

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: PORTFOLIO

Report Number: P127976

Luminaire Tested: **LSM90W9035D010TEP**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P127976
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24508)
Test Lab: INNOVATION CENTER P2
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LSM90W9035D010TEP
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE
Light Source: 90 CRI, 3500K CCT LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

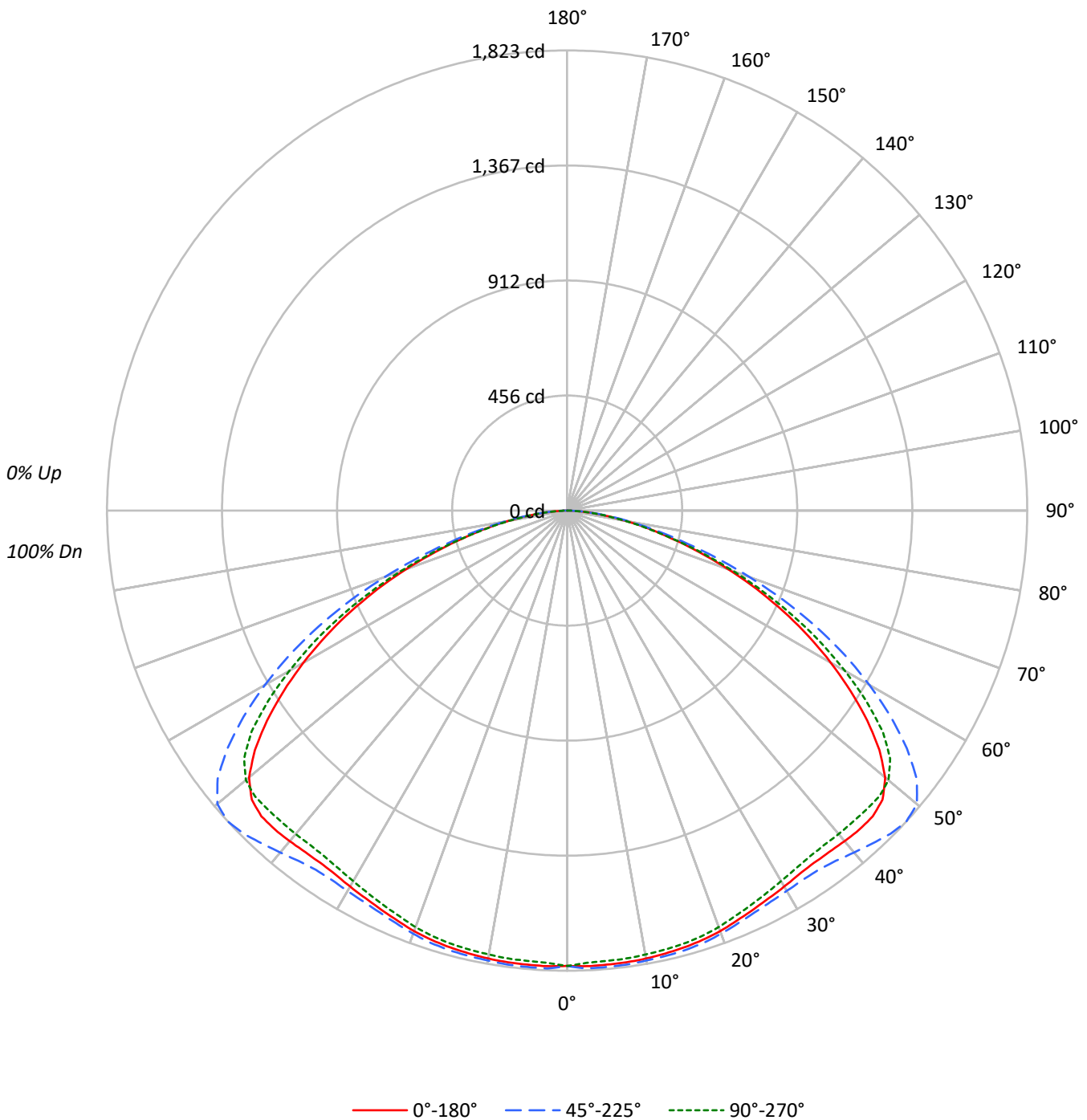
Lumens per Lamp: N/A
Luminaire Lumens: 6909.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.45 / 1.43 / 1.73
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

Input Watts (W): 97.58
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



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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 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 71 | 77 | 73 | 70 | 68 |
| 3 | 88 | 77 | 69 | 62 | 86 | 76 | 68 | 61 | 73 | 66 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 56 |
| 4 | 80 | 68 | 58 | 51 | 78 | 66 | 58 | 51 | 64 | 56 | 50 | 61 | 55 | 49 | 59 | 53 | 49 | 47 |
| 5 | 73 | 60 | 50 | 43 | 71 | 59 | 50 | 43 | 57 | 49 | 43 | 54 | 48 | 42 | 53 | 47 | 42 | 39 |
| 6 | 67 | 53 | 44 | 37 | 65 | 52 | 43 | 37 | 51 | 43 | 37 | 49 | 42 | 36 | 47 | 41 | 36 | 34 |
| 7 | 62 | 48 | 39 | 32 | 60 | 47 | 38 | 32 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 29 |
| 8 | 58 | 43 | 35 | 28 | 56 | 43 | 34 | 28 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 9 | 54 | 40 | 31 | 25 | 52 | 39 | 31 | 25 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 23 |
| 10 | 50 | 36 | 28 | 23 | 49 | 36 | 28 | 23 | 35 | 28 | 22 | 34 | 27 | 22 | 33 | 27 | 22 | 20 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 19534 | 19534 | 19534 |
| 5° | 19630 | 19728 | 19467 |
| 10° | 19813 | 19901 | 19637 |
| 15° | 20088 | 20212 | 19920 |
| 20° | 20430 | 20557 | 20234 |
| 25° | 20836 | 20992 | 20597 |
| 30° | 21505 | 21755 | 21193 |
| 35° | 22524 | 22961 | 22128 |
| 40° | 24171 | 24991 | 23648 |
| 45° | 26231 | 27732 | 25665 |
| 50° | 27712 | 30474 | 27997 |
| 55° | 27413 | 31019 | 28810 |
| 60° | 26140 | 29974 | 27526 |
| 65° | 24239 | 27852 | 25315 |
| 70° | 21498 | 24252 | 22163 |
| 75° | 18033 | 19790 | 18242 |
| 80° | 14717 | 15715 | 14405 |
| 85° | 10561 | 11182 | 10312 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 171.9 | 2.5 |
| 10°-20° | 506.2 | 7.3 |
| 20°-30° | 806.1 | 11.7 |
| 30°-40° | 1077.6 | 15.6 |
| 40°-50° | 1349.7 | 19.5 |
| 50°-60° | 1385.8 | 20.1 |
| 60°-70° | 1012.7 | 14.7 |
| 70°-80° | 491.6 | 7.1 |
| 80°-90° | 107.6 | 1.6 |
| 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° | 1484.1 | 21.5 |
| 0°-40° | 2561.6 | 37.1 |
| 0°-60° | 5297.1 | 76.7 |
| 0°-90° | 6909.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6909.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1804 | 1804 | 1804 | 1804 | 1804 | |
| 5° | 1806 | 1800 | 1815 | 1793 | 1791 | 172 |
| 15° | 1792 | 1788 | 1803 | 1782 | 1777 | 507 |
| 25° | 1744 | 1742 | 1757 | 1734 | 1724 | 807 |
| 35° | 1704 | 1713 | 1737 | 1700 | 1674 | 1073 |
| 45° | 1713 | 1758 | 1811 | 1739 | 1676 | 1316 |
| 55° | 1452 | 1531 | 1643 | 1598 | 1526 | 1290 |
| 65° | 946 | 1007 | 1087 | 1046 | 988 | 934 |
| 75° | 431 | 454 | 473 | 454 | 436 | 466 |
| 85° | 85 | 88 | 90 | 86 | 83 | 104 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P127976

CATALOG NUMBER: LSM90W9035D010TEP

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1803.9 | 1803.9 | 1803.9 | 1803.9 | 1803.9 |
| 2.5° | 1806.9 | 1800.9 | 1815.9 | 1793.9 | 1792.9 |
| 5° | 1805.9 | 1799.9 | 1814.9 | 1792.9 | 1790.9 |
| 7.5° | 1804.9 | 1799.9 | 1813.9 | 1791.9 | 1789.9 |
| 10° | 1801.9 | 1795.9 | 1809.9 | 1788.9 | 1785.9 |
| 12.5° | 1796.9 | 1791.9 | 1806.9 | 1784.9 | 1781.9 |
| 15° | 1791.9 | 1787.9 | 1802.9 | 1781.9 | 1776.9 |
| 17.5° | 1783.9 | 1779.9 | 1795.9 | 1773.9 | 1768.9 |
| 20° | 1772.9 | 1768.9 | 1783.9 | 1762.9 | 1755.9 |
| 22.5° | 1757.9 | 1753.9 | 1769.9 | 1747.9 | 1738.9 |
| 25° | 1743.9 | 1741.9 | 1756.9 | 1733.9 | 1723.9 |
| 27.5° | 1730.9 | 1730.9 | 1746.9 | 1721.9 | 1708.9 |
| 30° | 1719.9 | 1721.9 | 1739.9 | 1711.9 | 1694.9 |
| 32.5° | 1708.9 | 1714.9 | 1734.9 | 1702.9 | 1682.9 |
| 35° | 1703.9 | 1712.9 | 1736.9 | 1699.9 | 1673.9 |
| 37.5° | 1704.9 | 1720.9 | 1748.9 | 1703.9 | 1670.9 |
| 40° | 1709.9 | 1733.9 | 1767.9 | 1713.9 | 1672.9 |
| 42.5° | 1713.9 | 1746.9 | 1788.9 | 1725.9 | 1673.9 |
| 45° | 1712.9 | 1757.9 | 1810.9 | 1738.9 | 1675.9 |
| 47.5° | 1694.9 | 1752.9 | 1822.9 | 1748.9 | 1676.9 |
| 50° | 1645.0 | 1714.9 | 1808.9 | 1740.9 | 1661.9 |
| 52.5° | 1559.0 | 1637.0 | 1745.9 | 1690.9 | 1613.0 |
| 55° | 1452.0 | 1531.0 | 1643.0 | 1598.0 | 1526.0 |
| 57.5° | 1332.0 | 1412.0 | 1520.0 | 1476.0 | 1405.0 |
| 60° | 1207.0 | 1282.0 | 1384.0 | 1340.0 | 1271.0 |
| 62.5° | 1078.0 | 1147.0 | 1240.0 | 1198.0 | 1133.0 |
| 65° | 946.0 | 1007.0 | 1087.0 | 1046.0 | 988.0 |
| 67.5° | 812.0 | 863.0 | 927.0 | 891.0 | 842.0 |
| 70° | 679.0 | 719.0 | 766.0 | 737.0 | 700.0 |
| 72.5° | 549.0 | 586.0 | 614.0 | 589.0 | 563.0 |
| 75° | 431.0 | 454.0 | 473.0 | 454.0 | 436.0 |
| 77.5° | 330.0 | 343.0 | 353.0 | 338.0 | 324.0 |
| 80° | 236.0 | 248.0 | 252.0 | 241.0 | 231.0 |
| 82.5° | 154.0 | 162.0 | 165.0 | 157.0 | 151.0 |
| 85° | 85.0 | 88.0 | 90.0 | 86.0 | 83.0 |
| 87.5° | 27.0 | 28.0 | 30.0 | 27.0 | 25.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)