

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: P258583

Luminaire Tested: **14CZ-LD5-35-UNV-L93050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P258583  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35573)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ-LD5-35-UNV-L93050-W2A1-U-4000K  
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3245.0 lumens  
Efficiency: N/A  
Efficacy: 115.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

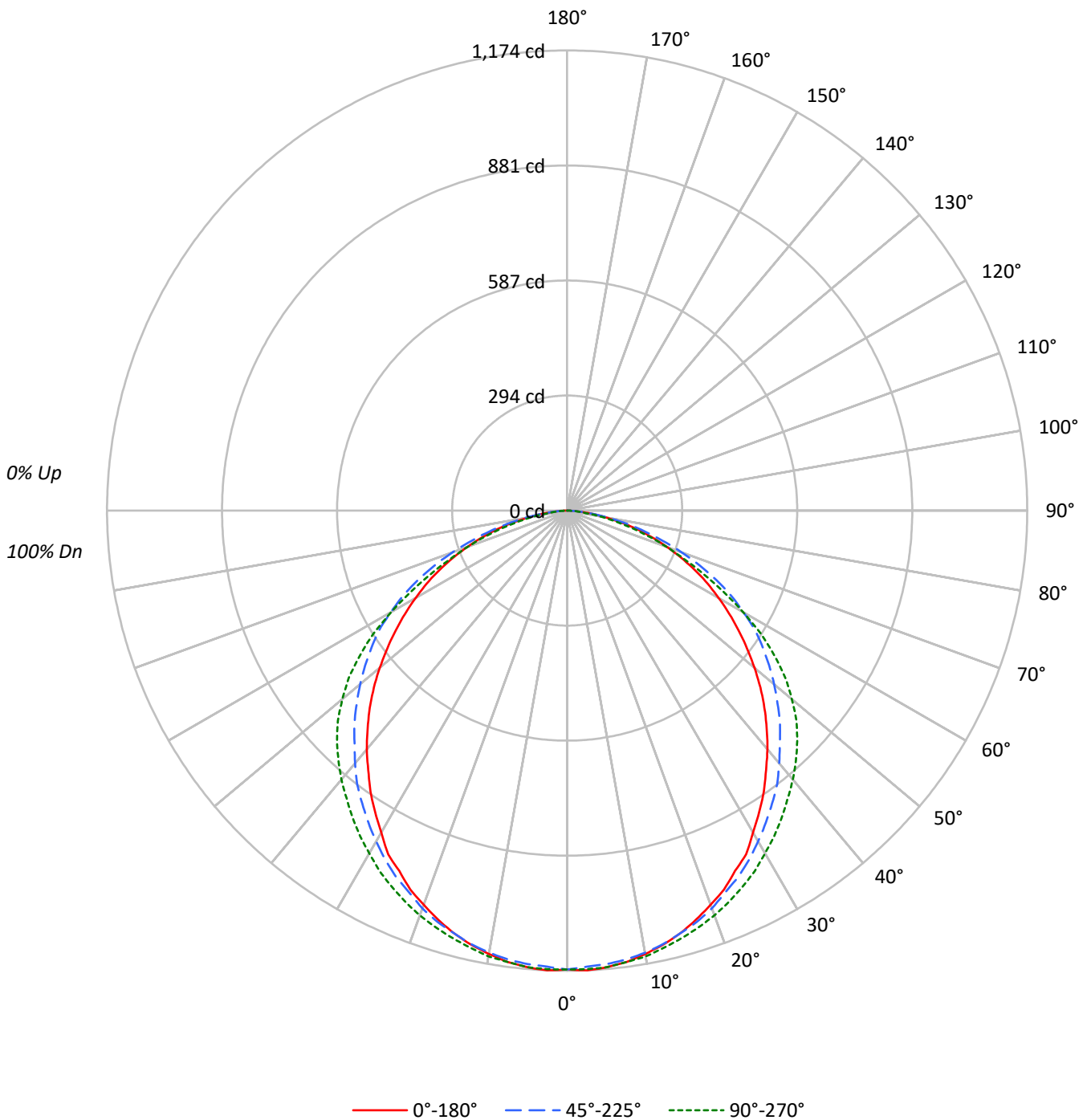
Input Watts (W): 28.179  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P258583

CATALOG NUMBER: 14CZ-LD5-35-UNV-L93050-W2A1-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P258583

CATALOG NUMBER: 14CZ-LD5-35-UNV-L93050-W2A1-U-4000K

**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  | 66  | 88  | 78  | 71  | 65  | 75  | 69  | 64  | 73  | 67  | 63  | 70  | 66  | 62  | 59  |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 61  | 55  | 67  | 60  | 54  | 65  | 59  | 54  | 63  | 57  | 53  | 51  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 46  | 56  | 51  | 46  | 44  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 38  |
| 7   | 65  | 52  | 43  | 37  | 63  | 51  | 43  | 37  | 49  | 42  | 36  | 48  | 41  | 36  | 47  | 40  | 36  | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 46  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 30  |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 29  | 42  | 34  | 29  | 40  | 34  | 29  | 39  | 33  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 37  | 31  | 26  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3151 | 3151 | 3151 |
| 5°  | 3159 | 3137 | 3159 |
| 10° | 3139 | 3130 | 3156 |
| 15° | 3111 | 3111 | 3146 |
| 20° | 3065 | 3092 | 3147 |
| 25° | 3012 | 3064 | 3144 |
| 30° | 2948 | 3027 | 3137 |
| 35° | 2875 | 2996 | 3138 |
| 40° | 2793 | 2956 | 3147 |
| 45° | 2709 | 2922 | 3160 |
| 50° | 2612 | 2887 | 3134 |
| 55° | 2507 | 2860 | 3032 |
| 60° | 2402 | 2798 | 2789 |
| 65° | 2292 | 2679 | 2444 |
| 70° | 2127 | 2442 | 2115 |
| 75° | 1930 | 2129 | 1747 |
| 80° | 1537 | 1686 | 1289 |
| 85° | 1087 | 939  | 741  |



TEST NUMBER: P258583

CATALOG NUMBER: 14CZ-LD5-35-UNV-L93050-W2A1-U-4000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 110.8  | 3.4       |
| 10°-20°   | 316.5  | 9.8       |
| 20°-30°   | 477.2  | 14.7      |
| 30°-40°   | 572.1  | 17.6      |
| 40°-50°   | 593.7  | 18.3      |
| 50°-60°   | 535.4  | 16.5      |
| 60°-70°   | 390.6  | 12.0      |
| 70°-80°   | 205.0  | 6.3       |
| 80°-90°   | 43.7   | 1.3       |
| 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°    | 904.6  | 27.9      |
| 0°-40°    | 1476.6 | 45.5      |
| 0°-60°    | 2605.8 | 80.3      |
| 0°-90°    | 3245.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3245.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1171 | 1171  | 1171 | 1171  | 1171 |      |
| 5°  | 1169 | 1166  | 1161 | 1169  | 1169 | 111  |
| 15° | 1117 | 1117  | 1117 | 1129  | 1129 | 315  |
| 25° | 1014 | 1019  | 1032 | 1054  | 1059 | 468  |
| 35° | 875  | 885   | 912  | 946   | 955  | 547  |
| 45° | 712  | 726   | 768  | 814   | 830  | 549  |
| 55° | 534  | 554   | 610  | 650   | 646  | 478  |
| 65° | 360  | 381   | 421  | 405   | 384  | 356  |
| 75° | 186  | 211   | 205  | 178   | 168  | 195  |
| 85° | 35   | 43    | 30   | 26    | 24   | 45   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P258583

CATALOG NUMBER: 14CZ-LD5-35-UNV-L93050-W2A1-U-4000K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1171.0 | 1171.0 | 1171.0 | 1171.0 | 1171.0 |
| 2.5°  | 1174.2 | 1171.0 | 1164.6 | 1171.0 | 1171.0 |
| 5°    | 1169.4 | 1166.2 | 1161.4 | 1169.4 | 1169.4 |
| 7.5°  | 1161.4 | 1158.2 | 1155.0 | 1163.0 | 1161.4 |
| 10°   | 1148.6 | 1147.0 | 1145.4 | 1155.0 | 1155.0 |
| 12.5° | 1134.2 | 1134.2 | 1132.6 | 1143.8 | 1142.2 |
| 15°   | 1116.6 | 1116.6 | 1116.6 | 1129.4 | 1129.4 |
| 17.5° | 1094.2 | 1097.4 | 1100.6 | 1115.0 | 1115.0 |
| 20°   | 1070.2 | 1073.4 | 1079.8 | 1097.4 | 1099.0 |
| 22.5° | 1046.2 | 1047.8 | 1054.2 | 1075.0 | 1079.8 |
| 25°   | 1014.3 | 1019.1 | 1031.8 | 1054.2 | 1059.0 |
| 27.5° | 988.7  | 990.3  | 1004.7 | 1030.2 | 1036.6 |
| 30°   | 948.7  | 959.9  | 974.3  | 1003.1 | 1009.5 |
| 32.5° | 911.9  | 921.5  | 943.9  | 974.3  | 983.9  |
| 35°   | 875.1  | 884.7  | 911.9  | 945.5  | 955.1  |
| 37.5° | 833.5  | 847.9  | 879.9  | 913.5  | 924.7  |
| 40°   | 795.1  | 807.9  | 841.5  | 883.1  | 895.9  |
| 42.5° | 753.5  | 766.3  | 803.1  | 849.5  | 863.9  |
| 45°   | 711.9  | 726.3  | 767.9  | 814.3  | 830.3  |
| 47.5° | 668.7  | 684.7  | 727.9  | 779.1  | 793.5  |
| 50°   | 623.9  | 641.5  | 689.5  | 742.3  | 748.7  |
| 52.5° | 579.1  | 598.3  | 649.5  | 695.9  | 702.3  |
| 55°   | 534.3  | 553.5  | 609.5  | 649.5  | 646.3  |
| 57.5° | 491.1  | 511.9  | 569.5  | 590.3  | 587.1  |
| 60°   | 446.3  | 468.7  | 519.9  | 529.5  | 518.3  |
| 62.5° | 404.7  | 425.5  | 473.5  | 465.5  | 451.1  |
| 65°   | 359.9  | 380.7  | 420.7  | 404.7  | 383.9  |
| 67.5° | 315.2  | 340.8  | 366.3  | 339.2  | 323.2  |
| 70°   | 270.4  | 299.2  | 310.4  | 283.2  | 268.8  |
| 72.5° | 227.2  | 257.6  | 254.4  | 227.2  | 217.6  |
| 75°   | 185.6  | 211.2  | 204.8  | 177.6  | 168.0  |
| 77.5° | 140.8  | 169.6  | 155.2  | 132.8  | 124.8  |
| 80°   | 99.2   | 124.8  | 108.8  | 89.6   | 83.2   |
| 82.5° | 65.6   | 83.2   | 67.2   | 52.8   | 48.0   |
| 85°   | 35.2   | 43.2   | 30.4   | 25.6   | 24.0   |
| 87.5° | 14.4   | 12.8   | 11.2   | 11.2   | 9.6    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)