

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-LD5-46SL-LN-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 (P33519)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

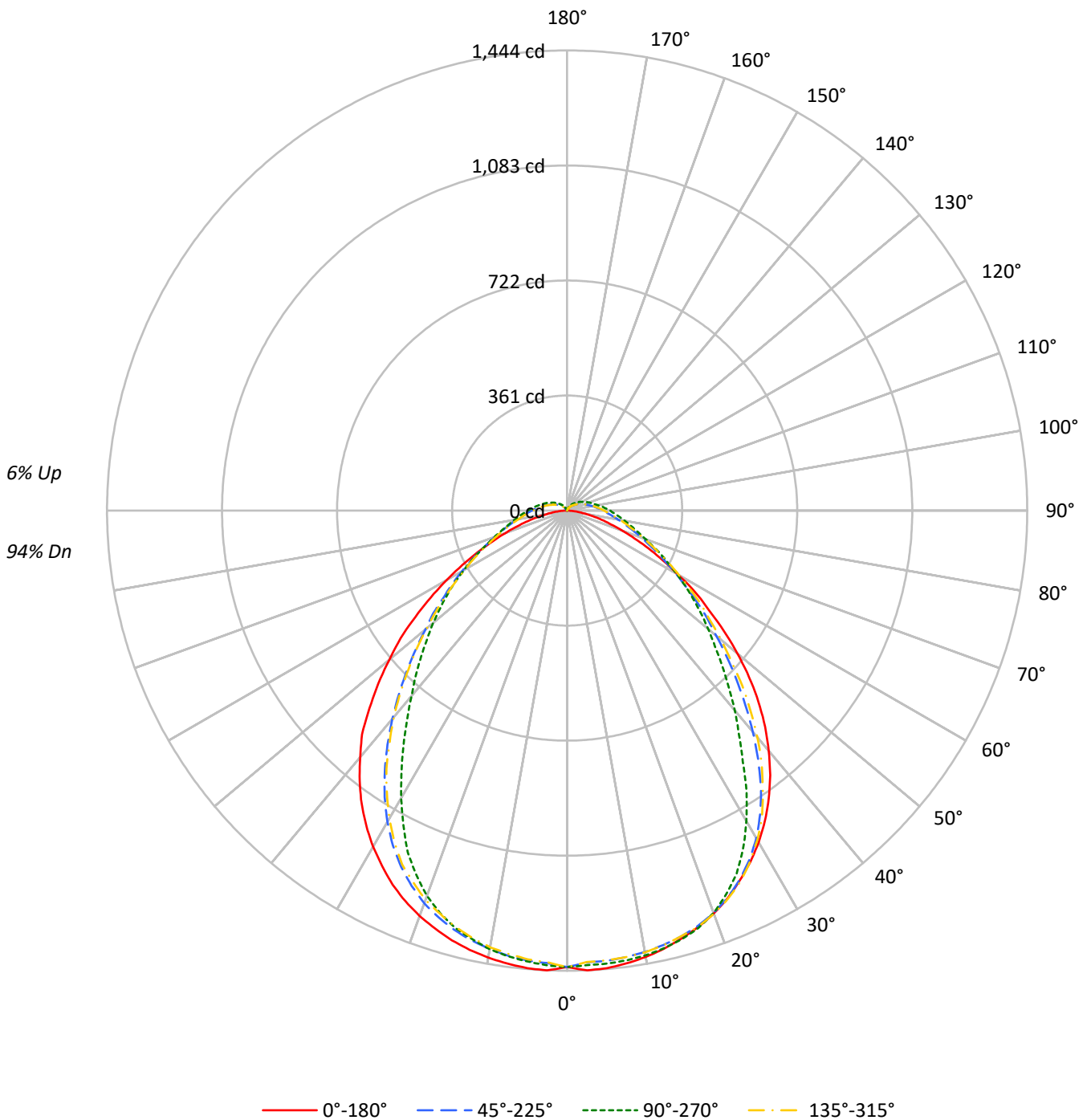
Lumens per Lamp: N/A
Luminaire Lumens: 3625.0 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 35
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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94				
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81	79				
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69	67				
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60	57				
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52	50				
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46	44				
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41	39				
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37	35				
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33	31				
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30	28				
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27	26				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	11575	11575	11575	11575
5°	11658	11207	11658	11157
10°	11605	10909	11625	10757
15°	11531	10583	11583	10308
20°	11442	10164	11510	9734
25°	11259	9542	11384	8980
30°	11020	8628	11165	7988
35°	10648	7509	10854	6992
40°	10116	6567	10383	6093
45°	9412	5708	9718	5381
50°	8452	5016	8824	4763
55°	7311	4430	7843	4206
60°	6148	3889	6705	3665
65°	5041	3439	5548	3189
70°	4012	3052	4491	2823
75°	3151	2818	3548	2592
80°	2273	2719	2680	2484
85°	1401	2734	1886	2513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.8	3.7
10°-20°	389.4	10.7
20°-30°	577.1	15.9
30°-40°	641.1	17.7
40°-50°	581.2	16.0
50°-60°	450.4	12.4
60°-70°	305.8	8.4
70°-80°	194.6	5.4
80°-90°	124.4	3.4
90°-100°	83.9	2.3
100°-110°	57.4	1.6
110°-120°	38.3	1.1
120°-130°	23.8	0.7
130°-140°	13.2	0.4
140°-150°	6.2	0.2
150°-160°	2.3	0.1
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1102.3	30.4
0°-40°	1743.4	48.1
0°-60°	2775.0	76.6
0°-90°	3399.8	93.8
90°-120°	179.6	5.0
90°-150°	222.8	6.1
90°-180°	225.0	6.2
0°-180°	3625.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1432	1432	1432	1432	1432	
5°	1441	1427	1441	1421	1441	137
15°	1390	1392	1396	1356	1390	392
25°	1281	1258	1295	1183	1281	590
35°	1103	961	1124	895	1103	688
45°	849	687	877	648	849	652
55°	542	483	582	459	542	488
65°	281	325	310	301	281	282
75°	113	217	127	199	113	121
85°	20	156	28	143	20	25
90°	0	135	2	123	0	1
95°	1	115	0	107	1	1
105°	1	84	0	80	1	1
115°	1	64	0	59	1	1
125°	1	47	1	42	1	1
135°	1	33	1	27	1	1
145°	1	21	1	15	1	1
155°	1	12	1	6	1	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4
2.5°	1444.2	1442.6	1441.1	1438.7	1441.1	1447.4	1443.4	1434.8	1433.2	1419.0	1425.3
5°	1441.1	1438.7	1437.1	1434.8	1437.9	1445.8	1441.8	1434.0	1431.6	1418.2	1425.3
7.5°	1433.2	1431.6	1429.2	1429.2	1432.4	1440.3	1437.1	1428.4	1426.9	1413.5	1421.4
10°	1422.1	1421.4	1419.8	1419.8	1422.9	1432.4	1428.4	1420.6	1419.0	1406.4	1415.1
12.5°	1408.0	1408.8	1406.4	1406.4	1411.1	1420.6	1417.4	1408.8	1407.2	1396.1	1404.8
15°	1389.8	1390.6	1389.1	1389.8	1394.6	1405.6	1401.7	1393.8	1392.2	1383.5	1390.6
17.5°	1369.4	1370.1	1370.1	1369.4	1374.9	1385.9	1382.8	1375.7	1373.3	1366.2	1374.9
20°	1345.7	1345.7	1345.7	1345.7	1352.0	1363.1	1359.1	1353.6	1348.9	1343.4	1350.4
22.5°	1316.6	1315.8	1316.6	1318.9	1325.2	1333.9	1331.5	1325.2	1318.1	1315.0	1320.5
25°	1281.1	1283.5	1284.3	1286.6	1294.5	1301.6	1299.2	1292.9	1281.9	1279.5	1281.1
27.5°	1244.1	1245.7	1248.0	1247.2	1258.3	1265.4	1260.6	1255.1	1239.4	1237.0	1235.4
30°	1202.3	1204.7	1206.3	1205.5	1214.1	1222.0	1217.3	1210.2	1188.9	1187.4	1174.7
32.5°	1155.1	1157.4	1159.0	1159.0	1171.6	1174.7	1166.1	1155.8	1133.0	1127.5	1116.4
35°	1103.0	1105.4	1106.2	1106.2	1118.8	1118.0	1107.0	1092.8	1067.6	1060.5	1041.6
37.5°	1047.1	1048.7	1049.5	1054.2	1059.7	1055.0	1040.8	1022.7	1003.8	984.1	963.6
40°	984.1	986.4	988.0	991.2	996.7	991.2	970.7	948.6	928.1	906.1	885.6
42.5°	919.5	926.6	925.0	924.2	927.3	912.4	896.6	871.4	850.9	828.1	807.6
45°	849.3	848.6	852.5	854.1	853.3	840.7	818.6	795.8	775.3	751.6	734.3
47.5°	775.3	774.5	777.7	779.2	774.5	761.1	743.8	717.8	700.4	680.0	666.6
50°	697.3	697.3	702.0	697.3	694.9	681.5	667.3	641.3	628.0	609.8	602.0
52.5°	619.3	626.4	621.6	620.1	617.7	604.3	593.3	572.0	561.0	553.1	543.6
55°	542.1	549.9	546.8	544.4	543.6	532.6	522.4	506.6	499.5	494.0	488.5
57.5°	476.7	475.9	474.3	471.9	472.7	464.1	453.8	445.2	442.0	439.6	441.2
60°	401.0	407.3	405.0	405.8	406.6	405.0	396.3	390.8	391.6	392.4	394.7
62.5°	338.8	344.3	348.2	345.1	346.7	349.0	344.3	342.7	345.9	349.0	352.2
65°	281.3	286.8	290.7	289.9	294.7	299.4	298.6	300.2	307.3	311.2	315.2
67.5°	229.3	234.8	240.3	241.1	248.2	255.3	258.4	263.9	271.8	277.3	282.1
70°	184.4	189.1	195.4	199.3	208.8	218.2	223.8	234.8	239.5	247.4	250.5
72.5°	144.2	148.1	156.8	166.2	174.1	185.9	197.0	206.4	213.5	222.2	226.1
75°	112.7	114.2	123.7	134.7	145.8	159.2	171.0	181.2	190.7	199.3	205.6
77.5°	82.7	85.1	93.8	108.7	121.3	135.5	148.9	159.9	170.2	178.9	187.5
80°	57.5	62.2	71.7	86.7	100.9	116.6	129.2	141.8	152.9	161.5	170.2
82.5°	37.0	41.0	54.4	69.3	84.3	100.1	113.5	126.1	137.9	147.3	155.2
85°	20.5	26.0	39.4	55.2	70.1	85.9	100.1	112.7	124.5	133.2	141.0
87.5°	7.9	15.8	28.4	43.3	58.3	73.3	88.2	100.1	111.9	121.3	128.4
90°	0.0	9.5	21.3	36.2	51.2	66.2	80.4	93.0	104.0	112.7	120.5
92.5°	0.8	6.3	16.5	29.2	43.3	57.5	70.9	83.5	94.5	103.2	110.3
95°	0.8	4.7	13.4	25.2	37.8	51.2	63.8	75.6	85.9	94.5	101.6
97.5°	0.8	3.2	11.0	22.1	33.1	46.5	58.3	69.3	78.8	87.5	93.0
100°	0.8	3.2	9.5	18.9	29.9	41.8	52.8	63.8	72.5	79.6	85.9
102.5°	0.8	2.4	7.9	16.5	26.8	37.0	48.1	58.3	66.2	73.3	79.6
105°	0.8	2.4	7.1	14.2	23.6	33.9	43.3	52.8	61.5	67.8	73.3
107.5°	0.8	1.6	6.3	11.8	20.5	30.7	40.2	48.1	55.9	62.2	67.8
110°	0.8	1.6	5.5	11.0	18.1	27.6	36.2	44.1	51.2	57.5	62.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.8	1.6	4.7	10.2	16.5	24.4	33.1	40.2	47.3	52.8	57.5
115°	0.8	1.6	4.7	9.5	15.0	21.3	29.2	37.0	42.5	48.8	52.8
117.5°	0.8	1.6	3.9	7.9	14.2	19.7	26.8	33.1	39.4	44.9	48.8
120°	0.8	1.6	3.9	7.1	12.6	18.1	23.6	29.9	36.2	40.2	44.1
122.5°	0.8	1.6	3.2	7.1	11.0	16.5	21.3	26.8	32.3	37.0	41.0
125°	0.8	1.6	3.2	6.3	10.2	15.0	19.7	23.6	29.2	33.1	37.0
127.5°	0.8	1.6	3.2	5.5	9.5	13.4	18.1	22.1	26.0	29.9	33.1
130°	0.8	1.6	2.4	4.7	8.7	11.8	15.8	20.5	23.6	26.8	29.9
132.5°	0.8	1.6	2.4	4.7	7.1	10.2	14.2	18.1	21.3	24.4	26.8
135°	0.8	1.6	2.4	3.9	6.3	9.5	11.8	15.8	18.9	22.1	24.4
137.5°	0.8	1.6	2.4	3.9	5.5	7.9	10.2	13.4	16.5	18.9	22.1
140°	0.8	1.6	2.4	3.2	4.7	7.1	9.5	11.0	14.2	16.5	18.9
142.5°	0.8	1.6	2.4	3.2	4.7	6.3	7.9	9.5	11.8	14.2	16.5
145°	0.8	1.6	2.4	3.2	3.9	5.5	7.1	8.7	9.5	11.8	13.4
147.5°	0.8	1.6	2.4	3.2	3.2	4.7	6.3	7.1	8.7	9.5	11.0
150°	0.8	1.6	2.4	2.4	3.2	3.9	5.5	6.3	7.1	8.7	9.5
152.5°	0.8	1.6	2.4	2.4	3.2	3.9	4.7	5.5	6.3	7.1	7.9
155°	0.8	1.6	2.4	2.4	2.4	3.2	3.9	4.7	5.5	6.3	7.1
157.5°	1.6	1.6	1.6	2.4	2.4	3.2	3.2	3.9	4.7	4.7	5.5
160°	1.6	1.6	1.6	2.4	2.4	2.4	3.2	3.2	3.9	3.9	4.7
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4
2.5°	1423.7	1426.1	1433.2	1433.2	1431.6	1430.0	1430.0	1427.7	1429.2	1432.4	1430.8
5°	1423.7	1426.1	1433.2	1433.2	1431.6	1430.0	1429.2	1426.9	1429.2	1432.4	1430.8
7.5°	1419.0	1422.1	1429.2	1429.2	1427.7	1426.9	1425.3	1423.7	1426.1	1429.2	1427.7
10°	1412.7	1415.8	1422.9	1422.9	1421.4	1421.4	1419.0	1417.4	1420.6	1422.9	1422.1
12.5°	1403.2	1407.2	1413.5	1412.7	1411.1	1411.9	1409.5	1406.4	1409.5	1411.9	1412.7
15°	1389.8	1394.6	1400.9	1399.3	1396.9	1398.5	1394.6	1392.2	1394.6	1399.3	1398.5
17.5°	1372.5	1375.7	1380.4	1380.4	1378.0	1376.4	1374.9	1372.5	1374.1	1377.2	1378.0
20°	1348.1	1352.0	1354.4	1352.0	1351.2	1348.9	1345.7	1343.4	1346.5	1351.2	1352.0
22.5°	1315.8	1316.6	1322.1	1316.6	1312.6	1311.8	1308.7	1304.0	1308.7	1312.6	1313.4
25°	1275.6	1279.5	1277.2	1267.7	1267.7	1261.4	1259.8	1257.5	1258.3	1265.4	1268.5
27.5°	1224.4	1226.0	1219.7	1211.8	1204.7	1200.7	1195.2	1196.0	1196.0	1205.5	1208.6
30°	1168.4	1159.8	1154.3	1141.7	1136.1	1126.7	1125.1	1125.1	1123.5	1128.3	1142.4
32.5°	1101.5	1089.7	1081.0	1069.2	1059.7	1050.3	1045.5	1047.9	1047.1	1058.9	1063.7
35°	1028.2	1021.1	1003.0	988.0	982.5	968.3	968.3	961.2	966.0	979.4	984.9
37.5°	951.0	940.0	925.0	908.4	904.5	893.5	889.5	885.6	895.8	898.2	903.7
40°	872.2	862.0	847.8	832.0	832.0	818.6	818.6	818.6	819.4	824.1	834.4
42.5°	797.3	786.3	773.7	762.7	761.1	750.9	750.9	750.1	751.6	755.6	765.0
45°	724.9	716.2	702.8	697.3	698.1	687.0	689.4	687.0	690.2	694.1	697.3
47.5°	657.9	652.4	646.9	639.0	636.6	635.8	631.9	628.7	634.3	634.3	639.0
50°	595.6	592.5	589.3	584.6	585.4	582.3	577.5	577.5	581.5	582.3	585.4
52.5°	541.3	537.3	533.4	534.2	535.0	533.4	531.0	528.7	531.0	532.6	536.6
55°	486.9	483.8	487.7	486.1	487.7	486.1	484.6	483.0	486.9	484.6	488.5
57.5°	438.1	441.2	442.8	439.6	442.0	440.4	441.2	438.9	442.0	443.6	442.8
60°	393.2	397.9	395.5	396.3	399.5	397.9	394.7	397.1	400.2	401.0	400.2
62.5°	352.2	357.7	360.1	358.5	359.3	357.7	360.1	356.9	360.9	362.4	360.1
65°	315.2	321.5	323.0	323.0	323.0	321.5	323.8	324.6	326.2	326.2	324.6
67.5°	283.6	289.2	290.7	292.3	290.7	289.2	289.2	289.9	293.1	294.7	293.1
70°	255.3	260.8	261.6	261.6	262.4	263.9	260.8	262.4	264.7	265.5	264.7
72.5°	230.9	236.4	237.9	237.2	237.9	238.7	238.7	237.2	239.5	241.1	241.1
75°	211.2	214.3	215.9	215.9	216.7	217.5	217.5	216.7	218.2	219.0	219.8
77.5°	193.0	195.4	197.8	197.8	198.5	197.8	199.3	199.3	200.1	200.9	201.7
80°	174.9	178.1	179.6	180.4	182.0	182.8	182.8	182.8	183.6	184.4	184.4
82.5°	160.7	163.1	165.5	167.8	167.8	168.6	168.6	168.6	169.4	169.4	170.2
85°	146.5	149.7	152.1	153.6	154.4	155.2	155.2	156.0	156.0	156.0	156.8
87.5°	133.9	137.9	139.5	141.0	141.8	143.4	143.4	143.4	144.2	144.2	144.2
90°	125.3	129.2	130.8	132.4	133.2	133.9	133.9	134.7	134.7	135.5	135.5
92.5°	115.0	119.0	122.1	122.1	122.9	124.5	123.7	123.7	124.5	125.3	125.3
95°	107.2	110.3	112.7	113.5	114.2	114.2	114.2	115.0	114.2	115.0	115.0
97.5°	97.7	100.9	103.2	104.8	105.6	105.6	105.6	106.4	105.6	106.4	106.4
100°	89.8	93.0	95.3	96.1	97.7	97.7	97.7	97.7	97.7	97.7	98.5
102.5°	83.5	86.7	88.2	89.0	89.8	90.6	90.6	90.6	90.6	91.4	91.4
105°	77.2	80.4	81.9	82.7	83.5	84.3	84.3	84.3	85.1	85.1	84.3
107.5°	71.7	74.1	75.6	77.2	78.0	78.0	78.8	78.8	78.8	78.8	78.8
110°	66.2	68.5	70.9	72.5	72.5	73.3	73.3	74.1	74.1	73.3	74.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	60.7	63.8	65.4	67.0	67.8	68.5	68.5	68.5	68.5	68.5	68.5
115°	55.9	59.1	60.7	62.2	63.0	63.8	63.8	63.8	63.8	63.8	63.8
117.5°	52.0	55.2	56.7	57.5	58.3	59.1	59.9	59.9	59.9	59.9	59.9
120°	48.1	50.4	52.0	53.6	54.4	55.2	55.2	55.2	55.2	55.2	55.2
122.5°	44.1	46.5	48.1	49.6	50.4	51.2	51.2	51.2	51.2	51.2	51.2
125°	40.2	42.5	44.1	45.7	46.5	47.3	47.3	47.3	47.3	47.3	47.3
127.5°	36.2	38.6	41.0	41.8	42.5	43.3	43.3	43.3	44.1	43.3	43.3
130°	32.3	34.7	37.0	37.8	38.6	39.4	40.2	40.2	40.2	40.2	39.4
132.5°	29.2	31.5	33.1	33.9	35.5	35.5	36.2	36.2	36.2	36.2	35.5
135°	26.8	28.4	29.9	30.7	32.3	32.3	32.3	33.1	33.1	32.3	31.5
137.5°	23.6	25.2	26.8	27.6	28.4	29.2	29.2	29.9	29.2	29.2	29.2
140°	22.1	22.8	24.4	25.2	26.0	26.0	26.0	26.8	26.8	26.0	26.0
142.5°	18.9	20.5	22.1	22.8	23.6	23.6	23.6	23.6	23.6	23.6	23.6
145°	15.8	18.1	18.9	20.5	20.5	21.3	21.3	21.3	21.3	21.3	20.5
147.5°	13.4	15.0	17.3	18.1	18.1	18.9	18.9	18.9	18.9	18.9	18.1
150°	10.2	11.8	14.2	15.8	15.8	16.5	16.5	16.5	16.5	15.8	15.8
152.5°	8.7	10.2	11.0	12.6	13.4	13.4	13.4	14.2	13.4	13.4	13.4
155°	7.9	8.7	9.5	10.2	11.0	11.8	11.8	11.8	11.8	11.0	11.0
157.5°	6.3	7.1	7.9	8.7	9.5	10.2	10.2	10.2	10.2	10.2	9.5
160°	4.7	5.5	6.3	6.3	7.1	7.9	8.7	7.9	7.9	7.9	7.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4
2.5°	1429.2	1428.4	1430.8	1426.9	1415.1	1418.2	1416.6	1423.7	1425.3	1426.9	1434.0
5°	1429.2	1428.4	1430.0	1426.9	1414.3	1416.6	1415.1	1422.1	1423.7	1424.5	1431.6
7.5°	1426.1	1425.3	1427.7	1423.7	1410.3	1413.5	1411.1	1418.2	1419.0	1419.8	1426.1
10°	1419.8	1419.0	1420.6	1417.4	1404.0	1407.2	1404.0	1411.1	1411.1	1412.7	1417.4
12.5°	1410.3	1408.8	1411.9	1408.0	1393.0	1396.9	1395.4	1400.1	1400.9	1401.7	1406.4
15°	1396.9	1395.4	1397.7	1395.4	1382.0	1382.8	1380.4	1387.5	1388.3	1386.7	1391.4
17.5°	1377.2	1375.7	1380.4	1378.8	1365.4	1368.6	1367.8	1369.4	1371.7	1367.8	1374.1
20°	1352.8	1354.4	1356.0	1356.8	1346.5	1346.5	1345.7	1348.9	1351.2	1348.1	1352.8
22.5°	1316.6	1320.5	1325.2	1326.8	1319.7	1318.9	1323.7	1322.1	1324.4	1322.9	1326.0
25°	1270.9	1278.7	1283.5	1288.2	1284.3	1285.8	1292.9	1294.5	1294.5	1293.7	1296.9
27.5°	1214.1	1224.4	1233.1	1243.3	1239.4	1242.5	1254.3	1255.9	1259.1	1255.9	1262.2
30°	1146.4	1155.8	1172.4	1187.4	1188.9	1193.7	1210.2	1211.8	1220.4	1217.3	1219.7
32.5°	1078.6	1083.4	1102.3	1117.2	1126.7	1138.5	1156.6	1159.8	1171.6	1174.0	1174.0
35°	993.5	1006.9	1024.3	1045.5	1057.4	1070.0	1094.4	1099.1	1116.4	1122.0	1128.3
37.5°	921.8	934.4	945.5	967.5	988.8	1003.0	1022.7	1034.5	1052.6	1062.9	1070.7
40°	845.4	855.7	867.5	889.5	907.7	928.9	948.6	962.8	985.7	997.5	1007.7
42.5°	772.9	780.8	793.4	809.2	828.1	851.7	870.6	887.2	911.6	928.1	940.0
45°	708.3	713.0	724.1	735.9	752.4	776.9	795.0	816.3	836.0	853.3	867.5
47.5°	647.6	654.0	659.5	667.3	682.3	697.3	718.6	739.0	758.7	777.7	791.8
50°	591.7	591.7	600.4	605.9	616.1	629.5	646.1	660.3	684.7	698.1	716.2
52.5°	537.3	540.5	545.2	548.4	556.3	564.9	578.3	590.1	610.6	623.2	640.6
55°	489.3	492.4	494.8	496.4	501.1	511.3	516.1	525.5	539.7	549.9	564.9
57.5°	443.6	445.2	447.5	448.3	449.1	455.4	459.3	461.7	475.9	486.1	498.7
60°	401.8	401.8	404.2	403.4	402.6	405.8	405.0	407.3	416.0	422.3	427.8
62.5°	362.4	362.4	363.2	361.6	360.9	360.9	357.7	360.1	362.4	363.2	367.2
65°	326.2	330.1	327.0	327.8	323.0	321.5	319.9	315.2	314.4	311.2	312.8
67.5°	293.9	297.0	293.9	293.9	289.9	286.8	282.9	275.0	272.6	266.3	264.7
70°	267.9	265.5	267.1	264.7	260.0	256.1	250.5	244.2	236.4	228.5	223.0
72.5°	242.7	242.7	241.1	238.7	236.4	228.5	222.2	215.1	205.6	195.4	187.5
75°	218.2	219.0	219.0	216.7	212.7	205.6	198.5	188.3	178.1	166.2	156.0
77.5°	200.9	200.9	200.9	197.0	193.0	186.7	178.1	167.0	156.0	141.8	130.0
80°	184.4	183.6	183.6	178.9	174.9	167.8	159.2	148.1	136.3	121.3	107.9
82.5°	171.0	170.2	168.6	164.7	159.2	152.1	143.4	131.6	119.0	105.6	89.0
85°	156.8	156.0	154.4	150.5	145.0	138.7	129.2	117.4	104.8	89.8	74.1
87.5°	144.2	143.4	141.0	138.7	132.4	125.3	115.8	104.8	91.4	77.2	61.5
90°	135.5	133.9	132.4	129.2	123.7	115.8	106.4	94.5	81.2	67.0	51.2
92.5°	125.3	124.5	122.1	119.0	114.2	106.4	96.9	85.9	72.5	59.1	44.1
95°	115.0	114.2	112.7	109.5	104.8	97.7	89.0	78.0	65.4	52.0	38.6
97.5°	105.6	105.6	103.2	100.9	95.3	89.8	81.2	70.9	59.1	47.3	34.7
100°	97.7	97.7	95.3	92.2	88.2	82.7	74.1	64.6	53.6	42.5	29.9
102.5°	90.6	89.8	88.2	85.1	81.2	75.6	67.8	59.1	48.8	37.8	26.8
105°	84.3	83.5	81.9	78.8	75.6	69.3	63.0	54.4	44.1	33.9	23.6
107.5°	78.0	77.2	76.4	73.3	69.3	63.8	57.5	48.8	40.2	30.7	21.3
110°	72.5	71.7	70.1	67.0	63.0	58.3	52.0	44.9	36.2	27.6	18.9



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	67.8	67.0	65.4	62.2	59.1	53.6	48.1	40.2	33.1	25.2	16.5
115°	63.0	62.2	60.7	57.5	53.6	48.8	43.3	37.0	29.2	22.1	15.0
117.5°	58.3	57.5	55.9	53.6	49.6	44.9	39.4	33.1	26.0	20.5	13.4
120°	54.4	52.8	51.2	48.8	44.9	41.0	35.5	29.9	23.6	18.1	11.8
122.5°	50.4	48.8	47.3	44.9	41.0	37.0	31.5	26.8	22.1	16.5	11.0
125°	45.7	44.9	43.3	41.0	37.0	33.1	29.2	24.4	19.7	15.0	9.5
127.5°	41.8	41.0	39.4	36.2	33.1	29.9	26.0	22.1	17.3	12.6	8.7
130°	38.6	37.0	35.5	33.1	30.7	27.6	23.6	19.7	15.8	11.0	7.9
132.5°	34.7	33.1	31.5	29.9	27.6	24.4	21.3	17.3	14.2	10.2	7.1
135°	31.5	29.9	28.4	26.8	24.4	22.1	18.9	15.8	12.6	9.5	6.3
137.5°	27.6	26.8	26.0	24.4	22.1	19.7	17.3	13.4	11.0	8.7	5.5
140°	25.2	24.4	23.6	21.3	19.7	17.3	15.0	11.8	9.5	7.1	4.7
142.5°	22.8	22.1	20.5	18.9	17.3	15.8	12.6	11.0	8.7	6.3	4.7
145°	19.7	18.9	18.1	16.5	15.0	12.6	11.0	9.5	7.9	5.5	3.9
147.5°	18.1	17.3	15.8	14.2	12.6	11.0	10.2	8.7	6.3	4.7	3.2
150°	15.0	14.2	13.4	11.8	11.0	10.2	8.7	7.1	5.5	3.9	3.2
152.5°	12.6	11.8	11.0	11.0	9.5	8.7	7.1	6.3	4.7	3.9	2.4
155°	11.0	11.0	10.2	9.5	7.9	7.1	6.3	4.7	3.9	3.2	2.4
157.5°	9.5	8.7	7.9	7.9	7.1	6.3	4.7	3.9	3.2	3.2	2.4
160°	7.9	7.1	7.1	6.3	5.5	4.7	3.9	3.9	3.2	2.4	2.4
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4
2.5°	1434.8	1426.1	1434.0	1444.2	1444.2	1442.6	1441.1	1444.2	1452.1	1448.9	1439.5
5°	1432.4	1423.7	1430.8	1441.1	1441.1	1438.7	1437.1	1439.5	1448.1	1444.2	1435.5
7.5°	1427.7	1419.8	1424.5	1434.0	1434.0	1431.6	1430.0	1433.2	1440.3	1436.3	1426.9
10°	1419.0	1410.3	1415.8	1424.5	1423.7	1422.1	1419.8	1423.7	1430.0	1424.5	1413.5
12.5°	1408.0	1399.3	1404.0	1411.9	1411.1	1408.0	1406.4	1408.8	1414.3	1411.1	1399.3
15°	1393.0	1384.3	1388.3	1396.1	1393.8	1391.4	1388.3	1389.1	1396.1	1390.6	1378.0
17.5°	1374.9	1365.4	1368.6	1375.7	1373.3	1370.9	1367.0	1367.8	1375.7	1367.8	1354.4
20°	1352.8	1342.6	1344.9	1353.6	1349.7	1345.7	1341.8	1341.8	1349.7	1341.0	1326.0
22.5°	1329.2	1318.9	1320.5	1326.8	1323.7	1316.6	1312.6	1315.0	1318.9	1307.9	1292.1
25°	1300.0	1286.6	1289.0	1295.3	1292.9	1283.5	1279.5	1281.1	1279.5	1270.9	1254.3
27.5°	1266.1	1252.0	1253.5	1257.5	1254.3	1245.7	1240.9	1241.7	1238.6	1227.5	1208.6
30°	1223.6	1216.5	1215.7	1218.1	1213.4	1204.7	1199.2	1197.6	1196.8	1181.1	1158.2
32.5°	1180.3	1174.0	1170.0	1173.2	1167.7	1159.0	1149.5	1149.5	1141.7	1126.7	1107.0
35°	1136.1	1125.9	1122.0	1124.3	1118.0	1107.0	1099.1	1095.2	1083.4	1064.4	1043.2
37.5°	1079.4	1072.3	1067.6	1070.0	1062.9	1055.0	1040.0	1036.1	1023.5	997.5	970.7
40°	1018.0	1012.4	1007.7	1010.1	1002.2	990.4	977.0	970.7	956.5	927.3	906.1
42.5°	951.8	949.4	943.9	952.6	936.8	925.0	911.6	901.3	887.2	855.7	831.2
45°	881.7	887.2	874.6	876.9	866.7	856.4	842.3	827.3	813.1	783.2	755.6
47.5°	807.6	811.5	802.9	804.4	793.4	784.0	771.3	752.4	736.7	710.7	686.3
50°	731.2	729.6	729.6	728.0	719.3	707.5	694.9	677.6	661.8	638.2	617.7
52.5°	650.0	653.2	654.7	658.7	647.6	640.6	620.9	605.9	594.1	569.6	552.3
55°	572.0	583.0	579.9	581.5	568.9	563.3	547.6	535.8	518.4	504.3	493.2
57.5°	501.1	503.5	505.0	507.4	501.9	490.9	478.3	468.8	455.4	443.6	435.7
60°	432.6	432.6	433.3	437.3	431.8	422.3	412.9	405.8	396.3	389.2	384.5
62.5°	367.9	373.5	374.2	371.1	364.0	359.3	353.0	349.0	342.7	340.4	338.8
65°	308.1	308.1	308.1	309.6	305.7	302.6	298.6	297.8	300.2	297.0	298.6
67.5°	257.6	255.3	253.7	254.5	252.9	251.3	250.5	252.9	257.6	257.6	261.6
70°	214.3	209.6	206.4	206.4	206.4	207.2	209.6	214.3	222.2	225.3	230.9
72.5°	178.9	168.6	163.9	163.9	164.7	167.8	174.9	183.6	190.7	197.0	204.1
75°	145.0	134.7	127.6	126.9	128.4	133.2	143.4	151.3	163.1	171.8	180.4
77.5°	117.4	104.8	96.1	95.3	97.7	104.8	117.4	127.6	141.0	150.5	159.9
80°	93.8	79.6	72.5	67.8	71.7	80.4	94.5	107.2	119.8	132.4	144.2
82.5°	74.8	61.5	50.4	45.7	50.4	62.2	75.6	90.6	103.2	116.6	128.4
85°	59.1	44.9	32.3	27.6	33.1	45.7	60.7	75.6	89.8	103.2	115.0
87.5°	46.5	32.3	19.7	13.4	20.5	33.9	48.1	63.0	78.0	91.4	103.2
90°	36.2	22.8	11.0	1.6	11.8	24.4	38.6	52.8	67.8	81.2	93.0
92.5°	30.7	17.3	6.3	0.0	7.1	18.1	31.5	45.7	59.1	72.5	84.3
95°	26.0	14.2	4.7	0.0	4.7	14.2	26.0	38.6	52.0	65.4	77.2
97.5°	22.1	11.0	3.2	0.0	3.2	11.0	21.3	33.9	45.7	58.3	69.3
100°	18.9	9.5	2.4	0.0	2.4	8.7	18.1	29.2	41.0	52.8	63.0
102.5°	16.5	7.9	1.6	0.0	1.6	7.1	15.0	25.2	35.5	46.5	56.7
105°	14.2	6.3	1.6	0.0	0.8	5.5	12.6	22.1	31.5	41.8	51.2
107.5°	12.6	5.5	1.6	0.0	0.8	4.7	11.0	18.9	28.4	37.0	45.7
110°	11.0	4.7	1.6	0.0	0.8	3.2	9.5	16.5	24.4	33.1	41.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	9.5	3.9	0.8	0.0	0.0	2.4	7.9	14.2	21.3	29.9	37.0
115°	8.7	3.9	0.8	0.0	0.0	1.6	6.3	12.6	18.9	26.8	33.1
117.5°	7.9	3.2	0.8	0.0	0.8	1.6	5.5	11.0	16.5	22.8	29.9
120°	7.1	3.2	0.8	0.0	0.8	0.8	3.9	9.5	14.2	20.5	26.0
122.5°	6.3	3.2	0.8	0.0	0.8	0.8	3.2	7.9	12.6	18.1	22.8
125°	5.5	2.4	1.6	0.8	0.8	0.8	2.4	6.3	11.0	15.0	20.5
127.5°	5.5	2.4	1.6	0.8	0.8	0.8	1.6	5.5	8.7	13.4	18.1
130°	4.7	2.4	1.6	0.8	0.8	0.8	0.8	3.9	7.9	11.0	15.0
132.5°	3.9	2.4	1.6	0.8	0.8	0.8	0.8	2.4	5.5	9.5	12.6
135°	3.9	2.4	1.6	0.8	0.8	0.8	0.8	1.6	3.9	7.1	10.2
137.5°	3.2	1.6	1.6	0.8	0.8	0.8	0.8	0.8	3.2	5.5	7.9
140°	3.2	1.6	1.6	0.8	0.8	0.8	0.8	0.8	2.4	3.9	6.3
142.5°	2.4	1.6	1.6	0.8	0.8	0.8	0.8	0.8	1.6	3.2	4.7
145°	2.4	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8	1.6	3.2
147.5°	2.4	2.4	1.6	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4
150°	2.4	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6
152.5°	2.4	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6
155°	2.4	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6
157.5°	2.4	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6
160°	2.4	1.6	1.6	0.8	1.6	0.8	1.6	1.6	1.6	1.6	1.6
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4
2.5°	1436.3	1421.4	1429.2	1426.9	1430.0	1436.3	1435.5	1434.0	1434.0	1431.6	1428.4
5°	1431.6	1417.4	1424.5	1420.6	1424.5	1430.0	1429.2	1426.9	1428.4	1424.5	1420.6
7.5°	1422.1	1409.5	1415.8	1412.7	1415.8	1421.4	1419.0	1418.2	1419.8	1413.5	1411.1
10°	1411.1	1396.9	1404.0	1400.1	1404.0	1408.0	1406.4	1403.2	1406.4	1400.1	1397.7
12.5°	1393.8	1382.0	1386.7	1385.1	1387.5	1391.4	1388.3	1385.9	1387.5	1382.0	1377.2
15°	1374.9	1363.1	1367.0	1364.6	1366.2	1370.9	1365.4	1364.6	1363.1	1357.5	1356.0
17.5°	1350.4	1339.4	1343.4	1339.4	1341.8	1340.2	1339.4	1335.5	1335.5	1329.2	1324.4
20°	1320.5	1311.1	1308.7	1305.5	1308.7	1305.5	1300.8	1297.7	1296.9	1290.6	1286.6
22.5°	1285.8	1274.8	1276.4	1267.7	1268.5	1263.8	1255.9	1252.7	1249.6	1242.5	1237.0
25°	1244.1	1233.1	1225.2	1219.7	1212.6	1211.8	1201.5	1193.7	1192.9	1184.2	1183.4
27.5°	1196.8	1184.2	1177.9	1164.5	1155.8	1148.7	1140.1	1132.2	1128.3	1118.8	1112.5
30°	1142.4	1128.3	1112.5	1103.0	1089.7	1084.1	1069.2	1059.7	1056.6	1046.3	1041.6
32.5°	1081.0	1066.0	1053.4	1035.3	1020.3	1012.4	997.5	988.0	984.1	973.0	966.7
35°	1014.0	997.5	982.5	965.2	953.4	940.0	921.8	912.4	903.7	899.8	895.0
37.5°	943.9	925.8	908.4	891.1	880.9	865.1	849.3	843.0	832.8	828.9	824.1
40°	871.4	853.3	836.7	820.2	808.4	794.2	780.0	777.7	766.6	762.7	759.5
42.5°	799.7	780.8	761.9	750.1	741.4	727.2	717.8	715.4	706.0	703.6	703.6
45°	735.1	711.5	695.7	685.5	678.4	666.6	658.7	657.1	649.2	647.6	647.6
47.5°	665.8	643.7	631.9	625.6	619.3	610.6	605.9	605.9	598.0	596.4	595.6
50°	601.2	580.7	572.0	565.7	564.9	558.6	554.7	553.1	553.1	547.6	548.4
52.5°	539.7	529.5	522.4	518.4	513.7	509.8	506.6	506.6	504.3	500.3	501.9
55°	483.0	471.2	471.9	468.8	466.4	464.1	464.9	460.1	459.3	456.2	458.6
57.5°	426.2	426.2	424.7	422.3	418.4	419.9	419.9	419.9	416.0	413.6	416.0
60°	378.2	380.6	376.6	379.0	377.4	378.2	376.6	376.6	374.2	373.5	374.2
62.5°	335.6	339.6	338.0	341.2	339.6	340.4	341.9	338.8	337.2	335.6	337.2
65°	297.8	302.6	301.8	304.1	304.9	305.7	306.5	304.9	303.3	301.8	301.0
67.5°	264.7	269.5	272.6	273.4	274.2	276.6	275.8	274.2	272.6	270.2	269.5
70°	234.8	241.1	245.0	246.6	249.8	248.2	248.2	247.4	245.8	243.5	242.7
72.5°	209.6	216.7	220.6	222.2	225.3	225.3	224.5	223.8	222.2	219.8	219.0
75°	187.5	193.8	199.3	202.5	204.9	204.9	204.1	203.3	201.7	200.1	199.3
77.5°	170.2	175.7	180.4	184.4	185.9	186.7	185.9	184.4	184.4	183.6	182.8
80°	152.9	159.2	163.9	167.8	170.2	170.2	169.4	170.2	168.6	167.8	167.0
82.5°	137.9	145.0	150.5	154.4	156.0	156.8	156.0	156.8	155.2	155.2	155.2
85°	124.5	131.6	137.9	141.0	143.4	144.2	144.2	144.2	143.4	143.4	143.4
87.5°	113.5	120.5	126.9	130.0	132.4	133.2	133.2	133.9	132.4	132.4	132.4
90°	103.2	110.3	116.6	119.8	122.1	123.7	123.7	124.5	123.7	122.9	122.9
92.5°	93.8	101.6	107.9	111.1	113.5	115.8	115.8	116.6	115.0	115.0	115.0
95°	85.9	93.8	99.3	103.2	105.6	107.2	107.9	107.9	107.2	107.2	107.2
97.5°	78.8	85.9	91.4	95.3	97.7	98.5	99.3	100.1	99.3	99.3	99.3
100°	71.7	78.8	84.3	87.5	90.6	91.4	92.2	93.0	93.0	92.2	92.2
102.5°	65.4	72.5	77.2	81.2	83.5	85.1	85.9	85.9	85.9	85.9	85.9
105°	59.1	66.2	70.9	74.8	77.2	78.8	79.6	80.4	80.4	79.6	79.6
107.5°	53.6	59.9	65.4	68.5	71.7	73.3	74.1	74.1	74.8	74.1	74.1
110°	48.1	55.2	59.9	63.0	66.2	67.8	68.5	69.3	69.3	69.3	69.3



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	44.1	49.6	54.4	57.5	60.7	62.2	63.0	63.8	64.6	63.8	63.8
115°	39.4	44.9	49.6	52.8	55.2	56.7	58.3	59.1	59.1	59.9	59.1
117.5°	35.5	40.2	44.9	48.1	50.4	52.8	53.6	54.4	55.2	54.4	54.4
120°	31.5	36.2	40.2	43.3	45.7	48.1	48.8	49.6	50.4	49.6	49.6
122.5°	28.4	32.3	36.2	39.4	41.8	43.3	44.9	44.9	45.7	45.7	45.7
125°	25.2	29.2	32.3	35.5	37.8	39.4	40.2	41.0	41.0	41.8	41.8
127.5°	22.1	25.2	29.2	31.5	33.9	35.5	36.2	37.0	37.0	37.8	37.8
130°	18.9	22.1	25.2	27.6	29.9	31.5	32.3	33.1	33.9	33.9	33.9
132.5°	16.5	19.7	22.1	24.4	26.0	27.6	29.2	29.9	29.9	29.9	29.9
135°	13.4	16.5	18.9	21.3	22.8	24.4	25.2	26.8	26.8	26.8	26.8
137.5°	11.0	14.2	16.5	18.1	19.7	21.3	22.1	22.8	23.6	23.6	23.6
140°	8.7	11.0	13.4	15.8	17.3	18.1	19.7	19.7	20.5	20.5	20.5
142.5°	6.3	8.7	10.2	12.6	14.2	15.8	16.5	17.3	17.3	17.3	17.3
145°	4.7	6.3	7.9	9.5	11.8	12.6	13.4	14.2	15.0	15.0	15.0
147.5°	3.2	4.7	5.5	7.1	8.7	10.2	11.0	11.8	12.6	12.6	12.6
150°	2.4	3.2	4.7	5.5	6.3	7.9	9.5	9.5	10.2	10.2	9.5
152.5°	1.6	2.4	3.2	3.9	4.7	5.5	7.1	7.1	7.9	7.9	7.9
155°	1.6	1.6	1.6	2.4	3.2	3.9	4.7	5.5	5.5	5.5	5.5
157.5°	1.6	1.6	1.6	1.6	1.6	2.4	3.2	3.9	3.9	3.9	3.9
160°	1.6	1.6	0.8	0.8	1.6	1.6	1.6	1.6	2.4	2.4	2.4
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4
2.5°	1430.8	1432.4	1432.4	1430.8	1430.0	1433.2	1429.2	1414.3	1419.0	1420.6	1425.3
5°	1423.7	1425.3	1425.3	1425.3	1423.7	1426.9	1422.9	1408.0	1413.5	1415.8	1419.0
7.5°	1413.5	1414.3	1415.8	1415.1	1413.5	1418.2	1414.3	1399.3	1403.2	1407.2	1411.1
10°	1400.1	1400.1	1400.9	1402.4	1400.9	1404.8	1400.9	1387.5	1391.4	1393.8	1398.5
12.5°	1382.0	1383.5	1384.3	1383.5	1382.8	1385.9	1384.3	1371.7	1373.3	1378.0	1382.8
15°	1357.5	1357.5	1361.5	1359.9	1359.9	1363.1	1364.6	1350.4	1352.8	1359.9	1364.6
17.5°	1327.6	1328.4	1331.5	1333.1	1332.3	1337.8	1338.6	1327.6	1326.8	1335.5	1340.2
20°	1289.0	1290.6	1294.5	1297.7	1297.7	1304.0	1306.3	1299.2	1300.0	1309.5	1311.1
22.5°	1241.7	1241.7	1248.8	1253.5	1257.5	1261.4	1268.5	1262.2	1262.2	1274.8	1281.9
25°	1183.4	1188.9	1191.3	1200.7	1206.3	1217.3	1223.6	1224.4	1225.2	1237.0	1241.7
27.5°	1118.8	1120.4	1127.5	1138.5	1144.8	1155.1	1166.9	1169.2	1173.2	1188.9	1196.0
30°	1045.5	1050.3	1053.4	1069.2	1077.8	1091.2	1106.2	1111.7	1114.9	1136.1	1144.8
32.5°	970.7	972.3	985.7	994.3	1004.6	1018.7	1036.1	1046.3	1052.6	1074.7	1087.3
35°	895.8	899.0	910.0	921.0	931.3	945.5	963.6	977.8	988.8	1008.5	1025.0
37.5°	827.3	835.2	837.5	848.6	856.4	870.6	883.2	903.7	914.7	935.2	956.5
40°	765.8	768.2	769.8	780.8	786.3	799.7	817.8	831.2	846.2	861.2	886.4
42.5°	705.2	706.7	709.1	715.4	721.7	731.2	744.6	758.0	773.7	795.8	812.3
45°	649.2	650.8	652.4	656.3	661.8	670.5	679.2	688.6	704.4	723.3	740.6
47.5°	597.2	600.4	600.4	601.2	605.1	612.2	618.5	630.3	639.0	649.2	668.9
50°	547.6	549.9	550.7	550.7	553.1	557.8	559.4	567.3	575.2	584.6	598.8
52.5°	501.1	501.1	500.3	503.5	503.5	506.6	507.4	512.1	517.6	527.9	534.2
55°	457.0	457.0	459.3	457.8	457.8	459.3	458.6	459.3	464.1	470.4	475.9
57.5°	414.4	413.6	416.0	414.4	413.6	415.2	416.8	413.6	414.4	420.7	420.7
60°	371.9	372.7	375.0	373.5	373.5	373.5	371.9	370.3	368.7	372.7	374.2
62.5°	338.0	335.6	338.0	335.6	337.2	336.4	334.9	331.7	332.5	330.9	329.3
65°	302.6	302.6	303.3	301.0	302.6	302.6	300.2	299.4	294.7	293.1	289.2
67.5°	271.8	271.8	272.6	271.0	271.0	271.8	269.5	267.1	262.4	260.0	254.5
70°	245.0	245.0	245.0	244.2	244.2	244.2	242.7	239.5	234.8	230.9	223.8
72.5°	220.6	221.4	220.6	220.6	223.0	220.6	218.2	215.1	211.2	203.3	197.0
75°	200.9	201.7	200.9	200.9	200.9	200.1	199.3	194.6	189.9	183.6	174.1
77.5°	183.6	183.6	184.4	183.6	183.6	182.8	180.4	176.5	171.0	165.5	154.4
80°	167.0	167.8	168.6	169.4	167.8	167.0	164.7	161.5	154.4	148.1	137.1
82.5°	155.2	154.4	155.2	156.0	154.4	153.6	151.3	147.3	141.8	133.2	122.1
85°	143.4	142.6	142.6	143.4	142.6	141.0	138.7	134.7	129.2	120.5	109.5
87.5°	131.6	132.4	133.2	132.4	131.6	130.0	127.6	123.7	117.4	110.3	98.5
90°	122.9	122.9	122.9	122.9	122.1	120.5	118.2	113.5	107.9	99.3	89.0
92.5°	115.0	115.0	115.0	115.0	114.2	111.9	109.5	105.6	99.3	90.6	81.2
95°	107.2	107.9	107.2	107.2	105.6	104.8	100.9	96.9	91.4	82.7	72.5
97.5°	98.5	99.3	98.5	98.5	97.7	96.1	93.8	89.0	83.5	75.6	66.2
100°	92.2	92.2	91.4	91.4	90.6	89.0	85.9	81.9	76.4	68.5	59.1
102.5°	85.1	85.9	85.1	85.1	83.5	81.9	79.6	75.6	70.1	62.2	53.6
105°	79.6	79.6	78.8	78.8	77.2	75.6	73.3	68.5	63.8	56.7	48.1
107.5°	74.1	74.1	73.3	73.3	71.7	70.1	67.0	63.0	58.3	51.2	43.3
110°	68.5	68.5	68.5	67.8	66.2	63.8	61.5	57.5	52.8	46.5	38.6



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	64.6	63.8	63.0	62.2	60.7	59.1	55.9	52.0	47.3	41.8	34.7
115°	59.1	59.1	58.3	57.5	55.9	53.6	51.2	48.1	43.3	37.0	30.7
117.5°	54.4	54.4	53.6	52.8	51.2	48.8	46.5	43.3	38.6	33.1	27.6
120°	49.6	49.6	48.8	48.1	46.5	44.1	42.5	38.6	34.7	29.2	24.4
122.5°	45.7	44.9	44.9	43.3	42.5	40.2	37.8	34.7	30.7	26.0	21.3
125°	41.0	41.0	40.2	39.4	38.6	36.2	33.9	30.7	26.8	22.8	18.9
127.5°	37.0	37.0	36.2	35.5	34.7	32.3	29.9	27.6	23.6	19.7	15.8
130°	33.1	33.1	32.3	31.5	30.7	28.4	26.8	23.6	20.5	17.3	13.4
132.5°	29.9	29.9	29.2	28.4	26.8	25.2	23.6	20.5	18.1	15.0	11.8
135°	26.8	26.0	26.0	25.2	23.6	22.1	20.5	18.1	15.0	12.6	9.5
137.5°	23.6	22.8	22.1	21.3	20.5	18.9	17.3	15.8	13.4	10.2	7.9
140°	20.5	19.7	19.7	18.9	17.3	16.5	15.0	12.6	11.0	8.7	6.3
142.5°	17.3	17.3	16.5	15.8	15.0	14.2	12.6	11.0	8.7	7.1	4.7
145°	15.0	14.2	14.2	13.4	12.6	11.0	10.2	8.7	7.1	5.5	3.9
147.5°	11.8	11.8	11.8	11.0	10.2	9.5	8.7	7.1	5.5	3.9	2.4
150°	9.5	9.5	9.5	8.7	7.9	7.1	6.3	5.5	3.9	2.4	1.6
152.5°	7.9	7.9	7.1	7.1	6.3	5.5	4.7	3.9	2.4	1.6	1.6
155°	5.5	5.5	5.5	4.7	4.7	3.9	3.2	2.4	1.6	1.6	1.6
157.5°	3.9	3.9	3.9	3.2	3.2	2.4	2.4	1.6	1.6	1.6	1.6
160°	2.4	2.4	2.4	2.4	1.6	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4	1432.4
2.5°	1422.9	1422.1	1428.4	1428.4	1421.4	1432.4	1444.2
5°	1418.2	1417.4	1423.7	1423.7	1417.4	1428.4	1441.1
7.5°	1408.8	1409.5	1415.8	1417.4	1409.5	1419.8	1433.2
10°	1398.5	1397.7	1404.8	1406.4	1400.1	1409.5	1422.1
12.5°	1382.0	1382.0	1389.1	1391.4	1385.1	1396.1	1408.0
15°	1364.6	1364.6	1369.4	1373.3	1367.8	1378.0	1389.8
17.5°	1342.6	1341.8	1346.5	1351.2	1345.7	1356.8	1369.4
20°	1314.2	1314.2	1319.7	1325.2	1321.3	1331.5	1345.7
22.5°	1284.3	1281.1	1290.6	1294.5	1292.1	1302.4	1316.6
25°	1246.4	1245.7	1255.1	1260.6	1257.5	1268.5	1281.1
27.5°	1205.5	1204.7	1214.1	1221.2	1219.7	1229.9	1244.1
30°	1155.8	1159.8	1168.4	1180.3	1176.3	1187.4	1202.3
32.5°	1103.8	1107.8	1118.0	1130.6	1131.4	1140.1	1155.1
35°	1041.6	1051.8	1058.9	1075.5	1078.6	1087.3	1103.0
37.5°	976.2	988.0	1003.0	1015.6	1021.9	1029.0	1047.1
40°	902.9	920.3	936.8	951.8	959.7	966.7	984.1
42.5°	836.7	850.1	865.9	880.9	895.0	901.3	919.5
45°	761.9	777.7	791.8	810.0	824.1	831.2	849.3
47.5°	688.6	704.4	723.3	735.9	750.9	758.0	775.3
50°	618.5	632.7	648.4	663.4	676.0	682.3	697.3
52.5°	549.2	564.1	579.1	588.6	602.0	606.7	619.3
55°	487.7	497.9	511.3	516.9	530.3	533.4	542.1
57.5°	428.6	435.7	440.4	449.9	459.3	466.4	476.7
60°	375.0	378.2	381.3	386.9	394.7	397.1	401.0
62.5°	327.0	326.2	332.5	334.1	334.9	342.7	338.8
65°	284.4	285.2	279.7	277.3	280.5	282.9	281.3
67.5°	249.0	244.2	239.5	234.0	229.3	231.6	229.3
70°	214.3	210.4	202.5	194.6	191.5	186.7	184.4
72.5°	186.7	177.3	169.4	159.2	153.6	148.1	144.2
75°	165.5	152.1	141.0	130.0	122.1	114.2	112.7
77.5°	143.4	130.8	118.2	106.4	94.5	85.9	82.7
80°	126.1	114.2	99.3	85.1	72.5	61.5	57.5
82.5°	110.3	97.7	82.7	67.8	53.6	41.8	37.0
85°	96.9	83.5	68.5	53.6	39.4	26.8	20.5
87.5°	86.7	71.7	56.7	42.5	27.6	15.0	7.9
90°	77.2	63.0	48.8	33.9	19.7	7.9	0.0
92.5°	68.5	55.2	41.0	27.6	15.0	4.7	0.8
95°	60.7	48.8	34.7	22.1	11.0	3.2	0.8
97.5°	54.4	42.5	29.9	18.1	8.7	2.4	0.8
100°	48.8	37.0	26.0	15.0	7.1	1.6	0.8
102.5°	43.3	33.1	22.1	12.6	5.5	0.8	0.8
105°	38.6	29.2	18.9	11.0	4.7	0.8	0.8
107.5°	34.7	26.0	16.5	9.5	3.2	0.8	0.8
110°	30.7	22.1	14.2	7.9	2.4	0.8	0.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	27.6	19.7	12.6	6.3	1.6	0.8	0.8
115°	24.4	17.3	11.0	5.5	1.6	0.8	0.8
117.5°	21.3	15.0	9.5	3.9	0.8	0.8	0.8
120°	18.9	13.4	7.9	3.2	0.8	0.8	0.8
122.5°	16.5	11.0	6.3	2.4	0.8	0.8	0.8
125°	14.2	9.5	5.5	1.6	0.8	0.8	0.8
127.5°	11.8	7.9	3.9	1.6	0.8	0.8	0.8
130°	10.2	6.3	3.2	0.8	0.8	0.8	0.8
132.5°	8.7	4.7	2.4	0.8	0.8	0.8	0.8
135°	7.1	3.9	1.6	0.8	0.8	0.8	0.8
137.5°	5.5	3.2	1.6	0.8	0.8	0.8	0.8
140°	3.9	2.4	0.8	0.8	0.8	0.8	0.8
142.5°	3.2	1.6	0.8	0.8	0.8	0.8	0.8
145°	2.4	1.6	0.8	0.8	0.8	0.8	0.8
147.5°	1.6	1.6	1.6	1.6	0.8	0.8	0.8
150°	1.6	1.6	0.8	0.8	1.6	0.8	0.8
152.5°	1.6	0.8	0.8	0.8	1.6	0.8	0.8
155°	1.6	1.6	1.6	1.6	1.6	1.6	0.8
157.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6
160°	1.6	1.6	1.6	1.6	1.6	1.6	1.6
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)