Supplemental Material

Table S1. Primers used for conventional PCR and qRT-PCR (Arias et al., 2020)

Primer Name	Sequence (5' → 3')	Use
Actina4.F	CAC ACT TTC TAC AAT GAG CT	To determine the integrity of synthesized cDNA.
Actina4.R	GCA GTG ATC TCT TTG CTC AT	
DcqUbi.F	GCT CGA GGA CGG CAG AAC	As a normalization gene in RT-qPCR assays.
DcqUbi.R	CTT GGG CTT GGT GTA GGT CTT C	
DcqPsy1.F	ATC GGT GTG GCG AAG TTT GT	For measuring the expression levels of the DcPSY1 gene.
DcqPsy1.R	CAA GAG CCT TGG GCG TGA TA	
DcqPsy2.F	TGG CTC AAG CAG GGC TTT CT	For measuring the expression levels of the DcPSY2 gene.
DcqPsy2.R	ATG CCC ATA CCG GCC ATC TA	
DcqArf6.F	TCA TGA GCT GCG TAG TGAACTTGC	For measuring the expression levels of the DcARF6 gene.
DcqArf6.R	AGC TGC CAG CCT GAT CTT AAA GGA	
DcqArc6.F	CCG AGG TGT TAG ATG GCC AGATG	For measuring the expression levels of the DcARC6 gene.
DcqArc6.R	TAA GTG AGT AGT CCC AGG ACC AAC C	

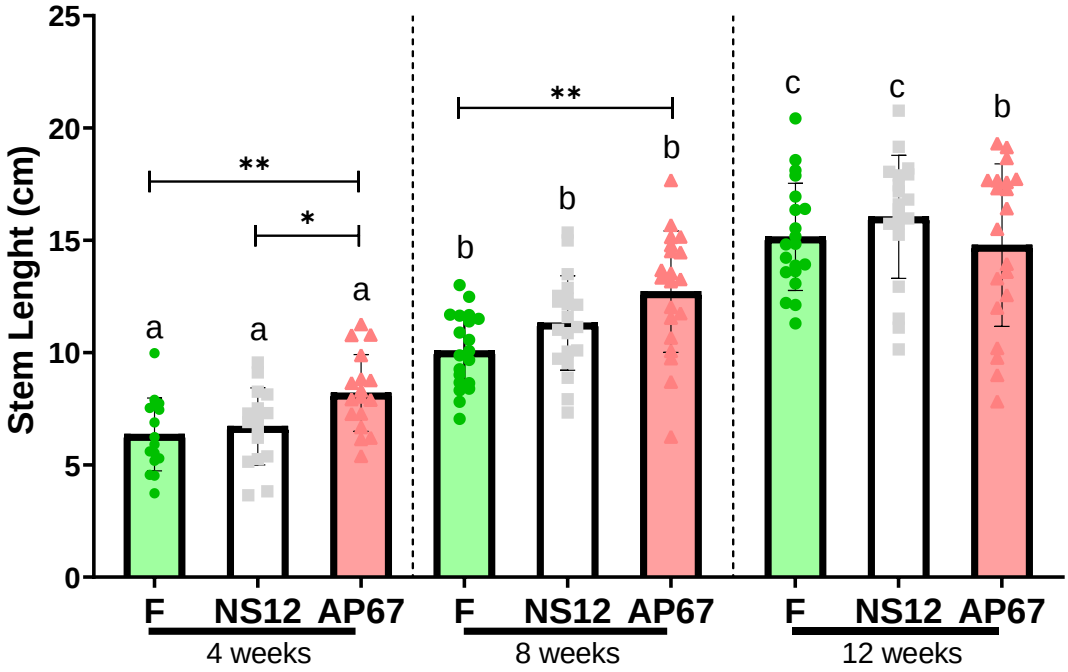

Figure S1: Stem length of carrot plants cultivated under different light conditions. Letters denote significant differences of the same light treatment over time and asterisks denote significant differences between different light treatments at a given development time. Differences were calculated using one-way ANOVA with Brown-Forsythe and Welch correction for multiple comparisons. **** $p < 0.0001$, *** $p < 0.001$, **$p < 0.01$, * $p < 0.1$.

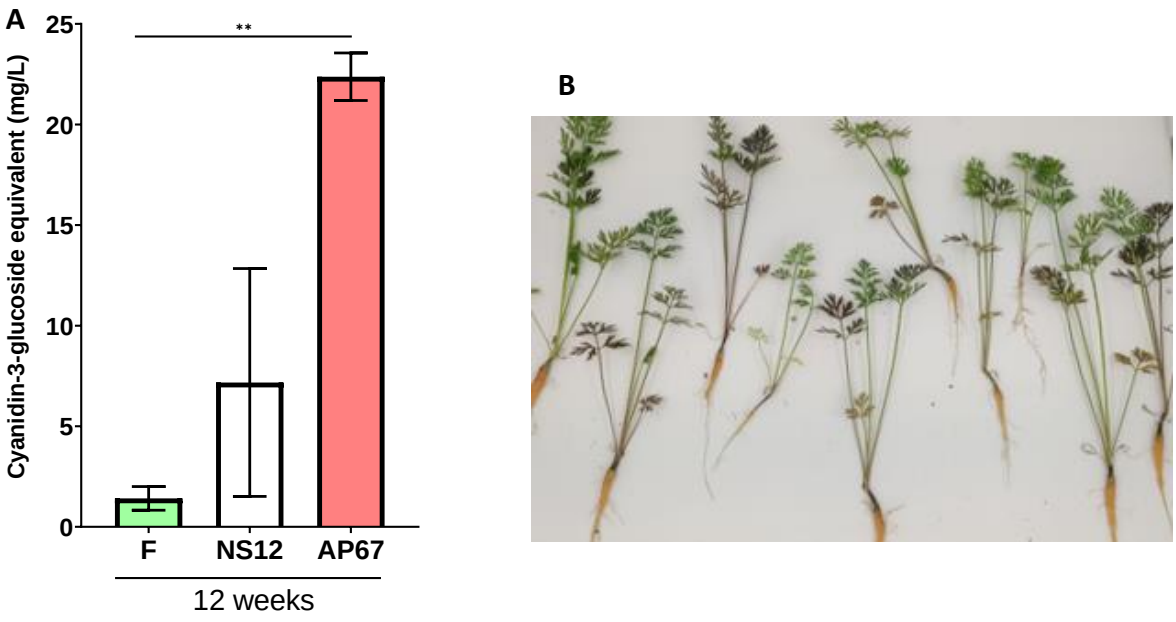

Figure S2. Accumulation of anthocyanins in leaves of carrot plants cultivated under different lights A) Total monomeric anthocyanin content expressed in cyanin-3-glucose equivalent units (mg/mL) in 12-week-old carrot leaves. Quantification was carried out by spectrophotometry using the differential pH method described by Lee et al., (2005) (2 biological replicates) B) Photographic record of 8-week carrots in AP67 condition. The purple colour corresponding to the accumulation of anthocyanins is observed in the leaves.

The asterisks denote the significant differences calculated using the Student t test ($p < 0.05$) with Welch correction (n=2) **** $p<0.0001$, *** $p<0.001$, **$p<0.01$, * $p<0.1$.

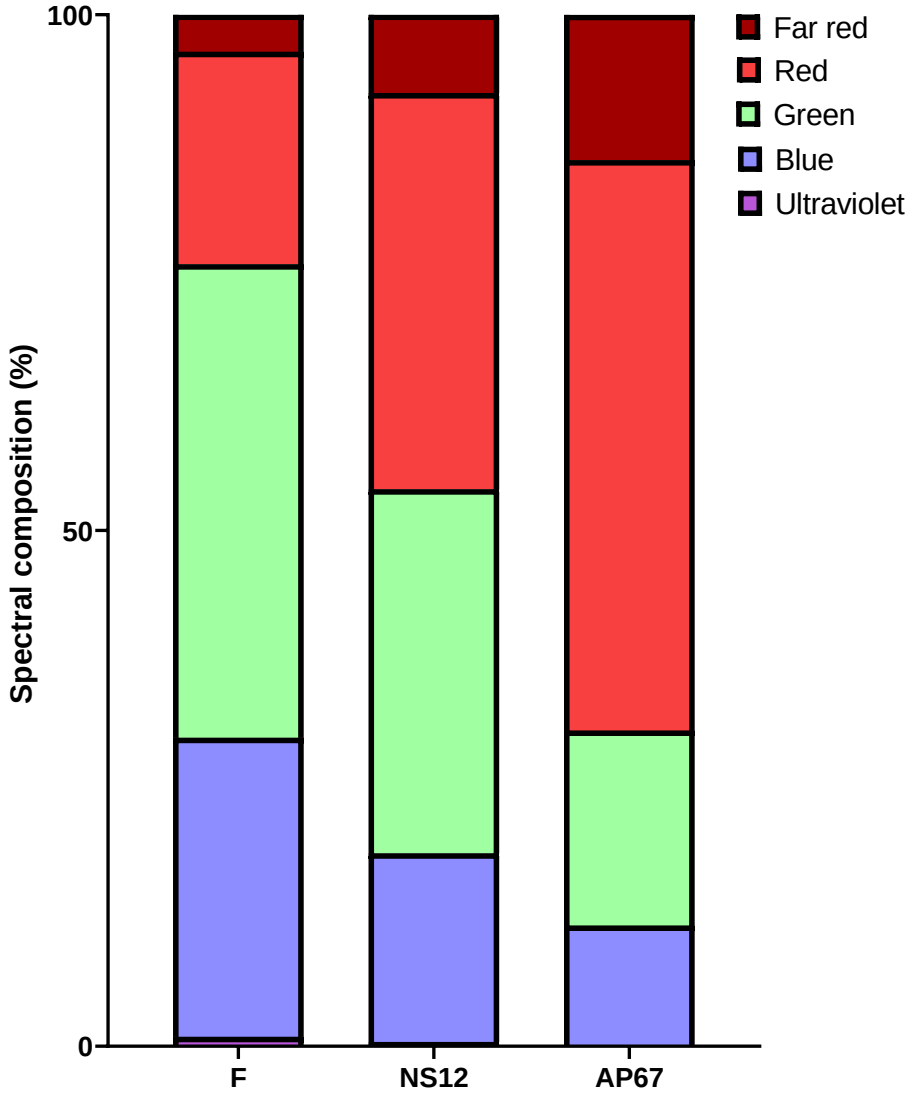

Figure S3. Spectral composition (in percentages) of the used LED lights in this work. A visual representation of the percentages of Table I.

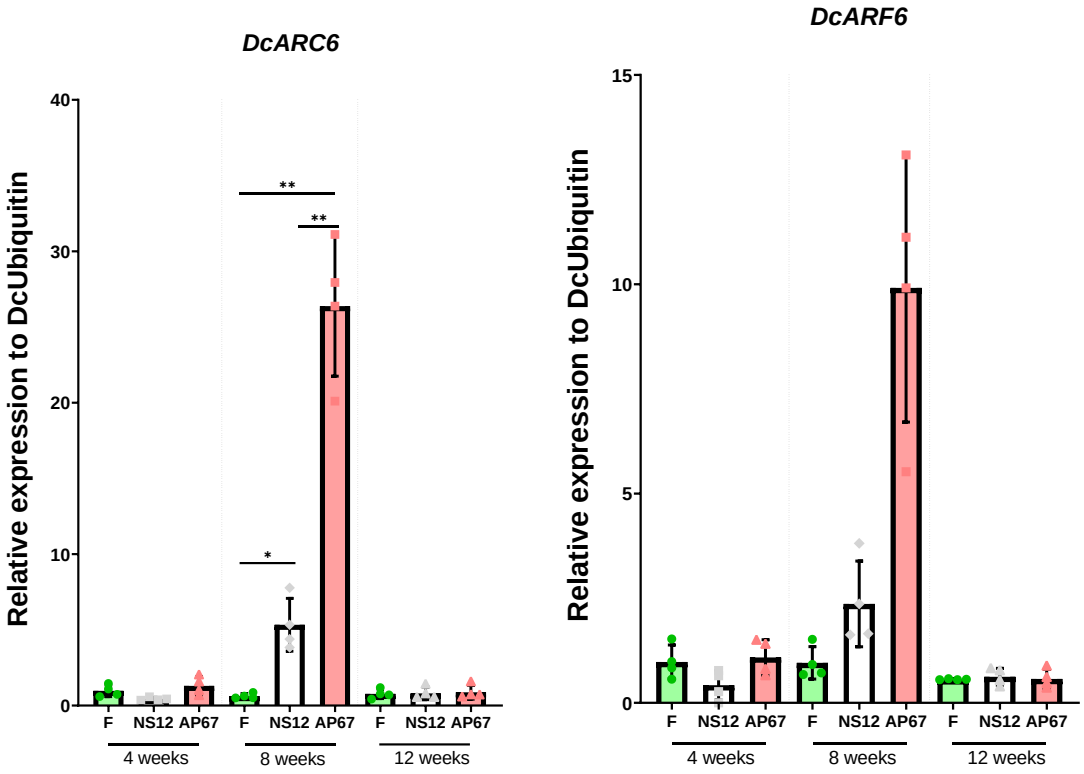

Figure S4. Relative expression of genes related to chloroplast development (DcARC6) and secondary root development (DcARF6). Asterisks denote significant differences between different light treatments at a given development time. Differences were calculated using one-way ANOVA with Brown-Forsythe and Welch correction for multiple comparisons. **** $p < 0.0001$, *** $p < 0.001$, **$p < 0.01$, * $p < 0.1$.