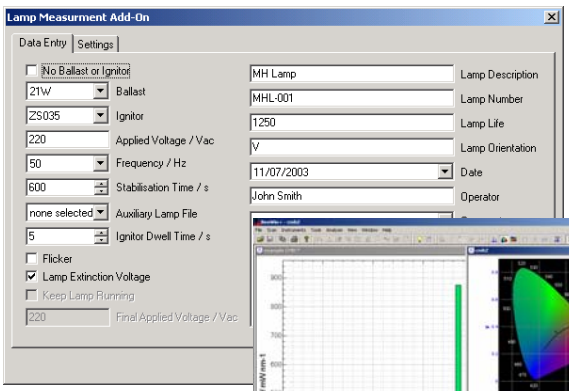
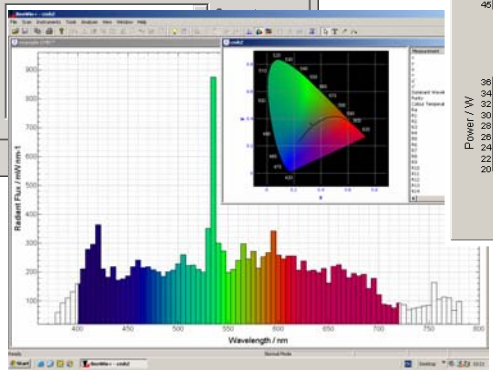
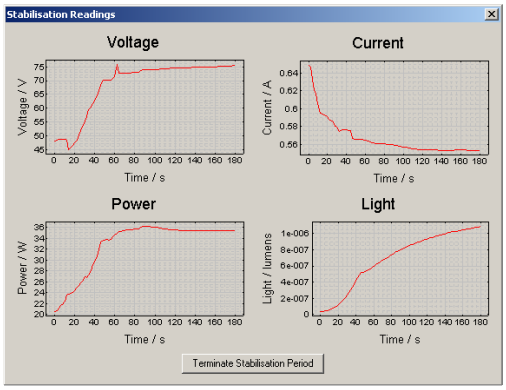
Fully Automated Spectroradiometer (Ceramic Metal Halide 15W-1kW)

The picture illustrates a fully integrated and automated lamp measurement facility for testing and characterising ceramic metal halide lamps ranging in power from 15W to 1kW. An integrating sphere based spectroradiometer is combined with software selected control gear (power supply, ballasts and ignitors) and electrical measurement instrumentation to allow complete lamp characterisation. The lamps are mounted on a turntable allowing lamp orientation to be rotated in 5 degree intervals, 0-360 degrees A simple Windows form instigates a full measurement procedure under complete software control including:

- Reference ballast selection (15W to 1000W)
- Ignitor selection (or electronic)
- Applied voltage and frequency selection
- Lamp stabilisation time and monitoring
- Spectral power distribution (spectral flux, 250-1700nm)
- Colour temperature
- Colour rendering indices
- Chromaticity co-ordinates
- Emission peak wavelengths
- Total lumens
- Lamp flicker (%)
- Lamp extinction voltage
- Sphere/ambient temperature
- Electrical parameters:
  V_{min}, V_{pk}, V_{rms}, A, W and PF etc







BENTHAM