

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: P393578

Luminaire Tested: **24EN-LD2-54-UNV-L83050-W2A-1-U (2700K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P393578
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-36)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24EN-LD2-54-UNV-L83050-W2A-1-U (2700K)
Description: 2X4 ENCOUNTER, 5400 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5259.3 lumens
Efficiency: N/A
Efficacy: 137.3 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.28 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

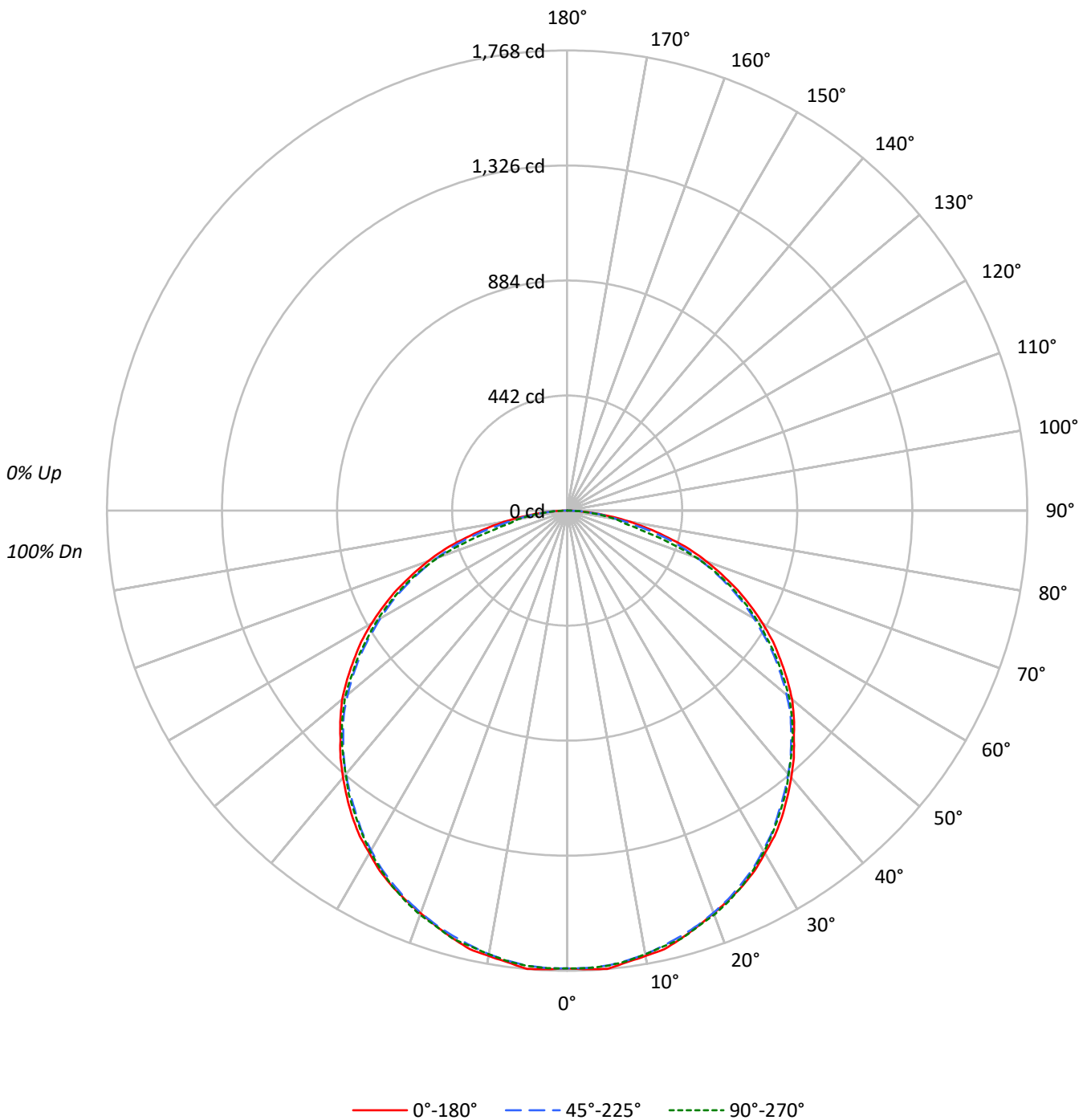
Input Watts (W): 38.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P393578

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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 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 90 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 79 | 68 | 60 | 53 | 66 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 47 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 50 | 42 | 35 | 62 | 50 | 41 | 35 | 48 | 40 | 35 | 47 | 40 | 35 | 45 | 39 | 34 | 32 |
| 8 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 43 | 36 | 31 | 41 | 35 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 38 | 31 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2367 | 2367 | 2367 |
| 5° | 2387 | 2370 | 2372 |
| 10° | 2374 | 2365 | 2365 |
| 15° | 2369 | 2357 | 2371 |
| 20° | 2357 | 2354 | 2366 |
| 25° | 2363 | 2351 | 2362 |
| 30° | 2361 | 2341 | 2350 |
| 35° | 2363 | 2326 | 2336 |
| 40° | 2352 | 2322 | 2325 |
| 45° | 2344 | 2315 | 2332 |
| 50° | 2361 | 2304 | 2331 |
| 55° | 2347 | 2274 | 2300 |
| 60° | 2337 | 2230 | 2267 |
| 65° | 2301 | 2178 | 2218 |
| 70° | 2236 | 2099 | 2072 |
| 75° | 2087 | 1936 | 1570 |
| 80° | 1869 | 1525 | 1473 |
| 85° | 1504 | 1355 | 1237 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 166.8 | 3.2 |
| 10°-20° | 478.7 | 9.1 |
| 20°-30° | 730.3 | 13.9 |
| 30°-40° | 891.2 | 16.9 |
| 40°-50° | 943.0 | 17.9 |
| 50°-60° | 875.0 | 16.6 |
| 60°-70° | 686.6 | 13.1 |
| 70°-80° | 385.4 | 7.3 |
| 80°-90° | 102.2 | 1.9 |
| 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° | 1375.8 | 26.2 |
| 0°-40° | 2267.0 | 43.1 |
| 0°-60° | 4085.1 | 77.7 |
| 0°-90° | 5259.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5259.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1759 | 1759 | 1759 | 1759 | 1759 | |
| 5° | 1768 | 1756 | 1755 | 1751 | 1756 | 167 |
| 15° | 1701 | 1698 | 1692 | 1691 | 1702 | 480 |
| 25° | 1592 | 1580 | 1583 | 1578 | 1591 | 734 |
| 35° | 1438 | 1429 | 1416 | 1420 | 1422 | 899 |
| 45° | 1232 | 1227 | 1217 | 1212 | 1225 | 954 |
| 55° | 1000 | 985 | 970 | 972 | 980 | 896 |
| 65° | 723 | 703 | 684 | 684 | 697 | 713 |
| 75° | 401 | 389 | 372 | 329 | 302 | 427 |
| 85° | 97 | 89 | 88 | 81 | 80 | 113 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P393578

CATALOG NUMBER: 24EN-LD2-54-UNV-L83050-W2A-1-U (2700K)

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1758.9 | 1758.9 | 1758.9 | 1758.9 | 1758.9 |
| 2.5° | 1763.7 | 1757.9 | 1758.9 | 1756.9 | 1759.8 |
| 5° | 1767.6 | 1756.0 | 1755.0 | 1751.1 | 1756.0 |
| 7.5° | 1750.2 | 1746.3 | 1744.4 | 1743.4 | 1746.3 |
| 10° | 1737.6 | 1730.9 | 1730.9 | 1731.9 | 1730.9 |
| 12.5° | 1726.1 | 1716.4 | 1711.6 | 1714.5 | 1714.5 |
| 15° | 1701.0 | 1698.1 | 1692.3 | 1691.3 | 1701.9 |
| 17.5° | 1674.0 | 1675.9 | 1670.1 | 1669.1 | 1674.9 |
| 20° | 1646.0 | 1645.0 | 1644.1 | 1639.2 | 1652.7 |
| 22.5° | 1619.9 | 1615.1 | 1616.1 | 1610.3 | 1623.8 |
| 25° | 1592.0 | 1580.4 | 1583.3 | 1578.4 | 1591.0 |
| 27.5° | 1560.1 | 1546.6 | 1548.5 | 1548.5 | 1553.4 |
| 30° | 1519.6 | 1508.0 | 1507.0 | 1512.8 | 1512.8 |
| 32.5° | 1482.9 | 1471.4 | 1465.6 | 1466.5 | 1468.5 |
| 35° | 1438.5 | 1428.9 | 1416.4 | 1420.2 | 1422.1 |
| 37.5° | 1389.3 | 1384.5 | 1370.0 | 1370.0 | 1376.8 |
| 40° | 1339.2 | 1332.4 | 1321.8 | 1318.9 | 1323.7 |
| 42.5° | 1289.0 | 1282.2 | 1271.6 | 1266.8 | 1274.5 |
| 45° | 1232.1 | 1227.3 | 1216.6 | 1211.8 | 1225.3 |
| 47.5° | 1181.9 | 1171.3 | 1164.5 | 1160.7 | 1170.3 |
| 50° | 1127.9 | 1112.4 | 1100.9 | 1102.8 | 1113.4 |
| 52.5° | 1066.1 | 1051.7 | 1035.3 | 1039.1 | 1044.9 |
| 55° | 1000.5 | 985.1 | 969.6 | 972.5 | 980.3 |
| 57.5° | 937.8 | 922.4 | 898.2 | 903.1 | 908.9 |
| 60° | 868.3 | 847.1 | 828.8 | 831.7 | 842.3 |
| 62.5° | 795.0 | 777.6 | 759.3 | 761.2 | 770.9 |
| 65° | 722.7 | 703.4 | 684.1 | 684.1 | 696.6 |
| 67.5° | 643.5 | 630.0 | 608.8 | 608.8 | 616.5 |
| 70° | 568.3 | 550.9 | 533.5 | 522.0 | 526.8 |
| 72.5° | 492.1 | 470.8 | 457.3 | 428.4 | 415.8 |
| 75° | 401.4 | 388.8 | 372.4 | 329.0 | 302.0 |
| 77.5° | 319.4 | 312.6 | 280.8 | 235.4 | 223.8 |
| 80° | 241.2 | 236.4 | 196.8 | 190.1 | 190.1 |
| 82.5° | 165.0 | 160.2 | 148.6 | 137.0 | 135.1 |
| 85° | 97.4 | 88.8 | 87.8 | 81.0 | 80.1 |
| 87.5° | 31.8 | 36.7 | 34.7 | 35.7 | 35.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)