

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: P826549

Luminaire Tested: **OHBL-24SE-MCL-UNV-L830-CD-UPL24**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P826549
REPORT IS A COMBINATION OF REPORTS P826246 AND G3-2310-221-6
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: OHBL-24SE-MCL-UNV-L830-CD-UPL24
Description:
Light Source: -
Ballast/Driver: -

Summary

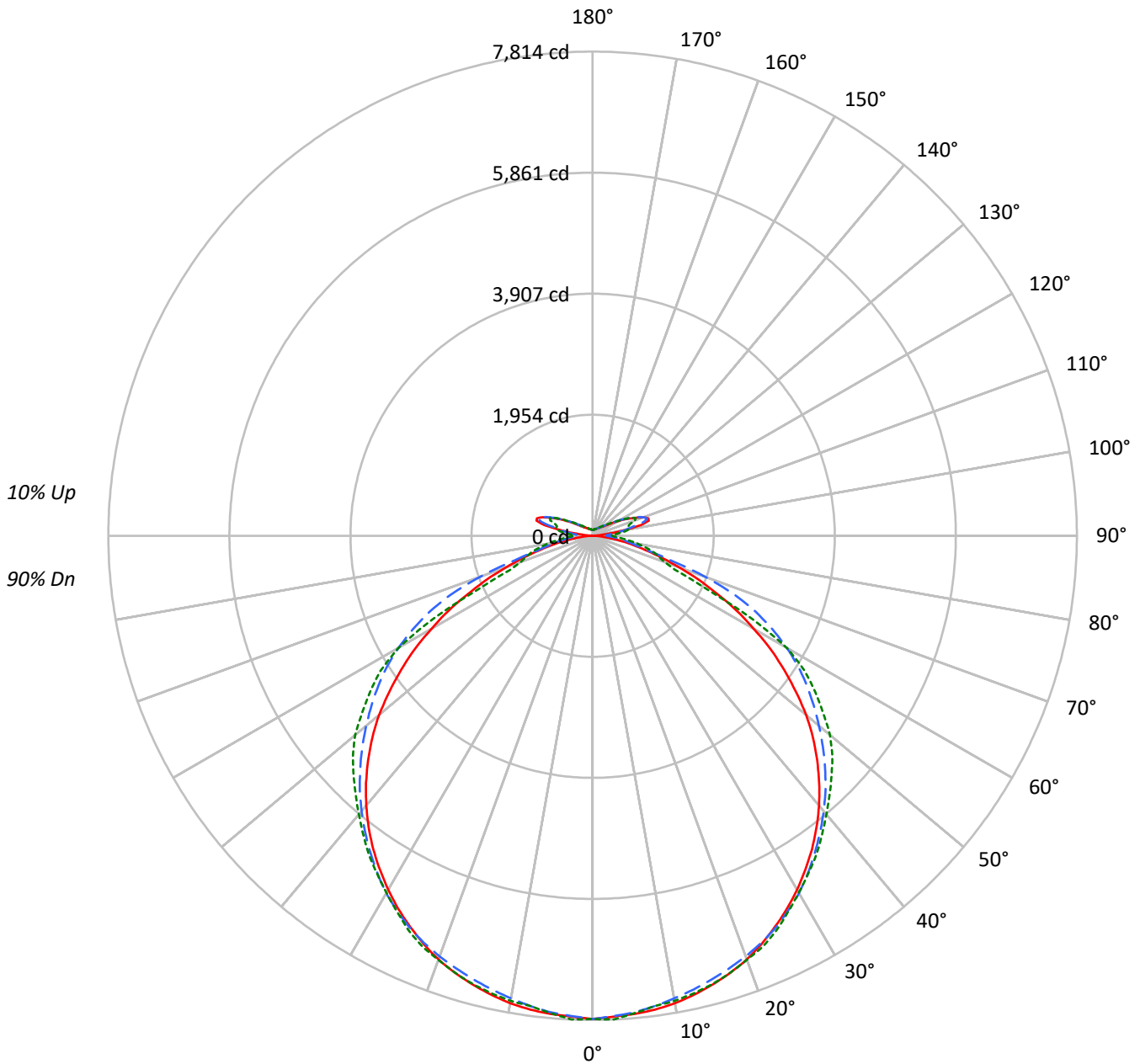
Lumens per Lamp: N/A
Luminaire Lumens: 24293.3 lumens
Efficiency: N/A
Efficacy: 156.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 3.78' x L: 1.67' x H: 0.17')
CIE Type: Semi-Direct

Input Watts (W): 155.4
Input Voltage (V): NR
Input Current (A_{in}): 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: P826549

CATALOG NUMBER: OHBL-24SE-MCL-UNV-L830-CD-UPL24

Luminous Intensity Polar Plot





TEST NUMBER: P826549

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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 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 105 | 105 | 105 | 99 | 99 | 99 | 93 | 93 | 93 | 93 | 93 | 93 | 90 |
| 1 | 107 | 102 | 98 | 94 | 103 | 99 | 95 | 92 | 93 | 90 | 87 | 87 | 85 | 83 | 82 | 80 | 78 | 78 | 78 | 78 | 76 |
| 2 | 97 | 89 | 83 | 77 | 94 | 87 | 81 | 76 | 81 | 77 | 72 | 77 | 73 | 69 | 72 | 69 | 66 | 66 | 66 | 66 | 63 |
| 3 | 89 | 79 | 71 | 64 | 85 | 76 | 69 | 63 | 72 | 66 | 61 | 68 | 63 | 58 | 64 | 60 | 56 | 56 | 56 | 56 | 54 |
| 4 | 81 | 70 | 61 | 55 | 78 | 68 | 60 | 54 | 64 | 57 | 52 | 60 | 55 | 50 | 57 | 52 | 48 | 48 | 48 | 48 | 46 |
| 5 | 75 | 62 | 53 | 47 | 72 | 60 | 52 | 46 | 57 | 50 | 45 | 54 | 48 | 43 | 51 | 46 | 42 | 42 | 42 | 42 | 40 |
| 6 | 69 | 56 | 47 | 41 | 66 | 54 | 46 | 40 | 52 | 44 | 39 | 49 | 43 | 38 | 46 | 41 | 37 | 37 | 37 | 37 | 35 |
| 7 | 64 | 51 | 42 | 36 | 62 | 49 | 41 | 36 | 47 | 40 | 35 | 45 | 38 | 34 | 42 | 37 | 33 | 33 | 33 | 33 | 31 |
| 8 | 59 | 46 | 38 | 32 | 57 | 45 | 37 | 32 | 43 | 36 | 31 | 41 | 35 | 30 | 39 | 33 | 29 | 29 | 29 | 29 | 27 |
| 9 | 55 | 42 | 34 | 29 | 53 | 41 | 34 | 28 | 39 | 33 | 28 | 38 | 31 | 27 | 36 | 30 | 26 | 26 | 26 | 26 | 24 |
| 10 | 52 | 39 | 31 | 26 | 50 | 38 | 31 | 26 | 36 | 30 | 25 | 35 | 29 | 25 | 33 | 28 | 24 | 24 | 24 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 13319 | 13319 | 13319 |
| 5° | 13168 | 13120 | 13209 |
| 10° | 13056 | 12915 | 13118 |
| 15° | 12909 | 12761 | 13086 |
| 20° | 12761 | 12661 | 13028 |
| 25° | 12539 | 12561 | 12974 |
| 30° | 12301 | 12406 | 12792 |
| 35° | 12027 | 12164 | 12726 |
| 40° | 11690 | 11914 | 12616 |
| 45° | 11248 | 11624 | 12620 |
| 50° | 10676 | 11296 | 12622 |
| 55° | 9822 | 10971 | 12268 |
| 60° | 8736 | 10499 | 11480 |
| 65° | 7362 | 9633 | 7390 |
| 70° | 5786 | 7505 | 5475 |
| 75° | 4183 | 4442 | 5738 |
| 80° | 2738 | 3676 | 5784 |
| 85° | 1372 | 3338 | 6083 |



TEST NUMBER: P826549

CATALOG NUMBER: OHBL-24SE-MCL-UNV-L830-CD-UPL24

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 735.3 | 3.0 |
| 10°-20° | 2108.5 | 8.7 |
| 20°-30° | 3220.3 | 13.3 |
| 30°-40° | 3907.4 | 16.1 |
| 40°-50° | 4095.3 | 16.9 |
| 50°-60° | 3710.9 | 15.3 |
| 60°-70° | 2488.0 | 10.2 |
| 70°-80° | 1117.2 | 4.6 |
| 80°-90° | 411.2 | 1.7 |
| 90°-100° | 337.8 | 1.4 |
| 100°-110° | 806.6 | 3.3 |
| 110°-120° | 671.4 | 2.8 |
| 120°-130° | 324.2 | 1.3 |
| 130°-140° | 165.2 | 0.7 |
| 140°-150° | 96.7 | 0.4 |
| 150°-160° | 57.6 | 0.2 |
| 160°-170° | 30.5 | 0.1 |
| 170°-180° | 9.3 | 0.0 |
| 0°-30° | 6064.1 | 25.0 |
| 0°-40° | 9971.5 | 41.0 |
| 0°-60° | 17777.7 | 73.2 |
| 0°-90° | 21794.1 | 89.7 |
| 90°-120° | 1815.7 | 7.5 |
| 90°-150° | 2401.8 | 9.9 |
| 90°-180° | 2499.0 | 10.3 |
| 0°-180° | 24293.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 7798 | 7798 | 7798 | 7798 | 7798 | |
| 5° | 7747 | 7774 | 7720 | 7744 | 7734 | 737 |
| 15° | 7496 | 7467 | 7414 | 7479 | 7488 | 2116 |
| 25° | 6964 | 6933 | 6982 | 7046 | 7026 | 3210 |
| 35° | 6172 | 6187 | 6250 | 6317 | 6292 | 3858 |
| 45° | 5122 | 5206 | 5303 | 5438 | 5455 | 3946 |
| 55° | 3769 | 3951 | 4220 | 4390 | 4379 | 3365 |
| 65° | 2212 | 2558 | 2904 | 2451 | 2001 | 2204 |
| 75° | 870 | 1263 | 929 | 951 | 1012 | 951 |
| 85° | 150 | 288 | 369 | 445 | 467 | 183 |
| 90° | 6 | 128 | 234 | 297 | 314 | 12 |
| 95° | 50 | 163 | 291 | 371 | 404 | 155 |
| 105° | 938 | 949 | 850 | 637 | 595 | 891 |
| 115° | 653 | 664 | 683 | 690 | 687 | 658 |
| 125° | 322 | 340 | 358 | 360 | 359 | 303 |
| 135° | 196 | 201 | 209 | 216 | 219 | 155 |
| 145° | 145 | 150 | 153 | 155 | 157 | 93 |
| 155° | 119 | 122 | 124 | 125 | 124 | 56 |
| 165° | 105 | 106 | 107 | 107 | 107 | 30 |
| 175° | 96 | 97 | 96 | 96 | 96 | 9 |
| 180° | 95 | 95 | 95 | 95 | 95 | |



TEST NUMBER: P826549

CATALOG NUMBER: OHBL-24SE-MCL-UNV-L830-CD-UPL24

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 7798.1 | 7798.1 | 7798.1 | 7798.1 | 7798.1 |
| 2.5° | 7766.6 | 7799.3 | 7758.7 | 7802.7 | 7814.0 |
| 5° | 7747.4 | 7774.5 | 7720.4 | 7744.1 | 7733.9 |
| 7.5° | 7712.4 | 7721.5 | 7657.3 | 7676.4 | 7656.1 |
| 10° | 7660.6 | 7656.1 | 7580.6 | 7617.8 | 7622.3 |
| 12.5° | 7583.9 | 7570.4 | 7502.8 | 7559.1 | 7560.3 |
| 15° | 7496.0 | 7466.7 | 7413.6 | 7479.1 | 7488.1 |
| 17.5° | 7394.5 | 7356.1 | 7321.2 | 7405.8 | 7392.2 |
| 20° | 7276.1 | 7231.0 | 7224.3 | 7316.7 | 7282.9 |
| 22.5° | 7129.5 | 7094.6 | 7110.4 | 7198.3 | 7176.9 |
| 25° | 6963.8 | 6933.4 | 6981.9 | 7046.1 | 7025.8 |
| 27.5° | 6789.1 | 6771.0 | 6826.2 | 6875.9 | 6836.3 |
| 30° | 6597.4 | 6587.2 | 6660.5 | 6701.0 | 6651.4 |
| 32.5° | 6388.7 | 6392.1 | 6462.1 | 6517.2 | 6471.1 |
| 35° | 6172.3 | 6186.9 | 6250.1 | 6316.6 | 6291.8 |
| 37.5° | 5934.3 | 5967.0 | 6030.2 | 6105.7 | 6079.8 |
| 40° | 5682.9 | 5730.3 | 5800.2 | 5891.4 | 5867.8 |
| 42.5° | 5411.2 | 5470.9 | 5561.1 | 5662.6 | 5660.3 |
| 45° | 5122.5 | 5205.9 | 5302.9 | 5438.2 | 5455.1 |
| 47.5° | 4822.5 | 4916.1 | 5039.1 | 5219.5 | 5245.4 |
| 50° | 4496.7 | 4614.0 | 4767.3 | 4983.8 | 4999.6 |
| 52.5° | 4133.6 | 4293.8 | 4496.7 | 4704.1 | 4685.0 |
| 55° | 3769.4 | 3951.0 | 4220.4 | 4389.6 | 4379.4 |
| 57.5° | 3406.3 | 3610.5 | 3937.5 | 4058.1 | 4056.9 |
| 60° | 3000.4 | 3258.6 | 3616.0 | 3707.4 | 3617.2 |
| 62.5° | 2624.9 | 2902.3 | 3273.3 | 3206.8 | 2897.8 |
| 65° | 2212.3 | 2558.5 | 2904.5 | 2451.3 | 2001.4 |
| 67.5° | 1845.8 | 2206.6 | 2467.1 | 1678.9 | 1437.6 |
| 70° | 1477.1 | 1875.2 | 1923.6 | 1245.9 | 1229.1 |
| 72.5° | 1150.1 | 1574.0 | 1327.2 | 1066.7 | 1120.8 |
| 75° | 870.4 | 1262.9 | 929.1 | 950.6 | 1012.5 |
| 77.5° | 634.8 | 969.7 | 722.8 | 833.2 | 884.0 |
| 80° | 436.3 | 686.7 | 589.7 | 700.2 | 735.1 |
| 82.5° | 274.0 | 453.3 | 472.4 | 563.8 | 599.8 |
| 85° | 150.0 | 287.5 | 368.7 | 445.4 | 466.8 |
| 87.5° | 62.0 | 173.6 | 281.9 | 343.9 | 362.0 |
| 90° | 5.8 | 127.5 | 234.3 | 296.8 | 314.5 |
| 92.5° | 16.9 | 115.2 | 222.6 | 287.7 | 307.7 |
| 95° | 50.4 | 163.0 | 290.9 | 371.1 | 403.6 |
| 97.5° | 252.6 | 318.2 | 400.6 | 484.6 | 519.8 |
| 100° | 517.0 | 584.8 | 531.4 | 575.7 | 587.6 |
| 102.5° | 798.2 | 820.7 | 651.8 | 608.0 | 603.9 |
| 105° | 937.8 | 949.1 | 849.7 | 637.1 | 594.8 |



TEST NUMBER: P826549

CATALOG NUMBER: OHBL-24SE-MCL-UNV-L830-CD-UPL24

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 759.8 | 778.9 | 786.5 | 775.2 | 747.7 |
| 115° | 653.0 | 664.0 | 683.1 | 690.3 | 687.0 |
| 117.5° | 559.9 | 563.1 | 583.7 | 589.6 | 592.8 |
| 120° | 465.0 | 476.4 | 499.4 | 500.4 | 495.9 |
| 122.5° | 391.5 | 402.7 | 420.6 | 424.4 | 420.0 |
| 125° | 322.4 | 340.3 | 358.1 | 360.5 | 358.9 |
| 127.5° | 275.2 | 287.3 | 305.6 | 309.9 | 310.1 |
| 130° | 240.7 | 249.3 | 264.3 | 269.7 | 270.6 |
| 132.5° | 215.8 | 223.4 | 233.4 | 241.6 | 240.6 |
| 135° | 196.3 | 201.1 | 208.7 | 216.3 | 219.2 |
| 137.5° | 181.6 | 184.3 | 189.9 | 198.4 | 199.5 |
| 140° | 167.6 | 171.3 | 174.9 | 181.3 | 183.3 |
| 142.5° | 154.4 | 159.2 | 161.8 | 167.0 | 168.2 |
| 145° | 145.1 | 149.9 | 152.7 | 154.8 | 156.8 |
| 147.5° | 137.8 | 141.5 | 143.4 | 145.3 | 146.4 |
| 150° | 131.3 | 133.2 | 136.0 | 136.9 | 137.8 |
| 152.5° | 124.8 | 126.6 | 129.4 | 130.4 | 130.4 |
| 155° | 119.2 | 122.2 | 124.0 | 125.0 | 123.9 |
| 157.5° | 114.6 | 117.5 | 119.4 | 120.3 | 120.3 |
| 160° | 110.8 | 112.9 | 114.7 | 115.7 | 115.7 |
| 162.5° | 108.2 | 109.2 | 110.1 | 111.0 | 111.0 |
| 165° | 105.4 | 106.4 | 107.3 | 107.3 | 107.3 |
| 167.5° | 102.6 | 103.8 | 103.6 | 104.5 | 104.5 |
| 170° | 99.8 | 100.8 | 100.8 | 100.6 | 100.6 |
| 172.5° | 98.0 | 98.9 | 98.9 | 97.8 | 98.7 |
| 175° | 96.1 | 97.1 | 95.9 | 95.8 | 95.8 |
| 177.5° | 97.2 | 96.1 | 95.0 | 93.9 | 92.8 |
| 180° | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 |



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°







| | | | | | |
|--------|-------|-------|-------|-------|-------|
| 107.5° | 942.7 | 962.2 | 923.5 | 744.9 | 633.6 |
| 110° | 871.3 | 890.9 | 877.2 | 815.7 | 726.8 |



(END OF REPORT)