

UltraViolet Light Source

Operation Manual

250 Watt Spot
250 Watt Flood
400 Watt Flood



NOCTURN

A Unit of Strong Entertainment Lighting
a division of Ballantyne of Omaha, Inc.

4350 McKinley Street Omaha, Nebraska 68112 USA
Telephone: 402/453-4444 Toll Free Telephone in U.S.: 800/262-5016 Fax: 402/453-7238
E-Mail: info@nocturnuv.com

With the purchase of this NOCTURN UltraViolet Light Source, you are assured of the most flexible and best performing ultraviolet fixture in its class.

The ultraviolet light source is a high-intensity lighting system for indoor and outdoor use. The fixture is used to evenly illuminate fluorescent materials in many environments, especially when an extremely wide field or projection across great distances is necessary. The 400 watt fixture can be manually operated or addressed for use with standard DMX-512 protocol lighting control. The lighting fixture has been designed for quiet and efficient operation, maximum lamp life and easy field serviceability.

IMPORTANT

Before attempting to operate this light source, read the entire operation manual. Improper set-up, use or servicing may cause damage to the fixture and/or lamp that can void any applicable warranty!

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I. INTRODUCTION

The NOCTURN UltraViolet Light Source is intended to provide a source of illumination for fluorescent materials. The fixture can be used in a variety of applications where high intensity fluorescent illumination is desirable, such as entertainment, special effects, industrial, and scientific uses.

Caution/ Warning Statements

The following cautions and warnings apply to the use, maintenance and care of the UV light source.

- This operation manual should be read and fully understood to enhance operator safety.
- Disconnect the power cord prior to attempting any servicing to the fixture. Always verify the cord is unplugged prior to opening the front cover for lamp replacement or servicing the fixture.
- **DO NOT OPERATE THE FIXTURE WITHOUT AN INTACT FILTER WINDOW SECURELY IN PLACE. REPLACE THE WINDOW IF ANY CRACKS ARE FOUND THAT MAY ALLOW UNFILTERED LIGHT TO ESCAPE.**
- **THE LAMP PRODUCES INTENSE LEVELS OF ULTRAVIOLET RADIATION WHICH WILL CAUSE BURNS OR DAMAGE TO BARE SKIN AND UNPROTECTED EYES. DO NOT ALLOW THE FIXTURE TO OPERATE IN ANY MANNER THAT ALLOWS UNFILTERED LIGHT TO BE RELEASED.**
- Adequate cooling is necessary for operation of the fixture. Provide a minimum of 6" free air space on the sides and rear of the fixture. Do not place any combustible objects closer than 24" in front of the fixture while it is operating. The fixture must not be operated in confined areas subject to ambient temperatures higher than specified (see Section I, System Specifications).
- Allow a minimum of 10 minutes for lamp cooling before attempting to replace the lamp. Portions of the lamp attain extremely high temperatures during operation and can cause serious burns if touched while hot.
- Do not subject the fixture to extreme mechanical shock or rough handling that may damage the lamp or internal fixture components.
- For maximum lamp life, allow the lamp to remain ON for a minimum of 5 minutes any time the lamp is ignited.
- Clean the lamp with isopropyl alcohol and a lint-free cloth after it has been installed into the fixture to help eliminate premature failure from contaminants. This procedure will help increase life and performance.
- When removing a fixture for servicing or inspection, exercise extreme caution when loosening the clamp from the pipe or truss. The fixture may be installed in such a manner that a moment arm is created during the installation. This may cause the fixture to swing down violently when the clamp is loosened.

System Description

The fixture uses a special double-ended linear high intensity discharge lamp that has been custom manufactured to NOCTURN specifications. The lamps will produce maximum levels of ultraviolet energy peaked at 365 nanometers (UV-A).

In combination with the *Atek™* reflector, the fixture is able to provide greater output in the UV-A region than other similar fixtures in the respective classes.

When the fixture is energized, the lamp will immediately ignite and output will steadily increase for several minutes. After this brief period, the lamp will stabilize and reach a maximum output.

By utilizing a special borosilicate filter window, dangerous ultraviolet radiation (UV-B and UV-C) have been eliminated and minimum visual and infra-red energy is transmitted.

To enable flexibility, mounting points are provided which allow accessories to be used with the fixture to externally control the light output (douser, barn doors, etc.).

Basic control interfacing is performed on the rear of the fixture. DMX models feature an illuminated display showing either the fixture address or lamp life hour meter mode (user selectable) for simplicity of fixture control. An hour meter is included on standard 250 watt models not using the DMX option.

DMX-equipped fixtures incorporate standard 5-pin XLR ports for the use of daisy chaining in a DMX control environment.

To enable quick and easy installation, the fixture is provided with a truss clamp attached to the yoke. The clamp will accommodate 1-1/2" to 2" diameter pipes. Alternately, the yoke incorporates a 1/2" hole to accommodate either a Baby or Standard pin for use on a stand. NOCTURN recommends that the supplied safety cable be attached during installation to prevent the fixture from dropping.

System Specifications

DMX Specifications

Compatibility per *USITT (1992)*.

Electrical Specifications - 250 Watt Fixtures

Lamp type.....NOCTURN UV Enhanced Double-Ended Linear HID
Lamp Power (Nominal).....250 Watts
Lamp Life.....1,000 Hours/ Optimal UV-A Output
Input Line Voltage.....120/ 208/ 240 (Assigned at Factory)
Input Line Frequency.....50 Hz/ 60Hz (Assigned at Factory)
Fixture Weight23 Lbs.
Dimensions.....7.5” High x 10.1” Wide x 14.5” Long

Electrical Specifications - 400 Watt Fixture

Lamp type.....NOCTURN UV Enhanced Double-Ended Linear HID
Lamp Power (Nominal).....400 Watts
Lamp Life.....1,000 Hours/ Optimal UV-A Output
Input Line Voltage.....120/ 208/ 240 (Assigned at Factory)
Input Line Frequency.....50 Hz/ 60Hz (Assigned at Factory)
Fixture Weight39 Lbs.
Dimensions.....10.5” High x 13.3” Wide x 14.5” Long

Allowable Ambient Conditions for Fixtures

Operating Temperature.....40°F - 122°F (4°C- 50°C)
Storage Temperature.....-40°F- 122°F (-40°C- 50°C)
Humidity.....0 - 90% (Relative)

II. RECEIVING, INSPECTION AND STORAGE

The NOCTURN UltraViolet Light Source is packaged and sent to you following the best commercial practices. However, handling and transportation can result in damage. The following sections will assist you should this occur.

Receiving and Handling

Inspect the fixture container for signs of damage during the shipment process, always in the presence of the shipping carrier. Open the container and carefully remove all packing material. Check the contents against the packing slip included with the container and inspect the fixture for any obvious visual damage. Noted damage should be immediately reported to the carrier's agent. Keep all packing intact with the container for storage or returns.

Always furnish the model number and serial number (located on the back cover) when information is needed concerning the fixture. This will assist with an expedient response.

Following the initial inspections, the fixture and related hardware should be placed back into the shipping container if installation is not immediate. Fold the flaps and interleave or tape them down. This will insure the contents remain protected and ready for installation.

System Inspection

The fixture must be inspected prior to use according to the following procedure. Should there be any irregularities found, do not use the fixture. Consult the trouble shooting section of this manual. If the problem is not solved, call NOCTURN for technical assistance.

- 1) Visually inspect the power cord, plug and safety cable to be sure there is no evidence of damage caused by fraying or kinking. The plug should have all terminals clean and straight.
- 2) Inspect the filter window in the front of the fixture and verify no cracks exist; the window should be a singular piece of dark glass. Small waves seen on the surface are acceptable.
- 3) Locate the lamp in the packaging and verify that there are no cracks or loose contacts on the ends. A typical lamp will have a small film that is mirror-like or has micro-drop-lets deposited on the interior of the bulb envelope surfaces. This is normal.

Storage

The fixture should remain closed and the lamp removed if long term storage is necessary. The lamp should be placed back into its original container and kept with the fixture for re-installation. The fixture may be stored in an open environment where dirt or dust accumulation can be avoided. The power cord may be wound around the fixture or bundled together, preventing sharp kinks. The original shipping container is suitable for a short or long term storage solution that offers maximum protection when the fixture is not installed.

III. SYSTEM INSTALLATION

The fixture can be used in various locations with a minimal amount of installation time and effort. While the most common installation is to a pipe or truss, the fixture can be easily changed for use on a stand.

Installation and Adjustment

The fixture comes with a heavy-duty clamp as a standard item (packaged separately). It is capable of fastening the fixture to 1-1/2" to 2" diameter tubing.

- 1) Attach the clamp to the outside of the yoke by inserting the 1/2" bolt through the hole in the yoke with the bolt head and washer on the inside surface. Orientate as desired and tighten as much as possible.
- 2) Loosen the 2 knobs located on either side of the fixture and orientate the yoke to approximately the final elevation (if necessary). Retighten knobs.
- 3) Loosen the clamp knob and allow the drop link to move freely.
- 4) Place the clamp over the truss or tubing by moving the drop link away from the opening. The fixture weight load should now be supported by the clamp.
- 5) Place the drop link inside the square head bolt and tighten the clamp knob as much as possible after fixture is in desired position.
- 6) Attach the supplied safety cable around the fixture yoke and truss or tube.

To make other minor adjustments, loosen the side knobs slightly and rotate the fixture by the handle on the rear cover to the desired position. Retighten knobs.

Prior to leaving the fixture after initial installation or any adjustment, verify all knobs are completely tightened and the safety cable is in place.

For use with a stand, remove the bolt and replace the clamp with the preferred adapter pin. Store the clamp in a safe place for future use if needed.

Accessories

The fixture comes standard with integral accessory mounting points that accept standard entertainment lighting accessories (dousers, frames, barndoors, etc.). Two slots are available and will accommodate either 7-1/4" (250 Watt fixtures) or 10" (400 Watt fixture) accessories. The accessories may be installed by sliding the frame or clips of the accessory into the slots of the mounting points. All accessories should be attached to the fixture with a safety cable provided by the accessory manufacturer or the installer.

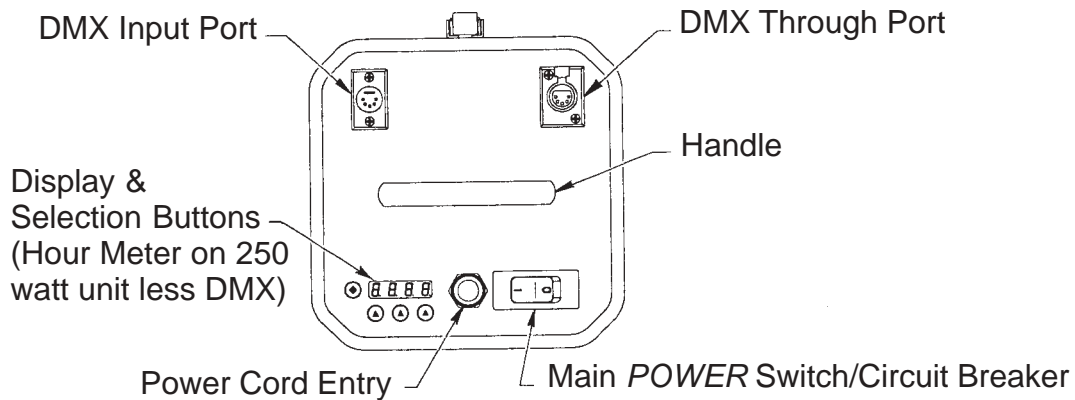
IV. SYSTEM INTERFACE AND OPERATION

The following section will provide all necessary operational information for the various functions of the fixture. Depending on installation requirements, the fixture may be used in a conventional manner (manual mode), or will support the use of DMX-512 protocol for digital lighting control (*optional on 250 watt units*).

Control Interface

Rear Cover

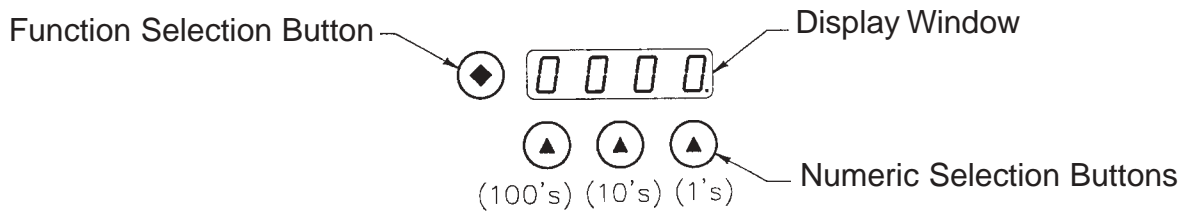
The controls for the fixture are found on the back cover and consist of several components. These include a display, integral selection buttons, power switch/ circuit breaker, and two DMX ports (input and through) when required. Other items located on this panel are the power cable with strain relief and carrying handle.



REAR COVER & RELATED CONTROLS

DMX Function Display

The display and related buttons serve to track lamp life in hours and select fixture address. Whenever the fixture is turned ON, the display will remain active for approximately 5 minutes. This time will extend to approximately 5 minutes after the *last function or selection input* is made to the fixture (after it first turned ON) and additional control interfacing is necessary. After approximately 5 minutes, the display will extinguish and remain in a "sleep" mode. The fixture will remain like this until the selection button is depressed once. If it is necessary to see the display (read lamp hours or to change the fixture address), press the FUNCTION SELECTION BUTTON and the display will reactivate. After the initial 5 minutes the fixture is ON, the display will remain active for 30 seconds *after the last function or selection button is depressed* before returning to the "sleep" mode.



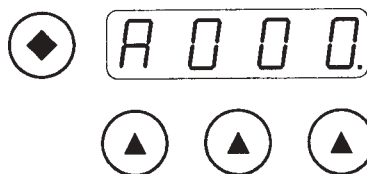
FUNCTION DISPLAY & RELATED BUTTONS

Manual Operational Mode

The manual operation will allow the fixture to be used in a conventional manner where power to the fixture is manually switched ON for “stand alone” use. This is done by pressing the power switch/ circuit breaker to the ON position.

- 1) Plug the power cord into a power source and push the power switch/ circuit breaker to the ON position.
- 2) The display will energize and show the TIMER mode - select ADDRESS mode by depressing the FUNCTION SELECTION BUTTON (diamond). The display should read “A” followed by three digits.
- 3) The fixture display is initially preset at the factory to the address “A000” when it arrives. If this address is not displayed, press the NUMERIC SELECTION BUTTONS (triangles) until the display reads “A000”. The relay within the fixture will close and the lamp will ignite. Full lamp output is attained within 5 minutes.
- 4) The 250 watt model without DMX will ignite immediately and record elapsed hours on the running time meter.

NOTE: The NUMERIC SELECTION BUTTONS scroll with ascending numbers, from “0” to “9” before recycling to “0”.



DISPLAY WINDOW for MANUAL MODE (Sample Display)

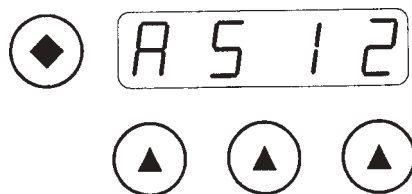
DMX Operation Mode

In DMX operation, the fixture will be used in an installation where it is desirable to control several fixtures and related accessories with the use of sophisticated lighting programs or equipment (DMX source). This is most suitable for applications where all aspects of lighting are to be fully digitally programmed and executed. Typical installations require fixtures and related accessories to be “addressed” so that they may be controlled with a DMX source.

- 1) Plug the power cord into a power source and push the power switch/ circuit breaker to the ON position.
- 2) The display will energize and show the TIMER mode - select ADDRESS mode by depressing the FUNCTION SELECTION BUTTON (diamond button). The display should read “A” followed by three digits.
- 3) Press the NUMERIC SELECTION BUTTONS (triangles) until the display reads “A” followed by the DESIRED FIXTURE ADDRESS.
- 4) Plug the DMX cable from the DMX source into the INPUT port on the rear cover of the fixture.
- 5) When DMX 512 signals are detected (DMX level above 80%/ 204 - 255), a relay within the fixture will close and the lamp will ignite. Full lamp output is attained within 5 minutes. The display will also show a decimal point between the “A” character and the first “0” digit when DMX is detected.
- 6) When signals from the DMX source are detected (DMX level below 20%/ 000 - 051) the fixture relay will open and the lamp will extinguish, but the fixture will remain ON.

In most applications where DMX operation is utilized, it is common to “daisy-chain” or link several other fixtures and accessories together. This eliminates the need to connect individual cables from the DMX source to each item.

- 7) Plug DMX cable into the THROUGH port on the rear cover of the fixture. Connect opposite end into next desired DMX accessory or fixture. The UV fixture will monitor incoming signals, process those to which it is addressed, and pass all other signals through (use terminator at last fixture).



DISPLAY WINDOW for DMX MODE (Sample Display)

Lamp Hour Meter Mode

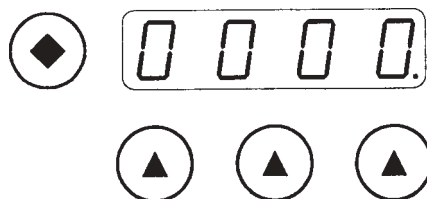
The display can be changed to a resetable hour meter that keeps a memory of total elapsed lamp hours while ignited. This feature is useful in determining when a lamp should be replaced. Output and performance will dramatically decrease while the possibility of lamp failure will increase if the lamp is allowed to operate past its maximum rated life. **All NOCTURN lamps have a maximum rated life of 1,000 hours peak UV-A intensity.**

The HOUR METER mode will *always* display 4 digits, between “0000” and “6535” (*unlike the DMX ADDRESS mode that will display an “A” character followed by 3 digits*). The timer can reach a maximum “6535” hours, and will rollover to “0000” when it is exceeded.

1. Plug the power cord into a power source and push the power switch/ circuit breaker to the ON position.
2. The display will energize and show the HOUR METER mode. The display will show 4 digits total, “0000” to “6535”. The fixtures should arrive from the factory preset at “0000” when the HOUR METER mode is active.
3. To reset the HOUR METER to “0000”, depress all three NUMERIC SELECTION BUTTONS (triangles) together and hold for approximately 5 seconds or until the display shows “0000”.

The display (when active) will show a moving decimal point when the HOUR METER mode is active and the lamp is operating. The decimal point will float across the bottom of the display from the left to right. This indicates the relay within the fixture is closed and the lamp is ON.

When the HOUR METER mode reaches 1,000 hours (elapsed lamp life), the display (when active) will move from a steady state to flashing state. This indicates the lamp has reached its maximum rated life and should be changed. Follow the instructions for resetting the timer to have the display reset to a steady state.



DISPLAY WINDOW for the LAMP HOUR METER MODE (Sample Display)

V. SERVICING

THE FOLLOWING SERVICE SECTION OUTLINES MAINTENANCE PROCEDURES. ALL SERVICING SHOULD BE PERFORMED BY QUALIFIED SERVICE PERSONNEL.

The front cover containing the filter window should only be opened for lamp replacement or maintenance. Observe all warnings and cautions provided in this Operator's Manual before initiating any service procedures. Refer all other electrical or mechanical problems to qualified NOCTURN technical personnel.

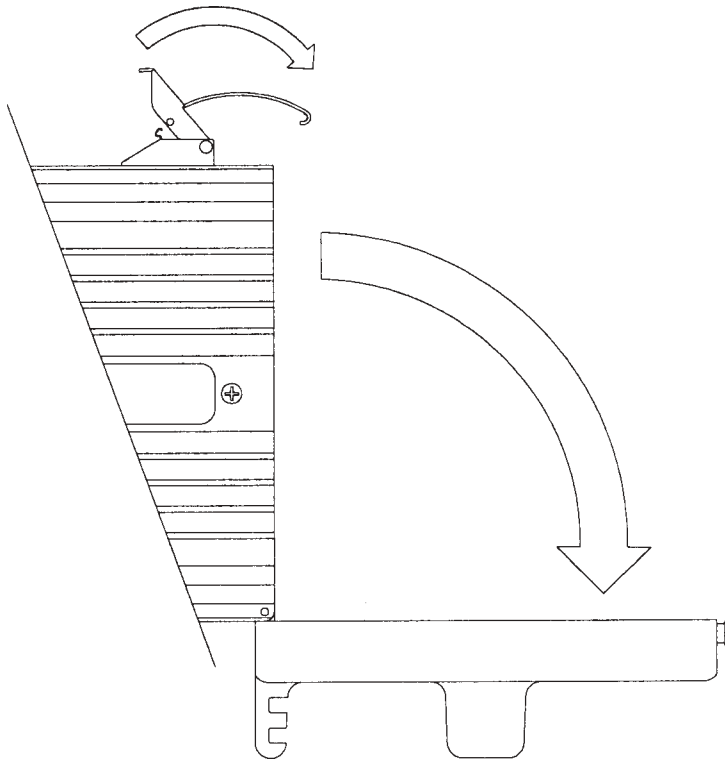
WARNING: Do not subject the lamp or fixture to extreme mechanical shock or rough handling that may damage the lamp or internal components.

DANGER: Disconnect the main power cord prior to attempting any service to the lamp or fixture.

Lamp Replacement

The lamp should be replaced when it has reached its maximum rated life of 1,000 hours. See section VI (page 20) for replacement lamp part numbers. For safety reasons, NOCTURN recommends that soft cotton gloves be worn when handling the lamps during the following LAMP REPLACEMENT procedure.

- 1) Push the power switch/ circuit breaker to the OFF position.
- 2) Unplug the fixture. Wait a minimum of 10 minutes for the lamp to cool before proceeding if the fixture was operating.
- 3) Open the front cover by pushing the lock tab of the latch forward, then lift the catch link up and forward. Carefully lower the front cover until it supports itself.
- 4) Grasp one end of the lamp and push in axially towards the socket (compress the socket). DO NOT PROCEED IF THE LAMP IS STILL HOT.
- 5) While one end is compressing the socket, rotate the opposite end towards the front of the fixture.
- 6) Completely remove the lamp and properly dispose of it.
- 7) To install a new lamp, hold one end of the lamp and engage the opposite end into the socket. Compress the socket with the lamp and swing the end that is being held until it fully engages the other socket contact.
- 8) Visually ensure the lamp is fully engaged into both sockets and can rotate axially between the contacts with ease.
- 9) Rotate the lamp so the fill tube pinch (bump) is orientated to the top. This will help with the lamp ignition sequence and overall life.
- 10) Clean the entire lamp with a swab soaked in isopropyl alcohol to remove any contaminants or oils and completely dry with a lint-free cloth.
- 11) Close and secure the front cover with the latch.
- 12) Reset the lamp hour meter (See page 12).



Front Cover Access (Lamp Replacement)

Main Power Switch/ Circuit Breaker

A circuit breaker is used to prevent damage to the fixture and internal components from an over-current condition. The POWER SWITCH/ CIRCUIT BREAKER, located on the back cover, controls the power to the fixture while also offering over-current protection.

- 1) Press the POWER SWITCH/CIRCUIT BREAKER to the ON position. The fixture is now operational.
- 2) Should the fixture POWER SWITCH/CIRCUIT BREAKER trip due to an over-current condition, the switch will automatically return to the OFF position.
- 3) To reset the POWER SWITCH/CIRCUIT BREAKER, push the switch to the ON position again.

NOTE: If the POWER SWITCH/CIRCUIT BREAKER continues to trip, or trips immediately after it has been reset, unplug the fixture and remove for further servicing. Contact NOCTURN for technical service.

Maintenance/ Cleaning

Proper maintenance of a lighting system is necessary to provide the highest available levels of output illumination. Costly damage and major repairs may be prevented by periodic inspection of the lighting fixture. A scheduled maintenance program can increase safety and minimize down-time associated with the fixture operation, as small problems may be caught in an early stage preventing further damage.

Before attempting any maintenance or cleaning, the fixture must be turned OFF, unplugged and allowed to cool if it has been in operation. It is recommended that lamps be replaced as a group at scheduled intervals based on maximum rated life. The following list suggest inspection points during periodic maintenance.

- Overall fixture exterior condition
- Correct function of controls
- Protective filter window and guard
- Lamp condition
- Lamp sockets
- Reflector optical condition
- Integrity of seals

The exterior of the fixture has many fins used to dissipate the heat during normal operation and should be free of any accumulation of dust and dirt. Large accumulation of dust or dirt will diminish the cooling efficiency and/ or cause a safety hazard. The exterior may be cleaned with a dampened cloth and a mild detergent.

The rear cover containing all functional controls should be wiped with a damp cloth and mild detergent if any dirt or dust accumulation is present. The display should be easily seen and should operate correctly in all modes.

The front window should be examined for cracks and replaced if any are found. The window should be cleaned of excessive dust or dirt accumulation with normal glass cleaning products or isopropyl alcohol. The attached guard should be firmly secured to aid in protecting the window.

Lamps should be inspected to ensure maximum output is available and the fixture is operating normally if they appear...

- Dim, slow starting or inoperative
- Visually discolored, such as a blackened arc tube or melted ribbons
- The arc tube is blistered or swollen abnormally.

Any lamp that has reached its maximum rated life should be replaced immediately, regardless of the visual appearance or output. After a lamp has been replaced, completely clean all surfaces with isopropyl alcohol for maximum performance and life.

The lamp sockets should be inspected before replacing a lamp. The contacts on either side should be free from any surface contamination or damage. Remove contaminants if any are noted. Any damaged sockets may effect lamp operation and performance and should be replaced.

The reflector is responsible for capturing and directing the energy emitted from the lamp. The reflectors in all NOCTURN fixtures have been designed for optimal performance while transmitting maximum UV energy from the lamp and providing a smooth, even field. Inspect the reflector for dirt and dust, or residue accumulation. Wipe the reflective optical surfaces surrounding the lamp with isopropyl alcohol to clean the reflector.

Periodically inspect the seals on the front and rear covers, as well as around the window. They should be replaced if any signs of damage or deterioration are noted. These prevent moisture and other elements from entering the fixture, and aid in eliminating extraneous light from escaping.

Trouble Shooting

Any repairs or maintenance other than those listed in listed in the following section should be referred to NOCTURN UltraViolet Effects or qualified repair technicians. Please have the fixture model number and serial number available so that NOCTURN may answer any questions completely and accurately.

<u>SYMPTOM</u>	<u>PROBABLE CAUSE</u>	<u>SOLUTION</u>
<i>Lamp fails to ignite</i>	Power cord is not plugged in or the source is not energized.	Plug into source that has suitable electricity available.
	Power Switch/ Circuit Breaker is not in the ON position.	Push to the ON position.
	Incorrect fixture address.	Set to "A000."
	TIMER display shows lamp has exceeded rated life.	Replace lamp if it has passed the maximum rated life (1,000 hours).

Lamp fails to ignite
(continued)

Lamp failure.

Replace lamp if any abnormalities or damage to the envelope or contacts are present.

Socket failure.

Remove any contamination or replace if damage is found.

Safety interlock is not engaged.

Interlock rod must contact the window when the front cover is secured and moves freely when not engaged.

Power Switch/Circuit Breaker Trips

Power source over-current condition.

Check power source for correct Voltage and Current ratings.

Wires are shorting on or within the fixture.

Repair as necessary to prevent future shorting.

Power Switch/Circuit Breaker is not correctly operating.

Replace if damage is found.

Fixture Display is Inoperative

Power cord is not plugged in or the source is not energized.

Plug into source that has suitable electricity available.

Power Switch/Circuit Breaker is not in the ON position.

Push to the ON position.

FUNCTION SELECTION BUTTON is not operating.

Display should reactivate when the button is pressed.

Membrane switch ribbon cable is not fully connected to DMX board.

Connect termination header into DMX board.

Internal power terminals are not connected.

Connect termination plugs if unplugged.

Internal fuse blown.

Replace fuse.

DMX Controls are not functioning

DMX source signals are not being conducted.

Cables must be fully connected into ports.

Cables must conduct signals and be free of damaged to wires or terminals.

Verify correct signal levels are originating from DMX source and are being conducted through the cables.

Incorrect fixture address.

Verify the fixture is correctly addressed.

Verify the DMX source is correctly addressing the fixture.

Output is Dim

Obstructions in front of fixture; window has contamination.

Remove obstructions; clean window of any dirt, dust or residue buildup.

TIMER display shows lamp has exceeded rated life.

Replace lamp if it has passed the maximum rated life (1,000 hours).

Lamp failure.

Replace lamp if any abnormalities or damage to the envelope or contacts are present.

Socket failure.

Remove any contamination or replace if damage is found.

Warranty

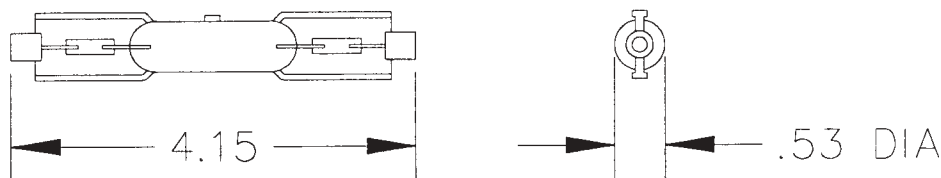
NOCTURN UltraViolet Visual Effects warrants that the lighting fixture is fit for the purposes and indications described in the labeling for a period of one year after the date of shipment when used in accordance with the prescribed directions for use. Unless the equipment and/ or lamp is used in accordance with such instructions, this warranty is void and of no effect. There are no other expressed or implied warranties. **NOCTURN UltraViolet Visual Effects** sole obligation and purchaser's exclusive remedy for breach of any warranty shall be limited to repair or replacement of the product at **NOCTURN's** option.

NOCTURN UltraViolet Visual Effects shall not be held liable for proximate, incidental or consequential damages.

Prices, specifications and model availability are subject to change without notice.



Nocturn 250 Watt Lamp
388-0250



Nocturn 400 Watt Lamp
388-0400

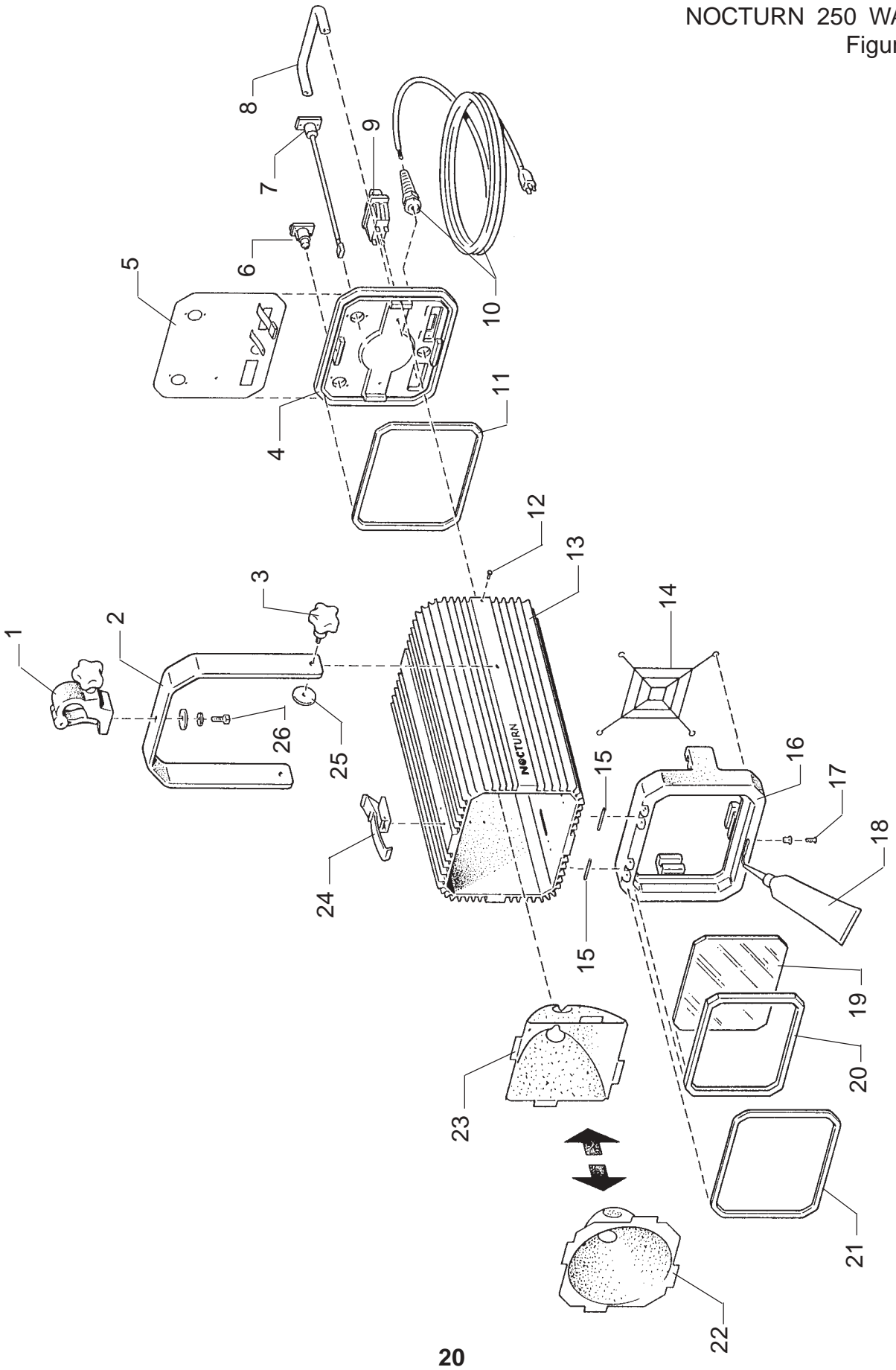
Replacement Lamps

VI. REPLACEMENT PART NUMBERS

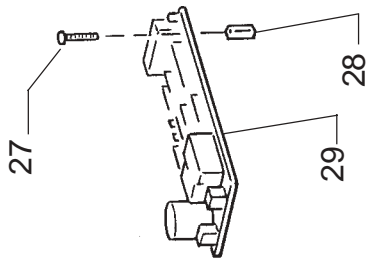
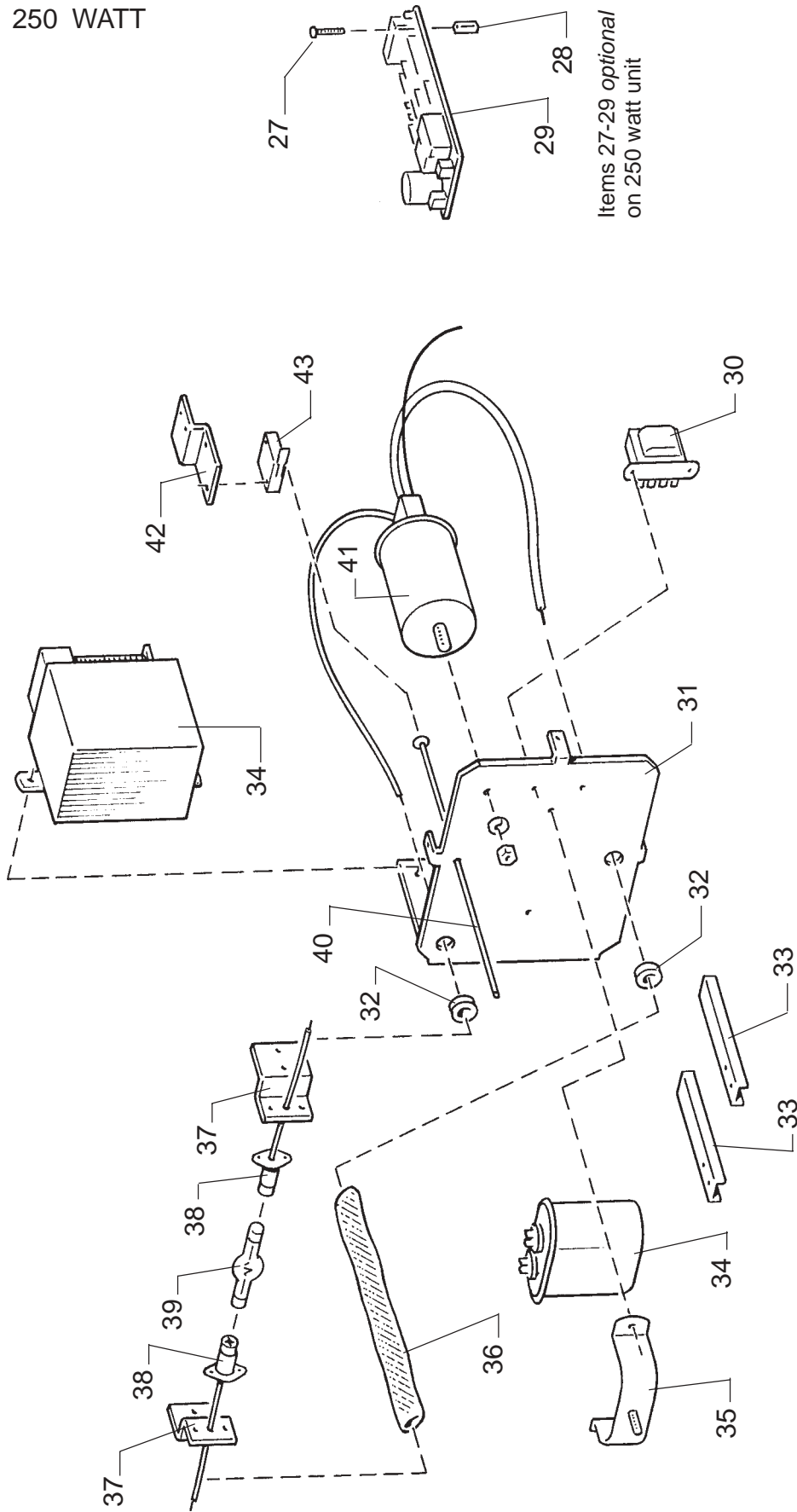
When it is necessary to order parts, always state the fixture's **Model Number and Serial Number** located on the back cover. This will assist NOCTURN in filling the order correctly and promptly.

The following charts and fixture assembly drawings describe user-serviceable components and general locations within the fixtures.

NOCTURN 250 WATT
Figure 1



NOCTURN 250 WATT
Figure 2



Items 27-29 optional
on 250 watt unit

250 Watt UV Fixtures

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	
		Nocturn	Strong
	<i>Replacement Lamp</i>		
39	Lamp, UV Enhanced, 250 Watt	388-0250	31-30009
	<i>Figure 1</i>		
1	Truss Clamp, with Hardware	323-0202	31-10021
2	Yoke	680-8034	32-40192
3	Knob	471-0013	31-28003
4	Back Casting	680-8032	32-20007
5	Decal, Active Membrane	680-8041	31-98042
6	XLR Connector Assembly, Input	992-0700	32-70026
7	XLR Connector Assembly, Through	992-0701	32-70027
8	Handle	470-0013	31-28015
9	Circuit Breaker	710-0073	31-61004
10	Power Cord Assembly, U.S.	992-0702	32-70325
10	Power Cord Assembly, European	992-0798	32-50029
11	End Seal	680-8036	31-98040
12	Screw, 8-32 x 1/2" Flat Head	338-5081	4080503
13	Housing Assembly, Nocturn 250	325-0466	
	Chassis, Bottom Right		31-98055
	Chassis, Bottom Left		31-98056
	Chassis, Top Right		31-98057
	Chassis, Top Left		31-98058
14	Wire Guard	680-8027	31-98036
15	Hinge Pin (2 req'd.)	323-0220	31-37002
16	Front Cover Casting	680-8025	31-29002
17	Screw, 8-32 x 1/2" Flat Head	338-5081	4080503
-	Bushing (with Item 24)	323-0205	31-18003
18	RTV Silicone Sealant (3 oz. Tube)	11-98069	11-98069
19	Window, UV Filter	680-8028	31-98037
20	Seal, Window	680-8029	31-98038
21	Retainer, Window	680-8030	31-98040
22	Reflector, Spot	680-8043	31-98044
23	Reflector, Flood	680-8038	31-98041
27	End Seal	680-8036	31-98040
24	Latch Assembly, with Bushing	323-0205	31-18003
25	Washer, Friction	325-2470	31-70003

250 Watt UV Fixtures (continued)

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	
		Nocturn	Strong
26	Screw, 1/2-13 x 1" Hex Head*	41-51449	4501000
-	Lockwasher, 1/2" Shakeproof*	41-70025	4507000
-	Flat Washer, 1/2"*	00856000	4507100

* Included with Item 1 Clamp

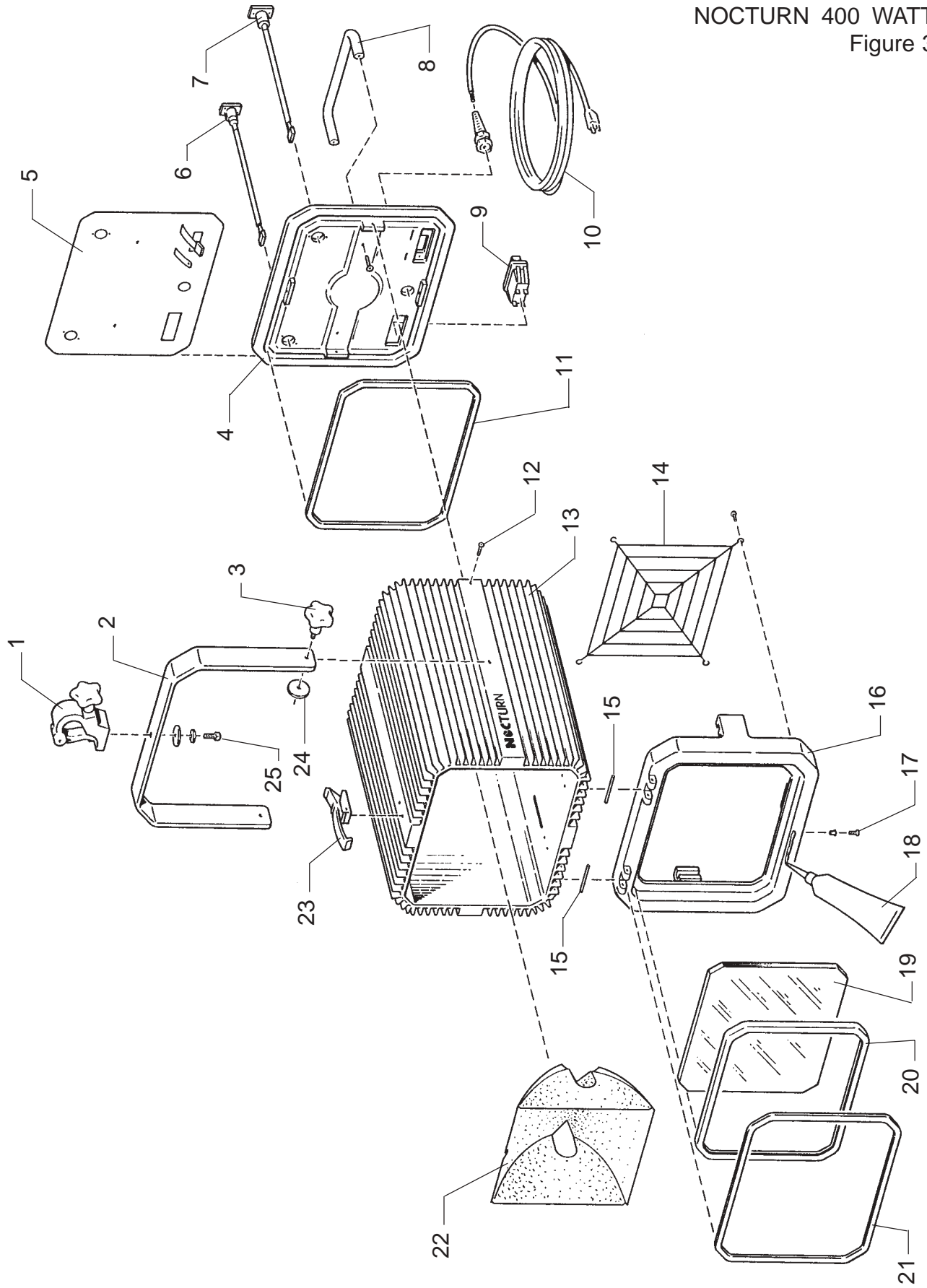
Figure 2 - Nocturn 250 Internal Components

27	Screw, 4-40 x 1/4" Pan Head	334-3710	4040250
28	Standoff, 4-40 x 1" (with Item 29)	320-0408	41-98049
29	DMX Circuit Board (<i>optional</i>)	900-0043	32-70025
30	Transformer	800-0043	31-64001
31	Bulkhead Plate	324-0099	32-40099
32	Grommet	323-0129	41-98054
33	Air Scoop	322-0120	32-20120
34	Ballast Assembly, 60 Hz. (two-part)	530-0041	31-98395
34	Ballast Assembly, 50 Hz. (two-part)	530-0042	31-98396
35	Bracket	324-0311	32-40311
36	Insulator Sleeve (Order by <i>foot</i>)	SL048000	SL048000
37	Mounting Bracket, Lamp Socket	680-8037	32-40101
38	Lamp Socket	230-0001	31-13016
39	Bulb, 250 Watt	388-0250	31-30009
40	Rod, Interlock Actuator	680-8040	32-40103
41	Ignitor	800-0044	31-64002
42	Switch Bracket	680-8039	32-40102
43	Microswitch, Interlock	710-0070	31-61005

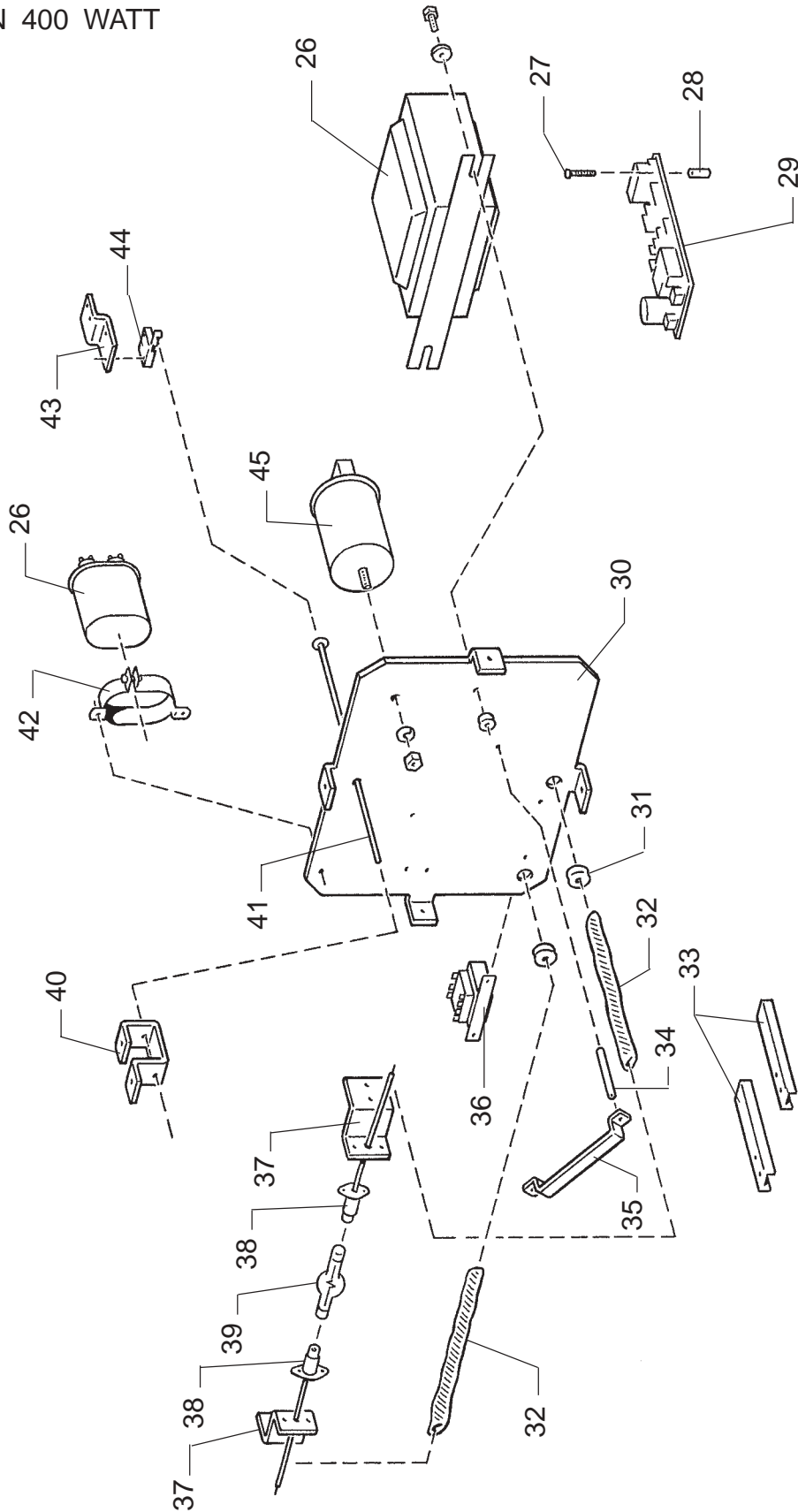
Not Shown

-	Fuse, Circuit (60 Hz, 120 V)	561-0006	31-21002
-	Fuse, Circuit (60 Hz, 208/240 V)	561-0003	31-21006
-	Fuse, Circuit (50 Hz, 220/240 V)	31-30099	31-30099

NOCTURN 400 WATT
Figure 3



NOCTURN 400 WATT
Figure 4



400 Watt UV Fixture

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	
		Nocturn	Strong
	Replacement Lamp		
39	Lamp, UV enhanced 400W	388-0400	31-30010
	Figure 3		
1	Truss Clamp, with Hardware	323-0202	31-10021
2	Yoke	680-8064	32-40191
3	Knob	471-0013	31-28003
4	Back Casting	680-8061	31-29005
5	Decal, Active Membrane	680-8071	31-98051
6	XLR Connector Assembly, Input	992-0700	32-70026
7	XLR Connector Assembly, Through	992-0701	32-70027
8	Handle	470-0016	31-28004
9	Circuit Breaker	710-0073	31-61004
10	Power Cord Assembly, U.S.	992-0702	32-70325
10	Power Cord Assembly, European	992-0798	32-50029
11	End Seal	680-8066	31-98049
12	Screw, 8-32 x 1" Flat Head	338-1083	4081001
13	Housing Assembly, Nocturn 400	325-0467	
	Chassis, Bottom Right		31-98061
	Chassis, Bottom Left		31-98062
	Chassis, Top Right		31-98063
	Chassis, Top Left		31-98064
14	Wire Guard	680-8057	31-98045
15	Hinge Pin (2 req'd.)	323-0238	31-37003
16	Front Cover Casting	680-8056	32-20008
17	Screw, 8-32 x 1/2" Flat Head	338-5081	4080503
-	Bushing (with Item 23)	323-0205	31-18003
18	RTV Silicone Sealant (3 oz. Tube)	11-98069	11-98069
19	Window, UV Filter	680-8058	31-98046
20	Seal, Window	680-8059	31-98047
21	Retainer, Window	680-8060	31-98049
22	Reflector, Flood	680-8068	31-98050
23	Latch Assembly, with Bushing	323-0205	31-18003
24	Washer, Friction	325-2470	31-70003

400 Watt UV Fixtures (continued)

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	
		Nocturn	Strong
25	Screw, 1/2-13 x 1" Hex Head*	41-51449	4501000
-	Lockwasher, 1/2" Shakeproof*	41-70025	4507000
-	Flat Washer, 1/2"*	00856000	4507100

* Included with Item 1 Clamp

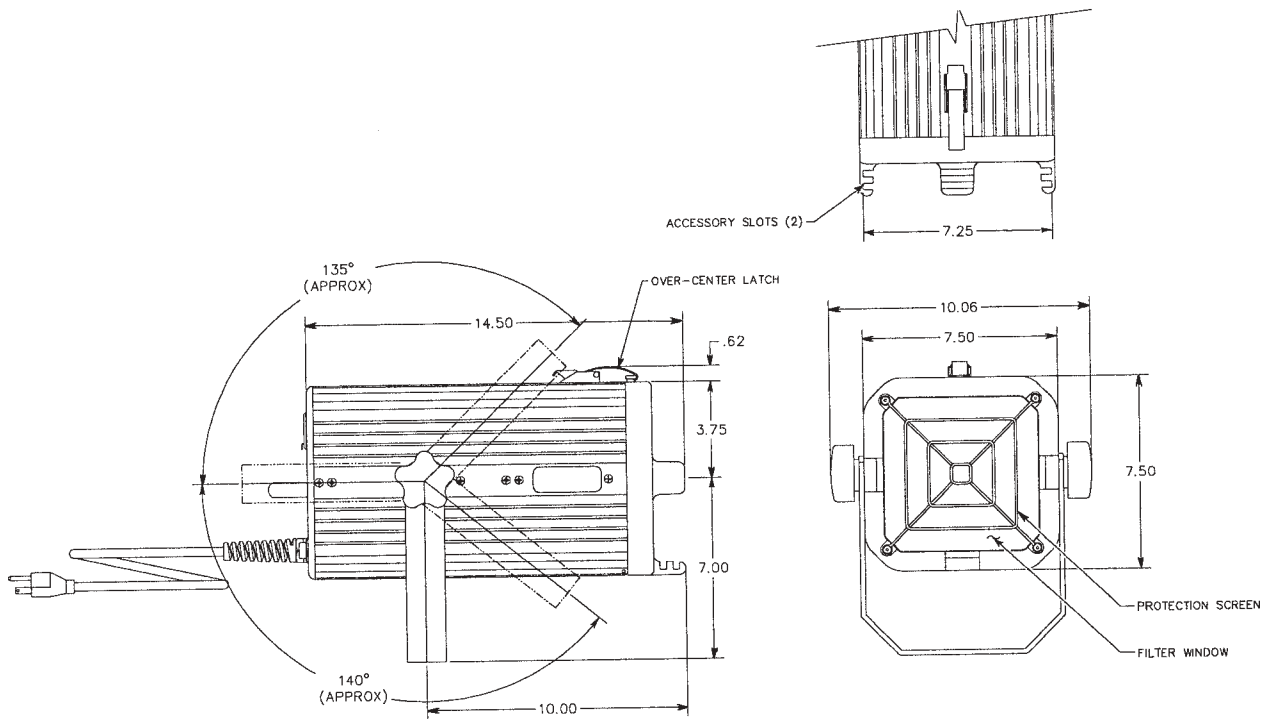
Figure 4 - Nocturn 400 Internal Components

26	Ballast Assembly, 60 Hz. (two-part)	530-0039	31-98393
26	Ballast Assembly, 50 Hz. (two-part)	530-0040	31-98394
27	Screw, 4-40 x 1/4" Pan Head	334-3710	4040250
28	Standoff, 4-40 x 1"	320-0408	41-98049
29	DMX Circuit Board	900-0043	32-70025
30	Bulkhead Plate	680-8063	32-40105
31	Grommet	323-0129	41-98054
32	Insulator Sleeve (Order by foot)	SL048000	SL048000
33	Air Scoop	322-0120	32-20120
34	Spacer	91-56002	91-56002
35	Bracket	324-0291	32-40332
36	Transformer	800-0043	31-64001
37	Mounting Bracket, Lamp Socket	680-8037	32-40101
38	Lamp Socket	230-0001	31-13016
39	Bulb, 400 Watt	388-0400	31-30010
40	Support Bracket, Interlock Rod	680-8211	32-40074
41	Rod, Interlock Actuator	680-8040	32-40103
42	Capacitor Clamp	310-8007	31-08007
43	Switch Bracket	680-8039	32-40102
44	Microswitch, Interlock	710-0070	31-61005
45	Ignitor	800-0044	31-64002

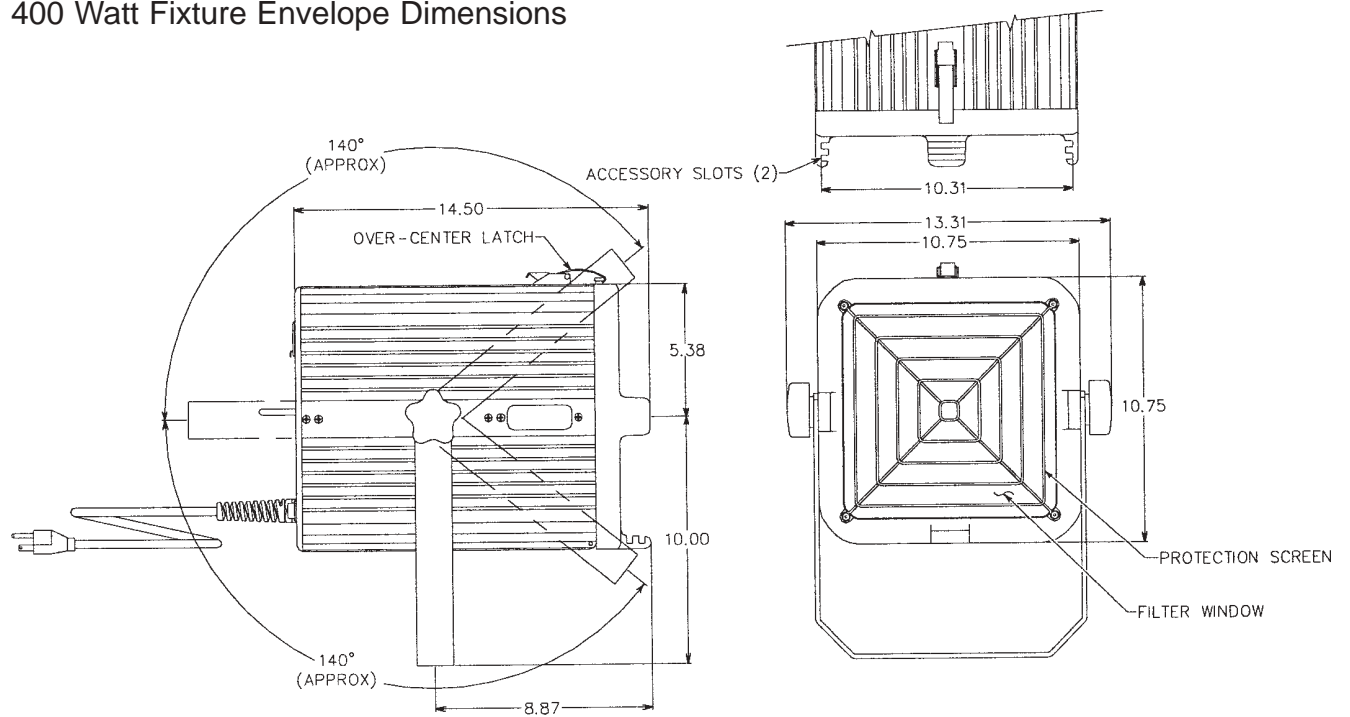
Not Shown

-	Fuse, Circuit (60 Hz, 120 V)	561-0006	31-21002
-	Fuse, Circuit (60 Hz, 208/240 V)	561-0003	31-21006
-	Fuse, Circuit (50 Hz, 220/240 V)	31-30099	31-30099

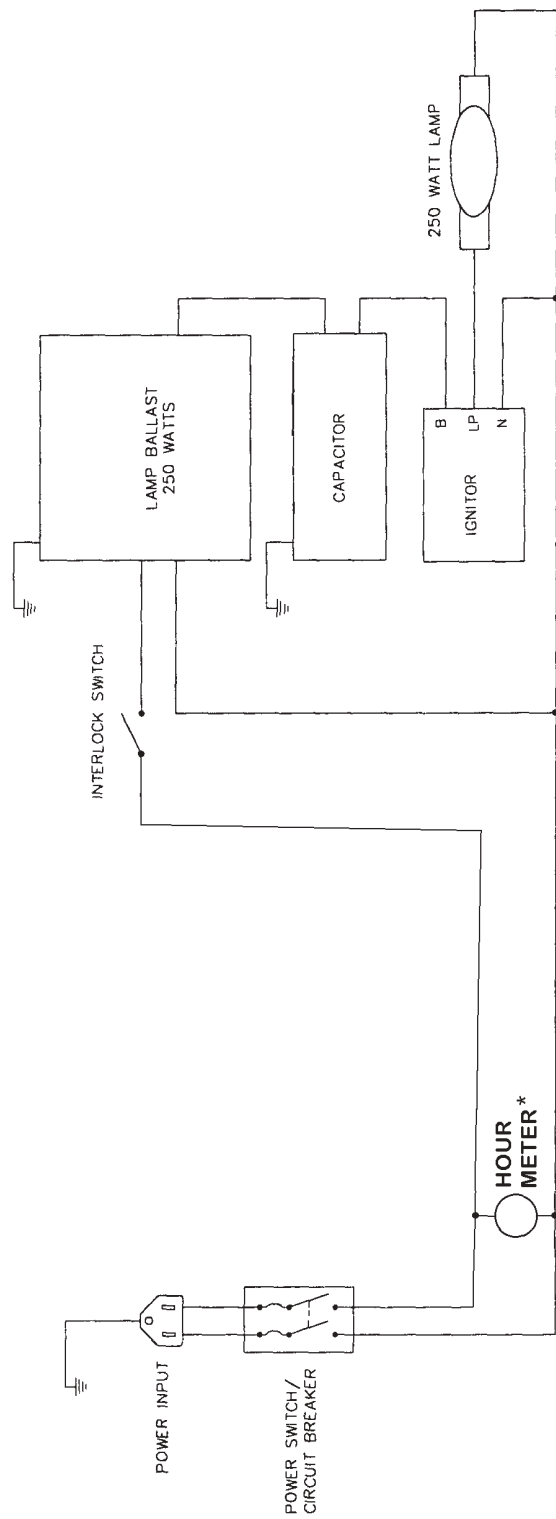
250 Watt Fixture Envelope Dimensions



400 Watt Fixture Envelope Dimensions

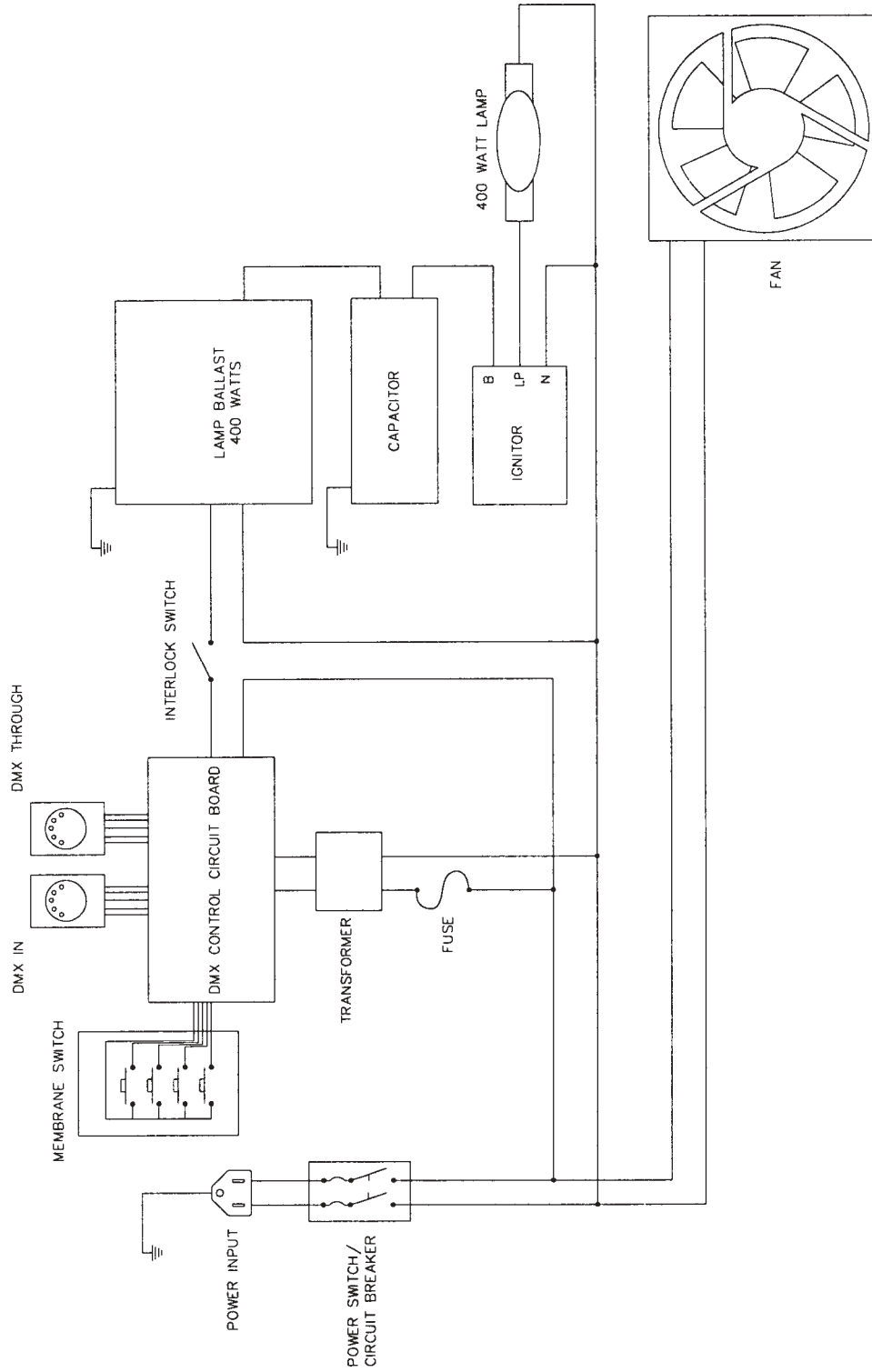


Wiring Diagram - 250 Watt Fixture
Figure 5



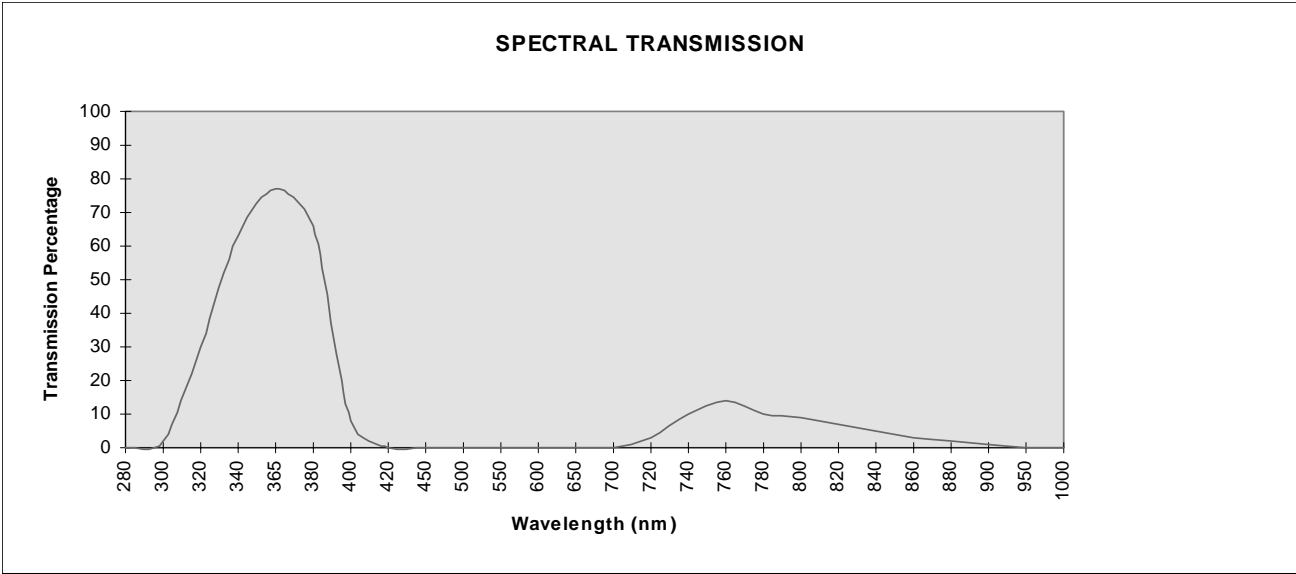
* 115 V, 60 Hz: 81-32001
230 V, 50 Hz: 81-32010

Wiring Diagram - 400 Watt Fixture
Figure 6

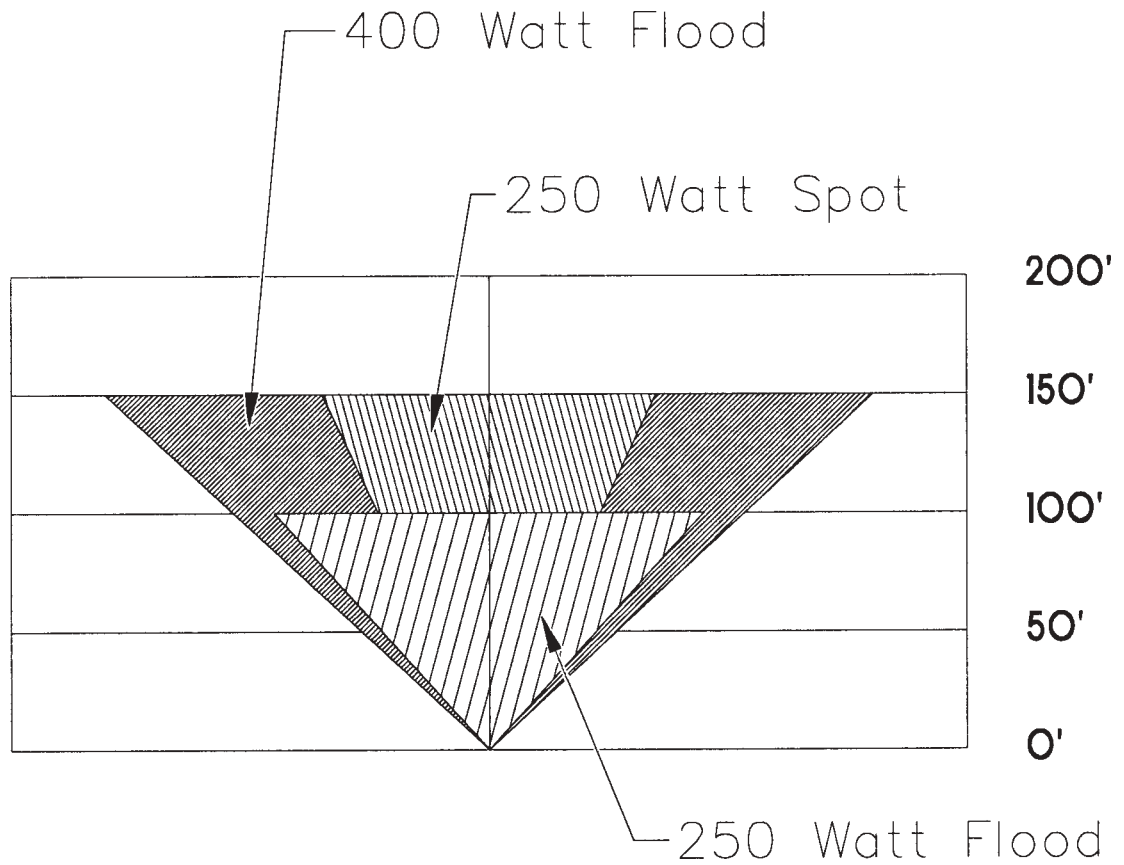


Fan, 115 V.AC 31-02002
 Fan, 230 V.AC 31-02053
 Fan not required after Serial
 Number BE400-218

Spectral Transmission Chart



Comparative Fixture Illumination Performance



250 Watt Spot Fixture - 50 Degree Field/ 150' Throw
250 Watt Flood Fixture - 92 Degree Field/ 100' Throw
400 Watt Flood Fixture - 96 Degree Field/ 150' Throw

Note: Edge of field is 10% of peak intensity at ± 0 degrees A.O.I. Throw is the distance at which intensity reaches 1 microwatt/ sq. Centimeter at ± 0 degrees A.O.I. Useful intensity levels vary with ambient light and other environmental conditions.

