

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: P201256

Luminaire Tested: **8LBLED-LD4-9-SYMF-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201256
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-LD4-9-SYMF-UNV-L850-CD1-U
Description: 8 ft. Low Bay Linear, 9000 lm, Frst Sym lens, 5K
Light Source: (784) 5000K CCT, 80 CRI LEDS
2UT217098A8504C
Ballast/Driver: OSRAM
(OTI85W01440CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10206.5 lumens
Efficiency: N/A
Efficacy: 158.2 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

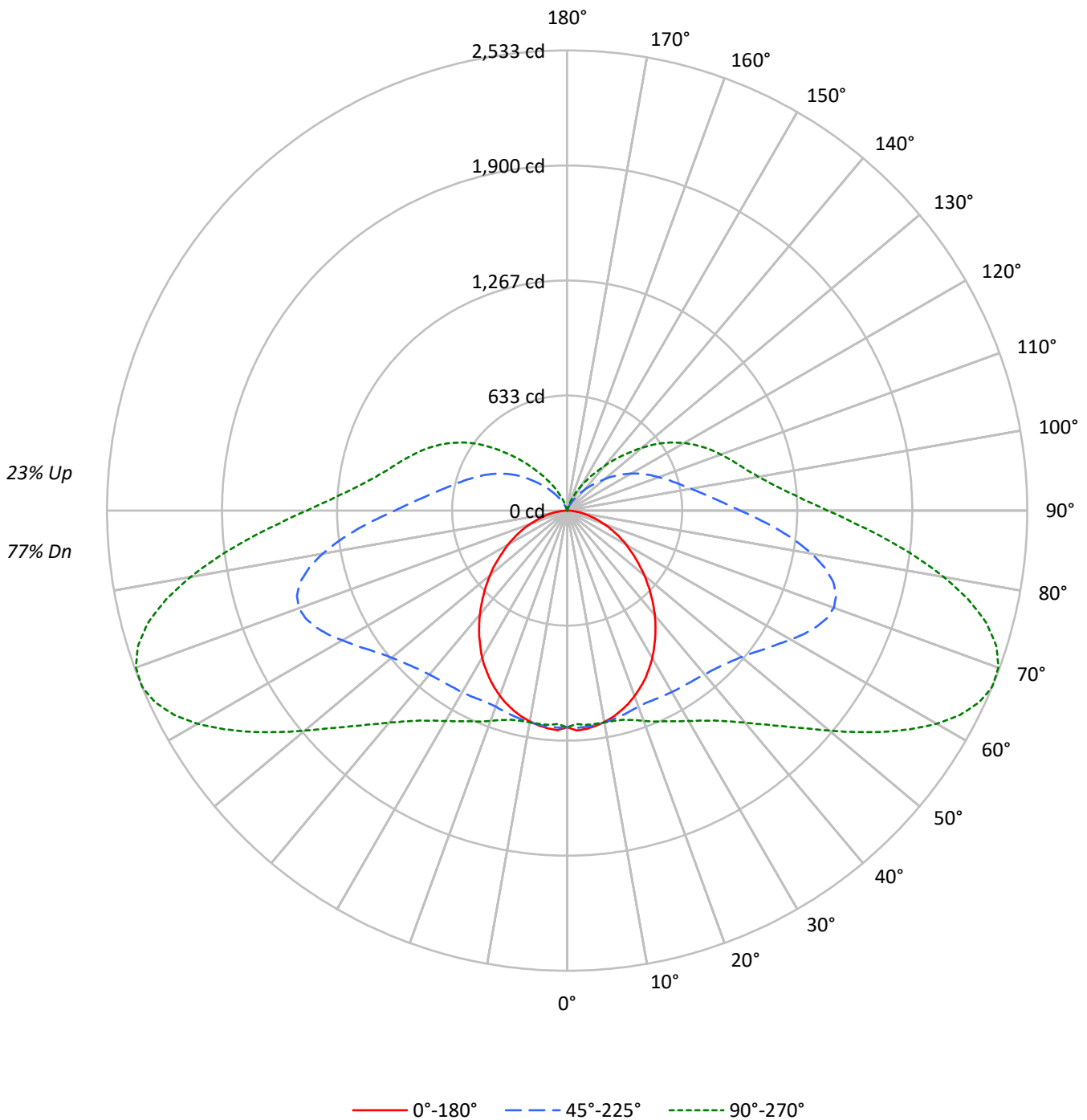
Input Watts (W): 64.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P201256

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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°	9607	9607	9607
5°	9734	8633	9713
10°	9619	7941	9598
15°	9446	7457	9432
20°	9222	7270	9208
25°	8951	7198	8913
30°	8586	7236	8578
35°	8170	7412	8154
40°	7725	7835	7689
45°	7237	8513	7217
50°	6743	9505	6722
55°	6244	10732	6233
60°	5799	11981	5813
65°	5305	12988	5320
70°	4782	13457	4782
75°	4157	13167	4132
80°	3469	12117	3433
85°	2594	10642	2473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.2	1.1
10°-20°	329.3	3.2
20°-30°	529.2	5.2
30°-40°	716.6	7.0
40°-50°	920.7	9.0
50°-60°	1184.5	11.6
60°-70°	1449.1	14.2
70°-80°	1465.0	14.4
80°-90°	1132.9	11.1
90°-100°	787.1	7.7
100°-110°	587.9	5.8
110°-120°	440.6	4.3
120°-130°	296.7	2.9
130°-140°	162.7	1.6
140°-150°	69.4	0.7
150°-160°	19.8	0.2
160°-170°	1.7	0.0
170°-180°	0.0	0.0
0°-30°	971.8	9.5
0°-40°	1688.4	16.5
0°-60°	3793.6	37.2
0°-90°	7840.6	76.8
90°-120°	1815.6	17.8
90°-150°	2344.4	23.0
90°-180°	2366.0	23.2
0°-180°	10206.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1192	1192	1192	1192	1192	
5°	1206	1195	1184	1193	1204	114
15°	1140	1167	1192	1167	1139	321
25°	1019	1146	1280	1146	1015	468
35°	846	1161	1411	1162	844	529
45°	652	1205	1678	1211	650	503
55°	461	1328	2123	1334	460	413
65°	294	1514	2501	1524	295	292
75°	146	1516	2389	1522	146	156
85°	36	1160	1754	1156	35	40
90°	1	952	1432	947	0	2
95°	1	803	1212	800	0	1
105°	1	608	977	608	0	1
115°	1	472	827	472	0	1
125°	1	339	648	337	0	1
135°	2	204	426	202	0	1
145°	2	104	234	100	0	1
155°	2	33	97	31	0	1
165°	2	2	10	4	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°	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4
2.5°	1211.5	1210.6	1205.4	1197.6	1194.2	1193.3	1192.4	1189.0	1188.1	1189.8	1196.8
5°	1206.3	1205.4	1200.2	1192.4	1189.8	1189.0	1188.1	1185.5	1185.5	1188.1	1195.0
7.5°	1195.9	1195.0	1189.8	1183.8	1181.2	1180.3	1180.3	1178.6	1178.6	1182.9	1190.7
10°	1181.2	1180.3	1176.0	1170.8	1169.0	1169.0	1169.0	1168.2	1169.9	1175.1	1183.8
12.5°	1163.8	1162.1	1158.6	1154.3	1154.3	1154.3	1155.2	1155.2	1157.8	1166.4	1176.8
15°	1140.4	1141.3	1137.8	1134.4	1136.1	1137.0	1138.7	1140.4	1144.8	1155.2	1167.3
17.5°	1116.2	1116.2	1113.6	1111.8	1115.3	1117.0	1119.6	1122.2	1130.0	1143.0	1156.9
20°	1085.8	1086.7	1085.8	1086.7	1091.0	1093.6	1097.1	1103.2	1113.6	1131.8	1148.2
22.5°	1052.9	1054.6	1054.6	1058.1	1065.0	1069.4	1073.7	1082.4	1097.1	1120.5	1143.9
25°	1019.1	1018.2	1022.6	1028.6	1035.6	1041.6	1046.8	1059.8	1081.5	1112.7	1145.6
27.5°	978.4	980.1	986.2	994.8	1005.2	1013.0	1020.8	1039.0	1070.2	1111.8	1150.0
30°	936.8	939.4	947.2	959.3	974.0	984.4	993.1	1021.7	1064.2	1111.8	1153.4
32.5°	891.7	896.0	906.4	922.0	942.8	955.0	968.8	1007.0	1059.0	1110.1	1156.9
35°	845.8	851.0	864.8	883.9	908.2	922.9	944.6	995.7	1052.0	1108.4	1161.2
37.5°	799.0	805.1	820.7	844.9	876.1	898.6	924.6	983.6	1046.8	1108.4	1167.3
40°	750.5	757.4	777.3	805.1	844.9	874.4	905.6	971.4	1041.6	1109.2	1176.8
42.5°	701.1	708.9	733.1	766.1	818.1	852.7	887.4	961.0	1038.2	1113.6	1189.0
45°	651.7	662.1	688.9	728.8	793.8	830.2	870.0	951.5	1036.4	1121.4	1205.4
47.5°	602.3	614.4	645.6	693.3	768.7	812.0	853.6	943.7	1038.2	1131.8	1227.1
50°	554.6	568.5	603.1	661.2	745.3	792.1	838.0	938.5	1041.6	1147.4	1253.1
52.5°	506.1	524.3	562.4	632.6	724.5	773.9	825.0	935.0	1048.6	1168.2	1286.9
55°	461.0	480.1	524.3	604.9	704.5	758.3	812.9	934.2	1060.7	1193.3	1328.5
57.5°	415.1	438.5	487.0	578.0	683.7	742.7	803.3	935.9	1075.4	1220.1	1370.9
60°	376.1	396.9	453.2	552.0	665.5	727.9	794.7	937.6	1091.0	1251.3	1420.3
62.5°	334.5	357.0	423.8	526.9	647.3	714.9	786.0	940.2	1107.5	1283.4	1470.6
65°	293.8	317.2	394.3	502.6	629.1	701.1	775.6	940.2	1120.5	1312.9	1513.9
67.5°	254.8	279.9	364.8	476.6	608.3	683.7	762.6	935.9	1128.3	1333.7	1547.7
70°	217.5	245.2	336.2	448.9	585.8	662.9	744.4	926.4	1127.4	1341.5	1562.4
72.5°	180.2	212.3	305.0	421.2	561.5	639.5	722.7	908.2	1115.3	1331.9	1552.9
75°	146.5	181.1	277.3	393.4	533.8	611.8	695.9	880.4	1088.4	1302.5	1516.5
77.5°	115.3	153.4	247.8	363.1	502.6	579.7	662.1	844.9	1046.0	1250.5	1452.4
80°	85.8	128.3	220.1	332.8	468.8	544.2	623.9	799.9	990.5	1180.3	1366.6
82.5°	59.8	104.9	193.2	302.4	434.2	506.1	582.3	746.1	926.4	1098.8	1267.8
85°	36.4	84.1	166.4	273.0	398.6	466.2	538.1	689.8	856.2	1010.4	1159.5
87.5°	15.6	65.0	143.0	244.4	363.1	427.2	493.1	636.1	781.7	918.6	1051.2
90°	0.9	48.5	122.2	217.5	329.3	389.1	450.6	578.9	713.2	834.5	952.4
92.5°	0.0	41.6	110.1	201.0	305.9	361.4	418.6	536.4	657.7	766.1	870.9
95°	0.9	34.7	99.7	182.8	282.5	335.4	388.2	498.3	607.5	707.1	803.3
97.5°	0.9	28.6	88.4	166.4	260.8	309.4	358.8	461.0	559.8	654.3	743.5
100°	0.9	22.5	78.0	150.8	238.3	283.4	330.2	426.4	519.1	607.5	691.5
102.5°	0.9	16.5	69.3	136.1	217.5	260.0	303.3	394.3	481.8	566.7	646.5
105°	0.9	11.3	60.7	122.2	198.4	238.3	279.0	364.8	448.0	529.5	607.5
107.5°	0.9	7.8	52.9	109.2	177.6	217.5	255.6	337.1	416.8	495.7	571.9
110°	0.9	6.9	45.9	97.9	161.2	197.6	234.0	311.1	387.4	462.8	537.3



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CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.9	6.1	39.0	87.5	144.7	177.6	213.2	286.0	360.5	433.3	504.4
115°	0.9	6.1	32.1	78.0	130.9	160.3	193.2	261.7	332.8	403.0	472.3
117.5°	0.9	6.1	26.0	69.3	117.9	144.7	173.3	239.2	305.0	373.5	441.1
120°	0.9	5.2	20.8	60.7	106.6	130.9	157.7	217.5	278.2	342.3	407.3
122.5°	0.9	5.2	17.3	52.9	95.3	117.9	142.1	195.0	253.0	312.0	372.6
125°	0.9	4.3	14.7	44.2	84.1	105.7	127.4	175.0	228.8	283.4	338.8
127.5°	1.7	4.3	12.1	36.4	72.8	91.9	112.7	156.0	202.8	252.2	305.0
130°	1.7	4.3	10.4	27.7	61.5	78.9	97.1	136.9	180.2	222.7	268.6
132.5°	1.7	3.5	9.5	21.7	51.1	66.7	83.2	118.7	156.9	195.0	234.8
135°	1.7	3.5	7.8	17.3	40.7	54.6	70.2	101.4	135.2	170.7	204.5
137.5°	1.7	2.6	6.9	13.9	31.2	44.2	58.1	85.8	115.3	145.6	176.8
140°	1.7	2.6	6.1	11.3	23.4	32.9	45.9	70.2	96.2	123.1	149.9
142.5°	1.7	2.6	5.2	9.5	18.2	25.1	34.7	57.2	79.7	102.3	125.7
145°	1.7	2.6	4.3	7.8	13.9	19.1	25.1	44.2	64.1	84.1	104.0
147.5°	1.7	2.6	4.3	6.9	11.3	14.7	19.1	32.1	50.3	66.7	84.1
150°	1.7	2.6	3.5	6.1	9.5	11.3	13.9	22.5	36.4	51.1	65.9
152.5°	1.7	1.7	3.5	5.2	6.9	8.7	10.4	16.5	25.1	36.4	49.4
155°	1.7	1.7	2.6	4.3	6.1	6.9	7.8	11.3	16.5	23.4	32.9
157.5°	1.7	1.7	2.6	3.5	4.3	5.2	6.1	7.8	11.3	14.7	19.9
160°	1.7	1.7	2.6	3.5	3.5	4.3	4.3	5.2	6.9	8.7	11.3
162.5°	1.7	1.7	2.6	2.6	2.6	3.5	3.5	3.5	4.3	4.3	5.2
165°	1.7	1.7	1.7	2.6	1.7	2.6	1.7	2.6	2.6	1.7	1.7
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



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CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4
2.5°	1199.4	1193.3	1190.7	1187.2	1184.6	1182.9	1180.3	1178.6	1176.0	1176.0	1176.8
5°	1197.6	1191.6	1189.8	1186.4	1184.6	1183.8	1182.0	1182.9	1182.9	1183.8	1182.9
7.5°	1194.2	1189.0	1187.2	1185.5	1183.8	1182.9	1182.0	1183.8	1183.8	1184.6	1184.6
10°	1188.1	1184.6	1184.6	1182.9	1182.0	1181.2	1179.4	1182.0	1182.0	1183.8	1182.9
12.5°	1181.2	1180.3	1181.2	1182.0	1182.0	1181.2	1180.3	1183.8	1185.5	1185.5	1186.4
15°	1173.4	1175.1	1179.4	1182.0	1183.8	1183.8	1185.5	1189.0	1191.6	1192.4	1192.4
17.5°	1167.3	1171.6	1179.4	1186.4	1189.8	1191.6	1195.9	1202.8	1207.1	1208.0	1208.0
20°	1163.0	1173.4	1187.2	1200.2	1204.5	1208.0	1216.7	1225.3	1231.4	1232.3	1232.3
22.5°	1166.4	1183.8	1202.8	1217.5	1223.6	1227.9	1237.5	1248.7	1255.7	1256.5	1256.5
25°	1175.1	1195.9	1217.5	1235.7	1242.7	1247.9	1258.3	1270.4	1277.3	1279.9	1279.1
27.5°	1182.9	1208.0	1233.1	1253.9	1261.7	1268.7	1281.7	1295.5	1304.2	1306.8	1305.1
30°	1189.8	1219.3	1247.9	1273.0	1283.4	1291.2	1306.8	1323.3	1334.5	1337.1	1334.5
32.5°	1196.8	1232.3	1266.1	1295.5	1305.9	1317.2	1337.1	1356.2	1367.5	1370.9	1369.2
35°	1206.3	1247.9	1287.7	1321.5	1335.4	1348.4	1371.8	1394.3	1408.2	1410.8	1408.2
37.5°	1219.3	1267.8	1312.0	1354.5	1369.2	1387.4	1415.1	1442.0	1458.5	1461.9	1458.5
40°	1235.7	1292.9	1344.9	1394.3	1414.3	1433.3	1467.1	1499.2	1517.4	1523.5	1520.9
42.5°	1257.4	1324.1	1384.8	1443.7	1466.3	1490.5	1530.4	1567.6	1588.4	1595.4	1588.4
45°	1284.3	1363.1	1433.3	1501.8	1527.8	1557.2	1604.9	1647.4	1671.6	1677.7	1671.6
47.5°	1319.8	1409.1	1490.5	1569.4	1600.6	1635.2	1691.6	1740.1	1766.1	1773.0	1767.0
50°	1357.9	1464.5	1558.1	1648.2	1687.2	1723.6	1789.5	1843.2	1871.0	1884.0	1872.7
52.5°	1405.6	1525.2	1635.2	1735.8	1782.6	1825.9	1898.7	1957.6	1991.4	2002.7	1987.1
55°	1462.8	1598.0	1721.0	1837.2	1884.0	1932.5	2013.1	2075.5	2111.0	2123.1	2111.9
57.5°	1526.1	1675.1	1811.2	1933.3	1987.9	2037.3	2127.5	2192.5	2223.7	2239.2	2225.4
60°	1591.9	1754.8	1902.1	2032.1	2091.9	2143.1	2234.9	2299.0	2332.0	2347.6	2334.6
62.5°	1656.0	1832.0	1987.1	2122.3	2179.5	2235.8	2327.6	2389.2	2423.0	2436.8	2424.7
65°	1711.5	1896.9	2056.4	2195.9	2254.8	2310.3	2397.0	2455.9	2491.4	2501.0	2492.3
67.5°	1753.1	1941.1	2102.3	2240.1	2297.3	2352.8	2435.1	2489.7	2524.4	2533.0	2525.2
70°	1772.2	1958.5	2117.9	2252.2	2308.6	2358.0	2436.0	2488.0	2520.9	2526.1	2520.0
72.5°	1760.0	1941.1	2095.4	2223.7	2277.4	2320.7	2392.6	2442.0	2473.2	2477.6	2473.2
75°	1715.0	1888.3	2033.9	2153.5	2203.7	2240.1	2308.6	2354.5	2385.7	2389.2	2384.0
77.5°	1638.7	1799.9	1933.3	2048.6	2090.2	2125.7	2190.7	2231.5	2256.6	2261.8	2255.7
80°	1536.5	1684.6	1804.2	1907.3	1947.2	1977.5	2040.8	2085.0	2098.9	2105.8	2097.1
82.5°	1419.5	1552.0	1658.6	1752.2	1787.8	1825.0	1865.8	1906.5	1926.4	1932.5	1925.5
85°	1293.8	1411.7	1506.1	1590.2	1621.4	1655.2	1690.7	1730.6	1747.9	1754.0	1747.0
87.5°	1168.2	1272.1	1355.3	1429.9	1458.5	1488.8	1531.3	1552.0	1575.4	1582.4	1574.6
90°	1055.5	1149.1	1223.6	1291.2	1318.1	1345.8	1378.7	1404.7	1426.4	1432.5	1425.5
92.5°	964.5	1048.6	1117.0	1177.7	1201.1	1227.1	1259.1	1284.3	1303.3	1309.4	1302.5
95°	889.1	966.2	1030.4	1086.7	1109.2	1133.5	1169.0	1189.0	1206.3	1211.5	1206.3
97.5°	825.0	897.8	958.4	1013.0	1034.7	1057.2	1091.9	1111.8	1128.3	1132.6	1128.3
100°	768.7	839.7	899.5	951.5	973.2	994.8	1028.6	1048.6	1064.2	1069.4	1064.2
102.5°	721.9	790.3	849.3	902.1	922.9	944.6	976.6	1000.0	1012.2	1018.2	1013.0
105°	681.1	747.9	806.8	858.8	880.4	901.2	934.2	955.8	969.7	976.6	970.6
107.5°	643.9	709.7	769.5	819.8	841.5	862.2	896.0	917.7	930.7	938.5	931.6
110°	608.3	673.3	730.5	782.5	804.2	825.9	859.6	881.3	894.3	901.2	895.2



TEST NUMBER: P201256

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	573.7	636.9	695.9	746.1	766.9	788.6	823.3	845.8	857.9	865.7	858.8
115°	539.0	601.4	658.6	707.1	727.9	750.5	784.3	807.7	820.7	826.7	819.8
117.5°	505.2	565.0	619.6	667.3	688.1	709.7	742.7	766.1	779.9	786.0	779.1
120°	470.6	527.7	581.5	624.8	646.5	666.4	700.2	722.7	736.6	742.7	735.7
122.5°	433.3	489.6	540.7	583.2	604.0	623.1	656.0	678.5	691.5	697.6	691.5
125°	395.2	448.0	497.4	539.9	557.2	575.4	607.5	629.1	643.0	648.2	643.0
127.5°	357.0	405.6	451.5	488.8	507.8	525.1	555.5	576.3	588.4	594.5	590.1
130°	318.9	364.8	406.4	440.2	456.7	473.2	500.9	519.9	532.1	537.3	532.9
132.5°	278.2	322.4	363.1	392.6	408.2	422.0	447.2	463.6	474.0	480.1	474.9
135°	241.8	278.2	316.3	346.6	362.2	374.4	396.9	410.8	420.3	425.5	420.3
137.5°	208.8	240.0	271.2	298.1	312.8	325.8	347.5	360.5	369.2	374.4	369.2
140°	178.5	205.4	233.1	254.8	267.8	278.2	298.1	309.4	317.2	321.5	316.3
142.5°	149.1	173.3	196.7	216.6	227.9	236.6	255.6	264.3	270.4	273.0	270.4
145°	123.9	143.9	163.8	182.0	190.6	197.6	216.6	226.2	231.4	234.0	231.4
147.5°	100.5	117.0	133.5	148.2	156.0	164.7	177.6	188.9	193.2	195.0	193.2
150°	78.9	93.6	106.6	118.7	124.8	130.9	142.1	153.4	157.7	160.3	157.7
152.5°	59.8	71.9	82.3	91.9	97.1	102.3	111.8	122.2	126.5	128.3	126.5
155°	43.3	52.0	61.5	68.5	72.8	76.3	83.2	90.1	97.1	97.1	97.1
157.5°	26.9	33.8	41.6	47.7	50.3	53.7	58.9	65.0	70.2	72.8	72.8
160°	13.9	18.2	23.4	27.7	30.3	32.9	36.4	41.6	45.1	47.7	45.9
162.5°	6.1	7.8	10.4	12.1	13.9	14.7	17.3	19.9	21.7	26.0	22.5
165°	1.7	1.7	2.6	3.5	3.5	3.5	4.3	5.2	6.1	9.5	6.9
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



TEST NUMBER: P201256

CATALOG NUMBER: 8LBLELD4-9-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4
2.5°	1178.6	1181.2	1184.6	1186.4	1189.0	1190.7	1195.0	1200.2	1195.9	1189.8	1190.7
5°	1182.9	1182.0	1184.6	1186.4	1188.1	1189.0	1193.3	1198.5	1193.3	1187.2	1187.2
7.5°	1184.6	1183.8	1184.6	1185.5	1186.4	1186.4	1190.7	1195.0	1189.8	1182.0	1180.3
10°	1182.0	1181.2	1182.0	1183.8	1183.8	1183.8	1186.4	1189.8	1183.8	1174.2	1170.8
12.5°	1183.8	1181.2	1181.2	1182.0	1182.0	1180.3	1181.2	1183.8	1176.0	1165.6	1160.4
15°	1189.8	1185.5	1183.8	1183.8	1182.0	1177.7	1176.0	1176.0	1167.3	1153.4	1146.5
17.5°	1204.5	1197.6	1192.4	1189.8	1186.4	1178.6	1172.5	1169.0	1157.8	1142.2	1130.9
20°	1227.1	1217.5	1209.7	1204.5	1200.2	1186.4	1174.2	1164.7	1149.1	1130.0	1115.3
22.5°	1249.6	1239.2	1227.9	1222.7	1216.7	1201.1	1184.6	1168.2	1144.8	1118.8	1098.8
25°	1271.3	1260.9	1247.9	1242.7	1234.9	1216.7	1195.9	1176.8	1146.5	1111.0	1082.4
27.5°	1296.4	1283.4	1269.5	1261.7	1253.1	1232.3	1208.9	1185.5	1151.7	1111.0	1071.1
30°	1325.0	1309.4	1291.2	1282.5	1272.1	1247.9	1219.3	1191.6	1155.2	1111.0	1065.0
32.5°	1357.9	1339.7	1318.1	1305.9	1293.8	1265.2	1231.4	1199.4	1157.8	1110.1	1059.8
35°	1396.1	1375.3	1349.3	1335.4	1320.7	1286.9	1247.0	1208.0	1162.1	1109.2	1052.9
37.5°	1443.7	1419.5	1388.3	1370.9	1353.6	1313.7	1267.8	1221.0	1169.0	1110.1	1047.7
40°	1500.9	1472.3	1435.9	1414.3	1393.5	1347.5	1292.9	1237.5	1178.6	1111.8	1042.5
42.5°	1568.5	1533.9	1493.1	1468.0	1443.7	1386.5	1324.1	1258.3	1191.6	1115.3	1039.9
45°	1649.1	1612.7	1560.7	1529.5	1502.7	1435.9	1364.0	1286.0	1210.6	1124.0	1039.0
47.5°	1741.8	1695.9	1639.6	1603.2	1571.1	1494.0	1410.8	1320.7	1232.3	1135.2	1040.8
50°	1845.8	1793.8	1728.8	1690.7	1650.8	1562.4	1466.3	1361.4	1260.0	1151.7	1045.1
52.5°	1960.2	1903.0	1832.8	1787.8	1743.6	1641.3	1528.7	1413.4	1292.1	1172.5	1052.9
55°	2078.9	2017.4	1939.4	1890.0	1840.6	1728.0	1602.3	1469.7	1334.5	1198.5	1065.9
57.5°	2194.2	2130.9	2045.1	1994.9	1939.4	1819.8	1681.2	1531.3	1380.5	1228.8	1080.6
60°	2300.8	2237.5	2150.9	2099.7	2039.1	1910.8	1761.8	1598.8	1428.1	1260.9	1098.0
62.5°	2390.9	2330.2	2243.6	2191.6	2129.2	1996.6	1838.9	1664.7	1480.1	1294.7	1114.4
65°	2457.6	2400.4	2316.4	2262.6	2202.9	2065.1	1903.9	1722.8	1523.5	1324.1	1129.2
67.5°	2491.4	2437.7	2356.2	2305.1	2246.2	2109.3	1948.1	1761.8	1556.4	1344.9	1138.7
70°	2488.0	2436.8	2360.6	2310.3	2254.0	2122.3	1963.7	1777.4	1571.1	1352.7	1137.0
72.5°	2442.9	2391.8	2323.3	2274.8	2221.1	2098.0	1942.0	1763.5	1559.8	1340.6	1123.1
75°	2353.6	2306.8	2237.5	2197.7	2149.1	2034.7	1885.7	1712.4	1521.7	1308.5	1094.5
77.5°	2225.4	2189.9	2122.3	2085.0	2037.3	1931.6	1791.2	1635.2	1455.0	1254.8	1050.3
80°	2068.5	2039.1	1973.2	1940.3	1893.5	1801.6	1680.3	1529.5	1366.6	1182.0	993.1
82.5°	1896.9	1863.2	1811.2	1780.8	1736.6	1654.3	1539.1	1416.0	1264.3	1098.8	926.4
85°	1719.3	1688.1	1640.4	1614.4	1575.4	1501.8	1398.7	1290.3	1156.0	1007.0	854.5
87.5°	1550.3	1520.0	1474.9	1451.5	1416.0	1350.1	1260.0	1164.7	1046.0	918.6	778.2
90°	1403.9	1375.3	1332.8	1311.1	1279.1	1219.3	1137.8	1052.0	947.2	830.2	709.7
92.5°	1283.4	1257.4	1217.5	1196.8	1168.2	1113.6	1039.9	961.9	867.4	766.1	654.3
95°	1188.1	1163.0	1127.4	1107.5	1080.6	1024.3	959.3	886.5	799.9	707.1	604.0
97.5°	1111.0	1090.2	1051.2	1032.1	1010.4	953.2	894.3	822.4	741.8	655.1	558.9
100°	1048.6	1025.2	989.6	971.4	948.9	895.2	835.4	767.8	689.8	607.5	518.2
102.5°	1000.0	975.8	942.8	922.0	900.4	845.8	786.9	721.0	646.5	566.7	481.0
105°	956.7	933.3	900.4	879.6	857.9	804.2	747.9	681.1	607.5	530.3	447.2
107.5°	916.0	895.2	862.2	841.5	819.8	766.1	709.7	643.9	571.9	496.6	416.0
110°	881.3	858.8	824.1	804.2	780.8	729.7	673.3	609.2	537.3	463.6	386.5



TEST NUMBER: P201256

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	846.7	822.4	787.7	767.8	744.4	693.3	637.8	574.5	504.4	433.3	358.8
115°	808.5	785.1	748.7	728.8	705.4	655.1	601.4	539.9	472.3	403.0	331.0
117.5°	767.8	744.4	708.0	688.9	666.4	617.0	565.9	506.1	440.2	373.5	303.3
120°	723.6	701.1	666.4	647.3	625.7	578.0	528.6	468.8	406.4	342.3	277.3
122.5°	678.5	656.9	623.1	604.0	583.2	538.1	489.6	431.6	371.8	312.0	252.2
125°	630.0	608.3	576.3	558.1	537.3	494.0	447.2	392.6	337.1	283.4	226.2
127.5°	573.7	556.3	525.1	507.0	487.9	449.8	404.7	355.3	304.2	252.2	201.0
130°	519.9	501.8	472.3	455.8	439.4	404.7	364.8	317.2	266.9	221.8	175.9
132.5°	463.6	447.2	422.0	408.2	393.4	362.2	321.5	274.7	232.2	193.2	152.5
135°	410.8	396.9	374.4	362.2	347.5	314.6	276.4	237.4	201.9	167.3	130.9
137.5°	361.4	347.5	326.7	313.7	298.1	268.6	237.4	205.4	172.4	143.0	110.9
140°	309.4	298.1	279.0	267.8	253.9	228.8	202.8	172.4	146.5	119.6	91.9
142.5°	265.2	255.6	236.6	226.2	214.0	193.2	169.0	145.6	122.2	98.8	75.4
145°	227.0	217.5	196.7	188.9	177.6	159.5	139.5	118.7	99.7	79.7	60.7
147.5°	189.8	178.5	160.3	153.4	144.7	129.1	113.5	97.1	80.6	63.3	46.8
150°	155.1	142.1	127.4	123.1	114.4	102.3	89.3	75.4	62.4	48.5	33.8
152.5°	122.2	110.9	98.8	94.5	87.5	79.7	68.5	57.2	46.8	33.8	23.4
155°	91.0	82.3	72.8	70.2	65.0	58.9	49.4	40.7	31.2	22.5	16.5
157.5°	64.1	57.2	50.3	48.5	45.1	39.9	32.1	25.1	19.9	14.7	11.3
160°	39.9	35.5	30.3	28.6	26.0	22.5	17.3	14.7	12.1	9.5	6.9
162.5°	19.1	16.5	14.7	13.9	12.1	10.4	9.5	7.8	6.9	6.1	5.2
165°	6.9	6.9	6.9	6.1	6.1	6.1	6.1	5.2	4.3	4.3	3.5
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: P201256

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4	1192.4
2.5°	1191.6	1193.3	1193.3	1194.2	1196.8	1202.0	1208.9	1209.7
5°	1188.1	1189.0	1189.0	1189.0	1191.6	1195.9	1202.8	1203.7
7.5°	1180.3	1180.3	1180.3	1180.3	1182.9	1186.4	1192.4	1193.3
10°	1169.9	1169.0	1169.0	1168.2	1169.9	1172.5	1179.4	1178.6
12.5°	1156.9	1155.2	1154.3	1154.3	1153.4	1156.0	1160.4	1161.2
15°	1142.2	1138.7	1137.0	1135.2	1134.4	1134.4	1139.6	1138.7
17.5°	1124.8	1119.6	1117.0	1114.4	1111.0	1111.0	1114.4	1113.6
20°	1104.9	1098.0	1093.6	1090.2	1085.0	1083.2	1085.0	1084.1
22.5°	1085.0	1073.7	1069.4	1064.2	1056.4	1052.9	1052.0	1051.2
25°	1061.6	1047.7	1041.6	1036.4	1025.2	1020.8	1016.5	1014.8
27.5°	1040.8	1020.8	1013.0	1004.4	991.4	985.3	978.4	976.6
30°	1022.6	993.1	981.0	972.3	955.8	946.3	937.6	935.9
32.5°	1008.7	968.0	951.5	941.1	918.6	905.6	894.3	889.1
35°	996.6	944.6	922.9	906.4	879.6	864.0	848.4	844.1
37.5°	985.3	924.6	896.0	873.5	843.2	820.7	803.3	796.4
40°	974.0	906.4	871.8	843.2	803.3	777.3	755.7	747.0
42.5°	963.6	888.2	851.0	816.3	764.3	733.1	709.7	697.6
45°	954.1	871.8	831.1	792.9	726.2	689.8	661.2	649.9
47.5°	947.2	856.2	811.1	769.5	690.7	645.6	616.1	601.4
50°	942.0	841.5	792.1	746.1	659.5	603.1	570.2	552.9
52.5°	939.4	828.5	774.7	725.3	630.9	562.4	523.4	510.4
55°	940.2	818.1	760.0	706.3	604.0	523.4	480.1	460.2
57.5°	942.0	808.5	745.3	687.2	577.1	485.3	436.8	416.0
60°	945.4	800.7	732.3	669.0	552.0	452.4	396.9	377.0
62.5°	948.9	793.8	719.3	651.7	527.7	422.0	357.0	334.5
65°	949.8	783.4	705.4	634.3	503.5	391.7	316.3	294.6
67.5°	946.3	770.4	688.1	614.4	478.4	362.2	278.2	255.6
70°	935.9	753.1	668.1	591.9	450.6	333.6	241.8	217.5
72.5°	916.8	730.5	644.7	566.7	423.8	303.3	208.8	179.4
75°	890.0	702.8	617.0	538.1	395.2	274.7	178.5	145.6
77.5°	853.6	667.3	584.1	506.1	364.0	245.2	152.5	114.4
80°	806.8	630.0	547.7	471.4	333.6	218.4	127.4	84.9
82.5°	751.3	587.5	508.7	435.9	305.0	190.6	104.0	58.9
85°	694.1	541.6	468.0	398.6	274.7	164.7	84.1	34.7
87.5°	637.8	495.7	429.0	364.8	243.5	141.3	65.0	13.9
90°	582.3	451.5	388.2	328.4	216.6	119.6	48.5	0.0
92.5°	536.4	418.6	361.4	304.2	199.3	108.3	41.6	0.0
95°	495.7	387.4	332.8	279.9	181.1	97.9	34.7	0.0
97.5°	458.4	357.9	307.6	257.4	164.7	86.7	28.6	0.0
100°	422.9	328.4	281.6	236.6	149.1	77.1	21.7	0.0
102.5°	391.7	302.4	258.2	214.0	133.5	67.6	15.6	0.0
105°	361.4	277.3	236.6	194.1	119.6	58.9	9.5	0.0
107.5°	334.5	253.9	214.9	175.9	106.6	51.1	6.1	0.0
110°	308.5	232.2	194.1	158.6	95.3	44.2	5.2	0.0



TEST NUMBER: P201256

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	284.2	211.4	175.9	142.1	85.8	37.3	5.2	0.0
115°	259.1	191.5	158.6	128.3	76.3	30.3	4.3	0.0
117.5°	237.4	172.4	143.0	117.0	66.7	24.3	4.3	0.0
120°	215.8	156.0	130.0	104.9	58.1	18.2	4.3	0.0
122.5°	194.1	141.3	116.1	93.6	50.3	14.7	3.5	0.0
125°	174.2	125.7	103.1	81.5	41.6	13.0	3.5	0.0
127.5°	154.3	110.1	89.3	70.2	32.9	11.3	2.6	0.0
130°	134.3	94.5	76.3	58.9	25.1	9.5	2.6	0.0
132.5°	116.1	79.7	64.1	48.5	19.9	7.8	1.7	0.0
135°	97.9	66.7	52.9	38.1	15.6	6.9	1.7	0.0
137.5°	82.3	54.6	41.6	28.6	13.0	5.2	1.7	0.0
140°	67.6	43.3	31.2	21.7	10.4	4.3	0.9	0.0
142.5°	53.7	32.1	23.4	16.5	8.7	3.5	0.9	0.0
145°	41.6	23.4	17.3	13.0	7.8	2.6	0.9	0.0
147.5°	30.3	18.2	13.9	11.3	6.1	2.6	0.9	0.0
150°	21.7	13.9	11.3	8.7	4.3	1.7	0.9	0.0
152.5°	16.5	10.4	8.7	6.9	3.5	1.7	0.9	0.0
155°	12.1	7.8	6.9	5.2	2.6	1.7	0.9	0.0
157.5°	8.7	6.1	5.2	3.5	2.6	1.7	0.9	0.0
160°	5.2	4.3	3.5	2.6	1.7	0.9	0.9	0.0
162.5°	4.3	2.6	2.6	2.6	1.7	0.9	0.9	0.0
165°	2.6	1.7	1.7	1.7	0.9	0.9	0.9	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)