

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-LD5-90HL-SLN-UNV-L950-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-LD5-90HL-SLN-UNV-L950-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
SQUARE NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

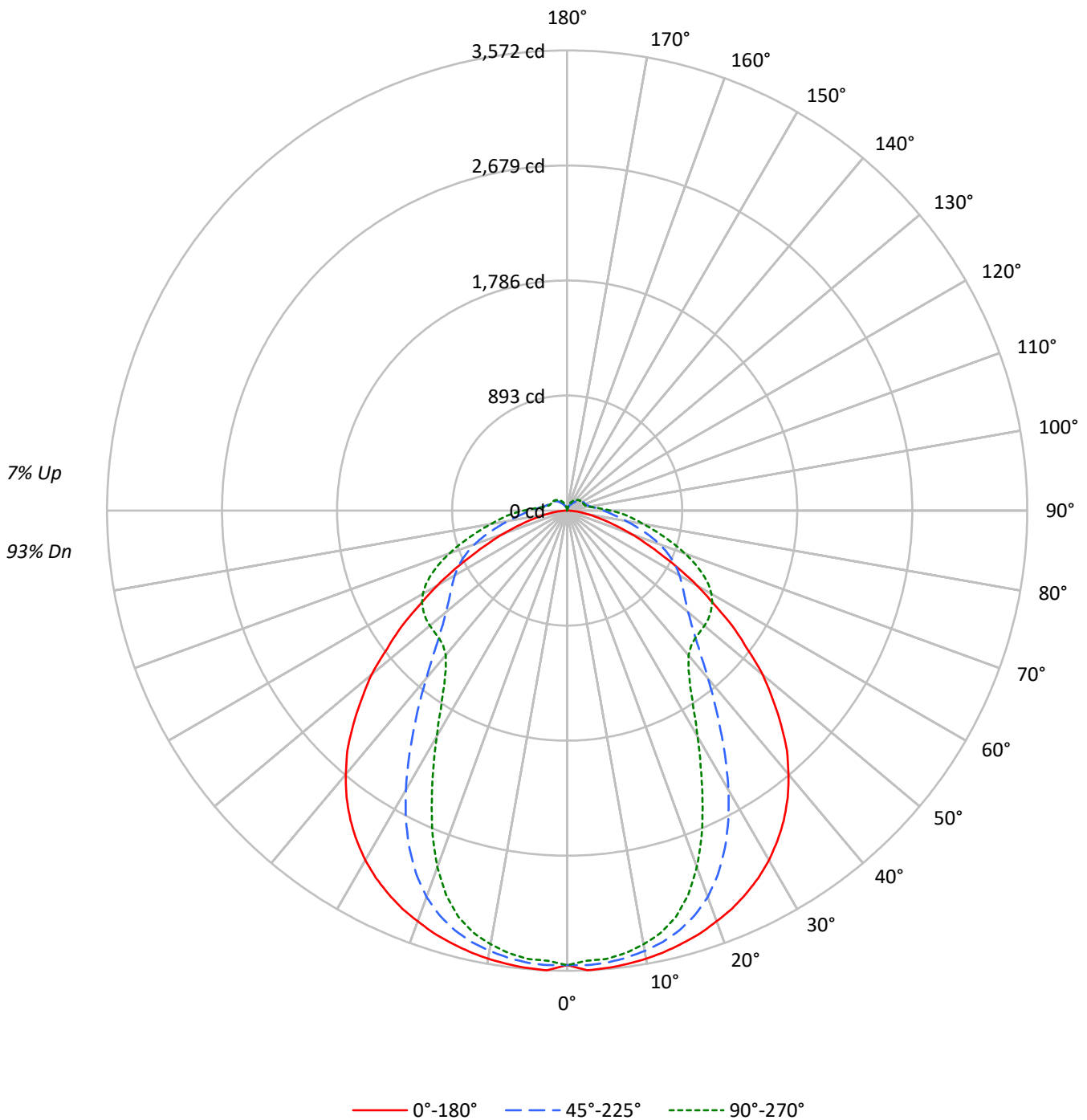
Lumens per Lamp: N/A
Luminaire Lumens: 8871.0 lumens
Efficiency: N/A
Efficacy: 112.3 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 0.96 / 1.11
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 79
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-LD5-90HL-SLN-UNV-L950-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-SLN-UNV-L950-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° | 28506 | 28506 | 28506 |
| 5° | 28834 | 27876 | 27439 |
| 10° | 28824 | 27105 | 26310 |
| 15° | 28833 | 26197 | 24810 |
| 20° | 28847 | 24847 | 22281 |
| 25° | 28858 | 22768 | 18868 |
| 30° | 28721 | 20034 | 15519 |
| 35° | 28312 | 17045 | 13006 |
| 40° | 27483 | 14436 | 11757 |
| 45° | 26027 | 12546 | 11668 |
| 50° | 24043 | 11469 | 12077 |
| 55° | 21172 | 11024 | 12499 |
| 60° | 17863 | 10867 | 12673 |
| 65° | 14369 | 10625 | 12278 |
| 70° | 11541 | 10077 | 11323 |
| 75° | 8702 | 9119 | 10047 |
| 80° | 6424 | 8191 | 8937 |
| 85° | 4297 | 7727 | 8221 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-SLN-UNV-L950-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 333.7 | 3.8 |
| 10°-20° | 943.3 | 10.6 |
| 20°-30° | 1318.6 | 14.9 |
| 30°-40° | 1367.7 | 15.4 |
| 40°-50° | 1263.6 | 14.2 |
| 50°-60° | 1128.1 | 12.7 |
| 60°-70° | 914.3 | 10.3 |
| 70°-80° | 608.1 | 6.9 |
| 80°-90° | 348.2 | 3.9 |
| 90°-100° | 192.7 | 2.2 |
| 100°-110° | 130.5 | 1.5 |
| 110°-120° | 108.6 | 1.2 |
| 120°-130° | 88.3 | 1.0 |
| 130°-140° | 63.7 | 0.7 |
| 140°-150° | 38.4 | 0.4 |
| 150°-160° | 18.5 | 0.2 |
| 160°-170° | 4.8 | 0.1 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 2595.6 | 29.3 |
| 0°-40° | 3963.4 | 44.7 |
| 0°-60° | 6355.0 | 71.6 |
| 0°-90° | 8225.6 | 92.7 |
| 90°-120° | 431.7 | 4.9 |
| 90°-150° | 622.1 | 7.0 |
| 90°-180° | 645.0 | 7.3 |
| 0°-180° | 8871.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 3528 | 3528 | 3528 | 3528 | 3528 | |
| 5° | 3564 | 3504 | 3523 | 3498 | 3494 | 339 |
| 15° | 3475 | 3402 | 3373 | 3296 | 3264 | 982 |
| 25° | 3284 | 3138 | 2896 | 2592 | 2486 | 1513 |
| 35° | 2933 | 2611 | 2076 | 1743 | 1665 | 1830 |
| 45° | 2349 | 1861 | 1413 | 1363 | 1404 | 1806 |
| 55° | 1570 | 1187 | 1104 | 1283 | 1363 | 1396 |
| 65° | 802 | 718 | 898 | 1101 | 1159 | 810 |
| 75° | 311 | 389 | 606 | 742 | 773 | 341 |
| 85° | 63 | 181 | 357 | 457 | 469 | 72 |
| 90° | 3 | 127 | 282 | 340 | 337 | 5 |
| 95° | 3 | 107 | 224 | 239 | 232 | 2 |
| 105° | 2 | 94 | 161 | 156 | 149 | 2 |
| 115° | 2 | 84 | 143 | 141 | 136 | 1 |
| 125° | 2 | 72 | 126 | 132 | 129 | 2 |
| 135° | 3 | 54 | 100 | 116 | 116 | 2 |
| 145° | 3 | 34 | 69 | 90 | 97 | 2 |
| 155° | 3 | 22 | 43 | 57 | 69 | 1 |
| 165° | 3 | 12 | 22 | 28 | 37 | 1 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-SLN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 3527.5 | 3527.5 | 3527.5 | 3527.5 | 3527.5 |
| 2.5° | 3571.9 | 3513.7 | 3532.1 | 3516.7 | 3496.8 |
| 5° | 3564.3 | 3504.5 | 3522.9 | 3498.3 | 3493.7 |
| 7.5° | 3550.5 | 3490.7 | 3501.4 | 3472.3 | 3464.6 |
| 10° | 3532.1 | 3469.2 | 3470.7 | 3429.4 | 3418.6 |
| 12.5° | 3507.5 | 3438.5 | 3429.4 | 3372.6 | 3357.3 |
| 15° | 3475.3 | 3401.8 | 3372.6 | 3296.0 | 3263.8 |
| 17.5° | 3440.1 | 3354.2 | 3294.4 | 3176.4 | 3125.8 |
| 20° | 3392.6 | 3296.0 | 3191.7 | 3012.4 | 2944.9 |
| 22.5° | 3345.0 | 3225.5 | 3058.4 | 2819.2 | 2728.8 |
| 25° | 3283.7 | 3138.1 | 2895.9 | 2592.3 | 2486.5 |
| 27.5° | 3214.7 | 3035.4 | 2708.8 | 2359.3 | 2245.9 |
| 30° | 3133.5 | 2911.2 | 2503.4 | 2130.9 | 2023.6 |
| 32.5° | 3038.4 | 2771.7 | 2287.3 | 1925.5 | 1825.8 |
| 35° | 2932.7 | 2610.7 | 2075.7 | 1743.0 | 1664.9 |
| 37.5° | 2811.5 | 2434.4 | 1879.5 | 1595.9 | 1545.3 |
| 40° | 2673.6 | 2242.8 | 1698.6 | 1482.4 | 1465.6 |
| 42.5° | 2524.9 | 2055.8 | 1543.7 | 1408.8 | 1424.2 |
| 45° | 2348.6 | 1861.1 | 1413.4 | 1362.8 | 1404.2 |
| 47.5° | 2163.1 | 1671.0 | 1307.7 | 1336.8 | 1396.6 |
| 50° | 1983.7 | 1494.7 | 1224.9 | 1319.9 | 1390.4 |
| 52.5° | 1761.4 | 1336.8 | 1159.0 | 1304.6 | 1381.2 |
| 55° | 1569.8 | 1186.6 | 1103.8 | 1283.1 | 1362.8 |
| 57.5° | 1349.1 | 1051.6 | 1054.7 | 1255.5 | 1335.3 |
| 60° | 1165.1 | 929.0 | 1007.2 | 1217.2 | 1293.9 |
| 62.5° | 978.1 | 818.6 | 955.1 | 1166.6 | 1235.6 |
| 65° | 801.8 | 717.5 | 898.3 | 1100.7 | 1159.0 |
| 67.5° | 654.6 | 625.5 | 834.0 | 1021.0 | 1070.0 |
| 70° | 530.4 | 541.2 | 763.4 | 932.1 | 973.5 |
| 72.5° | 407.8 | 463.0 | 686.8 | 837.0 | 872.3 |
| 75° | 311.2 | 389.4 | 605.5 | 742.0 | 772.6 |
| 77.5° | 230.0 | 325.0 | 532.0 | 656.1 | 682.2 |
| 80° | 162.5 | 268.3 | 463.0 | 581.0 | 600.9 |
| 82.5° | 108.8 | 220.8 | 406.2 | 513.6 | 532.0 |
| 85° | 62.9 | 180.9 | 357.2 | 456.8 | 469.1 |
| 87.5° | 26.1 | 150.2 | 317.3 | 398.6 | 404.7 |
| 90° | 3.1 | 127.2 | 282.1 | 340.3 | 337.3 |
| 92.5° | 3.1 | 115.0 | 251.4 | 285.1 | 277.5 |
| 95° | 3.1 | 107.3 | 223.8 | 239.2 | 231.5 |
| 97.5° | 3.1 | 102.7 | 199.3 | 205.4 | 197.8 |
| 100° | 1.5 | 99.6 | 182.4 | 182.4 | 174.8 |
| 102.5° | 1.5 | 96.6 | 170.2 | 165.6 | 159.4 |
| 105° | 1.5 | 93.5 | 161.0 | 156.4 | 148.7 |
| 107.5° | 1.5 | 92.0 | 154.8 | 150.2 | 142.6 |
| 110° | 1.5 | 88.9 | 150.2 | 145.6 | 139.5 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-SLN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-------|-------|-------|
| 112.5° | 1.5 | 87.4 | 147.2 | 144.1 | 136.4 |
| 115° | 1.5 | 84.3 | 142.6 | 141.0 | 136.4 |
| 117.5° | 1.5 | 81.2 | 139.5 | 139.5 | 134.9 |
| 120° | 1.5 | 78.2 | 134.9 | 138.0 | 133.4 |
| 122.5° | 1.5 | 75.1 | 130.3 | 134.9 | 130.3 |
| 125° | 1.5 | 72.1 | 125.7 | 131.8 | 128.8 |
| 127.5° | 3.1 | 67.5 | 119.6 | 128.8 | 125.7 |
| 130° | 1.5 | 62.9 | 113.4 | 125.7 | 124.2 |
| 132.5° | 3.1 | 58.3 | 107.3 | 121.1 | 121.1 |
| 135° | 3.1 | 53.7 | 99.6 | 116.5 | 116.5 |
| 137.5° | 3.1 | 47.5 | 92.0 | 110.4 | 111.9 |
| 140° | 3.1 | 42.9 | 84.3 | 104.2 | 107.3 |
| 142.5° | 3.1 | 38.3 | 76.7 | 98.1 | 102.7 |
| 145° | 3.1 | 33.7 | 69.0 | 90.4 | 96.6 |
| 147.5° | 3.1 | 30.7 | 61.3 | 81.2 | 90.4 |
| 150° | 3.1 | 26.1 | 55.2 | 73.6 | 82.8 |
| 152.5° | 3.1 | 23.0 | 49.1 | 65.9 | 76.7 |
| 155° | 3.1 | 21.5 | 42.9 | 56.7 | 69.0 |
| 157.5° | 3.1 | 18.4 | 36.8 | 49.1 | 61.3 |
| 160° | 3.1 | 15.3 | 30.7 | 42.9 | 52.1 |
| 162.5° | 3.1 | 13.8 | 26.1 | 35.3 | 46.0 |
| 165° | 3.1 | 12.3 | 21.5 | 27.6 | 36.8 |
| 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)