

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: P1213805

Luminaire Tested: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213805
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33518)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR LENSED
Light Source: -
Ballast/Driver: -

Summary

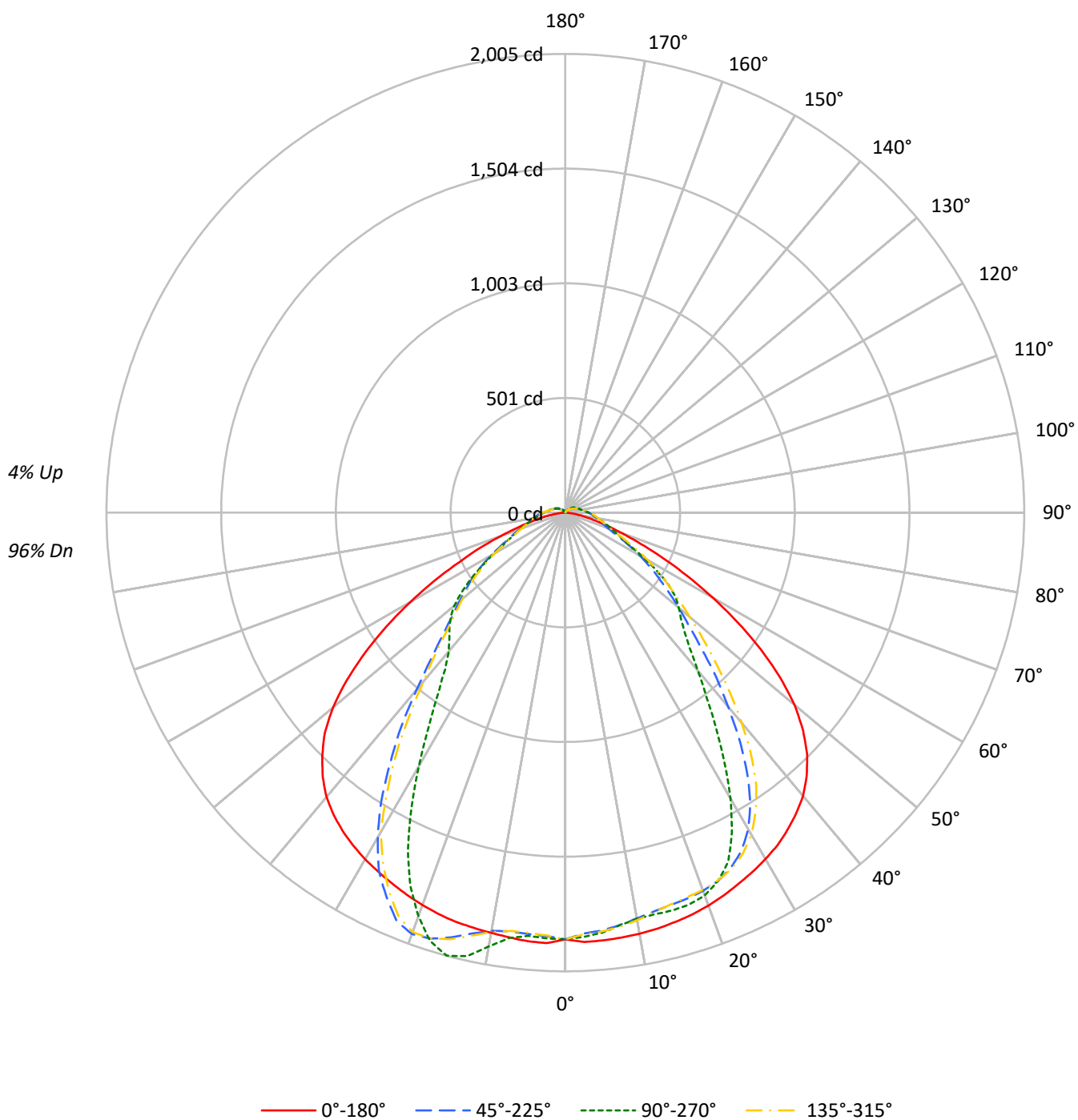
Lumens per Lamp: N/A
Luminaire Lumens: 4446.0 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.12 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 37
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: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-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	115	115	115	115	109	109	109	103	103	103	98	98	98
1	109	104	100	97	106	102	98	95	97	94	91	92	90	88	88	86	84
2	100	93	86	81	97	90	85	80	86	82	77	82	79	75	79	76	73
3	92	83	75	69	89	81	74	68	77	71	67	74	69	65	71	67	63
4	85	74	66	60	83	73	65	59	70	63	58	67	61	57	64	60	56
5	79	67	59	52	76	66	58	52	63	56	51	61	55	50	59	53	49
6	73	61	52	46	71	60	52	46	57	51	45	55	49	45	54	48	44
7	68	55	47	42	66	54	47	41	53	46	41	51	45	40	49	44	40
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36
9	60	47	39	34	58	46	39	34	45	38	33	43	37	33	42	37	33
10	56	43	36	31	54	43	36	31	42	35	30	40	34	30	39	34	30

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15071	15071	15071	15071
5°	15180	14473	15212	14587
10°	15251	13872	15220	14813
15°	15369	13686	15361	15239
20°	15538	13469	15522	14197
25°	15729	12778	15721	12346
30°	16025	11074	16035	9811
35°	16340	8955	16386	7578
40°	16616	7210	16686	6352
45°	16558	6107	16643	5947
50°	15844	5622	16066	5497
55°	14057	5054	14408	4594
60°	11403	3869	12008	3547
65°	8476	2960	9132	2806
70°	5764	2554	6497	2443
75°	3772	2306	4390	2180
80°	2439	2149	2854	1977
85°	1250	2143	1646	1958

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 16643 cd/sqm

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.2	4.0
10°-20°	527.1	11.9
20°-30°	801.3	18.0
30°-40°	859.6	19.3
40°-50°	746.1	16.8
50°-60°	552.9	12.4
60°-70°	316.8	7.1
70°-80°	175.4	3.9
80°-90°	106.8	2.4
90°-100°	69.5	1.6
100°-110°	46.5	1.0
110°-120°	31.4	0.7
120°-130°	19.3	0.4
130°-140°	10.1	0.2
140°-150°	4.6	0.1
150°-160°	1.4	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1505.6	33.9
0°-40°	2365.2	53.2
0°-60°	3664.1	82.4
0°-90°	4263.2	95.9
90°-120°	147.4	3.3
90°-150°	181.5	4.1
90°-180°	183.0	4.1
0°-180°	4446.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1865	1865	1865	1865	1865	
5°	1876	1843	1880	1857	1876	179
15°	1852	1800	1852	2005	1852	524
25°	1790	1684	1789	1627	1790	827
35°	1693	1146	1697	970	1693	1059
45°	1494	735	1502	716	1494	1144
55°	1042	551	1068	501	1042	924
65°	473	279	510	265	473	477
75°	135	177	157	168	135	154
85°	18	122	24	112	18	24
90°	0	102	2	94	0	1
95°	1	84	0	80	1	1
105°	1	63	1	60	1	1
115°	1	51	1	46	1	1
125°	1	38	1	32	1	1
135°	1	24	1	20	1	1
145°	1	14	2	12	1	1
155°	2	7	2	6	2	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0
2.5°	1878.5	1873.7	1871.7	1867.9	1870.8	1882.3	1874.6	1862.1	1863.1	1840.9	1852.5
5°	1876.5	1870.8	1867.9	1864.0	1865.9	1876.5	1868.8	1856.3	1855.4	1833.2	1843.8
7.5°	1873.7	1867.9	1863.1	1860.2	1861.1	1869.8	1860.2	1845.7	1842.8	1818.7	1828.4
10°	1868.8	1865.0	1858.2	1853.4	1852.5	1862.1	1846.7	1832.2	1825.5	1800.4	1810.1
12.5°	1862.1	1856.3	1849.6	1840.9	1839.9	1845.7	1833.2	1813.0	1806.2	1786.0	1796.6
15°	1852.5	1845.7	1838.0	1828.4	1823.6	1827.4	1812.0	1793.7	1792.7	1775.4	1789.8
17.5°	1841.9	1832.2	1823.6	1810.1	1803.3	1806.2	1793.7	1777.3	1779.2	1768.7	1785.0
20°	1827.4	1816.8	1803.3	1789.8	1780.2	1785.0	1776.4	1763.8	1766.7	1759.0	1773.5
22.5°	1811.0	1796.6	1780.2	1764.8	1757.1	1763.8	1757.1	1746.5	1747.5	1742.6	1751.3
25°	1789.8	1773.5	1754.2	1734.9	1731.1	1735.9	1732.0	1723.4	1719.5	1711.8	1715.7
27.5°	1770.6	1752.3	1728.2	1708.0	1701.2	1710.9	1702.2	1687.7	1677.1	1666.5	1658.8
30°	1748.4	1726.3	1699.3	1676.2	1670.4	1674.2	1661.7	1639.6	1611.6	1598.1	1577.0
32.5°	1724.3	1695.4	1661.7	1635.7	1631.9	1629.0	1605.9	1574.1	1530.7	1503.7	1471.0
35°	1692.6	1660.8	1620.3	1588.5	1582.7	1566.4	1528.8	1486.4	1430.5	1384.3	1328.4
37.5°	1656.9	1619.3	1577.0	1534.6	1518.2	1485.4	1432.5	1388.1	1303.4	1247.5	1180.1
40°	1616.4	1571.2	1519.2	1468.1	1441.1	1388.1	1327.5	1261.9	1180.1	1104.9	1048.1
42.5°	1560.6	1512.4	1450.8	1393.9	1347.7	1277.4	1206.1	1113.6	1038.5	974.9	917.1
45°	1494.1	1436.3	1365.0	1296.6	1237.9	1154.1	1070.2	977.8	915.2	841.0	801.5
47.5°	1408.4	1345.8	1269.7	1193.6	1116.5	1024.0	936.3	847.7	785.1	732.1	703.2
50°	1307.2	1249.4	1165.6	1075.1	990.3	894.0	806.3	739.8	679.1	646.4	624.2
52.5°	1182.0	1128.0	1042.3	944.1	862.2	767.8	687.8	633.9	590.5	566.4	558.7
55°	1042.3	995.1	910.3	818.8	735.0	648.3	587.6	540.4	512.5	498.0	499.0
57.5°	893.0	856.4	776.4	694.6	615.6	550.1	495.1	457.6	436.4	435.4	438.3
60°	743.7	716.7	647.3	577.0	507.7	454.7	414.2	388.2	374.7	375.7	374.7
62.5°	601.1	576.1	526.0	468.2	413.3	377.6	341.0	330.4	318.9	317.9	317.9
65°	473.0	453.7	413.3	371.8	330.4	307.3	289.0	276.5	267.8	265.9	266.8
67.5°	355.5	347.8	319.8	291.9	265.9	251.4	236.0	233.1	226.4	226.4	228.3
70°	264.9	259.1	243.7	227.3	216.7	207.1	199.4	199.4	198.4	197.5	202.3
72.5°	191.7	192.7	187.8	175.3	174.4	172.4	170.5	173.4	174.4	177.3	183.0
75°	134.9	137.8	137.8	135.8	139.7	144.5	147.4	152.2	158.0	161.8	168.6
77.5°	95.4	95.4	100.2	106.0	113.7	122.3	130.0	136.8	144.5	149.3	155.1
80°	61.7	64.5	72.2	82.8	93.4	105.0	115.6	124.3	132.0	139.7	143.5
82.5°	36.6	41.4	51.1	64.5	78.0	92.5	103.1	113.7	122.3	130.0	132.9
85°	18.3	25.0	36.6	51.1	65.5	80.9	94.4	104.0	113.7	120.4	124.3
87.5°	5.8	13.5	26.0	39.5	54.9	70.3	84.8	95.4	104.0	109.8	113.7
90°	0.0	6.7	18.3	32.8	47.2	62.6	76.1	87.7	96.3	101.1	104.0
92.5°	0.0	3.9	14.4	27.0	40.5	55.9	69.4	80.0	87.7	92.5	94.4
95°	1.0	2.9	10.6	22.2	35.6	50.1	62.6	72.2	80.0	84.8	85.7
97.5°	1.0	1.9	8.7	18.3	30.8	44.3	56.8	66.5	72.2	77.1	78.0
100°	1.0	1.9	6.7	16.4	27.0	39.5	51.1	59.7	66.5	70.3	71.3
102.5°	1.0	1.0	5.8	13.5	24.1	34.7	45.3	53.9	59.7	63.6	65.5
105°	1.0	1.0	4.8	11.6	21.2	30.8	40.5	49.1	53.9	57.8	59.7
107.5°	1.0	1.0	3.9	9.6	18.3	27.0	36.6	43.3	49.1	53.0	54.9
110°	1.0	1.0	2.9	8.7	15.4	24.1	31.8	38.5	44.3	48.2	50.1

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	1.0	2.9	7.7	13.5	21.2	27.9	34.7	39.5	43.3	46.2
115°	1.0	1.0	2.9	6.7	12.5	18.3	25.0	30.8	35.6	39.5	42.4
117.5°	1.0	1.0	2.9	5.8	10.6	16.4	22.2	27.9	31.8	35.6	38.5
120°	1.0	1.0	1.9	4.8	9.6	14.4	19.3	24.1	28.9	32.8	35.6
122.5°	1.0	1.0	1.9	4.8	7.7	12.5	17.3	21.2	26.0	28.9	31.8
125°	1.0	1.0	1.9	3.9	6.7	11.6	15.4	19.3	22.2	26.0	28.9
127.5°	1.0	1.0	1.9	3.9	5.8	9.6	13.5	17.3	20.2	23.1	25.0
130°	1.0	1.0	1.9	2.9	4.8	7.7	11.6	14.4	18.3	20.2	22.2
132.5°	1.0	1.0	1.0	2.9	3.9	5.8	8.7	12.5	15.4	18.3	19.3
135°	1.0	1.0	1.0	1.9	3.9	4.8	6.7	9.6	12.5	15.4	17.3
137.5°	1.0	1.0	1.0	1.9	2.9	4.8	5.8	7.7	10.6	12.5	15.4
140°	1.0	1.0	1.0	1.9	2.9	3.9	4.8	6.7	8.7	10.6	12.5
142.5°	1.0	1.0	1.0	1.9	1.9	2.9	3.9	5.8	6.7	8.7	10.6
145°	1.0	1.0	1.0	1.9	1.9	2.9	3.9	4.8	5.8	6.7	8.7
147.5°	1.0	1.0	1.0	1.9	1.9	1.9	2.9	3.9	4.8	5.8	6.7
150°	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9	3.9	4.8	5.8
152.5°	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9	2.9	3.9	4.8
155°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9	3.9	3.9
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0
2.5°	1848.6	1850.5	1862.1	1861.1	1859.2	1857.3	1857.3	1855.4	1857.3	1862.1	1860.2
5°	1839.0	1841.9	1850.5	1849.6	1847.6	1846.7	1845.7	1842.8	1844.8	1851.5	1849.6
7.5°	1821.6	1824.5	1832.2	1828.4	1825.5	1827.4	1822.6	1819.7	1823.6	1830.3	1829.3
10°	1803.3	1805.3	1814.9	1813.0	1808.1	1809.1	1804.3	1802.4	1807.2	1811.0	1812.0
12.5°	1790.8	1797.6	1806.2	1805.3	1804.3	1805.3	1800.4	1798.5	1801.4	1805.3	1804.3
15°	1787.9	1796.6	1806.2	1806.2	1807.2	1808.1	1803.3	1800.4	1803.3	1806.2	1805.3
17.5°	1785.0	1795.6	1804.3	1803.3	1804.3	1806.2	1798.5	1796.6	1800.4	1804.3	1802.4
20°	1775.4	1785.0	1790.8	1788.9	1788.9	1789.8	1780.2	1780.2	1786.0	1788.9	1789.8
22.5°	1748.4	1760.0	1760.0	1755.2	1755.2	1751.3	1748.4	1742.6	1749.4	1754.2	1758.1
25°	1708.0	1712.8	1707.0	1696.4	1690.6	1685.8	1672.3	1683.9	1683.9	1698.3	1703.1
27.5°	1651.1	1640.5	1624.2	1602.0	1597.2	1581.8	1573.1	1576.0	1580.8	1601.0	1616.4
30°	1557.7	1525.9	1498.0	1488.3	1467.1	1451.7	1436.3	1444.0	1452.7	1464.2	1496.0
32.5°	1434.4	1403.6	1358.3	1341.9	1319.7	1300.5	1282.2	1293.7	1309.1	1316.9	1351.5
35°	1292.8	1256.2	1214.7	1186.8	1163.7	1153.1	1130.0	1146.3	1162.7	1168.5	1198.4
37.5°	1142.5	1104.9	1068.3	1044.2	1022.1	1015.3	999.9	1011.5	1024.0	1032.7	1057.7
40°	999.9	965.2	937.3	920.9	905.5	899.7	894.0	898.8	908.4	915.2	934.4
42.5°	877.6	849.6	830.4	820.7	810.2	802.4	803.4	805.3	810.2	824.6	833.3
45°	770.7	754.3	741.8	739.8	733.1	732.1	731.2	735.0	737.9	746.6	753.3
47.5°	684.9	678.2	675.3	679.1	682.0	678.2	680.1	684.9	690.7	690.7	689.7
50°	617.5	619.4	623.3	631.9	637.7	639.6	641.6	647.3	648.3	650.2	647.3
52.5°	562.6	564.5	575.1	588.6	595.3	598.2	602.1	607.9	607.9	609.8	605.9
55°	506.7	509.6	520.2	533.7	539.5	543.3	547.2	551.0	553.9	557.8	554.9
57.5°	445.1	453.7	460.5	464.3	468.2	471.1	474.0	474.9	480.7	481.7	486.5
60°	379.5	381.5	388.2	387.3	384.4	392.1	388.2	395.0	401.7	410.4	411.3
62.5°	316.9	317.9	322.7	320.8	324.6	323.7	326.6	326.6	331.4	335.2	340.1
65°	267.8	268.8	272.6	272.6	271.7	274.5	277.4	279.4	279.4	282.3	286.1
67.5°	231.2	234.1	237.9	239.9	241.8	241.8	244.7	245.6	247.6	248.5	250.5
70°	206.2	210.0	213.9	215.8	216.7	218.7	219.6	219.6	221.6	222.5	224.5
72.5°	187.8	191.7	194.6	194.6	196.5	197.5	197.5	198.4	199.4	201.3	203.3
75°	172.4	175.3	177.3	176.3	176.3	176.3	177.3	177.3	179.2	181.1	183.0
77.5°	158.0	160.9	160.9	158.9	158.9	158.9	158.9	159.9	160.9	162.8	164.7
80°	147.4	147.4	146.4	146.4	144.5	143.5	143.5	144.5	144.5	146.4	149.3
82.5°	135.8	135.8	134.9	133.9	132.9	132.0	132.0	132.9	133.9	134.9	136.8
85°	125.2	125.2	123.3	123.3	122.3	122.3	122.3	122.3	123.3	124.3	126.2
87.5°	114.6	113.7	112.7	111.7	111.7	111.7	111.7	111.7	112.7	114.6	115.6
90°	104.0	103.1	102.1	102.1	101.1	101.1	102.1	102.1	103.1	104.0	105.0
92.5°	94.4	93.4	92.5	92.5	91.5	91.5	92.5	91.5	93.4	93.4	94.4
95°	85.7	84.8	83.8	83.8	83.8	83.8	83.8	83.8	84.8	84.8	85.7
97.5°	78.0	77.1	76.1	76.1	77.1	76.1	77.1	77.1	77.1	78.0	79.0
100°	71.3	70.3	70.3	71.3	70.3	70.3	71.3	71.3	71.3	71.3	72.2
102.5°	65.5	65.5	65.5	65.5	65.5	65.5	66.5	66.5	66.5	66.5	67.4
105°	59.7	60.7	60.7	60.7	61.7	61.7	61.7	62.6	62.6	62.6	62.6
107.5°	55.9	56.8	56.8	57.8	57.8	58.8	58.8	58.8	58.8	59.7	59.7
110°	52.0	53.0	53.9	54.9	54.9	55.9	55.9	55.9	55.9	55.9	55.9

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	48.2	49.1	50.1	52.0	53.0	53.0	53.0	53.0	53.9	53.9	53.0
115°	44.3	46.2	47.2	49.1	50.1	50.1	51.1	51.1	51.1	51.1	50.1
117.5°	40.5	43.3	44.3	46.2	47.2	47.2	48.2	48.2	48.2	48.2	47.2
120°	37.6	39.5	41.4	42.4	43.3	44.3	44.3	45.3	45.3	45.3	44.3
122.5°	34.7	36.6	38.5	39.5	40.5	41.4	41.4	41.4	41.4	41.4	41.4
125°	30.8	32.8	34.7	35.6	36.6	37.6	37.6	38.5	38.5	38.5	37.6
127.5°	27.9	29.9	30.8	32.8	33.7	33.7	34.7	34.7	34.7	34.7	33.7
130°	24.1	26.0	27.9	28.9	29.9	29.9	30.8	30.8	30.8	30.8	30.8
132.5°	21.2	23.1	24.1	26.0	26.0	27.0	27.0	27.9	27.9	27.9	27.0
135°	19.3	20.2	21.2	23.1	23.1	24.1	24.1	24.1	24.1	24.1	24.1
137.5°	17.3	18.3	19.3	20.2	20.2	21.2	21.2	21.2	21.2	22.2	21.2
140°	14.4	16.4	17.3	17.3	18.3	18.3	18.3	19.3	19.3	19.3	18.3
142.5°	12.5	13.5	14.4	15.4	16.4	16.4	16.4	16.4	17.3	16.4	16.4
145°	9.6	11.6	12.5	13.5	14.4	14.4	14.4	14.4	14.4	14.4	14.4
147.5°	7.7	8.7	10.6	11.6	11.6	12.5	12.5	12.5	12.5	12.5	12.5
150°	6.7	6.7	8.7	9.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
152.5°	4.8	5.8	6.7	7.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
155°	4.8	4.8	5.8	5.8	6.7	6.7	6.7	6.7	7.7	6.7	6.7
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0
2.5°	1857.3	1856.3	1860.2	1856.3	1837.0	1844.8	1841.9	1852.5	1853.4	1856.3	1865.9
5°	1847.6	1847.6	1852.5	1848.6	1830.3	1838.0	1837.0	1847.6	1849.6	1851.5	1862.1
7.5°	1828.4	1829.3	1836.1	1833.2	1813.9	1825.5	1824.5	1837.0	1840.9	1844.8	1854.4
10°	1810.1	1809.1	1816.8	1813.9	1795.6	1809.1	1808.1	1820.7	1826.5	1833.2	1844.8
12.5°	1800.4	1797.6	1800.4	1797.6	1777.3	1787.9	1788.9	1803.3	1810.1	1818.7	1832.2
15°	1800.4	1795.6	1795.6	1789.8	1766.7	1773.5	1774.4	1784.1	1792.7	1801.4	1817.8
17.5°	1798.5	1793.7	1792.7	1787.9	1762.9	1762.9	1761.9	1768.7	1773.5	1782.1	1799.5
20°	1787.9	1786.0	1785.0	1782.1	1759.0	1755.2	1753.2	1753.2	1756.1	1759.0	1776.4
22.5°	1760.0	1761.9	1763.8	1765.8	1747.5	1740.7	1741.7	1739.8	1736.9	1736.9	1751.3
25°	1708.0	1717.6	1725.3	1734.0	1723.4	1718.6	1724.3	1721.4	1716.6	1712.8	1725.3
27.5°	1625.1	1645.3	1661.7	1682.9	1683.9	1680.0	1695.4	1693.5	1692.6	1686.8	1696.4
30°	1510.5	1542.3	1564.4	1595.3	1621.3	1625.1	1651.1	1655.0	1658.8	1655.9	1665.6
32.5°	1371.8	1415.1	1452.7	1500.8	1525.9	1548.1	1584.7	1600.1	1615.5	1620.3	1630.9
35°	1220.5	1269.7	1314.0	1366.9	1406.4	1454.6	1498.9	1522.0	1556.7	1570.2	1585.6
37.5°	1077.0	1123.2	1166.6	1219.6	1283.1	1333.2	1388.1	1440.2	1487.4	1506.6	1529.7
40°	949.8	987.4	1028.8	1075.1	1132.9	1198.4	1258.1	1330.3	1386.2	1424.7	1458.5
42.5°	853.5	871.8	907.4	948.9	995.1	1061.6	1122.3	1203.2	1270.6	1325.5	1381.4
45°	767.8	776.4	802.4	824.6	871.8	930.6	995.1	1074.1	1144.4	1214.7	1282.2
47.5°	694.6	705.1	717.7	731.2	764.9	814.0	869.9	941.2	1011.5	1093.4	1170.4
50°	645.4	648.3	650.2	656.0	676.2	710.0	755.2	815.9	883.4	971.0	1052.9
52.5°	602.1	602.1	596.3	593.4	601.1	622.3	648.3	691.7	761.0	841.9	928.6
55°	555.8	547.2	545.2	535.6	537.5	547.2	559.7	593.4	650.2	719.6	803.4
57.5°	491.3	487.4	487.4	483.6	475.9	480.7	483.6	507.7	548.1	607.9	681.1
60°	417.1	415.2	420.0	421.0	414.2	417.1	416.2	430.6	459.5	507.7	568.4
62.5°	342.9	351.6	352.6	356.4	352.6	351.6	356.4	369.0	383.4	420.0	467.2
65°	288.0	292.8	293.8	298.6	296.7	296.7	300.6	310.2	318.9	343.9	380.5
67.5°	252.4	250.5	251.4	254.3	251.4	250.5	253.4	259.1	265.9	281.3	307.3
70°	224.5	222.5	222.5	222.5	218.7	215.8	216.7	218.7	221.6	230.2	246.6
72.5°	203.3	203.3	200.4	197.5	194.6	192.7	190.7	188.8	187.8	190.7	199.4
75°	184.0	185.0	184.0	181.1	177.3	173.4	169.5	165.7	160.9	158.9	159.9
77.5°	166.7	167.6	168.6	167.6	163.8	158.9	153.2	147.4	140.6	133.9	130.0
80°	151.2	153.2	154.1	153.2	150.3	146.4	139.7	132.9	123.3	114.6	105.0
82.5°	137.8	140.6	141.6	141.6	139.7	135.8	128.1	120.4	109.8	98.3	85.7
85°	127.2	129.1	131.0	131.0	130.0	126.2	118.5	109.8	99.2	85.7	72.2
87.5°	116.6	117.5	119.5	121.4	119.5	115.6	108.9	99.2	88.6	75.1	59.7
90°	106.0	106.9	108.9	110.8	109.8	106.0	100.2	91.5	80.0	65.5	50.1
92.5°	95.4	97.3	98.3	99.2	100.2	97.3	92.5	83.8	72.2	57.8	43.3
95°	87.7	87.7	89.6	90.6	91.5	88.6	84.8	76.1	65.5	52.0	37.6
97.5°	80.0	80.0	81.9	81.9	82.8	80.9	77.1	69.4	58.8	46.2	31.8
100°	72.2	73.2	74.2	75.1	75.1	74.2	70.3	62.6	53.0	41.4	27.9
102.5°	67.4	67.4	68.4	68.4	69.4	67.4	63.6	56.8	47.2	36.6	24.1
105°	62.6	62.6	63.6	63.6	62.6	60.7	56.8	51.1	42.4	31.8	21.2
107.5°	58.8	58.8	58.8	58.8	57.8	55.9	52.0	45.3	37.6	28.9	19.3
110°	55.9	54.9	54.9	53.9	53.0	50.1	46.2	40.5	33.7	25.0	16.4



TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	53.0	52.0	51.1	50.1	48.2	45.3	41.4	36.6	29.9	22.2	14.4
115°	50.1	49.1	48.2	46.2	44.3	41.4	37.6	32.8	26.0	19.3	12.5
117.5°	47.2	46.2	44.3	42.4	40.5	37.6	33.7	28.9	23.1	17.3	11.6
120°	43.3	42.4	41.4	39.5	37.6	33.7	29.9	26.0	20.2	15.4	9.6
122.5°	40.5	39.5	37.6	36.6	33.7	30.8	27.0	23.1	18.3	13.5	8.7
125°	36.6	35.6	34.7	32.8	30.8	27.0	24.1	20.2	16.4	11.6	6.7
127.5°	33.7	32.8	30.8	28.9	27.0	24.1	21.2	18.3	14.4	9.6	6.7
130°	29.9	28.9	27.9	26.0	24.1	21.2	19.3	15.4	12.5	8.7	5.8
132.5°	26.0	26.0	25.0	23.1	21.2	19.3	16.4	13.5	10.6	7.7	4.8
135°	24.1	23.1	22.2	20.2	19.3	16.4	14.4	11.6	8.7	6.7	3.9
137.5°	21.2	20.2	19.3	18.3	16.4	14.4	12.5	9.6	7.7	5.8	3.9
140°	18.3	17.3	17.3	15.4	14.4	12.5	10.6	8.7	6.7	4.8	2.9
142.5°	16.4	15.4	14.4	13.5	12.5	10.6	8.7	6.7	5.8	3.9	2.9
145°	14.4	13.5	12.5	11.6	10.6	8.7	7.7	5.8	4.8	3.9	2.9
147.5°	11.6	11.6	10.6	9.6	8.7	7.7	6.7	5.8	3.9	2.9	1.9
150°	9.6	9.6	8.7	7.7	7.7	6.7	5.8	4.8	3.9	2.9	1.9
152.5°	8.7	7.7	7.7	6.7	6.7	5.8	4.8	3.9	2.9	2.9	1.9
155°	6.7	6.7	6.7	5.8	5.8	4.8	3.9	3.9	2.9	1.9	1.9
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0
2.5°	1867.9	1856.3	1865.9	1883.3	1881.4	1879.4	1877.5	1881.4	1893.9	1887.1	1876.5
5°	1865.0	1853.4	1864.0	1880.4	1879.4	1876.5	1874.6	1878.5	1891.0	1884.3	1872.7
7.5°	1859.2	1848.6	1856.3	1872.7	1872.7	1870.8	1868.8	1872.7	1884.3	1878.5	1866.9
10°	1849.6	1841.9	1849.6	1865.0	1865.9	1862.1	1860.2	1865.0	1876.5	1873.7	1864.0
12.5°	1841.9	1834.2	1842.8	1858.2	1859.2	1855.4	1852.5	1858.2	1873.7	1875.6	1872.7
15°	1831.3	1824.5	1835.1	1851.5	1851.5	1848.6	1848.6	1856.3	1877.5	1886.2	1891.0
17.5°	1815.9	1811.0	1823.6	1839.9	1840.9	1839.0	1839.9	1855.4	1883.3	1904.5	1918.0
20°	1796.6	1794.7	1808.1	1825.5	1828.4	1829.3	1834.2	1857.3	1895.8	1924.7	1938.2
22.5°	1773.5	1774.4	1789.8	1808.1	1812.0	1814.9	1824.5	1857.3	1905.4	1936.3	1942.0
25°	1747.5	1750.3	1766.7	1788.9	1793.7	1799.5	1815.9	1858.2	1908.3	1928.6	1918.9
27.5°	1719.5	1725.3	1746.5	1769.6	1775.4	1785.0	1806.2	1852.5	1894.8	1895.8	1860.2
30°	1690.6	1697.4	1722.4	1749.4	1759.0	1768.7	1794.7	1839.0	1862.1	1831.3	1768.7
32.5°	1657.9	1667.5	1692.6	1725.3	1736.9	1749.4	1775.4	1813.0	1804.3	1737.8	1648.2
35°	1616.4	1629.9	1658.8	1697.4	1708.0	1724.3	1742.6	1751.3	1712.8	1618.4	1517.2
37.5°	1565.4	1585.6	1619.3	1663.7	1675.2	1685.8	1690.6	1666.5	1589.5	1487.4	1382.4
40°	1506.6	1537.5	1574.1	1623.2	1634.8	1634.8	1617.4	1566.4	1469.1	1335.2	1218.6
42.5°	1435.3	1472.9	1519.2	1568.3	1579.8	1566.4	1524.9	1435.3	1324.6	1175.2	1051.9
45°	1348.6	1398.7	1450.8	1501.8	1507.6	1477.7	1403.6	1289.9	1153.1	1014.4	896.8
47.5°	1245.6	1311.1	1367.9	1425.7	1418.0	1367.9	1268.7	1139.6	995.1	864.1	769.7
50°	1130.0	1207.0	1270.6	1325.5	1309.1	1239.8	1123.2	988.4	844.8	733.1	655.1
52.5°	1006.7	1095.3	1158.9	1203.2	1181.0	1098.2	970.1	841.0	723.5	621.3	569.3
55°	878.5	968.1	1033.6	1068.3	1039.4	949.8	823.6	706.1	595.3	528.9	498.0
57.5°	754.3	838.1	899.7	927.7	891.1	801.5	684.9	585.7	505.7	449.9	434.5
60°	634.8	703.2	762.0	783.2	743.7	660.8	560.7	481.7	422.9	384.4	376.7
62.5°	524.0	579.9	626.2	642.5	604.0	539.5	452.8	394.0	352.6	333.3	323.7
65°	432.5	465.3	512.5	509.6	486.5	426.8	363.2	321.7	294.8	282.3	276.5
67.5°	340.1	369.9	399.8	403.6	374.7	333.3	291.9	262.0	247.6	240.8	237.9
70°	263.0	285.1	303.4	298.6	283.2	257.2	231.2	214.8	209.0	206.2	206.2
72.5°	204.2	215.8	224.5	218.7	209.0	195.6	183.0	176.3	177.3	179.2	181.1
75°	158.0	160.9	162.8	157.0	155.1	146.4	145.5	146.4	152.2	158.0	160.9
77.5°	121.4	117.5	114.6	108.9	109.8	108.9	113.7	121.4	130.0	138.7	146.4
80°	93.4	84.8	78.0	72.2	75.1	80.0	89.6	101.1	112.7	122.3	132.0
82.5°	72.2	59.7	50.1	44.3	50.1	57.8	70.3	84.8	98.3	108.9	119.5
85°	55.9	41.4	29.9	24.1	29.9	41.4	54.9	71.3	85.7	97.3	107.9
87.5°	43.3	29.9	16.4	9.6	16.4	28.9	44.3	59.7	74.2	87.7	98.3
90°	34.7	20.2	7.7	1.9	8.7	20.2	34.7	50.1	64.5	79.0	89.6
92.5°	27.9	14.4	3.9	0.0	4.8	15.4	28.9	43.3	57.8	71.3	81.9
95°	23.1	11.6	2.9	0.0	3.9	11.6	23.1	37.6	51.1	64.5	73.2
97.5°	19.3	8.7	1.9	0.0	1.9	9.6	19.3	31.8	45.3	57.8	66.5
100°	16.4	7.7	1.9	0.0	1.9	7.7	16.4	27.9	39.5	51.1	59.7
102.5°	13.5	5.8	1.0	1.0	1.0	5.8	14.4	24.1	34.7	45.3	53.9
105°	12.5	4.8	1.0	1.0	1.0	4.8	12.5	21.2	30.8	40.5	48.2
107.5°	10.6	3.9	1.0	1.0	1.0	3.9	10.6	18.3	27.9	36.6	43.3
110°	8.7	3.9	1.0	1.0	1.0	3.9	8.7	16.4	24.1	31.8	38.5

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	7.7	2.9	1.0	1.0	1.0	2.9	7.7	14.4	21.2	28.9	34.7
115°	6.7	2.9	1.0	1.0	1.0	2.9	6.7	12.5	18.3	25.0	30.8
117.5°	5.8	2.9	1.0	1.0	1.0	1.9	5.8	10.6	16.4	22.2	27.9
120°	4.8	1.9	1.0	1.0	1.0	1.9	4.8	9.6	14.4	19.3	24.1
122.5°	4.8	1.9	1.0	1.0	1.0	1.9	3.9	7.7	12.5	16.4	21.2
125°	3.9	1.9	1.0	1.0	1.0	1.0	3.9	6.7	10.6	14.4	18.3
127.5°	3.9	1.9	1.0	1.0	1.0	1.0	2.9	5.8	8.7	12.5	16.4
130°	2.9	1.9	1.0	1.0	1.0	1.0	1.9	4.8	7.7	10.6	13.5
132.5°	2.9	1.9	1.0	1.0	1.0	1.0	1.9	3.9	5.8	8.7	11.6
135°	2.9	1.0	1.0	1.0	1.0	1.0	1.0	2.9	4.8	6.7	8.7
137.5°	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.9	3.9	4.8	7.7
140°	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	3.9	5.8
142.5°	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	4.8
145°	1.9	1.0	1.0	1.9	1.9	1.0	1.0	1.9	1.9	2.9	3.9
147.5°	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	2.9
150°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.9
152.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
155°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0
2.5°	1874.6	1852.5	1864.0	1860.2	1864.0	1873.7	1872.7	1869.8	1871.7	1866.9	1862.1
5°	1870.8	1848.6	1860.2	1855.4	1860.2	1869.8	1867.9	1865.0	1867.9	1862.1	1857.3
7.5°	1865.9	1845.7	1859.2	1858.2	1866.9	1879.4	1880.4	1880.4	1887.1	1878.5	1874.6
10°	1865.9	1855.4	1873.7	1880.4	1902.6	1918.9	1920.9	1924.7	1936.3	1934.3	1924.7
12.5°	1886.2	1884.3	1911.2	1927.6	1947.8	1970.9	1983.5	1987.3	1995.0	1989.3	1985.4
15°	1912.2	1921.8	1951.7	1970.0	1992.1	2009.5	2012.4	2014.3	2020.1	2011.4	2004.7
17.5°	1946.9	1952.6	1976.7	1984.4	1998.9	2001.8	1997.9	1988.3	1988.3	1969.0	1963.2
20°	1963.2	1960.4	1970.0	1957.5	1951.7	1934.3	1918.0	1899.7	1898.7	1878.5	1876.5
22.5°	1948.8	1929.5	1909.3	1878.5	1865.0	1839.9	1817.8	1807.2	1800.4	1774.4	1767.7
25°	1897.7	1850.5	1820.7	1784.1	1751.3	1722.4	1701.2	1679.1	1657.9	1636.7	1627.0
27.5°	1809.1	1764.8	1716.6	1665.6	1620.3	1576.0	1540.3	1518.2	1498.0	1470.0	1455.6
30°	1700.3	1638.6	1585.6	1536.5	1462.3	1408.4	1378.5	1334.2	1318.8	1306.3	1279.3
32.5°	1572.1	1498.0	1425.7	1359.2	1283.1	1233.0	1193.6	1160.8	1151.2	1118.4	1110.7
35°	1430.5	1333.2	1251.4	1185.8	1130.9	1070.2	1037.5	1015.3	996.1	973.9	970.1
37.5°	1263.9	1176.2	1083.7	1025.9	982.6	930.6	905.5	890.1	881.4	865.1	862.2
40°	1096.3	1008.6	945.0	887.2	860.2	832.3	814.0	807.3	803.4	797.6	791.8
42.5°	944.1	867.0	821.7	783.2	771.6	758.1	753.3	757.2	753.3	751.4	750.4
45°	815.0	756.2	724.4	712.9	710.0	706.1	710.0	716.7	717.7	715.7	715.7
47.5°	697.4	669.5	656.0	657.9	662.8	665.7	672.4	681.1	683.0	678.2	680.1
50°	620.4	604.0	601.1	608.8	619.4	623.3	631.0	637.7	636.8	634.8	632.9
52.5°	548.1	543.3	551.0	558.7	570.3	572.2	575.1	578.0	577.0	573.2	571.2
55°	487.4	491.3	498.0	500.9	509.6	508.6	509.6	509.6	505.7	503.8	500.9
57.5°	432.5	433.5	437.3	438.3	443.1	441.2	440.2	438.3	432.5	431.6	428.7
60°	376.7	374.7	383.4	376.7	380.5	376.7	375.7	370.9	365.1	364.1	362.2
62.5°	323.7	319.8	325.6	322.7	324.6	320.8	318.9	313.1	308.3	307.3	306.3
65°	276.5	274.5	280.3	279.4	281.3	276.5	274.5	270.7	266.8	265.9	264.9
67.5°	237.0	241.8	244.7	244.7	246.6	245.6	240.8	239.9	238.9	235.0	235.0
70°	208.1	211.0	216.7	217.7	216.7	218.7	214.8	213.9	212.9	211.0	210.0
72.5°	185.0	188.8	194.6	195.6	194.6	194.6	192.7	191.7	191.7	188.8	188.8
75°	166.7	171.5	176.3	176.3	176.3	174.4	172.4	172.4	170.5	169.5	167.6
77.5°	151.2	157.0	160.9	159.9	158.9	157.0	157.0	154.1	151.2	151.2	149.3
80°	139.7	143.5	146.4	145.5	144.5	141.6	140.6	137.8	135.8	132.9	132.9
82.5°	127.2	132.0	133.9	132.9	131.0	128.1	127.2	125.2	123.3	122.3	120.4
85°	116.6	121.4	122.3	120.4	118.5	116.6	115.6	114.6	113.7	111.7	111.7
87.5°	106.0	110.8	110.8	109.8	107.9	106.9	106.0	105.0	104.0	103.1	102.1
90°	97.3	101.1	101.1	100.2	99.2	98.3	97.3	96.3	95.4	94.4	94.4
92.5°	88.6	92.5	92.5	91.5	90.6	89.6	89.6	88.6	87.7	86.7	85.7
95°	80.9	84.8	84.8	84.8	83.8	82.8	82.8	81.9	80.9	80.9	80.0
97.5°	73.2	77.1	77.1	77.1	76.1	75.1	75.1	74.2	74.2	74.2	73.2
100°	66.5	69.4	70.3	70.3	69.4	69.4	69.4	68.4	68.4	68.4	67.4
102.5°	59.7	62.6	64.5	64.5	64.5	63.6	63.6	63.6	63.6	63.6	62.6
105°	53.9	56.8	58.8	59.7	59.7	59.7	59.7	59.7	59.7	59.7	59.7
107.5°	49.1	52.0	53.9	54.9	55.9	55.9	56.8	56.8	56.8	56.8	56.8
110°	44.3	47.2	50.1	51.1	52.0	53.0	53.0	53.9	53.0	53.0	53.0

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	39.5	43.3	45.3	47.2	48.2	49.1	50.1	50.1	50.1	50.1	50.1
115°	35.6	39.5	41.4	43.3	45.3	46.2	46.2	47.2	47.2	47.2	46.2
117.5°	31.8	35.6	37.6	39.5	40.5	42.4	43.3	43.3	43.3	43.3	42.4
120°	28.9	31.8	33.7	35.6	37.6	38.5	39.5	39.5	39.5	39.5	39.5
122.5°	25.0	27.9	30.8	32.8	33.7	34.7	35.6	35.6	35.6	35.6	35.6
125°	22.2	25.0	27.0	28.9	29.9	31.8	31.8	31.8	31.8	31.8	31.8
127.5°	19.3	22.2	24.1	26.0	27.0	27.9	28.9	28.9	28.9	28.9	28.9
130°	16.4	19.3	21.2	23.1	24.1	25.0	25.0	26.0	26.0	26.0	26.0
132.5°	14.4	16.4	18.3	20.2	21.2	22.2	22.2	23.1	23.1	23.1	23.1
135°	11.6	14.4	15.4	17.3	18.3	19.3	19.3	20.2	20.2	20.2	20.2
137.5°	9.6	11.6	13.5	15.4	16.4	16.4	17.3	17.3	18.3	18.3	18.3
140°	7.7	8.7	11.6	12.5	13.5	14.4	15.4	15.4	15.4	15.4	15.4
142.5°	5.8	7.7	8.7	10.6	11.6	12.5	13.5	13.5	13.5	13.5	13.5
145°	4.8	5.8	6.7	8.7	9.6	10.6	11.6	11.6	11.6	11.6	11.6
147.5°	3.9	4.8	5.8	6.7	7.7	8.7	9.6	9.6	9.6	9.6	9.6
150°	2.9	3.9	4.8	4.8	5.8	6.7	7.7	8.7	8.7	8.7	8.7
152.5°	2.9	2.9	3.9	3.9	4.8	5.8	6.7	6.7	6.7	6.7	6.7
155°	1.9	2.9	2.9	2.9	3.9	3.9	4.8	5.8	5.8	5.8	5.8
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0
2.5°	1865.0	1868.8	1866.9	1864.0	1863.1	1867.9	1863.1	1840.9	1849.6	1850.5	1857.3
5°	1862.1	1865.0	1863.1	1861.1	1858.2	1864.0	1858.2	1835.1	1843.8	1844.8	1851.5
7.5°	1881.4	1882.3	1882.3	1877.5	1869.8	1872.7	1865.0	1839.0	1843.8	1843.8	1848.6
10°	1929.5	1931.5	1934.3	1921.8	1912.2	1904.5	1893.9	1862.1	1861.1	1853.4	1853.4
12.5°	1992.1	1987.3	1982.5	1976.7	1969.0	1959.4	1944.0	1906.4	1893.9	1881.4	1868.8
15°	2010.4	2008.5	2007.6	2004.7	1999.8	1997.0	1985.4	1947.8	1929.5	1914.1	1892.0
17.5°	1962.3	1966.1	1978.7	1979.6	1985.4	1997.0	1995.0	1969.0	1952.6	1945.9	1918.9
20°	1875.6	1876.5	1892.0	1898.7	1923.7	1943.0	1957.5	1954.6	1950.7	1958.4	1938.2
22.5°	1771.5	1778.3	1794.7	1805.3	1829.3	1851.5	1874.6	1887.1	1907.4	1939.2	1935.3
25°	1629.9	1638.6	1661.7	1679.1	1712.8	1746.5	1777.3	1799.5	1823.6	1884.3	1904.5
27.5°	1460.4	1473.9	1503.7	1521.1	1568.3	1603.0	1647.3	1690.6	1724.3	1793.7	1835.1
30°	1282.2	1293.7	1325.5	1349.6	1390.1	1437.3	1493.1	1554.8	1610.7	1681.0	1733.0
32.5°	1115.5	1128.0	1154.1	1175.2	1220.5	1260.0	1321.7	1397.8	1449.8	1547.1	1616.4
35°	970.1	981.6	999.9	1018.2	1055.8	1096.3	1149.2	1223.4	1289.9	1391.0	1478.7
37.5°	867.9	869.9	880.5	891.1	919.0	949.8	991.3	1056.8	1118.4	1227.3	1323.6
40°	794.7	794.7	800.5	803.4	815.9	834.2	860.2	911.3	962.4	1045.2	1162.7
42.5°	749.5	747.5	747.5	748.5	747.5	756.2	771.6	795.7	841.0	909.4	1000.9
45°	715.7	711.9	709.0	702.3	698.4	698.4	699.4	708.0	734.0	778.4	852.5
47.5°	678.2	677.2	672.4	664.7	657.9	653.1	645.4	642.5	650.2	675.3	725.4
50°	634.8	630.0	625.2	619.4	611.7	606.9	592.4	593.4	586.7	598.2	624.2
52.5°	571.2	567.4	565.5	560.7	557.8	555.8	544.3	532.7	529.8	531.8	541.4
55°	500.9	502.9	495.1	499.0	498.0	489.4	484.5	475.9	473.0	472.0	476.8
57.5°	427.7	429.6	424.8	428.7	428.7	423.9	421.0	421.0	414.2	408.4	415.2
60°	361.2	357.4	360.3	365.1	365.1	362.2	360.3	360.3	355.5	353.5	358.4
62.5°	307.3	303.4	306.3	311.2	312.1	310.2	308.3	308.3	302.5	302.5	306.3
65°	265.9	266.8	265.9	269.7	269.7	270.7	268.8	266.8	260.1	263.0	262.0
67.5°	236.0	235.0	235.0	238.9	237.9	239.9	237.9	235.0	230.2	226.4	225.4
70°	211.0	210.0	210.0	211.9	212.9	212.9	211.9	210.0	203.3	199.4	196.5
72.5°	188.8	187.8	188.8	189.8	190.7	191.7	190.7	188.8	183.0	178.2	173.4
75°	168.6	167.6	170.5	170.5	171.5	171.5	172.4	171.5	166.7	160.9	155.1
77.5°	148.4	149.3	152.2	153.2	155.1	156.1	157.0	157.0	152.2	147.4	139.7
80°	132.0	133.9	135.8	136.8	138.7	141.6	142.6	143.5	139.7	134.9	126.2
82.5°	120.4	121.4	123.3	124.3	127.2	128.1	129.1	131.0	129.1	124.3	114.6
85°	110.8	111.7	113.7	113.7	115.6	117.5	118.5	119.5	118.5	113.7	104.0
87.5°	102.1	103.1	104.0	105.0	106.0	106.9	107.9	108.9	107.9	103.1	94.4
90°	94.4	94.4	95.4	95.4	96.3	97.3	99.2	99.2	98.3	94.4	85.7
92.5°	85.7	86.7	86.7	87.7	88.6	89.6	90.6	90.6	89.6	85.7	78.0
95°	80.0	80.0	80.9	80.9	81.9	81.9	82.8	82.8	81.9	78.0	70.3
97.5°	73.2	73.2	73.2	73.2	74.2	74.2	75.1	75.1	74.2	70.3	63.6
100°	67.4	67.4	67.4	67.4	67.4	68.4	68.4	68.4	67.4	63.6	56.8
102.5°	62.6	62.6	62.6	62.6	62.6	62.6	62.6	62.6	60.7	57.8	51.1
105°	59.7	59.7	59.7	58.8	58.8	58.8	57.8	57.8	54.9	52.0	46.2
107.5°	55.9	55.9	55.9	54.9	54.9	53.9	53.0	53.0	50.1	47.2	41.4
110°	53.0	53.0	53.0	52.0	51.1	50.1	49.1	48.2	45.3	41.4	36.6



TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	50.1	50.1	49.1	49.1	48.2	47.2	45.3	44.3	41.4	37.6	32.8
115°	46.2	46.2	46.2	45.3	44.3	43.3	42.4	40.5	37.6	33.7	28.9
117.5°	42.4	42.4	42.4	41.4	40.5	39.5	38.5	36.6	33.7	29.9	26.0
120°	38.5	38.5	38.5	37.6	36.6	35.6	34.7	32.8	29.9	27.0	22.2
122.5°	35.6	35.6	34.7	33.7	32.8	31.8	30.8	28.9	27.0	23.1	19.3
125°	31.8	31.8	30.8	30.8	29.9	28.9	27.9	26.0	23.1	20.2	17.3
127.5°	28.9	27.9	27.9	27.9	27.0	26.0	24.1	23.1	20.2	17.3	14.4
130°	25.0	25.0	25.0	24.1	24.1	23.1	21.2	19.3	17.3	15.4	12.5
132.5°	22.2	22.2	22.2	22.2	21.2	20.2	18.3	17.3	15.4	12.5	10.6
135°	20.2	20.2	19.3	19.3	18.3	17.3	16.4	14.4	12.5	10.6	8.7
137.5°	17.3	17.3	17.3	16.4	16.4	15.4	13.5	12.5	11.6	9.6	7.7
140°	15.4	15.4	14.4	14.4	13.5	13.5	12.5	10.6	9.6	7.7	6.7
142.5°	13.5	13.5	12.5	12.5	11.6	11.6	10.6	9.6	7.7	6.7	4.8
145°	11.6	11.6	10.6	10.6	10.6	9.6	8.7	7.7	6.7	5.8	4.8
147.5°	9.6	9.6	9.6	8.7	8.7	7.7	7.7	6.7	5.8	4.8	3.9
150°	8.7	8.7	7.7	7.7	7.7	6.7	5.8	5.8	4.8	3.9	2.9
152.5°	6.7	6.7	6.7	6.7	5.8	5.8	4.8	4.8	3.9	2.9	2.9
155°	5.8	5.8	5.8	4.8	4.8	4.8	3.9	3.9	2.9	2.9	1.9
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0	1865.0
2.5°	1854.4	1853.4	1862.1	1861.1	1849.6	1866.9	1878.5
5°	1849.6	1848.6	1856.3	1858.2	1845.7	1864.0	1876.5
7.5°	1845.7	1844.8	1853.4	1856.3	1843.8	1860.2	1873.7
10°	1846.7	1841.9	1849.6	1851.5	1839.9	1857.3	1868.8
12.5°	1853.4	1841.9	1844.8	1844.8	1834.2	1849.6	1862.1
15°	1869.8	1845.7	1841.9	1839.0	1825.5	1839.9	1852.5
17.5°	1888.1	1855.4	1841.9	1832.2	1815.9	1828.4	1841.9
20°	1906.4	1865.9	1843.8	1828.4	1806.2	1817.8	1827.4
22.5°	1915.1	1875.6	1845.7	1822.6	1794.7	1800.4	1811.0
25°	1903.5	1871.7	1841.9	1813.9	1780.2	1781.2	1789.8
27.5°	1861.1	1852.5	1833.2	1805.3	1768.7	1763.8	1770.6
30°	1788.9	1813.0	1813.9	1793.7	1755.2	1745.5	1748.4
32.5°	1687.7	1741.7	1773.5	1769.6	1735.9	1722.4	1724.3
35°	1571.2	1638.6	1708.0	1731.1	1707.0	1696.4	1692.6
37.5°	1431.5	1522.0	1614.5	1671.4	1667.5	1660.8	1656.9
40°	1277.4	1386.2	1496.0	1586.6	1614.5	1614.5	1616.4
42.5°	1112.6	1239.8	1360.2	1474.8	1540.3	1554.8	1560.6
45°	953.7	1081.8	1212.8	1344.8	1432.5	1477.7	1494.1
47.5°	809.2	938.3	1062.5	1207.0	1323.6	1382.4	1408.4
50°	685.9	782.2	913.2	1056.8	1183.9	1256.2	1307.2
52.5°	583.8	658.9	773.5	907.4	1035.6	1134.8	1182.0
55°	498.0	549.1	646.4	762.0	884.3	987.4	1042.3
57.5°	425.8	466.2	532.7	629.0	732.1	834.2	893.0
60°	362.2	390.1	435.4	511.5	599.2	686.8	743.7
62.5°	307.3	325.6	355.5	411.3	479.7	548.1	601.1
65°	264.9	272.6	289.0	323.7	375.7	427.7	473.0
67.5°	223.5	228.3	240.8	262.0	288.0	325.6	355.5
70°	192.7	192.7	193.6	206.2	219.6	243.7	264.9
72.5°	167.6	164.7	158.9	161.8	164.7	178.2	191.7
75°	147.4	140.6	131.0	127.2	125.2	127.2	134.9
77.5°	130.0	120.4	108.9	99.2	91.5	88.6	95.4
80°	115.6	104.0	90.6	78.0	65.5	58.8	61.7
82.5°	104.0	89.6	75.1	60.7	46.2	36.6	36.6
85°	91.5	78.0	62.6	47.2	32.8	20.2	18.3
87.5°	82.8	68.4	52.0	37.6	23.1	10.6	5.8
90°	74.2	59.7	44.3	29.9	16.4	4.8	0.0
92.5°	66.5	53.0	38.5	24.1	11.6	2.9	0.0
95°	59.7	47.2	32.8	20.2	9.6	1.9	1.0
97.5°	53.0	41.4	28.9	16.4	6.7	1.9	1.0
100°	48.2	36.6	25.0	13.5	5.8	1.0	1.0
102.5°	42.4	32.8	21.2	11.6	4.8	1.0	1.0
105°	37.6	28.9	18.3	9.6	3.9	1.0	1.0
107.5°	33.7	25.0	16.4	8.7	3.9	1.0	1.0
110°	29.9	22.2	14.4	7.7	2.9	1.0	1.0



TEST NUMBER: P1213805

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	27.0	19.3	12.5	6.7	1.9	1.0	1.0
115°	23.1	17.3	10.6	5.8	1.9	1.0	1.0
117.5°	20.2	14.4	9.6	4.8	1.9	1.0	1.0
120°	17.3	12.5	7.7	3.9	1.0	1.0	1.0
122.5°	15.4	10.6	6.7	3.9	1.0	1.0	1.0
125°	13.5	9.6	5.8	2.9	1.0	1.0	1.0
127.5°	11.6	7.7	4.8	1.9	1.0	1.0	1.0
130°	9.6	6.7	3.9	1.9	1.0	1.0	1.0
132.5°	7.7	5.8	3.9	1.9	1.0	1.0	1.0
135°	6.7	4.8	2.9	1.9	1.0	1.0	1.0
137.5°	5.8	3.9	1.9	1.9	1.9	1.0	1.0
140°	4.8	2.9	1.9	1.9	1.9	1.9	1.0
142.5°	3.9	2.9	1.9	1.9	1.9	1.9	1.0
145°	2.9	1.9	1.9	1.9	1.9	1.9	1.0
147.5°	2.9	1.9	1.9	1.9	1.9	1.9	1.0
150°	1.9	1.9	1.9	1.9	1.9	1.9	1.9
152.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9
155°	1.9	1.9	1.9	1.9	1.9	1.9	1.9
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)