

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: **4SNLED-LD5-60HL-SLN-UNV-L935-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 (P27402)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-60HL-SLN-UNV-L935-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
SQUARE NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

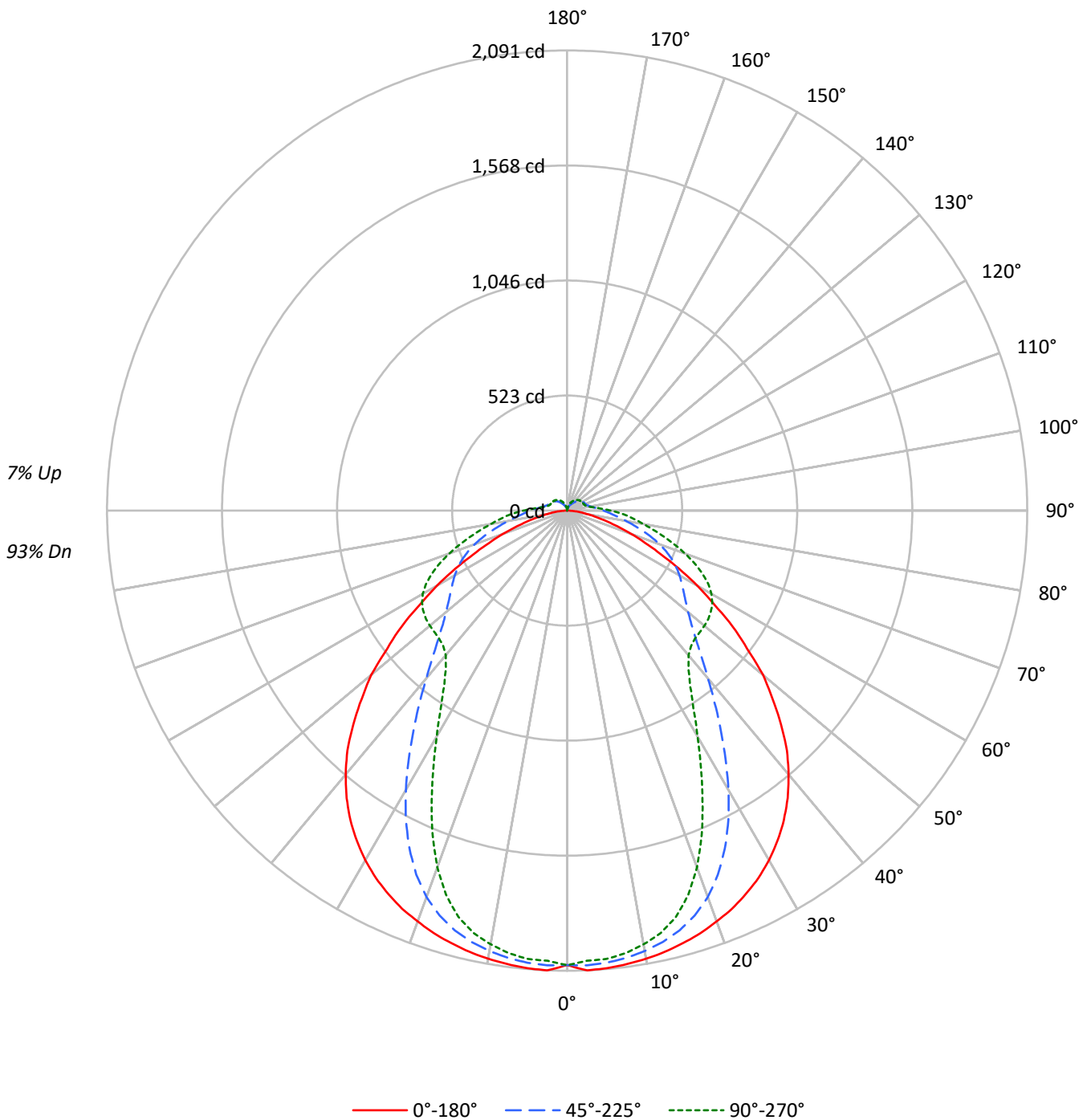
Lumens per Lamp: N/A
Luminaire Lumens: 5194.1 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 0.96 / 1.11
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 43
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: 4SNLED-LD5-60HL-SLN-UNV-L935-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-60HL-SLN-UNV-L935-CD1-U

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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 101 | 101 | 101 | 95 | 95 | 95 | 93 |
| 1 | 107 | 102 | 97 | 93 | 103 | 99 | 94 | 91 | 93 | 90 | 87 | 88 | 85 | 83 | 83 | 81 | 79 | 76 |
| 2 | 97 | 89 | 82 | 76 | 94 | 86 | 80 | 75 | 81 | 76 | 72 | 77 | 73 | 69 | 73 | 70 | 66 | 64 |
| 3 | 89 | 78 | 70 | 64 | 86 | 76 | 69 | 63 | 72 | 66 | 61 | 68 | 63 | 59 | 65 | 61 | 57 | 54 |
| 4 | 82 | 70 | 61 | 55 | 79 | 68 | 60 | 54 | 65 | 58 | 52 | 61 | 55 | 51 | 58 | 53 | 49 | 47 |
| 5 | 75 | 63 | 54 | 47 | 73 | 61 | 53 | 47 | 58 | 51 | 46 | 55 | 49 | 44 | 53 | 48 | 43 | 41 |
| 6 | 70 | 57 | 48 | 42 | 67 | 55 | 47 | 41 | 53 | 46 | 40 | 51 | 44 | 39 | 48 | 43 | 39 | 36 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 42 | 37 | 48 | 41 | 36 | 46 | 40 | 35 | 44 | 39 | 35 | 32 |
| 8 | 61 | 47 | 39 | 33 | 59 | 46 | 39 | 33 | 44 | 37 | 32 | 43 | 36 | 32 | 41 | 35 | 31 | 29 |
| 9 | 57 | 44 | 36 | 30 | 55 | 43 | 35 | 30 | 41 | 34 | 29 | 40 | 33 | 29 | 38 | 33 | 28 | 27 |
| 10 | 53 | 40 | 33 | 28 | 52 | 40 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 35 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 16690 | 16690 | 16690 |
| 5° | 16883 | 16321 | 16066 |
| 10° | 16876 | 15870 | 15405 |
| 15° | 16882 | 15339 | 14526 |
| 20° | 16890 | 14548 | 13046 |
| 25° | 16896 | 13330 | 11048 |
| 30° | 16816 | 11730 | 9086 |
| 35° | 16577 | 9980 | 7615 |
| 40° | 16091 | 8452 | 6884 |
| 45° | 15239 | 7346 | 6832 |
| 50° | 14078 | 6715 | 7071 |
| 55° | 12396 | 6455 | 7319 |
| 60° | 10460 | 6362 | 7420 |
| 65° | 8412 | 6222 | 7189 |
| 70° | 6758 | 5900 | 6630 |
| 75° | 5095 | 5339 | 5883 |
| 80° | 3759 | 4796 | 5234 |
| 85° | 2514 | 4523 | 4814 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-60HL-SLN-UNV-L935-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 195.4 | 3.8 |
| 10°-20° | 552.3 | 10.6 |
| 20°-30° | 772.0 | 14.9 |
| 30°-40° | 800.8 | 15.4 |
| 40°-50° | 739.8 | 14.2 |
| 50°-60° | 660.5 | 12.7 |
| 60°-70° | 535.3 | 10.3 |
| 70°-80° | 356.0 | 6.9 |
| 80°-90° | 203.9 | 3.9 |
| 90°-100° | 112.8 | 2.2 |
| 100°-110° | 76.4 | 1.5 |
| 110°-120° | 63.6 | 1.2 |
| 120°-130° | 51.7 | 1.0 |
| 130°-140° | 37.3 | 0.7 |
| 140°-150° | 22.5 | 0.4 |
| 150°-160° | 10.8 | 0.2 |
| 160°-170° | 2.8 | 0.1 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 1519.7 | 29.3 |
| 0°-40° | 2320.6 | 44.7 |
| 0°-60° | 3720.9 | 71.6 |
| 0°-90° | 4816.2 | 92.7 |
| 90°-120° | 252.8 | 4.9 |
| 90°-150° | 364.3 | 7.0 |
| 90°-180° | 378.0 | 7.3 |
| 0°-180° | 5194.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2065 | 2065 | 2065 | 2065 | 2065 | |
| 5° | 2087 | 2052 | 2063 | 2048 | 2046 | 199 |
| 15° | 2035 | 1992 | 1975 | 1930 | 1911 | 575 |
| 25° | 1923 | 1837 | 1696 | 1518 | 1456 | 886 |
| 35° | 1717 | 1529 | 1215 | 1021 | 975 | 1071 |
| 45° | 1375 | 1090 | 828 | 798 | 822 | 1057 |
| 55° | 919 | 695 | 646 | 751 | 798 | 817 |
| 65° | 469 | 420 | 526 | 644 | 679 | 475 |
| 75° | 182 | 228 | 354 | 434 | 452 | 200 |
| 85° | 37 | 106 | 209 | 268 | 275 | 42 |
| 90° | 2 | 74 | 165 | 199 | 198 | 3 |
| 95° | 2 | 63 | 131 | 140 | 136 | 1 |
| 105° | 1 | 55 | 94 | 92 | 87 | 1 |
| 115° | 1 | 49 | 84 | 83 | 80 | 1 |
| 125° | 1 | 42 | 74 | 77 | 75 | 1 |
| 135° | 2 | 31 | 58 | 68 | 68 | 1 |
| 145° | 2 | 20 | 40 | 53 | 56 | 1 |
| 155° | 2 | 13 | 25 | 33 | 40 | 1 |
| 165° | 2 | 7 | 13 | 16 | 22 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-60HL-SLN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2065.3 | 2065.3 | 2065.3 | 2065.3 | 2065.3 |
| 2.5° | 2091.4 | 2057.3 | 2068.0 | 2059.1 | 2047.4 |
| 5° | 2086.9 | 2051.9 | 2062.6 | 2048.3 | 2045.6 |
| 7.5° | 2078.8 | 2043.8 | 2050.1 | 2033.0 | 2028.5 |
| 10° | 2068.0 | 2031.2 | 2032.1 | 2007.9 | 2001.6 |
| 12.5° | 2053.7 | 2013.3 | 2007.9 | 1974.7 | 1965.7 |
| 15° | 2034.8 | 1991.7 | 1974.7 | 1929.8 | 1911.0 |
| 17.5° | 2014.2 | 1963.9 | 1928.9 | 1859.8 | 1830.2 |
| 20° | 1986.4 | 1929.8 | 1868.8 | 1763.8 | 1724.3 |
| 22.5° | 1958.5 | 1888.5 | 1790.7 | 1650.7 | 1597.7 |
| 25° | 1922.6 | 1837.4 | 1695.5 | 1517.8 | 1455.9 |
| 27.5° | 1882.2 | 1777.2 | 1586.0 | 1381.4 | 1315.0 |
| 30° | 1834.7 | 1704.5 | 1465.8 | 1247.6 | 1184.8 |
| 32.5° | 1779.0 | 1622.8 | 1339.2 | 1127.4 | 1069.0 |
| 35° | 1717.1 | 1528.6 | 1215.3 | 1020.6 | 974.8 |
| 37.5° | 1646.2 | 1425.4 | 1100.4 | 934.4 | 904.8 |
| 40° | 1565.4 | 1313.2 | 994.5 | 868.0 | 858.1 |
| 42.5° | 1478.3 | 1203.7 | 903.9 | 824.9 | 833.9 |
| 45° | 1375.1 | 1089.7 | 827.6 | 798.0 | 822.2 |
| 47.5° | 1266.5 | 978.4 | 765.6 | 782.7 | 817.7 |
| 50° | 1161.5 | 875.1 | 717.2 | 772.8 | 814.1 |
| 52.5° | 1031.3 | 782.7 | 678.6 | 763.8 | 808.7 |
| 55° | 919.1 | 694.7 | 646.3 | 751.3 | 798.0 |
| 57.5° | 789.9 | 615.7 | 617.5 | 735.1 | 781.8 |
| 60° | 682.2 | 543.9 | 589.7 | 712.7 | 757.6 |
| 62.5° | 572.7 | 479.3 | 559.2 | 683.1 | 723.5 |
| 65° | 469.4 | 420.1 | 526.0 | 644.5 | 678.6 |
| 67.5° | 383.3 | 366.2 | 488.3 | 597.8 | 626.5 |
| 70° | 310.6 | 316.8 | 447.0 | 545.7 | 570.0 |
| 72.5° | 238.8 | 271.1 | 402.1 | 490.1 | 510.7 |
| 75° | 182.2 | 228.0 | 354.5 | 434.4 | 452.4 |
| 77.5° | 134.6 | 190.3 | 311.5 | 384.2 | 399.4 |
| 80° | 95.1 | 157.1 | 271.1 | 340.2 | 351.9 |
| 82.5° | 63.7 | 129.3 | 237.9 | 300.7 | 311.5 |
| 85° | 36.8 | 105.9 | 209.1 | 267.5 | 274.7 |
| 87.5° | 15.3 | 88.0 | 185.8 | 233.4 | 237.0 |
| 90° | 1.8 | 74.5 | 165.2 | 199.3 | 197.5 |
| 92.5° | 1.8 | 67.3 | 147.2 | 167.0 | 162.5 |
| 95° | 1.8 | 62.8 | 131.0 | 140.0 | 135.5 |
| 97.5° | 1.8 | 60.1 | 116.7 | 120.3 | 115.8 |
| 100° | 0.9 | 58.3 | 106.8 | 106.8 | 102.3 |
| 102.5° | 0.9 | 56.5 | 99.6 | 96.9 | 93.3 |
| 105° | 0.9 | 54.8 | 94.2 | 91.6 | 87.1 |
| 107.5° | 0.9 | 53.9 | 90.7 | 88.0 | 83.5 |
| 110° | 0.9 | 52.1 | 88.0 | 85.3 | 81.7 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-60HL-SLN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|------|-------|------|
| 112.5° | 0.9 | 51.2 | 86.2 | 84.4 | 79.9 |
| 115° | 0.9 | 49.4 | 83.5 | 82.6 | 79.9 |
| 117.5° | 0.9 | 47.6 | 81.7 | 81.7 | 79.0 |
| 120° | 0.9 | 45.8 | 79.0 | 80.8 | 78.1 |
| 122.5° | 0.9 | 44.0 | 76.3 | 79.0 | 76.3 |
| 125° | 0.9 | 42.2 | 73.6 | 77.2 | 75.4 |
| 127.5° | 1.8 | 39.5 | 70.0 | 75.4 | 73.6 |
| 130° | 0.9 | 36.8 | 66.4 | 73.6 | 72.7 |
| 132.5° | 1.8 | 34.1 | 62.8 | 70.9 | 70.9 |
| 135° | 1.8 | 31.4 | 58.3 | 68.2 | 68.2 |
| 137.5° | 1.8 | 27.8 | 53.9 | 64.6 | 65.5 |
| 140° | 1.8 | 25.1 | 49.4 | 61.0 | 62.8 |
| 142.5° | 1.8 | 22.4 | 44.9 | 57.4 | 60.1 |
| 145° | 1.8 | 19.7 | 40.4 | 53.0 | 56.5 |
| 147.5° | 1.8 | 18.0 | 35.9 | 47.6 | 53.0 |
| 150° | 1.8 | 15.3 | 32.3 | 43.1 | 48.5 |
| 152.5° | 1.8 | 13.5 | 28.7 | 38.6 | 44.9 |
| 155° | 1.8 | 12.6 | 25.1 | 33.2 | 40.4 |
| 157.5° | 1.8 | 10.8 | 21.5 | 28.7 | 35.9 |
| 160° | 1.8 | 9.0 | 18.0 | 25.1 | 30.5 |
| 162.5° | 1.8 | 8.1 | 15.3 | 20.6 | 26.9 |
| 165° | 1.8 | 7.2 | 12.6 | 16.2 | 21.5 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)