

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: P393061

Luminaire Tested: **14EN-LD2-33-UNV-L82765-W2A-1-U (4000K)**

Issue Date: 3/28/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P393061  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-52)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14EN-LD2-33-UNV-L82765-W2A-1-U (4000K)  
Description: 1X4 ENCOUNTER, 3300 LUMENS, VIVIDTUNE TUNABLE WHITE  
Light Source: 3000K/5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3087.3 lumens  
Efficiency: N/A  
Efficacy: 99.0 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

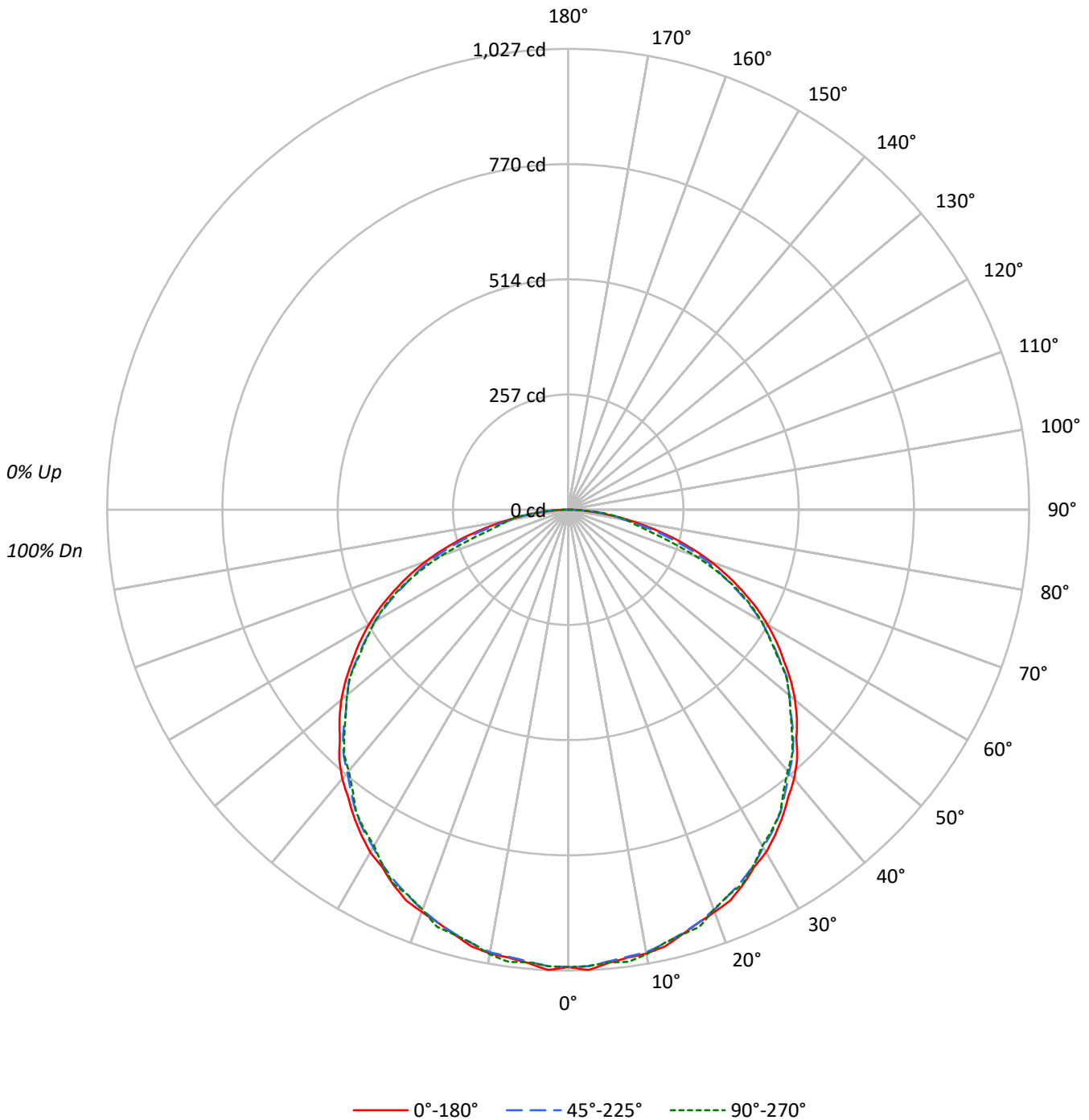
Input Watts (W): 31.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 103 | 99  | 95  | 106 | 101 | 97  | 93  | 97  | 93  | 90  | 93  | 90  | 88  | 89  | 87  | 85  | 83  |
| 2   | 98  | 90  | 83  | 77  | 95  | 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  | 60  | 68  | 64  | 59  | 57  |
| 4   | 82  | 69  | 60  | 53  | 79  | 68  | 59  | 53  | 65  | 58  | 52  | 63  | 57  | 51  | 61  | 55  | 51  | 48  |
| 5   | 75  | 62  | 52  | 46  | 73  | 61  | 52  | 45  | 58  | 51  | 45  | 56  | 50  | 44  | 54  | 49  | 44  | 42  |
| 6   | 69  | 55  | 46  | 40  | 67  | 54  | 46  | 39  | 53  | 45  | 39  | 51  | 44  | 39  | 49  | 43  | 38  | 36  |
| 7   | 64  | 50  | 41  | 35  | 62  | 49  | 41  | 35  | 48  | 40  | 34  | 46  | 39  | 34  | 45  | 39  | 34  | 32  |
| 8   | 59  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 30  | 28  |
| 9   | 56  | 42  | 34  | 28  | 54  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 27  | 38  | 32  | 27  | 25  |
| 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°  | 2743 | 2743 | 2743 |
| 5°  | 2740 | 2730 | 2735 |
| 10° | 2744 | 2736 | 2749 |
| 15° | 2730 | 2725 | 2730 |
| 20° | 2731 | 2718 | 2715 |
| 25° | 2738 | 2713 | 2732 |
| 30° | 2740 | 2700 | 2688 |
| 35° | 2737 | 2707 | 2704 |
| 40° | 2750 | 2688 | 2671 |
| 45° | 2737 | 2698 | 2684 |
| 50° | 2761 | 2691 | 2691 |
| 55° | 2752 | 2682 | 2669 |
| 60° | 2760 | 2669 | 2675 |
| 65° | 2724 | 2581 | 2623 |
| 70° | 2661 | 2550 | 2382 |
| 75° | 2496 | 2322 | 1942 |
| 80° | 2187 | 1940 | 2070 |
| 85° | 1615 | 2078 | 2078 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 96.5   | 3.1       |
| 10°-20°   | 276.9  | 9.0       |
| 20°-30°   | 422.3  | 13.7      |
| 30°-40°   | 515.7  | 16.7      |
| 40°-50°   | 548.7  | 17.8      |
| 50°-60°   | 515.2  | 16.7      |
| 60°-70°   | 409.3  | 13.3      |
| 70°-80°   | 232.7  | 7.5       |
| 80°-90°   | 70.1   | 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°    | 795.7  | 25.8      |
| 0°-40°    | 1311.3 | 42.5      |
| 0°-60°    | 2375.2 | 76.9      |
| 0°-90°    | 3087.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3087.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1019 | 1019  | 1019 | 1019  | 1019 |      |
| 5°  | 1014 | 1014  | 1011 | 1016  | 1013 | 97   |
| 15° | 980  | 984   | 978  | 982   | 980  | 277  |
| 25° | 922  | 920   | 914  | 914   | 920  | 425  |
| 35° | 833  | 829   | 824  | 820   | 823  | 522  |
| 45° | 719  | 718   | 709  | 707   | 705  | 558  |
| 55° | 587  | 583   | 572  | 571   | 569  | 526  |
| 65° | 428  | 421   | 405  | 412   | 412  | 423  |
| 75° | 240  | 234   | 223  | 196   | 187  | 253  |
| 85° | 52   | 57    | 67   | 65    | 67   | 65   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1019.2 | 1019.2 | 1019.2 | 1019.2 | 1019.2 |
| 2.5°  | 1026.6 | 1019.2 | 1018.2 | 1019.2 | 1018.2 |
| 5°    | 1014.5 | 1014.5 | 1010.7 | 1016.4 | 1012.6 |
| 7.5°  | 1007.0 | 1010.7 | 1005.1 | 1010.7 | 1016.4 |
| 10°   | 1004.2 | 1003.3 | 1001.4 | 1000.5 | 1006.1 |
| 12.5° | 996.7  | 992.1  | 990.2  | 993.0  | 989.3  |
| 15°   | 979.9  | 983.7  | 978.1  | 981.8  | 979.9  |
| 17.5° | 965.0  | 969.6  | 965.0  | 966.8  | 974.3  |
| 20°   | 953.8  | 954.7  | 949.1  | 950.0  | 948.2  |
| 22.5° | 942.6  | 935.1  | 931.3  | 932.3  | 930.4  |
| 25°   | 922.0  | 920.1  | 913.6  | 914.5  | 920.1  |
| 27.5° | 897.7  | 899.6  | 894.0  | 893.0  | 894.0  |
| 30°   | 881.8  | 877.2  | 868.8  | 869.7  | 865.0  |
| 32.5° | 858.5  | 852.9  | 848.2  | 843.5  | 845.4  |
| 35°   | 833.3  | 828.6  | 823.9  | 820.2  | 823.0  |
| 37.5° | 806.2  | 803.4  | 794.0  | 793.1  | 788.4  |
| 40°   | 782.8  | 774.4  | 765.1  | 762.3  | 760.4  |
| 42.5° | 754.8  | 750.1  | 740.8  | 736.1  | 738.9  |
| 45°   | 719.3  | 718.4  | 709.0  | 707.1  | 705.3  |
| 47.5° | 691.3  | 684.7  | 672.6  | 673.5  | 671.7  |
| 50°   | 659.5  | 653.9  | 642.7  | 639.0  | 642.7  |
| 52.5° | 624.9  | 622.1  | 613.7  | 610.0  | 612.8  |
| 55°   | 586.6  | 582.9  | 571.7  | 570.8  | 568.9  |
| 57.5° | 551.1  | 545.5  | 533.4  | 529.7  | 531.5  |
| 60°   | 512.8  | 507.2  | 496.0  | 490.4  | 497.0  |
| 62.5° | 472.7  | 465.2  | 453.1  | 454.0  | 457.7  |
| 65°   | 427.8  | 421.3  | 405.4  | 412.0  | 412.0  |
| 67.5° | 383.9  | 377.4  | 364.3  | 364.3  | 358.7  |
| 70°   | 338.2  | 329.8  | 324.1  | 311.1  | 302.7  |
| 72.5° | 289.6  | 281.2  | 274.6  | 252.2  | 240.1  |
| 75°   | 240.1  | 233.5  | 223.3  | 196.2  | 186.8  |
| 77.5° | 188.7  | 186.8  | 170.9  | 150.4  | 153.2  |
| 80°   | 141.1  | 143.9  | 125.2  | 132.6  | 133.6  |
| 82.5° | 96.2   | 96.2   | 99.0   | 104.6  | 104.6  |
| 85°   | 52.3   | 57.0   | 67.3   | 65.4   | 67.3   |
| 87.5° | 19.6   | 28.0   | 30.8   | 29.0   | 29.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)