

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: P183616

Luminaire Tested: **LSM45M8040D010TEP**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P183616
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: LSM45M8040D010TEP
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE, MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: 80 CRI, 4000K CCT LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5146.6 lumens
Efficiency: N/A
Efficacy: 115.2 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

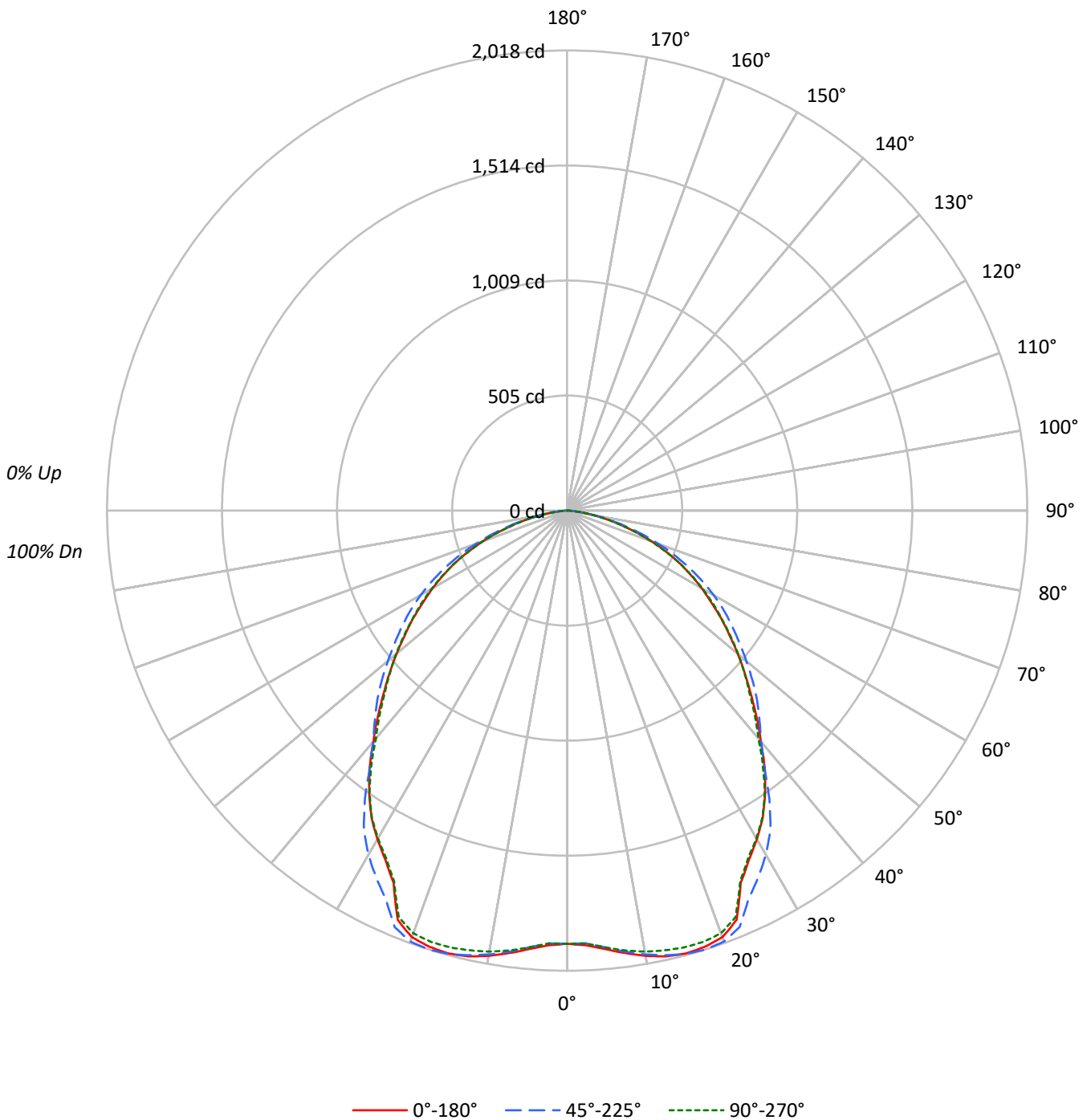
Input Watts (W): 44.68
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P183616

CATALOG NUMBER: LSM45M8040D010TEP

Luminous Intensity Polar Plot





TEST NUMBER: P183616

CATALOG NUMBER: LSM45M8040D010TEP

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°	20567	20567	20567
5°	20988	20905	20899
10°	21801	21734	21591
15°	22542	22558	22235
20°	22944	23172	22730
25°	21525	22465	21443
30°	20806	21791	20746
35°	20009	20442	19972
40°	18679	18689	18456
45°	17449	18046	17314
50°	16430	17271	16499
55°	15558	16670	15624
60°	14753	16072	14872
65°	13880	15071	13862
70°	12452	13446	12386
75°	10246	11045	10271
80°	7464	7976	7676
85°	4336	4585	4498



TEST NUMBER: P183616

CATALOG NUMBER: LSM45M8040D010TEP

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.3	3.6
10°-20°	569.5	11.1
20°-30°	855.1	16.6
30°-40°	936.0	18.2
40°-50°	915.6	17.8
50°-60°	790.1	15.4
60°-70°	564.8	11.0
70°-80°	277.5	5.4
80°-90°	51.7	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°	1610.9	31.3
0°-40°	2546.9	49.5
0°-60°	4252.6	82.6
0°-90°	5146.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5146.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1899	1899	1899	1899	1899	
5°	1931	1947	1923	1938	1923	186
15°	2011	2038	2012	2014	1983	567
25°	1802	1908	1880	1896	1795	839
35°	1514	1490	1546	1472	1511	942
45°	1139	1215	1178	1202	1131	882
55°	824	899	883	890	828	737
65°	542	571	588	566	541	534
75°	245	258	264	254	246	263
85°	35	37	37	36	36	49
90°	0	0	0	0	0	



TEST NUMBER: P183616

CATALOG NUMBER: LSM45M8040D010TEP

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3
2.5°	1908.2	1923.9	1910.9	1908.2	1897.3	1923.2	1913.7	1915.7	1908.2	1909.6	1899.3
5°	1930.8	1947.2	1934.9	1931.4	1920.5	1947.2	1937.6	1939.0	1931.4	1933.5	1923.2
7.5°	1957.4	1974.5	1961.5	1959.5	1949.2	1975.9	1967.0	1968.4	1960.2	1961.5	1951.3
10°	1982.7	2001.2	1988.2	1986.8	1976.6	2005.3	1995.7	1997.1	1987.5	1988.2	1976.6
12.5°	2002.6	2021.7	2008.7	2008.7	1999.2	2026.5	2019.0	2020.4	2010.8	2010.8	1997.1
15°	2010.8	2030.6	2016.9	2019.0	2009.4	2038.1	2031.3	2032.0	2023.8	2025.8	2012.2
17.5°	2006.0	2025.8	2013.5	2014.9	2006.0	2035.4	2028.6	2031.3	2024.5	2029.9	2018.3
20°	1991.0	2008.7	1993.7	1995.1	1988.2	2017.6	2012.8	2017.6	2012.8	2021.0	2010.8
22.5°	1942.4	1958.8	1950.6	1959.5	1958.1	1989.6	1986.8	1991.0	1983.4	1987.5	1976.6
25°	1801.5	1822.7	1820.0	1845.3	1869.2	1908.2	1905.5	1906.8	1891.1	1892.5	1880.2
27.5°	1726.3	1744.0	1733.8	1735.2	1725.6	1747.5	1748.8	1783.0	1803.6	1822.0	1813.8
30°	1664.0	1677.7	1653.1	1636.0	1611.4	1633.3	1631.9	1662.0	1698.2	1741.3	1742.7
32.5°	1597.0	1601.1	1566.2	1543.0	1534.1	1557.3	1556.0	1564.9	1592.2	1638.7	1659.2
35°	1513.6	1517.0	1473.9	1467.1	1467.1	1490.3	1484.8	1487.6	1502.6	1532.7	1546.4
37.5°	1424.0	1419.2	1394.6	1395.9	1401.4	1422.6	1418.5	1418.5	1423.3	1437.0	1419.9
40°	1321.4	1326.8	1319.3	1326.2	1330.9	1351.5	1349.4	1350.8	1348.7	1341.2	1322.1
42.5°	1230.4	1244.1	1252.3	1260.5	1261.2	1281.0	1279.7	1285.1	1274.9	1255.0	1248.9
45°	1139.4	1155.9	1178.4	1194.8	1196.2	1215.4	1215.4	1216.7	1195.5	1181.2	1178.4
47.5°	1057.4	1074.5	1097.7	1122.3	1126.5	1146.3	1146.3	1142.9	1120.3	1111.4	1102.5
50°	975.3	997.2	1019.1	1048.5	1050.5	1065.6	1066.3	1062.8	1052.6	1041.6	1025.2
52.5°	897.3	924.0	945.2	969.1	970.5	982.8	980.1	982.8	984.2	971.9	952.0
55°	824.1	851.5	870.0	887.1	890.5	898.7	893.2	902.1	910.3	899.4	883.0
57.5°	748.9	778.3	794.1	805.7	808.4	815.3	809.8	821.4	832.4	825.5	814.6
60°	681.2	704.5	715.4	726.3	727.0	733.9	729.1	740.7	753.0	749.6	742.1
62.5°	611.4	627.9	636.1	647.7	644.3	651.1	653.2	663.4	672.3	673.0	666.8
65°	541.7	550.6	557.4	564.3	565.6	571.1	573.1	577.2	590.9	592.3	588.2
67.5°	467.8	473.3	479.4	485.6	484.9	490.4	495.9	500.0	508.9	512.3	506.8
70°	393.3	400.1	403.5	406.3	405.6	411.0	415.8	419.3	427.5	429.5	424.7
72.5°	318.0	324.9	327.6	328.3	327.6	333.8	337.9	339.9	346.8	350.2	342.7
75°	244.9	253.7	255.1	253.7	253.1	258.5	260.6	264.0	268.8	269.5	264.0
77.5°	178.5	186.0	187.4	185.3	184.0	188.1	189.5	192.9	195.6	197.0	191.5
80°	119.7	127.2	126.5	125.8	123.8	126.5	128.6	129.9	132.0	132.0	127.9
82.5°	71.8	76.6	75.9	76.6	74.5	75.2	76.6	78.7	78.0	79.3	76.6
85°	34.9	36.9	36.9	36.9	36.2	36.9	37.6	39.0	37.6	39.0	36.9
87.5°	12.3	13.0	12.3	12.3	12.3	12.3	13.0	13.0	12.3	13.0	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P183616

CATALOG NUMBER: LSM45M8040D010TEP

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3	1899.3
2.5°	1913.7	1902.7	1913.7	1908.9	1915.0	1913.0	1913.7	1921.2	1904.1	1900.0
5°	1937.6	1926.0	1936.9	1933.5	1938.3	1936.2	1937.6	1945.1	1927.3	1922.6
7.5°	1965.0	1952.7	1963.6	1958.8	1963.6	1961.5	1962.2	1968.4	1949.9	1945.8
10°	1990.3	1977.3	1986.8	1982.1	1984.8	1982.7	1984.1	1988.2	1968.4	1963.6
12.5°	2010.1	1997.1	2006.7	2001.2	2002.6	1999.8	1999.2	2001.2	1980.7	1975.2
15°	2026.5	2013.5	2020.4	2014.9	2014.2	2010.1	2008.7	2009.4	1988.9	1983.4
17.5°	2031.3	2016.3	2020.4	2014.2	2012.2	2008.7	2007.4	2008.7	1988.9	1983.4
20°	2021.7	2003.9	2006.0	1998.5	1995.7	1993.0	1993.0	1995.1	1975.9	1972.5
22.5°	1988.9	1973.9	1978.6	1973.9	1971.1	1968.4	1963.6	1958.8	1934.2	1929.4
25°	1893.1	1882.9	1900.7	1903.4	1895.9	1881.5	1854.8	1834.3	1798.8	1794.7
27.5°	1822.7	1801.5	1780.3	1753.6	1737.9	1731.7	1735.8	1743.4	1724.9	1718.1
30°	1744.0	1698.2	1657.2	1629.8	1619.6	1618.2	1634.6	1654.5	1657.9	1659.2
32.5°	1646.2	1588.1	1556.6	1547.8	1540.9	1538.9	1544.3	1566.9	1581.3	1594.3
35°	1535.4	1495.1	1478.7	1479.4	1472.5	1469.8	1466.4	1480.0	1495.1	1510.8
37.5°	1432.2	1414.4	1409.6	1412.3	1404.8	1400.7	1396.6	1400.0	1404.8	1410.3
40°	1335.1	1339.2	1341.9	1343.9	1334.4	1331.6	1328.2	1326.8	1318.6	1305.6
42.5°	1252.3	1263.2	1275.5	1275.5	1265.3	1263.9	1264.6	1260.5	1235.9	1218.1
45°	1181.2	1185.3	1206.5	1210.6	1201.7	1199.6	1200.3	1187.3	1148.3	1130.6
47.5°	1111.4	1113.5	1132.6	1142.2	1132.6	1130.6	1132.6	1105.2	1062.8	1054.0
50°	1041.0	1046.4	1054.6	1063.5	1054.6	1054.0	1051.9	1025.9	984.2	979.4
52.5°	969.8	980.8	976.7	978.7	973.2	973.9	976.0	949.3	911.0	902.8
55°	897.3	907.6	897.3	891.9	889.8	891.9	896.0	871.3	841.2	827.6
57.5°	825.5	831.7	820.7	809.8	806.4	811.2	814.6	794.1	768.1	757.8
60°	751.0	749.6	740.7	730.4	723.6	729.1	734.6	716.1	692.8	686.7
62.5°	672.3	670.9	660.0	651.1	644.3	648.4	653.8	636.1	620.3	614.9
65°	591.6	590.2	578.6	571.8	565.6	567.0	573.1	556.7	547.2	541.0
67.5°	513.6	508.9	497.2	493.1	485.6	488.3	492.4	479.4	470.6	465.1
70°	431.6	427.5	417.2	413.1	406.9	408.3	412.4	404.2	394.6	391.2
72.5°	348.1	347.4	337.9	332.4	329.0	329.7	333.1	329.0	320.1	317.3
75°	267.4	269.5	261.9	257.2	253.7	253.7	257.8	258.5	249.0	245.5
77.5°	197.0	197.0	190.8	191.5	186.0	186.0	188.8	191.5	181.2	179.2
80°	132.0	131.3	129.3	127.2	124.5	125.2	127.2	130.6	122.4	123.1
82.5°	78.0	78.0	78.0	76.6	74.5	73.9	76.6	79.3	73.9	73.9
85°	38.3	37.6	37.6	37.6	36.2	35.6	37.6	39.0	35.6	36.2
87.5°	13.0	12.3	12.3	13.0	12.3	12.3	12.3	12.3	11.6	12.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)