

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: P201304

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201304
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28136)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8LBLED-LD4-9-SYMW-UNV-L850-CD1-U
Description: 8 ft. Low Bay Linear, 9000 lm, Wht Sym lens, 5K
Light Source: (784) 5000K CCT, 80 CRI LEDS
2UT217098A8504C
Ballast/Driver: OSRAM
(OTi85W01440CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9648.5 lumens
Efficiency: N/A
Efficacy: 149.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 2.12 / 1.93
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 8' x H: 0.21')
CIE Type: Semi-Direct

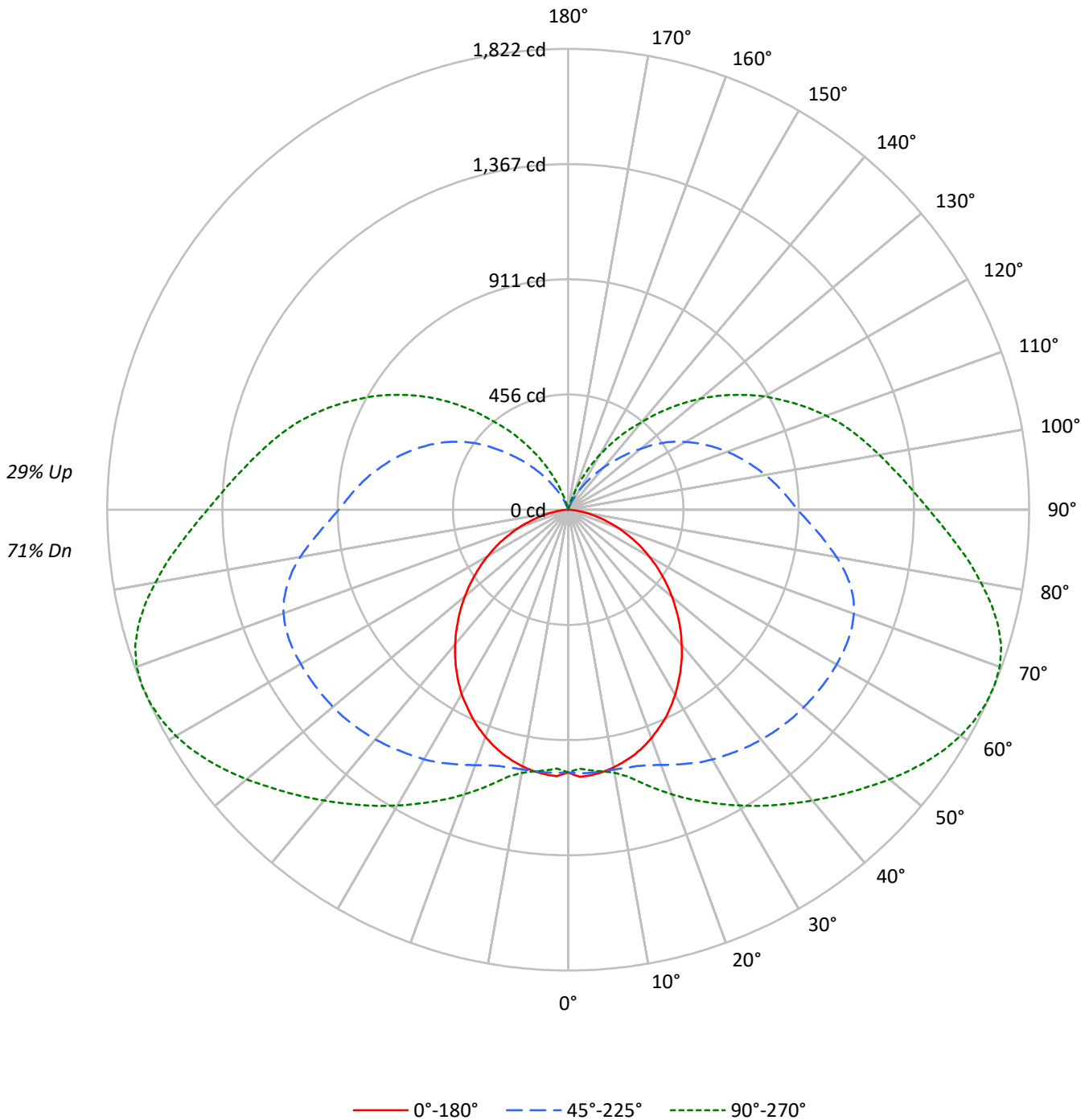
Input Watts (W): 64.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	97	90	84	79	91	85	80	75	75	71	67	66	63	60	58	55	53	49
2	86	76	67	60	81	71	64	57	63	57	51	55	50	46	48	44	40	36
3	77	65	55	48	72	61	52	45	54	47	41	47	41	36	41	36	32	28
4	70	56	46	39	65	53	44	37	47	39	33	41	35	30	35	30	26	23
5	64	50	40	32	60	47	38	31	41	34	28	36	30	25	31	26	22	19
6	59	44	34	27	55	42	33	26	37	29	24	32	26	21	28	23	19	16
7	54	40	30	24	50	37	29	23	33	26	20	29	23	18	25	20	16	14
8	50	36	27	21	47	34	25	20	30	23	18	26	20	16	23	18	14	12
9	47	33	24	18	44	31	23	17	27	21	16	24	18	14	21	16	13	10
10	43	30	22	16	41	28	21	15	25	19	14	22	17	13	20	15	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8371	8371	8371
5°	8503	7546	8475
10°	8426	7086	8398
15°	8320	6986	8283
20°	8162	7065	8118
25°	7984	7164	7923
30°	7744	7306	7720
35°	7483	7489	7450
40°	7180	7719	7154
45°	6862	8012	6823
50°	6510	8368	6479
55°	6126	8757	6091
60°	5705	9133	5665
65°	5211	9450	5164
70°	4610	9671	4553
75°	3836	9690	3689
80°	2944	9528	2733
85°	1668	9337	1482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.2	1.0
10°-20°	298.9	3.1
20°-30°	505.9	5.2
30°-40°	707.4	7.3
40°-50°	891.3	9.2
50°-60°	1046.6	10.8
60°-70°	1144.4	11.9
70°-80°	1130.6	11.7
80°-90°	993.3	10.3
90°-100°	845.5	8.8
100°-110°	705.1	7.3
110°-120°	546.1	5.7
120°-130°	380.1	3.9
130°-140°	221.9	2.3
140°-150°	101.2	1.0
150°-160°	28.9	0.3
160°-170°	2.1	0.0
170°-180°	0.0	0.0
0°-30°	904.0	9.4
0°-40°	1611.4	16.7
0°-60°	3549.3	36.8
0°-90°	6817.6	70.7
90°-120°	2096.7	21.7
90°-150°	2799.9	29.0
90°-180°	2831.0	29.3
0°-180°	9648.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1039	1039	1039	1039	1039	
5°	1054	1044	1035	1042	1050	100
15°	1004	1049	1117	1049	1000	283
25°	909	1108	1274	1108	902	418
35°	775	1165	1426	1163	771	484
45°	618	1204	1579	1202	614	476
55°	452	1222	1732	1218	450	405
65°	289	1221	1820	1217	286	286
75°	135	1155	1758	1150	130	145
85°	23	988	1539	985	21	30
90°	0	906	1426	906	0	1
95°	0	849	1332	850	0	0
105°	1	730	1171	733	0	1
115°	1	604	992	606	1	1
125°	2	462	791	462	1	1
135°	2	293	568	293	1	1
145°	3	150	352	148	2	1
155°	3	42	156	40	2	1
165°	3	4	11	0	2	1
175°	0	0	0	0	0	0
180°	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°	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0
2.5°	1057.2	1056.3	1052.0	1045.1	1042.5	1040.7	1039.9	1037.3	1036.4	1038.1	1043.3
5°	1053.7	1052.0	1048.5	1042.5	1039.9	1039.0	1038.1	1035.5	1034.7	1037.3	1044.2
7.5°	1045.9	1045.1	1041.6	1035.5	1034.7	1033.0	1033.0	1031.2	1031.2	1035.5	1043.3
10°	1034.7	1033.8	1030.4	1026.0	1025.2	1025.2	1025.2	1025.2	1026.9	1033.8	1043.3
12.5°	1020.0	1020.0	1017.4	1013.9	1014.8	1014.8	1015.6	1017.4	1022.6	1033.0	1045.1
15°	1004.4	1003.5	1000.9	1000.0	1002.6	1003.5	1006.1	1010.4	1019.1	1033.8	1049.4
17.5°	984.4	984.4	981.8	982.7	987.9	990.5	994.8	1002.6	1016.5	1036.4	1058.9
20°	961.0	961.9	961.0	963.6	972.3	977.5	982.7	995.7	1015.6	1043.3	1073.7
22.5°	935.0	936.8	936.8	943.7	955.0	962.8	970.6	988.8	1017.4	1055.5	1091.0
25°	909.0	909.0	911.6	921.2	936.8	946.3	958.4	984.4	1023.4	1068.5	1108.3
27.5°	877.8	880.4	884.8	897.8	919.4	932.4	947.2	984.4	1030.4	1081.5	1125.7
30°	844.9	847.5	854.4	872.6	900.4	916.8	937.6	984.4	1036.4	1091.9	1140.4
32.5°	810.2	814.6	824.1	847.5	881.3	903.8	930.7	983.6	1041.6	1100.5	1152.5
35°	774.7	779.0	793.8	821.5	865.7	891.7	922.9	981.0	1044.2	1108.3	1164.7
37.5°	737.5	745.2	761.7	796.4	850.1	881.3	914.2	978.4	1046.8	1114.4	1176.8
40°	697.6	705.4	728.8	770.4	834.5	867.4	903.8	974.9	1048.5	1120.5	1187.2
42.5°	658.6	669.0	695.9	746.1	818.9	855.3	893.4	969.7	1047.7	1124.8	1195.9
45°	617.9	630.0	662.9	722.7	801.6	840.6	881.3	962.8	1045.9	1127.4	1203.7
47.5°	576.3	591.0	630.0	699.3	784.2	825.0	869.2	955.8	1043.3	1129.1	1210.6
50°	535.5	552.9	597.1	675.9	765.2	808.5	854.4	948.0	1039.0	1130.0	1214.9
52.5°	494.8	513.9	565.9	652.5	745.2	791.2	839.7	938.5	1033.8	1129.1	1219.3
55°	452.3	473.1	534.7	627.4	724.5	772.1	823.2	926.4	1026.0	1125.7	1221.9
57.5°	411.6	435.0	505.2	603.1	702.8	753.0	807.6	913.4	1017.4	1123.1	1224.5
60°	370.0	396.9	474.9	575.4	680.3	732.3	788.6	898.6	1007.0	1117.0	1224.5
62.5°	329.3	359.6	445.4	550.3	657.7	711.5	769.5	882.2	995.7	1110.9	1224.5
65°	288.6	323.2	415.1	522.5	632.6	688.9	747.8	864.8	981.8	1102.3	1221.0
67.5°	248.7	288.6	383.9	493.9	606.6	664.7	725.3	844.9	966.2	1091.0	1214.1
70°	209.7	253.9	352.7	463.6	579.7	636.9	700.2	823.2	948.0	1076.3	1201.9
72.5°	170.7	221.0	319.8	433.3	551.1	610.1	674.2	798.1	925.5	1056.3	1182.9
75°	135.2	188.0	288.6	402.1	521.7	581.5	645.6	770.4	898.6	1030.4	1155.1
77.5°	103.1	157.7	258.2	371.8	490.5	552.9	616.1	740.0	867.4	997.4	1118.7
80°	72.8	128.3	227.9	340.6	459.3	520.8	583.2	707.1	834.5	958.4	1077.1
82.5°	45.1	101.4	197.6	310.2	429.0	489.6	551.1	674.2	797.2	917.7	1032.1
85°	23.4	76.3	169.0	281.6	399.5	459.3	519.9	640.4	759.1	876.1	987.9
87.5°	7.8	55.5	145.6	256.5	372.6	432.4	491.3	608.3	723.6	835.4	944.6
90°	0.0	41.6	128.3	236.6	350.1	408.2	467.1	579.7	692.4	802.4	906.4
92.5°	0.0	35.5	117.0	222.7	334.5	391.7	448.9	560.7	669.0	775.6	877.0
95°	0.0	28.6	107.5	208.8	318.0	374.4	430.7	539.9	646.5	750.4	849.2
97.5°	0.0	22.5	97.1	195.8	301.6	356.2	410.8	519.1	623.1	725.3	820.6
100°	0.9	17.3	85.8	179.4	284.2	338.0	390.8	496.5	597.9	696.7	791.2
102.5°	0.9	12.1	75.4	165.5	266.0	318.0	370.0	473.1	572.8	670.7	760.8
105°	0.9	8.7	65.0	150.8	248.7	299.0	350.1	450.6	547.7	642.1	730.5
107.5°	0.9	6.1	55.5	136.9	231.4	279.0	328.4	426.4	521.7	613.5	700.2
110°	0.9	4.3	46.8	122.2	212.3	260.0	307.6	402.1	494.8	584.1	669.0



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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.9	3.5	38.1	108.3	193.2	240.0	286.0	377.8	467.9	554.6	636.9
115°	0.9	3.5	30.3	95.3	174.2	219.2	263.4	353.6	439.4	524.3	604.0
117.5°	0.9	2.6	23.4	82.3	156.8	198.4	240.9	326.7	411.6	493.9	571.1
120°	0.9	2.6	17.3	69.3	138.7	177.6	219.2	300.7	382.2	461.9	535.5
122.5°	1.7	2.6	13.0	58.1	122.2	157.7	197.6	274.7	351.0	428.1	500.9
125°	1.7	1.7	10.4	46.8	104.9	137.8	173.3	247.8	317.2	390.8	461.9
127.5°	1.7	1.7	7.8	35.5	87.5	117.9	149.9	219.2	286.8	352.7	420.3
130°	1.7	1.7	6.9	26.0	71.1	97.9	127.4	189.8	253.0	313.7	375.2
132.5°	1.7	1.7	5.2	19.1	56.3	80.6	106.6	162.0	220.1	279.0	334.5
135°	1.7	1.7	4.3	13.9	42.5	64.1	86.7	136.1	188.9	244.4	292.9
137.5°	1.7	1.7	4.3	10.4	31.2	48.5	68.5	113.5	160.3	209.7	253.9
140°	1.7	1.7	3.5	8.7	21.7	35.5	52.0	91.0	130.9	176.8	219.2
142.5°	1.7	1.7	2.6	6.9	15.6	25.1	37.3	70.2	105.7	145.6	182.8
145°	2.6	1.7	2.6	6.1	11.3	17.3	26.0	52.9	81.5	117.0	149.9
147.5°	1.7	1.7	1.7	4.3	8.7	12.1	17.3	36.4	61.5	91.0	118.7
150°	2.6	1.7	1.7	3.5	6.9	8.7	12.1	24.3	42.5	66.7	91.0
152.5°	2.6	1.7	1.7	3.5	5.2	6.9	8.7	15.6	27.7	45.1	65.0
155°	2.6	1.7	1.7	2.6	4.3	5.2	6.9	10.4	16.5	27.7	42.5
157.5°	2.6	2.6	2.6	2.6	3.5	4.3	5.2	7.8	9.5	15.6	24.3
160°	2.6	2.6	1.7	1.7	2.6	2.6	3.5	5.2	6.9	8.7	12.1
162.5°	2.6	2.6	2.6	1.7	1.7	1.7	2.6	3.5	4.3	6.1	7.8
165°	2.6	2.6	1.7	1.7	1.7	1.7	1.7	1.7	2.6	3.5	4.3
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0
2.5°	1045.1	1040.7	1039.0	1035.5	1033.0	1031.2	1028.6	1026.9	1025.2	1024.3	1024.3
5°	1045.9	1041.6	1039.9	1037.3	1036.4	1034.7	1033.0	1034.7	1033.8	1034.7	1033.8
7.5°	1046.8	1043.3	1043.3	1042.5	1041.6	1041.6	1039.9	1041.6	1042.5	1043.3	1042.5
10°	1049.4	1048.5	1050.3	1051.1	1051.1	1051.1	1051.1	1052.9	1056.3	1056.3	1055.5
12.5°	1053.7	1056.3	1061.5	1065.9	1067.6	1067.6	1071.1	1074.5	1078.9	1079.7	1078.9
15°	1062.4	1070.2	1081.5	1091.0	1095.3	1097.9	1104.9	1110.9	1115.3	1117.0	1115.3
17.5°	1078.0	1092.7	1110.1	1123.9	1129.1	1132.6	1142.1	1148.2	1153.4	1157.7	1156.0
20°	1098.8	1118.7	1139.5	1156.0	1162.9	1167.3	1177.7	1188.9	1194.1	1197.6	1196.7
22.5°	1121.3	1144.7	1168.1	1188.1	1195.9	1201.1	1214.1	1224.5	1232.3	1236.6	1235.7
25°	1143.0	1169.9	1198.5	1220.1	1229.7	1235.7	1249.6	1261.7	1270.4	1273.9	1273.0
27.5°	1164.7	1195.9	1227.1	1252.2	1261.7	1269.5	1286.0	1299.0	1309.4	1312.0	1312.0
30°	1182.0	1218.4	1252.2	1280.8	1291.2	1301.6	1319.8	1337.1	1346.6	1350.1	1349.2
32.5°	1198.5	1239.2	1277.3	1309.4	1322.4	1332.8	1354.4	1373.5	1384.8	1388.2	1384.8
35°	1214.9	1260.0	1302.5	1337.1	1351.0	1364.0	1388.2	1409.9	1422.0	1425.5	1423.8
37.5°	1230.5	1280.8	1326.7	1364.8	1381.3	1395.2	1420.3	1446.3	1459.3	1462.8	1459.3
40°	1245.3	1299.9	1350.1	1391.7	1409.9	1426.4	1455.8	1481.8	1496.6	1500.9	1499.2
42.5°	1259.1	1318.9	1373.5	1419.4	1440.2	1457.6	1490.5	1519.1	1534.7	1539.9	1535.6
45°	1271.3	1338.0	1396.9	1446.3	1468.8	1488.8	1526.0	1557.2	1572.8	1578.9	1573.7
47.5°	1283.4	1355.3	1418.6	1473.2	1499.2	1520.0	1561.6	1594.5	1612.7	1617.9	1612.7
50°	1294.7	1372.6	1442.0	1500.9	1528.6	1552.0	1597.1	1632.6	1650.8	1658.6	1651.7
52.5°	1305.1	1389.1	1463.6	1526.9	1557.2	1583.2	1631.7	1669.9	1691.5	1696.7	1689.8
55°	1315.5	1404.7	1482.7	1551.2	1584.1	1611.8	1664.7	1704.5	1726.2	1732.3	1725.3
57.5°	1324.1	1418.6	1500.9	1574.6	1608.4	1640.4	1693.3	1734.9	1757.4	1764.3	1757.4
60°	1330.2	1429.8	1517.4	1593.6	1629.1	1662.1	1718.4	1760.0	1782.5	1789.5	1782.5
62.5°	1334.5	1438.5	1528.6	1608.4	1646.5	1680.3	1737.5	1778.2	1801.6	1808.5	1801.6
65°	1335.4	1442.0	1534.7	1617.9	1656.9	1690.7	1748.7	1789.5	1813.7	1819.8	1812.9
67.5°	1330.2	1438.5	1534.7	1619.6	1658.6	1693.3	1751.3	1792.1	1815.5	1822.4	1815.5
70°	1319.8	1428.1	1526.0	1612.7	1651.7	1686.3	1743.5	1785.1	1808.5	1815.5	1807.7
72.5°	1299.9	1409.9	1507.8	1596.2	1633.5	1667.3	1723.6	1764.3	1786.9	1794.7	1786.0
75°	1271.3	1381.3	1479.2	1564.2	1603.2	1634.3	1690.7	1730.5	1751.3	1758.3	1750.5
77.5°	1234.0	1344.9	1439.4	1523.4	1562.4	1591.0	1645.6	1684.6	1705.4	1711.5	1703.7
80°	1190.7	1300.7	1391.7	1474.9	1511.3	1538.2	1592.8	1630.0	1649.9	1656.0	1651.7
82.5°	1143.0	1250.5	1338.8	1420.3	1455.0	1481.8	1535.6	1572.0	1591.9	1600.6	1593.6
85°	1094.5	1197.6	1284.3	1363.1	1397.8	1426.4	1475.8	1512.2	1532.1	1539.0	1534.7
87.5°	1045.9	1145.6	1229.7	1305.9	1338.0	1367.4	1416.8	1453.2	1473.2	1480.1	1474.9
90°	1005.2	1100.5	1181.1	1256.5	1289.5	1316.3	1364.0	1398.6	1418.6	1425.5	1421.2
92.5°	972.3	1063.3	1141.3	1210.6	1241.8	1270.4	1316.3	1350.1	1370.0	1376.1	1371.8
95°	941.1	1029.5	1104.9	1172.5	1202.8	1230.5	1273.9	1306.8	1325.9	1331.9	1328.5
97.5°	911.6	996.6	1069.3	1135.2	1166.4	1191.5	1233.1	1264.3	1283.4	1288.6	1283.4
100°	878.7	964.5	1035.5	1100.5	1127.4	1152.5	1194.1	1225.3	1241.8	1248.7	1244.4
102.5°	847.5	929.8	1000.0	1064.1	1092.7	1117.9	1156.0	1186.3	1205.4	1209.7	1205.4
105°	815.4	895.2	963.6	1026.9	1055.5	1079.7	1117.9	1147.3	1165.5	1170.7	1166.4
107.5°	782.5	859.6	928.1	987.9	1015.6	1038.1	1077.1	1105.7	1121.3	1130.9	1123.9
110°	747.0	823.2	889.1	947.2	974.0	995.7	1033.8	1062.4	1077.1	1085.8	1079.7



TEST NUMBER: P201304

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	714.1	786.0	849.2	905.6	930.7	952.4	989.6	1017.4	1031.2	1039.9	1033.8
115°	679.4	746.1	808.5	862.2	887.4	907.3	944.6	970.6	984.4	992.2	987.0
117.5°	642.1	707.1	766.0	818.9	842.3	862.2	897.8	923.8	936.8	942.8	937.6
120°	605.7	669.0	724.5	774.7	798.1	817.2	851.8	876.1	888.2	895.2	890.0
122.5°	567.6	629.1	679.4	729.7	751.3	769.5	800.7	826.7	838.0	844.0	840.6
125°	526.9	587.5	636.1	682.0	702.8	720.1	750.4	772.1	785.1	791.2	787.7
127.5°	484.4	542.5	591.9	634.3	654.3	673.3	698.5	722.7	731.4	738.3	734.9
130°	436.8	494.8	540.7	584.1	603.1	618.7	646.5	666.4	677.7	683.7	681.1
132.5°	390.0	443.7	492.2	531.2	549.4	565.9	591.0	610.1	625.7	626.5	623.1
135°	344.9	391.7	435.9	477.5	495.7	512.1	534.7	552.0	566.7	567.6	563.3
137.5°	301.6	344.9	383.0	422.0	441.1	458.4	479.2	495.7	509.5	512.1	506.1
140°	260.0	299.8	334.5	369.2	387.4	403.8	426.4	440.2	451.5	452.3	448.9
142.5°	220.1	256.5	286.8	318.9	335.4	350.1	375.2	389.1	399.5	402.1	396.9
145°	182.8	214.9	243.5	271.2	285.1	299.0	324.1	340.6	349.2	351.8	346.6
147.5°	147.3	174.2	199.3	224.4	236.6	249.6	270.4	291.2	299.0	300.7	296.4
150°	114.4	136.9	159.4	180.2	190.6	201.9	220.1	239.2	249.6	251.3	247.8
152.5°	84.1	103.1	121.3	138.7	147.3	156.0	171.6	189.8	202.8	203.6	200.2
155°	57.2	72.8	87.5	100.5	108.3	115.3	127.4	141.3	155.1	156.0	153.4
157.5°	34.7	45.1	57.2	67.6	72.8	78.9	87.5	97.9	110.1	112.7	110.1
160°	17.3	23.4	30.3	37.3	41.6	45.9	50.3	58.9	65.9	71.9	68.5
162.5°	8.7	10.4	12.1	15.6	17.3	19.9	23.4	26.9	30.3	36.4	32.1
165°	5.2	6.1	6.9	6.9	7.8	7.8	7.8	7.8	7.8	11.3	7.8
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: P201304

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0
2.5°	1026.9	1028.6	1032.1	1033.8	1035.5	1037.3	1040.7	1045.9	1041.6	1037.3	1038.1
5°	1033.8	1033.8	1034.7	1037.3	1037.3	1038.1	1041.6	1046.8	1042.5	1036.4	1036.4
7.5°	1042.5	1041.6	1042.5	1043.3	1042.5	1042.5	1044.2	1046.8	1041.6	1034.7	1033.0
10°	1054.6	1052.0	1051.1	1052.0	1051.1	1048.5	1049.4	1049.4	1042.5	1032.1	1027.8
12.5°	1076.3	1071.9	1068.5	1067.6	1065.0	1060.7	1058.1	1054.6	1044.2	1032.1	1023.4
15°	1111.8	1104.9	1097.9	1095.3	1091.0	1080.6	1071.9	1064.1	1049.4	1032.1	1020.0
17.5°	1151.7	1143.0	1133.5	1130.0	1123.9	1109.2	1094.5	1079.7	1058.9	1034.7	1017.4
20°	1189.8	1179.4	1168.1	1162.1	1156.0	1137.8	1120.5	1101.4	1074.5	1042.5	1016.5
22.5°	1227.9	1215.8	1200.2	1195.0	1187.2	1166.4	1145.6	1123.9	1091.9	1053.7	1018.2
25°	1265.2	1251.3	1236.6	1227.9	1219.3	1195.9	1170.7	1144.7	1108.3	1066.7	1024.3
27.5°	1302.5	1286.9	1268.7	1259.1	1250.5	1224.5	1195.9	1166.4	1125.7	1078.9	1032.1
30°	1338.8	1321.5	1299.9	1289.5	1279.1	1249.6	1216.7	1183.7	1139.5	1089.3	1037.3
32.5°	1375.2	1356.2	1331.9	1319.8	1307.7	1273.9	1237.5	1200.2	1151.7	1098.8	1041.6
35°	1410.8	1390.0	1363.1	1348.4	1335.4	1299.0	1258.3	1216.7	1162.9	1106.6	1044.2
37.5°	1447.2	1423.8	1394.3	1377.8	1363.1	1323.3	1278.2	1231.4	1175.1	1112.7	1046.8
40°	1483.6	1458.4	1425.5	1408.2	1390.0	1346.6	1298.1	1246.1	1185.5	1118.7	1047.7
42.5°	1520.8	1493.1	1456.7	1437.6	1418.6	1370.0	1316.3	1259.1	1194.1	1123.1	1046.8
45°	1558.1	1526.9	1487.9	1466.2	1445.4	1392.6	1334.5	1270.4	1201.9	1125.7	1045.1
47.5°	1595.4	1562.4	1520.0	1496.6	1471.4	1415.1	1351.8	1282.5	1208.9	1126.5	1043.3
50°	1633.5	1598.0	1552.0	1526.0	1500.0	1436.8	1369.2	1292.9	1213.2	1127.4	1039.0
52.5°	1670.7	1632.6	1583.2	1555.5	1525.2	1458.4	1385.6	1303.3	1216.7	1126.5	1033.0
55°	1704.5	1664.7	1612.7	1583.2	1549.4	1478.4	1400.4	1312.0	1218.4	1123.9	1025.2
57.5°	1735.7	1695.0	1640.4	1607.5	1574.6	1497.4	1414.2	1321.5	1220.1	1119.6	1016.5
60°	1760.0	1719.3	1662.1	1629.1	1593.6	1513.0	1425.5	1326.7	1220.1	1113.5	1005.2
62.5°	1778.2	1737.5	1680.3	1645.6	1608.4	1526.0	1434.2	1331.9	1220.1	1107.5	994.0
65°	1789.5	1749.6	1690.7	1656.0	1617.9	1532.1	1438.5	1332.8	1216.7	1098.8	980.1
67.5°	1791.2	1751.3	1692.4	1658.6	1619.6	1532.1	1435.9	1328.5	1209.7	1087.5	964.5
70°	1783.4	1743.5	1685.5	1650.8	1612.7	1524.3	1426.4	1318.1	1197.6	1072.8	946.3
72.5°	1763.5	1722.7	1666.4	1630.9	1593.6	1506.1	1406.4	1299.0	1177.7	1052.0	924.6
75°	1728.8	1688.9	1633.5	1600.6	1562.4	1476.6	1376.1	1271.3	1149.9	1026.0	897.8
77.5°	1682.9	1643.9	1589.3	1556.4	1520.8	1436.8	1338.0	1234.0	1116.1	994.0	866.6
80°	1628.3	1591.0	1537.3	1505.2	1470.6	1389.1	1292.1	1190.7	1074.5	955.8	831.9
82.5°	1570.2	1533.8	1481.8	1448.9	1416.0	1337.1	1244.4	1143.9	1030.4	915.1	794.6
85°	1513.9	1474.9	1422.9	1392.6	1359.6	1282.5	1195.0	1095.3	985.3	873.5	758.2
87.5°	1455.0	1416.8	1365.7	1337.1	1305.9	1227.9	1144.7	1047.7	942.8	836.2	722.7
90°	1401.2	1364.0	1314.6	1286.0	1256.5	1181.1	1099.7	1007.8	906.4	803.3	693.3
92.5°	1351.8	1317.2	1270.4	1242.7	1214.1	1142.1	1064.1	974.9	877.0	777.3	669.9
95°	1309.4	1275.6	1232.3	1205.4	1175.9	1107.5	1031.2	943.7	850.1	753.0	648.2
97.5°	1266.9	1234.9	1192.4	1166.4	1138.7	1071.9	998.3	914.2	822.4	726.2	624.8
100°	1227.9	1196.7	1153.4	1130.0	1103.1	1039.0	966.2	883.9	793.8	699.3	599.7
102.5°	1189.8	1158.6	1117.0	1093.6	1067.6	1003.5	932.4	851.0	763.4	672.5	575.4
105°	1150.8	1120.5	1078.9	1055.5	1029.5	967.1	897.8	818.9	733.1	644.7	550.3
107.5°	1108.3	1078.9	1039.0	1015.6	991.4	929.0	862.2	785.1	702.8	616.1	524.3
110°	1065.0	1035.5	999.2	974.0	950.6	890.0	825.0	751.3	670.7	586.7	497.4



TEST NUMBER: P201304

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1020.0	991.4	955.8	932.4	908.2	850.1	787.7	716.7	638.7	556.3	469.7
115°	974.0	945.4	909.9	886.5	864.8	809.4	748.7	681.1	605.7	526.0	442.0
117.5°	923.8	898.6	864.8	844.0	821.5	766.0	709.7	644.7	572.8	493.9	413.4
120°	877.0	852.7	819.8	797.2	777.3	724.5	670.7	607.5	536.4	462.7	383.9
122.5°	827.6	801.6	771.2	752.2	730.5	682.0	630.0	569.3	500.0	427.2	351.8
125°	775.6	751.3	721.9	703.7	683.7	637.8	588.4	527.7	461.9	391.7	318.9
127.5°	722.7	700.2	671.6	655.1	636.1	591.0	543.3	484.4	418.6	352.7	285.1
130°	669.0	646.5	620.5	603.1	584.9	542.5	495.7	437.6	375.2	313.7	252.2
132.5°	612.7	591.0	565.0	549.4	532.9	492.2	444.5	388.2	332.8	277.3	220.1
135°	554.6	534.7	511.3	496.5	480.1	438.5	393.4	342.3	292.9	241.8	188.9
137.5°	498.3	480.1	457.5	442.8	424.6	385.6	345.8	299.8	254.8	207.1	157.7
140°	442.8	426.4	404.7	388.2	372.6	336.2	299.8	258.2	217.5	174.2	130.0
142.5°	390.8	376.1	351.8	336.2	321.5	289.4	257.4	218.4	182.0	143.0	104.9
145°	339.7	326.7	299.8	286.0	273.8	245.2	213.2	181.1	148.2	114.4	81.5
147.5°	290.3	274.7	249.6	237.4	226.2	201.0	174.2	144.7	117.9	88.4	59.8
150°	242.6	223.6	201.9	191.5	182.0	160.3	136.9	112.7	89.3	64.1	41.6
152.5°	193.2	173.3	158.6	148.2	139.5	122.2	103.1	82.3	63.3	43.3	26.0
155°	143.0	129.1	115.3	110.1	102.3	87.5	71.9	55.5	39.9	26.0	14.7
157.5°	98.8	88.4	79.7	74.5	68.5	57.2	44.2	32.1	22.5	13.9	6.9
160°	59.8	52.9	46.8	42.5	38.1	30.3	21.7	14.7	9.5	4.3	2.6
162.5°	26.9	22.5	19.9	17.3	14.7	11.3	6.9	3.5	1.7	0.9	0.9
165°	5.2	3.5	2.6	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
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: P201304

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0	1039.0
2.5°	1039.0	1039.9	1040.7	1040.7	1043.3	1047.7	1053.7	1054.6
5°	1036.4	1037.3	1037.3	1038.1	1040.7	1044.2	1049.4	1050.3
7.5°	1032.1	1032.1	1032.1	1032.1	1033.8	1037.3	1041.6	1042.5
10°	1026.0	1024.3	1023.4	1022.6	1023.4	1026.9	1030.4	1031.2
12.5°	1019.1	1014.8	1013.0	1012.2	1012.2	1013.0	1016.5	1016.5
15°	1011.3	1004.4	1001.8	1000.0	996.6	996.6	1000.0	1000.0
17.5°	1003.5	994.0	988.8	985.3	980.1	979.2	981.0	979.2
20°	996.6	981.8	974.9	968.8	961.0	958.4	958.4	955.8
22.5°	989.6	969.7	960.2	951.5	939.4	935.0	932.4	930.7
25°	985.3	956.7	944.6	934.2	917.7	908.2	905.6	902.1
27.5°	984.4	946.3	929.8	916.8	894.3	883.0	876.1	871.8
30°	984.4	935.9	914.2	896.0	868.3	851.0	844.0	842.3
32.5°	983.6	928.1	902.1	878.7	843.2	820.6	810.2	807.6
35°	981.0	920.3	890.0	861.4	818.0	789.4	774.7	771.2
37.5°	977.5	910.8	878.7	845.8	792.0	757.4	739.2	734.0
40°	974.0	901.2	864.8	829.3	766.0	724.5	701.1	695.0
42.5°	968.0	890.8	852.7	813.7	741.8	691.5	664.7	655.1
45°	961.9	878.7	838.0	796.4	717.5	657.7	623.9	614.4
47.5°	954.1	865.7	823.2	777.3	695.0	624.8	586.7	574.5
50°	945.4	852.7	806.8	759.1	670.7	592.7	545.9	532.9
52.5°	935.9	838.0	790.3	740.0	646.5	562.4	507.8	491.3
55°	923.8	821.5	771.2	718.4	621.3	531.2	468.8	449.7
57.5°	910.8	805.0	753.0	698.5	596.2	501.7	430.7	409.0
60°	895.2	786.0	730.5	675.9	570.2	471.4	392.6	367.4
62.5°	878.7	766.9	710.6	652.5	544.2	442.0	355.3	326.7
65°	861.4	745.2	688.1	628.3	516.5	410.8	318.9	286.0
67.5°	840.6	721.9	662.9	602.3	487.9	379.6	283.4	246.1
70°	819.8	696.7	635.2	574.5	458.4	348.4	249.6	207.1
72.5°	794.6	669.9	607.5	545.9	428.1	318.0	216.6	168.1
75°	766.9	642.1	578.9	516.5	396.9	286.0	183.7	130.0
77.5°	737.5	611.8	549.4	486.1	367.4	255.6	153.4	97.9
80°	706.3	579.7	518.2	454.9	336.2	225.3	123.9	67.6
82.5°	671.6	548.5	487.0	423.8	306.8	195.8	97.1	41.6
85°	638.7	517.3	457.5	395.2	278.2	166.4	72.8	20.8
87.5°	606.6	488.7	430.7	369.2	253.9	143.9	52.9	6.1
90°	580.6	465.3	408.2	348.4	234.8	127.4	39.9	0.0
92.5°	559.8	447.1	390.8	332.8	221.0	116.1	33.8	0.0
95°	539.9	428.1	374.4	316.3	207.1	106.6	26.9	0.0
97.5°	518.2	409.9	356.2	299.8	193.2	96.2	21.7	0.0
100°	496.5	390.0	338.0	283.4	177.6	85.8	15.6	0.0
102.5°	473.1	369.2	318.0	265.2	163.8	74.5	10.4	0.0
105°	450.6	348.4	299.0	247.0	149.0	65.0	6.9	0.0
107.5°	426.4	327.6	279.0	229.6	134.3	54.6	4.3	0.0
110°	402.1	306.8	259.1	211.4	120.5	45.1	3.5	0.0



TEST NUMBER: P201304

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	377.8	285.1	239.2	192.4	106.6	36.4	2.6	0.9
115°	351.8	262.6	218.4	173.3	92.7	28.6	2.6	0.9
117.5°	325.8	239.2	198.4	155.1	79.7	21.7	1.7	0.9
120°	299.0	218.4	176.8	137.8	67.6	15.6	1.7	0.9
122.5°	273.0	196.7	156.8	119.6	55.5	12.1	1.7	0.9
125°	246.1	171.6	136.9	103.1	44.2	9.5	1.7	0.9
127.5°	217.5	148.2	116.1	84.9	33.8	6.9	1.7	0.9
130°	188.0	124.8	96.2	69.3	24.3	5.2	1.7	0.9
132.5°	160.3	104.9	78.0	54.6	17.3	4.3	1.7	0.9
135°	135.2	84.9	61.5	40.7	12.1	3.5	0.9	0.9
137.5°	110.9	67.6	46.8	29.5	8.7	2.6	1.7	0.9
140°	89.3	51.1	33.8	20.8	6.1	1.7	1.7	0.9
142.5°	69.3	36.4	23.4	13.9	4.3	1.7	0.9	0.9
145°	51.1	24.3	15.6	8.7	3.5	1.7	1.7	1.7
147.5°	34.7	16.5	9.5	6.1	2.6	1.7	1.7	0.9
150°	22.5	10.4	6.1	4.3	1.7	1.7	1.7	0.9
152.5°	13.9	6.1	3.5	2.6	1.7	1.7	1.7	0.9
155°	6.9	3.5	2.6	1.7	1.7	1.7	1.7	1.7
157.5°	3.5	2.6	1.7	1.7	1.7	1.7	1.7	1.7
160°	1.7	1.7	0.9	0.9	1.7	1.7	1.7	1.7
162.5°	0.9	0.9	0.9	0.9	1.7	1.7	1.7	1.7
165°	0.0	0.9	0.9	0.9	1.7	1.7	1.7	1.7
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)