

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: P201258

Luminaire Tested: **8LBLED-LD4-10-SYMF-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201258
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: 8LBLED-LD4-10-SYMF-UNV-L850-CD1-U
Description: 8 ft. Low Bay Linear, 10000 lm, Frst Sym lens, 5K
Light Source: (784) 5000K CCT, 80 CRI LEDS
2UT217098A8504C
Ballast/Driver: OSRAM
(OTi85W01600CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11290.1 lumens
Efficiency: N/A
Efficacy: 156.9 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.99 / 1.87
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 8' x H: 0.21')
CIE Type: Semi-Direct

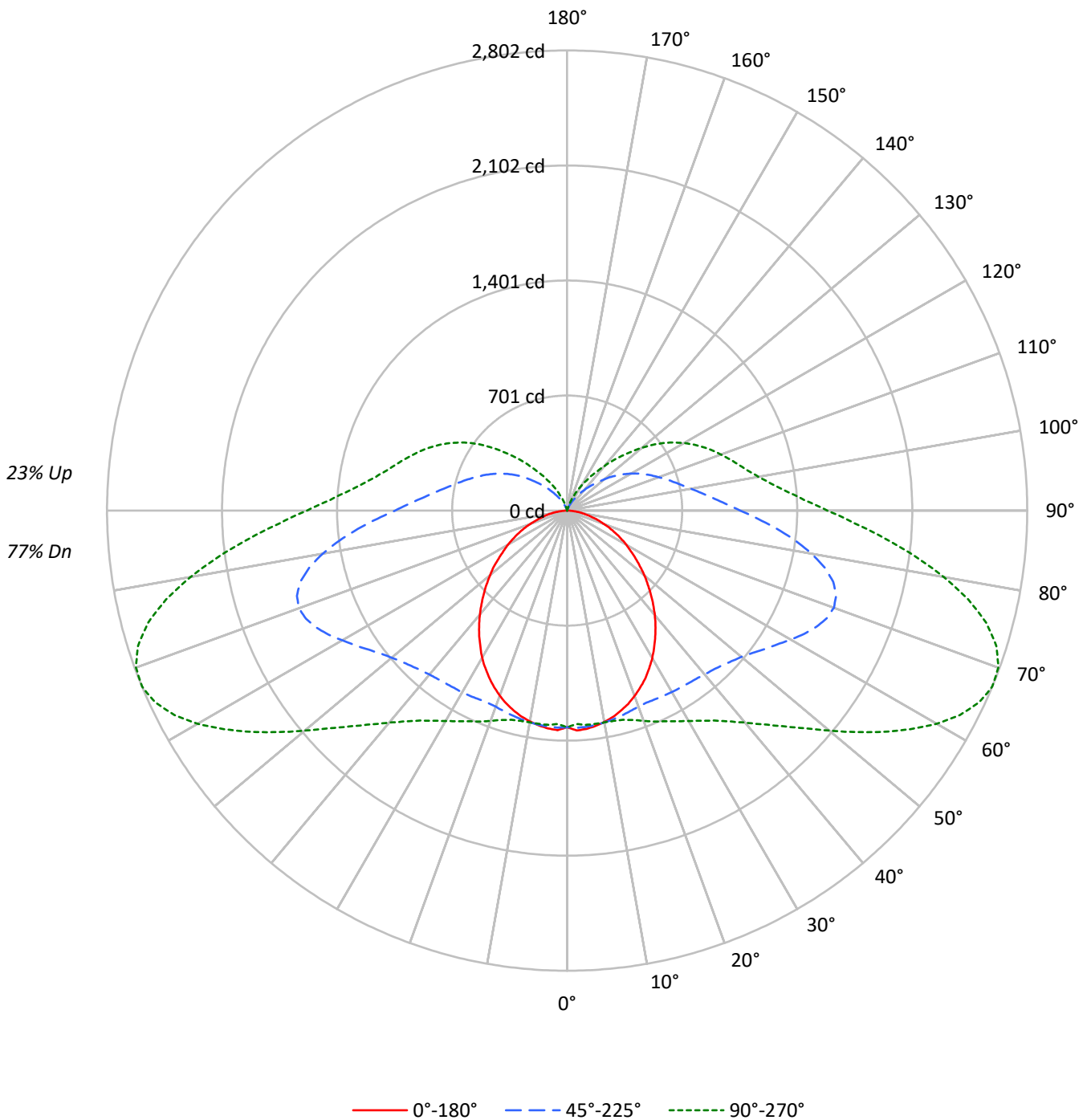
Input Watts (W): 71.96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	10627	10627	10627
5°	10768	9549	10744
10°	10641	8783	10617
15°	10449	8249	10434
20°	10202	8042	10185
25°	9901	7962	9859
30°	9497	8004	9489
35°	9038	8199	9019
40°	8544	8667	8505
45°	8006	9417	7984
50°	7459	10514	7436
55°	6907	11872	6894
60°	6414	13253	6430
65°	5869	14367	5885
70°	5290	14886	5290
75°	4597	14565	4569
80°	3837	13403	3797
85°	2872	11772	2729



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.2	1.1
10°-20°	364.3	3.2
20°-30°	585.4	5.2
30°-40°	792.7	7.0
40°-50°	1018.4	9.0
50°-60°	1310.2	11.6
60°-70°	1602.9	14.2
70°-80°	1620.6	14.4
80°-90°	1253.2	11.1
90°-100°	870.7	7.7
100°-110°	650.3	5.8
110°-120°	487.4	4.3
120°-130°	328.2	2.9
130°-140°	180.0	1.6
140°-150°	76.7	0.7
150°-160°	21.9	0.2
160°-170°	1.9	0.0
170°-180°	0.0	0.0
0°-30°	1074.9	9.5
0°-40°	1867.7	16.5
0°-60°	4196.3	37.2
0°-90°	8673.0	76.8
90°-120°	2008.4	17.8
90°-150°	2593.3	23.0
90°-180°	2617.0	23.2
0°-180°	11290.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1319	1319	1319	1319	1319	
5°	1334	1322	1309	1320	1332	126
15°	1262	1291	1319	1291	1260	355
25°	1127	1267	1416	1268	1122	518
35°	936	1284	1561	1286	934	585
45°	721	1333	1856	1339	719	556
55°	510	1470	2348	1476	509	457
65°	325	1675	2766	1685	326	323
75°	162	1678	2643	1683	161	173
85°	40	1283	1940	1279	38	44
90°	1	1054	1584	1048	0	3
95°	1	889	1340	885	0	1
105°	1	672	1080	672	0	1
115°	1	522	914	522	0	1
125°	1	375	717	373	0	1
135°	2	226	471	223	0	1
145°	2	115	259	110	0	1
155°	2	36	107	34	0	1
165°	2	2	10	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°	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0
2.5°	1340.1	1339.1	1333.4	1324.8	1320.9	1320.0	1319.0	1315.2	1314.2	1316.1	1323.8
5°	1334.4	1333.4	1327.6	1319.0	1316.1	1315.2	1314.2	1311.3	1311.3	1314.2	1321.9
7.5°	1322.8	1321.9	1316.1	1309.4	1306.6	1305.6	1305.6	1303.7	1303.7	1308.5	1317.1
10°	1306.6	1305.6	1300.8	1295.0	1293.1	1293.1	1293.1	1292.2	1294.1	1299.8	1309.4
12.5°	1287.4	1285.5	1281.6	1276.8	1276.8	1276.8	1277.8	1277.8	1280.7	1290.3	1301.8
15°	1261.5	1262.5	1258.6	1254.8	1256.7	1257.7	1259.6	1261.5	1266.3	1277.8	1291.2
17.5°	1234.7	1234.7	1231.8	1229.9	1233.7	1235.6	1238.5	1241.4	1250.0	1264.4	1279.7
20°	1201.1	1202.1	1201.1	1202.1	1206.9	1209.7	1213.6	1220.3	1231.8	1251.9	1270.1
22.5°	1164.7	1166.6	1166.6	1170.4	1178.1	1182.9	1187.7	1197.3	1213.6	1239.5	1265.3
25°	1127.3	1126.3	1131.1	1137.8	1145.5	1152.2	1158.0	1172.4	1196.3	1230.8	1267.3
27.5°	1082.2	1084.2	1090.9	1100.5	1112.0	1120.6	1129.2	1149.3	1183.9	1229.9	1272.0
30°	1036.2	1039.1	1047.7	1061.2	1077.5	1089.0	1098.5	1130.2	1177.1	1229.9	1275.9
32.5°	986.4	991.2	1002.7	1019.9	1042.9	1056.4	1071.7	1113.9	1171.4	1227.9	1279.7
35°	935.6	941.3	956.7	977.8	1004.6	1020.9	1044.9	1101.4	1163.7	1226.0	1284.5
37.5°	883.8	890.5	907.8	934.6	969.1	994.1	1022.8	1088.0	1158.0	1226.0	1291.2
40°	830.1	837.8	859.9	890.5	934.6	967.2	1001.7	1074.6	1152.2	1227.0	1301.8
42.5°	775.5	784.1	811.0	847.4	904.9	943.2	981.6	1063.1	1148.4	1231.8	1315.2
45°	720.9	732.4	762.1	806.2	878.1	918.3	962.4	1052.5	1146.5	1240.4	1333.4
47.5°	666.2	679.6	714.1	766.9	850.3	898.2	944.2	1043.9	1148.4	1251.9	1357.4
50°	613.5	628.8	667.2	731.4	824.4	876.1	927.0	1038.1	1152.2	1269.2	1386.1
52.5°	559.8	579.9	622.1	699.8	801.4	856.0	912.6	1034.3	1159.9	1292.2	1423.5
55°	510.0	531.1	579.9	669.1	779.3	838.8	899.2	1033.4	1173.3	1320.0	1469.5
57.5°	459.2	485.0	538.7	639.4	756.3	821.5	888.6	1035.3	1189.6	1349.7	1516.5
60°	416.0	439.0	501.3	610.6	736.2	805.2	879.0	1037.2	1206.9	1384.2	1571.1
62.5°	370.0	394.9	468.7	582.8	716.1	790.8	869.4	1040.1	1225.1	1419.7	1626.7
65°	325.0	350.8	436.2	556.0	695.9	775.5	857.9	1040.1	1239.5	1452.3	1674.6
67.5°	281.8	309.6	403.6	527.2	672.9	756.3	843.6	1035.3	1248.1	1475.3	1712.0
70°	240.6	271.3	371.9	496.5	648.0	733.3	823.4	1024.7	1247.1	1483.9	1728.3
72.5°	199.4	234.9	337.4	465.9	621.2	707.4	799.5	1004.6	1233.7	1473.3	1717.8
75°	162.0	200.3	306.7	435.2	590.5	676.8	769.7	973.9	1204.0	1440.8	1677.5
77.5°	127.5	169.7	274.2	401.6	556.0	641.3	732.4	934.6	1157.0	1383.2	1606.6
80°	94.9	141.9	243.5	368.1	518.6	602.0	690.2	884.8	1095.7	1305.6	1511.7
82.5°	66.1	116.0	213.8	334.5	480.3	559.8	644.2	825.3	1024.7	1215.5	1402.4
85°	40.3	93.0	184.0	302.0	440.9	515.7	595.3	763.0	947.1	1117.7	1282.6
87.5°	17.3	71.9	158.2	270.3	401.6	472.6	545.4	703.6	864.6	1016.1	1162.8
90°	1.0	53.7	135.2	240.6	364.3	430.4	498.5	640.3	788.9	923.1	1053.5
92.5°	0.0	46.0	121.7	222.4	338.4	399.7	463.0	593.4	727.6	847.4	963.4
95°	1.0	38.3	110.2	202.3	312.5	371.0	429.4	551.2	672.0	782.2	888.6
97.5°	1.0	31.6	97.8	184.0	288.5	342.2	396.9	510.0	619.2	723.7	822.5
100°	1.0	24.9	86.3	166.8	263.6	313.5	365.2	471.6	574.2	672.0	765.0
102.5°	1.0	18.2	76.7	150.5	240.6	287.6	335.5	436.2	533.0	626.9	715.1
105°	1.0	12.5	67.1	135.2	219.5	263.6	308.7	403.6	495.6	585.7	672.0
107.5°	1.0	8.6	58.5	120.8	196.5	240.6	282.8	372.9	461.1	548.3	632.7
110°	1.0	7.7	50.8	108.3	178.3	218.6	258.8	344.1	428.5	511.9	594.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	6.7	43.1	96.8	160.1	196.5	235.8	316.3	398.8	479.3	557.9
115°	1.0	6.7	35.5	86.3	144.7	177.3	213.8	289.5	368.1	445.7	522.4
117.5°	1.0	6.7	28.8	76.7	130.4	160.1	191.7	264.6	337.4	413.2	487.9
120°	1.0	5.8	23.0	67.1	117.9	144.7	174.5	240.6	307.7	378.6	450.5
122.5°	1.0	5.8	19.2	58.5	105.4	130.4	157.2	215.7	279.9	345.1	412.2
125°	1.0	4.8	16.3	48.9	93.0	116.9	140.9	193.6	253.1	313.5	374.8
127.5°	1.9	4.8	13.4	40.3	80.5	101.6	124.6	172.5	224.3	278.9	337.4
130°	1.9	4.8	11.5	30.7	68.1	87.2	107.4	151.5	199.4	246.4	297.2
132.5°	1.9	3.8	10.5	24.0	56.6	73.8	92.0	131.3	173.5	215.7	259.8
135°	1.9	3.8	8.6	19.2	45.1	60.4	77.6	112.2	149.5	188.8	226.2
137.5°	1.9	2.9	7.7	15.3	34.5	48.9	64.2	94.9	127.5	161.0	195.6
140°	1.9	2.9	6.7	12.5	25.9	36.4	50.8	77.6	106.4	136.1	165.8
142.5°	1.9	2.9	5.8	10.5	20.1	27.8	38.3	63.3	88.2	113.1	139.0
145°	1.9	2.9	4.8	8.6	15.3	21.1	27.8	48.9	70.9	93.0	115.0
147.5°	1.9	2.9	4.8	7.7	12.5	16.3	21.1	35.5	55.6	73.8	93.0
150°	1.9	2.9	3.8	6.7	10.5	12.5	15.3	24.9	40.3	56.6	72.9
152.5°	1.9	1.9	3.8	5.8	7.7	9.6	11.5	18.2	27.8	40.3	54.6
155°	1.9	1.9	2.9	4.8	6.7	7.7	8.6	12.5	18.2	25.9	36.4
157.5°	1.9	1.9	2.9	3.8	4.8	5.8	6.7	8.6	12.5	16.3	22.0
160°	1.9	1.9	2.9	3.8	3.8	4.8	4.8	5.8	7.7	9.6	12.5
162.5°	1.9	1.9	2.9	2.9	2.9	3.8	3.8	3.8	4.8	4.8	5.8
165°	1.9	1.9	1.9	2.9	1.9	2.9	1.9	2.9	2.9	1.9	1.9
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°	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0
2.5°	1326.7	1320.0	1317.1	1313.3	1310.4	1308.5	1305.6	1303.7	1300.8	1300.8	1301.8
5°	1324.8	1318.1	1316.1	1312.3	1310.4	1309.4	1307.5	1308.5	1308.5	1309.4	1308.5
7.5°	1320.9	1315.2	1313.3	1311.3	1309.4	1308.5	1307.5	1309.4	1309.4	1310.4	1310.4
10°	1314.2	1310.4	1310.4	1308.5	1307.5	1306.6	1304.6	1307.5	1307.5	1309.4	1308.5
12.5°	1306.6	1305.6	1306.6	1307.5	1307.5	1306.6	1305.6	1309.4	1311.3	1311.3	1312.3
15°	1297.9	1299.8	1304.6	1307.5	1309.4	1309.4	1311.3	1315.2	1318.1	1319.0	1319.0
17.5°	1291.2	1296.0	1304.6	1312.3	1316.1	1318.1	1322.8	1330.5	1335.3	1336.3	1336.3
20°	1286.4	1297.9	1313.3	1327.6	1332.4	1336.3	1345.9	1355.4	1362.2	1363.1	1363.1
22.5°	1290.3	1309.4	1330.5	1346.8	1353.5	1358.3	1368.9	1381.3	1389.0	1389.9	1389.9
25°	1299.8	1322.8	1346.8	1366.9	1374.6	1380.4	1391.9	1405.3	1413.0	1415.8	1414.9
27.5°	1308.5	1336.3	1364.1	1387.1	1395.7	1403.4	1417.7	1433.1	1442.7	1445.5	1443.6
30°	1316.1	1348.7	1380.4	1408.2	1419.7	1428.3	1445.5	1463.8	1476.2	1479.1	1476.2
32.5°	1323.8	1363.1	1400.5	1433.1	1444.6	1457.1	1479.1	1500.2	1512.6	1516.5	1514.6
35°	1334.4	1380.4	1424.5	1461.8	1477.2	1491.6	1517.4	1542.4	1557.7	1560.6	1557.7
37.5°	1348.7	1402.4	1451.3	1498.3	1514.6	1534.7	1565.4	1595.1	1613.3	1617.1	1613.3
40°	1366.9	1430.2	1487.7	1542.4	1564.4	1585.5	1622.9	1658.4	1678.5	1685.2	1682.3
42.5°	1390.9	1464.7	1531.8	1597.0	1621.9	1648.8	1692.9	1734.1	1757.1	1764.8	1757.1
45°	1420.6	1507.9	1585.5	1661.2	1690.0	1722.6	1775.3	1822.3	1849.1	1855.8	1849.1
47.5°	1459.9	1558.7	1648.8	1736.0	1770.5	1808.9	1871.2	1924.8	1953.6	1961.3	1954.6
50°	1502.1	1620.0	1723.5	1823.2	1866.4	1906.6	1979.5	2038.9	2069.6	2084.0	2071.5
52.5°	1554.8	1687.1	1808.9	1920.0	1971.8	2019.7	2100.3	2165.4	2202.8	2215.3	2198.0
55°	1618.1	1767.6	1903.8	2032.2	2084.0	2137.6	2226.8	2295.8	2335.1	2348.5	2336.1
57.5°	1688.1	1852.9	2003.4	2138.6	2199.0	2253.6	2353.3	2425.2	2459.7	2477.0	2461.6
60°	1760.9	1941.1	2104.1	2247.9	2314.0	2370.6	2472.2	2543.1	2579.6	2596.8	2582.4
62.5°	1831.9	2026.4	2198.0	2347.6	2410.8	2473.2	2574.8	2642.8	2680.2	2695.5	2682.1
65°	1893.2	2098.3	2274.7	2429.1	2494.2	2555.6	2651.4	2716.6	2755.9	2766.5	2756.9
67.5°	1939.2	2147.2	2325.5	2477.9	2541.2	2602.6	2693.6	2754.0	2792.4	2801.9	2793.3
70°	1960.3	2166.4	2342.8	2491.4	2553.7	2608.3	2694.6	2752.1	2788.5	2794.3	2787.6
72.5°	1946.9	2147.2	2317.9	2459.7	2519.2	2567.1	2646.7	2701.3	2735.8	2740.6	2735.8
75°	1897.0	2088.8	2249.8	2382.1	2437.7	2477.9	2553.7	2604.5	2639.0	2642.8	2637.1
77.5°	1812.7	1991.0	2138.6	2266.1	2312.1	2351.4	2423.3	2468.4	2496.2	2501.9	2495.2
80°	1699.6	1863.5	1995.8	2109.8	2153.9	2187.5	2257.5	2306.4	2321.7	2329.4	2319.8
82.5°	1570.2	1716.8	1834.7	1938.3	1977.6	2018.8	2063.8	2108.9	2130.9	2137.6	2130.0
85°	1431.2	1561.5	1666.0	1759.0	1793.5	1830.9	1870.2	1914.3	1933.5	1940.2	1932.5
87.5°	1292.2	1407.2	1499.2	1581.7	1613.3	1646.9	1693.8	1716.8	1742.7	1750.4	1741.8
90°	1167.6	1271.1	1353.5	1428.3	1458.0	1488.7	1525.1	1553.9	1577.8	1584.5	1576.9
92.5°	1066.9	1159.9	1235.6	1302.7	1328.6	1357.4	1392.8	1420.6	1441.7	1448.4	1440.8
95°	983.5	1068.8	1139.8	1202.1	1227.0	1253.8	1293.1	1315.2	1334.4	1340.1	1334.4
97.5°	912.6	993.1	1060.2	1120.6	1144.6	1169.5	1207.8	1229.9	1248.1	1252.9	1248.1
100°	850.3	928.9	995.0	1052.5	1076.5	1100.5	1137.8	1159.9	1177.1	1182.9	1177.1
102.5°	798.5	874.2	939.4	997.9	1020.9	1044.9	1080.3	1106.2	1119.6	1126.3	1120.6
105°	753.4	827.3	892.4	950.0	973.9	996.9	1033.4	1057.3	1072.7	1080.3	1073.6
107.5°	712.2	785.1	851.2	906.8	930.8	953.8	991.2	1015.1	1029.5	1038.1	1030.5
110°	672.9	744.8	808.1	865.6	889.6	913.5	950.9	974.9	989.3	996.9	990.2



TEST NUMBER: P201258

CATALOG NUMBER: 8LBLED-LD4-10-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	634.6	704.6	769.7	825.3	848.3	872.3	910.7	935.6	949.0	957.6	950.0
115°	596.2	665.3	728.5	782.2	805.2	830.1	867.5	893.4	907.8	914.5	906.8
117.5°	558.9	625.0	685.4	738.1	761.1	785.1	821.5	847.4	862.7	869.4	861.8
120°	520.5	583.8	643.2	691.1	715.1	737.2	774.5	799.5	814.8	821.5	813.8
122.5°	479.3	541.6	598.2	645.1	668.1	689.2	725.6	750.6	765.0	771.7	765.0
125°	437.1	495.6	550.2	597.2	616.4	636.5	672.0	695.9	711.3	717.0	711.3
127.5°	394.9	448.6	499.4	540.6	561.7	580.9	614.5	637.5	650.9	657.6	652.8
130°	352.8	403.6	449.6	487.0	505.2	523.4	554.1	575.2	588.6	594.3	589.5
132.5°	307.7	356.6	401.6	434.2	451.5	466.8	494.6	512.8	524.3	531.1	525.3
135°	267.4	307.7	349.9	383.4	400.7	414.1	439.0	454.4	464.9	470.7	464.9
137.5°	231.0	265.5	300.0	329.8	346.0	360.4	384.4	398.8	408.4	414.1	408.4
140°	197.5	227.2	257.9	281.8	296.2	307.7	329.8	342.2	350.8	355.6	349.9
142.5°	164.9	191.7	217.6	239.6	252.1	261.7	282.8	292.4	299.1	302.0	299.1
145°	137.1	159.1	181.2	201.3	210.9	218.6	239.6	250.2	255.9	258.8	255.9
147.5°	111.2	129.4	147.6	163.9	172.5	182.1	196.5	209.0	213.8	215.7	213.8
150°	87.2	103.5	117.9	131.3	138.0	144.7	157.2	169.7	174.5	177.3	174.5
152.5°	66.1	79.6	91.1	101.6	107.4	113.1	123.7	135.2	140.0	141.9	140.0
155°	47.9	57.5	68.1	75.7	80.5	84.4	92.0	99.7	107.4	107.4	107.4
157.5°	29.7	37.4	46.0	52.7	55.6	59.4	65.2	71.9	77.6	80.5	80.5
160°	15.3	20.1	25.9	30.7	33.6	36.4	40.3	46.0	49.8	52.7	50.8
162.5°	6.7	8.6	11.5	13.4	15.3	16.3	19.2	22.0	24.0	28.8	24.9
165°	1.9	1.9	2.9	3.8	3.8	3.8	4.8	5.8	6.7	10.5	7.7
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: P201258

CATALOG NUMBER: 8LBLELD4-10-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0
2.5°	1303.7	1306.6	1310.4	1312.3	1315.2	1317.1	1321.9	1327.6	1322.8	1316.1	1317.1
5°	1308.5	1307.5	1310.4	1312.3	1314.2	1315.2	1320.0	1325.7	1320.0	1313.3	1313.3
7.5°	1310.4	1309.4	1310.4	1311.3	1312.3	1312.3	1317.1	1321.9	1316.1	1307.5	1305.6
10°	1307.5	1306.6	1307.5	1309.4	1309.4	1309.4	1312.3	1316.1	1309.4	1298.9	1295.0
12.5°	1309.4	1306.6	1306.6	1307.5	1307.5	1305.6	1306.6	1309.4	1300.8	1289.3	1283.5
15°	1316.1	1311.3	1309.4	1309.4	1307.5	1302.7	1300.8	1300.8	1291.2	1275.9	1268.2
17.5°	1332.4	1324.8	1319.0	1316.1	1312.3	1303.7	1297.0	1293.1	1280.7	1263.4	1251.0
20°	1357.4	1346.8	1338.2	1332.4	1327.6	1312.3	1298.9	1288.3	1271.1	1250.0	1233.7
22.5°	1382.3	1370.8	1358.3	1352.6	1345.9	1328.6	1310.4	1292.2	1266.3	1237.5	1215.5
25°	1406.2	1394.7	1380.4	1374.6	1366.0	1345.9	1322.8	1301.8	1268.2	1228.9	1197.3
27.5°	1434.0	1419.7	1404.3	1395.7	1386.1	1363.1	1337.2	1311.3	1274.0	1228.9	1184.8
30°	1465.7	1448.4	1428.3	1418.7	1407.2	1380.4	1348.7	1318.1	1277.8	1228.9	1178.1
32.5°	1502.1	1482.0	1458.0	1444.6	1431.2	1399.5	1362.2	1326.7	1280.7	1227.9	1172.4
35°	1544.3	1521.3	1492.5	1477.2	1460.9	1423.5	1379.4	1336.3	1285.5	1227.0	1164.7
37.5°	1597.0	1570.2	1535.7	1516.5	1497.3	1453.2	1402.4	1350.6	1293.1	1227.9	1158.9
40°	1660.3	1628.6	1588.4	1564.4	1541.4	1490.6	1430.2	1368.9	1303.7	1229.9	1153.2
42.5°	1735.0	1696.7	1651.6	1623.8	1597.0	1533.7	1464.7	1391.9	1318.1	1233.7	1150.3
45°	1824.2	1783.9	1726.4	1691.9	1662.2	1588.4	1508.8	1422.5	1339.1	1243.3	1149.3
47.5°	1926.8	1876.0	1813.6	1773.4	1737.9	1652.6	1560.6	1460.9	1363.1	1255.7	1151.3
50°	2041.8	1984.3	1912.4	1870.2	1826.1	1728.3	1621.9	1505.9	1393.8	1274.0	1156.1
52.5°	2168.3	2105.1	2027.4	1977.6	1928.7	1815.6	1690.9	1563.5	1429.3	1297.0	1164.7
55°	2299.6	2231.6	2145.3	2090.7	2036.0	1911.4	1772.4	1625.8	1476.2	1325.7	1179.1
57.5°	2427.1	2357.2	2262.3	2206.7	2145.3	2013.0	1859.7	1693.8	1527.0	1359.3	1195.4
60°	2545.0	2475.1	2379.2	2322.7	2255.6	2113.7	1948.8	1768.6	1579.7	1394.7	1214.5
62.5°	2644.7	2577.6	2481.8	2424.3	2355.2	2208.6	2034.1	1841.4	1637.3	1432.1	1232.7
65°	2718.5	2655.3	2562.3	2502.9	2436.7	2284.3	2106.0	1905.7	1685.2	1464.7	1249.0
67.5°	2755.9	2696.5	2606.4	2549.8	2484.7	2333.2	2154.9	1948.8	1721.6	1487.7	1259.6
70°	2752.1	2695.5	2611.2	2555.6	2493.3	2347.6	2172.2	1966.1	1737.9	1496.4	1257.7
72.5°	2702.3	2645.7	2570.0	2516.3	2456.9	2320.7	2148.2	1950.7	1725.5	1482.9	1242.3
75°	2603.5	2551.8	2475.1	2431.0	2377.3	2250.8	2085.9	1894.2	1683.3	1447.5	1210.7
77.5°	2461.6	2422.3	2347.6	2306.4	2253.6	2136.7	1981.4	1808.9	1609.5	1388.0	1161.8
80°	2288.1	2255.6	2182.7	2146.3	2094.5	1992.9	1858.7	1691.9	1511.7	1307.5	1098.5
82.5°	2098.3	2061.0	2003.4	1969.9	1921.0	1829.9	1702.4	1566.3	1398.6	1215.5	1024.7
85°	1901.8	1867.3	1814.6	1785.8	1742.7	1661.2	1547.2	1427.3	1278.8	1113.9	945.2
87.5°	1714.9	1681.4	1631.5	1605.6	1566.3	1493.5	1393.8	1288.3	1157.0	1016.1	860.8
90°	1552.9	1521.3	1474.3	1450.3	1414.9	1348.7	1258.6	1163.7	1047.7	918.3	785.1
92.5°	1419.7	1390.9	1346.8	1323.8	1292.2	1231.8	1150.3	1064.0	959.5	847.4	723.7
95°	1314.2	1286.4	1247.1	1225.1	1195.4	1133.0	1061.2	980.6	884.8	782.2	668.1
97.5°	1228.9	1205.9	1162.8	1141.7	1117.7	1054.4	989.3	909.7	820.5	724.7	618.3
100°	1159.9	1134.0	1094.7	1074.6	1049.7	990.2	924.1	849.3	763.0	672.0	573.2
102.5°	1106.2	1079.4	1042.9	1019.9	996.0	935.6	870.4	797.5	715.1	626.9	532.0
105°	1058.3	1032.4	996.0	973.0	949.0	889.6	827.3	753.4	672.0	586.7	494.6
107.5°	1013.2	990.2	953.8	930.8	906.8	847.4	785.1	712.2	632.7	549.3	460.1
110°	974.9	950.0	911.6	889.6	863.7	807.1	744.8	673.9	594.3	512.8	427.5



TEST NUMBER: P201258

CATALOG NUMBER: 8LBLED-LD4-10-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	936.5	909.7	871.4	849.3	823.4	766.9	705.5	635.5	557.9	479.3	396.9
115°	894.4	868.5	828.2	806.2	780.3	724.7	665.3	597.2	522.4	445.7	366.2
117.5°	849.3	823.4	783.2	762.1	737.2	682.5	626.0	559.8	487.0	413.2	335.5
120°	800.4	775.5	737.2	716.1	692.1	639.4	584.7	518.6	449.6	378.6	306.7
122.5°	750.6	726.6	689.2	668.1	645.1	595.3	541.6	477.4	411.2	345.1	278.9
125°	696.9	672.9	637.5	617.3	594.3	546.4	494.6	434.2	372.9	313.5	250.2
127.5°	634.6	615.4	580.9	560.8	539.7	497.5	447.7	393.0	336.5	278.9	222.4
130°	575.2	555.0	522.4	504.2	486.0	447.7	403.6	350.8	295.2	245.4	194.6
132.5°	512.8	494.6	466.8	451.5	435.2	400.7	355.6	303.9	256.9	213.8	168.7
135°	454.4	439.0	414.1	400.7	384.4	348.0	305.8	262.7	223.4	185.0	144.7
137.5°	399.7	384.4	361.4	347.0	329.8	297.2	262.7	227.2	190.8	158.2	122.7
140°	342.2	329.8	308.7	296.2	280.9	253.1	224.3	190.8	162.0	132.3	101.6
142.5°	293.3	282.8	261.7	250.2	236.8	213.8	186.9	161.0	135.2	109.3	83.4
145°	251.1	240.6	217.6	209.0	196.5	176.4	154.3	131.3	110.2	88.2	67.1
147.5°	209.9	197.5	177.3	169.7	160.1	142.8	125.6	107.4	89.1	70.0	51.8
150°	171.6	157.2	140.9	136.1	126.5	113.1	98.7	83.4	69.0	53.7	37.4
152.5°	135.2	122.7	109.3	104.5	96.8	88.2	75.7	63.3	51.8	37.4	25.9
155°	100.7	91.1	80.5	77.6	71.9	65.2	54.6	45.1	34.5	24.9	18.2
157.5°	70.9	63.3	55.6	53.7	49.8	44.1	35.5	27.8	22.0	16.3	12.5
160°	44.1	39.3	33.6	31.6	28.8	24.9	19.2	16.3	13.4	10.5	7.7
162.5°	21.1	18.2	16.3	15.3	13.4	11.5	10.5	8.6	7.7	6.7	5.8
165°	7.7	7.7	7.7	6.7	6.7	6.7	6.7	5.8	4.8	4.8	3.8
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: P201258

CATALOG NUMBER: 8LBLED-LD4-10-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0	1319.0
2.5°	1318.1	1320.0	1320.0	1320.9	1323.8	1329.6	1337.2	1338.2
5°	1314.2	1315.2	1315.2	1315.2	1318.1	1322.8	1330.5	1331.5
7.5°	1305.6	1305.6	1305.6	1305.6	1308.5	1312.3	1319.0	1320.0
10°	1294.1	1293.1	1293.1	1292.2	1294.1	1297.0	1304.6	1303.7
12.5°	1279.7	1277.8	1276.8	1276.8	1275.9	1278.8	1283.5	1284.5
15°	1263.4	1259.6	1257.7	1255.7	1254.8	1254.8	1260.5	1259.6
17.5°	1244.2	1238.5	1235.6	1232.7	1228.9	1228.9	1232.7	1231.8
20°	1222.2	1214.5	1209.7	1205.9	1200.1	1198.2	1200.1	1199.2
22.5°	1200.1	1187.7	1182.9	1177.1	1168.5	1164.7	1163.7	1162.8
25°	1174.3	1158.9	1152.2	1146.5	1134.0	1129.2	1124.4	1122.5
27.5°	1151.3	1129.2	1120.6	1111.0	1096.6	1089.9	1082.2	1080.3
30°	1131.1	1098.5	1085.1	1075.5	1057.3	1046.8	1037.2	1035.3
32.5°	1115.8	1070.7	1052.5	1041.0	1016.1	1001.7	989.3	983.5
35°	1102.4	1044.9	1020.9	1002.7	973.0	955.7	938.5	933.7
37.5°	1089.9	1022.8	991.2	966.3	932.7	907.8	888.6	880.9
40°	1077.5	1002.7	964.3	932.7	888.6	859.9	835.9	826.3
42.5°	1065.9	982.6	941.3	903.0	845.5	811.0	785.1	771.7
45°	1055.4	964.3	919.3	877.1	803.3	763.0	731.4	718.9
47.5°	1047.7	947.1	897.2	851.2	764.0	714.1	681.6	665.3
50°	1042.0	930.8	876.1	825.3	729.5	667.2	630.7	611.6
52.5°	1039.1	916.4	857.0	802.3	697.9	622.1	579.0	564.6
55°	1040.1	904.9	840.7	781.2	668.1	579.0	531.1	509.0
57.5°	1042.0	894.4	824.4	760.2	638.4	536.8	483.1	460.1
60°	1045.8	885.7	810.0	740.0	610.6	500.4	439.0	417.0
62.5°	1049.7	878.1	795.6	720.9	583.8	466.8	394.9	370.0
65°	1050.6	866.6	780.3	701.7	556.9	433.3	349.9	325.9
67.5°	1046.8	852.2	761.1	679.6	529.1	400.7	307.7	282.8
70°	1035.3	833.0	739.1	654.7	498.5	369.1	267.4	240.6
72.5°	1014.2	808.1	713.2	626.9	468.7	335.5	231.0	198.4
75°	984.5	777.4	682.5	595.3	437.1	303.9	197.5	161.0
77.5°	944.2	738.1	646.1	559.8	402.6	271.3	168.7	126.5
80°	892.4	696.9	605.8	521.5	369.1	241.6	140.9	93.9
82.5°	831.1	649.9	562.7	482.2	337.4	210.9	115.0	65.2
85°	767.8	599.1	517.6	440.9	303.9	182.1	93.0	38.3
87.5°	705.5	548.3	474.5	403.6	269.4	156.2	71.9	15.3
90°	644.2	499.4	429.4	363.3	239.6	132.3	53.7	0.0
92.5°	593.4	463.0	399.7	336.5	220.5	119.8	46.0	0.0
95°	548.3	428.5	368.1	309.6	200.3	108.3	38.3	0.0
97.5°	507.1	395.9	340.3	284.7	182.1	95.9	31.6	0.0
100°	467.8	363.3	311.5	261.7	164.9	85.3	24.0	0.0
102.5°	433.3	334.5	285.7	236.8	147.6	74.8	17.3	0.0
105°	399.7	306.7	261.7	214.7	132.3	65.2	10.5	0.0
107.5°	370.0	280.9	237.7	194.6	117.9	56.6	6.7	0.0
110°	341.3	256.9	214.7	175.4	105.4	48.9	5.8	0.0



TEST NUMBER: P201258

CATALOG NUMBER: 8LBLED-LD4-10-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	314.4	233.9	194.6	157.2	94.9	41.2	5.8	0.0
115°	286.6	211.8	175.4	141.9	84.4	33.6	4.8	0.0
117.5°	262.7	190.8	158.2	129.4	73.8	26.8	4.8	0.0
120°	238.7	172.5	143.8	116.0	64.2	20.1	4.8	0.0
122.5°	214.7	156.2	128.5	103.5	55.6	16.3	3.8	0.0
125°	192.7	139.0	114.1	90.1	46.0	14.4	3.8	0.0
127.5°	170.6	121.7	98.7	77.6	36.4	12.5	2.9	0.0
130°	148.6	104.5	84.4	65.2	27.8	10.5	2.9	0.0
132.5°	128.5	88.2	70.9	53.7	22.0	8.6	1.9	0.0
135°	108.3	73.8	58.5	42.2	17.3	7.7	1.9	0.0
137.5°	91.1	60.4	46.0	31.6	14.4	5.8	1.9	0.0
140°	74.8	47.9	34.5	24.0	11.5	4.8	1.0	0.0
142.5°	59.4	35.5	25.9	18.2	9.6	3.8	1.0	0.0
145°	46.0	25.9	19.2	14.4	8.6	2.9	1.0	0.0
147.5°	33.6	20.1	15.3	12.5	6.7	2.9	1.0	0.0
150°	24.0	15.3	12.5	9.6	4.8	1.9	1.0	0.0
152.5°	18.2	11.5	9.6	7.7	3.8	1.9	1.0	0.0
155°	13.4	8.6	7.7	5.8	2.9	1.9	1.0	0.0
157.5°	9.6	6.7	5.8	3.8	2.9	1.9	1.0	0.0
160°	5.8	4.8	3.8	2.9	1.9	1.0	1.0	0.0
162.5°	4.8	2.9	2.9	2.9	1.9	1.0	1.0	0.0
165°	2.9	1.9	1.9	1.9	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)