

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: P296421

Luminaire Tested: **22RLN-LD5-31-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296421
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-L82765-W2A1-U-2700K
Description: RLN LED 2x2 TUNABLE WHITE TROFFER
WITH STANDARD LENS
Light Source: (252) 80 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2886.0 lumens
Efficiency: N/A
Efficacy: 118.0 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

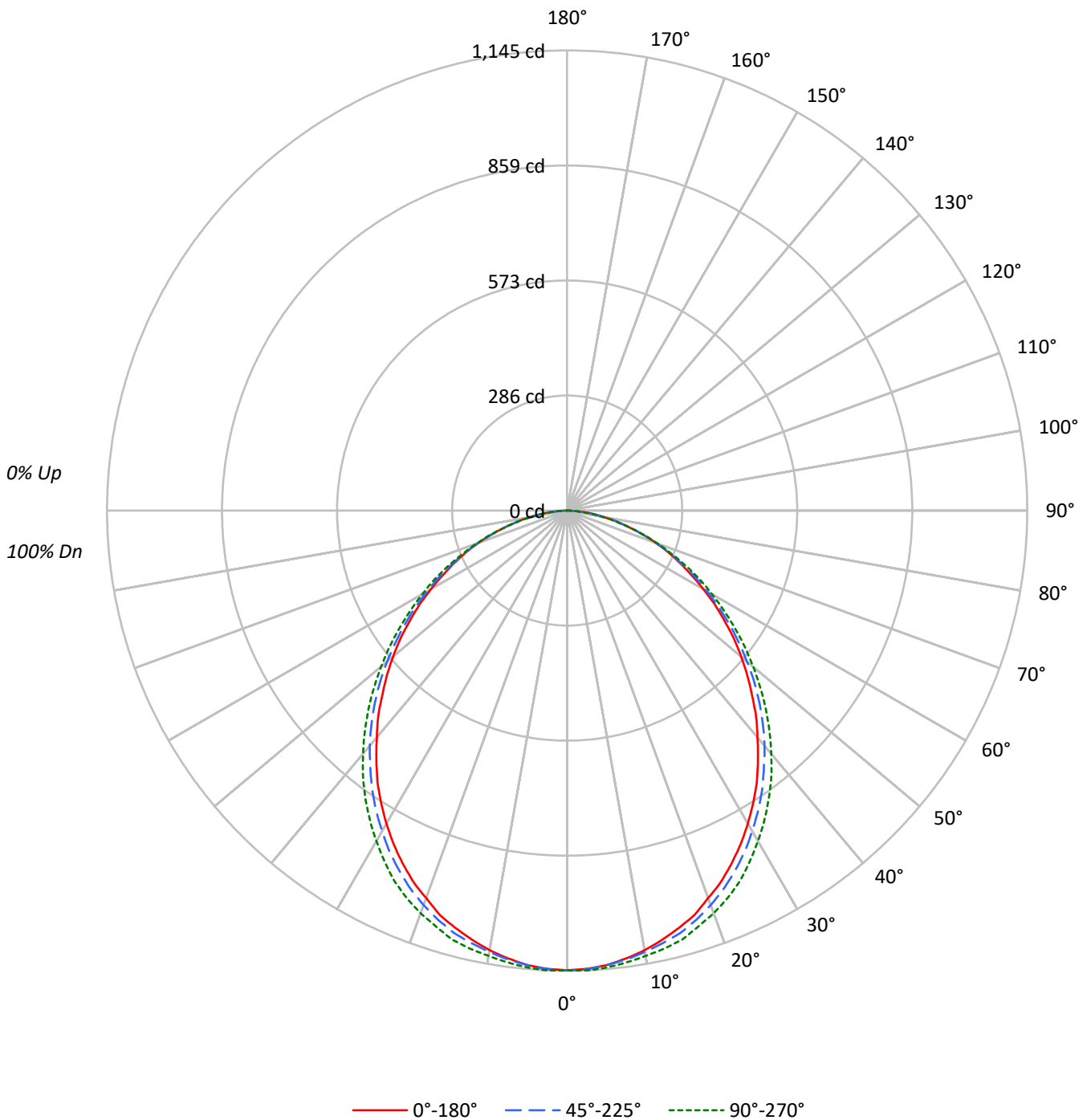
Input Watts (W): 24.459
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P296421

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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 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 74 | 71 | | | | | 71 | | | |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 77 | 70 | 65 | 74 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | 61 | | | |
| 4 | 84 | 72 | 64 | 57 | 81 | 71 | 63 | 57 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 59 | 54 | 52 | | | | | 52 | | | |
| 5 | 77 | 65 | 56 | 49 | 75 | 64 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | 46 | | | |
| 6 | 71 | 58 | 50 | 43 | 70 | 57 | 49 | 43 | 56 | 48 | 43 | 54 | 47 | 42 | 52 | 47 | 42 | 40 | | | | | 40 | | | |
| 7 | 66 | 53 | 44 | 38 | 65 | 52 | 44 | 38 | 51 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 | | | | | 36 | | | |
| 8 | 62 | 49 | 40 | 34 | 60 | 48 | 40 | 34 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 | | | | | 32 | | | |
| 9 | 58 | 45 | 37 | 31 | 56 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 29 | | | | | 29 | | | |
| 10 | 54 | 41 | 33 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 26 | | | | | 26 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3078 | 3078 | 3078 |
| 5° | 3067 | 3067 | 3082 |
| 10° | 3036 | 3047 | 3075 |
| 15° | 2995 | 3031 | 3079 |
| 20° | 2938 | 2992 | 3053 |
| 25° | 2875 | 2935 | 3021 |
| 30° | 2794 | 2861 | 2951 |
| 35° | 2704 | 2780 | 2874 |
| 40° | 2588 | 2684 | 2775 |
| 45° | 2475 | 2574 | 2661 |
| 50° | 2367 | 2446 | 2530 |
| 55° | 2241 | 2309 | 2390 |
| 60° | 2106 | 2161 | 2238 |
| 65° | 1979 | 2016 | 2080 |
| 70° | 1845 | 1845 | 1880 |
| 75° | 1646 | 1646 | 1646 |
| 80° | 1449 | 1406 | 1406 |
| 85° | 1155 | 1112 | 1022 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 107.9 | 3.7 |
| 10°-20° | 306.7 | 10.6 |
| 20°-30° | 455.6 | 15.8 |
| 30°-40° | 528.8 | 18.3 |
| 40°-50° | 520.7 | 18.0 |
| 50°-60° | 440.6 | 15.3 |
| 60°-70° | 314.2 | 10.9 |
| 70°-80° | 168.9 | 5.9 |
| 80°-90° | 42.6 | 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° | 870.2 | 30.2 |
| 0°-40° | 1399.0 | 48.5 |
| 0°-60° | 2360.3 | 81.8 |
| 0°-90° | 2886.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2886.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1144 | 1144 | 1144 | 1144 | 1144 | |
| 5° | 1135 | 1135 | 1135 | 1140 | 1141 | 108 |
| 15° | 1075 | 1078 | 1088 | 1098 | 1105 | 303 |
| 25° | 968 | 971 | 988 | 1007 | 1017 | 446 |
| 35° | 823 | 824 | 846 | 866 | 875 | 514 |
| 45° | 650 | 655 | 676 | 692 | 699 | 503 |
| 55° | 478 | 479 | 492 | 505 | 509 | 428 |
| 65° | 311 | 311 | 317 | 322 | 327 | 308 |
| 75° | 158 | 157 | 158 | 158 | 158 | 170 |
| 85° | 37 | 36 | 36 | 33 | 33 | 44 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P296421

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1143.9 | 1143.9 | 1143.9 | 1143.9 | 1143.9 |
| 2.5° | 1141.1 | 1141.1 | 1142.5 | 1143.9 | 1145.4 |
| 5° | 1135.3 | 1135.3 | 1135.3 | 1139.6 | 1141.1 |
| 7.5° | 1123.8 | 1125.2 | 1126.7 | 1131.0 | 1133.9 |
| 10° | 1110.9 | 1112.3 | 1115.2 | 1122.4 | 1125.2 |
| 12.5° | 1093.6 | 1097.9 | 1102.2 | 1112.3 | 1116.6 |
| 15° | 1074.9 | 1077.8 | 1087.8 | 1097.9 | 1105.1 |
| 17.5° | 1054.7 | 1056.2 | 1067.7 | 1082.1 | 1085.0 |
| 20° | 1026.0 | 1030.3 | 1044.7 | 1059.1 | 1066.2 |
| 22.5° | 1000.1 | 1002.9 | 1018.8 | 1037.5 | 1043.2 |
| 25° | 968.4 | 971.3 | 988.5 | 1007.2 | 1017.3 |
| 27.5° | 935.3 | 938.2 | 956.9 | 977.0 | 984.2 |
| 30° | 899.3 | 902.2 | 920.9 | 942.5 | 949.7 |
| 32.5° | 861.9 | 864.8 | 884.9 | 903.6 | 913.7 |
| 35° | 823.1 | 824.5 | 846.1 | 866.2 | 874.9 |
| 37.5° | 779.9 | 784.2 | 804.4 | 824.5 | 834.6 |
| 40° | 736.7 | 741.0 | 764.1 | 782.8 | 790.0 |
| 42.5° | 696.4 | 702.2 | 720.9 | 738.2 | 745.4 |
| 45° | 650.4 | 654.7 | 676.3 | 692.1 | 699.3 |
| 47.5° | 608.7 | 613.0 | 631.7 | 647.5 | 651.8 |
| 50° | 565.5 | 568.4 | 584.2 | 598.6 | 604.3 |
| 52.5° | 522.3 | 523.8 | 538.2 | 552.5 | 556.9 |
| 55° | 477.7 | 479.2 | 492.1 | 505.1 | 509.4 |
| 57.5° | 436.0 | 436.0 | 447.5 | 457.6 | 461.9 |
| 60° | 391.4 | 391.4 | 401.5 | 411.5 | 415.9 |
| 62.5° | 349.7 | 349.7 | 359.7 | 366.9 | 372.7 |
| 65° | 310.8 | 310.8 | 316.6 | 322.3 | 326.6 |
| 67.5° | 273.4 | 269.1 | 274.8 | 282.0 | 280.6 |
| 70° | 234.5 | 230.2 | 234.5 | 237.4 | 238.9 |
| 72.5° | 195.7 | 192.8 | 195.7 | 197.1 | 200.0 |
| 75° | 158.3 | 156.8 | 158.3 | 158.3 | 158.3 |
| 77.5° | 126.6 | 122.3 | 125.2 | 123.7 | 122.3 |
| 80° | 93.5 | 92.1 | 90.7 | 89.2 | 90.7 |
| 82.5° | 64.8 | 63.3 | 63.3 | 60.4 | 60.4 |
| 85° | 37.4 | 36.0 | 36.0 | 33.1 | 33.1 |
| 87.5° | 14.4 | 14.4 | 13.0 | 13.0 | 13.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)