

CHAPTER 2 (RE)

DEFINITIONS

HIGH-EFFICACY LAMPS. Compact fluorescent lamps, light-emitting diode (LED) lamps, T-8 or smaller diameter linear fluorescent lamps, or other lamps with an efficacy of not less than the following:

1. ~~60~~ 75 lumens per watt for lamps over 40 watts
2. ~~50~~ 65 lumens per watt for lamps over 40 watts
3. ~~40~~ 55-lumens per watt for lamps 15 watts or less

Justification: Light-emitting diode (LED) lamps continue to dramatically improve in efficacy. The publication, *Energy Saving Opportunity from Advanced LED Lighting Research*, published by the Pacific North National Laboratory in October 2019 estimated an average efficacy for residential general service lamps of over 100 lumens per watt (lpw) in 2020, rising to nearly 200 lpw by 2034. A survey of retail outlets in Honolulu indicated efficacies of no less than 80 lpw, including for very low-wattage lamps (e.g. a 10-watt lamp emitting 800 lumens.) High-efficacy lamps not only reduce utility costs but emit very little heat—a favorable indicator in Hawai‘i.