

Orux 480 Z Profile

480w LED Profile with CMY, Framing Shutters, and More!



User Manual



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1. Introduction and Setup

Unpacking and In the Box

Thank you for choosing the Orux 480 Z from GAMMA LED Vision. You will see you have acquired a powerful and versatile moving light.

Inside the box you should find:

- Orux 480 Z Fixture 1
- Omega Brackets 2
- Safety Cable 1
- DMX Cable 1
- 1m True1 to Edison Cable 1

(Flight case is optional, please contact your dealer)

Please check carefully that there is no damage from shipping. Should there be any problems, please consult your dealer and don't use the light until you've verified it's good to go!

Mounting and Operation

Before installation, please read the user manual carefully, then prepare Omega Brackets (2 pcs) and Safety Cable (1 pc).



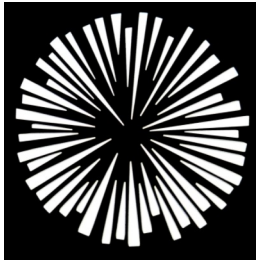
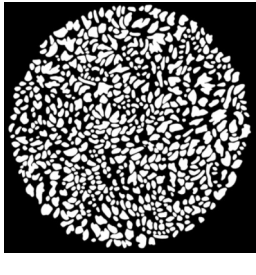

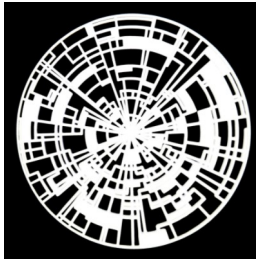
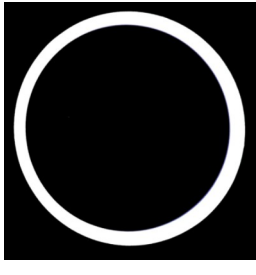
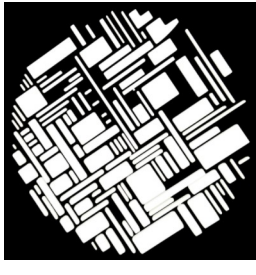
Clamp Mounting: The Orux 480 Z provides omega brackets which you can attach clamps to for typical clamp mounting. Once the clamps are attached to the omega brackets, you can attach the omega brackets to the fixture via the ½ turn fasteners.

As an added safety measure be sure to attached at least one properly rated safety cable to the fixture using on of the safety cable rigging point integrated in the base assembly.

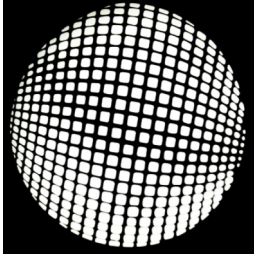

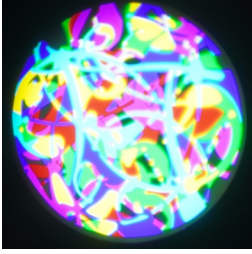
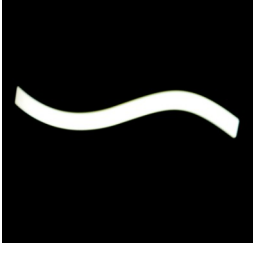

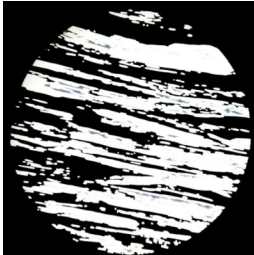

Features

- ◆ High Brightness 480w LED Source with 20,000 hour life
- ◆ Motorized Zoom from 4.5° -55°
- ◆ 540 Degree Pan and 270 Degree Tilt
- ◆ CMY Color Mixing
- ◆ 7 Rotating and 8 Fixed Gobos
- ◆ Color Wheel with 7 Colors + Open
- ◆ Variable CTO Filter 7100k-2500k
- ◆ Frost Filter
- ◆ Variable Strobe
- ◆ Dual, Independently Rotating Prisms
- ◆ Motorized Focus

Fixed Gobo Wheel:

1	2	3	4	5
				
6	7	8		
				

Rotating Gobos (25.4mm outer diameter, 20mm image diameter, 1mm thick glass)

1	2	3	4	5
				
6	7			
				

Safety Precautions

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

Caution: For added protection mount the fixtures in areas outside walking paths, seating areas, or in areas where the fixture might be reached by unauthorized personnel.

Before mounting the fixture to any surface, make sure that the installation area can hold a minimum point load of 10 times the device's weight.

Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.

Never stand directly below the device when mounting, removing, or servicing the fixture.

From a ceiling, or set on a flat level surface (see illustration below). Be sure this fixture is kept at least 0.5m (1.5ft) away from any flammable materials (decoration etc.).

Always use and install a safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.

DO NOT connect the device to any dimmer pack.

During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, and it will decrease gradually within 15 minutes.

·Don't try to modify the fixture without any instruction by the manufacturer.

·Warranty is voided if there are any malfunctions from not following the user manual while operating or any hazardous operation, like shock short circuit, electronic shock, lamp broken, etc.

Customer Support

WARRANTY POLICY

GAMMA LED Vision warrants its products for the periods set below from the date of purchase to be free of manufacturer and workmanship defects. Warranty does not cover normal wear and tear caused by force, negligence or misuse of products. GAMMA LED Vision is not responsible for any damages or injury caused by misuse or improper handling of the products and in accordance with instructions and specifications of manual.

Warranty terms are as follows:

LED Fixtures:

Indoor: 2 Years

Outdoor (IP 54 or higher): 1 Year

Lamp Fixtures: 1 year / excludes the lamp

LED Video Products:

Indoor: 2 Years

Outdoor (IP 54 or higher): 1 Year

Controllers: 2 years

Batteries: 6 months

All Trussing Related Products and Accessories: 1 Year

Please visit WWW.GAMMALEDVISION.COM for complete Limited Warranty terms and contact information.

2. Setup and Operation

Using the LCD Menu and Buttons

The Orux 480 Z features a standard LCD screen and buttons for operation. Press **Menu** to enter the menu. Use the **Up** and **Down** arrows to navigate through the options and press **Enter** to go into the menu or confirm your selection. The menu will automatically exit after a period of inactivity.

Address	001-512	Set the DMX Address		
Info	Software Version	Displays the Software Version		
	IP Info	Displays the IP Address and Subnet Mask (Not Enabled on the Orux 480 Z)		
	Time Info	Current Time	Displays the Run Time since powered on.	
		LED Run Time	Displays the total LED “On” time.	
		Total Run Time	Displays the total powered-on time over the life of the fixture.	
Ethernet	(Not Enabled on the Orux 480 Z)	(Not Enabled on the Orux 480 Z)		
Set	Display Reverse	“ON” will reverse the display for hanging fixtures.		
	User Time	N/A		
	Language	Set Language – English or Chinese		
	Reset Default	Set the fixture to the factory default settings		
	Motor Reset	Offers options to reset each individual motor inside the fixture separately.		
	Calibrate	Allows for calibration of individual parameters. Contact GAMMA LED Vision for password if required. Most users should never need this :)		
	Fan Set	Silent	Set fans to silent/quiet mode	
		High	Set fans to high	
		Auto	Set fans to automatic/balanced	
	Encoders	Turn off or on the Pan/Tilt correction encoders.		
	Tilt Reverse	Turning this “ON” reverses the tilt of the light.		
	Pan Reverse	Turning this “ON” reverses the pan of the light.		
	Dimmer Curve	Square Law (Default)	Sets the dimmer curve to the desired option. Most users should leave this alone :)	
		S Curve		
Linear				

		Inv Sq Law	
	DMX Fail	Hold or Blackout – Determines what happens when DMX signal is lost while unit is powered on.	
	Temp Unit	Celsius or Fahrenheit – Sets the displayed temperature of the LED.	
	Keylock	Off or On – When turned “On”, the display will lock once the fixture has power cycled. The password will be up/down/up/down/enter.	
	Display	On or Off – When turned “On” the display will remain on when the fixture is powered. When turned “Off” (default) the display will turn off after a few moments of non-use.	
Mode	Signal Select	Set to DMX or Art-Net. (Art-Net is Not Enabled on the Orux 480 Z)	
	Manual Control	Allows manual/testing control of each parameter individually.	
	Sound	Sensitivity – set the sensitivity of the sound-active mode.	
	Auto	Auto Speed – set the speed of the auto programs.	
	Slave	Set the fixture as a slave for master/slave mode.	
	DMX Mode	Set the DMX Mode to 34 or 54 Channel.	

DMX Setup

DMX Basics

DMX512 stands for digital multiplex 512. This means that 512 channels are controlled digitally through 1 data cable.

A channel is a set of 255 steps that are assigned to control attributes in each light. This may be a color like red, green or blue, and intensity, strobe, pan/tilt or other attributes.

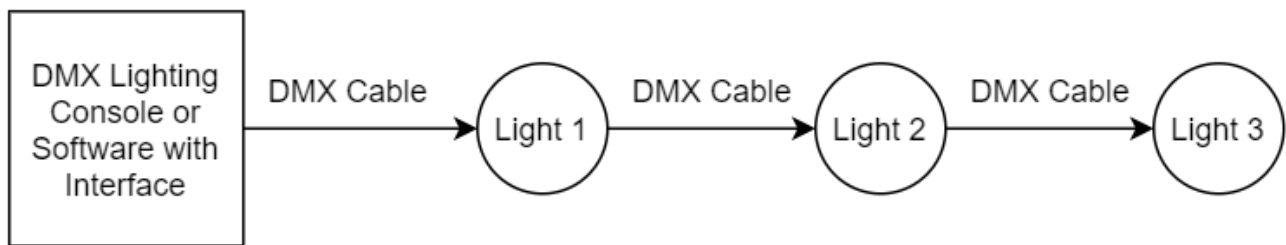
Multiple sets of 512 "universes" may be used. Only 1 universe will travel on a DMX cable, but through networked DMX (Art-Net or sACN E1.31), many universes can travel over a network.

DMX Wiring

DMX works by connecting 1 or multiple lights to the output of a DMX lighting console or software with a DMX interface.

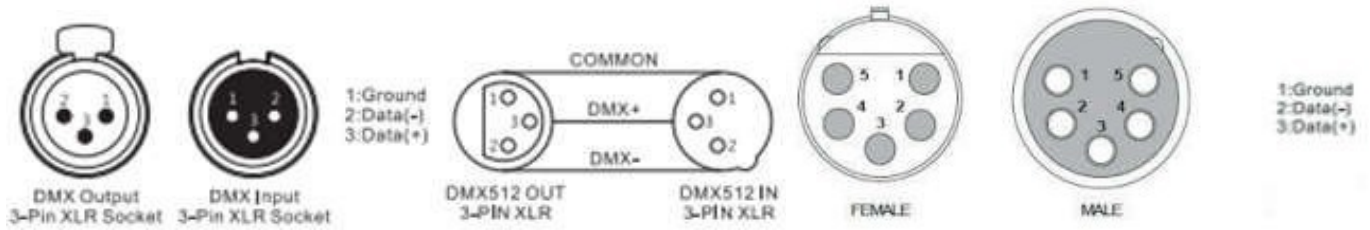
DMX lights connect in what is called a "daisy-chain". Your first DMX cable will plug its male DMX connector into the female DMX connector on your lighting console. The remaining female connector will then connect to the DMX input on your first light.

You may then connect your next fixture to the output of your first light, and continue the chain.

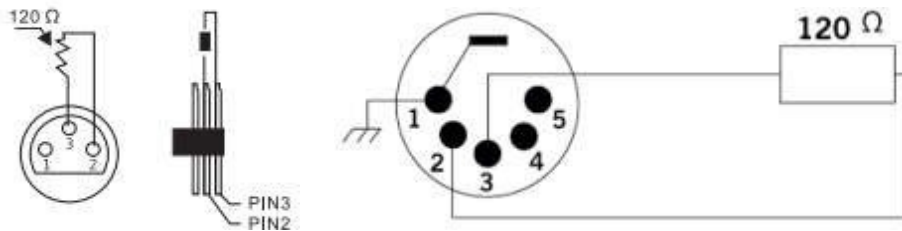


32 Fixture Rule – DMX only allows you to connect up to 32 fixtures in a single daisy chain for signal strength. Sometimes, depending on the fixtures and cable length, this number is less (or more).

DMX Cables can be 3-pin or 5-pin. These use the same type of data, and in the 5-pin only pins 1, 2, and 3 are used. The cable should be a 2 conductor, shielded cable of at least 110 ohms resistance. Microphone cable is not DMX cable. Please refer to the diagram below:



For installations where the DMX cable has to run a long distance or is in an electrically noisy environment, it is recommended to use a DMX terminator. This helps in preventing corruption of the digital control signal by electrical noise and reflections. The DMX terminator is simply an XLR plug with a 120 Ω resistor connected between pins 2 and 3, which is then plugged into the output XLR socket of the last fixture in the chain. Please see illustrations below:



DMX Modes and Configuration

The Orux 480 Z has multiple DMX modes, sometimes called "personalities", "profiles", or as we will use here "modes".

In general, modes with more DMX channels offer a greater level of control or options but take up more of your output channels on your lighting console or software.

Modes with less DMX channels often offer less control, but may be plenty for your needs. *Depending on your needs and control solution, you may not need channels for automated programs, strobes, or macros – your console may have great effects! In this case, you can use a lesser channel mode and fit more lights per DMX universe.*

The Orux 480 Z offers a 34 and 54 Channel Mode. The 34 Channel Mode is utilitarian and will work well for many users. The 54CH mode offers 16-bit control of most parameters, ideal for fine control and longer throw distances.

View the DMX mode charts below to find the mode that best suits your needs.

34CH	54CH	Function	Value	Description/Options
1	1	Pan	0-255	0-540° Pan Control
2	2	Pan Fine	0-255	Fine Control for Pan
3	3	Tilt	0-255	0-270° Degree Tilt Control
4	4	Tilt Fine	0-255	Fine Control for Tilt
5	5	P/T Speed	0-255	Pan/Tilt Speed, Fast to Slow
6	6	Strobe	0-10	Closed
			11-21	Open
			22-126	Strobe, Slow to Fast
			127-137	Open
			138-201	Pulse Effect in Various Timings
			202-212	Open
			213-244	Random Strobe, Slow to Fast
			245-255	Open
7	7	Dimmer	0-255	Intensity Control

34CH	54CH	Function	Value	Description/Options
	8	Dimmer Fine	0-255	Fine Control of the Dimmer
8	9	Zoom	0-255	Zoom Adjustment from Narrow to Wide
	10	Zoom Fine	0-255	Fine Control of Zoom
9	11	Focus	0-255	Focus Control from Far to Near
	12	Focus Fine	0-255	Fine Control of Focus
10	13	Auto Focus	0-45	Auto Focus Off
			46-67	3m / 9.84' Auto Focus Point
			88-129	5m / 16.4' Auto Focus Point
			130-171	7m / 22.9' Auto Focus Point
			172-213	10m / 32.8' Auto Focus Point
			214-255	15m / 49.2' Auto Focus Point
11	14	Auto Focus Fine	0-255	Allows Fine Control of the Exact Autofocus Point. By default (Zero) Autofocus sits on the Rotating Gobo Wheel
16	15	Color Wheel	0-15	Open
			16-22	Open/Red
			23-29	Red
			30-36	Red/Green
			37-43	Green
			44-50	Green/Blue
			51-57	Blue
			58-64	Blue/Yellow
			65-71	Yellow
			72-78	Yellow/Amber
			79-85	Amber
			86-92	Amber/Magenta
93-99	Magenta			

34CH	54CH	Function	Value	Description/Options
			100-106	Magenta/Violet
			107-113	Violet
			114-120	Violet/Open
			121-127	Open
			128-189	CW Rotation, Fast to Slow
			190-193	Stop
			194-255	CCW Rotation, Slow to Fast
	16	Color Wheel Fine	0-255	Fine Control of the Color Wheel
13	17	Cyan	0-255	Cyan
	18	Cyan Fine	0-255	Fine Control of Cyan
14	19	Magenta	0-255	Magenta
	20	Magenta Fine	0-255	Fine Control of Magenta
15	21	Yellow	0-255	Yellow
	22	Yellow Fine	0-255	Fine Control of Yellow
16	23	CTO	0-255	CTO Filter, 7100k-2500k
	24	CTO Fine	0-255	Fine Control of CTO
17	25	Rotating Gobo Wheel	0-7	Open
			8-20	Rotating Gobo 1
			21-33	Rotating Gobo 2
			34-46	Rotating Gobo 3
			47-59	Rotating Gobo 4
			60-72	Rotating Gobo 5
			73-85	Rotating Gobo 6
			86-98	Rotating Gobo 7
			99-111	Gobo 1 Shake, Slow to Fast
			112-124	Gobo 2 Shake, Slow to Fast

34CH	54CH	Function	Value	Description/Options
			125-137	Gobo 3 Shake, Slow to Fast
			138-150	Gobo 4 Shake, Slow to Fast
			151-163	Gobo 5 Shake, Slow to Fast
			164-176	Gobo 6 Shake, Slow to Fast
			177-189	Gobo 7 Shake, Slow to Fast
			190-221	Gobo Wheel Scroll CW, Fast to Slow
			222-223	Stop
			224-225	Gobo Wheel Scroll CCW, Slow to Fast
18	26	Gobo Wheel Rotation	0-127	Gobo Indexing
			128-189	CW Rotation, Fast to Slow
			190-193	Stop
			194-255	CCW Rotation, Slow to Fast
	27	Gobo Wheel Rotation Fine	0-255	Fine Control of Gobo Rotation
19	28	Fixed Gobo Wheel	0-13	Open
			14-24	Gobo 1
			25-35	Gobo 2
			36-46	Gobo 3
			47-57	Gobo 4
			58-68	Gobo 5
			69-79	Gobo 6
			80-90	Gobo 7
			91-101	Gobo 8
			102-112	Gobo 1 Shake, Slow to Fast
			113-123	Gobo 2 Shake, Slow to Fast
			124-134	Gobo 3 Shake, Slow to Fast
			135-145	Gobo 4 Shake, Slow to Fast

34CH	54CH	Function	Value	Description/Options
			146-156	Gobo 5 Shake, Slow to Fast
			157-167	Gobo 6 Shake, Slow to Fast
			168-178	Gobo 7 Shake, Slow to Fast
			179-189	Gobo 8 Shake, Slow to Fast
			190-221	Gobo Wheel Scroll, Fast to Slow
			222-223	Stop
			224-255	Gobo Wheel Scroll, Slow to Fast
20	29	Animation Wheel	0-127	Animation Indexing
			128-158	CW Rotation from Fast to Slow
			159-162	Stop
			163-193	CCW Rotation from Slow to Fast
			194-255	Bank and Forth Scroll, from Slow to Fast
21	30	Iris	0-255	Iris, Large to Small
	31	Iris Fine	0-255	Iris Fine Control
22	32	Prism (5 Facet)	0-127	Open
			128-255	Prism Inserted
23	33	Prism Rotation	0-127	Prism Indexing
			128-189	CW Rotation from Fast to Slow
			190-193	Stop
			194-255	CCW Rotation from Slow to Fast
	34	Prism Rotation Fine	0-255	Fine Control of Prism Rotation
24	35	Frost	0-127	Open
			128-255	Frost Inserted
25	36	Shutter 1A	0-255	Shutter Position
	37	Shutter 1A Fine	0-255	Fine Control of Shutter Position
26	38	Shutter 1B	0-255	Shutter Rotation
	39	Shutter 1B Fine	0-255	Fine Control of Shutter Rotation

34CH	54CH	Function	Value	Description/Options
27	40	Shutter 2A	0-255	Shutter Position
	41	Shutter 2A Fine	0-255	Fine Control of Shutter Position
28	42	Shutter 2B	0-255	Shutter Rotation
	43	Shutter 2B Fine	0-255	Fine Control of Shutter Rotation
29	44	Shutter 3A	0-255	Shutter Position
	45	Shutter 3A Fine	0-255	Fine Control of Shutter Position
30	46	Shutter 3B	0-255	Shutter Rotation
	47	Shutter 3B Fine	0-255	Fine Control of Shutter Rotation
31	48	Shutter 4A	0-255	Shutter Position
	49	Shutter 4A Fine	0-255	Fine Control of Shutter Position
32	50	Shutter 4B	0-255	Shutter Rotation
	51	Shutter 4B Fine	0-255	Fine Control of Shutter Rotation
33	52	Shutter Assembly Rotation	0-255	Rotation of the Full Shutter Rotation
	53	Shutter Assembly Rotation Fine	0-255	Fine Control of the Shutter Assembly Rotation
34	54	Control	0-9	N/A
			10-19	Display Off
			20-29	Display On
			30-39	Display Invert Off
			40-49	Display Invert On
			50-59	Auto Fan Control Mode
			60-69	High Fan Control Mode
			70-79	Silent Fan Control Mode
			80-89	Square Law Dimmer Curve
			90-99	Linear Dimmer Curve
			100-149	N/A
			150-159	Reset All

34CH	54CH	Function	Value	Description/Options
			160-169	Reset Focus/Zoom
			170-179	Reset Colors
			180-189	Reset Gobos
			190-199	Reset Other Motors
			200-255	N/A

3. Maintenance

Routine Maintenance

Fixture Cleaning

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics.

- ◆ Clean with soft, damp cloth.
- ◆ Always dry the parts carefully.
- ◆ Clean the external optics at least every 20 days.

Use an air compressor (oil-free) or electronics vacuum to clean the fan inlets and outlets when you notice they are dusty or dirty. Like any other electronics fan, always use an object to block the fan from spinning while you clean it, and blow air so that the dirt blows out of the fixture!

Troubleshooting Problems

Error Messages

The display may show some of these common error messages:

"Error Channel is XX" – indicates there is a problem with one of the channels. These correspond to the DMX channels.

"Pan or Tilt Movement Er" – This message will appear after reset if the Pan or Tilt circuit indicates the encoder is not reading correctly and there is a problem with the system.

Common Problems

The following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work and you do not hear any fans running when it's plugged in:

- Check that the unit is plugged in to a working power outlet.
- Press the menu button to confirm that the unit is powered on. If the screen does not light up, the unit has no power.

B. Not Responding to the DMX Controller

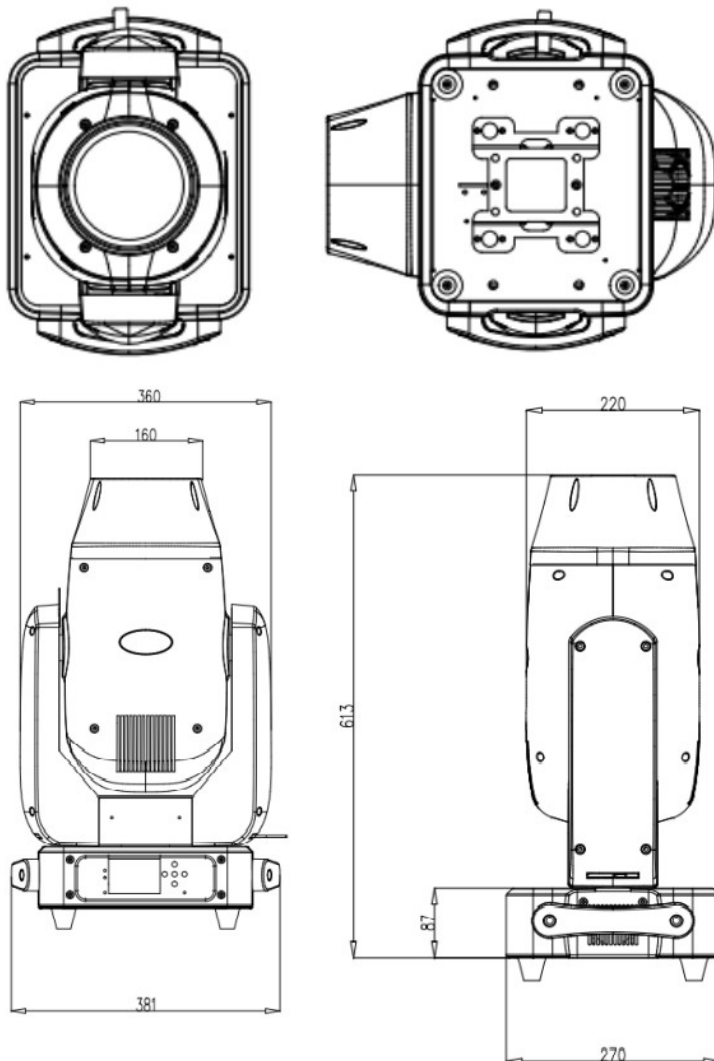
- Check DMX cables to verify that they are plugged in and functional.
- Check the DMX address and mode – does it match the address and mode patched in the lighting console or software?
- Plug the light directly into the DMX controller with a cable that you know is good. Unplug all other lights – does it work?
- Try to use another DMX controller.

C. One of the functions is not working well

- The stepper motor might be damaged or the cable connected to the PCB is broken.
- The motor's drive IC on the PCB may be bad.

4. Technical Specifications

- Fully Featured Spot/Beam fixture with Zoom, CMY, Gobo Wheels, Prisms, and more!
- Motorized Zoom from 4.5° -55°
- Multiple DMX modes.
- AC100-240v, 50/60Hz autosensing
- 600w total power consumption from a 480w LED source (at 120v)
- Weight – 75 lbs
- Dimensions: 33"x15"x18"



Photometric Reports

Zoom In, Focused: 4.5°

Distance in Ft.	Full White Intensity in FC
10	11200
15	5010
20	2890
25	1812
50	453

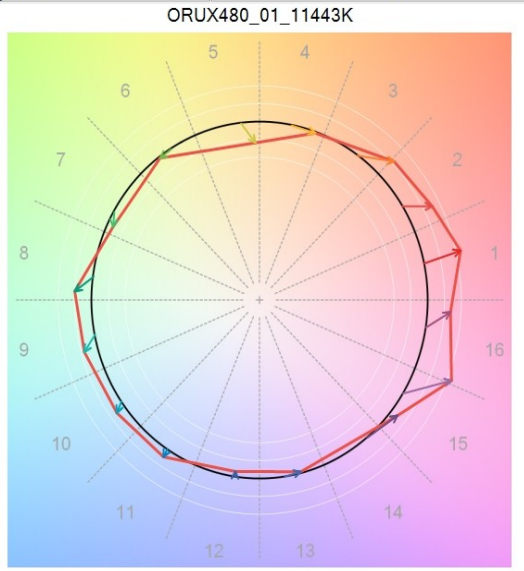
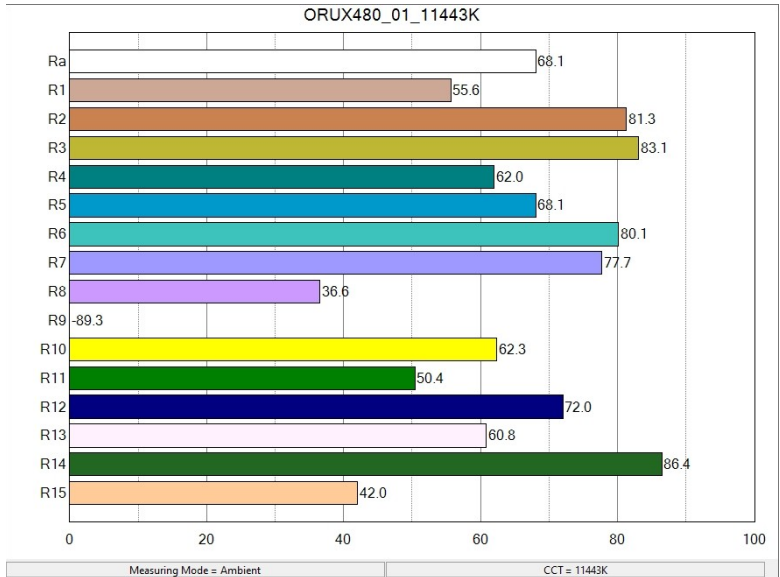
Zoom 50%, Focused:25°

Distance in Ft.	Full White Intensity in FC
5	7980
10	2260
15	1030
20	534
25	1390
50	347.5

Zoom Out, Focused: 55°

Distance in Ft.	Full White Intensity in FC
5	972
10	247
15	119
20	80
25	42
50	10

CRI and TM30 at Full Open White



Measuring Mode = Ambient		CCT = 11443K
Rf = 77	Rg = 109	Ra = 68.1