

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: P392800

Luminaire Tested: **12EN-LD2-17-UNV-L93050-W2A-1-U (5700K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P392800
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-563-35)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 12EN-LD2-17-UNV-L93050-W2A-1-U (5700K)
Description: 1X2 ENCOUNTER, 1700 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1644.7 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.26 / 1.4
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

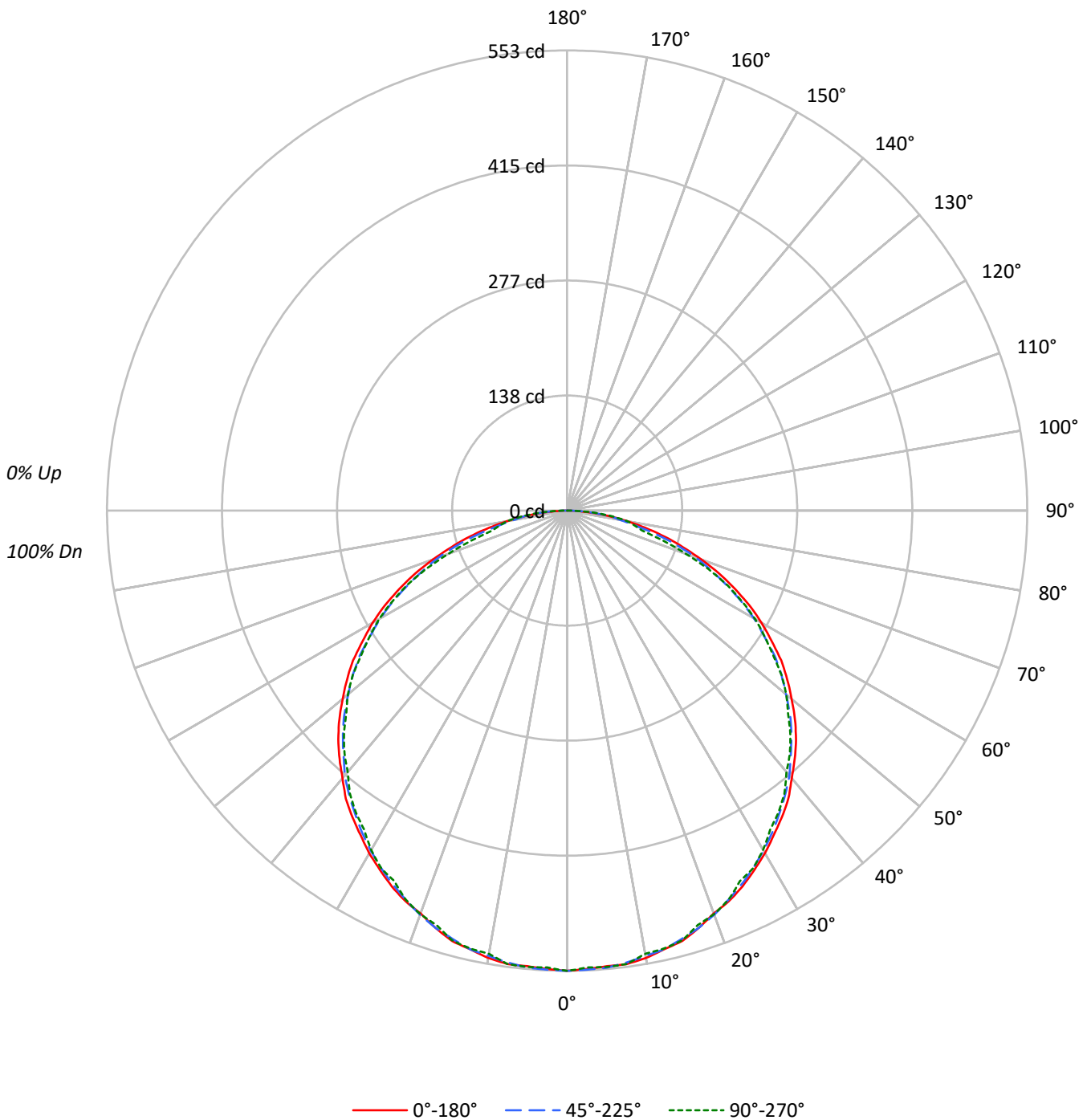
Input Watts (W): 15.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 79 | 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° | 2977 | 2977 | 2977 |
| 5° | 2969 | 2978 | 2974 |
| 10° | 2984 | 2970 | 2955 |
| 15° | 2984 | 2969 | 2979 |
| 20° | 2951 | 2960 | 2956 |
| 25° | 2960 | 2944 | 2918 |
| 30° | 2955 | 2933 | 2928 |
| 35° | 2956 | 2921 | 2909 |
| 40° | 2950 | 2919 | 2882 |
| 45° | 2961 | 2901 | 2887 |
| 50° | 2947 | 2874 | 2880 |
| 55° | 2946 | 2855 | 2831 |
| 60° | 2905 | 2792 | 2810 |
| 65° | 2831 | 2684 | 2707 |
| 70° | 2692 | 2582 | 2387 |
| 75° | 2531 | 2312 | 1944 |
| 80° | 2269 | 1996 | 2269 |
| 85° | 1741 | 2069 | 2235 |



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CATALOG NUMBER: 12EN-LD2-17-UNV-L93050-W2A-1-U (5700K)

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 52.3 | 3.2 |
| 10°-20° | 150.3 | 9.1 |
| 20°-30° | 228.6 | 13.9 |
| 30°-40° | 278.7 | 16.9 |
| 40°-50° | 295.0 | 17.9 |
| 50°-60° | 273.0 | 16.6 |
| 60°-70° | 211.7 | 12.9 |
| 70°-80° | 118.3 | 7.2 |
| 80°-90° | 36.7 | 2.2 |
| 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° | 431.3 | 26.2 |
| 0°-40° | 710.0 | 43.2 |
| 0°-60° | 1278.0 | 77.7 |
| 0°-90° | 1644.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1644.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 553 | 553 | 553 | 553 | 553 | |
| 5° | 550 | 550 | 551 | 548 | 550 | 52 |
| 15° | 536 | 534 | 533 | 533 | 535 | 151 |
| 25° | 498 | 496 | 496 | 496 | 491 | 230 |
| 35° | 450 | 449 | 445 | 441 | 443 | 281 |
| 45° | 389 | 386 | 381 | 378 | 379 | 300 |
| 55° | 314 | 310 | 304 | 302 | 302 | 280 |
| 65° | 222 | 220 | 211 | 213 | 213 | 220 |
| 75° | 122 | 119 | 111 | 100 | 94 | 128 |
| 85° | 28 | 29 | 34 | 35 | 36 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P392800

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 553.1 | 553.1 | 553.1 | 553.1 | 553.1 |
| 2.5° | 551.3 | 551.3 | 552.2 | 554.9 | 549.6 |
| 5° | 549.6 | 550.5 | 551.3 | 547.8 | 550.5 |
| 7.5° | 549.6 | 547.8 | 547.8 | 547.8 | 549.6 |
| 10° | 546.0 | 541.6 | 543.4 | 545.2 | 540.8 |
| 12.5° | 539.9 | 539.9 | 539.9 | 536.3 | 539.0 |
| 15° | 535.5 | 533.7 | 532.8 | 532.8 | 534.6 |
| 17.5° | 525.8 | 524.0 | 525.8 | 525.8 | 522.2 |
| 20° | 515.2 | 517.8 | 516.9 | 514.3 | 516.1 |
| 22.5° | 508.1 | 508.1 | 506.4 | 505.5 | 506.4 |
| 25° | 498.4 | 495.8 | 495.8 | 495.8 | 491.4 |
| 27.5° | 486.9 | 486.1 | 484.3 | 480.8 | 484.3 |
| 30° | 475.5 | 473.7 | 471.9 | 470.2 | 471.1 |
| 32.5° | 462.2 | 460.5 | 458.7 | 458.7 | 454.3 |
| 35° | 449.9 | 449.0 | 444.6 | 441.1 | 442.8 |
| 37.5° | 436.7 | 433.1 | 430.5 | 427.8 | 428.7 |
| 40° | 419.9 | 418.1 | 415.5 | 412.8 | 410.2 |
| 42.5° | 404.9 | 404.0 | 397.8 | 395.2 | 396.1 |
| 45° | 389.0 | 386.4 | 381.1 | 378.4 | 379.3 |
| 47.5° | 371.4 | 368.7 | 363.4 | 361.7 | 359.9 |
| 50° | 352.0 | 351.1 | 343.2 | 340.5 | 344.0 |
| 52.5° | 333.5 | 330.8 | 324.6 | 322.0 | 324.6 |
| 55° | 314.0 | 310.5 | 304.3 | 301.7 | 301.7 |
| 57.5° | 291.1 | 289.3 | 280.5 | 278.8 | 281.4 |
| 60° | 269.9 | 266.4 | 259.4 | 257.6 | 261.1 |
| 62.5° | 247.0 | 243.5 | 235.5 | 236.4 | 237.3 |
| 65° | 222.3 | 219.7 | 210.8 | 212.6 | 212.6 |
| 67.5° | 197.6 | 194.1 | 187.0 | 184.4 | 183.5 |
| 70° | 171.1 | 168.5 | 164.1 | 155.3 | 151.7 |
| 72.5° | 145.6 | 143.8 | 138.5 | 124.4 | 121.7 |
| 75° | 121.7 | 119.1 | 111.2 | 99.7 | 93.5 |
| 77.5° | 96.2 | 96.2 | 84.7 | 81.2 | 82.9 |
| 80° | 73.2 | 72.3 | 64.4 | 70.6 | 73.2 |
| 82.5° | 50.3 | 48.5 | 52.0 | 54.7 | 55.6 |
| 85° | 28.2 | 29.1 | 33.5 | 35.3 | 36.2 |
| 87.5° | 11.5 | 14.1 | 15.0 | 16.8 | 17.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)