

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: P296383

Luminaire Tested: **22RLN-LD5-31-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296383
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-L83050-W2A1-U-3000K
Description: RLN LED 2x2 TUNABLE WHITE TROFFER WITH STANDARD LENS
Light Source: (252) 80 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2972.0 lumens
Efficiency: N/A
Efficacy: 122.0 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

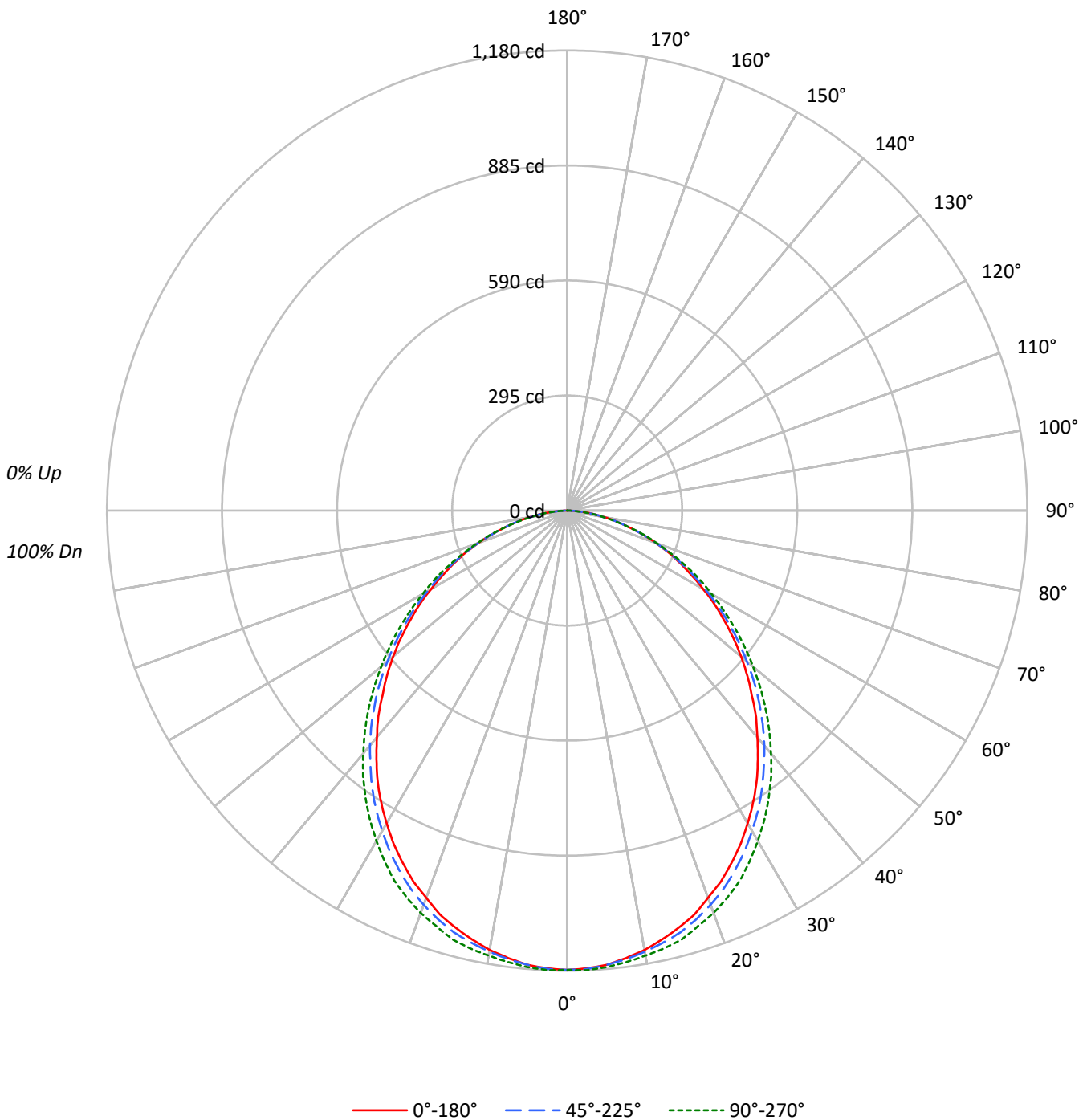
Input Watts (W): 24.366
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 3170 | 3170 | 3170 |
| 5° | 3158 | 3158 | 3174 |
| 10° | 3126 | 3138 | 3166 |
| 15° | 3084 | 3121 | 3170 |
| 20° | 3025 | 3081 | 3144 |
| 25° | 2961 | 3023 | 3110 |
| 30° | 2878 | 2947 | 3039 |
| 35° | 2784 | 2862 | 2960 |
| 40° | 2665 | 2764 | 2858 |
| 45° | 2549 | 2650 | 2741 |
| 50° | 2438 | 2519 | 2606 |
| 55° | 2308 | 2378 | 2461 |
| 60° | 2169 | 2225 | 2305 |
| 65° | 2038 | 2076 | 2142 |
| 70° | 1900 | 1900 | 1936 |
| 75° | 1695 | 1695 | 1695 |
| 80° | 1492 | 1447 | 1447 |
| 85° | 1189 | 1142 | 1053 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 111.1 | 3.7 |
| 10°-20° | 315.9 | 10.6 |
| 20°-30° | 469.2 | 15.8 |
| 30°-40° | 544.5 | 18.3 |
| 40°-50° | 536.2 | 18.0 |
| 50°-60° | 453.8 | 15.3 |
| 60°-70° | 323.6 | 10.9 |
| 70°-80° | 173.9 | 5.9 |
| 80°-90° | 43.8 | 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° | 896.2 | 30.2 |
| 0°-40° | 1440.7 | 48.5 |
| 0°-60° | 2430.7 | 81.8 |
| 0°-90° | 2972.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2972.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1178 | 1178 | 1178 | 1178 | 1178 | |
| 5° | 1169 | 1169 | 1169 | 1174 | 1175 | 111 |
| 15° | 1107 | 1110 | 1120 | 1131 | 1138 | 312 |
| 25° | 997 | 1000 | 1018 | 1037 | 1048 | 459 |
| 35° | 848 | 849 | 871 | 892 | 901 | 529 |
| 45° | 670 | 674 | 696 | 713 | 720 | 518 |
| 55° | 492 | 493 | 507 | 520 | 525 | 441 |
| 65° | 320 | 320 | 326 | 332 | 336 | 318 |
| 75° | 163 | 162 | 163 | 163 | 163 | 175 |
| 85° | 38 | 37 | 37 | 34 | 34 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1178.0 | 1178.0 | 1178.0 | 1178.0 | 1178.0 |
| 2.5° | 1175.1 | 1175.1 | 1176.6 | 1178.0 | 1179.5 |
| 5° | 1169.1 | 1169.1 | 1169.1 | 1173.6 | 1175.1 |
| 7.5° | 1157.3 | 1158.8 | 1160.3 | 1164.7 | 1167.7 |
| 10° | 1144.0 | 1145.4 | 1148.4 | 1155.8 | 1158.8 |
| 12.5° | 1126.2 | 1130.6 | 1135.1 | 1145.4 | 1149.9 |
| 15° | 1106.9 | 1109.9 | 1120.2 | 1130.6 | 1138.0 |
| 17.5° | 1086.2 | 1087.6 | 1099.5 | 1114.3 | 1117.3 |
| 20° | 1056.5 | 1061.0 | 1075.8 | 1090.6 | 1098.0 |
| 22.5° | 1029.9 | 1032.8 | 1049.1 | 1068.4 | 1074.3 |
| 25° | 997.3 | 1000.2 | 1018.0 | 1037.3 | 1047.6 |
| 27.5° | 963.2 | 966.1 | 985.4 | 1006.1 | 1013.6 |
| 30° | 926.1 | 929.1 | 948.4 | 970.6 | 978.0 |
| 32.5° | 887.6 | 890.6 | 911.3 | 930.6 | 940.9 |
| 35° | 847.6 | 849.1 | 871.3 | 892.0 | 900.9 |
| 37.5° | 803.1 | 807.6 | 828.3 | 849.1 | 859.4 |
| 40° | 758.7 | 763.1 | 786.8 | 806.1 | 813.5 |
| 42.5° | 717.2 | 723.1 | 742.4 | 760.2 | 767.6 |
| 45° | 669.8 | 674.2 | 696.4 | 712.7 | 720.2 |
| 47.5° | 626.8 | 631.2 | 650.5 | 666.8 | 671.3 |
| 50° | 582.3 | 585.3 | 601.6 | 616.4 | 622.4 |
| 52.5° | 537.9 | 539.4 | 554.2 | 569.0 | 573.5 |
| 55° | 492.0 | 493.4 | 506.8 | 520.1 | 524.6 |
| 57.5° | 449.0 | 449.0 | 460.8 | 471.2 | 475.7 |
| 60° | 403.1 | 403.1 | 413.4 | 423.8 | 428.2 |
| 62.5° | 360.1 | 360.1 | 370.5 | 377.9 | 383.8 |
| 65° | 320.1 | 320.1 | 326.0 | 331.9 | 336.4 |
| 67.5° | 281.5 | 277.1 | 283.0 | 290.4 | 289.0 |
| 70° | 241.5 | 237.1 | 241.5 | 244.5 | 246.0 |
| 72.5° | 201.5 | 198.6 | 201.5 | 203.0 | 206.0 |
| 75° | 163.0 | 161.5 | 163.0 | 163.0 | 163.0 |
| 77.5° | 130.4 | 126.0 | 128.9 | 127.4 | 126.0 |
| 80° | 96.3 | 94.8 | 93.4 | 91.9 | 93.4 |
| 82.5° | 66.7 | 65.2 | 65.2 | 62.2 | 62.2 |
| 85° | 38.5 | 37.0 | 37.0 | 34.1 | 34.1 |
| 87.5° | 14.8 | 14.8 | 13.3 | 13.3 | 13.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)