

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: P393420

Luminaire Tested: **24EN-LD2-30-UNV-L83050-W2A-1-U (3500K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393420
Test Lab: INNOVATION CENTER (G3)
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24EN-LD2-30-UNV-L83050-W2A-1-U (3500K)
Description: 2X4 ENCOUNTER, 3000 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3055.0 lumens
Efficiency: N/A
Efficacy: 144.8 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

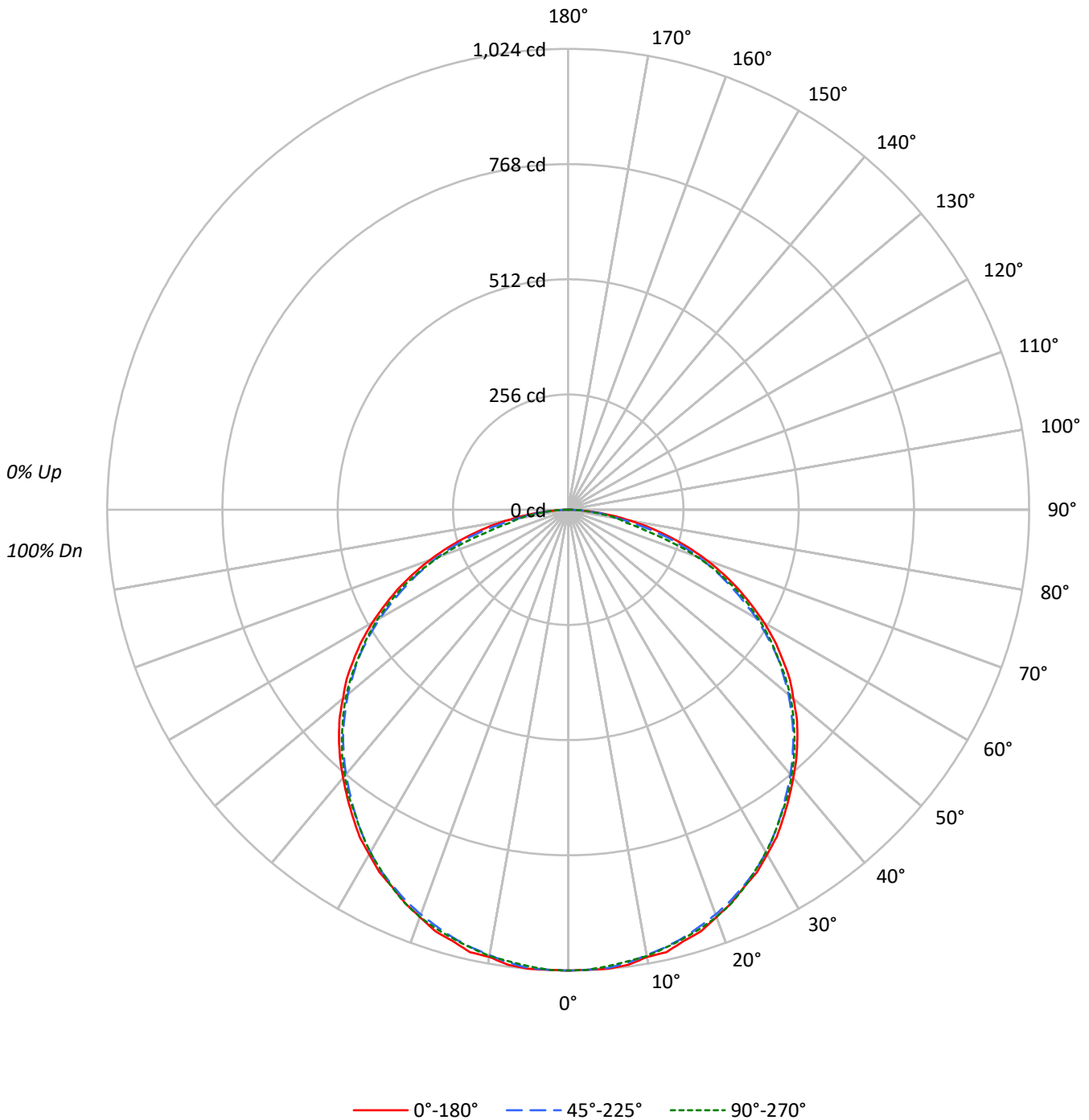
Input Watts (W): 21.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P393420

CATALOG NUMBER: 24EN-LD2-30-UNV-L83050-W2A-1-U (3500K)

Luminous Intensity Polar Plot





TEST NUMBER: P393420

CATALOG NUMBER: 24EN-LD2-30-UNV-L83050-W2A-1-U (3500K)

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 | 109 | 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 | 85 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 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 | 42 | 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 | 36 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1378 | 1378 | 1378 |
| 5° | 1383 | 1380 | 1375 |
| 10° | 1379 | 1373 | 1376 |
| 15° | 1382 | 1372 | 1375 |
| 20° | 1379 | 1370 | 1379 |
| 25° | 1373 | 1369 | 1375 |
| 30° | 1373 | 1366 | 1366 |
| 35° | 1370 | 1355 | 1357 |
| 40° | 1366 | 1349 | 1356 |
| 45° | 1370 | 1345 | 1353 |
| 50° | 1367 | 1338 | 1348 |
| 55° | 1365 | 1328 | 1330 |
| 60° | 1354 | 1300 | 1319 |
| 65° | 1328 | 1258 | 1289 |
| 70° | 1286 | 1220 | 1192 |
| 75° | 1211 | 1123 | 920 |
| 80° | 1077 | 876 | 852 |
| 85° | 880 | 787 | 710 |



TEST NUMBER: P393420

CATALOG NUMBER: 24EN-LD2-30-UNV-L83050-W2A-1-U (3500K)

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 97.1 | 3.2 |
| 10°-20° | 278.5 | 9.1 |
| 20°-30° | 425.5 | 13.9 |
| 30°-40° | 518.6 | 17.0 |
| 40°-50° | 547.4 | 17.9 |
| 50°-60° | 508.2 | 16.6 |
| 60°-70° | 398.0 | 13.0 |
| 70°-80° | 222.5 | 7.3 |
| 80°-90° | 59.2 | 1.9 |
| 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° | 801.0 | 26.2 |
| 0°-40° | 1319.6 | 43.2 |
| 0°-60° | 2375.2 | 77.7 |
| 0°-90° | 3055.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3055.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1024 | 1024 | 1024 | 1024 | 1024 | |
| 5° | 1024 | 1023 | 1022 | 1022 | 1018 | 97 |
| 15° | 992 | 986 | 985 | 984 | 987 | 280 |
| 25° | 925 | 924 | 922 | 919 | 926 | 427 |
| 35° | 834 | 831 | 825 | 828 | 826 | 522 |
| 45° | 720 | 712 | 707 | 703 | 711 | 555 |
| 55° | 582 | 574 | 566 | 563 | 567 | 520 |
| 65° | 417 | 408 | 395 | 399 | 405 | 412 |
| 75° | 233 | 226 | 216 | 185 | 177 | 246 |
| 85° | 57 | 51 | 51 | 48 | 46 | 65 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393420

CATALOG NUMBER: 24EN-LD2-30-UNV-L83050-W2A-1-U (3500K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|------|-------|------|-------|------|
| 0° | 1024 | 1024 | 1024 | 1024 | 1024 |
| 2.5° | 1023 | 1025 | 1023 | 1021 | 1023 |
| 5° | 1024 | 1023 | 1022 | 1022 | 1018 |
| 7.5° | 1020 | 1018 | 1015 | 1016 | 1012 |
| 10° | 1009 | 1009 | 1005 | 1008 | 1007 |
| 12.5° | 1007 | 997 | 996 | 997 | 997 |
| 15° | 992 | 986 | 985 | 984 | 987 |
| 17.5° | 982 | 972 | 971 | 969 | 976 |
| 20° | 963 | 957 | 957 | 954 | 963 |
| 22.5° | 946 | 940 | 941 | 937 | 947 |
| 25° | 925 | 924 | 922 | 919 | 926 |
| 27.5° | 908 | 904 | 903 | 900 | 902 |
| 30° | 884 | 883 | 879 | 878 | 879 |
| 32.5° | 862 | 859 | 853 | 854 | 853 |
| 35° | 834 | 831 | 825 | 828 | 826 |
| 37.5° | 806 | 803 | 796 | 799 | 801 |
| 40° | 778 | 774 | 768 | 771 | 772 |
| 42.5° | 750 | 743 | 738 | 736 | 743 |
| 45° | 720 | 712 | 707 | 703 | 711 |
| 47.5° | 689 | 680 | 673 | 671 | 678 |
| 50° | 653 | 646 | 639 | 636 | 644 |
| 52.5° | 621 | 610 | 602 | 600 | 607 |
| 55° | 582 | 574 | 566 | 563 | 567 |
| 57.5° | 544 | 535 | 524 | 524 | 530 |
| 60° | 503 | 494 | 483 | 484 | 490 |
| 62.5° | 459 | 453 | 438 | 442 | 448 |
| 65° | 417 | 408 | 395 | 399 | 405 |
| 67.5° | 372 | 364 | 352 | 353 | 356 |
| 70° | 327 | 317 | 310 | 303 | 303 |
| 72.5° | 280 | 272 | 264 | 245 | 241 |
| 75° | 233 | 226 | 216 | 185 | 177 |
| 77.5° | 187 | 182 | 163 | 134 | 131 |
| 80° | 139 | 138 | 113 | 110 | 110 |
| 82.5° | 96 | 92 | 86 | 80 | 77 |
| 85° | 57 | 51 | 51 | 48 | 46 |
| 87.5° | 18 | 21 | 21 | 21 | 21 |
| 90° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)