

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: P258818

Luminaire Tested: **14CZ-LD5-20-S-UNV-L92765-W2A1-U-2700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P258818  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35112)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ-LD5-20-S-UNV-L92765-W2A1-U-2700K  
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER  
WITH SMOOTH LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1685.0 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

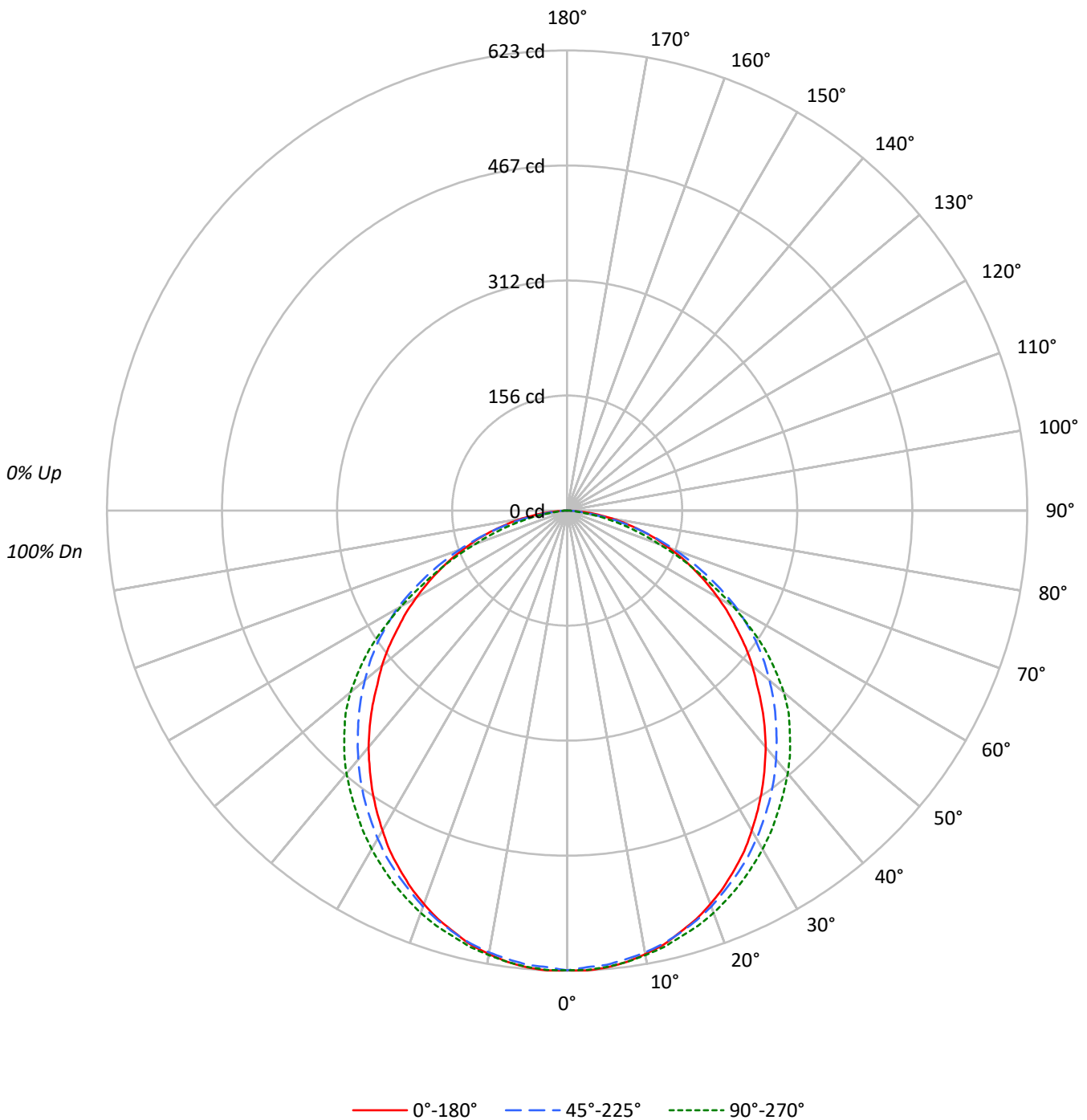
Input Watts (W): 15.345  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |    |    | 10 |    |     |   |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 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 |    |    |    |    | 100 |   |  |   |
| 1   | 109 | 105 | 100 | 97  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |    |    |    |    | 85  |   |  |   |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 83  | 78  | 86  | 81  | 76  | 83  | 78  | 75  | 80  | 76  | 73  | 71  |    |    |    |    | 71  |   |  |   |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  | 73  | 68  | 63  | 70  | 66  | 62  | 60  |    |    |    |    | 60  |   |  |   |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |    |    |    |    | 51  |   |  |   |
| 5   | 76  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 57  | 51  | 46  | 44  |    |    |    |    | 44  |   |  |   |
| 6   | 71  | 57  | 48  | 42  | 69  | 56  | 48  | 42  | 55  | 47  | 42  | 53  | 46  | 41  | 51  | 45  | 41  | 39  |    |    |    |    | 39  |   |  |   |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  | 48  | 42  | 37  | 47  | 41  | 36  | 34  |    |    |    |    | 34  |   |  |   |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 32  | 31  |    |    |    |    | 31  |   |  |   |
| 9   | 57  | 44  | 35  | 30  | 56  | 43  | 35  | 30  | 42  | 35  | 30  | 41  | 34  | 30  | 40  | 34  | 29  | 28  |    |    |    |    | 28  |   |  |   |
| 10  | 53  | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 27  | 25  |    |    |    |    | 25  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1675 | 1675 | 1675 |
| 5°  | 1677 | 1667 | 1675 |
| 10° | 1666 | 1660 | 1670 |
| 15° | 1646 | 1648 | 1663 |
| 20° | 1623 | 1634 | 1660 |
| 25° | 1592 | 1614 | 1652 |
| 30° | 1554 | 1593 | 1645 |
| 35° | 1512 | 1571 | 1635 |
| 40° | 1469 | 1546 | 1633 |
| 45° | 1417 | 1520 | 1623 |
| 50° | 1371 | 1496 | 1603 |
| 55° | 1317 | 1472 | 1532 |
| 60° | 1269 | 1431 | 1398 |
| 65° | 1214 | 1338 | 1229 |
| 70° | 1146 | 1217 | 1039 |
| 75° | 1070 | 1054 | 859  |
| 80° | 942  | 815  | 628  |
| 85° | 741  | 395  | 349  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 58.8   | 3.5       |
| 10°-20°   | 167.6  | 9.9       |
| 20°-30°   | 251.5  | 14.9      |
| 30°-40°   | 299.8  | 17.8      |
| 40°-50°   | 308.8  | 18.3      |
| 50°-60°   | 275.2  | 16.3      |
| 60°-70°   | 198.3  | 11.8      |
| 70°-80°   | 103.7  | 6.2       |
| 80°-90°   | 21.5   | 1.3       |
| 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       |
| <hr/>     |        |           |
| 0°-30°    | 477.8  | 28.4      |
| 0°-40°    | 777.6  | 46.1      |
| 0°-60°    | 1361.6 | 80.8      |
| 0°-90°    | 1685.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1685.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 622 | 622   | 622 | 622   | 622 |      |
| 5°  | 621 | 619   | 617 | 621   | 620 | 59   |
| 15° | 591 | 592   | 592 | 598   | 597 | 167  |
| 25° | 536 | 539   | 544 | 554   | 556 | 247  |
| 35° | 460 | 466   | 478 | 494   | 498 | 288  |
| 45° | 372 | 381   | 399 | 422   | 426 | 287  |
| 55° | 281 | 290   | 314 | 328   | 327 | 252  |
| 65° | 191 | 198   | 210 | 200   | 193 | 189  |
| 75° | 103 | 108   | 101 | 88    | 83  | 109  |
| 85° | 24  | 21    | 13  | 11    | 11  | 28   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 622.4 | 622.4 | 622.4 | 622.4 | 622.4 |
| 2.5°  | 623.2 | 621.7 | 618.7 | 622.4 | 622.4 |
| 5°    | 620.9 | 619.4 | 617.2 | 620.9 | 620.2 |
| 7.5°  | 616.4 | 614.9 | 612.7 | 617.2 | 616.4 |
| 10°   | 609.7 | 608.9 | 607.4 | 611.9 | 611.2 |
| 12.5° | 602.2 | 601.4 | 600.7 | 605.2 | 605.2 |
| 15°   | 590.9 | 591.7 | 591.7 | 597.7 | 596.9 |
| 17.5° | 580.4 | 581.1 | 581.9 | 589.4 | 589.4 |
| 20°   | 566.9 | 567.6 | 570.6 | 578.9 | 579.6 |
| 22.5° | 552.6 | 553.4 | 557.1 | 566.9 | 568.4 |
| 25°   | 536.1 | 539.1 | 543.6 | 554.1 | 556.4 |
| 27.5° | 519.6 | 521.8 | 529.3 | 541.3 | 542.9 |
| 30°   | 500.1 | 504.6 | 512.8 | 526.3 | 529.3 |
| 32.5° | 480.5 | 485.8 | 495.5 | 510.6 | 514.3 |
| 35°   | 460.3 | 466.3 | 478.3 | 494.0 | 497.8 |
| 37.5° | 439.2 | 444.5 | 459.5 | 476.0 | 481.3 |
| 40°   | 418.2 | 423.5 | 440.0 | 458.8 | 464.8 |
| 42.5° | 395.7 | 403.2 | 419.7 | 440.7 | 446.7 |
| 45°   | 372.4 | 380.7 | 399.4 | 422.0 | 426.5 |
| 47.5° | 348.4 | 357.4 | 379.2 | 401.7 | 407.0 |
| 50°   | 327.4 | 335.6 | 357.4 | 379.2 | 382.9 |
| 52.5° | 304.8 | 312.3 | 336.4 | 354.4 | 355.1 |
| 55°   | 280.8 | 289.8 | 313.8 | 328.1 | 326.6 |
| 57.5° | 259.0 | 266.5 | 289.8 | 297.3 | 292.8 |
| 60°   | 235.8 | 242.5 | 265.8 | 266.5 | 259.8 |
| 62.5° | 213.2 | 220.0 | 238.0 | 232.8 | 224.5 |
| 65°   | 190.7 | 197.5 | 210.2 | 200.5 | 193.0 |
| 67.5° | 168.9 | 174.9 | 182.5 | 169.7 | 162.2 |
| 70°   | 145.7 | 153.9 | 154.7 | 139.7 | 132.1 |
| 72.5° | 125.4 | 129.9 | 128.4 | 114.1 | 107.4 |
| 75°   | 102.9 | 108.1 | 101.4 | 87.8  | 82.6  |
| 77.5° | 81.8  | 85.6  | 76.6  | 63.8  | 60.1  |
| 80°   | 60.8  | 63.1  | 52.6  | 42.8  | 40.5  |
| 82.5° | 41.3  | 41.3  | 30.0  | 23.3  | 21.0  |
| 85°   | 24.0  | 21.0  | 12.8  | 11.3  | 11.3  |
| 87.5° | 8.3   | 5.3   | 5.3   | 5.3   | 5.3   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)