

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: P732317

Luminaire Tested: **24CZ2-50HE-HRP-B2750-W2D-3000K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P732317  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P295011)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 1/5/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50HE-HRP-B2750-W2D-3000K  
Description: 2X4 5000 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 3000K CCT AND HRP LENS  
  
Light Source: -  
Ballast/Driver: -

**Summary**

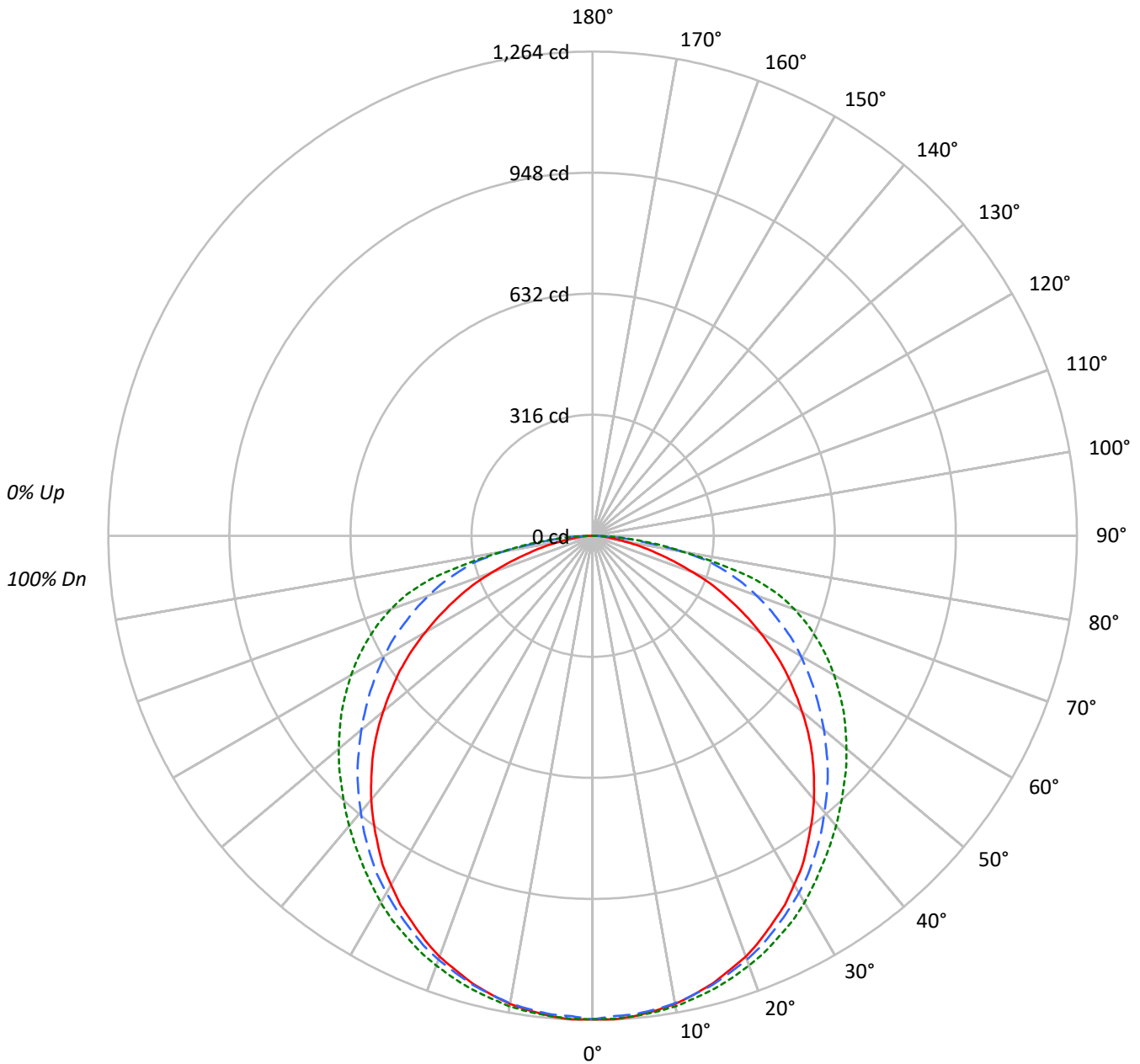
Lumens per Lamp: N/A  
Luminaire Lumens: 3890.0 lumens  
Efficiency: N/A  
Efficacy: 105.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 37  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 50  |     |     |     |     |     |     |     |     | 30 |    |   |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 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 | 96  | 93  | 96  | 93  | 90  | 92  | 90  | 87  | 89  | 86  | 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  | 61  | 70  | 64  | 59  | 68  | 63  | 58  | 56  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 81  | 68  | 59  | 52  | 79  | 67  | 59  | 52  | 65  | 57  | 51  | 62  | 56  | 50  | 60  | 54  | 50  | 48  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 74  | 61  | 52  | 45  | 72  | 60  | 51  | 45  | 58  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 43  | 41  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 69  | 55  | 46  | 39  | 67  | 54  | 45  | 39  | 52  | 44  | 38  | 50  | 43  | 38  | 49  | 42  | 38  | 36  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 63  | 50  | 41  | 34  | 62  | 49  | 40  | 34  | 47  | 39  | 34  | 46  | 39  | 34  | 44  | 38  | 33  | 31  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 59  | 45  | 36  | 30  | 57  | 44  | 36  | 30  | 43  | 36  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 28  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 55  | 41  | 33  | 27  | 54  | 41  | 33  | 27  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 25  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 52  | 38  | 30  | 25  | 50  | 38  | 30  | 25  | 37  | 30  | 25  | 36  | 29  | 24  | 35  | 29  | 24  | 23  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1781 | 1781 | 1781 |
| 5°  | 1784 | 1776 | 1784 |
| 10° | 1778 | 1776 | 1788 |
| 15° | 1768 | 1773 | 1789 |
| 20° | 1756 | 1768 | 1793 |
| 25° | 1735 | 1760 | 1795 |
| 30° | 1715 | 1754 | 1802 |
| 35° | 1686 | 1745 | 1804 |
| 40° | 1656 | 1734 | 1821 |
| 45° | 1619 | 1732 | 1849 |
| 50° | 1566 | 1731 | 1899 |
| 55° | 1511 | 1743 | 1967 |
| 60° | 1425 | 1770 | 2055 |
| 65° | 1316 | 1811 | 2170 |
| 70° | 1149 | 1875 | 2312 |
| 75° | 932  | 1971 | 2388 |
| 80° | 688  | 1934 | 1934 |
| 85° | 528  | 1425 | 1608 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 119.6  | 3.1       |
| 10°-20°   | 343.3  | 8.8       |
| 20°-30°   | 522.7  | 13.4      |
| 30°-40°   | 634.7  | 16.3      |
| 40°-50°   | 670.5  | 17.2      |
| 50°-60°   | 632.7  | 16.3      |
| 60°-70°   | 526.1  | 13.5      |
| 70°-80°   | 346.1  | 8.9       |
| 80°-90°   | 94.3   | 2.4       |
| 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  | 25.3      |
| 0°-40°    | 1620.2 | 41.7      |
| 0°-60°    | 2923.4 | 75.2      |
| 0°-90°    | 3890.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3890.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1262 | 1262  | 1262 | 1262  | 1262 |      |
| 5°  | 1259 | 1259  | 1254 | 1259  | 1259 | 120  |
| 15° | 1210 | 1212  | 1213 | 1225  | 1225 | 341  |
| 25° | 1114 | 1120  | 1130 | 1150  | 1153 | 514  |
| 35° | 979  | 990   | 1013 | 1039  | 1047 | 613  |
| 45° | 811  | 827   | 868  | 910   | 927  | 625  |
| 55° | 614  | 640   | 708  | 775   | 800  | 547  |
| 65° | 394  | 440   | 542  | 622   | 650  | 390  |
| 75° | 171  | 249   | 362  | 428   | 438  | 184  |
| 85° | 33   | 72    | 88   | 98    | 99   | 40   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1262.2 | 1262.2 | 1262.2 | 1262.2 | 1262.2 |
| 2.5°  | 1263.8 | 1262.2 | 1255.5 | 1262.2 | 1262.2 |
| 5°    | 1258.9 | 1258.9 | 1253.9 | 1258.9 | 1258.9 |
| 7.5°  | 1250.7 | 1250.7 | 1247.5 | 1253.9 | 1253.9 |
| 10°   | 1241.0 | 1241.0 | 1239.2 | 1247.5 | 1247.5 |
| 12.5° | 1226.3 | 1227.9 | 1226.3 | 1236.0 | 1236.0 |
| 15°   | 1210.0 | 1211.6 | 1213.2 | 1224.7 | 1224.7 |
| 17.5° | 1188.9 | 1192.1 | 1195.3 | 1208.4 | 1210.0 |
| 20°   | 1169.3 | 1170.9 | 1177.4 | 1192.1 | 1193.7 |
| 22.5° | 1143.1 | 1148.2 | 1156.2 | 1170.9 | 1175.8 |
| 25°   | 1113.9 | 1120.4 | 1130.2 | 1149.8 | 1153.0 |
| 27.5° | 1086.1 | 1091.2 | 1104.1 | 1125.2 | 1131.9 |
| 30°   | 1052.1 | 1060.2 | 1076.5 | 1097.6 | 1105.7 |
| 32.5° | 1019.5 | 1027.5 | 1047.1 | 1070.0 | 1076.5 |
| 35°   | 978.8  | 990.1  | 1013.0 | 1039.0 | 1047.1 |
| 37.5° | 939.7  | 951.0  | 978.8  | 1008.0 | 1017.9 |
| 40°   | 898.8  | 911.9  | 941.3  | 975.6  | 988.5  |
| 42.5° | 854.9  | 872.9  | 905.5  | 942.9  | 957.6  |
| 45°   | 811.0  | 827.3  | 868.0  | 910.3  | 926.6  |
| 47.5° | 763.7  | 783.2  | 827.3  | 877.7  | 897.2  |
| 50°   | 713.4  | 737.7  | 788.3  | 843.7  | 864.8  |
| 52.5° | 662.8  | 690.4  | 747.4  | 809.4  | 832.2  |
| 55°   | 613.9  | 640.0  | 708.3  | 775.2  | 799.6  |
| 57.5° | 560.3  | 592.7  | 667.6  | 739.3  | 763.7  |
| 60°   | 504.9  | 540.8  | 627.0  | 701.9  | 727.9  |
| 62.5° | 449.5  | 490.2  | 587.9  | 662.8  | 690.4  |
| 65°   | 394.1  | 439.7  | 542.4  | 622.1  | 649.7  |
| 67.5° | 340.4  | 390.9  | 499.9  | 579.8  | 607.4  |
| 70°   | 278.5  | 342.0  | 454.4  | 532.5  | 560.3  |
| 72.5° | 221.5  | 294.8  | 410.4  | 483.8  | 508.1  |
| 75°   | 171.0  | 249.1  | 361.5  | 428.4  | 438.0  |
| 77.5° | 125.5  | 203.6  | 311.0  | 333.9  | 335.5  |
| 80°   | 84.6   | 162.9  | 237.9  | 234.4  | 237.9  |
| 82.5° | 55.4   | 122.0  | 149.8  | 167.8  | 169.4  |
| 85°   | 32.6   | 71.7   | 88.0   | 97.7   | 99.3   |
| 87.5° | 16.3   | 24.4   | 31.0   | 32.6   | 35.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)