

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P#

Luminaire Tested: **4SNLED-LD5-77SL-LW-UNV-L930-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33520)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

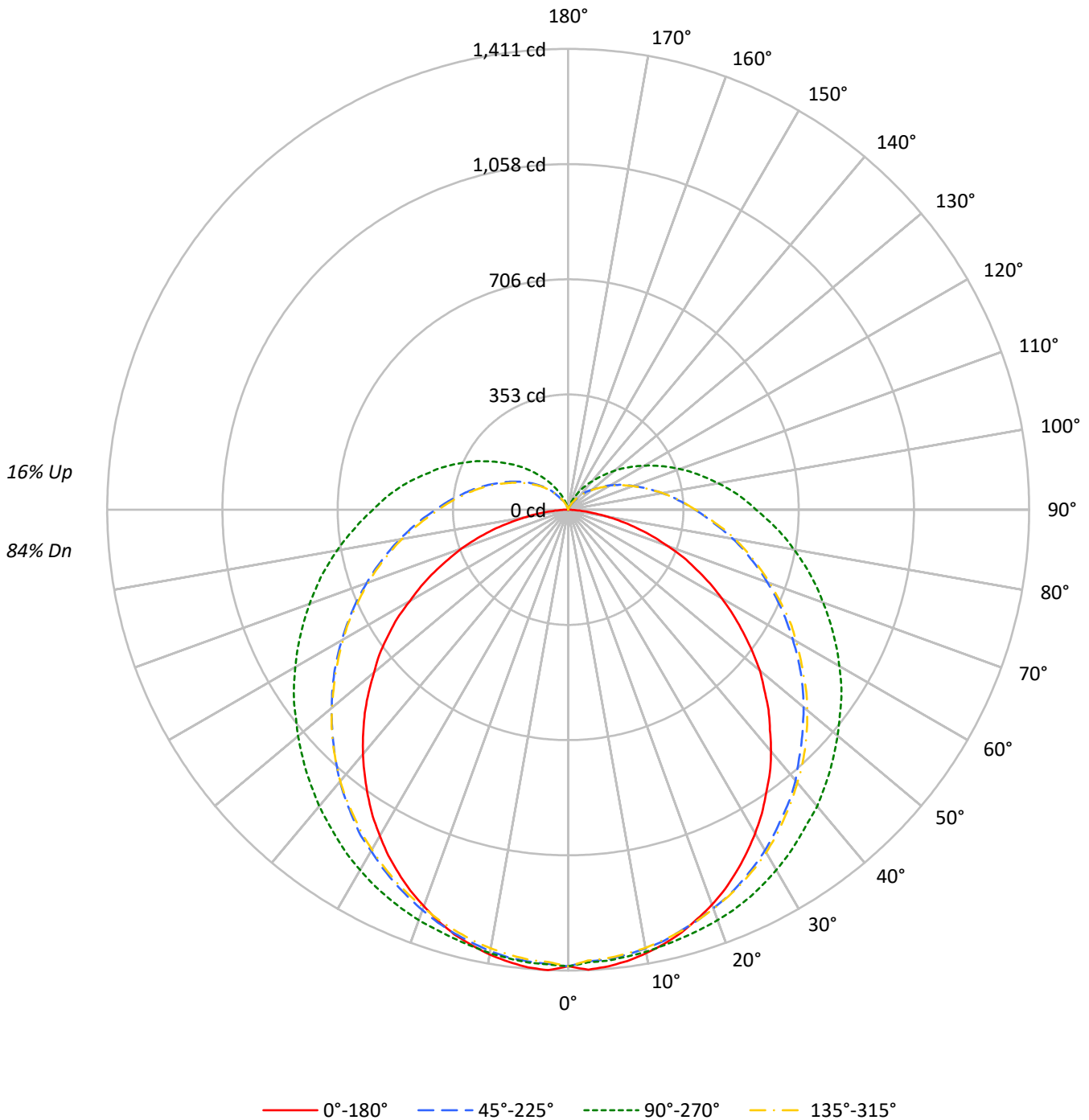
Lumens per Lamp: N/A
Luminaire Lumens: 6073.0 lumens
Efficiency: N/A
Efficacy: 71.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

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: 25 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	0
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°	11296	11296	11296	11296
5°	11356	10886	11380	10932
10°	11251	10576	11287	10611
15°	11120	10311	11169	10323
20°	10945	10119	10983	10119
25°	10730	9947	10795	9936
30°	10487	9770	10569	9770
35°	10206	9606	10320	9618
40°	9928	9510	10049	9510
45°	9608	9409	9755	9422
50°	9276	9350	9401	9375
55°	8810	9359	9087	9399
60°	8319	9387	8591	9445
65°	7768	9481	8113	9576
70°	6993	9655	7540	9792
75°	6101	9971	6680	10163
80°	4720	10440	5364	10681
85°	2821	11190	3525	11500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.4	2.2
10°-20°	380.6	6.3
20°-30°	583.5	9.6
30°-40°	719.8	11.9
40°-50°	781.0	12.9
50°-60°	769.7	12.7
60°-70°	695.9	11.5
70°-80°	579.8	9.5
80°-90°	449.1	7.4
90°-100°	340.6	5.6
100°-110°	252.0	4.1
110°-120°	175.3	2.9
120°-130°	111.9	1.8
130°-140°	62.8	1.0
140°-150°	28.7	0.5
150°-160°	8.9	0.1
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	1096.5	18.1
0°-40°	1816.3	29.9
0°-60°	3367.0	55.4
0°-90°	5091.8	83.8
90°-120°	767.9	12.6
90°-150°	971.2	16.0
90°-180°	981.0	16.2
0°-180°	6073.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1398	1398	1398	1398	1398	
5°	1404	1386	1407	1392	1404	133
15°	1340	1356	1346	1358	1340	378
25°	1221	1311	1228	1309	1221	562
35°	1057	1230	1069	1231	1057	662
45°	867	1132	880	1134	867	668
55°	653	1020	674	1025	653	585
65°	434	895	453	904	434	430
75°	218	767	239	782	218	231
85°	41	638	52	656	41	50
90°	2	575	3	597	2	2
95°	2	522	2	547	2	1
105°	2	414	2	439	2	2
115°	2	316	2	344	2	1
125°	2	227	2	252	2	1
135°	2	148	2	174	2	1
145°	2	86	2	105	2	1
155°	2	35	2	49	2	1
165°	2	6	2	9	2	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8
2.5°	1409.6	1409.6	1408.1	1405.2	1406.7	1411.1	1408.1	1400.8	1396.4	1384.6	1387.5
5°	1403.7	1403.7	1402.2	1399.3	1400.8	1406.7	1403.7	1397.8	1391.9	1381.6	1386.0
7.5°	1393.4	1393.4	1391.9	1389.0	1391.9	1397.8	1394.9	1389.0	1384.6	1374.2	1378.7
10°	1378.7	1380.1	1378.7	1374.2	1380.1	1386.0	1384.6	1377.2	1372.8	1363.9	1368.3
12.5°	1361.0	1362.4	1361.0	1359.5	1362.4	1371.3	1368.3	1362.4	1359.5	1352.1	1356.5
15°	1340.3	1341.8	1338.8	1338.8	1341.8	1350.6	1350.6	1344.7	1341.8	1334.4	1343.3
17.5°	1313.8	1315.3	1313.8	1313.8	1316.7	1325.6	1327.1	1324.1	1321.2	1318.2	1327.1
20°	1287.2	1285.8	1285.8	1284.3	1290.2	1303.5	1302.0	1302.0	1299.0	1299.0	1309.4
22.5°	1256.3	1256.3	1254.8	1254.8	1262.2	1274.0	1274.0	1276.9	1274.0	1279.9	1288.7
25°	1220.9	1222.4	1220.9	1223.8	1229.7	1243.0	1244.5	1248.9	1250.4	1256.3	1266.6
27.5°	1184.0	1185.5	1184.0	1187.0	1197.3	1207.6	1215.0	1220.9	1222.4	1231.2	1244.5
30°	1144.2	1144.2	1145.7	1148.6	1160.4	1176.7	1182.5	1189.9	1189.9	1204.7	1217.9
32.5°	1102.9	1102.9	1102.9	1108.8	1122.1	1141.3	1148.6	1157.5	1160.4	1175.2	1189.9
35°	1057.2	1058.7	1058.7	1063.1	1080.8	1100.0	1110.3	1120.6	1126.5	1144.2	1159.0
37.5°	1014.5	1017.4	1013.0	1018.9	1043.9	1060.2	1072.0	1082.3	1092.6	1116.2	1128.0
40°	965.8	968.7	967.3	979.1	999.7	1020.4	1033.6	1043.9	1058.7	1082.3	1095.6
42.5°	914.2	917.1	920.1	933.4	955.5	976.1	992.3	1005.6	1023.3	1043.9	1066.1
45°	867.0	867.0	871.4	887.6	911.2	933.4	952.5	967.3	987.9	1010.0	1032.2
47.5°	813.9	815.4	821.3	840.5	865.5	892.1	909.8	928.9	951.1	974.6	999.7
50°	765.3	765.3	774.1	794.8	818.3	847.8	867.0	889.1	912.7	940.7	965.8
52.5°	709.2	712.2	725.5	744.6	775.6	802.1	824.2	847.8	875.9	905.3	933.4
55°	653.2	659.1	669.4	696.0	728.4	753.5	780.0	809.5	836.0	868.5	900.9
57.5°	598.6	603.1	619.3	645.8	679.7	710.7	738.7	766.7	799.2	831.6	865.5
60°	542.6	548.5	567.7	594.2	631.1	663.5	696.0	725.5	759.4	793.3	828.7
62.5°	489.5	494.0	516.1	547.0	583.9	619.3	651.7	687.1	724.0	756.4	791.8
65°	433.5	440.9	465.9	494.0	536.7	572.1	609.0	647.3	685.6	721.0	754.9
67.5°	381.9	386.3	412.9	445.3	488.1	527.9	566.2	607.5	647.3	684.2	718.1
70°	321.4	336.2	362.7	396.6	442.4	483.6	524.9	567.7	610.4	648.8	681.2
72.5°	271.3	283.1	312.6	349.5	393.7	442.4	485.1	530.8	573.6	613.4	647.3
75°	218.2	230.0	263.9	305.2	350.9	402.5	446.8	494.0	538.2	578.0	613.4
77.5°	166.6	181.4	218.2	261.0	311.1	364.2	409.9	457.1	502.8	545.6	581.0
80°	119.4	135.7	175.5	224.1	272.8	325.9	376.0	423.2	468.9	511.7	548.5
82.5°	76.7	94.4	137.1	185.8	237.4	290.5	342.1	389.3	435.0	477.7	516.1
85°	41.3	60.5	104.7	153.3	205.0	258.0	309.6	359.8	404.0	443.8	485.1
87.5°	11.8	35.4	78.1	126.8	179.9	228.5	278.7	328.8	373.0	415.8	452.7
90°	1.5	20.6	59.0	104.7	156.3	203.5	253.6	300.8	345.0	387.8	424.7
92.5°	1.5	13.3	45.7	87.0	134.2	182.8	233.0	278.7	320.0	362.7	399.6
95°	1.5	10.3	36.9	73.7	118.0	163.7	210.9	255.1	297.8	337.7	374.5
97.5°	1.5	7.4	29.5	63.4	103.2	146.0	191.7	235.9	277.2	315.5	349.5
100°	1.5	5.9	23.6	54.6	89.9	131.2	172.5	215.3	255.1	292.0	327.3
102.5°	1.5	4.4	20.6	45.7	79.6	116.5	156.3	196.1	234.4	269.8	305.2
105°	1.5	4.4	17.7	39.8	70.8	104.7	141.6	179.9	215.3	249.2	281.6
107.5°	1.5	2.9	14.7	33.9	61.9	94.4	128.3	165.1	197.6	230.0	261.0
110°	1.5	2.9	11.8	31.0	54.6	84.0	116.5	150.4	181.4	212.3	241.8



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CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.5	2.9	10.3	26.5	47.2	75.2	104.7	135.7	165.1	196.1	222.6
115°	1.5	2.9	8.8	23.6	44.2	64.9	94.4	122.4	151.9	179.9	205.0
117.5°	1.5	2.9	7.4	19.2	38.3	59.0	82.6	110.6	137.1	163.7	187.3
120°	1.5	2.9	5.9	17.7	33.9	53.1	73.7	98.8	123.9	148.9	174.0
122.5°	1.5	1.5	5.9	14.7	29.5	47.2	67.8	87.0	110.6	134.2	156.3
125°	1.5	1.5	5.9	13.3	25.1	42.8	60.5	78.1	98.8	119.4	138.6
127.5°	1.5	1.5	4.4	10.3	22.1	36.9	53.1	72.3	87.0	106.2	125.3
130°	1.5	1.5	4.4	8.8	19.2	31.0	47.2	63.4	81.1	94.4	110.6
132.5°	1.5	1.5	4.4	7.4	14.7	25.1	39.8	54.6	70.8	85.5	98.8
135°	1.5	1.5	2.9	5.9	11.8	20.6	32.4	45.7	61.9	76.7	89.9
137.5°	1.5	1.5	2.9	5.9	8.8	17.7	25.1	36.9	51.6	64.9	78.1
140°	1.5	1.5	2.9	4.4	7.4	13.3	20.6	29.5	41.3	53.1	67.8
142.5°	1.5	1.5	1.5	4.4	5.9	10.3	16.2	23.6	32.4	42.8	54.6
145°	1.5	1.5	1.5	4.4	5.9	7.4	13.3	19.2	25.1	32.4	42.8
147.5°	1.5	1.5	1.5	2.9	4.4	5.9	10.3	14.7	19.2	25.1	31.0
150°	1.5	1.5	1.5	2.9	4.4	5.9	7.4	10.3	14.7	20.6	25.1
152.5°	1.5	1.5	1.5	2.9	2.9	4.4	5.9	7.4	10.3	14.7	17.7
155°	1.5	1.5	1.5	1.5	2.9	4.4	5.9	5.9	7.4	10.3	13.3
157.5°	1.5	1.5	1.5	1.5	2.9	2.9	4.4	4.4	5.9	5.9	8.8
160°	1.5	1.5	1.5	1.5	1.5	2.9	2.9	4.4	4.4	4.4	4.4
162.5°	1.5	1.5	1.5	1.5	1.5	1.5	2.9	2.9	2.9	4.4	4.4
165°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.9	2.9	2.9
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°	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8
2.5°	1387.5	1389.0	1393.4	1393.4	1390.5	1390.5	1389.0	1387.5	1389.0	1391.9	1391.9
5°	1384.6	1386.0	1390.5	1391.9	1389.0	1387.5	1387.5	1386.0	1387.5	1390.5	1390.5
7.5°	1378.7	1380.1	1384.6	1386.0	1383.1	1383.1	1381.6	1380.1	1383.1	1384.6	1384.6
10°	1369.8	1371.3	1377.2	1378.7	1377.2	1375.7	1375.7	1374.2	1375.7	1378.7	1378.7
12.5°	1358.0	1361.0	1368.3	1368.3	1368.3	1366.9	1366.9	1365.4	1366.9	1369.8	1368.3
15°	1344.7	1350.6	1356.5	1359.5	1359.5	1359.5	1358.0	1356.5	1359.5	1361.0	1359.5
17.5°	1330.0	1337.4	1346.2	1349.2	1349.2	1350.6	1349.2	1347.7	1350.6	1350.6	1349.2
20°	1315.3	1322.6	1331.5	1334.4	1337.4	1338.8	1338.8	1337.4	1338.8	1340.3	1338.8
22.5°	1296.1	1304.9	1315.3	1319.7	1322.6	1325.6	1325.6	1325.6	1327.1	1328.5	1325.6
25°	1275.4	1285.8	1297.6	1302.0	1307.9	1309.4	1310.8	1310.8	1312.3	1313.8	1309.4
27.5°	1253.3	1265.1	1276.9	1284.3	1288.7	1291.7	1291.7	1293.1	1294.6	1296.1	1291.7
30°	1226.8	1244.5	1254.8	1260.7	1266.6	1271.0	1272.5	1274.0	1275.4	1276.9	1272.5
32.5°	1203.2	1217.9	1231.2	1238.6	1246.0	1251.9	1253.3	1253.3	1256.3	1256.3	1251.9
35°	1175.2	1192.9	1206.1	1213.5	1222.4	1226.8	1229.7	1229.7	1232.7	1232.7	1228.3
37.5°	1147.2	1164.9	1179.6	1188.4	1198.8	1204.7	1206.1	1206.1	1209.1	1209.1	1203.2
40°	1117.7	1136.8	1153.1	1163.4	1172.2	1179.6	1181.1	1185.5	1185.5	1184.0	1178.1
42.5°	1088.2	1105.9	1123.6	1135.4	1147.2	1154.5	1157.5	1159.0	1159.0	1157.5	1153.1
45°	1055.7	1076.4	1092.6	1107.3	1119.1	1126.5	1130.9	1132.4	1132.4	1129.5	1125.0
47.5°	1024.8	1045.4	1061.6	1077.9	1089.7	1098.5	1102.9	1104.4	1102.9	1101.5	1097.0
50°	992.3	1015.9	1032.2	1048.4	1060.2	1067.5	1074.9	1076.4	1074.9	1073.4	1064.6
52.5°	958.4	983.5	1001.2	1017.4	1030.7	1039.5	1045.4	1046.9	1046.9	1043.9	1038.0
55°	924.5	946.6	968.7	986.4	1001.2	1010.0	1017.4	1020.4	1017.4	1014.5	1007.1
57.5°	893.5	914.2	936.3	955.5	970.2	982.0	987.9	990.9	987.9	983.5	976.1
60°	856.7	878.8	903.9	921.6	937.8	949.6	952.5	958.4	955.5	951.1	943.7
62.5°	821.3	847.8	870.0	892.1	905.3	918.6	924.5	927.5	924.5	920.1	912.7
65°	784.4	813.9	836.0	858.2	872.9	886.2	893.5	895.0	892.1	887.6	880.3
67.5°	750.5	778.5	802.1	825.7	839.0	852.3	859.6	862.6	859.6	853.7	846.4
70°	716.6	744.6	772.6	790.3	806.6	821.3	825.7	830.1	827.2	821.3	812.4
72.5°	682.7	712.2	740.2	757.9	775.6	788.9	794.8	799.2	796.2	790.3	780.0
75°	647.3	678.3	706.3	725.5	743.1	756.4	762.3	766.7	763.8	757.9	746.1
77.5°	614.9	645.8	672.4	693.0	710.7	722.5	732.8	734.3	731.4	725.5	713.7
80°	581.0	611.9	639.9	660.6	678.3	690.1	697.4	701.9	698.9	693.0	681.2
82.5°	551.5	579.5	607.5	628.1	645.8	660.6	666.5	670.9	669.4	660.6	651.7
85°	519.0	551.5	573.6	595.7	613.4	628.1	632.6	638.5	637.0	629.6	617.8
87.5°	486.6	519.0	545.6	567.7	583.9	595.7	603.1	606.0	604.5	597.2	583.9
90°	460.0	489.5	516.1	539.7	552.9	566.2	573.6	575.1	575.1	566.2	555.9
92.5°	435.0	463.0	489.5	511.7	527.9	539.7	545.6	548.5	547.0	539.7	527.9
95°	407.0	437.9	463.0	485.1	501.3	513.1	519.0	522.0	520.5	513.1	501.3
97.5°	383.4	411.4	436.5	457.1	473.3	485.1	491.0	494.0	494.0	486.6	474.8
100°	359.8	387.8	411.4	432.0	446.8	458.6	464.5	465.9	464.5	458.6	446.8
102.5°	336.2	362.7	386.3	405.5	421.7	432.0	437.9	439.4	439.4	432.0	420.2
105°	312.6	339.1	361.3	381.9	395.2	405.5	409.9	414.3	412.9	407.0	395.2
107.5°	290.5	317.0	337.7	356.8	370.1	380.4	384.8	389.3	387.8	381.9	370.1
110°	269.8	294.9	314.1	333.2	345.0	355.4	362.7	364.2	361.3	355.4	345.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	250.7	272.8	292.0	309.6	322.9	330.3	336.2	339.1	336.2	330.3	322.9
115°	230.0	252.1	271.3	287.5	299.3	308.2	312.6	315.5	312.6	306.7	299.3
117.5°	210.9	231.5	250.7	266.9	277.2	284.6	289.0	292.0	289.0	284.6	277.2
120°	194.6	212.3	230.0	244.8	256.6	262.5	266.9	269.8	268.4	262.5	255.1
122.5°	175.5	194.6	210.9	225.6	235.9	241.8	244.8	247.7	246.2	241.8	234.4
125°	159.2	175.5	191.7	205.0	215.3	221.2	224.1	227.1	225.6	221.2	212.3
127.5°	141.6	159.2	172.5	185.8	193.2	202.0	203.5	206.4	205.0	200.5	193.2
130°	128.3	141.6	154.8	166.6	175.5	181.4	184.3	185.8	182.8	179.9	172.5
132.5°	112.1	126.8	138.6	148.9	154.8	160.7	163.7	165.1	165.1	160.7	154.8
135°	100.3	110.6	120.9	131.2	137.1	143.0	146.0	147.5	146.0	143.0	137.1
137.5°	89.9	98.8	106.2	115.0	122.4	125.3	128.3	128.3	126.8	125.3	120.9
140°	78.1	88.5	95.8	101.7	107.6	109.1	112.1	112.1	110.6	109.1	106.2
142.5°	66.4	75.2	82.6	89.9	94.4	97.3	98.8	100.3	98.8	97.3	92.9
145°	53.1	63.4	70.8	75.2	81.1	82.6	84.0	85.5	84.0	82.6	78.1
147.5°	41.3	50.1	57.5	63.4	67.8	69.3	70.8	72.3	70.8	67.8	66.4
150°	29.5	36.9	45.7	51.6	54.6	57.5	57.5	57.5	59.0	56.0	53.1
152.5°	23.6	26.5	32.4	38.3	42.8	44.2	45.7	45.7	44.2	44.2	41.3
155°	16.2	19.2	23.6	28.0	32.4	33.9	35.4	35.4	33.9	33.9	32.4
157.5°	10.3	13.3	16.2	19.2	23.6	25.1	26.5	26.5	26.5	25.1	23.6
160°	5.9	7.4	8.8	11.8	14.7	16.2	17.7	17.7	17.7	17.7	16.2
162.5°	4.4	4.4	4.4	5.9	7.4	8.8	10.3	10.3	10.3	10.3	8.8
165°	2.9	2.9	2.9	2.9	2.9	4.4	5.9	5.9	5.9	5.9	5.9
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: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8
2.5°	1390.5	1390.5	1391.9	1389.0	1380.1	1381.6	1381.6	1387.5	1390.5	1391.9	1399.3
5°	1387.5	1387.5	1390.5	1386.0	1378.7	1378.7	1378.7	1384.6	1386.0	1389.0	1394.9
7.5°	1383.1	1383.1	1384.6	1380.1	1371.3	1371.3	1369.8	1375.7	1378.7	1380.1	1386.0
10°	1375.7	1375.7	1377.2	1372.8	1362.4	1362.4	1361.0	1365.4	1366.9	1369.8	1374.2
12.5°	1365.4	1365.4	1365.4	1361.0	1350.6	1349.2	1347.7	1352.1	1352.1	1353.6	1358.0
15°	1356.5	1353.6	1353.6	1349.2	1338.8	1335.9	1332.9	1334.4	1337.4	1335.9	1338.8
17.5°	1346.2	1343.3	1340.3	1335.9	1322.6	1318.2	1315.3	1316.7	1315.3	1313.8	1316.7
20°	1334.4	1330.0	1328.5	1321.2	1307.9	1300.5	1294.6	1291.7	1293.1	1288.7	1290.2
22.5°	1321.2	1315.3	1312.3	1303.5	1290.2	1281.3	1274.0	1268.1	1266.6	1260.7	1262.2
25°	1304.9	1297.6	1293.1	1285.8	1271.0	1260.7	1251.9	1243.0	1238.6	1231.2	1229.7
27.5°	1285.8	1278.4	1272.5	1265.1	1250.4	1237.1	1226.8	1215.0	1209.1	1200.2	1195.8
30°	1266.6	1257.7	1248.9	1243.0	1226.8	1212.0	1195.8	1185.5	1176.7	1166.3	1159.0
32.5°	1243.0	1234.2	1225.3	1216.5	1201.7	1184.0	1170.8	1154.5	1144.2	1132.4	1123.6
35°	1219.4	1207.6	1198.8	1187.0	1173.7	1153.1	1136.8	1120.6	1107.3	1094.1	1083.8
37.5°	1192.9	1184.0	1170.8	1160.4	1144.2	1123.6	1105.9	1085.2	1073.4	1055.7	1042.5
40°	1167.8	1157.5	1144.2	1130.9	1114.7	1091.1	1072.0	1048.4	1035.1	1014.5	1001.2
42.5°	1142.7	1128.0	1114.7	1100.0	1082.3	1060.2	1036.6	1013.0	995.3	976.1	957.0
45°	1114.7	1098.5	1082.3	1066.1	1048.4	1026.3	1001.2	976.1	954.0	936.3	912.7
47.5°	1085.2	1069.0	1049.8	1032.2	1013.0	990.9	964.3	937.8	914.2	893.5	868.5
50°	1055.7	1039.5	1018.9	999.7	977.6	955.5	927.5	896.5	871.4	844.9	822.8
52.5°	1024.8	1008.6	989.4	964.3	940.7	918.6	889.1	856.7	828.7	806.6	778.5
55°	993.8	977.6	955.5	930.4	906.8	878.8	850.8	818.3	787.4	760.8	732.8
57.5°	961.4	946.6	921.6	900.9	871.4	841.9	812.4	781.5	747.6	716.6	684.2
60°	928.9	912.7	889.1	864.1	834.6	805.1	774.1	740.2	704.8	670.9	641.4
62.5°	899.4	878.8	856.7	830.1	799.2	771.2	735.8	698.9	663.5	628.1	592.7
65°	865.5	843.4	822.8	796.2	763.8	731.4	696.0	659.1	620.8	582.4	547.0
67.5°	831.6	809.5	787.4	760.8	726.9	693.0	656.2	619.3	576.5	539.7	498.4
70°	797.7	780.0	752.0	724.0	693.0	656.2	619.3	579.5	535.2	495.4	452.7
72.5°	763.8	746.1	718.1	688.6	659.1	620.8	581.0	541.1	499.9	454.1	408.4
75°	731.4	709.2	684.2	656.2	625.2	585.4	545.6	504.3	455.6	412.9	365.7
77.5°	700.4	679.7	654.7	623.7	589.8	551.5	510.2	467.4	418.8	373.0	321.4
80°	666.5	645.8	620.8	589.8	555.9	519.0	474.8	430.6	383.4	333.2	280.2
82.5°	634.0	614.9	586.9	558.8	522.0	485.1	440.9	396.6	346.5	297.8	246.2
85°	600.1	581.0	554.4	524.9	489.5	449.7	408.4	364.2	314.1	263.9	212.3
87.5°	570.6	548.5	522.0	492.5	457.1	418.8	378.9	331.8	283.1	234.4	181.4
90°	539.7	519.0	492.5	463.0	427.6	389.3	348.0	303.7	256.6	206.4	156.3
92.5°	513.1	491.0	465.9	436.5	401.1	364.2	322.9	278.7	233.0	184.3	135.7
95°	486.6	464.5	440.9	411.4	376.0	339.1	297.8	255.1	210.9	163.7	118.0
97.5°	457.1	437.9	414.3	386.3	350.9	315.5	275.7	234.4	191.7	146.0	103.2
100°	433.5	411.4	389.3	359.8	327.3	293.4	253.6	213.8	172.5	129.8	89.9
102.5°	407.0	386.3	364.2	336.2	303.7	269.8	233.0	194.6	156.3	116.5	78.1
105°	381.9	362.7	339.1	312.6	281.6	249.2	213.8	178.4	141.6	103.2	69.3
107.5°	356.8	337.7	315.5	290.5	261.0	228.5	196.1	160.7	126.8	92.9	61.9
110°	331.8	314.1	293.4	268.4	240.3	210.9	179.9	147.5	113.5	82.6	54.6



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	309.6	292.0	271.3	247.7	221.2	193.2	163.7	132.7	101.7	73.7	47.2
115°	287.5	271.3	250.7	230.0	203.5	176.9	148.9	119.4	91.4	66.4	41.3
117.5°	265.4	249.2	230.0	209.4	185.8	160.7	134.2	106.2	82.6	59.0	36.9
120°	243.3	228.5	210.9	191.7	171.0	146.0	119.4	95.8	73.7	51.6	32.4
122.5°	222.6	209.4	193.2	175.5	153.3	129.8	107.6	87.0	66.4	45.7	26.5
125°	203.5	190.2	175.5	157.8	137.1	116.5	97.3	78.1	57.5	39.8	22.1
127.5°	184.3	171.0	156.3	140.1	123.9	104.7	87.0	69.3	51.6	35.4	19.2
130°	165.1	153.3	140.1	126.8	110.6	92.9	78.1	60.5	44.2	28.0	16.2
132.5°	146.0	137.1	125.3	112.1	97.3	84.0	67.8	53.1	38.3	25.1	14.7
135°	129.8	120.9	110.6	98.8	87.0	73.7	59.0	45.7	32.4	20.6	11.8
137.5°	115.0	107.6	97.3	87.0	76.7	63.4	51.6	38.3	26.5	17.7	8.8
140°	101.7	94.4	85.5	75.2	66.4	54.6	42.8	31.0	23.6	14.7	7.4
142.5°	88.5	81.1	73.7	64.9	56.0	45.7	35.4	26.5	19.2	11.8	7.4
145°	75.2	69.3	61.9	54.6	45.7	36.9	29.5	22.1	14.7	8.8	5.9
147.5°	61.9	57.5	50.1	44.2	36.9	29.5	23.6	17.7	11.8	7.4	4.4
150°	50.1	45.7	39.8	33.9	29.5	23.6	19.2	13.3	8.8	7.4	4.4
152.5°	38.3	35.4	31.0	28.0	23.6	17.7	13.3	10.3	7.4	5.9	2.9
155°	31.0	28.0	25.1	20.6	17.7	13.3	10.3	7.4	5.9	4.4	2.9
157.5°	22.1	20.6	17.7	14.7	11.8	8.8	7.4	7.4	4.4	2.9	1.5
160°	14.7	13.3	11.8	8.8	7.4	7.4	5.9	4.4	2.9	2.9	1.5
162.5°	8.8	7.4	7.4	7.4	5.9	5.9	4.4	2.9	2.9	1.5	1.5
165°	5.9	5.9	5.9	4.4	4.4	4.4	2.9	1.5	1.5	1.5	1.5
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8
2.5°	1399.3	1394.9	1400.8	1411.1	1412.6	1411.1	1408.1	1412.6	1418.5	1417.0	1406.7
5°	1396.4	1390.5	1396.4	1406.7	1406.7	1405.2	1403.7	1408.1	1414.0	1412.6	1403.7
7.5°	1387.5	1381.6	1387.5	1396.4	1397.8	1394.9	1394.9	1399.3	1405.2	1403.7	1396.4
10°	1375.7	1369.8	1372.8	1383.1	1386.0	1383.1	1383.1	1387.5	1394.9	1393.4	1384.6
12.5°	1358.0	1353.6	1356.5	1365.4	1368.3	1366.9	1365.4	1371.3	1378.7	1378.7	1369.8
15°	1338.8	1332.9	1335.9	1346.2	1347.7	1344.7	1346.2	1350.6	1359.5	1359.5	1352.1
17.5°	1316.7	1309.4	1313.8	1321.2	1322.6	1322.6	1322.6	1328.5	1338.8	1337.4	1331.5
20°	1291.7	1281.3	1284.3	1291.7	1294.6	1294.6	1294.6	1304.9	1312.3	1312.3	1306.4
22.5°	1262.2	1254.8	1254.8	1262.2	1266.6	1265.1	1265.1	1274.0	1284.3	1282.8	1282.8
25°	1228.3	1222.4	1219.4	1228.3	1229.7	1231.2	1234.2	1243.0	1254.8	1254.8	1256.3
27.5°	1192.9	1187.0	1185.5	1192.9	1194.3	1195.8	1198.8	1209.1	1220.9	1222.4	1225.3
30°	1159.0	1150.1	1147.2	1153.1	1156.0	1157.5	1157.5	1173.7	1184.0	1188.4	1194.3
32.5°	1119.1	1110.3	1102.9	1113.2	1114.7	1117.7	1119.1	1135.4	1147.2	1154.5	1163.4
35°	1079.3	1064.6	1061.6	1069.0	1072.0	1073.4	1076.4	1094.1	1110.3	1116.2	1128.0
37.5°	1035.1	1024.8	1015.9	1023.3	1026.3	1027.7	1036.6	1052.8	1069.0	1077.9	1089.7
40°	993.8	980.5	973.2	977.6	980.5	982.0	992.3	1010.0	1029.2	1039.5	1054.3
42.5°	948.1	930.4	924.5	928.9	930.4	934.8	943.7	967.3	986.4	1001.2	1013.0
45°	902.4	889.1	875.9	880.3	881.8	884.7	898.0	923.0	943.7	961.4	974.6
47.5°	855.2	839.0	825.7	828.7	834.6	836.0	850.8	880.3	899.4	918.6	936.3
50°	808.0	785.9	775.6	775.6	778.5	785.9	805.1	834.6	855.2	877.3	896.5
52.5°	759.4	738.7	726.9	728.4	731.4	740.2	757.9	787.4	811.0	834.6	858.2
55°	710.7	688.6	676.8	673.8	676.8	688.6	709.2	740.2	763.8	791.8	816.9
57.5°	662.1	635.5	625.2	620.8	623.7	638.5	659.1	691.5	721.0	747.6	777.1
60°	609.0	588.3	570.6	560.3	567.7	586.9	609.0	642.9	673.8	703.3	735.8
62.5°	563.3	536.7	517.5	507.2	514.6	530.8	561.8	594.2	628.1	662.1	694.5
65°	511.7	485.1	463.0	452.7	460.0	479.2	510.2	545.6	582.4	616.3	654.7
67.5°	461.5	433.5	407.0	396.6	405.5	426.1	460.0	499.9	539.7	575.1	616.3
70°	412.9	381.9	353.9	346.5	352.4	380.4	412.9	452.7	494.0	535.2	578.0
72.5°	368.6	330.3	300.8	292.0	299.3	330.3	367.2	408.4	452.7	496.9	542.6
75°	317.0	281.6	249.2	238.9	247.7	275.7	321.4	365.7	412.9	460.0	502.8
77.5°	275.7	234.4	200.5	184.3	199.1	234.4	278.7	325.9	374.5	423.2	471.8
80°	233.0	190.2	153.3	135.7	151.9	190.2	234.4	286.1	340.6	389.3	433.5
82.5°	194.6	148.9	110.6	91.4	109.1	151.9	200.5	252.1	305.2	353.9	405.5
85°	159.2	112.1	72.3	51.6	76.7	115.0	166.6	219.7	274.3	324.4	374.5
87.5°	129.8	84.0	44.2	22.1	47.2	89.9	138.6	191.7	246.2	296.4	343.6
90°	106.2	60.5	23.6	2.9	28.0	67.8	115.0	166.6	218.2	269.8	317.0
92.5°	87.0	45.7	13.3	1.5	17.7	54.6	98.8	147.5	197.6	247.7	293.4
95°	72.3	35.4	8.8	1.5	13.3	42.8	84.0	131.2	178.4	227.1	272.8
97.5°	61.9	29.5	7.4	1.5	10.3	36.9	72.3	116.5	162.2	207.9	252.1
100°	53.1	23.6	5.9	1.5	8.8	31.0	63.4	103.2	146.0	190.2	233.0
102.5°	45.7	19.2	4.4	1.5	7.4	26.5	56.0	92.9	131.2	174.0	215.3
105°	39.8	16.2	4.4	1.5	5.9	23.6	50.1	82.6	120.9	159.2	199.1
107.5°	33.9	13.3	2.9	1.5	4.4	19.2	44.2	75.2	109.1	146.0	182.8
110°	29.5	11.8	2.9	1.5	4.4	17.7	38.3	67.8	98.8	132.7	168.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	25.1	8.8	2.9	1.5	2.9	14.7	33.9	60.5	89.9	120.9	154.8
115°	22.1	7.4	1.5	1.5	2.9	13.3	31.0	54.6	81.1	110.6	141.6
117.5°	17.7	5.9	1.5	1.5	1.5	10.3	26.5	48.7	73.7	101.7	129.8
120°	14.7	5.9	1.5	1.5	1.5	8.8	23.6	42.8	66.4	91.4	118.0
122.5°	13.3	4.4	1.5	1.5	1.5	7.4	20.6	38.3	59.0	82.6	107.6
125°	11.8	4.4	1.5	1.5	1.5	5.9	17.7	33.9	53.1	73.7	97.3
127.5°	8.8	4.4	1.5	1.5	1.5	4.4	16.2	29.5	47.2	66.4	87.0
130°	7.4	2.9	1.5	1.5	1.5	4.4	13.3	26.5	41.3	59.0	78.1
132.5°	5.9	2.9	1.5	1.5	1.5	2.9	10.3	20.6	35.4	51.6	69.3
135°	5.9	2.9	1.5	1.5	1.5	2.9	7.4	17.7	29.5	44.2	59.0
137.5°	5.9	1.5	1.5	1.5	1.5	2.9	5.9	13.3	23.6	35.4	48.7
140°	4.4	1.5	1.5	1.5	1.5	1.5	4.4	10.3	19.2	29.5	41.3
142.5°	4.4	1.5	1.5	1.5	1.5	1.5	4.4	7.4	14.7	23.6	32.4
145°	2.9	1.5	1.5	1.5	1.5	1.5	2.9	5.9	11.8	17.7	26.5
147.5°	2.9	1.5	1.5	1.5	1.5	1.5	2.9	4.4	8.8	14.7	20.6
150°	2.9	1.5	1.5	1.5	1.5	1.5	2.9	4.4	5.9	10.3	16.2
152.5°	1.5	1.5	1.5	1.5	1.5	1.5	2.9	2.9	4.4	7.4	10.3
155°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.9	4.4	5.9	7.4
157.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.9	2.9	4.4	5.9
160°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.9	2.9	4.4
162.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.9	2.9
165°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8
2.5°	1402.2	1391.9	1394.9	1393.4	1396.4	1400.8	1400.8	1399.3	1399.3	1396.4	1393.4
5°	1399.3	1389.0	1393.4	1391.9	1394.9	1399.3	1399.3	1397.8	1397.8	1393.4	1391.9
7.5°	1390.5	1383.1	1386.0	1386.0	1389.0	1393.4	1393.4	1391.9	1391.9	1387.5	1386.0
10°	1381.6	1372.8	1377.2	1377.2	1380.1	1386.0	1386.0	1384.6	1384.6	1380.1	1378.7
12.5°	1366.9	1358.0	1365.4	1366.9	1369.8	1375.7	1374.2	1374.2	1374.2	1369.8	1368.3
15°	1349.2	1343.3	1350.6	1352.1	1356.5	1363.9	1363.9	1363.9	1363.9	1359.5	1358.0
17.5°	1330.0	1325.6	1332.9	1335.9	1341.8	1349.2	1349.2	1350.6	1352.1	1349.2	1347.7
20°	1307.9	1304.9	1312.3	1318.2	1327.1	1334.4	1337.4	1338.8	1341.8	1338.8	1337.4
22.5°	1282.8	1282.8	1293.1	1299.0	1309.4	1316.7	1321.2	1325.6	1328.5	1325.6	1324.1
25°	1254.8	1259.2	1269.5	1279.9	1291.7	1299.0	1303.5	1309.4	1312.3	1310.8	1309.4
27.5°	1228.3	1234.2	1247.4	1257.7	1268.1	1279.9	1284.3	1291.7	1294.6	1294.6	1293.1
30°	1197.3	1206.1	1220.9	1232.7	1246.0	1257.7	1263.6	1271.0	1275.4	1272.5	1274.0
32.5°	1167.8	1182.5	1194.3	1207.6	1222.4	1234.2	1241.5	1250.4	1254.8	1253.3	1254.8
35°	1135.4	1150.1	1166.3	1179.6	1197.3	1209.1	1219.4	1226.8	1232.7	1231.2	1231.2
37.5°	1100.0	1119.1	1135.4	1153.1	1169.3	1182.5	1192.9	1201.7	1207.6	1207.6	1207.6
40°	1066.1	1086.7	1102.9	1123.6	1144.2	1156.0	1167.8	1176.7	1182.5	1184.0	1185.5
42.5°	1029.2	1051.3	1070.5	1092.6	1113.2	1128.0	1141.3	1151.6	1157.5	1160.4	1159.0
45°	995.3	1015.9	1038.0	1063.1	1082.3	1097.0	1113.2	1125.0	1130.9	1132.4	1133.9
47.5°	957.0	980.5	1005.6	1030.7	1049.8	1069.0	1083.8	1095.6	1101.5	1105.9	1105.9
50°	920.1	945.2	973.2	999.7	1020.4	1039.5	1054.3	1067.5	1074.9	1077.9	1079.3
52.5°	886.2	909.8	939.3	965.8	986.4	1005.6	1024.8	1039.5	1046.9	1049.8	1049.8
55°	844.9	874.4	906.8	931.9	954.0	976.1	995.3	1010.0	1017.4	1021.8	1024.8
57.5°	806.6	837.5	871.4	898.0	924.5	945.2	962.8	982.0	987.9	993.8	995.3
60°	769.7	800.7	833.1	862.6	889.1	911.2	931.9	948.1	958.4	961.4	964.3
62.5°	731.4	763.8	797.7	827.2	855.2	881.8	900.9	915.7	927.5	931.9	934.8
65°	694.5	728.4	762.3	793.3	822.8	849.3	868.5	883.2	895.0	902.4	903.9
67.5°	654.7	691.5	726.9	759.4	788.9	816.9	836.0	850.8	862.6	871.4	872.9
70°	617.8	656.2	691.5	726.9	756.4	784.4	805.1	819.8	833.1	839.0	841.9
72.5°	582.4	622.2	659.1	694.5	724.0	752.0	774.1	788.9	802.1	809.5	811.0
75°	548.5	588.3	628.1	662.1	693.0	721.0	743.1	759.4	771.2	778.5	781.5
77.5°	514.6	555.9	595.7	629.6	662.1	690.1	709.2	728.4	740.2	749.0	749.0
80°	480.7	523.4	564.7	598.6	631.1	656.2	678.3	697.4	709.2	718.1	718.1
82.5°	451.2	492.5	532.3	566.2	598.6	626.7	648.8	666.5	679.7	685.6	687.1
85°	417.3	463.0	499.9	536.7	567.7	594.2	616.3	635.5	647.3	653.2	656.2
87.5°	389.3	433.5	473.3	505.8	536.7	563.3	588.3	604.5	616.3	623.7	626.7
90°	362.7	405.5	445.3	477.7	510.2	535.2	558.8	575.1	588.3	594.2	597.2
92.5°	339.1	381.9	420.2	452.7	483.6	511.7	533.8	550.0	561.8	567.7	572.1
95°	317.0	358.3	395.2	430.6	460.0	485.1	508.7	524.9	538.2	542.6	547.0
97.5°	294.9	334.7	371.6	405.5	436.5	460.0	482.2	498.4	508.7	516.1	520.5
100°	275.7	314.1	349.5	381.9	411.4	433.5	457.1	471.8	482.2	488.1	494.0
102.5°	255.1	293.4	327.3	358.3	389.3	409.9	432.0	446.8	455.6	465.9	465.9
105°	237.4	272.8	306.7	336.2	362.7	387.8	407.0	421.7	432.0	439.4	439.4
107.5°	218.2	253.6	286.1	317.0	342.1	365.7	383.4	396.6	408.4	412.9	417.3
110°	203.5	234.4	266.9	296.4	320.0	342.1	359.8	374.5	384.8	389.3	392.2



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	185.8	218.2	247.7	275.7	299.3	320.0	337.7	349.5	359.8	365.7	367.2
115°	171.0	202.0	228.5	255.1	280.2	297.8	314.1	325.9	336.2	340.6	343.6
117.5°	157.8	185.8	212.3	234.4	258.0	277.2	293.4	303.7	312.6	318.5	321.4
120°	144.5	171.0	194.6	216.8	238.9	256.6	271.3	281.6	292.0	296.4	296.4
122.5°	131.2	156.3	178.4	199.1	219.7	235.9	252.1	261.0	269.8	274.3	274.3
125°	119.4	143.0	163.7	182.8	202.0	216.8	230.0	240.3	249.2	252.1	252.1
127.5°	107.6	129.8	148.9	166.6	182.8	197.6	210.9	221.2	228.5	231.5	231.5
130°	97.3	116.5	134.2	151.9	168.1	179.9	193.2	202.0	206.4	210.9	212.3
132.5°	87.0	104.7	120.9	135.7	151.9	163.7	174.0	182.8	187.3	191.7	193.2
135°	76.7	92.9	107.6	122.4	135.7	147.5	156.3	163.7	169.6	172.5	174.0
137.5°	64.9	82.6	95.8	107.6	122.4	131.2	141.6	146.0	151.9	154.8	154.8
140°	54.6	67.8	82.6	94.4	106.2	115.0	123.9	131.2	135.7	137.1	137.1
142.5°	44.2	56.0	67.8	82.6	92.9	100.3	109.1	115.0	118.0	119.4	120.9
145°	35.4	44.2	54.6	67.8	79.6	88.5	92.9	98.8	101.7	103.2	104.7
147.5°	26.5	35.4	44.2	53.1	64.9	73.7	78.1	84.0	87.0	88.5	88.5
150°	20.6	26.5	32.4	41.3	50.1	60.5	66.4	70.8	72.3	73.7	73.7
152.5°	14.7	20.6	25.1	31.0	36.9	45.7	54.6	57.5	59.0	60.5	60.5
155°	10.3	14.7	17.7	22.1	26.5	33.9	41.3	45.7	47.2	48.7	48.7
157.5°	7.4	10.3	11.8	16.2	19.2	22.1	28.0	35.4	36.9	36.9	36.9
160°	4.4	5.9	7.4	10.3	11.8	14.7	17.7	22.1	26.5	26.5	26.5
162.5°	2.9	4.4	4.4	5.9	5.9	8.8	10.3	11.8	16.2	17.7	17.7
165°	1.5	2.9	2.9	2.9	2.9	2.9	4.4	4.4	7.4	8.8	8.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8
2.5°	1394.9	1397.8	1396.4	1396.4	1396.4	1399.3	1396.4	1383.1	1386.0	1389.0	1391.9
5°	1393.4	1394.9	1394.9	1393.4	1393.4	1396.4	1393.4	1380.1	1383.1	1386.0	1387.5
7.5°	1387.5	1389.0	1389.0	1389.0	1387.5	1390.5	1386.0	1374.2	1374.2	1377.2	1378.7
10°	1380.1	1383.1	1381.6	1380.1	1380.1	1380.1	1377.2	1363.9	1363.9	1365.4	1366.9
12.5°	1371.3	1371.3	1371.3	1369.8	1368.3	1368.3	1365.4	1352.1	1350.6	1353.6	1352.1
15°	1359.5	1362.4	1359.5	1358.0	1355.1	1355.1	1350.6	1337.4	1334.4	1335.9	1334.4
17.5°	1349.2	1350.6	1347.7	1344.7	1341.8	1340.3	1335.9	1321.2	1316.7	1318.2	1315.3
20°	1338.8	1338.8	1335.9	1332.9	1328.5	1324.1	1318.2	1303.5	1296.1	1296.1	1290.2
22.5°	1325.6	1325.6	1322.6	1318.2	1313.8	1307.9	1302.0	1287.2	1275.4	1272.5	1268.1
25°	1310.8	1309.4	1307.9	1303.5	1294.6	1288.7	1282.8	1266.6	1253.3	1247.4	1240.1
27.5°	1293.1	1293.1	1288.7	1284.3	1275.4	1268.1	1260.7	1246.0	1228.3	1220.9	1210.6
30°	1274.0	1274.0	1269.5	1263.6	1254.8	1246.0	1237.1	1219.4	1201.7	1191.4	1179.6
32.5°	1254.8	1253.3	1248.9	1243.0	1234.2	1220.9	1213.5	1195.8	1175.2	1163.4	1147.2
35°	1231.2	1229.7	1225.3	1217.9	1206.1	1195.8	1184.0	1167.8	1144.2	1129.5	1111.8
37.5°	1207.6	1206.1	1203.2	1192.9	1181.1	1169.3	1154.5	1138.3	1116.2	1097.0	1079.3
40°	1184.0	1182.5	1176.7	1169.3	1154.5	1139.8	1125.0	1108.8	1085.2	1063.1	1043.9
42.5°	1159.0	1157.5	1150.1	1141.3	1125.0	1110.3	1092.6	1074.9	1051.3	1024.8	1005.6
45°	1133.9	1130.9	1123.6	1113.2	1095.6	1079.3	1061.6	1041.0	1017.4	992.3	967.3
47.5°	1107.3	1102.9	1095.6	1080.8	1066.1	1048.4	1027.7	1005.6	982.0	954.0	927.5
50°	1077.9	1074.9	1066.1	1052.8	1035.1	1017.4	993.8	971.7	943.7	917.1	884.7
52.5°	1049.8	1043.9	1036.6	1021.8	1004.1	985.0	959.9	933.4	905.3	880.3	846.4
55°	1020.4	1017.4	1007.1	995.3	973.2	951.1	927.5	899.4	868.5	839.0	806.6
57.5°	992.3	986.4	977.6	961.4	942.2	920.1	895.0	865.5	831.6	800.7	765.3
60°	964.3	955.5	945.2	930.4	909.8	886.2	859.6	828.7	794.8	760.8	724.0
62.5°	933.4	926.0	914.2	899.4	878.8	853.7	825.7	793.3	760.8	725.5	685.6
65°	902.4	895.0	883.2	868.5	847.8	819.8	790.3	757.9	721.0	687.1	644.4
67.5°	871.4	864.1	850.8	834.6	813.9	787.4	756.4	722.5	685.6	648.8	604.5
70°	840.5	831.6	819.8	802.1	781.5	753.5	722.5	687.1	650.3	610.4	566.2
72.5°	809.5	802.1	787.4	771.2	749.0	721.0	690.1	654.7	616.3	575.1	530.8
75°	778.5	769.7	759.4	740.2	716.6	690.1	657.6	622.2	581.0	541.1	495.4
77.5°	747.6	740.2	726.9	707.8	685.6	657.6	625.2	589.8	548.5	507.2	458.6
80°	716.6	707.8	697.4	679.7	654.7	626.7	592.7	557.4	516.1	473.3	424.7
82.5°	685.6	676.8	665.0	647.3	623.7	595.7	563.3	524.9	483.6	439.4	393.7
85°	654.7	647.3	634.0	616.3	591.3	563.3	530.8	496.9	452.7	408.4	362.7
87.5°	623.7	616.3	603.1	585.4	561.8	533.8	501.3	465.9	423.2	381.9	331.8
90°	594.2	588.3	575.1	557.4	533.8	505.8	476.3	437.9	396.6	355.4	308.2
92.5°	567.7	561.8	550.0	532.3	511.7	480.7	451.2	414.3	373.0	330.3	284.6
95°	544.1	536.7	524.9	508.7	483.6	457.1	427.6	390.7	350.9	308.2	263.9
97.5°	517.5	510.2	498.4	480.7	460.0	432.0	402.5	367.2	327.3	287.5	243.3
100°	491.0	483.6	470.4	455.6	435.0	407.0	378.9	343.6	306.7	268.4	225.6
102.5°	464.5	457.1	445.3	430.6	409.9	384.8	356.8	322.9	286.1	247.7	207.9
105°	439.4	432.0	420.2	405.5	386.3	361.3	331.8	302.3	266.9	230.0	191.7
107.5°	414.3	407.0	396.6	381.9	362.7	339.1	311.1	280.2	247.7	212.3	175.5
110°	389.3	383.4	371.6	358.3	339.1	315.5	290.5	261.0	228.5	196.1	160.7



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	365.7	359.8	348.0	333.2	317.0	294.9	269.8	241.8	210.9	179.9	146.0
115°	342.1	334.7	324.4	311.1	294.9	274.3	250.7	225.6	194.6	165.1	134.2
117.5°	318.5	312.6	302.3	289.0	274.3	253.6	231.5	207.9	178.4	150.4	122.4
120°	294.9	290.5	280.2	268.4	253.6	234.4	213.8	190.2	163.7	137.1	110.6
122.5°	272.8	268.4	258.0	247.7	233.0	215.3	196.1	174.0	150.4	125.3	101.7
125°	252.1	246.2	237.4	227.1	213.8	197.6	178.4	157.8	135.7	113.5	91.4
127.5°	230.0	225.6	219.7	207.9	194.6	179.9	162.2	144.5	123.9	103.2	82.6
130°	212.3	206.4	199.1	190.2	178.4	163.7	147.5	129.8	112.1	92.9	72.3
132.5°	191.7	185.8	179.9	171.0	160.7	147.5	132.7	116.5	100.3	82.6	64.9
135°	172.5	168.1	162.2	153.3	143.0	132.7	118.0	103.2	88.5	72.3	57.5
137.5°	154.8	150.4	144.5	138.6	128.3	118.0	104.7	91.4	78.1	63.4	50.1
140°	137.1	134.2	128.3	122.4	113.5	103.2	91.4	79.6	67.8	54.6	42.8
142.5°	119.4	116.5	112.1	106.2	98.8	89.9	79.6	69.3	57.5	47.2	36.9
145°	103.2	101.7	97.3	91.4	85.5	76.7	67.8	59.0	48.7	39.8	29.5
147.5°	87.0	85.5	82.6	78.1	72.3	64.9	57.5	48.7	41.3	32.4	23.6
150°	72.3	70.8	69.3	63.4	60.5	53.1	47.2	39.8	33.9	25.1	19.2
152.5°	59.0	59.0	56.0	51.6	48.7	42.8	38.3	32.4	26.5	20.6	14.7
155°	47.2	45.7	44.2	41.3	38.3	33.9	29.5	25.1	20.6	14.7	10.3
157.5°	36.9	35.4	33.9	31.0	28.0	26.5	22.1	17.7	13.3	10.3	7.4
160°	26.5	25.1	23.6	22.1	20.6	17.7	14.7	11.8	8.8	5.9	4.4
162.5°	17.7	16.2	16.2	14.7	13.3	10.3	8.8	7.4	5.9	4.4	2.9
165°	8.8	8.8	7.4	7.4	5.9	4.4	4.4	4.4	2.9	2.9	1.5
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8	1397.8
2.5°	1390.5	1390.5	1396.4	1394.9	1390.5	1399.3	1409.6
5°	1386.0	1386.0	1390.5	1390.5	1386.0	1394.9	1403.7
7.5°	1378.7	1377.2	1381.6	1381.6	1375.7	1383.1	1393.4
10°	1365.4	1363.9	1368.3	1368.3	1362.4	1369.8	1378.7
12.5°	1350.6	1347.7	1352.1	1350.6	1344.7	1352.1	1361.0
15°	1331.5	1330.0	1332.9	1330.0	1324.1	1331.5	1340.3
17.5°	1312.3	1307.9	1309.4	1309.4	1299.0	1306.4	1313.8
20°	1287.2	1281.3	1282.8	1281.3	1274.0	1278.4	1287.2
22.5°	1262.2	1253.3	1253.3	1251.9	1243.0	1248.9	1256.3
25°	1231.2	1220.9	1220.9	1219.4	1209.1	1213.5	1220.9
27.5°	1200.2	1189.9	1185.5	1184.0	1173.7	1173.7	1184.0
30°	1167.8	1153.1	1150.1	1145.7	1135.4	1135.4	1144.2
32.5°	1136.8	1116.2	1110.3	1104.4	1094.1	1092.6	1102.9
35°	1095.6	1079.3	1069.0	1063.1	1051.3	1048.4	1057.2
37.5°	1061.6	1041.0	1026.3	1018.9	1007.1	1002.7	1014.5
40°	1024.8	1002.7	983.5	979.1	961.4	955.5	965.8
42.5°	983.5	959.9	940.7	931.9	918.6	912.7	914.2
45°	942.2	917.1	896.5	884.7	871.4	861.1	867.0
47.5°	899.4	877.3	852.3	834.6	818.3	811.0	813.9
50°	856.7	830.1	806.6	787.4	768.2	759.4	765.3
52.5°	813.9	785.9	759.4	738.7	716.6	707.8	709.2
55°	772.6	743.1	712.2	690.1	669.4	656.2	653.2
57.5°	731.4	698.9	666.5	641.4	614.9	603.1	598.6
60°	687.1	653.2	619.3	589.8	561.8	548.5	542.6
62.5°	645.8	609.0	570.6	539.7	511.7	494.0	489.5
65°	606.0	563.3	524.9	489.5	458.6	439.4	433.5
67.5°	563.3	519.0	477.7	439.4	409.9	384.8	381.9
70°	523.4	476.3	430.6	390.7	358.3	333.2	321.4
72.5°	483.6	435.0	387.8	345.0	303.7	280.2	271.3
75°	445.3	395.2	345.0	300.8	255.1	227.1	218.2
77.5°	409.9	358.3	305.2	256.6	213.8	178.4	166.6
80°	376.0	322.9	266.9	216.8	171.0	132.7	119.4
82.5°	340.6	290.5	233.0	179.9	132.7	92.9	76.7
85°	309.6	259.5	202.0	148.9	101.7	59.0	41.3
87.5°	284.6	230.0	178.4	125.3	76.7	33.9	11.8
90°	259.5	206.4	154.8	103.2	57.5	19.2	1.5
92.5°	237.4	187.3	135.7	88.5	44.2	13.3	1.5
95°	216.8	168.1	119.4	73.7	35.4	8.8	1.5
97.5°	197.6	151.9	106.2	63.4	29.5	7.4	1.5
100°	181.4	137.1	94.4	56.0	25.1	5.9	1.5
102.5°	165.1	123.9	84.0	48.7	22.1	4.4	1.5
105°	151.9	112.1	75.2	44.2	19.2	4.4	1.5
107.5°	138.6	101.7	67.8	38.3	16.2	2.9	1.5
110°	125.3	92.9	60.5	33.9	14.7	2.9	1.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-77SL-LW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	115.0	84.0	54.6	31.0	11.8	2.9	1.5
115°	104.7	75.2	48.7	26.5	10.3	1.5	1.5
117.5°	94.4	67.8	42.8	23.6	8.8	1.5	1.5
120°	85.5	60.5	38.3	20.6	7.4	1.5	1.5
122.5°	76.7	54.6	33.9	17.7	5.9	1.5	1.5
125°	69.3	48.7	29.5	14.7	4.4	1.5	1.5
127.5°	61.9	42.8	26.5	13.3	4.4	1.5	1.5
130°	54.6	38.3	22.1	10.3	2.9	1.5	1.5
132.5°	48.7	32.4	19.2	8.8	2.9	1.5	1.5
135°	42.8	28.0	16.2	5.9	2.9	1.5	1.5
137.5°	36.9	23.6	13.3	4.4	1.5	1.5	1.5
140°	31.0	20.6	10.3	4.4	1.5	1.5	1.5
142.5°	26.5	16.2	7.4	2.9	1.5	1.5	1.5
145°	20.6	13.3	5.9	2.9	1.5	1.5	1.5
147.5°	16.2	10.3	4.4	2.9	1.5	1.5	1.5
150°	11.8	7.4	4.4	1.5	1.5	1.5	1.5
152.5°	8.8	5.9	2.9	1.5	1.5	1.5	1.5
155°	5.9	4.4	2.9	1.5	1.5	1.5	1.5
157.5°	4.4	2.9	1.5	1.5	1.5	1.5	1.5
160°	2.9	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5
165°	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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)