

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: P1213080

Luminaire Tested: 4SNLED-LD5-46SL-LC-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213080
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33518)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-46SL-LC-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR LENSED
Light Source: -
Ballast/Driver: -

Summary

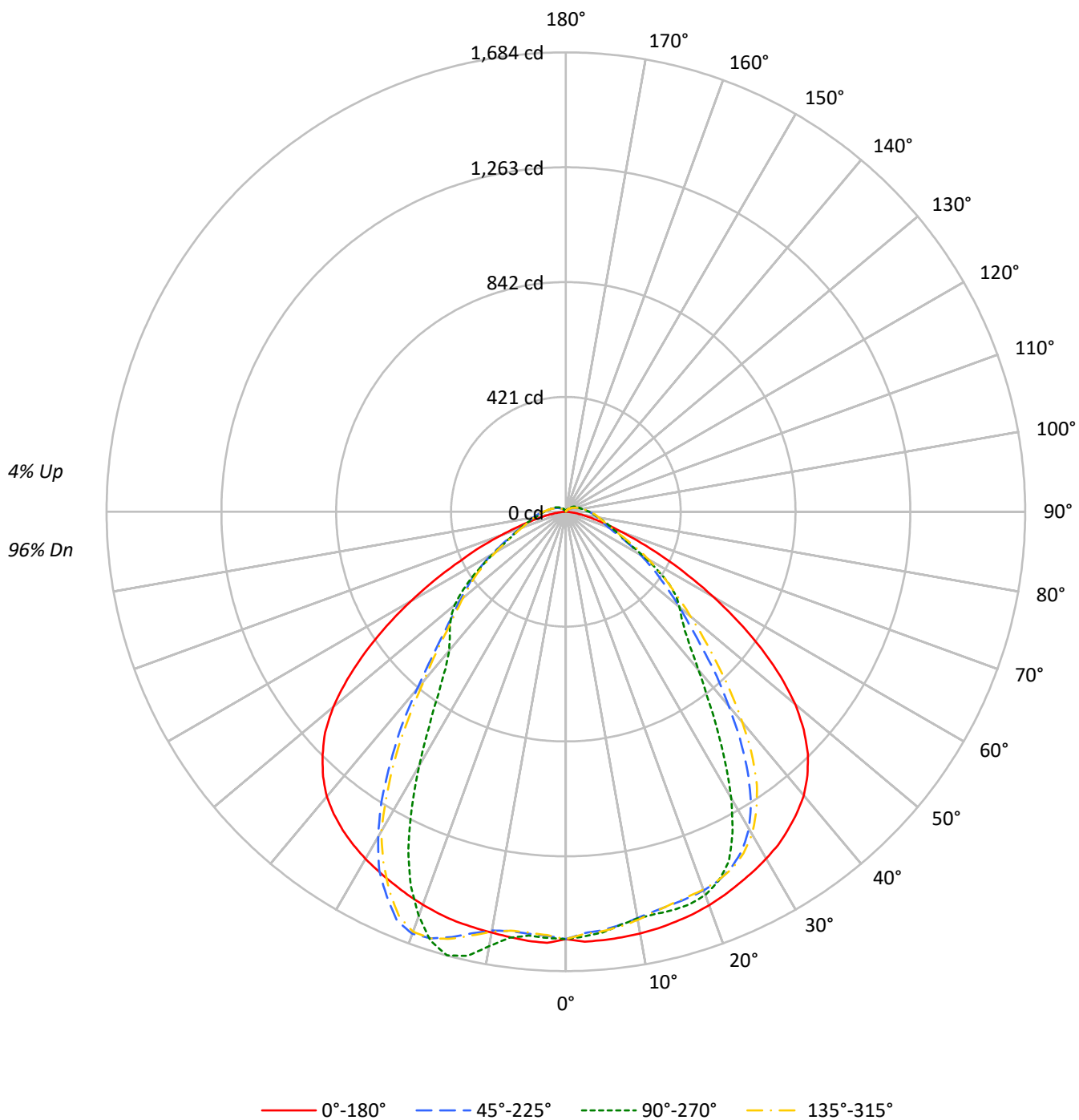
Lumens per Lamp: N/A
Luminaire Lumens: 3734.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.12 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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: P1213080

CATALOG NUMBER: 4SNLED-LD5-46SL-LC-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	115	115	115	115	109	109	109	103	103	103	98	98	98
1	109	104	100	97	106	102	98	95	97	94	91	92	90	88	88	86	84
2	100	93	86	81	97	90	85	80	86	82	77	82	79	75	79	76	73
3	92	83	75	69	89	81	74	68	77	71	67	74	69	65	71	67	63
4	85	74	66	60	83	73	65	59	70	63	58	67	61	57	64	60	56
5	79	67	59	52	76	66	58	52	63	56	51	61	55	50	59	53	49
6	73	61	52	46	71	60	52	46	57	51	45	55	49	45	54	48	44
7	68	55	47	42	66	54	47	41	53	46	41	51	45	40	49	44	40
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36
9	60	47	39	34	58	46	39	34	45	38	33	43	37	33	42	37	33
10	56	43	36	31	54	43	36	31	42	35	30	40	34	30	39	34	30

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	12657	12657	12657	12657
5°	12749	12156	12776	12251
10°	12809	11650	12782	12441
15°	12908	11494	12901	12798
20°	13050	11312	13036	11924
25°	13211	10731	13204	10369
30°	13459	9301	13466	8240
35°	13723	7521	13762	6364
40°	13955	6055	14013	5335
45°	13906	5129	13978	4995
50°	13307	4723	13494	4617
55°	11806	4245	12100	3859
60°	9576	3249	10085	2979
65°	7118	2485	7670	2357
70°	4841	2146	5457	2052
75°	3168	1936	3688	1831
80°	2048	1806	2400	1660
85°	1052	1800	1380	1644

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 13978 cd/sqm

TEST NUMBER: P1213080

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.8	4.0
10°-20°	442.7	11.9
20°-30°	673.0	18.0
30°-40°	722.0	19.3
40°-50°	626.6	16.8
50°-60°	464.4	12.4
60°-70°	266.1	7.1
70°-80°	147.3	3.9
80°-90°	89.7	2.4
90°-100°	58.3	1.6
100°-110°	39.1	1.0
110°-120°	26.4	0.7
120°-130°	16.2	0.4
130°-140°	8.5	0.2
140°-150°	3.9	0.1
150°-160°	1.1	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1264.5	33.9
0°-40°	1986.4	53.2
0°-60°	3077.4	82.4
0°-90°	3580.5	95.9
90°-120°	123.8	3.3
90°-150°	152.4	4.1
90°-180°	154.0	4.1
0°-180°	3734.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1566	1566	1566	1566	1566	
5°	1576	1548	1579	1560	1576	150
15°	1556	1512	1555	1684	1556	440
25°	1503	1414	1502	1366	1503	695
35°	1422	963	1426	815	1422	890
45°	1255	617	1261	601	1255	961
55°	875	463	897	421	875	776
65°	397	235	428	222	397	400
75°	113	149	132	141	113	129
85°	15	103	20	94	15	20
90°	0	86	2	79	0	1
95°	1	70	0	67	1	1
105°	1	53	1	50	1	1
115°	1	43	1	39	1	1
125°	1	32	1	27	1	1
135°	1	20	1	17	1	1
145°	1	12	2	10	1	1
155°	2	6	2	5	2	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

TEST NUMBER: P1213080

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1577.6	1573.6	1572.0	1568.7	1571.2	1580.9	1574.4	1563.9	1564.7	1546.1	1555.8
5°	1576.0	1571.2	1568.7	1565.5	1567.1	1576.0	1569.6	1559.0	1558.2	1539.6	1548.5
7.5°	1573.6	1568.7	1564.7	1562.3	1563.1	1570.4	1562.3	1550.1	1547.7	1527.5	1535.6
10°	1569.6	1566.3	1560.7	1556.6	1555.8	1563.9	1550.9	1538.8	1533.1	1512.1	1520.2
12.5°	1563.9	1559.0	1553.4	1546.1	1545.3	1550.1	1539.6	1522.6	1517.0	1500.0	1508.9
15°	1555.8	1550.1	1543.7	1535.6	1531.5	1534.8	1521.8	1506.4	1505.6	1491.1	1503.2
17.5°	1546.9	1538.8	1531.5	1520.2	1514.5	1517.0	1506.4	1492.7	1494.3	1485.4	1499.2
20°	1534.8	1525.9	1514.5	1503.2	1495.1	1499.2	1491.9	1481.4	1483.8	1477.3	1489.5
22.5°	1521.0	1508.9	1495.1	1482.2	1475.7	1481.4	1475.7	1466.8	1467.6	1463.6	1470.9
25°	1503.2	1489.5	1473.3	1457.1	1453.9	1457.9	1454.7	1447.4	1444.2	1437.7	1440.9
27.5°	1487.0	1471.7	1451.4	1434.4	1428.8	1436.9	1429.6	1417.5	1408.6	1399.7	1393.2
30°	1468.4	1449.8	1427.2	1407.7	1402.9	1406.1	1395.6	1377.0	1353.5	1342.2	1324.4
32.5°	1448.2	1423.9	1395.6	1373.8	1370.5	1368.1	1348.7	1322.0	1285.6	1262.9	1235.4
35°	1421.5	1394.8	1360.8	1334.1	1329.3	1315.5	1284.0	1248.4	1201.4	1162.6	1115.7
37.5°	1391.6	1360.0	1324.4	1288.8	1275.1	1247.6	1203.1	1165.8	1094.6	1047.7	991.1
40°	1357.6	1319.6	1275.9	1233.0	1210.3	1165.8	1114.9	1059.9	991.1	928.0	880.2
42.5°	1310.7	1270.2	1218.4	1170.7	1131.9	1072.8	1012.9	935.3	872.2	818.8	770.2
45°	1254.8	1206.3	1146.4	1089.0	1039.6	969.2	898.9	821.2	768.6	706.3	673.1
47.5°	1182.8	1130.2	1066.3	1002.4	937.7	860.0	786.4	712.0	659.4	614.9	590.6
50°	1097.9	1049.3	978.9	902.9	831.7	750.8	677.2	621.3	570.4	542.9	524.3
52.5°	992.7	947.4	875.4	792.9	724.1	644.8	577.7	532.4	495.9	475.7	469.2
55°	875.4	835.7	764.6	687.7	617.3	544.5	493.5	453.9	430.4	418.3	419.1
57.5°	750.0	719.2	652.1	583.3	517.0	462.0	415.9	384.3	366.5	365.7	368.1
60°	624.6	601.9	543.7	484.6	426.4	381.9	347.9	326.0	314.7	315.5	314.7
62.5°	504.8	483.8	441.7	393.2	347.1	317.1	286.4	277.5	267.8	267.0	267.0
65°	397.2	381.1	347.1	312.3	277.5	258.1	242.7	232.2	224.9	223.3	224.1
67.5°	298.5	292.1	268.6	245.1	223.3	211.2	198.2	195.8	190.1	190.1	191.7
70°	222.5	217.6	204.7	190.9	182.0	173.9	167.5	167.5	166.7	165.9	169.9
72.5°	161.0	161.8	157.8	147.2	146.4	144.8	143.2	145.6	146.4	148.9	153.7
75°	113.3	115.7	115.7	114.1	117.3	121.4	123.8	127.8	132.7	135.9	141.6
77.5°	80.1	80.1	84.1	89.0	95.5	102.7	109.2	114.9	121.4	125.4	130.3
80°	51.8	54.2	60.7	69.6	78.5	88.2	97.1	104.4	110.8	117.3	120.5
82.5°	30.7	34.8	42.9	54.2	65.5	77.7	86.6	95.5	102.7	109.2	111.6
85°	15.4	21.0	30.7	42.9	55.0	68.0	79.3	87.4	95.5	101.1	104.4
87.5°	4.9	11.3	21.8	33.2	46.1	59.1	71.2	80.1	87.4	92.2	95.5
90°	0.0	5.7	15.4	27.5	39.6	52.6	63.9	73.6	80.9	85.0	87.4
92.5°	0.0	3.2	12.1	22.7	34.0	46.9	58.3	67.2	73.6	77.7	79.3
95°	0.8	2.4	8.9	18.6	29.9	42.1	52.6	60.7	67.2	71.2	72.0
97.5°	0.8	1.6	7.3	15.4	25.9	37.2	47.7	55.8	60.7	64.7	65.5
100°	0.8	1.6	5.7	13.8	22.7	33.2	42.9	50.2	55.8	59.1	59.9
102.5°	0.8	0.8	4.9	11.3	20.2	29.1	38.0	45.3	50.2	53.4	55.0
105°	0.8	0.8	4.0	9.7	17.8	25.9	34.0	41.3	45.3	48.5	50.2
107.5°	0.8	0.8	3.2	8.1	15.4	22.7	30.7	36.4	41.3	44.5	46.1
110°	0.8	0.8	2.4	7.3	12.9	20.2	26.7	32.4	37.2	40.5	42.1



TEST NUMBER: P1213080

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.8	0.8	2.4	6.5	11.3	17.8	23.5	29.1	33.2	36.4	38.8
115°	0.8	0.8	2.4	5.7	10.5	15.4	21.0	25.9	29.9	33.2	35.6
117.5°	0.8	0.8	2.4	4.9	8.9	13.8	18.6	23.5	26.7	29.9	32.4
120°	0.8	0.8	1.6	4.0	8.1	12.1	16.2	20.2	24.3	27.5	29.9
122.5°	0.8	0.8	1.6	4.0	6.5	10.5	14.6	17.8	21.8	24.3	26.7
125°	0.8	0.8	1.6	3.2	5.7	9.7	12.9	16.2	18.6	21.8	24.3
127.5°	0.8	0.8	1.6	3.2	4.9	8.1	11.3	14.6	17.0	19.4	21.0
130°	0.8	0.8	1.6	2.4	4.0	6.5	9.7	12.1	15.4	17.0	18.6
132.5°	0.8	0.8	0.8	2.4	3.2	4.9	7.3	10.5	12.9	15.4	16.2
135°	0.8	0.8	0.8	1.6	3.2	4.0	5.7	8.1	10.5	12.9	14.6
137.5°	0.8	0.8	0.8	1.6	2.4	4.0	4.9	6.5	8.9	10.5	12.9
140°	0.8	0.8	0.8	1.6	2.4	3.2	4.0	5.7	7.3	8.9	10.5
142.5°	0.8	0.8	0.8	1.6	1.6	2.4	3.2	4.9	5.7	7.3	8.9
145°	0.8	0.8	0.8	1.6	1.6	2.4	3.2	4.0	4.9	5.7	7.3
147.5°	0.8	0.8	0.8	1.6	1.6	1.6	2.4	3.2	4.0	4.9	5.7
150°	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	3.2	4.0	4.9
152.5°	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	2.4	3.2	4.0
155°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	3.2	3.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P1213080

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1552.6	1554.2	1563.9	1563.1	1561.5	1559.8	1559.8	1558.2	1559.8	1563.9	1562.3
5°	1544.5	1546.9	1554.2	1553.4	1551.8	1550.9	1550.1	1547.7	1549.3	1555.0	1553.4
7.5°	1529.9	1532.3	1538.8	1535.6	1533.1	1534.8	1530.7	1528.3	1531.5	1537.2	1536.4
10°	1514.5	1516.2	1524.2	1522.6	1518.6	1519.4	1515.3	1513.7	1517.8	1521.0	1521.8
12.5°	1504.0	1509.7	1517.0	1516.2	1515.3	1516.2	1512.1	1510.5	1512.9	1516.2	1515.3
15°	1501.6	1508.9	1517.0	1517.0	1517.8	1518.6	1514.5	1512.1	1514.5	1517.0	1516.2
17.5°	1499.2	1508.1	1515.3	1514.5	1515.3	1517.0	1510.5	1508.9	1512.1	1515.3	1513.7
20°	1491.1	1499.2	1504.0	1502.4	1502.4	1503.2	1495.1	1495.1	1500.0	1502.4	1503.2
22.5°	1468.4	1478.1	1478.1	1474.1	1474.1	1470.9	1468.4	1463.6	1469.2	1473.3	1476.5
25°	1434.4	1438.5	1433.6	1424.7	1419.9	1415.8	1404.5	1414.2	1414.2	1426.4	1430.4
27.5°	1386.7	1377.8	1364.1	1345.4	1341.4	1328.5	1321.2	1323.6	1327.6	1344.6	1357.6
30°	1308.2	1281.5	1258.1	1250.0	1232.2	1219.2	1206.3	1212.8	1220.0	1229.8	1256.5
32.5°	1204.7	1178.8	1140.8	1127.0	1108.4	1092.2	1076.8	1086.6	1099.5	1106.0	1135.1
35°	1085.7	1055.0	1020.2	996.7	977.3	968.4	949.0	962.8	976.5	981.4	1006.5
37.5°	959.5	928.0	897.2	877.0	858.4	852.7	839.8	849.5	860.0	867.3	888.3
40°	839.8	810.7	787.2	773.5	760.5	755.7	750.8	754.8	762.9	768.6	784.8
42.5°	737.0	713.6	697.4	689.3	680.4	673.9	674.7	676.4	680.4	692.5	699.8
45°	647.2	633.5	623.0	621.3	615.7	614.9	614.1	617.3	619.7	627.0	632.7
47.5°	575.2	569.6	567.1	570.4	572.8	569.6	571.2	575.2	580.1	580.1	579.3
50°	518.6	520.2	523.5	530.7	535.6	537.2	538.8	543.7	544.5	546.1	543.7
52.5°	472.5	474.1	483.0	494.3	500.0	502.4	505.7	510.5	510.5	512.1	508.9
55°	425.6	428.0	436.9	448.2	453.1	456.3	459.5	462.8	465.2	468.4	466.0
57.5°	373.8	381.1	386.7	390.0	393.2	395.6	398.1	398.9	403.7	404.5	408.6
60°	318.8	320.4	326.0	325.2	322.8	329.3	326.0	331.7	337.4	344.7	345.5
62.5°	266.2	267.0	271.0	269.4	272.6	271.8	274.3	274.3	278.3	281.5	285.6
65°	224.9	225.7	229.0	229.0	228.2	230.6	233.0	234.6	234.6	237.1	240.3
67.5°	194.2	196.6	199.8	201.5	203.1	203.1	205.5	206.3	207.9	208.7	210.4
70°	173.1	176.4	179.6	181.2	182.0	183.7	184.5	184.5	186.1	186.9	188.5
72.5°	157.8	161.0	163.4	163.4	165.0	165.9	165.9	166.7	167.5	169.1	170.7
75°	144.8	147.2	148.9	148.1	148.1	148.1	148.9	148.9	150.5	152.1	153.7
77.5°	132.7	135.1	135.1	133.5	133.5	133.5	133.5	134.3	135.1	136.7	138.3
80°	123.8	123.8	123.0	123.0	121.4	120.5	120.5	121.4	121.4	123.0	125.4
82.5°	114.1	114.1	113.3	112.5	111.6	110.8	110.8	111.6	112.5	113.3	114.9
85°	105.2	105.2	103.6	103.6	102.7	102.7	102.7	102.7	103.6	104.4	106.0
87.5°	96.3	95.5	94.7	93.8	93.8	93.8	93.8	93.8	94.7	96.3	97.1
90°	87.4	86.6	85.8	85.8	85.0	85.0	85.8	85.8	86.6	87.4	88.2
92.5°	79.3	78.5	77.7	77.7	76.9	76.9	77.7	76.9	78.5	78.5	79.3
95°	72.0	71.2	70.4	70.4	70.4	70.4	70.4	70.4	71.2	71.2	72.0
97.5°	65.5	64.7	63.9	63.9	64.7	63.9	64.7	64.7	64.7	65.5	66.3
100°	59.9	59.1	59.1	59.9	59.1	59.1	59.9	59.9	59.9	59.9	60.7
102.5°	55.0	55.0	55.0	55.0	55.0	55.0	55.8	55.8	55.8	55.8	56.6
105°	50.2	51.0	51.0	51.0	51.8	51.8	51.8	52.6	52.6	52.6	52.6
107.5°	46.9	47.7	47.7	48.5	48.5	49.4	49.4	49.4	49.4	50.2	50.2
110°	43.7	44.5	45.3	46.1	46.1	46.9	46.9	46.9	46.9	46.9	46.9

TEST NUMBER: P1213080

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	40.5	41.3	42.1	43.7	44.5	44.5	44.5	44.5	45.3	45.3	44.5
115°	37.2	38.8	39.6	41.3	42.1	42.1	42.9	42.9	42.9	42.9	42.1
117.5°	34.0	36.4	37.2	38.8	39.6	39.6	40.5	40.5	40.5	40.5	39.6
120°	31.6	33.2	34.8	35.6	36.4	37.2	37.2	38.0	38.0	38.0	37.2
122.5°	29.1	30.7	32.4	33.2	34.0	34.8	34.8	34.8	34.8	34.8	34.8
125°	25.9	27.5	29.1	29.9	30.7	31.6	31.6	32.4	32.4	32.4	31.6
127.5°	23.5	25.1	25.9	27.5	28.3	28.3	29.1	29.1	29.1	29.1	28.3
130°	20.2	21.8	23.5	24.3	25.1	25.1	25.9	25.9	25.9	25.9	25.9
132.5°	17.8	19.4	20.2	21.8	21.8	22.7	22.7	23.5	23.5	23.5	22.7
135°	16.2	17.0	17.8	19.4	19.4	20.2	20.2	20.2	20.2	20.2	20.2
137.5°	14.6	15.4	16.2	17.0	17.0	17.8	17.8	17.8	17.8	18.6	17.8
140°	12.1	13.8	14.6	14.6	15.4	15.4	15.4	16.2	16.2	16.2	15.4
142.5°	10.5	11.3	12.1	12.9	13.8	13.8	13.8	13.8	14.6	13.8	13.8
145°	8.1	9.7	10.5	11.3	12.1	12.1	12.1	12.1	12.1	12.1	12.1
147.5°	6.5	7.3	8.9	9.7	9.7	10.5	10.5	10.5	10.5	10.5	10.5
150°	5.7	5.7	7.3	8.1	8.9	8.9	8.9	8.9	8.9	8.9	8.9
152.5°	4.0	4.9	5.7	6.5	7.3	7.3	7.3	7.3	7.3	7.3	7.3
155°	4.0	4.0	4.9	4.9	5.7	5.7	5.7	5.7	6.5	5.7	5.7
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P1213080

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

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1559.8	1559.0	1562.3	1559.0	1542.9	1549.3	1546.9	1555.8	1556.6	1559.0	1567.1
5°	1551.8	1551.8	1555.8	1552.6	1537.2	1543.7	1542.9	1551.8	1553.4	1555.0	1563.9
7.5°	1535.6	1536.4	1542.0	1539.6	1523.4	1533.1	1532.3	1542.9	1546.1	1549.3	1557.4
10°	1520.2	1519.4	1525.9	1523.4	1508.1	1519.4	1518.6	1529.1	1534.0	1539.6	1549.3
12.5°	1512.1	1509.7	1512.1	1509.7	1492.7	1501.6	1502.4	1514.5	1520.2	1527.5	1538.8
15°	1512.1	1508.1	1508.1	1503.2	1483.8	1489.5	1490.3	1498.4	1505.6	1512.9	1526.7
17.5°	1510.5	1506.4	1505.6	1501.6	1480.6	1480.6	1479.8	1485.4	1489.5	1496.7	1511.3
20°	1501.6	1500.0	1499.2	1496.7	1477.3	1474.1	1472.5	1472.5	1474.9	1477.3	1491.9
22.5°	1478.1	1479.8	1481.4	1483.0	1467.6	1462.0	1462.8	1461.1	1458.7	1458.7	1470.9
25°	1434.4	1442.5	1449.0	1456.3	1447.4	1443.3	1448.2	1445.8	1441.7	1438.5	1449.0
27.5°	1364.9	1381.9	1395.6	1413.4	1414.2	1411.0	1423.9	1422.3	1421.5	1416.6	1424.7
30°	1268.6	1295.3	1313.9	1339.8	1361.6	1364.9	1386.7	1389.9	1393.2	1390.8	1398.8
32.5°	1152.1	1188.5	1220.0	1260.5	1281.5	1300.1	1330.9	1343.8	1356.8	1360.8	1369.7
35°	1025.1	1066.3	1103.5	1148.0	1181.2	1221.7	1258.9	1278.3	1307.4	1318.7	1331.7
37.5°	904.5	943.4	979.8	1024.3	1077.7	1119.7	1165.8	1209.5	1249.2	1265.4	1284.8
40°	797.7	829.3	864.1	902.9	951.4	1006.5	1056.6	1117.3	1164.2	1196.6	1224.9
42.5°	716.8	732.2	762.1	796.9	835.7	891.6	942.5	1010.5	1067.1	1113.3	1160.2
45°	644.8	652.1	673.9	692.5	732.2	781.5	835.7	902.1	961.1	1020.2	1076.8
47.5°	583.3	592.2	602.7	614.1	642.4	683.6	730.6	790.4	849.5	918.3	983.0
50°	542.1	544.5	546.1	551.0	568.0	596.3	634.3	685.3	741.9	815.5	884.3
52.5°	505.7	505.7	500.8	498.4	504.8	522.6	544.5	580.9	639.1	707.1	779.9
55°	466.8	459.5	457.9	449.8	451.4	459.5	470.1	498.4	546.1	604.4	674.7
57.5°	412.6	409.4	409.4	406.1	399.7	403.7	406.1	426.4	460.3	510.5	572.0
60°	350.3	348.7	352.7	353.6	347.9	350.3	349.5	361.6	385.9	426.4	477.3
62.5°	288.0	295.3	296.1	299.3	296.1	295.3	299.3	309.9	322.0	352.7	392.4
65°	241.9	246.0	246.8	250.8	249.2	249.2	252.4	260.5	267.8	288.8	319.6
67.5°	212.0	210.4	211.2	213.6	211.2	210.4	212.8	217.6	223.3	236.2	258.1
70°	188.5	186.9	186.9	186.9	183.7	181.2	182.0	183.7	186.1	193.4	207.1
72.5°	170.7	170.7	168.3	165.9	163.4	161.8	160.2	158.6	157.8	160.2	167.5
75°	154.5	155.3	154.5	152.1	148.9	145.6	142.4	139.2	135.1	133.5	134.3
77.5°	140.0	140.8	141.6	140.8	137.5	133.5	128.6	123.8	118.1	112.5	109.2
80°	127.0	128.6	129.4	128.6	126.2	123.0	117.3	111.6	103.6	96.3	88.2
82.5°	115.7	118.1	118.9	118.9	117.3	114.1	107.6	101.1	92.2	82.5	72.0
85°	106.8	108.4	110.0	110.0	109.2	106.0	99.5	92.2	83.3	72.0	60.7
87.5°	97.9	98.7	100.3	101.9	100.3	97.1	91.4	83.3	74.4	63.1	50.2
90°	89.0	89.8	91.4	93.0	92.2	89.0	84.1	76.9	67.2	55.0	42.1
92.5°	80.1	81.7	82.5	83.3	84.1	81.7	77.7	70.4	60.7	48.5	36.4
95°	73.6	73.6	75.2	76.1	76.9	74.4	71.2	63.9	55.0	43.7	31.6
97.5°	67.2	67.2	68.8	68.8	69.6	68.0	64.7	58.3	49.4	38.8	26.7
100°	60.7	61.5	62.3	63.1	63.1	62.3	59.1	52.6	44.5	34.8	23.5
102.5°	56.6	56.6	57.4	57.4	58.3	56.6	53.4	47.7	39.6	30.7	20.2
105°	52.6	52.6	53.4	53.4	52.6	51.0	47.7	42.9	35.6	26.7	17.8
107.5°	49.4	49.4	49.4	49.4	48.5	46.9	43.7	38.0	31.6	24.3	16.2
110°	46.9	46.1	46.1	45.3	44.5	42.1	38.8	34.0	28.3	21.0	13.8

TEST NUMBER: P1213080

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

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	44.5	43.7	42.9	42.1	40.5	38.0	34.8	30.7	25.1	18.6	12.1
115°	42.1	41.3	40.5	38.8	37.2	34.8	31.6	27.5	21.8	16.2	10.5
117.5°	39.6	38.8	37.2	35.6	34.0	31.6	28.3	24.3	19.4	14.6	9.7
120°	36.4	35.6	34.8	33.2	31.6	28.3	25.1	21.8	17.0	12.9	8.1
122.5°	34.0	33.2	31.6	30.7	28.3	25.9	22.7	19.4	15.4	11.3	7.3
125°	30.7	29.9	29.1	27.5	25.9	22.7	20.2	17.0	13.8	9.7	5.7
127.5°	28.3	27.5	25.9	24.3	22.7	20.2	17.8	15.4	12.1	8.1	5.7
130°	25.1	24.3	23.5	21.8	20.2	17.8	16.2	12.9	10.5	7.3	4.9
132.5°	21.8	21.8	21.0	19.4	17.8	16.2	13.8	11.3	8.9	6.5	4.0
135°	20.2	19.4	18.6	17.0	16.2	13.8	12.1	9.7	7.3	5.7	3.2
137.5°	17.8	17.0	16.2	15.4	13.8	12.1	10.5	8.1	6.5	4.9	3.2
140°	15.4	14.6	14.6	12.9	12.1	10.5	8.9	7.3	5.7	4.0	2.4
142.5°	13.8	12.9	12.1	11.3	10.5	8.9	7.3	5.7	4.9	3.2	2.4
145°	12.1	11.3	10.5	9.7	8.9	7.3	6.5	4.9	4.0	3.2	2.4
147.5°	9.7	9.7	8.9	8.1	7.3	6.5	5.7	4.9	3.2	2.4	1.6
150°	8.1	8.1	7.3	6.5	6.5	5.7	4.9	4.0	3.2	2.4	1.6
152.5°	7.3	6.5	6.5	5.7	5.7	4.9	4.0	3.2	2.4	2.4	1.6
155°	5.7	5.7	5.7	4.9	4.9	4.0	3.2	3.2	2.4	1.6	1.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P1213080

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

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1568.7	1559.0	1567.1	1581.7	1580.1	1578.5	1576.8	1580.1	1590.6	1584.9	1576.0
5°	1566.3	1556.6	1565.5	1579.3	1578.5	1576.0	1574.4	1577.6	1588.2	1582.5	1572.8
7.5°	1561.5	1552.6	1559.0	1572.8	1572.8	1571.2	1569.6	1572.8	1582.5	1577.6	1567.9
10°	1553.4	1546.9	1553.4	1566.3	1567.1	1563.9	1562.3	1566.3	1576.0	1573.6	1565.5
12.5°	1546.9	1540.4	1547.7	1560.7	1561.5	1558.2	1555.8	1560.7	1573.6	1575.2	1572.8
15°	1538.0	1532.3	1541.2	1555.0	1555.0	1552.6	1552.6	1559.0	1576.8	1584.1	1588.2
17.5°	1525.1	1521.0	1531.5	1545.3	1546.1	1544.5	1545.3	1558.2	1581.7	1599.5	1610.8
20°	1508.9	1507.3	1518.6	1533.1	1535.6	1536.4	1540.4	1559.8	1592.2	1616.5	1627.8
22.5°	1489.5	1490.3	1503.2	1518.6	1521.8	1524.2	1532.3	1559.8	1600.3	1626.2	1631.0
25°	1467.6	1470.0	1483.8	1502.4	1506.4	1511.3	1525.1	1560.7	1602.7	1619.7	1611.6
27.5°	1444.2	1449.0	1466.8	1486.2	1491.1	1499.2	1517.0	1555.8	1591.4	1592.2	1562.3
30°	1419.9	1425.5	1446.6	1469.2	1477.3	1485.4	1507.3	1544.5	1563.9	1538.0	1485.4
32.5°	1392.4	1400.5	1421.5	1449.0	1458.7	1469.2	1491.1	1522.6	1515.3	1459.5	1384.3
35°	1357.6	1368.9	1393.2	1425.5	1434.4	1448.2	1463.6	1470.9	1438.5	1359.2	1274.3
37.5°	1314.7	1331.7	1360.0	1397.2	1406.9	1415.8	1419.9	1399.7	1334.9	1249.2	1161.0
40°	1265.4	1291.2	1322.0	1363.2	1373.0	1373.0	1358.4	1315.5	1233.8	1121.3	1023.4
42.5°	1205.5	1237.0	1275.9	1317.1	1326.8	1315.5	1280.7	1205.5	1112.4	987.0	883.5
45°	1132.7	1174.7	1218.4	1261.3	1266.2	1241.1	1178.8	1083.3	968.4	851.9	753.2
47.5°	1046.1	1101.1	1148.8	1197.4	1190.9	1148.8	1065.5	957.1	835.7	725.7	646.4
50°	949.0	1013.7	1067.1	1113.3	1099.5	1041.2	943.4	830.1	709.5	615.7	550.2
52.5°	845.5	919.9	973.3	1010.5	991.9	922.3	814.7	706.3	607.6	521.8	478.1
55°	737.9	813.1	868.1	897.2	873.0	797.7	691.7	593.0	500.0	444.2	418.3
57.5°	633.5	703.9	755.7	779.1	748.4	673.1	575.2	491.9	424.8	377.8	364.9
60°	533.2	590.6	640.0	657.8	624.6	555.0	470.9	404.5	355.2	322.8	316.3
62.5°	440.1	487.0	525.9	539.6	507.3	453.1	380.3	330.9	296.1	279.9	271.8
65°	363.3	390.8	430.4	428.0	408.6	358.4	305.0	270.2	247.6	237.1	232.2
67.5°	285.6	310.7	335.8	339.0	314.7	279.9	245.1	220.1	207.9	202.3	199.8
70°	220.9	239.5	254.9	250.8	237.9	216.0	194.2	180.4	175.6	173.1	173.1
72.5°	171.5	181.2	188.5	183.7	175.6	164.2	153.7	148.1	148.9	150.5	152.1
75°	132.7	135.1	136.7	131.9	130.3	123.0	122.2	123.0	127.8	132.7	135.1
77.5°	101.9	98.7	96.3	91.4	92.2	91.4	95.5	101.9	109.2	116.5	123.0
80°	78.5	71.2	65.5	60.7	63.1	67.2	75.2	85.0	94.7	102.7	110.8
82.5°	60.7	50.2	42.1	37.2	42.1	48.5	59.1	71.2	82.5	91.4	100.3
85°	46.9	34.8	25.1	20.2	25.1	34.8	46.1	59.9	72.0	81.7	90.6
87.5°	36.4	25.1	13.8	8.1	13.8	24.3	37.2	50.2	62.3	73.6	82.5
90°	29.1	17.0	6.5	1.6	7.3	17.0	29.1	42.1	54.2	66.3	75.2
92.5°	23.5	12.1	3.2	0.0	4.0	12.9	24.3	36.4	48.5	59.9	68.8
95°	19.4	9.7	2.4	0.0	3.2	9.7	19.4	31.6	42.9	54.2	61.5
97.5°	16.2	7.3	1.6	0.0	1.6	8.1	16.2	26.7	38.0	48.5	55.8
100°	13.8	6.5	1.6	0.0	1.6	6.5	13.8	23.5	33.2	42.9	50.2
102.5°	11.3	4.9	0.8	0.8	0.8	4.9	12.1	20.2	29.1	38.0	45.3
105°	10.5	4.0	0.8	0.8	0.8	4.0	10.5	17.8	25.9	34.0	40.5
107.5°	8.9	3.2	0.8	0.8	0.8	3.2	8.9	15.4	23.5	30.7	36.4
110°	7.3	3.2	0.8	0.8	0.8	3.2	7.3	13.8	20.2	26.7	32.4

TEST NUMBER: P1213080

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

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	6.5	2.4	0.8	0.8	0.8	2.4	6.5	12.1	17.8	24.3	29.1
115°	5.7	2.4	0.8	0.8	0.8	2.4	5.7	10.5	15.4	21.0	25.9
117.5°	4.9	2.4	0.8	0.8	0.8	1.6	4.9	8.9	13.8	18.6	23.5
120°	4.0	1.6	0.8	0.8	0.8	1.6	4.0	8.1	12.1	16.2	20.2
122.5°	4.0	1.6	0.8	0.8	0.8	1.6	3.2	6.5	10.5	13.8	17.8
125°	3.2	1.6	0.8	0.8	0.8	0.8	3.2	5.7	8.9	12.1	15.4
127.5°	3.2	1.6	0.8	0.8	0.8	0.8	2.4	4.9	7.3	10.5	13.8
130°	2.4	1.6	0.8	0.8	0.8	0.8	1.6	4.0	6.5	8.9	11.3
132.5°	2.4	1.6	0.8	0.8	0.8	0.8	1.6	3.2	4.9	7.3	9.7
135°	2.4	0.8	0.8	0.8	0.8	0.8	0.8	2.4	4.0	5.7	7.3
137.5°	1.6	0.8	0.8	0.8	0.8	0.8	0.8	1.6	3.2	4.0	6.5
140°	1.6	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	3.2	4.9
142.5°	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	2.4	4.0
145°	1.6	0.8	0.8	1.6	1.6	0.8	0.8	1.6	1.6	2.4	3.2
147.5°	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	2.4
150°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4
152.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
155°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P1213080

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

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1574.4	1555.8	1565.5	1562.3	1565.5	1573.6	1572.8	1570.4	1572.0	1567.9	1563.9
5°	1571.2	1552.6	1562.3	1558.2	1562.3	1570.4	1568.7	1566.3	1568.7	1563.9	1559.8
7.5°	1567.1	1550.1	1561.5	1560.7	1567.9	1578.5	1579.3	1579.3	1584.9	1577.6	1574.4
10°	1567.1	1558.2	1573.6	1579.3	1597.9	1611.6	1613.2	1616.5	1626.2	1624.6	1616.5
12.5°	1584.1	1582.5	1605.2	1618.9	1635.9	1655.3	1665.8	1669.1	1675.5	1670.7	1667.4
15°	1606.0	1614.1	1639.1	1654.5	1673.1	1687.7	1690.1	1691.7	1696.6	1689.3	1683.6
17.5°	1635.1	1639.9	1660.2	1666.6	1678.8	1681.2	1678.0	1669.9	1669.9	1653.7	1648.8
20°	1648.8	1646.4	1654.5	1644.0	1639.1	1624.6	1610.8	1595.4	1594.6	1577.6	1576.0
22.5°	1636.7	1620.5	1603.5	1577.6	1566.3	1545.3	1526.7	1517.8	1512.1	1490.3	1484.6
25°	1593.8	1554.2	1529.1	1498.4	1470.9	1446.6	1428.8	1410.2	1392.4	1374.6	1366.5
27.5°	1519.4	1482.2	1441.7	1398.8	1360.8	1323.6	1293.7	1275.1	1258.1	1234.6	1222.5
30°	1428.0	1376.2	1331.7	1290.4	1228.1	1182.8	1157.7	1120.5	1107.6	1097.1	1074.4
32.5°	1320.4	1258.1	1197.4	1141.6	1077.7	1035.6	1002.4	974.9	966.8	939.3	932.8
35°	1201.4	1119.7	1051.0	995.9	949.8	898.9	871.3	852.7	836.6	817.9	814.7
37.5°	1061.5	987.8	910.2	861.6	825.2	781.5	760.5	747.6	740.3	726.5	724.1
40°	920.7	847.1	793.7	745.1	722.5	699.0	683.6	678.0	674.7	669.9	665.0
42.5°	792.9	728.1	690.1	657.8	648.0	636.7	632.7	635.9	632.7	631.1	630.2
45°	684.5	635.1	608.4	598.7	596.3	593.0	596.3	601.9	602.7	601.1	601.1
47.5°	585.8	562.3	551.0	552.6	556.6	559.1	564.7	572.0	573.6	569.6	571.2
50°	521.0	507.3	504.8	511.3	520.2	523.5	529.9	535.6	534.8	533.2	531.5
52.5°	460.3	456.3	462.8	469.2	479.0	480.6	483.0	485.4	484.6	481.4	479.8
55°	409.4	412.6	418.3	420.7	428.0	427.2	428.0	428.0	424.8	423.1	420.7
57.5°	363.3	364.1	367.3	368.1	372.2	370.5	369.7	368.1	363.3	362.5	360.0
60°	316.3	314.7	322.0	316.3	319.6	316.3	315.5	311.5	306.6	305.8	304.2
62.5°	271.8	268.6	273.5	271.0	272.6	269.4	267.8	262.9	258.9	258.1	257.3
65°	232.2	230.6	235.4	234.6	236.2	232.2	230.6	227.3	224.1	223.3	222.5
67.5°	199.0	203.1	205.5	205.5	207.1	206.3	202.3	201.5	200.6	197.4	197.4
70°	174.8	177.2	182.0	182.8	182.0	183.7	180.4	179.6	178.8	177.2	176.4
72.5°	155.3	158.6	163.4	164.2	163.4	163.4	161.8	161.0	161.0	158.6	158.6
75°	140.0	144.0	148.1	148.1	148.1	146.4	144.8	144.8	143.2	142.4	140.8
77.5°	127.0	131.9	135.1	134.3	133.5	131.9	131.9	129.4	127.0	127.0	125.4
80°	117.3	120.5	123.0	122.2	121.4	118.9	118.1	115.7	114.1	111.6	111.6
82.5°	106.8	110.8	112.5	111.6	110.0	107.6	106.8	105.2	103.6	102.7	101.1
85°	97.9	101.9	102.7	101.1	99.5	97.9	97.1	96.3	95.5	93.8	93.8
87.5°	89.0	93.0	93.0	92.2	90.6	89.8	89.0	88.2	87.4	86.6	85.8
90°	81.7	85.0	85.0	84.1	83.3	82.5	81.7	80.9	80.1	79.3	79.3
92.5°	74.4	77.7	77.7	76.9	76.1	75.2	75.2	74.4	73.6	72.8	72.0
95°	68.0	71.2	71.2	71.2	70.4	69.6	69.6	68.8	68.0	68.0	67.2
97.5°	61.5	64.7	64.7	64.7	63.9	63.1	63.1	62.3	62.3	62.3	61.5
100°	55.8	58.3	59.1	59.1	58.3	58.3	58.3	57.4	57.4	57.4	56.6
102.5°	50.2	52.6	54.2	54.2	54.2	53.4	53.4	53.4	53.4	53.4	52.6
105°	45.3	47.7	49.4	50.2	50.2	50.2	50.2	50.2	50.2	50.2	50.2
107.5°	41.3	43.7	45.3	46.1	46.9	46.9	47.7	47.7	47.7	47.7	47.7
110°	37.2	39.6	42.1	42.9	43.7	44.5	44.5	45.3	44.5	44.5	44.5

TEST NUMBER: P1213080

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

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	33.2	36.4	38.0	39.6	40.5	41.3	42.1	42.1	42.1	42.1	42.1
115°	29.9	33.2	34.8	36.4	38.0	38.8	38.8	39.6	39.6	39.6	38.8
117.5°	26.7	29.9	31.6	33.2	34.0	35.6	36.4	36.4	36.4	36.4	35.6
120°	24.3	26.7	28.3	29.9	31.6	32.4	33.2	33.2	33.2	33.2	33.2
122.5°	21.0	23.5	25.9	27.5	28.3	29.1	29.9	29.9	29.9	29.9	29.9
125°	18.6	21.0	22.7	24.3	25.1	26.7	26.7	26.7	26.7	26.7	26.7
127.5°	16.2	18.6	20.2	21.8	22.7	23.5	24.3	24.3	24.3	24.3	24.3
130°	13.8	16.2	17.8	19.4	20.2	21.0	21.0	21.8	21.8	21.8	21.8
132.5°	12.1	13.8	15.4	17.0	17.8	18.6	18.6	19.4	19.4	19.4	19.4
135°	9.7	12.1	12.9	14.6	15.4	16.2	16.2	17.0	17.0	17.0	17.0
137.5°	8.1	9.7	11.3	12.9	13.8	13.8	14.6	14.6	15.4	15.4	15.4
140°	6.5	7.3	9.7	10.5	11.3	12.1	12.9	12.9	12.9	12.9	12.9
142.5°	4.9	6.5	7.3	8.9	9.7	10.5	11.3	11.3	11.3	11.3	11.3
145°	4.0	4.9	5.7	7.3	8.1	8.9	9.7	9.7	9.7	9.7	9.7
147.5°	3.2	4.0	4.9	5.7	6.5	7.3	8.1	8.1	8.1	8.1	8.1
150°	2.4	3.2	4.0	4.0	4.9	5.7	6.5	7.3	7.3	7.3	7.3
152.5°	2.4	2.4	3.2	3.2	4.0	4.9	5.7	5.7	5.7	5.7	5.7
155°	1.6	2.4	2.4	2.4	3.2	3.2	4.0	4.9	4.9	4.9	4.9
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P1213080

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

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1566.3	1569.6	1567.9	1565.5	1564.7	1568.7	1564.7	1546.1	1553.4	1554.2	1559.8
5°	1563.9	1566.3	1564.7	1563.1	1560.7	1565.5	1560.7	1541.2	1548.5	1549.3	1555.0
7.5°	1580.1	1580.9	1580.9	1576.8	1570.4	1572.8	1566.3	1544.5	1548.5	1548.5	1552.6
10°	1620.5	1622.1	1624.6	1614.1	1606.0	1599.5	1590.6	1563.9	1563.1	1556.6	1556.6
12.5°	1673.1	1669.1	1665.0	1660.2	1653.7	1645.6	1632.7	1601.1	1590.6	1580.1	1569.6
15°	1688.5	1686.9	1686.1	1683.6	1679.6	1677.2	1667.4	1635.9	1620.5	1607.6	1589.0
17.5°	1648.0	1651.3	1661.8	1662.6	1667.4	1677.2	1675.5	1653.7	1639.9	1634.3	1611.6
20°	1575.2	1576.0	1589.0	1594.6	1615.7	1631.9	1644.0	1641.6	1638.3	1644.8	1627.8
22.5°	1487.8	1493.5	1507.3	1516.2	1536.4	1555.0	1574.4	1584.9	1601.9	1628.6	1625.4
25°	1368.9	1376.2	1395.6	1410.2	1438.5	1466.8	1492.7	1511.3	1531.5	1582.5	1599.5
27.5°	1226.5	1237.8	1262.9	1277.5	1317.1	1346.3	1383.5	1419.9	1448.2	1506.4	1541.2
30°	1076.8	1086.6	1113.3	1133.5	1167.5	1207.1	1254.0	1305.8	1352.7	1411.8	1455.5
32.5°	936.9	947.4	969.2	987.0	1025.1	1058.2	1110.0	1173.9	1217.6	1299.3	1357.6
35°	814.7	824.4	839.8	855.2	886.7	920.7	965.2	1027.5	1083.3	1168.3	1241.9
37.5°	729.0	730.6	739.5	748.4	771.8	797.7	832.5	887.5	939.3	1030.7	1111.6
40°	667.5	667.5	672.3	674.7	685.3	700.6	722.5	765.4	808.2	877.8	976.5
42.5°	629.4	627.8	627.8	628.6	627.8	635.1	648.0	668.3	706.3	763.7	840.6
45°	601.1	597.9	595.5	589.8	586.6	586.6	587.4	594.7	616.5	653.7	716.0
47.5°	569.6	568.8	564.7	558.2	552.6	548.5	542.1	539.6	546.1	567.1	609.2
50°	533.2	529.1	525.1	520.2	513.7	509.7	497.6	498.4	492.7	502.4	524.3
52.5°	479.8	476.5	474.9	470.9	468.4	466.8	457.1	447.4	445.0	446.6	454.7
55°	420.7	422.3	415.9	419.1	418.3	411.0	407.0	399.7	397.2	396.4	400.5
57.5°	359.2	360.8	356.8	360.0	360.0	356.0	353.6	353.6	347.9	343.0	348.7
60°	303.4	300.2	302.6	306.6	306.6	304.2	302.6	302.6	298.5	296.9	301.0
62.5°	258.1	254.9	257.3	261.3	262.1	260.5	258.9	258.9	254.0	254.0	257.3
65°	223.3	224.1	223.3	226.5	226.5	227.3	225.7	224.1	218.4	220.9	220.1
67.5°	198.2	197.4	197.4	200.6	199.8	201.5	199.8	197.4	193.4	190.1	189.3
70°	177.2	176.4	176.4	178.0	178.8	178.8	178.0	176.4	170.7	167.5	165.0
72.5°	158.6	157.8	158.6	159.4	160.2	161.0	160.2	158.6	153.7	149.7	145.6
75°	141.6	140.8	143.2	143.2	144.0	144.0	144.8	144.0	140.0	135.1	130.3
77.5°	124.6	125.4	127.8	128.6	130.3	131.1	131.9	131.9	127.8	123.8	117.3
80°	110.8	112.5	114.1	114.9	116.5	118.9	119.7	120.5	117.3	113.3	106.0
82.5°	101.1	101.9	103.6	104.4	106.8	107.6	108.4	110.0	108.4	104.4	96.3
85°	93.0	93.8	95.5	95.5	97.1	98.7	99.5	100.3	99.5	95.5	87.4
87.5°	85.8	86.6	87.4	88.2	89.0	89.8	90.6	91.4	90.6	86.6	79.3
90°	79.3	79.3	80.1	80.1	80.9	81.7	83.3	83.3	82.5	79.3	72.0
92.5°	72.0	72.8	72.8	73.6	74.4	75.2	76.1	76.1	75.2	72.0	65.5
95°	67.2	67.2	68.0	68.0	68.8	68.8	69.6	69.6	68.8	65.5	59.1
97.5°	61.5	61.5	61.5	61.5	62.3	62.3	63.1	63.1	62.3	59.1	53.4
100°	56.6	56.6	56.6	56.6	56.6	57.4	57.4	57.4	56.6	53.4	47.7
102.5°	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	51.0	48.5	42.9
105°	50.2	50.2	50.2	49.4	49.4	49.4	48.5	48.5	46.1	43.7	38.8
107.5°	46.9	46.9	46.9	46.1	46.1	45.3	44.5	44.5	42.1	39.6	34.8
110°	44.5	44.5	44.5	43.7	42.9	42.1	41.3	40.5	38.0	34.8	30.7

TEST NUMBER: P1213080

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

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	42.1	42.1	41.3	41.3	40.5	39.6	38.0	37.2	34.8	31.6	27.5
115°	38.8	38.8	38.8	38.0	37.2	36.4	35.6	34.0	31.6	28.3	24.3
117.5°	35.6	35.6	35.6	34.8	34.0	33.2	32.4	30.7	28.3	25.1	21.8
120°	32.4	32.4	32.4	31.6	30.7	29.9	29.1	27.5	25.1	22.7	18.6
122.5°	29.9	29.9	29.1	28.3	27.5	26.7	25.9	24.3	22.7	19.4	16.2
125°	26.7	26.7	25.9	25.9	25.1	24.3	23.5	21.8	19.4	17.0	14.6
127.5°	24.3	23.5	23.5	23.5	22.7	21.8	20.2	19.4	17.0	14.6	12.1
130°	21.0	21.0	21.0	20.2	20.2	19.4	17.8	16.2	14.6	12.9	10.5
132.5°	18.6	18.6	18.6	18.6	17.8	17.0	15.4	14.6	12.9	10.5	8.9
135°	17.0	17.0	16.2	16.2	15.4	14.6	13.8	12.1	10.5	8.9	7.3
137.5°	14.6	14.6	14.6	13.8	13.8	12.9	11.3	10.5	9.7	8.1	6.5
140°	12.9	12.9	12.1	12.1	11.3	11.3	10.5	8.9	8.1	6.5	5.7
142.5°	11.3	11.3	10.5	10.5	9.7	9.7	8.9	8.1	6.5	5.7	4.0
145°	9.7	9.7	8.9	8.9	8.9	8.1	7.3	6.5	5.7	4.9	4.0
147.5°	8.1	8.1	8.1	7.3	7.3	6.5	6.5	5.7	4.9	4.0	3.2
150°	7.3	7.3	6.5	6.5	6.5	5.7	4.9	4.9	4.0	3.2	2.4
152.5°	5.7	5.7	5.7	5.7	4.9	4.9	4.0	4.0	3.2	2.4	2.4
155°	4.9	4.9	4.9	4.0	4.0	4.0	3.2	3.2	2.4	2.4	1.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P1213080

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

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3	1566.3
2.5°	1557.4	1556.6	1563.9	1563.1	1553.4	1567.9	1577.6
5°	1553.4	1552.6	1559.0	1560.7	1550.1	1565.5	1576.0
7.5°	1550.1	1549.3	1556.6	1559.0	1548.5	1562.3	1573.6
10°	1550.9	1546.9	1553.4	1555.0	1545.3	1559.8	1569.6
12.5°	1556.6	1546.9	1549.3	1549.3	1540.4	1553.4	1563.9
15°	1570.4	1550.1	1546.9	1544.5	1533.1	1545.3	1555.8
17.5°	1585.7	1558.2	1546.9	1538.8	1525.1	1535.6	1546.9
20°	1601.1	1567.1	1548.5	1535.6	1517.0	1526.7	1534.8
22.5°	1608.4	1575.2	1550.1	1530.7	1507.3	1512.1	1521.0
25°	1598.7	1572.0	1546.9	1523.4	1495.1	1495.9	1503.2
27.5°	1563.1	1555.8	1539.6	1516.2	1485.4	1481.4	1487.0
30°	1502.4	1522.6	1523.4	1506.4	1474.1	1466.0	1468.4
32.5°	1417.5	1462.8	1489.5	1486.2	1457.9	1446.6	1448.2
35°	1319.6	1376.2	1434.4	1453.9	1433.6	1424.7	1421.5
37.5°	1202.2	1278.3	1356.0	1403.7	1400.5	1394.8	1391.6
40°	1072.8	1164.2	1256.5	1332.5	1356.0	1356.0	1357.6
42.5°	934.5	1041.2	1142.4	1238.7	1293.7	1305.8	1310.7
45°	801.0	908.6	1018.6	1129.4	1203.1	1241.1	1254.8
47.5°	679.6	788.0	892.4	1013.7	1111.6	1161.0	1182.8
50°	576.0	656.9	767.0	887.5	994.3	1055.0	1097.9
52.5°	490.3	553.4	649.7	762.1	869.7	953.1	992.7
55°	418.3	461.2	542.9	640.0	742.7	829.3	875.4
57.5°	357.6	391.6	447.4	528.3	614.9	700.6	750.0
60°	304.2	327.7	365.7	429.6	503.2	576.9	624.6
62.5°	258.1	273.5	298.5	345.5	402.9	460.3	504.8
65°	222.5	229.0	242.7	271.8	315.5	359.2	397.2
67.5°	187.7	191.7	202.3	220.1	241.9	273.5	298.5
70°	161.8	161.8	162.6	173.1	184.5	204.7	222.5
72.5°	140.8	138.3	133.5	135.9	138.3	149.7	161.0
75°	123.8	118.1	110.0	106.8	105.2	106.8	113.3
77.5°	109.2	101.1	91.4	83.3	76.9	74.4	80.1
80°	97.1	87.4	76.1	65.5	55.0	49.4	51.8
82.5°	87.4	75.2	63.1	51.0	38.8	30.7	30.7
85°	76.9	65.5	52.6	39.6	27.5	17.0	15.4
87.5°	69.6	57.4	43.7	31.6	19.4	8.9	4.9
90°	62.3	50.2	37.2	25.1	13.8	4.0	0.0
92.5°	55.8	44.5	32.4	20.2	9.7	2.4	0.0
95°	50.2	39.6	27.5	17.0	8.1	1.6	0.8
97.5°	44.5	34.8	24.3	13.8	5.7	1.6	0.8
100°	40.5	30.7	21.0	11.3	4.9	0.8	0.8
102.5°	35.6	27.5	17.8	9.7	4.0	0.8	0.8
105°	31.6	24.3	15.4	8.1	3.2	0.8	0.8
107.5°	28.3	21.0	13.8	7.3	3.2	0.8	0.8
110°	25.1	18.6	12.1	6.5	2.4	0.8	0.8



TEST NUMBER: P1213080

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

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	22.7	16.2	10.5	5.7	1.6	0.8	0.8
115°	19.4	14.6	8.9	4.9	1.6	0.8	0.8
117.5°	17.0	12.1	8.1	4.0	1.6	0.8	0.8
120°	14.6	10.5	6.5	3.2	0.8	0.8	0.8
122.5°	12.9	8.9	5.7	3.2	0.8	0.8	0.8
125°	11.3	8.1	4.9	2.4	0.8	0.8	0.8
127.5°	9.7	6.5	4.0	1.6	0.8	0.8	0.8
130°	8.1	5.7	3.2	1.6	0.8	0.8	0.8
132.5°	6.5	4.9	3.2	1.6	0.8	0.8	0.8
135°	5.7	4.0	2.4	1.6	0.8	0.8	0.8
137.5°	4.9	3.2	1.6	1.6	1.6	0.8	0.8
140°	4.0	2.4	1.6	1.6	1.6	1.6	0.8
142.5°	3.2	2.4	1.6	1.6	1.6	1.6	0.8
145°	2.4	1.6	1.6	1.6	1.6	1.6	0.8
147.5°	2.4	1.6	1.6	1.6	1.6	1.6	0.8
150°	1.6	1.6	1.6	1.6	1.6	1.6	1.6
152.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6
155°	1.6	1.6	1.6	1.6	1.6	1.6	1.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)