

Road lighting luminaires — luminous intensity distribution

Road lighting luminaires have traditionally been classified as full cutoff or semi-cutoff, according to their luminous intensity distribution. BS EN 13201: Part 2: 2003 has introduced a finer classification designed to give better control of disability glare and obtrusive light. This classification uses the maximum luminous intensity per 1000 lamp lumens at different angles from the downward vertical in any direction as a criterion. Table 4.9 shows the limits for each of the six classes (G levels) and their relationship to the traditional semi-cutoff and full cutoff terms.

Table 4.9 BS EN 13201: Part 2: 2003 road lighting luminaire classification

Cutoff classification	G level	Maximum luminous intensity/1000 lamp lumens, at 70° from downward vertical	Maximum luminous intensity/1000 lamp lumens, at 80° from downward vertical	Maximum luminous intensity/1000 lamp lumens, at 90° from downward vertical	Other requirements
	G1	-	200	50	None
	G2	-	150	30	None
Semi-cutoff	G3	-	100	20	None
	G4	500	100	10	0 at greater than 95°
	G5	350	100	10	0 at greater than 95°
Full cutoff	G6	350	100	0	0 at greater than 95°

Operating conditions

The International Protection (IP) system classifies luminaires according to the degree of protection provided against the ingress of foreign bodies, dust and moisture. The degree of protection is indicated by the letters IP followed by two numbers. The first number indicates the degree of protection against the ingress of foreign bodies and dust. The second indicates the protection against the ingress of moisture. Table 4.10 shows the degree of protection indicated by each number. Using Table 4.10 it can be seen that a luminaire classified as IP55 is dust protected and able to withstand water jets.