

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: P263490

Luminaire Tested: **24CZ-LD5-50SE-SQP-UNV-L92765-W2A1-U-5700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263490  
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-LD5-50SE-SQP-UNV-L92765-W2A1-U-5700K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 5700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3122.0 lumens  
Efficiency: N/A  
Efficacy: 76.3 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

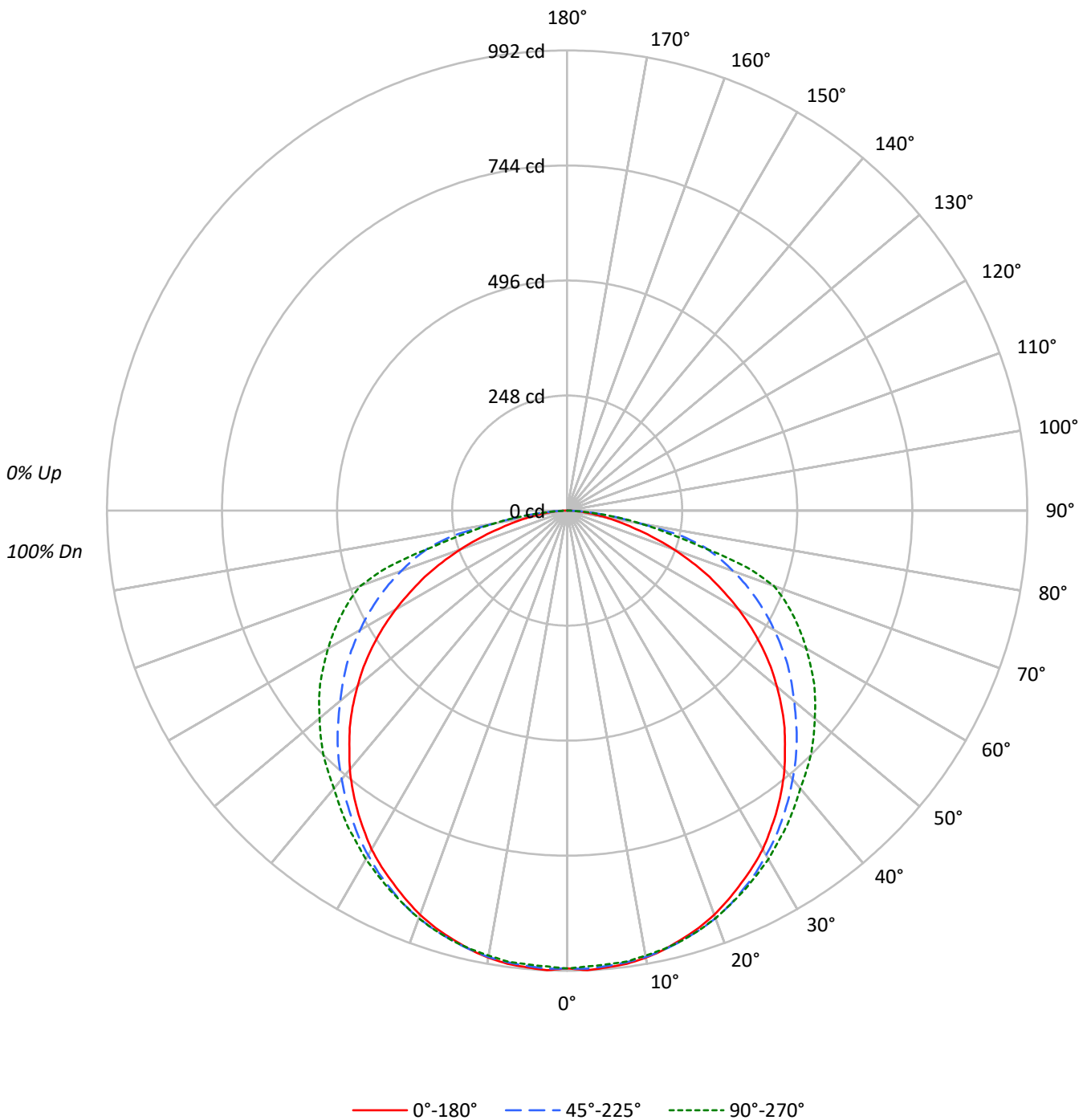
Input Watts (W): 40.92  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     | 20  |     |     | 20  |     |     | 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°  | 1328 | 1328 | 1328 |
| 5°  | 1335 | 1331 | 1326 |
| 10° | 1337 | 1335 | 1331 |
| 15° | 1332 | 1337 | 1337 |
| 20° | 1328 | 1339 | 1339 |
| 25° | 1317 | 1336 | 1341 |
| 30° | 1310 | 1333 | 1348 |
| 35° | 1295 | 1330 | 1359 |
| 40° | 1280 | 1328 | 1374 |
| 45° | 1261 | 1332 | 1415 |
| 50° | 1235 | 1337 | 1458 |
| 55° | 1203 | 1362 | 1525 |
| 60° | 1150 | 1389 | 1601 |
| 65° | 1078 | 1432 | 1715 |
| 70° | 964  | 1497 | 1865 |
| 75° | 796  | 1601 | 1542 |
| 80° | 650  | 1237 | 1250 |
| 85° | 523  | 821  | 772  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 93.7   | 3.0       |
| 10°-20°   | 270.5  | 8.7       |
| 20°-30°   | 413.4  | 13.2      |
| 30°-40°   | 505.6  | 16.2      |
| 40°-50°   | 541.0  | 17.3      |
| 50°-60°   | 518.0  | 16.6      |
| 60°-70°   | 438.2  | 14.0      |
| 70°-80°   | 277.8  | 8.9       |
| 80°-90°   | 63.9   | 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°    | 777.6  | 24.9      |
| 0°-40°    | 1283.1 | 41.1      |
| 0°-60°    | 2342.1 | 75.0      |
| 0°-90°    | 3122.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3122.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 987 | 987   | 987 | 987   | 987 |      |
| 5°  | 988 | 984   | 985 | 984   | 982 | 94   |
| 15° | 956 | 955   | 960 | 960   | 960 | 270  |
| 25° | 887 | 887   | 900 | 903   | 903 | 409  |
| 35° | 789 | 793   | 810 | 821   | 827 | 493  |
| 45° | 663 | 674   | 700 | 729   | 743 | 511  |
| 55° | 513 | 529   | 580 | 629   | 650 | 457  |
| 65° | 339 | 371   | 450 | 511   | 539 | 334  |
| 75° | 153 | 216   | 308 | 306   | 297 | 167  |
| 85° | 34  | 52    | 53  | 48    | 50  | 40   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 986.9 | 986.9 | 986.9 | 986.9 | 986.9 |
| 2.5°  | 991.8 | 986.9 | 988.5 | 986.9 | 983.7 |
| 5°    | 988.5 | 983.7 | 985.3 | 983.7 | 982.1 |
| 7.5°  | 985.3 | 980.5 | 982.1 | 980.5 | 980.5 |
| 10°   | 978.9 | 974.0 | 977.2 | 975.6 | 974.0 |
| 12.5° | 969.2 | 966.0 | 969.2 | 967.6 | 967.6 |
| 15°   | 956.3 | 954.7 | 959.5 | 959.5 | 959.5 |
| 17.5° | 943.4 | 941.8 | 948.2 | 948.2 | 948.2 |
| 20°   | 927.3 | 925.6 | 935.3 | 935.3 | 935.3 |
| 22.5° | 907.9 | 906.3 | 919.2 | 919.2 | 919.2 |
| 25°   | 886.9 | 886.9 | 899.8 | 903.1 | 903.1 |
| 27.5° | 866.0 | 866.0 | 880.5 | 885.3 | 885.3 |
| 30°   | 843.4 | 843.4 | 857.9 | 864.4 | 867.6 |
| 32.5° | 816.0 | 819.2 | 835.3 | 843.4 | 846.6 |
| 35°   | 788.6 | 793.4 | 809.5 | 820.8 | 827.3 |
| 37.5° | 759.5 | 764.4 | 783.7 | 796.6 | 804.7 |
| 40°   | 728.9 | 735.4 | 756.3 | 772.4 | 782.1 |
| 42.5° | 695.0 | 704.7 | 728.9 | 749.9 | 762.8 |
| 45°   | 662.8 | 674.1 | 699.9 | 728.9 | 743.4 |
| 47.5° | 627.3 | 640.2 | 669.2 | 706.3 | 720.8 |
| 50°   | 590.2 | 603.1 | 638.6 | 680.5 | 696.7 |
| 52.5° | 553.1 | 567.6 | 609.6 | 654.7 | 674.1 |
| 55°   | 512.8 | 528.9 | 580.5 | 628.9 | 649.9 |
| 57.5° | 470.9 | 490.2 | 548.3 | 599.9 | 622.5 |
| 60°   | 427.3 | 451.5 | 516.0 | 570.9 | 595.1 |
| 62.5° | 382.2 | 411.2 | 483.8 | 541.8 | 567.6 |
| 65°   | 338.6 | 370.9 | 449.9 | 511.2 | 538.6 |
| 67.5° | 291.9 | 332.2 | 416.1 | 482.2 | 508.0 |
| 70°   | 245.1 | 291.9 | 380.6 | 448.3 | 474.1 |
| 72.5° | 198.4 | 254.8 | 345.1 | 406.4 | 406.4 |
| 75°   | 153.2 | 216.1 | 308.0 | 306.4 | 296.7 |
| 77.5° | 116.1 | 180.6 | 253.2 | 216.1 | 217.7 |
| 80°   | 83.9  | 145.1 | 159.6 | 159.6 | 161.3 |
| 82.5° | 56.4  | 111.3 | 103.2 | 101.6 | 104.8 |
| 85°   | 33.9  | 51.6  | 53.2  | 48.4  | 50.0  |
| 87.5° | 16.1  | 17.7  | 14.5  | 9.7   | 9.7   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)