

Table 16.9 Lighting classes for subsidiary roads and associated areas, footpaths and cycle tracks

Crime rate	CRI	Low traffic flow/E1 or E2	Normal traffic flow/E1 or E2	Normal traffic flow/E3 or E4	High traffic flow/E1 or E2	High traffic flow/E3 or E4
Low	< 60	S5	S4	S3	S3	S2
Low	≥ 60	S6	S5	S4	S4	S3
Moderate	< 60	S4	S3	S2	-	S1
Moderate	≥ 60	S3	S4	S3	-	S2
High	< 60	S2	S2	S1	-	S1
High	≥ 60	S3	S3	S2	-	S2

The area over which these illuminances should be applied varies with the application. When considering roads with associated areas, it is recommended that a single lighting class be applied to the carriageway and any adjacent footway and verge, from boundary to boundary. If a road is a shared surface residential road, the relevant area is the shared surface only. When considering footpaths and cycle tracks separated from roads, consideration should be given to extending the lit area beyond the width of the footpath or cycle track so as to give a wider field of view.

Glare from luminaires should be controlled. To limit disability glare, where luminaires have clear bowls or reflectors, these should conform to at least class G1 of Table 16.3. For discomfort glare, the simplest approach is to select a luminaire where the light source is not visible, either directly or as an image, from any relevant direction. If a more quantitative approach is desired, glare index can be used. This is calculated from the equation:

$$\text{Glare index} = I \times A^{-0.5}$$

where: I = maximum luminous intensity at 85° from the downward vertical, in any direction (cd)

A = apparent area of the luminous parts of the luminaire on a plane perpendicular to the direction of I (m²).

Table 16.10 shows the glare index classes appropriate for subsidiary roads, footpaths and cycle tracks.

Table 16.10 Lighting classes based on glare index

Lighting class	Maximum glare index
D1	7,000
D2	5,500
D3	4,000
D4	2,000
D5	1,000
D6	500