

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-LD5-90HL-LN-UNV-L950-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-LD5-90HL-LN-UNV-L950-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

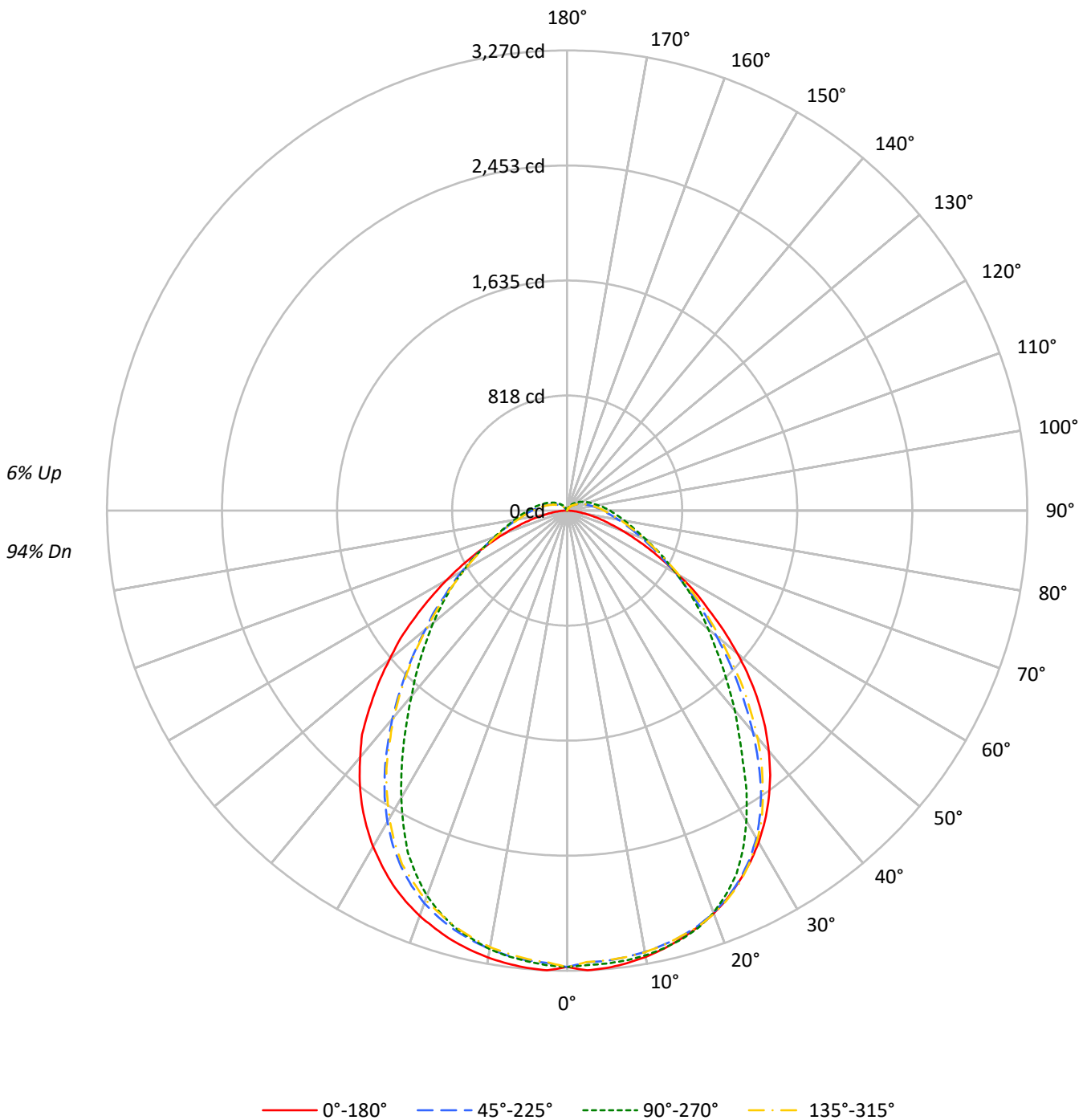
Lumens per Lamp: N/A
Luminaire Lumens: 8208.0 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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: 25 FT



TEST NUMBER: P#
CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-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	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°	26209	26209	26209	26209
5°	26396	25375	26396	25263
10°	26278	24700	26322	24357
15°	26109	23962	26228	23339
20°	25909	23013	26061	22042
25°	25493	21606	25775	20333
30°	24953	19538	25280	18088
35°	24111	17002	24577	15831
40°	22905	14870	23510	13797
45°	21313	12927	22004	12185
50°	19136	11359	19979	10785
55°	16554	10030	17757	9523
60°	13923	8806	15180	8300
65°	11413	7786	12564	7220
70°	9084	6910	10170	6391
75°	7133	6380	8031	5870
80°	5147	6156	6064	5625
85°	3170	6190	4263	5691



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	307.5	3.7
10°-20°	881.7	10.7
20°-30°	1306.7	15.9
30°-40°	1451.7	17.7
40°-50°	1316.0	16.0
50°-60°	1019.7	12.4
60°-70°	692.5	8.4
70°-80°	440.6	5.4
80°-90°	281.6	3.4
90°-100°	189.9	2.3
100°-110°	130.1	1.6
110°-120°	86.8	1.1
120°-130°	54.0	0.7
130°-140°	29.9	0.4
140°-150°	14.0	0.2
150°-160°	5.1	0.1
160°-170°	0.3	0.0
170°-180°	0.0	0.0
0°-30°	2495.9	30.4
0°-40°	3947.6	48.1
0°-60°	6283.3	76.6
0°-90°	7698.0	93.8
90°-120°	406.7	5.0
90°-150°	504.6	6.1
90°-180°	510.0	6.2
0°-180°	8208.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3243	3243	3243	3243	3243	
5°	3263	3231	3263	3217	3263	310
15°	3147	3152	3161	3070	3147	888
25°	2901	2847	2933	2680	2901	1336
35°	2498	2176	2546	2027	2498	1558
45°	1923	1556	1986	1466	1923	1477
55°	1227	1094	1317	1038	1227	1105
65°	637	735	701	682	637	639
75°	255	491	287	451	255	275
85°	46	353	62	325	46	56
90°	0	305	4	278	0	3
95°	2	260	0	243	2	1
105°	2	191	0	180	2	2
115°	2	144	0	134	2	2
125°	2	107	2	95	2	2
135°	2	75	2	61	2	1
145°	2	48	2	34	2	1
155°	2	27	2	12	2	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3
2.5°	3270.1	3266.5	3262.9	3257.6	3262.9	3277.2	3268.3	3248.7	3245.1	3213.0	3227.3
5°	3262.9	3257.6	3254.0	3248.7	3255.8	3273.7	3264.7	3246.9	3241.5	3211.2	3227.3
7.5°	3245.1	3241.5	3236.2	3236.2	3243.3	3261.2	3254.0	3234.4	3230.8	3200.5	3218.3
10°	3220.1	3218.3	3214.8	3214.8	3221.9	3243.3	3234.4	3216.6	3213.0	3184.5	3204.1
12.5°	3188.0	3189.8	3184.5	3184.5	3195.2	3216.6	3209.4	3189.8	3186.2	3161.3	3180.9
15°	3147.0	3148.8	3145.2	3147.0	3157.7	3182.7	3173.7	3155.9	3152.3	3132.7	3148.8
17.5°	3100.6	3102.4	3102.4	3100.6	3113.1	3138.1	3130.9	3114.9	3109.5	3093.5	3113.1
20°	3047.1	3047.1	3047.1	3047.1	3061.4	3086.3	3077.4	3064.9	3054.2	3041.7	3057.8
22.5°	2981.1	2979.3	2981.1	2986.4	3000.7	3020.3	3015.0	3000.7	2984.6	2977.5	2990.0
25°	2900.8	2906.1	2907.9	2913.3	2931.1	2947.2	2941.8	2927.6	2902.6	2897.2	2900.8
27.5°	2816.9	2820.5	2825.9	2824.1	2849.1	2865.1	2854.4	2841.9	2806.2	2800.9	2797.3
30°	2722.4	2727.7	2731.3	2729.5	2749.2	2767.0	2756.3	2740.2	2692.1	2688.5	2660.0
32.5°	2615.4	2620.7	2624.3	2624.3	2652.8	2660.0	2640.3	2617.1	2565.4	2552.9	2527.9
35°	2497.6	2503.0	2504.7	2504.7	2533.3	2531.5	2506.5	2474.4	2417.3	2401.3	2358.5
37.5°	2370.9	2374.5	2376.3	2387.0	2399.5	2388.8	2356.7	2315.6	2272.8	2228.2	2181.8
40°	2228.2	2233.6	2237.1	2244.3	2256.8	2244.3	2197.9	2147.9	2101.6	2051.6	2005.2
42.5°	2081.9	2098.0	2094.4	2092.6	2099.8	2065.9	2030.2	1973.1	1926.7	1875.0	1828.6
45°	1923.2	1921.4	1930.3	1933.9	1932.1	1903.5	1853.6	1801.8	1755.5	1701.9	1662.7
47.5°	1755.5	1753.7	1760.8	1764.4	1753.7	1723.4	1684.1	1625.2	1586.0	1539.6	1509.3
50°	1578.8	1578.8	1589.5	1578.8	1573.5	1543.2	1511.1	1452.2	1421.9	1380.8	1363.0
52.5°	1402.2	1418.3	1407.6	1404.0	1398.7	1368.3	1343.4	1295.2	1270.2	1252.4	1231.0
55°	1227.4	1245.2	1238.1	1232.7	1231.0	1206.0	1182.8	1147.1	1131.1	1118.6	1106.1
57.5°	1079.3	1077.5	1074.0	1068.6	1070.4	1050.8	1027.6	1008.0	1000.8	995.5	999.0
60°	908.1	922.3	917.0	918.8	920.5	917.0	897.4	884.9	886.7	888.4	893.8
62.5°	767.1	779.6	788.5	781.4	785.0	790.3	779.6	776.0	783.2	790.3	797.5
65°	636.9	649.4	658.3	656.5	667.2	677.9	676.1	679.7	695.8	704.7	713.6
67.5°	519.1	531.6	544.1	545.9	562.0	578.0	585.2	597.6	615.5	628.0	638.7
70°	417.5	428.2	442.4	451.4	472.8	494.2	506.7	531.6	542.3	560.2	567.3
72.5°	326.5	335.4	355.0	376.4	394.3	421.0	446.0	467.4	483.5	503.1	512.0
75°	255.1	258.7	280.1	305.1	330.0	360.4	387.1	410.3	431.7	451.4	465.6
77.5°	187.3	192.7	212.3	246.2	274.7	306.8	337.2	362.2	385.3	405.0	424.6
80°	130.2	140.9	162.3	196.2	228.4	264.0	292.6	321.1	346.1	365.7	385.3
82.5°	83.8	92.8	123.1	157.0	190.9	226.6	256.9	285.4	312.2	333.6	351.4
85°	46.4	58.9	89.2	124.9	158.8	194.5	226.6	255.1	281.9	301.5	319.3
87.5°	17.8	35.7	64.2	98.1	132.0	165.9	199.8	226.6	253.3	274.7	290.8
90°	0.0	21.4	48.2	82.1	116.0	149.9	182.0	210.5	235.5	255.1	273.0
92.5°	1.8	14.3	37.5	66.0	98.1	130.2	160.6	189.1	214.1	233.7	249.8
95°	1.8	10.7	30.3	57.1	85.6	116.0	144.5	171.3	194.5	214.1	230.1
97.5°	1.8	7.1	25.0	50.0	74.9	105.3	132.0	157.0	178.4	198.0	210.5
100°	1.8	7.1	21.4	42.8	67.8	94.6	119.5	144.5	164.1	180.2	194.5
102.5°	1.8	5.4	17.8	37.5	60.7	83.8	108.8	132.0	149.9	165.9	180.2
105°	1.8	5.4	16.1	32.1	53.5	76.7	98.1	119.5	139.2	153.4	165.9
107.5°	1.8	3.6	14.3	26.8	46.4	69.6	91.0	108.8	126.7	140.9	153.4
110°	1.8	3.6	12.5	25.0	41.0	62.4	82.1	99.9	116.0	130.2	140.9



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.8	3.6	10.7	23.2	37.5	55.3	74.9	91.0	107.0	119.5	130.2
115°	1.8	3.6	10.7	21.4	33.9	48.2	66.0	83.8	96.3	110.6	119.5
117.5°	1.8	3.6	8.9	17.8	32.1	44.6	60.7	74.9	89.2	101.7	110.6
120°	1.8	3.6	8.9	16.1	28.5	41.0	53.5	67.8	82.1	91.0	99.9
122.5°	1.8	3.6	7.1	16.1	25.0	37.5	48.2	60.7	73.1	83.8	92.8
125°	1.8	3.6	7.1	14.3	23.2	33.9	44.6	53.5	66.0	74.9	83.8
127.5°	1.8	3.6	7.1	12.5	21.4	30.3	41.0	50.0	58.9	67.8	74.9
130°	1.8	3.6	5.4	10.7	19.6	26.8	35.7	46.4	53.5	60.7	67.8
132.5°	1.8	3.6	5.4	10.7	16.1	23.2	32.1	41.0	48.2	55.3	60.7
135°	1.8	3.6	5.4	8.9	14.3	21.4	26.8	35.7	42.8	50.0	55.3
137.5°	1.8	3.6	5.4	8.9	12.5	17.8	23.2	30.3	37.5	42.8	50.0
140°	1.8	3.6	5.4	7.1	10.7	16.1	21.4	25.0	32.1	37.5	42.8
142.5°	1.8	3.6	5.4	7.1	10.7	14.3	17.8	21.4	26.8	32.1	37.5
145°	1.8	3.6	5.4	7.1	8.9	12.5	16.1	19.6	21.4	26.8	30.3
147.5°	1.8	3.6	5.4	7.1	7.1	10.7	14.3	16.1	19.6	21.4	25.0
150°	1.8	3.6	5.4	5.4	7.1	8.9	12.5	14.3	16.1	19.6	21.4
152.5°	1.8	3.6	5.4	5.4	7.1	8.9	10.7	12.5	14.3	16.1	17.8
155°	1.8	3.6	5.4	5.4	5.4	7.1	8.9	10.7	12.5	14.3	16.1
157.5°	3.6	3.6	3.6	5.4	5.4	7.1	7.1	8.9	10.7	10.7	12.5
160°	3.6	3.6	3.6	5.4	5.4	5.4	7.1	7.1	8.9	8.9	10.7
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°	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3
2.5°	3223.7	3229.1	3245.1	3245.1	3241.5	3238.0	3238.0	3232.6	3236.2	3243.3	3239.8
5°	3223.7	3229.1	3245.1	3245.1	3241.5	3238.0	3236.2	3230.8	3236.2	3243.3	3239.8
7.5°	3213.0	3220.1	3236.2	3236.2	3232.6	3230.8	3227.3	3223.7	3229.1	3236.2	3232.6
10°	3198.7	3205.9	3221.9	3221.9	3218.3	3218.3	3213.0	3209.4	3216.6	3221.9	3220.1
12.5°	3177.3	3186.2	3200.5	3198.7	3195.2	3196.9	3191.6	3184.5	3191.6	3196.9	3198.7
15°	3147.0	3157.7	3172.0	3168.4	3163.0	3166.6	3157.7	3152.3	3157.7	3168.4	3166.6
17.5°	3107.7	3114.9	3125.6	3125.6	3120.2	3116.7	3113.1	3107.7	3111.3	3118.4	3120.2
20°	3052.4	3061.4	3066.7	3061.4	3059.6	3054.2	3047.1	3041.7	3048.9	3059.6	3061.4
22.5°	2979.3	2981.1	2993.6	2981.1	2972.2	2970.4	2963.2	2952.5	2963.2	2972.2	2973.9
25°	2888.3	2897.2	2891.9	2870.5	2870.5	2856.2	2852.6	2847.3	2849.1	2865.1	2872.3
27.5°	2772.3	2775.9	2761.6	2743.8	2727.7	2718.8	2706.3	2708.1	2708.1	2729.5	2736.7
30°	2645.7	2626.1	2613.6	2585.0	2572.5	2551.1	2547.6	2547.6	2544.0	2554.7	2586.8
32.5°	2494.0	2467.3	2447.7	2420.9	2399.5	2378.1	2367.4	2372.7	2370.9	2397.7	2408.4
35°	2328.1	2312.1	2271.0	2237.1	2224.7	2192.5	2192.5	2176.5	2187.2	2217.5	2230.0
37.5°	2153.3	2128.3	2094.4	2057.0	2048.0	2023.1	2014.1	2005.2	2028.4	2033.8	2046.3
40°	1974.9	1951.7	1919.6	1883.9	1883.9	1853.6	1853.6	1853.6	1855.4	1866.1	1889.3
42.5°	1805.4	1780.4	1751.9	1726.9	1723.4	1700.2	1700.2	1698.4	1701.9	1710.9	1732.3
45°	1641.3	1621.7	1591.3	1578.8	1580.6	1555.7	1561.0	1555.7	1562.8	1571.7	1578.8
47.5°	1489.6	1477.2	1464.7	1446.8	1441.5	1439.7	1430.8	1423.6	1436.1	1436.1	1446.8
50°	1348.7	1341.6	1334.4	1323.7	1325.5	1318.4	1307.7	1307.7	1316.6	1318.4	1325.5
52.5°	1225.6	1216.7	1207.8	1209.6	1211.3	1207.8	1202.4	1197.1	1202.4	1206.0	1214.9
55°	1102.5	1095.4	1104.3	1100.7	1104.3	1100.7	1097.2	1093.6	1102.5	1097.2	1106.1
57.5°	991.9	999.0	1002.6	995.5	1000.8	997.3	999.0	993.7	1000.8	1004.4	1002.6
60°	890.2	900.9	895.6	897.4	904.5	900.9	893.8	899.1	906.3	908.1	906.3
62.5°	797.5	809.9	815.3	811.7	813.5	809.9	815.3	808.2	817.1	820.6	815.3
65°	713.6	727.9	731.4	731.4	731.4	727.9	733.2	735.0	738.6	738.6	735.0
67.5°	642.2	654.7	658.3	661.9	658.3	654.7	654.7	656.5	663.7	667.2	663.7
70°	578.0	590.5	592.3	592.3	594.1	597.6	590.5	594.1	599.4	601.2	599.4
72.5°	522.7	535.2	538.8	537.0	538.8	540.6	540.6	537.0	542.3	545.9	545.9
75°	478.1	485.2	488.8	488.8	490.6	492.4	492.4	490.6	494.2	496.0	497.7
77.5°	437.1	442.4	447.8	447.8	449.6	447.8	451.4	451.4	453.1	454.9	456.7
80°	396.0	403.2	406.8	408.5	412.1	413.9	413.9	413.9	415.7	417.5	417.5
82.5°	363.9	369.3	374.6	380.0	380.0	381.8	381.8	381.8	383.6	383.6	385.3
85°	331.8	339.0	344.3	347.9	349.7	351.4	351.4	353.2	353.2	353.2	355.0
87.5°	303.3	312.2	315.8	319.3	321.1	324.7	324.7	324.7	326.5	326.5	326.5
90°	283.7	292.6	296.1	299.7	301.5	303.3	303.3	305.1	305.1	306.8	306.8
92.5°	260.5	269.4	276.5	276.5	278.3	281.9	280.1	280.1	281.9	283.7	283.7
95°	242.6	249.8	255.1	256.9	258.7	258.7	258.7	260.5	258.7	260.5	260.5
97.5°	221.2	228.4	233.7	237.3	239.1	239.1	239.1	240.8	239.1	240.8	240.8
100°	203.4	210.5	215.9	217.6	221.2	221.2	221.2	221.2	221.2	221.2	223.0
102.5°	189.1	196.2	199.8	201.6	203.4	205.2	205.2	205.2	205.2	206.9	206.9
105°	174.8	182.0	185.5	187.3	189.1	190.9	190.9	190.9	192.7	192.7	190.9
107.5°	162.3	167.7	171.3	174.8	176.6	176.6	178.4	178.4	178.4	178.4	178.4
110°	149.9	155.2	160.6	164.1	164.1	165.9	165.9	167.7	167.7	165.9	167.7



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	137.4	144.5	148.1	151.6	153.4	155.2	155.2	155.2	155.2	155.2	155.2
115°	126.7	133.8	137.4	140.9	142.7	144.5	144.5	144.5	144.5	144.5	144.5
117.5°	117.7	124.9	128.4	130.2	132.0	133.8	135.6	135.6	135.6	135.6	133.8
120°	108.8	114.2	117.7	121.3	123.1	124.9	124.9	124.9	124.9	124.9	124.9
122.5°	99.9	105.3	108.8	112.4	114.2	116.0	116.0	116.0	116.0	116.0	116.0
125°	91.0	96.3	99.9	103.5	105.3	107.0	107.0	107.0	107.0	107.0	107.0
127.5°	82.1	87.4	92.8	94.6	96.3	98.1	98.1	98.1	99.9	98.1	98.1
130°	73.1	78.5	83.8	85.6	87.4	89.2	91.0	91.0	91.0	91.0	89.2
132.5°	66.0	71.4	74.9	76.7	80.3	80.3	82.1	82.1	82.1	82.1	80.3
135°	60.7	64.2	67.8	69.6	73.1	73.1	73.1	74.9	74.9	73.1	71.4
137.5°	53.5	57.1	60.7	62.4	64.2	66.0	66.0	67.8	66.0	66.0	66.0
140°	50.0	51.7	55.3	57.1	58.9	58.9	58.9	60.7	60.7	58.9	58.9
142.5°	42.8	46.4	50.0	51.7	53.5	53.5	53.5	53.5	53.5	53.5	53.5
145°	35.7	41.0	42.8	46.4	46.4	48.2	48.2	48.2	48.2	48.2	46.4
147.5°	30.3	33.9	39.2	41.0	41.0	42.8	42.8	42.8	42.8	42.8	41.0
150°	23.2	26.8	32.1	35.7	35.7	37.5	37.5	37.5	37.5	35.7	35.7
152.5°	19.6	23.2	25.0	28.5	30.3	30.3	30.3	32.1	30.3	30.3	30.3
155°	17.8	19.6	21.4	23.2	25.0	26.8	26.8	26.8	26.8	25.0	25.0
157.5°	14.3	16.1	17.8	19.6	21.4	23.2	23.2	23.2	23.2	23.2	21.4
160°	10.7	12.5	14.3	14.3	16.1	17.8	19.6	17.8	17.8	17.8	17.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3
2.5°	3236.2	3234.4	3239.8	3230.8	3204.1	3211.2	3207.6	3223.7	3227.3	3230.8	3246.9
5°	3236.2	3234.4	3238.0	3230.8	3202.3	3207.6	3204.1	3220.1	3223.7	3225.5	3241.5
7.5°	3229.1	3227.3	3232.6	3223.7	3193.4	3200.5	3195.2	3211.2	3213.0	3214.8	3229.1
10°	3214.8	3213.0	3216.6	3209.4	3179.1	3186.2	3179.1	3195.2	3195.2	3198.7	3209.4
12.5°	3193.4	3189.8	3196.9	3188.0	3154.1	3163.0	3159.5	3170.2	3172.0	3173.7	3184.5
15°	3163.0	3159.5	3164.8	3159.5	3129.1	3130.9	3125.6	3141.6	3143.4	3139.9	3150.6
17.5°	3118.4	3114.9	3125.6	3122.0	3091.7	3098.8	3097.0	3100.6	3106.0	3097.0	3111.3
20°	3063.1	3066.7	3070.3	3072.1	3048.9	3048.9	3047.1	3054.2	3059.6	3052.4	3063.1
22.5°	2981.1	2990.0	3000.7	3004.3	2988.2	2986.4	2997.1	2993.6	2998.9	2995.3	3002.5
25°	2877.6	2895.4	2906.1	2916.9	2907.9	2911.5	2927.6	2931.1	2931.1	2929.3	2936.5
27.5°	2749.2	2772.3	2792.0	2815.2	2806.2	2813.4	2840.1	2843.7	2850.8	2843.7	2858.0
30°	2595.7	2617.1	2654.6	2688.5	2692.1	2702.8	2740.2	2743.8	2763.4	2756.3	2761.6
32.5°	2442.3	2453.0	2495.8	2529.7	2551.1	2577.9	2618.9	2626.1	2652.8	2658.2	2658.2
35°	2249.6	2280.0	2319.2	2367.4	2394.1	2422.7	2478.0	2488.7	2527.9	2540.4	2554.7
37.5°	2087.3	2115.8	2140.8	2190.8	2238.9	2271.0	2315.6	2342.4	2383.4	2406.6	2424.5
40°	1914.2	1937.4	1964.2	2014.1	2055.2	2103.3	2147.9	2180.1	2231.8	2258.6	2281.7
42.5°	1750.1	1768.0	1796.5	1832.2	1875.0	1928.5	1971.3	2008.8	2064.1	2101.6	2128.3
45°	1603.8	1614.5	1639.5	1666.3	1703.7	1759.0	1800.1	1848.2	1892.8	1932.1	1964.2
47.5°	1466.5	1480.7	1493.2	1511.1	1544.9	1578.8	1627.0	1673.4	1718.0	1760.8	1792.9
50°	1339.8	1339.8	1359.4	1371.9	1395.1	1425.4	1462.9	1495.0	1550.3	1580.6	1621.7
52.5°	1216.7	1223.8	1234.5	1241.7	1259.5	1279.1	1309.5	1336.2	1382.6	1411.1	1450.4
55°	1107.9	1115.0	1120.4	1123.9	1134.6	1157.8	1168.5	1189.9	1222.0	1245.2	1279.1
57.5°	1004.4	1008.0	1013.3	1015.1	1016.9	1031.2	1040.1	1045.4	1077.5	1100.7	1129.3
60°	909.8	909.8	915.2	913.4	911.6	918.8	917.0	922.3	942.0	956.2	968.7
62.5°	820.6	820.6	822.4	818.9	817.1	817.1	809.9	815.3	820.6	822.4	831.3
65°	738.6	747.5	740.4	742.1	731.4	727.9	724.3	713.6	711.8	704.7	708.3
67.5°	665.4	672.6	665.4	665.4	656.5	649.4	640.5	622.6	617.3	603.0	599.4
70°	606.6	601.2	604.8	599.4	588.7	579.8	567.3	553.0	535.2	517.4	504.9
72.5°	549.5	549.5	545.9	540.6	535.2	517.4	503.1	487.0	465.6	442.4	424.6
75°	494.2	496.0	496.0	490.6	481.7	465.6	449.6	426.4	403.2	376.4	353.2
77.5°	454.9	454.9	454.9	446.0	437.1	422.8	403.2	378.2	353.2	321.1	294.4
80°	417.5	415.7	415.7	405.0	396.0	380.0	360.4	335.4	308.6	274.7	244.4
82.5°	387.1	385.3	381.8	372.9	360.4	344.3	324.7	297.9	269.4	239.1	201.6
85°	355.0	353.2	349.7	340.7	328.3	314.0	292.6	265.8	237.3	203.4	167.7
87.5°	326.5	324.7	319.3	314.0	299.7	283.7	262.2	237.3	206.9	174.8	139.2
90°	306.8	303.3	299.7	292.6	280.1	262.2	240.8	214.1	183.8	151.6	116.0
92.5°	283.7	281.9	276.5	269.4	258.7	240.8	219.4	194.5	164.1	133.8	99.9
95°	260.5	258.7	255.1	248.0	237.3	221.2	201.6	176.6	148.1	117.7	87.4
97.5°	239.1	239.1	233.7	228.4	215.9	203.4	183.8	160.6	133.8	107.0	78.5
100°	221.2	221.2	215.9	208.7	199.8	187.3	167.7	146.3	121.3	96.3	67.8
102.5°	205.2	203.4	199.8	192.7	183.8	171.3	153.4	133.8	110.6	85.6	60.7
105°	190.9	189.1	185.5	178.4	171.3	157.0	142.7	123.1	99.9	76.7	53.5
107.5°	176.6	174.8	173.0	165.9	157.0	144.5	130.2	110.6	91.0	69.6	48.2
110°	164.1	162.3	158.8	151.6	142.7	132.0	117.7	101.7	82.1	62.4	42.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	153.4	151.6	148.1	140.9	133.8	121.3	108.8	91.0	74.9	57.1	37.5
115°	142.7	140.9	137.4	130.2	121.3	110.6	98.1	83.8	66.0	50.0	33.9
117.5°	132.0	130.2	126.7	121.3	112.4	101.7	89.2	74.9	58.9	46.4	30.3
120°	123.1	119.5	116.0	110.6	101.7	92.8	80.3	67.8	53.5	41.0	26.8
122.5°	114.2	110.6	107.0	101.7	92.8	83.8	71.4	60.7	50.0	37.5	25.0
125°	103.5	101.7	98.1	92.8	83.8	74.9	66.0	55.3	44.6	33.9	21.4
127.5°	94.6	92.8	89.2	82.1	74.9	67.8	58.9	50.0	39.2	28.5	19.6
130°	87.4	83.8	80.3	74.9	69.6	62.4	53.5	44.6	35.7	25.0	17.8
132.5°	78.5	74.9	71.4	67.8	62.4	55.3	48.2	39.2	32.1	23.2	16.1
135°	71.4	67.8	64.2	60.7	55.3	50.0	42.8	35.7	28.5	21.4	14.3
137.5°	62.4	60.7	58.9	55.3	50.0	44.6	39.2	30.3	25.0	19.6	12.5
140°	57.1	55.3	53.5	48.2	44.6	39.2	33.9	26.8	21.4	16.1	10.7
142.5°	51.7	50.0	46.4	42.8	39.2	35.7	28.5	25.0	19.6	14.3	10.7
145°	44.6	42.8	41.0	37.5	33.9	28.5	25.0	21.4	17.8	12.5	8.9
147.5°	41.0	39.2	35.7	32.1	28.5	25.0	23.2	19.6	14.3	10.7	7.1
150°	33.9	32.1	30.3	26.8	25.0	23.2	19.6	16.1	12.5	8.9	7.1
152.5°	28.5	26.8	25.0	25.0	21.4	19.6	16.1	14.3	10.7	8.9	5.4
155°	25.0	25.0	23.2	21.4	17.8	16.1	14.3	10.7	8.9	7.1	5.4
157.5°	21.4	19.6	17.8	17.8	16.1	14.3	10.7	8.9	7.1	7.1	5.4
160°	17.8	16.1	16.1	14.3	12.5	10.7	8.9	8.9	7.1	5.4	5.4
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: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3
2.5°	3248.7	3229.1	3246.9	3270.1	3270.1	3266.5	3262.9	3270.1	3287.9	3280.8	3259.4
5°	3243.3	3223.7	3239.8	3262.9	3262.9	3257.6	3254.0	3259.4	3279.0	3270.1	3250.5
7.5°	3232.6	3214.8	3225.5	3246.9	3246.9	3241.5	3238.0	3245.1	3261.2	3252.2	3230.8
10°	3213.0	3193.4	3205.9	3225.5	3223.7	3220.1	3214.8	3223.7	3238.0	3225.5	3200.5
12.5°	3188.0	3168.4	3179.1	3196.9	3195.2	3188.0	3184.5	3189.8	3202.3	3195.2	3168.4
15°	3154.1	3134.5	3143.4	3161.3	3155.9	3150.6	3143.4	3145.2	3161.3	3148.8	3120.2
17.5°	3113.1	3091.7	3098.8	3114.9	3109.5	3104.2	3095.3	3097.0	3114.9	3097.0	3066.7
20°	3063.1	3039.9	3045.3	3064.9	3056.0	3047.1	3038.2	3038.2	3056.0	3036.4	3002.5
22.5°	3009.6	2986.4	2990.0	3004.3	2997.1	2981.1	2972.2	2977.5	2986.4	2961.5	2925.8
25°	2943.6	2913.3	2918.6	2932.9	2927.6	2906.1	2897.2	2900.8	2897.2	2877.6	2840.1
27.5°	2866.9	2834.8	2838.4	2847.3	2840.1	2820.5	2809.8	2811.6	2804.5	2779.5	2736.7
30°	2770.6	2754.5	2752.7	2758.1	2747.4	2727.7	2715.3	2711.7	2709.9	2674.2	2622.5
32.5°	2672.4	2658.2	2649.2	2656.4	2643.9	2624.3	2602.9	2602.9	2585.0	2551.1	2506.5
35°	2572.5	2549.3	2540.4	2545.8	2531.5	2506.5	2488.7	2479.8	2453.0	2410.2	2362.0
37.5°	2444.1	2428.0	2417.3	2422.7	2406.6	2388.8	2354.9	2346.0	2317.4	2258.6	2197.9
40°	2304.9	2292.4	2281.7	2287.1	2269.3	2242.5	2212.2	2197.9	2165.8	2099.8	2051.6
42.5°	2155.1	2149.7	2137.2	2156.9	2121.2	2094.4	2064.1	2040.9	2008.8	1937.4	1882.1
45°	1996.3	2008.8	1980.2	1985.6	1962.4	1939.2	1907.1	1873.2	1841.1	1773.3	1710.9
47.5°	1828.6	1837.5	1817.9	1821.5	1796.5	1775.1	1746.5	1703.7	1668.0	1609.2	1553.9
50°	1655.6	1652.0	1652.0	1648.4	1628.8	1602.0	1573.5	1534.2	1498.6	1445.0	1398.7
52.5°	1471.8	1478.9	1482.5	1491.4	1466.5	1450.4	1405.8	1371.9	1345.1	1289.8	1250.6
55°	1295.2	1320.2	1313.0	1316.6	1288.1	1275.6	1239.9	1213.1	1173.9	1141.8	1116.8
57.5°	1134.6	1140.0	1143.5	1148.9	1136.4	1111.4	1082.9	1061.5	1031.2	1004.4	986.6
60°	979.4	979.4	981.2	990.1	977.6	956.2	934.8	918.8	897.4	881.3	870.6
62.5°	833.1	845.6	847.4	840.3	824.2	813.5	799.2	790.3	776.0	770.7	767.1
65°	697.5	697.5	697.5	701.1	692.2	685.1	676.1	674.4	679.7	672.6	676.1
67.5°	583.4	578.0	574.5	576.2	572.7	569.1	567.3	572.7	583.4	583.4	592.3
70°	485.2	474.5	467.4	467.4	467.4	469.2	474.5	485.2	503.1	510.2	522.7
72.5°	405.0	381.8	371.1	371.1	372.9	380.0	396.0	415.7	431.7	446.0	462.1
75°	328.3	305.1	289.0	287.2	290.8	301.5	324.7	342.5	369.3	388.9	408.5
77.5°	265.8	237.3	217.6	215.9	221.2	237.3	265.8	289.0	319.3	340.7	362.2
80°	212.3	180.2	164.1	153.4	162.3	182.0	214.1	242.6	271.2	299.7	326.5
82.5°	169.5	139.2	114.2	103.5	114.2	140.9	171.3	205.2	233.7	264.0	290.8
85°	133.8	101.7	73.1	62.4	74.9	103.5	137.4	171.3	203.4	233.7	260.5
87.5°	105.3	73.1	44.6	30.3	46.4	76.7	108.8	142.7	176.6	206.9	233.7
90°	82.1	51.7	25.0	3.6	26.8	55.3	87.4	119.5	153.4	183.8	210.5
92.5°	69.6	39.2	14.3	0.0	16.1	41.0	71.4	103.5	133.8	164.1	190.9
95°	58.9	32.1	10.7	0.0	10.7	32.1	58.9	87.4	117.7	148.1	174.8
97.5°	50.0	25.0	7.1	0.0	7.1	25.0	48.2	76.7	103.5	132.0	157.0
100°	42.8	21.4	5.4	0.0	5.4	19.6	41.0	66.0	92.8	119.5	142.7
102.5°	37.5	17.8	3.6	0.0	3.6	16.1	33.9	57.1	80.3	105.3	128.4
105°	32.1	14.3	3.6	0.0	1.8	12.5	28.5	50.0	71.4	94.6	116.0
107.5°	28.5	12.5	3.6	0.0	1.8	10.7	25.0	42.8	64.2	83.8	103.5
110°	25.0	10.7	3.6	0.0	1.8	7.1	21.4	37.5	55.3	74.9	94.6



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	21.4	8.9	1.8	0.0	0.0	5.4	17.8	32.1	48.2	67.8	83.8
115°	19.6	8.9	1.8	0.0	0.0	3.6	14.3	28.5	42.8	60.7	74.9
117.5°	17.8	7.1	1.8	0.0	1.8	3.6	12.5	25.0	37.5	51.7	67.8
120°	16.1	7.1	1.8	0.0	1.8	1.8	8.9	21.4	32.1	46.4	58.9
122.5°	14.3	7.1	1.8	0.0	1.8	1.8	7.1	17.8	28.5	41.0	51.7
125°	12.5	5.4	3.6	1.8	1.8	1.8	5.4	14.3	25.0	33.9	46.4
127.5°	12.5	5.4	3.6	1.8	1.8	1.8	3.6	12.5	19.6	30.3	41.0
130°	10.7	5.4	3.6	1.8	1.8	1.8	1.8	8.9	17.8	25.0	33.9
132.5°	8.9	5.4	3.6	1.8	1.8	1.8	1.8	5.4	12.5	21.4	28.5
135°	8.9	5.4	3.6	1.8	1.8	1.8	1.8	3.6	8.9	16.1	23.2
137.5°	7.1	3.6	3.6	1.8	1.8	1.8	1.8	1.8	7.1	12.5	17.8
140°	7.1	3.6	3.6	1.8	1.8	1.8	1.8	1.8	5.4	8.9	14.3
142.5°	5.4	3.6	3.6	1.8	1.8	1.8	1.8	1.8	3.6	7.1	10.7
145°	5.4	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	3.6	7.1
147.5°	5.4	5.4	3.6	1.8	1.8	1.8	1.8	1.8	1.8	3.6	5.4
150°	5.4	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.6
152.5°	5.4	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.6
155°	5.4	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	3.6	3.6
157.5°	5.4	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.6
160°	5.4	3.6	3.6	1.8	3.6	1.8	3.6	3.6	3.6	3.6	3.6
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: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3
2.5°	3252.2	3218.3	3236.2	3230.8	3238.0	3252.2	3250.5	3246.9	3246.9	3241.5	3234.4
5°	3241.5	3209.4	3225.5	3216.6	3225.5	3238.0	3236.2	3230.8	3234.4	3225.5	3216.6
7.5°	3220.1	3191.6	3205.9	3198.7	3205.9	3218.3	3213.0	3211.2	3214.8	3200.5	3195.2
10°	3195.2	3163.0	3179.1	3170.2	3179.1	3188.0	3184.5	3177.3	3184.5	3170.2	3164.8
12.5°	3155.9	3129.1	3139.9	3136.3	3141.6	3150.6	3143.4	3138.1	3141.6	3129.1	3118.4
15°	3113.1	3086.3	3095.3	3089.9	3093.5	3104.2	3091.7	3089.9	3086.3	3073.8	3070.3
17.5°	3057.8	3032.8	3041.7	3032.8	3038.2	3034.6	3032.8	3023.9	3023.9	3009.6	2998.9
20°	2990.0	2968.6	2963.2	2956.1	2963.2	2956.1	2945.4	2938.3	2936.5	2922.2	2913.3
22.5°	2911.5	2886.5	2890.1	2870.5	2872.3	2861.5	2843.7	2836.6	2829.4	2813.4	2800.9
25°	2816.9	2792.0	2774.1	2761.6	2745.6	2743.8	2720.6	2702.8	2701.0	2681.4	2679.6
27.5°	2709.9	2681.4	2667.1	2636.8	2617.1	2601.1	2581.5	2563.6	2554.7	2533.3	2519.0
30°	2586.8	2554.7	2519.0	2497.6	2467.3	2454.8	2420.9	2399.5	2392.4	2369.2	2358.5
32.5°	2447.7	2413.8	2385.2	2344.2	2310.3	2292.4	2258.6	2237.1	2228.2	2203.2	2189.0
35°	2296.0	2258.6	2224.7	2185.4	2158.6	2128.3	2087.3	2065.9	2046.3	2037.3	2026.6
37.5°	2137.2	2096.2	2057.0	2017.7	1994.5	1958.8	1923.2	1908.9	1885.7	1876.8	1866.1
40°	1973.1	1932.1	1894.6	1857.2	1830.4	1798.3	1766.2	1760.8	1735.8	1726.9	1719.8
42.5°	1810.8	1768.0	1725.1	1698.4	1678.8	1646.6	1625.2	1619.9	1598.5	1593.1	1593.1
45°	1664.5	1611.0	1575.3	1552.1	1536.0	1509.3	1491.4	1487.9	1470.0	1466.5	1466.5
47.5°	1507.5	1457.5	1430.8	1416.5	1402.2	1382.6	1371.9	1371.9	1354.1	1350.5	1348.7
50°	1361.2	1314.8	1295.2	1280.9	1279.1	1264.9	1255.9	1252.4	1252.4	1239.9	1241.7
52.5°	1222.0	1198.9	1182.8	1173.9	1163.2	1154.3	1147.1	1147.1	1141.8	1132.8	1136.4
55°	1093.6	1066.8	1068.6	1061.5	1056.1	1050.8	1052.6	1041.9	1040.1	1032.9	1038.3
57.5°	965.1	965.1	961.6	956.2	947.3	950.9	950.9	950.9	942.0	936.6	942.0
60°	856.3	861.7	852.8	858.1	854.5	856.3	852.8	852.8	847.4	845.6	847.4
62.5°	760.0	768.9	765.3	772.5	768.9	770.7	774.3	767.1	763.6	760.0	763.6
65°	674.4	685.1	683.3	688.6	690.4	692.2	694.0	690.4	686.8	683.3	681.5
67.5°	599.4	610.1	617.3	619.1	620.8	626.2	624.4	620.8	617.3	611.9	610.1
70°	531.6	545.9	554.8	558.4	565.5	562.0	562.0	560.2	556.6	551.3	549.5
72.5°	474.5	490.6	499.5	503.1	510.2	510.2	508.4	506.7	503.1	497.7	496.0
75°	424.6	438.9	451.4	458.5	463.8	463.8	462.1	460.3	456.7	453.1	451.4
77.5°	385.3	397.8	408.5	417.5	421.0	422.8	421.0	417.5	417.5	415.7	413.9
80°	346.1	360.4	371.1	380.0	385.3	385.3	383.6	385.3	381.8	380.0	378.2
82.5°	312.2	328.3	340.7	349.7	353.2	355.0	353.2	355.0	351.4	351.4	351.4
85°	281.9	297.9	312.2	319.3	324.7	326.5	326.5	326.5	324.7	324.7	324.7
87.5°	256.9	273.0	287.2	294.4	299.7	301.5	301.5	303.3	299.7	299.7	299.7
90°	233.7	249.8	264.0	271.2	276.5	280.1	280.1	281.9	280.1	278.3	278.3
92.5°	212.3	230.1	244.4	251.5	256.9	262.2	262.2	264.0	260.5	260.5	260.5
95°	194.5	212.3	224.8	233.7	239.1	242.6	244.4	244.4	242.6	242.6	242.6
97.5°	178.4	194.5	206.9	215.9	221.2	223.0	224.8	226.6	224.8	224.8	224.8
100°	162.3	178.4	190.9	198.0	205.2	206.9	208.7	210.5	210.5	208.7	208.7
102.5°	148.1	164.1	174.8	183.8	189.1	192.7	194.5	194.5	194.5	194.5	194.5
105°	133.8	149.9	160.6	169.5	174.8	178.4	180.2	182.0	182.0	180.2	180.2
107.5°	121.3	135.6	148.1	155.2	162.3	165.9	167.7	167.7	169.5	167.7	167.7
110°	108.8	124.9	135.6	142.7	149.9	153.4	155.2	157.0	157.0	157.0	157.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	99.9	112.4	123.1	130.2	137.4	140.9	142.7	144.5	146.3	144.5	144.5
115°	89.2	101.7	112.4	119.5	124.9	128.4	132.0	133.8	133.8	135.6	133.8
117.5°	80.3	91.0	101.7	108.8	114.2	119.5	121.3	123.1	124.9	123.1	123.1
120°	71.4	82.1	91.0	98.1	103.5	108.8	110.6	112.4	114.2	112.4	112.4
122.5°	64.2	73.1	82.1	89.2	94.6	98.1	101.7	101.7	103.5	103.5	103.5
125°	57.1	66.0	73.1	80.3	85.6	89.2	91.0	92.8	92.8	94.6	94.6
127.5°	50.0	57.1	66.0	71.4	76.7	80.3	82.1	83.8	83.8	85.6	85.6
130°	42.8	50.0	57.1	62.4	67.8	71.4	73.1	74.9	76.7	76.7	76.7
132.5°	37.5	44.6	50.0	55.3	58.9	62.4	66.0	67.8	67.8	67.8	67.8
135°	30.3	37.5	42.8	48.2	51.7	55.3	57.1	60.7	60.7	60.7	60.7
137.5°	25.0	32.1	37.5	41.0	44.6	48.2	50.0	51.7	53.5	53.5	53.5
140°	19.6	25.0	30.3	35.7	39.2	41.0	44.6	44.6	46.4	46.4	46.4
142.5°	14.3	19.6	23.2	28.5	32.1	35.7	37.5	39.2	39.2	39.2	39.2
145°	10.7	14.3	17.8	21.4	26.8	28.5	30.3	32.1	33.9	33.9	33.9
147.5°	7.1	10.7	12.5	16.1	19.6	23.2	25.0	26.8	28.5	28.5	28.5
150°	5.4	7.1	10.7	12.5	14.3	17.8	21.4	21.4	23.2	23.2	21.4
152.5°	3.6	5.4	7.1	8.9	10.7	12.5	16.1	16.1	17.8	17.8	17.8
155°	3.6	3.6	3.6	5.4	7.1	8.9	10.7	12.5	12.5	12.5	12.5
157.5°	3.6	3.6	3.6	3.6	3.6	5.4	7.1	8.9	8.9	8.9	8.9
160°	3.6	3.6	1.8	1.8	3.6	3.6	3.6	3.6	5.4	5.4	5.4
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: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3
2.5°	3239.8	3243.3	3243.3	3239.8	3238.0	3245.1	3236.2	3202.3	3213.0	3216.6	3227.3
5°	3223.7	3227.3	3227.3	3227.3	3223.7	3230.8	3221.9	3188.0	3200.5	3205.9	3213.0
7.5°	3200.5	3202.3	3205.9	3204.1	3200.5	3211.2	3202.3	3168.4	3177.3	3186.2	3195.2
10°	3170.2	3170.2	3172.0	3175.5	3172.0	3180.9	3172.0	3141.6	3150.6	3155.9	3166.6
12.5°	3129.1	3132.7	3134.5	3132.7	3130.9	3138.1	3134.5	3106.0	3109.5	3120.2	3130.9
15°	3073.8	3073.8	3082.8	3079.2	3079.2	3086.3	3089.9	3057.8	3063.1	3079.2	3089.9
17.5°	3006.1	3007.8	3015.0	3018.5	3016.8	3029.2	3031.0	3006.1	3004.3	3023.9	3034.6
20°	2918.6	2922.2	2931.1	2938.3	2938.3	2952.5	2957.9	2941.8	2943.6	2965.0	2968.6
22.5°	2811.6	2811.6	2827.7	2838.4	2847.3	2856.2	2872.3	2858.0	2858.0	2886.5	2902.6
25°	2679.6	2692.1	2697.4	2718.8	2731.3	2756.3	2770.6	2772.3	2774.1	2800.9	2811.6
27.5°	2533.3	2536.9	2552.9	2577.9	2592.2	2615.4	2642.1	2647.5	2656.4	2692.1	2708.1
30°	2367.4	2378.1	2385.2	2420.9	2440.5	2470.8	2504.7	2517.2	2524.4	2572.5	2592.2
32.5°	2197.9	2201.5	2231.8	2251.4	2274.6	2306.7	2346.0	2369.2	2383.4	2433.4	2461.9
35°	2028.4	2035.6	2060.5	2085.5	2108.7	2140.8	2181.8	2214.0	2238.9	2283.5	2321.0
37.5°	1873.2	1891.0	1896.4	1921.4	1939.2	1971.3	1999.9	2046.3	2071.2	2117.6	2165.8
40°	1734.1	1739.4	1743.0	1768.0	1780.4	1810.8	1851.8	1882.1	1916.0	1949.9	2007.0
42.5°	1596.7	1600.3	1605.6	1619.9	1634.2	1655.6	1685.9	1716.2	1751.9	1801.8	1839.3
45°	1470.0	1473.6	1477.2	1486.1	1498.6	1518.2	1537.8	1559.2	1594.9	1637.7	1677.0
47.5°	1352.3	1359.4	1359.4	1361.2	1370.1	1386.2	1400.4	1427.2	1446.8	1470.0	1514.6
50°	1239.9	1245.2	1247.0	1247.0	1252.4	1263.1	1266.6	1284.5	1302.3	1323.7	1355.8
52.5°	1134.6	1134.6	1132.8	1140.0	1140.0	1147.1	1148.9	1159.6	1172.1	1195.3	1209.6
55°	1034.7	1034.7	1040.1	1036.5	1036.5	1040.1	1038.3	1040.1	1050.8	1065.1	1077.5
57.5°	938.4	936.6	942.0	938.4	936.6	940.2	943.7	936.6	938.4	952.7	952.7
60°	842.1	843.8	849.2	845.6	845.6	845.6	842.1	838.5	834.9	843.8	847.4
62.5°	765.3	760.0	765.3	760.0	763.6	761.8	758.2	751.1	752.9	749.3	745.7
65°	685.1	685.1	686.8	681.5	685.1	685.1	679.7	677.9	667.2	663.7	654.7
67.5°	615.5	615.5	617.3	613.7	613.7	615.5	610.1	604.8	594.1	588.7	576.2
70°	554.8	554.8	554.8	553.0	553.0	553.0	549.5	542.3	531.6	522.7	506.7
72.5°	499.5	501.3	499.5	499.5	504.9	499.5	494.2	487.0	478.1	460.3	446.0
75°	454.9	456.7	454.9	454.9	454.9	453.1	451.4	440.6	429.9	415.7	394.3
77.5°	415.7	415.7	417.5	415.7	415.7	413.9	408.5	399.6	387.1	374.6	349.7
80°	378.2	380.0	381.8	383.6	380.0	378.2	372.9	365.7	349.7	335.4	310.4
82.5°	351.4	349.7	351.4	353.2	349.7	347.9	342.5	333.6	321.1	301.5	276.5
85°	324.7	322.9	322.9	324.7	322.9	319.3	314.0	305.1	292.6	273.0	248.0
87.5°	297.9	299.7	301.5	299.7	297.9	294.4	289.0	280.1	265.8	249.8	223.0
90°	278.3	278.3	278.3	278.3	276.5	273.0	267.6	256.9	244.4	224.8	201.6
92.5°	260.5	260.5	260.5	260.5	258.7	253.3	248.0	239.1	224.8	205.2	183.8
95°	242.6	244.4	242.6	242.6	239.1	237.3	228.4	219.4	206.9	187.3	164.1
97.5°	223.0	224.8	223.0	223.0	221.2	217.6	212.3	201.6	189.1	171.3	149.9
100°	208.7	208.7	206.9	206.9	205.2	201.6	194.5	185.5	173.0	155.2	133.8
102.5°	192.7	194.5	192.7	192.7	189.1	185.5	180.2	171.3	158.8	140.9	121.3
105°	180.2	180.2	178.4	178.4	174.8	171.3	165.9	155.2	144.5	128.4	108.8
107.5°	167.7	167.7	165.9	165.9	162.3	158.8	151.6	142.7	132.0	116.0	98.1
110°	155.2	155.2	155.2	153.4	149.9	144.5	139.2	130.2	119.5	105.3	87.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	146.3	144.5	142.7	140.9	137.4	133.8	126.7	117.7	107.0	94.6	78.5
115°	133.8	133.8	132.0	130.2	126.7	121.3	116.0	108.8	98.1	83.8	69.6
117.5°	123.1	123.1	121.3	119.5	116.0	110.6	105.3	98.1	87.4	74.9	62.4
120°	112.4	112.4	110.6	108.8	105.3	99.9	96.3	87.4	78.5	66.0	55.3
122.5°	103.5	101.7	101.7	98.1	96.3	91.0	85.6	78.5	69.6	58.9	48.2
125°	92.8	92.8	91.0	89.2	87.4	82.1	76.7	69.6	60.7	51.7	42.8
127.5°	83.8	83.8	82.1	80.3	78.5	73.1	67.8	62.4	53.5	44.6	35.7
130°	74.9	74.9	73.1	71.4	69.6	64.2	60.7	53.5	46.4	39.2	30.3
132.5°	67.8	67.8	66.0	64.2	60.7	57.1	53.5	46.4	41.0	33.9	26.8
135°	60.7	58.9	58.9	57.1	53.5	50.0	46.4	41.0	33.9	28.5	21.4
137.5°	53.5	51.7	50.0	48.2	46.4	42.8	39.2	35.7	30.3	23.2	17.8
140°	46.4	44.6	44.6	42.8	39.2	37.5	33.9	28.5	25.0	19.6	14.3
142.5°	39.2	39.2	37.5	35.7	33.9	32.1	28.5	25.0	19.6	16.1	10.7
145°	33.9	32.1	32.1	30.3	28.5	25.0	23.2	19.6	16.1	12.5	8.9
147.5°	26.8	26.8	26.8	25.0	23.2	21.4	19.6	16.1	12.5	8.9	5.4
150°	21.4	21.4	21.4	19.6	17.8	16.1	14.3	12.5	8.9	5.4	3.6
152.5°	17.8	17.8	16.1	16.1	14.3	12.5	10.7	8.9	5.4	3.6	3.6
155°	12.5	12.5	12.5	10.7	10.7	8.9	7.1	5.4	3.6	3.6	3.6
157.5°	8.9	8.9	8.9	7.1	7.1	5.4	5.4	3.6	3.6	3.6	3.6
160°	5.4	5.4	5.4	5.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3	3243.3
2.5°	3221.9	3220.1	3234.4	3234.4	3218.3	3243.3	3270.1
5°	3211.2	3209.4	3223.7	3223.7	3209.4	3234.4	3262.9
7.5°	3189.8	3191.6	3205.9	3209.4	3191.6	3214.8	3245.1
10°	3166.6	3164.8	3180.9	3184.5	3170.2	3191.6	3220.1
12.5°	3129.1	3129.1	3145.2	3150.6	3136.3	3161.3	3188.0
15°	3089.9	3089.9	3100.6	3109.5	3097.0	3120.2	3147.0
17.5°	3039.9	3038.2	3048.9	3059.6	3047.1	3072.1	3100.6
20°	2975.7	2975.7	2988.2	3000.7	2991.8	3015.0	3047.1
22.5°	2907.9	2900.8	2922.2	2931.1	2925.8	2949.0	2981.1
25°	2822.3	2820.5	2841.9	2854.4	2847.3	2872.3	2900.8
27.5°	2729.5	2727.7	2749.2	2765.2	2761.6	2784.8	2816.9
30°	2617.1	2626.1	2645.7	2672.4	2663.5	2688.5	2722.4
32.5°	2499.4	2508.3	2531.5	2560.0	2561.8	2581.5	2615.4
35°	2358.5	2381.6	2397.7	2435.2	2442.3	2461.9	2497.6
37.5°	2210.4	2237.1	2271.0	2299.6	2313.9	2329.9	2370.9
40°	2044.5	2083.7	2121.2	2155.1	2172.9	2189.0	2228.2
42.5°	1894.6	1924.9	1960.6	1994.5	2026.6	2040.9	2081.9
45°	1725.1	1760.8	1792.9	1834.0	1866.1	1882.1	1923.2
47.5°	1559.2	1594.9	1637.7	1666.3	1700.2	1716.2	1755.5
50°	1400.4	1432.6	1468.2	1502.1	1530.7	1544.9	1578.8
52.5°	1243.5	1277.3	1311.2	1332.7	1363.0	1373.7	1402.2
55°	1104.3	1127.5	1157.8	1170.3	1200.6	1207.8	1227.4
57.5°	970.5	986.6	997.3	1018.7	1040.1	1056.1	1079.3
60°	849.2	856.3	863.5	875.9	893.8	899.1	908.1
62.5°	740.4	738.6	752.9	756.4	758.2	776.0	767.1
65°	644.0	645.8	633.3	628.0	635.1	640.5	636.9
67.5°	563.7	553.0	542.3	529.8	519.1	524.5	519.1
70°	485.2	476.3	458.5	440.6	433.5	422.8	417.5
72.5°	422.8	401.4	383.6	360.4	347.9	335.4	326.5
75°	374.6	344.3	319.3	294.4	276.5	258.7	255.1
77.5°	324.7	296.1	267.6	240.8	214.1	194.5	187.3
80°	285.4	258.7	224.8	192.7	164.1	139.2	130.2
82.5°	249.8	221.2	187.3	153.4	121.3	94.6	83.8
85°	219.4	189.1	155.2	121.3	89.2	60.7	46.4
87.5°	196.2	162.3	128.4	96.3	62.4	33.9	17.8
90°	174.8	142.7	110.6	76.7	44.6	17.8	0.0
92.5°	155.2	124.9	92.8	62.4	33.9	10.7	1.8
95°	137.4	110.6	78.5	50.0	25.0	7.1	1.8
97.5°	123.1	96.3	67.8	41.0	19.6	5.4	1.8
100°	110.6	83.8	58.9	33.9	16.1	3.6	1.8
102.5°	98.1	74.9	50.0	28.5	12.5	1.8	1.8
105°	87.4	66.0	42.8	25.0	10.7	1.8	1.8
107.5°	78.5	58.9	37.5	21.4	7.1	1.8	1.8
110°	69.6	50.0	32.1	17.8	5.4	1.8	1.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-90HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	62.4	44.6	28.5	14.3	3.6	1.8	1.8
115°	55.3	39.2	25.0	12.5	3.6	1.8	1.8
117.5°	48.2	33.9	21.4	8.9	1.8	1.8	1.8
120°	42.8	30.3	17.8	7.1	1.8	1.8	1.8
122.5°	37.5	25.0	14.3	5.4	1.8	1.8	1.8
125°	32.1	21.4	12.5	3.6	1.8	1.8	1.8
127.5°	26.8	17.8	8.9	3.6	1.8	1.8	1.8
130°	23.2	14.3	7.1	1.8	1.8	1.8	1.8
132.5°	19.6	10.7	5.4	1.8	1.8	1.8	1.8
135°	16.1	8.9	3.6	1.8	1.8	1.8	1.8
137.5°	12.5	7.1	3.6	1.8	1.8	1.8	1.8
140°	8.9	5.4	1.8	1.8	1.8	1.8	1.8
142.5°	7.1	3.6	1.8	1.8	1.8	1.8	1.8
145°	5.4	3.6	1.8	1.8	1.8	1.8	1.8
147.5°	3.6	3.6	3.6	3.6	1.8	1.8	1.8
150°	3.6	3.6	1.8	1.8	3.6	1.8	1.8
152.5°	3.6	1.8	1.8	1.8	3.6	1.8	1.8
155°	3.6	3.6	3.6	3.6	3.6	3.6	1.8
157.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6
160°	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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)