

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: P263369

Luminaire Tested: **24CZ-LD5-35-SQP-UNV-L92765-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263369  
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-L92765-W2A1-U-4000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (336) 90 CRI LEDS TUNED AT 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2057.0 lumens  
Efficiency: N/A  
Efficacy: 84.1 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

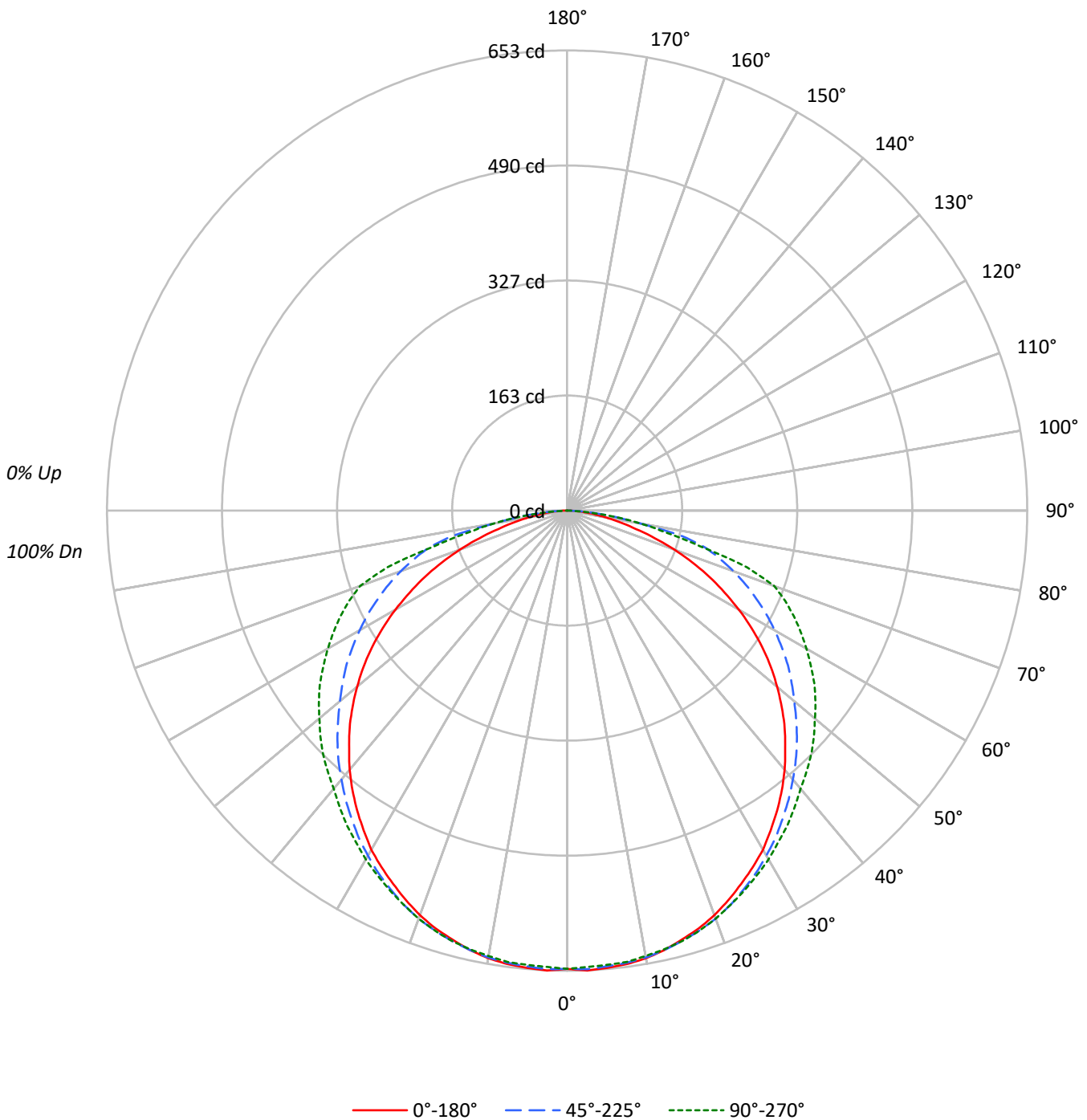
Input Watts (W): 24.459  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 875 | 875  | 875  |
| 5°  | 880 | 877  | 874  |
| 10° | 881 | 880  | 877  |
| 15° | 878 | 881  | 881  |
| 20° | 875 | 882  | 882  |
| 25° | 868 | 880  | 883  |
| 30° | 863 | 878  | 888  |
| 35° | 853 | 876  | 895  |
| 40° | 844 | 875  | 905  |
| 45° | 831 | 877  | 932  |
| 50° | 814 | 881  | 961  |
| 55° | 793 | 897  | 1004 |
| 60° | 758 | 915  | 1055 |
| 65° | 710 | 944  | 1130 |
| 70° | 635 | 987  | 1229 |
| 75° | 525 | 1055 | 1016 |
| 80° | 428 | 815  | 824  |
| 85° | 344 | 542  | 508  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 61.8   | 3.0       |
| 10°-20°   | 178.2  | 8.7       |
| 20°-30°   | 272.4  | 13.2      |
| 30°-40°   | 333.1  | 16.2      |
| 40°-50°   | 356.4  | 17.3      |
| 50°-60°   | 341.3  | 16.6      |
| 60°-70°   | 288.7  | 14.0      |
| 70°-80°   | 183.0  | 8.9       |
| 80°-90°   | 42.1   | 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°    | 512.3  | 24.9      |
| 0°-40°    | 845.4  | 41.1      |
| 0°-60°    | 1543.2 | 75.0      |
| 0°-90°    | 2057.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2057.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 650 | 650   | 650 | 650   | 650 |      |
| 5°  | 651 | 648   | 649 | 648   | 647 | 62   |
| 15° | 630 | 629   | 632 | 632   | 632 | 178  |
| 25° | 584 | 584   | 593 | 595   | 595 | 270  |
| 35° | 520 | 523   | 533 | 541   | 545 | 325  |
| 45° | 437 | 444   | 461 | 480   | 490 | 336  |
| 55° | 338 | 348   | 382 | 414   | 428 | 301  |
| 65° | 223 | 244   | 296 | 337   | 355 | 220  |
| 75° | 101 | 142   | 203 | 202   | 196 | 110  |
| 85° | 22  | 34    | 35  | 32    | 33  | 27   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 650.3 | 650.3 | 650.3 | 650.3 | 650.3 |
| 2.5°  | 653.4 | 650.3 | 651.3 | 650.3 | 648.1 |
| 5°    | 651.3 | 648.1 | 649.2 | 648.1 | 647.1 |
| 7.5°  | 649.2 | 646.0 | 647.1 | 646.0 | 646.0 |
| 10°   | 644.9 | 641.8 | 643.9 | 642.8 | 641.8 |
| 12.5° | 638.6 | 636.4 | 638.6 | 637.5 | 637.5 |
| 15°   | 630.1 | 629.0 | 632.2 | 632.2 | 632.2 |
| 17.5° | 621.6 | 620.5 | 624.8 | 624.8 | 624.8 |
| 20°   | 610.9 | 609.9 | 616.3 | 616.3 | 616.3 |
| 22.5° | 598.2 | 597.1 | 605.6 | 605.6 | 605.6 |
| 25°   | 584.4 | 584.4 | 592.9 | 595.0 | 595.0 |
| 27.5° | 570.6 | 570.6 | 580.1 | 583.3 | 583.3 |
| 30°   | 555.7 | 555.7 | 565.3 | 569.5 | 571.6 |
| 32.5° | 537.6 | 539.8 | 550.4 | 555.7 | 557.8 |
| 35°   | 519.6 | 522.8 | 533.4 | 540.8 | 545.1 |
| 37.5° | 500.4 | 503.6 | 516.4 | 524.9 | 530.2 |
| 40°   | 480.3 | 484.5 | 498.3 | 508.9 | 515.3 |
| 42.5° | 457.9 | 464.3 | 480.3 | 494.1 | 502.6 |
| 45°   | 436.7 | 444.1 | 461.1 | 480.3 | 489.8 |
| 47.5° | 413.3 | 421.8 | 440.9 | 465.4 | 474.9 |
| 50°   | 388.9 | 397.4 | 420.8 | 448.4 | 459.0 |
| 52.5° | 364.4 | 374.0 | 401.6 | 431.4 | 444.1 |
| 55°   | 337.9 | 348.5 | 382.5 | 414.4 | 428.2 |
| 57.5° | 310.3 | 323.0 | 361.3 | 395.3 | 410.1 |
| 60°   | 281.6 | 297.5 | 340.0 | 376.1 | 392.1 |
| 62.5° | 251.8 | 270.9 | 318.8 | 357.0 | 374.0 |
| 65°   | 223.1 | 244.4 | 296.4 | 336.8 | 354.9 |
| 67.5° | 192.3 | 218.9 | 274.1 | 317.7 | 334.7 |
| 70°   | 161.5 | 192.3 | 250.8 | 295.4 | 312.4 |
| 72.5° | 130.7 | 167.9 | 227.4 | 267.8 | 267.8 |
| 75°   | 100.9 | 142.4 | 202.9 | 201.9 | 195.5 |
| 77.5° | 76.5  | 119.0 | 166.8 | 142.4 | 143.4 |
| 80°   | 55.3  | 95.6  | 105.2 | 105.2 | 106.3 |
| 82.5° | 37.2  | 73.3  | 68.0  | 66.9  | 69.1  |
| 85°   | 22.3  | 34.0  | 35.1  | 31.9  | 32.9  |
| 87.5° | 10.6  | 11.7  | 9.6   | 6.4   | 6.4   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)