

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: P259187

Luminaire Tested: **14CZ-LD5-35-SQP-UNV-L92765-W2A1-U-5500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P259187
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35908)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-35-SQP-UNV-L92765-W2A1-U-5500K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SQP LENS
Light Source: (168) 90 CRI LEDS TUNED AT 5500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2140.0 lumens
Efficiency: N/A
Efficacy: 75.9 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

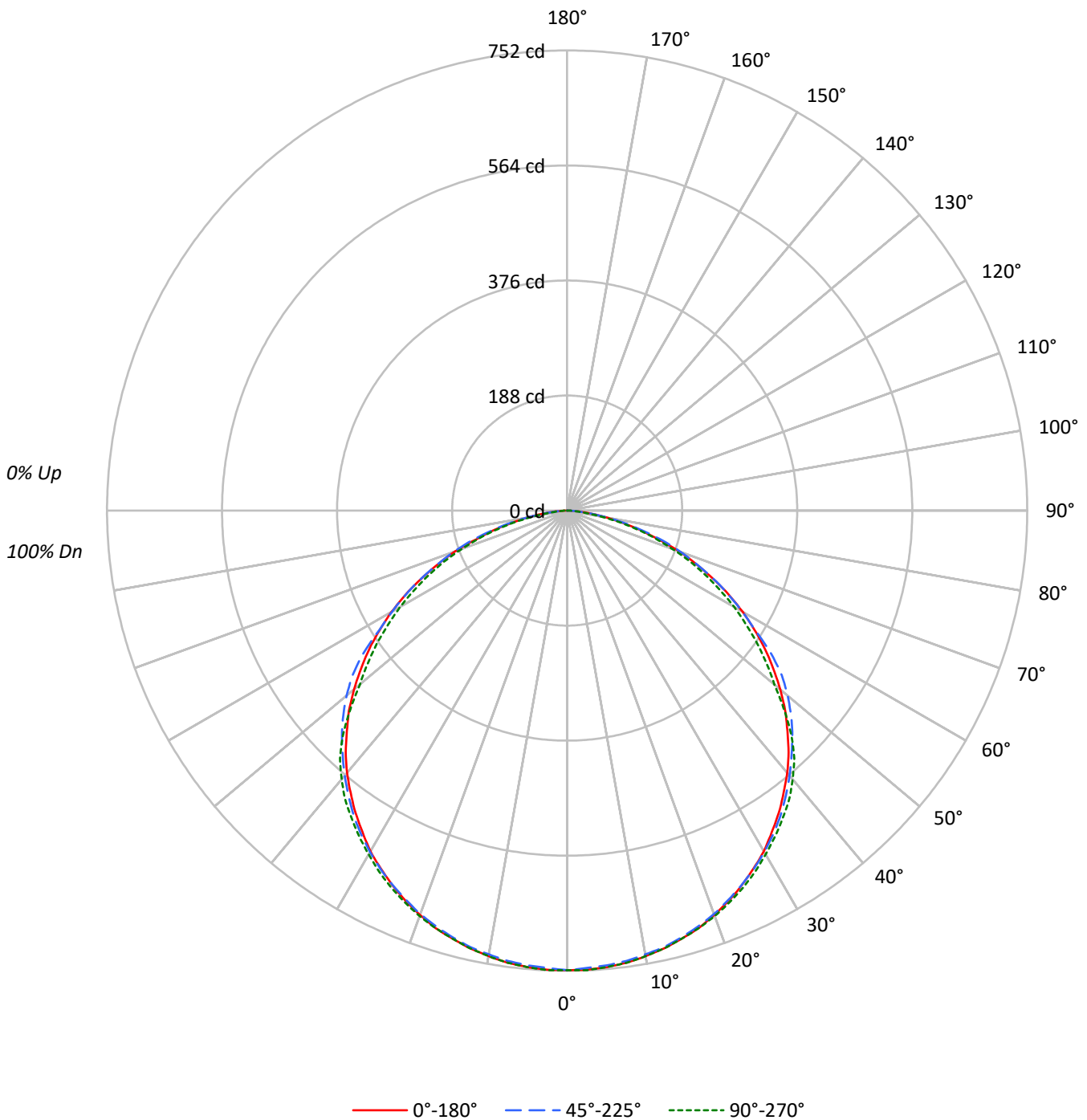
Input Watts (W): 28.179
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 65 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 65 | 62 | 59 |
| 4 | 83 | 71 | 62 | 55 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 47 | 60 | 53 | 47 | 58 | 52 | 46 | 56 | 50 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 41 | 54 | 47 | 41 | 52 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 42 | 37 | 49 | 42 | 36 | 48 | 41 | 36 | 46 | 40 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 46 | 38 | 33 | 45 | 38 | 32 | 44 | 37 | 32 | 43 | 37 | 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 | 27 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2021 | 2021 | 2021 |
| 5° | 2023 | 2015 | 2023 |
| 10° | 2020 | 2012 | 2020 |
| 15° | 2017 | 2011 | 2017 |
| 20° | 2013 | 2009 | 2020 |
| 25° | 2006 | 2004 | 2019 |
| 30° | 1998 | 2002 | 2016 |
| 35° | 1981 | 1998 | 2017 |
| 40° | 1966 | 1986 | 2014 |
| 45° | 1937 | 1981 | 1972 |
| 50° | 1903 | 1969 | 1851 |
| 55° | 1854 | 1908 | 1782 |
| 60° | 1783 | 1779 | 1697 |
| 65° | 1671 | 1680 | 1588 |
| 70° | 1534 | 1552 | 1437 |
| 75° | 1289 | 1350 | 1229 |
| 80° | 1023 | 1044 | 865 |
| 85° | 670 | 580 | 491 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 71.1 | 3.3 |
| 10°-20° | 204.4 | 9.6 |
| 20°-30° | 312.1 | 14.6 |
| 30°-40° | 380.8 | 17.8 |
| 40°-50° | 398.2 | 18.6 |
| 50°-60° | 352.6 | 16.5 |
| 60°-70° | 259.6 | 12.1 |
| 70°-80° | 134.4 | 6.3 |
| 80°-90° | 26.8 | 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° | 587.6 | 27.5 |
| 0°-40° | 968.5 | 45.3 |
| 0°-60° | 1719.2 | 80.3 |
| 0°-90° | 2140.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2140.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 751 | 751 | 751 | 751 | 751 | |
| 5° | 749 | 749 | 746 | 749 | 749 | 71 |
| 15° | 724 | 724 | 722 | 725 | 724 | 205 |
| 25° | 676 | 676 | 675 | 679 | 680 | 311 |
| 35° | 603 | 604 | 608 | 614 | 614 | 377 |
| 45° | 509 | 513 | 520 | 525 | 518 | 393 |
| 55° | 395 | 403 | 407 | 386 | 380 | 352 |
| 65° | 262 | 278 | 264 | 254 | 249 | 260 |
| 75° | 124 | 133 | 130 | 122 | 118 | 132 |
| 85° | 22 | 23 | 19 | 17 | 16 | 28 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 751.0 | 751.0 | 751.0 | 751.0 | 751.0 |
| 2.5° | 751.0 | 751.0 | 748.1 | 751.0 | 751.7 |
| 5° | 748.8 | 748.8 | 745.9 | 748.8 | 748.8 |
| 7.5° | 745.2 | 744.4 | 742.3 | 745.2 | 745.2 |
| 10° | 739.4 | 739.4 | 736.5 | 740.1 | 739.4 |
| 12.5° | 732.8 | 732.1 | 730.7 | 733.6 | 732.8 |
| 15° | 724.1 | 724.1 | 722.0 | 724.9 | 724.1 |
| 17.5° | 715.4 | 714.7 | 712.5 | 715.4 | 715.4 |
| 20° | 703.1 | 702.4 | 701.7 | 704.6 | 705.3 |
| 22.5° | 690.1 | 689.3 | 688.6 | 693.0 | 693.0 |
| 25° | 675.6 | 675.6 | 674.9 | 679.2 | 679.9 |
| 27.5° | 659.6 | 659.6 | 660.4 | 666.2 | 665.4 |
| 30° | 643.0 | 643.0 | 644.4 | 648.8 | 648.8 |
| 32.5° | 622.7 | 624.1 | 627.0 | 632.1 | 632.1 |
| 35° | 603.1 | 604.5 | 608.2 | 614.0 | 614.0 |
| 37.5° | 581.3 | 583.5 | 587.1 | 594.4 | 595.8 |
| 40° | 559.6 | 561.0 | 565.4 | 573.4 | 573.4 |
| 42.5° | 535.7 | 537.1 | 542.9 | 550.9 | 549.5 |
| 45° | 508.9 | 513.2 | 520.5 | 524.8 | 518.3 |
| 47.5° | 483.5 | 486.4 | 496.5 | 491.5 | 480.6 |
| 50° | 454.5 | 460.3 | 470.4 | 452.3 | 442.2 |
| 52.5° | 424.8 | 431.3 | 442.2 | 416.8 | 411.0 |
| 55° | 395.1 | 403.0 | 406.7 | 385.6 | 379.8 |
| 57.5° | 363.2 | 371.9 | 364.6 | 352.3 | 346.5 |
| 60° | 331.3 | 341.4 | 330.5 | 318.9 | 315.3 |
| 62.5° | 297.9 | 309.5 | 297.2 | 287.0 | 282.0 |
| 65° | 262.4 | 278.3 | 263.9 | 253.7 | 249.4 |
| 67.5° | 227.6 | 244.3 | 229.1 | 220.4 | 217.5 |
| 70° | 195.0 | 204.4 | 197.2 | 188.5 | 182.7 |
| 72.5° | 155.8 | 165.3 | 163.8 | 154.4 | 150.8 |
| 75° | 124.0 | 132.7 | 129.8 | 121.8 | 118.2 |
| 77.5° | 92.1 | 101.5 | 98.6 | 89.2 | 87.7 |
| 80° | 66.0 | 72.5 | 67.4 | 58.7 | 55.8 |
| 82.5° | 41.3 | 46.4 | 39.9 | 33.3 | 31.9 |
| 85° | 21.7 | 23.2 | 18.8 | 16.7 | 15.9 |
| 87.5° | 7.2 | 8.0 | 8.0 | 7.2 | 7.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)