

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: P183630

Luminaire Tested: **LSM90M9030D010TEP**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P183630
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: LSM90M9030D010TEP
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE, MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: 90 CRI, 3000K CCT LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

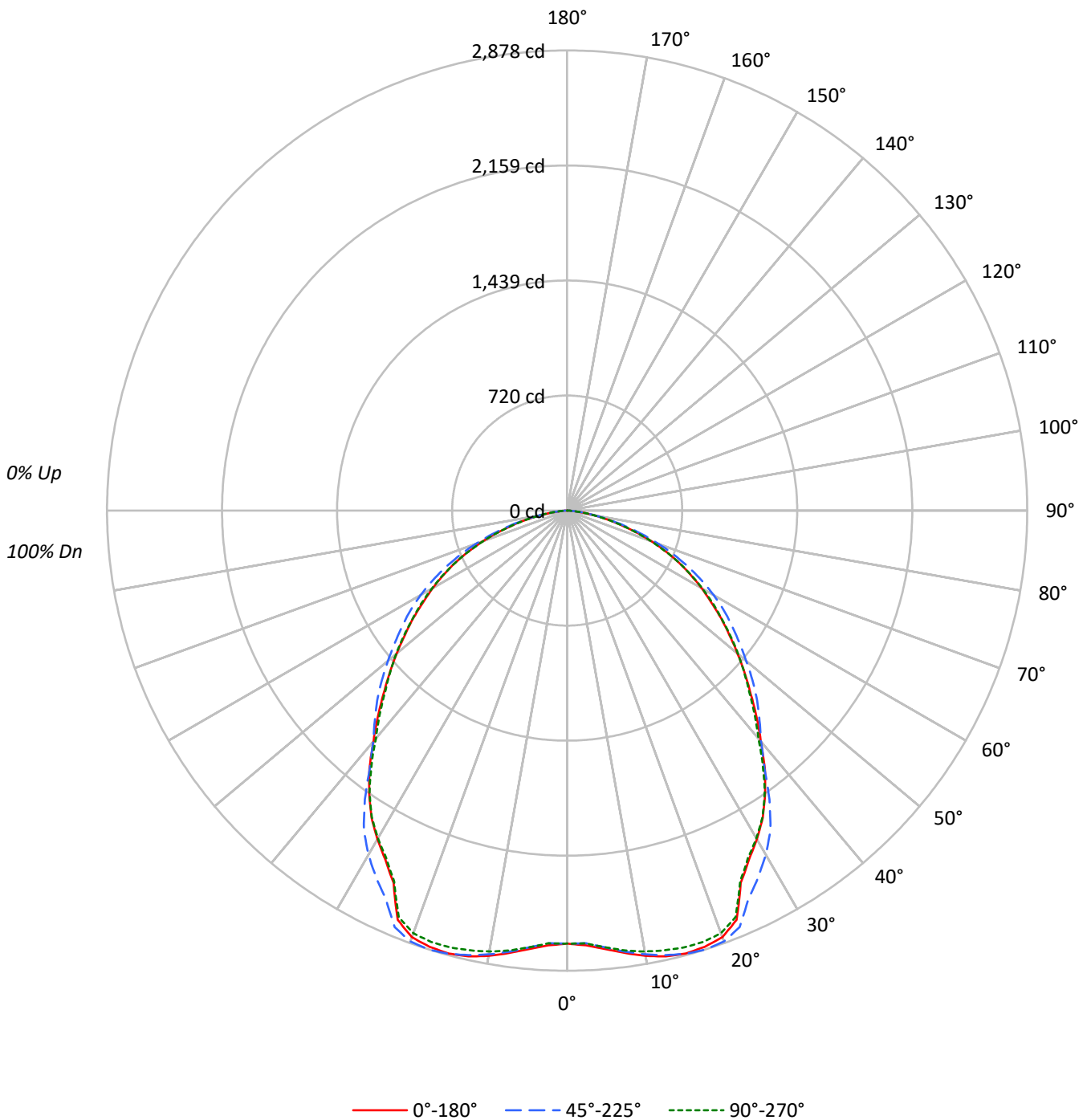
Lumens per Lamp: N/A
Luminaire Lumens: 7339.2 lumens
Efficiency: N/A
Efficacy: 75.2 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.33
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

Input Watts (W): 97.58
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°	29328	29328	29328
5°	29928	29812	29801
10°	31089	30994	30789
15°	32145	32168	31708
20°	32717	33043	32414
25°	30695	32034	30578
30°	29670	31073	29585
35°	28533	29151	28481
40°	26636	26650	26320
45°	24884	25735	24689
50°	23430	24629	23528
55°	22189	23771	22279
60°	21038	22918	21207
65°	19791	21492	19768
70°	17755	19177	17664
75°	14610	15752	14648
80°	10645	11374	10950
85°	6175	6548	6423



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.6	3.6
10°-20°	812.1	11.1
20°-30°	1219.4	16.6
30°-40°	1334.8	18.2
40°-50°	1305.7	17.8
50°-60°	1126.7	15.4
60°-70°	805.4	11.0
70°-80°	395.7	5.4
80°-90°	73.8	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°	2297.1	31.3
0°-40°	3631.9	49.5
0°-60°	6064.3	82.6
0°-90°	7339.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7339.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2708	2708	2708	2708	2708	
5°	2753	2777	2743	2764	2742	265
15°	2867	2906	2869	2872	2828	809
25°	2569	2721	2681	2704	2559	1197
35°	2158	2125	2205	2100	2154	1344
45°	1625	1733	1680	1714	1612	1258
55°	1175	1282	1259	1269	1180	1051
65°	772	814	839	807	772	761
75°	349	369	376	362	350	375
85°	50	53	53	52	52	69
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°	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4
2.5°	2721.1	2743.6	2725.0	2721.1	2705.5	2742.6	2728.9	2731.9	2721.1	2723.1	2708.4
5°	2753.3	2776.7	2759.2	2754.3	2738.7	2776.7	2763.1	2765.0	2754.3	2757.2	2742.6
7.5°	2791.3	2815.7	2797.2	2794.3	2779.6	2817.7	2805.0	2806.9	2795.2	2797.2	2782.6
10°	2827.4	2853.8	2835.2	2833.3	2818.7	2859.6	2846.0	2847.9	2834.3	2835.2	2818.7
12.5°	2855.7	2883.0	2864.5	2864.5	2850.8	2889.9	2879.1	2881.1	2867.4	2867.4	2847.9
15°	2867.4	2895.7	2876.2	2879.1	2865.5	2906.4	2896.7	2897.7	2885.9	2888.9	2869.4
17.5°	2860.6	2888.9	2871.3	2873.3	2860.6	2902.5	2892.8	2896.7	2886.9	2894.7	2878.1
20°	2839.1	2864.5	2843.0	2845.0	2835.2	2877.2	2870.3	2877.2	2870.3	2882.0	2867.4
22.5°	2769.9	2793.3	2781.6	2794.3	2792.3	2837.2	2833.3	2839.1	2828.4	2834.3	2818.7
25°	2569.0	2599.2	2595.3	2631.4	2665.5	2721.1	2717.2	2719.2	2696.7	2698.7	2681.1
27.5°	2461.7	2487.0	2472.4	2474.4	2460.7	2491.9	2493.9	2542.6	2571.9	2598.2	2586.5
30°	2372.9	2392.4	2357.3	2332.9	2297.8	2329.0	2327.1	2370.0	2421.7	2483.1	2485.1
32.5°	2277.4	2283.2	2233.5	2200.3	2187.6	2220.8	2218.8	2231.5	2270.5	2336.8	2366.1
35°	2158.4	2163.2	2101.8	2092.0	2092.0	2125.2	2117.4	2121.3	2142.8	2185.7	2205.2
37.5°	2030.6	2023.8	1988.7	1990.6	1998.4	2028.6	2022.8	2022.8	2029.6	2049.1	2024.7
40°	1884.3	1892.1	1881.4	1891.1	1898.0	1927.2	1924.3	1926.2	1923.3	1912.6	1885.3
42.5°	1754.6	1774.1	1785.8	1797.5	1798.5	1826.8	1824.8	1832.6	1818.0	1789.7	1780.9
45°	1624.9	1648.3	1680.5	1703.9	1705.8	1733.1	1733.1	1735.1	1704.8	1684.4	1680.5
47.5°	1507.8	1532.2	1565.4	1600.5	1606.3	1634.6	1634.6	1629.7	1597.6	1584.9	1572.2
50°	1390.8	1422.0	1453.2	1495.2	1498.1	1519.5	1520.5	1515.6	1501.0	1485.4	1462.0
52.5°	1279.6	1317.6	1347.9	1382.0	1384.0	1401.5	1397.6	1401.5	1403.5	1385.9	1357.6
55°	1175.3	1214.3	1240.6	1265.0	1269.9	1281.6	1273.8	1286.4	1298.1	1282.5	1259.1
57.5°	1068.0	1109.9	1132.3	1148.9	1152.8	1162.6	1154.8	1171.4	1187.0	1177.2	1161.6
60°	971.4	1004.6	1020.2	1035.8	1036.8	1046.5	1039.7	1056.3	1073.8	1068.9	1058.2
62.5°	871.9	895.3	907.0	923.6	918.7	928.5	931.4	946.1	958.7	959.7	950.9
65°	772.4	785.1	794.9	804.6	806.6	814.4	817.3	823.2	842.7	844.6	838.8
67.5°	667.1	674.9	683.7	692.5	691.5	699.3	707.1	713.0	725.6	730.5	722.7
70°	560.8	570.6	575.4	579.3	578.4	586.2	593.0	597.9	609.6	612.5	605.7
72.5°	453.5	463.3	467.2	468.1	467.2	476.0	481.8	484.7	494.5	499.4	488.6
75°	349.2	361.8	363.8	361.8	360.9	368.7	371.6	376.5	383.3	384.3	376.5
77.5°	254.6	265.3	267.2	264.3	262.4	268.2	270.2	275.0	278.9	280.9	273.1
80°	170.7	181.4	180.4	179.5	176.5	180.4	183.4	185.3	188.2	188.2	182.4
82.5°	102.4	109.2	108.3	109.2	106.3	107.3	109.2	112.2	111.2	113.1	109.2
85°	49.7	52.7	52.7	52.7	51.7	52.7	53.6	55.6	53.6	55.6	52.7
87.5°	17.6	18.5	17.6	17.6	17.6	17.6	18.5	18.5	17.6	18.5	17.6
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°	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4	2708.4
2.5°	2728.9	2713.3	2728.9	2722.1	2730.9	2727.9	2728.9	2739.7	2715.3	2709.4
5°	2763.1	2746.5	2762.1	2757.2	2764.0	2761.1	2763.1	2773.8	2748.4	2741.6
7.5°	2802.1	2784.5	2800.1	2793.3	2800.1	2797.2	2798.2	2806.9	2780.6	2774.8
10°	2838.2	2819.6	2833.3	2826.5	2830.4	2827.4	2829.4	2835.2	2806.9	2800.1
12.5°	2866.4	2847.9	2861.6	2853.8	2855.7	2851.8	2850.8	2853.8	2824.5	2816.7
15°	2889.9	2871.3	2881.1	2873.3	2872.3	2866.4	2864.5	2865.5	2836.2	2828.4
17.5°	2896.7	2875.2	2881.1	2872.3	2869.4	2864.5	2862.5	2864.5	2836.2	2828.4
20°	2883.0	2857.7	2860.6	2849.9	2846.0	2842.1	2842.1	2845.0	2817.7	2812.8
22.5°	2836.2	2814.8	2821.6	2814.8	2810.9	2806.9	2800.1	2793.3	2758.2	2751.4
25°	2699.7	2685.0	2710.4	2714.3	2703.6	2683.1	2645.0	2615.8	2565.1	2559.2
27.5°	2599.2	2569.0	2538.7	2500.7	2478.3	2469.5	2475.3	2486.1	2459.7	2450.0
30°	2487.0	2421.7	2363.2	2324.2	2309.5	2307.6	2331.0	2359.3	2364.2	2366.1
32.5°	2347.6	2264.7	2219.8	2207.1	2197.4	2194.5	2202.3	2234.4	2254.9	2273.5
35°	2189.6	2132.0	2108.6	2109.6	2099.8	2095.9	2091.1	2110.6	2132.0	2154.5
37.5°	2042.3	2016.9	2010.1	2014.0	2003.3	1997.4	1991.6	1996.5	2003.3	2011.1
40°	1903.8	1909.7	1913.6	1916.5	1902.8	1898.9	1894.1	1892.1	1880.4	1861.9
42.5°	1785.8	1801.4	1819.0	1819.0	1804.3	1802.4	1803.4	1797.5	1762.4	1737.0
45°	1684.4	1690.2	1720.5	1726.3	1713.6	1710.7	1711.7	1693.1	1637.5	1612.2
47.5°	1584.9	1587.8	1615.1	1628.8	1615.1	1612.2	1615.1	1576.1	1515.6	1503.0
50°	1484.4	1492.2	1503.9	1516.6	1503.9	1503.0	1500.0	1463.0	1403.5	1396.6
52.5°	1383.0	1398.6	1392.7	1395.7	1387.9	1388.8	1391.8	1353.7	1299.1	1287.4
55°	1279.6	1294.2	1279.6	1271.8	1268.9	1271.8	1277.7	1242.5	1199.6	1180.1
57.5°	1177.2	1186.0	1170.4	1154.8	1149.9	1156.7	1161.6	1132.3	1095.3	1080.6
60°	1070.9	1068.9	1056.3	1041.6	1031.9	1039.7	1047.5	1021.2	988.0	979.2
62.5°	958.7	956.8	941.2	928.5	918.7	924.6	932.4	907.0	884.6	876.8
65°	843.6	841.7	825.1	815.4	806.6	808.5	817.3	793.9	780.2	771.5
67.5°	732.5	725.6	709.1	703.2	692.5	696.4	702.2	683.7	671.0	663.2
70°	615.4	609.6	594.9	589.1	580.3	582.3	588.1	576.4	562.8	557.9
72.5°	496.4	495.5	481.8	474.0	469.1	470.1	475.0	469.1	456.4	452.5
75°	381.3	384.3	373.5	366.7	361.8	361.8	367.7	368.7	355.0	350.1
77.5°	280.9	280.9	272.1	273.1	265.3	265.3	269.2	273.1	258.5	255.5
80°	188.2	187.3	184.3	181.4	177.5	178.5	181.4	186.3	174.6	175.6
82.5°	111.2	111.2	111.2	109.2	106.3	105.3	109.2	113.1	105.3	105.3
85°	54.6	53.6	53.6	53.6	51.7	50.7	53.6	55.6	50.7	51.7
87.5°	18.5	17.6	17.6	18.5	17.6	17.6	17.6	17.6	16.6	17.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)