

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1213516

Luminaire Tested: 4SNLED-LD5-70HL-UNV-L935-CD1-U

Issue Date: 3/29/2018

**Test Information**

Test Method: LM-79-2019  
Report Number: P1213516  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27410)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/29/2018  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4SNLED-LD5-70HL-UNV-L935-CD1-U  
Description: 4FT LINEAR SNLED LED FIXTURE  
OPEN LED STIP  
Light Source: -  
Ballast/Driver: -

**Summary**

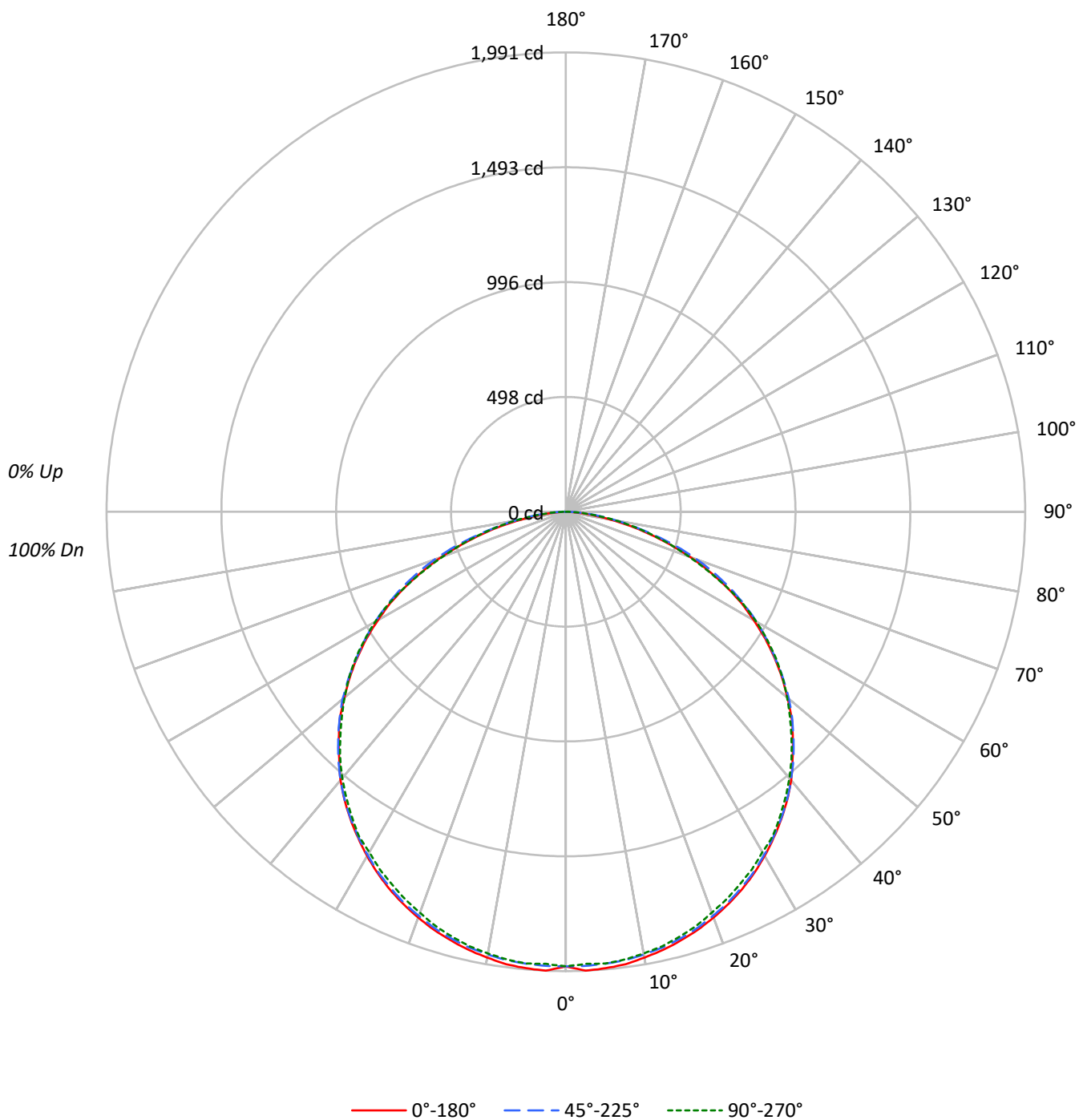
Lumens per Lamp: N/A  
Luminaire Lumens: 5910.0 lumens  
Efficiency: N/A  
Efficacy: 123.1 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.41  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')  
CIE Type: Direct

Input Watts (W): 48  
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: 24 FT

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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  | 20  |     |     |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  | 30  |     |     |  | 10  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 109 | 104 | 99  | 96  | 106 | 101 | 98  | 94  | 97  | 94  | 91  |  | 93  | 91  | 88  |  | 90  |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  |  | 81  | 77  | 73  |  | 78  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  | 74  | 68  | 62  |  | 72  | 66  | 61  |  | 69  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 61  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 59  | 51  | 46  |  | 57  | 50  | 45  |  | 55  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 40  |  | 51  | 45  | 39  |  | 50  |
| 7   | 64  | 51  | 42  | 35  | 63  | 50  | 41  | 35  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 45  |
| 8   | 60  | 46  | 37  | 32  | 58  | 45  | 37  | 31  | 44  | 37  | 31  |  | 43  | 36  | 31  |  | 42  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 40  | 33  | 28  |  | 39  | 33  | 28  |  | 38  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 26  | 37  | 30  | 25  |  | 36  | 30  | 25  |  | 36  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 15920 | 15920 | 15920 |
| 5°  | 16065 | 15558 | 15435 |
| 10° | 16013 | 15217 | 14958 |
| 15° | 15962 | 14875 | 14490 |
| 20° | 15916 | 14510 | 13990 |
| 25° | 15871 | 14144 | 13524 |
| 30° | 15794 | 13751 | 13065 |
| 35° | 15715 | 13343 | 12624 |
| 40° | 15621 | 12906 | 12096 |
| 45° | 15424 | 12388 | 11491 |
| 50° | 15188 | 11825 | 10876 |
| 55° | 14898 | 11071 | 10212 |
| 60° | 14417 | 10305 | 9345  |
| 65° | 13713 | 9308  | 8127  |
| 70° | 12498 | 7998  | 6589  |
| 75° | 10617 | 6103  | 5065  |
| 80° | 7934  | 4019  | 3321  |
| 85° | 4099  | 1958  | 1483  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 15424 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 187.0  | 3.2       |
| 10°-20°   | 539.2  | 9.1       |
| 20°-30°   | 825.4  | 14.0      |
| 30°-40°   | 1011.3 | 17.1      |
| 40°-50°   | 1069.7 | 18.1      |
| 50°-60°   | 987.4  | 16.7      |
| 60°-70°   | 762.1  | 12.9      |
| 70°-80°   | 423.0  | 7.2       |
| 80°-90°   | 104.8  | 1.8       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| <hr/>     |        |           |
| 0°-30°    | 1551.7 | 26.3      |
| 0°-40°    | 2563.0 | 43.4      |
| 0°-60°    | 4620.1 | 78.2      |
| 0°-90°    | 5910.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5910.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1970 | 1970  | 1970 | 1970  | 1970 |      |
| 5°  | 1986 | 1960  | 1966 | 1961  | 1965 | 189  |
| 15° | 1924 | 1901  | 1915 | 1908  | 1906 | 543  |
| 25° | 1806 | 1784  | 1799 | 1783  | 1782 | 832  |
| 35° | 1628 | 1610  | 1625 | 1607  | 1616 | 1018 |
| 45° | 1392 | 1379  | 1396 | 1381  | 1383 | 1074 |
| 55° | 1105 | 1096  | 1108 | 1108  | 1113 | 986  |
| 65° | 765  | 757   | 787  | 782   | 767  | 755  |
| 75° | 380  | 402   | 405  | 404   | 390  | 403  |
| 85° | 60   | 88    | 90   | 92    | 85   | 81   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1970.1 | 1970.1 | 1970.1 | 1970.1 | 1970.1 |
| 2.5°  | 1990.8 | 1965.2 | 1970.1 | 1967.2 | 1961.3 |
| 5°    | 1985.9 | 1960.3 | 1966.2 | 1961.3 | 1965.2 |
| 7.5°  | 1978.0 | 1950.4 | 1960.3 | 1953.4 | 1957.3 |
| 10°   | 1962.2 | 1938.6 | 1948.5 | 1940.6 | 1943.6 |
| 12.5° | 1945.5 | 1920.9 | 1934.7 | 1924.9 | 1928.8 |
| 15°   | 1923.9 | 1901.3 | 1915.0 | 1908.1 | 1906.2 |
| 17.5° | 1900.3 | 1878.6 | 1892.4 | 1884.5 | 1881.6 |
| 20°   | 1871.8 | 1851.1 | 1863.9 | 1852.1 | 1849.1 |
| 22.5° | 1840.3 | 1819.6 | 1834.4 | 1817.7 | 1818.6 |
| 25°   | 1805.9 | 1784.2 | 1799.0 | 1783.2 | 1782.2 |
| 27.5° | 1766.5 | 1745.9 | 1761.6 | 1744.9 | 1746.8 |
| 30°   | 1723.2 | 1702.6 | 1718.3 | 1701.6 | 1703.6 |
| 32.5° | 1676.0 | 1659.3 | 1673.1 | 1657.3 | 1668.2 |
| 35°   | 1627.8 | 1610.1 | 1624.9 | 1607.2 | 1616.0 |
| 37.5° | 1575.7 | 1559.0 | 1574.7 | 1555.0 | 1562.9 |
| 40°   | 1519.6 | 1504.9 | 1518.6 | 1500.9 | 1507.8 |
| 42.5° | 1454.7 | 1445.9 | 1459.6 | 1441.9 | 1447.8 |
| 45°   | 1391.8 | 1379.0 | 1395.7 | 1380.9 | 1382.9 |
| 47.5° | 1328.8 | 1315.0 | 1330.8 | 1318.0 | 1317.0 |
| 50°   | 1253.1 | 1248.2 | 1262.9 | 1253.1 | 1252.1 |
| 52.5° | 1181.3 | 1171.4 | 1187.2 | 1182.3 | 1185.2 |
| 55°   | 1104.6 | 1095.7 | 1108.5 | 1107.5 | 1113.4 |
| 57.5° | 1024.9 | 1016.0 | 1032.8 | 1030.8 | 1035.7 |
| 60°   | 940.3  | 933.4  | 955.1  | 950.1  | 954.1  |
| 62.5° | 857.7  | 844.9  | 872.4  | 868.5  | 866.5  |
| 65°   | 765.2  | 757.4  | 786.9  | 781.9  | 767.2  |
| 67.5° | 669.8  | 666.9  | 697.4  | 687.5  | 662.9  |
| 70°   | 574.4  | 576.4  | 605.9  | 587.2  | 566.5  |
| 72.5° | 474.1  | 488.8  | 506.5  | 492.8  | 478.0  |
| 75°   | 379.7  | 402.3  | 405.2  | 404.3  | 389.5  |
| 77.5° | 287.2  | 315.7  | 308.8  | 315.7  | 303.9  |
| 80°   | 200.7  | 232.1  | 227.2  | 233.1  | 223.3  |
| 82.5° | 123.9  | 152.5  | 153.4  | 157.4  | 148.5  |
| 85°   | 60.0   | 88.5   | 90.5   | 91.5   | 84.6   |
| 87.5° | 12.8   | 41.3   | 42.3   | 39.3   | 34.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)