

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: P#

Luminaire Tested: **22CZ-LD5-24-S-UNV-L840-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25712)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-24-S-UNV-L840-CD1-U  
Description: CRUZE 2x2 LED TROFFER

Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2569.8 lumens  
Efficiency: N/A  
Efficacy: 131.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.24 / 1.33  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 2' x H: 0.1')  
CIE Type: Direct

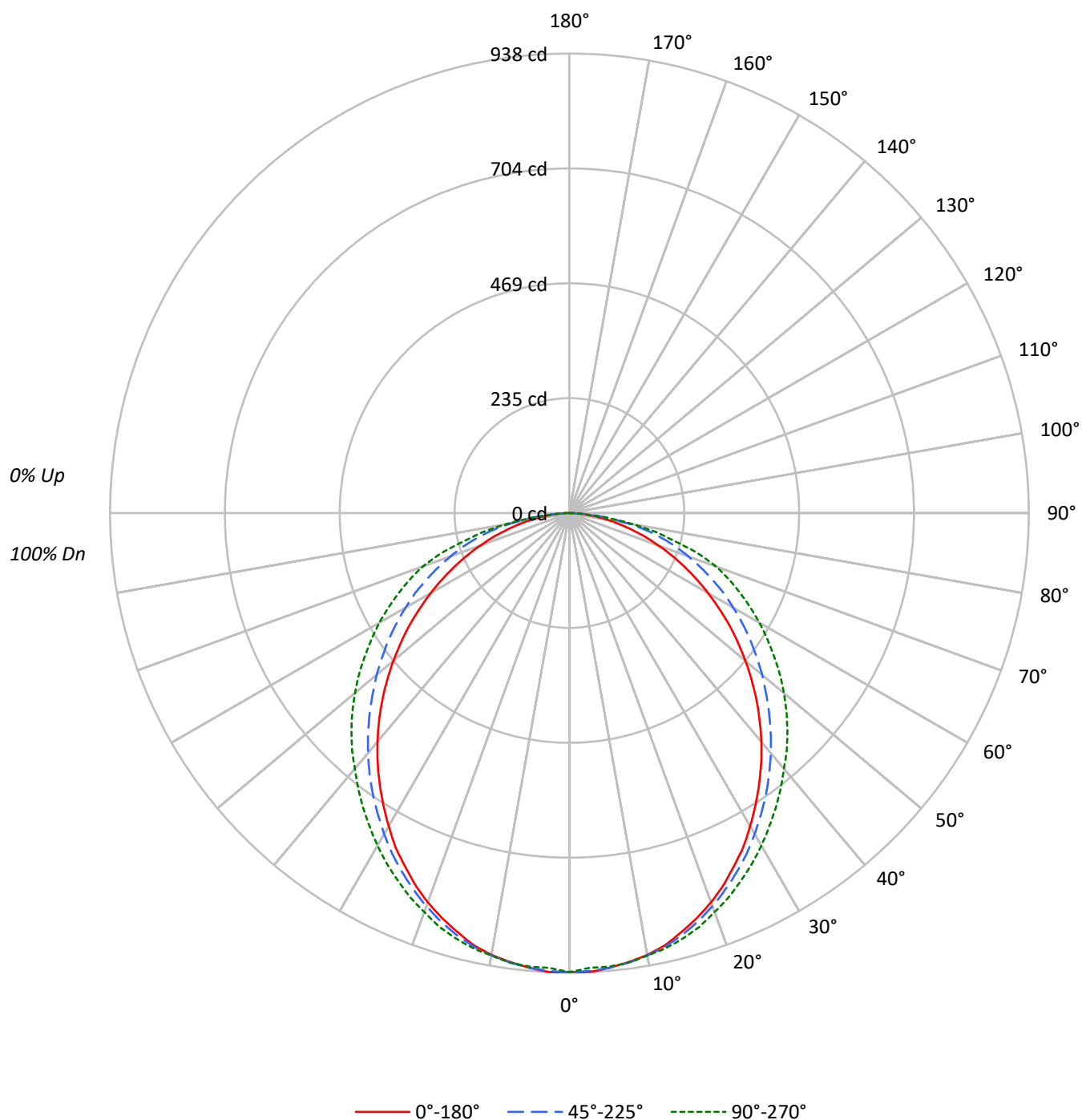
Input Watts (W): 19.62  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |     |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 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 | 100 |    |    |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 91  | 88  | 90  | 87  | 85  | 83  |    |    |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 77  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  | 69  |    |    |
| 3   | 90  | 79  | 71  | 64  | 87  | 78  | 70  | 64  | 75  | 68  | 63  | 72  | 66  | 62  | 69  | 64  | 60  | 58  |    |    |
| 4   | 82  | 70  | 61  | 54  | 80  | 69  | 61  | 54  | 66  | 59  | 53  | 64  | 58  | 53  | 62  | 56  | 52  | 50  |    |    |
| 5   | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 46  | 56  | 50  | 45  | 43  |    |    |
| 6   | 70  | 56  | 47  | 41  | 68  | 56  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 35  | 33  |    |    |
| 8   | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 30  |    |    |
| 9   | 56  | 43  | 35  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 39  | 33  | 29  | 27  |    |    |
| 10  | 53  | 40  | 32  | 26  | 52  | 39  | 32  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2521 | 2521 | 2521 |
| 5°  | 2506 | 2502 | 2500 |
| 10° | 2481 | 2475 | 2484 |
| 15° | 2433 | 2437 | 2470 |
| 20° | 2378 | 2385 | 2437 |
| 25° | 2306 | 2324 | 2403 |
| 30° | 2229 | 2259 | 2367 |
| 35° | 2143 | 2191 | 2331 |
| 40° | 2056 | 2120 | 2297 |
| 45° | 1959 | 2049 | 2282 |
| 50° | 1853 | 1983 | 2258 |
| 55° | 1746 | 1920 | 2232 |
| 60° | 1620 | 1852 | 2219 |
| 65° | 1491 | 1781 | 2208 |
| 70° | 1341 | 1700 | 2203 |
| 75° | 1157 | 1594 | 1957 |
| 80° | 939  | 1338 | 1579 |
| 85° | 631  | 780  | 800  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 88.5   | 3.4       |
| 10°-20°   | 251.3  | 9.8       |
| 20°-30°   | 373.3  | 14.5      |
| 30°-40°   | 439.4  | 17.1      |
| 40°-50°   | 447.9  | 17.4      |
| 50°-60°   | 404.0  | 15.7      |
| 60°-70°   | 318.2  | 12.4      |
| 70°-80°   | 196.3  | 7.6       |
| 80°-90°   | 51.0   | 2.0       |
| 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°    | 713.0  | 27.7      |
| 0°-40°    | 1152.4 | 44.8      |
| 0°-60°    | 2004.3 | 78.0      |
| 0°-90°    | 2569.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2569.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 937 | 937   | 937 | 937   | 937 |      |
| 5°  | 932 | 933   | 932 | 931   | 929 | 88   |
| 15° | 885 | 889   | 891 | 896   | 899 | 250  |
| 25° | 795 | 800   | 808 | 822   | 828 | 366  |
| 35° | 675 | 683   | 700 | 722   | 734 | 422  |
| 45° | 541 | 549   | 576 | 611   | 630 | 417  |
| 55° | 399 | 412   | 450 | 491   | 510 | 356  |
| 65° | 259 | 278   | 322 | 363   | 384 | 257  |
| 75° | 132 | 154   | 194 | 216   | 223 | 141  |
| 85° | 32  | 41    | 46  | 43    | 41  | 38   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 936.8 | 936.8 | 936.8 | 936.8 | 936.8 |
| 2.5°  | 938.1 | 938.1 | 935.6 | 933.1 | 929.4 |
| 5°    | 931.9 | 933.1 | 931.9 | 930.7 | 929.4 |
| 7.5°  | 924.5 | 925.7 | 925.7 | 925.7 | 925.7 |
| 10°   | 915.9 | 917.1 | 917.1 | 917.1 | 917.1 |
| 12.5° | 903.5 | 904.7 | 906.0 | 907.2 | 909.7 |
| 15°   | 885.0 | 888.7 | 891.2 | 896.1 | 898.6 |
| 17.5° | 866.5 | 870.2 | 873.9 | 880.1 | 885.0 |
| 20°   | 845.5 | 848.0 | 854.1 | 861.5 | 866.5 |
| 22.5° | 822.0 | 825.8 | 831.9 | 841.8 | 849.2 |
| 25°   | 794.9 | 799.8 | 808.5 | 822.0 | 828.2 |
| 27.5° | 769.0 | 772.7 | 783.8 | 798.6 | 807.2 |
| 30°   | 738.1 | 743.1 | 756.6 | 775.1 | 783.8 |
| 32.5° | 707.3 | 713.4 | 728.2 | 749.2 | 759.1 |
| 35°   | 675.2 | 682.6 | 699.9 | 722.1 | 734.4 |
| 37.5° | 643.1 | 650.5 | 670.2 | 694.9 | 708.5 |
| 40°   | 609.7 | 617.2 | 639.4 | 666.5 | 681.3 |
| 42.5° | 575.2 | 583.8 | 608.5 | 639.4 | 656.7 |
| 45°   | 540.6 | 549.3 | 576.4 | 611.0 | 629.5 |
| 47.5° | 504.8 | 514.7 | 544.3 | 582.6 | 601.1 |
| 50°   | 469.0 | 480.1 | 513.5 | 553.0 | 571.5 |
| 52.5° | 433.2 | 445.6 | 481.4 | 522.1 | 541.9 |
| 55°   | 398.7 | 412.3 | 450.5 | 491.3 | 509.8 |
| 57.5° | 361.7 | 377.7 | 418.4 | 457.9 | 478.9 |
| 60°   | 327.1 | 344.4 | 386.3 | 425.8 | 448.1 |
| 62.5° | 292.5 | 311.0 | 355.5 | 395.0 | 416.0 |
| 65°   | 259.2 | 277.7 | 322.2 | 362.9 | 383.9 |
| 67.5° | 225.9 | 246.9 | 290.1 | 330.8 | 351.8 |
| 70°   | 193.8 | 216.0 | 258.0 | 297.5 | 318.5 |
| 72.5° | 162.9 | 185.1 | 227.1 | 264.1 | 276.5 |
| 75°   | 132.1 | 154.3 | 193.8 | 216.0 | 223.4 |
| 77.5° | 103.7 | 124.7 | 159.2 | 172.8 | 182.7 |
| 80°   | 77.8  | 96.3  | 121.0 | 129.6 | 130.8 |
| 82.5° | 53.1  | 69.1  | 83.9  | 85.2  | 83.9  |
| 85°   | 32.1  | 40.7  | 45.7  | 43.2  | 40.7  |
| 87.5° | 14.8  | 16.0  | 14.8  | 9.9   | 6.2   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)