

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: P201251

Luminaire Tested: **4LBLED-LD4-10-SYMF-UNV-L840-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201251
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: 4LBLED-LD4-10-SYMF-UNV-L840-CD1-U
Description: 4 ft. Low Bay Linear, 10000 lm, Frst Sym lens, 4K
Light Source: (392) 4000K CCT, 80 CRI LEDS
2UT217098A8404C
Ballast/Driver: OSRAM
(OTi85W01720CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10706.7 lumens
Efficiency: N/A
Efficacy: 136.9 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.99 / 1.87
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

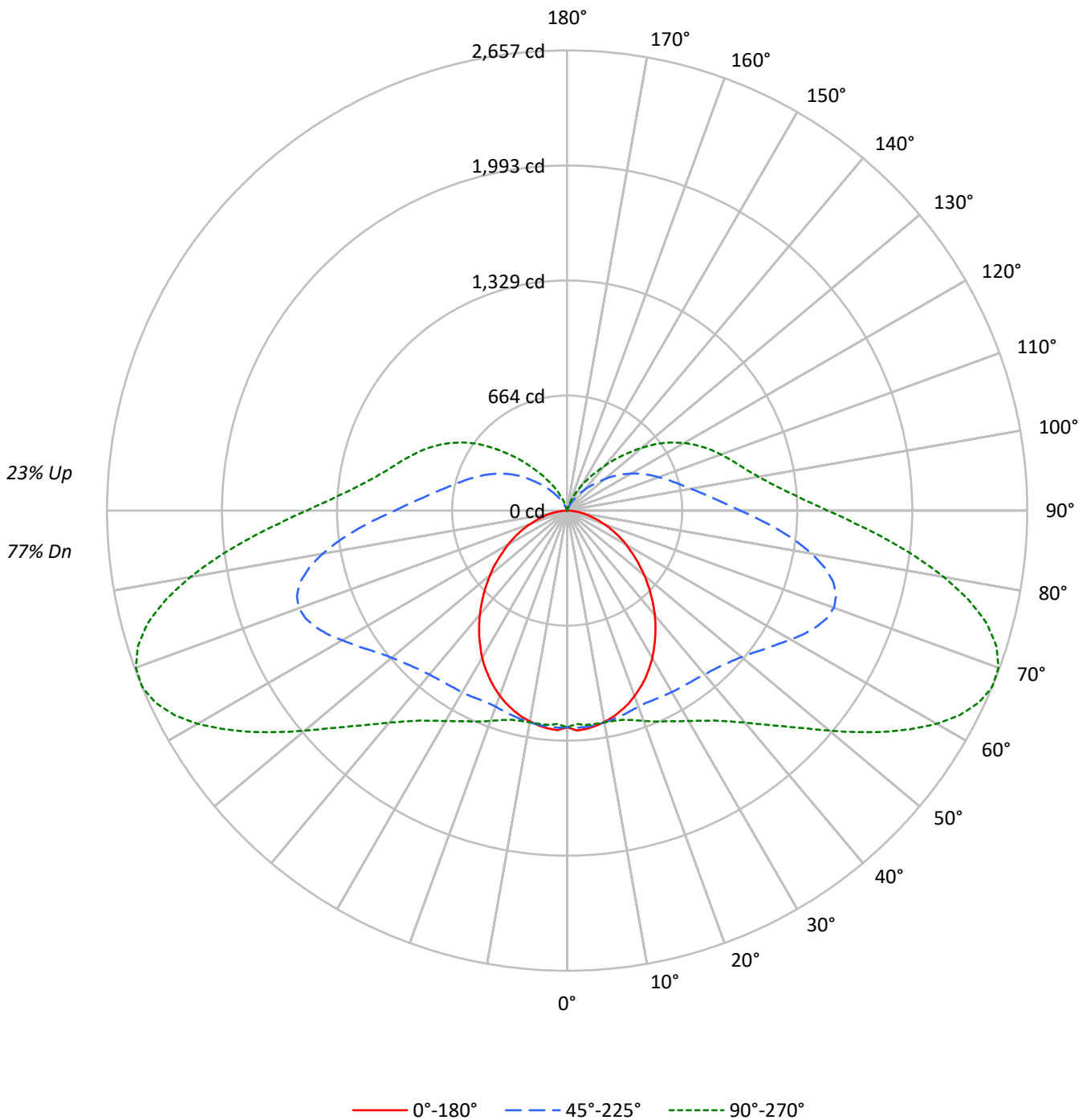
Input Watts (W): 78.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	114	114	114	114	108	108	108	108	98	98	98	89	89	89	81	81	81	77
1	98	91	84	78	92	86	80	75	77	73	68	69	65	62	62	59	56	52
2	86	75	66	59	81	71	63	56	64	57	51	57	51	47	50	46	42	38
3	77	64	54	46	72	61	51	44	54	46	40	48	42	37	43	37	33	29
4	70	55	45	37	65	52	43	36	47	39	32	42	35	30	37	31	27	23
5	63	49	38	31	59	46	37	29	41	33	27	37	30	25	32	27	22	19
6	58	43	33	26	55	41	32	25	37	29	23	33	26	21	29	23	19	16
7	54	39	29	22	50	37	28	21	33	25	20	30	23	18	26	21	16	14
8	50	35	26	19	47	33	25	19	30	22	17	27	20	16	24	18	14	12
9	46	32	23	17	44	30	22	16	27	20	15	25	18	14	22	17	13	10
10	43	29	21	15	41	28	20	15	25	18	14	23	17	12	20	15	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	20157	20157	20157
5°	20375	18113	20332
10°	20089	16660	20045
15°	19683	15646	19653
20°	19169	15253	19138
25°	18556	15102	18478
30°	17752	15182	17735
35°	16839	15550	16805
40°	15866	16437	15794
45°	14808	17860	14769
50°	13734	19942	13691
55°	12647	22517	12623
60°	11663	25136	11690
65°	10572	27248	10603
70°	9407	28233	9407
75°	8009	27626	7962
80°	6450	25421	6385
85°	4430	22326	4221



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.8	1.1
10°-20°	345.4	3.2
20°-30°	555.2	5.2
30°-40°	751.8	7.0
40°-50°	965.8	9.0
50°-60°	1242.5	11.6
60°-70°	1520.1	14.2
70°-80°	1536.8	14.4
80°-90°	1188.4	11.1
90°-100°	825.7	7.7
100°-110°	616.7	5.8
110°-120°	462.2	4.3
120°-130°	311.2	2.9
130°-140°	170.7	1.6
140°-150°	72.8	0.7
150°-160°	20.8	0.2
160°-170°	1.8	0.0
170°-180°	0.0	0.0
0°-30°	1019.4	9.5
0°-40°	1771.1	16.5
0°-60°	3979.5	37.2
0°-90°	8224.8	76.8
90°-120°	1904.6	17.8
90°-150°	2459.3	23.0
90°-180°	2482.0	23.2
0°-180°	10706.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1251	1251	1251	1251	1251	
5°	1265	1254	1242	1252	1263	120
15°	1196	1224	1251	1224	1194	337
25°	1069	1202	1343	1203	1064	491
35°	887	1218	1480	1219	885	554
45°	684	1264	1760	1270	682	527
55°	484	1394	2227	1400	483	433
65°	308	1588	2624	1598	309	306
75°	154	1591	2506	1596	153	164
85°	38	1216	1840	1213	36	42
90°	1	999	1503	994	0	2
95°	1	843	1271	839	0	1
105°	1	637	1024	637	0	1
115°	1	495	867	495	0	1
125°	1	355	680	354	0	1
135°	2	214	446	212	0	1
145°	2	109	245	104	0	1
155°	2	34	102	33	0	1
165°	2	2	10	4	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9
2.5°	1270.9	1269.9	1264.5	1256.3	1252.7	1251.8	1250.9	1247.2	1246.3	1248.1	1255.4
5°	1265.4	1264.5	1259.0	1250.9	1248.1	1247.2	1246.3	1243.6	1243.6	1246.3	1253.6
7.5°	1254.5	1253.6	1248.1	1241.8	1239.0	1238.1	1238.1	1236.3	1236.3	1240.9	1249.0
10°	1239.0	1238.1	1233.6	1228.1	1226.3	1226.3	1226.3	1225.4	1227.2	1232.7	1241.8
12.5°	1220.9	1219.0	1215.4	1210.9	1210.9	1210.9	1211.8	1211.8	1214.5	1223.6	1234.5
15°	1196.3	1197.2	1193.6	1189.9	1191.8	1192.7	1194.5	1196.3	1200.9	1211.8	1224.5
17.5°	1170.9	1170.9	1168.1	1166.3	1169.9	1171.8	1174.5	1177.2	1185.4	1199.0	1213.6
20°	1139.0	1140.0	1139.0	1140.0	1144.5	1147.2	1150.9	1157.2	1168.1	1187.2	1204.5
22.5°	1104.5	1106.3	1106.3	1110.0	1117.2	1121.8	1126.3	1135.4	1150.9	1175.4	1199.9
25°	1069.0	1068.1	1072.7	1079.0	1086.3	1092.7	1098.1	1111.8	1134.5	1167.2	1201.8
27.5°	1026.3	1028.1	1034.5	1043.6	1054.5	1062.7	1070.9	1090.0	1122.7	1166.3	1206.3
30°	982.7	985.4	993.6	1006.3	1021.8	1032.7	1041.8	1071.8	1116.3	1166.3	1209.9
32.5°	935.4	940.0	950.9	967.2	989.0	1001.8	1016.3	1056.3	1110.9	1164.5	1213.6
35°	887.2	892.7	907.2	927.2	952.7	968.1	990.9	1044.5	1103.6	1162.7	1218.1
37.5°	838.1	844.5	860.9	886.3	919.1	942.7	970.0	1031.8	1098.1	1162.7	1224.5
40°	787.2	794.5	815.4	844.5	886.3	917.2	950.0	1019.0	1092.7	1163.6	1234.5
42.5°	735.4	743.6	769.1	803.6	858.1	894.5	930.9	1008.1	1089.0	1168.1	1247.2
45°	683.6	694.5	722.7	764.5	832.7	870.9	912.7	998.1	1087.2	1176.3	1264.5
47.5°	631.8	644.5	677.2	727.2	806.3	851.8	895.4	990.0	1089.0	1187.2	1287.2
50°	581.8	596.3	632.7	693.6	781.8	830.9	879.1	984.5	1092.7	1203.6	1314.5
52.5°	530.9	550.0	590.0	663.6	760.0	811.8	865.4	980.9	1100.0	1225.4	1349.9
55°	483.6	503.6	550.0	634.5	739.1	795.4	852.7	980.0	1112.7	1251.8	1393.6
57.5°	435.4	460.0	510.9	606.3	717.2	779.1	842.7	981.8	1128.1	1279.9	1438.1
60°	394.5	416.3	475.4	579.1	698.2	763.6	833.6	983.6	1144.5	1312.7	1489.9
62.5°	350.9	374.5	444.5	552.7	679.1	750.0	824.5	986.3	1161.8	1346.3	1542.7
65°	308.2	332.7	413.6	527.3	660.0	735.4	813.6	986.3	1175.4	1377.2	1588.1
67.5°	267.3	293.6	382.7	500.0	638.2	717.2	800.0	981.8	1183.6	1399.0	1623.6
70°	228.2	257.3	352.7	470.9	614.5	695.4	780.9	971.8	1182.7	1407.2	1639.0
72.5°	189.1	222.7	320.0	441.8	589.1	670.9	758.1	952.7	1169.9	1397.2	1629.0
75°	153.6	190.0	290.9	412.7	560.0	641.8	730.0	923.6	1141.8	1366.3	1590.8
77.5°	120.9	160.9	260.0	380.9	527.3	608.2	694.5	886.3	1097.2	1311.8	1523.6
80°	90.0	134.5	230.9	349.1	491.8	570.9	654.5	839.1	1039.0	1238.1	1433.6
82.5°	62.7	110.0	202.7	317.3	455.4	530.9	610.9	782.7	971.8	1152.7	1329.9
85°	38.2	88.2	174.5	286.4	418.2	489.1	564.5	723.6	898.1	1060.0	1216.3
87.5°	16.4	68.2	150.0	256.4	380.9	448.2	517.3	667.2	820.0	963.6	1102.7
90°	0.9	50.9	128.2	228.2	345.4	408.2	472.7	607.2	748.1	875.4	999.0
92.5°	0.0	43.6	115.4	210.9	320.9	379.1	439.1	562.7	690.0	803.6	913.6
95°	0.9	36.4	104.5	191.8	296.4	351.8	407.3	522.7	637.2	741.8	842.7
97.5°	0.9	30.0	92.7	174.5	273.6	324.5	376.3	483.6	587.2	686.3	780.0
100°	0.9	23.6	81.8	158.2	250.0	297.3	346.3	447.3	544.5	637.2	725.4
102.5°	0.9	17.3	72.7	142.7	228.2	272.7	318.2	413.6	505.4	594.5	678.2
105°	0.9	11.8	63.6	128.2	208.2	250.0	292.7	382.7	470.0	555.4	637.2
107.5°	0.9	8.2	55.5	114.5	186.4	228.2	268.2	353.6	437.3	520.0	600.0
110°	0.9	7.3	48.2	102.7	169.1	207.3	245.4	326.3	406.3	485.4	563.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.9	6.4	40.9	91.8	151.8	186.4	223.6	300.0	378.2	454.5	529.1
115°	0.9	6.4	33.6	81.8	137.3	168.2	202.7	274.5	349.1	422.7	495.4
117.5°	0.9	6.4	27.3	72.7	123.6	151.8	181.8	250.9	320.0	391.8	462.7
120°	0.9	5.5	21.8	63.6	111.8	137.3	165.4	228.2	291.8	359.1	427.3
122.5°	0.9	5.5	18.2	55.5	100.0	123.6	149.1	204.5	265.4	327.3	390.9
125°	0.9	4.5	15.5	46.4	88.2	110.9	133.6	183.6	240.0	297.3	355.4
127.5°	1.8	4.5	12.7	38.2	76.4	96.4	118.2	163.6	212.7	264.5	320.0
130°	1.8	4.5	10.9	29.1	64.5	82.7	101.8	143.6	189.1	233.6	281.8
132.5°	1.8	3.6	10.0	22.7	53.6	70.0	87.3	124.5	164.5	204.5	246.4
135°	1.8	3.6	8.2	18.2	42.7	57.3	73.6	106.4	141.8	179.1	214.5
137.5°	1.8	2.7	7.3	14.5	32.7	46.4	60.9	90.0	120.9	152.7	185.4
140°	1.8	2.7	6.4	11.8	24.5	34.5	48.2	73.6	100.9	129.1	157.3
142.5°	1.8	2.7	5.5	10.0	19.1	26.4	36.4	60.0	83.6	107.3	131.8
145°	1.8	2.7	4.5	8.2	14.5	20.0	26.4	46.4	67.3	88.2	109.1
147.5°	1.8	2.7	4.5	7.3	11.8	15.5	20.0	33.6	52.7	70.0	88.2
150°	1.8	2.7	3.6	6.4	10.0	11.8	14.5	23.6	38.2	53.6	69.1
152.5°	1.8	1.8	3.6	5.5	7.3	9.1	10.9	17.3	26.4	38.2	51.8
155°	1.8	1.8	2.7	4.5	6.4	7.3	8.2	11.8	17.3	24.5	34.5
157.5°	1.8	1.8	2.7	3.6	4.5	5.5	6.4	8.2	11.8	15.5	20.9
160°	1.8	1.8	2.7	3.6	3.6	4.5	4.5	5.5	7.3	9.1	11.8
162.5°	1.8	1.8	2.7	2.7	2.7	3.6	3.6	3.6	4.5	4.5	5.5
165°	1.8	1.8	1.8	2.7	1.8	2.7	1.8	2.7	2.7	1.8	1.8
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9
2.5°	1258.1	1251.8	1249.0	1245.4	1242.7	1240.9	1238.1	1236.3	1233.6	1233.6	1234.5
5°	1256.3	1249.9	1248.1	1244.5	1242.7	1241.8	1239.9	1240.9	1240.9	1241.8	1240.9
7.5°	1252.7	1247.2	1245.4	1243.6	1241.8	1240.9	1239.9	1241.8	1241.8	1242.7	1242.7
10°	1246.3	1242.7	1242.7	1240.9	1239.9	1239.0	1237.2	1239.9	1239.9	1241.8	1240.9
12.5°	1239.0	1238.1	1239.0	1239.9	1239.9	1239.0	1238.1	1241.8	1243.6	1243.6	1244.5
15°	1230.9	1232.7	1237.2	1239.9	1241.8	1241.8	1243.6	1247.2	1249.9	1250.9	1250.9
17.5°	1224.5	1229.0	1237.2	1244.5	1248.1	1249.9	1254.5	1261.8	1266.3	1267.2	1267.2
20°	1219.9	1230.9	1245.4	1259.0	1263.6	1267.2	1276.3	1285.4	1291.8	1292.7	1292.7
22.5°	1223.6	1241.8	1261.8	1277.2	1283.6	1288.1	1298.1	1309.9	1317.2	1318.1	1318.1
25°	1232.7	1254.5	1277.2	1296.3	1303.6	1309.0	1319.9	1332.7	1339.9	1342.7	1341.8
27.5°	1240.9	1267.2	1293.6	1315.4	1323.6	1330.9	1344.5	1359.0	1368.1	1370.9	1369.0
30°	1248.1	1279.0	1309.0	1335.4	1346.3	1354.5	1370.9	1388.1	1399.9	1402.7	1399.9
32.5°	1255.4	1292.7	1328.1	1359.0	1369.9	1381.8	1402.7	1422.7	1434.5	1438.1	1436.3
35°	1265.4	1309.0	1350.9	1386.3	1400.8	1414.5	1439.0	1462.7	1477.2	1479.9	1477.2
37.5°	1279.0	1329.9	1376.3	1420.8	1436.3	1455.4	1484.5	1512.7	1529.9	1533.6	1529.9
40°	1296.3	1356.3	1410.8	1462.7	1483.6	1503.6	1539.0	1572.7	1591.8	1598.1	1595.4
42.5°	1319.0	1389.0	1452.7	1514.5	1538.1	1563.6	1605.4	1644.5	1666.3	1673.6	1666.3
45°	1347.2	1429.9	1503.6	1575.4	1602.7	1633.6	1683.6	1728.1	1753.6	1759.9	1753.6
47.5°	1384.5	1478.1	1563.6	1646.3	1679.0	1715.4	1774.5	1825.4	1852.6	1859.9	1853.6
50°	1424.5	1536.3	1634.5	1729.0	1769.9	1808.1	1877.2	1933.6	1962.6	1976.3	1964.5
52.5°	1474.5	1599.9	1715.4	1820.8	1869.9	1915.4	1991.7	2053.5	2089.0	2100.8	2084.5
55°	1534.5	1676.3	1805.4	1927.2	1976.3	2027.2	2111.7	2177.2	2214.5	2227.2	2215.4
57.5°	1600.8	1757.2	1899.9	2028.1	2085.4	2137.2	2231.7	2299.9	2332.6	2349.0	2334.4
60°	1669.9	1840.8	1995.4	2131.7	2194.5	2248.1	2344.4	2411.7	2446.3	2462.6	2449.0
62.5°	1737.2	1921.7	2084.5	2226.3	2286.3	2345.4	2441.7	2506.3	2541.7	2556.3	2543.5
65°	1795.4	1989.9	2157.2	2303.5	2365.4	2423.5	2514.4	2576.3	2613.5	2623.5	2614.4
67.5°	1839.0	2036.3	2205.4	2349.9	2409.9	2468.1	2554.4	2611.7	2648.1	2657.2	2649.0
70°	1859.0	2054.5	2221.7	2362.6	2421.7	2473.5	2555.3	2609.9	2644.4	2649.9	2643.5
72.5°	1846.3	2036.3	2198.1	2332.6	2389.0	2434.4	2509.9	2561.7	2594.4	2599.0	2594.4
75°	1799.0	1980.8	2133.5	2259.0	2311.7	2349.9	2421.7	2469.9	2502.6	2506.3	2500.8
77.5°	1719.0	1888.1	2028.1	2149.0	2192.6	2229.9	2298.1	2340.8	2367.2	2372.6	2366.3
80°	1611.7	1767.2	1892.6	2000.8	2042.6	2074.5	2140.8	2187.2	2201.7	2209.0	2199.9
82.5°	1489.0	1628.1	1739.9	1838.1	1875.4	1914.5	1957.2	1999.9	2020.8	2027.2	2019.9
85°	1357.2	1480.8	1579.9	1668.1	1700.8	1736.3	1773.6	1815.4	1833.6	1839.9	1832.6
87.5°	1225.4	1334.5	1421.8	1499.9	1529.9	1561.8	1606.3	1628.1	1652.7	1659.9	1651.7
90°	1107.2	1205.4	1283.6	1354.5	1382.7	1411.8	1446.3	1473.6	1496.3	1502.7	1495.4
92.5°	1011.8	1100.0	1171.8	1235.4	1259.9	1287.2	1320.9	1347.2	1367.2	1373.6	1366.3
95°	932.7	1013.6	1080.9	1140.0	1163.6	1189.0	1226.3	1247.2	1265.4	1270.9	1265.4
97.5°	865.4	941.8	1005.4	1062.7	1085.4	1109.0	1145.4	1166.3	1183.6	1188.1	1183.6
100°	806.3	880.9	943.6	998.1	1020.9	1043.6	1079.0	1100.0	1116.3	1121.8	1116.3
102.5°	757.2	829.1	890.9	946.3	968.1	990.9	1024.5	1049.0	1061.8	1068.1	1062.7
105°	714.5	784.5	846.3	900.9	923.6	945.4	980.0	1002.7	1017.2	1024.5	1018.1
107.5°	675.4	744.5	807.2	860.0	882.7	904.5	940.0	962.7	976.3	984.5	977.2
110°	638.2	706.3	766.3	820.9	843.6	866.3	901.8	924.5	938.1	945.4	939.1



TEST NUMBER: P201251

CATALOG NUMBER: 4LBLED-LD4-10-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	601.8	668.2	730.0	782.7	804.5	827.2	863.6	887.2	900.0	908.1	900.9
115°	565.4	630.9	690.9	741.8	763.6	787.2	822.7	847.2	860.9	867.2	860.0
117.5°	530.0	592.7	650.0	700.0	721.8	744.5	779.1	803.6	818.1	824.5	817.2
120°	493.6	553.6	610.0	655.4	678.2	699.1	734.5	758.1	772.7	779.1	771.8
122.5°	454.5	513.6	567.2	611.8	633.6	653.6	688.2	711.8	725.4	731.8	725.4
125°	414.5	470.0	521.8	566.3	584.5	603.6	637.2	660.0	674.5	680.0	674.5
127.5°	374.5	425.4	473.6	512.7	532.7	550.9	582.7	604.5	617.2	623.6	619.1
130°	334.5	382.7	426.3	461.8	479.1	496.3	525.4	545.4	558.2	563.6	559.1
132.5°	291.8	338.2	380.9	411.8	428.2	442.7	469.1	486.3	497.3	503.6	498.2
135°	253.6	291.8	331.8	363.6	380.0	392.7	416.3	430.9	440.9	446.3	440.9
137.5°	219.1	251.8	284.5	312.7	328.2	341.8	364.5	378.2	387.3	392.7	387.3
140°	187.3	215.4	244.5	267.3	280.9	291.8	312.7	324.5	332.7	337.3	331.8
142.5°	156.4	181.8	206.4	227.3	239.1	248.2	268.2	277.3	283.6	286.4	283.6
145°	130.0	150.9	171.8	190.9	200.0	207.3	227.3	237.3	242.7	245.4	242.7
147.5°	105.5	122.7	140.0	155.4	163.6	172.7	186.4	198.2	202.7	204.5	202.7
150°	82.7	98.2	111.8	124.5	130.9	137.3	149.1	160.9	165.4	168.2	165.4
152.5°	62.7	75.5	86.4	96.4	101.8	107.3	117.3	128.2	132.7	134.5	132.7
155°	45.5	54.5	64.5	71.8	76.4	80.0	87.3	94.5	101.8	101.8	101.8
157.5°	28.2	35.5	43.6	50.0	52.7	56.4	61.8	68.2	73.6	76.4	76.4
160°	14.5	19.1	24.5	29.1	31.8	34.5	38.2	43.6	47.3	50.0	48.2
162.5°	6.4	8.2	10.9	12.7	14.5	15.5	18.2	20.9	22.7	27.3	23.6
165°	1.8	1.8	2.7	3.6	3.6	3.6	4.5	5.5	6.4	10.0	7.3
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: P201251

CATALOG NUMBER: 4LBLEDD4-10-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9
2.5°	1236.3	1239.0	1242.7	1244.5	1247.2	1249.0	1253.6	1259.0	1254.5	1248.1	1249.0
5°	1240.9	1239.9	1242.7	1244.5	1246.3	1247.2	1251.8	1257.2	1251.8	1245.4	1245.4
7.5°	1242.7	1241.8	1242.7	1243.6	1244.5	1244.5	1249.0	1253.6	1248.1	1239.9	1238.1
10°	1239.9	1239.0	1239.9	1241.8	1241.8	1241.8	1244.5	1248.1	1241.8	1231.8	1228.1
12.5°	1241.8	1239.0	1239.0	1239.9	1239.9	1238.1	1239.0	1241.8	1233.6	1222.7	1217.2
15°	1248.1	1243.6	1241.8	1241.8	1239.9	1235.4	1233.6	1233.6	1224.5	1209.9	1202.7
17.5°	1263.6	1256.3	1250.9	1248.1	1244.5	1236.3	1229.9	1226.3	1214.5	1198.1	1186.3
20°	1287.2	1277.2	1269.0	1263.6	1259.0	1244.5	1231.8	1221.8	1205.4	1185.4	1169.9
22.5°	1310.9	1299.9	1288.1	1282.7	1276.3	1259.9	1242.7	1225.4	1200.9	1173.6	1152.7
25°	1333.6	1322.7	1309.0	1303.6	1295.4	1276.3	1254.5	1234.5	1202.7	1165.4	1135.4
27.5°	1359.9	1346.3	1331.8	1323.6	1314.5	1292.7	1268.1	1243.6	1208.1	1165.4	1123.6
30°	1389.9	1373.6	1354.5	1345.4	1334.5	1309.0	1279.0	1249.9	1211.8	1165.4	1117.2
32.5°	1424.5	1405.4	1382.7	1369.9	1357.2	1327.2	1291.8	1258.1	1214.5	1164.5	1111.8
35°	1464.5	1442.7	1415.4	1400.8	1385.4	1349.9	1308.1	1267.2	1219.0	1163.6	1104.5
37.5°	1514.5	1489.0	1456.3	1438.1	1419.9	1378.1	1329.9	1280.9	1226.3	1164.5	1099.0
40°	1574.5	1544.5	1506.3	1483.6	1461.8	1413.6	1356.3	1298.1	1236.3	1166.3	1093.6
42.5°	1645.4	1609.0	1566.3	1539.9	1514.5	1454.5	1389.0	1319.9	1249.9	1169.9	1090.9
45°	1729.9	1691.7	1637.2	1604.5	1576.3	1506.3	1430.8	1349.0	1269.9	1179.0	1090.0
47.5°	1827.2	1779.0	1719.9	1681.7	1648.1	1567.2	1479.9	1385.4	1292.7	1190.9	1091.8
50°	1936.3	1881.7	1813.6	1773.6	1731.7	1639.0	1538.1	1428.1	1321.8	1208.1	1096.3
52.5°	2056.3	1996.3	1922.6	1875.4	1829.0	1721.7	1603.6	1482.7	1355.4	1229.9	1104.5
55°	2180.8	2116.3	2034.5	1982.6	1930.8	1812.6	1680.8	1541.8	1399.9	1257.2	1118.1
57.5°	2301.7	2235.4	2145.4	2092.6	2034.5	1909.0	1763.6	1606.3	1448.1	1289.0	1133.6
60°	2413.5	2347.2	2256.3	2202.6	2139.0	2004.5	1848.1	1677.2	1498.1	1322.7	1151.8
62.5°	2508.1	2444.4	2353.5	2299.0	2233.5	2094.5	1929.0	1746.3	1552.7	1358.1	1169.0
65°	2578.1	2518.1	2429.9	2373.5	2310.8	2166.3	1997.2	1807.2	1598.1	1389.0	1184.5
67.5°	2613.5	2557.2	2471.7	2418.1	2356.3	2212.6	2043.5	1848.1	1632.7	1410.8	1194.5
70°	2609.9	2556.3	2476.3	2423.5	2364.4	2226.3	2059.9	1864.5	1648.1	1419.0	1192.7
72.5°	2562.6	2509.0	2437.2	2386.3	2329.9	2200.8	2037.2	1849.9	1636.3	1406.3	1178.1
75°	2469.0	2419.9	2347.2	2305.4	2254.4	2134.5	1978.1	1796.3	1596.3	1372.7	1148.1
77.5°	2334.4	2297.2	2226.3	2187.2	2137.2	2026.3	1879.0	1715.4	1526.3	1316.3	1101.8
80°	2169.9	2139.0	2069.9	2035.4	1986.3	1889.9	1762.7	1604.5	1433.6	1239.9	1041.8
82.5°	1989.9	1954.5	1899.9	1868.1	1821.7	1735.4	1614.5	1485.4	1326.3	1152.7	971.8
85°	1803.6	1770.8	1720.8	1693.6	1652.7	1575.4	1467.2	1353.6	1212.7	1056.3	896.3
87.5°	1626.3	1594.5	1547.2	1522.7	1485.4	1416.3	1321.8	1221.8	1097.2	963.6	816.3
90°	1472.7	1442.7	1398.1	1375.4	1341.8	1279.0	1193.6	1103.6	993.6	870.9	744.5
92.5°	1346.3	1319.0	1277.2	1255.4	1225.4	1168.1	1090.9	1009.0	910.0	803.6	686.3
95°	1246.3	1219.9	1182.7	1161.8	1133.6	1074.5	1006.3	930.0	839.1	741.8	633.6
97.5°	1165.4	1143.6	1102.7	1082.7	1060.0	1000.0	938.1	862.7	778.1	687.2	586.3
100°	1100.0	1075.4	1038.1	1019.0	995.4	939.1	876.3	805.4	723.6	637.2	543.6
102.5°	1049.0	1023.6	989.0	967.2	944.5	887.2	825.4	756.3	678.2	594.5	504.5
105°	1003.6	979.0	944.5	922.7	900.0	843.6	784.5	714.5	637.2	556.3	469.1
107.5°	960.9	939.1	904.5	882.7	860.0	803.6	744.5	675.4	600.0	520.9	436.3
110°	924.5	900.9	864.5	843.6	819.1	765.4	706.3	639.1	563.6	486.3	405.4



TEST NUMBER: P201251

CATALOG NUMBER: 4LBLED-LD4-10-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	888.1	862.7	826.3	805.4	780.9	727.2	669.1	602.7	529.1	454.5	376.3
115°	848.1	823.6	785.4	764.5	740.0	687.2	630.9	566.3	495.4	422.7	347.3
117.5°	805.4	780.9	742.7	722.7	699.1	647.2	593.6	530.9	461.8	391.8	318.2
120°	759.1	735.4	699.1	679.1	656.3	606.3	554.5	491.8	426.3	359.1	290.9
122.5°	711.8	689.1	653.6	633.6	611.8	564.5	513.6	452.7	390.0	327.3	264.5
125°	660.9	638.2	604.5	585.4	563.6	518.2	469.1	411.8	353.6	297.3	237.3
127.5°	601.8	583.6	550.9	531.8	511.8	471.8	424.5	372.7	319.1	264.5	210.9
130°	545.4	526.3	495.4	478.2	460.9	424.5	382.7	332.7	280.0	232.7	184.5
132.5°	486.3	469.1	442.7	428.2	412.7	380.0	337.3	288.2	243.6	202.7	160.0
135°	430.9	416.3	392.7	380.0	364.5	330.0	290.0	249.1	211.8	175.4	137.3
137.5°	379.1	364.5	342.7	329.1	312.7	281.8	249.1	215.4	180.9	150.0	116.4
140°	324.5	312.7	292.7	280.9	266.4	240.0	212.7	180.9	153.6	125.4	96.4
142.5°	278.2	268.2	248.2	237.3	224.5	202.7	177.3	152.7	128.2	103.6	79.1
145°	238.2	228.2	206.4	198.2	186.4	167.3	146.4	124.5	104.5	83.6	63.6
147.5°	199.1	187.3	168.2	160.9	151.8	135.4	119.1	101.8	84.5	66.4	49.1
150°	162.7	149.1	133.6	129.1	120.0	107.3	93.6	79.1	65.5	50.9	35.5
152.5°	128.2	116.4	103.6	99.1	91.8	83.6	71.8	60.0	49.1	35.5	24.5
155°	95.5	86.4	76.4	73.6	68.2	61.8	51.8	42.7	32.7	23.6	17.3
157.5°	67.3	60.0	52.7	50.9	47.3	41.8	33.6	26.4	20.9	15.5	11.8
160°	41.8	37.3	31.8	30.0	27.3	23.6	18.2	15.5	12.7	10.0	7.3
162.5°	20.0	17.3	15.5	14.5	12.7	10.9	10.0	8.2	7.3	6.4	5.5
165°	7.3	7.3	7.3	6.4	6.4	6.4	6.4	5.5	4.5	4.5	3.6
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: P201251

CATALOG NUMBER: 4LBLED-LD4-10-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9	1250.9
2.5°	1249.9	1251.8	1251.8	1252.7	1255.4	1260.9	1268.1	1269.0
5°	1246.3	1247.2	1247.2	1247.2	1249.9	1254.5	1261.8	1262.7
7.5°	1238.1	1238.1	1238.1	1238.1	1240.9	1244.5	1250.9	1251.8
10°	1227.2	1226.3	1226.3	1225.4	1227.2	1229.9	1237.2	1236.3
12.5°	1213.6	1211.8	1210.9	1210.9	1209.9	1212.7	1217.2	1218.1
15°	1198.1	1194.5	1192.7	1190.9	1189.9	1189.9	1195.4	1194.5
17.5°	1179.9	1174.5	1171.8	1169.0	1165.4	1165.4	1169.0	1168.1
20°	1159.0	1151.8	1147.2	1143.6	1138.1	1136.3	1138.1	1137.2
22.5°	1138.1	1126.3	1121.8	1116.3	1108.1	1104.5	1103.6	1102.7
25°	1113.6	1099.0	1092.7	1087.2	1075.4	1070.9	1066.3	1064.5
27.5°	1091.8	1070.9	1062.7	1053.6	1040.0	1033.6	1026.3	1024.5
30°	1072.7	1041.8	1029.0	1020.0	1002.7	992.7	983.6	981.8
32.5°	1058.1	1015.4	998.1	987.2	963.6	950.0	938.1	932.7
35°	1045.4	990.9	968.1	950.9	922.7	906.3	890.0	885.4
37.5°	1033.6	970.0	940.0	916.3	884.5	860.9	842.7	835.4
40°	1021.8	950.9	914.5	884.5	842.7	815.4	792.7	783.6
42.5°	1010.9	931.8	892.7	856.3	801.8	769.1	744.5	731.8
45°	1000.9	914.5	871.8	831.8	761.8	723.6	693.6	681.8
47.5°	993.6	898.1	850.9	807.2	724.5	677.2	646.3	630.9
50°	988.1	882.7	830.9	782.7	691.8	632.7	598.2	580.0
52.5°	985.4	869.1	812.7	760.9	661.8	590.0	549.1	535.4
55°	986.3	858.1	797.2	740.9	633.6	549.1	503.6	482.7
57.5°	988.1	848.1	781.8	720.9	605.4	509.1	458.2	436.3
60°	991.8	840.0	768.1	701.8	579.1	474.5	416.3	395.4
62.5°	995.4	832.7	754.5	683.6	553.6	442.7	374.5	350.9
65°	996.3	821.8	740.0	665.4	528.2	410.9	331.8	309.1
67.5°	992.7	808.1	721.8	644.5	501.8	380.0	291.8	268.2
70°	981.8	790.0	700.9	620.9	472.7	350.0	253.6	228.2
72.5°	961.8	766.3	676.3	594.5	444.5	318.2	219.1	188.2
75°	933.6	737.2	647.2	564.5	414.5	288.2	187.3	152.7
77.5°	895.4	700.0	612.7	530.9	381.8	257.3	160.0	120.0
80°	846.3	660.9	574.5	494.5	350.0	229.1	133.6	89.1
82.5°	788.1	616.3	533.6	457.3	320.0	200.0	109.1	61.8
85°	728.2	568.2	490.9	418.2	288.2	172.7	88.2	36.4
87.5°	669.1	520.0	450.0	382.7	255.4	148.2	68.2	14.5
90°	610.9	473.6	407.3	344.5	227.3	125.4	50.9	0.0
92.5°	562.7	439.1	379.1	319.1	209.1	113.6	43.6	0.0
95°	520.0	406.3	349.1	293.6	190.0	102.7	36.4	0.0
97.5°	480.9	375.4	322.7	270.0	172.7	90.9	30.0	0.0
100°	443.6	344.5	295.4	248.2	156.4	80.9	22.7	0.0
102.5°	410.9	317.3	270.9	224.5	140.0	70.9	16.4	0.0
105°	379.1	290.9	248.2	203.6	125.4	61.8	10.0	0.0
107.5°	350.9	266.4	225.4	184.5	111.8	53.6	6.4	0.0
110°	323.6	243.6	203.6	166.4	100.0	46.4	5.5	0.0



TEST NUMBER: P201251

CATALOG NUMBER: 4LBLED-LD4-10-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	298.2	221.8	184.5	149.1	90.0	39.1	5.5	0.0
115°	271.8	200.9	166.4	134.5	80.0	31.8	4.5	0.0
117.5°	249.1	180.9	150.0	122.7	70.0	25.5	4.5	0.0
120°	226.4	163.6	136.4	110.0	60.9	19.1	4.5	0.0
122.5°	203.6	148.2	121.8	98.2	52.7	15.5	3.6	0.0
125°	182.7	131.8	108.2	85.5	43.6	13.6	3.6	0.0
127.5°	161.8	115.4	93.6	73.6	34.5	11.8	2.7	0.0
130°	140.9	99.1	80.0	61.8	26.4	10.0	2.7	0.0
132.5°	121.8	83.6	67.3	50.9	20.9	8.2	1.8	0.0
135°	102.7	70.0	55.5	40.0	16.4	7.3	1.8	0.0
137.5°	86.4	57.3	43.6	30.0	13.6	5.5	1.8	0.0
140°	70.9	45.5	32.7	22.7	10.9	4.5	0.9	0.0
142.5°	56.4	33.6	24.5	17.3	9.1	3.6	0.9	0.0
145°	43.6	24.5	18.2	13.6	8.2	2.7	0.9	0.0
147.5°	31.8	19.1	14.5	11.8	6.4	2.7	0.9	0.0
150°	22.7	14.5	11.8	9.1	4.5	1.8	0.9	0.0
152.5°	17.3	10.9	9.1	7.3	3.6	1.8	0.9	0.0
155°	12.7	8.2	7.3	5.5	2.7	1.8	0.9	0.0
157.5°	9.1	6.4	5.5	3.6	2.7	1.8	0.9	0.0
160°	5.5	4.5	3.6	2.7	1.8	0.9	0.9	0.0
162.5°	4.5	2.7	2.7	2.7	1.8	0.9	0.9	0.0
165°	2.7	1.8	1.8	1.8	0.9	0.9	0.9	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)