

# TECHBRITE™

Saving energy in the best possible LIGHT™

Cincinnati, Ohio

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Regional Conference  
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# The Shrinking Fluorescent



**T12: 12/8"**

**T8: 8/8"**

**T5: 5/8"**

# T5 Vital Statistics

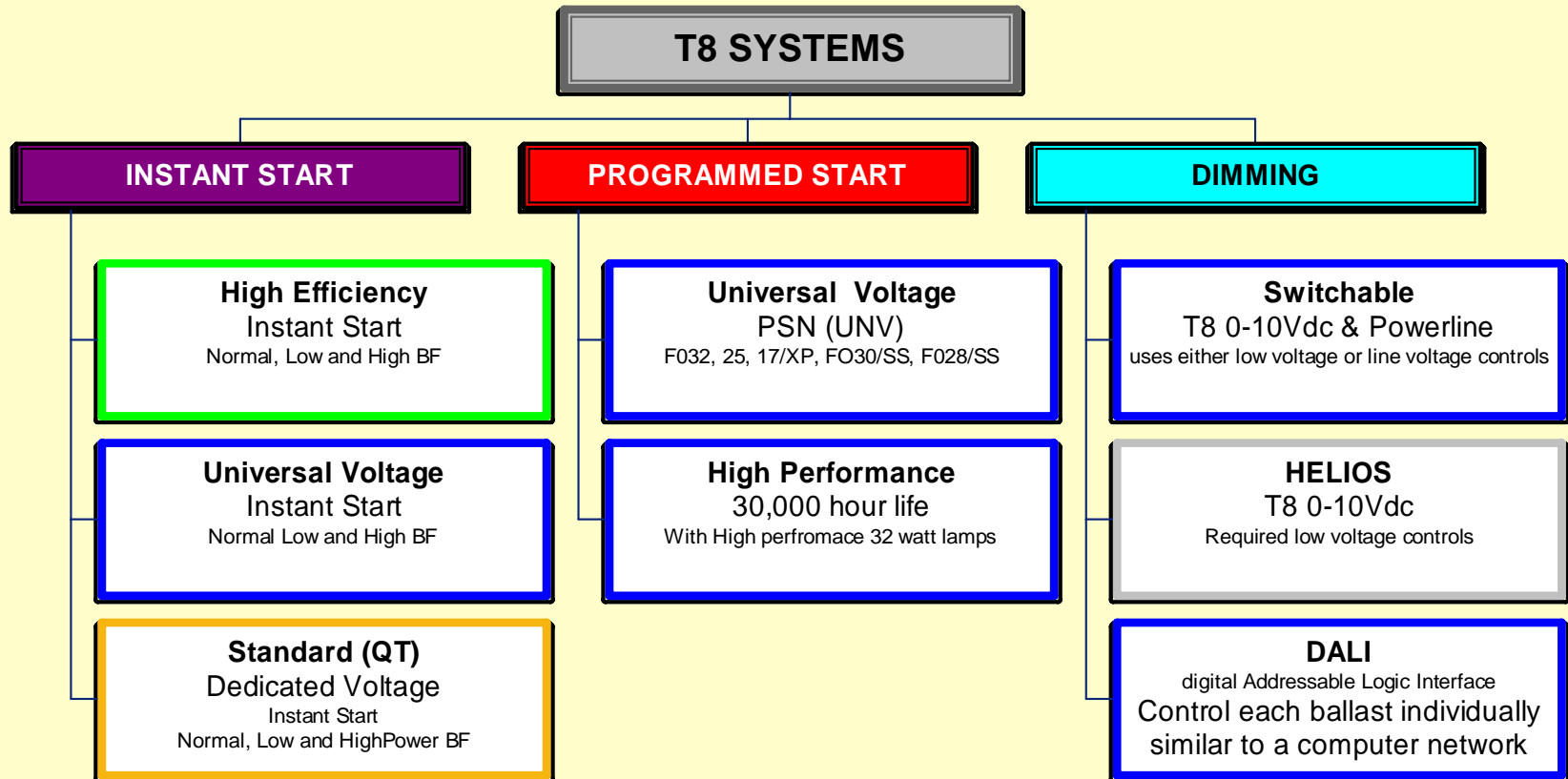
- **Life:**---20,000 Hours (Circular 16,000 Hours)
- **Metric Sizes:**---Nominal 2, 3, 4 and 5 Foot Lengths  
Circular 9” and 12” Nominal
- **Colors:** 3000, 3500, 4100, 5000, 6500  
Kelvin
- **CRI:** 85
- **Wattages:** Standard 14, 21, 28 and 35 Watts  
HO 24, 39 and 54 Watts  
Circular 22 and 40 Watts

# T-8 TECHNOLOGY

- Advantages-
  - ◆ 86 CRI
  - ◆ 20,000 – 30,000 hrs Life
  - ◆ 2750 - 3000 Lumens
- 3000 to 6500 Kelvin Temperature
  - ◆ Multi 6 Lamp Replaces 400 Watt HID
  - ◆ Lower Cost Per Lamp vs. T-5

# T8 Ballast Systems

## Electronic Fluorescent Ballast



# New T-8 Ballast Technology

- Program Start (Motion Control)
  - Approximately 6% Lower Efficacy Factor Compared to extra efficient IS ballast because of cathode heating.
- Universal Voltage (120/277) + - 20%
- Pre-wired to Sockets/Socket Bars
- Extra Low BF PS T-8 Ballast
- Research as low as .5 to 1.20 BF
- Valid Option vs. De-Lamp or Adding Lamps

## *High Efficiency T8 For 480 Volt Applications*

### ➤ **High lumen fluorescent options for 480V are now expanding**

- F54T5HO has been the only choice
- Hi Lumen F32T8 ballasts are now available
  - **Standardizes lamps throughout a facility**
  - **Large lamp selection for different colors and energy savings**
- Instant Start technology for maximum energy savings
  - High Range Voltage (HRV) for 347 to 480V

# System Comparison

Qty of Lamps	Ballast Type (s)	Lamp Type	Mean Lamp Lumens	Ballast Factor	Watts	Fixture Efficiency	Mean System Lumens Delivered	Mean Lumen Comparison	System Delivered LPW
1	Std Core & Coil	400W MH	24000	1.00	458	80%	19,200	100%	41.9
6	(2) 3Lamp T-8 HO	F32T8	2800	1.18	226	92%	18,238	95%	80.7

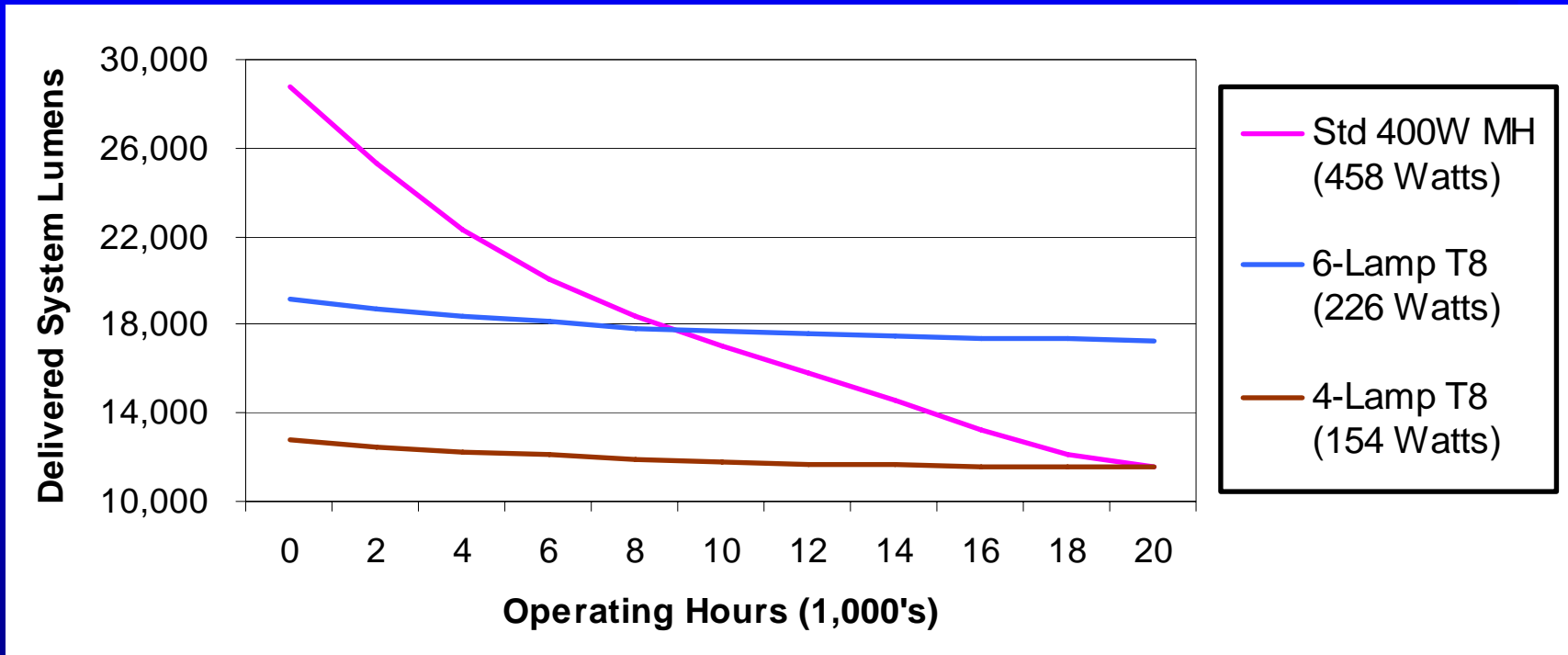
\* Savings calculation based on 4,000 annual operating hours and \$0.08/KWH utility rate

Lamp Data shown is for an 800 Series F32T8 lamp

System Delivered Mean Lumens = Mean Lamp Lumens x # of Lamps x Ballast Factor x Fixture Efficiency

**Energy Saving T8 lamps can be used for even greater savings**

# HID to T8 Lumen Comparisons



*Delivered system lumens uses HID fixture efficiency of .80 & Fluorescent fixture of .92*

**6-Lamp T8 provides lower initial lumens but higher maintained lumens**

# APPLYING NEW TECHNOLOGY

## •Office Retrofits

- 2x4 T-8 .9 BF 2 Lamp, 2x2 T-8 .9 BF FO-17 2 Lamp

## •Warehouse/Plant – 400, 1000 Watt HID, HPS

### Replacements Options      Typical Mtg. Height

- |                          |               |
|--------------------------|---------------|
| •2x4 4 Lamp T-5 HO       | 20 to 25 Feet |
| •2x4 6 Lamp T-8 HO       | 20 to 25 Feet |
| •1x8 6 Lamp T-8 HO Strip | 20 to 25 Feet |
| •1x8 4 Lamp T-8 HO Strip | 15 to 22 Feet |
| •1x8 6 Lamp T-5 HO Strip | 25 to 30 Feet |
| •2x4 6 Lamp T-5 HO       | 25 to 30 Feet |
| •1x8 8 Lamp T-5 HO Strip | 30 to 40 Feet |
| •2x4 8 Lamp T-5 HO       | 30 to 40 Feet |

# APPLYING NEW TECHNOLOGY

## Specialty Moisture Proof T-5/T-8 Applications

- Freezer –10°
- Cooler –40°
- Paint Booth
- Carwash
- Food Distribution
- Parking Garage
- Indoor Running Tracks
- Parking Garage
- Chemical
- 1x4 2 Lamp T-5 HO Moisture Proof
- 1x8 4 Lamp T-5 HO Moisture Proof
- 1x4 2 Lamp T-8 HO Moisture Proof
- 1x8 4 Lamp T-8 HO Moisture Proof

# Technical Contribution

- ❖ Advanced Transformer
- ❖ Philips Lighting
- ❖ Osram Sylvania
- ❖ Universal Lighting Technologies