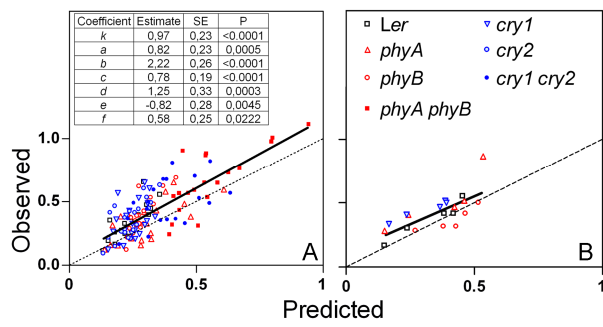
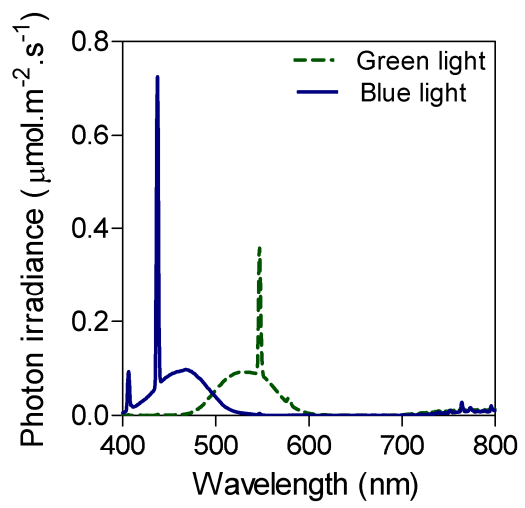


Supplemental Figure 1. Scans of the light environment at midday in the 20 different stations where hypocotyl length was measured. To provide a more meaningful description of the light environments, the photon irradiance relative to sunlight for each wavelength under each condition averaged for four days of measurement was multiplied by the absolute photon irradiance measured for sunlight.



Supplemental Figure 2. Parametrisation, goodness-of-fit analysis and validation of the model stage I. A, Observed versus predicted values of hypocotyl length for the data used to parametrise the model. The embedded table shows the estimated coefficients of the model and their significance. B, Validation: Observed versus predicted values for an independent set of data (Yanovsky et al., 1995). The observed-predicted regression lines and the 1:1 lines (dashed) are included.



Supplemental Figure 3. Spectral irradiance of the blue and green broad-band sources.

Supplemental Table S1. Light environment at midday in the 20 different stations where hypocotyl length was measured. Photon irradiances for the indicated wavebands are expressed relative to incoming radiation and data are means and SE of four measurements.

Station	Description	BLUE	GREEN	RED	FAR-RED	BLUE /GREEN	RED /FAR-RED
		420-490	500-570	620-680	700-750		
1	5-m tall canopy of <i>Cupressus sempervirens</i> L. (Italian cypress)	2 ± 0	3 ± 0	3 ± 0	5 ± 0	0.90 ± 0.03	0.59 ± 0.03
2	3-m tall canopy of <i>Viburnum tinus</i> (Eve Price)	1 ± 1	2 ± 1	2 ± 1	4 ± 2	0.98 ± 0.07	0.30 ± 0.05
3	40-cm tall <i>Cynodon dactylon</i> (Bermudagrass)	14 ± 6	18 ± 6	18 ± 8	43 ± 5	0.79 ± 0.05	0.36 ± 0.17
4	25-cm tall <i>Cynodon dactylon</i> (Bermudagrass)	22 ± 7	27 ± 8	27 ± 10	53 ± 13	0.92 ± 0.08	0.43 ± 0.08
5	10-cm tall <i>Cynodon dactylon</i> (Bermudagrass)	42 ± 19	53 ± 22	50 ± 23	98 ± 30	0.82 ± 0.03	0.42 ± 0.07
6	80-cm tall canopy of <i>Sonchus oleraceus</i> , <i>Digitaria sanguinalis</i> and <i>Medicago lupulina</i>	15 ± 9	16 ± 9	17 ± 10	20 ± 12	1.07 ± 0.12	0.78 ± 0.05
7	80-cm tall canopy of <i>Amaranthus powellii</i> , <i>Sonchus oleraceus</i> , <i>Taraxacum officinale</i> , <i>Medicago lupulina</i> , <i>Trifolium repens</i> and <i>Rumex crispus</i>	74 ± 48	80 ± 51	85 ± 54	93 ± 54	0.98 ± 0.02	0.84 ± 0.05
8	40-cm tall canopy of <i>Tropaeolum majus</i> (Garden Nasturtium)	13 ± 5	20 ± 6	18 ± 6	56 ± 12	0.71 ± 0.05	0.28 ± 0.05
9	2-m tall canopy of <i>Abelia grandiflora</i>	31 ± 9	36 ± 10	35 ± 12	63 ± 13	0.94 ± 0.08	0.50 ± 0.09
10	20-cm tall young canopy of <i>Lolium multiflorum</i> , <i>Lolium perenne</i> , <i>Festuca arundinacea</i> and <i>Agrostis tenuis</i>	51 ± 4	63 ± 5	61 ± 5	107 ± 13	0.88 ± 0.01	0.55 ± 0.07
11	1-m tall canopy of <i>Hedychium coronarium</i> (White garland-lily)	5 ± 2	6 ± 2	6 ± 2	15 ± 4	0.79 ± 0.07	0.31 ± 0.05
12	2-m tall canopy of <i>Spiraea</i> sp. bush	13 ± 7	14 ± 7	15 ± 8	20 ± 10	1.01 ± 0.04	0.64 ± 0.09
13	15-cm tall canopy of <i>Bromus unioloides</i> , <i>Paspalum dilatatum</i> and <i>Cynodon dactylon</i>	82 ± 0	98 ± 0	100 ± 0	137 ± 0	0.87 ± 0.03	0.70 ± 0.1
14	10-cm canopy of lignified dead branches	6 ± 2	7 ± 2	8 ± 3	10 ± 4	1.03 ± 0.06	0.75 ± 0.03
15	Layer of <i>Populus</i> sp. yellow leaves	51 ± 13	69 ± 20	88 ± 28	101 ± 34	0.85 ± 0.09	0.91 ± 0.02
16	2-mm layer of soil	19 ± 4	22 ± 4	27 ± 6	31 ± 7	0.96 ± 0.08	0.91 ± 0.04
17	2-mm layer of a soil-sand mixture	9 ± 2	10 ± 2	11 ± 3	15 ± 3	1.00 ± 0.07	0.79 ± 0.02
18	2-mm layer of sand	2 ± 1	8 ± 2	17 ± 5	28 ± 8	0.37 ± 0.08	0.62 ± 0.03
18	2.5-m tall canopy of <i>Cotoneaster</i> sp. bush	9 ± 3	10 ± 4	11 ± 4	17 ± 6	1.01 ± 0.09	0.59 ± 0.05
20	Control exposed to unfiltered sunlight	100 ± 24	100 ± 29	100 ± 32	100 ± 33	1.15 ± 0.1	1.04 ± 0.01