

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: P259080

Luminaire Tested: **14CZ-LD5-29-SQP-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259080  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35908)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ-LD5-29-SQP-UNV-L93050-W2A1-U-3000K  
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER  
WITH SQP LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1476.1 lumens  
Efficiency: N/A  
Efficacy: 65.3 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.28 / 1.4  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

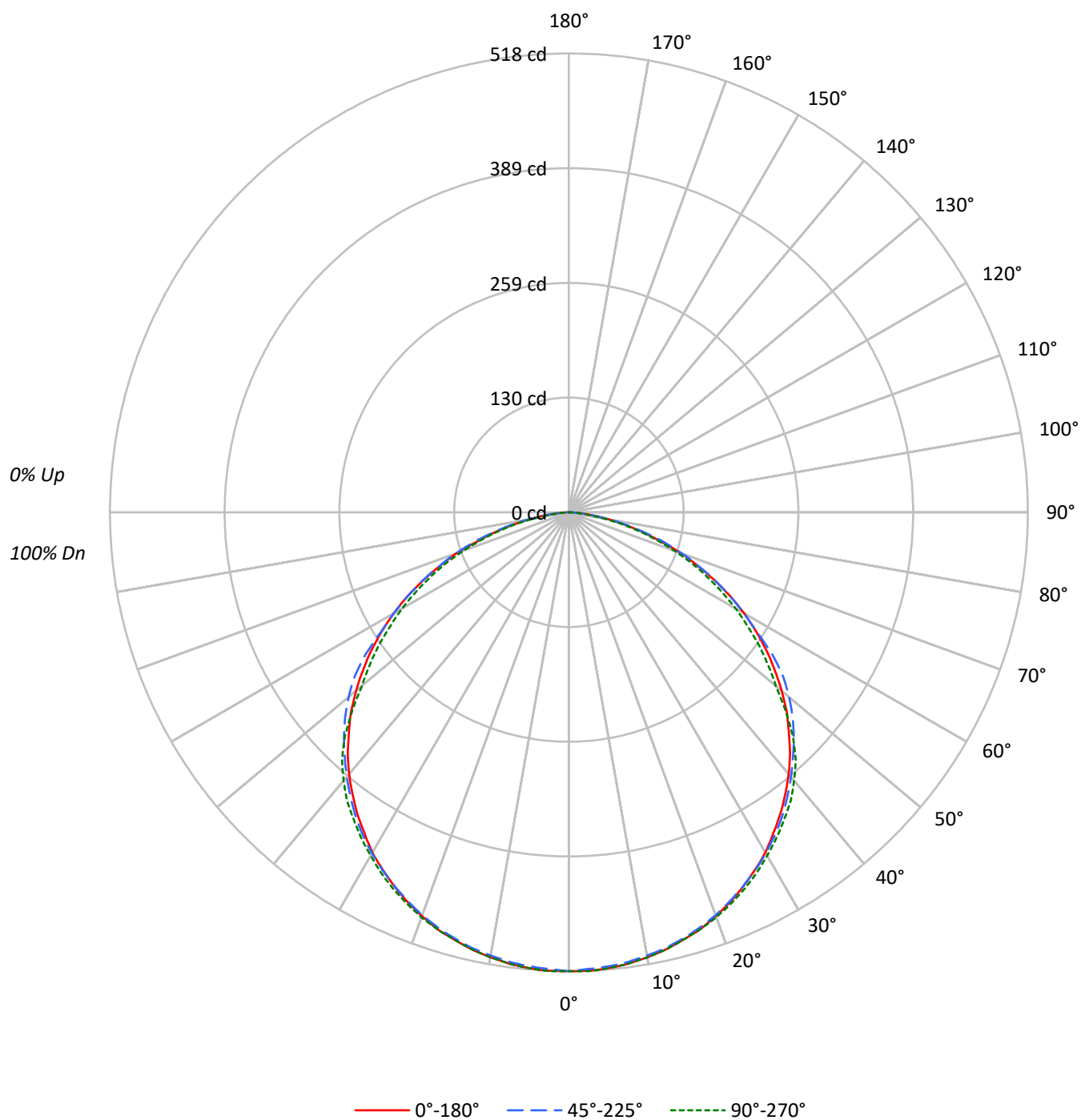
Input Watts (W): 22.599  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 91  | 89  |  | 90  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  |  | 82  | 78  | 74  |  | 79  |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  |  | 73  | 67  | 63  |  | 70  |
| 4   | 83  | 71  | 62  | 55  | 81  | 70  | 61  | 55  | 67  | 60  | 54  |  | 65  | 59  | 54  |  | 63  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  |  | 58  | 52  | 46  |  | 56  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 41  | 54  | 47  | 41  |  | 52  | 46  | 41  |  | 51  |
| 7   | 65  | 52  | 43  | 37  | 63  | 51  | 42  | 37  | 49  | 42  | 36  |  | 48  | 41  | 36  |  | 46  |
| 8   | 61  | 47  | 39  | 33  | 59  | 46  | 38  | 33  | 45  | 38  | 32  |  | 44  | 37  | 32  |  | 43  |
| 9   | 57  | 43  | 35  | 29  | 55  | 43  | 35  | 29  | 41  | 34  | 29  |  | 40  | 34  | 29  |  | 39  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 26  |  | 37  | 31  | 26  |  | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1394 | 1394 | 1394 |
| 5°  | 1395 | 1390 | 1395 |
| 10° | 1394 | 1388 | 1394 |
| 15° | 1392 | 1387 | 1392 |
| 20° | 1389 | 1386 | 1393 |
| 25° | 1384 | 1382 | 1393 |
| 30° | 1378 | 1381 | 1391 |
| 35° | 1367 | 1378 | 1391 |
| 40° | 1356 | 1370 | 1389 |
| 45° | 1336 | 1366 | 1361 |
| 50° | 1312 | 1358 | 1277 |
| 55° | 1278 | 1316 | 1229 |
| 60° | 1230 | 1227 | 1171 |
| 65° | 1152 | 1159 | 1095 |
| 70° | 1058 | 1070 | 991  |
| 75° | 889  | 931  | 847  |
| 80° | 705  | 721  | 597  |
| 85° | 463  | 401  | 340  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 49.1   | 3.3       |
| 10°-20°   | 141.0  | 9.6       |
| 20°-30°   | 215.3  | 14.6      |
| 30°-40°   | 262.7  | 17.8      |
| 40°-50°   | 274.7  | 18.6      |
| 50°-60°   | 243.2  | 16.5      |
| 60°-70°   | 179.1  | 12.1      |
| 70°-80°   | 92.7   | 6.3       |
| 80°-90°   | 18.5   | 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       |
| 0°-30°    | 405.3  | 27.5      |
| 0°-40°    | 668.0  | 45.3      |
| 0°-60°    | 1185.9 | 80.3      |
| 0°-90°    | 1476.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1476.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 518 | 518   | 518 | 518   | 518 |      |
| 5°  | 516 | 516   | 514 | 516   | 516 | 49   |
| 15° | 500 | 500   | 498 | 500   | 500 | 141  |
| 25° | 466 | 466   | 466 | 468   | 469 | 215  |
| 35° | 416 | 417   | 420 | 424   | 424 | 260  |
| 45° | 351 | 354   | 359 | 362   | 358 | 271  |
| 55° | 272 | 278   | 280 | 266   | 262 | 243  |
| 65° | 181 | 192   | 182 | 175   | 172 | 179  |
| 75° | 86  | 92    | 90  | 84    | 82  | 91   |
| 85° | 15  | 16    | 13  | 12    | 11  | 19   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 518.0 | 518.0 | 518.0 | 518.0 | 518.0 |
| 2.5°  | 518.0 | 518.0 | 516.0 | 518.0 | 518.5 |
| 5°    | 516.5 | 516.5 | 514.5 | 516.5 | 516.5 |
| 7.5°  | 514.0 | 513.5 | 512.0 | 514.0 | 514.0 |
| 10°   | 510.0 | 510.0 | 508.0 | 510.5 | 510.0 |
| 12.5° | 505.5 | 505.0 | 504.0 | 506.0 | 505.5 |
| 15°   | 499.5 | 499.5 | 498.0 | 500.0 | 499.5 |
| 17.5° | 493.5 | 493.0 | 491.5 | 493.5 | 493.5 |
| 20°   | 485.0 | 484.5 | 484.0 | 486.0 | 486.5 |
| 22.5° | 476.0 | 475.5 | 475.0 | 478.0 | 478.0 |
| 25°   | 466.0 | 466.0 | 465.5 | 468.5 | 469.0 |
| 27.5° | 455.0 | 455.0 | 455.5 | 459.5 | 459.0 |
| 30°   | 443.5 | 443.5 | 444.5 | 447.5 | 447.5 |
| 32.5° | 429.5 | 430.5 | 432.5 | 436.0 | 436.0 |
| 35°   | 416.0 | 417.0 | 419.5 | 423.5 | 423.5 |
| 37.5° | 401.0 | 402.5 | 405.0 | 410.0 | 411.0 |
| 40°   | 386.0 | 387.0 | 390.0 | 395.5 | 395.5 |
| 42.5° | 369.5 | 370.5 | 374.5 | 380.0 | 379.0 |
| 45°   | 351.0 | 354.0 | 359.0 | 362.0 | 357.5 |
| 47.5° | 333.5 | 335.5 | 342.5 | 339.0 | 331.5 |
| 50°   | 313.5 | 317.5 | 324.5 | 312.0 | 305.0 |
| 52.5° | 293.0 | 297.5 | 305.0 | 287.5 | 283.5 |
| 55°   | 272.5 | 278.0 | 280.5 | 266.0 | 262.0 |
| 57.5° | 250.5 | 256.5 | 251.5 | 243.0 | 239.0 |
| 60°   | 228.5 | 235.5 | 228.0 | 220.0 | 217.5 |
| 62.5° | 205.5 | 213.5 | 205.0 | 198.0 | 194.5 |
| 65°   | 181.0 | 192.0 | 182.0 | 175.0 | 172.0 |
| 67.5° | 157.0 | 168.5 | 158.0 | 152.0 | 150.0 |
| 70°   | 134.5 | 141.0 | 136.0 | 130.0 | 126.0 |
| 72.5° | 107.5 | 114.0 | 113.0 | 106.5 | 104.0 |
| 75°   | 85.5  | 91.5  | 89.5  | 84.0  | 81.5  |
| 77.5° | 63.5  | 70.0  | 68.0  | 61.5  | 60.5  |
| 80°   | 45.5  | 50.0  | 46.5  | 40.5  | 38.5  |
| 82.5° | 28.5  | 32.0  | 27.5  | 23.0  | 22.0  |
| 85°   | 15.0  | 16.0  | 13.0  | 11.5  | 11.0  |
| 87.5° | 5.0   | 5.5   | 5.5   | 5.0   | 5.0   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)