

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: P277219

Luminaire Tested: **22CZ2-20HE-UNV-L82765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P277219
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-5700K
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED TO 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2099.0 lumens
Efficiency: N/A
Efficacy: 131.2 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

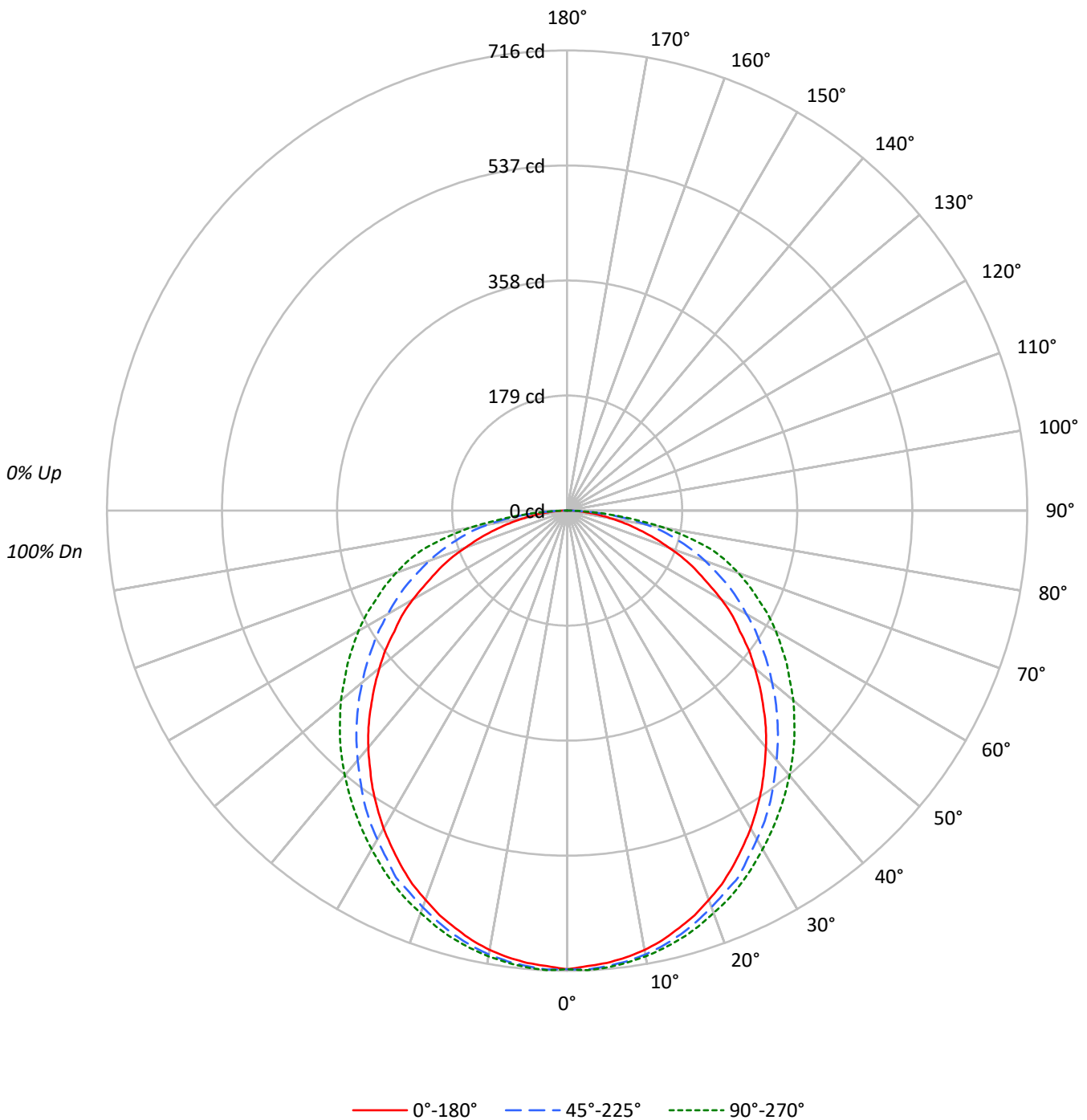
Input Watts (W): 15.996
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | | | | | 100 | | | |
| 1 | 108 | 103 | 98 | 94 | 105 | 101 | 96 | 93 | 96 | 93 | 90 | 92 | 90 | 87 | 89 | 86 | 84 | 82 | | | | | 82 | | | |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 71 | 77 | 73 | 70 | 68 | | | | | 68 | | | |
| 3 | 89 | 78 | 69 | 63 | 86 | 76 | 68 | 62 | 73 | 66 | 61 | 70 | 65 | 60 | 68 | 63 | 59 | 56 | | | | | 56 | | | |
| 4 | 81 | 69 | 60 | 53 | 79 | 67 | 59 | 52 | 65 | 57 | 52 | 63 | 56 | 51 | 60 | 55 | 50 | 48 | | | | | 48 | | | |
| 5 | 75 | 61 | 52 | 45 | 72 | 60 | 52 | 45 | 58 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 41 | | | | | 41 | | | |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 46 | 39 | 52 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 38 | 36 | | | | | 36 | | | |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 32 | | | | | 32 | | | |
| 8 | 59 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 28 | | | | | 28 | | | |
| 9 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 | | | | | 25 | | | |
| 10 | 52 | 39 | 31 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 | | | | | 23 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1921 | 1921 | 1921 |
| 5° | 1908 | 1922 | 1928 |
| 10° | 1897 | 1916 | 1925 |
| 15° | 1873 | 1902 | 1919 |
| 20° | 1846 | 1881 | 1908 |
| 25° | 1812 | 1871 | 1901 |
| 30° | 1775 | 1836 | 1890 |
| 35° | 1734 | 1812 | 1887 |
| 40° | 1691 | 1781 | 1890 |
| 45° | 1643 | 1761 | 1902 |
| 50° | 1595 | 1742 | 1924 |
| 55° | 1541 | 1735 | 1958 |
| 60° | 1495 | 1734 | 2018 |
| 65° | 1421 | 1762 | 2091 |
| 70° | 1325 | 1796 | 2227 |
| 75° | 1213 | 1858 | 2406 |
| 80° | 1057 | 1937 | 2369 |
| 85° | 926 | 1723 | 1880 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 67.5 | 3.2 |
| 10°-20° | 192.2 | 9.2 |
| 20°-30° | 288.6 | 13.7 |
| 30°-40° | 344.9 | 16.4 |
| 40°-50° | 358.6 | 17.1 |
| 50°-60° | 332.4 | 15.8 |
| 60°-70° | 272.6 | 13.0 |
| 70°-80° | 184.3 | 8.8 |
| 80°-90° | 57.9 | 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° | 548.3 | 26.1 |
| 0°-40° | 893.2 | 42.6 |
| 0°-60° | 1584.1 | 75.5 |
| 0°-90° | 2099.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2099.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 714 | 714 | 714 | 714 | 714 | |
| 5° | 706 | 708 | 712 | 713 | 714 | 67 |
| 15° | 672 | 676 | 683 | 687 | 689 | 190 |
| 25° | 610 | 616 | 630 | 637 | 640 | 281 |
| 35° | 528 | 535 | 552 | 568 | 574 | 330 |
| 45° | 432 | 440 | 463 | 490 | 500 | 333 |
| 55° | 328 | 339 | 370 | 403 | 417 | 295 |
| 65° | 223 | 236 | 277 | 313 | 328 | 221 |
| 75° | 117 | 136 | 179 | 215 | 231 | 124 |
| 85° | 30 | 41 | 56 | 62 | 61 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 713.7 | 713.7 | 713.7 | 713.7 | 713.7 |
| 2.5° | 709.6 | 711.6 | 714.7 | 715.8 | 715.8 |
| 5° | 706.5 | 707.5 | 711.6 | 712.7 | 713.7 |
| 7.5° | 701.3 | 703.4 | 707.5 | 708.5 | 709.6 |
| 10° | 694.1 | 696.1 | 701.3 | 703.4 | 704.4 |
| 12.5° | 684.8 | 686.8 | 693.0 | 696.1 | 697.2 |
| 15° | 672.4 | 675.5 | 682.7 | 686.8 | 688.9 |
| 17.5° | 660.0 | 663.1 | 670.3 | 676.5 | 678.6 |
| 20° | 644.5 | 651.7 | 656.9 | 665.2 | 666.2 |
| 22.5° | 629.0 | 633.1 | 642.4 | 650.7 | 654.8 |
| 25° | 610.4 | 615.6 | 630.0 | 637.3 | 640.4 |
| 27.5° | 590.8 | 598.0 | 609.4 | 620.7 | 624.9 |
| 30° | 571.2 | 576.3 | 590.8 | 604.2 | 608.3 |
| 32.5° | 549.5 | 556.7 | 572.2 | 585.6 | 591.8 |
| 35° | 527.8 | 535.0 | 551.5 | 568.1 | 574.3 |
| 37.5° | 504.0 | 512.3 | 528.8 | 548.4 | 556.7 |
| 40° | 481.3 | 487.5 | 507.1 | 530.9 | 538.1 |
| 42.5° | 457.6 | 464.8 | 485.4 | 511.3 | 519.5 |
| 45° | 431.7 | 440.0 | 462.7 | 489.6 | 499.9 |
| 47.5° | 406.9 | 415.2 | 440.0 | 466.8 | 479.2 |
| 50° | 381.1 | 391.4 | 416.2 | 447.2 | 459.6 |
| 52.5° | 356.3 | 365.6 | 393.5 | 425.5 | 436.9 |
| 55° | 328.4 | 338.8 | 369.8 | 402.8 | 417.3 |
| 57.5° | 305.7 | 313.0 | 347.0 | 381.1 | 395.6 |
| 60° | 277.8 | 287.1 | 322.2 | 358.4 | 374.9 |
| 62.5° | 247.9 | 263.4 | 299.5 | 336.7 | 353.2 |
| 65° | 223.1 | 235.5 | 276.8 | 313.0 | 328.4 |
| 67.5° | 197.3 | 210.7 | 251.0 | 289.2 | 306.8 |
| 70° | 168.4 | 185.9 | 228.3 | 266.5 | 283.0 |
| 72.5° | 142.5 | 161.1 | 204.5 | 241.7 | 259.2 |
| 75° | 116.7 | 136.3 | 178.7 | 214.8 | 231.4 |
| 77.5° | 91.9 | 113.6 | 154.9 | 182.8 | 193.1 |
| 80° | 68.2 | 88.8 | 125.0 | 144.6 | 152.9 |
| 82.5° | 47.5 | 65.1 | 91.9 | 102.3 | 104.3 |
| 85° | 30.0 | 41.3 | 55.8 | 62.0 | 60.9 |
| 87.5° | 13.4 | 16.5 | 20.7 | 22.7 | 21.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)