

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: P1213783

Luminaire Tested: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213783
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-LD5-46SL-LN-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

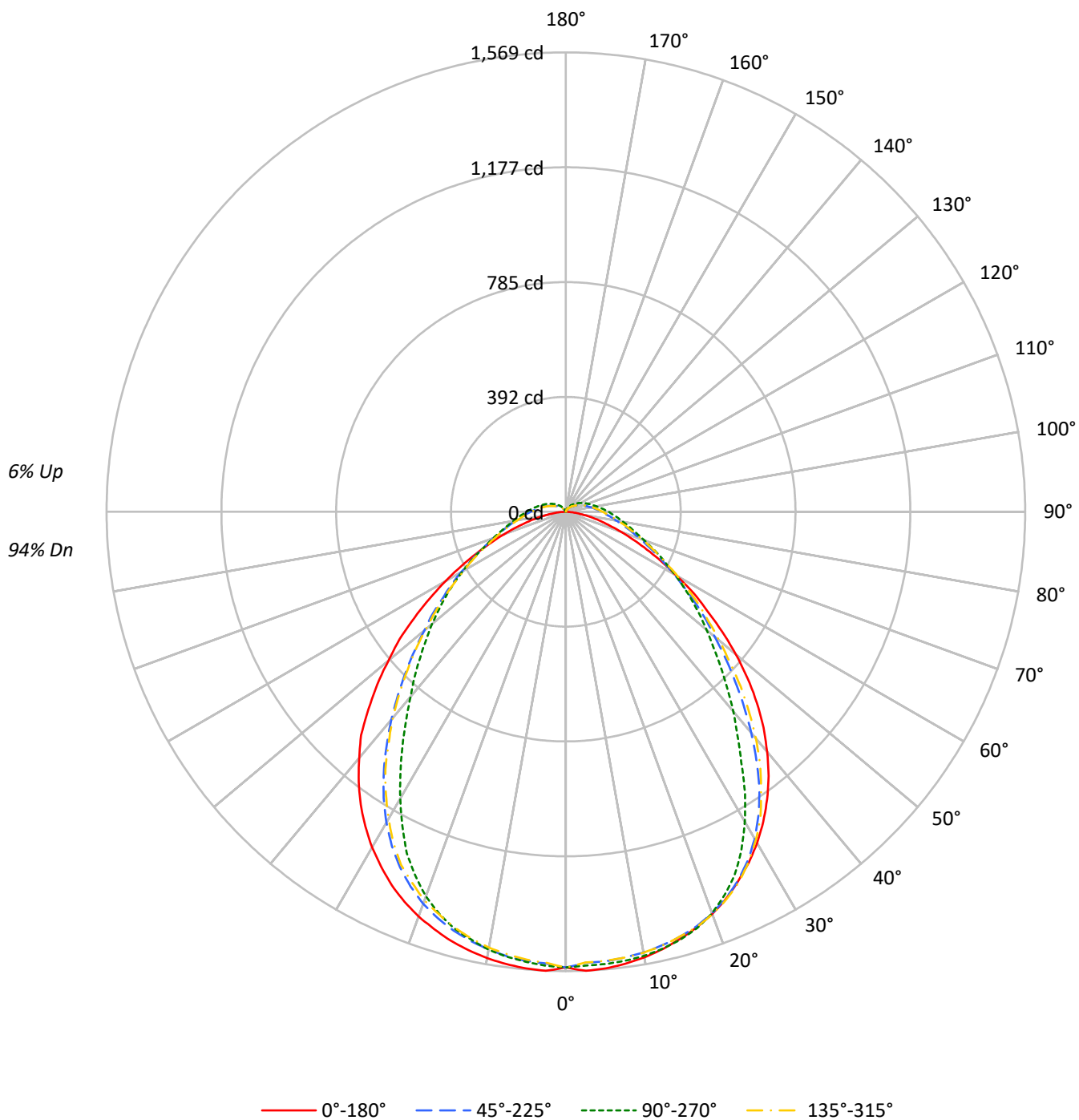
Lumens per Lamp: N/A
Luminaire Lumens: 3939.0 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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: 24 FT

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

Luminous Intensity Polar Plot



TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

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°	12578	12578	12578	12578
5°	12668	12178	12668	12123
10°	12611	11854	12632	11689
15°	12530	11500	12587	11200
20°	12434	11044	12506	10578
25°	12234	10368	12370	9758
30°	11975	9376	12132	8680
35°	11571	8159	11794	7598
40°	10992	7136	11283	6621
45°	10228	6204	10560	5847
50°	9184	5451	9588	5176
55°	7944	4813	8521	4570
60°	6682	4226	7286	3983
65°	5476	3736	6030	3464
70°	4358	3316	4881	3067
75°	3422	3061	3853	2817
80°	2471	2954	2909	2700
85°	1523	2971	2050	2730

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 10560 cd/sqm

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.6	3.7
10°-20°	423.1	10.7
20°-30°	627.1	15.9
30°-40°	696.7	17.7
40°-50°	631.5	16.0
50°-60°	489.4	12.4
60°-70°	332.3	8.4
70°-80°	211.4	5.4
80°-90°	135.2	3.4
90°-100°	91.1	2.3
100°-110°	62.4	1.6
110°-120°	41.6	1.1
120°-130°	25.9	0.7
130°-140°	14.3	0.4
140°-150°	6.7	0.2
150°-160°	2.5	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1197.8	30.4
0°-40°	1894.4	48.1
0°-60°	3015.3	76.6
0°-90°	3694.2	93.8
90°-120°	195.2	5.0
90°-150°	242.2	6.1
90°-180°	245.0	6.2
0°-180°	3939.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1556	1556	1556	1556	1556	
5°	1566	1550	1566	1544	1566	149
15°	1510	1513	1517	1473	1510	426
25°	1392	1366	1408	1286	1392	641
35°	1199	1044	1222	973	1199	748
45°	923	747	953	704	923	709
55°	589	525	632	498	589	530
65°	306	353	336	327	306	306
75°	122	235	138	217	122	132
85°	22	170	30	156	22	27
90°	0	146	2	134	0	1
95°	1	125	0	116	1	1
105°	1	92	0	86	1	1
115°	1	69	0	64	1	1
125°	1	51	1	45	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	0

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5
2.5°	1569.3	1567.6	1565.9	1563.3	1565.9	1572.7	1568.4	1559.0	1557.3	1541.9	1548.8
5°	1565.9	1563.3	1561.6	1559.0	1562.5	1571.0	1566.7	1558.2	1555.6	1541.1	1548.8
7.5°	1557.3	1555.6	1553.0	1553.0	1556.5	1565.0	1561.6	1552.2	1550.5	1535.9	1544.5
10°	1545.3	1544.5	1542.8	1542.8	1546.2	1556.5	1552.2	1543.6	1541.9	1528.2	1537.6
12.5°	1529.9	1530.8	1528.2	1528.2	1533.3	1543.6	1540.2	1530.8	1529.1	1517.1	1526.5
15°	1510.2	1511.1	1509.4	1510.2	1515.4	1527.4	1523.1	1514.5	1512.8	1503.4	1511.1
17.5°	1488.0	1488.8	1488.8	1488.0	1494.0	1506.0	1502.5	1494.8	1492.3	1484.5	1494.0
20°	1462.3	1462.3	1462.3	1462.3	1469.1	1481.1	1476.8	1470.8	1465.7	1459.7	1467.4
22.5°	1430.6	1429.8	1430.6	1433.2	1440.0	1449.4	1446.9	1440.0	1432.3	1428.9	1434.9
25°	1392.1	1394.7	1395.5	1398.1	1406.6	1414.3	1411.8	1404.9	1392.9	1390.4	1392.1
27.5°	1351.8	1353.6	1356.1	1355.3	1367.3	1375.0	1369.8	1363.8	1346.7	1344.1	1342.4
30°	1306.5	1309.0	1310.8	1309.9	1319.3	1327.9	1322.7	1315.0	1291.9	1290.2	1276.5
32.5°	1255.1	1257.7	1259.4	1259.4	1273.1	1276.5	1267.1	1256.0	1231.1	1225.1	1213.2
35°	1198.6	1201.2	1202.0	1202.0	1215.7	1214.9	1202.9	1187.5	1160.1	1152.4	1131.8
37.5°	1137.8	1139.5	1140.4	1145.5	1151.5	1146.4	1131.0	1111.3	1090.7	1069.3	1047.1
40°	1069.3	1071.9	1073.6	1077.0	1083.0	1077.0	1054.8	1030.8	1008.5	984.6	962.3
42.5°	999.1	1006.8	1005.1	1004.3	1007.7	991.4	974.3	946.9	924.6	899.8	877.5
45°	922.9	922.1	926.3	928.1	927.2	913.5	889.5	864.7	842.4	816.8	797.9
47.5°	842.4	841.6	845.0	846.7	841.6	827.0	808.2	779.9	761.1	738.8	724.3
50°	757.7	757.7	762.8	757.7	755.1	740.6	725.2	696.9	682.3	662.7	654.1
52.5°	672.9	680.6	675.5	673.8	671.2	656.7	644.7	621.6	609.6	601.0	590.7
55°	589.0	597.6	594.2	591.6	590.7	578.8	567.6	550.5	542.8	536.8	530.8
57.5°	518.0	517.1	515.4	512.8	513.7	504.3	493.1	483.7	480.3	477.7	479.4
60°	435.8	442.6	440.1	440.9	441.8	440.1	430.6	424.6	425.5	426.4	428.9
62.5°	368.1	374.1	378.4	375.0	376.7	379.3	374.1	372.4	375.8	379.3	382.7
65°	305.6	311.6	315.9	315.1	320.2	325.3	324.5	326.2	333.9	338.2	342.5
67.5°	249.1	255.1	261.1	262.0	269.7	277.4	280.8	286.8	295.4	301.4	306.5
70°	200.3	205.5	212.3	216.6	226.9	237.2	243.1	255.1	260.3	268.8	272.3
72.5°	156.7	161.0	170.4	180.6	189.2	202.0	214.0	224.3	232.0	241.4	245.7
75°	122.4	124.1	134.4	146.4	158.4	172.9	185.8	196.9	207.2	216.6	223.5
77.5°	89.9	92.5	101.9	118.1	131.8	147.3	161.8	173.8	184.9	194.3	203.8
80°	62.5	67.6	77.9	94.2	109.6	126.7	140.4	154.1	166.1	175.5	184.9
82.5°	40.2	44.5	59.1	75.3	91.6	108.7	123.3	137.0	149.8	160.1	168.7
85°	22.3	28.3	42.8	59.9	76.2	93.3	108.7	122.4	135.3	144.7	153.2
87.5°	8.6	17.1	30.8	47.1	63.4	79.6	95.9	108.7	121.6	131.8	139.6
90°	0.0	10.3	23.1	39.4	55.6	71.9	87.3	101.0	113.0	122.4	131.0
92.5°	0.9	6.8	18.0	31.7	47.1	62.5	77.1	90.8	102.7	112.2	119.9
95°	0.9	5.1	14.6	27.4	41.1	55.6	69.3	82.2	93.3	102.7	110.4
97.5°	0.9	3.4	12.0	24.0	36.0	50.5	63.4	75.3	85.6	95.0	101.0
100°	0.9	3.4	10.3	20.5	32.5	45.4	57.4	69.3	78.8	86.5	93.3
102.5°	0.9	2.6	8.6	18.0	29.1	40.2	52.2	63.4	71.9	79.6	86.5
105°	0.9	2.6	7.7	15.4	25.7	36.8	47.1	57.4	66.8	73.6	79.6
107.5°	0.9	1.7	6.8	12.8	22.3	33.4	43.7	52.2	60.8	67.6	73.6
110°	0.9	1.7	6.0	12.0	19.7	30.0	39.4	47.9	55.6	62.5	67.6

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.9	1.7	5.1	11.1	18.0	26.5	36.0	43.7	51.4	57.4	62.5
115°	0.9	1.7	5.1	10.3	16.3	23.1	31.7	40.2	46.2	53.1	57.4
117.5°	0.9	1.7	4.3	8.6	15.4	21.4	29.1	36.0	42.8	48.8	53.1
120°	0.9	1.7	4.3	7.7	13.7	19.7	25.7	32.5	39.4	43.7	47.9
122.5°	0.9	1.7	3.4	7.7	12.0	18.0	23.1	29.1	35.1	40.2	44.5
125°	0.9	1.7	3.4	6.8	11.1	16.3	21.4	25.7	31.7	36.0	40.2
127.5°	0.9	1.7	3.4	6.0	10.3	14.6	19.7	24.0	28.3	32.5	36.0
130°	0.9	1.7	2.6	5.1	9.4	12.8	17.1	22.3	25.7	29.1	32.5
132.5°	0.9	1.7	2.6	5.1	7.7	11.1	15.4	19.7	23.1	26.5	29.1
135°	0.9	1.7	2.6	4.3	6.8	10.3	12.8	17.1	20.5	24.0	26.5
137.5°	0.9	1.7	2.6	4.3	6.0	8.6	11.1	14.6	18.0	20.5	24.0
140°	0.9	1.7	2.6	3.4	5.1	7.7	10.3	12.0	15.4	18.0	20.5
142.5°	0.9	1.7	2.6	3.4	5.1	6.8	8.6	10.3	12.8	15.4	18.0
145°	0.9	1.7	2.6	3.4	4.3	6.0	7.7	9.4	10.3	12.8	14.6
147.5°	0.9	1.7	2.6	3.4	3.4	5.1	6.8	7.7	9.4	10.3	12.0
150°	0.9	1.7	2.6	2.6	3.4	4.3	6.0	6.8	7.7	9.4	10.3
152.5°	0.9	1.7	2.6	2.6	3.4	4.3	5.1	6.0	6.8	7.7	8.6
155°	0.9	1.7	2.6	2.6	2.6	3.4	4.3	5.1	6.0	6.8	7.7
157.5°	1.7	1.7	1.7	2.6	2.6	3.4	3.4	4.3	5.1	5.1	6.0
160°	1.7	1.7	1.7	2.6	2.6	2.6	3.4	3.4	4.3	4.3	5.1
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: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5
2.5°	1547.0	1549.6	1557.3	1557.3	1555.6	1553.9	1553.9	1551.3	1553.0	1556.5	1554.8
5°	1547.0	1549.6	1557.3	1557.3	1555.6	1553.9	1553.0	1550.5	1553.0	1556.5	1554.8
7.5°	1541.9	1545.3	1553.0	1553.0	1551.3	1550.5	1548.8	1547.0	1549.6	1553.0	1551.3
10°	1535.1	1538.5	1546.2	1546.2	1544.5	1544.5	1541.9	1540.2	1543.6	1546.2	1545.3
12.5°	1524.8	1529.1	1535.9	1535.1	1533.3	1534.2	1531.6	1528.2	1531.6	1534.2	1535.1
15°	1510.2	1515.4	1522.2	1520.5	1517.9	1519.6	1515.4	1512.8	1515.4	1520.5	1519.6
17.5°	1491.4	1494.8	1500.0	1500.0	1497.4	1495.7	1494.0	1491.4	1493.1	1496.5	1497.4
20°	1464.9	1469.1	1471.7	1469.1	1468.3	1465.7	1462.3	1459.7	1463.1	1468.3	1469.1
22.5°	1429.8	1430.6	1436.6	1430.6	1426.3	1425.5	1422.0	1416.9	1422.0	1426.3	1427.2
25°	1386.1	1390.4	1387.8	1377.5	1377.5	1370.7	1369.0	1366.4	1367.3	1375.0	1378.4
27.5°	1330.4	1332.2	1325.3	1316.7	1309.0	1304.8	1298.8	1299.6	1299.6	1309.9	1313.3
30°	1269.7	1260.2	1254.2	1240.5	1234.6	1224.3	1222.6	1222.6	1220.9	1226.0	1241.4
32.5°	1196.9	1184.0	1174.6	1161.8	1151.5	1141.2	1136.1	1138.7	1137.8	1150.7	1155.8
35°	1117.3	1109.6	1089.9	1073.6	1067.6	1052.2	1052.2	1044.5	1049.6	1064.2	1070.2
37.5°	1033.4	1021.4	1005.1	987.1	982.8	970.9	966.6	962.3	973.4	976.0	982.0
40°	947.7	936.6	921.2	904.1	904.1	889.5	889.5	889.5	890.4	895.5	906.7
42.5°	866.4	854.4	840.7	828.7	827.0	815.9	815.9	815.0	816.8	821.0	831.3
45°	787.6	778.2	763.7	757.7	758.5	746.6	749.1	746.6	750.0	754.3	757.7
47.5°	714.9	708.9	702.9	694.3	691.8	690.9	686.6	683.2	689.2	689.2	694.3
50°	647.2	643.8	640.4	635.3	636.1	632.7	627.6	627.6	631.8	632.7	636.1
52.5°	588.2	583.9	579.6	580.5	581.3	579.6	577.0	574.5	577.0	578.8	583.0
55°	529.1	525.7	530.0	528.2	530.0	528.2	526.5	524.8	529.1	526.5	530.8
57.5°	476.0	479.4	481.2	477.7	480.3	478.6	479.4	476.9	480.3	482.0	481.2
60°	427.2	432.4	429.8	430.6	434.1	432.4	428.9	431.5	434.9	435.8	434.9
62.5°	382.7	388.7	391.3	389.5	390.4	388.7	391.3	387.8	392.1	393.8	391.3
65°	342.5	349.3	351.0	351.0	351.0	349.3	351.9	352.7	354.4	354.4	352.7
67.5°	308.2	314.2	315.9	317.6	315.9	314.2	314.2	315.1	318.5	320.2	318.5
70°	277.4	283.4	284.2	284.2	285.1	286.8	283.4	285.1	287.7	288.5	287.7
72.5°	250.8	256.8	258.6	257.7	258.6	259.4	259.4	257.7	260.3	262.0	262.0
75°	229.4	232.9	234.6	234.6	235.4	236.3	236.3	235.4	237.2	238.0	238.9
77.5°	209.8	212.3	214.9	214.9	215.7	214.9	216.6	216.6	217.5	218.3	219.2
80°	190.1	193.5	195.2	196.1	197.8	198.6	198.6	198.6	199.5	200.3	200.3
82.5°	174.7	177.2	179.8	182.4	182.4	183.2	183.2	183.2	184.1	184.1	184.9
85°	159.2	162.7	165.2	166.9	167.8	168.7	168.7	169.5	169.5	169.5	170.4
87.5°	145.5	149.8	151.5	153.2	154.1	155.8	155.8	155.8	156.7	156.7	156.7
90°	136.1	140.4	142.1	143.8	144.7	145.5	145.5	146.4	146.4	147.3	147.3
92.5°	125.0	129.3	132.7	132.7	133.6	135.3	134.4	134.4	135.3	136.1	136.1
95°	116.4	119.9	122.4	123.3	124.1	124.1	124.1	125.0	124.1	125.0	125.0
97.5°	106.2	109.6	112.2	113.9	114.7	114.7	114.7	115.6	114.7	115.6	115.6
100°	97.6	101.0	103.6	104.4	106.2	106.2	106.2	106.2	106.2	106.2	107.0
102.5°	90.8	94.2	95.9	96.7	97.6	98.5	98.5	98.5	98.5	99.3	99.3
105°	83.9	87.3	89.0	89.9	90.8	91.6	91.6	91.6	92.5	92.5	91.6
107.5°	77.9	80.5	82.2	83.9	84.8	84.8	85.6	85.6	85.6	85.6	85.6
110°	71.9	74.5	77.1	78.8	78.8	79.6	79.6	80.5	80.5	79.6	80.5

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	65.9	69.3	71.1	72.8	73.6	74.5	74.5	74.5	74.5	74.5	74.5
115°	60.8	64.2	65.9	67.6	68.5	69.3	69.3	69.3	69.3	69.3	69.3
117.5°	56.5	59.9	61.6	62.5	63.4	64.2	65.1	65.1	65.1	65.1	64.2
120°	52.2	54.8	56.5	58.2	59.1	59.9	59.9	59.9	59.9	59.9	59.9
122.5°	47.9	50.5	52.2	53.9	54.8	55.6	55.6	55.6	55.6	55.6	55.6
125°	43.7	46.2	47.9	49.7	50.5	51.4	51.4	51.4	51.4	51.4	51.4
127.5°	39.4	42.0	44.5	45.4	46.2	47.1	47.1	47.1	47.9	47.1	47.1
130°	35.1	37.7	40.2	41.1	42.0	42.8	43.7	43.7	43.7	43.7	42.8
132.5°	31.7	34.2	36.0	36.8	38.5	38.5	39.4	39.4	39.4	39.4	38.5
135°	29.1	30.8	32.5	33.4	35.1	35.1	35.1	36.0	36.0	35.1	34.2
137.5°	25.7	27.4	29.1	30.0	30.8	31.7	31.7	32.5	31.7	31.7	31.7
140°	24.0	24.8	26.5	27.4	28.3	28.3	28.3	29.1	29.1	28.3	28.3
142.5°	20.5	22.3	24.0	24.8	25.7	25.7	25.7	25.7	25.7	25.7	25.7
145°	17.1	19.7	20.5	22.3	22.3	23.1	23.1	23.1	23.1	23.1	22.3
147.5°	14.6	16.3	18.8	19.7	19.7	20.5	20.5	20.5	20.5	20.5	19.7
150°	11.1	12.8	15.4	17.1	17.1	18.0	18.0	18.0	18.0	17.1	17.1
152.5°	9.4	11.1	12.0	13.7	14.6	14.6	14.6	15.4	14.6	14.6	14.6
155°	8.6	9.4	10.3	11.1	12.0	12.8	12.8	12.8	12.8	12.0	12.0
157.5°	6.8	7.7	8.6	9.4	10.3	11.1	11.1	11.1	11.1	11.1	10.3
160°	5.1	6.0	6.8	6.8	7.7	8.6	9.4	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: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5
2.5°	1553.0	1552.2	1554.8	1550.5	1537.6	1541.1	1539.3	1547.0	1548.8	1550.5	1558.2
5°	1553.0	1552.2	1553.9	1550.5	1536.8	1539.3	1537.6	1545.3	1547.0	1547.9	1555.6
7.5°	1549.6	1548.8	1551.3	1547.0	1532.5	1535.9	1533.3	1541.1	1541.9	1542.8	1549.6
10°	1542.8	1541.9	1543.6	1540.2	1525.6	1529.1	1525.6	1533.3	1533.3	1535.1	1540.2
12.5°	1532.5	1530.8	1534.2	1529.9	1513.7	1517.9	1516.2	1521.4	1522.2	1523.1	1528.2
15°	1517.9	1516.2	1518.8	1516.2	1501.7	1502.5	1500.0	1507.7	1508.5	1506.8	1511.9
17.5°	1496.5	1494.8	1500.0	1498.2	1483.7	1487.1	1486.3	1488.0	1490.5	1486.3	1493.1
20°	1470.0	1471.7	1473.4	1474.3	1463.1	1463.1	1462.3	1465.7	1468.3	1464.9	1470.0
22.5°	1430.6	1434.9	1440.0	1441.7	1434.0	1433.2	1438.3	1436.6	1439.2	1437.5	1440.9
25°	1381.0	1389.5	1394.7	1399.8	1395.5	1397.2	1404.9	1406.6	1406.6	1405.8	1409.2
27.5°	1319.3	1330.4	1339.9	1351.0	1346.7	1350.1	1363.0	1364.7	1368.1	1364.7	1371.5
30°	1245.7	1256.0	1273.9	1290.2	1291.9	1297.1	1315.0	1316.7	1326.2	1322.7	1325.3
32.5°	1172.1	1177.2	1197.7	1214.0	1224.3	1237.1	1256.8	1260.2	1273.1	1275.6	1275.6
35°	1079.6	1094.1	1113.0	1136.1	1148.9	1162.6	1189.2	1194.3	1213.2	1219.1	1226.0
37.5°	1001.7	1015.4	1027.4	1051.3	1074.5	1089.9	1111.3	1124.1	1143.8	1154.9	1163.5
40°	918.6	929.8	942.6	966.6	986.3	1009.4	1030.8	1046.2	1071.0	1083.9	1095.0
42.5°	839.9	848.4	862.1	879.3	899.8	925.5	946.0	964.0	990.6	1008.5	1021.4
45°	769.7	774.8	786.8	799.6	817.6	844.2	863.8	887.0	908.4	927.2	942.6
47.5°	703.7	710.6	716.6	725.2	741.4	757.7	780.8	803.1	824.5	845.0	860.4
50°	643.0	643.0	652.4	658.4	669.5	684.1	702.0	717.4	744.0	758.5	778.2
52.5°	583.9	587.3	592.4	595.9	604.4	613.9	628.4	641.2	663.5	677.2	696.0
55°	531.7	535.1	537.7	539.4	544.5	555.6	560.8	571.0	586.5	597.6	613.9
57.5°	482.0	483.7	486.3	487.1	488.0	494.8	499.1	501.7	517.1	528.2	541.9
60°	436.6	436.6	439.2	438.3	437.5	440.9	440.1	442.6	452.0	458.9	464.9
62.5°	393.8	393.8	394.7	393.0	392.1	392.1	388.7	391.3	393.8	394.7	399.0
65°	354.4	358.7	355.3	356.2	351.0	349.3	347.6	342.5	341.6	338.2	339.9
67.5°	319.3	322.8	319.3	319.3	315.1	311.6	307.4	298.8	296.2	289.4	287.7
70°	291.1	288.5	290.2	287.7	282.5	278.2	272.3	265.4	256.8	248.3	242.3
72.5°	263.7	263.7	262.0	259.4	256.8	248.3	241.4	233.7	223.5	212.3	203.8
75°	237.2	238.0	238.0	235.4	231.2	223.5	215.7	204.6	193.5	180.6	169.5
77.5°	218.3	218.3	218.3	214.0	209.8	202.9	193.5	181.5	169.5	154.1	141.3
80°	200.3	199.5	199.5	194.3	190.1	182.4	172.9	161.0	148.1	131.8	117.3
82.5°	185.8	184.9	183.2	178.9	172.9	165.2	155.8	143.0	129.3	114.7	96.7
85°	170.4	169.5	167.8	163.5	157.5	150.7	140.4	127.6	113.9	97.6	80.5
87.5°	156.7	155.8	153.2	150.7	143.8	136.1	125.9	113.9	99.3	83.9	66.8
90°	147.3	145.5	143.8	140.4	134.4	125.9	115.6	102.7	88.2	72.8	55.6
92.5°	136.1	135.3	132.7	129.3	124.1	115.6	105.3	93.3	78.8	64.2	47.9
95°	125.0	124.1	122.4	119.0	113.9	106.2	96.7	84.8	71.1	56.5	42.0
97.5°	114.7	114.7	112.2	109.6	103.6	97.6	88.2	77.1	64.2	51.4	37.7
100°	106.2	106.2	103.6	100.2	95.9	89.9	80.5	70.2	58.2	46.2	32.5
102.5°	98.5	97.6	95.9	92.5	88.2	82.2	73.6	64.2	53.1	41.1	29.1
105°	91.6	90.8	89.0	85.6	82.2	75.3	68.5	59.1	47.9	36.8	25.7
107.5°	84.8	83.9	83.0	79.6	75.3	69.3	62.5	53.1	43.7	33.4	23.1
110°	78.8	77.9	76.2	72.8	68.5	63.4	56.5	48.8	39.4	30.0	20.5

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	73.6	72.8	71.1	67.6	64.2	58.2	52.2	43.7	36.0	27.4	18.0
115°	68.5	67.6	65.9	62.5	58.2	53.1	47.1	40.2	31.7	24.0	16.3
117.5°	63.4	62.5	60.8	58.2	53.9	48.8	42.8	36.0	28.3	22.3	14.6
120°	59.1	57.4	55.6	53.1	48.8	44.5	38.5	32.5	25.7	19.7	12.8
122.5°	54.8	53.1	51.4	48.8	44.5	40.2	34.2	29.1	24.0	18.0	12.0
125°	49.7	48.8	47.1	44.5	40.2	36.0	31.7	26.5	21.4	16.3	10.3
127.5°	45.4	44.5	42.8	39.4	36.0	32.5	28.3	24.0	18.8	13.7	9.4
130°	42.0	40.2	38.5	36.0	33.4	30.0	25.7	21.4	17.1	12.0	8.6
132.5°	37.7	36.0	34.2	32.5	30.0	26.5	23.1	18.8	15.4	11.1	7.7
135°	34.2	32.5	30.8	29.1	26.5	24.0	20.5	17.1	13.7	10.3	6.8
137.5°	30.0	29.1	28.3	26.5	24.0	21.4	18.8	14.6	12.0	9.4	6.0
140°	27.4	26.5	25.7	23.1	21.4	18.8	16.3	12.8	10.3	7.7	5.1
142.5°	24.8	24.0	22.3	20.5	18.8	17.1	13.7	12.0	9.4	6.8	5.1
145°	21.4	20.5	19.7	18.0	16.3	13.7	12.0	10.3	8.6	6.0	4.3
147.5°	19.7	18.8	17.1	15.4	13.7	12.0	11.1	9.4	6.8	5.1	3.4
150°	16.3	15.4	14.6	12.8	12.0	11.1	9.4	7.7	6.0	4.3	3.4
152.5°	13.7	12.8	12.0	12.0	10.3	9.4	7.7	6.8	5.1	4.3	2.6
155°	12.0	12.0	11.1	10.3	8.6	7.7	6.8	5.1	4.3	3.4	2.6
157.5°	10.3	9.4	8.6	8.6	7.7	6.8	5.1	4.3	3.4	3.4	2.6
160°	8.6	7.7	7.7	6.8	6.0	5.1	4.3	4.3	3.4	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: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5
2.5°	1559.0	1549.6	1558.2	1569.3	1569.3	1567.6	1565.9	1569.3	1577.9	1574.4	1564.2
5°	1556.5	1547.0	1554.8	1565.9	1565.9	1563.3	1561.6	1564.2	1573.6	1569.3	1559.9
7.5°	1551.3	1542.8	1547.9	1558.2	1558.2	1555.6	1553.9	1557.3	1565.0	1560.7	1550.5
10°	1541.9	1532.5	1538.5	1547.9	1547.0	1545.3	1542.8	1547.0	1553.9	1547.9	1535.9
12.5°	1529.9	1520.5	1525.6	1534.2	1533.3	1529.9	1528.2	1530.8	1536.8	1533.3	1520.5
15°	1513.7	1504.2	1508.5	1517.1	1514.5	1511.9	1508.5	1509.4	1517.1	1511.1	1497.4
17.5°	1494.0	1483.7	1487.1	1494.8	1492.3	1489.7	1485.4	1486.3	1494.8	1486.3	1471.7
20°	1470.0	1458.9	1461.4	1470.8	1466.6	1462.3	1458.0	1458.0	1466.6	1457.2	1440.9
22.5°	1444.3	1433.2	1434.9	1441.7	1438.3	1430.6	1426.3	1428.9	1433.2	1421.2	1404.1
25°	1412.6	1398.1	1400.6	1407.5	1404.9	1394.7	1390.4	1392.1	1390.4	1381.0	1363.0
27.5°	1375.8	1360.4	1362.1	1366.4	1363.0	1353.6	1348.4	1349.3	1345.9	1333.9	1313.3
30°	1329.6	1321.9	1321.0	1323.6	1318.5	1309.0	1303.0	1301.3	1300.5	1283.4	1258.5
32.5°	1282.5	1275.6	1271.4	1274.8	1268.8	1259.4	1249.1	1249.1	1240.5	1224.3	1202.9
35°	1234.6	1223.4	1219.1	1221.7	1214.9	1202.9	1194.3	1190.0	1177.2	1156.6	1133.5
37.5°	1172.9	1165.2	1160.1	1162.6	1154.9	1146.4	1130.1	1125.8	1112.1	1083.9	1054.8
40°	1106.1	1100.1	1095.0	1097.6	1089.0	1076.2	1061.6	1054.8	1039.4	1007.7	984.6
42.5°	1034.2	1031.6	1025.7	1035.1	1018.0	1005.1	990.6	979.4	964.0	929.8	903.2
45°	958.0	964.0	950.3	952.9	941.8	930.6	915.2	898.9	883.5	851.0	821.0
47.5°	877.5	881.8	872.4	874.1	862.1	851.9	838.2	817.6	800.5	772.2	745.7
50°	794.5	792.8	792.8	791.1	781.7	768.8	755.1	736.3	719.2	693.5	671.2
52.5°	706.3	709.7	711.5	715.7	703.7	696.0	674.6	658.4	645.5	619.0	600.2
55°	621.6	633.5	630.1	631.8	618.1	612.1	595.0	582.2	563.3	547.9	535.9
57.5°	544.5	547.1	548.8	551.4	545.4	533.4	519.7	509.4	494.8	482.0	473.4
60°	470.0	470.0	470.9	475.2	469.2	458.9	448.6	440.9	430.6	422.9	417.8
62.5°	399.8	405.8	406.7	403.2	395.5	390.4	383.6	379.3	372.4	369.9	368.1
65°	334.8	334.8	334.8	336.5	332.2	328.8	324.5	323.6	326.2	322.8	324.5
67.5°	280.0	277.4	275.7	276.5	274.8	273.1	272.3	274.8	280.0	280.0	284.2
70°	232.9	227.7	224.3	224.3	224.3	225.2	227.7	232.9	241.4	244.9	250.8
72.5°	194.3	183.2	178.1	178.1	178.9	182.4	190.1	199.5	207.2	214.0	221.7
75°	157.5	146.4	138.7	137.8	139.6	144.7	155.8	164.4	177.2	186.6	196.1
77.5°	127.6	113.9	104.4	103.6	106.2	113.9	127.6	138.7	153.2	163.5	173.8
80°	101.9	86.5	78.8	73.6	77.9	87.3	102.7	116.4	130.1	143.8	156.7
82.5°	81.3	66.8	54.8	49.7	54.8	67.6	82.2	98.5	112.2	126.7	139.6
85°	64.2	48.8	35.1	30.0	36.0	49.7	65.9	82.2	97.6	112.2	125.0
87.5°	50.5	35.1	21.4	14.6	22.3	36.8	52.2	68.5	84.8	99.3	112.2
90°	39.4	24.8	12.0	1.7	12.8	26.5	42.0	57.4	73.6	88.2	101.0
92.5°	33.4	18.8	6.8	0.0	7.7	19.7	34.2	49.7	64.2	78.8	91.6
95°	28.3	15.4	5.1	0.0	5.1	15.4	28.3	42.0	56.5	71.1	83.9
97.5°	24.0	12.0	3.4	0.0	3.4	12.0	23.1	36.8	49.7	63.4	75.3
100°	20.5	10.3	2.6	0.0	2.6	9.4	19.7	31.7	44.5	57.4	68.5
102.5°	18.0	8.6	1.7	0.0	1.7	7.7	16.3	27.4	38.5	50.5	61.6
105°	15.4	6.8	1.7	0.0	0.9	6.0	13.7	24.0	34.2	45.4	55.6
107.5°	13.7	6.0	1.7	0.0	0.9	5.1	12.0	20.5	30.8	40.2	49.7
110°	12.0	5.1	1.7	0.0	0.9	3.4	10.3	18.0	26.5	36.0	45.4

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	10.3	4.3	0.9	0.0	0.0	2.6	8.6	15.4	23.1	32.5	40.2
115°	9.4	4.3	0.9	0.0	0.0	1.7	6.8	13.7	20.5	29.1	36.0
117.5°	8.6	3.4	0.9	0.0	0.9	1.7	6.0	12.0	18.0	24.8	32.5
120°	7.7	3.4	0.9	0.0	0.9	0.9	4.3	10.3	15.4	22.3	28.3
122.5°	6.8	3.4	0.9	0.0	0.9	0.9	3.4	8.6	13.7	19.7	24.8
125°	6.0	2.6	1.7	0.9	0.9	0.9	2.6	6.8	12.0	16.3	22.3
127.5°	6.0	2.6	1.7	0.9	0.9	0.9	1.7	6.0	9.4	14.6	19.7
130°	5.1	2.6	1.7	0.9	0.9	0.9	0.9	4.3	8.6	12.0	16.3
132.5°	4.3	2.6	1.7	0.9	0.9	0.9	0.9	2.6	6.0	10.3	13.7
135°	4.3	2.6	1.7	0.9	0.9	0.9	0.9	1.7	4.3	7.7	11.1
137.5°	3.4	1.7	1.7	0.9	0.9	0.9	0.9	0.9	3.4	6.0	8.6
140°	3.4	1.7	1.7	0.9	0.9	0.9	0.9	0.9	2.6	4.3	6.8
142.5°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	0.9	1.7	3.4	5.1
145°	2.6	1.7	1.7	0.9	0.9	0.9	0.9	0.9	0.9	1.7	3.4
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: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5
2.5°	1560.7	1544.5	1553.0	1550.5	1553.9	1560.7	1559.9	1558.2	1558.2	1555.6	1552.2
5°	1555.6	1540.2	1547.9	1543.6	1547.9	1553.9	1553.0	1550.5	1552.2	1547.9	1543.6
7.5°	1545.3	1531.6	1538.5	1535.1	1538.5	1544.5	1541.9	1541.1	1542.8	1535.9	1533.3
10°	1533.3	1517.9	1525.6	1521.4	1525.6	1529.9	1528.2	1524.8	1528.2	1521.4	1518.8
12.5°	1514.5	1501.7	1506.8	1505.1	1507.7	1511.9	1508.5	1506.0	1507.7	1501.7	1496.5
15°	1494.0	1481.1	1485.4	1482.8	1484.5	1489.7	1483.7	1482.8	1481.1	1475.1	1473.4
17.5°	1467.4	1455.4	1459.7	1455.4	1458.0	1456.3	1455.4	1451.2	1451.2	1444.3	1439.2
20°	1434.9	1424.6	1422.0	1418.6	1422.0	1418.6	1413.5	1410.1	1409.2	1402.4	1398.1
22.5°	1397.2	1385.2	1386.9	1377.5	1378.4	1373.2	1364.7	1361.3	1357.8	1350.1	1344.1
25°	1351.8	1339.9	1331.3	1325.3	1317.6	1316.7	1305.6	1297.1	1296.2	1286.8	1285.9
27.5°	1300.5	1286.8	1279.9	1265.4	1256.0	1248.3	1238.8	1230.3	1226.0	1215.7	1208.9
30°	1241.4	1226.0	1208.9	1198.6	1184.0	1178.0	1161.8	1151.5	1148.1	1137.0	1131.8
32.5°	1174.6	1158.4	1144.7	1125.0	1108.7	1100.1	1083.9	1073.6	1069.3	1057.3	1050.5
35°	1101.9	1083.9	1067.6	1048.8	1035.9	1021.4	1001.7	991.4	982.0	977.7	972.6
37.5°	1025.7	1006.0	987.1	968.3	957.2	940.0	922.9	916.1	904.9	900.7	895.5
40°	946.9	927.2	909.2	891.2	878.4	863.0	847.6	845.0	833.0	828.7	825.3
42.5°	869.0	848.4	827.9	815.0	805.6	790.2	779.9	777.4	767.1	764.5	764.5
45°	798.8	773.1	756.0	744.8	737.1	724.3	715.7	714.0	705.5	703.7	703.7
47.5°	723.4	699.5	686.6	679.8	672.9	663.5	658.4	658.4	649.8	648.1	647.2
50°	653.2	631.0	621.6	614.7	613.9	607.0	602.7	601.0	601.0	595.0	595.9
52.5°	586.5	575.3	567.6	563.3	558.2	553.9	550.5	550.5	547.9	543.6	545.4
55°	524.8	512.0	512.8	509.4	506.8	504.3	505.1	500.0	499.1	495.7	498.3
57.5°	463.2	463.2	461.5	458.9	454.6	456.3	456.3	456.3	452.0	449.5	452.0
60°	410.9	413.5	409.2	411.8	410.1	410.9	409.2	409.2	406.7	405.8	406.7
62.5°	364.7	369.0	367.3	370.7	369.0	369.9	371.6	368.1	366.4	364.7	366.4
65°	323.6	328.8	327.9	330.5	331.3	332.2	333.0	331.3	329.6	327.9	327.0
67.5°	287.7	292.8	296.2	297.1	297.9	300.5	299.6	297.9	296.2	293.7	292.8
70°	255.1	262.0	266.3	268.0	271.4	269.7	269.7	268.8	267.1	264.5	263.7
72.5°	227.7	235.4	239.7	241.4	244.9	244.9	244.0	243.1	241.4	238.9	238.0
75°	203.8	210.6	216.6	220.0	222.6	222.6	221.7	220.9	219.2	217.5	216.6
77.5°	184.9	190.9	196.1	200.3	202.0	202.9	202.0	200.3	200.3	199.5	198.6
80°	166.1	172.9	178.1	182.4	184.9	184.9	184.1	184.9	183.2	182.4	181.5
82.5°	149.8	157.5	163.5	167.8	169.5	170.4	169.5	170.4	168.7	168.7	168.7
85°	135.3	143.0	149.8	153.2	155.8	156.7	156.7	156.7	155.8	155.8	155.8
87.5°	123.3	131.0	137.8	141.3	143.8	144.7	144.7	145.5	143.8	143.8	143.8
90°	112.2	119.9	126.7	130.1	132.7	134.4	134.4	135.3	134.4	133.6	133.6
92.5°	101.9	110.4	117.3	120.7	123.3	125.9	125.9	126.7	125.0	125.0	125.0
95°	93.3	101.9	107.9	112.2	114.7	116.4	117.3	117.3	116.4	116.4	116.4
97.5°	85.6	93.3	99.3	103.6	106.2	107.0	107.9	108.7	107.9	107.9	107.9
100°	77.9	85.6	91.6	95.0	98.5	99.3	100.2	101.0	101.0	100.2	100.2
102.5°	71.1	78.8	83.9	88.2	90.8	92.5	93.3	93.3	93.3	93.3	93.3
105°	64.2	71.9	77.1	81.3	83.9	85.6	86.5	87.3	87.3	86.5	86.5
107.5°	58.2	65.1	71.1	74.5	77.9	79.6	80.5	80.5	81.3	80.5	80.5
110°	52.2	59.9	65.1	68.5	71.9	73.6	74.5	75.3	75.3	75.3	75.3

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	47.9	53.9	59.1	62.5	65.9	67.6	68.5	69.3	70.2	69.3	69.3
115°	42.8	48.8	53.9	57.4	59.9	61.6	63.4	64.2	64.2	65.1	64.2
117.5°	38.5	43.7	48.8	52.2	54.8	57.4	58.2	59.1	59.9	59.1	59.1
120°	34.2	39.4	43.7	47.1	49.7	52.2	53.1	53.9	54.8	53.9	53.9
122.5°	30.8	35.1	39.4	42.8	45.4	47.1	48.8	48.8	49.7	49.7	49.7
125°	27.4	31.7	35.1	38.5	41.1	42.8	43.7	44.5	44.5	45.4	45.4
127.5°	24.0	27.4	31.7	34.2	36.8	38.5	39.4	40.2	40.2	41.1	41.1
130°	20.5	24.0	27.4	30.0	32.5	34.2	35.1	36.0	36.8	36.8	36.8
132.5°	18.0	21.4	24.0	26.5	28.3	30.0	31.7	32.5	32.5	32.5	32.5
135°	14.6	18.0	20.5	23.1	24.8	26.5	27.4	29.1	29.1	29.1	29.1
137.5°	12.0	15.4	18.0	19.7	21.4	23.1	24.0	24.8	25.7	25.7	25.7
140°	9.4	12.0	14.6	17.1	18.8	19.7	21.4	21.4	22.3	22.3	22.3
142.5°	6.8	9.4	11.1	13.7	15.4	17.1	18.0	18.8	18.8	18.8	18.8
145°	5.1	6.8	8.6	10.3	12.8	13.7	14.6	15.4	16.3	16.3	16.3
147.5°	3.4	5.1	6.0	7.7	9.4	11.1	12.0	12.8	13.7	13.7	13.7
150°	2.6	3.4	5.1	6.0	6.8	8.6	10.3	10.3	11.1	11.1	10.3
152.5°	1.7	2.6	3.4	4.3	5.1	6.0	7.7	7.7	8.6	8.6	8.6
155°	1.7	1.7	1.7	2.6	3.4	4.3	5.1	6.0	6.0	6.0	6.0
157.5°	1.7	1.7	1.7	1.7	1.7	2.6	3.4	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: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5
2.5°	1554.8	1556.5	1556.5	1554.8	1553.9	1557.3	1553.0	1536.8	1541.9	1543.6	1548.8
5°	1547.0	1548.8	1548.8	1548.8	1547.0	1550.5	1546.2	1529.9	1535.9	1538.5	1541.9
7.5°	1535.9	1536.8	1538.5	1537.6	1535.9	1541.1	1536.8	1520.5	1524.8	1529.1	1533.3
10°	1521.4	1521.4	1522.2	1523.9	1522.2	1526.5	1522.2	1507.7	1511.9	1514.5	1519.6
12.5°	1501.7	1503.4	1504.2	1503.4	1502.5	1506.0	1504.2	1490.5	1492.3	1497.4	1502.5
15°	1475.1	1475.1	1479.4	1477.7	1477.7	1481.1	1482.8	1467.4	1470.0	1477.7	1482.8
17.5°	1442.6	1443.5	1446.9	1448.6	1447.7	1453.7	1454.6	1442.6	1441.7	1451.2	1456.3
20°	1400.6	1402.4	1406.6	1410.1	1410.1	1416.9	1419.5	1411.8	1412.6	1422.9	1424.6
22.5°	1349.3	1349.3	1357.0	1362.1	1366.4	1370.7	1378.4	1371.5	1371.5	1385.2	1392.9
25°	1285.9	1291.9	1294.5	1304.8	1310.8	1322.7	1329.6	1330.4	1331.3	1344.1	1349.3
27.5°	1215.7	1217.4	1225.1	1237.1	1244.0	1255.1	1267.9	1270.5	1274.8	1291.9	1299.6
30°	1136.1	1141.2	1144.7	1161.8	1171.2	1185.8	1202.0	1208.0	1211.4	1234.6	1244.0
32.5°	1054.8	1056.5	1071.0	1080.4	1091.6	1107.0	1125.8	1137.0	1143.8	1167.8	1181.5
35°	973.4	976.9	988.8	1000.8	1012.0	1027.4	1047.1	1062.5	1074.5	1095.9	1113.8
37.5°	898.9	907.5	910.1	922.1	930.6	946.0	959.7	982.0	994.0	1016.2	1039.4
40°	832.2	834.7	836.4	848.4	854.4	869.0	888.7	903.2	919.5	935.8	963.2
42.5°	766.2	768.0	770.5	777.4	784.2	794.5	809.1	823.6	840.7	864.7	882.7
45°	705.5	707.2	708.9	713.2	719.2	728.6	738.0	748.3	765.4	785.9	804.8
47.5°	649.0	652.4	652.4	653.2	657.5	665.2	672.1	684.9	694.3	705.5	726.9
50°	595.0	597.6	598.4	598.4	601.0	606.1	607.9	616.4	625.0	635.3	650.7
52.5°	544.5	544.5	543.6	547.1	547.1	550.5	551.4	556.5	562.5	573.6	580.5
55°	496.6	496.6	499.1	497.4	497.4	499.1	498.3	499.1	504.3	511.1	517.1
57.5°	450.3	449.5	452.0	450.3	449.5	451.2	452.9	449.5	450.3	457.2	457.2
60°	404.1	405.0	407.5	405.8	405.8	405.8	404.1	402.4	400.7	405.0	406.7
62.5°	367.3	364.7	367.3	364.7	366.4	365.6	363.9	360.4	361.3	359.6	357.9
65°	328.8	328.8	329.6	327.0	328.8	328.8	326.2	325.3	320.2	318.5	314.2
67.5°	295.4	295.4	296.2	294.5	294.5	295.4	292.8	290.2	285.1	282.5	276.5
70°	266.3	266.3	266.3	265.4	265.4	265.4	263.7	260.3	255.1	250.8	243.1
72.5°	239.7	240.6	239.7	239.7	242.3	239.7	237.2	233.7	229.4	220.9	214.0
75°	218.3	219.2	218.3	218.3	218.3	217.5	216.6	211.5	206.3	199.5	189.2
77.5°	199.5	199.5	200.3	199.5	199.5	198.6	196.1	191.8	185.8	179.8	167.8
80°	181.5	182.4	183.2	184.1	182.4	181.5	178.9	175.5	167.8	161.0	149.0
82.5°	168.7	167.8	168.7	169.5	167.8	166.9	164.4	160.1	154.1	144.7	132.7
85°	155.8	155.0	155.0	155.8	155.0	153.2	150.7	146.4	140.4	131.0	119.0
87.5°	143.0	143.8	144.7	143.8	143.0	141.3	138.7	134.4	127.6	119.9	107.0
90°	133.6	133.6	133.6	133.6	132.7	131.0	128.4	123.3	117.3	107.9	96.7
92.5°	125.0	125.0	125.0	125.0	124.1	121.6	119.0	114.7	107.9	98.5	88.2
95°	116.4	117.3	116.4	116.4	114.7	113.9	109.6	105.3	99.3	89.9	78.8
97.5°	107.0	107.9	107.0	107.0	106.2	104.4	101.9	96.7	90.8	82.2	71.9
100°	100.2	100.2	99.3	99.3	98.5	96.7	93.3	89.0	83.0	74.5	64.2
102.5°	92.5	93.3	92.5	92.5	90.8	89.0	86.5	82.2	76.2	67.6	58.2
105°	86.5	86.5	85.6	85.6	83.9	82.2	79.6	74.5	69.3	61.6	52.2
107.5°	80.5	80.5	79.6	79.6	77.9	76.2	72.8	68.5	63.4	55.6	47.1
110°	74.5	74.5	74.5	73.6	71.9	69.3	66.8	62.5	57.4	50.5	42.0

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	70.2	69.3	68.5	67.6	65.9	64.2	60.8	56.5	51.4	45.4	37.7
115°	64.2	64.2	63.4	62.5	60.8	58.2	55.6	52.2	47.1	40.2	33.4
117.5°	59.1	59.1	58.2	57.4	55.6	53.1	50.5	47.1	42.0	36.0	30.0
120°	53.9	53.9	53.1	52.2	50.5	47.9	46.2	42.0	37.7	31.7	26.5
122.5°	49.7	48.8	48.8	47.1	46.2	43.7	41.1	37.7	33.4	28.3	23.1
125°	44.5	44.5	43.7	42.8	42.0	39.4	36.8	33.4	29.1	24.8	20.5
127.5°	40.2	40.2	39.4	38.5	37.7	35.1	32.5	30.0	25.7	21.4	17.1
130°	36.0	36.0	35.1	34.2	33.4	30.8	29.1	25.7	22.3	18.8	14.6
132.5°	32.5	32.5	31.7	30.8	29.1	27.4	25.7	22.3	19.7	16.3	12.8
135°	29.1	28.3	28.3	27.4	25.7	24.0	22.3	19.7	16.3	13.7	10.3
137.5°	25.7	24.8	24.0	23.1	22.3	20.5	18.8	17.1	14.6	11.1	8.6
140°	22.3	21.4	21.4	20.5	18.8	18.0	16.3	13.7	12.0	9.4	6.8
142.5°	18.8	18.8	18.0	17.1	16.3	15.4	13.7	12.0	9.4	7.7	5.1
145°	16.3	15.4	15.4	14.6	13.7	12.0	11.1	9.4	7.7	6.0	4.3
147.5°	12.8	12.8	12.8	12.0	11.1	10.3	9.4	7.7	6.0	4.3	2.6
150°	10.3	10.3	10.3	9.4	8.6	7.7	6.8	6.0	4.3	2.6	1.7
152.5°	8.6	8.6	7.7	7.7	6.8	6.0	5.1	4.3	2.6	1.7	1.7
155°	6.0	6.0	6.0	5.1	5.1	4.3	3.4	2.6	1.7	1.7	1.7
157.5°	4.3	4.3	4.3	3.4	3.4	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

TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5	1556.5
2.5°	1546.2	1545.3	1552.2	1552.2	1544.5	1556.5	1569.3
5°	1541.1	1540.2	1547.0	1547.0	1540.2	1552.2	1565.9
7.5°	1530.8	1531.6	1538.5	1540.2	1531.6	1542.8	1557.3
10°	1519.6	1518.8	1526.5	1528.2	1521.4	1531.6	1545.3
12.5°	1501.7	1501.7	1509.4	1511.9	1505.1	1517.1	1529.9
15°	1482.8	1482.8	1488.0	1492.3	1486.3	1497.4	1510.2
17.5°	1458.9	1458.0	1463.1	1468.3	1462.3	1474.3	1488.0
20°	1428.0	1428.0	1434.0	1440.0	1435.7	1446.9	1462.3
22.5°	1395.5	1392.1	1402.4	1406.6	1404.1	1415.2	1430.6
25°	1354.4	1353.6	1363.8	1369.8	1366.4	1378.4	1392.1
27.5°	1309.9	1309.0	1319.3	1327.0	1325.3	1336.4	1351.8
30°	1256.0	1260.2	1269.7	1282.5	1278.2	1290.2	1306.5
32.5°	1199.5	1203.7	1214.9	1228.6	1229.4	1238.8	1255.1
35°	1131.8	1142.9	1150.7	1168.6	1172.1	1181.5	1198.6
37.5°	1060.8	1073.6	1089.9	1103.6	1110.4	1118.1	1137.8
40°	981.1	1000.0	1018.0	1034.2	1042.8	1050.5	1069.3
42.5°	909.2	923.8	940.9	957.2	972.6	979.4	999.1
45°	827.9	845.0	860.4	880.1	895.5	903.2	922.9
47.5°	748.3	765.4	785.9	799.6	815.9	823.6	842.4
50°	672.1	687.5	704.6	720.9	734.6	741.4	757.7
52.5°	596.7	613.0	629.3	639.5	654.1	659.2	672.9
55°	530.0	541.1	555.6	561.6	576.2	579.6	589.0
57.5°	465.7	473.4	478.6	488.9	499.1	506.8	518.0
60°	407.5	410.9	414.4	420.4	428.9	431.5	435.8
62.5°	355.3	354.4	361.3	363.0	363.9	372.4	368.1
65°	309.1	309.9	303.9	301.4	304.8	307.4	305.6
67.5°	270.5	265.4	260.3	254.3	249.1	251.7	249.1
70°	232.9	228.6	220.0	211.5	208.0	202.9	200.3
72.5°	202.9	192.6	184.1	172.9	166.9	161.0	156.7
75°	179.8	165.2	153.2	141.3	132.7	124.1	122.4
77.5°	155.8	142.1	128.4	115.6	102.7	93.3	89.9
80°	137.0	124.1	107.9	92.5	78.8	66.8	62.5
82.5°	119.9	106.2	89.9	73.6	58.2	45.4	40.2
85°	105.3	90.8	74.5	58.2	42.8	29.1	22.3
87.5°	94.2	77.9	61.6	46.2	30.0	16.3	8.6
90°	83.9	68.5	53.1	36.8	21.4	8.6	0.0
92.5°	74.5	59.9	44.5	30.0	16.3	5.1	0.9
95°	65.9	53.1	37.7	24.0	12.0	3.4	0.9
97.5°	59.1	46.2	32.5	19.7	9.4	2.6	0.9
100°	53.1	40.2	28.3	16.3	7.7	1.7	0.9
102.5°	47.1	36.0	24.0	13.7	6.0	0.9	0.9
105°	42.0	31.7	20.5	12.0	5.1	0.9	0.9
107.5°	37.7	28.3	18.0	10.3	3.4	0.9	0.9
110°	33.4	24.0	15.4	8.6	2.6	0.9	0.9



TEST NUMBER: P1213783

CATALOG NUMBER: 4SNLED-LD5-46SL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	30.0	21.4	13.7	6.8	1.7	0.9	0.9
115°	26.5	18.8	12.0	6.0	1.7	0.9	0.9
117.5°	23.1	16.3	10.3	4.3	0.9	0.9	0.9
120°	20.5	14.6	8.6	3.4	0.9	0.9	0.9
122.5°	18.0	12.0	6.8	2.6	0.9	0.9	0.9
125°	15.4	10.3	6.0	1.7	0.9	0.9	0.9
127.5°	12.8	8.6	4.3	1.7	0.9	0.9	0.9
130°	11.1	6.8	3.4	0.9	0.9	0.9	0.9
132.5°	9.4	5.1	2.6	0.9	0.9	0.9	0.9
135°	7.7	4.3	1.7	0.9	0.9	0.9	0.9
137.5°	6.0	3.4	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°	3.4	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)