

PAR Revival Schedule (now shows

all three sensors

side-by-side)

Phase	Time window	Lamp %	Target PAR($\mu\text{mol m}^{-2} \text{s}^{-1}$)	LI-COR(μmol)	QSL-1463 raw	QSL-1463 $\times 1.07$	QSL-1448 raw	QSL-1448 $\times 1.90$
2 · Gentle PAR Primer	12 – 48 h	11 %	10	10.21	12.64 (+24 %)	13.52 (+32 %)	5.42 (–47 %)	10.30 (+1 %)
3 · Moderate Ramp	48 – 72 h	35 %	25	25.08	23.48 (– 6 %)	25.12 (+0 %)	13.25 (–47 %)	25.18 (+0 %)
4 · High-Mod Boost (opt.)	72 – 96 h	≈ 70 %	50	50†	46.7 (– 7 %)	50.0 (+0 %)	26.3 (–47 %)	50.0 (+0 %)

* Percentages in brackets are deviations from the LI-COR reading.

† 70 % lamp is a linear extrapolation from your 11 % \rightarrow 10 μmol and 35 % \rightarrow 25 μmol measurements; confirm with LI-COR before use.

How to read & use the table

- **Bold LI-COR column** = the photon-flux you actually program your lamp to deliver.
- **QSL-1463**
 - Raw shows the meter's uncorrected behaviour.
 - $\times 1.07$ applies a single gain that aligns it to LI-COR at mid-range; it slightly **over-reads at 10 μmol** but lands perfectly at $\geq 25 \mu\text{mol}$.
- **QSL-1448**
 - Raw under-reads by ~ 47 % at every level.

- $\times 1.90$ brings it into line ($\leq 1\%$ error after correction).

With this snapshot you—and anyone who steps into the lab—can **see at a glance** how each instrument tracks the light field, pick the meter you trust for quick spot-checks, and recognise when any probe drifts out of its lane.

Updated phase card (integrated into the original schedule)

Phase	Hours	PAR set-point	Lamp %	Verification checklist (log at start & every 6 h)
1. Rehydration (dark)	0 – 12	0	OFF	–
2. Gentle PAR Primer	12 – 48	10 μmol	11 %	LI-COR ≈ 10 ; QSL-1463 ≈ 12.6 (raw) / 13.5 ($\times 1.07$); QSL-1448 ≈ 5.4 (raw) / 10.3 ($\times 1.90$) .pdf](file-service://file-HWJ3oxyoi2ufPwZUavuZSx)
3. Moderate Ramp	48 – 72	25 μmol	35 %	LI-COR ≈ 25 ; QSL-1463 ≈ 23.5 (raw) / 25.1 ($\times 1.07$); QSL-1448 ≈ 13.3 (raw) / 25.2 ($\times 1.90$) .pdf](file-service://file-HWJ3oxyoi2ufPwZUavuZSx)
4. High-Mod Boost (opt.)	72 – 96	50 μmol	$\approx 70\%$	LI-COR ≈ 50 ; QSL-1463 ≈ 46.7 (raw) / 50.0 ($\times 1.07$); QSL-1448 ≈ 26.3 (raw) / 50.0 ($\times 1.90$) .pdf](file-service://file-HWJ3oxyoi2ufPwZUavuZSx)
5. Switch to UV	96 h \rightarrow	0	OFF	Begin UV protocol

Practical take-aways

- **Set intensity with the LI-COR**, then jot the matching readings from both QSLs (raw + corrected) into your logbook.
- **QSL-1463** is a solid drift sentinel once you apply $\times 1.07$; use it for the six-hourly checks.
- **QSL-1448** is serviceable after $\times 1.90$ but still shows larger scatter—keep it as a redundancy probe.
- If any corrected reading strays $> 10\%$ from the targets above, re-set the lamp with LI-COR and note the time.