



ILLUMINATION RECOMMENDATIONS—OUTDOOR

These recommendations for outdoor lighting are for average maintained (mean) illuminance at grade except in the case of roadways where they are average for the end of the lamp life. Except where specifically indicated, the layout and coverage arrangements and footcandle/uniformity graphs on subsequent pages are configured so that reasonable uniformity is obtained with commonly available wide distribution lighting equipment such as a NEMA 5X5 (or wider) floodlight and ANSI Type II, III, IV, and V roadway distributions. The illuminance recommendations herein are extractions from *IESNA LIGHTING HANDBOOK*.

GENERAL APPLICATION	AVERAGE MAINTAINED FOOTCANDLES		
AIRPORTS			
Hanger aprons to approximately 50 feet (15M) out	1.0		
Service aprons to approximately 200 feet (61M)	0.5		
Center of aircraft service (vertical)	2.0		
BUILDING EXTERIOR—SITE AREAS ADJACENT TO			
Active entrances—pedestrian or vehicle	5.0		
Inactive entrances—normally locked	1.0		
Vital locations or structures (security)	5.0		
Building Surroundings	1.0		
BUILDING FLOODLIGHTING	A*	B*	C*
Terra cotta, light marble, plaster	15	10	5
Bedford or buff limestone, smooth buff face brick, concrete, aluminum	10	15	10
Smooth or medium gray brick, common tan or dark field gray brick	30	20	15
Brownstone, stained shingles, other dark surfaces	50	35	20
<small>*A=City; B=Suburban; C=Rural</small>			
CENTRAL STATIONS—ELECTRIC UTILITY			
Barge unloading, car dumping	5.0		
Conveyors	2.0		
Storage tanks	1.0		
Storage piles—coal, ash	0.2		
Substation general lighting	2.0		
FLOODLIGHTED SIGNS			
Bright surroundings, light surfaces	50		
Bright surroundings, dark surfaces	100		
Dark surroundings, light surfaces	20		
Dark surroundings, dark surfaces	50		
PARKING AREAS			
High activity	3.6		
Medium activity	2.4		
Low activity	0.8		
QUARRIES AND OPEN MINES			
Men and machines	5.0		
ROADWAYS—NON-DEDICATED AND PRIVATE			
High activity	2.0		
Medium activity	1.0		
Low activity	0.5		
SHIPPING—PIERS			
Freight	20.0		
Passengers	20.0		
Surrounding active areas	5.0		
YARDS			
Material handling	5.0		
Prison—general lighting	5.0		
Railroad—general lighting bare yard	1.0		
Storage—inactive	1.0		

GENERAL APPLICATION	ROADWAYS—MINIMUM AVERAGE FCS (AVERAGE/ MINIMUM UNIFORMITY)		
	Commercial	Intermediate	Residential
Freeway—Major Urban	0.84 (3:1)	0.84 (3:1)	0.84 (3:1)
Freeway—All Other	0.56 (3:1)	0.56 (3:1)	0.56 (3:1)
Divided Highway	1.30 (3:1)	1.12 (3:1)	0.84 (3:1)
Major	1.58 (3:1)	1.21 (3:1)	0.84 (3:1)
Collector	1.12 (4:1)	0.84 (4:1)	0.56 (3:1)
Local	0.84 (6:1)	0.65 (6:1)	0.37 (6:1)

NOTE: Minimum Average FCS refers to average footcandles at end-of-life lamp or group relamping.