

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: P201321

Luminaire Tested: **8LBLED-LD4-9-SYMF-UNV-L835-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201321
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-L835-CD1-U
Description: 8 ft. Low Bay Linear, 9000 lm, Frst Sym lens, 3.5K
Light Source: (784) 3500K CCT, 80 CRI LEDS
2UT217098A8354C
Ballast/Driver: OSRAM
(OTI85W01440CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9669.2 lumens
Efficiency: N/A
Efficacy: 149.9 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

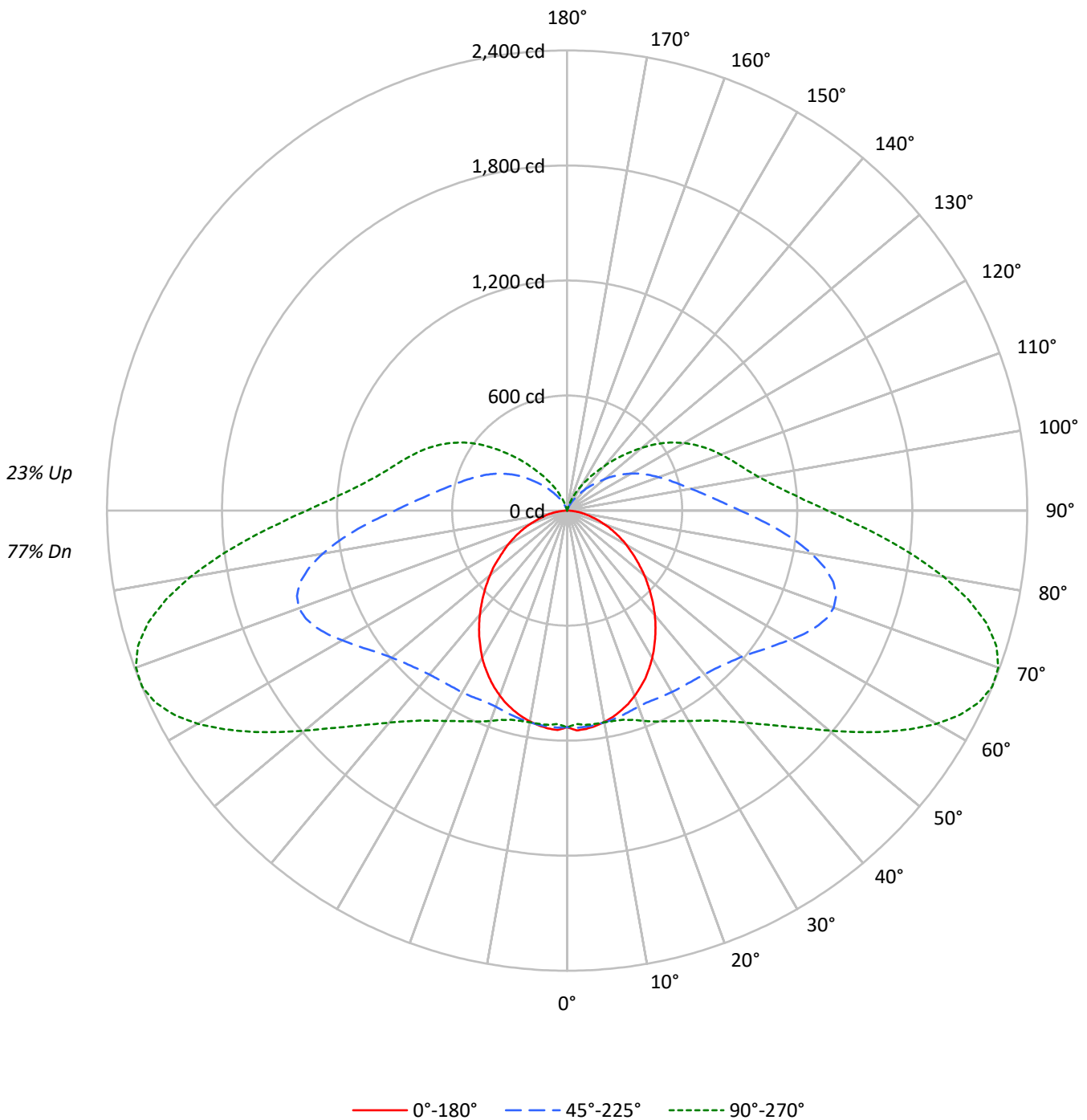
Input Watts (W): 64.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	9101	9101	9101
5°	9222	8178	9201
10°	9113	7522	9093
15°	8949	7064	8935
20°	8737	6887	8723
25°	8480	6819	8444
30°	8134	6855	8126
35°	7740	7022	7724
40°	7318	7423	7284
45°	6856	8065	6838
50°	6388	9005	6368
55°	5916	10168	5904
60°	5494	11350	5506
65°	5025	12304	5040
70°	4531	12748	4531
75°	3936	12474	3913
80°	3287	11478	3255
85°	2459	10081	2337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	1.1
10°-20°	312.0	3.2
20°-30°	501.4	5.2
30°-40°	678.9	7.0
40°-50°	872.2	9.0
50°-60°	1122.1	11.6
60°-70°	1372.8	14.2
70°-80°	1387.9	14.4
80°-90°	1073.3	11.1
90°-100°	745.7	7.7
100°-110°	556.9	5.8
110°-120°	417.4	4.3
120°-130°	281.1	2.9
130°-140°	154.1	1.6
140°-150°	65.7	0.7
150°-160°	18.8	0.2
160°-170°	1.6	0.0
170°-180°	0.0	0.0
0°-30°	920.6	9.5
0°-40°	1599.5	16.5
0°-60°	3593.9	37.2
0°-90°	7427.8	76.8
90°-120°	1720.0	17.8
90°-150°	2221.0	23.0
90°-180°	2241.0	23.2
0°-180°	9669.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1130	1130	1130	1130	1130	
5°	1143	1132	1121	1130	1140	108
15°	1080	1106	1130	1106	1079	304
25°	966	1085	1213	1086	961	443
35°	801	1100	1336	1101	800	501
45°	617	1142	1589	1147	616	476
55°	437	1258	2011	1264	436	391
65°	278	1434	2369	1443	279	276
75°	139	1437	2263	1442	138	148
85°	34	1098	1662	1095	33	38
90°	1	902	1357	897	0	2
95°	1	761	1148	758	0	1
105°	1	576	925	576	0	1
115°	1	447	783	447	0	1
125°	1	321	614	319	0	1
135°	2	194	403	191	0	1
145°	2	98	222	94	0	1
155°	2	31	92	30	0	1
165°	2	2	9	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°	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6
2.5°	1147.7	1146.9	1142.0	1134.6	1131.3	1130.5	1129.6	1126.4	1125.5	1127.2	1133.8
5°	1142.8	1142.0	1137.0	1129.6	1127.2	1126.4	1125.5	1123.1	1123.1	1125.5	1132.1
7.5°	1132.9	1132.1	1127.2	1121.4	1119.0	1118.2	1118.2	1116.5	1116.5	1120.6	1128.0
10°	1119.0	1118.2	1114.1	1109.1	1107.5	1107.5	1107.5	1106.7	1108.3	1113.2	1121.4
12.5°	1102.6	1100.9	1097.6	1093.5	1093.5	1093.5	1094.3	1094.3	1096.8	1105.0	1114.9
15°	1080.4	1081.2	1077.9	1074.6	1076.3	1077.1	1078.7	1080.4	1084.5	1094.3	1105.8
17.5°	1057.4	1057.4	1054.9	1053.3	1056.6	1058.2	1060.7	1063.2	1070.5	1082.9	1096.0
20°	1028.7	1029.5	1028.7	1029.5	1033.6	1036.1	1039.3	1045.1	1054.9	1072.2	1087.8
22.5°	997.5	999.1	999.1	1002.4	1009.0	1013.1	1017.2	1025.4	1039.3	1061.5	1083.7
25°	965.5	964.6	968.7	974.5	981.1	986.8	991.7	1004.0	1024.6	1054.1	1085.3
27.5°	926.9	928.5	934.3	942.5	952.3	959.7	967.1	984.3	1013.9	1053.3	1089.4
30°	887.5	889.9	897.3	908.8	922.8	932.6	940.8	967.9	1008.1	1053.3	1092.7
32.5°	844.8	848.9	858.7	873.5	893.2	904.7	917.8	954.0	1003.2	1051.7	1096.0
35°	801.3	806.2	819.3	837.4	860.4	874.3	894.9	943.3	996.7	1050.0	1100.1
37.5°	756.9	762.7	777.5	800.4	830.0	851.3	876.0	931.8	991.7	1050.0	1105.8
40°	711.0	717.5	736.4	762.7	800.4	828.4	857.9	920.3	986.8	1050.8	1114.9
42.5°	664.2	671.5	694.5	725.7	775.0	807.8	840.7	910.5	983.5	1054.9	1126.4
45°	617.4	627.2	652.7	690.4	752.0	786.5	824.2	901.4	981.9	1062.3	1142.0
47.5°	570.6	582.1	611.6	656.8	728.2	769.2	808.7	894.0	983.5	1072.2	1162.5
50°	525.4	538.6	571.4	626.4	706.0	750.4	793.9	889.1	986.8	1087.0	1187.1
52.5°	479.4	496.7	532.8	599.3	686.3	733.1	781.6	885.8	993.4	1106.7	1219.1
55°	436.8	454.8	496.7	573.0	667.4	718.3	770.1	885.0	1004.9	1130.5	1258.5
57.5°	393.2	415.4	461.4	547.6	647.7	703.6	761.0	886.6	1018.8	1155.9	1298.8
60°	356.3	376.0	429.4	523.0	630.5	689.6	752.8	888.3	1033.6	1185.5	1345.6
62.5°	316.9	338.2	401.5	499.1	613.3	677.3	744.6	890.7	1049.2	1215.9	1393.2
65°	278.3	300.5	373.5	476.2	596.0	664.2	734.8	890.7	1061.5	1243.8	1434.2
67.5°	241.4	265.2	345.6	451.5	576.3	647.7	722.4	886.6	1068.9	1263.5	1466.2
70°	206.1	232.3	318.5	425.3	555.0	628.0	705.2	877.6	1068.1	1270.9	1480.2
72.5°	170.8	201.1	289.0	399.0	532.0	605.9	684.7	860.4	1056.6	1261.8	1471.2
75°	138.7	171.6	262.7	372.7	505.7	579.6	659.2	834.1	1031.1	1233.9	1436.7
77.5°	109.2	145.3	234.8	344.0	476.2	549.2	627.2	800.4	990.9	1184.7	1375.9
80°	81.3	121.5	208.5	315.3	444.1	515.6	591.1	757.8	938.4	1118.2	1294.7
82.5°	56.6	99.3	183.1	286.5	411.3	479.4	551.7	706.9	877.6	1041.0	1201.1
85°	34.5	79.6	157.6	258.6	377.6	441.7	509.8	653.5	811.1	957.2	1098.5
87.5°	14.8	61.6	135.5	231.5	344.0	404.7	467.1	602.6	740.5	870.2	995.8
90°	0.8	46.0	115.8	206.1	312.0	368.6	426.9	548.4	675.7	790.6	902.2
92.5°	0.0	39.4	104.3	190.5	289.8	342.3	396.5	508.2	623.1	725.7	825.1
95°	0.8	32.8	94.4	173.2	267.6	317.7	367.8	472.1	575.5	669.9	761.0
97.5°	0.8	27.1	83.7	157.6	247.1	293.1	339.9	436.8	530.3	619.8	704.4
100°	0.8	21.3	73.9	142.8	225.8	268.5	312.8	403.9	491.8	575.5	655.1
102.5°	0.8	15.6	65.7	128.9	206.1	246.3	287.3	373.5	456.5	536.9	612.4
105°	0.8	10.7	57.5	115.8	188.0	225.8	264.4	345.6	424.4	501.6	575.5
107.5°	0.8	7.4	50.1	103.4	168.3	206.1	242.2	319.4	394.9	469.6	541.8
110°	0.8	6.6	43.5	92.8	152.7	187.2	221.7	294.7	367.0	438.4	509.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.8	5.7	36.9	82.9	137.1	168.3	202.0	270.9	341.5	410.5	477.8
115°	0.8	5.7	30.4	73.9	124.0	151.9	183.1	247.9	315.3	381.7	447.4
117.5°	0.8	5.7	24.6	65.7	111.7	137.1	164.2	226.6	289.0	353.8	417.9
120°	0.8	4.9	19.7	57.5	101.0	124.0	149.4	206.1	263.5	324.3	385.9
122.5°	0.8	4.9	16.4	50.1	90.3	111.7	134.6	184.7	239.7	295.5	353.0
125°	0.8	4.1	14.0	41.9	79.6	100.2	120.7	165.8	216.7	268.5	321.0
127.5°	1.6	4.1	11.5	34.5	69.0	87.0	106.7	147.8	192.1	238.9	289.0
130°	1.6	4.1	9.9	26.3	58.3	74.7	91.9	129.7	170.8	211.0	254.5
132.5°	1.6	3.3	9.0	20.5	48.4	63.2	78.8	112.5	148.6	184.7	222.5
135°	1.6	3.3	7.4	16.4	38.6	51.7	66.5	96.1	128.1	161.7	193.7
137.5°	1.6	2.5	6.6	13.1	29.6	41.9	55.0	81.3	109.2	137.9	167.5
140°	1.6	2.5	5.7	10.7	22.2	31.2	43.5	66.5	91.1	116.6	142.0
142.5°	1.6	2.5	4.9	9.0	17.2	23.8	32.8	54.2	75.5	96.9	119.0
145°	1.6	2.5	4.1	7.4	13.1	18.1	23.8	41.9	60.8	79.6	98.5
147.5°	1.6	2.5	4.1	6.6	10.7	14.0	18.1	30.4	47.6	63.2	79.6
150°	1.6	2.5	3.3	5.7	9.0	10.7	13.1	21.3	34.5	48.4	62.4
152.5°	1.6	1.6	3.3	4.9	6.6	8.2	9.9	15.6	23.8	34.5	46.8
155°	1.6	1.6	2.5	4.1	5.7	6.6	7.4	10.7	15.6	22.2	31.2
157.5°	1.6	1.6	2.5	3.3	4.1	4.9	5.7	7.4	10.7	14.0	18.9
160°	1.6	1.6	2.5	3.3	3.3	4.1	4.1	4.9	6.6	8.2	10.7
162.5°	1.6	1.6	2.5	2.5	2.5	3.3	3.3	3.3	4.1	4.1	4.9
165°	1.6	1.6	1.6	2.5	1.6	2.5	1.6	2.5	2.5	1.6	1.6
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°	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6
2.5°	1136.2	1130.5	1128.0	1124.7	1122.3	1120.6	1118.2	1116.5	1114.1	1114.1	1114.9
5°	1134.6	1128.8	1127.2	1123.9	1122.3	1121.4	1119.8	1120.6	1120.6	1121.4	1120.6
7.5°	1131.3	1126.4	1124.7	1123.1	1121.4	1120.6	1119.8	1121.4	1121.4	1122.3	1122.3
10°	1125.5	1122.3	1122.3	1120.6	1119.8	1119.0	1117.3	1119.8	1119.8	1121.4	1120.6
12.5°	1119.0	1118.2	1119.0	1119.8	1119.8	1119.0	1118.2	1121.4	1123.1	1123.1	1123.9
15°	1111.6	1113.2	1117.3	1119.8	1121.4	1121.4	1123.1	1126.4	1128.8	1129.6	1129.6
17.5°	1105.8	1109.9	1117.3	1123.9	1127.2	1128.8	1132.9	1139.5	1143.6	1144.4	1144.4
20°	1101.7	1111.6	1124.7	1137.0	1141.1	1144.4	1152.6	1160.8	1166.6	1167.4	1167.4
22.5°	1105.0	1121.4	1139.5	1153.5	1159.2	1163.3	1172.3	1183.0	1189.6	1190.4	1190.4
25°	1113.2	1132.9	1153.5	1170.7	1177.3	1182.2	1192.0	1203.5	1210.1	1212.6	1211.7
27.5°	1120.6	1144.4	1168.2	1187.9	1195.3	1201.9	1214.2	1227.3	1235.6	1238.0	1236.4
30°	1127.2	1155.1	1182.2	1206.0	1215.9	1223.2	1238.0	1253.6	1264.3	1266.7	1264.3
32.5°	1133.8	1167.4	1199.4	1227.3	1237.2	1247.9	1266.7	1284.8	1295.5	1298.8	1297.1
35°	1142.8	1182.2	1220.0	1252.0	1265.1	1277.4	1299.6	1320.9	1334.1	1336.5	1334.1
37.5°	1155.1	1201.1	1242.9	1283.2	1297.1	1314.4	1340.6	1366.1	1381.7	1385.0	1381.7
40°	1170.7	1224.9	1274.1	1320.9	1339.8	1357.9	1389.9	1420.3	1437.5	1443.3	1440.8
42.5°	1191.2	1254.4	1311.9	1367.7	1389.1	1412.1	1449.8	1485.1	1504.8	1511.4	1504.8
45°	1216.7	1291.4	1357.9	1422.7	1447.4	1475.3	1520.4	1560.7	1583.6	1589.4	1583.6
47.5°	1250.3	1334.9	1412.1	1486.8	1516.3	1549.2	1602.5	1648.5	1673.1	1679.7	1673.9
50°	1286.5	1387.4	1476.1	1561.5	1598.4	1632.9	1695.3	1746.2	1772.5	1784.8	1774.1
52.5°	1331.6	1444.9	1549.2	1644.4	1688.7	1729.8	1798.7	1854.6	1886.6	1897.3	1882.5
55°	1385.8	1513.9	1630.4	1740.4	1784.8	1830.8	1907.1	1966.2	1999.9	2011.4	2000.7
57.5°	1445.7	1586.9	1715.8	1831.6	1883.3	1930.1	2015.5	2077.0	2106.6	2121.4	2108.2
60°	1508.1	1662.5	1802.0	1925.2	1981.8	2030.2	2117.3	2178.0	2209.2	2224.0	2211.7
62.5°	1568.9	1735.5	1882.5	2010.5	2064.7	2118.1	2205.1	2263.4	2295.4	2308.6	2297.1
65°	1621.4	1797.1	1948.2	2080.3	2136.2	2188.7	2270.8	2326.6	2360.3	2369.3	2361.1
67.5°	1660.8	1839.0	1991.7	2122.2	2176.4	2228.9	2306.9	2358.6	2391.5	2399.7	2392.3
70°	1678.9	1855.4	2006.4	2133.7	2187.1	2233.8	2307.7	2357.0	2388.2	2393.1	2387.4
72.5°	1667.4	1839.0	1985.1	2106.6	2157.5	2198.5	2266.7	2313.5	2343.0	2347.1	2343.0
75°	1624.7	1788.9	1926.8	2040.1	2087.7	2122.2	2187.1	2230.6	2260.1	2263.4	2258.5
77.5°	1552.4	1705.1	1831.6	1940.8	1980.2	2013.8	2075.4	2114.0	2137.8	2142.7	2137.0
80°	1455.6	1596.0	1709.3	1806.9	1844.7	1873.4	1933.4	1975.2	1988.4	1994.9	1986.7
82.5°	1344.7	1470.3	1571.3	1660.0	1693.7	1729.0	1767.5	1806.1	1825.0	1830.8	1824.2
85°	1225.7	1337.4	1426.8	1506.5	1536.0	1568.0	1601.7	1639.5	1655.9	1661.6	1655.1
87.5°	1106.7	1205.2	1284.0	1354.6	1381.7	1410.4	1450.6	1470.3	1492.5	1499.1	1491.7
90°	999.9	1088.6	1159.2	1223.2	1248.7	1275.0	1306.2	1330.8	1351.3	1357.1	1350.5
92.5°	913.7	993.4	1058.2	1115.7	1137.9	1162.5	1192.9	1216.7	1234.7	1240.5	1233.9
95°	842.3	915.4	976.1	1029.5	1050.8	1073.8	1107.5	1126.4	1142.8	1147.7	1142.8
97.5°	781.6	850.5	908.0	959.7	980.2	1001.6	1034.4	1053.3	1068.9	1073.0	1068.9
100°	728.2	795.5	852.2	901.4	921.9	942.5	974.5	993.4	1008.1	1013.1	1008.1
102.5°	683.9	748.7	804.5	854.6	874.3	894.9	925.2	947.4	958.9	964.6	959.7
105°	645.3	708.5	764.3	813.6	834.1	853.8	885.0	905.5	918.7	925.2	919.5
107.5°	610.0	672.4	729.0	776.6	797.2	816.9	848.9	869.4	881.7	889.1	882.5
110°	576.3	637.9	692.1	741.3	761.9	782.4	814.4	834.9	847.2	853.8	848.1



TEST NUMBER: P201321

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	543.5	603.4	659.2	706.9	726.6	747.1	779.9	801.3	812.8	820.1	813.6
115°	510.6	569.8	623.9	669.9	689.6	711.0	743.0	765.1	777.5	783.2	776.6
117.5°	478.6	535.3	587.0	632.1	651.8	672.4	703.6	725.7	738.9	744.6	738.0
120°	445.8	500.0	550.9	591.9	612.4	631.3	663.3	684.7	697.8	703.6	697.0
122.5°	410.5	463.8	512.3	552.5	572.2	590.3	621.5	642.8	655.1	660.9	655.1
125°	374.4	424.4	471.2	511.5	527.9	545.1	575.5	596.0	609.2	614.1	609.2
127.5°	338.2	384.2	427.7	463.0	481.1	497.5	526.2	545.9	557.4	563.2	559.1
130°	302.1	345.6	385.0	417.1	432.6	448.2	474.5	492.6	504.1	509.0	504.9
132.5°	263.5	305.4	344.0	371.9	386.7	399.8	423.6	439.2	449.1	454.8	449.9
135°	229.0	263.5	299.7	328.4	343.2	354.7	376.0	389.1	398.2	403.1	398.2
137.5°	197.9	227.4	257.0	282.4	296.4	308.7	329.2	341.5	349.7	354.7	349.7
140°	169.1	194.6	220.8	241.4	253.7	263.5	282.4	293.1	300.5	304.6	299.7
142.5°	141.2	164.2	186.4	205.2	215.9	224.1	242.2	250.4	256.1	258.6	256.1
145°	117.4	136.3	155.2	172.4	180.6	187.2	205.2	214.3	219.2	221.7	219.2
147.5°	95.2	110.8	126.4	140.4	147.8	156.0	168.3	179.0	183.1	184.7	183.1
150°	74.7	88.7	101.0	112.5	118.2	124.0	134.6	145.3	149.4	151.9	149.4
152.5°	56.6	68.1	78.0	87.0	91.9	96.9	105.9	115.8	119.9	121.5	119.9
155°	41.0	49.3	58.3	64.9	69.0	72.2	78.8	85.4	91.9	91.9	91.9
157.5°	25.4	32.0	39.4	45.2	47.6	50.9	55.8	61.6	66.5	69.0	69.0
160°	13.1	17.2	22.2	26.3	28.7	31.2	34.5	39.4	42.7	45.2	43.5
162.5°	5.7	7.4	9.9	11.5	13.1	14.0	16.4	18.9	20.5	24.6	21.3
165°	1.6	1.6	2.5	3.3	3.3	3.3	4.1	4.9	5.7	9.0	6.6
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: P201321

CATALOG NUMBER: 8LBLELD4-9-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6
2.5°	1116.5	1119.0	1122.3	1123.9	1126.4	1128.0	1132.1	1137.0	1132.9	1127.2	1128.0
5°	1120.6	1119.8	1122.3	1123.9	1125.5	1126.4	1130.5	1135.4	1130.5	1124.7	1124.7
7.5°	1122.3	1121.4	1122.3	1123.1	1123.9	1123.9	1128.0	1132.1	1127.2	1119.8	1118.2
10°	1119.8	1119.0	1119.8	1121.4	1121.4	1121.4	1123.9	1127.2	1121.4	1112.4	1109.1
12.5°	1121.4	1119.0	1119.0	1119.8	1119.8	1118.2	1119.0	1121.4	1114.1	1104.2	1099.3
15°	1127.2	1123.1	1121.4	1121.4	1119.8	1115.7	1114.1	1114.1	1105.8	1092.7	1086.1
17.5°	1141.1	1134.6	1129.6	1127.2	1123.9	1116.5	1110.8	1107.5	1096.8	1082.0	1071.4
20°	1162.5	1153.5	1146.1	1141.1	1137.0	1123.9	1112.4	1103.4	1088.6	1070.5	1056.6
22.5°	1183.8	1174.0	1163.3	1158.4	1152.6	1137.9	1122.3	1106.7	1084.5	1059.9	1041.0
25°	1204.4	1194.5	1182.2	1177.3	1169.9	1152.6	1132.9	1114.9	1086.1	1052.5	1025.4
27.5°	1228.2	1215.9	1202.7	1195.3	1187.1	1167.4	1145.2	1123.1	1091.1	1052.5	1014.7
30°	1255.3	1240.5	1223.2	1215.0	1205.2	1182.2	1155.1	1128.8	1094.3	1052.5	1009.0
32.5°	1286.5	1269.2	1248.7	1237.2	1225.7	1198.6	1166.6	1136.2	1096.8	1051.7	1004.0
35°	1322.6	1302.9	1278.2	1265.1	1251.2	1219.1	1181.4	1144.4	1100.9	1050.8	997.5
37.5°	1367.7	1344.7	1315.2	1298.8	1282.3	1244.6	1201.1	1156.7	1107.5	1051.7	992.5
40°	1421.9	1394.8	1360.3	1339.8	1320.1	1276.6	1224.9	1172.3	1116.5	1053.3	987.6
42.5°	1485.9	1453.1	1414.5	1390.7	1367.7	1313.5	1254.4	1192.0	1128.8	1056.6	985.2
45°	1562.3	1527.8	1478.6	1449.0	1423.6	1360.3	1292.2	1218.3	1146.9	1064.8	984.3
47.5°	1650.1	1606.6	1553.3	1518.8	1488.4	1415.3	1336.5	1251.2	1167.4	1075.5	986.0
50°	1748.7	1699.4	1637.8	1601.7	1563.9	1480.2	1389.1	1289.7	1193.7	1091.1	990.1
52.5°	1857.0	1802.8	1736.3	1693.7	1651.8	1554.9	1448.2	1339.0	1224.1	1110.8	997.5
55°	1969.5	1911.2	1837.3	1790.5	1743.7	1637.0	1518.0	1392.4	1264.3	1135.4	1009.8
57.5°	2078.7	2018.8	1937.5	1889.9	1837.3	1724.0	1592.7	1450.6	1307.8	1164.1	1023.7
60°	2179.7	2119.7	2037.6	1989.2	1931.7	1810.2	1669.0	1514.7	1353.0	1194.5	1040.2
62.5°	2265.0	2207.6	2125.5	2076.2	2017.1	1891.5	1742.1	1577.1	1402.2	1226.5	1055.8
65°	2328.3	2274.1	2194.4	2143.5	2086.9	1956.4	1803.7	1632.1	1443.3	1254.4	1069.7
67.5°	2360.3	2309.4	2232.2	2183.8	2127.9	1998.2	1845.5	1669.0	1474.5	1274.1	1078.7
70°	2357.0	2308.6	2236.3	2188.7	2135.3	2010.5	1860.3	1683.8	1488.4	1281.5	1077.1
72.5°	2314.3	2265.9	2201.0	2155.0	2104.1	1987.6	1839.8	1670.7	1477.7	1270.0	1064.0
75°	2229.7	2185.4	2119.7	2082.0	2036.0	1927.6	1786.4	1622.2	1441.6	1239.7	1036.9
77.5°	2108.2	2074.6	2010.5	1975.2	1930.1	1829.9	1696.9	1549.2	1378.4	1188.8	995.0
80°	1959.6	1931.7	1869.3	1838.1	1793.8	1706.8	1591.9	1449.0	1294.7	1119.8	940.8
82.5°	1797.1	1765.1	1715.8	1687.1	1645.2	1567.2	1458.0	1341.5	1197.8	1041.0	877.6
85°	1628.8	1599.2	1554.1	1529.5	1492.5	1422.7	1325.0	1222.4	1095.2	954.0	809.5
87.5°	1468.7	1440.0	1397.3	1375.1	1341.5	1279.1	1193.7	1103.4	990.9	870.2	737.2
90°	1330.0	1302.9	1262.6	1242.1	1211.7	1155.1	1077.9	996.7	897.3	786.5	672.4
92.5°	1215.9	1191.2	1153.5	1133.8	1106.7	1054.9	985.2	911.3	821.8	725.7	619.8
95°	1125.5	1101.7	1068.1	1049.2	1023.7	970.4	908.8	839.8	757.8	669.9	572.2
97.5°	1052.5	1032.8	995.8	977.8	957.2	903.1	847.2	779.1	702.7	620.6	529.5
100°	993.4	971.2	937.5	920.3	899.0	848.1	791.4	727.4	653.5	575.5	490.9
102.5°	947.4	924.4	893.2	873.5	853.0	801.3	745.4	683.0	612.4	536.9	455.6
105°	906.3	884.2	853.0	833.3	812.8	761.9	708.5	645.3	575.5	502.4	423.6
107.5°	867.8	848.1	816.9	797.2	776.6	725.7	672.4	610.0	541.8	470.4	394.1
110°	834.9	813.6	780.7	761.9	739.7	691.3	637.9	577.1	509.0	439.2	366.2



TEST NUMBER: P201321

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	802.1	779.1	746.3	727.4	705.2	656.8	604.2	544.3	477.8	410.5	339.9
115°	766.0	743.8	709.3	690.4	668.3	620.6	569.8	511.5	447.4	381.7	313.6
117.5°	727.4	705.2	670.7	652.7	631.3	584.5	536.1	479.4	417.1	353.8	287.3
120°	685.5	664.2	631.3	613.3	592.7	547.6	500.8	444.1	385.0	324.3	262.7
122.5°	642.8	622.3	590.3	572.2	552.5	509.8	463.8	408.8	352.2	295.5	238.9
125°	596.8	576.3	545.9	528.7	509.0	468.0	423.6	371.9	319.4	268.5	214.3
127.5°	543.5	527.1	497.5	480.3	462.2	426.1	383.4	336.6	288.2	238.9	190.5
130°	492.6	475.3	447.4	431.8	416.2	383.4	345.6	300.5	252.9	210.2	166.7
132.5°	439.2	423.6	399.8	386.7	372.7	343.2	304.6	260.2	220.0	183.1	144.5
135°	389.1	376.0	354.7	343.2	329.2	298.0	261.9	224.9	191.3	158.4	124.0
137.5°	342.3	329.2	309.5	297.2	282.4	254.5	224.9	194.6	163.4	135.5	105.1
140°	293.1	282.4	264.4	253.7	240.5	216.7	192.1	163.4	138.7	113.3	87.0
142.5°	251.2	242.2	224.1	214.3	202.8	183.1	160.1	137.9	115.8	93.6	71.4
145°	215.1	206.1	186.4	179.0	168.3	151.1	132.2	112.5	94.4	75.5	57.5
147.5°	179.8	169.1	151.9	145.3	137.1	122.3	107.5	91.9	76.3	59.9	44.3
150°	147.0	134.6	120.7	116.6	108.4	96.9	84.6	71.4	59.1	46.0	32.0
152.5°	115.8	105.1	93.6	89.5	82.9	75.5	64.9	54.2	44.3	32.0	22.2
155°	86.2	78.0	69.0	66.5	61.6	55.8	46.8	38.6	29.6	21.3	15.6
157.5°	60.8	54.2	47.6	46.0	42.7	37.8	30.4	23.8	18.9	14.0	10.7
160°	37.8	33.7	28.7	27.1	24.6	21.3	16.4	14.0	11.5	9.0	6.6
162.5°	18.1	15.6	14.0	13.1	11.5	9.9	9.0	7.4	6.6	5.7	4.9
165°	6.6	6.6	6.6	5.7	5.7	5.7	5.7	4.9	4.1	4.1	3.3
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: P201321

CATALOG NUMBER: 8LBLELD4-9-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6	1129.6
2.5°	1128.8	1130.5	1130.5	1131.3	1133.8	1138.7	1145.2	1146.1
5°	1125.5	1126.4	1126.4	1126.4	1128.8	1132.9	1139.5	1140.3
7.5°	1118.2	1118.2	1118.2	1118.2	1120.6	1123.9	1129.6	1130.5
10°	1108.3	1107.5	1107.5	1106.7	1108.3	1110.8	1117.3	1116.5
12.5°	1096.0	1094.3	1093.5	1093.5	1092.7	1095.2	1099.3	1100.1
15°	1082.0	1078.7	1077.1	1075.5	1074.6	1074.6	1079.6	1078.7
17.5°	1065.6	1060.7	1058.2	1055.8	1052.5	1052.5	1055.8	1054.9
20°	1046.7	1040.2	1036.1	1032.8	1027.8	1026.2	1027.8	1027.0
22.5°	1027.8	1017.2	1013.1	1008.1	1000.8	997.5	996.7	995.8
25°	1005.7	992.5	986.8	981.9	971.2	967.1	963.0	961.4
27.5°	986.0	967.1	959.7	951.5	939.2	933.4	926.9	925.2
30°	968.7	940.8	929.3	921.1	905.5	896.5	888.3	886.6
32.5°	955.6	917.0	901.4	891.6	870.2	857.9	847.2	842.3
35°	944.1	894.9	874.3	858.7	833.3	818.5	803.7	799.6
37.5°	933.4	876.0	848.9	827.5	798.8	777.5	761.0	754.5
40°	922.8	858.7	825.9	798.8	761.0	736.4	715.9	707.7
42.5°	912.9	841.5	806.2	773.3	724.1	694.5	672.4	660.9
45°	903.9	825.9	787.3	751.2	688.0	653.5	626.4	615.7
47.5°	897.3	811.1	768.4	729.0	654.3	611.6	583.7	569.8
50°	892.4	797.2	750.4	706.9	624.8	571.4	540.2	523.8
52.5°	889.9	784.8	733.9	687.1	597.7	532.8	495.9	483.5
55°	890.7	775.0	720.0	669.1	572.2	495.9	454.8	435.9
57.5°	892.4	766.0	706.0	651.0	546.8	459.7	413.8	394.1
60°	895.7	758.6	693.7	633.8	523.0	428.5	376.0	357.1
62.5°	899.0	752.0	681.4	617.4	500.0	399.8	338.2	316.9
65°	899.8	742.2	668.3	600.9	477.0	371.1	299.7	279.1
67.5°	896.5	729.8	651.8	582.1	453.2	343.2	263.5	242.2
70°	886.6	713.4	633.0	560.7	426.9	316.1	229.0	206.1
72.5°	868.6	692.1	610.8	536.9	401.5	287.3	197.9	169.9
75°	843.1	665.8	584.5	509.8	374.4	260.2	169.1	137.9
77.5°	808.7	632.1	553.3	479.4	344.8	232.3	144.5	108.4
80°	764.3	596.8	518.9	446.6	316.1	206.9	120.7	80.5
82.5°	711.8	556.6	481.9	412.9	289.0	180.6	98.5	55.8
85°	657.6	513.1	443.3	377.6	260.2	156.0	79.6	32.8
87.5°	604.2	469.6	406.4	345.6	230.7	133.8	61.6	13.1
90°	551.7	427.7	367.8	311.1	205.2	113.3	46.0	0.0
92.5°	508.2	396.5	342.3	288.2	188.8	102.6	39.4	0.0
95°	469.6	367.0	315.3	265.2	171.6	92.8	32.8	0.0
97.5°	434.3	339.1	291.4	243.8	156.0	82.1	27.1	0.0
100°	400.6	311.1	266.8	224.1	141.2	73.1	20.5	0.0
102.5°	371.1	286.5	244.6	202.8	126.4	64.0	14.8	0.0
105°	342.3	262.7	224.1	183.9	113.3	55.8	9.0	0.0
107.5°	316.9	240.5	203.6	166.7	101.0	48.4	5.7	0.0
110°	292.3	220.0	183.9	150.2	90.3	41.9	4.9	0.0



TEST NUMBER: P201321

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	269.3	200.3	166.7	134.6	81.3	35.3	4.9	0.0
115°	245.5	181.4	150.2	121.5	72.2	28.7	4.1	0.0
117.5°	224.9	163.4	135.5	110.8	63.2	23.0	4.1	0.0
120°	204.4	147.8	123.1	99.3	55.0	17.2	4.1	0.0
122.5°	183.9	133.8	110.0	88.7	47.6	14.0	3.3	0.0
125°	165.0	119.0	97.7	77.2	39.4	12.3	3.3	0.0
127.5°	146.1	104.3	84.6	66.5	31.2	10.7	2.5	0.0
130°	127.2	89.5	72.2	55.8	23.8	9.0	2.5	0.0
132.5°	110.0	75.5	60.8	46.0	18.9	7.4	1.6	0.0
135°	92.8	63.2	50.1	36.1	14.8	6.6	1.6	0.0
137.5°	78.0	51.7	39.4	27.1	12.3	4.9	1.6	0.0
140°	64.0	41.0	29.6	20.5	9.9	4.1	0.8	0.0
142.5°	50.9	30.4	22.2	15.6	8.2	3.3	0.8	0.0
145°	39.4	22.2	16.4	12.3	7.4	2.5	0.8	0.0
147.5°	28.7	17.2	13.1	10.7	5.7	2.5	0.8	0.0
150°	20.5	13.1	10.7	8.2	4.1	1.6	0.8	0.0
152.5°	15.6	9.9	8.2	6.6	3.3	1.6	0.8	0.0
155°	11.5	7.4	6.6	4.9	2.5	1.6	0.8	0.0
157.5°	8.2	5.7	4.9	3.3	2.5	1.6	0.8	0.0
160°	4.9	4.1	3.3	2.5	1.6	0.8	0.8	0.0
162.5°	4.1	2.5	2.5	2.5	1.6	0.8	0.8	0.0
165°	2.5	1.6	1.6	1.6	0.8	0.8	0.8	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)