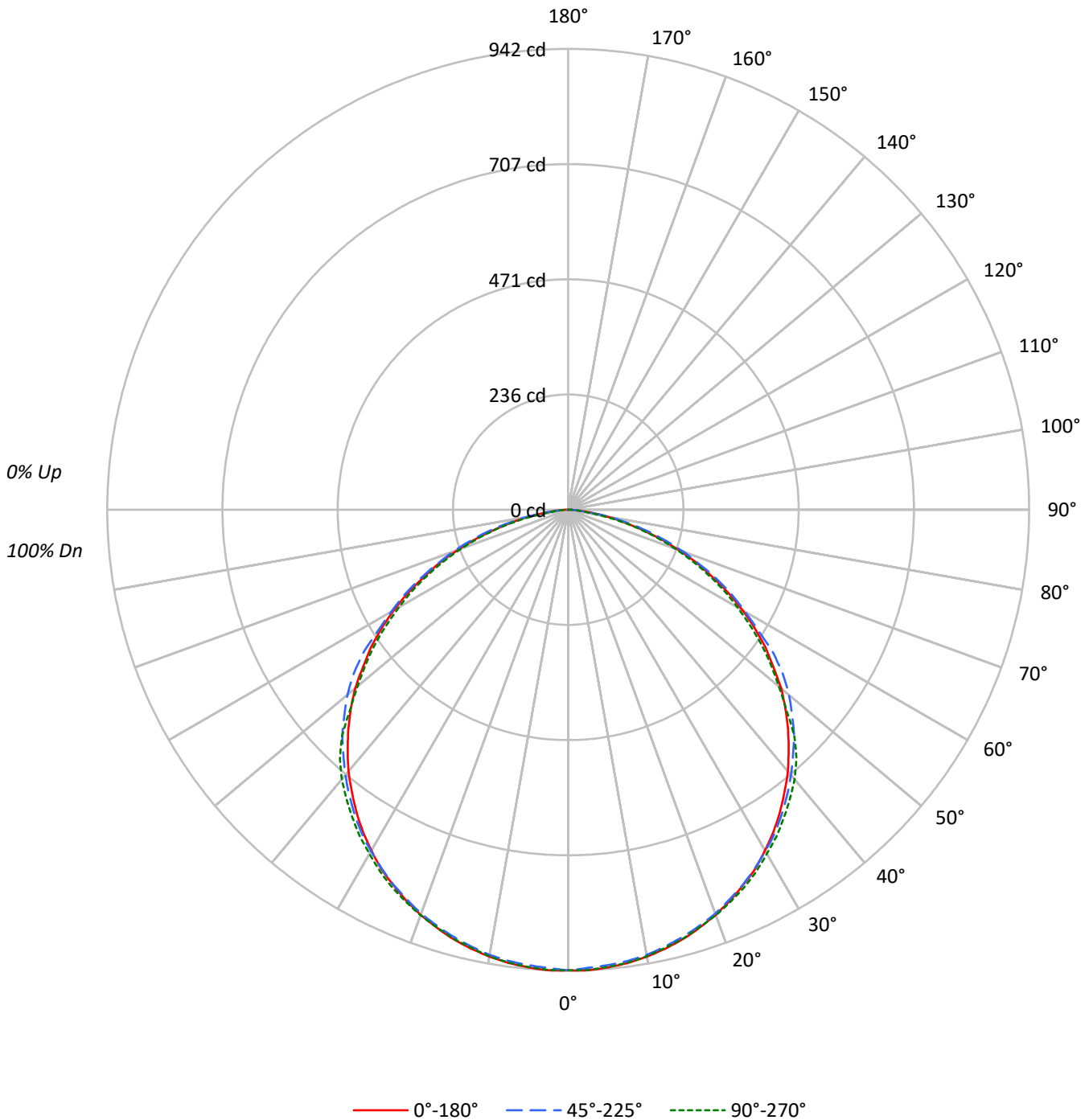
Input Watts (W): 36.549
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: 14CZ-LD5-44-RDP-UNV-L93050-W2A1-U-4000K

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 | 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 | 65 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 65 | 61 | 59 |
| 4 | 83 | 71 | 62 | 55 | 80 | 69 | 61 | 55 | 67 | 60 | 54 | 65 | 58 | 53 | 62 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 47 | 60 | 53 | 47 | 58 | 51 | 46 | 56 | 50 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 47 | 41 | 54 | 47 | 41 | 52 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 42 | 36 | 49 | 42 | 36 | 48 | 41 | 36 | 46 | 40 | 36 | 34 |
| 8 | 61 | 47 | 38 | 33 | 59 | 46 | 38 | 33 | 45 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 32 | 30 |
| 9 | 57 | 43 | 35 | 29 | 55 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2534 | 2534 | 2534 |
| 5° | 2536 | 2525 | 2534 |
| 10° | 2535 | 2525 | 2532 |
| 15° | 2531 | 2518 | 2528 |
| 20° | 2524 | 2516 | 2526 |
| 25° | 2513 | 2510 | 2528 |
| 30° | 2499 | 2504 | 2523 |
| 35° | 2478 | 2498 | 2524 |
| 40° | 2453 | 2487 | 2527 |
| 45° | 2418 | 2484 | 2488 |
| 50° | 2378 | 2466 | 2352 |
| 55° | 2312 | 2402 | 2267 |
| 60° | 2214 | 2246 | 2148 |
| 65° | 2073 | 2129 | 2017 |
| 70° | 1887 | 1962 | 1825 |
| 75° | 1574 | 1720 | 1547 |
| 80° | 1247 | 1316 | 1071 |
| 85° | 812 | 704 | 621 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 89.1 | 3.3 |
| 10°-20° | 256.0 | 9.5 |
| 20°-30° | 390.8 | 14.6 |
| 30°-40° | 476.5 | 17.7 |
| 40°-50° | 499.0 | 18.6 |
| 50°-60° | 443.9 | 16.5 |
| 60°-70° | 327.5 | 12.2 |
| 70°-80° | 169.2 | 6.3 |
| 80°-90° | 32.9 | 1.2 |
| 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° | 736.0 | 27.4 |
| 0°-40° | 1212.5 | 45.2 |
| 0°-60° | 2155.4 | 80.3 |
| 0°-90° | 2685.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2685.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 942 | 942 | 942 | 942 | 942 | |
| 5° | 939 | 938 | 935 | 938 | 938 | 89 |
| 15° | 908 | 908 | 904 | 908 | 908 | 256 |
| 25° | 846 | 846 | 845 | 852 | 852 | 390 |
| 35° | 754 | 755 | 760 | 769 | 768 | 472 |
| 45° | 635 | 640 | 653 | 659 | 654 | 490 |
| 55° | 493 | 503 | 512 | 490 | 483 | 439 |
| 65° | 326 | 348 | 334 | 323 | 317 | 323 |
| 75° | 151 | 167 | 165 | 152 | 149 | 164 |
| 85° | 26 | 29 | 23 | 21 | 20 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 941.6 | 941.6 | 941.6 | 941.6 | 941.6 |
| 2.5° | 942.5 | 941.6 | 937.3 | 941.6 | 941.6 |
| 5° | 939.0 | 938.1 | 934.6 | 938.1 | 938.1 |
| 7.5° | 934.6 | 933.8 | 930.3 | 933.8 | 933.8 |
| 10° | 927.6 | 926.8 | 924.1 | 927.6 | 926.8 |
| 12.5° | 918.9 | 918.9 | 914.5 | 918.9 | 917.1 |
| 15° | 908.4 | 907.5 | 904.0 | 907.5 | 907.5 |
| 17.5° | 895.3 | 894.4 | 891.8 | 896.1 | 894.4 |
| 20° | 881.3 | 880.4 | 878.6 | 883.0 | 882.1 |
| 22.5° | 864.6 | 864.6 | 862.0 | 867.3 | 867.3 |
| 25° | 846.3 | 846.3 | 845.4 | 851.5 | 851.5 |
| 27.5° | 827.9 | 826.1 | 826.1 | 832.2 | 833.1 |
| 30° | 804.2 | 804.2 | 806.0 | 813.0 | 812.1 |
| 32.5° | 780.6 | 781.5 | 785.0 | 791.1 | 792.0 |
| 35° | 754.4 | 755.2 | 760.5 | 769.2 | 768.4 |
| 37.5° | 726.4 | 729.0 | 735.1 | 744.7 | 744.7 |
| 40° | 698.4 | 700.1 | 708.0 | 718.5 | 719.4 |
| 42.5° | 666.8 | 671.2 | 680.0 | 692.2 | 690.5 |
| 45° | 635.3 | 639.7 | 652.8 | 659.0 | 653.7 |
| 47.5° | 602.1 | 607.3 | 620.5 | 621.3 | 603.8 |
| 50° | 568.0 | 574.1 | 589.0 | 571.5 | 561.8 |
| 52.5° | 528.6 | 540.0 | 553.1 | 528.6 | 522.5 |
| 55° | 492.7 | 503.2 | 512.0 | 490.1 | 483.1 |
| 57.5° | 452.4 | 466.4 | 460.3 | 449.8 | 441.1 |
| 60° | 411.3 | 426.2 | 417.4 | 406.9 | 399.1 |
| 62.5° | 369.3 | 385.9 | 377.2 | 366.7 | 359.7 |
| 65° | 325.5 | 348.3 | 334.3 | 322.9 | 316.8 |
| 67.5° | 284.4 | 306.3 | 289.7 | 280.9 | 274.8 |
| 70° | 239.8 | 258.2 | 249.4 | 238.0 | 231.9 |
| 72.5° | 196.0 | 210.0 | 207.4 | 195.2 | 190.8 |
| 75° | 151.4 | 167.1 | 165.4 | 152.3 | 148.8 |
| 77.5° | 113.8 | 128.6 | 123.4 | 112.9 | 108.5 |
| 80° | 80.5 | 90.1 | 84.9 | 72.6 | 69.1 |
| 82.5° | 49.0 | 56.9 | 48.1 | 41.1 | 37.6 |
| 85° | 26.3 | 28.9 | 22.8 | 21.0 | 20.1 |
| 87.5° | 9.6 | 9.6 | 9.6 | 8.8 | 8.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)