



of 90 degrees or higher from nadir (straight down). This percentage must be met at the public realm plot boundary.

- **Maximum Light Trespass (into windows)** - This is calculated in vertical illuminance (Lux) and is measured flat on the glazing at the centre of the window. These values are the maximum levels permitted excluding existing base light levels.
- **Maximum Luminaire Source Intensity** - This applies to each lighting source and/or luminaire directly visible outside of the area being lit which could be a source of glare or distraction. These values must be achieved however exceptions may be permitted for particular lighting applications, such as sports lighting.
- **Maximum Surface Luminance** - This is the measurement of actual visual brightness and must be limited to avoid over lighting of all or any of the external lighting elements. The area luminance is only applicable to surfaces directly illuminated as part of the night time external lighting scheme.
- **Motion sensors with threshold adjustment** - Threshold adjustments can be made to prevent nuisance activation by insects, birds and small animals.

Hours of operation should be followed, except where it can be demonstrated that the project's known 'hours of usage' vary from these.

References

- DMA (2016) *Abu Dhabi Lighting Manual Issue 1*. Abu Dhabi, UAE.
- DMA (2014) *Abu Dhabi Public Realm & Street Lighting Handbook First Edition*. Abu Dhabi, UAE.
- IESNA (1999) *IESNA RP-33-99 Lighting for Exterior Environments*. New York, USA: Illuminating Engineers Society of North America.
- IES RP-8 (2005) *Roadway Lighting*. New York, USA: Illuminating Engineers Society of North America.
- International Energy Conservation Code, IECC: www.energycodes.gov.
- ILP (2005) *Guidance Notes for the Reduction of Obtrusive Light*. Warwickshire, UK: Institution of lighting professionals.
- UPC (2013) *Abu Dhabi Safety and Security Planning Manual, P4 Lighting surveillance*. Abu Dhabi, UAE.