

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: P183628

Luminaire Tested: **LSM70M9030D010TEP**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P183628
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: LSM70M9030D010TEP
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE, MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: 90 CRI, 3000K CCT LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5979.1 lumens
Efficiency: N/A
Efficacy: 80.0 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

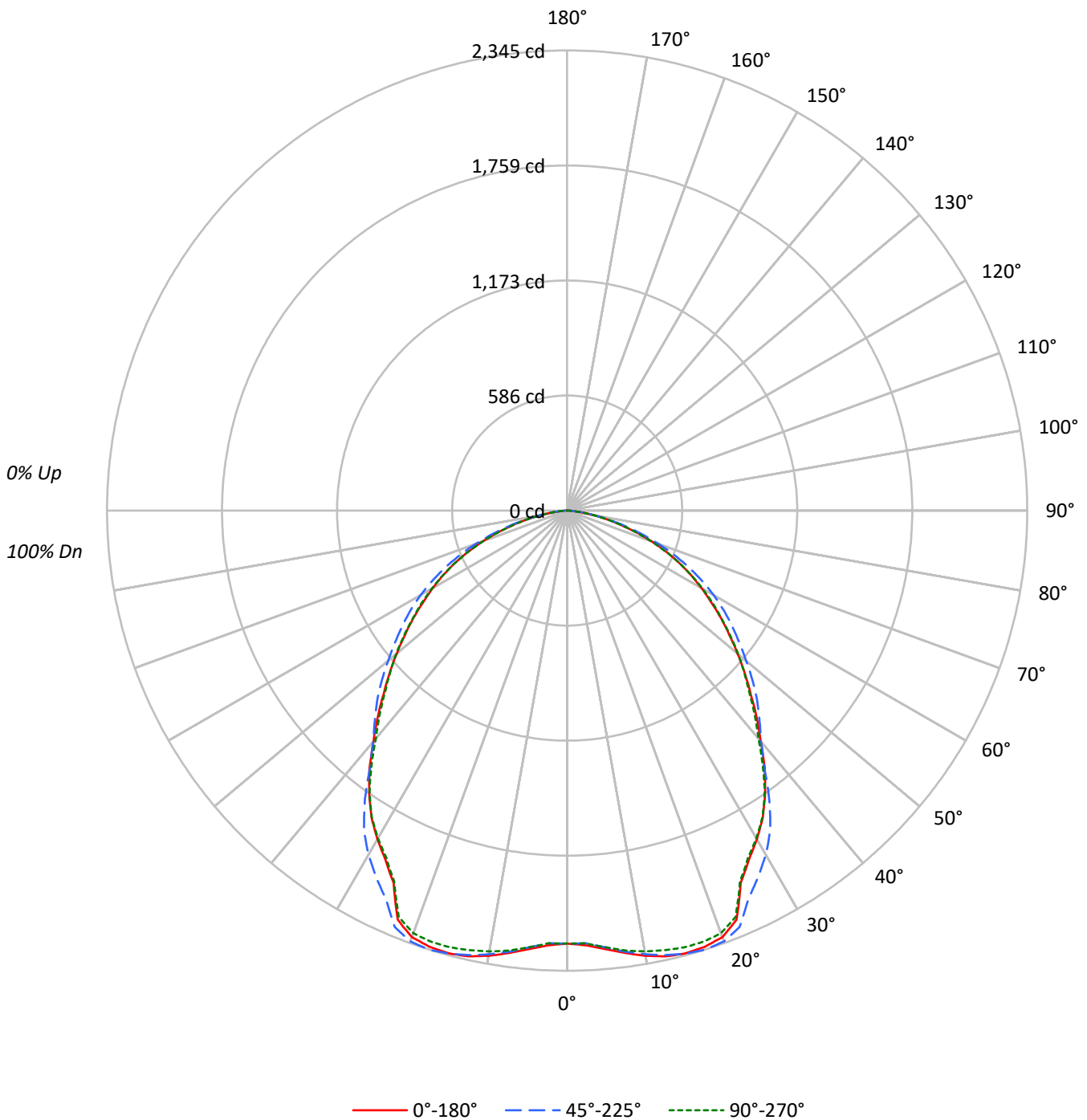
Input Watts (W): 74.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	23893	23893	23893
5°	24383	24288	24279
10°	25329	25249	25083
15°	26189	26206	25833
20°	26654	26920	26408
25°	25006	26098	24912
30°	24172	25315	24102
35°	23245	23749	23203
40°	21700	21711	21441
45°	20273	20966	20113
50°	19089	20066	19168
55°	18077	19366	18150
60°	17140	18671	17278
65°	16124	17508	16104
70°	14466	15622	14390
75°	11903	12832	11937
80°	8674	9267	8917
85°	5032	5330	5231



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.4	3.6
10°-20°	661.6	11.1
20°-30°	993.4	16.6
30°-40°	1087.5	18.2
40°-50°	1063.7	17.8
50°-60°	917.9	15.4
60°-70°	656.2	11.0
70°-80°	322.4	5.4
80°-90°	60.1	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°	1871.4	31.3
0°-40°	2958.9	49.5
0°-60°	4940.5	82.6
0°-90°	5979.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5979.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2206	2206	2206	2206	2206	
5°	2243	2262	2234	2252	2234	216
15°	2336	2368	2338	2340	2304	659
25°	2093	2217	2184	2203	2085	975
35°	1758	1731	1796	1711	1755	1095
45°	1324	1412	1369	1396	1313	1025
55°	958	1044	1026	1034	961	857
65°	629	664	683	657	628	620
75°	284	300	307	295	285	305
85°	40	43	43	42	42	56
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°	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5
2.5°	2216.9	2235.1	2220.0	2216.9	2204.2	2234.4	2223.2	2225.6	2216.9	2218.5	2206.5
5°	2243.1	2262.2	2247.9	2243.9	2231.2	2262.2	2251.0	2252.6	2243.9	2246.3	2234.4
7.5°	2274.1	2293.9	2278.8	2276.5	2264.5	2295.5	2285.2	2286.8	2277.3	2278.8	2266.9
10°	2303.5	2324.9	2309.8	2308.2	2296.3	2329.7	2318.6	2320.2	2309.0	2309.8	2296.3
12.5°	2326.5	2348.8	2333.7	2333.7	2322.6	2354.3	2345.6	2347.2	2336.1	2336.1	2320.2
15°	2336.1	2359.1	2343.2	2345.6	2334.5	2367.8	2359.9	2360.7	2351.2	2353.5	2337.6
17.5°	2330.5	2353.5	2339.2	2340.8	2330.5	2364.7	2356.7	2359.9	2351.9	2358.3	2344.8
20°	2313.0	2333.7	2316.2	2317.8	2309.8	2344.0	2338.4	2344.0	2338.4	2348.0	2336.1
22.5°	2256.6	2275.7	2266.1	2276.5	2274.9	2311.4	2308.2	2313.0	2304.3	2309.0	2296.3
25°	2092.9	2117.5	2114.4	2143.8	2171.6	2216.9	2213.7	2215.3	2197.0	2198.6	2184.3
27.5°	2005.5	2026.2	2014.3	2015.8	2004.7	2030.1	2031.7	2071.5	2095.3	2116.8	2107.2
30°	1933.2	1949.1	1920.5	1900.6	1872.0	1897.5	1895.9	1930.8	1972.9	2023.0	2024.6
32.5°	1855.3	1860.1	1819.6	1792.6	1782.2	1809.3	1807.7	1818.0	1849.8	1903.8	1927.6
35°	1758.4	1762.4	1712.3	1704.4	1704.4	1731.4	1725.0	1728.2	1745.7	1780.6	1796.5
37.5°	1654.3	1648.7	1620.1	1621.7	1628.1	1652.7	1648.0	1648.0	1653.5	1669.4	1649.5
40°	1535.1	1541.5	1532.7	1540.7	1546.2	1570.1	1567.7	1569.3	1566.9	1558.2	1535.9
42.5°	1429.4	1445.3	1454.9	1464.4	1465.2	1488.2	1486.7	1493.0	1481.1	1458.0	1450.9
45°	1323.8	1342.8	1369.1	1388.1	1389.7	1412.0	1412.0	1413.6	1388.9	1372.2	1369.1
47.5°	1228.4	1248.3	1275.3	1303.9	1308.7	1331.7	1331.7	1327.7	1301.5	1291.2	1280.9
50°	1133.1	1158.5	1183.9	1218.1	1220.5	1238.0	1238.7	1234.8	1222.9	1210.1	1191.1
52.5°	1042.5	1073.5	1098.1	1125.9	1127.5	1141.8	1138.6	1141.8	1143.4	1129.1	1106.1
55°	957.5	989.2	1010.7	1030.6	1034.5	1044.1	1037.7	1048.0	1057.6	1044.9	1025.8
57.5°	870.1	904.2	922.5	936.0	939.2	947.1	940.8	954.3	967.0	959.1	946.3
60°	791.4	818.4	831.1	843.8	844.6	852.6	847.0	860.5	874.8	870.9	862.1
62.5°	710.4	729.4	739.0	752.5	748.5	756.4	758.8	770.7	781.1	781.9	774.7
65°	629.3	639.6	647.6	655.5	657.1	663.5	665.9	670.6	686.5	688.1	683.3
67.5°	543.5	549.8	557.0	564.2	563.4	569.7	576.1	580.8	591.2	595.1	588.8
70°	456.9	464.8	468.8	472.0	471.2	477.5	483.1	487.1	496.6	499.0	493.4
72.5°	369.5	377.4	380.6	381.4	380.6	387.8	392.5	394.9	402.9	406.8	398.1
75°	284.5	294.8	296.4	294.8	294.0	300.4	302.7	306.7	312.3	313.1	306.7
77.5°	207.4	216.1	217.7	215.3	213.7	218.5	220.1	224.1	227.2	228.8	222.5
80°	139.1	147.8	147.0	146.2	143.8	147.0	149.4	151.0	153.4	153.4	148.6
82.5°	83.4	89.0	88.2	89.0	86.6	87.4	89.0	91.4	90.6	92.2	89.0
85°	40.5	42.9	42.9	42.9	42.1	42.9	43.7	45.3	43.7	45.3	42.9
87.5°	14.3	15.1	14.3	14.3	14.3	14.3	15.1	15.1	14.3	15.1	14.3
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°	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5	2206.5
2.5°	2223.2	2210.5	2223.2	2217.7	2224.8	2222.4	2223.2	2232.0	2212.1	2207.3
5°	2251.0	2237.5	2250.2	2246.3	2251.8	2249.4	2251.0	2259.8	2239.1	2233.6
7.5°	2282.8	2268.5	2281.2	2275.7	2281.2	2278.8	2279.6	2286.8	2265.3	2260.6
10°	2312.2	2297.1	2308.2	2302.7	2305.9	2303.5	2305.1	2309.8	2286.8	2281.2
12.5°	2335.3	2320.2	2331.3	2324.9	2326.5	2323.3	2322.6	2324.9	2301.1	2294.7
15°	2354.3	2339.2	2347.2	2340.8	2340.0	2335.3	2333.7	2334.5	2310.6	2304.3
17.5°	2359.9	2342.4	2347.2	2340.0	2337.6	2333.7	2332.1	2333.7	2310.6	2304.3
20°	2348.8	2328.1	2330.5	2321.8	2318.6	2315.4	2315.4	2317.8	2295.5	2291.6
22.5°	2310.6	2293.2	2298.7	2293.2	2290.0	2286.8	2281.2	2275.7	2247.1	2241.5
25°	2199.4	2187.5	2208.1	2211.3	2202.6	2185.9	2154.9	2131.1	2089.7	2085.0
27.5°	2117.5	2092.9	2068.3	2037.3	2019.0	2011.9	2016.6	2025.4	2003.9	1996.0
30°	2026.2	1972.9	1925.3	1893.5	1881.6	1880.0	1899.0	1922.1	1926.1	1927.6
32.5°	1912.5	1845.0	1808.5	1798.1	1790.2	1787.8	1794.2	1820.4	1837.1	1852.2
35°	1783.8	1736.9	1717.9	1718.7	1710.7	1707.5	1703.6	1719.5	1736.9	1755.2
37.5°	1663.8	1643.2	1637.6	1640.8	1632.1	1627.3	1622.5	1626.5	1632.1	1638.4
40°	1551.0	1555.8	1559.0	1561.3	1550.2	1547.0	1543.1	1541.5	1531.9	1516.8
42.5°	1454.9	1467.6	1481.9	1481.9	1470.0	1468.4	1469.2	1464.4	1435.8	1415.1
45°	1372.2	1377.0	1401.6	1406.4	1396.1	1393.7	1394.5	1379.4	1334.1	1313.4
47.5°	1291.2	1293.6	1315.8	1326.9	1315.8	1313.4	1315.8	1284.0	1234.8	1224.4
50°	1209.3	1215.7	1225.2	1235.6	1225.2	1224.4	1222.1	1191.9	1143.4	1137.8
52.5°	1126.7	1139.4	1134.7	1137.0	1130.7	1131.5	1133.9	1102.9	1058.4	1048.8
55°	1042.5	1054.4	1042.5	1036.1	1033.7	1036.1	1040.9	1012.3	977.3	961.4
57.5°	959.1	966.2	953.5	940.8	936.8	942.4	946.3	922.5	892.3	880.4
60°	872.4	870.9	860.5	848.6	840.7	847.0	853.4	831.9	804.9	797.8
62.5°	781.1	779.5	766.8	756.4	748.5	753.3	759.6	739.0	720.7	714.3
65°	687.3	685.7	672.2	664.3	657.1	658.7	665.9	646.8	635.7	628.5
67.5°	596.7	591.2	577.7	572.9	564.2	567.3	572.1	557.0	546.7	540.3
70°	501.4	496.6	484.7	479.9	472.8	474.4	479.1	469.6	458.5	454.5
72.5°	404.4	403.6	392.5	386.2	382.2	383.0	387.0	382.2	371.9	368.7
75°	310.7	313.1	304.3	298.8	294.8	294.8	299.6	300.4	289.2	285.3
77.5°	228.8	228.8	221.7	222.5	216.1	216.1	219.3	222.5	210.6	208.2
80°	153.4	152.6	150.2	147.8	144.6	145.4	147.8	151.8	142.2	143.0
82.5°	90.6	90.6	90.6	89.0	86.6	85.8	89.0	92.2	85.8	85.8
85°	44.5	43.7	43.7	43.7	42.1	41.3	43.7	45.3	41.3	42.1
87.5°	15.1	14.3	14.3	15.1	14.3	14.3	14.3	14.3	13.5	14.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)