

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-LD5-60SE-RDP-UNV-L850-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-LD5-60SE-RDP-UNV-L850-CD1-U  
Description:

Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4331.0 lumens  
Efficiency: N/A  
Efficacy: 72.2 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

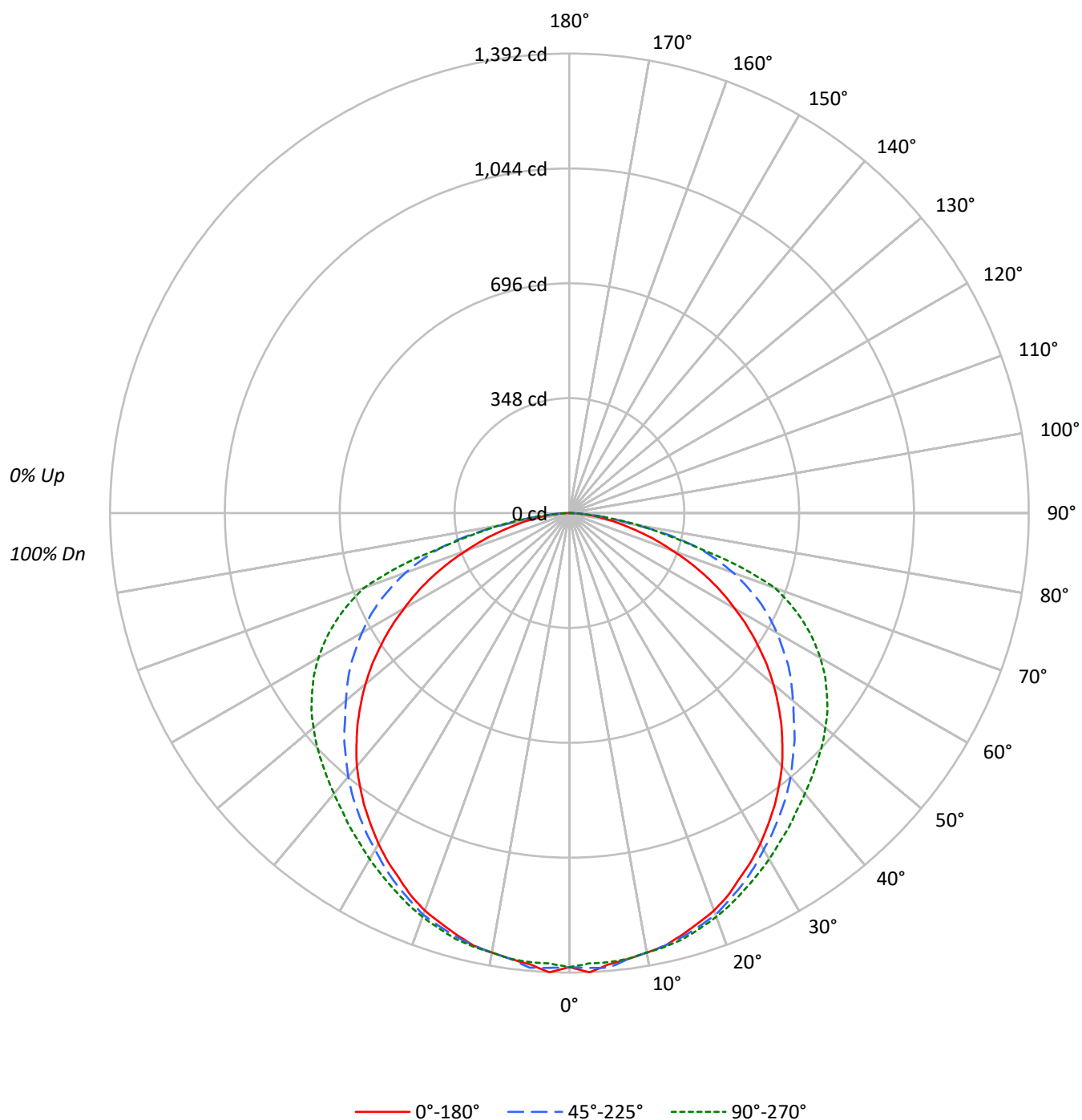
Input Watts (W): 60  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P#

CATALOG NUMBER: 24CZ-LD5-60SE-RDP-UNV-L850-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 24CZ-LD5-60SE-RDP-UNV-L850-CD1-U

**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  |  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 100 |
| 1   | 108 | 103 | 99  | 95  | 105 | 101 | 97  | 93  | 97  | 93  | 90  |  | 93  | 90  | 87  |  | 83  |
| 2   | 98  | 89  | 82  | 76  | 95  | 87  | 81  | 75  | 84  | 78  | 73  |  | 80  | 76  | 71  |  | 68  |
| 3   | 89  | 78  | 69  | 62  | 86  | 76  | 68  | 62  | 73  | 66  | 61  |  | 70  | 64  | 59  |  | 56  |
| 4   | 81  | 68  | 59  | 52  | 79  | 67  | 58  | 52  | 64  | 57  | 51  |  | 62  | 56  | 50  |  | 47  |
| 5   | 74  | 61  | 52  | 45  | 72  | 60  | 51  | 44  | 58  | 50  | 44  |  | 56  | 49  | 43  |  | 41  |
| 6   | 68  | 55  | 45  | 39  | 66  | 54  | 45  | 39  | 52  | 44  | 38  |  | 50  | 43  | 38  |  | 35  |
| 7   | 63  | 49  | 40  | 34  | 62  | 49  | 40  | 34  | 47  | 39  | 34  |  | 45  | 39  | 33  |  | 31  |
| 8   | 59  | 45  | 36  | 30  | 57  | 44  | 36  | 30  | 43  | 35  | 30  |  | 42  | 35  | 30  |  | 28  |
| 9   | 55  | 41  | 33  | 27  | 54  | 41  | 33  | 27  | 39  | 32  | 27  |  | 38  | 32  | 27  |  | 25  |
| 10  | 51  | 38  | 30  | 24  | 50  | 37  | 30  | 24  | 36  | 29  | 24  |  | 35  | 29  | 24  |  | 22  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1851 | 1851 | 1851 |
| 5°  | 1849 | 1858 | 1836 |
| 10° | 1839 | 1830 | 1831 |
| 15° | 1829 | 1825 | 1835 |
| 20° | 1818 | 1819 | 1830 |
| 25° | 1792 | 1798 | 1825 |
| 30° | 1772 | 1775 | 1828 |
| 35° | 1748 | 1763 | 1842 |
| 40° | 1724 | 1753 | 1871 |
| 45° | 1686 | 1744 | 1926 |
| 50° | 1641 | 1742 | 2000 |
| 55° | 1577 | 1768 | 2084 |
| 60° | 1492 | 1791 | 2174 |
| 65° | 1392 | 1817 | 2253 |
| 70° | 1226 | 1813 | 2292 |
| 75° | 1039 | 1737 | 1739 |
| 80° | 844  | 1182 | 1300 |
| 85° | 646  | 647  | 594  |



TEST NUMBER: P#

CATALOG NUMBER: 24CZ-LD5-60SE-RDP-UNV-L850-CD1-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 130.6  | 3.0       |
| 10°-20°   | 375.1  | 8.7       |
| 20°-30°   | 571.6  | 13.2      |
| 30°-40°   | 699.4  | 16.1      |
| 40°-50°   | 752.5  | 17.4      |
| 50°-60°   | 729.0  | 16.8      |
| 60°-70°   | 617.5  | 14.3      |
| 70°-80°   | 373.3  | 8.6       |
| 80°-90°   | 82.0   | 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°    | 1077.3 | 24.9      |
| 0°-40°    | 1776.7 | 41.0      |
| 0°-60°    | 3258.2 | 75.2      |
| 0°-90°    | 4331.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4331.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1376 | 1376  | 1376 | 1376  | 1376 |      |
| 5°  | 1372 | 1372  | 1382 | 1376  | 1366 | 130  |
| 15° | 1322 | 1325  | 1329 | 1332  | 1335 | 373  |
| 25° | 1221 | 1228  | 1241 | 1251  | 1258 | 564  |
| 35° | 1083 | 1090  | 1113 | 1144  | 1160 | 677  |
| 45° | 908  | 925   | 965  | 1026  | 1063 | 700  |
| 55° | 696  | 726   | 811  | 905   | 952  | 622  |
| 65° | 461  | 511   | 636  | 737   | 784  | 454  |
| 75° | 219  | 296   | 400  | 407   | 397  | 235  |
| 85° | 54   | 64    | 67   | 64    | 60   | 61   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P#

CATALOG NUMBER: 24CZ-LD5-60SE-RDP-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1375.6 | 1375.6 | 1375.6 | 1375.6 | 1375.6 |
| 2.5°  | 1392.5 | 1389.1 | 1379.0 | 1372.3 | 1365.6 |
| 5°    | 1372.3 | 1372.3 | 1382.4 | 1375.6 | 1365.6 |
| 7.5°  | 1362.2 | 1362.2 | 1362.2 | 1379.0 | 1362.2 |
| 10°   | 1352.1 | 1355.5 | 1352.1 | 1365.6 | 1352.1 |
| 12.5° | 1342.0 | 1342.0 | 1342.0 | 1345.4 | 1345.4 |
| 15°   | 1321.8 | 1325.2 | 1328.6 | 1331.9 | 1335.3 |
| 17.5° | 1301.6 | 1305.0 | 1311.7 | 1315.1 | 1318.5 |
| 20°   | 1281.5 | 1284.8 | 1294.9 | 1294.9 | 1301.6 |
| 22.5° | 1254.6 | 1254.6 | 1268.0 | 1271.4 | 1281.5 |
| 25°   | 1220.9 | 1227.7 | 1241.1 | 1251.2 | 1257.9 |
| 27.5° | 1190.7 | 1197.4 | 1210.8 | 1224.3 | 1234.4 |
| 30°   | 1157.0 | 1163.7 | 1177.2 | 1197.4 | 1210.8 |
| 32.5° | 1120.0 | 1126.7 | 1146.9 | 1170.5 | 1183.9 |
| 35°   | 1083.0 | 1089.7 | 1113.3 | 1143.6 | 1160.4 |
| 37.5° | 1042.7 | 1052.8 | 1079.7 | 1113.3 | 1133.5 |
| 40°   | 1002.3 | 1012.4 | 1042.7 | 1079.7 | 1109.9 |
| 42.5° | 955.2  | 968.7  | 1002.3 | 1052.8 | 1086.4 |
| 45°   | 908.1  | 924.9  | 965.3  | 1025.8 | 1062.8 |
| 47.5° | 857.7  | 874.5  | 921.6  | 998.9  | 1039.3 |
| 50°   | 807.2  | 827.4  | 884.6  | 968.7  | 1012.4 |
| 52.5° | 753.4  | 773.6  | 847.6  | 938.4  | 985.5  |
| 55°   | 696.2  | 726.5  | 810.6  | 904.8  | 951.8  |
| 57.5° | 639.1  | 672.7  | 766.9  | 867.8  | 918.2  |
| 60°   | 578.5  | 618.9  | 726.5  | 827.4  | 877.9  |
| 62.5° | 521.3  | 565.1  | 682.8  | 783.7  | 834.1  |
| 65°   | 460.8  | 511.2  | 635.7  | 736.6  | 783.7  |
| 67.5° | 396.9  | 460.8  | 581.9  | 679.4  | 726.5  |
| 70°   | 333.0  | 407.0  | 528.1  | 618.9  | 662.6  |
| 72.5° | 275.8  | 353.2  | 467.5  | 544.9  | 544.9  |
| 75°   | 218.6  | 296.0  | 400.2  | 407.0  | 396.9  |
| 77.5° | 168.2  | 242.2  | 312.8  | 285.9  | 292.6  |
| 80°   | 124.4  | 185.0  | 198.4  | 208.5  | 215.3  |
| 82.5° | 84.1   | 124.4  | 127.8  | 134.5  | 134.5  |
| 85°   | 53.8   | 63.9   | 67.3   | 63.9   | 60.5   |
| 87.5° | 23.5   | 26.9   | 20.2   | 13.5   | 10.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)