

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: P230807

Luminaire Tested: **22CZ-LD5-29-SQP-UNV-L950-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230807  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25713)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-29-SQP-UNV-L950-CD1-U  
Description: CRUZE 2x2 LED TROFFER  
WITH SQP LENS  
Light Source: (84) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1922.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.31 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

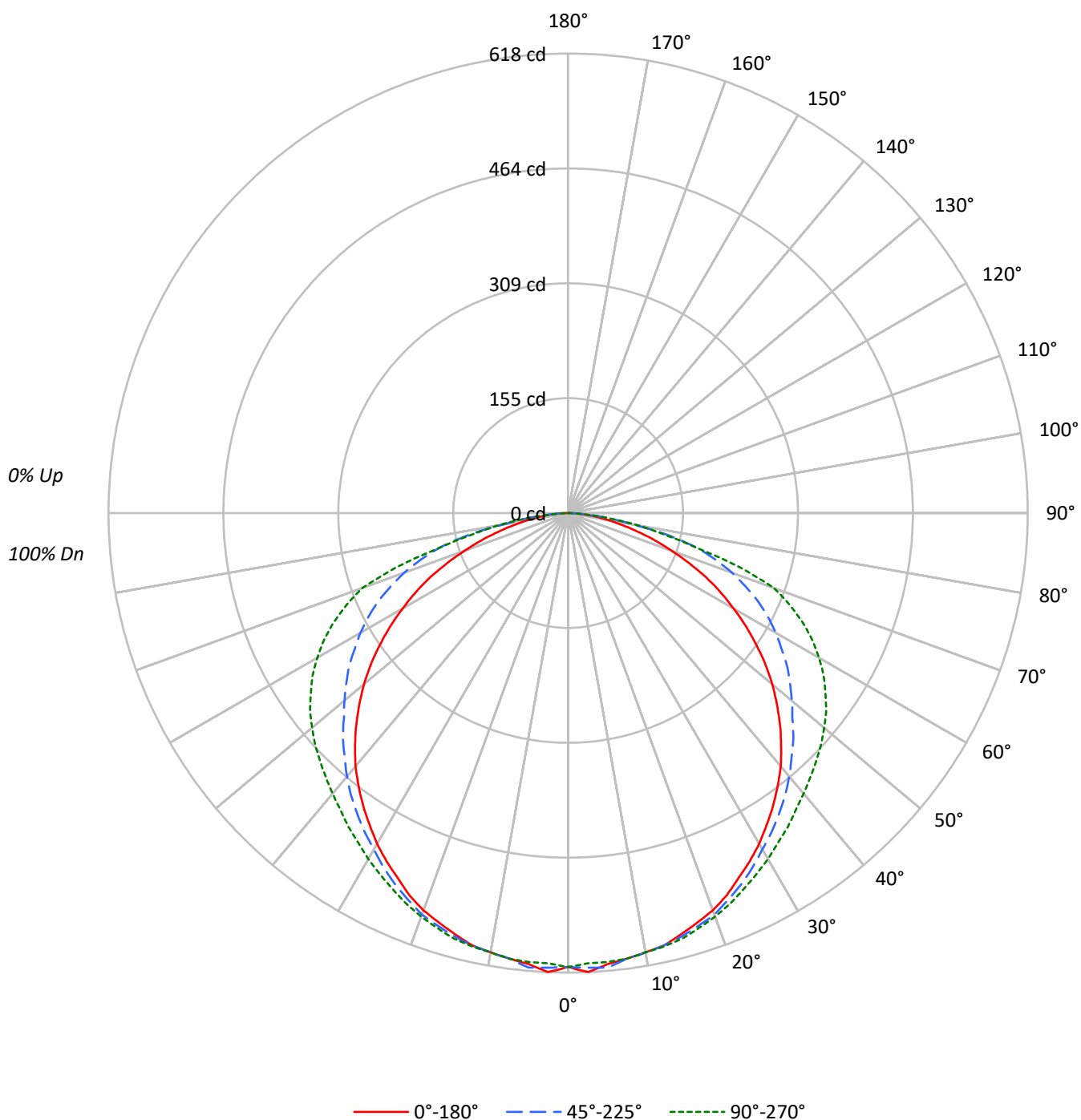
Input Watts (W): 23.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P230807

CATALOG NUMBER: 22CZ-LD5-29-SQP-UNV-L950-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P230807

CATALOG NUMBER: 22CZ-LD5-29-SQP-UNV-L950-CD1-U

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

|     |     |     |     |     |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|--|-----|-----|-----|--|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     |  | 20  |     |     |  |  | 20  |     |     |  |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     |  | 50  |     |     |  |  | 30  |     |     |  |  | 10  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  |  | 50  | 30  | 10  |  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  |  | 106 | 106 | 106 |  |  | 102 |
| 1   | 108 | 103 | 99  | 95  | 105 | 101 | 97  | 93  |  | 97  | 93  | 90  |  |  | 93  | 90  | 87  |  |  | 89  |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 81  | 75  |  | 84  | 78  | 73  |  |  | 80  | 76  | 71  |  |  | 77  |
| 3   | 89  | 78  | 69  | 62  | 86  | 76  | 68  | 62  |  | 73  | 66  | 61  |  |  | 70  | 64  | 59  |  |  | 68  |
| 4   | 81  | 68  | 59  | 52  | 79  | 67  | 58  | 52  |  | 64  | 57  | 51  |  |  | 62  | 56  | 50  |  |  | 60  |
| 5   | 74  | 61  | 52  | 45  | 72  | 60  | 51  | 44  |  | 58  | 50  | 44  |  |  | 56  | 49  | 43  |  |  | 54  |
| 6   | 68  | 55  | 45  | 39  | 66  | 54  | 45  | 39  |  | 52  | 44  | 38  |  |  | 50  | 43  | 38  |  |  | 48  |
| 7   | 63  | 49  | 40  | 34  | 62  | 49  | 40  | 34  |  | 47  | 39  | 34  |  |  | 45  | 39  | 33  |  |  | 44  |
| 8   | 59  | 45  | 36  | 30  | 57  | 44  | 36  | 30  |  | 43  | 35  | 30  |  |  | 42  | 35  | 30  |  |  | 40  |
| 9   | 55  | 41  | 33  | 27  | 54  | 41  | 33  | 27  |  | 39  | 32  | 27  |  |  | 38  | 32  | 27  |  |  | 37  |
| 10  | 51  | 38  | 30  | 24  | 50  | 37  | 30  | 24  |  | 36  | 29  | 24  |  |  | 35  | 29  | 24  |  |  | 35  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1643 | 1643 | 1643 |
| 5°  | 1645 | 1657 | 1637 |
| 10° | 1639 | 1639 | 1639 |
| 15° | 1634 | 1643 | 1651 |
| 20° | 1629 | 1646 | 1654 |
| 25° | 1609 | 1635 | 1657 |
| 30° | 1596 | 1623 | 1670 |
| 35° | 1579 | 1623 | 1692 |
| 40° | 1563 | 1625 | 1730 |
| 45° | 1534 | 1630 | 1795 |
| 50° | 1500 | 1644 | 1881 |
| 55° | 1450 | 1688 | 1982 |
| 60° | 1382 | 1735 | 2097 |
| 65° | 1302 | 1796 | 2215 |
| 70° | 1163 | 1843 | 2313 |
| 75° | 1009 | 1847 | 1831 |
| 80° | 855  | 1365 | 1480 |
| 85° | 738  | 923  | 831  |



TEST NUMBER: P230807

CATALOG NUMBER: 22CZ-LD5-29-SQP-UNV-L950-CD1-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 58.0   | 3.0       |
| 10°-20°   | 166.5  | 8.7       |
| 20°-30°   | 253.7  | 13.2      |
| 30°-40°   | 310.4  | 16.1      |
| 40°-50°   | 334.0  | 17.4      |
| 50°-60°   | 323.5  | 16.8      |
| 60°-70°   | 274.0  | 14.3      |
| 70°-80°   | 165.6  | 8.6       |
| 80°-90°   | 36.4   | 1.9       |
| 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°    | 478.1  | 24.9      |
| 0°-40°    | 788.5  | 41.0      |
| 0°-60°    | 1445.9 | 75.2      |
| 0°-90°    | 1922.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1922.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 610 | 610   | 610 | 610   | 610 |      |
| 5°  | 609 | 609   | 614 | 610   | 606 | 58   |
| 15° | 587 | 588   | 590 | 591   | 593 | 166  |
| 25° | 542 | 545   | 551 | 555   | 558 | 250  |
| 35° | 481 | 484   | 494 | 508   | 515 | 301  |
| 45° | 403 | 410   | 428 | 455   | 472 | 311  |
| 55° | 309 | 322   | 360 | 402   | 422 | 276  |
| 65° | 204 | 227   | 282 | 327   | 348 | 201  |
| 75° | 97  | 131   | 178 | 181   | 176 | 104  |
| 85° | 24  | 28    | 30  | 28    | 27  | 27   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P230807

CATALOG NUMBER: 22CZ-LD5-29-SQP-UNV-L950-CD1-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 610.5 | 610.5 | 610.5 | 610.5 | 610.5 |
| 2.5°  | 617.9 | 616.4 | 612.0 | 609.0 | 606.0 |
| 5°    | 609.0 | 609.0 | 613.5 | 610.5 | 606.0 |
| 7.5°  | 604.5 | 604.5 | 604.5 | 612.0 | 604.5 |
| 10°   | 600.0 | 601.5 | 600.0 | 606.0 | 600.0 |
| 12.5° | 595.6 | 595.6 | 595.6 | 597.0 | 597.0 |
| 15°   | 586.6 | 588.1 | 589.6 | 591.1 | 592.6 |
| 17.5° | 577.6 | 579.1 | 582.1 | 583.6 | 585.1 |
| 20°   | 568.7 | 570.2 | 574.7 | 574.7 | 577.6 |
| 22.5° | 556.7 | 556.7 | 562.7 | 564.2 | 568.7 |
| 25°   | 541.8 | 544.8 | 550.8 | 555.3 | 558.2 |
| 27.5° | 528.4 | 531.4 | 537.3 | 543.3 | 547.8 |
| 30°   | 513.5 | 516.4 | 522.4 | 531.4 | 537.3 |
| 32.5° | 497.0 | 500.0 | 509.0 | 519.4 | 525.4 |
| 35°   | 480.6 | 483.6 | 494.1 | 507.5 | 515.0 |
| 37.5° | 462.7 | 467.2 | 479.1 | 494.1 | 503.0 |
| 40°   | 444.8 | 449.3 | 462.7 | 479.1 | 492.6 |
| 42.5° | 423.9 | 429.9 | 444.8 | 467.2 | 482.1 |
| 45°   | 403.0 | 410.5 | 428.4 | 455.2 | 471.7 |
| 47.5° | 380.6 | 388.1 | 409.0 | 443.3 | 461.2 |
| 50°   | 358.2 | 367.2 | 392.6 | 429.9 | 449.3 |
| 52.5° | 334.3 | 343.3 | 376.1 | 416.4 | 437.3 |
| 55°   | 309.0 | 322.4 | 359.7 | 401.5 | 422.4 |
| 57.5° | 283.6 | 298.5 | 340.3 | 385.1 | 407.5 |
| 60°   | 256.7 | 274.6 | 322.4 | 367.2 | 389.6 |
| 62.5° | 231.4 | 250.8 | 303.0 | 347.8 | 370.2 |
| 65°   | 204.5 | 226.9 | 282.1 | 326.9 | 347.8 |
| 67.5° | 176.1 | 204.5 | 258.2 | 301.5 | 322.4 |
| 70°   | 147.8 | 180.6 | 234.3 | 274.6 | 294.0 |
| 72.5° | 122.4 | 156.7 | 207.5 | 241.8 | 241.8 |
| 75°   | 97.0  | 131.3 | 177.6 | 180.6 | 176.1 |
| 77.5° | 74.6  | 107.5 | 138.8 | 126.9 | 129.9 |
| 80°   | 55.2  | 82.1  | 88.1  | 92.5  | 95.5  |
| 82.5° | 37.3  | 55.2  | 56.7  | 59.7  | 59.7  |
| 85°   | 23.9  | 28.4  | 29.9  | 28.4  | 26.9  |
| 87.5° | 10.4  | 11.9  | 9.0   | 6.0   | 4.5   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)