

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: P183618

Luminaire Tested: **LSM70M8040D010TEP**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P183618  
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: LSM70M8040D010TEP  
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: 7695.8 lumens  
Efficiency: N/A  
Efficacy: 103.0 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

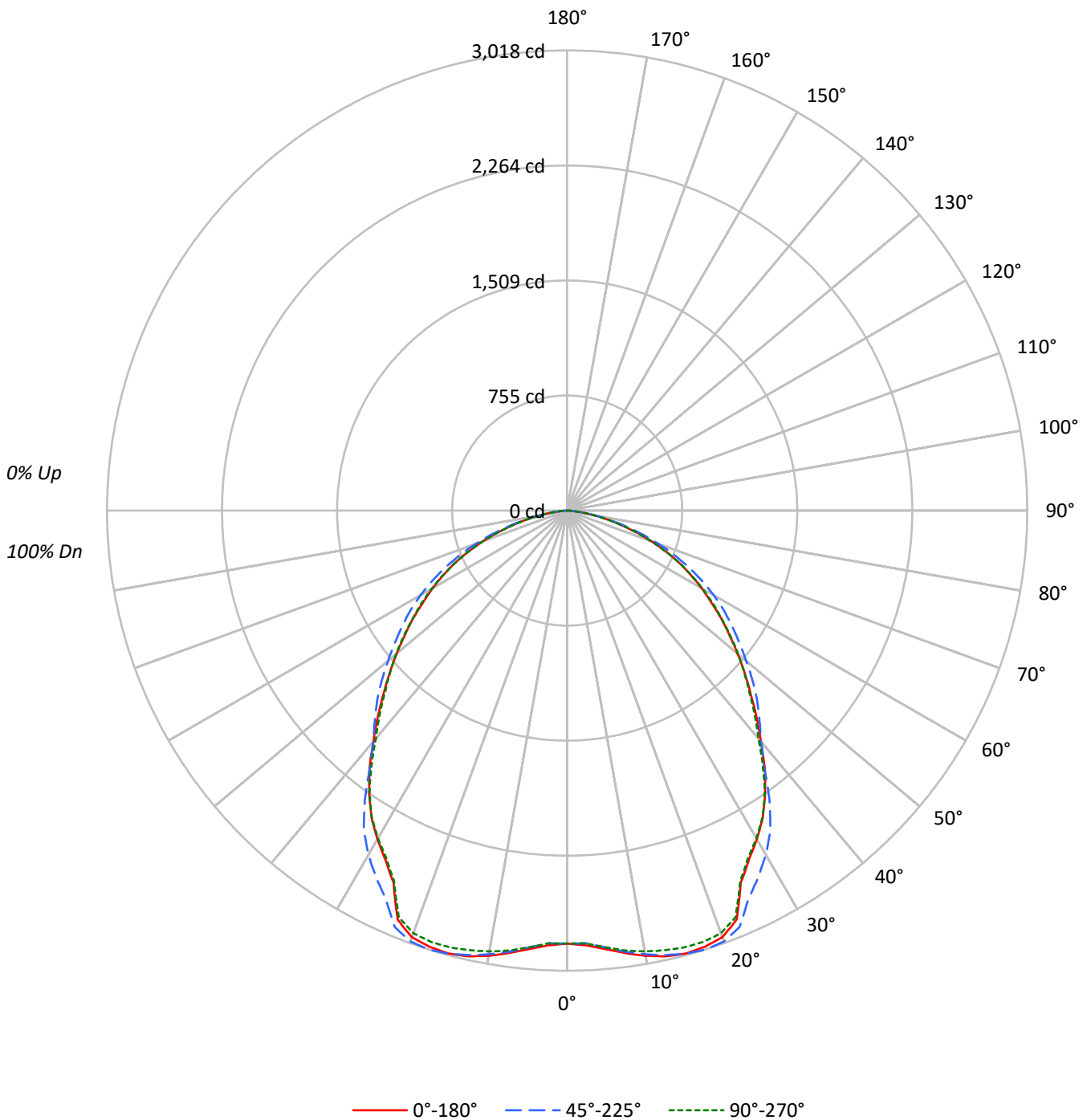
Input Watts (W): 74.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	30755	30755	30755
5°	31383	31261	31249
10°	32600	32499	32286
15°	33708	33731	33250
20°	34307	34649	33989
25°	32186	33591	32064
30°	31113	32584	31023
35°	29919	30567	29865
40°	27931	27945	27599
45°	26092	26985	25888
50°	24569	25826	24672
55°	23267	24926	23363
60°	22060	24031	22238
65°	20754	22535	20729
70°	18620	20108	18522
75°	15317	16518	15363
80°	11162	11923	11480
85°	6486	6858	6734



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	278.5	3.6
10°-20°	851.5	11.1
20°-30°	1278.7	16.6
30°-40°	1399.7	18.2
40°-50°	1369.2	17.8
50°-60°	1181.4	15.4
60°-70°	844.6	11.0
70°-80°	414.9	5.4
80°-90°	77.3	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°	2408.7	31.3
0°-40°	3808.4	49.5
0°-60°	6359.0	82.6
0°-90°	7695.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7695.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2840	2840	2840	2840	2840	
5°	2887	2912	2876	2898	2875	278
15°	3007	3048	3009	3012	2966	849
25°	2694	2853	2811	2835	2684	1255
35°	2263	2228	2312	2202	2259	1409
45°	1704	1817	1762	1797	1690	1319
55°	1232	1344	1320	1330	1238	1103
65°	810	854	880	846	809	798
75°	366	387	395	379	367	393
85°	52	55	55	54	54	73
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°	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1
2.5°	2853.4	2876.9	2857.5	2853.4	2837.0	2875.9	2861.5	2864.6	2853.4	2855.4	2840.1
5°	2887.1	2911.7	2893.2	2888.1	2871.8	2911.7	2897.3	2899.4	2888.1	2891.2	2875.9
7.5°	2927.0	2952.6	2933.1	2930.1	2914.7	2954.6	2941.3	2943.4	2931.1	2933.1	2917.8
10°	2964.8	2992.5	2973.0	2971.0	2955.6	2998.6	2984.3	2986.3	2972.0	2973.0	2955.6
12.5°	2994.5	3023.1	3003.7	3003.7	2989.4	3030.3	3019.0	3021.1	3006.8	3006.8	2986.3
15°	3006.8	3036.4	3016.0	3019.0	3004.7	3047.7	3037.5	3038.5	3026.2	3029.3	3008.8
17.5°	2999.6	3029.3	3010.9	3012.9	2999.6	3043.6	3033.4	3037.5	3027.2	3035.4	3018.0
20°	2977.1	3003.7	2981.2	2983.2	2973.0	3017.0	3009.8	3017.0	3009.8	3022.1	3006.8
22.5°	2904.5	2929.0	2916.8	2930.1	2928.0	2975.1	2971.0	2977.1	2965.9	2972.0	2955.6
25°	2693.8	2725.5	2721.4	2759.3	2795.1	2853.4	2849.3	2851.3	2827.8	2829.8	2811.4
27.5°	2581.3	2607.9	2592.6	2594.6	2580.3	2613.0	2615.1	2666.2	2696.9	2724.5	2712.2
30°	2488.3	2508.7	2471.9	2446.3	2409.5	2442.2	2440.2	2485.2	2539.4	2603.8	2605.9
32.5°	2388.0	2394.2	2342.0	2307.2	2293.9	2328.7	2326.7	2340.0	2380.9	2450.4	2481.1
35°	2263.3	2268.4	2203.9	2193.7	2193.7	2228.5	2220.3	2224.4	2246.9	2291.9	2312.3
37.5°	2129.3	2122.1	2085.3	2087.4	2095.5	2127.2	2121.1	2121.1	2128.3	2148.7	2123.1
40°	1975.9	1984.1	1972.8	1983.0	1990.2	2020.9	2017.8	2019.9	2016.8	2005.5	1976.9
42.5°	1839.9	1860.3	1872.6	1884.9	1885.9	1915.5	1913.5	1921.7	1906.3	1876.7	1867.5
45°	1703.8	1728.4	1762.1	1786.7	1788.7	1817.4	1817.4	1819.4	1787.7	1766.2	1762.1
47.5°	1581.1	1606.7	1641.5	1678.3	1684.4	1714.1	1714.1	1708.9	1675.2	1661.9	1648.6
50°	1458.4	1491.1	1523.8	1567.8	1570.9	1593.4	1594.4	1589.3	1574.0	1557.6	1533.0
52.5°	1341.8	1381.7	1413.4	1449.2	1451.2	1469.6	1465.5	1469.6	1471.7	1453.3	1423.6
55°	1232.4	1273.3	1300.9	1326.5	1331.6	1343.8	1335.7	1349.0	1361.2	1344.9	1320.3
57.5°	1119.9	1163.8	1187.4	1204.8	1208.8	1219.1	1210.9	1228.3	1244.6	1234.4	1218.0
60°	1018.6	1053.4	1069.8	1086.1	1087.1	1097.4	1090.2	1107.6	1126.0	1120.9	1109.6
62.5°	914.3	938.8	951.1	968.5	963.4	973.6	976.7	992.0	1005.3	1006.3	997.1
65°	810.0	823.3	833.5	843.7	845.8	854.0	857.0	863.2	883.6	885.7	879.5
67.5°	699.5	707.7	716.9	726.1	725.1	733.3	741.5	747.6	760.9	766.0	757.8
70°	588.1	598.3	603.4	607.5	606.5	614.6	621.8	626.9	639.2	642.3	635.1
72.5°	475.6	485.8	489.9	490.9	489.9	499.1	505.2	508.3	518.5	523.6	512.4
75°	366.1	379.4	381.5	379.4	378.4	386.6	389.7	394.8	401.9	402.9	394.8
77.5°	266.9	278.2	280.2	277.2	275.1	281.2	283.3	288.4	292.5	294.5	286.4
80°	179.0	190.2	189.2	188.2	185.1	189.2	192.3	194.3	197.4	197.4	191.2
82.5°	107.4	114.5	113.5	114.5	111.5	112.5	114.5	117.6	116.6	118.6	114.5
85°	52.2	55.2	55.2	55.2	54.2	55.2	56.2	58.3	56.2	58.3	55.2
87.5°	18.4	19.4	18.4	18.4	18.4	18.4	19.4	19.4	18.4	19.4	18.4
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°	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1	2840.1
2.5°	2861.5	2845.2	2861.5	2854.4	2863.6	2860.5	2861.5	2872.8	2847.2	2841.1
5°	2897.3	2880.0	2896.3	2891.2	2898.4	2895.3	2897.3	2908.6	2882.0	2874.8
7.5°	2938.2	2919.8	2936.2	2929.0	2936.2	2933.1	2934.2	2943.4	2915.7	2909.6
10°	2976.1	2956.7	2971.0	2963.8	2967.9	2964.8	2966.9	2973.0	2943.4	2936.2
12.5°	3005.7	2986.3	3000.6	2992.5	2994.5	2990.4	2989.4	2992.5	2961.8	2953.6
15°	3030.3	3010.9	3021.1	3012.9	3011.9	3005.7	3003.7	3004.7	2974.0	2965.9
17.5°	3037.5	3015.0	3021.1	3011.9	3008.8	3003.7	3001.7	3003.7	2974.0	2965.9
20°	3023.1	2996.5	2999.6	2988.4	2984.3	2980.2	2980.2	2983.2	2954.6	2949.5
22.5°	2974.0	2951.5	2958.7	2951.5	2947.5	2943.4	2936.2	2929.0	2892.2	2885.1
25°	2830.9	2815.5	2842.1	2846.2	2835.0	2813.5	2773.6	2742.9	2689.7	2683.6
27.5°	2725.5	2693.8	2662.1	2622.2	2598.7	2589.5	2595.6	2606.9	2579.3	2569.0
30°	2607.9	2539.4	2478.0	2437.1	2421.8	2419.7	2444.3	2473.9	2479.1	2481.1
32.5°	2461.7	2374.7	2327.7	2314.4	2304.2	2301.1	2309.3	2343.0	2364.5	2383.9
35°	2296.0	2235.6	2211.1	2212.1	2201.9	2197.8	2192.7	2213.1	2235.6	2259.2
37.5°	2141.6	2115.0	2107.8	2111.9	2100.6	2094.5	2088.4	2093.5	2100.6	2108.8
40°	1996.3	2002.5	2006.6	2009.6	1995.3	1991.2	1986.1	1984.1	1971.8	1952.4
42.5°	1872.6	1888.9	1907.4	1907.4	1892.0	1890.0	1891.0	1884.9	1848.0	1821.4
45°	1766.2	1772.4	1804.1	1810.2	1796.9	1793.8	1794.9	1775.4	1717.1	1690.5
47.5°	1661.9	1665.0	1693.6	1707.9	1693.6	1690.5	1693.6	1652.7	1589.3	1576.0
50°	1556.6	1564.7	1577.0	1590.3	1577.0	1576.0	1572.9	1534.1	1471.7	1464.5
52.5°	1450.2	1466.6	1460.4	1463.5	1455.3	1456.3	1459.4	1419.5	1362.3	1350.0
55°	1341.8	1357.1	1341.8	1333.6	1330.5	1333.6	1339.8	1302.9	1257.9	1237.5
57.5°	1234.4	1243.6	1227.3	1210.9	1205.8	1212.9	1218.0	1187.4	1148.5	1133.2
60°	1122.9	1120.9	1107.6	1092.3	1082.0	1090.2	1098.4	1070.8	1036.0	1026.8
62.5°	1005.3	1003.3	986.9	973.6	963.4	969.5	977.7	951.1	927.6	919.4
65°	884.6	882.6	865.2	855.0	845.8	847.8	857.0	832.5	818.2	809.0
67.5°	768.1	760.9	743.5	737.4	726.1	730.2	736.4	716.9	703.6	695.4
70°	645.3	639.2	623.9	617.7	608.5	610.6	616.7	604.4	590.1	585.0
72.5°	520.6	519.5	505.2	497.0	491.9	492.9	498.1	491.9	478.6	474.5
75°	399.9	402.9	391.7	384.5	379.4	379.4	385.6	386.6	372.3	367.2
77.5°	294.5	294.5	285.3	286.4	278.2	278.2	282.3	286.4	271.0	268.0
80°	197.4	196.4	193.3	190.2	186.1	187.2	190.2	195.3	183.1	184.1
82.5°	116.6	116.6	116.6	114.5	111.5	110.5	114.5	118.6	110.5	110.5
85°	57.3	56.2	56.2	56.2	54.2	53.2	56.2	58.3	53.2	54.2
87.5°	19.4	18.4	18.4	19.4	18.4	18.4	18.4	18.4	17.4	18.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)