

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: METALUX

Report Number: P#

Luminaire Tested: **2SNLED-LD5-45HL-LN-UNV-L950-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33519)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U
Description: 2FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

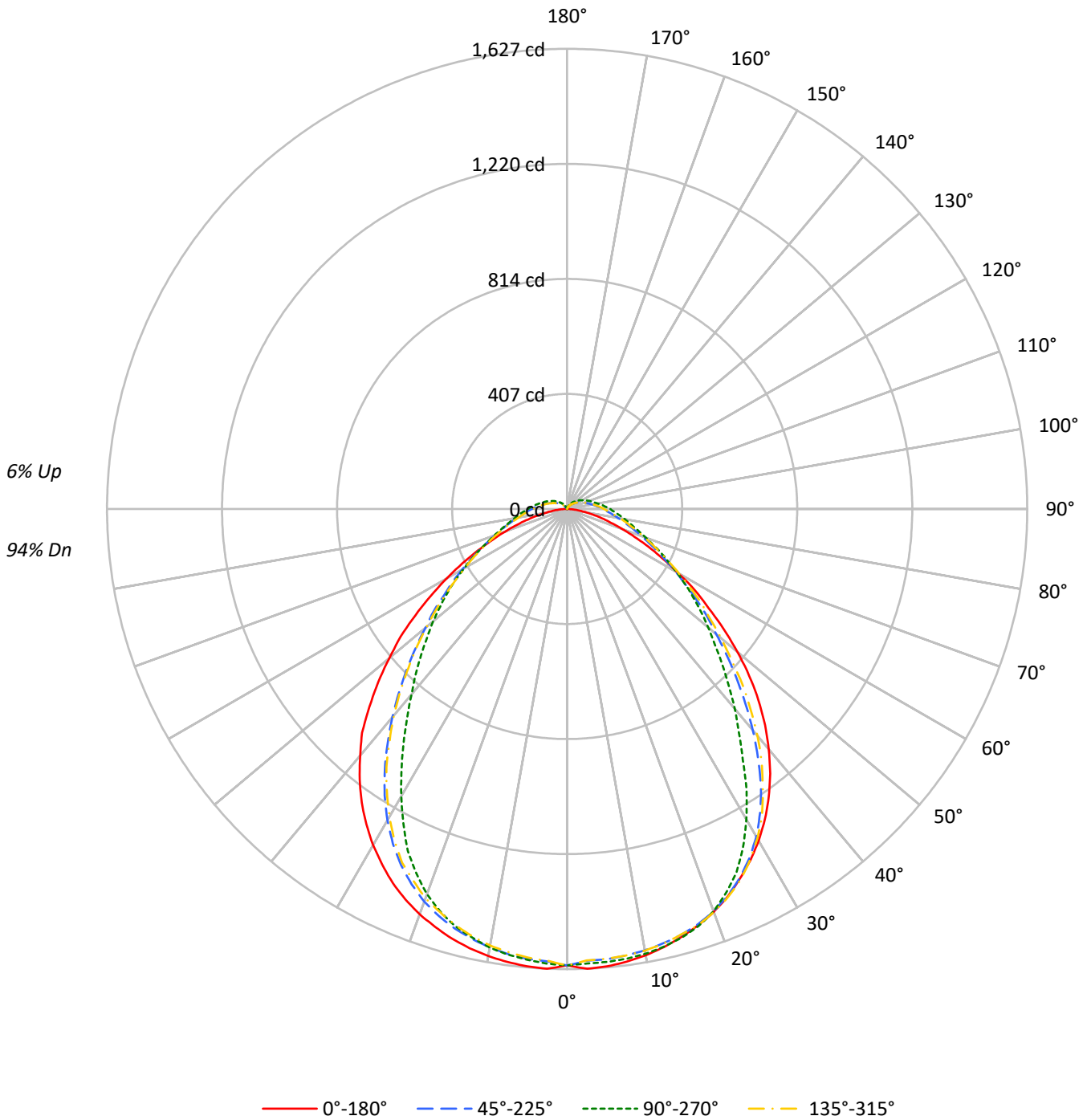
Lumens per Lamp: N/A
Luminaire Lumens: 4084.0 lumens
Efficiency: N/A
Efficacy: 113.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 2' x H: 0.12')
CIE Type: Direct

Input Watts (W): 36
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P#
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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81	79
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69	67
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60	57
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52	50
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46	44
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41	39
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37	35
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33	31
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30	28
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	26082	26082	26082	26082
5°	26196	25250	26196	25139
10°	26008	24580	26051	24239
15°	25768	23846	25885	23226
20°	25496	22902	25646	21934
25°	25009	21500	25286	20235
30°	24400	19443	24718	17999
35°	23491	16919	23944	15755
40°	22226	14798	22813	13729
45°	20585	12863	21254	12126
50°	18384	11304	19193	10733
55°	15798	9981	16947	9476
60°	13178	8764	14368	8258
65°	10687	7748	11762	7185
70°	8376	6876	9381	6360
75°	6426	6349	7236	5842
80°	4453	6125	5243	5598
85°	2499	6162	3364	5664



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.0	3.7
10°-20°	438.7	10.7
20°-30°	650.2	15.9
30°-40°	722.3	17.7
40°-50°	654.8	16.0
50°-60°	507.4	12.4
60°-70°	344.5	8.4
70°-80°	219.2	5.4
80°-90°	140.1	3.4
90°-100°	94.5	2.3
100°-110°	64.7	1.6
110°-120°	43.2	1.1
120°-130°	26.9	0.7
130°-140°	14.9	0.4
140°-150°	7.0	0.2
150°-160°	2.6	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1241.9	30.4
0°-40°	1964.2	48.1
0°-60°	3126.3	76.6
0°-90°	3830.2	93.8
90°-120°	202.4	5.0
90°-150°	251.1	6.1
90°-180°	254.0	6.2
0°-180°	4084.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1614	1614	1614	1614	1614	
5°	1624	1608	1624	1600	1624	154
15°	1566	1568	1573	1528	1566	442
25°	1443	1417	1459	1333	1443	665
35°	1243	1083	1267	1008	1243	775
45°	957	774	988	730	957	735
55°	611	544	655	517	611	550
65°	317	366	349	339	317	318
75°	127	244	143	225	127	137
85°	23	176	31	162	23	28
90°	0	152	2	138	0	1
95°	1	130	0	121	1	1
105°	1	95	0	90	1	1
115°	1	72	0	67	1	1
125°	1	53	1	47	1	1
135°	1	37	1	30	1	1
145°	1	24	1	17	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	



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8
2.5°	1627.1	1625.3	1623.5	1620.9	1623.5	1630.6	1626.2	1616.4	1614.6	1598.7	1605.8
5°	1623.5	1620.9	1619.1	1616.4	1620.0	1628.8	1624.4	1615.5	1612.9	1597.8	1605.8
7.5°	1614.6	1612.9	1610.2	1610.2	1613.8	1622.6	1619.1	1609.3	1607.5	1592.5	1601.3
10°	1602.2	1601.3	1599.6	1599.6	1603.1	1613.8	1609.3	1600.4	1598.7	1584.5	1594.2
12.5°	1586.2	1587.1	1584.5	1584.5	1589.8	1600.4	1596.9	1587.1	1585.4	1572.9	1582.7
15°	1565.8	1566.7	1564.9	1565.8	1571.2	1583.6	1579.1	1570.3	1568.5	1558.7	1566.7
17.5°	1542.7	1543.6	1543.6	1542.7	1549.0	1561.4	1557.8	1549.8	1547.2	1539.2	1549.0
20°	1516.1	1516.1	1516.1	1516.1	1523.2	1535.6	1531.2	1525.0	1519.7	1513.5	1521.4
22.5°	1483.3	1482.4	1483.3	1485.9	1493.0	1502.8	1500.1	1493.0	1485.0	1481.5	1487.7
25°	1443.3	1446.0	1446.9	1449.5	1458.4	1466.4	1463.7	1456.6	1444.2	1441.6	1443.3
27.5°	1401.6	1403.4	1406.0	1405.2	1417.6	1425.6	1420.3	1414.0	1396.3	1393.6	1391.8
30°	1354.6	1357.2	1359.0	1358.1	1367.9	1376.8	1371.4	1363.4	1339.5	1337.7	1323.5
32.5°	1301.3	1304.0	1305.7	1305.7	1319.9	1323.5	1313.7	1302.2	1276.4	1270.2	1257.8
35°	1242.7	1245.4	1246.3	1246.3	1260.5	1259.6	1247.2	1231.2	1202.8	1194.8	1173.5
37.5°	1179.7	1181.5	1182.4	1187.7	1193.9	1188.6	1172.6	1152.2	1130.9	1108.7	1085.6
40°	1108.7	1111.3	1113.1	1116.7	1122.9	1116.7	1093.6	1068.7	1045.7	1020.8	997.7
42.5°	1035.9	1043.9	1042.1	1041.2	1044.8	1027.9	1010.2	981.7	958.7	932.9	909.8
45°	956.9	956.0	960.4	962.2	961.3	947.1	922.3	896.5	873.5	846.8	827.3
47.5°	873.5	872.6	876.1	877.9	872.6	857.5	837.9	808.7	789.1	766.0	751.0
50°	785.6	785.6	790.9	785.6	782.9	767.8	751.8	722.6	707.5	687.0	678.2
52.5°	697.7	705.7	700.4	698.6	695.9	680.8	668.4	644.4	632.0	623.1	612.5
55°	610.7	619.6	616.0	613.4	612.5	600.1	588.5	570.8	562.8	556.6	550.3
57.5°	537.0	536.1	534.4	531.7	532.6	522.8	511.3	501.5	498.0	495.3	497.1
60°	451.8	458.9	456.3	457.1	458.0	456.3	446.5	440.3	441.2	442.1	444.7
62.5°	381.7	387.9	392.3	388.8	390.6	393.2	387.9	386.1	389.7	393.2	396.8
65°	316.9	323.1	327.5	326.7	332.0	337.3	336.4	338.2	346.2	350.6	355.1
67.5°	258.3	264.5	270.7	271.6	279.6	287.6	291.2	297.4	306.2	312.5	317.8
70°	207.7	213.0	220.1	224.6	235.2	245.9	252.1	264.5	269.8	278.7	282.3
72.5°	162.4	166.9	176.6	187.3	196.2	209.5	221.9	232.6	240.6	250.3	254.8
75°	126.9	128.7	139.4	151.8	164.2	179.3	192.6	204.2	214.8	224.6	231.7
77.5°	93.2	95.9	105.6	122.5	136.7	152.7	167.8	180.2	191.7	201.5	211.3
80°	64.8	70.1	80.8	97.6	113.6	131.4	145.6	159.8	172.2	182.0	191.7
82.5°	41.7	46.2	61.2	78.1	95.0	112.7	127.8	142.0	155.3	166.0	174.9
85°	23.1	29.3	44.4	62.1	79.0	96.8	112.7	126.9	140.2	150.0	158.9
87.5°	8.9	17.8	32.0	48.8	65.7	82.6	99.4	112.7	126.0	136.7	144.7
90°	0.0	10.7	24.0	40.8	57.7	74.6	90.5	104.7	117.2	126.9	135.8
92.5°	0.9	7.1	18.6	32.8	48.8	64.8	79.9	94.1	106.5	116.3	124.3
95°	0.9	5.3	15.1	28.4	42.6	57.7	71.9	85.2	96.8	106.5	114.5
97.5°	0.9	3.6	12.4	24.9	37.3	52.4	65.7	78.1	88.8	98.5	104.7
100°	0.9	3.6	10.7	21.3	33.7	47.0	59.5	71.9	81.7	89.7	96.8
102.5°	0.9	2.7	8.9	18.6	30.2	41.7	54.1	65.7	74.6	82.6	89.7
105°	0.9	2.7	8.0	16.0	26.6	38.2	48.8	59.5	69.2	76.3	82.6
107.5°	0.9	1.8	7.1	13.3	23.1	34.6	45.3	54.1	63.0	70.1	76.3
110°	0.9	1.8	6.2	12.4	20.4	31.1	40.8	49.7	57.7	64.8	70.1



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.9	1.8	5.3	11.5	18.6	27.5	37.3	45.3	53.3	59.5	64.8
115°	0.9	1.8	5.3	10.7	16.9	24.0	32.8	41.7	47.9	55.0	59.5
117.5°	0.9	1.8	4.4	8.9	16.0	22.2	30.2	37.3	44.4	50.6	55.0
120°	0.9	1.8	4.4	8.0	14.2	20.4	26.6	33.7	40.8	45.3	49.7
122.5°	0.9	1.8	3.6	8.0	12.4	18.6	24.0	30.2	36.4	41.7	46.2
125°	0.9	1.8	3.6	7.1	11.5	16.9	22.2	26.6	32.8	37.3	41.7
127.5°	0.9	1.8	3.6	6.2	10.7	15.1	20.4	24.9	29.3	33.7	37.3
130°	0.9	1.8	2.7	5.3	9.8	13.3	17.8	23.1	26.6	30.2	33.7
132.5°	0.9	1.8	2.7	5.3	8.0	11.5	16.0	20.4	24.0	27.5	30.2
135°	0.9	1.8	2.7	4.4	7.1	10.7	13.3	17.8	21.3	24.9	27.5
137.5°	0.9	1.8	2.7	4.4	6.2	8.9	11.5	15.1	18.6	21.3	24.9
140°	0.9	1.8	2.7	3.6	5.3	8.0	10.7	12.4	16.0	18.6	21.3
142.5°	0.9	1.8	2.7	3.6	5.3	7.1	8.9	10.7	13.3	16.0	18.6
145°	0.9	1.8	2.7	3.6	4.4	6.2	8.0	9.8	10.7	13.3	15.1
147.5°	0.9	1.8	2.7	3.6	3.6	5.3	7.1	8.0	9.8	10.7	12.4
150°	0.9	1.8	2.7	2.7	3.6	4.4	6.2	7.1	8.0	9.8	10.7
152.5°	0.9	1.8	2.7	2.7	3.6	4.4	5.3	6.2	7.1	8.0	8.9
155°	0.9	1.8	2.7	2.7	2.7	3.6	4.4	5.3	6.2	7.1	8.0
157.5°	1.8	1.8	1.8	2.7	2.7	3.6	3.6	4.4	5.3	5.3	6.2
160°	1.8	1.8	1.8	2.7	2.7	2.7	3.6	3.6	4.4	4.4	5.3
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°	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8
2.5°	1604.0	1606.7	1614.6	1614.6	1612.9	1611.1	1611.1	1608.4	1610.2	1613.8	1612.0
5°	1604.0	1606.7	1614.6	1614.6	1612.9	1611.1	1610.2	1607.5	1610.2	1613.8	1612.0
7.5°	1598.7	1602.2	1610.2	1610.2	1608.4	1607.5	1605.8	1604.0	1606.7	1610.2	1608.4
10°	1591.6	1595.1	1603.1	1603.1	1601.3	1601.3	1598.7	1596.9	1600.4	1603.1	1602.2
12.5°	1580.9	1585.4	1592.5	1591.6	1589.8	1590.7	1588.0	1584.5	1588.0	1590.7	1591.6
15°	1565.8	1571.2	1578.3	1576.5	1573.8	1575.6	1571.2	1568.5	1571.2	1576.5	1575.6
17.5°	1546.3	1549.8	1555.2	1555.2	1552.5	1550.7	1549.0	1546.3	1548.1	1551.6	1552.5
20°	1518.8	1523.2	1525.9	1523.2	1522.3	1519.7	1516.1	1513.5	1517.0	1522.3	1523.2
22.5°	1482.4	1483.3	1489.5	1483.3	1478.8	1477.9	1474.4	1469.1	1474.4	1478.8	1479.7
25°	1437.1	1441.6	1438.9	1428.2	1428.2	1421.1	1419.4	1416.7	1417.6	1425.6	1429.1
27.5°	1379.4	1381.2	1374.1	1365.2	1357.2	1352.8	1346.6	1347.5	1347.5	1358.1	1361.7
30°	1316.4	1306.6	1300.4	1286.2	1280.0	1269.3	1267.6	1267.6	1265.8	1271.1	1287.1
32.5°	1240.9	1227.6	1217.9	1204.5	1193.9	1183.2	1177.9	1180.6	1179.7	1193.0	1198.3
35°	1158.4	1150.4	1130.0	1113.1	1106.9	1090.9	1090.9	1082.9	1088.3	1103.4	1109.6
37.5°	1071.4	1059.0	1042.1	1023.5	1019.0	1006.6	1002.2	997.7	1009.3	1011.9	1018.1
40°	982.6	971.1	955.1	937.4	937.4	922.3	922.3	922.3	923.2	928.5	940.0
42.5°	898.3	885.9	871.7	859.3	857.5	845.9	845.9	845.0	846.8	851.3	861.9
45°	816.6	806.9	791.8	785.6	786.5	774.0	776.7	774.0	777.6	782.0	785.6
47.5°	741.2	735.0	728.8	719.9	717.2	716.3	711.9	708.3	714.6	714.6	719.9
50°	671.1	667.5	664.0	658.6	659.5	656.0	650.7	650.7	655.1	656.0	659.5
52.5°	609.8	605.4	600.9	601.8	602.7	600.9	598.3	595.6	598.3	600.1	604.5
55°	548.6	545.0	549.5	547.7	549.5	547.7	545.9	544.1	548.6	545.9	550.3
57.5°	493.5	497.1	498.9	495.3	498.0	496.2	497.1	494.4	498.0	499.8	498.9
60°	442.9	448.3	445.6	446.5	450.0	448.3	444.7	447.4	450.9	451.8	450.9
62.5°	396.8	403.0	405.7	403.9	404.8	403.0	405.7	402.1	406.5	408.3	405.7
65°	355.1	362.2	363.9	363.9	363.9	362.2	364.8	365.7	367.5	367.5	365.7
67.5°	319.6	325.8	327.5	329.3	327.5	325.8	325.8	326.7	330.2	332.0	330.2
70°	287.6	293.8	294.7	294.7	295.6	297.4	293.8	295.6	298.3	299.1	298.3
72.5°	260.1	266.3	268.1	267.2	268.1	269.0	269.0	267.2	269.8	271.6	271.6
75°	237.9	241.4	243.2	243.2	244.1	245.0	245.0	244.1	245.9	246.8	247.7
77.5°	217.5	220.1	222.8	222.8	223.7	222.8	224.6	224.6	225.5	226.4	227.2
80°	197.1	200.6	202.4	203.3	205.0	205.9	205.9	205.9	206.8	207.7	207.7
82.5°	181.1	183.7	186.4	189.1	189.1	190.0	190.0	190.0	190.8	190.8	191.7
85°	165.1	168.7	171.3	173.1	174.0	174.9	174.9	175.8	175.8	175.8	176.6
87.5°	150.9	155.3	157.1	158.9	159.8	161.6	161.6	161.6	162.4	162.4	162.4
90°	141.1	145.6	147.4	149.1	150.0	150.9	150.9	151.8	151.8	152.7	152.7
92.5°	129.6	134.0	137.6	137.6	138.5	140.2	139.4	139.4	140.2	141.1	141.1
95°	120.7	124.3	126.9	127.8	128.7	128.7	128.7	129.6	128.7	129.6	129.6
97.5°	110.1	113.6	116.3	118.1	118.9	118.9	118.9	119.8	118.9	119.8	119.8
100°	101.2	104.7	107.4	108.3	110.1	110.1	110.1	110.1	110.1	110.1	111.0
102.5°	94.1	97.6	99.4	100.3	101.2	102.1	102.1	102.1	102.1	103.0	103.0
105°	87.0	90.5	92.3	93.2	94.1	95.0	95.0	95.0	95.9	95.9	95.0
107.5°	80.8	83.4	85.2	87.0	87.9	87.9	88.8	88.8	88.8	88.8	88.8
110°	74.6	77.2	79.9	81.7	81.7	82.6	82.6	83.4	83.4	82.6	83.4



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	68.3	71.9	73.7	75.5	76.3	77.2	77.2	77.2	77.2	77.2	77.2
115°	63.0	66.6	68.3	70.1	71.0	71.9	71.9	71.9	71.9	71.9	71.9
117.5°	58.6	62.1	63.9	64.8	65.7	66.6	67.5	67.5	67.5	67.5	66.6
120°	54.1	56.8	58.6	60.4	61.2	62.1	62.1	62.1	62.1	62.1	62.1
122.5°	49.7	52.4	54.1	55.9	56.8	57.7	57.7	57.7	57.7	57.7	57.7
125°	45.3	47.9	49.7	51.5	52.4	53.3	53.3	53.3	53.3	53.3	53.3
127.5°	40.8	43.5	46.2	47.0	47.9	48.8	48.8	48.8	49.7	48.8	48.8
130°	36.4	39.1	41.7	42.6	43.5	44.4	45.3	45.3	45.3	45.3	44.4
132.5°	32.8	35.5	37.3	38.2	39.9	39.9	40.8	40.8	40.8	40.8	39.9
135°	30.2	32.0	33.7	34.6	36.4	36.4	36.4	37.3	37.3	36.4	35.5
137.5°	26.6	28.4	30.2	31.1	32.0	32.8	32.8	33.7	32.8	32.8	32.8
140°	24.9	25.7	27.5	28.4	29.3	29.3	29.3	30.2	30.2	29.3	29.3
142.5°	21.3	23.1	24.9	25.7	26.6	26.6	26.6	26.6	26.6	26.6	26.6
145°	17.8	20.4	21.3	23.1	23.1	24.0	24.0	24.0	24.0	24.0	23.1
147.5°	15.1	16.9	19.5	20.4	20.4	21.3	21.3	21.3	21.3	21.3	20.4
150°	11.5	13.3	16.0	17.8	17.8	18.6	18.6	18.6	18.6	17.8	17.8
152.5°	9.8	11.5	12.4	14.2	15.1	15.1	15.1	16.0	15.1	15.1	15.1
155°	8.9	9.8	10.7	11.5	12.4	13.3	13.3	13.3	13.3	12.4	12.4
157.5°	7.1	8.0	8.9	9.8	10.7	11.5	11.5	11.5	11.5	11.5	10.7
160°	5.3	6.2	7.1	7.1	8.0	8.9	9.8	8.9	8.9	8.9	8.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8
2.5°	1610.2	1609.3	1612.0	1607.5	1594.2	1597.8	1596.0	1604.0	1605.8	1607.5	1615.5
5°	1610.2	1609.3	1611.1	1607.5	1593.3	1596.0	1594.2	1602.2	1604.0	1604.9	1612.9
7.5°	1606.7	1605.8	1608.4	1604.0	1588.9	1592.5	1589.8	1597.8	1598.7	1599.6	1606.7
10°	1599.6	1598.7	1600.4	1596.9	1581.8	1585.4	1581.8	1589.8	1589.8	1591.6	1596.9
12.5°	1588.9	1587.1	1590.7	1586.2	1569.4	1573.8	1572.0	1577.4	1578.3	1579.1	1584.5
15°	1573.8	1572.0	1574.7	1572.0	1556.9	1557.8	1555.2	1563.2	1564.1	1562.3	1567.6
17.5°	1551.6	1549.8	1555.2	1553.4	1538.3	1541.9	1541.0	1542.7	1545.4	1541.0	1548.1
20°	1524.1	1525.9	1527.7	1528.5	1517.0	1517.0	1516.1	1519.7	1522.3	1518.8	1524.1
22.5°	1483.3	1487.7	1493.0	1494.8	1486.8	1485.9	1491.3	1489.5	1492.2	1490.4	1493.9
25°	1431.8	1440.7	1446.0	1451.3	1446.9	1448.7	1456.6	1458.4	1458.4	1457.5	1461.1
27.5°	1367.9	1379.4	1389.2	1400.7	1396.3	1399.8	1413.1	1414.9	1418.5	1414.9	1422.0
30°	1291.5	1302.2	1320.8	1337.7	1339.5	1344.8	1363.4	1365.2	1375.0	1371.4	1374.1
32.5°	1215.2	1220.5	1241.8	1258.7	1269.3	1282.7	1303.1	1306.6	1319.9	1322.6	1322.6
35°	1119.3	1134.4	1154.0	1177.9	1191.2	1205.4	1233.0	1238.3	1257.8	1264.0	1271.1
37.5°	1038.6	1052.8	1065.2	1090.0	1114.0	1130.0	1152.2	1165.5	1185.9	1197.4	1206.3
40°	952.5	964.0	977.3	1002.2	1022.6	1046.5	1068.7	1084.7	1110.5	1123.8	1135.3
42.5°	870.8	879.7	893.9	911.6	932.9	959.6	980.9	999.5	1027.0	1045.7	1059.0
45°	798.0	803.3	815.8	829.1	847.7	875.2	895.6	919.6	941.8	961.3	977.3
47.5°	729.7	736.8	743.0	751.8	768.7	785.6	809.5	832.6	854.8	876.1	892.1
50°	666.6	666.6	676.4	682.6	694.1	709.2	727.9	743.9	771.4	786.5	806.9
52.5°	605.4	608.9	614.3	617.8	626.7	636.4	651.5	664.9	687.9	702.1	721.7
55°	551.2	554.8	557.4	559.2	564.5	576.1	581.4	592.1	608.0	619.6	636.4
57.5°	499.8	501.5	504.2	505.1	506.0	513.1	517.5	520.2	536.1	547.7	561.9
60°	452.7	452.7	455.4	454.5	453.6	457.1	456.3	458.9	468.7	475.8	482.0
62.5°	408.3	408.3	409.2	407.4	406.5	406.5	403.0	405.7	408.3	409.2	413.6
65°	367.5	371.9	368.4	369.3	363.9	362.2	360.4	355.1	354.2	350.6	352.4
67.5°	331.1	334.6	331.1	331.1	326.7	323.1	318.7	309.8	307.1	300.0	298.3
70°	301.8	299.1	300.9	298.3	292.9	288.5	282.3	275.2	266.3	257.4	251.2
72.5°	273.4	273.4	271.6	269.0	266.3	257.4	250.3	242.3	231.7	220.1	211.3
75°	245.9	246.8	246.8	244.1	239.7	231.7	223.7	212.1	200.6	187.3	175.8
77.5°	226.4	226.4	226.4	221.9	217.5	210.4	200.6	188.2	175.8	159.8	146.5
80°	207.7	206.8	206.8	201.5	197.1	189.1	179.3	166.9	153.6	136.7	121.6
82.5°	192.6	191.7	190.0	185.5	179.3	171.3	161.6	148.2	134.0	118.9	100.3
85°	176.6	175.8	174.0	169.5	163.3	156.2	145.6	132.3	118.1	101.2	83.4
87.5°	162.4	161.6	158.9	156.2	149.1	141.1	130.5	118.1	103.0	87.0	69.2
90°	152.7	150.9	149.1	145.6	139.4	130.5	119.8	106.5	91.4	75.5	57.7
92.5°	141.1	140.2	137.6	134.0	128.7	119.8	109.2	96.8	81.7	66.6	49.7
95°	129.6	128.7	126.9	123.4	118.1	110.1	100.3	87.9	73.7	58.6	43.5
97.5°	118.9	118.9	116.3	113.6	107.4	101.2	91.4	79.9	66.6	53.3	39.1
100°	110.1	110.1	107.4	103.9	99.4	93.2	83.4	72.8	60.4	47.9	33.7
102.5°	102.1	101.2	99.4	95.9	91.4	85.2	76.3	66.6	55.0	42.6	30.2
105°	95.0	94.1	92.3	88.8	85.2	78.1	71.0	61.2	49.7	38.2	26.6
107.5°	87.9	87.0	86.1	82.6	78.1	71.9	64.8	55.0	45.3	34.6	24.0
110°	81.7	80.8	79.0	75.5	71.0	65.7	58.6	50.6	40.8	31.1	21.3



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	76.3	75.5	73.7	70.1	66.6	60.4	54.1	45.3	37.3	28.4	18.6
115°	71.0	70.1	68.3	64.8	60.4	55.0	48.8	41.7	32.8	24.9	16.9
117.5°	65.7	64.8	63.0	60.4	55.9	50.6	44.4	37.3	29.3	23.1	15.1
120°	61.2	59.5	57.7	55.0	50.6	46.2	39.9	33.7	26.6	20.4	13.3
122.5°	56.8	55.0	53.3	50.6	46.2	41.7	35.5	30.2	24.9	18.6	12.4
125°	51.5	50.6	48.8	46.2	41.7	37.3	32.8	27.5	22.2	16.9	10.7
127.5°	47.0	46.2	44.4	40.8	37.3	33.7	29.3	24.9	19.5	14.2	9.8
130°	43.5	41.7	39.9	37.3	34.6	31.1	26.6	22.2	17.8	12.4	8.9
132.5°	39.1	37.3	35.5	33.7	31.1	27.5	24.0	19.5	16.0	11.5	8.0
135°	35.5	33.7	32.0	30.2	27.5	24.9	21.3	17.8	14.2	10.7	7.1
137.5°	31.1	30.2	29.3	27.5	24.9	22.2	19.5	15.1	12.4	9.8	6.2
140°	28.4	27.5	26.6	24.0	22.2	19.5	16.9	13.3	10.7	8.0	5.3
142.5°	25.7	24.9	23.1	21.3	19.5	17.8	14.2	12.4	9.8	7.1	5.3
145°	22.2	21.3	20.4	18.6	16.9	14.2	12.4	10.7	8.9	6.2	4.4
147.5°	20.4	19.5	17.8	16.0	14.2	12.4	11.5	9.8	7.1	5.3	3.6
150°	16.9	16.0	15.1	13.3	12.4	11.5	9.8	8.0	6.2	4.4	3.6
152.5°	14.2	13.3	12.4	12.4	10.7	9.8	8.0	7.1	5.3	4.4	2.7
155°	12.4	12.4	11.5	10.7	8.9	8.0	7.1	5.3	4.4	3.6	2.7
157.5°	10.7	9.8	8.9	8.9	8.0	7.1	5.3	4.4	3.6	3.6	2.7
160°	8.9	8.0	8.0	7.1	6.2	5.3	4.4	4.4	3.6	2.7	2.7
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: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8
2.5°	1616.4	1606.7	1615.5	1627.1	1627.1	1625.3	1623.5	1627.1	1636.0	1632.4	1621.7
5°	1613.8	1604.0	1612.0	1623.5	1623.5	1620.9	1619.1	1621.7	1631.5	1627.1	1617.3
7.5°	1608.4	1599.6	1604.9	1615.5	1615.5	1612.9	1611.1	1614.6	1622.6	1618.2	1607.5
10°	1598.7	1588.9	1595.1	1604.9	1604.0	1602.2	1599.6	1604.0	1611.1	1604.9	1592.5
12.5°	1586.2	1576.5	1581.8	1590.7	1589.8	1586.2	1584.5	1587.1	1593.3	1589.8	1576.5
15°	1569.4	1559.6	1564.1	1572.9	1570.3	1567.6	1564.1	1564.9	1572.9	1566.7	1552.5
17.5°	1549.0	1538.3	1541.9	1549.8	1547.2	1544.5	1540.1	1541.0	1549.8	1541.0	1525.9
20°	1524.1	1512.6	1515.2	1525.0	1520.6	1516.1	1511.7	1511.7	1520.6	1510.8	1493.9
22.5°	1497.5	1485.9	1487.7	1494.8	1491.3	1483.3	1478.8	1481.5	1485.9	1473.5	1455.8
25°	1464.6	1449.5	1452.2	1459.3	1456.6	1446.0	1441.6	1443.3	1441.6	1431.8	1413.1
27.5°	1426.5	1410.5	1412.3	1416.7	1413.1	1403.4	1398.1	1398.9	1395.4	1383.0	1361.7
30°	1378.5	1370.5	1369.7	1372.3	1367.0	1357.2	1351.0	1349.2	1348.3	1330.6	1304.9
32.5°	1329.7	1322.6	1318.2	1321.7	1315.5	1305.7	1295.1	1295.1	1286.2	1269.3	1247.2
35°	1280.0	1268.5	1264.0	1266.7	1259.6	1247.2	1238.3	1233.8	1220.5	1199.2	1175.3
37.5°	1216.1	1208.1	1202.8	1205.4	1197.4	1188.6	1171.7	1167.3	1153.1	1123.8	1093.6
40°	1146.9	1140.6	1135.3	1138.0	1129.1	1115.8	1100.7	1093.6	1077.6	1044.8	1020.8
42.5°	1072.3	1069.6	1063.4	1073.2	1055.4	1042.1	1027.0	1015.5	999.5	964.0	936.5
45°	993.3	999.5	985.3	988.0	976.4	964.9	948.9	932.0	916.1	882.3	851.3
47.5°	909.8	914.3	904.5	906.3	893.9	883.2	869.0	847.7	830.0	800.7	773.1
50°	823.7	822.0	822.0	820.2	810.4	797.1	782.9	763.4	745.6	719.0	695.9
52.5°	732.3	735.9	737.6	742.1	729.7	721.7	699.5	682.6	669.3	641.8	622.2
55°	644.4	656.9	653.3	655.1	640.9	634.7	616.9	603.6	584.1	568.1	555.7
57.5°	564.5	567.2	569.0	571.7	565.4	553.0	538.8	528.2	513.1	499.8	490.9
60°	487.3	487.3	488.2	492.6	486.4	475.8	465.1	457.1	446.5	438.5	433.2
62.5°	414.5	420.7	421.6	418.1	410.1	404.8	397.7	393.2	386.1	383.5	381.7
65°	347.1	347.1	347.1	348.8	344.4	340.9	336.4	335.5	338.2	334.6	336.4
67.5°	290.3	287.6	285.8	286.7	284.9	283.2	282.3	284.9	290.3	290.3	294.7
70°	241.4	236.1	232.6	232.6	232.6	233.5	236.1	241.4	250.3	253.9	260.1
72.5°	201.5	190.0	184.6	184.6	185.5	189.1	197.1	206.8	214.8	221.9	229.9
75°	163.3	151.8	143.8	142.9	144.7	150.0	161.6	170.4	183.7	193.5	203.3
77.5°	132.3	118.1	108.3	107.4	110.1	118.1	132.3	143.8	158.9	169.5	180.2
80°	105.6	89.7	81.7	76.3	80.8	90.5	106.5	120.7	134.9	149.1	162.4
82.5°	84.3	69.2	56.8	51.5	56.8	70.1	85.2	102.1	116.3	131.4	144.7
85°	66.6	50.6	36.4	31.1	37.3	51.5	68.3	85.2	101.2	116.3	129.6
87.5°	52.4	36.4	22.2	15.1	23.1	38.2	54.1	71.0	87.9	103.0	116.3
90°	40.8	25.7	12.4	1.8	13.3	27.5	43.5	59.5	76.3	91.4	104.7
92.5°	34.6	19.5	7.1	0.0	8.0	20.4	35.5	51.5	66.6	81.7	95.0
95°	29.3	16.0	5.3	0.0	5.3	16.0	29.3	43.5	58.6	73.7	87.0
97.5°	24.9	12.4	3.6	0.0	3.6	12.4	24.0	38.2	51.5	65.7	78.1
100°	21.3	10.7	2.7	0.0	2.7	9.8	20.4	32.8	46.2	59.5	71.0
102.5°	18.6	8.9	1.8	0.0	1.8	8.0	16.9	28.4	39.9	52.4	63.9
105°	16.0	7.1	1.8	0.0	0.9	6.2	14.2	24.9	35.5	47.0	57.7
107.5°	14.2	6.2	1.8	0.0	0.9	5.3	12.4	21.3	32.0	41.7	51.5
110°	12.4	5.3	1.8	0.0	0.9	3.6	10.7	18.6	27.5	37.3	47.0



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	10.7	4.4	0.9	0.0	0.0	2.7	8.9	16.0	24.0	33.7	41.7
115°	9.8	4.4	0.9	0.0	0.0	1.8	7.1	14.2	21.3	30.2	37.3
117.5°	8.9	3.6	0.9	0.0	0.9	1.8	6.2	12.4	18.6	25.7	33.7
120°	8.0	3.6	0.9	0.0	0.9	0.9	4.4	10.7	16.0	23.1	29.3
122.5°	7.1	3.6	0.9	0.0	0.9	0.9	3.6	8.9	14.2	20.4	25.7
125°	6.2	2.7	1.8	0.9	0.9	0.9	2.7	7.1	12.4	16.9	23.1
127.5°	6.2	2.7	1.8	0.9	0.9	0.9	1.8	6.2	9.8	15.1	20.4
130°	5.3	2.7	1.8	0.9	0.9	0.9	0.9	4.4	8.9	12.4	16.9
132.5°	4.4	2.7	1.8	0.9	0.9	0.9	0.9	2.7	6.2	10.7	14.2
135°	4.4	2.7	1.8	0.9	0.9	0.9	0.9	1.8	4.4	8.0	11.5
137.5°	3.6	1.8	1.8	0.9	0.9	0.9	0.9	0.9	3.6	6.2	8.9
140°	3.6	1.8	1.8	0.9	0.9	0.9	0.9	0.9	2.7	4.4	7.1
142.5°	2.7	1.8	1.8	0.9	0.9	0.9	0.9	0.9	1.8	3.6	5.3
145°	2.7	1.8	1.8	0.9	0.9	0.9	0.9	0.9	0.9	1.8	3.6
147.5°	2.7	2.7	1.8	0.9	0.9	0.9	0.9	0.9	0.9	1.8	2.7
150°	2.7	1.8	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8
152.5°	2.7	1.8	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8
155°	2.7	1.8	1.8	0.9	0.9	0.9	0.9	0.9	0.9	1.8	1.8
157.5°	2.7	1.8	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8
160°	2.7	1.8	1.8	0.9	1.8	0.9	1.8	1.8	1.8	1.8	1.8
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8
2.5°	1618.2	1601.3	1610.2	1607.5	1611.1	1618.2	1617.3	1615.5	1615.5	1612.9	1609.3
5°	1612.9	1596.9	1604.9	1600.4	1604.9	1611.1	1610.2	1607.5	1609.3	1604.9	1600.4
7.5°	1602.2	1588.0	1595.1	1591.6	1595.1	1601.3	1598.7	1597.8	1599.6	1592.5	1589.8
10°	1589.8	1573.8	1581.8	1577.4	1581.8	1586.2	1584.5	1580.9	1584.5	1577.4	1574.7
12.5°	1570.3	1556.9	1562.3	1560.5	1563.2	1567.6	1564.1	1561.4	1563.2	1556.9	1551.6
15°	1549.0	1535.6	1540.1	1537.4	1539.2	1544.5	1538.3	1537.4	1535.6	1529.4	1527.7
17.5°	1521.4	1509.0	1513.5	1509.0	1511.7	1509.9	1509.0	1504.6	1504.6	1497.5	1492.2
20°	1487.7	1477.1	1474.4	1470.8	1474.4	1470.8	1465.5	1462.0	1461.1	1454.0	1449.5
22.5°	1448.7	1436.2	1438.0	1428.2	1429.1	1423.8	1414.9	1411.4	1407.8	1399.8	1393.6
25°	1401.6	1389.2	1380.3	1374.1	1366.1	1365.2	1353.7	1344.8	1343.9	1334.1	1333.3
27.5°	1348.3	1334.1	1327.0	1312.0	1302.2	1294.2	1284.4	1275.6	1271.1	1260.5	1253.4
30°	1287.1	1271.1	1253.4	1242.7	1227.6	1221.4	1204.5	1193.9	1190.3	1178.8	1173.5
32.5°	1217.9	1201.0	1186.8	1166.4	1149.5	1140.6	1123.8	1113.1	1108.7	1096.3	1089.2
35°	1142.4	1123.8	1106.9	1087.4	1074.1	1059.0	1038.6	1027.9	1018.1	1013.7	1008.4
37.5°	1063.4	1043.0	1023.5	1003.9	992.4	974.6	956.9	949.8	938.3	933.8	928.5
40°	981.7	961.3	942.7	924.1	910.7	894.8	878.8	876.1	863.7	859.3	855.7
42.5°	901.0	879.7	858.4	845.0	835.3	819.3	808.7	806.0	795.3	792.7	792.7
45°	828.2	801.6	783.8	772.3	764.3	751.0	742.1	740.3	731.4	729.7	729.7
47.5°	750.1	725.2	711.9	704.8	697.7	687.9	682.6	682.6	673.7	672.0	671.1
50°	677.3	654.2	644.4	637.3	636.4	629.3	624.9	623.1	623.1	616.9	617.8
52.5°	608.0	596.5	588.5	584.1	578.8	574.3	570.8	570.8	568.1	563.7	565.4
55°	544.1	530.8	531.7	528.2	525.5	522.8	523.7	518.4	517.5	514.0	516.6
57.5°	480.2	480.2	478.4	475.8	471.3	473.1	473.1	473.1	468.7	466.0	468.7
60°	426.1	428.7	424.3	427.0	425.2	426.1	424.3	424.3	421.6	420.7	421.6
62.5°	378.1	382.6	380.8	384.4	382.6	383.5	385.2	381.7	379.9	378.1	379.9
65°	335.5	340.9	340.0	342.6	343.5	344.4	345.3	343.5	341.7	340.0	339.1
67.5°	298.3	303.6	307.1	308.0	308.9	311.6	310.7	308.9	307.1	304.5	303.6
70°	264.5	271.6	276.1	277.8	281.4	279.6	279.6	278.7	276.9	274.3	273.4
72.5°	236.1	244.1	248.5	250.3	253.9	253.9	253.0	252.1	250.3	247.7	246.8
75°	211.3	218.4	224.6	228.1	230.8	230.8	229.9	229.0	227.2	225.5	224.6
77.5°	191.7	197.9	203.3	207.7	209.5	210.4	209.5	207.7	207.7	206.8	205.9
80°	172.2	179.3	184.6	189.1	191.7	191.7	190.8	191.7	190.0	189.1	188.2
82.5°	155.3	163.3	169.5	174.0	175.8	176.6	175.8	176.6	174.9	174.9	174.9
85°	140.2	148.2	155.3	158.9	161.6	162.4	162.4	162.4	161.6	161.6	161.6
87.5°	127.8	135.8	142.9	146.5	149.1	150.0	150.0	150.9	149.1	149.1	149.1
90°	116.3	124.3	131.4	134.9	137.6	139.4	139.4	140.2	139.4	138.5	138.5
92.5°	105.6	114.5	121.6	125.2	127.8	130.5	130.5	131.4	129.6	129.6	129.6
95°	96.8	105.6	111.8	116.3	118.9	120.7	121.6	121.6	120.7	120.7	120.7
97.5°	88.8	96.8	103.0	107.4	110.1	111.0	111.8	112.7	111.8	111.8	111.8
100°	80.8	88.8	95.0	98.5	102.1	103.0	103.9	104.7	104.7	103.9	103.9
102.5°	73.7	81.7	87.0	91.4	94.1	95.9	96.8	96.8	96.8	96.8	96.8
105°	66.6	74.6	79.9	84.3	87.0	88.8	89.7	90.5	90.5	89.7	89.7
107.5°	60.4	67.5	73.7	77.2	80.8	82.6	83.4	83.4	84.3	83.4	83.4
110°	54.1	62.1	67.5	71.0	74.6	76.3	77.2	78.1	78.1	78.1	78.1



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	49.7	55.9	61.2	64.8	68.3	70.1	71.0	71.9	72.8	71.9	71.9
115°	44.4	50.6	55.9	59.5	62.1	63.9	65.7	66.6	66.6	67.5	66.6
117.5°	39.9	45.3	50.6	54.1	56.8	59.5	60.4	61.2	62.1	61.2	61.2
120°	35.5	40.8	45.3	48.8	51.5	54.1	55.0	55.9	56.8	55.9	55.9
122.5°	32.0	36.4	40.8	44.4	47.0	48.8	50.6	50.6	51.5	51.5	51.5
125°	28.4	32.8	36.4	39.9	42.6	44.4	45.3	46.2	46.2	47.0	47.0
127.5°	24.9	28.4	32.8	35.5	38.2	39.9	40.8	41.7	41.7	42.6	42.6
130°	21.3	24.9	28.4	31.1	33.7	35.5	36.4	37.3	38.2	38.2	38.2
132.5°	18.6	22.2	24.9	27.5	29.3	31.1	32.8	33.7	33.7	33.7	33.7
135°	15.1	18.6	21.3	24.0	25.7	27.5	28.4	30.2	30.2	30.2	30.2
137.5°	12.4	16.0	18.6	20.4	22.2	24.0	24.9	25.7	26.6	26.6	26.6
140°	9.8	12.4	15.1	17.8	19.5	20.4	22.2	22.2	23.1	23.1	23.1
142.5°	7.1	9.8	11.5	14.2	16.0	17.8	18.6	19.5	19.5	19.5	19.5
145°	5.3	7.1	8.9	10.7	13.3	14.2	15.1	16.0	16.9	16.9	16.9
147.5°	3.6	5.3	6.2	8.0	9.8	11.5	12.4	13.3	14.2	14.2	14.2
150°	2.7	3.6	5.3	6.2	7.1	8.9	10.7	10.7	11.5	11.5	10.7
152.5°	1.8	2.7	3.6	4.4	5.3	6.2	8.0	8.0	8.9	8.9	8.9
155°	1.8	1.8	1.8	2.7	3.6	4.4	5.3	6.2	6.2	6.2	6.2
157.5°	1.8	1.8	1.8	1.8	1.8	2.7	3.6	4.4	4.4	4.4	4.4
160°	1.8	1.8	0.9	0.9	1.8	1.8	1.8	1.8	2.7	2.7	2.7
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: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8
2.5°	1612.0	1613.8	1613.8	1612.0	1611.1	1614.6	1610.2	1593.3	1598.7	1600.4	1605.8
5°	1604.0	1605.8	1605.8	1605.8	1604.0	1607.5	1603.1	1586.2	1592.5	1595.1	1598.7
7.5°	1592.5	1593.3	1595.1	1594.2	1592.5	1597.8	1593.3	1576.5	1580.9	1585.4	1589.8
10°	1577.4	1577.4	1578.3	1580.0	1578.3	1582.7	1578.3	1563.2	1567.6	1570.3	1575.6
12.5°	1556.9	1558.7	1559.6	1558.7	1557.8	1561.4	1559.6	1545.4	1547.2	1552.5	1557.8
15°	1529.4	1529.4	1533.9	1532.1	1532.1	1535.6	1537.4	1521.4	1524.1	1532.1	1537.4
17.5°	1495.7	1496.6	1500.1	1501.9	1501.0	1507.2	1508.1	1495.7	1494.8	1504.6	1509.9
20°	1452.2	1454.0	1458.4	1462.0	1462.0	1469.1	1471.7	1463.7	1464.6	1475.3	1477.1
22.5°	1398.9	1398.9	1406.9	1412.3	1416.7	1421.1	1429.1	1422.0	1422.0	1436.2	1444.2
25°	1333.3	1339.5	1342.1	1352.8	1359.0	1371.4	1378.5	1379.4	1380.3	1393.6	1398.9
27.5°	1260.5	1262.2	1270.2	1282.7	1289.8	1301.3	1314.6	1317.3	1321.7	1339.5	1347.5
30°	1177.9	1183.2	1186.8	1204.5	1214.3	1229.4	1246.3	1252.5	1256.0	1280.0	1289.8
32.5°	1093.6	1095.4	1110.5	1120.2	1131.8	1147.7	1167.3	1178.8	1185.9	1210.8	1225.0
35°	1009.3	1012.8	1025.2	1037.7	1049.2	1065.2	1085.6	1101.6	1114.0	1136.2	1154.8
37.5°	932.0	940.9	943.6	956.0	964.9	980.9	995.1	1018.1	1030.6	1053.6	1077.6
40°	862.8	865.5	867.2	879.7	885.9	901.0	921.4	936.5	953.3	970.2	998.6
42.5°	794.5	796.2	798.9	806.0	813.1	823.7	838.8	853.9	871.7	896.5	915.2
45°	731.4	733.2	735.0	739.4	745.6	755.4	765.2	775.8	793.6	814.9	834.4
47.5°	672.8	676.4	676.4	677.3	681.7	689.7	696.8	710.1	719.9	731.4	753.6
50°	616.9	619.6	620.5	620.5	623.1	628.5	630.2	639.1	648.0	658.6	674.6
52.5°	564.5	564.5	563.7	567.2	567.2	570.8	571.7	577.0	583.2	594.7	601.8
55°	514.8	514.8	517.5	515.7	515.7	517.5	516.6	517.5	522.8	529.9	536.1
57.5°	466.9	466.0	468.7	466.9	466.0	467.8	469.6	466.0	466.9	474.0	474.0
60°	419.0	419.9	422.5	420.7	420.7	420.7	419.0	417.2	415.4	419.9	421.6
62.5°	380.8	378.1	380.8	378.1	379.9	379.0	377.3	373.7	374.6	372.8	371.0
65°	340.9	340.9	341.7	339.1	340.9	340.9	338.2	337.3	332.0	330.2	325.8
67.5°	306.2	306.2	307.1	305.4	305.4	306.2	303.6	300.9	295.6	292.9	286.7
70°	276.1	276.1	276.1	275.2	275.2	275.2	273.4	269.8	264.5	260.1	252.1
72.5°	248.5	249.4	248.5	248.5	251.2	248.5	245.9	242.3	237.9	229.0	221.9
75°	226.4	227.2	226.4	226.4	226.4	225.5	224.6	219.3	213.9	206.8	196.2
77.5°	206.8	206.8	207.7	206.8	206.8	205.9	203.3	198.8	192.6	186.4	174.0
80°	188.2	189.1	190.0	190.8	189.1	188.2	185.5	182.0	174.0	166.9	154.5
82.5°	174.9	174.0	174.9	175.8	174.0	173.1	170.4	166.0	159.8	150.0	137.6
85°	161.6	160.7	160.7	161.6	160.7	158.9	156.2	151.8	145.6	135.8	123.4
87.5°	148.2	149.1	150.0	149.1	148.2	146.5	143.8	139.4	132.3	124.3	111.0
90°	138.5	138.5	138.5	138.5	137.6	135.8	133.1	127.8	121.6	111.8	100.3
92.5°	129.6	129.6	129.6	129.6	128.7	126.0	123.4	118.9	111.8	102.1	91.4
95°	120.7	121.6	120.7	120.7	118.9	118.1	113.6	109.2	103.0	93.2	81.7
97.5°	111.0	111.8	111.0	111.0	110.1	108.3	105.6	100.3	94.1	85.2	74.6
100°	103.9	103.9	103.0	103.0	102.1	100.3	96.8	92.3	86.1	77.2	66.6
102.5°	95.9	96.8	95.9	95.9	94.1	92.3	89.7	85.2	79.0	70.1	60.4
105°	89.7	89.7	88.8	88.8	87.0	85.2	82.6	77.2	71.9	63.9	54.1
107.5°	83.4	83.4	82.6	82.6	80.8	79.0	75.5	71.0	65.7	57.7	48.8
110°	77.2	77.2	77.2	76.3	74.6	71.9	69.2	64.8	59.5	52.4	43.5



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	72.8	71.9	71.0	70.1	68.3	66.6	63.0	58.6	53.3	47.0	39.1
115°	66.6	66.6	65.7	64.8	63.0	60.4	57.7	54.1	48.8	41.7	34.6
117.5°	61.2	61.2	60.4	59.5	57.7	55.0	52.4	48.8	43.5	37.3	31.1
120°	55.9	55.9	55.0	54.1	52.4	49.7	47.9	43.5	39.1	32.8	27.5
122.5°	51.5	50.6	50.6	48.8	47.9	45.3	42.6	39.1	34.6	29.3	24.0
125°	46.2	46.2	45.3	44.4	43.5	40.8	38.2	34.6	30.2	25.7	21.3
127.5°	41.7	41.7	40.8	39.9	39.1	36.4	33.7	31.1	26.6	22.2	17.8
130°	37.3	37.3	36.4	35.5	34.6	32.0	30.2	26.6	23.1	19.5	15.1
132.5°	33.7	33.7	32.8	32.0	30.2	28.4	26.6	23.1	20.4	16.9	13.3
135°	30.2	29.3	29.3	28.4	26.6	24.9	23.1	20.4	16.9	14.2	10.7
137.5°	26.6	25.7	24.9	24.0	23.1	21.3	19.5	17.8	15.1	11.5	8.9
140°	23.1	22.2	22.2	21.3	19.5	18.6	16.9	14.2	12.4	9.8	7.1
142.5°	19.5	19.5	18.6	17.8	16.9	16.0	14.2	12.4	9.8	8.0	5.3
145°	16.9	16.0	16.0	15.1	14.2	12.4	11.5	9.8	8.0	6.2	4.4
147.5°	13.3	13.3	13.3	12.4	11.5	10.7	9.8	8.0	6.2	4.4	2.7
150°	10.7	10.7	10.7	9.8	8.9	8.0	7.1	6.2	4.4	2.7	1.8
152.5°	8.9	8.9	8.0	8.0	7.1	6.2	5.3	4.4	2.7	1.8	1.8
155°	6.2	6.2	6.2	5.3	5.3	4.4	3.6	2.7	1.8	1.8	1.8
157.5°	4.4	4.4	4.4	3.6	3.6	2.7	2.7	1.8	1.8	1.8	1.8
160°	2.7	2.7	2.7	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8	1613.8
2.5°	1603.1	1602.2	1609.3	1609.3	1601.3	1613.8	1627.1
5°	1597.8	1596.9	1604.0	1604.0	1596.9	1609.3	1623.5
7.5°	1587.1	1588.0	1595.1	1596.9	1588.0	1599.6	1614.6
10°	1575.6	1574.7	1582.7	1584.5	1577.4	1588.0	1602.2
12.5°	1556.9	1556.9	1564.9	1567.6	1560.5	1572.9	1586.2
15°	1537.4	1537.4	1542.7	1547.2	1541.0	1552.5	1565.8
17.5°	1512.6	1511.7	1517.0	1522.3	1516.1	1528.5	1542.7
20°	1480.6	1480.6	1486.8	1493.0	1488.6	1500.1	1516.1
22.5°	1446.9	1443.3	1454.0	1458.4	1455.8	1467.3	1483.3
25°	1404.3	1403.4	1414.0	1420.3	1416.7	1429.1	1443.3
27.5°	1358.1	1357.2	1367.9	1375.9	1374.1	1385.6	1401.6
30°	1302.2	1306.6	1316.4	1329.7	1325.3	1337.7	1354.6
32.5°	1243.6	1248.0	1259.6	1273.8	1274.7	1284.4	1301.3
35°	1173.5	1185.0	1193.0	1211.7	1215.2	1225.0	1242.7
37.5°	1099.8	1113.1	1130.0	1144.2	1151.3	1159.3	1179.7
40°	1017.3	1036.8	1055.4	1072.3	1081.2	1089.2	1108.7
42.5°	942.7	957.8	975.5	992.4	1008.4	1015.5	1035.9
45°	858.4	876.1	892.1	912.5	928.5	936.5	956.9
47.5°	775.8	793.6	814.9	829.1	845.9	853.9	873.5
50°	696.8	712.8	730.5	747.4	761.6	768.7	785.6
52.5°	618.7	635.6	652.4	663.1	678.2	683.5	697.7
55°	549.5	561.0	576.1	582.3	597.4	600.9	610.7
57.5°	482.9	490.9	496.2	506.9	517.5	525.5	537.0
60°	422.5	426.1	429.6	435.8	444.7	447.4	451.8
62.5°	368.4	367.5	374.6	376.4	377.3	386.1	381.7
65°	320.4	321.3	315.1	312.5	316.0	318.7	316.9
67.5°	280.5	275.2	269.8	263.6	258.3	261.0	258.3
70°	241.4	237.0	228.1	219.3	215.7	210.4	207.7
72.5°	210.4	199.7	190.8	179.3	173.1	166.9	162.4
75°	186.4	171.3	158.9	146.5	137.6	128.7	126.9
77.5°	161.6	147.4	133.1	119.8	106.5	96.8	93.2
80°	142.0	128.7	111.8	95.9	81.7	69.2	64.8
82.5°	124.3	110.1	93.2	76.3	60.4	47.0	41.7
85°	109.2	94.1	77.2	60.4	44.4	30.2	23.1
87.5°	97.6	80.8	63.9	47.9	31.1	16.9	8.9
90°	87.0	71.0	55.0	38.2	22.2	8.9	0.0
92.5°	77.2	62.1	46.2	31.1	16.9	5.3	0.9
95°	68.3	55.0	39.1	24.9	12.4	3.6	0.9
97.5°	61.2	47.9	33.7	20.4	9.8	2.7	0.9
100°	55.0	41.7	29.3	16.9	8.0	1.8	0.9
102.5°	48.8	37.3	24.9	14.2	6.2	0.9	0.9
105°	43.5	32.8	21.3	12.4	5.3	0.9	0.9
107.5°	39.1	29.3	18.6	10.7	3.6	0.9	0.9
110°	34.6	24.9	16.0	8.9	2.7	0.9	0.9



TEST NUMBER: P#

CATALOG NUMBER: 2SNLED-LD5-45HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	31.1	22.2	14.2	7.1	1.8	0.9	0.9
115°	27.5	19.5	12.4	6.2	1.8	0.9	0.9
117.5°	24.0	16.9	10.7	4.4	0.9	0.9	0.9
120°	21.3	15.1	8.9	3.6	0.9	0.9	0.9
122.5°	18.6	12.4	7.1	2.7	0.9	0.9	0.9
125°	16.0	10.7	6.2	1.8	0.9	0.9	0.9
127.5°	13.3	8.9	4.4	1.8	0.9	0.9	0.9
130°	11.5	7.1	3.6	0.9	0.9	0.9	0.9
132.5°	9.8	5.3	2.7	0.9	0.9	0.9	0.9
135°	8.0	4.4	1.8	0.9	0.9	0.9	0.9
137.5°	6.2	3.6	1.8	0.9	0.9	0.9	0.9
140°	4.4	2.7	0.9	0.9	0.9	0.9	0.9
142.5°	3.6	1.8	0.9	0.9	0.9	0.9	0.9
145°	2.7	1.8	0.9	0.9	0.9	0.9	0.9
147.5°	1.8	1.8	1.8	1.8	0.9	0.9	0.9
150°	1.8	1.8	0.9	0.9	1.8	0.9	0.9
152.5°	1.8	0.9	0.9	0.9	1.8	0.9	0.9
155°	1.8	1.8	1.8	1.8	1.8	1.8	0.9
157.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8
160°	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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)