

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: P259106

Luminaire Tested: **14CZ-LD5-20-SQP-UNV-L82765-W2A1-U-5500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259106  
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-LD5-20-SQP-UNV-L82765-W2A1-U-5500K  
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 5500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1414.0 lumens  
Efficiency: N/A  
Efficacy: 89.4 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

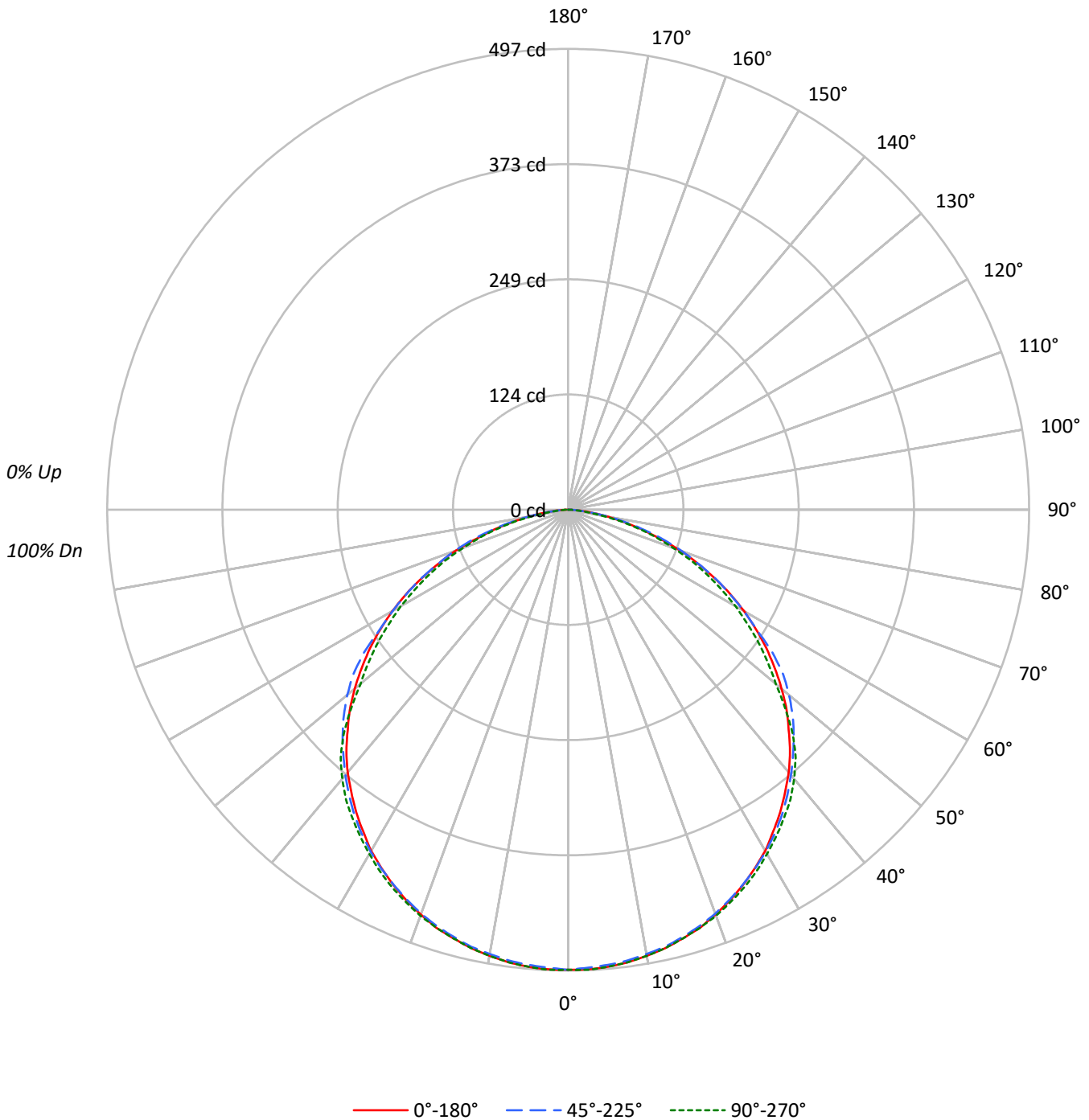
Input Watts (W): 15.81  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P259106

CATALOG NUMBER: 14CZ-LD5-20-SQP-UNV-L82765-W2A1-U-5500K

### Luminous Intensity Polar Plot





TEST NUMBER: P259106

CATALOG NUMBER: 14CZ-LD5-20-SQP-UNV-L82765-W2A1-U-5500K

**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   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 73  | 70  |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 65  | 75  | 69  | 64  | 73  | 67  | 63  | 70  | 65  | 62  | 59  |
| 4   | 83  | 71  | 62  | 55  | 81  | 70  | 61  | 55  | 67  | 60  | 54  | 65  | 59  | 54  | 63  | 57  | 53  | 51  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  | 58  | 52  | 46  | 56  | 50  | 46  | 44  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 41  | 54  | 47  | 41  | 52  | 46  | 41  | 51  | 45  | 40  | 38  |
| 7   | 65  | 52  | 43  | 37  | 63  | 51  | 42  | 37  | 49  | 42  | 36  | 48  | 41  | 36  | 46  | 40  | 36  | 34  |
| 8   | 61  | 47  | 39  | 33  | 59  | 46  | 38  | 33  | 45  | 38  | 32  | 44  | 37  | 32  | 43  | 37  | 32  | 30  |
| 9   | 57  | 43  | 35  | 29  | 55  | 43  | 35  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 39  | 33  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1335 | 1335 | 1335 |
| 5°  | 1337 | 1331 | 1337 |
| 10° | 1335 | 1330 | 1335 |
| 15° | 1333 | 1329 | 1333 |
| 20° | 1330 | 1328 | 1334 |
| 25° | 1325 | 1324 | 1334 |
| 30° | 1320 | 1323 | 1332 |
| 35° | 1309 | 1320 | 1333 |
| 40° | 1299 | 1312 | 1331 |
| 45° | 1279 | 1309 | 1303 |
| 50° | 1257 | 1301 | 1223 |
| 55° | 1225 | 1261 | 1178 |
| 60° | 1178 | 1175 | 1121 |
| 65° | 1104 | 1110 | 1049 |
| 70° | 1013 | 1025 | 950  |
| 75° | 852  | 891  | 812  |
| 80° | 676  | 690  | 572  |
| 85° | 445  | 386  | 324  |



TEST NUMBER: P259106

CATALOG NUMBER: 14CZ-LD5-20-SQP-UNV-L82765-W2A1-U-5500K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 47.0   | 3.3       |
| 10°-20°   | 135.1  | 9.6       |
| 20°-30°   | 206.2  | 14.6      |
| 30°-40°   | 251.6  | 17.8      |
| 40°-50°   | 263.1  | 18.6      |
| 50°-60°   | 232.9  | 16.5      |
| 60°-70°   | 171.5  | 12.1      |
| 70°-80°   | 88.8   | 6.3       |
| 80°-90°   | 17.7   | 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°    | 388.3  | 27.5      |
| 0°-40°    | 639.9  | 45.3      |
| 0°-60°    | 1136.0 | 80.3      |
| 0°-90°    | 1414.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1414.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 496 | 496   | 496 | 496   | 496 |      |
| 5°  | 495 | 495   | 493 | 495   | 495 | 47   |
| 15° | 478 | 478   | 477 | 479   | 478 | 135  |
| 25° | 446 | 446   | 446 | 449   | 449 | 206  |
| 35° | 398 | 399   | 402 | 406   | 406 | 249  |
| 45° | 336 | 339   | 344 | 347   | 342 | 260  |
| 55° | 261 | 266   | 269 | 255   | 251 | 233  |
| 65° | 173 | 184   | 174 | 168   | 165 | 172  |
| 75° | 82  | 88    | 86  | 80    | 78  | 87   |
| 85° | 14  | 15    | 12  | 11    | 10  | 19   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P259106

CATALOG NUMBER: 14CZ-LD5-20-SQP-UNV-L82765-W2A1-U-5500K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 496.2 | 496.2 | 496.2 | 496.2 | 496.2 |
| 2.5°  | 496.2 | 496.2 | 494.3 | 496.2 | 496.7 |
| 5°    | 494.8 | 494.8 | 492.8 | 494.8 | 494.8 |
| 7.5°  | 492.4 | 491.9 | 490.4 | 492.4 | 492.4 |
| 10°   | 488.5 | 488.5 | 486.6 | 489.0 | 488.5 |
| 12.5° | 484.2 | 483.7 | 482.8 | 484.7 | 484.2 |
| 15°   | 478.5 | 478.5 | 477.0 | 479.0 | 478.5 |
| 17.5° | 472.7 | 472.2 | 470.8 | 472.7 | 472.7 |
| 20°   | 464.6 | 464.1 | 463.6 | 465.5 | 466.0 |
| 22.5° | 456.0 | 455.5 | 455.0 | 457.9 | 457.9 |
| 25°   | 446.4 | 446.4 | 445.9 | 448.8 | 449.3 |
| 27.5° | 435.8 | 435.8 | 436.3 | 440.2 | 439.7 |
| 30°   | 424.8 | 424.8 | 425.8 | 428.7 | 428.7 |
| 32.5° | 411.4 | 412.4 | 414.3 | 417.6 | 417.6 |
| 35°   | 398.5 | 399.4 | 401.8 | 405.7 | 405.7 |
| 37.5° | 384.1 | 385.6 | 388.0 | 392.7 | 393.7 |
| 40°   | 369.8 | 370.7 | 373.6 | 378.9 | 378.9 |
| 42.5° | 353.9 | 354.9 | 358.7 | 364.0 | 363.0 |
| 45°   | 336.2 | 339.1 | 343.9 | 346.8 | 342.5 |
| 47.5° | 319.5 | 321.4 | 328.1 | 324.7 | 317.5 |
| 50°   | 300.3 | 304.1 | 310.8 | 298.9 | 292.2 |
| 52.5° | 280.7 | 285.0 | 292.2 | 275.4 | 271.6 |
| 55°   | 261.0 | 266.3 | 268.7 | 254.8 | 251.0 |
| 57.5° | 240.0 | 245.7 | 240.9 | 232.8 | 228.9 |
| 60°   | 218.9 | 225.6 | 218.4 | 210.7 | 208.3 |
| 62.5° | 196.9 | 204.5 | 196.4 | 189.7 | 186.3 |
| 65°   | 173.4 | 183.9 | 174.3 | 167.6 | 164.8 |
| 67.5° | 150.4 | 161.4 | 151.3 | 145.6 | 143.7 |
| 70°   | 128.8 | 135.1 | 130.3 | 124.5 | 120.7 |
| 72.5° | 103.0 | 109.2 | 108.2 | 102.0 | 99.6  |
| 75°   | 81.9  | 87.6  | 85.7  | 80.5  | 78.1  |
| 77.5° | 60.8  | 67.1  | 65.1  | 58.9  | 58.0  |
| 80°   | 43.6  | 47.9  | 44.5  | 38.8  | 36.9  |
| 82.5° | 27.3  | 30.7  | 26.3  | 22.0  | 21.1  |
| 85°   | 14.4  | 15.3  | 12.5  | 11.0  | 10.5  |
| 87.5° | 4.8   | 5.3   | 5.3   | 4.8   | 4.8   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)