

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: P295904

Luminaire Tested: **24RLN-LD5-50-UNV-L82765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295904
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-085-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-50-UNV-L82765-W2A1-U-5000K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH STANDARD LENS
Light Source: (504) 80 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5139.0 lumens
Efficiency: N/A
Efficacy: 143.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.29
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

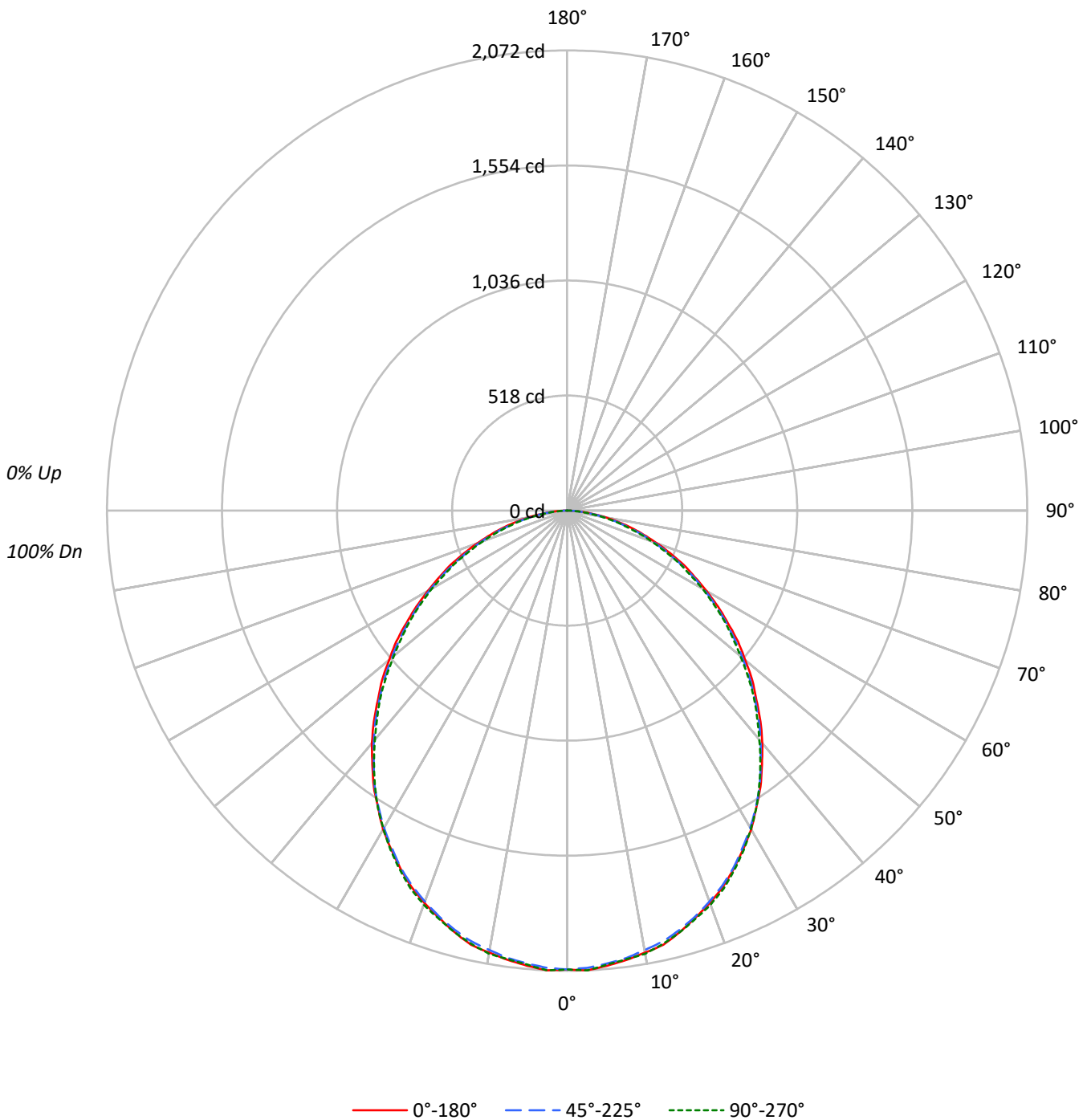
Input Watts (W): 35.805
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 72 |
| 3 | 91 | 81 | 73 | 67 | 89 | 80 | 72 | 66 | 77 | 70 | 65 | 74 | 69 | 64 | 71 | 67 | 63 | 61 |
| 4 | 84 | 72 | 64 | 57 | 82 | 71 | 63 | 57 | 68 | 62 | 56 | 66 | 60 | 55 | 64 | 59 | 55 | 52 |
| 5 | 77 | 65 | 56 | 50 | 75 | 64 | 55 | 49 | 62 | 54 | 49 | 60 | 53 | 48 | 58 | 52 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 49 | 43 | 56 | 48 | 43 | 54 | 48 | 43 | 53 | 47 | 42 | 40 |
| 7 | 66 | 53 | 45 | 39 | 65 | 52 | 44 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 |
| 8 | 62 | 49 | 40 | 35 | 60 | 48 | 40 | 35 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 57 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 41 | 34 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2779 | 2779 | 2779 |
| 5° | 2779 | 2765 | 2772 |
| 10° | 2761 | 2745 | 2768 |
| 15° | 2737 | 2723 | 2737 |
| 20° | 2692 | 2682 | 2704 |
| 25° | 2639 | 2634 | 2648 |
| 30° | 2576 | 2563 | 2571 |
| 35° | 2494 | 2484 | 2478 |
| 40° | 2402 | 2379 | 2364 |
| 45° | 2293 | 2271 | 2262 |
| 50° | 2190 | 2155 | 2131 |
| 55° | 2073 | 2042 | 2022 |
| 60° | 1950 | 1914 | 1891 |
| 65° | 1842 | 1774 | 1758 |
| 70° | 1689 | 1624 | 1591 |
| 75° | 1551 | 1457 | 1396 |
| 80° | 1361 | 1272 | 1195 |
| 85° | 1101 | 1024 | 871 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 194.9 | 3.8 |
| 10°-20° | 552.6 | 10.8 |
| 20°-30° | 817.3 | 15.9 |
| 30°-40° | 943.3 | 18.4 |
| 40°-50° | 921.3 | 17.9 |
| 50°-60° | 778.0 | 15.1 |
| 60°-70° | 554.1 | 10.8 |
| 70°-80° | 300.0 | 5.8 |
| 80°-90° | 77.4 | 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° | 1564.8 | 30.4 |
| 0°-40° | 2508.1 | 48.8 |
| 0°-60° | 4207.4 | 81.9 |
| 0°-90° | 5139.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5139.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2066 | 2066 | 2066 | 2066 | 2066 | |
| 5° | 2057 | 2057 | 2048 | 2052 | 2052 | 195 |
| 15° | 1965 | 1956 | 1955 | 1963 | 1965 | 553 |
| 25° | 1777 | 1767 | 1774 | 1781 | 1784 | 818 |
| 35° | 1519 | 1507 | 1512 | 1507 | 1509 | 948 |
| 45° | 1205 | 1195 | 1194 | 1189 | 1189 | 932 |
| 55° | 884 | 872 | 870 | 862 | 862 | 792 |
| 65° | 579 | 567 | 557 | 550 | 552 | 570 |
| 75° | 298 | 288 | 280 | 274 | 269 | 316 |
| 85° | 71 | 70 | 66 | 58 | 56 | 84 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P295904

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2065.7 | 2065.7 | 2065.7 | 2065.7 | 2065.7 |
| 2.5° | 2072.4 | 2064.1 | 2060.8 | 2062.4 | 2072.4 |
| 5° | 2057.4 | 2057.4 | 2047.5 | 2052.5 | 2052.5 |
| 7.5° | 2040.9 | 2042.5 | 2032.6 | 2040.9 | 2037.5 |
| 10° | 2021.0 | 2016.0 | 2009.4 | 2022.6 | 2025.9 |
| 12.5° | 2002.7 | 1991.1 | 1987.8 | 1996.1 | 1997.8 |
| 15° | 1964.6 | 1956.3 | 1954.7 | 1962.9 | 1964.6 |
| 17.5° | 1921.5 | 1923.2 | 1916.5 | 1928.1 | 1926.5 |
| 20° | 1880.0 | 1876.7 | 1873.4 | 1886.7 | 1888.3 |
| 22.5° | 1833.6 | 1823.7 | 1827.0 | 1838.6 | 1841.9 |
| 25° | 1777.3 | 1767.3 | 1773.9 | 1780.6 | 1783.9 |
| 27.5° | 1717.6 | 1712.6 | 1710.9 | 1719.2 | 1722.5 |
| 30° | 1657.9 | 1649.6 | 1649.6 | 1659.5 | 1654.6 |
| 32.5° | 1584.9 | 1578.3 | 1581.6 | 1584.9 | 1586.6 |
| 35° | 1518.6 | 1507.0 | 1512.0 | 1507.0 | 1508.7 |
| 37.5° | 1440.7 | 1432.4 | 1430.8 | 1429.1 | 1429.1 |
| 40° | 1367.8 | 1361.1 | 1354.5 | 1354.5 | 1346.2 |
| 42.5° | 1288.2 | 1279.9 | 1276.6 | 1271.6 | 1266.6 |
| 45° | 1205.3 | 1195.3 | 1193.7 | 1188.7 | 1188.7 |
| 47.5° | 1130.7 | 1115.8 | 1114.1 | 1104.2 | 1104.2 |
| 50° | 1046.1 | 1036.2 | 1029.6 | 1022.9 | 1017.9 |
| 52.5° | 969.9 | 959.9 | 950.0 | 943.3 | 938.4 |
| 55° | 883.7 | 872.1 | 870.4 | 862.1 | 862.1 |
| 57.5° | 805.7 | 795.8 | 789.2 | 779.2 | 780.9 |
| 60° | 724.5 | 714.6 | 711.2 | 702.9 | 702.9 |
| 62.5° | 648.2 | 639.9 | 635.0 | 626.7 | 620.1 |
| 65° | 578.6 | 567.0 | 557.1 | 550.4 | 552.1 |
| 67.5° | 502.3 | 489.1 | 484.1 | 477.5 | 472.5 |
| 70° | 429.4 | 421.1 | 412.8 | 404.5 | 404.5 |
| 72.5° | 361.4 | 353.1 | 348.2 | 338.2 | 334.9 |
| 75° | 298.4 | 288.5 | 280.2 | 273.6 | 268.6 |
| 77.5° | 235.4 | 225.5 | 220.5 | 212.2 | 212.2 |
| 80° | 175.7 | 169.1 | 164.1 | 160.8 | 154.2 |
| 82.5° | 121.0 | 117.7 | 112.7 | 107.8 | 102.8 |
| 85° | 71.3 | 69.6 | 66.3 | 58.0 | 56.4 |
| 87.5° | 28.2 | 28.2 | 24.9 | 23.2 | 21.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)