

# Halo Programmable LED Aquarium Light

Marine Deluxe MX80 / MX110  
Marine Basic M90 / M110

HALO  
JIOU

## Features

- ✓ Ocean blue light spectrum  
simulating marine environment
- ✓ Two channels (groups) of LEDs for  
optimized blend of spectrum
- ✓ High performance glass lens enabling  
desired light emission angle
- ✓ Built-in programmable timer and  
dimmer (Deluxe only)
- ✓ Robust anodized aluminum mounting  
arm compatible with M4 and M5  
screw

## Options of Functionality

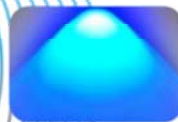


- **Deluxe Light Unit**  
embedded Programmable  
Timer and Dimmer  
(MX80/MX110)



- **Basic Light Unit**  
synchronizes with Deluxe Light Unit  
through simple connection by a  
plug and play control cable  
(M80/M110)

## Options of Light Emission Angle



- **80 degree emission angle**  
through glass lens  
(M80/MX80)



- **110 degree emission angle**  
through glass lens  
(M110/MX110)

## Options of Mounting Arm

- **MAK-24** for tank depth of 18" ~ 24"
- **MAK-18** for tank depth of 14" ~ 18"

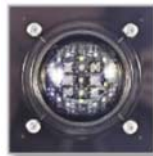


	Marine Deluxe MX80	Marine Deluxe MX110	Marine Basic M80	Marine Basic M110
Lens Emission Angle	80 degrees	110 degrees	80 degrees	110 degrees
LED Array Structure	25 LED (UV + Cool White + Blue + Royal Blue)			
LED Light Characteristic	<p>■ channel 1: full spectrum of ocean blue light 400-480nm  LED included: UV 400nm x1, UV 420nm x1, Royal Blue x2, Blue 465nm x2, Blue 470nm x5, Blue 475nm x2, Blue 480nm x4</p> <p>■ channel 2: high Kelvin white light simulating neritic zone  LED included: Blue 470nm x4, Cool White x4.</p>			
Dimensions (Light Unit)	L13.4 x W13.4 x H13.8 cm L5.3 x W5.3 x 5.5 in		L13.4 x W13.4 x H12.5 cm L5.3 x W5.3 x 4.9 in	
Weight (Light Unit)	730g / 1.61lbs	720g / 1.59lbs	690g / 1.52lbs	680g / 1.50lbs
Power Consumption	85W at maximum intensity (DC 33V)		85W at maximum intensity (DC 33V)	



#### Spectrum Knob

controls mixing ratio of channel 1 and 2 to optimize spectrum



#### 2 Channel LED Matrix & Lens

delivers the desired light spectrum with well defined emission angle



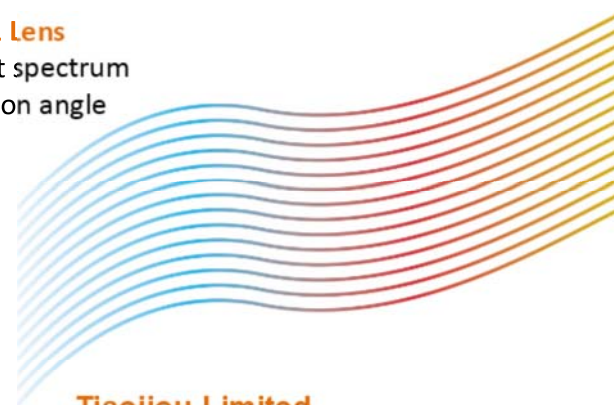
#### Power Knob

controls the maximum light intensity (power) of both channel 1 and 2



#### LCD Programmable Control Panel

controls the timer and the dimmer respectively



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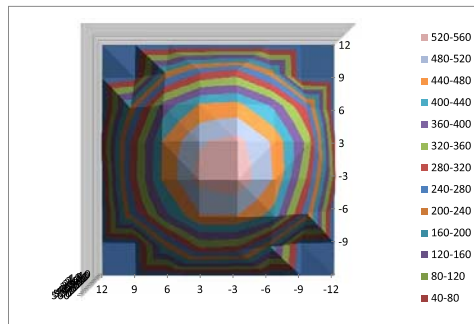
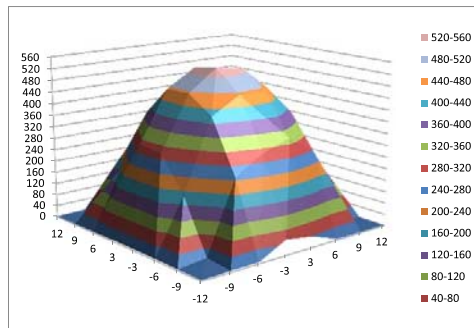
# Halo LED PAR Measurements @ lens 80 degree

Product : Marine Deluxe Date: 10/06 2014

Measuring Distance: **12** 18 24 in

Equipment: Apogee Quantum Flux MQ-200 SN:2942

in	12	9	6	3	-3	-6	-9	-12
-12	2	3	4	5	5	5	4	3
-9	3	9	200	307	299	188	14	5
-6	4	241	380	474	476	421	249	5
-3	15	278	443	533	547	475	307	53
3	36	274	440	515	533	470	338	38
6	4	210	377	442	450	390	271	4
9	3	25	209	273	291	219	9	3
12	2	3	3	4	4	3	3	3

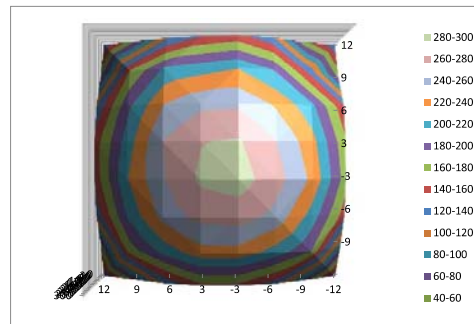
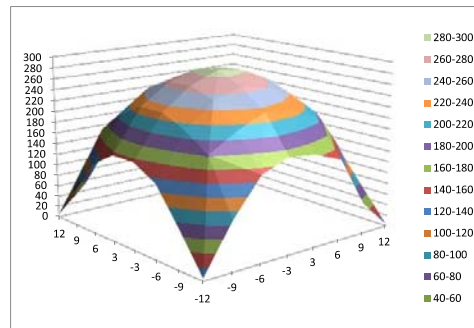


Product : Marine Deluxe Date: 10/06 2014

Measuring Distance: 12 **18** 24 in

Equipment: Apogee Quantum Flux MQ-200 SN:2942

in	12	9	6	3	-3	-6	-9	-12
-12	5	64	126	155	155	132	71	5
-9	54	169	207	231	231	211	182	87
-6	128	203	247	266	269	253	212	151
-3	148	218	258	283	289	268	235	170
3	149	210	260	279	282	260	227	164
6	124	195	239	255	257	237	206	145
9	56	160	203	211	219	197	138	53
12	2	59	116	140	147	124	48	3

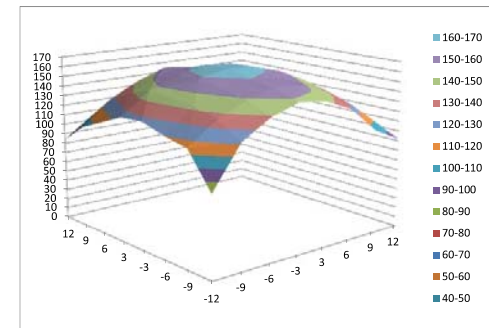


Product : Marine Deluxe Date: 10/06 2014

Measuring Distance: 12 18 **24** in

Equipment: Apogee Quantum Flux MQ-200 SN:2942

in	12	9	6	3	-3	-6	-9	-12
-12	84	103	114	125	127	120	115	81
-9	105	127	138	147	145	142	136	122
-6	122	142	152	157	159	154	149	139
-3	130	152	156	164	165	160	156	148
3	129	148	154	162	163	157	154	144
6	122	140	147	154	155	149	143	132
9	109	124	134	140	142	135	127	106
12	87	104	115	121	123	115	102	92





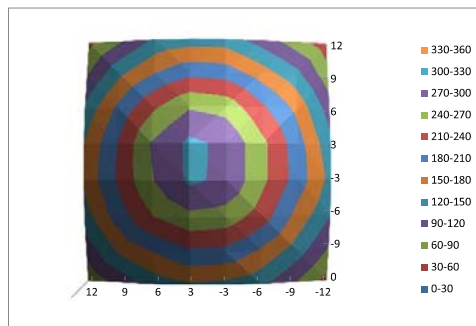
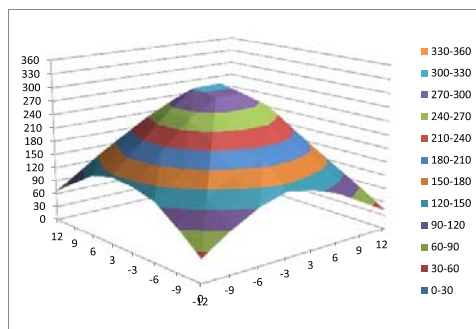
# Halo LED PAR Measurements @ lens 110 degree

Product : Marine Deluxe Date: 10/06 2014

Measuring Distance: **12** 18 24 in

Equipment: Apogee Quantum Flux MQ-200 SN:2942

in	12	9	6	3	-3	-6	-9	-12
-12	66	100	133	146	141	128	92	50
-9	104	156	182	204	201	175	138	90
-6	138	193	239	262	257	224	171	122
-3	155	212	268	305	294	246	196	139
3	150	209	272	306	294	246	193	128
6	129	186	234	266	258	215	172	107
9	90	144	178	199	194	165	131	74
12	51	88	125	134	133	108	77	42

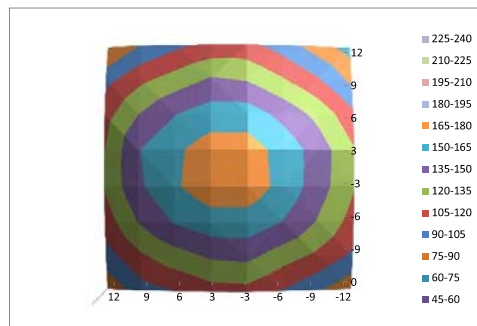
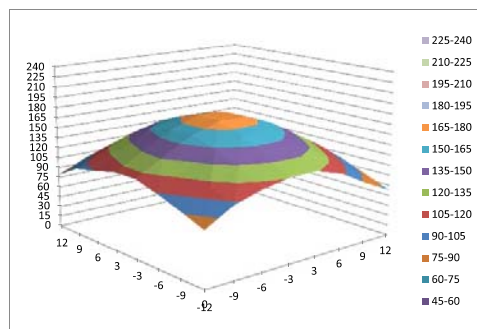


Product : Marine Deluxe Date: 10/06 2014

Measuring Distance: 12 **18** 24 in

Equipment: Apogee Quantum Flux MQ-200 SN:2942

in	12	9	6	3	-3	-6	-9	-12
-12	79	98	105	113	114	104	92	79
-9	98	117	128	136	138	126	116	102
-6	112	136	151	159	159	149	133	114
-3	121	147	163	173	173	160	141	121
3	119	149	162	172	172	159	142	121
6	114	135	149	157	157	145	130	109
9	100	116	126	136	133	121	107	87
12	73	91	101	108	109	98	83	68



Product : Marine Deluxe Date: 10/06 2014

Measuring Distance: 12 18 **24** in

Equipment: Apogee Quantum Flux MQ-200 SN:2942

in	12	9	6	3	-3	-6	-9	-12
-12	60	72	74	79	78	75	71	65
-9	71	80	84	89	90	85	80	74
-6	79	89	94	97	97	93	88	82
-3	84	93	97	101	102	97	93	87
3	85	93	97	102	101	97	93	86
6	78	85	94	95	95	91	88	83
9	70	75	84	86	88	82	79	71
12	59	64	74	74	76	72	71	64

