

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: P229795

Luminaire Tested: **24RLN-LD5-80-RDP-UNV-L835-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P229795
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36059)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-80-RDP-UNV-L835-CD1-U
Description: METALUX 2X4 RLN LED TROFFER WITH RDP LENS
Light Source: (252)3500K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6681.0 lumens
Efficiency: N/A
Efficacy: 99.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.38
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')
CIE Type: Direct

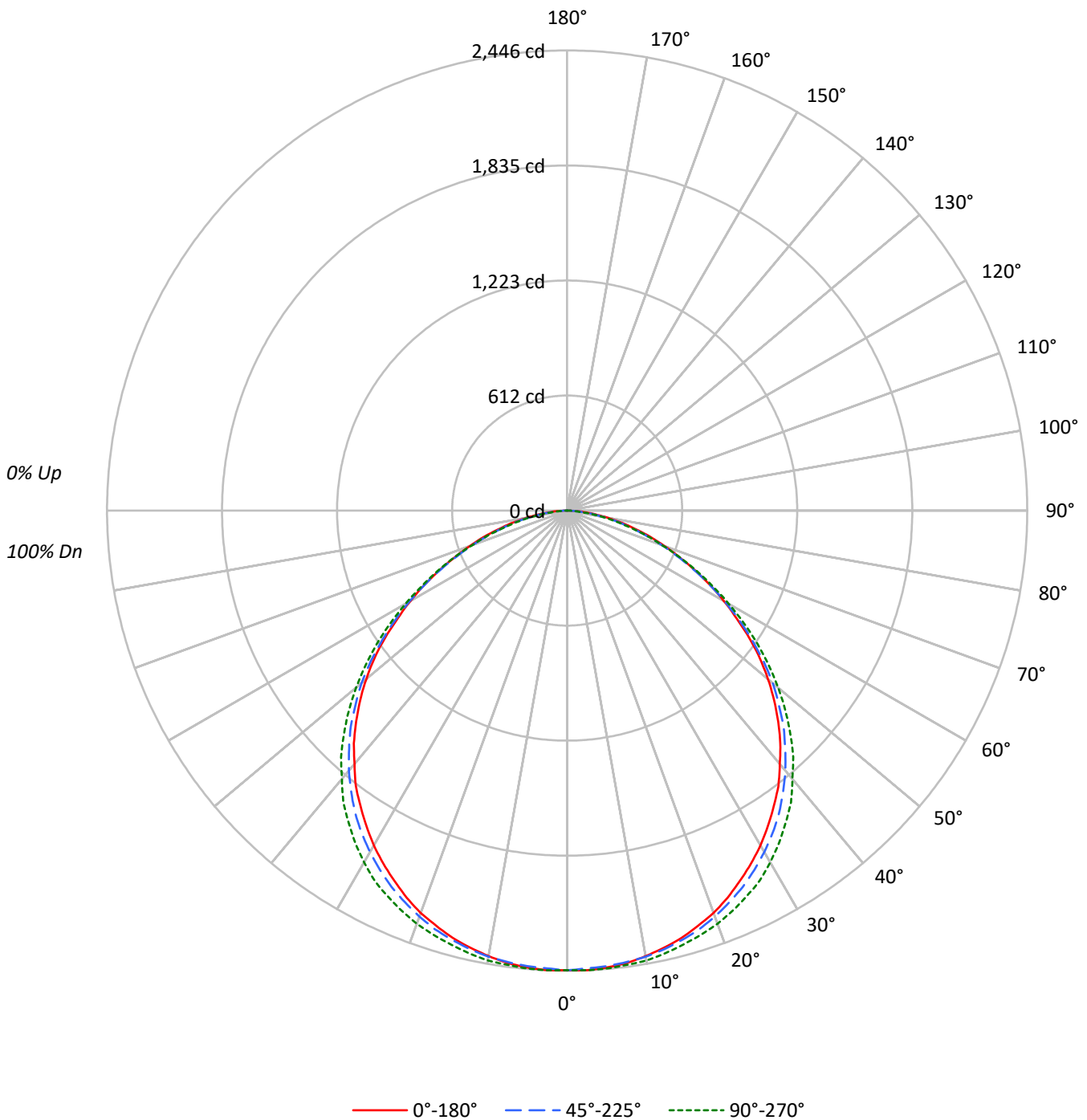
Input Watts (W): 67.45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P229795

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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 | 73 | 71 | | | | | 71 | | | |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 66 | 63 | 60 | | | | | 60 | | | |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 66 | 60 | 55 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 45 | | | | | 45 | | | |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 | 39 | | | | | 39 | | | |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 | | | | | 35 | | | |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 31 | | | | | 31 | | | |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 | | | | | 28 | | | |
| 10 | 54 | 41 | 33 | 27 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 | | | | | 25 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3742 | 3742 | 3742 |
| 5° | 3749 | 3737 | 3757 |
| 10° | 3741 | 3745 | 3776 |
| 15° | 3730 | 3746 | 3786 |
| 20° | 3710 | 3743 | 3809 |
| 25° | 3671 | 3731 | 3821 |
| 30° | 3635 | 3707 | 3819 |
| 35° | 3583 | 3673 | 3787 |
| 40° | 3517 | 3608 | 3725 |
| 45° | 3437 | 3525 | 3634 |
| 50° | 3322 | 3400 | 3491 |
| 55° | 3161 | 3201 | 3296 |
| 60° | 2950 | 2966 | 3043 |
| 65° | 2710 | 2691 | 2756 |
| 70° | 2463 | 2395 | 2406 |
| 75° | 2190 | 2070 | 2055 |
| 80° | 1900 | 1699 | 1655 |
| 85° | 1559 | 1202 | 935 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 231.7 | 3.5 |
| 10°-20° | 668.0 | 10.0 |
| 20°-30° | 1019.6 | 15.3 |
| 30°-40° | 1229.3 | 18.4 |
| 40°-50° | 1253.6 | 18.8 |
| 50°-60° | 1072.8 | 16.1 |
| 60°-70° | 739.0 | 11.1 |
| 70°-80° | 378.8 | 5.7 |
| 80°-90° | 88.2 | 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° | 1919.4 | 28.7 |
| 0°-40° | 3148.6 | 47.1 |
| 0°-60° | 5475.0 | 81.9 |
| 0°-90° | 6681.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6681.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2443 | 2443 | 2443 | 2443 | 2443 | |
| 5° | 2438 | 2433 | 2431 | 2438 | 2443 | 232 |
| 15° | 2352 | 2350 | 2362 | 2380 | 2388 | 663 |
| 25° | 2172 | 2180 | 2208 | 2246 | 2261 | 1002 |
| 35° | 1916 | 1924 | 1964 | 2007 | 2025 | 1199 |
| 45° | 1587 | 1589 | 1627 | 1668 | 1678 | 1222 |
| 55° | 1184 | 1176 | 1199 | 1224 | 1234 | 1056 |
| 65° | 748 | 730 | 743 | 748 | 760 | 743 |
| 75° | 370 | 355 | 350 | 350 | 347 | 399 |
| 85° | 89 | 79 | 68 | 61 | 53 | 103 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P229795

CATALOG NUMBER: 24RLN-LD5-80-RDP-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2443.3 | 2443.3 | 2443.3 | 2443.3 | 2443.3 |
| 2.5° | 2445.8 | 2440.7 | 2435.7 | 2440.7 | 2445.8 |
| 5° | 2438.2 | 2433.1 | 2430.6 | 2438.2 | 2443.3 |
| 7.5° | 2425.5 | 2420.5 | 2420.5 | 2430.6 | 2435.7 |
| 10° | 2405.2 | 2402.7 | 2407.8 | 2417.9 | 2428.1 |
| 12.5° | 2379.9 | 2379.9 | 2387.5 | 2400.2 | 2410.3 |
| 15° | 2352.0 | 2349.5 | 2362.2 | 2379.9 | 2387.5 |
| 17.5° | 2314.0 | 2316.5 | 2334.3 | 2354.6 | 2364.7 |
| 20° | 2276.0 | 2278.5 | 2296.3 | 2324.1 | 2336.8 |
| 22.5° | 2227.8 | 2232.9 | 2253.2 | 2288.7 | 2301.3 |
| 25° | 2172.1 | 2179.7 | 2207.6 | 2245.6 | 2260.8 |
| 27.5° | 2116.3 | 2123.9 | 2154.3 | 2197.4 | 2217.7 |
| 30° | 2055.5 | 2065.6 | 2096.0 | 2141.7 | 2159.4 |
| 32.5° | 1987.1 | 1994.7 | 2032.7 | 2078.3 | 2096.0 |
| 35° | 1916.1 | 1923.7 | 1964.2 | 2007.3 | 2025.1 |
| 37.5° | 1845.1 | 1845.1 | 1885.7 | 1936.4 | 1954.1 |
| 40° | 1758.9 | 1761.5 | 1804.6 | 1852.7 | 1862.9 |
| 42.5° | 1677.8 | 1677.8 | 1715.9 | 1761.5 | 1779.2 |
| 45° | 1586.6 | 1589.1 | 1627.2 | 1667.7 | 1677.8 |
| 47.5° | 1492.8 | 1492.8 | 1525.8 | 1563.8 | 1573.9 |
| 50° | 1394.0 | 1388.9 | 1426.9 | 1457.3 | 1464.9 |
| 52.5° | 1292.6 | 1285.0 | 1315.4 | 1340.8 | 1350.9 |
| 55° | 1183.6 | 1176.0 | 1198.8 | 1224.2 | 1234.3 |
| 57.5° | 1069.6 | 1059.4 | 1084.8 | 1107.6 | 1112.6 |
| 60° | 963.1 | 947.9 | 968.2 | 980.9 | 993.5 |
| 62.5° | 856.7 | 838.9 | 854.1 | 861.7 | 871.9 |
| 65° | 747.7 | 729.9 | 742.6 | 747.7 | 760.4 |
| 67.5° | 643.8 | 631.1 | 633.6 | 641.2 | 646.3 |
| 70° | 550.0 | 534.8 | 534.8 | 534.8 | 537.3 |
| 72.5° | 463.8 | 441.0 | 438.5 | 441.0 | 441.0 |
| 75° | 370.0 | 354.8 | 349.8 | 349.8 | 347.2 |
| 77.5° | 296.5 | 276.3 | 273.7 | 268.7 | 263.6 |
| 80° | 215.4 | 197.7 | 192.6 | 190.1 | 187.6 |
| 82.5° | 149.5 | 134.3 | 129.3 | 124.2 | 116.6 |
| 85° | 88.7 | 78.6 | 68.4 | 60.8 | 53.2 |
| 87.5° | 32.9 | 30.4 | 25.3 | 22.8 | 22.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)