

SENATE No.

The Commonwealth of Massachusetts

PRESENTED BY:

Cynthia Stone Creem

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act to improve outdoor lighting, conserve energy, and increase dark-sky visibility.

PETITION OF:

NAME:

Cynthia Stone Creem

DISTRICT/ADDRESS:

Norfolk and Middlesex

SENATE No.

[Pin Slip]

[SIMILAR MATTER FILED IN PREVIOUS SESSION
SEE SENATE, NO. 2102 OF 2023-2024.]

The Commonwealth of Massachusetts

In the One Hundred and Ninety-Fourth General Court
(2025-2026)

An Act to improve outdoor lighting, conserve energy, and increase dark-sky visibility.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 SECTION 1. Chapter 85 of the General Laws is hereby amended by adding the following
2 section:

3 Section 38. (a) As used in this section, the following words shall have the following
4 meanings unless the context clearly requires otherwise:

5 “Correlated color temperature” or “CCT”, the apparent hue of the light emitted by a
6 fixture, expressed in kelvin

7 (K).

8 “Façade lighting”, illumination of exterior surfaces of buildings for the enhancement of
9 their nighttime appearance, achieved by shining light onto building surfaces, or by internal or

10 external illumination of translucent building surfaces, or with fixtures solely for decorative
11 function.

12 “Fixture”, a complete lighting unit, including a light source together with the parts
13 designed to distribute the light, position and protect the light source, and connect the light source
14 to the power supply.

15 “Fully shielded fixture”, a fixture that in its mounted position has an uplight value of U0
16 as defined by the standards of the Illuminating Engineering Society or that allows no direct light
17 from the fixture above a horizontal plane through the fixture's lowest light-emitting part, in its
18 mounted position.

19 “Glare”, light emitted by a fixture that causes visual discomfort or reduced visibility.

20 “Illuminance”, the luminous power incident per unit area of a surface.

21 “Light trespass”, light that falls beyond the property it is intended to illuminate.

22 “Lumen”, a standard unit of measurement of the quantity of light emitted from a source
23 of light.

24 “Municipal funds”, bond revenues or money appropriated or allocated by the governing
25 body of a town or city

26 within the commonwealth.

27 “Ornamental lighting”, a lighting fixture that has a historical or decorative appearance
28 and that serves a decorative function in addition to serving to light a roadway, parking lot,
29 walkway, plaza, landscaping, or other area.

30 “Parking-lot lighting”, a permanent outdoor fixture specifically intended to illuminate an
31 uncovered
32 vehicle parking area.

33 “Permanent outdoor fixture”, a fixture for use in an exterior environment installed with
34 mounting not intended
35 for relocation.

36 “Roadway lighting”, a permanent outdoor fixture specifically intended to illuminate a
37 public roadway.

38 “Sky glow”, scattered light in the atmosphere that is caused by light directed upward or
39 sideways from fixtures, reducing an individual’s ability to view the natural night sky.

40 “State funds”, bond revenues or money appropriated or allocated by the general court.

41 “Uplight,” direct light emitted above a horizontal plane through the fixture’s lowest light-
42 emitting part in its
43 mounted position.

44 (b) Not later than January 1, 2026, the Department of Energy Resources, in consultation
45 with the Massachusetts Department of Transportation and the Executive Office of Public Safety
46 and Security, shall promulgate regulations with the intent of reducing energy waste and
47 minimizing light pollution to the greatest extent possible and therefore to ensure that state or
48 municipal funds are not used to install, to cause to be installed, or to operate a new permanent
49 outdoor fixture, unless the following conditions are met:

50 (i) Fixtures used for roadway lighting or parking-lot lighting, whether mounted to poles,
51 buildings or other structures, shall be fully shielded unless they are ornamental lighting fixtures,
52 or are fixtures used to light tunnels or roadway underpasses;

53 (ii) Ornamental lighting fixtures shall comply with a limit on lumens of uplight
54 established in the regulations;

55 (iii) Fixtures used for roadway lighting shall not be more numerous than is necessary for
56 adequate vehicular and pedestrian safety, as determined by the regulations and given due
57 consideration to the current lighting needs criteria published by the Federal Highway
58 Administration and the Illuminating Engineering Society;

59 (iv) Building-mounted fixtures shall be fully shielded unless they are façade lighting
60 fixtures;

61 (v) Façade lighting fixtures shall be selected and installed to direct the light onto the
62 intended target, and shall be shielded, so that glare, sky glow, and light trespass are minimized;

63 (vi) Fixtures used to light historic structures, flags, monuments, statuary and works of art
64 shall be selected and installed to direct the light onto the intended target, and shall be shielded, so
65 that glare, sky glow, and light trespass are minimized;

66 (vii) Fixtures used to light athletic playing areas shall be selected and installed so as to
67 minimize glare, light trespass and sky glow outside the athletic playing area;

68 (viii) Fixtures installed for any purpose shall have a correlated color temperature that is
69 not greater than a limit established in the regulations; provided, that the limit shall not exceed
70 3000 K; and provided further, that said regulations shall include exemptions from the limit where

71 a public safety need is demonstrated, where the fixtures are used exclusively for the decorative
72 illumination through color of certain building façade or landscape features, or where the fixtures
73 are used to illuminate athletic playing areas;

74 (ix) Lighting installed for any purpose shall provide maintained illuminance at levels that
75 are no greater than those required for the intended purpose, as established in the regulations and
76 given due consideration to lighting industry standards and practices, unless a demonstrated and
77 verified need exists for higher levels to ensure safety or security; provided, that if a municipal or
78 county ordinance or regulation specifies lower illuminance levels, the illuminance level required
79 for the intended purpose by the municipal or county ordinance or regulation shall be used.

80 (c) This section shall not apply: (i) if it is preempted by federal law; (ii) if the outdoor
81 lighting fixture is used temporarily for emergency, repair, construction or similar activities; (iii)
82 to navigational and other lighting systems necessary for aviation and nautical safety; (iv) if a
83 compelling and bona fide safety or security need exists that cannot be addressed by another
84 reasonable method; (v) to the replacement of a previously installed permanent outdoor fixture
85 that is destroyed, damaged or inoperative, has experienced electrical failure due to failed
86 components, or requires standard maintenance; (vi) to festoon lighting; as defined in the NFPA
87 70 National Electrical Code; or (vii) to fixtures installed under any specific exemptions as
88 codified in the regulations established under Section 38 (b).

89 SECTION 2. The Massachusetts Department of Transportation shall review and issue a
90 report on existing roadway lighting and lighting operational costs. The report shall include a
91 review of standards and other criteria for roadway lighting and an analysis of lighting operational
92 costs; a review of roadway lighting's impact on human health, human safety, and environmental

93 impact; actions taken by the department to comply with current standards; procedures and
94 accepted best practices relative to roadway lighting; and recommendations for reducing lighting
95 operational costs through the replacement of existing high-wattage, unshielded fixtures with
96 lower-wattage, fully shielded fixtures and the replacement of unnecessary roadway lighting with
97 the installation of passive safety measures. The department shall issue its report to the
98 department of energy resources and the clerks of senate and the house of representatives not later
99 than January 1, 2026.

100 SECTION 3. Not later than January 1, 2026, the Department of Public Utilities shall,
101 subject to its ratemaking authority, develop a rate for unmetered roadway or parking-lot lighting
102 fixtures utilizing less than 25 watts of electricity.