

## KAUFMAN ISD GYM LIGHTING RETROFITS

The 400-watt metal halide fixtures in the Kaufman High School and Kaufman Jr. High School gyms were replaced with fluorescent high bay fixtures utilizing T-5 high output (HO) lamps. Fixtures with six lamps were used in all gyms, except the Jr. High practice gym, where 4-lamp fixtures were installed.

The fluorescent high bays use only 234 watts per 4-lamp and 351 watts per 6-lamp fixture, compared to about 458 watts each for the 400-watt metal halide fixtures they replaced. This reduced energy use should result in savings for the district. Also, because these fluorescent fixtures offer the advantage of instant off/on with no warm up period, they can be turned on and off as needed. This should encourage coaches, P.E. teachers, etc. to turn lights off during the day. Additionally, motion sensors on the fixtures will turn off the lights when no activity is detected for a period of time.

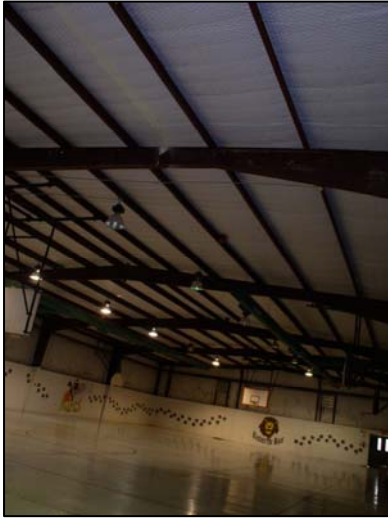
The fluorescent high bay fixtures produce very even, glare-free lighting without excessive brightness. Before and after readings were taken with a light meter in each gym. Because the lighting is very uniform and non-glare, illumination levels are quite a bit higher than they might first appear.

The following table summarizes the decrease in fixture wattage. Additional savings would be realized from turning off the lights each school day (potentially several hours each day) when the gyms are not in use. Some additional savings will also come from reduced air conditioning load in the gymnasiums, since the fluorescent ballasts give off less heat. In all cases the replacements resulted in higher light levels.

Facility	Wattage Reduction (kw)	Average Illumination levels (fc)	
		Before	After
High School Practice Gym	1.9	24	52
High School Competition Gym	2.6	23	55
Jr. High Competition Gym	7.6	26	52
Jr. High Practice Gym	1.5	n/a	38

# KAUFMAN JR. HIGH SCHOOL

## Practice Gym



Before

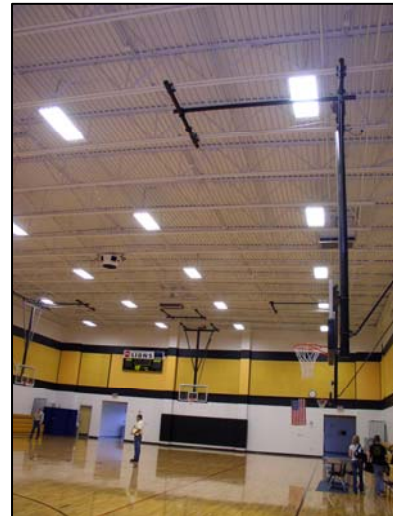


After

## Competition Gym



Before



After

# KAUFMAN HIGH SCHOOL

## Practice Gym

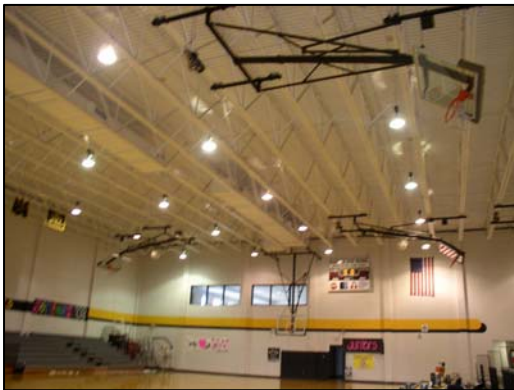


Before



After

## Competition Gym



Before



After