

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P#

Luminaire Tested: **4SNLED-LD5-78SL-LN-UNV-L930-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P#  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33519)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U  
Description: 4FT LINEAR SNLED LED FIXTURE  
NARROW LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

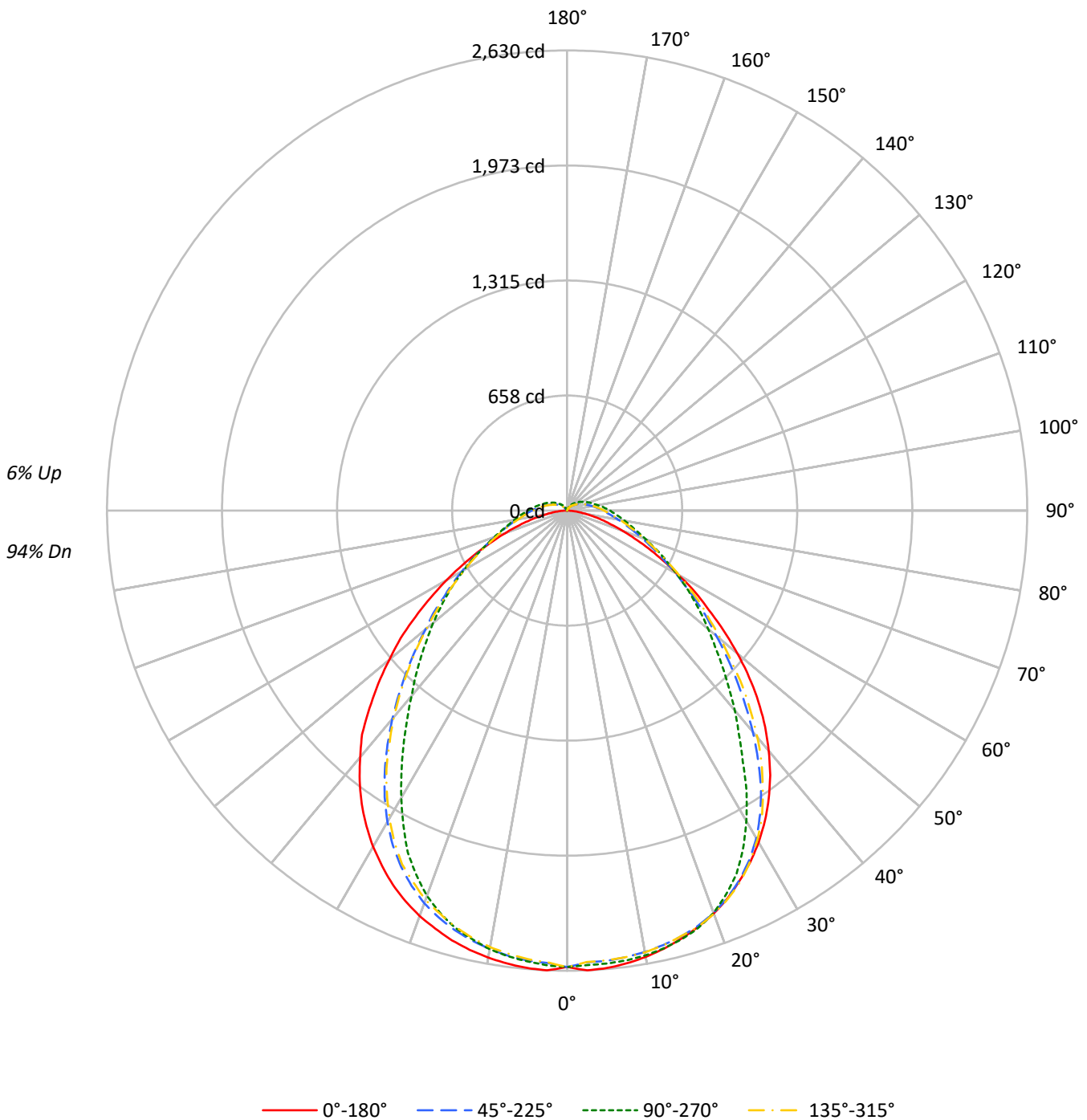
Lumens per Lamp: N/A  
Luminaire Lumens: 6602.0 lumens  
Efficiency: N/A  
Efficacy: 77.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')  
CIE Type: Direct

Input Watts (W): 85  
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: 25 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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	96	96	96	94				
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81	79				
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69	67				
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60	57				
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52	50				
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46	44				
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41	39				
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37	35				
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33	31				
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30	28				
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27	26				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	21081	21081	21081	21081
5°	21232	20410	21232	20320
10°	21137	19868	21172	19592
15°	21000	19274	21096	18772
20°	20840	18511	20961	17729
25°	20505	17378	20732	16355
30°	20070	15715	20333	14548
35°	19394	13675	19768	12734
40°	18423	11960	18910	11097
45°	17143	10397	17699	9801
50°	15392	9136	16070	8675
55°	13314	8068	14283	7659
60°	11199	7083	12211	6676
65°	9181	6263	10105	5806
70°	7307	5557	8181	5141
75°	5738	5132	6459	4721
80°	4143	4951	4878	4524
85°	2548	4979	3430	4578



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.3	3.7
10°-20°	709.2	10.7
20°-30°	1051.0	15.9
30°-40°	1167.7	17.7
40°-50°	1058.5	16.0
50°-60°	820.2	12.4
60°-70°	557.0	8.4
70°-80°	354.4	5.4
80°-90°	226.5	3.4
90°-100°	152.7	2.3
100°-110°	104.6	1.6
110°-120°	69.8	1.1
120°-130°	43.4	0.7
130°-140°	24.0	0.4
140°-150°	11.3	0.2
150°-160°	4.1	0.1
160°-170°	0.3	0.0
170°-180°	0.0	0.0
0°-30°	2007.5	30.4
0°-40°	3175.2	48.1
0°-60°	5053.9	76.6
0°-90°	6191.8	93.8
90°-120°	327.1	5.0
90°-150°	405.8	6.1
90°-180°	410.0	6.2
0°-180°	6602.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2609	2609	2609	2609	2609	
5°	2624	2599	2624	2587	2624	249
15°	2531	2536	2543	2470	2531	714
25°	2333	2290	2359	2155	2333	1075
35°	2009	1751	2048	1630	2009	1253
45°	1547	1251	1597	1180	1547	1188
55°	987	880	1059	835	987	889
65°	512	591	564	548	512	514
75°	205	395	231	363	205	221
85°	37	284	50	261	37	45
90°	0	245	3	224	0	2
95°	1	210	0	195	1	1
105°	1	154	0	145	1	1
115°	1	116	0	108	1	1
125°	1	86	1	76	1	1
135°	1	60	1	49	1	1
145°	1	39	1	27	1	1
155°	1	22	1	10	1	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2630.3	2627.4	2624.5	2620.2	2624.5	2636.0	2628.8	2613.0	2610.2	2584.3	2595.8
5°	2624.5	2620.2	2617.3	2613.0	2618.8	2633.1	2625.9	2611.6	2607.3	2582.9	2595.8
7.5°	2610.2	2607.3	2603.0	2603.0	2608.7	2623.1	2617.3	2601.6	2598.7	2574.3	2588.6
10°	2590.1	2588.6	2585.8	2585.8	2591.5	2608.7	2601.6	2587.2	2584.3	2561.4	2577.2
12.5°	2564.2	2565.7	2561.4	2561.4	2570.0	2587.2	2581.5	2565.7	2562.8	2542.7	2558.5
15°	2531.2	2532.7	2529.8	2531.2	2539.8	2559.9	2552.8	2538.4	2535.5	2519.8	2532.7
17.5°	2493.9	2495.4	2495.4	2493.9	2504.0	2524.1	2518.3	2505.4	2501.1	2488.2	2504.0
20°	2450.9	2450.9	2450.9	2450.9	2462.4	2482.5	2475.3	2465.2	2456.6	2446.6	2459.5
22.5°	2397.8	2396.4	2397.8	2402.1	2413.6	2429.4	2425.1	2413.6	2400.7	2394.9	2405.0
25°	2333.2	2337.5	2339.0	2343.3	2357.6	2370.5	2366.2	2354.7	2334.7	2330.3	2333.2
27.5°	2265.8	2268.6	2272.9	2271.5	2291.6	2304.5	2295.9	2285.9	2257.2	2252.9	2250.0
30°	2189.7	2194.0	2196.9	2195.5	2211.2	2225.6	2217.0	2204.1	2165.3	2162.5	2139.5
32.5°	2103.6	2107.9	2110.8	2110.8	2133.8	2139.5	2123.7	2105.1	2063.4	2053.4	2033.3
35°	2008.9	2013.2	2014.7	2014.7	2037.6	2036.2	2016.1	1990.3	1944.3	1931.4	1897.0
37.5°	1907.0	1909.9	1911.3	1920.0	1930.0	1921.4	1895.6	1862.6	1828.1	1792.2	1754.9
40°	1792.2	1796.5	1799.4	1805.2	1815.2	1805.2	1767.8	1727.7	1690.4	1650.2	1612.9
42.5°	1674.6	1687.5	1684.6	1683.2	1688.9	1661.7	1633.0	1587.0	1549.7	1508.1	1470.8
45°	1546.9	1545.4	1552.6	1555.5	1554.0	1531.1	1490.9	1449.3	1412.0	1368.9	1337.4
47.5°	1412.0	1410.5	1416.3	1419.2	1410.5	1386.2	1354.6	1307.2	1275.7	1238.4	1214.0
50°	1269.9	1269.9	1278.5	1269.9	1265.6	1241.2	1215.4	1168.0	1143.6	1110.6	1096.3
52.5°	1127.9	1140.8	1132.2	1129.3	1125.0	1100.6	1080.5	1041.8	1021.7	1007.3	990.1
55°	987.2	1001.6	995.9	991.5	990.1	970.0	951.4	922.7	909.8	899.7	889.7
57.5°	868.1	866.7	863.8	859.5	861.0	845.2	826.5	810.7	805.0	800.7	803.6
60°	730.4	741.9	737.6	739.0	740.4	737.6	721.8	711.7	713.2	714.6	718.9
62.5°	617.0	627.1	634.2	628.5	631.4	635.7	627.1	624.2	629.9	635.7	641.4
65°	512.3	522.3	529.5	528.1	536.7	545.3	543.8	546.7	559.6	566.8	574.0
67.5°	417.6	427.6	437.7	439.1	452.0	464.9	470.7	480.7	495.1	505.1	513.7
70°	335.8	344.4	355.9	363.0	380.3	397.5	407.5	427.6	436.2	450.6	456.3
72.5°	262.6	269.8	285.6	302.8	317.1	338.6	358.7	376.0	388.9	404.7	411.8
75°	205.2	208.1	225.3	245.4	265.5	289.9	311.4	330.0	347.3	363.0	374.5
77.5°	150.7	155.0	170.8	198.0	221.0	246.8	271.2	291.3	309.9	325.7	341.5
80°	104.8	113.4	130.6	157.8	183.7	212.4	235.3	258.3	278.4	294.2	309.9
82.5°	67.4	74.6	99.0	126.3	153.5	182.2	206.6	229.6	251.1	268.3	282.7
85°	37.3	47.4	71.7	100.4	127.7	156.4	182.2	205.2	226.7	242.5	256.9
87.5°	14.3	28.7	51.7	78.9	106.2	133.4	160.7	182.2	203.8	221.0	233.9
90°	0.0	17.2	38.7	66.0	93.3	120.5	146.4	169.3	189.4	205.2	219.5
92.5°	1.4	11.5	30.1	53.1	78.9	104.8	129.1	152.1	172.2	188.0	200.9
95°	1.4	8.6	24.4	45.9	68.9	93.3	116.2	137.8	156.4	172.2	185.1
97.5°	1.4	5.7	20.1	40.2	60.3	84.7	106.2	126.3	143.5	159.3	169.3
100°	1.4	5.7	17.2	34.4	54.5	76.1	96.1	116.2	132.0	144.9	156.4
102.5°	1.4	4.3	14.3	30.1	48.8	67.4	87.5	106.2	120.5	133.4	144.9
105°	1.4	4.3	12.9	25.8	43.0	61.7	78.9	96.1	111.9	123.4	133.4
107.5°	1.4	2.9	11.5	21.5	37.3	56.0	73.2	87.5	101.9	113.4	123.4
110°	1.4	2.9	10.0	20.1	33.0	50.2	66.0	80.4	93.3	104.8	113.4



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CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.4	2.9	8.6	18.7	30.1	44.5	60.3	73.2	86.1	96.1	104.8
115°	1.4	2.9	8.6	17.2	27.3	38.7	53.1	67.4	77.5	89.0	96.1
117.5°	1.4	2.9	7.2	14.3	25.8	35.9	48.8	60.3	71.7	81.8	89.0
120°	1.4	2.9	7.2	12.9	23.0	33.0	43.0	54.5	66.0	73.2	80.4
122.5°	1.4	2.9	5.7	12.9	20.1	30.1	38.7	48.8	58.8	67.4	74.6
125°	1.4	2.9	5.7	11.5	18.7	27.3	35.9	43.0	53.1	60.3	67.4
127.5°	1.4	2.9	5.7	10.0	17.2	24.4	33.0	40.2	47.4	54.5	60.3
130°	1.4	2.9	4.3	8.6	15.8	21.5	28.7	37.3	43.0	48.8	54.5
132.5°	1.4	2.9	4.3	8.6	12.9	18.7	25.8	33.0	38.7	44.5	48.8
135°	1.4	2.9	4.3	7.2	11.5	17.2	21.5	28.7	34.4	40.2	44.5
137.5°	1.4	2.9	4.3	7.2	10.0	14.3	18.7	24.4	30.1	34.4	40.2
140°	1.4	2.9	4.3	5.7	8.6	12.9	17.2	20.1	25.8	30.1	34.4
142.5°	1.4	2.9	4.3	5.7	8.6	11.5	14.3	17.2	21.5	25.8	30.1
145°	1.4	2.9	4.3	5.7	7.2	10.0	12.9	15.8	17.2	21.5	24.4
147.5°	1.4	2.9	4.3	5.7	5.7	8.6	11.5	12.9	15.8	17.2	20.1
150°	1.4	2.9	4.3	4.3	5.7	7.2	10.0	11.5	12.9	15.8	17.2
152.5°	1.4	2.9	4.3	4.3	5.7	7.2	8.6	10.0	11.5	12.9	14.3
155°	1.4	2.9	4.3	4.3	4.3	5.7	7.2	8.6	10.0	11.5	12.9
157.5°	2.9	2.9	2.9	4.3	4.3	5.7	5.7	7.2	8.6	8.6	10.0
160°	2.9	2.9	2.9	4.3	4.3	4.3	5.7	5.7	7.2	7.2	8.6
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



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2592.9	2597.2	2610.2	2610.2	2607.3	2604.4	2604.4	2600.1	2603.0	2608.7	2605.9
5°	2592.9	2597.2	2610.2	2610.2	2607.3	2604.4	2603.0	2598.7	2603.0	2608.7	2605.9
7.5°	2584.3	2590.1	2603.0	2603.0	2600.1	2598.7	2595.8	2592.9	2597.2	2603.0	2600.1
10°	2572.9	2578.6	2591.5	2591.5	2588.6	2588.6	2584.3	2581.5	2587.2	2591.5	2590.1
12.5°	2555.6	2562.8	2574.3	2572.9	2570.0	2571.4	2567.1	2561.4	2567.1	2571.4	2572.9
15°	2531.2	2539.8	2551.3	2548.5	2544.2	2547.0	2539.8	2535.5	2539.8	2548.5	2547.0
17.5°	2499.7	2505.4	2514.0	2514.0	2509.7	2506.8	2504.0	2499.7	2502.5	2508.3	2509.7
20°	2455.2	2462.4	2466.7	2462.4	2460.9	2456.6	2450.9	2446.6	2452.3	2460.9	2462.4
22.5°	2396.4	2397.8	2407.8	2397.8	2390.6	2389.2	2383.4	2374.8	2383.4	2390.6	2392.0
25°	2323.2	2330.3	2326.0	2308.8	2308.8	2297.3	2294.5	2290.2	2291.6	2304.5	2310.3
27.5°	2229.9	2232.8	2221.3	2206.9	2194.0	2186.9	2176.8	2178.2	2178.2	2195.5	2201.2
30°	2128.0	2112.2	2102.2	2079.2	2069.2	2052.0	2049.1	2049.1	2046.2	2054.8	2080.7
32.5°	2006.1	1984.5	1968.7	1947.2	1930.0	1912.8	1904.2	1908.5	1907.0	1928.6	1937.2
35°	1872.6	1859.7	1826.7	1799.4	1789.4	1763.5	1763.5	1750.6	1759.2	1783.6	1793.7
37.5°	1732.0	1711.9	1684.6	1654.5	1647.3	1627.2	1620.1	1612.9	1631.5	1635.8	1645.9
40°	1588.5	1569.8	1544.0	1515.3	1515.3	1490.9	1490.9	1490.9	1492.3	1501.0	1519.6
42.5°	1452.2	1432.1	1409.1	1389.0	1386.2	1367.5	1367.5	1366.1	1368.9	1376.1	1393.3
45°	1320.1	1304.4	1280.0	1269.9	1271.4	1251.3	1255.6	1251.3	1257.0	1264.2	1269.9
47.5°	1198.2	1188.1	1178.1	1163.7	1159.4	1158.0	1150.8	1145.1	1155.1	1155.1	1163.7
50°	1084.8	1079.1	1073.3	1064.7	1066.2	1060.4	1051.8	1051.8	1059.0	1060.4	1066.2
52.5°	985.8	978.6	971.5	972.9	974.3	971.5	967.2	962.8	967.2	970.0	977.2
55°	886.8	881.1	888.2	885.4	888.2	885.4	882.5	879.6	886.8	882.5	889.7
57.5°	797.8	803.6	806.4	800.7	805.0	802.1	803.6	799.3	805.0	807.9	806.4
60°	716.0	724.6	720.3	721.8	727.5	724.6	718.9	723.2	729.0	730.4	729.0
62.5°	641.4	651.5	655.8	652.9	654.3	651.5	655.8	650.0	657.2	660.1	655.8
65°	574.0	585.5	588.3	588.3	588.3	585.5	589.8	591.2	594.1	594.1	591.2
67.5°	516.6	526.6	529.5	532.4	529.5	526.6	526.6	528.1	533.8	536.7	533.8
70°	464.9	475.0	476.4	476.4	477.8	480.7	475.0	477.8	482.1	483.6	482.1
72.5°	420.4	430.5	433.4	431.9	433.4	434.8	434.8	431.9	436.2	439.1	439.1
75°	384.6	390.3	393.2	393.2	394.6	396.0	396.0	394.6	397.5	398.9	400.3
77.5°	351.6	355.9	360.2	360.2	361.6	360.2	363.0	363.0	364.5	365.9	367.3
80°	318.6	324.3	327.2	328.6	331.5	332.9	332.9	332.9	334.3	335.8	335.8
82.5°	292.7	297.0	301.3	305.6	305.6	307.1	307.1	307.1	308.5	308.5	309.9
85°	266.9	272.6	276.9	279.8	281.2	282.7	282.7	284.1	284.1	284.1	285.6
87.5°	243.9	251.1	254.0	256.9	258.3	261.2	261.2	261.2	262.6	262.6	262.6
90°	228.2	235.3	238.2	241.1	242.5	243.9	243.9	245.4	245.4	246.8	246.8
92.5°	209.5	216.7	222.4	222.4	223.9	226.7	225.3	225.3	226.7	228.2	228.2
95°	195.2	200.9	205.2	206.6	208.1	208.1	208.1	209.5	208.1	209.5	209.5
97.5°	177.9	183.7	188.0	190.8	192.3	192.3	192.3	193.7	192.3	193.7	193.7
100°	163.6	169.3	173.6	175.1	177.9	177.9	177.9	177.9	177.9	177.9	179.4
102.5°	152.1	157.8	160.7	162.1	163.6	165.0	165.0	165.0	165.0	166.5	166.5
105°	140.6	146.4	149.2	150.7	152.1	153.5	153.5	153.5	155.0	155.0	153.5
107.5°	130.6	134.9	137.8	140.6	142.1	142.1	143.5	143.5	143.5	143.5	143.5
110°	120.5	124.8	129.1	132.0	132.0	133.4	133.4	134.9	134.9	133.4	134.9





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	110.5	116.2	119.1	122.0	123.4	124.8	124.8	124.8	124.8	124.8	124.8
115°	101.9	107.6	110.5	113.4	114.8	116.2	116.2	116.2	116.2	116.2	116.2
117.5°	94.7	100.4	103.3	104.8	106.2	107.6	109.1	109.1	109.1	109.1	107.6
120°	87.5	91.8	94.7	97.6	99.0	100.4	100.4	100.4	100.4	100.4	100.4
122.5°	80.4	84.7	87.5	90.4	91.8	93.3	93.3	93.3	93.3	93.3	93.3
125°	73.2	77.5	80.4	83.2	84.7	86.1	86.1	86.1	86.1	86.1	86.1
127.5°	66.0	70.3	74.6	76.1	77.5	78.9	78.9	78.9	80.4	78.9	78.9
130°	58.8	63.1	67.4	68.9	70.3	71.7	73.2	73.2	73.2	73.2	71.7
132.5°	53.1	57.4	60.3	61.7	64.6	64.6	66.0	66.0	66.0	66.0	64.6
135°	48.8	51.7	54.5	56.0	58.8	58.8	58.8	60.3	60.3	58.8	57.4
137.5°	43.0	45.9	48.8	50.2	51.7	53.1	53.1	54.5	53.1	53.1	53.1
140°	40.2	41.6	44.5	45.9	47.4	47.4	47.4	48.8	48.8	47.4	47.4
142.5°	34.4	37.3	40.2	41.6	43.0	43.0	43.0	43.0	43.0	43.0	43.0
145°	28.7	33.0	34.4	37.3	37.3	38.7	38.7	38.7	38.7	38.7	37.3
147.5°	24.4	27.3	31.6	33.0	33.0	34.4	34.4	34.4	34.4	34.4	33.0
150°	18.7	21.5	25.8	28.7	28.7	30.1	30.1	30.1	30.1	28.7	28.7
152.5°	15.8	18.7	20.1	23.0	24.4	24.4	24.4	25.8	24.4	24.4	24.4
155°	14.3	15.8	17.2	18.7	20.1	21.5	21.5	21.5	21.5	20.1	20.1
157.5°	11.5	12.9	14.3	15.8	17.2	18.7	18.7	18.7	18.7	18.7	17.2
160°	8.6	10.0	11.5	11.5	12.9	14.3	15.8	14.3	14.3	14.3	14.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2603.0	2601.6	2605.9	2598.7	2577.2	2582.9	2580.0	2592.9	2595.8	2598.7	2611.6
5°	2603.0	2601.6	2604.4	2598.7	2575.7	2580.0	2577.2	2590.1	2592.9	2594.4	2607.3
7.5°	2597.2	2595.8	2600.1	2592.9	2568.5	2574.3	2570.0	2582.9	2584.3	2585.8	2597.2
10°	2585.8	2584.3	2587.2	2581.5	2557.1	2562.8	2557.1	2570.0	2570.0	2572.9	2581.5
12.5°	2568.5	2565.7	2571.4	2564.2	2537.0	2544.2	2541.3	2549.9	2551.3	2552.8	2561.4
15°	2544.2	2541.3	2545.6	2541.3	2516.9	2518.3	2514.0	2526.9	2528.4	2525.5	2534.1
17.5°	2508.3	2505.4	2514.0	2511.2	2486.8	2492.5	2491.1	2493.9	2498.2	2491.1	2502.5
20°	2463.8	2466.7	2469.5	2471.0	2452.3	2452.3	2450.9	2456.6	2460.9	2455.2	2463.8
22.5°	2397.8	2405.0	2413.6	2416.4	2403.5	2402.1	2410.7	2407.8	2412.1	2409.3	2415.0
25°	2314.6	2328.9	2337.5	2346.1	2339.0	2341.8	2354.7	2357.6	2357.6	2356.2	2361.9
27.5°	2211.2	2229.9	2245.7	2264.3	2257.2	2262.9	2284.4	2287.3	2293.0	2287.3	2298.8
30°	2087.8	2105.1	2135.2	2162.5	2165.3	2173.9	2204.1	2206.9	2222.7	2217.0	2221.3
32.5°	1964.4	1973.0	2007.5	2034.7	2052.0	2073.5	2106.5	2112.2	2133.8	2138.1	2138.1
35°	1809.5	1833.9	1865.4	1904.2	1925.7	1948.7	1993.1	2001.7	2033.3	2043.4	2054.8
37.5°	1678.9	1701.8	1721.9	1762.1	1800.9	1826.7	1862.6	1884.1	1917.1	1935.7	1950.1
40°	1539.7	1558.3	1579.9	1620.1	1653.1	1691.8	1727.7	1753.5	1795.1	1816.6	1835.3
42.5°	1407.7	1422.0	1445.0	1473.7	1508.1	1551.2	1585.6	1615.7	1660.2	1690.4	1711.9
45°	1290.0	1298.6	1318.7	1340.2	1370.4	1414.9	1447.9	1486.6	1522.5	1554.0	1579.9
47.5°	1179.5	1191.0	1201.0	1215.4	1242.7	1269.9	1308.7	1346.0	1381.9	1416.3	1442.1
50°	1077.6	1077.6	1093.4	1103.5	1122.1	1146.5	1176.7	1202.5	1247.0	1271.4	1304.4
52.5°	978.6	984.4	993.0	998.7	1013.1	1028.9	1053.2	1074.8	1112.1	1135.0	1166.6
55°	891.1	896.8	901.1	904.0	912.6	931.3	939.9	957.1	982.9	1001.6	1028.9
57.5°	807.9	810.7	815.0	816.5	817.9	829.4	836.6	840.9	866.7	885.4	908.3
60°	731.8	731.8	736.1	734.7	733.3	739.0	737.6	741.9	757.6	769.1	779.2
62.5°	660.1	660.1	661.5	658.6	657.2	657.2	651.5	655.8	660.1	661.5	668.7
65°	594.1	601.2	595.5	596.9	588.3	585.5	582.6	574.0	572.5	566.8	569.7
67.5°	535.2	541.0	535.2	535.2	528.1	522.3	515.1	500.8	496.5	485.0	482.1
70°	487.9	483.6	486.4	482.1	473.5	466.4	456.3	444.8	430.5	416.1	406.1
72.5°	442.0	442.0	439.1	434.8	430.5	416.1	404.7	391.7	374.5	355.9	341.5
75°	397.5	398.9	398.9	394.6	387.4	374.5	361.6	343.0	324.3	302.8	284.1
77.5°	365.9	365.9	365.9	358.7	351.6	340.1	324.3	304.2	284.1	258.3	236.8
80°	335.8	334.3	334.3	325.7	318.6	305.6	289.9	269.8	248.2	221.0	196.6
82.5°	311.4	309.9	307.1	299.9	289.9	276.9	261.2	239.6	216.7	192.3	162.1
85°	285.6	284.1	281.2	274.1	264.0	252.5	235.3	213.8	190.8	163.6	134.9
87.5°	262.6	261.2	256.9	252.5	241.1	228.2	210.9	190.8	166.5	140.6	111.9
90°	246.8	243.9	241.1	235.3	225.3	210.9	193.7	172.2	147.8	122.0	93.3
92.5°	228.2	226.7	222.4	216.7	208.1	193.7	176.5	156.4	132.0	107.6	80.4
95°	209.5	208.1	205.2	199.5	190.8	177.9	162.1	142.1	119.1	94.7	70.3
97.5°	192.3	192.3	188.0	183.7	173.6	163.6	147.8	129.1	107.6	86.1	63.1
100°	177.9	177.9	173.6	167.9	160.7	150.7	134.9	117.7	97.6	77.5	54.5
102.5°	165.0	163.6	160.7	155.0	147.8	137.8	123.4	107.6	89.0	68.9	48.8
105°	153.5	152.1	149.2	143.5	137.8	126.3	114.8	99.0	80.4	61.7	43.0
107.5°	142.1	140.6	139.2	133.4	126.3	116.2	104.8	89.0	73.2	56.0	38.7
110°	132.0	130.6	127.7	122.0	114.8	106.2	94.7	81.8	66.0	50.2	34.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	123.4	122.0	119.1	113.4	107.6	97.6	87.5	73.2	60.3	45.9	30.1
115°	114.8	113.4	110.5	104.8	97.6	89.0	78.9	67.4	53.1	40.2	27.3
117.5°	106.2	104.8	101.9	97.6	90.4	81.8	71.7	60.3	47.4	37.3	24.4
120°	99.0	96.1	93.3	89.0	81.8	74.6	64.6	54.5	43.0	33.0	21.5
122.5°	91.8	89.0	86.1	81.8	74.6	67.4	57.4	48.8	40.2	30.1	20.1
125°	83.2	81.8	78.9	74.6	67.4	60.3	53.1	44.5	35.9	27.3	17.2
127.5°	76.1	74.6	71.7	66.0	60.3	54.5	47.4	40.2	31.6	23.0	15.8
130°	70.3	67.4	64.6	60.3	56.0	50.2	43.0	35.9	28.7	20.1	14.3
132.5°	63.1	60.3	57.4	54.5	50.2	44.5	38.7	31.6	25.8	18.7	12.9
135°	57.4	54.5	51.7	48.8	44.5	40.2	34.4	28.7	23.0	17.2	11.5
137.5°	50.2	48.8	47.4	44.5	40.2	35.9	31.6	24.4	20.1	15.8	10.0
140°	45.9	44.5	43.0	38.7	35.9	31.6	27.3	21.5	17.2	12.9	8.6
142.5°	41.6	40.2	37.3	34.4	31.6	28.7	23.0	20.1	15.8	11.5	8.6
145°	35.9	34.4	33.0	30.1	27.3	23.0	20.1	17.2	14.3	10.0	7.2
147.5°	33.0	31.6	28.7	25.8	23.0	20.1	18.7	15.8	11.5	8.6	5.7
150°	27.3	25.8	24.4	21.5	20.1	18.7	15.8	12.9	10.0	7.2	5.7
152.5°	23.0	21.5	20.1	20.1	17.2	15.8	12.9	11.5	8.6	7.2	4.3
155°	20.1	20.1	18.7	17.2	14.3	12.9	11.5	8.6	7.2	5.7	4.3
157.5°	17.2	15.8	14.3	14.3	12.9	11.5	8.6	7.2	5.7	5.7	4.3
160°	14.3	12.9	12.9	11.5	10.0	8.6	7.2	7.2	5.7	4.3	4.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2613.0	2597.2	2611.6	2630.3	2630.3	2627.4	2624.5	2630.3	2644.6	2638.9	2621.6
5°	2608.7	2592.9	2605.9	2624.5	2624.5	2620.2	2617.3	2621.6	2637.4	2630.3	2614.5
7.5°	2600.1	2585.8	2594.4	2611.6	2611.6	2607.3	2604.4	2610.2	2623.1	2615.9	2598.7
10°	2584.3	2568.5	2578.6	2594.4	2592.9	2590.1	2585.8	2592.9	2604.4	2594.4	2574.3
12.5°	2564.2	2548.5	2557.1	2571.4	2570.0	2564.2	2561.4	2565.7	2575.7	2570.0	2548.5
15°	2537.0	2521.2	2528.4	2542.7	2538.4	2534.1	2528.4	2529.8	2542.7	2532.7	2509.7
17.5°	2504.0	2486.8	2492.5	2505.4	2501.1	2496.8	2489.6	2491.1	2505.4	2491.1	2466.7
20°	2463.8	2445.1	2449.4	2465.2	2458.1	2450.9	2443.7	2443.7	2458.1	2442.3	2415.0
22.5°	2420.7	2402.1	2405.0	2416.4	2410.7	2397.8	2390.6	2394.9	2402.1	2382.0	2353.3
25°	2367.7	2343.3	2347.6	2359.0	2354.7	2337.5	2330.3	2333.2	2330.3	2314.6	2284.4
27.5°	2306.0	2280.1	2283.0	2290.2	2284.4	2268.6	2260.0	2261.5	2255.7	2235.6	2201.2
30°	2228.5	2215.6	2214.1	2218.4	2209.8	2194.0	2184.0	2181.1	2179.7	2151.0	2109.4
32.5°	2149.5	2138.1	2130.9	2136.6	2126.6	2110.8	2093.6	2093.6	2079.2	2052.0	2016.1
35°	2069.2	2050.5	2043.4	2047.7	2036.2	2016.1	2001.7	1994.6	1973.0	1938.6	1899.9
37.5°	1965.9	1953.0	1944.3	1948.7	1935.7	1921.4	1894.1	1886.9	1864.0	1816.6	1767.8
40°	1853.9	1843.9	1835.3	1839.6	1825.2	1803.7	1779.3	1767.8	1742.0	1688.9	1650.2
42.5°	1733.4	1729.1	1719.1	1734.8	1706.1	1684.6	1660.2	1641.6	1615.7	1558.3	1513.9
45°	1605.7	1615.7	1592.8	1597.1	1578.4	1559.8	1534.0	1506.7	1480.9	1426.3	1376.1
47.5°	1470.8	1478.0	1462.2	1465.1	1445.0	1427.8	1404.8	1370.4	1341.7	1294.3	1249.8
50°	1331.6	1328.8	1328.8	1325.9	1310.1	1288.6	1265.6	1234.1	1205.4	1162.3	1125.0
52.5°	1183.8	1189.6	1192.4	1199.6	1179.5	1166.6	1130.7	1103.5	1081.9	1037.5	1005.9
55°	1041.8	1061.9	1056.1	1059.0	1036.0	1026.0	997.3	975.8	944.2	918.4	898.3
57.5°	912.6	916.9	919.8	924.1	914.1	894.0	871.0	853.8	829.4	807.9	793.5
60°	787.8	787.8	789.2	796.4	786.3	769.1	751.9	739.0	721.8	708.9	700.3
62.5°	670.1	680.2	681.6	675.9	662.9	654.3	642.9	635.7	624.2	619.9	617.0
65°	561.1	561.1	561.1	563.9	556.8	551.0	543.8	542.4	546.7	541.0	543.8
67.5°	469.2	464.9	462.1	463.5	460.6	457.7	456.3	460.6	469.2	469.2	476.4
70°	390.3	381.7	376.0	376.0	376.0	377.4	381.7	390.3	404.7	410.4	420.4
72.5°	325.7	307.1	298.5	298.5	299.9	305.6	318.6	334.3	347.3	358.7	371.7
75°	264.0	245.4	232.5	231.0	233.9	242.5	261.2	275.5	297.0	312.8	328.6
77.5°	213.8	190.8	175.1	173.6	177.9	190.8	213.8	232.5	256.9	274.1	291.3
80°	170.8	144.9	132.0	123.4	130.6	146.4	172.2	195.2	218.1	241.1	262.6
82.5°	136.3	111.9	91.8	83.2	91.8	113.4	137.8	165.0	188.0	212.4	233.9
85°	107.6	81.8	58.8	50.2	60.3	83.2	110.5	137.8	163.6	188.0	209.5
87.5°	84.7	58.8	35.9	24.4	37.3	61.7	87.5	114.8	142.1	166.5	188.0
90°	66.0	41.6	20.1	2.9	21.5	44.5	70.3	96.1	123.4	147.8	169.3
92.5°	56.0	31.6	11.5	0.0	12.9	33.0	57.4	83.2	107.6	132.0	153.5
95°	47.4	25.8	8.6	0.0	8.6	25.8	47.4	70.3	94.7	119.1	140.6
97.5°	40.2	20.1	5.7	0.0	5.7	20.1	38.7	61.7	83.2	106.2	126.3
100°	34.4	17.2	4.3	0.0	4.3	15.8	33.0	53.1	74.6	96.1	114.8
102.5°	30.1	14.3	2.9	0.0	2.9	12.9	27.3	45.9	64.6	84.7	103.3
105°	25.8	11.5	2.9	0.0	1.4	10.0	23.0	40.2	57.4	76.1	93.3
107.5°	23.0	10.0	2.9	0.0	1.4	8.6	20.1	34.4	51.7	67.4	83.2
110°	20.1	8.6	2.9	0.0	1.4	5.7	17.2	30.1	44.5	60.3	76.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	17.2	7.2	1.4	0.0	0.0	4.3	14.3	25.8	38.7	54.5	67.4
115°	15.8	7.2	1.4	0.0	0.0	2.9	11.5	23.0	34.4	48.8	60.3
117.5°	14.3	5.7	1.4	0.0	1.4	2.9	10.0	20.1	30.1	41.6	54.5
120°	12.9	5.7	1.4	0.0	1.4	1.4	7.2	17.2	25.8	37.3	47.4
122.5°	11.5	5.7	1.4	0.0	1.4	1.4	5.7	14.3	23.0	33.0	41.6
125°	10.0	4.3	2.9	1.4	1.4	1.4	4.3	11.5	20.1	27.3	37.3
127.5°	10.0	4.3	2.9	1.4	1.4	1.4	2.9	10.0	15.8	24.4	33.0
130°	8.6	4.3	2.9	1.4	1.4	1.4	1.4	7.2	14.3	20.1	27.3
132.5°	7.2	4.3	2.9	1.4	1.4	1.4	1.4	4.3	10.0	17.2	23.0
135°	7.2	4.3	2.9	1.4	1.4	1.4	1.4	2.9	7.2	12.9	18.7
137.5°	5.7	2.9	2.9	1.4	1.4	1.4	1.4	1.4	5.7	10.0	14.3
140°	5.7	2.9	2.9	1.4	1.4	1.4	1.4	1.4	4.3	7.2	11.5
142.5°	4.3	2.9	2.9	1.4	1.4	1.4	1.4	1.4	2.9	5.7	8.6
145°	4.3	2.9	2.9	1.4	1.4	1.4	1.4	1.4	1.4	2.9	5.7
147.5°	4.3	4.3	2.9	1.4	1.4	1.4	1.4	1.4	1.4	2.9	4.3
150°	4.3	2.9	2.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.9
152.5°	4.3	2.9	2.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.9
155°	4.3	2.9	2.9	1.4	1.4	1.4	1.4	1.4	1.4	2.9	2.9
157.5°	4.3	2.9	2.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.9
160°	4.3	2.9	2.9	1.4	2.9	1.4	2.9	2.9	2.9	2.9	2.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2615.9	2588.6	2603.0	2598.7	2604.4	2615.9	2614.5	2611.6	2611.6	2607.3	2601.6
5°	2607.3	2581.5	2594.4	2587.2	2594.4	2604.4	2603.0	2598.7	2601.6	2594.4	2587.2
7.5°	2590.1	2567.1	2578.6	2572.9	2578.6	2588.6	2584.3	2582.9	2585.8	2574.3	2570.0
10°	2570.0	2544.2	2557.1	2549.9	2557.1	2564.2	2561.4	2555.6	2561.4	2549.9	2545.6
12.5°	2538.4	2516.9	2525.5	2522.6	2526.9	2534.1	2528.4	2524.1	2526.9	2516.9	2508.3
15°	2504.0	2482.5	2489.6	2485.3	2488.2	2496.8	2486.8	2485.3	2482.5	2472.4	2469.5
17.5°	2459.5	2439.4	2446.6	2439.4	2443.7	2440.8	2439.4	2432.2	2432.2	2420.7	2412.1
20°	2405.0	2387.7	2383.4	2377.7	2383.4	2377.7	2369.1	2363.4	2361.9	2350.4	2343.3
22.5°	2341.8	2321.7	2324.6	2308.8	2310.3	2301.6	2287.3	2281.6	2275.8	2262.9	2252.9
25°	2265.8	2245.7	2231.3	2221.3	2208.4	2206.9	2188.3	2173.9	2172.5	2156.7	2155.3
27.5°	2179.7	2156.7	2145.2	2120.8	2105.1	2092.1	2076.4	2062.0	2054.8	2037.6	2026.1
30°	2080.7	2054.8	2026.1	2008.9	1984.5	1974.5	1947.2	1930.0	1924.3	1905.6	1897.0
32.5°	1968.7	1941.5	1918.5	1885.5	1858.3	1843.9	1816.6	1799.4	1792.2	1772.2	1760.7
35°	1846.8	1816.6	1789.4	1757.8	1736.3	1711.9	1678.9	1661.7	1645.9	1638.7	1630.1
37.5°	1719.1	1686.1	1654.5	1622.9	1604.3	1575.6	1546.9	1535.4	1516.7	1509.6	1501.0
40°	1587.0	1554.0	1523.9	1493.8	1472.3	1446.4	1420.6	1416.3	1396.2	1389.0	1383.3
42.5°	1456.5	1422.0	1387.6	1366.1	1350.3	1324.5	1307.2	1302.9	1285.7	1281.4	1281.4
45°	1338.8	1295.8	1267.1	1248.4	1235.5	1214.0	1199.6	1196.7	1182.4	1179.5	1179.5
47.5°	1212.5	1172.3	1150.8	1139.3	1127.9	1112.1	1103.5	1103.5	1089.1	1086.3	1084.8
50°	1094.9	1057.6	1041.8	1030.3	1028.9	1017.4	1010.2	1007.3	1007.3	997.3	998.7
52.5°	982.9	964.3	951.4	944.2	935.6	928.4	922.7	922.7	918.4	911.2	914.1
55°	879.6	858.1	859.5	853.8	849.5	845.2	846.6	838.0	836.6	830.8	835.1
57.5°	776.3	776.3	773.4	769.1	762.0	764.8	764.8	764.8	757.6	753.3	757.6
60°	688.8	693.1	685.9	690.2	687.3	688.8	685.9	685.9	681.6	680.2	681.6
62.5°	611.3	618.5	615.6	621.3	618.5	619.9	622.8	617.0	614.2	611.3	614.2
65°	542.4	551.0	549.6	553.9	555.3	556.8	558.2	555.3	552.5	549.6	548.1
67.5°	482.1	490.8	496.5	497.9	499.4	503.7	502.2	499.4	496.5	492.2	490.8
70°	427.6	439.1	446.3	449.1	454.9	452.0	452.0	450.6	447.7	443.4	442.0
72.5°	381.7	394.6	401.8	404.7	410.4	410.4	409.0	407.5	404.7	400.3	398.9
75°	341.5	353.0	363.0	368.8	373.1	373.1	371.7	370.2	367.3	364.5	363.0
77.5°	309.9	320.0	328.6	335.8	338.6	340.1	338.6	335.8	335.8	334.3	332.9
80°	278.4	289.9	298.5	305.6	309.9	309.9	308.5	309.9	307.1	305.6	304.2
82.5°	251.1	264.0	274.1	281.2	284.1	285.6	284.1	285.6	282.7	282.7	282.7
85°	226.7	239.6	251.1	256.9	261.2	262.6	262.6	262.6	261.2	261.2	261.2
87.5°	206.6	219.5	231.0	236.8	241.1	242.5	242.5	243.9	241.1	241.1	241.1
90°	188.0	200.9	212.4	218.1	222.4	225.3	225.3	226.7	225.3	223.9	223.9
92.5°	170.8	185.1	196.6	202.3	206.6	210.9	210.9	212.4	209.5	209.5	209.5
95°	156.4	170.8	180.8	188.0	192.3	195.2	196.6	196.6	195.2	195.2	195.2
97.5°	143.5	156.4	166.5	173.6	177.9	179.4	180.8	182.2	180.8	180.8	180.8
100°	130.6	143.5	153.5	159.3	165.0	166.5	167.9	169.3	169.3	167.9	167.9
102.5°	119.1	132.0	140.6	147.8	152.1	155.0	156.4	156.4	156.4	156.4	156.4
105°	107.6	120.5	129.1	136.3	140.6	143.5	144.9	146.4	146.4	144.9	144.9
107.5°	97.6	109.1	119.1	124.8	130.6	133.4	134.9	134.9	136.3	134.9	134.9
110°	87.5	100.4	109.1	114.8	120.5	123.4	124.8	126.3	126.3	126.3	126.3



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	80.4	90.4	99.0	104.8	110.5	113.4	114.8	116.2	117.7	116.2	116.2
115°	71.7	81.8	90.4	96.1	100.4	103.3	106.2	107.6	107.6	109.1	107.6
117.5°	64.6	73.2	81.8	87.5	91.8	96.1	97.6	99.0	100.4	99.0	99.0
120°	57.4	66.0	73.2	78.9	83.2	87.5	89.0	90.4	91.8	90.4	90.4
122.5°	51.7	58.8	66.0	71.7	76.1	78.9	81.8	81.8	83.2	83.2	83.2
125°	45.9	53.1	58.8	64.6	68.9	71.7	73.2	74.6	74.6	76.1	76.1
127.5°	40.2	45.9	53.1	57.4	61.7	64.6	66.0	67.4	67.4	68.9	68.9
130°	34.4	40.2	45.9	50.2	54.5	57.4	58.8	60.3	61.7	61.7	61.7
132.5°	30.1	35.9	40.2	44.5	47.4	50.2	53.1	54.5	54.5	54.5	54.5
135°	24.4	30.1	34.4	38.7	41.6	44.5	45.9	48.8	48.8	48.8	48.8
137.5°	20.1	25.8	30.1	33.0	35.9	38.7	40.2	41.6	43.0	43.0	43.0
140°	15.8	20.1	24.4	28.7	31.6	33.0	35.9	35.9	37.3	37.3	37.3
142.5°	11.5	15.8	18.7	23.0	25.8	28.7	30.1	31.6	31.6	31.6	31.6
145°	8.6	11.5	14.3	17.2	21.5	23.0	24.4	25.8	27.3	27.3	27.3
147.5°	5.7	8.6	10.0	12.9	15.8	18.7	20.1	21.5	23.0	23.0	23.0
150°	4.3	5.7	8.6	10.0	11.5	14.3	17.2	17.2	18.7	18.7	17.2
152.5°	2.9	4.3	5.7	7.2	8.6	10.0	12.9	12.9	14.3	14.3	14.3
155°	2.9	2.9	2.9	4.3	5.7	7.2	8.6	10.0	10.0	10.0	10.0
157.5°	2.9	2.9	2.9	2.9	2.9	4.3	5.7	7.2	7.2	7.2	7.2
160°	2.9	2.9	1.4	1.4	2.9	2.9	2.9	2.9	4.3	4.3	4.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2605.9	2608.7	2608.7	2605.9	2604.4	2610.2	2603.0	2575.7	2584.3	2587.2	2595.8
5°	2592.9	2595.8	2595.8	2595.8	2592.9	2598.7	2591.5	2564.2	2574.3	2578.6	2584.3
7.5°	2574.3	2575.7	2578.6	2577.2	2574.3	2582.9	2575.7	2548.5	2555.6	2562.8	2570.0
10°	2549.9	2549.9	2551.3	2554.2	2551.3	2558.5	2551.3	2526.9	2534.1	2538.4	2547.0
12.5°	2516.9	2519.8	2521.2	2519.8	2518.3	2524.1	2521.2	2498.2	2501.1	2509.7	2518.3
15°	2472.4	2472.4	2479.6	2476.7	2476.7	2482.5	2485.3	2459.5	2463.8	2476.7	2485.3
17.5°	2417.9	2419.3	2425.1	2427.9	2426.5	2436.5	2438.0	2417.9	2416.4	2432.2	2440.8
20°	2347.6	2350.4	2357.6	2363.4	2363.4	2374.8	2379.1	2366.2	2367.7	2384.9	2387.7
22.5°	2261.5	2261.5	2274.4	2283.0	2290.2	2297.3	2310.3	2298.8	2298.8	2321.7	2334.7
25°	2155.3	2165.3	2169.6	2186.9	2196.9	2217.0	2228.5	2229.9	2231.3	2252.9	2261.5
27.5°	2037.6	2040.5	2053.4	2073.5	2085.0	2103.6	2125.2	2129.5	2136.6	2165.3	2178.2
30°	1904.2	1912.8	1918.5	1947.2	1963.0	1987.4	2014.7	2024.7	2030.4	2069.2	2085.0
32.5°	1767.8	1770.7	1795.1	1810.9	1829.6	1855.4	1886.9	1905.6	1917.1	1957.3	1980.2
35°	1631.5	1637.3	1657.4	1677.4	1696.1	1721.9	1754.9	1780.8	1800.9	1836.7	1866.9
37.5°	1506.7	1521.0	1525.3	1545.4	1559.8	1585.6	1608.6	1645.9	1666.0	1703.3	1742.0
40°	1394.8	1399.1	1401.9	1422.0	1432.1	1456.5	1489.5	1513.9	1541.1	1568.4	1614.3
42.5°	1284.3	1287.1	1291.4	1302.9	1314.4	1331.6	1356.0	1380.4	1409.1	1449.3	1479.4
45°	1182.4	1185.3	1188.1	1195.3	1205.4	1221.1	1236.9	1254.1	1282.8	1317.3	1348.8
47.5°	1087.7	1093.4	1093.4	1094.9	1102.0	1115.0	1126.4	1148.0	1163.7	1182.4	1218.3
50°	997.3	1001.6	1003.0	1003.0	1007.3	1015.9	1018.8	1033.2	1047.5	1064.7	1090.6
52.5°	912.6	912.6	911.2	916.9	916.9	922.7	924.1	932.7	942.8	961.4	972.9
55°	832.3	832.3	836.6	833.7	833.7	836.6	835.1	836.6	845.2	856.7	866.7
57.5°	754.8	753.3	757.6	754.8	753.3	756.2	759.1	753.3	754.8	766.3	766.3
60°	677.3	678.7	683.0	680.2	680.2	680.2	677.3	674.4	671.6	678.7	681.6
62.5°	615.6	611.3	615.6	611.3	614.2	612.7	609.9	604.1	605.5	602.7	599.8
65°	551.0	551.0	552.5	548.1	551.0	551.0	546.7	545.3	536.7	533.8	526.6
67.5°	495.1	495.1	496.5	493.6	493.6	495.1	490.8	486.4	477.8	473.5	463.5
70°	446.3	446.3	446.3	444.8	444.8	444.8	442.0	436.2	427.6	420.4	407.5
72.5°	401.8	403.2	401.8	401.8	406.1	401.8	397.5	391.7	384.6	370.2	358.7
75°	365.9	367.3	365.9	365.9	365.9	364.5	363.0	354.4	345.8	334.3	317.1
77.5°	334.3	334.3	335.8	334.3	334.3	332.9	328.6	321.4	311.4	301.3	281.2
80°	304.2	305.6	307.1	308.5	305.6	304.2	299.9	294.2	281.2	269.8	249.7
82.5°	282.7	281.2	282.7	284.1	281.2	279.8	275.5	268.3	258.3	242.5	222.4
85°	261.2	259.7	259.7	261.2	259.7	256.9	252.5	245.4	235.3	219.5	199.5
87.5°	239.6	241.1	242.5	241.1	239.6	236.8	232.5	225.3	213.8	200.9	179.4
90°	223.9	223.9	223.9	223.9	222.4	219.5	215.2	206.6	196.6	180.8	162.1
92.5°	209.5	209.5	209.5	209.5	208.1	203.8	199.5	192.3	180.8	165.0	147.8
95°	195.2	196.6	195.2	195.2	192.3	190.8	183.7	176.5	166.5	150.7	132.0
97.5°	179.4	180.8	179.4	179.4	177.9	175.1	170.8	162.1	152.1	137.8	120.5
100°	167.9	167.9	166.5	166.5	165.0	162.1	156.4	149.2	139.2	124.8	107.6
102.5°	155.0	156.4	155.0	155.0	152.1	149.2	144.9	137.8	127.7	113.4	97.6
105°	144.9	144.9	143.5	143.5	140.6	137.8	133.4	124.8	116.2	103.3	87.5
107.5°	134.9	134.9	133.4	133.4	130.6	127.7	122.0	114.8	106.2	93.3	78.9
110°	124.8	124.8	124.8	123.4	120.5	116.2	111.9	104.8	96.1	84.7	70.3





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	117.7	116.2	114.8	113.4	110.5	107.6	101.9	94.7	86.1	76.1	63.1
115°	107.6	107.6	106.2	104.8	101.9	97.6	93.3	87.5	78.9	67.4	56.0
117.5°	99.0	99.0	97.6	96.1	93.3	89.0	84.7	78.9	70.3	60.3	50.2
120°	90.4	90.4	89.0	87.5	84.7	80.4	77.5	70.3	63.1	53.1	44.5
122.5°	83.2	81.8	81.8	78.9	77.5	73.2	68.9	63.1	56.0	47.4	38.7
125°	74.6	74.6	73.2	71.7	70.3	66.0	61.7	56.0	48.8	41.6	34.4
127.5°	67.4	67.4	66.0	64.6	63.1	58.8	54.5	50.2	43.0	35.9	28.7
130°	60.3	60.3	58.8	57.4	56.0	51.7	48.8	43.0	37.3	31.6	24.4
132.5°	54.5	54.5	53.1	51.7	48.8	45.9	43.0	37.3	33.0	27.3	21.5
135°	48.8	47.4	47.4	45.9	43.0	40.2	37.3	33.0	27.3	23.0	17.2
137.5°	43.0	41.6	40.2	38.7	37.3	34.4	31.6	28.7	24.4	18.7	14.3
140°	37.3	35.9	35.9	34.4	31.6	30.1	27.3	23.0	20.1	15.8	11.5
142.5°	31.6	31.6	30.1	28.7	27.3	25.8	23.0	20.1	15.8	12.9	8.6
145°	27.3	25.8	25.8	24.4	23.0	20.1	18.7	15.8	12.9	10.0	7.2
147.5°	21.5	21.5	21.5	20.1	18.7	17.2	15.8	12.9	10.0	7.2	4.3
150°	17.2	17.2	17.2	15.8	14.3	12.9	11.5	10.0	7.2	4.3	2.9
152.5°	14.3	14.3	12.9	12.9	11.5	10.0	8.6	7.2	4.3	2.9	2.9
155°	10.0	10.0	10.0	8.6	8.6	7.2	5.7	4.3	2.9	2.9	2.9
157.5°	7.2	7.2	7.2	5.7	5.7	4.3	4.3	2.9	2.9	2.9	2.9
160°	4.3	4.3	4.3	4.3	2.9	2.9	2.9	2.9	2.9	2.9	2.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	330°	335°	340°	345°	350°	355°	360°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2591.5	2590.1	2601.6	2601.6	2588.6	2608.7	2630.3
5°	2582.9	2581.5	2592.9	2592.9	2581.5	2601.6	2624.5
7.5°	2565.7	2567.1	2578.6	2581.5	2567.1	2585.8	2610.2
10°	2547.0	2545.6	2558.5	2561.4	2549.9	2567.1	2590.1
12.5°	2516.9	2516.9	2529.8	2534.1	2522.6	2542.7	2564.2
15°	2485.3	2485.3	2493.9	2501.1	2491.1	2509.7	2531.2
17.5°	2445.1	2443.7	2452.3	2460.9	2450.9	2471.0	2493.9
20°	2393.5	2393.5	2403.5	2413.6	2406.4	2425.1	2450.9
22.5°	2339.0	2333.2	2350.4	2357.6	2353.3	2372.0	2397.8
25°	2270.1	2268.6	2285.9	2295.9	2290.2	2310.3	2333.2
27.5°	2195.5	2194.0	2211.2	2224.2	2221.3	2239.9	2265.8
30°	2105.1	2112.2	2128.0	2149.5	2142.4	2162.5	2189.7
32.5°	2010.4	2017.5	2036.2	2059.1	2060.6	2076.4	2103.6
35°	1897.0	1915.6	1928.6	1958.7	1964.4	1980.2	2008.9
37.5°	1777.9	1799.4	1826.7	1849.6	1861.1	1874.0	1907.0
40°	1644.4	1676.0	1706.1	1733.4	1747.8	1760.7	1792.2
42.5°	1523.9	1548.3	1577.0	1604.3	1630.1	1641.6	1674.6
45°	1387.6	1416.3	1442.1	1475.1	1501.0	1513.9	1546.9
47.5°	1254.1	1282.8	1317.3	1340.2	1367.5	1380.4	1412.0
50°	1126.4	1152.3	1181.0	1208.2	1231.2	1242.7	1269.9
52.5°	1000.2	1027.4	1054.7	1071.9	1096.3	1104.9	1127.9
55°	888.2	906.9	931.3	941.3	965.7	971.5	987.2
57.5°	780.6	793.5	802.1	819.4	836.6	849.5	868.1
60°	683.0	688.8	694.5	704.6	718.9	723.2	730.4
62.5°	595.5	594.1	605.5	608.4	609.9	624.2	617.0
65°	518.0	519.4	509.4	505.1	510.8	515.1	512.3
67.5°	453.4	444.8	436.2	426.2	417.6	421.9	417.6
70°	390.3	383.1	368.8	354.4	348.7	340.1	335.8
72.5°	340.1	322.9	308.5	289.9	279.8	269.8	262.6
75°	301.3	276.9	256.9	236.8	222.4	208.1	205.2
77.5°	261.2	238.2	215.2	193.7	172.2	156.4	150.7
80°	229.6	208.1	180.8	155.0	132.0	111.9	104.8
82.5°	200.9	177.9	150.7	123.4	97.6	76.1	67.4
85°	176.5	152.1	124.8	97.6	71.7	48.8	37.3
87.5°	157.8	130.6	103.3	77.5	50.2	27.3	14.3
90°	140.6	114.8	89.0	61.7	35.9	14.3	0.0
92.5°	124.8	100.4	74.6	50.2	27.3	8.6	1.4
95°	110.5	89.0	63.1	40.2	20.1	5.7	1.4
97.5°	99.0	77.5	54.5	33.0	15.8	4.3	1.4
100°	89.0	67.4	47.4	27.3	12.9	2.9	1.4
102.5°	78.9	60.3	40.2	23.0	10.0	1.4	1.4
105°	70.3	53.1	34.4	20.1	8.6	1.4	1.4
107.5°	63.1	47.4	30.1	17.2	5.7	1.4	1.4
110°	56.0	40.2	25.8	14.3	4.3	1.4	1.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-78SL-LN-UNV-L930-CD1-U

**CANDELA DISTRIBUTION (continued):**

	330°	335°	340°	345°	350°	355°	360°
112.5°	50.2	35.9	23.0	11.5	2.9	1.4	1.4
115°	44.5	31.6	20.1	10.0	2.9	1.4	1.4
117.5°	38.7	27.3	17.2	7.2	1.4	1.4	1.4
120°	34.4	24.4	14.3	5.7	1.4	1.4	1.4
122.5°	30.1	20.1	11.5	4.3	1.4	1.4	1.4
125°	25.8	17.2	10.0	2.9	1.4	1.4	1.4
127.5°	21.5	14.3	7.2	2.9	1.4	1.4	1.4
130°	18.7	11.5	5.7	1.4	1.4	1.4	1.4
132.5°	15.8	8.6	4.3	1.4	1.4	1.4	1.4
135°	12.9	7.2	2.9	1.4	1.4	1.4	1.4
137.5°	10.0	5.7	2.9	1.4	1.4	1.4	1.4
140°	7.2	4.3	1.4	1.4	1.4	1.4	1.4
142.5°	5.7	2.9	1.4	1.4	1.4	1.4	1.4
145°	4.3	2.9	1.4	1.4	1.4	1.4	1.4
147.5°	2.9	2.9	2.9	2.9	1.4	1.4	1.4
150°	2.9	2.9	1.4	1.4	2.9	1.4	1.4
152.5°	2.9	1.4	1.4	1.4	2.9	1.4	1.4
155°	2.9	2.9	2.9	2.9	2.9	2.9	1.4
157.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9
160°	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)