

Failure of Philips Luma 3 luminaire upper canopies

Incident Description

During high winds on Sunday 21st February 2016, the upper canopy of a Philips Luma 3 lighting luminaire mounted on a 15m high column broke free from its lower frame housing, landing in a live lane of the M1 Motorway carriageway.

The canopy and gear tray were then recovered by the Police under a rolling road block. BMJV and the NE RCC are not aware of any traffic incident as a result of debris in the live lanes.

Further investigation identified that a second canopy unit had broken free at an unknown time prior to Wednesday 10th February, when the light was reported as out. In this instance the upper canopy landed behind the permanent vehicle restraint system (VRS) in the verge.

The upper canopies are made from die-cast aluminium and both units show possible material failure in the same three locations (as shown in photo 1) as well as impact damage.

Inspection to assess the integrity of all remaining Philips Luma 3 luminaires identified a further four units with hinge pins missing, although no material failures were identified. These units have been taken down as a precaution.

A representative from the manufacturer (Philips) attended site on Wednesday 24th February to review the two damaged units (photo 1) and the four units found without hinge pins. These four units have been taken away by Philips for further inspection and testing.

As an additional temporary measure, heavy duty plastic zip ties have been fitted to all remaining units, to prevent upper canopies working free from the lower frame.



Photo 1: Underside of canopies marked in red to highlight possible material failure



Figure 1: Extract from Philips Luma catalogue showing canopy in open position

BMJV Actions:

- Full survey of all Philips Luma 3 luminaires installed on the M1 J39-42 project
- Removal of further units where hinge pins were not present
- Installation of two heavy duty cable ties on all remaining units to further secure canopy to lower frame
- Philips have taken the four units without hinge pins away for further testing to review cause failure

Further Information

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