

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-LD5-64SL-LN-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 (P33519)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

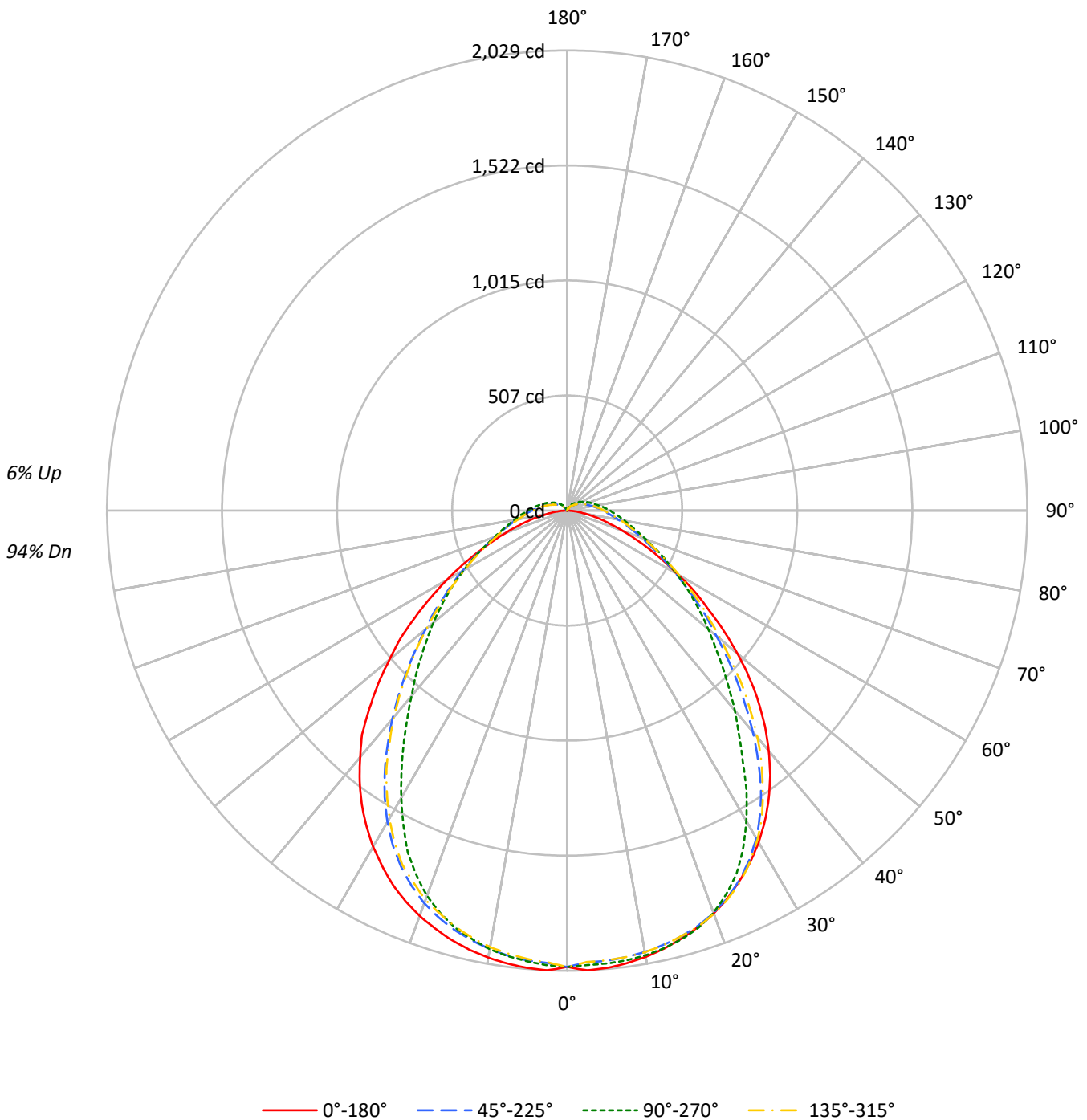
Lumens per Lamp: N/A
Luminaire Lumens: 5093.0 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 55
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-LD5-64SL-LN-UNV-L930-CD1-U

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	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°	16263	16263	16263	16263
5°	16379	15745	16379	15676
10°	16306	15326	16333	15114
15°	16201	14869	16274	14482
20°	16076	14280	16171	13677
25°	15818	13406	15993	12617
30°	15483	12123	15686	11223
35°	14961	10550	15249	9823
40°	14212	9226	14588	8560
45°	13224	8021	13653	7561
50°	11874	7048	12397	6692
55°	10272	6224	11017	5909
60°	8638	5464	9420	5150
65°	7082	4832	7795	4480
70°	5636	4287	6310	3965
75°	4426	3959	4983	3643
80°	3194	3819	3763	3491
85°	1968	3842	2644	3531



TEST NUMBER: P#

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.8	3.7
10°-20°	547.1	10.7
20°-30°	810.8	15.9
30°-40°	900.8	17.7
40°-50°	816.5	16.0
50°-60°	632.7	12.4
60°-70°	429.7	8.4
70°-80°	273.4	5.4
80°-90°	174.8	3.4
90°-100°	117.8	2.3
100°-110°	80.7	1.6
110°-120°	53.8	1.1
120°-130°	33.5	0.7
130°-140°	18.5	0.4
140°-150°	8.7	0.2
150°-160°	3.2	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1548.7	30.4
0°-40°	2449.5	48.1
0°-60°	3898.7	76.6
0°-90°	4776.5	93.8
90°-120°	252.4	5.0
90°-150°	313.1	6.1
90°-180°	316.0	6.2
0°-180°	5093.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2012	2012	2012	2012	2012	
5°	2025	2005	2025	1996	2025	192
15°	1953	1956	1962	1905	1953	551
25°	1800	1767	1820	1663	1800	829
35°	1550	1350	1580	1258	1550	967
45°	1193	965	1232	910	1193	916
55°	762	679	817	644	762	686
65°	395	456	435	423	395	396
75°	158	304	178	280	158	170
85°	29	219	39	202	29	34
90°	0	189	2	173	0	2
95°	1	162	0	150	1	1
105°	1	118	0	112	1	1
115°	1	90	0	83	1	1
125°	1	66	1	59	1	1
135°	1	46	1	38	1	1
145°	1	30	1	21	1	1
155°	1	17	1	8	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-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5
2.5°	2029.1	2026.8	2024.6	2021.3	2024.6	2033.5	2028.0	2015.8	2013.6	1993.6	2002.5
5°	2024.6	2021.3	2019.1	2015.8	2020.2	2031.3	2025.7	2014.7	2011.4	1992.5	2002.5
7.5°	2013.6	2011.4	2008.0	2008.0	2012.5	2023.5	2019.1	2006.9	2004.7	1985.9	1997.0
10°	1998.1	1997.0	1994.7	1994.7	1999.2	2012.5	2006.9	1995.9	1993.6	1975.9	1988.1
12.5°	1978.1	1979.2	1975.9	1975.9	1982.6	1995.9	1991.4	1979.2	1977.0	1961.5	1973.7
15°	1952.7	1953.8	1951.6	1952.7	1959.3	1974.8	1969.3	1958.2	1956.0	1943.8	1953.8
17.5°	1923.9	1925.0	1925.0	1923.9	1931.6	1947.1	1942.7	1932.8	1929.4	1919.5	1931.6
20°	1890.7	1890.7	1890.7	1890.7	1899.5	1915.0	1909.5	1901.8	1895.1	1887.4	1897.3
22.5°	1849.7	1848.6	1849.7	1853.1	1861.9	1874.1	1870.8	1861.9	1851.9	1847.5	1855.3
25°	1799.9	1803.2	1804.3	1807.7	1818.7	1828.7	1825.4	1816.5	1801.0	1797.7	1799.9
27.5°	1747.9	1750.1	1753.4	1752.3	1767.8	1777.8	1771.1	1763.4	1741.3	1737.9	1735.7
30°	1689.2	1692.5	1694.8	1693.7	1705.8	1716.9	1710.3	1700.3	1670.4	1668.2	1650.5
32.5°	1622.8	1626.1	1628.3	1628.3	1646.1	1650.5	1638.3	1623.9	1591.8	1584.1	1568.6
35°	1549.7	1553.1	1554.2	1554.2	1571.9	1570.8	1555.3	1535.4	1499.9	1490.0	1463.4
37.5°	1471.2	1473.4	1474.5	1481.1	1488.9	1482.2	1462.3	1436.8	1410.3	1382.6	1353.8
40°	1382.6	1385.9	1388.1	1392.6	1400.3	1392.6	1363.8	1332.8	1304.0	1273.0	1244.2
42.5°	1291.8	1301.8	1299.6	1298.5	1302.9	1281.9	1259.7	1224.3	1195.5	1163.4	1134.6
45°	1193.3	1192.2	1197.7	1199.9	1198.8	1181.1	1150.1	1118.0	1089.3	1056.0	1031.7
47.5°	1089.3	1088.1	1092.6	1094.8	1088.1	1069.3	1045.0	1008.4	984.1	955.3	936.5
50°	979.7	979.7	986.3	979.7	976.3	957.5	937.6	901.1	882.2	856.8	845.7
52.5°	870.1	880.0	873.4	871.2	867.9	849.0	833.5	803.7	788.2	777.1	763.8
55°	761.6	772.7	768.2	764.9	763.8	748.3	733.9	711.8	701.8	694.1	686.3
57.5°	669.7	668.6	666.4	663.1	664.2	652.0	637.6	625.4	621.0	617.7	619.9
60°	563.4	572.3	569.0	570.1	571.2	569.0	556.8	549.1	550.2	551.3	554.6
62.5°	476.0	483.7	489.3	484.8	487.1	490.4	483.7	481.5	486.0	490.4	494.8
65°	395.2	402.9	408.5	407.4	414.0	420.6	419.5	421.8	431.7	437.3	442.8
67.5°	322.1	329.9	337.6	338.7	348.7	358.7	363.1	370.8	381.9	389.7	396.3
70°	259.0	265.7	274.5	280.1	293.3	306.6	314.4	329.9	336.5	347.6	352.0
72.5°	202.6	208.1	220.3	233.6	244.6	261.2	276.7	290.0	300.0	312.2	317.7
75°	158.3	160.5	173.8	189.3	204.8	223.6	240.2	254.6	267.9	280.1	288.9
77.5°	116.2	119.6	131.7	152.8	170.5	190.4	209.2	224.7	239.1	251.3	263.5
80°	80.8	87.5	100.7	121.8	141.7	163.8	181.5	199.3	214.8	226.9	239.1
82.5°	52.0	57.6	76.4	97.4	118.4	140.6	159.4	177.1	193.7	207.0	218.1
85°	28.8	36.5	55.3	77.5	98.5	120.7	140.6	158.3	174.9	187.1	198.1
87.5°	11.1	22.1	39.9	60.9	81.9	102.9	124.0	140.6	157.2	170.5	180.4
90°	0.0	13.3	29.9	50.9	72.0	93.0	112.9	130.6	146.1	158.3	169.4
92.5°	1.1	8.9	23.2	41.0	60.9	80.8	99.6	117.3	132.8	145.0	155.0
95°	1.1	6.6	18.8	35.4	53.1	72.0	89.7	106.3	120.7	132.8	142.8
97.5°	1.1	4.4	15.5	31.0	46.5	65.3	81.9	97.4	110.7	122.9	130.6
100°	1.1	4.4	13.3	26.6	42.1	58.7	74.2	89.7	101.8	111.8	120.7
102.5°	1.1	3.3	11.1	23.2	37.6	52.0	67.5	81.9	93.0	102.9	111.8
105°	1.1	3.3	10.0	19.9	33.2	47.6	60.9	74.2	86.3	95.2	102.9
107.5°	1.1	2.2	8.9	16.6	28.8	43.2	56.5	67.5	78.6	87.5	95.2
110°	1.1	2.2	7.7	15.5	25.5	38.7	50.9	62.0	72.0	80.8	87.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.1	2.2	6.6	14.4	23.2	34.3	46.5	56.5	66.4	74.2	80.8
115°	1.1	2.2	6.6	13.3	21.0	29.9	41.0	52.0	59.8	68.6	74.2
117.5°	1.1	2.2	5.5	11.1	19.9	27.7	37.6	46.5	55.3	63.1	68.6
120°	1.1	2.2	5.5	10.0	17.7	25.5	33.2	42.1	50.9	56.5	62.0
122.5°	1.1	2.2	4.4	10.0	15.5	23.2	29.9	37.6	45.4	52.0	57.6
125°	1.1	2.2	4.4	8.9	14.4	21.0	27.7	33.2	41.0	46.5	52.0
127.5°	1.1	2.2	4.4	7.7	13.3	18.8	25.5	31.0	36.5	42.1	46.5
130°	1.1	2.2	3.3	6.6	12.2	16.6	22.1	28.8	33.2	37.6	42.1
132.5°	1.1	2.2	3.3	6.6	10.0	14.4	19.9	25.5	29.9	34.3	37.6
135°	1.1	2.2	3.3	5.5	8.9	13.3	16.6	22.1	26.6	31.0	34.3
137.5°	1.1	2.2	3.3	5.5	7.7	11.1	14.4	18.8	23.2	26.6	31.0
140°	1.1	2.2	3.3	4.4	6.6	10.0	13.3	15.5	19.9	23.2	26.6
142.5°	1.1	2.2	3.3	4.4	6.6	8.9	11.1	13.3	16.6	19.9	23.2
145°	1.1	2.2	3.3	4.4	5.5	7.7	10.0	12.2	13.3	16.6	18.8
147.5°	1.1	2.2	3.3	4.4	4.4	6.6	8.9	10.0	12.2	13.3	15.5
150°	1.1	2.2	3.3	3.3	4.4	5.5	7.7	8.9	10.0	12.2	13.3
152.5°	1.1	2.2	3.3	3.3	4.4	5.5	6.6	7.7	8.9	10.0	11.1
155°	1.1	2.2	3.3	3.3	3.3	4.4	5.5	6.6	7.7	8.9	10.0
157.5°	2.2	2.2	2.2	3.3	3.3	4.4	4.4	5.5	6.6	6.6	7.7
160°	2.2	2.2	2.2	3.3	3.3	3.3	4.4	4.4	5.5	5.5	6.6
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-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5
2.5°	2000.3	2003.6	2013.6	2013.6	2011.4	2009.1	2009.1	2005.8	2008.0	2012.5	2010.2
5°	2000.3	2003.6	2013.6	2013.6	2011.4	2009.1	2008.0	2004.7	2008.0	2012.5	2010.2
7.5°	1993.6	1998.1	2008.0	2008.0	2005.8	2004.7	2002.5	2000.3	2003.6	2008.0	2005.8
10°	1984.8	1989.2	1999.2	1999.2	1997.0	1997.0	1993.6	1991.4	1995.9	1999.2	1998.1
12.5°	1971.5	1977.0	1985.9	1984.8	1982.6	1983.7	1980.4	1975.9	1980.4	1983.7	1984.8
15°	1952.7	1959.3	1968.2	1966.0	1962.6	1964.9	1959.3	1956.0	1959.3	1966.0	1964.9
17.5°	1928.3	1932.8	1939.4	1939.4	1936.1	1933.9	1931.6	1928.3	1930.5	1935.0	1936.1
20°	1894.0	1899.5	1902.9	1899.5	1898.4	1895.1	1890.7	1887.4	1891.8	1898.4	1899.5
22.5°	1848.6	1849.7	1857.5	1849.7	1844.2	1843.1	1838.7	1832.0	1838.7	1844.2	1845.3
25°	1792.2	1797.7	1794.4	1781.1	1781.1	1772.2	1770.0	1766.7	1767.8	1777.8	1782.2
27.5°	1720.2	1722.4	1713.6	1702.5	1692.5	1687.0	1679.3	1680.4	1680.4	1693.7	1698.1
30°	1641.6	1629.4	1621.7	1604.0	1596.2	1583.0	1580.7	1580.7	1578.5	1585.2	1605.1
32.5°	1547.5	1530.9	1518.8	1502.1	1488.9	1475.6	1468.9	1472.3	1471.2	1487.8	1494.4
35°	1444.6	1434.6	1409.2	1388.1	1380.4	1360.5	1360.5	1350.5	1357.1	1376.0	1383.7
37.5°	1336.1	1320.6	1299.6	1276.3	1270.8	1255.3	1249.8	1244.2	1258.6	1261.9	1269.7
40°	1225.4	1211.0	1191.1	1169.0	1169.0	1150.1	1150.1	1150.1	1151.2	1157.9	1172.3
42.5°	1120.2	1104.7	1087.0	1071.5	1069.3	1054.9	1054.9	1053.8	1056.0	1061.6	1074.9
45°	1018.4	1006.2	987.4	979.7	980.8	965.3	968.6	965.3	969.7	975.2	979.7
47.5°	924.3	916.6	908.8	897.7	894.4	893.3	887.8	883.4	891.1	891.1	897.7
50°	836.9	832.4	828.0	821.4	822.5	818.0	811.4	811.4	816.9	818.0	822.5
52.5°	760.5	754.9	749.4	750.5	751.6	749.4	746.1	742.8	746.1	748.3	753.8
55°	684.1	679.7	685.2	683.0	685.2	683.0	680.8	678.6	684.1	680.8	686.3
57.5°	615.5	619.9	622.1	617.7	621.0	618.8	619.9	616.6	621.0	623.2	622.1
60°	552.4	559.0	555.7	556.8	561.2	559.0	554.6	557.9	562.3	563.4	562.3
62.5°	494.8	502.6	505.9	503.7	504.8	502.6	505.9	501.5	507.0	509.2	505.9
65°	442.8	451.6	453.9	453.9	453.9	451.6	455.0	456.1	458.3	458.3	456.1
67.5°	398.5	406.3	408.5	410.7	408.5	406.3	406.3	407.4	411.8	414.0	411.8
70°	358.7	366.4	367.5	367.5	368.6	370.8	366.4	368.6	371.9	373.0	371.9
72.5°	324.3	332.1	334.3	333.2	334.3	335.4	335.4	333.2	336.5	338.7	338.7
75°	296.7	301.1	303.3	303.3	304.4	305.5	305.5	304.4	306.6	307.7	308.8
77.5°	271.2	274.5	277.8	277.8	279.0	277.8	280.1	280.1	281.2	282.3	283.4
80°	245.7	250.2	252.4	253.5	255.7	256.8	256.8	256.8	257.9	259.0	259.0
82.5°	225.8	229.1	232.5	235.8	235.8	236.9	236.9	236.9	238.0	238.0	239.1
85°	205.9	210.3	213.6	215.9	217.0	218.1	218.1	219.2	219.2	219.2	220.3
87.5°	188.2	193.7	195.9	198.1	199.3	201.5	201.5	201.5	202.6	202.6	202.6
90°	176.0	181.5	183.8	186.0	187.1	188.2	188.2	189.3	189.3	190.4	190.4
92.5°	161.6	167.2	171.6	171.6	172.7	174.9	173.8	173.8	174.9	176.0	176.0
95°	150.5	155.0	158.3	159.4	160.5	160.5	160.5	161.6	160.5	161.6	161.6
97.5°	137.3	141.7	145.0	147.2	148.3	148.3	148.3	149.4	148.3	149.4	149.4
100°	126.2	130.6	133.9	135.0	137.3	137.3	137.3	137.3	137.3	137.3	138.4
102.5°	117.3	121.8	124.0	125.1	126.2	127.3	127.3	127.3	127.3	128.4	128.4
105°	108.5	112.9	115.1	116.2	117.3	118.4	118.4	118.4	119.6	119.6	118.4
107.5°	100.7	104.1	106.3	108.5	109.6	109.6	110.7	110.7	110.7	110.7	110.7
110°	93.0	96.3	99.6	101.8	101.8	102.9	102.9	104.1	104.1	102.9	104.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	85.2	89.7	91.9	94.1	95.2	96.3	96.3	96.3	96.3	96.3	96.3
115°	78.6	83.0	85.2	87.5	88.6	89.7	89.7	89.7	89.7	89.7	89.7
117.5°	73.1	77.5	79.7	80.8	81.9	83.0	84.1	84.1	84.1	84.1	83.0
120°	67.5	70.8	73.1	75.3	76.4	77.5	77.5	77.5	77.5	77.5	77.5
122.5°	62.0	65.3	67.5	69.7	70.8	72.0	72.0	72.0	72.0	72.0	72.0
125°	56.5	59.8	62.0	64.2	65.3	66.4	66.4	66.4	66.4	66.4	66.4
127.5°	50.9	54.2	57.6	58.7	59.8	60.9	60.9	60.9	62.0	60.9	60.9
130°	45.4	48.7	52.0	53.1	54.2	55.3	56.5	56.5	56.5	56.5	55.3
132.5°	41.0	44.3	46.5	47.6	49.8	49.8	50.9	50.9	50.9	50.9	49.8
135°	37.6	39.9	42.1	43.2	45.4	45.4	45.4	46.5	46.5	45.4	44.3
137.5°	33.2	35.4	37.6	38.7	39.9	41.0	41.0	42.1	41.0	41.0	41.0
140°	31.0	32.1	34.3	35.4	36.5	36.5	36.5	37.6	37.6	36.5	36.5
142.5°	26.6	28.8	31.0	32.1	33.2	33.2	33.2	33.2	33.2	33.2	33.2
145°	22.1	25.5	26.6	28.8	28.8	29.9	29.9	29.9	29.9	29.9	28.8
147.5°	18.8	21.0	24.4	25.5	25.5	26.6	26.6	26.6	26.6	26.6	25.5
150°	14.4	16.6	19.9	22.1	22.1	23.2	23.2	23.2	23.2	22.1	22.1
152.5°	12.2	14.4	15.5	17.7	18.8	18.8	18.8	19.9	18.8	18.8	18.8
155°	11.1	12.2	13.3	14.4	15.5	16.6	16.6	16.6	16.6	15.5	15.5
157.5°	8.9	10.0	11.1	12.2	13.3	14.4	14.4	14.4	14.4	14.4	13.3
160°	6.6	7.7	8.9	8.9	10.0	11.1	12.2	11.1	11.1	11.1	11.1
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-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5
2.5°	2008.0	2006.9	2010.2	2004.7	1988.1	1992.5	1990.3	2000.3	2002.5	2004.7	2014.7
5°	2008.0	2006.9	2009.1	2004.7	1987.0	1990.3	1988.1	1998.1	2000.3	2001.4	2011.4
7.5°	2003.6	2002.5	2005.8	2000.3	1981.5	1985.9	1982.6	1992.5	1993.6	1994.7	2003.6
10°	1994.7	1993.6	1995.9	1991.4	1972.6	1977.0	1972.6	1982.6	1982.6	1984.8	1991.4
12.5°	1981.5	1979.2	1983.7	1978.1	1957.1	1962.6	1960.4	1967.1	1968.2	1969.3	1975.9
15°	1962.6	1960.4	1963.8	1960.4	1941.6	1942.7	1939.4	1949.4	1950.5	1948.3	1954.9
17.5°	1935.0	1932.8	1939.4	1937.2	1918.4	1922.8	1921.7	1923.9	1927.2	1921.7	1930.5
20°	1900.7	1902.9	1905.1	1906.2	1891.8	1891.8	1890.7	1895.1	1898.4	1894.0	1900.7
22.5°	1849.7	1855.3	1861.9	1864.1	1854.2	1853.1	1859.7	1857.5	1860.8	1858.6	1863.0
25°	1785.5	1796.6	1803.2	1809.9	1804.3	1806.6	1816.5	1818.7	1818.7	1817.6	1822.1
27.5°	1705.8	1720.2	1732.4	1746.8	1741.3	1745.7	1762.3	1764.5	1768.9	1764.5	1773.4
30°	1610.6	1623.9	1647.2	1668.2	1670.4	1677.0	1700.3	1702.5	1714.7	1710.3	1713.6
32.5°	1515.4	1522.1	1548.6	1569.7	1583.0	1599.6	1625.0	1629.4	1646.1	1649.4	1649.4
35°	1395.9	1414.7	1439.1	1468.9	1485.5	1503.3	1537.6	1544.2	1568.6	1576.3	1585.2
37.5°	1295.1	1312.9	1328.4	1359.3	1389.2	1409.2	1436.8	1453.4	1478.9	1493.3	1504.4
40°	1187.8	1202.2	1218.8	1249.8	1275.2	1305.1	1332.8	1352.7	1384.8	1401.4	1415.8
42.5°	1085.9	1097.0	1114.7	1136.9	1163.4	1196.6	1223.2	1246.4	1280.8	1304.0	1320.6
45°	995.2	1001.8	1017.3	1033.9	1057.1	1091.5	1116.9	1146.8	1174.5	1198.8	1218.8
47.5°	909.9	918.8	926.5	937.6	958.6	979.7	1009.5	1038.3	1066.0	1092.6	1112.5
50°	831.3	831.3	843.5	851.3	865.6	884.5	907.7	927.6	962.0	980.8	1006.2
52.5°	754.9	759.4	766.0	770.4	781.5	793.7	812.5	829.1	857.9	875.6	900.0
55°	687.4	691.9	695.2	697.4	704.0	718.4	725.1	738.3	758.3	772.7	793.7
57.5°	623.2	625.4	628.8	629.9	631.0	639.8	645.4	648.7	668.6	683.0	700.7
60°	564.6	564.6	567.9	566.8	565.7	570.1	569.0	572.3	584.5	593.3	601.1
62.5°	509.2	509.2	510.3	508.1	507.0	507.0	502.6	505.9	509.2	510.3	515.8
65°	458.3	463.8	459.4	460.5	453.9	451.6	449.4	442.8	441.7	437.3	439.5
67.5°	412.9	417.3	412.9	412.9	407.4	402.9	397.4	386.3	383.0	374.2	371.9
70°	376.4	373.0	375.3	371.9	365.3	359.8	352.0	343.2	332.1	321.0	313.3
72.5°	340.9	340.9	338.7	335.4	332.1	321.0	312.2	302.2	288.9	274.5	263.5
75°	306.6	307.7	307.7	304.4	298.9	288.9	279.0	264.6	250.2	233.6	219.2
77.5°	282.3	282.3	282.3	276.7	271.2	262.4	250.2	234.7	219.2	199.3	182.6
80°	259.0	257.9	257.9	251.3	245.7	235.8	223.6	208.1	191.5	170.5	151.7
82.5°	240.2	239.1	236.9	231.4	223.6	213.6	201.5	184.9	167.2	148.3	125.1
85°	220.3	219.2	217.0	211.4	203.7	194.8	181.5	164.9	147.2	126.2	104.1
87.5°	202.6	201.5	198.1	194.8	186.0	176.0	162.7	147.2	128.4	108.5	86.3
90°	190.4	188.2	186.0	181.5	173.8	162.7	149.4	132.8	114.0	94.1	72.0
92.5°	176.0	174.9	171.6	167.2	160.5	149.4	136.2	120.7	101.8	83.0	62.0
95°	161.6	160.5	158.3	153.9	147.2	137.3	125.1	109.6	91.9	73.1	54.2
97.5°	148.3	148.3	145.0	141.7	133.9	126.2	114.0	99.6	83.0	66.4	48.7
100°	137.3	137.3	133.9	129.5	124.0	116.2	104.1	90.8	75.3	59.8	42.1
102.5°	127.3	126.2	124.0	119.6	114.0	106.3	95.2	83.0	68.6	53.1	37.6
105°	118.4	117.3	115.1	110.7	106.3	97.4	88.6	76.4	62.0	47.6	33.2
107.5°	109.6	108.5	107.4	102.9	97.4	89.7	80.8	68.6	56.5	43.2	29.9
110°	101.8	100.7	98.5	94.1	88.6	81.9	73.1	63.1	50.9	38.7	26.6



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	95.2	94.1	91.9	87.5	83.0	75.3	67.5	56.5	46.5	35.4	23.2
115°	88.6	87.5	85.2	80.8	75.3	68.6	60.9	52.0	41.0	31.0	21.0
117.5°	81.9	80.8	78.6	75.3	69.7	63.1	55.3	46.5	36.5	28.8	18.8
120°	76.4	74.2	72.0	68.6	63.1	57.6	49.8	42.1	33.2	25.5	16.6
122.5°	70.8	68.6	66.4	63.1	57.6	52.0	44.3	37.6	31.0	23.2	15.5
125°	64.2	63.1	60.9	57.6	52.0	46.5	41.0	34.3	27.7	21.0	13.3
127.5°	58.7	57.6	55.3	50.9	46.5	42.1	36.5	31.0	24.4	17.7	12.2
130°	54.2	52.0	49.8	46.5	43.2	38.7	33.2	27.7	22.1	15.5	11.1
132.5°	48.7	46.5	44.3	42.1	38.7	34.3	29.9	24.4	19.9	14.4	10.0
135°	44.3	42.1	39.9	37.6	34.3	31.0	26.6	22.1	17.7	13.3	8.9
137.5°	38.7	37.6	36.5	34.3	31.0	27.7	24.4	18.8	15.5	12.2	7.7
140°	35.4	34.3	33.2	29.9	27.7	24.4	21.0	16.6	13.3	10.0	6.6
142.5°	32.1	31.0	28.8	26.6	24.4	22.1	17.7	15.5	12.2	8.9	6.6
145°	27.7	26.6	25.5	23.2	21.0	17.7	15.5	13.3	11.1	7.7	5.5
147.5°	25.5	24.4	22.1	19.9	17.7	15.5	14.4	12.2	8.9	6.6	4.4
150°	21.0	19.9	18.8	16.6	15.5	14.4	12.2	10.0	7.7	5.5	4.4
152.5°	17.7	16.6	15.5	15.5	13.3	12.2	10.0	8.9	6.6	5.5	3.3
155°	15.5	15.5	14.4	13.3	11.1	10.0	8.9	6.6	5.5	4.4	3.3
157.5°	13.3	12.2	11.1	11.1	10.0	8.9	6.6	5.5	4.4	4.4	3.3
160°	11.1	10.0	10.0	8.9	7.7	6.6	5.5	5.5	4.4	3.3	3.3
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



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5
2.5°	2015.8	2003.6	2014.7	2029.1	2029.1	2026.8	2024.6	2029.1	2040.1	2035.7	2022.4
5°	2012.5	2000.3	2010.2	2024.6	2024.6	2021.3	2019.1	2022.4	2034.6	2029.1	2016.9
7.5°	2005.8	1994.7	2001.4	2014.7	2014.7	2011.4	2009.1	2013.6	2023.5	2018.0	2004.7
10°	1993.6	1981.5	1989.2	2001.4	2000.3	1998.1	1994.7	2000.3	2009.1	2001.4	1985.9
12.5°	1978.1	1966.0	1972.6	1983.7	1982.6	1978.1	1975.9	1979.2	1987.0	1982.6	1966.0
15°	1957.1	1944.9	1950.5	1961.5	1958.2	1954.9	1950.5	1951.6	1961.5	1953.8	1936.1
17.5°	1931.6	1918.4	1922.8	1932.8	1929.4	1926.1	1920.6	1921.7	1932.8	1921.7	1902.9
20°	1900.7	1886.3	1889.6	1901.8	1896.2	1890.7	1885.2	1885.2	1896.2	1884.0	1863.0
22.5°	1867.4	1853.1	1855.3	1864.1	1859.7	1849.7	1844.2	1847.5	1853.1	1837.6	1815.4
25°	1826.5	1807.7	1811.0	1819.8	1816.5	1803.2	1797.7	1799.9	1797.7	1785.5	1762.3
27.5°	1778.9	1759.0	1761.2	1766.7	1762.3	1750.1	1743.5	1744.6	1740.1	1724.6	1698.1
30°	1719.1	1709.1	1708.0	1711.4	1704.7	1692.5	1684.8	1682.6	1681.5	1659.3	1627.2
32.5°	1658.2	1649.4	1643.8	1648.3	1640.5	1628.3	1615.1	1615.1	1604.0	1583.0	1555.3
35°	1596.2	1581.8	1576.3	1579.6	1570.8	1555.3	1544.2	1538.7	1522.1	1495.5	1465.6
37.5°	1516.5	1506.6	1499.9	1503.3	1493.3	1482.2	1461.2	1455.7	1437.9	1401.4	1363.8
40°	1430.2	1422.4	1415.8	1419.1	1408.1	1391.5	1372.6	1363.8	1343.9	1302.9	1273.0
42.5°	1337.2	1333.9	1326.1	1338.3	1316.2	1299.6	1280.8	1266.4	1246.4	1202.2	1167.8
45°	1238.7	1246.4	1228.7	1232.0	1217.7	1203.3	1183.3	1162.3	1142.4	1100.3	1061.6
47.5°	1134.6	1140.2	1128.0	1130.2	1114.7	1101.4	1083.7	1057.1	1035.0	998.5	964.2
50°	1027.3	1025.0	1025.0	1022.8	1010.7	994.1	976.3	952.0	929.8	896.6	867.9
52.5°	913.2	917.7	919.9	925.4	909.9	900.0	872.3	851.3	834.6	800.3	776.0
55°	803.7	819.2	814.7	816.9	799.2	791.5	769.3	752.7	728.4	708.5	693.0
57.5°	704.0	707.3	709.6	712.9	705.1	689.6	671.9	658.6	639.8	623.2	612.2
60°	607.7	607.7	608.8	614.4	606.6	593.3	580.0	570.1	556.8	546.8	540.2
62.5°	517.0	524.7	525.8	521.4	511.4	504.8	495.9	490.4	481.5	478.2	476.0
65°	432.8	432.8	432.8	435.0	429.5	425.1	419.5	418.4	421.8	417.3	419.5
67.5°	362.0	358.7	356.4	357.5	355.3	353.1	352.0	355.3	362.0	362.0	367.5
70°	301.1	294.5	290.0	290.0	290.0	291.1	294.5	301.1	312.2	316.6	324.3
72.5°	251.3	236.9	230.2	230.2	231.4	235.8	245.7	257.9	267.9	276.7	286.7
75°	203.7	189.3	179.3	178.2	180.4	187.1	201.5	212.5	229.1	241.3	253.5
77.5°	164.9	147.2	135.0	133.9	137.3	147.2	164.9	179.3	198.1	211.4	224.7
80°	131.7	111.8	101.8	95.2	100.7	112.9	132.8	150.5	168.3	186.0	202.6
82.5°	105.2	86.3	70.8	64.2	70.8	87.5	106.3	127.3	145.0	163.8	180.4
85°	83.0	63.1	45.4	38.7	46.5	64.2	85.2	106.3	126.2	145.0	161.6
87.5°	65.3	45.4	27.7	18.8	28.8	47.6	67.5	88.6	109.6	128.4	145.0
90°	50.9	32.1	15.5	2.2	16.6	34.3	54.2	74.2	95.2	114.0	130.6
92.5°	43.2	24.4	8.9	0.0	10.0	25.5	44.3	64.2	83.0	101.8	118.4
95°	36.5	19.9	6.6	0.0	6.6	19.9	36.5	54.2	73.1	91.9	108.5
97.5°	31.0	15.5	4.4	0.0	4.4	15.5	29.9	47.6	64.2	81.9	97.4
100°	26.6	13.3	3.3	0.0	3.3	12.2	25.5	41.0	57.6	74.2	88.6
102.5°	23.2	11.1	2.2	0.0	2.2	10.0	21.0	35.4	49.8	65.3	79.7
105°	19.9	8.9	2.2	0.0	1.1	7.7	17.7	31.0	44.3	58.7	72.0
107.5°	17.7	7.7	2.2	0.0	1.1	6.6	15.5	26.6	39.9	52.0	64.2
110°	15.5	6.6	2.2	0.0	1.1	4.4	13.3	23.2	34.3	46.5	58.7



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	13.3	5.5	1.1	0.0	0.0	3.3	11.1	19.9	29.9	42.1	52.0
115°	12.2	5.5	1.1	0.0	0.0	2.2	8.9	17.7	26.6	37.6	46.5
117.5°	11.1	4.4	1.1	0.0	1.1	2.2	7.7	15.5	23.2	32.1	42.1
120°	10.0	4.4	1.1	0.0	1.1	1.1	5.5	13.3	19.9	28.8	36.5
122.5°	8.9	4.4	1.1	0.0	1.1	1.1	4.4	11.1	17.7	25.5	32.1
125°	7.7	3.3	2.2	1.1	1.1	1.1	3.3	8.9	15.5	21.0	28.8
127.5°	7.7	3.3	2.2	1.1	1.1	1.1	2.2	7.7	12.2	18.8	25.5
130°	6.6	3.3	2.2	1.1	1.1	1.1	1.1	5.5	11.1	15.5	21.0
132.5°	5.5	3.3	2.2	1.1	1.1	1.1	1.1	3.3	7.7	13.3	17.7
135°	5.5	3.3	2.2	1.1	1.1	1.1	1.1	2.2	5.5	10.0	14.4
137.5°	4.4	2.2	2.2	1.1	1.1	1.1	1.1	1.1	4.4	7.7	11.1
140°	4.4	2.2	2.2	1.1	1.1	1.1	1.1	1.1	3.3	5.5	8.9
142.5°	3.3	2.2	2.2	1.1	1.1	1.1	1.1	1.1	2.2	4.4	6.6
145°	3.3	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	4.4
147.5°	3.3	3.3	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	3.3
150°	3.3	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2
152.5°	3.3	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2
155°	3.3	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	2.2
157.5°	3.3	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2
160°	3.3	2.2	2.2	1.1	2.2	1.1	2.2	2.2	2.2	2.2	2.2
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-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5
2.5°	2018.0	1997.0	2008.0	2004.7	2009.1	2018.0	2016.9	2014.7	2014.7	2011.4	2006.9
5°	2011.4	1991.4	2001.4	1995.9	2001.4	2009.1	2008.0	2004.7	2006.9	2001.4	1995.9
7.5°	1998.1	1980.4	1989.2	1984.8	1989.2	1997.0	1993.6	1992.5	1994.7	1985.9	1982.6
10°	1982.6	1962.6	1972.6	1967.1	1972.6	1978.1	1975.9	1971.5	1975.9	1967.1	1963.8
12.5°	1958.2	1941.6	1948.3	1946.0	1949.4	1954.9	1950.5	1947.1	1949.4	1941.6	1935.0
15°	1931.6	1915.0	1920.6	1917.3	1919.5	1926.1	1918.4	1917.3	1915.0	1907.3	1905.1
17.5°	1897.3	1881.8	1887.4	1881.8	1885.2	1882.9	1881.8	1876.3	1876.3	1867.4	1860.8
20°	1855.3	1842.0	1838.7	1834.2	1838.7	1834.2	1827.6	1823.2	1822.1	1813.2	1807.7
22.5°	1806.6	1791.1	1793.3	1781.1	1782.2	1775.6	1764.5	1760.1	1755.6	1745.7	1737.9
25°	1747.9	1732.4	1721.3	1713.6	1703.6	1702.5	1688.1	1677.0	1675.9	1663.8	1662.7
27.5°	1681.5	1663.8	1654.9	1636.1	1623.9	1614.0	1601.8	1590.7	1585.2	1571.9	1563.0
30°	1605.1	1585.2	1563.0	1549.7	1530.9	1523.2	1502.1	1488.9	1484.4	1470.0	1463.4
32.5°	1518.8	1497.7	1480.0	1454.5	1433.5	1422.4	1401.4	1388.1	1382.6	1367.1	1358.2
35°	1424.7	1401.4	1380.4	1356.0	1339.4	1320.6	1295.1	1281.9	1269.7	1264.2	1257.5
37.5°	1326.1	1300.7	1276.3	1252.0	1237.6	1215.4	1193.3	1184.4	1170.1	1164.5	1157.9
40°	1224.3	1198.8	1175.6	1152.3	1135.7	1115.8	1095.9	1092.6	1077.1	1071.5	1067.1
42.5°	1123.6	1097.0	1070.4	1053.8	1041.7	1021.7	1008.4	1005.1	991.8	988.5	988.5
45°	1032.8	999.6	977.4	963.1	953.1	936.5	925.4	923.2	912.1	909.9	909.9
47.5°	935.4	904.4	887.8	878.9	870.1	857.9	851.3	851.3	840.2	838.0	836.9
50°	844.6	815.8	803.7	794.8	793.7	784.8	779.3	777.1	777.1	769.3	770.4
52.5°	758.3	743.9	733.9	728.4	721.7	716.2	711.8	711.8	708.5	702.9	705.1
55°	678.6	662.0	663.1	658.6	655.3	652.0	653.1	646.5	645.4	640.9	644.3
57.5°	598.9	598.9	596.7	593.3	587.8	590.0	590.0	590.0	584.5	581.2	584.5
60°	531.3	534.7	529.1	532.4	530.2	531.3	529.1	529.1	525.8	524.7	525.8
62.5°	471.6	477.1	474.9	479.3	477.1	478.2	480.4	476.0	473.8	471.6	473.8
65°	418.4	425.1	424.0	427.3	428.4	429.5	430.6	428.4	426.2	424.0	422.9
67.5°	371.9	378.6	383.0	384.1	385.2	388.5	387.4	385.2	383.0	379.7	378.6
70°	329.9	338.7	344.3	346.5	350.9	348.7	348.7	347.6	345.4	342.1	340.9
72.5°	294.5	304.4	309.9	312.2	316.6	316.6	315.5	314.4	312.2	308.8	307.7
75°	263.5	272.3	280.1	284.5	287.8	287.8	286.7	285.6	283.4	281.2	280.1
77.5°	239.1	246.9	253.5	259.0	261.2	262.4	261.2	259.0	259.0	257.9	256.8
80°	214.8	223.6	230.2	235.8	239.1	239.1	238.0	239.1	236.9	235.8	234.7
82.5°	193.7	203.7	211.4	217.0	219.2	220.3	219.2	220.3	218.1	218.1	218.1
85°	174.9	184.9	193.7	198.1	201.5	202.6	202.6	202.6	201.5	201.5	201.5
87.5°	159.4	169.4	178.2	182.6	186.0	187.1	187.1	188.2	186.0	186.0	186.0
90°	145.0	155.0	163.8	168.3	171.6	173.8	173.8	174.9	173.8	172.7	172.7
92.5°	131.7	142.8	151.7	156.1	159.4	162.7	162.7	163.8	161.6	161.6	161.6
95°	120.7	131.7	139.5	145.0	148.3	150.5	151.7	151.7	150.5	150.5	150.5
97.5°	110.7	120.7	128.4	133.9	137.3	138.4	139.5	140.6	139.5	139.5	139.5
100°	100.7	110.7	118.4	122.9	127.3	128.4	129.5	130.6	130.6	129.5	129.5
102.5°	91.9	101.8	108.5	114.0	117.3	119.6	120.7	120.7	120.7	120.7	120.7
105°	83.0	93.0	99.6	105.2	108.5	110.7	111.8	112.9	112.9	111.8	111.8
107.5°	75.3	84.1	91.9	96.3	100.7	102.9	104.1	104.1	105.2	104.1	104.1
110°	67.5	77.5	84.1	88.6	93.0	95.2	96.3	97.4	97.4	97.4	97.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	62.0	69.7	76.4	80.8	85.2	87.5	88.6	89.7	90.8	89.7	89.7
115°	55.3	63.1	69.7	74.2	77.5	79.7	81.9	83.0	83.0	84.1	83.0
117.5°	49.8	56.5	63.1	67.5	70.8	74.2	75.3	76.4	77.5	76.4	76.4
120°	44.3	50.9	56.5	60.9	64.2	67.5	68.6	69.7	70.8	69.7	69.7
122.5°	39.9	45.4	50.9	55.3	58.7	60.9	63.1	63.1	64.2	64.2	64.2
125°	35.4	41.0	45.4	49.8	53.1	55.3	56.5	57.6	57.6	58.7	58.7
127.5°	31.0	35.4	41.0	44.3	47.6	49.8	50.9	52.0	52.0	53.1	53.1
130°	26.6	31.0	35.4	38.7	42.1	44.3	45.4	46.5	47.6	47.6	47.6
132.5°	23.2	27.7	31.0	34.3	36.5	38.7	41.0	42.1	42.1	42.1	42.1
135°	18.8	23.2	26.6	29.9	32.1	34.3	35.4	37.6	37.6	37.6	37.6
137.5°	15.5	19.9	23.2	25.5	27.7	29.9	31.0	32.1	33.2	33.2	33.2
140°	12.2	15.5	18.8	22.1	24.4	25.5	27.7	27.7	28.8	28.8	28.8
142.5°	8.9	12.2	14.4	17.7	19.9	22.1	23.2	24.4	24.4	24.4	24.4
145°	6.6	8.9	11.1	13.3	16.6	17.7	18.8	19.9	21.0	21.0	21.0
147.5°	4.4	6.6	7.7	10.0	12.2	14.4	15.5	16.6	17.7	17.7	17.7
150°	3.3	4.4	6.6	7.7	8.9	11.1	13.3	13.3	14.4	14.4	13.3
152.5°	2.2	3.3	4.4	5.5	6.6	7.7	10.0	10.0	11.1	11.1	11.1
155°	2.2	2.2	2.2	3.3	4.4	5.5	6.6	7.7	7.7	7.7	7.7
157.5°	2.2	2.2	2.2	2.2	2.2	3.3	4.4	5.5	5.5	5.5	5.5
160°	2.2	2.2	1.1	1.1	2.2	2.2	2.2	2.2	3.3	3.3	3.3
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



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5
2.5°	2010.2	2012.5	2012.5	2010.2	2009.1	2013.6	2008.0	1987.0	1993.6	1995.9	2002.5
5°	2000.3	2002.5	2002.5	2002.5	2000.3	2004.7	1999.2	1978.1	1985.9	1989.2	1993.6
7.5°	1985.9	1987.0	1989.2	1988.1	1985.9	1992.5	1987.0	1966.0	1971.5	1977.0	1982.6
10°	1967.1	1967.1	1968.2	1970.4	1968.2	1973.7	1968.2	1949.4	1954.9	1958.2	1964.9
12.5°	1941.6	1943.8	1944.9	1943.8	1942.7	1947.1	1944.9	1927.2	1929.4	1936.1	1942.7
15°	1907.3	1907.3	1912.8	1910.6	1910.6	1915.0	1917.3	1897.3	1900.7	1910.6	1917.3
17.5°	1865.2	1866.3	1870.8	1873.0	1871.9	1879.6	1880.7	1865.2	1864.1	1876.3	1882.9
20°	1811.0	1813.2	1818.7	1823.2	1823.2	1832.0	1835.3	1825.4	1826.5	1839.8	1842.0
22.5°	1744.6	1744.6	1754.5	1761.2	1766.7	1772.2	1782.2	1773.4	1773.4	1791.1	1801.0
25°	1662.7	1670.4	1673.7	1687.0	1694.8	1710.3	1719.1	1720.2	1721.3	1737.9	1744.6
27.5°	1571.9	1574.1	1584.1	1599.6	1608.4	1622.8	1639.4	1642.7	1648.3	1670.4	1680.4
30°	1468.9	1475.6	1480.0	1502.1	1514.3	1533.1	1554.2	1561.9	1566.4	1596.2	1608.4
32.5°	1363.8	1366.0	1384.8	1397.0	1411.4	1431.3	1455.7	1470.0	1478.9	1509.9	1527.6
35°	1258.6	1263.0	1278.5	1294.0	1308.4	1328.4	1353.8	1373.7	1389.2	1416.9	1440.2
37.5°	1162.3	1173.4	1176.7	1192.2	1203.3	1223.2	1240.9	1269.7	1285.2	1314.0	1343.9
40°	1076.0	1079.3	1081.5	1097.0	1104.7	1123.6	1149.0	1167.8	1188.9	1209.9	1245.3
42.5°	990.7	992.9	996.3	1005.1	1014.0	1027.3	1046.1	1064.9	1087.0	1118.0	1141.3
45°	912.1	914.4	916.6	922.1	929.8	942.0	954.2	967.5	989.6	1016.2	1040.5
47.5°	839.1	843.5	843.5	844.6	850.1	860.1	869.0	885.6	897.7	912.1	939.8
50°	769.3	772.7	773.8	773.8	777.1	783.7	785.9	797.0	808.1	821.4	841.3
52.5°	704.0	704.0	702.9	707.3	707.3	711.8	712.9	719.5	727.3	741.7	750.5
55°	642.0	642.0	645.4	643.1	643.1	645.4	644.3	645.4	652.0	660.9	668.6
57.5°	582.3	581.2	584.5	582.3	581.2	583.4	585.6	581.2	582.3	591.1	591.1
60°	522.5	523.6	526.9	524.7	524.7	524.7	522.5	520.3	518.1	523.6	525.8
62.5°	474.9	471.6	474.9	471.6	473.8	472.7	470.5	466.0	467.1	464.9	462.7
65°	425.1	425.1	426.2	422.9	425.1	425.1	421.8	420.6	414.0	411.8	406.3
67.5°	381.9	381.9	383.0	380.8	380.8	381.9	378.6	375.3	368.6	365.3	357.5
70°	344.3	344.3	344.3	343.2	343.2	343.2	340.9	336.5	329.9	324.3	314.4
72.5°	309.9	311.1	309.9	309.9	313.3	309.9	306.6	302.2	296.7	285.6	276.7
75°	282.3	283.4	282.3	282.3	282.3	281.2	280.1	273.4	266.8	257.9	244.6
77.5°	257.9	257.9	259.0	257.9	257.9	256.8	253.5	248.0	240.2	232.5	217.0
80°	234.7	235.8	236.9	238.0	235.8	234.7	231.4	226.9	217.0	208.1	192.6
82.5°	218.1	217.0	218.1	219.2	217.0	215.9	212.5	207.0	199.3	187.1	171.6
85°	201.5	200.4	200.4	201.5	200.4	198.1	194.8	189.3	181.5	169.4	153.9
87.5°	184.9	186.0	187.1	186.0	184.9	182.6	179.3	173.8	164.9	155.0	138.4
90°	172.7	172.7	172.7	172.7	171.6	169.4	166.0	159.4	151.7	139.5	125.1
92.5°	161.6	161.6	161.6	161.6	160.5	157.2	153.9	148.3	139.5	127.3	114.0
95°	150.5	151.7	150.5	150.5	148.3	147.2	141.7	136.2	128.4	116.2	101.8
97.5°	138.4	139.5	138.4	138.4	137.3	135.0	131.7	125.1	117.3	106.3	93.0
100°	129.5	129.5	128.4	128.4	127.3	125.1	120.7	115.1	107.4	96.3	83.0
102.5°	119.6	120.7	119.6	119.6	117.3	115.1	111.8	106.3	98.5	87.5	75.3
105°	111.8	111.8	110.7	110.7	108.5	106.3	102.9	96.3	89.7	79.7	67.5
107.5°	104.1	104.1	102.9	102.9	100.7	98.5	94.1	88.6	81.9	72.0	60.9
110°	96.3	96.3	96.3	95.2	93.0	89.7	86.3	80.8	74.2	65.3	54.2



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	90.8	89.7	88.6	87.5	85.2	83.0	78.6	73.1	66.4	58.7	48.7
115°	83.0	83.0	81.9	80.8	78.6	75.3	72.0	67.5	60.9	52.0	43.2
117.5°	76.4	76.4	75.3	74.2	72.0	68.6	65.3	60.9	54.2	46.5	38.7
120°	69.7	69.7	68.6	67.5	65.3	62.0	59.8	54.2	48.7	41.0	34.3
122.5°	64.2	63.1	63.1	60.9	59.8	56.5	53.1	48.7	43.2	36.5	29.9
125°	57.6	57.6	56.5	55.3	54.2	50.9	47.6	43.2	37.6	32.1	26.6
127.5°	52.0	52.0	50.9	49.8	48.7	45.4	42.1	38.7	33.2	27.7	22.1
130°	46.5	46.5	45.4	44.3	43.2	39.9	37.6	33.2	28.8	24.4	18.8
132.5°	42.1	42.1	41.0	39.9	37.6	35.4	33.2	28.8	25.5	21.0	16.6
135°	37.6	36.5	36.5	35.4	33.2	31.0	28.8	25.5	21.0	17.7	13.3
137.5°	33.2	32.1	31.0	29.9	28.8	26.6	24.4	22.1	18.8	14.4	11.1
140°	28.8	27.7	27.7	26.6	24.4	23.2	21.0	17.7	15.5	12.2	8.9
142.5°	24.4	24.4	23.2	22.1	21.0	19.9	17.7	15.5	12.2	10.0	6.6
145°	21.0	19.9	19.9	18.8	17.7	15.5	14.4	12.2	10.0	7.7	5.5
147.5°	16.6	16.6	16.6	15.5	14.4	13.3	12.2	10.0	7.7	5.5	3.3
150°	13.3	13.3	13.3	12.2	11.1	10.0	8.9	7.7	5.5	3.3	2.2
152.5°	11.1	11.1	10.0	10.0	8.9	7.7	6.6	5.5	3.3	2.2	2.2
155°	7.7	7.7	7.7	6.6	6.6	5.5	4.4	3.3	2.2	2.2	2.2
157.5°	5.5	5.5	5.5	4.4	4.4	3.3	3.3	2.2	2.2	2.2	2.2
160°	3.3	3.3	3.3	3.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5	2012.5
2.5°	1999.2	1998.1	2006.9	2006.9	1997.0	2012.5	2029.1
5°	1992.5	1991.4	2000.3	2000.3	1991.4	2006.9	2024.6
7.5°	1979.2	1980.4	1989.2	1991.4	1980.4	1994.7	2013.6
10°	1964.9	1963.8	1973.7	1975.9	1967.1	1980.4	1998.1
12.5°	1941.6	1941.6	1951.6	1954.9	1946.0	1961.5	1978.1
15°	1917.3	1917.3	1923.9	1929.4	1921.7	1936.1	1952.7
17.5°	1886.3	1885.2	1891.8	1898.4	1890.7	1906.2	1923.9
20°	1846.4	1846.4	1854.2	1861.9	1856.4	1870.8	1890.7
22.5°	1804.3	1799.9	1813.2	1818.7	1815.4	1829.8	1849.7
25°	1751.2	1750.1	1763.4	1771.1	1766.7	1782.2	1799.9
27.5°	1693.7	1692.5	1705.8	1715.8	1713.6	1728.0	1747.9
30°	1623.9	1629.4	1641.6	1658.2	1652.7	1668.2	1689.2
32.5°	1550.9	1556.4	1570.8	1588.5	1589.6	1601.8	1622.8
35°	1463.4	1477.8	1487.8	1511.0	1515.4	1527.6	1549.7
37.5°	1371.5	1388.1	1409.2	1426.9	1435.7	1445.7	1471.2
40°	1268.6	1292.9	1316.2	1337.2	1348.3	1358.2	1382.6
42.5°	1175.6	1194.4	1216.6	1237.6	1257.5	1266.4	1291.8
45°	1070.4	1092.6	1112.5	1138.0	1157.9	1167.8	1193.3
47.5°	967.5	989.6	1016.2	1033.9	1054.9	1064.9	1089.3
50°	869.0	888.9	911.0	932.1	949.8	958.6	979.7
52.5°	771.6	792.6	813.6	826.9	845.7	852.4	870.1
55°	685.2	699.6	718.4	726.2	745.0	749.4	761.6
57.5°	602.2	612.2	618.8	632.1	645.4	655.3	669.7
60°	526.9	531.3	535.8	543.5	554.6	557.9	563.4
62.5°	459.4	458.3	467.1	469.4	470.5	481.5	476.0
65°	399.6	400.7	393.0	389.7	394.1	397.4	395.2
67.5°	349.8	343.2	336.5	328.8	322.1	325.4	322.1
70°	301.1	295.6	284.5	273.4	269.0	262.4	259.0
72.5°	262.4	249.1	238.0	223.6	215.9	208.1	202.6
75°	232.5	213.6	198.1	182.6	171.6	160.5	158.3
77.5°	201.5	183.8	166.0	149.4	132.8	120.7	116.2
80°	177.1	160.5	139.5	119.6	101.8	86.3	80.8
82.5°	155.0	137.3	116.2	95.2	75.3	58.7	52.0
85°	136.2	117.3	96.3	75.3	55.3	37.6	28.8
87.5°	121.8	100.7	79.7	59.8	38.7	21.0	11.1
90°	108.5	88.6	68.6	47.6	27.7	11.1	0.0
92.5°	96.3	77.5	57.6	38.7	21.0	6.6	1.1
95°	85.2	68.6	48.7	31.0	15.5	4.4	1.1
97.5°	76.4	59.8	42.1	25.5	12.2	3.3	1.1
100°	68.6	52.0	36.5	21.0	10.0	2.2	1.1
102.5°	60.9	46.5	31.0	17.7	7.7	1.1	1.1
105°	54.2	41.0	26.6	15.5	6.6	1.1	1.1
107.5°	48.7	36.5	23.2	13.3	4.4	1.1	1.1
110°	43.2	31.0	19.9	11.1	3.3	1.1	1.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-64SL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	38.7	27.7	17.7	8.9	2.2	1.1	1.1
115°	34.3	24.4	15.5	7.7	2.2	1.1	1.1
117.5°	29.9	21.0	13.3	5.5	1.1	1.1	1.1
120°	26.6	18.8	11.1	4.4	1.1	1.1	1.1
122.5°	23.2	15.5	8.9	3.3	1.1	1.1	1.1
125°	19.9	13.3	7.7	2.2	1.1	1.1	1.1
127.5°	16.6	11.1	5.5	2.2	1.1	1.1	1.1
130°	14.4	8.9	4.4	1.1	1.1	1.1	1.1
132.5°	12.2	6.6	3.3	1.1	1.1	1.1	1.1
135°	10.0	5.5	2.2	1.1	1.1	1.1	1.1
137.5°	7.7	4.4	2.2	1.1	1.1	1.1	1.1
140°	5.5	3.3	1.1	1.1	1.1	1.1	1.1
142.5°	4.4	2.2	1.1	1.1	1.1	1.1	1.1
145°	3.3	2.2	1.1	1.1	1.1	1.1	1.1
147.5°	2.2	2.2	2.2	2.2	1.1	1.1	1.1
150°	2.2	2.2	1.1	1.1	2.2	1.1	1.1
152.5°	2.2	1.1	1.1	1.1	2.2	1.1	1.1
155°	2.2	2.2	2.2	2.2	2.2	2.2	1.1
157.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2
160°	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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)