Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P284570

Luminaire Tested: **2SNLED-LD5-16SL-SLW-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Report Generated By E9911574 / USPTCWHP6081592

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P284570 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P#) |
| Test Lab: | INNOVATION CENTER-P2 |
| Issue Date: | 3/3/2020 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | METALUX |
| Catalog Number: | 2SNLED-LD5-16SL-SLW-UNV-L850-CD1-U |
| Description: | 2FT LINEAR SNLED LED FIXTURE |
| | SQUARE FROSTED LENS |
| Light Source: | - |
| Ballast/Driver: | - |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 1631.0 lumens |
| Efficiency: | N/A |
| Efficacy: | 116.5 lumens/watt |
| Spacing Criteria (0/90/45): | 1.26 / 1.56 / 1.59 |
| Luminous Opening: | Rectangular w/ Sides (W: 0.33' x L: 2' x H: 0.12') |
| CIE Type: | Semi-Direct |

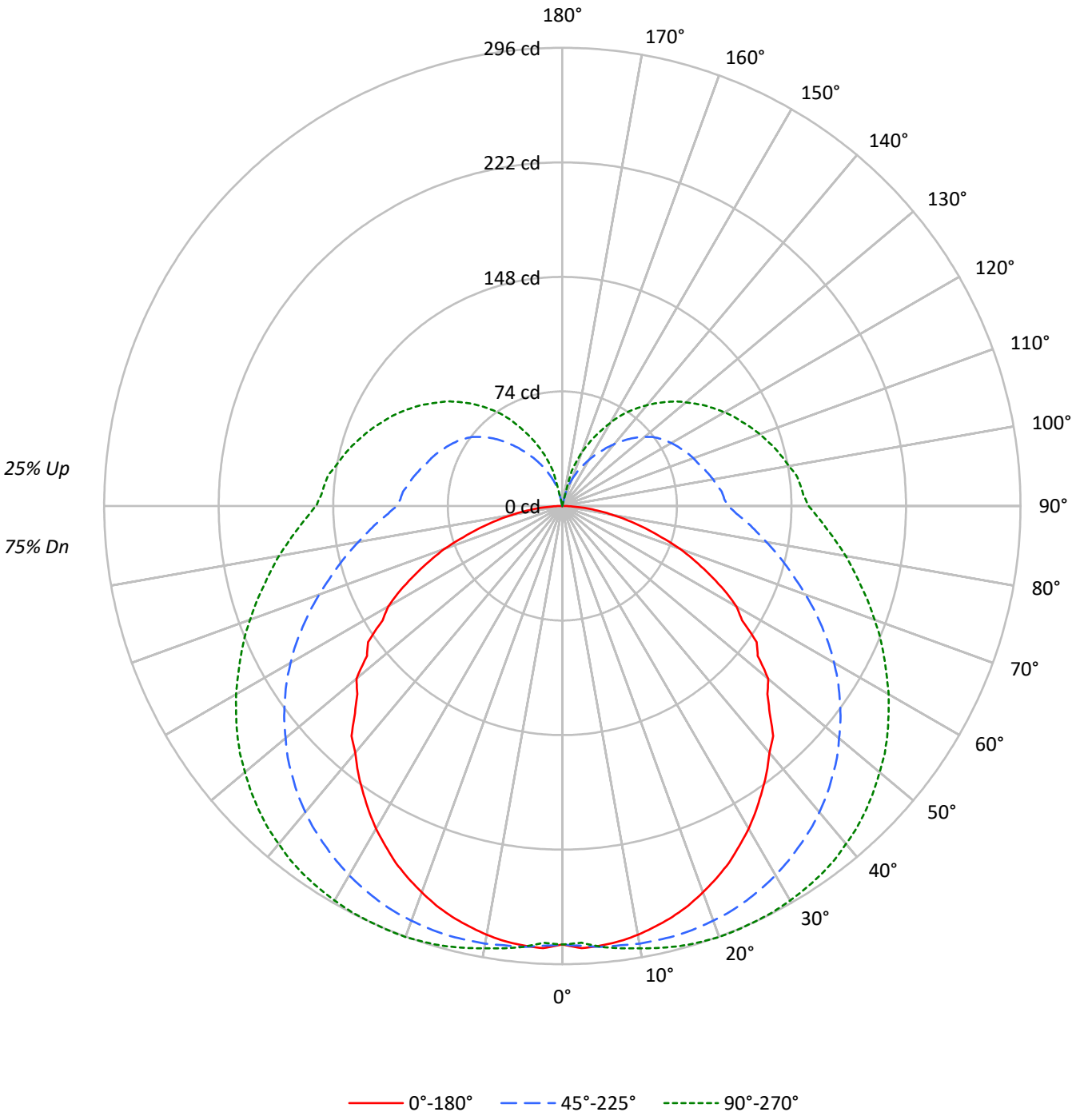
| | |
|---|---|
| Input Watts (W): | 14 |
| Input Voltage (V): | NR |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | NR |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 25 FT |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P284570
CATALOG NUMBER: 2SNLED-LD5-16SL-SLW-UNV-L850-CD1-U

## Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P284570
CATALOG NUMBER: 2SNLED-LD5-16SL-SLW-UNV-L850-CD1-U

## COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| RF | 20 | | | | 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° | 4579 | 4579 | 4579 |
| 5° | 4600 | 4516 | 4491 |
| 10° | 4566 | 4468 | 4465 |
| 15° | 4522 | 4436 | 4474 |
| 20° | 4467 | 4407 | 4484 |
| 25° | 4410 | 4383 | 4491 |
| 30° | 4336 | 4362 | 4514 |
| 35° | 4251 | 4339 | 4545 |
| 40° | 4172 | 4326 | 4574 |
| 45° | 4074 | 4307 | 4612 |
| 50° | 4062 | 4287 | 4649 |
| 55° | 3966 | 4275 | 4703 |
| 60° | 3789 | 4265 | 4768 |
| 65° | 3541 | 4254 | 4856 |
| 70° | 3263 | 4267 | 4992 |
| 75° | 2795 | 4343 | 5194 |
| 80° | 2268 | 4515 | 5530 |
| 85° | 1536 | 4886 | 6018 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P284570
CATALOG NUMBER: 2SNLED-LD5-16SL-SLW-UNV-L850-CD1-U

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 27.2 | 1.7 |
| 10°-20° | 80.7 | 4.9 |
| 20°-30° | 128.2 | 7.9 |
| 30°-40° | 164.6 | 10.1 |
| 40°-50° | 185.9 | 11.4 |
| 50°-60° | 189.6 | 11.6 |
| 60°-70° | 175.7 | 10.8 |
| 70°-80° | 148.7 | 9.1 |
| 80°-90° | 118.7 | 7.3 |
| 90°-100° | 100.8 | 6.2 |
| 100°-110° | 89.8 | 5.5 |
| 110°-120° | 76.5 | 4.7 |
| 120°-130° | 60.8 | 3.7 |
| 130°-140° | 43.1 | 2.6 |
| 140°-150° | 25.7 | 1.6 |
| 150°-160° | 12.0 | 0.7 |
| 160°-170° | 2.8 | 0.2 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 236.1 | 14.5 |
| 0°-40° | 400.7 | 24.6 |
| 0°-60° | 776.2 | 47.6 |
| 0°-90° | 1219.4 | 74.8 |
| 90°-120° | 267.1 | 16.4 |
| 90°-150° | 396.8 | 24.3 |
| 90°-180° | 412.0 | 25.3 |
| 0°-180° | 1631.0 | 100.0 |

**CANDELA DISTRIBUTION:**

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|---|---|---|---|---|---|---|
| 0° | 283 | 283 | 283 | 283 | 283 | |
| 5° | 285 | 283 | 286 | 286 | 286 | 27 |
| 15° | 275 | 277 | 287 | 292 | 294 | 78 |
| 25° | 254 | 263 | 281 | 291 | 296 | 117 |
| 35° | 225 | 242 | 268 | 284 | 291 | 141 |
| 45° | 189 | 215 | 247 | 268 | 278 | 147 |
| 55° | 153 | 179 | 219 | 246 | 256 | 135 |
| 65° | 105 | 140 | 185 | 217 | 229 | 104 |
| 75° | 55 | 98 | 150 | 187 | 200 | 59 |
| 85° | 14 | 63 | 120 | 158 | 172 | 15 |
| 90° | 1 | 51 | 107 | 146 | 159 | 1 |
| 95° | 0 | 48 | 104 | 141 | 154 | 0 |
| 105° | 0 | 44 | 94 | 130 | 143 | 0 |
| 115° | 0 | 41 | 86 | 117 | 128 | 0 |
| 125° | 0 | 36 | 76 | 103 | 113 | 0 |
| 135° | 0 | 26 | 61 | 87 | 95 | 0 |
| 145° | 0 | 17 | 43 | 65 | 74 | 0 |
| 155° | 0 | 11 | 26 | 40 | 49 | 0 |
| 165° | 0 | 6 | 12 | 16 | 23 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P284570
CATALOG NUMBER: 2SNLED-LD5-16SL-SLW-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 22.5° | 45° | 67.5° | 90° |
|---|---|---|---|---|---|
| 0° | 283.3 | 283.3 | 283.3 | 283.3 | 283.3 |
| 2.5° | 285.9 | 282.9 | 284.4 | 284.0 | 282.4 |
| 5° | 285.1 | 282.9 | 285.9 | 285.9 | 285.9 |
| 7.5° | 283.6 | 282.0 | 286.3 | 287.8 | 288.2 |
| 10° | 281.3 | 281.3 | 287.1 | 289.4 | 290.1 |
| 12.5° | 278.2 | 279.3 | 287.1 | 290.5 | 292.4 |
| 15° | 274.8 | 277.1 | 287.1 | 292.4 | 294.3 |
| 17.5° | 270.6 | 274.4 | 286.3 | 292.8 | 295.5 |
| 20° | 265.6 | 271.4 | 285.1 | 292.8 | 296.3 |
| 22.5° | 260.2 | 267.6 | 283.6 | 292.1 | 296.3 |
| 25° | 254.5 | 262.9 | 281.3 | 291.2 | 295.9 |
| 27.5° | 247.6 | 258.3 | 278.6 | 290.1 | 295.5 |
| 30° | 240.7 | 253.0 | 275.5 | 288.5 | 294.3 |
| 32.5° | 233.0 | 247.2 | 271.7 | 286.3 | 292.8 |
| 35° | 224.9 | 241.5 | 267.6 | 284.0 | 290.9 |
| 37.5° | 216.9 | 234.6 | 263.3 | 280.9 | 288.5 |
| 40° | 208.1 | 227.6 | 258.3 | 277.1 | 285.1 |
| 42.5° | 201.6 | 220.4 | 253.0 | 273.2 | 281.7 |
| 45° | 189.4 | 215.0 | 246.8 | 268.3 | 277.5 |
| 47.5° | 179.7 | 204.7 | 240.7 | 263.3 | 272.8 |
| 50° | 173.6 | 196.2 | 233.4 | 257.5 | 267.6 |
| 52.5° | 159.1 | 190.5 | 226.5 | 251.8 | 262.5 |
| 55° | 153.3 | 179.0 | 218.8 | 245.6 | 256.4 |
| 57.5° | 137.6 | 171.0 | 211.2 | 238.8 | 249.9 |
| 60° | 129.9 | 159.8 | 202.7 | 231.9 | 243.4 |
| 62.5° | 118.0 | 150.3 | 194.3 | 224.2 | 236.1 |
| 65° | 105.0 | 139.9 | 185.1 | 216.9 | 229.2 |
| 67.5° | 92.8 | 129.6 | 176.3 | 209.2 | 222.3 |
| 70° | 80.9 | 118.8 | 167.1 | 201.6 | 214.6 |
| 72.5° | 67.0 | 108.1 | 158.2 | 194.3 | 207.4 |
| 75° | 55.2 | 97.7 | 149.9 | 186.7 | 199.7 |
| 77.5° | 43.6 | 87.8 | 141.8 | 179.7 | 192.8 |
| 80° | 33.0 | 78.2 | 133.7 | 172.5 | 185.9 |
| 82.5° | 23.0 | 70.1 | 126.5 | 165.6 | 178.6 |
| 85° | 14.2 | 62.9 | 119.6 | 158.2 | 171.7 |
| 87.5° | 6.5 | 56.4 | 112.6 | 151.4 | 165.2 |
| 90° | 0.7 | 51.4 | 106.9 | 145.6 | 159.1 |
| 92.5° | 0.4 | 49.8 | 104.7 | 142.9 | 156.0 |
| 95° | 0.0 | 48.3 | 103.5 | 141.4 | 154.4 |
| 97.5° | 0.0 | 46.7 | 100.8 | 139.1 | 152.5 |
| 100° | 0.0 | 46.0 | 98.9 | 135.7 | 148.7 |
| 102.5° | 0.0 | 44.9 | 96.6 | 132.6 | 145.6 |
| 105° | 0.0 | 44.5 | 94.3 | 129.9 | 142.6 |
| 107.5° | 0.0 | 43.6 | 91.9 | 126.5 | 139.1 |
| 110° | 0.0 | 42.9 | 90.1 | 123.4 | 135.7 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P284570
CATALOG NUMBER: 2SNLED-LD5-16SL-SLW-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

| | 0° | 22.5° | 45° | 67.5° | 90° |
|---|---|---|---|---|---|
| 112.5° | 0.0 | 42.2 | 88.1 | 120.4 | *132.2* |
| 115° | 0.0 | 41.4 | 85.8 | 116.9 | *128.3* |
| 117.5° | 0.0 | 40.2 | 83.6 | 113.5 | *124.9* |
| 120° | 0.0 | 38.7 | 81.3 | 110.4 | *121.1* |
| 122.5° | 0.0 | 37.1 | 78.9 | 106.5 | *116.9* |
| 125° | 0.0 | 35.7 | 76.2 | 103.1 | *113.0* |
| 127.5° | 0.0 | 33.3 | 73.2 | 99.3 | *108.5* |
| 130° | 0.0 | 31.0 | 69.4 | 95.5 | *104.2* |
| 132.5° | 0.4 | 28.8 | 65.6 | 91.2 | *100.0* |
| 135° | 0.0 | 26.5 | 61.3 | 87.0 | *95.0* |
| 137.5° | 0.0 | 24.5 | 56.7 | 82.4 | *90.1* |
| 140° | 0.0 | 22.2 | 52.1 | 77.0 | *85.1* |
| 142.5° | 0.0 | 19.5 | 47.6 | 71.3 | *79.7* |
| 145° | 0.0 | 17.3 | 42.9 | 65.2 | *74.4* |
| 147.5° | 0.4 | 15.3 | 38.7 | 58.6 | *68.6* |
| 150° | 0.4 | 13.8 | 34.5 | 52.1 | *62.1* |
| 152.5° | 0.4 | 12.3 | 30.3 | 46.0 | *55.5* |
| 155° | 0.4 | 10.8 | 26.5 | 39.8 | *49.4* |
| 157.5° | 0.4 | 9.2 | 22.2 | 33.7 | *42.9* |
| 160° | 0.4 | 8.1 | 18.4 | 28.3 | *36.8* |
| 162.5° | 0.4 | 6.9 | 15.0 | 22.2 | *30.3* |
| 165° | 0.4 | 5.8 | 11.9 | 16.4 | *23.4* |
| 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)