ILLUMINATION MEASUREMENT

**Objective:**

* **Illumination measurement**

Scope: All over the plant.

Ref: Nil

* Aspect: Nil
* Impact: Nil
* Hazards: Physical- Falling.

Responsibility: Company Electrician , Enginner

1. Illumination measurement shall be done by using Lux meter in the horizontal plain. Lux is a unit of illumination of one square meter.
2. Lux meter used for illumination measurement shall be calibrated.
3. When taking measurements, verify that occupants and objects /materials are not blocking any light to the meter head. Measurement points that are shaded, even partially, by obstructions that are not moveable should be noted for potential elimination.
4. Identify the measurement locations by marking. It is important to measure the same locations for the baseline and post-installation lighting systems, or the same representative type of locations if fixtures are relocated for the retrofit.
5. To determine the minimum number and positions of measurement points calculate the Room Index.

Where L = length of interior; W = width of interior; Hm = the mounting height, which is the height of the lighting fittings above the horizontal working plane. The working plane is usually assumed to be 0.75m above the floor in offices and at 0.85m above floor level in manufacturing areas.

It does not matter whether these dimensions are in metres, yards or feet as long as the same unit is used throughout.

1. Refer below table for minimum number of measurement points as per RI.



Wherever it is not possible to maintain a square array i.e. the spacing between the points on each axis to be approximately the same, it may be necessary to increase the number of measurement points.

\*as per Energy Performance Assessment of Lighting Systems/Bureau of Energy Efficiency

1. Refer below table for min.-avg.-max. lux level limit required for different places.

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\*as per IS 3646(1)

1. It should be ensured that maximum lux limit is not crossed in order to avoid glaring issue at applicable locations as per IS 6665.

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\*as per IS 6665

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| **Amendment Record** | | | |
| **Revision Date** | **Manual Section Ref. & Para** | **Brief details of Revision** | **New Revision No** |
| **24.06.2023** | Point no 5 and 6 | Determine the minimum number and positions of measurement points | **01** |
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| **Prepared By:**  Senior Engineer | **Reviewed & Issued By:**  Head – Electrical & Instrumentation PID1 | **Approved By:**  Head – Electrical & Instrumentation VAB |
| **Signature:** | **Signature:** | **Signature:** |
| **Review Date:24.06.2023** | **Review Date:24.06.2023** | **Review Date:24.06.2023** |