

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: P#

Luminaire Tested: **24CZ-LD5-40SE-RDP-UNV-L840-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25713)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-40SE-RDP-UNV-L840-CD1-U  
Description:

Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2699.5 lumens  
Efficiency: N/A  
Efficacy: 82.9 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.31 / 1.41  
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')  
CIE Type: Direct

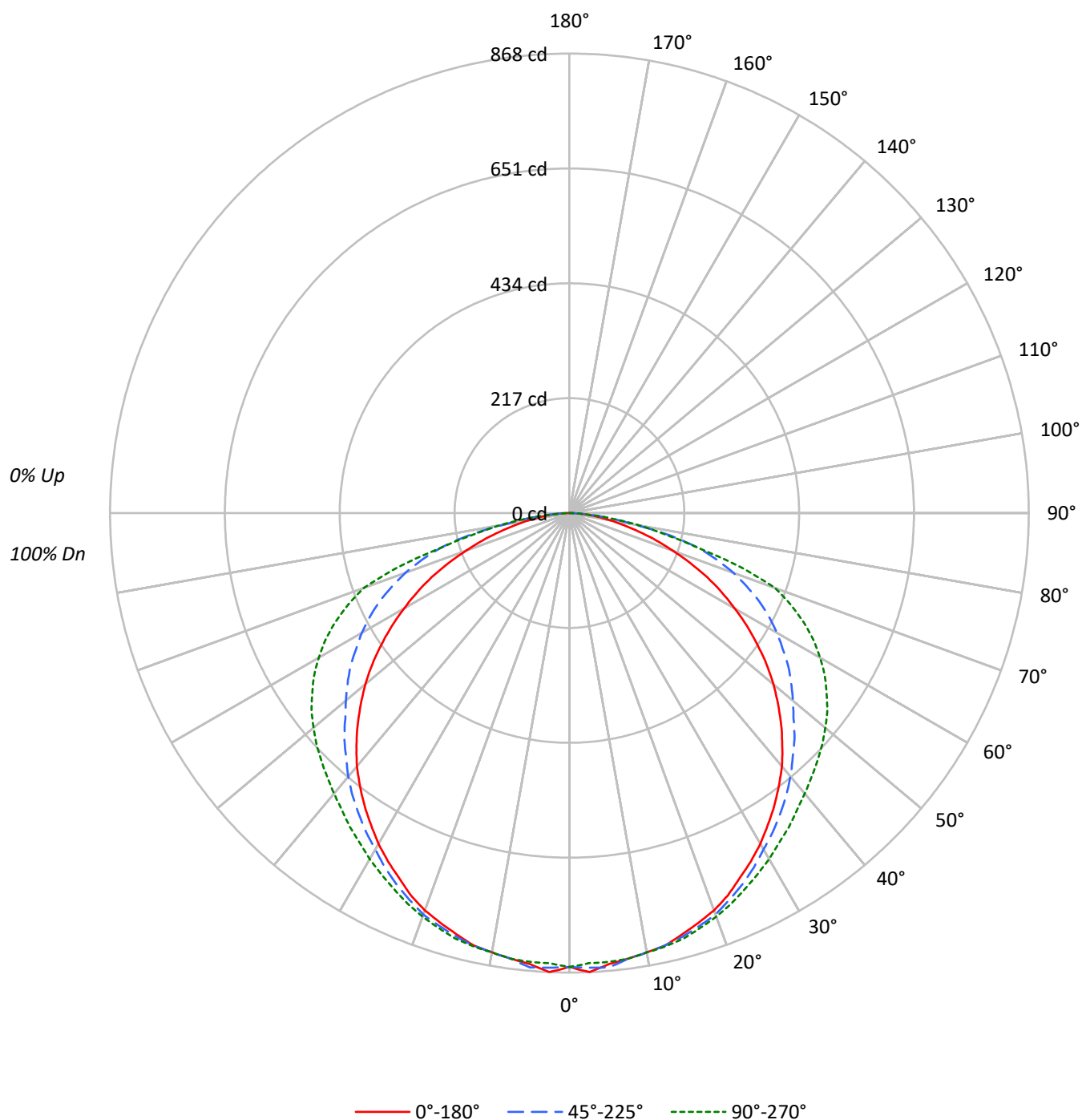
Input Watts (W): 32.55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P#

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### Luminous Intensity Polar Plot



TEST NUMBER: P#

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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  | 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 | 99  | 95  | 105 | 101 | 97  | 93  | 97  | 93  | 90  | 93  | 90  | 87  | 89  | 87  | 85  | 83  |    |    |    |    |    |   |  |   |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 81  | 75  | 84  | 78  | 73  | 80  | 76  | 71  | 77  | 73  | 70  | 68  |    |    |    |    |    |   |  |   |
| 3   | 89  | 78  | 69  | 62  | 86  | 76  | 68  | 62  | 73  | 66  | 61  | 70  | 64  | 59  | 68  | 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  | 52  | 45  | 72  | 60  | 51  | 44  | 58  | 50  | 44  | 56  | 49  | 43  | 54  | 48  | 43  | 41  |    |    |    |    |    |   |  |   |
| 6   | 68  | 55  | 45  | 39  | 66  | 54  | 45  | 39  | 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°  | 1154 | 1154 | 1154 |
| 5°  | 1153 | 1158 | 1145 |
| 10° | 1146 | 1141 | 1141 |
| 15° | 1140 | 1137 | 1144 |
| 20° | 1133 | 1134 | 1141 |
| 25° | 1117 | 1121 | 1137 |
| 30° | 1105 | 1106 | 1140 |
| 35° | 1090 | 1099 | 1148 |
| 40° | 1075 | 1093 | 1166 |
| 45° | 1051 | 1087 | 1201 |
| 50° | 1023 | 1085 | 1247 |
| 55° | 983  | 1102 | 1299 |
| 60° | 930  | 1116 | 1355 |
| 65° | 868  | 1133 | 1405 |
| 70° | 764  | 1130 | 1428 |
| 75° | 648  | 1083 | 1084 |
| 80° | 527  | 737  | 810  |
| 85° | 402  | 403  | 370  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 81.4   | 3.0       |
| 10°-20°   | 233.8  | 8.7       |
| 20°-30°   | 356.3  | 13.2      |
| 30°-40°   | 435.9  | 16.1      |
| 40°-50°   | 469.1  | 17.4      |
| 50°-60°   | 454.4  | 16.8      |
| 60°-70°   | 384.9  | 14.3      |
| 70°-80°   | 232.7  | 8.6       |
| 80°-90°   | 51.1   | 1.9       |
| 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°    | 671.5  | 24.9      |
| 0°-40°    | 1107.4 | 41.0      |
| 0°-60°    | 2030.8 | 75.2      |
| 0°-90°    | 2699.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2699.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 857 | 857   | 857 | 857   | 857 |      |
| 5°  | 855 | 855   | 862 | 857   | 851 | 81   |
| 15° | 824 | 826   | 828 | 830   | 832 | 233  |
| 25° | 761 | 765   | 774 | 780   | 784 | 351  |
| 35° | 675 | 679   | 694 | 713   | 723 | 422  |
| 45° | 566 | 576   | 602 | 639   | 662 | 436  |
| 55° | 434 | 453   | 505 | 564   | 593 | 388  |
| 65° | 287 | 319   | 396 | 459   | 488 | 283  |
| 75° | 136 | 184   | 250 | 254   | 247 | 146  |
| 85° | 34  | 40    | 42  | 40    | 38  | 38   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P#

CATALOG NUMBER: 24CZ-LD5-40SE-RDP-UNV-L840-CD1-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 857.4 | 857.4 | 857.4 | 857.4 | 857.4 |
| 2.5°  | 867.9 | 865.8 | 859.5 | 855.3 | 851.1 |
| 5°    | 855.3 | 855.3 | 861.6 | 857.4 | 851.1 |
| 7.5°  | 849.0 | 849.0 | 849.0 | 859.5 | 849.0 |
| 10°   | 842.7 | 844.8 | 842.7 | 851.1 | 842.7 |
| 12.5° | 836.5 | 836.5 | 836.5 | 838.6 | 838.6 |
| 15°   | 823.9 | 826.0 | 828.1 | 830.2 | 832.3 |
| 17.5° | 811.3 | 813.4 | 817.6 | 819.7 | 821.8 |
| 20°   | 798.7 | 800.8 | 807.1 | 807.1 | 811.3 |
| 22.5° | 781.9 | 781.9 | 790.3 | 792.4 | 798.7 |
| 25°   | 761.0 | 765.2 | 773.6 | 779.9 | 784.0 |
| 27.5° | 742.1 | 746.3 | 754.7 | 763.1 | 769.4 |
| 30°   | 721.2 | 725.3 | 733.7 | 746.3 | 754.7 |
| 32.5° | 698.1 | 702.3 | 714.9 | 729.5 | 737.9 |
| 35°   | 675.0 | 679.2 | 693.9 | 712.8 | 723.3 |
| 37.5° | 649.9 | 656.2 | 672.9 | 693.9 | 706.5 |
| 40°   | 624.7 | 631.0 | 649.9 | 672.9 | 691.8 |
| 42.5° | 595.4 | 603.8 | 624.7 | 656.2 | 677.1 |
| 45°   | 566.0 | 576.5 | 601.7 | 639.4 | 662.5 |
| 47.5° | 534.6 | 545.1 | 574.4 | 622.6 | 647.8 |
| 50°   | 503.1 | 515.7 | 551.3 | 603.8 | 631.0 |
| 52.5° | 469.6 | 482.2 | 528.3 | 584.9 | 614.2 |
| 55°   | 434.0 | 452.8 | 505.2 | 563.9 | 593.3 |
| 57.5° | 398.3 | 419.3 | 478.0 | 540.9 | 572.3 |
| 60°   | 360.6 | 385.7 | 452.8 | 515.7 | 547.2 |
| 62.5° | 324.9 | 352.2 | 425.6 | 488.5 | 519.9 |
| 65°   | 287.2 | 318.6 | 396.2 | 459.1 | 488.5 |
| 67.5° | 247.4 | 287.2 | 362.7 | 423.5 | 452.8 |
| 70°   | 207.5 | 253.7 | 329.1 | 385.7 | 413.0 |
| 72.5° | 171.9 | 220.1 | 291.4 | 339.6 | 339.6 |
| 75°   | 136.3 | 184.5 | 249.5 | 253.7 | 247.4 |
| 77.5° | 104.8 | 150.9 | 195.0 | 178.2 | 182.4 |
| 80°   | 77.6  | 115.3 | 123.7 | 130.0 | 134.2 |
| 82.5° | 52.4  | 77.6  | 79.7  | 83.9  | 83.9  |
| 85°   | 33.5  | 39.8  | 41.9  | 39.8  | 37.7  |
| 87.5° | 14.7  | 16.8  | 12.6  | 8.4   | 6.3   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)