

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: P296340

Luminaire Tested: **24RLN-LD5-60-RDP-UNV-L92765-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296340
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-LD5-60-RDP-UNV-L92765-W2A1-U-4000K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (504) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4412.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

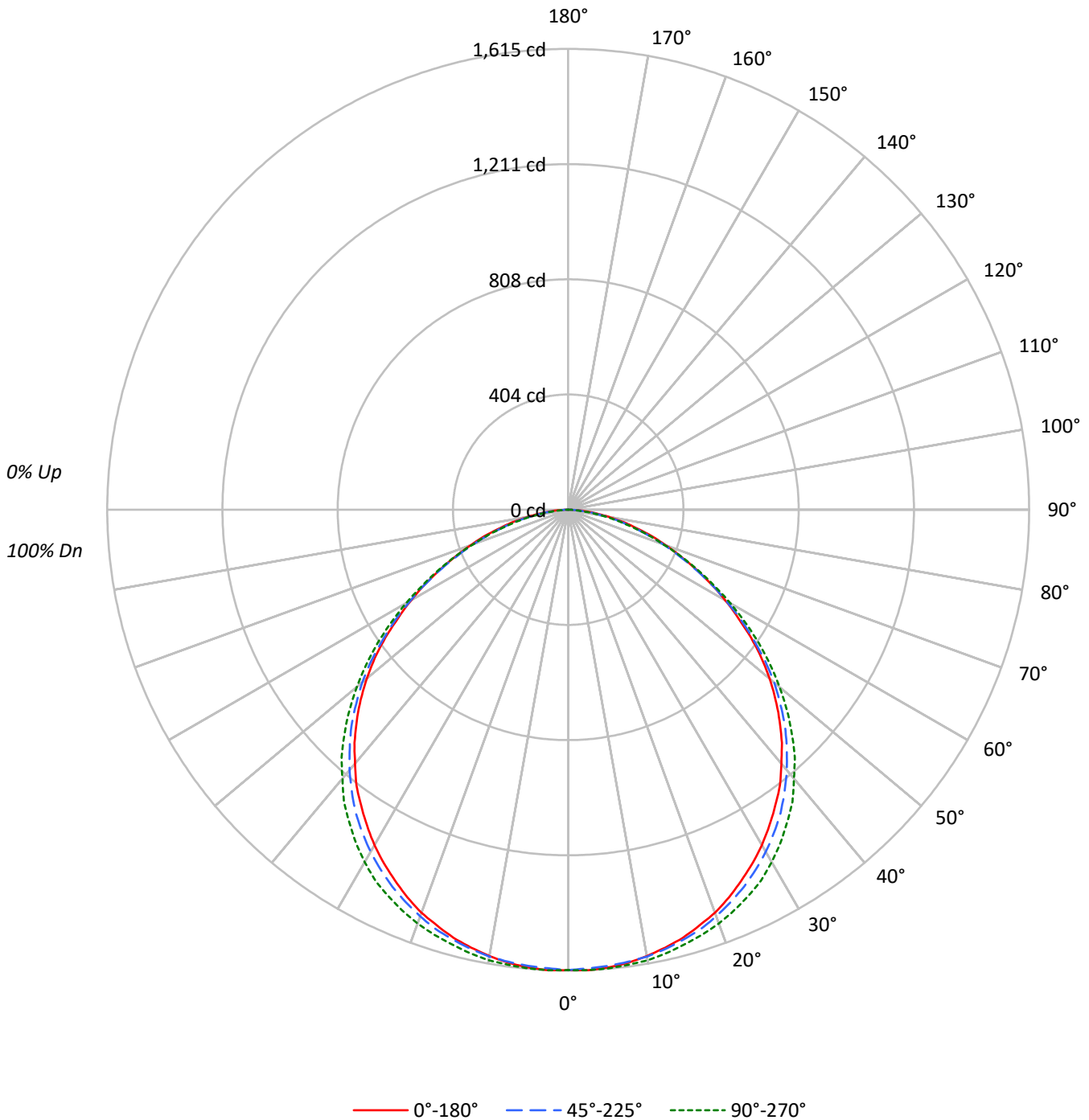
Input Watts (W): 43.71
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P296340

CATALOG NUMBER: 24RLN-LD5-60-RDP-UNV-L92765-W2A1-U-4000K

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° | 2171 | 2171 | 2171 |
| 5° | 2175 | 2168 | 2179 |
| 10° | 2170 | 2172 | 2191 |
| 15° | 2164 | 2173 | 2196 |
| 20° | 2152 | 2171 | 2210 |
| 25° | 2129 | 2164 | 2216 |
| 30° | 2109 | 2151 | 2215 |
| 35° | 2078 | 2131 | 2197 |
| 40° | 2040 | 2093 | 2161 |
| 45° | 1994 | 2045 | 2108 |
| 50° | 1927 | 1972 | 2025 |
| 55° | 1833 | 1857 | 1912 |
| 60° | 1711 | 1721 | 1766 |
| 65° | 1572 | 1561 | 1599 |
| 70° | 1429 | 1389 | 1396 |
| 75° | 1271 | 1201 | 1192 |
| 80° | 1103 | 986 | 960 |
| 85° | 905 | 698 | 542 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 153.0 | 3.5 |
| 10°-20° | 441.1 | 10.0 |
| 20°-30° | 673.4 | 15.3 |
| 30°-40° | 811.8 | 18.4 |
| 40°-50° | 827.8 | 18.8 |
| 50°-60° | 708.5 | 16.1 |
| 60°-70° | 488.0 | 11.1 |
| 70°-80° | 250.2 | 5.7 |
| 80°-90° | 58.2 | 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° | 1267.5 | 28.7 |
| 0°-40° | 2079.3 | 47.1 |
| 0°-60° | 3615.6 | 81.9 |
| 0°-90° | 4412.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4412.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1614 | 1614 | 1614 | 1614 | 1614 | |
| 5° | 1610 | 1607 | 1605 | 1610 | 1614 | 153 |
| 15° | 1553 | 1552 | 1560 | 1572 | 1577 | 438 |
| 25° | 1434 | 1439 | 1458 | 1483 | 1493 | 661 |
| 35° | 1265 | 1270 | 1297 | 1326 | 1337 | 792 |
| 45° | 1048 | 1049 | 1074 | 1101 | 1108 | 807 |
| 55° | 782 | 777 | 792 | 808 | 815 | 697 |
| 65° | 494 | 482 | 490 | 494 | 502 | 491 |
| 75° | 244 | 234 | 231 | 231 | 229 | 263 |
| 85° | 59 | 52 | 45 | 40 | 35 | 68 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P296340

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1613.5 | 1613.5 | 1613.5 | 1613.5 | 1613.5 |
| 2.5° | 1615.2 | 1611.8 | 1608.5 | 1611.8 | 1615.2 |
| 5° | 1610.1 | 1606.8 | 1605.1 | 1610.1 | 1613.5 |
| 7.5° | 1601.8 | 1598.4 | 1598.4 | 1605.1 | 1608.5 |
| 10° | 1588.4 | 1586.7 | 1590.1 | 1596.7 | 1603.4 |
| 12.5° | 1571.6 | 1571.6 | 1576.7 | 1585.0 | 1591.7 |
| 15° | 1553.2 | 1551.6 | 1559.9 | 1571.6 | 1576.7 |
| 17.5° | 1528.1 | 1529.8 | 1541.5 | 1554.9 | 1561.6 |
| 20° | 1503.0 | 1504.7 | 1516.4 | 1534.8 | 1543.2 |
| 22.5° | 1471.2 | 1474.6 | 1488.0 | 1511.4 | 1519.8 |
| 25° | 1434.4 | 1439.4 | 1457.8 | 1482.9 | 1493.0 |
| 27.5° | 1397.6 | 1402.6 | 1422.7 | 1451.1 | 1464.5 |
| 30° | 1357.4 | 1364.1 | 1384.2 | 1414.3 | 1426.0 |
| 32.5° | 1312.2 | 1317.2 | 1342.3 | 1372.5 | 1384.2 |
| 35° | 1265.3 | 1270.4 | 1297.1 | 1325.6 | 1337.3 |
| 37.5° | 1218.5 | 1218.5 | 1245.3 | 1278.7 | 1290.5 |
| 40° | 1161.6 | 1163.2 | 1191.7 | 1223.5 | 1230.2 |
| 42.5° | 1108.0 | 1108.0 | 1133.1 | 1163.2 | 1175.0 |
| 45° | 1047.8 | 1049.4 | 1074.5 | 1101.3 | 1108.0 |
| 47.5° | 985.8 | 985.8 | 1007.6 | 1032.7 | 1039.4 |
| 50° | 920.6 | 917.2 | 942.3 | 962.4 | 967.4 |
| 52.5° | 853.6 | 848.6 | 868.7 | 885.4 | 892.1 |
| 55° | 781.6 | 776.6 | 791.7 | 808.4 | 815.1 |
| 57.5° | 706.3 | 699.6 | 716.4 | 731.4 | 734.8 |
| 60° | 636.0 | 626.0 | 639.4 | 647.7 | 656.1 |
| 62.5° | 565.7 | 554.0 | 564.1 | 569.1 | 575.8 |
| 65° | 493.8 | 482.0 | 490.4 | 493.8 | 502.1 |
| 67.5° | 425.1 | 416.8 | 418.4 | 423.5 | 426.8 |
| 70° | 363.2 | 353.2 | 353.2 | 353.2 | 354.8 |
| 72.5° | 306.3 | 291.2 | 289.6 | 291.2 | 291.2 |
| 75° | 244.4 | 234.3 | 231.0 | 231.0 | 229.3 |
| 77.5° | 195.8 | 182.4 | 180.8 | 177.4 | 174.1 |
| 80° | 142.3 | 130.6 | 127.2 | 125.5 | 123.9 |
| 82.5° | 98.8 | 88.7 | 85.4 | 82.0 | 77.0 |
| 85° | 58.6 | 51.9 | 45.2 | 40.2 | 35.1 |
| 87.5° | 21.8 | 20.1 | 16.7 | 15.1 | 15.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)