

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-LD5-78HL-SLW-UNV-L930-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 (P27403)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-78HL-SLW-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
SQUARE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

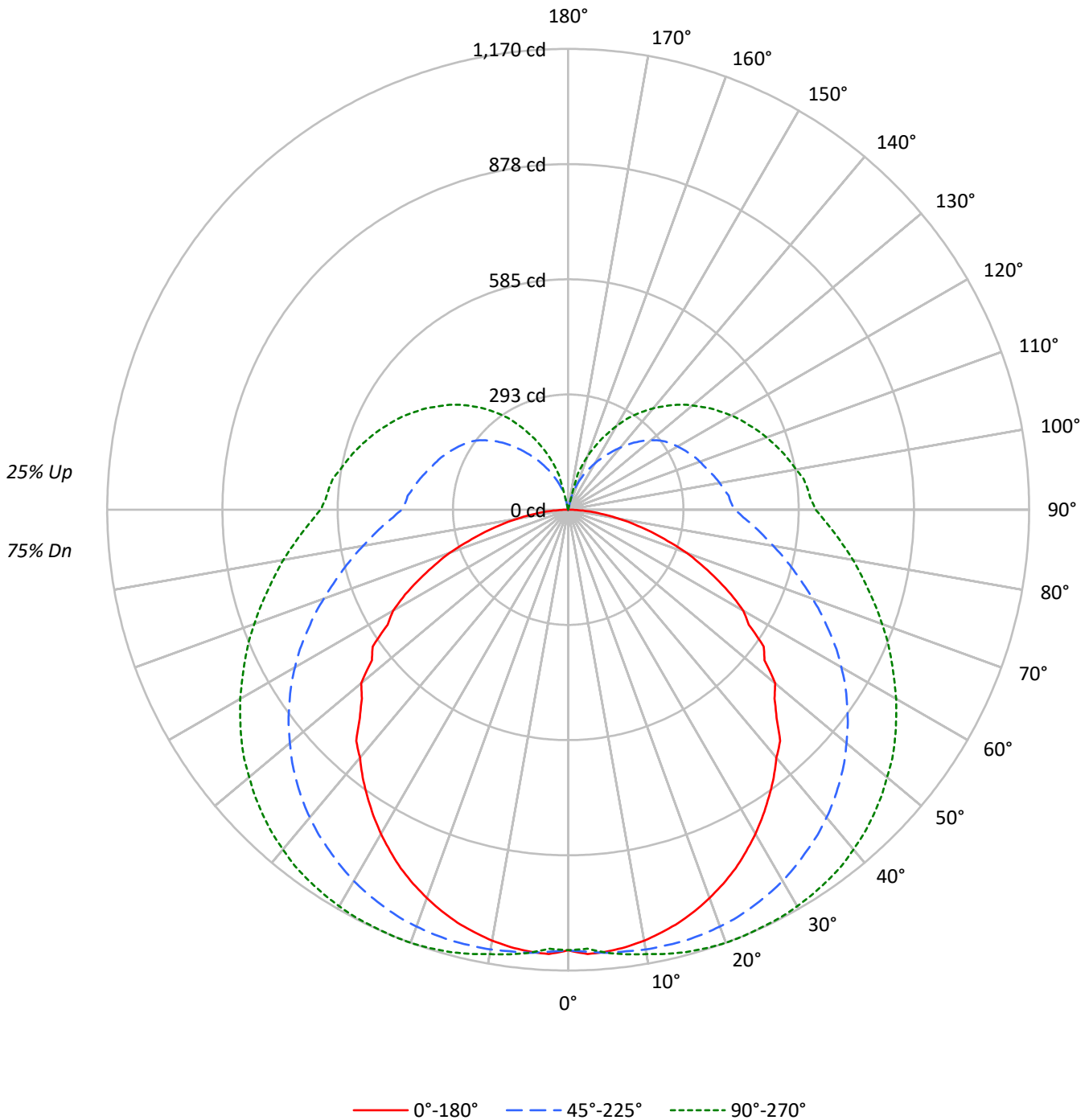
Lumens per Lamp: N/A
Luminaire Lumens: 6442.0 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.56 / 1.59
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

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#
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Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78HL-SLW-UNV-L930-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 | 113 | 113 | 113 | 113 | 107 | 107 | 107 | 107 | 97 | 97 | 97 | | 88 | 88 | 88 | | 79 | 79 | 79 | 75 |
| 1 | 100 | 94 | 89 | 84 | 95 | 89 | 84 | 80 | 80 | 76 | 73 | | 72 | 69 | 66 | | 64 | 62 | 60 | 56 |
| 2 | 90 | 80 | 72 | 66 | 85 | 76 | 69 | 63 | 68 | 63 | 58 | | 61 | 57 | 53 | | 55 | 51 | 48 | 44 |
| 3 | 81 | 69 | 60 | 53 | 76 | 66 | 58 | 51 | 59 | 53 | 47 | | 53 | 48 | 43 | | 47 | 43 | 39 | 36 |
| 4 | 74 | 61 | 51 | 44 | 69 | 58 | 49 | 43 | 52 | 45 | 39 | | 47 | 41 | 36 | | 42 | 37 | 33 | 30 |
| 5 | 67 | 54 | 44 | 37 | 63 | 51 | 43 | 36 | 46 | 39 | 33 | | 42 | 35 | 31 | | 37 | 32 | 28 | 25 |
| 6 | 62 | 48 | 39 | 32 | 58 | 46 | 37 | 31 | 41 | 34 | 29 | | 37 | 31 | 27 | | 34 | 28 | 24 | 22 |
| 7 | 57 | 43 | 34 | 28 | 54 | 41 | 33 | 27 | 37 | 30 | 25 | | 34 | 28 | 23 | | 30 | 25 | 21 | 19 |
| 8 | 53 | 39 | 31 | 25 | 50 | 37 | 29 | 24 | 34 | 27 | 22 | | 31 | 25 | 21 | | 28 | 23 | 19 | 17 |
| 9 | 49 | 36 | 27 | 22 | 47 | 34 | 26 | 21 | 31 | 24 | 20 | | 28 | 23 | 18 | | 26 | 21 | 17 | 15 |
| 10 | 46 | 33 | 25 | 20 | 44 | 31 | 24 | 19 | 29 | 22 | 18 | | 26 | 21 | 16 | | 24 | 19 | 15 | 13 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|-------|-------|
| 0° | 9040 | 9040 | 9040 |
| 5° | 9111 | 8936 | 8869 |
| 10° | 9067 | 8855 | 8819 |
| 15° | 9005 | 8807 | 8838 |
| 20° | 8920 | 8767 | 8853 |
| 25° | 8833 | 8736 | 8868 |
| 30° | 8713 | 8710 | 8916 |
| 35° | 8578 | 8677 | 8975 |
| 40° | 8450 | 8671 | 9035 |
| 45° | 8287 | 8653 | 9107 |
| 50° | 8311 | 8632 | 9178 |
| 55° | 8166 | 8633 | 9288 |
| 60° | 7868 | 8640 | 9414 |
| 65° | 7433 | 8648 | 9589 |
| 70° | 6950 | 8712 | 9860 |
| 75° | 6096 | 8915 | 10257 |
| 80° | 5147 | 9346 | 10920 |
| 85° | 3826 | 10216 | 11886 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78HL-SLW-UNV-L930-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 107.5 | 1.7 |
| 10°-20° | 318.7 | 4.9 |
| 20°-30° | 506.5 | 7.9 |
| 30°-40° | 650.1 | 10.1 |
| 40°-50° | 734.1 | 11.4 |
| 50°-60° | 749.0 | 11.6 |
| 60°-70° | 693.9 | 10.8 |
| 70°-80° | 587.5 | 9.1 |
| 80°-90° | 468.9 | 7.3 |
| 90°-100° | 398.2 | 6.2 |
| 100°-110° | 354.8 | 5.5 |
| 110°-120° | 302.2 | 4.7 |
| 120°-130° | 240.0 | 3.7 |
| 130°-140° | 170.3 | 2.6 |
| 140°-150° | 101.7 | 1.6 |
| 150°-160° | 47.4 | 0.7 |
| 160°-170° | 11.2 | 0.2 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 932.7 | 14.5 |
| 0°-40° | 1582.8 | 24.6 |
| 0°-60° | 3065.9 | 47.6 |
| 0°-90° | 4816.3 | 74.8 |
| 90°-120° | 1055.2 | 16.4 |
| 90°-150° | 1567.1 | 24.3 |
| 90°-180° | 1626.0 | 25.2 |
| 0°-180° | 6442.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 1119 | 1119 | 1119 | 1119 | 1119 | |
| 5° | 1126 | 1117 | 1129 | 1129 | 1129 | 107 |
| 15° | 1085 | 1094 | 1134 | 1155 | 1163 | 306 |
| 25° | 1005 | 1038 | 1111 | 1150 | 1169 | 463 |
| 35° | 889 | 954 | 1057 | 1122 | 1149 | 556 |
| 45° | 748 | 849 | 975 | 1060 | 1096 | 581 |
| 55° | 606 | 707 | 864 | 970 | 1013 | 532 |
| 65° | 415 | 552 | 731 | 857 | 905 | 412 |
| 75° | 218 | 386 | 592 | 737 | 789 | 232 |
| 85° | 56 | 248 | 472 | 625 | 678 | 61 |
| 90° | 3 | 203 | 422 | 575 | 628 | 5 |
| 95° | 0 | 191 | 409 | 559 | 610 | 0 |
| 105° | 0 | 176 | 372 | 513 | 563 | 0 |
| 115° | 0 | 164 | 339 | 462 | 507 | 0 |
| 125° | 0 | 141 | 301 | 407 | 447 | 0 |
| 135° | 0 | 104 | 242 | 344 | 375 | 0 |
| 145° | 0 | 68 | 170 | 257 | 294 | 1 |
| 155° | 2 | 42 | 104 | 157 | 195 | 1 |
| 165° | 2 | 23 | 47 | 65 | 92 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78HL-SLW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 1118.7 | 1118.7 | 1118.7 | 1118.7 | 1118.7 |
| 2.5° | 1129.3 | 1117.2 | 1123.2 | 1121.7 | 1115.6 |
| 5° | 1126.2 | 1117.2 | 1129.3 | 1129.3 | 1129.3 |
| 7.5° | 1120.2 | 1114.1 | 1130.8 | 1136.8 | 1138.4 |
| 10° | 1111.1 | 1111.1 | 1133.8 | 1142.9 | 1145.9 |
| 12.5° | 1099.0 | 1103.5 | 1133.8 | 1147.4 | 1155.0 |
| 15° | 1085.4 | 1094.5 | 1133.8 | 1155.0 | 1162.6 |
| 17.5° | 1068.7 | 1083.9 | 1130.8 | 1156.5 | 1167.1 |
| 20° | 1049.0 | 1071.7 | 1126.2 | 1156.5 | 1170.1 |
| 22.5° | 1027.8 | 1056.6 | 1120.2 | 1153.5 | 1170.1 |
| 25° | 1005.1 | 1038.4 | 1111.1 | 1150.5 | 1168.6 |
| 27.5° | 977.9 | 1020.3 | 1100.5 | 1145.9 | 1167.1 |
| 30° | 950.6 | 999.1 | 1088.4 | 1139.9 | 1162.6 |
| 32.5° | 920.4 | 976.4 | 1073.3 | 1130.8 | 1156.5 |
| 35° | 888.6 | 953.7 | 1056.6 | 1121.7 | 1148.9 |
| 37.5° | 856.8 | 926.4 | 1040.0 | 1109.6 | 1139.9 |
| 40° | 822.0 | 899.2 | 1020.3 | 1094.5 | 1126.2 |
| 42.5° | 796.2 | 870.4 | 999.1 | 1079.3 | 1112.6 |
| 45° | 747.8 | 849.2 | 974.9 | 1059.6 | 1096.0 |
| 47.5° | 710.0 | 808.4 | 950.6 | 1040.0 | 1077.8 |
| 50° | 685.7 | 775.0 | 921.9 | 1017.3 | 1056.6 |
| 52.5° | 628.2 | 752.3 | 894.6 | 994.5 | 1036.9 |
| 55° | 605.5 | 706.9 | 864.4 | 970.3 | 1012.7 |
| 57.5° | 543.4 | 675.1 | 834.1 | 943.1 | 987.0 |
| 60° | 513.2 | 631.2 | 800.8 | 915.8 | 961.2 |
| 62.5° | 466.2 | 593.4 | 767.5 | 885.6 | 932.5 |
| 65° | 414.8 | 552.5 | 731.1 | 856.8 | 905.2 |
| 67.5° | 366.3 | 511.7 | 696.3 | 826.5 | 878.0 |
| 70° | 319.4 | 469.3 | 660.0 | 796.2 | 847.7 |
| 72.5° | 264.9 | 426.9 | 625.2 | 767.5 | 818.9 |
| 75° | 218.0 | 386.0 | 591.9 | 737.2 | 788.7 |
| 77.5° | 172.6 | 346.7 | 560.1 | 710.0 | 761.4 |
| 80° | 130.2 | 308.8 | 528.3 | 681.2 | 734.2 |
| 82.5° | 90.8 | 277.0 | 499.5 | 653.9 | 705.4 |
| 85° | 56.0 | 248.3 | 472.3 | 625.2 | 678.2 |
| 87.5° | 25.7 | 222.5 | 445.0 | 597.9 | 652.4 |
| 90° | 3.0 | 202.8 | 422.3 | 575.2 | 628.2 |
| 92.5° | 1.5 | 196.8 | 413.3 | 564.6 | 616.1 |
| 95° | 0.0 | 190.7 | 408.7 | 558.6 | 610.0 |
| 97.5° | 0.0 | 184.7 | 398.1 | 549.5 | 602.5 |
| 100° | 0.0 | 181.7 | 390.6 | 535.9 | 587.3 |
| 102.5° | 0.0 | 177.1 | 381.5 | 523.8 | 575.2 |
| 105° | 0.0 | 175.6 | 372.4 | 513.2 | 563.1 |
| 107.5° | 0.0 | 172.6 | 363.3 | 499.5 | 549.5 |
| 110° | 0.0 | 169.5 | 355.7 | 487.4 | 535.9 |



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78HL-SLW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-------|-------|-------|
| 112.5° | 0.0 | 166.5 | 348.2 | 475.3 | 522.2 |
| 115° | 0.0 | 163.5 | 339.1 | 461.7 | 507.1 |
| 117.5° | 0.0 | 158.9 | 330.0 | 448.1 | 493.5 |
| 120° | 0.0 | 152.9 | 320.9 | 436.0 | 478.3 |
| 122.5° | 0.0 | 146.8 | 311.8 | 420.8 | 461.7 |
| 125° | 0.0 | 140.8 | 301.2 | 407.2 | 446.6 |
| 127.5° | 0.0 | 131.7 | 289.1 | 392.1 | 428.4 |
| 130° | 0.0 | 122.6 | 274.0 | 376.9 | 411.7 |
| 132.5° | 1.5 | 113.5 | 258.9 | 360.3 | 395.1 |
| 135° | 0.0 | 104.4 | 242.2 | 343.6 | 375.4 |
| 137.5° | 0.0 | 96.9 | 224.0 | 325.5 | 355.7 |
| 140° | 0.0 | 87.8 | 205.9 | 304.3 | 336.1 |
| 142.5° | 0.0 | 77.2 | 187.7 | 281.6 | 314.9 |
| 145° | 0.0 | 68.1 | 169.5 | 257.3 | 293.7 |
| 147.5° | 1.5 | 60.6 | 152.9 | 231.6 | 271.0 |
| 150° | 1.5 | 54.5 | 136.2 | 205.9 | 245.2 |
| 152.5° | 1.5 | 48.4 | 119.6 | 181.7 | 219.5 |
| 155° | 1.5 | 42.4 | 104.4 | 157.4 | 195.3 |
| 157.5° | 1.5 | 36.3 | 87.8 | 133.2 | 169.5 |
| 160° | 1.5 | 31.8 | 72.7 | 112.0 | 145.3 |
| 162.5° | 1.5 | 27.2 | 59.0 | 87.8 | 119.6 |
| 165° | 1.5 | 22.7 | 46.9 | 65.1 | 92.3 |
| 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)