

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: P258771

Luminaire Tested: **14CZ-LD5-20-S-UNV-L82765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258771
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-LD5-20-S-UNV-L82765-W2A1-U-5700K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED AT 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2242.0 lumens
Efficiency: N/A
Efficacy: 141.8 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

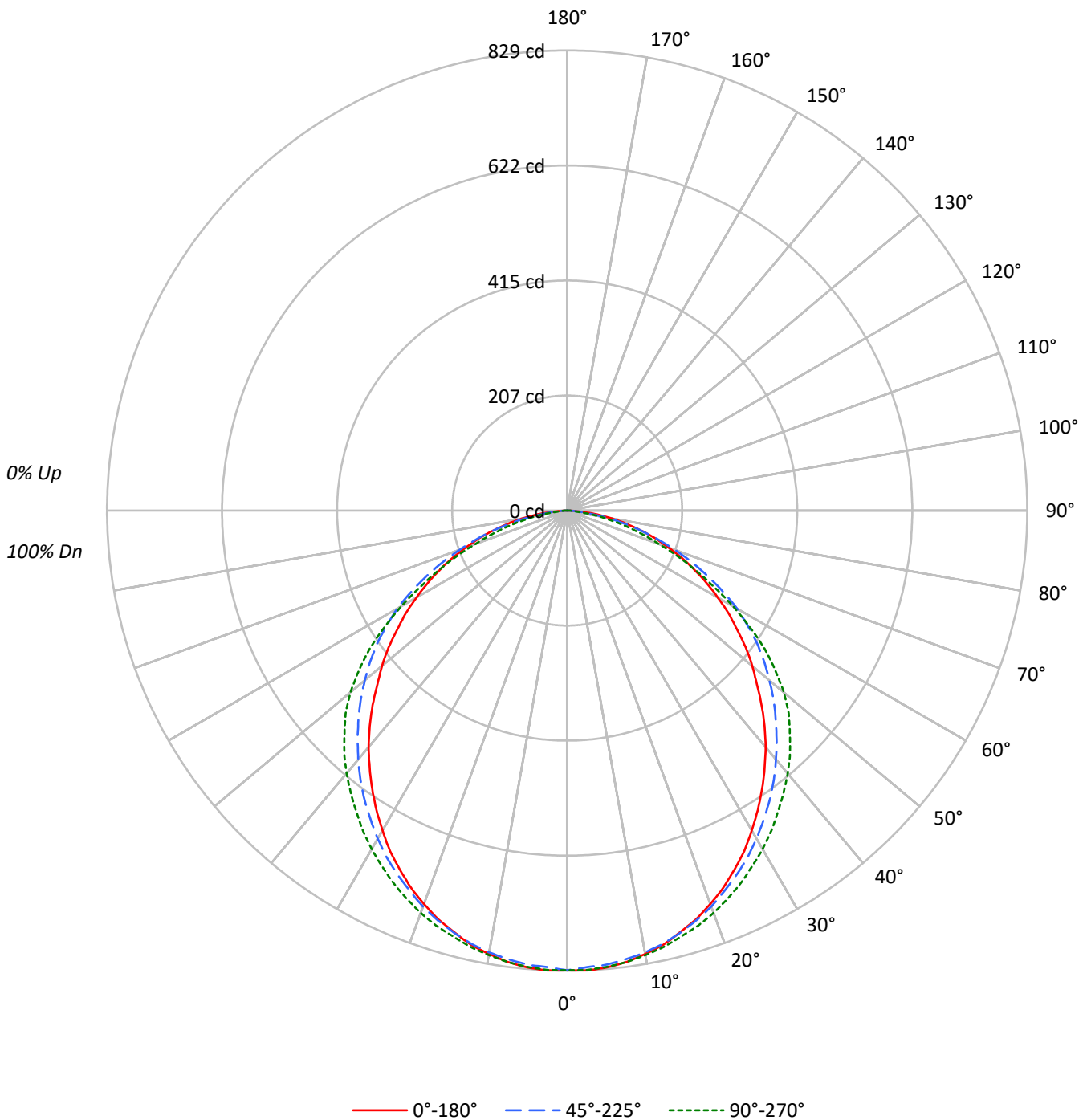
Input Watts (W): 15.81
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 2229 | 2229 | 2229 |
| 5° | 2232 | 2218 | 2229 |
| 10° | 2217 | 2208 | 2222 |
| 15° | 2190 | 2193 | 2213 |
| 20° | 2160 | 2174 | 2209 |
| 25° | 2118 | 2148 | 2198 |
| 30° | 2068 | 2120 | 2188 |
| 35° | 2012 | 2091 | 2176 |
| 40° | 1955 | 2056 | 2172 |
| 45° | 1886 | 2023 | 2159 |
| 50° | 1824 | 1991 | 2133 |
| 55° | 1753 | 1959 | 2039 |
| 60° | 1688 | 1904 | 1861 |
| 65° | 1616 | 1781 | 1635 |
| 70° | 1525 | 1619 | 1383 |
| 75° | 1423 | 1403 | 1143 |
| 80° | 1254 | 1083 | 835 |
| 85° | 988 | 525 | 463 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 78.3 | 3.5 |
| 10°-20° | 222.9 | 9.9 |
| 20°-30° | 334.6 | 14.9 |
| 30°-40° | 398.9 | 17.8 |
| 40°-50° | 410.9 | 18.3 |
| 50°-60° | 366.2 | 16.3 |
| 60°-70° | 263.8 | 11.8 |
| 70°-80° | 138.0 | 6.2 |
| 80°-90° | 28.5 | 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° | 635.8 | 28.4 |
| 0°-40° | 1034.6 | 46.1 |
| 0°-60° | 1811.7 | 80.8 |
| 0°-90° | 2242.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2242.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 828 | 828 | 828 | 828 | 828 | |
| 5° | 826 | 824 | 821 | 826 | 825 | 78 |
| 15° | 786 | 787 | 787 | 795 | 794 | 222 |
| 25° | 713 | 717 | 723 | 737 | 740 | 329 |
| 35° | 612 | 620 | 636 | 657 | 662 | 383 |
| 45° | 496 | 506 | 532 | 562 | 567 | 382 |
| 55° | 374 | 386 | 418 | 437 | 435 | 335 |
| 65° | 254 | 263 | 280 | 267 | 257 | 251 |
| 75° | 137 | 144 | 135 | 117 | 110 | 145 |
| 85° | 32 | 28 | 17 | 15 | 15 | 38 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 828.2 | 828.2 | 828.2 | 828.2 | 828.2 |
| 2.5° | 829.2 | 827.2 | 823.2 | 828.2 | 828.2 |
| 5° | 826.2 | 824.2 | 821.2 | 826.2 | 825.2 |
| 7.5° | 820.2 | 818.2 | 815.2 | 821.2 | 820.2 |
| 10° | 811.2 | 810.2 | 808.2 | 814.2 | 813.2 |
| 12.5° | 801.2 | 800.2 | 799.2 | 805.2 | 805.2 |
| 15° | 786.2 | 787.2 | 787.2 | 795.2 | 794.2 |
| 17.5° | 772.2 | 773.2 | 774.2 | 784.2 | 784.2 |
| 20° | 754.3 | 755.3 | 759.3 | 770.3 | 771.3 |
| 22.5° | 735.3 | 736.3 | 741.3 | 754.3 | 756.3 |
| 25° | 713.3 | 717.3 | 723.3 | 737.3 | 740.3 |
| 27.5° | 691.3 | 694.3 | 704.3 | 720.3 | 722.3 |
| 30° | 665.4 | 671.3 | 682.3 | 700.3 | 704.3 |
| 32.5° | 639.4 | 646.4 | 659.4 | 679.3 | 684.3 |
| 35° | 612.4 | 620.4 | 636.4 | 657.4 | 662.4 |
| 37.5° | 584.4 | 591.4 | 611.4 | 633.4 | 640.4 |
| 40° | 556.5 | 563.5 | 585.4 | 610.4 | 618.4 |
| 42.5° | 526.5 | 536.5 | 558.5 | 586.4 | 594.4 |
| 45° | 495.5 | 506.5 | 531.5 | 561.5 | 567.4 |
| 47.5° | 463.5 | 475.5 | 504.5 | 534.5 | 541.5 |
| 50° | 435.6 | 446.6 | 475.5 | 504.5 | 509.5 |
| 52.5° | 405.6 | 415.6 | 447.6 | 471.5 | 472.5 |
| 55° | 373.6 | 385.6 | 417.6 | 436.6 | 434.6 |
| 57.5° | 344.7 | 354.7 | 385.6 | 395.6 | 389.6 |
| 60° | 313.7 | 322.7 | 353.7 | 354.7 | 345.7 |
| 62.5° | 283.7 | 292.7 | 316.7 | 309.7 | 298.7 |
| 65° | 253.8 | 262.7 | 279.7 | 266.7 | 256.8 |
| 67.5° | 224.8 | 232.8 | 242.8 | 225.8 | 215.8 |
| 70° | 193.8 | 204.8 | 205.8 | 185.8 | 175.8 |
| 72.5° | 166.8 | 172.8 | 170.8 | 151.9 | 142.9 |
| 75° | 136.9 | 143.9 | 134.9 | 116.9 | 109.9 |
| 77.5° | 108.9 | 113.9 | 101.9 | 84.9 | 79.9 |
| 80° | 80.9 | 83.9 | 69.9 | 56.9 | 53.9 |
| 82.5° | 54.9 | 54.9 | 40.0 | 31.0 | 28.0 |
| 85° | 32.0 | 28.0 | 17.0 | 15.0 | 15.0 |
| 87.5° | 11.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)