

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: P260429

Luminaire Tested: **22CZ-LD5-34-RDP-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260429  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25714)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-34-RDP-UNV-L93050-W2A1-U-3000K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1970.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

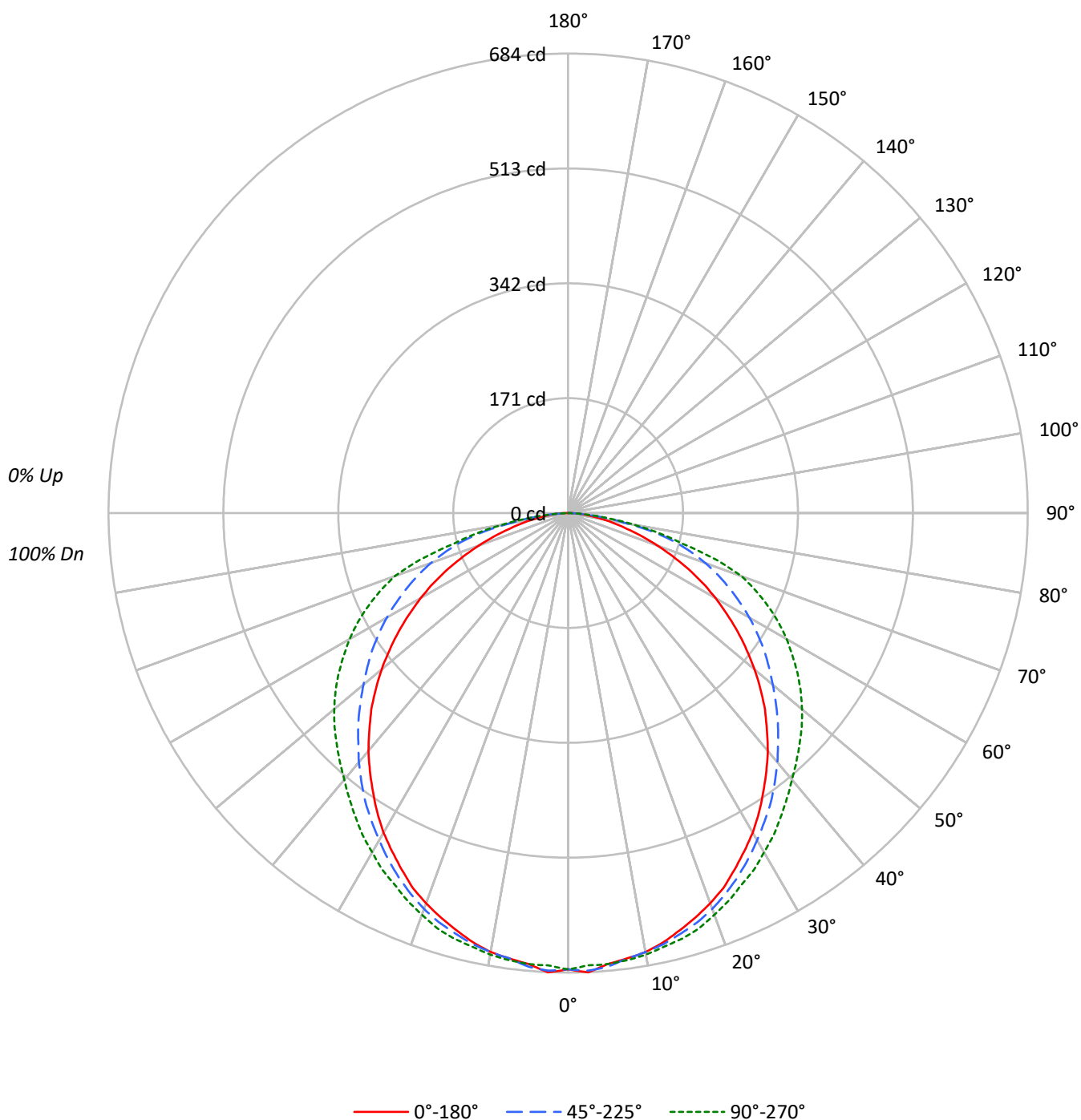
Input Watts (W): 26.258364  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| 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  | 81  | 76  |  | 84  | 79  | 74  |  | 81  | 77  | 73  |  | 78  | 74  | 71  |
| 3   | 89  | 79  | 70  | 64  | 87  | 77  | 69  | 63  |  | 74  | 67  | 62  |  | 71  | 66  | 61  |  | 69  | 64  | 60  |
| 4   | 82  | 69  | 60  | 54  | 79  | 68  | 60  | 53  |  | 66  | 58  | 52  |  | 63  | 57  | 52  |  | 61  | 56  | 51  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  |  | 59  | 51  | 45  |  | 57  | 50  | 45  |  | 55  | 49  | 44  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  |  | 53  | 45  | 40  |  | 51  | 44  | 39  |  | 50  | 44  | 39  |
| 7   | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  |  | 48  | 40  | 35  |  | 47  | 40  | 35  |  | 45  | 39  | 34  |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  |  | 44  | 37  | 31  |  | 43  | 36  | 31  |  | 42  | 35  | 31  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  |  | 40  | 33  | 28  |  | 39  | 33  | 28  |  | 38  | 32  | 28  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 26  |  | 37  | 30  | 25  |  | 36  | 30  | 25  |  | 36  | 30  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1828 | 1828 | 1828 |
| 5°  | 1821 | 1831 | 1821 |
| 10° | 1813 | 1813 | 1824 |
| 15° | 1791 | 1805 | 1827 |
| 20° | 1770 | 1796 | 1822 |
| 25° | 1739 | 1774 | 1812 |
| 30° | 1707 | 1747 | 1812 |
| 35° | 1664 | 1728 | 1813 |
| 40° | 1624 | 1702 | 1820 |
| 45° | 1577 | 1680 | 1853 |
| 50° | 1517 | 1664 | 1903 |
| 55° | 1444 | 1669 | 1956 |
| 60° | 1363 | 1678 | 2020 |
| 65° | 1257 | 1687 | 2092 |
| 70° | 1114 | 1707 | 2156 |
| 75° | 945  | 1701 | 1836 |
| 80° | 784  | 1368 | 1530 |
| 85° | 682  | 923  | 883  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 64.2   | 3.3       |
| 10°-20°   | 183.0  | 9.3       |
| 20°-30°   | 275.4  | 14.0      |
| 30°-40°   | 330.0  | 16.8      |
| 40°-50°   | 344.1  | 17.5      |
| 50°-60°   | 320.4  | 16.3      |
| 60°-70°   | 260.2  | 13.2      |
| 70°-80°   | 156.8  | 8.0       |
| 80°-90°   | 35.9   | 1.8       |
| 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°    | 522.6  | 26.5      |
| 0°-40°    | 852.6  | 43.3      |
| 0°-60°    | 1517.1 | 77.0      |
| 0°-90°    | 1970.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1970.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 679 | 679   | 679 | 679   | 679 |      |
| 5°  | 674 | 674   | 678 | 679   | 674 | 64   |
| 15° | 643 | 645   | 648 | 652   | 656 | 181  |
| 25° | 586 | 590   | 597 | 605   | 610 | 270  |
| 35° | 506 | 513   | 526 | 542   | 552 | 317  |
| 45° | 414 | 422   | 442 | 470   | 487 | 319  |
| 55° | 308 | 321   | 356 | 395   | 417 | 275  |
| 65° | 197 | 218   | 265 | 306   | 329 | 195  |
| 75° | 91  | 121   | 164 | 174   | 177 | 98   |
| 85° | 22  | 27    | 30  | 29    | 29  | 26   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 679.2 | 679.2 | 679.2 | 679.2 | 679.2 |
| 2.5°  | 684.4 | 683.1 | 681.8 | 677.9 | 674.0 |
| 5°    | 674.0 | 674.0 | 677.9 | 679.2 | 674.0 |
| 7.5°  | 668.8 | 668.8 | 668.8 | 674.0 | 671.4 |
| 10°   | 663.6 | 663.6 | 663.6 | 667.5 | 667.5 |
| 12.5° | 654.5 | 655.8 | 657.1 | 658.4 | 661.0 |
| 15°   | 642.8 | 645.4 | 648.0 | 651.9 | 655.8 |
| 17.5° | 631.1 | 633.7 | 638.9 | 642.8 | 648.0 |
| 20°   | 618.1 | 620.7 | 627.2 | 631.1 | 636.3 |
| 22.5° | 603.9 | 605.2 | 613.0 | 618.1 | 624.6 |
| 25°   | 585.7 | 589.6 | 597.4 | 605.2 | 610.4 |
| 27.5° | 567.5 | 571.4 | 580.5 | 590.9 | 598.7 |
| 30°   | 549.3 | 553.2 | 562.3 | 575.3 | 583.1 |
| 32.5° | 528.5 | 533.7 | 544.1 | 559.7 | 568.8 |
| 35°   | 506.5 | 513.0 | 525.9 | 541.5 | 551.9 |
| 37.5° | 484.4 | 490.9 | 505.2 | 524.6 | 535.0 |
| 40°   | 462.3 | 468.8 | 484.4 | 505.2 | 518.2 |
| 42.5° | 437.6 | 445.4 | 462.3 | 487.0 | 502.6 |
| 45°   | 414.3 | 422.1 | 441.5 | 470.1 | 487.0 |
| 47.5° | 388.3 | 397.4 | 419.5 | 451.9 | 471.4 |
| 50°   | 362.3 | 372.7 | 397.4 | 433.7 | 454.5 |
| 52.5° | 335.0 | 346.7 | 376.6 | 414.3 | 436.3 |
| 55°   | 307.8 | 320.8 | 355.8 | 394.8 | 416.9 |
| 57.5° | 280.5 | 294.8 | 333.7 | 374.0 | 396.1 |
| 60°   | 253.2 | 268.8 | 311.7 | 353.2 | 375.3 |
| 62.5° | 226.0 | 242.8 | 288.3 | 329.9 | 353.2 |
| 65°   | 197.4 | 218.2 | 264.9 | 306.5 | 328.6 |
| 67.5° | 168.8 | 193.5 | 241.5 | 281.8 | 302.6 |
| 70°   | 141.6 | 168.8 | 216.9 | 254.5 | 274.0 |
| 72.5° | 115.6 | 144.1 | 190.9 | 223.4 | 231.2 |
| 75°   | 90.9  | 120.8 | 163.6 | 174.0 | 176.6 |
| 77.5° | 70.1  | 97.4  | 129.9 | 132.5 | 139.0 |
| 80°   | 50.6  | 74.0  | 88.3  | 96.1  | 98.7  |
| 82.5° | 35.1  | 50.6  | 58.4  | 59.7  | 61.0  |
| 85°   | 22.1  | 27.3  | 29.9  | 28.6  | 28.6  |
| 87.5° | 11.7  | 10.4  | 9.1   | 6.5   | 5.2   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)