

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: P275606

Luminaire Tested: **14CZ2-39-S-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P275606
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-39-S-UNV-L93050-W2A1-U-3000K
Description: CRUZE 2.0 1x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (168) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3024.0 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

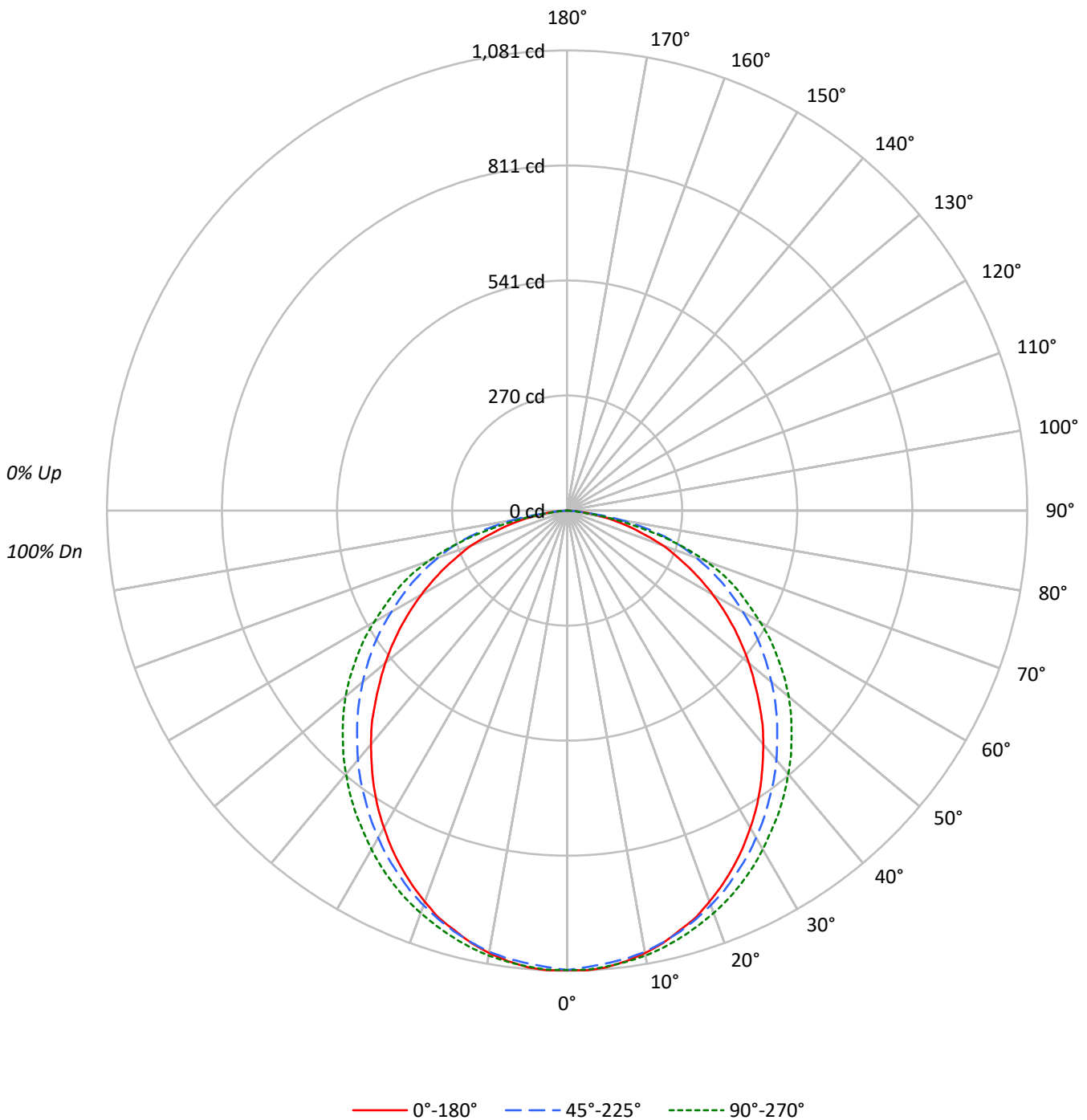
Input Watts (W): 31.713
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 90 | 84 | 78 | 96 | 89 | 82 | 77 | 85 | 80 | 75 | 82 | 77 | 73 | 79 | 75 | 72 | 70 |
| 3 | 90 | 79 | 71 | 65 | 87 | 78 | 70 | 64 | 75 | 68 | 63 | 72 | 66 | 62 | 69 | 65 | 61 | 58 |
| 4 | 82 | 70 | 61 | 55 | 80 | 69 | 61 | 54 | 66 | 59 | 53 | 64 | 58 | 53 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 54 | 47 | 74 | 62 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 46 | 56 | 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 | 28 | 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° | 2905 | 2905 | 2905 |
| 5° | 2908 | 2884 | 2904 |
| 10° | 2884 | 2876 | 2901 |
| 15° | 2844 | 2853 | 2890 |
| 20° | 2800 | 2825 | 2881 |
| 25° | 2742 | 2791 | 2871 |
| 30° | 2674 | 2758 | 2856 |
| 35° | 2600 | 2719 | 2847 |
| 40° | 2518 | 2686 | 2839 |
| 45° | 2425 | 2653 | 2836 |
| 50° | 2335 | 2624 | 2843 |
| 55° | 2237 | 2603 | 2835 |
| 60° | 2130 | 2566 | 2816 |
| 65° | 2005 | 2558 | 2816 |
| 70° | 1888 | 2537 | 2736 |
| 75° | 1637 | 2479 | 2338 |
| 80° | 1325 | 1998 | 1557 |
| 85° | 880 | 695 | 463 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 101.9 | 3.4 |
| 10°-20° | 290.1 | 9.6 |
| 20°-30° | 435.1 | 14.4 |
| 30°-40° | 519.0 | 17.2 |
| 40°-50° | 536.6 | 17.7 |
| 50°-60° | 489.9 | 16.2 |
| 60°-70° | 385.5 | 12.7 |
| 70°-80° | 224.4 | 7.4 |
| 80°-90° | 41.4 | 1.4 |
| 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° | 827.1 | 27.4 |
| 0°-40° | 1346.2 | 44.5 |
| 0°-60° | 2372.7 | 78.5 |
| 0°-90° | 3024.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3024.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1080 | 1080 | 1080 | 1080 | 1080 | |
| 5° | 1076 | 1074 | 1068 | 1076 | 1075 | 102 |
| 15° | 1021 | 1022 | 1024 | 1038 | 1038 | 288 |
| 25° | 924 | 928 | 940 | 963 | 967 | 425 |
| 35° | 792 | 802 | 828 | 859 | 867 | 495 |
| 45° | 637 | 658 | 697 | 736 | 745 | 492 |
| 55° | 477 | 502 | 555 | 595 | 604 | 426 |
| 65° | 315 | 348 | 402 | 433 | 442 | 313 |
| 75° | 157 | 195 | 238 | 234 | 225 | 167 |
| 85° | 28 | 40 | 22 | 18 | 15 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1079.5 | 1079.5 | 1079.5 | 1079.5 | 1079.5 |
| 2.5° | 1081.0 | 1078.0 | 1073.5 | 1081.0 | 1079.5 |
| 5° | 1076.5 | 1073.5 | 1067.5 | 1076.5 | 1075.0 |
| 7.5° | 1067.5 | 1064.5 | 1061.5 | 1070.5 | 1069.0 |
| 10° | 1055.5 | 1054.0 | 1052.5 | 1063.0 | 1061.5 |
| 12.5° | 1040.5 | 1040.5 | 1039.0 | 1051.0 | 1051.0 |
| 15° | 1021.0 | 1022.5 | 1024.0 | 1037.5 | 1037.5 |
| 17.5° | 1003.1 | 1001.6 | 1006.1 | 1021.0 | 1022.5 |
| 20° | 977.6 | 980.6 | 986.6 | 1004.6 | 1006.1 |
| 22.5° | 952.1 | 955.1 | 965.6 | 983.6 | 988.1 |
| 25° | 923.6 | 928.1 | 940.1 | 962.6 | 967.1 |
| 27.5° | 893.6 | 899.6 | 916.1 | 940.1 | 944.6 |
| 30° | 860.6 | 869.6 | 887.6 | 914.6 | 919.1 |
| 32.5° | 827.6 | 836.6 | 859.1 | 886.1 | 892.1 |
| 35° | 791.6 | 802.1 | 827.6 | 859.1 | 866.6 |
| 37.5° | 754.2 | 767.7 | 797.6 | 829.1 | 838.1 |
| 40° | 716.7 | 731.7 | 764.7 | 797.6 | 808.1 |
| 42.5° | 679.2 | 694.2 | 730.2 | 767.7 | 778.2 |
| 45° | 637.2 | 658.2 | 697.2 | 736.2 | 745.2 |
| 47.5° | 596.7 | 619.2 | 662.7 | 701.7 | 713.7 |
| 50° | 557.8 | 580.2 | 626.7 | 667.2 | 679.2 |
| 52.5° | 517.3 | 541.3 | 590.7 | 632.7 | 643.2 |
| 55° | 476.8 | 502.3 | 554.8 | 595.2 | 604.2 |
| 57.5° | 436.3 | 463.3 | 517.3 | 556.3 | 566.7 |
| 60° | 395.8 | 424.3 | 476.8 | 515.8 | 523.3 |
| 62.5° | 355.3 | 385.3 | 439.3 | 473.8 | 481.3 |
| 65° | 314.9 | 347.8 | 401.8 | 433.3 | 442.3 |
| 67.5° | 275.9 | 308.9 | 361.3 | 391.3 | 398.8 |
| 70° | 239.9 | 269.9 | 322.4 | 344.8 | 347.8 |
| 72.5° | 194.9 | 232.4 | 283.4 | 295.4 | 287.9 |
| 75° | 157.4 | 194.9 | 238.4 | 233.9 | 224.9 |
| 77.5° | 119.9 | 157.4 | 185.9 | 170.9 | 158.9 |
| 80° | 85.5 | 122.9 | 128.9 | 106.5 | 100.5 |
| 82.5° | 55.5 | 85.5 | 72.0 | 55.5 | 45.0 |
| 85° | 28.5 | 40.5 | 22.5 | 18.0 | 15.0 |
| 87.5° | 9.0 | 6.0 | 3.0 | 3.0 | 1.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)