

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: P277301

Luminaire Tested: **22CZ2-34HE-UNV-L92765-W2A1-U-6500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277301  
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: 22CZ2-34HE-UNV-L92765-W2A1-U-6500K  
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 6500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3039.0 lumens  
Efficiency: N/A  
Efficacy: 113.1 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

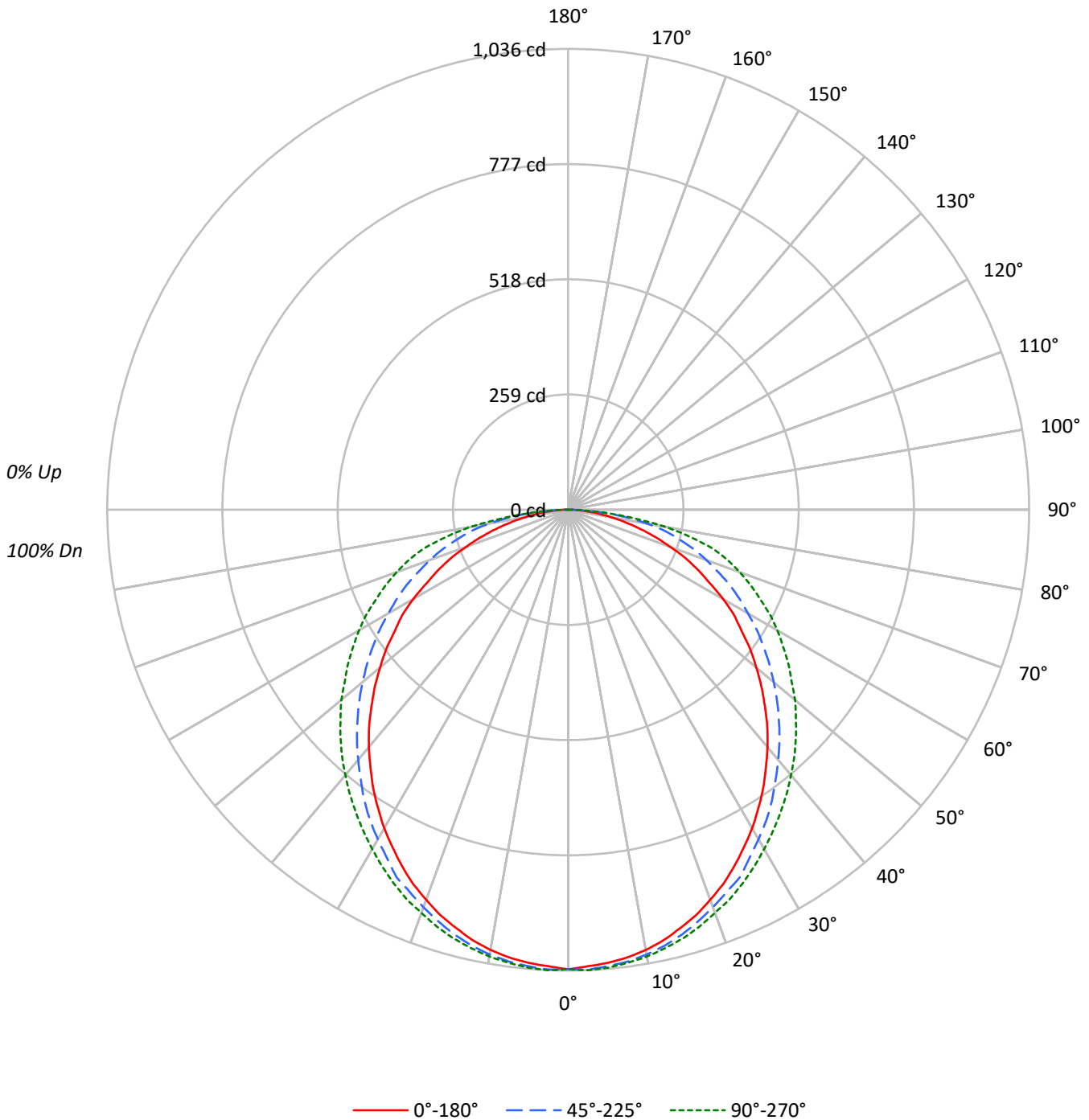
Input Watts (W): 26.877  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 2781 | 2781 | 2781 |
| 5°  | 2763 | 2783 | 2791 |
| 10° | 2746 | 2775 | 2787 |
| 15° | 2712 | 2754 | 2779 |
| 20° | 2672 | 2724 | 2762 |
| 25° | 2624 | 2708 | 2753 |
| 30° | 2570 | 2658 | 2737 |
| 35° | 2510 | 2623 | 2731 |
| 40° | 2448 | 2579 | 2737 |
| 45° | 2379 | 2549 | 2755 |
| 50° | 2310 | 2523 | 2786 |
| 55° | 2231 | 2512 | 2834 |
| 60° | 2165 | 2511 | 2921 |
| 65° | 2057 | 2552 | 3028 |
| 70° | 1917 | 2600 | 3223 |
| 75° | 1757 | 2690 | 3483 |
| 80° | 1530 | 2803 | 3429 |
| 85° | 1340 | 2495 | 2723 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 97.7   | 3.2       |
| 10°-20°   | 278.3  | 9.2       |
| 20°-30°   | 417.9  | 13.7      |
| 30°-40°   | 499.3  | 16.4      |
| 40°-50°   | 519.2  | 17.1      |
| 50°-60°   | 481.2  | 15.8      |
| 60°-70°   | 394.7  | 13.0      |
| 70°-80°   | 266.8  | 8.8       |
| 80°-90°   | 83.8   | 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°    | 793.9  | 26.1      |
| 0°-40°    | 1293.2 | 42.6      |
| 0°-60°    | 2293.6 | 75.5      |
| 0°-90°    | 3039.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3039.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1033 | 1033  | 1033 | 1033  | 1033 |      |
| 5°  | 1023 | 1024  | 1030 | 1032  | 1033 | 97   |
| 15° | 974  | 978   | 988  | 994   | 997  | 275  |
| 25° | 884  | 891   | 912  | 923   | 927  | 407  |
| 35° | 764  | 775   | 798  | 822   | 831  | 478  |
| 45° | 625  | 637   | 670  | 709   | 724  | 483  |
| 55° | 476  | 490   | 535  | 583   | 604  | 427  |
| 65° | 323  | 341   | 401  | 453   | 476  | 319  |
| 75° | 169  | 197   | 259  | 311   | 335  | 179  |
| 85° | 43   | 60    | 81   | 90    | 88   | 49   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1033.3 | 1033.3 | 1033.3 | 1033.3 | 1033.3 |
| 2.5°  | 1027.3 | 1030.3 | 1034.8 | 1036.3 | 1036.3 |
| 5°    | 1022.8 | 1024.3 | 1030.3 | 1031.8 | 1033.3 |
| 7.5°  | 1015.4 | 1018.4 | 1024.3 | 1025.8 | 1027.3 |
| 10°   | 1004.9 | 1007.9 | 1015.4 | 1018.4 | 1019.9 |
| 12.5° | 991.4  | 994.4  | 1003.4 | 1007.9 | 1009.4 |
| 15°   | 973.5  | 978.0  | 988.5  | 994.4  | 997.4  |
| 17.5° | 955.6  | 960.0  | 970.5  | 979.5  | 982.5  |
| 20°   | 933.1  | 943.6  | 951.1  | 963.0  | 964.5  |
| 22.5° | 910.7  | 916.7  | 930.1  | 942.1  | 948.1  |
| 25°   | 883.8  | 891.3  | 912.2  | 922.7  | 927.1  |
| 27.5° | 855.4  | 865.8  | 882.3  | 898.7  | 904.7  |
| 30°   | 827.0  | 834.4  | 855.4  | 874.8  | 880.8  |
| 32.5° | 795.5  | 806.0  | 828.4  | 847.9  | 856.9  |
| 35°   | 764.1  | 774.6  | 798.5  | 822.5  | 831.4  |
| 37.5° | 729.8  | 741.7  | 765.6  | 794.1  | 806.0  |
| 40°   | 696.9  | 705.8  | 734.2  | 768.6  | 779.1  |
| 42.5° | 662.5  | 672.9  | 702.8  | 740.2  | 752.2  |
| 45°   | 625.1  | 637.0  | 669.9  | 708.8  | 723.8  |
| 47.5° | 589.2  | 601.1  | 637.0  | 675.9  | 693.9  |
| 50°   | 551.8  | 566.8  | 602.6  | 647.5  | 665.4  |
| 52.5° | 515.9  | 529.4  | 569.7  | 616.1  | 632.6  |
| 55°   | 475.5  | 490.5  | 535.4  | 583.2  | 604.1  |
| 57.5° | 442.6  | 453.1  | 502.5  | 551.8  | 572.7  |
| 60°   | 402.3  | 415.7  | 466.6  | 518.9  | 542.8  |
| 62.5° | 358.9  | 381.3  | 433.7  | 487.5  | 511.4  |
| 65°   | 323.0  | 340.9  | 400.8  | 453.1  | 475.5  |
| 67.5° | 285.6  | 305.1  | 363.4  | 418.7  | 444.1  |
| 70°   | 243.7  | 269.2  | 330.5  | 385.8  | 409.7  |
| 72.5° | 206.4  | 233.3  | 296.1  | 349.9  | 375.3  |
| 75°   | 169.0  | 197.4  | 258.7  | 311.0  | 335.0  |
| 77.5° | 133.1  | 164.5  | 224.3  | 264.7  | 279.6  |
| 80°   | 98.7   | 128.6  | 180.9  | 209.4  | 221.3  |
| 82.5° | 68.8   | 94.2   | 133.1  | 148.0  | 151.0  |
| 85°   | 43.4   | 59.8   | 80.8   | 89.7   | 88.2   |
| 87.5° | 19.4   | 23.9   | 29.9   | 32.9   | 31.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)