

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: P234478

Luminaire Tested: **2WSNLED-LD4-24SL-F-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P234478
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-169-7)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2WSNLED-LD4-24SL-F-UNV-L840-CD1-U
Description: 2FT WSNLED WRAPAROUND
Light Source: (112) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

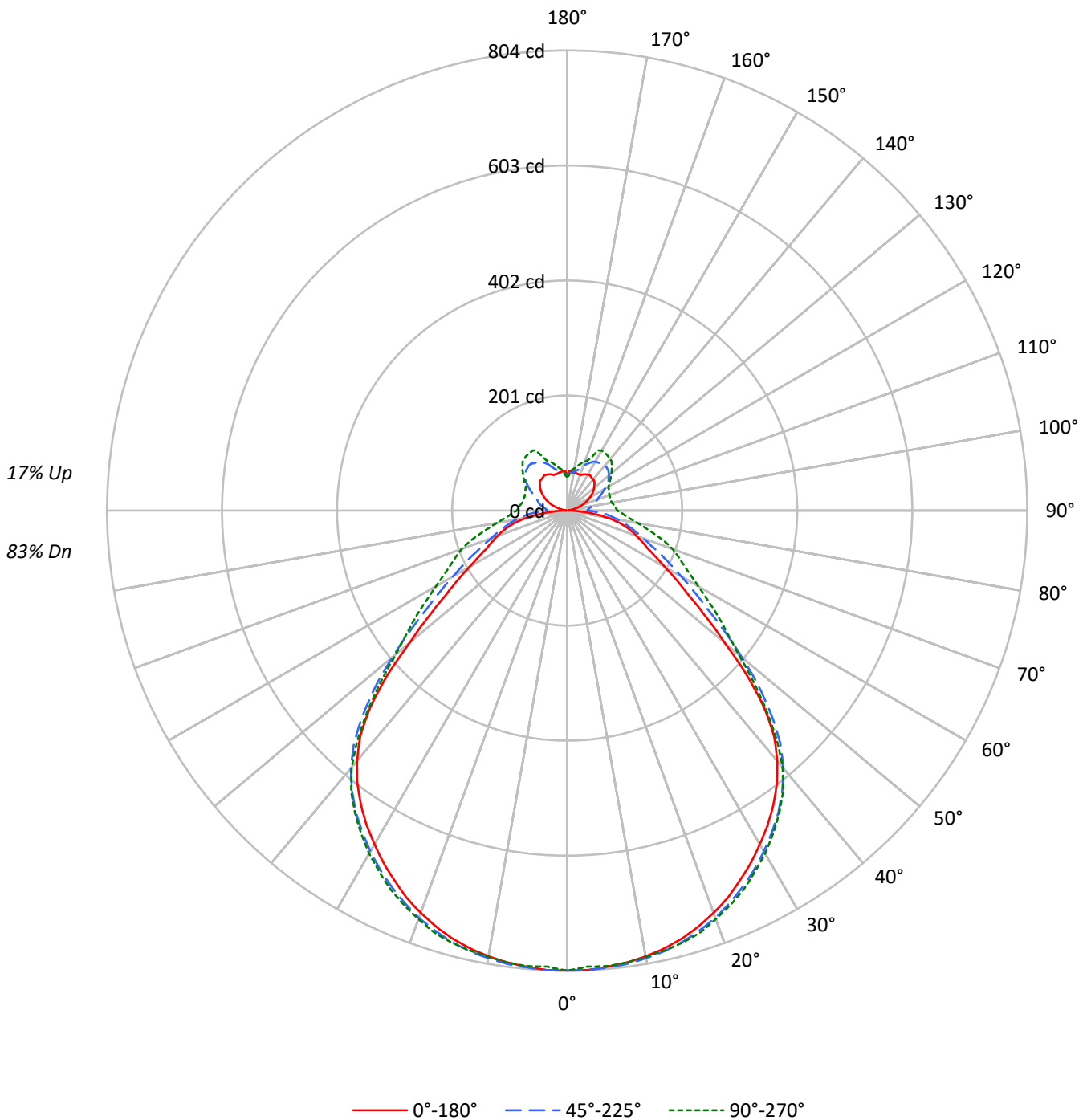
Lumens per Lamp: N/A
Luminaire Lumens: 2497.0 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.35
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 2' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 23.9
Input Voltage (V): 120
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: P234478

CATALOG NUMBER: 2WSNLED-LD4-24SL-F-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P234478

CATALOG NUMBER: 2WSNLED-LD4-24SL-F-UNV-L840-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 | 115 | 115 | 115 | 115 | 110 | 110 | 110 | 110 | 101 | 101 | 101 | 93 | 93 | 93 | 86 | 86 | 86 | 83 |
| 1 | 105 | 100 | 96 | 92 | 100 | 96 | 92 | 89 | 89 | 86 | 83 | 82 | 80 | 78 | 76 | 74 | 72 | 69 |
| 2 | 96 | 88 | 81 | 76 | 92 | 85 | 79 | 74 | 78 | 74 | 69 | 72 | 69 | 65 | 67 | 64 | 61 | 58 |
| 3 | 88 | 78 | 70 | 64 | 84 | 75 | 68 | 62 | 70 | 64 | 59 | 64 | 60 | 56 | 60 | 56 | 53 | 50 |
| 4 | 81 | 69 | 61 | 55 | 77 | 67 | 59 | 53 | 62 | 56 | 51 | 58 | 53 | 48 | 54 | 49 | 46 | 43 |
| 5 | 74 | 62 | 54 | 47 | 71 | 60 | 52 | 46 | 56 | 49 | 44 | 52 | 47 | 42 | 49 | 44 | 40 | 38 |
| 6 | 69 | 56 | 48 | 42 | 66 | 54 | 46 | 41 | 51 | 44 | 39 | 47 | 42 | 37 | 44 | 40 | 36 | 33 |
| 7 | 64 | 51 | 43 | 37 | 61 | 49 | 42 | 36 | 46 | 40 | 35 | 43 | 38 | 33 | 41 | 36 | 32 | 30 |
| 8 | 59 | 47 | 38 | 33 | 57 | 45 | 38 | 32 | 42 | 36 | 31 | 40 | 34 | 30 | 37 | 32 | 29 | 27 |
| 9 | 56 | 43 | 35 | 30 | 53 | 41 | 34 | 29 | 39 | 33 | 28 | 37 | 31 | 27 | 35 | 30 | 26 | 24 |
| 10 | 52 | 39 | 32 | 27 | 50 | 38 | 31 | 26 | 36 | 30 | 25 | 34 | 29 | 25 | 32 | 27 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4325 | 4325 | 4325 |
| 5° | 4300 | 4280 | 4270 |
| 10° | 4274 | 4241 | 4234 |
| 15° | 4242 | 4197 | 4212 |
| 20° | 4188 | 4138 | 4162 |
| 25° | 4117 | 4057 | 4097 |
| 30° | 4037 | 3968 | 4012 |
| 35° | 3953 | 3869 | 3902 |
| 40° | 3812 | 3716 | 3722 |
| 45° | 3487 | 3391 | 3325 |
| 50° | 2803 | 2876 | 2846 |
| 55° | 2250 | 2360 | 2561 |
| 60° | 1914 | 2016 | 2342 |
| 65° | 1733 | 1778 | 2254 |
| 70° | 1738 | 1630 | 2295 |
| 75° | 1762 | 1586 | 2239 |
| 80° | 1629 | 1596 | 2262 |
| 85° | 1113 | 1603 | 2596 |



TEST NUMBER: P234478

CATALOG NUMBER: 2WSNLED-LD4-24SL-F-UNV-L840-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 76.2 | 3.1 |
| 10°-20° | 219.8 | 8.8 |
| 20°-30° | 333.5 | 13.4 |
| 30°-40° | 399.7 | 16.0 |
| 40°-50° | 381.4 | 15.3 |
| 50°-60° | 269.4 | 10.8 |
| 60°-70° | 183.0 | 7.3 |
| 70°-80° | 124.9 | 5.0 |
| 80°-90° | 72.3 | 2.9 |
| 90°-100° | 46.4 | 1.9 |
| 100°-110° | 51.8 | 2.1 |
| 110°-120° | 62.3 | 2.5 |
| 120°-130° | 71.4 | 2.9 |
| 130°-140° | 73.1 | 2.9 |
| 140°-150° | 62.1 | 2.5 |
| 150°-160° | 41.8 | 1.7 |
| 160°-170° | 21.5 | 0.9 |
| 170°-180° | 6.4 | 0.3 |
| 0°-30° | 629.4 | 25.2 |
| 0°-40° | 1029.1 | 41.2 |
| 0°-60° | 1680.0 | 67.3 |
| 0°-90° | 2060.1 | 82.5 |
| 90°-120° | 160.5 | 6.4 |
| 90°-150° | 367.2 | 14.7 |
| 90°-180° | 437.0 | 17.5 |
| 0°-180° | 2497.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0° | 804 | 804 | 804 | 804 | 804 | |
| 5° | 800 | 801 | 801 | 800 | 799 | 76 |
| 15° | 774 | 776 | 780 | 781 | 781 | 218 |
| 25° | 714 | 718 | 725 | 729 | 730 | 329 |
| 35° | 628 | 634 | 644 | 646 | 646 | 392 |
| 45° | 487 | 502 | 505 | 507 | 492 | 368 |
| 55° | 261 | 286 | 299 | 308 | 322 | 239 |
| 65° | 154 | 169 | 179 | 192 | 224 | 156 |
| 75° | 104 | 88 | 114 | 136 | 158 | 109 |
| 85° | 31 | 42 | 65 | 93 | 102 | 34 |
| 90° | 1 | 18 | 37 | 70 | 88 | 2 |
| 95° | 2 | 18 | 38 | 70 | 84 | 3 |
| 105° | 17 | 25 | 51 | 71 | 78 | 18 |
| 115° | 37 | 53 | 65 | 75 | 81 | 36 |
| 125° | 55 | 69 | 88 | 90 | 91 | 48 |
| 135° | 68 | 81 | 101 | 110 | 110 | 52 |
| 145° | 72 | 83 | 101 | 116 | 120 | 45 |
| 155° | 70 | 76 | 91 | 106 | 104 | 32 |
| 165° | 66 | 69 | 74 | 82 | 83 | 19 |
| 175° | 69 | 70 | 65 | 62 | 69 | 7 |
| 180° | 59 | 59 | 59 | 59 | 59 | |



TEST NUMBER: P234478

CATALOG NUMBER: 2WSNLED-LD4-24SL-F-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 803.7 | 803.7 | 803.7 | 803.7 | 803.7 |
| 2.5° | 803.7 | 803.7 | 803.7 | 801.4 | 797.8 |
| 5° | 800.2 | 801.4 | 801.4 | 800.2 | 799.0 |
| 7.5° | 796.6 | 797.8 | 799.0 | 797.8 | 796.6 |
| 10° | 790.7 | 793.0 | 794.2 | 794.2 | 791.9 |
| 12.5° | 783.6 | 785.9 | 788.3 | 788.3 | 787.1 |
| 15° | 774.1 | 776.4 | 780.0 | 781.2 | 781.2 |
| 17.5° | 762.2 | 764.6 | 769.3 | 772.9 | 772.9 |
| 20° | 747.9 | 751.5 | 757.4 | 759.8 | 759.8 |
| 22.5° | 732.5 | 736.1 | 742.0 | 744.4 | 745.6 |
| 25° | 713.5 | 718.3 | 725.4 | 728.9 | 730.1 |
| 27.5° | 694.5 | 700.4 | 707.6 | 711.1 | 711.1 |
| 30° | 673.1 | 680.3 | 687.4 | 690.9 | 692.1 |
| 32.5° | 651.8 | 657.7 | 666.0 | 669.6 | 669.6 |
| 35° | 628.0 | 634.0 | 643.5 | 645.8 | 645.8 |
| 37.5° | 601.9 | 609.0 | 617.3 | 620.9 | 619.7 |
| 40° | 571.0 | 579.4 | 587.7 | 590.0 | 585.3 |
| 42.5° | 535.4 | 544.9 | 550.9 | 553.2 | 541.4 |
| 45° | 486.8 | 502.2 | 504.6 | 506.9 | 491.5 |
| 47.5° | 426.2 | 446.4 | 453.5 | 452.3 | 440.5 |
| 50° | 359.7 | 388.2 | 397.7 | 398.9 | 390.6 |
| 52.5° | 306.3 | 334.8 | 346.7 | 351.4 | 352.6 |
| 55° | 261.2 | 286.1 | 299.2 | 307.5 | 321.7 |
| 57.5° | 226.8 | 249.3 | 262.4 | 271.9 | 290.9 |
| 60° | 197.1 | 218.4 | 230.3 | 241.0 | 264.7 |
| 62.5° | 173.3 | 192.3 | 203.0 | 213.7 | 242.2 |
| 65° | 154.3 | 168.6 | 179.3 | 192.3 | 224.4 |
| 67.5° | 141.3 | 147.2 | 157.9 | 175.7 | 210.1 |
| 70° | 129.4 | 125.8 | 141.3 | 160.3 | 195.9 |
| 72.5° | 117.5 | 106.8 | 127.0 | 147.2 | 178.1 |
| 75° | 104.5 | 87.9 | 114.0 | 136.5 | 157.9 |
| 77.5° | 89.0 | 74.8 | 102.1 | 124.7 | 140.1 |
| 80° | 71.2 | 62.9 | 90.2 | 114.0 | 124.7 |
| 82.5° | 51.0 | 52.2 | 77.2 | 103.3 | 111.6 |
| 85° | 30.9 | 41.6 | 65.3 | 92.6 | 102.1 |
| 87.5° | 14.2 | 29.7 | 49.9 | 79.5 | 95.0 |
| 90° | 1.2 | 17.8 | 36.8 | 70.0 | 87.9 |
| 92.5° | 1.2 | 17.8 | 35.6 | 70.0 | 85.5 |
| 95° | 2.4 | 17.8 | 38.0 | 70.0 | 84.3 |
| 97.5° | 4.7 | 17.8 | 40.4 | 70.0 | 81.9 |
| 100° | 8.3 | 17.8 | 45.1 | 70.0 | 79.5 |
| 102.5° | 11.9 | 20.2 | 48.7 | 71.2 | 78.4 |
| 105° | 16.6 | 24.9 | 51.0 | 71.2 | 78.4 |
| 107.5° | 21.4 | 30.9 | 53.4 | 71.2 | 78.4 |
| 110° | 27.3 | 39.2 | 55.8 | 72.4 | 78.4 |



TEST NUMBER: P234478

CATALOG NUMBER: 2WSNLED-LD4-24SL-F-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|------|-------|-------|-------|-------|
| 112.5° | 32.1 | 47.5 | 59.4 | 73.6 | 79.5 |
| 115° | 36.8 | 53.4 | 65.3 | 74.8 | 80.7 |
| 117.5° | 41.6 | 57.0 | 70.0 | 77.2 | 81.9 |
| 120° | 46.3 | 61.7 | 76.0 | 80.7 | 83.1 |
| 122.5° | 49.9 | 65.3 | 81.9 | 85.5 | 87.9 |
| 125° | 54.6 | 68.9 | 87.9 | 90.2 | 91.4 |
| 127.5° | 58.2 | 72.4 | 91.4 | 96.2 | 96.2 |
| 130° | 61.7 | 74.8 | 95.0 | 100.9 | 100.9 |
| 132.5° | 64.1 | 78.4 | 98.5 | 105.7 | 105.7 |
| 135° | 67.7 | 80.7 | 100.9 | 110.4 | 110.4 |
| 137.5° | 70.0 | 83.1 | 102.1 | 112.8 | 115.2 |
| 140° | 71.2 | 83.1 | 103.3 | 115.2 | 117.5 |
| 142.5° | 71.2 | 84.3 | 103.3 | 116.3 | 118.7 |
| 145° | 72.4 | 83.1 | 100.9 | 116.3 | 119.9 |
| 147.5° | 73.6 | 81.9 | 99.7 | 116.3 | 119.9 |
| 150° | 72.4 | 80.7 | 98.5 | 112.8 | 121.1 |
| 152.5° | 71.2 | 78.4 | 96.2 | 108.0 | 118.7 |
| 155° | 70.0 | 76.0 | 91.4 | 105.7 | 104.5 |
| 157.5° | 67.7 | 73.6 | 87.9 | 99.7 | 95.0 |
| 160° | 66.5 | 71.2 | 81.9 | 95.0 | 91.4 |
| 162.5° | 66.5 | 68.9 | 77.2 | 89.0 | 87.9 |
| 165° | 66.5 | 68.9 | 73.6 | 81.9 | 83.1 |
| 167.5° | 67.7 | 68.9 | 71.2 | 73.6 | 78.4 |
| 170° | 67.7 | 68.9 | 68.9 | 68.9 | 74.8 |
| 172.5° | 68.9 | 70.0 | 66.5 | 64.1 | 72.4 |
| 175° | 68.9 | 70.0 | 65.3 | 61.7 | 68.9 |
| 177.5° | 68.9 | 68.9 | 64.1 | 59.4 | 60.5 |
| 180° | 59.4 | 59.4 | 59.4 | 59.4 | 59.4 |

(END OF REPORT)