

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: P263697

Luminaire Tested: **24CZ-LD5-60-RDP-UNV-L82765-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263697  
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-LD5-60-RDP-UNV-L82765-W2A1-U-3000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (336) 80 CRI LEDS TUNED AT 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3958.0 lumens  
Efficiency: N/A  
Efficacy: 90.0 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

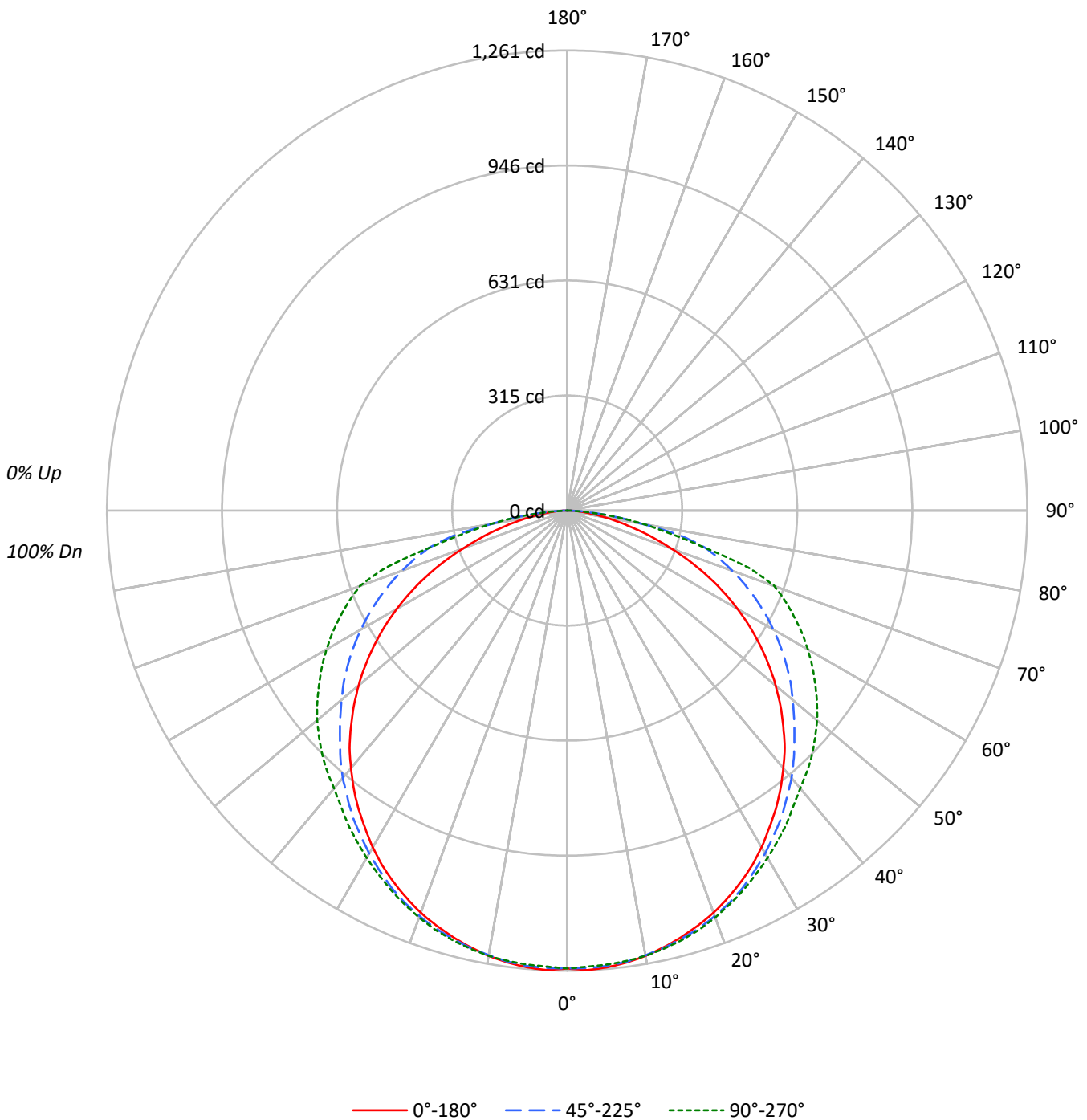
Input Watts (W): 43.989  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 1688 | 1688 | 1688 |
| 5°  | 1697 | 1692 | 1687 |
| 10° | 1693 | 1690 | 1693 |
| 15° | 1685 | 1691 | 1696 |
| 20° | 1679 | 1693 | 1699 |
| 25° | 1669 | 1692 | 1701 |
| 30° | 1656 | 1686 | 1707 |
| 35° | 1638 | 1683 | 1722 |
| 40° | 1619 | 1680 | 1745 |
| 45° | 1594 | 1676 | 1805 |
| 50° | 1562 | 1688 | 1872 |
| 55° | 1517 | 1719 | 1947 |
| 60° | 1452 | 1756 | 2050 |
| 65° | 1352 | 1811 | 2183 |
| 70° | 1196 | 1893 | 2376 |
| 75° | 1003 | 2026 | 1995 |
| 80° | 800  | 1600 | 1660 |
| 85° | 631  | 1082 | 993  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 119.0  | 3.0       |
| 10°-20°   | 342.5  | 8.7       |
| 20°-30°   | 523.1  | 13.2      |
| 30°-40°   | 639.6  | 16.2      |
| 40°-50°   | 684.6  | 17.3      |
| 50°-60°   | 656.6  | 16.6      |
| 60°-70°   | 554.4  | 14.0      |
| 70°-80°   | 354.3  | 9.0       |
| 80°-90°   | 83.8   | 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°    | 984.6  | 24.9      |
| 0°-40°    | 1624.2 | 41.0      |
| 0°-60°    | 2965.4 | 74.9      |
| 0°-90°    | 3958.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3958.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1255 | 1255  | 1255 | 1255  | 1255 |      |
| 5°  | 1257 | 1249  | 1253 | 1251  | 1249 | 119  |
| 15° | 1210 | 1206  | 1214 | 1218  | 1218 | 342  |
| 25° | 1124 | 1122  | 1140 | 1144  | 1146 | 518  |
| 35° | 998  | 1005  | 1025 | 1038  | 1048 | 624  |
| 45° | 838  | 851   | 881  | 922   | 949  | 646  |
| 55° | 647  | 668   | 733  | 799   | 830  | 577  |
| 65° | 425  | 466   | 569  | 649   | 686  | 419  |
| 75° | 193  | 275   | 390  | 398   | 384  | 208  |
| 85° | 41   | 68    | 70   | 68    | 64   | 49   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1254.7 | 1254.7 | 1254.7 | 1254.7 | 1254.7 |
| 2.5°  | 1260.6 | 1252.8 | 1254.7 | 1254.7 | 1250.8 |
| 5°    | 1256.7 | 1248.9 | 1252.8 | 1250.8 | 1248.9 |
| 7.5°  | 1248.9 | 1243.0 | 1246.9 | 1246.9 | 1245.0 |
| 10°   | 1239.1 | 1233.3 | 1237.2 | 1239.1 | 1239.1 |
| 12.5° | 1225.5 | 1221.6 | 1227.4 | 1227.4 | 1229.4 |
| 15°   | 1209.9 | 1206.0 | 1213.8 | 1217.7 | 1217.7 |
| 17.5° | 1192.4 | 1190.4 | 1200.2 | 1202.1 | 1204.1 |
| 20°   | 1172.9 | 1170.9 | 1182.6 | 1182.6 | 1186.5 |
| 22.5° | 1149.5 | 1147.6 | 1163.1 | 1163.1 | 1167.0 |
| 25°   | 1124.2 | 1122.2 | 1139.8 | 1143.7 | 1145.6 |
| 27.5° | 1096.9 | 1095.0 | 1112.5 | 1118.3 | 1122.2 |
| 30°   | 1065.7 | 1065.7 | 1085.2 | 1093.0 | 1098.9 |
| 32.5° | 1030.7 | 1036.5 | 1054.0 | 1065.7 | 1073.5 |
| 35°   | 997.5  | 1005.3 | 1024.8 | 1038.5 | 1048.2 |
| 37.5° | 960.5  | 968.3  | 989.7  | 1007.3 | 1019.0 |
| 40°   | 921.6  | 931.3  | 956.6  | 976.1  | 993.6  |
| 42.5° | 882.6  | 892.3  | 919.6  | 948.8  | 972.2  |
| 45°   | 837.8  | 851.4  | 880.6  | 921.6  | 948.8  |
| 47.5° | 793.0  | 806.6  | 843.6  | 894.3  | 921.6  |
| 50°   | 746.2  | 761.8  | 806.6  | 865.1  | 894.3  |
| 52.5° | 697.5  | 715.0  | 771.5  | 833.9  | 863.1  |
| 55°   | 646.8  | 668.3  | 732.6  | 798.8  | 830.0  |
| 57.5° | 594.2  | 617.6  | 693.6  | 763.7  | 796.9  |
| 60°   | 539.7  | 568.9  | 652.7  | 726.7  | 761.8  |
| 62.5° | 483.2  | 518.3  | 611.8  | 687.8  | 724.8  |
| 65°   | 424.7  | 465.6  | 568.9  | 648.8  | 685.8  |
| 67.5° | 364.3  | 418.9  | 526.0  | 609.8  | 646.8  |
| 70°   | 303.9  | 368.2  | 481.2  | 567.0  | 604.0  |
| 72.5° | 247.4  | 321.5  | 436.4  | 516.3  | 524.1  |
| 75°   | 192.9  | 274.7  | 389.7  | 397.5  | 383.8  |
| 77.5° | 144.2  | 228.0  | 321.5  | 286.4  | 284.5  |
| 80°   | 103.3  | 183.1  | 206.5  | 212.4  | 214.3  |
| 82.5° | 68.2   | 138.3  | 134.4  | 138.3  | 136.4  |
| 85°   | 40.9   | 68.2   | 70.1   | 68.2   | 64.3   |
| 87.5° | 19.5   | 25.3   | 19.5   | 17.5   | 15.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)