

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: P259366

Luminaire Tested: **22CZ-LD5-39-UNV-L92765-W2A1-U-6500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P259366  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ-LD5-39-UNV-L92765-W2A1-U-6500K  
Description: CRUZE 2x2 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 6500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3737.0 lumens  
Efficiency: N/A  
Efficacy: 118.5 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

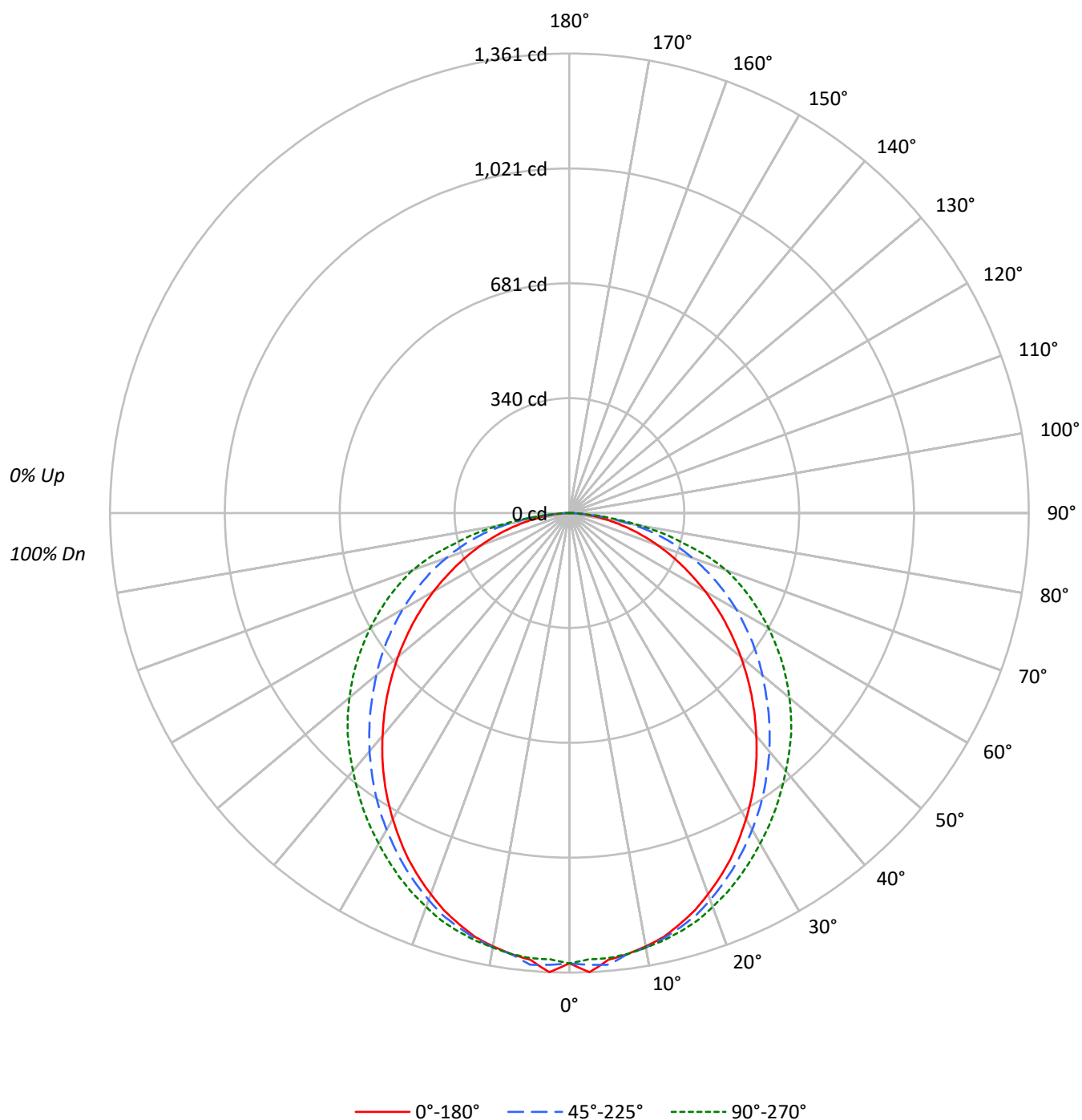
Input Watts (W): 31.527  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 108 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  |  | 93  | 90  | 88  |  | 89  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 84  | 79  | 74  |  | 81  | 77  | 73  |  | 78  |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 68  | 62  |  | 71  | 66  | 61  |  | 69  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 61  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  |  | 57  | 50  | 45  |  | 55  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  | 53  | 46  | 40  |  | 52  | 45  | 40  |  | 50  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 46  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 38  | 32  | 44  | 37  | 32  |  | 43  | 36  | 31  |  | 42  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 29  |  | 40  | 33  | 28  |  | 39  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  |  | 37  | 30  | 26  |  | 36  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3589 | 3589 | 3589 |
| 5°  | 3588 | 3628 | 3574 |
| 10° | 3560 | 3570 | 3570 |
| 15° | 3514 | 3539 | 3569 |
| 20° | 3440 | 3492 | 3554 |
| 25° | 3356 | 3432 | 3534 |
| 30° | 3252 | 3365 | 3512 |
| 35° | 3146 | 3301 | 3504 |
| 40° | 3026 | 3236 | 3505 |
| 45° | 2904 | 3174 | 3534 |
| 50° | 2777 | 3127 | 3561 |
| 55° | 2643 | 3095 | 3606 |
| 60° | 2504 | 3071 | 3668 |
| 65° | 2349 | 3055 | 3761 |
| 70° | 2187 | 3046 | 3889 |
| 75° | 1984 | 3042 | 3685 |
| 80° | 1719 | 2816 | 3267 |
| 85° | 1457 | 2133 | 2075 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 126.5  | 3.4       |
| 10°-20°   | 358.4  | 9.6       |
| 20°-30°   | 533.1  | 14.3      |
| 30°-40°   | 630.5  | 16.9      |
| 40°-50°   | 648.0  | 17.3      |
| 50°-60°   | 592.1  | 15.8      |
| 60°-70°   | 473.7  | 12.7      |
| 70°-80°   | 297.3  | 8.0       |
| 80°-90°   | 77.4   | 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°    | 1018.0 | 27.2      |
| 0°-40°    | 1648.4 | 44.1      |
| 0°-60°    | 2888.6 | 77.3      |
| 0°-90°    | 3737.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3737.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1334 | 1334  | 1334 | 1334  | 1334 |      |
| 5°  | 1328 | 1328  | 1343 | 1334  | 1323 | 126  |
| 15° | 1261 | 1263  | 1270 | 1278  | 1281 | 355  |
| 25° | 1130 | 1138  | 1156 | 1176  | 1190 | 520  |
| 35° | 958  | 970   | 1005 | 1043  | 1067 | 598  |
| 45° | 763  | 783   | 834  | 896   | 929  | 588  |
| 55° | 563  | 591   | 660  | 732   | 769  | 504  |
| 65° | 369  | 402   | 480  | 552   | 591  | 366  |
| 75° | 191  | 227   | 293  | 336   | 354  | 203  |
| 85° | 47   | 60    | 69   | 67    | 67   | 55   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1333.9 | 1333.9 | 1333.9 | 1333.9 | 1333.9 |
| 2.5°  | 1361.1 | 1355.7 | 1339.3 | 1328.4 | 1323.0 |
| 5°    | 1328.4 | 1328.4 | 1342.9 | 1333.9 | 1323.0 |
| 7.5°  | 1317.5 | 1317.5 | 1317.5 | 1344.8 | 1317.5 |
| 10°   | 1303.0 | 1304.8 | 1306.6 | 1317.5 | 1306.6 |
| 12.5° | 1286.6 | 1286.6 | 1290.2 | 1293.9 | 1295.7 |
| 15°   | 1261.2 | 1263.0 | 1270.3 | 1277.5 | 1281.2 |
| 17.5° | 1233.9 | 1239.4 | 1248.5 | 1257.5 | 1264.8 |
| 20°   | 1201.2 | 1208.5 | 1219.4 | 1233.9 | 1241.2 |
| 22.5° | 1166.7 | 1173.9 | 1188.5 | 1204.8 | 1217.6 |
| 25°   | 1130.3 | 1137.6 | 1155.8 | 1175.8 | 1190.3 |
| 27.5° | 1088.5 | 1097.6 | 1119.4 | 1146.7 | 1161.2 |
| 30°   | 1046.7 | 1057.6 | 1083.1 | 1114.0 | 1130.3 |
| 32.5° | 1003.1 | 1015.8 | 1044.9 | 1079.4 | 1099.4 |
| 35°   | 957.7  | 970.4  | 1004.9 | 1043.1 | 1066.7 |
| 37.5° | 910.4  | 925.0  | 963.1  | 1006.8 | 1032.2 |
| 40°   | 861.4  | 877.7  | 921.3  | 968.6  | 997.7  |
| 42.5° | 812.3  | 830.5  | 877.7  | 934.1  | 963.1  |
| 45°   | 763.2  | 783.2  | 834.1  | 895.9  | 928.6  |
| 47.5° | 712.4  | 736.0  | 788.7  | 857.7  | 890.5  |
| 50°   | 663.3  | 686.9  | 746.9  | 817.8  | 850.5  |
| 52.5° | 612.4  | 639.7  | 703.3  | 776.0  | 810.5  |
| 55°   | 563.3  | 590.6  | 659.7  | 732.4  | 768.7  |
| 57.5° | 514.3  | 541.5  | 614.2  | 688.7  | 725.1  |
| 60°   | 465.2  | 494.3  | 570.6  | 643.3  | 681.5  |
| 62.5° | 416.2  | 447.0  | 525.2  | 599.7  | 636.0  |
| 65°   | 368.9  | 401.6  | 479.8  | 552.4  | 590.6  |
| 67.5° | 323.5  | 358.0  | 434.3  | 505.2  | 543.4  |
| 70°   | 278.0  | 312.6  | 387.1  | 456.1  | 494.3  |
| 72.5° | 234.4  | 269.0  | 341.6  | 403.4  | 432.5  |
| 75°   | 190.8  | 227.2  | 292.6  | 336.2  | 354.4  |
| 77.5° | 149.0  | 185.4  | 241.7  | 270.8  | 290.8  |
| 80°   | 110.9  | 141.7  | 181.7  | 203.5  | 210.8  |
| 82.5° | 76.3   | 101.8  | 127.2  | 132.7  | 136.3  |
| 85°   | 47.2   | 60.0   | 69.1   | 67.2   | 67.2   |
| 87.5° | 21.8   | 23.6   | 20.0   | 14.5   | 9.1    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)