

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: P1213440

Luminaire Tested: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213440
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-LD5-48HL-RM-UNV-L935-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
METALIC FINISH REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

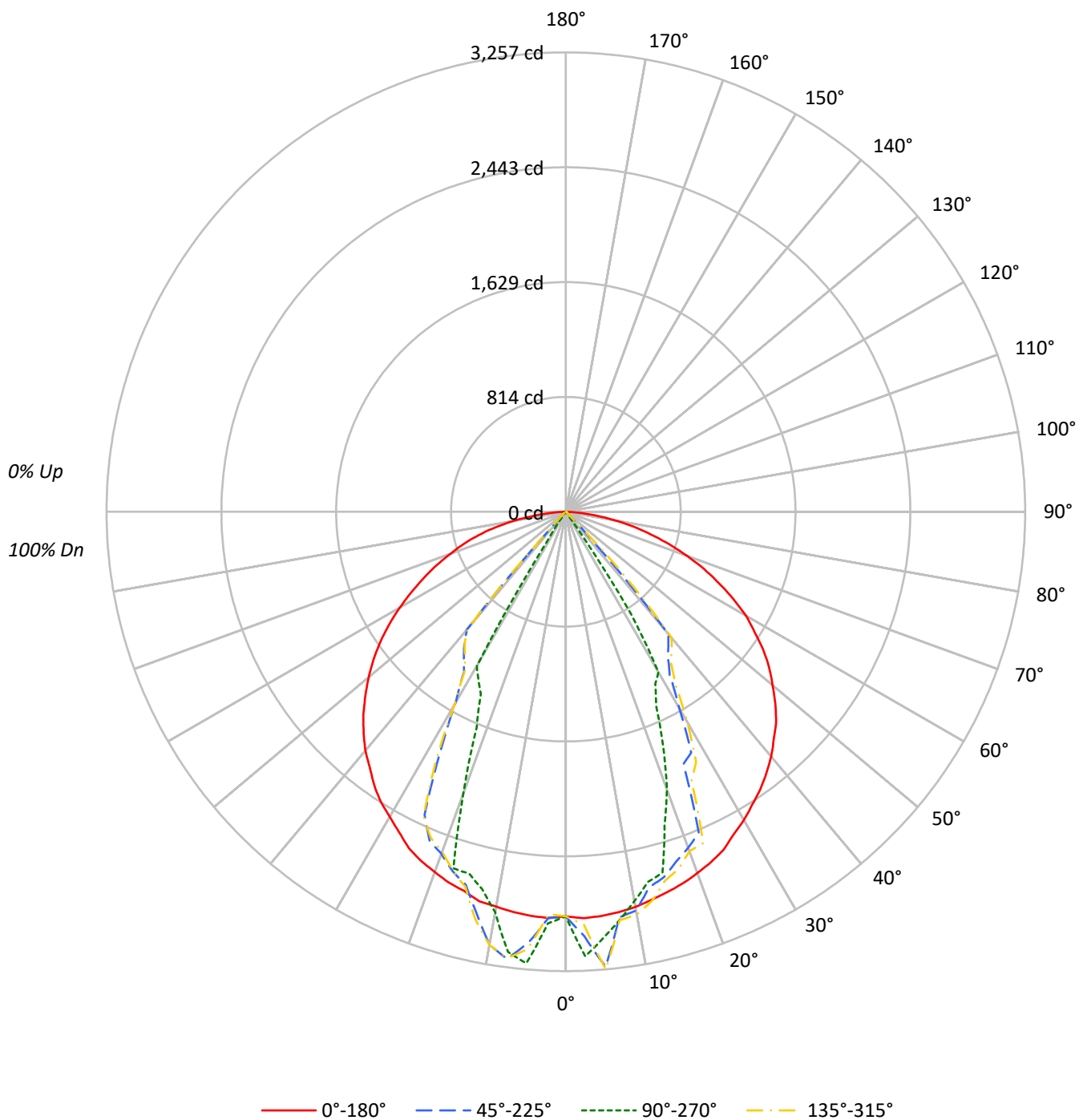
Lumens per Lamp: N/A
Luminaire Lumens: 4078.0 lumens
Efficiency: N/A
Efficacy: 110.2 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 0.81 / 0.97
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 37
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			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
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°	23176	23176	23176	23176
5°	23271	23836	23264	25243
10°	23215	21569	23201	22191
15°	23152	20133	23094	20185
20°	23178	15857	23113	16053
25°	23245	11476	23132	10829
30°	23139	10066	22894	9677
35°	23208	222	22867	269
40°	23287	48	22730	48
45°	23370	28	22492	22
50°	23191	23	22127	23
55°	23055	16	21638	16
60°	22620	17	20852	17
65°	21440	28	19913	18
70°	19890	30	18935	30
75°	17593	34	17881	34
80°	14290	39	15109	39
85°	8410	46	8587	46

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 2°

Vertical Angle: 45°

Luminance: 25234 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.7	7.1
10°-20°	784.8	19.2
20°-30°	998.7	24.5
30°-40°	843.6	20.7
40°-50°	551.5	13.5
50°-60°	347.5	8.5
60°-70°	185.0	4.5
70°-80°	67.4	1.7
80°-90°	11.6	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°	2071.3	50.8
0°-40°	2914.9	71.5
0°-60°	3814.0	93.5
0°-90°	4078.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4078.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2868	2868	2868	2868	2868	
5°	2877	3035	2876	3214	2877	274
15°	2790	2648	2784	2655	2790	789
25°	2645	1512	2632	1427	2645	1216
35°	2404	28	2369	34	2404	1504
45°	2109	3	2030	3	2109	1622
55°	1709	2	1604	2	1709	1523
65°	1196	3	1111	2	1196	1185
75°	629	3	640	3	629	668
85°	123	3	126	3	123	156
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°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2884.3	2886.0	2886.9	2888.6	2891.2	2892.1	2893.8	2892.1	2892.1	2892.1	2892.1
5°	2876.6	2880.0	2882.6	2886.0	2892.1	2892.9	2899.8	2900.7	2904.1	2911.0	2916.2
7.5°	2863.7	2867.1	2872.3	2880.9	2889.5	2898.9	2911.0	2923.9	2942.0	2959.2	2980.7
10°	2844.7	2849.0	2855.0	2862.8	2905.0	2911.0	2937.7	2974.7	2985.0	3039.2	3079.7
12.5°	2817.2	2831.8	2847.3	2854.2	2894.6	2958.3	3047.8	3029.8	3010.0	3187.3	3184.7
15°	2790.5	2810.3	2802.5	2858.5	2895.5	3006.5	2968.7	3049.6	3197.6	3161.5	3163.2
17.5°	2762.1	2766.4	2809.4	2855.9	2922.2	2979.0	3025.5	3136.5	3165.8	3168.3	3136.5
20°	2725.9	2746.6	2809.4	2851.6	2963.5	2990.2	3090.9	3147.7	3135.6	3106.4	3052.2
22.5°	2688.9	2751.8	2815.5	2874.8	2953.2	3024.6	3074.5	3101.2	3038.4	2923.0	2861.1
25°	2645.0	2682.0	2765.5	2852.5	2950.6	2991.9	3021.2	2978.1	2896.4	2793.1	2688.9
27.5°	2577.0	2636.4	2743.1	2841.3	2929.9	2979.8	2932.5	2829.2	2697.5	2629.5	2582.2
30°	2524.5	2602.0	2689.8	2784.5	2876.6	2905.8	2785.3	2667.4	2577.0	2509.0	2498.7
32.5°	2460.8	2571.0	2654.5	2744.9	2822.3	2783.6	2666.5	2514.2	2439.3	2413.5	2423.8
35°	2404.0	2487.5	2596.8	2685.5	2741.4	2654.5	2469.4	2374.8	2338.6	2353.2	2334.3
37.5°	2336.0	2446.2	2546.9	2623.5	2604.6	2473.7	2317.1	2256.8	2261.1	2249.1	2212.9
40°	2265.4	2370.5	2475.5	2547.8	2481.5	2281.8	2177.6	2164.7	2167.3	2128.6	2076.9
42.5°	2182.8	2278.4	2383.4	2448.8	2305.9	2150.1	2079.5	2081.2	2058.9	2004.6	1977.1
45°	2108.8	2196.6	2305.9	2311.9	2136.3	2006.4	1985.7	1963.3	1913.4	1895.3	1874.7
47.5°	2014.1	2111.4	2201.7	2169.0	1970.2	1889.3	1873.8	1824.7	1799.8	1786.0	1768.8
50°	1913.4	2011.5	2094.2	2001.2	1813.6	1794.6	1743.8	1705.1	1687.9	1673.3	1657.8
52.5°	1817.9	1898.8	1983.1	1823.0	1693.1	1675.0	1617.3	1594.9	1577.7	1561.4	1557.9
55°	1709.4	1780.9	1838.5	1653.5	1577.7	1535.5	1494.2	1478.7	1462.4	1454.6	1467.5
57.5°	1586.3	1667.2	1658.6	1486.5	1452.9	1391.8	1376.3	1366.0	1353.9	1359.1	1251.5
60°	1475.3	1537.3	1495.1	1364.3	1307.4	1266.1	1252.4	1245.5	1252.4	1147.4	1008.8
62.5°	1338.4	1408.2	1322.9	1221.4	1161.1	1141.3	1129.3	1138.7	1038.0	922.7	889.1
65°	1196.4	1272.2	1146.5	1068.2	1030.3	1013.1	1012.2	932.2	833.2	788.4	788.4
67.5°	1059.6	1137.9	976.1	910.7	896.0	897.7	847.8	726.5	698.9	668.8	581.9
70°	914.1	983.0	806.5	766.9	758.3	752.3	630.9	598.2	565.5	485.5	478.6
72.5°	769.5	803.1	648.1	638.7	636.9	529.3	505.2	449.3	411.4	402.0	397.7
75°	629.2	618.9	512.1	520.7	439.0	401.1	362.4	329.7	324.5	321.1	80.0
77.5°	496.6	445.0	403.7	351.2	314.2	266.8	259.1	253.9	167.0	60.3	49.1
80°	361.5	288.3	268.5	228.1	194.5	186.8	191.1	58.5	46.5	38.7	33.6
82.5°	229.8	184.2	150.6	131.7	128.2	55.9	41.3	33.6	29.3	25.0	20.7
85°	123.1	81.8	75.7	63.7	37.9	25.8	21.5	16.4	13.8	11.2	10.3
87.5°	38.7	32.7	26.7	21.5	12.9	8.6	6.9	6.0	5.2	4.3	4.3
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°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2890.3	2892.1	2891.2	2893.8	2893.8	2897.2	2899.8	2902.4	2907.5	2910.1	2929.9
5°	2927.3	2931.6	2944.6	2956.6	2971.2	2975.5	3000.5	3006.5	3035.8	3039.2	3135.6
7.5°	3010.0	3026.3	3057.3	3088.3	3119.3	3139.1	3173.5	3195.0	3218.3	3238.9	3315.5
10°	3109.8	3137.4	3167.5	3198.5	3216.6	3254.4	3275.1	3278.5	3272.5	3238.9	3115.0
12.5°	3207.9	3235.5	3222.6	3228.6	3250.1	3183.0	3192.5	3144.2	3177.8	3011.7	2888.6
15°	3194.2	3192.5	3160.6	3057.3	3074.5	2946.3	2894.6	2855.0	2886.9	2869.7	2850.7
17.5°	3152.9	3074.5	3019.4	2895.5	2843.0	2806.8	2807.7	2808.6	2793.1	2809.4	2761.2
20°	2978.1	2890.3	2808.6	2764.7	2749.2	2723.4	2736.3	2723.4	2724.2	2729.4	2655.4
22.5°	2745.7	2719.0	2671.7	2685.5	2680.3	2703.6	2686.3	2659.7	2668.3	2629.5	2573.6
25°	2651.9	2620.9	2619.2	2624.4	2616.6	2606.3	2590.8	2550.3	2547.8	2535.7	2509.9
27.5°	2557.2	2559.0	2564.1	2548.6	2521.1	2500.4	2477.2	2457.4	2465.1	2451.4	2416.1
30°	2491.8	2491.0	2460.0	2446.2	2395.4	2396.3	2390.2	2378.2	2370.5	2371.3	2348.9
32.5°	2398.9	2372.2	2336.9	2319.7	2315.4	2299.9	2287.8	2290.4	2296.4	2274.9	2298.2
35°	2303.3	2248.2	2243.1	2228.4	2214.7	2204.3	2208.6	2191.4	2190.6	2188.0	1998.6
37.5°	2175.1	2148.4	2145.8	2130.3	2120.8	2118.3	2101.9	2104.5	2112.2	2126.0	1704.2
40°	2069.2	2045.1	2039.1	2038.2	2017.6	2015.8	2020.1	2036.5	2047.7	1961.6	1624.2
42.5°	1955.6	1957.3	1938.4	1926.3	1928.9	1936.6	1957.3	1900.5	1646.6	1569.1	1484.8
45°	1858.3	1849.7	1839.4	1835.9	1858.3	1842.8	1615.6	1490.8	1460.7	1457.2	1220.5
47.5°	1756.8	1754.2	1749.9	1752.4	1625.1	1448.6	1397.0	1380.6	1385.8	1382.3	1048.4
50°	1654.3	1657.8	1657.8	1447.7	1329.0	1299.7	1304.0	1318.6	1227.4	1145.6	976.9
52.5°	1565.7	1539.0	1318.6	1242.9	1216.2	1229.1	1198.1	1083.7	1001.0	952.8	903.8
55°	1401.3	1205.0	1156.0	1143.9	1153.4	1038.9	968.3	894.3	872.8	867.6	839.2
57.5°	1102.6	1063.0	1067.3	1019.1	909.8	845.2	816.8	806.5	797.0	790.2	68.9
60°	975.2	986.4	902.9	799.6	755.7	747.1	740.2	730.8	729.0	717.0	43.9
62.5°	892.6	785.0	712.7	686.9	676.5	674.0	661.0	656.7	557.8	76.6	32.7
65°	673.1	629.2	615.4	609.4	598.2	598.2	496.6	78.3	63.7	55.1	29.3
67.5°	549.1	545.7	538.8	531.1	361.5	75.7	66.3	57.7	49.9	43.9	25.8
70°	464.8	463.1	421.8	77.5	64.6	56.8	49.9	44.8	41.3	37.0	23.2
72.5°	381.3	77.5	65.4	56.8	49.1	44.8	40.5	36.2	32.7	30.1	18.9
75°	59.4	52.5	46.5	42.2	38.7	34.4	31.0	28.4	27.5	24.1	12.9
77.5°	43.0	37.0	33.6	30.1	26.7	24.1	20.7	18.1	16.4	13.8	9.5
80°	30.1	26.7	24.1	19.8	17.2	14.6	12.9	11.2	10.3	8.6	4.3
82.5°	17.2	14.6	12.9	10.3	9.5	7.7	6.9	6.0	6.0	4.3	4.3
85°	7.7	7.7	6.0	5.2	4.3	4.3	4.3	3.4	3.4	2.6	2.6
87.5°	3.4	3.4	3.4	3.4	3.4	2.6	2.6	2.6	2.6	2.6	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°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2957.5	2968.7	2990.2	3012.6	2987.6	3077.1	3070.2	3100.4	3116.7	3124.5	3142.5
5°	3220.9	3270.8	3287.1	3238.1	3209.7	3180.4	3114.1	3064.2	3070.2	3053.9	2994.5
7.5°	3215.7	3109.0	2965.2	2899.8	2894.6	2886.9	2907.5	2919.6	2921.3	2920.5	2918.7
10°	2943.7	2888.6	2879.1	2870.5	2874.0	2842.1	2827.5	2786.2	2808.6	2796.5	2800.8
12.5°	2861.1	2848.2	2797.4	2726.8	2769.0	2737.1	2719.0	2731.1	2717.3	2704.4	2700.1
15°	2812.0	2728.5	2700.1	2682.9	2670.8	2664.0	2670.0	2656.2	2651.9	2649.3	2655.4
17.5°	2710.4	2676.9	2645.9	2600.3	2601.1	2598.5	2615.8	2641.6	2643.3	2510.8	2391.1
20°	2630.4	2602.8	2563.3	2534.9	2573.6	2504.7	2238.8	2112.2	2092.4	2092.4	2095.9
22.5°	2566.7	2505.6	2508.2	2463.4	2101.0	2027.0	2028.7	2036.5	2001.2	1880.7	1867.8
25°	2479.8	2470.3	2281.8	1971.9	1974.5	1916.8	1828.2	1703.4	1568.3	1568.3	1545.9
27.5°	2414.3	2213.8	1938.4	1925.5	1731.8	1609.6	1533.8	1419.3	1403.9	1389.2	1390.9
30°	2358.4	1872.9	1879.8	1609.6	1466.7	1365.1	1359.1	1340.2	1330.7	1328.1	1318.6
32.5°	1864.3	1823.9	1573.4	1370.3	1314.3	1298.0	1290.2	1268.7	1267.9	1251.5	1137.9
35°	1748.1	1601.0	1316.9	1261.8	1245.5	1230.0	1217.1	816.8	96.4	38.7	33.6
37.5°	1615.6	1337.6	1217.9	1193.0	1177.5	870.2	86.9	30.1	21.5	15.5	13.8
40°	1369.4	1194.7	1156.8	1129.3	465.7	30.1	18.9	14.6	8.6	7.7	6.9
42.5°	1155.1	1125.8	1085.4	330.5	34.4	14.6	9.5	6.9	6.0	6.0	5.2
45°	1081.1	1055.3	437.3	32.7	21.5	6.9	6.0	6.0	5.2	3.4	3.4
47.5°	1012.2	890.9	39.6	20.7	13.8	6.0	5.2	3.4	3.4	3.4	2.6
50°	939.1	49.1	27.5	15.5	8.6	3.4	3.4	3.4	3.4	2.6	2.6
52.5°	175.6	34.4	22.4	13.8	4.3	3.4	3.4	3.4	2.6	2.6	2.6
55°	41.3	27.5	20.7	12.1	3.4	3.4	3.4	2.6	2.6	2.6	1.7
57.5°	31.0	20.7	16.4	11.2	3.4	2.6	2.6	2.6	2.6	2.6	1.7
60°	25.8	14.6	12.9	10.3	2.6	2.6	2.6	2.6	2.6	2.6	1.7
62.5°	18.1	12.1	9.5	7.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6
65°	14.6	9.5	7.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
67.5°	12.9	7.7	5.2	1.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6
70°	10.3	2.6	2.6	1.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6
72.5°	8.6	2.6	1.7	1.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6
75°	8.6	4.3	1.7	1.7	2.6	2.6	3.4	3.4	2.6	2.6	2.6
77.5°	6.0	4.3	1.7	1.7	2.6	2.6	3.4	3.4	2.6	2.6	2.6
80°	3.4	4.3	1.7	2.6	2.6	5.2	6.0	3.4	2.6	2.6	2.6
82.5°	3.4	4.3	5.2	5.2	2.6	4.3	5.2	4.3	3.4	2.6	2.6
85°	3.4	2.6	3.4	4.3	2.6	4.3	4.3	3.4	3.4	2.6	2.6
87.5°	1.7	2.6	2.6	3.4	3.4	3.4	4.3	3.4	3.4	3.4	2.6
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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	3151.1	3154.6	3100.4	3081.4	3097.8	3094.3	3079.7	3025.5	3019.4	2983.3	2930.8
5°	3011.7	3034.9	3006.5	3055.6	3032.4	3055.6	3126.2	3158.9	3212.2	3245.0	3257.0
7.5°	2914.4	2919.6	2919.6	2923.9	2928.2	2929.1	2923.9	2920.5	2905.8	2887.8	2920.5
10°	2796.5	2802.5	2812.9	2811.1	2810.3	2828.4	2832.7	2869.7	2868.0	2874.8	2899.8
12.5°	2735.4	2688.9	2731.1	2719.9	2735.4	2711.3	2756.1	2748.3	2750.9	2771.6	2824.9
15°	2633.8	2648.5	2658.8	2658.8	2664.8	2659.7	2654.5	2689.8	2711.3	2712.2	2708.7
17.5°	2438.5	2327.4	2441.0	2411.8	2645.0	2651.1	2631.3	2614.9	2614.9	2627.8	2655.4
20°	2093.3	2095.9	2096.7	2107.9	2121.7	2120.8	2121.7	2460.8	2621.8	2584.8	2559.8
22.5°	1835.1	1803.2	1862.6	1858.3	1932.3	2014.1	2092.4	2084.7	2089.9	2329.1	2544.3
25°	1471.0	1512.3	1478.7	1493.4	1576.9	1674.1	1734.4	1891.9	2063.2	2051.1	2107.1
27.5°	1384.9	1373.7	1389.2	1389.2	1400.4	1413.3	1446.9	1535.5	1687.9	1848.0	1999.5
30°	1303.1	1312.6	1314.3	1329.8	1338.4	1347.0	1352.2	1385.8	1420.2	1531.2	1718.0
32.5°	978.7	858.1	1129.3	1202.4	1264.4	1279.0	1289.4	1303.1	1328.1	1344.5	1438.3
35°	28.4	28.4	30.1	34.4	43.9	296.1	1127.6	1242.9	1259.2	1279.9	1297.1
37.5°	13.8	10.3	12.1	12.9	15.5	21.5	31.0	96.4	1073.3	1213.6	1232.6
40°	6.0	6.0	6.0	6.0	6.9	8.6	12.9	21.5	32.7	863.3	1164.6
42.5°	5.2	5.2	5.2	5.2	5.2	5.2	6.0	7.7	15.5	37.0	611.1
45°	3.4	3.4	2.6	3.4	3.4	4.3	5.2	5.2	6.9	23.2	42.2
47.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.3	5.2	15.5	22.4
50°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	12.1	15.5
52.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	5.2	13.8
55°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.6	2.6	3.4	12.1
57.5°	1.7	1.7	1.7	1.7	1.7	2.6	1.7	1.7	2.6	2.6	11.2
60°	1.7	1.7	1.7	1.7	1.7	2.6	2.6	2.6	2.6	2.6	10.3
62.5°	2.6	2.6	1.7	2.6	1.7	1.7	2.6	2.6	2.6	2.6	6.9
65°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.7	2.6
67.5°	2.6	2.6	2.6	2.6	1.7	2.6	1.7	2.6	2.6	1.7	1.7
70°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.7	1.7	1.7	1.7
72.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.7	1.7	1.7	1.7
75°	2.6	2.6	2.6	2.6	2.6	2.6	3.4	3.4	1.7	1.7	1.7
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	4.3	5.2	4.3	4.3	1.7
80°	2.6	2.6	2.6	2.6	2.6	2.6	4.3	4.3	4.3	4.3	6.0
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	3.4	3.4	3.4	3.4	4.3
85°	2.6	2.6	2.6	2.6	2.6	2.6	3.4	3.4	3.4	2.6	3.4
87.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.4	2.6	2.6	2.6
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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	140°	145°	150°	155°	160°	161°	162°	163°	164°	165°	166°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2935.1	2905.8	2896.4	2876.6	2874.8	2876.6	2872.3	2866.2	2869.7	2863.7	2858.5
5°	3263.9	3185.6	3134.8	3066.8	2973.0	2952.3	2947.1	2917.9	2907.5	2904.1	2890.3
7.5°	2997.9	3140.8	3226.9	3256.1	3146.0	3120.1	3090.0	3065.9	3042.7	2998.8	2972.1
10°	2880.0	2886.9	2969.5	3065.9	3222.6	3244.1	3260.4	3207.9	3193.3	3081.4	3057.3
12.5°	2852.5	2853.3	2862.8	2921.3	3044.4	3058.2	3115.8	3146.8	3184.7	3206.2	3189.0
15°	2726.8	2796.5	2848.2	2853.3	2864.5	2888.6	2905.8	3013.4	3059.0	3181.3	3174.4
17.5°	2668.3	2690.6	2765.5	2826.6	2816.3	2807.7	2821.5	2836.1	2880.0	3002.2	3000.5
20°	2571.0	2642.4	2682.9	2746.6	2804.3	2806.8	2791.3	2782.7	2765.5	2785.3	2803.4
22.5°	2529.7	2540.9	2616.6	2661.4	2726.8	2750.0	2753.5	2754.3	2744.9	2734.5	2729.4
25°	2525.4	2490.1	2528.8	2584.8	2633.0	2657.9	2686.3	2695.8	2692.4	2692.4	2687.2
27.5°	2066.6	2478.9	2458.2	2495.3	2553.8	2571.0	2585.6	2614.9	2633.0	2645.9	2651.9
30°	1968.5	2042.5	2403.2	2408.3	2467.7	2466.0	2482.3	2506.4	2529.7	2559.8	2567.6
32.5°	1741.3	1922.9	2200.0	2321.4	2383.4	2389.4	2398.0	2404.9	2426.4	2460.0	2489.2
35°	1395.2	1751.6	1885.0	2280.1	2291.3	2303.3	2308.5	2324.8	2331.7	2345.5	2371.3
37.5°	1262.7	1447.7	1808.4	1971.9	2185.4	2195.7	2223.3	2230.2	2241.3	2252.5	2272.3
40°	1186.1	1236.9	1505.4	1761.1	2100.2	2107.1	2116.5	2133.8	2134.6	2147.5	2165.6
42.5°	1125.0	1157.7	1236.0	1681.9	2039.9	2039.1	2016.7	2027.9	2033.0	2046.8	2071.8
45°	898.6	1086.2	1136.2	1373.7	1624.2	1741.3	1965.9	1928.9	1928.0	1933.2	1959.9
47.5°	45.6	1021.7	1057.0	1133.6	1533.8	1538.1	1567.4	1813.6	1851.4	1839.4	1842.0
50°	31.0	70.6	984.7	1020.0	1322.1	1428.8	1450.3	1461.5	1603.5	1761.9	1736.1
52.5°	24.1	40.5	603.4	946.8	1074.2	1152.5	1291.1	1370.3	1378.9	1442.6	1658.6
55°	21.5	31.0	65.4	873.6	913.2	930.4	1011.4	1149.9	1261.8	1295.4	1298.0
57.5°	18.9	28.4	44.8	395.1	830.6	834.0	847.8	896.0	996.7	1088.8	1193.0
60°	17.2	25.0	35.3	68.0	754.9	763.5	766.1	779.0	791.0	853.8	973.5
62.5°	10.3	19.8	31.0	49.1	597.3	686.0	685.1	693.7	704.9	711.8	735.9
65°	8.6	15.5	26.7	41.3	73.2	91.2	554.3	616.3	623.2	632.6	636.9
67.5°	7.7	13.8	19.8	32.7	55.1	62.8	72.3	89.5	488.9	550.9	559.5
70°	6.9	9.5	16.4	27.5	44.8	48.2	54.2	62.0	73.2	90.4	442.4
72.5°	4.3	6.9	11.2	19.8	34.4	38.7	42.2	47.3	52.5	62.8	72.3
75°	1.7	5.2	9.5	14.6	26.7	29.3	31.8	35.3	39.6	46.5	51.6
77.5°	1.7	4.3	7.7	10.3	17.2	19.8	23.2	25.8	29.3	32.7	37.9
80°	6.0	3.4	5.2	7.7	12.1	12.9	14.6	16.4	18.9	21.5	25.0
82.5°	4.3	5.2	6.0	5.2	6.0	7.7	8.6	10.3	11.2	12.9	13.8
85°	3.4	3.4	4.3	4.3	4.3	4.3	4.3	4.3	5.2	6.0	7.7
87.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	167°	168°	169°	170°	171°	172°	173°	174°	175°	176°	177°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2858.5	2856.8	2851.6	2851.6	2850.7	2854.2	2856.8	2859.3	2858.5	2863.7	2858.5
5°	2880.0	2875.7	2868.0	2861.1	2858.5	2860.2	2857.6	2860.2	2856.8	2861.1	2853.3
7.5°	2939.4	2924.8	2894.6	2882.6	2867.1	2866.2	2858.5	2856.8	2851.6	2851.6	2842.1
10°	3044.4	2973.8	2965.2	2929.1	2916.2	2853.3	2867.1	2843.9	2841.3	2830.1	2825.8
12.5°	3130.5	3075.4	3059.0	3027.2	2991.0	2863.7	2892.1	2842.1	2839.6	2817.2	2793.9
15°	3132.2	3164.0	3119.3	3031.5	3023.7	2936.0	2878.3	2861.1	2838.7	2771.6	2782.7
17.5°	3031.5	3104.7	3126.2	3107.2	3052.2	2992.8	2911.9	2877.4	2810.3	2780.2	2759.5
20°	2868.0	2942.0	3034.1	3040.1	3074.5	3032.4	2926.5	2870.5	2789.6	2737.1	2719.9
22.5°	2738.0	2792.2	2898.1	2947.1	2989.3	3004.0	2936.8	2854.2	2753.5	2702.7	2692.4
25°	2669.1	2681.2	2713.0	2770.7	2863.7	2930.8	2940.3	2852.5	2800.0	2688.9	2630.4
27.5°	2644.2	2633.8	2620.9	2650.2	2719.9	2801.7	2855.9	2870.5	2739.7	2633.8	2575.3
30°	2580.5	2586.5	2566.7	2556.4	2602.0	2686.3	2782.7	2806.8	2706.1	2596.8	2529.7
32.5°	2502.1	2512.5	2515.9	2497.8	2488.4	2546.9	2651.1	2708.7	2703.6	2544.3	2469.4
35°	2404.0	2433.3	2441.0	2441.9	2426.4	2416.9	2477.2	2596.8	2642.4	2520.2	2411.8
37.5°	2300.7	2309.3	2351.5	2362.7	2362.7	2334.3	2379.1	2474.6	2538.3	2466.0	2341.2
40°	2171.6	2199.2	2238.8	2258.6	2278.4	2280.9	2256.0	2323.1	2428.1	2410.0	2274.9
42.5°	2077.8	2095.9	2120.0	2146.7	2187.1	2197.4	2171.6	2183.7	2293.0	2340.3	2188.8
45°	1968.5	1992.6	1999.5	2028.7	2070.9	2101.0	2100.2	2075.2	2163.0	2221.5	2126.0
47.5°	1856.6	1879.8	1891.9	1906.5	1937.5	1976.2	1997.8	1986.6	2003.8	2118.3	2042.5
50°	1741.3	1754.2	1778.3	1794.6	1815.3	1837.7	1889.3	1899.6	1875.5	1966.8	1950.4
52.5°	1631.9	1636.2	1652.6	1669.0	1696.5	1712.9	1754.2	1785.2	1783.4	1810.1	1848.0
55°	1546.7	1527.8	1531.2	1544.2	1562.2	1587.2	1610.4	1658.6	1675.0	1680.1	1740.4
57.5°	1208.5	1403.0	1420.2	1419.3	1440.9	1452.1	1473.6	1505.4	1563.9	1551.0	1618.2
60°	1098.3	1119.8	1282.5	1301.4	1309.2	1319.5	1345.3	1374.6	1417.6	1445.2	1474.4
62.5°	837.5	968.3	1017.4	1161.1	1183.5	1189.5	1206.7	1220.5	1265.3	1328.1	1316.1
65°	648.1	704.1	853.8	912.4	1034.6	1050.1	1074.2	1088.8	1101.7	1174.0	1177.5
67.5°	560.3	568.9	609.4	722.2	799.6	919.3	933.9	946.8	966.6	1018.2	1050.1
70°	478.6	488.9	500.1	509.6	610.3	689.4	800.5	804.8	817.7	852.1	924.4
72.5°	90.4	408.8	415.7	421.8	432.9	485.5	591.3	677.4	682.6	698.9	765.2
75°	61.1	71.4	98.1	337.4	348.6	352.0	370.1	477.7	556.9	560.3	589.6
77.5°	43.9	49.1	59.4	70.6	179.9	270.3	274.6	294.4	376.1	435.5	440.7
80°	30.1	33.6	39.6	44.8	55.1	72.3	199.7	205.7	216.0	297.8	313.3
82.5°	17.2	19.8	23.2	28.4	32.7	41.3	53.4	68.9	140.3	149.8	198.8
85°	8.6	9.5	11.2	13.8	16.4	19.8	26.7	32.7	44.8	80.9	83.5
87.5°	4.3	4.3	4.3	4.3	6.9	7.7	9.5	12.1	15.5	23.2	30.1
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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	178°	179°	180°	181°	182°	183°	184°	185°	186°	187°	188°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2859.3	2871.4	2881.7	2884.3	2884.3	2886.0	2888.6	2890.3	2892.1	2893.8	2892.1
5°	2854.2	2867.1	2875.7	2878.3	2878.3	2883.4	2887.8	2892.9	2895.5	2895.5	2893.8
7.5°	2841.3	2850.7	2861.9	2868.8	2869.7	2878.3	2886.0	2885.2	2888.6	2890.3	2894.6
10°	2824.1	2824.1	2843.0	2848.2	2852.5	2861.9	2864.5	2869.7	2881.7	2883.4	2894.6
12.5°	2815.5	2806.8	2829.2	2831.8	2846.4	2834.4	2849.9	2855.0	2843.0	2859.3	2837.8
15°	2776.7	2787.0	2783.6	2791.3	2817.2	2803.4	2845.6	2831.8	2862.8	2825.8	2891.2
17.5°	2744.9	2743.1	2756.9	2763.8	2769.0	2798.2	2809.4	2824.9	2837.0	2826.6	2852.5
20°	2721.6	2707.9	2718.2	2725.9	2744.0	2766.4	2773.3	2750.0	2790.5	2859.3	2875.7
22.5°	2677.7	2668.3	2680.3	2680.3	2707.9	2704.4	2730.2	2715.6	2753.5	2833.5	2917.0
25°	2618.3	2619.2	2632.1	2647.6	2652.8	2691.5	2705.3	2724.2	2771.6	2867.1	2917.9
27.5°	2558.1	2552.9	2560.7	2592.5	2619.2	2647.6	2651.9	2716.5	2781.0	2846.4	2891.2
30°	2497.8	2492.7	2497.8	2521.1	2552.9	2571.9	2619.2	2705.3	2765.5	2810.3	2852.5
32.5°	2433.3	2428.1	2440.2	2457.4	2513.3	2515.9	2609.7	2690.6	2738.0	2770.7	2762.9
35°	2364.4	2357.5	2368.7	2395.4	2447.1	2466.0	2564.1	2624.4	2677.7	2693.2	2657.1
37.5°	2281.8	2269.7	2283.5	2320.5	2374.8	2429.8	2511.6	2581.3	2609.7	2568.4	2525.4
40°	2195.7	2187.1	2211.2	2230.2	2293.8	2370.5	2464.3	2513.3	2495.3	2447.9	2400.6
42.5°	2119.1	2101.0	2122.6	2158.7	2231.0	2317.9	2393.7	2421.2	2378.2	2308.5	2253.4
45°	2025.3	2003.8	2029.6	2077.8	2155.3	2254.3	2313.6	2304.2	2231.0	2170.8	2095.0
47.5°	1927.2	1901.4	1927.2	1984.8	2071.8	2176.8	2219.8	2176.8	2084.7	2008.9	1947.8
50°	1830.8	1800.6	1825.6	1912.5	1997.8	2078.7	2077.8	1994.3	1939.2	1856.6	1803.2
52.5°	1735.2	1692.2	1717.2	1811.8	1897.1	1989.1	1921.2	1843.7	1777.4	1705.1	1687.9
55°	1617.3	1570.8	1604.4	1742.1	1807.5	1861.8	1753.3	1685.3	1619.9	1583.7	1562.2
57.5°	1505.4	1454.6	1483.9	1646.6	1694.8	1708.6	1608.7	1512.3	1473.6	1461.5	1430.5
60°	1390.1	1332.4	1360.0	1547.6	1581.2	1525.2	1427.1	1352.2	1344.5	1320.4	1296.3
62.5°	1279.9	1216.2	1233.4	1424.5	1440.0	1338.4	1248.1	1228.3	1209.3	1185.2	1172.3
65°	1153.4	1087.1	1111.2	1293.7	1279.0	1148.2	1097.4	1093.1	1068.2	1048.4	1067.3
67.5°	1037.2	958.9	992.4	1150.8	1084.5	977.8	957.1	946.8	927.0	938.2	739.4
70°	909.8	824.6	870.2	996.7	898.6	828.0	820.3	804.8	805.6	640.4	539.7
72.5°	767.8	693.7	760.0	828.0	711.0	690.3	679.1	677.4	546.6	444.1	419.2
75°	643.0	568.1	639.5	665.3	566.4	552.6	551.7	456.2	358.9	342.6	334.8
77.5°	501.8	444.1	512.1	473.4	434.7	419.2	376.1	282.3	270.3	259.1	97.3
80°	338.3	342.6	382.2	326.2	309.9	264.2	208.3	199.7	172.1	68.9	54.2
82.5°	205.7	258.2	243.6	204.0	199.7	143.7	131.7	67.1	49.9	39.6	34.4
85°	106.7	130.8	125.7	111.0	82.6	74.0	41.3	31.8	25.8	19.8	16.4
87.5°	36.2	48.2	46.5	37.0	28.4	22.4	14.6	12.1	8.6	6.9	6.0
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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	189°	190°	191°	192°	193°	194°	195°	196°	197°	198°	199°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2890.3	2890.3	2888.6	2890.3	2891.2	2889.5	2889.5	2891.2	2892.1	2892.9	2897.2
5°	2894.6	2896.4	2898.9	2904.1	2905.0	2915.3	2919.6	2922.2	2924.8	2925.6	2919.6
7.5°	2904.1	2910.1	2915.3	2914.4	2908.4	2892.1	2886.9	2882.6	2890.3	2910.1	2933.4
10°	2912.7	2885.2	2833.5	2904.1	2882.6	2902.4	2960.9	2973.8	3013.4	3069.4	3085.7
12.5°	2853.3	2929.1	2945.4	2866.2	3012.6	2958.3	3022.9	3079.7	3096.0	3152.9	3118.4
15°	2917.0	2954.0	2979.0	3058.2	3049.6	3096.0	3114.1	3102.9	3105.5	3120.1	3158.9
17.5°	2916.2	2990.2	3006.5	3059.9	3096.0	3096.9	3091.7	3086.6	3100.4	3111.5	3088.3
20°	2966.1	2990.2	3022.0	3043.5	3050.4	3059.0	3075.4	3062.5	3036.7	3011.7	3001.4
22.5°	2941.1	2995.3	3022.9	3026.3	3022.0	2995.3	2971.2	2935.1	2923.0	2910.1	2914.4
25°	2946.3	2971.2	2967.8	2954.0	2936.0	2886.0	2874.0	2858.5	2835.2	2779.3	2728.5
27.5°	2909.3	2896.4	2880.9	2847.3	2814.6	2787.9	2757.8	2707.9	2666.5	2606.3	2583.9
30°	2847.3	2795.7	2757.8	2738.0	2706.1	2661.4	2615.8	2554.6	2502.1	2490.1	2478.9
32.5°	2728.5	2677.7	2646.7	2598.5	2544.3	2491.0	2438.5	2414.3	2403.2	2404.9	2394.6
35°	2607.2	2562.4	2515.9	2443.6	2403.2	2349.8	2330.9	2325.7	2315.4	2304.2	2292.1
37.5°	2478.0	2425.5	2355.8	2312.8	2272.3	2250.8	2241.3	2233.6	2215.5	2195.7	2182.0
40°	2353.2	2258.6	2219.8	2177.6	2165.6	2156.1	2142.4	2123.4	2098.5	2095.0	2089.0
42.5°	2186.3	2118.3	2084.7	2076.1	2061.4	2045.1	2033.0	2012.4	2002.1	2008.9	2014.1
45°	2027.9	1993.5	1982.3	1971.9	1944.4	1921.2	1913.4	1906.5	1915.1	1953.0	1862.6
47.5°	1899.6	1885.9	1872.1	1854.9	1829.1	1811.8	1819.6	1826.5	1834.2	1556.2	1420.2
50°	1788.6	1769.7	1748.1	1729.2	1713.7	1712.0	1752.4	1631.1	1366.0	1359.1	1221.4
52.5°	1667.2	1638.8	1625.9	1614.7	1621.6	1647.4	1363.4	1265.3	1213.6	1054.4	983.8
55°	1536.4	1511.4	1511.4	1521.8	1484.8	1203.3	1188.7	1027.7	930.4	902.9	891.7
57.5°	1405.6	1403.0	1417.6	1296.3	1092.3	1047.5	880.5	845.2	829.7	826.3	808.2
60°	1285.9	1310.0	1096.6	1008.8	877.1	791.0	766.9	762.6	746.3	740.2	723.9
62.5°	1190.4	987.3	919.3	750.6	706.7	695.5	682.6	676.5	661.9	584.4	171.3
65°	859.9	812.5	659.3	630.9	627.5	611.1	606.0	544.8	128.2	86.1	73.2
67.5°	649.0	575.8	556.0	550.9	534.5	501.8	148.9	85.2	73.2	63.7	55.9
70°	498.4	485.5	470.8	458.8	135.1	84.4	73.2	62.0	53.4	47.3	43.0
72.5°	408.0	399.4	232.4	88.7	72.3	61.1	54.2	47.3	41.3	37.9	34.4
75°	319.3	88.7	73.2	61.1	52.5	44.8	39.6	35.3	31.8	29.3	26.7
77.5°	72.3	58.5	49.9	42.2	37.9	33.6	30.1	25.8	23.2	20.7	17.2
80°	44.8	38.7	32.7	30.1	25.8	21.5	18.9	17.2	13.8	12.9	11.2
82.5°	29.3	23.2	20.7	17.2	13.8	12.9	11.2	8.6	7.7	6.9	6.0
85°	12.9	11.2	9.5	7.7	6.0	5.2	4.3	3.4	3.4	3.4	3.4
87.5°	4.3	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	200°	205°	210°	215°	220°	225°	230°	235°	240°	245°	250°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2898.9	2914.4	2929.1	2924.8	2909.3	2885.2	2878.3	2868.8	2875.7	2890.3	2896.4
5°	2919.6	2911.0	2942.0	2987.6	3061.6	3068.5	3120.1	3132.2	3173.5	3199.3	3198.5
7.5°	2948.9	3071.1	3121.9	3177.0	3201.9	3195.9	3203.6	3197.6	3188.1	3183.8	3178.7
10°	3097.8	3190.7	3209.7	3209.7	3170.9	3118.4	3096.0	3057.3	2979.8	2981.6	2968.7
12.5°	3184.7	3217.4	3172.7	3134.8	2979.0	2918.7	2853.3	2822.3	2804.3	2776.7	2787.0
15°	3139.1	3092.6	3065.9	2943.7	2848.2	2739.7	2741.4	2722.5	2702.7	2704.4	2691.5
17.5°	3071.9	3034.9	2845.6	2761.2	2714.7	2672.6	2664.8	2639.9	2627.0	2622.6	2621.8
20°	2979.8	2846.4	2705.3	2684.6	2628.7	2580.5	2572.7	2580.5	2620.1	2549.5	2310.2
22.5°	2872.3	2680.3	2639.0	2580.5	2542.6	2523.7	2571.0	2355.8	2030.5	2070.1	2027.9
25°	2689.8	2606.3	2535.7	2491.0	2486.7	2370.5	1975.4	1934.1	1724.9	1613.0	1487.3
27.5°	2556.4	2520.2	2446.2	2438.5	2382.5	1938.4	1732.7	1505.4	1421.9	1409.0	1381.5
30°	2475.5	2423.8	2379.1	2183.7	1901.4	1560.5	1390.1	1358.2	1343.6	1328.1	1304.0
32.5°	2378.2	2329.1	2350.7	1835.9	1515.7	1343.6	1309.2	1285.9	1259.2	1248.9	1162.0
35°	2279.2	2256.8	1836.8	1543.3	1303.1	1261.8	1236.0	1211.9	964.0	233.3	79.2
37.5°	2173.3	2168.2	1650.9	1280.8	1220.5	1181.8	1108.6	229.0	54.2	37.0	27.5
40°	2090.7	1651.7	1304.9	1200.7	1151.7	1090.5	153.2	37.9	24.1	14.6	9.5
42.5°	2035.6	1485.6	1168.0	1126.7	1020.0	112.8	38.7	16.4	9.5	7.7	6.0
45°	1569.1	1173.2	1091.4	1048.4	129.1	38.7	22.4	7.7	6.0	5.2	3.4
47.5°	1447.7	1065.6	1017.4	229.0	43.0	20.7	15.5	5.2	3.4	3.4	3.4
50°	1096.6	984.7	809.9	55.9	27.5	14.6	11.2	3.4	3.4	3.4	2.6
52.5°	961.4	908.9	86.9	37.0	21.5	11.2	6.9	2.6	2.6	2.6	2.6
55°	878.8	576.7	51.6	28.4	18.1	10.3	4.3	2.6	2.6	2.6	1.7
57.5°	803.9	77.5	37.9	24.1	16.4	9.5	2.6	2.6	2.6	2.6	1.7
60°	681.7	55.9	31.0	21.5	15.5	8.6	2.6	2.6	2.6	2.6	2.6
62.5°	88.7	43.9	26.7	18.9	11.2	6.9	1.7	2.6	2.6	2.6	2.6
65°	64.6	34.4	24.1	12.9	6.9	2.6	1.7	2.6	2.6	2.6	2.6
67.5°	49.9	28.4	18.1	11.2	6.0	1.7	1.7	2.6	2.6	2.6	2.6
70°	39.6	24.1	14.6	9.5	5.2	1.7	1.7	2.6	2.6	2.6	2.6
72.5°	31.0	17.2	10.3	5.2	3.4	1.7	1.7	2.6	2.6	2.6	2.6
75°	23.2	13.8	7.7	4.3	1.7	1.7	1.7	2.6	2.6	2.6	2.6
77.5°	15.5	8.6	6.0	3.4	3.4	3.4	4.3	4.3	2.6	2.6	2.6
80°	10.3	6.0	4.3	4.3	4.3	3.4	4.3	4.3	2.6	4.3	2.6
82.5°	5.2	4.3	4.3	3.4	3.4	2.6	3.4	3.4	3.4	3.4	2.6
85°	3.4	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.4	3.4	2.6
87.5°	1.7	1.7	1.7	1.7	2.6	2.6	2.6	2.6	3.4	3.4	2.6
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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	255°	260°	265°	270°	275°	280°	285°	290°	295°	300°	305°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2888.6	2891.2	2884.3	2921.3	2902.4	2904.1	2911.9	2892.1	2896.4	2882.6	2873.1
5°	3201.9	3207.1	3212.2	3214.0	3217.4	3221.7	3216.6	3214.0	3208.8	3191.6	3173.5
7.5°	3152.9	3146.8	3144.2	3147.7	3153.7	3156.3	3152.0	3158.0	3180.4	3189.9	3195.9
10°	2894.6	2867.1	2886.0	2883.4	2861.9	2934.2	2914.4	2925.6	2933.4	3012.6	3060.8
12.5°	2771.6	2788.8	2756.1	2739.7	2761.2	2775.9	2790.5	2759.5	2802.5	2782.7	2846.4
15°	2668.3	2657.9	2654.5	2655.4	2651.1	2671.7	2676.9	2683.8	2689.8	2716.5	2726.8
17.5°	2621.8	2639.0	2645.9	2651.1	2642.4	2633.0	2623.5	2609.7	2614.0	2607.2	2627.0
20°	2149.2	2091.6	2088.1	2121.7	2084.7	2105.3	2155.3	2489.2	2478.0	2608.0	2564.1
22.5°	1793.8	1739.5	1693.1	1652.6	1710.3	1734.4	1827.3	1932.3	2102.8	2076.1	2261.1
25°	1465.0	1445.2	1433.1	1427.1	1431.4	1429.7	1450.3	1499.4	1576.9	1759.3	1995.2
27.5°	1370.3	1360.8	1356.5	1342.7	1353.1	1349.6	1366.0	1376.3	1399.5	1417.6	1494.2
30°	1295.4	1284.2	1276.5	1261.8	1272.2	1273.0	1278.2	1304.9	1314.3	1329.8	1353.9
32.5°	473.4	278.9	261.7	248.8	272.0	354.6	622.3	1088.0	1241.2	1253.2	1280.8
35°	46.5	38.7	34.4	34.4	35.3	38.7	51.6	136.0	248.8	961.4	1203.3
37.5°	18.1	15.5	12.9	12.1	12.9	14.6	19.8	25.8	35.3	73.2	326.2
40°	7.7	6.9	6.0	6.0	6.0	6.0	6.9	8.6	12.9	24.1	37.9
42.5°	5.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	6.0	7.7	15.5
45°	3.4	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.4	4.3	6.9
47.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.4
50°	2.6	2.6	2.6	2.6	1.7	2.6	1.7	2.6	2.6	2.6	2.6
52.5°	2.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.6	2.6
55°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.6
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	2.6	2.6	1.7
65°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.6	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°	2.6	2.6	1.7	2.6	1.7	1.7	2.6	2.6	2.6	1.7	1.7
72.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	5.2	5.2	3.4
75°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.3	5.2	4.3
77.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.3	4.3	4.3
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.4	3.4	3.4
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.4	3.4	3.4
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
87.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	310°	315°	320°	325°	330°	335°	340°	341°	342°	343°	344°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2856.8	2855.9	2874.0	2887.8	2882.6	2887.8	2893.8	2894.6	2896.4	2889.5	2886.9
5°	3139.1	3112.4	3060.8	3023.7	2980.7	2902.4	2863.7	2868.0	2868.8	2866.2	2869.7
7.5°	3193.3	3190.7	3172.7	3164.9	3135.6	3079.7	2990.2	2974.7	2936.8	2912.7	2892.9
10°	3057.3	3119.3	3135.6	3163.2	3180.4	3170.1	3094.3	3083.1	3059.0	3031.5	3037.5
12.5°	2910.1	2960.9	2963.5	3113.3	3146.8	3150.3	3121.0	3136.5	3139.9	3078.0	3041.8
15°	2729.4	2753.5	2804.3	2943.7	3045.3	3109.0	3127.9	3136.5	3094.3	3091.7	3077.1
17.5°	2650.2	2665.7	2688.9	2767.2	2921.3	3015.1	3095.2	3089.2	3105.5	3093.5	3056.5
20°	2550.3	2563.3	2604.6	2644.2	2719.9	2844.7	2994.5	3005.7	3027.2	3024.6	3034.9
22.5°	2548.6	2503.0	2509.9	2540.9	2620.1	2732.0	2891.2	2928.2	2942.0	2951.4	2962.6
25°	2021.9	2384.2	2450.5	2470.3	2521.9	2587.4	2775.0	2788.8	2814.6	2856.8	2887.8
27.5°	1751.6	1997.8	2262.9	2400.6	2433.3	2487.5	2599.4	2620.1	2707.9	2718.2	2766.4
30°	1382.3	1572.6	1968.5	2299.9	2354.1	2392.0	2471.2	2512.5	2550.3	2591.7	2642.4
32.5°	1300.6	1330.7	1550.2	1903.1	2324.8	2296.4	2355.0	2379.9	2421.2	2457.4	2494.4
35°	1225.7	1246.3	1292.8	1558.8	1893.6	2218.1	2257.7	2274.1	2297.3	2324.8	2351.5
37.5°	1147.4	1178.3	1210.2	1281.6	1751.6	2156.1	2155.3	2174.2	2188.0	2211.2	2233.6
40°	208.3	1081.9	1133.6	1180.1	1358.2	1719.7	2058.9	2067.5	2076.9	2091.6	2114.8
42.5°	33.6	180.8	1062.1	1106.9	1157.7	1539.8	2015.0	1979.7	1973.7	1984.0	2004.6
45°	17.2	43.9	213.5	1033.7	1079.4	1228.3	1647.4	1918.6	1912.5	1892.7	1897.1
47.5°	12.9	27.5	52.5	357.2	1010.5	1054.4	1520.1	1503.7	1618.2	1837.7	1804.1
50°	11.2	18.9	31.0	73.2	892.6	970.9	1170.6	1367.7	1428.0	1435.7	1699.1
52.5°	10.3	12.9	22.4	47.3	187.6	897.7	952.0	1020.8	1122.4	1340.2	1335.0
55°	9.5	12.1	18.9	31.8	65.4	809.1	865.0	877.9	899.5	1003.6	1141.3
57.5°	5.2	11.2	18.1	27.5	49.1	148.0	785.0	795.3	812.5	816.8	865.9
60°	2.6	10.3	16.4	24.1	36.2	68.9	705.8	717.8	728.2	729.9	745.4
62.5°	1.7	9.5	13.8	22.4	30.1	49.1	167.0	340.8	648.1	648.1	666.2
65°	1.7	6.9	8.6	14.6	27.5	40.5	70.6	81.8	159.2	391.6	584.4
67.5°	1.7	2.6	7.7	12.1	20.7	31.0	51.6	60.3	72.3	82.6	153.2
70°	1.7	1.7	6.9	7.7	12.9	23.2	37.0	42.2	49.1	55.9	64.6
72.5°	1.7	1.7	6.0	6.0	8.6	15.5	28.4	31.0	35.3	39.6	45.6
75°	4.3	3.4	5.2	5.2	6.0	12.1	21.5	24.1	25.8	29.3	33.6
77.5°	4.3	4.3	4.3	4.3	4.3	7.7	13.8	15.5	18.1	19.8	23.2
80°	3.4	3.4	3.4	4.3	4.3	5.2	8.6	9.5	10.3	12.9	13.8
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	5.2	6.0	7.7
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.4	3.4	3.4	3.4
87.5°	2.6	2.6	2.6	1.7	1.7	2.6	2.6	2.6	2.6	2.6	2.6
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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	345°	346°	347°	348°	349°	350°	351°	352°	353°	354°	355°
0°	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2886.0	2880.9	2876.6	2879.1	2871.4	2868.0	2870.5	2871.4	2873.1	2877.4	2878.3
5°	2878.3	2876.6	2884.3	2888.6	2886.9	2888.6	2888.6	2885.2	2880.0	2883.4	2875.7
7.5°	2873.1	2861.9	2853.3	2855.0	2846.4	2856.8	2866.2	2880.0	2884.3	2884.3	2875.7
10°	2961.8	2949.7	2901.5	2868.8	2847.3	2828.4	2873.1	2827.5	2849.0	2767.2	2861.1
12.5°	3034.9	3051.3	3029.8	2940.3	2924.8	2868.0	2900.7	2844.7	2828.4	2734.5	2764.7
15°	3064.2	3033.2	3026.3	3001.4	2967.8	2951.4	2863.7	2854.2	2827.5	2837.8	2798.2
17.5°	3038.4	3053.9	3033.2	3016.9	2982.4	2943.7	2891.2	2844.7	2807.7	2725.1	2794.8
20°	3013.4	3034.1	2972.1	2982.4	2985.9	2941.1	2913.6	2874.8	2828.4	2750.9	2690.6
22.5°	2972.1	2957.5	2962.6	2947.1	2934.2	2940.3	2902.4	2875.7	2797.4	2762.1	2680.3
25°	2905.0	2899.8	2913.6	2911.9	2880.9	2870.5	2851.6	2823.2	2792.2	2735.4	2668.3
27.5°	2795.7	2822.3	2846.4	2857.6	2841.3	2813.7	2803.4	2787.0	2765.5	2707.9	2657.9
30°	2680.3	2710.4	2738.0	2762.1	2776.7	2764.7	2755.2	2745.7	2713.0	2675.2	2619.2
32.5°	2548.6	2588.2	2626.1	2655.4	2687.2	2696.7	2689.8	2682.0	2654.5	2620.1	2575.3
35°	2396.3	2450.5	2505.6	2558.1	2571.9	2594.2	2616.6	2603.7	2589.1	2554.6	2513.3
37.5°	2267.2	2305.9	2345.5	2411.8	2460.0	2488.4	2528.0	2533.1	2508.2	2491.8	2437.6
40°	2133.8	2169.0	2226.7	2265.4	2331.7	2364.4	2406.6	2425.5	2419.5	2410.0	2362.7
42.5°	2028.7	2046.0	2083.8	2118.3	2183.7	2250.8	2287.8	2308.5	2330.0	2322.3	2298.2
45°	1916.8	1932.3	1945.3	1975.4	2039.1	2098.5	2144.1	2175.1	2213.8	2231.9	2202.6
47.5°	1805.8	1810.1	1825.6	1850.6	1888.4	1934.1	2010.7	2057.1	2093.3	2128.6	2109.7
50°	1720.6	1705.1	1707.7	1723.2	1754.2	1798.9	1854.0	1919.4	1960.7	2003.8	2008.1
52.5°	1503.7	1629.4	1599.2	1607.8	1624.2	1645.7	1703.4	1767.9	1818.7	1855.7	1892.7
55°	1261.8	1286.8	1528.7	1494.2	1504.6	1523.5	1550.2	1614.7	1663.8	1715.4	1767.1
57.5°	978.7	1164.6	1174.0	1397.8	1392.7	1394.4	1416.8	1453.8	1502.8	1567.4	1611.3
60°	760.9	839.2	991.6	1069.0	1265.3	1272.2	1285.1	1306.6	1348.8	1409.9	1479.6
62.5°	671.4	681.7	735.9	852.1	979.5	1133.6	1161.1	1164.6	1183.5	1244.6	1325.5
65°	589.6	596.5	612.8	624.9	731.6	880.5	1013.1	1034.6	1046.6	1082.8	1151.7
67.5°	406.3	513.9	528.5	537.1	547.4	616.3	780.7	890.0	903.8	935.6	995.9
70°	78.3	162.7	445.0	454.5	459.6	475.1	501.8	675.7	766.9	797.0	824.6
72.5°	53.4	62.8	75.7	179.0	378.7	387.3	393.4	415.7	569.8	657.6	672.2
75°	38.7	43.0	50.8	62.8	77.5	252.2	312.4	323.6	334.8	462.2	536.2
77.5°	27.5	31.0	34.4	40.5	47.3	61.1	87.8	241.9	253.1	259.1	365.8
80°	15.5	18.9	23.2	26.7	30.1	34.4	44.8	55.9	124.8	182.5	191.9
82.5°	8.6	10.3	12.1	14.6	16.4	20.7	25.0	30.1	39.6	58.5	123.9
85°	4.3	4.3	4.3	6.0	6.9	9.5	11.2	12.9	18.1	25.0	34.4
87.5°	2.6	2.6	3.4	3.4	3.4	4.3	4.3	4.3	5.2	7.7	11.2
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: P1213440

CATALOG NUMBER: 4SNLED-LD5-48HL-RM-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	356°	357°	358°	359°	360°
0°	2868.0	2868.0	2868.0	2868.0	2868.0
2.5°	2879.1	2876.6	2876.6	2886.9	2884.3
5°	2874.0	2871.4	2870.5	2881.7	2876.6
7.5°	2869.7	2860.2	2857.6	2868.0	2863.7
10°	2852.5	2845.6	2849.9	2846.4	2844.7
12.5°	2823.2	2818.9	2800.8	2802.5	2817.2
15°	2770.7	2787.9	2756.9	2784.5	2790.5
17.5°	2674.3	2713.0	2743.1	2759.5	2762.1
20°	2717.3	2730.2	2714.7	2715.6	2725.9
22.5°	2661.4	2667.4	2671.7	2666.5	2688.9
25°	2571.9	2548.6	2598.5	2608.9	2645.0
27.5°	2544.3	2525.4	2548.6	2546.9	2577.0
30°	2521.9	2460.8	2471.2	2487.5	2524.5
32.5°	2490.1	2393.7	2383.4	2419.5	2460.8
35°	2434.1	2342.9	2318.8	2342.0	2404.0
37.5°	2386.8	2272.3	2224.1	2255.1	2336.0
40°	2316.2	2217.2	2142.4	2169.9	2265.4
42.5°	2231.9	2169.9	2054.6	2073.5	2182.8
45°	2146.7	2091.6	1969.4	1978.8	2108.8
47.5°	2059.7	2008.9	1880.7	1882.4	2014.1
50°	1974.5	1907.4	1801.5	1771.4	1913.4
52.5°	1863.5	1801.5	1721.5	1672.4	1817.9
55°	1758.5	1688.8	1630.2	1554.5	1709.4
57.5°	1656.0	1578.6	1539.0	1441.7	1586.3
60°	1515.7	1478.7	1420.2	1327.2	1475.3
62.5°	1372.0	1360.0	1300.6	1204.2	1338.4
65°	1204.2	1232.6	1171.5	1088.8	1196.4
67.5°	1045.8	1096.6	1029.4	978.7	1059.6
70°	877.1	935.6	897.7	879.7	914.1
72.5°	711.0	767.8	771.2	758.3	769.5
75°	549.1	612.0	646.4	626.6	629.2
77.5°	416.6	446.7	484.6	500.1	496.6
80°	257.4	309.9	340.8	372.7	361.5
82.5°	130.0	173.9	211.7	246.2	229.8
85°	54.2	69.7	97.3	128.2	123.1
87.5°	16.4	27.5	29.3	41.3	38.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)