

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: P277217

Luminaire Tested: **22CZ2-20HE-UNV-L82765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P277217
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20HE-UNV-L82765-W2A1-U-5000K
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2073.0 lumens
Efficiency: N/A
Efficacy: 130.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

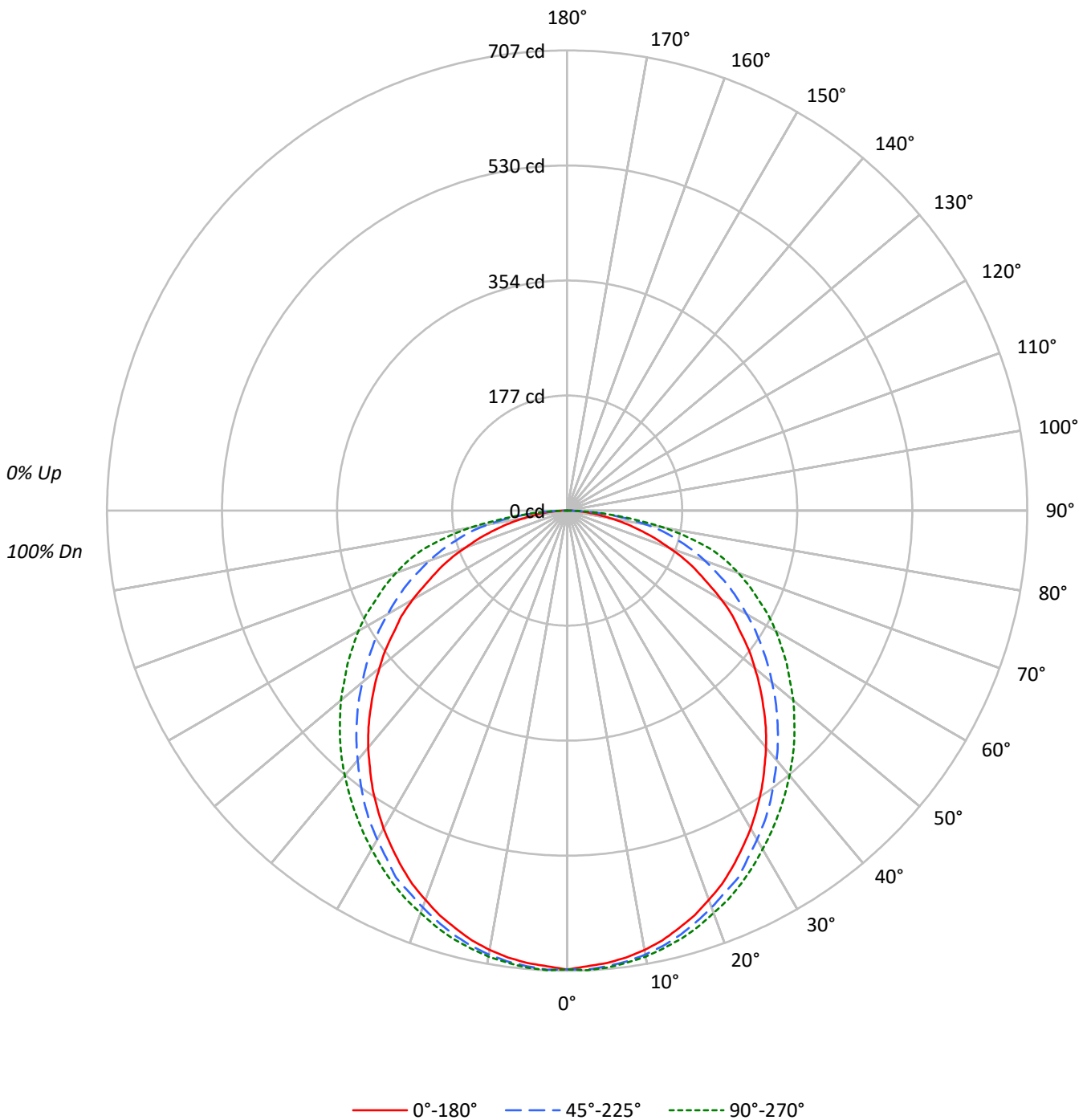
Input Watts (W): 15.903
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 103 | 98 | 94 | 105 | 101 | 96 | 93 | 96 | 93 | 90 | 92 | 90 | 87 | 89 | 86 | 84 | 82 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 71 | 77 | 73 | 70 | 68 |
| 3 | 89 | 78 | 69 | 63 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 59 | 56 |
| 4 | 81 | 69 | 60 | 53 | 79 | 67 | 59 | 52 | 65 | 57 | 52 | 63 | 56 | 51 | 60 | 55 | 50 | 48 |
| 5 | 75 | 61 | 52 | 45 | 72 | 60 | 52 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 41 |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 46 | 39 | 52 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 32 |
| 8 | 59 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 9 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 10 | 52 | 39 | 31 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1897 | 1897 | 1897 |
| 5° | 1885 | 1898 | 1904 |
| 10° | 1873 | 1893 | 1901 |
| 15° | 1850 | 1879 | 1896 |
| 20° | 1823 | 1858 | 1884 |
| 25° | 1790 | 1847 | 1878 |
| 30° | 1753 | 1813 | 1867 |
| 35° | 1712 | 1789 | 1863 |
| 40° | 1670 | 1759 | 1867 |
| 45° | 1623 | 1739 | 1879 |
| 50° | 1576 | 1721 | 1900 |
| 55° | 1522 | 1713 | 1933 |
| 60° | 1477 | 1713 | 1993 |
| 65° | 1403 | 1741 | 2066 |
| 70° | 1308 | 1773 | 2199 |
| 75° | 1199 | 1835 | 2376 |
| 80° | 1043 | 1912 | 2340 |
| 85° | 914 | 1701 | 1859 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 66.7 | 3.2 |
| 10°-20° | 189.9 | 9.2 |
| 20°-30° | 285.0 | 13.7 |
| 30°-40° | 340.6 | 16.4 |
| 40°-50° | 354.2 | 17.1 |
| 50°-60° | 328.3 | 15.8 |
| 60°-70° | 269.3 | 13.0 |
| 70°-80° | 182.0 | 8.8 |
| 80°-90° | 57.2 | 2.8 |
| 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° | 541.6 | 26.1 |
| 0°-40° | 882.1 | 42.6 |
| 0°-60° | 1564.6 | 75.5 |
| 0°-90° | 2073.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2073.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 705 | 705 | 705 | 705 | 705 | |
| 5° | 698 | 699 | 703 | 704 | 705 | 66 |
| 15° | 664 | 667 | 674 | 678 | 680 | 187 |
| 25° | 603 | 608 | 622 | 629 | 632 | 278 |
| 35° | 521 | 528 | 545 | 561 | 567 | 326 |
| 45° | 426 | 434 | 457 | 484 | 494 | 329 |
| 55° | 324 | 335 | 365 | 398 | 412 | 292 |
| 65° | 220 | 233 | 273 | 309 | 324 | 218 |
| 75° | 115 | 135 | 176 | 212 | 228 | 122 |
| 85° | 30 | 41 | 55 | 61 | 60 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 704.9 | 704.9 | 704.9 | 704.9 | 704.9 |
| 2.5° | 700.8 | 702.8 | 705.9 | 706.9 | 706.9 |
| 5° | 697.7 | 698.7 | 702.8 | 703.8 | 704.9 |
| 7.5° | 692.6 | 694.7 | 698.7 | 699.8 | 700.8 |
| 10° | 685.5 | 687.5 | 692.6 | 694.7 | 695.7 |
| 12.5° | 676.3 | 678.3 | 684.5 | 687.5 | 688.5 |
| 15° | 664.1 | 667.1 | 674.3 | 678.3 | 680.4 |
| 17.5° | 651.8 | 654.9 | 662.0 | 668.1 | 670.2 |
| 20° | 636.5 | 643.7 | 648.8 | 656.9 | 657.9 |
| 22.5° | 621.2 | 625.3 | 634.5 | 642.6 | 646.7 |
| 25° | 602.9 | 608.0 | 622.2 | 629.4 | 632.4 |
| 27.5° | 583.5 | 590.6 | 601.8 | 613.1 | 617.1 |
| 30° | 564.1 | 569.2 | 583.5 | 596.7 | 600.8 |
| 32.5° | 542.7 | 549.8 | 565.1 | 578.4 | 584.5 |
| 35° | 521.2 | 528.4 | 544.7 | 561.0 | 567.2 |
| 37.5° | 497.8 | 505.9 | 522.3 | 541.6 | 549.8 |
| 40° | 475.3 | 481.5 | 500.8 | 524.3 | 531.4 |
| 42.5° | 451.9 | 459.0 | 479.4 | 504.9 | 513.1 |
| 45° | 426.4 | 434.5 | 457.0 | 483.5 | 493.7 |
| 47.5° | 401.9 | 410.1 | 434.5 | 461.1 | 473.3 |
| 50° | 376.4 | 386.6 | 411.1 | 441.7 | 453.9 |
| 52.5° | 351.9 | 361.1 | 388.6 | 420.3 | 431.5 |
| 55° | 324.4 | 334.6 | 365.2 | 397.8 | 412.1 |
| 57.5° | 301.9 | 309.1 | 342.7 | 376.4 | 390.7 |
| 60° | 274.4 | 283.6 | 318.3 | 354.0 | 370.3 |
| 62.5° | 244.8 | 260.1 | 295.8 | 332.5 | 348.9 |
| 65° | 220.3 | 232.6 | 273.4 | 309.1 | 324.4 |
| 67.5° | 194.8 | 208.1 | 247.9 | 285.6 | 303.0 |
| 70° | 166.3 | 183.6 | 225.4 | 263.2 | 279.5 |
| 72.5° | 140.8 | 159.1 | 202.0 | 238.7 | 256.0 |
| 75° | 115.3 | 134.6 | 176.5 | 212.2 | 228.5 |
| 77.5° | 90.8 | 112.2 | 153.0 | 180.5 | 190.8 |
| 80° | 67.3 | 87.7 | 123.4 | 142.8 | 151.0 |
| 82.5° | 46.9 | 64.3 | 90.8 | 101.0 | 103.0 |
| 85° | 29.6 | 40.8 | 55.1 | 61.2 | 60.2 |
| 87.5° | 13.3 | 16.3 | 20.4 | 22.4 | 21.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)