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**TEST REPORT ON**

LED based aviation obstruction  
light

Date

12/11/2007

Test Report No.

07031894/1.04/226

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1. Evaluated for and their reference(s)

Insta Power Limited,  
S-19, Panchsheel Park  
New Delhi-110017

Reff. No. Nil, Dated 22/03/2007

2 Description & identification  
Of item under evaluation

(A) SUPPLIER'S

LED based medium intensity aviation obstruction light

(B) NPL

4202/OPT/2007

3 (a) Number of items received

One

(b) Number of items evaluated

One

4 Nature of evaluation

Evaluated for effective intensity for night operation

5 Environmental conditions

Ambient temperature  $(25 \pm 2)^{\circ}C$

Relative humidity  $(50 \pm 15) \%$

6 Standards used and  
Associated uncertainty

Calibrated photo head for flashing light.  
Expanded uncertainty in illuminance is  $\pm 1.5\%$  at  $k=2$ .

7 Trace ability of standards used

Standards used are traceable to national standards

8 Methodology of evaluation

The effective  $I_e$  is calculated from integrating the instantaneous luminous intensity,  $I$ , based on Blondel ray equation. Instantaneous intensity is calculated from the oscilloscope trace of photo detector signals.

Tested by: *Daya*

Mr. D. P. BAHUGUNA

Checked by: *H. C. Kandpal*

Dr. H. C. KANDPAL

Issued by: *H. C. Kandpal*

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**9 RESULTS**

Operating input voltage 230-Volt A.C.

Instantaneous luminous intensity variations of flashing light are given bellow.

1. Peak intensity (measured): 2489 Candela.
2. Effective intensity (measured): 1500 Candela.
3. Power at 230 Volt A.C. (measured): 13.00 Watt.
4. Rotation per minute (measured): 40
5. Visibility around 360° of aspect: Uniform
6. Vertical beam spread (measured): > 3°

Expanded combined relative uncertainty in measurement of effective intensity is  $\pm 2.5\%$  at  $K=2$ .

Date of measurements: 31/10/2007

Tested by:

*D.P. Bahuguna*

**Mr. D. P. BAHUGUNA**

Checked by:

*H.C. Kandpal*

**Dr. H. C. KANDPAL**

Issued by:

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