

Services : Lighting Specification, Lighting Specification

General:

Lighting Specification

1.1 Design Parameters:

The lighting within Sainsbury's store shall be designed by the Electrical Designer as a minimum to meet the following:

1. CIBSE Code for Lighting 2004
2. BS 5266-1:2005 Emergency Lighting and CIBSE Emergency Lighting Design Guide
3. European Standards BS EN 50172 and BS EN 1838
4. Building Regulations Requirements - in Particular Part L
5. BS7671:2001

1.2 Emergency Lighting:

The Electrical Designer must design a 3 hour duration maintained emergency lighting system to meet the requirements of BS5266 and the latest European standards - BS EN 50172 and BS EN 1838. The emergency luminaire where possible shall contain integral battery packs c/w remote led's to detail mains healthy and charging.

The Electrical Designer should also ensure that all internal fire exit signs (non internally illuminated) are illuminated by maintained emergency luminaire sited over, and that all external fire exits have a 3 hour duration sustained/maintained emergency bulkhead compact fluorescent luminaire installed externally over each doorway controlled OFF during daylight via BMS.

1.3 Acquisition stores

On first night of occupation a full emergency lighting test must be carried out in all areas by the electrical contractor, the results of which must be reported to the electrical designer and main contractor – the designer must then produce a BS5266 compliant scheme for installation by the electrical contractor prior to the store opening – the discharge test should be carried out for 1 hour. Systems either new or existing retained to be fully commissioned and re-certified on completion. See 'Refurbishment, Extension & Acquisition Specification'.

1.4. Control Requirements:

Sales Area

The Electrical Designer shall design all new lighting systems as follows:

- All new lighting schemes shall be fully dimmable and shall be controlled by a Clipsal lighting control system
- The sales floor shall be controlled a single zone, unless otherwise agreed with CoE
- The main ambient lighting level shall be designed to 1000 lux and shall be dimmed to the equivalent of 900 lux for trading light levels
- The stocking light levels shall be dimmed to the equivalent of 25% of the normal trading light levels
- All of the sales floor lighting system shall be fed from the essential services panel with the dimming control system inhibiting the sales floor lighting to 25% output of the equivalent trading light level, under emergency generator conditions
- a 45 min momentary override facility shall be provided, via the control system, typically located in the bulkstore
- 15 min prior to the store opening the entire sales area ambient lighting shall be switched 'On'.
- The Manager's Route key-switch shall be located at the Managers Final exit route door, this shall be hard wired to the lighting control system.
- The sales area emergency luminaire shall be controlled via normally closed contactors c/w key test switch typically located in the bulkstock area.

Customer Toilets

The Electrical Designer shall design the customer toilet circuitry as follows:

- The complete customer toilet area shall be controlled via the manager's final exit control switch to ensure that the lighting is switched off when the store is closed.
- The toilet lobby lighting shall remain unswitched for trading / stocking hours
- The individual toilet areas shall be controlled via PIR sensors with only the emergency light fittings remaining unswitched to provide minimum circulation light levels.

Customer Entrance Lobby

The Electrical Designer shall design the Customer Entrance Lobby circuitry as follows:

- The complete lobby area shall be controlled via the manager's final exit control switch to ensure that the lighting is switched off when the store is closed.

- The lobby lighting shall be switched off for stocking hours via the lighting control system.

Security Customer Holding Room

Luminaire contained within this area should be vandal resistant and switched manually from outside the room.

Staff Areas

The Electrical Designer shall design the staff area lighting so that each individual room is controlled via a PIR movement sensor to ensure that the lighting is switched off when the room is not occupied. Emergency lighting shall be tested via a central emergency test key switch. Staff Toilet and locker facilities shall be controlled by PIR movement sensors with variable time delay initially set to 10 minutes. The emergency light fittings within the toilets shall be left unswitched to provide minimum circulation light levels.

Where disabled person's lighting is provided (e.g. within the toilet areas) this shall be independently controlled via a ceiling-mounted pull switch, or wall switch mounted at 1000mm AFFL.

Bulkstock / Unloading Bay

The general bulkstore lighting system shall be designed as follows:

- The complete system shall be controlled via the manager's final exit control switch to ensure that the lighting is switched off when the store is closed.
- The main manager's route lighting shall remain unswitched for trading and stocking hours.
- All areas adjacent to the manager's route shall be controlled via PIR movement sensors. This includes cages, cold stores, GOL areas and loading areas. Please refer current model design drawings for details.
- Emergency luminaire within this area shall be tested via centrally wall mounted key switches.

Food Prep Areas (Meat/Fish/Deli/Hot Food/Bakery etc)

The Electrical Designer shall design lighting within each of the food preparation areas so that each individual prep room is controlled via its own local light switch and the maintained emergency luminaire within the room are tested via a key switch. All lighting to prep areas shall have all glass lamps provided with heat shrink safety sleeving to prevent glass escaping in the event of breakage.

Emergency luminaire within this area shall be tested via a wall mounted key switches.

Coldstores

Lighting for each coldstore shall be controlled via PIR movement sensors with only the emergency light fittings remaining unswitched to provide minimum circulation light levels.

The luminaire shall be vapour sealed and suitable for the operating temperature of the coldstore, the fixing of luminaire and all electrical equipment shall be suitable for the environment i.e. nylon bolts, low temperature flexible conduit etc.

The luminaire should be positioned end on to the blower units to minimise lumen depreciation from the forced cold air.

Any penetrations through the coldstore fabric formed by the electrical installation shall be vapour sealed by the Electrical Contractor.

Emergency luminaire within the coldstore shall be tested via centrally wall mounted key switches.

Surface Car Parks

SSL surface car parks shall be controlled via BMS Time and Light Level Sensor. All lighting is to be Light Level Sensor controlled "On" within a BMS time window at sunset, i.e. 150 lux ambient. At 20 minutes after store closing time 60% General lighting shall be controlled "Off". The remainder 40% "Security" shall remain "On" until sun-rise. Lamps on a common column/ mast may be distributed across both control strategies on a 60/40% split.

The design must incorporate lighting provision to facilitate safe access to staff parking areas dusk till dawn.

Belisha Beacons are required at all pedestrian crossings and shall where possible be fed from the 40% security circuits subject to any local planning conditions or residents nuisance requirements.

Underground/Covered/Multi-storey Car Parks

All General and Security lighting within underground car parking shall be arranged to be "On" for all store trading times. At 20 minutes after store closing time 60% General lighting shall be controlled "Off". The remainder 40% "Security" shall remain "On". The upper open deck lighting shall be controlled as for surface car parks. The enhanced entrance/exit area lighting should be controlled "On" during daylight and trading times. The lighting level should be reduced after sunset (150 lux) to the normal car park ambient level in accordance with BS5489. For underground car parks which are locked at end of trading the general lighting shall be controlled "Off", but security lighting "On" for any pedestrian routes used after trading hours. Manual switching is required to plant room and cupboard areas. Operational aspects of joint car parks may need agreement with the Local Authority.

The design must incorporate lighting provision to facilitate safe access to staff parking at all times.

Emergency lighting shall be provided in accordance with BS5489 and BS5266.

Illuminated Signs

Illuminated signs must be only illuminated during trading hours and switch 'ON' at 8000 lux
External signage under canopy's overhangs etc. 'ON' at 15000 lux

Neon signs must have local isolation in accordance with BS7671 and additionally clearly labelled isolators adjacent the distribution board / control centre that supplies them – typically shopfront switchroom.

Where neon signs have been removed and replaced with low voltage LED signs the Electrical Contractor must also decommission and remove the fireman's isolation switch.

1.5. Preferred Suppliers:

Suppliers vary from time to time with procurement policy carried out by Sainsbury's, The Electrical Designer must check latest preferred suppliers with Specs & Standards and Group Procurement;

- iGuzzini
- Zumtobel
- Riegens
- Fagerhult
- Crompton
- Holophane
- Urbis
- Abacus

All luminaire shall be fitted with HF electronic control gear Osram, Philips, Tridonic – or other approved supplier.
Discharge lamps shall have timed igniters.

All lamps throughout the store shall be Osram, Philips, GE or other approved supplier.

Luminaire to show an appropriate CE mark and be compliant with BSEN 60598.

All louvres / reflectors to be fitted with used lamp wattage stickers.

Identity

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