

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: P201306

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201306
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: 8LBLELD4-10-SYMW-UNV-L850-CD1-U
Description: 8 ft. Low Bay Linear, 10000 lm, Wht Sym lens, 5K
Light Source: (784) 5000K CCT, 80 CRI LEDS
2UT217098A8504C
Ballast/Driver: OSRAM
(OTI85W01600CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10672.8 lumens
Efficiency: N/A
Efficacy: 148.3 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

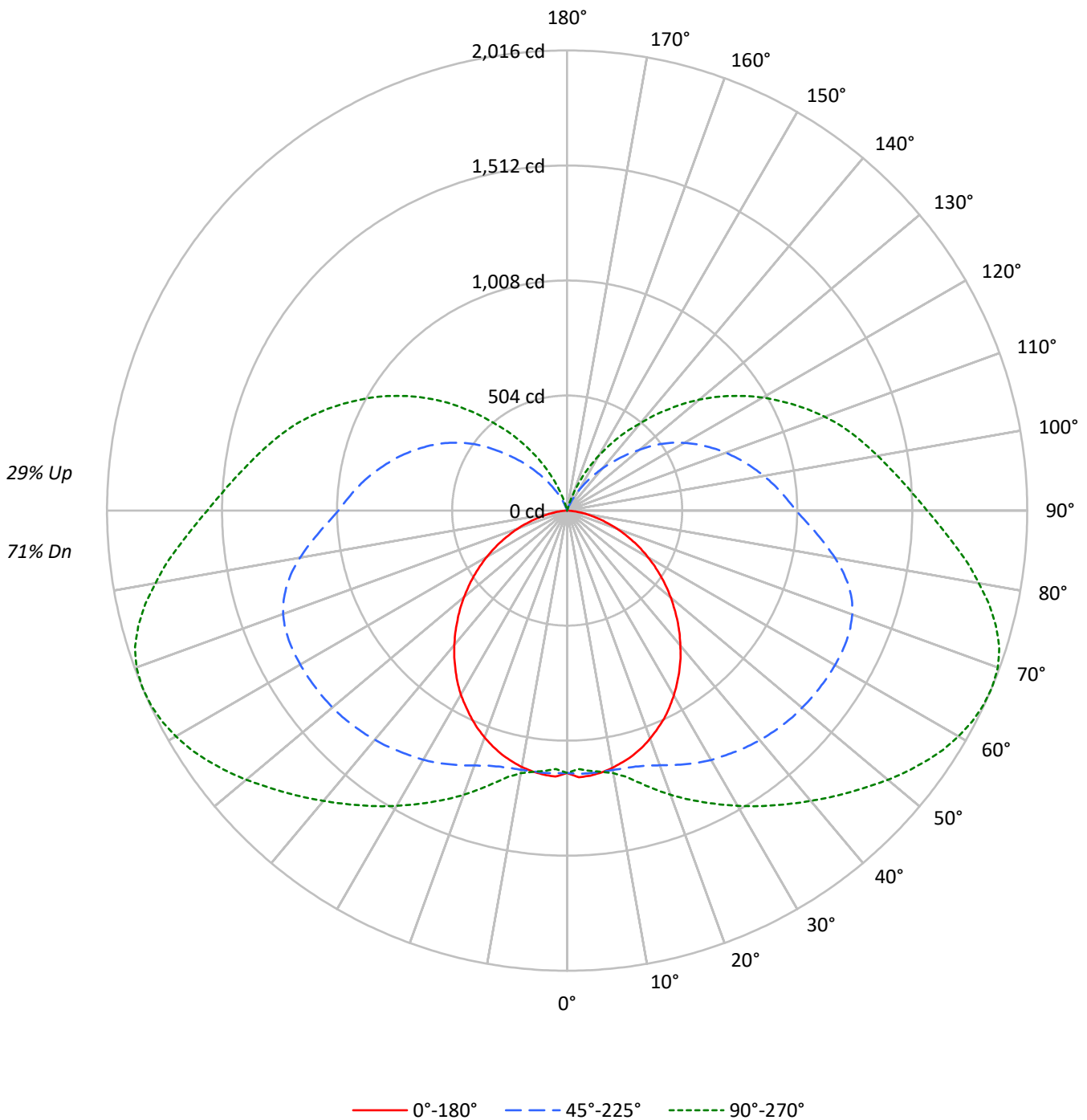
Input Watts (W): 71.96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P201306

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

Luminous Intensity Polar Plot





TEST NUMBER: P201306

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

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°	9260	9260	9260
5°	9406	8347	9375
10°	9321	7838	9290
15°	9203	7727	9163
20°	9029	7815	8980
25°	8832	7924	8765
30°	8566	8082	8540
35°	8278	8284	8241
40°	7942	8538	7913
45°	7590	8862	7547
50°	7202	9257	7167
55°	6777	9686	6738
60°	6311	10102	6266
65°	5764	10454	5712
70°	5101	10698	5037
75°	4242	10719	4080
80°	3255	10540	3025
85°	1846	10329	1639



TEST NUMBER: P201306

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.8	1.0
10°-20°	330.6	3.1
20°-30°	559.6	5.2
30°-40°	782.5	7.3
40°-50°	985.9	9.2
50°-60°	1157.7	10.8
60°-70°	1265.9	11.9
70°-80°	1250.7	11.7
80°-90°	1098.7	10.3
90°-100°	935.2	8.8
100°-110°	779.9	7.3
110°-120°	604.1	5.7
120°-130°	420.5	3.9
130°-140°	245.4	2.3
140°-150°	112.0	1.0
150°-160°	32.0	0.3
160°-170°	2.3	0.0
170°-180°	0.0	0.0
0°-30°	1000.0	9.4
0°-40°	1782.5	16.7
0°-60°	3926.1	36.8
0°-90°	7541.4	70.7
90°-120°	2319.3	21.7
90°-150°	3097.1	29.0
90°-180°	3131.0	29.3
0°-180°	10672.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1149	1149	1149	1149	1149	
5°	1166	1155	1144	1153	1162	111
15°	1111	1161	1236	1161	1106	313
25°	1006	1226	1409	1226	998	462
35°	857	1288	1577	1286	853	535
45°	684	1331	1746	1330	680	527
55°	500	1352	1916	1348	498	448
65°	319	1351	2013	1346	316	316
75°	150	1278	1945	1272	144	160
85°	26	1093	1702	1090	23	33
90°	0	1003	1577	1003	0	1
95°	0	939	1473	940	0	0
105°	1	808	1295	811	0	1
115°	1	668	1098	670	1	1
125°	2	511	875	511	1	2
135°	2	324	628	324	1	1
145°	3	166	389	164	2	1
155°	3	47	172	44	2	1
165°	3	5	12	0	2	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P201306

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3
2.5°	1169.4	1168.5	1163.7	1156.0	1153.2	1151.2	1150.3	1147.4	1146.4	1148.4	1154.1
5°	1165.6	1163.7	1159.9	1153.2	1150.3	1149.3	1148.4	1145.5	1144.5	1147.4	1155.1
7.5°	1157.0	1156.0	1152.2	1145.5	1144.5	1142.6	1142.6	1140.7	1140.7	1145.5	1154.1
10°	1144.5	1143.6	1139.7	1134.9	1134.0	1134.0	1134.0	1134.0	1135.9	1143.6	1154.1
12.5°	1128.2	1128.2	1125.4	1121.5	1122.5	1122.5	1123.4	1125.4	1131.1	1142.6	1156.0
15°	1111.0	1110.0	1107.1	1106.2	1109.1	1110.0	1112.9	1117.7	1127.3	1143.6	1160.8
17.5°	1088.9	1088.9	1086.1	1087.0	1092.8	1095.6	1100.4	1109.1	1124.4	1146.4	1171.4
20°	1063.0	1064.0	1063.0	1065.9	1075.5	1081.3	1087.0	1101.4	1123.4	1154.1	1187.7
22.5°	1034.3	1036.2	1036.2	1043.9	1056.3	1065.0	1073.6	1093.7	1125.4	1167.5	1206.8
25°	1005.5	1005.5	1008.4	1019.0	1036.2	1046.8	1060.2	1088.9	1132.1	1181.9	1226.0
27.5°	971.0	973.9	978.7	993.1	1017.0	1031.4	1047.7	1088.9	1139.7	1196.3	1245.2
30°	934.6	937.5	945.1	965.3	995.9	1014.2	1037.2	1088.9	1146.4	1207.8	1261.5
32.5°	896.3	901.1	911.6	937.5	974.9	999.8	1029.5	1088.0	1152.2	1217.4	1274.9
35°	857.0	861.8	878.0	908.7	957.6	986.4	1020.9	1085.1	1155.1	1226.0	1288.3
37.5°	815.7	824.4	842.6	880.9	940.4	974.9	1011.3	1082.2	1157.9	1232.7	1301.7
40°	771.6	780.3	806.2	852.2	923.1	959.5	999.8	1078.4	1159.9	1239.4	1313.2
42.5°	728.5	740.0	769.7	825.3	905.8	946.1	988.3	1072.6	1158.9	1244.2	1322.8
45°	683.5	696.9	733.3	799.4	886.7	929.8	974.9	1065.0	1157.0	1247.1	1331.4
47.5°	637.4	653.7	696.9	773.6	867.5	912.6	961.4	1057.3	1154.1	1249.0	1339.1
50°	592.4	611.6	660.5	747.7	846.4	894.3	945.1	1048.7	1149.3	1250.0	1343.9
52.5°	547.3	568.4	625.9	721.8	824.4	875.2	928.9	1038.1	1143.6	1249.0	1348.7
55°	500.4	523.4	591.4	694.0	801.4	854.1	910.6	1024.7	1134.9	1245.2	1351.6
57.5°	455.3	481.2	558.8	667.2	777.4	833.0	893.4	1010.3	1125.4	1242.3	1354.5
60°	409.3	439.0	525.3	636.5	752.5	810.0	872.3	994.0	1113.9	1235.6	1354.5
62.5°	364.3	397.8	492.7	608.7	727.6	787.0	851.2	975.8	1101.4	1228.9	1354.5
65°	319.2	357.5	459.2	578.0	699.8	762.1	827.2	956.6	1086.1	1219.3	1350.6
67.5°	275.1	319.2	424.6	546.4	671.0	735.2	802.3	934.6	1068.8	1206.8	1343.0
70°	232.0	280.9	390.1	512.8	641.3	704.5	774.5	910.6	1048.7	1190.5	1329.5
72.5°	188.8	244.4	353.7	479.3	609.6	674.8	745.8	882.8	1023.7	1168.5	1308.4
75°	149.5	208.0	319.2	444.8	577.1	643.2	714.1	852.2	994.0	1139.7	1277.8
77.5°	114.1	174.5	285.7	411.2	542.5	611.6	681.5	818.6	959.5	1103.3	1237.5
80°	80.5	141.9	252.1	376.7	508.0	576.1	645.1	782.2	923.1	1060.2	1191.5
82.5°	49.8	112.2	218.6	343.2	474.5	541.6	609.6	745.8	881.9	1015.1	1141.7
85°	25.9	84.4	186.9	311.5	441.9	508.0	575.1	708.4	839.7	969.1	1092.8
87.5°	8.6	61.3	161.0	283.7	412.2	478.3	543.5	672.9	800.4	924.1	1044.8
90°	0.0	46.0	141.9	261.7	387.3	451.5	516.7	641.3	765.9	887.6	1002.7
92.5°	0.0	39.3	129.4	246.4	370.0	433.3	496.5	620.2	740.0	857.9	970.1
95°	0.0	31.6	118.9	231.0	351.8	414.1	476.4	597.2	715.1	830.1	939.4
97.5°	0.0	24.9	107.4	216.6	333.6	394.0	454.4	574.2	689.2	802.3	907.8
100°	1.0	19.2	94.9	198.4	314.4	373.8	432.3	549.3	661.4	770.7	875.2
102.5°	1.0	13.4	83.4	183.1	294.3	351.8	409.3	523.4	633.6	741.9	841.6
105°	1.0	9.6	71.9	166.8	275.1	330.7	387.3	498.5	605.8	710.3	808.1
107.5°	1.0	6.7	61.3	151.5	255.9	308.7	363.3	471.6	577.1	678.7	774.5
110°	1.0	4.8	51.8	135.2	234.8	287.6	340.3	444.8	547.3	646.1	740.0



TEST NUMBER: P201306

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	3.8	42.2	119.8	213.8	265.5	316.3	417.9	517.6	613.5	704.5
115°	1.0	3.8	33.5	105.4	192.7	242.5	291.4	391.1	486.0	579.9	668.1
117.5°	1.0	2.9	25.9	91.1	173.5	219.5	266.5	361.4	455.3	546.4	631.7
120°	1.0	2.9	19.2	76.7	153.4	196.5	242.5	332.6	422.7	510.9	592.4
122.5°	1.9	2.9	14.4	64.2	135.2	174.5	218.6	303.9	388.2	473.5	554.1
125°	1.9	1.9	11.5	51.8	116.0	152.4	191.7	274.1	350.8	432.3	510.9
127.5°	1.9	1.9	8.6	39.3	96.8	130.4	165.8	242.5	317.3	390.1	464.9
130°	1.9	1.9	7.7	28.8	78.6	108.3	140.9	209.9	279.9	347.0	415.1
132.5°	1.9	1.9	5.8	21.1	62.3	89.1	117.9	179.3	243.5	308.7	370.0
135°	1.9	1.9	4.8	15.3	47.0	70.9	95.9	150.5	209.0	270.3	324.0
137.5°	1.9	1.9	4.8	11.5	34.5	53.7	75.7	125.6	177.3	232.0	280.9
140°	1.9	1.9	3.8	9.6	24.0	39.3	57.5	100.6	144.7	195.5	242.5
142.5°	1.9	1.9	2.9	7.7	17.3	27.8	41.2	77.6	116.9	161.0	202.3
145°	2.9	1.9	2.9	6.7	12.5	19.2	28.8	58.5	90.1	129.4	165.8
147.5°	1.9	1.9	1.9	4.8	9.6	13.4	19.2	40.3	68.1	100.6	131.3
150°	2.9	1.9	1.9	3.8	7.7	9.6	13.4	26.8	47.0	73.8	100.6
152.5°	2.9	1.9	1.9	3.8	5.8	7.7	9.6	17.3	30.7	49.8	71.9
155°	2.9	1.9	1.9	2.9	4.8	5.8	7.7	11.5	18.2	30.7	47.0
157.5°	2.9	2.9	2.9	2.9	3.8	4.8	5.8	8.6	10.5	17.3	26.8
160°	2.9	2.9	1.9	1.9	2.9	2.9	3.8	5.8	7.7	9.6	13.4
162.5°	2.9	2.9	2.9	1.9	1.9	1.9	2.9	3.8	4.8	6.7	8.6
165°	2.9	2.9	1.9	1.9	1.9	1.9	1.9	1.9	2.9	3.8	4.8
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: P201306

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3
2.5°	1156.0	1151.2	1149.3	1145.5	1142.6	1140.7	1137.8	1135.9	1134.0	1133.0	1133.0
5°	1157.0	1152.2	1150.3	1147.4	1146.4	1144.5	1142.6	1144.5	1143.6	1144.5	1143.6
7.5°	1157.9	1154.1	1154.1	1153.2	1152.2	1152.2	1150.3	1152.2	1153.2	1154.1	1153.2
10°	1160.8	1159.9	1161.8	1162.7	1162.7	1162.7	1162.7	1164.7	1168.5	1168.5	1167.5
12.5°	1165.6	1168.5	1174.2	1179.0	1181.0	1181.0	1184.8	1188.6	1193.4	1194.4	1193.4
15°	1175.2	1183.8	1196.3	1206.8	1211.6	1214.5	1222.2	1228.9	1233.7	1235.6	1233.7
17.5°	1192.5	1208.8	1227.9	1243.3	1249.0	1252.8	1263.4	1270.1	1275.9	1280.6	1278.7
20°	1215.5	1237.5	1260.5	1278.7	1286.4	1291.2	1302.7	1315.2	1320.9	1324.7	1323.8
22.5°	1240.4	1266.3	1292.1	1314.2	1322.8	1328.6	1343.0	1354.5	1363.1	1367.9	1366.9
25°	1264.3	1294.1	1325.7	1349.7	1360.2	1366.9	1382.3	1395.7	1405.3	1409.1	1408.1
27.5°	1288.3	1322.8	1357.3	1385.1	1395.7	1404.3	1422.5	1436.9	1448.4	1451.3	1451.3
30°	1307.5	1347.7	1385.1	1416.8	1428.3	1439.8	1459.9	1479.1	1489.6	1493.4	1492.5
32.5°	1325.7	1370.7	1412.9	1448.4	1462.8	1474.3	1498.2	1519.3	1531.8	1535.6	1531.8
35°	1343.9	1393.8	1440.7	1479.1	1494.4	1508.8	1535.6	1559.6	1573.0	1576.8	1574.9
37.5°	1361.2	1416.8	1467.6	1509.7	1528.0	1543.3	1571.1	1599.8	1614.2	1618.1	1614.2
40°	1377.5	1437.8	1493.4	1539.5	1559.6	1577.8	1610.4	1639.1	1655.4	1660.2	1658.3
42.5°	1392.8	1458.9	1519.3	1570.1	1593.1	1612.3	1648.7	1680.4	1697.6	1703.4	1698.6
45°	1406.2	1480.0	1545.2	1599.8	1624.8	1646.8	1688.0	1722.5	1739.8	1746.5	1740.8
47.5°	1419.6	1499.2	1569.2	1629.6	1658.3	1681.3	1727.3	1763.8	1783.9	1789.6	1783.9
50°	1432.1	1518.4	1595.1	1660.2	1690.9	1716.8	1766.6	1805.9	1826.1	1834.7	1827.0
52.5°	1443.6	1536.6	1619.0	1689.0	1722.5	1751.3	1805.0	1847.2	1871.1	1876.9	1869.2
55°	1455.1	1553.8	1640.1	1715.8	1752.3	1782.9	1841.4	1885.5	1909.5	1916.2	1908.5
57.5°	1464.7	1569.2	1660.2	1741.7	1779.1	1814.6	1873.0	1919.0	1944.0	1951.6	1944.0
60°	1471.4	1581.6	1678.4	1762.8	1802.1	1838.5	1900.8	1946.8	1971.8	1979.4	1971.8
62.5°	1476.2	1591.2	1690.9	1779.1	1821.3	1858.7	1921.9	1967.0	1992.9	2000.5	1992.9
65°	1477.1	1595.1	1697.6	1789.6	1832.8	1870.2	1934.4	1979.4	2006.3	2013.0	2005.3
67.5°	1471.4	1591.2	1697.6	1791.6	1834.7	1873.0	1937.3	1982.3	2008.2	2015.9	2008.2
70°	1459.9	1579.7	1688.0	1783.9	1827.0	1865.4	1928.6	1974.6	2000.5	2008.2	1999.6
72.5°	1437.8	1559.6	1667.9	1765.7	1806.9	1844.3	1906.6	1951.6	1976.6	1985.2	1975.6
75°	1406.2	1528.0	1636.3	1730.2	1773.3	1807.9	1870.2	1914.3	1937.3	1944.9	1936.3
77.5°	1365.0	1487.7	1592.2	1685.2	1728.3	1759.9	1820.3	1863.5	1886.5	1893.2	1884.5
80°	1317.1	1438.8	1539.5	1631.5	1671.7	1701.5	1761.8	1803.1	1825.1	1831.8	1827.0
82.5°	1264.3	1383.2	1481.0	1571.1	1609.4	1639.1	1698.6	1738.8	1760.9	1770.5	1762.8
85°	1210.7	1324.7	1420.6	1507.8	1546.2	1577.8	1632.4	1672.7	1694.7	1702.4	1697.6
87.5°	1157.0	1267.2	1360.2	1444.6	1480.0	1512.6	1567.3	1607.5	1629.6	1637.2	1631.5
90°	1111.9	1217.4	1306.5	1389.9	1426.3	1456.1	1508.8	1547.1	1569.2	1576.8	1572.0
92.5°	1075.5	1176.2	1262.4	1339.1	1373.6	1405.3	1456.1	1493.4	1515.5	1522.2	1517.4
95°	1041.0	1138.8	1222.2	1296.9	1330.5	1361.2	1409.1	1445.5	1466.6	1473.3	1469.5
97.5°	1008.4	1102.4	1182.9	1255.7	1290.2	1318.0	1364.0	1398.5	1419.6	1425.4	1419.6
100°	972.0	1066.9	1145.5	1217.4	1247.1	1274.9	1320.9	1355.4	1373.6	1381.3	1376.5
102.5°	937.5	1028.5	1106.2	1177.1	1208.8	1236.5	1278.7	1312.3	1333.4	1338.2	1333.4
105°	902.0	990.2	1065.9	1135.9	1167.5	1194.4	1236.5	1269.1	1289.3	1295.0	1290.2
107.5°	865.6	950.9	1026.6	1092.8	1123.4	1148.4	1191.5	1223.1	1240.4	1250.9	1243.3
110°	826.3	910.6	983.5	1047.7	1077.4	1101.4	1143.6	1175.2	1191.5	1201.1	1194.4



TEST NUMBER: P201306

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	789.9	869.4	939.4	1001.7	1029.5	1053.5	1094.7	1125.4	1140.7	1150.3	1143.6
115°	751.5	825.3	894.3	953.8	981.6	1003.6	1044.8	1073.6	1088.9	1097.6	1091.8
117.5°	710.3	782.2	847.4	905.8	931.7	953.8	993.1	1021.8	1036.2	1042.9	1037.2
120°	670.0	740.0	801.4	857.0	882.8	903.9	942.3	969.1	982.5	990.2	984.4
122.5°	627.9	695.9	751.5	807.1	831.1	851.2	885.7	914.5	926.9	933.6	929.8
125°	582.8	649.9	703.6	754.4	777.4	796.6	830.1	854.1	868.5	875.2	871.3
127.5°	535.8	600.1	654.7	701.7	723.7	744.8	772.6	799.4	809.0	816.7	812.9
130°	483.1	547.3	598.1	646.1	667.2	684.4	715.1	737.1	749.6	756.3	753.4
132.5°	431.4	490.8	544.5	587.6	607.7	625.9	653.7	674.8	692.1	693.0	689.2
135°	381.5	433.3	482.2	528.2	548.3	566.5	591.4	610.6	626.9	627.9	623.1
137.5°	333.6	381.5	423.7	466.8	487.9	507.1	530.1	548.3	563.6	566.5	559.8
140°	287.6	331.7	370.0	408.3	428.5	446.7	471.6	487.0	499.4	500.4	496.5
142.5°	243.5	283.7	317.3	352.8	371.0	387.3	415.1	430.4	441.9	444.8	439.0
145°	202.3	237.7	269.4	300.0	315.4	330.7	358.5	376.7	386.3	389.2	383.4
147.5°	163.0	192.7	220.5	248.3	261.7	276.1	299.1	322.1	330.7	332.6	327.8
150°	126.5	151.5	176.4	199.4	210.9	223.3	243.5	264.6	276.1	278.0	274.1
152.5°	93.0	114.1	134.2	153.4	163.0	172.5	189.8	209.9	224.3	225.3	221.4
155°	63.3	80.5	96.8	111.2	119.8	127.5	140.9	156.2	171.6	172.5	169.7
157.5°	38.3	49.8	63.3	74.8	80.5	87.2	96.8	108.3	121.7	124.6	121.7
160°	19.2	25.9	33.5	41.2	46.0	50.8	55.6	65.2	72.9	79.6	75.7
162.5°	9.6	11.5	13.4	17.3	19.2	22.0	25.9	29.7	33.5	40.3	35.5
165°	5.8	6.7	7.7	7.7	8.6	8.6	8.6	8.6	8.6	12.5	8.6
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: P201306

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3
2.5°	1135.9	1137.8	1141.7	1143.6	1145.5	1147.4	1151.2	1157.0	1152.2	1147.4	1148.4
5°	1143.6	1143.6	1144.5	1147.4	1147.4	1148.4	1152.2	1157.9	1153.2	1146.4	1146.4
7.5°	1153.2	1152.2	1153.2	1154.1	1153.2	1153.2	1155.1	1157.9	1152.2	1144.5	1142.6
10°	1166.6	1163.7	1162.7	1163.7	1162.7	1159.9	1160.8	1160.8	1153.2	1141.7	1136.9
12.5°	1190.5	1185.7	1181.9	1181.0	1178.1	1173.3	1170.4	1166.6	1155.1	1141.7	1132.1
15°	1229.8	1222.2	1214.5	1211.6	1206.8	1195.3	1185.7	1177.1	1160.8	1141.7	1128.2
17.5°	1273.9	1264.3	1253.8	1250.0	1243.3	1227.0	1210.7	1194.4	1171.4	1144.5	1125.4
20°	1316.1	1304.6	1292.1	1285.4	1278.7	1258.6	1239.4	1218.3	1188.6	1153.2	1124.4
22.5°	1358.3	1344.9	1327.6	1321.9	1313.2	1290.2	1267.2	1243.3	1207.8	1165.6	1126.3
25°	1399.5	1384.2	1367.9	1358.3	1348.7	1322.8	1295.0	1266.3	1226.0	1180.0	1133.0
27.5°	1440.7	1423.5	1403.3	1392.8	1383.2	1354.5	1322.8	1290.2	1245.2	1193.4	1141.7
30°	1481.0	1461.8	1437.8	1426.3	1414.8	1382.3	1345.8	1309.4	1260.5	1204.9	1147.4
32.5°	1521.2	1500.2	1473.3	1459.9	1446.5	1409.1	1368.8	1327.6	1273.9	1215.5	1152.2
35°	1560.5	1537.5	1507.8	1491.5	1477.1	1436.9	1391.8	1345.8	1286.4	1224.1	1155.1
37.5°	1600.8	1574.9	1542.3	1524.1	1507.8	1463.7	1413.9	1362.1	1299.8	1230.8	1157.9
40°	1641.1	1613.3	1576.8	1557.7	1537.5	1489.6	1435.9	1378.4	1311.3	1237.5	1158.9
42.5°	1682.3	1651.6	1611.3	1590.3	1569.2	1515.5	1456.1	1392.8	1320.9	1242.3	1157.9
45°	1723.5	1689.0	1645.9	1621.9	1598.9	1540.4	1476.2	1405.3	1329.5	1245.2	1156.0
47.5°	1764.7	1728.3	1681.3	1655.4	1627.6	1565.3	1495.4	1418.7	1337.2	1246.1	1154.1
50°	1806.9	1767.6	1716.8	1688.0	1659.3	1589.3	1514.5	1430.2	1342.0	1247.1	1149.3
52.5°	1848.1	1805.9	1751.3	1720.6	1687.1	1613.3	1532.7	1441.7	1345.8	1246.1	1142.6
55°	1885.5	1841.4	1783.9	1751.3	1713.9	1635.3	1549.0	1451.3	1347.7	1243.3	1134.0
57.5°	1920.0	1875.0	1814.6	1778.1	1741.7	1656.4	1564.4	1461.8	1349.7	1238.5	1124.4
60°	1946.8	1901.8	1838.5	1802.1	1762.8	1673.7	1576.8	1467.6	1349.7	1231.8	1111.9
62.5°	1967.0	1921.9	1858.7	1820.3	1779.1	1688.0	1586.4	1473.3	1349.7	1225.0	1099.5
65°	1979.4	1935.3	1870.2	1831.8	1789.6	1694.7	1591.2	1474.3	1345.8	1215.5	1084.1
67.5°	1981.4	1937.3	1872.1	1834.7	1791.6	1694.7	1588.3	1469.5	1338.2	1203.0	1066.9
70°	1972.7	1928.6	1864.4	1826.1	1783.9	1686.1	1577.8	1458.0	1324.7	1186.7	1046.8
72.5°	1950.7	1905.6	1843.3	1804.0	1762.8	1666.0	1555.8	1436.9	1302.7	1163.7	1022.8
75°	1912.3	1868.2	1806.9	1770.5	1728.3	1633.4	1522.2	1406.2	1272.0	1134.9	993.1
77.5°	1861.5	1818.4	1758.0	1721.6	1682.3	1589.3	1480.0	1365.0	1234.6	1099.5	958.6
80°	1801.1	1759.9	1700.5	1665.0	1626.7	1536.6	1429.2	1317.1	1188.6	1057.3	920.2
82.5°	1736.9	1696.7	1639.1	1602.7	1566.3	1479.1	1376.5	1265.3	1139.7	1012.2	879.0
85°	1674.6	1631.5	1574.0	1540.4	1504.0	1418.7	1321.9	1211.6	1089.9	966.2	838.7
87.5°	1609.4	1567.3	1510.7	1479.1	1444.6	1358.3	1266.3	1158.9	1042.9	925.0	799.4
90°	1550.0	1508.8	1454.1	1422.5	1389.9	1306.5	1216.4	1114.8	1002.7	888.6	766.9
92.5°	1495.4	1457.0	1405.3	1374.6	1343.0	1263.4	1177.1	1078.4	970.1	859.8	741.0
95°	1448.4	1411.0	1363.1	1333.4	1300.8	1225.0	1140.7	1043.9	940.4	833.0	717.0
97.5°	1401.4	1366.0	1319.0	1290.2	1259.6	1185.7	1104.3	1011.3	909.7	803.3	691.1
100°	1358.3	1323.8	1275.9	1250.0	1220.3	1149.3	1068.8	977.7	878.0	773.6	663.3
102.5°	1316.1	1281.6	1235.6	1209.7	1181.0	1110.0	1031.4	941.3	844.5	743.8	636.5
105°	1273.0	1239.4	1193.4	1167.5	1138.8	1069.8	993.1	905.8	810.9	713.2	608.7
107.5°	1226.0	1193.4	1149.3	1123.4	1096.6	1027.6	953.8	868.5	777.4	681.5	579.9
110°	1178.1	1145.5	1105.2	1077.4	1051.5	984.4	912.6	831.1	741.9	648.9	550.2



TEST NUMBER: P201306

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1128.2	1096.6	1057.3	1031.4	1004.6	940.4	871.3	792.7	706.5	615.4	519.5
115°	1077.4	1045.8	1006.5	980.6	956.6	895.3	828.2	753.4	670.0	581.8	488.9
117.5°	1021.8	994.0	956.6	933.6	908.7	847.4	785.1	713.2	633.6	546.4	457.2
120°	970.1	943.2	906.8	881.9	859.8	801.4	741.9	672.0	593.4	511.9	424.6
122.5°	915.4	886.7	853.1	832.0	808.1	754.4	696.9	629.8	553.1	472.6	389.2
125°	857.9	831.1	798.5	778.4	756.3	705.5	650.9	583.8	510.9	433.3	352.8
127.5°	799.4	774.5	742.9	724.7	703.6	653.7	601.0	535.8	463.0	390.1	315.4
130°	740.0	715.1	686.3	667.2	647.0	600.1	548.3	484.1	415.1	347.0	278.9
132.5°	677.7	653.7	625.0	607.7	589.5	544.5	491.7	429.4	368.1	306.7	243.5
135°	613.5	591.4	565.6	549.3	531.0	485.0	435.2	378.6	324.0	267.4	209.0
137.5°	551.2	531.0	506.1	489.8	469.7	426.6	382.5	331.7	281.8	229.1	174.5
140°	489.8	471.6	447.7	429.4	412.2	371.9	331.7	285.7	240.6	192.7	143.8
142.5°	432.3	416.0	389.2	371.9	355.6	320.2	284.7	241.6	201.3	158.2	116.0
145°	375.8	361.4	331.7	316.3	302.9	271.3	235.8	200.3	163.9	126.5	90.1
147.5°	321.1	303.9	276.1	262.6	250.2	222.4	192.7	160.1	130.4	97.8	66.1
150°	268.4	247.3	223.3	211.8	201.3	177.3	151.5	124.6	98.7	70.9	46.0
152.5°	213.8	191.7	175.4	163.9	154.3	135.2	114.1	91.1	70.0	47.9	28.8
155°	158.2	142.8	127.5	121.7	113.1	96.8	79.6	61.3	44.1	28.8	16.3
157.5°	109.3	97.8	88.2	82.4	75.7	63.3	48.9	35.5	24.9	15.3	7.7
160°	66.1	58.5	51.8	47.0	42.2	33.5	24.0	16.3	10.5	4.8	2.9
162.5°	29.7	24.9	22.0	19.2	16.3	12.5	7.7	3.8	1.9	1.0	1.0
165°	5.8	3.8	2.9	1.9	1.0	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: P201306

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3	1149.3
2.5°	1149.3	1150.3	1151.2	1151.2	1154.1	1158.9	1165.6	1166.6
5°	1146.4	1147.4	1147.4	1148.4	1151.2	1155.1	1160.8	1161.8
7.5°	1141.7	1141.7	1141.7	1141.7	1143.6	1147.4	1152.2	1153.2
10°	1134.9	1133.0	1132.1	1131.1	1132.1	1135.9	1139.7	1140.7
12.5°	1127.3	1122.5	1120.6	1119.6	1119.6	1120.6	1124.4	1124.4
15°	1118.6	1111.0	1108.1	1106.2	1102.4	1102.4	1106.2	1106.2
17.5°	1110.0	1099.5	1093.7	1089.9	1084.1	1083.2	1085.1	1083.2
20°	1102.4	1086.1	1078.4	1071.7	1063.0	1060.2	1060.2	1057.3
22.5°	1094.7	1072.6	1062.1	1052.5	1039.1	1034.3	1031.4	1029.5
25°	1089.9	1058.3	1044.8	1033.3	1015.1	1004.6	1001.7	997.9
27.5°	1088.9	1046.8	1028.5	1014.2	989.2	976.8	969.1	964.3
30°	1088.9	1035.3	1011.3	991.2	960.5	941.3	933.6	931.7
32.5°	1088.0	1026.6	997.9	972.0	932.7	907.8	896.3	893.4
35°	1085.1	1018.0	984.4	952.8	904.9	873.3	857.0	853.1
37.5°	1081.3	1007.5	972.0	935.6	876.1	837.8	817.7	811.9
40°	1077.4	996.9	956.6	917.3	847.4	801.4	775.5	768.8
42.5°	1070.7	985.4	943.2	900.1	820.5	764.9	735.2	724.7
45°	1064.0	972.0	926.9	880.9	793.7	727.6	690.2	679.6
47.5°	1055.4	957.6	910.6	859.8	768.8	691.1	648.9	635.5
50°	1045.8	943.2	892.4	839.7	741.9	655.7	603.9	589.5
52.5°	1035.3	926.9	874.2	818.6	715.1	622.1	561.7	543.5
55°	1021.8	908.7	853.1	794.7	687.3	587.6	518.6	497.5
57.5°	1007.5	890.5	833.0	772.6	659.5	555.0	476.4	452.4
60°	990.2	869.4	808.1	747.7	630.7	521.5	434.2	406.4
62.5°	972.0	848.3	786.0	721.8	602.0	488.9	393.0	361.4
65°	952.8	824.4	761.1	695.0	571.3	454.4	352.8	316.3
67.5°	929.8	798.5	733.3	666.2	539.7	419.9	313.5	272.2
70°	906.8	770.7	702.6	635.5	507.1	385.3	276.1	229.1
72.5°	879.0	741.0	672.0	603.9	473.5	351.8	239.6	186.0
75°	848.3	710.3	640.3	571.3	439.0	316.3	203.2	143.8
77.5°	815.7	676.7	607.7	537.8	406.4	282.8	169.7	108.3
80°	781.2	641.3	573.2	503.2	371.9	249.2	137.1	74.8
82.5°	742.9	606.8	538.7	468.7	339.3	216.6	107.4	46.0
85°	706.5	572.3	506.1	437.1	307.7	184.0	80.5	23.0
87.5°	671.0	540.6	476.4	408.3	280.9	159.1	58.5	6.7
90°	642.2	514.7	451.5	385.3	259.8	140.9	44.1	0.0
92.5°	619.2	494.6	432.3	368.1	244.4	128.4	37.4	0.0
95°	597.2	473.5	414.1	349.9	229.1	117.9	29.7	0.0
97.5°	573.2	453.4	394.0	331.7	213.8	106.4	24.0	0.0
100°	549.3	431.4	373.8	313.5	196.5	94.9	17.3	0.0
102.5°	523.4	408.3	351.8	293.3	181.2	82.4	11.5	0.0
105°	498.5	385.3	330.7	273.2	164.9	71.9	7.7	0.0
107.5°	471.6	362.3	308.7	254.0	148.6	60.4	4.8	0.0
110°	444.8	339.3	286.6	233.9	133.2	49.8	3.8	0.0



TEST NUMBER: P201306

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	417.9	315.4	264.6	212.8	117.9	40.3	2.9	1.0
115°	389.2	290.4	241.6	191.7	102.6	31.6	2.9	1.0
117.5°	360.4	264.6	219.5	171.6	88.2	24.0	1.9	1.0
120°	330.7	241.6	195.5	152.4	74.8	17.3	1.9	1.0
122.5°	301.9	217.6	173.5	132.3	61.3	13.4	1.9	1.0
125°	272.2	189.8	151.5	114.1	48.9	10.5	1.9	1.0
127.5°	240.6	163.9	128.4	93.9	37.4	7.7	1.9	1.0
130°	208.0	138.0	106.4	76.7	26.8	5.8	1.9	1.0
132.5°	177.3	116.0	86.3	60.4	19.2	4.8	1.9	1.0
135°	149.5	93.9	68.1	45.1	13.4	3.8	1.0	1.0
137.5°	122.7	74.8	51.8	32.6	9.6	2.9	1.9	1.0
140°	98.7	56.6	37.4	23.0	6.7	1.9	1.9	1.0
142.5°	76.7	40.3	25.9	15.3	4.8	1.9	1.0	1.0
145°	56.6	26.8	17.3	9.6	3.8	1.9	1.9	1.9
147.5°	38.3	18.2	10.5	6.7	2.9	1.9	1.9	1.0
150°	24.9	11.5	6.7	4.8	1.9	1.9	1.9	1.0
152.5°	15.3	6.7	3.8	2.9	1.9	1.9	1.9	1.0
155°	7.7	3.8	2.9	1.9	1.9	1.9	1.9	1.9
157.5°	3.8	2.9	1.9	1.9	1.9	1.9	1.9	1.9
160°	1.9	1.9	1.0	1.0	1.9	1.9	1.9	1.9
162.5°	1.0	1.0	1.0	1.0	1.9	1.9	1.9	1.9
165°	0.0	1.0	1.0	1.0	1.9	1.9	1.9	1.9
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)