

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: P1213782

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

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213782
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-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR LENSED
Light Source: -
Ballast/Driver: -

Summary

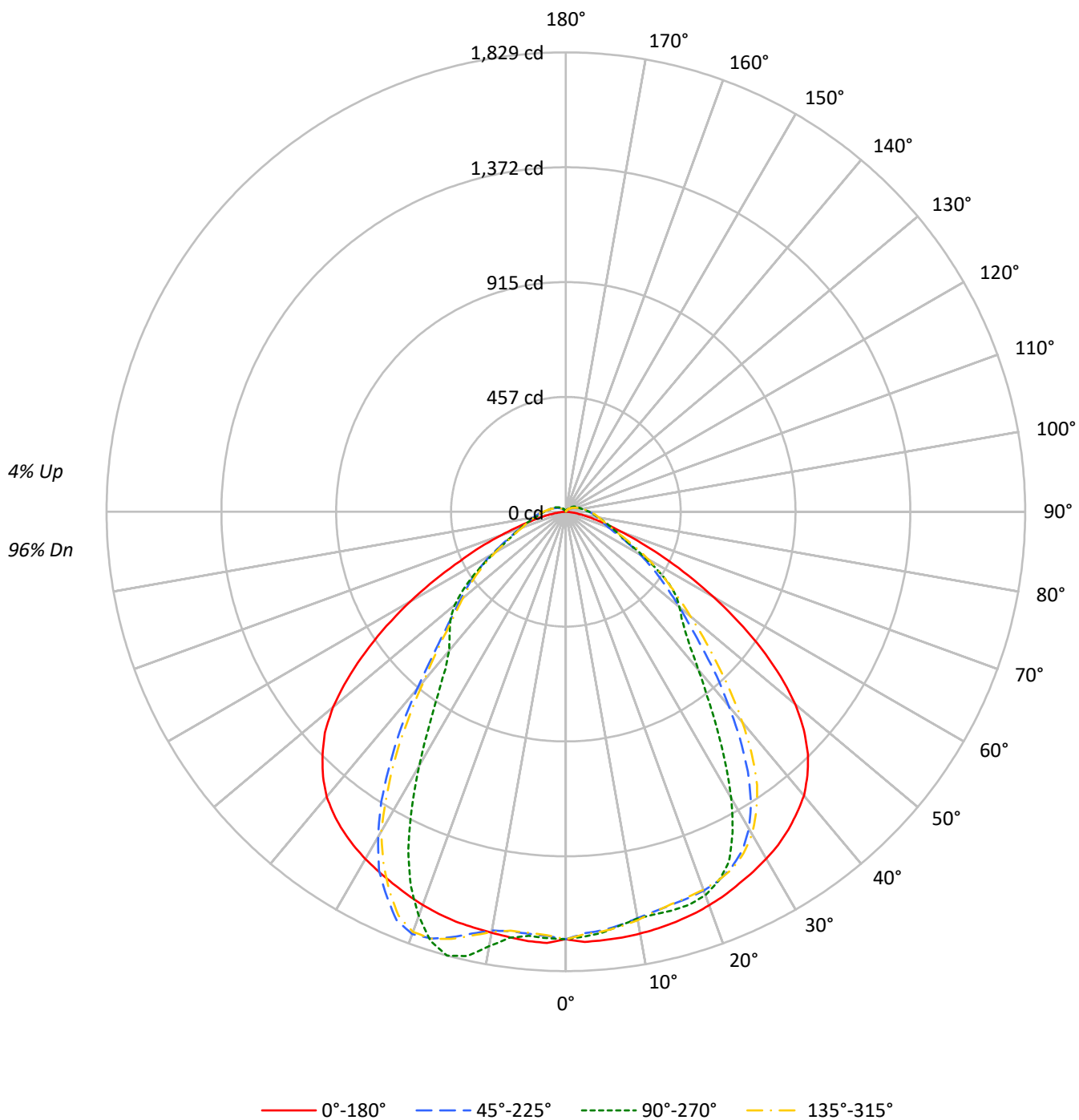
Lumens per Lamp: N/A
Luminaire Lumens: 4057.0 lumens
Efficiency: N/A
Efficacy: 115.9 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.12 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
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°	13752	13752	13752	13752
5°	13853	13207	13881	13311
10°	13916	12658	13888	13517
15°	14025	12489	14017	13905
20°	14179	12291	14164	12956
25°	14353	11660	14346	11266
30°	14623	10106	14631	8953
35°	14910	8171	14953	6915
40°	15162	6579	15226	5797
45°	15109	5573	15187	5427
50°	14457	5131	14660	5016
55°	12827	4612	13147	4192
60°	10404	3530	10958	3237
65°	7734	2700	8333	2560
70°	5259	2331	5929	2229
75°	3442	2103	4007	1990
80°	2226	1962	2605	1804
85°	1141	1956	1503	1788

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 15187 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.7	4.0
10°-20°	481.0	11.9
20°-30°	731.2	18.0
30°-40°	784.4	19.3
40°-50°	680.8	16.8
50°-60°	504.5	12.4
60°-70°	289.1	7.1
70°-80°	160.1	3.9
80°-90°	97.5	2.4
90°-100°	63.4	1.6
100°-110°	42.5	1.0
110°-120°	28.7	0.7
120°-130°	17.6	0.4
130°-140°	9.3	0.2
140°-150°	4.2	0.1
150°-160°	1.2	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1373.8	33.9
0°-40°	2158.2	53.2
0°-60°	3343.6	82.4
0°-90°	3890.2	95.9
90°-120°	134.5	3.3
90°-150°	165.6	4.1
90°-180°	167.0	4.1
0°-180°	4057.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1702	1702	1702	1702	1702	
5°	1712	1682	1716	1695	1712	163
15°	1690	1643	1690	1829	1690	478
25°	1633	1537	1632	1485	1633	755
35°	1544	1046	1549	885	1544	967
45°	1363	671	1370	653	1363	1044
55°	951	503	975	457	951	843
65°	432	255	465	242	432	435
75°	123	162	143	153	123	141
85°	17	112	22	102	17	22
90°	0	93	2	86	0	1
95°	1	76	0	73	1	1
105°	1	57	1	54	1	1
115°	1	47	1	42	1	1
125°	1	35	1	29	1	1
135°	1	22	1	18	1	1
145°	1	13	2	10	1	1
155°	2	6	2	5	2	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°	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8
2.5°	1714.1	1709.7	1708.0	1704.4	1707.1	1717.6	1710.6	1699.2	1700.1	1679.8	1690.4
5°	1712.4	1707.1	1704.4	1700.9	1702.7	1712.4	1705.3	1693.9	1693.0	1672.8	1682.5
7.5°	1709.7	1704.4	1700.1	1697.4	1698.3	1706.2	1697.4	1684.2	1681.6	1659.6	1668.4
10°	1705.3	1701.8	1695.7	1691.3	1690.4	1699.2	1685.1	1671.9	1665.8	1642.9	1651.7
12.5°	1699.2	1693.9	1687.7	1679.8	1679.0	1684.2	1672.8	1654.3	1648.2	1629.7	1639.4
15°	1690.4	1684.2	1677.2	1668.4	1664.0	1667.5	1653.5	1636.8	1635.9	1620.1	1633.2
17.5°	1680.7	1671.9	1664.0	1651.7	1645.6	1648.2	1636.8	1621.8	1623.6	1613.9	1628.8
20°	1667.5	1657.9	1645.6	1633.2	1624.5	1628.8	1620.9	1609.5	1612.1	1605.1	1618.3
22.5°	1652.6	1639.4	1624.5	1610.4	1603.4	1609.5	1603.4	1593.7	1594.6	1590.2	1598.1
25°	1633.2	1618.3	1600.7	1583.1	1579.6	1584.0	1580.5	1572.6	1569.1	1562.0	1565.6
27.5°	1615.7	1599.0	1577.0	1558.5	1552.4	1561.2	1553.3	1540.1	1530.4	1520.7	1513.7
30°	1595.4	1575.2	1550.6	1529.5	1524.2	1527.8	1516.3	1496.1	1470.6	1458.3	1439.0
32.5°	1573.5	1547.1	1516.3	1492.6	1489.1	1486.4	1465.3	1436.3	1396.8	1372.2	1342.3
35°	1544.5	1515.5	1478.5	1449.5	1444.3	1429.3	1395.0	1356.3	1305.4	1263.2	1212.2
37.5°	1511.9	1477.7	1439.0	1400.3	1385.4	1355.5	1307.1	1266.7	1189.3	1138.3	1076.8
40°	1475.0	1433.7	1386.2	1339.6	1315.0	1266.7	1211.3	1151.5	1076.8	1008.3	956.4
42.5°	1424.0	1380.1	1323.8	1272.0	1229.8	1165.6	1100.5	1016.2	947.6	889.6	836.8
45°	1363.4	1310.6	1245.6	1183.2	1129.6	1053.1	976.6	892.2	835.1	767.4	731.4
47.5°	1285.1	1228.0	1158.6	1089.1	1018.8	934.4	854.4	773.5	716.4	668.1	641.7
50°	1192.8	1140.1	1063.6	981.0	903.6	815.7	735.8	675.1	619.7	589.8	569.6
52.5°	1078.6	1029.3	951.1	861.5	786.7	700.6	627.6	578.4	538.8	516.9	509.8
55°	951.1	908.0	830.7	747.2	670.7	591.6	536.2	493.1	467.6	454.5	455.3
57.5°	814.9	781.5	708.5	633.8	561.7	501.9	451.8	417.5	398.2	397.3	400.0
60°	678.6	654.0	590.7	526.5	463.3	414.9	378.0	354.3	341.9	342.8	341.9
62.5°	548.5	525.7	480.0	427.2	377.1	344.6	311.2	301.5	291.0	290.1	290.1
65°	431.6	414.0	377.1	339.3	301.5	280.4	263.7	252.3	244.4	242.6	243.5
67.5°	324.4	317.3	291.8	266.3	242.6	229.4	215.4	212.7	206.6	206.6	208.3
70°	241.7	236.5	222.4	207.5	197.8	189.0	182.0	182.0	181.1	180.2	184.6
72.5°	174.9	175.8	171.4	160.0	159.1	157.3	155.6	158.2	159.1	161.7	167.0
75°	123.1	125.7	125.7	123.9	127.5	131.9	134.5	138.9	144.2	147.7	153.8
77.5°	87.0	87.0	91.4	96.7	103.7	111.6	118.7	124.8	131.9	136.3	141.5
80°	56.3	58.9	65.9	75.6	85.3	95.8	105.5	113.4	120.4	127.5	131.0
82.5°	33.4	37.8	46.6	58.9	71.2	84.4	94.1	103.7	111.6	118.7	121.3
85°	16.7	22.9	33.4	46.6	59.8	73.8	86.1	94.9	103.7	109.9	113.4
87.5°	5.3	12.3	23.7	36.0	50.1	64.2	77.4	87.0	94.9	100.2	103.7
90°	0.0	6.2	16.7	29.9	43.1	57.1	69.4	80.0	87.9	92.3	94.9
92.5°	0.0	3.5	13.2	24.6	36.9	51.0	63.3	73.0	80.0	84.4	86.1
95°	0.9	2.6	9.7	20.2	32.5	45.7	57.1	65.9	73.0	77.4	78.2
97.5°	0.9	1.8	7.9	16.7	28.1	40.4	51.9	60.7	65.9	70.3	71.2
100°	0.9	1.8	6.2	14.9	24.6	36.0	46.6	54.5	60.7	64.2	65.0
102.5°	0.9	0.9	5.3	12.3	22.0	31.6	41.3	49.2	54.5	58.0	59.8
105°	0.9	0.9	4.4	10.5	19.3	28.1	36.9	44.8	49.2	52.7	54.5
107.5°	0.9	0.9	3.5	8.8	16.7	24.6	33.4	39.6	44.8	48.3	50.1
110°	0.9	0.9	2.6	7.9	14.1	22.0	29.0	35.2	40.4	44.0	45.7

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.9	0.9	2.6	7.0	12.3	19.3	25.5	31.6	36.0	39.6	42.2
115°	0.9	0.9	2.6	6.2	11.4	16.7	22.9	28.1	32.5	36.0	38.7
117.5°	0.9	0.9	2.6	5.3	9.7	14.9	20.2	25.5	29.0	32.5	35.2
120°	0.9	0.9	1.8	4.4	8.8	13.2	17.6	22.0	26.4	29.9	32.5
122.5°	0.9	0.9	1.8	4.4	7.0	11.4	15.8	19.3	23.7	26.4	29.0
125°	0.9	0.9	1.8	3.5	6.2	10.5	14.1	17.6	20.2	23.7	26.4
127.5°	0.9	0.9	1.8	3.5	5.3	8.8	12.3	15.8	18.5	21.1	22.9
130°	0.9	0.9	1.8	2.6	4.4	7.0	10.5	13.2	16.7	18.5	20.2
132.5°	0.9	0.9	0.9	2.6	3.5	5.3	7.9	11.4	14.1	16.7	17.6
135°	0.9	0.9	0.9	1.8	3.5	4.4	6.2	8.8	11.4	14.1	15.8
137.5°	0.9	0.9	0.9	1.8	2.6	4.4	5.3	7.0	9.7	11.4	14.1
140°	0.9	0.9	0.9	1.8	2.6	3.5	4.4	6.2	7.9	9.7	11.4
142.5°	0.9	0.9	0.9	1.8	1.8	2.6	3.5	5.3	6.2	7.9	9.7
145°	0.9	0.9	0.9	1.8	1.8	2.6	3.5	4.4	5.3	6.2	7.9
147.5°	0.9	0.9	0.9	1.8	1.8	1.8	2.6	3.5	4.4	5.3	6.2
150°	1.8	1.8	1.8	1.8	1.8	1.8	2.6	2.6	3.5	4.4	5.3
152.5°	1.8	1.8	1.8	1.8	1.8	1.8	2.6	2.6	2.6	3.5	4.4
155°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.6	2.6	3.5	3.5
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

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8
2.5°	1686.9	1688.6	1699.2	1698.3	1696.5	1694.8	1694.8	1693.0	1694.8	1699.2	1697.4
5°	1678.1	1680.7	1688.6	1687.7	1686.0	1685.1	1684.2	1681.6	1683.3	1689.5	1687.7
7.5°	1662.3	1664.9	1671.9	1668.4	1665.8	1667.5	1663.1	1660.5	1664.0	1670.2	1669.3
10°	1645.6	1647.3	1656.1	1654.3	1649.9	1650.8	1646.4	1644.7	1649.1	1652.6	1653.5
12.5°	1634.1	1640.3	1648.2	1647.3	1646.4	1647.3	1642.9	1641.2	1643.8	1647.3	1646.4
15°	1631.5	1639.4	1648.2	1648.2	1649.1	1649.9	1645.6	1642.9	1645.6	1648.2	1647.3
17.5°	1628.8	1638.5	1646.4	1645.6	1646.4	1648.2	1641.2	1639.4	1642.9	1646.4	1644.7
20°	1620.1	1628.8	1634.1	1632.4	1632.4	1633.2	1624.5	1624.5	1629.7	1632.4	1633.2
22.5°	1595.4	1606.0	1606.0	1601.6	1601.6	1598.1	1595.4	1590.2	1596.3	1600.7	1604.2
25°	1558.5	1562.9	1557.6	1548.0	1542.7	1538.3	1526.0	1536.6	1536.6	1549.7	1554.1
27.5°	1506.7	1497.0	1482.1	1461.8	1457.4	1443.4	1435.5	1438.1	1442.5	1461.0	1475.0
30°	1421.4	1392.4	1366.9	1358.1	1338.8	1324.7	1310.6	1317.7	1325.6	1336.1	1365.1
32.5°	1308.9	1280.8	1239.4	1224.5	1204.3	1186.7	1170.0	1180.5	1194.6	1201.6	1233.3
35°	1179.7	1146.3	1108.5	1083.0	1061.9	1052.2	1031.1	1046.0	1061.0	1066.3	1093.5
37.5°	1042.5	1008.3	974.8	952.9	932.7	926.5	912.4	923.0	934.4	942.3	965.2
40°	912.4	880.8	855.3	840.4	826.3	821.0	815.7	820.1	828.9	835.1	852.7
42.5°	800.8	775.3	757.7	748.9	739.3	732.2	733.1	734.9	739.3	752.5	760.4
45°	703.2	688.3	676.9	675.1	668.9	668.1	667.2	670.7	673.3	681.3	687.4
47.5°	625.0	618.8	616.2	619.7	622.4	618.8	620.6	625.0	630.3	630.3	629.4
50°	563.5	565.2	568.7	576.6	581.9	583.7	585.4	590.7	591.6	593.3	590.7
52.5°	513.4	515.1	524.8	537.1	543.2	545.9	549.4	554.7	554.7	556.4	552.9
55°	462.4	465.0	474.7	487.0	492.3	495.8	499.3	502.8	505.4	509.0	506.3
57.5°	406.1	414.0	420.2	423.7	427.2	429.8	432.5	433.4	438.6	439.5	443.9
60°	346.3	348.1	354.3	353.4	350.7	357.8	354.3	360.4	366.6	374.5	375.3
62.5°	289.2	290.1	294.5	292.7	296.2	295.4	298.0	298.0	302.4	305.9	310.3
65°	244.4	245.3	248.8	248.8	247.9	250.5	253.2	254.9	254.9	257.6	261.1
67.5°	211.0	213.6	217.1	218.9	220.6	220.6	223.3	224.2	225.9	226.8	228.5
70°	188.1	191.6	195.1	196.9	197.8	199.5	200.4	200.4	202.2	203.1	204.8
72.5°	171.4	174.9	177.6	177.6	179.3	180.2	180.2	181.1	182.0	183.7	185.5
75°	157.3	160.0	161.7	160.9	160.9	160.9	161.7	161.7	163.5	165.3	167.0
77.5°	144.2	146.8	146.8	145.0	145.0	145.0	145.0	145.9	146.8	148.6	150.3
80°	134.5	134.5	133.6	133.6	131.9	131.0	131.0	131.9	131.9	133.6	136.3
82.5°	123.9	123.9	123.1	122.2	121.3	120.4	120.4	121.3	122.2	123.1	124.8
85°	114.3	114.3	112.5	112.5	111.6	111.6	111.6	111.6	112.5	113.4	115.2
87.5°	104.6	103.7	102.8	102.0	102.0	102.0	102.0	102.0	102.8	104.6	105.5
90°	94.9	94.1	93.2	93.2	92.3	92.3	93.2	93.2	94.1	94.9	95.8
92.5°	86.1	85.3	84.4	84.4	83.5	83.5	84.4	83.5	85.3	85.3	86.1
95°	78.2	77.4	76.5	76.5	76.5	76.5	76.5	76.5	77.4	77.4	78.2
97.5°	71.2	70.3	69.4	69.4	70.3	69.4	70.3	70.3	70.3	71.2	72.1
100°	65.0	64.2	64.2	65.0	64.2	64.2	65.0	65.0	65.0	65.0	65.9
102.5°	59.8	59.8	59.8	59.8	59.8	59.8	60.7	60.7	60.7	60.7	61.5
105°	54.5	55.4	55.4	55.4	56.3	56.3	56.3	57.1	57.1	57.1	57.1
107.5°	51.0	51.9	51.9	52.7	52.7	53.6	53.6	53.6	53.6	54.5	54.5
110°	47.5	48.3	49.2	50.1	50.1	51.0	51.0	51.0	51.0	51.0	51.0

TEST NUMBER: P1213782

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	44.0	44.8	45.7	47.5	48.3	48.3	48.3	48.3	49.2	49.2	48.3
115°	40.4	42.2	43.1	44.8	45.7	45.7	46.6	46.6	46.6	46.6	45.7
117.5°	36.9	39.6	40.4	42.2	43.1	43.1	44.0	44.0	44.0	44.0	43.1
120°	34.3	36.0	37.8	38.7	39.6	40.4	40.4	41.3	41.3	41.3	40.4
122.5°	31.6	33.4	35.2	36.0	36.9	37.8	37.8	37.8	37.8	37.8	37.8
125°	28.1	29.9	31.6	32.5	33.4	34.3	34.3	35.2	35.2	35.2	34.3
127.5°	25.5	27.3	28.1	29.9	30.8	30.8	31.6	31.6	31.6	31.6	30.8
130°	22.0	23.7	25.5	26.4	27.3	27.3	28.1	28.1	28.1	28.1	28.1
132.5°	19.3	21.1	22.0	23.7	23.7	24.6	24.6	25.5	25.5	25.5	24.6
135°	17.6	18.5	19.3	21.1	21.1	22.0	22.0	22.0	22.0	22.0	22.0
137.5°	15.8	16.7	17.6	18.5	18.5	19.3	19.3	19.3	19.3	20.2	19.3
140°	13.2	14.9	15.8	15.8	16.7	16.7	16.7	17.6	17.6	17.6	16.7
142.5°	11.4	12.3	13.2	14.1	14.9	14.9	14.9	14.9	15.8	14.9	14.9
145°	8.8	10.5	11.4	12.3	13.2	13.2	13.2	13.2	13.2	13.2	13.2
147.5°	7.0	7.9	9.7	10.5	10.5	11.4	11.4	11.4	11.4	11.4	11.4
150°	6.2	6.2	7.9	8.8	9.7	9.7	9.7	9.7	9.7	9.7	9.7
152.5°	4.4	5.3	6.2	7.0	7.9	7.9	7.9	7.9	7.9	7.9	7.9
155°	4.4	4.4	5.3	5.3	6.2	6.2	6.2	6.2	7.0	6.2	6.2
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: P1213782

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

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8
2.5°	1694.8	1693.9	1697.4	1693.9	1676.3	1683.3	1680.7	1690.4	1691.3	1693.9	1702.7
5°	1686.0	1686.0	1690.4	1686.9	1670.2	1677.2	1676.3	1686.0	1687.7	1689.5	1699.2
7.5°	1668.4	1669.3	1675.4	1672.8	1655.2	1665.8	1664.9	1676.3	1679.8	1683.3	1692.1
10°	1651.7	1650.8	1657.9	1655.2	1638.5	1650.8	1649.9	1661.4	1666.6	1672.8	1683.3
12.5°	1642.9	1640.3	1642.9	1640.3	1621.8	1631.5	1632.4	1645.6	1651.7	1659.6	1671.9
15°	1642.9	1638.5	1638.5	1633.2	1612.1	1618.3	1619.2	1628.0	1635.9	1643.8	1658.7
17.5°	1641.2	1636.8	1635.9	1631.5	1608.6	1608.6	1607.8	1613.9	1618.3	1626.2	1642.0
20°	1631.5	1629.7	1628.8	1626.2	1605.1	1601.6	1599.8	1599.8	1602.5	1605.1	1620.9
22.5°	1606.0	1607.8	1609.5	1611.3	1594.6	1588.4	1589.3	1587.5	1584.9	1584.9	1598.1
25°	1558.5	1567.3	1574.3	1582.3	1572.6	1568.2	1573.5	1570.8	1566.4	1562.9	1574.3
27.5°	1482.9	1501.4	1516.3	1535.7	1536.6	1533.0	1547.1	1545.3	1544.5	1539.2	1548.0
30°	1378.3	1407.3	1427.6	1455.7	1479.4	1482.9	1506.7	1510.2	1513.7	1511.1	1519.8
32.5°	1251.7	1291.3	1325.6	1369.5	1392.4	1412.6	1446.0	1460.1	1474.1	1478.5	1488.2
35°	1113.7	1158.6	1199.0	1247.3	1283.4	1327.3	1367.8	1388.9	1420.5	1432.8	1446.9
37.5°	982.8	1025.0	1064.5	1112.9	1170.9	1216.6	1266.7	1314.2	1357.2	1374.8	1395.9
40°	866.7	901.0	938.8	981.0	1033.7	1093.5	1148.0	1213.9	1264.9	1300.1	1330.9
42.5°	778.8	795.5	828.0	865.8	908.0	968.7	1024.1	1097.9	1159.4	1209.5	1260.5
45°	700.6	708.5	732.2	752.5	795.5	849.1	908.0	980.1	1044.3	1108.5	1170.0
47.5°	633.8	643.5	654.9	667.2	698.0	742.8	793.8	858.8	923.0	997.7	1068.0
50°	589.0	591.6	593.3	598.6	617.1	647.8	689.2	744.5	806.1	886.1	960.8
52.5°	549.4	549.4	544.1	541.5	548.5	567.9	591.6	631.1	694.4	768.3	847.4
55°	507.2	499.3	497.5	488.7	490.5	499.3	510.7	541.5	593.3	656.6	733.1
57.5°	448.3	444.8	444.8	441.3	434.2	438.6	441.3	463.3	500.2	554.7	621.5
60°	380.6	378.9	383.3	384.1	378.0	380.6	379.7	392.9	419.3	463.3	518.6
62.5°	312.9	320.8	321.7	325.2	321.7	320.8	325.2	336.7	349.9	383.3	426.3
65°	262.8	267.2	268.1	272.5	270.7	270.7	274.3	283.0	291.0	313.8	347.2
67.5°	230.3	228.5	229.4	232.1	229.4	228.5	231.2	236.5	242.6	256.7	280.4
70°	204.8	203.1	203.1	203.1	199.5	196.9	197.8	199.5	202.2	210.1	225.0
72.5°	185.5	185.5	182.8	180.2	177.6	175.8	174.0	172.3	171.4	174.0	182.0
75°	167.9	168.8	167.9	165.3	161.7	158.2	154.7	151.2	146.8	145.0	145.9
77.5°	152.1	153.0	153.8	153.0	149.4	145.0	139.8	134.5	128.3	122.2	118.7
80°	138.0	139.8	140.6	139.8	137.1	133.6	127.5	121.3	112.5	104.6	95.8
82.5°	125.7	128.3	129.2	129.2	127.5	123.9	116.9	109.9	100.2	89.7	78.2
85°	116.0	117.8	119.5	119.5	118.7	115.2	108.1	100.2	90.5	78.2	65.9
87.5°	106.4	107.2	109.0	110.8	109.0	105.5	99.3	90.5	80.9	68.6	54.5
90°	96.7	97.6	99.3	101.1	100.2	96.7	91.4	83.5	73.0	59.8	45.7
92.5°	87.0	88.8	89.7	90.5	91.4	88.8	84.4	76.5	65.9	52.7	39.6
95°	80.0	80.0	81.8	82.6	83.5	80.9	77.4	69.4	59.8	47.5	34.3
97.5°	73.0	73.0	74.7	74.7	75.6	73.8	70.3	63.3	53.6	42.2	29.0
100°	65.9	66.8	67.7	68.6	68.6	67.7	64.2	57.1	48.3	37.8	25.5
102.5°	61.5	61.5	62.4	62.4	63.3	61.5	58.0	51.9	43.1	33.4	22.0
105°	57.1	57.1	58.0	58.0	57.1	55.4	51.9	46.6	38.7	29.0	19.3
107.5°	53.6	53.6	53.6	53.6	52.7	51.0	47.5	41.3	34.3	26.4	17.6
110°	51.0	50.1	50.1	49.2	48.3	45.7	42.2	36.9	30.8	22.9	14.9

TEST NUMBER: P1213782

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

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	48.3	47.5	46.6	45.7	44.0	41.3	37.8	33.4	27.3	20.2	13.2
115°	45.7	44.8	44.0	42.2	40.4	37.8	34.3	29.9	23.7	17.6	11.4
117.5°	43.1	42.2	40.4	38.7	36.9	34.3	30.8	26.4	21.1	15.8	10.5
120°	39.6	38.7	37.8	36.0	34.3	30.8	27.3	23.7	18.5	14.1	8.8
122.5°	36.9	36.0	34.3	33.4	30.8	28.1	24.6	21.1	16.7	12.3	7.9
125°	33.4	32.5	31.6	29.9	28.1	24.6	22.0	18.5	14.9	10.5	6.2
127.5°	30.8	29.9	28.1	26.4	24.6	22.0	19.3	16.7	13.2	8.8	6.2
130°	27.3	26.4	25.5	23.7	22.0	19.3	17.6	14.1	11.4	7.9	5.3
132.5°	23.7	23.7	22.9	21.1	19.3	17.6	14.9	12.3	9.7	7.0	4.4
135°	22.0	21.1	20.2	18.5	17.6	14.9	13.2	10.5	7.9	6.2	3.5
137.5°	19.3	18.5	17.6	16.7	14.9	13.2	11.4	8.8	7.0	5.3	3.5
140°	16.7	15.8	15.8	14.1	13.2	11.4	9.7	7.9	6.2	4.4	2.6
142.5°	14.9	14.1	13.2	12.3	11.4	9.7	7.9	6.2	5.3	3.5	2.6
145°	13.2	12.3	11.4	10.5	9.7	7.9	7.0	5.3	4.4	3.5	2.6
147.5°	10.5	10.5	9.7	8.8	7.9	7.0	6.2	5.3	3.5	2.6	1.8
150°	8.8	8.8	7.9	7.0	7.0	6.2	5.3	4.4	3.5	2.6	1.8
152.5°	7.9	7.0	7.0	6.2	6.2	5.3	4.4	3.5	2.6	2.6	1.8
155°	6.2	6.2	6.2	5.3	5.3	4.4	3.5	3.5	2.6	1.8	1.8
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: P1213782

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

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8
2.5°	1704.4	1693.9	1702.7	1718.5	1716.8	1715.0	1713.2	1716.8	1728.2	1722.0	1712.4
5°	1701.8	1691.3	1700.9	1715.9	1715.0	1712.4	1710.6	1714.1	1725.5	1719.4	1708.8
7.5°	1696.5	1686.9	1693.9	1708.8	1708.8	1707.1	1705.3	1708.8	1719.4	1714.1	1703.6
10°	1687.7	1680.7	1687.7	1701.8	1702.7	1699.2	1697.4	1701.8	1712.4	1709.7	1700.9
12.5°	1680.7	1673.7	1681.6	1695.7	1696.5	1693.0	1690.4	1695.7	1709.7	1711.5	1708.8
15°	1671.0	1664.9	1674.6	1689.5	1689.5	1686.9	1686.9	1693.9	1713.2	1721.1	1725.5
17.5°	1657.0	1652.6	1664.0	1679.0	1679.8	1678.1	1679.0	1693.0	1718.5	1737.8	1750.2
20°	1639.4	1637.6	1649.9	1665.8	1668.4	1669.3	1673.7	1694.8	1729.9	1756.3	1768.6
22.5°	1618.3	1619.2	1633.2	1649.9	1653.5	1656.1	1664.9	1694.8	1738.7	1766.9	1772.1
25°	1594.6	1597.2	1612.1	1632.4	1636.8	1642.0	1657.0	1695.7	1741.4	1759.8	1751.0
27.5°	1569.1	1574.3	1593.7	1614.8	1620.1	1628.8	1648.2	1690.4	1729.1	1729.9	1697.4
30°	1542.7	1548.9	1571.7	1596.3	1605.1	1613.9	1637.6	1678.1	1699.2	1671.0	1613.9
32.5°	1512.8	1521.6	1544.5	1574.3	1584.9	1596.3	1620.1	1654.3	1646.4	1585.8	1504.0
35°	1475.0	1487.3	1513.7	1548.9	1558.5	1573.5	1590.2	1598.1	1562.9	1476.8	1384.5
37.5°	1428.4	1446.9	1477.7	1518.1	1528.6	1538.3	1542.7	1520.7	1450.4	1357.2	1261.4
40°	1374.8	1402.9	1436.3	1481.2	1491.7	1491.7	1475.9	1429.3	1340.5	1218.3	1112.0
42.5°	1309.8	1344.0	1386.2	1431.1	1441.6	1429.3	1391.5	1309.8	1208.7	1072.4	959.9
45°	1230.6	1276.4	1323.8	1370.4	1375.7	1348.4	1280.8	1177.0	1052.2	925.6	818.4
47.5°	1136.6	1196.4	1248.2	1301.0	1293.9	1248.2	1157.7	1039.9	908.0	788.5	702.3
50°	1031.1	1101.4	1159.4	1209.5	1194.6	1131.3	1025.0	901.9	770.9	668.9	597.7
52.5°	918.6	999.5	1057.5	1097.9	1077.7	1002.1	885.2	767.4	660.2	567.0	519.5
55°	801.7	883.4	943.2	974.8	948.5	866.7	751.6	644.3	543.2	482.6	454.5
57.5°	688.3	764.8	821.0	846.5	813.1	731.4	625.0	534.5	461.5	410.5	396.4
60°	579.3	641.7	695.3	714.7	678.6	603.0	511.6	439.5	385.9	350.7	343.7
62.5°	478.2	529.2	571.4	586.3	551.2	492.3	413.1	359.5	321.7	304.1	295.4
65°	394.7	424.6	467.6	465.0	443.9	389.4	331.4	293.6	269.0	257.6	252.3
67.5°	310.3	337.5	364.8	368.3	341.9	304.1	266.3	239.1	225.9	219.8	217.1
70°	240.0	260.2	276.9	272.5	258.4	234.7	211.0	196.0	190.8	188.1	188.1
72.5°	186.4	196.9	204.8	199.5	190.8	178.4	167.0	160.9	161.7	163.5	165.3
75°	144.2	146.8	148.6	143.3	141.5	133.6	132.7	133.6	138.9	144.2	146.8
77.5°	110.8	107.2	104.6	99.3	100.2	99.3	103.7	110.8	118.7	126.6	133.6
80°	85.3	77.4	71.2	65.9	68.6	73.0	81.8	92.3	102.8	111.6	120.4
82.5°	65.9	54.5	45.7	40.4	45.7	52.7	64.2	77.4	89.7	99.3	109.0
85°	51.0	37.8	27.3	22.0	27.3	37.8	50.1	65.0	78.2	88.8	98.5
87.5°	39.6	27.3	14.9	8.8	14.9	26.4	40.4	54.5	67.7	80.0	89.7
90°	31.6	18.5	7.0	1.8	7.9	18.5	31.6	45.7	58.9	72.1	81.8
92.5°	25.5	13.2	3.5	0.0	4.4	14.1	26.4	39.6	52.7	65.0	74.7
95°	21.1	10.5	2.6	0.0	3.5	10.5	21.1	34.3	46.6	58.9	66.8
97.5°	17.6	7.9	1.8	0.0	1.8	8.8	17.6	29.0	41.3	52.7	60.7
100°	14.9	7.0	1.8	0.0	1.8	7.0	14.9	25.5	36.0	46.6	54.5
102.5°	12.3	5.3	0.9	0.9	0.9	5.3	13.2	22.0	31.6	41.3	49.2
105°	11.4	4.4	0.9	0.9	0.9	4.4	11.4	19.3	28.1	36.9	44.0
107.5°	9.7	3.5	0.9	0.9	0.9	3.5	9.7	16.7	25.5	33.4	39.6
110°	7.9	3.5	0.9	0.9	0.9	3.5	7.9	14.9	22.0	29.0	35.2



TEST NUMBER: P1213782

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

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	7.0	2.6	0.9	0.9	0.9	2.6	7.0	13.2	19.3	26.4	31.6
115°	6.2	2.6	0.9	0.9	0.9	2.6	6.2	11.4	16.7	22.9	28.1
117.5°	5.3	2.6	0.9	0.9	0.9	1.8	5.3	9.7	14.9	20.2	25.5
120°	4.4	1.8	0.9	0.9	0.9	1.8	4.4	8.8	13.2	17.6	22.0
122.5°	4.4	1.8	0.9	0.9	0.9	1.8	3.5	7.0	11.4	14.9	19.3
125°	3.5	1.8	0.9	0.9	0.9	0.9	3.5	6.2	9.7	13.2	16.7
127.5°	3.5	1.8	0.9	0.9	0.9	0.9	2.6	5.3	7.9	11.4	14.9
130°	2.6	1.8	0.9	0.9	0.9	0.9	1.8	4.4	7.0	9.7	12.3
132.5°	2.6	1.8	0.9	0.9	0.9	0.9	1.8	3.5	5.3	7.9	10.5
135°	2.6	0.9	0.9	0.9	0.9	0.9	0.9	2.6	4.4	6.2	7.9
137.5°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	1.8	3.5	4.4	7.0
140°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	1.8	2.6	3.5	5.3
142.5°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8	2.6	4.4
145°	1.8	0.9	0.9	1.8	1.8	0.9	0.9	1.8	1.8	2.6	3.5
147.5°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8	1.8	2.6
150°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.6
152.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
155°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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: P1213782

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

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8
2.5°	1710.6	1690.4	1700.9	1697.4	1700.9	1709.7	1708.8	1706.2	1708.0	1703.6	1699.2
5°	1707.1	1686.9	1697.4	1693.0	1697.4	1706.2	1704.4	1701.8	1704.4	1699.2	1694.8
7.5°	1702.7	1684.2	1696.5	1695.7	1703.6	1715.0	1715.9	1715.9	1722.0	1714.1	1710.6
10°	1702.7	1693.0	1709.7	1715.9	1736.1	1751.0	1752.8	1756.3	1766.9	1765.1	1756.3
12.5°	1721.1	1719.4	1744.0	1758.9	1777.4	1798.5	1809.9	1813.4	1820.5	1815.2	1811.7
15°	1744.9	1753.7	1780.9	1797.6	1817.8	1833.7	1836.3	1838.1	1843.3	1835.4	1829.3
17.5°	1776.5	1781.8	1803.8	1810.8	1824.0	1826.6	1823.1	1814.3	1814.3	1796.7	1791.5
20°	1791.5	1788.8	1797.6	1786.2	1780.9	1765.1	1750.2	1733.5	1732.6	1714.1	1712.4
22.5°	1778.3	1760.7	1742.2	1714.1	1701.8	1679.0	1658.7	1649.1	1642.9	1619.2	1613.0
25°	1731.7	1688.6	1661.4	1628.0	1598.1	1571.7	1552.4	1532.2	1512.8	1493.5	1484.7
27.5°	1650.8	1610.4	1566.4	1519.8	1478.5	1438.1	1405.6	1385.4	1366.9	1341.4	1328.2
30°	1551.5	1495.2	1446.9	1402.1	1334.4	1285.1	1257.9	1217.5	1203.4	1192.0	1167.4
32.5°	1434.6	1366.9	1301.0	1240.3	1170.9	1125.2	1089.1	1059.2	1050.4	1020.6	1013.5
35°	1305.4	1216.6	1141.9	1082.1	1032.0	976.6	946.7	926.5	908.9	888.7	885.2
37.5°	1153.3	1073.3	988.9	936.2	896.6	849.1	826.3	812.2	804.3	789.4	786.7
40°	1000.3	920.3	862.3	809.6	785.0	759.5	742.8	736.6	733.1	727.8	722.6
42.5°	861.5	791.1	749.8	714.7	704.1	691.8	687.4	690.9	687.4	685.6	684.8
45°	743.7	690.0	661.0	650.5	647.8	644.3	647.8	654.0	654.9	653.1	653.1
47.5°	636.4	610.9	598.6	600.4	604.8	607.4	613.6	621.5	623.2	618.8	620.6
50°	566.1	551.2	548.5	555.5	565.2	568.7	575.8	581.9	581.0	579.3	577.5
52.5°	500.2	495.8	502.8	509.8	520.4	522.1	524.8	527.4	526.5	523.0	521.3
55°	444.8	448.3	454.5	457.1	465.0	464.1	465.0	465.0	461.5	459.7	457.1
57.5°	394.7	395.6	399.1	400.0	404.4	402.6	401.7	400.0	394.7	393.8	391.2
60°	343.7	341.9	349.9	343.7	347.2	343.7	342.8	338.4	333.2	332.3	330.5
62.5°	295.4	291.8	297.1	294.5	296.2	292.7	291.0	285.7	281.3	280.4	279.5
65°	252.3	250.5	255.8	254.9	256.7	252.3	250.5	247.0	243.5	242.6	241.7
67.5°	216.2	220.6	223.3	223.3	225.0	224.2	219.8	218.9	218.0	214.5	214.5
70°	189.9	192.5	197.8	198.7	197.8	199.5	196.0	195.1	194.3	192.5	191.6
72.5°	168.8	172.3	177.6	178.4	177.6	177.6	175.8	174.9	174.9	172.3	172.3
75°	152.1	156.5	160.9	160.9	160.9	159.1	157.3	157.3	155.6	154.7	153.0
77.5°	138.0	143.3	146.8	145.9	145.0	143.3	143.3	140.6	138.0	138.0	136.3
80°	127.5	131.0	133.6	132.7	131.9	129.2	128.3	125.7	123.9	121.3	121.3
82.5°	116.0	120.4	122.2	121.3	119.5	116.9	116.0	114.3	112.5	111.6	109.9
85°	106.4	110.8	111.6	109.9	108.1	106.4	105.5	104.6	103.7	102.0	102.0
87.5°	96.7	101.1	101.1	100.2	98.5	97.6	96.7	95.8	94.9	94.1	93.2
90°	88.8	92.3	92.3	91.4	90.5	89.7	88.8	87.9	87.0	86.1	86.1
92.5°	80.9	84.4	84.4	83.5	82.6	81.8	81.8	80.9	80.0	79.1	78.2
95°	73.8	77.4	77.4	77.4	76.5	75.6	75.6	74.7	73.8	73.8	73.0
97.5°	66.8	70.3	70.3	70.3	69.4	68.6	68.6	67.7	67.7	67.7	66.8
100°	60.7	63.3	64.2	64.2	63.3	63.3	63.3	62.4	62.4	62.4	61.5
102.5°	54.5	57.1	58.9	58.9	58.9	58.0	58.0	58.0	58.0	58.0	57.1
105°	49.2	51.9	53.6	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
107.5°	44.8	47.5	49.2	50.1	51.0	51.0	51.9	51.9	51.9	51.9	51.9
110°	40.4	43.1	45.7	46.6	47.5	48.3	48.3	49.2	48.3	48.3	48.3

TEST NUMBER: P1213782

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

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	36.0	39.6	41.3	43.1	44.0	44.8	45.7	45.7	45.7	45.7	45.7
115°	32.5	36.0	37.8	39.6	41.3	42.2	42.2	43.1	43.1	43.1	42.2
117.5°	29.0	32.5	34.3	36.0	36.9	38.7	39.6	39.6	39.6	39.6	38.7
120°	26.4	29.0	30.8	32.5	34.3	35.2	36.0	36.0	36.0	36.0	36.0
122.5°	22.9	25.5	28.1	29.9	30.8	31.6	32.5	32.5	32.5	32.5	32.5
125°	20.2	22.9	24.6	26.4	27.3	29.0	29.0	29.0	29.0	29.0	29.0
127.5°	17.6	20.2	22.0	23.7	24.6	25.5	26.4	26.4	26.4	26.4	26.4
130°	14.9	17.6	19.3	21.1	22.0	22.9	22.9	23.7	23.7	23.7	23.7
132.5°	13.2	14.9	16.7	18.5	19.3	20.2	20.2	21.1	21.1	21.1	21.1
135°	10.5	13.2	14.1	15.8	16.7	17.6	17.6	18.5	18.5	18.5	18.5
137.5°	8.8	10.5	12.3	14.1	14.9	14.9	15.8	15.8	16.7	16.7	16.7
140°	7.0	7.9	10.5	11.4	12.3	13.2	14.1	14.1	14.1	14.1	14.1
142.5°	5.3	7.0	7.9	9.7	10.5	11.4	12.3	12.3	12.3	12.3	12.3
145°	4.4	5.3	6.2	7.9	8.8	9.7	10.5	10.5	10.5	10.5	10.5
147.5°	3.5	4.4	5.3	6.2	7.0	7.9	8.8	8.8	8.8	8.8	8.8
150°	2.6	3.5	4.4	4.4	5.3	6.2	7.0	7.9	7.9	7.9	7.9
152.5°	2.6	2.6	3.5	3.5	4.4	5.3	6.2	6.2	6.2	6.2	6.2
155°	1.8	2.6	2.6	2.6	3.5	3.5	4.4	5.3	5.3	5.3	5.3
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: P1213782

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

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8
2.5°	1701.8	1705.3	1703.6	1700.9	1700.1	1704.4	1700.1	1679.8	1687.7	1688.6	1694.8
5°	1699.2	1701.8	1700.1	1698.3	1695.7	1700.9	1695.7	1674.6	1682.5	1683.3	1689.5
7.5°	1716.8	1717.6	1717.6	1713.2	1706.2	1708.8	1701.8	1678.1	1682.5	1682.5	1686.9
10°	1760.7	1762.5	1765.1	1753.7	1744.9	1737.8	1728.2	1699.2	1698.3	1691.3	1691.3
12.5°	1817.8	1813.4	1809.1	1803.8	1796.7	1788.0	1773.9	1739.6	1728.2	1716.8	1705.3
15°	1834.5	1832.8	1831.9	1829.3	1824.9	1822.2	1811.7	1777.4	1760.7	1746.6	1726.4
17.5°	1790.6	1794.1	1805.5	1806.4	1811.7	1822.2	1820.5	1796.7	1781.8	1775.6	1751.0
20°	1711.5	1712.4	1726.4	1732.6	1755.4	1773.0	1786.2	1783.6	1780.0	1787.1	1768.6
22.5°	1616.5	1622.7	1637.6	1647.3	1669.3	1689.5	1710.6	1722.0	1740.5	1769.5	1766.0
25°	1487.3	1495.2	1516.3	1532.2	1562.9	1593.7	1621.8	1642.0	1664.0	1719.4	1737.8
27.5°	1332.6	1344.9	1372.2	1388.0	1431.1	1462.7	1503.1	1542.7	1573.5	1636.8	1674.6
30°	1170.0	1180.5	1209.5	1231.5	1268.4	1311.5	1362.5	1418.8	1469.7	1533.9	1581.4
32.5°	1017.9	1029.3	1053.1	1072.4	1113.7	1149.8	1206.0	1275.5	1322.9	1411.7	1475.0
35°	885.2	895.7	912.4	929.1	963.4	1000.3	1048.7	1116.4	1177.0	1269.3	1349.3
37.5°	792.0	793.8	803.4	813.1	838.6	866.7	904.5	964.3	1020.6	1119.9	1207.8
40°	725.2	725.2	730.5	733.1	744.5	761.2	785.0	831.6	878.2	953.8	1061.0
42.5°	683.9	682.1	682.1	683.0	682.1	690.0	704.1	726.1	767.4	829.8	913.3
45°	653.1	649.6	647.0	640.8	637.3	637.3	638.2	646.1	669.8	710.3	777.9
47.5°	618.8	618.0	613.6	606.5	600.4	596.0	589.0	586.3	593.3	616.2	661.9
50°	579.3	574.9	570.5	565.2	558.2	553.8	540.6	541.5	535.3	545.9	569.6
52.5°	521.3	517.8	516.0	511.6	509.0	507.2	496.7	486.1	483.5	485.2	494.0
55°	457.1	458.9	451.8	455.3	454.5	446.5	442.2	434.2	431.6	430.7	435.1
57.5°	390.3	392.0	387.7	391.2	391.2	386.8	384.1	384.1	378.0	372.7	378.9
60°	329.6	326.1	328.8	333.2	333.2	330.5	328.8	328.8	324.4	322.6	327.0
62.5°	280.4	276.9	279.5	283.9	284.8	283.0	281.3	281.3	276.0	276.0	279.5
65°	242.6	243.5	242.6	246.1	246.1	247.0	245.3	243.5	237.3	240.0	239.1
67.5°	215.4	214.5	214.5	218.0	217.1	218.9	217.1	214.5	210.1	206.6	205.7
70°	192.5	191.6	191.6	193.4	194.3	194.3	193.4	191.6	185.5	182.0	179.3
72.5°	172.3	171.4	172.3	173.2	174.0	174.9	174.0	172.3	167.0	162.6	158.2
75°	153.8	153.0	155.6	155.6	156.5	156.5	157.3	156.5	152.1	146.8	141.5
77.5°	135.4	136.3	138.9	139.8	141.5	142.4	143.3	143.3	138.9	134.5	127.5
80°	120.4	122.2	123.9	124.8	126.6	129.2	130.1	131.0	127.5	123.1	115.2
82.5°	109.9	110.8	112.5	113.4	116.0	116.9	117.8	119.5	117.8	113.4	104.6
85°	101.1	102.0	103.7	103.7	105.5	107.2	108.1	109.0	108.1	103.7	94.9
87.5°	93.2	94.1	94.9	95.8	96.7	97.6	98.5	99.3	98.5	94.1	86.1
90°	86.1	86.1	87.0	87.0	87.9	88.8	90.5	90.5	89.7	86.1	78.2
92.5°	78.2	79.1	79.1	80.0	80.9	81.8	82.6	82.6	81.8	78.2	71.2
95°	73.0	73.0	73.8	73.8	74.7	74.7	75.6	75.6	74.7	71.2	64.2
97.5°	66.8	66.8	66.8	66.8	67.7	67.7	68.6	68.6	67.7	64.2	58.0
100°	61.5	61.5	61.5	61.5	61.5	62.4	62.4	62.4	61.5	58.0	51.9
102.5°	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	55.4	52.7	46.6
105°	54.5	54.5	54.5	53.6	53.6	53.6	52.7	52.7	50.1	47.5	42.2
107.5°	51.0	51.0	51.0	50.1	50.1	49.2	48.3	48.3	45.7	43.1	37.8
110°	48.3	48.3	48.3	47.5	46.6	45.7	44.8	44.0	41.3	37.8	33.4

TEST NUMBER: P1213782

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

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	45.7	45.7	44.8	44.8	44.0	43.1	41.3	40.4	37.8	34.3	29.9
115°	42.2	42.2	42.2	41.3	40.4	39.6	38.7	36.9	34.3	30.8	26.4
117.5°	38.7	38.7	38.7	37.8	36.9	36.0	35.2	33.4	30.8	27.3	23.7
120°	35.2	35.2	35.2	34.3	33.4	32.5	31.6	29.9	27.3	24.6	20.2
122.5°	32.5	32.5	31.6	30.8	29.9	29.0	28.1	26.4	24.6	21.1	17.6
125°	29.0	29.0	28.1	28.1	27.3	26.4	25.5	23.7	21.1	18.5	15.8
127.5°	26.4	25.5	25.5	25.5	24.6	23.7	22.0	21.1	18.5	15.8	13.2
130°	22.9	22.9	22.9	22.0	22.0	21.1	19.3	17.6	15.8	14.1	11.4
132.5°	20.2	20.2	20.2	20.2	19.3	18.5	16.7	15.8	14.1	11.4	9.7
135°	18.5	18.5	17.6	17.6	16.7	15.8	14.9	13.2	11.4	9.7	7.9
137.5°	15.8	15.8	15.8	14.9	14.9	14.1	12.3	11.4	10.5	8.8	7.0
140°	14.1	14.1	13.2	13.2	12.3	12.3	11.4	9.7	8.8	7.0	6.2
142.5°	12.3	12.3	11.4	11.4	10.5	10.5	9.7	8.8	7.0	6.2	4.4
145°	10.5	10.5	9.7	9.7	9.7	8.8	7.9	7.0	6.2	5.3	4.4
147.5°	8.8	8.8	8.8	7.9	7.9	7.0	7.0	6.2	5.3	4.4	3.5
150°	7.9	7.9	7.0	7.0	7.0	6.2	5.3	5.3	4.4	3.5	2.6
152.5°	6.2	6.2	6.2	6.2	5.3	5.3	4.4	4.4	3.5	2.6	2.6
155°	5.3	5.3	5.3	4.4	4.4	4.4	3.5	3.5	2.6	2.6	1.8
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: P1213782

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

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8	1701.8
2.5°	1692.1	1691.3	1699.2	1698.3	1687.7	1703.6	1714.1
5°	1687.7	1686.9	1693.9	1695.7	1684.2	1700.9	1712.4
7.5°	1684.2	1683.3	1691.3	1693.9	1682.5	1697.4	1709.7
10°	1685.1	1680.7	1687.7	1689.5	1679.0	1694.8	1705.3
12.5°	1691.3	1680.7	1683.3	1683.3	1673.7	1687.7	1699.2
15°	1706.2	1684.2	1680.7	1678.1	1665.8	1679.0	1690.4
17.5°	1722.9	1693.0	1680.7	1671.9	1657.0	1668.4	1680.7
20°	1739.6	1702.7	1682.5	1668.4	1648.2	1658.7	1667.5
22.5°	1747.5	1711.5	1684.2	1663.1	1637.6	1642.9	1652.6
25°	1737.0	1708.0	1680.7	1655.2	1624.5	1625.3	1633.2
27.5°	1698.3	1690.4	1672.8	1647.3	1613.9	1609.5	1615.7
30°	1632.4	1654.3	1655.2	1636.8	1601.6	1592.8	1595.4
32.5°	1540.1	1589.3	1618.3	1614.8	1584.0	1571.7	1573.5
35°	1433.7	1495.2	1558.5	1579.6	1557.6	1548.0	1544.5
37.5°	1306.2	1388.9	1473.3	1525.1	1521.6	1515.5	1511.9
40°	1165.6	1264.9	1365.1	1447.8	1473.3	1473.3	1475.0
42.5°	1015.3	1131.3	1241.2	1345.8	1405.6	1418.8	1424.0
45°	870.2	987.2	1106.7	1227.1	1307.1	1348.4	1363.4
47.5°	738.4	856.2	969.6	1101.4	1207.8	1261.4	1285.1
50°	625.9	713.8	833.3	964.3	1080.3	1146.3	1192.8
52.5°	532.7	601.3	705.9	828.0	945.0	1035.5	1078.6
55°	454.5	501.0	589.8	695.3	807.0	901.0	951.1
57.5°	388.5	425.5	486.1	574.0	668.1	761.2	814.9
60°	330.5	356.0	397.3	466.8	546.8	626.8	678.6
62.5°	280.4	297.1	324.4	375.3	437.8	500.2	548.5
65°	241.7	248.8	263.7	295.4	342.8	390.3	431.6
67.5°	203.9	208.3	219.8	239.1	262.8	297.1	324.4
70°	175.8	175.8	176.7	188.1	200.4	222.4	241.7
72.5°	153.0	150.3	145.0	147.7	150.3	162.6	174.9
75°	134.5	128.3	119.5	116.0	114.3	116.0	123.1
77.5°	118.7	109.9	99.3	90.5	83.5	80.9	87.0
80°	105.5	94.9	82.6	71.2	59.8	53.6	56.3
82.5°	94.9	81.8	68.6	55.4	42.2	33.4	33.4
85°	83.5	71.2	57.1	43.1	29.9	18.5	16.7
87.5°	75.6	62.4	47.5	34.3	21.1	9.7	5.3
90°	67.7	54.5	40.4	27.3	14.9	4.4	0.0
92.5°	60.7	48.3	35.2	22.0	10.5	2.6	0.0
95°	54.5	43.1	29.9	18.5	8.8	1.8	0.9
97.5°	48.3	37.8	26.4	14.9	6.2	1.8	0.9
100°	44.0	33.4	22.9	12.3	5.3	0.9	0.9
102.5°	38.7	29.9	19.3	10.5	4.4	0.9	0.9
105°	34.3	26.4	16.7	8.8	3.5	0.9	0.9
107.5°	30.8	22.9	14.9	7.9	3.5	0.9	0.9
110°	27.3	20.2	13.2	7.0	2.6	0.9	0.9



TEST NUMBER: P1213782

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

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	24.6	17.6	11.4	6.2	1.8	0.9	0.9
115°	21.1	15.8	9.7	5.3	1.8	0.9	0.9
117.5°	18.5	13.2	8.8	4.4	1.8	0.9	0.9
120°	15.8	11.4	7.0	3.5	0.9	0.9	0.9
122.5°	14.1	9.7	6.2	3.5	0.9	0.9	0.9
125°	12.3	8.8	5.3	2.6	0.9	0.9	0.9
127.5°	10.5	7.0	4.4	1.8	0.9	0.9	0.9
130°	8.8	6.2	3.5	1.8	0.9	0.9	0.9
132.5°	7.0	5.3	3.5	1.8	0.9	0.9	0.9
135°	6.2	4.4	2.6	1.8	0.9	0.9	0.9
137.5°	5.3	3.5	1.8	1.8	1.8	0.9	0.9
140°	4.4	2.6	1.8	1.8	1.8	1.8	0.9
142.5°	3.5	2.6	1.8	1.8	1.8	1.8	0.9
145°	2.6	1.8	1.8	1.8	1.8	1.8	0.9
147.5°	2.6	1.8	1.8	1.8	1.8	1.8	0.9
150°	1.8	1.8	1.8	1.8	1.8	1.8	1.8
152.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8
155°	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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)