

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: **4SNLED-LD5-52HL-LC-UNV-L930-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 (P33518)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR LENSED
Light Source: -
Ballast/Driver: -

Summary

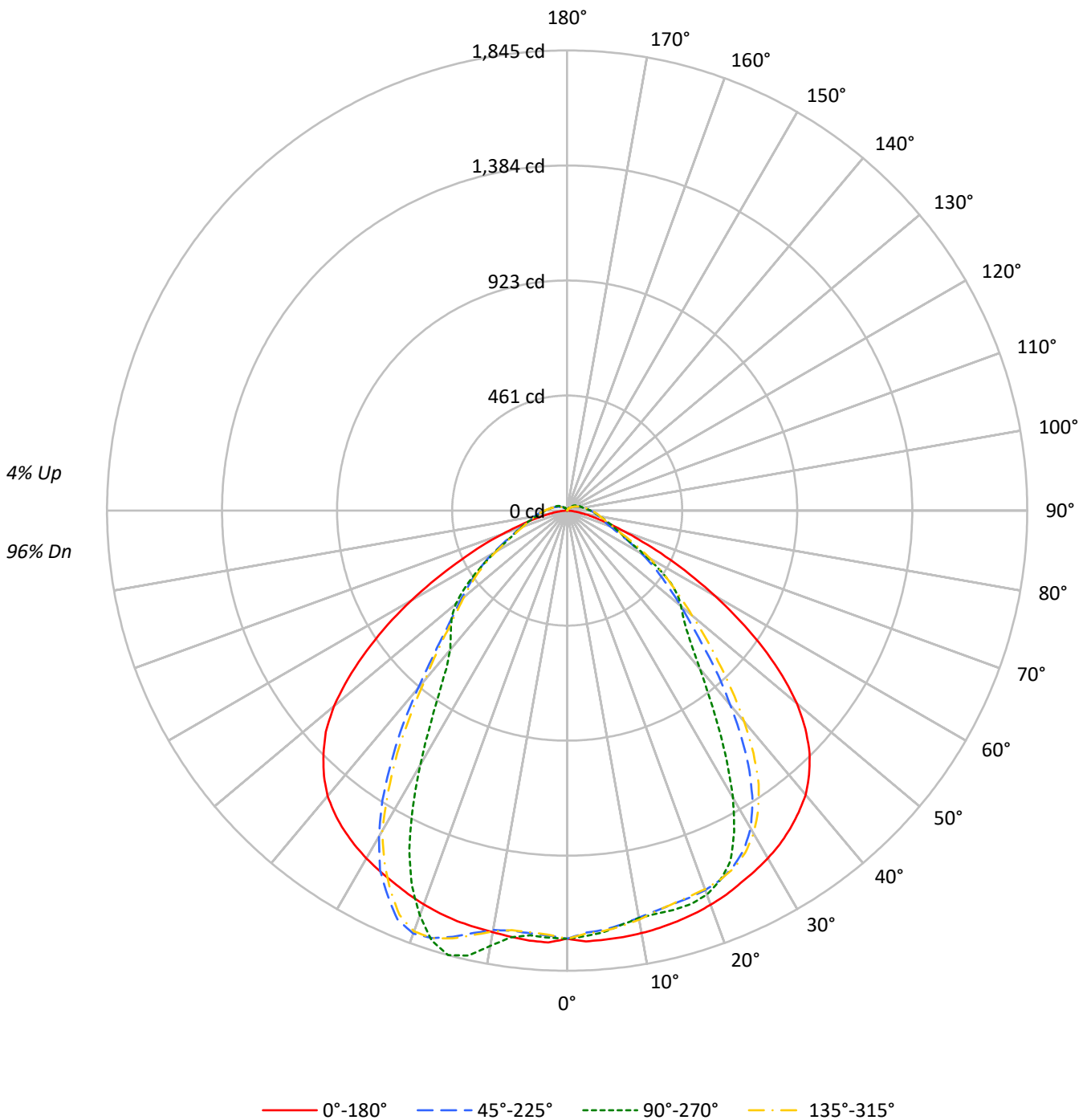
Lumens per Lamp: N/A
Luminaire Lumens: 4092.0 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.12 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 37
Input Voltage (V): NR
Input Current (A_{in}): 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#
CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

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	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	109	104	100	97	106	102	98	95	97	94	91	92	90	88	88	86	84	82
2	100	93	86	81	97	90	85	80	86	82	77	82	79	75	79	76	73	71
3	92	83	75	69	89	81	74	68	77	71	67	74	69	65	71	67	63	61
4	85	74	66	60	83	73	65	59	70	63	58	67	61	57	64	60	56	54
5	79	67	59	52	76	66	58	52	63	56	51	61	55	50	59	53	49	47
6	73	61	52	46	71	60	52	46	57	51	45	55	49	45	54	48	44	42
7	68	55	47	42	66	54	47	41	53	46	41	51	45	40	49	44	40	38
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36	34
9	60	47	39	34	58	46	39	34	45	38	33	43	37	33	42	37	33	31
10	56	43	36	31	54	43	36	31	42	35	30	40	34	30	39	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	13871	13871	13871	13871
5°	13972	13321	14001	13426
10°	14036	12767	14008	13634
15°	14146	12596	14138	14025
20°	14301	12397	14286	13067
25°	14477	11760	14469	11363
30°	14750	10192	14758	9030
35°	15039	8242	15081	6974
40°	15293	6636	15357	5847
45°	15239	5621	15318	5474
50°	14582	5175	14787	5060
55°	12938	4651	13262	4228
60°	10495	3560	11051	3265
65°	7801	2724	8405	2583
70°	5305	2351	5982	2248
75°	3470	2121	4040	2007
80°	2241	1978	2629	1821
85°	1148	1973	1517	1802



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.0	4.0
10°-20°	485.1	11.9
20°-30°	737.5	18.0
30°-40°	791.2	19.3
40°-50°	686.7	16.8
50°-60°	508.9	12.4
60°-70°	291.6	7.1
70°-80°	161.5	3.9
80°-90°	98.3	2.4
90°-100°	63.9	1.6
100°-110°	42.8	1.0
110°-120°	28.9	0.7
120°-130°	17.7	0.4
130°-140°	9.3	0.2
140°-150°	4.3	0.1
150°-160°	1.3	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1385.7	33.9
0°-40°	2176.9	53.2
0°-60°	3372.4	82.4
0°-90°	3923.8	95.9
90°-120°	135.7	3.3
90°-150°	167.0	4.1
90°-180°	168.0	4.1
0°-180°	4092.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1716	1716	1716	1716	1716	
5°	1727	1696	1731	1709	1727	165
15°	1705	1657	1704	1845	1705	482
25°	1647	1550	1646	1498	1647	761
35°	1558	1055	1562	893	1558	975
45°	1375	676	1382	659	1375	1053
55°	959	507	983	461	959	851
65°	435	257	469	244	435	439
75°	124	163	144	154	124	142
85°	17	113	22	103	17	22
90°	0	94	2	87	0	1
95°	1	77	0	74	1	1
105°	1	58	1	55	1	1
115°	1	47	1	43	1	1
125°	1	36	1	29	1	1
135°	1	22	1	19	1	1
145°	1	13	2	11	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	



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5
2.5°	1728.9	1724.5	1722.7	1719.2	1721.8	1732.4	1725.4	1713.8	1714.7	1694.3	1705.0
5°	1727.1	1721.8	1719.2	1715.6	1717.4	1727.1	1720.0	1708.5	1707.6	1687.2	1697.0
7.5°	1724.5	1719.2	1714.7	1712.1	1712.9	1720.9	1712.1	1698.8	1696.1	1673.9	1682.8
10°	1720.0	1716.5	1710.3	1705.9	1705.0	1713.8	1699.6	1686.3	1680.1	1657.1	1666.0
12.5°	1713.8	1708.5	1702.3	1694.3	1693.4	1698.8	1687.2	1668.6	1662.4	1643.8	1653.5
15°	1705.0	1698.8	1691.7	1682.8	1678.4	1681.9	1667.7	1650.9	1650.0	1634.0	1647.3
17.5°	1695.2	1686.3	1678.4	1666.0	1659.7	1662.4	1650.9	1635.8	1637.6	1627.8	1642.9
20°	1681.9	1672.2	1659.7	1647.3	1638.5	1642.9	1634.9	1623.4	1626.1	1619.0	1632.3
22.5°	1666.8	1653.5	1638.5	1624.3	1617.2	1623.4	1617.2	1607.4	1608.3	1603.9	1611.9
25°	1647.3	1632.3	1614.5	1596.8	1593.3	1597.7	1594.1	1586.2	1582.6	1575.5	1579.1
27.5°	1629.6	1612.8	1590.6	1572.0	1565.8	1574.6	1566.7	1553.4	1543.6	1533.8	1526.8
30°	1609.2	1588.8	1564.0	1542.7	1537.4	1540.9	1529.4	1509.0	1483.3	1470.9	1451.4
32.5°	1587.0	1560.4	1529.4	1505.5	1501.9	1499.3	1478.0	1448.7	1408.8	1384.0	1353.9
35°	1557.8	1528.5	1491.3	1462.0	1456.7	1441.6	1407.1	1368.0	1316.6	1274.1	1222.6
37.5°	1525.0	1490.4	1451.4	1412.4	1397.3	1367.2	1318.4	1277.6	1199.6	1148.2	1086.1
40°	1487.7	1446.1	1398.2	1351.2	1326.4	1277.6	1221.8	1161.5	1086.1	1016.9	964.6
42.5°	1436.3	1392.0	1335.2	1282.9	1240.4	1175.7	1110.0	1024.9	955.8	897.3	844.1
45°	1375.1	1321.9	1256.3	1193.4	1139.3	1062.2	985.0	899.9	842.3	774.0	737.7
47.5°	1296.2	1238.6	1168.6	1098.5	1027.6	942.5	861.8	780.2	722.6	673.8	647.2
50°	1203.1	1149.9	1072.8	989.5	911.4	822.8	742.1	680.9	625.1	594.9	574.5
52.5°	1087.9	1038.2	959.3	868.9	793.5	706.6	633.0	583.4	543.5	521.3	514.2
55°	959.3	915.9	837.9	753.6	676.5	596.7	540.8	497.4	471.7	458.4	459.3
57.5°	821.9	788.2	714.6	639.3	566.5	506.3	455.7	421.1	401.6	400.8	403.4
60°	684.5	659.6	595.8	531.1	467.2	418.5	381.2	357.3	344.9	345.8	344.9
62.5°	553.2	530.2	484.1	430.9	380.4	347.6	313.9	304.1	293.5	292.6	292.6
65°	435.3	417.6	380.4	342.2	304.1	282.8	266.0	254.5	246.5	244.7	245.6
67.5°	327.2	320.1	294.4	268.6	244.7	231.4	217.2	214.6	208.4	208.4	210.1
70°	243.8	238.5	224.3	209.2	199.5	190.6	183.5	183.5	182.6	181.8	186.2
72.5°	176.4	177.3	172.9	161.4	160.5	158.7	156.9	159.6	160.5	163.1	168.5
75°	124.1	126.8	126.8	125.0	128.6	133.0	135.7	140.1	145.4	149.0	155.2
77.5°	87.8	87.8	92.2	97.5	104.6	112.6	119.7	125.9	133.0	137.4	142.7
80°	56.7	59.4	66.5	76.2	86.0	96.6	106.4	114.4	121.5	128.6	132.1
82.5°	33.7	38.1	47.0	59.4	71.8	85.1	94.9	104.6	112.6	119.7	122.4
85°	16.8	23.1	33.7	47.0	60.3	74.5	86.9	95.8	104.6	110.8	114.4
87.5°	5.3	12.4	23.9	36.4	50.5	64.7	78.0	87.8	95.8	101.1	104.6
90°	0.0	6.2	16.8	30.1	43.4	57.6	70.0	80.7	88.7	93.1	95.8
92.5°	0.0	3.5	13.3	24.8	37.2	51.4	63.8	73.6	80.7	85.1	86.9
95°	0.9	2.7	9.8	20.4	32.8	46.1	57.6	66.5	73.6	78.0	78.9
97.5°	0.9	1.8	8.0	16.8	28.4	40.8	52.3	61.2	66.5	70.9	71.8
100°	0.9	1.8	6.2	15.1	24.8	36.4	47.0	55.0	61.2	64.7	65.6
102.5°	0.9	0.9	5.3	12.4	22.2	31.9	41.7	49.7	55.0	58.5	60.3
105°	0.9	0.9	4.4	10.6	19.5	28.4	37.2	45.2	49.7	53.2	55.0
107.5°	0.9	0.9	3.5	8.9	16.8	24.8	33.7	39.9	45.2	48.8	50.5
110°	0.9	0.9	2.7	8.0	14.2	22.2	29.3	35.5	40.8	44.3	46.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.9	0.9	2.7	7.1	12.4	19.5	25.7	31.9	36.4	39.9	42.6
115°	0.9	0.9	2.7	6.2	11.5	16.8	23.1	28.4	32.8	36.4	39.0
117.5°	0.9	0.9	2.7	5.3	9.8	15.1	20.4	25.7	29.3	32.8	35.5
120°	0.9	0.9	1.8	4.4	8.9	13.3	17.7	22.2	26.6	30.1	32.8
122.5°	0.9	0.9	1.8	4.4	7.1	11.5	16.0	19.5	23.9	26.6	29.3
125°	0.9	0.9	1.8	3.5	6.2	10.6	14.2	17.7	20.4	23.9	26.6
127.5°	0.9	0.9	1.8	3.5	5.3	8.9	12.4	16.0	18.6	21.3	23.1
130°	0.9	0.9	1.8	2.7	4.4	7.1	10.6	13.3	16.8	18.6	20.4
132.5°	0.9	0.9	0.9	2.7	3.5	5.3	8.0	11.5	14.2	16.8	17.7
135°	0.9	0.9	0.9	1.8	3.5	4.4	6.2	8.9	11.5	14.2	16.0
137.5°	0.9	0.9	0.9	1.8	2.7	4.4	5.3	7.1	9.8	11.5	14.2
140°	0.9	0.9	0.9	1.8	2.7	3.5	4.4	6.2	8.0	9.8	11.5
142.5°	0.9	0.9	0.9	1.8	1.8	2.7	3.5	5.3	6.2	8.0	9.8
145°	0.9	0.9	0.9	1.8	1.8	2.7	3.5	4.4	5.3	6.2	8.0
147.5°	0.9	0.9	0.9	1.8	1.8	1.8	2.7	3.5	4.4	5.3	6.2
150°	1.8	1.8	1.8	1.8	1.8	1.8	2.7	2.7	3.5	4.4	5.3
152.5°	1.8	1.8	1.8	1.8	1.8	1.8	2.7	2.7	2.7	3.5	4.4
155°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.7	2.7	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



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5
2.5°	1701.4	1703.2	1713.8	1712.9	1711.2	1709.4	1709.4	1707.6	1709.4	1713.8	1712.1
5°	1692.6	1695.2	1703.2	1702.3	1700.5	1699.6	1698.8	1696.1	1697.9	1704.1	1702.3
7.5°	1676.6	1679.3	1686.3	1682.8	1680.1	1681.9	1677.5	1674.8	1678.4	1684.6	1683.7
10°	1659.7	1661.5	1670.4	1668.6	1664.2	1665.1	1660.6	1658.9	1663.3	1666.8	1667.7
12.5°	1648.2	1654.4	1662.4	1661.5	1660.6	1661.5	1657.1	1655.3	1658.0	1661.5	1660.6
15°	1645.6	1653.5	1662.4	1662.4	1663.3	1664.2	1659.7	1657.1	1659.7	1662.4	1661.5
17.5°	1642.9	1652.7	1660.6	1659.7	1660.6	1662.4	1655.3	1653.5	1657.1	1660.6	1658.9
20°	1634.0	1642.9	1648.2	1646.4	1646.4	1647.3	1638.5	1638.5	1643.8	1646.4	1647.3
22.5°	1609.2	1619.8	1619.8	1615.4	1615.4	1611.9	1609.2	1603.9	1610.1	1614.5	1618.1
25°	1572.0	1576.4	1571.1	1561.3	1556.0	1551.6	1539.2	1549.8	1549.8	1563.1	1567.5
27.5°	1519.7	1509.9	1494.8	1474.4	1470.0	1455.8	1447.8	1450.5	1454.9	1473.6	1487.7
30°	1433.7	1404.4	1378.7	1369.8	1350.3	1336.1	1321.9	1329.0	1337.0	1347.7	1376.9
32.5°	1320.2	1291.8	1250.1	1235.1	1214.7	1196.9	1180.1	1190.7	1204.9	1212.0	1243.9
35°	1189.8	1156.1	1118.0	1092.3	1071.0	1061.3	1040.0	1055.1	1070.1	1075.5	1103.0
37.5°	1051.5	1016.9	983.3	961.1	940.7	934.5	920.3	930.9	942.5	950.5	973.5
40°	920.3	888.4	862.7	847.6	833.4	828.1	822.8	827.2	836.1	842.3	860.0
42.5°	807.7	782.0	764.3	755.4	745.6	738.6	739.4	741.2	745.6	758.9	766.9
45°	709.3	694.2	682.7	680.9	674.7	673.8	672.9	676.5	679.1	687.1	693.3
47.5°	630.4	624.2	621.5	625.1	627.7	624.2	626.0	630.4	635.7	635.7	634.8
50°	568.3	570.1	573.6	581.6	586.9	588.7	590.5	595.8	596.7	598.5	595.8
52.5°	517.8	519.6	529.3	541.7	547.9	550.6	554.1	559.5	559.5	561.2	557.7
55°	466.4	469.0	478.8	491.2	496.5	500.1	503.6	507.1	509.8	513.4	510.7
57.5°	409.6	417.6	423.8	427.3	430.9	433.6	436.2	437.1	442.4	443.3	447.7
60°	349.3	351.1	357.3	356.4	353.8	360.9	357.3	363.5	369.7	377.7	378.6
62.5°	291.7	292.6	297.0	295.2	298.8	297.9	300.6	300.6	305.0	308.5	313.0
65°	246.5	247.4	250.9	250.9	250.0	252.7	255.3	257.1	257.1	259.8	263.3
67.5°	212.8	215.4	219.0	220.8	222.5	222.5	225.2	226.1	227.9	228.7	230.5
70°	189.7	193.3	196.8	198.6	199.5	201.3	202.1	202.1	203.9	204.8	206.6
72.5°	172.9	176.4	179.1	179.1	180.9	181.8	181.8	182.6	183.5	185.3	187.1
75°	158.7	161.4	163.1	162.3	162.3	162.3	163.1	163.1	164.9	166.7	168.5
77.5°	145.4	148.1	148.1	146.3	146.3	146.3	146.3	147.2	148.1	149.8	151.6
80°	135.7	135.7	134.8	134.8	133.0	132.1	132.1	133.0	133.0	134.8	137.4
82.5°	125.0	125.0	124.1	123.2	122.4	121.5	121.5	122.4	123.2	124.1	125.9
85°	115.3	115.3	113.5	113.5	112.6	112.6	112.6	112.6	113.5	114.4	116.1
87.5°	105.5	104.6	103.7	102.8	102.8	102.8	102.8	102.8	103.7	105.5	106.4
90°	95.8	94.9	94.0	94.0	93.1	93.1	94.0	94.0	94.9	95.8	96.6
92.5°	86.9	86.0	85.1	85.1	84.2	84.2	85.1	84.2	86.0	86.0	86.9
95°	78.9	78.0	77.1	77.1	77.1	77.1	77.1	77.1	78.0	78.0	78.9
97.5°	71.8	70.9	70.0	70.0	70.9	70.0	70.9	70.9	70.9	71.8	72.7
100°	65.6	64.7	64.7	65.6	64.7	64.7	65.6	65.6	65.6	65.6	66.5
102.5°	60.3	60.3	60.3	60.3	60.3	60.3	61.2	61.2	61.2	61.2	62.1
105°	55.0	55.9	55.9	55.9	56.7	56.7	56.7	57.6	57.6	57.6	57.6
107.5°	51.4	52.3	52.3	53.2	53.2	54.1	54.1	54.1	54.1	55.0	55.0
110°	47.9	48.8	49.7	50.5	50.5	51.4	51.4	51.4	51.4	51.4	51.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	44.3	45.2	46.1	47.9	48.8	48.8	48.8	48.8	49.7	49.7	48.8
115°	40.8	42.6	43.4	45.2	46.1	46.1	47.0	47.0	47.0	47.0	46.1
117.5°	37.2	39.9	40.8	42.6	43.4	43.4	44.3	44.3	44.3	44.3	43.4
120°	34.6	36.4	38.1	39.0	39.9	40.8	40.8	41.7	41.7	41.7	40.8
122.5°	31.9	33.7	35.5	36.4	37.2	38.1	38.1	38.1	38.1	38.1	38.1
125°	28.4	30.1	31.9	32.8	33.7	34.6	34.6	35.5	35.5	35.5	34.6
127.5°	25.7	27.5	28.4	30.1	31.0	31.0	31.9	31.9	31.9	31.9	31.0
130°	22.2	23.9	25.7	26.6	27.5	27.5	28.4	28.4	28.4	28.4	28.4
132.5°	19.5	21.3	22.2	23.9	23.9	24.8	24.8	25.7	25.7	25.7	24.8
135°	17.7	18.6	19.5	21.3	21.3	22.2	22.2	22.2	22.2	22.2	22.2
137.5°	16.0	16.8	17.7	18.6	18.6	19.5	19.5	19.5	19.5	20.4	19.5
140°	13.3	15.1	16.0	16.0	16.8	16.8	16.8	17.7	17.7	17.7	16.8
142.5°	11.5	12.4	13.3	14.2	15.1	15.1	15.1	15.1	16.0	15.1	15.1
145°	8.9	10.6	11.5	12.4	13.3	13.3	13.3	13.3	13.3	13.3	13.3
147.5°	7.1	8.0	9.8	10.6	10.6	11.5	11.5	11.5	11.5	11.5	11.5
150°	6.2	6.2	8.0	8.9	9.8	9.8	9.8	9.8	9.8	9.8	9.8
152.5°	4.4	5.3	6.2	7.1	8.0	8.0	8.0	8.0	8.0	8.0	8.0
155°	4.4	4.4	5.3	5.3	6.2	6.2	6.2	6.2	7.1	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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5
2.5°	1709.4	1708.5	1712.1	1708.5	1690.8	1697.9	1695.2	1705.0	1705.9	1708.5	1717.4
5°	1700.5	1700.5	1705.0	1701.4	1684.6	1691.7	1690.8	1700.5	1702.3	1704.1	1713.8
7.5°	1682.8	1683.7	1689.9	1687.2	1669.5	1680.1	1679.3	1690.8	1694.3	1697.9	1706.7
10°	1666.0	1665.1	1672.2	1669.5	1652.7	1665.1	1664.2	1675.7	1681.0	1687.2	1697.9
12.5°	1657.1	1654.4	1657.1	1654.4	1635.8	1645.6	1646.4	1659.7	1666.0	1673.9	1686.3
15°	1657.1	1652.7	1652.7	1647.3	1626.1	1632.3	1633.1	1642.0	1650.0	1658.0	1673.0
17.5°	1655.3	1650.9	1650.0	1645.6	1622.5	1622.5	1621.6	1627.8	1632.3	1640.2	1656.2
20°	1645.6	1643.8	1642.9	1640.2	1619.0	1615.4	1613.6	1613.6	1616.3	1619.0	1634.9
22.5°	1619.8	1621.6	1623.4	1625.2	1608.3	1602.1	1603.0	1601.2	1598.6	1598.6	1611.9
25°	1572.0	1580.8	1587.9	1595.9	1586.2	1581.7	1587.0	1584.4	1580.0	1576.4	1587.9
27.5°	1495.7	1514.3	1529.4	1548.9	1549.8	1546.3	1560.4	1558.7	1557.8	1552.5	1561.3
30°	1390.2	1419.5	1439.9	1468.2	1492.2	1495.7	1519.7	1523.2	1526.8	1524.1	1533.0
32.5°	1262.5	1302.4	1337.0	1381.3	1404.4	1424.8	1458.5	1472.7	1486.9	1491.3	1501.0
35°	1123.3	1168.6	1209.3	1258.1	1294.5	1338.8	1379.6	1400.9	1432.8	1445.2	1459.4
37.5°	991.2	1033.8	1073.7	1122.5	1181.0	1227.1	1277.6	1325.5	1368.9	1386.7	1407.9
40°	874.2	908.8	946.9	989.5	1042.7	1103.0	1157.9	1224.4	1275.8	1311.3	1342.3
42.5°	785.5	802.4	835.2	873.3	915.9	977.1	1032.9	1107.4	1169.4	1220.0	1271.4
45°	706.6	714.6	738.6	758.9	802.4	856.5	915.9	988.6	1053.3	1118.0	1180.1
47.5°	639.3	649.0	660.5	672.9	704.0	749.2	800.6	866.2	930.9	1006.3	1077.2
50°	594.0	596.7	598.5	603.8	622.4	653.4	695.1	751.0	813.0	893.7	969.1
52.5°	554.1	554.1	548.8	546.2	553.2	572.8	596.7	636.6	700.4	774.9	854.7
55°	511.6	503.6	501.8	493.0	494.7	503.6	515.1	546.2	598.5	662.3	739.4
57.5°	452.2	448.6	448.6	445.1	438.0	442.4	445.1	467.2	504.5	559.5	626.8
60°	383.9	382.1	386.6	387.5	381.2	383.9	383.0	396.3	422.9	467.2	523.1
62.5°	315.6	323.6	324.5	328.0	324.5	323.6	328.0	339.6	352.9	386.6	430.0
65°	265.1	269.5	270.4	274.9	273.1	273.1	276.6	285.5	293.5	316.5	350.2
67.5°	232.3	230.5	231.4	234.1	231.4	230.5	233.2	238.5	244.7	258.9	282.8
70°	206.6	204.8	204.8	204.8	201.3	198.6	199.5	201.3	203.9	211.9	227.0
72.5°	187.1	187.1	184.4	181.8	179.1	177.3	175.6	173.8	172.9	175.6	183.5
75°	169.3	170.2	169.3	166.7	163.1	159.6	156.0	152.5	148.1	146.3	147.2
77.5°	153.4	154.3	155.2	154.3	150.7	146.3	141.0	135.7	129.4	123.2	119.7
80°	139.2	141.0	141.9	141.0	138.3	134.8	128.6	122.4	113.5	105.5	96.6
82.5°	126.8	129.4	130.3	130.3	128.6	125.0	117.9	110.8	101.1	90.4	78.9
85°	117.0	118.8	120.6	120.6	119.7	116.1	109.1	101.1	91.3	78.9	66.5
87.5°	107.3	108.2	109.9	111.7	109.9	106.4	100.2	91.3	81.6	69.2	55.0
90°	97.5	98.4	100.2	102.0	101.1	97.5	92.2	84.2	73.6	60.3	46.1
92.5°	87.8	89.5	90.4	91.3	92.2	89.5	85.1	77.1	66.5	53.2	39.9
95°	80.7	80.7	82.5	83.3	84.2	81.6	78.0	70.0	60.3	47.9	34.6
97.5°	73.6	73.6	75.4	75.4	76.2	74.5	70.9	63.8	54.1	42.6	29.3
100°	66.5	67.4	68.3	69.2	69.2	68.3	64.7	57.6	48.8	38.1	25.7
102.5°	62.1	62.1	62.9	62.9	63.8	62.1	58.5	52.3	43.4	33.7	22.2
105°	57.6	57.6	58.5	58.5	57.6	55.9	52.3	47.0	39.0	29.3	19.5
107.5°	54.1	54.1	54.1	54.1	53.2	51.4	47.9	41.7	34.6	26.6	17.7
110°	51.4	50.5	50.5	49.7	48.8	46.1	42.6	37.2	31.0	23.1	15.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	48.8	47.9	47.0	46.1	44.3	41.7	38.1	33.7	27.5	20.4	13.3
115°	46.1	45.2	44.3	42.6	40.8	38.1	34.6	30.1	23.9	17.7	11.5
117.5°	43.4	42.6	40.8	39.0	37.2	34.6	31.0	26.6	21.3	16.0	10.6
120°	39.9	39.0	38.1	36.4	34.6	31.0	27.5	23.9	18.6	14.2	8.9
122.5°	37.2	36.4	34.6	33.7	31.0	28.4	24.8	21.3	16.8	12.4	8.0
125°	33.7	32.8	31.9	30.1	28.4	24.8	22.2	18.6	15.1	10.6	6.2
127.5°	31.0	30.1	28.4	26.6	24.8	22.2	19.5	16.8	13.3	8.9	6.2
130°	27.5	26.6	25.7	23.9	22.2	19.5	17.7	14.2	11.5	8.0	5.3
132.5°	23.9	23.9	23.1	21.3	19.5	17.7	15.1	12.4	9.8	7.1	4.4
135°	22.2	21.3	20.4	18.6	17.7	15.1	13.3	10.6	8.0	6.2	3.5
137.5°	19.5	18.6	17.7	16.8	15.1	13.3	11.5	8.9	7.1	5.3	3.5
140°	16.8	16.0	16.0	14.2	13.3	11.5	9.8	8.0	6.2	4.4	2.7
142.5°	15.1	14.2	13.3	12.4	11.5	9.8	8.0	6.2	5.3	3.5	2.7
145°	13.3	12.4	11.5	10.6	9.8	8.0	7.1	5.3	4.4	3.5	2.7
147.5°	10.6	10.6	9.8	8.9	8.0	7.1	6.2	5.3	3.5	2.7	1.8
150°	8.9	8.9	8.0	7.1	7.1	6.2	5.3	4.4	3.5	2.7	1.8
152.5°	8.0	7.1	7.1	6.2	6.2	5.3	4.4	3.5	2.7	2.7	1.8
155°	6.2	6.2	6.2	5.3	5.3	4.4	3.5	3.5	2.7	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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5
2.5°	1719.2	1708.5	1717.4	1733.3	1731.6	1729.8	1728.0	1731.6	1743.1	1736.9	1727.1
5°	1716.5	1705.9	1715.6	1730.7	1729.8	1727.1	1725.4	1728.9	1740.4	1734.2	1723.6
7.5°	1711.2	1701.4	1708.5	1723.6	1723.6	1721.8	1720.0	1723.6	1734.2	1728.9	1718.3
10°	1702.3	1695.2	1702.3	1716.5	1717.4	1713.8	1712.1	1716.5	1727.1	1724.5	1715.6
12.5°	1695.2	1688.1	1696.1	1710.3	1711.2	1707.6	1705.0	1710.3	1724.5	1726.2	1723.6
15°	1685.5	1679.3	1689.0	1704.1	1704.1	1701.4	1701.4	1708.5	1728.0	1736.0	1740.4
17.5°	1671.3	1666.8	1678.4	1693.4	1694.3	1692.6	1693.4	1707.6	1733.3	1752.8	1765.3
20°	1653.5	1651.8	1664.2	1680.1	1682.8	1683.7	1688.1	1709.4	1744.9	1771.5	1783.9
22.5°	1632.3	1633.1	1647.3	1664.2	1667.7	1670.4	1679.3	1709.4	1753.7	1782.1	1787.4
25°	1608.3	1611.0	1626.1	1646.4	1650.9	1656.2	1671.3	1710.3	1756.4	1775.0	1766.1
27.5°	1582.6	1587.9	1607.4	1628.7	1634.0	1642.9	1662.4	1705.0	1744.0	1744.9	1712.1
30°	1556.0	1562.2	1585.3	1610.1	1619.0	1627.8	1651.8	1692.6	1713.8	1685.5	1627.8
32.5°	1525.9	1534.7	1557.8	1587.9	1598.6	1610.1	1634.0	1668.6	1660.6	1599.5	1517.0
35°	1487.7	1500.2	1526.8	1562.2	1572.0	1587.0	1603.9	1611.9	1576.4	1489.5	1396.4
37.5°	1440.8	1459.4	1490.4	1531.2	1541.8	1551.6	1556.0	1533.8	1462.9	1368.9	1272.3
40°	1386.7	1415.0	1448.7	1493.9	1504.6	1504.6	1488.6	1441.6	1352.1	1228.9	1121.6
42.5°	1321.1	1355.6	1398.2	1443.4	1454.1	1441.6	1403.5	1321.1	1219.1	1081.7	968.2
45°	1241.3	1287.4	1335.2	1382.2	1387.6	1360.1	1291.8	1187.2	1061.3	933.6	825.4
47.5°	1146.4	1206.7	1259.0	1312.2	1305.1	1259.0	1167.7	1048.9	915.9	795.3	708.4
50°	1040.0	1110.9	1169.4	1220.0	1204.9	1141.1	1033.8	909.7	777.6	674.7	602.9
52.5°	926.5	1008.1	1066.6	1107.4	1087.0	1010.7	892.8	774.0	665.8	571.9	524.0
55°	808.6	891.0	951.3	983.3	956.7	874.2	758.1	649.9	547.9	486.8	458.4
57.5°	694.2	771.4	828.1	853.8	820.1	737.7	630.4	539.1	465.5	414.1	399.9
60°	584.3	647.2	701.3	720.8	684.5	608.2	516.0	443.3	389.2	353.8	346.7
62.5°	482.3	533.7	576.3	591.4	555.9	496.5	416.7	362.6	324.5	306.8	297.9
65°	398.1	428.2	471.7	469.0	447.7	392.8	334.3	296.1	271.3	259.8	254.5
67.5°	313.0	340.5	367.9	371.5	344.9	306.8	268.6	241.2	227.9	221.7	219.0
70°	242.0	262.4	279.3	274.9	260.7	236.7	212.8	197.7	192.4	189.7	189.7
72.5°	188.0	198.6	206.6	201.3	192.4	180.0	168.5	162.3	163.1	164.9	166.7
75°	145.4	148.1	149.8	144.5	142.7	134.8	133.9	134.8	140.1	145.4	148.1
77.5°	111.7	108.2	105.5	100.2	101.1	100.2	104.6	111.7	119.7	127.7	134.8
80°	86.0	78.0	71.8	66.5	69.2	73.6	82.5	93.1	103.7	112.6	121.5
82.5°	66.5	55.0	46.1	40.8	46.1	53.2	64.7	78.0	90.4	100.2	109.9
85°	51.4	38.1	27.5	22.2	27.5	38.1	50.5	65.6	78.9	89.5	99.3
87.5°	39.9	27.5	15.1	8.9	15.1	26.6	40.8	55.0	68.3	80.7	90.4
90°	31.9	18.6	7.1	1.8	8.0	18.6	31.9	46.1	59.4	72.7	82.5
92.5°	25.7	13.3	3.5	0.0	4.4	14.2	26.6	39.9	53.2	65.6	75.4
95°	21.3	10.6	2.7	0.0	3.5	10.6	21.3	34.6	47.0	59.4	67.4
97.5°	17.7	8.0	1.8	0.0	1.8	8.9	17.7	29.3	41.7	53.2	61.2
100°	15.1	7.1	1.8	0.0	1.8	7.1	15.1	25.7	36.4	47.0	55.0
102.5°	12.4	5.3	0.9	0.9	0.9	5.3	13.3	22.2	31.9	41.7	49.7
105°	11.5	4.4	0.9	0.9	0.9	4.4	11.5	19.5	28.4	37.2	44.3
107.5°	9.8	3.5	0.9	0.9	0.9	3.5	9.8	16.8	25.7	33.7	39.9
110°	8.0	3.5	0.9	0.9	0.9	3.5	8.0	15.1	22.2	29.3	35.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	7.1	2.7	0.9	0.9	0.9	2.7	7.1	13.3	19.5	26.6	31.9
115°	6.2	2.7	0.9	0.9	0.9	2.7	6.2	11.5	16.8	23.1	28.4
117.5°	5.3	2.7	0.9	0.9	0.9	1.8	5.3	9.8	15.1	20.4	25.7
120°	4.4	1.8	0.9	0.9	0.9	1.8	4.4	8.9	13.3	17.7	22.2
122.5°	4.4	1.8	0.9	0.9	0.9	1.8	3.5	7.1	11.5	15.1	19.5
125°	3.5	1.8	0.9	0.9	0.9	0.9	3.5	6.2	9.8	13.3	16.8
127.5°	3.5	1.8	0.9	0.9	0.9	0.9	2.7	5.3	8.0	11.5	15.1
130°	2.7	1.8	0.9	0.9	0.9	0.9	1.8	4.4	7.1	9.8	12.4
132.5°	2.7	1.8	0.9	0.9	0.9	0.9	1.8	3.5	5.3	8.0	10.6
135°	2.7	0.9	0.9	0.9	0.9	0.9	0.9	2.7	4.4	6.2	8.0
137.5°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	1.8	3.5	4.4	7.1
140°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	1.8	2.7	3.5	5.3
142.5°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8	2.7	4.4
145°	1.8	0.9	0.9	1.8	1.8	0.9	0.9	1.8	1.8	2.7	3.5
147.5°	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.8	1.8	2.7
150°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.7
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5
2.5°	1725.4	1705.0	1715.6	1712.1	1715.6	1724.5	1723.6	1720.9	1722.7	1718.3	1713.8
5°	1721.8	1701.4	1712.1	1707.6	1712.1	1720.9	1719.2	1716.5	1719.2	1713.8	1709.4
7.5°	1717.4	1698.8	1711.2	1710.3	1718.3	1729.8	1730.7	1730.7	1736.9	1728.9	1725.4
10°	1717.4	1707.6	1724.5	1730.7	1751.1	1766.1	1767.9	1771.5	1782.1	1780.3	1771.5
12.5°	1736.0	1734.2	1759.0	1774.1	1792.7	1814.0	1825.5	1829.1	1836.2	1830.9	1827.3
15°	1759.9	1768.8	1796.3	1813.1	1833.5	1849.5	1852.1	1853.9	1859.2	1851.3	1845.0
17.5°	1791.9	1797.2	1819.3	1826.4	1839.7	1842.4	1838.8	1830.0	1830.0	1812.2	1806.9
20°	1806.9	1804.3	1813.1	1801.6	1796.3	1780.3	1765.3	1748.4	1747.5	1728.9	1727.1
22.5°	1793.6	1775.9	1757.3	1728.9	1716.5	1693.4	1673.0	1663.3	1657.1	1633.1	1626.9
25°	1746.6	1703.2	1675.7	1642.0	1611.9	1585.3	1565.8	1545.4	1525.9	1506.4	1497.5
27.5°	1665.1	1624.3	1580.0	1533.0	1491.3	1450.5	1417.7	1397.3	1378.7	1353.0	1339.7
30°	1564.9	1508.1	1459.4	1414.2	1345.9	1296.2	1268.7	1228.0	1213.8	1202.3	1177.4
32.5°	1447.0	1378.7	1312.2	1251.0	1181.0	1134.9	1098.5	1068.4	1059.5	1029.4	1022.3
35°	1316.6	1227.1	1151.7	1091.4	1040.9	985.0	954.9	934.5	916.8	896.4	892.8
37.5°	1163.2	1082.6	997.4	944.2	904.3	856.5	833.4	819.2	811.3	796.2	793.5
40°	1009.0	928.3	869.8	816.6	791.7	766.0	749.2	743.0	739.4	734.1	728.8
42.5°	868.9	798.0	756.3	720.8	710.2	697.8	693.3	696.9	693.3	691.6	690.7
45°	750.1	696.0	666.7	656.1	653.4	649.9	653.4	659.6	660.5	658.8	658.8
47.5°	641.9	616.2	603.8	605.6	610.0	612.7	618.9	626.8	628.6	624.2	626.0
50°	571.0	555.9	553.2	560.3	570.1	573.6	580.7	586.9	586.1	584.3	582.5
52.5°	504.5	500.1	507.1	514.2	524.9	526.7	529.3	532.0	531.1	527.5	525.8
55°	448.6	452.2	458.4	461.0	469.0	468.1	469.0	469.0	465.5	463.7	461.0
57.5°	398.1	399.0	402.5	403.4	407.8	406.1	405.2	403.4	398.1	397.2	394.5
60°	346.7	344.9	352.9	346.7	350.2	346.7	345.8	341.3	336.0	335.1	333.4
62.5°	297.9	294.4	299.7	297.0	298.8	295.2	293.5	288.2	283.7	282.8	281.9
65°	254.5	252.7	258.0	257.1	258.9	254.5	252.7	249.1	245.6	244.7	243.8
67.5°	218.1	222.5	225.2	225.2	227.0	226.1	221.7	220.8	219.9	216.3	216.3
70°	191.5	194.2	199.5	200.4	199.5	201.3	197.7	196.8	195.9	194.2	193.3
72.5°	170.2	173.8	179.1	180.0	179.1	179.1	177.3	176.4	176.4	173.8	173.8
75°	153.4	157.8	162.3	162.3	162.3	160.5	158.7	158.7	156.9	156.0	154.3
77.5°	139.2	144.5	148.1	147.2	146.3	144.5	144.5	141.9	139.2	139.2	137.4
80°	128.6	132.1	134.8	133.9	133.0	130.3	129.4	126.8	125.0	122.4	122.4
82.5°	117.0	121.5	123.2	122.4	120.6	117.9	117.0	115.3	113.5	112.6	110.8
85°	107.3	111.7	112.6	110.8	109.1	107.3	106.4	105.5	104.6	102.8	102.8
87.5°	97.5	102.0	102.0	101.1	99.3	98.4	97.5	96.6	95.8	94.9	94.0
90°	89.5	93.1	93.1	92.2	91.3	90.4	89.5	88.7	87.8	86.9	86.9
92.5°	81.6	85.1	85.1	84.2	83.3	82.5	82.5	81.6	80.7	79.8	78.9
95°	74.5	78.0	78.0	78.0	77.1	76.2	76.2	75.4	74.5	74.5	73.6
97.5°	67.4	70.9	70.9	70.9	70.0	69.2	69.2	68.3	68.3	68.3	67.4
100°	61.2	63.8	64.7	64.7	63.8	63.8	63.8	62.9	62.9	62.9	62.1
102.5°	55.0	57.6	59.4	59.4	59.4	58.5	58.5	58.5	58.5	58.5	57.6
105°	49.7	52.3	54.1	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
107.5°	45.2	47.9	49.7	50.5	51.4	51.4	52.3	52.3	52.3	52.3	52.3
110°	40.8	43.4	46.1	47.0	47.9	48.8	48.8	49.7	48.8	48.8	48.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	36.4	39.9	41.7	43.4	44.3	45.2	46.1	46.1	46.1	46.1	46.1
115°	32.8	36.4	38.1	39.9	41.7	42.6	42.6	43.4	43.4	43.4	42.6
117.5°	29.3	32.8	34.6	36.4	37.2	39.0	39.9	39.9	39.9	39.9	39.0
120°	26.6	29.3	31.0	32.8	34.6	35.5	36.4	36.4	36.4	36.4	36.4
122.5°	23.1	25.7	28.4	30.1	31.0	31.9	32.8	32.8	32.8	32.8	32.8
125°	20.4	23.1	24.8	26.6	27.5	29.3	29.3	29.3	29.3	29.3	29.3
127.5°	17.7	20.4	22.2	23.9	24.8	25.7	26.6	26.6	26.6	26.6	26.6
130°	15.1	17.7	19.5	21.3	22.2	23.1	23.1	23.9	23.9	23.9	23.9
132.5°	13.3	15.1	16.8	18.6	19.5	20.4	20.4	21.3	21.3	21.3	21.3
135°	10.6	13.3	14.2	16.0	16.8	17.7	17.7	18.6	18.6	18.6	18.6
137.5°	8.9	10.6	12.4	14.2	15.1	15.1	16.0	16.0	16.8	16.8	16.8
140°	7.1	8.0	10.6	11.5	12.4	13.3	14.2	14.2	14.2	14.2	14.2
142.5°	5.3	7.1	8.0	9.8	10.6	11.5	12.4	12.4	12.4	12.4	12.4
145°	4.4	5.3	6.2	8.0	8.9	9.8	10.6	10.6	10.6	10.6	10.6
147.5°	3.5	4.4	5.3	6.2	7.1	8.0	8.9	8.9	8.9	8.9	8.9
150°	2.7	3.5	4.4	4.4	5.3	6.2	7.1	8.0	8.0	8.0	8.0
152.5°	2.7	2.7	3.5	3.5	4.4	5.3	6.2	6.2	6.2	6.2	6.2
155°	1.8	2.7	2.7	2.7	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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5
2.5°	1716.5	1720.0	1718.3	1715.6	1714.7	1719.2	1714.7	1694.3	1702.3	1703.2	1709.4
5°	1713.8	1716.5	1714.7	1712.9	1710.3	1715.6	1710.3	1689.0	1697.0	1697.9	1704.1
7.5°	1731.6	1732.4	1732.4	1728.0	1720.9	1723.6	1716.5	1692.6	1697.0	1697.0	1701.4
10°	1775.9	1777.7	1780.3	1768.8	1759.9	1752.8	1743.1	1713.8	1712.9	1705.9	1705.9
12.5°	1833.5	1829.1	1824.7	1819.3	1812.2	1803.4	1789.2	1754.6	1743.1	1731.6	1720.0
15°	1850.4	1848.6	1847.7	1845.0	1840.6	1838.0	1827.3	1792.7	1775.9	1761.7	1741.3
17.5°	1806.0	1809.6	1821.1	1822.0	1827.3	1838.0	1836.2	1812.2	1797.2	1791.0	1766.1
20°	1726.2	1727.1	1741.3	1747.5	1770.6	1788.3	1801.6	1798.9	1795.4	1802.5	1783.9
22.5°	1630.5	1636.7	1651.8	1661.5	1683.7	1704.1	1725.4	1736.9	1755.5	1784.8	1781.2
25°	1500.2	1508.1	1529.4	1545.4	1576.4	1607.4	1635.8	1656.2	1678.4	1734.2	1752.8
27.5°	1344.1	1356.5	1384.0	1400.0	1443.4	1475.3	1516.1	1556.0	1587.0	1650.9	1689.0
30°	1180.1	1190.7	1220.0	1242.2	1279.4	1322.8	1374.3	1431.0	1482.4	1547.1	1595.0
32.5°	1026.7	1038.2	1062.2	1081.7	1123.3	1159.7	1216.4	1286.5	1334.4	1423.9	1487.7
35°	892.8	903.5	920.3	937.2	971.7	1009.0	1057.7	1126.0	1187.2	1280.3	1361.0
37.5°	798.8	800.6	810.4	820.1	845.8	874.2	912.3	972.6	1029.4	1129.5	1218.2
40°	731.5	731.5	736.8	739.4	751.0	767.8	791.7	838.7	885.7	962.0	1070.1
42.5°	689.8	688.0	688.0	688.9	688.0	696.0	710.2	732.3	774.0	837.0	921.2
45°	658.8	655.2	652.5	646.3	642.8	642.8	643.7	651.7	675.6	716.4	784.7
47.5°	624.2	623.3	618.9	611.8	605.6	601.1	594.0	591.4	598.5	621.5	667.6
50°	584.3	579.8	575.4	570.1	563.0	558.6	545.3	546.2	539.9	550.6	574.5
52.5°	525.8	522.2	520.4	516.0	513.4	511.6	500.9	490.3	487.6	489.4	498.3
55°	461.0	462.8	455.7	459.3	458.4	450.4	446.0	438.0	435.3	434.4	438.9
57.5°	393.7	395.4	391.0	394.5	394.5	390.1	387.5	387.5	381.2	375.9	382.1
60°	332.5	328.9	331.6	336.0	336.0	333.4	331.6	331.6	327.2	325.4	329.8
62.5°	282.8	279.3	281.9	286.4	287.3	285.5	283.7	283.7	278.4	278.4	281.9
65°	244.7	245.6	244.7	248.3	248.3	249.1	247.4	245.6	239.4	242.0	241.2
67.5°	217.2	216.3	216.3	219.9	219.0	220.8	219.0	216.3	211.9	208.4	207.5
70°	194.2	193.3	193.3	195.1	195.9	195.9	195.1	193.3	187.1	183.5	180.9
72.5°	173.8	172.9	173.8	174.7	175.6	176.4	175.6	173.8	168.5	164.0	159.6
75°	155.2	154.3	156.9	156.9	157.8	157.8	158.7	157.8	153.4	148.1	142.7
77.5°	136.5	137.4	140.1	141.0	142.7	143.6	144.5	144.5	140.1	135.7	128.6
80°	121.5	123.2	125.0	125.9	127.7	130.3	131.2	132.1	128.6	124.1	116.1
82.5°	110.8	111.7	113.5	114.4	117.0	117.9	118.8	120.6	118.8	114.4	105.5
85°	102.0	102.8	104.6	104.6	106.4	108.2	109.1	109.9	109.1	104.6	95.8
87.5°	94.0	94.9	95.8	96.6	97.5	98.4	99.3	100.2	99.3	94.9	86.9
90°	86.9	86.9	87.8	87.8	88.7	89.5	91.3	91.3	90.4	86.9	78.9
92.5°	78.9	79.8	79.8	80.7	81.6	82.5	83.3	83.3	82.5	78.9	71.8
95°	73.6	73.6	74.5	74.5	75.4	75.4	76.2	76.2	75.4	71.8	64.7
97.5°	67.4	67.4	67.4	67.4	68.3	68.3	69.2	69.2	68.3	64.7	58.5
100°	62.1	62.1	62.1	62.1	62.1	62.9	62.9	62.9	62.1	58.5	52.3
102.5°	57.6	57.6	57.6	57.6	57.6	57.6	57.6	57.6	55.9	53.2	47.0
105°	55.0	55.0	55.0	54.1	54.1	54.1	53.2	53.2	50.5	47.9	42.6
107.5°	51.4	51.4	51.4	50.5	50.5	49.7	48.8	48.8	46.1	43.4	38.1
110°	48.8	48.8	48.8	47.9	47.0	46.1	45.2	44.3	41.7	38.1	33.7



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	46.1	46.1	45.2	45.2	44.3	43.4	41.7	40.8	38.1	34.6	30.1
115°	42.6	42.6	42.6	41.7	40.8	39.9	39.0	37.2	34.6	31.0	26.6
117.5°	39.0	39.0	39.0	38.1	37.2	36.4	35.5	33.7	31.0	27.5	23.9
120°	35.5	35.5	35.5	34.6	33.7	32.8	31.9	30.1	27.5	24.8	20.4
122.5°	32.8	32.8	31.9	31.0	30.1	29.3	28.4	26.6	24.8	21.3	17.7
125°	29.3	29.3	28.4	28.4	27.5	26.6	25.7	23.9	21.3	18.6	16.0
127.5°	26.6	25.7	25.7	25.7	24.8	23.9	22.2	21.3	18.6	16.0	13.3
130°	23.1	23.1	23.1	22.2	22.2	21.3	19.5	17.7	16.0	14.2	11.5
132.5°	20.4	20.4	20.4	20.4	19.5	18.6	16.8	16.0	14.2	11.5	9.8
135°	18.6	18.6	17.7	17.7	16.8	16.0	15.1	13.3	11.5	9.8	8.0
137.5°	16.0	16.0	16.0	15.1	15.1	14.2	12.4	11.5	10.6	8.9	7.1
140°	14.2	14.2	13.3	13.3	12.4	12.4	11.5	9.8	8.9	7.1	6.2
142.5°	12.4	12.4	11.5	11.5	10.6	10.6	9.8	8.9	7.1	6.2	4.4
145°	10.6	10.6	9.8	9.8	9.8	8.9	8.0	7.1	6.2	5.3	4.4
147.5°	8.9	8.9	8.9	8.0	8.0	7.1	7.1	6.2	5.3	4.4	3.5
150°	8.0	8.0	7.1	7.1	7.1	6.2	5.3	5.3	4.4	3.5	2.7
152.5°	6.2	6.2	6.2	6.2	5.3	5.3	4.4	4.4	3.5	2.7	2.7
155°	5.3	5.3	5.3	4.4	4.4	4.4	3.5	3.5	2.7	2.7	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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5	1716.5
2.5°	1706.7	1705.9	1713.8	1712.9	1702.3	1718.3	1728.9
5°	1702.3	1701.4	1708.5	1710.3	1698.8	1715.6	1727.1
7.5°	1698.8	1697.9	1705.9	1708.5	1697.0	1712.1	1724.5
10°	1699.6	1695.2	1702.3	1704.1	1693.4	1709.4	1720.0
12.5°	1705.9	1695.2	1697.9	1697.9	1688.1	1702.3	1713.8
15°	1720.9	1698.8	1695.2	1692.6	1680.1	1693.4	1705.0
17.5°	1737.8	1707.6	1695.2	1686.3	1671.3	1682.8	1695.2
20°	1754.6	1717.4	1697.0	1682.8	1662.4	1673.0	1681.9
22.5°	1762.6	1726.2	1698.8	1677.5	1651.8	1657.1	1666.8
25°	1752.0	1722.7	1695.2	1669.5	1638.5	1639.4	1647.3
27.5°	1712.9	1705.0	1687.2	1661.5	1627.8	1623.4	1629.6
30°	1646.4	1668.6	1669.5	1650.9	1615.4	1606.5	1609.2
32.5°	1553.4	1603.0	1632.3	1628.7	1597.7	1585.3	1587.0
35°	1446.1	1508.1	1572.0	1593.3	1571.1	1561.3	1557.8
37.5°	1317.5	1400.9	1486.0	1538.3	1534.7	1528.5	1525.0
40°	1175.7	1275.8	1376.9	1460.3	1486.0	1486.0	1487.7
42.5°	1024.0	1141.1	1251.9	1357.4	1417.7	1431.0	1436.3
45°	877.8	995.7	1116.3	1237.7	1318.4	1360.1	1375.1
47.5°	744.8	863.6	977.9	1110.9	1218.2	1272.3	1296.2
50°	631.3	719.9	840.5	972.6	1089.7	1156.1	1203.1
52.5°	537.3	606.4	712.0	835.2	953.1	1044.4	1087.9
55°	458.4	505.4	594.9	701.3	813.9	908.8	959.3
57.5°	391.9	429.1	490.3	579.0	673.8	767.8	821.9
60°	333.4	359.1	400.8	470.8	551.5	632.2	684.5
62.5°	282.8	299.7	327.2	378.6	441.5	504.5	553.2
65°	243.8	250.9	266.0	297.9	345.8	393.7	435.3
67.5°	205.7	210.1	221.7	241.2	265.1	299.7	327.2
70°	177.3	177.3	178.2	189.7	202.1	224.3	243.8
72.5°	154.3	151.6	146.3	149.0	151.6	164.0	176.4
75°	135.7	129.4	120.6	117.0	115.3	117.0	124.1
77.5°	119.7	110.8	100.2	91.3	84.2	81.6	87.8
80°	106.4	95.8	83.3	71.8	60.3	54.1	56.7
82.5°	95.8	82.5	69.2	55.9	42.6	33.7	33.7
85°	84.2	71.8	57.6	43.4	30.1	18.6	16.8
87.5°	76.2	62.9	47.9	34.6	21.3	9.8	5.3
90°	68.3	55.0	40.8	27.5	15.1	4.4	0.0
92.5°	61.2	48.8	35.5	22.2	10.6	2.7	0.0
95°	55.0	43.4	30.1	18.6	8.9	1.8	0.9
97.5°	48.8	38.1	26.6	15.1	6.2	1.8	0.9
100°	44.3	33.7	23.1	12.4	5.3	0.9	0.9
102.5°	39.0	30.1	19.5	10.6	4.4	0.9	0.9
105°	34.6	26.6	16.8	8.9	3.5	0.9	0.9
107.5°	31.0	23.1	15.1	8.0	3.5	0.9	0.9
110°	27.5	20.4	13.3	7.1	2.7	0.9	0.9



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	24.8	17.7	11.5	6.2	1.8	0.9	0.9
115°	21.3	16.0	9.8	5.3	1.8	0.9	0.9
117.5°	18.6	13.3	8.9	4.4	1.8	0.9	0.9
120°	16.0	11.5	7.1	3.5	0.9	0.9	0.9
122.5°	14.2	9.8	6.2	3.5	0.9	0.9	0.9
125°	12.4	8.9	5.3	2.7	0.9	0.9	0.9
127.5°	10.6	7.1	4.4	1.8	0.9	0.9	0.9
130°	8.9	6.2	3.5	1.8	0.9	0.9	0.9
132.5°	7.1	5.3	3.5	1.8	0.9	0.9	0.9
135°	6.2	4.4	2.7	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	2.7	1.8	1.8	1.8	1.8	0.9
142.5°	3.5	2.7	1.8	1.8	1.8	1.8	0.9
145°	2.7	1.8	1.8	1.8	1.8	1.8	0.9
147.5°	2.7	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)