

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: P263587

Luminaire Tested: **24CZ-LD5-50-RDP-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263587  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25696)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-50-RDP-UNV-L93050-W2A1-U-3000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (336) 90 CRI LEDS TUNED AT 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2717.6 lumens  
Efficiency: N/A  
Efficacy: 74.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

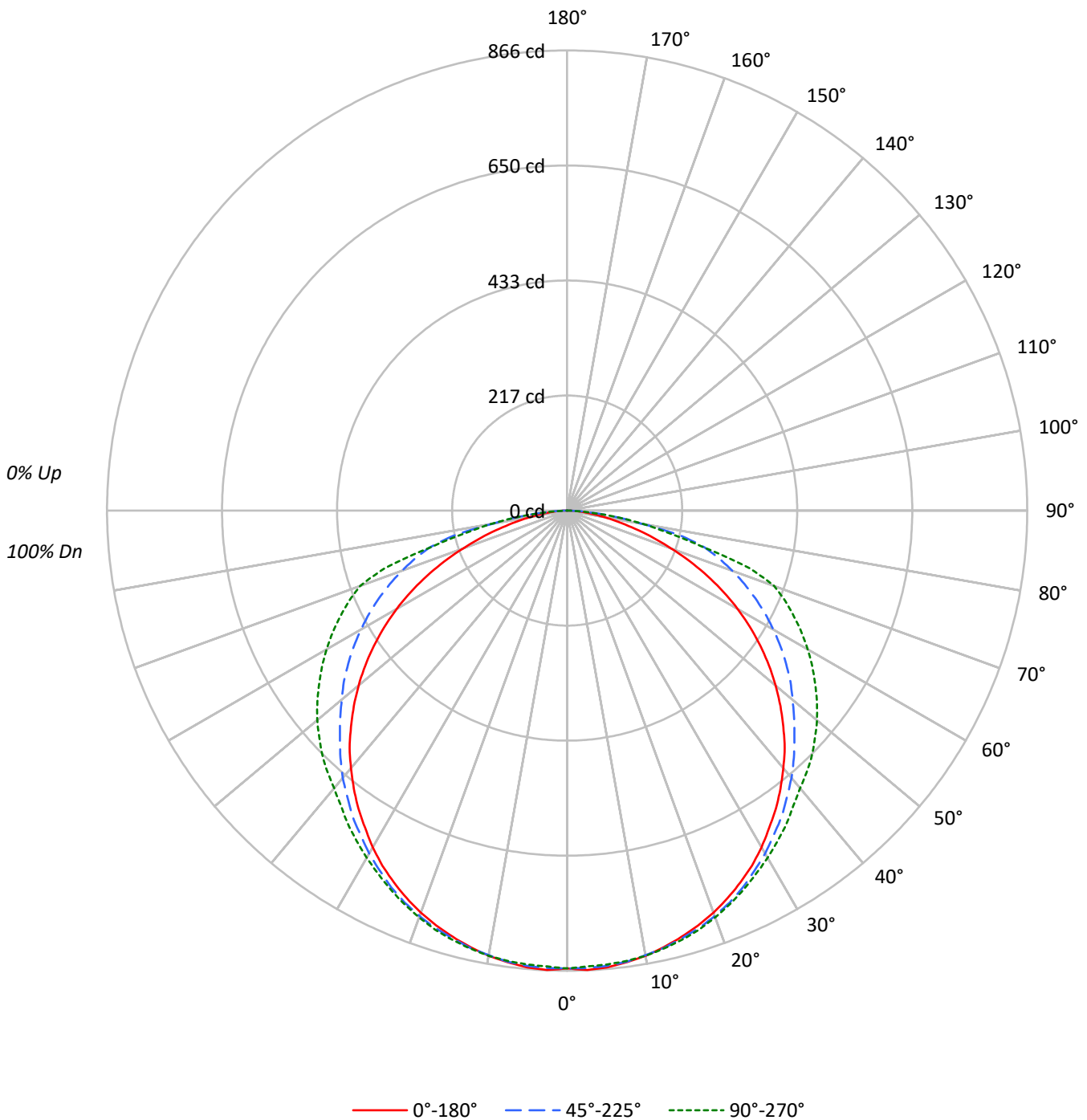
Input Watts (W): 36.533376  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 103 | 98  | 94  | 105 | 101 | 97  | 93  | 96  | 93  | 90  |  | 92  | 90  | 87  |  | 89  | 87  | 84  | 82  |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 80  | 75  | 83  | 78  | 73  |  | 80  | 75  | 71  |  | 77  | 73  | 70  | 67  |
| 3   | 89  | 78  | 69  | 62  | 86  | 76  | 68  | 62  | 73  | 66  | 60  |  | 70  | 64  | 59  |  | 67  | 62  | 58  | 56  |
| 4   | 81  | 68  | 59  | 52  | 78  | 67  | 58  | 52  | 64  | 57  | 51  |  | 62  | 56  | 50  |  | 60  | 54  | 50  | 47  |
| 5   | 74  | 61  | 51  | 45  | 72  | 60  | 51  | 44  | 57  | 50  | 44  |  | 55  | 49  | 43  |  | 54  | 48  | 43  | 41  |
| 6   | 68  | 55  | 45  | 39  | 66  | 54  | 45  | 38  | 52  | 44  | 38  |  | 50  | 43  | 38  |  | 48  | 42  | 37  | 35  |
| 7   | 63  | 49  | 40  | 34  | 61  | 48  | 40  | 34  | 47  | 39  | 34  |  | 45  | 38  | 33  |  | 44  | 38  | 33  | 31  |
| 8   | 59  | 45  | 36  | 30  | 57  | 44  | 36  | 30  | 43  | 35  | 30  |  | 42  | 35  | 30  |  | 40  | 34  | 29  | 27  |
| 9   | 55  | 41  | 33  | 27  | 53  | 41  | 32  | 27  | 39  | 32  | 27  |  | 38  | 32  | 27  |  | 37  | 31  | 27  | 25  |
| 10  | 51  | 38  | 30  | 24  | 50  | 37  | 30  | 24  | 36  | 29  | 24  |  | 35  | 29  | 24  |  | 35  | 28  | 24  | 22  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1159 | 1159 | 1159 |
| 5°  | 1165 | 1162 | 1158 |
| 10° | 1162 | 1161 | 1162 |
| 15° | 1157 | 1161 | 1165 |
| 20° | 1153 | 1163 | 1167 |
| 25° | 1146 | 1162 | 1168 |
| 30° | 1137 | 1158 | 1172 |
| 35° | 1125 | 1156 | 1182 |
| 40° | 1111 | 1154 | 1198 |
| 45° | 1094 | 1151 | 1240 |
| 50° | 1073 | 1159 | 1285 |
| 55° | 1042 | 1180 | 1337 |
| 60° | 997  | 1206 | 1408 |
| 65° | 928  | 1244 | 1499 |
| 70° | 821  | 1300 | 1631 |
| 75° | 688  | 1391 | 1370 |
| 80° | 549  | 1099 | 1141 |
| 85° | 434  | 744  | 681  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 81.7   | 3.0       |
| 10°-20°   | 235.2  | 8.7       |
| 20°-30°   | 359.2  | 13.2      |
| 30°-40°   | 439.1  | 16.2      |
| 40°-50°   | 470.0  | 17.3      |
| 50°-60°   | 450.9  | 16.6      |
| 60°-70°   | 380.7  | 14.0      |
| 70°-80°   | 243.3  | 9.0       |
| 80°-90°   | 57.5   | 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°    | 676.1  | 24.9      |
| 0°-40°    | 1115.2 | 41.0      |
| 0°-60°    | 2036.1 | 74.9      |
| 0°-90°    | 2717.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2717.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 862 | 862   | 862 | 862   | 862 |      |
| 5°  | 863 | 858   | 860 | 859   | 858 | 82   |
| 15° | 831 | 828   | 833 | 836   | 836 | 235  |
| 25° | 772 | 770   | 783 | 785   | 787 | 356  |
| 35° | 685 | 690   | 704 | 713   | 720 | 428  |
| 45° | 575 | 585   | 605 | 633   | 652 | 444  |
| 55° | 444 | 459   | 503 | 548   | 570 | 396  |
| 65° | 292 | 320   | 391 | 446   | 471 | 288  |
| 75° | 132 | 189   | 268 | 273   | 264 | 143  |
| 85° | 28  | 47    | 48  | 47    | 44  | 34   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 861.5 | 861.5 | 861.5 | 861.5 | 861.5 |
| 2.5°  | 865.5 | 860.2 | 861.5 | 861.5 | 858.8 |
| 5°    | 862.8 | 857.5 | 860.2 | 858.8 | 857.5 |
| 7.5°  | 857.5 | 853.5 | 856.2 | 856.2 | 854.8 |
| 10°   | 850.8 | 846.8 | 849.5 | 850.8 | 850.8 |
| 12.5° | 841.4 | 838.8 | 842.8 | 842.8 | 844.1 |
| 15°   | 830.7 | 828.1 | 833.4 | 836.1 | 836.1 |
| 17.5° | 818.7 | 817.4 | 824.0 | 825.4 | 826.7 |
| 20°   | 805.3 | 804.0 | 812.0 | 812.0 | 814.7 |
| 22.5° | 789.3 | 787.9 | 798.6 | 798.6 | 801.3 |
| 25°   | 771.9 | 770.5 | 782.6 | 785.3 | 786.6 |
| 27.5° | 753.1 | 751.8 | 763.8 | 767.9 | 770.5 |
| 30°   | 731.7 | 731.7 | 745.1 | 750.5 | 754.5 |
| 32.5° | 707.7 | 711.7 | 723.7 | 731.7 | 737.1 |
| 35°   | 684.9 | 690.3 | 703.7 | 713.0 | 719.7 |
| 37.5° | 659.5 | 664.9 | 679.6 | 691.6 | 699.6 |
| 40°   | 632.8 | 639.4 | 656.8 | 670.2 | 682.2 |
| 42.5° | 606.0 | 612.7 | 631.4 | 651.5 | 667.5 |
| 45°   | 575.2 | 584.6 | 604.7 | 632.8 | 651.5 |
| 47.5° | 544.5 | 553.8 | 579.2 | 614.0 | 632.8 |
| 50°   | 512.4 | 523.1 | 553.8 | 594.0 | 614.0 |
| 52.5° | 478.9 | 491.0 | 529.7 | 572.6 | 592.6 |
| 55°   | 444.1 | 458.8 | 503.0 | 548.5 | 569.9 |
| 57.5° | 408.0 | 424.1 | 476.2 | 524.4 | 547.1 |
| 60°   | 370.6 | 390.6 | 448.1 | 499.0 | 523.1 |
| 62.5° | 331.8 | 355.8 | 420.1 | 472.2 | 497.6 |
| 65°   | 291.6 | 319.7 | 390.6 | 445.5 | 470.9 |
| 67.5° | 250.2 | 287.6 | 361.2 | 418.7 | 444.1 |
| 70°   | 208.7 | 252.8 | 330.4 | 389.3 | 414.7 |
| 72.5° | 169.9 | 220.7 | 299.7 | 354.5 | 359.9 |
| 75°   | 132.4 | 188.6 | 267.5 | 272.9 | 263.5 |
| 77.5° | 99.0  | 156.5 | 220.7 | 196.6 | 195.3 |
| 80°   | 70.9  | 125.7 | 141.8 | 145.8 | 147.2 |
| 82.5° | 46.8  | 95.0  | 92.3  | 95.0  | 93.6  |
| 85°   | 28.1  | 46.8  | 48.2  | 46.8  | 44.1  |
| 87.5° | 13.4  | 17.4  | 13.4  | 12.0  | 10.7  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)