

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: P183601

Luminaire Tested: **LSM45M8027D010TEP**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P183601
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27020)
Test Lab: INNOVATION CENTER-P2
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LSM45M8027D010TEP
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE, MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: 80 CRI, 2700K CCT LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4523.3 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.33
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

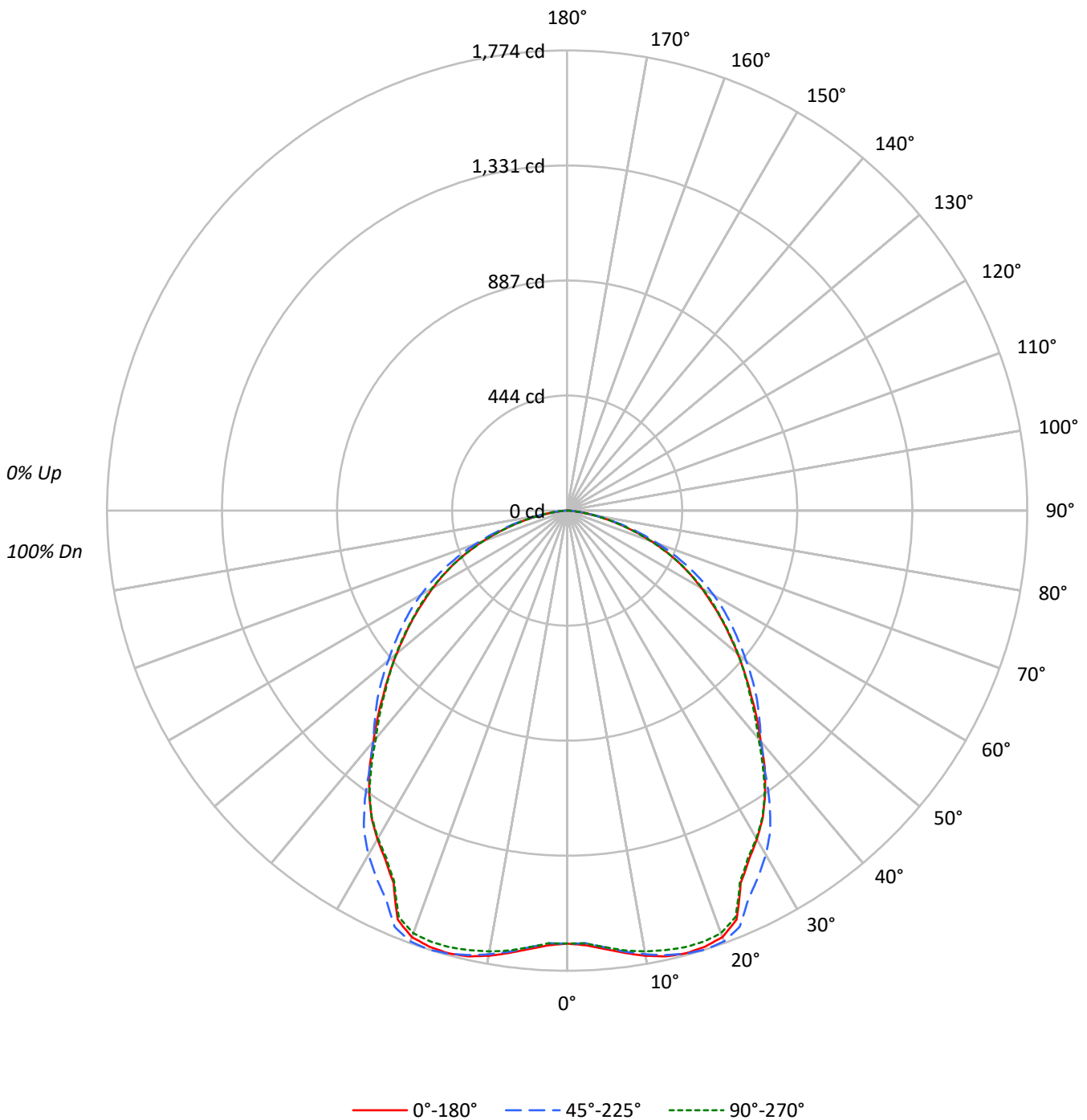
Input Watts (W): 44.68
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	85	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	32	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	33	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18076	18076	18076
5°	18445	18374	18367
10°	19161	19102	18976
15°	19813	19826	19542
20°	20164	20366	19977
25°	18917	19743	18846
30°	18287	19151	18234
35°	17586	17966	17553
40°	16416	16424	16221
45°	15335	15861	15216
50°	14441	15180	14501
55°	13674	14650	13731
60°	12966	14125	13070
65°	12199	13247	12184
70°	10942	11819	10885
75°	9004	9707	9029
80°	6560	7009	6747
85°	3814	4038	3963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.7	3.6
10°-20°	500.5	11.1
20°-30°	751.5	16.6
30°-40°	822.7	18.2
40°-50°	804.7	17.8
50°-60°	694.4	15.4
60°-70°	496.4	11.0
70°-80°	243.9	5.4
80°-90°	45.5	1.0
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°	1415.8	31.3
0°-40°	2238.4	49.5
0°-60°	3737.6	82.6
0°-90°	4523.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4523.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1669	1669	1669	1669	1669	
5°	1697	1711	1690	1704	1690	163
15°	1767	1791	1768	1770	1743	499
25°	1583	1677	1652	1666	1577	738
35°	1330	1310	1359	1294	1328	828
45°	1001	1068	1036	1056	994	775
55°	724	790	776	782	727	648
65°	476	502	517	497	476	469
75°	215	227	232	223	216	231
85°	31	32	32	32	32	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3
2.5°	1677.1	1690.9	1679.5	1677.1	1667.5	1690.3	1681.9	1683.7	1677.1	1678.3	1669.3
5°	1696.9	1711.4	1700.5	1697.5	1687.9	1711.4	1702.9	1704.1	1697.5	1699.3	1690.3
7.5°	1720.4	1735.4	1724.0	1722.2	1713.2	1736.6	1728.8	1730.0	1722.8	1724.0	1715.0
10°	1742.6	1758.8	1747.4	1746.2	1737.2	1762.4	1754.0	1755.2	1746.8	1747.4	1737.2
12.5°	1760.0	1776.9	1765.5	1765.5	1757.0	1781.1	1774.5	1775.7	1767.3	1767.3	1755.2
15°	1767.3	1784.7	1772.7	1774.5	1766.1	1791.3	1785.3	1785.9	1778.7	1780.5	1768.5
17.5°	1763.1	1780.5	1769.7	1770.9	1763.1	1788.9	1782.9	1785.3	1779.3	1784.1	1773.9
20°	1749.8	1765.5	1752.2	1753.4	1747.4	1773.3	1769.1	1773.3	1769.1	1776.3	1767.3
22.5°	1707.1	1721.6	1714.4	1722.2	1721.0	1748.6	1746.2	1749.8	1743.2	1746.8	1737.2
25°	1583.3	1602.0	1599.5	1621.8	1642.8	1677.1	1674.7	1675.9	1662.1	1663.3	1652.4
27.5°	1517.2	1532.8	1523.8	1525.0	1516.6	1535.8	1537.0	1567.1	1585.1	1601.4	1594.1
30°	1462.5	1474.5	1452.9	1437.9	1416.2	1435.4	1434.2	1460.7	1492.6	1530.4	1531.6
32.5°	1403.6	1407.2	1376.5	1356.1	1348.3	1368.7	1367.5	1375.3	1399.4	1440.3	1458.3
35°	1330.3	1333.3	1295.4	1289.4	1289.4	1309.8	1305.0	1307.4	1320.6	1347.1	1359.1
37.5°	1251.5	1247.3	1225.7	1226.9	1231.7	1250.3	1246.7	1246.7	1250.9	1262.9	1247.9
40°	1161.3	1166.1	1159.5	1165.5	1169.8	1187.8	1186.0	1187.2	1185.4	1178.8	1161.9
42.5°	1081.4	1093.4	1100.6	1107.8	1108.4	1125.9	1124.7	1129.5	1120.5	1103.0	1097.6
45°	1001.4	1015.9	1035.7	1050.1	1051.3	1068.2	1068.2	1069.4	1050.7	1038.1	1035.7
47.5°	929.3	944.3	964.8	986.4	990.0	1007.5	1007.5	1004.5	984.6	976.8	969.0
50°	857.2	876.4	895.7	921.5	923.3	936.5	937.1	934.1	925.1	915.5	901.1
52.5°	788.7	812.1	830.7	851.8	853.0	863.8	861.4	863.8	865.0	854.2	836.7
55°	724.3	748.4	764.6	779.6	782.6	789.9	785.0	792.9	800.1	790.5	776.0
57.5°	658.2	684.1	697.9	708.1	710.5	716.5	711.7	721.9	731.5	725.5	715.9
60°	598.7	619.1	628.8	638.4	639.0	645.0	640.8	651.0	661.8	658.8	652.2
62.5°	537.4	551.8	559.0	569.2	566.2	572.3	574.1	583.1	590.9	591.5	586.1
65°	476.1	483.9	489.9	495.9	497.1	501.9	503.7	507.3	519.4	520.6	517.0
67.5°	411.2	416.0	421.4	426.8	426.2	431.0	435.8	439.4	447.2	450.2	445.4
70°	345.6	351.6	354.7	357.1	356.5	361.3	365.5	368.5	375.7	377.5	373.3
72.5°	279.5	285.5	287.9	288.5	287.9	293.3	296.9	298.8	304.8	307.8	301.2
75°	215.2	223.0	224.2	223.0	222.4	227.2	229.0	232.0	236.2	236.8	232.0
77.5°	156.9	163.5	164.7	162.9	161.7	165.3	166.5	169.5	171.9	173.1	168.3
80°	105.2	111.8	111.2	110.6	108.8	111.2	113.0	114.2	116.0	116.0	112.4
82.5°	63.1	67.3	66.7	67.3	65.5	66.1	67.3	69.1	68.5	69.7	67.3
85°	30.7	32.5	32.5	32.5	31.9	32.5	33.1	34.3	33.1	34.3	32.5
87.5°	10.8	11.4	10.8	10.8	10.8	10.8	11.4	11.4	10.8	11.4	10.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3	1669.3
2.5°	1681.9	1672.3	1681.9	1677.7	1683.1	1681.3	1681.9	1688.5	1673.5	1669.9
5°	1702.9	1692.7	1702.3	1699.3	1703.5	1701.7	1702.9	1709.6	1693.9	1689.7
7.5°	1727.0	1716.2	1725.8	1721.6	1725.8	1724.0	1724.6	1730.0	1713.8	1710.2
10°	1749.2	1737.8	1746.2	1742.0	1744.4	1742.6	1743.8	1747.4	1730.0	1725.8
12.5°	1766.7	1755.2	1763.7	1758.8	1760.0	1757.6	1757.0	1758.8	1740.8	1736.0
15°	1781.1	1769.7	1775.7	1770.9	1770.3	1766.7	1765.5	1766.1	1748.0	1743.2
17.5°	1785.3	1772.1	1775.7	1770.3	1768.5	1765.5	1764.3	1765.5	1748.0	1743.2
20°	1776.9	1761.2	1763.1	1756.4	1754.0	1751.6	1751.6	1753.4	1736.6	1733.6
22.5°	1748.0	1734.8	1739.0	1734.8	1732.4	1730.0	1725.8	1721.6	1699.9	1695.7
25°	1663.9	1654.9	1670.5	1672.9	1666.3	1653.6	1630.2	1612.2	1580.9	1577.3
27.5°	1602.0	1583.3	1564.7	1541.2	1527.4	1522.0	1525.6	1532.2	1516.0	1510.0
30°	1532.8	1492.6	1456.5	1432.4	1423.4	1422.2	1436.6	1454.1	1457.1	1458.3
32.5°	1446.9	1395.8	1368.1	1360.3	1354.3	1352.5	1357.3	1377.1	1389.8	1401.2
35°	1349.5	1314.0	1299.6	1300.2	1294.2	1291.8	1288.8	1300.8	1314.0	1327.8
37.5°	1258.7	1243.1	1238.9	1241.3	1234.7	1231.1	1227.5	1230.5	1234.7	1239.5
40°	1173.4	1177.0	1179.4	1181.2	1172.8	1170.4	1167.4	1166.1	1158.9	1147.5
42.5°	1100.6	1110.2	1121.1	1121.1	1112.1	1110.8	1111.4	1107.8	1086.2	1070.6
45°	1038.1	1041.7	1060.4	1064.0	1056.1	1054.3	1054.9	1043.5	1009.3	993.6
47.5°	976.8	978.6	995.4	1003.9	995.4	993.6	995.4	971.4	934.1	926.3
50°	914.9	919.7	926.9	934.7	926.9	926.3	924.5	901.7	865.0	860.8
52.5°	852.4	862.0	858.4	860.2	855.4	856.0	857.8	834.3	800.7	793.5
55°	788.7	797.7	788.7	783.8	782.0	783.8	787.5	765.8	739.4	727.3
57.5°	725.5	730.9	721.3	711.7	708.7	712.9	715.9	697.9	675.0	666.0
60°	660.0	658.8	651.0	642.0	636.0	640.8	645.6	629.4	608.9	603.5
62.5°	590.9	589.7	580.1	572.3	566.2	569.9	574.7	559.0	545.2	540.4
65°	520.0	518.8	508.5	502.5	497.1	498.3	503.7	489.3	480.9	475.5
67.5°	451.4	447.2	437.0	433.4	426.8	429.2	432.8	421.4	413.6	408.8
70°	379.3	375.7	366.7	363.1	357.7	358.9	362.5	355.3	346.8	343.8
72.5°	306.0	305.4	296.9	292.1	289.1	289.7	292.7	289.1	281.3	278.9
75°	235.0	236.8	230.2	226.0	223.0	223.0	226.6	227.2	218.8	215.8
77.5°	173.1	173.1	167.7	168.3	163.5	163.5	165.9	168.3	159.3	157.5
80°	116.0	115.4	113.6	111.8	109.4	110.0	111.8	114.8	107.6	108.2
82.5°	68.5	68.5	68.5	67.3	65.5	64.9	67.3	69.7	64.9	64.9
85°	33.7	33.1	33.1	33.1	31.9	31.3	33.1	34.3	31.3	31.9
87.5°	11.4	10.8	10.8	11.4	10.8	10.8	10.8	10.8	10.2	10.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)