

FARR[®]

PERFORMANCE PREDICTION



**DESIGN #425
Farr 56 Pilot House
for
Boat Sales International, Ltd.**

Farr Yacht Design, Ltd.
Copyright
June 6, 2001

P.O. Box 4964, Annapolis, MD 21403 USA
Tel: (410) 267-0780 Fax: (410) 268-0553
E-mail: info@farrdesign.com

DESCRIPTION OF SYMBOLS IN VPP OUTPUT

The accompanying document contains a large amount information about the predicted performance of your boat. To allow this document to be used as a valuable racing tool we have prepared the following explanation of the important terms it contains.

General Terms:

Vt or TWS	True Wind Speed
Bt or TWA	True Wind Angle
V or Vs	Boat Speed
VMG	Boat Velocity Made Good
HEEL	Heel Angle
REEF	Measure of Reduction in Sail Area
FLAT	Measure of Reduction in Sail Lift
Va, AWS	Apparent Wind Speed
Ba, AWA	Apparent Wind Angle
Lee	Leeway Angle
Sail	Sail Combination Designator (Upwind or Downwind)
Flot	Flotation Designator (Varies Only For Water Ballasted Boats)

VPP Polar diagram

This is a graphical representation of the boats performance across a range of windspeeds and true wind directions. Optimal upwind and downwind conditions are marked as small rectangles on the boat speed contours for each windspeed.

Best Boatspeeds

The upper portion of this page gives a numerical representation of the polar diagram. Boatspeeds in knots are given for a series of true windspeeds at masthead height, across a range of true wind angles. All boatspeeds and windspeeds are given in knots. The shaded cells lie beyond the upwind and downwind optimum points. The two tables on the lower portion of the page provide a ready reference of useful details about the optimum upwind and downwind sailing conditions as a function of the true windspeeds (Vt's) across the top of the page. In addition to indicating the optimum upwind and downwind boat speeds in knots, they are also expressed in seconds/mile and in seconds/boat length. VMG is also expressed in seconds/mile.

Course Times

This page shows the predicted boat performance over a series of 1.0 nautical mile courses in various windspeeds. Times around the course are expressed as seconds. The courses reflect five different course conditions:- LEEWARD, LINEAR RANDOM (LR), WINDWARD-LEEWARD (WL), WINDWARD and CIRCULAR-RANDOM (CR).

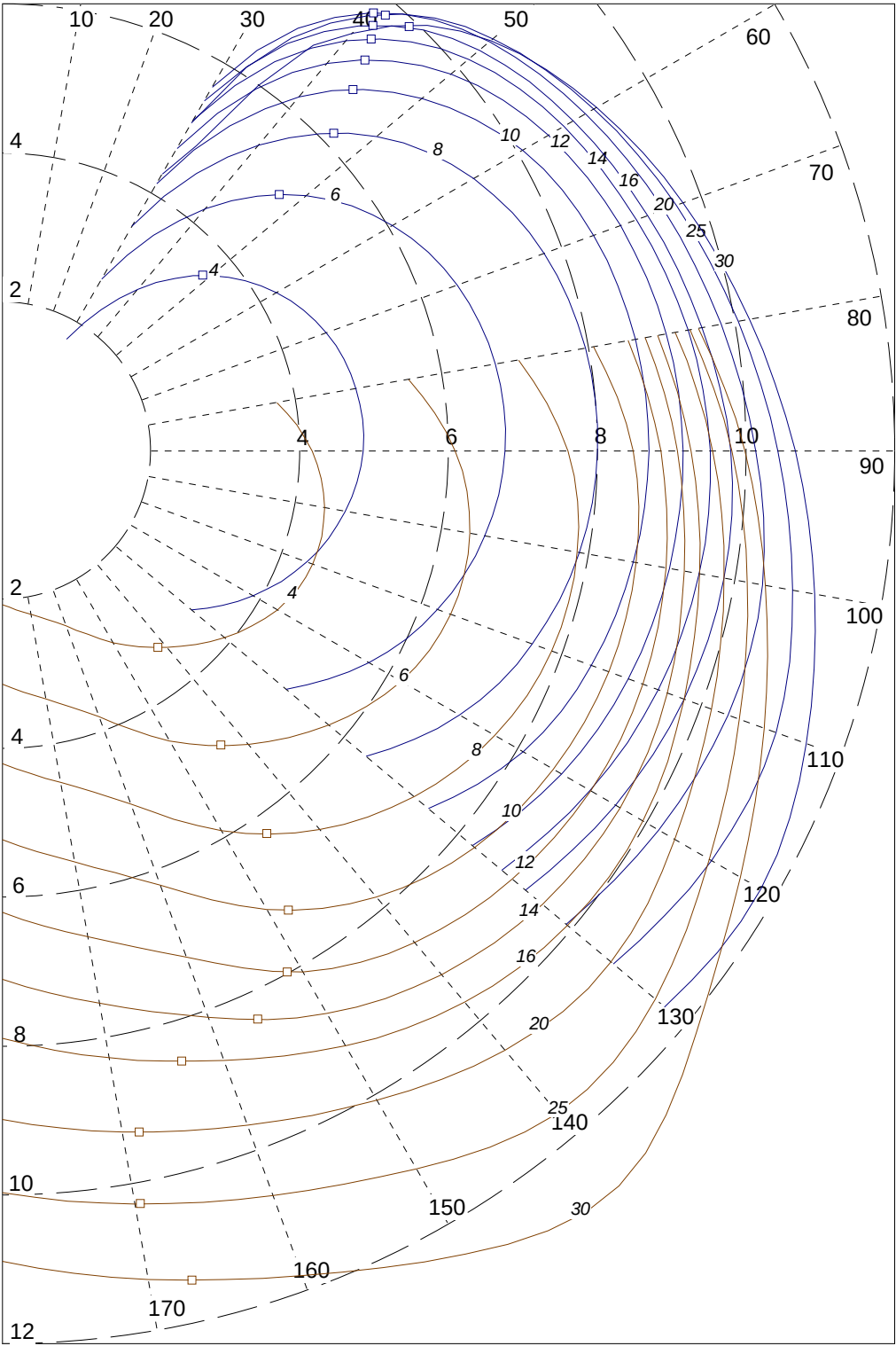
Times for 1 nm (secs)

This page is similar to the Best Boatspeeds page in that it represents the boatspeeds for a series of true windspeeds and true wind angles. Boatspeeds are expressed as seconds/nautical mile. Shaded areas again depict the off optimum conditions. Optimum upwind and downwind values, in terms of VMG, are presented underneath the table.

Best Performance

This page is a detailed representation of the polar diagram showing a list of predicted performance variables for each windspeed over the range of true wind angles. All of those items listed in the "General Terms" section are listed and optimum upwind and downwind settings are included in bold type.

Design 425 - Farr Pilothouse 56
Final VPP



Best Boatspeeds (kt)										
	4	6	8	10	12	14	16	20	25	30
30.0	1.73	2.67	3.48	4.15	4.70	5.13	5.43	5.64	5.08	4.29
33.0	2.10	3.21	4.16	4.91	5.50	5.95	6.25	6.51	6.28	5.04
36.0	2.43	3.68	4.72	5.52	6.13	6.57	6.86	7.10	6.97	6.44
39.0	2.73	4.11	5.21	6.05	6.65	7.05	7.32	7.55	7.49	7.14
42.0	3.02	4.50	5.64	6.49	7.06	7.44	7.69	7.91	7.89	7.67
45.0	3.28	4.84	6.03	6.86	7.41	7.77	7.99	8.19	8.22	8.08
50.0	3.66	5.33	6.57	7.36	7.87	8.18	8.37	8.54	8.61	8.57
60.0	4.25	6.06	7.31	8.07	8.47	8.71	8.86	9.05	9.18	9.22
70.0	4.63	6.51	7.75	8.46	8.84	9.07	9.23	9.46	9.64	9.74
80.0	4.83	6.73	7.95	8.64	9.06	9.36	9.55	9.81	10.04	10.19
90.0	4.85	6.76	8.00	8.69	9.15	9.51	9.79	10.12	10.42	10.65
100.0	4.68	6.58	7.87	8.65	9.10	9.51	9.85	10.37	10.78	11.08
110.0	4.44	6.41	7.85	8.67	9.16	9.51	9.75	10.38	11.06	11.50
120.0	4.27	6.19	7.64	8.55	9.13	9.59	9.94	10.43	11.00	11.77
130.0	3.90	5.72	7.22	8.28	8.94	9.47	9.92	10.68	11.45	12.17
140.0	3.44	5.14	6.63	7.82	8.62	9.18	9.66	10.51	11.61	12.89
150.0	2.97	4.49	5.89	7.11	8.07	8.72	9.22	10.07	11.13	12.46
160.0	2.50	3.80	5.05	6.21	7.24	8.09	8.71	9.64	10.64	11.79
170.0	2.23	3.39	4.52	5.61	6.63	7.53	8.28	9.29	10.27	11.30
180.0	2.06	3.13	4.20	5.22	6.20	7.09	7.88	8.98	9.96	10.88
Up.Vs(kts)	3.58	5.07	6.17	6.76	7.16	7.43	7.58	7.71	7.80	7.90
Up.Vs(s/m)	1006.0	709.7	583.8	532.3	502.7	484.8	475.1	467.0	461.7	455.7
Up.Vs(s/L)	9.2	6.5	5.3	4.8	4.6	4.4	4.3	4.3	4.2	4.2
Up.Bt	48.8	47.3	46.2	44.2	42.9	41.9	41.1	40.3	41.4	43.8
Up.Vmg(kts)	2.36	3.44	4.27	4.85	5.25	5.53	5.71	5.88	5.85	5.70
Up.Vmg(s/m)	1528.4	1046.2	843.9	742.6	686.1	651.5	630.3	612.6	615.3	631.7
Up.Heel	3.2	7.0	11.7	15.2	18.1	20.4	22.2	25.0	25.6	26.0
Up.Reef	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.77
Up.Flat	1.00	1.00	0.99	0.88	0.78	0.69	0.61	0.48	0.49	0.54
Up.Va	6.90	10.14	13.00	15.47	17.74	19.88	21.92	25.78	30.45	34.95
Up.Ba	25.8	25.6	25.8	25.8	26.0	26.2	26.4	27.1	29.3	32.3
Up.Leewy	3.25	3.46	3.82	4.04	4.25	4.44	4.65	5.11	5.64	6.18
Dn.Vs(kts)	3.37	4.93	6.25	7.27	7.98	8.37	8.54	9.33	10.28	11.43
Dn.Vs(s/m)	1068.2	730.3	575.6	495.4	451.2	430.0	421.3	385.8	350.1	315.1
Dn.Vs(s/L)	9.7	6.7	5.2	4.5	4.1	3.9	3.8	3.5	3.2	2.9
Dn.Bt	141.5	143.4	145.3	148.0	151.3	155.8	163.6	168.6	169.6	167.1
Dn.Vmg(kts)	2.64	3.96	5.14	6.16	7.00	7.63	8.20	9.15	10.11	11.14
Dn.Vmg(s/m)	1364.2	910.0	699.8	584.0	514.4	471.6	439.2	393.5	356.0	323.2
Dn.Heel	0.7	1.3	1.9	2.3	2.4	2.0	1.5	1.6	2.5	4.8
Dn.Reef	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Dn.Flat	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Dn.Va	2.50	3.58	4.56	5.43	6.30	7.23	8.17	11.01	15.00	19.03
Dn.Ba	84.5	88.2	94.1	103.0	113.9	127.4	146.5	159.0	162.5	159.4
Dn.Leewy	0.60	0.55	0.50	0.43	0.36	0.28	0.19	0.17	0.20	0.30

Shaded cells lie outside upwind and downwind optimum sailing angles.

Course Times

	Leeward <u>1.00 nm.</u>	WL <u>1.00 nm.</u>	LR <u>1.00 nm.</u>	Windward <u>1.00 nm.</u>	CR <u>1.00 nm.</u>
4.0	1364.2	1446.3	1002.2	1528.4	1065.6
6.0	910.0	978.1	692.9	1046.2	730.6
8.0	699.8	771.8	561.0	843.9	586.8
10.0	584.0	663.3	496.0	742.6	515.1
12.0	514.4	600.3	459.9	686.1	475.5
14.0	471.6	561.5	436.8	651.5	450.9
16.0	439.2	534.7	420.6	630.3	434.2
20.0	393.5	503.1	398.7	612.6	413.4
25.0	356.0	485.6	380.3	615.3	399.1
30.0	323.2	477.5	364.8	631.7	390.3

Best Performance

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
	4.0	30.0	1.729	1.498	1.5	1.000	0.805	5.56	21.1	6.73	Up	42y2
	4.0	33.0	2.097	1.759	1.9	1.000	0.877	5.87	21.8	5.66	Up	42y2
	4.0	36.0	2.427	1.964	2.3	1.000	0.933	6.13	22.5	4.99	Up	42y2
	4.0	39.0	2.733	2.124	2.6	1.000	0.985	6.36	23.3	4.53	Up	42y2
	4.0	42.0	3.018	2.243	2.8	1.000	1.000	6.56	24.0	4.06	Up	42y2
	4.0	45.0	3.280	2.319	3.0	1.000	1.000	6.73	24.8	3.64	Up	42y2
OptUp >	4.0	48.8	3.579	2.355	3.2	1.000	1.000	6.90	25.8	3.25	Up	42y2
	4.0	50.0	3.664	2.355	3.3	1.000	1.000	6.94	26.1	3.14	Up	42y2
	4.0	60.0	4.254	2.127	3.5	1.000	1.000	7.15	28.9	2.49	Up	42y2
	4.0	70.0	4.634	1.585	3.4	1.000	1.000	7.08	32.0	2.06	Up	42y2
	4.0	80.0	4.826	0.838	3.1	1.000	1.000	6.78	35.5	1.73	Up	42y2
	4.0	90.0	4.846	-0.000	2.7	1.000	1.000	6.28	39.5	1.45	Up	42y2
	4.0	100.0	4.676	-0.812	2.1	1.000	1.000	5.60	44.7	1.21	Up	42y2
	4.0	110.0	4.436	-1.517	2.5	1.000	1.000	4.85	50.8	1.29	Dn	42y2
	4.0	120.0	4.265	-2.133	2.0	1.000	1.000	4.14	56.8	1.11	Dn	42y2
	4.0	130.0	3.896	-2.504	1.2	1.000	1.000	3.34	66.6	0.89	Dn	42y2
	4.0	140.0	3.442	-2.637	0.7	1.000	1.000	2.60	81.6	0.64	Dn	42y2
OptDn >	4.0	141.5	3.370	2.639	0.7	1.000	1.000	2.50	84.5	0.60	Dn	42y2
	4.0	150.0	2.970	-2.572	0.3	1.000	1.000	2.06	103.9	0.39	Dn	42y2
	4.0	160.0	2.499	-2.348	0.1	1.000	1.000	1.86	132.6	0.20	Dn	42y2
	4.0	170.0	2.230	-2.196	0.0	1.000	1.000	1.85	157.9	0.10	Dn	42y2
	4.0	180.0	2.064	-2.064	-0.0	1.000	1.000	1.94	180.0	-0.00	Dn	42y2
	6.0	30.0	2.667	2.310	3.5	1.000	0.795	8.41	20.8	6.38	Up	42y2
	6.0	33.0	3.207	2.689	4.3	1.000	0.860	8.86	21.6	5.39	Up	42y2
	6.0	36.0	3.684	2.981	5.0	1.000	0.910	9.23	22.4	4.77	Up	42y2
	6.0	39.0	4.111	3.195	5.7	1.000	0.955	9.54	23.2	4.36	Up	42y2
	6.0	42.0	4.495	3.341	6.4	1.000	0.994	9.80	24.0	4.05	Up	42y2
	6.0	45.0	4.840	3.422	6.8	1.000	1.000	10.01	24.9	3.70	Up	42y2
OptUp >	6.0	47.3	5.073	3.441	7.0	1.000	1.000	10.14	25.6	3.46	Up	42y2
	6.0	50.0	5.327	3.424	7.2	1.000	1.000	10.25	26.4	3.22	Up	42y2
	6.0	60.0	6.056	3.028	7.6	1.000	1.000	10.42	29.6	2.58	Up	42y2
	6.0	70.0	6.506	2.225	7.2	1.000	1.000	10.22	33.2	2.13	Up	42y2
	6.0	80.0	6.725	1.168	6.5	1.000	1.000	9.74	37.1	1.77	Up	42y2
	6.0	90.0	6.756	-0.000	5.4	1.000	1.000	9.02	41.5	1.48	Up	42y2
	6.0	100.0	6.583	-1.143	4.2	1.000	1.000	8.09	46.8	1.22	Up	42y2
	6.0	110.0	6.411	-2.193	5.5	1.000	1.000	7.11	52.2	1.34	Dn	42y2
	6.0	120.0	6.186	-3.093	4.3	1.000	1.000	6.08	58.4	1.12	Dn	42y2
	6.0	130.0	5.724	-3.679	2.9	1.000	1.000	4.96	67.9	0.88	Dn	42y2
	6.0	140.0	5.144	-3.941	1.5	1.000	1.000	3.90	81.9	0.63	Dn	42y2
OptDn >	6.0	143.4	4.929	3.956	1.3	1.000	1.000	3.58	88.2	0.55	Dn	42y2
	6.0	150.0	4.493	-3.891	0.7	1.000	1.000	3.08	103.2	0.38	Dn	42y2
	6.0	160.0	3.799	-3.570	0.2	1.000	1.000	2.76	131.9	0.19	Dn	42y2
	6.0	170.0	3.385	-3.334	0.1	1.000	1.000	2.73	157.6	0.10	Dn	42y2
	6.0	180.0	3.133	-3.133	-0.0	1.000	1.000	2.87	180.0	-0.00	Dn	42y2

Best Performance (cont)

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
	8.0	30.0	3.482	3.016	6.0	1.000	0.772	11.14	20.9	6.40	Up	42y2
	8.0	33.0	4.158	3.487	7.3	1.000	0.829	11.70	21.7	5.40	Up	42y2
	8.0	36.0	4.722	3.820	8.4	1.000	0.870	12.12	22.6	4.81	Up	42y2
	8.0	39.0	5.209	4.048	9.5	1.000	0.905	12.46	23.5	4.40	Up	42y2
	8.0	42.0	5.641	4.192	10.5	1.000	0.946	12.73	24.4	4.15	Up	42y2
	8.0	45.0	6.025	4.261	11.4	1.000	0.975	12.93	25.4	3.91	Up	42y2
OptUp >	8.0	46.2	6.167	4.266	11.7	1.000	0.987	13.00	25.8	3.82	Up	42y2
	8.0	50.0	6.568	4.222	12.3	1.000	1.000	13.15	27.1	3.52	Up	42y2
	8.0	60.0	7.314	3.657	12.5	1.000	1.000	13.18	30.9	2.82	Up	42y2
	8.0	70.0	7.748	2.650	11.6	1.000	1.000	12.81	35.1	2.31	Up	42y2
	8.0	80.0	7.955	1.381	10.1	1.000	1.000	12.14	39.7	1.91	Up	42y2
	8.0	90.0	7.998	-0.000	8.4	1.000	1.000	11.25	44.7	1.57	Up	42y2
	8.0	100.0	7.870	-1.367	6.5	1.000	1.000	10.16	50.4	1.27	Up	42y2
	8.0	110.0	7.854	-2.686	9.5	1.000	1.000	9.01	55.4	1.47	Dn	42y2
	8.0	120.0	7.643	-3.821	7.2	1.000	1.000	7.78	62.1	1.18	Dn	42y2
	8.0	130.0	7.223	-4.643	4.9	1.000	1.000	6.45	71.2	0.90	Dn	42y2
	8.0	140.0	6.635	-5.083	2.8	1.000	1.000	5.16	84.4	0.63	Dn	42y2
OptDn >	8.0	145.3	6.255	5.144	1.9	1.000	1.000	4.56	94.1	0.50	Dn	42y2
	8.0	150.0	5.889	-5.100	1.2	1.000	1.000	4.13	104.6	0.38	Dn	42y2
	8.0	160.0	5.046	-4.742	0.4	1.000	1.000	3.69	132.1	0.19	Dn	42y2
	8.0	170.0	4.523	-4.454	0.2	1.000	1.000	3.63	157.5	0.09	Dn	42y2
	8.0	180.0	4.197	-4.197	-0.0	1.000	1.000	3.80	180.0	-0.00	Dn	42y2
	10.0	30.0	4.146	3.590	8.8	1.000	0.735	13.73	21.1	6.57	Up	42y2
	10.0	33.0	4.907	4.115	10.7	1.000	0.789	14.33	21.9	5.61	Up	42y2
	10.0	36.0	5.524	4.469	12.1	1.000	0.818	14.78	22.9	4.97	Up	42y2
	10.0	39.0	6.046	4.699	13.4	1.000	0.842	15.11	23.9	4.53	Up	42y2
	10.0	42.0	6.491	4.824	14.5	1.000	0.863	15.36	25.0	4.21	Up	42y2
OptUp >	10.0	44.2	6.763	4.848	15.2	1.000	0.879	15.47	25.8	4.04	Up	42y2
	10.0	45.0	6.860	4.851	15.4	1.000	0.884	15.51	26.1	3.97	Up	42y2
	10.0	50.0	7.364	4.734	16.7	1.000	0.923	15.62	28.0	3.69	Up	42y2
	10.0	60.0	8.073	4.036	18.1	1.000	1.000	15.45	32.2	3.26	Up	42y2
	10.0	70.0	8.456	2.892	16.2	1.000	1.000	14.91	37.2	2.64	Up	42y2
	10.0	80.0	8.636	1.500	13.8	1.000	1.000	14.11	42.7	2.15	Up	42y2
	10.0	90.0	8.686	-0.000	11.2	1.000	1.000	13.10	48.5	1.74	Up	42y2
	10.0	100.0	8.647	-1.501	17.0	1.000	1.000	11.68	53.7	2.08	Dn	42y2
	10.0	110.0	8.669	-2.965	13.9	1.000	1.000	10.52	60.1	1.70	Dn	42y2
	10.0	120.0	8.550	-4.275	10.4	1.000	1.000	9.23	67.4	1.31	Dn	42y2
	10.0	130.0	8.285	-5.325	7.0	1.000	1.000	7.83	76.3	0.96	Dn	42y2
	10.0	140.0	7.822	-5.992	4.2	1.000	1.000	6.41	88.6	0.65	Dn	42y2
OptDn >	10.0	148.0	7.267	6.165	2.3	1.000	1.000	5.43	103.0	0.43	Dn	42y2
	10.0	150.0	7.107	-6.155	2.0	1.000	1.000	5.23	107.3	0.38	Dn	42y2
	10.0	160.0	6.207	-5.833	0.7	1.000	1.000	4.68	133.0	0.19	Dn	42y2
	10.0	170.0	5.606	-5.521	0.3	1.000	1.000	4.58	157.7	0.09	Dn	42y2
	10.0	180.0	5.220	-5.220	-0.0	1.000	1.000	4.78	180.0	-0.00	Dn	42y2

Best Performance (cont)

	<i>TWS</i>	<i>TWA</i>	<i>V</i>	<i>VMG</i>	<i>Heel</i>	<i>Reef</i>	<i>Flat</i>	<i>AWS</i>	<i>AWA</i>	<i>Lee</i>	<i>Sail</i>	<i>Flot</i>
OptUp >	12.0	30.0	4.695	4.066	11.9	1.000	0.695	16.19	21.3	6.83	Up	42y2
	12.0	33.0	5.500	4.613	13.8	1.000	0.723	16.81	22.2	5.71	Up	42y2
	12.0	36.0	6.134	4.962	15.4	1.000	0.743	17.24	23.2	5.06	Up	42y2
	12.0	39.0	6.647	5.166	16.7	1.000	0.758	17.53	24.4	4.61	Up	42y2
	12.0	42.0	7.059	5.246	17.8	1.000	0.774	17.71	25.6	4.31	Up	42y2
	12.0	42.9	7.161	5.247	18.1	1.000	0.778	17.74	26.0	4.25	Up	42y2
	12.0	45.0	7.407	5.238	18.7	1.000	0.789	17.81	26.8	4.07	Up	42y2
	12.0	50.0	7.870	5.059	19.8	1.000	0.820	17.82	29.0	3.79	Up	42y2
	12.0	60.0	8.472	4.236	21.3	1.000	0.909	17.41	33.8	3.46	Up	42y2
	12.0	70.0	8.840	3.023	21.2	1.000	1.000	16.68	39.1	3.13	Up	42y2
	12.0	80.0	9.059	1.573	17.8	1.000	1.000	15.84	45.3	2.48	Up	42y2
	12.0	90.0	9.147	-0.000	14.2	1.000	1.000	14.80	51.8	1.96	Up	42y2
	12.0	100.0	9.100	-1.580	10.8	1.000	1.000	13.56	58.8	1.53	Up	42y2
	12.0	110.0	9.163	-3.134	18.7	1.000	1.000	11.82	64.7	2.01	Dn	42y2
	12.0	120.0	9.127	-4.564	13.8	1.000	1.000	10.57	72.8	1.50	Dn	42y2
OptDn >	12.0	130.0	8.945	-5.750	9.3	1.000	1.000	9.15	82.3	1.07	Dn	42y2
	12.0	140.0	8.616	-6.600	5.6	1.000	1.000	7.70	94.3	0.70	Dn	42y2
	12.0	150.0	8.074	-6.992	2.7	1.000	1.000	6.43	111.1	0.40	Dn	42y2
	12.0	151.3	7.978	6.998	2.4	1.000	1.000	6.30	113.9	0.36	Dn	42y2
	12.0	160.0	7.238	-6.801	1.0	1.000	1.000	5.76	134.5	0.20	Dn	42y2
	12.0	170.0	6.625	-6.525	0.4	1.000	1.000	5.59	158.1	0.10	Dn	42y2
	12.0	180.0	6.196	-6.196	-0.0	1.000	1.000	5.80	180.0	-0.00	Dn	42y2
	14.0	30.0	5.133	4.445	14.5	1.000	0.632	18.54	21.4	6.93	Up	42y2
	14.0	33.0	5.945	4.986	16.6	1.000	0.652	19.14	22.4	5.82	Up	42y2
	14.0	36.0	6.570	5.315	18.2	1.000	0.663	19.53	23.6	5.15	Up	42y2
OptUp >	14.0	39.0	7.052	5.480	19.5	1.000	0.676	19.76	24.9	4.74	Up	42y2
	14.0	41.9	7.426	5.526	20.4	1.000	0.687	19.88	26.2	4.44	Up	42y2
	14.0	42.0	7.444	5.532	20.4	1.000	0.687	19.89	26.2	4.42	Up	42y2
	14.0	45.0	7.766	5.492	21.2	1.000	0.700	19.93	27.6	4.19	Up	42y2
	14.0	50.0	8.184	5.260	22.2	1.000	0.730	19.85	30.0	3.92	Up	42y2
	14.0	60.0	8.710	4.355	23.4	1.000	0.810	19.25	35.3	3.60	Up	42y2
	14.0	70.0	9.070	3.102	23.7	1.000	0.915	18.36	41.0	3.34	Up	42y2
	14.0	80.0	9.356	1.625	22.2	1.000	1.000	17.38	47.3	2.90	Up	42y2
	14.0	90.0	9.509	-0.000	17.7	1.000	1.000	16.38	54.5	2.22	Up	42y2
	14.0	100.0	9.509	-1.651	13.3	1.000	1.000	15.17	62.2	1.68	Up	42y2
	14.0	110.0	9.507	-3.252	24.1	1.000	1.000	12.90	68.5	2.40	Dn	42y2
	14.0	120.0	9.586	-4.793	17.8	1.000	1.000	11.83	77.4	1.71	Dn	42y2
	14.0	130.0	9.469	-6.086	11.9	1.000	1.000	10.51	87.4	1.19	Dn	42y2
	14.0	140.0	9.178	-7.031	7.0	1.000	1.000	9.06	99.8	0.76	Dn	42y2
	14.0	150.0	8.724	-7.555	3.4	1.000	1.000	7.77	115.9	0.42	Dn	42y2
	14.0	155.8	8.372	7.634	2.0	1.000	1.000	7.23	127.4	0.28	Dn	42y2
OptDn >	14.0	160.0	8.092	-7.604	1.4	1.000	1.000	6.97	136.6	0.22	Dn	42y2
	14.0	170.0	7.533	-7.419	0.6	1.000	1.000	6.71	158.8	0.10	Dn	42y2
	14.0	180.0	7.093	-7.093	-0.0	1.000	1.000	6.91	180.0	-0.00	Dn	42y2

Best Performance (cont)

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
OptUp >	16.0	30.0	5.433	4.705	16.8	1.000	0.570	20.75	21.7	7.11	Up	42y2
	16.0	33.0	6.251	5.243	19.0	1.000	0.585	21.33	22.7	5.98	Up	42y2
	16.0	36.0	6.855	5.546	20.4	1.000	0.590	21.67	24.0	5.29	Up	42y2
	16.0	39.0	7.319	5.688	21.5	1.000	0.599	21.86	25.4	4.86	Up	42y2
	16.0	41.1	7.578	5.712	22.2	1.000	0.607	21.92	26.4	4.65	Up	42y2
	16.0	42.0	7.692	5.716	22.5	1.000	0.610	21.94	26.8	4.56	Up	42y2
	16.0	45.0	7.994	5.653	23.2	1.000	0.623	21.93	28.3	4.33	Up	42y2
	16.0	50.0	8.371	5.381	24.1	1.000	0.650	21.75	31.0	4.07	Up	42y2
	16.0	60.0	8.863	4.431	25.0	1.000	0.724	21.02	36.7	3.74	Up	42y2
	16.0	70.0	9.233	3.158	25.2	1.000	0.818	20.03	42.8	3.44	Up	42y2
	16.0	80.0	9.546	1.658	25.0	1.000	0.942	18.86	49.2	3.16	Up	42y2
	16.0	90.0	9.786	-0.000	21.4	1.000	1.000	17.82	56.7	2.53	Up	42y2
	16.0	100.0	9.850	-1.710	16.0	1.000	1.000	16.71	65.0	1.87	Up	42y2
	16.0	110.0	9.748	-3.334	11.4	1.000	1.000	15.35	73.8	1.38	Up	42y2
OptDn >	16.0	120.0	9.941	-4.971	22.2	1.000	1.000	12.97	81.4	1.98	Dn	42y2
	16.0	130.0	9.915	-6.373	14.8	1.000	1.000	11.86	91.8	1.32	Dn	42y2
	16.0	140.0	9.663	-7.402	8.6	1.000	1.000	10.49	104.3	0.83	Dn	42y2
	16.0	150.0	9.224	-7.988	4.2	1.000	1.000	9.23	120.1	0.46	Dn	42y2
	16.0	160.0	8.707	-8.182	1.8	1.000	1.000	8.37	139.1	0.25	Dn	42y2
	16.0	163.6	8.544	8.197	1.5	1.000	1.000	8.17	146.5	0.19	Dn	42y2
	16.0	170.0	8.277	-8.151	0.8	1.000	1.000	7.98	159.6	0.11	Dn	42y2
	16.0	180.0	7.883	-7.883	-0.0	1.000	1.000	8.12	180.0	-0.00	Dn	42y2
OptUp >	20.0	30.0	5.642	4.886	20.1	0.999	0.460	24.81	22.2	7.89	Up	42y2
	20.0	33.0	6.508	5.458	22.1	1.000	0.465	25.38	23.4	6.44	Up	42y2
	20.0	36.0	7.103	5.746	23.7	1.000	0.473	25.65	24.8	5.76	Up	42y2
	20.0	39.0	7.553	5.870	24.7	1.000	0.478	25.77	26.3	5.26	Up	42y2
	20.0	40.3	7.709	5.877	25.0	1.000	0.482	25.78	27.1	5.11	Up	42y2
	20.0	42.0	7.907	5.876	25.4	1.000	0.487	25.78	28.0	4.92	Up	42y2
	20.0	45.0	8.191	5.792	25.6	0.976	0.524	25.72	29.7	4.68	Up	42y2
	20.0	50.0	8.544	5.492	25.7	0.938	0.597	25.47	32.8	4.39	Up	42y2
	20.0	60.0	9.049	4.524	25.5	0.889	0.744	24.64	39.4	3.99	Up	42y2
	20.0	70.0	9.459	3.235	25.5	0.881	0.857	23.53	46.2	3.63	Up	42y2
	20.0	80.0	9.808	1.703	25.4	0.889	0.973	22.20	53.3	3.31	Up	42y2
	20.0	90.0	10.124	-0.000	25.6	0.951	1.000	20.69	60.7	2.95	Up	42y2
	20.0	100.0	10.370	-1.801	22.3	1.000	1.000	19.48	69.3	2.33	Up	42y2
	20.0	110.0	10.375	-3.549	15.9	1.000	1.000	18.42	78.9	1.66	Up	42y2
OptDn >	20.0	120.0	10.432	-5.216	26.9	0.938	1.000	15.46	88.4	2.30	Dn	42y2
	20.0	130.0	10.678	-6.864	21.6	1.000	1.000	14.41	98.7	1.63	Dn	42y2
	20.0	140.0	10.508	-8.050	12.3	1.000	1.000	13.45	111.0	0.97	Dn	42y2
	20.0	150.0	10.069	-8.720	6.2	1.000	1.000	12.30	126.1	0.55	Dn	42y2
	20.0	160.0	9.637	-9.056	3.3	1.000	1.000	11.42	143.3	0.32	Dn	42y2
	20.0	168.6	9.331	9.148	1.6	1.000	1.000	11.01	159.0	0.17	Dn	42y2
	20.0	170.0	9.286	-9.145	1.3	1.000	1.000	10.97	161.6	0.15	Dn	42y2
	20.0	180.0	8.978	-8.978	-0.0	1.000	1.000	11.02	180.0	-0.00	Dn	42y2

Best Performance (cont)

	TWS	TWA	V	VMG	Heel	Reef	Flat	AWS	AWA	Lee	Sail	Flot
	25.0	30.0	5.081	4.400	21.8	1.000	0.352	29.14	23.5	10.74	Up	42y2
	25.0	33.0	6.276	5.263	24.3	0.979	0.379	29.93	24.5	7.89	Up	42y2
	25.0	36.0	6.968	5.637	25.0	0.939	0.419	30.28	26.1	6.72	Up	42y2
	25.0	39.0	7.486	5.818	25.4	0.906	0.459	30.44	27.8	6.00	Up	42y2
OptUp >	25.0	41.4	7.797	5.851	25.6	0.882	0.492	30.45	29.3	5.64	Up	42y2
	25.0	42.0	7.894	5.866	25.6	0.877	0.501	30.47	29.7	5.52	Up	42y2
	25.0	45.0	8.219	5.811	26.0	0.852	0.549	30.39	31.5	5.23	Up	42y2
	25.0	50.0	8.611	5.535	25.9	0.816	0.628	30.10	34.9	4.85	Up	42y2
	25.0	60.0	9.180	4.590	25.9	0.785	0.757	29.14	41.9	4.33	Up	42y2
	25.0	70.0	9.640	3.297	25.8	0.772	0.886	27.89	49.3	3.91	Up	42y2
	25.0	80.0	10.036	1.743	25.8	0.781	1.000	26.43	57.0	3.52	Up	42y2
	25.0	90.0	10.422	-0.000	26.3	0.852	1.000	24.72	65.1	3.12	Up	42y2
	25.0	100.0	10.779	-1.872	27.0	0.947	1.000	22.87	73.6	2.75	Up	42y2
	25.0	110.0	11.062	-3.784	22.9	1.000	1.000	21.78	83.4	2.08	Up	42y2
	25.0	120.0	11.000	-5.500	16.0	1.000	1.000	20.87	94.1	1.47	Up	42y2
	25.0	130.0	11.451	-7.361	30.0	0.986	1.000	17.21	105.6	2.01	Dn	42y2
	25.0	140.0	11.608	-8.892	18.3	1.000	1.000	17.02	116.3	1.12	Dn	42y2
	25.0	150.0	11.130	-9.639	9.8	1.000	1.000	16.20	130.5	0.67	Dn	42y2
	25.0	160.0	10.640	-9.998	5.5	1.000	1.000	15.42	146.5	0.42	Dn	42y2
OptDn >	25.0	169.6	10.282	10.113	2.5	1.000	1.000	15.00	162.5	0.20	Dn	42y2
	25.0	170.0	10.265	-10.113	2.3	1.000	1.000	14.99	163.2	0.19	Dn	42y2
	25.0	180.0	9.959	-9.959	-0.0	1.000	1.000	15.04	180.0	-0.00	Dn	42y2
	30.0	30.0	4.295	3.719	35.0	0.630	0.554	32.67	22.1	15.00	Up	42y2
	30.0	33.0	5.042	4.228	22.9	0.889	0.369	33.74	26.5	12.64	Up	42y2
	30.0	36.0	6.438	5.208	24.9	0.845	0.421	34.63	27.5	8.57	Up	42y2
	30.0	39.0	7.142	5.551	25.6	0.813	0.467	34.89	29.2	7.28	Up	42y2
	30.0	42.0	7.668	5.698	25.9	0.785	0.513	34.98	31.1	6.49	Up	42y2
OptUp >	30.0	43.8	7.900	5.699	26.0	0.770	0.543	34.95	32.3	6.18	Up	42y2
	30.0	45.0	8.080	5.713	26.1	0.760	0.562	34.95	33.0	5.94	Up	42y2
	30.0	50.0	8.567	5.507	26.2	0.728	0.646	34.65	36.5	5.40	Up	42y2
	30.0	60.0	9.223	4.612	26.2	0.698	0.780	33.61	43.9	4.72	Up	42y2
	30.0	70.0	9.738	3.331	26.4	0.690	0.903	32.22	51.6	4.23	Up	42y2
	30.0	80.0	10.194	1.770	26.4	0.705	1.000	30.62	59.8	3.77	Up	42y2
	30.0	90.0	10.652	-0.000	27.1	0.772	1.000	28.75	68.3	3.31	Up	42y2
	30.0	100.0	11.084	-1.925	27.8	0.859	1.000	26.78	77.3	2.90	Up	42y2
	30.0	110.0	11.497	-3.932	28.7	0.971	1.000	24.77	87.1	2.51	Up	42y2
	30.0	120.0	11.771	-5.885	22.3	1.000	1.000	24.25	97.7	1.74	Up	42y2
	30.0	130.0	12.167	-7.821	31.9	0.904	1.000	20.76	110.0	2.02	Dn	42y2
	30.0	140.0	12.887	-9.872	25.6	1.000	1.000	20.11	120.1	1.20	Dn	42y2
	30.0	150.0	12.457	-10.788	14.4	1.000	1.000	19.85	133.0	0.73	Dn	42y2
	30.0	160.0	11.786	-11.075	8.2	1.000	1.000	19.29	148.2	0.48	Dn	42y2
OptDn >	30.0	167.1	11.426	11.137	4.8	1.000	1.000	19.03	159.4	0.30	Dn	42y2
	30.0	170.0	11.297	-11.125	3.6	1.000	1.000	18.97	164.1	0.23	Dn	42y2
	30.0	180.0	10.882	-10.882	-0.0	1.000	1.000	19.12	180.0	-0.00	Dn	42y2

Best Performance (cont)
