

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: P296651

Luminaire Tested: **22RLN-LD5-44-RDP-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296651
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-LD5-44-RDP-UNV-L93050-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: 3023.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

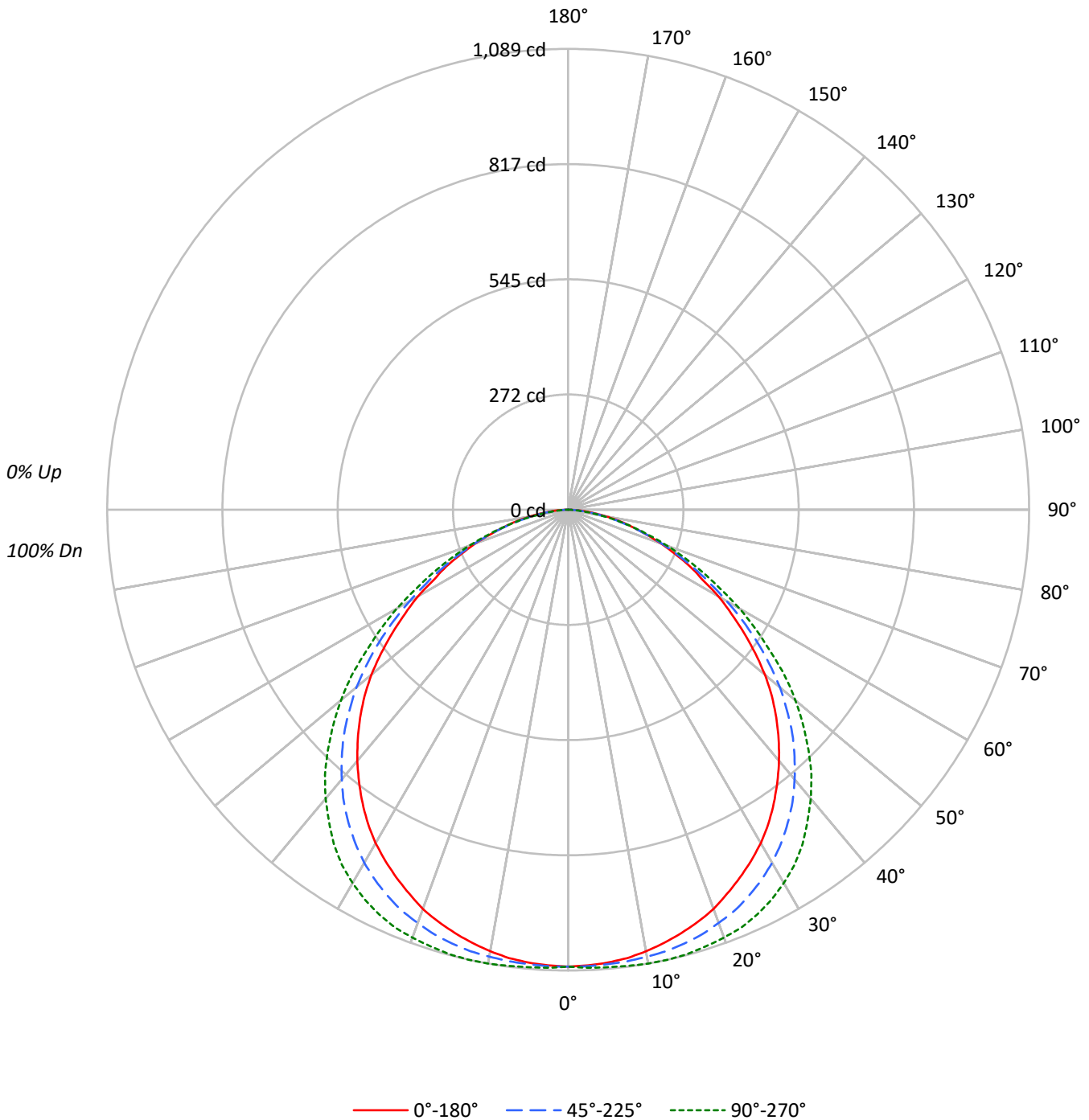
Input Watts (W): 36.27
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 2906 | 2906 | 2906 |
| 5° | 2902 | 2912 | 2932 |
| 10° | 2895 | 2930 | 2976 |
| 15° | 2885 | 2957 | 3029 |
| 20° | 2875 | 2976 | 3082 |
| 25° | 2849 | 2992 | 3135 |
| 30° | 2827 | 2993 | 3166 |
| 35° | 2782 | 2970 | 3171 |
| 40° | 2721 | 2923 | 3131 |
| 45° | 2646 | 2850 | 3054 |
| 50° | 2539 | 2732 | 2934 |
| 55° | 2377 | 2559 | 2732 |
| 60° | 2209 | 2329 | 2518 |
| 65° | 2025 | 2096 | 2237 |
| 70° | 1833 | 1862 | 1950 |
| 75° | 1615 | 1576 | 1634 |
| 80° | 1404 | 1289 | 1232 |
| 85° | 1142 | 855 | 741 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 102.8 | 3.4 |
| 10°-20° | 299.8 | 9.9 |
| 20°-30° | 464.5 | 15.4 |
| 30°-40° | 565.3 | 18.7 |
| 40°-50° | 575.8 | 19.0 |
| 50°-60° | 485.6 | 16.1 |
| 60°-70° | 328.5 | 10.9 |
| 70°-80° | 164.1 | 5.4 |
| 80°-90° | 36.5 | 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° | 867.2 | 28.7 |
| 0°-40° | 1432.5 | 47.4 |
| 0°-60° | 2493.9 | 82.5 |
| 0°-90° | 3023.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3023.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1080 | 1080 | 1080 | 1080 | 1080 | |
| 5° | 1074 | 1076 | 1078 | 1084 | 1085 | 102 |
| 15° | 1035 | 1043 | 1061 | 1080 | 1087 | 292 |
| 25° | 960 | 974 | 1008 | 1041 | 1056 | 442 |
| 35° | 847 | 865 | 904 | 947 | 965 | 529 |
| 45° | 695 | 708 | 749 | 788 | 802 | 535 |
| 55° | 507 | 514 | 546 | 571 | 582 | 453 |
| 65° | 318 | 312 | 329 | 344 | 351 | 314 |
| 75° | 155 | 150 | 152 | 154 | 157 | 166 |
| 85° | 37 | 31 | 28 | 24 | 24 | 43 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1079.8 | 1079.8 | 1079.8 | 1079.8 | 1079.8 |
| 2.5° | 1078.0 | 1078.0 | 1079.8 | 1081.7 | 1083.5 |
| 5° | 1074.3 | 1076.1 | 1078.0 | 1083.5 | 1085.4 |
| 7.5° | 1068.7 | 1070.6 | 1076.1 | 1083.5 | 1087.2 |
| 10° | 1059.5 | 1063.2 | 1072.4 | 1083.5 | 1089.1 |
| 12.5° | 1048.4 | 1053.9 | 1068.7 | 1081.7 | 1089.1 |
| 15° | 1035.4 | 1042.8 | 1061.3 | 1079.8 | 1087.2 |
| 17.5° | 1020.7 | 1029.9 | 1052.1 | 1072.4 | 1081.7 |
| 20° | 1004.0 | 1015.1 | 1039.1 | 1065.0 | 1076.1 |
| 22.5° | 981.8 | 996.6 | 1026.2 | 1055.8 | 1068.7 |
| 25° | 959.6 | 974.4 | 1007.7 | 1041.0 | 1055.8 |
| 27.5° | 935.6 | 952.2 | 987.4 | 1024.4 | 1039.1 |
| 30° | 909.7 | 924.5 | 963.3 | 1002.2 | 1018.8 |
| 32.5° | 880.1 | 894.9 | 935.6 | 976.3 | 994.8 |
| 35° | 846.8 | 865.3 | 904.2 | 946.7 | 965.2 |
| 37.5° | 811.7 | 828.4 | 870.9 | 911.6 | 928.2 |
| 40° | 774.7 | 791.4 | 832.1 | 874.6 | 891.2 |
| 42.5° | 735.9 | 752.5 | 791.4 | 832.1 | 850.5 |
| 45° | 695.2 | 708.2 | 748.9 | 787.7 | 802.5 |
| 47.5° | 652.7 | 661.9 | 700.8 | 737.8 | 752.5 |
| 50° | 606.5 | 615.7 | 652.7 | 686.0 | 700.8 |
| 52.5° | 556.6 | 564.0 | 599.1 | 628.7 | 645.3 |
| 55° | 506.6 | 514.0 | 545.5 | 571.3 | 582.4 |
| 57.5° | 456.7 | 460.4 | 488.1 | 514.0 | 525.1 |
| 60° | 410.5 | 410.5 | 432.7 | 453.0 | 467.8 |
| 62.5° | 356.9 | 362.4 | 379.0 | 399.4 | 404.9 |
| 65° | 318.0 | 312.5 | 329.1 | 343.9 | 351.3 |
| 67.5° | 273.7 | 270.0 | 281.1 | 294.0 | 297.7 |
| 70° | 233.0 | 227.4 | 236.7 | 244.1 | 247.8 |
| 72.5° | 190.4 | 188.6 | 192.3 | 197.8 | 199.7 |
| 75° | 155.3 | 149.8 | 151.6 | 153.5 | 157.2 |
| 77.5° | 123.9 | 114.6 | 116.5 | 114.6 | 116.5 |
| 80° | 90.6 | 83.2 | 83.2 | 81.4 | 79.5 |
| 82.5° | 61.0 | 57.3 | 53.6 | 49.9 | 48.1 |
| 85° | 37.0 | 31.4 | 27.7 | 24.0 | 24.0 |
| 87.5° | 14.8 | 11.1 | 9.2 | 9.2 | 9.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)