

Table I. *Effects of Light Intensity on Photosynthetic Pigment Characteristics and Photosynthetic Response in S. costatum and D. tertiolecta during Steady-State Growth at 15 C*

<i>S. costatum</i>							
I_0^a	Chl a^b	a/c^c	Chl $a/P700$	P700 ^d	C_0^e	P_{max}^f	P_{max}/R^g
130	4.5	5.6	650	4.3	0.25	15.8	6.8
65	5.4	5.8	875	3.7	0.20	15.9	7.3
39	5.9	4.5	960	3.7	0.22	15.1	6.6
20	7.1	3.1	1,340	3.2	0.20	10.9	7.2
9	5.1	2.8	1,130	2.7	0.20	7.4	7.3
2.6	5.0	2.4	1,110	2.7	0.20	3.9	6.6
0.7	5.0	1.9	1,100	2.7	0.20	3.1	6.6
<i>D. tertiolecta</i>							
I_0^a	Chl a^b	a/b^c	Chl $a + b/P700$	P700 ^d	C_0^e	P_{max}^f	P_{max}/R^g
400	11.8	5.6	530	15.8	20	78	8.8
200	14.9	4.0	550	20.4	19	74	8.8
120	20.9	3.0	560	29.9	16	71	9.7
60	27.6	2.7	520	43.8	12	65	9.0
20	30.9	2.3	380	70.2	8	46	8.9
8	25.5	2.1	370	61.2	4	38	9.4
2	24.3	2.0	360	61.0	4	31	9.9

^a Incident light in $\mu E m^{-2} s^{-1}$.

^b Mol Chl/cell ($\times 10^{-16}$).

^c Molar ratio.

^d Numbers of PSI reaction centers/cell ($\times 10^5$).

^e Compensation light intensity in $\mu E m^{-2} s^{-1}$.

^f Light saturated rate in $\mu mol O_2 cell^{-1} min^{-1} \times 10^{-10}$.

^g Gross photosynthesis to respiration ratios.

