Supplemental Data

UV treatments were superimposed onto white light supplied by four Sylvania cool white 4 ft. fluorescent tubes (F340W/SS/Eco). UVA radiation was supplied by one 2 ft. Phillips Blacklight (Tl20W/08RS) with a peak irradiance at 366 nm. UVB was supplied by one or two 2 ft. UBL FS20T12/UVB tube with peak irradiance at 310 nm (National Biological Corp., Beachwood, OH, USA). UV intensities were measured using an OL 756 UV-VIS spectroradiometer (Optronic Laboratories, Orlando FL, USA).

UV intensities are reported as W/m^2, and total applied energy as kJ/m^2, unweighted by any action spectrum. Some previous investigators (Hakkinen *et al.* 2004; Vehniainen *et al.* 2003) have used CIE weighting for human erythema [originally published by (McKinlay and Diffey 1987)]. Applying this weighting factor to our data produces an approximately 4.7-fold decrease in the reported total irradiation; thus, for our initial study using both UVB and UVA bulbs, the reported CIE-weighted dose would be 2.5, 4.9, and 7.3 kJ/m^2 for 4, 8, and 12 hours of total irradiation respectively, as compared to 2.8 and 5.4 kJ/m^2 in (Vehniainen *et al.* 2003). Vehniainen et al also observed a UV-stimulated induction of CYP1A (see Discussion). To facilitate comparisons to other studies we have not used this action spectrum to convert our irradiance data.

References

Hakkinen, J., Vehniainen, E., and Oikari, A. (2004). High sensitivity of northern pike larvae to UV-B but no UV-photoinduced toxicity of retene. *Aquatic Toxicology* **66**, 393-404.

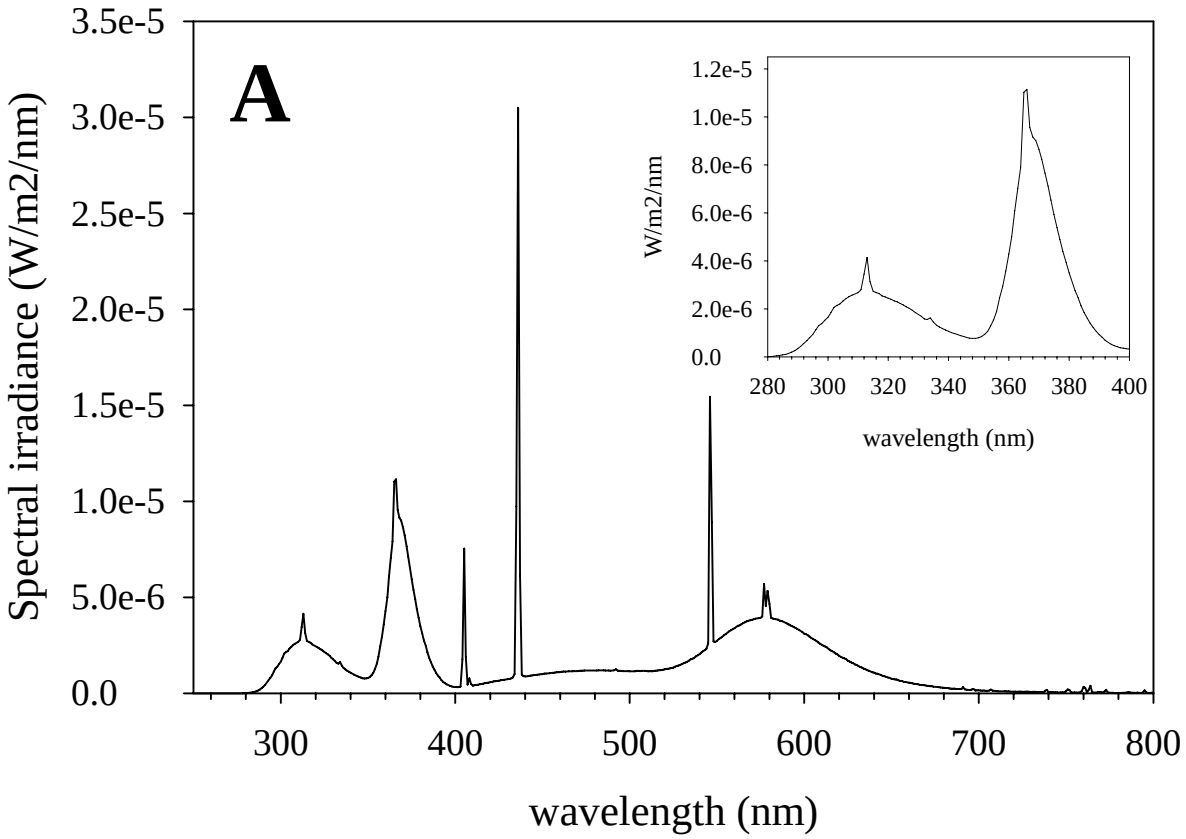
McKinlay, A. F., and Diffey, B. L. (1987). A reference action spectra for ultraviolet induced erythema in human skin. In Human exposure to ultraviolet radiation: risks and regulations (W. R. Passchier and B. M. F. Bosnajakovich, eds.), pp. 83–87. Elsevier, Amsterdam.

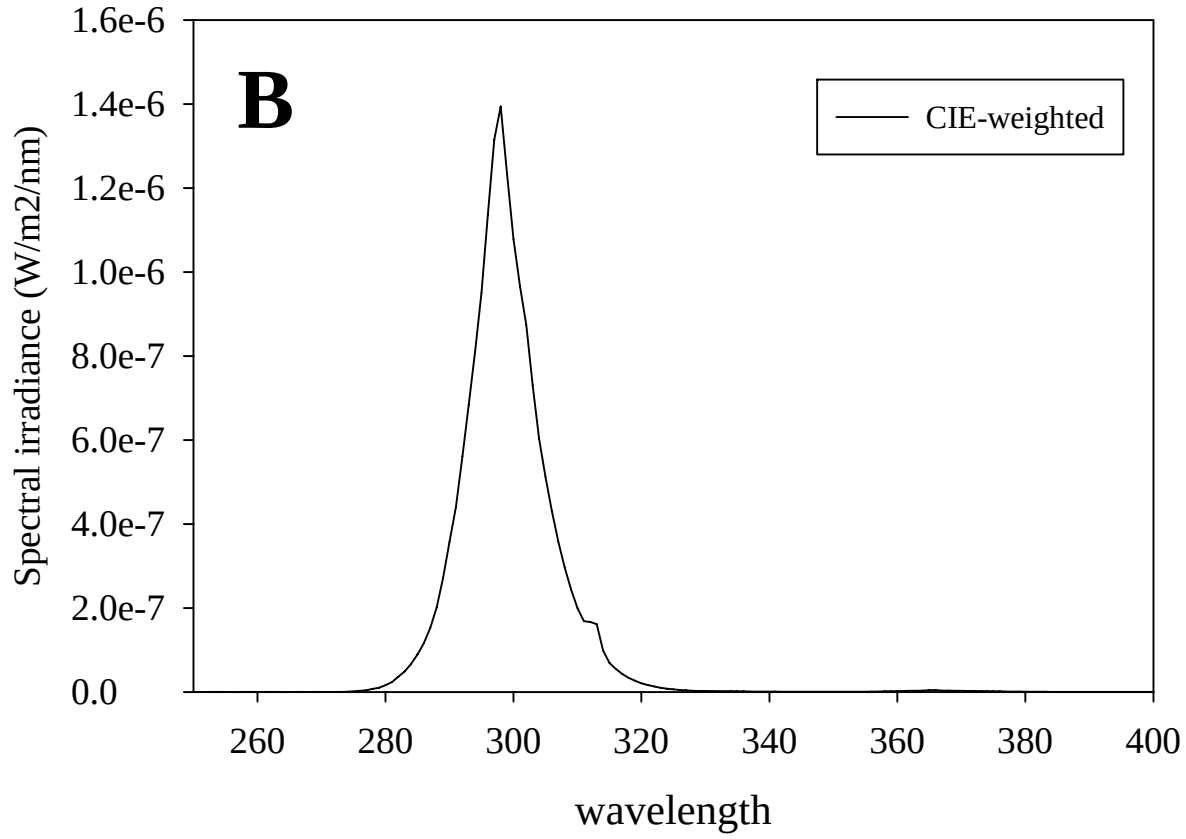
Vehniainen, E. R., Hakkinen, J., and Oikari, A. (2003). Photoinduced lethal and sublethal toxicity of retene, a polycyclic aromatic hydrocarbon derived from resin acid, to coregonid larvae. *Environ Toxicol Chem* **22**, 2995-3000.

Supplemental Figure 1. Spectral irradiance (W/m2/nm) for the UVB+UVA irradiation experiment, with one UVA bulb, one UVB bulb, and 4 white bulbs. (A) Spectral irradiance, inset is the region from 280-400 nm. (B) Spectral irradiance weighted by the CIE human erythemal action spectrum. Note scale change.

Supplemental Figure 2. Spectral irradiance for the enhanced UVB experiments (two UVB bulbs). (A) Spectral irradiance 250-400 nm. (B) Spectral irradiance weighted by the CIE human erythemal action spectrum.

Supplemental Figure 1





Supplemental Figure 2