

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: P393438

Luminaire Tested: **24EN-LD2-30-UNV-L93050-W2A-1-U (4500K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393438
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-31)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24EN-LD2-30-UNV-L93050-W2A-1-U (4500K)
Description: 2X4 ENCOUNTER, 3000 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2682.6 lumens
Efficiency: N/A
Efficacy: 130.9 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

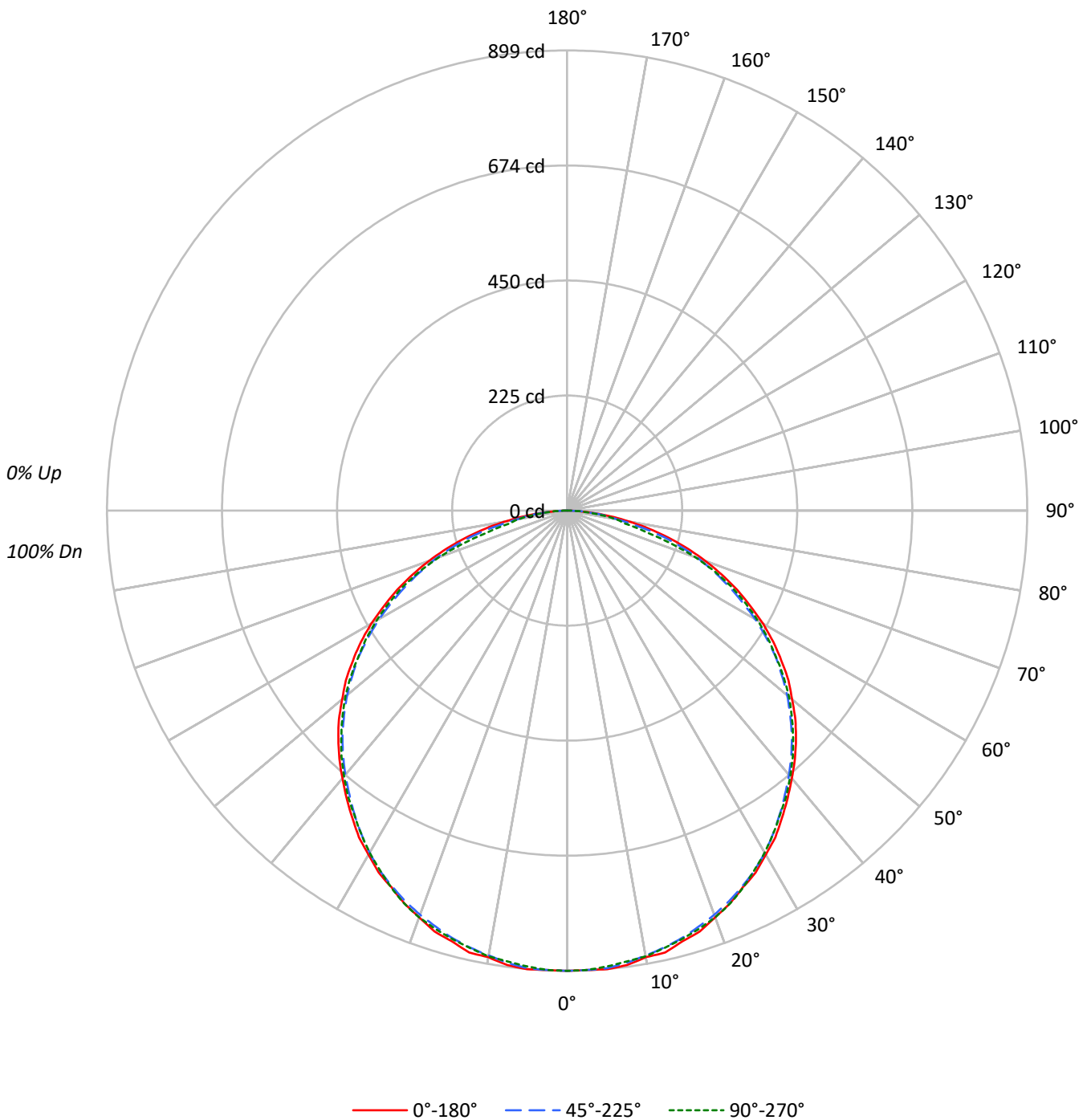
Input Watts (W): 20.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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 | 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° | 1210 | 1210 | 1210 |
| 5° | 1214 | 1212 | 1207 |
| 10° | 1210 | 1206 | 1208 |
| 15° | 1213 | 1205 | 1207 |
| 20° | 1211 | 1203 | 1211 |
| 25° | 1206 | 1202 | 1207 |
| 30° | 1206 | 1199 | 1199 |
| 35° | 1203 | 1190 | 1191 |
| 40° | 1200 | 1185 | 1191 |
| 45° | 1203 | 1181 | 1188 |
| 50° | 1200 | 1175 | 1184 |
| 55° | 1199 | 1166 | 1168 |
| 60° | 1189 | 1141 | 1158 |
| 65° | 1166 | 1104 | 1132 |
| 70° | 1129 | 1071 | 1047 |
| 75° | 1064 | 986 | 808 |
| 80° | 946 | 769 | 748 |
| 85° | 773 | 692 | 624 |



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CATALOG NUMBER: 24EN-LD2-30-UNV-L93050-W2A-1-U (4500K)

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 85.2 | 3.2 |
| 10°-20° | 244.5 | 9.1 |
| 20°-30° | 373.6 | 13.9 |
| 30°-40° | 455.4 | 17.0 |
| 40°-50° | 480.7 | 17.9 |
| 50°-60° | 446.3 | 16.6 |
| 60°-70° | 349.5 | 13.0 |
| 70°-80° | 195.4 | 7.3 |
| 80°-90° | 52.0 | 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° | 703.3 | 26.2 |
| 0°-40° | 1158.7 | 43.2 |
| 0°-60° | 2085.7 | 77.7 |
| 0°-90° | 2682.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2682.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 899 | 899 | 899 | 899 | 899 | |
| 5° | 899 | 898 | 897 | 897 | 894 | 85 |
| 15° | 871 | 866 | 865 | 864 | 867 | 246 |
| 25° | 812 | 811 | 810 | 807 | 813 | 375 |
| 35° | 732 | 730 | 724 | 727 | 725 | 458 |
| 45° | 632 | 625 | 621 | 617 | 624 | 488 |
| 55° | 511 | 504 | 497 | 494 | 498 | 457 |
| 65° | 366 | 358 | 347 | 350 | 356 | 361 |
| 75° | 205 | 198 | 190 | 162 | 155 | 216 |
| 85° | 50 | 45 | 45 | 42 | 40 | 57 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393438

CATALOG NUMBER: 24EN-LD2-30-UNV-L93050-W2A-1-U (4500K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 899.2 | 899.2 | 899.2 | 899.2 | 899.2 |
| 2.5° | 898.3 | 900.0 | 898.3 | 896.5 | 898.3 |
| 5° | 899.2 | 898.3 | 897.4 | 897.4 | 893.9 |
| 7.5° | 895.6 | 893.9 | 891.3 | 892.1 | 888.6 |
| 10° | 886.0 | 886.0 | 882.5 | 885.1 | 884.2 |
| 12.5° | 884.2 | 875.4 | 874.6 | 875.4 | 875.4 |
| 15° | 871.1 | 865.8 | 864.9 | 864.0 | 866.7 |
| 17.5° | 862.3 | 853.5 | 852.6 | 850.9 | 857.0 |
| 20° | 845.6 | 840.3 | 840.3 | 837.7 | 845.6 |
| 22.5° | 830.7 | 825.4 | 826.3 | 822.8 | 831.5 |
| 25° | 812.2 | 811.3 | 809.6 | 807.0 | 813.1 |
| 27.5° | 797.3 | 793.8 | 792.9 | 790.3 | 792.0 |
| 30° | 776.2 | 775.3 | 771.8 | 771.0 | 771.8 |
| 32.5° | 756.9 | 754.3 | 749.0 | 749.9 | 749.0 |
| 35° | 732.3 | 729.7 | 724.4 | 727.1 | 725.3 |
| 37.5° | 707.7 | 705.1 | 699.0 | 701.6 | 703.3 |
| 40° | 683.1 | 679.6 | 674.4 | 677.0 | 677.9 |
| 42.5° | 658.6 | 652.4 | 648.0 | 646.3 | 652.4 |
| 45° | 632.2 | 625.2 | 620.8 | 617.3 | 624.3 |
| 47.5° | 605.0 | 597.1 | 591.0 | 589.2 | 595.3 |
| 50° | 573.4 | 567.2 | 561.1 | 558.5 | 565.5 |
| 52.5° | 545.3 | 535.6 | 528.6 | 526.9 | 533.0 |
| 55° | 511.0 | 504.0 | 497.0 | 494.4 | 497.9 |
| 57.5° | 477.7 | 469.8 | 460.1 | 460.1 | 465.4 |
| 60° | 441.7 | 433.8 | 424.1 | 425.0 | 430.3 |
| 62.5° | 403.0 | 397.8 | 384.6 | 388.1 | 393.4 |
| 65° | 366.2 | 358.3 | 346.8 | 350.4 | 355.6 |
| 67.5° | 326.6 | 319.6 | 309.1 | 310.0 | 312.6 |
| 70° | 287.1 | 278.4 | 272.2 | 266.1 | 266.1 |
| 72.5° | 245.9 | 238.8 | 231.8 | 215.1 | 211.6 |
| 75° | 204.6 | 198.4 | 189.7 | 162.4 | 155.4 |
| 77.5° | 164.2 | 159.8 | 143.1 | 117.7 | 115.0 |
| 80° | 122.1 | 121.2 | 99.2 | 96.6 | 96.6 |
| 82.5° | 84.3 | 80.8 | 75.5 | 70.2 | 67.6 |
| 85° | 50.1 | 44.8 | 44.8 | 42.1 | 40.4 |
| 87.5° | 15.8 | 18.4 | 18.4 | 18.4 | 18.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)