

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: P1213848

Luminaire Tested: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213848
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-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

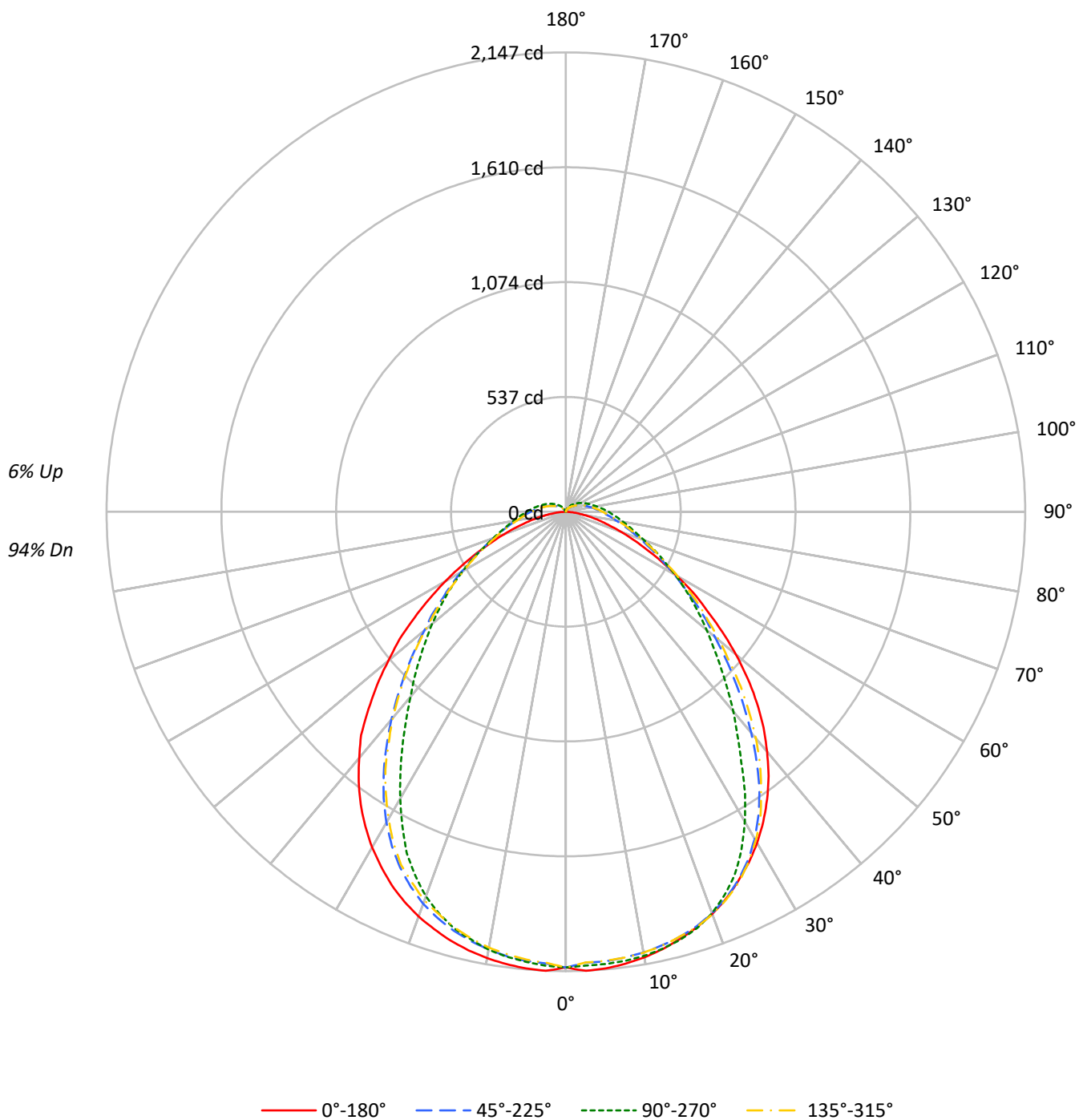
Lumens per Lamp: N/A
Luminaire Lumens: 5390.0 lumens
Efficiency: N/A
Efficacy: 112.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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
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°	17211	17211	17211	17211
5°	17334	16663	17334	16589
10°	17257	16221	17285	15995
15°	17146	15736	17223	15326
20°	17014	15112	17114	14474
25°	16741	14188	16926	13352
30°	16386	12830	16601	11877
35°	15833	11165	16139	10396
40°	15041	9765	15439	9059
45°	13995	8489	14450	8002
50°	12566	7459	13120	7083
55°	10870	6586	11661	6253
60°	9143	5782	9969	5450
65°	7494	5114	8251	4741
70°	5964	4537	6678	4197
75°	4684	4190	5274	3855
80°	3380	4043	3985	3695
85°	2084	4066	2801	3736

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 14450 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.9	3.7
10°-20°	579.0	10.7
20°-30°	858.1	15.9
30°-40°	953.3	17.7
40°-50°	864.2	16.0
50°-60°	669.6	12.4
60°-70°	454.7	8.4
70°-80°	289.3	5.4
80°-90°	185.0	3.4
90°-100°	124.7	2.3
100°-110°	85.4	1.6
110°-120°	57.0	1.1
120°-130°	35.4	0.7
130°-140°	19.6	0.4
140°-150°	9.2	0.2
150°-160°	3.4	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1639.0	30.4
0°-40°	2592.3	48.1
0°-60°	4126.1	76.6
0°-90°	5055.1	93.8
90°-120°	267.1	5.0
90°-150°	331.3	6.1
90°-180°	335.0	6.2
0°-180°	5390.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2130	2130	2130	2130	2130	
5°	2143	2122	2143	2112	2143	204
15°	2067	2070	2076	2016	2067	583
25°	1905	1870	1926	1760	1905	877
35°	1640	1429	1672	1331	1640	1023
45°	1263	1022	1304	963	1263	970
55°	806	718	865	682	806	726
65°	418	483	460	448	418	419
75°	168	322	189	296	168	180
85°	30	232	41	213	30	36
90°	0	200	2	183	0	2
95°	1	171	0	159	1	1
105°	1	125	0	118	1	1
115°	1	95	0	88	1	1
125°	1	70	1	62	1	1
135°	1	49	1	40	1	1
145°	1	32	1	22	1	1
155°	1	18	1	8	1	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
2.5°	2147.4	2145.0	2142.7	2139.2	2142.7	2152.1	2146.2	2133.3	2131.0	2109.9	2119.3
5°	2142.7	2139.2	2136.8	2133.3	2138.0	2149.7	2143.9	2132.2	2128.6	2108.7	2119.3
7.5°	2131.0	2128.6	2125.1	2125.1	2129.8	2141.5	2136.8	2124.0	2121.6	2101.7	2113.4
10°	2114.6	2113.4	2111.1	2111.1	2115.8	2129.8	2124.0	2112.2	2109.9	2091.2	2104.0
12.5°	2093.5	2094.7	2091.2	2091.2	2098.2	2112.2	2107.6	2094.7	2092.3	2075.9	2088.8
15°	2066.6	2067.7	2065.4	2066.6	2073.6	2090.0	2084.1	2072.4	2070.1	2057.2	2067.7
17.5°	2036.1	2037.3	2037.3	2036.1	2044.3	2060.7	2056.0	2045.5	2042.0	2031.4	2044.3
20°	2000.9	2000.9	2000.9	2000.9	2010.3	2026.7	2020.9	2012.7	2005.6	1997.4	2008.0
22.5°	1957.6	1956.4	1957.6	1961.1	1970.5	1983.4	1979.9	1970.5	1959.9	1955.3	1963.5
25°	1904.9	1908.4	1909.6	1913.1	1924.8	1935.3	1931.8	1922.5	1906.1	1902.5	1904.9
27.5°	1849.8	1852.2	1855.7	1854.5	1870.9	1881.5	1874.4	1866.2	1842.8	1839.3	1836.9
30°	1787.7	1791.2	1793.6	1792.4	1805.3	1817.0	1810.0	1799.4	1767.8	1765.5	1746.7
32.5°	1717.4	1721.0	1723.3	1723.3	1742.0	1746.7	1733.8	1718.6	1684.6	1676.4	1660.0
35°	1640.1	1643.6	1644.8	1644.8	1663.6	1662.4	1646.0	1624.9	1587.4	1576.9	1548.7
37.5°	1556.9	1559.3	1560.5	1567.5	1575.7	1568.7	1547.6	1520.6	1492.5	1463.2	1432.8
40°	1463.2	1466.7	1469.1	1473.8	1482.0	1473.8	1443.3	1410.5	1380.0	1347.2	1316.8
42.5°	1367.2	1377.7	1375.4	1374.2	1378.9	1356.6	1333.2	1295.7	1265.2	1231.3	1200.8
45°	1262.9	1261.7	1267.6	1269.9	1268.8	1250.0	1217.2	1183.2	1152.8	1117.6	1091.9
47.5°	1152.8	1151.6	1156.3	1158.6	1151.6	1131.7	1105.9	1067.3	1041.5	1011.0	991.1
50°	1036.8	1036.8	1043.8	1036.8	1033.3	1013.4	992.3	953.6	933.7	906.8	895.0
52.5°	920.8	931.4	924.3	922.0	918.5	898.6	882.2	850.5	834.1	822.4	808.3
55°	806.0	817.7	813.0	809.5	808.3	791.9	776.7	753.3	742.7	734.5	726.3
57.5°	708.8	707.6	705.3	701.7	702.9	690.0	674.8	661.9	657.2	653.7	656.0
60°	596.3	605.7	602.2	603.3	604.5	602.2	589.3	581.1	582.2	583.4	586.9
62.5°	503.8	512.0	517.8	513.1	515.5	519.0	512.0	509.6	514.3	519.0	523.7
65°	418.2	426.4	432.3	431.1	438.1	445.2	444.0	446.3	456.9	462.7	468.6
67.5°	340.9	349.1	357.3	358.5	369.0	379.6	384.3	392.5	404.2	412.4	419.4
70°	274.1	281.2	290.5	296.4	310.5	324.5	332.7	349.1	356.1	367.9	372.5
72.5°	214.4	220.2	233.1	247.2	258.9	276.5	292.9	306.9	317.5	330.4	336.2
75°	167.5	169.9	183.9	200.3	216.7	236.6	254.2	269.4	283.5	296.4	305.8
77.5°	123.0	126.5	139.4	161.7	180.4	201.5	221.4	237.8	253.0	265.9	278.8
80°	85.5	92.5	106.6	128.9	150.0	173.4	192.1	210.9	227.3	240.2	253.0
82.5°	55.1	60.9	80.8	103.1	125.4	148.8	168.7	187.4	205.0	219.1	230.8
85°	30.5	38.7	58.6	82.0	104.3	127.7	148.8	167.5	185.1	198.0	209.7
87.5°	11.7	23.4	42.2	64.4	86.7	109.0	131.2	148.8	166.4	180.4	191.0
90°	0.0	14.1	31.6	53.9	76.1	98.4	119.5	138.2	154.6	167.5	179.2
92.5°	1.2	9.4	24.6	43.3	64.4	85.5	105.4	124.2	140.6	153.5	164.0
95°	1.2	7.0	19.9	37.5	56.2	76.1	94.9	112.5	127.7	140.6	151.1
97.5°	1.2	4.7	16.4	32.8	49.2	69.1	86.7	103.1	117.2	130.0	138.2
100°	1.2	4.7	14.1	28.1	44.5	62.1	78.5	94.9	107.8	118.3	127.7
102.5°	1.2	3.5	11.7	24.6	39.8	55.1	71.5	86.7	98.4	109.0	118.3
105°	1.2	3.5	10.5	21.1	35.1	50.4	64.4	78.5	91.4	100.8	109.0
107.5°	1.2	2.3	9.4	17.6	30.5	45.7	59.7	71.5	83.2	92.5	100.8
110°	1.2	2.3	8.2	16.4	26.9	41.0	53.9	65.6	76.1	85.5	92.5

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.2	2.3	7.0	15.2	24.6	36.3	49.2	59.7	70.3	78.5	85.5
115°	1.2	2.3	7.0	14.1	22.3	31.6	43.3	55.1	63.3	72.6	78.5
117.5°	1.2	2.3	5.9	11.7	21.1	29.3	39.8	49.2	58.6	66.8	72.6
120°	1.2	2.3	5.9	10.5	18.7	26.9	35.1	44.5	53.9	59.7	65.6
122.5°	1.2	2.3	4.7	10.5	16.4	24.6	31.6	39.8	48.0	55.1	60.9
125°	1.2	2.3	4.7	9.4	15.2	22.3	29.3	35.1	43.3	49.2	55.1
127.5°	1.2	2.3	4.7	8.2	14.1	19.9	26.9	32.8	38.7	44.5	49.2
130°	1.2	2.3	3.5	7.0	12.9	17.6	23.4	30.5	35.1	39.8	44.5
132.5°	1.2	2.3	3.5	7.0	10.5	15.2	21.1	26.9	31.6	36.3	39.8
135°	1.2	2.3	3.5	5.9	9.4	14.1	17.6	23.4	28.1	32.8	36.3
137.5°	1.2	2.3	3.5	5.9	8.2	11.7	15.2	19.9	24.6	28.1	32.8
140°	1.2	2.3	3.5	4.7	7.0	10.5	14.1	16.4	21.1	24.6	28.1
142.5°	1.2	2.3	3.5	4.7	7.0	9.4	11.7	14.1	17.6	21.1	24.6
145°	1.2	2.3	3.5	4.7	5.9	8.2	10.5	12.9	14.1	17.6	19.9
147.5°	1.2	2.3	3.5	4.7	4.7	7.0	9.4	10.5	12.9	14.1	16.4
150°	1.2	2.3	3.5	3.5	4.7	5.9	8.2	9.4	10.5	12.9	14.1
152.5°	1.2	2.3	3.5	3.5	4.7	5.9	7.0	8.2	9.4	10.5	11.7
155°	1.2	2.3	3.5	3.5	3.5	4.7	5.9	7.0	8.2	9.4	10.5
157.5°	2.3	2.3	2.3	3.5	3.5	4.7	4.7	5.9	7.0	7.0	8.2
160°	2.3	2.3	2.3	3.5	3.5	3.5	4.7	4.7	5.9	5.9	7.0
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

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
2.5°	2116.9	2120.4	2131.0	2131.0	2128.6	2126.3	2126.3	2122.8	2125.1	2129.8	2127.5
5°	2116.9	2120.4	2131.0	2131.0	2128.6	2126.3	2125.1	2121.6	2125.1	2129.8	2127.5
7.5°	2109.9	2114.6	2125.1	2125.1	2122.8	2121.6	2119.3	2116.9	2120.4	2125.1	2122.8
10°	2100.5	2105.2	2115.8	2115.8	2113.4	2113.4	2109.9	2107.6	2112.2	2115.8	2114.6
12.5°	2086.5	2092.3	2101.7	2100.5	2098.2	2099.4	2095.8	2091.2	2095.8	2099.4	2100.5
15°	2066.6	2073.6	2083.0	2080.6	2077.1	2079.4	2073.6	2070.1	2073.6	2080.6	2079.4
17.5°	2040.8	2045.5	2052.5	2052.5	2049.0	2046.6	2044.3	2040.8	2043.1	2047.8	2049.0
20°	2004.5	2010.3	2013.8	2010.3	2009.1	2005.6	2000.9	1997.4	2002.1	2009.1	2010.3
22.5°	1956.4	1957.6	1965.8	1957.6	1951.7	1950.6	1945.9	1938.9	1945.9	1951.7	1952.9
25°	1896.7	1902.5	1899.0	1885.0	1885.0	1875.6	1873.3	1869.7	1870.9	1881.5	1886.1
27.5°	1820.5	1822.9	1813.5	1801.8	1791.2	1785.4	1777.2	1778.4	1778.4	1792.4	1797.1
30°	1737.4	1724.5	1716.3	1697.5	1689.3	1675.3	1672.9	1672.9	1670.6	1677.6	1698.7
32.5°	1637.8	1620.2	1607.3	1589.7	1575.7	1561.6	1554.6	1558.1	1556.9	1574.5	1581.5
35°	1528.8	1518.3	1491.3	1469.1	1460.9	1439.8	1439.8	1429.2	1436.3	1456.2	1464.4
37.5°	1414.0	1397.6	1375.4	1350.8	1344.9	1328.5	1322.6	1316.8	1332.0	1335.5	1343.7
40°	1296.9	1281.6	1260.6	1237.1	1237.1	1217.2	1217.2	1217.2	1218.4	1225.4	1240.6
42.5°	1185.6	1169.2	1150.4	1134.0	1131.7	1116.5	1116.5	1115.3	1117.6	1123.5	1137.5
45°	1077.8	1064.9	1045.0	1036.8	1038.0	1021.6	1025.1	1021.6	1026.2	1032.1	1036.8
47.5°	978.2	970.0	961.8	950.1	946.6	945.4	939.6	934.9	943.1	943.1	950.1
50°	885.7	881.0	876.3	869.3	870.4	865.7	858.7	858.7	864.6	865.7	870.4
52.5°	804.8	799.0	793.1	794.3	795.5	793.1	789.6	786.1	789.6	791.9	797.8
55°	724.0	719.3	725.2	722.8	725.2	722.8	720.5	718.1	724.0	720.5	726.3
57.5°	651.4	656.0	658.4	653.7	657.2	654.9	656.0	652.5	657.2	659.6	658.4
60°	584.6	591.6	588.1	589.3	594.0	591.6	586.9	590.4	595.1	596.3	595.1
62.5°	523.7	531.9	535.4	533.0	534.2	531.9	535.4	530.7	536.6	538.9	535.4
65°	468.6	478.0	480.3	480.3	480.3	478.0	481.5	482.7	485.0	485.0	482.7
67.5°	421.7	429.9	432.3	434.6	432.3	429.9	429.9	431.1	435.8	438.1	435.8
70°	379.6	387.8	388.9	388.9	390.1	392.5	387.8	390.1	393.6	394.8	393.6
72.5°	343.3	351.5	353.8	352.6	353.8	355.0	355.0	352.6	356.1	358.5	358.5
75°	314.0	318.7	321.0	321.0	322.2	323.3	323.3	322.2	324.5	325.7	326.9
77.5°	287.0	290.5	294.1	294.1	295.2	294.1	296.4	296.4	297.6	298.7	299.9
80°	260.1	264.8	267.1	268.3	270.6	271.8	271.8	271.8	273.0	274.1	274.1
82.5°	239.0	242.5	246.0	249.5	249.5	250.7	250.7	250.7	251.9	251.9	253.0
85°	217.9	222.6	226.1	228.4	229.6	230.8	230.8	232.0	232.0	232.0	233.1
87.5°	199.2	205.0	207.4	209.7	210.9	213.2	213.2	213.2	214.4	214.4	214.4
90°	186.3	192.1	194.5	196.8	198.0	199.2	199.2	200.3	200.3	201.5	201.5
92.5°	171.0	176.9	181.6	181.6	182.8	185.1	183.9	183.9	185.1	186.3	186.3
95°	159.3	164.0	167.5	168.7	169.9	169.9	169.9	171.0	169.9	171.0	171.0
97.5°	145.3	150.0	153.5	155.8	157.0	157.0	157.0	158.2	157.0	158.2	158.2
100°	133.6	138.2	141.8	142.9	145.3	145.3	145.3	145.3	145.3	145.3	146.4
102.5°	124.2	128.9	131.2	132.4	133.6	134.7	134.7	134.7	134.7	135.9	135.9
105°	114.8	119.5	121.8	123.0	124.2	125.4	125.4	125.4	126.5	126.5	125.4
107.5°	106.6	110.1	112.5	114.8	116.0	116.0	117.2	117.2	117.2	117.2	117.2
110°	98.4	101.9	105.4	107.8	107.8	109.0	109.0	110.1	110.1	109.0	110.1



TEST NUMBER: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	90.2	94.9	97.2	99.6	100.8	101.9	101.9	101.9	101.9	101.9	101.9
115°	83.2	87.9	90.2	92.5	93.7	94.9	94.9	94.9	94.9	94.9	94.9
117.5°	77.3	82.0	84.3	85.5	86.7	87.9	89.0	89.0	89.0	89.0	87.9
120°	71.5	75.0	77.3	79.7	80.8	82.0	82.0	82.0	82.0	82.0	82.0
122.5°	65.6	69.1	71.5	73.8	75.0	76.1	76.1	76.1	76.1	76.1	76.1
125°	59.7	63.3	65.6	67.9	69.1	70.3	70.3	70.3	70.3	70.3	70.3
127.5°	53.9	57.4	60.9	62.1	63.3	64.4	64.4	64.4	65.6	64.4	64.4
130°	48.0	51.5	55.1	56.2	57.4	58.6	59.7	59.7	59.7	59.7	58.6
132.5°	43.3	46.9	49.2	50.4	52.7	52.7	53.9	53.9	53.9	53.9	52.7
135°	39.8	42.2	44.5	45.7	48.0	48.0	48.0	49.2	49.2	48.0	46.9
137.5°	35.1	37.5	39.8	41.0	42.2	43.3	43.3	44.5	43.3	43.3	43.3
140°	32.8	34.0	36.3	37.5	38.7	38.7	38.7	39.8	39.8	38.7	38.7
142.5°	28.1	30.5	32.8	34.0	35.1	35.1	35.1	35.1	35.1	35.1	35.1
145°	23.4	26.9	28.1	30.5	30.5	31.6	31.6	31.6	31.6	31.6	30.5
147.5°	19.9	22.3	25.8	26.9	26.9	28.1	28.1	28.1	28.1	28.1	26.9
150°	15.2	17.6	21.1	23.4	23.4	24.6	24.6	24.6	24.6	23.4	23.4
152.5°	12.9	15.2	16.4	18.7	19.9	19.9	19.9	21.1	19.9	19.9	19.9
155°	11.7	12.9	14.1	15.2	16.4	17.6	17.6	17.6	17.6	16.4	16.4
157.5°	9.4	10.5	11.7	12.9	14.1	15.2	15.2	15.2	15.2	15.2	14.1
160°	7.0	8.2	9.4	9.4	10.5	11.7	12.9	11.7	11.7	11.7	11.7
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: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
2.5°	2125.1	2124.0	2127.5	2121.6	2104.0	2108.7	2106.4	2116.9	2119.3	2121.6	2132.2
5°	2125.1	2124.0	2126.3	2121.6	2102.9	2106.4	2104.0	2114.6	2116.9	2118.1	2128.6
7.5°	2120.4	2119.3	2122.8	2116.9	2097.0	2101.7	2098.2	2108.7	2109.9	2111.1	2120.4
10°	2111.1	2109.9	2112.2	2107.6	2087.6	2092.3	2087.6	2098.2	2098.2	2100.5	2107.6
12.5°	2097.0	2094.7	2099.4	2093.5	2071.2	2077.1	2074.8	2081.8	2083.0	2084.1	2091.2
15°	2077.1	2074.8	2078.3	2074.8	2054.8	2056.0	2052.5	2063.0	2064.2	2061.9	2068.9
17.5°	2047.8	2045.5	2052.5	2050.2	2030.2	2034.9	2033.8	2036.1	2039.6	2033.8	2043.1
20°	2011.5	2013.8	2016.2	2017.3	2002.1	2002.1	2000.9	2005.6	2009.1	2004.5	2011.5
22.5°	1957.6	1963.5	1970.5	1972.8	1962.3	1961.1	1968.1	1965.8	1969.3	1967.0	1971.7
25°	1889.7	1901.4	1908.4	1915.4	1909.6	1911.9	1922.5	1924.8	1924.8	1923.6	1928.3
27.5°	1805.3	1820.5	1833.4	1848.7	1842.8	1847.5	1865.1	1867.4	1872.1	1867.4	1876.8
30°	1704.6	1718.6	1743.2	1765.5	1767.8	1774.8	1799.4	1801.8	1814.7	1810.0	1813.5
32.5°	1603.8	1610.8	1638.9	1661.2	1675.3	1692.8	1719.8	1724.5	1742.0	1745.6	1745.6
35°	1477.3	1497.2	1523.0	1554.6	1572.2	1590.9	1627.2	1634.3	1660.0	1668.2	1677.6
37.5°	1370.7	1389.4	1405.8	1438.6	1470.3	1491.3	1520.6	1538.2	1565.1	1580.4	1592.1
40°	1257.0	1272.3	1289.8	1322.6	1349.6	1381.2	1410.5	1431.6	1465.6	1483.1	1498.4
42.5°	1149.3	1161.0	1179.7	1203.1	1231.3	1266.4	1294.5	1319.1	1355.4	1380.0	1397.6
45°	1053.2	1060.2	1076.6	1094.2	1118.8	1155.1	1182.1	1213.7	1243.0	1268.8	1289.8
47.5°	963.0	972.4	980.6	992.3	1014.5	1036.8	1068.4	1098.9	1128.2	1156.3	1177.4
50°	879.8	879.8	892.7	900.9	916.1	936.0	960.6	981.7	1018.0	1038.0	1064.9
52.5°	799.0	803.7	810.7	815.4	827.1	840.0	859.9	877.5	907.9	926.7	952.4
55°	727.5	732.2	735.7	738.1	745.1	760.3	767.3	781.4	802.5	817.7	840.0
57.5°	659.6	661.9	665.4	666.6	667.8	677.1	683.0	686.5	707.6	722.8	741.6
60°	597.5	597.5	601.0	599.8	598.6	603.3	602.2	605.7	618.6	627.9	636.1
62.5°	538.9	538.9	540.1	537.7	536.6	536.6	531.9	535.4	538.9	540.1	545.9
65°	485.0	490.9	486.2	487.4	480.3	478.0	475.6	468.6	467.4	462.7	465.1
67.5°	437.0	441.7	437.0	437.0	431.1	426.4	420.6	408.9	405.3	396.0	393.6
70°	398.3	394.8	397.1	393.6	386.6	380.7	372.5	363.2	351.5	339.7	331.5
72.5°	360.8	360.8	358.5	355.0	351.5	339.7	330.4	319.8	305.8	290.5	278.8
75°	324.5	325.7	325.7	322.2	316.3	305.8	295.2	280.0	264.8	247.2	232.0
77.5°	298.7	298.7	298.7	292.9	287.0	277.6	264.8	248.4	232.0	210.9	193.3
80°	274.1	273.0	273.0	265.9	260.1	249.5	236.6	220.2	202.7	180.4	160.5
82.5°	254.2	253.0	250.7	244.8	236.6	226.1	213.2	195.6	176.9	157.0	132.4
85°	233.1	232.0	229.6	223.8	215.6	206.2	192.1	174.6	155.8	133.6	110.1
87.5°	214.4	213.2	209.7	206.2	196.8	186.3	172.2	155.8	135.9	114.8	91.4
90°	201.5	199.2	196.8	192.1	183.9	172.2	158.2	140.6	120.7	99.6	76.1
92.5°	186.3	185.1	181.6	176.9	169.9	158.2	144.1	127.7	107.8	87.9	65.6
95°	171.0	169.9	167.5	162.8	155.8	145.3	132.4	116.0	97.2	77.3	57.4
97.5°	157.0	157.0	153.5	150.0	141.8	133.6	120.7	105.4	87.9	70.3	51.5
100°	145.3	145.3	141.8	137.1	131.2	123.0	110.1	96.1	79.7	63.3	44.5
102.5°	134.7	133.6	131.2	126.5	120.7	112.5	100.8	87.9	72.6	56.2	39.8
105°	125.4	124.2	121.8	117.2	112.5	103.1	93.7	80.8	65.6	50.4	35.1
107.5°	116.0	114.8	113.6	109.0	103.1	94.9	85.5	72.6	59.7	45.7	31.6
110°	107.8	106.6	104.3	99.6	93.7	86.7	77.3	66.8	53.9	41.0	28.1

TEST NUMBER: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	100.8	99.6	97.2	92.5	87.9	79.7	71.5	59.7	49.2	37.5	24.6
115°	93.7	92.5	90.2	85.5	79.7	72.6	64.4	55.1	43.3	32.8	22.3
117.5°	86.7	85.5	83.2	79.7	73.8	66.8	58.6	49.2	38.7	30.5	19.9
120°	80.8	78.5	76.1	72.6	66.8	60.9	52.7	44.5	35.1	26.9	17.6
122.5°	75.0	72.6	70.3	66.8	60.9	55.1	46.9	39.8	32.8	24.6	16.4
125°	67.9	66.8	64.4	60.9	55.1	49.2	43.3	36.3	29.3	22.3	14.1
127.5°	62.1	60.9	58.6	53.9	49.2	44.5	38.7	32.8	25.8	18.7	12.9
130°	57.4	55.1	52.7	49.2	45.7	41.0	35.1	29.3	23.4	16.4	11.7
132.5°	51.5	49.2	46.9	44.5	41.0	36.3	31.6	25.8	21.1	15.2	10.5
135°	46.9	44.5	42.2	39.8	36.3	32.8	28.1	23.4	18.7	14.1	9.4
137.5°	41.0	39.8	38.7	36.3	32.8	29.3	25.8	19.9	16.4	12.9	8.2
140°	37.5	36.3	35.1	31.6	29.3	25.8	22.3	17.6	14.1	10.5	7.0
142.5°	34.0	32.8	30.5	28.1	25.8	23.4	18.7	16.4	12.9	9.4	7.0
145°	29.3	28.1	26.9	24.6	22.3	18.7	16.4	14.1	11.7	8.2	5.9
147.5°	26.9	25.8	23.4	21.1	18.7	16.4	15.2	12.9	9.4	7.0	4.7
150°	22.3	21.1	19.9	17.6	16.4	15.2	12.9	10.5	8.2	5.9	4.7
152.5°	18.7	17.6	16.4	16.4	14.1	12.9	10.5	9.4	7.0	5.9	3.5
155°	16.4	16.4	15.2	14.1	11.7	10.5	9.4	7.0	5.9	4.7	3.5
157.5°	14.1	12.9	11.7	11.7	10.5	9.4	7.0	5.9	4.7	4.7	3.5
160°	11.7	10.5	10.5	9.4	8.2	7.0	5.9	5.9	4.7	3.5	3.5
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: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
2.5°	2133.3	2120.4	2132.2	2147.4	2147.4	2145.0	2142.7	2147.4	2159.1	2154.4	2140.4
5°	2129.8	2116.9	2127.5	2142.7	2142.7	2139.2	2136.8	2140.4	2153.2	2147.4	2134.5
7.5°	2122.8	2111.1	2118.1	2132.2	2132.2	2128.6	2126.3	2131.0	2141.5	2135.7	2121.6
10°	2109.9	2097.0	2105.2	2118.1	2116.9	2114.6	2111.1	2116.9	2126.3	2118.1	2101.7
12.5°	2093.5	2080.6	2087.6	2099.4	2098.2	2093.5	2091.2	2094.7	2102.9	2098.2	2080.6
15°	2071.2	2058.4	2064.2	2075.9	2072.4	2068.9	2064.2	2065.4	2075.9	2067.7	2049.0
17.5°	2044.3	2030.2	2034.9	2045.5	2042.0	2038.4	2032.6	2033.8	2045.5	2033.8	2013.8
20°	2011.5	1996.3	1999.8	2012.7	2006.8	2000.9	1995.1	1995.1	2006.8	1993.9	1971.7
22.5°	1976.3	1961.1	1963.5	1972.8	1968.1	1957.6	1951.7	1955.3	1961.1	1944.7	1921.3
25°	1933.0	1913.1	1916.6	1926.0	1922.5	1908.4	1902.5	1904.9	1902.5	1889.7	1865.1
27.5°	1882.6	1861.5	1863.9	1869.7	1865.1	1852.2	1845.1	1846.3	1841.6	1825.2	1797.1
30°	1819.4	1808.8	1807.6	1811.2	1804.1	1791.2	1783.0	1780.7	1779.5	1756.1	1722.1
32.5°	1754.9	1745.6	1739.7	1744.4	1736.2	1723.3	1709.2	1709.2	1697.5	1675.3	1646.0
35°	1689.3	1674.1	1668.2	1671.8	1662.4	1646.0	1634.3	1628.4	1610.8	1582.7	1551.1
37.5°	1605.0	1594.4	1587.4	1590.9	1580.4	1568.7	1546.4	1540.5	1521.8	1483.1	1443.3
40°	1513.6	1505.4	1498.4	1501.9	1490.2	1472.6	1452.7	1443.3	1422.2	1378.9	1347.2
42.5°	1415.2	1411.7	1403.5	1416.4	1392.9	1375.4	1355.4	1340.2	1319.1	1272.3	1235.9
45°	1310.9	1319.1	1300.4	1303.9	1288.7	1273.4	1252.3	1230.1	1209.0	1164.5	1123.5
47.5°	1200.8	1206.7	1193.8	1196.1	1179.7	1165.7	1146.9	1118.8	1095.4	1056.7	1020.4
50°	1087.2	1084.8	1084.8	1082.5	1069.6	1052.0	1033.3	1007.5	984.1	948.9	918.5
52.5°	966.5	971.2	973.5	979.4	963.0	952.4	923.2	900.9	883.3	847.0	821.2
55°	850.5	866.9	862.2	864.6	845.8	837.6	814.2	796.6	770.9	749.8	733.4
57.5°	745.1	748.6	750.9	754.5	746.3	729.9	711.1	697.1	677.1	659.6	647.8
60°	643.2	643.2	644.3	650.2	642.0	627.9	613.9	603.3	589.3	578.7	571.7
62.5°	547.1	555.3	556.5	551.8	541.2	534.2	524.8	519.0	509.6	506.1	503.8
65°	458.1	458.1	458.1	460.4	454.5	449.9	444.0	442.8	446.3	441.7	444.0
67.5°	383.1	379.6	377.2	378.4	376.1	373.7	372.5	376.1	383.1	383.1	388.9
70°	318.7	311.6	306.9	306.9	306.9	308.1	311.6	318.7	330.4	335.1	343.3
72.5°	265.9	250.7	243.7	243.7	244.8	249.5	260.1	273.0	283.5	292.9	303.4
75°	215.6	200.3	189.8	188.6	191.0	198.0	213.2	224.9	242.5	255.4	268.3
77.5°	174.6	155.8	142.9	141.8	145.3	155.8	174.6	189.8	209.7	223.8	237.8
80°	139.4	118.3	107.8	100.8	106.6	119.5	140.6	159.3	178.1	196.8	214.4
82.5°	111.3	91.4	75.0	67.9	75.0	92.5	112.5	134.7	153.5	173.4	191.0
85°	87.9	66.8	48.0	41.0	49.2	67.9	90.2	112.5	133.6	153.5	171.0
87.5°	69.1	48.0	29.3	19.9	30.5	50.4	71.5	93.7	116.0	135.9	153.5
90°	53.9	34.0	16.4	2.3	17.6	36.3	57.4	78.5	100.8	120.7	138.2
92.5°	45.7	25.8	9.4	0.0	10.5	26.9	46.9	67.9	87.9	107.8	125.4
95°	38.7	21.1	7.0	0.0	7.0	21.1	38.7	57.4	77.3	97.2	114.8
97.5°	32.8	16.4	4.7	0.0	4.7	16.4	31.6	50.4	67.9	86.7	103.1
100°	28.1	14.1	3.5	0.0	3.5	12.9	26.9	43.3	60.9	78.5	93.7
102.5°	24.6	11.7	2.3	0.0	2.3	10.5	22.3	37.5	52.7	69.1	84.3
105°	21.1	9.4	2.3	0.0	1.2	8.2	18.7	32.8	46.9	62.1	76.1
107.5°	18.7	8.2	2.3	0.0	1.2	7.0	16.4	28.1	42.2	55.1	67.9
110°	16.4	7.0	2.3	0.0	1.2	4.7	14.1	24.6	36.3	49.2	62.1

TEST NUMBER: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	14.1	5.9	1.2	0.0	0.0	3.5	11.7	21.1	31.6	44.5	55.1
115°	12.9	5.9	1.2	0.0	0.0	2.3	9.4	18.7	28.1	39.8	49.2
117.5°	11.7	4.7	1.2	0.0	1.2	2.3	8.2	16.4	24.6	34.0	44.5
120°	10.5	4.7	1.2	0.0	1.2	1.2	5.9	14.1	21.1	30.5	38.7
122.5°	9.4	4.7	1.2	0.0	1.2	1.2	4.7	11.7	18.7	26.9	34.0
125°	8.2	3.5	2.3	1.2	1.2	1.2	3.5	9.4	16.4	22.3	30.5
127.5°	8.2	3.5	2.3	1.2	1.2	1.2	2.3	8.2	12.9	19.9	26.9
130°	7.0	3.5	2.3	1.2	1.2	1.2	1.2	5.9	11.7	16.4	22.3
132.5°	5.9	3.5	2.3	1.2	1.2	1.2	1.2	3.5	8.2	14.1	18.7
135°	5.9	3.5	2.3	1.2	1.2	1.2	1.2	2.3	5.9	10.5	15.2
137.5°	4.7	2.3	2.3	1.2	1.2	1.2	1.2	1.2	4.7	8.2	11.7
140°	4.7	2.3	2.3	1.2	1.2	1.2	1.2	1.2	3.5	5.9	9.4
142.5°	3.5	2.3	2.3	1.2	1.2	1.2	1.2	1.2	2.3	4.7	7.0
145°	3.5	2.3	2.3	1.2	1.2	1.2	1.2	1.2	1.2	2.3	4.7
147.5°	3.5	3.5	2.3	1.2	1.2	1.2	1.2	1.2	1.2	2.3	3.5
150°	3.5	2.3	2.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.3
152.5°	3.5	2.3	2.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.3
155°	3.5	2.3	2.3	1.2	1.2	1.2	1.2	1.2	1.2	2.3	2.3
157.5°	3.5	2.3	2.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.3
160°	3.5	2.3	2.3	1.2	2.3	1.2	2.3	2.3	2.3	2.3	2.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
2.5°	2135.7	2113.4	2125.1	2121.6	2126.3	2135.7	2134.5	2132.2	2132.2	2128.6	2124.0
5°	2128.6	2107.6	2118.1	2112.2	2118.1	2126.3	2125.1	2121.6	2124.0	2118.1	2112.2
7.5°	2114.6	2095.8	2105.2	2100.5	2105.2	2113.4	2109.9	2108.7	2111.1	2101.7	2098.2
10°	2098.2	2077.1	2087.6	2081.8	2087.6	2093.5	2091.2	2086.5	2091.2	2081.8	2078.3
12.5°	2072.4	2054.8	2061.9	2059.5	2063.0	2068.9	2064.2	2060.7	2063.0	2054.8	2047.8
15°	2044.3	2026.7	2032.6	2029.1	2031.4	2038.4	2030.2	2029.1	2026.7	2018.5	2016.2
17.5°	2008.0	1991.6	1997.4	1991.6	1995.1	1992.7	1991.6	1985.7	1985.7	1976.3	1969.3
20°	1963.5	1949.4	1945.9	1941.2	1945.9	1941.2	1934.2	1929.5	1928.3	1918.9	1913.1
22.5°	1911.9	1895.5	1897.9	1885.0	1886.1	1879.1	1867.4	1862.7	1858.0	1847.5	1839.3
25°	1849.8	1833.4	1821.7	1813.5	1803.0	1801.8	1786.6	1774.8	1773.7	1760.8	1759.6
27.5°	1779.5	1760.8	1751.4	1731.5	1718.6	1708.1	1695.2	1683.5	1677.6	1663.6	1654.2
30°	1698.7	1677.6	1654.2	1640.1	1620.2	1612.0	1589.7	1575.7	1571.0	1555.8	1548.7
32.5°	1607.3	1585.1	1566.3	1539.4	1517.1	1505.4	1483.1	1469.1	1463.2	1446.8	1437.4
35°	1507.7	1483.1	1460.9	1435.1	1417.5	1397.6	1370.7	1356.6	1343.7	1337.9	1330.8
37.5°	1403.5	1376.5	1350.8	1325.0	1309.8	1286.3	1262.9	1253.5	1238.3	1232.4	1225.4
40°	1295.7	1268.8	1244.1	1219.5	1202.0	1180.9	1159.8	1156.3	1139.9	1134.0	1129.3
42.5°	1189.1	1161.0	1132.9	1115.3	1102.4	1081.3	1067.3	1063.7	1049.7	1046.2	1046.2
45°	1093.0	1057.9	1034.4	1019.2	1008.7	991.1	979.4	977.0	965.3	963.0	963.0
47.5°	989.9	957.1	939.6	930.2	920.8	907.9	900.9	900.9	889.2	886.8	885.7
50°	893.9	863.4	850.5	841.1	840.0	830.6	824.7	822.4	822.4	814.2	815.4
52.5°	802.5	787.3	776.7	770.9	763.8	758.0	753.3	753.3	749.8	743.9	746.3
55°	718.1	700.6	701.7	697.1	693.5	690.0	691.2	684.2	683.0	678.3	681.8
57.5°	633.8	633.8	631.4	627.9	622.1	624.4	624.4	624.4	618.6	615.0	618.6
60°	562.3	565.8	560.0	563.5	561.2	562.3	560.0	560.0	556.5	555.3	556.5
62.5°	499.1	504.9	502.6	507.3	504.9	506.1	508.4	503.8	501.4	499.1	501.4
65°	442.8	449.9	448.7	452.2	453.4	454.5	455.7	453.4	451.0	448.7	447.5
67.5°	393.6	400.7	405.3	406.5	407.7	411.2	410.0	407.7	405.3	401.8	400.7
70°	349.1	358.5	364.3	366.7	371.4	369.0	369.0	367.9	365.5	362.0	360.8
72.5°	311.6	322.2	328.0	330.4	335.1	335.1	333.9	332.7	330.4	326.9	325.7
75°	278.8	288.2	296.4	301.1	304.6	304.6	303.4	302.3	299.9	297.6	296.4
77.5°	253.0	261.2	268.3	274.1	276.5	277.6	276.5	274.1	274.1	273.0	271.8
80°	227.3	236.6	243.7	249.5	253.0	253.0	251.9	253.0	250.7	249.5	248.4
82.5°	205.0	215.6	223.8	229.6	232.0	233.1	232.0	233.1	230.8	230.8	230.8
85°	185.1	195.6	205.0	209.7	213.2	214.4	214.4	214.4	213.2	213.2	213.2
87.5°	168.7	179.2	188.6	193.3	196.8	198.0	198.0	199.2	196.8	196.8	196.8
90°	153.5	164.0	173.4	178.1	181.6	183.9	183.9	185.1	183.9	182.8	182.8
92.5°	139.4	151.1	160.5	165.2	168.7	172.2	172.2	173.4	171.0	171.0	171.0
95°	127.7	139.4	147.6	153.5	157.0	159.3	160.5	160.5	159.3	159.3	159.3
97.5°	117.2	127.7	135.9	141.8	145.3	146.4	147.6	148.8	147.6	147.6	147.6
100°	106.6	117.2	125.4	130.0	134.7	135.9	137.1	138.2	138.2	137.1	137.1
102.5°	97.2	107.8	114.8	120.7	124.2	126.5	127.7	127.7	127.7	127.7	127.7
105°	87.9	98.4	105.4	111.3	114.8	117.2	118.3	119.5	119.5	118.3	118.3
107.5°	79.7	89.0	97.2	101.9	106.6	109.0	110.1	110.1	111.3	110.1	110.1
110°	71.5	82.0	89.0	93.7	98.4	100.8	101.9	103.1	103.1	103.1	103.1

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CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	65.6	73.8	80.8	85.5	90.2	92.5	93.7	94.9	96.1	94.9	94.9
115°	58.6	66.8	73.8	78.5	82.0	84.3	86.7	87.9	87.9	89.0	87.9
117.5°	52.7	59.7	66.8	71.5	75.0	78.5	79.7	80.8	82.0	80.8	80.8
120°	46.9	53.9	59.7	64.4	67.9	71.5	72.6	73.8	75.0	73.8	73.8
122.5°	42.2	48.0	53.9	58.6	62.1	64.4	66.8	66.8	67.9	67.9	67.9
125°	37.5	43.3	48.0	52.7	56.2	58.6	59.7	60.9	60.9	62.1	62.1
127.5°	32.8	37.5	43.3	46.9	50.4	52.7	53.9	55.1	55.1	56.2	56.2
130°	28.1	32.8	37.5	41.0	44.5	46.9	48.0	49.2	50.4	50.4	50.4
132.5°	24.6	29.3	32.8	36.3	38.7	41.0	43.3	44.5	44.5	44.5	44.5
135°	19.9	24.6	28.1	31.6	34.0	36.3	37.5	39.8	39.8	39.8	39.8
137.5°	16.4	21.1	24.6	26.9	29.3	31.6	32.8	34.0	35.1	35.1	35.1
140°	12.9	16.4	19.9	23.4	25.8	26.9	29.3	29.3	30.5	30.5	30.5
142.5°	9.4	12.9	15.2	18.7	21.1	23.4	24.6	25.8	25.8	25.8	25.8
145°	7.0	9.4	11.7	14.1	17.6	18.7	19.9	21.1	22.3	22.3	22.3
147.5°	4.7	7.0	8.2	10.5	12.9	15.2	16.4	17.6	18.7	18.7	18.7
150°	3.5	4.7	7.0	8.2	9.4	11.7	14.1	14.1	15.2	15.2	14.1
152.5°	2.3	3.5	4.7	5.9	7.0	8.2	10.5	10.5	11.7	11.7	11.7
155°	2.3	2.3	2.3	3.5	4.7	5.9	7.0	8.2	8.2	8.2	8.2
157.5°	2.3	2.3	2.3	2.3	2.3	3.5	4.7	5.9	5.9	5.9	5.9
160°	2.3	2.3	1.2	1.2	2.3	2.3	2.3	2.3	3.5	3.5	3.5
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: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
2.5°	2127.5	2129.8	2129.8	2127.5	2126.3	2131.0	2125.1	2102.9	2109.9	2112.2	2119.3
5°	2116.9	2119.3	2119.3	2119.3	2116.9	2121.6	2115.8	2093.5	2101.7	2105.2	2109.9
7.5°	2101.7	2102.9	2105.2	2104.0	2101.7	2108.7	2102.9	2080.6	2086.5	2092.3	2098.2
10°	2081.8	2081.8	2083.0	2085.3	2083.0	2088.8	2083.0	2063.0	2068.9	2072.4	2079.4
12.5°	2054.8	2057.2	2058.4	2057.2	2056.0	2060.7	2058.4	2039.6	2042.0	2049.0	2056.0
15°	2018.5	2018.5	2024.4	2022.0	2022.0	2026.7	2029.1	2008.0	2011.5	2022.0	2029.1
17.5°	1974.0	1975.2	1979.9	1982.2	1981.0	1989.2	1990.4	1974.0	1972.8	1985.7	1992.7
20°	1916.6	1918.9	1924.8	1929.5	1929.5	1938.9	1942.4	1931.8	1933.0	1947.1	1949.4
22.5°	1846.3	1846.3	1856.9	1863.9	1869.7	1875.6	1886.1	1876.8	1876.8	1895.5	1906.1
25°	1759.6	1767.8	1771.3	1785.4	1793.6	1810.0	1819.4	1820.5	1821.7	1839.3	1846.3
27.5°	1663.6	1665.9	1676.4	1692.8	1702.2	1717.4	1735.0	1738.5	1744.4	1767.8	1778.4
30°	1554.6	1561.6	1566.3	1589.7	1602.6	1622.5	1644.8	1653.0	1657.7	1689.3	1702.2
32.5°	1443.3	1445.6	1465.6	1478.5	1493.7	1514.8	1540.5	1555.8	1565.1	1597.9	1616.7
35°	1332.0	1336.7	1353.1	1369.5	1384.7	1405.8	1432.8	1453.9	1470.3	1499.5	1524.1
37.5°	1230.1	1241.8	1245.3	1261.7	1273.4	1294.5	1313.3	1343.7	1360.1	1390.6	1422.2
40°	1138.7	1142.2	1144.6	1161.0	1169.2	1189.1	1216.0	1235.9	1258.2	1280.5	1318.0
42.5°	1048.5	1050.8	1054.4	1063.7	1073.1	1087.2	1107.1	1127.0	1150.4	1183.2	1207.8
45°	965.3	967.7	970.0	975.9	984.1	997.0	1009.8	1023.9	1047.3	1075.5	1101.2
47.5°	888.0	892.7	892.7	893.9	899.7	910.3	919.6	937.2	950.1	965.3	994.6
50°	814.2	817.7	818.9	818.9	822.4	829.4	831.8	843.5	855.2	869.3	890.4
52.5°	745.1	745.1	743.9	748.6	748.6	753.3	754.5	761.5	769.7	784.9	794.3
55°	679.5	679.5	683.0	680.7	680.7	683.0	681.8	683.0	690.0	699.4	707.6
57.5°	616.2	615.0	618.6	616.2	615.0	617.4	619.7	615.0	616.2	625.6	625.6
60°	553.0	554.1	557.6	555.3	555.3	555.3	553.0	550.6	548.3	554.1	556.5
62.5°	502.6	499.1	502.6	499.1	501.4	500.2	497.9	493.2	494.4	492.0	489.7
65°	449.9	449.9	451.0	447.5	449.9	449.9	446.3	445.2	438.1	435.8	429.9
67.5°	404.2	404.2	405.3	403.0	403.0	404.2	400.7	397.1	390.1	386.6	378.4
70°	364.3	364.3	364.3	363.2	363.2	363.2	360.8	356.1	349.1	343.3	332.7
72.5°	328.0	329.2	328.0	328.0	331.5	328.0	324.5	319.8	314.0	302.3	292.9
75°	298.7	299.9	298.7	298.7	298.7	297.6	296.4	289.4	282.3	273.0	258.9
77.5°	273.0	273.0	274.1	273.0	273.0	271.8	268.3	262.4	254.2	246.0	229.6
80°	248.4	249.5	250.7	251.9	249.5	248.4	244.8	240.2	229.6	220.2	203.8
82.5°	230.8	229.6	230.8	232.0	229.6	228.4	224.9	219.1	210.9	198.0	181.6
85°	213.2	212.0	212.0	213.2	212.0	209.7	206.2	200.3	192.1	179.2	162.8
87.5°	195.6	196.8	198.0	196.8	195.6	193.3	189.8	183.9	174.6	164.0	146.4
90°	182.8	182.8	182.8	182.8	181.6	179.2	175.7	168.7	160.5	147.6	132.4
92.5°	171.0	171.0	171.0	171.0	169.9	166.4	162.8	157.0	147.6	134.7	120.7
95°	159.3	160.5	159.3	159.3	157.0	155.8	150.0	144.1	135.9	123.0	107.8
97.5°	146.4	147.6	146.4	146.4	145.3	142.9	139.4	132.4	124.2	112.5	98.4
100°	137.1	137.1	135.9	135.9	134.7	132.4	127.7	121.8	113.6	101.9	87.9
102.5°	126.5	127.7	126.5	126.5	124.2	121.8	118.3	112.5	104.3	92.5	79.7
105°	118.3	118.3	117.2	117.2	114.8	112.5	109.0	101.9	94.9	84.3	71.5
107.5°	110.1	110.1	109.0	109.0	106.6	104.3	99.6	93.7	86.7	76.1	64.4
110°	101.9	101.9	101.9	100.8	98.4	94.9	91.4	85.5	78.5	69.1	57.4

TEST NUMBER: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	96.1	94.9	93.7	92.5	90.2	87.9	83.2	77.3	70.3	62.1	51.5
115°	87.9	87.9	86.7	85.5	83.2	79.7	76.1	71.5	64.4	55.1	45.7
117.5°	80.8	80.8	79.7	78.5	76.1	72.6	69.1	64.4	57.4	49.2	41.0
120°	73.8	73.8	72.6	71.5	69.1	65.6	63.3	57.4	51.5	43.3	36.3
122.5°	67.9	66.8	66.8	64.4	63.3	59.7	56.2	51.5	45.7	38.7	31.6
125°	60.9	60.9	59.7	58.6	57.4	53.9	50.4	45.7	39.8	34.0	28.1
127.5°	55.1	55.1	53.9	52.7	51.5	48.0	44.5	41.0	35.1	29.3	23.4
130°	49.2	49.2	48.0	46.9	45.7	42.2	39.8	35.1	30.5	25.8	19.9
132.5°	44.5	44.5	43.3	42.2	39.8	37.5	35.1	30.5	26.9	22.3	17.6
135°	39.8	38.7	38.7	37.5	35.1	32.8	30.5	26.9	22.3	18.7	14.1
137.5°	35.1	34.0	32.8	31.6	30.5	28.1	25.8	23.4	19.9	15.2	11.7
140°	30.5	29.3	29.3	28.1	25.8	24.6	22.3	18.7	16.4	12.9	9.4
142.5°	25.8	25.8	24.6	23.4	22.3	21.1	18.7	16.4	12.9	10.5	7.0
145°	22.3	21.1	21.1	19.9	18.7	16.4	15.2	12.9	10.5	8.2	5.9
147.5°	17.6	17.6	17.6	16.4	15.2	14.1	12.9	10.5	8.2	5.9	3.5
150°	14.1	14.1	14.1	12.9	11.7	10.5	9.4	8.2	5.9	3.5	2.3
152.5°	11.7	11.7	10.5	10.5	9.4	8.2	7.0	5.9	3.5	2.3	2.3
155°	8.2	8.2	8.2	7.0	7.0	5.9	4.7	3.5	2.3	2.3	2.3
157.5°	5.9	5.9	5.9	4.7	4.7	3.5	3.5	2.3	2.3	2.3	2.3
160°	3.5	3.5	3.5	3.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8	2129.8
2.5°	2115.8	2114.6	2124.0	2124.0	2113.4	2129.8	2147.4
5°	2108.7	2107.6	2116.9	2116.9	2107.6	2124.0	2142.7
7.5°	2094.7	2095.8	2105.2	2107.6	2095.8	2111.1	2131.0
10°	2079.4	2078.3	2088.8	2091.2	2081.8	2095.8	2114.6
12.5°	2054.8	2054.8	2065.4	2068.9	2059.5	2075.9	2093.5
15°	2029.1	2029.1	2036.1	2042.0	2033.8	2049.0	2066.6
17.5°	1996.3	1995.1	2002.1	2009.1	2000.9	2017.3	2036.1
20°	1954.1	1954.1	1962.3	1970.5	1964.6	1979.9	2000.9
22.5°	1909.6	1904.9	1918.9	1924.8	1921.3	1936.5	1957.6
25°	1853.3	1852.2	1866.2	1874.4	1869.7	1886.1	1904.9
27.5°	1792.4	1791.2	1805.3	1815.8	1813.5	1828.7	1849.8
30°	1718.6	1724.5	1737.4	1754.9	1749.1	1765.5	1787.7
32.5°	1641.3	1647.2	1662.4	1681.1	1682.3	1695.2	1717.4
35°	1548.7	1564.0	1574.5	1599.1	1603.8	1616.7	1640.1
37.5°	1451.5	1469.1	1491.3	1510.1	1519.5	1530.0	1556.9
40°	1342.6	1368.3	1392.9	1415.2	1426.9	1437.4	1463.2
42.5°	1244.1	1264.1	1287.5	1309.8	1330.8	1340.2	1367.2
45°	1132.9	1156.3	1177.4	1204.3	1225.4	1235.9	1262.9
47.5°	1023.9	1047.3	1075.5	1094.2	1116.5	1127.0	1152.8
50°	919.6	940.7	964.2	986.4	1005.2	1014.5	1036.8
52.5°	816.5	838.8	861.1	875.1	895.0	902.1	920.8
55°	725.2	740.4	760.3	768.5	788.4	793.1	806.0
57.5°	637.3	647.8	654.9	668.9	683.0	693.5	708.8
60°	557.6	562.3	567.0	575.2	586.9	590.4	596.3
62.5°	486.2	485.0	494.4	496.7	497.9	509.6	503.8
65°	422.9	424.1	415.9	412.4	417.1	420.6	418.2
67.5°	370.2	363.2	356.1	347.9	340.9	344.4	340.9
70°	318.7	312.8	301.1	289.4	284.7	277.6	274.1
72.5°	277.6	263.6	251.9	236.6	228.4	220.2	214.4
75°	246.0	226.1	209.7	193.3	181.6	169.9	167.5
77.5°	213.2	194.5	175.7	158.2	140.6	127.7	123.0
80°	187.4	169.9	147.6	126.5	107.8	91.4	85.5
82.5°	164.0	145.3	123.0	100.8	79.7	62.1	55.1
85°	144.1	124.2	101.9	79.7	58.6	39.8	30.5
87.5°	128.9	106.6	84.3	63.3	41.0	22.3	11.7
90°	114.8	93.7	72.6	50.4	29.3	11.7	0.0
92.5°	101.9	82.0	60.9	41.0	22.3	7.0	1.2
95°	90.2	72.6	51.5	32.8	16.4	4.7	1.2
97.5°	80.8	63.3	44.5	26.9	12.9	3.5	1.2
100°	72.6	55.1	38.7	22.3	10.5	2.3	1.2
102.5°	64.4	49.2	32.8	18.7	8.2	1.2	1.2
105°	57.4	43.3	28.1	16.4	7.0	1.2	1.2
107.5°	51.5	38.7	24.6	14.1	4.7	1.2	1.2
110°	45.7	32.8	21.1	11.7	3.5	1.2	1.2

TEST NUMBER: P1213848

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	41.0	29.3	18.7	9.4	2.3	1.2	1.2
115°	36.3	25.8	16.4	8.2	2.3	1.2	1.2
117.5°	31.6	22.3	14.1	5.9	1.2	1.2	1.2
120°	28.1	19.9	11.7	4.7	1.2	1.2	1.2
122.5°	24.6	16.4	9.4	3.5	1.2	1.2	1.2
125°	21.1	14.1	8.2	2.3	1.2	1.2	1.2
127.5°	17.6	11.7	5.9	2.3	1.2	1.2	1.2
130°	15.2	9.4	4.7	1.2	1.2	1.2	1.2
132.5°	12.9	7.0	3.5	1.2	1.2	1.2	1.2
135°	10.5	5.9	2.3	1.2	1.2	1.2	1.2
137.5°	8.2	4.7	2.3	1.2	1.2	1.2	1.2
140°	5.9	3.5	1.2	1.2	1.2	1.2	1.2
142.5°	4.7	2.3	1.2	1.2	1.2	1.2	1.2
145°	3.5	2.3	1.2	1.2	1.2	1.2	1.2
147.5°	2.3	2.3	2.3	2.3	1.2	1.2	1.2
150°	2.3	2.3	1.2	1.2	2.3	1.2	1.2
152.5°	2.3	1.2	1.2	1.2	2.3	1.2	1.2
155°	2.3	2.3	2.3	2.3	2.3	2.3	1.2
157.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3
160°	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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)