

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: P263233

Luminaire Tested: **24CZ-LD5-35-SQP-UNV-L82765-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263233  
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-LD5-35-SQP-UNV-L82765-W2A1-U-3500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (336) 80 CRI LEDS TUNED AT 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2275.0 lumens  
Efficiency: N/A  
Efficacy: 93.7 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

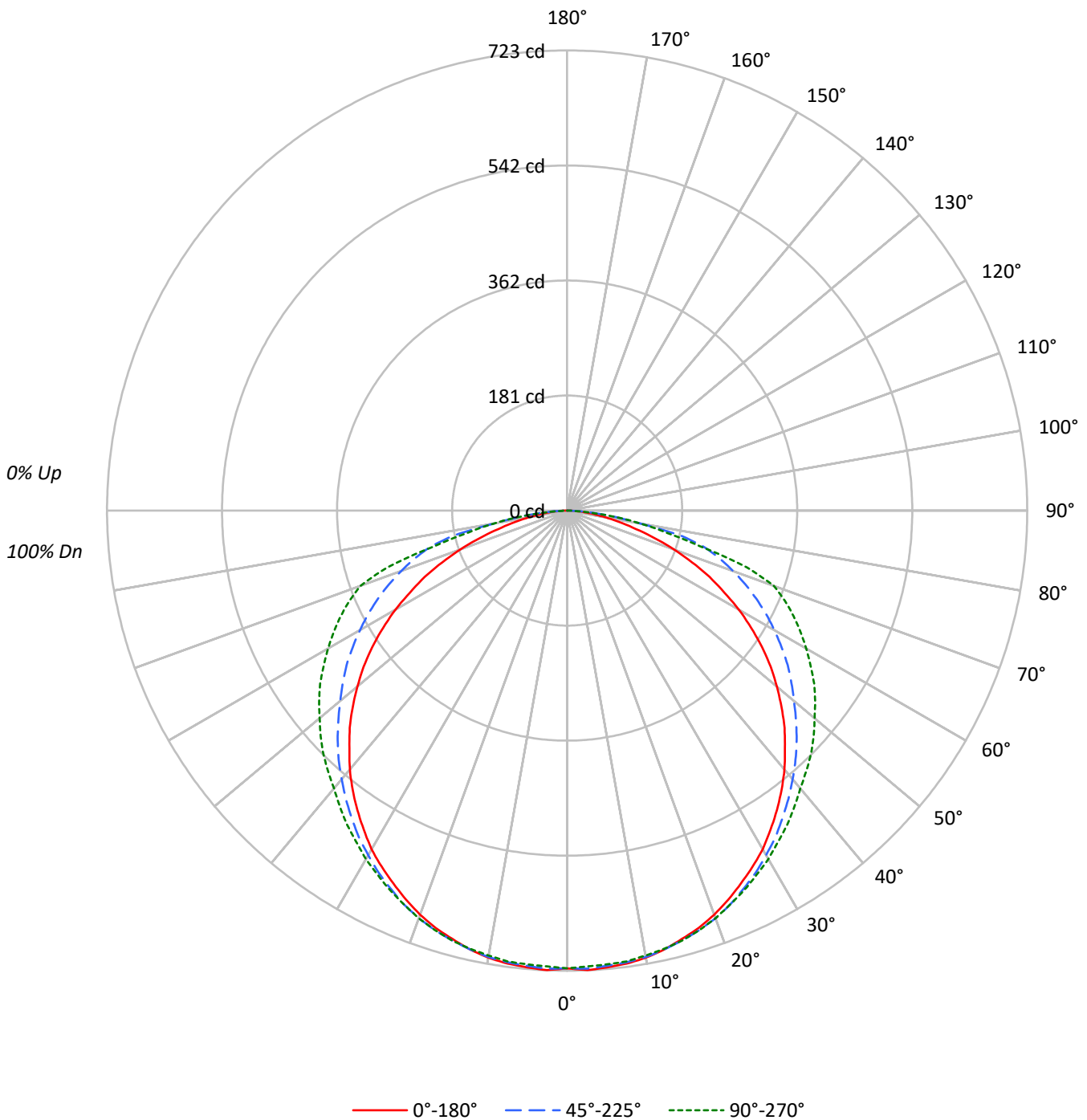
Input Watts (W): 24.273  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 968 | 968  | 968  |
| 5°  | 973 | 970  | 967  |
| 10° | 975 | 973  | 970  |
| 15° | 971 | 974  | 974  |
| 20° | 967 | 976  | 976  |
| 25° | 959 | 973  | 977  |
| 30° | 955 | 971  | 982  |
| 35° | 944 | 969  | 990  |
| 40° | 933 | 968  | 1001 |
| 45° | 919 | 970  | 1031 |
| 50° | 900 | 974  | 1063 |
| 55° | 877 | 992  | 1111 |
| 60° | 838 | 1012 | 1167 |
| 65° | 786 | 1044 | 1250 |
| 70° | 703 | 1091 | 1359 |
| 75° | 580 | 1167 | 1124 |
| 80° | 473 | 901  | 910  |
| 85° | 381 | 599  | 562  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 68.3   | 3.0       |
| 10°-20°   | 197.1  | 8.7       |
| 20°-30°   | 301.2  | 13.2      |
| 30°-40°   | 368.4  | 16.2      |
| 40°-50°   | 394.2  | 17.3      |
| 50°-60°   | 377.5  | 16.6      |
| 60°-70°   | 319.3  | 14.0      |
| 70°-80°   | 202.4  | 8.9       |
| 80°-90°   | 46.6   | 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°    | 566.6  | 24.9      |
| 0°-40°    | 935.0  | 41.1      |
| 0°-60°    | 1706.7 | 75.0      |
| 0°-90°    | 2275.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2275.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 719 | 719   | 719 | 719   | 719 |      |
| 5°  | 720 | 717   | 718 | 717   | 716 | 69   |
| 15° | 697 | 696   | 699 | 699   | 699 | 197  |
| 25° | 646 | 646   | 656 | 658   | 658 | 298  |
| 35° | 575 | 578   | 590 | 598   | 603 | 360  |
| 45° | 483 | 491   | 510 | 531   | 542 | 372  |
| 55° | 374 | 385   | 423 | 458   | 474 | 333  |
| 65° | 247 | 270   | 328 | 372   | 392 | 243  |
| 75° | 112 | 158   | 224 | 223   | 216 | 121  |
| 85° | 25  | 38    | 39  | 35    | 36  | 29   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 719.2 | 719.2 | 719.2 | 719.2 | 719.2 |
| 2.5°  | 722.7 | 719.2 | 720.3 | 719.2 | 716.8 |
| 5°    | 720.3 | 716.8 | 718.0 | 716.8 | 715.6 |
| 7.5°  | 718.0 | 714.5 | 715.6 | 714.5 | 714.5 |
| 10°   | 713.3 | 709.8 | 712.1 | 710.9 | 709.8 |
| 12.5° | 706.2 | 703.9 | 706.2 | 705.1 | 705.1 |
| 15°   | 696.8 | 695.7 | 699.2 | 699.2 | 699.2 |
| 17.5° | 687.4 | 686.3 | 691.0 | 691.0 | 691.0 |
| 20°   | 675.7 | 674.5 | 681.6 | 681.6 | 681.6 |
| 22.5° | 661.6 | 660.4 | 669.8 | 669.8 | 669.8 |
| 25°   | 646.3 | 646.3 | 655.7 | 658.1 | 658.1 |
| 27.5° | 631.0 | 631.0 | 641.6 | 645.1 | 645.1 |
| 30°   | 614.6 | 614.6 | 625.2 | 629.9 | 632.2 |
| 32.5° | 594.6 | 597.0 | 608.7 | 614.6 | 616.9 |
| 35°   | 574.6 | 578.2 | 589.9 | 598.1 | 602.8 |
| 37.5° | 553.5 | 557.0 | 571.1 | 580.5 | 586.4 |
| 40°   | 531.2 | 535.9 | 551.1 | 562.9 | 569.9 |
| 42.5° | 506.5 | 513.5 | 531.2 | 546.4 | 555.8 |
| 45°   | 483.0 | 491.2 | 510.0 | 531.2 | 541.7 |
| 47.5° | 457.1 | 466.5 | 487.7 | 514.7 | 525.3 |
| 50°   | 430.1 | 439.5 | 465.3 | 495.9 | 507.6 |
| 52.5° | 403.1 | 413.6 | 444.2 | 477.1 | 491.2 |
| 55°   | 373.7 | 385.4 | 423.0 | 458.3 | 473.6 |
| 57.5° | 343.1 | 357.2 | 399.5 | 437.1 | 453.6 |
| 60°   | 311.4 | 329.0 | 376.0 | 416.0 | 433.6 |
| 62.5° | 278.5 | 299.7 | 352.5 | 394.8 | 413.6 |
| 65°   | 246.8 | 270.3 | 327.9 | 372.5 | 392.5 |
| 67.5° | 212.7 | 242.1 | 303.2 | 351.4 | 370.2 |
| 70°   | 178.6 | 212.7 | 277.3 | 326.7 | 345.5 |
| 72.5° | 144.5 | 185.7 | 251.5 | 296.1 | 296.1 |
| 75°   | 111.6 | 157.5 | 224.4 | 223.3 | 216.2 |
| 77.5° | 84.6  | 131.6 | 184.5 | 157.5 | 158.6 |
| 80°   | 61.1  | 105.8 | 116.3 | 116.3 | 117.5 |
| 82.5° | 41.1  | 81.1  | 75.2  | 74.0  | 76.4  |
| 85°   | 24.7  | 37.6  | 38.8  | 35.3  | 36.4  |
| 87.5° | 11.8  | 12.9  | 10.6  | 7.1   | 7.1   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)