

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: P201255

Luminaire Tested: **8LBLED-LD4-9-SYMF-UNV-L840-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201255
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-L840-CD1-U
Description: 8 ft. Low Bay Linear, 9000 lm, Frst Sym lens, 4K
Light Source: (784) 4000K CCT, 80 CRI LEDS
2UT217098A8404C
Ballast/Driver: OSRAM
(OTI85W01440CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9785.0 lumens
Efficiency: N/A
Efficacy: 151.7 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

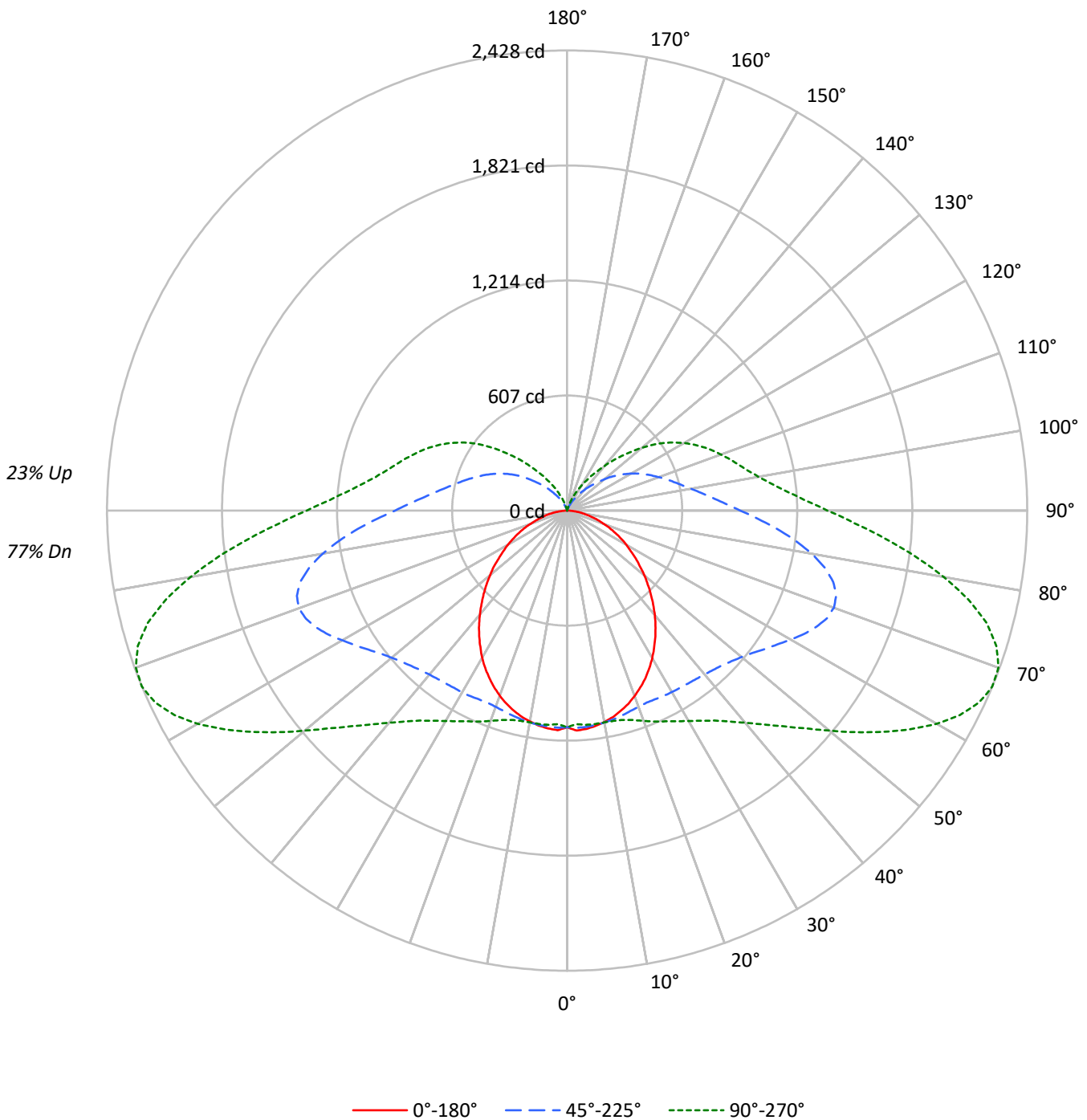
Input Watts (W): 64.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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	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°	9211	9211	9211
5°	9332	8277	9312
10°	9222	7613	9202
15°	9056	7149	9043
20°	8842	6970	8827
25°	8581	6901	8545
30°	8232	6937	8224
35°	7833	7106	7817
40°	7406	7511	7371
45°	6939	8161	6920
50°	6464	9112	6443
55°	5986	10289	5975
60°	5560	11486	5573
65°	5085	12452	5101
70°	4584	12901	4584
75°	3984	12624	3961
80°	3324	11616	3291
85°	2487	10202	2366



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	1.1
10°-20°	315.7	3.2
20°-30°	507.4	5.2
30°-40°	687.0	7.0
40°-50°	882.6	9.0
50°-60°	1135.6	11.6
60°-70°	1389.2	14.2
70°-80°	1404.5	14.4
80°-90°	1086.1	11.1
90°-100°	754.6	7.7
100°-110°	563.6	5.8
110°-120°	422.4	4.3
120°-130°	284.5	2.9
130°-140°	156.0	1.6
140°-150°	66.5	0.7
150°-160°	19.0	0.2
160°-170°	1.6	0.0
170°-180°	0.0	0.0
0°-30°	931.6	9.5
0°-40°	1618.7	16.5
0°-60°	3636.9	37.2
0°-90°	7516.8	76.8
90°-120°	1740.6	17.8
90°-150°	2247.6	23.0
90°-180°	2268.0	23.2
0°-180°	9785.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1143	1143	1143	1143	1143	
5°	1156	1146	1135	1144	1154	110
15°	1093	1119	1143	1119	1092	308
25°	977	1098	1227	1099	973	449
35°	811	1113	1352	1114	809	507
45°	625	1156	1608	1161	623	482
55°	442	1274	2035	1279	441	396
65°	282	1451	2398	1460	282	280
75°	140	1454	2290	1459	140	150
85°	35	1112	1682	1108	33	38
90°	1	913	1373	908	0	2
95°	1	770	1162	767	0	1
105°	1	582	936	582	0	1
115°	1	453	793	453	0	1
125°	1	325	621	323	0	1
135°	2	196	408	194	0	1
145°	2	100	224	96	0	1
155°	2	32	93	30	0	1
165°	2	2	9	4	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P201255

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2
2.5°	1161.5	1160.6	1155.6	1148.2	1144.8	1144.0	1143.2	1139.9	1139.0	1140.7	1147.3
5°	1156.5	1155.6	1150.7	1143.2	1140.7	1139.9	1139.0	1136.5	1136.5	1139.0	1145.7
7.5°	1146.5	1145.7	1140.7	1134.9	1132.4	1131.5	1131.5	1129.9	1129.9	1134.0	1141.5
10°	1132.4	1131.5	1127.4	1122.4	1120.7	1120.7	1120.7	1119.9	1121.6	1126.6	1134.9
12.5°	1115.8	1114.1	1110.8	1106.6	1106.6	1106.6	1107.4	1107.4	1109.9	1118.3	1128.2
15°	1093.3	1094.2	1090.8	1087.5	1089.2	1090.0	1091.7	1093.3	1097.5	1107.4	1119.1
17.5°	1070.1	1070.1	1067.6	1065.9	1069.2	1070.9	1073.4	1075.9	1083.4	1095.8	1109.1
20°	1041.0	1041.8	1041.0	1041.8	1046.0	1048.5	1051.8	1057.6	1067.6	1085.0	1100.8
22.5°	1009.4	1011.1	1011.1	1014.4	1021.0	1025.2	1029.4	1037.7	1051.8	1074.2	1096.6
25°	977.0	976.2	980.3	986.2	992.8	998.6	1003.6	1016.1	1036.8	1066.7	1098.3
27.5°	938.0	939.6	945.4	953.8	963.7	971.2	978.7	996.1	1026.0	1065.9	1102.5
30°	898.1	900.6	908.1	919.7	933.8	943.8	952.1	979.5	1020.2	1065.9	1105.8
32.5°	854.9	859.0	869.0	884.0	903.9	915.5	928.8	965.4	1015.2	1064.2	1109.1
35°	810.9	815.8	829.1	847.4	870.7	884.8	905.6	954.6	1008.6	1062.6	1113.3
37.5°	766.0	771.8	786.8	810.0	839.9	861.5	886.5	943.0	1003.6	1062.6	1119.1
40°	719.5	726.1	745.2	771.8	810.0	838.3	868.2	931.3	998.6	1063.4	1128.2
42.5°	672.1	679.6	702.9	734.4	784.3	817.5	850.7	921.4	995.3	1067.6	1139.9
45°	624.8	634.7	660.5	698.7	761.0	795.9	834.1	912.2	993.6	1075.0	1155.6
47.5°	577.4	589.0	618.9	664.6	736.9	778.5	818.3	904.7	995.3	1085.0	1176.4
50°	531.7	545.0	578.2	633.9	714.5	759.3	803.4	899.8	998.6	1100.0	1201.3
52.5°	485.2	502.6	539.2	606.5	694.5	741.9	790.9	896.4	1005.3	1119.9	1233.7
55°	442.0	460.3	502.6	579.9	675.4	726.9	779.3	895.6	1016.9	1144.0	1273.6
57.5°	398.0	420.4	466.9	554.1	655.5	712.0	770.1	897.3	1031.0	1169.8	1314.3
60°	360.6	380.5	434.5	529.2	638.1	697.9	761.8	898.9	1046.0	1199.7	1361.7
62.5°	320.7	342.3	406.3	505.1	620.6	685.4	753.5	901.4	1061.8	1230.4	1409.9
65°	281.6	304.1	378.0	481.9	603.2	672.1	743.6	901.4	1074.2	1258.7	1451.4
67.5°	244.3	268.3	349.8	456.9	583.2	655.5	731.1	897.3	1081.7	1278.6	1483.8
70°	208.5	235.1	322.3	430.4	561.6	635.6	713.7	888.1	1080.9	1286.1	1497.9
72.5°	172.8	203.5	292.4	403.8	538.4	613.1	692.9	870.7	1069.2	1276.9	1488.8
75°	140.4	173.6	265.9	377.2	511.8	586.5	667.1	844.1	1043.5	1248.7	1453.9
77.5°	110.5	147.1	237.6	348.1	481.9	555.8	634.7	810.0	1002.8	1198.8	1392.4
80°	82.2	123.0	211.0	319.0	449.5	521.7	598.2	766.8	949.6	1131.5	1310.2
82.5°	57.3	100.5	185.3	289.9	416.2	485.2	558.3	715.3	888.1	1053.4	1215.5
85°	34.9	80.6	159.5	261.7	382.2	447.0	515.9	661.3	820.8	968.7	1111.6
87.5°	15.0	62.3	137.1	234.3	348.1	409.6	472.7	609.8	749.4	880.6	1007.8
90°	0.8	46.5	117.1	208.5	315.7	373.0	432.0	555.0	683.7	800.1	913.0
92.5°	0.0	39.9	105.5	192.7	293.3	346.4	401.3	514.3	630.6	734.4	834.9
95°	0.8	33.2	95.5	175.3	270.8	321.5	372.2	477.7	582.4	677.9	770.1
97.5°	0.8	27.4	84.7	159.5	250.1	296.6	343.9	442.0	536.7	627.3	712.8
100°	0.8	21.6	74.8	144.6	228.5	271.7	316.5	408.8	497.6	582.4	663.0
102.5°	0.8	15.8	66.5	130.4	208.5	249.2	290.8	378.0	461.9	543.3	619.8
105°	0.8	10.8	58.2	117.1	190.3	228.5	267.5	349.8	429.5	507.6	582.4
107.5°	0.8	7.5	50.7	104.7	170.3	208.5	245.1	323.2	399.6	475.2	548.3
110°	0.8	6.6	44.0	93.9	154.5	189.4	224.3	298.3	371.4	443.6	515.1



TEST NUMBER: P201255

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.8	5.8	37.4	83.9	138.7	170.3	204.4	274.2	345.6	415.4	483.5
115°	0.8	5.8	30.7	74.8	125.5	153.7	185.3	250.9	319.0	386.3	452.8
117.5°	0.8	5.8	24.9	66.5	113.0	138.7	166.2	229.3	292.4	358.1	422.9
120°	0.8	5.0	19.9	58.2	102.2	125.5	151.2	208.5	266.7	328.2	390.5
122.5°	0.8	5.0	16.6	50.7	91.4	113.0	136.3	186.9	242.6	299.1	357.2
125°	0.8	4.2	14.1	42.4	80.6	101.4	122.1	167.8	219.3	271.7	324.8
127.5°	1.7	4.2	11.6	34.9	69.8	88.1	108.0	149.5	194.4	241.8	292.4
130°	1.7	4.2	10.0	26.6	59.0	75.6	93.0	131.3	172.8	213.5	257.5
132.5°	1.7	3.3	9.1	20.8	49.0	64.0	79.8	113.8	150.4	186.9	225.1
135°	1.7	3.3	7.5	16.6	39.0	52.3	67.3	97.2	129.6	163.7	196.1
137.5°	1.7	2.5	6.6	13.3	29.9	42.4	55.7	82.2	110.5	139.6	169.5
140°	1.7	2.5	5.8	10.8	22.4	31.6	44.0	67.3	92.2	118.0	143.7
142.5°	1.7	2.5	5.0	9.1	17.4	24.1	33.2	54.8	76.4	98.0	120.5
145°	1.7	2.5	4.2	7.5	13.3	18.3	24.1	42.4	61.5	80.6	99.7
147.5°	1.7	2.5	4.2	6.6	10.8	14.1	18.3	30.7	48.2	64.0	80.6
150°	1.7	2.5	3.3	5.8	9.1	10.8	13.3	21.6	34.9	49.0	63.1
152.5°	1.7	1.7	3.3	5.0	6.6	8.3	10.0	15.8	24.1	34.9	47.4
155°	1.7	1.7	2.5	4.2	5.8	6.6	7.5	10.8	15.8	22.4	31.6
157.5°	1.7	1.7	2.5	3.3	4.2	5.0	5.8	7.5	10.8	14.1	19.1
160°	1.7	1.7	2.5	3.3	3.3	4.2	4.2	5.0	6.6	8.3	10.8
162.5°	1.7	1.7	2.5	2.5	2.5	3.3	3.3	3.3	4.2	4.2	5.0
165°	1.7	1.7	1.7	2.5	1.7	2.5	1.7	2.5	2.5	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



TEST NUMBER: P201255

CATALOG NUMBER: 8LBLELD4-9-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2
2.5°	1149.8	1144.0	1141.5	1138.2	1135.7	1134.0	1131.5	1129.9	1127.4	1127.4	1128.2
5°	1148.2	1142.3	1140.7	1137.4	1135.7	1134.9	1133.2	1134.0	1134.0	1134.9	1134.0
7.5°	1144.8	1139.9	1138.2	1136.5	1134.9	1134.0	1133.2	1134.9	1134.9	1135.7	1135.7
10°	1139.0	1135.7	1135.7	1134.0	1133.2	1132.4	1130.7	1133.2	1133.2	1134.9	1134.0
12.5°	1132.4	1131.5	1132.4	1133.2	1133.2	1132.4	1131.5	1134.9	1136.5	1136.5	1137.4
15°	1124.9	1126.6	1130.7	1133.2	1134.9	1134.9	1136.5	1139.9	1142.3	1143.2	1143.2
17.5°	1119.1	1123.2	1130.7	1137.4	1140.7	1142.3	1146.5	1153.1	1157.3	1158.1	1158.1
20°	1114.9	1124.9	1138.2	1150.7	1154.8	1158.1	1166.4	1174.7	1180.6	1181.4	1181.4
22.5°	1118.3	1134.9	1153.1	1167.3	1173.1	1177.2	1186.4	1197.2	1203.8	1204.7	1204.7
25°	1126.6	1146.5	1167.3	1184.7	1191.4	1196.3	1206.3	1217.9	1224.6	1227.1	1226.3
27.5°	1134.0	1158.1	1182.2	1202.2	1209.6	1216.3	1228.7	1242.0	1250.3	1252.8	1251.2
30°	1140.7	1168.9	1196.3	1220.4	1230.4	1237.9	1252.8	1268.6	1279.4	1281.9	1279.4
32.5°	1147.3	1181.4	1213.8	1242.0	1252.0	1262.8	1281.9	1300.2	1311.0	1314.3	1312.7
35°	1156.5	1196.3	1234.6	1267.0	1280.3	1292.7	1315.1	1336.7	1350.0	1352.5	1350.0
37.5°	1168.9	1215.5	1257.8	1298.5	1312.7	1330.1	1356.7	1382.4	1398.2	1401.6	1398.2
40°	1184.7	1239.5	1289.4	1336.7	1355.9	1374.1	1406.5	1437.3	1454.7	1460.5	1458.0
42.5°	1205.5	1269.5	1327.6	1384.1	1405.7	1429.0	1467.2	1502.9	1522.8	1529.5	1522.8
45°	1231.2	1306.8	1374.1	1439.8	1464.7	1492.9	1538.6	1579.3	1602.6	1608.4	1602.6
47.5°	1265.3	1350.9	1429.0	1504.6	1534.5	1567.7	1621.7	1668.2	1693.2	1699.8	1694.0
50°	1301.9	1404.0	1493.8	1580.2	1617.6	1652.5	1715.6	1767.1	1793.7	1806.1	1795.3
52.5°	1347.5	1462.2	1567.7	1664.1	1708.9	1750.5	1820.3	1876.8	1909.2	1920.0	1905.0
55°	1402.4	1532.0	1650.0	1761.3	1806.1	1852.7	1929.9	1989.8	2023.8	2035.4	2024.6
57.5°	1463.0	1605.9	1736.4	1853.5	1905.8	1953.2	2039.6	2101.9	2131.8	2146.8	2133.5
60°	1526.2	1682.4	1823.6	1948.2	2005.5	2054.6	2142.6	2204.1	2235.7	2250.6	2238.2
62.5°	1587.6	1756.3	1905.0	2034.6	2089.4	2143.5	2231.5	2290.5	2322.9	2336.2	2324.6
65°	1640.8	1818.6	1971.5	2105.2	2161.7	2214.9	2298.0	2354.5	2388.5	2397.7	2389.4
67.5°	1680.7	1861.0	2015.5	2147.6	2202.4	2255.6	2334.5	2386.9	2420.1	2428.4	2420.9
70°	1699.0	1877.6	2030.5	2159.2	2213.2	2260.6	2335.4	2385.2	2416.8	2421.8	2416.0
72.5°	1687.3	1861.0	2008.9	2131.8	2183.3	2224.9	2293.8	2341.2	2371.1	2375.2	2371.1
75°	1644.1	1810.3	1949.9	2064.5	2112.7	2147.6	2213.2	2257.3	2287.2	2290.5	2285.5
77.5°	1571.0	1725.6	1853.5	1964.0	2003.9	2037.9	2100.3	2139.3	2163.4	2168.4	2162.6
80°	1473.0	1615.1	1729.7	1828.6	1866.8	1895.9	1956.5	1998.9	2012.2	2018.8	2010.5
82.5°	1360.8	1488.0	1590.1	1679.9	1713.9	1749.7	1788.7	1827.7	1846.9	1852.7	1846.0
85°	1240.4	1353.4	1443.9	1524.5	1554.4	1586.8	1620.9	1659.1	1675.7	1681.5	1674.9
87.5°	1119.9	1219.6	1299.4	1370.8	1398.2	1427.3	1468.0	1488.0	1510.4	1517.0	1509.6
90°	1011.9	1101.6	1173.1	1237.9	1263.6	1290.2	1321.8	1346.7	1367.5	1373.3	1366.7
92.5°	924.7	1005.3	1070.9	1129.1	1151.5	1176.4	1207.1	1231.2	1249.5	1255.3	1248.7
95°	852.4	926.3	987.8	1041.8	1063.4	1086.7	1120.7	1139.9	1156.5	1161.5	1156.5
97.5°	790.9	860.7	918.9	971.2	992.0	1013.6	1046.8	1065.9	1081.7	1085.8	1081.7
100°	736.9	805.0	862.4	912.2	933.0	953.8	986.2	1005.3	1020.2	1025.2	1020.2
102.5°	692.1	757.7	814.2	864.9	884.8	905.6	936.3	958.7	970.4	976.2	971.2
105°	653.0	717.0	773.5	823.3	844.1	864.0	895.6	916.4	929.7	936.3	930.5
107.5°	617.3	680.4	737.7	785.9	806.7	826.6	859.0	879.8	892.3	899.8	893.1
110°	583.2	645.5	700.4	750.2	771.0	791.7	824.1	844.9	857.4	864.0	858.2



TEST NUMBER: P201255

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	550.0	610.6	667.1	715.3	735.3	756.0	789.3	810.9	822.5	830.0	823.3
115°	516.8	576.6	631.4	677.9	697.9	719.5	751.9	774.3	786.8	792.6	785.9
117.5°	484.4	541.7	594.0	639.7	659.7	680.4	712.0	734.4	747.7	753.5	746.9
120°	451.1	506.0	557.5	599.0	619.8	638.9	671.3	692.9	706.2	712.0	705.3
122.5°	415.4	469.4	518.4	559.1	579.1	597.3	628.9	650.5	663.0	668.8	663.0
125°	378.8	429.5	476.9	517.6	534.2	551.6	582.4	603.2	616.4	621.4	616.4
127.5°	342.3	388.8	432.8	468.6	486.8	503.5	532.5	552.5	564.1	569.9	565.8
130°	305.7	349.8	389.6	422.0	437.8	453.6	480.2	498.5	510.1	515.1	510.9
132.5°	266.7	309.1	348.1	376.4	391.3	404.6	428.7	444.5	454.4	460.3	455.3
135°	231.8	266.7	303.2	332.3	347.3	358.9	380.5	393.8	402.9	407.9	402.9
137.5°	200.2	230.1	260.0	285.8	299.9	312.4	333.1	345.6	353.9	358.9	353.9
140°	171.1	196.9	223.5	244.3	256.7	266.7	285.8	296.6	304.1	308.2	303.2
142.5°	142.9	166.2	188.6	207.7	218.5	226.8	245.1	253.4	259.2	261.7	259.2
145°	118.8	137.9	157.0	174.5	182.8	189.4	207.7	216.8	221.8	224.3	221.8
147.5°	96.4	112.2	127.9	142.1	149.5	157.9	170.3	181.1	185.3	186.9	185.3
150°	75.6	89.7	102.2	113.8	119.6	125.5	136.3	147.1	151.2	153.7	151.2
152.5°	57.3	69.0	78.9	88.1	93.0	98.0	107.2	117.1	121.3	123.0	121.3
155°	41.5	49.8	59.0	65.6	69.8	73.1	79.8	86.4	93.0	93.0	93.0
157.5°	25.8	32.4	39.9	45.7	48.2	51.5	56.5	62.3	67.3	69.8	69.8
160°	13.3	17.4	22.4	26.6	29.1	31.6	34.9	39.9	43.2	45.7	44.0
162.5°	5.8	7.5	10.0	11.6	13.3	14.1	16.6	19.1	20.8	24.9	21.6
165°	1.7	1.7	2.5	3.3	3.3	3.3	4.2	5.0	5.8	9.1	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: P201255

CATALOG NUMBER: 8LBLELD4-9-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2
2.5°	1129.9	1132.4	1135.7	1137.4	1139.9	1141.5	1145.7	1150.7	1146.5	1140.7	1141.5
5°	1134.0	1133.2	1135.7	1137.4	1139.0	1139.9	1144.0	1149.0	1144.0	1138.2	1138.2
7.5°	1135.7	1134.9	1135.7	1136.5	1137.4	1137.4	1141.5	1145.7	1140.7	1133.2	1131.5
10°	1133.2	1132.4	1133.2	1134.9	1134.9	1134.9	1137.4	1140.7	1134.9	1125.7	1122.4
12.5°	1134.9	1132.4	1132.4	1133.2	1133.2	1131.5	1132.4	1134.9	1127.4	1117.4	1112.4
15°	1140.7	1136.5	1134.9	1134.9	1133.2	1129.1	1127.4	1127.4	1119.1	1105.8	1099.1
17.5°	1154.8	1148.2	1143.2	1140.7	1137.4	1129.9	1124.1	1120.7	1109.9	1095.0	1084.2
20°	1176.4	1167.3	1159.8	1154.8	1150.7	1137.4	1125.7	1116.6	1101.6	1083.4	1069.2
22.5°	1198.0	1188.0	1177.2	1172.3	1166.4	1151.5	1135.7	1119.9	1097.5	1072.6	1053.4
25°	1218.8	1208.8	1196.3	1191.4	1183.9	1166.4	1146.5	1128.2	1099.1	1065.1	1037.7
27.5°	1242.9	1230.4	1217.1	1209.6	1201.3	1181.4	1159.0	1136.5	1104.1	1065.1	1026.9
30°	1270.3	1255.3	1237.9	1229.6	1219.6	1196.3	1168.9	1142.3	1107.4	1065.1	1021.0
32.5°	1301.9	1284.4	1263.6	1252.0	1240.4	1213.0	1180.6	1149.8	1109.9	1064.2	1016.1
35°	1338.4	1318.5	1293.5	1280.3	1266.1	1233.7	1195.5	1158.1	1114.1	1063.4	1009.4
37.5°	1384.1	1360.8	1330.9	1314.3	1297.7	1259.5	1215.5	1170.6	1120.7	1064.2	1004.4
40°	1438.9	1411.5	1376.6	1355.9	1335.9	1291.9	1239.5	1186.4	1129.9	1065.9	999.4
42.5°	1503.7	1470.5	1431.5	1407.4	1384.1	1329.3	1269.5	1206.3	1142.3	1069.2	997.0
45°	1581.0	1546.1	1496.3	1466.4	1440.6	1376.6	1307.7	1232.9	1160.6	1077.5	996.1
47.5°	1669.9	1625.9	1571.9	1537.0	1506.2	1432.3	1352.5	1266.1	1181.4	1088.3	997.8
50°	1769.6	1719.7	1657.4	1620.9	1582.7	1497.9	1405.7	1305.2	1208.0	1104.1	1001.9
52.5°	1879.3	1824.4	1757.1	1713.9	1671.6	1573.5	1465.5	1355.0	1238.7	1124.1	1009.4
55°	1993.1	1934.1	1859.3	1812.0	1764.6	1656.6	1536.1	1409.0	1279.4	1149.0	1021.9
57.5°	2103.6	2042.9	1960.7	1912.5	1859.3	1744.7	1611.7	1468.0	1323.5	1178.1	1036.0
60°	2205.8	2145.1	2062.0	2013.0	1954.9	1831.9	1689.0	1532.8	1369.2	1208.8	1052.6
62.5°	2292.2	2234.0	2150.9	2101.1	2041.3	1914.2	1762.9	1596.0	1419.0	1241.2	1068.4
65°	2356.1	2301.3	2220.7	2169.2	2111.9	1979.8	1825.3	1651.6	1460.5	1269.5	1082.5
67.5°	2388.5	2337.0	2258.9	2209.9	2153.4	2022.2	1867.6	1689.0	1492.1	1289.4	1091.7
70°	2385.2	2336.2	2263.1	2214.9	2160.9	2034.6	1882.6	1704.0	1506.2	1296.9	1090.0
72.5°	2342.0	2293.0	2227.4	2180.8	2129.3	2011.4	1861.8	1690.7	1495.4	1285.2	1076.7
75°	2256.4	2211.6	2145.1	2106.9	2060.4	1950.7	1807.8	1641.7	1458.9	1254.5	1049.3
77.5°	2133.5	2099.4	2034.6	1998.9	1953.2	1851.8	1717.3	1567.7	1394.9	1203.0	1006.9
80°	1983.1	1954.9	1891.7	1860.2	1815.3	1727.2	1610.9	1466.4	1310.2	1133.2	952.1
82.5°	1818.6	1786.2	1736.4	1707.3	1664.9	1586.0	1475.5	1357.5	1212.1	1053.4	888.1
85°	1648.3	1618.4	1572.7	1547.8	1510.4	1439.8	1340.9	1237.1	1108.3	965.4	819.2
87.5°	1486.3	1457.2	1414.0	1391.6	1357.5	1294.4	1208.0	1116.6	1002.8	880.6	746.1
90°	1345.9	1318.5	1277.8	1257.0	1226.3	1168.9	1090.8	1008.6	908.1	795.9	680.4
92.5°	1230.4	1205.5	1167.3	1147.3	1119.9	1067.6	997.0	922.2	831.6	734.4	627.3
95°	1139.0	1114.9	1080.9	1061.8	1036.0	982.0	919.7	849.9	766.8	677.9	579.1
97.5°	1065.1	1045.1	1007.8	989.5	968.7	913.9	857.4	788.4	711.2	628.1	535.9
100°	1005.3	982.8	948.8	931.3	909.7	858.2	800.9	736.1	661.3	582.4	496.8
102.5°	958.7	935.5	903.9	884.0	863.2	810.9	754.4	691.2	619.8	543.3	461.1
105°	917.2	894.8	863.2	843.3	822.5	771.0	717.0	653.0	582.4	508.4	428.7
107.5°	878.2	858.2	826.6	806.7	785.9	734.4	680.4	617.3	548.3	476.0	398.8
110°	844.9	823.3	790.1	771.0	748.5	699.5	645.5	584.0	515.1	444.5	370.5



TEST NUMBER: P201255

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	811.7	788.4	755.2	736.1	713.7	664.6	611.5	550.8	483.5	415.4	343.9
115°	775.1	752.7	717.8	698.7	676.3	628.1	576.6	517.6	452.8	386.3	317.4
117.5°	736.1	713.7	678.8	660.5	638.9	591.5	542.5	485.2	422.0	358.1	290.8
120°	693.7	672.1	638.9	620.6	599.8	554.1	506.8	449.5	389.6	328.2	265.9
122.5°	650.5	629.7	597.3	579.1	559.1	515.9	469.4	413.7	356.4	299.1	241.8
125°	604.0	583.2	552.5	535.0	515.1	473.6	428.7	376.4	323.2	271.7	216.8
127.5°	550.0	533.4	503.5	486.0	467.7	431.2	388.0	340.6	291.6	241.8	192.7
130°	498.5	481.0	452.8	437.0	421.2	388.0	349.8	304.1	255.9	212.7	168.7
132.5°	444.5	428.7	404.6	391.3	377.2	347.3	308.2	263.4	222.7	185.3	146.2
135°	393.8	380.5	358.9	347.3	333.1	301.6	265.0	227.6	193.6	160.3	125.5
137.5°	346.4	333.1	313.2	300.7	285.8	257.5	227.6	196.9	165.3	137.1	106.3
140°	296.6	285.8	267.5	256.7	243.4	219.3	194.4	165.3	140.4	114.6	88.1
142.5°	254.2	245.1	226.8	216.8	205.2	185.3	162.0	139.6	117.1	94.7	72.3
145°	217.7	208.5	188.6	181.1	170.3	152.9	133.8	113.8	95.5	76.4	58.2
147.5°	181.9	171.1	153.7	147.1	138.7	123.8	108.8	93.0	77.3	60.6	44.9
150°	148.7	136.3	122.1	118.0	109.7	98.0	85.6	72.3	59.8	46.5	32.4
152.5°	117.1	106.3	94.7	90.6	83.9	76.4	65.6	54.8	44.9	32.4	22.4
155°	87.2	78.9	69.8	67.3	62.3	56.5	47.4	39.0	29.9	21.6	15.8
157.5°	61.5	54.8	48.2	46.5	43.2	38.2	30.7	24.1	19.1	14.1	10.8
160°	38.2	34.1	29.1	27.4	24.9	21.6	16.6	14.1	11.6	9.1	6.6
162.5°	18.3	15.8	14.1	13.3	11.6	10.0	9.1	7.5	6.6	5.8	5.0
165°	6.6	6.6	6.6	5.8	5.8	5.8	5.8	5.0	4.2	4.2	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: P201255

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2	1143.2
2.5°	1142.3	1144.0	1144.0	1144.8	1147.3	1152.3	1159.0	1159.8
5°	1139.0	1139.9	1139.9	1139.9	1142.3	1146.5	1153.1	1154.0
7.5°	1131.5	1131.5	1131.5	1131.5	1134.0	1137.4	1143.2	1144.0
10°	1121.6	1120.7	1120.7	1119.9	1121.6	1124.1	1130.7	1129.9
12.5°	1109.1	1107.4	1106.6	1106.6	1105.8	1108.3	1112.4	1113.3
15°	1095.0	1091.7	1090.0	1088.3	1087.5	1087.5	1092.5	1091.7
17.5°	1078.4	1073.4	1070.9	1068.4	1065.1	1065.1	1068.4	1067.6
20°	1059.3	1052.6	1048.5	1045.1	1040.2	1038.5	1040.2	1039.3
22.5°	1040.2	1029.4	1025.2	1020.2	1012.7	1009.4	1008.6	1007.8
25°	1017.7	1004.4	998.6	993.6	982.8	978.7	974.5	972.9
27.5°	997.8	978.7	971.2	962.9	950.4	944.6	938.0	936.3
30°	980.3	952.1	940.5	932.2	916.4	907.2	898.9	897.3
32.5°	967.0	928.0	912.2	902.2	880.6	868.2	857.4	852.4
35°	955.4	905.6	884.8	869.0	843.3	828.3	813.3	809.2
37.5°	944.6	886.5	859.0	837.4	808.4	786.8	770.1	763.5
40°	933.8	869.0	835.8	808.4	770.1	745.2	724.5	716.1
42.5°	923.8	851.6	815.8	782.6	732.8	702.9	680.4	668.8
45°	914.7	835.8	796.7	760.2	696.2	661.3	633.9	623.1
47.5°	908.1	820.8	777.6	737.7	662.1	618.9	590.7	576.6
50°	903.1	806.7	759.3	715.3	632.2	578.2	546.7	530.0
52.5°	900.6	794.2	742.7	695.4	604.8	539.2	501.8	489.3
55°	901.4	784.3	728.6	677.1	579.1	501.8	460.3	441.2
57.5°	903.1	775.1	714.5	658.8	553.3	465.2	418.7	398.8
60°	906.4	767.7	702.0	641.4	529.2	433.7	380.5	361.4
62.5°	909.7	761.0	689.6	624.8	506.0	404.6	342.3	320.7
65°	910.6	751.0	676.3	608.1	482.7	375.5	303.2	282.5
67.5°	907.2	738.6	659.7	589.0	458.6	347.3	266.7	245.1
70°	897.3	722.0	640.5	567.4	432.0	319.9	231.8	208.5
72.5°	879.0	700.4	618.1	543.3	406.3	290.8	200.2	172.0
75°	853.2	673.8	591.5	515.9	378.8	263.4	171.1	139.6
77.5°	818.3	639.7	560.0	485.2	348.9	235.1	146.2	109.7
80°	773.5	604.0	525.1	452.0	319.9	209.4	122.1	81.4
82.5°	720.3	563.3	487.7	417.9	292.4	182.8	99.7	56.5
85°	665.5	519.2	448.6	382.2	263.4	157.9	80.6	33.2
87.5°	611.5	475.2	411.2	349.8	233.5	135.4	62.3	13.3
90°	558.3	432.8	372.2	314.9	207.7	114.6	46.5	0.0
92.5°	514.3	401.3	346.4	291.6	191.1	103.8	39.9	0.0
95°	475.2	371.4	319.0	268.3	173.6	93.9	33.2	0.0
97.5°	439.5	343.1	294.9	246.7	157.9	83.1	27.4	0.0
100°	405.4	314.9	270.0	226.8	142.9	73.9	20.8	0.0
102.5°	375.5	289.9	247.6	205.2	127.9	64.8	15.0	0.0
105°	346.4	265.9	226.8	186.1	114.6	56.5	9.1	0.0
107.5°	320.7	243.4	206.0	168.7	102.2	49.0	5.8	0.0
110°	295.8	222.7	186.1	152.0	91.4	42.4	5.0	0.0



TEST NUMBER: P201255

CATALOG NUMBER: 8LBLED-LD4-9-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	272.5	202.7	168.7	136.3	82.2	35.7	5.0	0.0
115°	248.4	183.6	152.0	123.0	73.1	29.1	4.2	0.0
117.5°	227.6	165.3	137.1	112.2	64.0	23.3	4.2	0.0
120°	206.9	149.5	124.6	100.5	55.7	17.4	4.2	0.0
122.5°	186.1	135.4	111.3	89.7	48.2	14.1	3.3	0.0
125°	167.0	120.5	98.9	78.1	39.9	12.5	3.3	0.0
127.5°	147.9	105.5	85.6	67.3	31.6	10.8	2.5	0.0
130°	128.8	90.6	73.1	56.5	24.1	9.1	2.5	0.0
132.5°	111.3	76.4	61.5	46.5	19.1	7.5	1.7	0.0
135°	93.9	64.0	50.7	36.6	15.0	6.6	1.7	0.0
137.5°	78.9	52.3	39.9	27.4	12.5	5.0	1.7	0.0
140°	64.8	41.5	29.9	20.8	10.0	4.2	0.8	0.0
142.5°	51.5	30.7	22.4	15.8	8.3	3.3	0.8	0.0
145°	39.9	22.4	16.6	12.5	7.5	2.5	0.8	0.0
147.5°	29.1	17.4	13.3	10.8	5.8	2.5	0.8	0.0
150°	20.8	13.3	10.8	8.3	4.2	1.7	0.8	0.0
152.5°	15.8	10.0	8.3	6.6	3.3	1.7	0.8	0.0
155°	11.6	7.5	6.6	5.0	2.5	1.7	0.8	0.0
157.5°	8.3	5.8	5.0	3.3	2.5	1.7	0.8	0.0
160°	5.0	4.2	3.3	2.5	1.7	0.8	0.8	0.0
162.5°	4.2	2.5	2.5	2.5	1.7	0.8	0.8	0.0
165°	2.5	1.7	1.7	1.7	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)