

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: P258797

Luminaire Tested: **14CZ-LD5-35-S-UNV-L82765-W2A1-U-5500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P258797  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35112)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ-LD5-35-S-UNV-L82765-W2A1-U-5500K  
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 5500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3750.0 lumens  
Efficiency: N/A  
Efficacy: 133.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

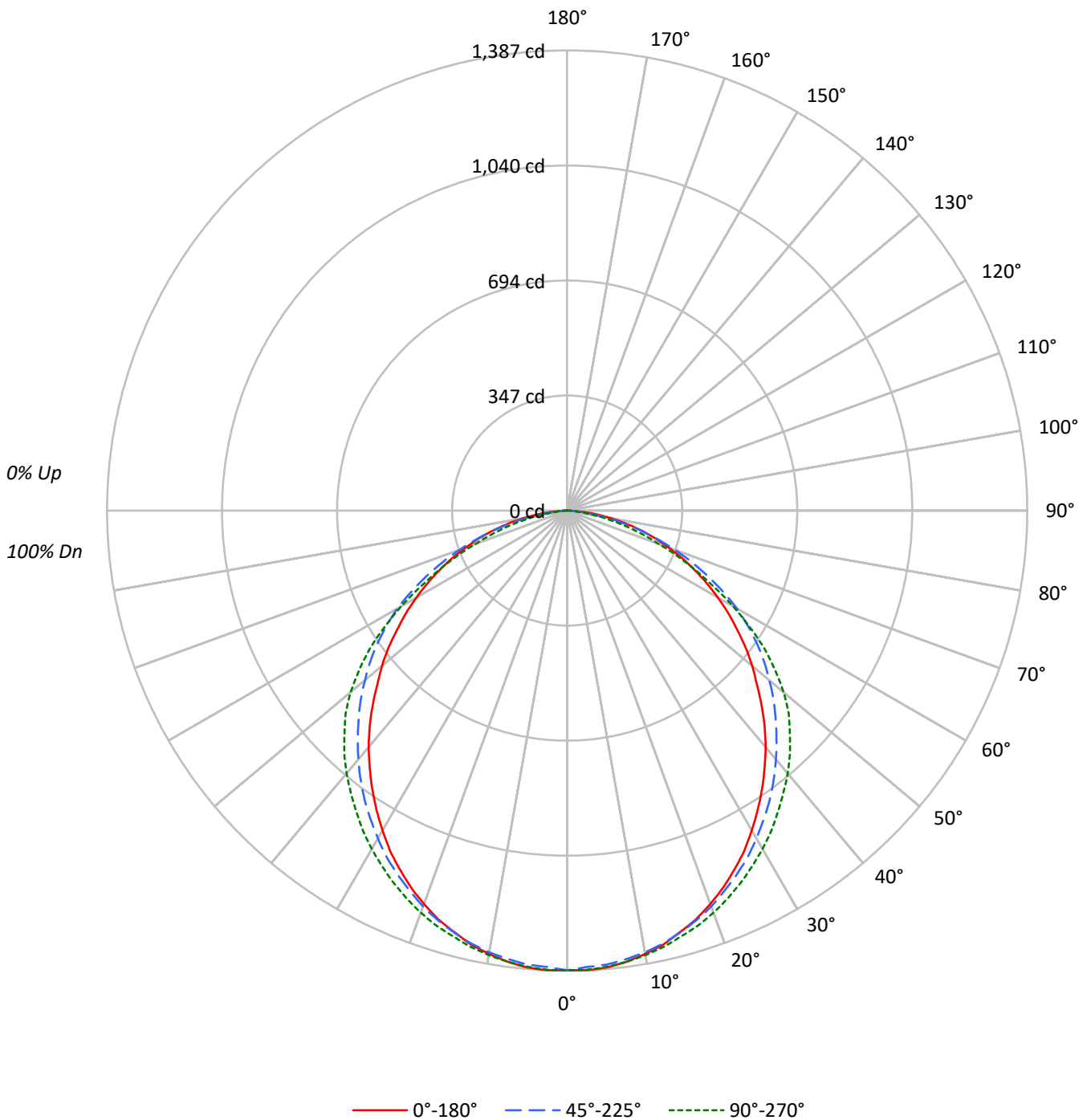
Input Watts (W): 28.179  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 105 | 100 | 97  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 83  | 78  | 86  | 81  | 76  | 83  | 78  | 75  | 80  | 76  | 73  | 71  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 68  | 63  | 70  | 66  | 62  | 60  |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |
| 5   | 76  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 57  | 51  | 46  | 44  |
| 6   | 71  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 55  | 47  | 42  | 53  | 46  | 41  | 51  | 45  | 41  | 39  |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 36  | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 32  | 31  |
| 9   | 57  | 44  | 35  | 30  | 56  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 40  | 34  | 29  | 28  |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 27  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3728 | 3728 | 3728 |
| 5°  | 3733 | 3710 | 3728 |
| 10° | 3707 | 3694 | 3717 |
| 15° | 3664 | 3668 | 3701 |
| 20° | 3613 | 3637 | 3694 |
| 25° | 3543 | 3592 | 3676 |
| 30° | 3458 | 3546 | 3660 |
| 35° | 3365 | 3497 | 3640 |
| 40° | 3269 | 3440 | 3633 |
| 45° | 3154 | 3383 | 3612 |
| 50° | 3050 | 3330 | 3568 |
| 55° | 2932 | 3277 | 3410 |
| 60° | 2824 | 3183 | 3112 |
| 65° | 2702 | 2979 | 2734 |
| 70° | 2551 | 2708 | 2314 |
| 75° | 2380 | 2346 | 1911 |
| 80° | 2098 | 1813 | 1398 |
| 85° | 1652 | 877  | 775  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 130.9  | 3.5       |
| 10°-20°   | 372.9  | 9.9       |
| 20°-30°   | 559.6  | 14.9      |
| 30°-40°   | 667.2  | 17.8      |
| 40°-50°   | 687.2  | 18.3      |
| 50°-60°   | 612.4  | 16.3      |
| 60°-70°   | 441.3  | 11.8      |
| 70°-80°   | 230.8  | 6.2       |
| 80°-90°   | 47.7   | 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°    | 1063.4 | 28.4      |
| 0°-40°    | 1730.6 | 46.1      |
| 0°-60°    | 3030.2 | 80.8      |
| 0°-90°    | 3750.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3750.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1385 | 1385  | 1385 | 1385  | 1385 |      |
| 5°  | 1382 | 1379  | 1374 | 1382  | 1380 | 131  |
| 15° | 1315 | 1317  | 1317 | 1330  | 1328 | 371  |
| 25° | 1193 | 1200  | 1210 | 1233  | 1238 | 550  |
| 35° | 1024 | 1038  | 1064 | 1100  | 1108 | 641  |
| 45° | 829  | 847   | 889  | 939   | 949  | 640  |
| 55° | 625  | 645   | 698  | 730   | 727  | 560  |
| 65° | 424  | 440   | 468  | 446   | 429  | 420  |
| 75° | 229  | 241   | 226  | 196   | 184  | 243  |
| 85° | 54   | 47    | 28   | 25    | 25   | 63   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1385.3 | 1385.3 | 1385.3 | 1385.3 | 1385.3 |
| 2.5°  | 1386.9 | 1383.6 | 1376.9 | 1385.3 | 1385.3 |
| 5°    | 1381.9 | 1378.6 | 1373.6 | 1381.9 | 1380.2 |
| 7.5°  | 1371.9 | 1368.5 | 1363.5 | 1373.6 | 1371.9 |
| 10°   | 1356.8 | 1355.2 | 1351.8 | 1361.9 | 1360.2 |
| 12.5° | 1340.1 | 1338.5 | 1336.8 | 1346.8 | 1346.8 |
| 15°   | 1315.1 | 1316.7 | 1316.7 | 1330.1 | 1328.4 |
| 17.5° | 1291.7 | 1293.3 | 1295.0 | 1311.7 | 1311.7 |
| 20°   | 1261.6 | 1263.3 | 1270.0 | 1288.3 | 1290.0 |
| 22.5° | 1229.8 | 1231.5 | 1239.9 | 1261.6 | 1264.9 |
| 25°   | 1193.1 | 1199.8 | 1209.8 | 1233.2 | 1238.2 |
| 27.5° | 1156.3 | 1161.3 | 1178.0 | 1204.8 | 1208.1 |
| 30°   | 1112.9 | 1122.9 | 1141.3 | 1171.4 | 1178.0 |
| 32.5° | 1069.4 | 1081.1 | 1102.9 | 1136.3 | 1144.6 |
| 35°   | 1024.3 | 1037.7 | 1064.4 | 1099.5 | 1107.9 |
| 37.5° | 977.5  | 989.2  | 1022.6 | 1059.4 | 1071.1 |
| 40°   | 930.7  | 942.4  | 979.2  | 1021.0 | 1034.3 |
| 42.5° | 880.6  | 897.3  | 934.1  | 980.9  | 994.2  |
| 45°   | 828.8  | 847.2  | 889.0  | 939.1  | 949.1  |
| 47.5° | 775.3  | 795.4  | 843.9  | 894.0  | 905.7  |
| 50°   | 728.6  | 746.9  | 795.4  | 843.9  | 852.2  |
| 52.5° | 678.4  | 695.1  | 748.6  | 788.7  | 790.4  |
| 55°   | 625.0  | 645.0  | 698.5  | 730.2  | 726.9  |
| 57.5° | 576.5  | 593.2  | 645.0  | 661.7  | 651.7  |
| 60°   | 524.7  | 539.7  | 591.5  | 593.2  | 578.2  |
| 62.5° | 474.6  | 489.6  | 529.7  | 518.0  | 499.6  |
| 65°   | 424.4  | 439.5  | 467.9  | 446.2  | 429.4  |
| 67.5° | 376.0  | 389.3  | 406.1  | 377.6  | 360.9  |
| 70°   | 324.2  | 342.6  | 344.2  | 310.8  | 294.1  |
| 72.5° | 279.1  | 289.1  | 285.7  | 254.0  | 239.0  |
| 75°   | 228.9  | 240.6  | 225.6  | 195.5  | 183.8  |
| 77.5° | 182.1  | 190.5  | 170.4  | 142.0  | 133.7  |
| 80°   | 135.4  | 140.4  | 117.0  | 95.2   | 90.2   |
| 82.5° | 91.9   | 91.9   | 66.8   | 51.8   | 46.8   |
| 85°   | 53.5   | 46.8   | 28.4   | 25.1   | 25.1   |
| 87.5° | 18.4   | 11.7   | 11.7   | 11.7   | 11.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)