

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: P263753

Luminaire Tested: **24CZ-LD5-40SE-RDP-UNV-L82765-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263753  
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-LD5-40SE-RDP-UNV-L82765-W2A1-U-4000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2808.0 lumens  
Efficiency: N/A  
Efficacy: 91.2 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

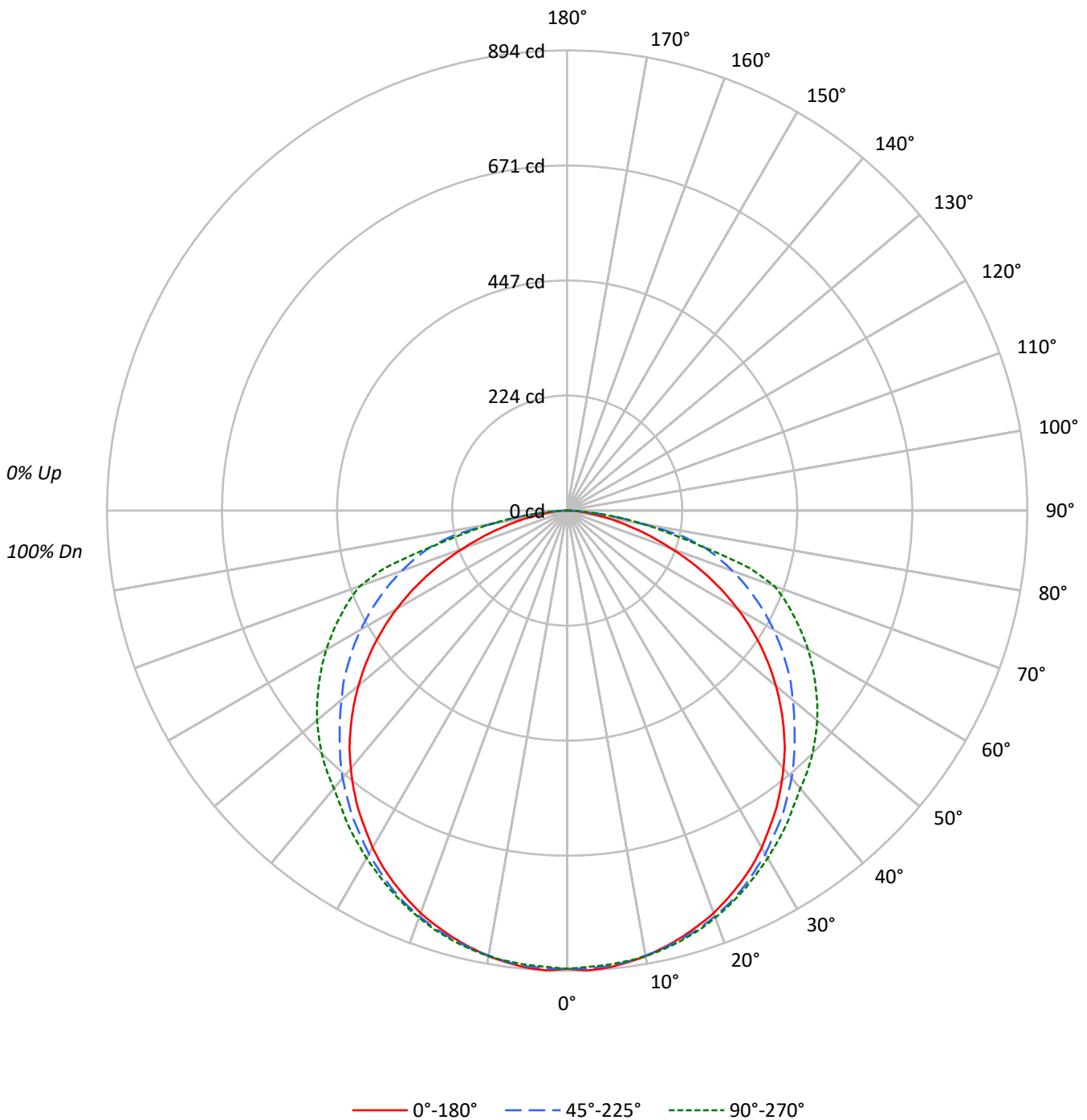
Input Watts (W): 30.783  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 1198 | 1198 | 1198 |
| 5°  | 1204 | 1200 | 1197 |
| 10° | 1201 | 1199 | 1201 |
| 15° | 1196 | 1199 | 1203 |
| 20° | 1191 | 1201 | 1205 |
| 25° | 1184 | 1200 | 1207 |
| 30° | 1175 | 1196 | 1211 |
| 35° | 1162 | 1194 | 1221 |
| 40° | 1148 | 1192 | 1238 |
| 45° | 1131 | 1189 | 1281 |
| 50° | 1108 | 1198 | 1328 |
| 55° | 1076 | 1219 | 1381 |
| 60° | 1030 | 1246 | 1454 |
| 65° | 959  | 1285 | 1549 |
| 70° | 848  | 1343 | 1686 |
| 75° | 711  | 1437 | 1416 |
| 80° | 568  | 1135 | 1178 |
| 85° | 448  | 769  | 704  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 84.4   | 3.0       |
| 10°-20°   | 243.0  | 8.7       |
| 20°-30°   | 371.1  | 13.2      |
| 30°-40°   | 453.7  | 16.2      |
| 40°-50°   | 485.7  | 17.3      |
| 50°-60°   | 465.9  | 16.6      |
| 60°-70°   | 393.3  | 14.0      |
| 70°-80°   | 251.4  | 9.0       |
| 80°-90°   | 59.5   | 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°    | 698.5  | 24.9      |
| 0°-40°    | 1152.3 | 41.0      |
| 0°-60°    | 2103.8 | 74.9      |
| 0°-90°    | 2808.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2808.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 890 | 890   | 890 | 890   | 890 |      |
| 5°  | 892 | 886   | 889 | 887   | 886 | 85   |
| 15° | 858 | 856   | 861 | 864   | 864 | 242  |
| 25° | 798 | 796   | 809 | 811   | 813 | 368  |
| 35° | 708 | 713   | 727 | 737   | 744 | 442  |
| 45° | 594 | 604   | 625 | 654   | 673 | 458  |
| 55° | 459 | 474   | 520 | 567   | 589 | 410  |
| 65° | 301 | 330   | 404 | 460   | 486 | 297  |
| 75° | 137 | 195   | 276 | 282   | 272 | 147  |
| 85° | 29  | 48    | 50  | 48    | 46  | 35   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 890.2 | 890.2 | 890.2 | 890.2 | 890.2 |
| 2.5°  | 894.3 | 888.8 | 890.2 | 890.2 | 887.4 |
| 5°    | 891.5 | 886.0 | 888.8 | 887.4 | 886.0 |
| 7.5°  | 886.0 | 881.9 | 884.6 | 884.6 | 883.2 |
| 10°   | 879.1 | 875.0 | 877.7 | 879.1 | 879.1 |
| 12.5° | 869.4 | 866.7 | 870.8 | 870.8 | 872.2 |
| 15°   | 858.4 | 855.6 | 861.1 | 863.9 | 863.9 |
| 17.5° | 845.9 | 844.5 | 851.5 | 852.8 | 854.2 |
| 20°   | 832.1 | 830.7 | 839.0 | 839.0 | 841.8 |
| 22.5° | 815.5 | 814.1 | 825.2 | 825.2 | 828.0 |
| 25°   | 797.5 | 796.2 | 808.6 | 811.4 | 812.8 |
| 27.5° | 778.2 | 776.8 | 789.3 | 793.4 | 796.2 |
| 30°   | 756.1 | 756.1 | 769.9 | 775.4 | 779.6 |
| 32.5° | 731.2 | 735.3 | 747.8 | 756.1 | 761.6 |
| 35°   | 707.7 | 713.2 | 727.1 | 736.7 | 743.6 |
| 37.5° | 681.4 | 687.0 | 702.2 | 714.6 | 722.9 |
| 40°   | 653.8 | 660.7 | 678.7 | 692.5 | 704.9 |
| 42.5° | 626.2 | 633.1 | 652.4 | 673.1 | 689.7 |
| 45°   | 594.4 | 604.0 | 624.8 | 653.8 | 673.1 |
| 47.5° | 562.6 | 572.2 | 598.5 | 634.4 | 653.8 |
| 50°   | 529.4 | 540.5 | 572.2 | 613.7 | 634.4 |
| 52.5° | 494.8 | 507.3 | 547.4 | 591.6 | 612.3 |
| 55°   | 458.9 | 474.1 | 519.7 | 566.7 | 588.8 |
| 57.5° | 421.6 | 438.2 | 492.1 | 541.8 | 565.3 |
| 60°   | 382.9 | 403.6 | 463.0 | 515.6 | 540.5 |
| 62.5° | 342.8 | 367.7 | 434.0 | 487.9 | 514.2 |
| 65°   | 301.3 | 330.4 | 403.6 | 460.3 | 486.5 |
| 67.5° | 258.5 | 297.2 | 373.2 | 432.6 | 458.9 |
| 70°   | 215.6 | 261.2 | 341.4 | 402.2 | 428.5 |
| 72.5° | 175.5 | 228.1 | 309.6 | 366.3 | 371.8 |
| 75°   | 136.8 | 194.9 | 276.4 | 282.0 | 272.3 |
| 77.5° | 102.3 | 161.7 | 228.1 | 203.2 | 201.8 |
| 80°   | 73.3  | 129.9 | 146.5 | 150.7 | 152.0 |
| 82.5° | 48.4  | 98.1  | 95.4  | 98.1  | 96.8  |
| 85°   | 29.0  | 48.4  | 49.8  | 48.4  | 45.6  |
| 87.5° | 13.8  | 18.0  | 13.8  | 12.4  | 11.1  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)