

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: P393528

Luminaire Tested: **24EN-LD2-45-UNV-L92765-W2A-1-U (5700K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393528
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-34)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24EN-LD2-45-UNV-L92765-W2A-1-U (5700K)
Description: 2X4 ENCOUNTER, 4500 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3921.2 lumens
Efficiency: N/A
Efficacy: 123.7 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

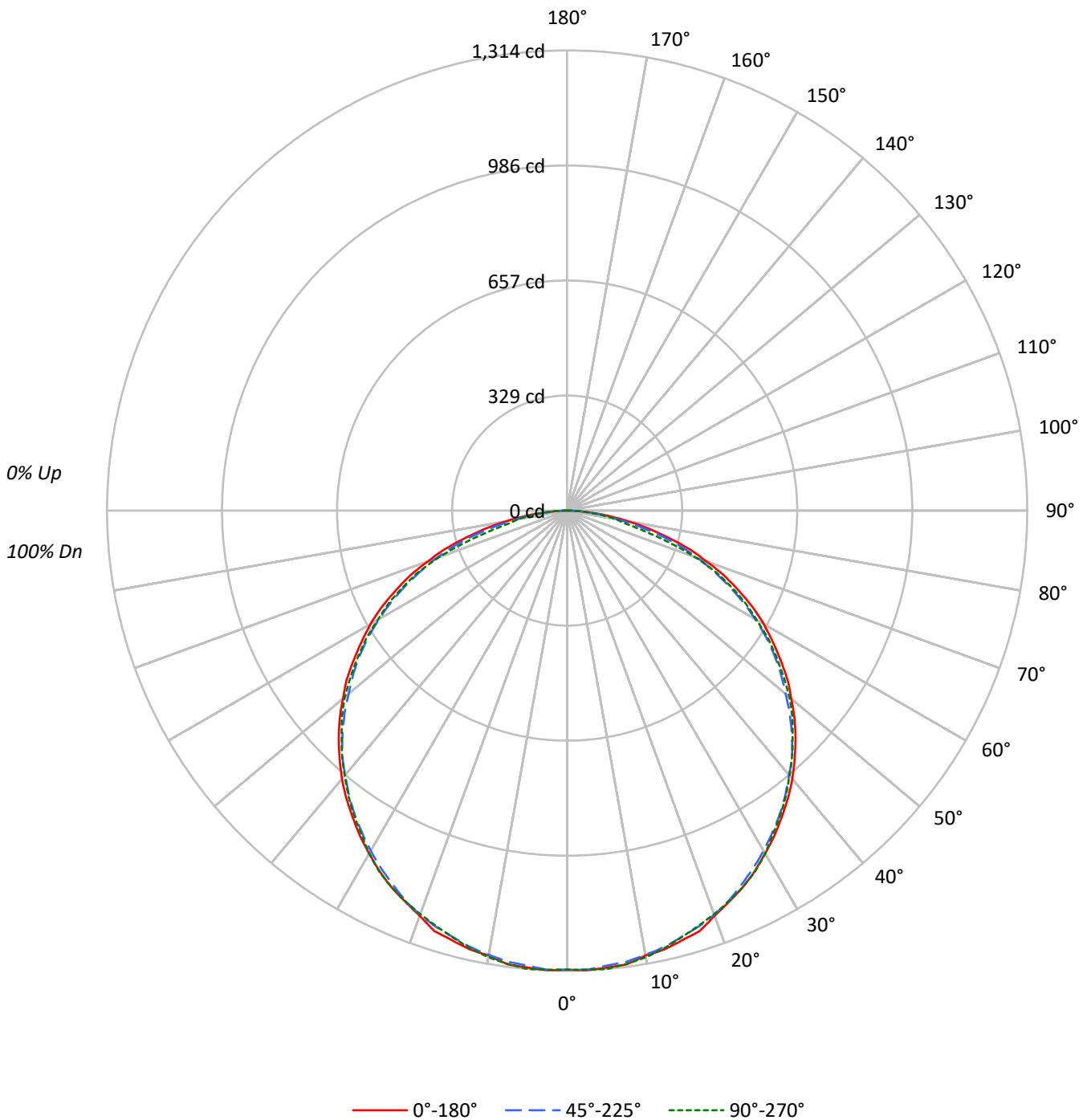
Input Watts (W): 31.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 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 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 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° | 1764 | 1764 | 1764 |
| 5° | 1769 | 1762 | 1774 |
| 10° | 1762 | 1760 | 1769 |
| 15° | 1769 | 1756 | 1757 |
| 20° | 1763 | 1759 | 1756 |
| 25° | 1762 | 1750 | 1761 |
| 30° | 1757 | 1743 | 1757 |
| 35° | 1754 | 1739 | 1743 |
| 40° | 1757 | 1732 | 1735 |
| 45° | 1756 | 1726 | 1733 |
| 50° | 1748 | 1706 | 1734 |
| 55° | 1745 | 1696 | 1711 |
| 60° | 1746 | 1667 | 1681 |
| 65° | 1720 | 1624 | 1651 |
| 70° | 1660 | 1566 | 1529 |
| 75° | 1553 | 1437 | 1197 |
| 80° | 1373 | 1154 | 1107 |
| 85° | 1122 | 1017 | 925 |



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CATALOG NUMBER: 24EN-LD2-45-UNV-L92765-W2A-1-U (5700K)

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 124.2 | 3.2 |
| 10°-20° | 356.8 | 9.1 |
| 20°-30° | 544.4 | 13.9 |
| 30°-40° | 664.2 | 16.9 |
| 40°-50° | 703.0 | 17.9 |
| 50°-60° | 652.0 | 16.6 |
| 60°-70° | 512.6 | 13.1 |
| 70°-80° | 287.2 | 7.3 |
| 80°-90° | 76.7 | 2.0 |
| 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° | 1025.5 | 26.2 |
| 0°-40° | 1689.7 | 43.1 |
| 0°-60° | 3044.7 | 77.6 |
| 0°-90° | 3921.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3921.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1311 | 1311 | 1311 | 1311 | 1311 | |
| 5° | 1310 | 1307 | 1304 | 1304 | 1314 | 125 |
| 15° | 1270 | 1265 | 1261 | 1263 | 1262 | 359 |
| 25° | 1187 | 1181 | 1178 | 1179 | 1186 | 547 |
| 35° | 1068 | 1065 | 1059 | 1059 | 1061 | 669 |
| 45° | 923 | 917 | 907 | 905 | 911 | 712 |
| 55° | 744 | 735 | 723 | 724 | 729 | 666 |
| 65° | 540 | 526 | 510 | 514 | 519 | 534 |
| 75° | 299 | 292 | 276 | 242 | 230 | 317 |
| 85° | 73 | 67 | 66 | 62 | 60 | 84 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393528

CATALOG NUMBER: 24EN-LD2-45-UNV-L92765-W2A-1-U (5700K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1311.2 | 1311.2 | 1311.2 | 1311.2 | 1311.2 |
| 2.5° | 1313.8 | 1309.5 | 1312.0 | 1306.9 | 1312.0 |
| 5° | 1309.5 | 1306.9 | 1304.3 | 1303.5 | 1313.8 |
| 7.5° | 1306.9 | 1301.8 | 1299.2 | 1296.6 | 1305.2 |
| 10° | 1289.8 | 1291.5 | 1288.1 | 1288.9 | 1294.9 |
| 12.5° | 1283.8 | 1278.7 | 1277.0 | 1277.0 | 1280.4 |
| 15° | 1270.1 | 1265.0 | 1260.7 | 1263.3 | 1261.5 |
| 17.5° | 1259.0 | 1245.3 | 1246.1 | 1246.1 | 1243.6 |
| 20° | 1231.6 | 1225.6 | 1228.2 | 1223.9 | 1226.5 |
| 22.5° | 1208.5 | 1205.1 | 1205.9 | 1201.6 | 1207.6 |
| 25° | 1187.1 | 1181.1 | 1178.5 | 1179.4 | 1186.2 |
| 27.5° | 1160.6 | 1154.6 | 1151.1 | 1150.3 | 1162.3 |
| 30° | 1130.6 | 1126.3 | 1122.0 | 1122.0 | 1130.6 |
| 32.5° | 1101.5 | 1095.5 | 1090.4 | 1089.5 | 1094.7 |
| 35° | 1068.1 | 1064.7 | 1058.7 | 1058.7 | 1061.3 |
| 37.5° | 1035.6 | 1028.8 | 1023.6 | 1024.5 | 1026.2 |
| 40° | 1000.5 | 993.7 | 986.0 | 986.0 | 987.7 |
| 42.5° | 962.0 | 956.0 | 950.9 | 947.4 | 950.9 |
| 45° | 922.6 | 916.6 | 907.2 | 904.7 | 910.6 |
| 47.5° | 881.5 | 873.8 | 862.7 | 864.4 | 872.1 |
| 50° | 835.3 | 827.6 | 814.8 | 819.1 | 828.5 |
| 52.5° | 793.4 | 784.0 | 770.3 | 774.6 | 778.8 |
| 55° | 743.7 | 735.2 | 723.2 | 724.1 | 729.2 |
| 57.5° | 695.8 | 686.4 | 673.6 | 672.7 | 680.4 |
| 60° | 648.7 | 635.9 | 619.6 | 620.5 | 624.8 |
| 62.5° | 596.5 | 582.8 | 566.6 | 566.6 | 574.3 |
| 65° | 540.1 | 525.5 | 510.1 | 513.5 | 518.7 |
| 67.5° | 485.3 | 466.4 | 452.8 | 454.5 | 460.5 |
| 70° | 421.9 | 409.1 | 398.0 | 392.0 | 388.6 |
| 72.5° | 366.3 | 348.3 | 339.8 | 318.4 | 311.5 |
| 75° | 298.7 | 291.9 | 276.4 | 242.2 | 230.2 |
| 77.5° | 238.8 | 231.9 | 211.4 | 174.6 | 167.8 |
| 80° | 177.2 | 178.9 | 148.9 | 142.9 | 142.9 |
| 82.5° | 124.1 | 119.0 | 108.7 | 103.6 | 101.0 |
| 85° | 72.7 | 66.8 | 65.9 | 62.5 | 59.9 |
| 87.5° | 24.0 | 27.4 | 26.5 | 27.4 | 27.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)