

Pedestrian Luminaires, LED, Post-Top, Traditional



1. Scope

This standard covers the requirements for light-emitting diode (LED), post-top, traditional, pedestrian luminaires.

This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No.	Color	Description
014471	Dark green	Marina post-top LED luminaire
014472	Jet black	Marina post-top LED luminaire
014473	Black	Promenade post-top LED luminaire
014474	Black	Photocontrol housing for Promenade

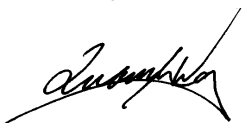
2. Application

Traditional, LED, pedestrian luminaires are:

- Installed in City-designated areas and City Light-designated streetlight districts.
- Post-top mounted on streetlight poles with a 4-in pole-top outer diameter.

Stock Nos. 014471 and 014472 are equipped with a built-in slipfitter with tool-less door to house a standard, three-pin photocontrol.

The photocontrol housing for the Promenade (Stock No. 014474) is required for installation with the Promenade post-top LED luminaire (Stock No. 014473).



3. Industry Standards

Traditional, LED, pedestrian luminaires shall meet the applicable requirements of the following industry standards:

ANSI/NEMA/ANSLG C78.377-2008; Specifications for the Chromaticity of Solid State Lighting (SSL) Products

ANSI C136.10-2010; Locking-Type Photocontrol Devices and Mating Receptacles.

ANSI C136.22; American National Standard for Roadway Lighting Equipment – Internal Labeling of Luminaires

ANSI C136.31-2010; American National Standard for Roadway Lighting Equipment – Luminaire Vibration

ANSI C136.37-2011; American National Standard for Roadway and Area Lighting Equipment – Solid State Light Sources Used in Roadway and Area Lighting

ANSI C136.41-2013; Dimming Control between an External Locking Type Photocontrol and Ballast or Driver

ASTM B117-09; Standard Practice for Operating Salt Spray (Fog) Apparatus

ASTM D1654-08; Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments

ASTM D523-08; Standard Test Method for Specular Gloss

ASTM G154-06; Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials

C136.15-2011 (or latest); American National Standard for Roadway and Area Lighting Equipment – Internal Labeling of Luminaires

C136.22-2004 (R2009); American National Standard for Roadway and Area Lighting Equipment – Ingress Protection (Resistance to Dust, Solid Objects and Moisture) for Luminaire Enclosures

Code of Federal Regulations (CFR), Title 47, Part 15; Radio Frequency Devices

Federal Trade Commission (FTC) Green Guides; 16 CFR Part 260; Guides for the Use of Environmental Marketing

IEC 60529; Degrees of protection provided by enclosures (IP Code), consolidated edition

IEEE C62.41.2-2002; IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC Power Circuits

IES LM-79-08; Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

IES LM-80-08; Approved Method: Measuring Lumen Maintenance of LED Lighting Sources

IESNA TM-15-11 (revised); Luminaire Classification System for Outdoor Luminaires

Restriction of Hazardous Substances Directive 2002/95/EC, (RoHS 1)

UL 1598; Luminaires; UL

4. Requirements

4.1 Luminaire Performance

Operating temperature, range	
°C	-20 to +50
°F	-4 to +122
Correlated Color Temperature (CCT), nominal, °K, per ANSI/NEMA/ANSI C78.377	3000 ± 300
Color rendering index (CRI), minimum	70
Lumen depreciation of LED light sources per IES LM-80, hours, minimum	60,000
Light distribution, IES	Type 5
Luminaire efficacy, lumens/watt, minimum, per IES LM-79, Section 11.0	75
Off-state power consumption, W, maximum	0.5

4.2 Power Supply/Driver

Input voltage, functional range, 60 Hz, Vac	120 to 277
Dimming control signal interface operative range, Vdc	0 to 10
Power factor, minimum	90

4.3 Construction

4.3.1 General

Luminaires shall be designed and constructed to meet the requirements of ANSI C136.37.

Luminaire features conforming to ANSI C136.37 shall include, but not be limited to the following: mounting provisions, latching and hinging, terminal blocks, dimming, ingress protection, wiring and grounding, and photocontrol receptacle.

Luminaires shall be RoHS (European Union Directive 2002/95/ED for Restriction of Hazardous Substances) compliant. Luminaire shall have less than the maximum concentration values of the following RoHS-restricted substances:

- Mercury (Hg)
- Cadmium (Cd)
- Chromium VI (Cr +6)
- Polybrominated biphenyl (PBB)
- Polybrominated diphenyl ether (PBDE)
- Lead (Pb)

4.3.2 Fixture Housing

Luminaire weight (lb), maximum	38
Effective projected area (EPA) (ft ²) maximum	1.53
External housing, ingress protection per IEC 60529	IP65
Optical chamber, ingress protection per IEC 60529	IP66

Luminaire housing shall be cast aluminum and allow for tool-less entry.

Photocontrol receptacle shall be located at the base of the luminaire and allow for tool-less entry.

Luminaire cooling system shall consist of a passive heat sink without fans, pumps, or liquids.

All fasteners shall be stainless steel.

All polycarbonate components shall be UV stabilized.

4.3.3 Electrical

Power supply/driver shall be UL Recognized for dry and damp locations.

All other electrical components shall be UL Listed or UL Recognized for wet locations.

Luminaire photocontrol receptacle shall be designed and constructed to accept a standard plug type, locking, three-pole, three-wire, streetlight photocontrol, and shall be located at the base of the fixture.

Photocontrol receptacle shall also be configured with two conductive pads as defined in ANSI C136.41-2013. The use of four conductive pads is optional.

The two conductive pads shall be connected to the 0-10 Vdc control signal interface on the power supply/driver with quick-disconnect connectors.

Rotational adjustment of the photocontrol shall be tool-less.

Luminaire circuitry shall include quick connect/disconnects to allow easy separation and removal of driver and power door.

A three-pole terminal block capable of accepting #14 to #6 AWG wire shall be mounted to the housing inside the electrical compartment.

Terminal block shall be capable of operation with a standard #2 flat blade screwdriver.

Luminaires shall meet the requirements of Title 47 of the Code of Federal Regulations (CFR), Part 15 – Radio Frequency Devices.

4.3.4 Mounting

Luminaires shall be designed for post-top mounting onto a pole with a top diameter of 4 in.

Tenon mounting area opening shall be limited to 1/4-in over the range of tenon sizes and leveling adjustment to prevent entrance of wildlife as specified in ANSI C136.37.

4.3.5 Lens

Lens shall be one-piece and seamless.

Lens shall be lightly diffused and resistant to ultraviolet light deterioration.

Lens shall be smooth on the exterior to discourage unwanted growth.

4.4 Finish and Color

Finish on housing shall be a powder coating with a minimum thickness of 100 microns and shall meet salt spray requirements of ASTM B 117 and the humidity resistance requirements of ASTM D 2247.

Color choices for fixtures are standard. See Section 11.

5. Detailed Requirements

Physical and electrical details for specific luminaires are provided below.

Marina Post-Top Luminaire, Stock Nos. 014471 and 014472

System power consumption (W)	45
Weight (lb)	32
EPA (ft ²)	2.12
Tenon mounting requirements, outside diameter by length (in)	4 x 3
Dimensions, height by width (in)	37.75 x 29.5



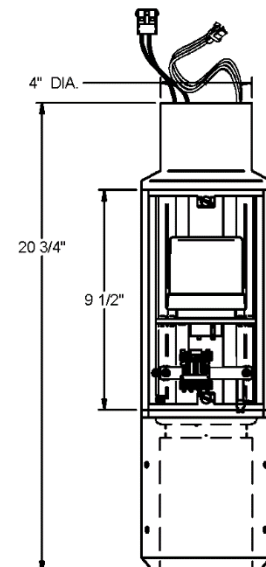
Promenade Post-Top Luminaire, Stock No. 014473

System power consumption (W)	72
Weight (lb)	38
EPA (ft ²)	1.53
Tenon mounting requirements, outside diameter by length (in)	4 x 4
Dimensions, height by width (in)	39 x 19



Photocontrol Housing for Promenade, Stock No. 014474

Tenon mounting requirements, outside diameter by length (in)	4 x 4
Dimensions, height by width (in)	20-3/4 x 5-5/8



6. Testing

Test data that establishes compliance with the requirements of this material standard shall be provided upon request.

Certificate of RoHS (European Union Directive 2002/95/EC for Restriction of Hazardous Substances) compliance shall be provided upon request.

7. Design Changes

The manufacturer shall inform Seattle City Light in writing of all design changes that could affect the product's understood or published capabilities.

8. Marking

8.1 Internal Labeling

A readily visible label shall be permanently affixed to the inside surface of each luminaire housing.

The internal label shall meet the requirements of ANSI C136.22.

The internal label shall include, but not be limited to, the following information:

- Manufacturer's name and catalog number
- Month and year of manufacture
- Line input voltage
- Frequency if other than 60 Hz
- Driver type, if applicable (may be on driver if readily visible)
- Photocontrol voltage if different from line input voltage
- Lamp type, wattage, and voltage, if applicable (may be on driver if readily visible)
- Descriptive wiring diagram showing input terminals, ballast, capacitors, starting aid, photocontrol receptacle, lamp, and the like, as necessary
- Plant location
- Input power consumption
- Driver output current
- Driver output adjustment
- IEC IP rating
- Correlated color temperature (CCT)
- IES light distribution type
- IESNA TM-15 BUG ratings
- Serial number

8.2 Barcode

A barcode label shall be provided as specified in the purchase order.

8.3 Component Identification

All UL Listed components shall be labeled or recognized as such.

9. Packaging

Luminaires shall be individually packaged to prevent damage during shipping, inside storage, and casual handling prior to installation.

Each package shall be legibly marked with:

- Manufacturer name
- Manufacturer catalog number
- Product description (including color)
- Date of manufacture (month and year)
- Seattle City Light stock number
- Seattle City Light purchase order number

Accessories shall be individually packaged to prevent damage during shipping, inside storage, and casual handling prior to installation.

Each package shall be legibly marked with:

- Product description
- Seattle City Light stock number

10. Issuance

EA

11. Approved Manufacturers

11.1 Stock No. 014471

Manufacturer:	Cyclone Lighting
Catalog Number:	CN11T4-GCPP-SKY-5-34W-3K-120-GCN04-PTDR-DG-TX-CP4306
<i>where:</i>	
CN11T4 =	luminaire
GCPP =	globe, GCPP (partially obscured non-diffused polycarbonate 75% diffusing)
SKY-5 =	optic, type 5hot
34W =	watt, 34W
3K =	color temperature, 3K
120 =	voltage, 120-277 Vac
GCN04 =	guard, GCN04
PTDR =	option, twist-lock dimmable photocontrol receptacle with seven pins
DG =	color, dark green
TX =	finish, textured
CP4306 =	Cyclone project, 4306

11.2 Stock No. 014472

Manufacturer:	Cyclone Lighting
Catalog Number:	CN11T4-GCPP-SKY-5-34W-3K-120-GCN04-PTDR-BK-TX-CP4306
<i>where:</i>	
CN11T4 =	luminaire
GCPP =	globe, GCPP (partially obscured non-diffused polycarbonate 75% diffusing)
SKY-5 =	optic, type 5hot
34W =	watt, 34W
3K =	color temperature, 3K
120 =	voltage, 120-277 Vac
GCN04 =	guard, GCN04
PTDR =	option, twist-lock dimmable photocontrol receptacle with seven pins
BK =	color, jet black
TX =	finish, textured
CP4306 =	Cyclone project, 4306

11.3 Stock No. 014473

Manufacturer:	Architectural Area Lighting
Catalog Number:	20A-1491-PRMN2-72L-335-3K7-5W-DL-CC-RAL9005TX-STND_MNT-UNV-MOD-WIRE_LEADS
<i>where:</i>	
20A-1491 =	AAL Drawing #, modifications, quick connectors
PRMN2 =	model, Promenade 2 series
72L =	LED quantity, 72 LEDs
335 =	drive current, 335 mA, 6983 Lumens
3K7 =	CCT/CRI, 3000K/70 CRI
5W =	distribution, type 5 wide
DL =	lens, lightly diffused
CC-RAL9005TX =	custom color finish, textured black, RAL9005TX
STND_MNT =	mounting, standard mounting slip over 4-inch pole
UNV =	voltage, 120-277 V
MOD-WIRE_LEADS =	modifications, quick connectors

11.4 Stock No. 014474

Manufacturer:	Architectural Area Lighting
Catalog Number:	20A-1491-PCA-UF-RAL9005TX
<i>where:</i>	
20A-1491 =	AAL Drawing #, modifications, quick connectors
PCA-UF =	model, PCA-UF
(15A-1103) =	drawing number, 15A-1103
RAL9005TX =	finish, textured black, RAL 9005TX

12. Sources

Architectural Area Lighting, PRMN2 Decorative & Post Top Specifications, Rev 11/02/2020

Architectural Area Lighting; drawing 20A-1491; November 23, 2020

Borek, Tom; Seattle City Light Streetlight Engineer and subject matter expert of 5723.19

Chao, Yaochiem; Seattle City Light Standards Engineer and originator of 5723.19

Cyclone Lighting; file CN11T4-CP4306-SEATTLE CITY LIGHT MATERIAL STANDARD 5723.19.DOC, July 24, 2018

Freed, Ken; Cyclone Lighting Manufacturer Representative with Lighting Group Northwest and subject matter expert for 5723.19

Li, Jesse; Seattle City Light Streetlight Engineer and subject matter expert for 5723.19