

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: P393472

Luminaire Tested: **24EN-LD2-34-UNV-L93050-W2A-1-U (5700K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393472
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-L93050-W2A-1-U (5700K)
Description: 2X4 ENCOUNTER, 3400 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3052.8 lumens
Efficiency: N/A
Efficacy: 131.0 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

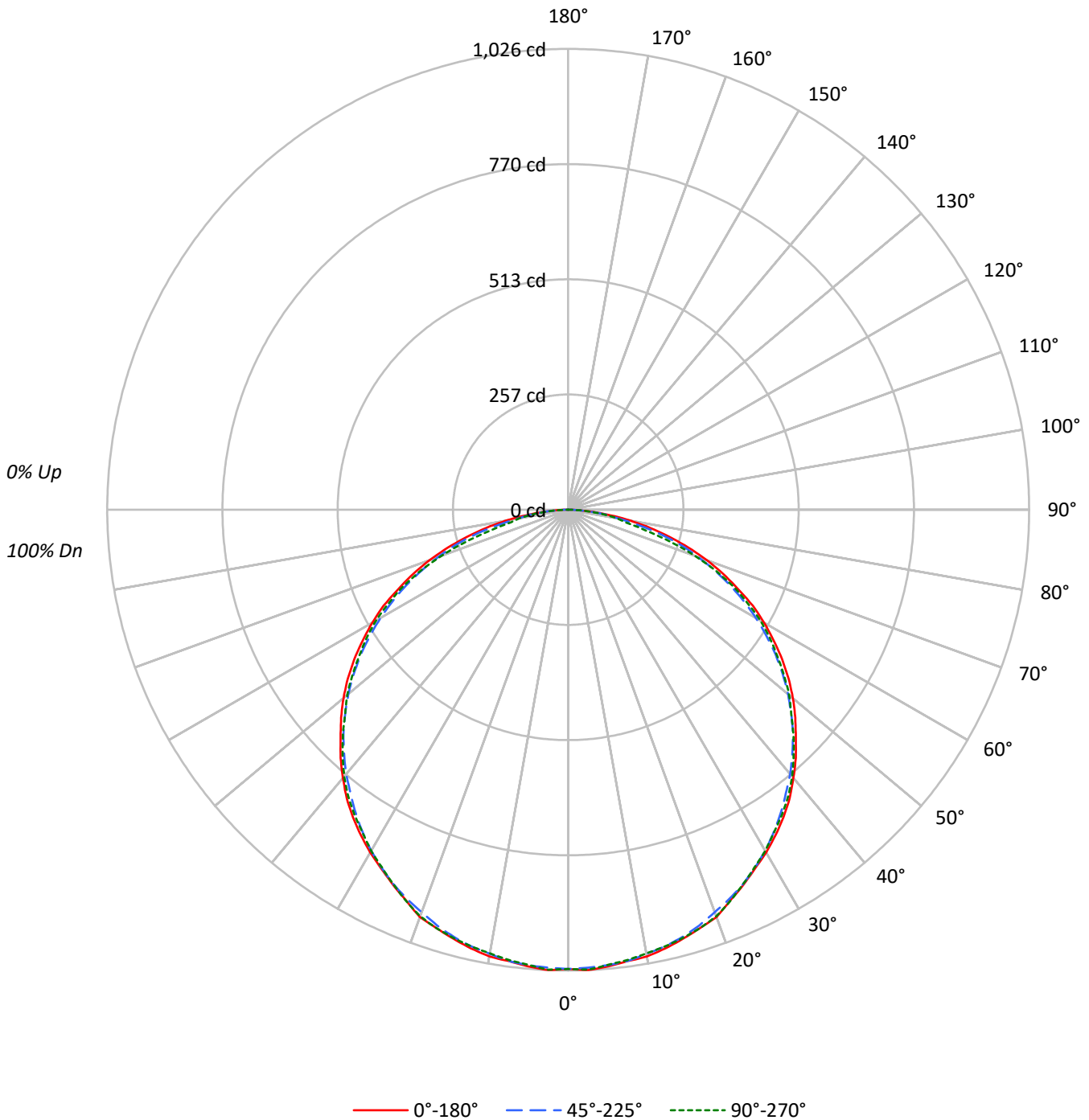
Input Watts (W): 23.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1376 | 1376 | 1376 |
| 5° | 1378 | 1375 | 1374 |
| 10° | 1380 | 1372 | 1370 |
| 15° | 1377 | 1371 | 1375 |
| 20° | 1382 | 1365 | 1379 |
| 25° | 1368 | 1366 | 1366 |
| 30° | 1369 | 1362 | 1362 |
| 35° | 1372 | 1355 | 1362 |
| 40° | 1370 | 1350 | 1362 |
| 45° | 1363 | 1346 | 1349 |
| 50° | 1366 | 1337 | 1344 |
| 55° | 1364 | 1322 | 1333 |
| 60° | 1355 | 1298 | 1329 |
| 65° | 1326 | 1264 | 1295 |
| 70° | 1291 | 1211 | 1183 |
| 75° | 1211 | 1119 | 931 |
| 80° | 1087 | 875 | 862 |
| 85° | 858 | 790 | 722 |



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CATALOG NUMBER: 24EN-LD2-34-UNV-L93050-W2A-1-U (5700K)

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 96.8 | 3.2 |
| 10°-20° | 278.1 | 9.1 |
| 20°-30° | 424.3 | 13.9 |
| 30°-40° | 517.7 | 17.0 |
| 40°-50° | 547.7 | 17.9 |
| 50°-60° | 507.7 | 16.6 |
| 60°-70° | 398.7 | 13.1 |
| 70°-80° | 222.4 | 7.3 |
| 80°-90° | 59.4 | 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° | 799.2 | 26.2 |
| 0°-40° | 1316.9 | 43.1 |
| 0°-60° | 2372.2 | 77.7 |
| 0°-90° | 3052.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3052.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1022 | 1022 | 1022 | 1022 | 1022 | |
| 5° | 1021 | 1020 | 1018 | 1017 | 1017 | 97 |
| 15° | 989 | 986 | 984 | 982 | 987 | 279 |
| 25° | 922 | 920 | 920 | 918 | 920 | 426 |
| 35° | 835 | 829 | 825 | 823 | 829 | 523 |
| 45° | 716 | 714 | 708 | 708 | 709 | 554 |
| 55° | 581 | 572 | 564 | 563 | 568 | 519 |
| 65° | 416 | 408 | 397 | 400 | 407 | 413 |
| 75° | 233 | 224 | 215 | 188 | 179 | 246 |
| 85° | 56 | 51 | 51 | 48 | 47 | 65 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393472

CATALOG NUMBER: 24EN-LD2-34-UNV-L93050-W2A-1-U (5700K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1022.4 | 1022.4 | 1022.4 | 1022.4 | 1022.4 |
| 2.5° | 1025.9 | 1022.4 | 1020.6 | 1022.4 | 1025.1 |
| 5° | 1020.6 | 1019.8 | 1018.0 | 1017.1 | 1017.1 |
| 7.5° | 1013.6 | 1015.4 | 1013.6 | 1010.9 | 1010.9 |
| 10° | 1010.1 | 1008.3 | 1003.9 | 1003.0 | 1003.0 |
| 12.5° | 1000.4 | 997.7 | 995.9 | 992.4 | 995.9 |
| 15° | 988.9 | 986.2 | 984.5 | 981.8 | 987.1 |
| 17.5° | 976.5 | 970.4 | 970.4 | 970.4 | 976.5 |
| 20° | 965.1 | 956.2 | 953.6 | 955.4 | 963.3 |
| 22.5° | 942.1 | 938.6 | 937.7 | 939.5 | 943.0 |
| 25° | 921.8 | 920.1 | 920.1 | 918.3 | 920.1 |
| 27.5° | 900.7 | 900.7 | 898.9 | 897.1 | 898.0 |
| 30° | 881.3 | 878.6 | 876.9 | 875.1 | 876.9 |
| 32.5° | 859.2 | 854.8 | 851.3 | 850.4 | 852.2 |
| 35° | 835.4 | 829.2 | 824.8 | 823.0 | 829.2 |
| 37.5° | 809.8 | 801.0 | 795.7 | 795.7 | 804.5 |
| 40° | 779.8 | 770.1 | 768.4 | 767.5 | 775.4 |
| 42.5° | 749.8 | 742.8 | 738.4 | 739.2 | 742.8 |
| 45° | 716.3 | 713.7 | 707.5 | 707.5 | 709.2 |
| 47.5° | 685.4 | 681.9 | 673.1 | 674.8 | 673.1 |
| 50° | 652.8 | 646.6 | 638.7 | 636.0 | 642.2 |
| 52.5° | 618.4 | 611.3 | 601.6 | 599.9 | 605.2 |
| 55° | 581.3 | 571.6 | 563.7 | 562.8 | 568.1 |
| 57.5° | 542.5 | 532.8 | 523.1 | 523.1 | 531.9 |
| 60° | 503.7 | 494.0 | 482.5 | 482.5 | 494.0 |
| 62.5° | 463.1 | 452.5 | 440.2 | 442.8 | 449.9 |
| 65° | 416.4 | 408.4 | 397.0 | 399.6 | 406.7 |
| 67.5° | 373.1 | 364.3 | 352.0 | 355.5 | 355.5 |
| 70° | 328.2 | 316.7 | 307.9 | 302.6 | 300.8 |
| 72.5° | 280.5 | 270.8 | 264.6 | 245.2 | 239.9 |
| 75° | 232.9 | 224.1 | 215.2 | 187.9 | 179.1 |
| 77.5° | 187.0 | 180.8 | 163.2 | 134.1 | 130.6 |
| 80° | 140.3 | 137.6 | 112.9 | 111.2 | 111.2 |
| 82.5° | 95.3 | 93.5 | 84.7 | 80.3 | 79.4 |
| 85° | 55.6 | 51.2 | 51.2 | 47.6 | 46.8 |
| 87.5° | 19.4 | 20.3 | 22.1 | 21.2 | 20.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)