

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: P183626

Luminaire Tested: **LSM45M9030D010TEP**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P183626  
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: LSM45M9030D010TEP  
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: 4014.8 lumens  
Efficiency: N/A  
Efficacy: 89.9 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

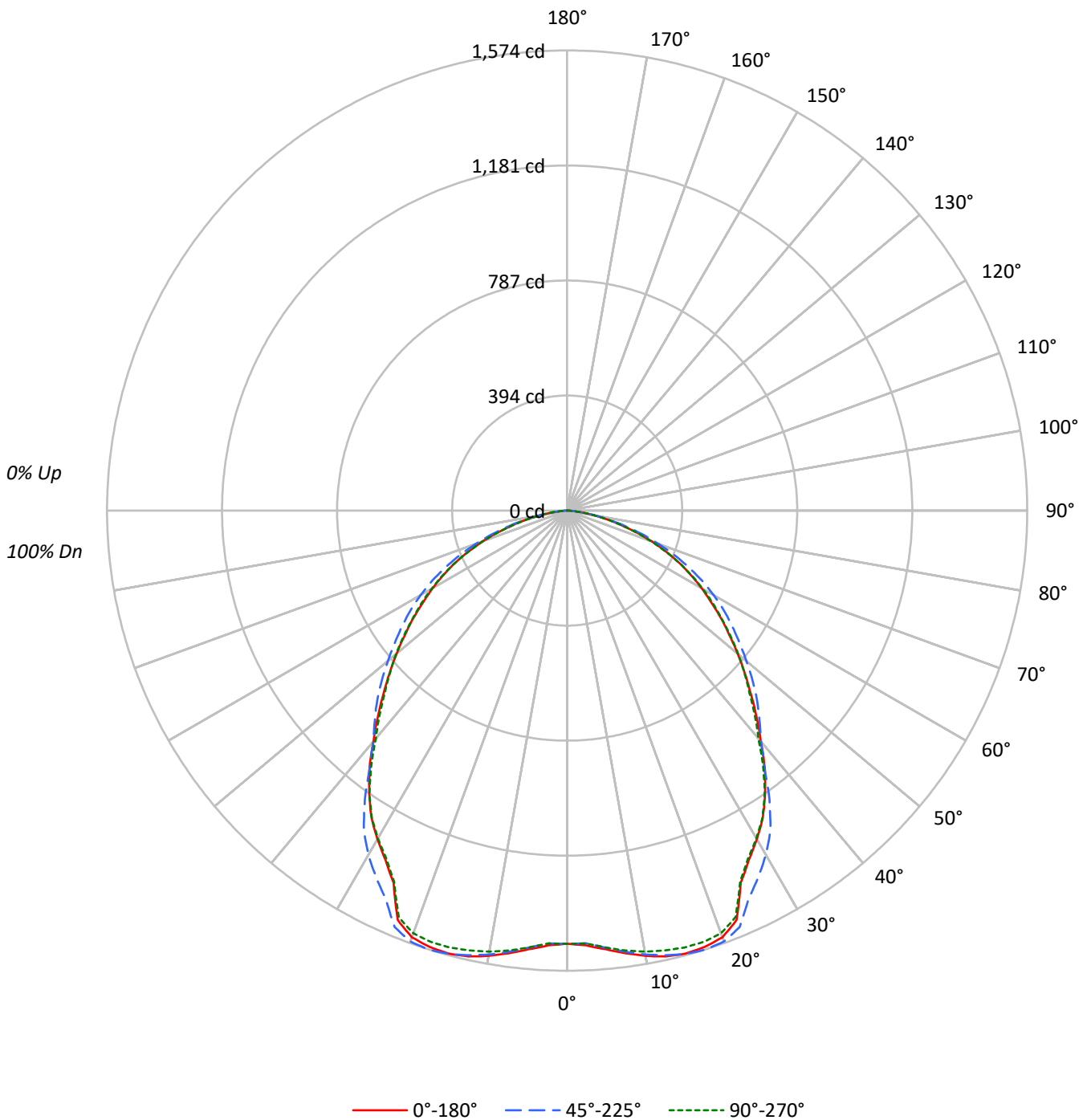
Input Watts (W): 44.68  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	16044	16044	16044
5°	16372	16308	16303
10°	17007	16954	16843
15°	17585	17597	17346
20°	17897	18076	17731
25°	16791	17524	16727
30°	16231	16999	16185
35°	15608	15947	15580
40°	14571	14578	14397
45°	13613	14078	13505
50°	12817	13474	12871
55°	12137	13004	12188
60°	11509	12537	11602
65°	10828	11756	10813
70°	9714	10489	9663
75°	7991	8615	8012
80°	5824	6224	5987
85°	3379	3578	3516



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.3	3.6
10°-20°	444.2	11.1
20°-30°	667.1	16.6
30°-40°	730.2	18.2
40°-50°	714.3	17.8
50°-60°	616.3	15.4
60°-70°	440.6	11.0
70°-80°	216.5	5.4
80°-90°	40.4	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°	1256.6	31.3
0°-40°	1986.8	49.5
0°-60°	3317.4	82.6
0°-90°	4014.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4014.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1482	1482	1482	1482	1482	
5°	1506	1519	1500	1512	1500	145
15°	1569	1590	1570	1571	1547	443
25°	1405	1489	1467	1479	1400	655
35°	1181	1163	1206	1149	1179	735
45°	889	948	919	937	882	688
55°	643	701	689	694	646	575
65°	423	446	459	441	422	416
75°	191	202	206	198	192	205
85°	27	29	29	28	28	38
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°	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6
2.5°	1488.6	1500.8	1490.7	1488.6	1480.0	1500.3	1492.8	1494.4	1488.6	1489.6	1481.6
5°	1506.2	1519.0	1509.4	1506.7	1498.2	1519.0	1511.5	1512.6	1506.7	1508.3	1500.3
7.5°	1527.0	1540.3	1530.2	1528.6	1520.6	1541.4	1534.5	1535.5	1529.1	1530.2	1522.2
10°	1546.7	1561.1	1551.0	1549.9	1541.9	1564.3	1556.9	1557.9	1550.5	1551.0	1541.9
12.5°	1562.2	1577.1	1567.0	1567.0	1559.5	1580.9	1575.0	1576.1	1568.6	1568.6	1557.9
15°	1568.6	1584.1	1573.4	1575.0	1567.5	1589.9	1584.6	1585.1	1578.7	1580.3	1569.7
17.5°	1564.9	1580.3	1570.7	1571.8	1564.9	1587.8	1582.5	1584.6	1579.3	1583.5	1574.5
20°	1553.1	1567.0	1555.3	1556.3	1551.0	1573.9	1570.2	1573.9	1570.2	1576.6	1568.6
22.5°	1515.2	1528.1	1521.6	1528.6	1527.5	1552.1	1549.9	1553.1	1547.3	1550.5	1541.9
25°	1405.3	1421.9	1419.7	1439.5	1458.2	1488.6	1486.4	1487.5	1475.2	1476.3	1466.7
27.5°	1346.6	1360.5	1352.5	1353.6	1346.1	1363.2	1364.3	1390.9	1406.9	1421.3	1414.9
30°	1298.1	1308.8	1289.6	1276.2	1257.0	1274.1	1273.0	1296.5	1324.8	1358.4	1359.5
32.5°	1245.8	1249.0	1221.8	1203.7	1196.7	1214.9	1213.8	1220.7	1242.1	1278.4	1294.4
35°	1180.7	1183.4	1149.8	1144.4	1144.4	1162.6	1158.3	1160.4	1172.2	1195.7	1206.3
37.5°	1110.8	1107.1	1087.9	1088.9	1093.2	1109.8	1106.6	1106.6	1110.3	1121.0	1107.6
40°	1030.8	1035.1	1029.2	1034.5	1038.3	1054.3	1052.7	1053.7	1052.1	1046.3	1031.3
42.5°	959.8	970.5	976.9	983.3	983.8	999.3	998.2	1002.5	994.5	979.0	974.2
45°	888.9	901.7	919.3	932.1	933.2	948.1	948.1	949.2	932.6	921.4	919.3
47.5°	824.8	838.2	856.3	875.5	878.7	894.2	894.2	891.5	873.9	867.0	860.1
50°	760.8	777.9	795.0	817.9	819.5	831.3	831.8	829.1	821.1	812.6	799.8
52.5°	700.0	720.8	737.3	756.0	757.1	766.7	764.6	766.7	767.8	758.2	742.7
55°	642.9	664.3	678.7	692.0	694.7	701.1	696.8	703.7	710.1	701.6	688.8
57.5°	584.2	607.2	619.4	628.5	630.6	636.0	631.7	640.8	649.3	644.0	635.4
60°	531.4	549.5	558.1	566.6	567.2	572.5	568.8	577.8	587.4	584.8	578.9
62.5°	477.0	489.8	496.2	505.3	502.6	507.9	509.5	517.5	524.5	525.0	520.2
65°	422.6	429.5	434.8	440.2	441.2	445.5	447.1	450.3	461.0	462.0	458.8
67.5°	364.9	369.2	374.0	378.8	378.3	382.5	386.8	390.0	397.0	399.6	395.4
70°	306.8	312.1	314.8	316.9	316.4	320.7	324.4	327.1	333.5	335.1	331.3
72.5°	248.1	253.4	255.6	256.1	255.6	260.4	263.6	265.2	270.5	273.2	267.3
75°	191.0	197.9	199.0	197.9	197.4	201.7	203.3	205.9	209.7	210.2	205.9
77.5°	139.3	145.1	146.2	144.6	143.5	146.7	147.8	150.5	152.6	153.7	149.4
80°	93.4	99.2	98.7	98.2	96.6	98.7	100.3	101.4	103.0	103.0	99.8
82.5°	56.0	59.8	59.2	59.8	58.2	58.7	59.8	61.4	60.8	61.9	59.8
85°	27.2	28.8	28.8	28.8	28.3	28.8	29.3	30.4	29.3	30.4	28.8
87.5°	9.6	10.1	9.6	9.6	9.6	9.6	10.1	10.1	9.6	10.1	9.6
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°	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6	1481.6
2.5°	1492.8	1484.3	1492.8	1489.1	1493.9	1492.3	1492.8	1498.7	1485.4	1482.2
5°	1511.5	1502.4	1511.0	1508.3	1512.0	1510.4	1511.5	1517.4	1503.5	1499.8
7.5°	1532.9	1523.2	1531.8	1528.1	1531.8	1530.2	1530.7	1535.5	1521.1	1517.9
10°	1552.6	1542.5	1549.9	1546.2	1548.3	1546.7	1547.8	1551.0	1535.5	1531.8
12.5°	1568.1	1557.9	1565.4	1561.1	1562.2	1560.1	1559.5	1561.1	1545.1	1540.9
15°	1580.9	1570.7	1576.1	1571.8	1571.3	1568.1	1567.0	1567.5	1551.5	1547.3
17.5°	1584.6	1572.9	1576.1	1571.3	1569.7	1567.0	1565.9	1567.0	1551.5	1547.3
20°	1577.1	1563.3	1564.9	1559.0	1556.9	1554.7	1554.7	1556.3	1541.4	1538.7
22.5°	1551.5	1539.8	1543.5	1539.8	1537.7	1535.5	1531.8	1528.1	1508.8	1505.1
25°	1476.8	1468.8	1482.7	1484.8	1479.0	1467.8	1447.0	1430.9	1403.2	1400.0
27.5°	1421.9	1405.3	1388.8	1368.0	1355.7	1350.9	1354.1	1360.0	1345.6	1340.2
30°	1360.5	1324.8	1292.8	1271.4	1263.4	1262.3	1275.2	1290.6	1293.3	1294.4
32.5°	1284.2	1238.9	1214.3	1207.4	1202.1	1200.5	1204.7	1222.3	1233.5	1243.7
35°	1197.8	1166.3	1153.5	1154.0	1148.7	1146.6	1143.9	1154.6	1166.3	1178.6
37.5°	1117.2	1103.4	1099.6	1101.8	1095.9	1092.7	1089.5	1092.2	1095.9	1100.2
40°	1041.5	1044.7	1046.8	1048.4	1040.9	1038.8	1036.1	1035.1	1028.7	1018.5
42.5°	976.9	985.4	995.0	995.0	987.0	986.0	986.5	983.3	964.1	950.2
45°	921.4	924.6	941.2	944.4	937.4	935.8	936.4	926.2	895.8	881.9
47.5°	867.0	868.6	883.5	891.0	883.5	881.9	883.5	862.2	829.1	822.2
50°	812.0	816.3	822.7	829.7	822.7	822.2	820.6	800.3	767.8	764.0
52.5°	756.6	765.1	761.9	763.5	759.2	759.8	761.4	740.5	710.7	704.3
55°	700.0	708.0	700.0	695.7	694.1	695.7	698.9	679.7	656.3	645.6
57.5°	644.0	648.8	640.2	631.7	629.0	632.8	635.4	619.4	599.2	591.2
60°	585.8	584.8	577.8	569.8	564.5	568.8	573.0	558.6	540.5	535.7
62.5°	524.5	523.4	514.9	507.9	502.6	505.8	510.1	496.2	483.9	479.7
65°	461.5	460.4	451.4	446.0	441.2	442.3	447.1	434.3	426.8	422.0
67.5°	400.7	397.0	387.9	384.7	378.8	380.9	384.1	374.0	367.1	362.8
70°	336.7	333.5	325.5	322.3	317.5	318.5	321.7	315.3	307.9	305.2
72.5°	271.6	271.0	263.6	259.3	256.6	257.2	259.8	256.6	249.7	247.6
75°	208.6	210.2	204.3	200.6	197.9	197.9	201.1	201.7	194.2	191.5
77.5°	153.7	153.7	148.9	149.4	145.1	145.1	147.3	149.4	141.4	139.8
80°	103.0	102.4	100.8	99.2	97.1	97.6	99.2	101.9	95.5	96.0
82.5°	60.8	60.8	60.8	59.8	58.2	57.6	59.8	61.9	57.6	57.6
85°	29.9	29.3	29.3	29.3	28.3	27.7	29.3	30.4	27.7	28.3
87.5°	10.1	9.6	9.6	10.1	9.6	9.6	9.6	9.6	9.1	9.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)