

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: P1213003

Luminaire Tested: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213003
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33519)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U
Description: 2FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

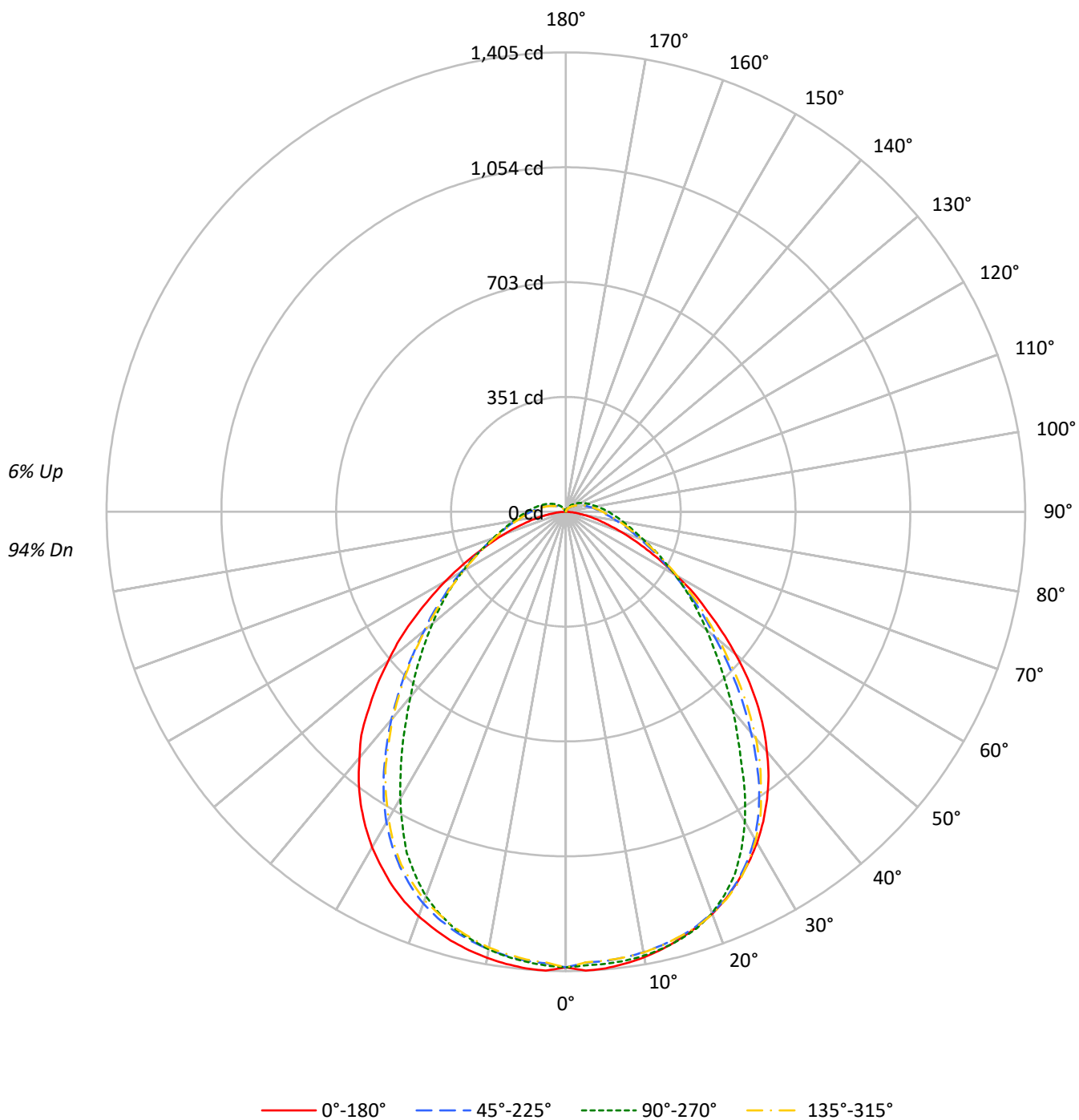
Lumens per Lamp: N/A
Luminaire Lumens: 3526.0 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 2' x H: 0.12')
CIE Type: Direct

Input Watts (W): 36
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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94		
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81	79		
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69	67		
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60	57		
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52	50		
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46	44		
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41	39		
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37	35		
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33	31		
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30	28		
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27	26		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	22519	22519	22519	22519
5°	22617	21801	22617	21705
10°	22454	21222	22492	20926
15°	22248	20588	22348	20051
20°	22013	19773	22141	18938
25°	21592	18562	21831	17470
30°	21065	16786	21341	15539
35°	20281	14608	20672	13602
40°	19189	12776	19696	11854
45°	17773	11106	18350	10470
50°	15870	9760	16570	9266
55°	13641	8618	14631	8181
60°	11378	7567	12405	7130
65°	9227	6689	10157	6204
70°	7231	5937	8098	5490
75°	5550	5483	6248	5043
80°	3841	5289	4528	4834
85°	2153	5317	2899	4890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 18350 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.1	3.7
10°-20°	378.8	10.7
20°-30°	561.3	15.9
30°-40°	623.6	17.7
40°-50°	565.3	16.0
50°-60°	438.1	12.4
60°-70°	297.5	8.4
70°-80°	189.3	5.4
80°-90°	121.0	3.4
90°-100°	81.6	2.3
100°-110°	55.9	1.6
110°-120°	37.3	1.1
120°-130°	23.2	0.7
130°-140°	12.8	0.4
140°-150°	6.0	0.2
150°-160°	2.2	0.1
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1072.2	30.4
0°-40°	1695.8	48.1
0°-60°	2699.2	76.6
0°-90°	3306.9	93.8
90°-120°	174.7	5.0
90°-150°	216.8	6.1
90°-180°	219.0	6.2
0°-180°	3526.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1393	1393	1393	1393	1393	
5°	1402	1388	1402	1382	1402	133
15°	1352	1354	1358	1319	1352	382
25°	1246	1223	1260	1151	1246	574
35°	1073	935	1094	871	1073	669
45°	826	668	853	630	826	634
55°	527	470	566	446	527	475
65°	274	316	301	293	274	274
75°	110	211	123	194	110	118
85°	20	152	27	140	20	24
90°	0	131	2	120	0	1
95°	1	112	0	104	1	1
105°	1	82	0	77	1	1
115°	1	62	0	58	1	1
125°	1	46	1	41	1	1
135°	1	32	1	26	1	1
145°	1	21	1	15	1	1
155°	1	12	1	5	1	0
165°	0	0	0	0	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°	25°	30°	35°	40°	45°	50°
0°	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3
2.5°	1404.8	1403.2	1401.7	1399.4	1401.7	1407.8	1404.0	1395.6	1394.0	1380.2	1386.4
5°	1401.7	1399.4	1397.9	1395.6	1398.6	1406.3	1402.5	1394.8	1392.5	1379.5	1386.4
7.5°	1394.0	1392.5	1390.2	1390.2	1393.3	1400.9	1397.9	1389.4	1387.9	1374.9	1382.5
10°	1383.3	1382.5	1381.0	1381.0	1384.1	1393.3	1389.4	1381.8	1380.2	1368.0	1376.4
12.5°	1369.5	1370.3	1368.0	1368.0	1372.6	1381.8	1378.7	1370.3	1368.7	1358.0	1366.4
15°	1351.9	1352.7	1351.1	1351.9	1356.5	1367.2	1363.4	1355.7	1354.2	1345.8	1352.7
17.5°	1332.0	1332.7	1332.7	1332.0	1337.3	1348.1	1345.0	1338.1	1335.8	1328.9	1337.3
20°	1309.0	1309.0	1309.0	1309.0	1315.1	1325.8	1322.0	1316.6	1312.0	1306.7	1313.6
22.5°	1280.6	1279.8	1280.6	1282.9	1289.0	1297.5	1295.2	1289.0	1282.1	1279.1	1284.4
25°	1246.1	1248.4	1249.2	1251.5	1259.2	1266.1	1263.8	1257.6	1246.9	1244.6	1246.1
27.5°	1210.1	1211.6	1213.9	1213.2	1223.9	1230.8	1226.2	1220.8	1205.5	1203.2	1201.7
30°	1169.5	1171.8	1173.3	1172.6	1181.0	1188.6	1184.0	1177.2	1156.5	1154.9	1142.7
32.5°	1123.5	1125.8	1127.3	1127.3	1139.6	1142.7	1134.2	1124.3	1102.0	1096.7	1086.0
35°	1072.9	1075.2	1076.0	1076.0	1088.3	1087.5	1076.8	1063.0	1038.4	1031.5	1013.1
37.5°	1018.5	1020.0	1020.8	1025.4	1030.8	1026.2	1012.4	994.8	976.4	957.2	937.3
40°	957.2	959.5	961.0	964.1	969.5	964.1	944.2	922.7	902.8	881.3	861.4
42.5°	894.4	901.3	899.7	899.0	902.0	887.5	872.1	847.6	827.7	805.5	785.5
45°	826.2	825.4	829.2	830.8	830.0	817.7	796.3	774.0	754.1	731.1	714.3
47.5°	754.1	753.3	756.4	757.9	753.3	740.3	723.5	698.2	681.3	661.4	648.4
50°	678.2	678.2	682.8	678.2	675.9	662.9	649.1	623.8	610.8	593.2	585.5
52.5°	602.4	609.3	604.7	603.1	600.8	587.8	577.1	556.4	545.7	538.0	528.8
55°	527.3	534.9	531.9	529.6	528.8	518.1	508.1	492.8	485.9	480.5	475.2
57.5°	463.7	462.9	461.4	459.1	459.8	451.4	441.4	433.0	429.9	427.6	429.2
60°	390.1	396.2	393.9	394.7	395.4	393.9	385.5	380.1	380.9	381.7	384.0
62.5°	329.5	334.9	338.7	335.7	337.2	339.5	334.9	333.4	336.4	339.5	342.6
65°	273.6	279.0	282.8	282.0	286.6	291.2	290.5	292.0	298.9	302.7	306.6
67.5°	223.0	228.4	233.7	234.5	241.4	248.3	251.4	256.7	264.4	269.8	274.4
70°	179.3	183.9	190.1	193.9	203.1	212.3	217.7	228.4	233.0	240.6	243.7
72.5°	140.2	144.1	152.5	161.7	169.4	180.9	191.6	200.8	207.7	216.1	219.9
75°	109.6	111.1	120.3	131.1	141.8	154.8	166.3	176.3	185.5	193.9	200.0
77.5°	80.5	82.8	91.2	105.8	118.0	131.8	144.8	155.6	165.5	174.0	182.4
80°	55.9	60.5	69.7	84.3	98.1	113.4	125.7	137.9	148.7	157.1	165.5
82.5°	36.0	39.9	52.9	67.4	82.0	97.3	110.4	122.6	134.1	143.3	151.0
85°	19.9	25.3	38.3	53.6	68.2	83.5	97.3	109.6	121.1	129.5	137.2
87.5°	7.7	15.3	27.6	42.2	56.7	71.3	85.8	97.3	108.8	118.0	124.9
90°	0.0	9.2	20.7	35.3	49.8	64.4	78.2	90.4	101.2	109.6	117.3
92.5°	0.8	6.1	16.1	28.4	42.2	55.9	69.0	81.2	92.0	100.4	107.3
95°	0.8	4.6	13.0	24.5	36.8	49.8	62.1	73.6	83.5	92.0	98.9
97.5°	0.8	3.1	10.7	21.5	32.2	45.2	56.7	67.4	76.6	85.1	90.4
100°	0.8	3.1	9.2	18.4	29.1	40.6	51.3	62.1	70.5	77.4	83.5
102.5°	0.8	2.3	7.7	16.1	26.1	36.0	46.7	56.7	64.4	71.3	77.4
105°	0.8	2.3	6.9	13.8	23.0	33.0	42.2	51.3	59.8	65.9	71.3
107.5°	0.8	1.5	6.1	11.5	19.9	29.9	39.1	46.7	54.4	60.5	65.9
110°	0.8	1.5	5.4	10.7	17.6	26.8	35.3	42.9	49.8	55.9	60.5

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.8	1.5	4.6	10.0	16.1	23.8	32.2	39.1	46.0	51.3	55.9
115°	0.8	1.5	4.6	9.2	14.6	20.7	28.4	36.0	41.4	47.5	51.3
117.5°	0.8	1.5	3.8	7.7	13.8	19.2	26.1	32.2	38.3	43.7	47.5
120°	0.8	1.5	3.8	6.9	12.3	17.6	23.0	29.1	35.3	39.1	42.9
122.5°	0.8	1.5	3.1	6.9	10.7	16.1	20.7	26.1	31.4	36.0	39.9
125°	0.8	1.5	3.1	6.1	10.0	14.6	19.2	23.0	28.4	32.2	36.0
127.5°	0.8	1.5	3.1	5.4	9.2	13.0	17.6	21.5	25.3	29.1	32.2
130°	0.8	1.5	2.3	4.6	8.4	11.5	15.3	19.9	23.0	26.1	29.1
132.5°	0.8	1.5	2.3	4.6	6.9	10.0	13.8	17.6	20.7	23.8	26.1
135°	0.8	1.5	2.3	3.8	6.1	9.2	11.5	15.3	18.4	21.5	23.8
137.5°	0.8	1.5	2.3	3.8	5.4	7.7	10.0	13.0	16.1	18.4	21.5
140°	0.8	1.5	2.3	3.1	4.6	6.9	9.2	10.7	13.8	16.1	18.4
142.5°	0.8	1.5	2.3	3.1	4.6	6.1	7.7	9.2	11.5	13.8	16.1
145°	0.8	1.5	2.3	3.1	3.8	5.4	6.9	8.4	9.2	11.5	13.0
147.5°	0.8	1.5	2.3	3.1	3.1	4.6	6.1	6.9	8.4	9.2	10.7
150°	0.8	1.5	2.3	2.3	3.1	3.8	5.4	6.1	6.9	8.4	9.2
152.5°	0.8	1.5	2.3	2.3	3.1	3.8	4.6	5.4	6.1	6.9	7.7
155°	0.8	1.5	2.3	2.3	2.3	3.1	3.8	4.6	5.4	6.1	6.9
157.5°	1.5	1.5	1.5	2.3	2.3	3.1	3.1	3.8	4.6	4.6	5.4
160°	1.5	1.5	1.5	2.3	2.3	2.3	3.1	3.1	3.8	3.8	4.6
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3
2.5°	1384.8	1387.1	1394.0	1394.0	1392.5	1391.0	1391.0	1388.7	1390.2	1393.3	1391.7
5°	1384.8	1387.1	1394.0	1394.0	1392.5	1391.0	1390.2	1387.9	1390.2	1393.3	1391.7
7.5°	1380.2	1383.3	1390.2	1390.2	1388.7	1387.9	1386.4	1384.8	1387.1	1390.2	1388.7
10°	1374.1	1377.2	1384.1	1384.1	1382.5	1382.5	1380.2	1378.7	1381.8	1384.1	1383.3
12.5°	1364.9	1368.7	1374.9	1374.1	1372.6	1373.3	1371.0	1368.0	1371.0	1373.3	1374.1
15°	1351.9	1356.5	1362.6	1361.1	1358.8	1360.3	1356.5	1354.2	1356.5	1361.1	1360.3
17.5°	1335.0	1338.1	1342.7	1342.7	1340.4	1338.9	1337.3	1335.0	1336.6	1339.6	1340.4
20°	1311.3	1315.1	1317.4	1315.1	1314.3	1312.0	1309.0	1306.7	1309.7	1314.3	1315.1
22.5°	1279.8	1280.6	1286.0	1280.6	1276.8	1276.0	1272.9	1268.4	1272.9	1276.8	1277.5
25°	1240.8	1244.6	1242.3	1233.1	1233.1	1227.0	1225.4	1223.1	1223.9	1230.8	1233.9
27.5°	1190.9	1192.5	1186.3	1178.7	1171.8	1168.0	1162.6	1163.4	1163.4	1172.6	1175.6
30°	1136.5	1128.1	1122.7	1110.5	1105.1	1095.9	1094.4	1094.4	1092.9	1097.4	1111.2
32.5°	1071.4	1059.9	1051.5	1040.0	1030.8	1021.6	1017.0	1019.3	1018.5	1030.0	1034.6
35°	1000.1	993.2	975.6	961.0	955.7	941.9	941.9	935.0	939.6	952.6	958.0
37.5°	925.0	914.3	899.7	883.6	879.8	869.1	865.2	861.4	871.4	873.7	879.0
40°	848.4	838.4	824.6	809.3	809.3	796.3	796.3	796.3	797.0	801.6	811.6
42.5°	775.6	764.8	752.6	741.9	740.3	730.4	730.4	729.6	731.1	735.0	744.2
45°	705.1	696.6	683.6	678.2	679.0	668.3	670.6	668.3	671.3	675.2	678.2
47.5°	639.9	634.6	629.2	621.5	619.2	618.5	614.6	611.6	616.9	616.9	621.5
50°	579.4	576.3	573.2	568.7	569.4	566.4	561.8	561.8	565.6	566.4	569.4
52.5°	526.5	522.7	518.8	519.6	520.4	518.8	516.5	514.2	516.5	518.1	521.9
55°	473.6	470.6	474.4	472.9	474.4	472.9	471.3	469.8	473.6	471.3	475.2
57.5°	426.1	429.2	430.7	427.6	429.9	428.4	429.2	426.9	429.9	431.5	430.7
60°	382.4	387.0	384.7	385.5	388.6	387.0	384.0	386.3	389.3	390.1	389.3
62.5°	342.6	347.9	350.2	348.7	349.5	347.9	350.2	347.2	351.0	352.5	350.2
65°	306.6	312.7	314.2	314.2	314.2	312.7	315.0	315.7	317.3	317.3	315.7
67.5°	275.9	281.3	282.8	284.3	282.8	281.3	281.3	282.0	285.1	286.6	285.1
70°	248.3	253.7	254.4	254.4	255.2	256.7	253.7	255.2	257.5	258.3	257.5
72.5°	224.5	229.9	231.4	230.7	231.4	232.2	232.2	230.7	233.0	234.5	234.5
75°	205.4	208.5	210.0	210.0	210.8	211.5	211.5	210.8	212.3	213.1	213.8
77.5°	187.8	190.1	192.4	192.4	193.1	192.4	193.9	193.9	194.7	195.4	196.2
80°	170.1	173.2	174.7	175.5	177.0	177.8	177.8	177.8	178.6	179.3	179.3
82.5°	156.3	158.6	160.9	163.2	163.2	164.0	164.0	164.0	164.8	164.8	165.5
85°	142.5	145.6	147.9	149.4	150.2	151.0	151.0	151.7	151.7	151.7	152.5
87.5°	130.3	134.1	135.6	137.2	137.9	139.5	139.5	139.5	140.2	140.2	140.2
90°	121.9	125.7	127.2	128.8	129.5	130.3	130.3	131.1	131.1	131.8	131.8
92.5°	111.9	115.7	118.8	118.8	119.6	121.1	120.3	120.3	121.1	121.9	121.9
95°	104.2	107.3	109.6	110.4	111.1	111.1	111.1	111.9	111.1	111.9	111.9
97.5°	95.0	98.1	100.4	101.9	102.7	102.7	102.7	103.5	102.7	103.5	103.5
100°	87.4	90.4	92.7	93.5	95.0	95.0	95.0	95.0	95.0	95.0	95.8
102.5°	81.2	84.3	85.8	86.6	87.4	88.1	88.1	88.1	88.1	88.9	88.9
105°	75.1	78.2	79.7	80.5	81.2	82.0	82.0	82.0	82.8	82.8	82.0
107.5°	69.7	72.0	73.6	75.1	75.9	75.9	76.6	76.6	76.6	76.6	76.6
110°	64.4	66.7	69.0	70.5	70.5	71.3	71.3	72.0	72.0	71.3	72.0

TEST NUMBER: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	59.0	62.1	63.6	65.1	65.9	66.7	66.7	66.7	66.7	66.7	66.7
115°	54.4	57.5	59.0	60.5	61.3	62.1	62.1	62.1	62.1	62.1	62.1
117.5°	50.6	53.6	55.2	55.9	56.7	57.5	58.2	58.2	58.2	58.2	57.5
120°	46.7	49.0	50.6	52.1	52.9	53.6	53.6	53.6	53.6	53.6	53.6
122.5°	42.9	45.2	46.7	48.3	49.0	49.8	49.8	49.8	49.8	49.8	49.8
125°	39.1	41.4	42.9	44.4	45.2	46.0	46.0	46.0	46.0	46.0	46.0
127.5°	35.3	37.6	39.9	40.6	41.4	42.2	42.2	42.2	42.9	42.2	42.2
130°	31.4	33.7	36.0	36.8	37.6	38.3	39.1	39.1	39.1	39.1	38.3
132.5°	28.4	30.7	32.2	33.0	34.5	34.5	35.3	35.3	35.3	35.3	34.5
135°	26.1	27.6	29.1	29.9	31.4	31.4	31.4	32.2	32.2	31.4	30.7
137.5°	23.0	24.5	26.1	26.8	27.6	28.4	28.4	29.1	28.4	28.4	28.4
140°	21.5	22.2	23.8	24.5	25.3	25.3	25.3	26.1	26.1	25.3	25.3
142.5°	18.4	19.9	21.5	22.2	23.0	23.0	23.0	23.0	23.0	23.0	23.0
145°	15.3	17.6	18.4	19.9	19.9	20.7	20.7	20.7	20.7	20.7	19.9
147.5°	13.0	14.6	16.9	17.6	17.6	18.4	18.4	18.4	18.4	18.4	17.6
150°	10.0	11.5	13.8	15.3	15.3	16.1	16.1	16.1	16.1	15.3	15.3
152.5°	8.4	10.0	10.7	12.3	13.0	13.0	13.0	13.8	13.0	13.0	13.0
155°	7.7	8.4	9.2	10.0	10.7	11.5	11.5	11.5	11.5	10.7	10.7
157.5°	6.1	6.9	7.7	8.4	9.2	10.0	10.0	10.0	10.0	10.0	9.2
160°	4.6	5.4	6.1	6.1	6.9	7.7	8.4	7.7	7.7	7.7	7.7
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3
2.5°	1390.2	1389.4	1391.7	1387.9	1376.4	1379.5	1377.9	1384.8	1386.4	1387.9	1394.8
5°	1390.2	1389.4	1391.0	1387.9	1375.6	1377.9	1376.4	1383.3	1384.8	1385.6	1392.5
7.5°	1387.1	1386.4	1388.7	1384.8	1371.8	1374.9	1372.6	1379.5	1380.2	1381.0	1387.1
10°	1381.0	1380.2	1381.8	1378.7	1365.7	1368.7	1365.7	1372.6	1372.6	1374.1	1378.7
12.5°	1371.8	1370.3	1373.3	1369.5	1355.0	1358.8	1357.3	1361.8	1362.6	1363.4	1368.0
15°	1358.8	1357.3	1359.5	1357.3	1344.2	1345.0	1342.7	1349.6	1350.4	1348.8	1353.4
17.5°	1339.6	1338.1	1342.7	1341.2	1328.1	1331.2	1330.4	1332.0	1334.3	1330.4	1336.6
20°	1315.9	1317.4	1318.9	1319.7	1309.7	1309.7	1309.0	1312.0	1314.3	1311.3	1315.9
22.5°	1280.6	1284.4	1289.0	1290.6	1283.7	1282.9	1287.5	1286.0	1288.3	1286.7	1289.8
25°	1236.2	1243.8	1248.4	1253.0	1249.2	1250.7	1257.6	1259.2	1259.2	1258.4	1261.5
27.5°	1181.0	1190.9	1199.4	1209.3	1205.5	1208.6	1220.1	1221.6	1224.7	1221.6	1227.7
30°	1115.1	1124.3	1140.4	1154.9	1156.5	1161.1	1177.2	1178.7	1187.1	1184.0	1186.3
32.5°	1049.2	1053.8	1072.2	1086.7	1095.9	1107.4	1125.0	1128.1	1139.6	1141.9	1141.9
35°	966.4	979.4	996.3	1017.0	1028.5	1040.7	1064.5	1069.1	1086.0	1091.3	1097.4
37.5°	896.7	908.9	919.7	941.1	961.8	975.6	994.8	1006.3	1023.9	1033.8	1041.5
40°	822.3	832.3	843.8	865.2	882.9	903.6	922.7	936.5	958.7	970.2	980.2
42.5°	751.8	759.5	771.7	787.1	805.5	828.5	846.8	862.9	886.7	902.8	914.3
45°	689.0	693.6	704.3	715.8	731.9	755.6	773.3	794.0	813.1	830.0	843.8
47.5°	630.0	636.1	641.5	649.1	663.7	678.2	698.9	718.9	738.0	756.4	770.2
50°	575.5	575.5	584.0	589.3	599.3	612.3	628.4	642.2	666.0	679.0	696.6
52.5°	522.7	525.7	530.3	533.4	541.1	549.5	562.5	574.0	593.9	606.2	623.1
55°	475.9	479.0	481.3	482.8	487.4	497.4	502.0	511.2	525.0	534.9	549.5
57.5°	431.5	433.0	435.3	436.1	436.8	443.0	446.8	449.1	462.9	472.9	485.1
60°	390.9	390.9	393.2	392.4	391.6	394.7	393.9	396.2	404.6	410.8	416.1
62.5°	352.5	352.5	353.3	351.8	351.0	351.0	347.9	350.2	352.5	353.3	357.1
65°	317.3	321.1	318.0	318.8	314.2	312.7	311.1	306.6	305.8	302.7	304.3
67.5°	285.9	288.9	285.9	285.9	282.0	279.0	275.1	267.5	265.2	259.0	257.5
70°	260.6	258.3	259.8	257.5	252.9	249.1	243.7	237.6	229.9	222.2	216.9
72.5°	236.0	236.0	234.5	232.2	229.9	222.2	216.1	209.2	200.0	190.1	182.4
75°	212.3	213.1	213.1	210.8	206.9	200.0	193.1	183.2	173.2	161.7	151.7
77.5°	195.4	195.4	195.4	191.6	187.8	181.6	173.2	162.5	151.7	137.9	126.5
80°	179.3	178.6	178.6	174.0	170.1	163.2	154.8	144.1	132.6	118.0	105.0
82.5°	166.3	165.5	164.0	160.2	154.8	147.9	139.5	128.0	115.7	102.7	86.6
85°	152.5	151.7	150.2	146.4	141.0	134.9	125.7	114.2	101.9	87.4	72.0
87.5°	140.2	139.5	137.2	134.9	128.8	121.9	112.7	101.9	88.9	75.1	59.8
90°	131.8	130.3	128.8	125.7	120.3	112.7	103.5	92.0	78.9	65.1	49.8
92.5°	121.9	121.1	118.8	115.7	111.1	103.5	94.3	83.5	70.5	57.5	42.9
95°	111.9	111.1	109.6	106.5	101.9	95.0	86.6	75.9	63.6	50.6	37.6
97.5°	102.7	102.7	100.4	98.1	92.7	87.4	78.9	69.0	57.5	46.0	33.7
100°	95.0	95.0	92.7	89.7	85.8	80.5	72.0	62.8	52.1	41.4	29.1
102.5°	88.1	87.4	85.8	82.8	78.9	73.6	65.9	57.5	47.5	36.8	26.1
105°	82.0	81.2	79.7	76.6	73.6	67.4	61.3	52.9	42.9	33.0	23.0
107.5°	75.9	75.1	74.3	71.3	67.4	62.1	55.9	47.5	39.1	29.9	20.7
110°	70.5	69.7	68.2	65.1	61.3	56.7	50.6	43.7	35.3	26.8	18.4

TEST NUMBER: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	65.9	65.1	63.6	60.5	57.5	52.1	46.7	39.1	32.2	24.5	16.1
115°	61.3	60.5	59.0	55.9	52.1	47.5	42.2	36.0	28.4	21.5	14.6
117.5°	56.7	55.9	54.4	52.1	48.3	43.7	38.3	32.2	25.3	19.9	13.0
120°	52.9	51.3	49.8	47.5	43.7	39.9	34.5	29.1	23.0	17.6	11.5
122.5°	49.0	47.5	46.0	43.7	39.9	36.0	30.7	26.1	21.5	16.1	10.7
125°	44.4	43.7	42.2	39.9	36.0	32.2	28.4	23.8	19.2	14.6	9.2
127.5°	40.6	39.9	38.3	35.3	32.2	29.1	25.3	21.5	16.9	12.3	8.4
130°	37.6	36.0	34.5	32.2	29.9	26.8	23.0	19.2	15.3	10.7	7.7
132.5°	33.7	32.2	30.7	29.1	26.8	23.8	20.7	16.9	13.8	10.0	6.9
135°	30.7	29.1	27.6	26.1	23.8	21.5	18.4	15.3	12.3	9.2	6.1
137.5°	26.8	26.1	25.3	23.8	21.5	19.2	16.9	13.0	10.7	8.4	5.4
140°	24.5	23.8	23.0	20.7	19.2	16.9	14.6	11.5	9.2	6.9	4.6
142.5°	22.2	21.5	19.9	18.4	16.9	15.3	12.3	10.7	8.4	6.1	4.6
145°	19.2	18.4	17.6	16.1	14.6	12.3	10.7	9.2	7.7	5.4	3.8
147.5°	17.6	16.9	15.3	13.8	12.3	10.7	10.0	8.4	6.1	4.6	3.1
150°	14.6	13.8	13.0	11.5	10.7	10.0	8.4	6.9	5.4	3.8	3.1
152.5°	12.3	11.5	10.7	10.7	9.2	8.4	6.9	6.1	4.6	3.8	2.3
155°	10.7	10.7	10.0	9.2	7.7	6.9	6.1	4.6	3.8	3.1	2.3
157.5°	9.2	8.4	7.7	7.7	6.9	6.1	4.6	3.8	3.1	3.1	2.3
160°	7.7	6.9	6.9	6.1	5.4	4.6	3.8	3.8	3.1	2.3	2.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3
2.5°	1395.6	1387.1	1394.8	1404.8	1404.8	1403.2	1401.7	1404.8	1412.4	1409.4	1400.2
5°	1393.3	1384.8	1391.7	1401.7	1401.7	1399.4	1397.9	1400.2	1408.6	1404.8	1396.3
7.5°	1388.7	1381.0	1385.6	1394.8	1394.8	1392.5	1391.0	1394.0	1400.9	1397.1	1387.9
10°	1380.2	1371.8	1377.2	1385.6	1384.8	1383.3	1381.0	1384.8	1391.0	1385.6	1374.9
12.5°	1369.5	1361.1	1365.7	1373.3	1372.6	1369.5	1368.0	1370.3	1375.6	1372.6	1361.1
15°	1355.0	1346.5	1350.4	1358.0	1355.7	1353.4	1350.4	1351.1	1358.0	1352.7	1340.4
17.5°	1337.3	1328.1	1331.2	1338.1	1335.8	1333.5	1329.7	1330.4	1338.1	1330.4	1317.4
20°	1315.9	1305.9	1308.2	1316.6	1312.8	1309.0	1305.1	1305.1	1312.8	1304.4	1289.8
22.5°	1292.9	1282.9	1284.4	1290.6	1287.5	1280.6	1276.8	1279.1	1282.9	1272.2	1256.9
25°	1264.5	1251.5	1253.8	1259.9	1257.6	1248.4	1244.6	1246.1	1244.6	1236.2	1220.1
27.5°	1231.6	1217.8	1219.3	1223.1	1220.1	1211.6	1207.0	1207.8	1204.7	1194.0	1175.6
30°	1190.2	1183.3	1182.5	1184.8	1180.2	1171.8	1166.4	1164.9	1164.1	1148.8	1126.6
32.5°	1148.0	1141.9	1138.1	1141.1	1135.8	1127.3	1118.1	1118.1	1110.5	1095.9	1076.8
35°	1105.1	1095.2	1091.3	1093.6	1087.5	1076.8	1069.1	1065.3	1053.8	1035.4	1014.7
37.5°	1049.9	1043.0	1038.4	1040.7	1033.8	1026.2	1011.6	1007.8	995.5	970.2	944.2
40°	990.2	984.8	980.2	982.5	974.8	963.3	950.3	944.2	930.4	902.0	881.3
42.5°	925.8	923.5	918.1	926.5	911.2	899.7	886.7	876.7	862.9	832.3	808.5
45°	857.6	862.9	850.7	853.0	843.0	833.0	819.3	804.7	790.9	761.8	735.0
47.5°	785.5	789.4	780.9	782.5	771.7	762.5	750.3	731.9	716.6	691.3	667.5
50°	711.2	709.7	709.7	708.1	699.7	688.2	675.9	659.1	643.8	620.8	600.8
52.5°	632.3	635.3	636.9	640.7	630.0	623.1	603.9	589.3	577.8	554.1	537.2
55°	556.4	567.1	564.1	565.6	553.3	548.0	532.6	521.1	504.3	490.5	479.8
57.5°	487.4	489.7	491.2	493.5	488.2	477.5	465.2	456.0	443.0	431.5	423.8
60°	420.7	420.7	421.5	425.3	420.0	410.8	401.6	394.7	385.5	378.6	374.0
62.5°	357.9	363.3	364.0	361.0	354.1	349.5	343.3	339.5	333.4	331.1	329.5
65°	299.7	299.7	299.7	301.2	297.4	294.3	290.5	289.7	292.0	288.9	290.5
67.5°	250.6	248.3	246.8	247.5	246.0	244.5	243.7	246.0	250.6	250.6	254.4
70°	208.5	203.9	200.8	200.8	200.8	201.6	203.9	208.5	216.1	219.2	224.5
72.5°	174.0	164.0	159.4	159.4	160.2	163.2	170.1	178.6	185.5	191.6	198.5
75°	141.0	131.1	124.2	123.4	124.9	129.5	139.5	147.1	158.6	167.1	175.5
77.5°	114.2	101.9	93.5	92.7	95.0	101.9	114.2	124.2	137.2	146.4	155.6
80°	91.2	77.4	70.5	65.9	69.7	78.2	92.0	104.2	116.5	128.8	140.2
82.5°	72.8	59.8	49.0	44.4	49.0	60.5	73.6	88.1	100.4	113.4	124.9
85°	57.5	43.7	31.4	26.8	32.2	44.4	59.0	73.6	87.4	100.4	111.9
87.5°	45.2	31.4	19.2	13.0	19.9	33.0	46.7	61.3	75.9	88.9	100.4
90°	35.3	22.2	10.7	1.5	11.5	23.8	37.6	51.3	65.9	78.9	90.4
92.5°	29.9	16.9	6.1	0.0	6.9	17.6	30.7	44.4	57.5	70.5	82.0
95°	25.3	13.8	4.6	0.0	4.6	13.8	25.3	37.6	50.6	63.6	75.1
97.5°	21.5	10.7	3.1	0.0	3.1	10.7	20.7	33.0	44.4	56.7	67.4
100°	18.4	9.2	2.3	0.0	2.3	8.4	17.6	28.4	39.9	51.3	61.3
102.5°	16.1	7.7	1.5	0.0	1.5	6.9	14.6	24.5	34.5	45.2	55.2
105°	13.8	6.1	1.5	0.0	0.8	5.4	12.3	21.5	30.7	40.6	49.8
107.5°	12.3	5.4	1.5	0.0	0.8	4.6	10.7	18.4	27.6	36.0	44.4
110°	10.7	4.6	1.5	0.0	0.8	3.1	9.2	16.1	23.8	32.2	40.6

TEST NUMBER: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	9.2	3.8	0.8	0.0	0.0	2.3	7.7	13.8	20.7	29.1	36.0
115°	8.4	3.8	0.8	0.0	0.0	1.5	6.1	12.3	18.4	26.1	32.2
117.5°	7.7	3.1	0.8	0.0	0.8	1.5	5.4	10.7	16.1	22.2	29.1
120°	6.9	3.1	0.8	0.0	0.8	0.8	3.8	9.2	13.8	19.9	25.3
122.5°	6.1	3.1	0.8	0.0	0.8	0.8	3.1	7.7	12.3	17.6	22.2
125°	5.4	2.3	1.5	0.8	0.8	0.8	2.3	6.1	10.7	14.6	19.9
127.5°	5.4	2.3	1.5	0.8	0.8	0.8	1.5	5.4	8.4	13.0	17.6
130°	4.6	2.3	1.5	0.8	0.8	0.8	0.8	3.8	7.7	10.7	14.6
132.5°	3.8	2.3	1.5	0.8	0.8	0.8	0.8	2.3	5.4	9.2	12.3
135°	3.8	2.3	1.5	0.8	0.8	0.8	0.8	1.5	3.8	6.9	10.0
137.5°	3.1	1.5	1.5	0.8	0.8	0.8	0.8	0.8	3.1	5.4	7.7
140°	3.1	1.5	1.5	0.8	0.8	0.8	0.8	0.8	2.3	3.8	6.1
142.5°	2.3	1.5	1.5	0.8	0.8	0.8	0.8	0.8	1.5	3.1	4.6
145°	2.3	1.5	1.5	0.8	0.8	0.8	0.8	0.8	0.8	1.5	3.1
147.5°	2.3	2.3	1.5	0.8	0.8	0.8	0.8	0.8	0.8	1.5	2.3
150°	2.3	1.5	1.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5
152.5°	2.3	1.5	1.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5
155°	2.3	1.5	1.5	0.8	0.8	0.8	0.8	0.8	0.8	1.5	1.5
157.5°	2.3	1.5	1.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5
160°	2.3	1.5	1.5	0.8	1.5	0.8	1.5	1.5	1.5	1.5	1.5
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3
2.5°	1397.1	1382.5	1390.2	1387.9	1391.0	1397.1	1396.3	1394.8	1394.8	1392.5	1389.4
5°	1392.5	1378.7	1385.6	1381.8	1385.6	1391.0	1390.2	1387.9	1389.4	1385.6	1381.8
7.5°	1383.3	1371.0	1377.2	1374.1	1377.2	1382.5	1380.2	1379.5	1381.0	1374.9	1372.6
10°	1372.6	1358.8	1365.7	1361.8	1365.7	1369.5	1368.0	1364.9	1368.0	1361.8	1359.5
12.5°	1355.7	1344.2	1348.8	1347.3	1349.6	1353.4	1350.4	1348.1	1349.6	1344.2	1339.6
15°	1337.3	1325.8	1329.7	1327.4	1328.9	1333.5	1328.1	1327.4	1325.8	1320.5	1318.9
17.5°	1313.6	1302.8	1306.7	1302.8	1305.1	1303.6	1302.8	1299.0	1299.0	1292.9	1288.3
20°	1284.4	1275.2	1272.9	1269.9	1272.9	1269.9	1265.3	1262.2	1261.5	1255.3	1251.5
22.5°	1250.7	1240.0	1241.5	1233.1	1233.9	1229.3	1221.6	1218.5	1215.5	1208.6	1203.2
25°	1210.1	1199.4	1191.7	1186.3	1179.5	1178.7	1168.7	1161.1	1160.3	1151.9	1151.1
27.5°	1164.1	1151.9	1145.7	1132.7	1124.3	1117.4	1108.9	1101.3	1097.4	1088.3	1082.1
30°	1111.2	1097.4	1082.1	1072.9	1059.9	1054.5	1040.0	1030.8	1027.7	1017.7	1013.1
32.5°	1051.5	1036.9	1024.6	1007.0	992.5	984.8	970.2	961.0	957.2	946.5	940.3
35°	986.3	970.2	955.7	938.8	927.3	914.3	896.7	887.5	879.0	875.2	870.6
37.5°	918.1	900.5	883.6	866.8	856.8	841.5	826.2	820.0	810.1	806.2	801.6
40°	847.6	830.0	813.9	797.8	786.3	772.5	758.7	756.4	745.7	741.9	738.8
42.5°	777.9	759.5	741.1	729.6	721.2	707.4	698.2	695.9	686.7	684.4	684.4
45°	715.0	692.0	676.7	666.7	659.8	648.4	640.7	639.2	631.5	630.0	630.0
47.5°	647.6	626.1	614.6	608.5	602.4	593.9	589.3	589.3	581.7	580.1	579.4
50°	584.7	564.8	556.4	550.3	549.5	543.4	539.5	538.0	538.0	532.6	533.4
52.5°	525.0	515.0	508.1	504.3	499.7	495.8	492.8	492.8	490.5	486.6	488.2
55°	469.8	458.3	459.1	456.0	453.7	451.4	452.2	447.6	446.8	443.7	446.0
57.5°	414.6	414.6	413.1	410.8	406.9	408.5	408.5	408.5	404.6	402.3	404.6
60°	367.9	370.2	366.3	368.6	367.1	367.9	366.3	366.3	364.0	363.3	364.0
62.5°	326.5	330.3	328.8	331.8	330.3	331.1	332.6	329.5	328.0	326.5	328.0
65°	289.7	294.3	293.5	295.8	296.6	297.4	298.1	296.6	295.1	293.5	292.8
67.5°	257.5	262.1	265.2	265.9	266.7	269.0	268.2	266.7	265.2	262.9	262.1
70°	228.4	234.5	238.3	239.9	242.9	241.4	241.4	240.6	239.1	236.8	236.0
72.5°	203.9	210.8	214.6	216.1	219.2	219.2	218.4	217.7	216.1	213.8	213.1
75°	182.4	188.5	193.9	197.0	199.3	199.3	198.5	197.7	196.2	194.7	193.9
77.5°	165.5	170.9	175.5	179.3	180.9	181.6	180.9	179.3	179.3	178.6	177.8
80°	148.7	154.8	159.4	163.2	165.5	165.5	164.8	165.5	164.0	163.2	162.5
82.5°	134.1	141.0	146.4	150.2	151.7	152.5	151.7	152.5	151.0	151.0	151.0
85°	121.1	128.0	134.1	137.2	139.5	140.2	140.2	140.2	139.5	139.5	139.5
87.5°	110.4	117.3	123.4	126.5	128.8	129.5	129.5	130.3	128.8	128.8	128.8
90°	100.4	107.3	113.4	116.5	118.8	120.3	120.3	121.1	120.3	119.6	119.6
92.5°	91.2	98.9	105.0	108.1	110.4	112.7	112.7	113.4	111.9	111.9	111.9
95°	83.5	91.2	96.6	100.4	102.7	104.2	105.0	105.0	104.2	104.2	104.2
97.5°	76.6	83.5	88.9	92.7	95.0	95.8	96.6	97.3	96.6	96.6	96.6
100°	69.7	76.6	82.0	85.1	88.1	88.9	89.7	90.4	90.4	89.7	89.7
102.5°	63.6	70.5	75.1	78.9	81.2	82.8	83.5	83.5	83.5	83.5	83.5
105°	57.5	64.4	69.0	72.8	75.1	76.6	77.4	78.2	78.2	77.4	77.4
107.5°	52.1	58.2	63.6	66.7	69.7	71.3	72.0	72.0	72.8	72.0	72.0
110°	46.7	53.6	58.2	61.3	64.4	65.9	66.7	67.4	67.4	67.4	67.4



TEST NUMBER: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	42.9	48.3	52.9	55.9	59.0	60.5	61.3	62.1	62.8	62.1	62.1
115°	38.3	43.7	48.3	51.3	53.6	55.2	56.7	57.5	57.5	58.2	57.5
117.5°	34.5	39.1	43.7	46.7	49.0	51.3	52.1	52.9	53.6	52.9	52.9
120°	30.7	35.3	39.1	42.2	44.4	46.7	47.5	48.3	49.0	48.3	48.3
122.5°	27.6	31.4	35.3	38.3	40.6	42.2	43.7	43.7	44.4	44.4	44.4
125°	24.5	28.4	31.4	34.5	36.8	38.3	39.1	39.9	39.9	40.6	40.6
127.5°	21.5	24.5	28.4	30.7	33.0	34.5	35.3	36.0	36.0	36.8	36.8
130°	18.4	21.5	24.5	26.8	29.1	30.7	31.4	32.2	33.0	33.0	33.0
132.5°	16.1	19.2	21.5	23.8	25.3	26.8	28.4	29.1	29.1	29.1	29.1
135°	13.0	16.1	18.4	20.7	22.2	23.8	24.5	26.1	26.1	26.1	26.1
137.5°	10.7	13.8	16.1	17.6	19.2	20.7	21.5	22.2	23.0	23.0	23.0
140°	8.4	10.7	13.0	15.3	16.9	17.6	19.2	19.2	19.9	19.9	19.9
142.5°	6.1	8.4	10.0	12.3	13.8	15.3	16.1	16.9	16.9	16.9	16.9
145°	4.6	6.1	7.7	9.2	11.5	12.3	13.0	13.8	14.6	14.6	14.6
147.5°	3.1	4.6	5.4	6.9	8.4	10.0	10.7	11.5	12.3	12.3	12.3
150°	2.3	3.1	4.6	5.4	6.1	7.7	9.2	9.2	10.0	10.0	9.2
152.5°	1.5	2.3	3.1	3.8	4.6	5.4	6.9	6.9	7.7	7.7	7.7
155°	1.5	1.5	1.5	2.3	3.1	3.8	4.6	5.4	5.4	5.4	5.4
157.5°	1.5	1.5	1.5	1.5	1.5	2.3	3.1	3.8	3.8	3.8	3.8
160°	1.5	1.5	0.8	0.8	1.5	1.5	1.5	1.5	2.3	2.3	2.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3
2.5°	1391.7	1393.3	1393.3	1391.7	1391.0	1394.0	1390.2	1375.6	1380.2	1381.8	1386.4
5°	1384.8	1386.4	1386.4	1386.4	1384.8	1387.9	1384.1	1369.5	1374.9	1377.2	1380.2
7.5°	1374.9	1375.6	1377.2	1376.4	1374.9	1379.5	1375.6	1361.1	1364.9	1368.7	1372.6
10°	1361.8	1361.8	1362.6	1364.1	1362.6	1366.4	1362.6	1349.6	1353.4	1355.7	1360.3
12.5°	1344.2	1345.8	1346.5	1345.8	1345.0	1348.1	1346.5	1334.3	1335.8	1340.4	1345.0
15°	1320.5	1320.5	1324.3	1322.8	1322.8	1325.8	1327.4	1313.6	1315.9	1322.8	1327.4
17.5°	1291.3	1292.1	1295.2	1296.7	1295.9	1301.3	1302.1	1291.3	1290.6	1299.0	1303.6
20°	1253.8	1255.3	1259.2	1262.2	1262.2	1268.4	1270.7	1263.8	1264.5	1273.7	1275.2
22.5°	1207.8	1207.8	1214.7	1219.3	1223.1	1227.0	1233.9	1227.7	1227.7	1240.0	1246.9
25°	1151.1	1156.5	1158.8	1168.0	1173.3	1184.0	1190.2	1190.9	1191.7	1203.2	1207.8
27.5°	1088.3	1089.8	1096.7	1107.4	1113.5	1123.5	1135.0	1137.3	1141.1	1156.5	1163.4
30°	1017.0	1021.6	1024.6	1040.0	1048.4	1061.4	1076.0	1081.4	1084.4	1105.1	1113.5
32.5°	944.2	945.7	958.7	967.2	977.1	990.9	1007.8	1017.7	1023.9	1045.3	1057.6
35°	871.4	874.4	885.2	895.9	905.9	919.7	937.3	951.1	961.8	981.0	997.1
37.5°	804.7	812.4	814.7	825.4	833.0	846.8	859.1	879.0	889.8	909.7	930.4
40°	744.9	747.2	748.7	759.5	764.8	777.9	795.5	808.5	823.1	837.6	862.2
42.5°	685.9	687.4	689.7	695.9	702.0	711.2	724.2	737.3	752.6	774.0	790.1
45°	631.5	633.0	634.6	638.4	643.8	652.2	660.6	669.8	685.1	703.5	720.4
47.5°	580.9	584.0	584.0	584.7	588.6	595.5	601.6	613.1	621.5	631.5	650.7
50°	532.6	534.9	535.7	535.7	538.0	542.6	544.1	551.8	559.5	568.7	582.4
52.5°	487.4	487.4	486.6	489.7	489.7	492.8	493.5	498.1	503.5	513.5	519.6
55°	444.5	444.5	446.8	445.3	445.3	446.8	446.0	446.8	451.4	457.5	462.9
57.5°	403.1	402.3	404.6	403.1	402.3	403.9	405.4	402.3	403.1	409.2	409.2
60°	361.7	362.5	364.8	363.3	363.3	363.3	361.7	360.2	358.7	362.5	364.0
62.5°	328.8	326.5	328.8	326.5	328.0	327.2	325.7	322.6	323.4	321.9	320.3
65°	294.3	294.3	295.1	292.8	294.3	294.3	292.0	291.2	286.6	285.1	281.3
67.5°	264.4	264.4	265.2	263.6	263.6	264.4	262.1	259.8	255.2	252.9	247.5
70°	238.3	238.3	238.3	237.6	237.6	237.6	236.0	233.0	228.4	224.5	217.7
72.5°	214.6	215.4	214.6	214.6	216.9	214.6	212.3	209.2	205.4	197.7	191.6
75°	195.4	196.2	195.4	195.4	195.4	194.7	193.9	189.3	184.7	178.6	169.4
77.5°	178.6	178.6	179.3	178.6	178.6	177.8	175.5	171.7	166.3	160.9	150.2
80°	162.5	163.2	164.0	164.8	163.2	162.5	160.2	157.1	150.2	144.1	133.3
82.5°	151.0	150.2	151.0	151.7	150.2	149.4	147.1	143.3	137.9	129.5	118.8
85°	139.5	138.7	138.7	139.5	138.7	137.2	134.9	131.1	125.7	117.3	106.5
87.5°	128.0	128.8	129.5	128.8	128.0	126.5	124.2	120.3	114.2	107.3	95.8
90°	119.6	119.6	119.6	119.6	118.8	117.3	115.0	110.4	105.0	96.6	86.6
92.5°	111.9	111.9	111.9	111.9	111.1	108.8	106.5	102.7	96.6	88.1	78.9
95°	104.2	105.0	104.2	104.2	102.7	101.9	98.1	94.3	88.9	80.5	70.5
97.5°	95.8	96.6	95.8	95.8	95.0	93.5	91.2	86.6	81.2	73.6	64.4
100°	89.7	89.7	88.9	88.9	88.1	86.6	83.5	79.7	74.3	66.7	57.5
102.5°	82.8	83.5	82.8	82.8	81.2	79.7	77.4	73.6	68.2	60.5	52.1
105°	77.4	77.4	76.6	76.6	75.1	73.6	71.3	66.7	62.1	55.2	46.7
107.5°	72.0	72.0	71.3	71.3	69.7	68.2	65.1	61.3	56.7	49.8	42.2
110°	66.7	66.7	66.7	65.9	64.4	62.1	59.8	55.9	51.3	45.2	37.6



TEST NUMBER: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	62.8	62.1	61.3	60.5	59.0	57.5	54.4	50.6	46.0	40.6	33.7
115°	57.5	57.5	56.7	55.9	54.4	52.1	49.8	46.7	42.2	36.0	29.9
117.5°	52.9	52.9	52.1	51.3	49.8	47.5	45.2	42.2	37.6	32.2	26.8
120°	48.3	48.3	47.5	46.7	45.2	42.9	41.4	37.6	33.7	28.4	23.8
122.5°	44.4	43.7	43.7	42.2	41.4	39.1	36.8	33.7	29.9	25.3	20.7
125°	39.9	39.9	39.1	38.3	37.6	35.3	33.0	29.9	26.1	22.2	18.4
127.5°	36.0	36.0	35.3	34.5	33.7	31.4	29.1	26.8	23.0	19.2	15.3
130°	32.2	32.2	31.4	30.7	29.9	27.6	26.1	23.0	19.9	16.9	13.0
132.5°	29.1	29.1	28.4	27.6	26.1	24.5	23.0	19.9	17.6	14.6	11.5
135°	26.1	25.3	25.3	24.5	23.0	21.5	19.9	17.6	14.6	12.3	9.2
137.5°	23.0	22.2	21.5	20.7	19.9	18.4	16.9	15.3	13.0	10.0	7.7
140°	19.9	19.2	19.2	18.4	16.9	16.1	14.6	12.3	10.7	8.4	6.1
142.5°	16.9	16.9	16.1	15.3	14.6	13.8	12.3	10.7	8.4	6.9	4.6
145°	14.6	13.8	13.8	13.0	12.3	10.7	10.0	8.4	6.9	5.4	3.8
147.5°	11.5	11.5	11.5	10.7	10.0	9.2	8.4	6.9	5.4	3.8	2.3
150°	9.2	9.2	9.2	8.4	7.7	6.9	6.1	5.4	3.8	2.3	1.5
152.5°	7.7	7.7	6.9	6.9	6.1	5.4	4.6	3.8	2.3	1.5	1.5
155°	5.4	5.4	5.4	4.6	4.6	3.8	3.1	2.3	1.5	1.5	1.5
157.5°	3.8	3.8	3.8	3.1	3.1	2.3	2.3	1.5	1.5	1.5	1.5
160°	2.3	2.3	2.3	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3	1393.3
2.5°	1384.1	1383.3	1389.4	1389.4	1382.5	1393.3	1404.8
5°	1379.5	1378.7	1384.8	1384.8	1378.7	1389.4	1401.7
7.5°	1370.3	1371.0	1377.2	1378.7	1371.0	1381.0	1394.0
10°	1360.3	1359.5	1366.4	1368.0	1361.8	1371.0	1383.3
12.5°	1344.2	1344.2	1351.1	1353.4	1347.3	1358.0	1369.5
15°	1327.4	1327.4	1332.0	1335.8	1330.4	1340.4	1351.9
17.5°	1305.9	1305.1	1309.7	1314.3	1309.0	1319.7	1332.0
20°	1278.3	1278.3	1283.7	1289.0	1285.2	1295.2	1309.0
22.5°	1249.2	1246.1	1255.3	1259.2	1256.9	1266.8	1280.6
25°	1212.4	1211.6	1220.8	1226.2	1223.1	1233.9	1246.1
27.5°	1172.6	1171.8	1181.0	1187.9	1186.3	1196.3	1210.1
30°	1124.3	1128.1	1136.5	1148.0	1144.2	1154.9	1169.5
32.5°	1073.7	1077.5	1087.5	1099.7	1100.5	1108.9	1123.5
35°	1013.1	1023.1	1030.0	1046.1	1049.2	1057.6	1072.9
37.5°	949.5	961.0	975.6	987.9	994.0	1000.9	1018.5
40°	878.3	895.1	911.2	925.8	933.4	940.3	957.2
42.5°	813.9	826.9	842.2	856.8	870.6	876.7	894.4
45°	741.1	756.4	770.2	787.8	801.6	808.5	826.2
47.5°	669.8	685.1	703.5	715.8	730.4	737.3	754.1
50°	601.6	615.4	630.7	645.3	657.5	663.7	678.2
52.5°	534.2	548.7	563.3	572.5	585.5	590.1	602.4
55°	474.4	484.3	497.4	502.7	515.8	518.8	527.3
57.5°	416.9	423.8	428.4	437.6	446.8	453.7	463.7
60°	364.8	367.9	370.9	376.3	384.0	386.3	390.1
62.5°	318.0	317.3	323.4	324.9	325.7	333.4	329.5
65°	276.7	277.4	272.1	269.8	272.8	275.1	273.6
67.5°	242.2	237.6	233.0	227.6	223.0	225.3	223.0
70°	208.5	204.6	197.0	189.3	186.2	181.6	179.3
72.5°	181.6	172.4	164.8	154.8	149.4	144.1	140.2
75°	160.9	147.9	137.2	126.5	118.8	111.1	109.6
77.5°	139.5	127.2	115.0	103.5	92.0	83.5	80.5
80°	122.6	111.1	96.6	82.8	70.5	59.8	55.9
82.5°	107.3	95.0	80.5	65.9	52.1	40.6	36.0
85°	94.3	81.2	66.7	52.1	38.3	26.1	19.9
87.5°	84.3	69.7	55.2	41.4	26.8	14.6	7.7
90°	75.1	61.3	47.5	33.0	19.2	7.7	0.0
92.5°	66.7	53.6	39.9	26.8	14.6	4.6	0.8
95°	59.0	47.5	33.7	21.5	10.7	3.1	0.8
97.5°	52.9	41.4	29.1	17.6	8.4	2.3	0.8
100°	47.5	36.0	25.3	14.6	6.9	1.5	0.8
102.5°	42.2	32.2	21.5	12.3	5.4	0.8	0.8
105°	37.6	28.4	18.4	10.7	4.6	0.8	0.8
107.5°	33.7	25.3	16.1	9.2	3.1	0.8	0.8
110°	29.9	21.5	13.8	7.7	2.3	0.8	0.8



TEST NUMBER: P1213003

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	26.8	19.2	12.3	6.1	1.5	0.8	0.8
115°	23.8	16.9	10.7	5.4	1.5	0.8	0.8
117.5°	20.7	14.6	9.2	3.8	0.8	0.8	0.8
120°	18.4	13.0	7.7	3.1	0.8	0.8	0.8
122.5°	16.1	10.7	6.1	2.3	0.8	0.8	0.8
125°	13.8	9.2	5.4	1.5	0.8	0.8	0.8
127.5°	11.5	7.7	3.8	1.5	0.8	0.8	0.8
130°	10.0	6.1	3.1	0.8	0.8	0.8	0.8
132.5°	8.4	4.6	2.3	0.8	0.8	0.8	0.8
135°	6.9	3.8	1.5	0.8	0.8	0.8	0.8
137.5°	5.4	3.1	1.5	0.8	0.8	0.8	0.8
140°	3.8	2.3	0.8	0.8	0.8	0.8	0.8
142.5°	3.1	1.5	0.8	0.8	0.8	0.8	0.8
145°	2.3	1.5	0.8	0.8	0.8	0.8	0.8
147.5°	1.5	1.5	1.5	1.5	0.8	0.8	0.8
150°	1.5	1.5	0.8	0.8	1.5	0.8	0.8
152.5°	1.5	0.8	0.8	0.8	1.5	0.8	0.8
155°	1.5	1.5	1.5	1.5	1.5	1.5	0.8
157.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5
160°	1.5	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	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
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)