

14 - Brisbane Street, St Lucia – Comment on Trial LED Luminaires

Luminaire

This luminaire could not be identified on the trial list provided by BCC-Energex. However, the luminaire appears to be closely related to the Cooper – Streetworks XVN.

Colour

This is an intensely bright white light of at least 4000K that is unnecessary in this residential street.

Brightness

This is an intensely bright luminaire that projects very high levels of illumination in the immediate vicinity of the luminaire but also casts unnecessarily bright illumination over a wide area. It can be somewhat disconcerting for pedestrians to move into the luminaire's primary beam close to the pole as the rapid increase in illumination is very uncomfortable and forces pedestrians into a strong squint. The discomfort is exacerbated as a pedestrian moves along the street and passes in and out of the intense primary beams. The result is a process of squint then relax, squint then relax as the pedestrian progresses along the street. The brightness of this luminaire may also impact the vision of vehicle drivers, particularly in older age groups, as a vehicle moves into and out of the primary beam again and again along the street.

Glare

This is one of the worst luminaires in this trial for excessive glare. The design of the LED array flat on the lower surface with no shielding makes the array visible from any angle below the horizontal and exacerbates the intense glare. This is a very uncomfortable luminaire for pedestrians as they will find they need to squint and avert their vision downwards to reduce glare and vision discomfort as they enter the primary beam zone.

Installation



None of the trial luminaires in this street have been installed horizontal.

None of these trial luminaires have been installed horizontal and some appear to have an up-tilt angle of around 15°. This high variability of installation may create great difficulty in effectively controlling the distribution of light and light trespass. It appears this luminaire has no internal capacity for installation angle adjustment.

If these luminaires were installed horizontal it would likely result in a much more significant rear light trespass problem.

Light Distribution

This luminaire projects a wide illumination pattern laterally along the street and forwards across the street. The very bright primary beam area directly below the

luminaire is a significant problem as it causes rapid changes in brightness for pedestrians and drivers.

The extent of forward light trespass on to properties on the other side of the street is also a substantial problem with this luminaire.



These luminaires cast a very extensive illumination pattern with very bright regions below each pole.



Forward light trespass is substantial.

Overall Assessment as a LED Luminaire for Brisbane-wide Roll-out

For all the reasons of high colour temperature, excessive brightness, uneven illuminations, inability to adjust up-tilt angle and excessive forward light trespass this luminaire is unsuitable for Brisbane-wide roll-out in residential streets or high vehicle traffic streets.