

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: METALUX

Report Number: P201254

Luminaire Tested: **4LBLED-LD4-11-SYMF-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P201254  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28138)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4LBLED-LD4-11-SYMF-UNV-L850-CD1-U  
Description: 4 ft. Low Bay Linear, 11000 lm, Frst Sym lens, 5K  
Light Source: (392) 5000K CCT, 80 CRI LEDS  
2UT217098A8504C  
Ballast/Driver: OSRAM  
(OT85W01920CC)

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12285.4 lumens  
Efficiency: N/A  
Efficacy: 139.3 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.99 / 1.87  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.21')  
CIE Type: Semi-Direct

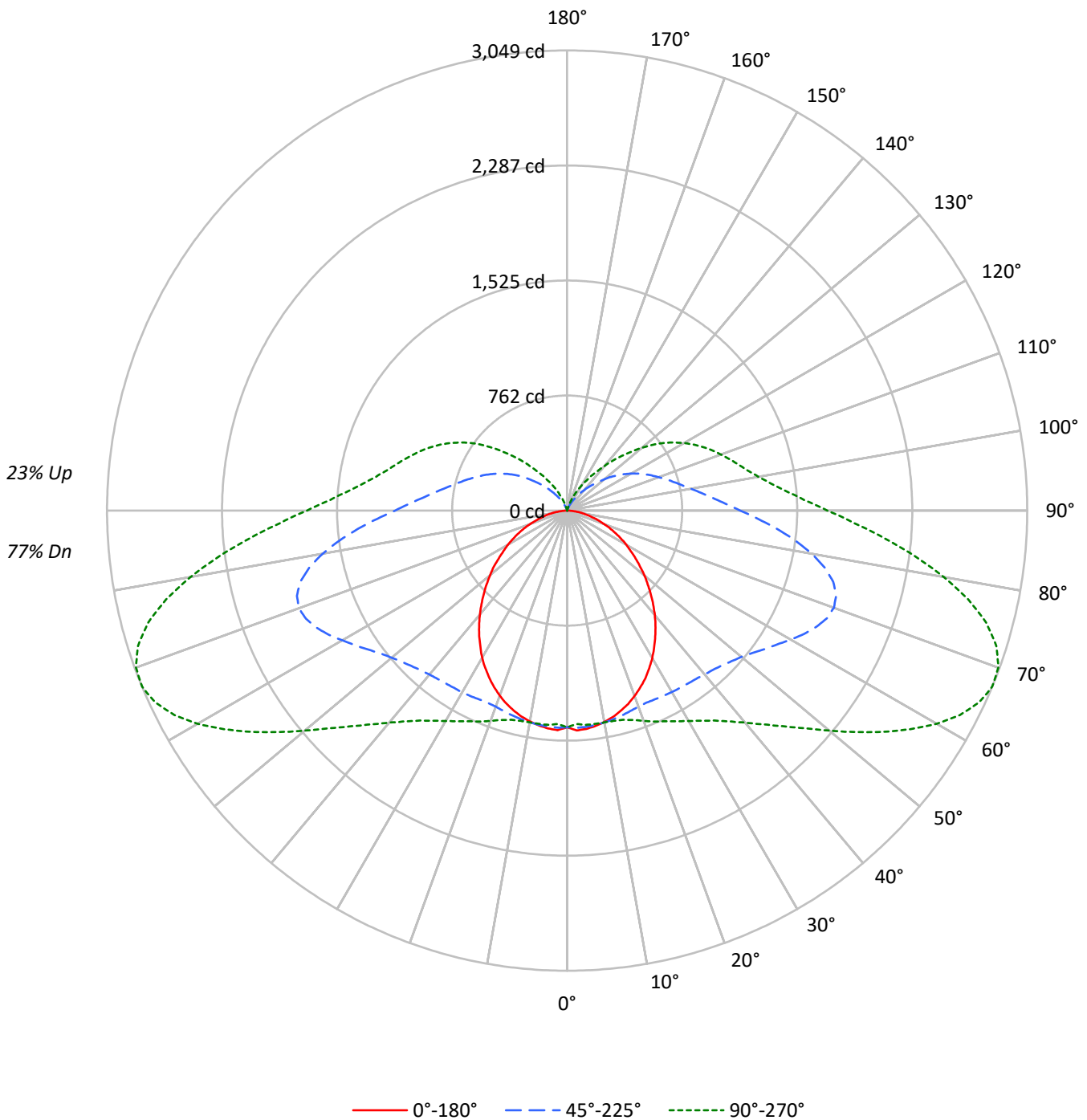
Input Watts (W): 88.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	114	114	114	114	108	108	108	108	98	98	98		89	89	89		81	81	81	77
1	98	91	84	78	92	86	80	75	77	73	68		69	65	62		62	59	56	52
2	86	75	66	59	81	71	63	56	64	57	51		57	51	47		50	46	42	38
3	77	64	54	46	72	61	51	44	54	46	40		48	42	37		43	37	33	29
4	70	55	45	37	65	52	43	36	47	39	32		42	35	30		37	31	27	23
5	63	49	38	31	59	46	37	29	41	33	27		37	30	25		32	27	22	19
6	58	43	33	26	55	41	32	25	37	29	23		33	26	21		29	23	19	16
7	54	39	29	22	50	37	28	21	33	25	20		30	23	18		26	21	16	14
8	50	35	26	19	47	33	25	19	30	22	17		27	20	16		24	18	14	12
9	46	32	23	17	44	30	22	16	27	20	15		25	18	14		22	17	13	10
10	43	29	21	15	41	28	20	15	25	18	14		23	17	12		20	15	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	23128	23128	23128
5°	23380	20783	23330
10°	23051	19116	23001
15°	22585	17952	22550
20°	21996	17501	21961
25°	21294	17327	21203
30°	20369	17420	20349
35°	19324	17844	19284
40°	18206	18861	18122
45°	16991	20494	16946
50°	15759	22882	15709
55°	14511	25837	14485
60°	13384	28843	13413
65°	12129	31267	12167
70°	10792	32395	10792
75°	9192	31698	9135
80°	7403	29169	7324
85°	5079	25618	4836



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.3	1.1
10°-20°	396.4	3.2
20°-30°	637.1	5.2
30°-40°	862.6	7.0
40°-50°	1108.2	9.0
50°-60°	1425.7	11.6
60°-70°	1744.2	14.2
70°-80°	1763.4	14.4
80°-90°	1363.7	11.1
90°-100°	947.4	7.7
100°-110°	707.6	5.8
110°-120°	530.4	4.3
120°-130°	357.1	2.9
130°-140°	195.9	1.6
140°-150°	83.5	0.7
150°-160°	23.9	0.2
160°-170°	2.1	0.0
170°-180°	0.0	0.0
0°-30°	1169.7	9.5
0°-40°	2032.3	16.5
0°-60°	4566.2	37.2
0°-90°	9437.6	76.8
90°-120°	2185.4	17.8
90°-150°	2821.9	23.0
90°-180°	2848.0	23.2
0°-180°	12285.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1435	1435	1435	1435	1435	
5°	1452	1438	1425	1436	1449	138
15°	1373	1405	1435	1405	1371	387
25°	1227	1379	1541	1380	1222	563
35°	1018	1398	1698	1399	1016	636
45°	784	1451	2019	1457	782	605
55°	555	1599	2556	1606	554	497
65°	354	1822	3010	1834	355	351
75°	176	1825	2876	1832	175	188
85°	44	1396	2111	1392	42	48
90°	1	1146	1724	1140	0	3
95°	1	967	1458	963	0	1
105°	1	731	1176	731	0	1
115°	1	568	995	568	0	1
125°	1	408	780	406	0	1
135°	2	246	512	243	0	2
145°	2	125	282	120	0	1
155°	2	40	117	38	0	1
165°	2	2	12	5	0	0
175°	0	0	0	0	0	0
180°	0	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°	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3
2.5°	1458.2	1457.2	1450.9	1441.6	1437.4	1436.3	1435.3	1431.1	1430.1	1432.2	1440.5
5°	1452.0	1450.9	1444.7	1435.3	1432.2	1431.1	1430.1	1426.9	1426.9	1430.1	1438.4
7.5°	1439.5	1438.4	1432.2	1424.9	1421.7	1420.7	1420.7	1418.6	1418.6	1423.8	1433.2
10°	1421.7	1420.7	1415.5	1409.2	1407.1	1407.1	1407.1	1406.1	1408.2	1414.4	1424.9
12.5°	1400.9	1398.8	1394.6	1389.4	1389.4	1389.4	1390.4	1390.4	1393.6	1404.0	1416.5
15°	1372.7	1373.8	1369.6	1365.4	1367.5	1368.5	1370.6	1372.7	1377.9	1390.4	1405.0
17.5°	1343.5	1343.5	1340.4	1338.3	1342.5	1344.5	1347.7	1350.8	1360.2	1375.8	1392.5
20°	1307.0	1308.0	1307.0	1308.0	1313.3	1316.4	1320.6	1327.9	1340.4	1362.3	1382.1
22.5°	1267.4	1269.4	1269.4	1273.6	1282.0	1287.2	1292.4	1302.8	1320.6	1348.7	1376.9
25°	1226.7	1225.6	1230.8	1238.1	1246.5	1253.8	1260.1	1275.7	1301.8	1339.3	1379.0
27.5°	1177.7	1179.7	1187.0	1197.5	1210.0	1219.4	1228.8	1250.7	1288.2	1338.3	1384.2
30°	1127.6	1130.7	1140.1	1154.7	1172.4	1185.0	1195.4	1229.8	1280.9	1338.3	1388.4
32.5°	1073.3	1078.6	1091.1	1109.8	1134.9	1149.5	1166.2	1212.1	1274.7	1336.2	1392.5
35°	1018.1	1024.3	1041.0	1064.0	1093.2	1110.9	1137.0	1198.5	1266.3	1334.1	1397.7
37.5°	961.7	969.0	987.8	1017.0	1054.6	1081.7	1113.0	1183.9	1260.1	1334.1	1405.0
40°	903.3	911.7	935.7	969.0	1017.0	1052.5	1090.0	1169.3	1253.8	1335.2	1416.5
42.5°	843.9	853.2	882.5	922.1	984.7	1026.4	1068.1	1156.8	1249.6	1340.4	1431.1
45°	784.4	796.9	829.3	877.2	955.5	999.3	1047.3	1145.3	1247.5	1349.8	1450.9
47.5°	724.9	739.6	777.1	834.5	925.2	977.4	1027.4	1135.9	1249.6	1362.3	1477.0
50°	667.6	684.3	726.0	795.9	897.1	953.4	1008.7	1129.7	1253.8	1381.1	1508.3
52.5°	609.2	631.1	677.0	761.5	872.0	931.5	993.0	1125.5	1262.1	1406.1	1549.0
55°	554.9	577.9	631.1	728.1	848.0	912.7	978.4	1124.5	1276.7	1436.3	1599.1
57.5°	499.6	527.8	586.2	695.7	823.0	893.9	966.9	1126.5	1294.5	1468.7	1650.2
60°	452.7	477.7	545.5	664.4	801.1	876.2	956.5	1128.6	1313.3	1506.2	1709.6
62.5°	402.6	429.8	510.1	634.2	779.2	860.6	946.1	1131.8	1333.1	1544.8	1770.1
65°	353.6	381.8	474.6	605.0	757.3	843.9	933.6	1131.8	1348.7	1580.3	1822.3
67.5°	306.7	336.9	439.1	573.7	732.3	823.0	917.9	1126.5	1358.1	1605.3	1863.0
70°	261.8	295.2	404.7	540.3	705.1	798.0	896.0	1115.1	1357.1	1614.7	1880.7
72.5°	217.0	255.6	367.2	506.9	675.9	769.8	869.9	1093.2	1342.5	1603.2	1869.2
75°	176.3	218.0	333.8	473.6	642.5	736.4	837.6	1059.8	1310.1	1567.8	1825.4
77.5°	138.7	184.6	298.3	437.1	605.0	697.8	796.9	1017.0	1259.0	1505.2	1748.2
80°	103.3	154.4	264.9	400.5	564.3	655.1	751.0	962.8	1192.3	1420.7	1645.0
82.5°	72.0	126.2	232.6	364.0	522.6	609.2	701.0	898.1	1115.1	1322.6	1526.0
85°	43.8	101.2	200.3	328.6	479.8	561.2	647.8	830.3	1030.6	1216.2	1395.7
87.5°	18.8	78.2	172.1	294.2	437.1	514.2	593.5	765.6	940.9	1105.7	1265.3
90°	1.0	58.4	147.1	261.8	396.4	468.3	542.4	696.8	858.5	1004.5	1146.4
92.5°	0.0	50.1	132.5	242.0	368.2	435.0	503.8	645.7	791.7	922.1	1048.3
95°	1.0	41.7	120.0	220.1	340.0	403.7	467.3	599.8	731.2	851.2	966.9
97.5°	1.0	34.4	106.4	200.3	314.0	372.4	431.8	554.9	673.8	787.5	895.0
100°	1.0	27.1	93.9	181.5	286.9	341.1	397.4	513.2	624.8	731.2	832.4
102.5°	1.0	19.8	83.4	163.8	261.8	312.9	365.1	474.6	580.0	682.2	778.1
105°	1.0	13.6	73.0	147.1	238.9	286.9	335.9	439.1	539.3	637.3	731.2
107.5°	1.0	9.4	63.6	131.4	213.8	261.8	307.7	405.8	501.7	596.6	688.4
110°	1.0	8.3	55.3	117.9	194.0	237.8	281.6	374.5	466.3	557.0	646.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	7.3	46.9	105.4	174.2	213.8	256.6	344.2	433.9	521.5	607.1
115°	1.0	7.3	38.6	93.9	157.5	193.0	232.6	315.0	400.5	485.0	568.5
117.5°	1.0	7.3	31.3	83.4	141.9	174.2	208.6	287.9	367.2	449.6	530.9
120°	1.0	6.3	25.0	73.0	128.3	157.5	189.8	261.8	334.8	412.0	490.3
122.5°	1.0	6.3	20.9	63.6	114.7	141.9	171.1	234.7	304.6	375.5	448.5
125°	1.0	5.2	17.7	53.2	101.2	127.3	153.3	210.7	275.4	341.1	407.8
127.5°	2.1	5.2	14.6	43.8	87.6	110.6	135.6	187.8	244.1	303.5	367.2
130°	2.1	5.2	12.5	33.4	74.1	94.9	116.8	164.8	217.0	268.1	323.4
132.5°	2.1	4.2	11.5	26.1	61.5	80.3	100.1	142.9	188.8	234.7	282.7
135°	2.1	4.2	9.4	20.9	49.0	65.7	84.5	122.0	162.7	205.5	246.2
137.5°	2.1	3.1	8.3	16.7	37.6	53.2	69.9	103.3	138.7	175.2	212.8
140°	2.1	3.1	7.3	13.6	28.2	39.6	55.3	84.5	115.8	148.1	180.5
142.5°	2.1	3.1	6.3	11.5	21.9	30.2	41.7	68.8	96.0	123.1	151.2
145°	2.1	3.1	5.2	9.4	16.7	22.9	30.2	53.2	77.2	101.2	125.2
147.5°	2.1	3.1	5.2	8.3	13.6	17.7	22.9	38.6	60.5	80.3	101.2
150°	2.1	3.1	4.2	7.3	11.5	13.6	16.7	27.1	43.8	61.5	79.3
152.5°	2.1	2.1	4.2	6.3	8.3	10.4	12.5	19.8	30.2	43.8	59.5
155°	2.1	2.1	3.1	5.2	7.3	8.3	9.4	13.6	19.8	28.2	39.6
157.5°	2.1	2.1	3.1	4.2	5.2	6.3	7.3	9.4	13.6	17.7	24.0
160°	2.1	2.1	3.1	4.2	4.2	5.2	5.2	6.3	8.3	10.4	13.6
162.5°	2.1	2.1	3.1	3.1	3.1	4.2	4.2	4.2	5.2	5.2	6.3
165°	2.1	2.1	2.1	3.1	2.1	3.1	2.1	3.1	3.1	2.1	2.1
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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°	95°
0°	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3
2.5°	1443.6	1436.3	1433.2	1429.0	1425.9	1423.8	1420.7	1418.6	1415.5	1415.5	1416.5
5°	1441.6	1434.3	1432.2	1428.0	1425.9	1424.9	1422.8	1423.8	1423.8	1424.9	1423.8
7.5°	1437.4	1431.1	1429.0	1426.9	1424.9	1423.8	1422.8	1424.9	1424.9	1425.9	1425.9
10°	1430.1	1425.9	1425.9	1423.8	1422.8	1421.7	1419.6	1422.8	1422.8	1424.9	1423.8
12.5°	1421.7	1420.7	1421.7	1422.8	1422.8	1421.7	1420.7	1424.9	1426.9	1426.9	1428.0
15°	1412.3	1414.4	1419.6	1422.8	1424.9	1424.9	1426.9	1431.1	1434.3	1435.3	1435.3
17.5°	1405.0	1410.3	1419.6	1428.0	1432.2	1434.3	1439.5	1447.8	1453.0	1454.1	1454.1
20°	1399.8	1412.3	1429.0	1444.7	1449.9	1454.1	1464.5	1474.9	1482.2	1483.3	1483.3
22.5°	1404.0	1424.9	1447.8	1465.5	1472.8	1478.1	1489.5	1503.1	1511.4	1512.5	1512.5
25°	1414.4	1439.5	1465.5	1487.4	1495.8	1502.1	1514.6	1529.2	1537.5	1540.6	1539.6
27.5°	1423.8	1454.1	1484.3	1509.4	1518.7	1527.1	1542.7	1559.4	1569.9	1573.0	1570.9
30°	1432.2	1467.6	1502.1	1532.3	1544.8	1554.2	1573.0	1592.8	1606.4	1609.5	1606.4
32.5°	1440.5	1483.3	1524.0	1559.4	1571.9	1585.5	1609.5	1632.4	1646.0	1650.2	1648.1
35°	1452.0	1502.1	1550.0	1590.7	1607.4	1623.1	1651.2	1678.3	1695.0	1698.2	1695.0
37.5°	1467.6	1526.0	1579.2	1630.4	1648.1	1670.0	1703.4	1735.7	1755.5	1759.7	1755.5
40°	1487.4	1556.3	1618.9	1678.3	1702.3	1725.3	1766.0	1804.5	1826.5	1833.8	1830.6
42.5°	1513.5	1593.8	1666.9	1737.8	1764.9	1794.1	1842.1	1887.0	1912.0	1920.3	1912.0
45°	1545.9	1640.8	1725.3	1807.7	1839.0	1874.4	1931.8	1982.9	2012.1	2019.4	2012.1
47.5°	1588.6	1696.1	1794.1	1889.0	1926.6	1968.3	2036.1	2094.5	2125.8	2134.2	2126.9
50°	1634.5	1762.8	1875.5	1984.0	2030.9	2074.7	2154.0	2218.7	2252.0	2267.7	2254.1
52.5°	1691.9	1835.8	1968.3	2089.3	2145.6	2197.8	2285.4	2356.3	2397.0	2410.6	2391.8
55°	1760.7	1923.5	2071.6	2211.4	2267.7	2326.1	2423.1	2498.2	2541.0	2555.6	2542.0
57.5°	1836.9	2016.3	2180.1	2327.1	2392.9	2452.3	2560.8	2639.0	2676.6	2695.3	2678.7
60°	1916.2	2112.3	2289.6	2446.0	2518.0	2579.6	2690.1	2767.3	2807.0	2825.7	2810.1
62.5°	1993.3	2205.1	2391.8	2554.5	2623.4	2691.2	2801.7	2875.8	2916.5	2933.2	2918.6
65°	2060.1	2283.3	2475.3	2643.2	2714.1	2780.9	2885.2	2956.1	2998.9	3010.4	2999.9
67.5°	2110.2	2336.5	2530.5	2696.4	2765.2	2832.0	2931.1	2996.8	3038.5	3049.0	3039.6
70°	2133.1	2357.4	2549.3	2711.0	2778.8	2838.3	2932.1	2994.7	3034.4	3040.6	3033.3
72.5°	2118.5	2336.5	2522.2	2676.6	2741.2	2793.4	2880.0	2939.4	2977.0	2982.2	2977.0
75°	2064.3	2272.9	2448.1	2592.1	2652.6	2696.4	2778.8	2834.1	2871.6	2875.8	2869.5
77.5°	1972.5	2166.5	2327.1	2465.9	2515.9	2558.7	2636.9	2686.0	2716.2	2722.5	2715.2
80°	1849.4	2027.8	2171.7	2295.8	2343.8	2380.3	2456.5	2509.7	2526.4	2534.7	2524.3
82.5°	1708.6	1868.2	1996.5	2109.1	2151.9	2196.8	2245.8	2294.8	2318.8	2326.1	2317.7
85°	1557.3	1699.2	1812.9	1914.1	1951.6	1992.3	2035.1	2083.1	2103.9	2111.2	2102.9
87.5°	1406.1	1531.3	1631.4	1721.1	1755.5	1792.0	1843.1	1868.2	1896.3	1904.7	1895.3
90°	1270.5	1383.1	1472.8	1554.2	1586.5	1619.9	1659.6	1690.9	1716.9	1724.2	1715.9
92.5°	1161.0	1262.1	1344.5	1417.6	1445.7	1477.0	1515.6	1545.9	1568.8	1576.1	1567.8
95°	1070.2	1163.0	1240.2	1308.0	1335.2	1364.4	1407.1	1431.1	1452.0	1458.2	1452.0
97.5°	993.0	1080.6	1153.7	1219.4	1245.5	1272.6	1314.3	1338.3	1358.1	1363.3	1358.1
100°	925.2	1010.8	1082.7	1145.3	1171.4	1197.5	1238.1	1262.1	1280.9	1287.2	1280.9
102.5°	868.9	951.3	1022.2	1085.9	1110.9	1137.0	1175.6	1203.7	1218.3	1225.6	1219.4
105°	819.9	900.2	971.1	1033.7	1059.8	1084.8	1124.5	1150.5	1167.2	1175.6	1168.3
107.5°	775.0	854.3	926.3	986.8	1012.8	1037.9	1078.6	1104.6	1120.3	1129.7	1121.3
110°	732.3	810.5	879.3	941.9	968.0	994.1	1034.7	1060.8	1076.5	1084.8	1077.5





TEST NUMBER: P201254

CATALOG NUMBER: 4LBLED-LD4-11-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	690.5	766.7	837.6	898.1	923.1	949.2	990.9	1018.1	1032.7	1042.0	1033.7
115°	648.8	723.9	792.7	851.2	876.2	903.3	944.0	972.2	987.8	995.1	986.8
117.5°	608.1	680.1	745.8	803.2	828.2	854.3	893.9	922.1	938.8	946.1	937.7
120°	566.4	635.2	699.9	752.1	778.1	802.1	842.8	869.9	886.6	893.9	885.6
122.5°	521.5	589.3	650.9	702.0	727.0	750.0	789.6	816.7	832.4	839.7	832.4
125°	475.6	539.3	598.7	649.8	670.7	692.6	731.2	757.3	774.0	780.2	774.0
127.5°	429.8	488.2	543.5	588.3	611.3	632.1	668.6	693.7	708.3	715.6	710.3
130°	383.9	439.1	489.2	529.9	549.7	569.5	602.9	625.9	640.5	646.7	641.5
132.5°	334.8	388.0	437.1	472.5	491.3	508.0	538.2	558.1	570.6	577.9	571.6
135°	291.0	334.8	380.7	417.2	436.0	450.6	477.7	494.4	505.9	512.2	505.9
137.5°	251.4	288.9	326.5	358.8	376.6	392.2	418.3	433.9	444.4	450.6	444.4
140°	214.9	247.2	280.6	306.7	322.3	334.8	358.8	372.4	381.8	387.0	380.7
142.5°	179.4	208.6	236.8	260.8	274.3	284.8	307.7	318.1	325.4	328.6	325.4
145°	149.2	173.2	197.1	219.0	229.5	237.8	260.8	272.2	278.5	281.6	278.5
147.5°	121.0	140.8	160.6	178.4	187.8	198.2	213.8	227.4	232.6	234.7	232.6
150°	94.9	112.7	128.3	142.9	150.2	157.5	171.1	184.6	189.8	193.0	189.8
152.5°	72.0	86.6	99.1	110.6	116.8	123.1	134.6	147.1	152.3	154.4	152.3
155°	52.2	62.6	74.1	82.4	87.6	91.8	100.1	108.5	116.8	116.8	116.8
157.5°	32.3	40.7	50.1	57.4	60.5	64.7	70.9	78.2	84.5	87.6	87.6
160°	16.7	21.9	28.2	33.4	36.5	39.6	43.8	50.1	54.2	57.4	55.3
162.5°	7.3	9.4	12.5	14.6	16.7	17.7	20.9	24.0	26.1	31.3	27.1
165°	2.1	2.1	3.1	4.2	4.2	4.2	5.2	6.3	7.3	11.5	8.3
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P201254

CATALOG NUMBER: 4LBLELD4-11-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3
2.5°	1418.6	1421.7	1425.9	1428.0	1431.1	1433.2	1438.4	1444.7	1439.5	1432.2	1433.2
5°	1423.8	1422.8	1425.9	1428.0	1430.1	1431.1	1436.3	1442.6	1436.3	1429.0	1429.0
7.5°	1425.9	1424.9	1425.9	1426.9	1428.0	1428.0	1433.2	1438.4	1432.2	1422.8	1420.7
10°	1422.8	1421.7	1422.8	1424.9	1424.9	1424.9	1428.0	1432.2	1424.9	1413.4	1409.2
12.5°	1424.9	1421.7	1421.7	1422.8	1422.8	1420.7	1421.7	1424.9	1415.5	1403.0	1396.7
15°	1432.2	1426.9	1424.9	1424.9	1422.8	1417.6	1415.5	1415.5	1405.0	1388.4	1380.0
17.5°	1449.9	1441.6	1435.3	1432.2	1428.0	1418.6	1411.3	1407.1	1393.6	1374.8	1361.2
20°	1477.0	1465.5	1456.2	1449.9	1444.7	1428.0	1413.4	1401.9	1383.1	1360.2	1342.5
22.5°	1504.1	1491.6	1478.1	1471.8	1464.5	1445.7	1425.9	1406.1	1377.9	1346.6	1322.6
25°	1530.2	1517.7	1502.1	1495.8	1486.4	1464.5	1439.5	1416.5	1380.0	1337.2	1302.8
27.5°	1560.5	1544.8	1528.1	1518.7	1508.3	1483.3	1455.1	1426.9	1386.3	1337.2	1289.3
30°	1594.9	1576.1	1554.2	1543.8	1531.3	1502.1	1467.6	1434.3	1390.4	1337.2	1282.0
32.5°	1634.5	1612.6	1586.5	1571.9	1557.3	1522.9	1482.2	1443.6	1393.6	1336.2	1275.7
35°	1680.4	1655.4	1624.1	1607.4	1589.7	1549.0	1501.0	1454.1	1398.8	1335.2	1267.4
37.5°	1737.8	1708.6	1671.0	1650.2	1629.3	1581.3	1526.0	1469.7	1407.1	1336.2	1261.1
40°	1806.6	1772.2	1728.4	1702.3	1677.3	1622.0	1556.3	1489.5	1418.6	1338.3	1254.8
42.5°	1888.0	1846.3	1797.2	1767.0	1737.8	1668.9	1593.8	1514.6	1434.3	1342.5	1251.7
45°	1985.0	1941.2	1878.6	1841.1	1808.7	1728.4	1641.8	1547.9	1457.2	1352.9	1250.7
47.5°	2096.6	2041.3	1973.5	1929.7	1891.1	1798.3	1698.2	1589.7	1483.3	1366.4	1252.8
50°	2221.8	2159.2	2081.0	2035.1	1987.1	1880.7	1764.9	1638.7	1516.7	1386.3	1258.0
52.5°	2359.5	2290.6	2206.1	2151.9	2098.7	1975.6	1840.0	1701.3	1555.2	1411.3	1267.4
55°	2502.4	2428.3	2334.4	2275.0	2215.5	2079.9	1928.7	1769.1	1606.4	1442.6	1283.0
57.5°	2641.1	2565.0	2461.7	2401.2	2334.4	2190.5	2023.6	1843.1	1661.6	1479.1	1300.7
60°	2769.4	2693.3	2589.0	2527.4	2454.4	2300.0	2120.6	1924.5	1719.0	1517.7	1321.6
62.5°	2877.9	2804.9	2700.6	2638.0	2562.9	2403.3	2213.4	2003.8	1781.6	1558.4	1341.4
65°	2958.2	2889.4	2788.2	2723.5	2651.5	2485.7	2291.7	2073.7	1833.8	1593.8	1359.1
67.5°	2998.9	2934.2	2836.2	2774.6	2703.7	2538.9	2344.9	2120.6	1873.4	1618.9	1370.6
70°	2994.7	2933.2	2841.4	2780.9	2713.1	2554.5	2363.6	2139.4	1891.1	1628.3	1368.5
72.5°	2940.5	2878.9	2796.5	2738.1	2673.4	2525.3	2337.6	2122.7	1877.6	1613.7	1351.8
75°	2833.0	2776.7	2693.3	2645.3	2586.9	2449.2	2269.8	2061.1	1831.7	1575.1	1317.4
77.5°	2678.7	2635.9	2554.5	2509.7	2452.3	2325.1	2156.1	1968.3	1751.4	1510.4	1264.2
80°	2489.9	2454.4	2375.1	2335.5	2279.2	2168.6	2022.6	1841.1	1645.0	1422.8	1195.4
82.5°	2283.3	2242.6	2180.1	2143.6	2090.4	1991.3	1852.5	1704.4	1521.9	1322.6	1115.1
85°	2069.5	2031.9	1974.6	1943.3	1896.3	1807.7	1683.5	1553.2	1391.5	1212.1	1028.5
87.5°	1866.1	1829.6	1775.3	1747.2	1704.4	1625.1	1516.7	1401.9	1259.0	1105.7	936.7
90°	1689.8	1655.4	1604.3	1578.2	1539.6	1467.6	1369.6	1266.3	1140.1	999.3	854.3
92.5°	1544.8	1513.5	1465.5	1440.5	1406.1	1340.4	1251.7	1157.8	1044.1	922.1	787.5
95°	1430.1	1399.8	1357.1	1333.1	1300.7	1232.9	1154.7	1067.1	962.8	851.2	727.0
97.5°	1337.2	1312.2	1265.3	1242.3	1216.2	1147.4	1076.5	989.9	892.9	788.6	672.8
100°	1262.1	1234.0	1191.2	1169.3	1142.2	1077.5	1005.5	924.2	830.3	731.2	623.8
102.5°	1203.7	1174.5	1134.9	1109.8	1083.8	1018.1	947.1	867.9	778.1	682.2	578.9
105°	1151.6	1123.4	1083.8	1058.7	1032.7	968.0	900.2	819.9	731.2	638.4	538.2
107.5°	1102.5	1077.5	1037.9	1012.8	986.8	922.1	854.3	775.0	688.4	597.7	500.7
110°	1060.8	1033.7	992.0	968.0	939.8	878.3	810.5	733.3	646.7	558.1	465.2



TEST NUMBER: P201254

CATALOG NUMBER: 4LBLED-LD4-11-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1019.1	989.9	948.2	924.2	896.0	834.5	767.7	691.6	607.1	521.5	431.8
115°	973.2	945.0	901.2	877.2	849.1	788.6	723.9	649.8	568.5	485.0	398.5
117.5°	924.2	896.0	852.2	829.3	802.1	742.7	681.1	609.2	529.9	449.6	365.1
120°	871.0	843.9	802.1	779.2	753.1	695.7	636.3	564.3	489.2	412.0	333.8
122.5°	816.7	790.7	750.0	727.0	702.0	647.8	589.3	519.5	447.5	375.5	303.5
125°	758.3	732.3	693.7	671.8	646.7	594.6	538.2	472.5	405.8	341.1	272.2
127.5°	690.5	669.7	632.1	610.2	587.3	541.4	487.1	427.7	366.1	303.5	242.0
130°	625.9	603.9	568.5	548.7	528.8	487.1	439.1	381.8	321.3	267.0	211.7
132.5°	558.1	538.2	508.0	491.3	473.6	436.0	387.0	330.7	279.5	232.6	183.6
135°	494.4	477.7	450.6	436.0	418.3	378.6	332.7	285.8	243.0	201.3	157.5
137.5°	435.0	418.3	393.2	377.6	358.8	323.4	285.8	247.2	207.6	172.1	133.5
140°	372.4	358.8	335.9	322.3	305.6	275.4	244.1	207.6	176.3	143.9	110.6
142.5°	319.2	307.7	284.8	272.2	257.6	232.6	203.4	175.2	147.1	118.9	90.7
145°	273.3	261.8	236.8	227.4	213.8	191.9	167.9	142.9	120.0	96.0	73.0
147.5°	228.4	214.9	193.0	184.6	174.2	155.4	136.6	116.8	97.0	76.1	56.3
150°	186.7	171.1	153.3	148.1	137.7	123.1	107.4	90.7	75.1	58.4	40.7
152.5°	147.1	133.5	118.9	113.7	105.4	96.0	82.4	68.8	56.3	40.7	28.2
155°	109.5	99.1	87.6	84.5	78.2	70.9	59.5	49.0	37.6	27.1	19.8
157.5°	77.2	68.8	60.5	58.4	54.2	48.0	38.6	30.2	24.0	17.7	13.6
160°	48.0	42.8	36.5	34.4	31.3	27.1	20.9	17.7	14.6	11.5	8.3
162.5°	22.9	19.8	17.7	16.7	14.6	12.5	11.5	9.4	8.3	7.3	6.3
165°	8.3	8.3	8.3	7.3	7.3	7.3	7.3	6.3	5.2	5.2	4.2
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P201254

CATALOG NUMBER: 4LBLED-LD4-11-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3	1435.3
2.5°	1434.3	1436.3	1436.3	1437.4	1440.5	1446.8	1455.1	1456.2
5°	1430.1	1431.1	1431.1	1431.1	1434.3	1439.5	1447.8	1448.9
7.5°	1420.7	1420.7	1420.7	1420.7	1423.8	1428.0	1435.3	1436.3
10°	1408.2	1407.1	1407.1	1406.1	1408.2	1411.3	1419.6	1418.6
12.5°	1392.5	1390.4	1389.4	1389.4	1388.4	1391.5	1396.7	1397.7
15°	1374.8	1370.6	1368.5	1366.4	1365.4	1365.4	1371.7	1370.6
17.5°	1353.9	1347.7	1344.5	1341.4	1337.2	1337.2	1341.4	1340.4
20°	1329.9	1321.6	1316.4	1312.2	1306.0	1303.9	1306.0	1304.9
22.5°	1306.0	1292.4	1287.2	1280.9	1271.5	1267.4	1266.3	1265.3
25°	1277.8	1261.1	1253.8	1247.5	1234.0	1228.8	1223.5	1221.5
27.5°	1252.8	1228.8	1219.4	1208.9	1193.3	1186.0	1177.7	1175.6
30°	1230.8	1195.4	1180.8	1170.3	1150.5	1139.1	1128.6	1126.5
32.5°	1214.2	1165.1	1145.3	1132.8	1105.7	1090.0	1076.5	1070.2
35°	1199.6	1137.0	1110.9	1091.1	1058.7	1040.0	1021.2	1016.0
37.5°	1186.0	1113.0	1078.6	1051.4	1014.9	987.8	966.9	958.6
40°	1172.4	1091.1	1049.4	1014.9	966.9	935.7	909.6	899.1
42.5°	1159.9	1069.2	1024.3	982.6	920.0	882.5	854.3	839.7
45°	1148.4	1049.4	1000.3	954.4	874.1	830.3	795.9	782.3
47.5°	1140.1	1030.6	976.3	926.3	831.3	777.1	741.6	723.9
50°	1133.8	1012.8	953.4	898.1	793.8	726.0	686.4	665.5
52.5°	1130.7	997.2	932.5	873.1	759.4	677.0	630.0	614.4
55°	1131.8	984.7	914.8	850.1	727.0	630.0	577.9	553.9
57.5°	1133.8	973.2	897.1	827.2	694.7	584.1	525.7	500.7
60°	1138.0	963.8	881.4	805.3	664.4	544.5	477.7	453.7
62.5°	1142.2	955.5	865.8	784.4	635.2	508.0	429.8	402.6
65°	1143.2	943.0	849.1	763.5	606.0	471.5	380.7	354.7
67.5°	1139.1	927.3	828.2	739.6	575.8	436.0	334.8	307.7
70°	1126.5	906.4	804.2	712.4	542.4	401.6	291.0	261.8
72.5°	1103.6	879.3	776.1	682.2	510.1	365.1	251.4	215.9
75°	1071.3	845.9	742.7	647.8	475.6	330.7	214.9	175.2
77.5°	1027.4	803.2	703.0	609.2	438.1	295.2	183.6	137.7
80°	971.1	758.3	659.2	567.4	401.6	262.9	153.3	102.2
82.5°	904.4	707.2	612.3	524.7	367.2	229.5	125.2	70.9
85°	835.5	651.9	563.3	479.8	330.7	198.2	101.2	41.7
87.5°	767.7	596.6	516.3	439.1	293.1	170.0	78.2	16.7
90°	701.0	543.5	467.3	395.3	260.8	143.9	58.4	0.0
92.5°	645.7	503.8	435.0	366.1	239.9	130.4	50.1	0.0
95°	596.6	466.3	400.5	336.9	218.0	117.9	41.7	0.0
97.5°	551.8	430.8	370.3	309.8	198.2	104.3	34.4	0.0
100°	509.0	395.3	339.0	284.8	179.4	92.8	26.1	0.0
102.5°	471.5	364.0	310.8	257.6	160.6	81.4	18.8	0.0
105°	435.0	333.8	284.8	233.7	143.9	70.9	11.5	0.0
107.5°	402.6	305.6	258.7	211.7	128.3	61.5	7.3	0.0
110°	371.3	279.5	233.7	190.9	114.7	53.2	6.3	0.0



TEST NUMBER: P201254

CATALOG NUMBER: 4LBLED-LD4-11-SYMF-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	342.1	254.5	211.7	171.1	103.3	44.9	6.3	0.0
115°	311.9	230.5	190.9	154.4	91.8	36.5	5.2	0.0
117.5°	285.8	207.6	172.1	140.8	80.3	29.2	5.2	0.0
120°	259.7	187.8	156.5	126.2	69.9	21.9	5.2	0.0
122.5°	233.7	170.0	139.8	112.7	60.5	17.7	4.2	0.0
125°	209.7	151.2	124.1	98.1	50.1	15.6	4.2	0.0
127.5°	185.7	132.5	107.4	84.5	39.6	13.6	3.1	0.0
130°	161.7	113.7	91.8	70.9	30.2	11.5	3.1	0.0
132.5°	139.8	96.0	77.2	58.4	24.0	9.4	2.1	0.0
135°	117.9	80.3	63.6	45.9	18.8	8.3	2.1	0.0
137.5°	99.1	65.7	50.1	34.4	15.6	6.3	2.1	0.0
140°	81.4	52.2	37.6	26.1	12.5	5.2	1.0	0.0
142.5°	64.7	38.6	28.2	19.8	10.4	4.2	1.0	0.0
145°	50.1	28.2	20.9	15.6	9.4	3.1	1.0	0.0
147.5°	36.5	21.9	16.7	13.6	7.3	3.1	1.0	0.0
150°	26.1	16.7	13.6	10.4	5.2	2.1	1.0	0.0
152.5°	19.8	12.5	10.4	8.3	4.2	2.1	1.0	0.0
155°	14.6	9.4	8.3	6.3	3.1	2.1	1.0	0.0
157.5°	10.4	7.3	6.3	4.2	3.1	2.1	1.0	0.0
160°	6.3	5.2	4.2	3.1	2.1	1.0	1.0	0.0
162.5°	5.2	3.1	3.1	3.1	2.1	1.0	1.0	0.0
165°	3.1	2.1	2.1	2.1	1.0	1.0	1.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)