

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: P565990

Luminaire Tested: **4SNX-104HL-FDL-UNV-L830-CD**

Issue Date: 9/15/2022



Test Information

Test Method: LM-79-08
Report Number: P565990
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2204-622-1)
Test Lab: INNOVATION CENTER
Issue Date: 9/15/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNX-104HL-FDL-UNV-L830-CD
Description: 4FT 10400 LUMEN, SNX FIXTURE WITH 3000K, 80CRI LEDS AND FDL LENS
Light Source: -
Ballast/Driver: -

Summary

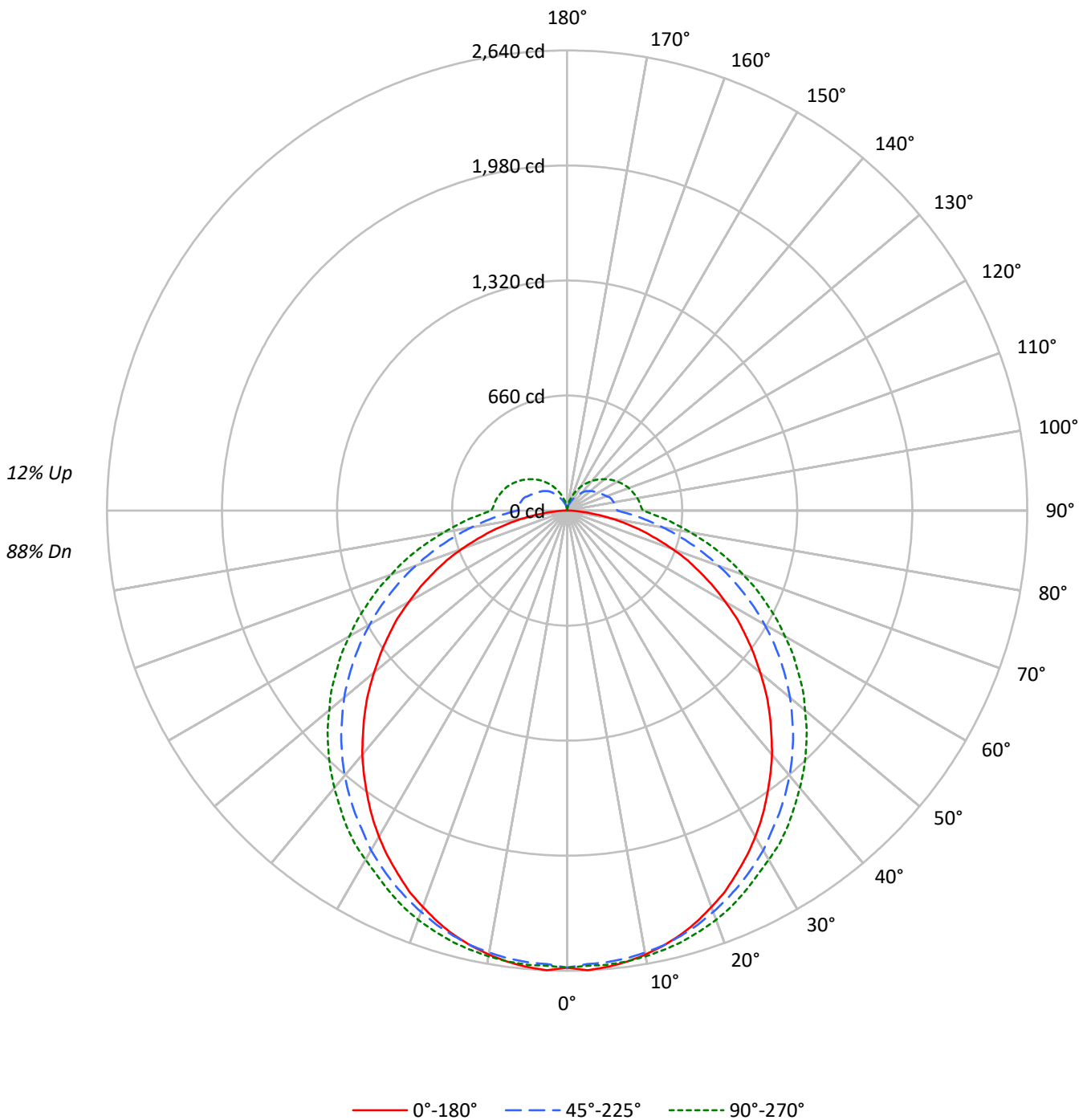
Lumens per Lamp: N/A
Luminaire Lumens: 9440.0 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.31 / 1.41
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.04')
CIE Type: Semi-Direct

Input Watts (W): 75.5
Input Voltage (V): NR
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: P565990

CATALOG NUMBER: 4SNX-104HL-FDL-UNV-L830-CD

Luminous Intensity Polar Plot





TEST NUMBER: P565990

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|
| RF | 20 | | | | 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 | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 105 | 105 | 105 | 98 | 98 | 98 | 91 | 91 | 91 | 88 |
| 1 | 105 | 99 | 95 | 90 | 101 | 96 | 92 | 88 | 89 | 86 | 83 | 84 | 81 | 78 | 78 | 76 | 74 | 71 |
| 2 | 95 | 86 | 79 | 72 | 91 | 83 | 76 | 71 | 77 | 72 | 67 | 72 | 68 | 64 | 68 | 64 | 61 | 58 |
| 3 | 86 | 75 | 66 | 60 | 82 | 72 | 65 | 58 | 68 | 61 | 56 | 63 | 58 | 53 | 59 | 55 | 51 | 48 |
| 4 | 78 | 66 | 57 | 50 | 75 | 64 | 56 | 49 | 60 | 53 | 47 | 56 | 50 | 45 | 53 | 48 | 43 | 41 |
| 5 | 72 | 59 | 50 | 43 | 69 | 57 | 48 | 42 | 54 | 46 | 41 | 50 | 44 | 39 | 47 | 42 | 38 | 35 |
| 6 | 66 | 53 | 44 | 37 | 64 | 51 | 43 | 37 | 48 | 41 | 35 | 45 | 39 | 34 | 43 | 37 | 33 | 31 |
| 7 | 61 | 48 | 39 | 33 | 59 | 46 | 38 | 32 | 44 | 36 | 31 | 41 | 35 | 30 | 39 | 33 | 29 | 27 |
| 8 | 57 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 40 | 33 | 28 | 38 | 31 | 27 | 36 | 30 | 26 | 24 |
| 9 | 53 | 40 | 32 | 26 | 51 | 39 | 31 | 26 | 37 | 30 | 25 | 35 | 29 | 24 | 33 | 27 | 23 | 21 |
| 10 | 50 | 37 | 29 | 23 | 48 | 36 | 28 | 23 | 34 | 27 | 22 | 32 | 26 | 22 | 31 | 25 | 21 | 19 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 28224 | 28224 | 28224 |
| 5° | 28375 | 27800 | 27855 |
| 10° | 28219 | 27539 | 27566 |
| 15° | 27988 | 27225 | 27297 |
| 20° | 27616 | 26848 | 26990 |
| 25° | 27170 | 26467 | 26580 |
| 30° | 26683 | 26084 | 26228 |
| 35° | 26066 | 25623 | 25984 |
| 40° | 25467 | 25241 | 25608 |
| 45° | 24744 | 24800 | 25291 |
| 50° | 23904 | 24332 | 24889 |
| 55° | 23107 | 23753 | 24529 |
| 60° | 22187 | 23136 | 24089 |
| 65° | 21064 | 22427 | 23659 |
| 70° | 19636 | 21653 | 23171 |
| 75° | 17602 | 20801 | 23004 |
| 80° | 14761 | 20273 | 22819 |
| 85° | 10705 | 20695 | 24054 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 248.9 | 2.6 |
| 10°-20° | 716.1 | 7.6 |
| 20°-30° | 1089.3 | 11.5 |
| 30°-40° | 1324.5 | 14.0 |
| 40°-50° | 1401.3 | 14.8 |
| 50°-60° | 1313.5 | 13.9 |
| 60°-70° | 1080.6 | 11.4 |
| 70°-80° | 747.7 | 7.9 |
| 80°-90° | 415.8 | 4.4 |
| 90°-100° | 273.9 | 2.9 |
| 100°-110° | 245.6 | 2.6 |
| 110°-120° | 203.3 | 2.2 |
| 120°-130° | 157.2 | 1.7 |
| 130°-140° | 111.3 | 1.2 |
| 140°-150° | 67.1 | 0.7 |
| 150°-160° | 32.2 | 0.3 |
| 160°-170° | 10.5 | 0.1 |
| 170°-180° | 1.3 | 0.0 |
| 0°-30° | 2054.3 | 21.8 |
| 0°-40° | 3378.8 | 35.8 |
| 0°-60° | 6093.6 | 64.6 |
| 0°-90° | 8337.6 | 88.3 |
| 90°-120° | 722.8 | 7.7 |
| 90°-150° | 1058.3 | 11.2 |
| 90°-180° | 1102.0 | 11.7 |
| 0°-180° | 9440.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|------|------|-------|------|-------|------|------|
| 0° | 2622 | 2622 | 2622 | 2622 | 2622 | |
| 5° | 2628 | 2624 | 2601 | 2622 | 2616 | 250 |
| 15° | 2519 | 2527 | 2525 | 2559 | 2559 | 710 |
| 25° | 2299 | 2331 | 2359 | 2410 | 2412 | 1060 |
| 35° | 1998 | 2051 | 2121 | 2189 | 2208 | 1250 |
| 45° | 1642 | 1728 | 1833 | 1916 | 1938 | 1266 |
| 55° | 1250 | 1361 | 1492 | 1586 | 1618 | 1119 |
| 65° | 846 | 967 | 1117 | 1227 | 1261 | 838 |
| 75° | 440 | 567 | 734 | 850 | 897 | 466 |
| 85° | 97 | 241 | 407 | 520 | 566 | 112 |
| 90° | 2 | 136 | 288 | 396 | 435 | 6 |
| 95° | 2 | 129 | 280 | 383 | 420 | 1 |
| 105° | 2 | 112 | 262 | 360 | 393 | 2 |
| 115° | 3 | 97 | 222 | 320 | 356 | 3 |
| 125° | 3 | 82 | 189 | 273 | 307 | 3 |
| 135° | 3 | 65 | 158 | 225 | 252 | 2 |
| 145° | 3 | 47 | 110 | 170 | 191 | 2 |
| 155° | 5 | 32 | 68 | 108 | 126 | 2 |
| 165° | 5 | 21 | 37 | 50 | 65 | 1 |
| 175° | 5 | 8 | 11 | 11 | 6 | 0 |
| 180° | 3 | 3 | 3 | 3 | 3 | |



TEST NUMBER: P565990

CATALOG NUMBER: 4SNX-104HL-FDL-UNV-L830-CD

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|--------|--------|--------|--------|--------|
| 0° | 2622.1 | 2622.1 | 2622.1 | 2622.1 | 2622.1 |
| 2.5° | 2639.8 | 2631.8 | 2604.3 | 2622.1 | 2614.0 |
| 5° | 2628.5 | 2623.7 | 2601.1 | 2622.1 | 2615.6 |
| 7.5° | 2610.8 | 2609.1 | 2591.4 | 2615.6 | 2609.1 |
| 10° | 2586.5 | 2589.7 | 2575.2 | 2601.1 | 2596.2 |
| 12.5° | 2555.8 | 2560.6 | 2554.2 | 2583.3 | 2580.0 |
| 15° | 2518.6 | 2526.7 | 2525.1 | 2559.0 | 2559.0 |
| 17.5° | 2473.3 | 2484.7 | 2491.1 | 2529.9 | 2529.9 |
| 20° | 2420.0 | 2437.8 | 2450.7 | 2492.7 | 2499.2 |
| 22.5° | 2366.6 | 2387.7 | 2407.1 | 2450.7 | 2460.4 |
| 25° | 2298.8 | 2331.1 | 2358.6 | 2410.3 | 2411.9 |
| 27.5° | 2232.5 | 2268.0 | 2305.2 | 2355.3 | 2360.2 |
| 30° | 2159.7 | 2205.0 | 2250.3 | 2298.8 | 2313.3 |
| 32.5° | 2082.1 | 2132.2 | 2182.4 | 2247.0 | 2266.4 |
| 35° | 1998.1 | 2051.4 | 2120.9 | 2188.8 | 2208.2 |
| 37.5° | 1914.0 | 1973.8 | 2054.7 | 2124.2 | 2141.9 |
| 40° | 1828.3 | 1894.6 | 1985.1 | 2056.3 | 2077.3 |
| 42.5° | 1733.0 | 1813.8 | 1910.8 | 1986.8 | 2011.0 |
| 45° | 1642.4 | 1728.1 | 1833.2 | 1915.6 | 1938.3 |
| 47.5° | 1547.1 | 1637.6 | 1750.7 | 1838.0 | 1863.9 |
| 50° | 1445.2 | 1548.7 | 1669.9 | 1757.2 | 1781.5 |
| 52.5° | 1349.8 | 1454.9 | 1582.6 | 1673.1 | 1707.1 |
| 55° | 1249.6 | 1361.1 | 1492.1 | 1585.8 | 1618.2 |
| 57.5° | 1155.8 | 1262.5 | 1403.2 | 1496.9 | 1537.4 |
| 60° | 1049.2 | 1167.2 | 1307.8 | 1409.6 | 1442.0 |
| 62.5° | 948.9 | 1068.5 | 1214.0 | 1319.1 | 1356.3 |
| 65° | 845.5 | 966.7 | 1117.0 | 1227.0 | 1260.9 |
| 67.5° | 748.5 | 868.1 | 1021.7 | 1130.0 | 1173.6 |
| 70° | 641.8 | 767.9 | 924.7 | 1036.2 | 1073.4 |
| 72.5° | 536.7 | 667.6 | 827.7 | 947.3 | 989.3 |
| 75° | 439.7 | 567.4 | 733.9 | 850.3 | 897.2 |
| 77.5° | 345.9 | 475.3 | 643.4 | 763.0 | 803.4 |
| 80° | 252.2 | 388.0 | 559.3 | 677.3 | 716.1 |
| 82.5° | 166.5 | 308.8 | 478.5 | 596.5 | 638.5 |
| 85° | 97.0 | 240.9 | 407.4 | 520.5 | 565.8 |
| 87.5° | 42.0 | 182.7 | 341.1 | 452.6 | 489.8 |
| 90° | 1.6 | 135.8 | 287.7 | 396.1 | 434.9 |
| 92.5° | 1.6 | 132.6 | 281.3 | 388.0 | 425.2 |
| 95° | 1.6 | 129.3 | 279.7 | 383.1 | 420.3 |
| 97.5° | 1.6 | 127.7 | 276.4 | 379.9 | 415.5 |
| 100° | 1.6 | 122.9 | 271.6 | 373.4 | 409.0 |
| 102.5° | 1.6 | 116.4 | 266.7 | 367.0 | 400.9 |
| 105° | 1.6 | 111.5 | 261.9 | 360.5 | 392.8 |
| 107.5° | 1.6 | 106.7 | 253.8 | 352.4 | 384.7 |
| 110° | 1.6 | 101.8 | 240.9 | 344.3 | 376.7 |



TEST NUMBER: P565990

CATALOG NUMBER: 4SNX-104HL-FDL-UNV-L830-CD

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-------|-------|-------|
| 112.5° | 1.6 | 100.2 | 231.2 | 333.0 | 367.0 |
| 115° | 3.2 | 97.0 | 221.5 | 320.1 | 355.6 |
| 117.5° | 3.2 | 95.4 | 213.4 | 307.1 | 344.3 |
| 120° | 3.2 | 90.5 | 205.3 | 295.8 | 331.4 |
| 122.5° | 3.2 | 85.7 | 197.2 | 284.5 | 320.1 |
| 125° | 3.2 | 82.4 | 189.1 | 273.2 | 307.1 |
| 127.5° | 3.2 | 77.6 | 182.7 | 261.9 | 292.6 |
| 130° | 3.2 | 74.4 | 174.6 | 249.0 | 279.7 |
| 132.5° | 3.2 | 69.5 | 166.5 | 236.0 | 265.1 |
| 135° | 3.2 | 64.7 | 158.4 | 224.7 | 252.2 |
| 137.5° | 3.2 | 58.2 | 148.7 | 211.8 | 237.6 |
| 140° | 3.2 | 53.3 | 135.8 | 198.8 | 223.1 |
| 142.5° | 3.2 | 50.1 | 122.9 | 184.3 | 206.9 |
| 145° | 3.2 | 46.9 | 109.9 | 169.7 | 190.8 |
| 147.5° | 3.2 | 43.6 | 98.6 | 155.2 | 174.6 |
| 150° | 3.2 | 38.8 | 87.3 | 142.3 | 158.4 |
| 152.5° | 4.8 | 35.6 | 77.6 | 126.1 | 142.3 |
| 155° | 4.8 | 32.3 | 67.9 | 108.3 | 126.1 |
| 157.5° | 4.8 | 29.1 | 58.2 | 90.5 | 109.9 |
| 160° | 4.8 | 25.9 | 50.1 | 74.4 | 93.8 |
| 162.5° | 4.8 | 24.2 | 43.6 | 61.4 | 79.2 |
| 165° | 4.8 | 21.0 | 37.2 | 50.1 | 64.7 |
| 167.5° | 4.8 | 16.2 | 30.7 | 38.8 | 53.3 |
| 170° | 4.8 | 12.9 | 24.2 | 27.5 | 40.4 |
| 172.5° | 4.8 | 9.7 | 17.8 | 19.4 | 21.0 |
| 175° | 4.8 | 8.1 | 11.3 | 11.3 | 6.5 |
| 177.5° | 4.8 | 6.5 | 6.5 | 6.5 | 3.2 |
| 180° | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |

(END OF REPORT)