

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: P259542

Luminaire Tested: **22CZ-LD5-44-S-UNV-L92765-W2A1-U-5700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259542  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25712)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-44-S-UNV-L92765-W2A1-U-5700K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER  
WITH SMOOTH LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 5700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4248.0 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.24 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

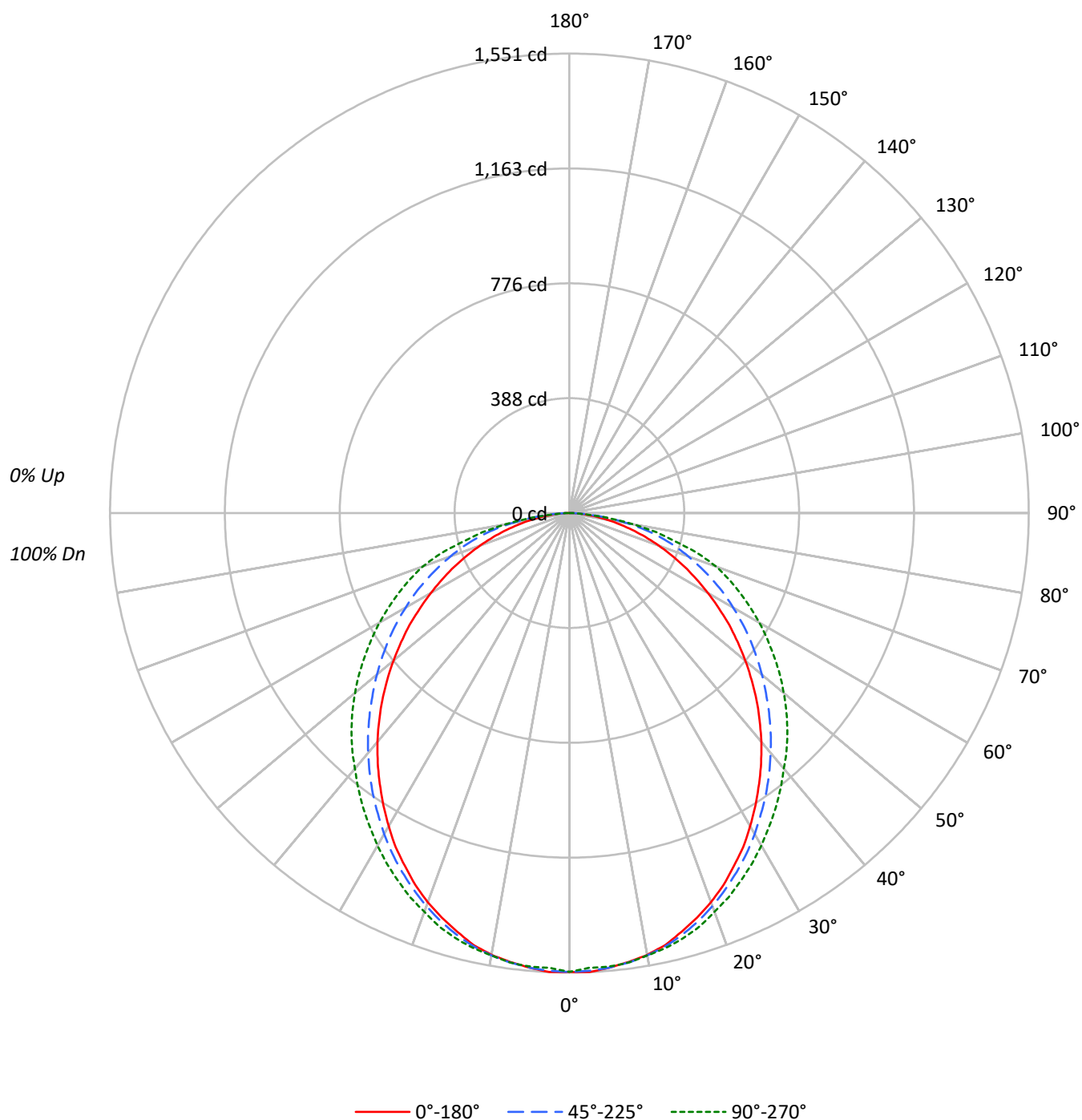
Input Watts (W): 35.619  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |  |     |     | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  |  | 97  | 94  | 91  |  | 93  | 91  | 88  |  | 90  | 87  | 85  |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 77  |  | 85  | 79  | 75  |  | 81  | 77  | 73  |  | 78  | 75  | 71  |
| 3   | 90  | 79  | 71  | 64  | 87  | 78  | 70  | 64  |  | 75  | 68  | 63  |  | 72  | 66  | 62  |  | 69  | 64  | 60  |
| 4   | 82  | 70  | 61  | 54  | 80  | 69  | 61  | 54  |  | 66  | 59  | 53  |  | 64  | 58  | 53  |  | 62  | 56  | 52  |
| 5   | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  |  | 59  | 52  | 46  |  | 57  | 51  | 46  |  | 56  | 50  | 45  |
| 6   | 70  | 56  | 47  | 41  | 68  | 56  | 47  | 41  |  | 54  | 46  | 40  |  | 52  | 45  | 40  |  | 50  | 44  | 40  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  |  | 49  | 41  | 36  |  | 47  | 41  | 36  |  | 46  | 40  | 35  |
| 8   | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  |  | 45  | 37  | 32  |  | 43  | 37  | 32  |  | 42  | 36  | 32  |
| 9   | 56  | 43  | 35  | 29  | 55  | 42  | 34  | 29  |  | 41  | 34  | 29  |  | 40  | 34  | 29  |  | 39  | 33  | 29  |
| 10  | 53  | 40  | 32  | 26  | 52  | 39  | 32  | 26  |  | 38  | 31  | 26  |  | 37  | 31  | 26  |  | 36  | 30  | 26  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4167 | 4167 | 4167 |
| 5°  | 4161 | 4161 | 4150 |
| 10° | 4137 | 4142 | 4142 |
| 15° | 4076 | 4104 | 4138 |
| 20° | 4003 | 4043 | 4102 |
| 25° | 3901 | 3968 | 4065 |
| 30° | 3791 | 3887 | 4026 |
| 35° | 3666 | 3801 | 3988 |
| 40° | 3541 | 3713 | 3956 |
| 45° | 3401 | 3626 | 3960 |
| 50° | 3246 | 3553 | 3955 |
| 55° | 3092 | 3494 | 3954 |
| 60° | 2910 | 3437 | 3986 |
| 65° | 2728 | 3391 | 4041 |
| 70° | 2520 | 3355 | 4142 |
| 75° | 2270 | 3330 | 3840 |
| 80° | 1991 | 3099 | 3352 |
| 85° | 1636 | 2331 | 2078 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 146.2  | 3.4       |
| 10°-20°   | 415.4  | 9.8       |
| 20°-30°   | 617.0  | 14.5      |
| 30°-40°   | 726.3  | 17.1      |
| 40°-50°   | 740.5  | 17.4      |
| 50°-60°   | 667.8  | 15.7      |
| 60°-70°   | 526.0  | 12.4      |
| 70°-80°   | 324.5  | 7.6       |
| 80°-90°   | 84.2   | 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°    | 1178.7 | 27.7      |
| 0°-40°    | 1905.0 | 44.8      |
| 0°-60°    | 3313.3 | 78.0      |
| 0°-90°    | 4248.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4248.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1549 | 1549  | 1549 | 1549  | 1549 |      |
| 5°  | 1540 | 1542  | 1540 | 1538  | 1536 | 146  |
| 15° | 1463 | 1469  | 1473 | 1481  | 1485 | 412  |
| 25° | 1314 | 1322  | 1336 | 1359  | 1369 | 605  |
| 35° | 1116 | 1128  | 1157 | 1194  | 1214 | 698  |
| 45° | 894  | 908   | 953  | 1010  | 1041 | 689  |
| 55° | 659  | 682   | 745  | 812   | 843  | 588  |
| 65° | 428  | 459   | 532  | 600   | 635  | 424  |
| 75° | 218  | 255   | 320  | 357   | 369  | 233  |
| 85° | 53   | 67    | 76   | 71    | 67   | 62   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1548.6 | 1548.6 | 1548.6 | 1548.6 | 1548.6 |
| 2.5°  | 1550.7 | 1550.7 | 1546.6 | 1542.5 | 1536.4 |
| 5°    | 1540.5 | 1542.5 | 1540.5 | 1538.4 | 1536.4 |
| 7.5°  | 1528.2 | 1530.3 | 1530.3 | 1530.3 | 1530.3 |
| 10°   | 1514.0 | 1516.0 | 1516.0 | 1516.0 | 1516.0 |
| 12.5° | 1493.6 | 1495.6 | 1497.6 | 1499.7 | 1503.8 |
| 15°   | 1463.0 | 1469.1 | 1473.2 | 1481.3 | 1485.4 |
| 17.5° | 1432.3 | 1438.5 | 1444.6 | 1454.8 | 1463.0 |
| 20°   | 1397.7 | 1401.7 | 1411.9 | 1424.2 | 1432.3 |
| 22.5° | 1358.9 | 1365.0 | 1375.2 | 1391.5 | 1403.8 |
| 25°   | 1314.0 | 1322.2 | 1336.4 | 1358.9 | 1369.1 |
| 27.5° | 1271.2 | 1277.3 | 1295.6 | 1320.1 | 1334.4 |
| 30°   | 1220.1 | 1228.3 | 1250.8 | 1281.4 | 1295.6 |
| 32.5° | 1169.1 | 1179.3 | 1203.8 | 1238.5 | 1254.8 |
| 35°   | 1116.1 | 1128.3 | 1156.9 | 1193.6 | 1214.0 |
| 37.5° | 1063.0 | 1075.3 | 1107.9 | 1148.7 | 1171.2 |
| 40°   | 1007.9 | 1020.2 | 1056.9 | 1101.8 | 1126.3 |
| 42.5° | 950.8  | 965.1  | 1005.9 | 1056.9 | 1085.5 |
| 45°   | 893.7  | 908.0  | 952.9  | 1010.0 | 1040.6 |
| 47.5° | 834.5  | 850.8  | 899.8  | 963.1  | 993.7  |
| 50°   | 775.3  | 793.7  | 848.8  | 914.1  | 944.7  |
| 52.5° | 716.2  | 736.6  | 795.7  | 863.1  | 895.7  |
| 55°   | 659.0  | 681.5  | 744.7  | 812.1  | 842.7  |
| 57.5° | 597.8  | 624.4  | 691.7  | 757.0  | 791.7  |
| 60°   | 540.7  | 569.3  | 638.6  | 703.9  | 740.7  |
| 62.5° | 483.6  | 514.2  | 587.6  | 652.9  | 687.6  |
| 65°   | 428.5  | 459.1  | 532.5  | 599.9  | 634.6  |
| 67.5° | 373.4  | 408.1  | 479.5  | 546.8  | 581.5  |
| 70°   | 320.3  | 357.1  | 426.4  | 491.7  | 526.4  |
| 72.5° | 269.3  | 306.1  | 375.4  | 436.6  | 457.0  |
| 75°   | 218.3  | 255.0  | 320.3  | 357.1  | 369.3  |
| 77.5° | 171.4  | 206.1  | 263.2  | 285.7  | 302.0  |
| 80°   | 128.5  | 159.1  | 200.0  | 214.2  | 216.3  |
| 82.5° | 87.7   | 114.3  | 138.7  | 140.8  | 138.7  |
| 85°   | 53.0   | 67.3   | 75.5   | 71.4   | 67.3   |
| 87.5° | 24.5   | 26.5   | 24.5   | 16.3   | 10.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)