

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: P260446

Luminaire Tested: **22CZ-LD5-20-RDP-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260446  
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-LD5-20-RDP-UNV-L82765-W2A1-U-3500K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1555.0 lumens  
Efficiency: N/A  
Efficacy: 99.5 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

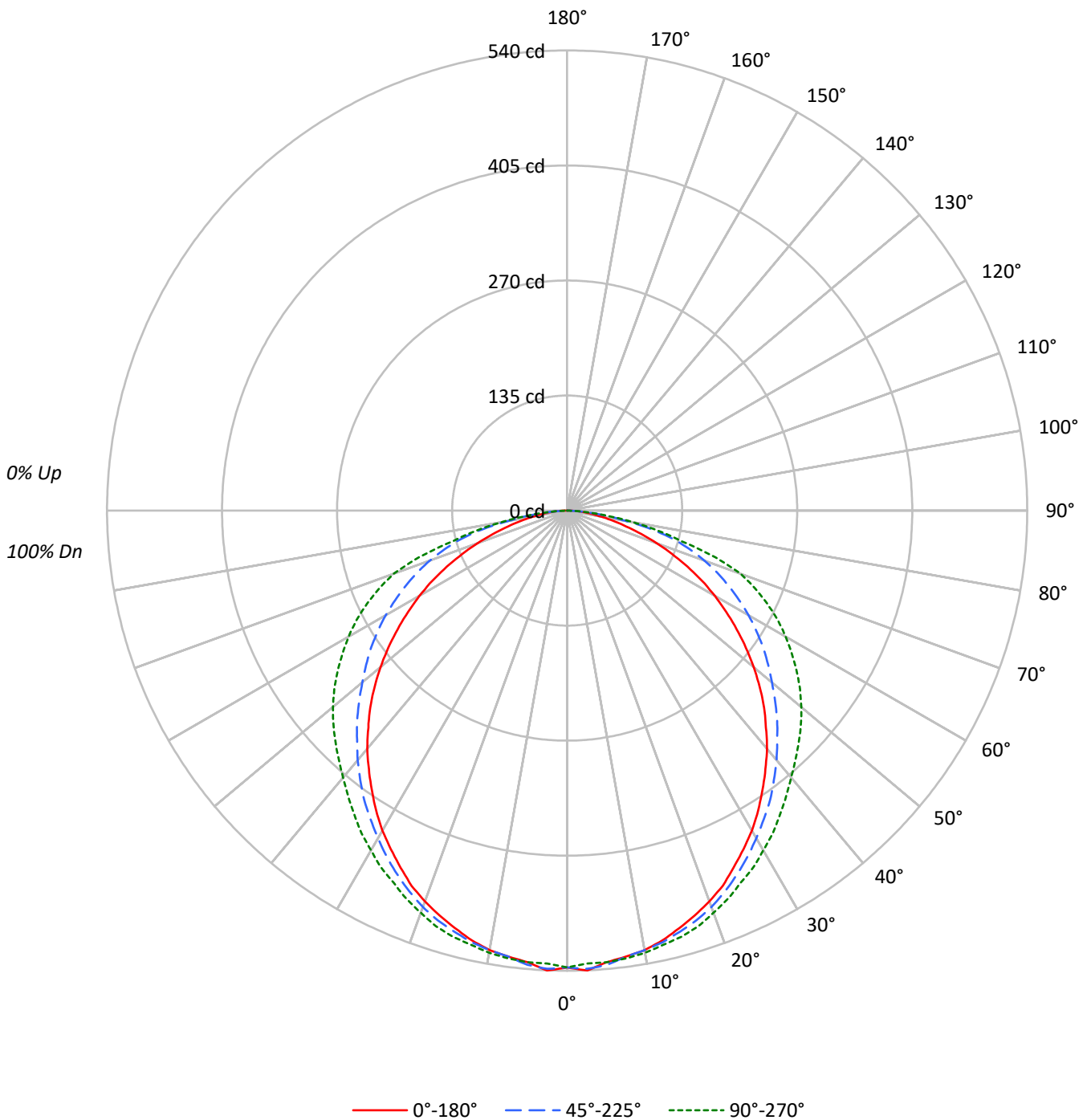
Input Watts (W): 15.624  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 108 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 89  | 87  | 85  | 83  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 81  | 76  | 84  | 79  | 74  | 81  | 77  | 73  | 78  | 74  | 71  | 69  |
| 3   | 89  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 67  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 57  |
| 4   | 82  | 69  | 60  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 52  | 63  | 57  | 52  | 61  | 56  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 59  | 51  | 45  | 57  | 50  | 45  | 55  | 49  | 44  | 42  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 40  | 51  | 44  | 39  | 50  | 44  | 39  | 37  |
| 7   | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  | 48  | 40  | 35  | 47  | 40  | 35  | 45  | 39  | 34  | 32  |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 26  | 37  | 30  | 25  | 36  | 30  | 25  | 36  | 30  | 25  | 23  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1443 | 1443 | 1443 |
| 5°  | 1437 | 1445 | 1437 |
| 10° | 1431 | 1431 | 1440 |
| 15° | 1414 | 1425 | 1442 |
| 20° | 1397 | 1418 | 1438 |
| 25° | 1373 | 1400 | 1431 |
| 30° | 1347 | 1379 | 1430 |
| 35° | 1313 | 1364 | 1431 |
| 40° | 1282 | 1343 | 1437 |
| 45° | 1244 | 1326 | 1463 |
| 50° | 1197 | 1313 | 1502 |
| 55° | 1140 | 1318 | 1544 |
| 60° | 1076 | 1324 | 1594 |
| 65° | 992  | 1331 | 1651 |
| 70° | 879  | 1347 | 1702 |
| 75° | 747  | 1343 | 1449 |
| 80° | 620  | 1080 | 1207 |
| 85° | 537  | 729  | 698  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 50.7   | 3.3       |
| 10°-20°   | 144.5  | 9.3       |
| 20°-30°   | 217.4  | 14.0      |
| 30°-40°   | 260.5  | 16.8      |
| 40°-50°   | 271.6  | 17.5      |
| 50°-60°   | 252.9  | 16.3      |
| 60°-70°   | 205.4  | 13.2      |
| 70°-80°   | 123.8  | 8.0       |
| 80°-90°   | 28.4   | 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°    | 412.5  | 26.5      |
| 0°-40°    | 673.0  | 43.3      |
| 0°-60°    | 1197.5 | 77.0      |
| 0°-90°    | 1555.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1555.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 536 | 536   | 536 | 536   | 536 |      |
| 5°  | 532 | 532   | 535 | 536   | 532 | 51   |
| 15° | 507 | 510   | 512 | 515   | 518 | 143  |
| 25° | 462 | 465   | 472 | 478   | 482 | 213  |
| 35° | 400 | 405   | 415 | 427   | 436 | 250  |
| 45° | 327 | 333   | 348 | 371   | 384 | 252  |
| 55° | 243 | 253   | 281 | 312   | 329 | 217  |
| 65° | 156 | 172   | 209 | 242   | 259 | 154  |
| 75° | 72  | 95    | 129 | 137   | 139 | 78   |
| 85° | 17  | 22    | 24  | 23    | 23  | 20   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 536.1 | 536.1 | 536.1 | 536.1 | 536.1 |
| 2.5°  | 540.2 | 539.2 | 538.2 | 535.1 | 532.0 |
| 5°    | 532.0 | 532.0 | 535.1 | 536.1 | 532.0 |
| 7.5°  | 527.9 | 527.9 | 527.9 | 532.0 | 530.0 |
| 10°   | 523.8 | 523.8 | 523.8 | 526.9 | 526.9 |
| 12.5° | 516.6 | 517.7 | 518.7 | 519.7 | 521.8 |
| 15°   | 507.4 | 509.5 | 511.5 | 514.6 | 517.7 |
| 17.5° | 498.2 | 500.2 | 504.3 | 507.4 | 511.5 |
| 20°   | 487.9 | 490.0 | 495.1 | 498.2 | 502.3 |
| 22.5° | 476.7 | 477.7 | 483.8 | 487.9 | 493.1 |
| 25°   | 462.3 | 465.4 | 471.5 | 477.7 | 481.8 |
| 27.5° | 448.0 | 451.0 | 458.2 | 466.4 | 472.6 |
| 30°   | 433.6 | 436.7 | 443.9 | 454.1 | 460.3 |
| 32.5° | 417.2 | 421.3 | 429.5 | 441.8 | 449.0 |
| 35°   | 399.8 | 404.9 | 415.1 | 427.4 | 435.6 |
| 37.5° | 382.3 | 387.5 | 398.7 | 414.1 | 422.3 |
| 40°   | 364.9 | 370.0 | 382.3 | 398.7 | 409.0 |
| 42.5° | 345.4 | 351.6 | 364.9 | 384.4 | 396.7 |
| 45°   | 327.0 | 333.1 | 348.5 | 371.1 | 384.4 |
| 47.5° | 306.5 | 313.7 | 331.1 | 356.7 | 372.1 |
| 50°   | 286.0 | 294.2 | 313.7 | 342.4 | 358.8 |
| 52.5° | 264.5 | 273.7 | 297.3 | 327.0 | 344.4 |
| 55°   | 242.9 | 253.2 | 280.9 | 311.6 | 329.0 |
| 57.5° | 221.4 | 232.7 | 263.4 | 295.2 | 312.6 |
| 60°   | 199.9 | 212.2 | 246.0 | 278.8 | 296.2 |
| 62.5° | 178.4 | 191.7 | 227.6 | 260.4 | 278.8 |
| 65°   | 155.8 | 172.2 | 209.1 | 241.9 | 259.3 |
| 67.5° | 133.3 | 152.7 | 190.7 | 222.4 | 238.8 |
| 70°   | 111.7 | 133.3 | 171.2 | 200.9 | 216.3 |
| 72.5° | 91.2  | 113.8 | 150.7 | 176.3 | 182.5 |
| 75°   | 71.8  | 95.3  | 129.2 | 137.4 | 139.4 |
| 77.5° | 55.4  | 76.9  | 102.5 | 104.6 | 109.7 |
| 80°   | 40.0  | 58.4  | 69.7  | 75.9  | 77.9  |
| 82.5° | 27.7  | 40.0  | 46.1  | 47.2  | 48.2  |
| 85°   | 17.4  | 21.5  | 23.6  | 22.6  | 22.6  |
| 87.5° | 9.2   | 8.2   | 7.2   | 5.1   | 4.1   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)