

## 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( $\mu\text{mol}$ )	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	<b>10.21</b>	12.64 (+24 %)	13.52 (+32 %)	5.42 (-47 %)	10.30 (+1 %)
3 · Moderate Ramp	48 – 72 h	35 %	25	<b>25.08</b>	23.48 (-6 %)	25.12 (+0 %)	13.25 (-47 %)	25.18 (+0 %)
4 · High-Mod Boost (opt.)	72 – 96 h	$\approx 70$ %	50	<b>50†</b>	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 % → 10  $\mu\text{mol}$  and 35 % → 25  $\mu\text{mol}$  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  $\mu\text{mol}$**  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.

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### **Updated phase card (integrated into the original schedule)**

<b>Phase</b>	<b>Hour s</b>	<b>PAR set-p oint</b>	<b>Lamp %</b>	<b>Verification checklist (log at start &amp; every 6 h)</b>
<b>1. Rehydration (dark)</b>	0 – 12	0	OFF	–
<b>2. Gentle PAR Primer</b>	12 – 48	10 $\mu\text{mol}$	<b>11 %</b>	<b>LI-COR <math>\approx 10</math></b> ; QSL-1463 $\approx 12.6$ (raw) / 13.5 ( $\times 1.07$ ); QSL-1448 $\approx 5.4$ (raw) / 10.3 ( $\times 1.90$ ) .pdf]([file-service://file-HWJ3oxyoi2ufPwZUavuZSx)
<b>3. Moderate Ramp</b>	48 – 72	25 $\mu\text{mol}$	<b>35 %</b>	<b>LI-COR <math>\approx 25</math></b> ; QSL-1463 $\approx 23.5$ (raw) / 25.1 ( $\times 1.07$ ); QSL-1448 $\approx 13.3$ (raw) / 25.2 ( $\times 1.90$ ) .pdf]([file-service://file-HWJ3oxyoi2ufPwZUavuZSx)
<b>4. High-Mod Boost (opt.)</b>	72 – 96	50 $\mu\text{mol}$	<b><math>\approx 70</math> %</b>	<b>LI-COR <math>\approx 50</math></b> ; QSL-1463 $\approx 46.7$ (raw) / 50.0 ( $\times 1.07$ ); QSL-1448 $\approx 26.3$ (raw) / 50.0 ( $\times 1.90$ ) .pdf]([file-service://file-HWJ3oxyoi2ufPwZUavuZSx)
<b>5. Switch to UV</b>	96 h →	0	OFF	Begin UV protocol

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### **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.