

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: P393102

Luminaire Tested: **14EN-LD2-38-UNV-L83050-W2A-1-U (4500K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393102
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-53)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14EN-LD2-38-UNV-L83050-W2A-1-U (4500K)
Description: 1X4 ENCOUNTER, 3800 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3840.5 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

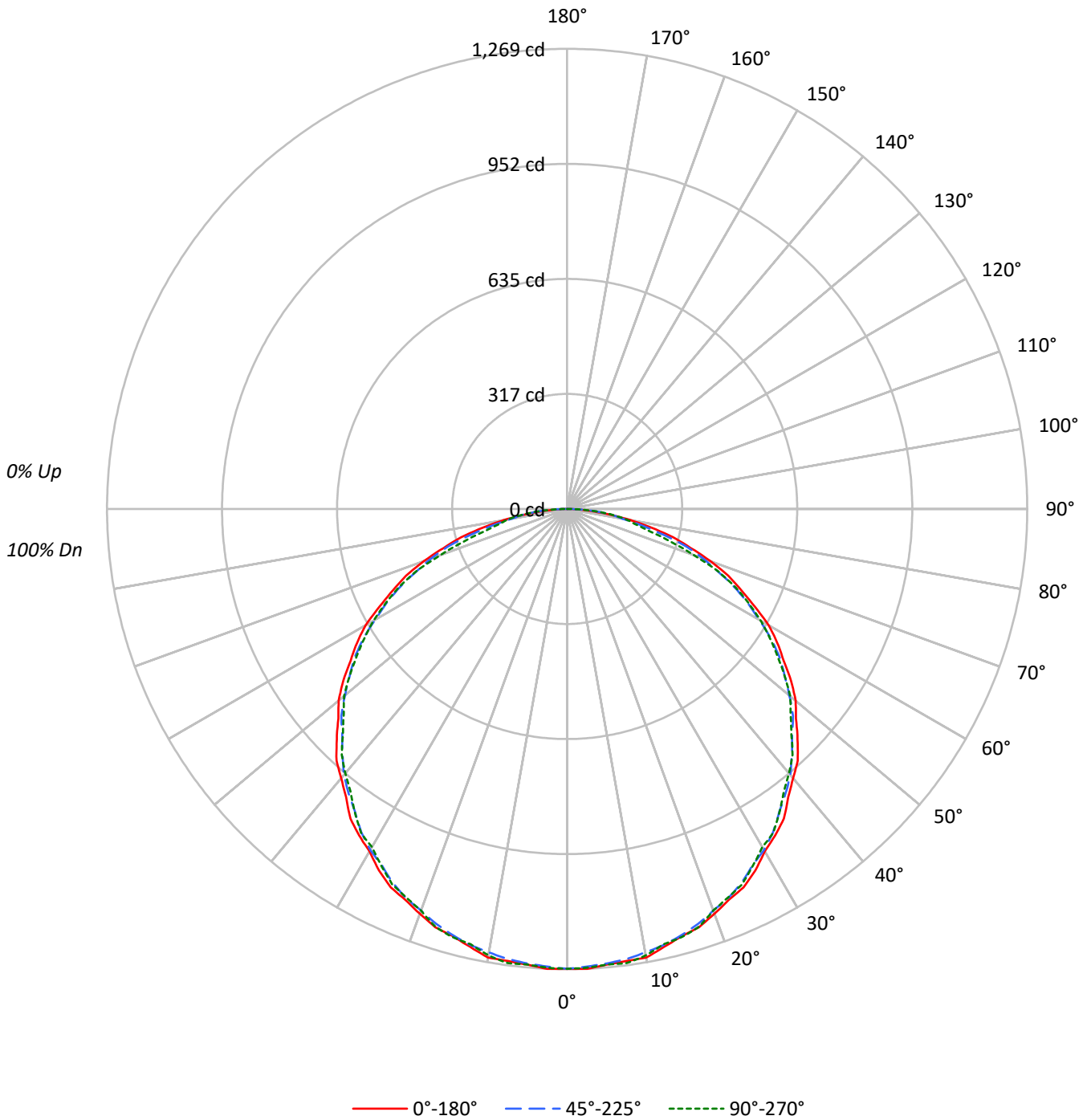
Input Watts (W): 36.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P393102

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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 | 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° | 3413 | 3413 | 3413 |
| 5° | 3407 | 3398 | 3407 |
| 10° | 3432 | 3393 | 3415 |
| 15° | 3397 | 3391 | 3405 |
| 20° | 3401 | 3375 | 3375 |
| 25° | 3418 | 3379 | 3391 |
| 30° | 3387 | 3375 | 3346 |
| 35° | 3424 | 3350 | 3354 |
| 40° | 3404 | 3365 | 3343 |
| 45° | 3420 | 3339 | 3327 |
| 50° | 3443 | 3349 | 3362 |
| 55° | 3419 | 3357 | 3324 |
| 60° | 3456 | 3292 | 3320 |
| 65° | 3370 | 3240 | 3266 |
| 70° | 3299 | 3139 | 2923 |
| 75° | 3143 | 2857 | 2424 |
| 80° | 2744 | 2366 | 2571 |
| 85° | 2010 | 2544 | 2578 |



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CATALOG NUMBER: 14EN-LD2-38-UNV-L83050-W2A-1-U (4500K)

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 120.1 | 3.1 |
| 10°-20° | 344.5 | 9.0 |
| 20°-30° | 525.4 | 13.7 |
| 30°-40° | 641.9 | 16.7 |
| 40°-50° | 682.7 | 17.8 |
| 50°-60° | 640.9 | 16.7 |
| 60°-70° | 508.3 | 13.2 |
| 70°-80° | 289.6 | 7.5 |
| 80°-90° | 87.1 | 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° | 990.0 | 25.8 |
| 0°-40° | 1631.9 | 42.5 |
| 0°-60° | 2955.5 | 77.0 |
| 0°-90° | 3840.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3840.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1268 | 1268 | 1268 | 1268 | 1268 | |
| 5° | 1261 | 1268 | 1258 | 1262 | 1261 | 120 |
| 15° | 1219 | 1221 | 1217 | 1219 | 1222 | 345 |
| 25° | 1151 | 1140 | 1138 | 1139 | 1142 | 529 |
| 35° | 1042 | 1030 | 1020 | 1021 | 1021 | 649 |
| 45° | 899 | 894 | 877 | 878 | 874 | 694 |
| 55° | 729 | 725 | 716 | 708 | 708 | 655 |
| 65° | 529 | 526 | 509 | 511 | 513 | 526 |
| 75° | 302 | 291 | 275 | 246 | 233 | 315 |
| 85° | 65 | 72 | 82 | 82 | 84 | 80 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393102

CATALOG NUMBER: 14EN-LD2-38-UNV-L83050-W2A-1-U (4500K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1268.2 | 1268.2 | 1268.2 | 1268.2 | 1268.2 |
| 2.5° | 1269.2 | 1268.2 | 1263.1 | 1269.2 | 1266.2 |
| 5° | 1261.1 | 1268.2 | 1258.0 | 1262.1 | 1261.1 |
| 7.5° | 1257.0 | 1255.0 | 1251.9 | 1259.1 | 1263.1 |
| 10° | 1256.0 | 1245.8 | 1241.7 | 1248.9 | 1249.9 |
| 12.5° | 1236.7 | 1239.7 | 1231.6 | 1233.6 | 1229.5 |
| 15° | 1219.4 | 1221.4 | 1217.3 | 1219.4 | 1222.4 |
| 17.5° | 1209.2 | 1203.1 | 1200.0 | 1204.1 | 1208.2 |
| 20° | 1187.8 | 1188.8 | 1178.6 | 1183.7 | 1178.6 |
| 22.5° | 1166.4 | 1167.4 | 1161.3 | 1161.3 | 1159.3 |
| 25° | 1151.2 | 1140.0 | 1137.9 | 1138.9 | 1142.0 |
| 27.5° | 1123.7 | 1119.6 | 1107.4 | 1111.5 | 1109.4 |
| 30° | 1090.1 | 1094.2 | 1086.0 | 1077.9 | 1076.9 |
| 32.5° | 1067.7 | 1060.6 | 1056.5 | 1053.5 | 1058.5 |
| 35° | 1042.3 | 1030.0 | 1019.9 | 1020.9 | 1020.9 |
| 37.5° | 1001.5 | 1000.5 | 989.3 | 984.2 | 981.2 |
| 40° | 969.0 | 964.9 | 957.8 | 950.6 | 951.7 |
| 42.5° | 941.5 | 928.3 | 917.1 | 915.0 | 920.1 |
| 45° | 898.7 | 893.7 | 877.4 | 878.4 | 874.3 |
| 47.5° | 856.0 | 855.0 | 844.8 | 836.7 | 835.6 |
| 50° | 822.4 | 812.2 | 800.0 | 798.0 | 803.1 |
| 52.5° | 778.6 | 773.5 | 756.2 | 756.2 | 756.2 |
| 55° | 728.8 | 724.7 | 715.5 | 708.4 | 708.4 |
| 57.5° | 687.0 | 678.9 | 667.7 | 662.6 | 662.6 |
| 60° | 642.2 | 630.0 | 611.7 | 613.7 | 616.8 |
| 62.5° | 583.2 | 577.1 | 560.8 | 558.8 | 564.9 |
| 65° | 529.3 | 526.2 | 508.9 | 510.9 | 513.0 |
| 67.5° | 481.4 | 468.2 | 448.9 | 456.0 | 451.9 |
| 70° | 419.3 | 412.2 | 399.0 | 384.7 | 371.5 |
| 72.5° | 357.3 | 353.2 | 346.1 | 311.5 | 299.2 |
| 75° | 302.3 | 291.1 | 274.8 | 246.3 | 233.1 |
| 77.5° | 237.2 | 234.1 | 210.7 | 188.3 | 190.3 |
| 80° | 177.1 | 179.1 | 152.7 | 161.8 | 165.9 |
| 82.5° | 116.0 | 120.1 | 125.2 | 131.3 | 128.2 |
| 85° | 65.1 | 72.3 | 82.4 | 82.4 | 83.5 |
| 87.5° | 23.4 | 34.6 | 36.6 | 36.6 | 36.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)