

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: P393180

Luminaire Tested: **14EN-LD2-47-UNV-L93050-W2A-1-U (3500K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393180
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-55)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14EN-LD2-47-UNV-L93050-W2A-1-U (3500K)
Description: 1X4 ENCOUNTER, 4700 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3967.4 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

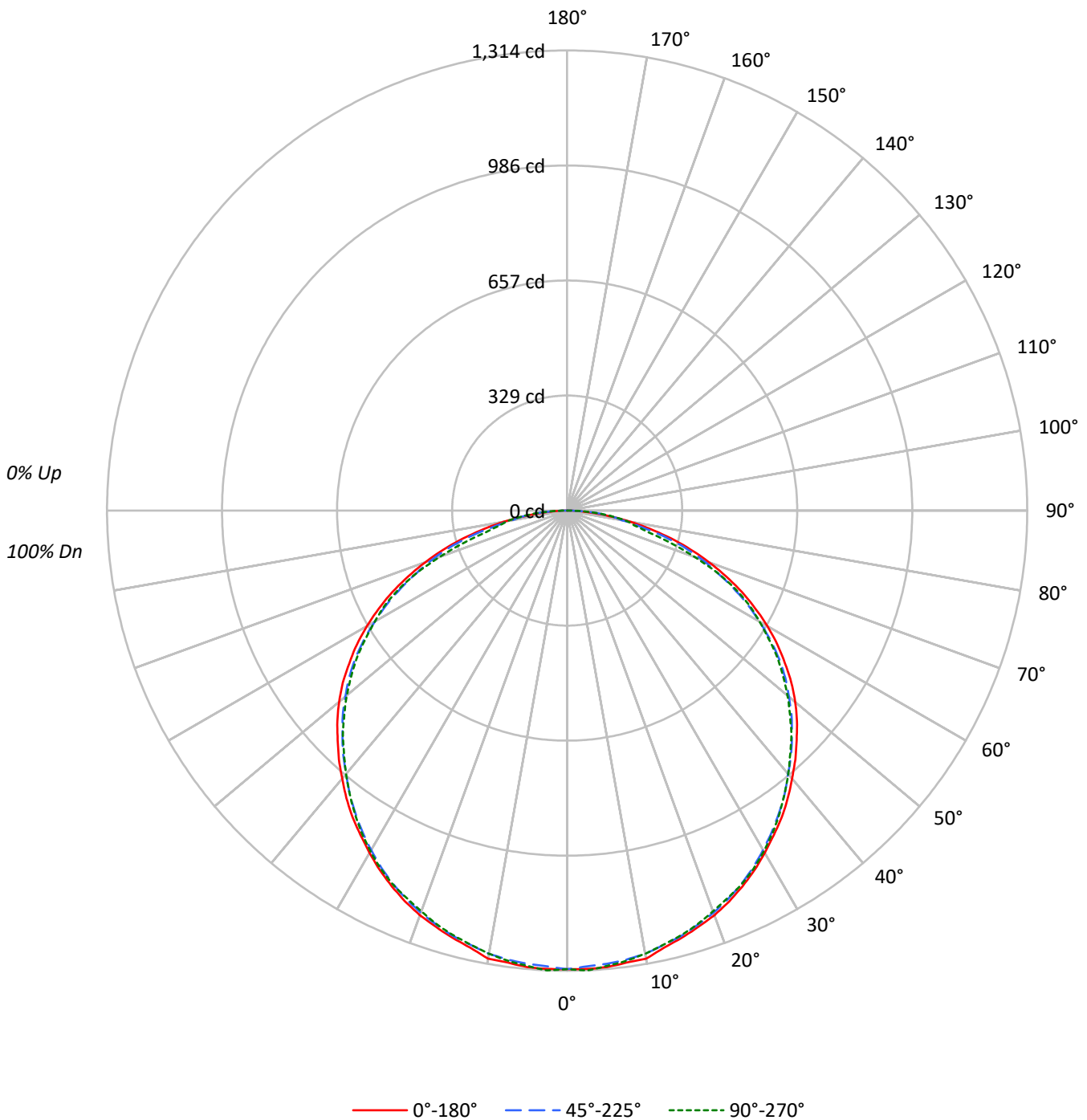
Input Watts (W): 46.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P393180

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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 | 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 | | | | | 100 | | | |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | | 83 | | | |
| 2 | 98 | 90 | 83 | 77 | 95 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 68 | | | | | 68 | | | |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 65 | 60 | 68 | 64 | 59 | 57 | | | | | 57 | | | |
| 4 | 82 | 69 | 60 | 53 | 79 | 68 | 59 | 53 | 65 | 58 | 52 | 63 | 57 | 51 | 61 | 55 | 51 | 48 | | | | | 48 | | | |
| 5 | 75 | 62 | 52 | 46 | 73 | 61 | 52 | 45 | 58 | 51 | 45 | 56 | 50 | 44 | 54 | 49 | 44 | 42 | | | | | 42 | | | |
| 6 | 69 | 55 | 46 | 40 | 67 | 54 | 46 | 39 | 53 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 38 | 36 | | | | | 36 | | | |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 32 | | | | | 32 | | | |
| 8 | 59 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 30 | 28 | | | | | 28 | | | |
| 9 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 | | | | | 25 | | | |
| 10 | 52 | 39 | 31 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 | | | | | 23 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3523 | 3523 | 3523 |
| 5° | 3535 | 3509 | 3525 |
| 10° | 3550 | 3511 | 3511 |
| 15° | 3519 | 3505 | 3498 |
| 20° | 3521 | 3499 | 3487 |
| 25° | 3515 | 3493 | 3498 |
| 30° | 3507 | 3478 | 3491 |
| 35° | 3511 | 3464 | 3472 |
| 40° | 3509 | 3447 | 3450 |
| 45° | 3527 | 3453 | 3447 |
| 50° | 3559 | 3460 | 3440 |
| 55° | 3563 | 3468 | 3440 |
| 60° | 3553 | 3413 | 3413 |
| 65° | 3507 | 3331 | 3379 |
| 70° | 3388 | 3235 | 3057 |
| 75° | 3191 | 2990 | 2509 |
| 80° | 2828 | 2476 | 2684 |
| 85° | 2078 | 2674 | 2674 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 123.9 | 3.1 |
| 10°-20° | 355.6 | 9.0 |
| 20°-30° | 543.6 | 13.7 |
| 30°-40° | 662.6 | 16.7 |
| 40°-50° | 704.1 | 17.7 |
| 50°-60° | 662.4 | 16.7 |
| 60°-70° | 525.8 | 13.3 |
| 70°-80° | 299.0 | 7.5 |
| 80°-90° | 90.3 | 2.3 |
| 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° | 1023.1 | 25.8 |
| 0°-40° | 1685.7 | 42.5 |
| 0°-60° | 3052.2 | 76.9 |
| 0°-90° | 3967.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3967.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1309 | 1309 | 1309 | 1309 | 1309 | |
| 5° | 1308 | 1307 | 1299 | 1301 | 1305 | 124 |
| 15° | 1263 | 1262 | 1258 | 1256 | 1256 | 357 |
| 25° | 1184 | 1182 | 1176 | 1179 | 1178 | 546 |
| 35° | 1069 | 1067 | 1054 | 1052 | 1057 | 668 |
| 45° | 927 | 920 | 907 | 905 | 906 | 716 |
| 55° | 759 | 752 | 739 | 734 | 733 | 679 |
| 65° | 551 | 542 | 523 | 530 | 531 | 543 |
| 75° | 307 | 300 | 288 | 254 | 241 | 323 |
| 85° | 67 | 73 | 87 | 85 | 87 | 83 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393180

CATALOG NUMBER: 14EN-LD2-47-UNV-L93050-W2A-1-U (3500K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1309.3 | 1309.3 | 1309.3 | 1309.3 | 1309.3 |
| 2.5° | 1310.2 | 1311.0 | 1302.6 | 1307.6 | 1314.4 |
| 5° | 1308.5 | 1306.8 | 1299.2 | 1300.9 | 1305.1 |
| 7.5° | 1301.8 | 1300.1 | 1293.3 | 1293.3 | 1296.7 |
| 10° | 1299.2 | 1290.8 | 1284.9 | 1283.3 | 1284.9 |
| 12.5° | 1278.2 | 1278.2 | 1270.6 | 1271.5 | 1269.8 |
| 15° | 1263.1 | 1262.2 | 1258.0 | 1256.3 | 1255.5 |
| 17.5° | 1246.3 | 1244.6 | 1240.4 | 1243.7 | 1238.7 |
| 20° | 1229.4 | 1226.9 | 1221.9 | 1224.4 | 1217.7 |
| 22.5° | 1208.4 | 1204.2 | 1200.8 | 1205.1 | 1197.5 |
| 25° | 1184.0 | 1181.5 | 1176.5 | 1179.0 | 1178.1 |
| 27.5° | 1158.0 | 1156.3 | 1149.5 | 1149.5 | 1152.9 |
| 30° | 1128.5 | 1127.7 | 1119.3 | 1120.1 | 1123.5 |
| 32.5° | 1098.3 | 1096.6 | 1088.2 | 1085.6 | 1091.5 |
| 35° | 1068.8 | 1067.1 | 1054.5 | 1052.0 | 1057.0 |
| 37.5° | 1035.2 | 1032.7 | 1020.0 | 1015.8 | 1020.0 |
| 40° | 999.0 | 997.3 | 981.4 | 978.0 | 982.2 |
| 42.5° | 964.5 | 958.7 | 946.9 | 941.8 | 942.7 |
| 45° | 926.7 | 920.0 | 907.4 | 904.8 | 905.7 |
| 47.5° | 890.5 | 881.3 | 869.5 | 867.0 | 862.8 |
| 50° | 850.2 | 839.2 | 826.6 | 823.3 | 821.6 |
| 52.5° | 807.3 | 795.5 | 785.4 | 778.7 | 777.0 |
| 55° | 759.4 | 751.8 | 739.2 | 734.1 | 733.3 |
| 57.5° | 712.3 | 703.0 | 688.7 | 683.7 | 682.8 |
| 60° | 660.1 | 654.2 | 634.1 | 633.2 | 634.1 |
| 62.5° | 606.3 | 597.9 | 581.1 | 582.8 | 587.8 |
| 65° | 550.8 | 542.4 | 523.1 | 529.8 | 530.6 |
| 67.5° | 491.1 | 484.4 | 465.0 | 469.2 | 464.2 |
| 70° | 430.6 | 425.5 | 411.2 | 401.1 | 388.5 |
| 72.5° | 370.0 | 362.4 | 353.2 | 323.8 | 312.8 |
| 75° | 306.9 | 300.2 | 287.6 | 254.0 | 241.3 |
| 77.5° | 242.2 | 240.5 | 217.0 | 194.3 | 196.8 |
| 80° | 182.5 | 184.2 | 159.8 | 168.2 | 173.2 |
| 82.5° | 121.1 | 121.9 | 128.7 | 136.2 | 132.9 |
| 85° | 67.3 | 73.2 | 86.6 | 84.9 | 86.6 |
| 87.5° | 24.4 | 37.0 | 37.8 | 40.4 | 39.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)