

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: P392836

Luminaire Tested: **12EN-LD2-27-UNV-L82765-W2A-1-U (3500K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P392836
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-563-37)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 12EN-LD2-27-UNV-L82765-W2A-1-U (3500K)
Description: 1X2 ENCOUNTER, 2700 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 3000K/5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2603.2 lumens
Efficiency: N/A
Efficacy: 111.2 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

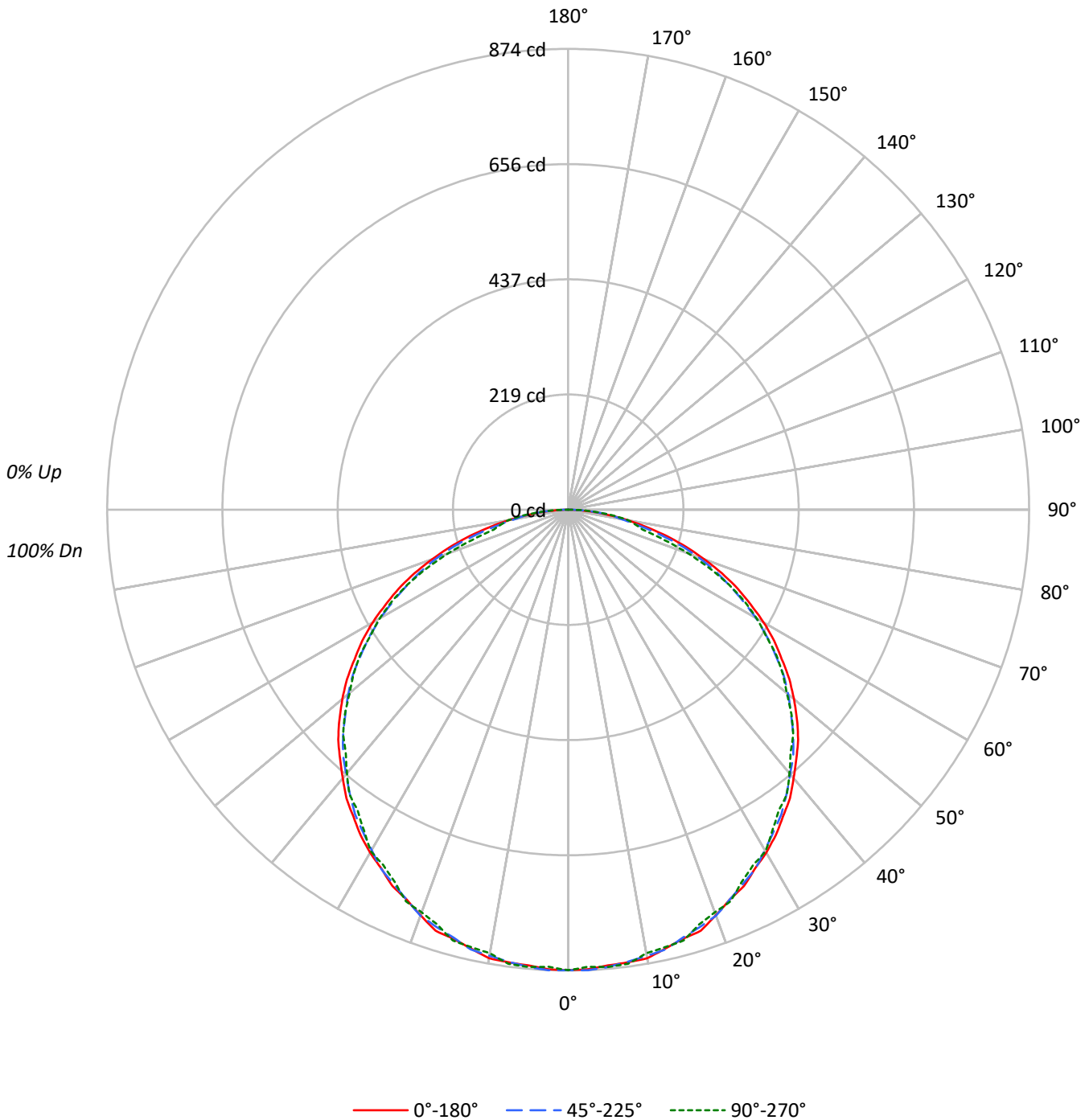
Input Watts (W): 23.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 89 | 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 | 41 | 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 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4700 | 4700 | 4700 |
| 5° | 4687 | 4702 | 4702 |
| 10° | 4721 | 4694 | 4669 |
| 15° | 4691 | 4681 | 4713 |
| 20° | 4687 | 4692 | 4654 |
| 25° | 4679 | 4651 | 4623 |
| 30° | 4668 | 4632 | 4650 |
| 35° | 4667 | 4630 | 4573 |
| 40° | 4671 | 4598 | 4585 |
| 45° | 4693 | 4592 | 4592 |
| 50° | 4679 | 4560 | 4528 |
| 55° | 4639 | 4496 | 4524 |
| 60° | 4608 | 4424 | 4444 |
| 65° | 4523 | 4270 | 4281 |
| 70° | 4307 | 4113 | 3800 |
| 75° | 4017 | 3664 | 3034 |
| 80° | 3552 | 3140 | 3580 |
| 85° | 2810 | 3335 | 3452 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 82.7 | 3.2 |
| 10°-20° | 237.6 | 9.1 |
| 20°-30° | 361.5 | 13.9 |
| 30°-40° | 440.6 | 16.9 |
| 40°-50° | 466.9 | 17.9 |
| 50°-60° | 432.4 | 16.6 |
| 60°-70° | 336.0 | 12.9 |
| 70°-80° | 187.6 | 7.2 |
| 80°-90° | 57.9 | 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° | 681.8 | 26.2 |
| 0°-40° | 1122.4 | 43.1 |
| 0°-60° | 2021.7 | 77.7 |
| 0°-90° | 2603.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2603.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 873 | 873 | 873 | 873 | 873 | |
| 5° | 868 | 870 | 870 | 870 | 870 | 83 |
| 15° | 842 | 841 | 840 | 839 | 846 | 238 |
| 25° | 788 | 786 | 783 | 782 | 778 | 362 |
| 35° | 710 | 708 | 705 | 701 | 696 | 445 |
| 45° | 617 | 611 | 603 | 598 | 603 | 475 |
| 55° | 494 | 492 | 479 | 476 | 482 | 443 |
| 65° | 355 | 348 | 335 | 336 | 336 | 349 |
| 75° | 193 | 188 | 176 | 158 | 146 | 204 |
| 85° | 46 | 46 | 54 | 56 | 56 | 54 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P392836

CATALOG NUMBER: 12EN-LD2-27-UNV-L82765-W2A-1-U (3500K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 873.2 | 873.2 | 873.2 | 873.2 | 873.2 |
| 2.5° | 872.3 | 871.3 | 874.2 | 872.3 | 867.6 |
| 5° | 867.6 | 870.4 | 870.4 | 870.4 | 870.4 |
| 7.5° | 865.7 | 863.8 | 864.7 | 865.7 | 868.5 |
| 10° | 863.8 | 858.1 | 859.0 | 858.1 | 854.3 |
| 12.5° | 852.4 | 852.4 | 854.3 | 852.4 | 849.6 |
| 15° | 842.0 | 841.0 | 840.1 | 839.1 | 845.8 |
| 17.5° | 837.2 | 829.7 | 829.7 | 830.6 | 824.9 |
| 20° | 818.3 | 818.3 | 819.3 | 816.4 | 812.6 |
| 22.5° | 800.3 | 803.2 | 800.3 | 796.5 | 804.1 |
| 25° | 788.0 | 786.1 | 783.3 | 782.3 | 778.5 |
| 27.5° | 767.2 | 769.1 | 768.1 | 764.3 | 759.6 |
| 30° | 751.1 | 749.2 | 745.4 | 740.6 | 748.2 |
| 32.5° | 732.1 | 729.3 | 724.5 | 721.7 | 720.8 |
| 35° | 710.3 | 707.5 | 704.7 | 700.9 | 696.1 |
| 37.5° | 690.4 | 685.7 | 680.0 | 674.3 | 681.0 |
| 40° | 664.9 | 663.0 | 654.5 | 650.7 | 652.6 |
| 42.5° | 640.2 | 638.4 | 631.7 | 627.0 | 624.1 |
| 45° | 616.6 | 610.9 | 603.3 | 597.6 | 603.3 |
| 47.5° | 588.2 | 584.4 | 573.0 | 571.1 | 574.0 |
| 50° | 558.8 | 554.1 | 544.6 | 541.7 | 540.8 |
| 52.5° | 528.5 | 524.7 | 514.3 | 508.6 | 513.3 |
| 55° | 494.4 | 492.5 | 479.2 | 476.4 | 482.1 |
| 57.5° | 463.1 | 457.5 | 446.1 | 443.2 | 444.2 |
| 60° | 428.1 | 423.4 | 411.0 | 407.3 | 412.9 |
| 62.5° | 390.2 | 385.5 | 372.2 | 371.3 | 377.0 |
| 65° | 355.2 | 347.6 | 335.3 | 336.2 | 336.2 |
| 67.5° | 315.4 | 309.7 | 299.3 | 294.6 | 289.8 |
| 70° | 273.7 | 269.9 | 261.4 | 246.2 | 241.5 |
| 72.5° | 233.9 | 229.2 | 221.6 | 196.1 | 191.3 |
| 75° | 193.2 | 188.5 | 176.2 | 158.2 | 145.9 |
| 77.5° | 152.5 | 151.5 | 134.5 | 127.9 | 130.7 |
| 80° | 114.6 | 113.7 | 101.3 | 111.8 | 115.5 |
| 82.5° | 77.7 | 75.8 | 82.4 | 88.1 | 87.1 |
| 85° | 45.5 | 46.4 | 54.0 | 55.9 | 55.9 |
| 87.5° | 18.0 | 20.8 | 24.6 | 27.5 | 26.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)