

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-LD5-52HL-RM-UNV-L940-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 (P33524)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
METALIC FINISH REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

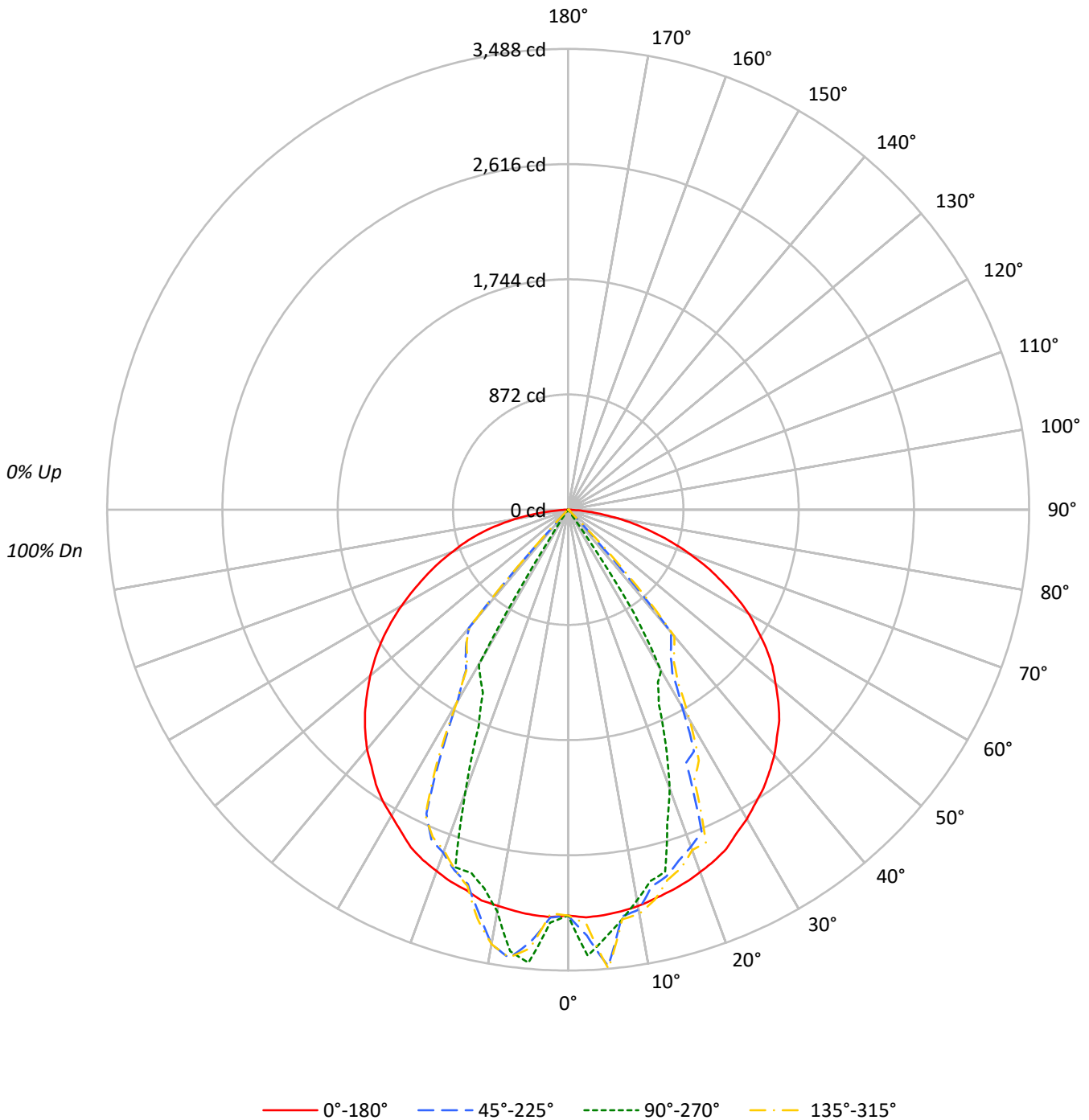
Lumens per Lamp: N/A
Luminaire Lumens: 4367.0 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 0.81 / 0.97
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	103	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81					81			
3	98	90	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72					72			
4	91	82	75	70	89	81	74	69	78	73	69	76	72	68	74	70	67	65					65			
5	85	75	68	63	84	74	68	63	72	66	62	71	65	61	69	64	61	59					59			
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54					54			
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49					49			
8	71	60	53	48	70	59	52	48	58	52	47	57	51	47	56	51	47	45					45			
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39					39			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	24818	24818	24818	24818
5°	24920	25525	24912	27031
10°	24860	23097	24845	23765
15°	24792	21559	24731	21615
20°	24821	16981	24750	17191
25°	24893	12289	24771	11596
30°	24779	10780	24518	10363
35°	24853	237	24488	288
40°	24938	52	24341	52
45°	25025	31	24086	23
50°	24835	24	23695	24
55°	24689	17	23172	17
60°	24222	18	22328	18
65°	22960	30	21325	19
70°	21300	33	20277	33
75°	18841	36	19148	36
80°	15302	42	16176	42
85°	9004	49	9195	49



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	308.1	7.1
10°-20°	840.5	19.2
20°-30°	1069.5	24.5
30°-40°	903.4	20.7
40°-50°	590.6	13.5
50°-60°	372.1	8.5
60°-70°	198.1	4.5
70°-80°	72.2	1.7
80°-90°	12.4	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°	2218.1	50.8
0°-40°	3121.5	71.5
0°-60°	4084.2	93.5
0°-90°	4367.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4367.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3071	3071	3071	3071	3071	
5°	3080	3250	3080	3442	3080	293
15°	2988	2836	2981	2844	2988	845
25°	2832	1620	2819	1528	2832	1303
35°	2574	30	2537	37	2574	1610
45°	2258	4	2173	3	2258	1737
55°	1831	2	1718	2	1831	1631
65°	1281	3	1190	2	1281	1269
75°	674	3	685	3	674	715
85°	132	3	135	3	132	167
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°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3088.7	3090.6	3091.5	3093.3	3096.1	3097.0	3098.9	3097.0	3097.0	3097.0	3097.0
5°	3080.4	3084.1	3086.9	3090.6	3097.0	3097.9	3105.3	3106.2	3109.9	3117.3	3122.8
7.5°	3066.6	3070.3	3075.8	3085.0	3094.2	3104.4	3117.3	3131.1	3150.5	3168.9	3191.9
10°	3046.3	3050.9	3057.4	3065.7	3110.8	3117.3	3145.9	3185.5	3196.6	3254.6	3297.9
12.5°	3016.8	3032.5	3049.1	3056.5	3099.8	3168.0	3263.8	3244.5	3223.3	3413.2	3410.4
15°	2988.2	3009.4	3001.1	3061.1	3100.7	3219.6	3179.0	3265.7	3424.2	3385.5	3387.4
17.5°	2957.8	2962.4	3008.5	3058.3	3129.3	3190.1	3239.9	3358.8	3390.1	3392.9	3358.8
20°	2919.1	2941.2	3008.5	3053.7	3173.5	3202.1	3309.9	3370.8	3357.9	3326.5	3268.5
22.5°	2879.5	2946.8	3015.0	3078.6	3162.5	3239.0	3292.4	3321.0	3253.7	3130.2	3063.8
25°	2832.5	2872.1	2961.5	3054.6	3159.7	3203.9	3235.3	3189.2	3101.6	2991.0	2879.5
27.5°	2759.7	2823.3	2937.6	3042.6	3137.6	3191.0	3140.3	3029.7	2888.7	2815.9	2765.2
30°	2703.4	2786.4	2880.4	2981.8	3080.4	3111.8	2982.7	2856.4	2759.7	2686.8	2675.8
32.5°	2635.2	2753.2	2842.6	2939.4	3022.3	2980.9	2855.5	2692.4	2612.2	2584.5	2595.6
35°	2574.4	2663.8	2780.9	2875.8	2935.7	2842.6	2644.4	2543.1	2504.3	2520.0	2499.7
37.5°	2501.6	2619.6	2727.4	2809.4	2789.2	2649.0	2481.3	2416.8	2421.4	2408.5	2369.8
40°	2426.0	2538.4	2650.9	2728.3	2657.3	2443.5	2332.0	2318.1	2320.9	2279.4	2224.1
42.5°	2337.5	2439.8	2552.3	2622.3	2469.3	2302.5	2226.9	2228.7	2204.8	2146.7	2117.2
45°	2258.2	2352.3	2469.3	2475.8	2287.7	2148.6	2126.4	2102.5	2049.0	2029.6	2007.5
47.5°	2156.8	2261.0	2357.8	2322.8	2109.8	2023.2	2006.6	1954.1	1927.3	1912.6	1894.2
50°	2049.0	2154.1	2242.6	2143.0	1942.1	1921.8	1867.4	1825.9	1807.5	1791.8	1775.3
52.5°	1946.7	2033.3	2123.7	1952.2	1813.0	1793.7	1731.9	1708.0	1689.5	1672.0	1668.3
55°	1830.6	1907.1	1968.8	1770.6	1689.5	1644.4	1600.1	1583.5	1566.0	1557.7	1571.5
57.5°	1698.7	1785.4	1776.2	1591.8	1555.9	1490.4	1473.8	1462.8	1449.9	1455.4	1340.2
60°	1579.8	1646.2	1601.0	1460.9	1400.1	1355.9	1341.1	1333.7	1341.1	1228.7	1080.3
62.5°	1433.3	1507.9	1416.7	1307.9	1243.4	1222.2	1209.3	1219.4	1111.6	988.1	952.1
65°	1281.2	1362.3	1227.7	1143.9	1103.3	1084.9	1084.0	998.2	892.2	844.3	844.3
67.5°	1134.6	1218.5	1045.2	975.2	959.5	961.4	907.9	777.9	748.4	716.2	623.1
70°	978.9	1052.6	863.7	821.3	812.0	805.6	675.6	640.6	605.6	519.9	512.5
72.5°	824.0	860.0	694.1	683.9	682.1	566.9	541.1	481.1	440.6	430.4	425.8
75°	673.8	662.7	548.4	557.6	470.1	429.5	388.0	353.0	347.5	343.8	85.7
77.5°	531.8	476.5	432.3	376.1	336.4	285.7	277.4	271.9	178.8	64.5	52.5
80°	387.1	308.8	287.6	244.3	208.3	200.0	204.6	62.7	49.8	41.5	35.9
82.5°	246.1	197.3	161.3	141.0	137.3	59.9	44.2	35.9	31.3	26.7	22.1
85°	131.8	87.6	81.1	68.2	40.6	27.7	23.0	17.5	14.7	12.0	11.1
87.5°	41.5	35.0	28.6	23.0	13.8	9.2	7.4	6.5	5.5	4.6	4.6
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°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3095.2	3097.0	3096.1	3098.9	3098.9	3102.5	3105.3	3108.1	3113.6	3116.4	3137.6
5°	3134.8	3139.4	3153.2	3166.1	3181.8	3186.4	3213.1	3219.6	3250.9	3254.6	3357.9
7.5°	3223.3	3240.8	3274.0	3307.2	3340.3	3361.5	3398.4	3421.5	3446.3	3468.5	3550.5
10°	3330.2	3359.7	3392.0	3425.1	3444.5	3485.1	3507.2	3510.9	3504.4	3468.5	3335.7
12.5°	3435.3	3464.8	3451.0	3457.4	3480.4	3408.6	3418.7	3367.1	3403.0	3225.1	3093.3
15°	3420.5	3418.7	3384.6	3274.0	3292.4	3155.1	3099.8	3057.4	3091.5	3073.0	3052.8
17.5°	3376.3	3292.4	3233.4	3100.7	3044.5	3005.8	3006.7	3007.6	2991.0	3008.5	2956.9
20°	3189.2	3095.2	3007.6	2960.6	2944.0	2916.4	2930.2	2916.4	2917.3	2922.8	2843.5
22.5°	2940.3	2911.7	2861.0	2875.8	2870.3	2895.2	2876.7	2848.1	2857.4	2815.9	2756.0
25°	2839.8	2806.7	2804.8	2810.4	2802.1	2791.0	2774.4	2731.1	2728.3	2715.4	2687.8
27.5°	2738.5	2740.3	2745.8	2729.2	2699.7	2677.6	2652.7	2631.5	2639.8	2625.1	2587.3
30°	2668.4	2667.5	2634.3	2619.6	2565.2	2566.1	2559.6	2546.7	2538.4	2539.4	2515.4
32.5°	2568.9	2540.3	2502.5	2484.1	2479.5	2462.9	2450.0	2452.7	2459.2	2436.1	2461.0
35°	2466.5	2407.6	2402.0	2386.4	2371.6	2360.5	2365.2	2346.7	2345.8	2343.0	2140.3
37.5°	2329.2	2300.6	2297.9	2281.3	2271.1	2268.4	2250.9	2253.6	2261.9	2276.7	1825.0
40°	2215.8	2190.0	2183.6	2182.7	2160.5	2158.7	2163.3	2180.8	2192.8	2100.6	1739.3
42.5°	2094.2	2096.0	2075.7	2062.8	2065.6	2073.9	2096.0	2035.2	1763.3	1680.3	1590.0
45°	1990.0	1980.8	1969.7	1966.0	1990.0	1973.4	1730.1	1596.4	1564.2	1560.5	1307.0
47.5°	1881.2	1878.5	1873.9	1876.6	1740.2	1551.3	1496.0	1478.5	1484.0	1480.3	1122.7
50°	1771.6	1775.3	1775.3	1550.3	1423.1	1391.8	1396.4	1412.1	1314.4	1226.8	1046.2
52.5°	1676.6	1648.1	1412.1	1331.0	1302.4	1316.2	1283.0	1160.5	1072.0	1020.4	967.8
55°	1500.6	1290.4	1237.9	1225.0	1235.1	1112.5	1036.9	957.7	934.6	929.1	898.7
57.5°	1180.7	1138.3	1142.9	1091.3	974.3	905.1	874.7	863.7	853.5	846.1	73.7
60°	1044.3	1056.3	966.9	856.3	809.3	800.1	792.7	782.5	780.7	767.8	47.0
62.5°	955.8	840.6	763.2	735.5	724.5	721.7	707.9	703.3	597.3	82.0	35.0
65°	720.8	673.8	659.0	652.6	640.6	640.6	531.8	83.9	68.2	59.0	31.3
67.5°	588.1	584.4	577.0	568.7	387.1	81.1	71.0	61.8	53.5	47.0	27.7
70°	497.7	495.9	451.6	83.0	69.1	60.8	53.5	47.9	44.2	39.6	24.9
72.5°	408.3	83.0	70.1	60.8	52.5	47.9	43.3	38.7	35.0	32.3	20.3
75°	63.6	56.2	49.8	45.2	41.5	36.9	33.2	30.4	29.5	25.8	13.8
77.5°	46.1	39.6	35.9	32.3	28.6	25.8	22.1	19.4	17.5	14.7	10.1
80°	32.3	28.6	25.8	21.2	18.4	15.7	13.8	12.0	11.1	9.2	4.6
82.5°	18.4	15.7	13.8	11.1	10.1	8.3	7.4	6.5	6.5	4.6	4.6
85°	8.3	8.3	6.5	5.5	4.6	4.6	4.6	3.7	3.7	2.8	2.8
87.5°	3.7	3.7	3.7	3.7	3.7	2.8	2.8	2.8	2.8	2.8	1.8
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°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3167.1	3179.0	3202.1	3226.1	3199.3	3295.2	3287.8	3320.1	3337.6	3345.9	3365.2
5°	3449.1	3502.6	3520.1	3467.5	3437.1	3405.8	3334.8	3281.4	3287.8	3270.3	3206.7
7.5°	3443.6	3329.3	3175.4	3105.3	3099.8	3091.5	3113.6	3126.5	3128.3	3127.4	3125.6
10°	3152.3	3093.3	3083.2	3074.0	3077.7	3043.5	3027.9	2983.6	3007.6	2994.7	2999.3
12.5°	3063.8	3050.0	2995.6	2920.0	2965.2	2931.1	2911.7	2924.6	2909.9	2896.1	2891.5
15°	3011.3	2921.9	2891.5	2873.0	2860.1	2852.8	2859.2	2844.5	2839.8	2837.1	2843.5
17.5°	2902.5	2866.6	2833.4	2784.5	2785.5	2782.7	2801.1	2828.8	2830.6	2688.7	2560.6
20°	2816.8	2787.3	2744.9	2714.5	2756.0	2682.2	2397.4	2261.9	2240.7	2240.7	2244.4
22.5°	2748.6	2683.2	2685.9	2638.0	2249.9	2170.7	2172.5	2180.8	2143.0	2014.0	2000.2
25°	2655.5	2645.4	2443.5	2111.7	2114.4	2052.7	1957.8	1824.1	1679.4	1679.4	1655.4
27.5°	2585.4	2370.7	2075.7	2061.9	1854.5	1723.6	1642.5	1519.9	1503.3	1487.7	1489.5
30°	2525.5	2005.7	2013.1	1723.6	1570.6	1461.9	1455.4	1435.1	1425.0	1422.2	1412.1
32.5°	1996.5	1953.1	1684.9	1467.4	1407.5	1390.0	1381.7	1358.6	1357.7	1340.2	1218.5
35°	1872.0	1714.4	1410.2	1351.3	1333.7	1317.2	1303.3	874.7	103.2	41.5	35.9
37.5°	1730.1	1432.4	1304.2	1277.5	1260.9	931.9	93.1	32.3	23.0	16.6	14.7
40°	1466.5	1279.4	1238.8	1209.3	498.7	32.3	20.3	15.7	9.2	8.3	7.4
42.5°	1237.0	1205.6	1162.3	353.9	36.9	15.7	10.1	7.4	6.5	6.5	5.5
45°	1157.7	1130.0	468.2	35.0	23.0	7.4	6.5	6.5	5.5	3.7	3.7
47.5°	1084.0	954.0	42.4	22.1	14.7	6.5	5.5	3.7	3.7	3.7	2.8
50°	1005.6	52.5	29.5	16.6	9.2	3.7	3.7	3.7	3.7	2.8	2.8
52.5°	188.0	36.9	24.0	14.7	4.6	3.7	3.7	3.7	2.8	2.8	2.8
55°	44.2	29.5	22.1	12.9	3.7	3.7	3.7	2.8	2.8	2.8	1.8
57.5°	33.2	22.1	17.5	12.0	3.7	2.8	2.8	2.8	2.8	2.8	1.8
60°	27.7	15.7	13.8	11.1	2.8	2.8	2.8	2.8	2.8	2.8	1.8
62.5°	19.4	12.9	10.1	8.3	2.8	2.8	2.8	2.8	2.8	2.8	2.8
65°	15.7	10.1	8.3	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
67.5°	13.8	8.3	5.5	1.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
70°	11.1	2.8	2.8	1.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
72.5°	9.2	2.8	1.8	1.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	9.2	4.6	1.8	1.8	2.8	2.8	3.7	3.7	2.8	2.8	2.8
77.5°	6.5	4.6	1.8	1.8	2.8	2.8	3.7	3.7	2.8	2.8	2.8
80°	3.7	4.6	1.8	2.8	2.8	5.5	6.5	3.7	2.8	2.8	2.8
82.5°	3.7	4.6	5.5	5.5	2.8	4.6	5.5	4.6	3.7	2.8	2.8
85°	3.7	2.8	3.7	4.6	2.8	4.6	4.6	3.7	3.7	2.8	2.8
87.5°	1.8	2.8	2.8	3.7	3.7	3.7	4.6	3.7	3.7	3.7	2.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	85°	90°	95°	100°	105°	110°	115°	120°	125°	130°	135°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3374.4	3378.1	3320.1	3299.8	3317.3	3313.6	3297.9	3239.9	3233.4	3194.7	3138.5
5°	3225.1	3250.0	3219.6	3272.1	3247.3	3272.1	3347.7	3382.7	3439.9	3474.9	3487.8
7.5°	3121.0	3126.5	3126.5	3131.1	3135.7	3136.6	3131.1	3127.4	3111.8	3092.4	3127.4
10°	2994.7	3001.1	3012.2	3010.4	3009.4	3028.8	3033.4	3073.0	3071.2	3078.6	3105.3
12.5°	2929.3	2879.5	2924.6	2912.7	2929.3	2903.4	2951.4	2943.1	2945.8	2968.0	3025.1
15°	2820.5	2836.2	2847.2	2847.2	2853.7	2848.1	2842.6	2880.4	2903.4	2904.4	2900.7
17.5°	2611.3	2492.4	2614.0	2582.7	2832.5	2838.9	2817.7	2800.2	2800.2	2814.0	2843.5
20°	2241.6	2244.4	2245.3	2257.3	2272.1	2271.1	2272.1	2635.2	2807.6	2768.0	2741.2
22.5°	1965.1	1931.0	1994.6	1990.0	2069.3	2156.8	2240.7	2232.4	2238.0	2494.2	2724.6
25°	1575.2	1619.5	1583.5	1599.2	1688.6	1792.8	1857.3	2026.0	2209.4	2196.5	2256.4
27.5°	1483.1	1471.1	1487.7	1487.7	1499.7	1513.5	1549.4	1644.4	1807.5	1979.0	2141.2
30°	1395.5	1405.6	1407.5	1424.1	1433.3	1442.5	1448.0	1484.0	1520.9	1639.8	1839.8
32.5°	1048.0	919.0	1209.3	1287.7	1354.0	1369.7	1380.8	1395.5	1422.2	1439.7	1540.2
35°	30.4	30.4	32.3	36.9	47.0	317.1	1207.5	1331.0	1348.5	1370.6	1389.0
37.5°	14.7	11.1	12.9	13.8	16.6	23.0	33.2	103.2	1149.4	1299.6	1319.9
40°	6.5	6.5	6.5	6.5	7.4	9.2	13.8	23.0	35.0	924.5	1247.1
42.5°	5.5	5.5	5.5	5.5	5.5	5.5	6.5	8.3	16.6	39.6	654.4
45°	3.7	3.7	2.8	3.7	3.7	4.6	5.5	5.5	7.4	24.9	45.2
47.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	4.6	5.5	16.6	24.0
50°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	12.9	16.6
52.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	5.5	14.7
55°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.8	2.8	3.7	12.9
57.5°	1.8	1.8	1.8	1.8	1.8	2.8	1.8	1.8	2.8	2.8	12.0
60°	1.8	1.8	1.8	1.8	1.8	2.8	2.8	2.8	2.8	2.8	11.1
62.5°	2.8	2.8	1.8	2.8	1.8	1.8	2.8	2.8	2.8	2.8	7.4
65°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.8	2.8
67.5°	2.8	2.8	2.8	2.8	1.8	2.8	1.8	2.8	2.8	1.8	1.8
70°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.8	1.8	1.8	1.8
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.8	1.8	1.8	1.8
75°	2.8	2.8	2.8	2.8	2.8	2.8	3.7	3.7	1.8	1.8	1.8
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	4.6	5.5	4.6	4.6	1.8
80°	2.8	2.8	2.8	2.8	2.8	2.8	4.6	4.6	4.6	4.6	6.5
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	3.7	3.7	3.7	3.7	4.6
85°	2.8	2.8	2.8	2.8	2.8	2.8	3.7	3.7	3.7	2.8	3.7
87.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.7	2.8	2.8	2.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	140°	145°	150°	155°	160°	161°	162°	163°	164°	165°	166°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3143.1	3111.8	3101.6	3080.4	3078.6	3080.4	3075.8	3069.4	3073.0	3066.6	3061.1
5°	3495.2	3411.3	3356.9	3284.1	3183.7	3161.5	3156.0	3124.7	3113.6	3109.9	3095.2
7.5°	3210.4	3363.4	3455.6	3486.9	3368.9	3341.3	3309.0	3283.2	3258.3	3211.3	3182.7
10°	3084.1	3091.5	3180.0	3283.2	3451.0	3474.0	3491.5	3435.3	3419.6	3299.8	3274.0
12.5°	3054.6	3055.5	3065.7	3128.3	3260.2	3274.9	3336.7	3369.8	3410.4	3433.4	3415.0
15°	2920.0	2994.7	3050.0	3055.5	3067.5	3093.3	3111.8	3227.0	3275.8	3406.7	3399.3
17.5°	2857.4	2881.3	2961.5	3027.0	3015.9	3006.7	3021.4	3037.1	3084.1	3215.0	3213.1
20°	2753.2	2829.7	2873.0	2941.2	3003.0	3005.8	2989.2	2979.9	2961.5	2982.7	3002.1
22.5°	2709.0	2720.9	2802.1	2850.0	2920.0	2944.9	2948.6	2949.5	2939.4	2928.3	2922.8
25°	2704.4	2666.6	2708.0	2768.0	2819.6	2846.3	2876.7	2886.9	2883.2	2883.2	2877.6
27.5°	2213.1	2654.6	2632.5	2672.1	2734.8	2753.2	2768.9	2800.2	2819.6	2833.4	2839.8
30°	2108.0	2187.3	2573.5	2579.0	2642.6	2640.8	2658.3	2684.1	2709.0	2741.2	2749.5
32.5°	1864.7	2059.1	2355.9	2485.9	2552.3	2558.7	2567.9	2575.3	2598.4	2634.3	2665.6
35°	1494.1	1875.7	2018.6	2441.7	2453.6	2466.5	2472.1	2489.6	2497.0	2511.7	2539.4
37.5°	1352.2	1550.3	1936.6	2111.7	2340.3	2351.3	2380.8	2388.2	2400.2	2412.2	2433.4
40°	1270.1	1324.5	1612.1	1885.9	2249.0	2256.4	2266.5	2285.0	2285.9	2299.7	2319.1
42.5°	1204.7	1239.7	1323.6	1801.1	2184.5	2183.6	2159.6	2171.6	2177.1	2191.9	2218.6
45°	962.3	1163.2	1216.7	1471.1	1739.3	1864.7	2105.2	2065.6	2064.7	2070.2	2098.8
47.5°	48.9	1094.1	1131.9	1213.9	1642.5	1647.1	1678.5	1942.1	1982.6	1969.7	1972.5
50°	33.2	75.6	1054.5	1092.2	1415.8	1530.1	1553.1	1565.1	1717.2	1886.8	1859.1
52.5°	25.8	43.3	646.1	1013.9	1150.3	1234.2	1382.6	1467.4	1476.6	1544.8	1776.2
55°	23.0	33.2	70.1	935.6	978.0	996.4	1083.0	1231.4	1351.3	1387.2	1390.0
57.5°	20.3	30.4	47.9	423.1	889.5	893.2	907.9	959.5	1067.4	1166.0	1277.5
60°	18.4	26.7	37.8	72.8	808.4	817.6	820.3	834.2	847.1	914.4	1042.5
62.5°	11.1	21.2	33.2	52.5	639.7	734.6	733.7	742.9	754.9	762.3	788.1
65°	9.2	16.6	28.6	44.2	78.3	97.7	593.6	660.0	667.3	677.5	682.1
67.5°	8.3	14.7	21.2	35.0	59.0	67.3	77.4	95.9	523.5	589.9	599.1
70°	7.4	10.1	17.5	29.5	47.9	51.6	58.1	66.4	78.3	96.8	473.8
72.5°	4.6	7.4	12.0	21.2	36.9	41.5	45.2	50.7	56.2	67.3	77.4
75°	1.8	5.5	10.1	15.7	28.6	31.3	34.1	37.8	42.4	49.8	55.3
77.5°	1.8	4.6	8.3	11.1	18.4	21.2	24.9	27.7	31.3	35.0	40.6
80°	6.5	3.7	5.5	8.3	12.9	13.8	15.7	17.5	20.3	23.0	26.7
82.5°	4.6	5.5	6.5	5.5	6.5	8.3	9.2	11.1	12.0	13.8	14.7
85°	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6	5.5	6.5	8.3
87.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.7	3.7
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	167°	168°	169°	170°	171°	172°	173°	174°	175°	176°	177°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3061.1	3059.2	3053.7	3053.7	3052.8	3056.5	3059.2	3062.0	3061.1	3066.6	3061.1
5°	3084.1	3079.5	3071.2	3063.8	3061.1	3062.9	3060.1	3062.9	3059.2	3063.8	3055.5
7.5°	3147.7	3132.0	3099.8	3086.9	3070.3	3069.4	3061.1	3059.2	3053.7	3053.7	3043.5
10°	3260.2	3184.6	3175.4	3136.6	3122.8	3055.5	3070.3	3045.4	3042.6	3030.6	3026.0
12.5°	3352.3	3293.3	3275.8	3241.7	3203.0	3066.6	3097.0	3043.5	3040.8	3016.8	2991.9
15°	3354.2	3388.3	3340.3	3246.3	3238.0	3144.0	3082.3	3063.8	3039.9	2968.0	2979.9
17.5°	3246.3	3324.7	3347.7	3327.4	3268.5	3204.9	3118.2	3081.3	3009.4	2977.2	2955.1
20°	3071.2	3150.5	3249.1	3255.5	3292.4	3247.3	3133.9	3074.0	2987.3	2931.1	2912.7
22.5°	2932.0	2990.1	3103.5	3156.0	3201.2	3216.8	3144.9	3056.5	2948.6	2894.2	2883.2
25°	2858.3	2871.2	2905.3	2967.0	3066.6	3138.5	3148.6	3054.6	2998.4	2879.5	2816.8
27.5°	2831.6	2820.5	2806.7	2838.0	2912.7	3000.2	3058.3	3074.0	2933.9	2820.5	2757.8
30°	2763.3	2769.8	2748.6	2737.5	2786.4	2876.7	2979.9	3005.8	2897.9	2780.9	2709.0
32.5°	2679.5	2690.5	2694.2	2674.9	2664.7	2727.4	2838.9	2900.7	2895.2	2724.6	2644.4
35°	2574.4	2605.7	2614.0	2614.9	2598.4	2588.2	2652.7	2780.9	2829.7	2698.8	2582.7
37.5°	2463.8	2473.0	2518.2	2530.1	2530.1	2499.7	2547.7	2650.0	2718.2	2640.8	2507.1
40°	2325.5	2355.0	2397.4	2418.6	2439.8	2442.6	2415.9	2487.7	2600.2	2580.8	2436.1
42.5°	2225.1	2244.4	2270.2	2298.8	2342.1	2353.2	2325.5	2338.4	2455.5	2506.2	2344.0
45°	2108.0	2133.8	2141.2	2172.5	2217.7	2249.9	2249.0	2222.3	2316.3	2379.0	2276.7
47.5°	1988.2	2013.1	2026.0	2041.6	2074.8	2116.3	2139.3	2127.4	2145.8	2268.4	2187.3
50°	1864.7	1878.5	1904.3	1921.8	1943.9	1967.9	2023.2	2034.3	2008.4	2106.2	2088.6
52.5°	1747.6	1752.2	1769.7	1787.2	1816.7	1834.2	1878.5	1911.7	1909.8	1938.4	1979.0
55°	1656.3	1636.1	1639.8	1653.6	1672.9	1699.7	1724.6	1776.2	1793.7	1799.2	1863.7
57.5°	1294.1	1502.4	1520.9	1519.9	1543.0	1555.0	1578.0	1612.1	1674.8	1661.0	1732.9
60°	1176.1	1199.2	1373.4	1393.7	1401.9	1413.0	1440.7	1472.0	1518.1	1547.6	1578.9
62.5°	896.8	1036.9	1089.5	1243.4	1267.4	1273.8	1292.3	1307.0	1354.9	1422.2	1409.3
65°	694.1	754.0	914.4	977.0	1107.9	1124.5	1150.3	1166.0	1179.8	1257.2	1260.9
67.5°	600.0	609.3	652.6	773.3	856.3	984.4	1000.1	1013.9	1035.1	1090.4	1124.5
70°	512.5	523.5	535.5	545.7	653.5	738.3	857.2	861.8	875.6	912.5	989.9
72.5°	96.8	437.8	445.2	451.6	463.6	519.9	633.2	725.4	730.9	748.4	819.4
75°	65.4	76.5	105.1	361.3	373.3	377.0	396.3	511.6	596.4	600.0	631.4
77.5°	47.0	52.5	63.6	75.6	192.6	289.4	294.0	315.2	402.8	466.4	471.9
80°	32.3	35.9	42.4	47.9	59.0	77.4	213.8	220.3	231.4	318.9	335.5
82.5°	18.4	21.2	24.9	30.4	35.0	44.2	57.1	73.7	150.2	160.4	212.9
85°	9.2	10.1	12.0	14.7	17.5	21.2	28.6	35.0	47.9	86.6	89.4
87.5°	4.6	4.6	4.6	4.6	7.4	8.3	10.1	12.9	16.6	24.9	32.3
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	178°	179°	180°	181°	182°	183°	184°	185°	186°	187°	188°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3062.0	3074.9	3085.9	3088.7	3088.7	3090.6	3093.3	3095.2	3097.0	3098.9	3097.0
5°	3056.5	3070.3	3079.5	3082.3	3082.3	3087.8	3092.4	3097.9	3100.7	3100.7	3098.9
7.5°	3042.6	3052.8	3064.7	3072.1	3073.0	3082.3	3090.6	3089.6	3093.3	3095.2	3099.8
10°	3024.2	3024.2	3044.5	3050.0	3054.6	3064.7	3067.5	3073.0	3085.9	3087.8	3099.8
12.5°	3015.0	3005.8	3029.7	3032.5	3048.2	3035.3	3051.8	3057.4	3044.5	3062.0	3038.9
15°	2973.5	2984.6	2980.9	2989.2	3016.8	3002.1	3047.2	3032.5	3065.7	3026.0	3096.1
17.5°	2939.4	2937.6	2952.3	2959.7	2965.2	2996.5	3008.5	3025.1	3038.0	3027.0	3054.6
20°	2914.5	2899.8	2910.8	2919.1	2938.5	2962.4	2969.8	2944.9	2988.2	3062.0	3079.5
22.5°	2867.5	2857.4	2870.3	2870.3	2899.8	2896.1	2923.7	2908.1	2948.6	3034.3	3123.7
25°	2803.9	2804.8	2818.6	2835.2	2840.8	2882.2	2897.0	2917.3	2968.0	3070.3	3124.7
27.5°	2739.4	2733.8	2742.1	2776.2	2804.8	2835.2	2839.8	2909.0	2978.1	3048.2	3096.1
30°	2674.9	2669.3	2674.9	2699.7	2733.8	2754.1	2804.8	2897.0	2961.5	3009.4	3054.6
32.5°	2605.7	2600.2	2613.1	2631.5	2691.4	2694.2	2794.7	2881.3	2932.0	2967.0	2958.8
35°	2532.0	2524.6	2536.6	2565.2	2620.5	2640.8	2745.8	2810.4	2867.5	2884.1	2845.4
37.5°	2443.5	2430.6	2445.3	2485.0	2543.1	2602.0	2689.6	2764.3	2794.7	2750.4	2704.4
40°	2351.3	2342.1	2367.9	2388.2	2456.4	2538.4	2638.9	2691.4	2672.1	2621.4	2570.7
42.5°	2269.3	2249.9	2273.0	2311.7	2389.1	2482.2	2563.3	2592.8	2546.7	2472.1	2413.1
45°	2168.8	2145.8	2173.4	2225.1	2308.0	2414.0	2477.6	2467.5	2389.1	2324.6	2243.5
47.5°	2063.8	2036.1	2063.8	2125.5	2218.6	2331.1	2377.1	2331.1	2232.4	2151.3	2085.9
50°	1960.5	1928.3	1955.0	2048.1	2139.3	2226.0	2225.1	2135.6	2076.7	1988.2	1931.0
52.5°	1858.2	1812.1	1838.8	1940.2	2031.5	2130.1	2057.3	1974.3	1903.4	1825.9	1807.5
55°	1731.9	1682.2	1718.1	1865.6	1935.6	1993.7	1877.6	1804.7	1734.7	1696.0	1672.9
57.5°	1612.1	1557.7	1589.1	1763.3	1814.9	1829.6	1722.7	1619.5	1578.0	1565.1	1531.9
60°	1488.6	1426.8	1456.3	1657.3	1693.2	1633.3	1528.2	1448.0	1439.7	1413.9	1388.1
62.5°	1370.6	1302.4	1320.8	1525.5	1542.1	1433.3	1336.5	1315.3	1295.0	1269.2	1255.4
65°	1235.1	1164.1	1190.0	1385.4	1369.7	1229.6	1175.2	1170.6	1143.9	1122.7	1142.9
67.5°	1110.7	1026.8	1062.8	1232.4	1161.4	1047.1	1025.0	1013.9	992.7	1004.7	791.8
70°	974.3	883.0	931.9	1067.4	962.3	886.7	878.4	861.8	862.7	685.8	577.9
72.5°	822.2	742.9	813.9	886.7	761.3	739.2	727.2	725.4	585.3	475.6	448.9
75°	688.5	608.3	684.8	712.5	606.5	591.8	590.8	488.5	384.4	366.8	358.6
77.5°	537.4	475.6	548.4	507.0	465.5	448.9	402.8	302.3	289.4	277.4	104.2
80°	362.2	366.8	409.2	349.3	331.8	283.0	223.1	213.8	184.3	73.7	58.1
82.5°	220.3	276.5	260.8	218.4	213.8	153.9	141.0	71.9	53.5	42.4	36.9
85°	114.3	140.1	134.6	118.9	88.5	79.3	44.2	34.1	27.7	21.2	17.5
87.5°	38.7	51.6	49.8	39.6	30.4	24.0	15.7	12.9	9.2	7.4	6.5
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	189°	190°	191°	192°	193°	194°	195°	196°	197°	198°	199°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3095.2	3095.2	3093.3	3095.2	3096.1	3094.2	3094.2	3096.1	3097.0	3097.9	3102.5
5°	3099.8	3101.6	3104.4	3109.9	3110.8	3121.9	3126.5	3129.3	3132.0	3133.0	3126.5
7.5°	3109.9	3116.4	3121.9	3121.0	3114.5	3097.0	3091.5	3086.9	3095.2	3116.4	3141.3
10°	3119.1	3089.6	3034.3	3109.9	3086.9	3108.1	3170.7	3184.6	3227.0	3286.9	3304.4
12.5°	3055.5	3136.6	3154.2	3069.4	3226.1	3168.0	3237.1	3297.9	3315.5	3376.3	3339.4
15°	3123.7	3163.4	3190.1	3274.9	3265.7	3315.5	3334.8	3322.8	3325.6	3341.3	3382.7
17.5°	3122.8	3202.1	3219.6	3276.7	3315.5	3316.4	3310.9	3305.3	3320.1	3332.1	3307.2
20°	3176.3	3202.1	3236.2	3259.2	3266.6	3275.8	3293.3	3279.5	3251.9	3225.1	3214.1
22.5°	3149.5	3207.6	3237.1	3240.8	3236.2	3207.6	3181.8	3143.1	3130.2	3116.4	3121.0
25°	3155.1	3181.8	3178.1	3163.4	3144.0	3090.6	3077.7	3061.1	3036.2	2976.3	2921.9
27.5°	3115.4	3101.6	3085.0	3049.1	3014.1	2985.5	2953.2	2899.8	2855.5	2791.0	2767.0
30°	3049.1	2993.8	2953.2	2932.0	2897.9	2850.0	2801.1	2735.7	2679.5	2666.6	2654.6
32.5°	2921.9	2867.5	2834.3	2782.7	2724.6	2667.5	2611.3	2585.4	2573.5	2575.3	2564.3
35°	2791.9	2744.0	2694.2	2616.8	2573.5	2516.3	2496.0	2490.5	2479.5	2467.5	2454.6
37.5°	2653.7	2597.4	2522.8	2476.7	2433.4	2410.3	2400.2	2391.9	2372.5	2351.3	2336.6
40°	2520.0	2418.6	2377.1	2332.0	2319.1	2308.9	2294.2	2273.9	2247.2	2243.5	2237.0
42.5°	2341.2	2268.4	2232.4	2223.2	2207.5	2190.0	2177.1	2155.0	2143.9	2151.3	2156.8
45°	2171.6	2134.7	2122.7	2111.7	2082.2	2057.3	2049.0	2041.6	2050.8	2091.4	1994.6
47.5°	2034.3	2019.5	2004.8	1986.3	1958.7	1940.2	1948.5	1955.9	1964.2	1666.5	1520.9
50°	1915.4	1895.1	1872.0	1851.8	1835.2	1833.3	1876.6	1746.7	1462.8	1455.4	1307.9
52.5°	1785.4	1755.0	1741.1	1729.2	1736.5	1764.2	1460.0	1354.9	1299.6	1129.1	1053.5
55°	1645.3	1618.6	1618.6	1629.6	1590.0	1288.6	1272.9	1100.5	996.4	966.9	954.9
57.5°	1505.2	1502.4	1518.1	1388.1	1169.7	1121.7	942.9	905.1	888.5	884.9	865.5
60°	1377.1	1402.9	1174.3	1080.3	939.2	847.1	821.3	816.7	799.1	792.7	775.2
62.5°	1274.8	1057.2	984.4	803.7	756.7	744.8	730.9	724.5	708.8	625.9	183.4
65°	920.8	870.1	706.0	675.6	671.9	654.4	648.9	583.5	137.3	92.2	78.3
67.5°	695.0	616.6	595.4	589.9	572.4	537.4	159.5	91.3	78.3	68.2	59.9
70°	533.7	519.9	504.2	491.3	144.7	90.3	78.3	66.4	57.1	50.7	46.1
72.5°	436.9	427.7	248.9	94.9	77.4	65.4	58.1	50.7	44.2	40.6	36.9
75°	342.0	94.9	78.3	65.4	56.2	47.9	42.4	37.8	34.1	31.3	28.6
77.5°	77.4	62.7	53.5	45.2	40.6	35.9	32.3	27.7	24.9	22.1	18.4
80°	47.9	41.5	35.0	32.3	27.7	23.0	20.3	18.4	14.7	13.8	12.0
82.5°	31.3	24.9	22.1	18.4	14.7	13.8	12.0	9.2	8.3	7.4	6.5
85°	13.8	12.0	10.1	8.3	6.5	5.5	4.6	3.7	3.7	3.7	3.7
87.5°	4.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.8	1.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	200°	205°	210°	215°	220°	225°	230°	235°	240°	245°	250°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3104.4	3121.0	3136.6	3132.0	3115.4	3089.6	3082.3	3072.1	3079.5	3095.2	3101.6
5°	3126.5	3117.3	3150.5	3199.3	3278.6	3286.0	3341.3	3354.2	3398.4	3426.1	3425.1
7.5°	3157.8	3288.7	3343.1	3402.1	3428.8	3422.4	3430.7	3424.2	3414.1	3409.5	3403.9
10°	3317.3	3416.8	3437.1	3437.1	3395.6	3339.4	3315.5	3274.0	3191.0	3192.9	3179.0
12.5°	3410.4	3445.4	3397.5	3356.9	3190.1	3125.6	3055.5	3022.3	3003.0	2973.5	2984.6
15°	3361.5	3311.8	3283.2	3152.3	3050.0	2933.9	2935.7	2915.4	2894.2	2896.1	2882.2
17.5°	3289.7	3250.0	3047.2	2956.9	2907.1	2862.0	2853.7	2826.9	2813.1	2808.5	2807.6
20°	3191.0	3048.2	2897.0	2874.9	2815.0	2763.3	2755.0	2763.3	2805.7	2730.2	2473.9
22.5°	3075.8	2870.3	2826.0	2763.3	2722.8	2702.5	2753.2	2522.8	2174.4	2216.8	2171.6
25°	2880.4	2791.0	2715.4	2667.5	2662.9	2538.4	2115.4	2071.1	1847.1	1727.3	1592.7
27.5°	2737.5	2698.8	2619.6	2611.3	2551.3	2075.7	1855.4	1612.1	1522.7	1508.9	1479.4
30°	2650.9	2595.6	2547.7	2338.4	2036.1	1671.1	1488.6	1454.5	1438.8	1422.2	1396.4
32.5°	2546.7	2494.2	2517.2	1966.0	1623.2	1438.8	1401.9	1377.1	1348.5	1337.4	1244.3
35°	2440.7	2416.8	1967.0	1652.7	1395.5	1351.3	1323.6	1297.8	1032.3	249.8	84.8
37.5°	2327.4	2321.8	1767.9	1371.5	1307.0	1265.5	1187.2	245.2	58.1	39.6	29.5
40°	2238.9	1768.8	1397.3	1285.8	1233.3	1167.8	164.1	40.6	25.8	15.7	10.1
42.5°	2179.9	1590.9	1250.8	1206.5	1092.2	120.7	41.5	17.5	10.1	8.3	6.5
45°	1680.3	1256.3	1168.8	1122.7	138.3	41.5	24.0	8.3	6.5	5.5	3.7
47.5°	1550.3	1141.1	1089.5	245.2	46.1	22.1	16.6	5.5	3.7	3.7	3.7
50°	1174.3	1054.5	867.3	59.9	29.5	15.7	12.0	3.7	3.7	3.7	2.8
52.5°	1029.6	973.3	93.1	39.6	23.0	12.0	7.4	2.8	2.8	2.8	2.8
55°	941.1	617.6	55.3	30.4	19.4	11.1	4.6	2.8	2.8	2.8	1.8
57.5°	860.9	83.0	40.6	25.8	17.5	10.1	2.8	2.8	2.8	2.8	1.8
60°	730.0	59.9	33.2	23.0	16.6	9.2	2.8	2.8	2.8	2.8	2.8
62.5°	94.9	47.0	28.6	20.3	12.0	7.4	1.8	2.8	2.8	2.8	2.8
65°	69.1	36.9	25.8	13.8	7.4	2.8	1.8	2.8	2.8	2.8	2.8
67.5°	53.5	30.4	19.4	12.0	6.5	1.8	1.8	2.8	2.8	2.8	2.8
70°	42.4	25.8	15.7	10.1	5.5	1.8	1.8	2.8	2.8	2.8	2.8
72.5°	33.2	18.4	11.1	5.5	3.7	1.8	1.8	2.8	2.8	2.8	2.8
75°	24.9	14.7	8.3	4.6	1.8	1.8	1.8	2.8	2.8	2.8	2.8
77.5°	16.6	9.2	6.5	3.7	3.7	3.7	4.6	4.6	2.8	2.8	2.8
80°	11.1	6.5	4.6	4.6	4.6	3.7	4.6	4.6	2.8	4.6	2.8
82.5°	5.5	4.6	4.6	3.7	3.7	2.8	3.7	3.7	3.7	3.7	2.8
85°	3.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.7	3.7	2.8
87.5°	1.8	1.8	1.8	1.8	2.8	2.8	2.8	2.8	3.7	3.7	2.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	255°	260°	265°	270°	275°	280°	285°	290°	295°	300°	305°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3093.3	3096.1	3088.7	3128.3	3108.1	3109.9	3118.2	3097.0	3101.6	3086.9	3076.7
5°	3428.8	3434.4	3439.9	3441.7	3445.4	3450.0	3444.5	3441.7	3436.2	3417.8	3398.4
7.5°	3376.3	3369.8	3367.1	3370.8	3377.2	3380.0	3375.4	3381.8	3405.8	3415.9	3422.4
10°	3099.8	3070.3	3090.6	3087.8	3064.7	3142.2	3121.0	3133.0	3141.3	3226.1	3277.7
12.5°	2968.0	2986.4	2951.4	2933.9	2956.9	2972.6	2988.2	2955.1	3001.1	2979.9	3048.2
15°	2857.4	2846.3	2842.6	2843.5	2838.9	2861.0	2866.6	2874.0	2880.4	2909.0	2920.0
17.5°	2807.6	2826.0	2833.4	2838.9	2829.7	2819.6	2809.4	2794.7	2799.3	2791.9	2813.1
20°	2301.6	2239.8	2236.1	2272.1	2232.4	2254.5	2308.0	2665.6	2653.7	2792.8	2745.8
22.5°	1920.9	1862.8	1813.0	1769.7	1831.5	1857.3	1956.8	2069.3	2251.8	2223.2	2421.4
25°	1568.8	1547.6	1534.7	1528.2	1532.8	1531.0	1553.1	1605.7	1688.6	1884.0	2136.6
27.5°	1467.4	1457.3	1452.6	1437.9	1449.0	1445.3	1462.8	1473.8	1498.7	1518.1	1600.1
30°	1387.2	1375.2	1366.9	1351.3	1362.3	1363.2	1368.8	1397.3	1407.5	1424.1	1449.9
32.5°	507.0	298.6	280.2	266.4	291.3	379.8	666.4	1165.1	1329.1	1342.0	1371.5
35°	49.8	41.5	36.9	36.9	37.8	41.5	55.3	145.6	266.4	1029.6	1288.6
37.5°	19.4	16.6	13.8	12.9	13.8	15.7	21.2	27.7	37.8	78.3	349.3
40°	8.3	7.4	6.5	6.5	6.5	6.5	7.4	9.2	13.8	25.8	40.6
42.5°	5.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6	6.5	8.3	16.6
45°	3.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.7	4.6	7.4
47.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.7
50°	2.8	2.8	2.8	2.8	1.8	2.8	1.8	2.8	2.8	2.8	2.8
52.5°	2.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.8	2.8
55°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.8
57.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
60°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
62.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.8	2.8	1.8
65°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.8	1.8
67.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
70°	2.8	2.8	1.8	2.8	1.8	1.8	2.8	2.8	2.8	1.8	1.8
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	5.5	5.5	3.7
75°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	4.6	5.5	4.6
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	4.6	4.6	4.6
80°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.7	3.7	3.7
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.7	3.7	3.7
85°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
87.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	310°	315°	320°	325°	330°	335°	340°	341°	342°	343°	344°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3059.2	3058.3	3077.7	3092.4	3086.9	3092.4	3098.9	3099.8	3101.6	3094.2	3091.5
5°	3361.5	3333.0	3277.7	3238.0	3191.9	3108.1	3066.6	3071.2	3072.1	3069.4	3073.0
7.5°	3419.6	3416.8	3397.5	3389.2	3357.9	3297.9	3202.1	3185.5	3144.9	3119.1	3097.9
10°	3274.0	3340.3	3357.9	3387.4	3405.8	3394.7	3313.6	3301.6	3275.8	3246.3	3252.8
12.5°	3116.4	3170.7	3173.5	3333.9	3369.8	3373.5	3342.2	3358.8	3362.5	3296.1	3257.4
15°	2922.8	2948.6	3003.0	3152.3	3261.1	3329.3	3349.6	3358.8	3313.6	3310.9	3295.2
17.5°	2838.0	2854.6	2879.5	2963.4	3128.3	3228.8	3314.5	3308.1	3325.6	3312.7	3273.1
20°	2731.1	2744.9	2789.2	2831.6	2912.7	3046.3	3206.7	3218.7	3241.7	3239.0	3250.0
22.5°	2729.2	2680.4	2687.8	2720.9	2805.7	2925.6	3096.1	3135.7	3150.5	3160.6	3172.6
25°	2165.1	2553.2	2624.2	2645.4	2700.7	2770.7	2971.7	2986.4	3014.1	3059.2	3092.4
27.5°	1875.7	2139.3	2423.2	2570.7	2605.7	2663.8	2783.6	2805.7	2899.8	2910.8	2962.4
30°	1480.3	1684.0	2108.0	2462.9	2520.9	2561.5	2646.3	2690.5	2731.1	2775.3	2829.7
32.5°	1392.7	1425.0	1660.0	2037.9	2489.6	2459.2	2521.9	2548.6	2592.8	2631.5	2671.2
35°	1312.5	1334.7	1384.4	1669.3	2027.8	2375.3	2417.7	2435.2	2460.1	2489.6	2518.2
37.5°	1228.7	1261.8	1296.0	1372.5	1875.7	2308.9	2308.0	2328.3	2343.0	2367.9	2391.9
40°	223.1	1158.6	1213.9	1263.7	1454.5	1841.6	2204.8	2214.0	2224.1	2239.8	2264.7
42.5°	35.9	193.6	1137.4	1185.3	1239.7	1649.0	2157.8	2120.0	2113.5	2124.6	2146.7
45°	18.4	47.0	228.6	1107.0	1155.8	1315.3	1764.2	2054.5	2048.1	2026.9	2031.5
47.5°	13.8	29.5	56.2	382.5	1082.1	1129.1	1627.8	1610.3	1732.9	1967.9	1931.9
50°	12.0	20.3	33.2	78.3	955.8	1039.7	1253.6	1464.6	1529.1	1537.4	1819.5
52.5°	11.1	13.8	24.0	50.7	200.9	961.4	1019.4	1093.2	1201.9	1435.1	1429.6
55°	10.1	12.9	20.3	34.1	70.1	866.4	926.3	940.2	963.2	1074.7	1222.2
57.5°	5.5	12.0	19.4	29.5	52.5	158.5	840.6	851.7	870.1	874.7	927.3
60°	2.8	11.1	17.5	25.8	38.7	73.7	755.8	768.7	779.8	781.6	798.2
62.5°	1.8	10.1	14.7	24.0	32.3	52.5	178.8	365.0	694.1	694.1	713.4
65°	1.8	7.4	9.2	15.7	29.5	43.3	75.6	87.6	170.5	419.4	625.9
67.5°	1.8	2.8	8.3	12.9	22.1	33.2	55.3	64.5	77.4	88.5	164.1
70°	1.8	1.8	7.4	8.3	13.8	24.9	39.6	45.2	52.5	59.9	69.1
72.5°	1.8	1.8	6.5	6.5	9.2	16.6	30.4	33.2	37.8	42.4	48.9
75°	4.6	3.7	5.5	5.5	6.5	12.9	23.0	25.8	27.7	31.3	35.9
77.5°	4.6	4.6	4.6	4.6	4.6	8.3	14.7	16.6	19.4	21.2	24.9
80°	3.7	3.7	3.7	4.6	4.6	5.5	9.2	10.1	11.1	13.8	14.7
82.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	5.5	6.5	8.3
85°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.7	3.7	3.7	3.7
87.5°	2.8	2.8	2.8	1.8	1.8	2.8	2.8	2.8	2.8	2.8	2.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	345°	346°	347°	348°	349°	350°	351°	352°	353°	354°	355°
0°	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3090.6	3085.0	3080.4	3083.2	3074.9	3071.2	3074.0	3074.9	3076.7	3081.3	3082.3
5°	3082.3	3080.4	3088.7	3093.3	3091.5	3093.3	3093.3	3089.6	3084.1	3087.8	3079.5
7.5°	3076.7	3064.7	3055.5	3057.4	3048.2	3059.2	3069.4	3084.1	3088.7	3088.7	3079.5
10°	3171.7	3158.8	3107.1	3072.1	3049.1	3028.8	3076.7	3027.9	3050.9	2963.4	3063.8
12.5°	3250.0	3267.5	3244.5	3148.6	3132.0	3071.2	3106.2	3046.3	3028.8	2928.3	2960.6
15°	3281.4	3248.2	3240.8	3214.1	3178.1	3160.6	3066.6	3056.5	3027.9	3038.9	2996.5
17.5°	3253.7	3270.3	3248.2	3230.7	3193.8	3152.3	3096.1	3046.3	3006.7	2918.2	2992.9
20°	3227.0	3249.1	3182.7	3193.8	3197.5	3149.5	3120.1	3078.6	3028.8	2945.8	2881.3
22.5°	3182.7	3167.1	3172.6	3156.0	3142.2	3148.6	3108.1	3079.5	2995.6	2957.8	2870.3
25°	3110.8	3105.3	3120.1	3118.2	3085.0	3074.0	3053.7	3023.3	2990.1	2929.3	2857.4
27.5°	2993.8	3022.3	3048.2	3060.1	3042.6	3013.1	3002.1	2984.6	2961.5	2899.8	2846.3
30°	2870.3	2902.5	2932.0	2957.8	2973.5	2960.6	2950.5	2940.3	2905.3	2864.7	2804.8
32.5°	2729.2	2771.6	2812.2	2843.5	2877.6	2887.8	2880.4	2872.1	2842.6	2805.7	2757.8
35°	2566.1	2624.2	2683.2	2739.4	2754.1	2778.1	2802.1	2788.2	2772.6	2735.7	2691.4
37.5°	2427.8	2469.3	2511.7	2582.7	2634.3	2664.7	2707.1	2712.6	2685.9	2668.4	2610.3
40°	2285.0	2322.8	2384.5	2426.0	2497.0	2532.0	2577.2	2597.4	2591.0	2580.8	2530.1
42.5°	2172.5	2190.9	2231.5	2268.4	2338.4	2410.3	2450.0	2472.1	2495.1	2486.8	2461.0
45°	2052.7	2069.3	2083.1	2115.4	2183.6	2247.2	2296.0	2329.2	2370.7	2390.0	2358.7
47.5°	1933.8	1938.4	1955.0	1981.7	2022.3	2071.1	2153.2	2202.9	2241.6	2279.4	2259.2
50°	1842.5	1825.9	1828.7	1845.3	1878.5	1926.4	1985.4	2055.5	2099.7	2145.8	2150.4
52.5°	1610.3	1744.8	1712.6	1721.8	1739.3	1762.3	1824.1	1893.2	1947.6	1987.2	2026.9
55°	1351.3	1378.0	1637.0	1600.1	1611.2	1631.5	1660.0	1729.2	1781.7	1837.0	1892.3
57.5°	1048.0	1247.1	1257.2	1496.9	1491.4	1493.2	1517.2	1556.8	1609.3	1678.5	1725.5
60°	814.8	898.7	1061.8	1144.8	1354.9	1362.3	1376.1	1399.2	1444.3	1509.8	1584.5
62.5°	718.9	730.0	788.1	912.5	1048.9	1213.9	1243.4	1247.1	1267.4	1332.8	1419.5
65°	631.4	638.8	656.3	669.2	783.5	942.9	1084.9	1107.9	1120.8	1159.5	1233.3
67.5°	435.1	550.3	565.9	575.2	586.2	660.0	836.0	953.1	967.8	1001.9	1066.4
70°	83.9	174.2	476.5	486.7	492.2	508.8	537.4	723.6	821.3	853.5	883.0
72.5°	57.1	67.3	81.1	191.7	405.6	414.8	421.2	445.2	610.2	704.2	719.9
75°	41.5	46.1	54.4	67.3	83.0	270.1	334.6	346.6	358.6	495.0	574.2
77.5°	29.5	33.2	36.9	43.3	50.7	65.4	94.0	259.0	271.0	277.4	391.7
80°	16.6	20.3	24.9	28.6	32.3	36.9	47.9	59.9	133.7	195.4	205.5
82.5°	9.2	11.1	12.9	15.7	17.5	22.1	26.7	32.3	42.4	62.7	132.7
85°	4.6	4.6	4.6	6.5	7.4	10.1	12.0	13.8	19.4	26.7	36.9
87.5°	2.8	2.8	3.7	3.7	3.7	4.6	4.6	4.6	5.5	8.3	12.0
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: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-RM-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	356°	357°	358°	359°	360°
0°	3071.2	3071.2	3071.2	3071.2	3071.2
2.5°	3083.2	3080.4	3080.4	3091.5	3088.7
5°	3077.7	3074.9	3074.0	3085.9	3080.4
7.5°	3073.0	3062.9	3060.1	3071.2	3066.6
10°	3054.6	3047.2	3051.8	3048.2	3046.3
12.5°	3023.3	3018.7	2999.3	3001.1	3016.8
15°	2967.0	2985.5	2952.3	2981.8	2988.2
17.5°	2863.8	2905.3	2937.6	2955.1	2957.8
20°	2909.9	2923.7	2907.1	2908.1	2919.1
22.5°	2850.0	2856.4	2861.0	2855.5	2879.5
25°	2754.1	2729.2	2782.7	2793.8	2832.5
27.5°	2724.6	2704.4	2729.2	2727.4	2759.7
30°	2700.7	2635.2	2646.3	2663.8	2703.4
32.5°	2666.6	2563.3	2552.3	2591.0	2635.2
35°	2606.6	2508.9	2483.1	2508.0	2574.4
37.5°	2556.0	2433.4	2381.7	2414.9	2501.6
40°	2480.4	2374.4	2294.2	2323.7	2426.0
42.5°	2390.0	2323.7	2200.2	2220.4	2337.5
45°	2298.8	2239.8	2108.9	2119.1	2258.2
47.5°	2205.7	2151.3	2014.0	2015.8	2156.8
50°	2114.4	2042.6	1929.2	1896.9	2049.0
52.5°	1995.5	1929.2	1843.5	1790.9	1946.7
55°	1883.1	1808.4	1745.8	1664.6	1830.6
57.5°	1773.4	1690.5	1648.1	1543.9	1698.7
60°	1623.2	1583.5	1520.9	1421.3	1579.8
62.5°	1469.2	1456.3	1392.7	1289.5	1433.3
65°	1289.5	1319.9	1254.5	1166.0	1281.2
67.5°	1119.9	1174.3	1102.4	1048.0	1134.6
70°	939.2	1001.9	961.4	942.0	978.9
72.5°	761.3	822.2	825.9	812.0	824.0
75°	588.1	655.3	692.2	671.0	673.8
77.5°	446.1	478.4	518.9	535.5	531.8
80°	275.6	331.8	365.0	399.1	387.1
82.5°	139.2	186.2	226.7	263.6	246.1
85°	58.1	74.7	104.2	137.3	131.8
87.5°	17.5	29.5	31.3	44.2	41.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)