

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: P1213094

Luminaire Tested: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213094
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: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

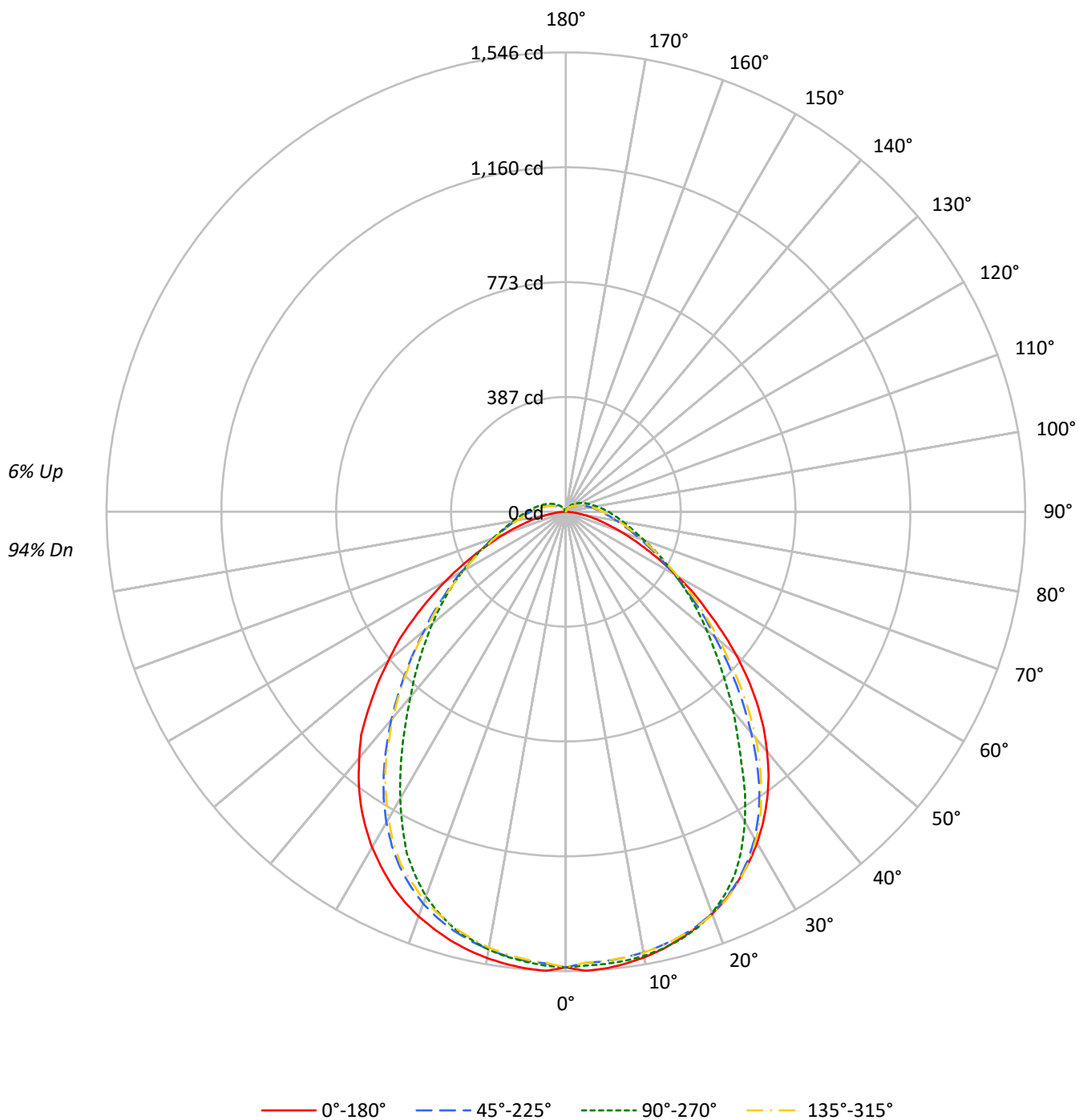
Lumens per Lamp: N/A
Luminaire Lumens: 3881.0 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	12392	12392	12392	12392
5°	12481	11998	12481	11945
10°	12426	11679	12446	11517
15°	12345	11330	12401	11035
20°	12251	10881	12322	10422
25°	12054	10216	12188	9614
30°	11798	9238	11953	8553
35°	11400	8039	11620	7486
40°	10830	7031	11116	6524
45°	10077	6112	10405	5762
50°	9048	5371	9447	5100
55°	7828	4743	8396	4502
60°	6584	4164	7179	3925
65°	5396	3681	5941	3413
70°	4295	3267	4809	3022
75°	3372	3017	3797	2775
80°	2435	2911	2866	2659
85°	1496	2927	2015	2690

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 10405 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.4	3.7
10°-20°	416.9	10.7
20°-30°	617.9	15.9
30°-40°	686.4	17.7
40°-50°	622.2	16.0
50°-60°	482.2	12.4
60°-70°	327.4	8.4
70°-80°	208.3	5.4
80°-90°	133.2	3.4
90°-100°	89.8	2.3
100°-110°	61.5	1.6
110°-120°	41.0	1.1
120°-130°	25.5	0.7
130°-140°	14.1	0.4
140°-150°	6.6	0.2
150°-160°	2.4	0.1
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1180.1	30.4
0°-40°	1866.6	48.1
0°-60°	2970.9	76.6
0°-90°	3639.8	93.8
90°-120°	192.3	5.0
90°-150°	238.5	6.1
90°-180°	241.0	6.2
0°-180°	3881.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1534	1534	1534	1534	1534	
5°	1543	1528	1543	1521	1543	147
15°	1488	1490	1495	1452	1488	420
25°	1372	1346	1387	1267	1372	632
35°	1181	1029	1204	958	1181	737
45°	909	736	939	693	909	698
55°	580	517	622	491	580	523
65°	301	348	332	322	301	302
75°	121	232	136	213	121	130
85°	22	167	30	154	22	26
90°	0	144	2	132	0	1
95°	1	123	0	115	1	1
105°	1	90	0	85	1	1
115°	1	68	0	63	1	1
125°	1	51	1	45	1	1
135°	1	35	1	29	1	1
145°	1	23	1	16	1	1
155°	1	13	1	6	1	1
165°	0	0	0	0	0	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°	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5
2.5°	1546.2	1544.5	1542.8	1540.3	1542.8	1549.6	1545.4	1536.1	1534.4	1519.2	1526.0
5°	1542.8	1540.3	1538.6	1536.1	1539.5	1547.9	1543.7	1535.2	1532.7	1518.4	1526.0
7.5°	1534.4	1532.7	1530.2	1530.2	1533.5	1542.0	1538.6	1529.3	1527.6	1513.3	1521.7
10°	1522.6	1521.7	1520.0	1520.0	1523.4	1533.5	1529.3	1520.9	1519.2	1505.7	1515.0
12.5°	1507.4	1508.2	1505.7	1505.7	1510.8	1520.9	1517.5	1508.2	1506.6	1494.7	1504.0
15°	1488.0	1488.8	1487.2	1488.0	1493.1	1504.9	1500.6	1492.2	1490.5	1481.2	1488.8
17.5°	1466.1	1466.9	1466.9	1466.1	1472.0	1483.8	1480.4	1472.8	1470.3	1462.7	1472.0
20°	1440.8	1440.8	1440.8	1440.8	1447.5	1459.3	1455.1	1449.2	1444.1	1438.2	1445.8
22.5°	1409.5	1408.7	1409.5	1412.1	1418.8	1428.1	1425.6	1418.8	1411.2	1407.9	1413.8
25°	1371.6	1374.1	1375.0	1377.5	1385.9	1393.5	1391.0	1384.2	1372.4	1369.9	1371.6
27.5°	1331.9	1333.6	1336.2	1335.3	1347.1	1354.7	1349.7	1343.8	1326.9	1324.3	1322.7
30°	1287.2	1289.8	1291.5	1290.6	1299.9	1308.3	1303.3	1295.7	1272.9	1271.2	1257.7
32.5°	1236.6	1239.2	1240.8	1240.8	1254.3	1257.7	1248.4	1237.5	1213.0	1207.1	1195.3
35°	1180.9	1183.5	1184.3	1184.3	1197.8	1197.0	1185.2	1170.0	1143.0	1135.4	1115.2
37.5°	1121.1	1122.7	1123.6	1128.6	1134.6	1129.5	1114.3	1094.9	1074.7	1053.6	1031.6
40°	1053.6	1056.1	1057.8	1061.2	1067.1	1061.2	1039.2	1015.6	993.7	970.1	948.1
42.5°	984.4	992.0	990.3	989.5	992.8	976.8	959.9	932.9	911.0	886.6	864.6
45°	909.3	908.5	912.7	914.4	913.5	900.1	876.4	852.0	830.0	804.7	786.2
47.5°	830.0	829.2	832.6	834.3	829.2	814.9	796.3	768.5	749.9	728.0	713.6
50°	746.5	746.5	751.6	746.5	744.0	729.7	714.5	686.6	672.3	652.9	644.5
52.5°	663.0	670.6	665.5	663.9	661.3	647.0	635.2	612.4	600.6	592.2	582.0
55°	580.4	588.8	585.4	582.9	582.0	570.2	559.3	542.4	534.8	528.9	523.0
57.5°	510.3	509.5	507.8	505.3	506.1	496.8	485.9	476.6	473.2	470.7	472.4
60°	429.4	436.1	433.6	434.4	435.3	433.6	424.3	418.4	419.2	420.1	422.6
62.5°	362.7	368.6	372.8	369.5	371.2	373.7	368.6	366.9	370.3	373.7	377.1
65°	301.1	307.0	311.3	310.4	315.5	320.5	319.7	321.4	329.0	333.2	337.4
67.5°	245.5	251.4	257.3	258.1	265.7	273.3	276.7	282.6	291.0	296.9	302.0
70°	197.4	202.4	209.2	213.4	223.5	233.7	239.6	251.4	256.4	264.9	268.2
72.5°	154.4	158.6	167.9	178.0	186.4	199.1	210.9	221.0	228.6	237.9	242.1
75°	120.6	122.3	132.4	144.2	156.1	170.4	183.0	194.0	204.1	213.4	220.2
77.5°	88.6	91.1	100.4	116.4	129.9	145.1	159.4	171.2	182.2	191.5	200.8
80°	61.6	66.6	76.8	92.8	108.0	124.8	138.3	151.8	163.6	172.9	182.2
82.5°	39.6	43.9	58.2	74.2	90.3	107.1	121.5	135.0	147.6	157.7	166.2
85°	21.9	27.8	42.2	59.0	75.1	91.9	107.1	120.6	133.3	142.6	151.0
87.5°	8.4	16.9	30.4	46.4	62.4	78.4	94.5	107.1	119.8	129.9	137.5
90°	0.0	10.1	22.8	38.8	54.8	70.9	86.0	99.5	111.3	120.6	129.1
92.5°	0.8	6.7	17.7	31.2	46.4	61.6	75.9	89.4	101.2	110.5	118.1
95°	0.8	5.1	14.3	27.0	40.5	54.8	68.3	81.0	91.9	101.2	108.8
97.5°	0.8	3.4	11.8	23.6	35.4	49.8	62.4	74.2	84.4	93.6	99.5
100°	0.8	3.4	10.1	20.2	32.1	44.7	56.5	68.3	77.6	85.2	91.9
102.5°	0.8	2.5	8.4	17.7	28.7	39.6	51.5	62.4	70.9	78.4	85.2
105°	0.8	2.5	7.6	15.2	25.3	36.3	46.4	56.5	65.8	72.5	78.4
107.5°	0.8	1.7	6.7	12.7	21.9	32.9	43.0	51.5	59.9	66.6	72.5
110°	0.8	1.7	5.9	11.8	19.4	29.5	38.8	47.2	54.8	61.6	66.6

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.8	1.7	5.1	11.0	17.7	26.1	35.4	43.0	50.6	56.5	61.6
115°	0.8	1.7	5.1	10.1	16.0	22.8	31.2	39.6	45.6	52.3	56.5
117.5°	0.8	1.7	4.2	8.4	15.2	21.1	28.7	35.4	42.2	48.1	52.3
120°	0.8	1.7	4.2	7.6	13.5	19.4	25.3	32.1	38.8	43.0	47.2
122.5°	0.8	1.7	3.4	7.6	11.8	17.7	22.8	28.7	34.6	39.6	43.9
125°	0.8	1.7	3.4	6.7	11.0	16.0	21.1	25.3	31.2	35.4	39.6
127.5°	0.8	1.7	3.4	5.9	10.1	14.3	19.4	23.6	27.8	32.1	35.4
130°	0.8	1.7	2.5	5.1	9.3	12.7	16.9	21.9	25.3	28.7	32.1
132.5°	0.8	1.7	2.5	5.1	7.6	11.0	15.2	19.4	22.8	26.1	28.7
135°	0.8	1.7	2.5	4.2	6.7	10.1	12.7	16.9	20.2	23.6	26.1
137.5°	0.8	1.7	2.5	4.2	5.9	8.4	11.0	14.3	17.7	20.2	23.6
140°	0.8	1.7	2.5	3.4	5.1	7.6	10.1	11.8	15.2	17.7	20.2
142.5°	0.8	1.7	2.5	3.4	5.1	6.7	8.4	10.1	12.7	15.2	17.7
145°	0.8	1.7	2.5	3.4	4.2	5.9	7.6	9.3	10.1	12.7	14.3
147.5°	0.8	1.7	2.5	3.4	3.4	5.1	6.7	7.6	9.3	10.1	11.8
150°	0.8	1.7	2.5	2.5	3.4	4.2	5.9	6.7	7.6	9.3	10.1
152.5°	0.8	1.7	2.5	2.5	3.4	4.2	5.1	5.9	6.7	7.6	8.4
155°	0.8	1.7	2.5	2.5	2.5	3.4	4.2	5.1	5.9	6.7	7.6
157.5°	1.7	1.7	1.7	2.5	2.5	3.4	3.4	4.2	5.1	5.1	5.9
160°	1.7	1.7	1.7	2.5	2.5	2.5	3.4	3.4	4.2	4.2	5.1
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°	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5
2.5°	1524.3	1526.8	1534.4	1534.4	1532.7	1531.0	1531.0	1528.5	1530.2	1533.5	1531.9
5°	1524.3	1526.8	1534.4	1534.4	1532.7	1531.0	1530.2	1527.6	1530.2	1533.5	1531.9
7.5°	1519.2	1522.6	1530.2	1530.2	1528.5	1527.6	1526.0	1524.3	1526.8	1530.2	1528.5
10°	1512.5	1515.8	1523.4	1523.4	1521.7	1521.7	1519.2	1517.5	1520.9	1523.4	1522.6
12.5°	1502.3	1506.6	1513.3	1512.5	1510.8	1511.6	1509.1	1505.7	1509.1	1511.6	1512.5
15°	1488.0	1493.1	1499.8	1498.1	1495.6	1497.3	1493.1	1490.5	1493.1	1498.1	1497.3
17.5°	1469.4	1472.8	1477.9	1477.9	1475.3	1473.7	1472.0	1469.4	1471.1	1474.5	1475.3
20°	1443.3	1447.5	1450.0	1447.5	1446.7	1444.1	1440.8	1438.2	1441.6	1446.7	1447.5
22.5°	1408.7	1409.5	1415.5	1409.5	1405.3	1404.5	1401.1	1396.0	1401.1	1405.3	1406.2
25°	1365.7	1369.9	1367.4	1357.2	1357.2	1350.5	1348.8	1346.3	1347.1	1354.7	1358.1
27.5°	1310.9	1312.5	1305.8	1297.4	1289.8	1285.5	1279.6	1280.5	1280.5	1290.6	1294.0
30°	1251.0	1241.7	1235.8	1222.3	1216.4	1206.3	1204.6	1204.6	1202.9	1207.9	1223.1
32.5°	1179.3	1166.6	1157.3	1144.7	1134.6	1124.4	1119.4	1121.9	1121.1	1133.7	1138.8
35°	1100.8	1093.2	1073.8	1057.8	1051.9	1036.7	1036.7	1029.1	1034.2	1048.5	1054.4
37.5°	1018.1	1006.3	990.3	972.6	968.4	956.6	952.4	948.1	959.1	961.6	967.5
40°	933.8	922.8	907.6	890.8	890.8	876.4	876.4	876.4	877.3	882.3	893.3
42.5°	853.7	841.8	828.4	816.5	814.9	803.9	803.9	803.0	804.7	808.9	819.1
45°	776.1	766.8	752.4	746.5	747.4	735.6	738.1	735.6	738.9	743.2	746.5
47.5°	704.4	698.4	692.5	684.1	681.6	680.7	676.5	673.1	679.0	679.0	684.1
50°	637.7	634.3	631.0	625.9	626.7	623.4	618.3	618.3	622.5	623.4	626.7
52.5°	579.5	575.3	571.1	571.9	572.8	571.1	568.5	566.0	568.5	570.2	574.4
55°	521.3	517.9	522.1	520.5	522.1	520.5	518.8	517.1	521.3	518.8	523.0
57.5°	469.0	472.4	474.1	470.7	473.2	471.5	472.4	469.8	473.2	474.9	474.1
60°	420.9	426.0	423.5	424.3	427.7	426.0	422.6	425.1	428.5	429.4	428.5
62.5°	377.1	383.0	385.5	383.8	384.7	383.0	385.5	382.1	386.3	388.0	385.5
65°	337.4	344.2	345.8	345.8	345.8	344.2	346.7	347.5	349.2	349.2	347.5
67.5°	303.7	309.6	311.3	313.0	311.3	309.6	309.6	310.4	313.8	315.5	313.8
70°	273.3	279.2	280.1	280.1	280.9	282.6	279.2	280.9	283.4	284.3	283.4
72.5°	247.2	253.1	254.7	253.9	254.7	255.6	255.6	253.9	256.4	258.1	258.1
75°	226.1	229.4	231.1	231.1	232.0	232.8	232.8	232.0	233.7	234.5	235.3
77.5°	206.7	209.2	211.7	211.7	212.6	211.7	213.4	213.4	214.3	215.1	215.9
80°	187.3	190.6	192.3	193.2	194.9	195.7	195.7	195.7	196.5	197.4	197.4
82.5°	172.1	174.6	177.1	179.7	179.7	180.5	180.5	180.5	181.4	181.4	182.2
85°	156.9	160.3	162.8	164.5	165.3	166.2	166.2	167.0	167.0	167.0	167.9
87.5°	143.4	147.6	149.3	151.0	151.8	153.5	153.5	153.5	154.4	154.4	154.4
90°	134.1	138.3	140.0	141.7	142.6	143.4	143.4	144.2	144.2	145.1	145.1
92.5°	123.2	127.4	130.7	130.7	131.6	133.3	132.4	132.4	133.3	134.1	134.1
95°	114.7	118.1	120.6	121.5	122.3	122.3	122.3	123.2	122.3	123.2	123.2
97.5°	104.6	108.0	110.5	112.2	113.0	113.0	113.0	113.9	113.0	113.9	113.9
100°	96.2	99.5	102.1	102.9	104.6	104.6	104.6	104.6	104.6	104.6	105.4
102.5°	89.4	92.8	94.5	95.3	96.2	97.0	97.0	97.0	97.0	97.8	97.8
105°	82.7	86.0	87.7	88.6	89.4	90.3	90.3	90.3	91.1	91.1	90.3
107.5°	76.8	79.3	81.0	82.7	83.5	83.5	84.4	84.4	84.4	84.4	84.4
110°	70.9	73.4	75.9	77.6	77.6	78.4	78.4	79.3	79.3	78.4	79.3



TEST NUMBER: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	65.0	68.3	70.0	71.7	72.5	73.4	73.4	73.4	73.4	73.4	73.4
115°	59.9	63.3	65.0	66.6	67.5	68.3	68.3	68.3	68.3	68.3	68.3
117.5°	55.7	59.0	60.7	61.6	62.4	63.3	64.1	64.1	64.1	64.1	63.3
120°	51.5	54.0	55.7	57.4	58.2	59.0	59.0	59.0	59.0	59.0	59.0
122.5°	47.2	49.8	51.5	53.1	54.0	54.8	54.8	54.8	54.8	54.8	54.8
125°	43.0	45.6	47.2	48.9	49.8	50.6	50.6	50.6	50.6	50.6	50.6
127.5°	38.8	41.3	43.9	44.7	45.6	46.4	46.4	46.4	47.2	46.4	46.4
130°	34.6	37.1	39.6	40.5	41.3	42.2	43.0	43.0	43.0	43.0	42.2
132.5°	31.2	33.7	35.4	36.3	38.0	38.0	38.8	38.8	38.8	38.8	38.0
135°	28.7	30.4	32.1	32.9	34.6	34.6	34.6	35.4	35.4	34.6	33.7
137.5°	25.3	27.0	28.7	29.5	30.4	31.2	31.2	32.1	31.2	31.2	31.2
140°	23.6	24.5	26.1	27.0	27.8	27.8	27.8	28.7	28.7	27.8	27.8
142.5°	20.2	21.9	23.6	24.5	25.3	25.3	25.3	25.3	25.3	25.3	25.3
145°	16.9	19.4	20.2	21.9	21.9	22.8	22.8	22.8	22.8	22.8	21.9
147.5°	14.3	16.0	18.6	19.4	19.4	20.2	20.2	20.2	20.2	20.2	19.4
150°	11.0	12.7	15.2	16.9	16.9	17.7	17.7	17.7	17.7	16.9	16.9
152.5°	9.3	11.0	11.8	13.5	14.3	14.3	14.3	15.2	14.3	14.3	14.3
155°	8.4	9.3	10.1	11.0	11.8	12.7	12.7	12.7	12.7	11.8	11.8
157.5°	6.7	7.6	8.4	9.3	10.1	11.0	11.0	11.0	11.0	11.0	10.1
160°	5.1	5.9	6.7	6.7	7.6	8.4	9.3	8.4	8.4	8.4	8.4
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: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5
2.5°	1530.2	1529.3	1531.9	1527.6	1515.0	1518.4	1516.7	1524.3	1526.0	1527.6	1535.2
5°	1530.2	1529.3	1531.0	1527.6	1514.1	1516.7	1515.0	1522.6	1524.3	1525.1	1532.7
7.5°	1526.8	1526.0	1528.5	1524.3	1509.9	1513.3	1510.8	1518.4	1519.2	1520.0	1526.8
10°	1520.0	1519.2	1520.9	1517.5	1503.2	1506.6	1503.2	1510.8	1510.8	1512.5	1517.5
12.5°	1509.9	1508.2	1511.6	1507.4	1491.4	1495.6	1493.9	1499.0	1499.8	1500.6	1505.7
15°	1495.6	1493.9	1496.4	1493.9	1479.6	1480.4	1477.9	1485.5	1486.3	1484.6	1489.7
17.5°	1474.5	1472.8	1477.9	1476.2	1461.8	1465.2	1464.4	1466.1	1468.6	1464.4	1471.1
20°	1448.3	1450.0	1451.7	1452.6	1441.6	1441.6	1440.8	1444.1	1446.7	1443.3	1448.3
22.5°	1409.5	1413.8	1418.8	1420.5	1412.9	1412.1	1417.1	1415.5	1418.0	1416.3	1419.7
25°	1360.6	1369.1	1374.1	1379.2	1375.0	1376.6	1384.2	1385.9	1385.9	1385.1	1388.5
27.5°	1299.9	1310.9	1320.1	1331.1	1326.9	1330.3	1342.9	1344.6	1348.0	1344.6	1351.3
30°	1227.3	1237.5	1255.2	1271.2	1272.9	1278.0	1295.7	1297.4	1306.6	1303.3	1305.8
32.5°	1154.8	1159.9	1180.1	1196.1	1206.3	1218.9	1238.3	1241.7	1254.3	1256.9	1256.9
35°	1063.7	1078.0	1096.6	1119.4	1132.0	1145.5	1171.7	1176.7	1195.3	1201.2	1207.9
37.5°	986.9	1000.4	1012.2	1035.9	1058.6	1073.8	1094.9	1107.6	1127.0	1137.9	1146.4
40°	905.1	916.1	928.7	952.4	971.8	994.5	1015.6	1030.8	1055.3	1067.9	1078.9
42.5°	827.5	835.9	849.4	866.3	886.6	911.9	932.1	949.8	976.0	993.7	1006.3
45°	758.3	763.4	775.2	787.9	805.6	831.7	851.1	873.9	895.0	913.5	928.7
47.5°	693.4	700.1	706.0	714.5	730.5	746.5	769.3	791.2	812.3	832.6	847.8
50°	633.5	633.5	642.8	648.7	659.6	674.0	691.7	706.9	733.0	747.4	766.8
52.5°	575.3	578.7	583.7	587.1	595.5	604.8	619.2	631.8	653.7	667.2	685.8
55°	523.8	527.2	529.7	531.4	536.5	547.5	552.5	562.6	577.8	588.8	604.8
57.5°	474.9	476.6	479.1	480.0	480.8	487.6	491.8	494.3	509.5	520.5	534.0
60°	430.2	430.2	432.7	431.9	431.0	434.4	433.6	436.1	445.4	452.1	458.0
62.5°	388.0	388.0	388.9	387.2	386.3	386.3	383.0	385.5	388.0	388.9	393.1
65°	349.2	353.4	350.1	350.9	345.8	344.2	342.5	337.4	336.6	333.2	334.9
67.5°	314.6	318.0	314.6	314.6	310.4	307.0	302.8	294.4	291.9	285.1	283.4
70°	286.8	284.3	286.0	283.4	278.4	274.1	268.2	261.5	253.1	244.6	238.7
72.5°	259.8	259.8	258.1	255.6	253.1	244.6	237.9	230.3	220.2	209.2	200.8
75°	233.7	234.5	234.5	232.0	227.8	220.2	212.6	201.6	190.6	178.0	167.0
77.5°	215.1	215.1	215.1	210.9	206.7	199.9	190.6	178.8	167.0	151.8	139.2
80°	197.4	196.5	196.5	191.5	187.3	179.7	170.4	158.6	145.9	129.9	115.6
82.5°	183.0	182.2	180.5	176.3	170.4	162.8	153.5	140.9	127.4	113.0	95.3
85°	167.9	167.0	165.3	161.1	155.2	148.5	138.3	125.7	112.2	96.2	79.3
87.5°	154.4	153.5	151.0	148.5	141.7	134.1	124.0	112.2	97.8	82.7	65.8
90°	145.1	143.4	141.7	138.3	132.4	124.0	113.9	101.2	86.9	71.7	54.8
92.5°	134.1	133.3	130.7	127.4	122.3	113.9	103.8	91.9	77.6	63.3	47.2
95°	123.2	122.3	120.6	117.3	112.2	104.6	95.3	83.5	70.0	55.7	41.3
97.5°	113.0	113.0	110.5	108.0	102.1	96.2	86.9	75.9	63.3	50.6	37.1
100°	104.6	104.6	102.1	98.7	94.5	88.6	79.3	69.2	57.4	45.6	32.1
102.5°	97.0	96.2	94.5	91.1	86.9	81.0	72.5	63.3	52.3	40.5	28.7
105°	90.3	89.4	87.7	84.4	81.0	74.2	67.5	58.2	47.2	36.3	25.3
107.5°	83.5	82.7	81.8	78.4	74.2	68.3	61.6	52.3	43.0	32.9	22.8
110°	77.6	76.8	75.1	71.7	67.5	62.4	55.7	48.1	38.8	29.5	20.2



TEST NUMBER: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	72.5	71.7	70.0	66.6	63.3	57.4	51.5	43.0	35.4	27.0	17.7
115°	67.5	66.6	65.0	61.6	57.4	52.3	46.4	39.6	31.2	23.6	16.0
117.5°	62.4	61.6	59.9	57.4	53.1	48.1	42.2	35.4	27.8	21.9	14.3
120°	58.2	56.5	54.8	52.3	48.1	43.9	38.0	32.1	25.3	19.4	12.7
122.5°	54.0	52.3	50.6	48.1	43.9	39.6	33.7	28.7	23.6	17.7	11.8
125°	48.9	48.1	46.4	43.9	39.6	35.4	31.2	26.1	21.1	16.0	10.1
127.5°	44.7	43.9	42.2	38.8	35.4	32.1	27.8	23.6	18.6	13.5	9.3
130°	41.3	39.6	38.0	35.4	32.9	29.5	25.3	21.1	16.9	11.8	8.4
132.5°	37.1	35.4	33.7	32.1	29.5	26.1	22.8	18.6	15.2	11.0	7.6
135°	33.7	32.1	30.4	28.7	26.1	23.6	20.2	16.9	13.5	10.1	6.7
137.5°	29.5	28.7	27.8	26.1	23.6	21.1	18.6	14.3	11.8	9.3	5.9
140°	27.0	26.1	25.3	22.8	21.1	18.6	16.0	12.7	10.1	7.6	5.1
142.5°	24.5	23.6	21.9	20.2	18.6	16.9	13.5	11.8	9.3	6.7	5.1
145°	21.1	20.2	19.4	17.7	16.0	13.5	11.8	10.1	8.4	5.9	4.2
147.5°	19.4	18.6	16.9	15.2	13.5	11.8	11.0	9.3	6.7	5.1	3.4
150°	16.0	15.2	14.3	12.7	11.8	11.0	9.3	7.6	5.9	4.2	3.4
152.5°	13.5	12.7	11.8	11.8	10.1	9.3	7.6	6.7	5.1	4.2	2.5
155°	11.8	11.8	11.0	10.1	8.4	7.6	6.7	5.1	4.2	3.4	2.5
157.5°	10.1	9.3	8.4	8.4	7.6	6.7	5.1	4.2	3.4	3.4	2.5
160°	8.4	7.6	7.6	6.7	5.9	5.1	4.2	4.2	3.4	2.5	2.5
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: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5
2.5°	1536.1	1526.8	1535.2	1546.2	1546.2	1544.5	1542.8	1546.2	1554.6	1551.3	1541.1
5°	1533.5	1524.3	1531.9	1542.8	1542.8	1540.3	1538.6	1541.1	1550.4	1546.2	1536.9
7.5°	1528.5	1520.0	1525.1	1535.2	1535.2	1532.7	1531.0	1534.4	1542.0	1537.8	1527.6
10°	1519.2	1509.9	1515.8	1525.1	1524.3	1522.6	1520.0	1524.3	1531.0	1525.1	1513.3
12.5°	1507.4	1498.1	1503.2	1511.6	1510.8	1507.4	1505.7	1508.2	1514.1	1510.8	1498.1
15°	1491.4	1482.1	1486.3	1494.7	1492.2	1489.7	1486.3	1487.2	1494.7	1488.8	1475.3
17.5°	1472.0	1461.8	1465.2	1472.8	1470.3	1467.7	1463.5	1464.4	1472.8	1464.4	1450.0
20°	1448.3	1437.4	1439.9	1449.2	1445.0	1440.8	1436.5	1436.5	1445.0	1435.7	1419.7
22.5°	1423.0	1412.1	1413.8	1420.5	1417.1	1409.5	1405.3	1407.9	1412.1	1400.3	1383.4
25°	1391.8	1377.5	1380.0	1386.8	1384.2	1374.1	1369.9	1371.6	1369.9	1360.6	1342.9
27.5°	1355.6	1340.4	1342.1	1346.3	1342.9	1333.6	1328.6	1329.4	1326.0	1314.2	1294.0
30°	1310.0	1302.4	1301.6	1304.1	1299.0	1289.8	1283.9	1282.2	1281.3	1264.5	1240.0
32.5°	1263.6	1256.9	1252.6	1256.0	1250.1	1240.8	1230.7	1230.7	1222.3	1206.3	1185.2
35°	1216.4	1205.4	1201.2	1203.7	1197.0	1185.2	1176.7	1172.5	1159.9	1139.6	1116.8
37.5°	1155.6	1148.1	1143.0	1145.5	1137.9	1129.5	1113.5	1109.2	1095.8	1067.9	1039.2
40°	1089.8	1083.9	1078.9	1081.4	1073.0	1060.3	1046.0	1039.2	1024.1	992.8	970.1
42.5°	1019.0	1016.5	1010.6	1019.8	1003.0	990.3	976.0	965.0	949.8	916.1	889.9
45°	943.9	949.8	936.3	938.9	927.9	916.9	901.7	885.7	870.5	838.5	808.9
47.5°	864.6	868.8	859.6	861.2	849.4	839.3	825.8	805.6	788.7	760.9	734.7
50°	782.8	781.1	781.1	779.4	770.1	757.5	744.0	725.4	708.6	683.3	661.3
52.5°	695.9	699.3	701.0	705.2	693.4	685.8	664.7	648.7	636.0	609.9	591.3
55°	612.4	624.2	620.8	622.5	609.0	603.1	586.3	573.6	555.0	539.9	528.1
57.5°	536.5	539.0	540.7	543.2	537.3	525.5	512.0	501.9	487.6	474.9	466.5
60°	463.1	463.1	463.9	468.2	462.3	452.1	442.0	434.4	424.3	416.7	411.6
62.5°	393.9	399.8	400.7	397.3	389.7	384.7	377.9	373.7	366.9	364.4	362.7
65°	329.8	329.8	329.8	331.5	327.3	323.9	319.7	318.9	321.4	318.0	319.7
67.5°	275.8	273.3	271.6	272.5	270.8	269.1	268.2	270.8	275.8	275.8	280.1
70°	229.4	224.4	221.0	221.0	221.0	221.8	224.4	229.4	237.9	241.3	247.2
72.5°	191.5	180.5	175.5	175.5	176.3	179.7	187.3	196.5	204.1	210.9	218.5
75°	155.2	144.2	136.7	135.8	137.5	142.6	153.5	162.0	174.6	183.9	193.2
77.5°	125.7	112.2	102.9	102.1	104.6	112.2	125.7	136.7	151.0	161.1	171.2
80°	100.4	85.2	77.6	72.5	76.8	86.0	101.2	114.7	128.2	141.7	154.4
82.5°	80.1	65.8	54.0	48.9	54.0	66.6	81.0	97.0	110.5	124.8	137.5
85°	63.3	48.1	34.6	29.5	35.4	48.9	65.0	81.0	96.2	110.5	123.2
87.5°	49.8	34.6	21.1	14.3	21.9	36.3	51.5	67.5	83.5	97.8	110.5
90°	38.8	24.5	11.8	1.7	12.7	26.1	41.3	56.5	72.5	86.9	99.5
92.5°	32.9	18.6	6.7	0.0	7.6	19.4	33.7	48.9	63.3	77.6	90.3
95°	27.8	15.2	5.1	0.0	5.1	15.2	27.8	41.3	55.7	70.0	82.7
97.5°	23.6	11.8	3.4	0.0	3.4	11.8	22.8	36.3	48.9	62.4	74.2
100°	20.2	10.1	2.5	0.0	2.5	9.3	19.4	31.2	43.9	56.5	67.5
102.5°	17.7	8.4	1.7	0.0	1.7	7.6	16.0	27.0	38.0	49.8	60.7
105°	15.2	6.7	1.7	0.0	0.8	5.9	13.5	23.6	33.7	44.7	54.8
107.5°	13.5	5.9	1.7	0.0	0.8	5.1	11.8	20.2	30.4	39.6	48.9
110°	11.8	5.1	1.7	0.0	0.8	3.4	10.1	17.7	26.1	35.4	44.7

TEST NUMBER: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	10.1	4.2	0.8	0.0	0.0	2.5	8.4	15.2	22.8	32.1	39.6
115°	9.3	4.2	0.8	0.0	0.0	1.7	6.7	13.5	20.2	28.7	35.4
117.5°	8.4	3.4	0.8	0.0	0.8	1.7	5.9	11.8	17.7	24.5	32.1
120°	7.6	3.4	0.8	0.0	0.8	0.8	4.2	10.1	15.2	21.9	27.8
122.5°	6.7	3.4	0.8	0.0	0.8	0.8	3.4	8.4	13.5	19.4	24.5
125°	5.9	2.5	1.7	0.8	0.8	0.8	2.5	6.7	11.8	16.0	21.9
127.5°	5.9	2.5	1.7	0.8	0.8	0.8	1.7	5.9	9.3	14.3	19.4
130°	5.1	2.5	1.7	0.8	0.8	0.8	0.8	4.2	8.4	11.8	16.0
132.5°	4.2	2.5	1.7	0.8	0.8	0.8	0.8	2.5	5.9	10.1	13.5
135°	4.2	2.5	1.7	0.8	0.8	0.8	0.8	1.7	4.2	7.6	11.0
137.5°	3.4	1.7	1.7	0.8	0.8	0.8	0.8	0.8	3.4	5.9	8.4
140°	3.4	1.7	1.7	0.8	0.8	0.8	0.8	0.8	2.5	4.2	6.7
142.5°	2.5	1.7	1.7	0.8	0.8	0.8	0.8	0.8	1.7	3.4	5.1
145°	2.5	1.7	1.7	0.8	0.8	0.8	0.8	0.8	0.8	1.7	3.4
147.5°	2.5	2.5	1.7	0.8	0.8	0.8	0.8	0.8	0.8	1.7	2.5
150°	2.5	1.7	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7
152.5°	2.5	1.7	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7
155°	2.5	1.7	1.7	0.8	0.8	0.8	0.8	0.8	0.8	1.7	1.7
157.5°	2.5	1.7	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7
160°	2.5	1.7	1.7	0.8	1.7	0.8	1.7	1.7	1.7	1.7	1.7
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: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5
2.5°	1537.8	1521.7	1530.2	1527.6	1531.0	1537.8	1536.9	1535.2	1535.2	1532.7	1529.3
5°	1532.7	1517.5	1525.1	1520.9	1525.1	1531.0	1530.2	1527.6	1529.3	1525.1	1520.9
7.5°	1522.6	1509.1	1515.8	1512.5	1515.8	1521.7	1519.2	1518.4	1520.0	1513.3	1510.8
10°	1510.8	1495.6	1503.2	1499.0	1503.2	1507.4	1505.7	1502.3	1505.7	1499.0	1496.4
12.5°	1492.2	1479.6	1484.6	1482.9	1485.5	1489.7	1486.3	1483.8	1485.5	1479.6	1474.5
15°	1472.0	1459.3	1463.5	1461.0	1462.7	1467.7	1461.8	1461.0	1459.3	1453.4	1451.7
17.5°	1445.8	1434.0	1438.2	1434.0	1436.5	1434.9	1434.0	1429.8	1429.8	1423.0	1418.0
20°	1413.8	1403.6	1401.1	1397.7	1401.1	1397.7	1392.7	1389.3	1388.5	1381.7	1377.5
22.5°	1376.6	1364.8	1366.5	1357.2	1358.1	1353.0	1344.6	1341.2	1337.8	1330.3	1324.3
25°	1331.9	1320.1	1311.7	1305.8	1298.2	1297.4	1286.4	1278.0	1277.1	1267.8	1267.0
27.5°	1281.3	1267.8	1261.1	1246.7	1237.5	1229.9	1220.6	1212.2	1207.9	1197.8	1191.1
30°	1223.1	1207.9	1191.1	1180.9	1166.6	1160.7	1144.7	1134.6	1131.2	1120.2	1115.2
32.5°	1157.3	1141.3	1127.8	1108.4	1092.4	1083.9	1067.9	1057.8	1053.6	1041.8	1035.0
35°	1085.6	1067.9	1051.9	1033.3	1020.7	1006.3	986.9	976.8	967.5	963.3	958.3
37.5°	1010.6	991.2	972.6	954.0	943.1	926.2	909.3	902.6	891.6	887.4	882.3
40°	932.9	913.5	895.8	878.1	865.5	850.3	835.1	832.6	820.8	816.5	813.2
42.5°	856.2	835.9	815.7	803.0	793.8	778.6	768.5	765.9	755.8	753.3	753.3
45°	787.0	761.7	744.8	733.9	726.3	713.6	705.2	703.5	695.1	693.4	693.4
47.5°	712.8	689.2	676.5	669.8	663.0	653.7	648.7	648.7	640.2	638.6	637.7
50°	643.6	621.7	612.4	605.7	604.8	598.1	593.8	592.2	592.2	586.3	587.1
52.5°	577.8	566.9	559.3	555.0	550.0	545.8	542.4	542.4	539.9	535.6	537.3
55°	517.1	504.4	505.3	501.9	499.4	496.8	497.7	492.6	491.8	488.4	490.9
57.5°	456.4	456.4	454.7	452.1	447.9	449.6	449.6	449.6	445.4	442.9	445.4
60°	404.9	407.4	403.2	405.7	404.1	404.9	403.2	403.2	400.7	399.8	400.7
62.5°	359.3	363.6	361.9	365.3	363.6	364.4	366.1	362.7	361.0	359.3	361.0
65°	318.9	323.9	323.1	325.6	326.4	327.3	328.1	326.4	324.8	323.1	322.2
67.5°	283.4	288.5	291.9	292.7	293.5	296.1	295.2	293.5	291.9	289.3	288.5
70°	251.4	258.1	262.3	264.0	267.4	265.7	265.7	264.9	263.2	260.7	259.8
72.5°	224.4	232.0	236.2	237.9	241.3	241.3	240.4	239.6	237.9	235.3	234.5
75°	200.8	207.5	213.4	216.8	219.3	219.3	218.5	217.6	215.9	214.3	213.4
77.5°	182.2	188.1	193.2	197.4	199.1	199.9	199.1	197.4	197.4	196.5	195.7
80°	163.6	170.4	175.5	179.7	182.2	182.2	181.4	182.2	180.5	179.7	178.8
82.5°	147.6	155.2	161.1	165.3	167.0	167.9	167.0	167.9	166.2	166.2	166.2
85°	133.3	140.9	147.6	151.0	153.5	154.4	154.4	154.4	153.5	153.5	153.5
87.5°	121.5	129.1	135.8	139.2	141.7	142.6	142.6	143.4	141.7	141.7	141.7
90°	110.5	118.1	124.8	128.2	130.7	132.4	132.4	133.3	132.4	131.6	131.6
92.5°	100.4	108.8	115.6	118.9	121.5	124.0	124.0	124.8	123.2	123.2	123.2
95°	91.9	100.4	106.3	110.5	113.0	114.7	115.6	115.6	114.7	114.7	114.7
97.5°	84.4	91.9	97.8	102.1	104.6	105.4	106.3	107.1	106.3	106.3	106.3
100°	76.8	84.4	90.3	93.6	97.0	97.8	98.7	99.5	99.5	98.7	98.7
102.5°	70.0	77.6	82.7	86.9	89.4	91.1	91.9	91.9	91.9	91.9	91.9
105°	63.3	70.9	75.9	80.1	82.7	84.4	85.2	86.0	86.0	85.2	85.2
107.5°	57.4	64.1	70.0	73.4	76.8	78.4	79.3	79.3	80.1	79.3	79.3
110°	51.5	59.0	64.1	67.5	70.9	72.5	73.4	74.2	74.2	74.2	74.2

TEST NUMBER: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	47.2	53.1	58.2	61.6	65.0	66.6	67.5	68.3	69.2	68.3	68.3
115°	42.2	48.1	53.1	56.5	59.0	60.7	62.4	63.3	63.3	64.1	63.3
117.5°	38.0	43.0	48.1	51.5	54.0	56.5	57.4	58.2	59.0	58.2	58.2
120°	33.7	38.8	43.0	46.4	48.9	51.5	52.3	53.1	54.0	53.1	53.1
122.5°	30.4	34.6	38.8	42.2	44.7	46.4	48.1	48.1	48.9	48.9	48.9
125°	27.0	31.2	34.6	38.0	40.5	42.2	43.0	43.9	43.9	44.7	44.7
127.5°	23.6	27.0	31.2	33.7	36.3	38.0	38.8	39.6	39.6	40.5	40.5
130°	20.2	23.6	27.0	29.5	32.1	33.7	34.6	35.4	36.3	36.3	36.3
132.5°	17.7	21.1	23.6	26.1	27.8	29.5	31.2	32.1	32.1	32.1	32.1
135°	14.3	17.7	20.2	22.8	24.5	26.1	27.0	28.7	28.7	28.7	28.7
137.5°	11.8	15.2	17.7	19.4	21.1	22.8	23.6	24.5	25.3	25.3	25.3
140°	9.3	11.8	14.3	16.9	18.6	19.4	21.1	21.1	21.9	21.9	21.9
142.5°	6.7	9.3	11.0	13.5	15.2	16.9	17.7	18.6	18.6	18.6	18.6
145°	5.1	6.7	8.4	10.1	12.7	13.5	14.3	15.2	16.0	16.0	16.0
147.5°	3.4	5.1	5.9	7.6	9.3	11.0	11.8	12.7	13.5	13.5	13.5
150°	2.5	3.4	5.1	5.9	6.7	8.4	10.1	10.1	11.0	11.0	10.1
152.5°	1.7	2.5	3.4	4.2	5.1	5.9	7.6	7.6	8.4	8.4	8.4
155°	1.7	1.7	1.7	2.5	3.4	4.2	5.1	5.9	5.9	5.9	5.9
157.5°	1.7	1.7	1.7	1.7	1.7	2.5	3.4	4.2	4.2	4.2	4.2
160°	1.7	1.7	0.8	0.8	1.7	1.7	1.7	1.7	2.5	2.5	2.5
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: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5
2.5°	1531.9	1533.5	1533.5	1531.9	1531.0	1534.4	1530.2	1514.1	1519.2	1520.9	1526.0
5°	1524.3	1526.0	1526.0	1526.0	1524.3	1527.6	1523.4	1507.4	1513.3	1515.8	1519.2
7.5°	1513.3	1514.1	1515.8	1515.0	1513.3	1518.4	1514.1	1498.1	1502.3	1506.6	1510.8
10°	1499.0	1499.0	1499.8	1501.5	1499.8	1504.0	1499.8	1485.5	1489.7	1492.2	1497.3
12.5°	1479.6	1481.2	1482.1	1481.2	1480.4	1483.8	1482.1	1468.6	1470.3	1475.3	1480.4
15°	1453.4	1453.4	1457.6	1455.9	1455.9	1459.3	1461.0	1445.8	1448.3	1455.9	1461.0
17.5°	1421.4	1422.2	1425.6	1427.3	1426.4	1432.3	1433.2	1421.4	1420.5	1429.8	1434.9
20°	1380.0	1381.7	1385.9	1389.3	1389.3	1396.0	1398.6	1391.0	1391.8	1402.0	1403.6
22.5°	1329.4	1329.4	1337.0	1342.1	1346.3	1350.5	1358.1	1351.3	1351.3	1364.8	1372.4
25°	1267.0	1272.9	1275.4	1285.5	1291.5	1303.3	1310.0	1310.9	1311.7	1324.3	1329.4
27.5°	1197.8	1199.5	1207.1	1218.9	1225.7	1236.6	1249.3	1251.8	1256.0	1272.9	1280.5
30°	1119.4	1124.4	1127.8	1144.7	1154.0	1168.3	1184.3	1190.2	1193.6	1216.4	1225.7
32.5°	1039.2	1040.9	1055.3	1064.5	1075.5	1090.7	1109.2	1120.2	1127.0	1150.6	1164.1
35°	959.1	962.5	974.3	986.1	997.1	1012.2	1031.6	1046.8	1058.6	1079.7	1097.4
37.5°	885.7	894.1	896.7	908.5	916.9	932.1	945.6	967.5	979.3	1001.3	1024.1
40°	819.9	822.4	824.1	835.9	841.8	856.2	875.6	889.9	906.0	922.0	949.0
42.5°	755.0	756.7	759.2	765.9	772.7	782.8	797.1	811.5	828.4	852.0	869.7
45°	695.1	696.8	698.4	702.7	708.6	717.8	727.1	737.2	754.1	774.4	792.9
47.5°	639.4	642.8	642.8	643.6	647.8	655.4	662.2	674.8	684.1	695.1	716.2
50°	586.3	588.8	589.6	589.6	592.2	597.2	598.9	607.3	615.8	625.9	641.1
52.5°	536.5	536.5	535.6	539.0	539.0	542.4	543.2	548.3	554.2	565.2	571.9
55°	489.2	489.2	491.8	490.1	490.1	491.8	490.9	491.8	496.8	503.6	509.5
57.5°	443.7	442.9	445.4	443.7	442.9	444.5	446.2	442.9	443.7	450.4	450.4
60°	398.1	399.0	401.5	399.8	399.8	399.8	398.1	396.5	394.8	399.0	400.7
62.5°	361.9	359.3	361.9	359.3	361.0	360.2	358.5	355.1	356.0	354.3	352.6
65°	323.9	323.9	324.8	322.2	323.9	323.9	321.4	320.5	315.5	313.8	309.6
67.5°	291.0	291.0	291.9	290.2	290.2	291.0	288.5	286.0	280.9	278.4	272.5
70°	262.3	262.3	262.3	261.5	261.5	261.5	259.8	256.4	251.4	247.2	239.6
72.5°	236.2	237.0	236.2	236.2	238.7	236.2	233.7	230.3	226.1	217.6	210.9
75°	215.1	215.9	215.1	215.1	215.1	214.3	213.4	208.4	203.3	196.5	186.4
77.5°	196.5	196.5	197.4	196.5	196.5	195.7	193.2	189.0	183.0	177.1	165.3
80°	178.8	179.7	180.5	181.4	179.7	178.8	176.3	172.9	165.3	158.6	146.8
82.5°	166.2	165.3	166.2	167.0	165.3	164.5	162.0	157.7	151.8	142.6	130.7
85°	153.5	152.7	152.7	153.5	152.7	151.0	148.5	144.2	138.3	129.1	117.3
87.5°	140.9	141.7	142.6	141.7	140.9	139.2	136.7	132.4	125.7	118.1	105.4
90°	131.6	131.6	131.6	131.6	130.7	129.1	126.5	121.5	115.6	106.3	95.3
92.5°	123.2	123.2	123.2	123.2	122.3	119.8	117.3	113.0	106.3	97.0	86.9
95°	114.7	115.6	114.7	114.7	113.0	112.2	108.0	103.8	97.8	88.6	77.6
97.5°	105.4	106.3	105.4	105.4	104.6	102.9	100.4	95.3	89.4	81.0	70.9
100°	98.7	98.7	97.8	97.8	97.0	95.3	91.9	87.7	81.8	73.4	63.3
102.5°	91.1	91.9	91.1	91.1	89.4	87.7	85.2	81.0	75.1	66.6	57.4
105°	85.2	85.2	84.4	84.4	82.7	81.0	78.4	73.4	68.3	60.7	51.5
107.5°	79.3	79.3	78.4	78.4	76.8	75.1	71.7	67.5	62.4	54.8	46.4
110°	73.4	73.4	73.4	72.5	70.9	68.3	65.8	61.6	56.5	49.8	41.3



TEST NUMBER: P1213094

CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	69.2	68.3	67.5	66.6	65.0	63.3	59.9	55.7	50.6	44.7	37.1
115°	63.3	63.3	62.4	61.6	59.9	57.4	54.8	51.5	46.4	39.6	32.9
117.5°	58.2	58.2	57.4	56.5	54.8	52.3	49.8	46.4	41.3	35.4	29.5
120°	53.1	53.1	52.3	51.5	49.8	47.2	45.6	41.3	37.1	31.2	26.1
122.5°	48.9	48.1	48.1	46.4	45.6	43.0	40.5	37.1	32.9	27.8	22.8
125°	43.9	43.9	43.0	42.2	41.3	38.8	36.3	32.9	28.7	24.5	20.2
127.5°	39.6	39.6	38.8	38.0	37.1	34.6	32.1	29.5	25.3	21.1	16.9
130°	35.4	35.4	34.6	33.7	32.9	30.4	28.7	25.3	21.9	18.6	14.3
132.5°	32.1	32.1	31.2	30.4	28.7	27.0	25.3	21.9	19.4	16.0	12.7
135°	28.7	27.8	27.8	27.0	25.3	23.6	21.9	19.4	16.0	13.5	10.1
137.5°	25.3	24.5	23.6	22.8	21.9	20.2	18.6	16.9	14.3	11.0	8.4
140°	21.9	21.1	21.1	20.2	18.6	17.7	16.0	13.5	11.8	9.3	6.7
142.5°	18.6	18.6	17.7	16.9	16.0	15.2	13.5	11.8	9.3	7.6	5.1
145°	16.0	15.2	15.2	14.3	13.5	11.8	11.0	9.3	7.6	5.9	4.2
147.5°	12.7	12.7	12.7	11.8	11.0	10.1	9.3	7.6	5.9	4.2	2.5
150°	10.1	10.1	10.1	9.3	8.4	7.6	6.7	5.9	4.2	2.5	1.7
152.5°	8.4	8.4	7.6	7.6	6.7	5.9	5.1	4.2	2.5	1.7	1.7
155°	5.9	5.9	5.9	5.1	5.1	4.2	3.4	2.5	1.7	1.7	1.7
157.5°	4.2	4.2	4.2	3.4	3.4	2.5	2.5	1.7	1.7	1.7	1.7
160°	2.5	2.5	2.5	2.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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

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CATALOG NUMBER: 4SNLED-LD5-49SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5	1533.5
2.5°	1523.4	1522.6	1529.3	1529.3	1521.7	1533.5	1546.2
5°	1518.4	1517.5	1524.3	1524.3	1517.5	1529.3	1542.8
7.5°	1508.2	1509.1	1515.8	1517.5	1509.1	1520.0	1534.4
10°	1497.3	1496.4	1504.0	1505.7	1499.0	1509.1	1522.6
12.5°	1479.6	1479.6	1487.2	1489.7	1482.9	1494.7	1507.4
15°	1461.0	1461.0	1466.1	1470.3	1464.4	1475.3	1488.0
17.5°	1437.4	1436.5	1441.6	1446.7	1440.8	1452.6	1466.1
20°	1407.0	1407.0	1412.9	1418.8	1414.6	1425.6	1440.8
22.5°	1375.0	1371.6	1381.7	1385.9	1383.4	1394.4	1409.5
25°	1334.5	1333.6	1343.8	1349.7	1346.3	1358.1	1371.6
27.5°	1290.6	1289.8	1299.9	1307.5	1305.8	1316.8	1331.9
30°	1237.5	1241.7	1251.0	1263.6	1259.4	1271.2	1287.2
32.5°	1181.8	1186.0	1197.0	1210.5	1211.3	1220.6	1236.6
35°	1115.2	1126.1	1133.7	1151.4	1154.8	1164.1	1180.9
37.5°	1045.1	1057.8	1073.8	1087.3	1094.1	1101.7	1121.1
40°	966.7	985.2	1003.0	1019.0	1027.4	1035.0	1053.6
42.5°	895.8	910.2	927.0	943.1	958.3	965.0	984.4
45°	815.7	832.6	847.8	867.2	882.3	889.9	909.3
47.5°	737.2	754.1	774.4	787.9	803.9	811.5	830.0
50°	662.2	677.4	694.2	710.3	723.8	730.5	746.5
52.5°	587.9	604.0	620.0	630.1	644.5	649.5	663.0
55°	522.1	533.1	547.5	553.4	567.7	571.1	580.4
57.5°	458.9	466.5	471.5	481.7	491.8	499.4	510.3
60°	401.5	404.9	408.3	414.2	422.6	425.1	429.4
62.5°	350.1	349.2	356.0	357.7	358.5	366.9	362.7
65°	304.5	305.4	299.5	296.9	300.3	302.8	301.1
67.5°	266.6	261.5	256.4	250.5	245.5	248.0	245.5
70°	229.4	225.2	216.8	208.4	205.0	199.9	197.4
72.5°	199.9	189.8	181.4	170.4	164.5	158.6	154.4
75°	177.1	162.8	151.0	139.2	130.7	122.3	120.6
77.5°	153.5	140.0	126.5	113.9	101.2	91.9	88.6
80°	135.0	122.3	106.3	91.1	77.6	65.8	61.6
82.5°	118.1	104.6	88.6	72.5	57.4	44.7	39.6
85°	103.8	89.4	73.4	57.4	42.2	28.7	21.9
87.5°	92.8	76.8	60.7	45.6	29.5	16.0	8.4
90°	82.7	67.5	52.3	36.3	21.1	8.4	0.0
92.5°	73.4	59.0	43.9	29.5	16.0	5.1	0.8
95°	65.0	52.3	37.1	23.6	11.8	3.4	0.8
97.5°	58.2	45.6	32.1	19.4	9.3	2.5	0.8
100°	52.3	39.6	27.8	16.0	7.6	1.7	0.8
102.5°	46.4	35.4	23.6	13.5	5.9	0.8	0.8
105°	41.3	31.2	20.2	11.8	5.1	0.8	0.8
107.5°	37.1	27.8	17.7	10.1	3.4	0.8	0.8
110°	32.9	23.6	15.2	8.4	2.5	0.8	0.8



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CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	29.5	21.1	13.5	6.7	1.7	0.8	0.8
115°	26.1	18.6	11.8	5.9	1.7	0.8	0.8
117.5°	22.8	16.0	10.1	4.2	0.8	0.8	0.8
120°	20.2	14.3	8.4	3.4	0.8	0.8	0.8
122.5°	17.7	11.8	6.7	2.5	0.8	0.8	0.8
125°	15.2	10.1	5.9	1.7	0.8	0.8	0.8
127.5°	12.7	8.4	4.2	1.7	0.8	0.8	0.8
130°	11.0	6.7	3.4	0.8	0.8	0.8	0.8
132.5°	9.3	5.1	2.5	0.8	0.8	0.8	0.8
135°	7.6	4.2	1.7	0.8	0.8	0.8	0.8
137.5°	5.9	3.4	1.7	0.8	0.8	0.8	0.8
140°	4.2	2.5	0.8	0.8	0.8	0.8	0.8
142.5°	3.4	1.7	0.8	0.8	0.8	0.8	0.8
145°	2.5	1.7	0.8	0.8	0.8	0.8	0.8
147.5°	1.7	1.7	1.7	1.7	0.8	0.8	0.8
150°	1.7	1.7	0.8	0.8	1.7	0.8	0.8
152.5°	1.7	0.8	0.8	0.8	1.7	0.8	0.8
155°	1.7	1.7	1.7	1.7	1.7	1.7	0.8
157.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7
160°	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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)