

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: P296025

Luminaire Tested: **24RLN-LD5-42-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296025
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-LD5-42-UNV-L92765-W2A1-U-4500K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH STANDARD LENS
Light Source: (504) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3818.0 lumens
Efficiency: N/A
Efficacy: 128.7 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

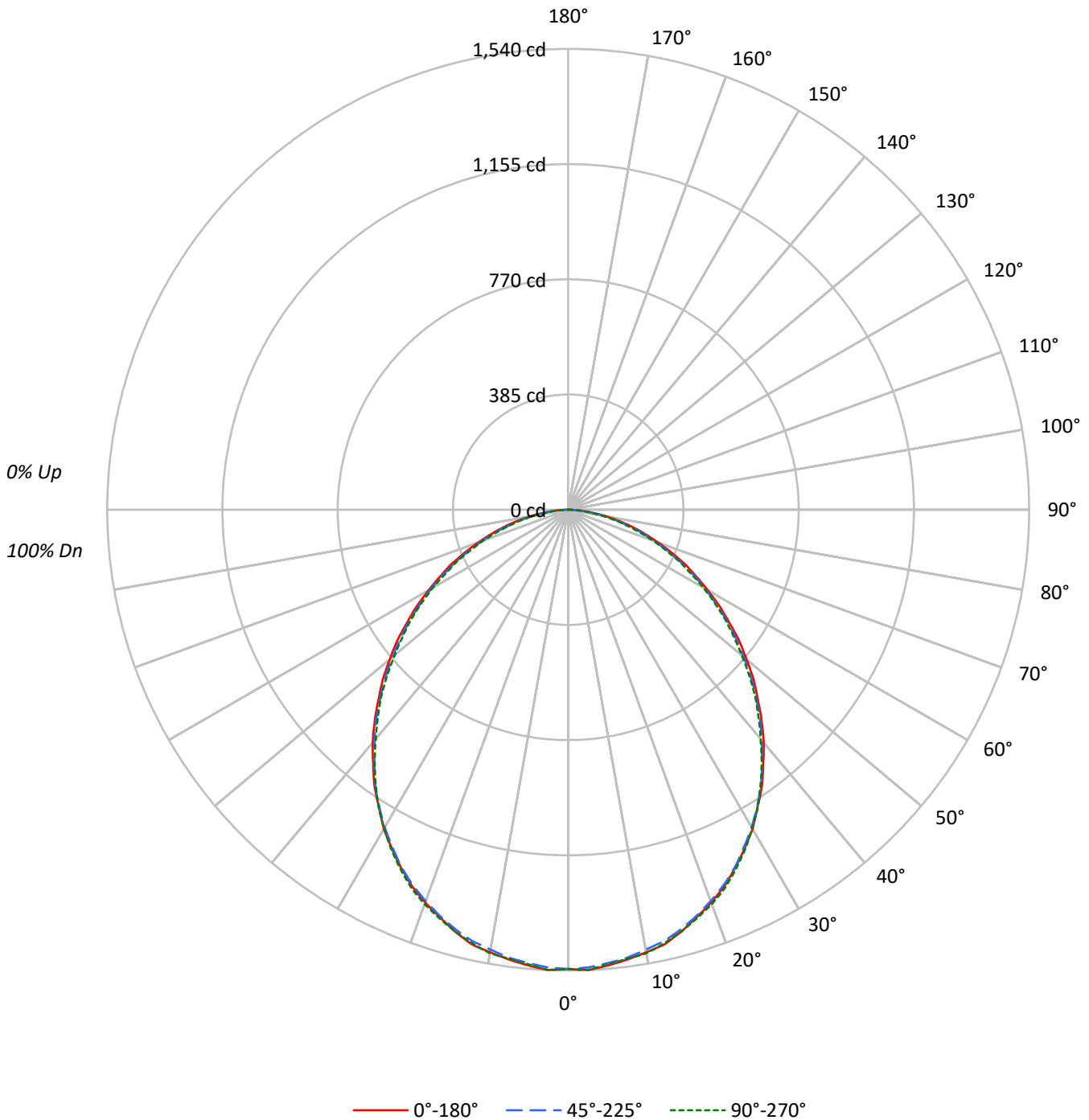
Input Watts (W): 29.667
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P296025

CATALOG NUMBER: 24RLN-LD5-42-UNV-L92765-W2A1-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P296025

CATALOG NUMBER: 24RLN-LD5-42-UNV-L92765-W2A1-U-4500K

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° | 2065 | 2065 | 2065 |
| 5° | 2065 | 2055 | 2060 |
| 10° | 2051 | 2040 | 2056 |
| 15° | 2033 | 2023 | 2033 |
| 20° | 2000 | 1993 | 2009 |
| 25° | 1960 | 1957 | 1968 |
| 30° | 1914 | 1904 | 1910 |
| 35° | 1853 | 1845 | 1841 |
| 40° | 1785 | 1767 | 1757 |
| 45° | 1704 | 1687 | 1680 |
| 50° | 1627 | 1601 | 1583 |
| 55° | 1540 | 1517 | 1502 |
| 60° | 1449 | 1422 | 1405 |
| 65° | 1369 | 1318 | 1306 |
| 70° | 1255 | 1207 | 1182 |
| 75° | 1153 | 1082 | 1037 |
| 80° | 1012 | 945 | 888 |
| 85° | 818 | 761 | 647 |



TEST NUMBER: P296025

CATALOG NUMBER: 24RLN-LD5-42-UNV-L92765-W2A1-U-4500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 144.8 | 3.8 |
| 10°-20° | 410.5 | 10.8 |
| 20°-30° | 607.2 | 15.9 |
| 30°-40° | 700.8 | 18.4 |
| 40°-50° | 684.5 | 17.9 |
| 50°-60° | 578.0 | 15.1 |
| 60°-70° | 411.7 | 10.8 |
| 70°-80° | 222.9 | 5.8 |
| 80°-90° | 57.5 | 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° | 1162.6 | 30.4 |
| 0°-40° | 1863.4 | 48.8 |
| 0°-60° | 3125.9 | 81.9 |
| 0°-90° | 3818.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3818.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1535 | 1535 | 1535 | 1535 | 1535 | |
| 5° | 1529 | 1529 | 1521 | 1525 | 1525 | 145 |
| 15° | 1460 | 1453 | 1452 | 1458 | 1460 | 411 |
| 25° | 1320 | 1313 | 1318 | 1323 | 1325 | 608 |
| 35° | 1128 | 1120 | 1123 | 1120 | 1121 | 704 |
| 45° | 896 | 888 | 887 | 883 | 883 | 692 |
| 55° | 656 | 648 | 647 | 640 | 640 | 589 |
| 65° | 430 | 421 | 414 | 409 | 410 | 424 |
| 75° | 222 | 214 | 208 | 203 | 200 | 235 |
| 85° | 53 | 52 | 49 | 43 | 42 | 62 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P296025

CATALOG NUMBER: 24RLN-LD5-42-UNV-L92765-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1534.7 | 1534.7 | 1534.7 | 1534.7 | 1534.7 |
| 2.5° | 1539.7 | 1533.5 | 1531.0 | 1532.3 | 1539.7 |
| 5° | 1528.6 | 1528.6 | 1521.2 | 1524.9 | 1524.9 |
| 7.5° | 1516.3 | 1517.5 | 1510.1 | 1516.3 | 1513.8 |
| 10° | 1501.5 | 1497.8 | 1492.8 | 1502.7 | 1505.2 |
| 12.5° | 1487.9 | 1479.3 | 1476.8 | 1483.0 | 1484.2 |
| 15° | 1459.6 | 1453.4 | 1452.2 | 1458.4 | 1459.6 |
| 17.5° | 1427.6 | 1428.8 | 1423.9 | 1432.5 | 1431.3 |
| 20° | 1396.8 | 1394.3 | 1391.8 | 1401.7 | 1402.9 |
| 22.5° | 1362.3 | 1354.9 | 1357.4 | 1366.0 | 1368.4 |
| 25° | 1320.4 | 1313.0 | 1317.9 | 1322.9 | 1325.3 |
| 27.5° | 1276.1 | 1272.4 | 1271.1 | 1277.3 | 1279.8 |
| 30° | 1231.7 | 1225.6 | 1225.6 | 1233.0 | 1229.3 |
| 32.5° | 1177.5 | 1172.6 | 1175.1 | 1177.5 | 1178.8 |
| 35° | 1128.3 | 1119.6 | 1123.3 | 1119.6 | 1120.9 |
| 37.5° | 1070.4 | 1064.2 | 1063.0 | 1061.7 | 1061.7 |
| 40° | 1016.2 | 1011.2 | 1006.3 | 1006.3 | 1000.2 |
| 42.5° | 957.0 | 950.9 | 948.4 | 944.7 | 941.0 |
| 45° | 895.5 | 888.1 | 886.8 | 883.1 | 883.1 |
| 47.5° | 840.0 | 828.9 | 827.7 | 820.3 | 820.3 |
| 50° | 777.2 | 769.8 | 764.9 | 760.0 | 756.3 |
| 52.5° | 720.6 | 713.2 | 705.8 | 700.9 | 697.2 |
| 55° | 656.5 | 647.9 | 646.7 | 640.5 | 640.5 |
| 57.5° | 598.6 | 591.2 | 586.3 | 578.9 | 580.1 |
| 60° | 538.3 | 530.9 | 528.4 | 522.3 | 522.3 |
| 62.5° | 481.6 | 475.4 | 471.8 | 465.6 | 460.7 |
| 65° | 429.9 | 421.2 | 413.9 | 408.9 | 410.2 |
| 67.5° | 373.2 | 363.4 | 359.7 | 354.7 | 351.0 |
| 70° | 319.0 | 312.9 | 306.7 | 300.5 | 300.5 |
| 72.5° | 268.5 | 262.4 | 258.7 | 251.3 | 248.8 |
| 75° | 221.7 | 214.3 | 208.2 | 203.2 | 199.5 |
| 77.5° | 174.9 | 167.5 | 163.8 | 157.7 | 157.7 |
| 80° | 130.6 | 125.6 | 121.9 | 119.5 | 114.6 |
| 82.5° | 89.9 | 87.5 | 83.8 | 80.1 | 76.4 |
| 85° | 53.0 | 51.7 | 49.3 | 43.1 | 41.9 |
| 87.5° | 20.9 | 20.9 | 18.5 | 17.2 | 16.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)