

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: P1213104

Luminaire Tested: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213104
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33524)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
METALIC FINISH REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

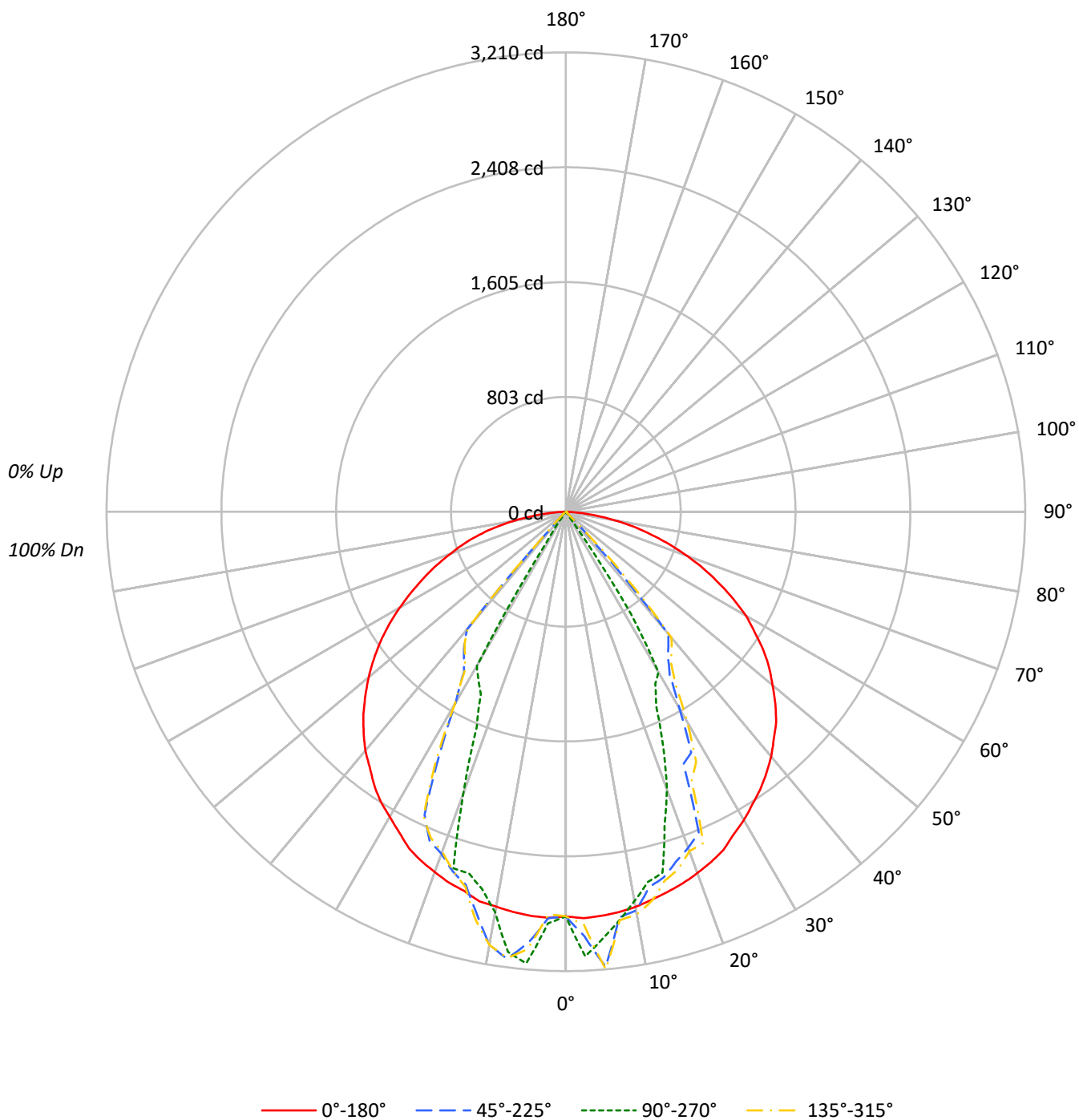
Lumens per Lamp: N/A
Luminaire Lumens: 4018.9 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 0.81 / 0.97
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 39
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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	112	108	105	103	109	106	103	101	102	100	98	98	96	95	95	93	92	90		
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81		
3	98	90	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72		
4	91	82	75	70	89	81	74	69	78	73	69	76	72	68	74	70	67	65		
5	85	75	68	63	84	74	68	63	72	66	62	71	65	61	69	64	61	59		
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54		
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49		
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45		
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42		
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	22841	22841	22841	22841
5°	22934	23491	22927	24877
10°	22879	21257	22866	21870
15°	22817	19841	22760	19892
20°	22843	15628	22778	15820
25°	22909	11309	22797	10672
30°	22804	9921	22563	9537
35°	22872	219	22537	265
40°	22951	47	22401	47
45°	23032	28	22166	21
50°	22856	22	21807	22
55°	22721	16	21325	16
60°	22291	17	20550	17
65°	21130	26	19625	18
70°	19603	29	18661	29
75°	17339	33	17624	33
80°	14085	37	14887	37
85°	8287	44	8458	44

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 2°

Vertical Angle: 45°

Luminance: 24868 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.6	7.1
10°-20°	773.5	19.2
20°-30°	984.2	24.5
30°-40°	831.4	20.7
40°-50°	543.6	13.5
50°-60°	342.5	8.5
60°-70°	182.3	4.5
70°-80°	66.4	1.7
80°-90°	11.4	0.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2041.3	50.8
0°-40°	2872.7	71.5
0°-60°	3758.8	93.5
0°-90°	4018.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4018.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2826	2826	2826	2826	2826	
5°	2835	2991	2834	3168	2835	270
15°	2750	2610	2743	2617	2750	777
25°	2607	1490	2594	1406	2607	1199
35°	2369	28	2334	34	2369	1482
45°	2078	3	2000	2	2078	1598
55°	1685	2	1581	2	1685	1501
65°	1179	2	1095	2	1179	1168
75°	620	2	630	2	620	658
85°	121	2	124	2	121	153
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2842.6	2844.3	2845.1	2846.8	2849.4	2850.2	2851.9	2850.2	2850.2	2850.2	2850.2
5°	2834.9	2838.3	2840.9	2844.3	2850.2	2851.1	2857.8	2858.7	2862.1	2868.9	2874.0
7.5°	2822.2	2825.6	2830.7	2839.2	2847.7	2857.0	2868.9	2881.6	2899.4	2916.4	2937.6
10°	2803.6	2807.8	2813.7	2821.4	2862.9	2868.9	2895.2	2931.6	2941.8	2995.3	3035.1
12.5°	2776.4	2790.8	2806.1	2812.9	2852.8	2915.5	3003.8	2985.9	2966.4	3141.2	3138.6
15°	2750.1	2769.6	2762.0	2817.1	2853.6	2963.0	2925.7	3005.4	3151.4	3115.7	3117.4
17.5°	2722.1	2726.4	2768.8	2814.6	2879.9	2935.9	2981.7	3091.1	3120.0	3122.5	3091.1
20°	2686.5	2706.9	2768.8	2810.3	2920.6	2946.9	3046.2	3102.2	3090.3	3061.4	3008.0
22.5°	2650.0	2711.9	2774.7	2833.2	2910.4	2980.8	3030.0	3056.3	2994.4	2880.8	2819.7
25°	2606.8	2643.2	2725.5	2811.2	2907.9	2948.6	2977.5	2935.0	2854.5	2752.7	2650.0
27.5°	2539.7	2598.3	2703.5	2800.2	2887.5	2936.7	2890.1	2788.3	2658.5	2591.5	2544.8
30°	2488.0	2564.3	2650.9	2744.2	2834.9	2863.8	2745.0	2628.8	2539.7	2472.7	2462.6
32.5°	2425.2	2533.8	2616.1	2705.2	2781.5	2743.3	2628.0	2477.8	2404.0	2378.6	2388.8
35°	2369.2	2451.5	2559.3	2646.6	2701.8	2616.1	2433.7	2340.4	2304.8	2319.2	2300.5
37.5°	2302.2	2410.8	2510.1	2585.6	2566.9	2438.0	2283.6	2224.2	2228.4	2216.5	2180.9
40°	2232.7	2336.2	2439.6	2510.9	2445.6	2248.8	2146.1	2133.4	2136.0	2097.8	2046.9
42.5°	2151.2	2245.4	2348.9	2413.4	2272.5	2119.0	2049.4	2051.1	2029.1	1975.6	1948.5
45°	2078.3	2164.8	2272.5	2278.5	2105.4	1977.3	1957.0	1934.9	1885.7	1867.9	1847.5
47.5°	1985.0	2080.8	2169.9	2137.7	1941.7	1862.0	1846.7	1798.3	1773.7	1760.2	1743.2
50°	1885.7	1982.4	2063.9	1972.2	1787.3	1768.7	1718.6	1680.4	1663.5	1649.1	1633.8
52.5°	1791.6	1871.3	1954.4	1796.7	1668.6	1650.7	1593.9	1571.9	1554.9	1538.8	1535.4
55°	1684.7	1755.1	1811.9	1629.5	1554.9	1513.3	1472.6	1457.3	1441.2	1433.6	1446.3
57.5°	1563.4	1643.1	1634.6	1465.0	1431.9	1371.7	1356.4	1346.2	1334.3	1339.4	1233.4
60°	1453.9	1515.0	1473.5	1344.5	1288.5	1247.8	1234.2	1227.5	1234.2	1130.8	994.2
62.5°	1319.1	1387.8	1303.8	1203.7	1144.3	1124.8	1112.9	1122.3	1023.0	909.4	876.3
65°	1179.1	1253.8	1129.9	1052.7	1015.4	998.4	997.6	918.7	821.1	777.0	777.0
67.5°	1044.2	1121.4	961.9	897.5	883.1	884.8	835.6	715.9	688.8	659.1	573.4
70°	900.9	968.7	794.8	755.8	747.3	741.4	621.8	589.6	557.3	478.4	471.6
72.5°	758.4	791.4	638.8	629.4	627.7	521.7	497.9	442.8	405.5	396.1	391.9
75°	620.1	609.9	504.7	513.2	432.6	395.3	357.1	324.9	319.8	316.4	78.9
77.5°	489.5	438.6	397.8	346.1	309.6	263.0	255.3	250.2	164.6	59.4	48.4
80°	356.3	284.2	264.7	224.8	191.7	184.1	188.3	57.7	45.8	38.2	33.1
82.5°	226.5	181.5	148.4	129.8	126.4	55.1	40.7	33.1	28.8	24.6	20.4
85°	121.3	80.6	74.6	62.8	37.3	25.4	21.2	16.1	13.6	11.0	10.2
87.5°	38.2	32.2	26.3	21.2	12.7	8.5	6.8	5.9	5.1	4.2	4.2
90°	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):

	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°	25°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2848.5	2850.2	2849.4	2851.9	2851.9	2855.3	2857.8	2860.4	2865.5	2868.0	2887.5
5°	2885.0	2889.2	2902.0	2913.8	2928.3	2932.5	2957.1	2963.0	2991.9	2995.3	3090.3
7.5°	2966.4	2982.5	3013.1	3043.6	3074.2	3093.7	3127.6	3148.8	3171.7	3192.1	3267.6
10°	3064.8	3092.0	3121.7	3152.2	3170.0	3207.3	3227.7	3231.1	3225.2	3192.1	3069.9
12.5°	3161.5	3188.7	3176.0	3181.9	3203.1	3136.9	3146.3	3098.8	3131.8	2968.1	2846.8
15°	3148.0	3146.3	3114.9	3013.1	3030.0	2903.7	2852.8	2813.7	2845.1	2828.2	2809.5
17.5°	3107.2	3030.0	2975.8	2853.6	2801.9	2766.2	2767.1	2767.9	2752.7	2768.8	2721.3
20°	2935.0	2848.5	2767.9	2724.7	2709.4	2684.0	2696.7	2684.0	2684.8	2689.9	2616.9
22.5°	2706.0	2679.7	2633.1	2646.6	2641.5	2664.4	2647.5	2621.2	2629.7	2591.5	2536.4
25°	2613.5	2583.0	2581.3	2586.4	2578.8	2568.6	2553.3	2513.4	2510.9	2499.0	2473.6
27.5°	2520.2	2521.9	2527.0	2511.8	2484.6	2464.2	2441.3	2421.8	2429.5	2415.9	2381.1
30°	2455.8	2454.9	2424.4	2410.8	2360.8	2361.6	2355.7	2343.8	2336.2	2337.0	2314.9
32.5°	2364.2	2337.9	2303.1	2286.1	2281.9	2266.6	2254.7	2257.3	2263.2	2242.0	2264.9
35°	2270.0	2215.7	2210.6	2196.2	2182.6	2172.4	2176.7	2159.7	2158.9	2156.3	1969.7
37.5°	2143.6	2117.3	2114.8	2099.5	2090.2	2087.6	2071.5	2074.0	2081.7	2095.2	1679.6
40°	2039.3	2015.5	2009.6	2008.7	1988.4	1986.7	1990.9	2007.0	2018.1	1933.2	1600.7
42.5°	1927.3	1929.0	1910.3	1898.4	1901.0	1908.6	1929.0	1873.0	1622.8	1546.4	1463.3
45°	1831.4	1822.9	1812.8	1809.4	1831.4	1816.2	1592.2	1469.2	1439.5	1436.1	1202.9
47.5°	1731.3	1728.8	1724.5	1727.1	1601.5	1427.7	1376.8	1360.6	1365.7	1362.3	1033.2
50°	1630.4	1633.8	1633.8	1426.8	1309.7	1280.9	1285.1	1299.6	1209.6	1129.1	962.8
52.5°	1543.0	1516.7	1299.6	1224.9	1198.6	1211.3	1180.8	1068.0	986.5	939.0	890.7
55°	1381.0	1187.6	1139.2	1127.4	1136.7	1023.9	954.3	881.4	860.2	855.1	827.1
57.5°	1086.6	1047.6	1051.9	1004.4	896.6	833.0	805.0	794.8	785.5	778.7	67.9
60°	961.1	972.1	889.8	788.1	744.8	736.3	729.5	720.2	718.5	706.6	43.3
62.5°	879.7	773.6	702.4	676.9	666.7	664.2	651.5	647.2	549.7	75.5	32.2
65°	663.4	620.1	606.5	600.6	589.6	589.6	489.5	77.2	62.8	54.3	28.8
67.5°	541.2	537.8	531.0	523.4	356.3	74.6	65.3	56.8	49.2	43.3	25.4
70°	458.1	456.4	415.7	76.3	63.6	56.0	49.2	44.1	40.7	36.5	22.9
72.5°	375.8	76.3	64.5	56.0	48.4	44.1	39.9	35.6	32.2	29.7	18.7
75°	58.5	51.7	45.8	41.6	38.2	33.9	30.5	28.0	27.1	23.8	12.7
77.5°	42.4	36.5	33.1	29.7	26.3	23.8	20.4	17.8	16.1	13.6	9.3
80°	29.7	26.3	23.8	19.5	17.0	14.4	12.7	11.0	10.2	8.5	4.2
82.5°	17.0	14.4	12.7	10.2	9.3	7.6	6.8	5.9	5.9	4.2	4.2
85°	7.6	7.6	5.9	5.1	4.2	4.2	4.2	3.4	3.4	2.5	2.5
87.5°	3.4	3.4	3.4	3.4	3.4	2.5	2.5	2.5	2.5	2.5	1.7
90°	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):

	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2914.7	2925.7	2946.9	2969.0	2944.4	3032.6	3025.8	3055.5	3071.6	3079.2	3097.1
5°	3174.3	3223.5	3239.6	3191.2	3163.2	3134.4	3069.1	3019.9	3025.8	3009.7	2951.2
7.5°	3169.2	3064.0	2922.3	2857.8	2852.8	2845.1	2865.5	2877.4	2879.1	2878.2	2876.5
10°	2901.1	2846.8	2837.5	2829.0	2832.4	2801.0	2786.6	2745.9	2767.9	2756.1	2760.3
12.5°	2819.7	2807.0	2756.9	2687.3	2728.9	2697.5	2679.7	2691.6	2678.0	2665.3	2661.0
15°	2771.3	2689.0	2661.0	2644.1	2632.2	2625.4	2631.4	2617.8	2613.5	2611.0	2616.9
17.5°	2671.2	2638.1	2607.6	2562.6	2563.5	2561.0	2577.9	2603.4	2605.1	2474.4	2356.5
20°	2592.3	2565.2	2526.2	2498.2	2536.4	2468.5	2206.4	2081.7	2062.2	2062.2	2065.6
22.5°	2529.6	2469.3	2471.9	2427.8	2070.6	1997.7	1999.4	2007.0	1972.2	1853.5	1840.8
25°	2443.9	2434.6	2248.8	1943.4	1945.9	1889.1	1801.7	1678.7	1545.6	1545.6	1523.5
27.5°	2379.4	2181.8	1910.3	1897.6	1706.7	1586.3	1511.6	1398.8	1383.5	1369.1	1370.8
30°	2324.3	1845.9	1852.6	1586.3	1445.5	1345.4	1339.4	1320.8	1311.4	1308.9	1299.6
32.5°	1837.4	1797.5	1550.7	1350.5	1295.3	1279.2	1271.6	1250.4	1249.5	1233.4	1121.4
35°	1722.9	1577.8	1297.9	1243.6	1227.5	1212.2	1199.5	805.0	95.0	38.2	33.1
37.5°	1592.2	1318.2	1200.3	1175.7	1160.4	857.6	85.7	29.7	21.2	15.3	13.6
40°	1349.6	1177.4	1140.1	1112.9	458.9	29.7	18.7	14.4	8.5	7.6	6.8
42.5°	1138.4	1109.5	1069.7	325.7	33.9	14.4	9.3	6.8	5.9	5.9	5.1
45°	1065.4	1040.0	430.9	32.2	21.2	6.8	5.9	5.9	5.1	3.4	3.4
47.5°	997.6	878.0	39.0	20.4	13.6	5.9	5.1	3.4	3.4	3.4	2.5
50°	925.5	48.4	27.1	15.3	8.5	3.4	3.4	3.4	3.4	2.5	2.5
52.5°	173.0	33.9	22.1	13.6	4.2	3.4	3.4	3.4	2.5	2.5	2.5
55°	40.7	27.1	20.4	11.9	3.4	3.4	3.4	2.5	2.5	2.5	1.7
57.5°	30.5	20.4	16.1	11.0	3.4	2.5	2.5	2.5	2.5	2.5	1.7
60°	25.4	14.4	12.7	10.2	2.5	2.5	2.5	2.5	2.5	2.5	1.7
62.5°	17.8	11.9	9.3	7.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5
65°	14.4	9.3	7.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
67.5°	12.7	7.6	5.1	1.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5
70°	10.2	2.5	2.5	1.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5
72.5°	8.5	2.5	1.7	1.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5
75°	8.5	4.2	1.7	1.7	2.5	2.5	3.4	3.4	2.5	2.5	2.5
77.5°	5.9	4.2	1.7	1.7	2.5	2.5	3.4	3.4	2.5	2.5	2.5
80°	3.4	4.2	1.7	2.5	2.5	5.1	5.9	3.4	2.5	2.5	2.5
82.5°	3.4	4.2	5.1	5.1	2.5	4.2	5.1	4.2	3.4	2.5	2.5
85°	3.4	2.5	3.4	4.2	2.5	4.2	4.2	3.4	3.4	2.5	2.5
87.5°	1.7	2.5	2.5	3.4	3.4	3.4	4.2	3.4	3.4	3.4	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	3105.5	3108.9	3055.5	3036.8	3053.0	3049.6	3035.1	2981.7	2975.8	2940.1	2888.4
5°	2968.1	2991.0	2963.0	3011.4	2988.5	3011.4	3080.9	3113.2	3165.8	3198.0	3209.9
7.5°	2872.3	2877.4	2877.4	2881.6	2885.8	2886.7	2881.6	2878.2	2863.8	2846.0	2878.2
10°	2756.1	2762.0	2772.2	2770.5	2769.6	2787.4	2791.7	2828.2	2826.5	2833.2	2857.8
12.5°	2695.8	2650.0	2691.6	2680.6	2695.8	2672.1	2716.2	2708.6	2711.1	2731.5	2784.0
15°	2595.7	2610.2	2620.3	2620.3	2626.3	2621.2	2616.1	2650.9	2672.1	2672.9	2669.5
17.5°	2403.2	2293.7	2405.7	2376.9	2606.8	2612.7	2593.2	2577.1	2577.1	2589.8	2616.9
20°	2063.0	2065.6	2066.4	2077.4	2091.0	2090.2	2091.0	2425.2	2583.9	2547.4	2522.8
22.5°	1808.5	1777.1	1835.7	1831.4	1904.4	1985.0	2062.2	2054.5	2059.6	2295.4	2507.5
25°	1449.7	1490.4	1457.3	1471.8	1554.0	1649.9	1709.3	1864.5	2033.3	2021.4	2076.6
27.5°	1364.9	1353.9	1369.1	1369.1	1380.1	1392.9	1426.0	1513.3	1663.5	1821.3	1970.5
30°	1284.3	1293.6	1295.3	1310.6	1319.1	1327.6	1332.6	1365.7	1399.7	1509.1	1693.2
32.5°	964.5	845.7	1112.9	1185.0	1246.1	1260.5	1270.7	1284.3	1308.9	1325.0	1417.5
35°	28.0	28.0	29.7	33.9	43.3	291.8	1111.2	1224.9	1241.0	1261.4	1278.4
37.5°	13.6	10.2	11.9	12.7	15.3	21.2	30.5	95.0	1057.8	1196.1	1214.7
40°	5.9	5.9	5.9	5.9	6.8	8.5	12.7	21.2	32.2	850.8	1147.7
42.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.9	7.6	15.3	36.5	602.3
45°	3.4	3.4	2.5	3.4	3.4	4.2	5.1	5.1	6.8	22.9	41.6
47.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.2	5.1	15.3	22.1
50°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	11.9	15.3
52.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.1	13.6
55°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5	2.5	3.4	11.9
57.5°	1.7	1.7	1.7	1.7	1.7	2.5	1.7	1.7	2.5	2.5	11.0
60°	1.7	1.7	1.7	1.7	1.7	2.5	2.5	2.5	2.5	2.5	10.2
62.5°	2.5	2.5	1.7	2.5	1.7	1.7	2.5	2.5	2.5	2.5	6.8
65°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.7	2.5
67.5°	2.5	2.5	2.5	2.5	1.7	2.5	1.7	2.5	2.5	1.7	1.7
70°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.7	1.7	1.7	1.7
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.7	1.7	1.7	1.7
75°	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4	1.7	1.7	1.7
77.5°	2.5	2.5	2.5	2.5	2.5	2.5	4.2	5.1	4.2	4.2	1.7
80°	2.5	2.5	2.5	2.5	2.5	2.5	4.2	4.2	4.2	4.2	5.9
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4	3.4	3.4	4.2
85°	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4	3.4	2.5	3.4
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4	2.5	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	140°	145°	150°	155°	160°	161°	162°	163°	164°	165°	166°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2892.6	2863.8	2854.5	2834.9	2833.2	2834.9	2830.7	2824.8	2828.2	2822.2	2817.1
5°	3216.7	3139.5	3089.4	3022.4	2930.0	2909.6	2904.5	2875.7	2865.5	2862.1	2848.5
7.5°	2954.6	3095.4	3180.2	3209.0	3100.5	3075.0	3045.3	3021.6	2998.7	2955.4	2929.1
10°	2838.3	2845.1	2926.6	3021.6	3176.0	3197.2	3213.3	3161.5	3147.1	3036.8	3013.1
12.5°	2811.2	2812.0	2821.4	2879.1	3000.4	3013.9	3070.8	3101.3	3138.6	3159.8	3142.9
15°	2687.3	2756.1	2807.0	2812.0	2823.1	2846.8	2863.8	2969.8	3014.8	3135.2	3128.4
17.5°	2629.7	2651.7	2725.5	2785.7	2775.6	2767.1	2780.7	2795.1	2838.3	2958.8	2957.1
20°	2533.8	2604.2	2644.1	2706.9	2763.7	2766.2	2751.0	2742.5	2725.5	2745.0	2762.8
22.5°	2493.1	2504.1	2578.8	2622.9	2687.3	2710.2	2713.6	2714.5	2705.2	2695.0	2689.9
25°	2488.8	2454.1	2492.2	2547.4	2594.9	2619.5	2647.5	2656.8	2653.4	2653.4	2648.3
27.5°	2036.7	2443.0	2422.7	2459.2	2516.8	2533.8	2548.2	2577.1	2594.9	2607.6	2613.5
30°	1940.0	2013.0	2368.4	2373.5	2432.0	2430.3	2446.4	2470.2	2493.1	2522.8	2530.4
32.5°	1716.1	1895.1	2168.2	2287.8	2348.9	2354.8	2363.3	2370.1	2391.3	2424.4	2453.2
35°	1375.1	1726.2	1857.7	2247.1	2258.1	2270.0	2275.1	2291.2	2298.0	2311.6	2337.0
37.5°	1244.4	1426.8	1782.2	1943.4	2153.8	2164.0	2191.1	2197.9	2208.9	2219.9	2239.5
40°	1168.9	1219.0	1483.6	1735.6	2069.8	2076.6	2085.9	2102.9	2103.7	2116.5	2134.3
42.5°	1108.7	1140.9	1218.1	1657.5	2010.4	2009.6	1987.5	1998.5	2003.6	2017.2	2041.8
45°	885.6	1070.5	1119.7	1353.9	1600.7	1716.1	1937.5	1901.0	1900.1	1905.2	1931.5
47.5°	45.0	1006.9	1041.7	1117.2	1511.6	1515.9	1544.7	1787.3	1824.6	1812.8	1815.3
50°	30.5	69.6	970.4	1005.2	1303.0	1408.1	1429.3	1440.4	1580.3	1736.4	1711.0
52.5°	23.8	39.9	594.6	933.1	1058.7	1135.8	1272.4	1350.5	1358.9	1421.7	1634.6
55°	21.2	30.5	64.5	861.0	900.0	917.0	996.7	1133.3	1243.6	1276.7	1279.2
57.5°	18.7	28.0	44.1	389.4	818.6	822.0	835.6	883.1	982.3	1073.1	1175.7
60°	17.0	24.6	34.8	67.0	743.9	752.4	755.0	767.7	779.6	841.5	959.4
62.5°	10.2	19.5	30.5	48.4	588.7	676.1	675.2	683.7	694.7	701.5	725.3
65°	8.5	15.3	26.3	40.7	72.1	89.9	546.3	607.4	614.2	623.5	627.7
67.5°	7.6	13.6	19.5	32.2	54.3	61.9	71.3	88.2	481.8	542.9	551.4
70°	6.8	9.3	16.1	27.1	44.1	47.5	53.4	61.1	72.1	89.1	436.0
72.5°	4.2	6.8	11.0	19.5	33.9	38.2	41.6	46.7	51.7	61.9	71.3
75°	1.7	5.1	9.3	14.4	26.3	28.8	31.4	34.8	39.0	45.8	50.9
77.5°	1.7	4.2	7.6	10.2	17.0	19.5	22.9	25.4	28.8	32.2	37.3
80°	5.9	3.4	5.1	7.6	11.9	12.7	14.4	16.1	18.7	21.2	24.6
82.5°	4.2	5.1	5.9	5.1	5.9	7.6	8.5	10.2	11.0	12.7	13.6
85°	3.4	3.4	4.2	4.2	4.2	4.2	4.2	4.2	5.1	5.9	7.6
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	167°	168°	169°	170°	171°	172°	173°	174°	175°	176°	177°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2817.1	2815.4	2810.3	2810.3	2809.5	2812.9	2815.4	2818.0	2817.1	2822.2	2817.1
5°	2838.3	2834.1	2826.5	2819.7	2817.1	2818.8	2816.3	2818.8	2815.4	2819.7	2812.0
7.5°	2896.9	2882.4	2852.8	2840.9	2825.6	2824.8	2817.1	2815.4	2810.3	2810.3	2801.0
10°	3000.4	2930.8	2922.3	2886.7	2874.0	2812.0	2825.6	2802.7	2800.2	2789.1	2784.9
12.5°	3085.2	3030.9	3014.8	2983.4	2947.8	2822.2	2850.2	2801.0	2798.5	2776.4	2753.5
15°	3086.9	3118.3	3074.2	2987.6	2980.0	2893.5	2836.6	2819.7	2797.6	2731.5	2742.5
17.5°	2987.6	3059.7	3080.9	3062.3	3008.0	2949.5	2869.7	2835.8	2769.6	2739.9	2719.6
20°	2826.5	2899.4	2990.2	2996.1	3030.0	2988.5	2884.1	2829.0	2749.3	2697.5	2680.6
22.5°	2698.4	2751.8	2856.2	2904.5	2946.1	2960.5	2894.3	2812.9	2713.6	2663.6	2653.4
25°	2630.5	2642.4	2673.8	2730.6	2822.2	2888.4	2897.7	2811.2	2759.4	2650.0	2592.3
27.5°	2605.9	2595.7	2583.0	2611.8	2680.6	2761.1	2814.6	2829.0	2700.1	2595.7	2538.0
30°	2543.1	2549.1	2529.6	2519.4	2564.3	2647.5	2742.5	2766.2	2667.0	2559.3	2493.1
32.5°	2465.9	2476.1	2479.5	2461.7	2452.4	2510.1	2612.7	2669.5	2664.4	2507.5	2433.7
35°	2369.2	2398.1	2405.7	2406.6	2391.3	2382.0	2441.3	2559.3	2604.2	2483.8	2376.9
37.5°	2267.4	2275.9	2317.5	2328.5	2328.5	2300.5	2344.6	2438.8	2501.6	2430.3	2307.3
40°	2140.2	2167.3	2206.4	2225.9	2245.4	2247.9	2223.3	2289.5	2393.0	2375.2	2242.0
42.5°	2047.7	2065.6	2089.3	2115.6	2155.5	2165.7	2140.2	2152.1	2259.8	2306.5	2157.2
45°	1940.0	1963.8	1970.5	1999.4	2041.0	2070.6	2069.8	2045.2	2131.7	2189.4	2095.2
47.5°	1829.7	1852.6	1864.5	1878.9	1909.5	1947.6	1968.9	1957.8	1974.8	2087.6	2013.0
50°	1716.1	1728.8	1752.5	1768.7	1789.0	1811.1	1862.0	1872.1	1848.4	1938.3	1922.2
52.5°	1608.3	1612.6	1628.7	1644.8	1672.0	1688.1	1728.8	1759.3	1757.6	1783.9	1821.3
55°	1524.4	1505.7	1509.1	1521.8	1539.6	1564.2	1587.1	1634.6	1650.7	1655.8	1715.2
57.5°	1191.0	1382.7	1399.7	1398.8	1420.0	1431.0	1452.3	1483.6	1541.3	1528.6	1594.8
60°	1082.4	1103.6	1263.9	1282.6	1290.2	1300.4	1325.9	1354.7	1397.1	1424.3	1453.1
62.5°	825.4	954.3	1002.7	1144.3	1166.4	1172.3	1189.3	1202.9	1247.0	1308.9	1297.0
65°	638.8	693.9	841.5	899.2	1019.6	1034.9	1058.7	1073.1	1085.8	1157.1	1160.4
67.5°	552.2	560.7	600.6	711.7	788.1	906.0	920.4	933.1	952.6	1003.5	1034.9
70°	471.6	481.8	492.8	502.2	601.4	679.5	788.9	793.1	805.9	839.8	911.1
72.5°	89.1	402.9	409.7	415.7	426.7	478.4	582.8	667.6	672.7	688.8	754.1
75°	60.2	70.4	96.7	332.5	343.6	346.9	364.8	470.8	548.8	552.2	581.1
77.5°	43.3	48.4	58.5	69.6	177.3	266.4	270.6	290.1	370.7	429.2	434.3
80°	29.7	33.1	39.0	44.1	54.3	71.3	196.8	202.7	212.9	293.5	308.8
82.5°	17.0	19.5	22.9	28.0	32.2	40.7	52.6	67.9	138.3	147.6	196.0
85°	8.5	9.3	11.0	13.6	16.1	19.5	26.3	32.2	44.1	79.7	82.3
87.5°	4.2	4.2	4.2	4.2	6.8	7.6	9.3	11.9	15.3	22.9	29.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	178°	179°	180°	181°	182°	183°	184°	185°	186°	187°	188°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2818.0	2829.9	2840.0	2842.6	2842.6	2844.3	2846.8	2848.5	2850.2	2851.9	2850.2
5°	2812.9	2825.6	2834.1	2836.6	2836.6	2841.7	2846.0	2851.1	2853.6	2853.6	2851.9
7.5°	2800.2	2809.5	2820.5	2827.3	2828.2	2836.6	2844.3	2843.4	2846.8	2848.5	2852.8
10°	2783.2	2783.2	2801.9	2807.0	2811.2	2820.5	2823.1	2828.2	2840.0	2841.7	2852.8
12.5°	2774.7	2766.2	2788.3	2790.8	2805.3	2793.4	2808.6	2813.7	2801.9	2818.0	2796.8
15°	2736.5	2746.7	2743.3	2751.0	2776.4	2762.8	2804.4	2790.8	2821.4	2784.9	2849.4
17.5°	2705.2	2703.5	2717.0	2723.8	2728.9	2757.8	2768.8	2784.0	2795.9	2785.7	2811.2
20°	2682.3	2668.7	2678.9	2686.5	2704.3	2726.4	2733.2	2710.2	2750.1	2818.0	2834.1
22.5°	2639.0	2629.7	2641.5	2641.5	2668.7	2665.3	2690.7	2676.3	2713.6	2792.5	2874.8
25°	2580.5	2581.3	2594.0	2609.3	2614.4	2652.6	2666.1	2684.8	2731.5	2825.6	2875.7
27.5°	2521.1	2516.0	2523.6	2555.0	2581.3	2609.3	2613.5	2677.2	2740.8	2805.3	2849.4
30°	2461.7	2456.6	2461.7	2484.6	2516.0	2534.7	2581.3	2666.1	2725.5	2769.6	2811.2
32.5°	2398.1	2393.0	2404.9	2421.8	2477.0	2479.5	2572.0	2651.7	2698.4	2730.6	2723.0
35°	2330.2	2323.4	2334.5	2360.8	2411.7	2430.3	2527.0	2586.4	2639.0	2654.3	2618.6
37.5°	2248.8	2236.9	2250.5	2287.0	2340.4	2394.7	2475.3	2544.0	2572.0	2531.3	2488.8
40°	2164.0	2155.5	2179.2	2197.9	2260.7	2336.2	2428.6	2477.0	2459.2	2412.5	2365.8
42.5°	2088.5	2070.6	2091.9	2127.5	2198.7	2284.4	2359.1	2386.2	2343.8	2275.1	2220.8
45°	1996.0	1974.8	2000.2	2047.7	2124.1	2221.6	2280.2	2270.8	2198.7	2139.4	2064.7
47.5°	1899.3	1873.8	1899.3	1956.1	2041.8	2145.3	2187.7	2145.3	2054.5	1979.9	1919.7
50°	1804.3	1774.6	1799.2	1884.9	1968.9	2048.6	2047.7	1965.5	1911.2	1829.7	1777.1
52.5°	1710.1	1667.7	1692.3	1785.6	1869.6	1960.4	1893.4	1817.0	1751.7	1680.4	1663.5
55°	1593.9	1548.1	1581.2	1716.9	1781.4	1834.8	1727.9	1660.9	1596.5	1560.8	1539.6
57.5°	1483.6	1433.6	1462.4	1622.8	1670.3	1683.8	1585.4	1490.4	1452.3	1440.4	1409.8
60°	1370.0	1313.1	1340.3	1525.2	1558.3	1503.1	1406.4	1332.6	1325.0	1301.3	1277.5
62.5°	1261.4	1198.6	1215.6	1403.9	1419.2	1319.1	1230.0	1210.5	1191.8	1168.1	1155.4
65°	1136.7	1071.4	1095.1	1275.0	1260.5	1131.6	1081.6	1077.3	1052.7	1033.2	1051.9
67.5°	1022.2	945.0	978.1	1134.1	1068.8	963.6	943.3	933.1	913.6	924.6	728.7
70°	896.6	812.7	857.6	982.3	885.6	816.0	808.4	793.1	794.0	631.1	531.9
72.5°	756.7	683.7	749.0	816.0	700.7	680.3	669.3	667.6	538.7	437.7	413.1
75°	633.7	559.9	630.3	655.7	558.2	544.6	543.7	449.6	353.7	337.6	330.0
77.5°	494.5	437.7	504.7	466.6	428.4	413.1	370.7	278.2	266.4	255.3	95.9
80°	333.4	337.6	376.6	321.5	305.4	260.4	205.3	196.8	169.7	67.9	53.4
82.5°	202.7	254.5	240.1	201.0	196.8	141.7	129.8	66.2	49.2	39.0	33.9
85°	105.2	128.9	123.8	109.4	81.4	73.0	40.7	31.4	25.4	19.5	16.1
87.5°	35.6	47.5	45.8	36.5	28.0	22.1	14.4	11.9	8.5	6.8	5.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	189°	190°	191°	192°	193°	194°	195°	196°	197°	198°	199°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2848.5	2848.5	2846.8	2848.5	2849.4	2847.7	2847.7	2849.4	2850.2	2851.1	2855.3
5°	2852.8	2854.5	2857.0	2862.1	2862.9	2873.1	2877.4	2879.9	2882.4	2883.3	2877.4
7.5°	2862.1	2868.0	2873.1	2872.3	2866.3	2850.2	2845.1	2840.9	2848.5	2868.0	2890.9
10°	2870.6	2843.4	2792.5	2862.1	2840.9	2860.4	2918.1	2930.8	2969.8	3025.0	3041.1
12.5°	2812.0	2886.7	2902.8	2824.8	2969.0	2915.5	2979.2	3035.1	3051.3	3107.2	3073.3
15°	2874.8	2911.3	2935.9	3013.9	3005.4	3051.3	3069.1	3058.0	3060.6	3075.0	3113.2
17.5°	2874.0	2946.9	2963.0	3015.6	3051.3	3052.1	3047.0	3041.9	3055.5	3066.5	3043.6
20°	2923.2	2946.9	2978.3	2999.5	3006.3	3014.8	3030.9	3018.2	2992.7	2968.1	2957.9
22.5°	2898.6	2952.0	2979.2	2982.5	2978.3	2952.0	2928.3	2892.6	2880.8	2868.0	2872.3
25°	2903.7	2928.3	2924.9	2911.3	2893.5	2844.3	2832.4	2817.1	2794.2	2739.1	2689.0
27.5°	2867.2	2854.5	2839.2	2806.1	2773.9	2747.6	2717.9	2668.7	2628.0	2568.6	2546.5
30°	2806.1	2755.2	2717.9	2698.4	2667.0	2622.9	2577.9	2517.7	2465.9	2454.1	2443.0
32.5°	2689.0	2639.0	2608.5	2561.0	2507.5	2454.9	2403.2	2379.4	2368.4	2370.1	2359.9
35°	2569.4	2525.3	2479.5	2408.3	2368.4	2315.8	2297.1	2292.0	2281.9	2270.8	2259.0
37.5°	2442.2	2390.4	2321.7	2279.3	2239.5	2218.2	2208.9	2201.3	2183.5	2164.0	2150.4
40°	2319.2	2225.9	2187.7	2146.1	2134.3	2124.9	2111.4	2092.7	2068.1	2064.7	2058.8
42.5°	2154.6	2087.6	2054.5	2046.0	2031.6	2015.5	2003.6	1983.3	1973.1	1979.9	1985.0
45°	1998.5	1964.6	1953.6	1943.4	1916.3	1893.4	1885.7	1878.9	1887.4	1924.7	1835.7
47.5°	1872.1	1858.6	1845.0	1828.0	1802.6	1785.6	1793.3	1800.0	1807.7	1533.7	1399.7
50°	1762.7	1744.1	1722.9	1704.2	1688.9	1687.2	1727.1	1607.5	1346.2	1339.4	1203.7
52.5°	1643.1	1615.1	1602.4	1591.4	1598.2	1623.6	1343.7	1247.0	1196.1	1039.1	969.6
55°	1514.2	1489.6	1489.6	1499.8	1463.3	1185.9	1171.5	1012.8	917.0	889.8	878.8
57.5°	1385.2	1382.7	1397.1	1277.5	1076.5	1032.4	867.8	833.0	817.7	814.3	796.5
60°	1267.3	1291.1	1080.7	994.2	864.4	779.6	755.8	751.6	735.5	729.5	713.4
62.5°	1173.2	973.0	906.0	739.7	696.4	685.4	672.7	666.7	652.3	576.0	168.8
65°	847.4	800.8	649.8	621.8	618.4	602.3	597.2	537.0	126.4	84.8	72.1
67.5°	639.6	567.5	548.0	542.9	526.8	494.5	146.8	84.0	72.1	62.8	55.1
70°	491.2	478.4	464.0	452.1	133.2	83.1	72.1	61.1	52.6	46.7	42.4
72.5°	402.1	393.6	229.0	87.4	71.3	60.2	53.4	46.7	40.7	37.3	33.9
75°	314.7	87.4	72.1	60.2	51.7	44.1	39.0	34.8	31.4	28.8	26.3
77.5°	71.3	57.7	49.2	41.6	37.3	33.1	29.7	25.4	22.9	20.4	17.0
80°	44.1	38.2	32.2	29.7	25.4	21.2	18.7	17.0	13.6	12.7	11.0
82.5°	28.8	22.9	20.4	17.0	13.6	12.7	11.0	8.5	7.6	6.8	5.9
85°	12.7	11.0	9.3	7.6	5.9	5.1	4.2	3.4	3.4	3.4	3.4
87.5°	4.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	200°	205°	210°	215°	220°	225°	230°	235°	240°	245°	250°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2857.0	2872.3	2886.7	2882.4	2867.2	2843.4	2836.6	2827.3	2834.1	2848.5	2854.5
5°	2877.4	2868.9	2899.4	2944.4	3017.3	3024.1	3075.0	3086.9	3127.6	3153.0	3152.2
7.5°	2906.2	3026.7	3076.7	3131.0	3155.6	3149.7	3157.3	3151.4	3142.0	3137.8	3132.7
10°	3053.0	3144.6	3163.2	3163.2	3125.1	3073.3	3051.3	3013.1	2936.7	2938.4	2925.7
12.5°	3138.6	3170.9	3126.8	3089.4	2935.9	2876.5	2812.0	2781.5	2763.7	2736.5	2746.7
15°	3093.7	3047.9	3021.6	2901.1	2807.0	2700.1	2701.8	2683.1	2663.6	2665.3	2652.6
17.5°	3027.5	2991.0	2804.4	2721.3	2675.5	2633.9	2626.3	2601.7	2588.9	2584.7	2583.9
20°	2936.7	2805.3	2666.1	2645.8	2590.6	2543.1	2535.5	2543.1	2582.2	2512.6	2276.8
22.5°	2830.7	2641.5	2600.8	2543.1	2505.8	2487.2	2533.8	2321.7	2001.1	2040.1	1998.5
25°	2650.9	2568.6	2499.0	2454.9	2450.7	2336.2	1946.8	1906.1	1699.9	1589.7	1465.8
27.5°	2519.4	2483.8	2410.8	2403.2	2348.0	1910.3	1707.6	1483.6	1401.4	1388.6	1361.5
30°	2439.6	2388.8	2344.6	2152.1	1873.8	1537.9	1370.0	1338.6	1324.2	1308.9	1285.1
32.5°	2343.8	2295.4	2316.6	1809.4	1493.8	1324.2	1290.2	1267.3	1241.0	1230.9	1145.2
35°	2246.2	2224.2	1810.2	1521.0	1284.3	1243.6	1218.1	1194.4	950.1	229.9	78.0
37.5°	2141.9	2136.8	1627.0	1262.2	1202.9	1164.7	1092.6	225.6	53.4	36.5	27.1
40°	2060.5	1627.8	1286.0	1183.3	1135.0	1074.8	151.0	37.3	23.8	14.4	9.3
42.5°	2006.2	1464.1	1151.1	1110.4	1005.2	111.1	38.2	16.1	9.3	7.6	5.9
45°	1546.4	1156.2	1075.6	1033.2	127.2	38.2	22.1	7.6	5.9	5.1	3.4
47.5°	1426.8	1050.2	1002.7	225.6	42.4	20.4	15.3	5.1	3.4	3.4	3.4
50°	1080.7	970.4	798.2	55.1	27.1	14.4	11.0	3.4	3.4	3.4	2.5
52.5°	947.5	895.8	85.7	36.5	21.2	11.0	6.8	2.5	2.5	2.5	2.5
55°	866.1	568.3	50.9	28.0	17.8	10.2	4.2	2.5	2.5	2.5	1.7
57.5°	792.3	76.3	37.3	23.8	16.1	9.3	2.5	2.5	2.5	2.5	1.7
60°	671.8	55.1	30.5	21.2	15.3	8.5	2.5	2.5	2.5	2.5	2.5
62.5°	87.4	43.3	26.3	18.7	11.0	6.8	1.7	2.5	2.5	2.5	2.5
65°	63.6	33.9	23.8	12.7	6.8	2.5	1.7	2.5	2.5	2.5	2.5
67.5°	49.2	28.0	17.8	11.0	5.9	1.7	1.7	2.5	2.5	2.5	2.5
70°	39.0	23.8	14.4	9.3	5.1	1.7	1.7	2.5	2.5	2.5	2.5
72.5°	30.5	17.0	10.2	5.1	3.4	1.7	1.7	2.5	2.5	2.5	2.5
75°	22.9	13.6	7.6	4.2	1.7	1.7	1.7	2.5	2.5	2.5	2.5
77.5°	15.3	8.5	5.9	3.4	3.4	3.4	4.2	4.2	2.5	2.5	2.5
80°	10.2	5.9	4.2	4.2	4.2	3.4	4.2	4.2	2.5	4.2	2.5
82.5°	5.1	4.2	4.2	3.4	3.4	2.5	3.4	3.4	3.4	3.4	2.5
85°	3.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4	2.5
87.5°	1.7	1.7	1.7	1.7	2.5	2.5	2.5	2.5	3.4	3.4	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	255°	260°	265°	270°	275°	280°	285°	290°	295°	300°	305°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2846.8	2849.4	2842.6	2879.1	2860.4	2862.1	2869.7	2850.2	2854.5	2840.9	2831.6
5°	3155.6	3160.7	3165.8	3167.5	3170.9	3175.1	3170.0	3167.5	3162.4	3145.4	3127.6
7.5°	3107.2	3101.3	3098.8	3102.2	3108.1	3110.6	3106.4	3112.3	3134.4	3143.7	3149.7
10°	2852.8	2825.6	2844.3	2841.7	2820.5	2891.8	2872.3	2883.3	2890.9	2969.0	3016.5
12.5°	2731.5	2748.4	2716.2	2700.1	2721.3	2735.7	2750.1	2719.6	2762.0	2742.5	2805.3
15°	2629.7	2619.5	2616.1	2616.9	2612.7	2633.1	2638.1	2644.9	2650.9	2677.2	2687.3
17.5°	2583.9	2600.8	2607.6	2612.7	2604.2	2594.9	2585.6	2572.0	2576.2	2569.4	2588.9
20°	2118.1	2061.3	2057.9	2091.0	2054.5	2074.9	2124.1	2453.2	2442.2	2570.3	2527.0
22.5°	1767.8	1714.4	1668.6	1628.7	1685.5	1709.3	1800.9	1904.4	2072.3	2046.0	2228.4
25°	1443.8	1424.3	1412.4	1406.4	1410.7	1409.0	1429.3	1477.7	1554.0	1733.9	1966.3
27.5°	1350.5	1341.1	1336.9	1323.3	1333.5	1330.1	1346.2	1356.4	1379.3	1397.1	1472.6
30°	1276.7	1265.6	1258.0	1243.6	1253.8	1254.6	1259.7	1286.0	1295.3	1310.6	1334.3
32.5°	466.6	274.8	257.9	245.2	268.1	349.5	613.3	1072.2	1223.2	1235.1	1262.2
35°	45.8	38.2	33.9	33.9	34.8	38.2	50.9	134.0	245.2	947.5	1185.9
37.5°	17.8	15.3	12.7	11.9	12.7	14.4	19.5	25.4	34.8	72.1	321.5
40°	7.6	6.8	5.9	5.9	5.9	5.9	6.8	8.5	12.7	23.8	37.3
42.5°	5.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	5.9	7.6	15.3
45°	3.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4	4.2	6.8
47.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4
50°	2.5	2.5	2.5	2.5	1.7	2.5	1.7	2.5	2.5	2.5	2.5
52.5°	2.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5	2.5
55°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5
57.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
60°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
62.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5	2.5	1.7
65°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5	1.7
67.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
70°	2.5	2.5	1.7	2.5	1.7	1.7	2.5	2.5	2.5	1.7	1.7
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.1	5.1	3.4
75°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.2	5.1	4.2
77.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.2	4.2	4.2
80°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4	3.4
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4	3.4
85°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	310°	315°	320°	325°	330°	335°	340°	341°	342°	343°	344°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2815.4	2814.6	2832.4	2846.0	2840.9	2846.0	2851.9	2852.8	2854.5	2847.7	2845.1
5°	3093.7	3067.4	3016.5	2980.0	2937.6	2860.4	2822.2	2826.5	2827.3	2824.8	2828.2
7.5°	3147.1	3144.6	3126.8	3119.1	3090.3	3035.1	2946.9	2931.6	2894.3	2870.6	2851.1
10°	3013.1	3074.2	3090.3	3117.4	3134.4	3124.2	3049.6	3038.5	3014.8	2987.6	2993.6
12.5°	2868.0	2918.1	2920.6	3068.2	3101.3	3104.7	3075.9	3091.1	3094.5	3033.4	2997.8
15°	2689.9	2713.6	2763.7	2901.1	3001.2	3064.0	3082.6	3091.1	3049.6	3047.0	3032.6
17.5°	2611.8	2627.1	2650.0	2727.2	2879.1	2971.5	3050.4	3044.5	3060.6	3048.7	3012.2
20°	2513.4	2526.2	2566.9	2605.9	2680.6	2803.6	2951.2	2962.2	2983.4	2980.8	2991.0
22.5°	2511.8	2466.8	2473.6	2504.1	2582.2	2692.4	2849.4	2885.8	2899.4	2908.7	2919.8
25°	1992.6	2349.7	2415.0	2434.6	2485.5	2549.9	2734.8	2748.4	2773.9	2815.4	2846.0
27.5°	1726.2	1968.9	2230.1	2365.8	2398.1	2451.5	2561.8	2582.2	2668.7	2678.9	2726.4
30°	1362.3	1549.8	1940.0	2266.6	2320.0	2357.4	2435.4	2476.1	2513.4	2554.2	2604.2
32.5°	1281.7	1311.4	1527.7	1875.5	2291.2	2263.2	2320.9	2345.5	2386.2	2421.8	2458.3
35°	1207.9	1228.3	1274.1	1536.2	1866.2	2186.0	2225.0	2241.1	2264.1	2291.2	2317.5
37.5°	1130.8	1161.3	1192.7	1263.1	1726.2	2124.9	2124.1	2142.7	2156.3	2179.2	2201.3
40°	205.3	1066.3	1117.2	1163.0	1338.6	1694.9	2029.1	2037.6	2046.9	2061.3	2084.2
42.5°	33.1	178.1	1046.8	1090.9	1140.9	1517.6	1985.8	1951.0	1945.1	1955.3	1975.6
45°	17.0	43.3	210.4	1018.8	1063.7	1210.5	1623.6	1890.8	1884.9	1865.4	1869.6
47.5°	12.7	27.1	51.7	352.0	995.9	1039.1	1498.1	1481.9	1594.8	1811.1	1778.0
50°	11.0	18.7	30.5	72.1	879.7	956.9	1153.7	1347.9	1407.3	1414.9	1674.5
52.5°	10.2	12.7	22.1	46.7	184.9	884.8	938.2	1006.1	1106.2	1320.8	1315.7
55°	9.3	11.9	18.7	31.4	64.5	797.4	852.5	865.2	886.5	989.1	1124.8
57.5°	5.1	11.0	17.8	27.1	48.4	145.9	773.6	783.8	800.8	805.0	853.4
60°	2.5	10.2	16.1	23.8	35.6	67.9	695.6	707.5	717.6	719.3	734.6
62.5°	1.7	9.3	13.6	22.1	29.7	48.4	164.6	335.9	638.8	638.8	656.6
65°	1.7	6.8	8.5	14.4	27.1	39.9	69.6	80.6	156.9	386.0	576.0
67.5°	1.7	2.5	7.6	11.9	20.4	30.5	50.9	59.4	71.3	81.4	151.0
70°	1.7	1.7	6.8	7.6	12.7	22.9	36.5	41.6	48.4	55.1	63.6
72.5°	1.7	1.7	5.9	5.9	8.5	15.3	28.0	30.5	34.8	39.0	45.0
75°	4.2	3.4	5.1	5.1	5.9	11.9	21.2	23.8	25.4	28.8	33.1
77.5°	4.2	4.2	4.2	4.2	4.2	7.6	13.6	15.3	17.8	19.5	22.9
80°	3.4	3.4	3.4	4.2	4.2	5.1	8.5	9.3	10.2	12.7	13.6
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	5.1	5.9	7.6
85°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4	3.4	3.4
87.5°	2.5	2.5	2.5	1.7	1.7	2.5	2.5	2.5	2.5	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	345°	346°	347°	348°	349°	350°	351°	352°	353°	354°	355°
0°	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2844.3	2839.2	2834.9	2837.5	2829.9	2826.5	2829.0	2829.9	2831.6	2835.8	2836.6
5°	2836.6	2834.9	2842.6	2846.8	2845.1	2846.8	2846.8	2843.4	2838.3	2841.7	2834.1
7.5°	2831.6	2820.5	2812.0	2813.7	2805.3	2815.4	2824.8	2838.3	2842.6	2842.6	2834.1
10°	2918.9	2907.0	2859.5	2827.3	2806.1	2787.4	2831.6	2786.6	2807.8	2727.2	2819.7
12.5°	2991.0	3007.1	2985.9	2897.7	2882.4	2826.5	2858.7	2803.6	2787.4	2695.0	2724.7
15°	3019.9	2989.3	2982.5	2957.9	2924.9	2908.7	2822.2	2812.9	2786.6	2796.8	2757.8
17.5°	2994.4	3009.7	2989.3	2973.2	2939.3	2901.1	2849.4	2803.6	2767.1	2685.6	2754.4
20°	2969.8	2990.2	2929.1	2939.3	2942.7	2898.6	2871.4	2833.2	2787.4	2711.1	2651.7
22.5°	2929.1	2914.7	2919.8	2904.5	2891.8	2897.7	2860.4	2834.1	2756.9	2722.1	2641.5
25°	2862.9	2857.8	2871.4	2869.7	2839.2	2829.0	2810.3	2782.4	2751.8	2695.8	2629.7
27.5°	2755.2	2781.5	2805.3	2816.3	2800.2	2773.0	2762.8	2746.7	2725.5	2668.7	2619.5
30°	2641.5	2671.2	2698.4	2722.1	2736.5	2724.7	2715.3	2706.0	2673.8	2636.4	2581.3
32.5°	2511.8	2550.8	2588.1	2616.9	2648.3	2657.7	2650.9	2643.2	2616.1	2582.2	2538.0
35°	2361.6	2415.0	2469.3	2521.1	2534.7	2556.7	2578.8	2566.0	2551.6	2517.7	2477.0
37.5°	2234.4	2272.5	2311.6	2376.9	2424.4	2452.4	2491.4	2496.5	2471.9	2455.8	2402.3
40°	2102.9	2137.7	2194.5	2232.7	2298.0	2330.2	2371.8	2390.4	2384.5	2375.2	2328.5
42.5°	1999.4	2016.4	2053.7	2087.6	2152.1	2218.2	2254.7	2275.1	2296.3	2288.7	2264.9
45°	1889.1	1904.4	1917.1	1946.8	2009.6	2068.1	2113.1	2143.6	2181.8	2199.6	2170.7
47.5°	1779.7	1783.9	1799.2	1823.8	1861.1	1906.1	1981.6	2027.4	2063.0	2097.8	2079.1
50°	1695.7	1680.4	1683.0	1698.3	1728.8	1772.9	1827.2	1891.7	1932.4	1974.8	1979.0
52.5°	1481.9	1605.8	1576.1	1584.6	1600.7	1621.9	1678.7	1742.4	1792.4	1828.9	1865.4
55°	1243.6	1268.2	1506.5	1472.6	1482.8	1501.5	1527.7	1591.4	1639.7	1690.6	1741.5
57.5°	964.5	1147.7	1157.1	1377.6	1372.5	1374.2	1396.3	1432.7	1481.1	1544.7	1588.0
60°	749.9	827.1	977.2	1053.6	1247.0	1253.8	1266.5	1287.7	1329.3	1389.5	1458.2
62.5°	661.7	671.8	725.3	839.8	965.3	1117.2	1144.3	1147.7	1166.4	1226.6	1306.3
65°	581.1	587.9	604.0	615.8	721.0	867.8	998.4	1019.6	1031.5	1067.1	1135.0
67.5°	400.4	506.4	520.8	529.3	539.5	607.4	769.4	877.1	890.7	922.1	981.5
70°	77.2	160.3	438.6	447.9	453.0	468.2	494.5	665.9	755.8	785.5	812.7
72.5°	52.6	61.9	74.6	176.4	373.2	381.7	387.7	409.7	561.6	648.1	662.5
75°	38.2	42.4	50.0	61.9	76.3	248.5	307.9	319.0	330.0	455.5	528.5
77.5°	27.1	30.5	33.9	39.9	46.7	60.2	86.5	238.4	249.4	255.3	360.5
80°	15.3	18.7	22.9	26.3	29.7	33.9	44.1	55.1	123.0	179.8	189.2
82.5°	8.5	10.2	11.9	14.4	16.1	20.4	24.6	29.7	39.0	57.7	122.2
85°	4.2	4.2	4.2	5.9	6.8	9.3	11.0	12.7	17.8	24.6	33.9
87.5°	2.5	2.5	3.4	3.4	3.4	4.2	4.2	4.2	5.1	7.6	11.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213104

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	356°	357°	358°	359°	360°
0°	2826.5	2826.5	2826.5	2826.5	2826.5
2.5°	2837.5	2834.9	2834.9	2845.1	2842.6
5°	2832.4	2829.9	2829.0	2840.0	2834.9
7.5°	2828.2	2818.8	2816.3	2826.5	2822.2
10°	2811.2	2804.4	2808.6	2805.3	2803.6
12.5°	2782.4	2778.1	2760.3	2762.0	2776.4
15°	2730.6	2747.6	2717.0	2744.2	2750.1
17.5°	2635.6	2673.8	2703.5	2719.6	2722.1
20°	2678.0	2690.7	2675.5	2676.3	2686.5
22.5°	2622.9	2628.8	2633.1	2628.0	2650.0
25°	2534.7	2511.8	2561.0	2571.1	2606.8
27.5°	2507.5	2488.8	2511.8	2510.1	2539.7
30°	2485.5	2425.2	2435.4	2451.5	2488.0
32.5°	2454.1	2359.1	2348.9	2384.5	2425.2
35°	2398.9	2309.0	2285.3	2308.2	2369.2
37.5°	2352.3	2239.5	2191.9	2222.5	2302.2
40°	2282.7	2185.2	2111.4	2138.5	2232.7
42.5°	2199.6	2138.5	2024.8	2043.5	2151.2
45°	2115.6	2061.3	1940.9	1950.2	2078.3
47.5°	2029.9	1979.9	1853.5	1855.2	1985.0
50°	1945.9	1879.8	1775.4	1745.8	1885.7
52.5°	1836.5	1775.4	1696.6	1648.2	1791.6
55°	1733.0	1664.3	1606.6	1532.0	1684.7
57.5°	1632.1	1555.7	1516.7	1420.9	1563.4
60°	1493.8	1457.3	1399.7	1308.0	1453.9
62.5°	1352.2	1340.3	1281.7	1186.7	1319.1
65°	1186.7	1214.7	1154.5	1073.1	1179.1
67.5°	1030.7	1080.7	1014.5	964.5	1044.2
70°	864.4	922.1	884.8	866.9	900.9
72.5°	700.7	756.7	760.1	747.3	758.4
75°	541.2	603.1	637.1	617.5	620.1
77.5°	410.6	440.3	477.6	492.8	489.5
80°	253.6	305.4	335.9	367.3	356.3
82.5°	128.1	171.4	208.7	242.6	226.5
85°	53.4	68.7	95.9	126.4	121.3
87.5°	16.1	27.1	28.8	40.7	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)