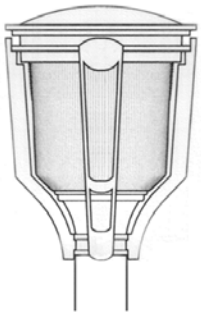
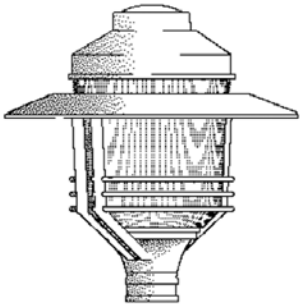
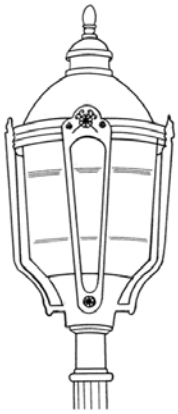
Decorative Luminaires, High Pressure Sodium

Not for new construction. For maintenance of existing facilities only.


57233Z14.tif
Z14


57233Z15.tif
Z15


57233Z40.tif
Z40


57233Z47A.tif
Z47A

1. Scope

This standard covers the requirements for the high-pressure sodium (HPS), pedestrian walkway luminaires.

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

Stock No.	Description
012380	Zenith Z14 HPS Luminaire
011967	Zenith Z15 HPS Luminaire
010398	Nostalgia Z40 HPS Luminaire
010399	Nostalgia Z47A HPS Luminaire

2. Application

HPS pedestrian walkway luminaires are installed in City-designated areas and SCL-designated streetlight districts.

HPS pedestrian walkway luminaires are supported by the following decorative streetlight poles of matching finish:

Stock No.	Mounting Height (ft)	Shaft	Color
013422	14	Fluted	Black
013423	14	Fluted	Light gray
013424	14	Fluted	Dark green
013425	14	Round	Black
013426	14	Round	Light gray
013427	14	Round	Dark green

3. Requirements

3.1 Luminaire Type

HPS luminaires shall be of the post top outdoor type, utilizing lamps in the vertical position.

3.2 Housing

Housing shall be aluminum or polymer suitable for wet locations and resistant to ultraviolet light deterioration. The base shall be a cast aluminum tenon-adapter designed to mount on a pole with a 3-in diameter top.

3.3 Lens

Lens shall be acrylic and resistant to ultraviolet light deterioration.

3.4 Hardware Fastening Material

All visible hardware shall be stainless steel.

3.5 Sockets

All HPS sockets shall be porcelain medium base pulse rated 4 kV and have a spring-loaded center contact. Sockets shall be factory prewired with a disconnect plug for the ballast module.

3.6 Electrical Module

All electrical components shall be UL Recognized, for wet locations and shall be mounted on a single plate and factory prewired with disconnect plugs. Ballasts shall be 120 volt CWA type with a minimum starting temperature of -30 degrees F. Ballasts shall be completely wired to the terminal board and lamp socket.

3.7 Photocell Control

Luminaire shall be supplied with an internal photocell in the base of the fixture.

3.8 Terminal Block

A terminal block shall be mounted to the housing inside the electrical compartment. The block shall accept #14 to #4 AWG wire and shall be factory prewired to electrical module disconnect plug.

3.9 Luminaire Light Distribution Patterns

Luminaire light distribution patterns shall conform to the IESNA classification system for Type III. Distribution shall be free from striations and hot spots. Photometric performance will be subject to testing by the Washington State Material Testing Laboratory to ensure conformance with these specifications and the photometric data submitted. A sample luminaire shall be submitted for testing when requested by the SCL department.

3.10 Luminaire Marking

Luminaires shall have an ANSI-approved decal (three inches square) attached to the housing so as to be readily visible from the ground, indicating lamp type by color code (e.g., gold for "high-pressure sodium"), and lamp wattage by numerical code.

3.11 Finish

The 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.

3.12 Color

The color of the pole shall be specified by the streetlight engineer and stated on the purchase order. Seattle City Light uses the following color choices:

3.13 Nameplate

The luminaire shall have a nameplate identifying wattage, voltage, manufacturer, and date of manufacture.

3.14 Packaging

The luminaire shall be packaged in accordance with the manufacturer's commercial practice to ensure safe delivery without damage.

4. Approved Manufacturers

4.1 Stock No. 012380

Manufacturer:	**Lumec**
Catalog Number:	Z14-70-HPS-3-120-SFPH4-PH8-xxxxx
where:	
Z14 =	luminaire style, ZED Zenith Z14
70 =	wattage, 70 watts
HPS =	lamp, HPS
3 =	optical system, type III
120 =	voltage, 120 volts
SFPH4 =	adaptor, utility slip-fitter for photocell
PH8 =	photocell receptacle, twist-lock photocell
xxxxx =	finish (See Section 3.12):
	GN8TX = textured dark green
	GYTX = textured grey
	BKTX = textured black
	BRTX = textured bronze

4.2 Stock No. 011967

Manufacturer:	**Lumec**
Catalog Number:	Z15-70-HPS-3-120-SFPH4-PH8-xxxxx
where:	
Z15 =	luminaire style, ZED Zenith Z15
70 =	wattage, 70 watts
HPS =	lamp, HPS
3 =	optical system, type III
120 =	voltage, 120 volts
SFPH4 =	adaptor, utility slip-fitter for photocell
PH8 =	photocell receptacle, twist-lock photocell
xxxxx =	finish (See Section 3.12):
	GN8TX = textured dark green
	GYTX = textured grey
	BKTX = textured black
	BRTX = textured bronze

4.3 Stock No. 010398

Manufacturer:	**Lumec**
Catalog Number:	Z40-70-HPS-3-120-SFPH4-PH8-xxxxx
where:	
Z40 =	luminaire style, ZED Nostalgia Z40
70 =	wattage, 70 watts
HPS =	lamp, HPS
3 =	optical system, type III
120 =	voltage, 120 volts
SFPH4 =	adaptor, utility slip-fitter for photocell
PH8 =	photocell receptacle, twist-lock photocell
xxxxx =	finish (See Section 3.12):
	GN8TX = textured dark green
	GYTX = textured grey
	BKTX = textured black
	BRTX = textured bronze

4.4 Stock No. 010399

Manufacturer:	**Lumec**
Catalog Number:	Z47A-70-HPS-3-120-SFPH4-PH8-xxxxx
where:	
Z47A =	luminaire style, ZED Nostalgia Z47A
70 =	wattage, 70 watts
HPS =	lamp, HPS
3 =	optical system, type III
120 =	voltage, 120 volts
SFPH4 =	adaptor, utility slip-fitter for photocell
PH8 =	photocell receptacle, twist-lock photocell
xxxxx =	finish (See Section 3.12)
	GN8TX = textured dark green
	GYTX = textured grey
	BKTX = textured black
	BRTX = textured bronze

5. References

American National Standards Institute (ANSI) standard C136.2; "For Roadway and Area Lighting Equipment - Luminaire Voltage Classification," 2004

American Society for Testing and Materials (ASTM) standard B 117; "Standard Practice for Operating Salt Spray (Fog) Apparatus"

American Society for Testing and Materials (ASTM) standard D 2247; "Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity"

Chao, Yaochiem; SCL standards engineer and subject matter expert for 5723.30 (yaochiem.chao@seattle.gov)

Edison Electric Institute (EEI) document TDJ 148 (Refers to two-wire hookup only; the three-wire hookup referred to in TDJ 148 is not used.)

Illuminating Engineering Society of North America (IESNA) standard LM 31; "Method for Photometric Testing of Roadway Luminaires Using Incandescent Filament and High Intensity Discharge Lamps," 1995

IESNA Lighting Handbook, IES HB-10-11, Tenth Edition, Illuminating Engineering Society, New York, NY, 2011

Pompeo, Brenda; SCL engineer and subject matter expert for 5723.30 (brenda.pompeo@seattle.gov)

SCL Material Standard 5723.3 (canceled); "Decorative Luminaire, High Pressure Sodium," February 2014