

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: P393205

Luminaire Tested: **14EN-LD2-51-UNV-L92765-W2A-1-U (4000K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393205
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-56)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14EN-LD2-51-UNV-L92765-W2A-1-U (4000K)
Description: 1X4 ENCOUNTER, 5100 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4202.9 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.27 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

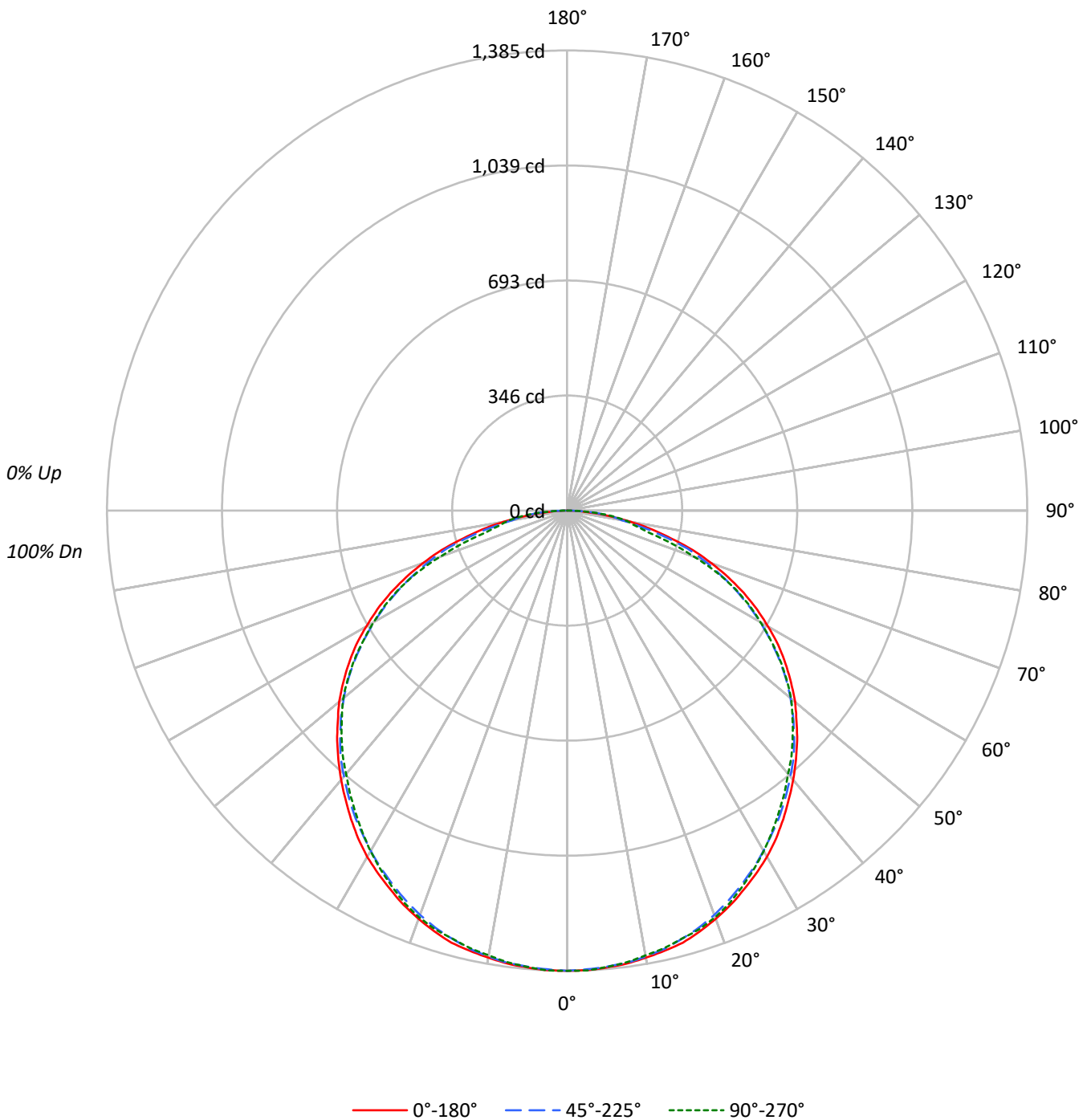
Input Watts (W): 50.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P393205

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Luminous Intensity Polar Plot





TEST NUMBER: P393205

CATALOG NUMBER: 14EN-LD2-51-UNV-L92765-W2A-1-U (4000K)

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 | 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 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 | 68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 65 | 60 | 68 | 64 | 59 | 57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 82 | 69 | 60 | 53 | 79 | 68 | 59 | 53 | 65 | 58 | 52 | 63 | 57 | 51 | 61 | 55 | 51 | 48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 75 | 62 | 52 | 46 | 73 | 61 | 52 | 45 | 58 | 51 | 45 | 56 | 50 | 44 | 54 | 49 | 44 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 69 | 55 | 46 | 40 | 67 | 54 | 46 | 39 | 53 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 38 | 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 59 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 30 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 56 | 42 | 34 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 52 | 39 | 31 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3728 | 3728 | 3728 |
| 5° | 3729 | 3722 | 3724 |
| 10° | 3733 | 3724 | 3715 |
| 15° | 3751 | 3719 | 3716 |
| 20° | 3744 | 3709 | 3730 |
| 25° | 3738 | 3688 | 3706 |
| 30° | 3739 | 3675 | 3677 |
| 35° | 3725 | 3670 | 3646 |
| 40° | 3719 | 3669 | 3634 |
| 45° | 3726 | 3676 | 3654 |
| 50° | 3750 | 3674 | 3684 |
| 55° | 3764 | 3651 | 3666 |
| 60° | 3757 | 3610 | 3619 |
| 65° | 3734 | 3533 | 3554 |
| 70° | 3631 | 3436 | 3215 |
| 75° | 3379 | 3164 | 2632 |
| 80° | 2986 | 2614 | 2858 |
| 85° | 2146 | 2810 | 2859 |



TEST NUMBER: P393205

CATALOG NUMBER: 14EN-LD2-51-UNV-L92765-W2A-1-U (4000K)

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 131.4 | 3.1 |
| 10°-20° | 377.6 | 9.0 |
| 20°-30° | 574.6 | 13.7 |
| 30°-40° | 701.9 | 16.7 |
| 40°-50° | 747.6 | 17.8 |
| 50°-60° | 701.1 | 16.7 |
| 60°-70° | 556.5 | 13.2 |
| 70°-80° | 316.8 | 7.5 |
| 80°-90° | 95.4 | 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° | 1083.6 | 25.8 |
| 0°-40° | 1785.5 | 42.5 |
| 0°-60° | 3234.2 | 77.0 |
| 0°-90° | 4202.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4202.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1385 | 1385 | 1385 | 1385 | 1385 | |
| 5° | 1380 | 1384 | 1378 | 1387 | 1379 | 131 |
| 15° | 1346 | 1341 | 1335 | 1336 | 1334 | 380 |
| 25° | 1259 | 1247 | 1242 | 1240 | 1248 | 581 |
| 35° | 1134 | 1128 | 1117 | 1116 | 1110 | 710 |
| 45° | 979 | 978 | 966 | 959 | 960 | 756 |
| 55° | 802 | 795 | 778 | 775 | 782 | 716 |
| 65° | 586 | 575 | 555 | 559 | 558 | 578 |
| 75° | 325 | 317 | 304 | 270 | 253 | 346 |
| 85° | 70 | 78 | 91 | 90 | 93 | 87 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393205

CATALOG NUMBER: 14EN-LD2-51-UNV-L92765-W2A-1-U (4000K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1385.3 | 1385.3 | 1385.3 | 1385.3 | 1385.3 |
| 2.5° | 1384.5 | 1390.2 | 1382.0 | 1388.6 | 1385.3 |
| 5° | 1380.3 | 1384.5 | 1377.8 | 1386.9 | 1378.7 |
| 7.5° | 1375.4 | 1377.8 | 1372.9 | 1381.2 | 1371.2 |
| 10° | 1366.3 | 1367.9 | 1363.0 | 1369.6 | 1359.6 |
| 12.5° | 1357.2 | 1354.7 | 1351.4 | 1353.9 | 1348.9 |
| 15° | 1346.4 | 1340.6 | 1334.8 | 1336.5 | 1334.0 |
| 17.5° | 1328.2 | 1320.8 | 1316.6 | 1315.0 | 1321.6 |
| 20° | 1307.5 | 1298.4 | 1295.1 | 1293.5 | 1302.6 |
| 22.5° | 1285.2 | 1273.6 | 1269.5 | 1267.8 | 1278.6 |
| 25° | 1258.8 | 1247.2 | 1242.2 | 1239.7 | 1248.0 |
| 27.5° | 1231.5 | 1219.1 | 1213.3 | 1211.6 | 1217.4 |
| 30° | 1203.3 | 1189.3 | 1182.7 | 1181.8 | 1183.5 |
| 32.5° | 1170.3 | 1159.5 | 1149.6 | 1150.4 | 1147.1 |
| 35° | 1133.9 | 1128.1 | 1117.3 | 1115.7 | 1109.9 |
| 37.5° | 1095.8 | 1095.8 | 1081.8 | 1084.2 | 1073.5 |
| 40° | 1058.6 | 1059.4 | 1044.5 | 1045.4 | 1034.6 |
| 42.5° | 1018.9 | 1021.4 | 1009.0 | 1002.4 | 999.9 |
| 45° | 979.2 | 977.6 | 966.0 | 959.4 | 960.2 |
| 47.5° | 936.2 | 936.2 | 923.0 | 917.2 | 919.7 |
| 50° | 895.7 | 892.4 | 877.5 | 872.5 | 880.0 |
| 52.5° | 849.4 | 845.2 | 830.3 | 824.6 | 832.0 |
| 55° | 802.2 | 794.8 | 778.2 | 774.9 | 781.5 |
| 57.5° | 753.4 | 743.5 | 725.3 | 723.7 | 727.0 |
| 60° | 698.0 | 689.7 | 670.7 | 667.4 | 672.4 |
| 62.5° | 644.3 | 632.7 | 613.7 | 613.7 | 618.6 |
| 65° | 586.4 | 574.8 | 554.9 | 559.1 | 558.2 |
| 67.5° | 525.2 | 513.6 | 496.2 | 497.9 | 488.8 |
| 70° | 461.5 | 448.3 | 436.7 | 421.0 | 408.6 |
| 72.5° | 397.0 | 382.9 | 378.8 | 342.4 | 330.0 |
| 75° | 325.0 | 316.8 | 304.3 | 269.6 | 253.1 |
| 77.5° | 261.3 | 253.1 | 230.7 | 204.3 | 208.4 |
| 80° | 192.7 | 194.4 | 168.7 | 178.6 | 184.4 |
| 82.5° | 126.5 | 130.7 | 136.5 | 143.9 | 145.6 |
| 85° | 69.5 | 77.7 | 91.0 | 90.1 | 92.6 |
| 87.5° | 27.3 | 36.4 | 39.7 | 41.4 | 38.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)