



The Lighting Society

Illuminating Engineering Society of Australia and New Zealand Limited

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Position Statement of Dark Skies and Lighting at Night

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“Light where you need it, when you need it, in the amount you need and no more”
IESNA 2020

Lighting the urban environment at night is critical in enhancing people’s perception of safety and creating visually comfortable and enjoyable spaces. This is important in establishing wayfinding and safety through the visibility of our surroundings.

At the same time, research has established that artificial light at night (ALAN) can be detrimental to flora and fauna, contribute to adverse health consequences in humans; as well as contributing greatly to skyglow and the reduced view of the night sky. This has led to the scientific community classifying all ALAN as a pollutant.

It is also important to acknowledge the cultural significance the loss of dark sky has in the Australasian region. Polynesian navigation of the Pacific Ocean to settle New Zealand only occurred through a deep understanding of the stars. In Australia, First Nations people have knowledge of sky country dating back over 60,000 years, and are globally recognised as the world’s first astronomers. In both cultures, star knowledge is entrenched in their way of life and helps to shape their everyday activity.

Whilst Australia and New Zealand remain relatively dark in a global context, the issues surrounding light pollution are no less impactful. Countries around the world, including Australia and New Zealand, are increasingly introducing strategies and practical initiatives to reduce the impacts of ALAN.

In recent times, LED technology has revolutionised the lighting industry, and is widely adopted across nearly all sectors of the outdoor lighting market. However, the high levels of energy in the blue end of the spectrum compared to traditional light sources has meant an acceleration of the impacts from ALAN.

For fauna, the presence of light at the blue end of the spectrum has a higher probability of causing negative effects. This includes direct impacts on physiological measures, disruption of daily activity patterns and negatively influencing life history traits. Light sources high in the blue end of the spectrum also scatter more efficiently in the atmosphere, causing greater impact on sky glow and further reducing our view of the stars.

Despite the negative environmental impacts, ALAN is still required for a number of functional uses such as task illumination, identifying hazards, and sports lighting. In addition, we use ALAN to highlight architecture, creating visually interesting spaces that enhance identity of place, improve people’s perception of safety and enable wayfinding through the visibility of objects that identify a location.



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It is therefore paramount that anyone working with ALAN seek to balance the requirements of outdoor lighting with those of the environment. This is not an easy task, and requires input from qualified designers, employing a considered approach to achieve good outcomes for people and planet. This typically includes a mix of Architects, Landscape Architects and Lighting Practitioners.

To balance quality night time outcomes with the needs to reduce our impact on the environment, the IESANZ recommends all lighting practitioners:

- Question the need for any light. Start with no light and add light only where and when it is needed.
- Use light sources with reduced blue spectrum content and with a Colour Rendering Index as high as practical for the application.
- Do not aim light fittings above the horizontal wherever possible.
- Avoid glare and try to conceal light fittings from direct view.
- Use control systems to dim, or turn off lighting when there are no people present. Adjust illuminance levels according to night-time activity.
- Light only the object or area intended and reduce spill light as much as practically possible.
- Consider surface reflectance's and reduce illuminance levels accordingly.