

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: P732190

Luminaire Tested: **24CZ2-40-B2750-W2D-5000K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P732190  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P272125)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 1/5/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40-B2750-W2D-5000K  
Description: 2X4 4000 LUMEN CRUZE TROFFER WITH BIO UP LEDS AT 5000K CCT AND RIBBED LENS  
  
Light Source: -  
Ballast/Driver: -

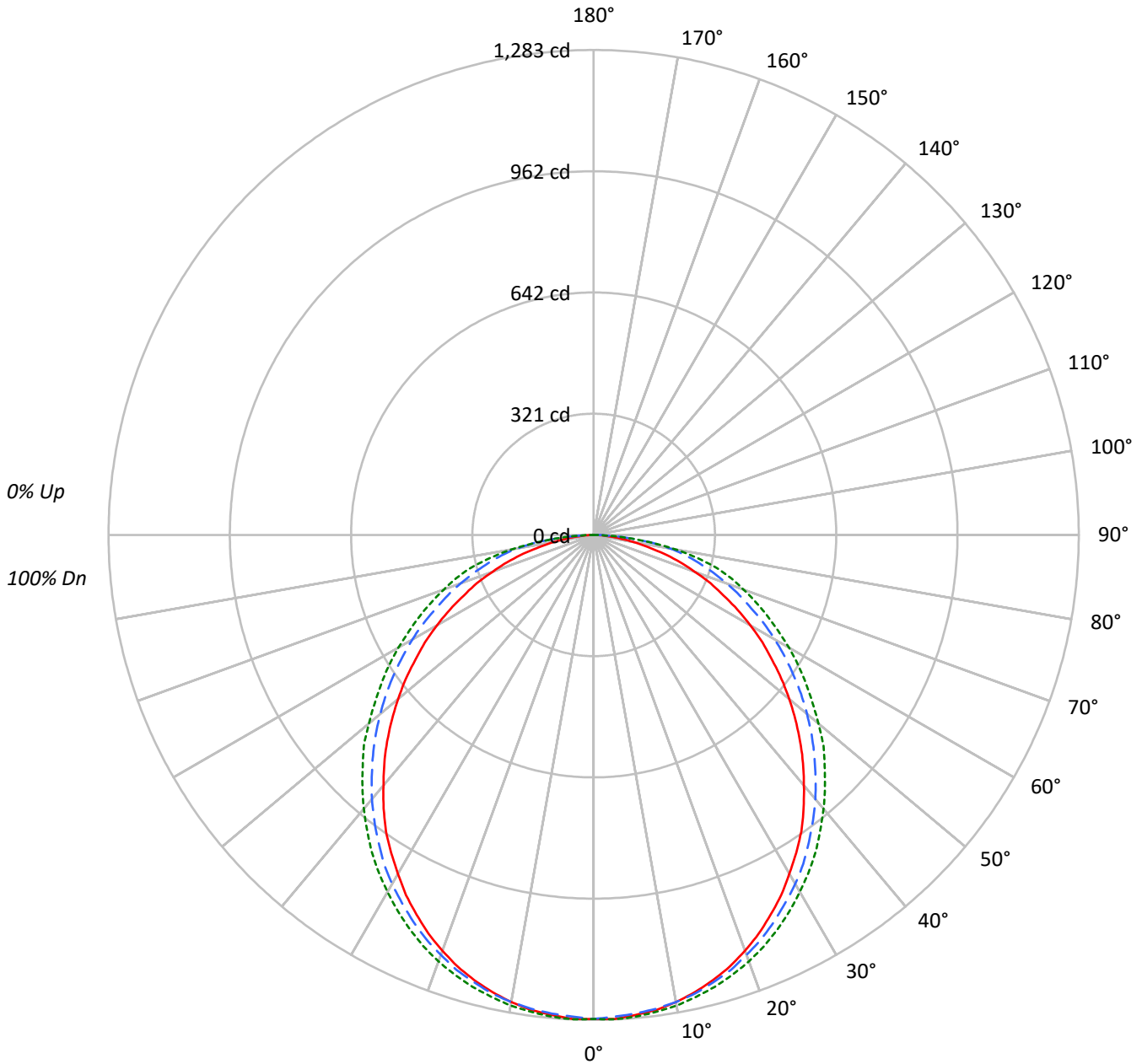
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3645.0 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 1.92' x L: 3.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 31  
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 | 99  | 95  | 106 | 101 | 97  | 93  | 97  | 93  | 90  | 93  | 90  | 88  | 89  | 87  | 85  | 83  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 81  | 76  | 84  | 79  | 74  | 81  | 76  | 72  | 78  | 74  | 71  | 69  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 89  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  | 63  | 57  | 52  | 61  | 56  | 51  | 49  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 42  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 70  | 56  | 47  | 40  | 68  | 55  | 47  | 40  | 53  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 39  | 37  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  | 47  | 40  | 35  | 46  | 39  | 35  | 33  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 26  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 24  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1807 | 1807 | 1807 |
| 5°  | 1806 | 1801 | 1812 |
| 10° | 1799 | 1799 | 1812 |
| 15° | 1781 | 1790 | 1808 |
| 20° | 1758 | 1775 | 1803 |
| 25° | 1725 | 1758 | 1792 |
| 30° | 1687 | 1738 | 1777 |
| 35° | 1650 | 1709 | 1763 |
| 40° | 1593 | 1681 | 1743 |
| 45° | 1541 | 1648 | 1724 |
| 50° | 1482 | 1617 | 1703 |
| 55° | 1416 | 1587 | 1687 |
| 60° | 1350 | 1562 | 1683 |
| 65° | 1264 | 1535 | 1693 |
| 70° | 1170 | 1543 | 1739 |
| 75° | 1048 | 1572 | 1837 |
| 80° | 847  | 1665 | 1797 |
| 85° | 636  | 1462 | 1425 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 121.2  | 3.3       |
| 10°-20°   | 346.4  | 9.5       |
| 20°-30°   | 520.7  | 14.3      |
| 30°-40°   | 620.2  | 17.0      |
| 40°-50°   | 634.8  | 17.4      |
| 50°-60°   | 571.5  | 15.7      |
| 60°-70°   | 448.8  | 12.3      |
| 70°-80°   | 291.3  | 8.0       |
| 80°-90°   | 90.1   | 2.5       |
| 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°    | 988.3  | 27.1      |
| 0°-40°    | 1608.5 | 44.1      |
| 0°-60°    | 2814.8 | 77.2      |
| 0°-90°    | 3645.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3645.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1281 | 1281  | 1281 | 1281  | 1281 |      |
| 5°  | 1275 | 1277  | 1271 | 1278  | 1279 | 121  |
| 15° | 1219 | 1223  | 1225 | 1235  | 1238 | 344  |
| 25° | 1108 | 1117  | 1129 | 1147  | 1151 | 510  |
| 35° | 958  | 969   | 992  | 1016  | 1024 | 597  |
| 45° | 772  | 791   | 826  | 857   | 864  | 595  |
| 55° | 575  | 601   | 645  | 678   | 686  | 516  |
| 65° | 379  | 408   | 460  | 498   | 507  | 377  |
| 75° | 192  | 229   | 288  | 328   | 337  | 203  |
| 85° | 39   | 73    | 90   | 88    | 88   | 48   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P732190

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°            | 22.5°         | 45°           | 67.5°         | 90°           |
|-------|---------------|---------------|---------------|---------------|---------------|
| 0°    | 1280.6        | 1280.6        | 1280.6        | 1280.6        | <i>1280.6</i> |
| 2.5°  | <i>1281.7</i> | <i>1281.7</i> | <i>1275.8</i> | <i>1281.7</i> | <i>1282.8</i> |
| 5°    | 1274.7        | 1277.1        | 1271.2        | 1278.2        | <i>1279.3</i> |
| 7.5°  | 1267.7        | 1267.7        | 1264.3        | 1271.2        | <i>1272.5</i> |
| 10°   | 1255.0        | 1256.2        | 1255.0        | 1263.1        | <i>1264.3</i> |
| 12.5° | 1238.9        | 1241.1        | 1242.4        | 1250.4        | <i>1251.6</i> |
| 15°   | 1219.2        | 1222.7        | 1224.9        | 1235.4        | <i>1237.7</i> |
| 17.5° | 1197.2        | 1200.6        | 1206.4        | 1217.9        | <i>1220.3</i> |
| 20°   | 1170.5        | 1175.1        | 1182.1        | 1197.2        | <i>1200.6</i> |
| 22.5° | 1141.6        | 1146.2        | 1157.8        | 1171.6        | <i>1177.5</i> |
| 25°   | 1108.0        | 1117.2        | 1128.8        | 1147.4        | <i>1150.8</i> |
| 27.5° | 1074.4        | 1082.5        | 1097.6        | 1117.2        | <i>1122.0</i> |
| 30°   | 1035.1        | 1047.8        | 1066.3        | 1086.0        | <i>1090.6</i> |
| 32.5° | 996.8         | 1009.5        | 1031.6        | 1052.5        | <i>1058.2</i> |
| 35°   | 957.5         | 969.1         | 992.2         | 1016.5        | <i>1023.5</i> |
| 37.5° | 912.3         | 927.4         | 952.9         | 977.2         | <i>984.1</i>  |
| 40°   | 864.9         | 883.4         | 912.3         | 937.8         | <i>945.9</i>  |
| 42.5° | 819.7         | 839.3         | 868.4         | 896.1         | <i>905.3</i>  |
| 45°   | 772.2         | 790.8         | 825.5         | 856.8         | <i>863.8</i>  |
| 47.5° | 723.6         | 744.5         | 781.5         | 812.7         | <i>824.3</i>  |
| 50°   | 675.0         | 697.1         | 736.4         | 768.8         | <i>775.7</i>  |
| 52.5° | 626.3         | 649.5         | 691.2         | 725.9         | <i>729.4</i>  |
| 55°   | 575.4         | 600.9         | 644.9         | 678.5         | <i>685.5</i>  |
| 57.5° | 529.1         | 551.1         | 598.6         | 633.3         | <i>641.4</i>  |
| 60°   | 478.2         | 502.5         | 553.4         | 585.9         | <i>596.2</i>  |
| 62.5° | 429.5         | 455.0         | 508.3         | 540.7         | <i>549.9</i>  |
| 65°   | 378.6         | 407.6         | 459.6         | 497.9         | <i>507.1</i>  |
| 67.5° | 334.7         | 362.4         | 417.9         | 455.0         | <i>464.2</i>  |
| 70°   | 283.6         | 315.0         | 374.0         | 412.2         | <i>421.4</i>  |
| 72.5° | 239.7         | 272.0         | 331.2         | 368.1         | <i>382.1</i>  |
| 75°   | 192.2         | 229.2         | 288.3         | 327.7         | <i>336.9</i>  |
| 77.5° | 145.9         | 188.7         | 248.9         | 279.0         | <i>279.0</i>  |
| 80°   | 104.2         | 149.4         | 204.9         | 218.9         | <i>221.1</i>  |
| 82.5° | 68.4          | 112.3         | 151.6         | 150.5         | <i>150.5</i>  |
| 85°   | 39.3          | 73.0          | 90.3          | 88.0          | <i>88.0</i>   |
| 87.5° | 15.1          | 30.1          | 32.4          | 32.4          | <i>31.2</i>   |
| 90°   | 0.0           | 0.0           | 0.0           | 0.0           | <i>0.0</i>    |



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







(END OF REPORT)