

# Ballast Reference Sheet

## Ballast Factor

a.k.a. % Light Output  
 .78 - L, HPL, EL,  
 .88 - RH, HP, HE  
 1.18 - RHH

## System Light Output

Rated Lamp Lumens  
 x Ballast Factor  
x Number of Lamps  
 System Lumens

## System Lumen Example

	<u>F40T12/ES</u>	<u>F32T8</u>
Rated Lamp Lumens	2280	2710
x Ballast Factor	x 0.90	x 0.78
<u>x Number of Lamps</u>	<u>x 4</u>	<u>x 4</u>
System Lumens	<b>8208</b>	<b>8455</b>
	(magnetic)	("L" electronic)

## Total Harmonic Distortion (THD)

Measurement of Harmonic content of a ballasts input current  
 < 10% - HP, HE, EL, HPL  
 < 20% - RH, L, RHH

## Power Factor

Measurement of the relationship between input voltage and current. A higher power factor means that the input current will be lower for the same input power level.  
 High PF (>.90) for C&I  
 Low PF (<.90) for Residential  
 Electronic typically > .98

## Ballast Efficacy Factor (B.E.F.)

= Ballast Factor x 100 / Input Watts  
 Can only compare like systems with the same lamp type and quantity

## **Instant Start**

- Maximum energy efficiency
- Ideal for applications with > 3 hours/start

## **Programmed (Rapid) Start**

- Maximizes lamp life by improved lamp starting and operation
- For applications < 3 hours/start
- For use with Occupancy sensors
- Use as a replacement for Rapid Start Specifications

## **Universal Voltage (UNVHP)**

- For 108 to 305 volt application
- THD < 10%
- Reduces Inventory
- Cannot connect to the wrong voltage

## **Reduced Harmonic "RH" Series**

- .88 Ballast factor
- Parallel instant start, THD<20%
- Commonly installed with new fixtures

## **Low Power "L" Series**

- .78 Ballast factor
- Popular energy retrofit product line
- Equivalent light level to T12/ES lamps
- Parallel instant start, THD<20%

## **High Efficiency**

- Most efficient electronic ballast
- HE for .88 ballast factor
- EL for .78 ballast factor
- Parallel Instant start, THD<10%
- Combine with F32T8/ES for maximum energy savings system