

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: P259227

Luminaire Tested: **22CZ-LD5-34-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259227  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-34-UNV-L83050-W2A1-U-5000K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3642.0 lumens  
Efficiency: N/A  
Efficacy: 135.0 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

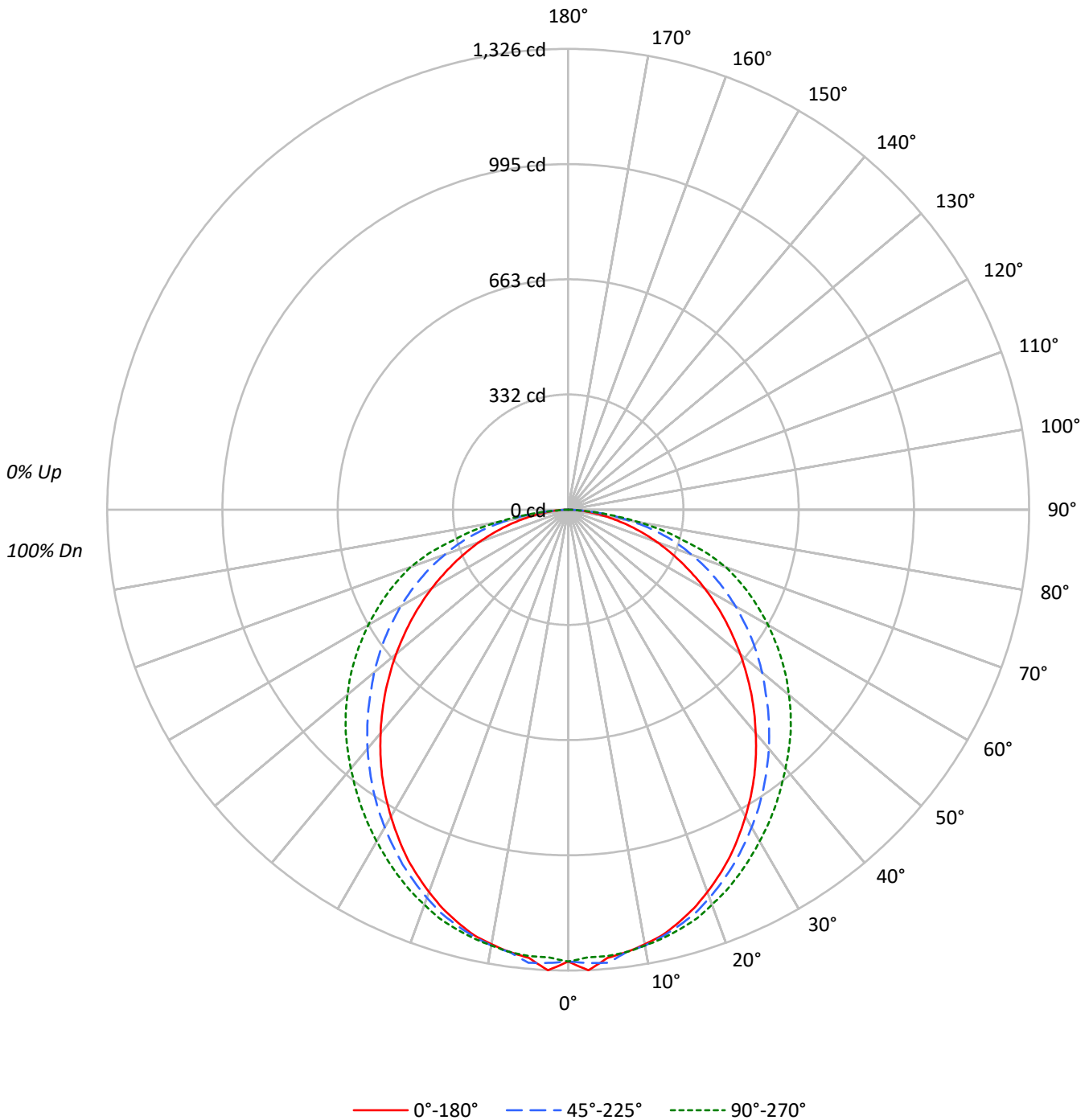
Input Watts (W): 26.97  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 89  | 87  | 85  | 83  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 84  | 79  | 74  | 81  | 77  | 73  | 78  | 74  | 71  | 69  |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 68  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 61  | 56  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 43  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  | 53  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 39  | 37  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  | 47  | 40  | 35  | 46  | 40  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 38  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 28  | 39  | 33  | 28  | 26  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3498 | 3498 | 3498 |
| 5°  | 3497 | 3535 | 3483 |
| 10° | 3470 | 3480 | 3480 |
| 15° | 3424 | 3449 | 3478 |
| 20° | 3353 | 3403 | 3464 |
| 25° | 3271 | 3344 | 3444 |
| 30° | 3170 | 3280 | 3423 |
| 35° | 3066 | 3217 | 3415 |
| 40° | 2949 | 3154 | 3416 |
| 45° | 2831 | 3094 | 3444 |
| 50° | 2706 | 3047 | 3470 |
| 55° | 2576 | 3016 | 3515 |
| 60° | 2440 | 2993 | 3574 |
| 65° | 2289 | 2977 | 3665 |
| 70° | 2132 | 2968 | 3790 |
| 75° | 1934 | 2964 | 3591 |
| 80° | 1674 | 2744 | 3183 |
| 85° | 1420 | 2078 | 2022 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 123.3  | 3.4       |
| 10°-20°   | 349.2  | 9.6       |
| 20°-30°   | 519.5  | 14.3      |
| 30°-40°   | 614.5  | 16.9      |
| 40°-50°   | 631.5  | 17.3      |
| 50°-60°   | 577.1  | 15.8      |
| 60°-70°   | 461.7  | 12.7      |
| 70°-80°   | 289.7  | 8.0       |
| 80°-90°   | 75.5   | 2.1       |
| 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°    | 992.1  | 27.2      |
| 0°-40°    | 1606.5 | 44.1      |
| 0°-60°    | 2815.2 | 77.3      |
| 0°-90°    | 3642.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3642.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1300 | 1300  | 1300 | 1300  | 1300 |      |
| 5°  | 1295 | 1295  | 1309 | 1300  | 1289 | 123  |
| 15° | 1229 | 1231  | 1238 | 1245  | 1249 | 346  |
| 25° | 1102 | 1109  | 1126 | 1146  | 1160 | 507  |
| 35° | 933  | 946   | 979  | 1017  | 1040 | 583  |
| 45° | 744  | 763   | 813  | 873   | 905  | 574  |
| 55° | 549  | 576   | 643  | 714   | 749  | 491  |
| 65° | 360  | 391   | 468  | 538   | 576  | 357  |
| 75° | 186  | 221   | 285  | 328   | 345  | 198  |
| 85° | 46   | 58    | 67   | 66    | 66   | 53   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1300.0 | 1300.0 | 1300.0 | 1300.0 | 1300.0 |
| 2.5°  | 1326.5 | 1321.2 | 1305.3 | 1294.6 | 1289.3 |
| 5°    | 1294.6 | 1294.6 | 1308.8 | 1300.0 | 1289.3 |
| 7.5°  | 1284.0 | 1284.0 | 1284.0 | 1310.6 | 1284.0 |
| 10°   | 1269.8 | 1271.6 | 1273.4 | 1284.0 | 1273.4 |
| 12.5° | 1253.9 | 1253.9 | 1257.4 | 1261.0 | 1262.8 |
| 15°   | 1229.1 | 1230.9 | 1238.0 | 1245.0 | 1248.6 |
| 17.5° | 1202.5 | 1207.9 | 1216.7 | 1225.6 | 1232.7 |
| 20°   | 1170.7 | 1177.7 | 1188.4 | 1202.5 | 1209.6 |
| 22.5° | 1137.0 | 1144.1 | 1158.3 | 1174.2 | 1186.6 |
| 25°   | 1101.6 | 1108.7 | 1126.4 | 1145.9 | 1160.0 |
| 27.5° | 1060.9 | 1069.7 | 1091.0 | 1117.5 | 1131.7 |
| 30°   | 1020.1 | 1030.8 | 1055.5 | 1085.7 | 1101.6 |
| 32.5° | 977.6  | 990.0  | 1018.4 | 1052.0 | 1071.5 |
| 35°   | 933.3  | 945.7  | 979.4  | 1016.6 | 1039.6 |
| 37.5° | 887.3  | 901.5  | 938.7  | 981.2  | 1006.0 |
| 40°   | 839.5  | 855.4  | 897.9  | 944.0  | 972.3  |
| 42.5° | 791.7  | 809.4  | 855.4  | 910.3  | 938.7  |
| 45°   | 743.8  | 763.3  | 812.9  | 873.1  | 905.0  |
| 47.5° | 694.3  | 717.3  | 768.6  | 835.9  | 867.8  |
| 50°   | 646.4  | 669.5  | 727.9  | 797.0  | 828.9  |
| 52.5° | 596.8  | 623.4  | 685.4  | 756.2  | 789.9  |
| 55°   | 549.0  | 575.6  | 642.9  | 713.7  | 749.2  |
| 57.5° | 501.2  | 527.8  | 598.6  | 671.2  | 706.6  |
| 60°   | 453.4  | 481.7  | 556.1  | 627.0  | 664.1  |
| 62.5° | 405.6  | 435.7  | 511.8  | 584.4  | 619.9  |
| 65°   | 359.5  | 391.4  | 467.6  | 538.4  | 575.6  |
| 67.5° | 315.2  | 348.9  | 423.3  | 492.4  | 529.5  |
| 70°   | 271.0  | 304.6  | 377.2  | 444.5  | 481.7  |
| 72.5° | 228.5  | 262.1  | 333.0  | 393.2  | 421.5  |
| 75°   | 186.0  | 221.4  | 285.1  | 327.6  | 345.4  |
| 77.5° | 145.2  | 180.6  | 235.5  | 263.9  | 283.4  |
| 80°   | 108.0  | 138.1  | 177.1  | 198.4  | 205.4  |
| 82.5° | 74.4   | 99.2   | 124.0  | 129.3  | 132.8  |
| 85°   | 46.0   | 58.4   | 67.3   | 65.5   | 65.5   |
| 87.5° | 21.3   | 23.0   | 19.5   | 14.2   | 8.9    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)