

**First Regular Session  
Sixty-third General Assembly  
STATE OF COLORADO**

**ENGROSSED**

*This Version Includes All Amendments Adopted  
on Second Reading in the House of Introduction*

LLS NO. 01-0618.01 Christy Chase

**HOUSE BILL 01-1160**

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**HOUSE SPONSORSHIP**

**Romanoff**, Plant, Borodkin, Boyd, Coleman, Larson, Mace, Madden, Ragsdale, Scott, Sinclair, Smith, Stafford, Williams S., and Witwer

**SENATE SPONSORSHIP**

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**House Committees**

Transportation & Energy  
Appropriations

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**A BILL FOR AN ACT**

101     **CONCERNING ENERGY-EFFICIENT STANDARDS FOR CERTAIN NEW**  
102             **OUTDOOR LIGHTING FIXTURES FUNDED BY THE STATE.**

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**Bill Summary**

*(Note: This summary applies to this bill as introduced and does not necessarily reflect any amendments that may be subsequently adopted.)*

Authorizes the use of state funds to install any new outdoor lighting fixture only if:

- For outdoor lighting fixtures with a rated output greater than a certain level of lumens, the new outdoor lighting fixture is a full cutoff luminaire;
- The minimum illuminance adequate for the intended purpose is used with consideration given to nationally recognized standards;

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.

*Capital letters indicate new material to be added to existing statute.  
Dashes through the words indicate deletions from existing statute.*

HOUSE  
Amended 2nd Reading  
February 27, 2001

- Full consideration has been given to energy conservation, glare reduction, the minimization of light trespass and pollution, and the preservation of the natural night environment; and
- For purposes of lighting state highways, the department of transportation determines that the installation of reflective road markers, lines, warning or informational signs, or other methods that do not require the use of artificial lighting will not achieve the purpose of an outdoor lighting fixture.

Makes exceptions when:

- Federal law or regulation preempts the restrictions;
- The outdoor lighting fixture is used temporarily for emergency purposes;
- The outdoor lighting fixture is used temporarily for nighttime work;
- Additional illumination is required for a special event or situation as long as the lighting is installed so as to shield the fixture from direct view and to minimize upward lighting and light pollution;
- The outdoor lighting fixture is used solely to enhance the aesthetic beauty of an object; or
- A compelling safety interest exists that cannot be addressed by another method.

Makes legislative declarations regarding the standards for new outdoor lighting fixtures, including an encouragement for local governments and commercial establishments to comply with the standards.

Defines terms.

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1 *Be it enacted by the General Assembly of the State of Colorado:*

2 **SECTION 1. Legislative declaration.** (1) The general assembly  
3 hereby finds and declares that:

4 (a) Energy costs in the state have been on the rise in recent years  
5 due in part to increased energy consumption and decreased energy  
6 efficiency and conservation.

7 (b) Properly directed lighting can save up to fifty percent in  
8 operation costs, resulting in a more efficient use of tax dollars to pay for  
9 state-funded light fixtures.

1 (c) Improperly aimed lighting can produce unsafe conditions such  
2 as glare and deep shadows and can contribute to light pollution of the  
3 night sky.

4 (d) Properly aimed lighting can minimize light trespass and  
5 pollution, reduce glare, and improve the view of the night sky, thereby  
6 preserving one of Colorado's natural resources.

7 (e) It is the declared policy of the state of Colorado to conserve  
8 energy, reduce glare, and minimize light trespass and pollution, and  
9 requiring state agencies and encouraging local governments and  
10 commercial entities, when installing new outdoor lighting fixtures, to use  
11 certain types of outdoor lighting fixtures that conserve energy, reduce  
12 glare, and minimize light trespass and pollution is necessary to advance  
13 such policy.

14 **SECTION 2.** Article 82 of title 24, Colorado Revised Statutes, is  
15 amended BY THE ADDITION OF A NEW PART to read:

16 **PART 9**

17 **OUTDOOR LIGHTING FIXTURES**

18 **24-82-901. Definitions.** AS USED IN THIS PART 9, UNLESS THE  
19 CONTEXT OTHERWISE REQUIRES:

20 (1) "ENERGY CONSERVATION" MEANS REDUCING ENERGY COSTS  
21 AND RESOURCES USED AND INCLUDES USING A LIGHT WITH LOWER  
22 WATTAGE OR A TIMER SWITCH.

23 (2) "FULL CUTOFF LUMINAIRE" MEANS A LUMINAIRE THAT ALLOWS  
24 NO DIRECT LIGHT EMISSIONS ABOVE A HORIZONTAL PLANE THROUGH THE  
25 LUMINAIRE'S LOWEST LIGHT-EMITTING PART.

26 (3) "GLARE" MEANS DIRECT LIGHT EMITTING FROM A LUMINAIRE  
27 THAT CAUSES REDUCED VISION OR MOMENTARY BLINDNESS.

1 (4) "LIGHT POLLUTION" MEANS THE NIGHT SKY GLOW CAUSED BY  
2 THE SCATTERING OF ARTIFICIAL LIGHT IN THE ATMOSPHERE.

3 (5) "LIGHT TRESPASS" MEANS LIGHT EMITTED BY A LUMINAIRE  
4 THAT SHINES BEYOND THE BOUNDARIES OF THE PROPERTY ON WHICH THE  
5 LUMINAIRE IS LOCATED.

6 (6) "LUMINAIRE" MEANS THE COMPLETE LIGHTING SYSTEM,  
7 INCLUDING THE LAMP AND THE FIXTURE.

8 (7) (a) "OUTDOOR LIGHTING FIXTURE" MEANS ANY TYPE OF FIXED  
9 OR MOVABLE LIGHTING EQUIPMENT THAT IS DESIGNED OR USED FOR  
10 ILLUMINATION OUTDOORS AND INCLUDES:

11 (I) AREA LIGHTING; AND

12 (II) BILLBOARD LIGHTING, STREET LIGHTS, SEARCHLIGHTS, AND  
13 OTHER LIGHTING USED FOR ADVERTISING PURPOSES.

14 (b) "OUTDOOR LIGHTING FIXTURE" DOES NOT INCLUDE LIGHTING  
15 EQUIPMENT THAT IS REQUIRED BY LAW TO BE INSTALLED ON MOTOR  
16 VEHICLES OR LIGHTING REQUIRED FOR THE SAFE OPERATION OF AIRCRAFT  
17 OR WATERCRAFT.

18 (8) "SPECIAL EVENT OR SITUATION" INCLUDES, BUT IS NOT LIMITED  
19 TO, SPORTING EVENTS AND THE ILLUMINATION OF MONUMENTS, HISTORIC  
20 STRUCTURES, OR FLAGS.

21 **24-82-902. Outdoor lighting fixtures funded by the state -**  
22 **standards.** (1) ON OR AFTER JULY 1, 2002, ANY NEW OUTDOOR LIGHTING  
23 FIXTURE INSTALLED BY OR ON BEHALF OF THE STATE USING STATE FUNDS  
24 SHALL MEET AT LEAST THE FOLLOWING REQUIREMENTS:

25 (a) FOR OUTDOOR LIGHTING FIXTURES WITH A RATED OUTPUT  
26 GREATER THAN THREE THOUSAND TWO HUNDRED LUMENS, THE FIXTURE IS  
27 A FULL CUTOFF LUMINAIRE;

1 (b) THE MINIMUM ILLUMINANCE ADEQUATE FOR THE INTENDED  
2 PURPOSE IS USED WITH CONSIDERATION GIVEN TO [REDACTED] RECOGNIZED  
3 STANDARDS, INCLUDING, BUT NOT LIMITED TO, RECOMMENDED PRACTICES  
4 ADOPTED BY THE ILLUMINATING ENGINEERING SOCIETY OF NORTH  
5 AMERICA (IESNA);

6 (c) FULL CONSIDERATION HAS BEEN GIVEN TO ENERGY  
7 CONSERVATION, GLARE REDUCTION, THE MINIMIZATION OF LIGHT  
8 POLLUTION, AND THE PRESERVATION OF THE NATURAL NIGHT  
9 ENVIRONMENT; AND

10 (d) FOR PURPOSES OF LIGHTING A DESIGNATED HIGHWAY IN THE  
11 STATE HIGHWAY SYSTEM, THE DEPARTMENT OF TRANSPORTATION  
12 DETERMINES THAT THE PURPOSE OF THE OUTDOOR LIGHTING FIXTURE  
13 CANNOT BE ACHIEVED BY THE INSTALLATION OF REFLECTIVE ROAD  
14 MARKERS, LINES, WARNING OR INFORMATIONAL SIGNS, OR OTHER  
15 EFFECTIVE METHODS THAT DO NOT REQUIRE THE USE OF ARTIFICIAL LIGHT.

16 (2) THE PROVISIONS OF SUBSECTION (1) OF THIS SECTION SHALL  
17 NOT APPLY IF:

18 (a) A FEDERAL LAW OR REGULATION PREEMPTS STATE LAW;

19 (b) THE OUTDOOR LIGHTING FIXTURE IS USED ON A TEMPORARY  
20 BASIS TO PROVIDE ILLUMINATION FOR EMERGENCY PERSONNEL IN AN  
21 EMERGENCY SITUATION;

22 (c) THE OUTDOOR LIGHTING FIXTURE IS USED ON A TEMPORARY  
23 BASIS FOR NIGHTTIME WORK;

24 (d) ADDITIONAL ILLUMINATION IS REQUIRED FOR A SPECIAL EVENT  
25 OR SITUATION; EXCEPT THAT ANY ADDITIONAL ILLUMINATION REQUIRED  
26 FOR A SPECIAL EVENT OR SITUATION SHALL BE INSTALLED SO AS TO SHIELD  
27 THE OUTDOOR LIGHTING FIXTURES FROM DIRECT VIEW AND TO MINIMIZE

1 UPWARD LIGHTING AND LIGHT POLLUTION;

2 (e) THE OUTDOOR LIGHTING FIXTURE IS USED SOLELY TO ENHANCE  
3 THE AESTHETIC BEAUTY OF AN OBJECT; OR

4 (f) A COMPELLING SAFETY INTEREST EXISTS THAT CANNOT BE  
5 ADDRESSED BY ANOTHER METHOD.

6 (3) THE PROVISIONS OF SUBSECTION (1) OF THIS SECTION SHALL  
7 SERVE ONLY AS GUIDELINES FOR AND SHALL NOT BE BINDING ON ANY STATE  
8 PRISON FACILITY OR ANY PRIVATE CONTRACT PRISON IN THE STATE.

9 **SECTION 3. Effective date.** This act shall take effect at 12:01  
10 a.m. on the day following the expiration of the ninety-day period after  
11 final adjournment of the general assembly that is allowed for submitting  
12 a referendum petition pursuant to article V, section 1 (3) of the state  
13 constitution; except that, if a referendum petition is filed against this act  
14 or an item, section, or part of this act within such period, then the act,  
15 item, section, or part, if approved by the people, shall take effect on the  
16 date of the official declaration of the vote thereon by proclamation of the  
17 governor.