

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: P296283

Luminaire Tested: **24RLN-LD5-31-RDP-UNV-L92765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296283
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36059-R2)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-31-RDP-UNV-L92765-W2A1-U-2700K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (504) 90 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2014.0 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

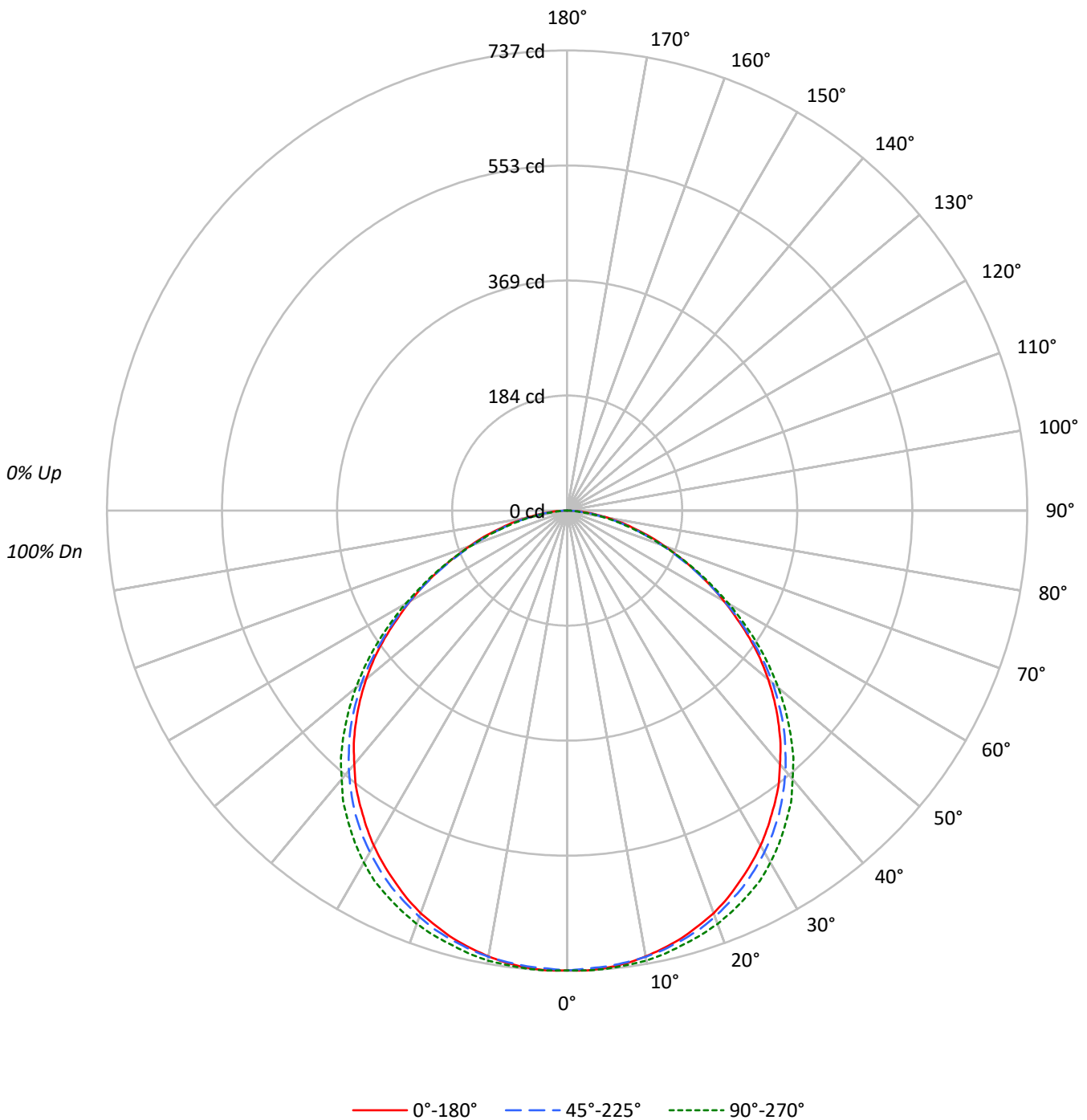
Input Watts (W): 21.111
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | | 74 | 68 | 64 | | 71 | 66 | 63 | 60 |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | | 66 | 60 | 55 | | 63 | 58 | 54 | 52 |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | | 59 | 53 | 48 | | 57 | 52 | 47 | 45 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | | 53 | 47 | 42 | | 52 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | | 49 | 42 | 37 | | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | | 45 | 38 | 33 | | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | | 41 | 35 | 30 | | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 27 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | | 38 | 32 | 27 | | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|-----|------|
| 0° | 991 | 991 | 991 |
| 5° | 993 | 990 | 995 |
| 10° | 991 | 992 | 1000 |
| 15° | 988 | 992 | 1003 |
| 20° | 982 | 991 | 1009 |
| 25° | 972 | 988 | 1012 |
| 30° | 963 | 982 | 1011 |
| 35° | 949 | 973 | 1003 |
| 40° | 931 | 955 | 986 |
| 45° | 910 | 933 | 962 |
| 50° | 880 | 900 | 924 |
| 55° | 837 | 848 | 873 |
| 60° | 781 | 785 | 806 |
| 65° | 718 | 713 | 730 |
| 70° | 652 | 634 | 637 |
| 75° | 580 | 548 | 544 |
| 80° | 503 | 450 | 438 |
| 85° | 412 | 318 | 247 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 69.9 | 3.5 |
| 10°-20° | 201.4 | 10.0 |
| 20°-30° | 307.4 | 15.3 |
| 30°-40° | 370.6 | 18.4 |
| 40°-50° | 377.9 | 18.8 |
| 50°-60° | 323.4 | 16.1 |
| 60°-70° | 222.8 | 11.1 |
| 70°-80° | 114.2 | 5.7 |
| 80°-90° | 26.6 | 1.3 |
| 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° | 578.6 | 28.7 |
| 0°-40° | 949.2 | 47.1 |
| 0°-60° | 1650.4 | 81.9 |
| 0°-90° | 2014.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2014.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 736 | 736 | 736 | 736 | 736 | |
| 5° | 735 | 734 | 733 | 735 | 736 | 70 |
| 15° | 709 | 708 | 712 | 717 | 720 | 200 |
| 25° | 655 | 657 | 666 | 677 | 682 | 302 |
| 35° | 578 | 580 | 592 | 605 | 610 | 361 |
| 45° | 478 | 479 | 490 | 503 | 506 | 368 |
| 55° | 357 | 354 | 361 | 369 | 372 | 318 |
| 65° | 225 | 220 | 224 | 225 | 229 | 224 |
| 75° | 112 | 107 | 105 | 105 | 105 | 120 |
| 85° | 27 | 24 | 21 | 18 | 16 | 31 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 736.5 | 736.5 | 736.5 | 736.5 | 736.5 |
| 2.5° | 737.3 | 735.8 | 734.2 | 735.8 | 737.3 |
| 5° | 735.0 | 733.5 | 732.7 | 735.0 | 736.5 |
| 7.5° | 731.2 | 729.7 | 729.7 | 732.7 | 734.2 |
| 10° | 725.1 | 724.3 | 725.8 | 728.9 | 731.9 |
| 12.5° | 717.4 | 717.4 | 719.7 | 723.5 | 726.6 |
| 15° | 709.0 | 708.3 | 712.1 | 717.4 | 719.7 |
| 17.5° | 697.6 | 698.3 | 703.7 | 709.8 | 712.8 |
| 20° | 686.1 | 686.9 | 692.2 | 700.6 | 704.4 |
| 22.5° | 671.6 | 673.1 | 679.2 | 689.9 | 693.7 |
| 25° | 654.8 | 657.1 | 665.5 | 676.9 | 681.5 |
| 27.5° | 638.0 | 640.3 | 649.4 | 662.4 | 668.5 |
| 30° | 619.6 | 622.7 | 631.9 | 645.6 | 651.0 |
| 32.5° | 599.0 | 601.3 | 612.8 | 626.5 | 631.9 |
| 35° | 577.6 | 579.9 | 592.1 | 605.1 | 610.5 |
| 37.5° | 556.2 | 556.2 | 568.4 | 583.7 | 589.1 |
| 40° | 530.2 | 531.0 | 544.0 | 558.5 | 561.6 |
| 42.5° | 505.8 | 505.8 | 517.3 | 531.0 | 536.4 |
| 45° | 478.3 | 479.0 | 490.5 | 502.7 | 505.8 |
| 47.5° | 450.0 | 450.0 | 459.9 | 471.4 | 474.5 |
| 50° | 420.2 | 418.7 | 430.2 | 439.3 | 441.6 |
| 52.5° | 389.7 | 387.4 | 396.5 | 404.2 | 407.2 |
| 55° | 356.8 | 354.5 | 361.4 | 369.0 | 372.1 |
| 57.5° | 322.4 | 319.4 | 327.0 | 333.9 | 335.4 |
| 60° | 290.3 | 285.7 | 291.9 | 295.7 | 299.5 |
| 62.5° | 258.2 | 252.9 | 257.5 | 259.8 | 262.8 |
| 65° | 225.4 | 220.0 | 223.9 | 225.4 | 229.2 |
| 67.5° | 194.1 | 190.2 | 191.0 | 193.3 | 194.8 |
| 70° | 165.8 | 161.2 | 161.2 | 161.2 | 162.0 |
| 72.5° | 139.8 | 132.9 | 132.2 | 132.9 | 132.9 |
| 75° | 111.5 | 107.0 | 105.4 | 105.4 | 104.7 |
| 77.5° | 89.4 | 83.3 | 82.5 | 81.0 | 79.5 |
| 80° | 64.9 | 59.6 | 58.1 | 57.3 | 56.5 |
| 82.5° | 45.1 | 40.5 | 39.0 | 37.4 | 35.1 |
| 85° | 26.7 | 23.7 | 20.6 | 18.3 | 16.0 |
| 87.5° | 9.9 | 9.2 | 7.6 | 6.9 | 6.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)