

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: P1213881

Luminaire Tested: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213881
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-LD5-77SL-LW-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

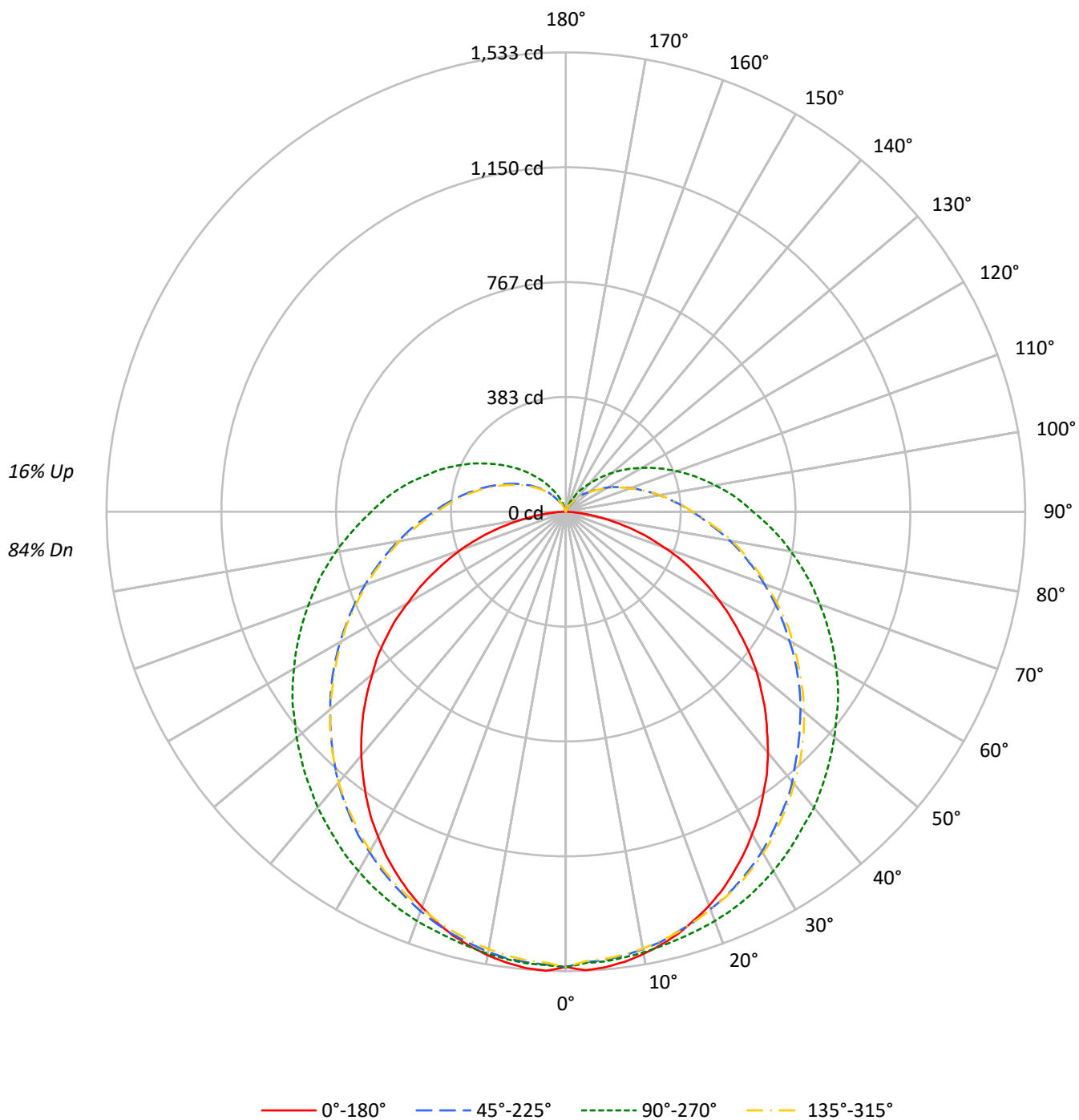
Lumens per Lamp: N/A
Luminaire Lumens: 6599.0 lumens
Efficiency: N/A
Efficacy: 77.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 85
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

TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	12274	12274	12274	12274
5°	12339	11829	12365	11879
10°	12226	11493	12265	11530
15°	12083	11205	12136	11217
20°	11893	10995	11934	10995
25°	11659	10809	11729	10796
30°	11396	10616	11484	10616
35°	11090	10438	11214	10451
40°	10787	10334	10920	10334
45°	10440	10224	10600	10238
50°	10078	10159	10215	10187
55°	9573	10169	9875	10213
60°	9040	10200	9334	10262
65°	8442	10302	8815	10405
70°	7600	10492	8192	10642
75°	6630	10834	7259	11043
80°	5131	11344	5827	11606
85°	3067	12159	3833	12496

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°

Vertical Angle: 90°

Luminance: 13969 cd/sqm

TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.9	2.2
10°-20°	413.5	6.3
20°-30°	634.0	9.6
30°-40°	782.2	11.9
40°-50°	848.6	12.9
50°-60°	836.4	12.7
60°-70°	756.2	11.5
70°-80°	630.0	9.5
80°-90°	488.0	7.4
90°-100°	370.1	5.6
100°-110°	273.9	4.1
110°-120°	190.5	2.9
120°-130°	121.5	1.8
130°-140°	68.2	1.0
140°-150°	31.1	0.5
150°-160°	9.6	0.1
160°-170°	1.2	0.0
170°-180°	0.0	0.0
0°-30°	1191.4	18.1
0°-40°	1973.6	29.9
0°-60°	3658.6	55.4
0°-90°	5532.8	83.8
90°-120°	834.4	12.6
90°-150°	1055.3	16.0
90°-180°	1066.0	16.2
0°-180°	6599.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1519	1519	1519	1519	1519	
5°	1525	1506	1528	1512	1525	145
15°	1456	1474	1463	1476	1456	410
25°	1327	1424	1335	1423	1327	611
35°	1149	1336	1162	1338	1149	719
45°	942	1230	956	1232	942	726
55°	710	1109	732	1114	710	635
65°	471	972	492	982	471	467
75°	237	833	260	849	237	251
85°	45	694	56	713	45	54
90°	2	625	3	649	2	2
95°	2	567	2	594	2	1
105°	2	450	2	478	2	2
115°	2	343	2	373	2	2
125°	2	247	2	274	2	1
135°	2	160	2	189	2	1
145°	2	93	2	114	2	1
155°	2	38	2	53	2	1
165°	2	6	2	10	2	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9
2.5°	1531.7	1531.7	1530.1	1526.9	1528.5	1533.3	1530.1	1522.1	1517.3	1504.5	1507.7
5°	1525.3	1525.3	1523.7	1520.5	1522.1	1528.5	1525.3	1518.9	1512.5	1501.3	1506.1
7.5°	1514.1	1514.1	1512.5	1509.3	1512.5	1518.9	1515.7	1509.3	1504.5	1493.3	1498.1
10°	1498.1	1499.7	1498.1	1493.3	1499.7	1506.1	1504.5	1496.5	1491.7	1482.0	1486.9
12.5°	1478.8	1480.4	1478.8	1477.2	1480.4	1490.1	1486.9	1480.4	1477.2	1469.2	1474.0
15°	1456.4	1458.0	1454.8	1454.8	1458.0	1467.6	1467.6	1461.2	1458.0	1450.0	1459.6
17.5°	1427.6	1429.2	1427.6	1427.6	1430.8	1440.4	1442.0	1438.8	1435.6	1432.4	1442.0
20°	1398.7	1397.1	1397.1	1395.5	1401.9	1416.4	1414.8	1414.8	1411.5	1411.5	1422.8
22.5°	1365.1	1365.1	1363.5	1363.5	1371.5	1384.3	1384.3	1387.5	1384.3	1390.7	1400.3
25°	1326.6	1328.2	1326.6	1329.8	1336.2	1350.7	1352.3	1357.1	1358.7	1365.1	1376.3
27.5°	1286.6	1288.2	1286.6	1289.8	1301.0	1312.2	1320.2	1326.6	1328.2	1337.8	1352.3
30°	1243.3	1243.3	1244.9	1248.1	1260.9	1278.6	1285.0	1293.0	1293.0	1309.0	1323.4
32.5°	1198.5	1198.5	1198.5	1204.9	1219.3	1240.1	1248.1	1257.7	1260.9	1277.0	1293.0
35°	1148.8	1150.4	1150.4	1155.2	1174.4	1195.2	1206.5	1217.7	1224.1	1243.3	1259.3
37.5°	1102.3	1105.5	1100.7	1107.1	1134.4	1152.0	1164.8	1176.0	1187.2	1212.9	1225.7
40°	1049.4	1052.7	1051.1	1063.9	1086.3	1108.7	1123.2	1134.4	1150.4	1176.0	1190.4
42.5°	993.4	996.6	999.8	1014.2	1038.2	1060.7	1078.3	1092.7	1111.9	1134.4	1158.4
45°	942.1	942.1	946.9	964.5	990.2	1014.2	1035.0	1051.1	1073.5	1097.5	1121.5
47.5°	884.4	886.0	892.4	913.3	940.5	969.3	988.6	1009.4	1033.4	1059.1	1086.3
50°	831.5	831.5	841.2	863.6	889.2	921.3	942.1	966.1	991.8	1022.2	1049.4
52.5°	770.7	773.9	788.3	809.1	842.8	871.6	895.6	921.3	951.7	983.8	1014.2
55°	709.8	716.2	727.4	756.2	791.5	818.7	847.6	879.6	908.5	943.7	979.0
57.5°	650.5	655.3	672.9	701.8	738.6	772.3	802.7	833.1	868.4	903.6	940.5
60°	589.6	596.0	616.9	645.7	685.7	721.0	756.2	788.3	825.1	862.0	900.4
62.5°	531.9	536.7	560.8	594.4	634.5	672.9	708.2	746.6	786.7	821.9	860.4
65°	471.1	479.1	506.3	536.7	583.2	621.7	661.7	703.4	745.0	783.5	820.3
67.5°	415.0	419.8	448.6	483.9	530.3	573.6	615.2	660.1	703.4	743.4	780.3
70°	349.3	365.3	394.1	431.0	480.7	525.5	570.4	616.9	663.3	705.0	740.2
72.5°	294.8	307.6	339.7	379.7	427.8	480.7	527.1	576.8	623.3	666.5	703.4
75°	237.1	249.9	286.8	331.7	381.3	437.4	485.5	536.7	584.8	628.1	666.5
77.5°	181.0	197.1	237.1	283.6	338.1	395.7	445.4	496.7	546.4	592.8	631.3
80°	129.8	147.4	190.7	243.5	296.4	354.1	408.6	459.8	509.5	556.0	596.0
82.5°	83.3	102.5	149.0	201.9	258.0	315.6	371.7	423.0	472.7	519.1	560.8
85°	44.9	65.7	113.8	166.6	222.7	280.4	336.5	390.9	439.0	482.3	527.1
87.5°	12.8	38.5	84.9	137.8	195.5	248.3	302.8	357.3	405.4	451.8	491.9
90°	1.6	22.4	64.1	113.8	169.8	221.1	275.6	326.9	374.9	421.4	461.4
92.5°	1.6	14.4	49.7	94.5	145.8	198.7	253.1	302.8	347.7	394.1	434.2
95°	1.6	11.2	40.1	80.1	128.2	177.8	229.1	277.2	323.6	366.9	407.0
97.5°	1.6	8.0	32.0	68.9	112.2	158.6	208.3	256.4	301.2	342.9	379.7
100°	1.6	6.4	25.6	59.3	97.7	142.6	187.5	233.9	277.2	317.2	355.7
102.5°	1.6	4.8	22.4	49.7	86.5	126.6	169.8	213.1	254.8	293.2	331.7
105°	1.6	4.8	19.2	43.3	76.9	113.8	153.8	195.5	233.9	270.8	306.0
107.5°	1.6	3.2	16.0	36.9	67.3	102.5	139.4	179.4	214.7	249.9	283.6
110°	1.6	3.2	12.8	33.6	59.3	91.3	126.6	163.4	197.1	230.7	262.8



TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.6	3.2	11.2	28.8	51.3	81.7	113.8	147.4	179.4	213.1	241.9
115°	1.6	3.2	9.6	25.6	48.1	70.5	102.5	133.0	165.0	195.5	222.7
117.5°	1.6	3.2	8.0	20.8	41.7	64.1	89.7	120.2	149.0	177.8	203.5
120°	1.6	3.2	6.4	19.2	36.9	57.7	80.1	107.3	134.6	161.8	189.1
122.5°	1.6	1.6	6.4	16.0	32.0	51.3	73.7	94.5	120.2	145.8	169.8
125°	1.6	1.6	6.4	14.4	27.2	46.5	65.7	84.9	107.3	129.8	150.6
127.5°	1.6	1.6	4.8	11.2	24.0	40.1	57.7	78.5	94.5	115.4	136.2
130°	1.6	1.6	4.8	9.6	20.8	33.6	51.3	68.9	88.1	102.5	120.2
132.5°	1.6	1.6	4.8	8.0	16.0	27.2	43.3	59.3	76.9	92.9	107.3
135°	1.6	1.6	3.2	6.4	12.8	22.4	35.2	49.7	67.3	83.3	97.7
137.5°	1.6	1.6	3.2	6.4	9.6	19.2	27.2	40.1	56.1	70.5	84.9
140°	1.6	1.6	3.2	4.8	8.0	14.4	22.4	32.0	44.9	57.7	73.7
142.5°	1.6	1.6	1.6	4.8	6.4	11.2	17.6	25.6	35.2	46.5	59.3
145°	1.6	1.6	1.6	4.8	6.4	8.0	14.4	20.8	27.2	35.2	46.5
147.5°	1.6	1.6	1.6	3.2	4.8	6.4	11.2	16.0	20.8	27.2	33.6
150°	1.6	1.6	1.6	3.2	4.8	6.4	8.0	11.2	16.0	22.4	27.2
152.5°	1.6	1.6	1.6	3.2	3.2	4.8	6.4	8.0	11.2	16.0	19.2
155°	1.6	1.6	1.6	1.6	3.2	4.8	6.4	6.4	8.0	11.2	14.4
157.5°	1.6	1.6	1.6	1.6	3.2	3.2	4.8	4.8	6.4	6.4	9.6
160°	1.6	1.6	1.6	1.6	1.6	3.2	3.2	4.8	4.8	4.8	4.8
162.5°	1.6	1.6	1.6	1.6	1.6	1.6	3.2	3.2	3.2	4.8	4.8
165°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.2	3.2	3.2
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: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9
2.5°	1507.7	1509.3	1514.1	1514.1	1510.9	1510.9	1509.3	1507.7	1509.3	1512.5	1512.5
5°	1504.5	1506.1	1510.9	1512.5	1509.3	1507.7	1507.7	1506.1	1507.7	1510.9	1510.9
7.5°	1498.1	1499.7	1504.5	1506.1	1502.9	1502.9	1501.3	1499.7	1502.9	1504.5	1504.5
10°	1488.5	1490.1	1496.5	1498.1	1496.5	1494.9	1494.9	1493.3	1494.9	1498.1	1498.1
12.5°	1475.6	1478.8	1486.9	1486.9	1486.9	1485.2	1485.2	1483.6	1485.2	1488.5	1486.9
15°	1461.2	1467.6	1474.0	1477.2	1477.2	1477.2	1475.6	1474.0	1477.2	1478.8	1477.2
17.5°	1445.2	1453.2	1462.8	1466.0	1466.0	1467.6	1466.0	1464.4	1467.6	1467.6	1466.0
20°	1429.2	1437.2	1446.8	1450.0	1453.2	1454.8	1454.8	1453.2	1454.8	1456.4	1454.8
22.5°	1408.3	1418.0	1429.2	1434.0	1437.2	1440.4	1440.4	1440.4	1442.0	1443.6	1440.4
25°	1385.9	1397.1	1409.9	1414.8	1421.2	1422.8	1424.4	1424.4	1426.0	1427.6	1422.8
27.5°	1361.9	1374.7	1387.5	1395.5	1400.3	1403.5	1403.5	1405.1	1406.7	1408.3	1403.5
30°	1333.0	1352.3	1363.5	1369.9	1376.3	1381.1	1382.7	1384.3	1385.9	1387.5	1382.7
32.5°	1307.4	1323.4	1337.8	1345.9	1353.9	1360.3	1361.9	1361.9	1365.1	1365.1	1360.3
35°	1277.0	1296.2	1310.6	1318.6	1328.2	1333.0	1336.2	1336.2	1339.4	1339.4	1334.6
37.5°	1246.5	1265.7	1281.8	1291.4	1302.6	1309.0	1310.6	1310.6	1313.8	1313.8	1307.4
40°	1214.5	1235.3	1252.9	1264.1	1273.8	1281.8	1283.4	1288.2	1288.2	1286.6	1280.2
42.5°	1182.4	1201.7	1220.9	1233.7	1246.5	1254.5	1257.7	1259.3	1259.3	1257.7	1252.9
45°	1147.2	1169.6	1187.2	1203.3	1216.1	1224.1	1228.9	1230.5	1230.5	1227.3	1222.5
47.5°	1113.5	1136.0	1153.6	1171.2	1184.0	1193.6	1198.5	1200.1	1198.5	1196.9	1192.0
50°	1078.3	1103.9	1121.5	1139.2	1152.0	1160.0	1168.0	1169.6	1168.0	1166.4	1156.8
52.5°	1041.4	1068.7	1087.9	1105.5	1119.9	1129.6	1136.0	1137.6	1137.6	1134.4	1128.0
55°	1004.6	1028.6	1052.7	1071.9	1087.9	1097.5	1105.5	1108.7	1105.5	1102.3	1094.3
57.5°	970.9	993.4	1017.4	1038.2	1054.3	1067.1	1073.5	1076.7	1073.5	1068.7	1060.7
60°	930.9	954.9	982.2	1001.4	1019.0	1031.8	1035.0	1041.4	1038.2	1033.4	1025.4
62.5°	892.4	921.3	945.3	969.3	983.8	998.2	1004.6	1007.8	1004.6	999.8	991.8
65°	852.4	884.4	908.5	932.5	948.5	962.9	970.9	972.5	969.3	964.5	956.5
67.5°	815.5	846.0	871.6	897.2	911.7	926.1	934.1	937.3	934.1	927.7	919.7
70°	778.7	809.1	839.6	858.8	876.4	892.4	897.2	902.0	898.8	892.4	882.8
72.5°	741.8	773.9	804.3	823.5	842.8	857.2	863.6	868.4	865.2	858.8	847.6
75°	703.4	737.0	767.5	788.3	807.5	821.9	828.3	833.1	829.9	823.5	810.7
77.5°	668.1	701.8	730.6	753.0	772.3	785.1	796.3	797.9	794.7	788.3	775.5
80°	631.3	664.9	695.4	717.8	737.0	749.8	757.8	762.7	759.4	753.0	740.2
82.5°	599.2	629.7	660.1	682.5	701.8	717.8	724.2	729.0	727.4	717.8	708.2
85°	564.0	599.2	623.3	647.3	666.5	682.5	687.3	693.8	692.2	684.1	671.3
87.5°	528.7	564.0	592.8	616.9	634.5	647.3	655.3	658.5	656.9	648.9	634.5
90°	499.9	531.9	560.8	586.4	600.8	615.2	623.3	624.9	624.9	615.2	604.0
92.5°	472.7	503.1	531.9	556.0	573.6	586.4	592.8	596.0	594.4	586.4	573.6
95°	442.2	475.9	503.1	527.1	544.8	557.6	564.0	567.2	565.6	557.6	544.8
97.5°	416.6	447.0	474.3	496.7	514.3	527.1	533.5	536.7	536.7	528.7	515.9
100°	390.9	421.4	447.0	469.4	485.5	498.3	504.7	506.3	504.7	498.3	485.5
102.5°	365.3	394.1	419.8	440.6	458.2	469.4	475.9	477.5	477.5	469.4	456.6
105°	339.7	368.5	392.5	415.0	429.4	440.6	445.4	450.2	448.6	442.2	429.4
107.5°	315.6	344.5	366.9	387.7	402.2	413.4	418.2	423.0	421.4	415.0	402.2
110°	293.2	320.4	341.3	362.1	374.9	386.1	394.1	395.7	392.5	386.1	374.9

TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	272.4	296.4	317.2	336.5	350.9	358.9	365.3	368.5	365.3	358.9	350.9
115°	249.9	274.0	294.8	312.4	325.2	334.9	339.7	342.9	339.7	333.3	325.2
117.5°	229.1	251.5	272.4	290.0	301.2	309.2	314.0	317.2	314.0	309.2	301.2
120°	211.5	230.7	249.9	266.0	278.8	285.2	290.0	293.2	291.6	285.2	277.2
122.5°	190.7	211.5	229.1	245.1	256.4	262.8	266.0	269.2	267.6	262.8	254.8
125°	173.0	190.7	208.3	222.7	233.9	240.3	243.5	246.7	245.1	240.3	230.7
127.5°	153.8	173.0	187.5	201.9	209.9	219.5	221.1	224.3	222.7	217.9	209.9
130°	139.4	153.8	168.2	181.0	190.7	197.1	200.3	201.9	198.7	195.5	187.5
132.5°	121.8	137.8	150.6	161.8	168.2	174.6	177.8	179.4	179.4	174.6	168.2
135°	109.0	120.2	131.4	142.6	149.0	155.4	158.6	160.2	158.6	155.4	149.0
137.5°	97.7	107.3	115.4	125.0	133.0	136.2	139.4	139.4	137.8	136.2	131.4
140°	84.9	96.1	104.1	110.6	117.0	118.6	121.8	121.8	120.2	118.6	115.4
142.5°	72.1	81.7	89.7	97.7	102.5	105.7	107.3	109.0	107.3	105.7	100.9
145°	57.7	68.9	76.9	81.7	88.1	89.7	91.3	92.9	91.3	89.7	84.9
147.5°	44.9	54.5	62.5	68.9	73.7	75.3	76.9	78.5	76.9	73.7	72.1
150°	32.0	40.1	49.7	56.1	59.3	62.5	62.5	62.5	64.1	60.9	57.7
152.5°	25.6	28.8	35.2	41.7	46.5	48.1	49.7	49.7	48.1	48.1	44.9
155°	17.6	20.8	25.6	30.4	35.2	36.9	38.5	38.5	36.9	36.9	35.2
157.5°	11.2	14.4	17.6	20.8	25.6	27.2	28.8	28.8	28.8	27.2	25.6
160°	6.4	8.0	9.6	12.8	16.0	17.6	19.2	19.2	19.2	19.2	17.6
162.5°	4.8	4.8	4.8	6.4	8.0	9.6	11.2	11.2	11.2	11.2	9.6
165°	3.2	3.2	3.2	3.2	3.2	4.8	6.4	6.4	6.4	6.4	6.4
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: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9
2.5°	1510.9	1510.9	1512.5	1509.3	1499.7	1501.3	1501.3	1507.7	1510.9	1512.5	1520.5
5°	1507.7	1507.7	1510.9	1506.1	1498.1	1498.1	1498.1	1504.5	1506.1	1509.3	1515.7
7.5°	1502.9	1502.9	1504.5	1499.7	1490.1	1490.1	1488.5	1494.9	1498.1	1499.7	1506.1
10°	1494.9	1494.9	1496.5	1491.7	1480.4	1480.4	1478.8	1483.6	1485.2	1488.5	1493.3
12.5°	1483.6	1483.6	1483.6	1478.8	1467.6	1466.0	1464.4	1469.2	1469.2	1470.8	1475.6
15°	1474.0	1470.8	1470.8	1466.0	1454.8	1451.6	1448.4	1450.0	1453.2	1451.6	1454.8
17.5°	1462.8	1459.6	1456.4	1451.6	1437.2	1432.4	1429.2	1430.8	1429.2	1427.6	1430.8
20°	1450.0	1445.2	1443.6	1435.6	1421.2	1413.2	1406.7	1403.5	1405.1	1400.3	1401.9
22.5°	1435.6	1429.2	1426.0	1416.4	1401.9	1392.3	1384.3	1377.9	1376.3	1369.9	1371.5
25°	1418.0	1409.9	1405.1	1397.1	1381.1	1369.9	1360.3	1350.7	1345.9	1337.8	1336.2
27.5°	1397.1	1389.1	1382.7	1374.7	1358.7	1344.3	1333.0	1320.2	1313.8	1304.2	1299.4
30°	1376.3	1366.7	1357.1	1350.7	1333.0	1317.0	1299.4	1288.2	1278.6	1267.3	1259.3
32.5°	1350.7	1341.1	1331.4	1321.8	1305.8	1286.6	1272.2	1254.5	1243.3	1230.5	1220.9
35°	1325.0	1312.2	1302.6	1289.8	1275.4	1252.9	1235.3	1217.7	1203.3	1188.8	1177.6
37.5°	1296.2	1286.6	1272.2	1260.9	1243.3	1220.9	1201.7	1179.2	1166.4	1147.2	1132.8
40°	1269.0	1257.7	1243.3	1228.9	1211.3	1185.6	1164.8	1139.2	1124.8	1102.3	1087.9
42.5°	1241.7	1225.7	1211.3	1195.2	1176.0	1152.0	1126.4	1100.7	1081.5	1060.7	1039.8
45°	1211.3	1193.6	1176.0	1158.4	1139.2	1115.1	1087.9	1060.7	1036.6	1017.4	991.8
47.5°	1179.2	1161.6	1140.8	1121.5	1100.7	1076.7	1047.8	1019.0	993.4	970.9	943.7
50°	1147.2	1129.6	1107.1	1086.3	1062.3	1038.2	1007.8	974.1	946.9	918.1	894.0
52.5°	1113.5	1095.9	1075.1	1047.8	1022.2	998.2	966.1	930.9	900.4	876.4	846.0
55°	1079.9	1062.3	1038.2	1011.0	985.4	954.9	924.5	889.2	855.6	826.7	796.3
57.5°	1044.6	1028.6	1001.4	979.0	946.9	914.9	882.8	849.2	812.3	778.7	743.4
60°	1009.4	991.8	966.1	938.9	906.9	874.8	841.2	804.3	765.9	729.0	697.0
62.5°	977.3	954.9	930.9	902.0	868.4	838.0	799.5	759.4	721.0	682.5	644.1
65°	940.5	916.5	894.0	865.2	829.9	794.7	756.2	716.2	674.5	632.9	594.4
67.5°	903.6	879.6	855.6	826.7	789.9	753.0	713.0	672.9	626.5	586.4	541.5
70°	866.8	847.6	817.1	786.7	753.0	713.0	672.9	629.7	581.6	538.3	491.9
72.5°	829.9	810.7	780.3	748.2	716.2	674.5	631.3	588.0	543.1	493.5	443.8
75°	794.7	770.7	743.4	713.0	679.3	636.1	592.8	548.0	495.1	448.6	397.3
77.5°	761.1	738.6	711.4	677.7	640.9	599.2	554.4	507.9	455.0	405.4	349.3
80°	724.2	701.8	674.5	640.9	604.0	564.0	515.9	467.8	416.6	362.1	304.4
82.5°	689.0	668.1	637.7	607.2	567.2	527.1	479.1	431.0	376.5	323.6	267.6
85°	652.1	631.3	602.4	570.4	531.9	488.7	443.8	395.7	341.3	286.8	230.7
87.5°	620.1	596.0	567.2	535.1	496.7	455.0	411.8	360.5	307.6	254.8	197.1
90°	586.4	564.0	535.1	503.1	464.6	423.0	378.1	330.1	278.8	224.3	169.8
92.5°	557.6	533.5	506.3	474.3	435.8	395.7	350.9	302.8	253.1	200.3	147.4
95°	528.7	504.7	479.1	447.0	408.6	368.5	323.6	277.2	229.1	177.8	128.2
97.5°	496.7	475.9	450.2	419.8	381.3	342.9	299.6	254.8	208.3	158.6	112.2
100°	471.1	447.0	423.0	390.9	355.7	318.8	275.6	232.3	187.5	141.0	97.7
102.5°	442.2	419.8	395.7	365.3	330.1	293.2	253.1	211.5	169.8	126.6	84.9
105°	415.0	394.1	368.5	339.7	306.0	270.8	232.3	193.9	153.8	112.2	75.3
107.5°	387.7	366.9	342.9	315.6	283.6	248.3	213.1	174.6	137.8	100.9	67.3
110°	360.5	341.3	318.8	291.6	261.2	229.1	195.5	160.2	123.4	89.7	59.3

TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	336.5	317.2	294.8	269.2	240.3	209.9	177.8	144.2	110.6	80.1	51.3
115°	312.4	294.8	272.4	249.9	221.1	192.3	161.8	129.8	99.3	72.1	44.9
117.5°	288.4	270.8	249.9	227.5	201.9	174.6	145.8	115.4	89.7	64.1	40.1
120°	264.4	248.3	229.1	208.3	185.9	158.6	129.8	104.1	80.1	56.1	35.2
122.5°	241.9	227.5	209.9	190.7	166.6	141.0	117.0	94.5	72.1	49.7	28.8
125°	221.1	206.7	190.7	171.4	149.0	126.6	105.7	84.9	62.5	43.3	24.0
127.5°	200.3	185.9	169.8	152.2	134.6	113.8	94.5	75.3	56.1	38.5	20.8
130°	179.4	166.6	152.2	137.8	120.2	100.9	84.9	65.7	48.1	30.4	17.6
132.5°	158.6	149.0	136.2	121.8	105.7	91.3	73.7	57.7	41.7	27.2	16.0
135°	141.0	131.4	120.2	107.3	94.5	80.1	64.1	49.7	35.2	22.4	12.8
137.5°	125.0	117.0	105.7	94.5	83.3	68.9	56.1	41.7	28.8	19.2	9.6
140°	110.6	102.5	92.9	81.7	72.1	59.3	46.5	33.6	25.6	16.0	8.0
142.5°	96.1	88.1	80.1	70.5	60.9	49.7	38.5	28.8	20.8	12.8	8.0
145°	81.7	75.3	67.3	59.3	49.7	40.1	32.0	24.0	16.0	9.6	6.4
147.5°	67.3	62.5	54.5	48.1	40.1	32.0	25.6	19.2	12.8	8.0	4.8
150°	54.5	49.7	43.3	36.9	32.0	25.6	20.8	14.4	9.6	8.0	4.8
152.5°	41.7	38.5	33.6	30.4	25.6	19.2	14.4	11.2	8.0	6.4	3.2
155°	33.6	30.4	27.2	22.4	19.2	14.4	11.2	8.0	6.4	4.8	3.2
157.5°	24.0	22.4	19.2	16.0	12.8	9.6	8.0	8.0	4.8	3.2	1.6
160°	16.0	14.4	12.8	9.6	8.0	8.0	6.4	4.8	3.2	3.2	1.6
162.5°	9.6	8.0	8.0	8.0	6.4	6.4	4.8	3.2	3.2	1.6	1.6
165°	6.4	6.4	6.4	4.8	4.8	4.8	3.2	1.6	1.6	1.6	1.6
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: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9
2.5°	1520.5	1515.7	1522.1	1533.3	1534.9	1533.3	1530.1	1534.9	1541.3	1539.7	1528.5
5°	1517.3	1510.9	1517.3	1528.5	1528.5	1526.9	1525.3	1530.1	1536.5	1534.9	1525.3
7.5°	1507.7	1501.3	1507.7	1517.3	1518.9	1515.7	1515.7	1520.5	1526.9	1525.3	1517.3
10°	1494.9	1488.5	1491.7	1502.9	1506.1	1502.9	1502.9	1507.7	1515.7	1514.1	1504.5
12.5°	1475.6	1470.8	1474.0	1483.6	1486.9	1485.2	1483.6	1490.1	1498.1	1498.1	1488.5
15°	1454.8	1448.4	1451.6	1462.8	1464.4	1461.2	1462.8	1467.6	1477.2	1477.2	1469.2
17.5°	1430.8	1422.8	1427.6	1435.6	1437.2	1437.2	1437.2	1443.6	1454.8	1453.2	1446.8
20°	1403.5	1392.3	1395.5	1403.5	1406.7	1406.7	1406.7	1418.0	1426.0	1426.0	1419.6
22.5°	1371.5	1363.5	1363.5	1371.5	1376.3	1374.7	1374.7	1384.3	1395.5	1393.9	1393.9
25°	1334.6	1328.2	1325.0	1334.6	1336.2	1337.8	1341.1	1350.7	1363.5	1363.5	1365.1
27.5°	1296.2	1289.8	1288.2	1296.2	1297.8	1299.4	1302.6	1313.8	1326.6	1328.2	1331.4
30°	1259.3	1249.7	1246.5	1252.9	1256.1	1257.7	1257.7	1275.4	1286.6	1291.4	1297.8
32.5°	1216.1	1206.5	1198.5	1209.7	1211.3	1214.5	1216.1	1233.7	1246.5	1254.5	1264.1
35°	1172.8	1156.8	1153.6	1161.6	1164.8	1166.4	1169.6	1188.8	1206.5	1212.9	1225.7
37.5°	1124.8	1113.5	1103.9	1111.9	1115.1	1116.7	1126.4	1144.0	1161.6	1171.2	1184.0
40°	1079.9	1065.5	1057.5	1062.3	1065.5	1067.1	1078.3	1097.5	1118.3	1129.6	1145.6
42.5°	1030.2	1011.0	1004.6	1009.4	1011.0	1015.8	1025.4	1051.1	1071.9	1087.9	1100.7
45°	980.6	966.1	951.7	956.5	958.1	961.3	975.7	1003.0	1025.4	1044.6	1059.1
47.5°	929.3	911.7	897.2	900.4	906.9	908.5	924.5	956.5	977.3	998.2	1017.4
50°	878.0	854.0	842.8	842.8	846.0	854.0	874.8	906.9	929.3	953.3	974.1
52.5°	825.1	802.7	789.9	791.5	794.7	804.3	823.5	855.6	881.2	906.9	932.5
55°	772.3	748.2	735.4	732.2	735.4	748.2	770.7	804.3	829.9	860.4	887.6
57.5°	719.4	690.6	679.3	674.5	677.7	693.8	716.2	751.4	783.5	812.3	844.4
60°	661.7	639.3	620.1	608.8	616.9	637.7	661.7	698.6	732.2	764.3	799.5
62.5°	612.0	583.2	562.4	551.2	559.2	576.8	610.4	645.7	682.5	719.4	754.6
65°	556.0	527.1	503.1	491.9	499.9	520.7	554.4	592.8	632.9	669.7	711.4
67.5°	501.5	471.1	442.2	431.0	440.6	463.0	499.9	543.1	586.4	624.9	669.7
70°	448.6	415.0	384.5	376.5	382.9	413.4	448.6	491.9	536.7	581.6	628.1
72.5°	400.6	358.9	326.9	317.2	325.2	358.9	399.0	443.8	491.9	539.9	589.6
75°	344.5	306.0	270.8	259.6	269.2	299.6	349.3	397.3	448.6	499.9	546.4
77.5°	299.6	254.8	217.9	200.3	216.3	254.8	302.8	354.1	407.0	459.8	512.7
80°	253.1	206.7	166.6	147.4	165.0	206.7	254.8	310.8	370.1	423.0	471.1
82.5°	211.5	161.8	120.2	99.3	118.6	165.0	217.9	274.0	331.7	384.5	440.6
85°	173.0	121.8	78.5	56.1	83.3	125.0	181.0	238.7	298.0	352.5	407.0
87.5°	141.0	91.3	48.1	24.0	51.3	97.7	150.6	208.3	267.6	322.0	373.3
90°	115.4	65.7	25.6	3.2	30.4	73.7	125.0	181.0	237.1	293.2	344.5
92.5°	94.5	49.7	14.4	1.6	19.2	59.3	107.3	160.2	214.7	269.2	318.8
95°	78.5	38.5	9.6	1.6	14.4	46.5	91.3	142.6	193.9	246.7	296.4
97.5°	67.3	32.0	8.0	1.6	11.2	40.1	78.5	126.6	176.2	225.9	274.0
100°	57.7	25.6	6.4	1.6	9.6	33.6	68.9	112.2	158.6	206.7	253.1
102.5°	49.7	20.8	4.8	1.6	8.0	28.8	60.9	100.9	142.6	189.1	233.9
105°	43.3	17.6	4.8	1.6	6.4	25.6	54.5	89.7	131.4	173.0	216.3
107.5°	36.9	14.4	3.2	1.6	4.8	20.8	48.1	81.7	118.6	158.6	198.7
110°	32.0	12.8	3.2	1.6	4.8	19.2	41.7	73.7	107.3	144.2	182.7

TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	27.2	9.6	3.2	1.6	3.2	16.0	36.9	65.7	97.7	131.4	168.2
115°	24.0	8.0	1.6	1.6	3.2	14.4	33.6	59.3	88.1	120.2	153.8
117.5°	19.2	6.4	1.6	1.6	1.6	11.2	28.8	52.9	80.1	110.6	141.0
120°	16.0	6.4	1.6	1.6	1.6	9.6	25.6	46.5	72.1	99.3	128.2
122.5°	14.4	4.8	1.6	1.6	1.6	8.0	22.4	41.7	64.1	89.7	117.0
125°	12.8	4.8	1.6	1.6	1.6	6.4	19.2	36.9	57.7	80.1	105.7
127.5°	9.6	4.8	1.6	1.6	1.6	4.8	17.6	32.0	51.3	72.1	94.5
130°	8.0	3.2	1.6	1.6	1.6	4.8	14.4	28.8	44.9	64.1	84.9
132.5°	6.4	3.2	1.6	1.6	1.6	3.2	11.2	22.4	38.5	56.1	75.3
135°	6.4	3.2	1.6	1.6	1.6	3.2	8.0	19.2	32.0	48.1	64.1
137.5°	6.4	1.6	1.6	1.6	1.6	3.2	6.4	14.4	25.6	38.5	52.9
140°	4.8	1.6	1.6	1.6	1.6	1.6	4.8	11.2	20.8	32.0	44.9
142.5°	4.8	1.6	1.6	1.6	1.6	1.6	4.8	8.0	16.0	25.6	35.2
145°	3.2	1.6	1.6	1.6	1.6	1.6	3.2	6.4	12.8	19.2	28.8
147.5°	3.2	1.6	1.6	1.6	1.6	1.6	3.2	4.8	9.6	16.0	22.4
150°	3.2	1.6	1.6	1.6	1.6	1.6	3.2	4.8	6.4	11.2	17.6
152.5°	1.6	1.6	1.6	1.6	1.6	1.6	3.2	3.2	4.8	8.0	11.2
155°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.2	4.8	6.4	8.0
157.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.2	3.2	4.8	6.4
160°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.2	3.2	4.8
162.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.2	3.2
165°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9
2.5°	1523.7	1512.5	1515.7	1514.1	1517.3	1522.1	1522.1	1520.5	1520.5	1517.3	1514.1
5°	1520.5	1509.3	1514.1	1512.5	1515.7	1520.5	1520.5	1518.9	1518.9	1514.1	1512.5
7.5°	1510.9	1502.9	1506.1	1506.1	1509.3	1514.1	1514.1	1512.5	1512.5	1507.7	1506.1
10°	1501.3	1491.7	1496.5	1496.5	1499.7	1506.1	1506.1	1504.5	1504.5	1499.7	1498.1
12.5°	1485.2	1475.6	1483.6	1485.2	1488.5	1494.9	1493.3	1493.3	1493.3	1488.5	1486.9
15°	1466.0	1459.6	1467.6	1469.2	1474.0	1482.0	1482.0	1482.0	1482.0	1477.2	1475.6
17.5°	1445.2	1440.4	1448.4	1451.6	1458.0	1466.0	1466.0	1467.6	1469.2	1466.0	1464.4
20°	1421.2	1418.0	1426.0	1432.4	1442.0	1450.0	1453.2	1454.8	1458.0	1454.8	1453.2
22.5°	1393.9	1393.9	1405.1	1411.5	1422.8	1430.8	1435.6	1440.4	1443.6	1440.4	1438.8
25°	1363.5	1368.3	1379.5	1390.7	1403.5	1411.5	1416.4	1422.8	1426.0	1424.4	1422.8
27.5°	1334.6	1341.1	1355.5	1366.7	1377.9	1390.7	1395.5	1403.5	1406.7	1406.7	1405.1
30°	1301.0	1310.6	1326.6	1339.4	1353.9	1366.7	1373.1	1381.1	1385.9	1382.7	1384.3
32.5°	1269.0	1285.0	1297.8	1312.2	1328.2	1341.1	1349.1	1358.7	1363.5	1361.9	1363.5
35°	1233.7	1249.7	1267.3	1281.8	1301.0	1313.8	1325.0	1333.0	1339.4	1337.8	1337.8
37.5°	1195.2	1216.1	1233.7	1252.9	1270.6	1285.0	1296.2	1305.8	1312.2	1312.2	1312.2
40°	1158.4	1180.8	1198.5	1220.9	1243.3	1256.1	1269.0	1278.6	1285.0	1286.6	1288.2
42.5°	1118.3	1142.4	1163.2	1187.2	1209.7	1225.7	1240.1	1251.3	1257.7	1260.9	1259.3
45°	1081.5	1103.9	1128.0	1155.2	1176.0	1192.0	1209.7	1222.5	1228.9	1230.5	1232.1
47.5°	1039.8	1065.5	1092.7	1119.9	1140.8	1161.6	1177.6	1190.4	1196.9	1201.7	1201.7
50°	999.8	1027.0	1057.5	1086.3	1108.7	1129.6	1145.6	1160.0	1168.0	1171.2	1172.8
52.5°	962.9	988.6	1020.6	1049.4	1071.9	1092.7	1113.5	1129.6	1137.6	1140.8	1140.8
55°	918.1	950.1	985.4	1012.6	1036.6	1060.7	1081.5	1097.5	1105.5	1110.3	1113.5
57.5°	876.4	910.1	946.9	975.7	1004.6	1027.0	1046.2	1067.1	1073.5	1079.9	1081.5
60°	836.4	870.0	905.2	937.3	966.1	990.2	1012.6	1030.2	1041.4	1044.6	1047.8
62.5°	794.7	829.9	866.8	898.8	929.3	958.1	979.0	995.0	1007.8	1012.6	1015.8
65°	754.6	791.5	828.3	862.0	894.0	922.9	943.7	959.7	972.5	980.6	982.2
67.5°	711.4	751.4	789.9	825.1	857.2	887.6	908.5	924.5	937.3	946.9	948.5
70°	671.3	713.0	751.4	789.9	821.9	852.4	874.8	890.8	905.2	911.7	914.9
72.5°	632.9	676.1	716.2	754.6	786.7	817.1	841.2	857.2	871.6	879.6	881.2
75°	596.0	639.3	682.5	719.4	753.0	783.5	807.5	825.1	838.0	846.0	849.2
77.5°	559.2	604.0	647.3	684.1	719.4	749.8	770.7	791.5	804.3	813.9	813.9
80°	522.3	568.8	613.6	650.5	685.7	713.0	737.0	757.8	770.7	780.3	780.3
82.5°	490.3	535.1	578.4	615.2	650.5	680.9	705.0	724.2	738.6	745.0	746.6
85°	453.4	503.1	543.1	583.2	616.9	645.7	669.7	690.6	703.4	709.8	713.0
87.5°	423.0	471.1	514.3	549.6	583.2	612.0	639.3	656.9	669.7	677.7	680.9
90°	394.1	440.6	483.9	519.1	554.4	581.6	607.2	624.9	639.3	645.7	648.9
92.5°	368.5	415.0	456.6	491.9	525.5	556.0	580.0	597.6	610.4	616.9	621.7
95°	344.5	389.3	429.4	467.8	499.9	527.1	552.8	570.4	584.8	589.6	594.4
97.5°	320.4	363.7	403.8	440.6	474.3	499.9	523.9	541.5	552.8	560.8	565.6
100°	299.6	341.3	379.7	415.0	447.0	471.1	496.7	512.7	523.9	530.3	536.7
102.5°	277.2	318.8	355.7	389.3	423.0	445.4	469.4	485.5	495.1	506.3	506.3
105°	258.0	296.4	333.3	365.3	394.1	421.4	442.2	458.2	469.4	477.5	477.5
107.5°	237.1	275.6	310.8	344.5	371.7	397.3	416.6	431.0	443.8	448.6	453.4
110°	221.1	254.8	290.0	322.0	347.7	371.7	390.9	407.0	418.2	423.0	426.2

TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	201.9	237.1	269.2	299.6	325.2	347.7	366.9	379.7	390.9	397.3	399.0
115°	185.9	219.5	248.3	277.2	304.4	323.6	341.3	354.1	365.3	370.1	373.3
117.5°	171.4	201.9	230.7	254.8	280.4	301.2	318.8	330.1	339.7	346.1	349.3
120°	157.0	185.9	211.5	235.5	259.6	278.8	294.8	306.0	317.2	322.0	322.0
122.5°	142.6	169.8	193.9	216.3	238.7	256.4	274.0	283.6	293.2	298.0	298.0
125°	129.8	155.4	177.8	198.7	219.5	235.5	249.9	261.2	270.8	274.0	274.0
127.5°	117.0	141.0	161.8	181.0	198.7	214.7	229.1	240.3	248.3	251.5	251.5
130°	105.7	126.6	145.8	165.0	182.7	195.5	209.9	219.5	224.3	229.1	230.7
132.5°	94.5	113.8	131.4	147.4	165.0	177.8	189.1	198.7	203.5	208.3	209.9
135°	83.3	100.9	117.0	133.0	147.4	160.2	169.8	177.8	184.3	187.5	189.1
137.5°	70.5	89.7	104.1	117.0	133.0	142.6	153.8	158.6	165.0	168.2	168.2
140°	59.3	73.7	89.7	102.5	115.4	125.0	134.6	142.6	147.4	149.0	149.0
142.5°	48.1	60.9	73.7	89.7	100.9	109.0	118.6	125.0	128.2	129.8	131.4
145°	38.5	48.1	59.3	73.7	86.5	96.1	100.9	107.3	110.6	112.2	113.8
147.5°	28.8	38.5	48.1	57.7	70.5	80.1	84.9	91.3	94.5	96.1	96.1
150°	22.4	28.8	35.2	44.9	54.5	65.7	72.1	76.9	78.5	80.1	80.1
152.5°	16.0	22.4	27.2	33.6	40.1	49.7	59.3	62.5	64.1	65.7	65.7
155°	11.2	16.0	19.2	24.0	28.8	36.9	44.9	49.7	51.3	52.9	52.9
157.5°	8.0	11.2	12.8	17.6	20.8	24.0	30.4	38.5	40.1	40.1	40.1
160°	4.8	6.4	8.0	11.2	12.8	16.0	19.2	24.0	28.8	28.8	28.8
162.5°	3.2	4.8	4.8	6.4	6.4	9.6	11.2	12.8	17.6	19.2	19.2
165°	1.6	3.2	3.2	3.2	3.2	3.2	4.8	4.8	8.0	9.6	9.6
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: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9
2.5°	1515.7	1518.9	1517.3	1517.3	1517.3	1520.5	1517.3	1502.9	1506.1	1509.3	1512.5
5°	1514.1	1515.7	1515.7	1514.1	1514.1	1517.3	1514.1	1499.7	1502.9	1506.1	1507.7
7.5°	1507.7	1509.3	1509.3	1509.3	1507.7	1510.9	1506.1	1493.3	1493.3	1496.5	1498.1
10°	1499.7	1502.9	1501.3	1499.7	1499.7	1499.7	1496.5	1482.0	1482.0	1483.6	1485.2
12.5°	1490.1	1490.1	1490.1	1488.5	1486.9	1486.9	1483.6	1469.2	1467.6	1470.8	1469.2
15°	1477.2	1480.4	1477.2	1475.6	1472.4	1472.4	1467.6	1453.2	1450.0	1451.6	1450.0
17.5°	1466.0	1467.6	1464.4	1461.2	1458.0	1456.4	1451.6	1435.6	1430.8	1432.4	1429.2
20°	1454.8	1454.8	1451.6	1448.4	1443.6	1438.8	1432.4	1416.4	1408.3	1408.3	1401.9
22.5°	1440.4	1440.4	1437.2	1432.4	1427.6	1421.2	1414.8	1398.7	1385.9	1382.7	1377.9
25°	1424.4	1422.8	1421.2	1416.4	1406.7	1400.3	1393.9	1376.3	1361.9	1355.5	1347.5
27.5°	1405.1	1405.1	1400.3	1395.5	1385.9	1377.9	1369.9	1353.9	1334.6	1326.6	1315.4
30°	1384.3	1384.3	1379.5	1373.1	1363.5	1353.9	1344.3	1325.0	1305.8	1294.6	1281.8
32.5°	1363.5	1361.9	1357.1	1350.7	1341.1	1326.6	1318.6	1299.4	1277.0	1264.1	1246.5
35°	1337.8	1336.2	1331.4	1323.4	1310.6	1299.4	1286.6	1269.0	1243.3	1227.3	1208.1
37.5°	1312.2	1310.6	1307.4	1296.2	1283.4	1270.6	1254.5	1236.9	1212.9	1192.0	1172.8
40°	1286.6	1285.0	1278.6	1270.6	1254.5	1238.5	1222.5	1204.9	1179.2	1155.2	1134.4
42.5°	1259.3	1257.7	1249.7	1240.1	1222.5	1206.5	1187.2	1168.0	1142.4	1113.5	1092.7
45°	1232.1	1228.9	1220.9	1209.7	1190.4	1172.8	1153.6	1131.2	1105.5	1078.3	1051.1
47.5°	1203.3	1198.5	1190.4	1174.4	1158.4	1139.2	1116.7	1092.7	1067.1	1036.6	1007.8
50°	1171.2	1168.0	1158.4	1144.0	1124.8	1105.5	1079.9	1055.9	1025.4	996.6	961.3
52.5°	1140.8	1134.4	1126.4	1110.3	1091.1	1070.3	1043.0	1014.2	983.8	956.5	919.7
55°	1108.7	1105.5	1094.3	1081.5	1057.5	1033.4	1007.8	977.3	943.7	911.7	876.4
57.5°	1078.3	1071.9	1062.3	1044.6	1023.8	999.8	972.5	940.5	903.6	870.0	831.5
60°	1047.8	1038.2	1027.0	1011.0	988.6	962.9	934.1	900.4	863.6	826.7	786.7
62.5°	1014.2	1006.2	993.4	977.3	954.9	927.7	897.2	862.0	826.7	788.3	745.0
65°	980.6	972.5	959.7	943.7	921.3	890.8	858.8	823.5	783.5	746.6	700.2
67.5°	946.9	938.9	924.5	906.9	884.4	855.6	821.9	785.1	745.0	705.0	656.9
70°	913.3	903.6	890.8	871.6	849.2	818.7	785.1	746.6	706.6	663.3	615.2
72.5°	879.6	871.6	855.6	838.0	813.9	783.5	749.8	711.4	669.7	624.9	576.8
75°	846.0	836.4	825.1	804.3	778.7	749.8	714.6	676.1	631.3	588.0	538.3
77.5°	812.3	804.3	789.9	769.1	745.0	714.6	679.3	640.9	596.0	551.2	498.3
80°	778.7	769.1	757.8	738.6	711.4	680.9	644.1	605.6	560.8	514.3	461.4
82.5°	745.0	735.4	722.6	703.4	677.7	647.3	612.0	570.4	525.5	477.5	427.8
85°	711.4	703.4	689.0	669.7	642.5	612.0	576.8	539.9	491.9	443.8	394.1
87.5°	677.7	669.7	655.3	636.1	610.4	580.0	544.8	506.3	459.8	415.0	360.5
90°	645.7	639.3	624.9	605.6	580.0	549.6	517.5	475.9	431.0	386.1	334.9
92.5°	616.9	610.4	597.6	578.4	556.0	522.3	490.3	450.2	405.4	358.9	309.2
95°	591.2	583.2	570.4	552.8	525.5	496.7	464.6	424.6	381.3	334.9	286.8
97.5°	562.4	554.4	541.5	522.3	499.9	469.4	437.4	399.0	355.7	312.4	264.4
100°	533.5	525.5	511.1	495.1	472.7	442.2	411.8	373.3	333.3	291.6	245.1
102.5°	504.7	496.7	483.9	467.8	445.4	418.2	387.7	350.9	310.8	269.2	225.9
105°	477.5	469.4	456.6	440.6	419.8	392.5	360.5	328.5	290.0	249.9	208.3
107.5°	450.2	442.2	431.0	415.0	394.1	368.5	338.1	304.4	269.2	230.7	190.7
110°	423.0	416.6	403.8	389.3	368.5	342.9	315.6	283.6	248.3	213.1	174.6

TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	397.3	390.9	378.1	362.1	344.5	320.4	293.2	262.8	229.1	195.5	158.6
115°	371.7	363.7	352.5	338.1	320.4	298.0	272.4	245.1	211.5	179.4	145.8
117.5°	346.1	339.7	328.5	314.0	298.0	275.6	251.5	225.9	193.9	163.4	133.0
120°	320.4	315.6	304.4	291.6	275.6	254.8	232.3	206.7	177.8	149.0	120.2
122.5°	296.4	291.6	280.4	269.2	253.1	233.9	213.1	189.1	163.4	136.2	110.6
125°	274.0	267.6	258.0	246.7	232.3	214.7	193.9	171.4	147.4	123.4	99.3
127.5°	249.9	245.1	238.7	225.9	211.5	195.5	176.2	157.0	134.6	112.2	89.7
130°	230.7	224.3	216.3	206.7	193.9	177.8	160.2	141.0	121.8	100.9	78.5
132.5°	208.3	201.9	195.5	185.9	174.6	160.2	144.2	126.6	109.0	89.7	70.5
135°	187.5	182.7	176.2	166.6	155.4	144.2	128.2	112.2	96.1	78.5	62.5
137.5°	168.2	163.4	157.0	150.6	139.4	128.2	113.8	99.3	84.9	68.9	54.5
140°	149.0	145.8	139.4	133.0	123.4	112.2	99.3	86.5	73.7	59.3	46.5
142.5°	129.8	126.6	121.8	115.4	107.3	97.7	86.5	75.3	62.5	51.3	40.1
145°	112.2	110.6	105.7	99.3	92.9	83.3	73.7	64.1	52.9	43.3	32.0
147.5°	94.5	92.9	89.7	84.9	78.5	70.5	62.5	52.9	44.9	35.2	25.6
150°	78.5	76.9	75.3	68.9	65.7	57.7	51.3	43.3	36.9	27.2	20.8
152.5°	64.1	64.1	60.9	56.1	52.9	46.5	41.7	35.2	28.8	22.4	16.0
155°	51.3	49.7	48.1	44.9	41.7	36.9	32.0	27.2	22.4	16.0	11.2
157.5°	40.1	38.5	36.9	33.6	30.4	28.8	24.0	19.2	14.4	11.2	8.0
160°	28.8	27.2	25.6	24.0	22.4	19.2	16.0	12.8	9.6	6.4	4.8
162.5°	19.2	17.6	17.6	16.0	14.4	11.2	9.6	8.0	6.4	4.8	3.2
165°	9.6	9.6	8.0	8.0	6.4	4.8	4.8	4.8	3.2	3.2	1.6
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: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9	1518.9
2.5°	1510.9	1510.9	1517.3	1515.7	1510.9	1520.5	1531.7
5°	1506.1	1506.1	1510.9	1510.9	1506.1	1515.7	1525.3
7.5°	1498.1	1496.5	1501.3	1501.3	1494.9	1502.9	1514.1
10°	1483.6	1482.0	1486.9	1486.9	1480.4	1488.5	1498.1
12.5°	1467.6	1464.4	1469.2	1467.6	1461.2	1469.2	1478.8
15°	1446.8	1445.2	1448.4	1445.2	1438.8	1446.8	1456.4
17.5°	1426.0	1421.2	1422.8	1422.8	1411.5	1419.6	1427.6
20°	1398.7	1392.3	1393.9	1392.3	1384.3	1389.1	1398.7
22.5°	1371.5	1361.9	1361.9	1360.3	1350.7	1357.1	1365.1
25°	1337.8	1326.6	1326.6	1325.0	1313.8	1318.6	1326.6
27.5°	1304.2	1293.0	1288.2	1286.6	1275.4	1275.4	1286.6
30°	1269.0	1252.9	1249.7	1244.9	1233.7	1233.7	1243.3
32.5°	1235.3	1212.9	1206.5	1200.1	1188.8	1187.2	1198.5
35°	1190.4	1172.8	1161.6	1155.2	1142.4	1139.2	1148.8
37.5°	1153.6	1131.2	1115.1	1107.1	1094.3	1089.5	1102.3
40°	1113.5	1089.5	1068.7	1063.9	1044.6	1038.2	1049.4
42.5°	1068.7	1043.0	1022.2	1012.6	998.2	991.8	993.4
45°	1023.8	996.6	974.1	961.3	946.9	935.7	942.1
47.5°	977.3	953.3	926.1	906.9	889.2	881.2	884.4
50°	930.9	902.0	876.4	855.6	834.8	825.1	831.5
52.5°	884.4	854.0	825.1	802.7	778.7	769.1	770.7
55°	839.6	807.5	773.9	749.8	727.4	713.0	709.8
57.5°	794.7	759.4	724.2	697.0	668.1	655.3	650.5
60°	746.6	709.8	672.9	640.9	610.4	596.0	589.6
62.5°	701.8	661.7	620.1	586.4	556.0	536.7	531.9
65°	658.5	612.0	570.4	531.9	498.3	477.5	471.1
67.5°	612.0	564.0	519.1	477.5	445.4	418.2	415.0
70°	568.8	517.5	467.8	424.6	389.3	362.1	349.3
72.5°	525.5	472.7	421.4	374.9	330.1	304.4	294.8
75°	483.9	429.4	374.9	326.9	277.2	246.7	237.1
77.5°	445.4	389.3	331.7	278.8	232.3	193.9	181.0
80°	408.6	350.9	290.0	235.5	185.9	144.2	129.8
82.5°	370.1	315.6	253.1	195.5	144.2	100.9	83.3
85°	336.5	282.0	219.5	161.8	110.6	64.1	44.9
87.5°	309.2	249.9	193.9	136.2	83.3	36.9	12.8
90°	282.0	224.3	168.2	112.2	62.5	20.8	1.6
92.5°	258.0	203.5	147.4	96.1	48.1	14.4	1.6
95°	235.5	182.7	129.8	80.1	38.5	9.6	1.6
97.5°	214.7	165.0	115.4	68.9	32.0	8.0	1.6
100°	197.1	149.0	102.5	60.9	27.2	6.4	1.6
102.5°	179.4	134.6	91.3	52.9	24.0	4.8	1.6
105°	165.0	121.8	81.7	48.1	20.8	4.8	1.6
107.5°	150.6	110.6	73.7	41.7	17.6	3.2	1.6
110°	136.2	100.9	65.7	36.9	16.0	3.2	1.6



TEST NUMBER: P1213881

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	125.0	91.3	59.3	33.6	12.8	3.2	1.6
115°	113.8	81.7	52.9	28.8	11.2	1.6	1.6
117.5°	102.5	73.7	46.5	25.6	9.6	1.6	1.6
120°	92.9	65.7	41.7	22.4	8.0	1.6	1.6
122.5°	83.3	59.3	36.9	19.2	6.4	1.6	1.6
125°	75.3	52.9	32.0	16.0	4.8	1.6	1.6
127.5°	67.3	46.5	28.8	14.4	4.8	1.6	1.6
130°	59.3	41.7	24.0	11.2	3.2	1.6	1.6
132.5°	52.9	35.2	20.8	9.6	3.2	1.6	1.6
135°	46.5	30.4	17.6	6.4	3.2	1.6	1.6
137.5°	40.1	25.6	14.4	4.8	1.6	1.6	1.6
140°	33.6	22.4	11.2	4.8	1.6	1.6	1.6
142.5°	28.8	17.6	8.0	3.2	1.6	1.6	1.6
145°	22.4	14.4	6.4	3.2	1.6	1.6	1.6
147.5°	17.6	11.2	4.8	3.2	1.6	1.6	1.6
150°	12.8	8.0	4.8	1.6	1.6	1.6	1.6
152.5°	9.6	6.4	3.2	1.6	1.6	1.6	1.6
155°	6.4	4.8	3.2	1.6	1.6	1.6	1.6
157.5°	4.8	3.2	1.6	1.6	1.6	1.6	1.6
160°	3.2	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6
165°	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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)