

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: P277587

Luminaire Tested: **22CZ2-39HE-RDP-UNV-L82765-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P277587
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-39HE-RDP-UNV-L82765-W2A1-U-4000K
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH RDP LENS
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2452.0 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

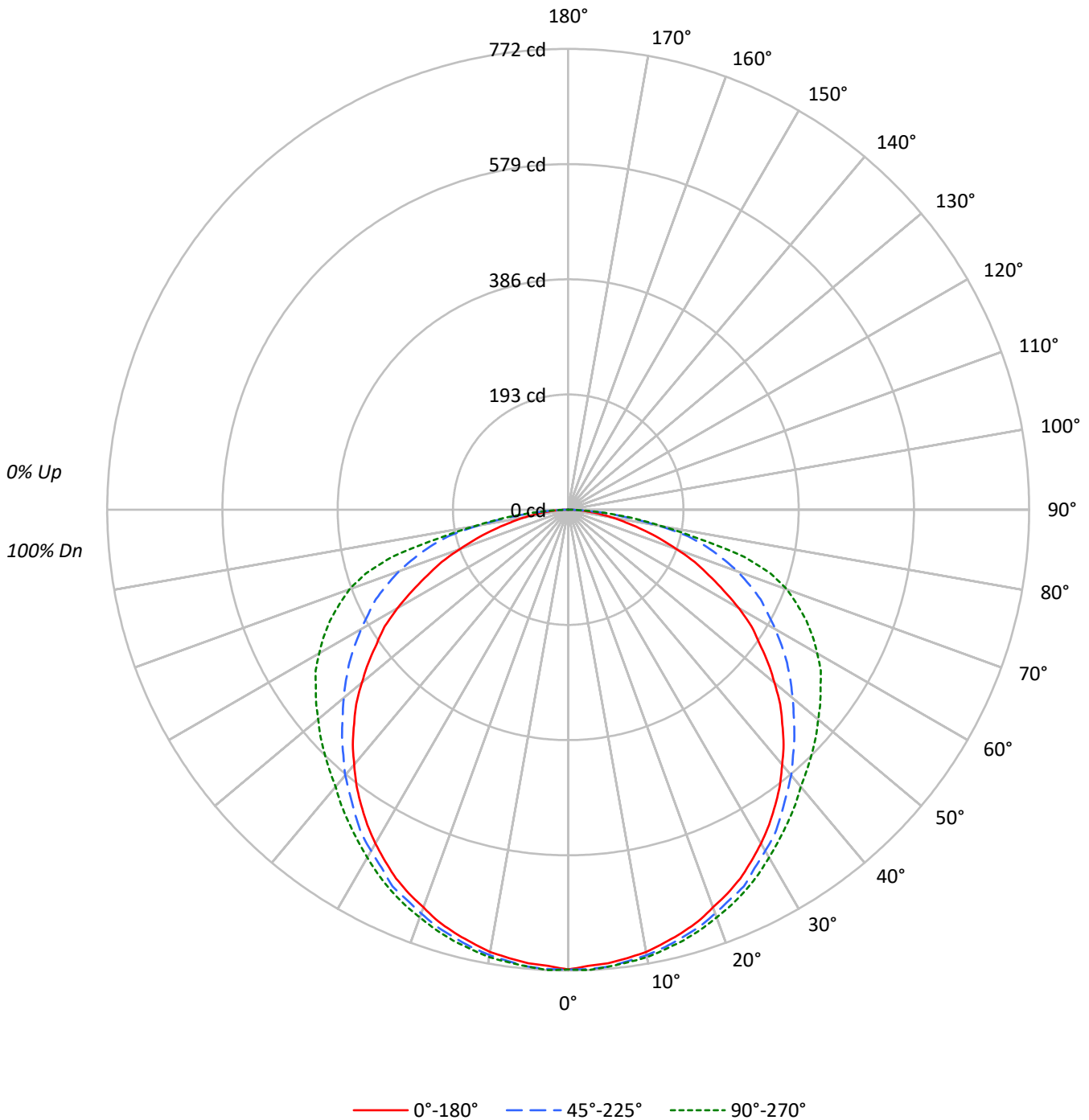
Input Watts (W): 30.504
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 100 | 96 | 92 | 96 | 92 | 89 | 92 | 89 | 86 | 88 | 86 | 84 | 82 | | | | | 82 | | | |
| 2 | 97 | 88 | 81 | 75 | 95 | 86 | 80 | 74 | 83 | 77 | 72 | 80 | 75 | 71 | 76 | 72 | 69 | 67 | | | | | 67 | | | |
| 3 | 88 | 77 | 68 | 61 | 86 | 75 | 67 | 61 | 72 | 65 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 55 | | | | | 55 | | | |
| 4 | 80 | 68 | 59 | 51 | 78 | 66 | 58 | 51 | 64 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 | | | | | 47 | | | |
| 5 | 74 | 60 | 51 | 44 | 72 | 59 | 50 | 44 | 57 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 42 | 40 | | | | | 40 | | | |
| 6 | 68 | 54 | 45 | 38 | 66 | 53 | 44 | 38 | 51 | 43 | 38 | 50 | 43 | 37 | 48 | 42 | 37 | 35 | | | | | 35 | | | |
| 7 | 63 | 49 | 40 | 33 | 61 | 48 | 39 | 33 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 31 | | | | | 31 | | | |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 35 | 30 | 43 | 35 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 27 | | | | | 27 | | | |
| 9 | 55 | 41 | 32 | 27 | 53 | 40 | 32 | 27 | 39 | 32 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 24 | | | | | 24 | | | |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 29 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 34 | 28 | 24 | 22 | | | | | 22 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2073 | 2073 | 2073 |
| 5° | 2061 | 2076 | 2076 |
| 10° | 2055 | 2070 | 2080 |
| 15° | 2045 | 2065 | 2081 |
| 20° | 2030 | 2061 | 2082 |
| 25° | 2024 | 2067 | 2089 |
| 30° | 2007 | 2051 | 2091 |
| 35° | 1985 | 2044 | 2103 |
| 40° | 1958 | 2040 | 2129 |
| 45° | 1929 | 2039 | 2197 |
| 50° | 1888 | 2054 | 2288 |
| 55° | 1836 | 2099 | 2420 |
| 60° | 1777 | 2155 | 2592 |
| 65° | 1654 | 2262 | 2802 |
| 70° | 1519 | 2370 | 3065 |
| 75° | 1332 | 2494 | 3169 |
| 80° | 1147 | 2376 | 2487 |
| 85° | 1003 | 1726 | 1893 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 72.9 | 3.0 |
| 10°-20° | 209.2 | 8.5 |
| 20°-30° | 319.2 | 13.0 |
| 30°-40° | 389.7 | 15.9 |
| 40°-50° | 416.7 | 17.0 |
| 50°-60° | 402.2 | 16.4 |
| 60°-70° | 346.2 | 14.1 |
| 70°-80° | 234.2 | 9.6 |
| 80°-90° | 61.8 | 2.5 |
| 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° | 601.2 | 24.5 |
| 0°-40° | 990.9 | 40.4 |
| 0°-60° | 1809.7 | 73.8 |
| 0°-90° | 2452.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2452.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 770 | 770 | 770 | 770 | 770 | |
| 5° | 763 | 765 | 768 | 768 | 768 | 72 |
| 15° | 734 | 736 | 741 | 745 | 747 | 207 |
| 25° | 682 | 685 | 696 | 700 | 704 | 314 |
| 35° | 604 | 610 | 622 | 635 | 640 | 378 |
| 45° | 507 | 516 | 536 | 563 | 577 | 391 |
| 55° | 391 | 404 | 447 | 492 | 516 | 351 |
| 65° | 260 | 285 | 355 | 411 | 440 | 258 |
| 75° | 128 | 170 | 240 | 289 | 305 | 137 |
| 85° | 32 | 45 | 56 | 58 | 61 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 770.2 | 770.2 | 770.2 | 770.2 | 770.2 |
| 2.5° | 764.8 | 766.6 | 770.2 | 770.2 | 772.0 |
| 5° | 763.0 | 764.8 | 768.4 | 768.4 | 768.4 |
| 7.5° | 757.6 | 759.4 | 763.0 | 764.8 | 764.8 |
| 10° | 752.2 | 754.0 | 757.6 | 759.4 | 761.2 |
| 12.5° | 743.2 | 745.0 | 750.4 | 754.0 | 754.0 |
| 15° | 734.1 | 735.9 | 741.4 | 745.0 | 746.8 |
| 17.5° | 723.3 | 726.9 | 732.3 | 735.9 | 737.7 |
| 20° | 708.9 | 712.5 | 719.7 | 725.1 | 726.9 |
| 22.5° | 696.3 | 699.9 | 707.1 | 712.5 | 716.1 |
| 25° | 681.8 | 685.4 | 696.3 | 699.9 | 703.5 |
| 27.5° | 663.8 | 667.4 | 676.4 | 683.6 | 689.0 |
| 30° | 645.8 | 649.4 | 660.2 | 669.2 | 672.8 |
| 32.5° | 625.9 | 631.3 | 644.0 | 651.2 | 656.6 |
| 35° | 604.3 | 609.7 | 622.3 | 634.9 | 640.3 |
| 37.5° | 582.6 | 588.0 | 600.7 | 616.9 | 624.1 |
| 40° | 557.4 | 564.6 | 580.8 | 602.5 | 606.1 |
| 42.5° | 533.9 | 542.9 | 557.4 | 582.6 | 591.6 |
| 45° | 506.9 | 515.9 | 535.7 | 562.8 | 577.2 |
| 47.5° | 481.6 | 490.6 | 512.3 | 544.7 | 562.8 |
| 50° | 450.9 | 463.6 | 490.6 | 528.5 | 546.5 |
| 52.5° | 422.1 | 432.9 | 469.0 | 510.5 | 532.1 |
| 55° | 391.4 | 404.0 | 447.3 | 492.4 | 515.9 |
| 57.5° | 364.4 | 375.2 | 423.9 | 474.4 | 501.5 |
| 60° | 330.1 | 344.5 | 400.4 | 454.6 | 481.6 |
| 62.5° | 294.0 | 315.7 | 377.0 | 432.9 | 461.8 |
| 65° | 259.7 | 285.0 | 355.3 | 411.3 | 440.1 |
| 67.5° | 229.1 | 256.1 | 328.3 | 387.8 | 414.9 |
| 70° | 193.0 | 227.3 | 301.2 | 359.0 | 389.6 |
| 72.5° | 160.5 | 198.4 | 270.6 | 328.3 | 355.3 |
| 75° | 128.1 | 169.6 | 239.9 | 288.6 | 304.8 |
| 77.5° | 99.2 | 138.9 | 205.6 | 220.1 | 221.9 |
| 80° | 74.0 | 110.0 | 153.3 | 155.1 | 160.5 |
| 82.5° | 50.5 | 77.6 | 99.2 | 108.2 | 110.0 |
| 85° | 32.5 | 45.1 | 55.9 | 57.7 | 61.3 |
| 87.5° | 14.4 | 16.2 | 19.8 | 18.0 | 18.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)