

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-LD5-65HL-LW-UNV-L940-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-LD5-65HL-LW-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WIDE FROSTED LENS
Light Source: -
Ballast/Driver: -

Summary

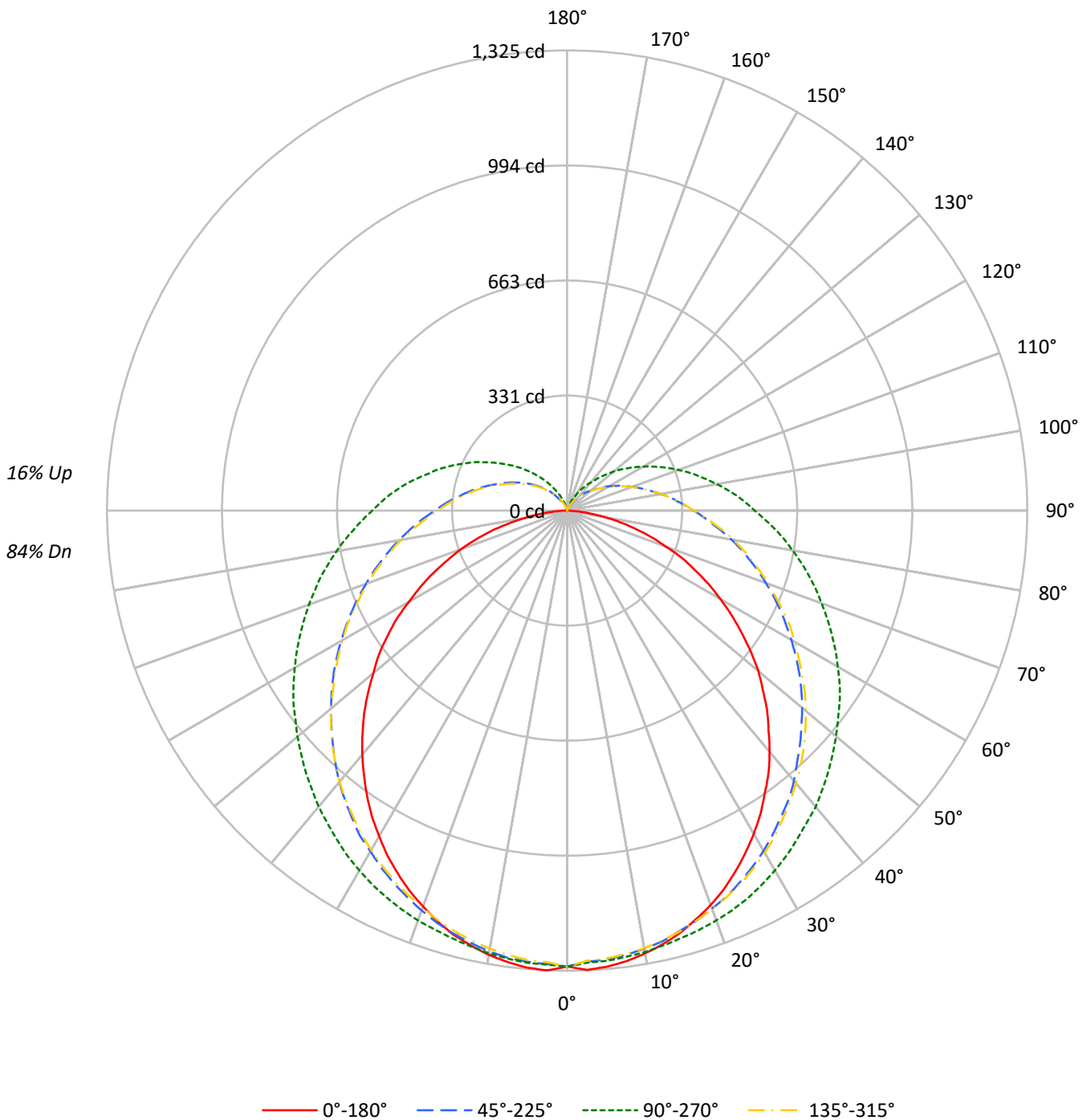
Lumens per Lamp: N/A
Luminaire Lumens: 5703.0 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.36 / 1.44
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Semi-Direct

Input Watts (W): 62
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	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°	10608	10608	10608	10608
5°	10664	10223	10687	10266
10°	10566	9932	10599	9964
15°	10443	9684	10489	9694
20°	10278	9502	10314	9502
25°	10076	9341	10136	9330
30°	9849	9175	9925	9175
35°	9584	9021	9692	9032
40°	9323	8931	9437	8931
45°	9023	8836	9160	8848
50°	8710	8780	8827	8804
55°	8273	8788	8535	8826
60°	7813	8815	8068	8870
65°	7295	8904	7618	8992
70°	6569	9068	7080	9196
75°	5729	9363	6272	9544
80°	4435	9803	5036	10029
85°	2651	10508	3313	10799



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.3	2.2
10°-20°	357.4	6.3
20°-30°	547.9	9.6
30°-40°	676.0	11.9
40°-50°	733.4	12.9
50°-60°	722.8	12.7
60°-70°	653.5	11.5
70°-80°	544.5	9.5
80°-90°	421.7	7.4
90°-100°	319.8	5.6
100°-110°	236.7	4.2
110°-120°	164.6	2.9
120°-130°	105.0	1.8
130°-140°	58.9	1.0
140°-150°	26.9	0.5
150°-160°	8.3	0.1
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	1029.7	18.1
0°-40°	1705.7	29.9
0°-60°	3161.9	55.4
0°-90°	4781.6	83.8
90°-120°	721.1	12.6
90°-150°	912.0	16.0
90°-180°	921.0	16.1
0°-180°	5703.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1313	1313	1313	1313	1313	
5°	1318	1302	1321	1307	1318	125
15°	1259	1274	1264	1275	1259	355
25°	1146	1231	1153	1230	1146	528
35°	993	1155	1004	1156	993	622
45°	814	1063	827	1065	814	627
55°	613	958	633	962	613	549
65°	407	840	425	849	407	403
75°	205	720	224	734	205	217
85°	39	600	48	616	39	47
90°	1	540	3	561	1	2
95°	1	490	1	514	1	1
105°	1	389	1	413	1	1
115°	1	296	1	323	1	1
125°	1	213	1	237	1	1
135°	1	138	1	163	1	1
145°	1	80	1	98	1	1
155°	1	33	1	46	1	1
165°	1	6	1	8	1	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7
2.5°	1323.7	1323.7	1322.4	1319.6	1321.0	1325.1	1322.4	1315.4	1311.3	1300.2	1303.0
5°	1318.2	1318.2	1316.8	1314.0	1315.4	1321.0	1318.2	1312.7	1307.1	1297.4	1301.6
7.5°	1308.5	1308.5	1307.1	1304.4	1307.1	1312.7	1309.9	1304.4	1300.2	1290.5	1294.7
10°	1294.7	1296.0	1294.7	1290.5	1296.0	1301.6	1300.2	1293.3	1289.1	1280.8	1285.0
12.5°	1278.0	1279.4	1278.0	1276.7	1279.4	1287.7	1285.0	1279.4	1276.7	1269.7	1273.9
15°	1258.7	1260.0	1257.3	1257.3	1260.0	1268.4	1268.4	1262.8	1260.0	1253.1	1261.4
17.5°	1233.7	1235.1	1233.7	1233.7	1236.5	1244.8	1246.2	1243.4	1240.7	1237.9	1246.2
20°	1208.8	1207.4	1207.4	1206.0	1211.6	1224.0	1222.7	1222.7	1219.9	1219.9	1229.6
22.5°	1179.7	1179.7	1178.4	1178.4	1185.3	1196.4	1196.4	1199.1	1196.4	1201.9	1210.2
25°	1146.5	1147.9	1146.5	1149.3	1154.8	1167.3	1168.7	1172.8	1174.2	1179.7	1189.4
27.5°	1111.9	1113.3	1111.9	1114.7	1124.3	1134.0	1141.0	1146.5	1147.9	1156.2	1168.7
30°	1074.5	1074.5	1075.9	1078.7	1089.7	1105.0	1110.5	1117.4	1117.4	1131.3	1143.7
32.5°	1035.7	1035.7	1035.7	1041.3	1053.7	1071.7	1078.7	1087.0	1089.7	1103.6	1117.4
35°	992.8	994.2	994.2	998.3	1015.0	1033.0	1042.7	1052.3	1057.9	1074.5	1088.3
37.5°	952.7	955.4	951.3	956.8	980.3	995.6	1006.7	1016.3	1026.0	1048.2	1059.3
40°	907.0	909.7	908.3	919.4	938.8	958.2	970.7	980.3	994.2	1016.3	1028.8
42.5°	858.5	861.3	864.0	876.5	897.3	916.6	931.9	944.3	961.0	980.3	1001.1
45°	814.2	814.2	818.3	833.6	855.7	876.5	894.5	908.3	927.7	948.5	969.3
47.5°	764.3	765.7	771.3	789.3	812.8	837.7	854.3	872.3	893.1	915.3	938.8
50°	718.6	718.6	726.9	746.3	768.5	796.2	814.2	835.0	857.1	883.4	907.0
52.5°	666.0	668.8	681.3	699.3	728.3	753.3	774.0	796.2	822.5	850.2	876.5
55°	613.4	618.9	628.6	653.6	684.0	707.6	732.5	760.2	785.1	815.6	846.0
57.5°	562.2	566.3	581.6	606.5	638.3	667.4	693.7	720.0	750.5	781.0	812.8
60°	509.6	515.1	533.1	558.0	592.6	623.1	653.6	681.3	713.1	745.0	778.2
62.5°	459.7	463.9	484.6	513.7	548.3	581.6	612.0	645.3	679.9	710.3	743.6
65°	407.1	414.0	437.6	463.9	504.0	537.3	571.9	607.9	643.9	677.1	708.9
67.5°	358.6	362.8	387.7	418.2	458.3	495.7	531.7	570.5	607.9	642.5	674.3
70°	301.9	315.7	340.6	372.5	415.4	454.2	492.9	533.1	573.3	609.3	639.7
72.5°	254.8	265.9	293.5	328.2	369.7	415.4	455.6	498.5	538.6	576.0	607.9
75°	204.9	216.0	247.9	286.6	329.6	378.0	419.6	463.9	505.4	542.8	576.0
77.5°	156.5	170.3	204.9	245.1	292.2	342.0	384.9	429.2	472.2	512.3	545.6
80°	112.2	127.4	164.8	210.5	256.2	306.0	353.1	397.4	440.3	480.5	515.1
82.5°	72.0	88.6	128.8	174.5	222.9	272.8	321.2	365.6	408.5	448.6	484.6
85°	38.8	56.8	98.3	144.0	192.5	242.3	290.8	337.9	379.4	416.8	455.6
87.5°	11.1	33.2	73.4	119.1	168.9	214.6	261.7	308.8	350.3	390.5	425.1
90°	1.4	19.4	55.4	98.3	146.8	191.1	238.2	282.5	324.0	364.2	398.8
92.5°	1.4	12.5	42.9	81.7	126.0	171.7	218.8	261.7	300.5	340.6	375.2
95°	1.4	9.7	34.6	69.2	110.8	153.7	198.0	239.5	279.7	317.1	351.7
97.5°	1.4	6.9	27.7	59.5	96.9	137.1	180.0	221.5	260.3	296.3	328.2
100°	1.4	5.5	22.2	51.2	84.5	123.2	162.0	202.2	239.5	274.2	307.4
102.5°	1.4	4.2	19.4	42.9	74.8	109.4	146.8	184.2	220.2	253.4	286.6
105°	1.4	4.2	16.6	37.4	66.5	98.3	132.9	168.9	202.2	234.0	264.5
107.5°	1.4	2.8	13.8	31.8	58.2	88.6	120.5	155.1	185.5	216.0	245.1
110°	1.4	2.8	11.1	29.1	51.2	78.9	109.4	141.2	170.3	199.4	227.1



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CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.4	2.8	9.7	24.9	44.3	70.6	98.3	127.4	155.1	184.2	209.1
115°	1.4	2.8	8.3	22.2	41.5	60.9	88.6	114.9	142.6	168.9	192.5
117.5°	1.4	2.8	6.9	18.0	36.0	55.4	77.5	103.8	128.8	153.7	175.9
120°	1.4	2.8	5.5	16.6	31.8	49.8	69.2	92.8	116.3	139.9	163.4
122.5°	1.4	1.4	5.5	13.8	27.7	44.3	63.7	81.7	103.8	126.0	146.8
125°	1.4	1.4	5.5	12.5	23.5	40.2	56.8	73.4	92.8	112.2	130.2
127.5°	1.4	1.4	4.2	9.7	20.8	34.6	49.8	67.8	81.7	99.7	117.7
130°	1.4	1.4	4.2	8.3	18.0	29.1	44.3	59.5	76.2	88.6	103.8
132.5°	1.4	1.4	4.2	6.9	13.8	23.5	37.4	51.2	66.5	80.3	92.8
135°	1.4	1.4	2.8	5.5	11.1	19.4	30.5	42.9	58.2	72.0	84.5
137.5°	1.4	1.4	2.8	5.5	8.3	16.6	23.5	34.6	48.5	60.9	73.4
140°	1.4	1.4	2.8	4.2	6.9	12.5	19.4	27.7	38.8	49.8	63.7
142.5°	1.4	1.4	1.4	4.2	5.5	9.7	15.2	22.2	30.5	40.2	51.2
145°	1.4	1.4	1.4	4.2	5.5	6.9	12.5	18.0	23.5	30.5	40.2
147.5°	1.4	1.4	1.4	2.8	4.2	5.5	9.7	13.8	18.0	23.5	29.1
150°	1.4	1.4	1.4	2.8	4.2	5.5	6.9	9.7	13.8	19.4	23.5
152.5°	1.4	1.4	1.4	2.8	2.8	4.2	5.5	6.9	9.7	13.8	16.6
155°	1.4	1.4	1.4	1.4	2.8	4.2	5.5	5.5	6.9	9.7	12.5
157.5°	1.4	1.4	1.4	1.4	2.8	2.8	4.2	4.2	5.5	5.5	8.3
160°	1.4	1.4	1.4	1.4	1.4	2.8	2.8	4.2	4.2	4.2	4.2
162.5°	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	2.8	4.2	4.2
165°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	2.8
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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7
2.5°	1303.0	1304.4	1308.5	1308.5	1305.7	1305.7	1304.4	1303.0	1304.4	1307.1	1307.1
5°	1300.2	1301.6	1305.7	1307.1	1304.4	1303.0	1303.0	1301.6	1303.0	1305.7	1305.7
7.5°	1294.7	1296.0	1300.2	1301.6	1298.8	1298.8	1297.4	1296.0	1298.8	1300.2	1300.2
10°	1286.4	1287.7	1293.3	1294.7	1293.3	1291.9	1291.9	1290.5	1291.9	1294.7	1294.7
12.5°	1275.3	1278.0	1285.0	1285.0	1285.0	1283.6	1283.6	1282.2	1283.6	1286.4	1285.0
15°	1262.8	1268.4	1273.9	1276.7	1276.7	1276.7	1275.3	1273.9	1276.7	1278.0	1276.7
17.5°	1249.0	1255.9	1264.2	1267.0	1267.0	1268.4	1267.0	1265.6	1268.4	1268.4	1267.0
20°	1235.1	1242.0	1250.4	1253.1	1255.9	1257.3	1257.3	1255.9	1257.3	1258.7	1257.3
22.5°	1217.1	1225.4	1235.1	1239.3	1242.0	1244.8	1244.8	1244.8	1246.2	1247.6	1244.8
25°	1197.7	1207.4	1218.5	1222.7	1228.2	1229.6	1231.0	1231.0	1232.4	1233.7	1229.6
27.5°	1177.0	1188.0	1199.1	1206.0	1210.2	1213.0	1213.0	1214.4	1215.7	1217.1	1213.0
30°	1152.0	1168.7	1178.4	1183.9	1189.4	1193.6	1195.0	1196.4	1197.7	1199.1	1195.0
32.5°	1129.9	1143.7	1156.2	1163.1	1170.0	1175.6	1177.0	1177.0	1179.7	1179.7	1175.6
35°	1103.6	1120.2	1132.7	1139.6	1147.9	1152.0	1154.8	1154.8	1157.6	1157.6	1153.4
37.5°	1077.3	1093.9	1107.7	1116.0	1125.7	1131.3	1132.7	1132.7	1135.4	1135.4	1129.9
40°	1049.6	1067.6	1082.8	1092.5	1100.8	1107.7	1109.1	1113.3	1113.3	1111.9	1106.3
42.5°	1021.9	1038.5	1055.1	1066.2	1077.3	1084.2	1087.0	1088.3	1088.3	1087.0	1082.8
45°	991.4	1010.8	1026.0	1039.9	1051.0	1057.9	1062.0	1063.4	1063.4	1060.7	1056.5
47.5°	962.3	981.7	997.0	1012.2	1023.3	1031.6	1035.7	1037.1	1035.7	1034.3	1030.2
50°	931.9	954.0	969.3	984.5	995.6	1002.5	1009.4	1010.8	1009.4	1008.0	999.7
52.5°	900.0	923.6	940.2	955.4	967.9	976.2	981.7	983.1	983.1	980.3	974.8
55°	868.2	889.0	909.7	926.3	940.2	948.5	955.4	958.2	955.4	952.7	945.7
57.5°	839.1	858.5	879.3	897.3	911.1	922.2	927.7	930.5	927.7	923.6	916.6
60°	804.5	825.3	848.8	865.4	880.6	891.7	894.5	900.0	897.3	893.1	886.2
62.5°	771.3	796.2	817.0	837.7	850.2	862.6	868.2	871.0	868.2	864.0	857.1
65°	736.6	764.3	785.1	805.9	819.7	832.2	839.1	840.5	837.7	833.6	826.6
67.5°	704.8	731.1	753.3	775.4	787.9	800.3	807.3	810.0	807.3	801.7	794.8
70°	672.9	699.3	725.6	742.2	757.4	771.3	775.4	779.6	776.8	771.3	763.0
72.5°	641.1	668.8	695.1	711.7	728.3	740.8	746.3	750.5	747.7	742.2	732.5
75°	607.9	636.9	663.3	681.3	697.9	710.3	715.9	720.0	717.3	711.7	700.6
77.5°	577.4	606.5	631.4	650.8	667.4	678.5	688.2	689.6	686.8	681.3	670.2
80°	545.6	574.6	600.9	620.3	636.9	648.0	654.9	659.1	656.3	650.8	639.7
82.5°	517.9	544.2	570.5	589.9	606.5	620.3	625.9	630.0	628.6	620.3	612.0
85°	487.4	517.9	538.6	559.4	576.0	589.9	594.0	599.6	598.2	591.3	580.2
87.5°	456.9	487.4	512.3	533.1	548.3	559.4	566.3	569.1	567.7	560.8	548.3
90°	432.0	459.7	484.6	506.8	519.2	531.7	538.6	540.0	540.0	531.7	522.0
92.5°	408.5	434.8	459.7	480.5	495.7	506.8	512.3	515.1	513.7	506.8	495.7
95°	382.2	411.2	434.8	455.6	470.8	481.9	487.4	490.2	488.8	481.9	470.8
97.5°	360.0	386.3	409.9	429.2	444.5	455.6	461.1	463.9	463.9	456.9	445.9
100°	337.9	364.2	386.3	405.7	419.6	430.6	436.2	437.6	436.2	430.6	419.6
102.5°	315.7	340.6	362.8	380.8	396.0	405.7	411.2	412.6	412.6	405.7	394.6
105°	293.5	318.5	339.2	358.6	371.1	380.8	384.9	389.1	387.7	382.2	371.1
107.5°	272.8	297.7	317.1	335.1	347.6	357.2	361.4	365.6	364.2	358.6	347.6
110°	253.4	276.9	294.9	312.9	324.0	333.7	340.6	342.0	339.2	333.7	324.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	235.4	256.2	274.2	290.8	303.2	310.2	315.7	318.5	315.7	310.2	303.2
115°	216.0	236.8	254.8	270.0	281.1	289.4	293.5	296.3	293.5	288.0	281.1
117.5°	198.0	217.4	235.4	250.6	260.3	267.2	271.4	274.2	271.4	267.2	260.3
120°	182.8	199.4	216.0	229.9	240.9	246.5	250.6	253.4	252.0	246.5	239.5
122.5°	164.8	182.8	198.0	211.9	221.5	227.1	229.9	232.6	231.2	227.1	220.2
125°	149.5	164.8	180.0	192.5	202.2	207.7	210.5	213.2	211.9	207.7	199.4
127.5°	132.9	149.5	162.0	174.5	181.4	189.7	191.1	193.9	192.5	188.3	181.4
130°	120.5	132.9	145.4	156.5	164.8	170.3	173.1	174.5	171.7	168.9	162.0
132.5°	105.2	119.1	130.2	139.9	145.4	150.9	153.7	155.1	155.1	150.9	145.4
135°	94.2	103.8	113.5	123.2	128.8	134.3	137.1	138.5	137.1	134.3	128.8
137.5°	84.5	92.8	99.7	108.0	114.9	117.7	120.5	120.5	119.1	117.7	113.5
140°	73.4	83.1	90.0	95.5	101.1	102.5	105.2	105.2	103.8	102.5	99.7
142.5°	62.3	70.6	77.5	84.5	88.6	91.4	92.8	94.2	92.8	91.4	87.2
145°	49.8	59.5	66.5	70.6	76.2	77.5	78.9	80.3	78.9	77.5	73.4
147.5°	38.8	47.1	54.0	59.5	63.7	65.1	66.5	67.8	66.5	63.7	62.3
150°	27.7	34.6	42.9	48.5	51.2	54.0	54.0	54.0	55.4	52.6	49.8
152.5°	22.2	24.9	30.5	36.0	40.2	41.5	42.9	42.9	41.5	41.5	38.8
155°	15.2	18.0	22.2	26.3	30.5	31.8	33.2	33.2	31.8	31.8	30.5
157.5°	9.7	12.5	15.2	18.0	22.2	23.5	24.9	24.9	24.9	23.5	22.2
160°	5.5	6.9	8.3	11.1	13.8	15.2	16.6	16.6	16.6	16.6	15.2
162.5°	4.2	4.2	4.2	5.5	6.9	8.3	9.7	9.7	9.7	9.7	8.3
165°	2.8	2.8	2.8	2.8	2.8	4.2	5.5	5.5	5.5	5.5	5.5
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-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7
2.5°	1305.7	1305.7	1307.1	1304.4	1296.0	1297.4	1297.4	1303.0	1305.7	1307.1	1314.0
5°	1303.0	1303.0	1305.7	1301.6	1294.7	1294.7	1294.7	1300.2	1301.6	1304.4	1309.9
7.5°	1298.8	1298.8	1300.2	1296.0	1287.7	1287.7	1286.4	1291.9	1294.7	1296.0	1301.6
10°	1291.9	1291.9	1293.3	1289.1	1279.4	1279.4	1278.0	1282.2	1283.6	1286.4	1290.5
12.5°	1282.2	1282.2	1282.2	1278.0	1268.4	1267.0	1265.6	1269.7	1269.7	1271.1	1275.3
15°	1273.9	1271.1	1271.1	1267.0	1257.3	1254.5	1251.7	1253.1	1255.9	1254.5	1257.3
17.5°	1264.2	1261.4	1258.7	1254.5	1242.0	1237.9	1235.1	1236.5	1235.1	1233.7	1236.5
20°	1253.1	1249.0	1247.6	1240.7	1228.2	1221.3	1215.7	1213.0	1214.4	1210.2	1211.6
22.5°	1240.7	1235.1	1232.4	1224.0	1211.6	1203.3	1196.4	1190.8	1189.4	1183.9	1185.3
25°	1225.4	1218.5	1214.4	1207.4	1193.6	1183.9	1175.6	1167.3	1163.1	1156.2	1154.8
27.5°	1207.4	1200.5	1195.0	1188.0	1174.2	1161.7	1152.0	1141.0	1135.4	1127.1	1123.0
30°	1189.4	1181.1	1172.8	1167.3	1152.0	1138.2	1123.0	1113.3	1105.0	1095.3	1088.3
32.5°	1167.3	1159.0	1150.7	1142.3	1128.5	1111.9	1099.4	1084.2	1074.5	1063.4	1055.1
35°	1145.1	1134.0	1125.7	1114.7	1102.2	1082.8	1067.6	1052.3	1039.9	1027.4	1017.7
37.5°	1120.2	1111.9	1099.4	1089.7	1074.5	1055.1	1038.5	1019.1	1008.0	991.4	979.0
40°	1096.7	1087.0	1074.5	1062.0	1046.8	1024.7	1006.7	984.5	972.0	952.7	940.2
42.5°	1073.1	1059.3	1046.8	1033.0	1016.3	995.6	973.4	951.3	934.6	916.6	898.6
45°	1046.8	1031.6	1016.3	1001.1	984.5	963.7	940.2	916.6	895.9	879.3	857.1
47.5°	1019.1	1003.9	985.9	969.3	951.3	930.5	905.6	880.6	858.5	839.1	815.6
50°	991.4	976.2	956.8	938.8	918.0	897.3	871.0	841.9	818.3	793.4	772.6
52.5°	962.3	947.1	929.1	905.6	883.4	862.6	835.0	804.5	778.2	757.4	731.1
55°	933.3	918.0	897.3	873.7	851.6	825.3	799.0	768.5	739.4	714.5	688.2
57.5°	902.8	889.0	865.4	846.0	818.3	790.6	763.0	733.9	702.0	672.9	642.5
60°	872.3	857.1	835.0	811.4	783.7	756.0	726.9	695.1	661.9	630.0	602.3
62.5°	844.6	825.3	804.5	779.6	750.5	724.2	690.9	656.3	623.1	589.9	556.6
65°	812.8	792.0	772.6	747.7	717.3	686.8	653.6	618.9	582.9	546.9	513.7
67.5°	781.0	760.2	739.4	714.5	682.6	650.8	616.2	581.6	541.4	506.8	468.0
70°	749.1	732.5	706.2	679.9	650.8	616.2	581.6	544.2	502.6	465.2	425.1
72.5°	717.3	700.6	674.3	646.6	618.9	582.9	545.6	508.2	469.4	426.5	383.6
75°	686.8	666.0	642.5	616.2	587.1	549.7	512.3	473.6	427.9	387.7	343.4
77.5°	657.7	638.3	614.8	585.7	553.9	517.9	479.1	438.9	393.2	350.3	301.9
80°	625.9	606.5	582.9	553.9	522.0	487.4	445.9	404.3	360.0	312.9	263.1
82.5°	595.4	577.4	551.1	524.8	490.2	455.6	414.0	372.5	325.4	279.7	231.2
85°	563.6	545.6	520.6	492.9	459.7	422.3	383.6	342.0	294.9	247.9	199.4
87.5°	535.9	515.1	490.2	462.5	429.2	393.2	355.9	311.5	265.9	220.2	170.3
90°	506.8	487.4	462.5	434.8	401.6	365.6	326.8	285.2	240.9	193.9	146.8
92.5°	481.9	461.1	437.6	409.9	376.6	342.0	303.2	261.7	218.8	173.1	127.4
95°	456.9	436.2	414.0	386.3	353.1	318.5	279.7	239.5	198.0	153.7	110.8
97.5°	429.2	411.2	389.1	362.8	329.6	296.3	258.9	220.2	180.0	137.1	96.9
100°	407.1	386.3	365.6	337.9	307.4	275.5	238.2	200.8	162.0	121.9	84.5
102.5°	382.2	362.8	342.0	315.7	285.2	253.4	218.8	182.8	146.8	109.4	73.4
105°	358.6	340.6	318.5	293.5	264.5	234.0	200.8	167.5	132.9	96.9	65.1
107.5°	335.1	317.1	296.3	272.8	245.1	214.6	184.2	150.9	119.1	87.2	58.2
110°	311.5	294.9	275.5	252.0	225.7	198.0	168.9	138.5	106.6	77.5	51.2



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	290.8	274.2	254.8	232.6	207.7	181.4	153.7	124.6	95.5	69.2	44.3
115°	270.0	254.8	235.4	216.0	191.1	166.2	139.9	112.2	85.8	62.3	38.8
117.5°	249.2	234.0	216.0	196.6	174.5	150.9	126.0	99.7	77.5	55.4	34.6
120°	228.5	214.6	198.0	180.0	160.6	137.1	112.2	90.0	69.2	48.5	30.5
122.5°	209.1	196.6	181.4	164.8	144.0	121.9	101.1	81.7	62.3	42.9	24.9
125°	191.1	178.6	164.8	148.2	128.8	109.4	91.4	73.4	54.0	37.4	20.8
127.5°	173.1	160.6	146.8	131.5	116.3	98.3	81.7	65.1	48.5	33.2	18.0
130°	155.1	144.0	131.5	119.1	103.8	87.2	73.4	56.8	41.5	26.3	15.2
132.5°	137.1	128.8	117.7	105.2	91.4	78.9	63.7	49.8	36.0	23.5	13.8
135°	121.9	113.5	103.8	92.8	81.7	69.2	55.4	42.9	30.5	19.4	11.1
137.5°	108.0	101.1	91.4	81.7	72.0	59.5	48.5	36.0	24.9	16.6	8.3
140°	95.5	88.6	80.3	70.6	62.3	51.2	40.2	29.1	22.2	13.8	6.9
142.5°	83.1	76.2	69.2	60.9	52.6	42.9	33.2	24.9	18.0	11.1	6.9
145°	70.6	65.1	58.2	51.2	42.9	34.6	27.7	20.8	13.8	8.3	5.5
147.5°	58.2	54.0	47.1	41.5	34.6	27.7	22.2	16.6	11.1	6.9	4.2
150°	47.1	42.9	37.4	31.8	27.7	22.2	18.0	12.5	8.3	6.9	4.2
152.5°	36.0	33.2	29.1	26.3	22.2	16.6	12.5	9.7	6.9	5.5	2.8
155°	29.1	26.3	23.5	19.4	16.6	12.5	9.7	6.9	5.5	4.2	2.8
157.5°	20.8	19.4	16.6	13.8	11.1	8.3	6.9	6.9	4.2	2.8	1.4
160°	13.8	12.5	11.1	8.3	6.9	6.9	5.5	4.2	2.8	2.8	1.4
162.5°	8.3	6.9	6.9	6.9	5.5	5.5	4.2	2.8	2.8	1.4	1.4
165°	5.5	5.5	5.5	4.2	4.2	4.2	2.8	1.4	1.4	1.4	1.4
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: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7
2.5°	1314.0	1309.9	1315.4	1325.1	1326.5	1325.1	1322.4	1326.5	1332.0	1330.7	1321.0
5°	1311.3	1305.7	1311.3	1321.0	1321.0	1319.6	1318.2	1322.4	1327.9	1326.5	1318.2
7.5°	1303.0	1297.4	1303.0	1311.3	1312.7	1309.9	1309.9	1314.0	1319.6	1318.2	1311.3
10°	1291.9	1286.4	1289.1	1298.8	1301.6	1298.8	1298.8	1303.0	1309.9	1308.5	1300.2
12.5°	1275.3	1271.1	1273.9	1282.2	1285.0	1283.6	1282.2	1287.7	1294.7	1294.7	1286.4
15°	1257.3	1251.7	1254.5	1264.2	1265.6	1262.8	1264.2	1268.4	1276.7	1276.7	1269.7
17.5°	1236.5	1229.6	1233.7	1240.7	1242.0	1242.0	1242.0	1247.6	1257.3	1255.9	1250.4
20°	1213.0	1203.3	1206.0	1213.0	1215.7	1215.7	1215.7	1225.4	1232.4	1232.4	1226.8
22.5°	1185.3	1178.4	1178.4	1185.3	1189.4	1188.0	1188.0	1196.4	1206.0	1204.7	1204.7
25°	1153.4	1147.9	1145.1	1153.4	1154.8	1156.2	1159.0	1167.3	1178.4	1178.4	1179.7
27.5°	1120.2	1114.7	1113.3	1120.2	1121.6	1123.0	1125.7	1135.4	1146.5	1147.9	1150.7
30°	1088.3	1080.0	1077.3	1082.8	1085.6	1087.0	1087.0	1102.2	1111.9	1116.0	1121.6
32.5°	1051.0	1042.7	1035.7	1045.4	1046.8	1049.6	1051.0	1066.2	1077.3	1084.2	1092.5
35°	1013.6	999.7	997.0	1003.9	1006.7	1008.0	1010.8	1027.4	1042.7	1048.2	1059.3
37.5°	972.0	962.3	954.0	961.0	963.7	965.1	973.4	988.7	1003.9	1012.2	1023.3
40°	933.3	920.8	913.9	918.0	920.8	922.2	931.9	948.5	966.5	976.2	990.0
42.5°	890.3	873.7	868.2	872.3	873.7	877.9	886.2	908.3	926.3	940.2	951.3
45°	847.4	835.0	822.5	826.6	828.0	830.8	843.3	866.8	886.2	902.8	915.3
47.5°	803.1	787.9	775.4	778.2	783.7	785.1	799.0	826.6	844.6	862.6	879.3
50°	758.8	738.0	728.3	728.3	731.1	738.0	756.0	783.7	803.1	823.9	841.9
52.5°	713.1	693.7	682.6	684.0	686.8	695.1	711.7	739.4	761.6	783.7	805.9
55°	667.4	646.6	635.6	632.8	635.6	646.6	666.0	695.1	717.3	743.6	767.1
57.5°	621.7	596.8	587.1	582.9	585.7	599.6	618.9	649.4	677.1	702.0	729.7
60°	571.9	552.5	535.9	526.2	533.1	551.1	571.9	603.7	632.8	660.5	690.9
62.5°	528.9	504.0	486.0	476.3	483.2	498.5	527.6	558.0	589.9	621.7	652.2
65°	480.5	455.6	434.8	425.1	432.0	450.0	479.1	512.3	546.9	578.8	614.8
67.5°	433.4	407.1	382.2	372.5	380.8	400.2	432.0	469.4	506.8	540.0	578.8
70°	387.7	358.6	332.3	325.4	330.9	357.2	387.7	425.1	463.9	502.6	542.8
72.5°	346.2	310.2	282.5	274.2	281.1	310.2	344.8	383.6	425.1	466.6	509.6
75°	297.7	264.5	234.0	224.3	232.6	258.9	301.9	343.4	387.7	432.0	472.2
77.5°	258.9	220.2	188.3	173.1	186.9	220.2	261.7	306.0	351.7	397.4	443.1
80°	218.8	178.6	144.0	127.4	142.6	178.6	220.2	268.6	319.9	365.6	407.1
82.5°	182.8	139.9	103.8	85.8	102.5	142.6	188.3	236.8	286.6	332.3	380.8
85°	149.5	105.2	67.8	48.5	72.0	108.0	156.5	206.3	257.5	304.6	351.7
87.5°	121.9	78.9	41.5	20.8	44.3	84.5	130.2	180.0	231.2	278.3	322.6
90°	99.7	56.8	22.2	2.8	26.3	63.7	108.0	156.5	204.9	253.4	297.7
92.5°	81.7	42.9	12.5	1.4	16.6	51.2	92.8	138.5	185.5	232.6	275.5
95°	67.8	33.2	8.3	1.4	12.5	40.2	78.9	123.2	167.5	213.2	256.2
97.5°	58.2	27.7	6.9	1.4	9.7	34.6	67.8	109.4	152.3	195.2	236.8
100°	49.8	22.2	5.5	1.4	8.3	29.1	59.5	96.9	137.1	178.6	218.8
102.5°	42.9	18.0	4.2	1.4	6.9	24.9	52.6	87.2	123.2	163.4	202.2
105°	37.4	15.2	4.2	1.4	5.5	22.2	47.1	77.5	113.5	149.5	186.9
107.5°	31.8	12.5	2.8	1.4	4.2	18.0	41.5	70.6	102.5	137.1	171.7
110°	27.7	11.1	2.8	1.4	4.2	16.6	36.0	63.7	92.8	124.6	157.9



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	23.5	8.3	2.8	1.4	2.8	13.8	31.8	56.8	84.5	113.5	145.4
115°	20.8	6.9	1.4	1.4	2.8	12.5	29.1	51.2	76.2	103.8	132.9
117.5°	16.6	5.5	1.4	1.4	1.4	9.7	24.9	45.7	69.2	95.5	121.9
120°	13.8	5.5	1.4	1.4	1.4	8.3	22.2	40.2	62.3	85.8	110.8
122.5°	12.5	4.2	1.4	1.4	1.4	6.9	19.4	36.0	55.4	77.5	101.1
125°	11.1	4.2	1.4	1.4	1.4	5.5	16.6	31.8	49.8	69.2	91.4
127.5°	8.3	4.2	1.4	1.4	1.4	4.2	15.2	27.7	44.3	62.3	81.7
130°	6.9	2.8	1.4	1.4	1.4	4.2	12.5	24.9	38.8	55.4	73.4
132.5°	5.5	2.8	1.4	1.4	1.4	2.8	9.7	19.4	33.2	48.5	65.1
135°	5.5	2.8	1.4	1.4	1.4	2.8	6.9	16.6	27.7	41.5	55.4
137.5°	5.5	1.4	1.4	1.4	1.4	2.8	5.5	12.5	22.2	33.2	45.7
140°	4.2	1.4	1.4	1.4	1.4	1.4	4.2	9.7	18.0	27.7	38.8
142.5°	4.2	1.4	1.4	1.4	1.4	1.4	4.2	6.9	13.8	22.2	30.5
145°	2.8	1.4	1.4	1.4	1.4	1.4	2.8	5.5	11.1	16.6	24.9
147.5°	2.8	1.4	1.4	1.4	1.4	1.4	2.8	4.2	8.3	13.8	19.4
150°	2.8	1.4	1.4	1.4	1.4	1.4	2.8	4.2	5.5	9.7	15.2
152.5°	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	4.2	6.9	9.7
155°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	4.2	5.5	6.9
157.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	4.2	5.5
160°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8	4.2
162.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	2.8
165°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7
2.5°	1316.8	1307.1	1309.9	1308.5	1311.3	1315.4	1315.4	1314.0	1314.0	1311.3	1308.5
5°	1314.0	1304.4	1308.5	1307.1	1309.9	1314.0	1314.0	1312.7	1312.7	1308.5	1307.1
7.5°	1305.7	1298.8	1301.6	1301.6	1304.4	1308.5	1308.5	1307.1	1307.1	1303.0	1301.6
10°	1297.4	1289.1	1293.3	1293.3	1296.0	1301.6	1301.6	1300.2	1300.2	1296.0	1294.7
12.5°	1283.6	1275.3	1282.2	1283.6	1286.4	1291.9	1290.5	1290.5	1290.5	1286.4	1285.0
15°	1267.0	1261.4	1268.4	1269.7	1273.9	1280.8	1280.8	1280.8	1280.8	1276.7	1275.3
17.5°	1249.0	1244.8	1251.7	1254.5	1260.0	1267.0	1267.0	1268.4	1269.7	1267.0	1265.6
20°	1228.2	1225.4	1232.4	1237.9	1246.2	1253.1	1255.9	1257.3	1260.0	1257.3	1255.9
22.5°	1204.7	1204.7	1214.4	1219.9	1229.6	1236.5	1240.7	1244.8	1247.6	1244.8	1243.4
25°	1178.4	1182.5	1192.2	1201.9	1213.0	1219.9	1224.0	1229.6	1232.4	1231.0	1229.6
27.5°	1153.4	1159.0	1171.4	1181.1	1190.8	1201.9	1206.0	1213.0	1215.7	1215.7	1214.4
30°	1124.3	1132.7	1146.5	1157.6	1170.0	1181.1	1186.7	1193.6	1197.7	1195.0	1196.4
32.5°	1096.7	1110.5	1121.6	1134.0	1147.9	1159.0	1165.9	1174.2	1178.4	1177.0	1178.4
35°	1066.2	1080.0	1095.3	1107.7	1124.3	1135.4	1145.1	1152.0	1157.6	1156.2	1156.2
37.5°	1033.0	1051.0	1066.2	1082.8	1098.0	1110.5	1120.2	1128.5	1134.0	1134.0	1134.0
40°	1001.1	1020.5	1035.7	1055.1	1074.5	1085.6	1096.7	1105.0	1110.5	1111.9	1113.3
42.5°	966.5	987.3	1005.3	1026.0	1045.4	1059.3	1071.7	1081.4	1087.0	1089.7	1088.3
45°	934.6	954.0	974.8	998.3	1016.3	1030.2	1045.4	1056.5	1062.0	1063.4	1064.8
47.5°	898.6	920.8	944.3	967.9	985.9	1003.9	1017.7	1028.8	1034.3	1038.5	1038.5
50°	864.0	887.6	913.9	938.8	958.2	976.2	990.0	1002.5	1009.4	1012.2	1013.6
52.5°	832.2	854.3	882.0	907.0	926.3	944.3	962.3	976.2	983.1	985.9	985.9
55°	793.4	821.1	851.6	875.1	895.9	916.6	934.6	948.5	955.4	959.6	962.3
57.5°	757.4	786.5	818.3	843.3	868.2	887.6	904.2	922.2	927.7	933.3	934.6
60°	722.8	751.9	782.3	810.0	835.0	855.7	875.1	890.3	900.0	902.8	905.6
62.5°	686.8	717.3	749.1	776.8	803.1	828.0	846.0	859.9	871.0	875.1	877.9
65°	652.2	684.0	715.9	745.0	772.6	797.6	815.6	829.4	840.5	847.4	848.8
67.5°	614.8	649.4	682.6	713.1	740.8	767.1	785.1	799.0	810.0	818.3	819.7
70°	580.2	616.2	649.4	682.6	710.3	736.6	756.0	769.9	782.3	787.9	790.6
72.5°	546.9	584.3	618.9	652.2	679.9	706.2	726.9	740.8	753.3	760.2	761.6
75°	515.1	552.5	589.9	621.7	650.8	677.1	697.9	713.1	724.2	731.1	733.9
77.5°	483.2	522.0	559.4	591.3	621.7	648.0	666.0	684.0	695.1	703.4	703.4
80°	451.4	491.6	530.3	562.2	592.6	616.2	636.9	654.9	666.0	674.3	674.3
82.5°	423.7	462.5	499.9	531.7	562.2	588.5	609.3	625.9	638.3	643.9	645.3
85°	391.9	434.8	469.4	504.0	533.1	558.0	578.8	596.8	607.9	613.4	616.2
87.5°	365.6	407.1	444.5	474.9	504.0	528.9	552.5	567.7	578.8	585.7	588.5
90°	340.6	380.8	418.2	448.6	479.1	502.6	524.8	540.0	552.5	558.0	560.8
92.5°	318.5	358.6	394.6	425.1	454.2	480.5	501.2	516.5	527.6	533.1	537.3
95°	297.7	336.5	371.1	404.3	432.0	455.6	477.7	492.9	505.4	509.6	513.7
97.5°	276.9	314.3	348.9	380.8	409.9	432.0	452.8	468.0	477.7	484.6	488.8
100°	258.9	294.9	328.2	358.6	386.3	407.1	429.2	443.1	452.8	458.3	463.9
102.5°	239.5	275.5	307.4	336.5	365.6	384.9	405.7	419.6	427.9	437.6	437.6
105°	222.9	256.2	288.0	315.7	340.6	364.2	382.2	396.0	405.7	412.6	412.6
107.5°	204.9	238.2	268.6	297.7	321.2	343.4	360.0	372.5	383.6	387.7	391.9
110°	191.1	220.2	250.6	278.3	300.5	321.2	337.9	351.7	361.4	365.6	368.3



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	174.5	204.9	232.6	258.9	281.1	300.5	317.1	328.2	337.9	343.4	344.8
115°	160.6	189.7	214.6	239.5	263.1	279.7	294.9	306.0	315.7	319.9	322.6
117.5°	148.2	174.5	199.4	220.2	242.3	260.3	275.5	285.2	293.5	299.1	301.9
120°	135.7	160.6	182.8	203.5	224.3	240.9	254.8	264.5	274.2	278.3	278.3
122.5°	123.2	146.8	167.5	186.9	206.3	221.5	236.8	245.1	253.4	257.5	257.5
125°	112.2	134.3	153.7	171.7	189.7	203.5	216.0	225.7	234.0	236.8	236.8
127.5°	101.1	121.9	139.9	156.5	171.7	185.5	198.0	207.7	214.6	217.4	217.4
130°	91.4	109.4	126.0	142.6	157.9	168.9	181.4	189.7	193.9	198.0	199.4
132.5°	81.7	98.3	113.5	127.4	142.6	153.7	163.4	171.7	175.9	180.0	181.4
135°	72.0	87.2	101.1	114.9	127.4	138.5	146.8	153.7	159.2	162.0	163.4
137.5°	60.9	77.5	90.0	101.1	114.9	123.2	132.9	137.1	142.6	145.4	145.4
140°	51.2	63.7	77.5	88.6	99.7	108.0	116.3	123.2	127.4	128.8	128.8
142.5°	41.5	52.6	63.7	77.5	87.2	94.2	102.5	108.0	110.8	112.2	113.5
145°	33.2	41.5	51.2	63.7	74.8	83.1	87.2	92.8	95.5	96.9	98.3
147.5°	24.9	33.2	41.5	49.8	60.9	69.2	73.4	78.9	81.7	83.1	83.1
150°	19.4	24.9	30.5	38.8	47.1	56.8	62.3	66.5	67.8	69.2	69.2
152.5°	13.8	19.4	23.5	29.1	34.6	42.9	51.2	54.0	55.4	56.8	56.8
155°	9.7	13.8	16.6	20.8	24.9	31.8	38.8	42.9	44.3	45.7	45.7
157.5°	6.9	9.7	11.1	15.2	18.0	20.8	26.3	33.2	34.6	34.6	34.6
160°	4.2	5.5	6.9	9.7	11.1	13.8	16.6	20.8	24.9	24.9	24.9
162.5°	2.8	4.2	4.2	5.5	5.5	8.3	9.7	11.1	15.2	16.6	16.6
165°	1.4	2.8	2.8	2.8	2.8	2.8	4.2	4.2	6.9	8.3	8.3
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-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7
2.5°	1309.9	1312.7	1311.3	1311.3	1311.3	1314.0	1311.3	1298.8	1301.6	1304.4	1307.1
5°	1308.5	1309.9	1309.9	1308.5	1308.5	1311.3	1308.5	1296.0	1298.8	1301.6	1303.0
7.5°	1303.0	1304.4	1304.4	1304.4	1303.0	1305.7	1301.6	1290.5	1290.5	1293.3	1294.7
10°	1296.0	1298.8	1297.4	1296.0	1296.0	1296.0	1293.3	1280.8	1280.8	1282.2	1283.6
12.5°	1287.7	1287.7	1287.7	1286.4	1285.0	1285.0	1282.2	1269.7	1268.4	1271.1	1269.7
15°	1276.7	1279.4	1276.7	1275.3	1272.5	1272.5	1268.4	1255.9	1253.1	1254.5	1253.1
17.5°	1267.0	1268.4	1265.6	1262.8	1260.0	1258.7	1254.5	1240.7	1236.5	1237.9	1235.1
20°	1257.3	1257.3	1254.5	1251.7	1247.6	1243.4	1237.9	1224.0	1217.1	1217.1	1211.6
22.5°	1244.8	1244.8	1242.0	1237.9	1233.7	1228.2	1222.7	1208.8	1197.7	1195.0	1190.8
25°	1231.0	1229.6	1228.2	1224.0	1215.7	1210.2	1204.7	1189.4	1177.0	1171.4	1164.5
27.5°	1214.4	1214.4	1210.2	1206.0	1197.7	1190.8	1183.9	1170.0	1153.4	1146.5	1136.8
30°	1196.4	1196.4	1192.2	1186.7	1178.4	1170.0	1161.7	1145.1	1128.5	1118.8	1107.7
32.5°	1178.4	1177.0	1172.8	1167.3	1159.0	1146.5	1139.6	1123.0	1103.6	1092.5	1077.3
35°	1156.2	1154.8	1150.7	1143.7	1132.7	1123.0	1111.9	1096.7	1074.5	1060.7	1044.0
37.5°	1134.0	1132.7	1129.9	1120.2	1109.1	1098.0	1084.2	1069.0	1048.2	1030.2	1013.6
40°	1111.9	1110.5	1105.0	1098.0	1084.2	1070.3	1056.5	1041.3	1019.1	998.3	980.3
42.5°	1088.3	1087.0	1080.0	1071.7	1056.5	1042.7	1026.0	1009.4	987.3	962.3	944.3
45°	1064.8	1062.0	1055.1	1045.4	1028.8	1013.6	997.0	977.6	955.4	931.9	908.3
47.5°	1039.9	1035.7	1028.8	1015.0	1001.1	984.5	965.1	944.3	922.2	895.9	871.0
50°	1012.2	1009.4	1001.1	988.7	972.0	955.4	933.3	912.5	886.2	861.3	830.8
52.5°	985.9	980.3	973.4	959.6	943.0	925.0	901.4	876.5	850.2	826.6	794.8
55°	958.2	955.4	945.7	934.6	913.9	893.1	871.0	844.6	815.6	787.9	757.4
57.5°	931.9	926.3	918.0	902.8	884.8	864.0	840.5	812.8	781.0	751.9	718.6
60°	905.6	897.3	887.6	873.7	854.3	832.2	807.3	778.2	746.3	714.5	679.9
62.5°	876.5	869.6	858.5	844.6	825.3	801.7	775.4	745.0	714.5	681.3	643.9
65°	847.4	840.5	829.4	815.6	796.2	769.9	742.2	711.7	677.1	645.3	605.1
67.5°	818.3	811.4	799.0	783.7	764.3	739.4	710.3	678.5	643.9	609.3	567.7
70°	789.3	781.0	769.9	753.3	733.9	707.6	678.5	645.3	610.6	573.3	531.7
72.5°	760.2	753.3	739.4	724.2	703.4	677.1	648.0	614.8	578.8	540.0	498.5
75°	731.1	722.8	713.1	695.1	672.9	648.0	617.6	584.3	545.6	508.2	465.2
77.5°	702.0	695.1	682.6	664.6	643.9	617.6	587.1	553.9	515.1	476.3	430.6
80°	672.9	664.6	654.9	638.3	614.8	588.5	556.6	523.4	484.6	444.5	398.8
82.5°	643.9	635.6	624.5	607.9	585.7	559.4	528.9	492.9	454.2	412.6	369.7
85°	614.8	607.9	595.4	578.8	555.3	528.9	498.5	466.6	425.1	383.6	340.6
87.5°	585.7	578.8	566.3	549.7	527.6	501.2	470.8	437.6	397.4	358.6	311.5
90°	558.0	552.5	540.0	523.4	501.2	474.9	447.2	411.2	372.5	333.7	289.4
92.5°	533.1	527.6	516.5	499.9	480.5	451.4	423.7	389.1	350.3	310.2	267.2
95°	510.9	504.0	492.9	477.7	454.2	429.2	401.6	366.9	329.6	289.4	247.9
97.5°	486.0	479.1	468.0	451.4	432.0	405.7	378.0	344.8	307.4	270.0	228.5
100°	461.1	454.2	441.7	427.9	408.5	382.2	355.9	322.6	288.0	252.0	211.9
102.5°	436.2	429.2	418.2	404.3	384.9	361.4	335.1	303.2	268.6	232.6	195.2
105°	412.6	405.7	394.6	380.8	362.8	339.2	311.5	283.9	250.6	216.0	180.0
107.5°	389.1	382.2	372.5	358.6	340.6	318.5	292.2	263.1	232.6	199.4	164.8
110°	365.6	360.0	348.9	336.5	318.5	296.3	272.8	245.1	214.6	184.2	150.9



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	343.4	337.9	326.8	312.9	297.7	276.9	253.4	227.1	198.0	168.9	137.1
115°	321.2	314.3	304.6	292.2	276.9	257.5	235.4	211.9	182.8	155.1	126.0
117.5°	299.1	293.5	283.9	271.4	257.5	238.2	217.4	195.2	167.5	141.2	114.9
120°	276.9	272.8	263.1	252.0	238.2	220.2	200.8	178.6	153.7	128.8	103.8
122.5°	256.2	252.0	242.3	232.6	218.8	202.2	184.2	163.4	141.2	117.7	95.5
125°	236.8	231.2	222.9	213.2	200.8	185.5	167.5	148.2	127.4	106.6	85.8
127.5°	216.0	211.9	206.3	195.2	182.8	168.9	152.3	135.7	116.3	96.9	77.5
130°	199.4	193.9	186.9	178.6	167.5	153.7	138.5	121.9	105.2	87.2	67.8
132.5°	180.0	174.5	168.9	160.6	150.9	138.5	124.6	109.4	94.2	77.5	60.9
135°	162.0	157.9	152.3	144.0	134.3	124.6	110.8	96.9	83.1	67.8	54.0
137.5°	145.4	141.2	135.7	130.2	120.5	110.8	98.3	85.8	73.4	59.5	47.1
140°	128.8	126.0	120.5	114.9	106.6	96.9	85.8	74.8	63.7	51.2	40.2
142.5°	112.2	109.4	105.2	99.7	92.8	84.5	74.8	65.1	54.0	44.3	34.6
145°	96.9	95.5	91.4	85.8	80.3	72.0	63.7	55.4	45.7	37.4	27.7
147.5°	81.7	80.3	77.5	73.4	67.8	60.9	54.0	45.7	38.8	30.5	22.2
150°	67.8	66.5	65.1	59.5	56.8	49.8	44.3	37.4	31.8	23.5	18.0
152.5°	55.4	55.4	52.6	48.5	45.7	40.2	36.0	30.5	24.9	19.4	13.8
155°	44.3	42.9	41.5	38.8	36.0	31.8	27.7	23.5	19.4	13.8	9.7
157.5°	34.6	33.2	31.8	29.1	26.3	24.9	20.8	16.6	12.5	9.7	6.9
160°	24.9	23.5	22.2	20.8	19.4	16.6	13.8	11.1	8.3	5.5	4.2
162.5°	16.6	15.2	15.2	13.8	12.5	9.7	8.3	6.9	5.5	4.2	2.8
165°	8.3	8.3	6.9	6.9	5.5	4.2	4.2	4.2	2.8	2.8	1.4
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: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7	1312.7
2.5°	1305.7	1305.7	1311.3	1309.9	1305.7	1314.0	1323.7
5°	1301.6	1301.6	1305.7	1305.7	1301.6	1309.9	1318.2
7.5°	1294.7	1293.3	1297.4	1297.4	1291.9	1298.8	1308.5
10°	1282.2	1280.8	1285.0	1285.0	1279.4	1286.4	1294.7
12.5°	1268.4	1265.6	1269.7	1268.4	1262.8	1269.7	1278.0
15°	1250.4	1249.0	1251.7	1249.0	1243.4	1250.4	1258.7
17.5°	1232.4	1228.2	1229.6	1229.6	1219.9	1226.8	1233.7
20°	1208.8	1203.3	1204.7	1203.3	1196.4	1200.5	1208.8
22.5°	1185.3	1177.0	1177.0	1175.6	1167.3	1172.8	1179.7
25°	1156.2	1146.5	1146.5	1145.1	1135.4	1139.6	1146.5
27.5°	1127.1	1117.4	1113.3	1111.9	1102.2	1102.2	1111.9
30°	1096.7	1082.8	1080.0	1075.9	1066.2	1066.2	1074.5
32.5°	1067.6	1048.2	1042.7	1037.1	1027.4	1026.0	1035.7
35°	1028.8	1013.6	1003.9	998.3	987.3	984.5	992.8
37.5°	997.0	977.6	963.7	956.8	945.7	941.6	952.7
40°	962.3	941.6	923.6	919.4	902.8	897.3	907.0
42.5°	923.6	901.4	883.4	875.1	862.6	857.1	858.5
45°	884.8	861.3	841.9	830.8	818.3	808.6	814.2
47.5°	844.6	823.9	800.3	783.7	768.5	761.6	764.3
50°	804.5	779.6	757.4	739.4	721.4	713.1	718.6
52.5°	764.3	738.0	713.1	693.7	672.9	664.6	666.0
55°	725.6	697.9	668.8	648.0	628.6	616.2	613.4
57.5°	686.8	656.3	625.9	602.3	577.4	566.3	562.2
60°	645.3	613.4	581.6	553.9	527.6	515.1	509.6
62.5°	606.5	571.9	535.9	506.8	480.5	463.9	459.7
65°	569.1	528.9	492.9	459.7	430.6	412.6	407.1
67.5°	528.9	487.4	448.6	412.6	384.9	361.4	358.6
70°	491.6	447.2	404.3	366.9	336.5	312.9	301.9
72.5°	454.2	408.5	364.2	324.0	285.2	263.1	254.8
75°	418.2	371.1	324.0	282.5	239.5	213.2	204.9
77.5°	384.9	336.5	286.6	240.9	200.8	167.5	156.5
80°	353.1	303.2	250.6	203.5	160.6	124.6	112.2
82.5°	319.9	272.8	218.8	168.9	124.6	87.2	72.0
85°	290.8	243.7	189.7	139.9	95.5	55.4	38.8
87.5°	267.2	216.0	167.5	117.7	72.0	31.8	11.1
90°	243.7	193.9	145.4	96.9	54.0	18.0	1.4
92.5°	222.9	175.9	127.4	83.1	41.5	12.5	1.4
95°	203.5	157.9	112.2	69.2	33.2	8.3	1.4
97.5°	185.5	142.6	99.7	59.5	27.7	6.9	1.4
100°	170.3	128.8	88.6	52.6	23.5	5.5	1.4
102.5°	155.1	116.3	78.9	45.7	20.8	4.2	1.4
105°	142.6	105.2	70.6	41.5	18.0	4.2	1.4
107.5°	130.2	95.5	63.7	36.0	15.2	2.8	1.4
110°	117.7	87.2	56.8	31.8	13.8	2.8	1.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-65HL-LW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	108.0	78.9	51.2	29.1	11.1	2.8	1.4
115°	98.3	70.6	45.7	24.9	9.7	1.4	1.4
117.5°	88.6	63.7	40.2	22.2	8.3	1.4	1.4
120°	80.3	56.8	36.0	19.4	6.9	1.4	1.4
122.5°	72.0	51.2	31.8	16.6	5.5	1.4	1.4
125°	65.1	45.7	27.7	13.8	4.2	1.4	1.4
127.5°	58.2	40.2	24.9	12.5	4.2	1.4	1.4
130°	51.2	36.0	20.8	9.7	2.8	1.4	1.4
132.5°	45.7	30.5	18.0	8.3	2.8	1.4	1.4
135°	40.2	26.3	15.2	5.5	2.8	1.4	1.4
137.5°	34.6	22.2	12.5	4.2	1.4	1.4	1.4
140°	29.1	19.4	9.7	4.2	1.4	1.4	1.4
142.5°	24.9	15.2	6.9	2.8	1.4	1.4	1.4
145°	19.4	12.5	5.5	2.8	1.4	1.4	1.4
147.5°	15.2	9.7	4.2	2.8	1.4	1.4	1.4
150°	11.1	6.9	4.2	1.4	1.4	1.4	1.4
152.5°	8.3	5.5	2.8	1.4	1.4	1.4	1.4
155°	5.5	4.2	2.8	1.4	1.4	1.4	1.4
157.5°	4.2	2.8	1.4	1.4	1.4	1.4	1.4
160°	2.8	1.4	1.4	1.4	1.4	1.4	1.4
162.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4
165°	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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)