

***Roundabout Lighting
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A nighttime view of a typically lighted roundabout.

For a roundabout to operate satisfactorily, all users—drivers, pedestrians, and cyclists—must be able to enter, navigate around, and exit the roundabout in a safe and efficient manner and pedestrians must be able to safely use crosswalks, during the day and at night.

In its lighting design guide for roundabouts (DG-19-08) the IES (Illuminating Engineering Society) provides criteria to address the visibility of the roadway, pedestrians, and hazards through a roundabout. This guide uses a combination of horizontal illuminance for the roadway areas of the roundabout and vertical illuminance in the crosswalks areas.

The latest edition of the Transportation Research Board's *Roundabouts: An Informational Guide*, reiterates the recommendation of IES DG-19-08.

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A computer rendering of recommended roundabout lighting layout.

Illumination is recommended for all roundabouts, including those in rural environments. The geometry of a roundabout makes headlamps ineffective in the detection of people or objects in the vehicle's path.

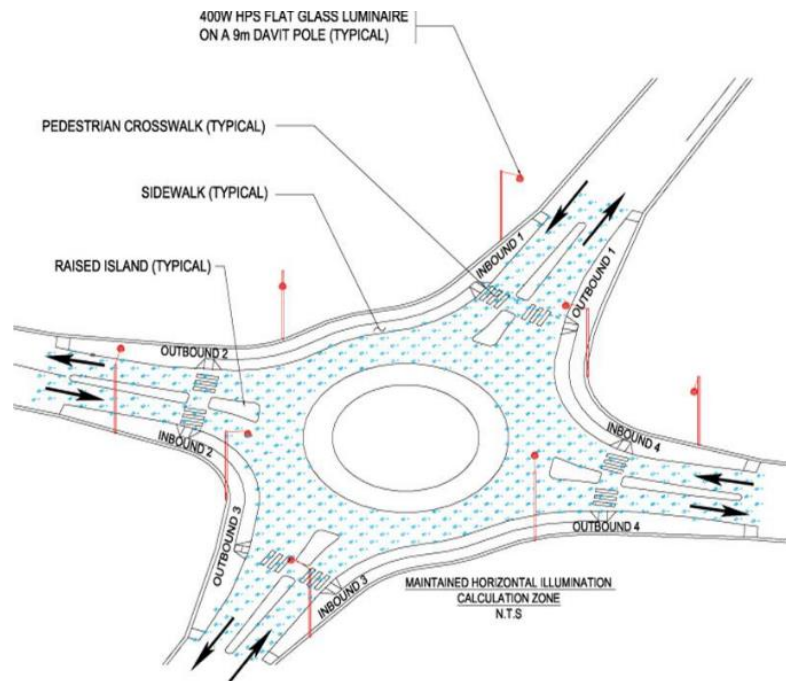
Lighting of roundabouts serves two main purposes:

1. It provides visibility from a distance for drivers approaching the roundabout.
2. It provides visibility of the key conflict areas to improve drivers' perception of the layout and visibility of other users within the roundabout.

Lighting located around the perimeter of the roundabout provides better visibility of pedestrians and obstructions than lighting located in the center.

According to IES DG-19-08, approach lighting should be used providing 20 to 40 vertical lux in crosswalks, if present, at roundabouts.

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Recommendations for placement of lighting within a roundabout. Light fixtures are shown in red.

A roundabout may have continuous lighting on the approach roads. This lighting will help a driver adapt to the roundabout lighting. Where there is no lighting on the approach roads lighting should be added on the approach roads for a distance of approximately 80 m from the start of the roundabout.

The lighting level used in a roundabout should be equivalent to the intersection lighting level included in IES RP-8-14, Standard Practice for Roadway Lighting.