

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: P263325

Luminaire Tested: **24CZ-LD5-35SE-SQP-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263325  
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-LD5-35SE-SQP-UNV-L82765-W2A1-U-4500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2392.0 lumens  
Efficiency: N/A  
Efficacy: 90.2 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

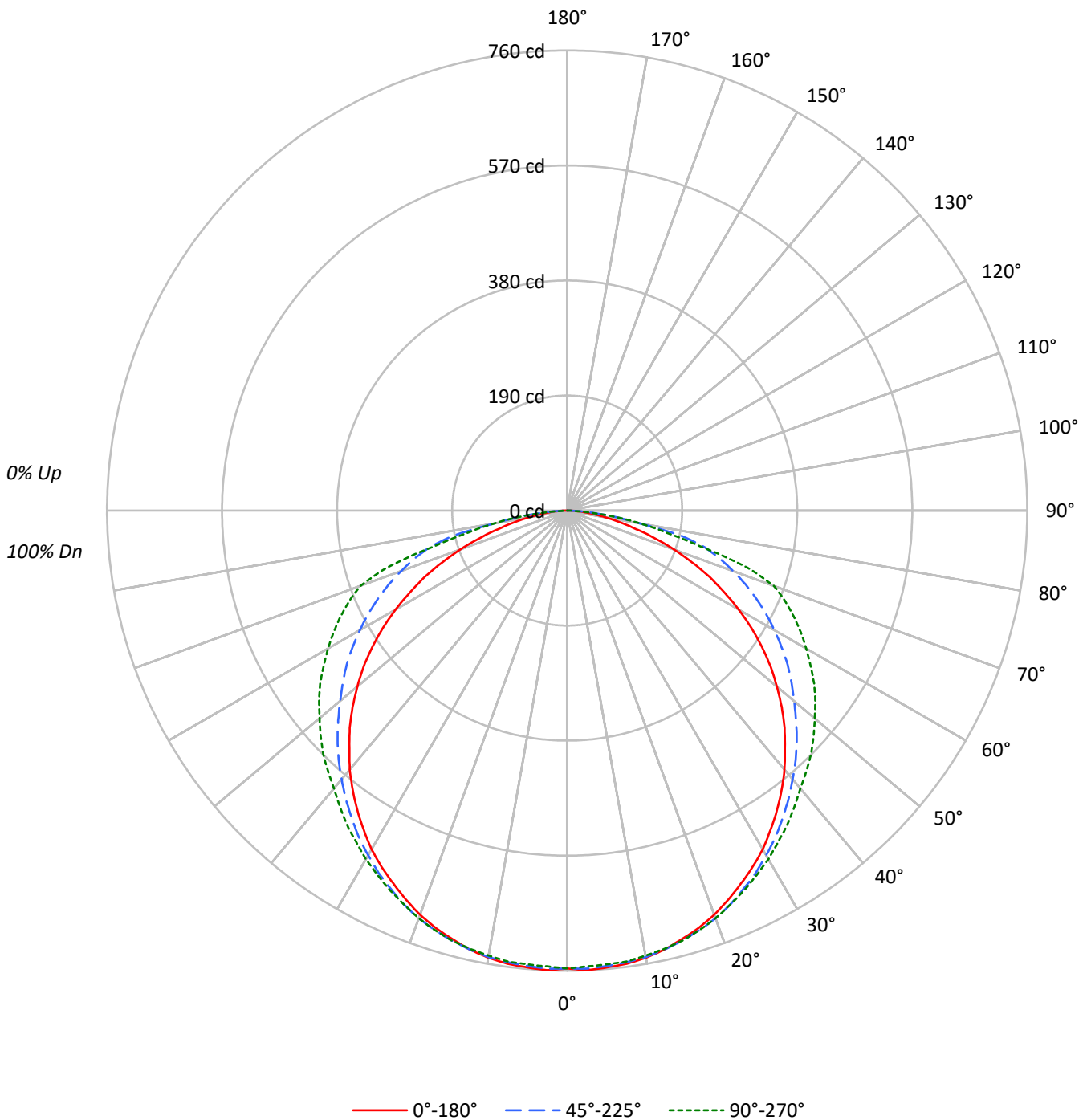
Input Watts (W): 26.505  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 1017 | 1017 | 1017 |
| 5°  | 1023 | 1020 | 1016 |
| 10° | 1025 | 1023 | 1020 |
| 15° | 1021 | 1024 | 1024 |
| 20° | 1017 | 1026 | 1026 |
| 25° | 1009 | 1023 | 1027 |
| 30° | 1004 | 1021 | 1033 |
| 35° | 992  | 1019 | 1041 |
| 40° | 981  | 1018 | 1052 |
| 45° | 966  | 1020 | 1084 |
| 50° | 947  | 1024 | 1117 |
| 55° | 922  | 1043 | 1168 |
| 60° | 881  | 1064 | 1227 |
| 65° | 826  | 1097 | 1314 |
| 70° | 739  | 1147 | 1429 |
| 75° | 610  | 1227 | 1182 |
| 80° | 497  | 948  | 958  |
| 85° | 400  | 630  | 591  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 71.8   | 3.0       |
| 10°-20°   | 207.2  | 8.7       |
| 20°-30°   | 316.7  | 13.2      |
| 30°-40°   | 387.4  | 16.2      |
| 40°-50°   | 414.5  | 17.3      |
| 50°-60°   | 396.9  | 16.6      |
| 60°-70°   | 335.7  | 14.0      |
| 70°-80°   | 212.8  | 8.9       |
| 80°-90°   | 49.0   | 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°    | 595.8  | 24.9      |
| 0°-40°    | 983.1  | 41.1      |
| 0°-60°    | 1794.5 | 75.0      |
| 0°-90°    | 2392.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2392.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 756 | 756   | 756 | 756   | 756 |      |
| 5°  | 757 | 754   | 755 | 754   | 752 | 72   |
| 15° | 733 | 731   | 735 | 735   | 735 | 207  |
| 25° | 680 | 680   | 689 | 692   | 692 | 314  |
| 35° | 604 | 608   | 620 | 629   | 634 | 378  |
| 45° | 508 | 516   | 536 | 558   | 570 | 391  |
| 55° | 393 | 405   | 445 | 482   | 498 | 350  |
| 65° | 260 | 284   | 345 | 392   | 413 | 256  |
| 75° | 117 | 166   | 236 | 235   | 227 | 128  |
| 85° | 26  | 40    | 41  | 37    | 38  | 31   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 756.2 | 756.2 | 756.2 | 756.2 | 756.2 |
| 2.5°  | 759.9 | 756.2 | 757.4 | 756.2 | 753.7 |
| 5°    | 757.4 | 753.7 | 754.9 | 753.7 | 752.4 |
| 7.5°  | 754.9 | 751.2 | 752.4 | 751.2 | 751.2 |
| 10°   | 750.0 | 746.3 | 748.7 | 747.5 | 746.3 |
| 12.5° | 742.6 | 740.1 | 742.6 | 741.3 | 741.3 |
| 15°   | 732.7 | 731.4 | 735.2 | 735.2 | 735.2 |
| 17.5° | 722.8 | 721.6 | 726.5 | 726.5 | 726.5 |
| 20°   | 710.4 | 709.2 | 716.6 | 716.6 | 716.6 |
| 22.5° | 695.6 | 694.4 | 704.3 | 704.3 | 704.3 |
| 25°   | 679.6 | 679.6 | 689.4 | 691.9 | 691.9 |
| 27.5° | 663.5 | 663.5 | 674.6 | 678.3 | 678.3 |
| 30°   | 646.2 | 646.2 | 657.3 | 662.3 | 664.7 |
| 32.5° | 625.2 | 627.7 | 640.0 | 646.2 | 648.7 |
| 35°   | 604.2 | 607.9 | 620.2 | 628.9 | 633.8 |
| 37.5° | 581.9 | 585.7 | 600.5 | 610.4 | 616.5 |
| 40°   | 558.5 | 563.4 | 579.5 | 591.8 | 599.2 |
| 42.5° | 532.5 | 539.9 | 558.5 | 574.5 | 584.4 |
| 45°   | 507.8 | 516.5 | 536.2 | 558.5 | 569.6 |
| 47.5° | 480.6 | 490.5 | 512.8 | 541.2 | 552.3 |
| 50°   | 452.2 | 462.1 | 489.3 | 521.4 | 533.8 |
| 52.5° | 423.8 | 434.9 | 467.0 | 501.6 | 516.5 |
| 55°   | 392.9 | 405.3 | 444.8 | 481.9 | 497.9 |
| 57.5° | 360.8 | 375.6 | 420.1 | 459.6 | 476.9 |
| 60°   | 327.4 | 346.0 | 395.4 | 437.4 | 455.9 |
| 62.5° | 292.8 | 315.1 | 370.7 | 415.1 | 434.9 |
| 65°   | 259.5 | 284.2 | 344.7 | 391.7 | 412.7 |
| 67.5° | 223.6 | 254.5 | 318.8 | 369.4 | 389.2 |
| 70°   | 187.8 | 223.6 | 291.6 | 343.5 | 363.3 |
| 72.5° | 152.0 | 195.2 | 264.4 | 311.4 | 311.4 |
| 75°   | 117.4 | 165.6 | 236.0 | 234.8 | 227.3 |
| 77.5° | 89.0  | 138.4 | 194.0 | 165.6 | 166.8 |
| 80°   | 64.2  | 111.2 | 122.3 | 122.3 | 123.6 |
| 82.5° | 43.2  | 85.3  | 79.1  | 77.8  | 80.3  |
| 85°   | 25.9  | 39.5  | 40.8  | 37.1  | 38.3  |
| 87.5° | 12.4  | 13.6  | 11.1  | 7.4   | 7.4   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)