

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: P685339

Luminaire Tested: **4CZL-5-UNV-L940-CD-U**

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685339  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-5-UNV-L940-CD-U  
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @90 CRI and 4000K  
Light Source: (392) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

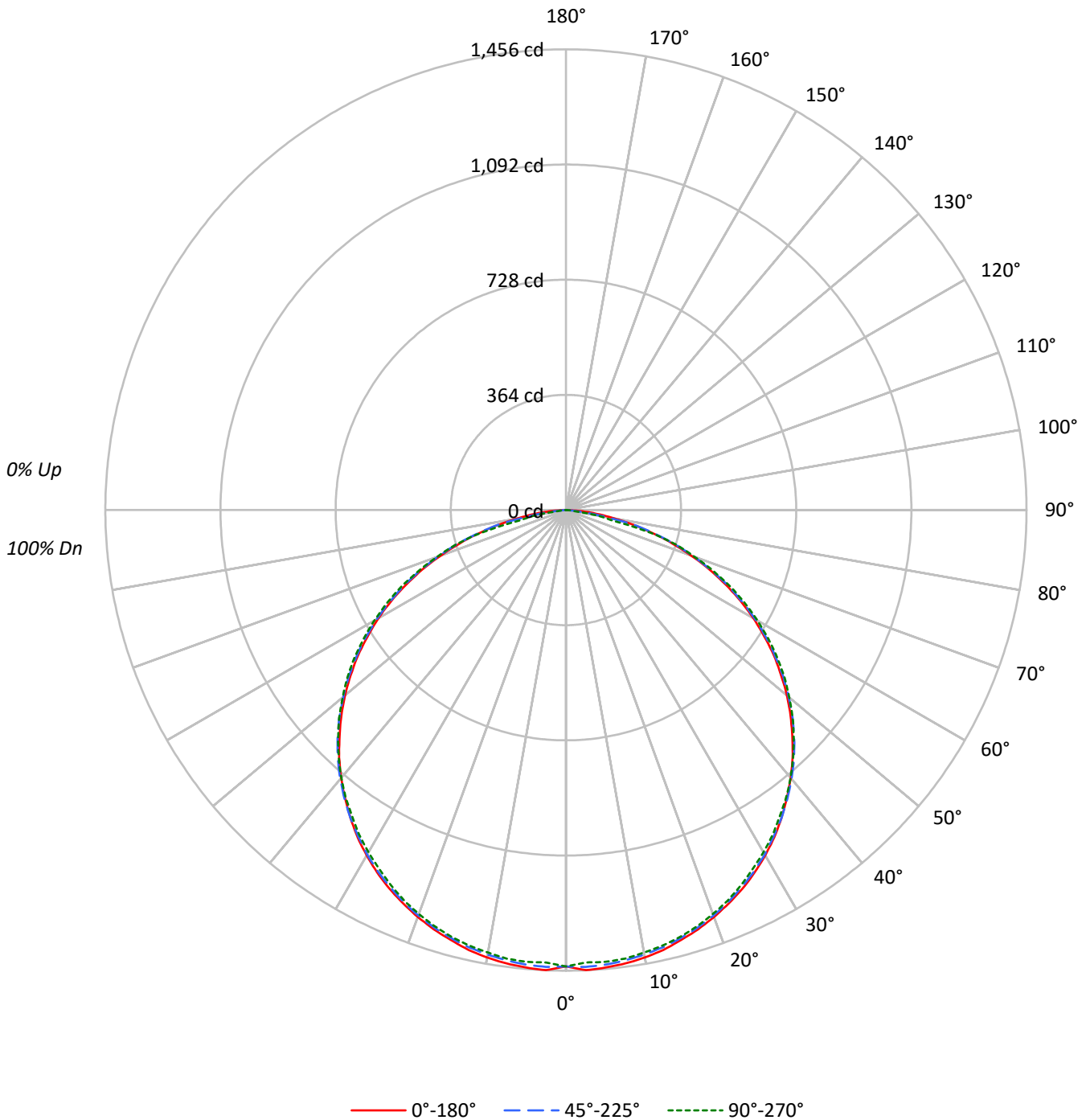
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4279.7 lumens  
Efficiency: N/A  
Efficacy: 138.1 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.41  
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31  
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  | 50  | 30  | 10  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 94  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 86  | 86  | 86  | 84  |
| 2   | 99  | 91  | 84  | 78  | 96  | 89  | 82  | 77  | 85  | 80  | 75  | 82  | 77  | 74  | 79  | 75  | 72  | 72  | 72  | 72  | 70  |
| 3   | 90  | 79  | 71  | 65  | 87  | 78  | 70  | 64  | 75  | 68  | 63  | 72  | 66  | 62  | 69  | 65  | 61  | 61  | 61  | 61  | 58  |
| 4   | 82  | 70  | 61  | 55  | 80  | 69  | 61  | 54  | 66  | 59  | 53  | 64  | 58  | 53  | 62  | 56  | 52  | 52  | 52  | 52  | 50  |
| 5   | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 46  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 50  | 45  | 45  | 45  | 45  | 43  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  | 53  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 39  | 39  | 39  | 39  | 37  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  | 47  | 40  | 35  | 46  | 40  | 35  | 35  | 35  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 31  | 31  | 31  | 29  |
| 9   | 56  | 42  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 28  | 28  | 28  | 26  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 25  | 25  | 25  | 25  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4659 | 4659 | 4659 |
| 5°  | 4705 | 4675 | 4647 |
| 10° | 4709 | 4677 | 4657 |
| 15° | 4703 | 4683 | 4669 |
| 20° | 4704 | 4687 | 4669 |
| 25° | 4705 | 4686 | 4663 |
| 30° | 4699 | 4686 | 4656 |
| 35° | 4682 | 4682 | 4649 |
| 40° | 4660 | 4678 | 4656 |
| 45° | 4621 | 4661 | 4651 |
| 50° | 4582 | 4615 | 4630 |
| 55° | 4520 | 4552 | 4597 |
| 60° | 4421 | 4461 | 4516 |
| 65° | 4257 | 4317 | 4391 |
| 70° | 3981 | 4060 | 4098 |
| 75° | 3582 | 3648 | 3462 |
| 80° | 2992 | 2436 | 1897 |
| 85° | 2230 | 585  | 211  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 136.9  | 3.2       |
| 10°-20°   | 394.6  | 9.2       |
| 20°-30°   | 604.3  | 14.1      |
| 30°-40°   | 739.9  | 17.3      |
| 40°-50°   | 782.7  | 18.3      |
| 50°-60°   | 721.8  | 16.9      |
| 60°-70°   | 556.8  | 13.0      |
| 70°-80°   | 297.4  | 6.9       |
| 80°-90°   | 45.5   | 1.1       |
| 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°    | 1135.8 | 26.5      |
| 0°-40°    | 1875.6 | 43.8      |
| 0°-60°    | 3380.1 | 79.0      |
| 0°-90°    | 4279.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4279.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1443 | 1443  | 1443 | 1443  | 1443 |      |
| 5°  | 1452 | 1434  | 1442 | 1436  | 1434 | 138  |
| 15° | 1407 | 1392  | 1401 | 1396  | 1396 | 397  |
| 25° | 1320 | 1307  | 1315 | 1306  | 1309 | 609  |
| 35° | 1188 | 1181  | 1188 | 1178  | 1179 | 743  |
| 45° | 1012 | 1011  | 1021 | 1014  | 1018 | 781  |
| 55° | 803  | 802   | 809  | 814   | 817  | 716  |
| 65° | 557  | 557   | 565  | 569   | 575  | 550  |
| 75° | 287  | 287   | 292  | 295   | 278  | 304  |
| 85° | 60   | 43    | 16   | 7     | 6    | 74   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1442.7 | 1442.7 | 1442.7 | 1442.7 | 1442.7 |
| 2.5°  | 1455.5 | 1438.3 | 1445.4 | 1440.1 | 1431.3 |
| 5°    | 1451.5 | 1434.4 | 1442.3 | 1436.1 | 1433.5 |
| 7.5°  | 1445.4 | 1427.8 | 1435.7 | 1430.8 | 1430.0 |
| 10°   | 1436.1 | 1418.1 | 1426.4 | 1421.2 | 1420.3 |
| 12.5° | 1423.8 | 1406.2 | 1415.4 | 1409.3 | 1410.2 |
| 15°   | 1406.7 | 1391.7 | 1400.9 | 1396.1 | 1396.5 |
| 17.5° | 1389.5 | 1374.1 | 1383.8 | 1379.0 | 1379.4 |
| 20°   | 1368.8 | 1353.9 | 1364.0 | 1356.5 | 1358.7 |
| 22.5° | 1345.5 | 1332.3 | 1341.1 | 1331.5 | 1335.9 |
| 25°   | 1320.5 | 1306.8 | 1315.2 | 1305.5 | 1308.6 |
| 27.5° | 1291.9 | 1279.1 | 1287.5 | 1277.4 | 1278.7 |
| 30°   | 1260.2 | 1248.8 | 1256.7 | 1246.6 | 1248.8 |
| 32.5° | 1226.4 | 1216.3 | 1222.4 | 1213.2 | 1216.3 |
| 35°   | 1187.7 | 1180.6 | 1187.7 | 1177.6 | 1179.3 |
| 37.5° | 1147.2 | 1140.2 | 1149.9 | 1141.1 | 1144.1 |
| 40°   | 1105.4 | 1098.9 | 1109.8 | 1101.1 | 1104.6 |
| 42.5° | 1061.0 | 1056.2 | 1067.2 | 1058.4 | 1062.8 |
| 45°   | 1011.8 | 1011.3 | 1020.6 | 1013.5 | 1018.4 |
| 47.5° | 963.0  | 962.1  | 971.3  | 966.5  | 972.2  |
| 50°   | 912.0  | 911.1  | 918.6  | 918.1  | 921.6  |
| 52.5° | 857.4  | 858.8  | 865.8  | 867.1  | 871.1  |
| 55°   | 802.9  | 802.0  | 808.6  | 813.5  | 816.6  |
| 57.5° | 743.6  | 745.3  | 750.6  | 756.3  | 758.5  |
| 60°   | 684.6  | 683.8  | 690.8  | 695.6  | 699.2  |
| 62.5° | 622.2  | 622.2  | 627.9  | 635.0  | 638.5  |
| 65°   | 557.1  | 557.1  | 565.0  | 569.4  | 574.7  |
| 67.5° | 490.7  | 489.4  | 496.4  | 506.1  | 505.2  |
| 70°   | 421.7  | 422.1  | 430.0  | 434.9  | 434.0  |
| 72.5° | 353.1  | 354.4  | 362.8  | 365.0  | 367.2  |
| 75°   | 287.1  | 286.7  | 292.4  | 294.6  | 277.5  |
| 77.5° | 221.6  | 222.1  | 225.6  | 165.3  | 145.1  |
| 80°   | 160.9  | 161.8  | 131.0  | 102.0  | 102.0  |
| 82.5° | 106.4  | 104.7  | 67.3   | 39.6   | 29.0   |
| 85°   | 60.2   | 43.1   | 15.8   | 6.6    | 5.7    |
| 87.5° | 24.6   | 7.9    | 4.4    | 3.1    | 2.6    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)