

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: P1213192

Luminaire Tested: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213192
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-LD5-90HL-LN-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

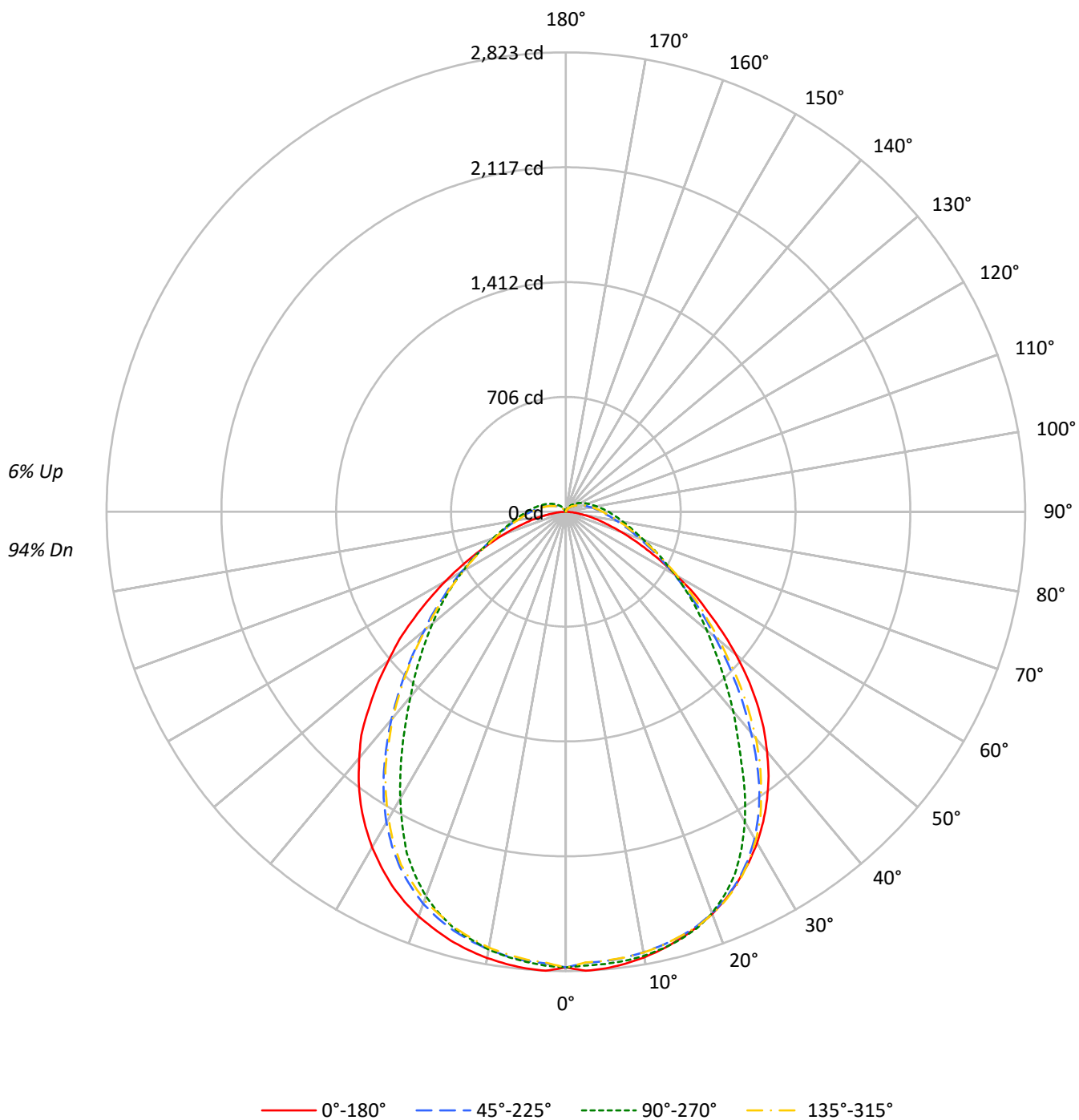
Lumens per Lamp: N/A
Luminaire Lumens: 7086.0 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	22627	22627	22627	22627
5°	22788	21906	22788	21810
10°	22687	21324	22724	21028
15°	22540	20687	22642	20149
20°	22368	19867	22499	19028
25°	22009	18653	22252	17554
30°	21542	16867	21825	15615
35°	20816	14678	21217	13668
40°	19774	12837	20297	11911
45°	18399	11159	18997	10519
50°	16520	9806	17249	9311
55°	14291	8659	15329	8222
60°	12019	7602	13106	7165
65°	9853	6722	10847	6232
70°	7842	5966	8780	5518
75°	6157	5507	6934	5068
80°	4443	5314	5238	4856
85°	2733	5343	3682	4912

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 18997 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.5	3.7
10°-20°	761.2	10.7
20°-30°	1128.1	15.9
30°-40°	1253.3	17.7
40°-50°	1136.1	16.0
50°-60°	880.3	12.4
60°-70°	597.8	8.4
70°-80°	380.3	5.4
80°-90°	243.1	3.4
90°-100°	163.9	2.3
100°-110°	112.3	1.6
110°-120°	74.9	1.1
120°-130°	46.6	0.7
130°-140°	25.8	0.4
140°-150°	12.1	0.2
150°-160°	4.4	0.1
160°-170°	0.3	0.0
170°-180°	0.0	0.0
0°-30°	2154.7	30.4
0°-40°	3408.0	48.1
0°-60°	5424.4	76.6
0°-90°	6645.7	93.8
90°-120°	351.1	5.0
90°-150°	435.6	6.1
90°-180°	440.0	6.2
0°-180°	7086.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2800	2800	2800	2800	2800	
5°	2817	2789	2817	2777	2817	268
15°	2717	2721	2729	2651	2717	767
25°	2504	2458	2532	2313	2504	1153
35°	2156	1879	2198	1750	2156	1345
45°	1660	1343	1714	1266	1660	1275
55°	1060	944	1137	896	1060	954
65°	550	634	605	588	550	551
75°	220	424	248	390	220	237
85°	40	305	54	280	40	48
90°	0	263	3	240	0	2
95°	2	225	0	210	2	1
105°	2	165	0	156	2	2
115°	2	125	0	116	2	1
125°	2	92	2	82	2	1
135°	2	65	2	52	2	1
145°	2	42	2	29	2	1
155°	2	23	2	11	2	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2823.1	2820.0	2816.9	2812.3	2816.9	2829.2	2821.5	2804.6	2801.5	2773.8	2786.1
5°	2816.9	2812.3	2809.2	2804.6	2810.8	2826.2	2818.5	2803.1	2798.4	2772.3	2786.1
7.5°	2801.5	2798.4	2793.8	2793.8	2800.0	2815.4	2809.2	2792.3	2789.2	2763.0	2778.4
10°	2780.0	2778.4	2775.3	2775.3	2781.5	2800.0	2792.3	2776.9	2773.8	2749.2	2766.1
12.5°	2752.2	2753.8	2749.2	2749.2	2758.4	2776.9	2770.7	2753.8	2750.7	2729.1	2746.1
15°	2716.8	2718.3	2715.3	2716.8	2726.0	2747.6	2739.9	2724.5	2721.4	2704.5	2718.3
17.5°	2676.8	2678.3	2678.3	2676.8	2687.5	2709.1	2702.9	2689.1	2684.5	2670.6	2687.5
20°	2630.6	2630.6	2630.6	2630.6	2642.9	2664.4	2656.7	2646.0	2636.7	2625.9	2639.8
22.5°	2573.6	2572.0	2573.6	2578.2	2590.5	2607.5	2602.8	2590.5	2576.7	2570.5	2581.3
25°	2504.3	2508.9	2510.4	2515.0	2530.5	2544.3	2539.7	2527.4	2505.8	2501.2	2504.3
27.5°	2431.9	2435.0	2439.6	2438.0	2459.6	2473.5	2464.2	2453.4	2422.6	2418.0	2414.9
30°	2350.3	2354.9	2358.0	2356.4	2373.4	2388.8	2379.5	2365.7	2324.1	2321.0	2296.3
32.5°	2257.8	2262.5	2265.5	2265.5	2290.2	2296.3	2279.4	2259.4	2214.7	2203.9	2182.4
35°	2156.2	2160.8	2162.4	2162.4	2187.0	2185.5	2163.9	2136.2	2086.9	2073.0	2036.1
37.5°	2046.8	2049.9	2051.5	2060.7	2071.5	2062.2	2034.5	1999.1	1962.1	1923.6	1883.6
40°	1923.6	1928.3	1931.3	1937.5	1948.3	1937.5	1897.5	1854.3	1814.3	1771.2	1731.1
42.5°	1797.3	1811.2	1808.1	1806.6	1812.7	1783.5	1752.7	1703.4	1663.4	1618.7	1578.6
45°	1660.3	1658.7	1666.4	1669.5	1668.0	1643.3	1600.2	1555.5	1515.5	1469.3	1435.4
47.5°	1515.5	1514.0	1520.1	1523.2	1514.0	1487.8	1453.9	1403.1	1369.2	1329.1	1303.0
50°	1363.0	1363.0	1372.3	1363.0	1358.4	1332.2	1304.5	1253.7	1227.5	1192.1	1176.7
52.5°	1210.6	1224.4	1215.2	1212.1	1207.5	1181.3	1159.7	1118.1	1096.6	1081.2	1062.7
55°	1059.6	1075.0	1068.9	1064.2	1062.7	1041.1	1021.1	990.3	976.4	965.7	954.9
57.5°	931.8	930.2	927.2	922.5	924.1	907.1	887.1	870.2	864.0	859.4	862.5
60°	783.9	796.3	791.6	793.2	794.7	791.6	774.7	763.9	765.4	767.0	771.6
62.5°	662.3	673.0	680.7	674.6	677.7	682.3	673.0	670.0	676.1	682.3	688.4
65°	549.8	560.6	568.3	566.8	576.0	585.3	583.7	586.8	600.7	608.4	616.1
67.5°	448.2	459.0	469.7	471.3	485.1	499.0	505.2	515.9	531.3	542.1	551.4
70°	360.4	369.6	382.0	389.7	408.1	426.6	437.4	459.0	468.2	483.6	489.8
72.5°	281.8	289.5	306.5	325.0	340.4	363.5	385.0	403.5	417.4	434.3	442.0
75°	220.2	223.3	241.8	263.4	284.9	311.1	334.2	354.2	372.7	389.7	402.0
77.5°	161.7	166.3	183.3	212.5	237.2	264.9	291.1	312.6	332.7	349.6	366.6
80°	112.4	121.7	140.2	169.4	197.1	227.9	252.6	277.2	298.8	315.7	332.7
82.5°	72.4	80.1	106.3	135.5	164.8	195.6	221.8	246.4	269.5	288.0	303.4
85°	40.0	50.8	77.0	107.8	137.1	167.9	195.6	220.2	243.3	260.3	275.7
87.5°	15.4	30.8	55.4	84.7	114.0	143.2	172.5	195.6	218.7	237.2	251.0
90°	0.0	18.5	41.6	70.8	100.1	129.4	157.1	181.7	203.3	220.2	235.6
92.5°	1.5	12.3	32.3	57.0	84.7	112.4	138.6	163.3	184.8	201.8	215.6
95°	1.5	9.2	26.2	49.3	73.9	100.1	124.8	147.9	167.9	184.8	198.7
97.5°	1.5	6.2	21.6	43.1	64.7	90.9	114.0	135.5	154.0	171.0	181.7
100°	1.5	6.2	18.5	37.0	58.5	81.6	103.2	124.8	141.7	155.6	167.9
102.5°	1.5	4.6	15.4	32.3	52.4	72.4	93.9	114.0	129.4	143.2	155.6
105°	1.5	4.6	13.9	27.7	46.2	66.2	84.7	103.2	120.1	132.5	143.2
107.5°	1.5	3.1	12.3	23.1	40.0	60.1	78.5	93.9	109.3	121.7	132.5
110°	1.5	3.1	10.8	21.6	35.4	53.9	70.8	86.2	100.1	112.4	121.7

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.5	3.1	9.2	20.0	32.3	47.7	64.7	78.5	92.4	103.2	112.4
115°	1.5	3.1	9.2	18.5	29.3	41.6	57.0	72.4	83.2	95.5	103.2
117.5°	1.5	3.1	7.7	15.4	27.7	38.5	52.4	64.7	77.0	87.8	95.5
120°	1.5	3.1	7.7	13.9	24.6	35.4	46.2	58.5	70.8	78.5	86.2
122.5°	1.5	3.1	6.2	13.9	21.6	32.3	41.6	52.4	63.1	72.4	80.1
125°	1.5	3.1	6.2	12.3	20.0	29.3	38.5	46.2	57.0	64.7	72.4
127.5°	1.5	3.1	6.2	10.8	18.5	26.2	35.4	43.1	50.8	58.5	64.7
130°	1.5	3.1	4.6	9.2	16.9	23.1	30.8	40.0	46.2	52.4	58.5
132.5°	1.5	3.1	4.6	9.2	13.9	20.0	27.7	35.4	41.6	47.7	52.4
135°	1.5	3.1	4.6	7.7	12.3	18.5	23.1	30.8	37.0	43.1	47.7
137.5°	1.5	3.1	4.6	7.7	10.8	15.4	20.0	26.2	32.3	37.0	43.1
140°	1.5	3.1	4.6	6.2	9.2	13.9	18.5	21.6	27.7	32.3	37.0
142.5°	1.5	3.1	4.6	6.2	9.2	12.3	15.4	18.5	23.1	27.7	32.3
145°	1.5	3.1	4.6	6.2	7.7	10.8	13.9	16.9	18.5	23.1	26.2
147.5°	1.5	3.1	4.6	6.2	6.2	9.2	12.3	13.9	16.9	18.5	21.6
150°	1.5	3.1	4.6	4.6	6.2	7.7	10.8	12.3	13.9	16.9	18.5
152.5°	1.5	3.1	4.6	4.6	6.2	7.7	9.2	10.8	12.3	13.9	15.4
155°	1.5	3.1	4.6	4.6	4.6	6.2	7.7	9.2	10.8	12.3	13.9
157.5°	3.1	3.1	3.1	4.6	4.6	6.2	6.2	7.7	9.2	9.2	10.8
160°	3.1	3.1	3.1	4.6	4.6	4.6	6.2	6.2	7.7	7.7	9.2
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°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2783.0	2787.7	2801.5	2801.5	2798.4	2795.4	2795.4	2790.7	2793.8	2800.0	2796.9
5°	2783.0	2787.7	2801.5	2801.5	2798.4	2795.4	2793.8	2789.2	2793.8	2800.0	2796.9
7.5°	2773.8	2780.0	2793.8	2793.8	2790.7	2789.2	2786.1	2783.0	2787.7	2793.8	2790.7
10°	2761.5	2767.6	2781.5	2781.5	2778.4	2778.4	2773.8	2770.7	2776.9	2781.5	2780.0
12.5°	2743.0	2750.7	2763.0	2761.5	2758.4	2759.9	2755.3	2749.2	2755.3	2759.9	2761.5
15°	2716.8	2726.0	2738.4	2735.3	2730.7	2733.7	2726.0	2721.4	2726.0	2735.3	2733.7
17.5°	2682.9	2689.1	2698.3	2698.3	2693.7	2690.6	2687.5	2682.9	2686.0	2692.2	2693.7
20°	2635.2	2642.9	2647.5	2642.9	2641.3	2636.7	2630.6	2625.9	2632.1	2641.3	2642.9
22.5°	2572.0	2573.6	2584.4	2573.6	2565.9	2564.3	2558.2	2548.9	2558.2	2565.9	2567.4
25°	2493.5	2501.2	2496.6	2478.1	2478.1	2465.8	2462.7	2458.1	2459.6	2473.5	2479.6
27.5°	2393.4	2396.5	2384.1	2368.7	2354.9	2347.2	2336.4	2337.9	2337.9	2356.4	2362.6
30°	2284.0	2267.1	2256.3	2231.7	2220.9	2202.4	2199.3	2199.3	2196.2	2205.5	2233.2
32.5°	2153.1	2130.0	2113.1	2090.0	2071.5	2053.0	2043.8	2048.4	2046.8	2069.9	2079.2
35°	2009.9	1996.0	1960.6	1931.3	1920.6	1892.8	1892.8	1879.0	1888.2	1914.4	1925.2
37.5°	1858.9	1837.4	1808.1	1775.8	1768.1	1746.5	1738.8	1731.1	1751.1	1755.8	1766.5
40°	1704.9	1684.9	1657.2	1626.4	1626.4	1600.2	1600.2	1600.2	1601.7	1611.0	1631.0
42.5°	1558.6	1537.1	1512.4	1490.9	1487.8	1467.8	1467.8	1466.2	1469.3	1477.0	1495.5
45°	1416.9	1400.0	1373.8	1363.0	1364.6	1343.0	1347.6	1343.0	1349.2	1356.9	1363.0
47.5°	1286.0	1275.2	1264.5	1249.1	1244.4	1242.9	1235.2	1229.0	1239.8	1239.8	1249.1
50°	1164.3	1158.2	1152.0	1142.8	1144.3	1138.2	1128.9	1128.9	1136.6	1138.2	1144.3
52.5°	1058.1	1050.4	1042.7	1044.2	1045.8	1042.7	1038.1	1033.4	1038.1	1041.1	1048.8
55°	951.8	945.6	953.3	950.3	953.3	950.3	947.2	944.1	951.8	947.2	954.9
57.5°	856.3	862.5	865.6	859.4	864.0	860.9	862.5	857.9	864.0	867.1	865.6
60°	768.5	777.8	773.2	774.7	780.9	777.8	771.6	776.2	782.4	783.9	782.4
62.5°	688.4	699.2	703.8	700.8	702.3	699.2	703.8	697.7	705.4	708.5	703.8
65°	616.1	628.4	631.5	631.5	631.5	628.4	633.0	634.5	637.6	637.6	634.5
67.5°	554.5	565.2	568.3	571.4	568.3	565.2	565.2	566.8	572.9	576.0	572.9
70°	499.0	509.8	511.3	511.3	512.9	515.9	509.8	512.9	517.5	519.0	517.5
72.5°	451.3	462.0	465.1	463.6	465.1	466.7	466.7	463.6	468.2	471.3	471.3
75°	412.8	418.9	422.0	422.0	423.5	425.1	425.1	423.5	426.6	428.2	429.7
77.5°	377.3	382.0	386.6	386.6	388.1	386.6	389.7	389.7	391.2	392.7	394.3
80°	341.9	348.1	351.2	352.7	355.8	357.3	357.3	357.3	358.9	360.4	360.4
82.5°	314.2	318.8	323.4	328.0	328.0	329.6	329.6	329.6	331.1	331.1	332.7
85°	286.5	292.6	297.2	300.3	301.9	303.4	303.4	304.9	304.9	304.9	306.5
87.5°	261.8	269.5	272.6	275.7	277.2	280.3	280.3	280.3	281.8	281.8	281.8
90°	244.9	252.6	255.7	258.7	260.3	261.8	261.8	263.4	263.4	264.9	264.9
92.5°	224.9	232.6	238.7	238.7	240.3	243.3	241.8	241.8	243.3	244.9	244.9
95°	209.5	215.6	220.2	221.8	223.3	223.3	223.3	224.9	223.3	224.9	224.9
97.5°	191.0	197.1	201.8	204.8	206.4	206.4	206.4	207.9	206.4	207.9	207.9
100°	175.6	181.7	186.4	187.9	191.0	191.0	191.0	191.0	191.0	191.0	192.5
102.5°	163.3	169.4	172.5	174.0	175.6	177.1	177.1	177.1	177.1	178.7	178.7
105°	150.9	157.1	160.2	161.7	163.3	164.8	164.8	164.8	166.3	166.3	164.8
107.5°	140.2	144.8	147.9	150.9	152.5	152.5	154.0	154.0	154.0	154.0	154.0
110°	129.4	134.0	138.6	141.7	141.7	143.2	143.2	144.8	144.8	143.2	144.8

TEST NUMBER: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	118.6	124.8	127.8	130.9	132.5	134.0	134.0	134.0	134.0	134.0	134.0
115°	109.3	115.5	118.6	121.7	123.2	124.8	124.8	124.8	124.8	124.8	124.8
117.5°	101.6	107.8	110.9	112.4	114.0	115.5	117.1	117.1	117.1	117.1	115.5
120°	93.9	98.6	101.6	104.7	106.3	107.8	107.8	107.8	107.8	107.8	107.8
122.5°	86.2	90.9	93.9	97.0	98.6	100.1	100.1	100.1	100.1	100.1	100.1
125°	78.5	83.2	86.2	89.3	90.9	92.4	92.4	92.4	92.4	92.4	92.4
127.5°	70.8	75.5	80.1	81.6	83.2	84.7	84.7	84.7	86.2	84.7	84.7
130°	63.1	67.8	72.4	73.9	75.5	77.0	78.5	78.5	78.5	78.5	77.0
132.5°	57.0	61.6	64.7	66.2	69.3	69.3	70.8	70.8	70.8	70.8	69.3
135°	52.4	55.4	58.5	60.1	63.1	63.1	63.1	64.7	64.7	63.1	61.6
137.5°	46.2	49.3	52.4	53.9	55.4	57.0	57.0	58.5	57.0	57.0	57.0
140°	43.1	44.7	47.7	49.3	50.8	50.8	50.8	52.4	52.4	50.8	50.8
142.5°	37.0	40.0	43.1	44.7	46.2	46.2	46.2	46.2	46.2	46.2	46.2
145°	30.8	35.4	37.0	40.0	40.0	41.6	41.6	41.6	41.6	41.6	40.0
147.5°	26.2	29.3	33.9	35.4	35.4	37.0	37.0	37.0	37.0	37.0	35.4
150°	20.0	23.1	27.7	30.8	30.8	32.3	32.3	32.3	32.3	30.8	30.8
152.5°	16.9	20.0	21.6	24.6	26.2	26.2	26.2	27.7	26.2	26.2	26.2
155°	15.4	16.9	18.5	20.0	21.6	23.1	23.1	23.1	23.1	21.6	21.6
157.5°	12.3	13.9	15.4	16.9	18.5	20.0	20.0	20.0	20.0	20.0	18.5
160°	9.2	10.8	12.3	12.3	13.9	15.4	16.9	15.4	15.4	15.4	15.4
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: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2793.8	2792.3	2796.9	2789.2	2766.1	2772.3	2769.2	2783.0	2786.1	2789.2	2803.1
5°	2793.8	2792.3	2795.4	2789.2	2764.6	2769.2	2766.1	2780.0	2783.0	2784.6	2798.4
7.5°	2787.7	2786.1	2790.7	2783.0	2756.9	2763.0	2758.4	2772.3	2773.8	2775.3	2787.7
10°	2775.3	2773.8	2776.9	2770.7	2744.5	2750.7	2744.5	2758.4	2758.4	2761.5	2770.7
12.5°	2756.9	2753.8	2759.9	2752.2	2723.0	2730.7	2727.6	2736.8	2738.4	2739.9	2749.2
15°	2730.7	2727.6	2732.2	2727.6	2701.4	2702.9	2698.3	2712.2	2713.7	2710.6	2719.9
17.5°	2692.2	2689.1	2698.3	2695.2	2669.1	2675.2	2673.7	2676.8	2681.4	2673.7	2686.0
20°	2644.4	2647.5	2650.6	2652.1	2632.1	2632.1	2630.6	2636.7	2641.3	2635.2	2644.4
22.5°	2573.6	2581.3	2590.5	2593.6	2579.7	2578.2	2587.4	2584.4	2589.0	2585.9	2592.1
25°	2484.2	2499.6	2508.9	2518.1	2510.4	2513.5	2527.4	2530.5	2530.5	2528.9	2535.1
27.5°	2373.4	2393.4	2410.3	2430.3	2422.6	2428.8	2451.9	2455.0	2461.1	2455.0	2467.3
30°	2240.9	2259.4	2291.7	2321.0	2324.1	2333.3	2365.7	2368.7	2385.7	2379.5	2384.1
32.5°	2108.5	2117.7	2154.7	2183.9	2202.4	2225.5	2260.9	2267.1	2290.2	2294.8	2294.8
35°	1942.1	1968.3	2002.2	2043.8	2066.9	2091.5	2139.3	2148.5	2182.4	2193.2	2205.5
37.5°	1802.0	1826.6	1848.2	1891.3	1932.9	1960.6	1999.1	2022.2	2057.6	2077.6	2093.1
40°	1652.6	1672.6	1695.7	1738.8	1774.2	1815.8	1854.3	1882.1	1926.7	1949.8	1969.8
42.5°	1510.9	1526.3	1550.9	1581.7	1618.7	1664.9	1701.9	1734.2	1781.9	1814.3	1837.4
45°	1384.6	1393.8	1415.4	1438.5	1470.8	1518.6	1554.0	1595.6	1634.1	1668.0	1695.7
47.5°	1266.0	1278.3	1289.1	1304.5	1333.8	1363.0	1404.6	1444.7	1483.2	1520.1	1547.8
50°	1156.6	1156.6	1173.6	1184.4	1204.4	1230.6	1262.9	1290.6	1338.4	1364.6	1400.0
52.5°	1050.4	1056.5	1065.8	1071.9	1087.3	1104.3	1130.5	1153.6	1193.6	1218.3	1252.1
55°	956.4	962.6	967.2	970.3	979.5	999.6	1008.8	1027.3	1055.0	1075.0	1104.3
57.5°	867.1	870.2	874.8	876.3	877.9	890.2	897.9	902.5	930.2	950.3	974.9
60°	785.5	785.5	790.1	788.6	787.0	793.2	791.6	796.3	813.2	825.5	836.3
62.5°	708.5	708.5	710.0	706.9	705.4	705.4	699.2	703.8	708.5	710.0	717.7
65°	637.6	645.3	639.2	640.7	631.5	628.4	625.3	616.1	614.5	608.4	611.4
67.5°	574.5	580.6	574.5	574.5	566.8	560.6	552.9	537.5	532.9	520.6	517.5
70°	523.6	519.0	522.1	517.5	508.2	500.5	489.8	477.4	462.0	446.6	435.9
72.5°	474.4	474.4	471.3	466.7	462.0	446.6	434.3	420.5	402.0	382.0	366.6
75°	426.6	428.2	428.2	423.5	415.8	402.0	388.1	368.1	348.1	325.0	304.9
77.5°	392.7	392.7	392.7	385.0	377.3	365.0	348.1	326.5	304.9	277.2	254.1
80°	360.4	358.9	358.9	349.6	341.9	328.0	311.1	289.5	266.4	237.2	211.0
82.5°	334.2	332.7	329.6	321.9	311.1	297.2	280.3	257.2	232.6	206.4	174.0
85°	306.5	304.9	301.9	294.2	283.4	271.1	252.6	229.5	204.8	175.6	144.8
87.5°	281.8	280.3	275.7	271.1	258.7	244.9	226.4	204.8	178.7	150.9	120.1
90°	264.9	261.8	258.7	252.6	241.8	226.4	207.9	184.8	158.6	130.9	100.1
92.5°	244.9	243.3	238.7	232.6	223.3	207.9	189.4	167.9	141.7	115.5	86.2
95°	224.9	223.3	220.2	214.1	204.8	191.0	174.0	152.5	127.8	101.6	75.5
97.5°	206.4	206.4	201.8	197.1	186.4	175.6	158.6	138.6	115.5	92.4	67.8
100°	191.0	191.0	186.4	180.2	172.5	161.7	144.8	126.3	104.7	83.2	58.5
102.5°	177.1	175.6	172.5	166.3	158.6	147.9	132.5	115.5	95.5	73.9	52.4
105°	164.8	163.3	160.2	154.0	147.9	135.5	123.2	106.3	86.2	66.2	46.2
107.5°	152.5	150.9	149.4	143.2	135.5	124.8	112.4	95.5	78.5	60.1	41.6
110°	141.7	140.2	137.1	130.9	123.2	114.0	101.6	87.8	70.8	53.9	37.0

TEST NUMBER: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	132.5	130.9	127.8	121.7	115.5	104.7	93.9	78.5	64.7	49.3	32.3
115°	123.2	121.7	118.6	112.4	104.7	95.5	84.7	72.4	57.0	43.1	29.3
117.5°	114.0	112.4	109.3	104.7	97.0	87.8	77.0	64.7	50.8	40.0	26.2
120°	106.3	103.2	100.1	95.5	87.8	80.1	69.3	58.5	46.2	35.4	23.1
122.5°	98.6	95.5	92.4	87.8	80.1	72.4	61.6	52.4	43.1	32.3	21.6
125°	89.3	87.8	84.7	80.1	72.4	64.7	57.0	47.7	38.5	29.3	18.5
127.5°	81.6	80.1	77.0	70.8	64.7	58.5	50.8	43.1	33.9	24.6	16.9
130°	75.5	72.4	69.3	64.7	60.1	53.9	46.2	38.5	30.8	21.6	15.4
132.5°	67.8	64.7	61.6	58.5	53.9	47.7	41.6	33.9	27.7	20.0	13.9
135°	61.6	58.5	55.4	52.4	47.7	43.1	37.0	30.8	24.6	18.5	12.3
137.5°	53.9	52.4	50.8	47.7	43.1	38.5	33.9	26.2	21.6	16.9	10.8
140°	49.3	47.7	46.2	41.6	38.5	33.9	29.3	23.1	18.5	13.9	9.2
142.5°	44.7	43.1	40.0	37.0	33.9	30.8	24.6	21.6	16.9	12.3	9.2
145°	38.5	37.0	35.4	32.3	29.3	24.6	21.6	18.5	15.4	10.8	7.7
147.5°	35.4	33.9	30.8	27.7	24.6	21.6	20.0	16.9	12.3	9.2	6.2
150°	29.3	27.7	26.2	23.1	21.6	20.0	16.9	13.9	10.8	7.7	6.2
152.5°	24.6	23.1	21.6	21.6	18.5	16.9	13.9	12.3	9.2	7.7	4.6
155°	21.6	21.6	20.0	18.5	15.4	13.9	12.3	9.2	7.7	6.2	4.6
157.5°	18.5	16.9	15.4	15.4	13.9	12.3	9.2	7.7	6.2	6.2	4.6
160°	15.4	13.9	13.9	12.3	10.8	9.2	7.7	7.7	6.2	4.6	4.6
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: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2804.6	2787.7	2803.1	2823.1	2823.1	2820.0	2816.9	2823.1	2838.5	2832.3	2813.8
5°	2800.0	2783.0	2796.9	2816.9	2816.9	2812.3	2809.2	2813.8	2830.8	2823.1	2806.1
7.5°	2790.7	2775.3	2784.6	2803.1	2803.1	2798.4	2795.4	2801.5	2815.4	2807.7	2789.2
10°	2773.8	2756.9	2767.6	2784.6	2783.0	2780.0	2775.3	2783.0	2795.4	2784.6	2763.0
12.5°	2752.2	2735.3	2744.5	2759.9	2758.4	2752.2	2749.2	2753.8	2764.6	2758.4	2735.3
15°	2723.0	2706.0	2713.7	2729.1	2724.5	2719.9	2713.7	2715.3	2729.1	2718.3	2693.7
17.5°	2687.5	2669.1	2675.2	2689.1	2684.5	2679.8	2672.1	2673.7	2689.1	2673.7	2647.5
20°	2644.4	2624.4	2629.0	2646.0	2638.3	2630.6	2622.9	2622.9	2638.3	2621.3	2592.1
22.5°	2598.2	2578.2	2581.3	2593.6	2587.4	2573.6	2565.9	2570.5	2578.2	2556.6	2525.8
25°	2541.2	2515.0	2519.7	2532.0	2527.4	2508.9	2501.2	2504.3	2501.2	2484.2	2451.9
27.5°	2475.0	2447.3	2450.4	2458.1	2451.9	2435.0	2425.7	2427.3	2421.1	2399.5	2362.6
30°	2391.8	2378.0	2376.4	2381.1	2371.8	2354.9	2344.1	2341.0	2339.5	2308.7	2264.0
32.5°	2307.1	2294.8	2287.1	2293.3	2282.5	2265.5	2247.1	2247.1	2231.7	2202.4	2163.9
35°	2220.9	2200.9	2193.2	2197.8	2185.5	2163.9	2148.5	2140.8	2117.7	2080.7	2039.1
37.5°	2110.0	2096.1	2086.9	2091.5	2077.6	2062.2	2033.0	2025.3	2000.6	1949.8	1897.5
40°	1989.9	1979.1	1969.8	1974.5	1959.1	1936.0	1909.8	1897.5	1869.7	1812.7	1771.2
42.5°	1860.5	1855.9	1845.1	1862.0	1831.2	1808.1	1781.9	1761.9	1734.2	1672.6	1624.8
45°	1723.4	1734.2	1709.6	1714.2	1694.2	1674.1	1646.4	1617.1	1589.4	1530.9	1477.0
47.5°	1578.6	1586.3	1569.4	1572.5	1550.9	1532.4	1507.8	1470.8	1440.0	1389.2	1341.5
50°	1429.3	1426.2	1426.2	1423.1	1406.1	1383.0	1358.4	1324.5	1293.7	1247.5	1207.5
52.5°	1270.6	1276.8	1279.9	1287.6	1266.0	1252.1	1213.6	1184.4	1161.3	1113.5	1079.6
55°	1118.1	1139.7	1133.5	1136.6	1112.0	1101.2	1070.4	1047.3	1013.4	985.7	964.1
57.5°	979.5	984.1	987.2	991.9	981.1	959.5	934.9	916.4	890.2	867.1	851.7
60°	845.5	845.5	847.1	854.8	844.0	825.5	807.0	793.2	774.7	760.8	751.6
62.5°	719.2	730.0	731.6	725.4	711.5	702.3	690.0	682.3	670.0	665.3	662.3
65°	602.2	602.2	602.2	605.3	597.6	591.4	583.7	582.2	586.8	580.6	583.7
67.5°	503.6	499.0	495.9	497.5	494.4	491.3	489.8	494.4	503.6	503.6	511.3
70°	418.9	409.7	403.5	403.5	403.5	405.1	409.7	418.9	434.3	440.5	451.3
72.5°	349.6	329.6	320.3	320.3	321.9	328.0	341.9	358.9	372.7	385.0	398.9
75°	283.4	263.4	249.5	248.0	251.0	260.3	280.3	295.7	318.8	335.8	352.7
77.5°	229.5	204.8	187.9	186.4	191.0	204.8	229.5	249.5	275.7	294.2	312.6
80°	183.3	155.6	141.7	132.5	140.2	157.1	184.8	209.5	234.1	258.7	281.8
82.5°	146.3	120.1	98.6	89.3	98.6	121.7	147.9	177.1	201.8	227.9	251.0
85°	115.5	87.8	63.1	53.9	64.7	89.3	118.6	147.9	175.6	201.8	224.9
87.5°	90.9	63.1	38.5	26.2	40.0	66.2	93.9	123.2	152.5	178.7	201.8
90°	70.8	44.7	21.6	3.1	23.1	47.7	75.5	103.2	132.5	158.6	181.7
92.5°	60.1	33.9	12.3	0.0	13.9	35.4	61.6	89.3	115.5	141.7	164.8
95°	50.8	27.7	9.2	0.0	9.2	27.7	50.8	75.5	101.6	127.8	150.9
97.5°	43.1	21.6	6.2	0.0	6.2	21.6	41.6	66.2	89.3	114.0	135.5
100°	37.0	18.5	4.6	0.0	4.6	16.9	35.4	57.0	80.1	103.2	123.2
102.5°	32.3	15.4	3.1	0.0	3.1	13.9	29.3	49.3	69.3	90.9	110.9
105°	27.7	12.3	3.1	0.0	1.5	10.8	24.6	43.1	61.6	81.6	100.1
107.5°	24.6	10.8	3.1	0.0	1.5	9.2	21.6	37.0	55.4	72.4	89.3
110°	21.6	9.2	3.1	0.0	1.5	6.2	18.5	32.3	47.7	64.7	81.6

TEST NUMBER: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	18.5	7.7	1.5	0.0	0.0	4.6	15.4	27.7	41.6	58.5	72.4
115°	16.9	7.7	1.5	0.0	0.0	3.1	12.3	24.6	37.0	52.4	64.7
117.5°	15.4	6.2	1.5	0.0	1.5	3.1	10.8	21.6	32.3	44.7	58.5
120°	13.9	6.2	1.5	0.0	1.5	1.5	7.7	18.5	27.7	40.0	50.8
122.5°	12.3	6.2	1.5	0.0	1.5	1.5	6.2	15.4	24.6	35.4	44.7
125°	10.8	4.6	3.1	1.5	1.5	1.5	4.6	12.3	21.6	29.3	40.0
127.5°	10.8	4.6	3.1	1.5	1.5	1.5	3.1	10.8	16.9	26.2	35.4
130°	9.2	4.6	3.1	1.5	1.5	1.5	1.5	7.7	15.4	21.6	29.3
132.5°	7.7	4.6	3.1	1.5	1.5	1.5	1.5	4.6	10.8	18.5	24.6
135°	7.7	4.6	3.1	1.5	1.5	1.5	1.5	3.1	7.7	13.9	20.0
137.5°	6.2	3.1	3.1	1.5	1.5	1.5	1.5	1.5	6.2	10.8	15.4
140°	6.2	3.1	3.1	1.5	1.5	1.5	1.5	1.5	4.6	7.7	12.3
142.5°	4.6	3.1	3.1	1.5	1.5	1.5	1.5	1.5	3.1	6.2	9.2
145°	4.6	3.1	3.1	1.5	1.5	1.5	1.5	1.5	1.5	3.1	6.2
147.5°	4.6	4.6	3.1	1.5	1.5	1.5	1.5	1.5	1.5	3.1	4.6
150°	4.6	3.1	3.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.1
152.5°	4.6	3.1	3.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.1
155°	4.6	3.1	3.1	1.5	1.5	1.5	1.5	1.5	1.5	3.1	3.1
157.5°	4.6	3.1	3.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.1
160°	4.6	3.1	3.1	1.5	3.1	1.5	3.1	3.1	3.1	3.1	3.1
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: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2807.7	2778.4	2793.8	2789.2	2795.4	2807.7	2806.1	2803.1	2803.1	2798.4	2792.3
5°	2798.4	2770.7	2784.6	2776.9	2784.6	2795.4	2793.8	2789.2	2792.3	2784.6	2776.9
7.5°	2780.0	2755.3	2767.6	2761.5	2767.6	2778.4	2773.8	2772.3	2775.3	2763.0	2758.4
10°	2758.4	2730.7	2744.5	2736.8	2744.5	2752.2	2749.2	2743.0	2749.2	2736.8	2732.2
12.5°	2724.5	2701.4	2710.6	2707.6	2712.2	2719.9	2713.7	2709.1	2712.2	2701.4	2692.2
15°	2687.5	2664.4	2672.1	2667.5	2670.6	2679.8	2669.1	2667.5	2664.4	2653.7	2650.6
17.5°	2639.8	2618.2	2625.9	2618.2	2622.9	2619.8	2618.2	2610.5	2610.5	2598.2	2589.0
20°	2581.3	2562.8	2558.2	2552.0	2558.2	2552.0	2542.8	2536.6	2535.1	2522.7	2515.0
22.5°	2513.5	2491.9	2495.0	2478.1	2479.6	2470.4	2455.0	2448.8	2442.7	2428.8	2418.0
25°	2431.9	2410.3	2394.9	2384.1	2370.3	2368.7	2348.7	2333.3	2331.8	2314.8	2313.3
27.5°	2339.5	2314.8	2302.5	2276.3	2259.4	2245.5	2228.6	2213.2	2205.5	2187.0	2174.7
30°	2233.2	2205.5	2174.7	2156.2	2130.0	2119.2	2090.0	2071.5	2065.3	2045.3	2036.1
32.5°	2113.1	2083.8	2059.2	2023.7	1994.5	1979.1	1949.8	1931.3	1923.6	1902.1	1889.8
35°	1982.2	1949.8	1920.6	1886.7	1863.6	1837.4	1802.0	1783.5	1766.5	1758.8	1749.6
37.5°	1845.1	1809.7	1775.8	1741.9	1721.9	1691.1	1660.3	1648.0	1627.9	1620.2	1611.0
40°	1703.4	1668.0	1635.6	1603.3	1580.2	1552.5	1524.7	1520.1	1498.6	1490.9	1484.7
42.5°	1563.2	1526.3	1489.3	1466.2	1449.3	1421.5	1403.1	1398.4	1380.0	1375.3	1375.3
45°	1437.0	1390.7	1359.9	1339.9	1326.1	1303.0	1287.6	1284.5	1269.1	1266.0	1266.0
47.5°	1301.4	1258.3	1235.2	1222.9	1210.6	1193.6	1184.4	1184.4	1169.0	1165.9	1164.3
50°	1175.1	1135.1	1118.1	1105.8	1104.3	1092.0	1084.3	1081.2	1081.2	1070.4	1071.9
52.5°	1055.0	1035.0	1021.1	1013.4	1004.2	996.5	990.3	990.3	985.7	978.0	981.1
55°	944.1	921.0	922.5	916.4	911.8	907.1	908.7	899.4	897.9	891.7	896.4
57.5°	833.2	833.2	830.1	825.5	817.8	820.9	820.9	820.9	813.2	808.6	813.2
60°	739.3	743.9	736.2	740.8	737.7	739.3	736.2	736.2	731.6	730.0	731.6
62.5°	656.1	663.8	660.7	666.9	663.8	665.3	668.4	662.3	659.2	656.1	659.2
65°	582.2	591.4	589.9	594.5	596.0	597.6	599.1	596.0	593.0	589.9	588.3
67.5°	517.5	526.7	532.9	534.4	536.0	540.6	539.0	536.0	532.9	528.3	526.7
70°	459.0	471.3	479.0	482.1	488.2	485.1	485.1	483.6	480.5	475.9	474.4
72.5°	409.7	423.5	431.2	434.3	440.5	440.5	438.9	437.4	434.3	429.7	428.2
75°	366.6	378.9	389.7	395.8	400.4	400.4	398.9	397.4	394.3	391.2	389.7
77.5°	332.7	343.5	352.7	360.4	363.5	365.0	363.5	360.4	360.4	358.9	357.3
80°	298.8	311.1	320.3	328.0	332.7	332.7	331.1	332.7	329.6	328.0	326.5
82.5°	269.5	283.4	294.2	301.9	304.9	306.5	304.9	306.5	303.4	303.4	303.4
85°	243.3	257.2	269.5	275.7	280.3	281.8	281.8	281.8	280.3	280.3	280.3
87.5°	221.8	235.6	248.0	254.1	258.7	260.3	260.3	261.8	258.7	258.7	258.7
90°	201.8	215.6	227.9	234.1	238.7	241.8	241.8	243.3	241.8	240.3	240.3
92.5°	183.3	198.7	211.0	217.2	221.8	226.4	226.4	227.9	224.9	224.9	224.9
95°	167.9	183.3	194.1	201.8	206.4	209.5	211.0	211.0	209.5	209.5	209.5
97.5°	154.0	167.9	178.7	186.4	191.0	192.5	194.1	195.6	194.1	194.1	194.1
100°	140.2	154.0	164.8	171.0	177.1	178.7	180.2	181.7	181.7	180.2	180.2
102.5°	127.8	141.7	150.9	158.6	163.3	166.3	167.9	167.9	167.9	167.9	167.9
105°	115.5	129.4	138.6	146.3	150.9	154.0	155.6	157.1	157.1	155.6	155.6
107.5°	104.7	117.1	127.8	134.0	140.2	143.2	144.8	144.8	146.3	144.8	144.8
110°	93.9	107.8	117.1	123.2	129.4	132.5	134.0	135.5	135.5	135.5	135.5

TEST NUMBER: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	86.2	97.0	106.3	112.4	118.6	121.7	123.2	124.8	126.3	124.8	124.8
115°	77.0	87.8	97.0	103.2	107.8	110.9	114.0	115.5	115.5	117.1	115.5
117.5°	69.3	78.5	87.8	93.9	98.6	103.2	104.7	106.3	107.8	106.3	106.3
120°	61.6	70.8	78.5	84.7	89.3	93.9	95.5	97.0	98.6	97.0	97.0
122.5°	55.4	63.1	70.8	77.0	81.6	84.7	87.8	87.8	89.3	89.3	89.3
125°	49.3	57.0	63.1	69.3	73.9	77.0	78.5	80.1	80.1	81.6	81.6
127.5°	43.1	49.3	57.0	61.6	66.2	69.3	70.8	72.4	72.4	73.9	73.9
130°	37.0	43.1	49.3	53.9	58.5	61.6	63.1	64.7	66.2	66.2	66.2
132.5°	32.3	38.5	43.1	47.7	50.8	53.9	57.0	58.5	58.5	58.5	58.5
135°	26.2	32.3	37.0	41.6	44.7	47.7	49.3	52.4	52.4	52.4	52.4
137.5°	21.6	27.7	32.3	35.4	38.5	41.6	43.1	44.7	46.2	46.2	46.2
140°	16.9	21.6	26.2	30.8	33.9	35.4	38.5	38.5	40.0	40.0	40.0
142.5°	12.3	16.9	20.0	24.6	27.7	30.8	32.3	33.9	33.9	33.9	33.9
145°	9.2	12.3	15.4	18.5	23.1	24.6	26.2	27.7	29.3	29.3	29.3
147.5°	6.2	9.2	10.8	13.9	16.9	20.0	21.6	23.1	24.6	24.6	24.6
150°	4.6	6.2	9.2	10.8	12.3	15.4	18.5	18.5	20.0	20.0	18.5
152.5°	3.1	4.6	6.2	7.7	9.2	10.8	13.9	13.9	15.4	15.4	15.4
155°	3.1	3.1	3.1	4.6	6.2	7.7	9.2	10.8	10.8	10.8	10.8
157.5°	3.1	3.1	3.1	3.1	3.1	4.6	6.2	7.7	7.7	7.7	7.7
160°	3.1	3.1	1.5	1.5	3.1	3.1	3.1	3.1	4.6	4.6	4.6
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: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2796.9	2800.0	2800.0	2796.9	2795.4	2801.5	2793.8	2764.6	2773.8	2776.9	2786.1
5°	2783.0	2786.1	2786.1	2786.1	2783.0	2789.2	2781.5	2752.2	2763.0	2767.6	2773.8
7.5°	2763.0	2764.6	2767.6	2766.1	2763.0	2772.3	2764.6	2735.3	2743.0	2750.7	2758.4
10°	2736.8	2736.8	2738.4	2741.4	2738.4	2746.1	2738.4	2712.2	2719.9	2724.5	2733.7
12.5°	2701.4	2704.5	2706.0	2704.5	2702.9	2709.1	2706.0	2681.4	2684.5	2693.7	2702.9
15°	2653.7	2653.7	2661.4	2658.3	2658.3	2664.4	2667.5	2639.8	2644.4	2658.3	2667.5
17.5°	2595.1	2596.7	2602.8	2605.9	2604.4	2615.2	2616.7	2595.1	2593.6	2610.5	2619.8
20°	2519.7	2522.7	2530.5	2536.6	2536.6	2548.9	2553.6	2539.7	2541.2	2559.7	2562.8
22.5°	2427.3	2427.3	2441.1	2450.4	2458.1	2465.8	2479.6	2467.3	2467.3	2491.9	2505.8
25°	2313.3	2324.1	2328.7	2347.2	2358.0	2379.5	2391.8	2393.4	2394.9	2418.0	2427.3
27.5°	2187.0	2190.1	2203.9	2225.5	2237.8	2257.8	2280.9	2285.6	2293.3	2324.1	2337.9
30°	2043.8	2053.0	2059.2	2090.0	2106.9	2133.1	2162.4	2173.1	2179.3	2220.9	2237.8
32.5°	1897.5	1900.5	1926.7	1943.7	1963.7	1991.4	2025.3	2045.3	2057.6	2100.8	2125.4
35°	1751.1	1757.3	1778.9	1800.4	1820.4	1848.2	1883.6	1911.3	1932.9	1971.4	2003.7
37.5°	1617.1	1632.5	1637.2	1658.7	1674.1	1701.9	1726.5	1766.5	1788.1	1828.1	1869.7
40°	1497.0	1501.6	1504.7	1526.3	1537.1	1563.2	1598.7	1624.8	1654.1	1683.4	1732.7
42.5°	1378.4	1381.5	1386.1	1398.4	1410.8	1429.3	1455.4	1481.6	1512.4	1555.5	1587.9
45°	1269.1	1272.2	1275.2	1282.9	1293.7	1310.7	1327.6	1346.1	1376.9	1413.8	1447.7
47.5°	1167.4	1173.6	1173.6	1175.1	1182.8	1196.7	1209.0	1232.1	1249.1	1269.1	1307.6
50°	1070.4	1075.0	1076.6	1076.6	1081.2	1090.4	1093.5	1108.9	1124.3	1142.8	1170.5
52.5°	979.5	979.5	978.0	984.1	984.1	990.3	991.9	1001.1	1011.9	1031.9	1044.2
55°	893.3	893.3	897.9	894.8	894.8	897.9	896.4	897.9	907.1	919.5	930.2
57.5°	810.1	808.6	813.2	810.1	808.6	811.7	814.7	808.6	810.1	822.4	822.4
60°	726.9	728.5	733.1	730.0	730.0	730.0	726.9	723.9	720.8	728.5	731.6
62.5°	660.7	656.1	660.7	656.1	659.2	657.6	654.6	648.4	649.9	646.9	643.8
65°	591.4	591.4	593.0	588.3	591.4	591.4	586.8	585.3	576.0	572.9	565.2
67.5°	531.3	531.3	532.9	529.8	529.8	531.3	526.7	522.1	512.9	508.2	497.5
70°	479.0	479.0	479.0	477.4	477.4	477.4	474.4	468.2	459.0	451.3	437.4
72.5°	431.2	432.8	431.2	431.2	435.9	431.2	426.6	420.5	412.8	397.4	385.0
75°	392.7	394.3	392.7	392.7	392.7	391.2	389.7	380.4	371.2	358.9	340.4
77.5°	358.9	358.9	360.4	358.9	358.9	357.3	352.7	345.0	334.2	323.4	301.9
80°	326.5	328.0	329.6	331.1	328.0	326.5	321.9	315.7	301.9	289.5	268.0
82.5°	303.4	301.9	303.4	304.9	301.9	300.3	295.7	288.0	277.2	260.3	238.7
85°	280.3	278.8	278.8	280.3	278.8	275.7	271.1	263.4	252.6	235.6	214.1
87.5°	257.2	258.7	260.3	258.7	257.2	254.1	249.5	241.8	229.5	215.6	192.5
90°	240.3	240.3	240.3	240.3	238.7	235.6	231.0	221.8	211.0	194.1	174.0
92.5°	224.9	224.9	224.9	224.9	223.3	218.7	214.1	206.4	194.1	177.1	158.6
95°	209.5	211.0	209.5	209.5	206.4	204.8	197.1	189.4	178.7	161.7	141.7
97.5°	192.5	194.1	192.5	192.5	191.0	187.9	183.3	174.0	163.3	147.9	129.4
100°	180.2	180.2	178.7	178.7	177.1	174.0	167.9	160.2	149.4	134.0	115.5
102.5°	166.3	167.9	166.3	166.3	163.3	160.2	155.6	147.9	137.1	121.7	104.7
105°	155.6	155.6	154.0	154.0	150.9	147.9	143.2	134.0	124.8	110.9	93.9
107.5°	144.8	144.8	143.2	143.2	140.2	137.1	130.9	123.2	114.0	100.1	84.7
110°	134.0	134.0	134.0	132.5	129.4	124.8	120.1	112.4	103.2	90.9	75.5



TEST NUMBER: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	126.3	124.8	123.2	121.7	118.6	115.5	109.3	101.6	92.4	81.6	67.8
115°	115.5	115.5	114.0	112.4	109.3	104.7	100.1	93.9	84.7	72.4	60.1
117.5°	106.3	106.3	104.7	103.2	100.1	95.5	90.9	84.7	75.5	64.7	53.9
120°	97.0	97.0	95.5	93.9	90.9	86.2	83.2	75.5	67.8	57.0	47.7
122.5°	89.3	87.8	87.8	84.7	83.2	78.5	73.9	67.8	60.1	50.8	41.6
125°	80.1	80.1	78.5	77.0	75.5	70.8	66.2	60.1	52.4	44.7	37.0
127.5°	72.4	72.4	70.8	69.3	67.8	63.1	58.5	53.9	46.2	38.5	30.8
130°	64.7	64.7	63.1	61.6	60.1	55.4	52.4	46.2	40.0	33.9	26.2
132.5°	58.5	58.5	57.0	55.4	52.4	49.3	46.2	40.0	35.4	29.3	23.1
135°	52.4	50.8	50.8	49.3	46.2	43.1	40.0	35.4	29.3	24.6	18.5
137.5°	46.2	44.7	43.1	41.6	40.0	37.0	33.9	30.8	26.2	20.0	15.4
140°	40.0	38.5	38.5	37.0	33.9	32.3	29.3	24.6	21.6	16.9	12.3
142.5°	33.9	33.9	32.3	30.8	29.3	27.7	24.6	21.6	16.9	13.9	9.2
145°	29.3	27.7	27.7	26.2	24.6	21.6	20.0	16.9	13.9	10.8	7.7
147.5°	23.1	23.1	23.1	21.6	20.0	18.5	16.9	13.9	10.8	7.7	4.6
150°	18.5	18.5	18.5	16.9	15.4	13.9	12.3	10.8	7.7	4.6	3.1
152.5°	15.4	15.4	13.9	13.9	12.3	10.8	9.2	7.7	4.6	3.1	3.1
155°	10.8	10.8	10.8	9.2	9.2	7.7	6.2	4.6	3.1	3.1	3.1
157.5°	7.7	7.7	7.7	6.2	6.2	4.6	4.6	3.1	3.1	3.1	3.1
160°	4.6	4.6	4.6	4.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0	2800.0
2.5°	2781.5	2780.0	2792.3	2792.3	2778.4	2800.0	2823.1
5°	2772.3	2770.7	2783.0	2783.0	2770.7	2792.3	2816.9
7.5°	2753.8	2755.3	2767.6	2770.7	2755.3	2775.3	2801.5
10°	2733.7	2732.2	2746.1	2749.2	2736.8	2755.3	2780.0
12.5°	2701.4	2701.4	2715.3	2719.9	2707.6	2729.1	2752.2
15°	2667.5	2667.5	2676.8	2684.5	2673.7	2693.7	2716.8
17.5°	2624.4	2622.9	2632.1	2641.3	2630.6	2652.1	2676.8
20°	2569.0	2569.0	2579.7	2590.5	2582.8	2602.8	2630.6
22.5°	2510.4	2504.3	2522.7	2530.5	2525.8	2545.9	2573.6
25°	2436.5	2435.0	2453.4	2464.2	2458.1	2479.6	2504.3
27.5°	2356.4	2354.9	2373.4	2387.2	2384.1	2404.2	2431.9
30°	2259.4	2267.1	2284.0	2307.1	2299.4	2321.0	2350.3
32.5°	2157.7	2165.4	2185.5	2210.1	2211.6	2228.6	2257.8
35°	2036.1	2056.1	2069.9	2102.3	2108.5	2125.4	2156.2
37.5°	1908.2	1931.3	1960.6	1985.2	1997.6	2011.4	2046.8
40°	1765.0	1798.9	1831.2	1860.5	1875.9	1889.8	1923.6
42.5°	1635.6	1661.8	1692.6	1721.9	1749.6	1761.9	1797.3
45°	1489.3	1520.1	1547.8	1583.3	1611.0	1624.8	1660.3
47.5°	1346.1	1376.9	1413.8	1438.5	1467.8	1481.6	1515.5
50°	1209.0	1236.7	1267.5	1296.8	1321.4	1333.8	1363.0
52.5°	1073.5	1102.7	1132.0	1150.5	1176.7	1185.9	1210.6
55°	953.3	973.4	999.6	1010.3	1036.5	1042.7	1059.6
57.5°	837.8	851.7	860.9	879.4	897.9	911.8	931.8
60°	733.1	739.3	745.4	756.2	771.6	776.2	783.9
62.5°	639.2	637.6	649.9	653.0	654.6	670.0	662.3
65°	556.0	557.5	546.7	542.1	548.3	552.9	549.8
67.5°	486.7	477.4	468.2	457.4	448.2	452.8	448.2
70°	418.9	411.2	395.8	380.4	374.3	365.0	360.4
72.5°	365.0	346.5	331.1	311.1	300.3	289.5	281.8
75°	323.4	297.2	275.7	254.1	238.7	223.3	220.2
77.5°	280.3	255.7	231.0	207.9	184.8	167.9	161.7
80°	246.4	223.3	194.1	166.3	141.7	120.1	112.4
82.5°	215.6	191.0	161.7	132.5	104.7	81.6	72.4
85°	189.4	163.3	134.0	104.7	77.0	52.4	40.0
87.5°	169.4	140.2	110.9	83.2	53.9	29.3	15.4
90°	150.9	123.2	95.5	66.2	38.5	15.4	0.0
92.5°	134.0	107.8	80.1	53.9	29.3	9.2	1.5
95°	118.6	95.5	67.8	43.1	21.6	6.2	1.5
97.5°	106.3	83.2	58.5	35.4	16.9	4.6	1.5
100°	95.5	72.4	50.8	29.3	13.9	3.1	1.5
102.5°	84.7	64.7	43.1	24.6	10.8	1.5	1.5
105°	75.5	57.0	37.0	21.6	9.2	1.5	1.5
107.5°	67.8	50.8	32.3	18.5	6.2	1.5	1.5
110°	60.1	43.1	27.7	15.4	4.6	1.5	1.5



TEST NUMBER: P1213192

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	53.9	38.5	24.6	12.3	3.1	1.5	1.5
115°	47.7	33.9	21.6	10.8	3.1	1.5	1.5
117.5°	41.6	29.3	18.5	7.7	1.5	1.5	1.5
120°	37.0	26.2	15.4	6.2	1.5	1.5	1.5
122.5°	32.3	21.6	12.3	4.6	1.5	1.5	1.5
125°	27.7	18.5	10.8	3.1	1.5	1.5	1.5
127.5°	23.1	15.4	7.7	3.1	1.5	1.5	1.5
130°	20.0	12.3	6.2	1.5	1.5	1.5	1.5
132.5°	16.9	9.2	4.6	1.5	1.5	1.5	1.5
135°	13.9	7.7	3.1	1.5	1.5	1.5	1.5
137.5°	10.8	6.2	3.1	1.5	1.5	1.5	1.5
140°	7.7	4.6	1.5	1.5	1.5	1.5	1.5
142.5°	6.2	3.1	1.5	1.5	1.5	1.5	1.5
145°	4.6	3.1	1.5	1.5	1.5	1.5	1.5
147.5°	3.1	3.1	3.1	3.1	1.5	1.5	1.5
150°	3.1	3.1	1.5	1.5	3.1	1.5	1.5
152.5°	3.1	1.5	1.5	1.5	3.1	1.5	1.5
155°	3.1	3.1	3.1	3.1	3.1	3.1	1.5
157.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1
160°	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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)