Temporary lighting risk review

Prepared by Jimmy Goode, production lead, for coordination with the festival directors, production team and electrical lead. This review covers the proposed temporary supply to exit signs and exhibition spotlights, with actions to resolve before the installation is accepted for event use.

Installation planning · Electrical coordination

Planning basis

The proposed arrangement comprises 45 self-contained exit signs and 35 PAR 16 LED spotlights across four circuits, with estimated routes of 150–220 m. Extension leads and power boards carry the supply between lighting positions. Confirm fixture models, input ratings, cable specifications and actual routes before finalising the design.

Proposed circuit	Units	Input per unit	Load estimate
Exit circuit 1	23	3 W assumed	69 W
Exit circuit 2	22	3 W assumed	66 W
Spotlight circuit 3	18	8 W stated	144 W
Spotlight circuit 4	17	8 W stated	136 W

Preliminary load and voltage-drop review

Preliminary examples at 220 m give approximately 0.43–1.46% steady-state voltage drop, assuming unity power factor, all load at the far end, and conductor resistance of 0.0121 or 0.00741 ohm/m. Confirm actual input current, cable construction and temperature, load positions, connections and upstream losses. Assess startup and fault protection separately; these estimates alone do not establish installation suitability.

Distribution options

Assess local distribution points and shorter final runs. Compare independently supplied lighting groups with the proposed chain of power boards, including the number of lights lost at each possible disconnection. The electrical lead is to select the arrangement and specify cables, connections and protection after reviewing the site and equipment.

Risks and required actions

Required checks before installation acceptance.

Review area	Risk / planning issue	Proposed control and responsible role
Supply and cable routes	The design depends on estimated routes and unconfirmed equipment ratings.	Electrical lead: confirm input data, supply conditions, routes and load distribution; specify cables and protection. Production: provide the equipment and route schedule.
Loss of downstream lighting	An upstream lead or power-board disconnection could remove mains power from many downstream lights, darkening an exhibition area.	Production and electrical lead: map downstream dependencies; assess independently supplied groups and suitable protection against accidental disconnection.
Fault protection	Long cable runs may limit fault current and delay protective-device operation. Low running current does not establish adequate protection.	Electrical lead: assess earthing, fault current, disconnection times and RCD coordination. Reassess protection before any breaker change.
Emergency lighting	On mains loss, functioning self-contained exit lights should transfer to battery. Charge, available duration and coverage remain to be confirmed.	Electrical lead: confirm models, charging requirements, emergency coverage and changeover/duration verification. Production: coordinate access and record outstanding issues.
LED startup	Simultaneous startup may interrupt lighting if driver inrush is incompatible with the selected protection.	Electrical lead: review driver data and circuit loading. Assess switching groups or sequencing where needed; confirm compatibility before accepting the arrangement.
Connections and routing	Exposed leads and power boards may be disturbed or damaged during installation and public use.	Production and electrical lead: inspect routes and connections; agree suitable mechanical protection and access. Record and resolve defects before event use.
Installation work	Access, drilling, fixings and work in dim areas require an agreed method and suitable equipment.	Production: agree the work method, access equipment and fixing approach with the venue and relevant leads. Confirm crew responsibilities and the required tools.

Responsibility and close-out

Production coordinates the required actions and records each owner, decision and completion date. The electrical lead approves the circuit arrangement and records installation and emergency-lighting checks before event use. Production refers outstanding issues to the festival directors and electrical lead.

Electrical responsibility and equipment inspection: DGUV Information 215-310, section 3.2.4 (May 2025). The electrical lead is to confirm the standards and site requirements applicable to this installation.

DGUV Information 215-310 — official publication