

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: P393448

Luminaire Tested: **24EN-LD2-34-UNV-L82765-W2A-1-U (5700K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393448
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-32)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24EN-LD2-34-UNV-L82765-W2A-1-U (5700K)
Description: 2X4 ENCOUNTER, 3400 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 3000K/5000K CCT, CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3335.4 lumens
Efficiency: N/A
Efficacy: 142.5 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

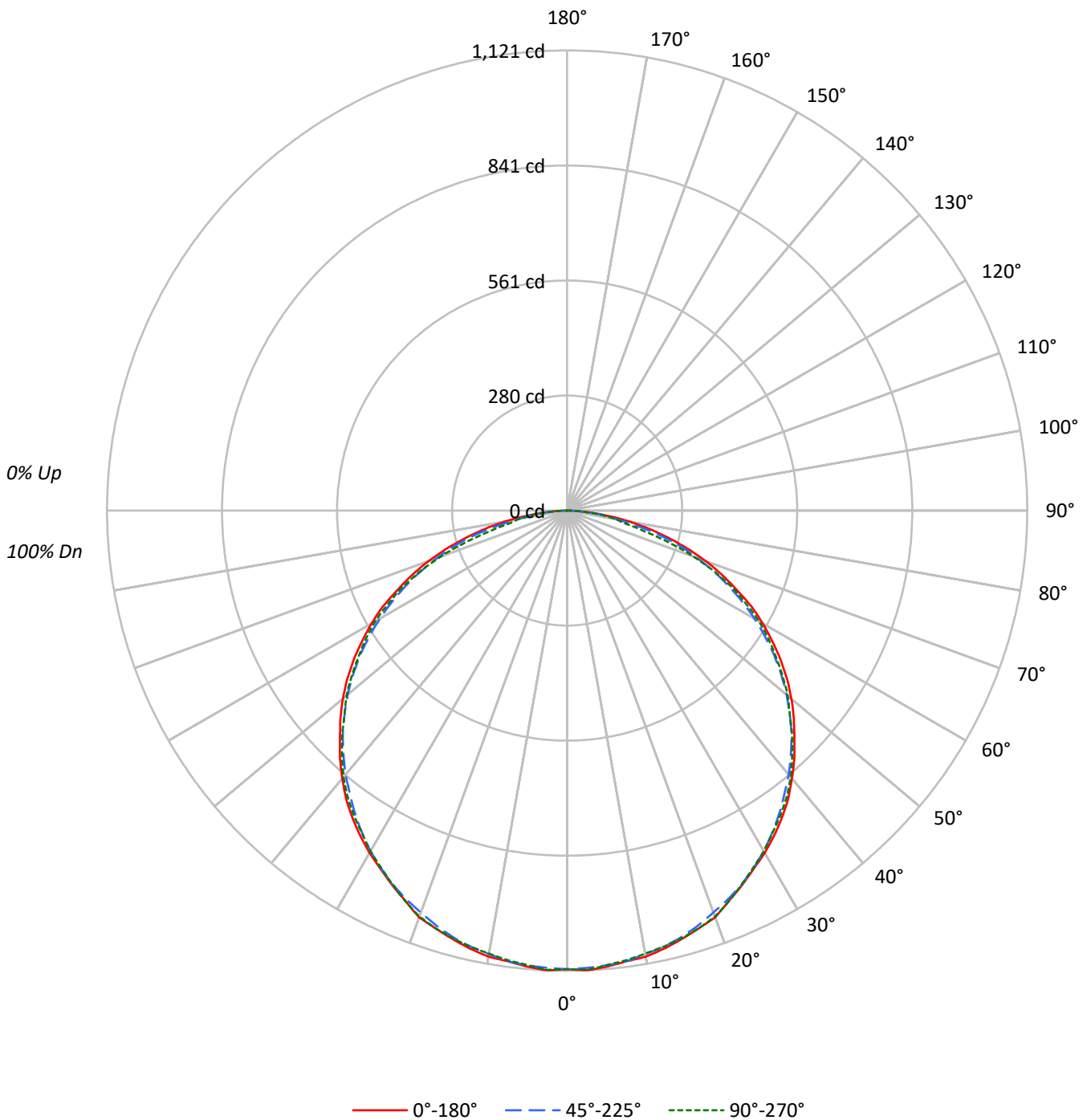
Input Watts (W): 23.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 90 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 79 | 68 | 60 | 53 | 66 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 47 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 50 | 42 | 35 | 62 | 50 | 41 | 35 | 48 | 40 | 35 | 47 | 40 | 35 | 45 | 39 | 34 | 32 |
| 8 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 43 | 36 | 31 | 41 | 35 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 38 | 31 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1503 | 1503 | 1503 |
| 5° | 1506 | 1502 | 1501 |
| 10° | 1508 | 1498 | 1497 |
| 15° | 1505 | 1498 | 1502 |
| 20° | 1510 | 1492 | 1507 |
| 25° | 1495 | 1492 | 1492 |
| 30° | 1496 | 1488 | 1488 |
| 35° | 1499 | 1480 | 1488 |
| 40° | 1496 | 1475 | 1488 |
| 45° | 1489 | 1471 | 1474 |
| 50° | 1493 | 1461 | 1469 |
| 55° | 1490 | 1445 | 1456 |
| 60° | 1481 | 1419 | 1452 |
| 65° | 1448 | 1381 | 1415 |
| 70° | 1410 | 1323 | 1293 |
| 75° | 1323 | 1223 | 1017 |
| 80° | 1187 | 956 | 941 |
| 85° | 937 | 863 | 789 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 105.8 | 3.2 |
| 10°-20° | 303.9 | 9.1 |
| 20°-30° | 463.5 | 13.9 |
| 30°-40° | 565.6 | 17.0 |
| 40°-50° | 598.4 | 17.9 |
| 50°-60° | 554.7 | 16.6 |
| 60°-70° | 435.6 | 13.1 |
| 70°-80° | 243.0 | 7.3 |
| 80°-90° | 64.9 | 1.9 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 873.2 | 26.2 |
| 0°-40° | 1438.8 | 43.1 |
| 0°-60° | 2591.8 | 77.7 |
| 0°-90° | 3335.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3335.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1117 | 1117 | 1117 | 1117 | 1117 | |
| 5° | 1115 | 1114 | 1112 | 1111 | 1111 | 106 |
| 15° | 1080 | 1078 | 1076 | 1073 | 1078 | 305 |
| 25° | 1007 | 1005 | 1005 | 1003 | 1005 | 465 |
| 35° | 913 | 906 | 901 | 899 | 906 | 571 |
| 45° | 783 | 780 | 773 | 773 | 775 | 605 |
| 55° | 635 | 625 | 616 | 615 | 621 | 567 |
| 65° | 455 | 446 | 434 | 437 | 444 | 451 |
| 75° | 254 | 245 | 235 | 205 | 196 | 269 |
| 85° | 61 | 56 | 56 | 52 | 51 | 71 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 24EN-LD2-34-UNV-L82765-W2A-1-U (5700K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1117.1 | 1117.1 | 1117.1 | 1117.1 | 1117.1 |
| 2.5° | 1120.9 | 1117.1 | 1115.1 | 1117.1 | 1120.0 |
| 5° | 1115.1 | 1114.2 | 1112.2 | 1111.3 | 1111.3 |
| 7.5° | 1107.4 | 1109.4 | 1107.4 | 1104.5 | 1104.5 |
| 10° | 1103.6 | 1101.6 | 1096.8 | 1095.9 | 1095.9 |
| 12.5° | 1093.0 | 1090.1 | 1088.1 | 1084.3 | 1088.1 |
| 15° | 1080.4 | 1077.5 | 1075.6 | 1072.7 | 1078.5 |
| 17.5° | 1066.9 | 1060.2 | 1060.2 | 1060.2 | 1066.9 |
| 20° | 1054.4 | 1044.8 | 1041.9 | 1043.8 | 1052.5 |
| 22.5° | 1029.4 | 1025.5 | 1024.5 | 1026.5 | 1030.3 |
| 25° | 1007.2 | 1005.3 | 1005.3 | 1003.3 | 1005.3 |
| 27.5° | 984.1 | 984.1 | 982.1 | 980.2 | 981.2 |
| 30° | 962.9 | 960.0 | 958.0 | 956.1 | 958.0 |
| 32.5° | 938.8 | 933.9 | 930.1 | 929.1 | 931.0 |
| 35° | 912.7 | 906.0 | 901.2 | 899.2 | 906.0 |
| 37.5° | 884.8 | 875.1 | 869.4 | 869.4 | 879.0 |
| 40° | 852.0 | 841.4 | 839.5 | 838.5 | 847.2 |
| 42.5° | 819.2 | 811.5 | 806.7 | 807.7 | 811.5 |
| 45° | 782.6 | 779.7 | 773.0 | 773.0 | 774.9 |
| 47.5° | 748.9 | 745.0 | 735.4 | 737.3 | 735.4 |
| 50° | 713.2 | 706.5 | 697.8 | 694.9 | 701.7 |
| 52.5° | 675.6 | 667.9 | 657.3 | 655.4 | 661.2 |
| 55° | 635.2 | 624.6 | 615.9 | 614.9 | 620.7 |
| 57.5° | 592.7 | 582.1 | 571.5 | 571.5 | 581.2 |
| 60° | 550.3 | 539.7 | 527.2 | 527.2 | 539.7 |
| 62.5° | 506.0 | 494.4 | 480.9 | 483.8 | 491.5 |
| 65° | 454.9 | 446.2 | 433.7 | 436.6 | 444.3 |
| 67.5° | 407.7 | 398.1 | 384.6 | 388.4 | 388.4 |
| 70° | 358.5 | 346.0 | 336.4 | 330.6 | 328.7 |
| 72.5° | 306.5 | 295.9 | 289.1 | 267.9 | 262.2 |
| 75° | 254.4 | 244.8 | 235.2 | 205.3 | 195.7 |
| 77.5° | 204.3 | 197.6 | 178.3 | 146.5 | 142.6 |
| 80° | 153.2 | 150.4 | 123.4 | 121.4 | 121.4 |
| 82.5° | 104.1 | 102.2 | 92.5 | 87.7 | 86.7 |
| 85° | 60.7 | 55.9 | 55.9 | 52.0 | 51.1 |
| 87.5° | 21.2 | 22.2 | 24.1 | 23.1 | 22.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)