

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-LD5-92HL-SLC-UNV-L830-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 (P27404)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-92HL-SLC-UNV-L830-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR SQUARE LENS
Light Source: -
Ballast/Driver: -

Summary

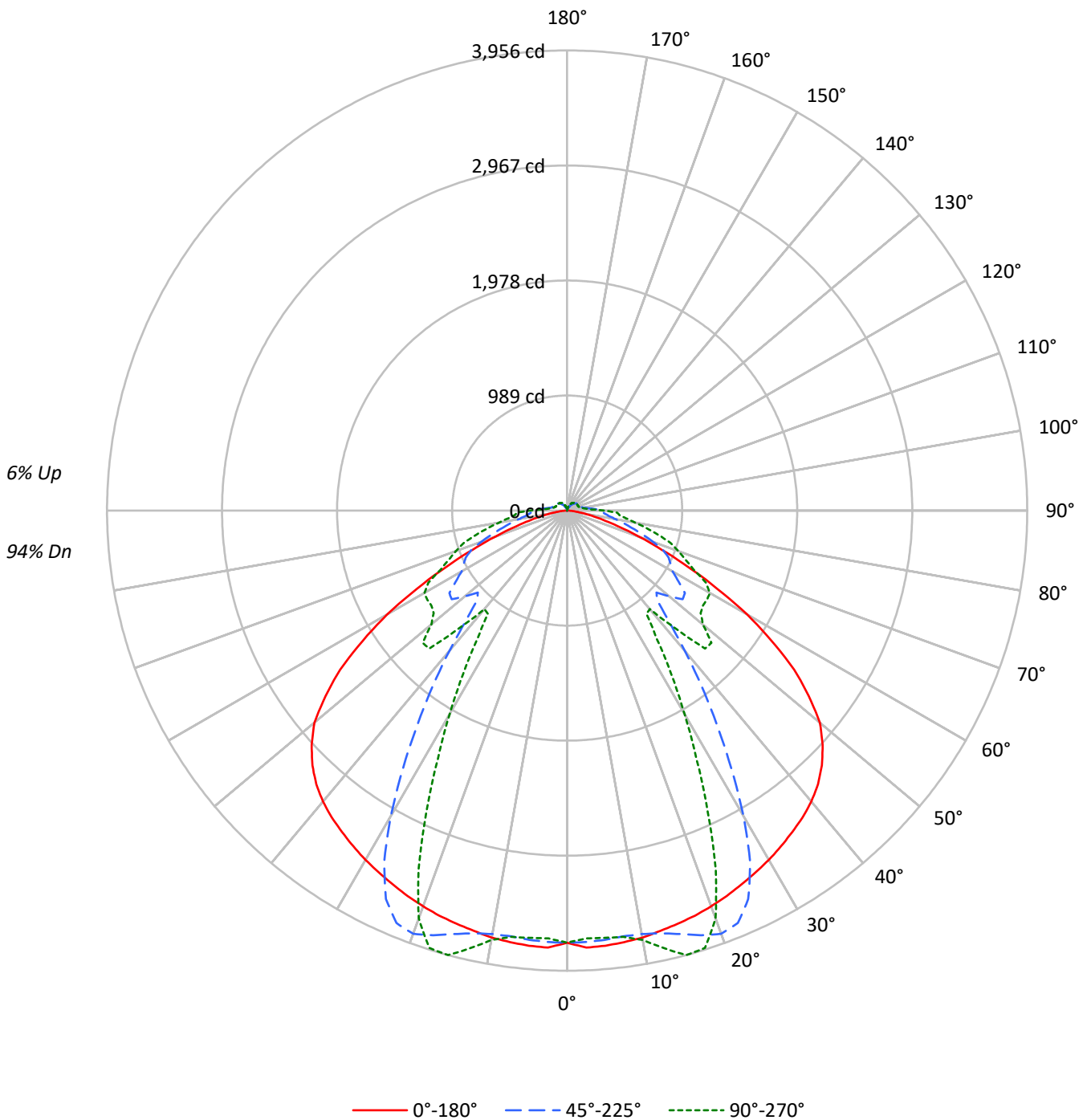
Lumens per Lamp: N/A
Luminaire Lumens: 9541.0 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1 / 1.08
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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-LD5-92HL-SLC-UNV-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-92HL-SLC-UNV-L830-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 | 118 | 118 | 118 | 118 | 114 | 114 | 114 | 114 | 108 | 108 | 108 | 102 | 102 | 102 | 97 | 97 | 97 | 94 |
| 1 | 107 | 102 | 98 | 94 | 104 | 99 | 95 | 92 | 94 | 91 | 88 | 89 | 87 | 84 | 85 | 83 | 81 | 78 |
| 2 | 98 | 90 | 83 | 77 | 95 | 87 | 81 | 76 | 83 | 78 | 73 | 79 | 74 | 71 | 75 | 71 | 68 | 66 |
| 3 | 89 | 79 | 71 | 65 | 87 | 77 | 70 | 64 | 73 | 67 | 62 | 70 | 65 | 60 | 67 | 62 | 59 | 56 |
| 4 | 82 | 71 | 62 | 56 | 80 | 69 | 61 | 55 | 66 | 59 | 53 | 63 | 57 | 52 | 60 | 55 | 51 | 49 |
| 5 | 76 | 63 | 55 | 48 | 74 | 62 | 54 | 48 | 59 | 52 | 47 | 57 | 51 | 46 | 54 | 49 | 45 | 43 |
| 6 | 70 | 58 | 49 | 43 | 68 | 56 | 48 | 42 | 54 | 47 | 41 | 52 | 45 | 41 | 50 | 44 | 40 | 38 |
| 7 | 66 | 52 | 44 | 38 | 64 | 51 | 43 | 38 | 49 | 42 | 37 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 8 | 61 | 48 | 40 | 34 | 59 | 47 | 39 | 34 | 45 | 38 | 33 | 44 | 37 | 33 | 42 | 37 | 32 | 30 |
| 9 | 57 | 44 | 36 | 31 | 56 | 44 | 36 | 31 | 42 | 35 | 30 | 41 | 34 | 30 | 39 | 34 | 29 | 28 |
| 10 | 54 | 41 | 33 | 28 | 52 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 30015 | 30015 | 30015 |
| 5° | 30380 | 29312 | 28952 |
| 10° | 30418 | 28866 | 28851 |
| 15° | 30502 | 29272 | 30071 |
| 20° | 30785 | 30144 | 28226 |
| 25° | 31168 | 28969 | 21734 |
| 30° | 31783 | 24263 | 15459 |
| 35° | 32571 | 18376 | 10468 |
| 40° | 33567 | 13358 | 8864 |
| 45° | 34328 | 9690 | 13935 |
| 50° | 34376 | 10730 | 13225 |
| 55° | 32131 | 12349 | 13060 |
| 60° | 27377 | 11299 | 13881 |
| 65° | 20596 | 11396 | 12697 |
| 70° | 14455 | 10374 | 11819 |
| 75° | 9471 | 8692 | 10605 |
| 80° | 6044 | 7446 | 8829 |
| 85° | 3259 | 7078 | 7925 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-92HL-SLC-UNV-L830-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 353.3 | 3.7 |
| 10°-20° | 1067.1 | 11.2 |
| 20°-30° | 1550.2 | 16.2 |
| 30°-40° | 1481.1 | 15.5 |
| 40°-50° | 1354.8 | 14.2 |
| 50°-60° | 1250.9 | 13.1 |
| 60°-70° | 993.7 | 10.4 |
| 70°-80° | 613.3 | 6.4 |
| 80°-90° | 334.0 | 3.5 |
| 90°-100° | 168.8 | 1.8 |
| 100°-110° | 106.1 | 1.1 |
| 110°-120° | 89.9 | 0.9 |
| 120°-130° | 73.4 | 0.8 |
| 130°-140° | 52.6 | 0.6 |
| 140°-150° | 32.5 | 0.3 |
| 150°-160° | 15.4 | 0.2 |
| 160°-170° | 4.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 2970.6 | 31.1 |
| 0°-40° | 4451.7 | 46.7 |
| 0°-60° | 7057.5 | 74.0 |
| 0°-90° | 8998.4 | 94.3 |
| 90°-120° | 364.7 | 3.8 |
| 90°-150° | 523.2 | 5.5 |
| 90°-180° | 543.0 | 5.7 |
| 0°-180° | 9541.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 3714 | 3714 | 3714 | 3714 | 3714 | |
| 5° | 3755 | 3698 | 3704 | 3685 | 3686 | 357 |
| 15° | 3676 | 3627 | 3768 | 3908 | 3956 | 1040 |
| 25° | 3546 | 3616 | 3685 | 3119 | 2864 | 1639 |
| 35° | 3374 | 3320 | 2238 | 1541 | 1340 | 2116 |
| 45° | 3098 | 2160 | 1092 | 1393 | 1677 | 2381 |
| 55° | 2382 | 1108 | 1236 | 1330 | 1424 | 2098 |
| 65° | 1149 | 718 | 964 | 1171 | 1199 | 1162 |
| 75° | 339 | 383 | 577 | 764 | 816 | 384 |
| 85° | 48 | 163 | 327 | 446 | 452 | 61 |
| 90° | 2 | 122 | 293 | 347 | 321 | 2 |
| 95° | 0 | 113 | 202 | 179 | 169 | 0 |
| 105° | 0 | 102 | 125 | 113 | 112 | 0 |
| 115° | 0 | 84 | 120 | 107 | 102 | 1 |
| 125° | 2 | 67 | 107 | 104 | 99 | 1 |
| 135° | 2 | 48 | 86 | 94 | 90 | 1 |
| 145° | 2 | 30 | 59 | 76 | 81 | 1 |
| 155° | 3 | 18 | 36 | 48 | 58 | 1 |
| 165° | 3 | 10 | 18 | 23 | 31 | 1 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-92HL-SLC-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 3714.2 | 3714.2 | 3714.2 | 3714.2 | 3714.2 |
| 2.5° | 3760.3 | 3706.0 | 3712.6 | 3701.1 | 3681.3 |
| 5° | 3755.3 | 3697.8 | 3704.4 | 3684.6 | 3686.3 |
| 7.5° | 3742.2 | 3683.0 | 3691.2 | 3687.9 | 3696.1 |
| 10° | 3727.4 | 3664.9 | 3696.1 | 3724.1 | 3748.7 |
| 12.5° | 3701.1 | 3645.2 | 3720.8 | 3803.0 | 3854.0 |
| 15° | 3676.4 | 3627.1 | 3768.5 | 3908.2 | 3955.9 |
| 17.5° | 3651.7 | 3620.5 | 3827.7 | 3949.3 | 3942.8 |
| 20° | 3620.5 | 3617.2 | 3872.1 | 3831.0 | 3730.7 |
| 22.5° | 3586.0 | 3618.9 | 3837.5 | 3536.6 | 3339.3 |
| 25° | 3546.5 | 3615.6 | 3684.6 | 3119.0 | 2864.2 |
| 27.5° | 3507.1 | 3600.8 | 3406.8 | 2661.9 | 2410.4 |
| 30° | 3467.6 | 3561.3 | 3031.9 | 2244.3 | 2015.8 |
| 32.5° | 3421.6 | 3475.8 | 2624.1 | 1874.4 | 1663.9 |
| 35° | 3373.9 | 3319.6 | 2237.7 | 1540.6 | 1340.0 |
| 37.5° | 3324.5 | 3094.4 | 1890.8 | 1247.9 | 1119.7 |
| 40° | 3265.4 | 2811.6 | 1571.8 | 1070.4 | 1104.9 |
| 42.5° | 3191.4 | 2492.6 | 1290.7 | 1123.0 | 1363.0 |
| 45° | 3097.6 | 2160.5 | 1091.7 | 1392.6 | 1677.1 |
| 47.5° | 2979.3 | 1841.5 | 1042.4 | 1594.9 | 1683.6 |
| 50° | 2836.2 | 1548.8 | 1146.0 | 1529.1 | 1522.5 |
| 52.5° | 2619.2 | 1305.5 | 1251.2 | 1394.3 | 1446.9 |
| 55° | 2382.4 | 1108.2 | 1236.4 | 1330.1 | 1423.9 |
| 57.5° | 2083.2 | 975.0 | 1134.5 | 1317.0 | 1425.5 |
| 60° | 1785.6 | 886.2 | 1047.3 | 1315.4 | 1417.3 |
| 62.5° | 1456.8 | 805.7 | 1003.0 | 1284.1 | 1344.9 |
| 65° | 1149.3 | 718.5 | 963.5 | 1170.7 | 1198.6 |
| 67.5° | 881.3 | 629.7 | 894.4 | 1044.1 | 1100.0 |
| 70° | 664.3 | 542.6 | 785.9 | 947.1 | 1016.1 |
| 72.5° | 478.5 | 460.4 | 674.1 | 861.6 | 933.9 |
| 75° | 338.7 | 383.1 | 577.1 | 764.5 | 815.5 |
| 77.5° | 233.5 | 312.4 | 494.9 | 657.7 | 698.8 |
| 80° | 152.9 | 249.9 | 420.9 | 565.6 | 593.6 |
| 82.5° | 92.1 | 200.6 | 365.0 | 494.9 | 509.7 |
| 85° | 47.7 | 162.8 | 327.2 | 445.6 | 452.2 |
| 87.5° | 14.8 | 136.5 | 305.8 | 422.6 | 430.8 |
| 90° | 1.6 | 121.7 | 292.7 | 346.9 | 320.6 |
| 92.5° | 0.0 | 115.1 | 253.2 | 236.8 | 212.1 |
| 95° | 0.0 | 113.4 | 202.2 | 179.2 | 169.4 |
| 97.5° | 0.0 | 110.2 | 166.1 | 149.6 | 144.7 |
| 100° | 0.0 | 106.9 | 143.0 | 131.5 | 129.9 |
| 102.5° | 0.0 | 105.2 | 129.9 | 120.0 | 118.4 |
| 105° | 0.0 | 101.9 | 125.0 | 113.4 | 111.8 |
| 107.5° | 0.0 | 97.0 | 121.7 | 110.2 | 106.9 |
| 110° | 0.0 | 92.1 | 121.7 | 108.5 | 103.6 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-92HL-SLC-UNV-L830-CD1-U

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-------|-------|-------|
| 112.5° | 0.0 | 87.1 | 121.7 | 106.9 | 101.9 |
| 115° | 0.0 | 83.9 | 120.0 | 106.9 | 101.9 |
| 117.5° | 1.6 | 80.6 | 118.4 | 106.9 | 101.9 |
| 120° | 0.0 | 77.3 | 115.1 | 106.9 | 100.3 |
| 122.5° | 1.6 | 72.3 | 111.8 | 105.2 | 100.3 |
| 125° | 1.6 | 67.4 | 106.9 | 103.6 | 98.7 |
| 127.5° | 1.6 | 62.5 | 101.9 | 100.3 | 95.4 |
| 130° | 1.6 | 57.5 | 97.0 | 98.7 | 93.7 |
| 132.5° | 1.6 | 52.6 | 90.4 | 95.4 | 92.1 |
| 135° | 1.6 | 47.7 | 85.5 | 93.7 | 90.4 |
| 137.5° | 1.6 | 42.7 | 78.9 | 88.8 | 88.8 |
| 140° | 1.6 | 37.8 | 72.3 | 85.5 | 87.1 |
| 142.5° | 1.6 | 34.5 | 65.8 | 82.2 | 83.9 |
| 145° | 1.6 | 29.6 | 59.2 | 75.6 | 80.6 |
| 147.5° | 1.6 | 26.3 | 52.6 | 69.1 | 75.6 |
| 150° | 1.6 | 23.0 | 46.0 | 62.5 | 69.1 |
| 152.5° | 1.6 | 19.7 | 41.1 | 54.3 | 64.1 |
| 155° | 3.3 | 18.1 | 36.2 | 47.7 | 57.5 |
| 157.5° | 3.3 | 14.8 | 29.6 | 41.1 | 49.3 |
| 160° | 3.3 | 13.2 | 26.3 | 34.5 | 44.4 |
| 162.5° | 3.3 | 11.5 | 21.4 | 29.6 | 37.8 |
| 165° | 3.3 | 9.9 | 18.1 | 23.0 | 31.2 |
| 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)