

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1213097

Luminaire Tested: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213097
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33519)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

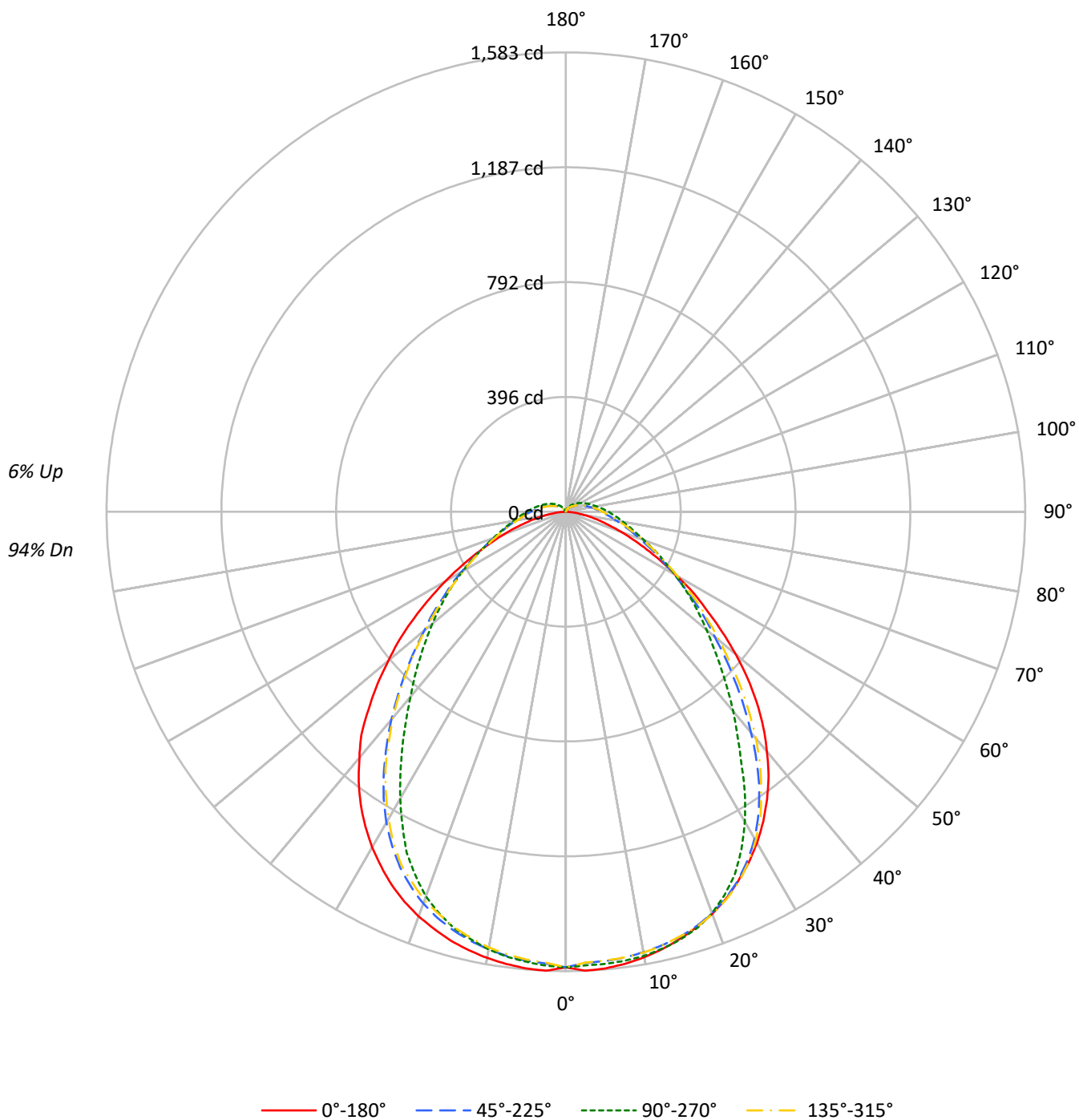
Lumens per Lamp: N/A
Luminaire Lumens: 3973.0 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 37
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	12686	12686	12686	12686
5°	12777	12283	12777	12228
10°	12720	11956	12741	11790
15°	12638	11599	12695	11297
20°	12541	11139	12614	10669
25°	12340	10458	12476	9842
30°	12078	9457	12236	8755
35°	11671	8230	11896	7663
40°	11086	7198	11379	6678
45°	10316	6257	10651	5898
50°	9262	5498	9671	5220
55°	8013	4855	8595	4610
60°	6738	4262	7349	4018
65°	5525	3769	6082	3495
70°	4398	3345	4922	3094
75°	3453	3089	3887	2841
80°	2490	2979	2937	2723
85°	1537	2997	2063	2755

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 10651 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.8	3.7
10°-20°	426.8	10.7
20°-30°	632.5	15.9
30°-40°	702.7	17.7
40°-50°	637.0	16.0
50°-60°	493.6	12.4
60°-70°	335.2	8.4
70°-80°	213.2	5.4
80°-90°	136.3	3.4
90°-100°	91.9	2.3
100°-110°	63.0	1.6
110°-120°	42.0	1.1
120°-130°	26.1	0.7
130°-140°	14.5	0.4
140°-150°	6.8	0.2
150°-160°	2.5	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1208.1	30.4
0°-40°	1910.8	48.1
0°-60°	3041.4	76.6
0°-90°	3726.1	93.8
90°-120°	196.9	5.0
90°-150°	244.2	6.1
90°-180°	247.0	6.2
0°-180°	3973.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1570	1570	1570	1570	1570	
5°	1579	1564	1579	1557	1579	150
15°	1523	1526	1530	1486	1523	430
25°	1404	1378	1420	1297	1404	647
35°	1209	1054	1232	981	1209	754
45°	931	753	961	710	931	715
55°	594	529	637	503	594	535
65°	308	356	339	330	308	309
75°	124	238	139	218	124	133
85°	22	171	30	157	22	27
90°	0	148	2	135	0	1
95°	1	126	0	117	1	1
105°	1	92	0	87	1	1
115°	1	70	0	65	1	1
125°	1	52	1	46	1	1
135°	1	36	1	29	1	1
145°	1	23	1	16	1	1
155°	1	13	1	6	1	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9
2.5°	1582.9	1581.1	1579.4	1576.8	1579.4	1586.3	1582.0	1572.5	1570.8	1555.2	1562.1
5°	1579.4	1576.8	1575.1	1572.5	1575.9	1584.6	1580.3	1571.6	1569.0	1554.4	1562.1
7.5°	1570.8	1569.0	1566.4	1566.4	1569.9	1578.5	1575.1	1565.6	1563.9	1549.2	1557.8
10°	1558.7	1557.8	1556.1	1556.1	1559.5	1569.9	1565.6	1556.9	1555.2	1541.4	1550.9
12.5°	1543.1	1544.0	1541.4	1541.4	1546.6	1556.9	1553.5	1544.0	1542.3	1530.2	1539.7
15°	1523.3	1524.1	1522.4	1523.3	1528.4	1540.5	1536.2	1527.6	1525.9	1516.4	1524.1
17.5°	1500.8	1501.7	1501.7	1500.8	1506.9	1519.0	1515.5	1507.7	1505.1	1497.4	1506.9
20°	1474.9	1474.9	1474.9	1474.9	1481.8	1493.9	1489.6	1483.5	1478.4	1472.3	1480.1
22.5°	1443.0	1442.1	1443.0	1445.6	1452.5	1462.0	1459.4	1452.5	1444.7	1441.2	1447.3
25°	1404.1	1406.7	1407.6	1410.1	1418.8	1426.6	1424.0	1417.1	1405.0	1402.4	1404.1
27.5°	1363.5	1365.2	1367.8	1367.0	1379.1	1386.8	1381.6	1375.6	1358.3	1355.7	1354.0
30°	1317.7	1320.3	1322.1	1321.2	1330.7	1339.3	1334.2	1326.4	1303.1	1301.3	1287.5
32.5°	1265.9	1268.5	1270.3	1270.3	1284.1	1287.5	1278.0	1266.8	1241.8	1235.7	1223.6
35°	1208.9	1211.5	1212.4	1212.4	1226.2	1225.3	1213.3	1197.7	1170.1	1162.3	1141.6
37.5°	1147.6	1149.4	1150.2	1155.4	1161.4	1156.3	1140.7	1120.9	1100.1	1078.5	1056.1
40°	1078.5	1081.1	1082.9	1086.3	1092.4	1086.3	1063.9	1039.7	1017.2	993.1	970.6
42.5°	1007.7	1015.5	1013.8	1012.9	1016.4	1000.0	982.7	955.1	932.6	907.6	885.1
45°	930.9	930.0	934.3	936.1	935.2	921.4	897.2	872.2	849.7	823.8	804.8
47.5°	849.7	848.9	852.3	854.0	848.9	834.2	815.2	786.7	767.7	745.2	730.5
50°	764.2	764.2	769.4	764.2	761.6	747.0	731.4	702.9	688.2	668.4	659.7
52.5°	678.7	686.5	681.3	679.6	677.0	662.3	650.2	626.9	614.8	606.2	595.8
55°	594.1	602.7	599.3	596.7	595.8	583.7	572.5	555.3	547.5	541.4	535.4
57.5°	522.4	521.6	519.8	517.3	518.1	508.6	497.4	487.9	484.4	481.9	483.6
60°	439.5	446.4	443.9	444.7	445.6	443.9	434.4	428.3	429.2	430.0	432.6
62.5°	371.3	377.4	381.7	378.2	380.0	382.5	377.4	375.6	379.1	382.5	386.0
65°	308.3	314.3	318.6	317.8	323.0	328.1	327.3	329.0	336.8	341.1	345.4
67.5°	251.3	257.3	263.4	264.2	272.0	279.8	283.2	289.3	297.9	304.0	309.1
70°	202.1	207.2	214.2	218.5	228.8	239.2	245.2	257.3	262.5	271.1	274.6
72.5°	158.0	162.3	171.8	182.2	190.8	203.8	215.9	226.2	234.0	243.5	247.8
75°	123.5	125.2	135.6	147.7	159.8	174.4	187.4	198.6	209.0	218.5	225.4
77.5°	90.7	93.3	102.8	119.2	133.0	148.5	163.2	175.3	186.5	196.0	205.5
80°	63.0	68.2	78.6	95.0	110.5	127.8	141.6	155.4	167.5	177.0	186.5
82.5°	40.6	44.9	59.6	76.0	92.4	109.7	124.3	138.2	151.1	161.5	170.1
85°	22.5	28.5	43.2	60.4	76.9	94.1	109.7	123.5	136.4	145.9	154.6
87.5°	8.6	17.3	31.1	47.5	63.9	80.3	96.7	109.7	122.6	133.0	140.8
90°	0.0	10.4	23.3	39.7	56.1	72.5	88.1	101.9	114.0	123.5	132.1
92.5°	0.9	6.9	18.1	32.0	47.5	63.0	77.7	91.5	103.6	113.1	120.9
95°	0.9	5.2	14.7	27.6	41.4	56.1	69.9	82.9	94.1	103.6	111.4
97.5°	0.9	3.5	12.1	24.2	36.3	50.9	63.9	76.0	86.4	95.9	101.9
100°	0.9	3.5	10.4	20.7	32.8	45.8	57.9	69.9	79.4	87.2	94.1
102.5°	0.9	2.6	8.6	18.1	29.4	40.6	52.7	63.9	72.5	80.3	87.2
105°	0.9	2.6	7.8	15.5	25.9	37.1	47.5	57.9	67.4	74.3	80.3
107.5°	0.9	1.7	6.9	13.0	22.5	33.7	44.0	52.7	61.3	68.2	74.3
110°	0.9	1.7	6.0	12.1	19.9	30.2	39.7	48.4	56.1	63.0	68.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.9	1.7	5.2	11.2	18.1	26.8	36.3	44.0	51.8	57.9	63.0
115°	0.9	1.7	5.2	10.4	16.4	23.3	32.0	40.6	46.6	53.5	57.9
117.5°	0.9	1.7	4.3	8.6	15.5	21.6	29.4	36.3	43.2	49.2	53.5
120°	0.9	1.7	4.3	7.8	13.8	19.9	25.9	32.8	39.7	44.0	48.4
122.5°	0.9	1.7	3.5	7.8	12.1	18.1	23.3	29.4	35.4	40.6	44.9
125°	0.9	1.7	3.5	6.9	11.2	16.4	21.6	25.9	32.0	36.3	40.6
127.5°	0.9	1.7	3.5	6.0	10.4	14.7	19.9	24.2	28.5	32.8	36.3
130°	0.9	1.7	2.6	5.2	9.5	13.0	17.3	22.5	25.9	29.4	32.8
132.5°	0.9	1.7	2.6	5.2	7.8	11.2	15.5	19.9	23.3	26.8	29.4
135°	0.9	1.7	2.6	4.3	6.9	10.4	13.0	17.3	20.7	24.2	26.8
137.5°	0.9	1.7	2.6	4.3	6.0	8.6	11.2	14.7	18.1	20.7	24.2
140°	0.9	1.7	2.6	3.5	5.2	7.8	10.4	12.1	15.5	18.1	20.7
142.5°	0.9	1.7	2.6	3.5	5.2	6.9	8.6	10.4	13.0	15.5	18.1
145°	0.9	1.7	2.6	3.5	4.3	6.0	7.8	9.5	10.4	13.0	14.7
147.5°	0.9	1.7	2.6	3.5	3.5	5.2	6.9	7.8	9.5	10.4	12.1
150°	0.9	1.7	2.6	2.6	3.5	4.3	6.0	6.9	7.8	9.5	10.4
152.5°	0.9	1.7	2.6	2.6	3.5	4.3	5.2	6.0	6.9	7.8	8.6
155°	0.9	1.7	2.6	2.6	2.6	3.5	4.3	5.2	6.0	6.9	7.8
157.5°	1.7	1.7	1.7	2.6	2.6	3.5	3.5	4.3	5.2	5.2	6.0
160°	1.7	1.7	1.7	2.6	2.6	2.6	3.5	3.5	4.3	4.3	5.2
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°	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9
2.5°	1560.4	1563.0	1570.8	1570.8	1569.0	1567.3	1567.3	1564.7	1566.4	1569.9	1568.2
5°	1560.4	1563.0	1570.8	1570.8	1569.0	1567.3	1566.4	1563.9	1566.4	1569.9	1568.2
7.5°	1555.2	1558.7	1566.4	1566.4	1564.7	1563.9	1562.1	1560.4	1563.0	1566.4	1564.7
10°	1548.3	1551.8	1559.5	1559.5	1557.8	1557.8	1555.2	1553.5	1556.9	1559.5	1558.7
12.5°	1537.9	1542.3	1549.2	1548.3	1546.6	1547.4	1544.9	1541.4	1544.9	1547.4	1548.3
15°	1523.3	1528.4	1535.4	1533.6	1531.0	1532.8	1528.4	1525.9	1528.4	1533.6	1532.8
17.5°	1504.3	1507.7	1512.9	1512.9	1510.3	1508.6	1506.9	1504.3	1506.0	1509.5	1510.3
20°	1477.5	1481.8	1484.4	1481.8	1481.0	1478.4	1474.9	1472.3	1475.8	1481.0	1481.8
22.5°	1442.1	1443.0	1449.0	1443.0	1438.6	1437.8	1434.3	1429.1	1434.3	1438.6	1439.5
25°	1398.1	1402.4	1399.8	1389.4	1389.4	1382.5	1380.8	1378.2	1379.1	1386.8	1390.3
27.5°	1341.9	1343.7	1336.7	1328.1	1320.3	1316.0	1310.0	1310.8	1310.8	1321.2	1324.7
30°	1280.6	1271.1	1265.1	1251.3	1245.2	1234.8	1233.1	1233.1	1231.4	1236.6	1252.1
32.5°	1207.2	1194.3	1184.8	1171.8	1161.4	1151.1	1145.9	1148.5	1147.6	1160.6	1165.8
35°	1126.9	1119.1	1099.3	1082.9	1076.8	1061.3	1061.3	1053.5	1058.7	1073.4	1079.4
37.5°	1042.3	1030.2	1013.8	995.7	991.3	979.2	974.9	970.6	981.8	984.4	990.5
40°	955.9	944.7	929.2	911.9	911.9	897.2	897.2	897.2	898.1	903.3	914.5
42.5°	873.9	861.8	848.0	835.9	834.2	822.9	822.9	822.1	823.8	828.1	838.5
45°	794.4	784.9	770.3	764.2	765.1	753.0	755.6	753.0	756.5	760.8	764.2
47.5°	721.0	715.0	709.0	700.3	697.7	696.9	692.6	689.1	695.1	695.1	700.3
50°	652.8	649.4	645.9	640.7	641.6	638.1	633.0	633.0	637.3	638.1	641.6
52.5°	593.2	588.9	584.6	585.5	586.3	584.6	582.0	579.4	582.0	583.7	588.1
55°	533.7	530.2	534.5	532.8	534.5	532.8	531.1	529.3	533.7	531.1	535.4
57.5°	480.1	483.6	485.3	481.9	484.4	482.7	483.6	481.0	484.4	486.2	485.3
60°	430.9	436.1	433.5	434.4	437.8	436.1	432.6	435.2	438.7	439.5	438.7
62.5°	386.0	392.0	394.6	392.9	393.8	392.0	394.6	391.2	395.5	397.2	394.6
65°	345.4	352.3	354.0	354.0	354.0	352.3	354.9	355.8	357.5	357.5	355.8
67.5°	310.9	316.9	318.6	320.4	318.6	316.9	316.9	317.8	321.2	323.0	321.2
70°	279.8	285.8	286.7	286.7	287.6	289.3	285.8	287.6	290.1	291.0	290.1
72.5°	253.0	259.1	260.8	259.9	260.8	261.6	261.6	259.9	262.5	264.2	264.2
75°	231.4	234.9	236.6	236.6	237.5	238.3	238.3	237.5	239.2	240.1	240.9
77.5°	211.6	214.2	216.7	216.7	217.6	216.7	218.5	218.5	219.3	220.2	221.1
80°	191.7	195.2	196.9	197.7	199.5	200.3	200.3	200.3	201.2	202.1	202.1
82.5°	176.2	178.8	181.3	183.9	183.9	184.8	184.8	184.8	185.7	185.7	186.5
85°	160.6	164.1	166.7	168.4	169.3	170.1	170.1	171.0	171.0	171.0	171.8
87.5°	146.8	151.1	152.8	154.6	155.4	157.2	157.2	157.2	158.0	158.0	158.0
90°	137.3	141.6	143.3	145.1	145.9	146.8	146.8	147.7	147.7	148.5	148.5
92.5°	126.1	130.4	133.8	133.8	134.7	136.4	135.6	135.6	136.4	137.3	137.3
95°	117.4	120.9	123.5	124.3	125.2	125.2	125.2	126.1	125.2	126.1	126.1
97.5°	107.1	110.5	113.1	114.8	115.7	115.7	115.7	116.6	115.7	116.6	116.6
100°	98.4	101.9	104.5	105.4	107.1	107.1	107.1	107.1	107.1	107.1	107.9
102.5°	91.5	95.0	96.7	97.6	98.4	99.3	99.3	99.3	99.3	100.2	100.2
105°	84.6	88.1	89.8	90.7	91.5	92.4	92.4	92.4	93.3	93.3	92.4
107.5°	78.6	81.2	82.9	84.6	85.5	85.5	86.4	86.4	86.4	86.4	86.4
110°	72.5	75.1	77.7	79.4	79.4	80.3	80.3	81.2	81.2	80.3	81.2

TEST NUMBER: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	66.5	69.9	71.7	73.4	74.3	75.1	75.1	75.1	75.1	75.1	75.1
115°	61.3	64.8	66.5	68.2	69.1	69.9	69.9	69.9	69.9	69.9	69.9
117.5°	57.0	60.4	62.2	63.0	63.9	64.8	65.6	65.6	65.6	65.6	64.8
120°	52.7	55.3	57.0	58.7	59.6	60.4	60.4	60.4	60.4	60.4	60.4
122.5°	48.4	50.9	52.7	54.4	55.3	56.1	56.1	56.1	56.1	56.1	56.1
125°	44.0	46.6	48.4	50.1	50.9	51.8	51.8	51.8	51.8	51.8	51.8
127.5°	39.7	42.3	44.9	45.8	46.6	47.5	47.5	47.5	48.4	47.5	47.5
130°	35.4	38.0	40.6	41.4	42.3	43.2	44.0	44.0	44.0	44.0	43.2
132.5°	32.0	34.5	36.3	37.1	38.9	38.9	39.7	39.7	39.7	39.7	38.9
135°	29.4	31.1	32.8	33.7	35.4	35.4	35.4	36.3	36.3	35.4	34.5
137.5°	25.9	27.6	29.4	30.2	31.1	32.0	32.0	32.8	32.0	32.0	32.0
140°	24.2	25.0	26.8	27.6	28.5	28.5	28.5	29.4	29.4	28.5	28.5
142.5°	20.7	22.5	24.2	25.0	25.9	25.9	25.9	25.9	25.9	25.9	25.9
145°	17.3	19.9	20.7	22.5	22.5	23.3	23.3	23.3	23.3	23.3	22.5
147.5°	14.7	16.4	19.0	19.9	19.9	20.7	20.7	20.7	20.7	20.7	19.9
150°	11.2	13.0	15.5	17.3	17.3	18.1	18.1	18.1	18.1	17.3	17.3
152.5°	9.5	11.2	12.1	13.8	14.7	14.7	14.7	15.5	14.7	14.7	14.7
155°	8.6	9.5	10.4	11.2	12.1	13.0	13.0	13.0	13.0	12.1	12.1
157.5°	6.9	7.8	8.6	9.5	10.4	11.2	11.2	11.2	11.2	11.2	10.4
160°	5.2	6.0	6.9	6.9	7.8	8.6	9.5	8.6	8.6	8.6	8.6
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: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9
2.5°	1566.4	1565.6	1568.2	1563.9	1550.9	1554.4	1552.6	1560.4	1562.1	1563.9	1571.6
5°	1566.4	1565.6	1567.3	1563.9	1550.0	1552.6	1550.9	1558.7	1560.4	1561.3	1569.0
7.5°	1563.0	1562.1	1564.7	1560.4	1545.7	1549.2	1546.6	1554.4	1555.2	1556.1	1563.0
10°	1556.1	1555.2	1556.9	1553.5	1538.8	1542.3	1538.8	1546.6	1546.6	1548.3	1553.5
12.5°	1545.7	1544.0	1547.4	1543.1	1526.7	1531.0	1529.3	1534.5	1535.4	1536.2	1541.4
15°	1531.0	1529.3	1531.9	1529.3	1514.6	1515.5	1512.9	1520.7	1521.5	1519.8	1525.0
17.5°	1509.5	1507.7	1512.9	1511.2	1496.5	1500.0	1499.1	1500.8	1503.4	1499.1	1506.0
20°	1482.7	1484.4	1486.1	1487.0	1475.8	1475.8	1474.9	1478.4	1481.0	1477.5	1482.7
22.5°	1443.0	1447.3	1452.5	1454.2	1446.4	1445.6	1450.7	1449.0	1451.6	1449.9	1453.3
25°	1392.9	1401.5	1406.7	1411.9	1407.6	1409.3	1417.1	1418.8	1418.8	1417.9	1421.4
27.5°	1330.7	1341.9	1351.4	1362.7	1358.3	1361.8	1374.7	1376.5	1379.9	1376.5	1383.4
30°	1256.4	1266.8	1284.9	1301.3	1303.1	1308.2	1326.4	1328.1	1337.6	1334.2	1336.7
32.5°	1182.2	1187.4	1208.1	1224.5	1234.8	1247.8	1267.7	1271.1	1284.1	1286.7	1286.7
35°	1088.9	1103.6	1122.6	1145.9	1158.9	1172.7	1199.4	1204.6	1223.6	1229.7	1236.6
37.5°	1010.3	1024.1	1036.2	1060.4	1083.7	1099.3	1120.9	1133.8	1153.7	1164.9	1173.5
40°	926.6	937.8	950.7	974.9	994.8	1018.1	1039.7	1055.2	1080.3	1093.2	1104.5
42.5°	847.1	855.8	869.6	886.8	907.6	933.5	954.2	972.3	999.1	1017.2	1030.2
45°	776.3	781.5	793.6	806.5	824.7	851.4	871.3	894.6	916.2	935.2	950.7
47.5°	709.8	716.7	722.8	731.4	747.8	764.2	787.5	810.0	831.6	852.3	867.8
50°	648.5	648.5	658.0	664.1	675.3	690.0	708.1	723.6	750.4	765.1	784.9
52.5°	588.9	592.4	597.6	601.0	609.7	619.2	633.8	646.8	669.2	683.1	702.1
55°	536.3	539.7	542.3	544.0	549.2	560.4	565.6	576.0	591.5	602.7	619.2
57.5°	486.2	487.9	490.5	491.3	492.2	499.1	503.4	506.0	521.6	532.8	546.6
60°	440.4	440.4	443.0	442.1	441.3	444.7	443.9	446.4	455.9	462.9	468.9
62.5°	397.2	397.2	398.1	396.4	395.5	395.5	392.0	394.6	397.2	398.1	402.4
65°	357.5	361.8	358.4	359.2	354.0	352.3	350.6	345.4	344.5	341.1	342.8
67.5°	322.1	325.6	322.1	322.1	317.8	314.3	310.0	301.4	298.8	291.9	290.1
70°	293.6	291.0	292.7	290.1	285.0	280.6	274.6	267.7	259.1	250.4	244.4
72.5°	266.0	266.0	264.2	261.6	259.1	250.4	243.5	235.7	225.4	214.2	205.5
75°	239.2	240.1	240.1	237.5	233.2	225.4	217.6	206.4	195.2	182.2	171.0
77.5°	220.2	220.2	220.2	215.9	211.6	204.7	195.2	183.1	171.0	155.4	142.5
80°	202.1	201.2	201.2	196.0	191.7	183.9	174.4	162.3	149.4	133.0	118.3
82.5°	187.4	186.5	184.8	180.5	174.4	166.7	157.2	144.2	130.4	115.7	97.6
85°	171.8	171.0	169.3	164.9	158.9	152.0	141.6	128.7	114.8	98.4	81.2
87.5°	158.0	157.2	154.6	152.0	145.1	137.3	126.9	114.8	100.2	84.6	67.4
90°	148.5	146.8	145.1	141.6	135.6	126.9	116.6	103.6	88.9	73.4	56.1
92.5°	137.3	136.4	133.8	130.4	125.2	116.6	106.2	94.1	79.4	64.8	48.4
95°	126.1	125.2	123.5	120.0	114.8	107.1	97.6	85.5	71.7	57.0	42.3
97.5°	115.7	115.7	113.1	110.5	104.5	98.4	88.9	77.7	64.8	51.8	38.0
100°	107.1	107.1	104.5	101.0	96.7	90.7	81.2	70.8	58.7	46.6	32.8
102.5°	99.3	98.4	96.7	93.3	88.9	82.9	74.3	64.8	53.5	41.4	29.4
105°	92.4	91.5	89.8	86.4	82.9	76.0	69.1	59.6	48.4	37.1	25.9
107.5°	85.5	84.6	83.8	80.3	76.0	69.9	63.0	53.5	44.0	33.7	23.3
110°	79.4	78.6	76.9	73.4	69.1	63.9	57.0	49.2	39.7	30.2	20.7

TEST NUMBER: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	74.3	73.4	71.7	68.2	64.8	58.7	52.7	44.0	36.3	27.6	18.1
115°	69.1	68.2	66.5	63.0	58.7	53.5	47.5	40.6	32.0	24.2	16.4
117.5°	63.9	63.0	61.3	58.7	54.4	49.2	43.2	36.3	28.5	22.5	14.7
120°	59.6	57.9	56.1	53.5	49.2	44.9	38.9	32.8	25.9	19.9	13.0
122.5°	55.3	53.5	51.8	49.2	44.9	40.6	34.5	29.4	24.2	18.1	12.1
125°	50.1	49.2	47.5	44.9	40.6	36.3	32.0	26.8	21.6	16.4	10.4
127.5°	45.8	44.9	43.2	39.7	36.3	32.8	28.5	24.2	19.0	13.8	9.5
130°	42.3	40.6	38.9	36.3	33.7	30.2	25.9	21.6	17.3	12.1	8.6
132.5°	38.0	36.3	34.5	32.8	30.2	26.8	23.3	19.0	15.5	11.2	7.8
135°	34.5	32.8	31.1	29.4	26.8	24.2	20.7	17.3	13.8	10.4	6.9
137.5°	30.2	29.4	28.5	26.8	24.2	21.6	19.0	14.7	12.1	9.5	6.0
140°	27.6	26.8	25.9	23.3	21.6	19.0	16.4	13.0	10.4	7.8	5.2
142.5°	25.0	24.2	22.5	20.7	19.0	17.3	13.8	12.1	9.5	6.9	5.2
145°	21.6	20.7	19.9	18.1	16.4	13.8	12.1	10.4	8.6	6.0	4.3
147.5°	19.9	19.0	17.3	15.5	13.8	12.1	11.2	9.5	6.9	5.2	3.5
150°	16.4	15.5	14.7	13.0	12.1	11.2	9.5	7.8	6.0	4.3	3.5
152.5°	13.8	13.0	12.1	12.1	10.4	9.5	7.8	6.9	5.2	4.3	2.6
155°	12.1	12.1	11.2	10.4	8.6	7.8	6.9	5.2	4.3	3.5	2.6
157.5°	10.4	9.5	8.6	8.6	7.8	6.9	5.2	4.3	3.5	3.5	2.6
160°	8.6	7.8	7.8	6.9	6.0	5.2	4.3	4.3	3.5	2.6	2.6
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: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9
2.5°	1572.5	1563.0	1571.6	1582.9	1582.9	1581.1	1579.4	1582.9	1591.5	1588.0	1577.7
5°	1569.9	1560.4	1568.2	1579.4	1579.4	1576.8	1575.1	1577.7	1587.2	1582.9	1573.4
7.5°	1564.7	1556.1	1561.3	1571.6	1571.6	1569.0	1567.3	1570.8	1578.5	1574.2	1563.9
10°	1555.2	1545.7	1551.8	1561.3	1560.4	1558.7	1556.1	1560.4	1567.3	1561.3	1549.2
12.5°	1543.1	1533.6	1538.8	1547.4	1546.6	1543.1	1541.4	1544.0	1550.0	1546.6	1533.6
15°	1526.7	1517.2	1521.5	1530.2	1527.6	1525.0	1521.5	1522.4	1530.2	1524.1	1510.3
17.5°	1506.9	1496.5	1500.0	1507.7	1505.1	1502.5	1498.2	1499.1	1507.7	1499.1	1484.4
20°	1482.7	1471.5	1474.0	1483.5	1479.2	1474.9	1470.6	1470.6	1479.2	1469.7	1453.3
22.5°	1456.8	1445.6	1447.3	1454.2	1450.7	1443.0	1438.6	1441.2	1445.6	1433.5	1416.2
25°	1424.8	1410.1	1412.7	1419.6	1417.1	1406.7	1402.4	1404.1	1402.4	1392.9	1374.7
27.5°	1387.7	1372.1	1373.9	1378.2	1374.7	1365.2	1360.1	1360.9	1357.5	1345.4	1324.7
30°	1341.1	1333.3	1332.4	1335.0	1329.8	1320.3	1314.3	1312.6	1311.7	1294.4	1269.4
32.5°	1293.6	1286.7	1282.3	1285.8	1279.8	1270.3	1259.9	1259.9	1251.3	1234.8	1213.3
35°	1245.2	1234.0	1229.7	1232.3	1225.3	1213.3	1204.6	1200.3	1187.4	1166.6	1143.3
37.5°	1183.0	1175.3	1170.1	1172.7	1164.9	1156.3	1139.9	1135.5	1121.7	1093.2	1063.9
40°	1115.7	1109.6	1104.5	1107.0	1098.4	1085.5	1070.8	1063.9	1048.3	1016.4	993.1
42.5°	1043.1	1040.6	1034.5	1044.0	1026.7	1013.8	999.1	987.9	972.3	937.8	911.0
45°	966.3	972.3	958.5	961.1	949.9	938.7	923.1	906.7	891.2	858.3	828.1
47.5°	885.1	889.4	879.9	881.7	869.6	859.2	845.4	824.7	807.4	778.9	752.1
50°	801.4	799.6	799.6	797.9	788.4	775.5	761.6	742.6	725.4	699.5	677.0
52.5°	712.4	715.9	717.6	721.9	709.8	702.1	680.5	664.1	651.1	624.3	605.3
55°	626.9	639.0	635.6	637.3	623.5	617.4	600.2	587.2	568.2	552.7	540.6
57.5°	549.2	551.8	553.5	556.1	550.1	538.0	524.2	513.8	499.1	486.2	477.5
60°	474.1	474.1	474.9	479.3	473.2	462.9	452.5	444.7	434.4	426.6	421.4
62.5°	403.3	409.3	410.2	406.7	399.0	393.8	386.9	382.5	375.6	373.0	371.3
65°	337.6	337.6	337.6	339.4	335.0	331.6	327.3	326.4	329.0	325.6	327.3
67.5°	282.4	279.8	278.1	278.9	277.2	275.5	274.6	277.2	282.4	282.4	286.7
70°	234.9	229.7	226.2	226.2	226.2	227.1	229.7	234.9	243.5	247.0	253.0
72.5°	196.0	184.8	179.6	179.6	180.5	183.9	191.7	201.2	209.0	215.9	223.7
75°	158.9	147.7	139.9	139.0	140.8	145.9	157.2	165.8	178.8	188.2	197.7
77.5°	128.7	114.8	105.4	104.5	107.1	114.8	128.7	139.9	154.6	164.9	175.3
80°	102.8	87.2	79.4	74.3	78.6	88.1	103.6	117.4	131.3	145.1	158.0
82.5°	82.0	67.4	55.3	50.1	55.3	68.2	82.9	99.3	113.1	127.8	140.8
85°	64.8	49.2	35.4	30.2	36.3	50.1	66.5	82.9	98.4	113.1	126.1
87.5°	50.9	35.4	21.6	14.7	22.5	37.1	52.7	69.1	85.5	100.2	113.1
90°	39.7	25.0	12.1	1.7	13.0	26.8	42.3	57.9	74.3	88.9	101.9
92.5°	33.7	19.0	6.9	0.0	7.8	19.9	34.5	50.1	64.8	79.4	92.4
95°	28.5	15.5	5.2	0.0	5.2	15.5	28.5	42.3	57.0	71.7	84.6
97.5°	24.2	12.1	3.5	0.0	3.5	12.1	23.3	37.1	50.1	63.9	76.0
100°	20.7	10.4	2.6	0.0	2.6	9.5	19.9	32.0	44.9	57.9	69.1
102.5°	18.1	8.6	1.7	0.0	1.7	7.8	16.4	27.6	38.9	50.9	62.2
105°	15.5	6.9	1.7	0.0	0.9	6.0	13.8	24.2	34.5	45.8	56.1
107.5°	13.8	6.0	1.7	0.0	0.9	5.2	12.1	20.7	31.1	40.6	50.1
110°	12.1	5.2	1.7	0.0	0.9	3.5	10.4	18.1	26.8	36.3	45.8

TEST NUMBER: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	10.4	4.3	0.9	0.0	0.0	2.6	8.6	15.5	23.3	32.8	40.6
115°	9.5	4.3	0.9	0.0	0.0	1.7	6.9	13.8	20.7	29.4	36.3
117.5°	8.6	3.5	0.9	0.0	0.9	1.7	6.0	12.1	18.1	25.0	32.8
120°	7.8	3.5	0.9	0.0	0.9	0.9	4.3	10.4	15.5	22.5	28.5
122.5°	6.9	3.5	0.9	0.0	0.9	0.9	3.5	8.6	13.8	19.9	25.0
125°	6.0	2.6	1.7	0.9	0.9	0.9	2.6	6.9	12.1	16.4	22.5
127.5°	6.0	2.6	1.7	0.9	0.9	0.9	1.7	6.0	9.5	14.7	19.9
130°	5.2	2.6	1.7	0.9	0.9	0.9	0.9	4.3	8.6	12.1	16.4
132.5°	4.3	2.6	1.7	0.9	0.9	0.9	0.9	2.6	6.0	10.4	13.8
135°	4.3	2.6	1.7	0.9	0.9	0.9	0.9	1.7	4.3	7.8	11.2
137.5°	3.5	1.7	1.7	0.9	0.9	0.9	0.9	0.9	3.5	6.0	8.6
140°	3.5	1.7	1.7	0.9	0.9	0.9	0.9	0.9	2.6	4.3	6.9
142.5°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	0.9	1.7	3.5	5.2
145°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	1.7	3.5
147.5°	2.6	2.6	1.7	0.9	0.9	0.9	0.9	0.9	0.9	1.7	2.6
150°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7
152.5°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7
155°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	1.7	1.7
157.5°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7
160°	2.6	1.7	1.7	0.9	1.7	0.9	1.7	1.7	1.7	1.7	1.7
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

TEST NUMBER: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9
2.5°	1574.2	1557.8	1566.4	1563.9	1567.3	1574.2	1573.4	1571.6	1571.6	1569.0	1565.6
5°	1569.0	1553.5	1561.3	1556.9	1561.3	1567.3	1566.4	1563.9	1565.6	1561.3	1556.9
7.5°	1558.7	1544.9	1551.8	1548.3	1551.8	1557.8	1555.2	1554.4	1556.1	1549.2	1546.6
10°	1546.6	1531.0	1538.8	1534.5	1538.8	1543.1	1541.4	1537.9	1541.4	1534.5	1531.9
12.5°	1527.6	1514.6	1519.8	1518.1	1520.7	1525.0	1521.5	1519.0	1520.7	1514.6	1509.5
15°	1506.9	1493.9	1498.2	1495.6	1497.4	1502.5	1496.5	1495.6	1493.9	1487.9	1486.1
17.5°	1480.1	1468.0	1472.3	1468.0	1470.6	1468.9	1468.0	1463.7	1463.7	1456.8	1451.6
20°	1447.3	1436.9	1434.3	1430.9	1434.3	1430.9	1425.7	1422.2	1421.4	1414.5	1410.1
22.5°	1409.3	1397.2	1398.9	1389.4	1390.3	1385.1	1376.5	1373.0	1369.6	1361.8	1355.7
25°	1363.5	1351.4	1342.8	1336.7	1329.0	1328.1	1316.9	1308.2	1307.4	1297.9	1297.0
27.5°	1311.7	1297.9	1291.0	1276.3	1266.8	1259.0	1249.5	1240.9	1236.6	1226.2	1219.3
30°	1252.1	1236.6	1219.3	1208.9	1194.3	1188.2	1171.8	1161.4	1158.0	1146.8	1141.6
32.5°	1184.8	1168.4	1154.5	1134.7	1118.3	1109.6	1093.2	1082.9	1078.5	1066.5	1059.6
35°	1111.4	1093.2	1076.8	1057.8	1044.9	1030.2	1010.3	1000.0	990.5	986.2	981.0
37.5°	1034.5	1014.6	995.7	976.7	965.4	948.2	930.9	924.0	912.8	908.4	903.3
40°	955.1	935.2	917.1	898.9	886.0	870.4	854.9	852.3	840.2	835.9	832.4
42.5°	876.5	855.8	835.0	822.1	812.6	797.0	786.7	784.1	773.7	771.1	771.1
45°	805.7	779.8	762.5	751.3	743.5	730.5	721.9	720.2	711.5	709.8	709.8
47.5°	729.7	705.5	692.6	685.6	678.7	669.2	664.1	664.1	655.4	653.7	652.8
50°	658.9	636.4	626.9	620.0	619.2	612.2	607.9	606.2	606.2	600.2	601.0
52.5°	591.5	580.3	572.5	568.2	563.0	558.7	555.3	555.3	552.7	548.3	550.1
55°	529.3	516.4	517.3	513.8	511.2	508.6	509.5	504.3	503.4	500.0	502.6
57.5°	467.2	467.2	465.4	462.9	458.5	460.3	460.3	460.3	455.9	453.4	455.9
60°	414.5	417.1	412.8	415.4	413.6	414.5	412.8	412.8	410.2	409.3	410.2
62.5°	367.9	372.2	370.5	373.9	372.2	373.0	374.8	371.3	369.6	367.9	369.6
65°	326.4	331.6	330.7	333.3	334.2	335.0	335.9	334.2	332.5	330.7	329.9
67.5°	290.1	295.3	298.8	299.6	300.5	303.1	302.2	300.5	298.8	296.2	295.3
70°	257.3	264.2	268.6	270.3	273.7	272.0	272.0	271.1	269.4	266.8	266.0
72.5°	229.7	237.5	241.8	243.5	247.0	247.0	246.1	245.2	243.5	240.9	240.1
75°	205.5	212.4	218.5	221.9	224.5	224.5	223.7	222.8	221.1	219.3	218.5
77.5°	186.5	192.6	197.7	202.1	203.8	204.7	203.8	202.1	202.1	201.2	200.3
80°	167.5	174.4	179.6	183.9	186.5	186.5	185.7	186.5	184.8	183.9	183.1
82.5°	151.1	158.9	164.9	169.3	171.0	171.8	171.0	171.8	170.1	170.1	170.1
85°	136.4	144.2	151.1	154.6	157.2	158.0	158.0	158.0	157.2	157.2	157.2
87.5°	124.3	132.1	139.0	142.5	145.1	145.9	145.9	146.8	145.1	145.1	145.1
90°	113.1	120.9	127.8	131.3	133.8	135.6	135.6	136.4	135.6	134.7	134.7
92.5°	102.8	111.4	118.3	121.8	124.3	126.9	126.9	127.8	126.1	126.1	126.1
95°	94.1	102.8	108.8	113.1	115.7	117.4	118.3	118.3	117.4	117.4	117.4
97.5°	86.4	94.1	100.2	104.5	107.1	107.9	108.8	109.7	108.8	108.8	108.8
100°	78.6	86.4	92.4	95.9	99.3	100.2	101.0	101.9	101.9	101.0	101.0
102.5°	71.7	79.4	84.6	88.9	91.5	93.3	94.1	94.1	94.1	94.1	94.1
105°	64.8	72.5	77.7	82.0	84.6	86.4	87.2	88.1	88.1	87.2	87.2
107.5°	58.7	65.6	71.7	75.1	78.6	80.3	81.2	81.2	82.0	81.2	81.2
110°	52.7	60.4	65.6	69.1	72.5	74.3	75.1	76.0	76.0	76.0	76.0



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CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	48.4	54.4	59.6	63.0	66.5	68.2	69.1	69.9	70.8	69.9	69.9
115°	43.2	49.2	54.4	57.9	60.4	62.2	63.9	64.8	64.8	65.6	64.8
117.5°	38.9	44.0	49.2	52.7	55.3	57.9	58.7	59.6	60.4	59.6	59.6
120°	34.5	39.7	44.0	47.5	50.1	52.7	53.5	54.4	55.3	54.4	54.4
122.5°	31.1	35.4	39.7	43.2	45.8	47.5	49.2	49.2	50.1	50.1	50.1
125°	27.6	32.0	35.4	38.9	41.4	43.2	44.0	44.9	44.9	45.8	45.8
127.5°	24.2	27.6	32.0	34.5	37.1	38.9	39.7	40.6	40.6	41.4	41.4
130°	20.7	24.2	27.6	30.2	32.8	34.5	35.4	36.3	37.1	37.1	37.1
132.5°	18.1	21.6	24.2	26.8	28.5	30.2	32.0	32.8	32.8	32.8	32.8
135°	14.7	18.1	20.7	23.3	25.0	26.8	27.6	29.4	29.4	29.4	29.4
137.5°	12.1	15.5	18.1	19.9	21.6	23.3	24.2	25.0	25.9	25.9	25.9
140°	9.5	12.1	14.7	17.3	19.0	19.9	21.6	21.6	22.5	22.5	22.5
142.5°	6.9	9.5	11.2	13.8	15.5	17.3	18.1	19.0	19.0	19.0	19.0
145°	5.2	6.9	8.6	10.4	13.0	13.8	14.7	15.5	16.4	16.4	16.4
147.5°	3.5	5.2	6.0	7.8	9.5	11.2	12.1	13.0	13.8	13.8	13.8
150°	2.6	3.5	5.2	6.0	6.9	8.6	10.4	10.4	11.2	11.2	10.4
152.5°	1.7	2.6	3.5	4.3	5.2	6.0	7.8	7.8	8.6	8.6	8.6
155°	1.7	1.7	1.7	2.6	3.5	4.3	5.2	6.0	6.0	6.0	6.0
157.5°	1.7	1.7	1.7	1.7	1.7	2.6	3.5	4.3	4.3	4.3	4.3
160°	1.7	1.7	0.9	0.9	1.7	1.7	1.7	1.7	2.6	2.6	2.6
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: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9
2.5°	1568.2	1569.9	1569.9	1568.2	1567.3	1570.8	1566.4	1550.0	1555.2	1556.9	1562.1
5°	1560.4	1562.1	1562.1	1562.1	1560.4	1563.9	1559.5	1543.1	1549.2	1551.8	1555.2
7.5°	1549.2	1550.0	1551.8	1550.9	1549.2	1554.4	1550.0	1533.6	1537.9	1542.3	1546.6
10°	1534.5	1534.5	1535.4	1537.1	1535.4	1539.7	1535.4	1520.7	1525.0	1527.6	1532.8
12.5°	1514.6	1516.4	1517.2	1516.4	1515.5	1519.0	1517.2	1503.4	1505.1	1510.3	1515.5
15°	1487.9	1487.9	1492.2	1490.5	1490.5	1493.9	1495.6	1480.1	1482.7	1490.5	1495.6
17.5°	1455.0	1455.9	1459.4	1461.1	1460.2	1466.3	1467.1	1455.0	1454.2	1463.7	1468.9
20°	1412.7	1414.5	1418.8	1422.2	1422.2	1429.1	1431.7	1424.0	1424.8	1435.2	1436.9
22.5°	1360.9	1360.9	1368.7	1373.9	1378.2	1382.5	1390.3	1383.4	1383.4	1397.2	1405.0
25°	1297.0	1303.1	1305.7	1316.0	1322.1	1334.2	1341.1	1341.9	1342.8	1355.7	1360.9
27.5°	1226.2	1227.9	1235.7	1247.8	1254.7	1265.9	1278.9	1281.5	1285.8	1303.1	1310.8
30°	1145.9	1151.1	1154.5	1171.8	1181.3	1196.0	1212.4	1218.4	1221.9	1245.2	1254.7
32.5°	1063.9	1065.6	1080.3	1089.8	1101.0	1116.5	1135.5	1146.8	1153.7	1177.9	1191.7
35°	981.8	985.3	997.4	1009.5	1020.7	1036.2	1056.1	1071.6	1083.7	1105.3	1123.5
37.5°	906.7	915.3	917.9	930.0	938.7	954.2	968.0	990.5	1002.6	1025.0	1048.3
40°	839.4	841.9	843.7	855.8	861.8	876.5	896.3	911.0	927.4	943.8	971.5
42.5°	772.9	774.6	777.2	784.1	791.0	801.4	816.0	830.7	848.0	872.2	890.3
45°	711.5	713.3	715.0	719.3	725.4	734.9	744.4	754.7	772.0	792.7	811.7
47.5°	654.6	658.0	658.0	658.9	663.2	671.0	677.9	690.8	700.3	711.5	733.1
50°	600.2	602.7	603.6	603.6	606.2	611.4	613.1	621.7	630.4	640.7	656.3
52.5°	549.2	549.2	548.3	551.8	551.8	555.3	556.1	561.3	567.3	578.6	585.5
55°	500.8	500.8	503.4	501.7	501.7	503.4	502.6	503.4	508.6	515.5	521.6
57.5°	454.2	453.4	455.9	454.2	453.4	455.1	456.8	453.4	454.2	461.1	461.1
60°	407.6	408.4	411.0	409.3	409.3	409.3	407.6	405.9	404.1	408.4	410.2
62.5°	370.5	367.9	370.5	367.9	369.6	368.7	367.0	363.5	364.4	362.7	361.0
65°	331.6	331.6	332.5	329.9	331.6	331.6	329.0	328.1	323.0	321.2	316.9
67.5°	297.9	297.9	298.8	297.1	297.1	297.9	295.3	292.7	287.6	285.0	278.9
70°	268.6	268.6	268.6	267.7	267.7	267.7	266.0	262.5	257.3	253.0	245.2
72.5°	241.8	242.7	241.8	241.8	244.4	241.8	239.2	235.7	231.4	222.8	215.9
75°	220.2	221.1	220.2	220.2	220.2	219.3	218.5	213.3	208.1	201.2	190.8
77.5°	201.2	201.2	202.1	201.2	201.2	200.3	197.7	193.4	187.4	181.3	169.3
80°	183.1	183.9	184.8	185.7	183.9	183.1	180.5	177.0	169.3	162.3	150.3
82.5°	170.1	169.3	170.1	171.0	169.3	168.4	165.8	161.5	155.4	145.9	133.8
85°	157.2	156.3	156.3	157.2	156.3	154.6	152.0	147.7	141.6	132.1	120.0
87.5°	144.2	145.1	145.9	145.1	144.2	142.5	139.9	135.6	128.7	120.9	107.9
90°	134.7	134.7	134.7	134.7	133.8	132.1	129.5	124.3	118.3	108.8	97.6
92.5°	126.1	126.1	126.1	126.1	125.2	122.6	120.0	115.7	108.8	99.3	88.9
95°	117.4	118.3	117.4	117.4	115.7	114.8	110.5	106.2	100.2	90.7	79.4
97.5°	107.9	108.8	107.9	107.9	107.1	105.4	102.8	97.6	91.5	82.9	72.5
100°	101.0	101.0	100.2	100.2	99.3	97.6	94.1	89.8	83.8	75.1	64.8
102.5°	93.3	94.1	93.3	93.3	91.5	89.8	87.2	82.9	76.9	68.2	58.7
105°	87.2	87.2	86.4	86.4	84.6	82.9	80.3	75.1	69.9	62.2	52.7
107.5°	81.2	81.2	80.3	80.3	78.6	76.9	73.4	69.1	63.9	56.1	47.5
110°	75.1	75.1	75.1	74.3	72.5	69.9	67.4	63.0	57.9	50.9	42.3



TEST NUMBER: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	70.8	69.9	69.1	68.2	66.5	64.8	61.3	57.0	51.8	45.8	38.0
115°	64.8	64.8	63.9	63.0	61.3	58.7	56.1	52.7	47.5	40.6	33.7
117.5°	59.6	59.6	58.7	57.9	56.1	53.5	50.9	47.5	42.3	36.3	30.2
120°	54.4	54.4	53.5	52.7	50.9	48.4	46.6	42.3	38.0	32.0	26.8
122.5°	50.1	49.2	49.2	47.5	46.6	44.0	41.4	38.0	33.7	28.5	23.3
125°	44.9	44.9	44.0	43.2	42.3	39.7	37.1	33.7	29.4	25.0	20.7
127.5°	40.6	40.6	39.7	38.9	38.0	35.4	32.8	30.2	25.9	21.6	17.3
130°	36.3	36.3	35.4	34.5	33.7	31.1	29.4	25.9	22.5	19.0	14.7
132.5°	32.8	32.8	32.0	31.1	29.4	27.6	25.9	22.5	19.9	16.4	13.0
135°	29.4	28.5	28.5	27.6	25.9	24.2	22.5	19.9	16.4	13.8	10.4
137.5°	25.9	25.0	24.2	23.3	22.5	20.7	19.0	17.3	14.7	11.2	8.6
140°	22.5	21.6	21.6	20.7	19.0	18.1	16.4	13.8	12.1	9.5	6.9
142.5°	19.0	19.0	18.1	17.3	16.4	15.5	13.8	12.1	9.5	7.8	5.2
145°	16.4	15.5	15.5	14.7	13.8	12.1	11.2	9.5	7.8	6.0	4.3
147.5°	13.0	13.0	13.0	12.1	11.2	10.4	9.5	7.8	6.0	4.3	2.6
150°	10.4	10.4	10.4	9.5	8.6	7.8	6.9	6.0	4.3	2.6	1.7
152.5°	8.6	8.6	7.8	7.8	6.9	6.0	5.2	4.3	2.6	1.7	1.7
155°	6.0	6.0	6.0	5.2	5.2	4.3	3.5	2.6	1.7	1.7	1.7
157.5°	4.3	4.3	4.3	3.5	3.5	2.6	2.6	1.7	1.7	1.7	1.7
160°	2.6	2.6	2.6	2.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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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CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9	1569.9
2.5°	1559.5	1558.7	1565.6	1565.6	1557.8	1569.9	1582.9
5°	1554.4	1553.5	1560.4	1560.4	1553.5	1565.6	1579.4
7.5°	1544.0	1544.9	1551.8	1553.5	1544.9	1556.1	1570.8
10°	1532.8	1531.9	1539.7	1541.4	1534.5	1544.9	1558.7
12.5°	1514.6	1514.6	1522.4	1525.0	1518.1	1530.2	1543.1
15°	1495.6	1495.6	1500.8	1505.1	1499.1	1510.3	1523.3
17.5°	1471.5	1470.6	1475.8	1481.0	1474.9	1487.0	1500.8
20°	1440.4	1440.4	1446.4	1452.5	1448.1	1459.4	1474.9
22.5°	1407.6	1404.1	1414.5	1418.8	1416.2	1427.4	1443.0
25°	1366.1	1365.2	1375.6	1381.6	1378.2	1390.3	1404.1
27.5°	1321.2	1320.3	1330.7	1338.5	1336.7	1348.0	1363.5
30°	1266.8	1271.1	1280.6	1293.6	1289.3	1301.3	1317.7
32.5°	1209.8	1214.1	1225.3	1239.2	1240.0	1249.5	1265.9
35°	1141.6	1152.8	1160.6	1178.7	1182.2	1191.7	1208.9
37.5°	1069.9	1082.9	1099.3	1113.1	1120.0	1127.8	1147.6
40°	989.6	1008.6	1026.7	1043.1	1051.8	1059.6	1078.5
42.5°	917.1	931.7	949.0	965.4	981.0	987.9	1007.7
45°	835.0	852.3	867.8	887.7	903.3	911.0	930.9
47.5°	754.7	772.0	792.7	806.5	822.9	830.7	849.7
50°	677.9	693.4	710.7	727.1	740.9	747.8	764.2
52.5°	601.9	618.3	634.7	645.1	659.7	664.9	678.7
55°	534.5	545.8	560.4	566.5	581.2	584.6	594.1
57.5°	469.8	477.5	482.7	493.1	503.4	511.2	522.4
60°	411.0	414.5	417.9	424.0	432.6	435.2	439.5
62.5°	358.4	357.5	364.4	366.1	367.0	375.6	371.3
65°	311.7	312.6	306.6	304.0	307.4	310.0	308.3
67.5°	272.9	267.7	262.5	256.5	251.3	253.9	251.3
70°	234.9	230.6	221.9	213.3	209.8	204.7	202.1
72.5°	204.7	194.3	185.7	174.4	168.4	162.3	158.0
75°	181.3	166.7	154.6	142.5	133.8	125.2	123.5
77.5°	157.2	143.3	129.5	116.6	103.6	94.1	90.7
80°	138.2	125.2	108.8	93.3	79.4	67.4	63.0
82.5°	120.9	107.1	90.7	74.3	58.7	45.8	40.6
85°	106.2	91.5	75.1	58.7	43.2	29.4	22.5
87.5°	95.0	78.6	62.2	46.6	30.2	16.4	8.6
90°	84.6	69.1	53.5	37.1	21.6	8.6	0.0
92.5°	75.1	60.4	44.9	30.2	16.4	5.2	0.9
95°	66.5	53.5	38.0	24.2	12.1	3.5	0.9
97.5°	59.6	46.6	32.8	19.9	9.5	2.6	0.9
100°	53.5	40.6	28.5	16.4	7.8	1.7	0.9
102.5°	47.5	36.3	24.2	13.8	6.0	0.9	0.9
105°	42.3	32.0	20.7	12.1	5.2	0.9	0.9
107.5°	38.0	28.5	18.1	10.4	3.5	0.9	0.9
110°	33.7	24.2	15.5	8.6	2.6	0.9	0.9



TEST NUMBER: P1213097

CATALOG NUMBER: 4SNLED-LD5-50HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	30.2	21.6	13.8	6.9	1.7	0.9	0.9
115°	26.8	19.0	12.1	6.0	1.7	0.9	0.9
117.5°	23.3	16.4	10.4	4.3	0.9	0.9	0.9
120°	20.7	14.7	8.6	3.5	0.9	0.9	0.9
122.5°	18.1	12.1	6.9	2.6	0.9	0.9	0.9
125°	15.5	10.4	6.0	1.7	0.9	0.9	0.9
127.5°	13.0	8.6	4.3	1.7	0.9	0.9	0.9
130°	11.2	6.9	3.5	0.9	0.9	0.9	0.9
132.5°	9.5	5.2	2.6	0.9	0.9	0.9	0.9
135°	7.8	4.3	1.7	0.9	0.9	0.9	0.9
137.5°	6.0	3.5	1.7	0.9	0.9	0.9	0.9
140°	4.3	2.6	0.9	0.9	0.9	0.9	0.9
142.5°	3.5	1.7	0.9	0.9	0.9	0.9	0.9
145°	2.6	1.7	0.9	0.9	0.9	0.9	0.9
147.5°	1.7	1.7	1.7	1.7	0.9	0.9	0.9
150°	1.7	1.7	0.9	0.9	1.7	0.9	0.9
152.5°	1.7	0.9	0.9	0.9	1.7	0.9	0.9
155°	1.7	1.7	1.7	1.7	1.7	1.7	0.9
157.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7
160°	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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)