

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: P201302

Luminaire Tested: **4LBLED-LD4-11-SYMW-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201302
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: 4LBLED-LD4-11-SYMW-UNV-L850-CD1-U
Description: 4 ft. Low Bay Linear, 11000 lm, Wht Sym lens, 5K
Light Source: (392) 5000K CCT, 80 CRI LEDS
2UT217098A8504C
Ballast/Driver: OSRAM
(OT85W01920CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11613.6 lumens
Efficiency: N/A
Efficacy: 131.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 2.12 / 1.93
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

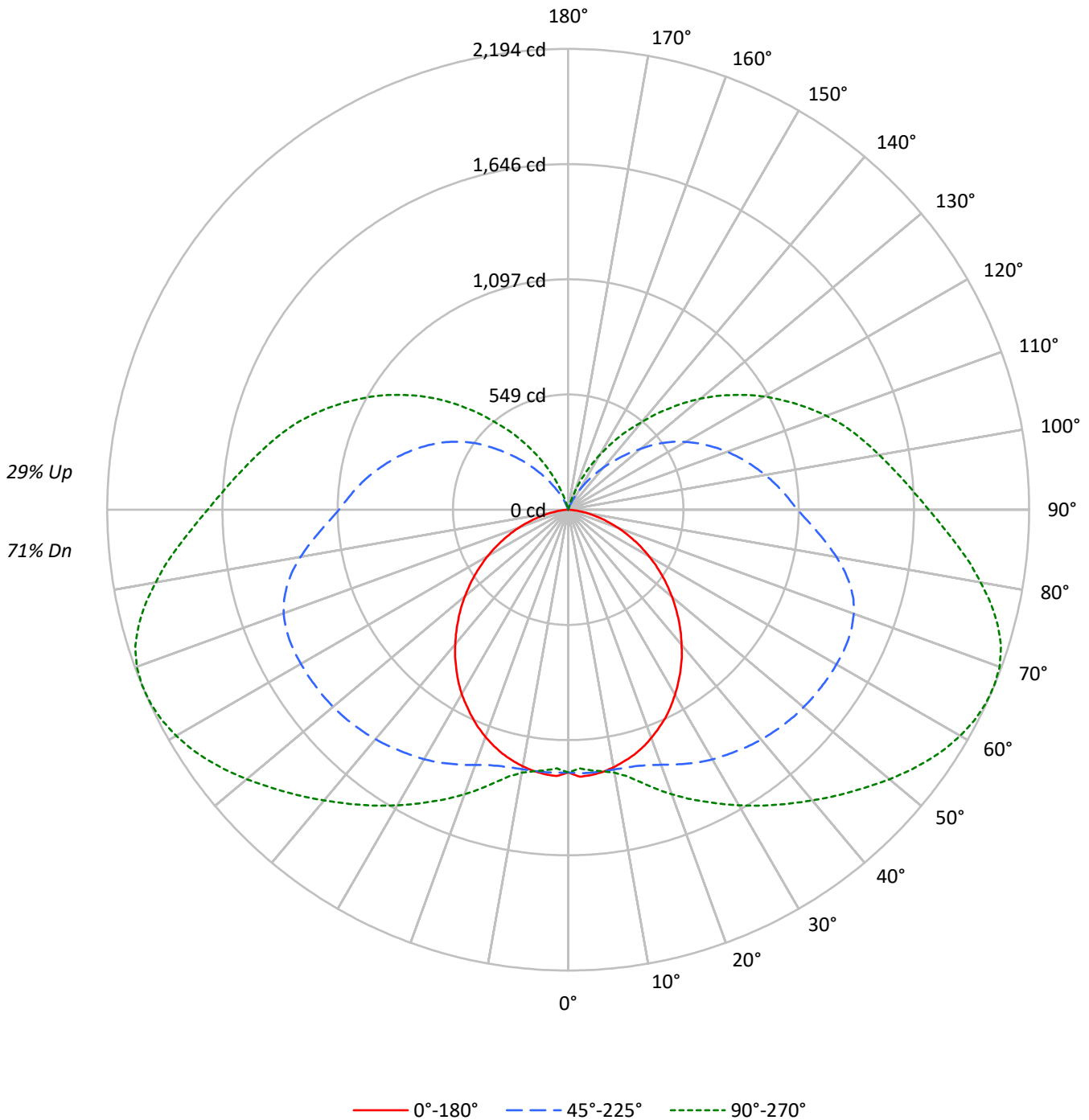
Input Watts (W): 88.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	75	75	75	71	
1	97	90	84	79	91	85	80	75	75	71	67	66	63	60	58	55	53	53	53	53	49	
2	86	76	67	60	81	71	64	57	63	57	51	55	50	46	48	44	40	40	40	40	36	
3	77	65	55	48	72	61	52	45	54	47	41	47	41	36	41	36	32	32	32	32	28	
4	70	56	46	39	65	53	44	37	47	39	33	41	35	30	35	30	26	26	26	26	23	
5	64	50	40	32	60	47	38	31	41	34	28	36	30	25	31	26	22	22	22	22	19	
6	59	44	34	27	55	42	33	26	37	29	24	32	26	21	28	23	19	19	19	19	16	
7	54	40	30	24	50	37	29	23	33	26	20	29	23	18	25	20	16	16	16	16	14	
8	50	36	27	21	47	34	25	20	30	23	18	26	20	16	23	18	14	14	14	14	12	
9	47	33	24	18	44	31	23	17	27	21	16	24	18	14	21	16	13	13	13	13	10	
10	43	30	22	16	41	28	21	15	25	19	14	22	17	13	20	15	11	11	11	11	9	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	20152	20152	20152
5°	20424	18165	20356
10°	20192	17058	20124
15°	19890	16817	19804
20°	19468	17008	19362
25°	18994	17245	18848
30°	18371	17589	18315
35°	17699	18029	17619
40°	16925	18582	16860
45°	16110	19287	16019
50°	15216	20145	15143
55°	14239	21080	14158
60°	13168	21985	13076
65°	11913	22750	11807
70°	10405	23282	10277
75°	8483	23328	8160
80°	6278	22939	5833
85°	3270	22479	2899



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.4	1.0
10°-20°	359.7	3.1
20°-30°	608.9	5.2
30°-40°	851.5	7.3
40°-50°	1072.9	9.2
50°-60°	1259.7	10.8
60°-70°	1377.5	11.9
70°-80°	1360.9	11.7
80°-90°	1195.6	10.3
90°-100°	1017.7	8.8
100°-110°	848.7	7.3
110°-120°	657.3	5.7
120°-130°	457.6	3.9
130°-140°	267.1	2.3
140°-150°	121.8	1.0
150°-160°	34.8	0.3
160°-170°	2.5	0.0
170°-180°	0.0	0.0
0°-30°	1088.1	9.4
0°-40°	1939.6	16.7
0°-60°	4272.2	36.8
0°-90°	8206.2	70.7
90°-120°	2523.7	21.7
90°-150°	3370.2	29.0
90°-180°	3407.0	29.3
0°-180°	11613.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1251	1251	1251	1251	1251	
5°	1268	1257	1245	1255	1264	120
15°	1209	1263	1344	1263	1204	341
25°	1094	1334	1533	1334	1086	503
35°	932	1402	1716	1400	928	583
45°	744	1449	1900	1447	740	573
55°	544	1471	2085	1467	541	487
65°	347	1470	2190	1464	344	344
75°	163	1390	2116	1384	156	175
85°	28	1189	1852	1186	25	36
90°	0	1091	1716	1091	0	1
95°	0	1022	1603	1023	0	0
105°	1	879	1409	882	0	1
115°	1	727	1194	729	1	1
125°	2	556	952	556	1	2
135°	2	353	683	353	1	2
145°	3	180	424	178	2	2
155°	3	51	188	48	2	1
165°	3	5	14	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°	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6
2.5°	1272.5	1271.5	1266.3	1257.9	1254.8	1252.7	1251.7	1248.6	1247.5	1249.6	1255.9
5°	1268.4	1266.3	1262.1	1254.8	1251.7	1250.6	1249.6	1246.5	1245.4	1248.6	1256.9
7.5°	1259.0	1257.9	1253.8	1246.5	1245.4	1243.3	1243.3	1241.2	1241.2	1246.5	1255.9
10°	1245.4	1244.4	1240.2	1235.0	1233.9	1233.9	1233.9	1233.9	1236.0	1244.4	1255.9
12.5°	1227.7	1227.7	1224.6	1220.4	1221.4	1221.4	1222.5	1224.6	1230.8	1243.3	1257.9
15°	1208.9	1207.9	1204.7	1203.7	1206.8	1207.9	1211.0	1216.2	1226.6	1244.4	1263.2
17.5°	1184.9	1184.9	1181.8	1182.8	1189.1	1192.2	1197.4	1206.8	1223.5	1247.5	1274.6
20°	1156.8	1157.8	1156.8	1159.9	1170.3	1176.6	1182.8	1198.5	1222.5	1255.9	1292.4
22.5°	1125.5	1127.6	1127.6	1135.9	1149.5	1158.8	1168.2	1190.1	1224.6	1270.5	1313.2
25°	1094.2	1094.2	1097.3	1108.8	1127.6	1139.0	1153.6	1184.9	1231.9	1286.1	1334.1
27.5°	1056.6	1059.8	1065.0	1080.6	1106.7	1122.3	1140.1	1184.9	1240.2	1301.7	1354.9
30°	1017.0	1020.1	1028.5	1050.4	1083.7	1103.6	1128.6	1184.9	1247.5	1314.3	1372.7
32.5°	975.3	980.5	992.0	1020.1	1060.8	1087.9	1120.3	1183.9	1253.8	1324.7	1387.3
35°	932.5	937.7	955.4	988.8	1042.0	1073.3	1110.9	1180.8	1256.9	1334.1	1401.9
37.5°	887.6	897.0	916.9	958.6	1023.2	1060.8	1100.4	1177.6	1260.0	1341.4	1416.5
40°	839.7	849.1	877.2	927.3	1004.5	1044.1	1087.9	1173.4	1262.1	1348.7	1429.0
42.5°	792.7	805.2	837.6	898.1	985.7	1029.5	1075.4	1167.2	1261.1	1353.9	1439.4
45°	743.7	758.3	797.9	869.9	964.8	1011.8	1060.8	1158.8	1259.0	1357.0	1448.8
47.5°	693.6	711.4	758.3	841.8	944.0	993.0	1046.2	1150.5	1255.9	1359.1	1457.2
50°	644.6	665.5	718.7	813.6	921.0	973.2	1028.5	1141.1	1250.6	1360.2	1462.4
52.5°	595.6	618.5	681.1	785.4	897.0	952.3	1010.7	1129.6	1244.4	1359.1	1467.6
55°	544.5	569.5	643.6	755.2	872.0	929.4	990.9	1115.0	1235.0	1354.9	1470.7
57.5°	495.5	523.6	608.1	726.0	845.9	906.4	972.1	1099.4	1224.6	1351.8	1473.9
60°	445.4	477.7	571.6	692.6	818.8	881.4	949.2	1081.7	1212.0	1344.5	1473.9
62.5°	396.4	432.9	536.1	662.3	791.7	856.4	926.2	1061.8	1198.5	1337.2	1473.9
65°	347.3	389.1	499.6	629.0	761.4	829.2	900.2	1041.0	1181.8	1326.8	1469.7
67.5°	299.4	347.3	462.1	594.5	730.1	800.0	873.0	1017.0	1163.0	1313.2	1461.3
70°	252.4	305.6	424.5	558.0	697.8	766.7	842.8	990.9	1141.1	1295.5	1446.7
72.5°	205.5	266.0	384.9	521.5	663.4	734.3	811.5	960.7	1114.0	1271.5	1423.8
75°	162.7	226.3	347.3	484.0	627.9	699.9	777.1	927.3	1081.7	1240.2	1390.4
77.5°	124.1	189.8	310.8	447.5	590.4	665.5	741.6	890.8	1044.1	1200.6	1346.6
80°	87.6	154.4	274.3	409.9	552.8	626.9	702.0	851.1	1004.5	1153.6	1296.5
82.5°	54.2	122.0	237.8	373.4	516.3	589.3	663.4	811.5	959.6	1104.6	1242.3
85°	28.2	91.8	203.4	339.0	480.9	552.8	625.8	770.8	913.7	1054.5	1189.1
87.5°	9.4	66.8	175.2	308.7	448.5	520.5	591.4	732.2	871.0	1005.5	1136.9
90°	0.0	50.1	154.4	284.8	421.4	491.3	562.2	697.8	833.4	965.9	1091.0
92.5°	0.0	42.8	140.8	268.1	402.6	471.5	540.3	674.9	805.2	933.5	1055.6
95°	0.0	34.4	129.3	251.4	382.8	450.6	518.4	649.8	778.1	903.3	1022.2
97.5°	0.0	27.1	116.8	235.7	363.0	428.7	494.4	624.8	750.0	873.0	987.8
100°	1.0	20.9	103.3	215.9	342.1	406.8	470.4	597.7	719.7	838.6	952.3
102.5°	1.0	14.6	90.7	199.2	320.2	382.8	445.4	569.5	689.5	807.3	915.8
105°	1.0	10.4	78.2	181.5	299.4	359.9	421.4	542.4	659.2	772.9	879.3
107.5°	1.0	7.3	66.8	164.8	278.5	335.9	395.3	513.2	627.9	738.5	842.8
110°	1.0	5.2	56.3	147.1	255.6	312.9	370.3	484.0	595.6	703.0	805.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	4.2	45.9	130.4	232.6	288.9	344.2	454.8	563.3	667.6	766.7
115°	1.0	4.2	36.5	114.7	209.7	263.9	317.1	425.6	528.8	631.1	727.0
117.5°	1.0	3.1	28.2	99.1	188.8	238.9	290.0	393.2	495.5	594.5	687.4
120°	1.0	3.1	20.9	83.4	166.9	213.8	263.9	361.9	460.0	556.0	644.6
122.5°	2.1	3.1	15.6	69.9	147.1	189.8	237.8	330.7	422.4	515.3	602.9
125°	2.1	2.1	12.5	56.3	126.2	165.8	208.6	298.3	381.8	470.4	556.0
127.5°	2.1	2.1	9.4	42.8	105.3	141.9	180.5	263.9	345.3	424.5	505.9
130°	2.1	2.1	8.3	31.3	85.5	117.9	153.3	228.4	304.6	377.6	451.6
132.5°	2.1	2.1	6.3	22.9	67.8	97.0	128.3	195.1	264.9	335.9	402.6
135°	2.1	2.1	5.2	16.7	51.1	77.2	104.3	163.8	227.4	294.1	352.6
137.5°	2.1	2.1	5.2	12.5	37.6	58.4	82.4	136.6	193.0	252.4	305.6
140°	2.1	2.1	4.2	10.4	26.1	42.8	62.6	109.5	157.5	212.8	263.9
142.5°	2.1	2.1	3.1	8.3	18.8	30.2	44.9	84.5	127.3	175.2	220.1
145°	3.1	2.1	3.1	7.3	13.6	20.9	31.3	63.6	98.0	140.8	180.5
147.5°	2.1	2.1	2.1	5.2	10.4	14.6	20.9	43.8	74.1	109.5	142.9
150°	3.1	2.1	2.1	4.2	8.3	10.4	14.6	29.2	51.1	80.3	109.5
152.5°	3.1	2.1	2.1	4.2	6.3	8.3	10.4	18.8	33.4	54.2	78.2
155°	3.1	2.1	2.1	3.1	5.2	6.3	8.3	12.5	19.8	33.4	51.1
157.5°	3.1	3.1	3.1	3.1	4.2	5.2	6.3	9.4	11.5	18.8	29.2
160°	3.1	3.1	2.1	2.1	3.1	3.1	4.2	6.3	8.3	10.4	14.6
162.5°	3.1	3.1	3.1	2.1	2.1	2.1	3.1	4.2	5.2	7.3	9.4
165°	3.1	3.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1	4.2	5.2
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°	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6
2.5°	1257.9	1252.7	1250.6	1246.5	1243.3	1241.2	1238.1	1236.0	1233.9	1232.9	1232.9
5°	1259.0	1253.8	1251.7	1248.6	1247.5	1245.4	1243.3	1245.4	1244.4	1245.4	1244.4
7.5°	1260.0	1255.9	1255.9	1254.8	1253.8	1253.8	1251.7	1253.8	1254.8	1255.9	1254.8
10°	1263.2	1262.1	1264.2	1265.2	1265.2	1265.2	1265.2	1267.3	1271.5	1271.5	1270.5
12.5°	1268.4	1271.5	1277.8	1283.0	1285.1	1285.1	1289.2	1293.4	1298.6	1299.7	1298.6
15°	1278.8	1288.2	1301.7	1313.2	1318.4	1321.6	1329.9	1337.2	1342.4	1344.5	1342.4
17.5°	1297.6	1315.3	1336.2	1352.9	1359.1	1363.3	1374.8	1382.1	1388.3	1393.5	1391.5
20°	1322.6	1346.6	1371.6	1391.5	1399.8	1405.0	1417.5	1431.1	1437.3	1441.5	1440.5
22.5°	1349.7	1377.9	1406.1	1430.0	1439.4	1445.7	1461.3	1473.9	1483.2	1488.5	1487.4
25°	1375.8	1408.1	1442.6	1468.6	1480.1	1487.4	1504.1	1518.7	1529.1	1533.3	1532.3
27.5°	1401.9	1439.4	1477.0	1507.2	1518.7	1528.1	1547.9	1563.6	1576.1	1579.2	1579.2
30°	1422.7	1466.6	1507.2	1541.7	1554.2	1566.7	1588.6	1609.5	1620.9	1625.1	1624.1
32.5°	1442.6	1491.6	1537.5	1576.1	1591.7	1604.2	1630.3	1653.3	1666.8	1671.0	1666.8
35°	1462.4	1516.6	1567.7	1609.5	1626.1	1641.8	1671.0	1697.1	1711.7	1715.8	1713.8
37.5°	1481.2	1541.7	1596.9	1642.8	1662.6	1679.3	1709.6	1740.9	1756.5	1760.7	1756.5
40°	1498.9	1564.6	1625.1	1675.2	1697.1	1716.9	1752.4	1783.6	1801.4	1806.6	1804.5
42.5°	1515.6	1587.5	1653.3	1708.5	1733.6	1754.4	1794.1	1828.5	1847.3	1853.5	1848.3
45°	1530.2	1610.5	1681.4	1740.9	1768.0	1792.0	1836.8	1874.4	1893.2	1900.5	1894.2
47.5°	1544.8	1631.4	1707.5	1773.2	1804.5	1829.5	1879.6	1919.2	1941.1	1947.4	1941.1
50°	1558.3	1652.2	1735.7	1806.6	1840.0	1868.1	1922.4	1965.1	1987.0	1996.4	1988.1
52.5°	1570.9	1672.0	1761.7	1837.9	1874.4	1905.7	1964.1	2010.0	2036.1	2042.3	2034.0
55°	1583.4	1690.8	1784.7	1867.1	1906.7	1940.1	2003.7	2051.7	2077.8	2085.1	2076.7
57.5°	1593.8	1707.5	1806.6	1895.3	1935.9	1974.5	2038.2	2088.2	2115.3	2123.7	2115.3
60°	1601.1	1721.1	1826.4	1918.2	1961.0	2000.6	2068.4	2118.5	2145.6	2153.9	2145.6
62.5°	1606.3	1731.5	1840.0	1935.9	1981.8	2022.5	2091.3	2140.4	2168.5	2176.9	2168.5
65°	1607.4	1735.7	1847.3	1947.4	1994.3	2035.0	2104.9	2153.9	2183.1	2190.4	2182.1
67.5°	1601.1	1731.5	1847.3	1949.5	1996.4	2038.2	2108.0	2157.1	2185.2	2193.6	2185.2
70°	1588.6	1719.0	1836.8	1941.1	1988.1	2029.8	2098.6	2148.7	2176.9	2185.2	2175.8
72.5°	1564.6	1697.1	1814.9	1921.3	1966.2	2006.9	2074.7	2123.7	2150.8	2160.2	2149.8
75°	1530.2	1662.6	1780.5	1882.7	1929.7	1967.2	2035.0	2083.0	2108.0	2116.4	2107.0
77.5°	1485.3	1618.8	1732.5	1833.7	1880.6	1915.1	1980.8	2027.7	2052.8	2060.1	2050.7
80°	1433.2	1565.6	1675.2	1775.3	1819.1	1851.4	1917.2	1962.0	1986.0	1993.3	1988.1
82.5°	1375.8	1505.1	1611.5	1709.6	1751.3	1783.6	1848.3	1892.1	1916.1	1926.5	1918.2
85°	1317.4	1441.5	1545.8	1640.7	1682.5	1716.9	1776.3	1820.2	1844.1	1852.5	1847.3
87.5°	1259.0	1378.9	1480.1	1571.9	1610.5	1646.0	1705.4	1749.2	1773.2	1781.6	1775.3
90°	1210.0	1324.7	1421.7	1512.4	1552.1	1584.4	1641.8	1683.5	1707.5	1715.8	1710.6
92.5°	1170.3	1279.8	1373.7	1457.2	1494.7	1529.1	1584.4	1625.1	1649.1	1656.4	1651.2
95°	1132.8	1239.2	1329.9	1411.3	1447.8	1481.2	1533.3	1572.9	1595.9	1603.2	1599.0
97.5°	1097.3	1199.5	1287.1	1366.4	1404.0	1434.2	1484.3	1521.8	1544.8	1551.0	1544.8
100°	1057.7	1160.9	1246.5	1324.7	1357.0	1387.3	1437.3	1474.9	1494.7	1503.1	1497.8
102.5°	1020.1	1119.2	1203.7	1280.9	1315.3	1345.6	1391.5	1428.0	1450.9	1456.1	1450.9
105°	981.5	1077.5	1159.9	1236.0	1270.5	1299.7	1345.6	1381.0	1402.9	1409.2	1404.0
107.5°	941.9	1034.7	1117.1	1189.1	1222.5	1249.6	1296.5	1331.0	1349.7	1361.2	1352.9
110°	899.1	990.9	1070.2	1140.1	1172.4	1198.5	1244.4	1278.8	1296.5	1307.0	1299.7



TEST NUMBER: P201302

CATALOG NUMBER: 4LBLED-LD4-11-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	859.5	946.1	1022.2	1090.0	1120.3	1146.3	1191.2	1224.6	1241.2	1251.7	1244.4
115°	817.8	898.1	973.2	1037.9	1068.1	1092.1	1136.9	1168.2	1184.9	1194.3	1188.1
117.5°	772.9	851.1	922.1	985.7	1013.9	1037.9	1080.6	1111.9	1127.6	1134.9	1128.6
120°	729.1	805.2	872.0	932.5	960.7	983.6	1025.3	1054.5	1069.1	1077.5	1071.2
122.5°	683.2	757.3	817.8	878.3	904.3	926.2	963.8	995.1	1008.6	1015.9	1011.8
125°	634.2	707.2	765.6	820.9	845.9	866.8	903.3	929.4	945.0	952.3	948.1
127.5°	583.1	653.0	712.4	763.5	787.5	810.5	840.7	869.9	880.3	888.7	884.5
130°	525.7	595.6	650.9	703.0	726.0	744.7	778.1	802.1	815.7	823.0	819.9
132.5°	469.4	534.0	592.5	639.4	661.3	681.1	711.4	734.3	753.1	754.1	750.0
135°	415.1	471.5	524.7	574.7	596.6	616.5	643.6	664.4	682.2	683.2	678.0
137.5°	363.0	415.1	461.0	508.0	530.9	551.8	576.8	596.6	613.3	616.5	609.2
140°	312.9	360.9	402.6	444.3	466.3	486.1	513.2	529.9	543.4	544.5	540.3
142.5°	264.9	308.7	345.3	383.8	403.7	421.4	451.6	468.3	480.9	484.0	477.7
145°	220.1	258.7	293.1	326.5	343.2	359.9	390.1	409.9	420.4	423.5	417.2
147.5°	177.3	209.7	239.9	270.2	284.8	300.4	325.4	350.5	359.9	361.9	356.7
150°	137.7	164.8	191.9	217.0	229.5	243.0	264.9	287.9	300.4	302.5	298.3
152.5°	101.2	124.1	146.0	166.9	177.3	187.8	206.5	228.4	244.1	245.1	240.9
155°	68.8	87.6	105.3	121.0	130.4	138.7	153.3	170.0	186.7	187.8	184.6
157.5°	41.7	54.2	68.8	81.4	87.6	94.9	105.3	117.9	132.5	135.6	132.5
160°	20.9	28.2	36.5	44.9	50.1	55.3	60.5	70.9	79.3	86.6	82.4
162.5°	10.4	12.5	14.6	18.8	20.9	24.0	28.2	32.3	36.5	43.8	38.6
165°	6.3	7.3	8.3	8.3	9.4	9.4	9.4	9.4	9.4	13.6	9.4
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: P201302

CATALOG NUMBER: 4LBLELD4-11-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6
2.5°	1236.0	1238.1	1242.3	1244.4	1246.5	1248.6	1252.7	1259.0	1253.8	1248.6	1249.6
5°	1244.4	1244.4	1245.4	1248.6	1248.6	1249.6	1253.8	1260.0	1254.8	1247.5	1247.5
7.5°	1254.8	1253.8	1254.8	1255.9	1254.8	1254.8	1256.9	1260.0	1253.8	1245.4	1243.3
10°	1269.4	1266.3	1265.2	1266.3	1265.2	1262.1	1263.2	1263.2	1254.8	1242.3	1237.1
12.5°	1295.5	1290.3	1286.1	1285.1	1281.9	1276.7	1273.6	1269.4	1256.9	1242.3	1231.9
15°	1338.3	1329.9	1321.6	1318.4	1313.2	1300.7	1290.3	1280.9	1263.2	1242.3	1227.7
17.5°	1386.2	1375.8	1364.3	1360.2	1352.9	1335.1	1317.4	1299.7	1274.6	1245.4	1224.6
20°	1432.1	1419.6	1406.1	1398.8	1391.5	1369.5	1348.7	1325.7	1293.4	1254.8	1223.5
22.5°	1478.0	1463.4	1444.6	1438.4	1429.0	1404.0	1378.9	1352.9	1314.3	1268.4	1225.6
25°	1522.9	1506.2	1488.5	1478.0	1467.6	1439.4	1409.2	1377.9	1334.1	1284.0	1232.9
27.5°	1567.7	1549.0	1527.0	1515.6	1505.1	1473.9	1439.4	1404.0	1354.9	1298.6	1242.3
30°	1611.5	1590.7	1564.6	1552.1	1539.6	1504.1	1464.5	1424.8	1371.6	1311.1	1248.6
32.5°	1655.3	1632.4	1603.2	1588.6	1574.0	1533.3	1489.5	1444.6	1386.2	1322.6	1253.8
35°	1698.1	1673.1	1640.7	1623.0	1607.4	1563.6	1514.5	1464.5	1399.8	1332.0	1256.9
37.5°	1741.9	1713.8	1678.3	1658.5	1640.7	1592.8	1538.5	1482.2	1414.4	1339.3	1260.0
40°	1785.7	1755.5	1715.8	1695.0	1673.1	1620.9	1562.5	1499.9	1426.9	1346.6	1261.1
42.5°	1830.6	1797.2	1753.4	1730.4	1707.5	1649.1	1584.4	1515.6	1437.3	1351.8	1260.0
45°	1875.4	1837.9	1790.9	1764.9	1739.8	1676.2	1606.3	1529.1	1446.7	1354.9	1257.9
47.5°	1920.3	1880.6	1829.5	1801.4	1771.1	1703.3	1627.2	1543.7	1455.1	1356.0	1255.9
50°	1966.2	1923.4	1868.1	1836.8	1805.5	1729.4	1648.0	1556.3	1460.3	1357.0	1250.6
52.5°	2011.0	1965.1	1905.7	1872.3	1835.8	1755.5	1667.9	1568.8	1464.5	1356.0	1243.3
55°	2051.7	2003.7	1941.1	1905.7	1865.0	1779.5	1685.6	1579.2	1466.6	1352.9	1233.9
57.5°	2089.3	2040.2	1974.5	1934.9	1895.3	1802.4	1702.3	1590.7	1468.6	1347.6	1223.5
60°	2118.5	2069.4	2000.6	1961.0	1918.2	1821.2	1715.8	1596.9	1468.6	1340.3	1210.0
62.5°	2140.4	2091.3	2022.5	1980.8	1935.9	1836.8	1726.3	1603.2	1468.6	1333.0	1196.4
65°	2153.9	2106.0	2035.0	1993.3	1947.4	1844.1	1731.5	1604.2	1464.5	1322.6	1179.7
67.5°	2156.0	2108.0	2037.1	1996.4	1949.5	1844.1	1728.4	1599.0	1456.1	1309.0	1160.9
70°	2146.6	2098.6	2028.8	1987.0	1941.1	1834.8	1716.9	1586.5	1441.5	1291.3	1139.0
72.5°	2122.6	2073.6	2005.8	1963.1	1918.2	1812.8	1692.9	1563.6	1417.5	1266.3	1113.0
75°	2080.9	2032.9	1966.2	1926.5	1880.6	1777.4	1656.4	1530.2	1384.1	1235.0	1080.6
77.5°	2025.6	1978.7	1913.0	1873.3	1830.6	1729.4	1610.5	1485.3	1343.5	1196.4	1043.1
80°	1959.9	1915.1	1850.4	1811.8	1770.1	1672.0	1555.2	1433.2	1293.4	1150.5	1001.3
82.5°	1890.0	1846.2	1783.6	1744.0	1704.4	1609.5	1497.8	1376.8	1240.2	1101.5	956.5
85°	1822.2	1775.3	1712.7	1676.2	1636.6	1543.7	1438.4	1318.4	1186.0	1051.4	912.7
87.5°	1751.3	1705.4	1643.9	1609.5	1571.9	1478.0	1377.9	1261.1	1134.9	1006.6	869.9
90°	1686.6	1641.8	1582.3	1547.9	1512.4	1421.7	1323.7	1213.1	1091.0	966.9	834.5
92.5°	1627.2	1585.5	1529.1	1495.8	1461.3	1374.8	1280.9	1173.4	1055.6	935.6	806.3
95°	1576.1	1535.4	1483.2	1450.9	1415.4	1333.0	1241.2	1135.9	1023.2	906.4	780.2
97.5°	1525.0	1486.4	1435.3	1404.0	1370.6	1290.3	1201.6	1100.4	989.9	874.1	752.1
100°	1478.0	1440.5	1388.3	1360.2	1327.8	1250.6	1163.0	1063.9	955.4	841.8	721.8
102.5°	1432.1	1394.6	1344.5	1316.3	1285.1	1207.9	1122.3	1024.3	918.9	809.4	692.6
105°	1385.2	1348.7	1298.6	1270.5	1239.2	1164.1	1080.6	985.7	882.4	776.0	662.3
107.5°	1334.1	1298.6	1250.6	1222.5	1193.3	1118.2	1037.9	945.0	845.9	741.6	631.1
110°	1281.9	1246.5	1202.7	1172.4	1144.2	1071.2	993.0	904.3	807.3	706.2	598.7



TEST NUMBER: P201302

CATALOG NUMBER: 4LBLED-LD4-11-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1227.7	1193.3	1150.5	1122.3	1093.1	1023.2	948.1	862.6	768.7	669.6	565.3
115°	1172.4	1138.0	1095.2	1067.1	1041.0	974.2	901.2	819.9	729.1	633.1	532.0
117.5°	1111.9	1081.7	1041.0	1015.9	988.8	922.1	854.3	776.0	689.5	594.5	497.5
120°	1055.6	1026.4	986.7	959.6	935.6	872.0	807.3	731.2	645.7	557.0	462.1
122.5°	996.1	964.8	928.3	905.4	879.3	820.9	758.3	685.3	601.8	514.2	423.5
125°	933.5	904.3	868.9	847.0	823.0	767.7	708.2	635.2	556.0	471.5	383.8
127.5°	869.9	842.8	808.4	788.6	765.6	711.4	654.0	583.1	503.8	424.5	343.2
130°	805.2	778.1	746.8	726.0	704.1	653.0	596.6	526.7	451.6	377.6	303.5
132.5°	737.4	711.4	680.1	661.3	641.5	592.5	535.1	467.3	400.5	333.8	264.9
135°	667.6	643.6	615.4	597.7	577.9	527.8	473.6	412.0	352.6	291.0	227.4
137.5°	599.8	577.9	550.7	533.0	511.1	464.2	416.2	360.9	306.7	249.3	189.8
140°	533.0	513.2	487.1	467.3	448.5	404.7	360.9	310.8	261.8	209.7	156.5
142.5°	470.4	452.7	423.5	404.7	387.0	348.4	309.8	262.9	219.0	172.1	126.2
145°	408.9	393.2	360.9	344.2	329.6	295.2	256.6	218.0	178.4	137.7	98.0
147.5°	349.4	330.7	300.4	285.8	272.2	242.0	209.7	174.2	141.9	106.4	72.0
150°	292.1	269.1	243.0	230.5	219.0	193.0	164.8	135.6	107.4	77.2	50.1
152.5°	232.6	208.6	190.9	178.4	167.9	147.1	124.1	99.1	76.1	52.2	31.3
155°	172.1	155.4	138.7	132.5	123.1	105.3	86.6	66.8	48.0	31.3	17.7
157.5°	118.9	106.4	96.0	89.7	82.4	68.8	53.2	38.6	27.1	16.7	8.3
160°	72.0	63.6	56.3	51.1	45.9	36.5	26.1	17.7	11.5	5.2	3.1
162.5°	32.3	27.1	24.0	20.9	17.7	13.6	8.3	4.2	2.1	1.0	1.0
165°	6.3	4.2	3.1	2.1	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: P201302

CATALOG NUMBER: 4LBLED-LD4-11-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6	1250.6
2.5°	1250.6	1251.7	1252.7	1252.7	1255.9	1261.1	1268.4	1269.4
5°	1247.5	1248.6	1248.6	1249.6	1252.7	1256.9	1263.2	1264.2
7.5°	1242.3	1242.3	1242.3	1242.3	1244.4	1248.6	1253.8	1254.8
10°	1235.0	1232.9	1231.9	1230.8	1231.9	1236.0	1240.2	1241.2
12.5°	1226.6	1221.4	1219.3	1218.3	1218.3	1219.3	1223.5	1223.5
15°	1217.3	1208.9	1205.8	1203.7	1199.5	1199.5	1203.7	1203.7
17.5°	1207.9	1196.4	1190.1	1186.0	1179.7	1178.7	1180.8	1178.7
20°	1199.5	1181.8	1173.4	1166.1	1156.8	1153.6	1153.6	1150.5
22.5°	1191.2	1167.2	1155.7	1145.3	1130.7	1125.5	1122.3	1120.3
25°	1186.0	1151.5	1136.9	1124.4	1104.6	1093.1	1090.0	1085.8
27.5°	1184.9	1139.0	1119.2	1103.6	1076.4	1062.9	1054.5	1049.3
30°	1184.9	1126.5	1100.4	1078.5	1045.2	1024.3	1015.9	1013.9
32.5°	1183.9	1117.1	1085.8	1057.7	1014.9	987.8	975.3	972.1
35°	1180.8	1107.7	1071.2	1036.8	984.7	950.2	932.5	928.3
37.5°	1176.6	1096.3	1057.7	1018.0	953.4	911.6	889.7	883.5
40°	1172.4	1084.8	1041.0	998.2	922.1	872.0	843.8	836.5
42.5°	1165.1	1072.3	1026.4	979.4	892.9	832.4	800.0	788.6
45°	1157.8	1057.7	1008.6	958.6	863.7	791.7	751.0	739.5
47.5°	1148.4	1042.0	990.9	935.6	836.5	752.1	706.2	691.6
50°	1138.0	1026.4	971.1	913.7	807.3	713.5	657.1	641.5
52.5°	1126.5	1008.6	951.3	890.8	778.1	677.0	611.2	591.4
55°	1111.9	988.8	928.3	864.7	747.9	639.4	564.3	541.4
57.5°	1096.3	969.0	906.4	840.7	717.6	603.9	518.4	492.3
60°	1077.5	946.1	879.3	813.6	686.3	567.4	472.5	442.3
62.5°	1057.7	923.1	855.3	785.4	655.0	532.0	427.7	393.2
65°	1036.8	897.0	828.2	756.2	621.7	494.4	383.8	344.2
67.5°	1011.8	868.9	797.9	724.9	587.2	456.9	341.1	296.2
70°	986.7	838.6	764.6	691.6	551.8	419.3	300.4	249.3
72.5°	956.5	806.3	731.2	657.1	515.3	382.8	260.8	202.4
75°	923.1	772.9	696.8	621.7	477.7	344.2	221.1	156.5
77.5°	887.6	736.4	661.3	585.2	442.3	307.7	184.6	117.9
80°	850.1	697.8	623.8	547.6	404.7	271.2	149.2	81.4
82.5°	808.4	660.3	586.2	510.1	369.2	235.7	116.8	50.1
85°	768.7	622.7	550.7	475.6	334.8	200.3	87.6	25.0
87.5°	730.1	588.3	518.4	444.3	305.6	173.1	63.6	7.3
90°	698.9	560.1	491.3	419.3	282.7	153.3	48.0	0.0
92.5°	673.8	538.2	470.4	400.5	266.0	139.8	40.7	0.0
95°	649.8	515.3	450.6	380.7	249.3	128.3	32.3	0.0
97.5°	623.8	493.4	428.7	360.9	232.6	115.8	26.1	0.0
100°	597.7	469.4	406.8	341.1	213.8	103.3	18.8	0.0
102.5°	569.5	444.3	382.8	319.2	197.1	89.7	12.5	0.0
105°	542.4	419.3	359.9	297.3	179.4	78.2	8.3	0.0
107.5°	513.2	394.3	335.9	276.4	161.7	65.7	5.2	0.0
110°	484.0	369.2	311.9	254.5	145.0	54.2	4.2	0.0



TEST NUMBER: P201302

CATALOG NUMBER: 4LBLED-LD4-11-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	454.8	343.2	287.9	231.6	128.3	43.8	3.1	1.0
115°	423.5	316.0	262.9	208.6	111.6	34.4	3.1	1.0
117.5°	392.2	287.9	238.9	186.7	96.0	26.1	2.1	1.0
120°	359.9	262.9	212.8	165.8	81.4	18.8	2.1	1.0
122.5°	328.6	236.8	188.8	143.9	66.8	14.6	2.1	1.0
125°	296.2	206.5	164.8	124.1	53.2	11.5	2.1	1.0
127.5°	261.8	178.4	139.8	102.2	40.7	8.3	2.1	1.0
130°	226.3	150.2	115.8	83.4	29.2	6.3	2.1	1.0
132.5°	193.0	126.2	93.9	65.7	20.9	5.2	2.1	1.0
135°	162.7	102.2	74.1	49.0	14.6	4.2	1.0	1.0
137.5°	133.5	81.4	56.3	35.5	10.4	3.1	2.1	1.0
140°	107.4	61.5	40.7	25.0	7.3	2.1	2.1	1.0
142.5°	83.4	43.8	28.2	16.7	5.2	2.1	1.0	1.0
145°	61.5	29.2	18.8	10.4	4.2	2.1	2.1	2.1
147.5°	41.7	19.8	11.5	7.3	3.1	2.1	2.1	1.0
150°	27.1	12.5	7.3	5.2	2.1	2.1	2.1	1.0
152.5°	16.7	7.3	4.2	3.1	2.1	2.1	2.1	1.0
155°	8.3	4.2	3.1	2.1	2.1	2.1	2.1	2.1
157.5°	4.2	3.1	2.1	2.1	2.1	2.1	2.1	2.1
160°	2.1	2.1	1.0	1.0	2.1	2.1	2.1	2.1
162.5°	1.0	1.0	1.0	1.0	2.1	2.1	2.1	2.1
165°	0.0	1.0	1.0	1.0	2.1	2.1	2.1	2.1
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)