

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: P1214199

Luminaire Tested: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1214199
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-L950-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

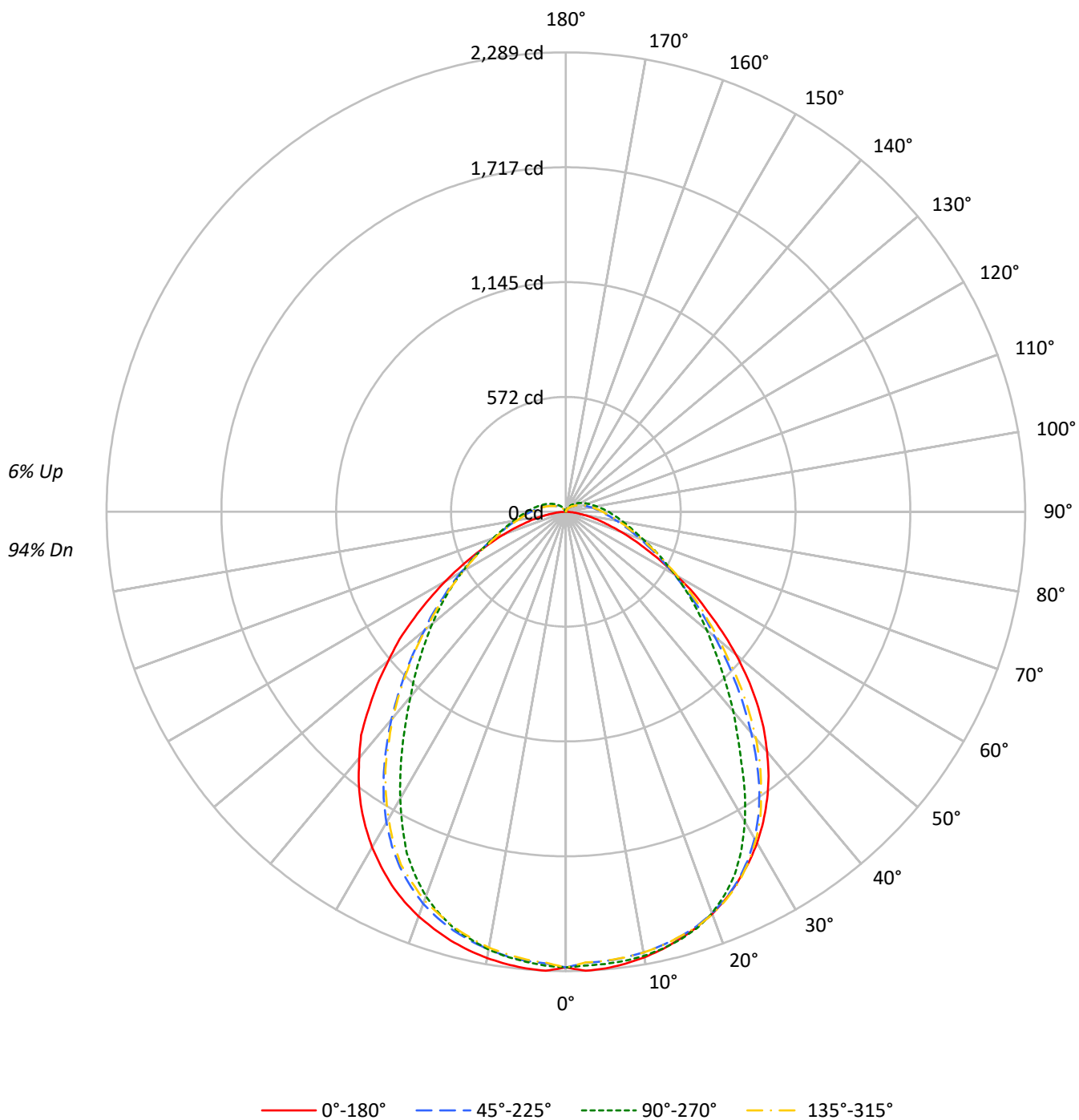
Lumens per Lamp: N/A
Luminaire Lumens: 5746.0 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

Luminous Intensity Polar Plot



TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	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
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	18348	18348	18348	18348
5°	18479	17763	18479	17686
10°	18396	17292	18427	17051
15°	18277	16775	18360	16338
20°	18138	16111	18244	15430
25°	17847	15125	18044	14234
30°	17468	13677	17697	12662
35°	16879	11902	17205	11083
40°	16035	10410	16458	9658
45°	14920	9049	15404	8530
50°	13397	7951	13987	7550
55°	11588	7022	12431	6667
60°	9747	6164	10627	5810
65°	7991	5450	8795	5054
70°	6358	4838	7120	4475
75°	4994	4466	5623	4109
80°	3605	4309	4246	3938
85°	2220	4334	2985	3984

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 15404 cd/sqm

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.3	3.7
10°-20°	617.2	10.7
20°-30°	914.8	15.9
30°-40°	1016.3	17.7
40°-50°	921.2	16.0
50°-60°	713.9	12.4
60°-70°	484.8	8.4
70°-80°	308.4	5.4
80°-90°	197.2	3.4
90°-100°	132.9	2.3
100°-110°	91.1	1.6
110°-120°	60.7	1.1
120°-130°	37.8	0.7
130°-140°	20.9	0.4
140°-150°	9.8	0.2
150°-160°	3.6	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1747.2	30.4
0°-40°	2763.5	48.1
0°-60°	4398.6	76.6
0°-90°	5389.0	93.8
90°-120°	284.7	5.0
90°-150°	353.2	6.1
90°-180°	357.0	6.2
0°-180°	5746.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2270	2270	2270	2270	2270	
5°	2284	2262	2284	2252	2284	217
15°	2203	2207	2213	2149	2203	622
25°	2031	1993	2053	1876	2031	935
35°	1748	1524	1782	1419	1748	1091
45°	1346	1089	1390	1027	1346	1034
55°	859	766	922	727	859	774
65°	446	514	491	477	446	447
75°	179	343	201	316	179	192
85°	32	247	44	227	32	39
90°	0	214	2	195	0	2
95°	1	182	0	170	1	1
105°	1	134	0	126	1	1
115°	1	101	0	94	1	1
125°	1	75	1	66	1	1
135°	1	52	1	42	1	1
145°	1	34	1	24	1	1
155°	1	19	1	9	1	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5
2.5°	2289.2	2286.7	2284.2	2280.5	2284.2	2294.2	2288.0	2274.2	2271.7	2249.3	2259.2
5°	2284.2	2280.5	2278.0	2274.2	2279.2	2291.7	2285.5	2273.0	2269.2	2248.0	2259.2
7.5°	2271.7	2269.2	2265.5	2265.5	2270.5	2283.0	2278.0	2264.2	2261.7	2240.5	2253.0
10°	2254.2	2253.0	2250.5	2250.5	2255.5	2270.5	2264.2	2251.8	2249.3	2229.3	2243.0
12.5°	2231.8	2233.0	2229.3	2229.3	2236.8	2251.8	2246.8	2233.0	2230.5	2213.0	2226.8
15°	2203.0	2204.3	2201.8	2203.0	2210.5	2228.0	2221.8	2209.3	2206.8	2193.1	2204.3
17.5°	2170.6	2171.8	2171.8	2170.6	2179.3	2196.8	2191.8	2180.6	2176.8	2165.6	2179.3
20°	2133.1	2133.1	2133.1	2133.1	2143.1	2160.6	2154.3	2145.6	2138.1	2129.4	2140.6
22.5°	2086.9	2085.6	2086.9	2090.6	2100.6	2114.4	2110.6	2100.6	2089.4	2084.4	2093.1
25°	2030.7	2034.4	2035.7	2039.4	2051.9	2063.2	2059.4	2049.4	2031.9	2028.2	2030.7
27.5°	1972.0	1974.5	1978.2	1977.0	1994.5	2005.7	1998.2	1989.5	1964.5	1960.8	1958.3
30°	1905.8	1909.6	1912.1	1910.8	1924.5	1937.0	1929.5	1918.3	1884.6	1882.1	1862.1
32.5°	1830.9	1834.6	1837.1	1837.1	1857.1	1862.1	1848.4	1832.1	1795.9	1787.2	1769.7
35°	1748.4	1752.2	1753.4	1753.4	1773.4	1772.2	1754.7	1732.2	1692.2	1681.0	1651.0
37.5°	1659.8	1662.3	1663.5	1671.0	1679.8	1672.3	1649.8	1621.1	1591.1	1559.9	1527.4
40°	1559.9	1563.6	1566.1	1571.1	1579.8	1571.1	1538.6	1503.7	1471.2	1436.2	1403.8
42.5°	1457.5	1468.7	1466.2	1464.9	1469.9	1446.2	1421.2	1381.3	1348.8	1312.6	1280.1
45°	1346.3	1345.1	1351.3	1353.8	1352.5	1332.6	1297.6	1261.4	1228.9	1191.4	1164.0
47.5°	1228.9	1227.7	1232.7	1235.2	1227.7	1206.4	1179.0	1137.7	1110.3	1077.8	1056.6
50°	1105.3	1105.3	1112.8	1105.3	1101.5	1080.3	1057.8	1016.6	995.4	966.6	954.2
52.5°	981.6	992.9	985.4	982.9	979.1	957.9	940.4	906.7	889.2	876.7	861.7
55°	859.2	871.7	866.7	863.0	861.7	844.3	828.0	803.0	791.8	783.1	774.3
57.5°	755.6	754.3	751.8	748.1	749.3	735.6	719.4	705.6	700.6	696.9	699.4
60°	635.7	645.7	641.9	643.2	644.4	641.9	628.2	619.5	620.7	621.9	625.7
62.5°	537.0	545.8	552.0	547.0	549.5	553.3	545.8	543.3	548.3	553.3	558.3
65°	445.9	454.6	460.8	459.6	467.1	474.6	473.3	475.8	487.1	493.3	499.6
67.5°	363.4	372.2	380.9	382.2	393.4	404.6	409.6	418.4	430.9	439.6	447.1
70°	292.2	299.7	309.7	316.0	331.0	345.9	354.7	372.2	379.7	392.2	397.1
72.5°	228.5	234.8	248.5	263.5	276.0	294.7	312.2	327.2	338.4	352.2	358.4
75°	178.6	181.1	196.1	213.6	231.0	252.3	271.0	287.2	302.2	316.0	326.0
77.5°	131.1	134.9	148.6	172.3	192.3	214.8	236.0	253.5	269.8	283.5	297.2
80°	91.2	98.7	113.6	137.4	159.9	184.8	204.8	224.8	242.3	256.0	269.8
82.5°	58.7	64.9	86.2	109.9	133.6	158.6	179.8	199.8	218.6	233.5	246.0
85°	32.5	41.2	62.4	87.4	111.2	136.1	158.6	178.6	197.3	211.1	223.6
87.5°	12.5	25.0	45.0	68.7	92.4	116.1	139.9	158.6	177.3	192.3	203.6
90°	0.0	15.0	33.7	57.4	81.2	104.9	127.4	147.4	164.9	178.6	191.1
92.5°	1.2	10.0	26.2	46.2	68.7	91.2	112.4	132.4	149.9	163.6	174.8
95°	1.2	7.5	21.2	40.0	59.9	81.2	101.2	119.9	136.1	149.9	161.1
97.5°	1.2	5.0	17.5	35.0	52.5	73.7	92.4	109.9	124.9	138.6	147.4
100°	1.2	5.0	15.0	30.0	47.5	66.2	83.7	101.2	114.9	126.1	136.1
102.5°	1.2	3.7	12.5	26.2	42.5	58.7	76.2	92.4	104.9	116.1	126.1
105°	1.2	3.7	11.2	22.5	37.5	53.7	68.7	83.7	97.4	107.4	116.1
107.5°	1.2	2.5	10.0	18.7	32.5	48.7	63.7	76.2	88.7	98.7	107.4
110°	1.2	2.5	8.7	17.5	28.7	43.7	57.4	69.9	81.2	91.2	98.7

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.2	2.5	7.5	16.2	26.2	38.7	52.5	63.7	74.9	83.7	91.2
115°	1.2	2.5	7.5	15.0	23.7	33.7	46.2	58.7	67.4	77.4	83.7
117.5°	1.2	2.5	6.2	12.5	22.5	31.2	42.5	52.5	62.4	71.2	77.4
120°	1.2	2.5	6.2	11.2	20.0	28.7	37.5	47.5	57.4	63.7	69.9
122.5°	1.2	2.5	5.0	11.2	17.5	26.2	33.7	42.5	51.2	58.7	64.9
125°	1.2	2.5	5.0	10.0	16.2	23.7	31.2	37.5	46.2	52.5	58.7
127.5°	1.2	2.5	5.0	8.7	15.0	21.2	28.7	35.0	41.2	47.5	52.5
130°	1.2	2.5	3.7	7.5	13.7	18.7	25.0	32.5	37.5	42.5	47.5
132.5°	1.2	2.5	3.7	7.5	11.2	16.2	22.5	28.7	33.7	38.7	42.5
135°	1.2	2.5	3.7	6.2	10.0	15.0	18.7	25.0	30.0	35.0	38.7
137.5°	1.2	2.5	3.7	6.2	8.7	12.5	16.2	21.2	26.2	30.0	35.0
140°	1.2	2.5	3.7	5.0	7.5	11.2	15.0	17.5	22.5	26.2	30.0
142.5°	1.2	2.5	3.7	5.0	7.5	10.0	12.5	15.0	18.7	22.5	26.2
145°	1.2	2.5	3.7	5.0	6.2	8.7	11.2	13.7	15.0	18.7	21.2
147.5°	1.2	2.5	3.7	5.0	5.0	7.5	10.0	11.2	13.7	15.0	17.5
150°	1.2	2.5	3.7	3.7	5.0	6.2	8.7	10.0	11.2	13.7	15.0
152.5°	1.2	2.5	3.7	3.7	5.0	6.2	7.5	8.7	10.0	11.2	12.5
155°	1.2	2.5	3.7	3.7	3.7	5.0	6.2	7.5	8.7	10.0	11.2
157.5°	2.5	2.5	2.5	3.7	3.7	5.0	5.0	6.2	7.5	7.5	8.7
160°	2.5	2.5	2.5	3.7	3.7	3.7	5.0	5.0	6.2	6.2	7.5
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

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5
2.5°	2256.7	2260.5	2271.7	2271.7	2269.2	2266.7	2266.7	2263.0	2265.5	2270.5	2268.0
5°	2256.7	2260.5	2271.7	2271.7	2269.2	2266.7	2265.5	2261.7	2265.5	2270.5	2268.0
7.5°	2249.3	2254.2	2265.5	2265.5	2263.0	2261.7	2259.2	2256.7	2260.5	2265.5	2263.0
10°	2239.3	2244.3	2255.5	2255.5	2253.0	2253.0	2249.3	2246.8	2251.8	2255.5	2254.2
12.5°	2224.3	2230.5	2240.5	2239.3	2236.8	2238.0	2234.3	2229.3	2234.3	2238.0	2239.3
15°	2203.0	2210.5	2220.5	2218.0	2214.3	2216.8	2210.5	2206.8	2210.5	2218.0	2216.8
17.5°	2175.6	2180.6	2188.1	2188.1	2184.3	2181.8	2179.3	2175.6	2178.1	2183.1	2184.3
20°	2136.9	2143.1	2146.8	2143.1	2141.8	2138.1	2133.1	2129.4	2134.4	2141.8	2143.1
22.5°	2085.6	2086.9	2095.6	2086.9	2080.7	2079.4	2074.4	2066.9	2074.4	2080.7	2081.9
25°	2022.0	2028.2	2024.5	2009.5	2009.5	1999.5	1997.0	1993.2	1994.5	2005.7	2010.7
27.5°	1940.8	1943.3	1933.3	1920.8	1909.6	1903.3	1894.6	1895.8	1895.8	1910.8	1915.8
30°	1852.1	1838.4	1829.6	1809.6	1800.9	1785.9	1783.4	1783.4	1780.9	1788.4	1810.9
32.5°	1746.0	1727.2	1713.5	1694.7	1679.8	1664.8	1657.3	1661.0	1659.8	1678.5	1686.0
35°	1629.8	1618.6	1589.8	1566.1	1557.4	1534.9	1534.9	1523.6	1531.1	1552.4	1561.1
37.5°	1507.4	1489.9	1466.2	1440.0	1433.7	1416.2	1410.0	1403.8	1420.0	1423.7	1432.5
40°	1382.5	1366.3	1343.8	1318.8	1318.8	1297.6	1297.6	1297.6	1298.8	1306.3	1322.6
42.5°	1263.9	1246.4	1226.4	1208.9	1206.4	1190.2	1190.2	1188.9	1191.4	1197.7	1212.7
45°	1149.0	1135.2	1114.0	1105.3	1106.5	1089.0	1092.8	1089.0	1094.0	1100.3	1105.3
47.5°	1042.8	1034.1	1025.3	1012.9	1009.1	1007.9	1001.6	996.6	1005.4	1005.4	1012.9
50°	944.2	939.2	934.2	926.7	927.9	922.9	915.4	915.4	921.7	922.9	927.9
52.5°	858.0	851.7	845.5	846.7	848.0	845.5	841.8	838.0	841.8	844.3	850.5
55°	771.8	766.8	773.1	770.6	773.1	770.6	768.1	765.6	771.8	768.1	774.3
57.5°	694.4	699.4	701.9	696.9	700.6	698.1	699.4	695.6	700.6	703.1	701.9
60°	623.2	630.7	626.9	628.2	633.2	630.7	625.7	629.4	634.4	635.7	634.4
62.5°	558.3	567.0	570.7	568.2	569.5	567.0	570.7	565.7	572.0	574.5	570.7
65°	499.6	509.5	512.0	512.0	512.0	509.5	513.3	514.5	517.0	517.0	514.5
67.5°	449.6	458.3	460.8	463.3	460.8	458.3	458.3	459.6	464.6	467.1	464.6
70°	404.6	413.4	414.6	414.6	415.9	418.4	413.4	415.9	419.6	420.9	419.6
72.5°	365.9	374.7	377.2	375.9	377.2	378.4	378.4	375.9	379.7	382.2	382.2
75°	334.7	339.7	342.2	342.2	343.4	344.7	344.7	343.4	345.9	347.2	348.4
77.5°	306.0	309.7	313.5	313.5	314.7	313.5	316.0	316.0	317.2	318.5	319.7
80°	277.3	282.2	284.7	286.0	288.5	289.7	289.7	289.7	291.0	292.2	292.2
82.5°	254.8	258.5	262.3	266.0	266.0	267.3	267.3	267.3	268.5	268.5	269.8
85°	232.3	237.3	241.0	243.5	244.8	246.0	246.0	247.3	247.3	247.3	248.5
87.5°	212.3	218.6	221.1	223.6	224.8	227.3	227.3	227.3	228.5	228.5	228.5
90°	198.6	204.8	207.3	209.8	211.1	212.3	212.3	213.6	213.6	214.8	214.8
92.5°	182.3	188.6	193.6	193.6	194.8	197.3	196.1	196.1	197.3	198.6	198.6
95°	169.8	174.8	178.6	179.8	181.1	181.1	181.1	182.3	181.1	182.3	182.3
97.5°	154.9	159.9	163.6	166.1	167.4	167.4	167.4	168.6	167.4	168.6	168.6
100°	142.4	147.4	151.1	152.4	154.9	154.9	154.9	154.9	154.9	154.9	156.1
102.5°	132.4	137.4	139.9	141.1	142.4	143.6	143.6	143.6	143.6	144.9	144.9
105°	122.4	127.4	129.9	131.1	132.4	133.6	133.6	133.6	134.9	134.9	133.6
107.5°	113.6	117.4	119.9	122.4	123.6	123.6	124.9	124.9	124.9	124.9	124.9
110°	104.9	108.7	112.4	114.9	114.9	116.1	116.1	117.4	117.4	116.1	117.4

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	96.2	101.2	103.7	106.2	107.4	108.7	108.7	108.7	108.7	108.7	108.7
115°	88.7	93.7	96.2	98.7	99.9	101.2	101.2	101.2	101.2	101.2	101.2
117.5°	82.4	87.4	89.9	91.2	92.4	93.7	94.9	94.9	94.9	94.9	93.7
120°	76.2	79.9	82.4	84.9	86.2	87.4	87.4	87.4	87.4	87.4	87.4
122.5°	69.9	73.7	76.2	78.7	79.9	81.2	81.2	81.2	81.2	81.2	81.2
125°	63.7	67.4	69.9	72.4	73.7	74.9	74.9	74.9	74.9	74.9	74.9
127.5°	57.4	61.2	64.9	66.2	67.4	68.7	68.7	68.7	69.9	68.7	68.7
130°	51.2	55.0	58.7	59.9	61.2	62.4	63.7	63.7	63.7	63.7	62.4
132.5°	46.2	50.0	52.5	53.7	56.2	56.2	57.4	57.4	57.4	57.4	56.2
135°	42.5	45.0	47.5	48.7	51.2	51.2	51.2	52.5	52.5	51.2	50.0
137.5°	37.5	40.0	42.5	43.7	45.0	46.2	46.2	47.5	46.2	46.2	46.2
140°	35.0	36.2	38.7	40.0	41.2	41.2	41.2	42.5	42.5	41.2	41.2
142.5°	30.0	32.5	35.0	36.2	37.5	37.5	37.5	37.5	37.5	37.5	37.5
145°	25.0	28.7	30.0	32.5	32.5	33.7	33.7	33.7	33.7	33.7	32.5
147.5°	21.2	23.7	27.5	28.7	28.7	30.0	30.0	30.0	30.0	30.0	28.7
150°	16.2	18.7	22.5	25.0	25.0	26.2	26.2	26.2	26.2	25.0	25.0
152.5°	13.7	16.2	17.5	20.0	21.2	21.2	21.2	22.5	21.2	21.2	21.2
155°	12.5	13.7	15.0	16.2	17.5	18.7	18.7	18.7	18.7	17.5	17.5
157.5°	10.0	11.2	12.5	13.7	15.0	16.2	16.2	16.2	16.2	16.2	15.0
160°	7.5	8.7	10.0	10.0	11.2	12.5	13.7	12.5	12.5	12.5	12.5
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

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5
2.5°	2265.5	2264.2	2268.0	2261.7	2243.0	2248.0	2245.5	2256.7	2259.2	2261.7	2273.0
5°	2265.5	2264.2	2266.7	2261.7	2241.8	2245.5	2243.0	2254.2	2256.7	2258.0	2269.2
7.5°	2260.5	2259.2	2263.0	2256.7	2235.5	2240.5	2236.8	2248.0	2249.3	2250.5	2260.5
10°	2250.5	2249.3	2251.8	2246.8	2225.5	2230.5	2225.5	2236.8	2236.8	2239.3	2246.8
12.5°	2235.5	2233.0	2238.0	2231.8	2208.0	2214.3	2211.8	2219.3	2220.5	2221.8	2229.3
15°	2214.3	2211.8	2215.5	2211.8	2190.6	2191.8	2188.1	2199.3	2200.5	2198.0	2205.5
17.5°	2183.1	2180.6	2188.1	2185.6	2164.3	2169.3	2168.1	2170.6	2174.3	2168.1	2178.1
20°	2144.3	2146.8	2149.3	2150.6	2134.4	2134.4	2133.1	2138.1	2141.8	2136.9	2144.3
22.5°	2086.9	2093.1	2100.6	2103.1	2091.9	2090.6	2098.1	2095.6	2099.4	2096.9	2101.9
25°	2014.5	2027.0	2034.4	2041.9	2035.7	2038.2	2049.4	2051.9	2051.9	2050.7	2055.7
27.5°	1924.5	1940.8	1954.5	1970.8	1964.5	1969.5	1988.2	1990.7	1995.7	1990.7	2000.7
30°	1817.1	1832.1	1858.4	1882.1	1884.6	1892.1	1918.3	1920.8	1934.5	1929.5	1933.3
32.5°	1709.7	1717.2	1747.2	1770.9	1785.9	1804.6	1833.4	1838.4	1857.1	1860.8	1860.8
35°	1574.9	1596.1	1623.6	1657.3	1676.0	1696.0	1734.7	1742.2	1769.7	1778.4	1788.4
37.5°	1461.2	1481.2	1498.7	1533.6	1567.4	1589.8	1621.1	1639.8	1668.5	1684.8	1697.2
40°	1340.1	1356.3	1375.0	1410.0	1438.7	1472.4	1503.7	1526.1	1562.4	1581.1	1597.3
42.5°	1225.2	1237.7	1257.6	1282.6	1312.6	1350.1	1380.0	1406.3	1445.0	1471.2	1489.9
45°	1122.8	1130.2	1147.7	1166.5	1192.7	1231.4	1260.1	1293.9	1325.1	1352.5	1375.0
47.5°	1026.6	1036.6	1045.3	1057.8	1081.5	1105.3	1139.0	1171.5	1202.7	1232.7	1255.1
50°	937.9	937.9	951.7	960.4	976.6	997.9	1024.1	1046.6	1085.3	1106.5	1135.2
52.5°	851.7	856.7	864.2	869.2	881.7	895.5	916.7	935.4	967.9	987.9	1015.3
55°	775.6	780.6	784.3	786.8	794.3	810.5	818.0	833.0	855.5	871.7	895.5
57.5°	703.1	705.6	709.4	710.6	711.9	721.9	728.1	731.9	754.3	770.6	790.5
60°	636.9	636.9	640.7	639.4	638.2	643.2	641.9	645.7	659.4	669.4	678.1
62.5°	574.5	574.5	575.7	573.2	572.0	572.0	567.0	570.7	574.5	575.7	582.0
65°	517.0	523.3	518.3	519.5	512.0	509.5	507.0	499.6	498.3	493.3	495.8
67.5°	465.8	470.8	465.8	465.8	459.6	454.6	448.4	435.9	432.1	422.1	419.6
70°	424.6	420.9	423.4	419.6	412.1	405.9	397.1	387.2	374.7	362.2	353.4
72.5°	384.7	384.7	382.2	378.4	374.7	362.2	352.2	340.9	326.0	309.7	297.2
75°	345.9	347.2	347.2	343.4	337.2	326.0	314.7	298.5	282.2	263.5	247.3
77.5°	318.5	318.5	318.5	312.2	306.0	296.0	282.2	264.8	247.3	224.8	206.1
80°	292.2	291.0	291.0	283.5	277.3	266.0	252.3	234.8	216.1	192.3	171.1
82.5°	271.0	269.8	267.3	261.0	252.3	241.0	227.3	208.6	188.6	167.4	141.1
85°	248.5	247.3	244.8	238.5	229.8	219.8	204.8	186.1	166.1	142.4	117.4
87.5°	228.5	227.3	223.6	219.8	209.8	198.6	183.6	166.1	144.9	122.4	97.4
90°	214.8	212.3	209.8	204.8	196.1	183.6	168.6	149.9	128.6	106.2	81.2
92.5°	198.6	197.3	193.6	188.6	181.1	168.6	153.6	136.1	114.9	93.7	69.9
95°	182.3	181.1	178.6	173.6	166.1	154.9	141.1	123.6	103.7	82.4	61.2
97.5°	167.4	167.4	163.6	159.9	151.1	142.4	128.6	112.4	93.7	74.9	55.0
100°	154.9	154.9	151.1	146.1	139.9	131.1	117.4	102.4	84.9	67.4	47.5
102.5°	143.6	142.4	139.9	134.9	128.6	119.9	107.4	93.7	77.4	59.9	42.5
105°	133.6	132.4	129.9	124.9	119.9	109.9	99.9	86.2	69.9	53.7	37.5
107.5°	123.6	122.4	121.1	116.1	109.9	101.2	91.2	77.4	63.7	48.7	33.7
110°	114.9	113.6	111.2	106.2	99.9	92.4	82.4	71.2	57.4	43.7	30.0



TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	107.4	106.2	103.7	98.7	93.7	84.9	76.2	63.7	52.5	40.0	26.2
115°	99.9	98.7	96.2	91.2	84.9	77.4	68.7	58.7	46.2	35.0	23.7
117.5°	92.4	91.2	88.7	84.9	78.7	71.2	62.4	52.5	41.2	32.5	21.2
120°	86.2	83.7	81.2	77.4	71.2	64.9	56.2	47.5	37.5	28.7	18.7
122.5°	79.9	77.4	74.9	71.2	64.9	58.7	50.0	42.5	35.0	26.2	17.5
125°	72.4	71.2	68.7	64.9	58.7	52.5	46.2	38.7	31.2	23.7	15.0
127.5°	66.2	64.9	62.4	57.4	52.5	47.5	41.2	35.0	27.5	20.0	13.7
130°	61.2	58.7	56.2	52.5	48.7	43.7	37.5	31.2	25.0	17.5	12.5
132.5°	55.0	52.5	50.0	47.5	43.7	38.7	33.7	27.5	22.5	16.2	11.2
135°	50.0	47.5	45.0	42.5	38.7	35.0	30.0	25.0	20.0	15.0	10.0
137.5°	43.7	42.5	41.2	38.7	35.0	31.2	27.5	21.2	17.5	13.7	8.7
140°	40.0	38.7	37.5	33.7	31.2	27.5	23.7	18.7	15.0	11.2	7.5
142.5°	36.2	35.0	32.5	30.0	27.5	25.0	20.0	17.5	13.7	10.0	7.5
145°	31.2	30.0	28.7	26.2	23.7	20.0	17.5	15.0	12.5	8.7	6.2
147.5°	28.7	27.5	25.0	22.5	20.0	17.5	16.2	13.7	10.0	7.5	5.0
150°	23.7	22.5	21.2	18.7	17.5	16.2	13.7	11.2	8.7	6.2	5.0
152.5°	20.0	18.7	17.5	17.5	15.0	13.7	11.2	10.0	7.5	6.2	3.7
155°	17.5	17.5	16.2	15.0	12.5	11.2	10.0	7.5	6.2	5.0	3.7
157.5°	15.0	13.7	12.5	12.5	11.2	10.0	7.5	6.2	5.0	5.0	3.7
160°	12.5	11.2	11.2	10.0	8.7	7.5	6.2	6.2	5.0	3.7	3.7
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: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5
2.5°	2274.2	2260.5	2273.0	2289.2	2289.2	2286.7	2284.2	2289.2	2301.7	2296.7	2281.7
5°	2270.5	2256.7	2268.0	2284.2	2284.2	2280.5	2278.0	2281.7	2295.5	2289.2	2275.5
7.5°	2263.0	2250.5	2258.0	2273.0	2273.0	2269.2	2266.7	2271.7	2283.0	2276.7	2261.7
10°	2249.3	2235.5	2244.3	2258.0	2256.7	2254.2	2250.5	2256.7	2266.7	2258.0	2240.5
12.5°	2231.8	2218.0	2225.5	2238.0	2236.8	2231.8	2229.3	2233.0	2241.8	2236.8	2218.0
15°	2208.0	2194.3	2200.5	2213.0	2209.3	2205.5	2200.5	2201.8	2213.0	2204.3	2184.3
17.5°	2179.3	2164.3	2169.3	2180.6	2176.8	2173.1	2166.8	2168.1	2180.6	2168.1	2146.8
20°	2144.3	2128.1	2131.9	2145.6	2139.4	2133.1	2126.9	2126.9	2139.4	2125.6	2101.9
22.5°	2106.9	2090.6	2093.1	2103.1	2098.1	2086.9	2080.7	2084.4	2090.6	2073.2	2048.2
25°	2060.7	2039.4	2043.2	2053.2	2049.4	2034.4	2028.2	2030.7	2028.2	2014.5	1988.2
27.5°	2007.0	1984.5	1987.0	1993.2	1988.2	1974.5	1967.0	1968.3	1963.3	1945.8	1915.8
30°	1939.5	1928.3	1927.0	1930.8	1923.3	1909.6	1900.8	1898.3	1897.1	1872.1	1835.9
32.5°	1870.8	1860.8	1854.6	1859.6	1850.9	1837.1	1822.1	1822.1	1809.6	1785.9	1754.7
35°	1800.9	1784.7	1778.4	1782.2	1772.2	1754.7	1742.2	1736.0	1717.2	1687.3	1653.5
37.5°	1711.0	1699.7	1692.2	1696.0	1684.8	1672.3	1648.5	1642.3	1622.3	1581.1	1538.6
40°	1613.6	1604.8	1597.3	1601.1	1588.6	1569.9	1548.6	1538.6	1516.2	1469.9	1436.2
42.5°	1508.7	1504.9	1496.2	1509.9	1484.9	1466.2	1445.0	1428.7	1406.3	1356.3	1317.6
45°	1397.5	1406.3	1386.3	1390.0	1373.8	1357.5	1335.1	1311.3	1288.9	1241.4	1197.7
47.5°	1280.1	1286.4	1272.6	1275.1	1257.6	1242.6	1222.7	1192.7	1167.7	1126.5	1087.8
50°	1159.0	1156.5	1156.5	1154.0	1140.2	1121.5	1101.5	1074.0	1049.1	1011.6	979.1
52.5°	1030.3	1035.3	1037.8	1044.1	1026.6	1015.3	984.1	960.4	941.7	902.9	875.5
55°	906.7	924.2	919.2	921.7	901.7	893.0	868.0	849.2	821.8	799.3	781.8
57.5°	794.3	798.0	800.5	804.3	795.5	778.1	758.1	743.1	721.9	703.1	690.6
60°	685.6	685.6	686.9	693.1	684.4	669.4	654.4	643.2	628.2	617.0	609.5
62.5°	583.2	592.0	593.2	588.2	577.0	569.5	559.5	553.3	543.3	539.5	537.0
65°	488.3	488.3	488.3	490.8	484.6	479.6	473.3	472.1	475.8	470.8	473.3
67.5°	408.4	404.6	402.1	403.4	400.9	398.4	397.1	400.9	408.4	408.4	414.6
70°	339.7	332.2	327.2	327.2	327.2	328.5	332.2	339.7	352.2	357.2	365.9
72.5°	283.5	267.3	259.8	259.8	261.0	266.0	277.3	291.0	302.2	312.2	323.5
75°	229.8	213.6	202.3	201.1	203.6	211.1	227.3	239.8	258.5	272.3	286.0
77.5°	186.1	166.1	152.4	151.1	154.9	166.1	186.1	202.3	223.6	238.5	253.5
80°	148.6	126.1	114.9	107.4	113.6	127.4	149.9	169.8	189.8	209.8	228.5
82.5°	118.6	97.4	79.9	72.4	79.9	98.7	119.9	143.6	163.6	184.8	203.6
85°	93.7	71.2	51.2	43.7	52.5	72.4	96.2	119.9	142.4	163.6	182.3
87.5°	73.7	51.2	31.2	21.2	32.5	53.7	76.2	99.9	123.6	144.9	163.6
90°	57.4	36.2	17.5	2.5	18.7	38.7	61.2	83.7	107.4	128.6	147.4
92.5°	48.7	27.5	10.0	0.0	11.2	28.7	50.0	72.4	93.7	114.9	133.6
95°	41.2	22.5	7.5	0.0	7.5	22.5	41.2	61.2	82.4	103.7	122.4
97.5°	35.0	17.5	5.0	0.0	5.0	17.5	33.7	53.7	72.4	92.4	109.9
100°	30.0	15.0	3.7	0.0	3.7	13.7	28.7	46.2	64.9	83.7	99.9
102.5°	26.2	12.5	2.5	0.0	2.5	11.2	23.7	40.0	56.2	73.7	89.9
105°	22.5	10.0	2.5	0.0	1.2	8.7	20.0	35.0	50.0	66.2	81.2
107.5°	20.0	8.7	2.5	0.0	1.2	7.5	17.5	30.0	45.0	58.7	72.4
110°	17.5	7.5	2.5	0.0	1.2	5.0	15.0	26.2	38.7	52.5	66.2

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	15.0	6.2	1.2	0.0	0.0	3.7	12.5	22.5	33.7	47.5	58.7
115°	13.7	6.2	1.2	0.0	0.0	2.5	10.0	20.0	30.0	42.5	52.5
117.5°	12.5	5.0	1.2	0.0	1.2	2.5	8.7	17.5	26.2	36.2	47.5
120°	11.2	5.0	1.2	0.0	1.2	1.2	6.2	15.0	22.5	32.5	41.2
122.5°	10.0	5.0	1.2	0.0	1.2	1.2	5.0	12.5	20.0	28.7	36.2
125°	8.7	3.7	2.5	1.2	1.2	1.2	3.7	10.0	17.5	23.7	32.5
127.5°	8.7	3.7	2.5	1.2	1.2	1.2	2.5	8.7	13.7	21.2	28.7
130°	7.5	3.7	2.5	1.2	1.2	1.2	1.2	6.2	12.5	17.5	23.7
132.5°	6.2	3.7	2.5	1.2	1.2	1.2	1.2	3.7	8.7	15.0	20.0
135°	6.2	3.7	2.5	1.2	1.2	1.2	1.2	2.5	6.2	11.2	16.2
137.5°	5.0	2.5	2.5	1.2	1.2	1.2	1.2	1.2	5.0	8.7	12.5
140°	5.0	2.5	2.5	1.2	1.2	1.2	1.2	1.2	3.7	6.2	10.0
142.5°	3.7	2.5	2.5	1.2	1.2	1.2	1.2	1.2	2.5	5.0	7.5
145°	3.7	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2	2.5	5.0
147.5°	3.7	3.7	2.5	1.2	1.2	1.2	1.2	1.2	1.2	2.5	3.7
150°	3.7	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.5
152.5°	3.7	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.5
155°	3.7	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2	2.5	2.5
157.5°	3.7	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.5
160°	3.7	2.5	2.5	1.2	2.5	1.2	2.5	2.5	2.5	2.5	2.5
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

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5
2.5°	2276.7	2253.0	2265.5	2261.7	2266.7	2276.7	2275.5	2273.0	2273.0	2269.2	2264.2
5°	2269.2	2246.8	2258.0	2251.8	2258.0	2266.7	2265.5	2261.7	2264.2	2258.0	2251.8
7.5°	2254.2	2234.3	2244.3	2239.3	2244.3	2253.0	2249.3	2248.0	2250.5	2240.5	2236.8
10°	2236.8	2214.3	2225.5	2219.3	2225.5	2231.8	2229.3	2224.3	2229.3	2219.3	2215.5
12.5°	2209.3	2190.6	2198.0	2195.6	2199.3	2205.5	2200.5	2196.8	2199.3	2190.6	2183.1
15°	2179.3	2160.6	2166.8	2163.1	2165.6	2173.1	2164.3	2163.1	2160.6	2151.8	2149.3
17.5°	2140.6	2123.1	2129.4	2123.1	2126.9	2124.4	2123.1	2116.9	2116.9	2106.9	2099.4
20°	2093.1	2078.2	2074.4	2069.4	2074.4	2069.4	2061.9	2056.9	2055.7	2045.7	2039.4
22.5°	2038.2	2020.7	2023.2	2009.5	2010.7	2003.2	1990.7	1985.7	1980.7	1969.5	1960.8
25°	1972.0	1954.5	1942.0	1933.3	1922.0	1920.8	1904.6	1892.1	1890.8	1877.1	1875.8
27.5°	1897.1	1877.1	1867.1	1845.9	1832.1	1820.9	1807.1	1794.7	1788.4	1773.4	1763.4
30°	1810.9	1788.4	1763.4	1748.4	1727.2	1718.5	1694.7	1679.8	1674.8	1658.5	1651.0
32.5°	1713.5	1689.8	1669.8	1641.0	1617.3	1604.8	1581.1	1566.1	1559.9	1542.4	1532.4
35°	1607.3	1581.1	1557.4	1529.9	1511.2	1489.9	1461.2	1446.2	1432.5	1426.2	1418.7
37.5°	1496.2	1467.4	1440.0	1412.5	1396.3	1371.3	1346.3	1336.3	1320.1	1313.8	1306.3
40°	1381.3	1352.5	1326.3	1300.1	1281.4	1258.9	1236.4	1232.7	1215.2	1208.9	1203.9
42.5°	1267.6	1237.7	1207.7	1188.9	1175.2	1152.7	1137.7	1134.0	1119.0	1115.3	1115.3
45°	1165.2	1127.7	1102.8	1086.5	1075.3	1056.6	1044.1	1041.6	1029.1	1026.6	1026.6
47.5°	1055.3	1020.3	1001.6	991.6	981.6	967.9	960.4	960.4	947.9	945.4	944.2
50°	952.9	920.4	906.7	896.7	895.5	885.5	879.2	876.7	876.7	868.0	869.2
52.5°	855.5	839.3	828.0	821.8	814.3	808.0	803.0	803.0	799.3	793.0	795.5
55°	765.6	746.8	748.1	743.1	739.3	735.6	736.8	729.4	728.1	723.1	726.9
57.5°	675.7	675.7	673.2	669.4	663.2	665.7	665.7	665.7	659.4	655.7	659.4
60°	599.5	603.2	597.0	600.7	598.2	599.5	597.0	597.0	593.2	592.0	593.2
62.5°	532.0	538.3	535.8	540.8	538.3	539.5	542.0	537.0	534.5	532.0	534.5
65°	472.1	479.6	478.3	482.1	483.3	484.6	485.8	483.3	480.8	478.3	477.1
67.5°	419.6	427.1	432.1	433.4	434.6	438.4	437.1	434.6	432.1	428.4	427.1
70°	372.2	382.2	388.4	390.9	395.9	393.4	393.4	392.2	389.7	385.9	384.7
72.5°	332.2	343.4	349.7	352.2	357.2	357.2	355.9	354.7	352.2	348.4	347.2
75°	297.2	307.2	316.0	321.0	324.7	324.7	323.5	322.2	319.7	317.2	316.0
77.5°	269.8	278.5	286.0	292.2	294.7	296.0	294.7	292.2	292.2	291.0	289.7
80°	242.3	252.3	259.8	266.0	269.8	269.8	268.5	269.8	267.3	266.0	264.8
82.5°	218.6	229.8	238.5	244.8	247.3	248.5	247.3	248.5	246.0	246.0	246.0
85°	197.3	208.6	218.6	223.6	227.3	228.5	228.5	228.5	227.3	227.3	227.3
87.5°	179.8	191.1	201.1	206.1	209.8	211.1	211.1	212.3	209.8	209.8	209.8
90°	163.6	174.8	184.8	189.8	193.6	196.1	196.1	197.3	196.1	194.8	194.8
92.5°	148.6	161.1	171.1	176.1	179.8	183.6	183.6	184.8	182.3	182.3	182.3
95°	136.1	148.6	157.4	163.6	167.4	169.8	171.1	171.1	169.8	169.8	169.8
97.5°	124.9	136.1	144.9	151.1	154.9	156.1	157.4	158.6	157.4	157.4	157.4
100°	113.6	124.9	133.6	138.6	143.6	144.9	146.1	147.4	147.4	146.1	146.1
102.5°	103.7	114.9	122.4	128.6	132.4	134.9	136.1	136.1	136.1	136.1	136.1
105°	93.7	104.9	112.4	118.6	122.4	124.9	126.1	127.4	127.4	126.1	126.1
107.5°	84.9	94.9	103.7	108.7	113.6	116.1	117.4	117.4	118.6	117.4	117.4
110°	76.2	87.4	94.9	99.9	104.9	107.4	108.7	109.9	109.9	109.9	109.9

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	69.9	78.7	86.2	91.2	96.2	98.7	99.9	101.2	102.4	101.2	101.2
115°	62.4	71.2	78.7	83.7	87.4	89.9	92.4	93.7	93.7	94.9	93.7
117.5°	56.2	63.7	71.2	76.2	79.9	83.7	84.9	86.2	87.4	86.2	86.2
120°	50.0	57.4	63.7	68.7	72.4	76.2	77.4	78.7	79.9	78.7	78.7
122.5°	45.0	51.2	57.4	62.4	66.2	68.7	71.2	71.2	72.4	72.4	72.4
125°	40.0	46.2	51.2	56.2	59.9	62.4	63.7	64.9	64.9	66.2	66.2
127.5°	35.0	40.0	46.2	50.0	53.7	56.2	57.4	58.7	58.7	59.9	59.9
130°	30.0	35.0	40.0	43.7	47.5	50.0	51.2	52.5	53.7	53.7	53.7
132.5°	26.2	31.2	35.0	38.7	41.2	43.7	46.2	47.5	47.5	47.5	47.5
135°	21.2	26.2	30.0	33.7	36.2	38.7	40.0	42.5	42.5	42.5	42.5
137.5°	17.5	22.5	26.2	28.7	31.2	33.7	35.0	36.2	37.5	37.5	37.5
140°	13.7	17.5	21.2	25.0	27.5	28.7	31.2	31.2	32.5	32.5	32.5
142.5°	10.0	13.7	16.2	20.0	22.5	25.0	26.2	27.5	27.5	27.5	27.5
145°	7.5	10.0	12.5	15.0	18.7	20.0	21.2	22.5	23.7	23.7	23.7
147.5°	5.0	7.5	8.7	11.2	13.7	16.2	17.5	18.7	20.0	20.0	20.0
150°	3.7	5.0	7.5	8.7	10.0	12.5	15.0	15.0	16.2	16.2	15.0
152.5°	2.5	3.7	5.0	6.2	7.5	8.7	11.2	11.2	12.5	12.5	12.5
155°	2.5	2.5	2.5	3.7	5.0	6.2	7.5	8.7	8.7	8.7	8.7
157.5°	2.5	2.5	2.5	2.5	2.5	3.7	5.0	6.2	6.2	6.2	6.2
160°	2.5	2.5	1.2	1.2	2.5	2.5	2.5	2.5	3.7	3.7	3.7
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: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5
2.5°	2268.0	2270.5	2270.5	2268.0	2266.7	2271.7	2265.5	2241.8	2249.3	2251.8	2259.2
5°	2256.7	2259.2	2259.2	2259.2	2256.7	2261.7	2255.5	2231.8	2240.5	2244.3	2249.3
7.5°	2240.5	2241.8	2244.3	2243.0	2240.5	2248.0	2241.8	2218.0	2224.3	2230.5	2236.8
10°	2219.3	2219.3	2220.5	2223.0	2220.5	2226.8	2220.5	2199.3	2205.5	2209.3	2216.8
12.5°	2190.6	2193.1	2194.3	2193.1	2191.8	2196.8	2194.3	2174.3	2176.8	2184.3	2191.8
15°	2151.8	2151.8	2158.1	2155.6	2155.6	2160.6	2163.1	2140.6	2144.3	2155.6	2163.1
17.5°	2104.4	2105.6	2110.6	2113.1	2111.9	2120.6	2121.9	2104.4	2103.1	2116.9	2124.4
20°	2043.2	2045.7	2051.9	2056.9	2056.9	2066.9	2070.7	2059.4	2060.7	2075.7	2078.2
22.5°	1968.3	1968.3	1979.5	1987.0	1993.2	1999.5	2010.7	2000.7	2000.7	2020.7	2031.9
25°	1875.8	1884.6	1888.3	1903.3	1912.1	1929.5	1939.5	1940.8	1942.0	1960.8	1968.3
27.5°	1773.4	1775.9	1787.2	1804.6	1814.6	1830.9	1849.6	1853.4	1859.6	1884.6	1895.8
30°	1657.3	1664.8	1669.8	1694.7	1708.5	1729.7	1753.4	1762.2	1767.2	1800.9	1814.6
32.5°	1538.6	1541.1	1562.4	1576.1	1592.3	1614.8	1642.3	1658.5	1668.5	1703.5	1723.5
35°	1420.0	1425.0	1442.5	1460.0	1476.2	1498.7	1527.4	1549.9	1567.4	1598.6	1624.8
37.5°	1311.3	1323.8	1327.6	1345.1	1357.5	1380.0	1400.0	1432.5	1450.0	1482.4	1516.2
40°	1213.9	1217.7	1220.2	1237.7	1246.4	1267.6	1296.3	1317.6	1341.3	1365.0	1405.0
42.5°	1117.8	1120.3	1124.0	1134.0	1144.0	1159.0	1180.2	1201.4	1226.4	1261.4	1287.6
45°	1029.1	1031.6	1034.1	1040.3	1049.1	1062.8	1076.5	1091.5	1116.5	1146.5	1174.0
47.5°	946.7	951.7	951.7	952.9	959.1	970.4	980.4	999.1	1012.9	1029.1	1060.3
50°	868.0	871.7	873.0	873.0	876.7	884.2	886.7	899.2	911.7	926.7	949.2
52.5°	794.3	794.3	793.0	798.0	798.0	803.0	804.3	811.8	820.5	836.8	846.7
55°	724.4	724.4	728.1	725.6	725.6	728.1	726.9	728.1	735.6	745.6	754.3
57.5°	656.9	655.7	659.4	656.9	655.7	658.2	660.7	655.7	656.9	666.9	666.9
60°	589.5	590.7	594.5	592.0	592.0	592.0	589.5	587.0	584.5	590.7	593.2
62.5°	535.8	532.0	535.8	532.0	534.5	533.3	530.8	525.8	527.0	524.5	522.0
65°	479.6	479.6	480.8	477.1	479.6	479.6	475.8	474.6	467.1	464.6	458.3
67.5°	430.9	430.9	432.1	429.6	429.6	430.9	427.1	423.4	415.9	412.1	403.4
70°	388.4	388.4	388.4	387.2	387.2	387.2	384.7	379.7	372.2	365.9	354.7
72.5°	349.7	350.9	349.7	349.7	353.4	349.7	345.9	340.9	334.7	322.2	312.2
75°	318.5	319.7	318.5	318.5	318.5	317.2	316.0	308.5	301.0	291.0	276.0
77.5°	291.0	291.0	292.2	291.0	291.0	289.7	286.0	279.8	271.0	262.3	244.8
80°	264.8	266.0	267.3	268.5	266.0	264.8	261.0	256.0	244.8	234.8	217.3
82.5°	246.0	244.8	246.0	247.3	244.8	243.5	239.8	233.5	224.8	211.1	193.6
85°	227.3	226.0	226.0	227.3	226.0	223.6	219.8	213.6	204.8	191.1	173.6
87.5°	208.6	209.8	211.1	209.8	208.6	206.1	202.3	196.1	186.1	174.8	156.1
90°	194.8	194.8	194.8	194.8	193.6	191.1	187.3	179.8	171.1	157.4	141.1
92.5°	182.3	182.3	182.3	182.3	181.1	177.3	173.6	167.4	157.4	143.6	128.6
95°	169.8	171.1	169.8	169.8	167.4	166.1	159.9	153.6	144.9	131.1	114.9
97.5°	156.1	157.4	156.1	156.1	154.9	152.4	148.6	141.1	132.4	119.9	104.9
100°	146.1	146.1	144.9	144.9	143.6	141.1	136.1	129.9	121.1	108.7	93.7
102.5°	134.9	136.1	134.9	134.9	132.4	129.9	126.1	119.9	111.2	98.7	84.9
105°	126.1	126.1	124.9	124.9	122.4	119.9	116.1	108.7	101.2	89.9	76.2
107.5°	117.4	117.4	116.1	116.1	113.6	111.2	106.2	99.9	92.4	81.2	68.7
110°	108.7	108.7	108.7	107.4	104.9	101.2	97.4	91.2	83.7	73.7	61.2

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	102.4	101.2	99.9	98.7	96.2	93.7	88.7	82.4	74.9	66.2	55.0
115°	93.7	93.7	92.4	91.2	88.7	84.9	81.2	76.2	68.7	58.7	48.7
117.5°	86.2	86.2	84.9	83.7	81.2	77.4	73.7	68.7	61.2	52.5	43.7
120°	78.7	78.7	77.4	76.2	73.7	69.9	67.4	61.2	55.0	46.2	38.7
122.5°	72.4	71.2	71.2	68.7	67.4	63.7	59.9	55.0	48.7	41.2	33.7
125°	64.9	64.9	63.7	62.4	61.2	57.4	53.7	48.7	42.5	36.2	30.0
127.5°	58.7	58.7	57.4	56.2	55.0	51.2	47.5	43.7	37.5	31.2	25.0
130°	52.5	52.5	51.2	50.0	48.7	45.0	42.5	37.5	32.5	27.5	21.2
132.5°	47.5	47.5	46.2	45.0	42.5	40.0	37.5	32.5	28.7	23.7	18.7
135°	42.5	41.2	41.2	40.0	37.5	35.0	32.5	28.7	23.7	20.0	15.0
137.5°	37.5	36.2	35.0	33.7	32.5	30.0	27.5	25.0	21.2	16.2	12.5
140°	32.5	31.2	31.2	30.0	27.5	26.2	23.7	20.0	17.5	13.7	10.0
142.5°	27.5	27.5	26.2	25.0	23.7	22.5	20.0	17.5	13.7	11.2	7.5
145°	23.7	22.5	22.5	21.2	20.0	17.5	16.2	13.7	11.2	8.7	6.2
147.5°	18.7	18.7	18.7	17.5	16.2	15.0	13.7	11.2	8.7	6.2	3.7
150°	15.0	15.0	15.0	13.7	12.5	11.2	10.0	8.7	6.2	3.7	2.5
152.5°	12.5	12.5	11.2	11.2	10.0	8.7	7.5	6.2	3.7	2.5	2.5
155°	8.7	8.7	8.7	7.5	7.5	6.2	5.0	3.7	2.5	2.5	2.5
157.5°	6.2	6.2	6.2	5.0	5.0	3.7	3.7	2.5	2.5	2.5	2.5
160°	3.7	3.7	3.7	3.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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

TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5	2270.5
2.5°	2255.5	2254.2	2264.2	2264.2	2253.0	2270.5	2289.2
5°	2248.0	2246.8	2256.7	2256.7	2246.8	2264.2	2284.2
7.5°	2233.0	2234.3	2244.3	2246.8	2234.3	2250.5	2271.7
10°	2216.8	2215.5	2226.8	2229.3	2219.3	2234.3	2254.2
12.5°	2190.6	2190.6	2201.8	2205.5	2195.6	2213.0	2231.8
15°	2163.1	2163.1	2170.6	2176.8	2168.1	2184.3	2203.0
17.5°	2128.1	2126.9	2134.4	2141.8	2133.1	2150.6	2170.6
20°	2083.2	2083.2	2091.9	2100.6	2094.4	2110.6	2133.1
22.5°	2035.7	2030.7	2045.7	2051.9	2048.2	2064.4	2086.9
25°	1975.7	1974.5	1989.5	1998.2	1993.2	2010.7	2030.7
27.5°	1910.8	1909.6	1924.5	1935.8	1933.3	1949.5	1972.0
30°	1832.1	1838.4	1852.1	1870.8	1864.6	1882.1	1905.8
32.5°	1749.7	1755.9	1772.2	1792.2	1793.4	1807.1	1830.9
35°	1651.0	1667.3	1678.5	1704.7	1709.7	1723.5	1748.4
37.5°	1547.4	1566.1	1589.8	1609.8	1619.8	1631.1	1659.8
40°	1431.2	1458.7	1484.9	1508.7	1521.1	1532.4	1559.9
42.5°	1326.3	1347.6	1372.5	1396.3	1418.7	1428.7	1457.5
45°	1207.7	1232.7	1255.1	1283.9	1306.3	1317.6	1346.3
47.5°	1091.5	1116.5	1146.5	1166.5	1190.2	1201.4	1228.9
50°	980.4	1002.9	1027.8	1051.6	1071.5	1081.5	1105.3
52.5°	870.5	894.2	917.9	932.9	954.2	961.6	981.6
55°	773.1	789.3	810.5	819.3	840.5	845.5	859.2
57.5°	679.4	690.6	698.1	713.1	728.1	739.3	755.6
60°	594.5	599.5	604.5	613.2	625.7	629.4	635.7
62.5°	518.3	517.0	527.0	529.5	530.8	543.3	537.0
65°	450.8	452.1	443.4	439.6	444.6	448.4	445.9
67.5°	394.6	387.2	379.7	370.9	363.4	367.2	363.4
70°	339.7	333.5	321.0	308.5	303.5	296.0	292.2
72.5°	296.0	281.0	268.5	252.3	243.5	234.8	228.5
75°	262.3	241.0	223.6	206.1	193.6	181.1	178.6
77.5°	227.3	207.3	187.3	168.6	149.9	136.1	131.1
80°	199.8	181.1	157.4	134.9	114.9	97.4	91.2
82.5°	174.8	154.9	131.1	107.4	84.9	66.2	58.7
85°	153.6	132.4	108.7	84.9	62.4	42.5	32.5
87.5°	137.4	113.6	89.9	67.4	43.7	23.7	12.5
90°	122.4	99.9	77.4	53.7	31.2	12.5	0.0
92.5°	108.7	87.4	64.9	43.7	23.7	7.5	1.2
95°	96.2	77.4	55.0	35.0	17.5	5.0	1.2
97.5°	86.2	67.4	47.5	28.7	13.7	3.7	1.2
100°	77.4	58.7	41.2	23.7	11.2	2.5	1.2
102.5°	68.7	52.5	35.0	20.0	8.7	1.2	1.2
105°	61.2	46.2	30.0	17.5	7.5	1.2	1.2
107.5°	55.0	41.2	26.2	15.0	5.0	1.2	1.2
110°	48.7	35.0	22.5	12.5	3.7	1.2	1.2



TEST NUMBER: P1214199

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	43.7	31.2	20.0	10.0	2.5	1.2	1.2
115°	38.7	27.5	17.5	8.7	2.5	1.2	1.2
117.5°	33.7	23.7	15.0	6.2	1.2	1.2	1.2
120°	30.0	21.2	12.5	5.0	1.2	1.2	1.2
122.5°	26.2	17.5	10.0	3.7	1.2	1.2	1.2
125°	22.5	15.0	8.7	2.5	1.2	1.2	1.2
127.5°	18.7	12.5	6.2	2.5	1.2	1.2	1.2
130°	16.2	10.0	5.0	1.2	1.2	1.2	1.2
132.5°	13.7	7.5	3.7	1.2	1.2	1.2	1.2
135°	11.2	6.2	2.5	1.2	1.2	1.2	1.2
137.5°	8.7	5.0	2.5	1.2	1.2	1.2	1.2
140°	6.2	3.7	1.2	1.2	1.2	1.2	1.2
142.5°	5.0	2.5	1.2	1.2	1.2	1.2	1.2
145°	3.7	2.5	1.2	1.2	1.2	1.2	1.2
147.5°	2.5	2.5	2.5	2.5	1.2	1.2	1.2
150°	2.5	2.5	1.2	1.2	2.5	1.2	1.2
152.5°	2.5	1.2	1.2	1.2	2.5	1.2	1.2
155°	2.5	2.5	2.5	2.5	2.5	2.5	1.2
157.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5
160°	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)