

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: P296684

Luminaire Tested: **22RLN-LD5-35-RDP-UNV-L92765-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296684
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36060-R2)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22RLN-LD5-35-RDP-UNV-L92765-W2A1-U-3500K
Description: RLN LED 2x2 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (252) 90 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2456.0 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.38 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

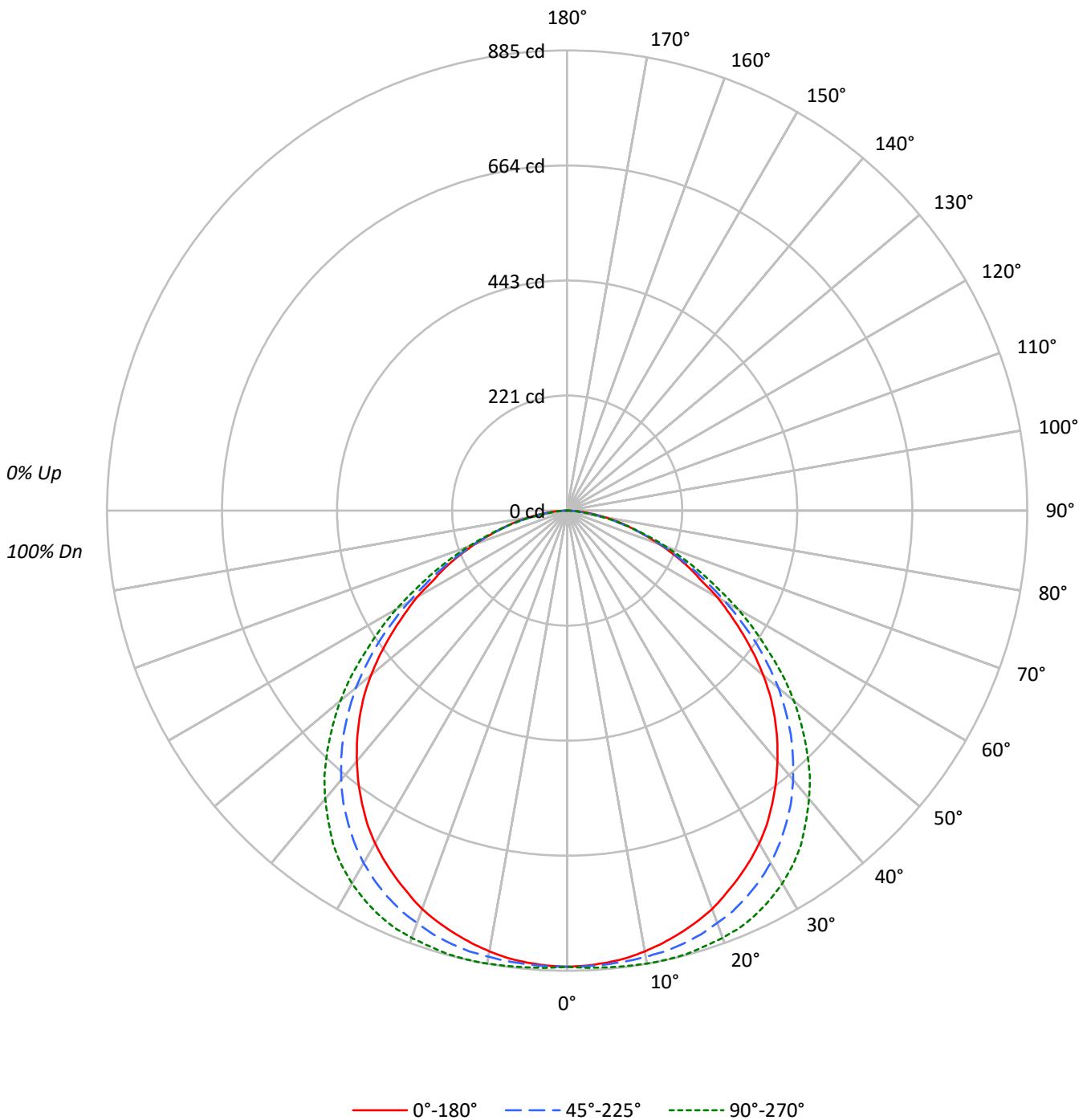
Input Watts (W): 27.993
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 103 | 99 | 96 | 98 | 95 | 93 | 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 | 72 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 67 | 63 | 61 |
| 4 | 84 | 72 | 63 | 57 | 81 | 71 | 63 | 56 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 58 | 54 | 52 |
| 5 | 77 | 64 | 56 | 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 | 54 | 47 | 42 | 52 | 46 | 42 | 40 |
| 7 | 66 | 53 | 44 | 38 | 64 | 52 | 44 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 40 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 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 | 28 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2361 | 2361 | 2361 |
| 5° | 2358 | 2366 | 2382 |
| 10° | 2352 | 2381 | 2418 |
| 15° | 2344 | 2402 | 2461 |
| 20° | 2336 | 2418 | 2504 |
| 25° | 2315 | 2431 | 2547 |
| 30° | 2297 | 2432 | 2572 |
| 35° | 2260 | 2413 | 2576 |
| 40° | 2211 | 2375 | 2544 |
| 45° | 2149 | 2315 | 2481 |
| 50° | 2063 | 2220 | 2383 |
| 55° | 1931 | 2079 | 2220 |
| 60° | 1795 | 1892 | 2046 |
| 65° | 1645 | 1703 | 1817 |
| 70° | 1489 | 1513 | 1584 |
| 75° | 1312 | 1281 | 1328 |
| 80° | 1141 | 1048 | 1001 |
| 85° | 926 | 695 | 602 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 83.5 | 3.4 |
| 10°-20° | 243.6 | 9.9 |
| 20°-30° | 377.4 | 15.4 |
| 30°-40° | 459.3 | 18.7 |
| 40°-50° | 467.8 | 19.0 |
| 50°-60° | 394.5 | 16.1 |
| 60°-70° | 266.9 | 10.9 |
| 70°-80° | 133.3 | 5.4 |
| 80°-90° | 29.7 | 1.2 |
| 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° | 704.5 | 28.7 |
| 0°-40° | 1163.8 | 47.4 |
| 0°-60° | 2026.1 | 82.5 |
| 0°-90° | 2456.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2456.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 877 | 877 | 877 | 877 | 877 | |
| 5° | 873 | 874 | 876 | 880 | 882 | 83 |
| 15° | 841 | 847 | 862 | 877 | 883 | 237 |
| 25° | 780 | 792 | 819 | 846 | 858 | 359 |
| 35° | 688 | 703 | 735 | 769 | 784 | 430 |
| 45° | 565 | 575 | 608 | 640 | 652 | 435 |
| 55° | 412 | 418 | 443 | 464 | 473 | 368 |
| 65° | 258 | 254 | 267 | 279 | 285 | 255 |
| 75° | 126 | 122 | 123 | 125 | 128 | 135 |
| 85° | 30 | 26 | 22 | 20 | 20 | 35 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 877.3 | 877.3 | 877.3 | 877.3 | 877.3 |
| 2.5° | 875.8 | 875.8 | 877.3 | 878.8 | 880.3 |
| 5° | 872.8 | 874.3 | 875.8 | 880.3 | 881.8 |
| 7.5° | 868.3 | 869.8 | 874.3 | 880.3 | 883.3 |
| 10° | 860.8 | 863.8 | 871.3 | 880.3 | 884.8 |
| 12.5° | 851.8 | 856.3 | 868.3 | 878.8 | 884.8 |
| 15° | 841.2 | 847.2 | 862.3 | 877.3 | 883.3 |
| 17.5° | 829.2 | 836.7 | 854.8 | 871.3 | 878.8 |
| 20° | 815.7 | 824.7 | 844.2 | 865.3 | 874.3 |
| 22.5° | 797.7 | 809.7 | 833.7 | 857.8 | 868.3 |
| 25° | 779.6 | 791.7 | 818.7 | 845.7 | 857.8 |
| 27.5° | 760.1 | 773.6 | 802.2 | 832.2 | 844.2 |
| 30° | 739.1 | 751.1 | 782.7 | 814.2 | 827.7 |
| 32.5° | 715.1 | 727.1 | 760.1 | 793.2 | 808.2 |
| 35° | 688.0 | 703.0 | 734.6 | 769.1 | 784.2 |
| 37.5° | 659.5 | 673.0 | 707.5 | 740.6 | 754.1 |
| 40° | 629.4 | 642.9 | 676.0 | 710.5 | 724.1 |
| 42.5° | 597.9 | 611.4 | 642.9 | 676.0 | 691.0 |
| 45° | 564.8 | 575.3 | 608.4 | 639.9 | 652.0 |
| 47.5° | 530.3 | 537.8 | 569.3 | 599.4 | 611.4 |
| 50° | 492.7 | 500.2 | 530.3 | 557.3 | 569.3 |
| 52.5° | 452.2 | 458.2 | 486.7 | 510.8 | 524.3 |
| 55° | 411.6 | 417.6 | 443.2 | 464.2 | 473.2 |
| 57.5° | 371.0 | 374.1 | 396.6 | 417.6 | 426.6 |
| 60° | 333.5 | 333.5 | 351.5 | 368.0 | 380.1 |
| 62.5° | 289.9 | 294.4 | 308.0 | 324.5 | 329.0 |
| 65° | 258.4 | 253.9 | 267.4 | 279.4 | 285.4 |
| 67.5° | 222.3 | 219.3 | 228.3 | 238.9 | 241.9 |
| 70° | 189.3 | 184.8 | 192.3 | 198.3 | 201.3 |
| 72.5° | 154.7 | 153.2 | 156.2 | 160.7 | 162.2 |
| 75° | 126.2 | 121.7 | 123.2 | 124.7 | 127.7 |
| 77.5° | 100.6 | 93.1 | 94.6 | 93.1 | 94.6 |
| 80° | 73.6 | 67.6 | 67.6 | 66.1 | 64.6 |
| 82.5° | 49.6 | 46.6 | 43.6 | 40.6 | 39.1 |
| 85° | 30.0 | 25.5 | 22.5 | 19.5 | 19.5 |
| 87.5° | 12.0 | 9.0 | 7.5 | 7.5 | 7.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)