

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: P828353

Luminaire Tested: **OHBL-24SE-MFL-UNV-L940-CD-UPL36**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P828353
REPORT IS A COMBINATION OF REPORTS P826307 AND G3-2310-221-2
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: OHBL-24SE-MFL-UNV-L940-CD-UPL36
Description:
Light Source: -
Ballast/Driver: -

Summary

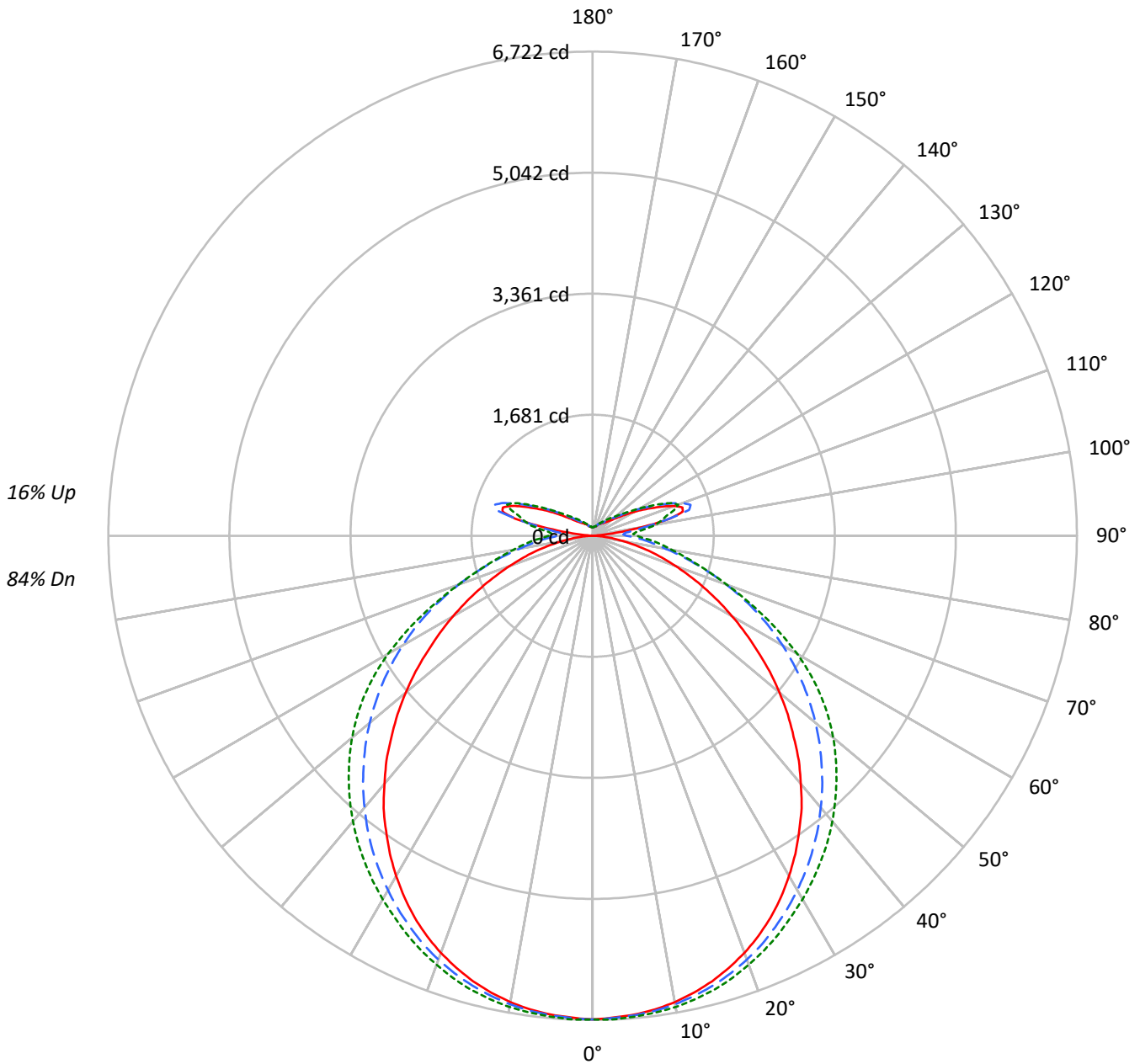
Lumens per Lamp: N/A
Luminaire Lumens: 23212.5 lumens
Efficiency: N/A
Efficacy: 139.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 3.78' x L: 1.67' x H: 0.17')
CIE Type: Semi-Direct

Input Watts (W): 166.8
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: P828353

CATALOG NUMBER: OHBL-24SE-MFL-UNV-L940-CD-UPL36

Luminous Intensity Polar Plot





TEST NUMBER: P828353

CATALOG NUMBER: OHBL-24SE-MFL-UNV-L940-CD-UPL36

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 115 | 115 | 115 | 115 | 111 | 111 | 111 | 111 | 102 | 102 | 102 | 94 | 94 | 94 | 87 | 87 | 87 | 84 | | | | | | | | | | | | | | | | | | | |
| 1 | 105 | 100 | 95 | 91 | 100 | 96 | 92 | 88 | 89 | 85 | 83 | 82 | 80 | 77 | 76 | 74 | 72 | 69 | | | | | | | | | | | | | | | | | | | |
| 2 | 95 | 87 | 80 | 74 | 91 | 83 | 77 | 72 | 77 | 72 | 68 | 72 | 68 | 64 | 66 | 63 | 60 | 57 | | | | | | | | | | | | | | | | | | | |
| 3 | 87 | 76 | 68 | 62 | 83 | 73 | 66 | 60 | 68 | 62 | 57 | 63 | 58 | 54 | 59 | 54 | 51 | 48 | | | | | | | | | | | | | | | | | | | |
| 4 | 79 | 67 | 59 | 52 | 76 | 65 | 57 | 51 | 60 | 54 | 48 | 56 | 51 | 46 | 52 | 48 | 44 | 41 | | | | | | | | | | | | | | | | | | | |
| 5 | 73 | 60 | 51 | 45 | 69 | 58 | 50 | 44 | 54 | 47 | 42 | 50 | 44 | 40 | 47 | 42 | 38 | 35 | | | | | | | | | | | | | | | | | | | |
| 6 | 67 | 54 | 45 | 39 | 64 | 52 | 44 | 38 | 49 | 42 | 36 | 46 | 40 | 35 | 43 | 37 | 33 | 31 | | | | | | | | | | | | | | | | | | | |
| 7 | 62 | 49 | 40 | 34 | 59 | 47 | 39 | 34 | 44 | 37 | 32 | 41 | 35 | 31 | 39 | 34 | 30 | 27 | | | | | | | | | | | | | | | | | | | |
| 8 | 58 | 44 | 36 | 30 | 55 | 43 | 35 | 30 | 40 | 34 | 29 | 38 | 32 | 28 | 36 | 30 | 26 | 24 | | | | | | | | | | | | | | | | | | | |
| 9 | 54 | 41 | 33 | 27 | 52 | 40 | 32 | 27 | 37 | 30 | 26 | 35 | 29 | 25 | 33 | 28 | 24 | 22 | | | | | | | | | | | | | | | | | | | |
| 10 | 50 | 38 | 30 | 25 | 48 | 36 | 29 | 24 | 34 | 28 | 23 | 32 | 27 | 23 | 31 | 25 | 22 | 20 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 11470 | 11470 | 11470 |
| 5° | 11341 | 11356 | 11444 |
| 10° | 11207 | 11251 | 11433 |
| 15° | 11027 | 11126 | 11403 |
| 20° | 10806 | 10974 | 11337 |
| 25° | 10529 | 10786 | 11272 |
| 30° | 10168 | 10583 | 11209 |
| 35° | 9742 | 10367 | 11166 |
| 40° | 9243 | 10117 | 11131 |
| 45° | 8665 | 9846 | 11076 |
| 50° | 8038 | 9572 | 11003 |
| 55° | 7284 | 9237 | 10834 |
| 60° | 6513 | 8842 | 10406 |
| 65° | 5677 | 8340 | 9637 |
| 70° | 4777 | 7701 | 8814 |
| 75° | 3862 | 6962 | 8382 |
| 80° | 2754 | 6413 | 8781 |
| 85° | 1532 | 6606 | 11008 |



TEST NUMBER: P828353

CATALOG NUMBER: OHBL-24SE-MFL-UNV-L940-CD-UPL36

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 636.3 | 2.7 |
| 10°-20° | 1825.5 | 7.9 |
| 20°-30° | 2760.8 | 11.9 |
| 30°-40° | 3314.3 | 14.3 |
| 40°-50° | 3423.2 | 14.7 |
| 50°-60° | 3079.8 | 13.3 |
| 60°-70° | 2319.9 | 10.0 |
| 70°-80° | 1400.9 | 6.0 |
| 80°-90° | 691.8 | 3.0 |
| 90°-100° | 527.6 | 2.3 |
| 100°-110° | 1248.0 | 5.4 |
| 110°-120° | 993.3 | 4.3 |
| 120°-130° | 479.0 | 2.1 |
| 130°-140° | 243.6 | 1.0 |
| 140°-150° | 139.6 | 0.6 |
| 150°-160° | 78.9 | 0.3 |
| 160°-170° | 38.3 | 0.2 |
| 170°-180° | 11.7 | 0.1 |
| 0°-30° | 5222.6 | 22.5 |
| 0°-40° | 8536.9 | 36.8 |
| 0°-60° | 15039.9 | 64.8 |
| 0°-90° | 19452.5 | 83.8 |
| 90°-120° | 2768.9 | 11.9 |
| 90°-150° | 3631.2 | 15.6 |
| 90°-180° | 3760.0 | 16.2 |
| 0°-180° | 23212.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 6715 | 6715 | 6715 | 6715 | 6715 | |
| 5° | 6673 | 6691 | 6683 | 6709 | 6701 | 634 |
| 15° | 6403 | 6434 | 6464 | 6518 | 6525 | 1805 |
| 25° | 5848 | 5912 | 5996 | 6089 | 6104 | 2690 |
| 35° | 5000 | 5116 | 5327 | 5488 | 5520 | 3125 |
| 45° | 3946 | 4145 | 4492 | 4737 | 4788 | 3046 |
| 55° | 2796 | 3085 | 3553 | 3821 | 3867 | 2506 |
| 65° | 1706 | 2054 | 2515 | 2640 | 2610 | 1695 |
| 75° | 804 | 1154 | 1456 | 1494 | 1479 | 857 |
| 85° | 168 | 442 | 730 | 830 | 845 | 194 |
| 90° | 7 | 215 | 472 | 588 | 611 | 15 |
| 95° | 62 | 224 | 456 | 580 | 609 | 208 |
| 105° | 1296 | 1349 | 1386 | 1133 | 1056 | 1232 |
| 115° | 909 | 921 | 1002 | 1046 | 1044 | 919 |
| 125° | 454 | 474 | 534 | 556 | 552 | 427 |
| 135° | 272 | 282 | 308 | 336 | 343 | 215 |
| 145° | 206 | 209 | 215 | 230 | 236 | 131 |
| 155° | 170 | 174 | 175 | 175 | 176 | 77 |
| 165° | 131 | 133 | 134 | 135 | 136 | 38 |
| 175° | 120 | 120 | 121 | 121 | 122 | 12 |
| 180° | 118 | 118 | 118 | 118 | 118 | |



TEST NUMBER: P828353

CATALOG NUMBER: OHBL-24SE-MFL-UNV-L940-CD-UPL36

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 6715.4 | 6715.4 | 6715.4 | 6715.4 | 6715.4 |
| 2.5° | 6695.7 | 6712.1 | 6702.3 | 6723.6 | 6722.0 |
| 5° | 6672.6 | 6690.7 | 6682.6 | 6708.8 | 6700.6 |
| 7.5° | 6633.3 | 6653.0 | 6651.3 | 6680.9 | 6677.6 |
| 10° | 6575.7 | 6597.1 | 6603.7 | 6643.1 | 6643.1 |
| 12.5° | 6496.8 | 6524.7 | 6541.2 | 6588.8 | 6590.5 |
| 15° | 6403.1 | 6434.3 | 6464.0 | 6518.2 | 6524.7 |
| 17.5° | 6289.7 | 6329.2 | 6370.2 | 6432.8 | 6440.9 |
| 20° | 6161.6 | 6205.9 | 6261.8 | 6327.6 | 6337.4 |
| 22.5° | 6013.6 | 6066.2 | 6138.5 | 6215.7 | 6227.3 |
| 25° | 5847.6 | 5911.7 | 5995.5 | 6089.2 | 6104.0 |
| 27.5° | 5658.6 | 5732.6 | 5846.0 | 5951.2 | 5964.3 |
| 30° | 5453.2 | 5540.3 | 5681.6 | 5806.6 | 5827.9 |
| 32.5° | 5236.2 | 5336.5 | 5510.7 | 5650.4 | 5680.0 |
| 35° | 4999.6 | 5116.2 | 5326.7 | 5487.7 | 5520.5 |
| 37.5° | 4766.2 | 4894.4 | 5132.7 | 5316.7 | 5356.2 |
| 40° | 4493.4 | 4652.8 | 4925.6 | 5129.4 | 5177.1 |
| 42.5° | 4237.0 | 4409.6 | 4718.6 | 4940.4 | 4986.4 |
| 45° | 3946.1 | 4145.0 | 4491.7 | 4736.6 | 4787.6 |
| 47.5° | 3673.2 | 3888.6 | 4273.1 | 4526.2 | 4578.8 |
| 50° | 3385.6 | 3622.3 | 4039.8 | 4304.4 | 4358.6 |
| 52.5° | 3098.0 | 3352.8 | 3798.2 | 4072.7 | 4123.6 |
| 55° | 2795.6 | 3084.9 | 3553.2 | 3821.2 | 3867.2 |
| 57.5° | 2514.6 | 2820.3 | 3301.8 | 3556.5 | 3584.5 |
| 60° | 2236.8 | 2554.0 | 3045.4 | 3268.9 | 3278.8 |
| 62.5° | 1965.6 | 2299.2 | 2782.5 | 2959.9 | 2946.8 |
| 65° | 1705.9 | 2054.4 | 2514.6 | 2639.5 | 2609.9 |
| 67.5° | 1456.1 | 1816.1 | 2240.1 | 2320.6 | 2281.2 |
| 70° | 1219.5 | 1584.4 | 1973.9 | 2014.9 | 1978.8 |
| 72.5° | 1010.7 | 1364.2 | 1704.3 | 1738.8 | 1712.5 |
| 75° | 803.7 | 1153.8 | 1456.1 | 1494.0 | 1479.2 |
| 77.5° | 609.7 | 950.0 | 1227.7 | 1277.0 | 1280.3 |
| 80° | 438.8 | 764.2 | 1028.8 | 1106.1 | 1115.9 |
| 82.5° | 289.3 | 593.3 | 862.8 | 961.4 | 976.2 |
| 85° | 167.6 | 442.1 | 729.7 | 830.0 | 844.8 |
| 87.5° | 72.3 | 318.8 | 586.7 | 677.1 | 695.2 |
| 90° | 7.0 | 215.2 | 472.2 | 588.5 | 610.8 |
| 92.5° | 26.7 | 195.2 | 425.2 | 540.4 | 563.7 |
| 95° | 62.2 | 224.5 | 455.8 | 580.4 | 609.0 |
| 97.5° | 335.0 | 448.1 | 574.6 | 709.4 | 745.0 |
| 100° | 708.0 | 801.9 | 790.6 | 864.0 | 894.5 |
| 102.5° | 1103.6 | 1184.2 | 1081.8 | 991.3 | 976.8 |
| 105° | 1295.6 | 1348.9 | 1385.8 | 1133.1 | 1055.9 |



TEST NUMBER: P828353

CATALOG NUMBER: OHBL-24SE-MFL-UNV-L940-CD-UPL36

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 1065.2 | 1099.0 | 1170.0 | 1209.2 | 1188.0 |
| 115° | 908.7 | 921.2 | 1002.0 | 1045.9 | 1043.9 |
| 117.5° | 780.8 | 790.2 | 862.8 | 895.5 | 890.9 |
| 120° | 659.0 | 672.2 | 740.1 | 760.8 | 760.4 |
| 122.5° | 548.6 | 569.1 | 629.3 | 651.9 | 645.5 |
| 125° | 453.9 | 474.5 | 534.3 | 556.0 | 552.3 |
| 127.5° | 389.7 | 398.2 | 453.2 | 478.4 | 483.3 |
| 130° | 336.6 | 345.3 | 391.0 | 420.6 | 423.9 |
| 132.5° | 300.1 | 310.4 | 345.4 | 374.3 | 383.5 |
| 135° | 272.3 | 281.7 | 308.4 | 335.7 | 343.1 |
| 137.5° | 249.7 | 258.2 | 276.6 | 304.0 | 311.4 |
| 140° | 232.2 | 239.1 | 252.6 | 275.7 | 282.3 |
| 142.5° | 218.2 | 223.4 | 231.1 | 251.8 | 256.7 |
| 145° | 206.0 | 208.7 | 214.7 | 230.4 | 236.2 |
| 147.5° | 195.5 | 199.0 | 203.4 | 210.8 | 216.6 |
| 150° | 186.0 | 190.2 | 192.1 | 195.5 | 201.3 |
| 152.5° | 177.3 | 181.5 | 183.4 | 182.6 | 186.8 |
| 155° | 169.5 | 173.7 | 174.7 | 174.8 | 176.4 |
| 157.5° | 146.1 | 148.7 | 151.3 | 152.2 | 152.2 |
| 160° | 140.8 | 142.6 | 145.2 | 145.2 | 146.1 |
| 162.5° | 135.6 | 137.4 | 139.1 | 140.0 | 140.8 |
| 165° | 131.3 | 133.0 | 133.9 | 134.8 | 135.6 |
| 167.5° | 127.8 | 128.7 | 129.5 | 130.4 | 130.4 |
| 170° | 124.3 | 125.2 | 126.1 | 126.1 | 126.9 |
| 172.5° | 121.7 | 122.6 | 123.5 | 123.5 | 123.5 |
| 175° | 120.0 | 120.0 | 120.9 | 120.9 | 121.7 |
| 177.5° | 118.2 | 119.1 | 119.1 | 119.1 | 120.0 |
| 180° | 118.2 | 118.2 | 118.2 | 118.2 | 118.2 |



Report Generated By 670246072 / DESKTOP-50001EG





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







| | | | | | |
|--------|--------|--------|--------|--------|--------|
| 107.5° | 1307.8 | 1358.2 | 1427.1 | 1326.8 | 1183.7 |
| 110° | 1207.8 | 1260.3 | 1329.0 | 1325.5 | 1265.0 |



(END OF REPORT)