

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: P259248

Luminaire Tested: **22CZ-LD5-29-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259248  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-29-UNV-L93050-W2A1-U-3000K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2217.0 lumens  
Efficiency: N/A  
Efficacy: 104.0 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

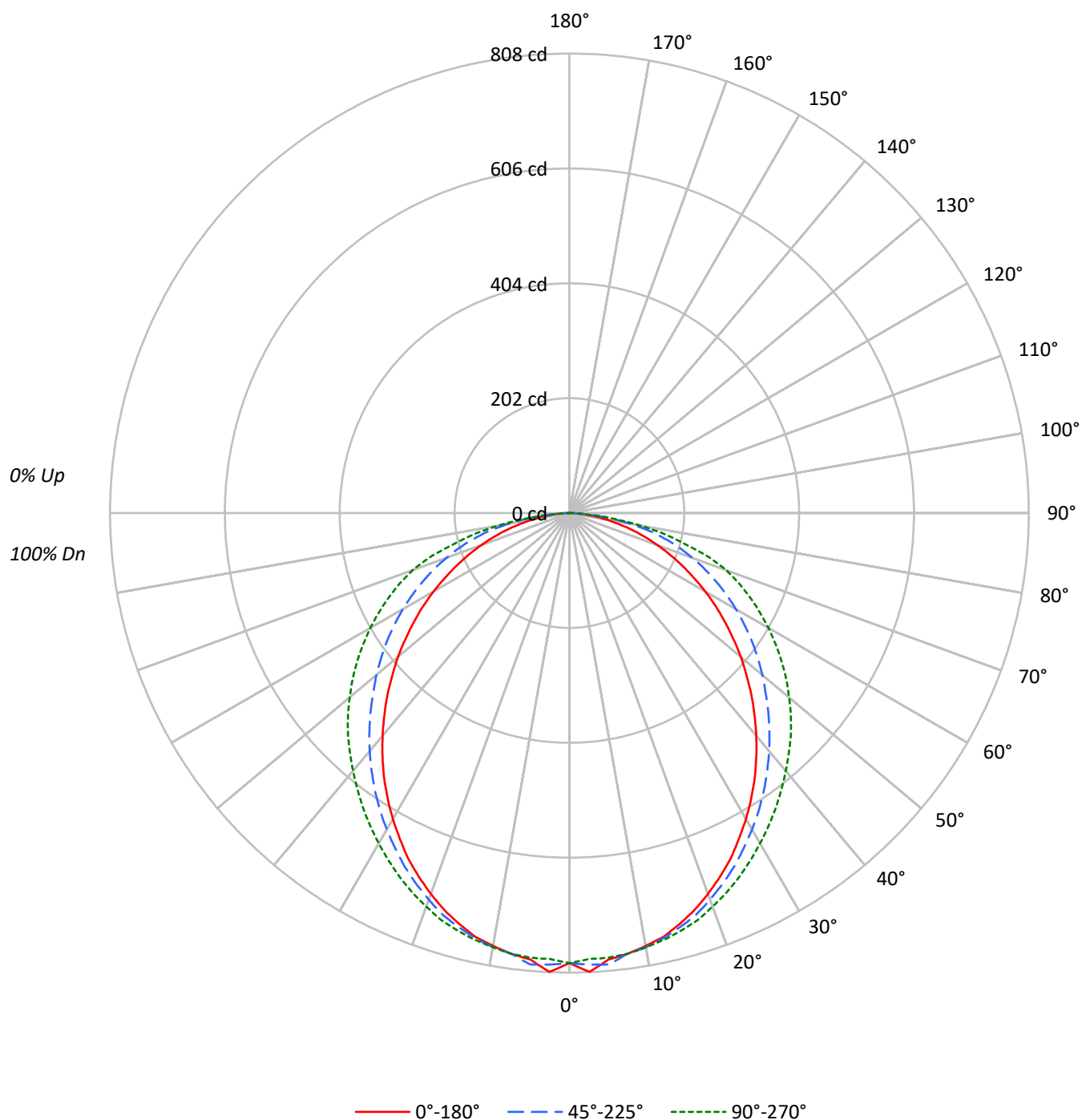
Input Watts (W): 21.311136  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P259248

CATALOG NUMBER: 22CZ-LD5-29-UNV-L93050-W2A1-U-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P259248

CATALOG NUMBER: 22CZ-LD5-29-UNV-L93050-W2A1-U-3000K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|--|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     |  | 20  |     |     |  |     | 20  |     |  |     |     | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     |  | 50  |     |     |  |     | 30  |     |  |     |     | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 108 | 104 | 99  | 95  | 106 | 101 | 97  | 94  |  | 97  | 94  | 91  |  | 93  | 90  | 88  |  | 89  | 87  | 85  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  |  | 84  | 79  | 74  |  | 81  | 77  | 73  |  | 78  | 74  | 71  |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  |  | 74  | 68  | 62  |  | 71  | 66  | 61  |  | 69  | 64  | 60  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  |  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 61  | 56  | 51  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  |  | 59  | 51  | 46  |  | 57  | 50  | 45  |  | 55  | 49  | 45  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  |  | 53  | 46  | 40  |  | 52  | 45  | 40  |  | 50  | 44  | 39  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  |  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 46  | 40  | 35  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 38  | 32  |  | 44  | 37  | 32  |  | 43  | 36  | 31  |  | 42  | 36  | 31  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  |  | 41  | 34  | 29  |  | 40  | 33  | 28  |  | 39  | 33  | 28  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  |  | 38  | 31  | 26  |  | 37  | 30  | 26  |  | 36  | 30  | 26  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2129 | 2129 | 2129 |
| 5°  | 2129 | 2152 | 2120 |
| 10° | 2112 | 2118 | 2118 |
| 15° | 2084 | 2099 | 2118 |
| 20° | 2041 | 2072 | 2109 |
| 25° | 1991 | 2036 | 2097 |
| 30° | 1930 | 1996 | 2084 |
| 35° | 1867 | 1959 | 2079 |
| 40° | 1795 | 1920 | 2079 |
| 45° | 1723 | 1883 | 2097 |
| 50° | 1647 | 1855 | 2112 |
| 55° | 1568 | 1836 | 2139 |
| 60° | 1485 | 1822 | 2176 |
| 65° | 1394 | 1812 | 2231 |
| 70° | 1297 | 1806 | 2307 |
| 75° | 1177 | 1805 | 2185 |
| 80° | 1020 | 1671 | 1939 |
| 85° | 865  | 1266 | 1232 |



TEST NUMBER: P259248

CATALOG NUMBER: 22CZ-LD5-29-UNV-L93050-W2A1-U-3000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 75.1   | 3.4       |
| 10°-20°   | 212.6  | 9.6       |
| 20°-30°   | 316.3  | 14.3      |
| 30°-40°   | 374.0  | 16.9      |
| 40°-50°   | 384.4  | 17.3      |
| 50°-60°   | 351.3  | 15.8      |
| 60°-70°   | 281.0  | 12.7      |
| 70°-80°   | 176.4  | 8.0       |
| 80°-90°   | 45.9   | 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°    | 603.9  | 27.2      |
| 0°-40°    | 978.0  | 44.1      |
| 0°-60°    | 1713.7 | 77.3      |
| 0°-90°    | 2217.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2217.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 791 | 791   | 791 | 791   | 791 |      |
| 5°  | 788 | 788   | 797 | 791   | 785 | 75   |
| 15° | 748 | 749   | 754 | 758   | 760 | 211  |
| 25° | 671 | 675   | 686 | 698   | 706 | 308  |
| 35° | 568 | 576   | 596 | 619   | 633 | 355  |
| 45° | 453 | 465   | 495 | 532   | 551 | 349  |
| 55° | 334 | 350   | 391 | 434   | 456 | 299  |
| 65° | 219 | 238   | 285 | 328   | 350 | 217  |
| 75° | 113 | 135   | 174 | 199   | 210 | 120  |
| 85° | 28  | 36    | 41  | 40    | 40  | 32   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P259248

CATALOG NUMBER: 22CZ-LD5-29-UNV-L93050-W2A1-U-3000K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 791.3 | 791.3 | 791.3 | 791.3 | 791.3 |
| 2.5°  | 807.5 | 804.3 | 794.6 | 788.1 | 784.9 |
| 5°    | 788.1 | 788.1 | 796.7 | 791.3 | 784.9 |
| 7.5°  | 781.6 | 781.6 | 781.6 | 797.8 | 781.6 |
| 10°   | 773.0 | 774.1 | 775.2 | 781.6 | 775.2 |
| 12.5° | 763.3 | 763.3 | 765.4 | 767.6 | 768.7 |
| 15°   | 748.2 | 749.3 | 753.6 | 757.9 | 760.1 |
| 17.5° | 732.0 | 735.3 | 740.7 | 746.0 | 750.4 |
| 20°   | 712.6 | 716.9 | 723.4 | 732.0 | 736.3 |
| 22.5° | 692.1 | 696.4 | 705.1 | 714.8 | 722.3 |
| 25°   | 670.6 | 674.9 | 685.7 | 697.5 | 706.2 |
| 27.5° | 645.8 | 651.2 | 664.1 | 680.3 | 688.9 |
| 30°   | 621.0 | 627.5 | 642.5 | 660.9 | 670.6 |
| 32.5° | 595.1 | 602.7 | 619.9 | 640.4 | 652.2 |
| 35°   | 568.2 | 575.7 | 596.2 | 618.8 | 632.8 |
| 37.5° | 540.1 | 548.8 | 571.4 | 597.3 | 612.4 |
| 40°   | 511.0 | 520.7 | 546.6 | 574.6 | 591.9 |
| 42.5° | 481.9 | 492.7 | 520.7 | 554.1 | 571.4 |
| 45°   | 452.8 | 464.7 | 494.8 | 531.5 | 550.9 |
| 47.5° | 422.6 | 436.6 | 467.9 | 508.9 | 528.3 |
| 50°   | 393.5 | 407.5 | 443.1 | 485.1 | 504.5 |
| 52.5° | 363.3 | 379.5 | 417.2 | 460.3 | 480.8 |
| 55°   | 334.2 | 350.4 | 391.3 | 434.5 | 456.0 |
| 57.5° | 305.1 | 321.3 | 364.4 | 408.6 | 430.2 |
| 60°   | 276.0 | 293.2 | 338.5 | 381.6 | 404.3 |
| 62.5° | 246.9 | 265.2 | 311.6 | 355.8 | 377.3 |
| 65°   | 218.9 | 238.3 | 284.6 | 327.7 | 350.4 |
| 67.5° | 191.9 | 212.4 | 257.7 | 299.7 | 322.4 |
| 70°   | 164.9 | 185.4 | 229.6 | 270.6 | 293.2 |
| 72.5° | 139.1 | 159.6 | 202.7 | 239.3 | 256.6 |
| 75°   | 113.2 | 134.8 | 173.6 | 199.4 | 210.2 |
| 77.5° | 88.4  | 110.0 | 143.4 | 160.6 | 172.5 |
| 80°   | 65.8  | 84.1  | 107.8 | 120.7 | 125.1 |
| 82.5° | 45.3  | 60.4  | 75.5  | 78.7  | 80.9  |
| 85°   | 28.0  | 35.6  | 41.0  | 39.9  | 39.9  |
| 87.5° | 12.9  | 14.0  | 11.9  | 8.6   | 5.4   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)