

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: P296403

Luminaire Tested: **22RLN-LD5-20-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P296403  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-085-11)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22RLN-LD5-20-UNV-L82765-W2A1-U-2700K  
Description: RLN LED 2x2 TUNABLE WHITE TROFFER  
WITH STANDARD LENS  
Light Source: (252) 80 CRI LEDS TUNED TO 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1841.0 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.23 / 1.3  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

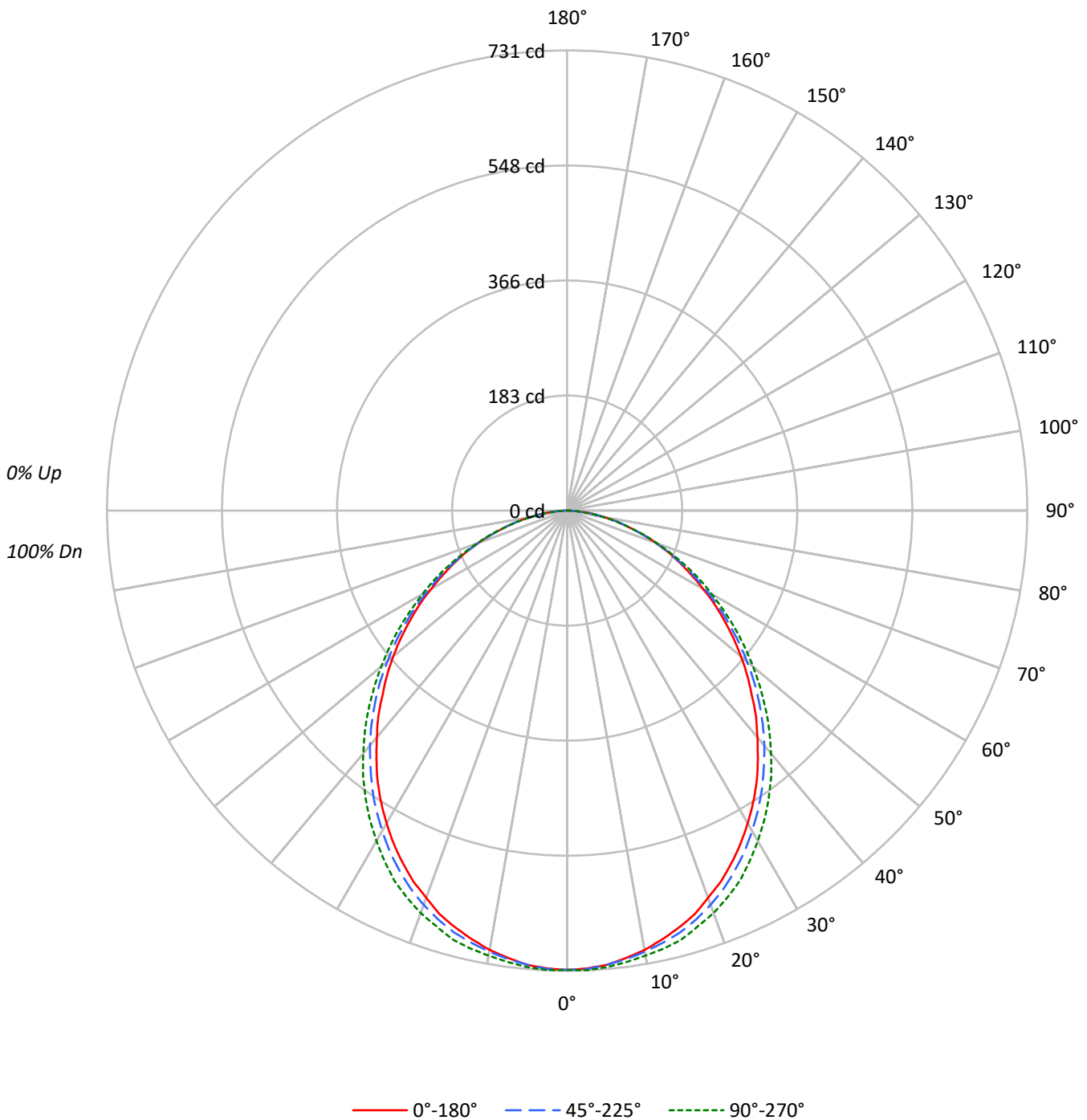
Input Watts (W): 15.438  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 105 | 101 | 97  | 107 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 86  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 74  | 71  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 77  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 63  | 61  |
| 4   | 84  | 72  | 64  | 57  | 81  | 71  | 63  | 57  | 68  | 61  | 56  | 66  | 60  | 55  | 64  | 59  | 54  | 52  |
| 5   | 77  | 65  | 56  | 49  | 75  | 64  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 48  | 58  | 52  | 48  | 46  |
| 6   | 71  | 58  | 50  | 43  | 70  | 57  | 49  | 43  | 56  | 48  | 43  | 54  | 47  | 42  | 52  | 47  | 42  | 40  |
| 7   | 66  | 53  | 44  | 38  | 65  | 52  | 44  | 38  | 51  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |
| 8   | 62  | 49  | 40  | 34  | 60  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |
| 9   | 58  | 45  | 37  | 31  | 56  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 29  |
| 10  | 54  | 41  | 33  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 32  | 28  | 26  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1964 | 1964 | 1964 |
| 5°  | 1956 | 1956 | 1966 |
| 10° | 1936 | 1944 | 1961 |
| 15° | 1910 | 1933 | 1964 |
| 20° | 1874 | 1908 | 1948 |
| 25° | 1834 | 1872 | 1927 |
| 30° | 1783 | 1826 | 1882 |
| 35° | 1725 | 1773 | 1833 |
| 40° | 1651 | 1712 | 1770 |
| 45° | 1579 | 1642 | 1698 |
| 50° | 1510 | 1560 | 1614 |
| 55° | 1430 | 1473 | 1524 |
| 60° | 1344 | 1378 | 1428 |
| 65° | 1263 | 1286 | 1327 |
| 70° | 1177 | 1177 | 1199 |
| 75° | 1050 | 1050 | 1050 |
| 80° | 925  | 896  | 896  |
| 85° | 738  | 707  | 651  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 68.8   | 3.7       |
| 10°-20°   | 195.7  | 10.6      |
| 20°-30°   | 290.7  | 15.8      |
| 30°-40°   | 337.3  | 18.3      |
| 40°-50°   | 332.1  | 18.0      |
| 50°-60°   | 281.1  | 15.3      |
| 60°-70°   | 200.5  | 10.9      |
| 70°-80°   | 107.7  | 5.9       |
| 80°-90°   | 27.2   | 1.5       |
| 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°    | 555.1  | 30.2      |
| 0°-40°    | 892.5  | 48.5      |
| 0°-60°    | 1505.7 | 81.8      |
| 0°-90°    | 1841.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1841.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 730 | 730   | 730 | 730   | 730 |      |
| 5°  | 724 | 724   | 724 | 727   | 728 | 69   |
| 15° | 686 | 688   | 694 | 700   | 705 | 193  |
| 25° | 618 | 620   | 631 | 642   | 649 | 284  |
| 35° | 525 | 526   | 540 | 553   | 558 | 328  |
| 45° | 415 | 418   | 431 | 442   | 446 | 321  |
| 55° | 305 | 306   | 314 | 322   | 325 | 273  |
| 65° | 198 | 198   | 202 | 206   | 208 | 197  |
| 75° | 101 | 100   | 101 | 101   | 101 | 108  |
| 85° | 24  | 23    | 23  | 21    | 21  | 28   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 729.7 | 729.7 | 729.7 | 729.7 | 729.7 |
| 2.5°  | 727.9 | 727.9 | 728.8 | 729.7 | 730.7 |
| 5°    | 724.2 | 724.2 | 724.2 | 727.0 | 727.9 |
| 7.5°  | 716.9 | 717.8 | 718.7 | 721.5 | 723.3 |
| 10°   | 708.6 | 709.5 | 711.4 | 716.0 | 717.8 |
| 12.5° | 697.6 | 700.4 | 703.1 | 709.5 | 712.3 |
| 15°   | 685.7 | 687.5 | 693.9 | 700.4 | 704.9 |
| 17.5° | 672.8 | 673.7 | 681.1 | 690.3 | 692.1 |
| 20°   | 654.5 | 657.2 | 666.4 | 675.6 | 680.2 |
| 22.5° | 637.9 | 639.8 | 649.9 | 661.8 | 665.5 |
| 25°   | 617.7 | 619.6 | 630.6 | 642.5 | 649.0 |
| 27.5° | 596.6 | 598.5 | 610.4 | 623.3 | 627.8 |
| 30°   | 573.7 | 575.5 | 587.5 | 601.2 | 605.8 |
| 32.5° | 549.8 | 551.7 | 564.5 | 576.4 | 582.9 |
| 35°   | 525.0 | 526.0 | 539.7 | 552.6 | 558.1 |
| 37.5° | 497.5 | 500.3 | 513.1 | 526.0 | 532.4 |
| 40°   | 470.0 | 472.7 | 487.4 | 499.3 | 503.9 |
| 42.5° | 444.3 | 447.9 | 459.9 | 470.9 | 475.5 |
| 45°   | 414.9 | 417.6 | 431.4 | 441.5 | 446.1 |
| 47.5° | 388.3 | 391.0 | 403.0 | 413.1 | 415.8 |
| 50°   | 360.7 | 362.6 | 372.7 | 381.8 | 385.5 |
| 52.5° | 333.2 | 334.1 | 343.3 | 352.5 | 355.2 |
| 55°   | 304.7 | 305.7 | 313.9 | 322.2 | 324.9 |
| 57.5° | 278.1 | 278.1 | 285.5 | 291.9 | 294.6 |
| 60°   | 249.7 | 249.7 | 256.1 | 262.5 | 265.3 |
| 62.5° | 223.1 | 223.1 | 229.5 | 234.1 | 237.7 |
| 65°   | 198.3 | 198.3 | 201.9 | 205.6 | 208.4 |
| 67.5° | 174.4 | 171.6 | 175.3 | 179.9 | 179.0 |
| 70°   | 149.6 | 146.9 | 149.6 | 151.5 | 152.4 |
| 72.5° | 124.8 | 123.0 | 124.8 | 125.8 | 127.6 |
| 75°   | 101.0 | 100.1 | 101.0 | 101.0 | 101.0 |
| 77.5° | 80.8  | 78.0  | 79.9  | 78.9  | 78.0  |
| 80°   | 59.7  | 58.7  | 57.8  | 56.9  | 57.8  |
| 82.5° | 41.3  | 40.4  | 40.4  | 38.6  | 38.6  |
| 85°   | 23.9  | 22.9  | 22.9  | 21.1  | 21.1  |
| 87.5° | 9.2   | 9.2   | 8.3   | 8.3   | 8.3   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)