

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1213148

Luminaire Tested: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213148
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33518)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR LENSED
Light Source: -
Ballast/Driver: -

Summary

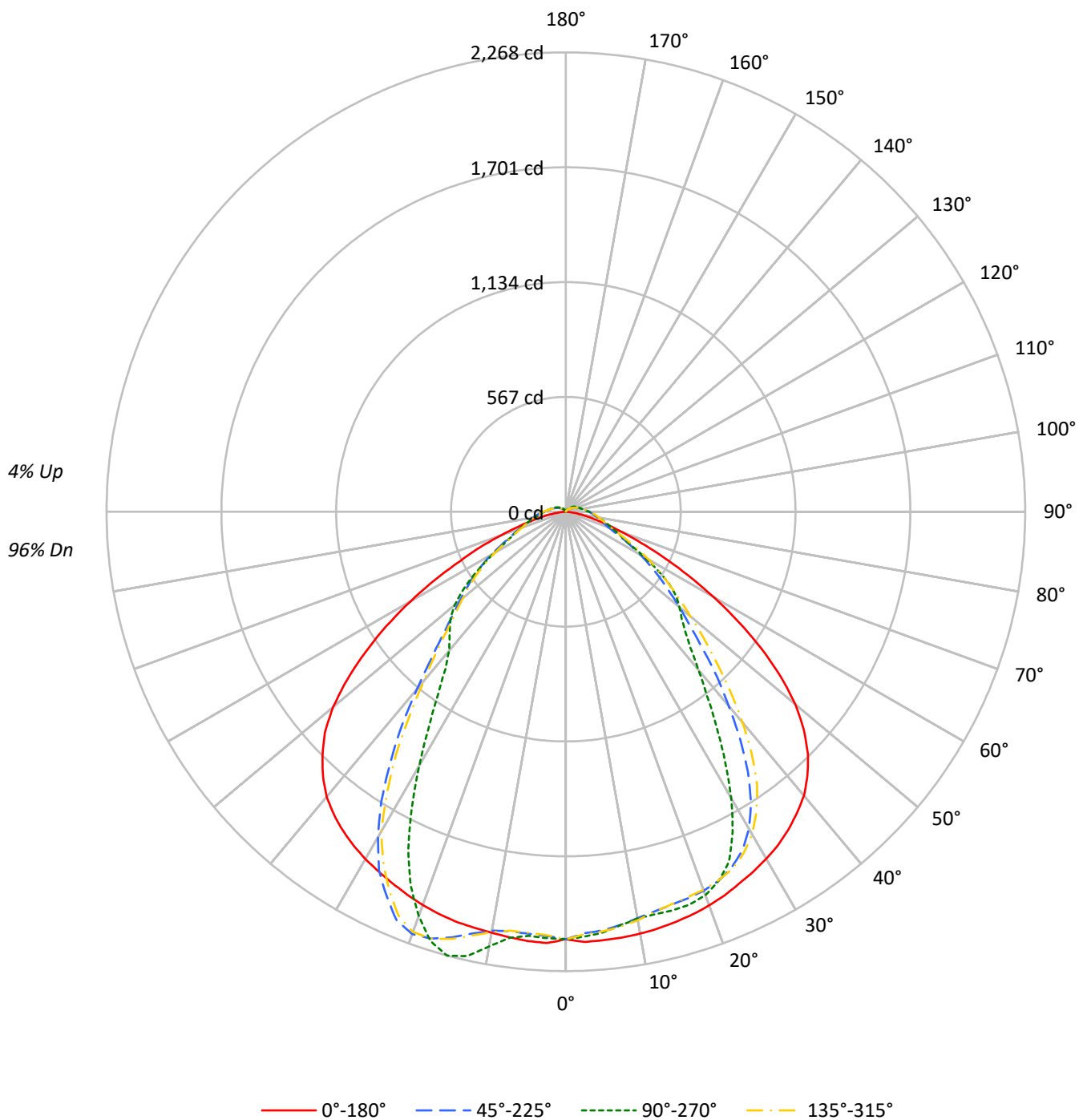
Lumens per Lamp: N/A
Luminaire Lumens: 5031.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.12 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

Luminous Intensity Polar Plot



TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	98	98	96
1	109	104	100	97	106	102	98	95	97	94	91	92	90	88	88	86	84	84	84	82
2	100	93	86	81	97	90	85	80	86	82	77	82	79	75	79	76	73	73	73	71
3	92	83	75	69	89	81	74	68	77	71	67	74	69	65	71	67	63	63	63	61
4	85	74	66	60	83	73	65	59	70	63	58	67	61	57	64	60	56	56	56	54
5	79	67	59	52	76	66	58	52	63	56	51	61	55	50	59	53	49	49	49	47
6	73	61	52	46	71	60	52	46	57	51	45	55	49	45	54	48	44	44	44	42
7	68	55	47	42	66	54	47	41	53	46	41	51	45	40	49	44	40	40	40	38
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36	36	36	34
9	60	47	39	34	58	46	39	34	45	38	33	43	37	33	42	37	33	33	33	31
10	56	43	36	31	54	43	36	31	42	35	30	40	34	30	39	34	30	30	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	17054	17054	17054	17054
5°	17179	16378	17213	16507
10°	17257	15697	17222	16762
15°	17391	15487	17382	17243
20°	17583	15242	17564	16066
25°	17800	14459	17790	13971
30°	18135	12531	18145	11102
35°	18490	10134	18542	8575
40°	18802	8159	18881	7188
45°	18736	6911	18833	6730
50°	17929	6363	18179	6221
55°	15908	5719	16304	5199
60°	12902	4377	13587	4015
65°	9591	3349	10333	3176
70°	6523	2890	7352	2764
75°	4267	2609	4969	2467
80°	2759	2432	3234	2237
85°	1414	2426	1865	2215

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 18833 cd/sqm

TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.5	4.0
10°-20°	596.4	11.9
20°-30°	906.8	18.0
30°-40°	972.7	19.3
40°-50°	844.2	16.8
50°-60°	625.7	12.4
60°-70°	358.5	7.1
70°-80°	198.5	3.9
80°-90°	120.9	2.4
90°-100°	78.6	1.6
100°-110°	52.6	1.0
110°-120°	35.6	0.7
120°-130°	21.8	0.4
130°-140°	11.5	0.2
140°-150°	5.2	0.1
150°-160°	1.5	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1703.7	33.9
0°-40°	2676.4	53.2
0°-60°	4146.3	82.4
0°-90°	4824.1	95.9
90°-120°	166.8	3.3
90°-150°	205.3	4.1
90°-180°	207.0	4.1
0°-180°	5031.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2110	2110	2110	2110	2110	
5°	2124	2085	2128	2102	2124	202
15°	2096	2037	2095	2268	2096	593
25°	2025	1905	2024	1841	2025	936
35°	1915	1297	1921	1098	1915	1199
45°	1691	832	1699	810	1691	1294
55°	1180	624	1209	567	1180	1046
65°	535	316	577	300	535	540
75°	153	201	178	190	153	174
85°	21	138	27	126	21	27
90°	0	116	2	107	0	1
95°	1	95	0	90	1	1
105°	1	71	1	68	1	1
115°	1	58	1	52	1	1
125°	1	44	1	36	1	1
135°	1	27	1	23	1	1
145°	1	16	2	13	1	1
155°	2	8	2	6	2	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4
2.5°	2125.6	2120.2	2118.0	2113.6	2116.9	2130.0	2121.3	2107.1	2108.2	2083.1	2096.2
5°	2123.5	2116.9	2113.6	2109.3	2111.5	2123.5	2114.7	2100.6	2099.5	2074.4	2086.4
7.5°	2120.2	2113.6	2108.2	2104.9	2106.0	2115.8	2104.9	2088.6	2085.3	2058.1	2069.0
10°	2114.7	2110.4	2102.7	2097.3	2096.2	2107.1	2089.7	2073.3	2065.7	2037.3	2048.2
12.5°	2107.1	2100.6	2092.9	2083.1	2082.0	2088.6	2074.4	2051.5	2043.9	2021.0	2033.0
15°	2096.2	2088.6	2079.9	2069.0	2063.5	2067.9	2050.4	2029.7	2028.6	2009.0	2025.4
17.5°	2084.2	2073.3	2063.5	2048.2	2040.6	2043.9	2029.7	2011.2	2013.4	2001.4	2019.9
20°	2067.9	2055.9	2040.6	2025.4	2014.5	2019.9	2010.1	1995.9	1999.2	1990.5	2006.8
22.5°	2049.3	2033.0	2014.5	1997.0	1988.3	1995.9	1988.3	1976.3	1977.4	1971.9	1981.7
25°	2025.4	2006.8	1985.0	1963.2	1958.9	1964.3	1959.9	1950.1	1945.8	1937.1	1941.4
27.5°	2003.5	1982.8	1955.6	1932.7	1925.1	1936.0	1926.2	1909.8	1897.8	1885.8	1877.1
30°	1978.5	1953.4	1922.9	1896.7	1890.2	1894.5	1880.4	1855.3	1823.7	1808.4	1784.4
32.5°	1951.2	1918.5	1880.4	1850.9	1846.6	1843.3	1817.1	1781.2	1732.1	1701.6	1664.5
35°	1915.3	1879.3	1833.5	1797.5	1791.0	1772.5	1729.9	1682.0	1618.8	1566.4	1503.2
37.5°	1874.9	1832.4	1784.4	1736.5	1718.0	1680.9	1620.9	1570.8	1474.9	1411.6	1335.3
40°	1829.1	1777.9	1719.0	1661.3	1630.7	1570.8	1502.1	1428.0	1335.3	1250.3	1186.0
42.5°	1765.9	1711.4	1641.6	1577.3	1525.0	1445.4	1364.8	1260.1	1175.1	1103.2	1037.7
45°	1690.7	1625.3	1544.6	1467.2	1400.7	1305.9	1211.1	1106.4	1035.6	951.6	906.9
47.5°	1593.7	1522.8	1436.7	1350.6	1263.4	1158.7	1059.5	959.3	888.4	828.5	795.8
50°	1479.2	1413.8	1319.0	1216.5	1120.6	1011.6	912.4	837.2	768.5	731.4	706.4
52.5°	1337.5	1276.5	1179.5	1068.3	975.6	868.8	778.3	717.3	668.2	641.0	632.2
55°	1179.5	1126.0	1030.1	926.6	831.7	733.6	664.9	611.5	579.9	563.6	564.7
57.5°	1010.5	969.1	878.6	785.9	696.6	622.4	560.3	517.8	493.8	492.7	496.0
60°	841.5	811.0	732.5	653.0	574.5	514.5	468.7	439.3	424.0	425.1	424.0
62.5°	680.2	651.9	595.2	529.8	467.6	427.3	385.9	373.9	360.8	359.7	359.7
65°	535.2	513.4	467.6	420.8	373.9	347.7	327.0	312.9	303.0	300.9	301.9
67.5°	402.2	393.5	361.9	330.3	300.9	284.5	267.1	263.8	256.2	256.2	258.3
70°	299.8	293.2	275.8	257.3	245.3	234.4	225.6	225.6	224.6	223.5	228.9
72.5°	216.9	218.0	212.6	198.4	197.3	195.1	192.9	196.2	197.3	200.6	207.1
75°	152.6	155.9	155.9	153.7	158.1	163.5	166.8	172.2	178.8	183.1	190.8
77.5°	107.9	107.9	113.4	119.9	128.6	138.4	147.2	154.8	163.5	169.0	175.5
80°	69.8	73.0	81.8	93.7	105.7	118.8	130.8	140.6	149.3	158.1	162.4
82.5°	41.4	46.9	57.8	73.0	88.3	104.6	116.6	128.6	138.4	147.2	150.4
85°	20.7	28.3	41.4	57.8	74.1	91.6	106.8	117.7	128.6	136.3	140.6
87.5°	6.5	15.3	29.4	44.7	62.1	79.6	95.9	107.9	117.7	124.3	128.6
90°	0.0	7.6	20.7	37.1	53.4	70.9	86.1	99.2	109.0	114.5	117.7
92.5°	0.0	4.4	16.4	30.5	45.8	63.2	78.5	90.5	99.2	104.6	106.8
95°	1.1	3.3	12.0	25.1	40.3	56.7	70.9	81.8	90.5	95.9	97.0
97.5°	1.1	2.2	9.8	20.7	34.9	50.1	64.3	75.2	81.8	87.2	88.3
100°	1.1	2.2	7.6	18.5	30.5	44.7	57.8	67.6	75.2	79.6	80.7
102.5°	1.1	1.1	6.5	15.3	27.3	39.2	51.2	61.0	67.6	71.9	74.1
105°	1.1	1.1	5.5	13.1	24.0	34.9	45.8	55.6	61.0	65.4	67.6
107.5°	1.1	1.1	4.4	10.9	20.7	30.5	41.4	49.1	55.6	60.0	62.1
110°	1.1	1.1	3.3	9.8	17.4	27.3	36.0	43.6	50.1	54.5	56.7

TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.1	1.1	3.3	8.7	15.3	24.0	31.6	39.2	44.7	49.1	52.3
115°	1.1	1.1	3.3	7.6	14.2	20.7	28.3	34.9	40.3	44.7	48.0
117.5°	1.1	1.1	3.3	6.5	12.0	18.5	25.1	31.6	36.0	40.3	43.6
120°	1.1	1.1	2.2	5.5	10.9	16.4	21.8	27.3	32.7	37.1	40.3
122.5°	1.1	1.1	2.2	5.5	8.7	14.2	19.6	24.0	29.4	32.7	36.0
125°	1.1	1.1	2.2	4.4	7.6	13.1	17.4	21.8	25.1	29.4	32.7
127.5°	1.1	1.1	2.2	4.4	6.5	10.9	15.3	19.6	22.9	26.2	28.3
130°	1.1	1.1	2.2	3.3	5.5	8.7	13.1	16.4	20.7	22.9	25.1
132.5°	1.1	1.1	1.1	3.3	4.4	6.5	9.8	14.2	17.4	20.7	21.8
135°	1.1	1.1	1.1	2.2	4.4	5.5	7.6	10.9	14.2	17.4	19.6
137.5°	1.1	1.1	1.1	2.2	3.3	5.5	6.5	8.7	12.0	14.2	17.4
140°	1.1	1.1	1.1	2.2	3.3	4.4	5.5	7.6	9.8	12.0	14.2
142.5°	1.1	1.1	1.1	2.2	2.2	3.3	4.4	6.5	7.6	9.8	12.0
145°	1.1	1.1	1.1	2.2	2.2	3.3	4.4	5.5	6.5	7.6	9.8
147.5°	1.1	1.1	1.1	2.2	2.2	2.2	3.3	4.4	5.5	6.5	7.6
150°	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.3	4.4	5.5	6.5
152.5°	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.3	3.3	4.4	5.5
155°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.3	4.4	4.4
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: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4
2.5°	2091.8	2094.0	2107.1	2106.0	2103.8	2101.7	2101.7	2099.5	2101.7	2107.1	2104.9
5°	2080.9	2084.2	2094.0	2092.9	2090.8	2089.7	2088.6	2085.3	2087.5	2095.1	2092.9
7.5°	2061.3	2064.6	2073.3	2069.0	2065.7	2067.9	2062.4	2059.1	2063.5	2071.1	2070.0
10°	2040.6	2042.8	2053.7	2051.5	2046.1	2047.2	2041.7	2039.5	2045.0	2049.3	2050.4
12.5°	2026.4	2034.1	2043.9	2042.8	2041.7	2042.8	2037.3	2035.2	2038.4	2042.8	2041.7
15°	2023.2	2033.0	2043.9	2043.9	2045.0	2046.1	2040.6	2037.3	2040.6	2043.9	2042.8
17.5°	2019.9	2031.9	2041.7	2040.6	2041.7	2043.9	2035.2	2033.0	2037.3	2041.7	2039.5
20°	2009.0	2019.9	2026.4	2024.3	2024.3	2025.4	2014.5	2014.5	2021.0	2024.3	2025.4
22.5°	1978.5	1991.6	1991.6	1986.1	1986.1	1981.7	1978.5	1971.9	1979.6	1985.0	1989.4
25°	1932.7	1938.1	1931.6	1919.6	1913.1	1907.6	1892.4	1905.4	1905.4	1921.8	1927.2
27.5°	1868.4	1856.4	1837.9	1812.8	1807.3	1789.9	1780.1	1783.4	1788.8	1811.7	1829.1
30°	1762.6	1726.7	1695.1	1684.2	1660.2	1642.7	1625.3	1634.0	1643.8	1656.9	1692.9
32.5°	1623.1	1588.2	1537.0	1518.5	1493.4	1471.6	1450.9	1464.0	1481.4	1490.1	1529.4
35°	1462.9	1421.5	1374.6	1343.0	1316.8	1304.8	1278.7	1297.2	1315.7	1322.3	1356.0
37.5°	1292.8	1250.3	1208.9	1181.6	1156.6	1148.9	1131.5	1144.6	1158.7	1168.6	1196.9
40°	1131.5	1092.3	1060.6	1042.1	1024.7	1018.1	1011.6	1017.0	1027.9	1035.6	1057.4
42.5°	993.1	961.4	939.6	928.7	916.7	908.0	909.1	911.3	916.7	933.1	942.9
45°	872.1	853.5	839.4	837.2	829.5	828.5	827.4	831.7	835.0	844.8	852.4
47.5°	775.0	767.4	764.1	768.5	771.8	767.4	769.6	775.0	781.6	781.6	780.5
50°	698.7	700.9	705.3	715.1	721.6	723.8	726.0	732.5	733.6	735.8	732.5
52.5°	636.6	638.8	650.8	666.0	673.7	676.9	681.3	687.8	687.8	690.0	685.7
55°	573.4	576.6	588.6	603.9	610.4	614.8	619.2	623.5	626.8	631.2	627.9
57.5°	503.6	513.4	521.1	525.4	529.8	533.0	536.3	537.4	543.9	545.0	550.5
60°	429.5	431.7	439.3	438.2	434.9	443.7	439.3	446.9	454.6	464.4	465.5
62.5°	358.6	359.7	365.2	363.0	367.4	366.3	369.5	369.5	375.0	379.3	384.8
65°	303.0	304.1	308.5	308.5	307.4	310.7	313.9	316.1	316.1	319.4	323.8
67.5°	261.6	264.9	269.2	271.4	273.6	273.6	276.9	278.0	280.1	281.2	283.4
70°	233.3	237.6	242.0	244.2	245.3	247.4	248.5	248.5	250.7	251.8	254.0
72.5°	212.6	216.9	220.2	220.2	222.4	223.5	223.5	224.6	225.6	227.8	230.0
75°	195.1	198.4	200.6	199.5	199.5	199.5	200.6	200.6	202.8	204.9	207.1
77.5°	178.8	182.0	182.0	179.9	179.9	179.9	179.9	181.0	182.0	184.2	186.4
80°	166.8	166.8	165.7	165.7	163.5	162.4	162.4	163.5	163.5	165.7	169.0
82.5°	153.7	153.7	152.6	151.5	150.4	149.3	149.3	150.4	151.5	152.6	154.8
85°	141.7	141.7	139.5	139.5	138.4	138.4	138.4	138.4	139.5	140.6	142.8
87.5°	129.7	128.6	127.5	126.4	126.4	126.4	126.4	126.4	127.5	129.7	130.8
90°	117.7	116.6	115.5	115.5	114.5	114.5	115.5	115.5	116.6	117.7	118.8
92.5°	106.8	105.7	104.6	104.6	103.6	103.6	104.6	103.6	105.7	105.7	106.8
95°	97.0	95.9	94.8	94.8	94.8	94.8	94.8	94.8	95.9	95.9	97.0
97.5°	88.3	87.2	86.1	86.1	87.2	86.1	87.2	87.2	87.2	88.3	89.4
100°	80.7	79.6	79.6	80.7	79.6	79.6	80.7	80.7	80.7	80.7	81.8
102.5°	74.1	74.1	74.1	74.1	74.1	74.1	75.2	75.2	75.2	75.2	76.3
105°	67.6	68.7	68.7	68.7	69.8	69.8	69.8	70.9	70.9	70.9	70.9
107.5°	63.2	64.3	64.3	65.4	65.4	66.5	66.5	66.5	66.5	67.6	67.6
110°	58.9	60.0	61.0	62.1	62.1	63.2	63.2	63.2	63.2	63.2	63.2



TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	54.5	55.6	56.7	58.9	60.0	60.0	60.0	60.0	61.0	61.0	60.0
115°	50.1	52.3	53.4	55.6	56.7	56.7	57.8	57.8	57.8	57.8	56.7
117.5°	45.8	49.1	50.1	52.3	53.4	53.4	54.5	54.5	54.5	54.5	53.4
120°	42.5	44.7	46.9	48.0	49.1	50.1	50.1	51.2	51.2	51.2	50.1
122.5°	39.2	41.4	43.6	44.7	45.8	46.9	46.9	46.9	46.9	46.9	46.9
125°	34.9	37.1	39.2	40.3	41.4	42.5	42.5	43.6	43.6	43.6	42.5
127.5°	31.6	33.8	34.9	37.1	38.2	38.2	39.2	39.2	39.2	39.2	38.2
130°	27.3	29.4	31.6	32.7	33.8	33.8	34.9	34.9	34.9	34.9	34.9
132.5°	24.0	26.2	27.3	29.4	29.4	30.5	30.5	31.6	31.6	31.6	30.5
135°	21.8	22.9	24.0	26.2	26.2	27.3	27.3	27.3	27.3	27.3	27.3
137.5°	19.6	20.7	21.8	22.9	22.9	24.0	24.0	24.0	24.0	25.1	24.0
140°	16.4	18.5	19.6	19.6	20.7	20.7	20.7	21.8	21.8	21.8	20.7
142.5°	14.2	15.3	16.4	17.4	18.5	18.5	18.5	18.5	19.6	18.5	18.5
145°	10.9	13.1	14.2	15.3	16.4	16.4	16.4	16.4	16.4	16.4	16.4
147.5°	8.7	9.8	12.0	13.1	13.1	14.2	14.2	14.2	14.2	14.2	14.2
150°	7.6	7.6	9.8	10.9	12.0	12.0	12.0	12.0	12.0	12.0	12.0
152.5°	5.5	6.5	7.6	8.7	9.8	9.8	9.8	9.8	9.8	9.8	9.8
155°	5.5	5.5	6.5	6.5	7.6	7.6	7.6	7.6	8.7	7.6	7.6
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: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4
2.5°	2101.7	2100.6	2104.9	2100.6	2078.8	2087.5	2084.2	2096.2	2097.3	2100.6	2111.5
5°	2090.8	2090.8	2096.2	2091.8	2071.1	2079.9	2078.8	2090.8	2092.9	2095.1	2107.1
7.5°	2069.0	2070.0	2077.7	2074.4	2052.6	2065.7	2064.6	2078.8	2083.1	2087.5	2098.4
10°	2048.2	2047.2	2055.9	2052.6	2031.9	2047.2	2046.1	2060.2	2066.8	2074.4	2087.5
12.5°	2037.3	2034.1	2037.3	2034.1	2011.2	2023.2	2024.3	2040.6	2048.2	2058.1	2073.3
15°	2037.3	2031.9	2031.9	2025.4	1999.2	2006.8	2007.9	2018.8	2028.6	2038.4	2057.0
17.5°	2035.2	2029.7	2028.6	2023.2	1994.8	1994.8	1993.7	2001.4	2006.8	2016.6	2036.3
20°	2023.2	2021.0	2019.9	2016.6	1990.5	1986.1	1983.9	1983.9	1987.2	1990.5	2010.1
22.5°	1991.6	1993.7	1995.9	1998.1	1977.4	1969.8	1970.8	1968.7	1965.4	1965.4	1981.7
25°	1932.7	1943.6	1952.3	1962.1	1950.1	1944.7	1951.2	1948.0	1942.5	1938.1	1952.3
27.5°	1838.9	1861.8	1880.4	1904.4	1905.4	1901.1	1918.5	1916.3	1915.3	1908.7	1919.6
30°	1709.2	1745.2	1770.3	1805.2	1834.6	1838.9	1868.4	1872.7	1877.1	1873.8	1884.7
32.5°	1552.3	1601.3	1643.8	1698.3	1726.7	1751.7	1793.2	1810.6	1828.0	1833.5	1845.5
35°	1381.1	1436.7	1486.9	1546.8	1591.5	1646.0	1696.2	1722.3	1761.6	1776.8	1794.3
37.5°	1218.7	1271.0	1320.1	1380.0	1452.0	1508.7	1570.8	1629.7	1683.1	1704.9	1731.0
40°	1074.8	1117.3	1164.2	1216.5	1281.9	1356.0	1423.6	1505.4	1568.6	1612.2	1650.4
42.5°	965.8	986.5	1026.8	1073.7	1126.0	1201.3	1269.9	1361.5	1437.8	1499.9	1563.2
45°	868.8	878.6	908.0	933.1	986.5	1053.0	1126.0	1215.4	1295.0	1374.6	1450.9
47.5°	785.9	797.9	812.1	827.4	865.5	921.1	984.3	1065.0	1144.6	1237.2	1324.4
50°	730.3	733.6	735.8	742.3	765.2	803.4	854.6	923.3	999.6	1098.8	1191.4
52.5°	681.3	681.3	674.8	671.5	680.2	704.2	733.6	782.7	861.2	952.7	1050.8
55°	629.0	619.2	617.0	606.1	608.3	619.2	633.3	671.5	735.8	814.3	909.1
57.5°	555.9	551.6	551.6	547.2	538.5	543.9	547.2	574.5	620.3	687.8	770.7
60°	472.0	469.8	475.3	476.4	468.7	472.0	470.9	487.3	520.0	574.5	643.1
62.5°	388.1	397.9	399.0	403.3	399.0	397.9	403.3	417.5	433.8	475.3	528.7
65°	325.9	331.4	332.5	337.9	335.7	335.7	340.1	351.0	360.8	389.2	430.6
67.5°	285.6	283.4	284.5	287.8	284.5	283.4	286.7	293.2	300.9	318.3	347.7
70°	254.0	251.8	251.8	251.8	247.4	244.2	245.3	247.4	250.7	260.5	279.1
72.5°	230.0	230.0	226.7	223.5	220.2	218.0	215.8	213.7	212.6	215.8	225.6
75°	208.2	209.3	208.2	204.9	200.6	196.2	191.9	187.5	182.0	179.9	181.0
77.5°	188.6	189.7	190.8	189.7	185.3	179.9	173.3	166.8	159.2	151.5	147.2
80°	171.1	173.3	174.4	173.3	170.1	165.7	158.1	150.4	139.5	129.7	118.8
82.5°	155.9	159.2	160.2	160.2	158.1	153.7	145.0	136.3	124.3	111.2	97.0
85°	143.9	146.1	148.2	148.2	147.2	142.8	134.1	124.3	112.3	97.0	81.8
87.5°	131.9	133.0	135.2	137.3	135.2	130.8	123.2	112.3	100.3	85.0	67.6
90°	119.9	121.0	123.2	125.4	124.3	119.9	113.4	103.6	90.5	74.1	56.7
92.5°	107.9	110.1	111.2	112.3	113.4	110.1	104.6	94.8	81.8	65.4	49.1
95°	99.2	99.2	101.4	102.5	103.6	100.3	95.9	86.1	74.1	58.9	42.5
97.5°	90.5	90.5	92.7	92.7	93.7	91.6	87.2	78.5	66.5	52.3	36.0
100°	81.8	82.8	83.9	85.0	85.0	83.9	79.6	70.9	60.0	46.9	31.6
102.5°	76.3	76.3	77.4	77.4	78.5	76.3	71.9	64.3	53.4	41.4	27.3
105°	70.9	70.9	71.9	71.9	70.9	68.7	64.3	57.8	48.0	36.0	24.0
107.5°	66.5	66.5	66.5	66.5	65.4	63.2	58.9	51.2	42.5	32.7	21.8
110°	63.2	62.1	62.1	61.0	60.0	56.7	52.3	45.8	38.2	28.3	18.5

TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	60.0	58.9	57.8	56.7	54.5	51.2	46.9	41.4	33.8	25.1	16.4
115°	56.7	55.6	54.5	52.3	50.1	46.9	42.5	37.1	29.4	21.8	14.2
117.5°	53.4	52.3	50.1	48.0	45.8	42.5	38.2	32.7	26.2	19.6	13.1
120°	49.1	48.0	46.9	44.7	42.5	38.2	33.8	29.4	22.9	17.4	10.9
122.5°	45.8	44.7	42.5	41.4	38.2	34.9	30.5	26.2	20.7	15.3	9.8
125°	41.4	40.3	39.2	37.1	34.9	30.5	27.3	22.9	18.5	13.1	7.6
127.5°	38.2	37.1	34.9	32.7	30.5	27.3	24.0	20.7	16.4	10.9	7.6
130°	33.8	32.7	31.6	29.4	27.3	24.0	21.8	17.4	14.2	9.8	6.5
132.5°	29.4	29.4	28.3	26.2	24.0	21.8	18.5	15.3	12.0	8.7	5.5
135°	27.3	26.2	25.1	22.9	21.8	18.5	16.4	13.1	9.8	7.6	4.4
137.5°	24.0	22.9	21.8	20.7	18.5	16.4	14.2	10.9	8.7	6.5	4.4
140°	20.7	19.6	19.6	17.4	16.4	14.2	12.0	9.8	7.6	5.5	3.3
142.5°	18.5	17.4	16.4	15.3	14.2	12.0	9.8	7.6	6.5	4.4	3.3
145°	16.4	15.3	14.2	13.1	12.0	9.8	8.7	6.5	5.5	4.4	3.3
147.5°	13.1	13.1	12.0	10.9	9.8	8.7	7.6	6.5	4.4	3.3	2.2
150°	10.9	10.9	9.8	8.7	8.7	7.6	6.5	5.5	4.4	3.3	2.2
152.5°	9.8	8.7	8.7	7.6	7.6	6.5	5.5	4.4	3.3	3.3	2.2
155°	7.6	7.6	7.6	6.5	6.5	5.5	4.4	4.4	3.3	2.2	2.2
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: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4
2.5°	2113.6	2100.6	2111.5	2131.1	2128.9	2126.7	2124.5	2128.9	2143.1	2135.4	2123.5
5°	2110.4	2097.3	2109.3	2127.8	2126.7	2123.5	2121.3	2125.6	2139.8	2132.2	2119.1
7.5°	2103.8	2091.8	2100.6	2119.1	2119.1	2116.9	2114.7	2119.1	2132.2	2125.6	2112.6
10°	2092.9	2084.2	2092.9	2110.4	2111.5	2107.1	2104.9	2110.4	2123.5	2120.2	2109.3
12.5°	2084.2	2075.5	2085.3	2102.7	2103.8	2099.5	2096.2	2102.7	2120.2	2122.4	2119.1
15°	2072.2	2064.6	2076.6	2095.1	2095.1	2091.8	2091.8	2100.6	2124.5	2134.4	2139.8
17.5°	2054.8	2049.3	2063.5	2082.0	2083.1	2080.9	2082.0	2099.5	2131.1	2155.1	2170.3
20°	2033.0	2030.8	2046.1	2065.7	2069.0	2070.0	2075.5	2101.7	2145.3	2178.0	2193.2
22.5°	2006.8	2007.9	2025.4	2046.1	2050.4	2053.7	2064.6	2101.7	2156.2	2191.0	2197.6
25°	1977.4	1980.7	1999.2	2024.3	2029.7	2036.3	2054.8	2102.7	2159.4	2182.3	2171.4
27.5°	1945.8	1952.3	1976.3	2002.5	2009.0	2019.9	2043.9	2096.2	2144.2	2145.3	2104.9
30°	1913.1	1920.7	1949.0	1979.6	1990.5	2001.4	2030.8	2080.9	2107.1	2072.2	2001.4
32.5°	1876.0	1886.9	1915.3	1952.3	1965.4	1979.6	2009.0	2051.5	2041.7	1966.5	1865.1
35°	1829.1	1844.4	1877.1	1920.7	1932.7	1951.2	1971.9	1981.7	1938.1	1831.3	1716.9
37.5°	1771.4	1794.3	1832.4	1882.6	1895.6	1907.6	1913.1	1885.8	1798.6	1683.1	1564.3
40°	1704.9	1739.8	1781.2	1836.8	1849.8	1849.8	1830.2	1772.5	1662.4	1510.8	1378.9
42.5°	1624.2	1666.7	1719.0	1774.6	1787.7	1772.5	1725.6	1624.2	1498.8	1329.9	1190.4
45°	1526.1	1582.8	1641.6	1699.4	1706.0	1672.2	1588.2	1459.6	1304.8	1147.8	1014.9
47.5°	1409.5	1483.6	1547.9	1613.3	1604.6	1547.9	1435.6	1289.6	1126.0	977.8	871.0
50°	1278.7	1365.9	1437.8	1499.9	1481.4	1402.9	1271.0	1118.4	956.0	829.5	741.2
52.5°	1139.1	1239.4	1311.4	1361.5	1336.4	1242.7	1097.7	951.6	818.6	703.1	644.2
55°	994.1	1095.5	1169.6	1208.9	1176.2	1074.8	932.0	799.0	673.7	598.4	563.6
57.5°	853.5	948.4	1018.1	1049.7	1008.3	906.9	775.0	662.8	572.3	509.1	491.6
60°	718.4	795.8	862.2	886.2	841.5	747.8	634.4	545.0	478.5	434.9	426.2
62.5°	593.0	656.2	708.5	727.1	683.5	610.4	512.3	445.8	399.0	377.2	366.3
65°	489.4	526.5	579.9	576.6	550.5	482.9	411.0	364.1	333.6	319.4	312.9
67.5°	384.8	418.6	452.4	456.7	424.0	377.2	330.3	296.5	280.1	272.5	269.2
70°	297.6	322.7	343.4	337.9	320.5	291.0	261.6	243.1	236.5	233.3	233.3
72.5°	231.1	244.2	254.0	247.4	236.5	221.3	207.1	199.5	200.6	202.8	204.9
75°	178.8	182.0	184.2	177.7	175.5	165.7	164.6	165.7	172.2	178.8	182.0
77.5°	137.3	133.0	129.7	123.2	124.3	123.2	128.6	137.3	147.2	157.0	165.7
80°	105.7	95.9	88.3	81.8	85.0	90.5	101.4	114.5	127.5	138.4	149.3
82.5°	81.8	67.6	56.7	50.1	56.7	65.4	79.6	95.9	111.2	123.2	135.2
85°	63.2	46.9	33.8	27.3	33.8	46.9	62.1	80.7	97.0	110.1	122.1
87.5°	49.1	33.8	18.5	10.9	18.5	32.7	50.1	67.6	83.9	99.2	111.2
90°	39.2	22.9	8.7	2.2	9.8	22.9	39.2	56.7	73.0	89.4	101.4
92.5°	31.6	16.4	4.4	0.0	5.5	17.4	32.7	49.1	65.4	80.7	92.7
95°	26.2	13.1	3.3	0.0	4.4	13.1	26.2	42.5	57.8	73.0	82.8
97.5°	21.8	9.8	2.2	0.0	2.2	10.9	21.8	36.0	51.2	65.4	75.2
100°	18.5	8.7	2.2	0.0	2.2	8.7	18.5	31.6	44.7	57.8	67.6
102.5°	15.3	6.5	1.1	1.1	1.1	6.5	16.4	27.3	39.2	51.2	61.0
105°	14.2	5.5	1.1	1.1	1.1	5.5	14.2	24.0	34.9	45.8	54.5
107.5°	12.0	4.4	1.1	1.1	1.1	4.4	12.0	20.7	31.6	41.4	49.1
110°	9.8	4.4	1.1	1.1	1.1	4.4	9.8	18.5	27.3	36.0	43.6

TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	8.7	3.3	1.1	1.1	1.1	3.3	8.7	16.4	24.0	32.7	39.2
115°	7.6	3.3	1.1	1.1	1.1	3.3	7.6	14.2	20.7	28.3	34.9
117.5°	6.5	3.3	1.1	1.1	1.1	2.2	6.5	12.0	18.5	25.1	31.6
120°	5.5	2.2	1.1	1.1	1.1	2.2	5.5	10.9	16.4	21.8	27.3
122.5°	5.5	2.2	1.1	1.1	1.1	2.2	4.4	8.7	14.2	18.5	24.0
125°	4.4	2.2	1.1	1.1	1.1	1.1	4.4	7.6	12.0	16.4	20.7
127.5°	4.4	2.2	1.1	1.1	1.1	1.1	3.3	6.5	9.8	14.2	18.5
130°	3.3	2.2	1.1	1.1	1.1	1.1	2.2	5.5	8.7	12.0	15.3
132.5°	3.3	2.2	1.1	1.1	1.1	1.1	2.2	4.4	6.5	9.8	13.1
135°	3.3	1.1	1.1	1.1	1.1	1.1	1.1	3.3	5.5	7.6	9.8
137.5°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	4.4	5.5	8.7
140°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	3.3	4.4	6.5
142.5°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2	3.3	5.5
145°	2.2	1.1	1.1	2.2	2.2	1.1	1.1	2.2	2.2	3.3	4.4
147.5°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2	2.2	3.3
150°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3
152.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
155°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4
2.5°	2121.3	2096.2	2109.3	2104.9	2109.3	2120.2	2119.1	2115.8	2118.0	2112.6	2107.1
5°	2116.9	2091.8	2104.9	2099.5	2104.9	2115.8	2113.6	2110.4	2113.6	2107.1	2101.7
7.5°	2111.5	2088.6	2103.8	2102.7	2112.6	2126.7	2127.8	2127.8	2135.4	2125.6	2121.3
10°	2111.5	2099.5	2120.2	2127.8	2152.9	2171.4	2173.6	2178.0	2191.0	2188.9	2178.0
12.5°	2134.4	2132.2	2162.7	2181.2	2204.1	2230.3	2244.5	2248.8	2257.5	2251.0	2246.6
15°	2163.8	2174.7	2208.5	2229.2	2254.3	2273.9	2277.2	2279.3	2285.9	2276.1	2268.4
17.5°	2203.0	2209.6	2236.8	2245.5	2261.9	2265.2	2260.8	2249.9	2249.9	2228.1	2221.6
20°	2221.6	2218.3	2229.2	2215.0	2208.5	2188.9	2170.3	2149.6	2148.5	2125.6	2123.5
22.5°	2205.2	2183.4	2160.5	2125.6	2110.4	2082.0	2057.0	2045.0	2037.3	2007.9	2000.3
25°	2147.4	2094.0	2060.2	2018.8	1981.7	1949.0	1925.1	1900.0	1876.0	1852.0	1841.1
27.5°	2047.2	1997.0	1942.5	1884.7	1833.5	1783.4	1743.0	1718.0	1695.1	1663.4	1647.1
30°	1924.0	1854.2	1794.3	1738.7	1654.7	1593.7	1559.9	1509.7	1492.3	1478.1	1447.6
32.5°	1779.0	1695.1	1613.3	1538.1	1452.0	1395.3	1350.6	1313.5	1302.6	1265.6	1256.9
35°	1618.8	1508.7	1416.0	1341.9	1279.7	1211.1	1174.0	1148.9	1127.1	1102.1	1097.7
37.5°	1430.2	1331.0	1226.3	1160.9	1111.9	1053.0	1024.7	1007.2	997.4	978.9	975.6
40°	1240.5	1141.3	1069.4	1004.0	973.4	941.8	921.1	913.5	909.1	902.6	896.0
42.5°	1068.3	981.1	929.8	886.2	873.1	857.9	852.4	856.8	852.4	850.3	849.2
45°	922.2	855.7	819.7	806.7	803.4	799.0	803.4	811.0	812.1	809.9	809.9
47.5°	789.2	757.6	742.3	744.5	750.0	753.2	760.9	770.7	772.9	767.4	769.6
50°	702.0	683.5	680.2	688.9	700.9	705.3	714.0	721.6	720.5	718.4	716.2
52.5°	620.3	614.8	623.5	632.2	645.3	647.5	650.8	654.0	653.0	648.6	646.4
55°	551.6	555.9	563.6	566.8	576.6	575.6	576.6	576.6	572.3	570.1	566.8
57.5°	489.4	490.5	494.9	496.0	501.4	499.3	498.2	496.0	489.4	488.4	485.1
60°	426.2	424.0	433.8	426.2	430.6	426.2	425.1	419.7	413.1	412.0	409.9
62.5°	366.3	361.9	368.4	365.2	367.4	363.0	360.8	354.3	348.8	347.7	346.6
65°	312.9	310.7	317.2	316.1	318.3	312.9	310.7	306.3	301.9	300.9	299.8
67.5°	268.2	273.6	276.9	276.9	279.1	278.0	272.5	271.4	270.3	266.0	266.0
70°	235.5	238.7	245.3	246.4	245.3	247.4	243.1	242.0	240.9	238.7	237.6
72.5°	209.3	213.7	220.2	221.3	220.2	220.2	218.0	216.9	216.9	213.7	213.7
75°	188.6	194.0	199.5	199.5	199.5	197.3	195.1	195.1	192.9	191.9	189.7
77.5°	171.1	177.7	182.0	181.0	179.9	177.7	177.7	174.4	171.1	171.1	169.0
80°	158.1	162.4	165.7	164.6	163.5	160.2	159.2	155.9	153.7	150.4	150.4
82.5°	143.9	149.3	151.5	150.4	148.2	145.0	143.9	141.7	139.5	138.4	136.3
85°	131.9	137.3	138.4	136.3	134.1	131.9	130.8	129.7	128.6	126.4	126.4
87.5°	119.9	125.4	125.4	124.3	122.1	121.0	119.9	118.8	117.7	116.6	115.5
90°	110.1	114.5	114.5	113.4	112.3	111.2	110.1	109.0	107.9	106.8	106.8
92.5°	100.3	104.6	104.6	103.6	102.5	101.4	101.4	100.3	99.2	98.1	97.0
95°	91.6	95.9	95.9	95.9	94.8	93.7	93.7	92.7	91.6	91.6	90.5
97.5°	82.8	87.2	87.2	87.2	86.1	85.0	85.0	83.9	83.9	83.9	82.8
100°	75.2	78.5	79.6	79.6	78.5	78.5	78.5	77.4	77.4	77.4	76.3
102.5°	67.6	70.9	73.0	73.0	73.0	71.9	71.9	71.9	71.9	71.9	70.9
105°	61.0	64.3	66.5	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6
107.5°	55.6	58.9	61.0	62.1	63.2	63.2	64.3	64.3	64.3	64.3	64.3
110°	50.1	53.4	56.7	57.8	58.9	60.0	60.0	61.0	60.0	60.0	60.0

TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	44.7	49.1	51.2	53.4	54.5	55.6	56.7	56.7	56.7	56.7	56.7
115°	40.3	44.7	46.9	49.1	51.2	52.3	52.3	53.4	53.4	53.4	52.3
117.5°	36.0	40.3	42.5	44.7	45.8	48.0	49.1	49.1	49.1	49.1	48.0
120°	32.7	36.0	38.2	40.3	42.5	43.6	44.7	44.7	44.7	44.7	44.7
122.5°	28.3	31.6	34.9	37.1	38.2	39.2	40.3	40.3	40.3	40.3	40.3
125°	25.1	28.3	30.5	32.7	33.8	36.0	36.0	36.0	36.0	36.0	36.0
127.5°	21.8	25.1	27.3	29.4	30.5	31.6	32.7	32.7	32.7	32.7	32.7
130°	18.5	21.8	24.0	26.2	27.3	28.3	28.3	29.4	29.4	29.4	29.4
132.5°	16.4	18.5	20.7	22.9	24.0	25.1	25.1	26.2	26.2	26.2	26.2
135°	13.1	16.4	17.4	19.6	20.7	21.8	21.8	22.9	22.9	22.9	22.9
137.5°	10.9	13.1	15.3	17.4	18.5	18.5	19.6	19.6	20.7	20.7	20.7
140°	8.7	9.8	13.1	14.2	15.3	16.4	17.4	17.4	17.4	17.4	17.4
142.5°	6.5	8.7	9.8	12.0	13.1	14.2	15.3	15.3	15.3	15.3	15.3
145°	5.5	6.5	7.6	9.8	10.9	12.0	13.1	13.1	13.1	13.1	13.1
147.5°	4.4	5.5	6.5	7.6	8.7	9.8	10.9	10.9	10.9	10.9	10.9
150°	3.3	4.4	5.5	5.5	6.5	7.6	8.7	9.8	9.8	9.8	9.8
152.5°	3.3	3.3	4.4	4.4	5.5	6.5	7.6	7.6	7.6	7.6	7.6
155°	2.2	3.3	3.3	3.3	4.4	4.4	5.5	6.5	6.5	6.5	6.5
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: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4
2.5°	2110.4	2114.7	2112.6	2109.3	2108.2	2113.6	2108.2	2083.1	2092.9	2094.0	2101.7
5°	2107.1	2110.4	2108.2	2106.0	2102.7	2109.3	2102.7	2076.6	2086.4	2087.5	2095.1
7.5°	2128.9	2130.0	2130.0	2124.5	2115.8	2119.1	2110.4	2080.9	2086.4	2086.4	2091.8
10°	2183.4	2185.6	2188.9	2174.7	2163.8	2155.1	2143.1	2107.1	2106.0	2097.3	2097.3
12.5°	2254.3	2248.8	2243.4	2236.8	2228.1	2217.2	2199.8	2157.2	2143.1	2128.9	2114.7
15°	2275.0	2272.8	2271.7	2268.4	2263.0	2259.7	2246.6	2204.1	2183.4	2166.0	2140.9
17.5°	2220.5	2224.8	2239.0	2240.1	2246.6	2259.7	2257.5	2228.1	2209.6	2201.9	2171.4
20°	2122.4	2123.5	2140.9	2148.5	2176.9	2198.7	2215.0	2211.8	2207.4	2216.1	2193.2
22.5°	2004.6	2012.3	2030.8	2042.8	2070.0	2095.1	2121.3	2135.4	2158.3	2194.3	2190.0
25°	1844.4	1854.2	1880.4	1900.0	1938.1	1976.3	2011.2	2036.3	2063.5	2132.2	2155.1
27.5°	1652.5	1667.8	1701.6	1721.2	1774.6	1813.9	1864.0	1913.1	1951.2	2029.7	2076.6
30°	1450.9	1464.0	1499.9	1527.2	1573.0	1626.4	1689.6	1759.4	1822.6	1902.2	1961.0
32.5°	1262.3	1276.5	1305.9	1329.9	1381.1	1425.8	1495.6	1581.7	1640.6	1750.7	1829.1
35°	1097.7	1110.8	1131.5	1152.2	1194.7	1240.5	1300.5	1384.4	1459.6	1574.1	1673.3
37.5°	982.2	984.3	996.3	1008.3	1039.9	1074.8	1121.7	1195.8	1265.6	1388.8	1497.8
40°	899.3	899.3	905.8	909.1	923.3	944.0	973.4	1031.2	1089.0	1182.7	1315.7
42.5°	848.1	845.9	845.9	847.0	845.9	855.7	873.1	900.4	951.6	1029.0	1132.6
45°	809.9	805.6	802.3	794.7	790.3	790.3	791.4	801.2	830.6	880.8	964.7
47.5°	767.4	766.3	760.9	752.1	744.5	739.1	730.3	727.1	735.8	764.1	820.8
50°	718.4	712.9	707.5	700.9	692.2	686.7	670.4	671.5	663.9	676.9	706.4
52.5°	646.4	642.1	639.9	634.4	631.2	629.0	615.9	602.8	599.5	601.7	612.6
55°	566.8	569.0	560.3	564.7	563.6	553.8	548.3	538.5	535.2	534.1	539.6
57.5°	484.0	486.2	480.7	485.1	485.1	479.6	476.4	476.4	468.7	462.2	469.8
60°	408.8	404.4	407.7	413.1	413.1	409.9	407.7	407.7	402.2	400.1	405.5
62.5°	347.7	343.4	346.6	352.1	353.2	351.0	348.8	348.8	342.3	342.3	346.6
65°	300.9	301.9	300.9	305.2	305.2	306.3	304.1	301.9	294.3	297.6	296.5
67.5°	267.1	266.0	266.0	270.3	269.2	271.4	269.2	266.0	260.5	256.2	255.1
70°	238.7	237.6	237.6	239.8	240.9	240.9	239.8	237.6	230.0	225.6	222.4
72.5°	213.7	212.6	213.7	214.7	215.8	216.9	215.8	213.7	207.1	201.7	196.2
75°	190.8	189.7	192.9	192.9	194.0	194.0	195.1	194.0	188.6	182.0	175.5
77.5°	167.9	169.0	172.2	173.3	175.5	176.6	177.7	177.7	172.2	166.8	158.1
80°	149.3	151.5	153.7	154.8	157.0	160.2	161.3	162.4	158.1	152.6	142.8
82.5°	136.3	137.3	139.5	140.6	143.9	145.0	146.1	148.2	146.1	140.6	129.7
85°	125.4	126.4	128.6	128.6	130.8	133.0	134.1	135.2	134.1	128.6	117.7
87.5°	115.5	116.6	117.7	118.8	119.9	121.0	122.1	123.2	122.1	116.6	106.8
90°	106.8	106.8	107.9	107.9	109.0	110.1	112.3	112.3	111.2	106.8	97.0
92.5°	97.0	98.1	98.1	99.2	100.3	101.4	102.5	102.5	101.4	97.0	88.3
95°	90.5	90.5	91.6	91.6	92.7	92.7	93.7	93.7	92.7	88.3	79.6
97.5°	82.8	82.8	82.8	82.8	83.9	83.9	85.0	85.0	83.9	79.6	71.9
100°	76.3	76.3	76.3	76.3	76.3	77.4	77.4	77.4	76.3	71.9	64.3
102.5°	70.9	70.9	70.9	70.9	70.9	70.9	70.9	70.9	68.7	65.4	57.8
105°	67.6	67.6	67.6	66.5	66.5	66.5	65.4	65.4	62.1	58.9	52.3
107.5°	63.2	63.2	63.2	62.1	62.1	61.0	60.0	60.0	56.7	53.4	46.9
110°	60.0	60.0	60.0	58.9	57.8	56.7	55.6	54.5	51.2	46.9	41.4

TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	56.7	56.7	55.6	55.6	54.5	53.4	51.2	50.1	46.9	42.5	37.1
115°	52.3	52.3	52.3	51.2	50.1	49.1	48.0	45.8	42.5	38.2	32.7
117.5°	48.0	48.0	48.0	46.9	45.8	44.7	43.6	41.4	38.2	33.8	29.4
120°	43.6	43.6	43.6	42.5	41.4	40.3	39.2	37.1	33.8	30.5	25.1
122.5°	40.3	40.3	39.2	38.2	37.1	36.0	34.9	32.7	30.5	26.2	21.8
125°	36.0	36.0	34.9	34.9	33.8	32.7	31.6	29.4	26.2	22.9	19.6
127.5°	32.7	31.6	31.6	31.6	30.5	29.4	27.3	26.2	22.9	19.6	16.4
130°	28.3	28.3	28.3	27.3	27.3	26.2	24.0	21.8	19.6	17.4	14.2
132.5°	25.1	25.1	25.1	25.1	24.0	22.9	20.7	19.6	17.4	14.2	12.0
135°	22.9	22.9	21.8	21.8	20.7	19.6	18.5	16.4	14.2	12.0	9.8
137.5°	19.6	19.6	19.6	18.5	18.5	17.4	15.3	14.2	13.1	10.9	8.7
140°	17.4	17.4	16.4	16.4	15.3	15.3	14.2	12.0	10.9	8.7	7.6
142.5°	15.3	15.3	14.2	14.2	13.1	13.1	12.0	10.9	8.7	7.6	5.5
145°	13.1	13.1	12.0	12.0	12.0	10.9	9.8	8.7	7.6	6.5	5.5
147.5°	10.9	10.9	10.9	9.8	9.8	8.7	8.7	7.6	6.5	5.5	4.4
150°	9.8	9.8	8.7	8.7	8.7	7.6	6.5	6.5	5.5	4.4	3.3
152.5°	7.6	7.6	7.6	7.6	6.5	6.5	5.5	5.5	4.4	3.3	3.3
155°	6.5	6.5	6.5	5.5	5.5	5.5	4.4	4.4	3.3	3.3	2.2
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: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4	2110.4
2.5°	2098.4	2097.3	2107.1	2106.0	2092.9	2112.6	2125.6
5°	2092.9	2091.8	2100.6	2102.7	2088.6	2109.3	2123.5
7.5°	2088.6	2087.5	2097.3	2100.6	2086.4	2104.9	2120.2
10°	2089.7	2084.2	2092.9	2095.1	2082.0	2101.7	2114.7
12.5°	2097.3	2084.2	2087.5	2087.5	2075.5	2092.9	2107.1
15°	2115.8	2088.6	2084.2	2080.9	2065.7	2082.0	2096.2
17.5°	2136.5	2099.5	2084.2	2073.3	2054.8	2069.0	2084.2
20°	2157.2	2111.5	2086.4	2069.0	2043.9	2057.0	2067.9
22.5°	2167.1	2122.4	2088.6	2062.4	2030.8	2037.3	2049.3
25°	2154.0	2118.0	2084.2	2052.6	2014.5	2015.5	2025.4
27.5°	2106.0	2096.2	2074.4	2042.8	2001.4	1995.9	2003.5
30°	2024.3	2051.5	2052.6	2029.7	1986.1	1975.2	1978.5
32.5°	1909.8	1970.8	2006.8	2002.5	1964.3	1949.0	1951.2
35°	1777.9	1854.2	1932.7	1958.9	1931.6	1919.6	1915.3
37.5°	1619.8	1722.3	1827.0	1891.3	1886.9	1879.3	1874.9
40°	1445.4	1568.6	1692.9	1795.3	1827.0	1827.0	1829.1
42.5°	1259.0	1402.9	1539.2	1668.9	1743.0	1759.4	1765.9
45°	1079.2	1224.1	1372.4	1521.7	1620.9	1672.2	1690.7
47.5°	915.7	1061.7	1202.3	1365.9	1497.8	1564.3	1593.7
50°	776.1	885.1	1033.4	1195.8	1339.7	1421.5	1479.2
52.5°	660.6	745.6	875.3	1026.8	1171.8	1284.1	1337.5
55°	563.6	621.3	731.4	862.2	1000.7	1117.3	1179.5
57.5°	481.8	527.6	602.8	711.8	828.5	944.0	1010.5
60°	409.9	441.5	492.7	578.8	678.0	777.2	841.5
62.5°	347.7	368.4	402.2	465.5	542.9	620.3	680.2
65°	299.8	308.5	327.0	366.3	425.1	484.0	535.2
67.5°	252.9	258.3	272.5	296.5	325.9	368.4	402.2
70°	218.0	218.0	219.1	233.3	248.5	275.8	299.8
72.5°	189.7	186.4	179.9	183.1	186.4	201.7	216.9
75°	166.8	159.2	148.2	143.9	141.7	143.9	152.6
77.5°	147.2	136.3	123.2	112.3	103.6	100.3	107.9
80°	130.8	117.7	102.5	88.3	74.1	66.5	69.8
82.5°	117.7	101.4	85.0	68.7	52.3	41.4	41.4
85°	103.6	88.3	70.9	53.4	37.1	22.9	20.7
87.5°	93.7	77.4	58.9	42.5	26.2	12.0	6.5
90°	83.9	67.6	50.1	33.8	18.5	5.5	0.0
92.5°	75.2	60.0	43.6	27.3	13.1	3.3	0.0
95°	67.6	53.4	37.1	22.9	10.9	2.2	1.1
97.5°	60.0	46.9	32.7	18.5	7.6	2.2	1.1
100°	54.5	41.4	28.3	15.3	6.5	1.1	1.1
102.5°	48.0	37.1	24.0	13.1	5.5	1.1	1.1
105°	42.5	32.7	20.7	10.9	4.4	1.1	1.1
107.5°	38.2	28.3	18.5	9.8	4.4	1.1	1.1
110°	33.8	25.1	16.4	8.7	3.3	1.1	1.1



TEST NUMBER: P1213148

CATALOG NUMBER: 4SNLED-LD5-63SL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	30.5	21.8	14.2	7.6	2.2	1.1	1.1
115°	26.2	19.6	12.0	6.5	2.2	1.1	1.1
117.5°	22.9	16.4	10.9	5.5	2.2	1.1	1.1
120°	19.6	14.2	8.7	4.4	1.1	1.1	1.1
122.5°	17.4	12.0	7.6	4.4	1.1	1.1	1.1
125°	15.3	10.9	6.5	3.3	1.1	1.1	1.1
127.5°	13.1	8.7	5.5	2.2	1.1	1.1	1.1
130°	10.9	7.6	4.4	2.2	1.1	1.1	1.1
132.5°	8.7	6.5	4.4	2.2	1.1	1.1	1.1
135°	7.6	5.5	3.3	2.2	1.1	1.1	1.1
137.5°	6.5	4.4	2.2	2.2	2.2	1.1	1.1
140°	5.5	3.3	2.2	2.2	2.2	2.2	1.1
142.5°	4.4	3.3	2.2	2.2	2.2	2.2	1.1
145°	3.3	2.2	2.2	2.2	2.2	2.2	1.1
147.5°	3.3	2.2	2.2	2.2	2.2	2.2	1.1
150°	2.2	2.2	2.2	2.2	2.2	2.2	2.2
152.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2
155°	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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)