

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: P1213018

Luminaire Tested: 4SNLED-LD5-20SL-SLW-UNV-L930-CD1-U

Issue Date: 3/29/2018

**Test Information**

Test Method: LM-79-2019  
Report Number: P1213018  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27403)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/29/2018  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4SNLED-LD5-20SL-SLW-UNV-L930-CD1-U  
Description: 4FT LINEAR SNLED LED FIXTURE  
SQUARE FROSTED LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

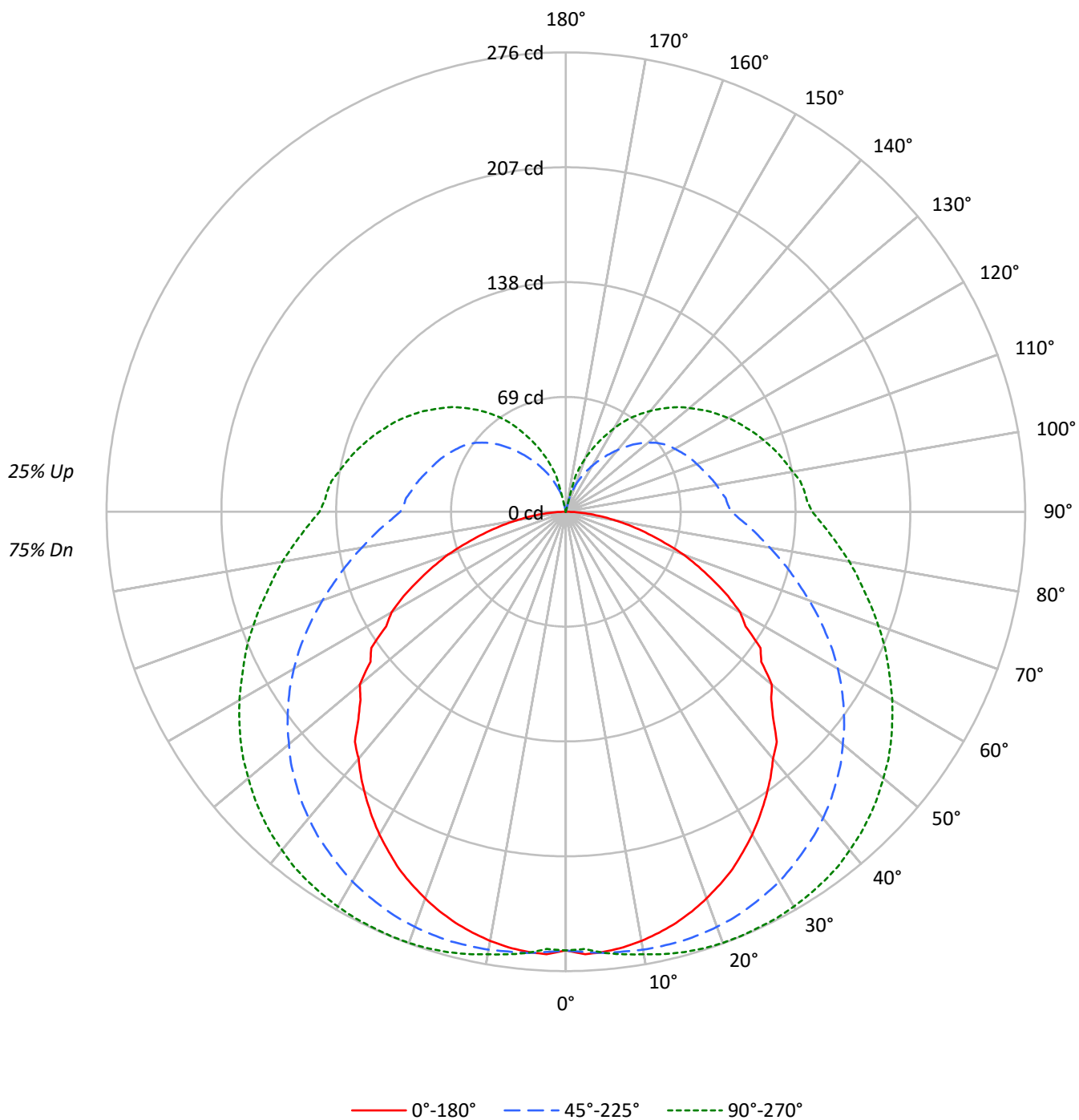
Lumens per Lamp: N/A  
Luminaire Lumens: 1518.0 lumens  
Efficiency: N/A  
Efficacy: 94.9 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.56 / 1.59  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')  
CIE Type: Semi-Direct

Input Watts (W): 16  
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 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
| 0   | 113 | 113 | 113 | 113 | 107 | 107 | 107 | 107 | 97 | 97 | 97 | 88 | 88 | 88 | 79 | 79 | 79 |
| 1   | 100 | 94  | 89  | 84  | 95  | 89  | 84  | 80  | 80 | 76 | 73 | 72 | 69 | 66 | 64 | 62 | 60 |
| 2   | 90  | 80  | 72  | 66  | 85  | 76  | 69  | 63  | 68 | 63 | 58 | 61 | 57 | 53 | 55 | 51 | 48 |
| 3   | 81  | 69  | 60  | 53  | 76  | 66  | 58  | 51  | 59 | 53 | 47 | 53 | 48 | 43 | 47 | 43 | 39 |
| 4   | 74  | 61  | 51  | 44  | 69  | 58  | 49  | 43  | 52 | 45 | 39 | 47 | 41 | 36 | 42 | 37 | 33 |
| 5   | 67  | 54  | 44  | 37  | 63  | 51  | 43  | 36  | 46 | 39 | 33 | 42 | 35 | 31 | 37 | 32 | 28 |
| 6   | 62  | 48  | 39  | 32  | 58  | 46  | 37  | 31  | 41 | 34 | 29 | 37 | 31 | 27 | 34 | 28 | 24 |
| 7   | 57  | 43  | 34  | 28  | 54  | 41  | 33  | 27  | 37 | 30 | 25 | 34 | 28 | 23 | 30 | 25 | 21 |
| 8   | 53  | 39  | 31  | 25  | 50  | 37  | 29  | 24  | 34 | 27 | 22 | 31 | 25 | 21 | 28 | 23 | 19 |
| 9   | 49  | 36  | 27  | 22  | 47  | 34  | 26  | 21  | 31 | 24 | 20 | 28 | 23 | 18 | 26 | 21 | 17 |
| 10  | 46  | 33  | 25  | 20  | 44  | 31  | 24  | 19  | 29 | 22 | 18 | 26 | 21 | 16 | 24 | 19 | 15 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2130 | 2130 | 2130 |
| 5°  | 2147 | 2106 | 2090 |
| 10° | 2136 | 2087 | 2078 |
| 15° | 2122 | 2076 | 2082 |
| 20° | 2102 | 2066 | 2086 |
| 25° | 2082 | 2058 | 2090 |
| 30° | 2053 | 2053 | 2101 |
| 35° | 2022 | 2045 | 2115 |
| 40° | 1991 | 2043 | 2129 |
| 45° | 1953 | 2039 | 2146 |
| 50° | 1959 | 2034 | 2163 |
| 55° | 1925 | 2034 | 2188 |
| 60° | 1854 | 2036 | 2218 |
| 65° | 1751 | 2038 | 2260 |
| 70° | 1638 | 2053 | 2324 |
| 75° | 1437 | 2101 | 2416 |
| 80° | 1214 | 2202 | 2573 |
| 85° | 902  | 2408 | 2801 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 90°

Luminance: 3186 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 25.3   | 1.7       |
| 10°-20°   | 75.1   | 4.9       |
| 20°-30°   | 119.3  | 7.9       |
| 30°-40°   | 153.2  | 10.1      |
| 40°-50°   | 173.0  | 11.4      |
| 50°-60°   | 176.5  | 11.6      |
| 60°-70°   | 163.5  | 10.8      |
| 70°-80°   | 138.4  | 9.1       |
| 80°-90°   | 110.5  | 7.3       |
| 90°-100°  | 93.8   | 6.2       |
| 100°-110° | 83.6   | 5.5       |
| 110°-120° | 71.2   | 4.7       |
| 120°-130° | 56.6   | 3.7       |
| 130°-140° | 40.1   | 2.6       |
| 140°-150° | 24.0   | 1.6       |
| 150°-160° | 11.2   | 0.7       |
| 160°-170° | 2.7    | 0.2       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 219.8  | 14.5      |
| 0°-40°    | 373.0  | 24.6      |
| 0°-60°    | 722.4  | 47.6      |
| 0°-90°    | 1134.9 | 74.8      |
| 90°-120°  | 248.6  | 16.4      |
| 90°-150°  | 369.3  | 24.3      |
| 90°-180°  | 383.0  | 25.2      |
| 0°-180°   | 1518.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 264 | 264   | 264 | 264   | 264 |      |
| 5°   | 265 | 263   | 266 | 266   | 266 | 25   |
| 15°  | 256 | 258   | 267 | 272   | 274 | 72   |
| 25°  | 237 | 245   | 262 | 271   | 275 | 109  |
| 35°  | 209 | 225   | 249 | 264   | 271 | 131  |
| 45°  | 176 | 200   | 230 | 250   | 258 | 137  |
| 55°  | 143 | 167   | 204 | 229   | 239 | 125  |
| 65°  | 98  | 130   | 172 | 202   | 213 | 97   |
| 75°  | 51  | 91    | 140 | 174   | 186 | 55   |
| 85°  | 13  | 58    | 111 | 147   | 160 | 14   |
| 90°  | 1   | 48    | 100 | 136   | 148 | 1    |
| 95°  | 0   | 45    | 96  | 132   | 144 | 0    |
| 105° | 0   | 41    | 88  | 121   | 133 | 0    |
| 115° | 0   | 38    | 80  | 109   | 120 | 0    |
| 125° | 0   | 33    | 71  | 96    | 105 | 0    |
| 135° | 0   | 25    | 57  | 81    | 88  | 0    |
| 145° | 0   | 16    | 40  | 61    | 69  | 0    |
| 155° | 0   | 10    | 25  | 37    | 46  | 0    |
| 165° | 0   | 5     | 11  | 15    | 22  | 0    |
| 175° | 0   | 0     | 0   | 0     | 0   | 0    |
| 180° | 0   | 0     | 0   | 0     | 0   | 0    |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 263.6 | 263.6 | 263.6 | 263.6 | 263.6 |
| 2.5°   | 266.1 | 263.2 | 264.7 | 264.3 | 262.9 |
| 5°     | 265.4 | 263.2 | 266.1 | 266.1 | 266.1 |
| 7.5°   | 264.0 | 262.5 | 266.5 | 267.9 | 268.2 |
| 10°    | 261.8 | 261.8 | 267.2 | 269.3 | 270.0 |
| 12.5°  | 259.0 | 260.0 | 267.2 | 270.4 | 272.2 |
| 15°    | 255.8 | 257.9 | 267.2 | 272.2 | 273.9 |
| 17.5°  | 251.8 | 255.4 | 266.5 | 272.5 | 275.0 |
| 20°    | 247.2 | 252.5 | 265.4 | 272.5 | 275.7 |
| 22.5°  | 242.2 | 249.0 | 264.0 | 271.8 | 275.7 |
| 25°    | 236.9 | 244.7 | 261.8 | 271.1 | 275.4 |
| 27.5°  | 230.4 | 240.4 | 259.3 | 270.0 | 275.0 |
| 30°    | 224.0 | 235.4 | 256.5 | 268.6 | 273.9 |
| 32.5°  | 216.9 | 230.1 | 252.9 | 266.5 | 272.5 |
| 35°    | 209.4 | 224.7 | 249.0 | 264.3 | 270.7 |
| 37.5°  | 201.9 | 218.3 | 245.1 | 261.5 | 268.6 |
| 40°    | 193.7 | 211.9 | 240.4 | 257.9 | 265.4 |
| 42.5°  | 187.6 | 205.1 | 235.4 | 254.3 | 262.2 |
| 45°    | 176.2 | 200.1 | 229.7 | 249.7 | 258.3 |
| 47.5°  | 167.3 | 190.5 | 224.0 | 245.1 | 254.0 |
| 50°    | 161.6 | 182.6 | 217.2 | 239.7 | 249.0 |
| 52.5°  | 148.0 | 177.3 | 210.8 | 234.4 | 244.3 |
| 55°    | 142.7 | 166.6 | 203.7 | 228.6 | 238.6 |
| 57.5°  | 128.1 | 159.1 | 196.5 | 222.2 | 232.6 |
| 60°    | 120.9 | 148.7 | 188.7 | 215.8 | 226.5 |
| 62.5°  | 109.9 | 139.8 | 180.8 | 208.7 | 219.7 |
| 65°    | 97.7  | 130.2 | 172.3 | 201.9 | 213.3 |
| 67.5°  | 86.3  | 120.6 | 164.1 | 194.8 | 206.9 |
| 70°    | 75.3  | 110.6 | 155.5 | 187.6 | 199.8 |
| 72.5°  | 62.4  | 100.6 | 147.3 | 180.8 | 193.0 |
| 75°    | 51.4  | 91.0  | 139.5 | 173.7 | 185.8 |
| 77.5°  | 40.7  | 81.7  | 132.0 | 167.3 | 179.4 |
| 80°    | 30.7  | 72.8  | 124.5 | 160.5 | 173.0 |
| 82.5°  | 21.4  | 65.3  | 117.7 | 154.1 | 166.2 |
| 85°    | 13.2  | 58.5  | 111.3 | 147.3 | 159.8 |
| 87.5°  | 6.1   | 52.4  | 104.9 | 140.9 | 153.7 |
| 90°    | 0.7   | 47.8  | 99.5  | 135.5 | 148.0 |
| 92.5°  | 0.4   | 46.4  | 97.4  | 133.1 | 145.2 |
| 95°    | 0.0   | 44.9  | 96.3  | 131.6 | 143.8 |
| 97.5°  | 0.0   | 43.5  | 93.8  | 129.5 | 142.0 |
| 100°   | 0.0   | 42.8  | 92.0  | 126.3 | 138.4 |
| 102.5° | 0.0   | 41.7  | 89.9  | 123.4 | 135.5 |
| 105°   | 0.0   | 41.4  | 87.7  | 120.9 | 132.7 |
| 107.5° | 0.0   | 40.7  | 85.6  | 117.7 | 129.5 |
| 110°   | 0.0   | 40.0  | 83.8  | 114.9 | 126.3 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°   |
|--------|-----|-------|------|-------|-------|
| 112.5° | 0.0 | 39.2  | 82.0 | 112.0 | 123.1 |
| 115°   | 0.0 | 38.5  | 79.9 | 108.8 | 119.5 |
| 117.5° | 0.0 | 37.5  | 77.8 | 105.6 | 116.3 |
| 120°   | 0.0 | 36.0  | 75.6 | 102.7 | 112.7 |
| 122.5° | 0.0 | 34.6  | 73.5 | 99.2  | 108.8 |
| 125°   | 0.0 | 33.2  | 71.0 | 96.0  | 105.2 |
| 127.5° | 0.0 | 31.0  | 68.1 | 92.4  | 100.9 |
| 130°   | 0.0 | 28.9  | 64.6 | 88.8  | 97.0  |
| 132.5° | 0.4 | 26.8  | 61.0 | 84.9  | 93.1  |
| 135°   | 0.0 | 24.6  | 57.1 | 81.0  | 88.5  |
| 137.5° | 0.0 | 22.8  | 52.8 | 76.7  | 83.8  |
| 140°   | 0.0 | 20.7  | 48.5 | 71.7  | 79.2  |
| 142.5° | 0.0 | 18.2  | 44.2 | 66.3  | 74.2  |
| 145°   | 0.0 | 16.1  | 40.0 | 60.6  | 69.2  |
| 147.5° | 0.4 | 14.3  | 36.0 | 54.6  | 63.9  |
| 150°   | 0.4 | 12.8  | 32.1 | 48.5  | 57.8  |
| 152.5° | 0.4 | 11.4  | 28.2 | 42.8  | 51.7  |
| 155°   | 0.4 | 10.0  | 24.6 | 37.1  | 46.0  |
| 157.5° | 0.4 | 8.6   | 20.7 | 31.4  | 40.0  |
| 160°   | 0.4 | 7.5   | 17.1 | 26.4  | 34.2  |
| 162.5° | 0.4 | 6.4   | 13.9 | 20.7  | 28.2  |
| 165°   | 0.4 | 5.4   | 11.1 | 15.3  | 21.8  |
| 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)