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Our reference: DIM-21-R019

Issue date: 18 January 2021

The self-contained emergency luminaire supplied by you was tested in our laboratory on 25 September 2020 and the results were presented as follows.

Description of luminaire:	"DIMON" self-contained emergency light fitting, using LED lamp
Complete set model:	LAHAN-6W; LAHAN-7W; LAHAN-8W; LAHAN-9W; LAHAN-10W; LAHAN-11W; LAHAN-12W; LAHAN-13W; LAHAN-14W; LAHAN-15W; LAHAN-16W; LAHAN-17W; LAHAN-18W; LAHAN-19W; LAHAN-20W; LAHAN-21W; LAHAN-22W; LAHAN-23W; LAHAN-24W; LAHAN-25W; LAHAN-26W; LAHAN-27W; LAHAN-28W; LAHAN-29W; LAHAN-30W; LAHAN-31W; LAHAN-32W; LAHAN-33W; LAHAN-34W; LAHAN-35W; LAHAN-36W; LAHAN-37W; LAHAN-38W; LAHAN-39W; LAHAN-40W; LAHAN-41W; LAHAN-42W; LAHAN-43W; LAHAN-44W; LAHAN-45W
Suitable converter model:	NANO-K-11-3
Input:	AC 220V +/-10% 50Hz
Battery:	Sealed Ni-Cd / Ni-MH rechargeable battery pack (12V 4.0Ah)
Full charge period / Duration:	12 hours / 3 hours
Lamp type:	Up to 45W LED lamp
Test button and charging LED:	Incorporated
Low voltage cut off:	Incorporated
Power cables:	The power cable connecting the power kit to the lamp is in a corrugated flexible metal conduit.
Case:	The case is made of Aluminum Alloy and polycarbonate housing and diffuser

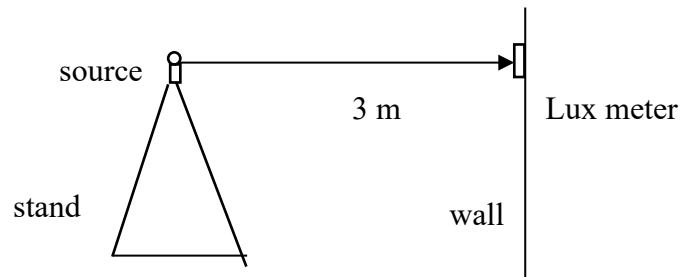
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Test procedures;

1. After 12 hours of charging at 220V 50 Hz AC supply, the emergency luminaire has attained 100% of its rated battery capacity.
2. The luminaire is positioned on a stand at 3 meters from a wall as shown below (not to scale);



3. The room light is switched off. The normal supply is terminated by pulling the plug and the emergency light is automatically turned on.
4. The illuminance at a point on the wall which lies on the central axis of the emergency luminaire is measured at 5 s, 1 min, 30 min and then at 30 min intervals after the emergency light is turned on. The maximum duration of emergency light is noted.

The results are as follows;

1. The emergency luminaire produced more than 90% of the stipulated illumination level within 5 seconds.
2. The total discharge time is over 240 minutes at which the batteries were disconnected by the incorporated low voltage cut out device.
3. The emergency luminaire passed the resistance to flame and ignition as stipulated in BSEN 60598-2-22:2014 and the external parts passed the 850°C glow wire test detailed in IEC60695-2-10:2013.



Summary of compliance with PPA/104(A)(4th Revision)

Item	Test Requirement of PPA/104(A) (4 th Revision)	Result-Remark	Verdict
B.3	Emergency lighting luminaires shall comply with the non-flammability (resistance to flame and ignition) provisions specified in BS EN 60598-2-22:2014 and external parts shall also be subjected to the 850°C glowing/hot wire test; any burning parts should self-extinguish within 30 seconds.		pass
B.4	All power cables extended outside the enclosure of a self-contained emergency lighting luminaire, other than the wiring connecting the luminaire to normal supply, shall conform to BS EN 60702-1:2002+A1:2015, BS EN 60702-2:2002+A1:2015 and BS 6207-3:2001 as appropriate or to BS 6387:2013 Cat. CWZ or other international standards acceptable to the Director of Fire Services.		pass
B.5	An automatic trickle charger with a 220-volt input and suitable output and fitted with pilot lights or other indicating device shall be provided for the batteries. The charger shall be capable of re-charging the battery to 100% of the rated capacity in not more than 12 hours.		pass
B.6	The self-contained luminaires emergency lighting systems shall be capable of maintaining the stipulated lighting levels for a period of not less than one hour (rated duration).		pass
B.7	Upon failure of the main lighting system or in the event of power failure, the emergency lighting shall automatically light up to at least 90% of the stipulated illumination level within 5 seconds.		pass
B.8	Each unit shall be provided with a properly labeled 'TEST' switch and charge monitor light. A low voltage cut out shall also be provided to disconnect the batteries when fully discharged.		pass

Our measurement complied with relevant sections of BS 5266-1:2016. The test results complied with relevant parts of BS EN1838:2013 and relevant parts of BS EN 60598-2-22:2014 and Regulation PPA / 104 (A) (4th Revision) of Fire Services Department specifications.



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