

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: P258668

Luminaire Tested: **14CZ-LD5-29-UNV-L92765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258668
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35573)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-29-UNV-L92765-W2A1-U-2700K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS
Light Source: (168) 90 CRI LEDS TUNED AT 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2304.0 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

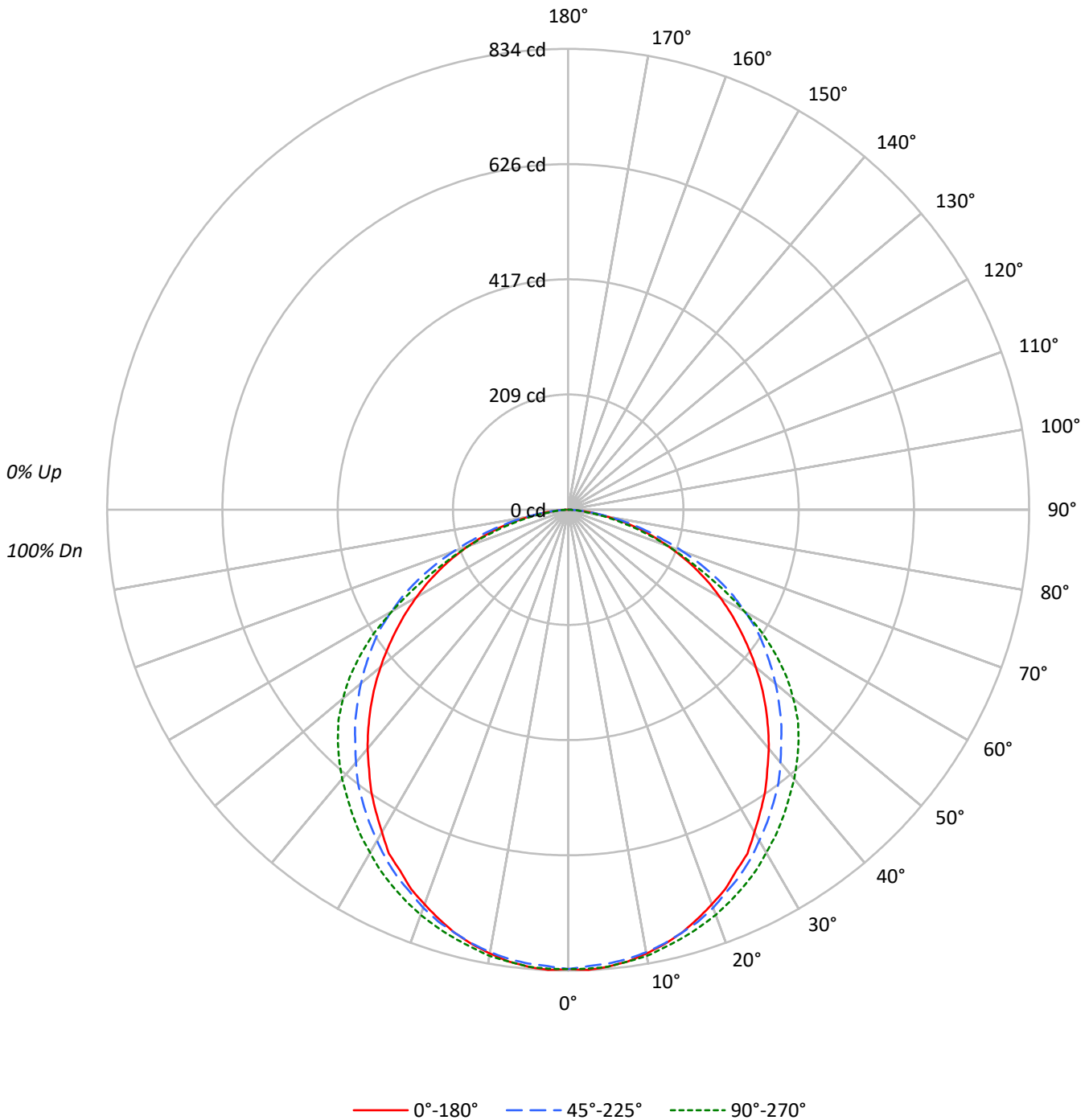
Input Watts (W): 22.041
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 66 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 66 | 62 | 59 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 46 | 56 | 51 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 42 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 43 | 37 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 46 | 38 | 33 | 45 | 38 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 30 |
| 9 | 57 | 43 | 35 | 30 | 55 | 43 | 35 | 29 | 42 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 26 | 37 | 31 | 26 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2237 | 2237 | 2237 |
| 5° | 2243 | 2227 | 2243 |
| 10° | 2228 | 2222 | 2241 |
| 15° | 2209 | 2209 | 2234 |
| 20° | 2176 | 2196 | 2235 |
| 25° | 2138 | 2175 | 2233 |
| 30° | 2093 | 2149 | 2227 |
| 35° | 2041 | 2127 | 2228 |
| 40° | 1983 | 2099 | 2235 |
| 45° | 1924 | 2075 | 2243 |
| 50° | 1855 | 2050 | 2226 |
| 55° | 1780 | 2031 | 2153 |
| 60° | 1706 | 1987 | 1981 |
| 65° | 1628 | 1902 | 1736 |
| 70° | 1511 | 1734 | 1501 |
| 75° | 1370 | 1512 | 1240 |
| 80° | 1091 | 1196 | 916 |
| 85° | 772 | 667 | 525 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.7 | 3.4 |
| 10°-20° | 224.7 | 9.8 |
| 20°-30° | 338.8 | 14.7 |
| 30°-40° | 406.2 | 17.6 |
| 40°-50° | 421.5 | 18.3 |
| 50°-60° | 380.2 | 16.5 |
| 60°-70° | 277.3 | 12.0 |
| 70°-80° | 145.5 | 6.3 |
| 80°-90° | 31.1 | 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° | 642.3 | 27.9 |
| 0°-40° | 1048.4 | 45.5 |
| 0°-60° | 1850.1 | 80.3 |
| 0°-90° | 2304.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2304.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 831 | 831 | 831 | 831 | 831 | |
| 5° | 830 | 828 | 825 | 830 | 830 | 79 |
| 15° | 793 | 793 | 793 | 802 | 802 | 223 |
| 25° | 720 | 724 | 733 | 748 | 752 | 332 |
| 35° | 621 | 628 | 647 | 671 | 678 | 388 |
| 45° | 506 | 516 | 545 | 578 | 590 | 390 |
| 55° | 379 | 393 | 433 | 461 | 459 | 340 |
| 65° | 256 | 270 | 299 | 287 | 273 | 253 |
| 75° | 132 | 150 | 145 | 126 | 119 | 138 |
| 85° | 25 | 31 | 22 | 18 | 17 | 32 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P258668

CATALOG NUMBER: 14CZ-LD5-29-UNV-L92765-W2A1-U-2700K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 831.4 | 831.4 | 831.4 | 831.4 | 831.4 |
| 2.5° | 833.7 | 831.4 | 826.9 | 831.4 | 831.4 |
| 5° | 830.3 | 828.0 | 824.6 | 830.3 | 830.3 |
| 7.5° | 824.6 | 822.4 | 820.1 | 825.8 | 824.6 |
| 10° | 815.5 | 814.4 | 813.3 | 820.1 | 820.1 |
| 12.5° | 805.3 | 805.3 | 804.2 | 812.1 | 811.0 |
| 15° | 792.8 | 792.8 | 792.8 | 801.9 | 801.9 |
| 17.5° | 776.9 | 779.2 | 781.5 | 791.7 | 791.7 |
| 20° | 759.9 | 762.2 | 766.7 | 779.2 | 780.3 |
| 22.5° | 742.9 | 744.0 | 748.5 | 763.3 | 766.7 |
| 25° | 720.1 | 723.5 | 732.6 | 748.5 | 751.9 |
| 27.5° | 702.0 | 703.1 | 713.3 | 731.5 | 736.0 |
| 30° | 673.6 | 681.5 | 691.7 | 712.2 | 716.7 |
| 32.5° | 647.4 | 654.3 | 670.2 | 691.7 | 698.6 |
| 35° | 621.3 | 628.1 | 647.4 | 671.3 | 678.1 |
| 37.5° | 591.8 | 602.0 | 624.7 | 648.6 | 656.5 |
| 40° | 564.5 | 573.6 | 597.5 | 627.0 | 636.1 |
| 42.5° | 535.0 | 544.1 | 570.2 | 603.1 | 613.4 |
| 45° | 505.5 | 515.7 | 545.2 | 578.2 | 589.5 |
| 47.5° | 474.8 | 486.1 | 516.8 | 553.2 | 563.4 |
| 50° | 443.0 | 455.5 | 489.6 | 527.0 | 531.6 |
| 52.5° | 411.2 | 424.8 | 461.2 | 494.1 | 498.6 |
| 55° | 379.4 | 393.0 | 432.8 | 461.2 | 458.9 |
| 57.5° | 348.7 | 363.5 | 404.4 | 419.1 | 416.9 |
| 60° | 316.9 | 332.8 | 369.2 | 376.0 | 368.0 |
| 62.5° | 287.4 | 302.1 | 336.2 | 330.5 | 320.3 |
| 65° | 255.6 | 270.3 | 298.7 | 287.4 | 272.6 |
| 67.5° | 223.8 | 241.9 | 260.1 | 240.8 | 229.4 |
| 70° | 192.0 | 212.4 | 220.4 | 201.0 | 190.8 |
| 72.5° | 161.3 | 182.9 | 180.6 | 161.3 | 154.5 |
| 75° | 131.8 | 149.9 | 145.4 | 126.1 | 119.3 |
| 77.5° | 100.0 | 120.4 | 110.2 | 94.3 | 88.6 |
| 80° | 70.4 | 88.6 | 77.2 | 63.6 | 59.1 |
| 82.5° | 46.6 | 59.1 | 47.7 | 37.5 | 34.1 |
| 85° | 25.0 | 30.7 | 21.6 | 18.2 | 17.0 |
| 87.5° | 10.2 | 9.1 | 8.0 | 8.0 | 6.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)