



### INTEGRAL LAMPS

Lamp Type	Applicable Lamps	CRI	Efficacy (lumens/watt)	R9 Value	Minimum Warranty	Safety	Power factor	Target DUV and Tolerance	CCT	Off-State Power
Integral Directional LED	BR, ER, K, MR, PAR, R (Per ANSIC79.1-2002)]	80	Lamps $\leq 20/8"$ : $\geq 40$ LPW Lamps $> 20/8"$ : $\geq 45$ LPW	>Zero	3 years*	UL 8750 or CSAUS Listed	Lamps $\leq 5W$ : no min.power factor Lamps $>5W$ : $\geq .70$ .	See DUV Requirements Chart in Footnotes	See CCT Requirements Chart in Footnotes	NA
Integral Omnidirectional LED	A, BT, P, PS, S, T (per ANSI C79.1-2002)		Lamp $<10$ W: $\geq 50$ LPW Lamps $\geq 10$ W: $\geq 55$ LPW							
Integral Decorative LED	B, BA, C, CA, DC, F, G (per ANSI C79.1-2002)		$\geq 40$ LPW							



**NON-RESIDENTIAL (COMMERCIAL)**

Lamp Type	Applicable Lamps	CRI	Efficacy (lumens/watt)	R9 Value	Minimum Warranty	Safety	Power factor	Target DUV and Tolerance	CCT	Off-State Power	THD
Recessed LED, surface and pendant-mounted downlights		75	≥ 35 LPW	An R9 (strong red) value is required.	3 years*	UL or CSAUS Listed	≥.90	See DUV Requirements Chart in Footnotes	See CCT Requirements Chart in Footnotes	Must be Zero <b>Exception:</b> Luminaires with integral occupancy, motion, photo-controls or individually addressable fixtures with external control and intelligence shall not exceed .5 Watts when in the off state	NA
Refrigerated case lighting		70									
Display case lighting		75									
Under-cabinet LED shelf-mounted task lighting		50	≥ 29 LPW								
Portable desk task lights			≥40 LPW								
Wall wash luminaires											
Outdoor pole/arm-mounted decorative luminaires											
Bollards		65	≥35 LPW								
Outdoor pole-mounted area and roadway luminaires			≥50 LPW								
Outdoor wall-mounted area luminaires ("wall packs")			≥52 LPW								
Parking garage/canopy luminaires		75	≥70 LPW								
Track or mono-point directional lighting fixtures			≥30 LPW								
Linear panels (2x2 troffer)		80	≥55 LPW								
High-bay and low-bay fixtures for commercial industrial buildings		70	≥60 LPW								
High-bay aisle lighting											
Tubular LED lamps		80	≥80 LPW								
Other		75	≥50 LPW								



### RESIDENTIAL

Lamp Type	Applicable Lamps	CRI	Efficacy (lumens/watt)	R9 Value	Minimum Warranty	Safety	Power factor	Target DUV and Tolerance	CCT	Off-State Power
Under-cabinet LED kitchen lighting		75	≥24 LPW	An R9 (strong red) value is required.	3 years*	UL 8750 or CSAUS Listed	≥.70	See DUV Requirements Chart in Footnotes	See CCT Requirements Chart in Footnotes	Must be Zero <b>Exception:</b> Luminaires with integral occupancy, motion, photo-controls or individually addressable fixtures with external control and intelligence shall not exceed .5 Watts when in the off state
Portable desk task lights			≥35 LPW							
Recessed, surface and pendant-mounted downlights			≥30 LPW							
Ceiling-mounted luminaires with diffusers			Including but not limited to: flush-mounts, close-to-ceiling, and ceiling fan light kits							
Cove lighting			≥45 LPW							
Surface-mounted luminaires with directional head(s)			Including but not limited to: ceiling fan light kits, track lights, and rail lights							
Outdoor wall-mounted porch lights			≥24 LPW							
Outdoor step lights			≥20 LPW							
Outdoor pathway lights			≥25 LPW							
Outdoor pole/arm-mounted decorative luminaires			≥35 LPW							
Other	≥50 LPW									

\* Warranties must cover material repair or replacement from the date of purchase and be a copy of the actual manufacturer luminaire warranty that is included in the packaging

Target DUV and Tolerance Chart

Nominal CCT	Target DUV and Tolerance
2700 K	0.000 ± 0.006
3000 K	0.000 ± 0.006
3500 K	0.000 ± 0.006
4000 K	0.001 ± 0.006
4500 K	0.001 ± 0.006
5000 K	0.001 ± 0.006
5700 K	0.001 ± 0.006
6500 K	0.001 ± 0.006

Target CCT (K) and Tolerance Chart

Nominal CCT	Target CCT (K) and Tolerance
2700 K	2725 ± 145
3000 K	3045 ± 175
3500 K	3465 ± 245
4000 K	3985 ± 275
4500 K	4503 ± 243
5000 K	5028 ± 283
5700 K	5665 ± 355
6500 K	6530 ± 510

#### Resources

1. Program Requirements for Integral LEDs are based on the Energy Star Program Requirements for Integral LED Lamps which was Amended on 3/22/10.
2. Program Requirements for Solid State Luminaires (recessed, surface and pendant-mounted downlights, Under-cabinet shelf-mounted task lighting, portable desk task lights, wall wash luminaires, bollards and all residential luminaires) are based on the Energy Star
3. Program Requirements for outdoor pole-mounted area and roadway luminaires, outdoor wall-mounted area luminaires ("wall packs") and parking garage/canopy luminaires are based on the Energy Star Program Requirements for SSL Luminaires version 1.2 draft #2
4. Program Requirements for SSL Lumen Maintenance were based on the ENERGY STAR® Manufacturer's Guide for Qualifying Solid State Lighting Luminaires – Version 2.0.