

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: P1213135

Luminaire Tested: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213135
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-LD5-60HL-LN-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

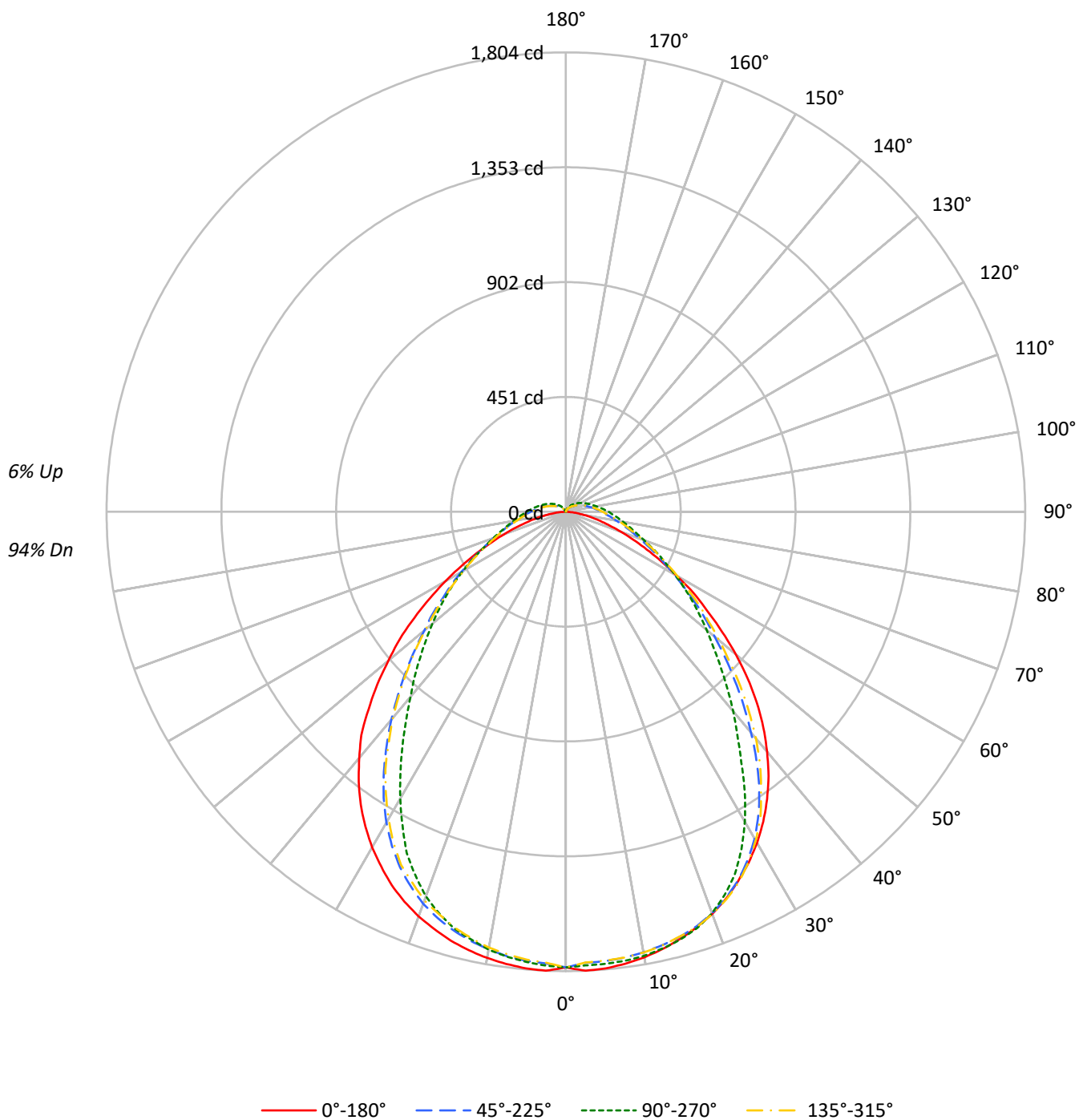
Lumens per Lamp: N/A
Luminaire Lumens: 4528.0 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 43
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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CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-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°	14459	14459	14459	14459
5°	14562	13998	14562	13936
10°	14497	13626	14521	13437
15°	14404	13219	14468	12875
20°	14293	12696	14377	12159
25°	14063	11919	14220	11217
30°	13765	10778	13946	9978
35°	13301	9380	13558	8734
40°	12636	8203	12970	7611
45°	11757	7131	12139	6722
50°	10557	6266	11022	5950
55°	9132	5533	9796	5254
60°	7680	4858	8374	4579
65°	6295	4296	6932	3982
70°	5011	3812	5609	3525
75°	3934	3519	4429	3238
80°	2838	3396	3344	3103
85°	1749	3416	2350	3139

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 12139 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.6	3.7
10°-20°	486.4	10.7
20°-30°	720.9	15.9
30°-40°	800.8	17.7
40°-50°	726.0	16.0
50°-60°	562.5	12.4
60°-70°	382.0	8.4
70°-80°	243.0	5.4
80°-90°	155.4	3.4
90°-100°	104.8	2.3
100°-110°	71.8	1.6
110°-120°	47.9	1.1
120°-130°	29.8	0.7
130°-140°	16.5	0.4
140°-150°	7.7	0.2
150°-160°	2.8	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1376.9	30.4
0°-40°	2177.7	48.1
0°-60°	3466.2	76.6
0°-90°	4246.6	93.8
90°-120°	224.4	5.0
90°-150°	278.4	6.1
90°-180°	281.0	6.2
0°-180°	4528.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1789	1789	1789	1789	1789	
5°	1800	1782	1800	1774	1800	171
15°	1736	1739	1744	1694	1736	490
25°	1600	1571	1618	1478	1600	737
35°	1378	1201	1404	1118	1378	860
45°	1061	858	1095	809	1061	815
55°	677	603	726	573	677	610
65°	351	406	387	376	351	352
75°	141	271	158	249	141	152
85°	26	195	34	179	26	31
90°	0	168	2	154	0	1
95°	1	144	0	134	1	1
105°	1	105	0	99	1	1
115°	1	80	0	74	1	1
125°	1	59	1	52	1	1
135°	1	41	1	34	1	1
145°	1	27	1	19	1	1
155°	1	15	1	7	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°	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2
2.5°	1804.0	1802.0	1800.0	1797.1	1800.0	1807.9	1803.0	1792.2	1790.2	1772.5	1780.3
5°	1800.0	1797.1	1795.1	1792.2	1796.1	1805.9	1801.0	1791.2	1788.2	1771.5	1780.3
7.5°	1790.2	1788.2	1785.3	1785.3	1789.2	1799.0	1795.1	1784.3	1782.3	1765.6	1775.4
10°	1776.4	1775.4	1773.5	1773.5	1777.4	1789.2	1784.3	1774.4	1772.5	1756.7	1767.6
12.5°	1758.7	1759.7	1756.7	1756.7	1762.6	1774.4	1770.5	1759.7	1757.7	1743.9	1754.8
15°	1736.1	1737.0	1735.1	1736.1	1742.0	1755.7	1750.8	1741.0	1739.0	1728.2	1737.0
17.5°	1710.5	1711.5	1711.5	1710.5	1717.4	1731.1	1727.2	1718.3	1715.4	1706.5	1717.4
20°	1680.9	1680.9	1680.9	1680.9	1688.8	1702.6	1697.7	1690.8	1684.9	1678.0	1686.8
22.5°	1644.5	1643.5	1644.5	1647.5	1655.4	1666.2	1663.2	1655.4	1646.5	1642.6	1649.5
25°	1600.2	1603.2	1604.2	1607.1	1617.0	1625.8	1622.9	1615.0	1601.2	1598.3	1600.2
27.5°	1554.0	1556.0	1558.9	1557.9	1571.7	1580.6	1574.7	1567.8	1548.1	1545.1	1543.2
30°	1501.8	1504.8	1506.7	1505.8	1516.6	1526.4	1520.5	1511.7	1485.1	1483.1	1467.4
32.5°	1442.8	1445.7	1447.7	1447.7	1463.4	1467.4	1456.6	1443.8	1415.2	1408.3	1394.6
35°	1377.8	1380.8	1381.8	1381.8	1397.5	1396.5	1382.7	1365.0	1333.5	1324.7	1301.1
37.5°	1307.9	1309.9	1310.9	1316.8	1323.7	1317.8	1300.1	1277.4	1253.8	1229.2	1203.6
40°	1229.2	1232.2	1234.1	1238.1	1245.0	1238.1	1212.5	1184.9	1159.3	1131.8	1106.2
42.5°	1148.5	1157.4	1155.4	1154.4	1158.4	1139.7	1120.0	1088.5	1062.9	1034.4	1008.8
45°	1060.9	1059.9	1064.9	1066.8	1065.8	1050.1	1022.5	994.0	968.4	938.9	917.2
47.5°	968.4	967.4	971.4	973.3	967.4	950.7	929.0	896.6	874.9	849.3	832.6
50°	871.0	871.0	876.9	871.0	868.0	851.3	833.6	801.1	784.4	761.7	751.9
52.5°	773.5	782.4	776.5	774.5	771.6	754.9	741.1	714.5	700.7	690.9	679.1
55°	677.1	686.9	683.0	680.1	679.1	665.3	652.5	632.8	624.0	617.1	610.2
57.5°	595.4	594.4	592.5	589.5	590.5	579.7	566.9	556.1	552.1	549.2	551.1
60°	500.9	508.8	505.9	506.8	507.8	505.9	495.0	488.1	489.1	490.1	493.1
62.5°	423.2	430.1	435.0	431.1	433.0	436.0	430.1	428.1	432.0	436.0	439.9
65°	351.3	358.2	363.2	362.2	368.1	374.0	373.0	375.0	383.8	388.7	393.7
67.5°	286.4	293.3	300.2	301.2	310.0	318.9	322.8	329.7	339.5	346.4	352.3
70°	230.3	236.2	244.1	249.0	260.8	272.6	279.5	293.3	299.2	309.0	313.0
72.5°	180.1	185.0	195.8	207.7	217.5	232.3	246.0	257.8	266.7	277.5	282.5
75°	140.7	142.7	154.5	168.3	182.1	198.8	213.6	226.4	238.2	249.0	256.9
77.5°	103.3	106.3	117.1	135.8	151.6	169.3	186.0	199.8	212.6	223.4	234.2
80°	71.8	77.7	89.6	108.3	126.0	145.7	161.4	177.1	190.9	201.8	212.6
82.5°	46.3	51.2	67.9	86.6	105.3	125.0	141.7	157.5	172.2	184.0	193.9
85°	25.6	32.5	49.2	68.9	87.6	107.3	125.0	140.7	155.5	166.3	176.2
87.5°	9.8	19.7	35.4	54.1	72.8	91.5	110.2	125.0	139.8	151.6	160.4
90°	0.0	11.8	26.6	45.3	64.0	82.7	100.4	116.1	129.9	140.7	150.6
92.5°	1.0	7.9	20.7	36.4	54.1	71.8	88.6	104.3	118.1	128.9	137.8
95°	1.0	5.9	16.7	31.5	47.2	64.0	79.7	94.5	107.3	118.1	127.0
97.5°	1.0	3.9	13.8	27.6	41.3	58.1	72.8	86.6	98.4	109.2	116.1
100°	1.0	3.9	11.8	23.6	37.4	52.2	65.9	79.7	90.5	99.4	107.3
102.5°	1.0	3.0	9.8	20.7	33.5	46.3	60.0	72.8	82.7	91.5	99.4
105°	1.0	3.0	8.9	17.7	29.5	42.3	54.1	65.9	76.8	84.6	91.5
107.5°	1.0	2.0	7.9	14.8	25.6	38.4	50.2	60.0	69.9	77.7	84.6
110°	1.0	2.0	6.9	13.8	22.6	34.4	45.3	55.1	64.0	71.8	77.7

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	2.0	5.9	12.8	20.7	30.5	41.3	50.2	59.0	65.9	71.8
115°	1.0	2.0	5.9	11.8	18.7	26.6	36.4	46.3	53.1	61.0	65.9
117.5°	1.0	2.0	4.9	9.8	17.7	24.6	33.5	41.3	49.2	56.1	61.0
120°	1.0	2.0	4.9	8.9	15.7	22.6	29.5	37.4	45.3	50.2	55.1
122.5°	1.0	2.0	3.9	8.9	13.8	20.7	26.6	33.5	40.4	46.3	51.2
125°	1.0	2.0	3.9	7.9	12.8	18.7	24.6	29.5	36.4	41.3	46.3
127.5°	1.0	2.0	3.9	6.9	11.8	16.7	22.6	27.6	32.5	37.4	41.3
130°	1.0	2.0	3.0	5.9	10.8	14.8	19.7	25.6	29.5	33.5	37.4
132.5°	1.0	2.0	3.0	5.9	8.9	12.8	17.7	22.6	26.6	30.5	33.5
135°	1.0	2.0	3.0	4.9	7.9	11.8	14.8	19.7	23.6	27.6	30.5
137.5°	1.0	2.0	3.0	4.9	6.9	9.8	12.8	16.7	20.7	23.6	27.6
140°	1.0	2.0	3.0	3.9	5.9	8.9	11.8	13.8	17.7	20.7	23.6
142.5°	1.0	2.0	3.0	3.9	5.9	7.9	9.8	11.8	14.8	17.7	20.7
145°	1.0	2.0	3.0	3.9	4.9	6.9	8.9	10.8	11.8	14.8	16.7
147.5°	1.0	2.0	3.0	3.9	3.9	5.9	7.9	8.9	10.8	11.8	13.8
150°	1.0	2.0	3.0	3.0	3.9	4.9	6.9	7.9	8.9	10.8	11.8
152.5°	1.0	2.0	3.0	3.0	3.9	4.9	5.9	6.9	7.9	8.9	9.8
155°	1.0	2.0	3.0	3.0	3.0	3.9	4.9	5.9	6.9	7.9	8.9
157.5°	2.0	2.0	2.0	3.0	3.0	3.9	3.9	4.9	5.9	5.9	6.9
160°	2.0	2.0	2.0	3.0	3.0	3.0	3.9	3.9	4.9	4.9	5.9
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

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2
2.5°	1778.4	1781.3	1790.2	1790.2	1788.2	1786.2	1786.2	1783.3	1785.3	1789.2	1787.2
5°	1778.4	1781.3	1790.2	1790.2	1788.2	1786.2	1785.3	1782.3	1785.3	1789.2	1787.2
7.5°	1772.5	1776.4	1785.3	1785.3	1783.3	1782.3	1780.3	1778.4	1781.3	1785.3	1783.3
10°	1764.6	1768.5	1777.4	1777.4	1775.4	1775.4	1772.5	1770.5	1774.4	1777.4	1776.4
12.5°	1752.8	1757.7	1765.6	1764.6	1762.6	1763.6	1760.7	1756.7	1760.7	1763.6	1764.6
15°	1736.1	1742.0	1749.8	1747.9	1744.9	1746.9	1742.0	1739.0	1742.0	1747.9	1746.9
17.5°	1714.4	1718.3	1724.2	1724.2	1721.3	1719.3	1717.4	1714.4	1716.4	1720.3	1721.3
20°	1683.9	1688.8	1691.8	1688.8	1687.8	1684.9	1680.9	1678.0	1681.9	1687.8	1688.8
22.5°	1643.5	1644.5	1651.4	1644.5	1639.6	1638.6	1634.7	1628.8	1634.7	1639.6	1640.6
25°	1593.4	1598.3	1595.3	1583.5	1583.5	1575.6	1573.7	1570.7	1571.7	1580.6	1584.5
27.5°	1529.4	1531.4	1523.5	1513.6	1504.8	1499.9	1493.0	1494.0	1494.0	1505.8	1509.7
30°	1459.5	1448.7	1441.8	1426.0	1419.2	1407.3	1405.4	1405.4	1403.4	1409.3	1427.0
32.5°	1375.9	1361.1	1350.3	1335.5	1323.7	1311.9	1306.0	1308.9	1307.9	1322.7	1328.6
35°	1284.3	1275.5	1252.8	1234.1	1227.2	1209.5	1209.5	1200.7	1206.6	1223.3	1230.2
37.5°	1187.9	1174.1	1155.4	1134.7	1129.8	1116.0	1111.1	1106.2	1119.0	1121.9	1128.8
40°	1089.5	1076.7	1059.0	1039.3	1039.3	1022.5	1022.5	1022.5	1023.5	1029.4	1042.2
42.5°	996.0	982.2	966.4	952.7	950.7	937.9	937.9	936.9	938.9	943.8	955.6
45°	905.4	894.6	877.9	871.0	872.0	858.2	861.1	858.2	862.1	867.0	871.0
47.5°	821.8	814.9	808.0	798.2	795.2	794.2	789.3	785.4	792.2	792.2	798.2
50°	744.0	740.1	736.2	730.2	731.2	727.3	721.4	721.4	726.3	727.3	731.2
52.5°	676.1	671.2	666.3	667.3	668.2	666.3	663.3	660.4	663.3	665.3	670.2
55°	608.2	604.3	609.2	607.2	609.2	607.2	605.3	603.3	608.2	605.3	610.2
57.5°	547.2	551.1	553.1	549.2	552.1	550.1	551.1	548.2	552.1	554.1	553.1
60°	491.1	497.0	494.0	495.0	499.0	497.0	493.1	496.0	500.0	500.9	500.0
62.5°	439.9	446.8	449.8	447.8	448.8	446.8	449.8	445.8	450.7	452.7	449.8
65°	393.7	401.5	403.5	403.5	403.5	401.5	404.5	405.5	407.4	407.4	405.5
67.5°	354.3	361.2	363.2	365.1	363.2	361.2	361.2	362.2	366.1	368.1	366.1
70°	318.9	325.8	326.7	326.7	327.7	329.7	325.8	327.7	330.7	331.7	330.7
72.5°	288.4	295.2	297.2	296.2	297.2	298.2	298.2	296.2	299.2	301.2	301.2
75°	263.8	267.7	269.7	269.7	270.6	271.6	271.6	270.6	272.6	273.6	274.6
77.5°	241.1	244.1	247.0	247.0	248.0	247.0	249.0	249.0	250.0	251.0	251.9
80°	218.5	222.4	224.4	225.4	227.3	228.3	228.3	228.3	229.3	230.3	230.3
82.5°	200.8	203.7	206.7	209.6	209.6	210.6	210.6	210.6	211.6	211.6	212.6
85°	183.1	187.0	189.9	191.9	192.9	193.9	193.9	194.9	194.9	194.9	195.8
87.5°	167.3	172.2	174.2	176.2	177.1	179.1	179.1	179.1	180.1	180.1	180.1
90°	156.5	161.4	163.4	165.3	166.3	167.3	167.3	168.3	168.3	169.3	169.3
92.5°	143.7	148.6	152.5	152.5	153.5	155.5	154.5	154.5	155.5	156.5	156.5
95°	133.8	137.8	140.7	141.7	142.7	142.7	142.7	143.7	142.7	143.7	143.7
97.5°	122.0	126.0	128.9	130.9	131.9	131.9	131.9	132.9	131.9	132.9	132.9
100°	112.2	116.1	119.1	120.1	122.0	122.0	122.0	122.0	122.0	122.0	123.0
102.5°	104.3	108.3	110.2	111.2	112.2	113.2	113.2	113.2	113.2	114.2	114.2
105°	96.4	100.4	102.4	103.3	104.3	105.3	105.3	105.3	106.3	106.3	105.3
107.5°	89.6	92.5	94.5	96.4	97.4	97.4	98.4	98.4	98.4	98.4	98.4
110°	82.7	85.6	88.6	90.5	90.5	91.5	91.5	92.5	92.5	91.5	92.5

TEST NUMBER: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	75.8	79.7	81.7	83.7	84.6	85.6	85.6	85.6	85.6	85.6	85.6
115°	69.9	73.8	75.8	77.7	78.7	79.7	79.7	79.7	79.7	79.7	79.7
117.5°	65.0	68.9	70.9	71.8	72.8	73.8	74.8	74.8	74.8	74.8	73.8
120°	60.0	63.0	65.0	66.9	67.9	68.9	68.9	68.9	68.9	68.9	68.9
122.5°	55.1	58.1	60.0	62.0	63.0	64.0	64.0	64.0	64.0	64.0	64.0
125°	50.2	53.1	55.1	57.1	58.1	59.0	59.0	59.0	59.0	59.0	59.0
127.5°	45.3	48.2	51.2	52.2	53.1	54.1	54.1	54.1	55.1	54.1	54.1
130°	40.4	43.3	46.3	47.2	48.2	49.2	50.2	50.2	50.2	50.2	49.2
132.5°	36.4	39.4	41.3	42.3	44.3	44.3	45.3	45.3	45.3	45.3	44.3
135°	33.5	35.4	37.4	38.4	40.4	40.4	40.4	41.3	41.3	40.4	39.4
137.5°	29.5	31.5	33.5	34.4	35.4	36.4	36.4	37.4	36.4	36.4	36.4
140°	27.6	28.5	30.5	31.5	32.5	32.5	32.5	33.5	33.5	32.5	32.5
142.5°	23.6	25.6	27.6	28.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
145°	19.7	22.6	23.6	25.6	25.6	26.6	26.6	26.6	26.6	26.6	25.6
147.5°	16.7	18.7	21.7	22.6	22.6	23.6	23.6	23.6	23.6	23.6	22.6
150°	12.8	14.8	17.7	19.7	19.7	20.7	20.7	20.7	20.7	19.7	19.7
152.5°	10.8	12.8	13.8	15.7	16.7	16.7	16.7	17.7	16.7	16.7	16.7
155°	9.8	10.8	11.8	12.8	13.8	14.8	14.8	14.8	14.8	13.8	13.8
157.5°	7.9	8.9	9.8	10.8	11.8	12.8	12.8	12.8	12.8	12.8	11.8
160°	5.9	6.9	7.9	7.9	8.9	9.8	10.8	9.8	9.8	9.8	9.8
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2
2.5°	1785.3	1784.3	1787.2	1782.3	1767.6	1771.5	1769.5	1778.4	1780.3	1782.3	1791.2
5°	1785.3	1784.3	1786.2	1782.3	1766.6	1769.5	1767.6	1776.4	1778.4	1779.4	1788.2
7.5°	1781.3	1780.3	1783.3	1778.4	1761.6	1765.6	1762.6	1771.5	1772.5	1773.5	1781.3
10°	1773.5	1772.5	1774.4	1770.5	1753.8	1757.7	1753.8	1762.6	1762.6	1764.6	1770.5
12.5°	1761.6	1759.7	1763.6	1758.7	1740.0	1744.9	1742.9	1748.9	1749.8	1750.8	1756.7
15°	1744.9	1742.9	1745.9	1742.9	1726.2	1727.2	1724.2	1733.1	1734.1	1732.1	1738.0
17.5°	1720.3	1718.3	1724.2	1722.3	1705.5	1709.5	1708.5	1710.5	1713.4	1708.5	1716.4
20°	1689.8	1691.8	1693.7	1694.7	1681.9	1681.9	1680.9	1684.9	1687.8	1683.9	1689.8
22.5°	1644.5	1649.5	1655.4	1657.3	1648.5	1647.5	1653.4	1651.4	1654.4	1652.4	1656.3
25°	1587.4	1597.3	1603.2	1609.1	1604.2	1606.1	1615.0	1617.0	1617.0	1616.0	1619.9
27.5°	1516.6	1529.4	1540.2	1553.0	1548.1	1552.0	1566.8	1568.8	1572.7	1568.8	1576.6
30°	1432.0	1443.8	1464.4	1483.1	1485.1	1491.0	1511.7	1513.6	1524.5	1520.5	1523.5
32.5°	1347.3	1353.2	1376.8	1395.5	1407.3	1422.1	1444.7	1448.7	1463.4	1466.4	1466.4
35°	1241.0	1257.8	1279.4	1306.0	1320.7	1336.5	1367.0	1372.9	1394.6	1401.4	1409.3
37.5°	1151.5	1167.2	1181.0	1208.5	1235.1	1252.8	1277.4	1292.2	1314.8	1327.6	1337.5
40°	1056.0	1068.8	1083.6	1111.1	1133.8	1160.3	1184.9	1202.6	1231.2	1245.9	1258.7
42.5°	965.5	975.3	991.0	1010.7	1034.4	1063.9	1087.5	1108.2	1138.7	1159.3	1174.1
45°	884.8	890.7	904.4	919.2	939.9	970.4	993.0	1019.6	1044.2	1065.8	1083.6
47.5°	809.0	816.9	823.7	833.6	852.3	871.0	897.6	923.1	947.7	971.4	989.1
50°	739.1	739.1	749.9	756.8	769.6	786.3	807.0	824.7	855.2	872.0	894.6
52.5°	671.2	675.1	681.0	685.0	694.8	705.6	722.4	737.1	762.7	778.5	800.1
55°	611.2	615.1	618.1	620.0	625.9	638.7	644.6	656.4	674.1	686.9	705.6
57.5°	554.1	556.1	559.0	560.0	561.0	568.8	573.8	576.7	594.4	607.2	623.0
60°	501.9	501.9	504.9	503.9	502.9	506.8	505.9	508.8	519.6	527.5	534.4
62.5°	452.7	452.7	453.7	451.7	450.7	450.7	446.8	449.8	452.7	453.7	458.6
65°	407.4	412.4	408.4	409.4	403.5	401.5	399.6	393.7	392.7	388.7	390.7
67.5°	367.1	371.0	367.1	367.1	362.2	358.2	353.3	343.5	340.5	332.6	330.7
70°	334.6	331.7	333.6	330.7	324.8	319.9	313.0	305.1	295.2	285.4	278.5
72.5°	303.1	303.1	301.2	298.2	295.2	285.4	277.5	268.7	256.9	244.1	234.2
75°	272.6	273.6	273.6	270.6	265.7	256.9	248.0	235.2	222.4	207.7	194.9
77.5°	251.0	251.0	251.0	246.0	241.1	233.2	222.4	208.6	194.9	177.1	162.4
80°	230.3	229.3	229.3	223.4	218.5	209.6	198.8	185.0	170.3	151.6	134.8
82.5°	213.6	212.6	210.6	205.7	198.8	189.9	179.1	164.4	148.6	131.9	111.2
85°	195.8	194.9	192.9	188.0	181.1	173.2	161.4	146.6	130.9	112.2	92.5
87.5°	180.1	179.1	176.2	173.2	165.3	156.5	144.7	130.9	114.2	96.4	76.8
90°	169.3	167.3	165.3	161.4	154.5	144.7	132.9	118.1	101.4	83.7	64.0
92.5°	156.5	155.5	152.5	148.6	142.7	132.9	121.1	107.3	90.5	73.8	55.1
95°	143.7	142.7	140.7	136.8	130.9	122.0	111.2	97.4	81.7	65.0	48.2
97.5°	131.9	131.9	128.9	126.0	119.1	112.2	101.4	88.6	73.8	59.0	43.3
100°	122.0	122.0	119.1	115.1	110.2	103.3	92.5	80.7	66.9	53.1	37.4
102.5°	113.2	112.2	110.2	106.3	101.4	94.5	84.6	73.8	61.0	47.2	33.5
105°	105.3	104.3	102.4	98.4	94.5	86.6	78.7	67.9	55.1	42.3	29.5
107.5°	97.4	96.4	95.5	91.5	86.6	79.7	71.8	61.0	50.2	38.4	26.6
110°	90.5	89.6	87.6	83.7	78.7	72.8	65.0	56.1	45.3	34.4	23.6

TEST NUMBER: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	84.6	83.7	81.7	77.7	73.8	66.9	60.0	50.2	41.3	31.5	20.7
115°	78.7	77.7	75.8	71.8	66.9	61.0	54.1	46.3	36.4	27.6	18.7
117.5°	72.8	71.8	69.9	66.9	62.0	56.1	49.2	41.3	32.5	25.6	16.7
120°	67.9	65.9	64.0	61.0	56.1	51.2	44.3	37.4	29.5	22.6	14.8
122.5°	63.0	61.0	59.0	56.1	51.2	46.3	39.4	33.5	27.6	20.7	13.8
125°	57.1	56.1	54.1	51.2	46.3	41.3	36.4	30.5	24.6	18.7	11.8
127.5°	52.2	51.2	49.2	45.3	41.3	37.4	32.5	27.6	21.7	15.7	10.8
130°	48.2	46.3	44.3	41.3	38.4	34.4	29.5	24.6	19.7	13.8	9.8
132.5°	43.3	41.3	39.4	37.4	34.4	30.5	26.6	21.7	17.7	12.8	8.9
135°	39.4	37.4	35.4	33.5	30.5	27.6	23.6	19.7	15.7	11.8	7.9
137.5°	34.4	33.5	32.5	30.5	27.6	24.6	21.7	16.7	13.8	10.8	6.9
140°	31.5	30.5	29.5	26.6	24.6	21.7	18.7	14.8	11.8	8.9	5.9
142.5°	28.5	27.6	25.6	23.6	21.7	19.7	15.7	13.8	10.8	7.9	5.9
145°	24.6	23.6	22.6	20.7	18.7	15.7	13.8	11.8	9.8	6.9	4.9
147.5°	22.6	21.7	19.7	17.7	15.7	13.8	12.8	10.8	7.9	5.9	3.9
150°	18.7	17.7	16.7	14.8	13.8	12.8	10.8	8.9	6.9	4.9	3.9
152.5°	15.7	14.8	13.8	13.8	11.8	10.8	8.9	7.9	5.9	4.9	3.0
155°	13.8	13.8	12.8	11.8	9.8	8.9	7.9	5.9	4.9	3.9	3.0
157.5°	11.8	10.8	9.8	9.8	8.9	7.9	5.9	4.9	3.9	3.9	3.0
160°	9.8	8.9	8.9	7.9	6.9	5.9	4.9	4.9	3.9	3.0	3.0
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: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2
2.5°	1792.2	1781.3	1791.2	1804.0	1804.0	1802.0	1800.0	1804.0	1813.8	1809.9	1798.1
5°	1789.2	1778.4	1787.2	1800.0	1800.0	1797.1	1795.1	1798.1	1808.9	1804.0	1793.1
7.5°	1783.3	1773.5	1779.4	1791.2	1791.2	1788.2	1786.2	1790.2	1799.0	1794.1	1782.3
10°	1772.5	1761.6	1768.5	1779.4	1778.4	1776.4	1773.5	1778.4	1786.2	1779.4	1765.6
12.5°	1758.7	1747.9	1753.8	1763.6	1762.6	1758.7	1756.7	1759.7	1766.6	1762.6	1747.9
15°	1740.0	1729.2	1734.1	1743.9	1741.0	1738.0	1734.1	1735.1	1743.9	1737.0	1721.3
17.5°	1717.4	1705.5	1709.5	1718.3	1715.4	1712.4	1707.5	1708.5	1718.3	1708.5	1691.8
20°	1689.8	1677.0	1680.0	1690.8	1685.9	1680.9	1676.0	1676.0	1685.9	1675.0	1656.3
22.5°	1660.3	1647.5	1649.5	1657.3	1653.4	1644.5	1639.6	1642.6	1647.5	1633.7	1614.0
25°	1623.9	1607.1	1610.1	1618.0	1615.0	1603.2	1598.3	1600.2	1598.3	1587.4	1566.8
27.5°	1581.5	1563.8	1565.8	1570.7	1566.8	1556.0	1550.1	1551.0	1547.1	1533.3	1509.7
30°	1528.4	1519.5	1518.6	1521.5	1515.6	1504.8	1497.9	1495.9	1494.9	1475.3	1446.7
32.5°	1474.3	1466.4	1461.5	1465.4	1458.5	1447.7	1435.9	1435.9	1426.0	1407.3	1382.7
35°	1419.2	1406.4	1401.4	1404.4	1396.5	1382.7	1372.9	1368.0	1353.2	1329.6	1303.0
37.5°	1348.3	1339.4	1333.5	1336.5	1327.6	1317.8	1299.1	1294.2	1278.4	1245.9	1212.5
40°	1271.5	1264.6	1258.7	1261.7	1251.9	1237.1	1220.4	1212.5	1194.8	1158.4	1131.8
42.5°	1188.9	1185.9	1179.0	1189.8	1170.2	1155.4	1138.7	1125.9	1108.2	1068.8	1038.3
45°	1101.3	1108.2	1092.4	1095.4	1082.6	1069.8	1052.1	1033.4	1015.7	978.3	943.8
47.5°	1008.8	1013.7	1002.9	1004.8	991.0	979.2	963.5	939.9	920.2	887.7	857.2
50°	913.3	911.3	911.3	909.4	898.5	883.8	868.0	846.4	826.7	797.2	771.6
52.5°	811.9	815.9	817.8	822.8	809.0	800.1	775.5	756.8	742.1	711.5	689.9
55°	714.5	728.3	724.3	726.3	710.6	703.7	684.0	669.2	647.6	629.9	616.1
57.5°	625.9	628.9	630.8	633.8	626.9	613.1	597.4	585.6	568.8	554.1	544.2
60°	540.3	540.3	541.3	546.2	539.3	527.5	515.7	506.8	495.0	486.2	480.3
62.5°	459.6	466.5	467.5	463.5	454.7	448.8	440.9	436.0	428.1	425.2	423.2
65°	384.8	384.8	384.8	386.8	381.9	377.9	373.0	372.0	375.0	371.0	373.0
67.5°	321.8	318.9	316.9	317.9	315.9	313.9	313.0	315.9	321.8	321.8	326.7
70°	267.7	261.8	257.8	257.8	257.8	258.8	261.8	267.7	277.5	281.5	288.4
72.5°	223.4	210.6	204.7	204.7	205.7	209.6	218.5	229.3	238.2	246.0	254.9
75°	181.1	168.3	159.4	158.4	160.4	166.3	179.1	189.0	203.7	214.5	225.4
77.5°	146.6	130.9	120.1	119.1	122.0	130.9	146.6	159.4	176.2	188.0	199.8
80°	117.1	99.4	90.5	84.6	89.6	100.4	118.1	133.8	149.6	165.3	180.1
82.5°	93.5	76.8	63.0	57.1	63.0	77.7	94.5	113.2	128.9	145.7	160.4
85°	73.8	56.1	40.4	34.4	41.3	57.1	75.8	94.5	112.2	128.9	143.7
87.5°	58.1	40.4	24.6	16.7	25.6	42.3	60.0	78.7	97.4	114.2	128.9
90°	45.3	28.5	13.8	2.0	14.8	30.5	48.2	65.9	84.6	101.4	116.1
92.5°	38.4	21.7	7.9	0.0	8.9	22.6	39.4	57.1	73.8	90.5	105.3
95°	32.5	17.7	5.9	0.0	5.9	17.7	32.5	48.2	65.0	81.7	96.4
97.5°	27.6	13.8	3.9	0.0	3.9	13.8	26.6	42.3	57.1	72.8	86.6
100°	23.6	11.8	3.0	0.0	3.0	10.8	22.6	36.4	51.2	65.9	78.7
102.5°	20.7	9.8	2.0	0.0	2.0	8.9	18.7	31.5	44.3	58.1	70.9
105°	17.7	7.9	2.0	0.0	1.0	6.9	15.7	27.6	39.4	52.2	64.0
107.5°	15.7	6.9	2.0	0.0	1.0	5.9	13.8	23.6	35.4	46.3	57.1
110°	13.8	5.9	2.0	0.0	1.0	3.9	11.8	20.7	30.5	41.3	52.2

TEST NUMBER: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	11.8	4.9	1.0	0.0	0.0	3.0	9.8	17.7	26.6	37.4	46.3
115°	10.8	4.9	1.0	0.0	0.0	2.0	7.9	15.7	23.6	33.5	41.3
117.5°	9.8	3.9	1.0	0.0	1.0	2.0	6.9	13.8	20.7	28.5	37.4
120°	8.9	3.9	1.0	0.0	1.0	1.0	4.9	11.8	17.7	25.6	32.5
122.5°	7.9	3.9	1.0	0.0	1.0	1.0	3.9	9.8	15.7	22.6	28.5
125°	6.9	3.0	2.0	1.0	1.0	1.0	3.0	7.9	13.8	18.7	25.6
127.5°	6.9	3.0	2.0	1.0	1.0	1.0	2.0	6.9	10.8	16.7	22.6
130°	5.9	3.0	2.0	1.0	1.0	1.0	1.0	4.9	9.8	13.8	18.7
132.5°	4.9	3.0	2.0	1.0	1.0	1.0	1.0	3.0	6.9	11.8	15.7
135°	4.9	3.0	2.0	1.0	1.0	1.0	1.0	2.0	4.9	8.9	12.8
137.5°	3.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	3.9	6.9	9.8
140°	3.9	2.0	2.0	1.0	1.0	1.0	1.0	1.0	3.0	4.9	7.9
142.5°	3.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0	3.9	5.9
145°	3.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.9
147.5°	3.0	3.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0
150°	3.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
152.5°	3.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
155°	3.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
157.5°	3.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
160°	3.0	2.0	2.0	1.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0
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: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2
2.5°	1794.1	1775.4	1785.3	1782.3	1786.2	1794.1	1793.1	1791.2	1791.2	1788.2	1784.3
5°	1788.2	1770.5	1779.4	1774.4	1779.4	1786.2	1785.3	1782.3	1784.3	1779.4	1774.4
7.5°	1776.4	1760.7	1768.5	1764.6	1768.5	1775.4	1772.5	1771.5	1773.5	1765.6	1762.6
10°	1762.6	1744.9	1753.8	1748.9	1753.8	1758.7	1756.7	1752.8	1756.7	1748.9	1745.9
12.5°	1741.0	1726.2	1732.1	1730.2	1733.1	1738.0	1734.1	1731.1	1733.1	1726.2	1720.3
15°	1717.4	1702.6	1707.5	1704.6	1706.5	1712.4	1705.5	1704.6	1702.6	1695.7	1693.7
17.5°	1686.8	1673.1	1678.0	1673.1	1676.0	1674.1	1673.1	1668.2	1668.2	1660.3	1654.4
20°	1649.5	1637.6	1634.7	1630.8	1634.7	1630.8	1624.8	1620.9	1619.9	1612.1	1607.1
22.5°	1606.1	1592.4	1594.3	1583.5	1584.5	1578.6	1568.8	1564.8	1560.9	1552.0	1545.1
25°	1554.0	1540.2	1530.4	1523.5	1514.6	1513.6	1500.8	1491.0	1490.0	1479.2	1478.2
27.5°	1494.9	1479.2	1471.3	1454.6	1443.8	1434.9	1424.1	1414.2	1409.3	1397.5	1389.6
30°	1427.0	1409.3	1389.6	1377.8	1361.1	1354.2	1335.5	1323.7	1319.8	1307.0	1301.1
32.5°	1350.3	1331.6	1315.8	1293.2	1274.5	1264.6	1245.9	1234.1	1229.2	1215.4	1207.6
35°	1266.6	1245.9	1227.2	1205.6	1190.8	1174.1	1151.5	1139.7	1128.8	1123.9	1118.0
37.5°	1179.0	1156.4	1134.7	1113.1	1100.3	1080.6	1060.9	1053.1	1040.3	1035.3	1029.4
40°	1088.5	1065.8	1045.2	1024.5	1009.7	992.0	974.3	971.4	957.6	952.7	948.7
42.5°	998.9	975.3	951.7	936.9	926.1	908.4	896.6	893.6	881.8	878.9	878.9
45°	918.2	888.7	869.0	856.2	847.4	832.6	822.8	820.8	810.9	809.0	809.0
47.5°	831.6	804.1	789.3	781.4	773.5	762.7	756.8	756.8	747.0	745.0	744.0
50°	750.9	725.3	714.5	706.6	705.6	697.8	692.8	690.9	690.9	684.0	685.0
52.5°	674.1	661.4	652.5	647.6	641.7	636.8	632.8	632.8	629.9	624.9	626.9
55°	603.3	588.5	589.5	585.6	582.6	579.7	580.7	574.7	573.8	569.8	572.8
57.5°	532.4	532.4	530.5	527.5	522.6	524.6	524.6	524.6	519.6	516.7	519.6
60°	472.4	475.3	470.4	473.4	471.4	472.4	470.4	470.4	467.5	466.5	467.5
62.5°	419.3	424.2	422.2	426.1	424.2	425.2	427.1	423.2	421.2	419.3	421.2
65°	372.0	377.9	376.9	379.9	380.9	381.9	382.8	380.9	378.9	376.9	375.9
67.5°	330.7	336.6	340.5	341.5	342.5	345.4	344.5	342.5	340.5	337.6	336.6
70°	293.3	301.2	306.1	308.0	312.0	310.0	310.0	309.0	307.1	304.1	303.1
72.5°	261.8	270.6	275.6	277.5	281.5	281.5	280.5	279.5	277.5	274.6	273.6
75°	234.2	242.1	249.0	252.9	255.9	255.9	254.9	253.9	251.9	250.0	249.0
77.5°	212.6	219.5	225.4	230.3	232.3	233.2	232.3	230.3	230.3	229.3	228.3
80°	190.9	198.8	204.7	209.6	212.6	212.6	211.6	212.6	210.6	209.6	208.6
82.5°	172.2	181.1	188.0	192.9	194.9	195.8	194.9	195.8	193.9	193.9	193.9
85°	155.5	164.4	172.2	176.2	179.1	180.1	180.1	180.1	179.1	179.1	179.1
87.5°	141.7	150.6	158.4	162.4	165.3	166.3	166.3	167.3	165.3	165.3	165.3
90°	128.9	137.8	145.7	149.6	152.5	154.5	154.5	155.5	154.5	153.5	153.5
92.5°	117.1	127.0	134.8	138.8	141.7	144.7	144.7	145.7	143.7	143.7	143.7
95°	107.3	117.1	124.0	128.9	131.9	133.8	134.8	134.8	133.8	133.8	133.8
97.5°	98.4	107.3	114.2	119.1	122.0	123.0	124.0	125.0	124.0	124.0	124.0
100°	89.6	98.4	105.3	109.2	113.2	114.2	115.1	116.1	116.1	115.1	115.1
102.5°	81.7	90.5	96.4	101.4	104.3	106.3	107.3	107.3	107.3	107.3	107.3
105°	73.8	82.7	88.6	93.5	96.4	98.4	99.4	100.4	100.4	99.4	99.4
107.5°	66.9	74.8	81.7	85.6	89.6	91.5	92.5	92.5	93.5	92.5	92.5
110°	60.0	68.9	74.8	78.7	82.7	84.6	85.6	86.6	86.6	86.6	86.6



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CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	55.1	62.0	67.9	71.8	75.8	77.7	78.7	79.7	80.7	79.7	79.7
115°	49.2	56.1	62.0	65.9	68.9	70.9	72.8	73.8	73.8	74.8	73.8
117.5°	44.3	50.2	56.1	60.0	63.0	65.9	66.9	67.9	68.9	67.9	67.9
120°	39.4	45.3	50.2	54.1	57.1	60.0	61.0	62.0	63.0	62.0	62.0
122.5°	35.4	40.4	45.3	49.2	52.2	54.1	56.1	56.1	57.1	57.1	57.1
125°	31.5	36.4	40.4	44.3	47.2	49.2	50.2	51.2	51.2	52.2	52.2
127.5°	27.6	31.5	36.4	39.4	42.3	44.3	45.3	46.3	46.3	47.2	47.2
130°	23.6	27.6	31.5	34.4	37.4	39.4	40.4	41.3	42.3	42.3	42.3
132.5°	20.7	24.6	27.6	30.5	32.5	34.4	36.4	37.4	37.4	37.4	37.4
135°	16.7	20.7	23.6	26.6	28.5	30.5	31.5	33.5	33.5	33.5	33.5
137.5°	13.8	17.7	20.7	22.6	24.6	26.6	27.6	28.5	29.5	29.5	29.5
140°	10.8	13.8	16.7	19.7	21.7	22.6	24.6	24.6	25.6	25.6	25.6
142.5°	7.9	10.8	12.8	15.7	17.7	19.7	20.7	21.7	21.7	21.7	21.7
145°	5.9	7.9	9.8	11.8	14.8	15.7	16.7	17.7	18.7	18.7	18.7
147.5°	3.9	5.9	6.9	8.9	10.8	12.8	13.8	14.8	15.7	15.7	15.7
150°	3.0	3.9	5.9	6.9	7.9	9.8	11.8	11.8	12.8	12.8	11.8
152.5°	2.0	3.0	3.9	4.9	5.9	6.9	8.9	8.9	9.8	9.8	9.8
155°	2.0	2.0	2.0	3.0	3.9	4.9	5.9	6.9	6.9	6.9	6.9
157.5°	2.0	2.0	2.0	2.0	2.0	3.0	3.9	4.9	4.9	4.9	4.9
160°	2.0	2.0	1.0	1.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0
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: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2
2.5°	1787.2	1789.2	1789.2	1787.2	1786.2	1790.2	1785.3	1766.6	1772.5	1774.4	1780.3
5°	1778.4	1780.3	1780.3	1780.3	1778.4	1782.3	1777.4	1758.7	1765.6	1768.5	1772.5
7.5°	1765.6	1766.6	1768.5	1767.6	1765.6	1771.5	1766.6	1747.9	1752.8	1757.7	1762.6
10°	1748.9	1748.9	1749.8	1751.8	1749.8	1754.8	1749.8	1733.1	1738.0	1741.0	1746.9
12.5°	1726.2	1728.2	1729.2	1728.2	1727.2	1731.1	1729.2	1713.4	1715.4	1721.3	1727.2
15°	1695.7	1695.7	1700.6	1698.7	1698.7	1702.6	1704.6	1686.8	1689.8	1698.7	1704.6
17.5°	1658.3	1659.3	1663.2	1665.2	1664.2	1671.1	1672.1	1658.3	1657.3	1668.2	1674.1
20°	1610.1	1612.1	1617.0	1620.9	1620.9	1628.8	1631.7	1622.9	1623.9	1635.7	1637.6
22.5°	1551.0	1551.0	1559.9	1565.8	1570.7	1575.6	1584.5	1576.6	1576.6	1592.4	1601.2
25°	1478.2	1485.1	1488.0	1499.9	1506.7	1520.5	1528.4	1529.4	1530.4	1545.1	1551.0
27.5°	1397.5	1399.5	1408.3	1422.1	1430.0	1442.8	1457.5	1460.5	1465.4	1485.1	1494.0
30°	1306.0	1311.9	1315.8	1335.5	1346.3	1363.1	1381.8	1388.6	1392.6	1419.2	1430.0
32.5°	1212.5	1214.5	1231.2	1242.0	1254.8	1272.5	1294.2	1307.0	1314.8	1342.4	1358.1
35°	1119.0	1122.9	1136.7	1150.5	1163.3	1181.0	1203.6	1221.3	1235.1	1259.7	1280.4
37.5°	1033.4	1043.2	1046.2	1059.9	1069.8	1087.5	1103.2	1128.8	1142.6	1168.2	1194.8
40°	956.6	959.6	961.5	975.3	982.2	998.9	1021.6	1038.3	1057.0	1075.7	1107.2
42.5°	880.8	882.8	885.7	893.6	901.5	913.3	930.0	946.8	966.4	994.0	1014.7
45°	810.9	812.9	814.9	819.8	826.7	837.5	848.3	860.2	879.8	903.5	925.1
47.5°	746.0	749.9	749.9	750.9	755.8	764.7	772.6	787.3	798.2	810.9	835.6
50°	684.0	686.9	687.9	687.9	690.9	696.8	698.8	708.6	718.4	730.2	748.0
52.5°	625.9	625.9	624.9	628.9	628.9	632.8	633.8	639.7	646.6	659.4	667.3
55°	570.8	570.8	573.8	571.8	571.8	573.8	572.8	573.8	579.7	587.5	594.4
57.5°	517.7	516.7	519.6	517.7	516.7	518.7	520.6	516.7	517.7	525.5	525.5
60°	464.5	465.5	468.5	466.5	466.5	466.5	464.5	462.6	460.6	465.5	467.5
62.5°	422.2	419.3	422.2	419.3	421.2	420.2	418.3	414.3	415.3	413.3	411.4
65°	377.9	377.9	378.9	375.9	377.9	377.9	375.0	374.0	368.1	366.1	361.2
67.5°	339.5	339.5	340.5	338.6	338.6	339.5	336.6	333.6	327.7	324.8	317.9
70°	306.1	306.1	306.1	305.1	305.1	305.1	303.1	299.2	293.3	288.4	279.5
72.5°	275.6	276.5	275.6	275.6	278.5	275.6	272.6	268.7	263.8	253.9	246.0
75°	251.0	251.9	251.0	251.0	251.0	250.0	249.0	243.1	237.2	229.3	217.5
77.5°	229.3	229.3	230.3	229.3	229.3	228.3	225.4	220.5	213.6	206.7	192.9
80°	208.6	209.6	210.6	211.6	209.6	208.6	205.7	201.8	192.9	185.0	171.2
82.5°	193.9	192.9	193.9	194.9	192.9	191.9	189.0	184.0	177.1	166.3	152.5
85°	179.1	178.1	178.1	179.1	178.1	176.2	173.2	168.3	161.4	150.6	136.8
87.5°	164.4	165.3	166.3	165.3	164.4	162.4	159.4	154.5	146.6	137.8	123.0
90°	153.5	153.5	153.5	153.5	152.5	150.6	147.6	141.7	134.8	124.0	111.2
92.5°	143.7	143.7	143.7	143.7	142.7	139.8	136.8	131.9	124.0	113.2	101.4
95°	133.8	134.8	133.8	133.8	131.9	130.9	126.0	121.1	114.2	103.3	90.5
97.5°	123.0	124.0	123.0	123.0	122.0	120.1	117.1	111.2	104.3	94.5	82.7
100°	115.1	115.1	114.2	114.2	113.2	111.2	107.3	102.4	95.5	85.6	73.8
102.5°	106.3	107.3	106.3	106.3	104.3	102.4	99.4	94.5	87.6	77.7	66.9
105°	99.4	99.4	98.4	98.4	96.4	94.5	91.5	85.6	79.7	70.9	60.0
107.5°	92.5	92.5	91.5	91.5	89.6	87.6	83.7	78.7	72.8	64.0	54.1
110°	85.6	85.6	85.6	84.6	82.7	79.7	76.8	71.8	65.9	58.1	48.2

TEST NUMBER: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	80.7	79.7	78.7	77.7	75.8	73.8	69.9	65.0	59.0	52.2	43.3
115°	73.8	73.8	72.8	71.8	69.9	66.9	64.0	60.0	54.1	46.3	38.4
117.5°	67.9	67.9	66.9	65.9	64.0	61.0	58.1	54.1	48.2	41.3	34.4
120°	62.0	62.0	61.0	60.0	58.1	55.1	53.1	48.2	43.3	36.4	30.5
122.5°	57.1	56.1	56.1	54.1	53.1	50.2	47.2	43.3	38.4	32.5	26.6
125°	51.2	51.2	50.2	49.2	48.2	45.3	42.3	38.4	33.5	28.5	23.6
127.5°	46.3	46.3	45.3	44.3	43.3	40.4	37.4	34.4	29.5	24.6	19.7
130°	41.3	41.3	40.4	39.4	38.4	35.4	33.5	29.5	25.6	21.7	16.7
132.5°	37.4	37.4	36.4	35.4	33.5	31.5	29.5	25.6	22.6	18.7	14.8
135°	33.5	32.5	32.5	31.5	29.5	27.6	25.6	22.6	18.7	15.7	11.8
137.5°	29.5	28.5	27.6	26.6	25.6	23.6	21.7	19.7	16.7	12.8	9.8
140°	25.6	24.6	24.6	23.6	21.7	20.7	18.7	15.7	13.8	10.8	7.9
142.5°	21.7	21.7	20.7	19.7	18.7	17.7	15.7	13.8	10.8	8.9	5.9
145°	18.7	17.7	17.7	16.7	15.7	13.8	12.8	10.8	8.9	6.9	4.9
147.5°	14.8	14.8	14.8	13.8	12.8	11.8	10.8	8.9	6.9	4.9	3.0
150°	11.8	11.8	11.8	10.8	9.8	8.9	7.9	6.9	4.9	3.0	2.0
152.5°	9.8	9.8	8.9	8.9	7.9	6.9	5.9	4.9	3.0	2.0	2.0
155°	6.9	6.9	6.9	5.9	5.9	4.9	3.9	3.0	2.0	2.0	2.0
157.5°	4.9	4.9	4.9	3.9	3.9	3.0	3.0	2.0	2.0	2.0	2.0
160°	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2	1789.2
2.5°	1777.4	1776.4	1784.3	1784.3	1775.4	1789.2	1804.0
5°	1771.5	1770.5	1778.4	1778.4	1770.5	1784.3	1800.0
7.5°	1759.7	1760.7	1768.5	1770.5	1760.7	1773.5	1790.2
10°	1746.9	1745.9	1754.8	1756.7	1748.9	1760.7	1776.4
12.5°	1726.2	1726.2	1735.1	1738.0	1730.2	1743.9	1758.7
15°	1704.6	1704.6	1710.5	1715.4	1708.5	1721.3	1736.1
17.5°	1677.0	1676.0	1681.9	1687.8	1680.9	1694.7	1710.5
20°	1641.6	1641.6	1648.5	1655.4	1650.4	1663.2	1680.9
22.5°	1604.2	1600.2	1612.1	1617.0	1614.0	1626.8	1644.5
25°	1556.9	1556.0	1567.8	1574.7	1570.7	1584.5	1600.2
27.5°	1505.8	1504.8	1516.6	1525.4	1523.5	1536.3	1554.0
30°	1443.8	1448.7	1459.5	1474.3	1469.4	1483.1	1501.8
32.5°	1378.8	1383.7	1396.5	1412.3	1413.3	1424.1	1442.8
35°	1301.1	1313.9	1322.7	1343.4	1347.3	1358.1	1377.8
37.5°	1219.4	1234.1	1252.8	1268.6	1276.5	1285.3	1307.9
40°	1127.8	1149.5	1170.2	1188.9	1198.7	1207.6	1229.2
42.5°	1045.2	1061.9	1081.6	1100.3	1118.0	1125.9	1148.5
45°	951.7	971.4	989.1	1011.7	1029.4	1038.3	1060.9
47.5°	860.2	879.8	903.5	919.2	937.9	946.8	968.4
50°	772.6	790.3	810.0	828.7	844.4	852.3	871.0
52.5°	686.0	704.7	723.4	735.2	751.9	757.8	773.5
55°	609.2	622.0	638.7	645.6	662.3	666.3	677.1
57.5°	535.4	544.2	550.1	562.0	573.8	582.6	595.4
60°	468.5	472.4	476.3	483.2	493.1	496.0	500.9
62.5°	408.4	407.4	415.3	417.3	418.3	428.1	423.2
65°	355.3	356.3	349.4	346.4	350.4	353.3	351.3
67.5°	311.0	305.1	299.2	292.3	286.4	289.3	286.4
70°	267.7	262.8	252.9	243.1	239.2	233.2	230.3
72.5°	233.2	221.4	211.6	198.8	191.9	185.0	180.1
75°	206.7	189.9	176.2	162.4	152.5	142.7	140.7
77.5°	179.1	163.4	147.6	132.9	118.1	107.3	103.3
80°	157.5	142.7	124.0	106.3	90.5	76.8	71.8
82.5°	137.8	122.0	103.3	84.6	66.9	52.2	46.3
85°	121.1	104.3	85.6	66.9	49.2	33.5	25.6
87.5°	108.3	89.6	70.9	53.1	34.4	18.7	9.8
90°	96.4	78.7	61.0	42.3	24.6	9.8	0.0
92.5°	85.6	68.9	51.2	34.4	18.7	5.9	1.0
95°	75.8	61.0	43.3	27.6	13.8	3.9	1.0
97.5°	67.9	53.1	37.4	22.6	10.8	3.0	1.0
100°	61.0	46.3	32.5	18.7	8.9	2.0	1.0
102.5°	54.1	41.3	27.6	15.7	6.9	1.0	1.0
105°	48.2	36.4	23.6	13.8	5.9	1.0	1.0
107.5°	43.3	32.5	20.7	11.8	3.9	1.0	1.0
110°	38.4	27.6	17.7	9.8	3.0	1.0	1.0



TEST NUMBER: P1213135

CATALOG NUMBER: 4SNLED-LD5-60HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	34.4	24.6	15.7	7.9	2.0	1.0	1.0
115°	30.5	21.7	13.8	6.9	2.0	1.0	1.0
117.5°	26.6	18.7	11.8	4.9	1.0	1.0	1.0
120°	23.6	16.7	9.8	3.9	1.0	1.0	1.0
122.5°	20.7	13.8	7.9	3.0	1.0	1.0	1.0
125°	17.7	11.8	6.9	2.0	1.0	1.0	1.0
127.5°	14.8	9.8	4.9	2.0	1.0	1.0	1.0
130°	12.8	7.9	3.9	1.0	1.0	1.0	1.0
132.5°	10.8	5.9	3.0	1.0	1.0	1.0	1.0
135°	8.9	4.9	2.0	1.0	1.0	1.0	1.0
137.5°	6.9	3.9	2.0	1.0	1.0	1.0	1.0
140°	4.9	3.0	1.0	1.0	1.0	1.0	1.0
142.5°	3.9	2.0	1.0	1.0	1.0	1.0	1.0
145°	3.0	2.0	1.0	1.0	1.0	1.0	1.0
147.5°	2.0	2.0	2.0	2.0	1.0	1.0	1.0
150°	2.0	2.0	1.0	1.0	2.0	1.0	1.0
152.5°	2.0	1.0	1.0	1.0	2.0	1.0	1.0
155°	2.0	2.0	2.0	2.0	2.0	2.0	1.0
157.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0
160°	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)