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# A BILL FOR AN ACT

RELATING TO STREET LIGHTING.

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:**

1           SECTION 1. The legislature finds that improperly aimed  
2 lighting can produce unsafe conditions such as glare and deep  
3 shadows and can contribute to light pollution of the night sky.  
4 In contrast, properly directed lighting can save in operation  
5 costs, resulting in a more efficient use of tax dollars to pay  
6 for state-funded light fixtures. The legislature further finds  
7 that properly aimed lighting can minimize light trespass and  
8 pollution, reduce glare, and improve the view of the night sky,  
9 thereby preserving one of Hawaii's natural resources.

10           The legislature also finds that fully shielded lighting  
11 units considerably reduce light pollution. The replacement of  
12 unshielded lighting units with fully shielded lighting units can  
13 result in the substantial lowering of the lamp wattage needed to  
14 maintain an equivalent level of lighting on the ground, thereby  
15 realizing a considerable energy savings to the State.  
16 Therefore, it is in the public interest to require the use of  
17 fully shielded lighting units to the maximum extent possible.



1 The purpose of this Act is to provide a regulatory strategy  
2 for outdoor lighting that will:

3 (1) Curtail and reverse the degradation of the nighttime  
4 environment and the night sky;

5 (2) Minimize glare, obtrusive light, and artificial sky  
6 glow by limiting outdoor lighting that is misdirected,  
7 excessive, or unnecessary;

8 (3) Permit reasonable uses of outdoor lighting for night-  
9 time safety, utility, security, productivity,  
10 enjoyment, and commerce;

11 (4) Conserve energy and resources to the greatest extent  
12 possible; and

13 (5) Preserve the dark night sky for astronomy.

14 SECTION 2. Chapter 264, Hawaii Revised Statutes, is  
15 amended by adding a new part to be appropriately designated and  
16 to read as follows:

17 **"PART . SHIELDED HIGHWAY AND STREET LIGHTING FIXTURES**

18 **§264- Definitions.** As used in this part, unless the  
19 context otherwise requires:

20 "Direct light" means light emitting generally in a downward  
21 direction by a lamp, off a reflector, or through a refractor of  
22 a lighting unit.



1 "Glare" means direct light emitted by a lighting unit that  
2 causes reduced visibility of objects or momentary blindness.

3 "Lamp" means the component of a lighting unit that produces  
4 light.

5 "Light pollution" means a general sky glow caused by the  
6 scattering of artificial light in the atmosphere.

7 "Lighting unit" means a complete lighting unit, including a  
8 lamp or lamps together with the parts designed to distribute the  
9 light, to position and protect the lamps and to connect the  
10 lamps to the power supply.

11 "Lumen" means a specific standard unit of measurement of  
12 luminous flux.

13 "Partially shielded lighting unit" means a lighting unit  
14 that is constructed in such a manner that more than zero but  
15 less than ten per cent of the light emitted, either directly  
16 from the lamp or indirectly by reflection or refraction from any  
17 part of the lighting unit, is projected above the horizontal  
18 plane of the lamp.

19 "Permanent outdoor lighting unit" means any fixed lighting  
20 unit or system of lighting units that is outdoors and that is  
21 intended to be used for seven days or longer.



1 "Roadway lighting" means permanent outdoor lighting units  
2 that are specifically intended to illuminate roadways for  
3 automotive vehicles.

4 **§264- Highway and street lighting control.** (a) The  
5 installation of any new permanent outdoor lighting unit by the  
6 department of transportation for the lighting of highways or  
7 streets shall meet the following conditions:

8 (1) The new lighting unit permits no more than two per  
9 cent of the total lumen in the zone of ninety to one  
10 hundred eighty degrees vertical angle if the rated  
11 output of the lumen is greater than thirty-two hundred  
12 lumens;

13 (2) The minimum lighting allowance specified by an  
14 applicable recommendation or regulation shall be used.  
15 The average minimum allowance adequate for the  
16 intended purpose shall be used if no lighting  
17 recommendation or regulation is applicable, giving  
18 full consideration to energy conservation and glare;  
19 and

20 (3) Adequate consideration shall be given to conserving  
21 energy and minimizing glare and light pollution.

22 (b) Subsection (a) shall not apply:



- 1 (1) Where federal laws or regulations preempt state laws  
2 or rules;
- 3 (2) Where fire, police, rescue, or repair personnel need  
4 light for temporary emergencies or road repair work;
- 5 (3) Where there are special requirements, such as sports  
6 facilities, historic decorative considerations, or  
7 flag or monument lighting. All such lighting shall be  
8 selected and installed to shield the lamp or lamps  
9 from direct view to the greatest extent possible and  
10 to minimize upward lighting and light pollution;
- 11 (4) Where there is substantial nighttime pedestrian  
12 traffic in an urban area and an engineer experienced  
13 in outdoor lighting has deemed it necessary to permit  
14 the installation of partially shielded lighting units;  
15 and
- 16 (5) Where it has been determined that a reasonable safety  
17 and security interest exists that cannot be addressed  
18 by another method without increasing the cost or  
19 reducing the effectiveness of the lighting.

20 **§264- Rules.** The department of transportation shall  
21 adopt rules for the efficient implementation of this part."



1 SECTION 3. Chapter 46, Hawaii Revised Statutes, is amended  
2 by adding a new section to part I to be appropriately designated  
3 and to read as follows:

4 "§46- Highway and street lighting; standards. The  
5 installation of new lighting units for highways and streets  
6 under the control of a county shall be in accordance with  
7 part of chapter 264."

8 SECTION 4. (a) Not later than December 31, 2007, the  
9 department of transportation shall establish an implementation  
10 plan to retrofit all highway and street lighting units  
11 maintained by the department of transportation to the standards  
12 established under this Act. The implementation of the  
13 retrofitting plan shall be completed by December 31, .

14 (b) The department of transportation shall submit a report  
15 containing the implementation plan required under this section  
16 to the legislature not later than twenty days prior to the  
17 convening of the 2008 regular session. The department of  
18 transportation shall also submit an annual report to each  
19 succeeding legislature not later than twenty days prior to the  
20 convening of each subsequent regular session on the status of  
21 retrofitting the highway and street lighting units maintained by  
22 the department of transportation to the standards established



1 under this Act. The department of transportation shall submit a  
2 final report on its completion of the retrofitting process  
3 required under this section no later than twenty days prior to  
4 the convening of the regular session.

5 SECTION 5. New statutory material is underscored.

6 SECTION 6. This Act shall take effect on July 1, 2096.



HB 2264  
HD2

**Report Title:**

Fully Shielded Street Lighting Fixtures; Required

**Description:**

Requires the State to install fully shielded lighting fixtures when installing new highway and street lights. Requires the counties to follow the same lighting standards as the State.  
(HB2264 HD2)

