

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: P230843

Luminaire Tested: **22CZ-LD5-20-RDP-UNV-L950-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230843  
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-L950-CD1-U  
Description: CRUZE 2x2 LED TROFFER  
WITH RDP LENS  
Light Source: (84) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1318.0 lumens  
Efficiency: N/A  
Efficacy: 80.4 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

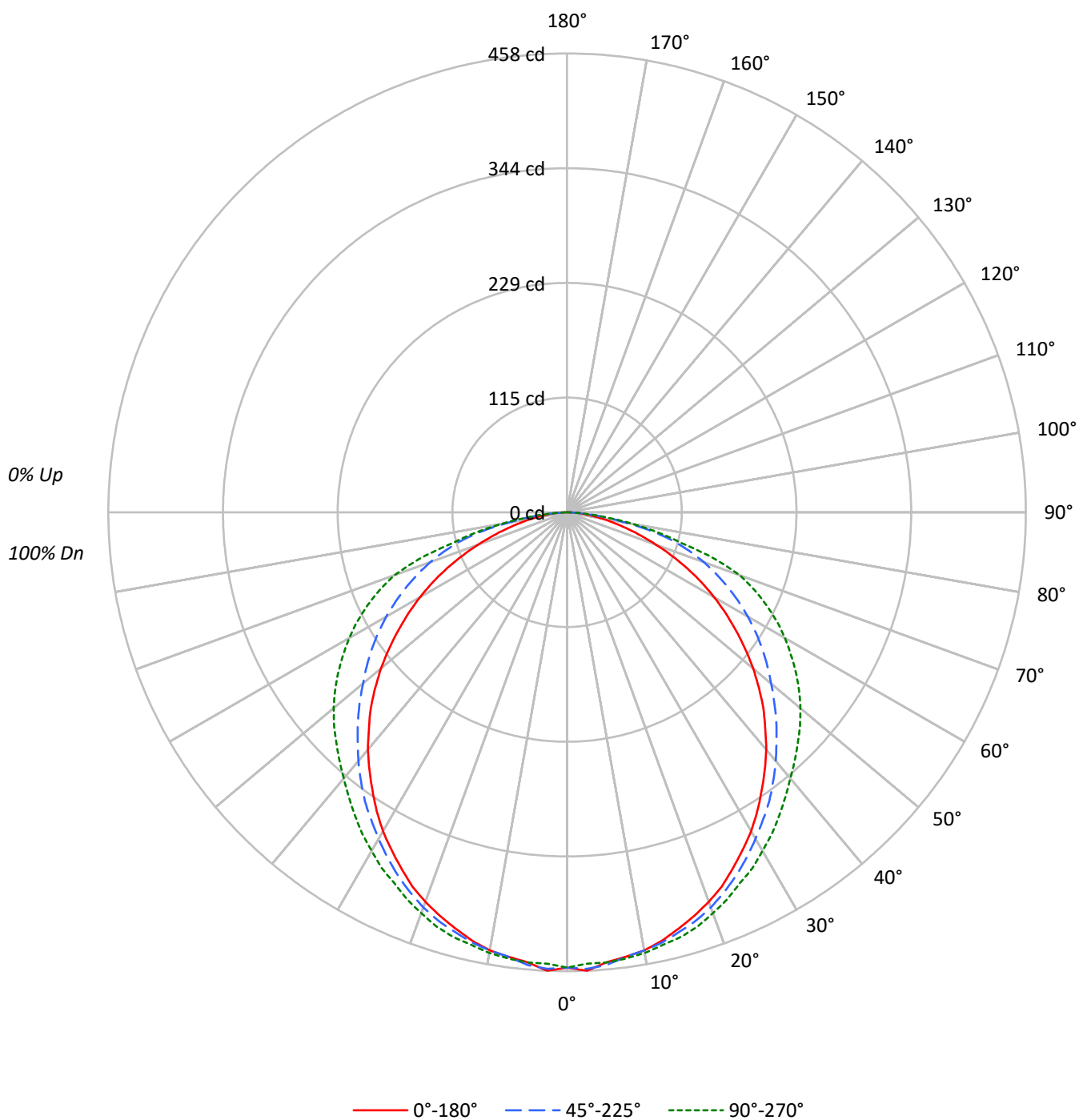
Input Watts (W): 16.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 |
| 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   | 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°  | 1223 | 1223 | 1223 |
| 5°  | 1218 | 1225 | 1218 |
| 10° | 1213 | 1213 | 1220 |
| 15° | 1198 | 1208 | 1222 |
| 20° | 1184 | 1202 | 1219 |
| 25° | 1163 | 1187 | 1212 |
| 30° | 1142 | 1169 | 1212 |
| 35° | 1113 | 1156 | 1213 |
| 40° | 1087 | 1139 | 1218 |
| 45° | 1055 | 1124 | 1240 |
| 50° | 1015 | 1113 | 1273 |
| 55° | 966  | 1117 | 1308 |
| 60° | 912  | 1122 | 1351 |
| 65° | 841  | 1128 | 1400 |
| 70° | 745  | 1142 | 1442 |
| 75° | 632  | 1138 | 1229 |
| 80° | 525  | 916  | 1023 |
| 85° | 457  | 618  | 590  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 42.9   | 3.3       |
| 10°-20°   | 122.5  | 9.3       |
| 20°-30°   | 184.2  | 14.0      |
| 30°-40°   | 220.8  | 16.8      |
| 40°-50°   | 230.2  | 17.5      |
| 50°-60°   | 214.4  | 16.3      |
| 60°-70°   | 174.1  | 13.2      |
| 70°-80°   | 104.9  | 8.0       |
| 80°-90°   | 24.1   | 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°    | 349.6  | 26.5      |
| 0°-40°    | 570.4  | 43.3      |
| 0°-60°    | 1015.0 | 77.0      |
| 0°-90°    | 1318.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1318.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 454 | 454   | 454 | 454   | 454 |      |
| 5°  | 451 | 451   | 454 | 454   | 451 | 43   |
| 15° | 430 | 432   | 434 | 436   | 439 | 121  |
| 25° | 392 | 394   | 400 | 405   | 408 | 181  |
| 35° | 339 | 343   | 352 | 362   | 369 | 212  |
| 45° | 277 | 282   | 295 | 314   | 326 | 213  |
| 55° | 206 | 215   | 238 | 264   | 279 | 184  |
| 65° | 132 | 146   | 177 | 205   | 220 | 131  |
| 75° | 61  | 81    | 110 | 116   | 118 | 66   |
| 85° | 15  | 18    | 20  | 19    | 19  | 17   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 454.4 | 454.4 | 454.4 | 454.4 | 454.4 |
| 2.5°  | 457.9 | 457.0 | 456.1 | 453.5 | 450.9 |
| 5°    | 450.9 | 450.9 | 453.5 | 454.4 | 450.9 |
| 7.5°  | 447.4 | 447.4 | 447.4 | 450.9 | 449.2 |
| 10°   | 444.0 | 444.0 | 444.0 | 446.6 | 446.6 |
| 12.5° | 437.9 | 438.8 | 439.6 | 440.5 | 442.2 |
| 15°   | 430.1 | 431.8 | 433.5 | 436.2 | 438.8 |
| 17.5° | 422.3 | 424.0 | 427.5 | 430.1 | 433.5 |
| 20°   | 413.6 | 415.3 | 419.6 | 422.3 | 425.7 |
| 22.5° | 404.0 | 404.9 | 410.1 | 413.6 | 417.9 |
| 25°   | 391.8 | 394.4 | 399.7 | 404.9 | 408.3 |
| 27.5° | 379.7 | 382.3 | 388.4 | 395.3 | 400.5 |
| 30°   | 367.5 | 370.1 | 376.2 | 384.9 | 390.1 |
| 32.5° | 353.6 | 357.1 | 364.0 | 374.5 | 380.5 |
| 35°   | 338.8 | 343.2 | 351.9 | 362.3 | 369.3 |
| 37.5° | 324.1 | 328.4 | 338.0 | 351.0 | 358.0 |
| 40°   | 309.3 | 313.6 | 324.1 | 338.0 | 346.7 |
| 42.5° | 292.8 | 298.0 | 309.3 | 325.8 | 336.2 |
| 45°   | 277.2 | 282.4 | 295.4 | 314.5 | 325.8 |
| 47.5° | 259.8 | 265.9 | 280.6 | 302.4 | 315.4 |
| 50°   | 242.4 | 249.4 | 265.9 | 290.2 | 304.1 |
| 52.5° | 224.2 | 232.0 | 252.0 | 277.2 | 291.9 |
| 55°   | 205.9 | 214.6 | 238.1 | 264.1 | 278.9 |
| 57.5° | 187.7 | 197.2 | 223.3 | 250.2 | 265.0 |
| 60°   | 169.4 | 179.8 | 208.5 | 236.3 | 251.1 |
| 62.5° | 151.2 | 162.5 | 192.9 | 220.7 | 236.3 |
| 65°   | 132.1 | 146.0 | 177.2 | 205.0 | 219.8 |
| 67.5° | 112.9 | 129.5 | 161.6 | 188.5 | 202.4 |
| 70°   | 94.7  | 112.9 | 145.1 | 170.3 | 183.3 |
| 72.5° | 77.3  | 96.4  | 127.7 | 149.4 | 154.7 |
| 75°   | 60.8  | 80.8  | 109.5 | 116.4 | 118.2 |
| 77.5° | 46.9  | 65.2  | 86.9  | 88.6  | 93.0  |
| 80°   | 33.9  | 49.5  | 59.1  | 64.3  | 66.0  |
| 82.5° | 23.5  | 33.9  | 39.1  | 40.0  | 40.8  |
| 85°   | 14.8  | 18.2  | 20.0  | 19.1  | 19.1  |
| 87.5° | 7.8   | 7.0   | 6.1   | 4.3   | 3.5   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)