

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: P393033

Luminaire Tested: **14EN-LD2-28-UNV-L82765-W2A-1-U (6500K)**

Issue Date: 3/28/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P393033  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-51)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14EN-LD2-28-UNV-L82765-W2A-1-U (6500K)  
Description: 1X4 ENCOUNTER, 2800 LUMENS, VIVIDTUNE TUNABLE WHITE  
Light Source: 3000K/5000K CCT, CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2698.5 lumens  
Efficiency: N/A  
Efficacy: 95.0 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.27 / 1.4  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

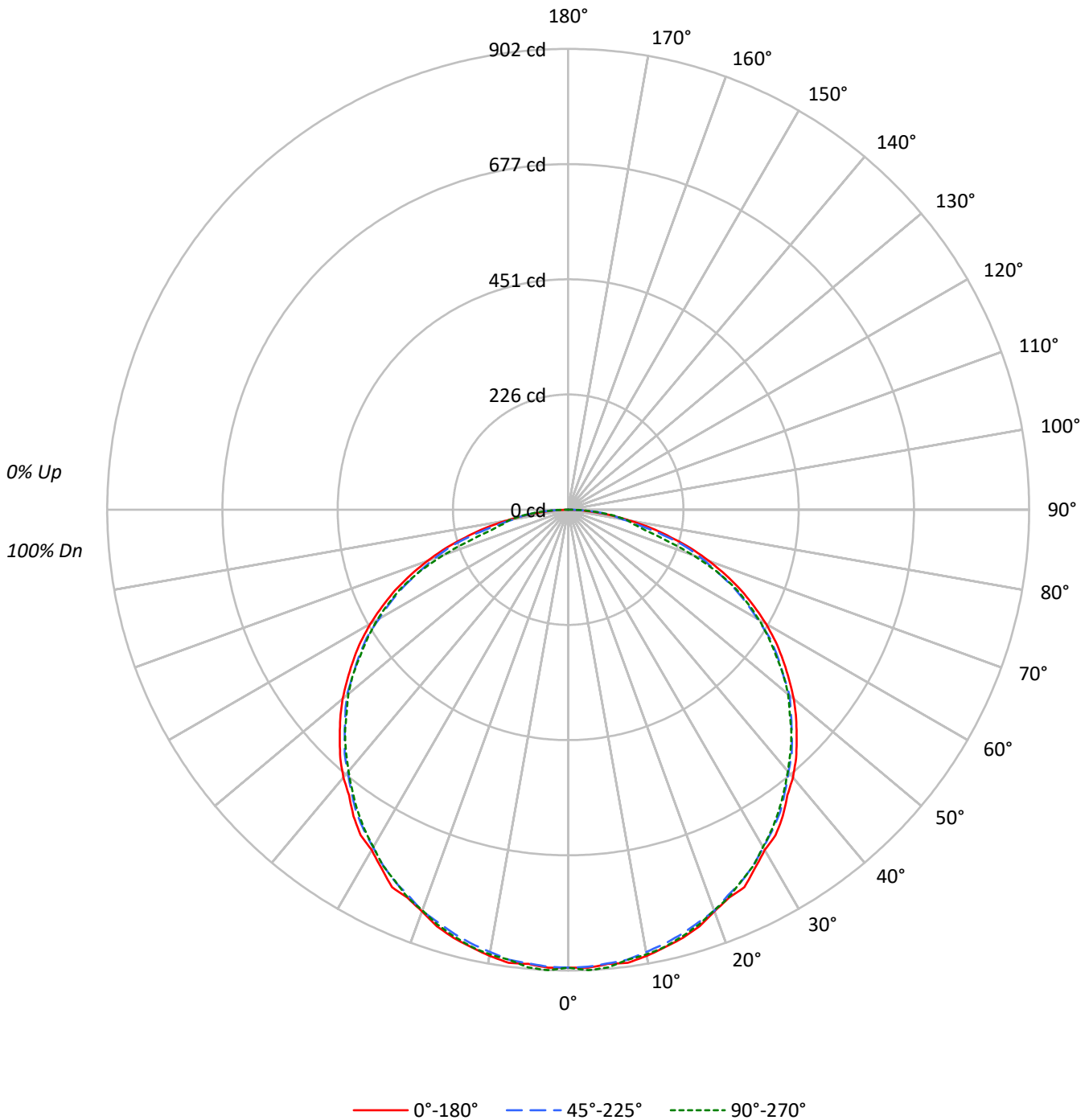
Input Watts (W): 28.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 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  | 61  | 68  | 64  | 60  | 57  |
| 4   | 82  | 69  | 60  | 53  | 79  | 68  | 60  | 53  | 65  | 58  | 52  | 63  | 57  | 52  | 61  | 55  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 58  | 51  | 45  | 56  | 50  | 44  | 55  | 49  | 44  | 42  |
| 6   | 69  | 55  | 46  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 39  | 51  | 44  | 39  | 49  | 43  | 39  | 36  |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 48  | 40  | 35  | 46  | 39  | 34  | 45  | 39  | 34  | 32  |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 30  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 32  | 27  | 26  |
| 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°  | 2412 | 2412 | 2412 |
| 5°  | 2411 | 2408 | 2429 |
| 10° | 2423 | 2402 | 2415 |
| 15° | 2416 | 2395 | 2408 |
| 20° | 2395 | 2393 | 2390 |
| 25° | 2421 | 2383 | 2381 |
| 30° | 2389 | 2371 | 2368 |
| 35° | 2406 | 2374 | 2361 |
| 40° | 2403 | 2356 | 2349 |
| 45° | 2405 | 2354 | 2350 |
| 50° | 2411 | 2367 | 2351 |
| 55° | 2408 | 2345 | 2327 |
| 60° | 2404 | 2300 | 2321 |
| 65° | 2378 | 2255 | 2285 |
| 70° | 2300 | 2186 | 2042 |
| 75° | 2156 | 2016 | 1625 |
| 80° | 1884 | 1660 | 1808 |
| 85° | 1430 | 1819 | 1819 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 85.0   | 3.2       |
| 10°-20°   | 243.6  | 9.0       |
| 20°-30°   | 370.9  | 13.7      |
| 30°-40°   | 452.3  | 16.8      |
| 40°-50°   | 479.9  | 17.8      |
| 50°-60°   | 449.2  | 16.6      |
| 60°-70°   | 355.0  | 13.2      |
| 70°-80°   | 200.9  | 7.4       |
| 80°-90°   | 61.6   | 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°    | 699.5  | 25.9      |
| 0°-40°    | 1151.8 | 42.7      |
| 0°-60°    | 2081.0 | 77.1      |
| 0°-90°    | 2698.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2698.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 896 | 896   | 896 | 896   | 896 |      |
| 5°  | 892 | 893   | 892 | 897   | 899 | 85   |
| 15° | 867 | 861   | 860 | 864   | 864 | 245  |
| 25° | 815 | 807   | 803 | 801   | 802 | 373  |
| 35° | 732 | 731   | 723 | 715   | 719 | 457  |
| 45° | 632 | 629   | 618 | 616   | 618 | 488  |
| 55° | 513 | 510   | 500 | 500   | 496 | 459  |
| 65° | 373 | 369   | 354 | 359   | 359 | 368  |
| 75° | 207 | 202   | 194 | 169   | 156 | 220  |
| 85° | 46  | 50    | 59  | 59    | 59  | 56   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 896.3 | 896.3 | 896.3 | 896.3 | 896.3 |
| 2.5°  | 897.3 | 898.2 | 895.4 | 896.3 | 902.1 |
| 5°    | 892.5 | 893.4 | 891.5 | 897.3 | 899.2 |
| 7.5°  | 894.4 | 889.6 | 888.6 | 890.5 | 888.6 |
| 10°   | 886.7 | 885.7 | 879.0 | 880.9 | 883.8 |
| 12.5° | 877.0 | 875.1 | 870.3 | 875.1 | 876.1 |
| 15°   | 867.4 | 860.6 | 859.7 | 864.5 | 864.5 |
| 17.5° | 854.8 | 854.8 | 847.1 | 847.1 | 851.0 |
| 20°   | 836.5 | 839.4 | 835.5 | 835.5 | 834.6 |
| 22.5° | 822.0 | 820.1 | 817.2 | 824.9 | 821.1 |
| 25°   | 815.3 | 806.6 | 802.7 | 800.8 | 801.8 |
| 27.5° | 791.2 | 793.1 | 784.4 | 780.5 | 785.4 |
| 30°   | 769.0 | 768.0 | 763.2 | 765.1 | 762.2 |
| 32.5° | 755.5 | 746.8 | 743.9 | 741.9 | 741.9 |
| 35°   | 732.3 | 731.3 | 722.7 | 714.9 | 718.8 |
| 37.5° | 704.3 | 704.3 | 696.6 | 694.7 | 693.7 |
| 40°   | 684.1 | 677.3 | 670.6 | 671.5 | 668.6 |
| 42.5° | 659.9 | 655.1 | 647.4 | 639.7 | 643.5 |
| 45°   | 632.0 | 629.1 | 618.5 | 615.6 | 617.5 |
| 47.5° | 604.9 | 598.2 | 591.4 | 591.4 | 587.6 |
| 50°   | 576.0 | 570.2 | 565.4 | 559.6 | 561.5 |
| 52.5° | 544.2 | 543.2 | 529.7 | 526.8 | 530.7 |
| 55°   | 513.3 | 510.4 | 499.8 | 499.8 | 495.9 |
| 57.5° | 481.4 | 476.6 | 467.9 | 465.0 | 464.1 |
| 60°   | 446.7 | 440.9 | 427.4 | 424.5 | 431.3 |
| 62.5° | 410.0 | 404.3 | 391.7 | 392.7 | 395.6 |
| 65°   | 373.4 | 368.6 | 354.1 | 358.9 | 358.9 |
| 67.5° | 333.8 | 326.1 | 313.6 | 315.5 | 312.6 |
| 70°   | 292.3 | 287.5 | 277.9 | 267.3 | 259.5 |
| 72.5° | 251.8 | 246.0 | 241.2 | 216.1 | 203.6 |
| 75°   | 207.4 | 201.6 | 193.9 | 168.8 | 156.3 |
| 77.5° | 166.9 | 162.1 | 144.7 | 127.4 | 130.3 |
| 80°   | 121.6 | 127.4 | 107.1 | 113.8 | 116.7 |
| 82.5° | 83.0  | 83.9  | 87.8  | 92.6  | 90.7  |
| 85°   | 46.3  | 50.2  | 58.9  | 58.9  | 58.9  |
| 87.5° | 17.4  | 25.1  | 26.1  | 27.0  | 27.0  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)