

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: P201294

Luminaire Tested: **4LBLED-LD4-7-SYMW-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201294
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-LD4-7-SYMW-UNV-L850-CD1-U
Description: 4 ft. Low Bay Linear, 7000 lm, Wht Sym lens, 5K
Light Source: (392) 5000K CCT, 80 CRI LEDS
2UT217098A8504C
Ballast/Driver: OSRAM
(OTI50W01120CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7340.1 lumens
Efficiency: N/A
Efficacy: 147.4 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

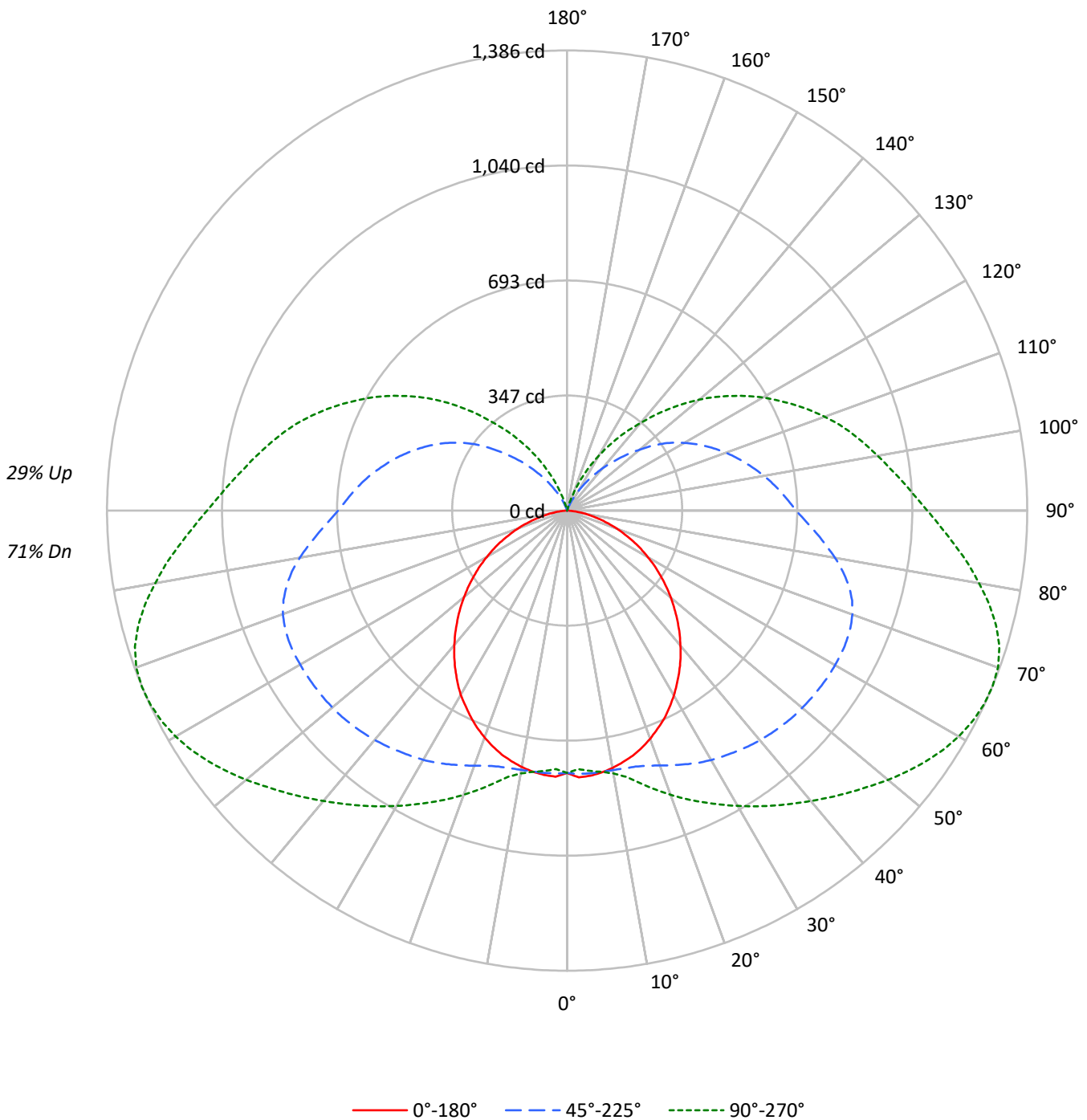
Input Watts (W): 49.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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°	12736	12736	12736
5°	12907	11480	12865
10°	12762	10781	12720
15°	12572	10629	12517
20°	12304	10750	12237
25°	12003	10900	11913
30°	11612	11117	11575
35°	11187	11395	11136
40°	10696	11744	10656
45°	10181	12189	10125
50°	9617	12732	9570
55°	8999	13323	8946
60°	8322	13895	8263
65°	7529	14379	7464
70°	6575	14715	6497
75°	5360	14744	5157
80°	3970	14498	3683
85°	2064	14207	1832



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.5	1.0
10°-20°	227.4	3.1
20°-30°	384.9	5.2
30°-40°	538.2	7.3
40°-50°	678.1	9.2
50°-60°	796.2	10.8
60°-70°	870.6	11.9
70°-80°	860.1	11.7
80°-90°	755.6	10.3
90°-100°	643.2	8.8
100°-110°	536.4	7.3
110°-120°	415.5	5.7
120°-130°	289.2	3.9
130°-140°	168.8	2.3
140°-150°	77.0	1.0
150°-160°	22.0	0.3
160°-170°	1.6	0.0
170°-180°	0.0	0.0
0°-30°	687.7	9.4
0°-40°	1225.9	16.7
0°-60°	2700.1	36.8
0°-90°	5186.5	70.7
90°-120°	1595.1	21.7
90°-150°	2130.0	29.0
90°-180°	2154.0	29.3
0°-180°	7340.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	790	790	790	790	790	
5°	802	794	787	793	799	76
15°	764	798	850	798	761	215
25°	692	843	969	843	686	318
35°	589	886	1084	885	587	368
45°	470	916	1201	914	467	362
55°	344	930	1318	927	342	308
65°	220	929	1384	926	218	218
75°	103	879	1338	875	99	110
85°	18	752	1171	750	16	22
90°	0	690	1084	690	0	1
95°	0	646	1013	647	0	0
105°	1	556	891	558	0	1
115°	1	460	755	461	1	1
125°	1	351	602	351	1	1
135°	1	223	432	223	1	1
145°	2	114	268	113	1	1
155°	2	32	119	30	1	1
165°	2	3	9	0	1	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°	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4
2.5°	804.3	803.6	800.3	795.0	793.1	791.8	791.1	789.1	788.5	789.8	793.7
5°	801.6	800.3	797.7	793.1	791.1	790.4	789.8	787.8	787.1	789.1	794.4
7.5°	795.7	795.0	792.4	787.8	787.1	785.8	785.8	784.5	784.5	787.8	793.7
10°	787.1	786.5	783.8	780.5	779.9	779.9	779.9	779.9	781.2	786.5	793.7
12.5°	775.9	775.9	774.0	771.3	772.0	772.0	772.6	774.0	777.9	785.8	795.0
15°	764.1	763.4	761.4	760.8	762.7	763.4	765.4	768.7	775.3	786.5	798.3
17.5°	748.9	748.9	746.9	747.6	751.5	753.5	756.8	762.7	773.3	788.5	805.6
20°	731.1	731.8	731.1	733.1	739.7	743.6	747.6	757.5	772.6	793.7	816.8
22.5°	711.3	712.6	712.6	717.9	726.5	732.4	738.4	752.2	774.0	803.0	830.0
25°	691.5	691.5	693.5	700.8	712.6	719.9	729.1	748.9	778.6	812.8	843.2
27.5°	667.8	669.8	673.1	683.0	699.5	709.3	720.6	748.9	783.8	822.7	856.4
30°	642.8	644.7	650.0	663.9	685.0	697.5	713.3	748.9	788.5	830.6	867.6
32.5°	616.4	619.7	626.9	644.7	670.5	687.6	708.0	748.2	792.4	837.2	876.8
35°	589.4	592.7	603.9	625.0	658.6	678.4	702.1	746.3	794.4	843.2	886.0
37.5°	561.0	567.0	579.5	605.8	646.7	670.5	695.5	744.3	796.4	847.8	895.3
40°	530.7	536.6	554.4	586.1	634.9	659.9	687.6	741.7	797.7	852.4	903.2
42.5°	501.0	508.9	529.4	567.6	623.0	650.7	679.7	737.7	797.0	855.7	909.8
45°	470.0	479.3	504.3	549.8	609.8	639.5	670.5	732.4	795.7	857.7	915.7
47.5°	438.4	449.6	479.3	532.0	596.6	627.6	661.2	727.1	793.7	859.0	921.0
50°	407.4	420.6	454.2	514.2	582.1	615.1	650.0	721.2	790.4	859.7	924.3
52.5°	376.4	390.9	430.5	496.4	567.0	601.9	638.8	714.0	786.5	859.0	927.6
55°	344.1	359.9	406.8	477.3	551.1	587.4	626.3	704.7	780.5	856.4	929.5
57.5°	313.1	330.9	384.3	458.8	534.6	572.9	614.4	694.8	774.0	854.4	931.5
60°	281.5	301.9	361.3	437.7	517.5	557.1	599.9	683.6	766.0	849.8	931.5
62.5°	250.5	273.6	338.9	418.6	500.4	541.2	585.4	671.1	757.5	845.2	931.5
65°	219.5	245.9	315.8	397.5	481.2	524.1	568.9	657.9	746.9	838.6	928.9
67.5°	189.2	219.5	292.0	375.8	461.5	505.6	551.8	642.8	735.1	830.0	923.6
70°	159.5	193.2	268.3	352.7	441.0	484.5	532.7	626.3	721.2	818.8	914.4
72.5°	129.9	168.1	243.3	329.6	419.3	464.1	512.9	607.2	704.1	803.6	899.9
75°	102.8	143.1	219.5	305.9	396.9	442.4	491.1	586.1	683.6	783.8	878.8
77.5°	78.5	120.0	196.5	282.8	373.1	420.6	468.7	563.0	659.9	758.8	851.1
80°	55.4	97.6	173.4	259.1	349.4	396.2	443.7	537.9	634.9	729.1	819.4
82.5°	34.3	77.1	150.3	236.0	326.3	372.5	419.3	512.9	606.5	698.1	785.2
85°	17.8	58.0	128.6	214.3	303.9	349.4	395.5	487.2	577.5	666.5	751.5
87.5°	5.9	42.2	110.8	195.1	283.5	329.0	373.8	462.8	550.5	635.5	718.6
90°	0.0	31.6	97.6	180.0	266.3	310.5	355.3	441.0	526.7	610.5	689.6
92.5°	0.0	27.0	89.0	169.4	254.5	298.0	341.5	426.5	508.9	590.0	667.2
95°	0.0	21.8	81.7	158.9	241.9	284.8	327.6	410.7	491.8	570.9	646.1
97.5°	0.0	17.1	73.8	149.0	229.4	270.9	312.5	394.9	474.0	551.8	624.3
100°	0.7	13.2	65.3	136.5	216.2	257.1	297.3	377.7	454.9	530.0	601.9
102.5°	0.7	9.2	57.4	125.9	202.4	241.9	281.5	359.9	435.8	510.3	578.8
105°	0.7	6.6	49.4	114.7	189.2	227.4	266.3	342.8	416.6	488.5	555.7
107.5°	0.7	4.6	42.2	104.2	176.0	212.3	249.9	324.3	396.9	466.7	532.7
110°	0.7	3.3	35.6	93.0	161.5	197.8	234.0	305.9	376.4	444.3	508.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.7	2.6	29.0	82.4	147.0	182.6	217.6	287.4	356.0	421.9	484.5
115°	0.7	2.6	23.1	72.5	132.5	166.8	200.4	269.0	334.2	398.8	459.5
117.5°	0.7	2.0	17.8	62.6	119.3	151.0	183.3	248.5	313.1	375.8	434.4
120°	0.7	2.0	13.2	52.7	105.5	135.1	166.8	228.8	290.7	351.4	407.4
122.5°	1.3	2.0	9.9	44.2	93.0	120.0	150.3	209.0	267.0	325.7	381.0
125°	1.3	1.3	7.9	35.6	79.8	104.8	131.8	188.5	241.3	297.3	351.4
127.5°	1.3	1.3	5.9	27.0	66.6	89.7	114.0	166.8	218.2	268.3	319.7
130°	1.3	1.3	5.3	19.8	54.1	74.5	96.9	144.4	192.5	238.6	285.5
132.5°	1.3	1.3	4.0	14.5	42.9	61.3	81.1	123.3	167.4	212.3	254.5
135°	1.3	1.3	3.3	10.5	32.3	48.8	65.9	103.5	143.7	185.9	222.8
137.5°	1.3	1.3	3.3	7.9	23.7	36.9	52.1	86.4	122.0	159.5	193.2
140°	1.3	1.3	2.6	6.6	16.5	27.0	39.6	69.2	99.5	134.5	166.8
142.5°	1.3	1.3	2.0	5.3	11.9	19.1	28.3	53.4	80.4	110.8	139.1
145°	2.0	1.3	2.0	4.6	8.6	13.2	19.8	40.2	62.0	89.0	114.0
147.5°	1.3	1.3	1.3	3.3	6.6	9.2	13.2	27.7	46.8	69.2	90.3
150°	2.0	1.3	1.3	2.6	5.3	6.6	9.2	18.5	32.3	50.8	69.2
152.5°	2.0	1.3	1.3	2.6	4.0	5.3	6.6	11.9	21.1	34.3	49.4
155°	2.0	1.3	1.3	2.0	3.3	4.0	5.3	7.9	12.5	21.1	32.3
157.5°	2.0	2.0	2.0	2.0	2.6	3.3	4.0	5.9	7.3	11.9	18.5
160°	2.0	2.0	1.3	1.3	2.0	2.0	2.6	4.0	5.3	6.6	9.2
162.5°	2.0	2.0	2.0	1.3	1.3	1.3	2.0	2.6	3.3	4.6	5.9
165°	2.0	2.0	1.3	1.3	1.3	1.3	1.3	1.3	2.0	2.6	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4
2.5°	795.0	791.8	790.4	787.8	785.8	784.5	782.5	781.2	779.9	779.2	779.2
5°	795.7	792.4	791.1	789.1	788.5	787.1	785.8	787.1	786.5	787.1	786.5
7.5°	796.4	793.7	793.7	793.1	792.4	792.4	791.1	792.4	793.1	793.7	793.1
10°	798.3	797.7	799.0	799.7	799.7	799.7	799.7	801.0	803.6	803.6	803.0
12.5°	801.6	803.6	807.6	810.9	812.2	812.2	814.8	817.5	820.8	821.4	820.8
15°	808.2	814.2	822.7	830.0	833.3	835.3	840.5	845.2	848.4	849.8	848.4
17.5°	820.1	831.3	844.5	855.0	859.0	861.6	868.9	873.5	877.5	880.8	879.4
20°	835.9	851.1	866.9	879.4	884.7	888.0	895.9	904.5	908.4	911.1	910.4
22.5°	853.1	870.9	888.7	903.8	909.8	913.7	923.6	931.5	937.4	940.7	940.1
25°	869.5	890.0	911.7	928.2	935.5	940.1	950.6	959.9	966.5	969.1	968.4
27.5°	886.0	909.8	933.5	952.6	959.9	965.8	978.3	988.2	996.1	998.1	998.1
30°	899.2	926.9	952.6	974.4	982.3	990.2	1004.0	1017.2	1024.5	1027.1	1026.4
32.5°	911.7	942.7	971.7	996.1	1006.0	1013.9	1030.4	1044.9	1053.5	1056.1	1053.5
35°	924.3	958.5	990.8	1017.2	1027.8	1037.7	1056.1	1072.6	1081.8	1084.5	1083.1
37.5°	936.1	974.4	1009.3	1038.3	1050.8	1061.4	1080.5	1100.3	1110.2	1112.8	1110.2
40°	947.3	988.9	1027.1	1058.7	1072.6	1085.1	1107.5	1127.3	1138.5	1141.8	1140.5
42.5°	957.9	1003.4	1044.9	1079.8	1095.7	1108.9	1133.9	1155.7	1167.5	1171.5	1168.2
45°	967.1	1017.9	1062.7	1100.3	1117.4	1132.6	1160.9	1184.7	1196.5	1201.1	1197.2
47.5°	976.3	1031.1	1079.2	1120.7	1140.5	1156.3	1188.0	1213.0	1226.9	1230.8	1226.9
50°	984.9	1044.2	1097.0	1141.8	1162.9	1180.7	1215.0	1242.0	1255.9	1261.8	1256.5
52.5°	992.8	1056.8	1113.5	1161.6	1184.7	1204.4	1241.4	1270.4	1286.8	1290.8	1285.5
55°	1000.7	1068.6	1128.0	1180.0	1205.1	1226.2	1266.4	1296.7	1313.2	1317.8	1312.6
57.5°	1007.3	1079.2	1141.8	1197.8	1223.6	1248.0	1288.2	1319.8	1336.9	1342.2	1336.9
60°	1011.9	1087.8	1154.3	1212.4	1239.4	1264.4	1307.3	1338.9	1356.1	1361.3	1356.1
62.5°	1015.2	1094.3	1162.9	1223.6	1252.6	1278.3	1321.8	1352.8	1370.6	1375.8	1370.6
65°	1015.9	1097.0	1167.5	1230.8	1260.5	1286.2	1330.4	1361.3	1379.8	1384.4	1379.1
67.5°	1011.9	1094.3	1167.5	1232.1	1261.8	1288.2	1332.3	1363.3	1381.1	1386.4	1381.1
70°	1004.0	1086.4	1160.9	1226.9	1256.5	1282.9	1326.4	1358.0	1375.8	1381.1	1375.2
72.5°	988.9	1072.6	1147.1	1214.3	1242.7	1268.4	1311.2	1342.2	1359.4	1365.3	1358.7
75°	967.1	1050.8	1125.3	1189.9	1219.6	1243.3	1286.2	1316.5	1332.3	1337.6	1331.7
77.5°	938.8	1023.1	1095.0	1159.0	1188.6	1210.4	1251.9	1281.6	1297.4	1302.0	1296.1
80°	905.8	989.5	1058.7	1122.0	1149.7	1170.2	1211.7	1240.0	1255.2	1259.8	1256.5
82.5°	869.5	951.3	1018.5	1080.5	1106.9	1127.3	1168.2	1195.9	1211.0	1217.6	1212.4
85°	832.6	911.1	977.0	1037.0	1063.4	1085.1	1122.7	1150.4	1165.5	1170.8	1167.5
87.5°	795.7	871.5	935.5	993.5	1017.9	1040.3	1077.9	1105.6	1120.7	1126.0	1122.0
90°	764.7	837.2	898.6	955.9	981.0	1001.4	1037.7	1064.0	1079.2	1084.5	1081.2
92.5°	739.7	808.9	868.2	921.0	944.7	966.5	1001.4	1027.1	1042.3	1046.9	1043.6
95°	715.9	783.2	840.5	892.0	915.0	936.1	969.1	994.1	1008.6	1013.3	1010.6
97.5°	693.5	758.1	813.5	863.6	887.3	906.5	938.1	961.8	976.3	980.3	976.3
100°	668.5	733.7	787.8	837.2	857.7	876.8	908.4	932.2	944.7	950.0	946.7
102.5°	644.7	707.4	760.8	809.6	831.3	850.4	879.4	902.5	917.0	920.3	917.0
105°	620.3	681.0	733.1	781.2	803.0	821.4	850.4	872.8	886.7	890.6	887.3
107.5°	595.3	654.0	706.1	751.5	772.6	789.8	819.4	841.2	853.1	860.3	855.0
110°	568.3	626.3	676.4	720.6	741.0	757.5	786.5	808.2	819.4	826.0	821.4



TEST NUMBER: P201294

CATALOG NUMBER: 4LBLED-LD4-7-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	543.2	597.9	646.1	688.9	708.0	724.5	752.9	774.0	784.5	791.1	786.5
115°	516.8	567.6	615.1	655.9	675.1	690.2	718.6	738.4	748.9	754.8	750.9
117.5°	488.5	537.9	582.8	623.0	640.8	655.9	683.0	702.8	712.6	717.3	713.3
120°	460.8	508.9	551.1	589.4	607.2	621.7	648.0	666.5	675.7	681.0	677.0
122.5°	431.8	478.6	516.8	555.1	571.6	585.4	609.1	628.9	637.5	642.1	639.5
125°	400.8	447.0	483.9	518.8	534.6	547.8	570.9	587.4	597.3	601.9	599.3
127.5°	368.5	412.7	450.3	482.6	497.7	512.2	531.4	549.8	556.4	561.7	559.0
130°	332.3	376.4	411.4	444.3	458.8	470.7	491.8	507.0	515.5	520.1	518.2
132.5°	296.7	337.5	374.5	404.1	418.0	430.5	449.6	464.1	476.0	476.6	474.0
135°	262.4	298.0	331.6	363.2	377.1	389.6	406.8	419.9	431.1	431.8	428.5
137.5°	229.4	262.4	291.4	321.1	335.6	348.7	364.6	377.1	387.6	389.6	385.0
140°	197.8	228.1	254.5	280.8	294.7	307.2	324.3	334.9	343.5	344.1	341.5
142.5°	167.4	195.1	218.2	242.6	255.1	266.3	285.5	296.0	303.9	305.9	301.9
145°	139.1	163.5	185.2	206.3	216.9	227.4	246.6	259.1	265.7	267.7	263.7
147.5°	112.1	132.5	151.6	170.7	180.0	189.9	205.7	221.5	227.4	228.8	225.5
150°	87.0	104.2	121.3	137.1	145.0	153.6	167.4	182.0	189.9	191.2	188.5
152.5°	63.9	78.5	92.3	105.5	112.1	118.7	130.5	144.4	154.3	154.9	152.3
155°	43.5	55.4	66.6	76.5	82.4	87.7	96.9	107.5	118.0	118.7	116.7
157.5°	26.4	34.3	43.5	51.4	55.4	60.0	66.6	74.5	83.7	85.7	83.7
160°	13.2	17.8	23.1	28.3	31.6	34.9	38.2	44.8	50.1	54.7	52.1
162.5°	6.6	7.9	9.2	11.9	13.2	15.2	17.8	20.4	23.1	27.7	24.4
165°	4.0	4.6	5.3	5.3	5.9	5.9	5.9	5.9	5.9	8.6	5.9
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: P201294

CATALOG NUMBER: 4LBLELD4-7-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4
2.5°	781.2	782.5	785.2	786.5	787.8	789.1	791.8	795.7	792.4	789.1	789.8
5°	786.5	786.5	787.1	789.1	789.1	789.8	792.4	796.4	793.1	788.5	788.5
7.5°	793.1	792.4	793.1	793.7	793.1	793.1	794.4	796.4	792.4	787.1	785.8
10°	802.3	800.3	799.7	800.3	799.7	797.7	798.3	798.3	793.1	785.2	781.9
12.5°	818.8	815.5	812.8	812.2	810.2	806.9	804.9	802.3	794.4	785.2	778.6
15°	845.8	840.5	835.3	833.3	830.0	822.1	815.5	809.6	798.3	785.2	775.9
17.5°	876.1	869.5	862.3	859.7	855.0	843.8	832.6	821.4	805.6	787.1	774.0
20°	905.1	897.2	888.7	884.0	879.4	865.6	852.4	837.9	817.5	793.1	773.3
22.5°	934.2	924.9	913.1	909.1	903.2	887.3	871.5	855.0	830.6	801.6	774.6
25°	962.5	952.0	940.7	934.2	927.6	909.8	890.6	870.9	843.2	811.5	779.2
27.5°	990.8	979.0	965.1	957.9	951.3	931.5	909.8	887.3	856.4	820.8	785.2
30°	1018.5	1005.3	988.9	981.0	973.0	950.6	925.6	900.5	866.9	828.7	789.1
32.5°	1046.2	1031.7	1013.3	1004.0	994.8	969.1	941.4	913.1	876.1	835.9	792.4
35°	1073.3	1057.4	1037.0	1025.8	1015.9	988.2	957.2	925.6	884.7	841.9	794.4
37.5°	1100.9	1083.1	1060.7	1048.2	1037.0	1006.7	972.4	936.8	893.9	846.5	796.4
40°	1128.6	1109.5	1084.5	1071.3	1057.4	1024.5	987.5	948.0	901.8	851.1	797.0
42.5°	1157.0	1135.9	1108.2	1093.7	1079.2	1042.3	1001.4	957.9	908.4	854.4	796.4
45°	1185.3	1161.6	1131.9	1115.4	1099.6	1059.4	1015.2	966.5	914.4	856.4	795.0
47.5°	1213.7	1188.6	1156.3	1138.5	1119.4	1076.5	1028.4	975.7	919.6	857.0	793.7
50°	1242.7	1215.6	1180.7	1160.9	1141.2	1093.0	1041.6	983.6	922.9	857.7	790.4
52.5°	1271.0	1242.0	1204.4	1183.3	1160.3	1109.5	1054.1	991.5	925.6	857.0	785.8
55°	1296.7	1266.4	1226.9	1204.4	1178.7	1124.7	1065.3	998.1	926.9	855.0	779.9
57.5°	1320.5	1289.5	1248.0	1222.9	1197.8	1139.2	1075.9	1005.3	928.2	851.7	773.3
60°	1338.9	1307.9	1264.4	1239.4	1212.4	1151.0	1084.5	1009.3	928.2	847.1	764.7
62.5°	1352.8	1321.8	1278.3	1251.9	1223.6	1160.9	1091.1	1013.3	928.2	842.5	756.2
65°	1361.3	1331.0	1286.2	1259.8	1230.8	1165.5	1094.3	1013.9	925.6	835.9	745.6
67.5°	1362.7	1332.3	1287.5	1261.8	1232.1	1165.5	1092.4	1010.6	920.3	827.4	733.7
70°	1356.7	1326.4	1282.2	1255.9	1226.9	1159.6	1085.1	1002.7	911.1	816.1	719.9
72.5°	1341.6	1310.6	1267.7	1240.7	1212.4	1145.8	1070.0	988.2	895.9	800.3	703.4
75°	1315.2	1284.9	1242.7	1217.6	1188.6	1123.4	1046.9	967.1	874.8	780.5	683.0
77.5°	1280.3	1250.6	1209.1	1184.0	1157.0	1093.0	1017.9	938.8	849.1	756.2	659.2
80°	1238.7	1210.4	1169.5	1145.1	1118.7	1056.8	982.9	905.8	817.5	727.1	632.9
82.5°	1194.6	1166.9	1127.3	1102.3	1077.2	1017.2	946.7	870.2	783.8	696.2	604.5
85°	1151.7	1122.0	1082.5	1059.4	1034.4	975.7	909.1	833.3	749.6	664.5	576.8
87.5°	1106.9	1077.9	1039.0	1017.2	993.5	934.2	870.9	797.0	717.3	636.2	549.8
90°	1066.0	1037.7	1000.1	978.3	955.9	898.6	836.6	766.7	689.6	611.1	527.4
92.5°	1028.4	1002.1	966.5	945.4	923.6	868.9	809.6	741.7	667.2	591.3	509.6
95°	996.1	970.4	937.4	917.0	894.6	842.5	784.5	717.9	646.7	572.9	493.1
97.5°	963.8	939.4	907.1	887.3	866.2	815.5	759.5	695.5	625.6	552.4	475.3
100°	934.2	910.4	877.5	859.7	839.2	790.4	735.1	672.4	603.9	532.0	456.2
102.5°	905.1	881.4	849.8	832.0	812.2	763.4	709.3	647.4	580.8	511.6	437.7
105°	875.5	852.4	820.8	803.0	783.2	735.7	683.0	623.0	557.7	490.5	418.6
107.5°	843.2	820.8	790.4	772.6	754.2	706.7	655.9	597.3	534.6	468.7	398.8
110°	810.2	787.8	760.1	741.0	723.2	677.0	627.6	571.6	510.3	446.3	378.4



TEST NUMBER: P201294

CATALOG NUMBER: 4LBLED-LD4-7-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	775.9	754.2	727.1	709.3	690.9	646.7	599.3	545.2	485.9	423.2	357.3
115°	741.0	719.2	692.2	674.4	657.9	615.7	569.6	518.2	460.8	400.2	336.2
117.5°	702.8	683.6	657.9	642.1	625.0	582.8	539.9	490.5	435.8	375.8	314.5
120°	667.2	648.7	623.6	606.5	591.3	551.1	510.3	462.1	408.1	352.0	292.0
122.5°	629.6	609.8	586.7	572.2	555.7	518.8	479.3	433.1	380.4	325.0	267.7
125°	590.0	571.6	549.2	535.3	520.1	485.2	447.6	401.5	351.4	298.0	242.6
127.5°	549.8	532.7	510.9	498.4	483.9	449.6	413.3	368.5	318.4	268.3	216.9
130°	508.9	491.8	472.0	458.8	445.0	412.7	377.1	332.9	285.5	238.6	191.8
132.5°	466.1	449.6	429.8	418.0	405.4	374.5	338.2	295.3	253.2	211.0	167.4
135°	421.9	406.8	389.0	377.7	365.2	333.6	299.3	260.4	222.8	183.9	143.7
137.5°	379.1	365.2	348.1	336.9	323.0	293.4	263.0	228.1	193.8	157.6	120.0
140°	336.9	324.3	307.9	295.3	283.5	255.8	228.1	196.5	165.5	132.5	98.9
142.5°	297.3	286.1	267.7	255.8	244.6	220.2	195.8	166.1	138.4	108.8	79.8
145°	258.4	248.5	228.1	217.6	208.3	186.6	162.2	137.8	112.7	87.0	62.0
147.5°	220.8	209.0	189.9	180.6	172.1	152.9	132.5	110.1	89.7	67.2	45.5
150°	184.6	170.1	153.6	145.7	138.4	122.0	104.2	85.7	67.9	48.8	31.6
152.5°	147.0	131.8	120.6	112.7	106.1	93.0	78.5	62.6	48.1	33.0	19.8
155°	108.8	98.2	87.7	83.7	77.8	66.6	54.7	42.2	30.3	19.8	11.2
157.5°	75.2	67.2	60.7	56.7	52.1	43.5	33.6	24.4	17.1	10.5	5.3
160°	45.5	40.2	35.6	32.3	29.0	23.1	16.5	11.2	7.3	3.3	2.0
162.5°	20.4	17.1	15.2	13.2	11.2	8.6	5.3	2.6	1.3	0.7	0.7
165°	4.0	2.6	2.0	1.3	0.7	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: P201294

CATALOG NUMBER: 4LBLED-LD4-7-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	790.4	790.4	790.4	790.4	790.4	790.4	790.4	790.4
2.5°	790.4	791.1	791.8	791.8	793.7	797.0	801.6	802.3
5°	788.5	789.1	789.1	789.8	791.8	794.4	798.3	799.0
7.5°	785.2	785.2	785.2	785.2	786.5	789.1	792.4	793.1
10°	780.5	779.2	778.6	777.9	778.6	781.2	783.8	784.5
12.5°	775.3	772.0	770.7	770.0	770.0	770.7	773.3	773.3
15°	769.3	764.1	762.1	760.8	758.1	758.1	760.8	760.8
17.5°	763.4	756.2	752.2	749.6	745.6	744.9	746.3	744.9
20°	758.1	746.9	741.7	737.0	731.1	729.1	729.1	727.1
22.5°	752.9	737.7	730.4	723.9	714.6	711.3	709.3	708.0
25°	749.6	727.8	718.6	710.7	698.1	690.9	688.9	686.3
27.5°	748.9	719.9	707.4	697.5	680.3	671.8	666.5	663.2
30°	748.9	712.0	695.5	681.7	660.6	647.4	642.1	640.8
32.5°	748.2	706.1	686.3	668.5	641.4	624.3	616.4	614.4
35°	746.3	700.1	677.0	655.3	622.3	600.6	589.4	586.7
37.5°	743.6	692.9	668.5	643.4	602.6	576.2	562.3	558.4
40°	741.0	685.6	657.9	630.9	582.8	551.1	533.3	528.7
42.5°	736.4	677.7	648.7	619.0	564.3	526.1	505.6	498.4
45°	731.8	668.5	637.5	605.8	545.9	500.4	474.7	467.4
47.5°	725.8	658.6	626.3	591.3	528.7	475.3	446.3	437.1
50°	719.2	648.7	613.8	577.5	510.3	450.9	415.3	405.4
52.5°	712.0	637.5	601.2	563.0	491.8	427.9	386.3	373.8
55°	702.8	625.0	586.7	546.5	472.7	404.1	356.7	342.1
57.5°	692.9	612.4	572.9	531.4	453.6	381.7	327.6	311.2
60°	681.0	597.9	555.7	514.2	433.8	358.6	298.6	279.5
62.5°	668.5	583.4	540.6	496.4	414.0	336.2	270.3	248.5
65°	655.3	567.0	523.4	478.0	392.9	312.5	242.6	217.6
67.5°	639.5	549.2	504.3	458.2	371.2	288.7	215.6	187.2
70°	623.6	530.0	483.2	437.1	348.7	265.0	189.9	157.6
72.5°	604.5	509.6	462.1	415.3	325.7	241.9	164.8	127.9
75°	583.4	488.5	440.4	392.9	301.9	217.6	139.8	98.9
77.5°	561.0	465.4	418.0	369.8	279.5	194.5	116.7	74.5
80°	537.3	441.0	394.2	346.1	255.8	171.4	94.3	51.4
82.5°	510.9	417.3	370.5	322.4	233.4	149.0	73.8	31.6
85°	485.9	393.6	348.1	300.6	211.6	126.6	55.4	15.8
87.5°	461.5	371.8	327.6	280.8	193.2	109.4	40.2	4.6
90°	441.7	354.0	310.5	265.0	178.7	96.9	30.3	0.0
92.5°	425.9	340.2	297.3	253.2	168.1	88.3	25.7	0.0
95°	410.7	325.7	284.8	240.6	157.6	81.1	20.4	0.0
97.5°	394.2	311.8	270.9	228.1	147.0	73.2	16.5	0.0
100°	377.7	296.7	257.1	215.6	135.1	65.3	11.9	0.0
102.5°	359.9	280.8	241.9	201.7	124.6	56.7	7.9	0.0
105°	342.8	265.0	227.4	187.9	113.4	49.4	5.3	0.0
107.5°	324.3	249.2	212.3	174.7	102.2	41.5	3.3	0.0
110°	305.9	233.4	197.1	160.9	91.6	34.3	2.6	0.0



TEST NUMBER: P201294

CATALOG NUMBER: 4LBLED-LD4-7-SYMW-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	287.4	216.9	182.0	146.4	81.1	27.7	2.0	0.7
115°	267.7	199.8	166.1	131.8	70.5	21.8	2.0	0.7
117.5°	247.9	182.0	151.0	118.0	60.7	16.5	1.3	0.7
120°	227.4	166.1	134.5	104.8	51.4	11.9	1.3	0.7
122.5°	207.7	149.6	119.3	91.0	42.2	9.2	1.3	0.7
125°	187.2	130.5	104.2	78.5	33.6	7.3	1.3	0.7
127.5°	165.5	112.7	88.3	64.6	25.7	5.3	1.3	0.7
130°	143.1	94.9	73.2	52.7	18.5	4.0	1.3	0.7
132.5°	122.0	79.8	59.3	41.5	13.2	3.3	1.3	0.7
135°	102.8	64.6	46.8	31.0	9.2	2.6	0.7	0.7
137.5°	84.4	51.4	35.6	22.4	6.6	2.0	1.3	0.7
140°	67.9	38.9	25.7	15.8	4.6	1.3	1.3	0.7
142.5°	52.7	27.7	17.8	10.5	3.3	1.3	0.7	0.7
145°	38.9	18.5	11.9	6.6	2.6	1.3	1.3	1.3
147.5°	26.4	12.5	7.3	4.6	2.0	1.3	1.3	0.7
150°	17.1	7.9	4.6	3.3	1.3	1.3	1.3	0.7
152.5°	10.5	4.6	2.6	2.0	1.3	1.3	1.3	0.7
155°	5.3	2.6	2.0	1.3	1.3	1.3	1.3	1.3
157.5°	2.6	2.0	1.3	1.3	1.3	1.3	1.3	1.3
160°	1.3	1.3	0.7	0.7	1.3	1.3	1.3	1.3
162.5°	0.7	0.7	0.7	0.7	1.3	1.3	1.3	1.3
165°	0.0	0.7	0.7	0.7	1.3	1.3	1.3	1.3
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)