

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: P275556

Luminaire Tested: **14CZ2-20-S-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P275556
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: 14CZ2-20-S-UNV-L83050-W2A1-U-3000K
Description: CRUZE 2.0 1x4 TUNABLE WHITE LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1985.0 lumens
Efficiency: N/A
Efficacy: 129.4 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

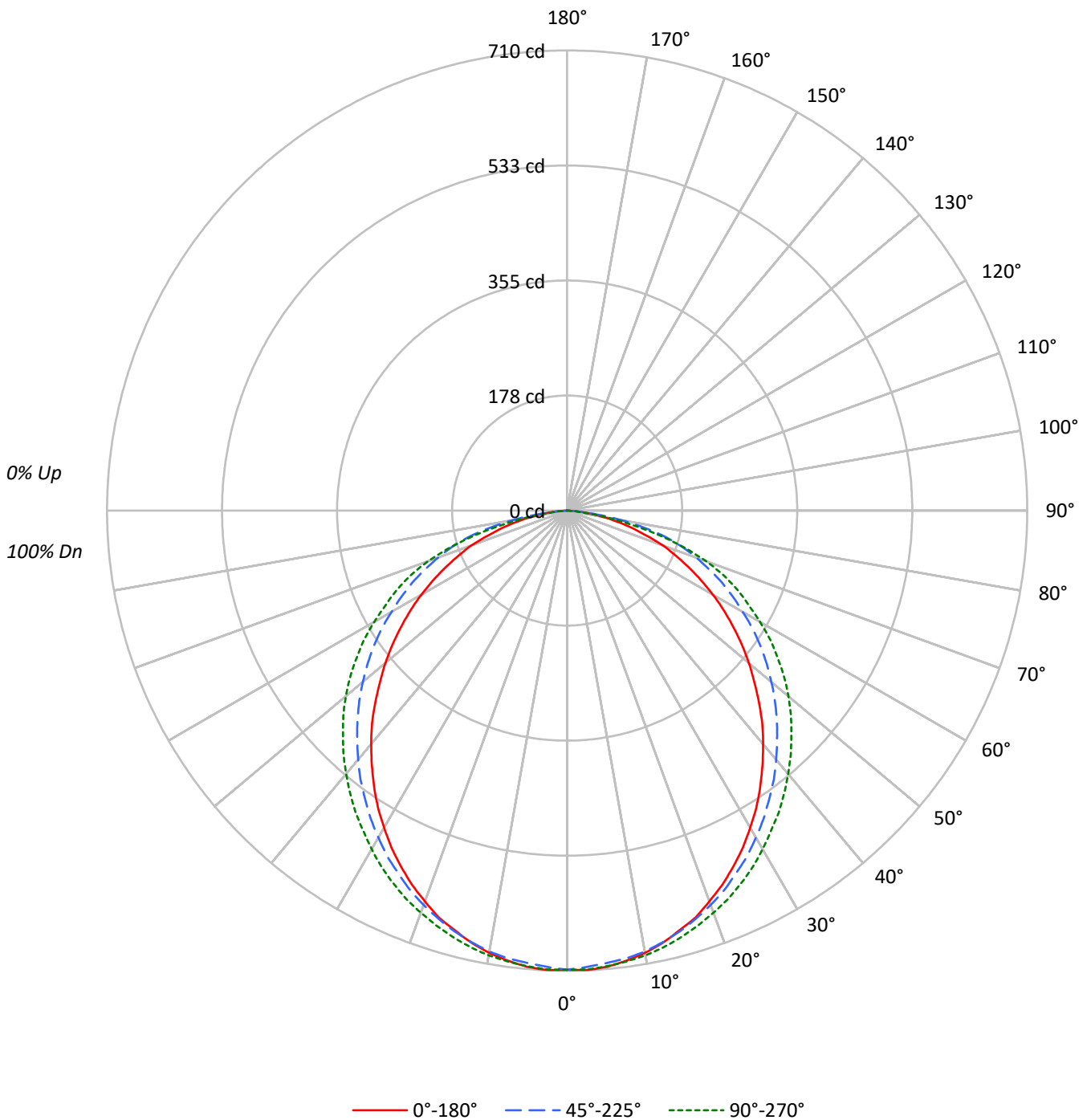
Input Watts (W): 15.345
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1907 | 1907 | 1907 |
| 5° | 1909 | 1893 | 1906 |
| 10° | 1893 | 1888 | 1904 |
| 15° | 1867 | 1873 | 1897 |
| 20° | 1838 | 1855 | 1891 |
| 25° | 1800 | 1832 | 1885 |
| 30° | 1755 | 1810 | 1875 |
| 35° | 1707 | 1785 | 1869 |
| 40° | 1652 | 1763 | 1864 |
| 45° | 1592 | 1741 | 1861 |
| 50° | 1533 | 1722 | 1866 |
| 55° | 1468 | 1708 | 1861 |
| 60° | 1398 | 1685 | 1849 |
| 65° | 1316 | 1680 | 1848 |
| 70° | 1239 | 1665 | 1796 |
| 75° | 1074 | 1627 | 1535 |
| 80° | 869 | 1311 | 1021 |
| 85° | 577 | 457 | 303 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 66.9 | 3.4 |
| 10°-20° | 190.4 | 9.6 |
| 20°-30° | 285.6 | 14.4 |
| 30°-40° | 340.7 | 17.2 |
| 40°-50° | 352.2 | 17.7 |
| 50°-60° | 321.6 | 16.2 |
| 60°-70° | 253.1 | 12.7 |
| 70°-80° | 147.3 | 7.4 |
| 80°-90° | 27.1 | 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° | 542.9 | 27.4 |
| 0°-40° | 883.7 | 44.5 |
| 0°-60° | 1557.5 | 78.5 |
| 0°-90° | 1985.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1985.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 709 | 709 | 709 | 709 | 709 | |
| 5° | 707 | 705 | 701 | 707 | 706 | 67 |
| 15° | 670 | 671 | 672 | 681 | 681 | 189 |
| 25° | 606 | 609 | 617 | 632 | 635 | 279 |
| 35° | 520 | 526 | 543 | 564 | 569 | 325 |
| 45° | 418 | 432 | 458 | 483 | 489 | 323 |
| 55° | 313 | 330 | 364 | 391 | 397 | 280 |
| 65° | 207 | 228 | 264 | 284 | 290 | 205 |
| 75° | 103 | 128 | 156 | 154 | 148 | 110 |
| 85° | 19 | 27 | 15 | 12 | 10 | 24 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 708.6 | 708.6 | 708.6 | 708.6 | 708.6 |
| 2.5° | 709.6 | 707.6 | 704.7 | 709.6 | 708.6 |
| 5° | 706.6 | 704.7 | 700.7 | 706.6 | 705.7 |
| 7.5° | 700.7 | 698.8 | 696.8 | 702.7 | 701.7 |
| 10° | 692.9 | 691.9 | 690.9 | 697.8 | 696.8 |
| 12.5° | 683.0 | 683.0 | 682.0 | 689.9 | 689.9 |
| 15° | 670.2 | 671.2 | 672.2 | 681.1 | 681.1 |
| 17.5° | 658.4 | 657.4 | 660.4 | 670.2 | 671.2 |
| 20° | 641.7 | 643.7 | 647.6 | 659.4 | 660.4 |
| 22.5° | 625.0 | 626.9 | 633.8 | 645.6 | 648.6 |
| 25° | 606.3 | 609.2 | 617.1 | 631.8 | 634.8 |
| 27.5° | 586.6 | 590.5 | 601.3 | 617.1 | 620.0 |
| 30° | 564.9 | 570.8 | 582.6 | 600.4 | 603.3 |
| 32.5° | 543.3 | 549.2 | 563.9 | 581.7 | 585.6 |
| 35° | 519.6 | 526.5 | 543.3 | 563.9 | 568.9 |
| 37.5° | 495.0 | 503.9 | 523.6 | 544.3 | 550.2 |
| 40° | 470.4 | 480.3 | 501.9 | 523.6 | 530.5 |
| 42.5° | 445.8 | 455.7 | 479.3 | 503.9 | 510.8 |
| 45° | 418.3 | 432.1 | 457.6 | 483.2 | 489.1 |
| 47.5° | 391.7 | 406.5 | 435.0 | 460.6 | 468.5 |
| 50° | 366.1 | 380.9 | 411.4 | 438.0 | 445.8 |
| 52.5° | 339.5 | 355.3 | 387.8 | 415.3 | 422.2 |
| 55° | 313.0 | 329.7 | 364.1 | 390.7 | 396.6 |
| 57.5° | 286.4 | 304.1 | 339.5 | 365.1 | 372.0 |
| 60° | 259.8 | 278.5 | 313.0 | 338.6 | 343.5 |
| 62.5° | 233.3 | 252.9 | 288.4 | 311.0 | 315.9 |
| 65° | 206.7 | 228.3 | 263.8 | 284.4 | 290.3 |
| 67.5° | 181.1 | 202.7 | 237.2 | 256.9 | 261.8 |
| 70° | 157.5 | 177.2 | 211.6 | 226.4 | 228.3 |
| 72.5° | 127.9 | 152.5 | 186.0 | 193.9 | 189.0 |
| 75° | 103.3 | 127.9 | 156.5 | 153.5 | 147.6 |
| 77.5° | 78.7 | 103.3 | 122.0 | 112.2 | 104.3 |
| 80° | 56.1 | 80.7 | 84.6 | 69.9 | 65.9 |
| 82.5° | 36.4 | 56.1 | 47.2 | 36.4 | 29.5 |
| 85° | 18.7 | 26.6 | 14.8 | 11.8 | 9.8 |
| 87.5° | 5.9 | 3.9 | 2.0 | 2.0 | 1.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)