

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: P183638

Luminaire Tested: **LSM70M9040D010TEP**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P183638
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: LSM70M9040D010TEP
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE, MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: 90 CRI, 4000K CCT LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6330.3 lumens
Efficiency: N/A
Efficacy: 84.7 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

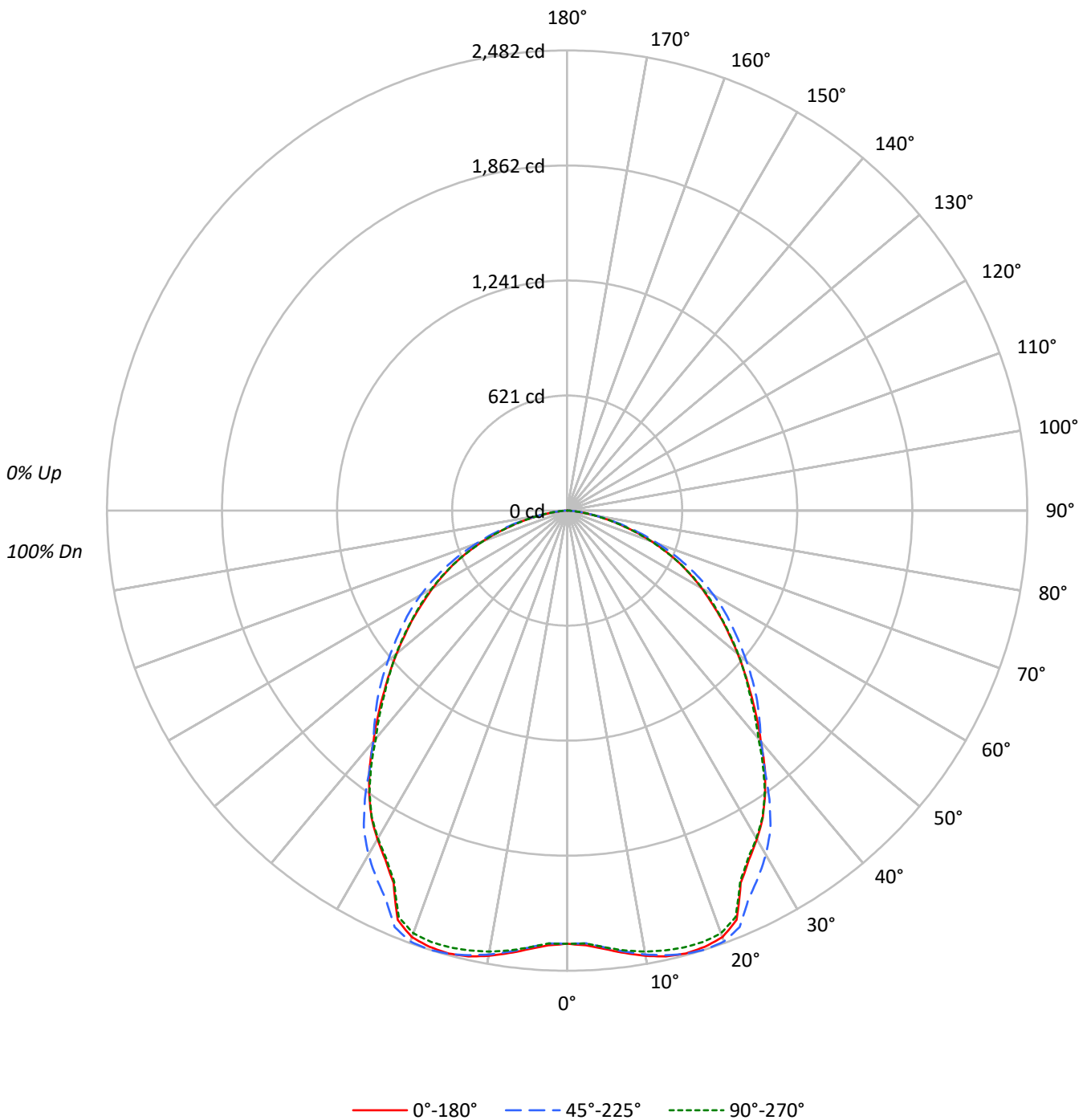
Input Watts (W): 74.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	25297	25297	25297
5°	25814	25714	25704
10°	26816	26733	26557
15°	27726	27745	27350
20°	28219	28500	27957
25°	26475	27631	26374
30°	25592	26802	25518
35°	24611	25143	24566
40°	22975	22986	22701
45°	21463	22198	21296
50°	20209	21243	20295
55°	19138	20503	19217
60°	18147	19767	18292
65°	17072	18538	17049
70°	15314	16540	15235
75°	12602	13585	12635
80°	9179	9809	9441
85°	5330	5641	5541



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.1	3.6
10°-20°	700.4	11.1
20°-30°	1051.8	16.6
30°-40°	1151.3	18.2
40°-50°	1126.2	17.8
50°-60°	971.8	15.4
60°-70°	694.7	11.0
70°-80°	341.3	5.4
80°-90°	63.6	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°	1981.3	31.3
0°-40°	3132.6	49.5
0°-60°	5230.6	82.6
0°-90°	6330.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6330.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2336	2336	2336	2336	2336	
5°	2375	2395	2366	2384	2365	229
15°	2473	2507	2475	2478	2440	698
25°	2216	2347	2313	2332	2207	1033
35°	1862	1833	1902	1811	1858	1159
45°	1402	1495	1450	1478	1391	1085
55°	1014	1105	1086	1094	1018	907
65°	666	702	724	696	665	657
75°	301	318	325	312	302	323
85°	43	45	45	45	45	60
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°	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1
2.5°	2347.1	2366.4	2350.4	2347.1	2333.6	2365.6	2353.8	2356.3	2347.1	2348.7	2336.1
5°	2374.8	2395.0	2379.9	2375.7	2362.2	2395.0	2383.2	2384.9	2375.7	2378.2	2365.6
7.5°	2407.6	2428.7	2412.7	2410.2	2397.5	2430.3	2419.4	2421.1	2411.0	2412.7	2400.1
10°	2438.8	2461.5	2445.5	2443.8	2431.2	2466.5	2454.7	2456.4	2444.6	2445.5	2431.2
12.5°	2463.1	2486.7	2470.7	2470.7	2458.9	2492.6	2483.3	2485.0	2473.2	2473.2	2456.4
15°	2473.2	2497.6	2480.8	2483.3	2471.6	2506.9	2498.5	2499.3	2489.2	2491.8	2474.9
17.5°	2467.4	2491.8	2476.6	2478.3	2467.4	2503.5	2495.1	2498.5	2490.1	2496.8	2482.5
20°	2448.8	2470.7	2452.2	2453.9	2445.5	2481.7	2475.8	2481.7	2475.8	2485.9	2473.2
22.5°	2389.1	2409.3	2399.2	2410.2	2408.5	2447.2	2443.8	2448.8	2439.6	2444.6	2431.2
25°	2215.8	2241.9	2238.5	2269.7	2299.1	2347.1	2343.7	2345.4	2326.0	2327.7	2312.6
27.5°	2123.3	2145.2	2132.5	2134.2	2122.4	2149.4	2151.0	2193.1	2218.3	2241.1	2231.0
30°	2046.7	2063.6	2033.3	2012.2	1982.0	2008.9	2007.2	2044.2	2088.8	2141.8	2143.5
32.5°	1964.3	1969.3	1926.4	1897.8	1886.9	1915.5	1913.8	1924.8	1958.4	2015.6	2040.8
35°	1861.7	1865.9	1812.9	1804.5	1804.5	1833.1	1826.3	1829.7	1848.2	1885.2	1902.0
37.5°	1751.5	1745.6	1715.3	1717.0	1723.7	1749.8	1744.7	1744.7	1750.6	1767.4	1746.4
40°	1625.3	1632.0	1622.8	1631.2	1637.1	1662.3	1659.8	1661.4	1658.9	1649.7	1626.1
42.5°	1513.4	1530.2	1540.3	1550.4	1551.2	1575.6	1574.0	1580.7	1568.1	1543.7	1536.1
45°	1401.5	1421.7	1449.5	1469.6	1471.3	1494.9	1494.9	1496.6	1470.5	1452.8	1449.5
47.5°	1300.6	1321.6	1350.2	1380.5	1385.5	1409.9	1409.9	1405.7	1378.0	1367.0	1356.1
50°	1199.6	1226.5	1253.4	1289.6	1292.1	1310.7	1311.5	1307.3	1294.7	1281.2	1261.0
52.5°	1103.7	1136.5	1162.6	1192.0	1193.7	1208.9	1205.5	1208.9	1210.5	1195.4	1171.0
55°	1013.7	1047.3	1070.1	1091.1	1095.3	1105.4	1098.7	1109.6	1119.7	1106.2	1086.0
57.5°	921.2	957.3	976.7	991.0	994.3	1002.8	996.0	1010.3	1023.8	1015.4	1001.9
60°	837.9	866.5	879.9	893.4	894.2	902.7	896.8	911.1	926.2	922.0	912.7
62.5°	752.1	772.3	782.4	796.7	792.4	800.9	803.4	816.0	826.9	827.8	820.2
65°	666.3	677.2	685.6	694.0	695.7	702.4	705.0	710.0	726.8	728.5	723.5
67.5°	575.4	582.1	589.7	597.3	596.4	603.2	609.9	614.9	625.9	630.1	623.4
70°	483.7	492.1	496.3	499.7	498.9	505.6	511.5	515.7	525.8	528.3	522.4
72.5°	391.2	399.6	403.0	403.8	403.0	410.5	415.6	418.1	426.5	430.7	421.5
75°	301.2	312.1	313.8	312.1	311.3	318.0	320.5	324.7	330.6	331.4	324.7
77.5°	219.6	228.8	230.5	228.0	226.3	231.3	233.0	237.2	240.6	242.3	235.5
80°	147.2	156.5	155.6	154.8	152.3	155.6	158.2	159.8	162.4	162.4	157.3
82.5°	88.3	94.2	93.4	94.2	91.7	92.5	94.2	96.7	95.9	97.6	94.2
85°	42.9	45.4	45.4	45.4	44.6	45.4	46.3	48.0	46.3	48.0	45.4
87.5°	15.1	16.0	15.1	15.1	15.1	15.1	16.0	16.0	15.1	16.0	15.1
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°	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1	2336.1
2.5°	2353.8	2340.3	2353.8	2347.9	2355.5	2352.9	2353.8	2363.0	2342.0	2337.0
5°	2383.2	2368.9	2382.4	2378.2	2384.1	2381.5	2383.2	2392.5	2370.6	2364.7
7.5°	2416.9	2401.7	2415.2	2409.3	2415.2	2412.7	2413.5	2421.1	2398.4	2393.3
10°	2448.0	2432.0	2443.8	2437.9	2441.3	2438.8	2440.4	2445.5	2421.1	2415.2
12.5°	2472.4	2456.4	2468.2	2461.5	2463.1	2459.8	2458.9	2461.5	2436.2	2429.5
15°	2492.6	2476.6	2485.0	2478.3	2477.5	2472.4	2470.7	2471.6	2446.3	2439.6
17.5°	2498.5	2480.0	2485.0	2477.5	2474.9	2470.7	2469.0	2470.7	2446.3	2439.6
20°	2486.7	2464.8	2467.4	2458.1	2454.7	2451.4	2451.4	2453.9	2430.3	2426.1
22.5°	2446.3	2427.8	2433.7	2427.8	2424.5	2421.1	2415.2	2409.3	2379.0	2373.1
25°	2328.6	2315.9	2337.8	2341.2	2331.9	2314.3	2281.4	2256.2	2212.5	2207.4
27.5°	2241.9	2215.8	2189.7	2156.9	2137.6	2130.0	2135.1	2144.3	2121.6	2113.2
30°	2145.2	2088.8	2038.3	2004.7	1992.1	1990.4	2010.6	2035.0	2039.2	2040.8
32.5°	2024.9	1953.4	1914.7	1903.7	1895.3	1892.8	1899.5	1927.3	1944.9	1960.9
35°	1888.6	1838.9	1818.8	1819.6	1811.2	1807.8	1803.6	1820.4	1838.9	1858.3
37.5°	1761.6	1739.7	1733.8	1737.2	1727.9	1722.9	1717.8	1722.0	1727.9	1734.6
40°	1642.1	1647.1	1650.5	1653.0	1641.3	1637.9	1633.7	1632.0	1621.9	1605.9
42.5°	1540.3	1553.8	1568.9	1568.9	1556.3	1554.6	1555.5	1550.4	1520.1	1498.2
45°	1452.8	1457.9	1483.9	1489.0	1478.1	1475.5	1476.4	1460.4	1412.4	1390.6
47.5°	1367.0	1369.5	1393.1	1404.9	1393.1	1390.6	1393.1	1359.4	1307.3	1296.4
50°	1280.4	1287.1	1297.2	1308.1	1297.2	1296.4	1293.8	1261.9	1210.5	1204.7
52.5°	1192.9	1206.3	1201.3	1203.8	1197.1	1197.9	1200.4	1167.6	1120.5	1110.4
55°	1103.7	1116.3	1103.7	1097.0	1094.5	1097.0	1102.0	1071.7	1034.7	1017.9
57.5°	1015.4	1022.9	1009.5	996.0	991.8	997.7	1001.9	976.7	944.7	932.1
60°	923.7	922.0	911.1	898.4	890.0	896.8	903.5	880.8	852.2	844.6
62.5°	826.9	825.3	811.8	800.9	792.4	797.5	804.2	782.4	763.0	756.3
65°	727.7	726.0	711.7	703.3	695.7	697.4	705.0	684.8	673.0	665.4
67.5°	631.8	625.9	611.6	606.5	597.3	600.6	605.7	589.7	578.8	572.0
70°	530.8	525.8	513.2	508.1	500.5	502.2	507.3	497.2	485.4	481.2
72.5°	428.2	427.3	415.6	408.8	404.6	405.5	409.7	404.6	393.7	390.3
75°	328.9	331.4	322.2	316.3	312.1	312.1	317.1	318.0	306.2	302.0
77.5°	242.3	242.3	234.7	235.5	228.8	228.8	232.2	235.5	222.9	220.4
80°	162.4	161.5	159.0	156.5	153.1	153.9	156.5	160.7	150.6	151.4
82.5°	95.9	95.9	95.9	94.2	91.7	90.9	94.2	97.6	90.9	90.9
85°	47.1	46.3	46.3	46.3	44.6	43.7	46.3	48.0	43.7	44.6
87.5°	16.0	15.1	15.1	16.0	15.1	15.1	15.1	15.1	14.3	15.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)