

2 - Galleon Street, West, Jamboree Heights – Comment on Trial LED

Luminaires

Galleon Street has two different LED luminaires under trial along its length. The following comments refer only to the luminaire in the western end of the street from Sirocco Street to about Poseidon Crescent. This LED luminaire appears to be the same as that on trial in Lilley Road, Bardon.

Luminaire

It is assumed this luminaire is a - Lingman Power Mission 2.

Colour

The slight amber tint to the emitted light suggests this is a 3000K LED. Colour rendition of vehicles, vegetation and homes is good. The colour of the light is comfortable to the eye and provides a pleasing ambience to the street.

Brightness

Galleon Street appears to be illuminated similarly to neighboring streets. It is unknown whether this section of Galleon Street is illuminated in excess of the minimum Australian Standard recommendation.

Glare

This appears to be a Type 6 full cut-off design luminaire. There appears to be no shielding of the LED array below what should be the horizontal. While the LED array in this luminaire is certainly much less painful to look at directly, it is still a glary light source and may well cause nuisance to residents, particularly those with bedrooms facing the street.

Luminaire Installation



An example of up-tilted LED luminaire installation in the western end of Galleon Street, Jamboree Heights.

It appears none of the LED luminaires in this street have been installed with the LED array oriented to horizontal. It appears this luminaire design does not have an internal capacity for angle adjustment and so simply conforms to the alignment of an existing bracket arm.

Light Distribution

While this luminaire appears to be identical to that under trial in Lilley Road, Bardon, the forward light trespass appears to be more pronounced in this street.

Forward light trespass would have been better controlled if the luminaire had been installed horizontal.

This luminaire also exhibits significant light trespass to the rear.



An example of backward light trespass onto private property – western end of Galleon Street, Jamboree Heights.



An example of forward light trespass onto private property – western end of Galleon Street, Jamboree Heights.

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

Overall this LED luminaire might be evaluated as one of the “least worst” of the 10 makes and models under trial. The main shortcomings of this luminaire are:

- unadjustable installation angle,
- the extent of forward and backward light trespass, and
- the unshielded glare directly from the LED array.

This luminaire is not recommended for roll-out across Brisbane. The trial program should explore similar luminaire options with this manufacturer that better address issues with shielding, glare, proper installation and backward light trespass.

3 - Galleon Street, East, Jamboree Heights – Comment on Trial LED Luminaires

Galleon Street has two different LED luminaires under trial along its length. The following comments refer only to the luminaire in the eastern end of the street from about Poseidon Crescent to Andaman Street.

Luminaire

It is assumed this luminaire is a - Orange Tek TerraLED Mini.

Colour

This is a very harsh white light and appears to be in excess of 4000K. Such harsh white light is unnecessary in a residential street such as this.

Brightness

The illumination from this luminaire appears to be brighter than the other LED luminaire being trialed on the western end of this street. For a low volume traffic and pedestrian residential street the level of illuminations appears to be significantly greater than this category of street probably requires.

Glare

This luminaire does not appear to incorporate any effective shielding below the 90° level, and this is particularly noticeable in the “glare zone” approaching 90°. The LED array is very glary for pedestrians and vehicle drivers and is likely to annoy some residents with bedroom windows facing these luminaires. Pedestrians, in particular, may find they squint their eyes and avert their vision downward when walking under this luminaire. The high colour temperature of this LED array may also contribute to the perception of glare.

Luminaire Installation



Even though this luminaire model appears to incorporate an angle adjustment mechanism the majority of the installations appear to position the LED array with an up-tilt angle. It is assumed the LED array should actually be positioned horizontal to perform to specification. This up-tilt may contribute to the glare and light trespass of this luminaire.

Light Distribution

This luminaire causes light trespass on to private properties to the rear and forwards and may cause annoyance to residents. The full cut-off design of this luminaire is a positive feature.



Rearward light trespass.



Forward light extends across the roadway and may annoy residents on the opposite side of the street.

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

This luminaire is not considered to be appropriate for residential street installation due to: blue-rich high colour temperature light; excessive glare; lack of LED array shielding; excessive rear and forward light trespass; and possible inability to install with the LED array horizontal.