

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: P263076

Luminaire Tested: **24CZ-LD5-30-SQP-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263076  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25695)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-30-SQP-UNV-L83050-W2A1-U-5000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (336) 80 CRI LEDS TUNED AT 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2154.0 lumens  
Efficiency: N/A  
Efficacy: 104.6 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.31 / 1.42  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

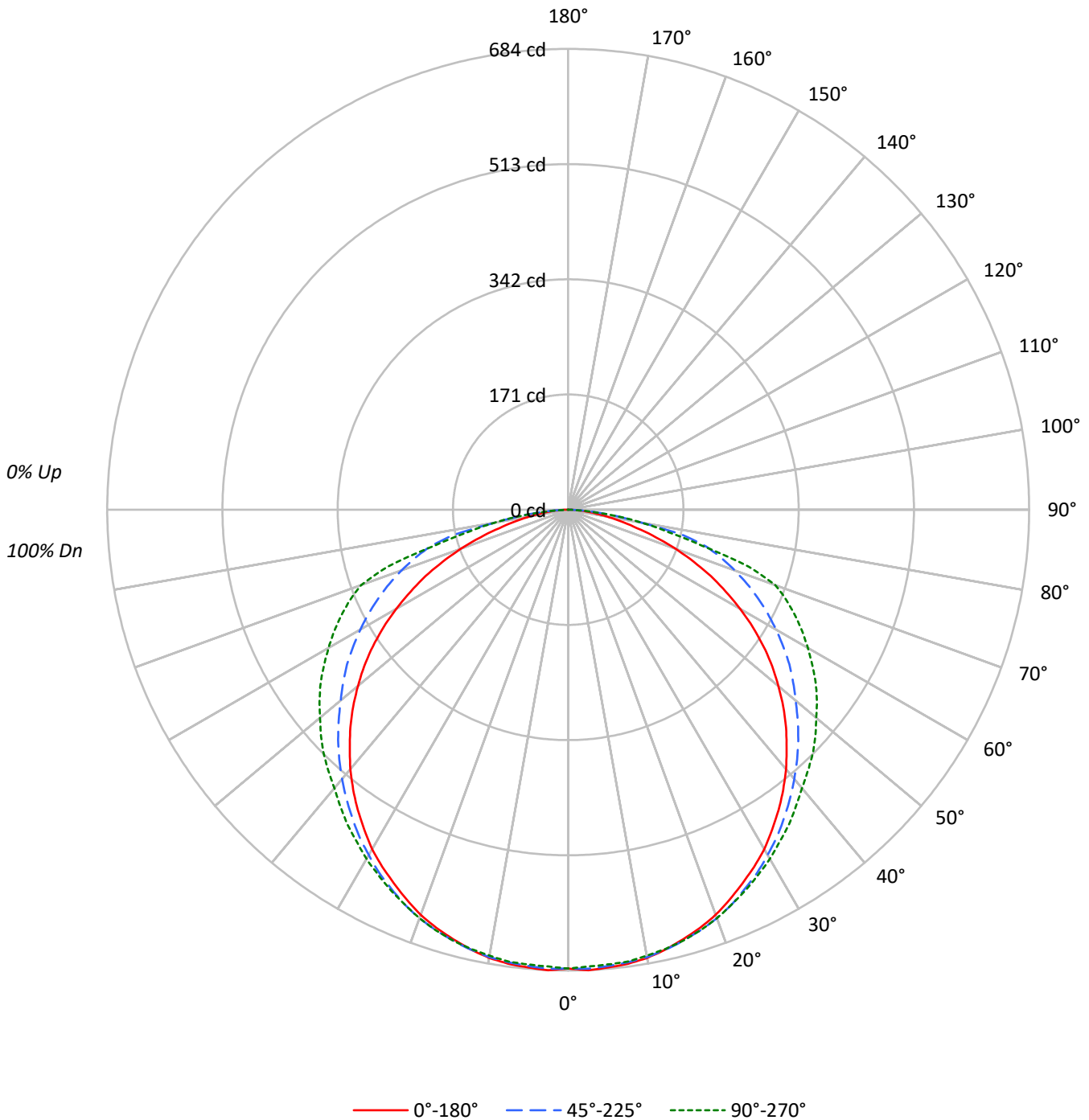
Input Watts (W): 20.584527  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 103 | 98  | 94  | 105 | 101 | 97  | 93  | 96  | 93  | 90  |  | 92  | 90  | 87  |  | 89  | 87  | 84  | 82  |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 80  | 75  | 83  | 78  | 73  |  | 80  | 75  | 71  |  | 77  | 73  | 70  | 67  |
| 3   | 89  | 78  | 69  | 62  | 86  | 76  | 68  | 62  | 73  | 66  | 60  |  | 70  | 64  | 59  |  | 67  | 63  | 58  | 56  |
| 4   | 81  | 68  | 59  | 52  | 79  | 67  | 58  | 52  | 64  | 57  | 51  |  | 62  | 56  | 50  |  | 60  | 54  | 50  | 47  |
| 5   | 74  | 61  | 51  | 45  | 72  | 60  | 51  | 44  | 57  | 50  | 44  |  | 55  | 49  | 43  |  | 54  | 48  | 43  | 41  |
| 6   | 68  | 55  | 45  | 39  | 66  | 54  | 45  | 38  | 52  | 44  | 38  |  | 50  | 43  | 38  |  | 48  | 42  | 37  | 35  |
| 7   | 63  | 49  | 40  | 34  | 62  | 49  | 40  | 34  | 47  | 39  | 34  |  | 45  | 39  | 33  |  | 44  | 38  | 33  | 31  |
| 8   | 59  | 45  | 36  | 30  | 57  | 44  | 36  | 30  | 43  | 35  | 30  |  | 42  | 35  | 30  |  | 40  | 34  | 29  | 28  |
| 9   | 55  | 41  | 33  | 27  | 54  | 41  | 33  | 27  | 39  | 32  | 27  |  | 38  | 32  | 27  |  | 37  | 31  | 27  | 25  |
| 10  | 51  | 38  | 30  | 24  | 50  | 37  | 30  | 24  | 36  | 29  | 24  |  | 35  | 29  | 24  |  | 35  | 28  | 24  | 22  |

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

|     | 0°  | 45°  | 90°  |
|-----|-----|------|------|
| 0°  | 916 | 916  | 916  |
| 5°  | 921 | 918  | 915  |
| 10° | 923 | 921  | 918  |
| 15° | 919 | 922  | 922  |
| 20° | 916 | 924  | 924  |
| 25° | 908 | 922  | 925  |
| 30° | 904 | 920  | 930  |
| 35° | 894 | 917  | 938  |
| 40° | 883 | 916  | 948  |
| 45° | 870 | 919  | 976  |
| 50° | 852 | 922  | 1006 |
| 55° | 830 | 939  | 1052 |
| 60° | 793 | 958  | 1105 |
| 65° | 744 | 988  | 1183 |
| 70° | 665 | 1033 | 1287 |
| 75° | 549 | 1105 | 1064 |
| 80° | 449 | 853  | 862  |
| 85° | 361 | 567  | 533  |



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CATALOG NUMBER: 24CZ-LD5-30-SQP-UNV-L83050-W2A1-U-5000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 64.7   | 3.0       |
| 10°-20°   | 186.6  | 8.7       |
| 20°-30°   | 285.2  | 13.2      |
| 30°-40°   | 348.8  | 16.2      |
| 40°-50°   | 373.2  | 17.3      |
| 50°-60°   | 357.4  | 16.6      |
| 60°-70°   | 302.3  | 14.0      |
| 70°-80°   | 191.6  | 8.9       |
| 80°-90°   | 44.1   | 2.0       |
| 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°    | 536.5  | 24.9      |
| 0°-40°    | 885.3  | 41.1      |
| 0°-60°    | 1615.9 | 75.0      |
| 0°-90°    | 2154.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2154.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 681 | 681   | 681 | 681   | 681 |      |
| 5°  | 682 | 679   | 680 | 679   | 678 | 65   |
| 15° | 660 | 659   | 662 | 662   | 662 | 186  |
| 25° | 612 | 612   | 621 | 623   | 623 | 282  |
| 35° | 544 | 547   | 558 | 566   | 571 | 340  |
| 45° | 457 | 465   | 483 | 503   | 513 | 352  |
| 55° | 354 | 365   | 400 | 434   | 448 | 316  |
| 65° | 234 | 256   | 310 | 353   | 372 | 230  |
| 75° | 106 | 149   | 212 | 211   | 205 | 115  |
| 85° | 23  | 36    | 37  | 33    | 34  | 28   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 680.9 | 680.9 | 680.9 | 680.9 | 680.9 |
| 2.5°  | 684.3 | 680.9 | 682.0 | 680.9 | 678.7 |
| 5°    | 682.0 | 678.7 | 679.8 | 678.7 | 677.6 |
| 7.5°  | 679.8 | 676.5 | 677.6 | 676.5 | 676.5 |
| 10°   | 675.4 | 672.0 | 674.2 | 673.1 | 672.0 |
| 12.5° | 668.7 | 666.5 | 668.7 | 667.6 | 667.6 |
| 15°   | 659.8 | 658.7 | 662.0 | 662.0 | 662.0 |
| 17.5° | 650.9 | 649.8 | 654.2 | 654.2 | 654.2 |
| 20°   | 639.8 | 638.6 | 645.3 | 645.3 | 645.3 |
| 22.5° | 626.4 | 625.3 | 634.2 | 634.2 | 634.2 |
| 25°   | 611.9 | 611.9 | 620.8 | 623.1 | 623.1 |
| 27.5° | 597.5 | 597.5 | 607.5 | 610.8 | 610.8 |
| 30°   | 581.9 | 581.9 | 591.9 | 596.4 | 598.6 |
| 32.5° | 563.0 | 565.2 | 576.3 | 581.9 | 584.1 |
| 35°   | 544.1 | 547.4 | 558.5 | 566.3 | 570.8 |
| 37.5° | 524.0 | 527.4 | 540.7 | 549.6 | 555.2 |
| 40°   | 502.9 | 507.4 | 521.8 | 532.9 | 539.6 |
| 42.5° | 479.5 | 486.2 | 502.9 | 517.4 | 526.3 |
| 45°   | 457.3 | 465.1 | 482.9 | 502.9 | 512.9 |
| 47.5° | 432.8 | 441.7 | 461.7 | 487.3 | 497.3 |
| 50°   | 407.2 | 416.1 | 440.6 | 469.5 | 480.6 |
| 52.5° | 381.6 | 391.6 | 420.6 | 451.7 | 465.1 |
| 55°   | 353.8 | 364.9 | 400.5 | 433.9 | 448.4 |
| 57.5° | 324.9 | 338.2 | 378.3 | 413.9 | 429.5 |
| 60°   | 294.8 | 311.5 | 356.0 | 393.9 | 410.6 |
| 62.5° | 263.7 | 283.7 | 333.8 | 373.8 | 391.6 |
| 65°   | 233.6 | 255.9 | 310.4 | 352.7 | 371.6 |
| 67.5° | 201.4 | 229.2 | 287.1 | 332.7 | 350.5 |
| 70°   | 169.1 | 201.4 | 262.6 | 309.3 | 327.1 |
| 72.5° | 136.9 | 175.8 | 238.1 | 280.4 | 280.4 |
| 75°   | 105.7 | 149.1 | 212.5 | 211.4 | 204.7 |
| 77.5° | 80.1  | 124.6 | 174.7 | 149.1 | 150.2 |
| 80°   | 57.9  | 100.1 | 110.1 | 110.1 | 111.3 |
| 82.5° | 38.9  | 76.8  | 71.2  | 70.1  | 72.3  |
| 85°   | 23.4  | 35.6  | 36.7  | 33.4  | 34.5  |
| 87.5° | 11.1  | 12.2  | 10.0  | 6.7   | 6.7   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)