

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1213157

Luminaire Tested: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213157
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33520)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

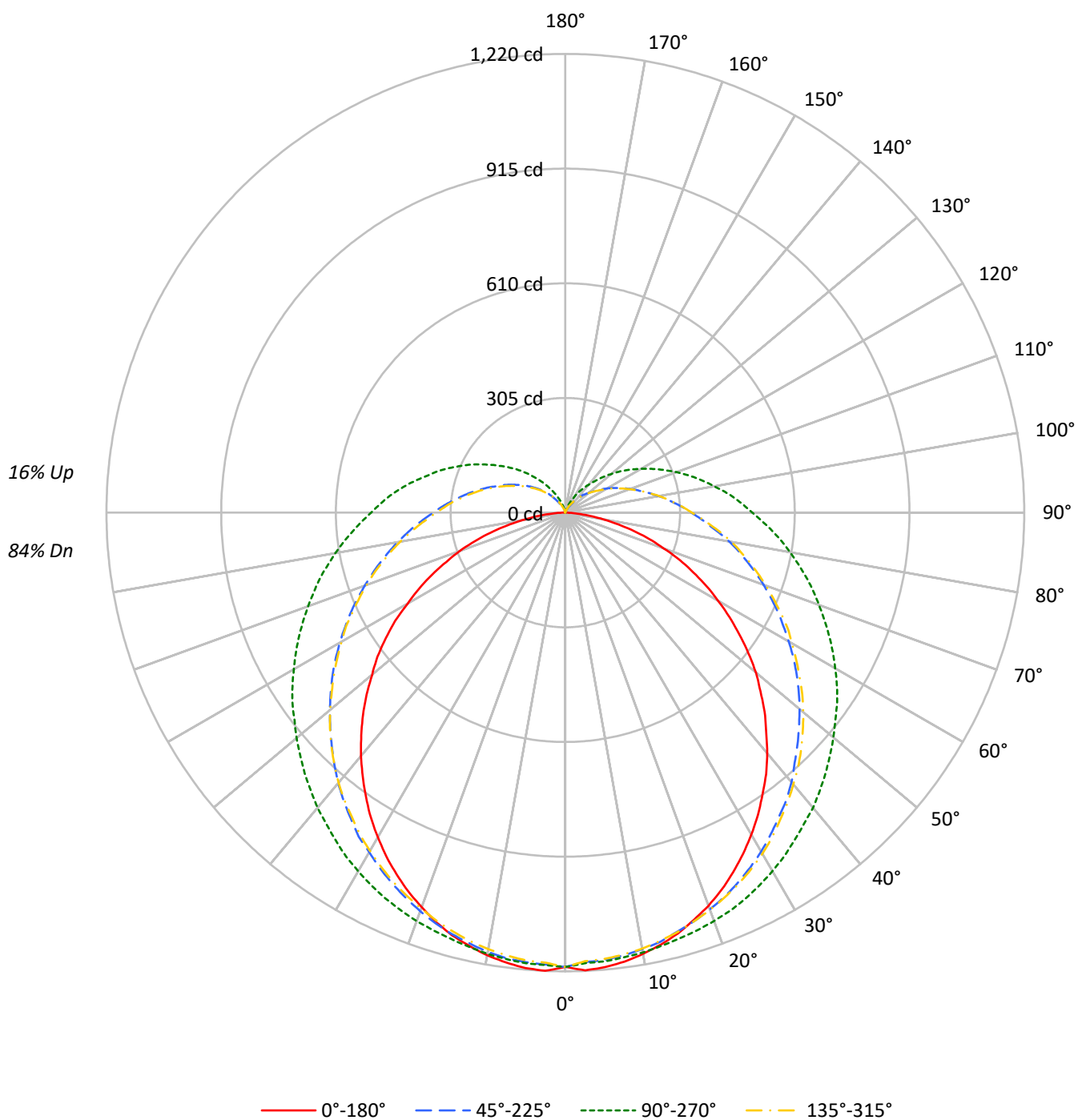
Lumens per Lamp: N/A
Luminaire Lumens: 5249.0 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 62
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: 24 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
RCR																				
0	115	115	115	115	111	111	111	111	102	102	102	94	94	94	87	87	87	84	84	84
1	102	96	91	86	98	92	87	83	85	81	77	78	75	72	72	70	67	64	64	64
2	92	82	74	68	87	79	72	66	73	67	62	67	62	58	62	58	54	51	51	51
3	83	71	62	55	79	69	60	54	63	56	51	58	52	48	54	49	45	42	42	42
4	76	63	53	46	72	60	52	45	56	48	42	51	45	40	47	42	38	35	35	35
5	69	56	46	39	66	54	45	38	50	42	36	46	39	34	42	37	33	30	30	30
6	64	50	41	34	61	48	39	33	45	37	31	41	35	30	38	33	28	26	26	26
7	59	45	36	30	56	43	35	29	40	33	28	38	31	26	35	29	25	23	23	23
8	55	41	32	26	52	40	31	26	37	30	24	34	28	23	32	26	22	20	20	20
9	51	37	29	23	49	36	28	23	34	27	22	32	25	21	30	24	20	18	18	18
10	48	34	26	21	46	33	26	21	31	24	20	29	23	19	27	22	18	16	16	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9763	9763	9763	9763
5°	9815	9409	9836	9449
10°	9724	9142	9755	9171
15°	9612	8913	9654	8923
20°	9460	8745	9493	8745
25°	9273	8597	9330	8588
30°	9065	8444	9135	8444
35°	8822	8303	8920	8313
40°	8581	8220	8686	8220
45°	8305	8133	8431	8143
50°	8016	8081	8126	8103
55°	7615	8089	7855	8124
60°	7191	8113	7425	8163
65°	6715	8195	7012	8276
70°	6045	8346	6517	8464
75°	5274	8618	5774	8785
80°	4080	9022	4633	9232
85°	2439	9671	3047	9939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°

Vertical Angle: 90°

Luminance: 11111 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.4	2.2
10°-20°	328.9	6.3
20°-30°	504.3	9.6
30°-40°	622.2	11.9
40°-50°	675.0	12.9
50°-60°	665.3	12.7
60°-70°	601.5	11.5
70°-80°	501.1	9.5
80°-90°	388.1	7.4
90°-100°	294.4	5.6
100°-110°	217.8	4.1
110°-120°	151.5	2.9
120°-130°	96.7	1.8
130°-140°	54.2	1.0
140°-150°	24.8	0.5
150°-160°	7.7	0.1
160°-170°	1.0	0.0
170°-180°	0.0	0.0
0°-30°	947.7	18.1
0°-40°	1569.9	29.9
0°-60°	2910.2	55.4
0°-90°	4400.9	83.8
90°-120°	663.7	12.6
90°-150°	839.4	16.0
90°-180°	848.0	16.2
0°-180°	5249.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1208	1208	1208	1208	1208	
5°	1213	1198	1216	1203	1213	115
15°	1158	1172	1164	1174	1158	326
25°	1055	1133	1062	1132	1055	486
35°	914	1063	924	1064	914	572
45°	749	979	761	980	749	577
55°	565	882	582	886	565	505
65°	375	774	391	781	375	371
75°	189	663	206	676	189	200
85°	36	552	45	567	36	43
90°	1	497	2	516	1	2
95°	1	451	1	473	1	1
105°	1	358	1	380	1	1
115°	1	273	1	297	1	1
125°	1	196	1	218	1	1
135°	1	127	1	150	1	1
145°	1	74	1	90	1	1
155°	1	31	1	42	1	1
165°	1	5	1	8	1	0
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°	25°	30°	35°	40°	45°	50°
0°	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2
2.5°	1218.4	1218.4	1217.1	1214.5	1215.8	1219.6	1217.1	1210.7	1206.9	1196.7	1199.2
5°	1213.3	1213.3	1212.0	1209.4	1210.7	1215.8	1213.3	1208.2	1203.1	1194.1	1198.0
7.5°	1204.3	1204.3	1203.1	1200.5	1203.1	1208.2	1205.6	1200.5	1196.7	1187.8	1191.6
10°	1191.6	1192.9	1191.6	1187.8	1192.9	1198.0	1196.7	1190.3	1186.5	1178.9	1182.7
12.5°	1176.3	1177.6	1176.3	1175.0	1177.6	1185.2	1182.7	1177.6	1175.0	1168.7	1172.5
15°	1158.5	1159.7	1157.2	1157.2	1159.7	1167.4	1167.4	1162.3	1159.7	1153.4	1161.0
17.5°	1135.5	1136.8	1135.5	1135.5	1138.1	1145.7	1147.0	1144.4	1141.9	1139.3	1147.0
20°	1112.6	1111.3	1111.3	1110.0	1115.1	1126.6	1125.3	1125.3	1122.8	1122.8	1131.7
22.5°	1085.8	1085.8	1084.5	1084.5	1090.9	1101.1	1101.1	1103.7	1101.1	1106.2	1113.9
25°	1055.2	1056.5	1055.2	1057.8	1062.9	1074.3	1075.6	1079.4	1080.7	1085.8	1094.7
27.5°	1023.4	1024.6	1023.4	1025.9	1034.8	1043.8	1050.1	1055.2	1056.5	1064.2	1075.6
30°	989.0	989.0	990.2	992.8	1003.0	1017.0	1022.1	1028.5	1028.5	1041.2	1052.7
32.5°	953.3	953.3	953.3	958.4	969.8	986.4	992.8	1000.4	1003.0	1015.7	1028.5
35°	913.8	915.0	915.0	918.9	934.2	950.7	959.7	968.6	973.7	989.0	1001.7
37.5°	876.8	879.4	875.5	880.6	902.3	916.3	926.5	935.4	944.4	964.7	974.9
40°	834.8	837.3	836.0	846.2	864.1	881.9	893.4	902.3	915.0	935.4	946.9
42.5°	790.2	792.7	795.2	806.7	825.8	843.7	857.7	869.2	884.5	902.3	921.4
45°	749.4	749.4	753.2	767.2	787.6	806.7	823.3	836.0	853.9	873.0	892.1
47.5°	703.5	704.8	709.9	726.4	748.1	771.0	786.3	802.9	822.0	842.4	864.1
50°	661.4	661.4	669.1	686.9	707.3	732.8	749.4	768.5	788.9	813.1	834.8
52.5°	613.0	615.6	627.0	643.6	670.4	693.3	712.4	732.8	757.0	782.5	806.7
55°	564.6	569.7	578.6	601.5	629.6	651.2	674.2	699.7	722.6	750.6	778.7
57.5°	517.4	521.2	535.3	558.2	587.5	614.3	638.5	662.7	690.7	718.8	748.1
60°	469.0	474.1	490.7	513.6	545.5	573.5	601.5	627.0	656.3	685.6	716.2
62.5°	423.1	426.9	446.1	472.8	504.7	535.3	563.3	593.9	625.7	653.8	684.4
65°	374.7	381.1	402.7	426.9	463.9	494.5	526.3	559.5	592.6	623.2	652.5
67.5°	330.1	333.9	356.8	384.9	421.8	456.2	489.4	525.1	559.5	591.3	620.7
70°	277.8	290.6	313.5	342.8	382.3	418.0	453.7	490.7	527.6	560.8	588.8
72.5°	234.5	244.7	270.2	302.0	340.3	382.3	419.3	458.8	495.8	530.2	559.5
75°	188.6	198.8	228.1	263.8	303.3	347.9	386.2	426.9	465.2	499.6	530.2
77.5°	144.0	156.8	188.6	225.6	268.9	314.8	354.3	395.1	434.6	471.5	502.1
80°	103.2	117.2	151.7	193.7	235.8	281.7	325.0	365.8	405.3	442.2	474.1
82.5°	66.3	81.6	118.5	160.6	205.2	251.1	295.7	336.5	376.0	412.9	446.1
85°	35.7	52.3	90.5	132.5	177.1	223.0	267.6	311.0	349.2	383.6	419.3
87.5°	10.2	30.6	67.5	109.6	155.5	197.5	240.9	284.2	322.4	359.4	391.3
90°	1.3	17.8	51.0	90.5	135.1	175.9	219.2	260.0	298.2	335.2	367.0
92.5°	1.3	11.5	39.5	75.2	116.0	158.0	201.4	240.9	276.6	313.5	345.4
95°	1.3	8.9	31.9	63.7	102.0	141.5	182.2	220.5	257.4	291.8	323.7
97.5°	1.3	6.4	25.5	54.8	89.2	126.2	165.7	203.9	239.6	272.7	302.0
100°	1.3	5.1	20.4	47.2	77.7	113.4	149.1	186.1	220.5	252.3	282.9
102.5°	1.3	3.8	17.8	39.5	68.8	100.7	135.1	169.5	202.6	233.2	263.8
105°	1.3	3.8	15.3	34.4	61.2	90.5	122.3	155.5	186.1	215.4	243.4
107.5°	1.3	2.5	12.7	29.3	53.5	81.6	110.9	142.7	170.8	198.8	225.6
110°	1.3	2.5	10.2	26.8	47.2	72.6	100.7	130.0	156.8	183.5	209.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.3	2.5	8.9	22.9	40.8	65.0	90.5	117.2	142.7	169.5	192.4
115°	1.3	2.5	7.6	20.4	38.2	56.1	81.6	105.8	131.3	155.5	177.1
117.5°	1.3	2.5	6.4	16.6	33.1	51.0	71.4	95.6	118.5	141.5	161.9
120°	1.3	2.5	5.1	15.3	29.3	45.9	63.7	85.4	107.1	128.7	150.4
122.5°	1.3	1.3	5.1	12.7	25.5	40.8	58.6	75.2	95.6	116.0	135.1
125°	1.3	1.3	5.1	11.5	21.7	37.0	52.3	67.5	85.4	103.2	119.8
127.5°	1.3	1.3	3.8	8.9	19.1	31.9	45.9	62.4	75.2	91.8	108.3
130°	1.3	1.3	3.8	7.6	16.6	26.8	40.8	54.8	70.1	81.6	95.6
132.5°	1.3	1.3	3.8	6.4	12.7	21.7	34.4	47.2	61.2	73.9	85.4
135°	1.3	1.3	2.5	5.1	10.2	17.8	28.0	39.5	53.5	66.3	77.7
137.5°	1.3	1.3	2.5	5.1	7.6	15.3	21.7	31.9	44.6	56.1	67.5
140°	1.3	1.3	2.5	3.8	6.4	11.5	17.8	25.5	35.7	45.9	58.6
142.5°	1.3	1.3	1.3	3.8	5.1	8.9	14.0	20.4	28.0	37.0	47.2
145°	1.3	1.3	1.3	3.8	5.1	6.4	11.5	16.6	21.7	28.0	37.0
147.5°	1.3	1.3	1.3	2.5	3.8	5.1	8.9	12.7	16.6	21.7	26.8
150°	1.3	1.3	1.3	2.5	3.8	5.1	6.4	8.9	12.7	17.8	21.7
152.5°	1.3	1.3	1.3	2.5	2.5	3.8	5.1	6.4	8.9	12.7	15.3
155°	1.3	1.3	1.3	1.3	2.5	3.8	5.1	5.1	6.4	8.9	11.5
157.5°	1.3	1.3	1.3	1.3	2.5	2.5	3.8	3.8	5.1	5.1	7.6
160°	1.3	1.3	1.3	1.3	1.3	2.5	2.5	3.8	3.8	3.8	3.8
162.5°	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5	3.8	3.8
165°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2
2.5°	1199.2	1200.5	1204.3	1204.3	1201.8	1201.8	1200.5	1199.2	1200.5	1203.1	1203.1
5°	1196.7	1198.0	1201.8	1203.1	1200.5	1199.2	1199.2	1198.0	1199.2	1201.8	1201.8
7.5°	1191.6	1192.9	1196.7	1198.0	1195.4	1195.4	1194.1	1192.9	1195.4	1196.7	1196.7
10°	1184.0	1185.2	1190.3	1191.6	1190.3	1189.0	1189.0	1187.8	1189.0	1191.6	1191.6
12.5°	1173.8	1176.3	1182.7	1182.7	1182.7	1181.4	1181.4	1180.1	1181.4	1184.0	1182.7
15°	1162.3	1167.4	1172.5	1175.0	1175.0	1175.0	1173.8	1172.5	1175.0	1176.3	1175.0
17.5°	1149.5	1155.9	1163.6	1166.1	1166.1	1167.4	1166.1	1164.8	1167.4	1167.4	1166.1
20°	1136.8	1143.2	1150.8	1153.4	1155.9	1157.2	1157.2	1155.9	1157.2	1158.5	1157.2
22.5°	1120.2	1127.9	1136.8	1140.6	1143.2	1145.7	1145.7	1145.7	1147.0	1148.3	1145.7
25°	1102.4	1111.3	1121.5	1125.3	1130.4	1131.7	1133.0	1133.0	1134.2	1135.5	1131.7
27.5°	1083.3	1093.5	1103.7	1110.0	1113.9	1116.4	1116.4	1117.7	1119.0	1120.2	1116.4
30°	1060.3	1075.6	1084.5	1089.6	1094.7	1098.6	1099.8	1101.1	1102.4	1103.7	1099.8
32.5°	1039.9	1052.7	1064.2	1070.5	1076.9	1082.0	1083.3	1083.3	1085.8	1085.8	1082.0
35°	1015.7	1031.0	1042.5	1048.9	1056.5	1060.3	1062.9	1062.9	1065.4	1065.4	1061.6
37.5°	991.5	1006.8	1019.5	1027.2	1036.1	1041.2	1042.5	1042.5	1045.0	1045.0	1039.9
40°	966.0	982.6	996.6	1005.5	1013.2	1019.5	1020.8	1024.6	1024.6	1023.4	1018.3
42.5°	940.5	955.8	971.1	981.3	991.5	997.9	1000.4	1001.7	1001.7	1000.4	996.6
45°	912.5	930.3	944.4	957.1	967.3	973.7	977.5	978.8	978.8	976.2	972.4
47.5°	885.7	903.6	917.6	931.6	941.8	949.5	953.3	954.6	953.3	952.0	948.2
50°	857.7	878.1	892.1	906.1	916.3	922.7	929.1	930.3	929.1	927.8	920.1
52.5°	828.4	850.0	865.3	879.4	890.8	898.5	903.6	904.8	904.8	902.3	897.2
55°	799.1	818.2	837.3	852.6	865.3	873.0	879.4	881.9	879.4	876.8	870.4
57.5°	772.3	790.2	809.3	825.8	838.6	848.8	853.9	856.4	853.9	850.0	843.7
60°	740.4	759.6	781.2	796.5	810.5	820.7	823.3	828.4	825.8	822.0	815.6
62.5°	709.9	732.8	751.9	771.0	782.5	794.0	799.1	801.6	799.1	795.2	788.9
65°	678.0	703.5	722.6	741.7	754.5	765.9	772.3	773.6	771.0	767.2	760.8
67.5°	648.7	672.9	693.3	713.7	725.2	736.6	743.0	745.5	743.0	737.9	731.5
70°	619.4	643.6	667.8	683.1	697.1	709.9	713.7	717.5	715.0	709.9	702.2
72.5°	590.1	615.6	639.8	655.1	670.4	681.8	686.9	690.7	688.2	683.1	674.2
75°	559.5	586.2	610.5	627.0	642.3	653.8	658.9	662.7	660.2	655.1	644.9
77.5°	531.4	558.2	581.1	599.0	614.3	624.5	633.4	634.7	632.1	627.0	616.8
80°	502.1	528.9	553.1	570.9	586.2	596.4	602.8	606.6	604.1	599.0	588.8
82.5°	476.6	500.9	525.1	542.9	558.2	570.9	576.0	579.9	578.6	570.9	563.3
85°	448.6	476.6	495.8	514.9	530.2	542.9	546.7	551.8	550.6	544.2	534.0
87.5°	420.6	448.6	471.5	490.7	504.7	514.9	521.2	523.8	522.5	516.1	504.7
90°	397.6	423.1	446.1	466.4	477.9	489.4	495.8	497.0	497.0	489.4	480.5
92.5°	376.0	400.2	423.1	442.2	456.2	466.4	471.5	474.1	472.8	466.4	456.2
95°	351.7	378.5	400.2	419.3	433.3	443.5	448.6	451.2	449.9	443.5	433.3
97.5°	331.4	355.6	377.2	395.1	409.1	419.3	424.4	426.9	426.9	420.6	410.4
100°	311.0	335.2	355.6	373.4	386.2	396.3	401.4	402.7	401.4	396.3	386.2
102.5°	290.6	313.5	333.9	350.5	364.5	373.4	378.5	379.8	379.8	373.4	363.2
105°	270.2	293.1	312.2	330.1	341.5	350.5	354.3	358.1	356.8	351.7	341.5
107.5°	251.1	274.0	291.8	308.4	319.9	328.8	332.6	336.5	335.2	330.1	319.9
110°	233.2	254.9	271.5	288.0	298.2	307.1	313.5	314.8	312.2	307.1	298.2

TEST NUMBER: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	216.7	235.8	252.3	267.6	279.1	285.5	290.6	293.1	290.6	285.5	279.1
115°	198.8	217.9	234.5	248.5	258.7	266.4	270.2	272.7	270.2	265.1	258.7
117.5°	182.2	200.1	216.7	230.7	239.6	246.0	249.8	252.3	249.8	246.0	239.6
120°	168.2	183.5	198.8	211.6	221.8	226.8	230.7	233.2	231.9	226.8	220.5
122.5°	151.7	168.2	182.2	195.0	203.9	209.0	211.6	214.1	212.8	209.0	202.6
125°	137.6	151.7	165.7	177.1	186.1	191.2	193.7	196.3	195.0	191.2	183.5
127.5°	122.3	137.6	149.1	160.6	167.0	174.6	175.9	178.4	177.1	173.3	167.0
130°	110.9	122.3	133.8	144.0	151.7	156.8	159.3	160.6	158.0	155.5	149.1
132.5°	96.9	109.6	119.8	128.7	133.8	138.9	141.5	142.7	142.7	138.9	133.8
135°	86.7	95.6	104.5	113.4	118.5	123.6	126.2	127.4	126.2	123.6	118.5
137.5°	77.7	85.4	91.8	99.4	105.8	108.3	110.9	110.9	109.6	108.3	104.5
140°	67.5	76.5	82.8	87.9	93.0	94.3	96.9	96.9	95.6	94.3	91.8
142.5°	57.3	65.0	71.4	77.7	81.6	84.1	85.4	86.7	85.4	84.1	80.3
145°	45.9	54.8	61.2	65.0	70.1	71.4	72.6	73.9	72.6	71.4	67.5
147.5°	35.7	43.3	49.7	54.8	58.6	59.9	61.2	62.4	61.2	58.6	57.3
150°	25.5	31.9	39.5	44.6	47.2	49.7	49.7	49.7	51.0	48.4	45.9
152.5°	20.4	22.9	28.0	33.1	37.0	38.2	39.5	39.5	38.2	38.2	35.7
155°	14.0	16.6	20.4	24.2	28.0	29.3	30.6	30.6	29.3	29.3	28.0
157.5°	8.9	11.5	14.0	16.6	20.4	21.7	22.9	22.9	22.9	21.7	20.4
160°	5.1	6.4	7.6	10.2	12.7	14.0	15.3	15.3	15.3	15.3	14.0
162.5°	3.8	3.8	3.8	5.1	6.4	7.6	8.9	8.9	8.9	8.9	7.6
165°	2.5	2.5	2.5	2.5	2.5	3.8	5.1	5.1	5.1	5.1	5.1
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: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2
2.5°	1201.8	1201.8	1203.1	1200.5	1192.9	1194.1	1194.1	1199.2	1201.8	1203.1	1209.4
5°	1199.2	1199.2	1201.8	1198.0	1191.6	1191.6	1191.6	1196.7	1198.0	1200.5	1205.6
7.5°	1195.4	1195.4	1196.7	1192.9	1185.2	1185.2	1184.0	1189.0	1191.6	1192.9	1198.0
10°	1189.0	1189.0	1190.3	1186.5	1177.6	1177.6	1176.3	1180.1	1181.4	1184.0	1187.8
12.5°	1180.1	1180.1	1180.1	1176.3	1167.4	1166.1	1164.8	1168.7	1168.7	1169.9	1173.8
15°	1172.5	1169.9	1169.9	1166.1	1157.2	1154.6	1152.1	1153.4	1155.9	1154.6	1157.2
17.5°	1163.6	1161.0	1158.5	1154.6	1143.2	1139.3	1136.8	1138.1	1136.8	1135.5	1138.1
20°	1153.4	1149.5	1148.3	1141.9	1130.4	1124.1	1119.0	1116.4	1117.7	1113.9	1115.1
22.5°	1141.9	1136.8	1134.2	1126.6	1115.1	1107.5	1101.1	1096.0	1094.7	1089.6	1090.9
25°	1127.9	1121.5	1117.7	1111.3	1098.6	1089.6	1082.0	1074.3	1070.5	1064.2	1062.9
27.5°	1111.3	1104.9	1099.8	1093.5	1080.7	1069.3	1060.3	1050.1	1045.0	1037.4	1033.6
30°	1094.7	1087.1	1079.4	1074.3	1060.3	1047.6	1033.6	1024.6	1017.0	1008.1	1001.7
32.5°	1074.3	1066.7	1059.1	1051.4	1038.7	1023.4	1011.9	997.9	989.0	978.8	971.1
35°	1054.0	1043.8	1036.1	1025.9	1014.5	996.6	982.6	968.6	957.1	945.6	936.7
37.5°	1031.0	1023.4	1011.9	1003.0	989.0	971.1	955.8	938.0	927.8	912.5	901.0
40°	1009.4	1000.4	989.0	977.5	963.5	943.1	926.5	906.1	894.7	876.8	865.3
42.5°	987.7	974.9	963.5	950.7	935.4	916.3	895.9	875.5	860.2	843.7	827.1
45°	963.5	949.5	935.4	921.4	906.1	887.0	865.3	843.7	824.6	809.3	788.9
47.5°	938.0	924.0	907.4	892.1	875.5	856.4	833.5	810.5	790.2	772.3	750.6
50°	912.5	898.5	880.6	864.1	845.0	825.8	801.6	774.9	753.2	730.3	711.1
52.5°	885.7	871.7	855.1	833.5	813.1	794.0	768.5	740.4	716.2	697.1	672.9
55°	859.0	845.0	825.8	804.2	783.8	759.6	735.3	707.3	680.5	657.6	633.4
57.5°	830.9	818.2	796.5	778.7	753.2	727.7	702.2	675.5	646.1	619.4	591.3
60°	802.9	788.9	768.5	746.8	721.3	695.8	669.1	639.8	609.2	579.9	554.4
62.5°	777.4	759.6	740.4	717.5	690.7	666.5	635.9	604.1	573.5	542.9	512.3
65°	748.1	729.0	711.1	688.2	660.2	632.1	601.5	569.7	536.5	503.4	472.8
67.5°	718.8	699.7	680.5	657.6	628.3	599.0	567.1	535.3	498.3	466.4	430.8
70°	689.5	674.2	650.0	625.7	599.0	567.1	535.3	500.9	462.6	428.2	391.3
72.5°	660.2	644.9	620.7	595.2	569.7	536.5	502.1	467.7	432.0	392.5	353.0
75°	632.1	613.0	591.3	567.1	540.4	506.0	471.5	435.9	393.8	356.8	316.1
77.5°	605.4	587.5	565.8	539.1	509.8	476.6	441.0	404.0	361.9	322.4	277.8
80°	576.0	558.2	536.5	509.8	480.5	448.6	410.4	372.1	331.4	288.0	242.1
82.5°	548.0	531.4	507.2	483.0	451.2	419.3	381.1	342.8	299.5	257.4	212.8
85°	518.7	502.1	479.2	453.7	423.1	388.7	353.0	314.8	271.5	228.1	183.5
87.5°	493.2	474.1	451.2	425.7	395.1	361.9	327.5	286.7	244.7	202.6	156.8
90°	466.4	448.6	425.7	400.2	369.6	336.5	300.8	262.5	221.8	178.4	135.1
92.5°	443.5	424.4	402.7	377.2	346.6	314.8	279.1	240.9	201.4	159.3	117.2
95°	420.6	401.4	381.1	355.6	325.0	293.1	257.4	220.5	182.2	141.5	102.0
97.5°	395.1	378.5	358.1	333.9	303.3	272.7	238.3	202.6	165.7	126.2	89.2
100°	374.7	355.6	336.5	311.0	282.9	253.6	219.2	184.8	149.1	112.2	77.7
102.5°	351.7	333.9	314.8	290.6	262.5	233.2	201.4	168.2	135.1	100.7	67.5
105°	330.1	313.5	293.1	270.2	243.4	215.4	184.8	154.2	122.3	89.2	59.9
107.5°	308.4	291.8	272.7	251.1	225.6	197.5	169.5	138.9	109.6	80.3	53.5
110°	286.7	271.5	253.6	231.9	207.7	182.2	155.5	127.4	98.1	71.4	47.2

TEST NUMBER: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	267.6	252.3	234.5	214.1	191.2	167.0	141.5	114.7	87.9	63.7	40.8
115°	248.5	234.5	216.7	198.8	175.9	152.9	128.7	103.2	79.0	57.3	35.7
117.5°	229.4	215.4	198.8	181.0	160.6	138.9	116.0	91.8	71.4	51.0	31.9
120°	210.3	197.5	182.2	165.7	147.8	126.2	103.2	82.8	63.7	44.6	28.0
122.5°	192.4	181.0	167.0	151.7	132.5	112.2	93.0	75.2	57.3	39.5	22.9
125°	175.9	164.4	151.7	136.4	118.5	100.7	84.1	67.5	49.7	34.4	19.1
127.5°	159.3	147.8	135.1	121.1	107.1	90.5	75.2	59.9	44.6	30.6	16.6
130°	142.7	132.5	121.1	109.6	95.6	80.3	67.5	52.3	38.2	24.2	14.0
132.5°	126.2	118.5	108.3	96.9	84.1	72.6	58.6	45.9	33.1	21.7	12.7
135°	112.2	104.5	95.6	85.4	75.2	63.7	51.0	39.5	28.0	17.8	10.2
137.5°	99.4	93.0	84.1	75.2	66.3	54.8	44.6	33.1	22.9	15.3	7.6
140°	87.9	81.6	73.9	65.0	57.3	47.2	37.0	26.8	20.4	12.7	6.4
142.5°	76.5	70.1	63.7	56.1	48.4	39.5	30.6	22.9	16.6	10.2	6.4
145°	65.0	59.9	53.5	47.2	39.5	31.9	25.5	19.1	12.7	7.6	5.1
147.5°	53.5	49.7	43.3	38.2	31.9	25.5	20.4	15.3	10.2	6.4	3.8
150°	43.3	39.5	34.4	29.3	25.5	20.4	16.6	11.5	7.6	6.4	3.8
152.5°	33.1	30.6	26.8	24.2	20.4	15.3	11.5	8.9	6.4	5.1	2.5
155°	26.8	24.2	21.7	17.8	15.3	11.5	8.9	6.4	5.1	3.8	2.5
157.5°	19.1	17.8	15.3	12.7	10.2	7.6	6.4	6.4	3.8	2.5	1.3
160°	12.7	11.5	10.2	7.6	6.4	6.4	5.1	3.8	2.5	2.5	1.3
162.5°	7.6	6.4	6.4	6.4	5.1	5.1	3.8	2.5	2.5	1.3	1.3
165°	5.1	5.1	5.1	3.8	3.8	3.8	2.5	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	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: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2
2.5°	1209.4	1205.6	1210.7	1219.6	1220.9	1219.6	1217.1	1220.9	1226.0	1224.7	1215.8
5°	1206.9	1201.8	1206.9	1215.8	1215.8	1214.5	1213.3	1217.1	1222.2	1220.9	1213.3
7.5°	1199.2	1194.1	1199.2	1206.9	1208.2	1205.6	1205.6	1209.4	1214.5	1213.3	1206.9
10°	1189.0	1184.0	1186.5	1195.4	1198.0	1195.4	1195.4	1199.2	1205.6	1204.3	1196.7
12.5°	1173.8	1169.9	1172.5	1180.1	1182.7	1181.4	1180.1	1185.2	1191.6	1191.6	1184.0
15°	1157.2	1152.1	1154.6	1163.6	1164.8	1162.3	1163.6	1167.4	1175.0	1175.0	1168.7
17.5°	1138.1	1131.7	1135.5	1141.9	1143.2	1143.2	1143.2	1148.3	1157.2	1155.9	1150.8
20°	1116.4	1107.5	1110.0	1116.4	1119.0	1119.0	1119.0	1127.9	1134.2	1134.2	1129.2
22.5°	1090.9	1084.5	1084.5	1090.9	1094.7	1093.5	1093.5	1101.1	1110.0	1108.8	1108.8
25°	1061.6	1056.5	1054.0	1061.6	1062.9	1064.2	1066.7	1074.3	1084.5	1084.5	1085.8
27.5°	1031.0	1025.9	1024.6	1031.0	1032.3	1033.6	1036.1	1045.0	1055.2	1056.5	1059.1
30°	1001.7	994.1	991.5	996.6	999.2	1000.4	1000.4	1014.5	1023.4	1027.2	1032.3
32.5°	967.3	959.7	953.3	962.2	963.5	966.0	967.3	981.3	991.5	997.9	1005.5
35°	932.9	920.1	917.6	924.0	926.5	927.8	930.3	945.6	959.7	964.7	974.9
37.5°	894.7	885.7	878.1	884.5	887.0	888.3	895.9	909.9	924.0	931.6	941.8
40°	859.0	847.5	841.1	845.0	847.5	848.8	857.7	873.0	889.6	898.5	911.2
42.5°	819.5	804.2	799.1	802.9	804.2	808.0	815.6	836.0	852.6	865.3	875.5
45°	780.0	768.5	757.0	760.8	762.1	764.7	776.1	797.8	815.6	830.9	842.4
47.5°	739.2	725.2	713.7	716.2	721.3	722.6	735.3	760.8	777.4	794.0	809.3
50°	698.4	679.3	670.4	670.4	672.9	679.3	695.8	721.3	739.2	758.3	774.9
52.5°	656.3	638.5	628.3	629.6	632.1	639.8	655.1	680.5	700.9	721.3	741.7
55°	614.3	595.2	585.0	582.4	585.0	595.2	613.0	639.8	660.2	684.4	706.0
57.5°	572.2	549.3	540.4	536.5	539.1	551.8	569.7	597.7	623.2	646.1	671.6
60°	526.3	508.5	493.2	484.3	490.7	507.2	526.3	555.7	582.4	607.9	635.9
62.5°	486.8	463.9	447.3	438.4	444.8	458.8	485.6	513.6	542.9	572.2	600.3
65°	442.2	419.3	400.2	391.3	397.6	414.2	441.0	471.5	503.4	532.7	565.8
67.5°	398.9	374.7	351.7	342.8	350.5	368.3	397.6	432.0	466.4	497.0	532.7
70°	356.8	330.1	305.9	299.5	304.6	328.8	356.8	391.3	426.9	462.6	499.6
72.5°	318.6	285.5	260.0	252.3	258.7	285.5	317.3	353.0	391.3	429.5	469.0
75°	274.0	243.4	215.4	206.5	214.1	238.3	277.8	316.1	356.8	397.6	434.6
77.5°	238.3	202.6	173.3	159.3	172.0	202.6	240.9	281.7	323.7	365.8	407.8
80°	201.4	164.4	132.5	117.2	131.3	164.4	202.6	247.2	294.4	336.5	374.7
82.5°	168.2	128.7	95.6	79.0	94.3	131.3	173.3	217.9	263.8	305.9	350.5
85°	137.6	96.9	62.4	44.6	66.3	99.4	144.0	189.9	237.0	280.4	323.7
87.5°	112.2	72.6	38.2	19.1	40.8	77.7	119.8	165.7	212.8	256.2	296.9
90°	91.8	52.3	20.4	2.5	24.2	58.6	99.4	144.0	188.6	233.2	274.0
92.5°	75.2	39.5	11.5	1.3	15.3	47.2	85.4	127.4	170.8	214.1	253.6
95°	62.4	30.6	7.6	1.3	11.5	37.0	72.6	113.4	154.2	196.3	235.8
97.5°	53.5	25.5	6.4	1.3	8.9	31.9	62.4	100.7	140.2	179.7	217.9
100°	45.9	20.4	5.1	1.3	7.6	26.8	54.8	89.2	126.2	164.4	201.4
102.5°	39.5	16.6	3.8	1.3	6.4	22.9	48.4	80.3	113.4	150.4	186.1
105°	34.4	14.0	3.8	1.3	5.1	20.4	43.3	71.4	104.5	137.6	172.0
107.5°	29.3	11.5	2.5	1.3	3.8	16.6	38.2	65.0	94.3	126.2	158.0
110°	25.5	10.2	2.5	1.3	3.8	15.3	33.1	58.6	85.4	114.7	145.3

TEST NUMBER: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	21.7	7.6	2.5	1.3	2.5	12.7	29.3	52.3	77.7	104.5	133.8
115°	19.1	6.4	1.3	1.3	2.5	11.5	26.8	47.2	70.1	95.6	122.3
117.5°	15.3	5.1	1.3	1.3	1.3	8.9	22.9	42.1	63.7	87.9	112.2
120°	12.7	5.1	1.3	1.3	1.3	7.6	20.4	37.0	57.3	79.0	102.0
122.5°	11.5	3.8	1.3	1.3	1.3	6.4	17.8	33.1	51.0	71.4	93.0
125°	10.2	3.8	1.3	1.3	1.3	5.1	15.3	29.3	45.9	63.7	84.1
127.5°	7.6	3.8	1.3	1.3	1.3	3.8	14.0	25.5	40.8	57.3	75.2
130°	6.4	2.5	1.3	1.3	1.3	3.8	11.5	22.9	35.7	51.0	67.5
132.5°	5.1	2.5	1.3	1.3	1.3	2.5	8.9	17.8	30.6	44.6	59.9
135°	5.1	2.5	1.3	1.3	1.3	2.5	6.4	15.3	25.5	38.2	51.0
137.5°	5.1	1.3	1.3	1.3	1.3	2.5	5.1	11.5	20.4	30.6	42.1
140°	3.8	1.3	1.3	1.3	1.3	1.3	3.8	8.9	16.6	25.5	35.7
142.5°	3.8	1.3	1.3	1.3	1.3	1.3	3.8	6.4	12.7	20.4	28.0
145°	2.5	1.3	1.3	1.3	1.3	1.3	2.5	5.1	10.2	15.3	22.9
147.5°	2.5	1.3	1.3	1.3	1.3	1.3	2.5	3.8	7.6	12.7	17.8
150°	2.5	1.3	1.3	1.3	1.3	1.3	2.5	3.8	5.1	8.9	14.0
152.5°	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5	3.8	6.4	8.9
155°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	3.8	5.1	6.4
157.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5	3.8	5.1
160°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5	3.8
162.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5
165°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	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	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: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2
2.5°	1212.0	1203.1	1205.6	1204.3	1206.9	1210.7	1210.7	1209.4	1209.4	1206.9	1204.3
5°	1209.4	1200.5	1204.3	1203.1	1205.6	1209.4	1209.4	1208.2	1208.2	1204.3	1203.1
7.5°	1201.8	1195.4	1198.0	1198.0	1200.5	1204.3	1204.3	1203.1	1203.1	1199.2	1198.0
10°	1194.1	1186.5	1190.3	1190.3	1192.9	1198.0	1198.0	1196.7	1196.7	1192.9	1191.6
12.5°	1181.4	1173.8	1180.1	1181.4	1184.0	1189.0	1187.8	1187.8	1187.8	1184.0	1182.7
15°	1166.1	1161.0	1167.4	1168.7	1172.5	1178.9	1178.9	1178.9	1178.9	1175.0	1173.8
17.5°	1149.5	1145.7	1152.1	1154.6	1159.7	1166.1	1166.1	1167.4	1168.7	1166.1	1164.8
20°	1130.4	1127.9	1134.2	1139.3	1147.0	1153.4	1155.9	1157.2	1159.7	1157.2	1155.9
22.5°	1108.8	1108.8	1117.7	1122.8	1131.7	1138.1	1141.9	1145.7	1148.3	1145.7	1144.4
25°	1084.5	1088.4	1097.3	1106.2	1116.4	1122.8	1126.6	1131.7	1134.2	1133.0	1131.7
27.5°	1061.6	1066.7	1078.2	1087.1	1096.0	1106.2	1110.0	1116.4	1119.0	1119.0	1117.7
30°	1034.8	1042.5	1055.2	1065.4	1076.9	1087.1	1092.2	1098.6	1102.4	1099.8	1101.1
32.5°	1009.4	1022.1	1032.3	1043.8	1056.5	1066.7	1073.1	1080.7	1084.5	1083.3	1084.5
35°	981.3	994.1	1008.1	1019.5	1034.8	1045.0	1054.0	1060.3	1065.4	1064.2	1064.2
37.5°	950.7	967.3	981.3	996.6	1010.6	1022.1	1031.0	1038.7	1043.8	1043.8	1043.8
40°	921.4	939.3	953.3	971.1	989.0	999.2	1009.4	1017.0	1022.1	1023.4	1024.6
42.5°	889.6	908.7	925.2	944.4	962.2	974.9	986.4	995.3	1000.4	1003.0	1001.7
45°	860.2	878.1	897.2	918.9	935.4	948.2	962.2	972.4	977.5	978.8	980.0
47.5°	827.1	847.5	869.2	890.8	907.4	924.0	936.7	946.9	952.0	955.8	955.8
50°	795.2	816.9	841.1	864.1	881.9	898.5	911.2	922.7	929.1	931.6	932.9
52.5°	765.9	786.3	811.8	834.8	852.6	869.2	885.7	898.5	904.8	907.4	907.4
55°	730.3	755.7	783.8	805.4	824.6	843.7	860.2	873.0	879.4	883.2	885.7
57.5°	697.1	723.9	753.2	776.1	799.1	816.9	832.2	848.8	853.9	859.0	860.2
60°	665.3	692.0	720.1	745.5	768.5	787.6	805.4	819.5	828.4	830.9	833.5
62.5°	632.1	660.2	689.5	715.0	739.2	762.1	778.7	791.4	801.6	805.4	808.0
65°	600.3	629.6	658.9	685.6	711.1	734.1	750.6	763.4	773.6	780.0	781.2
67.5°	565.8	597.7	628.3	656.3	681.8	706.0	722.6	735.3	745.5	753.2	754.5
70°	534.0	567.1	597.7	628.3	653.8	678.0	695.8	708.6	720.1	725.2	727.7
72.5°	503.4	537.8	569.7	600.3	625.7	650.0	669.1	681.8	693.3	699.7	700.9
75°	474.1	508.5	542.9	572.2	599.0	623.2	642.3	656.3	666.5	672.9	675.5
77.5°	444.8	480.5	514.9	544.2	572.2	596.4	613.0	629.6	639.8	647.4	647.4
80°	415.5	452.4	488.1	517.4	545.5	567.1	586.2	602.8	613.0	620.7	620.7
82.5°	390.0	425.7	460.1	489.4	517.4	541.6	560.8	576.0	587.5	592.6	593.9
85°	360.7	400.2	432.0	463.9	490.7	513.6	532.7	549.3	559.5	564.6	567.1
87.5°	336.5	374.7	409.1	437.1	463.9	486.8	508.5	522.5	532.7	539.1	541.6
90°	313.5	350.5	384.9	412.9	441.0	462.6	483.0	497.0	508.5	513.6	516.1
92.5°	293.1	330.1	363.2	391.3	418.0	442.2	461.3	475.4	485.6	490.7	494.5
95°	274.0	309.7	341.5	372.1	397.6	419.3	439.7	453.7	465.2	469.0	472.8
97.5°	254.9	289.3	321.2	350.5	377.2	397.6	416.7	430.8	439.7	446.1	449.9
100°	238.3	271.5	302.0	330.1	355.6	374.7	395.1	407.8	416.7	421.8	426.9
102.5°	220.5	253.6	282.9	309.7	336.5	354.3	373.4	386.2	393.8	402.7	402.7
105°	205.2	235.8	265.1	290.6	313.5	335.2	351.7	364.5	373.4	379.8	379.8
107.5°	188.6	219.2	247.2	274.0	295.7	316.1	331.4	342.8	353.0	356.8	360.7
110°	175.9	202.6	230.7	256.2	276.6	295.7	311.0	323.7	332.6	336.5	339.0

TEST NUMBER: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	160.6	188.6	214.1	238.3	258.7	276.6	291.8	302.0	311.0	316.1	317.3
115°	147.8	174.6	197.5	220.5	242.1	257.4	271.5	281.7	290.6	294.4	296.9
117.5°	136.4	160.6	183.5	202.6	223.0	239.6	253.6	262.5	270.2	275.3	277.8
120°	124.9	147.8	168.2	187.3	206.5	221.8	234.5	243.4	252.3	256.2	256.2
122.5°	113.4	135.1	154.2	172.0	189.9	203.9	217.9	225.6	233.2	237.0	237.0
125°	103.2	123.6	141.5	158.0	174.6	187.3	198.8	207.7	215.4	217.9	217.9
127.5°	93.0	112.2	128.7	144.0	158.0	170.8	182.2	191.2	197.5	200.1	200.1
130°	84.1	100.7	116.0	131.3	145.3	155.5	167.0	174.6	178.4	182.2	183.5
132.5°	75.2	90.5	104.5	117.2	131.3	141.5	150.4	158.0	161.9	165.7	167.0
135°	66.3	80.3	93.0	105.8	117.2	127.4	135.1	141.5	146.6	149.1	150.4
137.5°	56.1	71.4	82.8	93.0	105.8	113.4	122.3	126.2	131.3	133.8	133.8
140°	47.2	58.6	71.4	81.6	91.8	99.4	107.1	113.4	117.2	118.5	118.5
142.5°	38.2	48.4	58.6	71.4	80.3	86.7	94.3	99.4	102.0	103.2	104.5
145°	30.6	38.2	47.2	58.6	68.8	76.5	80.3	85.4	87.9	89.2	90.5
147.5°	22.9	30.6	38.2	45.9	56.1	63.7	67.5	72.6	75.2	76.5	76.5
150°	17.8	22.9	28.0	35.7	43.3	52.3	57.3	61.2	62.4	63.7	63.7
152.5°	12.7	17.8	21.7	26.8	31.9	39.5	47.2	49.7	51.0	52.3	52.3
155°	8.9	12.7	15.3	19.1	22.9	29.3	35.7	39.5	40.8	42.1	42.1
157.5°	6.4	8.9	10.2	14.0	16.6	19.1	24.2	30.6	31.9	31.9	31.9
160°	3.8	5.1	6.4	8.9	10.2	12.7	15.3	19.1	22.9	22.9	22.9
162.5°	2.5	3.8	3.8	5.1	5.1	7.6	8.9	10.2	14.0	15.3	15.3
165°	1.3	2.5	2.5	2.5	2.5	2.5	3.8	3.8	6.4	7.6	7.6
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: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2
2.5°	1205.6	1208.2	1206.9	1206.9	1206.9	1209.4	1206.9	1195.4	1198.0	1200.5	1203.1
5°	1204.3	1205.6	1205.6	1204.3	1204.3	1206.9	1204.3	1192.9	1195.4	1198.0	1199.2
7.5°	1199.2	1200.5	1200.5	1200.5	1199.2	1201.8	1198.0	1187.8	1187.8	1190.3	1191.6
10°	1192.9	1195.4	1194.1	1192.9	1192.9	1192.9	1190.3	1178.9	1178.9	1180.1	1181.4
12.5°	1185.2	1185.2	1185.2	1184.0	1182.7	1182.7	1180.1	1168.7	1167.4	1169.9	1168.7
15°	1175.0	1177.6	1175.0	1173.8	1171.2	1171.2	1167.4	1155.9	1153.4	1154.6	1153.4
17.5°	1166.1	1167.4	1164.8	1162.3	1159.7	1158.5	1154.6	1141.9	1138.1	1139.3	1136.8
20°	1157.2	1157.2	1154.6	1152.1	1148.3	1144.4	1139.3	1126.6	1120.2	1120.2	1115.1
22.5°	1145.7	1145.7	1143.2	1139.3	1135.5	1130.4	1125.3	1112.6	1102.4	1099.8	1096.0
25°	1133.0	1131.7	1130.4	1126.6	1119.0	1113.9	1108.8	1094.7	1083.3	1078.2	1071.8
27.5°	1117.7	1117.7	1113.9	1110.0	1102.4	1096.0	1089.6	1076.9	1061.6	1055.2	1046.3
30°	1101.1	1101.1	1097.3	1092.2	1084.5	1076.9	1069.3	1054.0	1038.7	1029.7	1019.5
32.5°	1084.5	1083.3	1079.4	1074.3	1066.7	1055.2	1048.9	1033.6	1015.7	1005.5	991.5
35°	1064.2	1062.9	1059.1	1052.7	1042.5	1033.6	1023.4	1009.4	989.0	976.2	960.9
37.5°	1043.8	1042.5	1039.9	1031.0	1020.8	1010.6	997.9	983.9	964.7	948.2	932.9
40°	1023.4	1022.1	1017.0	1010.6	997.9	985.1	972.4	958.4	938.0	918.9	902.3
42.5°	1001.7	1000.4	994.1	986.4	972.4	959.7	944.4	929.1	908.7	885.7	869.2
45°	980.0	977.5	971.1	962.2	946.9	932.9	917.6	899.8	879.4	857.7	836.0
47.5°	957.1	953.3	946.9	934.2	921.4	906.1	888.3	869.2	848.8	824.6	801.6
50°	931.6	929.1	921.4	909.9	894.7	879.4	859.0	839.9	815.6	792.7	764.7
52.5°	907.4	902.3	895.9	883.2	867.9	851.3	829.7	806.7	782.5	760.8	731.5
55°	881.9	879.4	870.4	860.2	841.1	822.0	801.6	777.4	750.6	725.2	697.1
57.5°	857.7	852.6	845.0	830.9	814.4	795.2	773.6	748.1	718.8	692.0	661.4
60°	833.5	825.8	816.9	804.2	786.3	765.9	743.0	716.2	686.9	657.6	625.7
62.5°	806.7	800.3	790.2	777.4	759.6	737.9	713.7	685.6	657.6	627.0	592.6
65°	780.0	773.6	763.4	750.6	732.8	708.6	683.1	655.1	623.2	593.9	556.9
67.5°	753.2	746.8	735.3	721.3	703.5	680.5	653.8	624.5	592.6	560.8	522.5
70°	726.4	718.8	708.6	693.3	675.5	651.2	624.5	593.9	562.0	527.6	489.4
72.5°	699.7	693.3	680.5	666.5	647.4	623.2	596.4	565.8	532.7	497.0	458.8
75°	672.9	665.3	656.3	639.8	619.4	596.4	568.4	537.8	502.1	467.7	428.2
77.5°	646.1	639.8	628.3	611.7	592.6	568.4	540.4	509.8	474.1	438.4	396.3
80°	619.4	611.7	602.8	587.5	565.8	541.6	512.3	481.7	446.1	409.1	367.0
82.5°	592.6	585.0	574.8	559.5	539.1	514.9	486.8	453.7	418.0	379.8	340.3
85°	565.8	559.5	548.0	532.7	511.0	486.8	458.8	429.5	391.3	353.0	313.5
87.5°	539.1	532.7	521.2	506.0	485.6	461.3	433.3	402.7	365.8	330.1	286.7
90°	513.6	508.5	497.0	481.7	461.3	437.1	411.6	378.5	342.8	307.1	266.4
92.5°	490.7	485.6	475.4	460.1	442.2	415.5	390.0	358.1	322.4	285.5	246.0
95°	470.3	463.9	453.7	439.7	418.0	395.1	369.6	337.7	303.3	266.4	228.1
97.5°	447.3	441.0	430.8	415.5	397.6	373.4	347.9	317.3	282.9	248.5	210.3
100°	424.4	418.0	406.5	393.8	376.0	351.7	327.5	296.9	265.1	231.9	195.0
102.5°	401.4	395.1	384.9	372.1	354.3	332.6	308.4	279.1	247.2	214.1	179.7
105°	379.8	373.4	363.2	350.5	333.9	312.2	286.7	261.3	230.7	198.8	165.7
107.5°	358.1	351.7	342.8	330.1	313.5	293.1	268.9	242.1	214.1	183.5	151.7
110°	336.5	331.4	321.2	309.7	293.1	272.7	251.1	225.6	197.5	169.5	138.9

TEST NUMBER: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	316.1	311.0	300.8	288.0	274.0	254.9	233.2	209.0	182.2	155.5	126.2
115°	295.7	289.3	280.4	268.9	254.9	237.0	216.7	195.0	168.2	142.7	116.0
117.5°	275.3	270.2	261.3	249.8	237.0	219.2	200.1	179.7	154.2	130.0	105.8
120°	254.9	251.1	242.1	231.9	219.2	202.6	184.8	164.4	141.5	118.5	95.6
122.5°	235.8	231.9	223.0	214.1	201.4	186.1	169.5	150.4	130.0	108.3	87.9
125°	217.9	212.8	205.2	196.3	184.8	170.8	154.2	136.4	117.2	98.1	79.0
127.5°	198.8	195.0	189.9	179.7	168.2	155.5	140.2	124.9	107.1	89.2	71.4
130°	183.5	178.4	172.0	164.4	154.2	141.5	127.4	112.2	96.9	80.3	62.4
132.5°	165.7	160.6	155.5	147.8	138.9	127.4	114.7	100.7	86.7	71.4	56.1
135°	149.1	145.3	140.2	132.5	123.6	114.7	102.0	89.2	76.5	62.4	49.7
137.5°	133.8	130.0	124.9	119.8	110.9	102.0	90.5	79.0	67.5	54.8	43.3
140°	118.5	116.0	110.9	105.8	98.1	89.2	79.0	68.8	58.6	47.2	37.0
142.5°	103.2	100.7	96.9	91.8	85.4	77.7	68.8	59.9	49.7	40.8	31.9
145°	89.2	87.9	84.1	79.0	73.9	66.3	58.6	51.0	42.1	34.4	25.5
147.5°	75.2	73.9	71.4	67.5	62.4	56.1	49.7	42.1	35.7	28.0	20.4
150°	62.4	61.2	59.9	54.8	52.3	45.9	40.8	34.4	29.3	21.7	16.6
152.5°	51.0	51.0	48.4	44.6	42.1	37.0	33.1	28.0	22.9	17.8	12.7
155°	40.8	39.5	38.2	35.7	33.1	29.3	25.5	21.7	17.8	12.7	8.9
157.5°	31.9	30.6	29.3	26.8	24.2	22.9	19.1	15.3	11.5	8.9	6.4
160°	22.9	21.7	20.4	19.1	17.8	15.3	12.7	10.2	7.6	5.1	3.8
162.5°	15.3	14.0	14.0	12.7	11.5	8.9	7.6	6.4	5.1	3.8	2.5
165°	7.6	7.6	6.4	6.4	5.1	3.8	3.8	3.8	2.5	2.5	1.3
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: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2	1208.2
2.5°	1201.8	1201.8	1206.9	1205.6	1201.8	1209.4	1218.4
5°	1198.0	1198.0	1201.8	1201.8	1198.0	1205.6	1213.3
7.5°	1191.6	1190.3	1194.1	1194.1	1189.0	1195.4	1204.3
10°	1180.1	1178.9	1182.7	1182.7	1177.6	1184.0	1191.6
12.5°	1167.4	1164.8	1168.7	1167.4	1162.3	1168.7	1176.3
15°	1150.8	1149.5	1152.1	1149.5	1144.4	1150.8	1158.5
17.5°	1134.2	1130.4	1131.7	1131.7	1122.8	1129.2	1135.5
20°	1112.6	1107.5	1108.8	1107.5	1101.1	1104.9	1112.6
22.5°	1090.9	1083.3	1083.3	1082.0	1074.3	1079.4	1085.8
25°	1064.2	1055.2	1055.2	1054.0	1045.0	1048.9	1055.2
27.5°	1037.4	1028.5	1024.6	1023.4	1014.5	1014.5	1023.4
30°	1009.4	996.6	994.1	990.2	981.3	981.3	989.0
32.5°	982.6	964.7	959.7	954.6	945.6	944.4	953.3
35°	946.9	932.9	924.0	918.9	908.7	906.1	913.8
37.5°	917.6	899.8	887.0	880.6	870.4	866.6	876.8
40°	885.7	866.6	850.0	846.2	830.9	825.8	834.8
42.5°	850.0	829.7	813.1	805.4	794.0	788.9	790.2
45°	814.4	792.7	774.9	764.7	753.2	744.3	749.4
47.5°	777.4	758.3	736.6	721.3	707.3	700.9	703.5
50°	740.4	717.5	697.1	680.5	664.0	656.3	661.4
52.5°	703.5	679.3	656.3	638.5	619.4	611.7	613.0
55°	667.8	642.3	615.6	596.4	578.6	567.1	564.6
57.5°	632.1	604.1	576.0	554.4	531.4	521.2	517.4
60°	593.9	564.6	535.3	509.8	485.6	474.1	469.0
62.5°	558.2	526.3	493.2	466.4	442.2	426.9	423.1
65°	523.8	486.8	453.7	423.1	396.3	379.8	374.7
67.5°	486.8	448.6	412.9	379.8	354.3	332.6	330.1
70°	452.4	411.6	372.1	337.7	309.7	288.0	277.8
72.5°	418.0	376.0	335.2	298.2	262.5	242.1	234.5
75°	384.9	341.5	298.2	260.0	220.5	196.3	188.6
77.5°	354.3	309.7	263.8	221.8	184.8	154.2	144.0
80°	325.0	279.1	230.7	187.3	147.8	114.7	103.2
82.5°	294.4	251.1	201.4	155.5	114.7	80.3	66.3
85°	267.6	224.3	174.6	128.7	87.9	51.0	35.7
87.5°	246.0	198.8	154.2	108.3	66.3	29.3	10.2
90°	224.3	178.4	133.8	89.2	49.7	16.6	1.3
92.5°	205.2	161.9	117.2	76.5	38.2	11.5	1.3
95°	187.3	145.3	103.2	63.7	30.6	7.6	1.3
97.5°	170.8	131.3	91.8	54.8	25.5	6.4	1.3
100°	156.8	118.5	81.6	48.4	21.7	5.1	1.3
102.5°	142.7	107.1	72.6	42.1	19.1	3.8	1.3
105°	131.3	96.9	65.0	38.2	16.6	3.8	1.3
107.5°	119.8	87.9	58.6	33.1	14.0	2.5	1.3
110°	108.3	80.3	52.3	29.3	12.7	2.5	1.3



TEST NUMBER: P1213157

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	99.4	72.6	47.2	26.8	10.2	2.5	1.3
115°	90.5	65.0	42.1	22.9	8.9	1.3	1.3
117.5°	81.6	58.6	37.0	20.4	7.6	1.3	1.3
120°	73.9	52.3	33.1	17.8	6.4	1.3	1.3
122.5°	66.3	47.2	29.3	15.3	5.1	1.3	1.3
125°	59.9	42.1	25.5	12.7	3.8	1.3	1.3
127.5°	53.5	37.0	22.9	11.5	3.8	1.3	1.3
130°	47.2	33.1	19.1	8.9	2.5	1.3	1.3
132.5°	42.1	28.0	16.6	7.6	2.5	1.3	1.3
135°	37.0	24.2	14.0	5.1	2.5	1.3	1.3
137.5°	31.9	20.4	11.5	3.8	1.3	1.3	1.3
140°	26.8	17.8	8.9	3.8	1.3	1.3	1.3
142.5°	22.9	14.0	6.4	2.5	1.3	1.3	1.3
145°	17.8	11.5	5.1	2.5	1.3	1.3	1.3
147.5°	14.0	8.9	3.8	2.5	1.3	1.3	1.3
150°	10.2	6.4	3.8	1.3	1.3	1.3	1.3
152.5°	7.6	5.1	2.5	1.3	1.3	1.3	1.3
155°	5.1	3.8	2.5	1.3	1.3	1.3	1.3
157.5°	3.8	2.5	1.3	1.3	1.3	1.3	1.3
160°	2.5	1.3	1.3	1.3	1.3	1.3	1.3
162.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3
165°	1.3	1.3	1.3	1.3	1.3	1.3	1.3
167.5°	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
172.5°	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
177.5°	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

(END OF REPORT)