

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: FAIL-SAFE

Report Number: P184394

Luminaire Tested: **ENW/ENC-24-4-LD1-67-40-CP187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P184394
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ENW/ENC-24-4-LD1-67-40-CP187-UNV-EDC1
Description: FAIL-SAFE 2X4 ENCOUNTER W/ 0.187" THICK CLEAR POLY LENS
Light Source: 4000K LEDS
Ballast/Driver: -

Summary

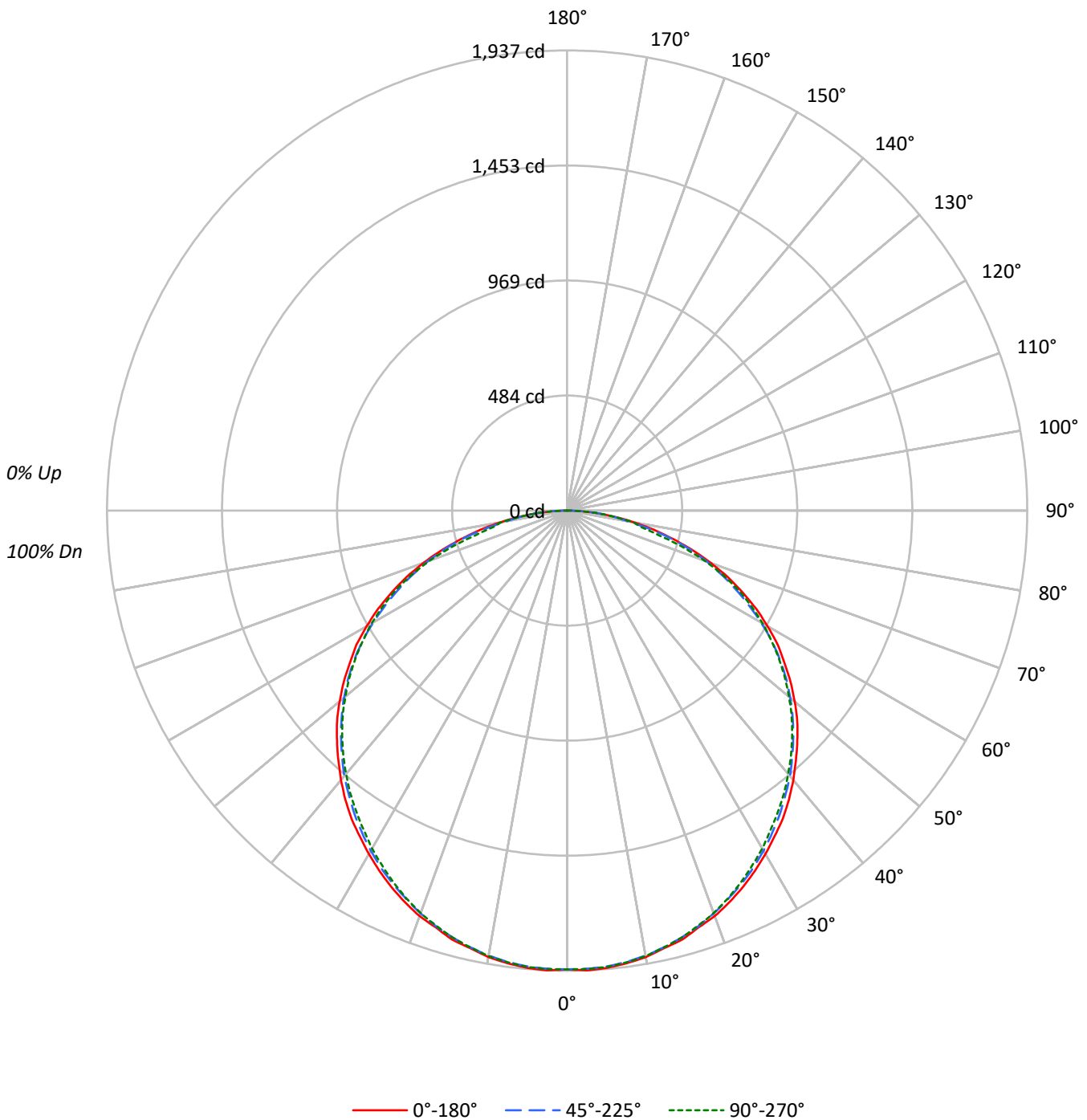
Lumens per Lamp: N/A
Luminaire Lumens: 5898.0 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.26 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 4' x H: 0.1')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (A_{in}): 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 | 108 | 103 | 99 | 95 | 105 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 87 | 89 | 87 | 85 | 83 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 74 | 81 | 76 | 72 | 78 | 74 | 70 | 68 |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 62 | 73 | 67 | 61 | 71 | 65 | 60 | 68 | 63 | 59 | 57 |
| 4 | 81 | 69 | 60 | 53 | 79 | 68 | 59 | 53 | 65 | 58 | 52 | 63 | 56 | 51 | 60 | 55 | 50 | 48 |
| 5 | 75 | 61 | 52 | 45 | 73 | 60 | 52 | 45 | 58 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 41 |
| 6 | 69 | 55 | 46 | 39 | 67 | 54 | 46 | 39 | 52 | 45 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 36 |
| 7 | 64 | 50 | 41 | 35 | 62 | 49 | 41 | 35 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 32 |
| 8 | 59 | 45 | 37 | 31 | 58 | 45 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 28 |
| 9 | 55 | 42 | 33 | 28 | 54 | 41 | 33 | 28 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 10 | 52 | 38 | 30 | 25 | 51 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2599 | 2599 | 2599 |
| 5° | 2604 | 2590 | 2593 |
| 10° | 2596 | 2575 | 2579 |
| 15° | 2588 | 2556 | 2558 |
| 20° | 2578 | 2535 | 2535 |
| 25° | 2567 | 2513 | 2507 |
| 30° | 2557 | 2492 | 2480 |
| 35° | 2555 | 2472 | 2456 |
| 40° | 2547 | 2454 | 2440 |
| 45° | 2544 | 2433 | 2428 |
| 50° | 2542 | 2415 | 2408 |
| 55° | 2528 | 2384 | 2384 |
| 60° | 2512 | 2323 | 2353 |
| 65° | 2461 | 2233 | 2295 |
| 70° | 2365 | 2143 | 2126 |
| 75° | 2191 | 1962 | 1739 |
| 80° | 1944 | 1529 | 1688 |
| 85° | 1521 | 1209 | 1269 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 183.1 | 3.1 |
| 10°-20° | 525.3 | 8.9 |
| 20°-30° | 799.8 | 13.6 |
| 30°-40° | 977.2 | 16.6 |
| 40°-50° | 1041.8 | 17.7 |
| 50°-60° | 979.8 | 16.6 |
| 60°-70° | 784.5 | 13.3 |
| 70°-80° | 465.4 | 7.9 |
| 80°-90° | 141.2 | 2.4 |
| 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° | 1508.2 | 25.6 |
| 0°-40° | 2485.3 | 42.1 |
| 0°-60° | 4506.8 | 76.4 |
| 0°-90° | 5898.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5898.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1931 | 1931 | 1931 | 1931 | 1931 | |
| 5° | 1932 | 1924 | 1926 | 1923 | 1928 | 184 |
| 15° | 1870 | 1863 | 1861 | 1855 | 1861 | 527 |
| 25° | 1749 | 1742 | 1735 | 1723 | 1728 | 807 |
| 35° | 1583 | 1574 | 1561 | 1545 | 1548 | 990 |
| 45° | 1370 | 1362 | 1346 | 1336 | 1340 | 1058 |
| 55° | 1116 | 1106 | 1093 | 1083 | 1089 | 999 |
| 65° | 814 | 802 | 781 | 790 | 798 | 805 |
| 75° | 461 | 453 | 452 | 411 | 397 | 488 |
| 85° | 127 | 118 | 126 | 126 | 129 | 142 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P184394

CATALOG NUMBER: ENW/ENC-24-4-LD1-67-40-CP187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1931.3 | 1931.3 | 1931.3 | 1931.3 | 1931.3 |
| 2.5° | 1937.3 | 1931.3 | 1930.4 | 1927.1 | 1931.3 |
| 5° | 1932.1 | 1924.5 | 1926.2 | 1922.8 | 1927.9 |
| 7.5° | 1921.9 | 1916.8 | 1916.0 | 1913.4 | 1917.7 |
| 10° | 1908.3 | 1903.3 | 1902.4 | 1898.1 | 1904.1 |
| 12.5° | 1886.3 | 1885.4 | 1882.8 | 1878.6 | 1883.7 |
| 15° | 1870.1 | 1863.3 | 1860.8 | 1854.8 | 1860.8 |
| 17.5° | 1839.5 | 1837.8 | 1834.4 | 1828.4 | 1832.7 |
| 20° | 1816.6 | 1809.8 | 1804.6 | 1796.1 | 1802.9 |
| 22.5° | 1784.3 | 1777.4 | 1769.8 | 1761.3 | 1767.3 |
| 25° | 1749.4 | 1741.8 | 1734.9 | 1723.1 | 1728.1 |
| 27.5° | 1710.3 | 1703.5 | 1695.8 | 1682.3 | 1685.6 |
| 30° | 1669.5 | 1662.6 | 1653.3 | 1638.9 | 1642.3 |
| 32.5° | 1625.3 | 1618.5 | 1607.4 | 1593.0 | 1593.8 |
| 35° | 1582.8 | 1574.3 | 1560.6 | 1545.4 | 1547.9 |
| 37.5° | 1533.5 | 1525.8 | 1508.8 | 1495.3 | 1499.5 |
| 40° | 1480.8 | 1474.8 | 1459.5 | 1445.1 | 1447.6 |
| 42.5° | 1425.5 | 1420.4 | 1402.6 | 1389.0 | 1394.9 |
| 45° | 1370.3 | 1361.8 | 1346.5 | 1336.3 | 1339.6 |
| 47.5° | 1314.1 | 1306.5 | 1287.8 | 1277.6 | 1281.8 |
| 50° | 1250.4 | 1241.1 | 1226.6 | 1216.4 | 1219.0 |
| 52.5° | 1185.8 | 1177.3 | 1162.0 | 1151.0 | 1155.2 |
| 55° | 1116.1 | 1105.9 | 1093.1 | 1083.0 | 1088.9 |
| 57.5° | 1051.5 | 1035.3 | 1021.8 | 1013.3 | 1020.1 |
| 60° | 974.1 | 963.1 | 942.7 | 941.0 | 950.3 |
| 62.5° | 897.6 | 883.2 | 862.0 | 867.9 | 875.5 |
| 65° | 814.3 | 802.5 | 781.2 | 789.7 | 798.2 |
| 67.5° | 731.8 | 714.8 | 702.1 | 708.1 | 710.6 |
| 70° | 642.6 | 629.8 | 624.0 | 615.5 | 614.6 |
| 72.5° | 551.7 | 542.3 | 541.5 | 517.7 | 508.3 |
| 75° | 460.7 | 453.1 | 452.2 | 410.6 | 397.0 |
| 77.5° | 372.3 | 369.8 | 352.0 | 318.8 | 318.8 |
| 80° | 286.5 | 289.8 | 256.7 | 267.8 | 279.7 |
| 82.5° | 201.5 | 202.3 | 198.0 | 198.0 | 198.9 |
| 85° | 126.7 | 118.2 | 125.8 | 125.8 | 129.2 |
| 87.5° | 51.0 | 55.3 | 57.8 | 61.2 | 62.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)