

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-LD5-54HL-LN-UNV-L940-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: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

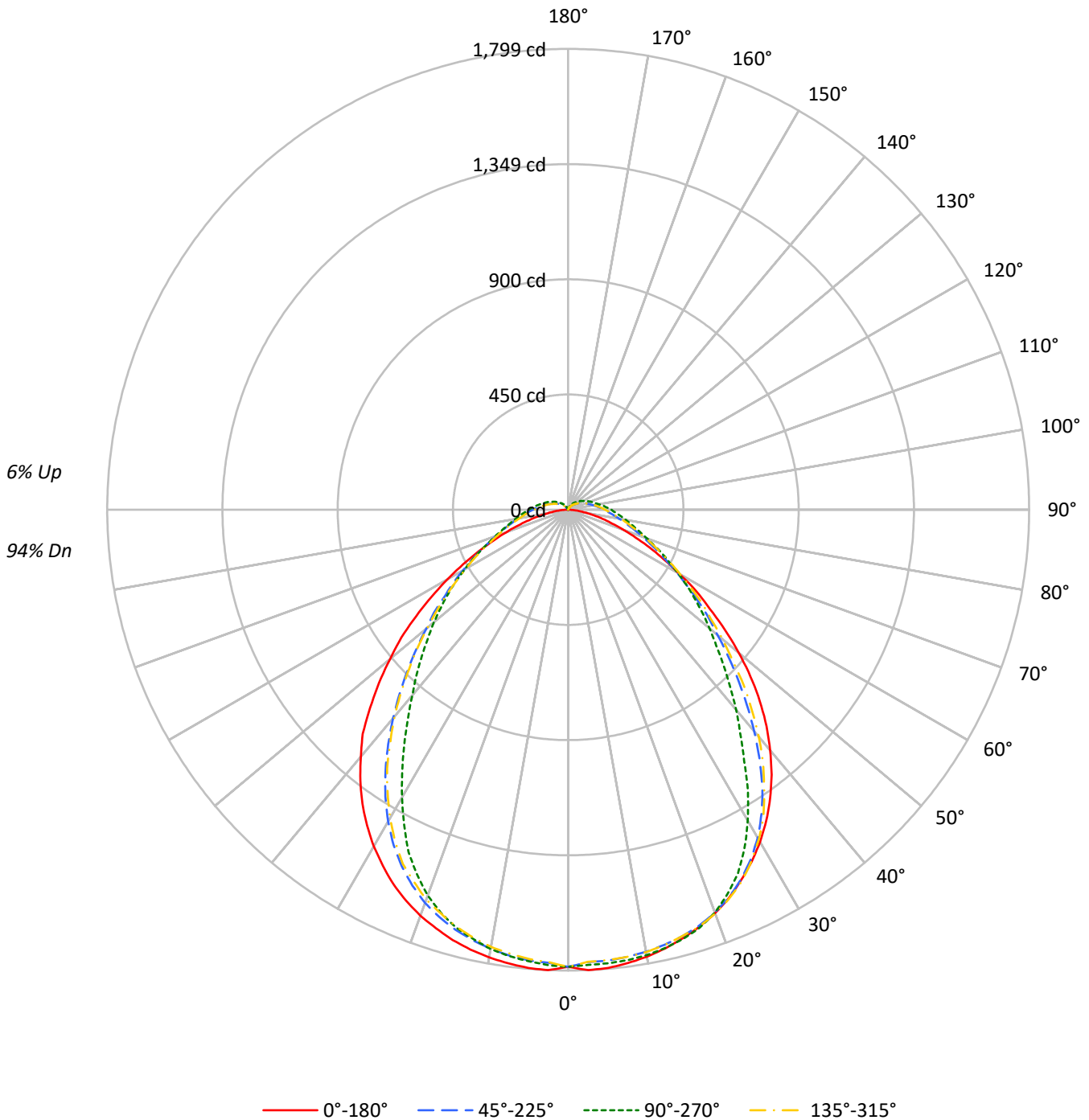
Lumens per Lamp: N/A
Luminaire Lumens: 4516.0 lumens
Efficiency: N/A
Efficacy: 115.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 39
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#
CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-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	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°	14421	14421	14421	14421
5°	14524	13961	14524	13899
10°	14458	13590	14482	13402
15°	14366	13184	14430	12840
20°	14255	12662	14338	12127
25°	14026	11888	14182	11187
30°	13729	10750	13909	9951
35°	13266	9355	13522	8710
40°	12603	8181	12935	7591
45°	11726	7112	12107	6704
50°	10529	6250	10993	5934
55°	9108	5519	9770	5240
60°	7660	4845	8353	4566
65°	6279	4284	6912	3973
70°	4998	3802	5596	3516
75°	3926	3510	4418	3229
80°	2834	3387	3336	3095
85°	1742	3405	2350	3130



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.2	3.7
10°-20°	485.1	10.7
20°-30°	718.9	15.9
30°-40°	798.7	17.7
40°-50°	724.0	16.0
50°-60°	561.1	12.4
60°-70°	381.0	8.4
70°-80°	242.4	5.4
80°-90°	155.0	3.4
90°-100°	104.5	2.3
100°-110°	71.6	1.6
110°-120°	47.7	1.1
120°-130°	29.7	0.7
130°-140°	16.4	0.4
140°-150°	7.7	0.2
150°-160°	2.8	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1373.2	30.4
0°-40°	2172.0	48.1
0°-60°	3457.0	76.6
0°-90°	4235.4	93.8
90°-120°	223.8	5.0
90°-150°	277.6	6.1
90°-180°	281.0	6.2
0°-180°	4516.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1784	1784	1784	1784	1784	
5°	1795	1778	1795	1770	1795	171
15°	1732	1734	1739	1689	1732	489
25°	1596	1567	1614	1474	1596	735
35°	1374	1198	1401	1115	1374	857
45°	1058	856	1092	807	1058	813
55°	675	602	724	571	675	608
65°	350	404	386	375	350	351
75°	140	270	158	248	140	151
85°	26	194	34	179	26	31
90°	0	168	2	153	0	1
95°	1	143	0	134	1	1
105°	1	105	0	99	1	1
115°	1	80	0	74	1	1
125°	1	59	1	52	1	1
135°	1	41	1	33	1	1
145°	1	26	1	19	1	1
155°	1	15	1	7	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#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5
2.5°	1799.2	1797.2	1795.3	1792.3	1795.3	1803.1	1798.2	1787.4	1785.4	1767.8	1775.6
5°	1795.3	1792.3	1790.3	1787.4	1791.3	1801.1	1796.2	1786.4	1783.5	1766.8	1775.6
7.5°	1785.4	1783.5	1780.5	1780.5	1784.5	1794.3	1790.3	1779.6	1777.6	1760.9	1770.7
10°	1771.7	1770.7	1768.8	1768.8	1772.7	1784.5	1779.6	1769.7	1767.8	1752.1	1762.9
12.5°	1754.0	1755.0	1752.1	1752.1	1758.0	1769.7	1765.8	1755.0	1753.1	1739.3	1750.1
15°	1731.5	1732.4	1730.5	1731.5	1737.3	1751.1	1746.2	1736.4	1734.4	1723.6	1732.4
17.5°	1705.9	1706.9	1706.9	1705.9	1712.8	1726.5	1722.6	1713.8	1710.8	1702.0	1712.8
20°	1676.5	1676.5	1676.5	1676.5	1684.3	1698.1	1693.2	1686.3	1680.4	1673.5	1682.4
22.5°	1640.2	1639.2	1640.2	1643.1	1651.0	1661.8	1658.8	1651.0	1642.1	1638.2	1645.1
25°	1596.0	1598.9	1599.9	1602.9	1612.7	1621.5	1618.6	1610.7	1597.0	1594.0	1596.0
27.5°	1549.9	1551.8	1554.8	1553.8	1567.5	1576.4	1570.5	1563.6	1544.0	1541.0	1539.1
30°	1497.8	1500.8	1502.8	1501.8	1512.6	1522.4	1516.5	1507.7	1481.2	1479.2	1463.5
32.5°	1439.0	1441.9	1443.9	1443.9	1459.6	1463.5	1452.7	1439.9	1411.5	1404.6	1390.9
35°	1374.2	1377.1	1378.1	1378.1	1393.8	1392.8	1379.1	1361.4	1330.0	1321.2	1297.6
37.5°	1304.5	1306.4	1307.4	1313.3	1320.2	1314.3	1296.6	1274.1	1250.5	1226.0	1200.4
40°	1226.0	1228.9	1230.9	1234.8	1241.7	1234.8	1209.3	1181.8	1156.3	1128.8	1103.3
42.5°	1145.5	1154.3	1152.3	1151.4	1155.3	1136.6	1117.0	1085.6	1060.1	1031.6	1006.1
45°	1058.1	1057.1	1062.0	1064.0	1063.0	1047.3	1019.8	991.4	965.8	936.4	914.8
47.5°	965.8	964.9	968.8	970.8	964.9	948.2	926.6	894.2	872.6	847.1	830.4
50°	868.7	868.7	874.6	868.7	865.7	849.0	831.4	799.0	782.3	759.7	749.9
52.5°	771.5	780.3	774.4	772.5	769.5	752.8	739.1	712.6	698.9	689.0	677.3
55°	675.3	685.1	681.2	678.3	677.3	663.5	650.8	631.1	622.3	615.4	608.6
57.5°	593.8	592.9	590.9	587.9	588.9	578.1	565.4	554.6	550.7	547.7	549.7
60°	499.6	507.5	504.5	505.5	506.5	504.5	493.7	486.8	487.8	488.8	491.8
62.5°	422.1	428.9	433.8	429.9	431.9	434.8	428.9	427.0	430.9	434.8	438.8
65°	350.4	357.3	362.2	361.2	367.1	373.0	372.0	374.0	382.8	387.7	392.6
67.5°	285.6	292.5	299.4	300.4	309.2	318.0	321.9	328.8	338.6	345.5	351.4
70°	229.7	235.6	243.4	248.3	260.1	271.9	278.8	292.5	298.4	308.2	312.1
72.5°	179.6	184.5	195.3	207.1	216.9	231.6	245.4	257.2	266.0	276.8	281.7
75°	140.4	142.3	154.1	167.8	181.6	198.3	213.0	225.8	237.5	248.3	256.2
77.5°	103.1	106.0	116.8	135.5	151.2	168.8	185.5	199.3	212.0	222.8	233.6
80°	71.7	77.5	89.3	108.0	125.6	145.3	161.0	176.7	190.4	201.2	212.0
82.5°	46.1	51.0	67.7	86.4	105.0	124.7	141.3	157.0	171.8	183.6	193.4
85°	25.5	32.4	49.1	68.7	87.4	107.0	124.7	140.4	155.1	165.9	175.7
87.5°	9.8	19.6	35.3	54.0	72.6	91.3	109.9	124.7	139.4	151.2	160.0
90°	0.0	11.8	26.5	45.2	63.8	82.5	100.1	115.8	129.6	140.4	150.2
92.5°	1.0	7.9	20.6	36.3	54.0	71.7	88.3	104.0	117.8	128.6	137.4
95°	1.0	5.9	16.7	31.4	47.1	63.8	79.5	94.2	107.0	117.8	126.6
97.5°	1.0	3.9	13.7	27.5	41.2	57.9	72.6	86.4	98.2	109.0	115.8
100°	1.0	3.9	11.8	23.6	37.3	52.0	65.8	79.5	90.3	99.1	107.0
102.5°	1.0	2.9	9.8	20.6	33.4	46.1	59.9	72.6	82.5	91.3	99.1
105°	1.0	2.9	8.8	17.7	29.4	42.2	54.0	65.8	76.6	84.4	91.3
107.5°	1.0	2.0	7.9	14.7	25.5	38.3	50.1	59.9	69.7	77.5	84.4
110°	1.0	2.0	6.9	13.7	22.6	34.4	45.2	55.0	63.8	71.7	77.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	2.0	5.9	12.8	20.6	30.4	41.2	50.1	58.9	65.8	71.7
115°	1.0	2.0	5.9	11.8	18.6	26.5	36.3	46.1	53.0	60.9	65.8
117.5°	1.0	2.0	4.9	9.8	17.7	24.5	33.4	41.2	49.1	55.9	60.9
120°	1.0	2.0	4.9	8.8	15.7	22.6	29.4	37.3	45.2	50.1	55.0
122.5°	1.0	2.0	3.9	8.8	13.7	20.6	26.5	33.4	40.2	46.1	51.0
125°	1.0	2.0	3.9	7.9	12.8	18.6	24.5	29.4	36.3	41.2	46.1
127.5°	1.0	2.0	3.9	6.9	11.8	16.7	22.6	27.5	32.4	37.3	41.2
130°	1.0	2.0	2.9	5.9	10.8	14.7	19.6	25.5	29.4	33.4	37.3
132.5°	1.0	2.0	2.9	5.9	8.8	12.8	17.7	22.6	26.5	30.4	33.4
135°	1.0	2.0	2.9	4.9	7.9	11.8	14.7	19.6	23.6	27.5	30.4
137.5°	1.0	2.0	2.9	4.9	6.9	9.8	12.8	16.7	20.6	23.6	27.5
140°	1.0	2.0	2.9	3.9	5.9	8.8	11.8	13.7	17.7	20.6	23.6
142.5°	1.0	2.0	2.9	3.9	5.9	7.9	9.8	11.8	14.7	17.7	20.6
145°	1.0	2.0	2.9	3.9	4.9	6.9	8.8	10.8	11.8	14.7	16.7
147.5°	1.0	2.0	2.9	3.9	3.9	5.9	7.9	8.8	10.8	11.8	13.7
150°	1.0	2.0	2.9	2.9	3.9	4.9	6.9	7.9	8.8	10.8	11.8
152.5°	1.0	2.0	2.9	2.9	3.9	4.9	5.9	6.9	7.9	8.8	9.8
155°	1.0	2.0	2.9	2.9	2.9	3.9	4.9	5.9	6.9	7.9	8.8
157.5°	2.0	2.0	2.0	2.9	2.9	3.9	3.9	4.9	5.9	5.9	6.9
160°	2.0	2.0	2.0	2.9	2.9	2.9	3.9	3.9	4.9	4.9	5.9
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: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5
2.5°	1773.7	1776.6	1785.4	1785.4	1783.5	1781.5	1781.5	1778.6	1780.5	1784.5	1782.5
5°	1773.7	1776.6	1785.4	1785.4	1783.5	1781.5	1780.5	1777.6	1780.5	1784.5	1782.5
7.5°	1767.8	1771.7	1780.5	1780.5	1778.6	1777.6	1775.6	1773.7	1776.6	1780.5	1778.6
10°	1759.9	1763.8	1772.7	1772.7	1770.7	1770.7	1767.8	1765.8	1769.7	1772.7	1771.7
12.5°	1748.1	1753.1	1760.9	1759.9	1758.0	1758.9	1756.0	1752.1	1756.0	1758.9	1759.9
15°	1731.5	1737.3	1745.2	1743.2	1740.3	1742.3	1737.3	1734.4	1737.3	1743.2	1742.3
17.5°	1709.9	1713.8	1719.7	1719.7	1716.7	1714.8	1712.8	1709.9	1711.8	1715.8	1716.7
20°	1679.4	1684.3	1687.3	1684.3	1683.4	1680.4	1676.5	1673.5	1677.5	1683.4	1684.3
22.5°	1639.2	1640.2	1647.0	1640.2	1635.3	1634.3	1630.4	1624.5	1630.4	1635.3	1636.2
25°	1589.1	1594.0	1591.1	1579.3	1579.3	1571.5	1569.5	1566.6	1567.5	1576.4	1580.3
27.5°	1525.3	1527.3	1519.4	1509.6	1500.8	1495.9	1489.0	1490.0	1490.0	1501.8	1505.7
30°	1455.6	1444.8	1438.0	1422.3	1415.4	1403.6	1401.7	1401.7	1399.7	1405.6	1423.2
32.5°	1372.2	1357.5	1346.7	1332.0	1320.2	1308.4	1302.5	1305.5	1304.5	1319.2	1325.1
35°	1280.9	1272.1	1249.5	1230.9	1224.0	1206.3	1206.3	1197.5	1203.4	1220.1	1226.9
37.5°	1184.7	1171.0	1152.3	1131.7	1126.8	1113.1	1108.2	1103.3	1116.0	1119.0	1125.8
40°	1086.6	1073.8	1056.1	1036.5	1036.5	1019.8	1019.8	1019.8	1020.8	1026.7	1039.5
42.5°	993.3	979.6	963.9	950.1	948.2	935.4	935.4	934.4	936.4	941.3	953.1
45°	903.0	892.2	875.5	868.7	869.7	855.9	858.9	855.9	859.8	864.7	868.7
47.5°	819.6	812.7	805.9	796.0	793.1	792.1	787.2	783.3	790.1	790.1	796.0
50°	742.1	738.1	734.2	728.3	729.3	725.4	719.5	719.5	724.4	725.4	729.3
52.5°	674.3	669.4	664.5	665.5	666.5	664.5	661.6	658.6	661.6	663.5	668.4
55°	606.6	602.7	607.6	605.6	607.6	605.6	603.7	601.7	606.6	603.7	608.6
57.5°	545.7	549.7	551.6	547.7	550.7	548.7	549.7	546.7	550.7	552.6	551.6
60°	489.8	495.7	492.7	493.7	497.6	495.7	491.8	494.7	498.6	499.6	498.6
62.5°	438.8	445.6	448.6	446.6	447.6	445.6	448.6	444.6	449.6	451.5	448.6
65°	392.6	400.5	402.4	402.4	402.4	400.5	403.4	404.4	406.4	406.4	404.4
67.5°	353.4	360.2	362.2	364.2	362.2	360.2	360.2	361.2	365.1	367.1	365.1
70°	318.0	324.9	325.9	325.9	326.9	328.8	324.9	326.9	329.8	330.8	329.8
72.5°	287.6	294.5	296.4	295.4	296.4	297.4	297.4	295.4	298.4	300.4	300.4
75°	263.1	267.0	268.9	268.9	269.9	270.9	270.9	269.9	271.9	272.9	273.9
77.5°	240.5	243.4	246.4	246.4	247.4	246.4	248.3	248.3	249.3	250.3	251.3
80°	217.9	221.8	223.8	224.8	226.7	227.7	227.7	227.7	228.7	229.7	229.7
82.5°	200.2	203.2	206.1	209.1	209.1	210.1	210.1	210.1	211.0	211.0	212.0
85°	182.6	186.5	189.4	191.4	192.4	193.4	193.4	194.3	194.3	194.3	195.3
87.5°	166.9	171.8	173.7	175.7	176.7	178.6	178.6	178.6	179.6	179.6	179.6
90°	156.1	161.0	162.9	164.9	165.9	166.9	166.9	167.8	167.8	168.8	168.8
92.5°	143.3	148.2	152.1	152.1	153.1	155.1	154.1	154.1	155.1	156.1	156.1
95°	133.5	137.4	140.4	141.3	142.3	142.3	142.3	143.3	142.3	143.3	143.3
97.5°	121.7	125.6	128.6	130.5	131.5	131.5	131.5	132.5	131.5	132.5	132.5
100°	111.9	115.8	118.8	119.7	121.7	121.7	121.7	121.7	121.7	121.7	122.7
102.5°	104.0	108.0	109.9	110.9	111.9	112.9	112.9	112.9	112.9	113.9	113.9
105°	96.2	100.1	102.1	103.1	104.0	105.0	105.0	105.0	106.0	106.0	105.0
107.5°	89.3	92.3	94.2	96.2	97.2	97.2	98.2	98.2	98.2	98.2	98.2
110°	82.5	85.4	88.3	90.3	90.3	91.3	91.3	92.3	92.3	91.3	92.3



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	75.6	79.5	81.5	83.4	84.4	85.4	85.4	85.4	85.4	85.4	85.4
115°	69.7	73.6	75.6	77.5	78.5	79.5	79.5	79.5	79.5	79.5	79.5
117.5°	64.8	68.7	70.7	71.7	72.6	73.6	74.6	74.6	74.6	74.6	73.6
120°	59.9	62.8	64.8	66.7	67.7	68.7	68.7	68.7	68.7	68.7	68.7
122.5°	55.0	57.9	59.9	61.8	62.8	63.8	63.8	63.8	63.8	63.8	63.8
125°	50.1	53.0	55.0	56.9	57.9	58.9	58.9	58.9	58.9	58.9	58.9
127.5°	45.2	48.1	51.0	52.0	53.0	54.0	54.0	54.0	55.0	54.0	54.0
130°	40.2	43.2	46.1	47.1	48.1	49.1	50.1	50.1	50.1	50.1	49.1
132.5°	36.3	39.3	41.2	42.2	44.2	44.2	45.2	45.2	45.2	45.2	44.2
135°	33.4	35.3	37.3	38.3	40.2	40.2	40.2	41.2	41.2	40.2	39.3
137.5°	29.4	31.4	33.4	34.4	35.3	36.3	36.3	37.3	36.3	36.3	36.3
140°	27.5	28.5	30.4	31.4	32.4	32.4	32.4	33.4	33.4	32.4	32.4
142.5°	23.6	25.5	27.5	28.5	29.4	29.4	29.4	29.4	29.4	29.4	29.4
145°	19.6	22.6	23.6	25.5	25.5	26.5	26.5	26.5	26.5	26.5	25.5
147.5°	16.7	18.6	21.6	22.6	22.6	23.6	23.6	23.6	23.6	23.6	22.6
150°	12.8	14.7	17.7	19.6	19.6	20.6	20.6	20.6	20.6	19.6	19.6
152.5°	10.8	12.8	13.7	15.7	16.7	16.7	16.7	17.7	16.7	16.7	16.7
155°	9.8	10.8	11.8	12.8	13.7	14.7	14.7	14.7	14.7	13.7	13.7
157.5°	7.9	8.8	9.8	10.8	11.8	12.8	12.8	12.8	12.8	12.8	11.8
160°	5.9	6.9	7.9	7.9	8.8	9.8	10.8	9.8	9.8	9.8	9.8
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: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5
2.5°	1780.5	1779.6	1782.5	1777.6	1762.9	1766.8	1764.8	1773.7	1775.6	1777.6	1786.4
5°	1780.5	1779.6	1781.5	1777.6	1761.9	1764.8	1762.9	1771.7	1773.7	1774.6	1783.5
7.5°	1776.6	1775.6	1778.6	1773.7	1757.0	1760.9	1758.0	1766.8	1767.8	1768.8	1776.6
10°	1768.8	1767.8	1769.7	1765.8	1749.1	1753.1	1749.1	1758.0	1758.0	1759.9	1765.8
12.5°	1757.0	1755.0	1758.9	1754.0	1735.4	1740.3	1738.3	1744.2	1745.2	1746.2	1752.1
15°	1740.3	1738.3	1741.3	1738.3	1721.6	1722.6	1719.7	1728.5	1729.5	1727.5	1733.4
17.5°	1715.8	1713.8	1719.7	1717.7	1701.0	1705.0	1704.0	1705.9	1708.9	1704.0	1711.8
20°	1685.3	1687.3	1689.2	1690.2	1677.5	1677.5	1676.5	1680.4	1683.4	1679.4	1685.3
22.5°	1640.2	1645.1	1651.0	1652.9	1644.1	1643.1	1649.0	1647.0	1650.0	1648.0	1652.0
25°	1583.2	1593.1	1598.9	1604.8	1599.9	1601.9	1610.7	1612.7	1612.7	1611.7	1615.6
27.5°	1512.6	1525.3	1536.1	1548.9	1544.0	1547.9	1562.6	1564.6	1568.5	1564.6	1572.4
30°	1428.2	1439.9	1460.5	1479.2	1481.2	1487.1	1507.7	1509.6	1520.4	1516.5	1519.4
32.5°	1343.7	1349.6	1373.2	1391.8	1403.6	1418.3	1440.9	1444.8	1459.6	1462.5	1462.5
35°	1237.7	1254.4	1276.0	1302.5	1317.2	1332.9	1363.4	1369.3	1390.9	1397.7	1405.6
37.5°	1148.4	1164.1	1177.9	1205.3	1231.8	1249.5	1274.1	1288.8	1311.4	1324.1	1333.9
40°	1053.2	1066.0	1080.7	1108.2	1130.7	1157.2	1181.8	1199.5	1227.9	1242.6	1255.4
42.5°	962.9	972.7	988.4	1008.1	1031.6	1061.1	1084.6	1105.2	1135.7	1156.3	1171.0
45°	882.4	888.3	902.0	916.8	937.4	967.8	990.4	1016.9	1041.4	1063.0	1080.7
47.5°	806.8	814.7	821.6	831.4	850.0	868.7	895.2	920.7	945.2	968.8	986.5
50°	737.1	737.1	747.9	754.8	767.6	784.3	804.9	822.5	853.0	869.7	892.2
52.5°	669.4	673.3	679.2	683.2	693.0	703.8	720.5	735.2	760.7	776.4	798.0
55°	609.5	613.5	616.4	618.4	624.3	637.0	642.9	654.7	672.4	685.1	703.8
57.5°	552.6	554.6	557.5	558.5	559.5	567.3	572.2	575.2	592.9	605.6	621.3
60°	500.6	500.6	503.5	502.6	501.6	505.5	504.5	507.5	518.3	526.1	533.0
62.5°	451.5	451.5	452.5	450.5	449.6	449.6	445.6	448.6	451.5	452.5	457.4
65°	406.4	411.3	407.3	408.3	402.4	400.5	398.5	392.6	391.6	387.7	389.7
67.5°	366.1	370.0	366.1	366.1	361.2	357.3	352.4	342.6	339.6	331.8	329.8
70°	333.7	330.8	332.7	329.8	323.9	319.0	312.1	304.3	294.5	284.6	277.8
72.5°	302.3	302.3	300.4	297.4	294.5	284.6	276.8	268.0	256.2	243.4	233.6
75°	271.9	272.9	272.9	269.9	265.0	256.2	247.4	234.6	221.8	207.1	194.3
77.5°	250.3	250.3	250.3	245.4	240.5	232.6	221.8	208.1	194.3	176.7	162.0
80°	229.7	228.7	228.7	222.8	217.9	209.1	198.3	184.5	169.8	151.2	134.5
82.5°	213.0	212.0	210.1	205.1	198.3	189.4	178.6	163.9	148.2	131.5	110.9
85°	195.3	194.3	192.4	187.5	180.6	172.8	161.0	146.3	130.5	111.9	92.3
87.5°	179.6	178.6	175.7	172.8	164.9	156.1	144.3	130.5	113.9	96.2	76.6
90°	168.8	166.9	164.9	161.0	154.1	144.3	132.5	117.8	101.1	83.4	63.8
92.5°	156.1	155.1	152.1	148.2	142.3	132.5	120.7	107.0	90.3	73.6	55.0
95°	143.3	142.3	140.4	136.4	130.5	121.7	110.9	97.2	81.5	64.8	48.1
97.5°	131.5	131.5	128.6	125.6	118.8	111.9	101.1	88.3	73.6	58.9	43.2
100°	121.7	121.7	118.8	114.8	109.9	103.1	92.3	80.5	66.7	53.0	37.3
102.5°	112.9	111.9	109.9	106.0	101.1	94.2	84.4	73.6	60.9	47.1	33.4
105°	105.0	104.0	102.1	98.2	94.2	86.4	78.5	67.7	55.0	42.2	29.4
107.5°	97.2	96.2	95.2	91.3	86.4	79.5	71.7	60.9	50.1	38.3	26.5
110°	90.3	89.3	87.4	83.4	78.5	72.6	64.8	55.9	45.2	34.4	23.6



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	84.4	83.4	81.5	77.5	73.6	66.7	59.9	50.1	41.2	31.4	20.6
115°	78.5	77.5	75.6	71.7	66.7	60.9	54.0	46.1	36.3	27.5	18.6
117.5°	72.6	71.7	69.7	66.7	61.8	55.9	49.1	41.2	32.4	25.5	16.7
120°	67.7	65.8	63.8	60.9	55.9	51.0	44.2	37.3	29.4	22.6	14.7
122.5°	62.8	60.9	58.9	55.9	51.0	46.1	39.3	33.4	27.5	20.6	13.7
125°	56.9	55.9	54.0	51.0	46.1	41.2	36.3	30.4	24.5	18.6	11.8
127.5°	52.0	51.0	49.1	45.2	41.2	37.3	32.4	27.5	21.6	15.7	10.8
130°	48.1	46.1	44.2	41.2	38.3	34.4	29.4	24.5	19.6	13.7	9.8
132.5°	43.2	41.2	39.3	37.3	34.4	30.4	26.5	21.6	17.7	12.8	8.8
135°	39.3	37.3	35.3	33.4	30.4	27.5	23.6	19.6	15.7	11.8	7.9
137.5°	34.4	33.4	32.4	30.4	27.5	24.5	21.6	16.7	13.7	10.8	6.9
140°	31.4	30.4	29.4	26.5	24.5	21.6	18.6	14.7	11.8	8.8	5.9
142.5°	28.5	27.5	25.5	23.6	21.6	19.6	15.7	13.7	10.8	7.9	5.9
145°	24.5	23.6	22.6	20.6	18.6	15.7	13.7	11.8	9.8	6.9	4.9
147.5°	22.6	21.6	19.6	17.7	15.7	13.7	12.8	10.8	7.9	5.9	3.9
150°	18.6	17.7	16.7	14.7	13.7	12.8	10.8	8.8	6.9	4.9	3.9
152.5°	15.7	14.7	13.7	13.7	11.8	10.8	8.8	7.9	5.9	4.9	2.9
155°	13.7	13.7	12.8	11.8	9.8	8.8	7.9	5.9	4.9	3.9	2.9
157.5°	11.8	10.8	9.8	9.8	8.8	7.9	5.9	4.9	3.9	3.9	2.9
160°	9.8	8.8	8.8	7.9	6.9	5.9	4.9	4.9	3.9	2.9	2.9
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: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5
2.5°	1787.4	1776.6	1786.4	1799.2	1799.2	1797.2	1795.3	1799.2	1809.0	1805.1	1793.3
5°	1784.5	1773.7	1782.5	1795.3	1795.3	1792.3	1790.3	1793.3	1804.1	1799.2	1788.4
7.5°	1778.6	1768.8	1774.6	1786.4	1786.4	1783.5	1781.5	1785.4	1794.3	1789.4	1777.6
10°	1767.8	1757.0	1763.8	1774.6	1773.7	1771.7	1768.8	1773.7	1781.5	1774.6	1760.9
12.5°	1754.0	1743.2	1749.1	1758.9	1758.0	1754.0	1752.1	1755.0	1761.9	1758.0	1743.2
15°	1735.4	1724.6	1729.5	1739.3	1736.4	1733.4	1729.5	1730.5	1739.3	1732.4	1716.7
17.5°	1712.8	1701.0	1705.0	1713.8	1710.8	1707.9	1703.0	1704.0	1713.8	1704.0	1687.3
20°	1685.3	1672.6	1675.5	1686.3	1681.4	1676.5	1671.6	1671.6	1681.4	1670.6	1652.0
22.5°	1655.9	1643.1	1645.1	1652.9	1649.0	1640.2	1635.3	1638.2	1643.1	1629.4	1609.7
25°	1619.6	1602.9	1605.8	1613.7	1610.7	1598.9	1594.0	1596.0	1594.0	1583.2	1562.6
27.5°	1577.4	1559.7	1561.6	1566.6	1562.6	1551.8	1545.9	1546.9	1543.0	1529.3	1505.7
30°	1524.3	1515.5	1514.5	1517.5	1511.6	1500.8	1493.9	1492.0	1491.0	1471.3	1442.9
32.5°	1470.4	1462.5	1457.6	1461.5	1454.7	1443.9	1432.1	1432.1	1422.3	1403.6	1379.1
35°	1415.4	1402.6	1397.7	1400.7	1392.8	1379.1	1369.3	1364.4	1349.6	1326.1	1299.6
37.5°	1344.7	1335.9	1330.0	1332.9	1324.1	1314.3	1295.6	1290.7	1275.0	1242.6	1209.3
40°	1268.2	1261.3	1255.4	1258.3	1248.5	1233.8	1217.1	1209.3	1191.6	1155.3	1128.8
42.5°	1185.7	1182.8	1175.9	1186.7	1167.1	1152.3	1135.7	1122.9	1105.2	1066.0	1035.5
45°	1098.4	1105.2	1089.5	1092.5	1079.7	1066.9	1049.3	1030.6	1013.0	975.7	941.3
47.5°	1006.1	1011.0	1000.2	1002.2	988.4	976.6	960.9	937.4	917.8	885.4	854.9
50°	910.9	908.9	908.9	907.0	896.2	881.4	865.7	844.1	824.5	795.1	769.5
52.5°	809.8	813.7	815.7	820.6	806.8	798.0	773.5	754.8	740.1	709.7	688.1
55°	712.6	726.3	722.4	724.4	708.7	701.8	682.2	667.5	645.9	628.2	614.5
57.5°	624.3	627.2	629.2	632.1	625.2	611.5	595.8	584.0	567.3	552.6	542.8
60°	538.9	538.9	539.9	544.8	537.9	526.1	514.3	505.5	493.7	484.9	479.0
62.5°	458.4	465.3	466.2	462.3	453.5	447.6	439.7	434.8	427.0	424.0	422.1
65°	383.8	383.8	383.8	385.7	380.8	376.9	372.0	371.0	374.0	370.0	372.0
67.5°	321.0	318.0	316.1	317.0	315.1	313.1	312.1	315.1	321.0	321.0	325.9
70°	267.0	261.1	257.2	257.2	257.2	258.1	261.1	267.0	276.8	280.7	287.6
72.5°	222.8	210.1	204.2	204.2	205.1	209.1	217.9	228.7	237.5	245.4	254.2
75°	180.6	167.8	159.0	158.0	160.0	165.9	178.6	188.5	203.2	214.0	224.8
77.5°	146.3	130.5	119.7	118.8	121.7	130.5	146.3	159.0	175.7	187.5	199.3
80°	116.8	99.1	90.3	84.4	89.3	100.1	117.8	133.5	149.2	164.9	179.6
82.5°	93.2	76.6	62.8	56.9	62.8	77.5	94.2	112.9	128.6	145.3	160.0
85°	73.6	55.9	40.2	34.4	41.2	56.9	75.6	94.2	111.9	128.6	143.3
87.5°	57.9	40.2	24.5	16.7	25.5	42.2	59.9	78.5	97.2	113.9	128.6
90°	45.2	28.5	13.7	2.0	14.7	30.4	48.1	65.8	84.4	101.1	115.8
92.5°	38.3	21.6	7.9	0.0	8.8	22.6	39.3	56.9	73.6	90.3	105.0
95°	32.4	17.7	5.9	0.0	5.9	17.7	32.4	48.1	64.8	81.5	96.2
97.5°	27.5	13.7	3.9	0.0	3.9	13.7	26.5	42.2	56.9	72.6	86.4
100°	23.6	11.8	2.9	0.0	2.9	10.8	22.6	36.3	51.0	65.8	78.5
102.5°	20.6	9.8	2.0	0.0	2.0	8.8	18.6	31.4	44.2	57.9	70.7
105°	17.7	7.9	2.0	0.0	1.0	6.9	15.7	27.5	39.3	52.0	63.8
107.5°	15.7	6.9	2.0	0.0	1.0	5.9	13.7	23.6	35.3	46.1	56.9
110°	13.7	5.9	2.0	0.0	1.0	3.9	11.8	20.6	30.4	41.2	52.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	11.8	4.9	1.0	0.0	0.0	2.9	9.8	17.7	26.5	37.3	46.1
115°	10.8	4.9	1.0	0.0	0.0	2.0	7.9	15.7	23.6	33.4	41.2
117.5°	9.8	3.9	1.0	0.0	1.0	2.0	6.9	13.7	20.6	28.5	37.3
120°	8.8	3.9	1.0	0.0	1.0	1.0	4.9	11.8	17.7	25.5	32.4
122.5°	7.9	3.9	1.0	0.0	1.0	1.0	3.9	9.8	15.7	22.6	28.5
125°	6.9	2.9	2.0	1.0	1.0	1.0	2.9	7.9	13.7	18.6	25.5
127.5°	6.9	2.9	2.0	1.0	1.0	1.0	2.0	6.9	10.8	16.7	22.6
130°	5.9	2.9	2.0	1.0	1.0	1.0	1.0	4.9	9.8	13.7	18.6
132.5°	4.9	2.9	2.0	1.0	1.0	1.0	1.0	2.9	6.9	11.8	15.7
135°	4.9	2.9	2.0	1.0	1.0	1.0	1.0	2.0	4.9	8.8	12.8
137.5°	3.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	3.9	6.9	9.8
140°	3.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	2.9	4.9	7.9
142.5°	2.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0	3.9	5.9
145°	2.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.9
147.5°	2.9	2.9	2.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.9
150°	2.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
152.5°	2.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
155°	2.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
157.5°	2.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
160°	2.9	2.0	2.0	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0
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-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5
2.5°	1789.4	1770.7	1780.5	1777.6	1781.5	1789.4	1788.4	1786.4	1786.4	1783.5	1779.6
5°	1783.5	1765.8	1774.6	1769.7	1774.6	1781.5	1780.5	1777.6	1779.6	1774.6	1769.7
7.5°	1771.7	1756.0	1763.8	1759.9	1763.8	1770.7	1767.8	1766.8	1768.8	1760.9	1758.0
10°	1758.0	1740.3	1749.1	1744.2	1749.1	1754.0	1752.1	1748.1	1752.1	1744.2	1741.3
12.5°	1736.4	1721.6	1727.5	1725.6	1728.5	1733.4	1729.5	1726.5	1728.5	1721.6	1715.8
15°	1712.8	1698.1	1703.0	1700.0	1702.0	1707.9	1701.0	1700.0	1698.1	1691.2	1689.2
17.5°	1682.4	1668.6	1673.5	1668.6	1671.6	1669.6	1668.6	1663.7	1663.7	1655.9	1650.0
20°	1645.1	1633.3	1630.4	1626.4	1630.4	1626.4	1620.5	1616.6	1615.6	1607.8	1602.9
22.5°	1601.9	1588.2	1590.1	1579.3	1580.3	1574.4	1564.6	1560.7	1556.7	1547.9	1541.0
25°	1549.9	1536.1	1526.3	1519.4	1510.6	1509.6	1496.9	1487.1	1486.1	1475.3	1474.3
27.5°	1491.0	1475.3	1467.4	1450.7	1439.9	1431.1	1420.3	1410.5	1405.6	1393.8	1386.0
30°	1423.2	1405.6	1386.0	1374.2	1357.5	1350.6	1332.0	1320.2	1316.3	1303.5	1297.6
32.5°	1346.7	1328.0	1312.3	1289.8	1271.1	1261.3	1242.6	1230.9	1226.0	1212.2	1204.4
35°	1263.3	1242.6	1224.0	1202.4	1187.7	1171.0	1148.4	1136.6	1125.8	1120.9	1115.0
37.5°	1175.9	1153.3	1131.7	1110.1	1097.4	1077.7	1058.1	1050.3	1037.5	1032.6	1026.7
40°	1085.6	1063.0	1042.4	1021.8	1007.1	989.4	971.7	968.8	955.0	950.1	946.2
42.5°	996.3	972.7	949.2	934.4	923.6	906.0	894.2	891.2	879.5	876.5	876.5
45°	915.8	886.3	866.7	853.9	845.1	830.4	820.6	818.6	808.8	806.8	806.8
47.5°	829.4	801.9	787.2	779.4	771.5	760.7	754.8	754.8	745.0	743.0	742.1
50°	748.9	723.4	712.6	704.8	703.8	695.9	691.0	689.0	689.0	682.2	683.2
52.5°	672.4	659.6	650.8	645.9	640.0	635.1	631.1	631.1	628.2	623.3	625.2
55°	601.7	587.0	587.9	584.0	581.1	578.1	579.1	573.2	572.2	568.3	571.3
57.5°	531.0	531.0	529.1	526.1	521.2	523.2	523.2	523.2	518.3	515.3	518.3
60°	471.1	474.1	469.2	472.1	470.2	471.1	469.2	469.2	466.2	465.3	466.2
62.5°	418.1	423.0	421.1	425.0	423.0	424.0	426.0	422.1	420.1	418.1	420.1
65°	371.0	376.9	375.9	378.9	379.9	380.8	381.8	379.9	377.9	375.9	375.0
67.5°	329.8	335.7	339.6	340.6	341.6	344.5	343.5	341.6	339.6	336.7	335.7
70°	292.5	300.4	305.3	307.2	311.2	309.2	309.2	308.2	306.2	303.3	302.3
72.5°	261.1	269.9	274.8	276.8	280.7	280.7	279.7	278.8	276.8	273.9	272.9
75°	233.6	241.5	248.3	252.3	255.2	255.2	254.2	253.2	251.3	249.3	248.3
77.5°	212.0	218.9	224.8	229.7	231.6	232.6	231.6	229.7	229.7	228.7	227.7
80°	190.4	198.3	204.2	209.1	212.0	212.0	211.0	212.0	210.1	209.1	208.1
82.5°	171.8	180.6	187.5	192.4	194.3	195.3	194.3	195.3	193.4	193.4	193.4
85°	155.1	163.9	171.8	175.7	178.6	179.6	179.6	179.6	178.6	178.6	178.6
87.5°	141.3	150.2	158.0	162.0	164.9	165.9	165.9	166.9	164.9	164.9	164.9
90°	128.6	137.4	145.3	149.2	152.1	154.1	154.1	155.1	154.1	153.1	153.1
92.5°	116.8	126.6	134.5	138.4	141.3	144.3	144.3	145.3	143.3	143.3	143.3
95°	107.0	116.8	123.7	128.6	131.5	133.5	134.5	134.5	133.5	133.5	133.5
97.5°	98.2	107.0	113.9	118.8	121.7	122.7	123.7	124.7	123.7	123.7	123.7
100°	89.3	98.2	105.0	109.0	112.9	113.9	114.8	115.8	115.8	114.8	114.8
102.5°	81.5	90.3	96.2	101.1	104.0	106.0	107.0	107.0	107.0	107.0	107.0
105°	73.6	82.5	88.3	93.2	96.2	98.2	99.1	100.1	100.1	99.1	99.1
107.5°	66.7	74.6	81.5	85.4	89.3	91.3	92.3	92.3	93.2	92.3	92.3
110°	59.9	68.7	74.6	78.5	82.5	84.4	85.4	86.4	86.4	86.4	86.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	55.0	61.8	67.7	71.7	75.6	77.5	78.5	79.5	80.5	79.5	79.5
115°	49.1	55.9	61.8	65.8	68.7	70.7	72.6	73.6	73.6	74.6	73.6
117.5°	44.2	50.1	55.9	59.9	62.8	65.8	66.7	67.7	68.7	67.7	67.7
120°	39.3	45.2	50.1	54.0	56.9	59.9	60.9	61.8	62.8	61.8	61.8
122.5°	35.3	40.2	45.2	49.1	52.0	54.0	55.9	55.9	56.9	56.9	56.9
125°	31.4	36.3	40.2	44.2	47.1	49.1	50.1	51.0	51.0	52.0	52.0
127.5°	27.5	31.4	36.3	39.3	42.2	44.2	45.2	46.1	46.1	47.1	47.1
130°	23.6	27.5	31.4	34.4	37.3	39.3	40.2	41.2	42.2	42.2	42.2
132.5°	20.6	24.5	27.5	30.4	32.4	34.4	36.3	37.3	37.3	37.3	37.3
135°	16.7	20.6	23.6	26.5	28.5	30.4	31.4	33.4	33.4	33.4	33.4
137.5°	13.7	17.7	20.6	22.6	24.5	26.5	27.5	28.5	29.4	29.4	29.4
140°	10.8	13.7	16.7	19.6	21.6	22.6	24.5	24.5	25.5	25.5	25.5
142.5°	7.9	10.8	12.8	15.7	17.7	19.6	20.6	21.6	21.6	21.6	21.6
145°	5.9	7.9	9.8	11.8	14.7	15.7	16.7	17.7	18.6	18.6	18.6
147.5°	3.9	5.9	6.9	8.8	10.8	12.8	13.7	14.7	15.7	15.7	15.7
150°	2.9	3.9	5.9	6.9	7.9	9.8	11.8	11.8	12.8	12.8	11.8
152.5°	2.0	2.9	3.9	4.9	5.9	6.9	8.8	8.8	9.8	9.8	9.8
155°	2.0	2.0	2.0	2.9	3.9	4.9	5.9	6.9	6.9	6.9	6.9
157.5°	2.0	2.0	2.0	2.0	2.0	2.9	3.9	4.9	4.9	4.9	4.9
160°	2.0	2.0	1.0	1.0	2.0	2.0	2.0	2.0	2.9	2.9	2.9
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: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5
2.5°	1782.5	1784.5	1784.5	1782.5	1781.5	1785.4	1780.5	1761.9	1767.8	1769.7	1775.6
5°	1773.7	1775.6	1775.6	1775.6	1773.7	1777.6	1772.7	1754.0	1760.9	1763.8	1767.8
7.5°	1760.9	1761.9	1763.8	1762.9	1760.9	1766.8	1761.9	1743.2	1748.1	1753.1	1758.0
10°	1744.2	1744.2	1745.2	1747.2	1745.2	1750.1	1745.2	1728.5	1733.4	1736.4	1742.3
12.5°	1721.6	1723.6	1724.6	1723.6	1722.6	1726.5	1724.6	1708.9	1710.8	1716.7	1722.6
15°	1691.2	1691.2	1696.1	1694.2	1694.2	1698.1	1700.0	1682.4	1685.3	1694.2	1700.0
17.5°	1653.9	1654.9	1658.8	1660.8	1659.8	1666.7	1667.7	1653.9	1652.9	1663.7	1669.6
20°	1605.8	1607.8	1612.7	1616.6	1616.6	1624.5	1627.4	1618.6	1619.6	1631.3	1633.3
22.5°	1546.9	1546.9	1555.8	1561.6	1566.6	1571.5	1580.3	1572.4	1572.4	1588.2	1597.0
25°	1474.3	1481.2	1484.1	1495.9	1502.8	1516.5	1524.3	1525.3	1526.3	1541.0	1546.9
27.5°	1393.8	1395.8	1404.6	1418.3	1426.2	1439.0	1453.7	1456.6	1461.5	1481.2	1490.0
30°	1302.5	1308.4	1312.3	1332.0	1342.8	1359.4	1378.1	1385.0	1388.9	1415.4	1426.2
32.5°	1209.3	1211.2	1227.9	1238.7	1251.5	1269.1	1290.7	1303.5	1311.4	1338.8	1354.5
35°	1116.0	1120.0	1133.7	1147.4	1160.2	1177.9	1200.4	1218.1	1231.8	1256.4	1277.0
37.5°	1030.6	1040.4	1043.4	1057.1	1066.9	1084.6	1100.3	1125.8	1139.6	1165.1	1191.6
40°	954.1	957.0	959.0	972.7	979.6	996.3	1018.9	1035.5	1054.2	1072.8	1104.2
42.5°	878.5	880.5	883.4	891.2	899.1	910.9	927.6	944.3	963.9	991.4	1012.0
45°	808.8	810.8	812.7	817.6	824.5	835.3	846.1	857.9	877.5	901.1	922.7
47.5°	744.0	747.9	747.9	748.9	753.8	762.7	770.5	785.2	796.0	808.8	833.3
50°	682.2	685.1	686.1	686.1	689.0	694.9	696.9	706.7	716.5	728.3	746.0
52.5°	624.3	624.3	623.3	627.2	627.2	631.1	632.1	638.0	644.9	657.6	665.5
55°	569.3	569.3	572.2	570.3	570.3	572.2	571.3	572.2	578.1	586.0	592.9
57.5°	516.3	515.3	518.3	516.3	515.3	517.3	519.2	515.3	516.3	524.1	524.1
60°	463.3	464.3	467.2	465.3	465.3	465.3	463.3	461.3	459.4	464.3	466.2
62.5°	421.1	418.1	421.1	418.1	420.1	419.1	417.2	413.2	414.2	412.3	410.3
65°	376.9	376.9	377.9	375.0	376.9	376.9	374.0	373.0	367.1	365.1	360.2
67.5°	338.6	338.6	339.6	337.7	337.7	338.6	335.7	332.7	326.9	323.9	317.0
70°	305.3	305.3	305.3	304.3	304.3	304.3	302.3	298.4	292.5	287.6	278.8
72.5°	274.8	275.8	274.8	274.8	277.8	274.8	271.9	268.0	263.1	253.2	245.4
75°	250.3	251.3	250.3	250.3	250.3	249.3	248.3	242.4	236.6	228.7	216.9
77.5°	228.7	228.7	229.7	228.7	228.7	227.7	224.8	219.9	213.0	206.1	192.4
80°	208.1	209.1	210.1	211.0	209.1	208.1	205.1	201.2	192.4	184.5	170.8
82.5°	193.4	192.4	193.4	194.3	192.4	191.4	188.5	183.6	176.7	165.9	152.1
85°	178.6	177.7	177.7	178.6	177.7	175.7	172.8	167.8	161.0	150.2	136.4
87.5°	163.9	164.9	165.9	164.9	163.9	162.0	159.0	154.1	146.3	137.4	122.7
90°	153.1	153.1	153.1	153.1	152.1	150.2	147.2	141.3	134.5	123.7	110.9
92.5°	143.3	143.3	143.3	143.3	142.3	139.4	136.4	131.5	123.7	112.9	101.1
95°	133.5	134.5	133.5	133.5	131.5	130.5	125.6	120.7	113.9	103.1	90.3
97.5°	122.7	123.7	122.7	122.7	121.7	119.7	116.8	110.9	104.0	94.2	82.5
100°	114.8	114.8	113.9	113.9	112.9	110.9	107.0	102.1	95.2	85.4	73.6
102.5°	106.0	107.0	106.0	106.0	104.0	102.1	99.1	94.2	87.4	77.5	66.7
105°	99.1	99.1	98.2	98.2	96.2	94.2	91.3	85.4	79.5	70.7	59.9
107.5°	92.3	92.3	91.3	91.3	89.3	87.4	83.4	78.5	72.6	63.8	54.0
110°	85.4	85.4	85.4	84.4	82.5	79.5	76.6	71.7	65.8	57.9	48.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	80.5	79.5	78.5	77.5	75.6	73.6	69.7	64.8	58.9	52.0	43.2
115°	73.6	73.6	72.6	71.7	69.7	66.7	63.8	59.9	54.0	46.1	38.3
117.5°	67.7	67.7	66.7	65.8	63.8	60.9	57.9	54.0	48.1	41.2	34.4
120°	61.8	61.8	60.9	59.9	57.9	55.0	53.0	48.1	43.2	36.3	30.4
122.5°	56.9	55.9	55.9	54.0	53.0	50.1	47.1	43.2	38.3	32.4	26.5
125°	51.0	51.0	50.1	49.1	48.1	45.2	42.2	38.3	33.4	28.5	23.6
127.5°	46.1	46.1	45.2	44.2	43.2	40.2	37.3	34.4	29.4	24.5	19.6
130°	41.2	41.2	40.2	39.3	38.3	35.3	33.4	29.4	25.5	21.6	16.7
132.5°	37.3	37.3	36.3	35.3	33.4	31.4	29.4	25.5	22.6	18.6	14.7
135°	33.4	32.4	32.4	31.4	29.4	27.5	25.5	22.6	18.6	15.7	11.8
137.5°	29.4	28.5	27.5	26.5	25.5	23.6	21.6	19.6	16.7	12.8	9.8
140°	25.5	24.5	24.5	23.6	21.6	20.6	18.6	15.7	13.7	10.8	7.9
142.5°	21.6	21.6	20.6	19.6	18.6	17.7	15.7	13.7	10.8	8.8	5.9
145°	18.6	17.7	17.7	16.7	15.7	13.7	12.8	10.8	8.8	6.9	4.9
147.5°	14.7	14.7	14.7	13.7	12.8	11.8	10.8	8.8	6.9	4.9	2.9
150°	11.8	11.8	11.8	10.8	9.8	8.8	7.9	6.9	4.9	2.9	2.0
152.5°	9.8	9.8	8.8	8.8	7.9	6.9	5.9	4.9	2.9	2.0	2.0
155°	6.9	6.9	6.9	5.9	5.9	4.9	3.9	2.9	2.0	2.0	2.0
157.5°	4.9	4.9	4.9	3.9	3.9	2.9	2.9	2.0	2.0	2.0	2.0
160°	2.9	2.9	2.9	2.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5	1784.5
2.5°	1772.7	1771.7	1779.6	1779.6	1770.7	1784.5	1799.2
5°	1766.8	1765.8	1773.7	1773.7	1765.8	1779.6	1795.3
7.5°	1755.0	1756.0	1763.8	1765.8	1756.0	1768.8	1785.4
10°	1742.3	1741.3	1750.1	1752.1	1744.2	1756.0	1771.7
12.5°	1721.6	1721.6	1730.5	1733.4	1725.6	1739.3	1754.0
15°	1700.0	1700.0	1705.9	1710.8	1704.0	1716.7	1731.5
17.5°	1672.6	1671.6	1677.5	1683.4	1676.5	1690.2	1705.9
20°	1637.2	1637.2	1644.1	1651.0	1646.1	1658.8	1676.5
22.5°	1599.9	1596.0	1607.8	1612.7	1609.7	1622.5	1640.2
25°	1552.8	1551.8	1563.6	1570.5	1566.6	1580.3	1596.0
27.5°	1501.8	1500.8	1512.6	1521.4	1519.4	1532.2	1549.9
30°	1439.9	1444.8	1455.6	1470.4	1465.5	1479.2	1497.8
32.5°	1375.2	1380.1	1392.8	1408.5	1409.5	1420.3	1439.0
35°	1297.6	1310.4	1319.2	1339.8	1343.7	1354.5	1374.2
37.5°	1216.1	1230.9	1249.5	1265.2	1273.1	1281.9	1304.5
40°	1124.9	1146.5	1167.1	1185.7	1195.5	1204.4	1226.0
42.5°	1042.4	1059.1	1078.7	1097.4	1115.0	1122.9	1145.5
45°	949.2	968.8	986.5	1009.0	1026.7	1035.5	1058.1
47.5°	857.9	877.5	901.1	916.8	935.4	944.3	965.8
50°	770.5	788.2	807.8	826.5	842.2	850.0	868.7
52.5°	684.1	702.8	721.4	733.2	749.9	755.8	771.5
55°	607.6	620.3	637.0	643.9	660.6	664.5	675.3
57.5°	534.0	542.8	548.7	560.5	572.2	581.1	593.8
60°	467.2	471.1	475.1	481.9	491.8	494.7	499.6
62.5°	407.3	406.4	414.2	416.2	417.2	427.0	422.1
65°	354.3	355.3	348.5	345.5	349.4	352.4	350.4
67.5°	310.2	304.3	298.4	291.5	285.6	288.6	285.6
70°	267.0	262.1	252.3	242.4	238.5	232.6	229.7
72.5°	232.6	220.8	211.0	198.3	191.4	184.5	179.6
75°	206.1	189.4	175.7	162.0	152.1	142.3	140.4
77.5°	178.6	162.9	147.2	132.5	117.8	107.0	103.1
80°	157.0	142.3	123.7	106.0	90.3	76.6	71.7
82.5°	137.4	121.7	103.1	84.4	66.7	52.0	46.1
85°	120.7	104.0	85.4	66.7	49.1	33.4	25.5
87.5°	108.0	89.3	70.7	53.0	34.4	18.6	9.8
90°	96.2	78.5	60.9	42.2	24.5	9.8	0.0
92.5°	85.4	68.7	51.0	34.4	18.6	5.9	1.0
95°	75.6	60.9	43.2	27.5	13.7	3.9	1.0
97.5°	67.7	53.0	37.3	22.6	10.8	2.9	1.0
100°	60.9	46.1	32.4	18.6	8.8	2.0	1.0
102.5°	54.0	41.2	27.5	15.7	6.9	1.0	1.0
105°	48.1	36.3	23.6	13.7	5.9	1.0	1.0
107.5°	43.2	32.4	20.6	11.8	3.9	1.0	1.0
110°	38.3	27.5	17.7	9.8	2.9	1.0	1.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	34.4	24.5	15.7	7.9	2.0	1.0	1.0
115°	30.4	21.6	13.7	6.9	2.0	1.0	1.0
117.5°	26.5	18.6	11.8	4.9	1.0	1.0	1.0
120°	23.6	16.7	9.8	3.9	1.0	1.0	1.0
122.5°	20.6	13.7	7.9	2.9	1.0	1.0	1.0
125°	17.7	11.8	6.9	2.0	1.0	1.0	1.0
127.5°	14.7	9.8	4.9	2.0	1.0	1.0	1.0
130°	12.8	7.9	3.9	1.0	1.0	1.0	1.0
132.5°	10.8	5.9	2.9	1.0	1.0	1.0	1.0
135°	8.8	4.9	2.0	1.0	1.0	1.0	1.0
137.5°	6.9	3.9	2.0	1.0	1.0	1.0	1.0
140°	4.9	2.9	1.0	1.0	1.0	1.0	1.0
142.5°	3.9	2.0	1.0	1.0	1.0	1.0	1.0
145°	2.9	2.0	1.0	1.0	1.0	1.0	1.0
147.5°	2.0	2.0	2.0	2.0	1.0	1.0	1.0
150°	2.0	2.0	1.0	1.0	2.0	1.0	1.0
152.5°	2.0	1.0	1.0	1.0	2.0	1.0	1.0
155°	2.0	2.0	2.0	2.0	2.0	2.0	1.0
157.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0
160°	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)