COMPARISON: T5/HO Fluorescent vs. HID

Advantages:	T5/HO	HID
Higher CRI *(better color rendering)*	✔	
Better Lumen Maintenance	✔	
Less color shifting	✔	
Instant-on and instant-restrike *(HID takes 5-12 minutes)*	✔	
Wider dimming range *(100-10%, as opposed to 100-50% for HID)*	✔	
More control options *(switching, etc.)*	✔	
Cooler Operating Temperatures	✔	
Safer for open luminaires *(Won't explode, can safely operate 24/7)*	✔	
Smaller luminaire "footprint"		✔
Less temperature sensitive		✔

LAMP COMPARISON:

Lamps	Total Input Watts *(@277V)*	Total Initial Lumens	Total Mean Lumens	Mean Lumens Per System Watt
1- 400W MH	458	36000	24000	52
1- 400W PS MH	452	44000	31000	69
6- 54W T5/HO	356 *(2 ballasts)*	30000	28440	**80**
8- 54W T5/HO	468 *(2 ballasts)*	40000	37920	**81**

THE BASIC DATA:

Description	Watts	Ballast	Input Watts	Current	Initial Lumens	Mean Lumens	Lamp LPW	Rated Life	Lumen Maint.	CRI	Color Temp (K)
T5/HO Lamps				*(@277V)*							
F24T5HO	24W	1-2 L, electronic	52	0.23 A	2000	1895	83	20,000 Hrs.	95%	85	3000, 3500, 4100
F39T5HO	39W	1-2 L, electronic	88	0.39A	3500	3320	90	20,000 Hrs.	95%	85	3000, 3500, 4100
F54T5HO	54W	1-4 L, electronic	234	1.72A	5000	4740	93	20,000 Hrs.	95%	85	3000, 3500, 4100
HID- Metal Halide				*(@277V)*							
MH400/U/ED28	400W	M59 CWA	458	1.7A	36000	24000	90	20,000 Hrs.	66%	65	4000
MH400/HBU/PS (pulse start)	400W	M135 CWA	452	1.7A	44000	31000	110	20,000 Hrs.	70%	65	4000
HID- High Pressure Sodium											
LU400	400W	S5EJ	460		50000	45000	125	24,000 Hrs.	90%	21	2100

Notes:

- LPW= Lumens Per Watt
- T5/HO lumen ratings are at 35°C, performance loses roughly 10% at 25°C, but this data is for bare single lamps rather than enclosed.
- CRI for Metal Halide lamps increases to 70 when using coated lamps instead of clear.
- New electronic ballasts for Pulse Start Metal Halide lamps do improve performance somewhat (lpw, lumen maintenance and dimming down to 35%) but seem susceptible to heat and are unproven in long term field use.

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