

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: P259297

Luminaire Tested: **22CZ-LD5-34-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259297  
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-L82765-W2A1-U-3500K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3356.0 lumens  
Efficiency: N/A  
Efficacy: 130.3 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

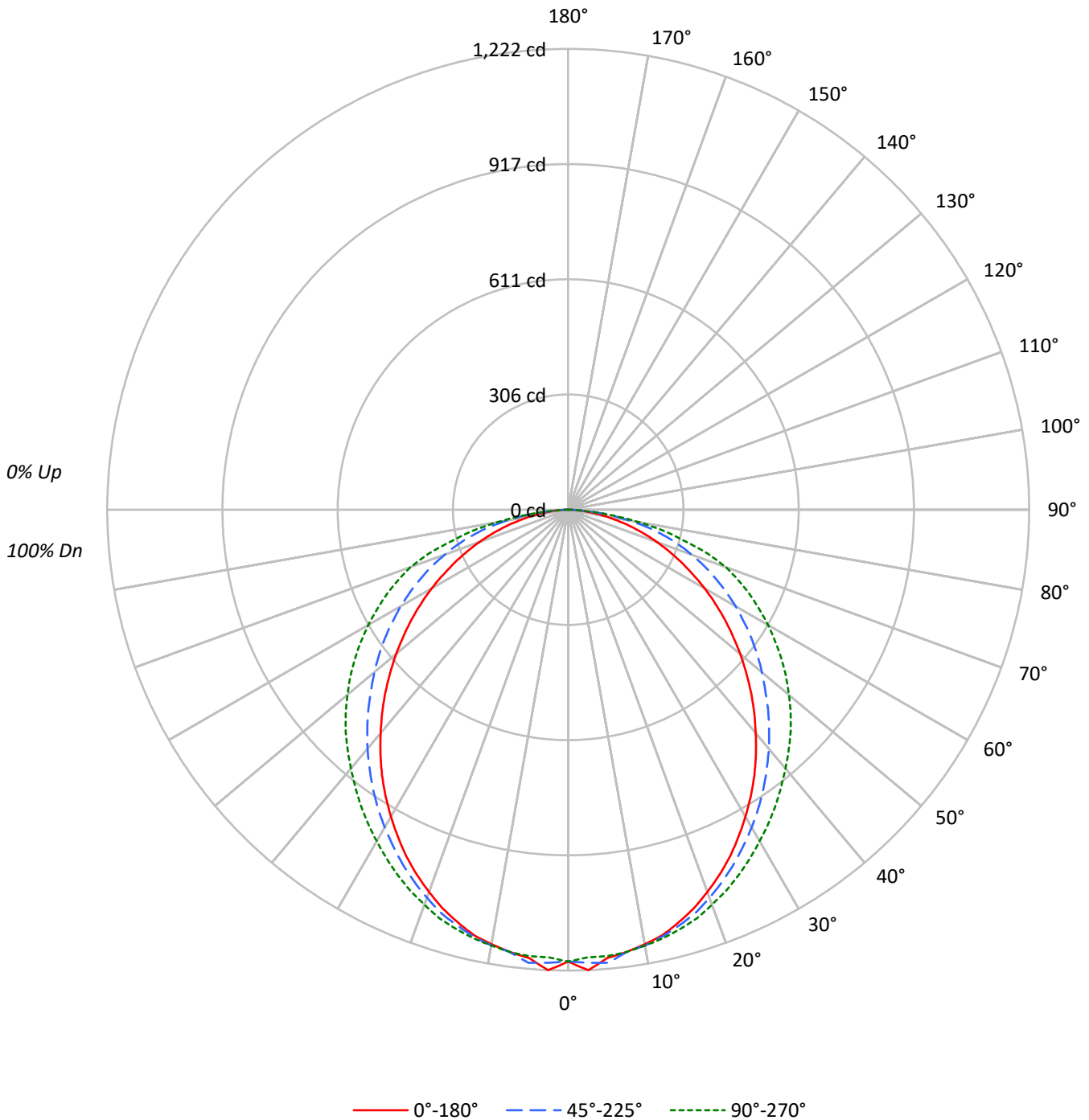
Input Watts (W): 25.761  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 3224 | 3224 | 3224 |
| 5°  | 3223 | 3258 | 3209 |
| 10° | 3197 | 3206 | 3206 |
| 15° | 3155 | 3178 | 3205 |
| 20° | 3089 | 3136 | 3192 |
| 25° | 3014 | 3082 | 3174 |
| 30° | 2921 | 3022 | 3154 |
| 35° | 2825 | 2965 | 3147 |
| 40° | 2718 | 2907 | 3147 |
| 45° | 2608 | 2851 | 3174 |
| 50° | 2494 | 2808 | 3198 |
| 55° | 2373 | 2779 | 3239 |
| 60° | 2249 | 2758 | 3294 |
| 65° | 2110 | 2743 | 3377 |
| 70° | 1965 | 2735 | 3493 |
| 75° | 1782 | 2731 | 3308 |
| 80° | 1543 | 2529 | 2934 |
| 85° | 1309 | 1914 | 1865 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 113.6  | 3.4       |
| 10°-20°   | 321.8  | 9.6       |
| 20°-30°   | 478.7  | 14.3      |
| 30°-40°   | 566.2  | 16.9      |
| 40°-50°   | 582.0  | 17.3      |
| 50°-60°   | 531.8  | 15.8      |
| 60°-70°   | 425.4  | 12.7      |
| 70°-80°   | 267.0  | 8.0       |
| 80°-90°   | 69.5   | 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°    | 914.2  | 27.2      |
| 0°-40°    | 1480.4 | 44.1      |
| 0°-60°    | 2594.1 | 77.3      |
| 0°-90°    | 3356.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3356.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1198 | 1198  | 1198 | 1198  | 1198 |      |
| 5°  | 1193 | 1193  | 1206 | 1198  | 1188 | 113  |
| 15° | 1133 | 1134  | 1141 | 1147  | 1150 | 319  |
| 25° | 1015 | 1022  | 1038 | 1056  | 1069 | 467  |
| 35° | 860  | 872   | 902  | 937   | 958  | 537  |
| 45° | 685  | 703   | 749  | 805   | 834  | 528  |
| 55° | 506  | 530   | 592  | 658   | 690  | 453  |
| 65° | 331  | 361   | 431  | 496   | 530  | 329  |
| 75° | 171  | 204   | 263  | 302   | 318  | 182  |
| 85° | 42   | 54    | 62   | 60    | 60   | 49   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1197.9 | 1197.9 | 1197.9 | 1197.9 | 1197.9 |
| 2.5°  | 1222.3 | 1217.5 | 1202.8 | 1193.0 | 1188.1 |
| 5°    | 1193.0 | 1193.0 | 1206.0 | 1197.9 | 1188.1 |
| 7.5°  | 1183.2 | 1183.2 | 1183.2 | 1207.7 | 1183.2 |
| 10°   | 1170.1 | 1171.8 | 1173.4 | 1183.2 | 1173.4 |
| 12.5° | 1155.4 | 1155.4 | 1158.7 | 1162.0 | 1163.6 |
| 15°   | 1132.6 | 1134.2 | 1140.8 | 1147.3 | 1150.5 |
| 17.5° | 1108.1 | 1113.0 | 1121.2 | 1129.3 | 1135.9 |
| 20°   | 1078.7 | 1085.3 | 1095.1 | 1108.1 | 1114.6 |
| 22.5° | 1047.7 | 1054.3 | 1067.3 | 1082.0 | 1093.4 |
| 25°   | 1015.1 | 1021.6 | 1037.9 | 1055.9 | 1068.9 |
| 27.5° | 977.6  | 985.7  | 1005.3 | 1029.8 | 1042.8 |
| 30°   | 940.0  | 949.8  | 972.7  | 1000.4 | 1015.1 |
| 32.5° | 900.9  | 912.3  | 938.4  | 969.4  | 987.3  |
| 35°   | 860.1  | 871.5  | 902.5  | 936.8  | 958.0  |
| 37.5° | 817.6  | 830.7  | 864.9  | 904.1  | 927.0  |
| 40°   | 773.6  | 788.2  | 827.4  | 869.8  | 896.0  |
| 42.5° | 729.5  | 745.8  | 788.2  | 838.8  | 864.9  |
| 45°   | 685.4  | 703.4  | 749.1  | 804.6  | 833.9  |
| 47.5° | 639.7  | 660.9  | 708.3  | 770.3  | 799.7  |
| 50°   | 595.7  | 616.9  | 670.7  | 734.4  | 763.8  |
| 52.5° | 550.0  | 574.5  | 631.6  | 696.9  | 727.9  |
| 55°   | 505.9  | 530.4  | 592.4  | 657.7  | 690.3  |
| 57.5° | 461.8  | 486.3  | 551.6  | 618.5  | 651.2  |
| 60°   | 417.8  | 443.9  | 512.4  | 577.7  | 612.0  |
| 62.5° | 373.7  | 401.5  | 471.6  | 538.6  | 571.2  |
| 65°   | 331.3  | 360.7  | 430.8  | 496.1  | 530.4  |
| 67.5° | 290.5  | 321.5  | 390.0  | 453.7  | 488.0  |
| 70°   | 249.7  | 280.7  | 347.6  | 409.6  | 443.9  |
| 72.5° | 210.5  | 241.5  | 306.8  | 362.3  | 388.4  |
| 75°   | 171.4  | 204.0  | 262.7  | 301.9  | 318.2  |
| 77.5° | 133.8  | 166.5  | 217.1  | 243.2  | 261.1  |
| 80°   | 99.6   | 127.3  | 163.2  | 182.8  | 189.3  |
| 82.5° | 68.5   | 91.4   | 114.2  | 119.1  | 122.4  |
| 85°   | 42.4   | 53.9   | 62.0   | 60.4   | 60.4   |
| 87.5° | 19.6   | 21.2   | 18.0   | 13.1   | 8.2    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)