

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: P296507

Luminaire Tested: **22RLN-LD5-31-UNV-L92765-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296507
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-LD5-31-UNV-L92765-W2A1-U-3500K
Description: RLN LED 2x2 TUNABLE WHITE TROFFER
WITH STANDARD LENS
Light Source: (252) 90 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2691.0 lumens
Efficiency: N/A
Efficacy: 109.6 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

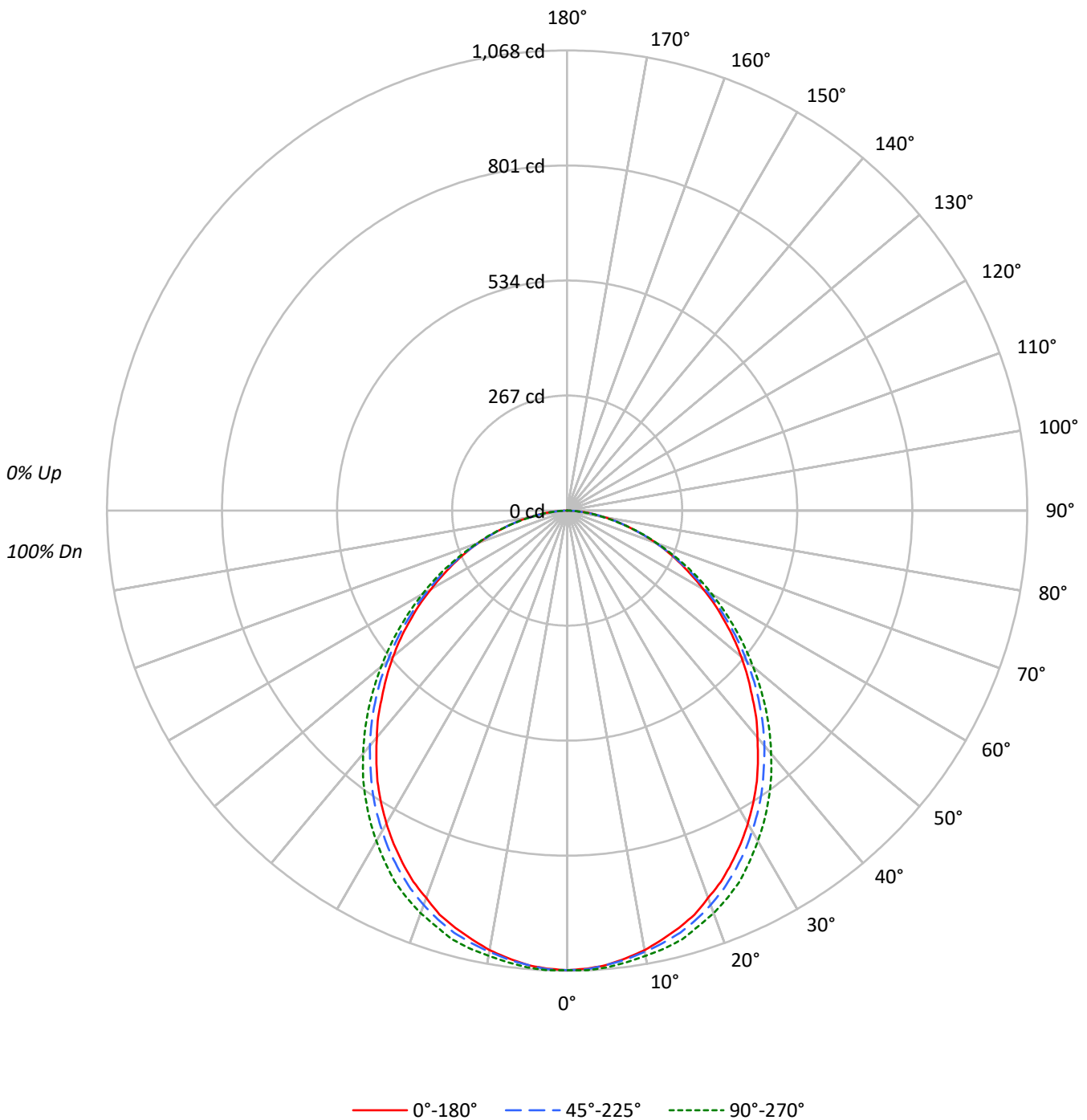
Input Watts (W): 24.552
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 2870 | 2870 | 2870 |
| 5° | 2860 | 2860 | 2874 |
| 10° | 2830 | 2841 | 2867 |
| 15° | 2792 | 2826 | 2871 |
| 20° | 2739 | 2790 | 2847 |
| 25° | 2681 | 2737 | 2817 |
| 30° | 2606 | 2668 | 2751 |
| 35° | 2521 | 2592 | 2680 |
| 40° | 2413 | 2503 | 2588 |
| 45° | 2308 | 2400 | 2482 |
| 50° | 2207 | 2280 | 2359 |
| 55° | 2090 | 2153 | 2228 |
| 60° | 1964 | 2014 | 2087 |
| 65° | 1845 | 1880 | 1940 |
| 70° | 1721 | 1721 | 1752 |
| 75° | 1535 | 1535 | 1535 |
| 80° | 1351 | 1309 | 1309 |
| 85° | 1078 | 1034 | 954 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 100.6 | 3.7 |
| 10°-20° | 286.0 | 10.6 |
| 20°-30° | 424.8 | 15.8 |
| 30°-40° | 493.1 | 18.3 |
| 40°-50° | 485.5 | 18.0 |
| 50°-60° | 410.9 | 15.3 |
| 60°-70° | 293.0 | 10.9 |
| 70°-80° | 157.5 | 5.9 |
| 80°-90° | 39.7 | 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° | 811.4 | 30.2 |
| 0°-40° | 1304.5 | 48.5 |
| 0°-60° | 2200.9 | 81.8 |
| 0°-90° | 2691.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2691.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1067 | 1067 | 1067 | 1067 | 1067 | |
| 5° | 1059 | 1059 | 1059 | 1063 | 1064 | 100 |
| 15° | 1002 | 1005 | 1014 | 1024 | 1030 | 282 |
| 25° | 903 | 906 | 922 | 939 | 949 | 416 |
| 35° | 768 | 769 | 789 | 808 | 816 | 479 |
| 45° | 606 | 610 | 631 | 645 | 652 | 469 |
| 55° | 445 | 447 | 459 | 471 | 475 | 399 |
| 65° | 290 | 290 | 295 | 300 | 305 | 288 |
| 75° | 148 | 146 | 148 | 148 | 148 | 158 |
| 85° | 35 | 34 | 34 | 31 | 31 | 41 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1066.7 | 1066.7 | 1066.7 | 1066.7 | 1066.7 |
| 2.5° | 1064.0 | 1064.0 | 1065.3 | 1066.7 | 1068.0 |
| 5° | 1058.6 | 1058.6 | 1058.6 | 1062.6 | 1064.0 |
| 7.5° | 1047.9 | 1049.2 | 1050.6 | 1054.6 | 1057.3 |
| 10° | 1035.8 | 1037.1 | 1039.8 | 1046.5 | 1049.2 |
| 12.5° | 1019.7 | 1023.7 | 1027.7 | 1037.1 | 1041.2 |
| 15° | 1002.3 | 1004.9 | 1014.3 | 1023.7 | 1030.4 |
| 17.5° | 983.5 | 984.8 | 995.5 | 1009.0 | 1011.6 |
| 20° | 956.6 | 960.7 | 974.1 | 987.5 | 994.2 |
| 22.5° | 932.5 | 935.2 | 949.9 | 967.4 | 972.7 |
| 25° | 903.0 | 905.6 | 921.7 | 939.2 | 948.6 |
| 27.5° | 872.1 | 874.8 | 892.2 | 911.0 | 917.7 |
| 30° | 838.6 | 841.2 | 858.7 | 878.8 | 885.5 |
| 32.5° | 803.7 | 806.4 | 825.1 | 842.6 | 852.0 |
| 35° | 767.5 | 768.8 | 788.9 | 807.7 | 815.8 |
| 37.5° | 727.2 | 731.2 | 750.0 | 768.8 | 778.2 |
| 40° | 687.0 | 691.0 | 712.4 | 729.9 | 736.6 |
| 42.5° | 649.4 | 654.8 | 672.2 | 688.3 | 695.0 |
| 45° | 606.4 | 610.5 | 630.6 | 645.4 | 652.1 |
| 47.5° | 567.5 | 571.6 | 589.0 | 603.8 | 607.8 |
| 50° | 527.3 | 530.0 | 544.7 | 558.1 | 563.5 |
| 52.5° | 487.0 | 488.4 | 501.8 | 515.2 | 519.2 |
| 55° | 445.4 | 446.8 | 458.9 | 470.9 | 475.0 |
| 57.5° | 406.5 | 406.5 | 417.3 | 426.7 | 430.7 |
| 60° | 364.9 | 364.9 | 374.3 | 383.7 | 387.8 |
| 62.5° | 326.0 | 326.0 | 335.4 | 342.1 | 347.5 |
| 65° | 289.8 | 289.8 | 295.2 | 300.5 | 304.6 |
| 67.5° | 254.9 | 250.9 | 256.3 | 263.0 | 261.6 |
| 70° | 218.7 | 214.7 | 218.7 | 221.4 | 222.7 |
| 72.5° | 182.5 | 179.8 | 182.5 | 183.8 | 186.5 |
| 75° | 147.6 | 146.2 | 147.6 | 147.6 | 147.6 |
| 77.5° | 118.1 | 114.0 | 116.7 | 115.4 | 114.0 |
| 80° | 87.2 | 85.9 | 84.5 | 83.2 | 84.5 |
| 82.5° | 60.4 | 59.0 | 59.0 | 56.4 | 56.4 |
| 85° | 34.9 | 33.5 | 33.5 | 30.9 | 30.9 |
| 87.5° | 13.4 | 13.4 | 12.1 | 12.1 | 12.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)