

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: P1213146

Luminaire Tested: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213146
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33519)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

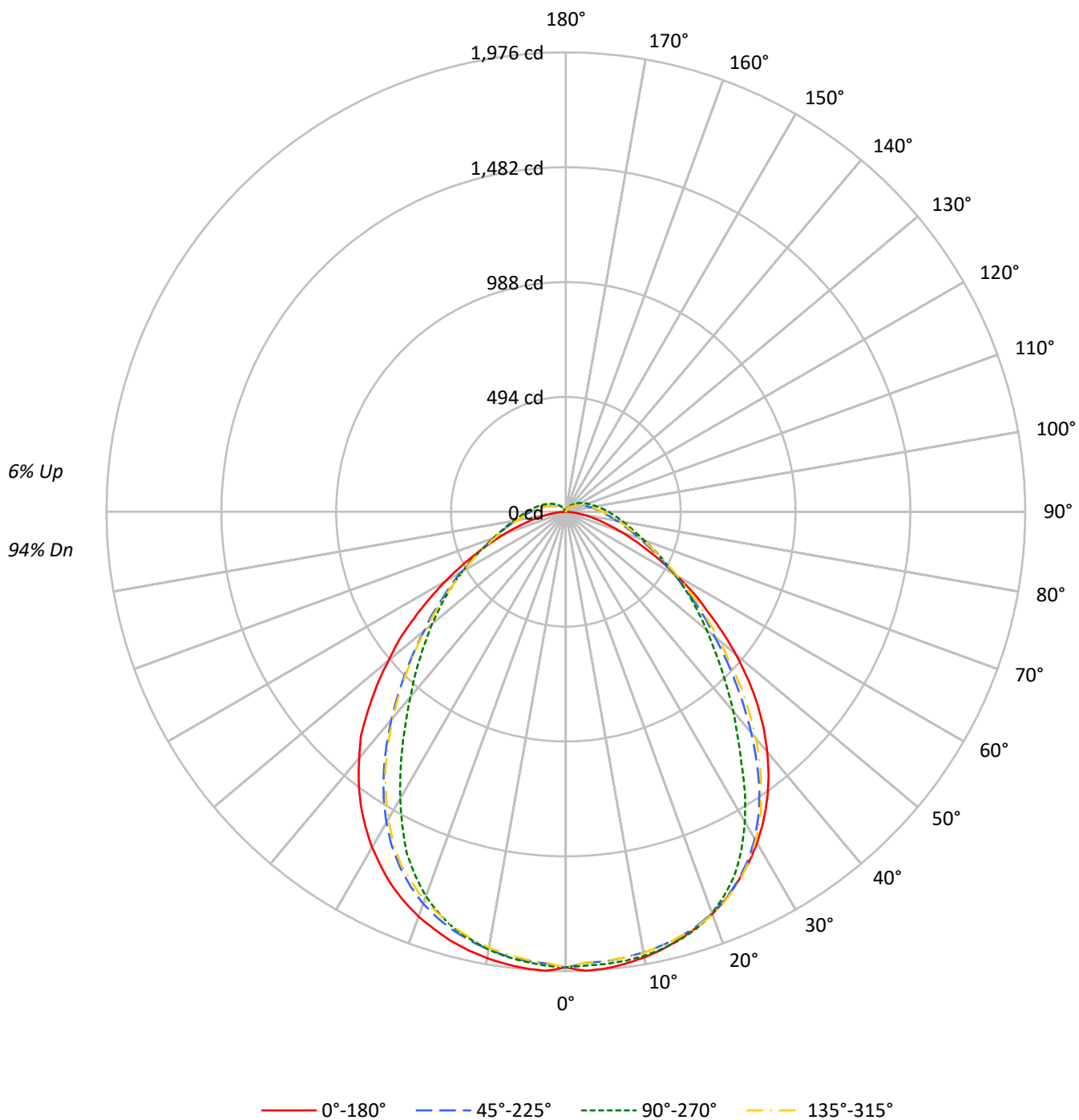
Lumens per Lamp: N/A
Luminaire Lumens: 4961.0 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 48
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

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	15841	15841	15841	15841
5°	15955	15337	15955	15269
10°	15883	14929	15909	14722
15°	15781	14483	15852	14106
20°	15660	13910	15752	13322
25°	15409	13058	15579	12290
30°	15081	11809	15279	10932
35°	14573	10276	14854	9569
40°	13844	8987	14209	8339
45°	12882	7813	13299	7364
50°	11567	6865	12076	6519
55°	10006	6063	10733	5756
60°	8414	5322	9175	5017
65°	6898	4706	7595	4363
70°	5490	4177	6147	3863
75°	4312	3856	4854	3548
80°	3111	3721	3665	3400
85°	1913	3742	2576	3438

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 13299 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.9	3.7
10°-20°	532.9	10.7
20°-30°	789.8	15.9
30°-40°	877.4	17.7
40°-50°	795.4	16.0
50°-60°	616.3	12.4
60°-70°	418.5	8.4
70°-80°	266.3	5.4
80°-90°	170.2	3.4
90°-100°	114.8	2.3
100°-110°	78.6	1.6
110°-120°	52.4	1.1
120°-130°	32.6	0.7
130°-140°	18.0	0.4
140°-150°	8.5	0.2
150°-160°	3.1	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1508.5	30.4
0°-40°	2386.0	48.1
0°-60°	3797.7	76.6
0°-90°	4652.7	93.8
90°-120°	245.8	5.0
90°-150°	305.0	6.1
90°-180°	308.0	6.2
0°-180°	4961.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1960	1960	1960	1960	1960	
5°	1972	1953	1972	1944	1972	187
15°	1902	1905	1911	1856	1902	537
25°	1753	1721	1773	1620	1753	807
35°	1510	1316	1539	1225	1510	942
45°	1162	940	1200	886	1162	893
55°	742	661	796	628	742	668
65°	385	444	424	412	385	386
75°	154	296	174	273	154	166
85°	28	214	38	196	28	34
90°	0	184	2	168	0	2
95°	1	157	0	147	1	1
105°	1	115	0	109	1	1
115°	1	87	0	81	1	1
125°	1	65	1	57	1	1
135°	1	45	1	37	1	1
145°	1	29	1	20	1	1
155°	1	16	1	8	1	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1976.5	1974.3	1972.2	1968.9	1972.2	1980.8	1975.4	1963.5	1961.4	1942.0	1950.6
5°	1972.2	1968.9	1966.8	1963.5	1967.8	1978.6	1973.2	1962.5	1959.2	1940.9	1950.6
7.5°	1961.4	1959.2	1956.0	1956.0	1960.3	1971.1	1966.8	1954.9	1952.8	1934.4	1945.2
10°	1946.3	1945.2	1943.0	1943.0	1947.4	1960.3	1954.9	1944.1	1942.0	1924.7	1936.6
12.5°	1926.9	1928.0	1924.7	1924.7	1931.2	1944.1	1939.8	1928.0	1925.8	1910.7	1922.6
15°	1902.1	1903.2	1901.0	1902.1	1908.5	1923.6	1918.2	1907.5	1905.3	1893.4	1903.2
17.5°	1874.0	1875.1	1875.1	1874.0	1881.6	1896.7	1892.4	1882.7	1879.4	1869.7	1881.6
20°	1841.7	1841.7	1841.7	1841.7	1850.3	1865.4	1860.0	1852.5	1846.0	1838.5	1848.2
22.5°	1801.8	1800.7	1801.8	1805.0	1813.7	1825.5	1822.3	1813.7	1803.9	1799.6	1807.2
25°	1753.3	1756.5	1757.6	1760.8	1771.6	1781.3	1778.1	1769.4	1754.3	1751.1	1753.3
27.5°	1702.6	1704.7	1708.0	1706.9	1722.0	1731.7	1725.2	1717.7	1696.1	1692.9	1690.7
30°	1645.4	1648.7	1650.8	1649.8	1661.6	1672.4	1665.9	1656.2	1627.1	1625.0	1607.7
32.5°	1580.7	1584.0	1586.1	1586.1	1603.4	1607.7	1595.8	1581.8	1550.6	1543.0	1527.9
35°	1509.6	1512.8	1513.9	1513.9	1531.1	1530.1	1515.0	1495.6	1461.1	1451.4	1425.5
37.5°	1433.0	1435.2	1436.3	1442.7	1450.3	1443.8	1424.4	1399.6	1373.7	1346.8	1318.7
40°	1346.8	1350.0	1352.2	1356.5	1364.0	1356.5	1328.4	1298.2	1270.2	1240.0	1212.0
42.5°	1258.3	1268.0	1265.9	1264.8	1269.1	1248.6	1227.1	1192.6	1164.5	1133.3	1105.2
45°	1162.4	1161.3	1166.7	1168.8	1167.8	1150.5	1120.3	1089.1	1061.0	1028.7	1004.9
47.5°	1061.0	1059.9	1064.3	1066.4	1059.9	1041.6	1017.9	982.3	958.6	930.5	912.2
50°	954.3	954.3	960.7	954.3	951.0	932.7	913.3	877.7	859.4	834.6	823.8
52.5°	847.5	857.2	850.8	848.6	845.4	827.0	811.9	782.8	767.7	756.9	744.0
55°	741.9	752.6	748.3	745.1	744.0	728.9	714.9	693.3	683.6	676.1	668.5
57.5°	652.4	651.3	649.1	645.9	647.0	635.1	621.1	609.2	604.9	601.7	603.8
60°	548.8	557.5	554.2	555.3	556.4	554.2	542.4	534.8	535.9	537.0	540.2
62.5°	463.7	471.2	476.6	472.3	474.4	477.7	471.2	469.0	473.4	477.7	482.0
65°	384.9	392.5	397.9	396.8	403.3	409.7	408.7	410.8	420.5	425.9	431.3
67.5°	313.8	321.3	328.9	330.0	339.7	349.4	353.7	361.2	372.0	379.6	386.0
70°	252.3	258.8	267.4	272.8	285.7	298.7	306.2	321.3	327.8	338.6	342.9
72.5°	197.3	202.7	214.6	227.5	238.3	254.5	269.6	282.5	292.2	304.1	309.5
75°	154.2	156.3	169.3	184.4	199.5	217.8	234.0	248.0	260.9	272.8	281.4
77.5°	113.2	116.5	128.3	148.8	166.1	185.5	203.8	218.9	232.9	244.8	256.6
80°	78.7	85.2	98.1	118.6	138.0	159.6	176.8	194.1	209.2	221.0	232.9
82.5°	50.7	56.1	74.4	94.9	115.4	136.9	155.3	172.5	188.7	201.6	212.4
85°	28.0	35.6	53.9	75.5	96.0	117.5	136.9	154.2	170.4	182.2	193.0
87.5°	10.8	21.6	38.8	59.3	79.8	100.3	120.8	136.9	153.1	166.1	175.8
90°	0.0	12.9	29.1	49.6	70.1	90.6	110.0	127.2	142.3	154.2	165.0
92.5°	1.1	8.6	22.6	39.9	59.3	78.7	97.0	114.3	129.4	141.3	151.0
95°	1.1	6.5	18.3	34.5	51.8	70.1	87.3	103.5	117.5	129.4	139.1
97.5°	1.1	4.3	15.1	30.2	45.3	63.6	79.8	94.9	107.8	119.7	127.2
100°	1.1	4.3	12.9	25.9	41.0	57.1	72.2	87.3	99.2	108.9	117.5
102.5°	1.1	3.2	10.8	22.6	36.7	50.7	65.8	79.8	90.6	100.3	108.9
105°	1.1	3.2	9.7	19.4	32.3	46.4	59.3	72.2	84.1	92.7	100.3
107.5°	1.1	2.2	8.6	16.2	28.0	42.1	55.0	65.8	76.6	85.2	92.7
110°	1.1	2.2	7.5	15.1	24.8	37.7	49.6	60.4	70.1	78.7	85.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.1	2.2	6.5	14.0	22.6	33.4	45.3	55.0	64.7	72.2	78.7
115°	1.1	2.2	6.5	12.9	20.5	29.1	39.9	50.7	58.2	66.9	72.2
117.5°	1.1	2.2	5.4	10.8	19.4	27.0	36.7	45.3	53.9	61.5	66.9
120°	1.1	2.2	5.4	9.7	17.3	24.8	32.3	41.0	49.6	55.0	60.4
122.5°	1.1	2.2	4.3	9.7	15.1	22.6	29.1	36.7	44.2	50.7	56.1
125°	1.1	2.2	4.3	8.6	14.0	20.5	27.0	32.3	39.9	45.3	50.7
127.5°	1.1	2.2	4.3	7.5	12.9	18.3	24.8	30.2	35.6	41.0	45.3
130°	1.1	2.2	3.2	6.5	11.9	16.2	21.6	28.0	32.3	36.7	41.0
132.5°	1.1	2.2	3.2	6.5	9.7	14.0	19.4	24.8	29.1	33.4	36.7
135°	1.1	2.2	3.2	5.4	8.6	12.9	16.2	21.6	25.9	30.2	33.4
137.5°	1.1	2.2	3.2	5.4	7.5	10.8	14.0	18.3	22.6	25.9	30.2
140°	1.1	2.2	3.2	4.3	6.5	9.7	12.9	15.1	19.4	22.6	25.9
142.5°	1.1	2.2	3.2	4.3	6.5	8.6	10.8	12.9	16.2	19.4	22.6
145°	1.1	2.2	3.2	4.3	5.4	7.5	9.7	11.9	12.9	16.2	18.3
147.5°	1.1	2.2	3.2	4.3	4.3	6.5	8.6	9.7	11.9	12.9	15.1
150°	1.1	2.2	3.2	3.2	4.3	5.4	7.5	8.6	9.7	11.9	12.9
152.5°	1.1	2.2	3.2	3.2	4.3	5.4	6.5	7.5	8.6	9.7	10.8
155°	1.1	2.2	3.2	3.2	3.2	4.3	5.4	6.5	7.5	8.6	9.7
157.5°	2.2	2.2	2.2	3.2	3.2	4.3	4.3	5.4	6.5	6.5	7.5
160°	2.2	2.2	2.2	3.2	3.2	3.2	4.3	4.3	5.4	5.4	6.5
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1948.4	1951.7	1961.4	1961.4	1959.2	1957.1	1957.1	1953.8	1956.0	1960.3	1958.1
5°	1948.4	1951.7	1961.4	1961.4	1959.2	1957.1	1956.0	1952.8	1956.0	1960.3	1958.1
7.5°	1942.0	1946.3	1956.0	1956.0	1953.8	1952.8	1950.6	1948.4	1951.7	1956.0	1953.8
10°	1933.3	1937.7	1947.4	1947.4	1945.2	1945.2	1942.0	1939.8	1944.1	1947.4	1946.3
12.5°	1920.4	1925.8	1934.4	1933.3	1931.2	1932.3	1929.0	1924.7	1929.0	1932.3	1933.3
15°	1902.1	1908.5	1917.2	1915.0	1911.8	1913.9	1908.5	1905.3	1908.5	1915.0	1913.9
17.5°	1878.3	1882.7	1889.1	1889.1	1885.9	1883.7	1881.6	1878.3	1880.5	1884.8	1885.9
20°	1844.9	1850.3	1853.5	1850.3	1849.2	1846.0	1841.7	1838.5	1842.8	1849.2	1850.3
22.5°	1800.7	1801.8	1809.3	1801.8	1796.4	1795.3	1791.0	1784.5	1791.0	1796.4	1797.5
25°	1745.7	1751.1	1747.9	1734.9	1734.9	1726.3	1724.2	1720.9	1722.0	1731.7	1736.0
27.5°	1675.6	1677.8	1669.2	1658.4	1648.7	1643.3	1635.7	1636.8	1636.8	1649.8	1654.1
30°	1599.1	1587.2	1579.7	1562.4	1554.9	1541.9	1539.8	1539.8	1537.6	1544.1	1563.5
32.5°	1507.4	1491.3	1479.4	1463.2	1450.3	1437.3	1430.9	1434.1	1433.0	1449.2	1455.7
35°	1407.1	1397.4	1372.6	1352.2	1344.6	1325.2	1325.2	1315.5	1322.0	1340.3	1347.8
37.5°	1301.5	1286.4	1265.9	1243.2	1237.9	1222.8	1217.4	1212.0	1226.0	1229.2	1236.8
40°	1193.6	1179.6	1160.2	1138.7	1138.7	1120.3	1120.3	1120.3	1121.4	1127.9	1141.9
42.5°	1091.2	1076.1	1058.9	1043.8	1041.6	1027.6	1027.6	1026.5	1028.7	1034.1	1047.0
45°	992.0	980.1	961.8	954.3	955.3	940.3	943.5	940.3	944.6	950.0	954.3
47.5°	900.4	892.8	885.3	874.5	871.2	870.2	864.8	860.5	868.0	868.0	874.5
50°	815.2	810.9	806.5	800.1	801.2	796.8	790.4	790.4	795.8	796.8	801.2
52.5°	740.8	735.4	730.0	731.1	732.1	730.0	726.8	723.5	726.8	728.9	734.3
55°	666.4	662.1	667.5	665.3	667.5	665.3	663.1	661.0	666.4	663.1	668.5
57.5°	599.5	603.8	606.0	601.7	604.9	602.8	603.8	600.6	604.9	607.1	606.0
60°	538.1	544.5	541.3	542.4	546.7	544.5	540.2	543.4	547.8	548.8	547.8
62.5°	482.0	489.5	492.8	490.6	491.7	489.5	492.8	488.5	493.8	496.0	492.8
65°	431.3	439.9	442.1	442.1	442.1	439.9	443.2	444.2	446.4	446.4	444.2
67.5°	388.2	395.7	397.9	400.0	397.9	395.7	395.7	396.8	401.1	403.3	401.1
70°	349.4	356.9	358.0	358.0	359.1	361.2	356.9	359.1	362.3	363.4	362.3
72.5°	315.9	323.5	325.6	324.6	325.6	326.7	326.7	324.6	327.8	330.0	330.0
75°	289.0	293.3	295.4	295.4	296.5	297.6	297.6	296.5	298.7	299.8	300.8
77.5°	264.2	267.4	270.6	270.6	271.7	270.6	272.8	272.8	273.9	275.0	276.0
80°	239.4	243.7	245.8	246.9	249.1	250.2	250.2	250.2	251.2	252.3	252.3
82.5°	220.0	223.2	226.4	229.7	229.7	230.8	230.8	230.8	231.8	231.8	232.9
85°	200.6	204.9	208.1	210.3	211.3	212.4	212.4	213.5	213.5	213.5	214.6
87.5°	183.3	188.7	190.9	193.0	194.1	196.2	196.2	196.2	197.3	197.3	197.3
90°	171.4	176.8	179.0	181.1	182.2	183.3	183.3	184.4	184.4	185.5	185.5
92.5°	157.4	162.8	167.1	167.1	168.2	170.4	169.3	169.3	170.4	171.4	171.4
95°	146.6	151.0	154.2	155.3	156.3	156.3	156.3	157.4	156.3	157.4	157.4
97.5°	133.7	138.0	141.3	143.4	144.5	144.5	144.5	145.6	144.5	145.6	145.6
100°	122.9	127.2	130.5	131.5	133.7	133.7	133.7	133.7	133.7	133.7	134.8
102.5°	114.3	118.6	120.8	121.8	122.9	124.0	124.0	124.0	124.0	125.1	125.1
105°	105.7	110.0	112.1	113.2	114.3	115.4	115.4	115.4	116.5	116.5	115.4
107.5°	98.1	101.4	103.5	105.7	106.7	106.7	107.8	107.8	107.8	107.8	107.8
110°	90.6	93.8	97.0	99.2	99.2	100.3	100.3	101.4	101.4	100.3	101.4

TEST NUMBER: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	83.0	87.3	89.5	91.7	92.7	93.8	93.8	93.8	93.8	93.8	93.8
115°	76.6	80.9	83.0	85.2	86.3	87.3	87.3	87.3	87.3	87.3	87.3
117.5°	71.2	75.5	77.6	78.7	79.8	80.9	81.9	81.9	81.9	81.9	80.9
120°	65.8	69.0	71.2	73.3	74.4	75.5	75.5	75.5	75.5	75.5	75.5
122.5°	60.4	63.6	65.8	67.9	69.0	70.1	70.1	70.1	70.1	70.1	70.1
125°	55.0	58.2	60.4	62.5	63.6	64.7	64.7	64.7	64.7	64.7	64.7
127.5°	49.6	52.8	56.1	57.1	58.2	59.3	59.3	59.3	60.4	59.3	59.3
130°	44.2	47.4	50.7	51.8	52.8	53.9	55.0	55.0	55.0	55.0	53.9
132.5°	39.9	43.1	45.3	46.4	48.5	48.5	49.6	49.6	49.6	49.6	48.5
135°	36.7	38.8	41.0	42.1	44.2	44.2	44.2	45.3	45.3	44.2	43.1
137.5°	32.3	34.5	36.7	37.7	38.8	39.9	39.9	41.0	39.9	39.9	39.9
140°	30.2	31.3	33.4	34.5	35.6	35.6	35.6	36.7	36.7	35.6	35.6
142.5°	25.9	28.0	30.2	31.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
145°	21.6	24.8	25.9	28.0	28.0	29.1	29.1	29.1	29.1	29.1	28.0
147.5°	18.3	20.5	23.7	24.8	24.8	25.9	25.9	25.9	25.9	25.9	24.8
150°	14.0	16.2	19.4	21.6	21.6	22.6	22.6	22.6	22.6	21.6	21.6
152.5°	11.9	14.0	15.1	17.3	18.3	18.3	18.3	19.4	18.3	18.3	18.3
155°	10.8	11.9	12.9	14.0	15.1	16.2	16.2	16.2	16.2	15.1	15.1
157.5°	8.6	9.7	10.8	11.9	12.9	14.0	14.0	14.0	14.0	14.0	12.9
160°	6.5	7.5	8.6	8.6	9.7	10.8	11.9	10.8	10.8	10.8	10.8
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: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1956.0	1954.9	1958.1	1952.8	1936.6	1940.9	1938.7	1948.4	1950.6	1952.8	1962.5
5°	1956.0	1954.9	1957.1	1952.8	1935.5	1938.7	1936.6	1946.3	1948.4	1949.5	1959.2
7.5°	1951.7	1950.6	1953.8	1948.4	1930.1	1934.4	1931.2	1940.9	1942.0	1943.0	1951.7
10°	1943.0	1942.0	1944.1	1939.8	1921.5	1925.8	1921.5	1931.2	1931.2	1933.3	1939.8
12.5°	1930.1	1928.0	1932.3	1926.9	1906.4	1911.8	1909.6	1916.1	1917.2	1918.2	1924.7
15°	1911.8	1909.6	1912.9	1909.6	1891.3	1892.4	1889.1	1898.8	1899.9	1897.8	1904.2
17.5°	1884.8	1882.7	1889.1	1887.0	1868.6	1873.0	1871.9	1874.0	1877.3	1871.9	1880.5
20°	1851.4	1853.5	1855.7	1856.8	1842.8	1842.8	1841.7	1846.0	1849.2	1844.9	1851.4
22.5°	1801.8	1807.2	1813.7	1815.8	1806.1	1805.0	1811.5	1809.3	1812.6	1810.4	1814.7
25°	1739.3	1750.0	1756.5	1763.0	1757.6	1759.7	1769.4	1771.6	1771.6	1770.5	1774.8
27.5°	1661.6	1675.6	1687.5	1701.5	1696.1	1700.4	1716.6	1718.8	1723.1	1718.8	1727.4
30°	1568.9	1581.8	1604.5	1625.0	1627.1	1633.6	1656.2	1658.4	1670.2	1665.9	1669.2
32.5°	1476.2	1482.6	1508.5	1529.0	1541.9	1558.1	1582.9	1587.2	1603.4	1606.6	1606.6
35°	1359.7	1378.0	1401.8	1430.9	1447.0	1464.3	1497.7	1504.2	1527.9	1535.5	1544.1
37.5°	1261.6	1278.8	1293.9	1324.1	1353.2	1372.6	1399.6	1415.8	1440.6	1454.6	1465.4
40°	1157.0	1171.0	1187.2	1217.4	1242.2	1271.3	1298.2	1317.6	1348.9	1365.1	1379.1
42.5°	1057.8	1068.6	1085.8	1107.4	1133.3	1165.6	1191.5	1214.1	1247.6	1270.2	1286.4
45°	969.4	975.8	990.9	1007.1	1029.7	1063.2	1088.0	1117.1	1144.0	1167.8	1187.2
47.5°	886.3	895.0	902.5	913.3	933.8	954.3	983.4	1011.4	1038.4	1064.3	1083.7
50°	809.8	809.8	821.6	829.2	843.2	861.5	884.2	903.6	937.0	955.3	980.1
52.5°	735.4	739.7	746.2	750.5	761.3	773.1	791.5	807.6	835.7	852.9	876.6
55°	669.6	673.9	677.2	679.3	685.8	699.8	706.3	719.2	738.6	752.6	773.1
57.5°	607.1	609.2	612.5	613.5	614.6	623.2	628.6	631.9	651.3	665.3	682.5
60°	549.9	549.9	553.2	552.1	551.0	555.3	554.2	557.5	569.3	578.0	585.5
62.5°	496.0	496.0	497.1	494.9	493.8	493.8	489.5	492.8	496.0	497.1	502.5
65°	446.4	451.8	447.5	448.6	442.1	439.9	437.8	431.3	430.2	425.9	428.1
67.5°	402.2	406.5	402.2	402.2	396.8	392.5	387.1	376.3	373.1	364.5	362.3
70°	366.6	363.4	365.5	362.3	355.8	350.4	342.9	334.3	323.5	312.7	305.2
72.5°	332.1	332.1	330.0	326.7	323.5	312.7	304.1	294.4	281.4	267.4	256.6
75°	298.7	299.8	299.8	296.5	291.1	281.4	271.7	257.7	243.7	227.5	213.5
77.5°	275.0	275.0	275.0	269.6	264.2	255.6	243.7	228.6	213.5	194.1	177.9
80°	252.3	251.2	251.2	244.8	239.4	229.7	217.8	202.7	186.5	166.1	147.7
82.5°	234.0	232.9	230.8	225.4	217.8	208.1	196.2	180.1	162.8	144.5	121.8
85°	214.6	213.5	211.3	205.9	198.4	189.8	176.8	160.7	143.4	122.9	101.4
87.5°	197.3	196.2	193.0	189.8	181.1	171.4	158.5	143.4	125.1	105.7	84.1
90°	185.5	183.3	181.1	176.8	169.3	158.5	145.6	129.4	111.1	91.7	70.1
92.5°	171.4	170.4	167.1	162.8	156.3	145.6	132.6	117.5	99.2	80.9	60.4
95°	157.4	156.3	154.2	149.9	143.4	133.7	121.8	106.7	89.5	71.2	52.8
97.5°	144.5	144.5	141.3	138.0	130.5	122.9	111.1	97.0	80.9	64.7	47.4
100°	133.7	133.7	130.5	126.2	120.8	113.2	101.4	88.4	73.3	58.2	41.0
102.5°	124.0	122.9	120.8	116.5	111.1	103.5	92.7	80.9	66.9	51.8	36.7
105°	115.4	114.3	112.1	107.8	103.5	94.9	86.3	74.4	60.4	46.4	32.3
107.5°	106.7	105.7	104.6	100.3	94.9	87.3	78.7	66.9	55.0	42.1	29.1
110°	99.2	98.1	96.0	91.7	86.3	79.8	71.2	61.5	49.6	37.7	25.9



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CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	92.7	91.7	89.5	85.2	80.9	73.3	65.8	55.0	45.3	34.5	22.6
115°	86.3	85.2	83.0	78.7	73.3	66.9	59.3	50.7	39.9	30.2	20.5
117.5°	79.8	78.7	76.6	73.3	67.9	61.5	53.9	45.3	35.6	28.0	18.3
120°	74.4	72.2	70.1	66.9	61.5	56.1	48.5	41.0	32.3	24.8	16.2
122.5°	69.0	66.9	64.7	61.5	56.1	50.7	43.1	36.7	30.2	22.6	15.1
125°	62.5	61.5	59.3	56.1	50.7	45.3	39.9	33.4	27.0	20.5	12.9
127.5°	57.1	56.1	53.9	49.6	45.3	41.0	35.6	30.2	23.7	17.3	11.9
130°	52.8	50.7	48.5	45.3	42.1	37.7	32.3	27.0	21.6	15.1	10.8
132.5°	47.4	45.3	43.1	41.0	37.7	33.4	29.1	23.7	19.4	14.0	9.7
135°	43.1	41.0	38.8	36.7	33.4	30.2	25.9	21.6	17.3	12.9	8.6
137.5°	37.7	36.7	35.6	33.4	30.2	27.0	23.7	18.3	15.1	11.9	7.5
140°	34.5	33.4	32.3	29.1	27.0	23.7	20.5	16.2	12.9	9.7	6.5
142.5°	31.3	30.2	28.0	25.9	23.7	21.6	17.3	15.1	11.9	8.6	6.5
145°	27.0	25.9	24.8	22.6	20.5	17.3	15.1	12.9	10.8	7.5	5.4
147.5°	24.8	23.7	21.6	19.4	17.3	15.1	14.0	11.9	8.6	6.5	4.3
150°	20.5	19.4	18.3	16.2	15.1	14.0	11.9	9.7	7.5	5.4	4.3
152.5°	17.3	16.2	15.1	15.1	12.9	11.9	9.7	8.6	6.5	5.4	3.2
155°	15.1	15.1	14.0	12.9	10.8	9.7	8.6	6.5	5.4	4.3	3.2
157.5°	12.9	11.9	10.8	10.8	9.7	8.6	6.5	5.4	4.3	4.3	3.2
160°	10.8	9.7	9.7	8.6	7.5	6.5	5.4	5.4	4.3	3.2	3.2
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

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CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1963.5	1951.7	1962.5	1976.5	1976.5	1974.3	1972.2	1976.5	1987.3	1982.9	1970.0
5°	1960.3	1948.4	1958.1	1972.2	1972.2	1968.9	1966.8	1970.0	1981.9	1976.5	1964.6
7.5°	1953.8	1943.0	1949.5	1962.5	1962.5	1959.2	1957.1	1961.4	1971.1	1965.7	1952.8
10°	1942.0	1930.1	1937.7	1949.5	1948.4	1946.3	1943.0	1948.4	1957.1	1949.5	1934.4
12.5°	1926.9	1915.0	1921.5	1932.3	1931.2	1926.9	1924.7	1928.0	1935.5	1931.2	1915.0
15°	1906.4	1894.5	1899.9	1910.7	1907.5	1904.2	1899.9	1901.0	1910.7	1903.2	1885.9
17.5°	1881.6	1868.6	1873.0	1882.7	1879.4	1876.2	1870.8	1871.9	1882.7	1871.9	1853.5
20°	1851.4	1837.4	1840.6	1852.5	1847.1	1841.7	1836.3	1836.3	1847.1	1835.2	1814.7
22.5°	1819.0	1805.0	1807.2	1815.8	1811.5	1801.8	1796.4	1799.6	1805.0	1789.9	1768.4
25°	1779.1	1760.8	1764.1	1772.7	1769.4	1756.5	1751.1	1753.3	1751.1	1739.3	1716.6
27.5°	1732.8	1713.4	1715.5	1720.9	1716.6	1704.7	1698.3	1699.4	1695.0	1679.9	1654.1
30°	1674.6	1664.9	1663.8	1667.0	1660.5	1648.7	1641.1	1639.0	1637.9	1616.3	1585.1
32.5°	1615.3	1606.6	1601.2	1605.5	1598.0	1586.1	1573.2	1573.2	1562.4	1541.9	1515.0
35°	1554.9	1540.9	1535.5	1538.7	1530.1	1515.0	1504.2	1498.8	1482.6	1456.7	1427.6
37.5°	1477.2	1467.5	1461.1	1464.3	1454.6	1443.8	1423.3	1417.9	1400.7	1365.1	1328.4
40°	1393.1	1385.6	1379.1	1382.3	1371.6	1355.4	1337.1	1328.4	1309.0	1269.1	1240.0
42.5°	1302.6	1299.3	1291.8	1303.6	1282.1	1265.9	1247.6	1233.5	1214.1	1171.0	1137.6
45°	1206.6	1214.1	1196.9	1200.1	1186.1	1172.1	1152.7	1132.2	1112.8	1071.8	1034.1
47.5°	1105.2	1110.6	1098.8	1100.9	1085.8	1072.9	1055.6	1029.7	1008.2	972.6	939.2
50°	1000.6	998.5	998.5	996.3	984.5	968.3	951.0	927.3	905.7	873.4	845.4
52.5°	889.6	893.9	896.0	901.4	886.3	876.6	849.7	829.2	813.0	779.6	755.9
55°	782.8	797.9	793.6	795.8	778.5	771.0	749.4	733.2	709.5	690.1	675.0
57.5°	685.8	689.0	691.2	694.4	686.9	671.8	654.5	641.6	623.2	607.1	596.3
60°	592.0	592.0	593.0	598.4	590.9	578.0	565.0	555.3	542.4	532.7	526.2
62.5°	503.6	511.1	512.2	507.9	498.2	491.7	483.1	477.7	469.0	465.8	463.7
65°	421.6	421.6	421.6	423.8	418.4	414.1	408.7	407.6	410.8	406.5	408.7
67.5°	352.6	349.4	347.2	348.3	346.1	344.0	342.9	346.1	352.6	352.6	358.0
70°	293.3	286.8	282.5	282.5	282.5	283.6	286.8	293.3	304.1	308.4	315.9
72.5°	244.8	230.8	224.3	224.3	225.4	229.7	239.4	251.2	260.9	269.6	279.3
75°	198.4	184.4	174.7	173.6	175.8	182.2	196.2	207.0	223.2	235.1	246.9
77.5°	160.7	143.4	131.5	130.5	133.7	143.4	160.7	174.7	193.0	205.9	218.9
80°	128.3	108.9	99.2	92.7	98.1	110.0	129.4	146.6	163.9	181.1	197.3
82.5°	102.4	84.1	69.0	62.5	69.0	85.2	103.5	124.0	141.3	159.6	175.8
85°	80.9	61.5	44.2	37.7	45.3	62.5	83.0	103.5	122.9	141.3	157.4
87.5°	63.6	44.2	27.0	18.3	28.0	46.4	65.8	86.3	106.7	125.1	141.3
90°	49.6	31.3	15.1	2.2	16.2	33.4	52.8	72.2	92.7	111.1	127.2
92.5°	42.1	23.7	8.6	0.0	9.7	24.8	43.1	62.5	80.9	99.2	115.4
95°	35.6	19.4	6.5	0.0	6.5	19.4	35.6	52.8	71.2	89.5	105.7
97.5°	30.2	15.1	4.3	0.0	4.3	15.1	29.1	46.4	62.5	79.8	94.9
100°	25.9	12.9	3.2	0.0	3.2	11.9	24.8	39.9	56.1	72.2	86.3
102.5°	22.6	10.8	2.2	0.0	2.2	9.7	20.5	34.5	48.5	63.6	77.6
105°	19.4	8.6	2.2	0.0	1.1	7.5	17.3	30.2	43.1	57.1	70.1
107.5°	17.3	7.5	2.2	0.0	1.1	6.5	15.1	25.9	38.8	50.7	62.5
110°	15.1	6.5	2.2	0.0	1.1	4.3	12.9	22.6	33.4	45.3	57.1

TEST NUMBER: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	12.9	5.4	1.1	0.0	0.0	3.2	10.8	19.4	29.1	41.0	50.7
115°	11.9	5.4	1.1	0.0	0.0	2.2	8.6	17.3	25.9	36.7	45.3
117.5°	10.8	4.3	1.1	0.0	1.1	2.2	7.5	15.1	22.6	31.3	41.0
120°	9.7	4.3	1.1	0.0	1.1	1.1	5.4	12.9	19.4	28.0	35.6
122.5°	8.6	4.3	1.1	0.0	1.1	1.1	4.3	10.8	17.3	24.8	31.3
125°	7.5	3.2	2.2	1.1	1.1	1.1	3.2	8.6	15.1	20.5	28.0
127.5°	7.5	3.2	2.2	1.1	1.1	1.1	2.2	7.5	11.9	18.3	24.8
130°	6.5	3.2	2.2	1.1	1.1	1.1	1.1	5.4	10.8	15.1	20.5
132.5°	5.4	3.2	2.2	1.1	1.1	1.1	1.1	3.2	7.5	12.9	17.3
135°	5.4	3.2	2.2	1.1	1.1	1.1	1.1	2.2	5.4	9.7	14.0
137.5°	4.3	2.2	2.2	1.1	1.1	1.1	1.1	1.1	4.3	7.5	10.8
140°	4.3	2.2	2.2	1.1	1.1	1.1	1.1	1.1	3.2	5.4	8.6
142.5°	3.2	2.2	2.2	1.1	1.1	1.1	1.1	1.1	2.2	4.3	6.5
145°	3.2	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	4.3
147.5°	3.2	3.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	3.2
150°	3.2	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2
152.5°	3.2	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2
155°	3.2	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	2.2
157.5°	3.2	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2
160°	3.2	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: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1965.7	1945.2	1956.0	1952.8	1957.1	1965.7	1964.6	1962.5	1962.5	1959.2	1954.9
5°	1959.2	1939.8	1949.5	1944.1	1949.5	1957.1	1956.0	1952.8	1954.9	1949.5	1944.1
7.5°	1946.3	1929.0	1937.7	1933.3	1937.7	1945.2	1942.0	1940.9	1943.0	1934.4	1931.2
10°	1931.2	1911.8	1921.5	1916.1	1921.5	1926.9	1924.7	1920.4	1924.7	1916.1	1912.9
12.5°	1907.5	1891.3	1897.8	1895.6	1898.8	1904.2	1899.9	1896.7	1898.8	1891.3	1884.8
15°	1881.6	1865.4	1870.8	1867.6	1869.7	1876.2	1868.6	1867.6	1865.4	1857.9	1855.7
17.5°	1848.2	1833.1	1838.5	1833.1	1836.3	1834.1	1833.1	1827.7	1827.7	1819.0	1812.6
20°	1807.2	1794.2	1791.0	1786.7	1791.0	1786.7	1780.2	1775.9	1774.8	1766.2	1760.8
22.5°	1759.7	1744.6	1746.8	1734.9	1736.0	1729.5	1718.8	1714.5	1710.1	1700.4	1692.9
25°	1702.6	1687.5	1676.7	1669.2	1659.5	1658.4	1644.4	1633.6	1632.5	1620.6	1619.6
27.5°	1637.9	1620.6	1612.0	1593.7	1581.8	1572.1	1560.3	1549.5	1544.1	1531.1	1522.5
30°	1563.5	1544.1	1522.5	1509.6	1491.3	1483.7	1463.2	1450.3	1446.0	1431.9	1425.5
32.5°	1479.4	1458.9	1441.6	1416.8	1396.4	1385.6	1365.1	1352.2	1346.8	1331.7	1323.0
35°	1387.7	1365.1	1344.6	1320.9	1304.7	1286.4	1261.6	1248.6	1236.8	1231.4	1224.9
37.5°	1291.8	1267.0	1243.2	1219.5	1205.5	1183.9	1162.4	1153.8	1139.7	1134.3	1127.9
40°	1192.6	1167.8	1145.1	1122.5	1106.3	1086.9	1067.5	1064.3	1049.2	1043.8	1039.5
42.5°	1094.4	1068.6	1042.7	1026.5	1014.7	995.2	982.3	979.1	966.1	962.9	962.9
45°	1006.0	973.7	952.1	938.1	928.4	912.2	901.4	899.3	888.5	886.3	886.3
47.5°	911.1	880.9	864.8	856.1	847.5	835.7	829.2	829.2	818.4	816.3	815.2
50°	822.7	794.7	782.8	774.2	773.1	764.5	759.1	756.9	756.9	749.4	750.5
52.5°	738.6	724.6	714.9	709.5	703.0	697.6	693.3	693.3	690.1	684.7	686.9
55°	661.0	644.8	645.9	641.6	638.3	635.1	636.2	629.7	628.6	624.3	627.6
57.5°	583.3	583.3	581.2	578.0	572.6	574.7	574.7	574.7	569.3	566.1	569.3
60°	517.6	520.8	515.4	518.6	516.5	517.6	515.4	515.4	512.2	511.1	512.2
62.5°	459.3	464.7	462.6	466.9	464.7	465.8	468.0	463.7	461.5	459.3	461.5
65°	407.6	414.1	413.0	416.2	417.3	418.4	419.4	417.3	415.1	413.0	411.9
67.5°	362.3	368.8	373.1	374.2	375.2	378.5	377.4	375.2	373.1	369.8	368.8
70°	321.3	330.0	335.3	337.5	341.8	339.7	339.7	338.6	336.4	333.2	332.1
72.5°	286.8	296.5	301.9	304.1	308.4	308.4	307.3	306.2	304.1	300.8	299.8
75°	256.6	265.3	272.8	277.1	280.4	280.4	279.3	278.2	276.0	273.9	272.8
77.5°	232.9	240.5	246.9	252.3	254.5	255.6	254.5	252.3	252.3	251.2	250.2
80°	209.2	217.8	224.3	229.7	232.9	232.9	231.8	232.9	230.8	229.7	228.6
82.5°	188.7	198.4	205.9	211.3	213.5	214.6	213.5	214.6	212.4	212.4	212.4
85°	170.4	180.1	188.7	193.0	196.2	197.3	197.3	197.3	196.2	196.2	196.2
87.5°	155.3	165.0	173.6	177.9	181.1	182.2	182.2	183.3	181.1	181.1	181.1
90°	141.3	151.0	159.6	163.9	167.1	169.3	169.3	170.4	169.3	168.2	168.2
92.5°	128.3	139.1	147.7	152.0	155.3	158.5	158.5	159.6	157.4	157.4	157.4
95°	117.5	128.3	135.9	141.3	144.5	146.6	147.7	147.7	146.6	146.6	146.6
97.5°	107.8	117.5	125.1	130.5	133.7	134.8	135.9	136.9	135.9	135.9	135.9
100°	98.1	107.8	115.4	119.7	124.0	125.1	126.2	127.2	127.2	126.2	126.2
102.5°	89.5	99.2	105.7	111.1	114.3	116.5	117.5	117.5	117.5	117.5	117.5
105°	80.9	90.6	97.0	102.4	105.7	107.8	108.9	110.0	110.0	108.9	108.9
107.5°	73.3	81.9	89.5	93.8	98.1	100.3	101.4	101.4	102.4	101.4	101.4
110°	65.8	75.5	81.9	86.3	90.6	92.7	93.8	94.9	94.9	94.9	94.9

TEST NUMBER: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	60.4	67.9	74.4	78.7	83.0	85.2	86.3	87.3	88.4	87.3	87.3
115°	53.9	61.5	67.9	72.2	75.5	77.6	79.8	80.9	80.9	81.9	80.9
117.5°	48.5	55.0	61.5	65.8	69.0	72.2	73.3	74.4	75.5	74.4	74.4
120°	43.1	49.6	55.0	59.3	62.5	65.8	66.9	67.9	69.0	67.9	67.9
122.5°	38.8	44.2	49.6	53.9	57.1	59.3	61.5	61.5	62.5	62.5	62.5
125°	34.5	39.9	44.2	48.5	51.8	53.9	55.0	56.1	56.1	57.1	57.1
127.5°	30.2	34.5	39.9	43.1	46.4	48.5	49.6	50.7	50.7	51.8	51.8
130°	25.9	30.2	34.5	37.7	41.0	43.1	44.2	45.3	46.4	46.4	46.4
132.5°	22.6	27.0	30.2	33.4	35.6	37.7	39.9	41.0	41.0	41.0	41.0
135°	18.3	22.6	25.9	29.1	31.3	33.4	34.5	36.7	36.7	36.7	36.7
137.5°	15.1	19.4	22.6	24.8	27.0	29.1	30.2	31.3	32.3	32.3	32.3
140°	11.9	15.1	18.3	21.6	23.7	24.8	27.0	27.0	28.0	28.0	28.0
142.5°	8.6	11.9	14.0	17.3	19.4	21.6	22.6	23.7	23.7	23.7	23.7
145°	6.5	8.6	10.8	12.9	16.2	17.3	18.3	19.4	20.5	20.5	20.5
147.5°	4.3	6.5	7.5	9.7	11.9	14.0	15.1	16.2	17.3	17.3	17.3
150°	3.2	4.3	6.5	7.5	8.6	10.8	12.9	12.9	14.0	14.0	12.9
152.5°	2.2	3.2	4.3	5.4	6.5	7.5	9.7	9.7	10.8	10.8	10.8
155°	2.2	2.2	2.2	3.2	4.3	5.4	6.5	7.5	7.5	7.5	7.5
157.5°	2.2	2.2	2.2	2.2	2.2	3.2	4.3	5.4	5.4	5.4	5.4
160°	2.2	2.2	1.1	1.1	2.2	2.2	2.2	2.2	3.2	3.2	3.2
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: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1958.1	1960.3	1960.3	1958.1	1957.1	1961.4	1956.0	1935.5	1942.0	1944.1	1950.6
5°	1948.4	1950.6	1950.6	1950.6	1948.4	1952.8	1947.4	1926.9	1934.4	1937.7	1942.0
7.5°	1934.4	1935.5	1937.7	1936.6	1934.4	1940.9	1935.5	1915.0	1920.4	1925.8	1931.2
10°	1916.1	1916.1	1917.2	1919.3	1917.2	1922.6	1917.2	1898.8	1904.2	1907.5	1913.9
12.5°	1891.3	1893.4	1894.5	1893.4	1892.4	1896.7	1894.5	1877.3	1879.4	1885.9	1892.4
15°	1857.9	1857.9	1863.3	1861.1	1861.1	1865.4	1867.6	1848.2	1851.4	1861.1	1867.6
17.5°	1816.9	1818.0	1822.3	1824.4	1823.4	1830.9	1832.0	1816.9	1815.8	1827.7	1834.1
20°	1764.1	1766.2	1771.6	1775.9	1775.9	1784.5	1787.8	1778.1	1779.1	1792.1	1794.2
22.5°	1699.4	1699.4	1709.1	1715.5	1720.9	1726.3	1736.0	1727.4	1727.4	1744.6	1754.3
25°	1619.6	1627.1	1630.3	1643.3	1650.8	1665.9	1674.6	1675.6	1676.7	1692.9	1699.4
27.5°	1531.1	1533.3	1543.0	1558.1	1566.7	1580.7	1596.9	1600.2	1605.5	1627.1	1636.8
30°	1430.9	1437.3	1441.6	1463.2	1475.1	1493.4	1513.9	1521.4	1525.8	1554.9	1566.7
32.5°	1328.4	1330.6	1348.9	1360.8	1374.8	1394.2	1417.9	1431.9	1440.6	1470.8	1488.0
35°	1226.0	1230.3	1245.4	1260.5	1274.5	1293.9	1318.7	1338.1	1353.2	1380.2	1402.8
37.5°	1132.2	1143.0	1146.2	1161.3	1172.1	1191.5	1208.7	1236.8	1251.9	1279.9	1309.0
40°	1048.1	1051.3	1053.5	1068.6	1076.1	1094.4	1119.2	1137.6	1158.1	1178.6	1213.1
42.5°	965.1	967.2	970.4	979.1	987.7	1000.6	1019.0	1037.3	1058.9	1089.1	1111.7
45°	888.5	890.7	892.8	898.2	905.7	917.6	929.5	942.4	964.0	989.9	1013.6
47.5°	817.3	821.6	821.6	822.7	828.1	837.8	846.4	862.6	874.5	888.5	915.5
50°	749.4	752.6	753.7	753.7	756.9	763.4	765.6	776.4	787.1	800.1	819.5
52.5°	685.8	685.8	684.7	689.0	689.0	693.3	694.4	700.9	708.4	722.4	731.1
55°	625.4	625.4	628.6	626.5	626.5	628.6	627.6	628.6	635.1	643.7	651.3
57.5°	567.2	566.1	569.3	567.2	566.1	568.2	570.4	566.1	567.2	575.8	575.8
60°	508.9	510.0	513.3	511.1	511.1	511.1	508.9	506.8	504.6	510.0	512.2
62.5°	462.6	459.3	462.6	459.3	461.5	460.4	458.3	454.0	455.0	452.9	450.7
65°	414.1	414.1	415.1	411.9	414.1	414.1	410.8	409.7	403.3	401.1	395.7
67.5°	372.0	372.0	373.1	370.9	370.9	372.0	368.8	365.5	359.1	355.8	348.3
70°	335.3	335.3	335.3	334.3	334.3	334.3	332.1	327.8	321.3	315.9	306.2
72.5°	301.9	303.0	301.9	301.9	305.2	301.9	298.7	294.4	289.0	278.2	269.6
75°	275.0	276.0	275.0	275.0	275.0	273.9	272.8	266.3	259.9	251.2	238.3
77.5°	251.2	251.2	252.3	251.2	251.2	250.2	246.9	241.5	234.0	226.4	211.3
80°	228.6	229.7	230.8	231.8	229.7	228.6	225.4	221.0	211.3	202.7	187.6
82.5°	212.4	211.3	212.4	213.5	211.3	210.3	207.0	201.6	194.1	182.2	167.1
85°	196.2	195.2	195.2	196.2	195.2	193.0	189.8	184.4	176.8	165.0	149.9
87.5°	180.1	181.1	182.2	181.1	180.1	177.9	174.7	169.3	160.7	151.0	134.8
90°	168.2	168.2	168.2	168.2	167.1	165.0	161.7	155.3	147.7	135.9	121.8
92.5°	157.4	157.4	157.4	157.4	156.3	153.1	149.9	144.5	135.9	124.0	111.1
95°	146.6	147.7	146.6	146.6	144.5	143.4	138.0	132.6	125.1	113.2	99.2
97.5°	134.8	135.9	134.8	134.8	133.7	131.5	128.3	121.8	114.3	103.5	90.6
100°	126.2	126.2	125.1	125.1	124.0	121.8	117.5	112.1	104.6	93.8	80.9
102.5°	116.5	117.5	116.5	116.5	114.3	112.1	108.9	103.5	96.0	85.2	73.3
105°	108.9	108.9	107.8	107.8	105.7	103.5	100.3	93.8	87.3	77.6	65.8
107.5°	101.4	101.4	100.3	100.3	98.1	96.0	91.7	86.3	79.8	70.1	59.3
110°	93.8	93.8	93.8	92.7	90.6	87.3	84.1	78.7	72.2	63.6	52.8

TEST NUMBER: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	88.4	87.3	86.3	85.2	83.0	80.9	76.6	71.2	64.7	57.1	47.4
115°	80.9	80.9	79.8	78.7	76.6	73.3	70.1	65.8	59.3	50.7	42.1
117.5°	74.4	74.4	73.3	72.2	70.1	66.9	63.6	59.3	52.8	45.3	37.7
120°	67.9	67.9	66.9	65.8	63.6	60.4	58.2	52.8	47.4	39.9	33.4
122.5°	62.5	61.5	61.5	59.3	58.2	55.0	51.8	47.4	42.1	35.6	29.1
125°	56.1	56.1	55.0	53.9	52.8	49.6	46.4	42.1	36.7	31.3	25.9
127.5°	50.7	50.7	49.6	48.5	47.4	44.2	41.0	37.7	32.3	27.0	21.6
130°	45.3	45.3	44.2	43.1	42.1	38.8	36.7	32.3	28.0	23.7	18.3
132.5°	41.0	41.0	39.9	38.8	36.7	34.5	32.3	28.0	24.8	20.5	16.2
135°	36.7	35.6	35.6	34.5	32.3	30.2	28.0	24.8	20.5	17.3	12.9
137.5°	32.3	31.3	30.2	29.1	28.0	25.9	23.7	21.6	18.3	14.0	10.8
140°	28.0	27.0	27.0	25.9	23.7	22.6	20.5	17.3	15.1	11.9	8.6
142.5°	23.7	23.7	22.6	21.6	20.5	19.4	17.3	15.1	11.9	9.7	6.5
145°	20.5	19.4	19.4	18.3	17.3	15.1	14.0	11.9	9.7	7.5	5.4
147.5°	16.2	16.2	16.2	15.1	14.0	12.9	11.9	9.7	7.5	5.4	3.2
150°	12.9	12.9	12.9	11.9	10.8	9.7	8.6	7.5	5.4	3.2	2.2
152.5°	10.8	10.8	9.7	9.7	8.6	7.5	6.5	5.4	3.2	2.2	2.2
155°	7.5	7.5	7.5	6.5	6.5	5.4	4.3	3.2	2.2	2.2	2.2
157.5°	5.4	5.4	5.4	4.3	4.3	3.2	3.2	2.2	2.2	2.2	2.2
160°	3.2	3.2	3.2	3.2	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: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1947.4	1946.3	1954.9	1954.9	1945.2	1960.3	1976.5
5°	1940.9	1939.8	1948.4	1948.4	1939.8	1954.9	1972.2
7.5°	1928.0	1929.0	1937.7	1939.8	1929.0	1943.0	1961.4
10°	1913.9	1912.9	1922.6	1924.7	1916.1	1929.0	1946.3
12.5°	1891.3	1891.3	1901.0	1904.2	1895.6	1910.7	1926.9
15°	1867.6	1867.6	1874.0	1879.4	1871.9	1885.9	1902.1
17.5°	1837.4	1836.3	1842.8	1849.2	1841.7	1856.8	1874.0
20°	1798.6	1798.6	1806.1	1813.7	1808.3	1822.3	1841.7
22.5°	1757.6	1753.3	1766.2	1771.6	1768.4	1782.4	1801.8
25°	1705.8	1704.7	1717.7	1725.2	1720.9	1736.0	1753.3
27.5°	1649.8	1648.7	1661.6	1671.3	1669.2	1683.2	1702.6
30°	1581.8	1587.2	1599.1	1615.3	1609.9	1625.0	1645.4
32.5°	1510.7	1516.1	1530.1	1547.3	1548.4	1560.3	1580.7
35°	1425.5	1439.5	1449.2	1471.8	1476.2	1488.0	1509.6
37.5°	1336.0	1352.2	1372.6	1389.9	1398.5	1408.2	1433.0
40°	1235.7	1259.4	1282.1	1302.6	1313.3	1323.0	1346.8
42.5°	1145.1	1163.5	1185.0	1205.5	1224.9	1233.5	1258.3
45°	1042.7	1064.3	1083.7	1108.5	1127.9	1137.6	1162.4
47.5°	942.4	964.0	989.9	1007.1	1027.6	1037.3	1061.0
50°	846.4	865.9	887.4	907.9	925.2	933.8	954.3
52.5°	751.6	772.0	792.5	805.5	823.8	830.3	847.5
55°	667.5	681.5	699.8	707.3	725.7	730.0	741.9
57.5°	586.6	596.3	602.8	615.7	628.6	638.3	652.4
60°	513.3	517.6	521.9	529.4	540.2	543.4	548.8
62.5°	447.5	446.4	455.0	457.2	458.3	469.0	463.7
65°	389.3	390.3	382.8	379.6	383.9	387.1	384.9
67.5°	340.7	334.3	327.8	320.2	313.8	317.0	313.8
70°	293.3	287.9	277.1	266.3	262.0	255.6	252.3
72.5°	255.6	242.6	231.8	217.8	210.3	202.7	197.3
75°	226.4	208.1	193.0	177.9	167.1	156.3	154.2
77.5°	196.2	179.0	161.7	145.6	129.4	117.5	113.2
80°	172.5	156.3	135.9	116.5	99.2	84.1	78.7
82.5°	151.0	133.7	113.2	92.7	73.3	57.1	50.7
85°	132.6	114.3	93.8	73.3	53.9	36.7	28.0
87.5°	118.6	98.1	77.6	58.2	37.7	20.5	10.8
90°	105.7	86.3	66.9	46.4	27.0	10.8	0.0
92.5°	93.8	75.5	56.1	37.7	20.5	6.5	1.1
95°	83.0	66.9	47.4	30.2	15.1	4.3	1.1
97.5°	74.4	58.2	41.0	24.8	11.9	3.2	1.1
100°	66.9	50.7	35.6	20.5	9.7	2.2	1.1
102.5°	59.3	45.3	30.2	17.3	7.5	1.1	1.1
105°	52.8	39.9	25.9	15.1	6.5	1.1	1.1
107.5°	47.4	35.6	22.6	12.9	4.3	1.1	1.1
110°	42.1	30.2	19.4	10.8	3.2	1.1	1.1

TEST NUMBER: P1213146

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	37.7	27.0	17.3	8.6	2.2	1.1	1.1
115°	33.4	23.7	15.1	7.5	2.2	1.1	1.1
117.5°	29.1	20.5	12.9	5.4	1.1	1.1	1.1
120°	25.9	18.3	10.8	4.3	1.1	1.1	1.1
122.5°	22.6	15.1	8.6	3.2	1.1	1.1	1.1
125°	19.4	12.9	7.5	2.2	1.1	1.1	1.1
127.5°	16.2	10.8	5.4	2.2	1.1	1.1	1.1
130°	14.0	8.6	4.3	1.1	1.1	1.1	1.1
132.5°	11.9	6.5	3.2	1.1	1.1	1.1	1.1
135°	9.7	5.4	2.2	1.1	1.1	1.1	1.1
137.5°	7.5	4.3	2.2	1.1	1.1	1.1	1.1
140°	5.4	3.2	1.1	1.1	1.1	1.1	1.1
142.5°	4.3	2.2	1.1	1.1	1.1	1.1	1.1
145°	3.2	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)