

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: P263522

Luminaire Tested: **24CZ-LD5-60-RDP-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263522  
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-L83050-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: 3962.0 lumens  
Efficiency: N/A  
Efficacy: 89.7 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

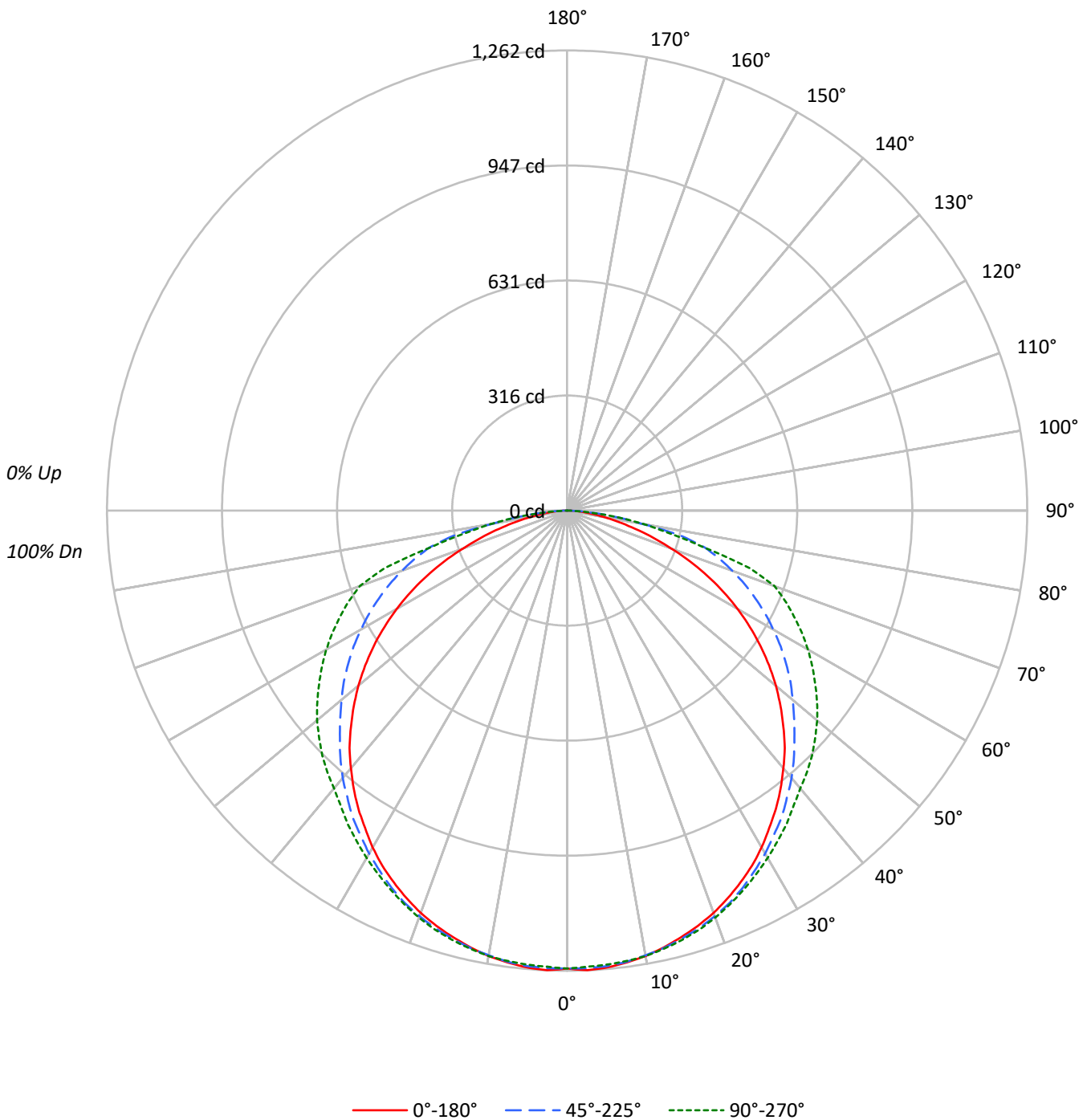
Input Watts (W): 44.179464  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 61  | 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°  | 1690 | 1690 | 1690 |
| 5°  | 1699 | 1694 | 1688 |
| 10° | 1695 | 1692 | 1695 |
| 15° | 1687 | 1692 | 1698 |
| 20° | 1681 | 1695 | 1701 |
| 25° | 1671 | 1694 | 1703 |
| 30° | 1657 | 1688 | 1709 |
| 35° | 1640 | 1685 | 1724 |
| 40° | 1620 | 1682 | 1747 |
| 45° | 1596 | 1677 | 1807 |
| 50° | 1564 | 1690 | 1874 |
| 55° | 1519 | 1720 | 1949 |
| 60° | 1454 | 1758 | 2052 |
| 65° | 1354 | 1813 | 2186 |
| 70° | 1197 | 1895 | 2378 |
| 75° | 1004 | 2028 | 1997 |
| 80° | 801  | 1602 | 1662 |
| 85° | 633  | 1084 | 994  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 119.1  | 3.0       |
| 10°-20°   | 342.8  | 8.7       |
| 20°-30°   | 523.7  | 13.2      |
| 30°-40°   | 640.2  | 16.2      |
| 40°-50°   | 685.3  | 17.3      |
| 50°-60°   | 657.3  | 16.6      |
| 60°-70°   | 555.0  | 14.0      |
| 70°-80°   | 354.7  | 9.0       |
| 80°-90°   | 83.9   | 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°    | 985.6  | 24.9      |
| 0°-40°    | 1625.8 | 41.0      |
| 0°-60°    | 2968.4 | 74.9      |
| 0°-90°    | 3962.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3962.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1256 | 1256  | 1256 | 1256  | 1256 |      |
| 5°  | 1258 | 1250  | 1254 | 1252  | 1250 | 119  |
| 15° | 1211 | 1207  | 1215 | 1219  | 1219 | 342  |
| 25° | 1125 | 1123  | 1141 | 1145  | 1147 | 519  |
| 35° | 998  | 1006  | 1026 | 1040  | 1049 | 624  |
| 45° | 839  | 852   | 882  | 922   | 950  | 647  |
| 55° | 648  | 669   | 733  | 800   | 831  | 578  |
| 65° | 425  | 466   | 570  | 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°    | 1256.0 | 1256.0 | 1256.0 | 1256.0 | 1256.0 |
| 2.5°  | 1261.8 | 1254.0 | 1256.0 | 1256.0 | 1252.1 |
| 5°    | 1257.9 | 1250.1 | 1254.0 | 1252.1 | 1250.1 |
| 7.5°  | 1250.1 | 1244.3 | 1248.2 | 1248.2 | 1246.2 |
| 10°   | 1240.4 | 1234.5 | 1238.4 | 1240.4 | 1240.4 |
| 12.5° | 1226.7 | 1222.8 | 1228.7 | 1228.7 | 1230.6 |
| 15°   | 1211.1 | 1207.2 | 1215.0 | 1218.9 | 1218.9 |
| 17.5° | 1193.6 | 1191.6 | 1201.4 | 1203.3 | 1205.3 |
| 20°   | 1174.1 | 1172.1 | 1183.8 | 1183.8 | 1187.7 |
| 22.5° | 1150.7 | 1148.7 | 1164.3 | 1164.3 | 1168.2 |
| 25°   | 1125.3 | 1123.4 | 1140.9 | 1144.8 | 1146.8 |
| 27.5° | 1098.0 | 1096.1 | 1113.6 | 1119.5 | 1123.4 |
| 30°   | 1066.8 | 1066.8 | 1086.3 | 1094.1 | 1100.0 |
| 32.5° | 1031.7 | 1037.6 | 1055.1 | 1066.8 | 1074.6 |
| 35°   | 998.5  | 1006.3 | 1025.9 | 1039.5 | 1049.3 |
| 37.5° | 961.5  | 969.3  | 990.7  | 1008.3 | 1020.0 |
| 40°   | 922.5  | 932.2  | 957.6  | 977.1  | 994.6  |
| 42.5° | 883.5  | 893.2  | 920.5  | 949.8  | 973.2  |
| 45°   | 838.6  | 852.3  | 881.5  | 922.5  | 949.8  |
| 47.5° | 793.8  | 807.4  | 844.5  | 895.2  | 922.5  |
| 50°   | 747.0  | 762.6  | 807.4  | 865.9  | 895.2  |
| 52.5° | 698.2  | 715.8  | 772.3  | 834.7  | 864.0  |
| 55°   | 647.5  | 668.9  | 733.3  | 799.6  | 830.8  |
| 57.5° | 594.8  | 618.2  | 694.3  | 764.5  | 797.7  |
| 60°   | 540.2  | 569.5  | 653.3  | 727.5  | 762.6  |
| 62.5° | 483.7  | 518.8  | 612.4  | 688.5  | 725.5  |
| 65°   | 425.2  | 466.1  | 569.5  | 649.4  | 686.5  |
| 67.5° | 364.7  | 419.3  | 526.6  | 610.4  | 647.5  |
| 70°   | 304.2  | 368.6  | 481.7  | 567.5  | 604.6  |
| 72.5° | 247.7  | 321.8  | 436.9  | 516.8  | 524.6  |
| 75°   | 193.1  | 275.0  | 390.1  | 397.9  | 384.2  |
| 77.5° | 144.3  | 228.2  | 321.8  | 286.7  | 284.7  |
| 80°   | 103.4  | 183.3  | 206.7  | 212.6  | 214.5  |
| 82.5° | 68.3   | 138.5  | 134.6  | 138.5  | 136.5  |
| 85°   | 41.0   | 68.3   | 70.2   | 68.3   | 64.4   |
| 87.5° | 19.5   | 25.4   | 19.5   | 17.6   | 15.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)