

DEEPSEA
POWER & LIGHT



SeaLite® Lumos



Operator's Manual

SeaLite® Lumos

Record product serial number below as it appears on the nameplate.

Serial #

Pin-out

- Positive = Pin ____
- Negative = Pin ____
- Ground = Pin ____
- Dimming (if applicable) = Pin ____

T: (858) 576-1261
F: (858) 576-0219

4033 Ruffin Road
San Diego, CA
92123- 1817 USA

www.deepsea.com
sales@deepsea.com



Original Instruction

REV 08/17/17

Specification Overview

Mechanical Specifications		
Housing	Anodized Aluminum (6013-T8) Titanium (optional)	
Port	Sapphire	
Outer Diameter	47.5 mm [1.87 in.]	
Overall Length (w/o connector)	154.3 mm [6.08 in]	
Weight in Air	Al housing: 530 g [1.17lbs] ¹ Ti Housing: 710 g [1.56 lbs] ²	
Weight in Water	Al housing: 230 g [0.51 lbs] ¹ Ti Housing: 400 g [0.88 lbs] ²	
Environmental Specifications		
Depth Rating	6,000 m [20,000 ft]	
Operating Temp.	-10° C to 40° C [14° F to 104° F]	
Optical Specifications		
Colors	Day Light White ³	
Lumens in Water	3000 typical	
Color Temp/Wavelength	5000K - 6500K ⁴	
Beam Pattern	Flood: 85° or Spot: 32°	
Electrical Specifications		
	Lumos 1000	Lumos 2000
Input Voltage	90~270 VAC, 50/60Hz 100~350 VDC	10~36 VDC
Current	0.27A @ 120 VAC 0.13A @ 240 VAC	1.10A @ 24 VDC 2.65A @ 10 VDC
Power	32.0W max	26.5W max
Dimming	AC phase control (TRIAC) variable voltage (VARIAC)	0~5 VDC

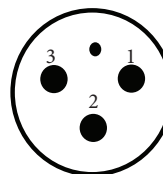
1 Aluminum Housing, Low Voltage Driver, Flood Reflector model.

2 Titanium Housing, Universal Driver, Spot Reflector model.

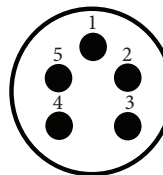
3 Other color options available.

4 Other color temperatures available.

Standard Connectors



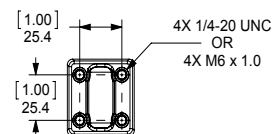
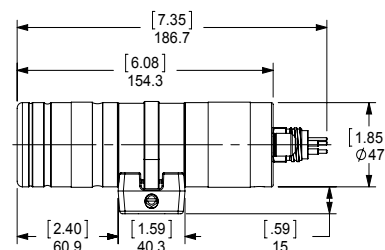
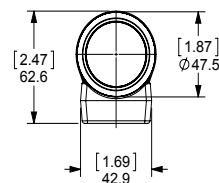
MCBH3MP
(High Voltage AC/DC)
1 = Hot (DC +)
2 = Neutral (DC -)
3 = Chassis



MCBH5MP
(Low Voltage DC)
1 = DC+
2 = DC-
3 = Chassis
4 = Not Used
5 = 0-5 V DC Control
(0-5V DC Control referenced to Pin 2)

*Other connector options
are available upon request.

Dimensions



[inch]
mm

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Safety Symbol

In this operator's manual and on the product, safety symbols are used to communicate important safety information. This section is provided to improve understanding of these symbols.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates a hazardous situation which, if not avoided, could result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in damage to the product or bodily harm.



CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE indicates information that relates to the protection of property.



This symbol means read the operator's manual carefully before using the equipment. The operator's manual contains important information on the safe and proper operation of the equipment.



This symbol means always wear safety glasses with side shields or goggles when handling or using this equipment to reduce the risk of eye injury.



This symbol indicates the risk of electrical shock.

General Notes and Warnings

You may run your SeaLite® Lumos in air. As the light heats up you will notice that the output will diminish. This is normal, and the light will return to full brightness once it is submerged and allowed to cool down.

DANGER

When the SeaLite® Lumos is operated in air the body may reach temperatures in excess of 65° C. These temperatures may be enough to cause burns if the light is handled without protective clothing.

Do not operate any high voltage electrical equipment in or around water without using a Ground Fault Interrupt circuit (GFI) and an isolation transformer, especially when divers are in the water.

WARNING

Do not clean any part of the light head with any type of alcohol.

There should be no reason to ever open the body of your SeaLite® Lumos light. There are no user serviceable parts inside your new underwater light. Your SeaLite® Lumos was thoroughly pressure tested prior to leaving the factory to confirm the integrity of the complete assembly. Opening the housing may cause potential problems when resealing.

Pre and Post Dive Inspection

Check to make sure that the rear bulkhead connector is secure before deployment.

Check the following areas for previous damage, wear or corrosion: rear bulkhead connector, power cable, front window.

Rinse your SeaLite® Lumos in fresh water after use in saltwater.

DANGER

After each deployment, carefully check to make sure the light is operational and has not flooded. If it gets flooded, upon surfacing, the light can become internally pressurized, which may be potentially dangerous. Additionally, if the power remains on when the light has partially flooded, it is possible for electrolytic generation of an explosive mixture of hydrogen and oxygen gases. If a light appears flooded upon removal from the water, it should be treated as potentially dangerous. Point the light away from persons and valuable equipment and make sure that the power is disconnected. See the Flooded Light Repair procedure for more information.

Troubleshooting

If the light stops working while underwater assume that it has been flooded. See Flooded Light Repair procedure below.

Once it has been determined that the light is not flooded, or if it does not turn on during pre-deployment checks, check the input power cable/inline connector to make sure that correct voltage is being supplied, and that the correct pinout is being used. See page 2 of this manual for electrical specs and connector pin assignments.

If the light still does not work, return it to DSPL using the RMA Procedure for Repair below.

Flooded Light Repair

If the light stops working while underwater, you should assume that it has been flooded. When working on a potentially flooded light, it is important to use appropriate personal protective equipment to include, at a minimum, eye and hand protection.

1. Place the light face down on a table making sure that the connector side is facing up.
2. Slowly unscrew the connector/socket assembly to allow any internal pressure to be equalized.
3. Once it is determined that the light is not internally pressurized, it is recommended that the light be returned to DeepSea Power & Light (DSPL) for evaluation and repair using the RMA Procedure.

RMA Procedure for Repair

Should it be necessary to return your light to the factory, follow the procedure for the Flooded Light Repair above, leaving the connector partially unscrewed. For warranty and non-warranty repairs please contact DeepSea Power & Light for a RMA number prior to returning your item. Please have your light model number, serial number and any other pertinent information along with a description of the problem, on hand when you call, or include them in a fax or e-mail. When shipping your item, be sure that the freight is pre-paid (CODs will not be accepted) and that the RMA number is clearly printed on the outside of the box.

All shipments should be sent to the address below:

DeepSea Power & Light
Attn: RMA #####
4033 Ruffin Road
San Diego, CA 92123-1817
U.S.A

Tel: (858) 576-1261
Fax: 858-576-0219
e-mail: RMA@deepsea.com

Limited Warranty

Seller warrants that the goods (except internal electronic components) sold under this contract will be free from defect in material and workmanship for a period of one year from the date of shipment from the factory, if they have been properly used. Internal electronic components are warranted for 90 days from the date of shipment from the factory, if they have been properly used. This warranty will be limited to the repair or replacement of parts and the necessary labor and services required to repair the goods. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY. This warranty is the exclusive and only warranty to pass with the goods under this contract. No agent, employee, or representative of the Seller has any authority to bind Seller to any information, representation, or warranty concerning the goods sold under this contract, and unless an affirmation, representation, or warranty made by an agent, employee, or representative is specifically included within this contract, it will not be enforceable by Buyer. If notice of defect is given to DeepSea Power & Light, Inc. within such 90 day or one year warranty period, the sole obligation of DeepSea Power & Light, Inc. shall be to furnish new or repaired parts free of charge in exchange for parts which have been proved defective and does not include any other costs such as the cost of removal of the defective part, installation, labor, or consequential damages of any kind, the exclusive remedy being to require DeepSea Power & Light, Inc. to furnish such new parts. Under no circumstances shall the Buyer be entitled to recover any incidental damages as that term is defined in Commercial Code §2715.

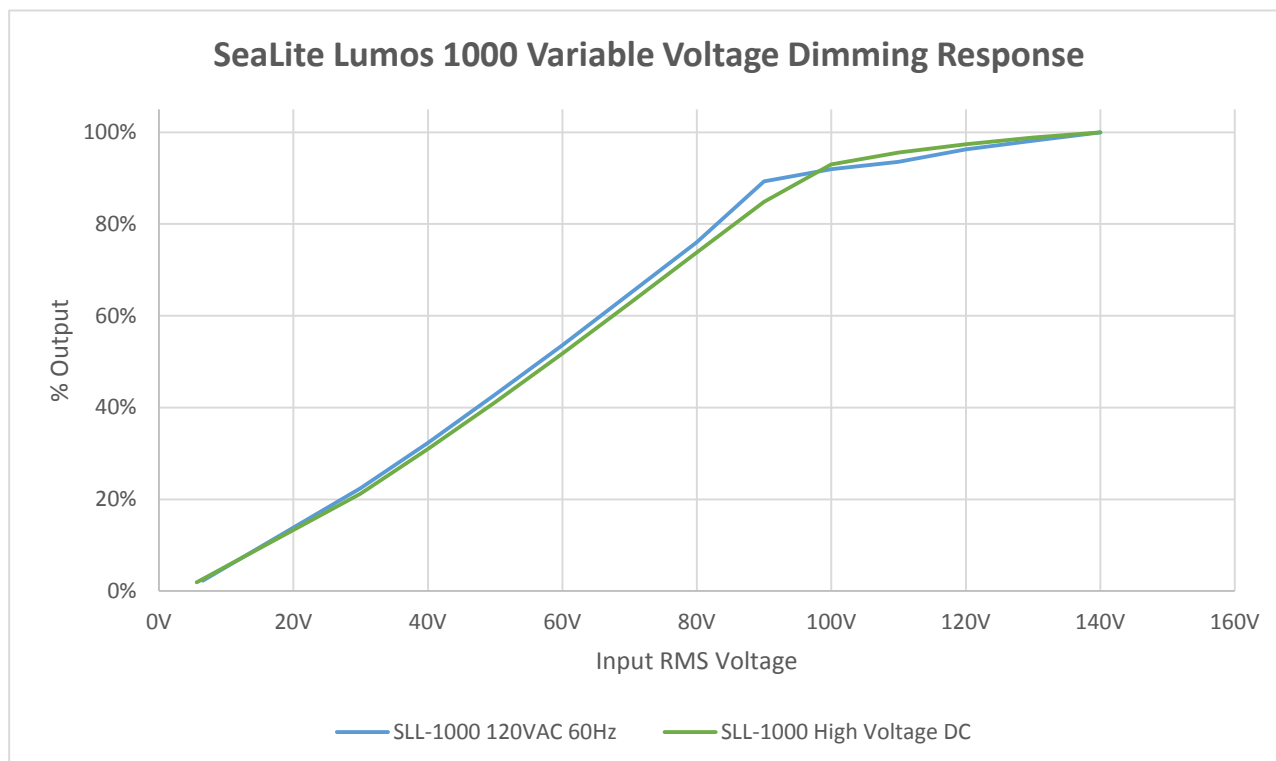
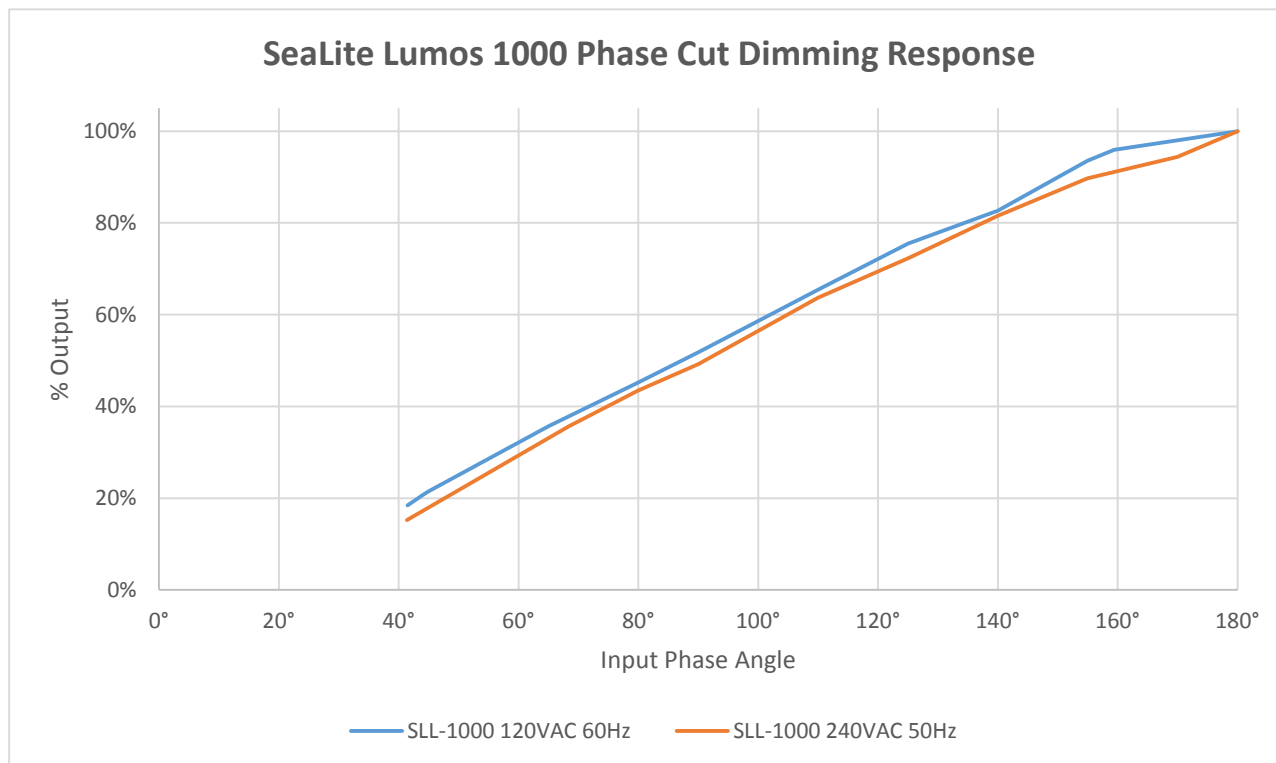


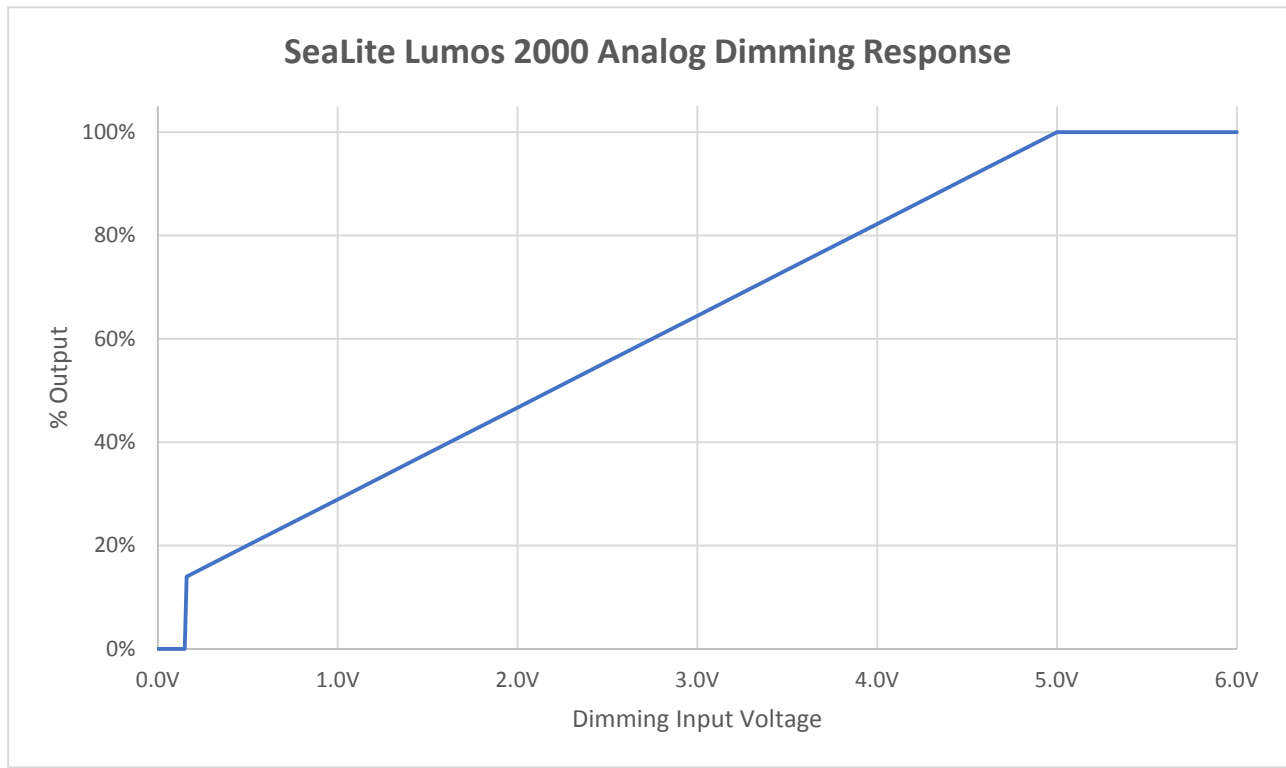
www.deepsea.com
sales@deepsea.com
4033 Ruffin Road
San Diego, CA 92123-1817 USA
T: (800) 487-3775
F: (858) 576-0219



Appendix A

Dimming Response Curves

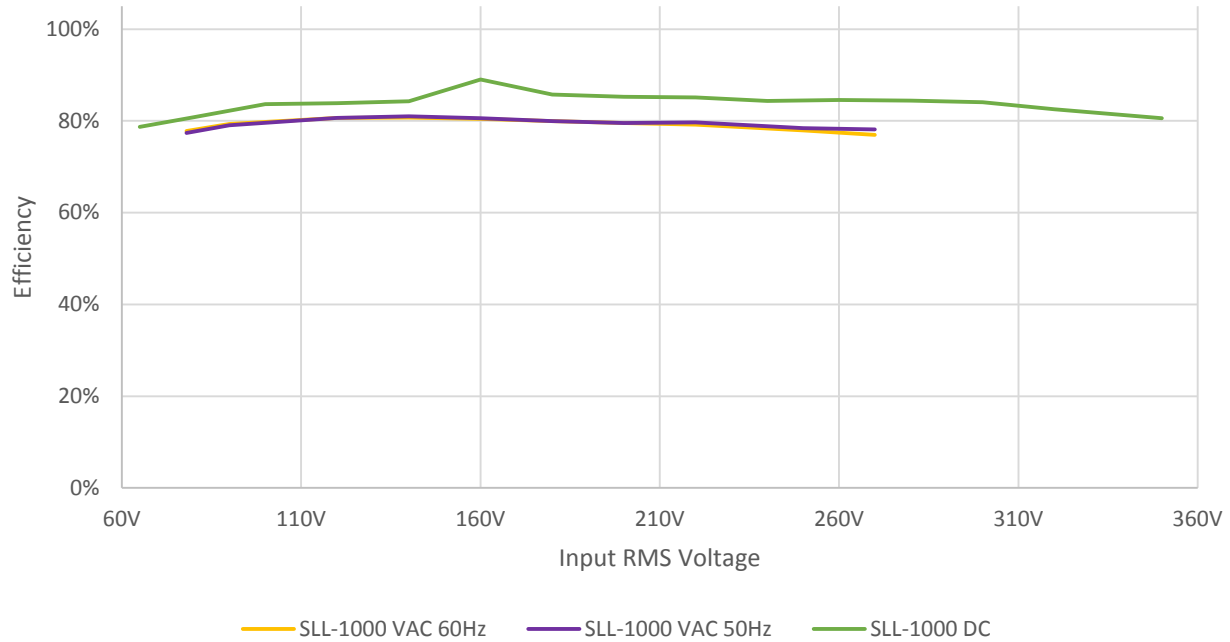




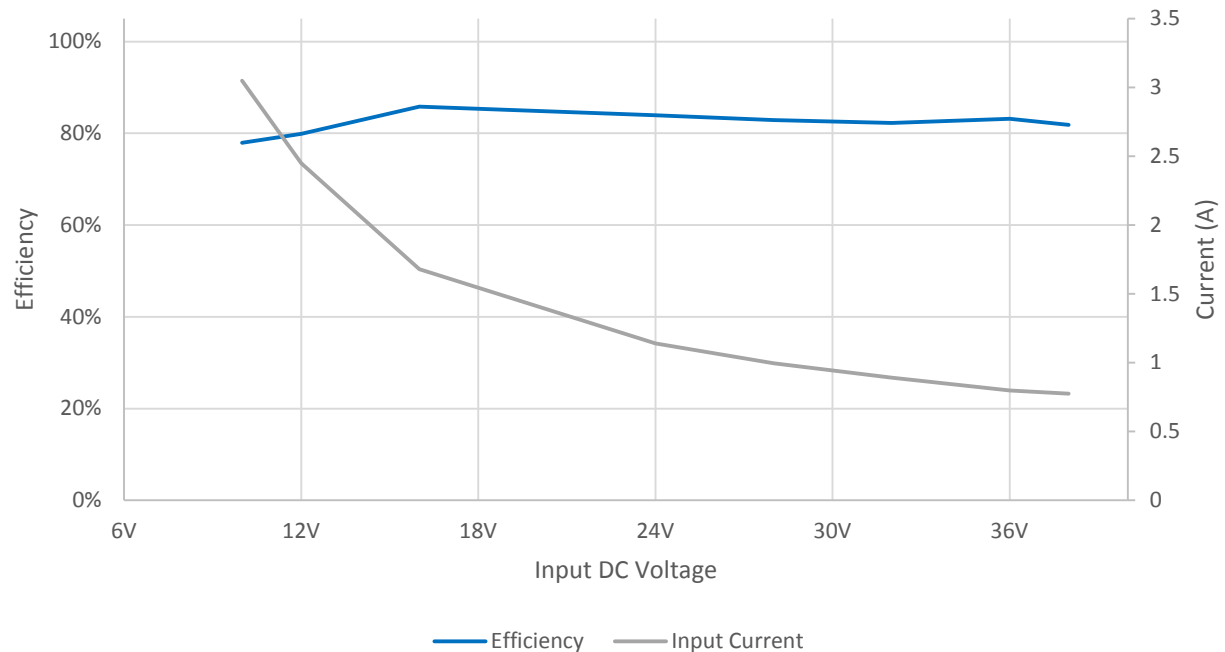
Appendix B

Driver Efficiency

SeaLite Lumos 1000 Efficiency



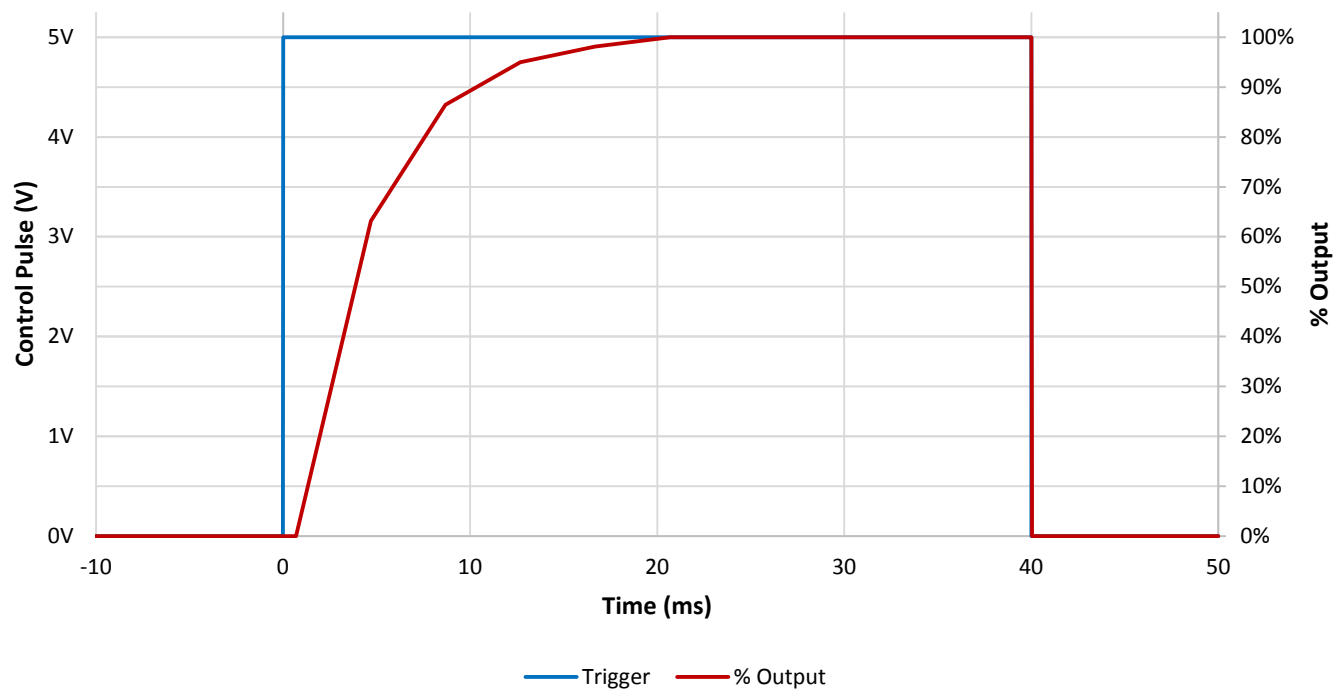
SeaLite Lumos 2000 Efficiency



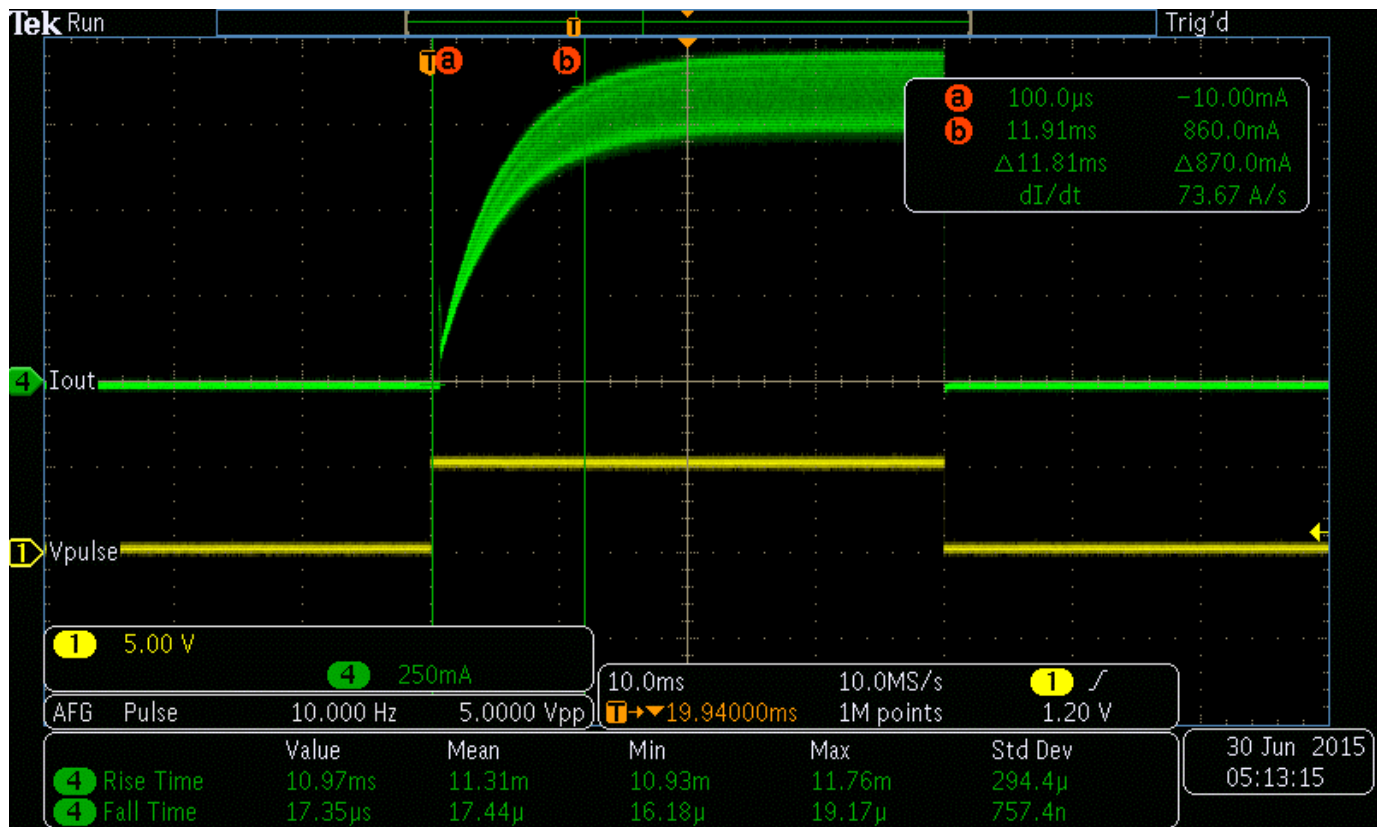
Appendix C

Low-Voltage DC Step Response Curve

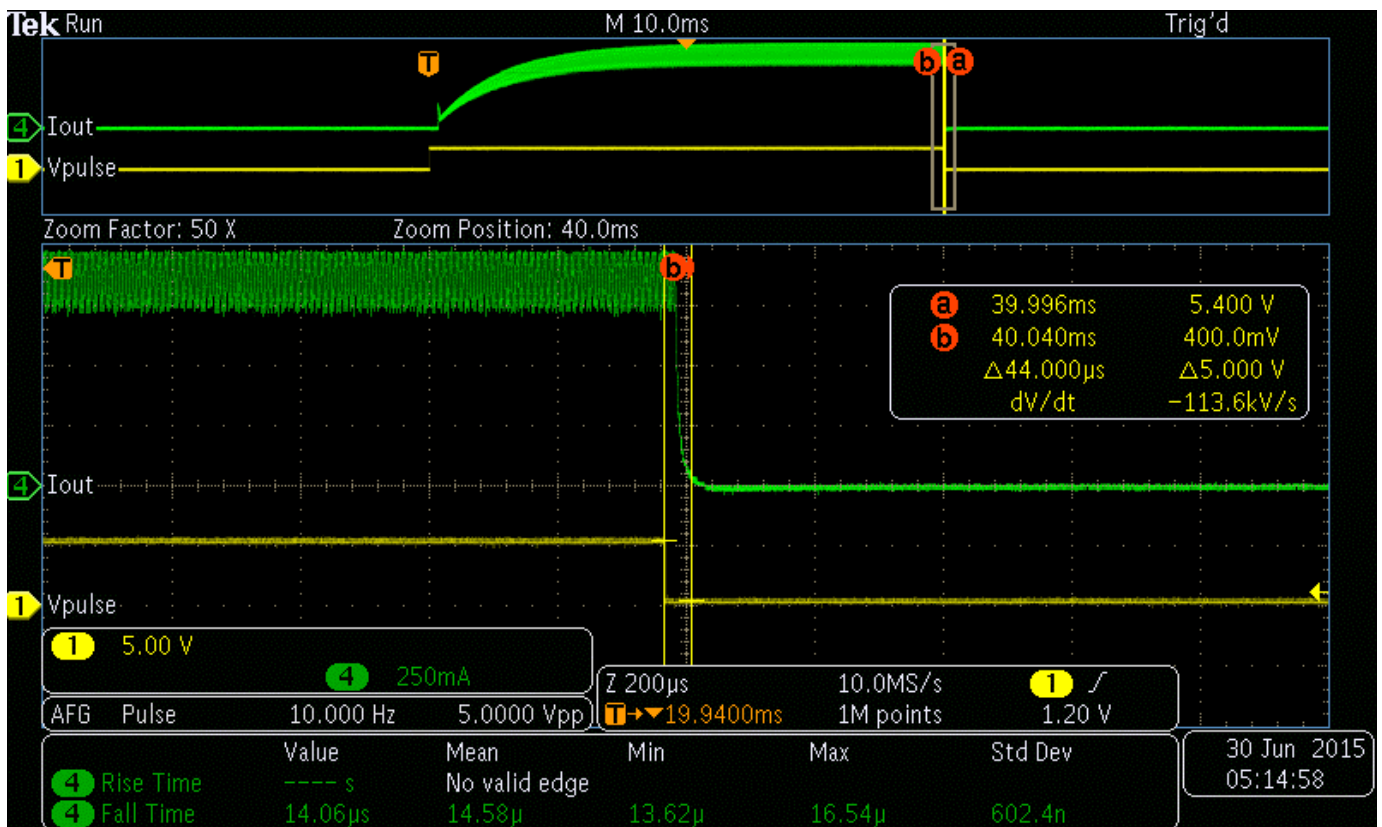
SLL-2000 DIM Input Step Response Characteristics



DIM Input Pulse Response: Rise Time SLL-2000 LVDC



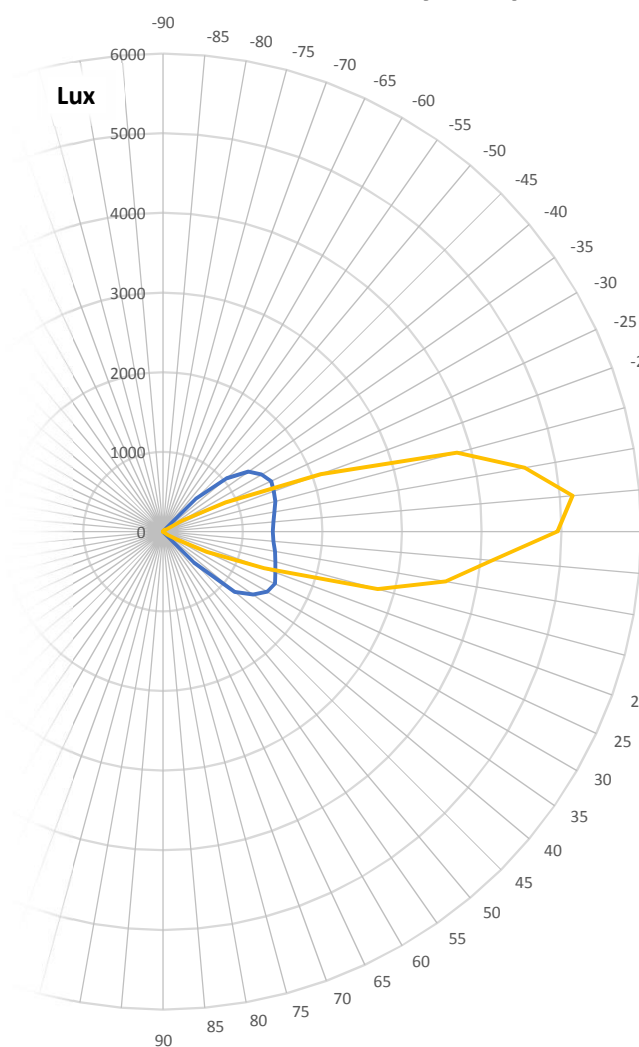
DIM Input Pulse Response: Fall Time SLL-2000 LVDC



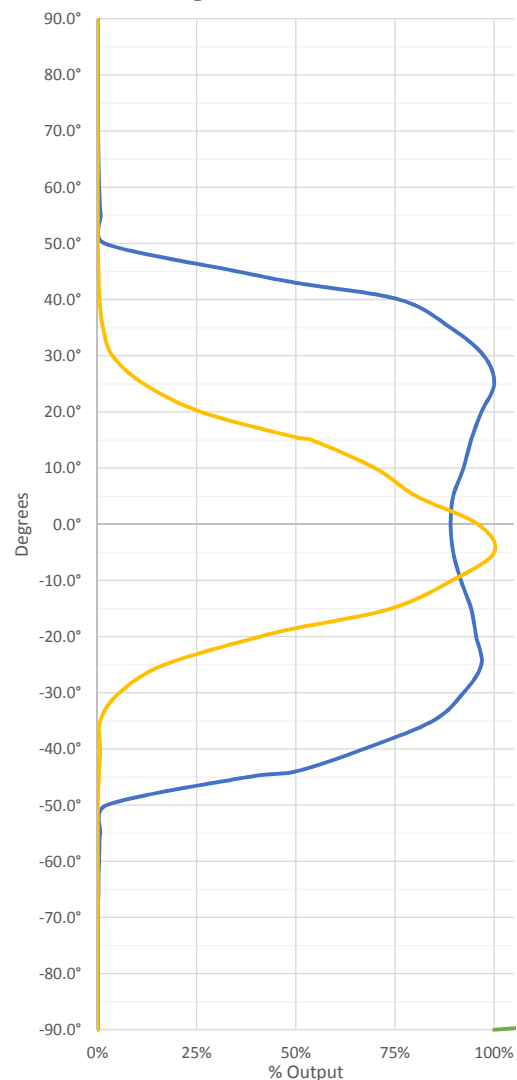
Appendix D

Beam Patterns

Radial Lux Intensity Comparison



Angular Distribution


SeaLite Lumos Flood
 SLL-2000-DW-F-A05
Lumens: 2607**Peak Lux:** 1550**FWHP Angle:** 87
SeaLite Lumos Spot
 SLL-1000-DW-S-PV
Lumens: 1831**Peak Lux:** 5160**FWHP Angle:** 34

NOTE: Beam pattern data for a representative sample of the indicated product configuration only.