

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: P259029

Luminaire Tested: **14CZ-LD5-39-RDP-UNV-L92765-W2A1-U-5700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259029  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35909)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ-LD5-39-RDP-UNV-L92765-W2A1-U-5700K  
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 5700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2466.0 lumens  
Efficiency: N/A  
Efficacy: 77.3 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

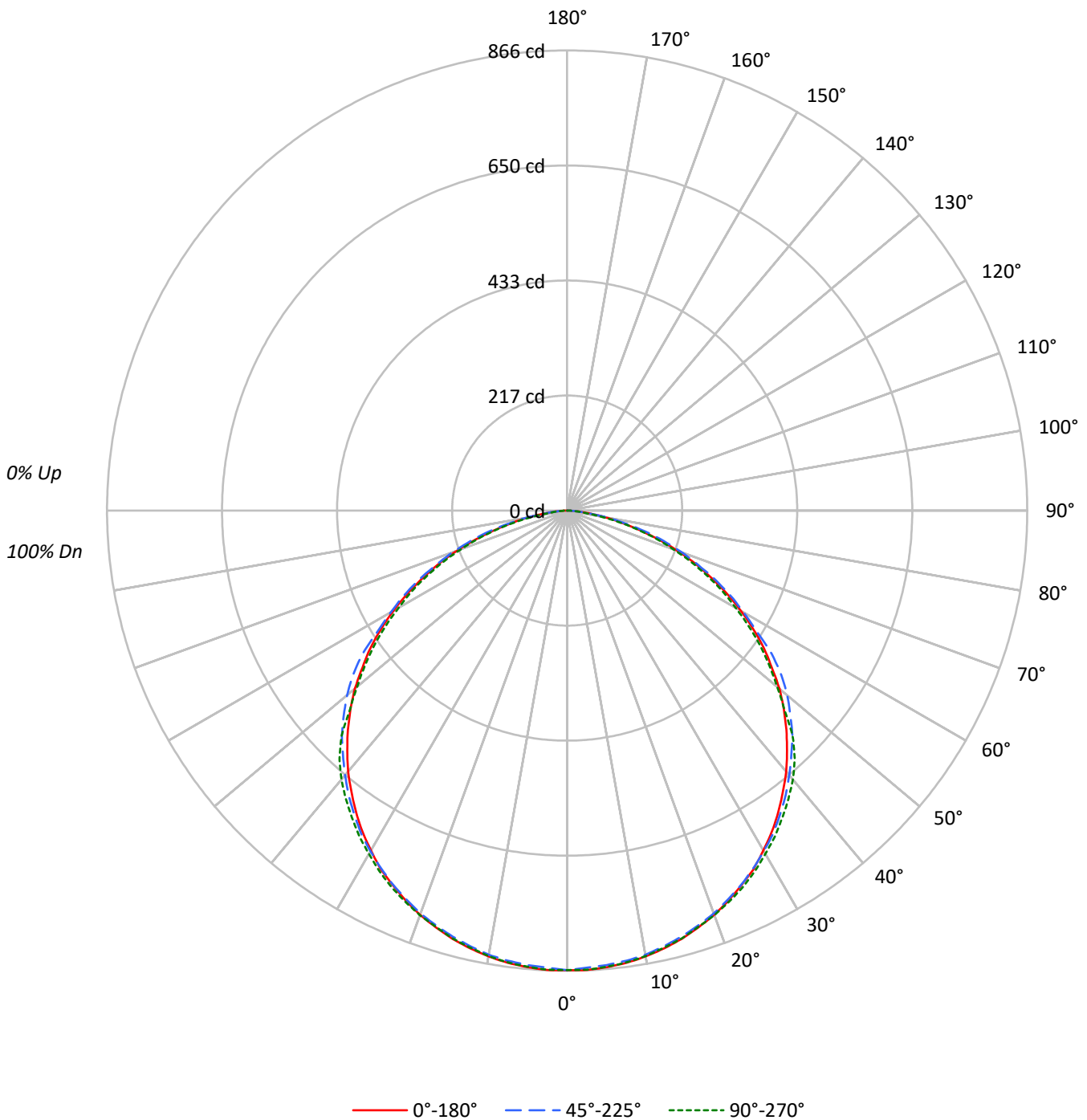
Input Watts (W): 31.899  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 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  | 61  | 59  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 65  | 58  | 53  | 62  | 57  | 53  | 51  |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 47  | 60  | 53  | 47  | 58  | 51  | 46  | 56  | 50  | 46  | 44  |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 47  | 41  | 54  | 47  | 41  | 52  | 46  | 41  | 51  | 45  | 40  | 38  |
| 7   | 65  | 52  | 43  | 37  | 63  | 51  | 42  | 36  | 49  | 42  | 36  | 48  | 41  | 36  | 46  | 40  | 36  | 34  |
| 8   | 61  | 47  | 38  | 33  | 59  | 46  | 38  | 33  | 45  | 38  | 32  | 44  | 37  | 32  | 43  | 36  | 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  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2327 | 2327 | 2327 |
| 5°  | 2330 | 2319 | 2327 |
| 10° | 2328 | 2319 | 2326 |
| 15° | 2324 | 2313 | 2322 |
| 20° | 2318 | 2311 | 2320 |
| 25° | 2308 | 2305 | 2322 |
| 30° | 2295 | 2300 | 2318 |
| 35° | 2276 | 2295 | 2318 |
| 40° | 2253 | 2284 | 2321 |
| 45° | 2221 | 2282 | 2285 |
| 50° | 2184 | 2264 | 2160 |
| 55° | 2123 | 2206 | 2082 |
| 60° | 2033 | 2063 | 1972 |
| 65° | 1904 | 1955 | 1853 |
| 70° | 1733 | 1803 | 1676 |
| 75° | 1445 | 1579 | 1420 |
| 80° | 1145 | 1209 | 984  |
| 85° | 744  | 645  | 571  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 81.9   | 3.3       |
| 10°-20°   | 235.2  | 9.5       |
| 20°-30°   | 359.0  | 14.6      |
| 30°-40°   | 437.7  | 17.7      |
| 40°-50°   | 458.3  | 18.6      |
| 50°-60°   | 407.7  | 16.5      |
| 60°-70°   | 300.8  | 12.2      |
| 70°-80°   | 155.4  | 6.3       |
| 80°-90°   | 30.2   | 1.2       |
| 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°    | 676.0  | 27.4      |
| 0°-40°    | 1113.6 | 45.2      |
| 0°-60°    | 1979.6 | 80.3      |
| 0°-90°    | 2466.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2466.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 865 | 865   | 865 | 865   | 865 |      |
| 5°  | 862 | 862   | 858 | 862   | 862 | 82   |
| 15° | 834 | 834   | 830 | 834   | 834 | 235  |
| 25° | 777 | 777   | 776 | 782   | 782 | 358  |
| 35° | 693 | 694   | 698 | 706   | 706 | 433  |
| 45° | 584 | 588   | 600 | 605   | 600 | 450  |
| 55° | 452 | 462   | 470 | 450   | 444 | 403  |
| 65° | 299 | 320   | 307 | 297   | 291 | 296  |
| 75° | 139 | 154   | 152 | 140   | 137 | 150  |
| 85° | 24  | 26    | 21  | 19    | 18  | 31   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 864.8 | 864.8 | 864.8 | 864.8 | 864.8 |
| 2.5°  | 865.6 | 864.8 | 860.8 | 864.8 | 864.8 |
| 5°    | 862.4 | 861.6 | 858.4 | 861.6 | 861.6 |
| 7.5°  | 858.4 | 857.6 | 854.4 | 857.6 | 857.6 |
| 10°   | 852.0 | 851.2 | 848.8 | 852.0 | 851.2 |
| 12.5° | 843.9 | 843.9 | 839.9 | 843.9 | 842.3 |
| 15°   | 834.3 | 833.5 | 830.3 | 833.5 | 833.5 |
| 17.5° | 822.2 | 821.4 | 819.0 | 823.0 | 821.4 |
| 20°   | 809.4 | 808.6 | 807.0 | 811.0 | 810.2 |
| 22.5° | 794.1 | 794.1 | 791.7 | 796.5 | 796.5 |
| 25°   | 777.2 | 777.2 | 776.4 | 782.0 | 782.0 |
| 27.5° | 760.3 | 758.7 | 758.7 | 764.4 | 765.2 |
| 30°   | 738.6 | 738.6 | 740.3 | 746.7 | 745.9 |
| 32.5° | 716.9 | 717.7 | 721.0 | 726.6 | 727.4 |
| 35°   | 692.8 | 693.6 | 698.5 | 706.5 | 705.7 |
| 37.5° | 667.1 | 669.5 | 675.2 | 684.0 | 684.0 |
| 40°   | 641.4 | 643.0 | 650.2 | 659.9 | 660.7 |
| 42.5° | 612.5 | 616.5 | 624.5 | 635.8 | 634.2 |
| 45°   | 583.5 | 587.5 | 599.6 | 605.2 | 600.4 |
| 47.5° | 553.0 | 557.8 | 569.9 | 570.7 | 554.6 |
| 50°   | 521.6 | 527.3 | 540.9 | 524.8 | 516.0 |
| 52.5° | 485.5 | 495.9 | 508.0 | 485.5 | 479.8 |
| 55°   | 452.5 | 462.2 | 470.2 | 450.1 | 443.7 |
| 57.5° | 415.5 | 428.4 | 422.8 | 413.1 | 405.1 |
| 60°   | 377.8 | 391.4 | 383.4 | 373.7 | 366.5 |
| 62.5° | 339.2 | 354.5 | 346.4 | 336.8 | 330.3 |
| 65°   | 299.0 | 319.9 | 307.0 | 296.6 | 291.0 |
| 67.5° | 261.2 | 281.3 | 266.0 | 258.0 | 252.4 |
| 70°   | 220.2 | 237.1 | 229.1 | 218.6 | 213.0 |
| 72.5° | 180.0 | 192.9 | 190.5 | 179.2 | 175.2 |
| 75°   | 139.0 | 153.5 | 151.9 | 139.9 | 136.6 |
| 77.5° | 104.5 | 118.2 | 113.3 | 103.7 | 99.7  |
| 80°   | 73.9  | 82.8  | 78.0  | 66.7  | 63.5  |
| 82.5° | 45.0  | 52.2  | 44.2  | 37.8  | 34.6  |
| 85°   | 24.1  | 26.5  | 20.9  | 19.3  | 18.5  |
| 87.5° | 8.8   | 8.8   | 8.8   | 8.0   | 8.0   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)