

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: P1213532

Luminaire Tested: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213532
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-LD5-78HL-LW-UNV-L935-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

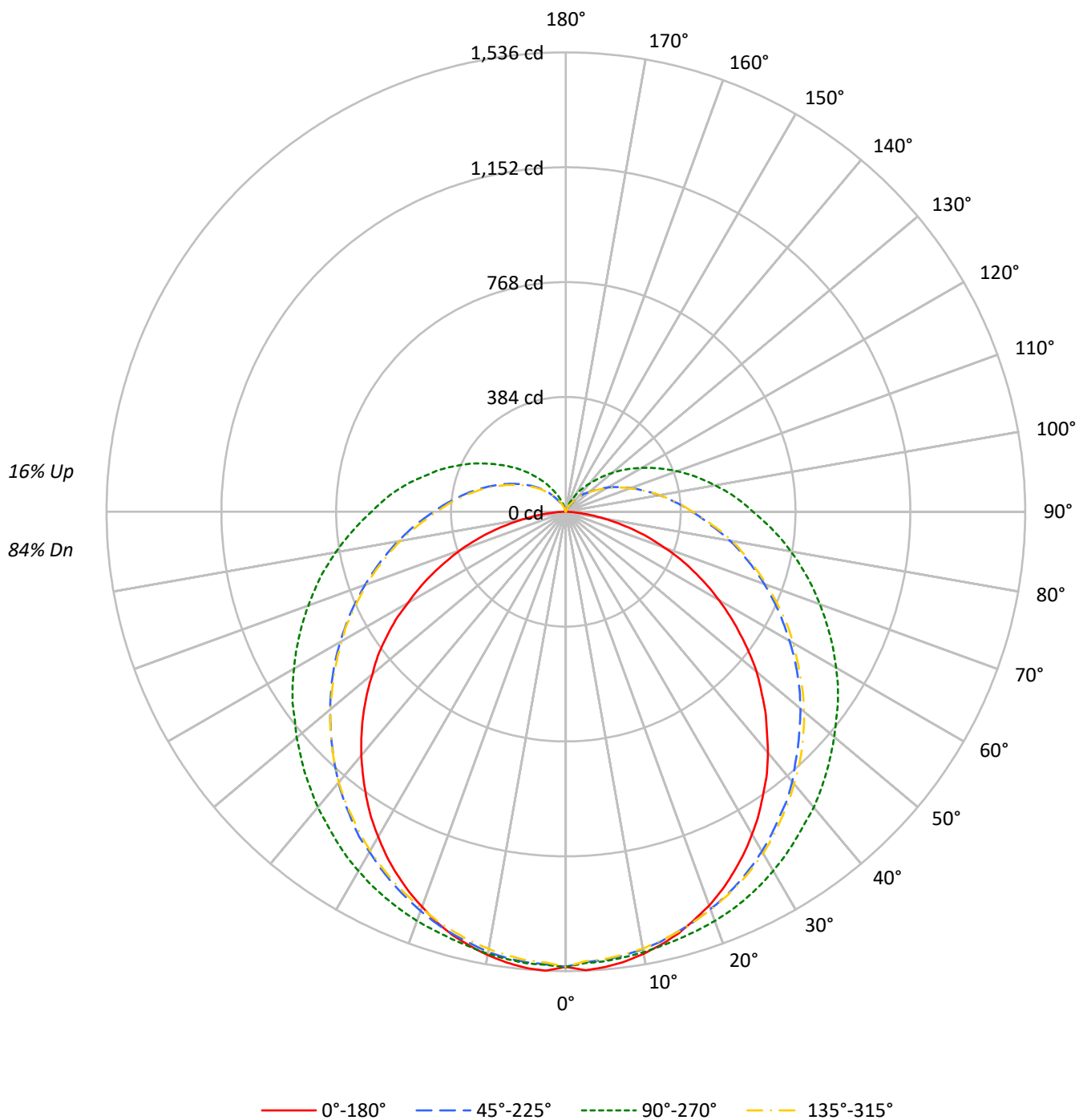
Lumens per Lamp: N/A
Luminaire Lumens: 6610.0 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	115	115	115	115	111	111	111	111	102	102	102	94	94	94	87	87	87	84		
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°	12294	12294	12294	12294
5°	12360	11848	12386	11899
10°	12246	11511	12285	11549
15°	12103	11224	12157	11236
20°	11913	11013	11954	11013
25°	11678	10826	11749	10814
30°	11415	10634	11503	10634
35°	11109	10456	11232	10469
40°	10806	10351	10937	10351
45°	10458	10241	10618	10255
50°	10095	10177	10232	10204
55°	9589	10186	9891	10230
60°	9055	10217	9351	10280
65°	8455	10320	8829	10422
70°	7614	10509	8205	10659
75°	6641	10852	7270	11062
80°	5139	11362	5835	11625
85°	3067	12178	3839	12517

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°

Vertical Angle: 90°

Luminance: 13993 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.1	2.2
10°-20°	414.2	6.3
20°-30°	635.1	9.6
30°-40°	783.5	11.9
40°-50°	850.0	12.9
50°-60°	837.8	12.7
60°-70°	757.5	11.5
70°-80°	631.1	9.5
80°-90°	488.8	7.4
90°-100°	370.7	5.6
100°-110°	274.3	4.1
110°-120°	190.8	2.9
120°-130°	121.7	1.8
130°-140°	68.3	1.0
140°-150°	31.2	0.5
150°-160°	9.7	0.1
160°-170°	1.2	0.0
170°-180°	0.0	0.0
0°-30°	1193.4	18.1
0°-40°	1976.9	29.9
0°-60°	3664.7	55.4
0°-90°	5542.1	83.8
90°-120°	835.8	12.6
90°-150°	1057.0	16.0
90°-180°	1068.0	16.2
0°-180°	6610.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1521	1521	1521	1521	1521	
5°	1528	1509	1531	1515	1528	145
15°	1459	1476	1465	1478	1459	411
25°	1329	1427	1337	1425	1329	612
35°	1151	1338	1164	1340	1151	721
45°	944	1232	958	1234	944	727
55°	711	1111	733	1115	711	636
65°	472	974	493	984	472	468
75°	238	834	260	851	238	251
85°	45	695	56	714	45	54
90°	2	626	3	650	2	2
95°	2	568	2	595	2	1
105°	2	451	2	478	2	2
115°	2	343	2	374	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	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4
2.5°	1534.3	1534.3	1532.7	1529.5	1531.1	1535.9	1532.7	1524.6	1519.8	1507.0	1510.2
5°	1527.8	1527.8	1526.2	1523.0	1524.6	1531.1	1527.8	1521.4	1515.0	1503.8	1508.6
7.5°	1516.6	1516.6	1515.0	1511.8	1515.0	1521.4	1518.2	1511.8	1507.0	1495.7	1500.6
10°	1500.6	1502.2	1500.6	1495.7	1502.2	1508.6	1507.0	1499.0	1494.1	1484.5	1489.3
12.5°	1481.3	1482.9	1481.3	1479.7	1482.9	1492.5	1489.3	1482.9	1479.7	1471.7	1476.5
15°	1458.8	1460.4	1457.2	1457.2	1460.4	1470.1	1470.1	1463.7	1460.4	1452.4	1462.0
17.5°	1429.9	1431.6	1429.9	1429.9	1433.2	1442.8	1444.4	1441.2	1438.0	1434.8	1444.4
20°	1401.1	1399.5	1399.5	1397.9	1404.3	1418.7	1417.1	1417.1	1413.9	1413.9	1425.1
22.5°	1367.4	1367.4	1365.8	1365.8	1373.8	1386.6	1386.6	1389.8	1386.6	1393.0	1402.7
25°	1328.8	1330.4	1328.8	1332.1	1338.5	1352.9	1354.5	1359.3	1360.9	1367.4	1378.6
27.5°	1288.7	1290.3	1288.7	1291.9	1303.2	1314.4	1322.4	1328.8	1330.4	1340.1	1354.5
30°	1245.4	1245.4	1247.0	1250.2	1263.0	1280.7	1287.1	1295.1	1295.1	1311.2	1325.6
32.5°	1200.5	1200.5	1200.5	1206.9	1221.3	1242.2	1250.2	1259.8	1263.0	1279.1	1295.1
35°	1150.7	1152.3	1152.3	1157.1	1176.4	1197.2	1208.5	1219.7	1226.1	1245.4	1261.4
37.5°	1104.2	1107.4	1102.6	1109.0	1136.3	1153.9	1166.7	1178.0	1189.2	1214.9	1227.7
40°	1051.2	1054.4	1052.8	1065.6	1088.1	1110.6	1125.0	1136.3	1152.3	1178.0	1192.4
42.5°	995.0	998.2	1001.4	1015.9	1040.0	1062.4	1080.1	1094.5	1113.8	1136.3	1160.3
45°	943.7	943.7	948.5	966.1	991.8	1015.9	1036.8	1052.8	1075.3	1099.3	1123.4
47.5°	885.9	887.5	893.9	914.8	942.1	971.0	990.2	1011.1	1035.1	1060.8	1088.1
50°	832.9	832.9	842.6	865.0	890.7	922.8	943.7	967.7	993.4	1023.9	1051.2
52.5°	771.9	775.2	789.6	810.5	844.2	873.1	897.1	922.8	953.3	985.4	1015.9
55°	711.0	717.4	728.6	757.5	792.8	820.1	849.0	881.1	910.0	945.3	980.6
57.5°	651.6	656.4	674.1	702.9	739.9	773.6	804.0	834.5	869.8	905.2	942.1
60°	590.6	597.0	617.9	646.8	686.9	722.2	757.5	789.6	826.5	863.4	901.9
62.5°	532.8	537.6	561.7	595.4	635.5	674.1	709.4	747.9	788.0	823.3	861.8
65°	471.8	479.9	507.1	537.6	584.2	622.7	662.8	704.5	746.3	784.8	821.7
67.5°	415.7	420.5	449.4	484.7	531.2	574.5	616.3	661.2	704.5	744.7	781.6
70°	349.9	365.9	394.8	431.7	481.5	526.4	571.3	617.9	664.4	706.1	741.5
72.5°	295.3	308.1	340.2	380.4	428.5	481.5	528.0	577.8	624.3	667.6	704.5
75°	237.5	250.4	287.3	332.2	382.0	438.1	486.3	537.6	585.8	629.1	667.6
77.5°	181.4	197.4	237.5	284.1	338.6	396.4	446.2	497.5	547.3	593.8	632.3
80°	130.0	147.6	191.0	243.9	296.9	354.7	409.2	460.6	510.4	556.9	597.0
82.5°	83.5	102.7	149.3	202.2	258.4	316.2	372.3	423.7	473.4	520.0	561.7
85°	44.9	65.8	113.9	166.9	223.1	280.9	337.0	391.6	439.7	483.1	528.0
87.5°	12.8	38.5	85.1	138.0	195.8	248.8	303.3	357.9	406.0	452.6	492.7
90°	1.6	22.5	64.2	113.9	170.1	221.5	276.0	327.4	375.5	422.1	462.2
92.5°	1.6	14.4	49.8	94.7	146.0	199.0	253.6	303.3	348.3	394.8	434.9
95°	1.6	11.2	40.1	80.2	128.4	178.1	229.5	277.6	324.2	367.5	407.6
97.5°	1.6	8.0	32.1	69.0	112.3	158.9	208.6	256.8	301.7	343.4	380.4
100°	1.6	6.4	25.7	59.4	97.9	142.8	187.8	234.3	277.6	317.8	356.3
102.5°	1.6	4.8	22.5	49.8	86.7	126.8	170.1	213.4	255.2	293.7	332.2
105°	1.6	4.8	19.3	43.3	77.0	113.9	154.1	195.8	234.3	271.2	306.5
107.5°	1.6	3.2	16.0	36.9	67.4	102.7	139.6	179.7	215.1	250.4	284.1
110°	1.6	3.2	12.8	33.7	59.4	91.5	126.8	163.7	197.4	231.1	263.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.6	3.2	11.2	28.9	51.4	81.8	113.9	147.6	179.7	213.4	242.3
115°	1.6	3.2	9.6	25.7	48.1	70.6	102.7	133.2	165.3	195.8	223.1
117.5°	1.6	3.2	8.0	20.9	41.7	64.2	89.9	120.4	149.3	178.1	203.8
120°	1.6	3.2	6.4	19.3	36.9	57.8	80.2	107.5	134.8	162.1	189.4
122.5°	1.6	1.6	6.4	16.0	32.1	51.4	73.8	94.7	120.4	146.0	170.1
125°	1.6	1.6	6.4	14.4	27.3	46.5	65.8	85.1	107.5	130.0	150.9
127.5°	1.6	1.6	4.8	11.2	24.1	40.1	57.8	78.6	94.7	115.6	136.4
130°	1.6	1.6	4.8	9.6	20.9	33.7	51.4	69.0	88.3	102.7	120.4
132.5°	1.6	1.6	4.8	8.0	16.0	27.3	43.3	59.4	77.0	93.1	107.5
135°	1.6	1.6	3.2	6.4	12.8	22.5	35.3	49.8	67.4	83.5	97.9
137.5°	1.6	1.6	3.2	6.4	9.6	19.3	27.3	40.1	56.2	70.6	85.1
140°	1.6	1.6	3.2	4.8	8.0	14.4	22.5	32.1	44.9	57.8	73.8
142.5°	1.6	1.6	1.6	4.8	6.4	11.2	17.7	25.7	35.3	46.5	59.4
145°	1.6	1.6	1.6	4.8	6.4	8.0	14.4	20.9	27.3	35.3	46.5
147.5°	1.6	1.6	1.6	3.2	4.8	6.4	11.2	16.0	20.9	27.3	33.7
150°	1.6	1.6	1.6	3.2	4.8	6.4	8.0	11.2	16.0	22.5	27.3
152.5°	1.6	1.6	1.6	3.2	3.2	4.8	6.4	8.0	11.2	16.0	19.3
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

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4
2.5°	1510.2	1511.8	1516.6	1516.6	1513.4	1513.4	1511.8	1510.2	1511.8	1515.0	1515.0
5°	1507.0	1508.6	1513.4	1515.0	1511.8	1510.2	1510.2	1508.6	1510.2	1513.4	1513.4
7.5°	1500.6	1502.2	1507.0	1508.6	1505.4	1505.4	1503.8	1502.2	1505.4	1507.0	1507.0
10°	1490.9	1492.5	1499.0	1500.6	1499.0	1497.4	1497.4	1495.7	1497.4	1500.6	1500.6
12.5°	1478.1	1481.3	1489.3	1489.3	1489.3	1487.7	1487.7	1486.1	1487.7	1490.9	1489.3
15°	1463.7	1470.1	1476.5	1479.7	1479.7	1479.7	1478.1	1476.5	1479.7	1481.3	1479.7
17.5°	1447.6	1455.6	1465.3	1468.5	1468.5	1470.1	1468.5	1466.9	1470.1	1470.1	1468.5
20°	1431.6	1439.6	1449.2	1452.4	1455.6	1457.2	1457.2	1455.6	1457.2	1458.8	1457.2
22.5°	1410.7	1420.3	1431.6	1436.4	1439.6	1442.8	1442.8	1442.8	1444.4	1446.0	1442.8
25°	1388.2	1399.5	1412.3	1417.1	1423.5	1425.1	1426.7	1426.7	1428.3	1429.9	1425.1
27.5°	1364.1	1377.0	1389.8	1397.9	1402.7	1405.9	1405.9	1407.5	1409.1	1410.7	1405.9
30°	1335.3	1354.5	1365.8	1372.2	1378.6	1383.4	1385.0	1386.6	1388.2	1389.8	1385.0
32.5°	1309.6	1325.6	1340.1	1348.1	1356.1	1362.5	1364.1	1364.1	1367.4	1367.4	1362.5
35°	1279.1	1298.3	1312.8	1320.8	1330.4	1335.3	1338.5	1338.5	1341.7	1341.7	1336.9
37.5°	1248.6	1267.9	1283.9	1293.5	1304.8	1311.2	1312.8	1312.8	1316.0	1316.0	1309.6
40°	1216.5	1237.4	1255.0	1266.3	1275.9	1283.9	1285.5	1290.3	1290.3	1288.7	1282.3
42.5°	1184.4	1203.7	1222.9	1235.8	1248.6	1256.6	1259.8	1261.4	1261.4	1259.8	1255.0
45°	1149.1	1171.6	1189.2	1205.3	1218.1	1226.1	1230.9	1232.5	1232.5	1229.3	1224.5
47.5°	1115.4	1137.9	1155.5	1173.2	1186.0	1195.6	1200.5	1202.1	1200.5	1198.8	1194.0
50°	1080.1	1105.8	1123.4	1141.1	1153.9	1161.9	1170.0	1171.6	1170.0	1168.4	1158.7
52.5°	1043.2	1070.5	1089.7	1107.4	1121.8	1131.4	1137.9	1139.5	1139.5	1136.3	1129.8
55°	1006.3	1030.3	1054.4	1073.7	1089.7	1099.3	1107.4	1110.6	1107.4	1104.2	1096.1
57.5°	972.6	995.0	1019.1	1040.0	1056.0	1068.9	1075.3	1078.5	1075.3	1070.5	1062.4
60°	932.4	956.5	983.8	1003.1	1020.7	1033.5	1036.8	1043.2	1040.0	1035.1	1027.1
62.5°	893.9	922.8	946.9	971.0	985.4	999.8	1006.3	1009.5	1006.3	1001.4	993.4
65°	853.8	885.9	910.0	934.0	950.1	964.5	972.6	974.2	971.0	966.1	958.1
67.5°	816.9	847.4	873.1	898.7	913.2	927.6	935.6	938.9	935.6	929.2	921.2
70°	780.0	810.5	841.0	860.2	877.9	893.9	898.7	903.5	900.3	893.9	884.3
72.5°	743.1	775.2	805.7	824.9	844.2	858.6	865.0	869.8	866.6	860.2	849.0
75°	704.5	738.2	768.7	789.6	808.9	823.3	829.7	834.5	831.3	824.9	812.1
77.5°	669.2	702.9	731.8	754.3	773.6	786.4	797.6	799.2	796.0	789.6	776.8
80°	632.3	666.0	696.5	719.0	738.2	751.1	759.1	763.9	760.7	754.3	741.5
82.5°	600.2	630.7	661.2	683.7	702.9	719.0	725.4	730.2	728.6	719.0	709.4
85°	564.9	600.2	624.3	648.4	667.6	683.7	688.5	694.9	693.3	685.3	672.4
87.5°	529.6	564.9	593.8	617.9	635.5	648.4	656.4	659.6	658.0	650.0	635.5
90°	500.7	532.8	561.7	587.4	601.8	616.3	624.3	625.9	625.9	616.3	605.0
92.5°	473.4	503.9	532.8	556.9	574.5	587.4	593.8	597.0	595.4	587.4	574.5
95°	442.9	476.6	503.9	528.0	545.7	558.5	564.9	568.1	566.5	558.5	545.7
97.5°	417.3	447.8	475.0	497.5	515.2	528.0	534.4	537.6	537.6	529.6	516.8
100°	391.6	422.1	447.8	470.2	486.3	499.1	505.5	507.1	505.5	499.1	486.3
102.5°	365.9	394.8	420.5	441.3	459.0	470.2	476.6	478.3	478.3	470.2	457.4
105°	340.2	369.1	393.2	415.7	430.1	441.3	446.2	451.0	449.4	442.9	430.1
107.5°	316.2	345.0	367.5	388.4	402.8	414.1	418.9	423.7	422.1	415.7	402.8
110°	293.7	321.0	341.8	362.7	375.5	386.8	394.8	396.4	393.2	386.8	375.5

TEST NUMBER: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	272.8	296.9	317.8	337.0	351.5	359.5	365.9	369.1	365.9	359.5	351.5
115°	250.4	274.4	295.3	313.0	325.8	335.4	340.2	343.4	340.2	333.8	325.8
117.5°	229.5	252.0	272.8	290.5	301.7	309.7	314.6	317.8	314.6	309.7	301.7
120°	211.8	231.1	250.4	266.4	279.2	285.7	290.5	293.7	292.1	285.7	277.6
122.5°	191.0	211.8	229.5	245.5	256.8	263.2	266.4	269.6	268.0	263.2	255.2
125°	173.3	191.0	208.6	223.1	234.3	240.7	243.9	247.2	245.5	240.7	231.1
127.5°	154.1	173.3	187.8	202.2	210.2	219.9	221.5	224.7	223.1	218.3	210.2
130°	139.6	154.1	168.5	181.4	191.0	197.4	200.6	202.2	199.0	195.8	187.8
132.5°	122.0	138.0	150.9	162.1	168.5	174.9	178.1	179.7	179.7	174.9	168.5
135°	109.1	120.4	131.6	142.8	149.3	155.7	158.9	160.5	158.9	155.7	149.3
137.5°	97.9	107.5	115.6	125.2	133.2	136.4	139.6	139.6	138.0	136.4	131.6
140°	85.1	96.3	104.3	110.7	117.2	118.8	122.0	122.0	120.4	118.8	115.6
142.5°	72.2	81.8	89.9	97.9	102.7	105.9	107.5	109.1	107.5	105.9	101.1
145°	57.8	69.0	77.0	81.8	88.3	89.9	91.5	93.1	91.5	89.9	85.1
147.5°	44.9	54.6	62.6	69.0	73.8	75.4	77.0	78.6	77.0	73.8	72.2
150°	32.1	40.1	49.8	56.2	59.4	62.6	62.6	62.6	64.2	61.0	57.8
152.5°	25.7	28.9	35.3	41.7	46.5	48.1	49.8	49.8	48.1	48.1	44.9
155°	17.7	20.9	25.7	30.5	35.3	36.9	38.5	38.5	36.9	36.9	35.3
157.5°	11.2	14.4	17.7	20.9	25.7	27.3	28.9	28.9	28.9	27.3	25.7
160°	6.4	8.0	9.6	12.8	16.0	17.7	19.3	19.3	19.3	19.3	17.7
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: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4
2.5°	1513.4	1513.4	1515.0	1511.8	1502.2	1503.8	1503.8	1510.2	1513.4	1515.0	1523.0
5°	1510.2	1510.2	1513.4	1508.6	1500.6	1500.6	1500.6	1507.0	1508.6	1511.8	1518.2
7.5°	1505.4	1505.4	1507.0	1502.2	1492.5	1492.5	1490.9	1497.4	1500.6	1502.2	1508.6
10°	1497.4	1497.4	1499.0	1494.1	1482.9	1482.9	1481.3	1486.1	1487.7	1490.9	1495.7
12.5°	1486.1	1486.1	1486.1	1481.3	1470.1	1468.5	1466.9	1471.7	1471.7	1473.3	1478.1
15°	1476.5	1473.3	1473.3	1468.5	1457.2	1454.0	1450.8	1452.4	1455.6	1454.0	1457.2
17.5°	1465.3	1462.0	1458.8	1454.0	1439.6	1434.8	1431.6	1433.2	1431.6	1429.9	1433.2
20°	1452.4	1447.6	1446.0	1438.0	1423.5	1415.5	1409.1	1405.9	1407.5	1402.7	1404.3
22.5°	1438.0	1431.6	1428.3	1418.7	1404.3	1394.6	1386.6	1380.2	1378.6	1372.2	1373.8
25°	1420.3	1412.3	1407.5	1399.5	1383.4	1372.2	1362.5	1352.9	1348.1	1340.1	1338.5
27.5°	1399.5	1391.4	1385.0	1377.0	1360.9	1346.5	1335.3	1322.4	1316.0	1306.4	1301.6
30°	1378.6	1369.0	1359.3	1352.9	1335.3	1319.2	1301.6	1290.3	1280.7	1269.5	1261.4
32.5°	1352.9	1343.3	1333.7	1324.0	1308.0	1288.7	1274.3	1256.6	1245.4	1232.5	1222.9
35°	1327.2	1314.4	1304.8	1291.9	1277.5	1255.0	1237.4	1219.7	1205.3	1190.8	1179.6
37.5°	1298.3	1288.7	1274.3	1263.0	1245.4	1222.9	1203.7	1181.2	1168.4	1149.1	1134.7
40°	1271.1	1259.8	1245.4	1230.9	1213.3	1187.6	1166.7	1141.1	1126.6	1104.2	1089.7
42.5°	1243.8	1227.7	1213.3	1197.2	1178.0	1153.9	1128.2	1102.6	1083.3	1062.4	1041.6
45°	1213.3	1195.6	1178.0	1160.3	1141.1	1117.0	1089.7	1062.4	1038.4	1019.1	993.4
47.5°	1181.2	1163.5	1142.7	1123.4	1102.6	1078.5	1049.6	1020.7	995.0	972.6	945.3
50°	1149.1	1131.4	1109.0	1088.1	1064.0	1040.0	1009.5	975.8	948.5	919.6	895.5
52.5°	1115.4	1097.7	1076.9	1049.6	1023.9	999.8	967.7	932.4	901.9	877.9	847.4
55°	1081.7	1064.0	1040.0	1012.7	987.0	956.5	926.0	890.7	857.0	828.1	797.6
57.5°	1046.4	1030.3	1003.1	980.6	948.5	916.4	884.3	850.6	813.7	780.0	744.7
60°	1011.1	993.4	967.7	940.5	908.4	876.3	842.6	805.7	767.1	730.2	698.1
62.5°	979.0	956.5	932.4	903.5	869.8	839.4	800.8	760.7	722.2	683.7	645.2
65°	942.1	918.0	895.5	866.6	831.3	796.0	757.5	717.4	675.7	633.9	595.4
67.5°	905.2	881.1	857.0	828.1	791.2	754.3	714.2	674.1	627.5	587.4	542.5
70°	868.2	849.0	818.5	788.0	754.3	714.2	674.1	630.7	582.6	539.2	492.7
72.5°	831.3	812.1	781.6	749.5	717.4	675.7	632.3	589.0	544.1	494.3	444.6
75°	796.0	771.9	744.7	714.2	680.5	637.1	593.8	548.9	495.9	449.4	398.0
77.5°	762.3	739.9	712.6	678.9	642.0	600.2	555.3	508.7	455.8	406.0	349.9
80°	725.4	702.9	675.7	642.0	605.0	564.9	516.8	468.6	417.3	362.7	304.9
82.5°	690.1	669.2	638.7	608.3	568.1	528.0	479.9	431.7	377.1	324.2	268.0
85°	653.2	632.3	603.4	571.3	532.8	489.5	444.6	396.4	341.8	287.3	231.1
87.5°	621.1	597.0	568.1	536.0	497.5	455.8	412.5	361.1	308.1	255.2	197.4
90°	587.4	564.9	536.0	503.9	465.4	423.7	378.8	330.6	279.2	224.7	170.1
92.5°	558.5	534.4	507.1	475.0	436.5	396.4	351.5	303.3	253.6	200.6	147.6
95°	529.6	505.5	479.9	447.8	409.2	369.1	324.2	277.6	229.5	178.1	128.4
97.5°	497.5	476.6	451.0	420.5	382.0	343.4	300.1	255.2	208.6	158.9	112.3
100°	471.8	447.8	423.7	391.6	356.3	319.4	276.0	232.7	187.8	141.2	97.9
102.5°	442.9	420.5	396.4	365.9	330.6	293.7	253.6	211.8	170.1	126.8	85.1
105°	415.7	394.8	369.1	340.2	306.5	271.2	232.7	194.2	154.1	112.3	75.4
107.5°	388.4	367.5	343.4	316.2	284.1	248.8	213.4	174.9	138.0	101.1	67.4
110°	361.1	341.8	319.4	292.1	261.6	229.5	195.8	160.5	123.6	89.9	59.4

TEST NUMBER: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	337.0	317.8	295.3	269.6	240.7	210.2	178.1	144.4	110.7	80.2	51.4
115°	313.0	295.3	272.8	250.4	221.5	192.6	162.1	130.0	99.5	72.2	44.9
117.5°	288.9	271.2	250.4	227.9	202.2	174.9	146.0	115.6	89.9	64.2	40.1
120°	264.8	248.8	229.5	208.6	186.2	158.9	130.0	104.3	80.2	56.2	35.3
122.5°	242.3	227.9	210.2	191.0	166.9	141.2	117.2	94.7	72.2	49.8	28.9
125°	221.5	207.0	191.0	171.7	149.3	126.8	105.9	85.1	62.6	43.3	24.1
127.5°	200.6	186.2	170.1	152.5	134.8	113.9	94.7	75.4	56.2	38.5	20.9
130°	179.7	166.9	152.5	138.0	120.4	101.1	85.1	65.8	48.1	30.5	17.7
132.5°	158.9	149.3	136.4	122.0	105.9	91.5	73.8	57.8	41.7	27.3	16.0
135°	141.2	131.6	120.4	107.5	94.7	80.2	64.2	49.8	35.3	22.5	12.8
137.5°	125.2	117.2	105.9	94.7	83.5	69.0	56.2	41.7	28.9	19.3	9.6
140°	110.7	102.7	93.1	81.8	72.2	59.4	46.5	33.7	25.7	16.0	8.0
142.5°	96.3	88.3	80.2	70.6	61.0	49.8	38.5	28.9	20.9	12.8	8.0
145°	81.8	75.4	67.4	59.4	49.8	40.1	32.1	24.1	16.0	9.6	6.4
147.5°	67.4	62.6	54.6	48.1	40.1	32.1	25.7	19.3	12.8	8.0	4.8
150°	54.6	49.8	43.3	36.9	32.1	25.7	20.9	14.4	9.6	8.0	4.8
152.5°	41.7	38.5	33.7	30.5	25.7	19.3	14.4	11.2	8.0	6.4	3.2
155°	33.7	30.5	27.3	22.5	19.3	14.4	11.2	8.0	6.4	4.8	3.2
157.5°	24.1	22.5	19.3	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: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4
2.5°	1523.0	1518.2	1524.6	1535.9	1537.5	1535.9	1532.7	1537.5	1543.9	1542.3	1531.1
5°	1519.8	1513.4	1519.8	1531.1	1531.1	1529.5	1527.8	1532.7	1539.1	1537.5	1527.8
7.5°	1510.2	1503.8	1510.2	1519.8	1521.4	1518.2	1518.2	1523.0	1529.5	1527.8	1519.8
10°	1497.4	1490.9	1494.1	1505.4	1508.6	1505.4	1505.4	1510.2	1518.2	1516.6	1507.0
12.5°	1478.1	1473.3	1476.5	1486.1	1489.3	1487.7	1486.1	1492.5	1500.6	1500.6	1490.9
15°	1457.2	1450.8	1454.0	1465.3	1466.9	1463.7	1465.3	1470.1	1479.7	1479.7	1471.7
17.5°	1433.2	1425.1	1429.9	1438.0	1439.6	1439.6	1439.6	1446.0	1457.2	1455.6	1449.2
20°	1405.9	1394.6	1397.9	1405.9	1409.1	1409.1	1409.1	1420.3	1428.3	1428.3	1421.9
22.5°	1373.8	1365.8	1365.8	1373.8	1378.6	1377.0	1377.0	1386.6	1397.9	1396.2	1396.2
25°	1336.9	1330.4	1327.2	1336.9	1338.5	1340.1	1343.3	1352.9	1365.8	1365.8	1367.4
27.5°	1298.3	1291.9	1290.3	1298.3	1300.0	1301.6	1304.8	1316.0	1328.8	1330.4	1333.7
30°	1261.4	1251.8	1248.6	1255.0	1258.2	1259.8	1259.8	1277.5	1288.7	1293.5	1300.0
32.5°	1218.1	1208.5	1200.5	1211.7	1213.3	1216.5	1218.1	1235.8	1248.6	1256.6	1266.3
35°	1174.8	1158.7	1155.5	1163.5	1166.7	1168.4	1171.6	1190.8	1208.5	1214.9	1227.7
37.5°	1126.6	1115.4	1105.8	1113.8	1117.0	1118.6	1128.2	1145.9	1163.5	1173.2	1186.0
40°	1081.7	1067.2	1059.2	1064.0	1067.2	1068.9	1080.1	1099.3	1120.2	1131.4	1147.5
42.5°	1031.9	1012.7	1006.3	1011.1	1012.7	1017.5	1027.1	1052.8	1073.7	1089.7	1102.6
45°	982.2	967.7	953.3	958.1	959.7	962.9	977.4	1004.7	1027.1	1046.4	1060.8
47.5°	930.8	913.2	898.7	901.9	908.4	910.0	926.0	958.1	979.0	999.8	1019.1
50°	879.5	855.4	844.2	844.2	847.4	855.4	876.3	908.4	930.8	954.9	975.8
52.5°	826.5	804.0	791.2	792.8	796.0	805.7	824.9	857.0	882.7	908.4	934.0
55°	773.6	749.5	736.6	733.4	736.6	749.5	771.9	805.7	831.3	861.8	889.1
57.5°	720.6	691.7	680.5	675.7	678.9	694.9	717.4	752.7	784.8	813.7	845.8
60°	662.8	640.3	621.1	609.9	617.9	638.7	662.8	699.7	733.4	765.5	800.8
62.5°	613.1	584.2	563.3	552.1	560.1	577.8	611.5	646.8	683.7	720.6	755.9
65°	556.9	528.0	503.9	492.7	500.7	521.6	555.3	593.8	633.9	670.8	712.6
67.5°	502.3	471.8	442.9	431.7	441.3	463.8	500.7	544.1	587.4	625.9	670.8
70°	449.4	415.7	385.2	377.1	383.6	414.1	449.4	492.7	537.6	582.6	629.1
72.5°	401.2	359.5	327.4	317.8	325.8	359.5	399.6	444.6	492.7	540.8	590.6
75°	345.0	306.5	271.2	260.0	269.6	300.1	349.9	398.0	449.4	500.7	547.3
77.5°	300.1	255.2	218.3	200.6	216.7	255.2	303.3	354.7	407.6	460.6	513.6
80°	253.6	207.0	166.9	147.6	165.3	207.0	255.2	311.3	370.7	423.7	471.8
82.5°	211.8	162.1	120.4	99.5	118.8	165.3	218.3	274.4	332.2	385.2	441.3
85°	173.3	122.0	78.6	56.2	83.5	125.2	181.4	239.1	298.5	353.1	407.6
87.5°	141.2	91.5	48.1	24.1	51.4	97.9	150.9	208.6	268.0	322.6	373.9
90°	115.6	65.8	25.7	3.2	30.5	73.8	125.2	181.4	237.5	293.7	345.0
92.5°	94.7	49.8	14.4	1.6	19.3	59.4	107.5	160.5	215.1	269.6	319.4
95°	78.6	38.5	9.6	1.6	14.4	46.5	91.5	142.8	194.2	247.2	296.9
97.5°	67.4	32.1	8.0	1.6	11.2	40.1	78.6	126.8	176.5	226.3	274.4
100°	57.8	25.7	6.4	1.6	9.6	33.7	69.0	112.3	158.9	207.0	253.6
102.5°	49.8	20.9	4.8	1.6	8.0	28.9	61.0	101.1	142.8	189.4	234.3
105°	43.3	17.7	4.8	1.6	6.4	25.7	54.6	89.9	131.6	173.3	216.7
107.5°	36.9	14.4	3.2	1.6	4.8	20.9	48.1	81.8	118.8	158.9	199.0
110°	32.1	12.8	3.2	1.6	4.8	19.3	41.7	73.8	107.5	144.4	183.0

TEST NUMBER: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	27.3	9.6	3.2	1.6	3.2	16.0	36.9	65.8	97.9	131.6	168.5
115°	24.1	8.0	1.6	1.6	3.2	14.4	33.7	59.4	88.3	120.4	154.1
117.5°	19.3	6.4	1.6	1.6	1.6	11.2	28.9	53.0	80.2	110.7	141.2
120°	16.0	6.4	1.6	1.6	1.6	9.6	25.7	46.5	72.2	99.5	128.4
122.5°	14.4	4.8	1.6	1.6	1.6	8.0	22.5	41.7	64.2	89.9	117.2
125°	12.8	4.8	1.6	1.6	1.6	6.4	19.3	36.9	57.8	80.2	105.9
127.5°	9.6	4.8	1.6	1.6	1.6	4.8	17.7	32.1	51.4	72.2	94.7
130°	8.0	3.2	1.6	1.6	1.6	4.8	14.4	28.9	44.9	64.2	85.1
132.5°	6.4	3.2	1.6	1.6	1.6	3.2	11.2	22.5	38.5	56.2	75.4
135°	6.4	3.2	1.6	1.6	1.6	3.2	8.0	19.3	32.1	48.1	64.2
137.5°	6.4	1.6	1.6	1.6	1.6	3.2	6.4	14.4	25.7	38.5	53.0
140°	4.8	1.6	1.6	1.6	1.6	1.6	4.8	11.2	20.9	32.1	44.9
142.5°	4.8	1.6	1.6	1.6	1.6	1.6	4.8	8.0	16.0	25.7	35.3
145°	3.2	1.6	1.6	1.6	1.6	1.6	3.2	6.4	12.8	19.3	28.9
147.5°	3.2	1.6	1.6	1.6	1.6	1.6	3.2	4.8	9.6	16.0	22.5
150°	3.2	1.6	1.6	1.6	1.6	1.6	3.2	4.8	6.4	11.2	17.7
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: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4
2.5°	1526.2	1515.0	1518.2	1516.6	1519.8	1524.6	1524.6	1523.0	1523.0	1519.8	1516.6
5°	1523.0	1511.8	1516.6	1515.0	1518.2	1523.0	1523.0	1521.4	1521.4	1516.6	1515.0
7.5°	1513.4	1505.4	1508.6	1508.6	1511.8	1516.6	1516.6	1515.0	1515.0	1510.2	1508.6
10°	1503.8	1494.1	1499.0	1499.0	1502.2	1508.6	1508.6	1507.0	1507.0	1502.2	1500.6
12.5°	1487.7	1478.1	1486.1	1487.7	1490.9	1497.4	1495.7	1495.7	1495.7	1490.9	1489.3
15°	1468.5	1462.0	1470.1	1471.7	1476.5	1484.5	1484.5	1484.5	1484.5	1479.7	1478.1
17.5°	1447.6	1442.8	1450.8	1454.0	1460.4	1468.5	1468.5	1470.1	1471.7	1468.5	1466.9
20°	1423.5	1420.3	1428.3	1434.8	1444.4	1452.4	1455.6	1457.2	1460.4	1457.2	1455.6
22.5°	1396.2	1396.2	1407.5	1413.9	1425.1	1433.2	1438.0	1442.8	1446.0	1442.8	1441.2
25°	1365.8	1370.6	1381.8	1393.0	1405.9	1413.9	1418.7	1425.1	1428.3	1426.7	1425.1
27.5°	1336.9	1343.3	1357.7	1369.0	1380.2	1393.0	1397.9	1405.9	1409.1	1409.1	1407.5
30°	1303.2	1312.8	1328.8	1341.7	1356.1	1369.0	1375.4	1383.4	1388.2	1385.0	1386.6
32.5°	1271.1	1287.1	1300.0	1314.4	1330.4	1343.3	1351.3	1360.9	1365.8	1364.1	1365.8
35°	1235.8	1251.8	1269.5	1283.9	1303.2	1316.0	1327.2	1335.3	1341.7	1340.1	1340.1
37.5°	1197.2	1218.1	1235.8	1255.0	1272.7	1287.1	1298.3	1308.0	1314.4	1314.4	1314.4
40°	1160.3	1182.8	1200.5	1222.9	1245.4	1258.2	1271.1	1280.7	1287.1	1288.7	1290.3
42.5°	1120.2	1144.3	1165.1	1189.2	1211.7	1227.7	1242.2	1253.4	1259.8	1263.0	1261.4
45°	1083.3	1105.8	1129.8	1157.1	1178.0	1194.0	1211.7	1224.5	1230.9	1232.5	1234.2
47.5°	1041.6	1067.2	1094.5	1121.8	1142.7	1163.5	1179.6	1192.4	1198.8	1203.7	1203.7
50°	1001.4	1028.7	1059.2	1088.1	1110.6	1131.4	1147.5	1161.9	1170.0	1173.2	1174.8
52.5°	964.5	990.2	1022.3	1051.2	1073.7	1094.5	1115.4	1131.4	1139.5	1142.7	1142.7
55°	919.6	951.7	987.0	1014.3	1038.4	1062.4	1083.3	1099.3	1107.4	1112.2	1115.4
57.5°	877.9	911.6	948.5	977.4	1006.3	1028.7	1048.0	1068.9	1075.3	1081.7	1083.3
60°	837.7	871.5	906.8	938.9	967.7	991.8	1014.3	1031.9	1043.2	1046.4	1049.6
62.5°	796.0	831.3	868.2	900.3	930.8	959.7	980.6	996.6	1009.5	1014.3	1017.5
65°	755.9	792.8	829.7	863.4	895.5	924.4	945.3	961.3	974.2	982.2	983.8
67.5°	712.6	752.7	791.2	826.5	858.6	889.1	910.0	926.0	938.9	948.5	950.1
70°	672.4	714.2	752.7	791.2	823.3	853.8	876.3	892.3	906.8	913.2	916.4
72.5°	633.9	677.3	717.4	755.9	788.0	818.5	842.6	858.6	873.1	881.1	882.7
75°	597.0	640.3	683.7	720.6	754.3	784.8	808.9	826.5	839.4	847.4	850.6
77.5°	560.1	605.0	648.4	685.3	720.6	751.1	771.9	792.8	805.7	815.3	815.3
80°	523.2	569.7	614.7	651.6	686.9	714.2	738.2	759.1	771.9	781.6	781.6
82.5°	491.1	536.0	579.4	616.3	651.6	682.1	706.1	725.4	739.9	746.3	747.9
85°	454.2	503.9	544.1	584.2	617.9	646.8	670.8	691.7	704.5	711.0	714.2
87.5°	423.7	471.8	515.2	550.5	584.2	613.1	640.3	658.0	670.8	678.9	682.1
90°	394.8	441.3	484.7	520.0	555.3	582.6	608.3	625.9	640.3	646.8	650.0
92.5°	369.1	415.7	457.4	492.7	526.4	556.9	581.0	598.6	611.5	617.9	622.7
95°	345.0	390.0	430.1	468.6	500.7	528.0	553.7	571.3	585.8	590.6	595.4
97.5°	321.0	364.3	404.4	441.3	475.0	500.7	524.8	542.5	553.7	561.7	566.5
100°	300.1	341.8	380.4	415.7	447.8	471.8	497.5	513.6	524.8	531.2	537.6
102.5°	277.6	319.4	356.3	390.0	423.7	446.2	470.2	486.3	495.9	507.1	507.1
105°	258.4	296.9	333.8	365.9	394.8	422.1	442.9	459.0	470.2	478.3	478.3
107.5°	237.5	276.0	311.3	345.0	372.3	398.0	417.3	431.7	444.6	449.4	454.2
110°	221.5	255.2	290.5	322.6	348.3	372.3	391.6	407.6	418.9	423.7	426.9

TEST NUMBER: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	202.2	237.5	269.6	300.1	325.8	348.3	367.5	380.4	391.6	398.0	399.6
115°	186.2	219.9	248.8	277.6	304.9	324.2	341.8	354.7	365.9	370.7	373.9
117.5°	171.7	202.2	231.1	255.2	280.9	301.7	319.4	330.6	340.2	346.7	349.9
120°	157.3	186.2	211.8	235.9	260.0	279.2	295.3	306.5	317.8	322.6	322.6
122.5°	142.8	170.1	194.2	216.7	239.1	256.8	274.4	284.1	293.7	298.5	298.5
125°	130.0	155.7	178.1	199.0	219.9	235.9	250.4	261.6	271.2	274.4	274.4
127.5°	117.2	141.2	162.1	181.4	199.0	215.1	229.5	240.7	248.8	252.0	252.0
130°	105.9	126.8	146.0	165.3	183.0	195.8	210.2	219.9	224.7	229.5	231.1
132.5°	94.7	113.9	131.6	147.6	165.3	178.1	189.4	199.0	203.8	208.6	210.2
135°	83.5	101.1	117.2	133.2	147.6	160.5	170.1	178.1	184.6	187.8	189.4
137.5°	70.6	89.9	104.3	117.2	133.2	142.8	154.1	158.9	165.3	168.5	168.5
140°	59.4	73.8	89.9	102.7	115.6	125.2	134.8	142.8	147.6	149.3	149.3
142.5°	48.1	61.0	73.8	89.9	101.1	109.1	118.8	125.2	128.4	130.0	131.6
145°	38.5	48.1	59.4	73.8	86.7	96.3	101.1	107.5	110.7	112.3	113.9
147.5°	28.9	38.5	48.1	57.8	70.6	80.2	85.1	91.5	94.7	96.3	96.3
150°	22.5	28.9	35.3	44.9	54.6	65.8	72.2	77.0	78.6	80.2	80.2
152.5°	16.0	22.5	27.3	33.7	40.1	49.8	59.4	62.6	64.2	65.8	65.8
155°	11.2	16.0	19.3	24.1	28.9	36.9	44.9	49.8	51.4	53.0	53.0
157.5°	8.0	11.2	12.8	17.7	20.9	24.1	30.5	38.5	40.1	40.1	40.1
160°	4.8	6.4	8.0	11.2	12.8	16.0	19.3	24.1	28.9	28.9	28.9
162.5°	3.2	4.8	4.8	6.4	6.4	9.6	11.2	12.8	17.7	19.3	19.3
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: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4
2.5°	1518.2	1521.4	1519.8	1519.8	1519.8	1523.0	1519.8	1505.4	1508.6	1511.8	1515.0
5°	1516.6	1518.2	1518.2	1516.6	1516.6	1519.8	1516.6	1502.2	1505.4	1508.6	1510.2
7.5°	1510.2	1511.8	1511.8	1511.8	1510.2	1513.4	1508.6	1495.7	1495.7	1499.0	1500.6
10°	1502.2	1505.4	1503.8	1502.2	1502.2	1502.2	1499.0	1484.5	1484.5	1486.1	1487.7
12.5°	1492.5	1492.5	1492.5	1490.9	1489.3	1489.3	1486.1	1471.7	1470.1	1473.3	1471.7
15°	1479.7	1482.9	1479.7	1478.1	1474.9	1474.9	1470.1	1455.6	1452.4	1454.0	1452.4
17.5°	1468.5	1470.1	1466.9	1463.7	1460.4	1458.8	1454.0	1438.0	1433.2	1434.8	1431.6
20°	1457.2	1457.2	1454.0	1450.8	1446.0	1441.2	1434.8	1418.7	1410.7	1410.7	1404.3
22.5°	1442.8	1442.8	1439.6	1434.8	1429.9	1423.5	1417.1	1401.1	1388.2	1385.0	1380.2
25°	1426.7	1425.1	1423.5	1418.7	1409.1	1402.7	1396.2	1378.6	1364.1	1357.7	1349.7
27.5°	1407.5	1407.5	1402.7	1397.9	1388.2	1380.2	1372.2	1356.1	1336.9	1328.8	1317.6
30°	1386.6	1386.6	1381.8	1375.4	1365.8	1356.1	1346.5	1327.2	1308.0	1296.7	1283.9
32.5°	1365.8	1364.1	1359.3	1352.9	1343.3	1328.8	1320.8	1301.6	1279.1	1266.3	1248.6
35°	1340.1	1338.5	1333.7	1325.6	1312.8	1301.6	1288.7	1271.1	1245.4	1229.3	1210.1
37.5°	1314.4	1312.8	1309.6	1298.3	1285.5	1272.7	1256.6	1239.0	1214.9	1194.0	1174.8
40°	1288.7	1287.1	1280.7	1272.7	1256.6	1240.6	1224.5	1206.9	1181.2	1157.1	1136.3
42.5°	1261.4	1259.8	1251.8	1242.2	1224.5	1208.5	1189.2	1170.0	1144.3	1115.4	1094.5
45°	1234.2	1230.9	1222.9	1211.7	1192.4	1174.8	1155.5	1133.0	1107.4	1080.1	1052.8
47.5°	1205.3	1200.5	1192.4	1176.4	1160.3	1141.1	1118.6	1094.5	1068.9	1038.4	1009.5
50°	1173.2	1170.0	1160.3	1145.9	1126.6	1107.4	1081.7	1057.6	1027.1	998.2	962.9
52.5°	1142.7	1136.3	1128.2	1112.2	1092.9	1072.1	1044.8	1015.9	985.4	958.1	921.2
55°	1110.6	1107.4	1096.1	1083.3	1059.2	1035.1	1009.5	979.0	945.3	913.2	877.9
57.5°	1080.1	1073.7	1064.0	1046.4	1025.5	1001.4	974.2	942.1	905.2	871.5	832.9
60°	1049.6	1040.0	1028.7	1012.7	990.2	964.5	935.6	901.9	865.0	828.1	788.0
62.5°	1015.9	1007.9	995.0	979.0	956.5	929.2	898.7	863.4	828.1	789.6	746.3
65°	982.2	974.2	961.3	945.3	922.8	892.3	860.2	824.9	784.8	747.9	701.3
67.5°	948.5	940.5	926.0	908.4	885.9	857.0	823.3	786.4	746.3	706.1	658.0
70°	914.8	905.2	892.3	873.1	850.6	820.1	786.4	747.9	707.8	664.4	616.3
72.5°	881.1	873.1	857.0	839.4	815.3	784.8	751.1	712.6	670.8	625.9	577.8
75°	847.4	837.7	826.5	805.7	780.0	751.1	715.8	677.3	632.3	589.0	539.2
77.5°	813.7	805.7	791.2	770.3	746.3	715.8	680.5	642.0	597.0	552.1	499.1
80°	780.0	770.3	759.1	739.9	712.6	682.1	645.2	606.6	561.7	515.2	462.2
82.5°	746.3	736.6	723.8	704.5	678.9	648.4	613.1	571.3	526.4	478.3	428.5
85°	712.6	704.5	690.1	670.8	643.6	613.1	577.8	540.8	492.7	444.6	394.8
87.5°	678.9	670.8	656.4	637.1	611.5	581.0	545.7	507.1	460.6	415.7	361.1
90°	646.8	640.3	625.9	606.6	581.0	550.5	518.4	476.6	431.7	386.8	335.4
92.5°	617.9	611.5	598.6	579.4	556.9	523.2	491.1	451.0	406.0	359.5	309.7
95°	592.2	584.2	571.3	553.7	526.4	497.5	465.4	425.3	382.0	335.4	287.3
97.5°	563.3	555.3	542.5	523.2	500.7	470.2	438.1	399.6	356.3	313.0	264.8
100°	534.4	526.4	512.0	495.9	473.4	442.9	412.5	373.9	333.8	292.1	245.5
102.5°	505.5	497.5	484.7	468.6	446.2	418.9	388.4	351.5	311.3	269.6	226.3
105°	478.3	470.2	457.4	441.3	420.5	393.2	361.1	329.0	290.5	250.4	208.6
107.5°	451.0	442.9	431.7	415.7	394.8	369.1	338.6	304.9	269.6	231.1	191.0
110°	423.7	417.3	404.4	390.0	369.1	343.4	316.2	284.1	248.8	213.4	174.9

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CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	398.0	391.6	378.8	362.7	345.0	321.0	293.7	263.2	229.5	195.8	158.9
115°	372.3	364.3	353.1	338.6	321.0	298.5	272.8	245.5	211.8	179.7	146.0
117.5°	346.7	340.2	329.0	314.6	298.5	276.0	252.0	226.3	194.2	163.7	133.2
120°	321.0	316.2	304.9	292.1	276.0	255.2	232.7	207.0	178.1	149.3	120.4
122.5°	296.9	292.1	280.9	269.6	253.6	234.3	213.4	189.4	163.7	136.4	110.7
125°	274.4	268.0	258.4	247.2	232.7	215.1	194.2	171.7	147.6	123.6	99.5
127.5°	250.4	245.5	239.1	226.3	211.8	195.8	176.5	157.3	134.8	112.3	89.9
130°	231.1	224.7	216.7	207.0	194.2	178.1	160.5	141.2	122.0	101.1	78.6
132.5°	208.6	202.2	195.8	186.2	174.9	160.5	144.4	126.8	109.1	89.9	70.6
135°	187.8	183.0	176.5	166.9	155.7	144.4	128.4	112.3	96.3	78.6	62.6
137.5°	168.5	163.7	157.3	150.9	139.6	128.4	113.9	99.5	85.1	69.0	54.6
140°	149.3	146.0	139.6	133.2	123.6	112.3	99.5	86.7	73.8	59.4	46.5
142.5°	130.0	126.8	122.0	115.6	107.5	97.9	86.7	75.4	62.6	51.4	40.1
145°	112.3	110.7	105.9	99.5	93.1	83.5	73.8	64.2	53.0	43.3	32.1
147.5°	94.7	93.1	89.9	85.1	78.6	70.6	62.6	53.0	44.9	35.3	25.7
150°	78.6	77.0	75.4	69.0	65.8	57.8	51.4	43.3	36.9	27.3	20.9
152.5°	64.2	64.2	61.0	56.2	53.0	46.5	41.7	35.3	28.9	22.5	16.0
155°	51.4	49.8	48.1	44.9	41.7	36.9	32.1	27.3	22.5	16.0	11.2
157.5°	40.1	38.5	36.9	33.7	30.5	28.9	24.1	19.3	14.4	11.2	8.0
160°	28.9	27.3	25.7	24.1	22.5	19.3	16.0	12.8	9.6	6.4	4.8
162.5°	19.3	17.7	17.7	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

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CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4	1521.4
2.5°	1513.4	1513.4	1519.8	1518.2	1513.4	1523.0	1534.3
5°	1508.6	1508.6	1513.4	1513.4	1508.6	1518.2	1527.8
7.5°	1500.6	1499.0	1503.8	1503.8	1497.4	1505.4	1516.6
10°	1486.1	1484.5	1489.3	1489.3	1482.9	1490.9	1500.6
12.5°	1470.1	1466.9	1471.7	1470.1	1463.7	1471.7	1481.3
15°	1449.2	1447.6	1450.8	1447.6	1441.2	1449.2	1458.8
17.5°	1428.3	1423.5	1425.1	1425.1	1413.9	1421.9	1429.9
20°	1401.1	1394.6	1396.2	1394.6	1386.6	1391.4	1401.1
22.5°	1373.8	1364.1	1364.1	1362.5	1352.9	1359.3	1367.4
25°	1340.1	1328.8	1328.8	1327.2	1316.0	1320.8	1328.8
27.5°	1306.4	1295.1	1290.3	1288.7	1277.5	1277.5	1288.7
30°	1271.1	1255.0	1251.8	1247.0	1235.8	1235.8	1245.4
32.5°	1237.4	1214.9	1208.5	1202.1	1190.8	1189.2	1200.5
35°	1192.4	1174.8	1163.5	1157.1	1144.3	1141.1	1150.7
37.5°	1155.5	1133.0	1117.0	1109.0	1096.1	1091.3	1104.2
40°	1115.4	1091.3	1070.5	1065.6	1046.4	1040.0	1051.2
42.5°	1070.5	1044.8	1023.9	1014.3	999.8	993.4	995.0
45°	1025.5	998.2	975.8	962.9	948.5	937.3	943.7
47.5°	979.0	954.9	927.6	908.4	890.7	882.7	885.9
50°	932.4	903.5	877.9	857.0	836.1	826.5	832.9
52.5°	885.9	855.4	826.5	804.0	780.0	770.3	771.9
55°	841.0	808.9	775.2	751.1	728.6	714.2	711.0
57.5°	796.0	760.7	725.4	698.1	669.2	656.4	651.6
60°	747.9	711.0	674.1	642.0	611.5	597.0	590.6
62.5°	702.9	662.8	621.1	587.4	556.9	537.6	532.8
65°	659.6	613.1	571.3	532.8	499.1	478.3	471.8
67.5°	613.1	564.9	520.0	478.3	446.2	418.9	415.7
70°	569.7	518.4	468.6	425.3	390.0	362.7	349.9
72.5°	526.4	473.4	422.1	375.5	330.6	304.9	295.3
75°	484.7	430.1	375.5	327.4	277.6	247.2	237.5
77.5°	446.2	390.0	332.2	279.2	232.7	194.2	181.4
80°	409.2	351.5	290.5	235.9	186.2	144.4	130.0
82.5°	370.7	316.2	253.6	195.8	144.4	101.1	83.5
85°	337.0	282.5	219.9	162.1	110.7	64.2	44.9
87.5°	309.7	250.4	194.2	136.4	83.5	36.9	12.8
90°	282.5	224.7	168.5	112.3	62.6	20.9	1.6
92.5°	258.4	203.8	147.6	96.3	48.1	14.4	1.6
95°	235.9	183.0	130.0	80.2	38.5	9.6	1.6
97.5°	215.1	165.3	115.6	69.0	32.1	8.0	1.6
100°	197.4	149.3	102.7	61.0	27.3	6.4	1.6
102.5°	179.7	134.8	91.5	53.0	24.1	4.8	1.6
105°	165.3	122.0	81.8	48.1	20.9	4.8	1.6
107.5°	150.9	110.7	73.8	41.7	17.7	3.2	1.6
110°	136.4	101.1	65.8	36.9	16.0	3.2	1.6



TEST NUMBER: P1213532

CATALOG NUMBER: 4SNLED-LD5-78HL-LW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	125.2	91.5	59.4	33.7	12.8	3.2	1.6
115°	113.9	81.8	53.0	28.9	11.2	1.6	1.6
117.5°	102.7	73.8	46.5	25.7	9.6	1.6	1.6
120°	93.1	65.8	41.7	22.5	8.0	1.6	1.6
122.5°	83.5	59.4	36.9	19.3	6.4	1.6	1.6
125°	75.4	53.0	32.1	16.0	4.8	1.6	1.6
127.5°	67.4	46.5	28.9	14.4	4.8	1.6	1.6
130°	59.4	41.7	24.1	11.2	3.2	1.6	1.6
132.5°	53.0	35.3	20.9	9.6	3.2	1.6	1.6
135°	46.5	30.5	17.7	6.4	3.2	1.6	1.6
137.5°	40.1	25.7	14.4	4.8	1.6	1.6	1.6
140°	33.7	22.5	11.2	4.8	1.6	1.6	1.6
142.5°	28.9	17.7	8.0	3.2	1.6	1.6	1.6
145°	22.5	14.4	6.4	3.2	1.6	1.6	1.6
147.5°	17.7	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)