

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-L835-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-L835-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
SQUARE NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

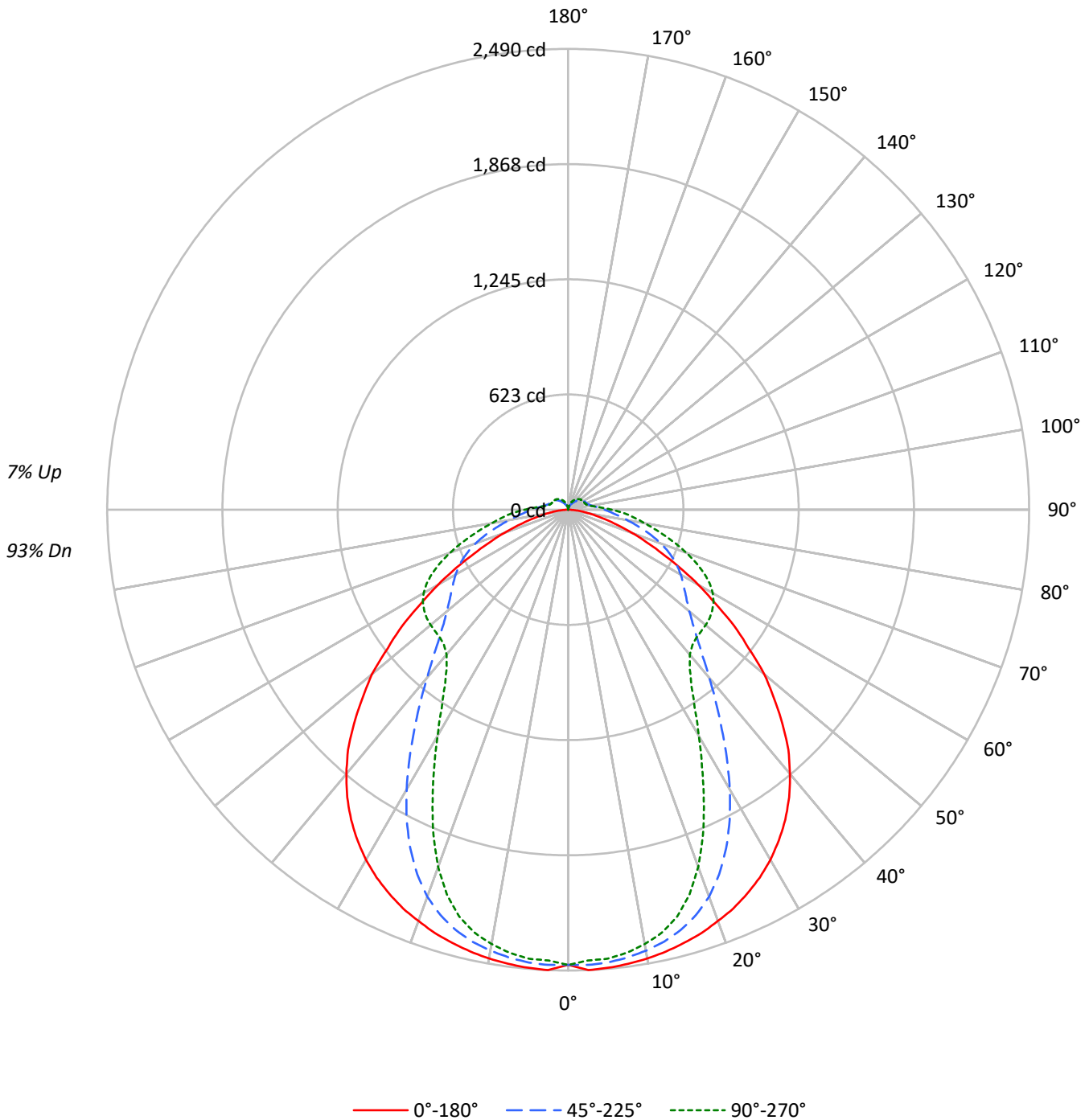
Lumens per Lamp: N/A
Luminaire Lumens: 6184.0 lumens
Efficiency: N/A
Efficacy: 143.8 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 0.96 / 1.11
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-60HL-SLN-UNV-L835-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° | 19871 | 19871 | 19871 |
| 5° | 20101 | 19432 | 19128 |
| 10° | 20093 | 18896 | 18341 |
| 15° | 20100 | 18263 | 17295 |
| 20° | 20109 | 17321 | 15532 |
| 25° | 20117 | 15872 | 13153 |
| 30° | 20022 | 13965 | 10818 |
| 35° | 19736 | 11883 | 9066 |
| 40° | 19159 | 10063 | 8195 |
| 45° | 18143 | 8746 | 8134 |
| 50° | 16761 | 7995 | 8419 |
| 55° | 14759 | 7684 | 8713 |
| 60° | 12453 | 7575 | 8834 |
| 65° | 10016 | 7407 | 8559 |
| 70° | 8047 | 7025 | 7893 |
| 75° | 6065 | 6357 | 7004 |
| 80° | 4479 | 5709 | 6230 |
| 85° | 2992 | 5386 | 5731 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-60HL-SLN-UNV-L835-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 232.6 | 3.8 |
| 10°-20° | 657.6 | 10.6 |
| 20°-30° | 919.2 | 14.9 |
| 30°-40° | 953.5 | 15.4 |
| 40°-50° | 880.8 | 14.2 |
| 50°-60° | 786.4 | 12.7 |
| 60°-70° | 637.3 | 10.3 |
| 70°-80° | 423.9 | 6.9 |
| 80°-90° | 242.7 | 3.9 |
| 90°-100° | 134.3 | 2.2 |
| 100°-110° | 90.9 | 1.5 |
| 110°-120° | 75.7 | 1.2 |
| 120°-130° | 61.6 | 1.0 |
| 130°-140° | 44.4 | 0.7 |
| 140°-150° | 26.8 | 0.4 |
| 150°-160° | 12.9 | 0.2 |
| 160°-170° | 3.3 | 0.1 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 1809.4 | 29.3 |
| 0°-40° | 2762.9 | 44.7 |
| 0°-60° | 4430.1 | 71.6 |
| 0°-90° | 5734.1 | 92.7 |
| 90°-120° | 301.0 | 4.9 |
| 90°-150° | 433.7 | 7.0 |
| 90°-180° | 450.0 | 7.3 |
| 0°-180° | 6184.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2459 | 2459 | 2459 | 2459 | 2459 | |
| 5° | 2485 | 2443 | 2456 | 2439 | 2436 | 236 |
| 15° | 2423 | 2371 | 2351 | 2298 | 2275 | 685 |
| 25° | 2289 | 2188 | 2019 | 1807 | 1733 | 1055 |
| 35° | 2044 | 1820 | 1447 | 1215 | 1161 | 1276 |
| 45° | 1637 | 1297 | 985 | 950 | 979 | 1259 |
| 55° | 1094 | 827 | 769 | 894 | 950 | 973 |
| 65° | 559 | 500 | 626 | 767 | 808 | 565 |
| 75° | 217 | 271 | 422 | 517 | 539 | 238 |
| 85° | 44 | 126 | 249 | 318 | 327 | 50 |
| 90° | 2 | 89 | 197 | 237 | 235 | 3 |
| 95° | 2 | 75 | 156 | 167 | 161 | 2 |
| 105° | 1 | 65 | 112 | 109 | 104 | 1 |
| 115° | 1 | 59 | 99 | 98 | 95 | 1 |
| 125° | 1 | 50 | 88 | 92 | 90 | 1 |
| 135° | 2 | 37 | 70 | 81 | 81 | 2 |
| 145° | 2 | 24 | 48 | 63 | 67 | 1 |
| 155° | 2 | 15 | 30 | 40 | 48 | 1 |
| 165° | 2 | 8 | 15 | 19 | 26 | 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-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2459.0 | 2459.0 | 2459.0 | 2459.0 | 2459.0 |
| 2.5° | 2490.0 | 2449.4 | 2462.2 | 2451.5 | 2437.6 |
| 5° | 2484.7 | 2443.0 | 2455.8 | 2438.7 | 2435.5 |
| 7.5° | 2475.0 | 2433.4 | 2440.8 | 2420.5 | 2415.2 |
| 10° | 2462.2 | 2418.4 | 2419.5 | 2390.6 | 2383.1 |
| 12.5° | 2445.1 | 2397.0 | 2390.6 | 2351.1 | 2340.4 |
| 15° | 2422.7 | 2371.4 | 2351.1 | 2297.6 | 2275.2 |
| 17.5° | 2398.1 | 2338.2 | 2296.6 | 2214.3 | 2179.0 |
| 20° | 2365.0 | 2297.6 | 2225.0 | 2099.9 | 2052.9 |
| 22.5° | 2331.8 | 2248.5 | 2132.0 | 1965.3 | 1902.2 |
| 25° | 2289.1 | 2187.6 | 2018.7 | 1807.1 | 1733.4 |
| 27.5° | 2241.0 | 2116.0 | 1888.3 | 1644.7 | 1565.6 |
| 30° | 2184.4 | 2029.4 | 1745.1 | 1485.4 | 1410.6 |
| 32.5° | 2118.1 | 1932.2 | 1594.5 | 1342.2 | 1272.8 |
| 35° | 2044.4 | 1819.9 | 1447.0 | 1215.1 | 1160.6 |
| 37.5° | 1959.9 | 1697.0 | 1310.2 | 1112.5 | 1077.2 |
| 40° | 1863.8 | 1563.5 | 1184.1 | 1033.4 | 1021.6 |
| 42.5° | 1760.1 | 1433.1 | 1076.1 | 982.1 | 992.8 |
| 45° | 1637.2 | 1297.4 | 985.3 | 950.0 | 978.9 |
| 47.5° | 1507.9 | 1164.8 | 911.6 | 931.9 | 973.6 |
| 50° | 1382.9 | 1042.0 | 853.9 | 920.1 | 969.3 |
| 52.5° | 1227.9 | 931.9 | 807.9 | 909.4 | 962.9 |
| 55° | 1094.3 | 827.1 | 769.4 | 894.5 | 950.0 |
| 57.5° | 940.4 | 733.1 | 735.2 | 875.2 | 930.8 |
| 60° | 812.2 | 647.6 | 702.1 | 848.5 | 902.0 |
| 62.5° | 681.8 | 570.7 | 665.8 | 813.3 | 861.3 |
| 65° | 558.9 | 500.1 | 626.2 | 767.3 | 807.9 |
| 67.5° | 456.3 | 436.0 | 581.4 | 711.7 | 745.9 |
| 70° | 369.8 | 377.2 | 532.2 | 649.8 | 678.6 |
| 72.5° | 284.3 | 322.7 | 478.8 | 583.5 | 608.1 |
| 75° | 216.9 | 271.4 | 422.1 | 517.2 | 538.6 |
| 77.5° | 160.3 | 226.6 | 370.8 | 457.4 | 475.6 |
| 80° | 113.3 | 187.0 | 322.7 | 405.0 | 418.9 |
| 82.5° | 75.9 | 153.9 | 283.2 | 358.0 | 370.8 |
| 85° | 43.8 | 126.1 | 249.0 | 318.5 | 327.0 |
| 87.5° | 18.2 | 104.7 | 221.2 | 277.9 | 282.1 |
| 90° | 2.1 | 88.7 | 196.6 | 237.2 | 235.1 |
| 92.5° | 2.1 | 80.2 | 175.3 | 198.8 | 193.4 |
| 95° | 2.1 | 74.8 | 156.0 | 166.7 | 161.4 |
| 97.5° | 2.1 | 71.6 | 138.9 | 143.2 | 137.9 |
| 100° | 1.1 | 69.5 | 127.2 | 127.2 | 121.8 |
| 102.5° | 1.1 | 67.3 | 118.6 | 115.4 | 111.1 |
| 105° | 1.1 | 65.2 | 112.2 | 109.0 | 103.7 |
| 107.5° | 1.1 | 64.1 | 107.9 | 104.7 | 99.4 |
| 110° | 1.1 | 62.0 | 104.7 | 101.5 | 97.2 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-60HL-SLN-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-------|-------|------|
| 112.5° | 1.1 | 60.9 | 102.6 | 100.5 | 95.1 |
| 115° | 1.1 | 58.8 | 99.4 | 98.3 | 95.1 |
| 117.5° | 1.1 | 56.6 | 97.2 | 97.2 | 94.0 |
| 120° | 1.1 | 54.5 | 94.0 | 96.2 | 93.0 |
| 122.5° | 1.1 | 52.4 | 90.8 | 94.0 | 90.8 |
| 125° | 1.1 | 50.2 | 87.6 | 91.9 | 89.8 |
| 127.5° | 2.1 | 47.0 | 83.4 | 89.8 | 87.6 |
| 130° | 1.1 | 43.8 | 79.1 | 87.6 | 86.6 |
| 132.5° | 2.1 | 40.6 | 74.8 | 84.4 | 84.4 |
| 135° | 2.1 | 37.4 | 69.5 | 81.2 | 81.2 |
| 137.5° | 2.1 | 33.1 | 64.1 | 76.9 | 78.0 |
| 140° | 2.1 | 29.9 | 58.8 | 72.7 | 74.8 |
| 142.5° | 2.1 | 26.7 | 53.4 | 68.4 | 71.6 |
| 145° | 2.1 | 23.5 | 48.1 | 63.1 | 67.3 |
| 147.5° | 2.1 | 21.4 | 42.7 | 56.6 | 63.1 |
| 150° | 2.1 | 18.2 | 38.5 | 51.3 | 57.7 |
| 152.5° | 2.1 | 16.0 | 34.2 | 46.0 | 53.4 |
| 155° | 2.1 | 15.0 | 29.9 | 39.5 | 48.1 |
| 157.5° | 2.1 | 12.8 | 25.6 | 34.2 | 42.7 |
| 160° | 2.1 | 10.7 | 21.4 | 29.9 | 36.3 |
| 162.5° | 2.1 | 9.6 | 18.2 | 24.6 | 32.1 |
| 165° | 2.1 | 8.5 | 15.0 | 19.2 | 25.6 |
| 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)