

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: P183633

Luminaire Tested: **LSM70M9035D010TEP**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P183633  
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: LSM70M9035D010TEP  
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE, MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS  
Light Source: 90 CRI, 3500K CCT LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6130.5 lumens  
Efficiency: N/A  
Efficacy: 82.1 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

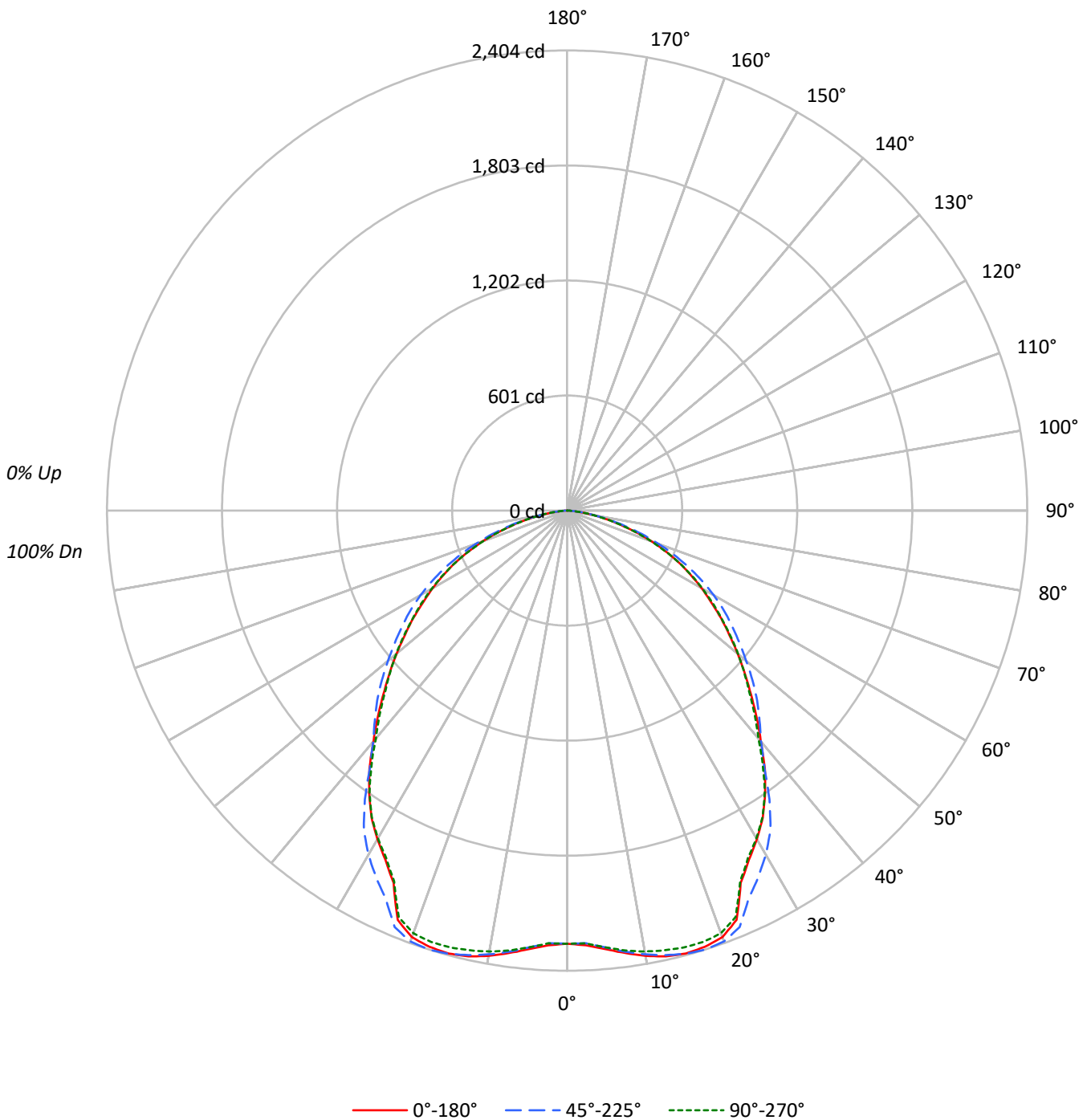
Input Watts (W): 74.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	24499	24499	24499
5°	25000	24902	24893
10°	25970	25889	25719
15°	26852	26870	26486
20°	27329	27601	27076
25°	25639	26759	25543
30°	24785	25956	24714
35°	23833	24350	23791
40°	22250	22261	21985
45°	20786	21496	20623
50°	19572	20573	19653
55°	18534	19857	18611
60°	17573	19143	17716
65°	16532	17951	16511
70°	14833	16017	14754
75°	12204	13158	12238
80°	8893	9497	9142
85°	5156	5467	5367



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	221.9	3.6
10°-20°	678.3	11.1
20°-30°	1018.6	16.6
30°-40°	1115.0	18.2
40°-50°	1090.7	17.8
50°-60°	941.1	15.4
60°-70°	672.8	11.0
70°-80°	330.5	5.4
80°-90°	61.6	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°	1918.8	31.3
0°-40°	3033.8	49.5
0°-60°	5065.6	82.6
0°-90°	6130.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6130.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2262	2262	2262	2262	2262	
5°	2300	2319	2291	2309	2290	222
15°	2395	2428	2397	2399	2363	676
25°	2146	2273	2240	2258	2138	1000
35°	1803	1775	1842	1754	1800	1123
45°	1357	1448	1404	1431	1347	1051
55°	982	1070	1052	1060	986	878
65°	645	680	701	674	644	636
75°	292	308	314	302	292	313
85°	42	44	44	43	43	58
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°	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4
2.5°	2273.0	2291.7	2276.3	2273.0	2260.0	2290.9	2279.5	2282.0	2273.0	2274.6	2262.4
5°	2299.9	2319.4	2304.8	2300.7	2287.7	2319.4	2308.0	2309.7	2300.7	2303.2	2290.9
7.5°	2331.7	2352.0	2336.6	2334.1	2321.9	2353.7	2343.1	2344.7	2334.9	2336.6	2324.3
10°	2361.8	2383.8	2368.3	2366.7	2354.5	2388.7	2377.3	2378.9	2367.5	2368.3	2354.5
12.5°	2385.4	2408.2	2392.8	2392.8	2381.4	2413.9	2405.0	2406.6	2395.2	2395.2	2378.9
15°	2395.2	2418.8	2402.5	2405.0	2393.6	2427.8	2419.7	2420.5	2410.7	2413.1	2396.8
17.5°	2389.5	2413.1	2398.5	2400.1	2389.5	2424.5	2416.4	2419.7	2411.5	2418.0	2404.2
20°	2371.6	2392.8	2374.8	2376.5	2368.3	2403.4	2397.7	2403.4	2397.7	2407.4	2395.2
22.5°	2313.7	2333.3	2323.5	2334.1	2332.5	2370.0	2366.7	2371.6	2362.6	2367.5	2354.5
25°	2145.9	2171.2	2167.9	2198.1	2226.6	2273.0	2269.7	2271.4	2252.6	2254.3	2239.6
27.5°	2056.3	2077.5	2065.3	2066.9	2055.5	2081.6	2083.2	2123.9	2148.4	2170.4	2160.6
30°	1982.2	1998.5	1969.1	1948.8	1919.4	1945.5	1943.9	1979.7	2022.9	2074.2	2075.8
32.5°	1902.3	1907.2	1865.7	1838.0	1827.4	1855.1	1853.4	1864.0	1896.6	1952.0	1976.5
35°	1802.9	1807.0	1755.7	1747.5	1747.5	1775.2	1768.7	1772.0	1789.9	1825.7	1842.0
37.5°	1696.2	1690.5	1661.2	1662.8	1669.3	1694.6	1689.7	1689.7	1695.4	1711.7	1691.3
40°	1574.0	1580.5	1571.6	1579.7	1585.4	1609.8	1607.4	1609.0	1606.6	1597.6	1574.8
42.5°	1465.6	1481.9	1491.7	1501.5	1502.3	1525.9	1524.3	1530.8	1518.6	1495.0	1487.6
45°	1357.3	1376.8	1403.7	1423.3	1424.9	1447.7	1447.7	1449.3	1424.1	1407.0	1403.7
47.5°	1259.5	1279.9	1307.6	1336.9	1341.8	1365.4	1365.4	1361.4	1334.5	1323.9	1313.3
50°	1161.8	1187.8	1213.9	1248.9	1251.4	1269.3	1270.1	1266.0	1253.8	1240.8	1221.2
52.5°	1068.9	1100.7	1125.9	1154.4	1156.1	1170.7	1167.5	1170.7	1172.3	1157.7	1134.1
55°	981.7	1014.3	1036.3	1056.7	1060.7	1070.5	1064.0	1074.6	1084.4	1071.3	1051.8
57.5°	892.1	927.1	945.9	959.7	963.0	971.1	964.6	978.5	991.5	983.3	970.3
60°	811.4	839.1	852.2	865.2	866.0	874.2	868.5	882.3	897.0	892.9	883.9
62.5°	728.3	747.9	757.7	771.5	767.4	775.6	778.0	790.3	800.8	801.7	794.3
65°	645.2	655.8	664.0	672.1	673.8	680.3	682.7	687.6	703.9	705.5	700.6
67.5°	557.3	563.8	571.1	578.4	577.6	584.1	590.7	595.5	606.1	610.2	603.7
70°	468.5	476.6	480.7	483.9	483.1	489.6	495.3	499.4	509.2	511.6	505.9
72.5°	378.8	387.0	390.2	391.1	390.2	397.6	402.5	404.9	413.1	417.1	408.2
75°	291.7	302.3	303.9	302.3	301.4	308.0	310.4	314.5	320.2	321.0	314.5
77.5°	212.6	221.6	223.2	220.8	219.2	224.0	225.7	229.7	233.0	234.6	228.1
80°	142.6	151.5	150.7	149.9	147.5	150.7	153.2	154.8	157.2	157.2	152.3
82.5°	85.5	91.2	90.4	91.2	88.8	89.6	91.2	93.7	92.9	94.5	91.2
85°	41.5	44.0	44.0	44.0	43.2	44.0	44.8	46.4	44.8	46.4	44.0
87.5°	14.7	15.5	14.7	14.7	14.7	14.7	15.5	15.5	14.7	15.5	14.7
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°	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4	2262.4
2.5°	2279.5	2266.5	2279.5	2273.8	2281.2	2278.7	2279.5	2288.5	2268.1	2263.2
5°	2308.0	2294.2	2307.2	2303.2	2308.9	2306.4	2308.0	2317.0	2295.8	2290.1
7.5°	2340.6	2326.0	2339.0	2333.3	2339.0	2336.6	2337.4	2344.7	2322.7	2317.8
10°	2370.8	2355.3	2366.7	2361.0	2364.3	2361.8	2363.4	2368.3	2344.7	2339.0
12.5°	2394.4	2378.9	2390.3	2383.8	2385.4	2382.2	2381.4	2383.8	2359.4	2352.8
15°	2413.9	2398.5	2406.6	2400.1	2399.3	2394.4	2392.8	2393.6	2369.1	2362.6
17.5°	2419.7	2401.7	2406.6	2399.3	2396.8	2392.8	2391.1	2392.8	2369.1	2362.6
20°	2408.2	2387.1	2389.5	2380.5	2377.3	2374.0	2374.0	2376.5	2353.7	2349.6
22.5°	2369.1	2351.2	2356.9	2351.2	2348.0	2344.7	2339.0	2333.3	2304.0	2298.3
25°	2255.1	2242.9	2264.0	2267.3	2258.3	2241.2	2209.5	2185.0	2142.7	2137.8
27.5°	2171.2	2145.9	2120.7	2088.9	2070.1	2062.8	2067.7	2076.7	2054.7	2046.5
30°	2077.5	2022.9	1974.0	1941.4	1929.2	1927.6	1947.1	1970.8	1974.8	1976.5
32.5°	1961.0	1891.7	1854.3	1843.7	1835.5	1833.1	1839.6	1866.5	1883.6	1899.1
35°	1829.0	1780.9	1761.4	1762.2	1754.0	1750.8	1746.7	1763.0	1780.9	1799.7
37.5°	1706.0	1684.8	1679.1	1682.4	1673.4	1668.5	1663.6	1667.7	1673.4	1679.9
40°	1590.3	1595.2	1598.4	1600.9	1589.5	1586.2	1582.1	1580.5	1570.7	1555.3
42.5°	1491.7	1504.7	1519.4	1519.4	1507.2	1505.6	1506.4	1501.5	1472.2	1451.0
45°	1407.0	1411.9	1437.1	1442.0	1431.4	1429.0	1429.8	1414.3	1367.9	1346.7
47.5°	1323.9	1326.3	1349.1	1360.5	1349.1	1346.7	1349.1	1316.6	1266.0	1255.4
50°	1240.0	1246.5	1256.3	1266.9	1256.3	1255.4	1253.0	1222.0	1172.3	1166.6
52.5°	1155.2	1168.3	1163.4	1165.8	1159.3	1160.1	1162.6	1130.8	1085.2	1075.4
55°	1068.9	1081.1	1068.9	1062.4	1059.9	1062.4	1067.3	1037.9	1002.1	985.8
57.5°	983.3	990.7	977.6	964.6	960.5	966.2	970.3	945.9	914.9	902.7
60°	894.5	892.9	882.3	870.1	862.0	868.5	875.0	853.0	825.3	818.0
62.5°	800.8	799.2	786.2	775.6	767.4	772.3	778.9	757.7	738.9	732.4
65°	704.7	703.1	689.2	681.1	673.8	675.4	682.7	663.2	651.8	644.4
67.5°	611.8	606.1	592.3	587.4	578.4	581.7	586.6	571.1	560.5	554.0
70°	514.1	509.2	497.0	492.1	484.7	486.4	491.3	481.5	470.1	466.0
72.5°	414.7	413.9	402.5	395.9	391.9	392.7	396.8	391.9	381.3	378.0
75°	318.5	321.0	312.0	306.3	302.3	302.3	307.1	308.0	296.5	292.5
77.5°	234.6	234.6	227.3	228.1	221.6	221.6	224.9	228.1	215.9	213.5
80°	157.2	156.4	154.0	151.5	148.3	149.1	151.5	155.6	145.8	146.6
82.5°	92.9	92.9	92.9	91.2	88.8	88.0	91.2	94.5	88.0	88.0
85°	45.6	44.8	44.8	44.8	43.2	42.4	44.8	46.4	42.4	43.2
87.5°	15.5	14.7	14.7	15.5	14.7	14.7	14.7	14.7	13.8	14.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)