

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: P258979

Luminaire Tested: **14CZ-LD5-44-RDP-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P258979  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35909)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ-LD5-44-RDP-UNV-L82765-W2A1-U-3500K  
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2856.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 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

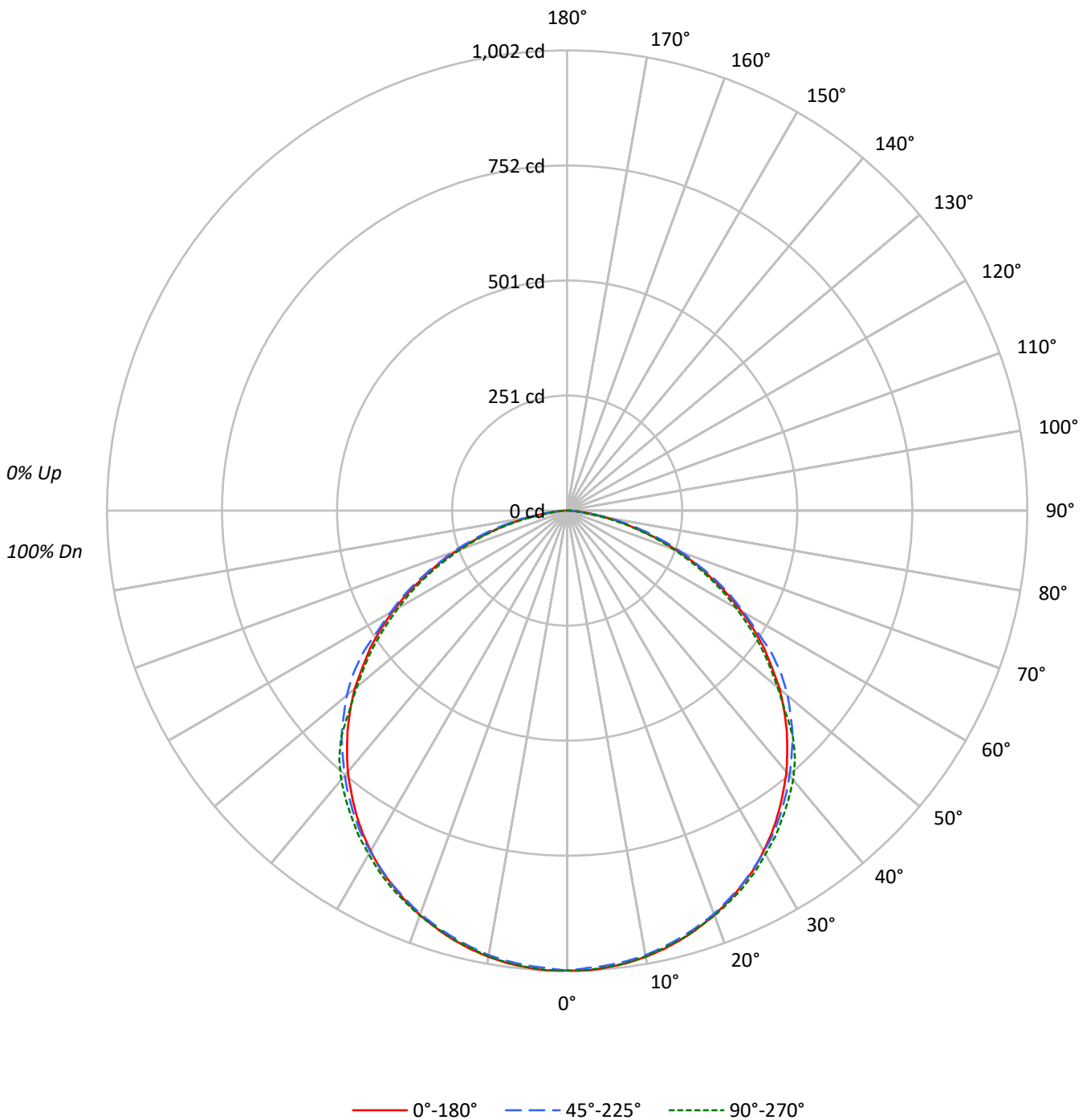
Input Watts (W): 35.805  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 61  | 59  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 65  | 58  | 53  | 62  | 57  | 53  | 51  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  | 58  | 51  | 46  | 56  | 50  | 46  | 44  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 47  | 41  | 54  | 47  | 41  | 52  | 46  | 41  | 51  | 45  | 40  | 38  |
| 7   | 65  | 52  | 43  | 37  | 63  | 51  | 42  | 36  | 49  | 42  | 36  | 48  | 41  | 36  | 46  | 40  | 36  | 34  |
| 8   | 61  | 47  | 38  | 33  | 59  | 46  | 38  | 33  | 45  | 38  | 32  | 44  | 37  | 32  | 43  | 36  | 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  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2695 | 2695 | 2695 |
| 5°  | 2698 | 2686 | 2696 |
| 10° | 2696 | 2686 | 2694 |
| 15° | 2692 | 2679 | 2689 |
| 20° | 2684 | 2676 | 2687 |
| 25° | 2673 | 2670 | 2689 |
| 30° | 2658 | 2664 | 2684 |
| 35° | 2636 | 2657 | 2685 |
| 40° | 2609 | 2646 | 2688 |
| 45° | 2572 | 2643 | 2646 |
| 50° | 2529 | 2623 | 2502 |
| 55° | 2459 | 2555 | 2411 |
| 60° | 2355 | 2390 | 2285 |
| 65° | 2205 | 2264 | 2146 |
| 70° | 2007 | 2087 | 1941 |
| 75° | 1674 | 1829 | 1645 |
| 80° | 1327 | 1399 | 1139 |
| 85° | 861  | 747  | 661  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 94.8   | 3.3       |
| 10°-20°   | 272.3  | 9.5       |
| 20°-30°   | 415.7  | 14.6      |
| 30°-40°   | 506.9  | 17.7      |
| 40°-50°   | 530.7  | 18.6      |
| 50°-60°   | 472.2  | 16.5      |
| 60°-70°   | 348.4  | 12.2      |
| 70°-80°   | 180.0  | 6.3       |
| 80°-90°   | 35.0   | 1.2       |
| 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°    | 782.9  | 27.4      |
| 0°-40°    | 1289.8 | 45.2      |
| 0°-60°    | 2292.7 | 80.3      |
| 0°-90°    | 2856.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2856.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1002 | 1002  | 1002 | 1002  | 1002 |      |
| 5°  | 999  | 998   | 994  | 998   | 998  | 95   |
| 15° | 966  | 965   | 962  | 965   | 965  | 273  |
| 25° | 900  | 900   | 899  | 906   | 906  | 415  |
| 35° | 802  | 803   | 809  | 818   | 817  | 502  |
| 45° | 676  | 680   | 694  | 701   | 695  | 521  |
| 55° | 524  | 535   | 545  | 521   | 514  | 467  |
| 65° | 346  | 370   | 356  | 344   | 337  | 343  |
| 75° | 161  | 178   | 176  | 162   | 158  | 174  |
| 85° | 28   | 31    | 24   | 22    | 21   | 36   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1001.6 | 1001.6 | 1001.6 | 1001.6 | 1001.6 |
| 2.5°  | 1002.5 | 1001.6 | 997.0  | 1001.6 | 1001.6 |
| 5°    | 998.8  | 997.9  | 994.2  | 997.9  | 997.9  |
| 7.5°  | 994.2  | 993.2  | 989.5  | 993.2  | 993.2  |
| 10°   | 986.7  | 985.8  | 983.0  | 986.7  | 985.8  |
| 12.5° | 977.4  | 977.4  | 972.8  | 977.4  | 975.5  |
| 15°   | 966.2  | 965.3  | 961.6  | 965.3  | 965.3  |
| 17.5° | 952.3  | 951.3  | 948.6  | 953.2  | 951.3  |
| 20°   | 937.4  | 936.4  | 934.6  | 939.2  | 938.3  |
| 22.5° | 919.7  | 919.7  | 916.9  | 922.5  | 922.5  |
| 25°   | 900.1  | 900.1  | 899.2  | 905.7  | 905.7  |
| 27.5° | 880.6  | 878.7  | 878.7  | 885.3  | 886.2  |
| 30°   | 855.5  | 855.5  | 857.3  | 864.8  | 863.8  |
| 32.5° | 830.3  | 831.3  | 835.0  | 841.5  | 842.4  |
| 35°   | 802.4  | 803.3  | 808.9  | 818.2  | 817.3  |
| 37.5° | 772.6  | 775.4  | 781.9  | 792.2  | 792.2  |
| 40°   | 742.8  | 744.7  | 753.1  | 764.2  | 765.2  |
| 42.5° | 709.3  | 714.0  | 723.3  | 736.3  | 734.5  |
| 45°   | 675.8  | 680.5  | 694.4  | 700.9  | 695.4  |
| 47.5° | 640.4  | 646.0  | 660.0  | 660.9  | 642.3  |
| 50°   | 604.1  | 610.6  | 626.5  | 607.9  | 597.6  |
| 52.5° | 562.2  | 574.3  | 588.3  | 562.2  | 555.7  |
| 55°   | 524.1  | 535.2  | 544.6  | 521.3  | 513.8  |
| 57.5° | 481.3  | 496.2  | 489.6  | 478.5  | 469.2  |
| 60°   | 437.5  | 453.3  | 444.0  | 432.9  | 424.5  |
| 62.5° | 392.8  | 410.5  | 401.2  | 390.0  | 382.6  |
| 65°   | 346.3  | 370.5  | 355.6  | 343.5  | 337.0  |
| 67.5° | 302.5  | 325.8  | 308.1  | 298.8  | 292.3  |
| 70°   | 255.1  | 274.6  | 265.3  | 253.2  | 246.7  |
| 72.5° | 208.5  | 223.4  | 220.6  | 207.6  | 202.9  |
| 75°   | 161.0  | 177.8  | 175.9  | 162.0  | 158.2  |
| 77.5° | 121.0  | 136.8  | 131.3  | 120.1  | 115.4  |
| 80°   | 85.6   | 95.9   | 90.3   | 77.3   | 73.5   |
| 82.5° | 52.1   | 60.5   | 51.2   | 43.8   | 40.0   |
| 85°   | 27.9   | 30.7   | 24.2   | 22.3   | 21.4   |
| 87.5° | 10.2   | 10.2   | 10.2   | 9.3    | 9.3    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)