

LAMP, HIGH PRESSURE SODIUM, 30,000 HOUR, MOGUL BASE**1. Scope**

This material standard covers the requirements for extended life, single-ended, single arc tube, high pressure sodium, streetlight lamps with mogul bases. High pressure sodium (HPS) lamps are a subcategory of high intensity discharge (HID) lamps.

This material standard applies to the following Seattle City Light Stock Numbers:

Stock Number	Wattage
013014	50
013015	70
012743	100
013016	150
013017	200
012744	250
012745	400

2. Application

Lamps are for installation in open or enclosed, high pressure sodium streetlight luminaires with mogul lamp holders. Lamps have no restriction on burning position.

Extended life lamps are well-suited for group re-lamping.

Two-hundred watt lamps, Stock Number 013017, are used in the Battery Street Tunnel.

3. Industry Standards

Lamps shall meet the applicable requirements of the following industry standards:

ANSI C78.42-2004 – American National Standard for Electric Lamps: High-Pressure Sodium Lamps

4. Construction

Lamps shall meet the applicable requirements of ANSI C78.42 and Table 4.1 of this material standard with the following clarifications:

Lamps shall be of single arc tube design.

Lamps shall be capable of operation in all positions.

Lamp bases shall be E39 mogul screw.

Lamp base connections shall be welded.

Lamps shall have an average rated life of 30,000 hours, where average rated life is defined as:

The total operation hours at which 65% of any group of lamps is still operating. The average life of a lamp shall be based on vertical operation (unless otherwise noted) of representative lamps operated under controlled conditions of up to 15 hours per start.

Lamp color rendering index (CRI) shall be 21 or greater.

Lamps shall be compliant with the Toxicity Characteristic Leaching Procedure (TCLP) test specified in the Resource Conservation and Recovery Act (RCRA) of 1990.

Lamps shall extinguish and remain off at end-of-life.

standards coordinator	standards manager	unit director
 John Shipek	 John Shipek	 Pamela S. Johnson

MATERIAL STANDARD

Lamp, High Pressure Sodium, 30,000 Hour, Mogul Base

standard number: **5722.45**

superseding: February 19, 2010

effective date: September 16, 2010

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4. Construction, continued**Table 4.1**

Stock Number	Wattage	ANSI Designation		Minimum Lumen Output		Minimum Correlated Color Temp., K	Glass Blub Finish
		Lamp	Blub	Initial	Mean		
013014	50	S68	ED-23.5 or ET-23.5	4000	3600	1900	clear
013015	70	S62	ED-23.5 or ET-23.5	6300	5600	1900	clear
012743	100	S54/O-NV	ED-23.5 or ET-23.5	9400	8000	2000	clear
013016	150	S55	ED-23.5 or ET-23.5	16000	13500	2100	clear
013017	200	S66	ED-18 or ET-18	22000	19800	2100	clear
012744	250	S50/O-EJ	ED-18 or ET-18	27000	24300	2100	clear
012745	400	S51/O-EJ	ED-18 or ET-18	50000	45000	2100	clear

5. Tests and Test Reports

Lamp test data that establishes compliance with the requirements of ANSI C78.42 and this material standard shall be provided upon request.

6. Packaging

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

Quantity of lamps per shipping carton shall be as mutually agreed upon between supplier and Seattle City Light.

Lamps shall be shipped in whole cartons only.

7. Issuance

Stock Unit: EA

8. Approved Manufacturers

Stock Number	Wattage	OSRAM/Sylvania (Lumalux PLUS ECO)		Phillips (Ceramalux ALTO)	
		Product No.	Ordering Abbreviation	Product No.	Ordering Code
013014	50	67607	LU50/PLUS/ECO	na	na
013015	70	67497	LU70/PLUS/ECO	147397	C70S62/ALTO NC HPS
012743	100	67559	LU100/PLUS/ECO	147405	C100S54/ALTO NC HPS
013016	150	67949	LU150/PLUS/ECO	147413	C150S55/ALTO NC HPS
013017	200	67495	LU200/PLUS/ECO	157255	C200S66/ALTO NC HPS
012744	250	67572	LU250/PLUS/ECO	147421	C250S50/ALTO NC HPS
012745	400	67312	LU400/PLUS/ECO	147439	C400S51/ALTO NC HPS

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9. References

5722.40 (canceled); "Lamp, High Pressure Sodium, 24,000 Hour, Mogul Base"; Material Standard; SCL

Shipek, John; SCL Standards Engineer, subject matter expert and originator of 5722.45
(john.shipek@seattle.gov)

Smalley, Ed; SCL Standards Engineer, subject matter expert (ed.smalley@seattle.gov)

Sylvania Lamp and Ballast Product Catalog 2004
(CATALOG04); Sylvania; 2004

Sylvania PIB HID 018R12; 11/09