

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: P392941

Luminaire Tested: **12EN-LD2-39-UNV-L83050-W2A-1-U (4000K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P392941
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-563-40)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 12EN-LD2-39-UNV-L83050-W2A-1-U (4000K)
Description: 1X2 ENCOUNTER, 3900 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3966.6 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.27 / 1.39
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

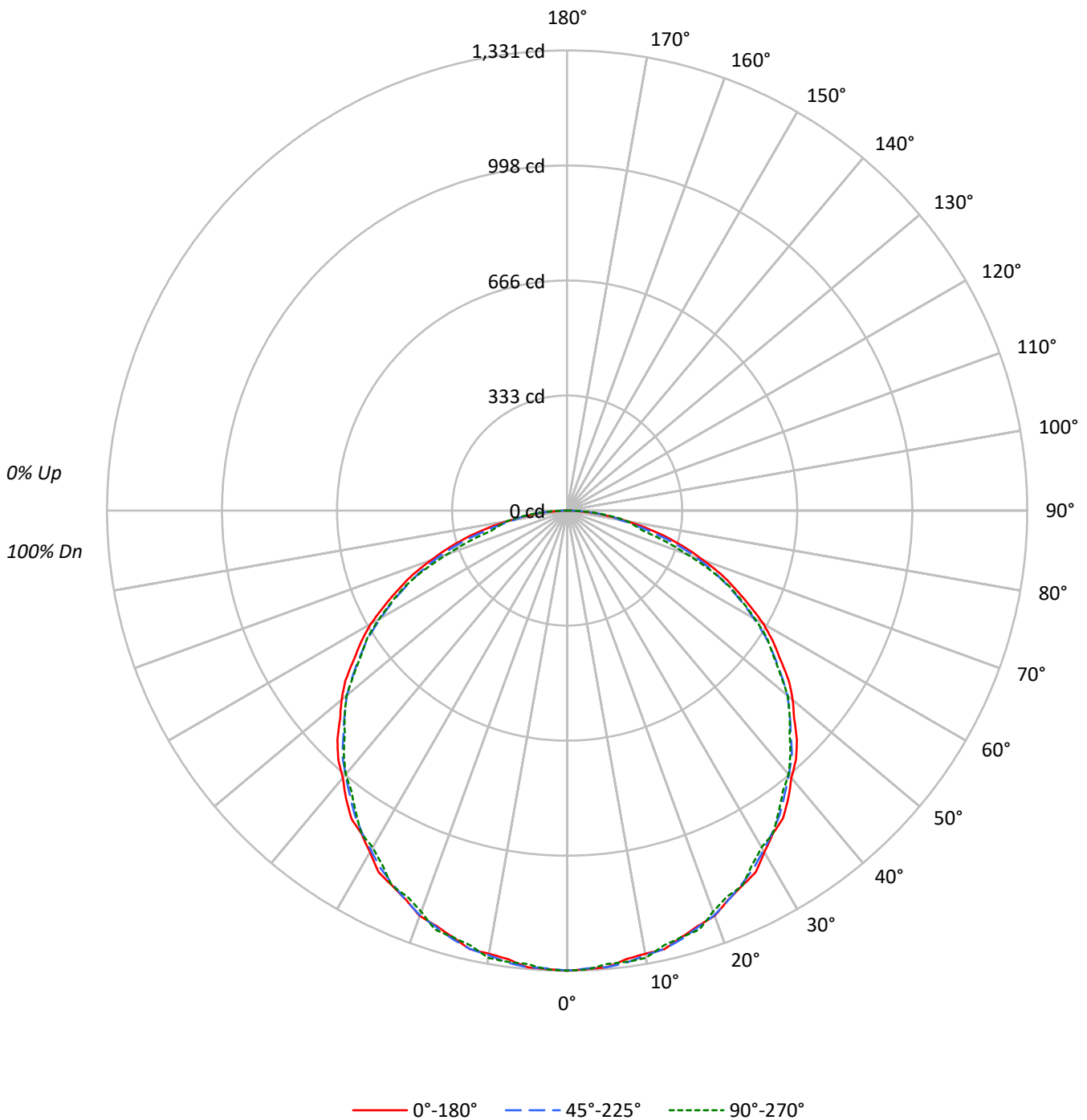
Input Watts (W): 35.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P392941

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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 | 103 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 89 | 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 | 39 | 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° | 7161 | 7161 | 7161 |
| 5° | 7162 | 7162 | 7113 |
| 10° | 7113 | 7135 | 7179 |
| 15° | 7117 | 7145 | 7117 |
| 20° | 7144 | 7132 | 7069 |
| 25° | 7109 | 7085 | 7115 |
| 30° | 7090 | 7052 | 6990 |
| 35° | 7146 | 7046 | 7001 |
| 40° | 7091 | 7006 | 6999 |
| 45° | 7155 | 6964 | 6925 |
| 50° | 7130 | 6962 | 6970 |
| 55° | 7067 | 6851 | 6813 |
| 60° | 7059 | 6712 | 6757 |
| 65° | 6842 | 6510 | 6586 |
| 70° | 6590 | 6290 | 5784 |
| 75° | 6224 | 5637 | 4741 |
| 80° | 5384 | 4857 | 5511 |
| 85° | 4279 | 5020 | 5335 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 125.8 | 3.2 |
| 10°-20° | 361.6 | 9.1 |
| 20°-30° | 550.2 | 13.9 |
| 30°-40° | 670.7 | 16.9 |
| 40°-50° | 710.7 | 17.9 |
| 50°-60° | 658.9 | 16.6 |
| 60°-70° | 512.5 | 12.9 |
| 70°-80° | 287.9 | 7.3 |
| 80°-90° | 88.4 | 2.2 |
| 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° | 1037.6 | 26.2 |
| 0°-40° | 1708.3 | 43.1 |
| 0°-60° | 3077.9 | 77.6 |
| 0°-90° | 3966.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3966.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1331 | 1331 | 1331 | 1331 | 1331 | |
| 5° | 1326 | 1321 | 1326 | 1323 | 1317 | 125 |
| 15° | 1277 | 1278 | 1282 | 1282 | 1277 | 361 |
| 25° | 1197 | 1197 | 1193 | 1189 | 1198 | 553 |
| 35° | 1088 | 1081 | 1072 | 1066 | 1066 | 677 |
| 45° | 940 | 930 | 915 | 912 | 910 | 722 |
| 55° | 753 | 749 | 730 | 726 | 726 | 676 |
| 65° | 537 | 532 | 511 | 510 | 517 | 533 |
| 75° | 299 | 289 | 271 | 243 | 228 | 314 |
| 85° | 69 | 71 | 81 | 83 | 86 | 82 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P392941

CATALOG NUMBER: 12EN-LD2-39-UNV-L83050-W2A-1-U (4000K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1330.6 | 1330.6 | 1330.6 | 1330.6 | 1330.6 |
| 2.5° | 1327.6 | 1330.6 | 1325.6 | 1327.6 | 1328.6 |
| 5° | 1325.6 | 1320.6 | 1325.6 | 1322.6 | 1316.6 |
| 7.5° | 1308.5 | 1313.6 | 1318.6 | 1319.6 | 1316.6 |
| 10° | 1301.5 | 1311.6 | 1305.5 | 1308.5 | 1313.6 |
| 12.5° | 1299.5 | 1295.5 | 1298.5 | 1293.5 | 1288.5 |
| 15° | 1277.4 | 1278.4 | 1282.4 | 1282.4 | 1277.4 |
| 17.5° | 1259.3 | 1267.4 | 1262.3 | 1261.3 | 1270.4 |
| 20° | 1247.3 | 1245.3 | 1245.3 | 1241.3 | 1234.2 |
| 22.5° | 1218.2 | 1219.2 | 1219.2 | 1217.2 | 1208.1 |
| 25° | 1197.1 | 1197.1 | 1193.1 | 1189.0 | 1198.1 |
| 27.5° | 1180.0 | 1171.0 | 1166.9 | 1161.9 | 1156.9 |
| 30° | 1140.8 | 1138.8 | 1134.8 | 1131.8 | 1124.8 |
| 32.5° | 1107.7 | 1108.7 | 1104.7 | 1098.7 | 1107.7 |
| 35° | 1087.6 | 1080.6 | 1072.5 | 1065.5 | 1065.5 |
| 37.5° | 1050.4 | 1043.4 | 1033.4 | 1027.4 | 1024.3 |
| 40° | 1009.3 | 1006.3 | 997.2 | 991.2 | 996.2 |
| 42.5° | 979.1 | 973.1 | 962.1 | 953.0 | 956.0 |
| 45° | 940.0 | 929.9 | 914.9 | 911.9 | 909.9 |
| 47.5° | 890.8 | 887.8 | 872.7 | 868.7 | 872.7 |
| 50° | 851.6 | 846.6 | 831.5 | 823.5 | 832.5 |
| 52.5° | 808.4 | 797.4 | 780.3 | 778.3 | 777.3 |
| 55° | 753.2 | 749.2 | 730.1 | 726.1 | 726.1 |
| 57.5° | 706.0 | 700.0 | 680.9 | 673.9 | 684.9 |
| 60° | 655.8 | 644.7 | 623.6 | 621.6 | 627.7 |
| 62.5° | 595.5 | 588.5 | 567.4 | 567.4 | 571.4 |
| 65° | 537.3 | 532.3 | 511.2 | 510.2 | 517.2 |
| 67.5° | 482.0 | 472.0 | 455.9 | 448.9 | 444.9 |
| 70° | 418.8 | 411.7 | 399.7 | 376.6 | 367.6 |
| 72.5° | 358.5 | 351.5 | 338.4 | 302.3 | 299.3 |
| 75° | 299.3 | 289.2 | 271.1 | 243.0 | 228.0 |
| 77.5° | 235.0 | 232.0 | 206.9 | 193.8 | 199.8 |
| 80° | 173.7 | 174.7 | 156.7 | 169.7 | 177.8 |
| 82.5° | 118.5 | 114.5 | 127.5 | 132.6 | 135.6 |
| 85° | 69.3 | 71.3 | 81.3 | 83.4 | 86.4 |
| 87.5° | 28.1 | 33.1 | 38.2 | 39.2 | 43.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)