

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: P1213497

Luminaire Tested: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213497
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-L935-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

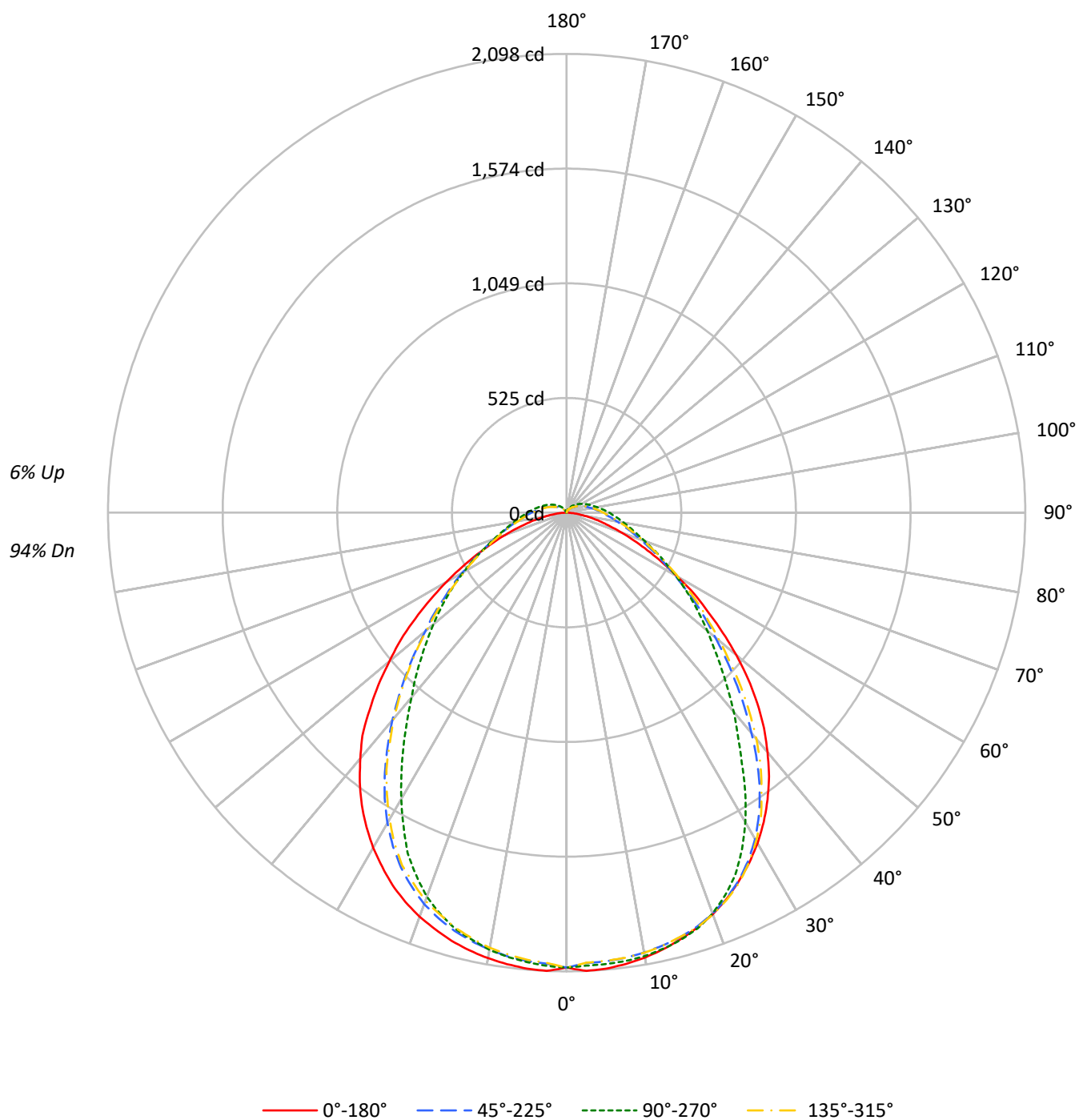
Lumens per Lamp: N/A
Luminaire Lumens: 5266.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
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°	16815	16815	16815	16815
5°	16935	16280	16935	16207
10°	16859	15847	16888	15627
15°	16751	15373	16827	14973
20°	16622	14765	16720	14141
25°	16356	13861	16537	13045
30°	16009	12534	16219	11604
35°	15469	10908	15768	10157
40°	14696	9540	15083	8852
45°	13673	8293	14117	7817
50°	12277	7288	12819	6919
55°	10621	6435	11392	6109
60°	8933	5650	9739	5325
65°	7322	4996	8061	4632
70°	5827	4433	6526	4100
75°	4577	4094	5153	3766
80°	3305	3949	3890	3608
85°	2036	3971	2740	3651

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 14117 cd/sqm

TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.3	3.7
10°-20°	565.7	10.7
20°-30°	838.3	15.9
30°-40°	931.4	17.7
40°-50°	844.3	16.0
50°-60°	654.2	12.4
60°-70°	444.3	8.4
70°-80°	282.6	5.4
80°-90°	180.7	3.4
90°-100°	121.8	2.3
100°-110°	83.4	1.6
110°-120°	55.7	1.1
120°-130°	34.6	0.7
130°-140°	19.1	0.4
140°-150°	9.0	0.2
150°-160°	3.3	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1601.3	30.4
0°-40°	2532.7	48.1
0°-60°	4031.2	76.6
0°-90°	4938.8	93.8
90°-120°	260.9	5.0
90°-150°	323.7	6.1
90°-180°	327.0	6.2
0°-180°	5266.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2081	2081	2081	2081	2081	
5°	2093	2073	2093	2064	2093	199
15°	2019	2022	2028	1970	2019	570
25°	1861	1827	1882	1719	1861	857
35°	1602	1396	1633	1300	1602	1000
45°	1234	998	1274	941	1234	948
55°	788	702	845	666	788	709
65°	409	472	450	437	409	410
75°	164	315	184	290	164	176
85°	30	227	40	208	30	36
90°	0	196	2	179	0	2
95°	1	167	0	156	1	1
105°	1	122	0	116	1	1
115°	1	93	0	86	1	1
125°	1	69	1	61	1	1
135°	1	48	1	39	1	1
145°	1	31	1	22	1	1
155°	1	17	1	8	1	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8
2.5°	2098.0	2095.7	2093.4	2090.0	2093.4	2102.6	2096.8	2084.3	2082.0	2061.4	2070.5
5°	2093.4	2090.0	2087.7	2084.3	2088.8	2100.3	2094.6	2083.1	2079.7	2060.2	2070.5
7.5°	2082.0	2079.7	2076.2	2076.2	2080.8	2092.3	2087.7	2075.1	2072.8	2053.3	2064.8
10°	2065.9	2064.8	2062.5	2062.5	2067.1	2080.8	2075.1	2063.6	2061.4	2043.0	2055.6
12.5°	2045.3	2046.5	2043.0	2043.0	2049.9	2063.6	2059.1	2046.5	2044.2	2028.2	2040.8
15°	2019.0	2020.2	2017.9	2019.0	2025.9	2041.9	2036.2	2024.7	2022.4	2009.9	2020.2
17.5°	1989.3	1990.4	1990.4	1989.3	1997.3	2013.3	2008.7	1998.4	1995.0	1984.7	1997.3
20°	1954.9	1954.9	1954.9	1954.9	1964.1	1980.1	1974.4	1966.4	1959.5	1951.5	1961.8
22.5°	1912.6	1911.4	1912.6	1916.0	1925.2	1937.7	1934.3	1925.2	1914.9	1910.3	1918.3
25°	1861.1	1864.5	1865.6	1869.1	1880.5	1890.8	1887.4	1878.2	1862.2	1858.8	1861.1
27.5°	1807.3	1809.6	1813.0	1811.8	1827.9	1838.2	1831.3	1823.3	1800.4	1797.0	1794.7
30°	1746.6	1750.0	1752.3	1751.2	1763.8	1775.2	1768.4	1758.0	1727.1	1724.9	1706.5
32.5°	1677.9	1681.4	1683.7	1683.7	1702.0	1706.5	1694.0	1679.1	1645.9	1637.9	1621.8
35°	1602.4	1605.8	1607.0	1607.0	1625.3	1624.1	1608.1	1587.5	1550.9	1540.6	1513.1
37.5°	1521.1	1523.4	1524.6	1531.4	1539.4	1532.6	1512.0	1485.6	1458.2	1429.6	1399.8
40°	1429.6	1433.0	1435.3	1439.9	1447.9	1439.9	1410.1	1378.1	1348.3	1316.2	1286.5
42.5°	1335.7	1346.0	1343.7	1342.6	1347.2	1325.4	1302.5	1265.9	1236.1	1202.9	1173.2
45°	1233.8	1232.7	1238.4	1240.7	1239.6	1221.2	1189.2	1156.0	1126.3	1091.9	1066.7
47.5°	1126.3	1125.1	1129.7	1132.0	1125.1	1105.6	1080.5	1042.7	1017.5	987.8	968.3
50°	1012.9	1012.9	1019.8	1012.9	1009.5	990.0	969.4	931.7	912.2	885.9	874.4
52.5°	899.6	909.9	903.1	900.8	897.3	877.9	861.9	831.0	814.9	803.5	789.7
55°	787.5	798.9	794.3	790.9	789.7	773.7	758.8	736.0	725.7	717.6	709.6
57.5°	692.5	691.3	689.0	685.6	686.7	674.1	659.3	646.7	642.1	638.7	641.0
60°	582.6	591.7	588.3	589.5	590.6	588.3	575.7	567.7	568.8	570.0	573.4
62.5°	492.2	500.2	505.9	501.3	503.6	507.0	500.2	497.9	502.5	507.0	511.6
65°	408.6	416.6	422.3	421.2	428.1	434.9	433.8	436.1	446.4	452.1	457.8
67.5°	333.1	341.1	349.1	350.2	360.5	370.8	375.4	383.4	394.9	402.9	409.8
70°	267.8	274.7	283.9	289.6	303.3	317.0	325.1	341.1	347.9	359.4	364.0
72.5°	209.5	215.2	227.8	241.5	252.9	270.1	286.1	299.9	310.2	322.8	328.5
75°	163.7	166.0	179.7	195.7	211.7	231.2	248.4	263.2	277.0	289.6	298.7
77.5°	120.2	123.6	136.2	157.9	176.3	196.9	216.3	232.3	247.2	259.8	272.4
80°	83.6	90.4	104.2	125.9	146.5	169.4	187.7	206.0	222.0	234.6	247.2
82.5°	53.8	59.5	79.0	100.7	122.5	145.4	164.8	183.1	200.3	214.0	225.5
85°	29.8	37.8	57.2	80.1	101.9	124.8	145.4	163.7	180.8	193.4	204.9
87.5°	11.4	22.9	41.2	63.0	84.7	106.4	128.2	145.4	162.5	176.3	186.6
90°	0.0	13.7	30.9	52.6	74.4	96.1	116.7	135.1	151.1	163.7	175.1
92.5°	1.1	9.2	24.0	42.3	63.0	83.6	103.0	121.3	137.3	149.9	160.2
95°	1.1	6.9	19.5	36.6	54.9	74.4	92.7	109.9	124.8	137.3	147.6
97.5°	1.1	4.6	16.0	32.0	48.1	67.5	84.7	100.7	114.5	127.0	135.1
100°	1.1	4.6	13.7	27.5	43.5	60.7	76.7	92.7	105.3	115.6	124.8
102.5°	1.1	3.4	11.4	24.0	38.9	53.8	69.8	84.7	96.1	106.4	115.6
105°	1.1	3.4	10.3	20.6	34.3	49.2	63.0	76.7	89.3	98.4	106.4
107.5°	1.1	2.3	9.2	17.2	29.8	44.6	58.4	69.8	81.3	90.4	98.4
110°	1.1	2.3	8.0	16.0	26.3	40.1	52.6	64.1	74.4	83.6	90.4

TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.1	2.3	6.9	14.9	24.0	35.5	48.1	58.4	68.7	76.7	83.6
115°	1.1	2.3	6.9	13.7	21.7	30.9	42.3	53.8	61.8	71.0	76.7
117.5°	1.1	2.3	5.7	11.4	20.6	28.6	38.9	48.1	57.2	65.2	71.0
120°	1.1	2.3	5.7	10.3	18.3	26.3	34.3	43.5	52.6	58.4	64.1
122.5°	1.1	2.3	4.6	10.3	16.0	24.0	30.9	38.9	46.9	53.8	59.5
125°	1.1	2.3	4.6	9.2	14.9	21.7	28.6	34.3	42.3	48.1	53.8
127.5°	1.1	2.3	4.6	8.0	13.7	19.5	26.3	32.0	37.8	43.5	48.1
130°	1.1	2.3	3.4	6.9	12.6	17.2	22.9	29.8	34.3	38.9	43.5
132.5°	1.1	2.3	3.4	6.9	10.3	14.9	20.6	26.3	30.9	35.5	38.9
135°	1.1	2.3	3.4	5.7	9.2	13.7	17.2	22.9	27.5	32.0	35.5
137.5°	1.1	2.3	3.4	5.7	8.0	11.4	14.9	19.5	24.0	27.5	32.0
140°	1.1	2.3	3.4	4.6	6.9	10.3	13.7	16.0	20.6	24.0	27.5
142.5°	1.1	2.3	3.4	4.6	6.9	9.2	11.4	13.7	17.2	20.6	24.0
145°	1.1	2.3	3.4	4.6	5.7	8.0	10.3	12.6	13.7	17.2	19.5
147.5°	1.1	2.3	3.4	4.6	4.6	6.9	9.2	10.3	12.6	13.7	16.0
150°	1.1	2.3	3.4	3.4	4.6	5.7	8.0	9.2	10.3	12.6	13.7
152.5°	1.1	2.3	3.4	3.4	4.6	5.7	6.9	8.0	9.2	10.3	11.4
155°	1.1	2.3	3.4	3.4	3.4	4.6	5.7	6.9	8.0	9.2	10.3
157.5°	2.3	2.3	2.3	3.4	3.4	4.6	4.6	5.7	6.9	6.9	8.0
160°	2.3	2.3	2.3	3.4	3.4	3.4	4.6	4.6	5.7	5.7	6.9
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: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8
2.5°	2068.2	2071.7	2082.0	2082.0	2079.7	2077.4	2077.4	2073.9	2076.2	2080.8	2078.5
5°	2068.2	2071.7	2082.0	2082.0	2079.7	2077.4	2076.2	2072.8	2076.2	2080.8	2078.5
7.5°	2061.4	2065.9	2076.2	2076.2	2073.9	2072.8	2070.5	2068.2	2071.7	2076.2	2073.9
10°	2052.2	2056.8	2067.1	2067.1	2064.8	2064.8	2061.4	2059.1	2063.6	2067.1	2065.9
12.5°	2038.5	2044.2	2053.3	2052.2	2049.9	2051.1	2047.6	2043.0	2047.6	2051.1	2052.2
15°	2019.0	2025.9	2035.0	2032.7	2029.3	2031.6	2025.9	2022.4	2025.9	2032.7	2031.6
17.5°	1993.8	1998.4	2005.3	2005.3	2001.8	1999.6	1997.3	1993.8	1996.1	2000.7	2001.8
20°	1958.3	1964.1	1967.5	1964.1	1962.9	1959.5	1954.9	1951.5	1956.1	1962.9	1964.1
22.5°	1911.4	1912.6	1920.6	1912.6	1906.8	1905.7	1901.1	1894.3	1901.1	1906.8	1908.0
25°	1853.0	1858.8	1855.3	1841.6	1841.6	1832.4	1830.2	1826.7	1827.9	1838.2	1842.7
27.5°	1778.7	1780.9	1771.8	1760.3	1750.0	1744.3	1736.3	1737.4	1737.4	1751.2	1755.8
30°	1697.4	1684.8	1676.8	1658.5	1650.5	1636.7	1634.4	1634.4	1632.1	1639.0	1659.6
32.5°	1600.1	1582.9	1570.3	1553.2	1539.4	1525.7	1518.8	1522.3	1521.1	1538.3	1545.2
35°	1493.7	1483.4	1457.0	1435.3	1427.3	1406.7	1406.7	1396.4	1403.2	1422.7	1430.7
37.5°	1381.5	1365.5	1343.7	1319.7	1314.0	1297.9	1292.2	1286.5	1301.4	1304.8	1312.8
40°	1267.0	1252.2	1231.6	1208.7	1208.7	1189.2	1189.2	1189.2	1190.3	1197.2	1212.1
42.5°	1158.3	1142.3	1124.0	1107.9	1105.6	1090.8	1090.8	1089.6	1091.9	1097.6	1111.4
45°	1053.0	1040.4	1021.0	1012.9	1014.1	998.1	1001.5	998.1	1002.6	1008.4	1012.9
47.5°	955.7	947.7	939.7	928.2	924.8	923.7	917.9	913.4	921.4	921.4	928.2
50°	865.3	860.7	856.1	849.3	850.4	845.8	839.0	839.0	844.7	845.8	850.4
52.5°	786.3	780.6	774.9	776.0	777.2	774.9	771.4	768.0	771.4	773.7	779.4
55°	707.3	702.8	708.5	706.2	708.5	706.2	703.9	701.6	707.3	703.9	709.6
57.5°	636.4	641.0	643.2	638.7	642.1	639.8	641.0	637.5	642.1	644.4	643.2
60°	571.1	578.0	574.6	575.7	580.3	578.0	573.4	576.9	581.4	582.6	581.4
62.5°	511.6	519.6	523.1	520.8	521.9	519.6	523.1	518.5	524.2	526.5	523.1
65°	457.8	467.0	469.3	469.3	469.3	467.0	470.4	471.6	473.8	473.8	471.6
67.5°	412.0	420.1	422.3	424.6	422.3	420.1	420.1	421.2	425.8	428.1	425.8
70°	370.8	378.9	380.0	380.0	381.1	383.4	378.9	381.1	384.6	385.7	384.6
72.5°	335.4	343.4	345.7	344.5	345.7	346.8	346.8	344.5	347.9	350.2	350.2
75°	306.7	311.3	313.6	313.6	314.8	315.9	315.9	314.8	317.0	318.2	319.3
77.5°	280.4	283.9	287.3	287.3	288.4	287.3	289.6	289.6	290.7	291.9	293.0
80°	254.1	258.7	261.0	262.1	264.4	265.5	265.5	265.5	266.7	267.8	267.8
82.5°	233.5	236.9	240.4	243.8	243.8	244.9	244.9	244.9	246.1	246.1	247.2
85°	212.9	217.5	220.9	223.2	224.3	225.5	225.5	226.6	226.6	226.6	227.8
87.5°	194.6	200.3	202.6	204.9	206.0	208.3	208.3	208.3	209.5	209.5	209.5
90°	182.0	187.7	190.0	192.3	193.4	194.6	194.6	195.7	195.7	196.9	196.9
92.5°	167.1	172.8	177.4	177.4	178.6	180.8	179.7	179.7	180.8	182.0	182.0
95°	155.7	160.2	163.7	164.8	166.0	166.0	166.0	167.1	166.0	167.1	167.1
97.5°	141.9	146.5	149.9	152.2	153.4	153.4	153.4	154.5	153.4	154.5	154.5
100°	130.5	135.1	138.5	139.6	141.9	141.9	141.9	141.9	141.9	141.9	143.1
102.5°	121.3	125.9	128.2	129.3	130.5	131.6	131.6	131.6	131.6	132.8	132.8
105°	112.2	116.7	119.0	120.2	121.3	122.5	122.5	122.5	123.6	123.6	122.5
107.5°	104.2	107.6	109.9	112.2	113.3	113.3	114.5	114.5	114.5	114.5	114.5
110°	96.1	99.6	103.0	105.3	105.3	106.4	106.4	107.6	107.6	106.4	107.6

TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	88.1	92.7	95.0	97.3	98.4	99.6	99.6	99.6	99.6	99.6	99.6
115°	81.3	85.8	88.1	90.4	91.6	92.7	92.7	92.7	92.7	92.7	92.7
117.5°	75.5	80.1	82.4	83.6	84.7	85.8	87.0	87.0	87.0	87.0	85.8
120°	69.8	73.3	75.5	77.8	79.0	80.1	80.1	80.1	80.1	80.1	80.1
122.5°	64.1	67.5	69.8	72.1	73.3	74.4	74.4	74.4	74.4	74.4	74.4
125°	58.4	61.8	64.1	66.4	67.5	68.7	68.7	68.7	68.7	68.7	68.7
127.5°	52.6	56.1	59.5	60.7	61.8	63.0	63.0	63.0	64.1	63.0	63.0
130°	46.9	50.4	53.8	54.9	56.1	57.2	58.4	58.4	58.4	58.4	57.2
132.5°	42.3	45.8	48.1	49.2	51.5	51.5	52.6	52.6	52.6	52.6	51.5
135°	38.9	41.2	43.5	44.6	46.9	46.9	46.9	48.1	48.1	46.9	45.8
137.5°	34.3	36.6	38.9	40.1	41.2	42.3	42.3	43.5	42.3	42.3	42.3
140°	32.0	33.2	35.5	36.6	37.8	37.8	37.8	38.9	38.9	37.8	37.8
142.5°	27.5	29.8	32.0	33.2	34.3	34.3	34.3	34.3	34.3	34.3	34.3
145°	22.9	26.3	27.5	29.8	29.8	30.9	30.9	30.9	30.9	30.9	29.8
147.5°	19.5	21.7	25.2	26.3	26.3	27.5	27.5	27.5	27.5	27.5	26.3
150°	14.9	17.2	20.6	22.9	22.9	24.0	24.0	24.0	24.0	22.9	22.9
152.5°	12.6	14.9	16.0	18.3	19.5	19.5	19.5	20.6	19.5	19.5	19.5
155°	11.4	12.6	13.7	14.9	16.0	17.2	17.2	17.2	17.2	16.0	16.0
157.5°	9.2	10.3	11.4	12.6	13.7	14.9	14.9	14.9	14.9	14.9	13.7
160°	6.9	8.0	9.2	9.2	10.3	11.4	12.6	11.4	11.4	11.4	11.4
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: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8
2.5°	2076.2	2075.1	2078.5	2072.8	2055.6	2060.2	2057.9	2068.2	2070.5	2072.8	2083.1
5°	2076.2	2075.1	2077.4	2072.8	2054.5	2057.9	2055.6	2065.9	2068.2	2069.4	2079.7
7.5°	2071.7	2070.5	2073.9	2068.2	2048.8	2053.3	2049.9	2060.2	2061.4	2062.5	2071.7
10°	2062.5	2061.4	2063.6	2059.1	2039.6	2044.2	2039.6	2049.9	2049.9	2052.2	2059.1
12.5°	2048.8	2046.5	2051.1	2045.3	2023.6	2029.3	2027.0	2033.9	2035.0	2036.2	2043.0
15°	2029.3	2027.0	2030.5	2027.0	2007.6	2008.7	2005.3	2015.6	2016.7	2014.4	2021.3
17.5°	2000.7	1998.4	2005.3	2003.0	1983.5	1988.1	1987.0	1989.3	1992.7	1987.0	1996.1
20°	1965.2	1967.5	1969.8	1970.9	1956.1	1956.1	1954.9	1959.5	1962.9	1958.3	1965.2
22.5°	1912.6	1918.3	1925.2	1927.4	1917.1	1916.0	1922.9	1920.6	1924.0	1921.7	1926.3
25°	1846.2	1857.6	1864.5	1871.4	1865.6	1867.9	1878.2	1880.5	1880.5	1879.4	1884.0
27.5°	1763.8	1778.7	1791.2	1806.1	1800.4	1805.0	1822.1	1824.4	1829.0	1824.4	1833.6
30°	1665.3	1679.1	1703.1	1724.9	1727.1	1734.0	1758.0	1760.3	1772.9	1768.4	1771.8
32.5°	1566.9	1573.8	1601.2	1623.0	1636.7	1653.9	1680.2	1684.8	1702.0	1705.4	1705.4
35°	1443.3	1462.8	1487.9	1518.8	1536.0	1554.3	1589.8	1596.7	1621.8	1629.9	1639.0
37.5°	1339.1	1357.5	1373.5	1405.5	1436.4	1457.0	1485.6	1502.8	1529.1	1544.0	1555.5
40°	1228.1	1243.0	1260.2	1292.2	1318.5	1349.4	1378.1	1398.7	1431.8	1449.0	1463.9
42.5°	1122.8	1134.3	1152.6	1175.5	1202.9	1237.3	1264.7	1288.8	1324.3	1348.3	1365.5
45°	1029.0	1035.8	1051.9	1069.0	1093.1	1128.5	1154.9	1185.8	1214.4	1239.6	1260.2
47.5°	940.8	950.0	958.0	969.4	991.2	1012.9	1043.8	1073.6	1102.2	1129.7	1150.3
50°	859.6	859.6	872.2	880.2	895.0	914.5	938.5	959.1	994.6	1014.1	1040.4
52.5°	780.6	785.2	792.0	796.6	808.1	820.7	840.1	857.3	887.0	905.3	930.5
55°	710.8	715.4	718.8	721.1	727.9	742.8	749.7	763.4	784.0	798.9	820.7
57.5°	644.4	646.7	650.1	651.3	652.4	661.6	667.3	670.7	691.3	706.2	724.5
60°	583.7	583.7	587.2	586.0	584.9	589.5	588.3	591.7	604.3	613.5	621.5
62.5°	526.5	526.5	527.6	525.4	524.2	524.2	519.6	523.1	526.5	527.6	533.4
65°	473.8	479.6	475.0	476.1	469.3	467.0	464.7	457.8	456.7	452.1	454.4
67.5°	426.9	431.5	426.9	426.9	421.2	416.6	410.9	399.5	396.0	386.9	384.6
70°	389.2	385.7	388.0	384.6	377.7	372.0	364.0	354.8	343.4	331.9	323.9
72.5°	352.5	352.5	350.2	346.8	343.4	331.9	322.8	312.5	298.7	283.9	272.4
75°	317.0	318.2	318.2	314.8	309.0	298.7	288.4	273.6	258.7	241.5	226.6
77.5°	291.9	291.9	291.9	286.1	280.4	271.3	258.7	242.6	226.6	206.0	188.9
80°	267.8	266.7	266.7	259.8	254.1	243.8	231.2	215.2	198.0	176.3	156.8
82.5°	248.4	247.2	244.9	239.2	231.2	220.9	208.3	191.1	172.8	153.4	129.3
85°	227.8	226.6	224.3	218.6	210.6	201.4	187.7	170.5	152.2	130.5	107.6
87.5°	209.5	208.3	204.9	201.4	192.3	182.0	168.3	152.2	132.8	112.2	89.3
90°	196.9	194.6	192.3	187.7	179.7	168.3	154.5	137.3	117.9	97.3	74.4
92.5°	182.0	180.8	177.4	172.8	166.0	154.5	140.8	124.8	105.3	85.8	64.1
95°	167.1	166.0	163.7	159.1	152.2	141.9	129.3	113.3	95.0	75.5	56.1
97.5°	153.4	153.4	149.9	146.5	138.5	130.5	117.9	103.0	85.8	68.7	50.4
100°	141.9	141.9	138.5	133.9	128.2	120.2	107.6	93.9	77.8	61.8	43.5
102.5°	131.6	130.5	128.2	123.6	117.9	109.9	98.4	85.8	71.0	54.9	38.9
105°	122.5	121.3	119.0	114.5	109.9	100.7	91.6	79.0	64.1	49.2	34.3
107.5°	113.3	112.2	111.0	106.4	100.7	92.7	83.6	71.0	58.4	44.6	30.9
110°	105.3	104.2	101.9	97.3	91.6	84.7	75.5	65.2	52.6	40.1	27.5

TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	98.4	97.3	95.0	90.4	85.8	77.8	69.8	58.4	48.1	36.6	24.0
115°	91.6	90.4	88.1	83.6	77.8	71.0	63.0	53.8	42.3	32.0	21.7
117.5°	84.7	83.6	81.3	77.8	72.1	65.2	57.2	48.1	37.8	29.8	19.5
120°	79.0	76.7	74.4	71.0	65.2	59.5	51.5	43.5	34.3	26.3	17.2
122.5°	73.3	71.0	68.7	65.2	59.5	53.8	45.8	38.9	32.0	24.0	16.0
125°	66.4	65.2	63.0	59.5	53.8	48.1	42.3	35.5	28.6	21.7	13.7
127.5°	60.7	59.5	57.2	52.6	48.1	43.5	37.8	32.0	25.2	18.3	12.6
130°	56.1	53.8	51.5	48.1	44.6	40.1	34.3	28.6	22.9	16.0	11.4
132.5°	50.4	48.1	45.8	43.5	40.1	35.5	30.9	25.2	20.6	14.9	10.3
135°	45.8	43.5	41.2	38.9	35.5	32.0	27.5	22.9	18.3	13.7	9.2
137.5°	40.1	38.9	37.8	35.5	32.0	28.6	25.2	19.5	16.0	12.6	8.0
140°	36.6	35.5	34.3	30.9	28.6	25.2	21.7	17.2	13.7	10.3	6.9
142.5°	33.2	32.0	29.8	27.5	25.2	22.9	18.3	16.0	12.6	9.2	6.9
145°	28.6	27.5	26.3	24.0	21.7	18.3	16.0	13.7	11.4	8.0	5.7
147.5°	26.3	25.2	22.9	20.6	18.3	16.0	14.9	12.6	9.2	6.9	4.6
150°	21.7	20.6	19.5	17.2	16.0	14.9	12.6	10.3	8.0	5.7	4.6
152.5°	18.3	17.2	16.0	16.0	13.7	12.6	10.3	9.2	6.9	5.7	3.4
155°	16.0	16.0	14.9	13.7	11.4	10.3	9.2	6.9	5.7	4.6	3.4
157.5°	13.7	12.6	11.4	11.4	10.3	9.2	6.9	5.7	4.6	4.6	3.4
160°	11.4	10.3	10.3	9.2	8.0	6.9	5.7	5.7	4.6	3.4	3.4
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: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8
2.5°	2084.3	2071.7	2083.1	2098.0	2098.0	2095.7	2093.4	2098.0	2109.4	2104.9	2091.1
5°	2080.8	2068.2	2078.5	2093.4	2093.4	2090.0	2087.7	2091.1	2103.7	2098.0	2085.4
7.5°	2073.9	2062.5	2069.4	2083.1	2083.1	2079.7	2077.4	2082.0	2092.3	2086.5	2072.8
10°	2061.4	2048.8	2056.8	2069.4	2068.2	2065.9	2062.5	2068.2	2077.4	2069.4	2053.3
12.5°	2045.3	2032.7	2039.6	2051.1	2049.9	2045.3	2043.0	2046.5	2054.5	2049.9	2032.7
15°	2023.6	2011.0	2016.7	2028.2	2024.7	2021.3	2016.7	2017.9	2028.2	2020.2	2001.8
17.5°	1997.3	1983.5	1988.1	1998.4	1995.0	1991.5	1985.8	1987.0	1998.4	1987.0	1967.5
20°	1965.2	1950.3	1953.8	1966.4	1960.6	1954.9	1949.2	1949.2	1960.6	1948.0	1926.3
22.5°	1930.9	1916.0	1918.3	1927.4	1922.9	1912.6	1906.8	1910.3	1916.0	1900.0	1877.1
25°	1888.5	1869.1	1872.5	1881.7	1878.2	1864.5	1858.8	1861.1	1858.8	1846.2	1822.1
27.5°	1839.3	1818.7	1821.0	1826.7	1822.1	1809.6	1802.7	1803.8	1799.3	1783.2	1755.8
30°	1777.5	1767.2	1766.1	1769.5	1762.6	1750.0	1742.0	1739.7	1738.6	1715.7	1682.5
32.5°	1714.6	1705.4	1699.7	1704.3	1696.2	1683.7	1669.9	1669.9	1658.5	1636.7	1608.1
35°	1650.5	1635.6	1629.9	1633.3	1624.1	1608.1	1596.7	1590.9	1573.8	1546.3	1515.4
37.5°	1568.1	1557.8	1550.9	1554.3	1544.0	1532.6	1510.8	1505.1	1486.8	1449.0	1410.1
40°	1478.8	1470.8	1463.9	1467.3	1455.9	1438.7	1419.3	1410.1	1389.5	1347.2	1316.2
42.5°	1382.6	1379.2	1371.2	1383.8	1360.9	1343.7	1324.3	1309.4	1288.8	1243.0	1207.5
45°	1280.8	1288.8	1270.5	1273.9	1259.0	1244.1	1223.5	1201.8	1181.2	1137.7	1097.6
47.5°	1173.2	1178.9	1166.3	1168.6	1152.6	1138.8	1120.5	1093.1	1070.2	1032.4	996.9
50°	1062.2	1059.9	1059.9	1057.6	1045.0	1027.8	1009.5	984.3	961.4	927.1	897.3
52.5°	944.3	948.8	951.1	956.9	940.8	930.5	901.9	880.2	863.0	827.5	802.3
55°	831.0	847.0	842.4	844.7	826.4	818.4	795.5	778.3	753.1	732.5	716.5
57.5°	727.9	731.4	733.7	737.1	729.1	713.1	694.8	681.0	661.6	644.4	632.9
60°	628.4	628.4	629.5	635.2	627.2	613.5	599.8	589.5	575.7	565.4	558.5
62.5°	534.5	542.5	543.7	539.1	528.8	521.9	512.8	507.0	497.9	494.5	492.2
65°	447.5	447.5	447.5	449.8	444.1	439.5	433.8	432.6	436.1	431.5	433.8
67.5°	374.3	370.8	368.5	369.7	367.4	365.1	364.0	367.4	374.3	374.3	380.0
70°	311.3	304.5	299.9	299.9	299.9	301.0	304.5	311.3	322.8	327.3	335.4
72.5°	259.8	244.9	238.1	238.1	239.2	243.8	254.1	266.7	277.0	286.1	296.4
75°	210.6	195.7	185.4	184.3	186.6	193.4	208.3	219.8	236.9	249.5	262.1
77.5°	170.5	152.2	139.6	138.5	141.9	152.2	170.5	185.4	204.9	218.6	232.3
80°	136.2	115.6	105.3	98.4	104.2	116.7	137.3	155.7	174.0	192.3	209.5
82.5°	108.7	89.3	73.3	66.4	73.3	90.4	109.9	131.6	149.9	169.4	186.6
85°	85.8	65.2	46.9	40.1	48.1	66.4	88.1	109.9	130.5	149.9	167.1
87.5°	67.5	46.9	28.6	19.5	29.8	49.2	69.8	91.6	113.3	132.8	149.9
90°	52.6	33.2	16.0	2.3	17.2	35.5	56.1	76.7	98.4	117.9	135.1
92.5°	44.6	25.2	9.2	0.0	10.3	26.3	45.8	66.4	85.8	105.3	122.5
95°	37.8	20.6	6.9	0.0	6.9	20.6	37.8	56.1	75.5	95.0	112.2
97.5°	32.0	16.0	4.6	0.0	4.6	16.0	30.9	49.2	66.4	84.7	100.7
100°	27.5	13.7	3.4	0.0	3.4	12.6	26.3	42.3	59.5	76.7	91.6
102.5°	24.0	11.4	2.3	0.0	2.3	10.3	21.7	36.6	51.5	67.5	82.4
105°	20.6	9.2	2.3	0.0	1.1	8.0	18.3	32.0	45.8	60.7	74.4
107.5°	18.3	8.0	2.3	0.0	1.1	6.9	16.0	27.5	41.2	53.8	66.4
110°	16.0	6.9	2.3	0.0	1.1	4.6	13.7	24.0	35.5	48.1	60.7

TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	13.7	5.7	1.1	0.0	0.0	3.4	11.4	20.6	30.9	43.5	53.8
115°	12.6	5.7	1.1	0.0	0.0	2.3	9.2	18.3	27.5	38.9	48.1
117.5°	11.4	4.6	1.1	0.0	1.1	2.3	8.0	16.0	24.0	33.2	43.5
120°	10.3	4.6	1.1	0.0	1.1	1.1	5.7	13.7	20.6	29.8	37.8
122.5°	9.2	4.6	1.1	0.0	1.1	1.1	4.6	11.4	18.3	26.3	33.2
125°	8.0	3.4	2.3	1.1	1.1	1.1	3.4	9.2	16.0	21.7	29.8
127.5°	8.0	3.4	2.3	1.1	1.1	1.1	2.3	8.0	12.6	19.5	26.3
130°	6.9	3.4	2.3	1.1	1.1	1.1	1.1	5.7	11.4	16.0	21.7
132.5°	5.7	3.4	2.3	1.1	1.1	1.1	1.1	3.4	8.0	13.7	18.3
135°	5.7	3.4	2.3	1.1	1.1	1.1	1.1	2.3	5.7	10.3	14.9
137.5°	4.6	2.3	2.3	1.1	1.1	1.1	1.1	1.1	4.6	8.0	11.4
140°	4.6	2.3	2.3	1.1	1.1	1.1	1.1	1.1	3.4	5.7	9.2
142.5°	3.4	2.3	2.3	1.1	1.1	1.1	1.1	1.1	2.3	4.6	6.9
145°	3.4	2.3	2.3	1.1	1.1	1.1	1.1	1.1	1.1	2.3	4.6
147.5°	3.4	3.4	2.3	1.1	1.1	1.1	1.1	1.1	1.1	2.3	3.4
150°	3.4	2.3	2.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3
152.5°	3.4	2.3	2.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3
155°	3.4	2.3	2.3	1.1	1.1	1.1	1.1	1.1	1.1	2.3	2.3
157.5°	3.4	2.3	2.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3
160°	3.4	2.3	2.3	1.1	2.3	1.1	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: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8
2.5°	2086.5	2064.8	2076.2	2072.8	2077.4	2086.5	2085.4	2083.1	2083.1	2079.7	2075.1
5°	2079.7	2059.1	2069.4	2063.6	2069.4	2077.4	2076.2	2072.8	2075.1	2069.4	2063.6
7.5°	2065.9	2047.6	2056.8	2052.2	2056.8	2064.8	2061.4	2060.2	2062.5	2053.3	2049.9
10°	2049.9	2029.3	2039.6	2033.9	2039.6	2045.3	2043.0	2038.5	2043.0	2033.9	2030.5
12.5°	2024.7	2007.6	2014.4	2012.1	2015.6	2021.3	2016.7	2013.3	2015.6	2007.6	2000.7
15°	1997.3	1980.1	1985.8	1982.4	1984.7	1991.5	1983.5	1982.4	1980.1	1972.1	1969.8
17.5°	1961.8	1945.8	1951.5	1945.8	1949.2	1946.9	1945.8	1940.0	1940.0	1930.9	1924.0
20°	1918.3	1904.6	1901.1	1896.5	1901.1	1896.5	1889.7	1885.1	1884.0	1874.8	1869.1
22.5°	1867.9	1851.9	1854.2	1841.6	1842.7	1835.9	1824.4	1819.9	1815.3	1805.0	1797.0
25°	1807.3	1791.2	1779.8	1771.8	1761.5	1760.3	1745.5	1734.0	1732.9	1720.3	1719.1
27.5°	1738.6	1720.3	1711.1	1691.7	1679.1	1668.8	1656.2	1644.7	1639.0	1625.3	1616.1
30°	1659.6	1639.0	1616.1	1602.4	1582.9	1574.9	1553.2	1539.4	1534.9	1520.0	1513.1
32.5°	1570.3	1548.6	1530.3	1504.0	1482.2	1470.8	1449.0	1435.3	1429.6	1413.5	1404.4
35°	1473.1	1449.0	1427.3	1402.1	1384.9	1365.5	1339.1	1325.4	1312.8	1307.1	1300.2
37.5°	1371.2	1344.9	1319.7	1294.5	1279.6	1256.7	1233.8	1224.7	1209.8	1204.1	1197.2
40°	1265.9	1239.6	1215.5	1191.5	1174.3	1153.7	1133.1	1129.7	1113.7	1107.9	1103.4
42.5°	1161.7	1134.3	1106.8	1089.6	1077.0	1056.4	1042.7	1039.3	1025.5	1022.1	1022.1
45°	1067.9	1033.5	1010.6	995.8	985.5	968.3	956.9	954.6	943.1	940.8	940.8
47.5°	967.2	935.1	917.9	908.8	899.6	887.0	880.2	880.2	868.7	866.4	865.3
50°	873.3	843.5	831.0	821.8	820.7	811.5	805.8	803.5	803.5	795.5	796.6
52.5°	784.0	769.1	758.8	753.1	746.3	740.5	736.0	736.0	732.5	726.8	729.1
55°	701.6	684.4	685.6	681.0	677.6	674.1	675.3	668.4	667.3	662.7	666.1
57.5°	619.2	619.2	616.9	613.5	607.8	610.1	610.1	610.1	604.3	600.9	604.3
60°	549.4	552.8	547.1	550.5	548.2	549.4	547.1	547.1	543.7	542.5	543.7
62.5°	487.6	493.3	491.0	495.6	493.3	494.5	496.7	492.2	489.9	487.6	489.9
65°	432.6	439.5	438.4	441.8	442.9	444.1	445.2	442.9	440.7	438.4	437.2
67.5°	384.6	391.4	396.0	397.2	398.3	401.7	400.6	398.3	396.0	392.6	391.4
70°	341.1	350.2	356.0	358.2	362.8	360.5	360.5	359.4	357.1	353.7	352.5
72.5°	304.5	314.8	320.5	322.8	327.3	327.3	326.2	325.1	322.8	319.3	318.2
75°	272.4	281.6	289.6	294.2	297.6	297.6	296.4	295.3	293.0	290.7	289.6
77.5°	247.2	255.2	262.1	267.8	270.1	271.3	270.1	267.8	267.8	266.7	265.5
80°	222.0	231.2	238.1	243.8	247.2	247.2	246.1	247.2	244.9	243.8	242.6
82.5°	200.3	210.6	218.6	224.3	226.6	227.8	226.6	227.8	225.5	225.5	225.5
85°	180.8	191.1	200.3	204.9	208.3	209.5	209.5	209.5	208.3	208.3	208.3
87.5°	164.8	175.1	184.3	188.9	192.3	193.4	193.4	194.6	192.3	192.3	192.3
90°	149.9	160.2	169.4	174.0	177.4	179.7	179.7	180.8	179.7	178.6	178.6
92.5°	136.2	147.6	156.8	161.4	164.8	168.3	168.3	169.4	167.1	167.1	167.1
95°	124.8	136.2	144.2	149.9	153.4	155.7	156.8	156.8	155.7	155.7	155.7
97.5°	114.5	124.8	132.8	138.5	141.9	143.1	144.2	145.4	144.2	144.2	144.2
100°	104.2	114.5	122.5	127.0	131.6	132.8	133.9	135.1	135.1	133.9	133.9
102.5°	95.0	105.3	112.2	117.9	121.3	123.6	124.8	124.8	124.8	124.8	124.8
105°	85.8	96.1	103.0	108.7	112.2	114.5	115.6	116.7	116.7	115.6	115.6
107.5°	77.8	87.0	95.0	99.6	104.2	106.4	107.6	107.6	108.7	107.6	107.6
110°	69.8	80.1	87.0	91.6	96.1	98.4	99.6	100.7	100.7	100.7	100.7



TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	64.1	72.1	79.0	83.6	88.1	90.4	91.6	92.7	93.9	92.7	92.7
115°	57.2	65.2	72.1	76.7	80.1	82.4	84.7	85.8	85.8	87.0	85.8
117.5°	51.5	58.4	65.2	69.8	73.3	76.7	77.8	79.0	80.1	79.0	79.0
120°	45.8	52.6	58.4	63.0	66.4	69.8	71.0	72.1	73.3	72.1	72.1
122.5°	41.2	46.9	52.6	57.2	60.7	63.0	65.2	65.2	66.4	66.4	66.4
125°	36.6	42.3	46.9	51.5	54.9	57.2	58.4	59.5	59.5	60.7	60.7
127.5°	32.0	36.6	42.3	45.8	49.2	51.5	52.6	53.8	53.8	54.9	54.9
130°	27.5	32.0	36.6	40.1	43.5	45.8	46.9	48.1	49.2	49.2	49.2
132.5°	24.0	28.6	32.0	35.5	37.8	40.1	42.3	43.5	43.5	43.5	43.5
135°	19.5	24.0	27.5	30.9	33.2	35.5	36.6	38.9	38.9	38.9	38.9
137.5°	16.0	20.6	24.0	26.3	28.6	30.9	32.0	33.2	34.3	34.3	34.3
140°	12.6	16.0	19.5	22.9	25.2	26.3	28.6	28.6	29.8	29.8	29.8
142.5°	9.2	12.6	14.9	18.3	20.6	22.9	24.0	25.2	25.2	25.2	25.2
145°	6.9	9.2	11.4	13.7	17.2	18.3	19.5	20.6	21.7	21.7	21.7
147.5°	4.6	6.9	8.0	10.3	12.6	14.9	16.0	17.2	18.3	18.3	18.3
150°	3.4	4.6	6.9	8.0	9.2	11.4	13.7	13.7	14.9	14.9	13.7
152.5°	2.3	3.4	4.6	5.7	6.9	8.0	10.3	10.3	11.4	11.4	11.4
155°	2.3	2.3	2.3	3.4	4.6	5.7	6.9	8.0	8.0	8.0	8.0
157.5°	2.3	2.3	2.3	2.3	2.3	3.4	4.6	5.7	5.7	5.7	5.7
160°	2.3	2.3	1.1	1.1	2.3	2.3	2.3	2.3	3.4	3.4	3.4
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: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8
2.5°	2078.5	2080.8	2080.8	2078.5	2077.4	2082.0	2076.2	2054.5	2061.4	2063.6	2070.5
5°	2068.2	2070.5	2070.5	2070.5	2068.2	2072.8	2067.1	2045.3	2053.3	2056.8	2061.4
7.5°	2053.3	2054.5	2056.8	2055.6	2053.3	2060.2	2054.5	2032.7	2038.5	2044.2	2049.9
10°	2033.9	2033.9	2035.0	2037.3	2035.0	2040.8	2035.0	2015.6	2021.3	2024.7	2031.6
12.5°	2007.6	2009.9	2011.0	2009.9	2008.7	2013.3	2011.0	1992.7	1995.0	2001.8	2008.7
15°	1972.1	1972.1	1977.8	1975.5	1975.5	1980.1	1982.4	1961.8	1965.2	1975.5	1982.4
17.5°	1928.6	1929.7	1934.3	1936.6	1935.5	1943.5	1944.6	1928.6	1927.4	1940.0	1946.9
20°	1872.5	1874.8	1880.5	1885.1	1885.1	1894.3	1897.7	1887.4	1888.5	1902.3	1904.6
22.5°	1803.8	1803.8	1814.1	1821.0	1826.7	1832.4	1842.7	1833.6	1833.6	1851.9	1862.2
25°	1719.1	1727.1	1730.6	1744.3	1752.3	1768.4	1777.5	1778.7	1779.8	1797.0	1803.8
27.5°	1625.3	1627.6	1637.9	1653.9	1663.1	1677.9	1695.1	1698.5	1704.3	1727.1	1737.4
30°	1518.8	1525.7	1530.3	1553.2	1565.8	1585.2	1607.0	1615.0	1619.6	1650.5	1663.1
32.5°	1410.1	1412.4	1431.8	1444.4	1459.3	1479.9	1505.1	1520.0	1529.1	1561.2	1579.5
35°	1301.4	1305.9	1322.0	1338.0	1352.9	1373.5	1399.8	1420.4	1436.4	1465.0	1489.1
37.5°	1201.8	1213.2	1216.7	1232.7	1244.1	1264.7	1283.1	1312.8	1328.8	1358.6	1389.5
40°	1112.5	1115.9	1118.2	1134.3	1142.3	1161.7	1188.1	1207.5	1229.3	1251.0	1287.6
42.5°	1024.4	1026.7	1030.1	1039.3	1048.4	1062.2	1081.6	1101.1	1124.0	1156.0	1180.0
45°	943.1	945.4	947.7	953.4	961.4	974.0	986.6	1000.3	1023.2	1050.7	1075.9
47.5°	867.6	872.2	872.2	873.3	879.0	889.3	898.5	915.7	928.2	943.1	971.7
50°	795.5	798.9	800.1	800.1	803.5	810.4	812.6	824.1	835.5	849.3	869.9
52.5°	727.9	727.9	726.8	731.4	731.4	736.0	737.1	744.0	752.0	766.9	776.0
55°	663.8	663.8	667.3	665.0	665.0	667.3	666.1	667.3	674.1	683.3	691.3
57.5°	602.0	600.9	604.3	602.0	600.9	603.2	605.5	600.9	602.0	611.2	611.2
60°	540.2	541.4	544.8	542.5	542.5	542.5	540.2	537.9	535.7	541.4	543.7
62.5°	491.0	487.6	491.0	487.6	489.9	488.7	486.4	481.9	483.0	480.7	478.4
65°	439.5	439.5	440.7	437.2	439.5	439.5	436.1	434.9	428.1	425.8	420.1
67.5°	394.9	394.9	396.0	393.7	393.7	394.9	391.4	388.0	381.1	377.7	369.7
70°	356.0	356.0	356.0	354.8	354.8	354.8	352.5	347.9	341.1	335.4	325.1
72.5°	320.5	321.6	320.5	320.5	323.9	320.5	317.0	312.5	306.7	295.3	286.1
75°	291.9	293.0	291.9	291.9	291.9	290.7	289.6	282.7	275.8	266.7	252.9
77.5°	266.7	266.7	267.8	266.7	266.7	265.5	262.1	256.4	248.4	240.4	224.3
80°	242.6	243.8	244.9	246.1	243.8	242.6	239.2	234.6	224.3	215.2	199.2
82.5°	225.5	224.3	225.5	226.6	224.3	223.2	219.8	214.0	206.0	193.4	177.4
85°	208.3	207.2	207.2	208.3	207.2	204.9	201.4	195.7	187.7	175.1	159.1
87.5°	191.1	192.3	193.4	192.3	191.1	188.9	185.4	179.7	170.5	160.2	143.1
90°	178.6	178.6	178.6	178.6	177.4	175.1	171.7	164.8	156.8	144.2	129.3
92.5°	167.1	167.1	167.1	167.1	166.0	162.5	159.1	153.4	144.2	131.6	117.9
95°	155.7	156.8	155.7	155.7	153.4	152.2	146.5	140.8	132.8	120.2	105.3
97.5°	143.1	144.2	143.1	143.1	141.9	139.6	136.2	129.3	121.3	109.9	96.1
100°	133.9	133.9	132.8	132.8	131.6	129.3	124.8	119.0	111.0	99.6	85.8
102.5°	123.6	124.8	123.6	123.6	121.3	119.0	115.6	109.9	101.9	90.4	77.8
105°	115.6	115.6	114.5	114.5	112.2	109.9	106.4	99.6	92.7	82.4	69.8
107.5°	107.6	107.6	106.4	106.4	104.2	101.9	97.3	91.6	84.7	74.4	63.0
110°	99.6	99.6	99.6	98.4	96.1	92.7	89.3	83.6	76.7	67.5	56.1

TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	93.9	92.7	91.6	90.4	88.1	85.8	81.3	75.5	68.7	60.7	50.4
115°	85.8	85.8	84.7	83.6	81.3	77.8	74.4	69.8	63.0	53.8	44.6
117.5°	79.0	79.0	77.8	76.7	74.4	71.0	67.5	63.0	56.1	48.1	40.1
120°	72.1	72.1	71.0	69.8	67.5	64.1	61.8	56.1	50.4	42.3	35.5
122.5°	66.4	65.2	65.2	63.0	61.8	58.4	54.9	50.4	44.6	37.8	30.9
125°	59.5	59.5	58.4	57.2	56.1	52.6	49.2	44.6	38.9	33.2	27.5
127.5°	53.8	53.8	52.6	51.5	50.4	46.9	43.5	40.1	34.3	28.6	22.9
130°	48.1	48.1	46.9	45.8	44.6	41.2	38.9	34.3	29.8	25.2	19.5
132.5°	43.5	43.5	42.3	41.2	38.9	36.6	34.3	29.8	26.3	21.7	17.2
135°	38.9	37.8	37.8	36.6	34.3	32.0	29.8	26.3	21.7	18.3	13.7
137.5°	34.3	33.2	32.0	30.9	29.8	27.5	25.2	22.9	19.5	14.9	11.4
140°	29.8	28.6	28.6	27.5	25.2	24.0	21.7	18.3	16.0	12.6	9.2
142.5°	25.2	25.2	24.0	22.9	21.7	20.6	18.3	16.0	12.6	10.3	6.9
145°	21.7	20.6	20.6	19.5	18.3	16.0	14.9	12.6	10.3	8.0	5.7
147.5°	17.2	17.2	17.2	16.0	14.9	13.7	12.6	10.3	8.0	5.7	3.4
150°	13.7	13.7	13.7	12.6	11.4	10.3	9.2	8.0	5.7	3.4	2.3
152.5°	11.4	11.4	10.3	10.3	9.2	8.0	6.9	5.7	3.4	2.3	2.3
155°	8.0	8.0	8.0	6.9	6.9	5.7	4.6	3.4	2.3	2.3	2.3
157.5°	5.7	5.7	5.7	4.6	4.6	3.4	3.4	2.3	2.3	2.3	2.3
160°	3.4	3.4	3.4	3.4	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: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8	2080.8
2.5°	2067.1	2065.9	2075.1	2075.1	2064.8	2080.8	2098.0
5°	2060.2	2059.1	2068.2	2068.2	2059.1	2075.1	2093.4
7.5°	2046.5	2047.6	2056.8	2059.1	2047.6	2062.5	2082.0
10°	2031.6	2030.5	2040.8	2043.0	2033.9	2047.6	2065.9
12.5°	2007.6	2007.6	2017.9	2021.3	2012.1	2028.2	2045.3
15°	1982.4	1982.4	1989.3	1995.0	1987.0	2001.8	2019.0
17.5°	1950.3	1949.2	1956.1	1962.9	1954.9	1970.9	1989.3
20°	1909.1	1909.1	1917.1	1925.2	1919.4	1934.3	1954.9
22.5°	1865.6	1861.1	1874.8	1880.5	1877.1	1892.0	1912.6
25°	1810.7	1809.6	1823.3	1831.3	1826.7	1842.7	1861.1
27.5°	1751.2	1750.0	1763.8	1774.1	1771.8	1786.7	1807.3
30°	1679.1	1684.8	1697.4	1714.6	1708.8	1724.9	1746.6
32.5°	1603.5	1609.3	1624.1	1642.4	1643.6	1656.2	1677.9
35°	1513.1	1528.0	1538.3	1562.3	1566.9	1579.5	1602.4
37.5°	1418.1	1435.3	1457.0	1475.3	1484.5	1494.8	1521.1
40°	1311.7	1336.9	1360.9	1382.6	1394.1	1404.4	1429.6
42.5°	1215.5	1235.0	1257.9	1279.6	1300.2	1309.4	1335.7
45°	1106.8	1129.7	1150.3	1176.6	1197.2	1207.5	1233.8
47.5°	1000.3	1023.2	1050.7	1069.0	1090.8	1101.1	1126.3
50°	898.5	919.1	942.0	963.7	982.0	991.2	1012.9
52.5°	797.8	819.5	841.3	855.0	874.4	881.3	899.6
55°	708.5	723.4	742.8	750.8	770.3	774.9	787.5
57.5°	622.6	632.9	639.8	653.5	667.3	677.6	692.5
60°	544.8	549.4	554.0	562.0	573.4	576.9	582.6
62.5°	475.0	473.8	483.0	485.3	486.4	497.9	492.2
65°	413.2	414.3	406.3	402.9	407.5	410.9	408.6
67.5°	361.7	354.8	347.9	339.9	333.1	336.5	333.1
70°	311.3	305.6	294.2	282.7	278.1	271.3	267.8
72.5°	271.3	257.5	246.1	231.2	223.2	215.2	209.5
75°	240.4	220.9	204.9	188.9	177.4	166.0	163.7
77.5°	208.3	190.0	171.7	154.5	137.3	124.8	120.2
80°	183.1	166.0	144.2	123.6	105.3	89.3	83.6
82.5°	160.2	141.9	120.2	98.4	77.8	60.7	53.8
85°	140.8	121.3	99.6	77.8	57.2	38.9	29.8
87.5°	125.9	104.2	82.4	61.8	40.1	21.7	11.4
90°	112.2	91.6	71.0	49.2	28.6	11.4	0.0
92.5°	99.6	80.1	59.5	40.1	21.7	6.9	1.1
95°	88.1	71.0	50.4	32.0	16.0	4.6	1.1
97.5°	79.0	61.8	43.5	26.3	12.6	3.4	1.1
100°	71.0	53.8	37.8	21.7	10.3	2.3	1.1
102.5°	63.0	48.1	32.0	18.3	8.0	1.1	1.1
105°	56.1	42.3	27.5	16.0	6.9	1.1	1.1
107.5°	50.4	37.8	24.0	13.7	4.6	1.1	1.1
110°	44.6	32.0	20.6	11.4	3.4	1.1	1.1



TEST NUMBER: P1213497

CATALOG NUMBER: 4SNLED-LD5-63HL-LN-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	40.1	28.6	18.3	9.2	2.3	1.1	1.1
115°	35.5	25.2	16.0	8.0	2.3	1.1	1.1
117.5°	30.9	21.7	13.7	5.7	1.1	1.1	1.1
120°	27.5	19.5	11.4	4.6	1.1	1.1	1.1
122.5°	24.0	16.0	9.2	3.4	1.1	1.1	1.1
125°	20.6	13.7	8.0	2.3	1.1	1.1	1.1
127.5°	17.2	11.4	5.7	2.3	1.1	1.1	1.1
130°	14.9	9.2	4.6	1.1	1.1	1.1	1.1
132.5°	12.6	6.9	3.4	1.1	1.1	1.1	1.1
135°	10.3	5.7	2.3	1.1	1.1	1.1	1.1
137.5°	8.0	4.6	2.3	1.1	1.1	1.1	1.1
140°	5.7	3.4	1.1	1.1	1.1	1.1	1.1
142.5°	4.6	2.3	1.1	1.1	1.1	1.1	1.1
145°	3.4	2.3	1.1	1.1	1.1	1.1	1.1
147.5°	2.3	2.3	2.3	2.3	1.1	1.1	1.1
150°	2.3	2.3	1.1	1.1	2.3	1.1	1.1
152.5°	2.3	1.1	1.1	1.1	2.3	1.1	1.1
155°	2.3	2.3	2.3	2.3	2.3	2.3	1.1
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)