

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: P295791

Luminaire Tested: **14RLN-LD5-31-RDP-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295791
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36061-R2)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14RLN-LD5-31-RDP-UNV-L92765-W2A1-U-5000K
Description: RLN LED 1x4 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (168) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2447.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.35 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

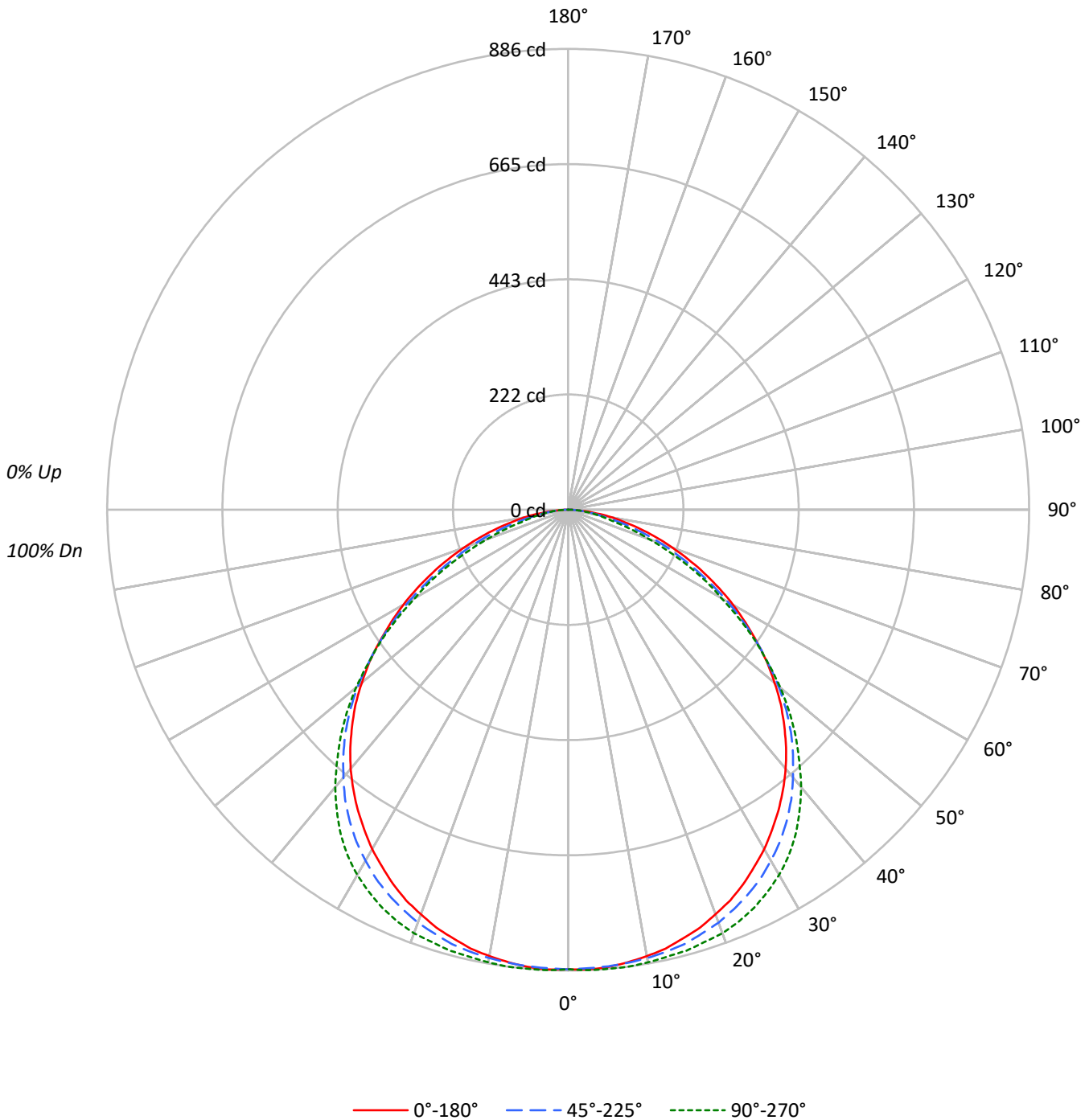
Input Watts (W): 28.923
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | | | | | 100 | | | |
| 1 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 94 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 87 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 74 | 72 | | | | | 72 | | | |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 77 | 70 | 65 | 74 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | 61 | | | |
| 4 | 84 | 72 | 63 | 57 | 81 | 71 | 63 | 57 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 59 | 54 | 52 | | | | | 52 | | | |
| 5 | 77 | 64 | 56 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 45 | | | | | 45 | | | |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 54 | 47 | 42 | 52 | 46 | 42 | 40 | | | | | 40 | | | |
| 7 | 66 | 53 | 44 | 38 | 64 | 52 | 44 | 38 | 50 | 43 | 38 | 49 | 42 | 37 | 48 | 42 | 37 | 35 | | | | | 35 | | | |
| 8 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 34 | 45 | 38 | 33 | 44 | 38 | 33 | 31 | | | | | 31 | | | |
| 9 | 57 | 44 | 36 | 30 | 56 | 44 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 | | | | | 28 | | | |
| 10 | 54 | 41 | 33 | 28 | 53 | 40 | 33 | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 | | | | | 25 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2378 | 2378 | 2378 |
| 5° | 2384 | 2381 | 2394 |
| 10° | 2381 | 2391 | 2415 |
| 15° | 2377 | 2408 | 2445 |
| 20° | 2371 | 2419 | 2482 |
| 25° | 2360 | 2425 | 2508 |
| 30° | 2342 | 2421 | 2519 |
| 35° | 2316 | 2404 | 2504 |
| 40° | 2284 | 2361 | 2447 |
| 45° | 2234 | 2304 | 2355 |
| 50° | 2168 | 2208 | 2229 |
| 55° | 2076 | 2070 | 2059 |
| 60° | 1969 | 1904 | 1832 |
| 65° | 1834 | 1703 | 1610 |
| 70° | 1674 | 1492 | 1301 |
| 75° | 1503 | 1238 | 973 |
| 80° | 1337 | 903 | 848 |
| 85° | 1050 | 750 | 750 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 84.1 | 3.4 |
| 10°-20° | 244.5 | 10.0 |
| 20°-30° | 377.3 | 15.4 |
| 30°-40° | 457.6 | 18.7 |
| 40°-50° | 464.6 | 19.0 |
| 50°-60° | 393.0 | 16.1 |
| 60°-70° | 265.9 | 10.9 |
| 70°-80° | 128.6 | 5.3 |
| 80°-90° | 31.4 | 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° | 705.9 | 28.8 |
| 0°-40° | 1163.5 | 47.5 |
| 0°-60° | 2021.1 | 82.6 |
| 0°-90° | 2447.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2447.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 884 | 884 | 884 | 884 | 884 | |
| 5° | 882 | 882 | 881 | 885 | 886 | 84 |
| 15° | 853 | 858 | 864 | 874 | 878 | 241 |
| 25° | 795 | 801 | 817 | 838 | 845 | 366 |
| 35° | 705 | 712 | 732 | 755 | 762 | 441 |
| 45° | 587 | 588 | 605 | 618 | 619 | 453 |
| 55° | 442 | 439 | 441 | 441 | 439 | 396 |
| 65° | 288 | 276 | 267 | 256 | 253 | 286 |
| 75° | 145 | 134 | 119 | 103 | 94 | 154 |
| 85° | 34 | 27 | 24 | 24 | 24 | 40 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 883.7 | 883.7 | 883.7 | 883.7 | 883.7 |
| 2.5° | 884.9 | 884.9 | 882.5 | 884.9 | 886.1 |
| 5° | 882.5 | 882.5 | 881.3 | 884.9 | 886.1 |
| 7.5° | 877.6 | 878.8 | 878.8 | 883.7 | 886.1 |
| 10° | 871.5 | 874.0 | 875.2 | 882.5 | 883.7 |
| 12.5° | 864.3 | 866.7 | 870.3 | 878.8 | 880.1 |
| 15° | 853.3 | 858.2 | 864.3 | 874.0 | 877.6 |
| 17.5° | 842.4 | 847.2 | 854.5 | 867.9 | 871.5 |
| 20° | 827.8 | 833.9 | 844.8 | 860.6 | 866.7 |
| 22.5° | 813.2 | 818.1 | 831.4 | 850.9 | 857.0 |
| 25° | 795.0 | 801.0 | 816.8 | 837.5 | 844.8 |
| 27.5° | 774.3 | 782.8 | 799.8 | 821.7 | 829.0 |
| 30° | 753.6 | 760.9 | 779.2 | 803.5 | 810.8 |
| 32.5° | 729.3 | 736.6 | 757.3 | 780.4 | 788.9 |
| 35° | 705.0 | 712.3 | 731.8 | 754.9 | 762.1 |
| 37.5° | 678.3 | 683.1 | 703.8 | 723.2 | 730.5 |
| 40° | 650.3 | 654.0 | 672.2 | 691.6 | 696.5 |
| 42.5° | 619.9 | 622.4 | 639.4 | 656.4 | 657.6 |
| 45° | 587.1 | 588.3 | 605.3 | 617.5 | 618.7 |
| 47.5° | 554.3 | 553.1 | 567.7 | 576.2 | 577.4 |
| 50° | 517.8 | 517.8 | 527.5 | 532.4 | 532.4 |
| 52.5° | 481.4 | 478.9 | 483.8 | 487.4 | 483.8 |
| 55° | 442.5 | 438.8 | 441.2 | 441.2 | 438.8 |
| 57.5° | 403.6 | 396.3 | 397.5 | 395.1 | 389.0 |
| 60° | 365.9 | 357.4 | 353.7 | 345.2 | 340.4 |
| 62.5° | 327.0 | 317.3 | 310.0 | 300.2 | 299.0 |
| 65° | 288.1 | 275.9 | 267.4 | 256.5 | 252.8 |
| 67.5° | 250.4 | 239.5 | 227.3 | 215.2 | 207.9 |
| 70° | 212.7 | 200.6 | 189.6 | 173.8 | 165.3 |
| 72.5° | 178.7 | 167.7 | 154.4 | 136.1 | 130.1 |
| 75° | 144.6 | 133.7 | 119.1 | 103.3 | 93.6 |
| 77.5° | 111.8 | 103.3 | 87.5 | 74.1 | 72.9 |
| 80° | 86.3 | 76.6 | 58.3 | 54.7 | 54.7 |
| 82.5° | 55.9 | 49.8 | 41.3 | 38.9 | 38.9 |
| 85° | 34.0 | 26.7 | 24.3 | 24.3 | 24.3 |
| 87.5° | 13.4 | 12.2 | 12.2 | 12.2 | 12.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)