

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: P296159

Luminaire Tested: **24RLN-LD5-36-RDP-UNV-L82765-W2A1-U-5700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296159
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36059-R2)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-36-RDP-UNV-L82765-W2A1-U-5700K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (504) 80 CRI LEDS TUNED TO 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3175.0 lumens
Efficiency: N/A
Efficacy: 122.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

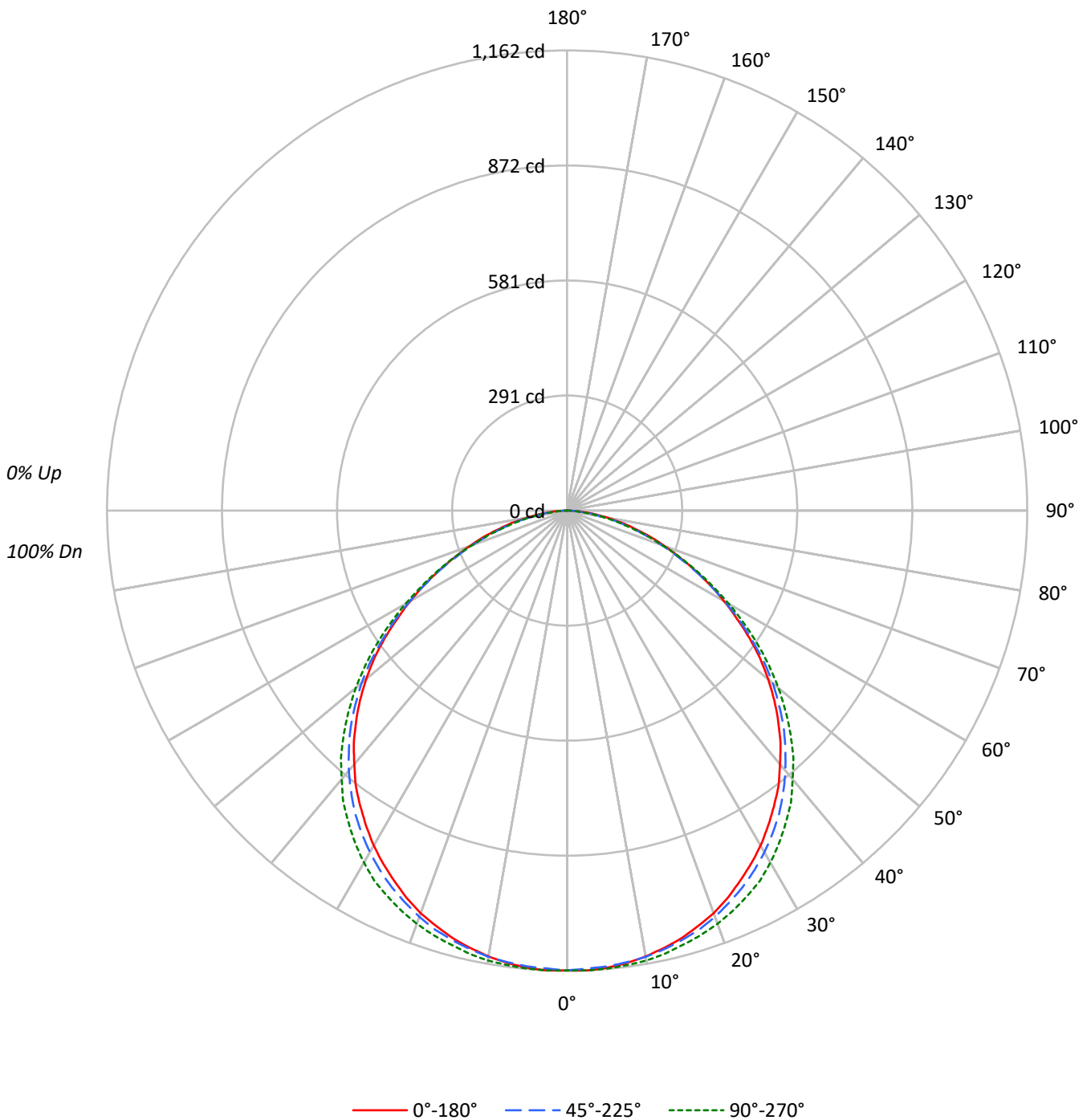
Input Watts (W): 25.947
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 66 | 63 | 60 |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 66 | 60 | 55 | 63 | 58 | 54 | 52 |
| 5 | 77 | 64 | 55 | 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 | 53 | 47 | 42 | 52 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 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 | 27 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1562 | 1562 | 1562 |
| 5° | 1565 | 1560 | 1568 |
| 10° | 1562 | 1563 | 1577 |
| 15° | 1557 | 1564 | 1580 |
| 20° | 1549 | 1563 | 1590 |
| 25° | 1532 | 1557 | 1595 |
| 30° | 1518 | 1548 | 1594 |
| 35° | 1496 | 1533 | 1581 |
| 40° | 1468 | 1506 | 1555 |
| 45° | 1435 | 1471 | 1517 |
| 50° | 1387 | 1419 | 1457 |
| 55° | 1320 | 1336 | 1376 |
| 60° | 1232 | 1238 | 1271 |
| 65° | 1131 | 1124 | 1150 |
| 70° | 1028 | 1000 | 1004 |
| 75° | 914 | 864 | 858 |
| 80° | 793 | 709 | 690 |
| 85° | 651 | 502 | 391 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 110.1 | 3.5 |
| 10°-20° | 317.5 | 10.0 |
| 20°-30° | 484.6 | 15.3 |
| 30°-40° | 584.2 | 18.4 |
| 40°-50° | 595.7 | 18.8 |
| 50°-60° | 509.8 | 16.1 |
| 60°-70° | 351.2 | 11.1 |
| 70°-80° | 180.0 | 5.7 |
| 80°-90° | 41.9 | 1.3 |
| 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° | 912.1 | 28.7 |
| 0°-40° | 1496.3 | 47.1 |
| 0°-60° | 2601.9 | 81.9 |
| 0°-90° | 3175.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3175.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1161 | 1161 | 1161 | 1161 | 1161 | |
| 5° | 1159 | 1156 | 1155 | 1159 | 1161 | 110 |
| 15° | 1118 | 1116 | 1123 | 1131 | 1135 | 315 |
| 25° | 1032 | 1036 | 1049 | 1067 | 1074 | 476 |
| 35° | 911 | 914 | 934 | 954 | 962 | 570 |
| 45° | 754 | 755 | 773 | 792 | 797 | 581 |
| 55° | 562 | 559 | 570 | 582 | 587 | 502 |
| 65° | 355 | 347 | 353 | 355 | 361 | 353 |
| 75° | 176 | 169 | 166 | 166 | 165 | 190 |
| 85° | 42 | 37 | 32 | 29 | 25 | 49 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1161.1 | 1161.1 | 1161.1 | 1161.1 | 1161.1 |
| 2.5° | 1162.3 | 1159.9 | 1157.5 | 1159.9 | 1162.3 |
| 5° | 1158.7 | 1156.3 | 1155.1 | 1158.7 | 1161.1 |
| 7.5° | 1152.7 | 1150.3 | 1150.3 | 1155.1 | 1157.5 |
| 10° | 1143.0 | 1141.8 | 1144.2 | 1149.1 | 1153.9 |
| 12.5° | 1131.0 | 1131.0 | 1134.6 | 1140.6 | 1145.5 |
| 15° | 1117.7 | 1116.5 | 1122.6 | 1131.0 | 1134.6 |
| 17.5° | 1099.7 | 1100.9 | 1109.3 | 1119.0 | 1123.8 |
| 20° | 1081.6 | 1082.8 | 1091.3 | 1104.5 | 1110.5 |
| 22.5° | 1058.7 | 1061.1 | 1070.8 | 1087.6 | 1093.7 |
| 25° | 1032.2 | 1035.8 | 1049.1 | 1067.2 | 1074.4 |
| 27.5° | 1005.7 | 1009.3 | 1023.8 | 1044.3 | 1053.9 |
| 30° | 976.8 | 981.6 | 996.1 | 1017.8 | 1026.2 |
| 32.5° | 944.3 | 947.9 | 966.0 | 987.7 | 996.1 |
| 35° | 910.6 | 914.2 | 933.5 | 953.9 | 962.4 |
| 37.5° | 876.9 | 876.9 | 896.1 | 920.2 | 928.6 |
| 40° | 835.9 | 837.1 | 857.6 | 880.5 | 885.3 |
| 42.5° | 797.4 | 797.4 | 815.4 | 837.1 | 845.5 |
| 45° | 754.0 | 755.2 | 773.3 | 792.5 | 797.4 |
| 47.5° | 709.4 | 709.4 | 725.1 | 743.2 | 748.0 |
| 50° | 662.5 | 660.0 | 678.1 | 692.6 | 696.2 |
| 52.5° | 614.3 | 610.7 | 625.1 | 637.2 | 642.0 |
| 55° | 562.5 | 558.9 | 569.7 | 581.8 | 586.6 |
| 57.5° | 508.3 | 503.5 | 515.5 | 526.4 | 528.8 |
| 60° | 457.7 | 450.5 | 460.1 | 466.1 | 472.2 |
| 62.5° | 407.1 | 398.7 | 405.9 | 409.5 | 414.3 |
| 65° | 355.3 | 346.9 | 352.9 | 355.3 | 361.3 |
| 67.5° | 305.9 | 299.9 | 301.1 | 304.7 | 307.1 |
| 70° | 261.4 | 254.1 | 254.1 | 254.1 | 255.3 |
| 72.5° | 220.4 | 209.6 | 208.4 | 209.6 | 209.6 |
| 75° | 175.9 | 168.6 | 166.2 | 166.2 | 165.0 |
| 77.5° | 140.9 | 131.3 | 130.1 | 127.7 | 125.3 |
| 80° | 102.4 | 93.9 | 91.5 | 90.3 | 89.1 |
| 82.5° | 71.1 | 63.8 | 61.4 | 59.0 | 55.4 |
| 85° | 42.2 | 37.3 | 32.5 | 28.9 | 25.3 |
| 87.5° | 15.7 | 14.5 | 12.0 | 10.8 | 10.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)