

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: P263908

Luminaire Tested: **24CZ-LD5-50SE-RDP-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P263908  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25696)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-50SE-RDP-UNV-L92765-W2A1-U-5000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH RDP LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3214.0 lumens  
Efficiency: N/A  
Efficacy: 79.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

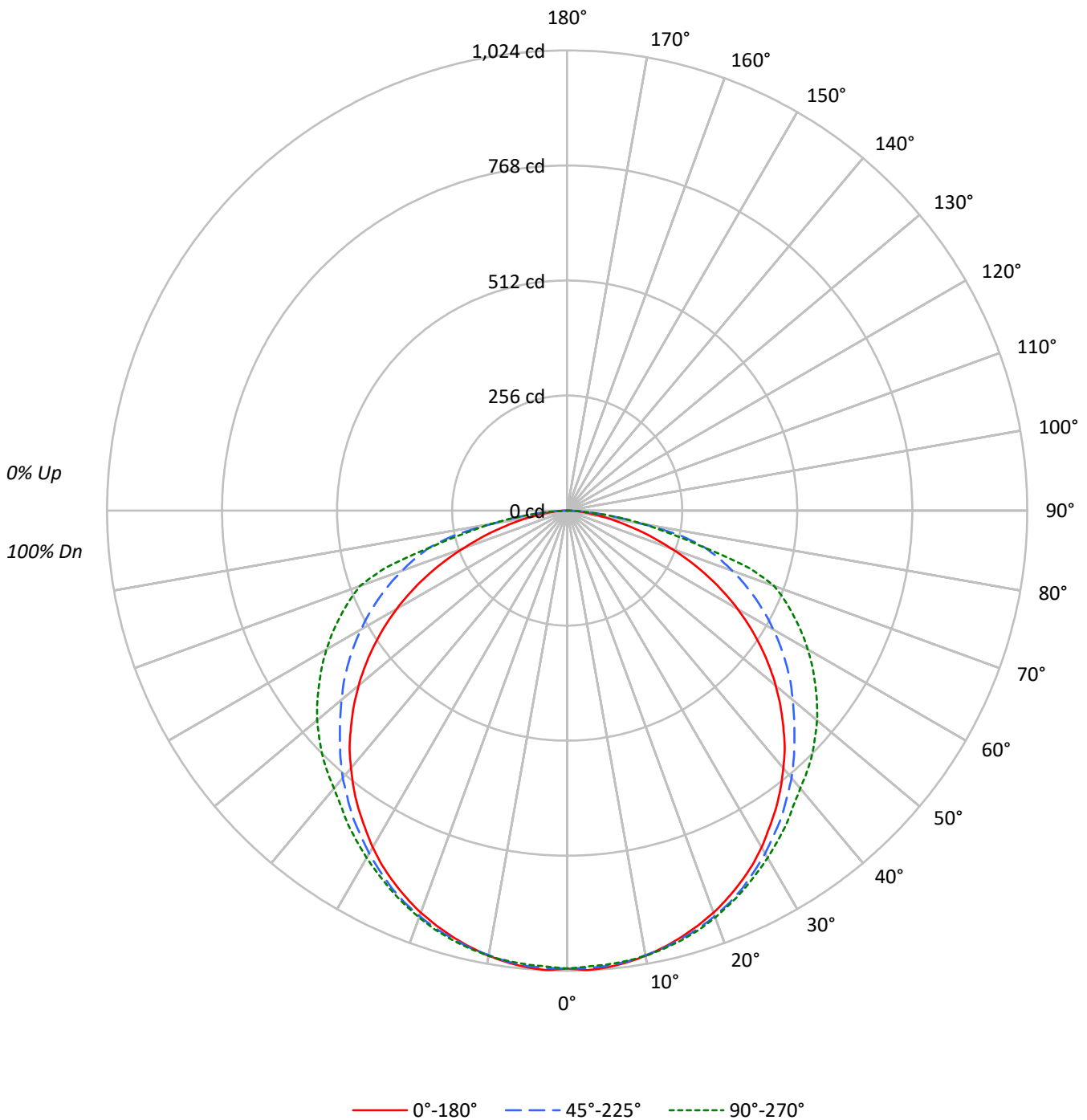
Input Watts (W): 40.641  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 62  | 58  | 56  |
| 4   | 81  | 68  | 59  | 52  | 78  | 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  | 61  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 38  | 33  | 44  | 38  | 33  | 31  |
| 8   | 59  | 45  | 36  | 30  | 57  | 44  | 36  | 30  | 43  | 35  | 30  | 42  | 35  | 30  | 40  | 34  | 29  | 27  |
| 9   | 55  | 41  | 33  | 27  | 53  | 41  | 32  | 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°  | 1371 | 1371 | 1371 |
| 5°  | 1378 | 1374 | 1370 |
| 10° | 1375 | 1373 | 1375 |
| 15° | 1369 | 1373 | 1377 |
| 20° | 1364 | 1375 | 1380 |
| 25° | 1355 | 1374 | 1381 |
| 30° | 1345 | 1369 | 1386 |
| 35° | 1330 | 1367 | 1398 |
| 40° | 1314 | 1364 | 1417 |
| 45° | 1294 | 1361 | 1466 |
| 50° | 1268 | 1371 | 1520 |
| 55° | 1232 | 1396 | 1581 |
| 60° | 1179 | 1426 | 1665 |
| 65° | 1098 | 1471 | 1773 |
| 70° | 971  | 1537 | 1929 |
| 75° | 814  | 1645 | 1620 |
| 80° | 650  | 1299 | 1348 |
| 85° | 513  | 880  | 806  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 96.6   | 3.0       |
| 10°-20°   | 278.1  | 8.7       |
| 20°-30°   | 424.8  | 13.2      |
| 30°-40°   | 519.3  | 16.2      |
| 40°-50°   | 555.9  | 17.3      |
| 50°-60°   | 533.2  | 16.6      |
| 60°-70°   | 450.2  | 14.0      |
| 70°-80°   | 287.7  | 9.0       |
| 80°-90°   | 68.0   | 2.1       |
| 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°    | 799.5  | 24.9      |
| 0°-40°    | 1318.9 | 41.0      |
| 0°-60°    | 2408.0 | 74.9      |
| 0°-90°    | 3214.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3214.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1019 | 1019  | 1019 | 1019  | 1019 |      |
| 5°  | 1020 | 1014  | 1017 | 1016  | 1014 | 97   |
| 15° | 982  | 979   | 986  | 989   | 989  | 277  |
| 25° | 913  | 911   | 926  | 929   | 930  | 421  |
| 35° | 810  | 816   | 832  | 843   | 851  | 506  |
| 45° | 680  | 691   | 715  | 748   | 770  | 525  |
| 55° | 525  | 543   | 595  | 649   | 674  | 469  |
| 65° | 345  | 378   | 462  | 527   | 557  | 340  |
| 75° | 157  | 223   | 316  | 323   | 312  | 169  |
| 85° | 33   | 55    | 57   | 55    | 52   | 40   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1018.9 | 1018.9 | 1018.9 | 1018.9 | 1018.9 |
| 2.5°  | 1023.6 | 1017.3 | 1018.9 | 1018.9 | 1015.7 |
| 5°    | 1020.4 | 1014.1 | 1017.3 | 1015.7 | 1014.1 |
| 7.5°  | 1014.1 | 1009.4 | 1012.5 | 1012.5 | 1011.0 |
| 10°   | 1006.2 | 1001.5 | 1004.6 | 1006.2 | 1006.2 |
| 12.5° | 995.1  | 992.0  | 996.7  | 996.7  | 998.3  |
| 15°   | 982.5  | 979.3  | 985.6  | 988.8  | 988.8  |
| 17.5° | 968.2  | 966.7  | 974.6  | 976.1  | 977.7  |
| 20°   | 952.4  | 950.8  | 960.3  | 960.3  | 963.5  |
| 22.5° | 933.4  | 931.8  | 944.5  | 944.5  | 947.7  |
| 25°   | 912.9  | 911.3  | 925.5  | 928.7  | 930.3  |
| 27.5° | 890.7  | 889.1  | 903.4  | 908.1  | 911.3  |
| 30°   | 865.4  | 865.4  | 881.2  | 887.6  | 892.3  |
| 32.5° | 836.9  | 841.7  | 855.9  | 865.4  | 871.7  |
| 35°   | 810.0  | 816.4  | 832.2  | 843.3  | 851.2  |
| 37.5° | 780.0  | 786.3  | 803.7  | 817.9  | 827.4  |
| 40°   | 748.3  | 756.2  | 776.8  | 792.6  | 806.9  |
| 42.5° | 716.7  | 724.6  | 746.7  | 770.5  | 789.5  |
| 45°   | 680.3  | 691.4  | 715.1  | 748.3  | 770.5  |
| 47.5° | 643.9  | 655.0  | 685.0  | 726.2  | 748.3  |
| 50°   | 605.9  | 618.6  | 655.0  | 702.4  | 726.2  |
| 52.5° | 566.4  | 580.6  | 626.5  | 677.1  | 700.9  |
| 55°   | 525.3  | 542.7  | 594.9  | 648.7  | 674.0  |
| 57.5° | 482.5  | 501.5  | 563.2  | 620.2  | 647.1  |
| 60°   | 438.2  | 462.0  | 530.0  | 590.1  | 618.6  |
| 62.5° | 392.4  | 420.8  | 496.8  | 558.5  | 588.5  |
| 65°   | 344.9  | 378.1  | 462.0  | 526.8  | 556.9  |
| 67.5° | 295.9  | 340.1  | 427.2  | 495.2  | 525.3  |
| 70°   | 246.8  | 299.0  | 390.8  | 460.4  | 490.4  |
| 72.5° | 200.9  | 261.0  | 354.4  | 419.3  | 425.6  |
| 75°   | 156.6  | 223.1  | 316.4  | 322.7  | 311.7  |
| 77.5° | 117.1  | 185.1  | 261.0  | 232.6  | 231.0  |
| 80°   | 83.9   | 148.7  | 167.7  | 172.4  | 174.0  |
| 82.5° | 55.4   | 112.3  | 109.2  | 112.3  | 110.7  |
| 85°   | 33.2   | 55.4   | 57.0   | 55.4   | 52.2   |
| 87.5° | 15.8   | 20.6   | 15.8   | 14.2   | 12.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)