

LED Lighting Facts

Recommended Product Performance Scale (Commercial)



Indoor Fixtures*

Indoor Fixtures*		Light Output (lumens)	Lumens per Watt (Efficacy)	Typical CRI	Typical CCT Range
Fluorescent Under-cabinet Task Lighting (typical)		≥ 125 per ft	29	80	2700K--6500K
Portable Desk Task Lights with CFLs (typical)		≥ 200	29		
Fluorescent Cove Lighting (typical with T5 lamps)		≥ 445 per ft	56		
Track Lights		≥ 200 per head	35		
Downlights with CFLs (by diameter)	< 4.5"	≥ 345	35		
	> 4.5"	≥ 575			
Surface-mounted or recessed troffers:					
Two-foot-by-four-foot (lensed, with two T12 lamps)		4400	51		
Two-foot-by-four-foot (parabolic, with two T8 lamps)		3700	63		
Refrigerator display case lighting (center-mounted)		100 per ft	35		
Refrigerator display case lighting (end-mounted)		50 per ft			

Outdoor Fixtures**

Outdoor Fixtures**	Lamp Wattage	Estimated Luminaire Light Output (lumens)	Estimated Luminaire Efficacy (lumens per watt)	Typical CRI	Typical CCT Range
Outdoor Area/Roadway, Parking Garage, Canopy Lights, High-bay and Low-bay					
High Pressure Sodium (HPS)	150	8,000--13,000	46--75	20	2000K--3000K
	250	12,000--18,000	42--63		
	400	25,000--40,000	54--87		
Metal Halide (MH)	150	6,000--10,000	35--58	65	3000K--6000K
	250	11,000--18,000	38--63		
	400	20,000--32,000	43--70		
Outdoor wall-mounted					
High Pressure Sodium (HPS)	100	5,000--7,000	43--61	20	2000K--3000K
	150	8,000--13,000	46--75		
Metal Halide (MH)	100	5,000--7,000	35--61	65	3000K--6000K
	150	6,000--10,000	35--58		
Bollards					
High Pressure Sodium (HPS)	50	1,000--2,000	17--35	20	2000K--3000K
	100	2,000--4,000	17--35		
Metal Halide (MH)	70	1,000--3,000	12--37	65	3000K--6000K
	100	2,000--4,000	17--35		

*Performance data for indoor fixtures is based on benchmark testing of conventional light sources by Pacific Northwest National Laboratory (PNNL) on behalf of the DOE Solid-State Lighting Program. Refrigerator display case lighting performance is shown only as a suggested reference.

**Light output and efficacy values for outdoor fixtures (luminaires) are based on rated lamp light output and input power from manufacturer published photometric (.ies) files, in addition to estimated luminaire power losses of 15% and luminaire light losses of 20%-50% (50%-80% for bollards).

The outdoor fixture performance table above is only intended to be used as a rough guide. A thorough review of outdoor LED luminaires should include, at a minimum, additional metrics such as light uniformity and light distribution. See more detailed DOE guidance on outdoor lighting here: <http://www1.eere.energy.gov/buildings/ssl/resources.html>.