
TV Power Measurement Report

Model: LG UN55FD

Funded By:



Prepared By:



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1. Test Specifics

Test Start Date	2020-08-26
Test Start Time	12:44:48
Test End Time	16:11:04
Test Duration	0 days 03:26:16
Tester Name	ryan
Lab Name	demo
Lab Address	111 s st
Make	lg
Model	un55fd
Model Year	2020
Serial Number	555ddd
Software Version	1.1.1
Manufacture Year	2020
Manufacture Month	1
Screen Diagonal (inches)	55
Pixel Rows	1080
Pixel Columns	1920
Screen Area (sq in)	1700
TV Technology Type	LED
Humidity (%)	10
Temperature (Celcius)	10

2. Compliance with Additional Tests

2.1 On Mode Tests

Test Name	Preset Picture	ABC	MDD	Avg Luminance (Nits)	Power Limit (W)	Avg Power (W)	Power/Power Limit
default	aps	off	off	51.8	103.3		
default_measured				51.8	147.1	103.3	0.7
brightest	vivid	off	off	62.1	123.9		
brightest_measured				62.1	157.4	123.9	0.8
passing_pps							2/2

Default PPS Power Limit Function

Minimum of:

1. $1.05 * ((0.001 * \text{area} + 0.38) * (1.00 * \text{luminance} + 0.00) + 0.01 * \text{area} + 18.12)$
2. $1.10 * ((0.072 * \text{area}) + 17.140)$

Brightest PPS Power Limit Function

Minimum of:

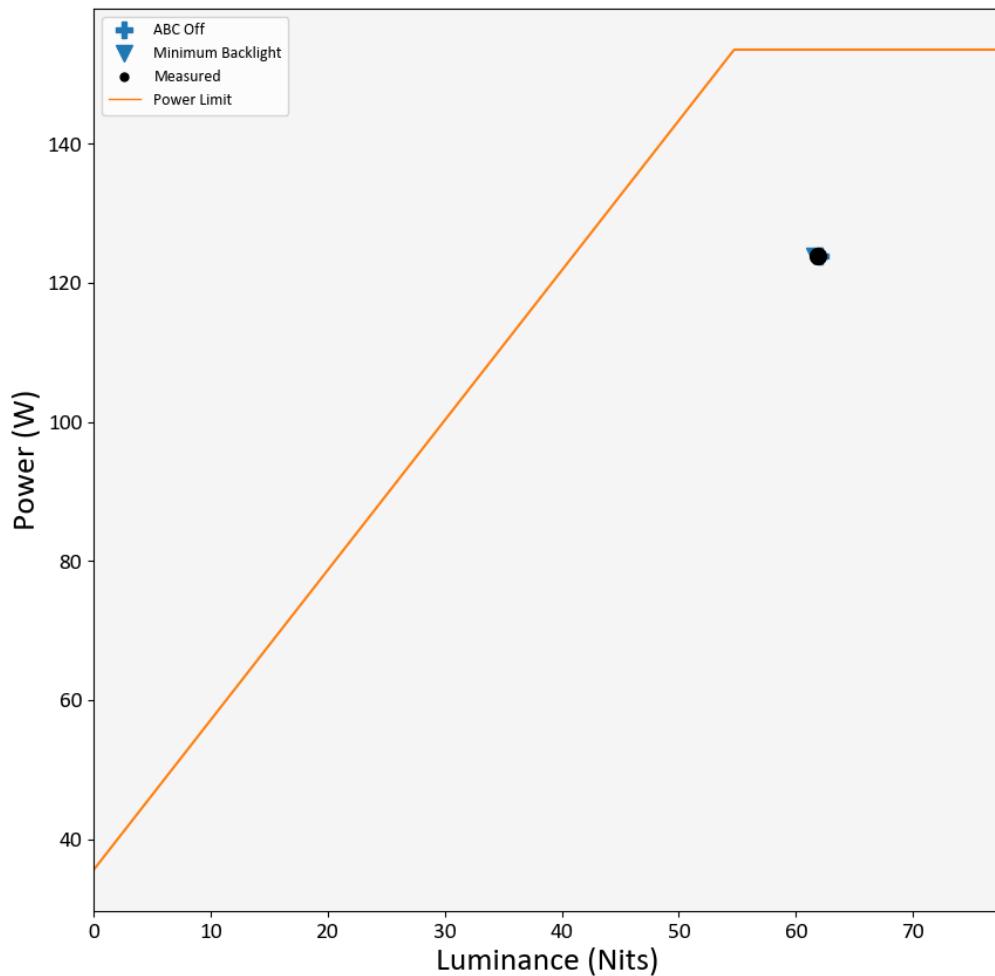
1. $1.05 * ((0.001 * \text{area} + 0.28) * (1.00 * \text{luminance} + 0.00) + 0.01 * \text{area} + 17.11)$
2. $1.10 * ((0.089 * \text{area}) + 13.650)$

HDR Default PPS Power Limit Function

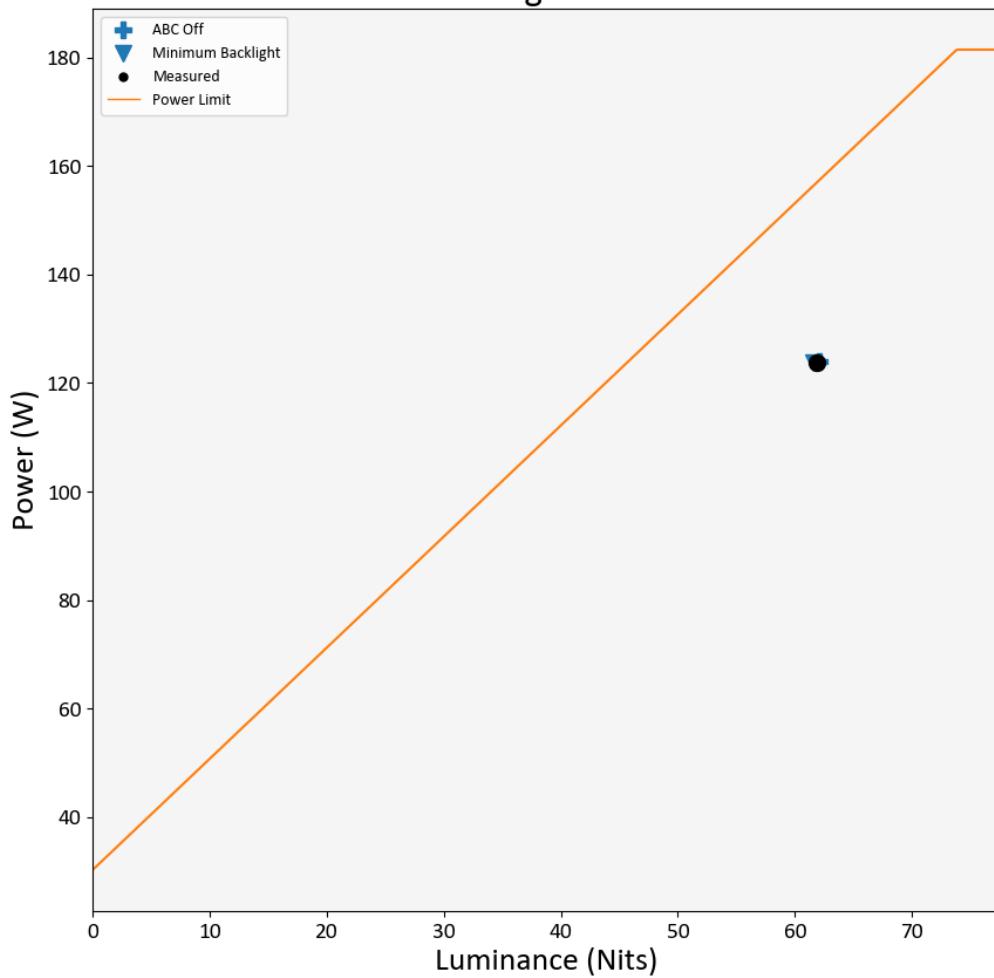
Minimum of:

1. $1.05 * ((0.002 * \text{area} + 0.38) * (1.00 * \text{luminance} + 0.00) + 0.01 * \text{area} + 17.67)$
2. $1.10 * ((0.089 * \text{area}) + 10.120)$

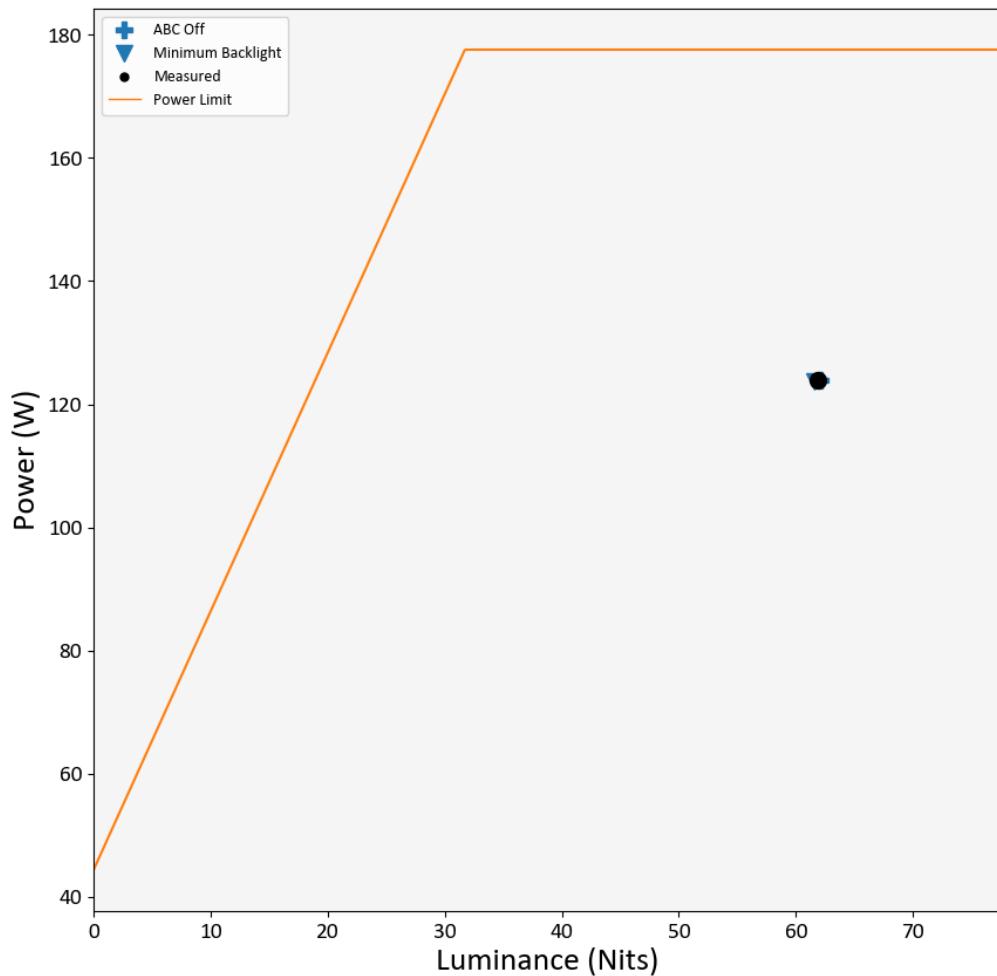
POA Default PPS



POA Brightest PPS



POA HDR Default PPS



2.2 Standby

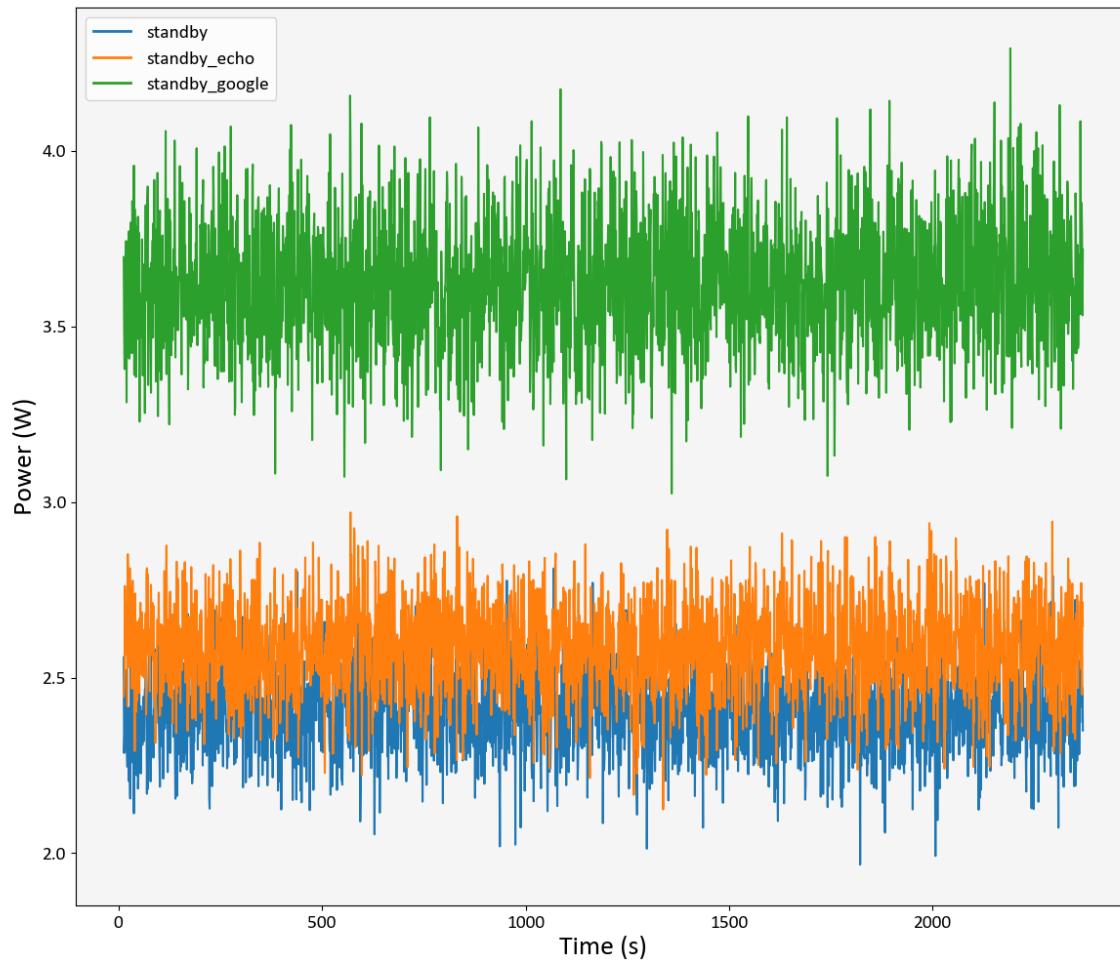
Test Name	QS	Wake Time (s)	Power Limit (W)	Avg Power (W)
standby	off	0.0	2	2.4
standby_echo	oob	0.0	2	2.6
standby_google	oob	0.0	2	3.6

Time to Wake from Standby

standby: 0 seconds

standby_echo: 0 seconds

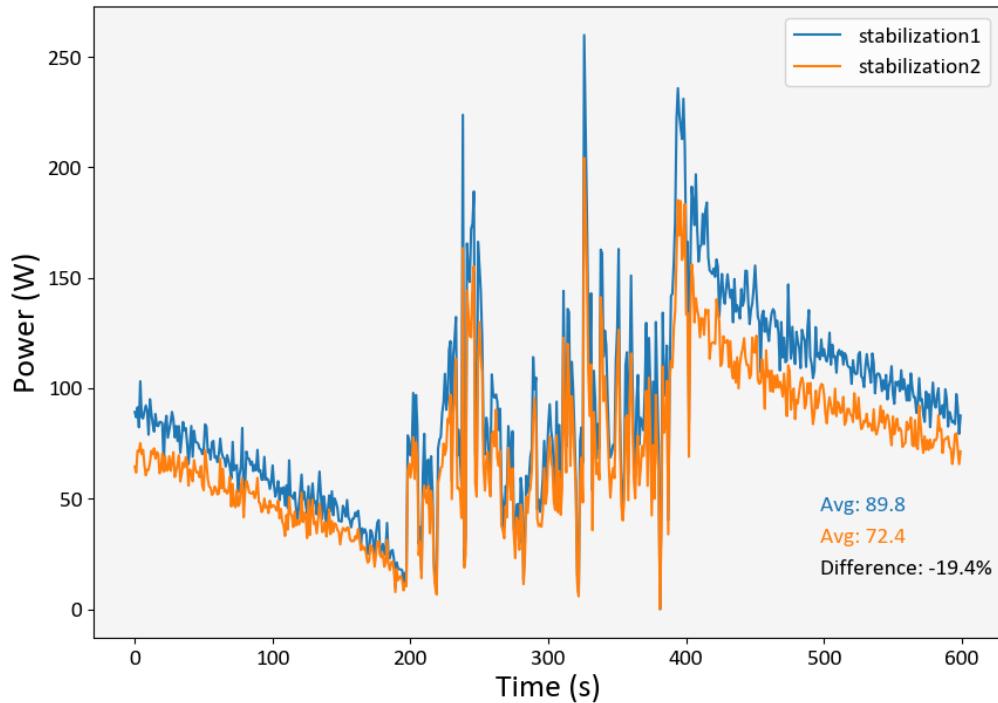
standby_google: 0 seconds



3. Supplemental Test Results

3.1 Stabilization

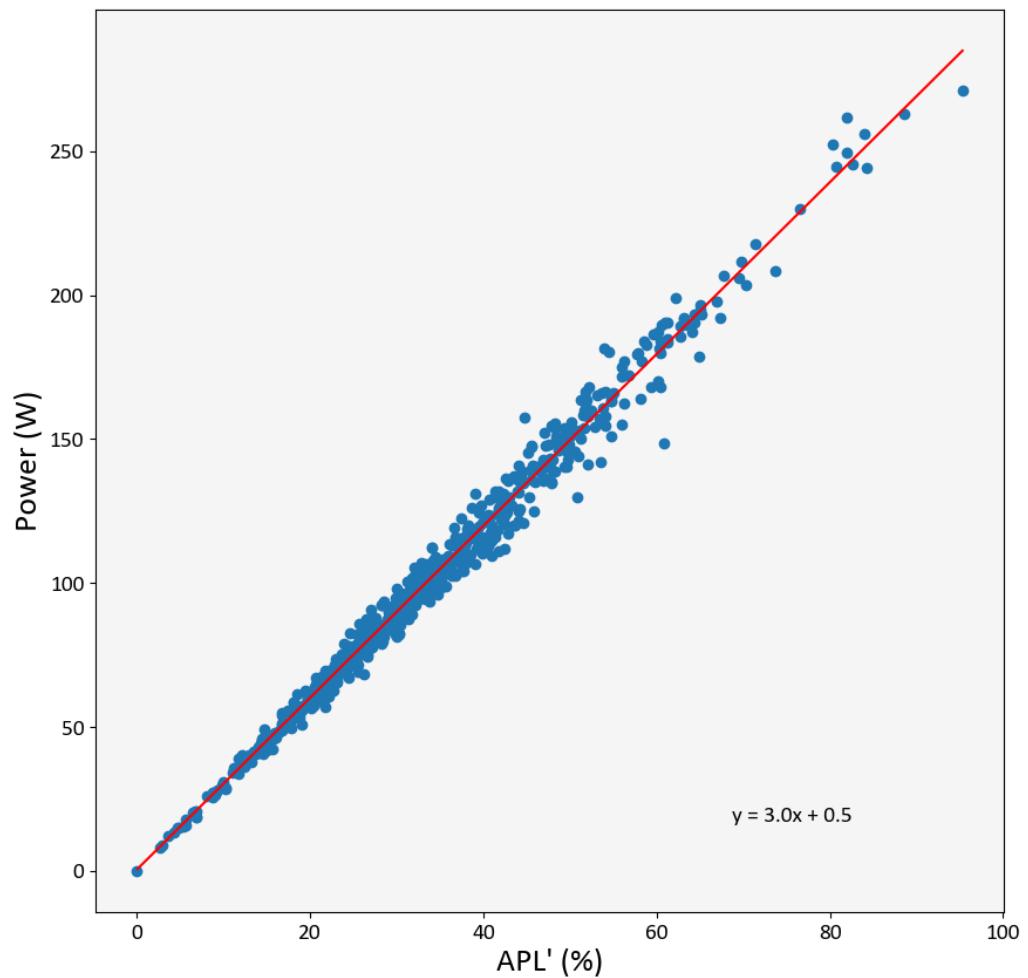
Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
stabilization1	600	IEC SDR	34.5	off	aps	off	45.0	89.8
stabilization2	600	IEC SDR	34.5	off	aps	off	36.2	72.4



3.2 APL' vs Power Charts

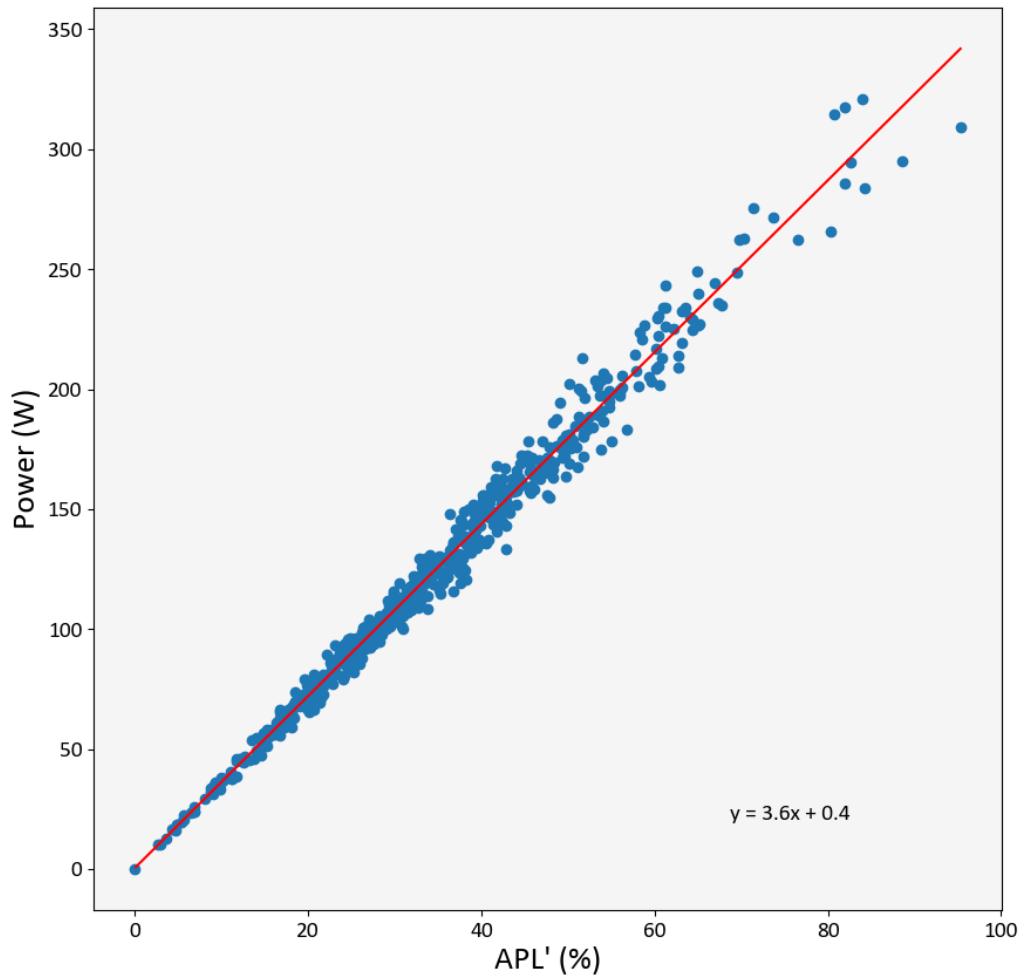
3.2.1 Default PPS: SDR

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default	600	IEC SDR	34.5	off	aps	off	51.8	103.3



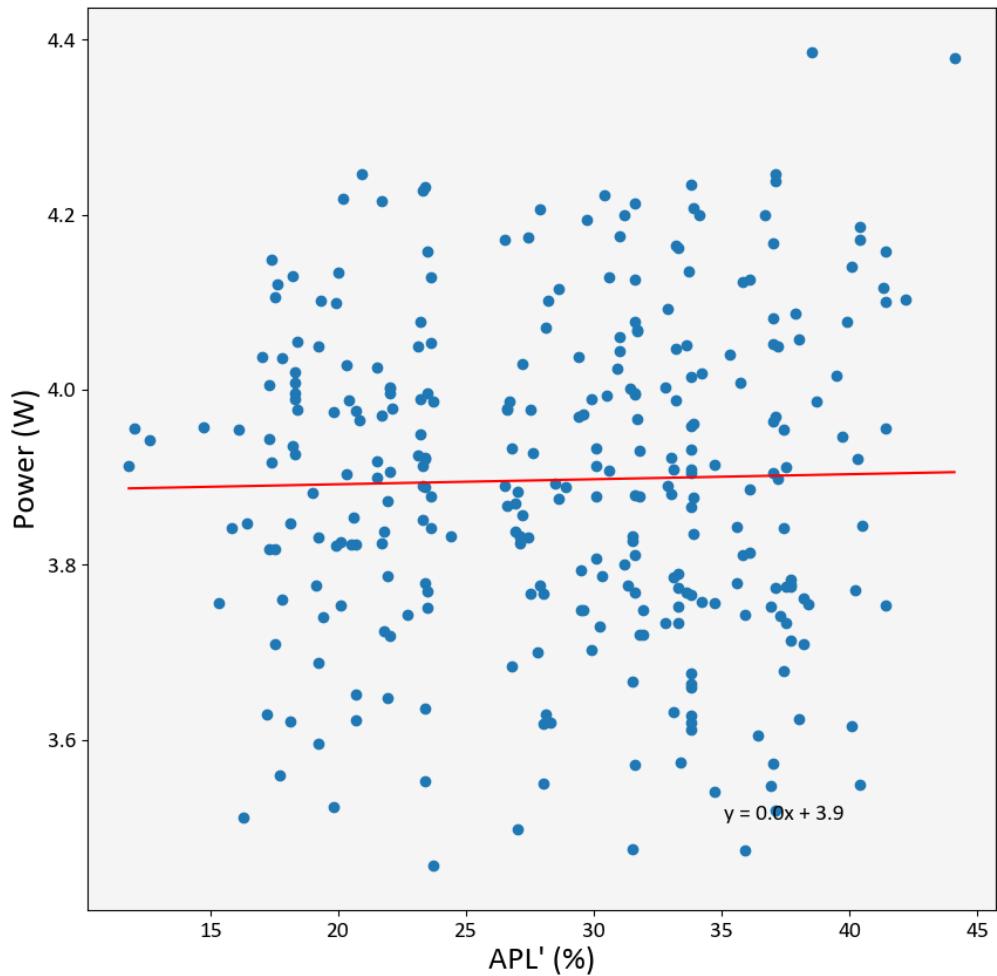
3.2.2 Brightest PPS: SDR

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
brightest	600	IEC SDR	34.5	off	vivid	off	62.1	123.9



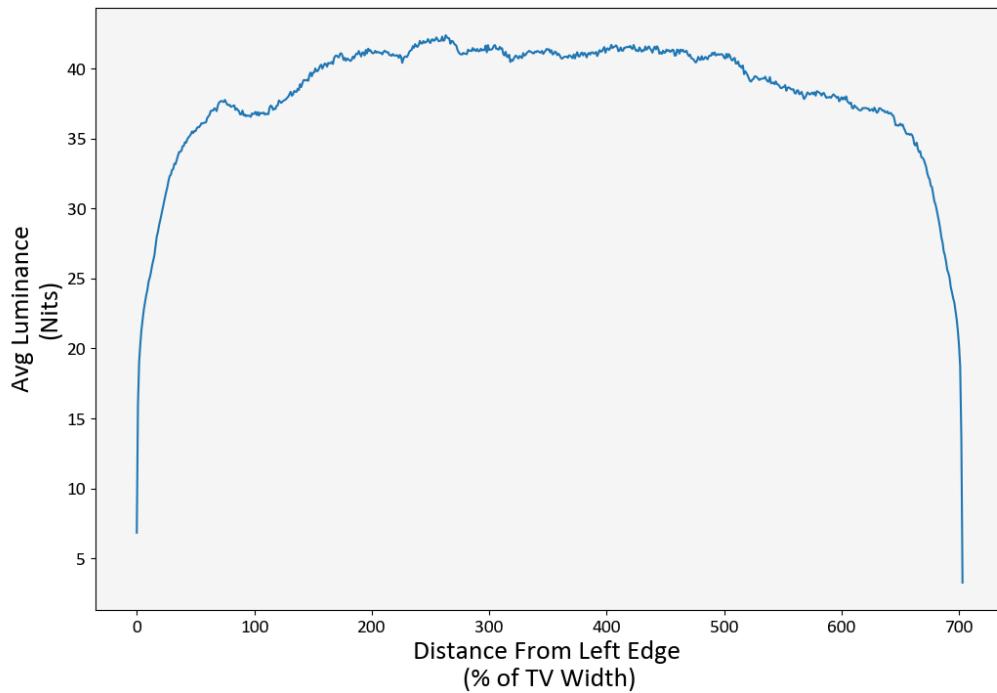
3.2.3 Default PPS: HDR

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
hdr10	300	CLASP HDR10	28.7	off	standard	off	2.0	3.9

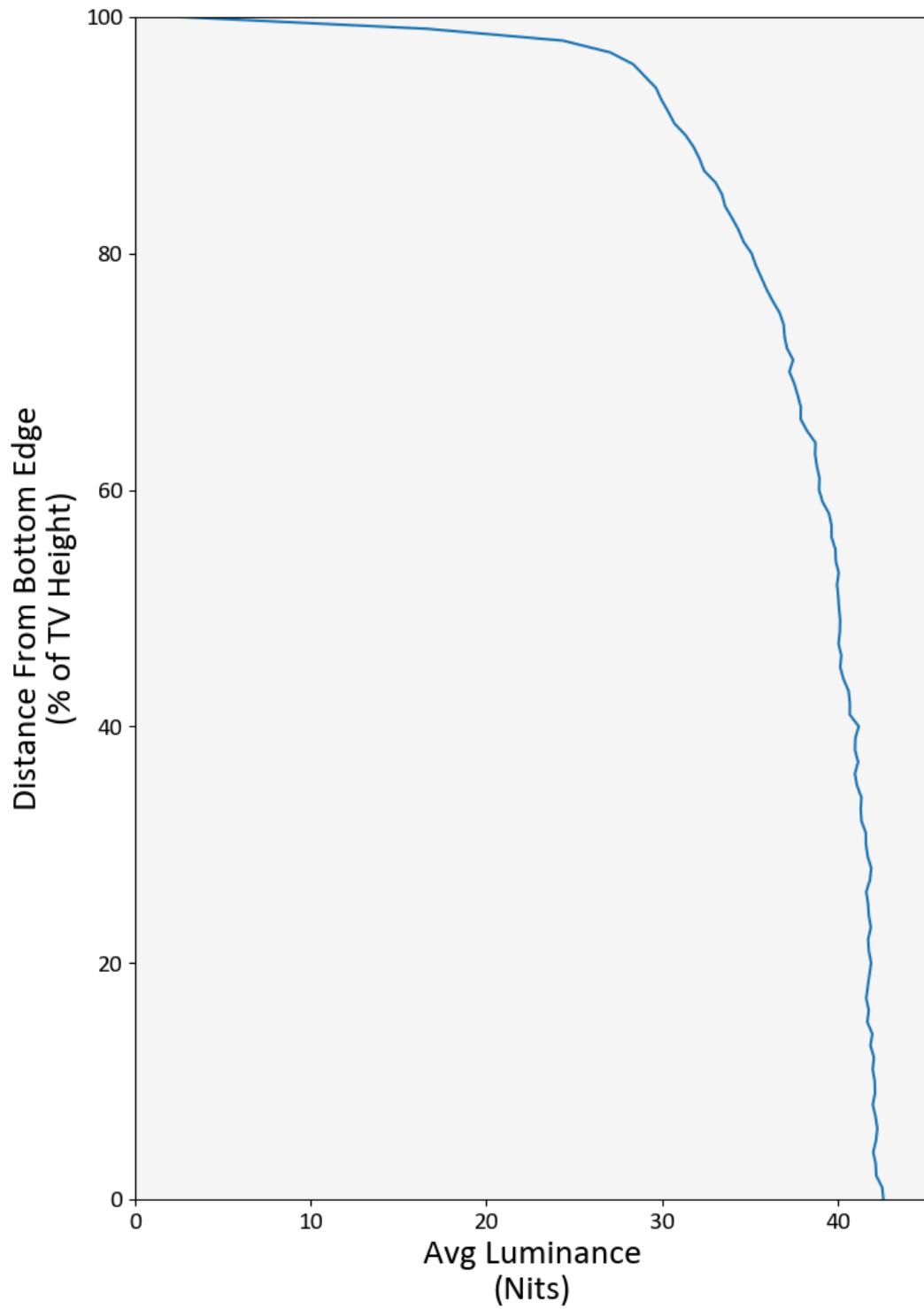


3.3 Light Directionality

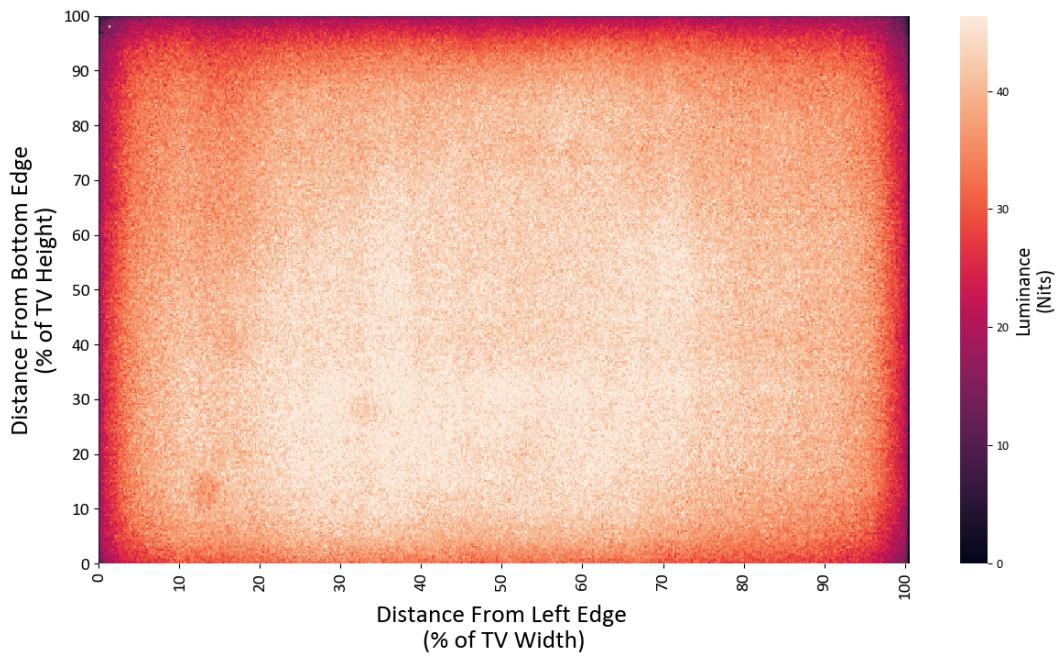
Average Luminance Along TV's Horizontal Axis



Average Luminance Along TV's Vertical Axis



Luminance Heatmap



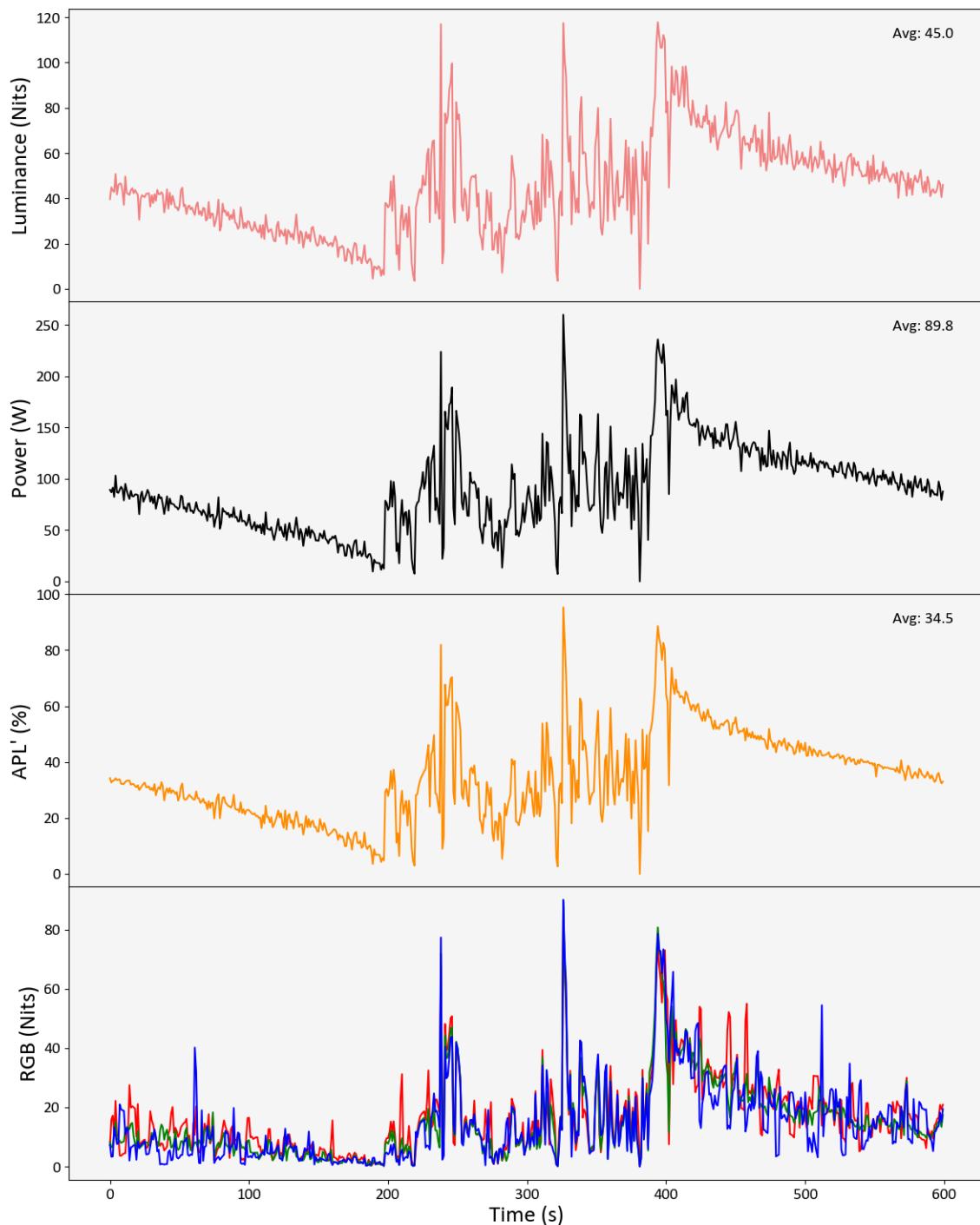
4. Test Results Table

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	QS	Wake Time (s)	Avg Luminance (Nits)	Avg Power (W)
stabilization1	600	IEC SDR	34.5	off		aps	off			45.0	89.8
stabilization2	600	IEC SDR	34.5	off		aps	off			36.2	72.4
default	600	IEC SDR	34.5	off		aps	off			51.8	103.3
default_low_backlight	600	IEC SDR	34.5	on	3.0	aps	off			51.7	103.3
brightest	600	IEC SDR	34.5	off		vivid	off			62.1	123.9
brightest_low_backlight	600	IEC SDR	34.5	on	3.0	vivid	off			61.6	123.8
hdr10	300	CLASP HDR10	28.7	off		standard	off			2.0	3.9
hdr10_low_backlight	300	CLASP HDR10	28.7	on	3.0	standard	off			1.9	3.9
standby	2400		0.0					off	0.0	1.2	2.4
standby_echo	2400		0.0					oob	0.0	1.3	2.6
standby_google	2400		0.0					oob	0.0	1.8	3.6
new_test	600	IEC SDR	34.5	off		aps	off			51.8	103.3

5. Test Result Plots

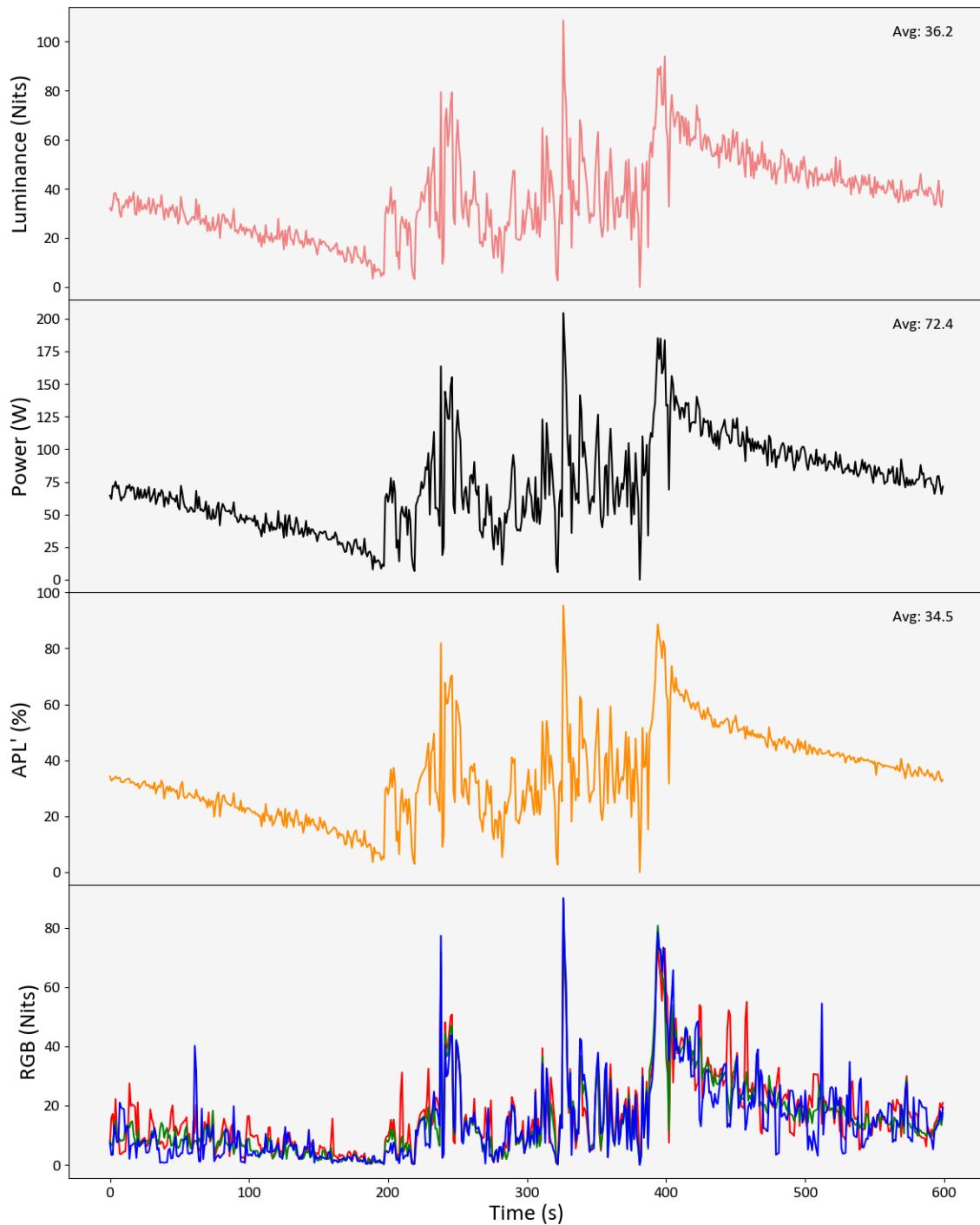
Test 9.1 - stabilization1

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
stabilization1	600	IEC SDR	34.5	off	aps	off	45.0	89.8



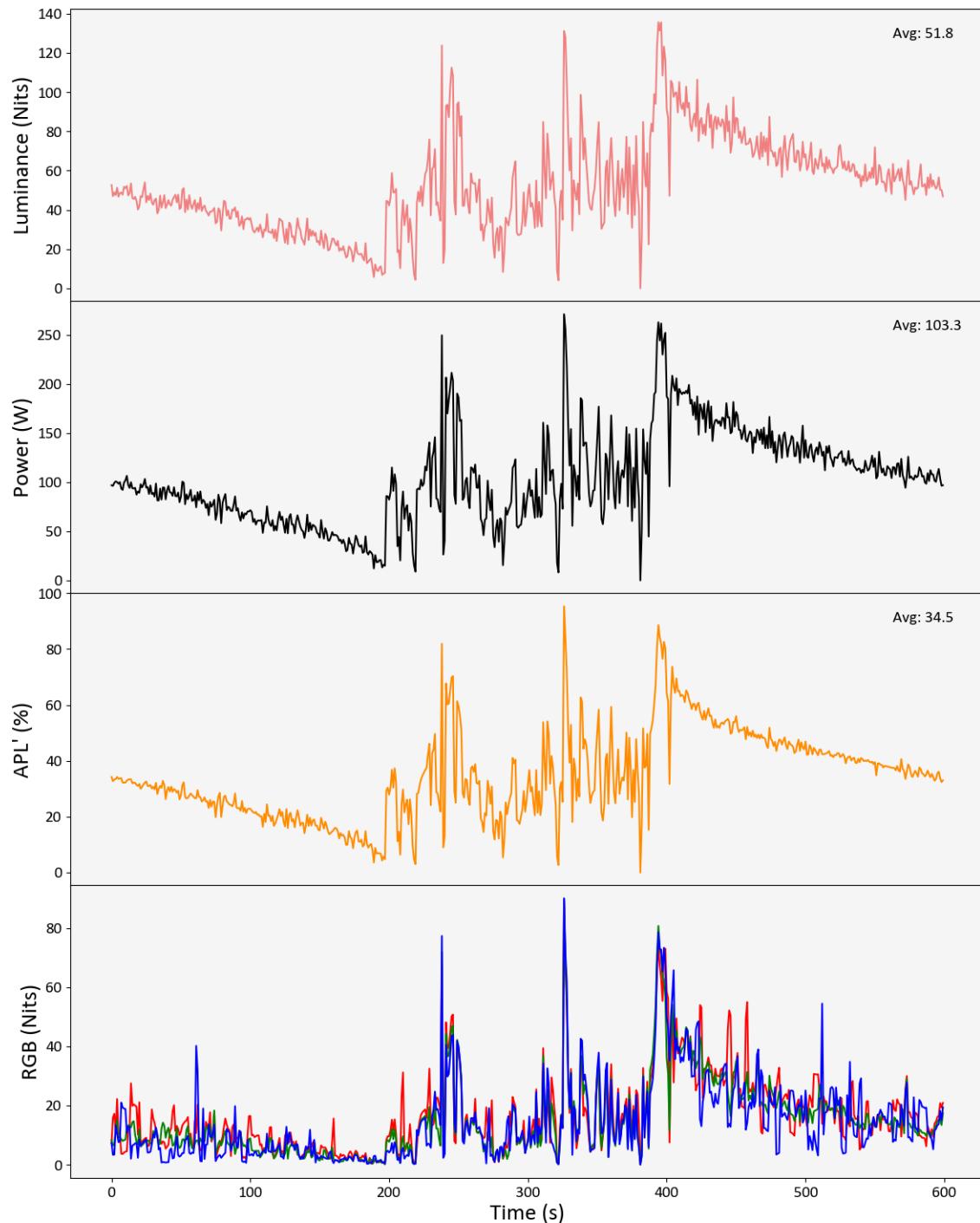
Test 9.2 - stabilization2

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
stabilization2	600	IEC SDR	34.5	off	aps	off	36.2	72.4



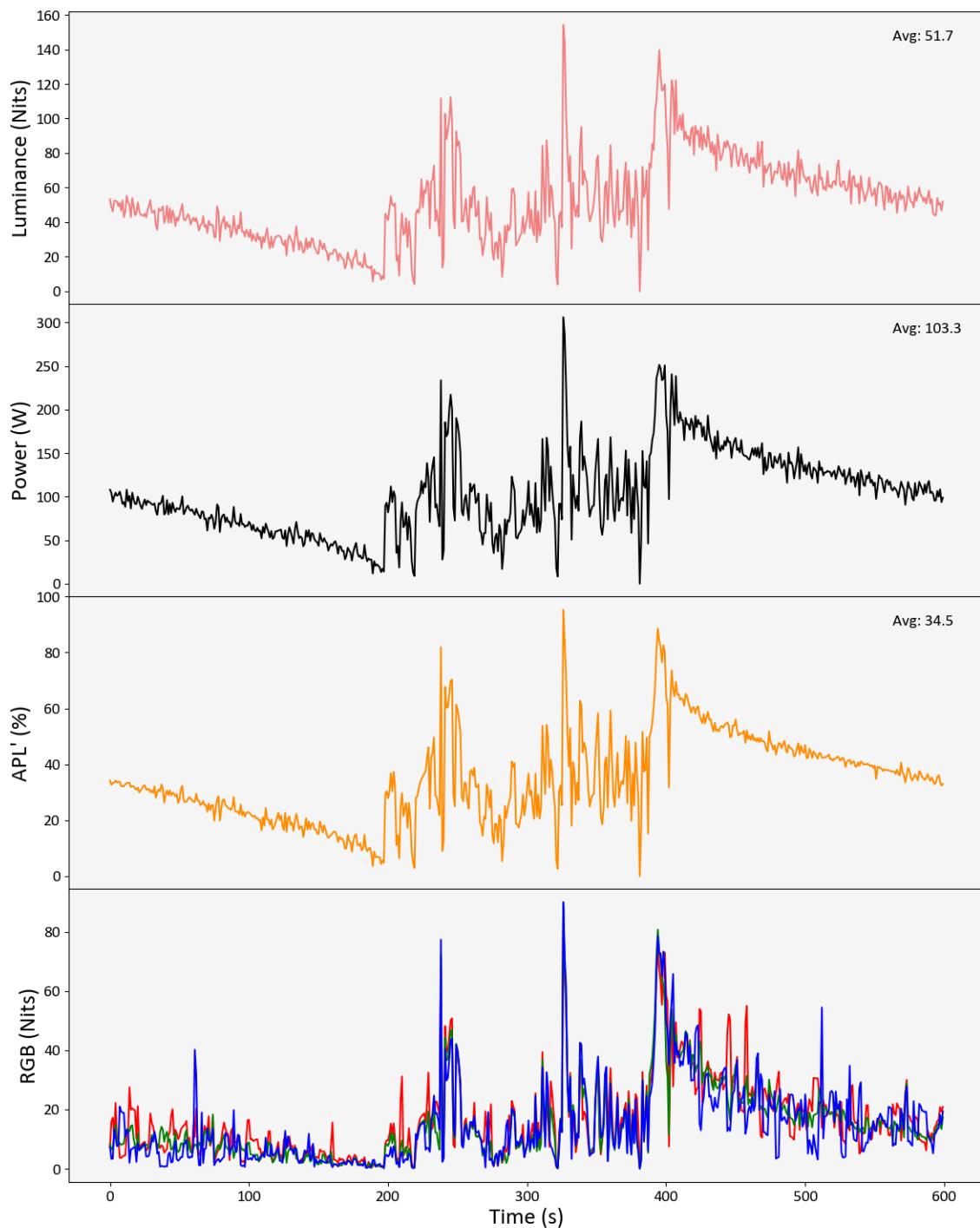
Test 10 - default

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default	600	IEC SDR	34.5	off	aps	off	51.8	103.3



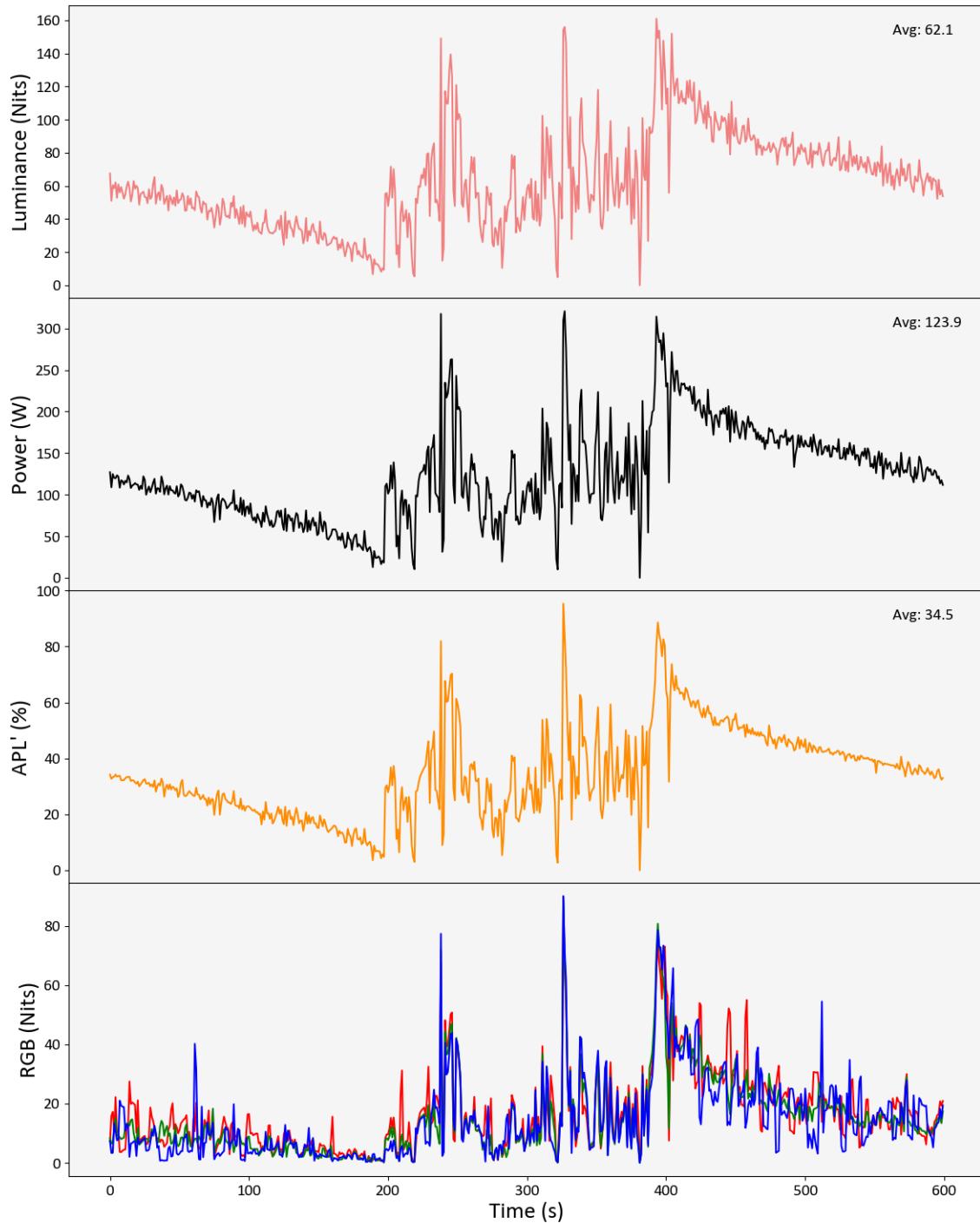
Test 11 - default_low_backlight

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default_low_backlight	600	IEC SDR	34.5	on	3.0	aps	off	51.7	103.3



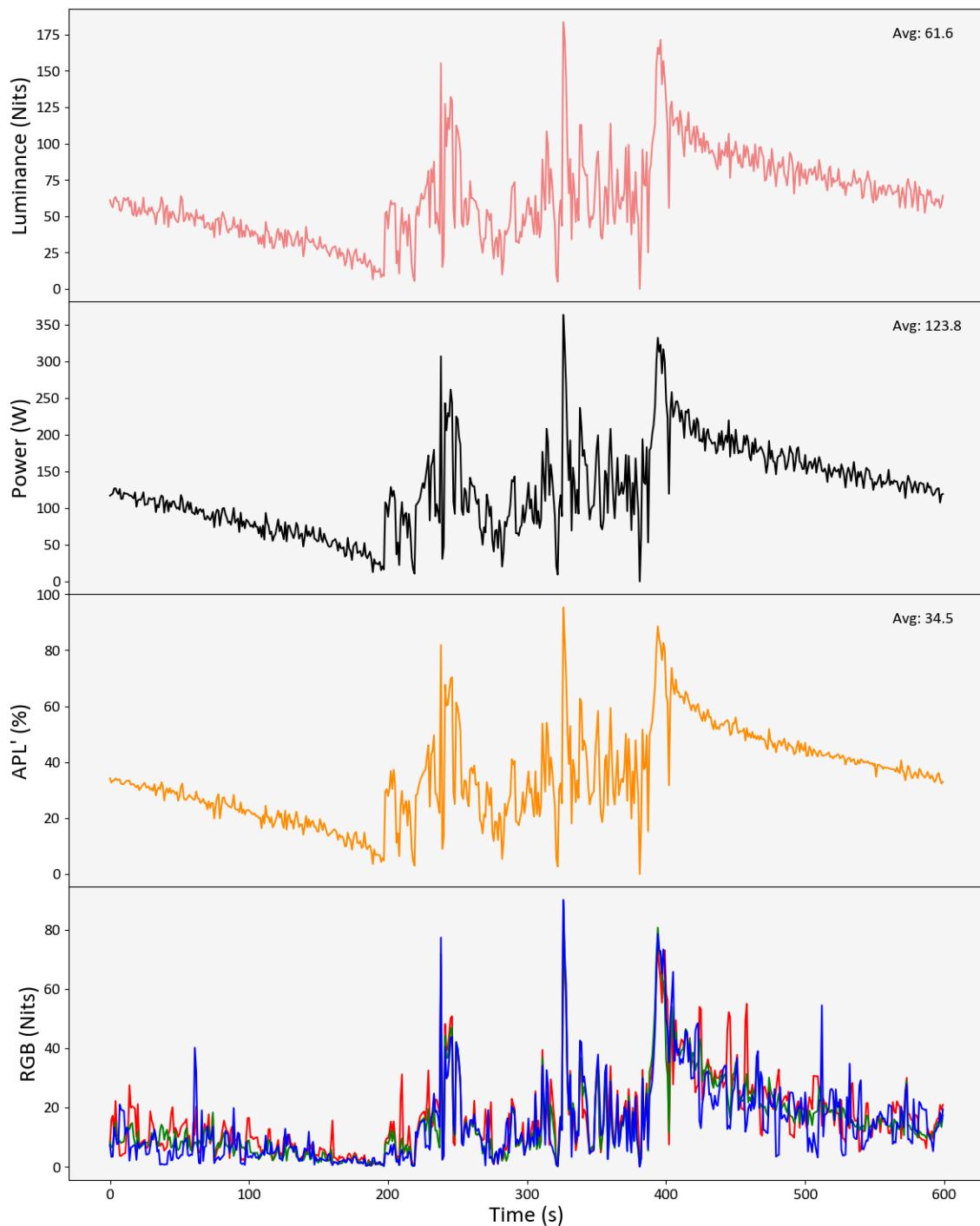
Test 12 - brightest

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
brightest	600	IEC SDR	34.5	off	vivid	off	62.1	123.9



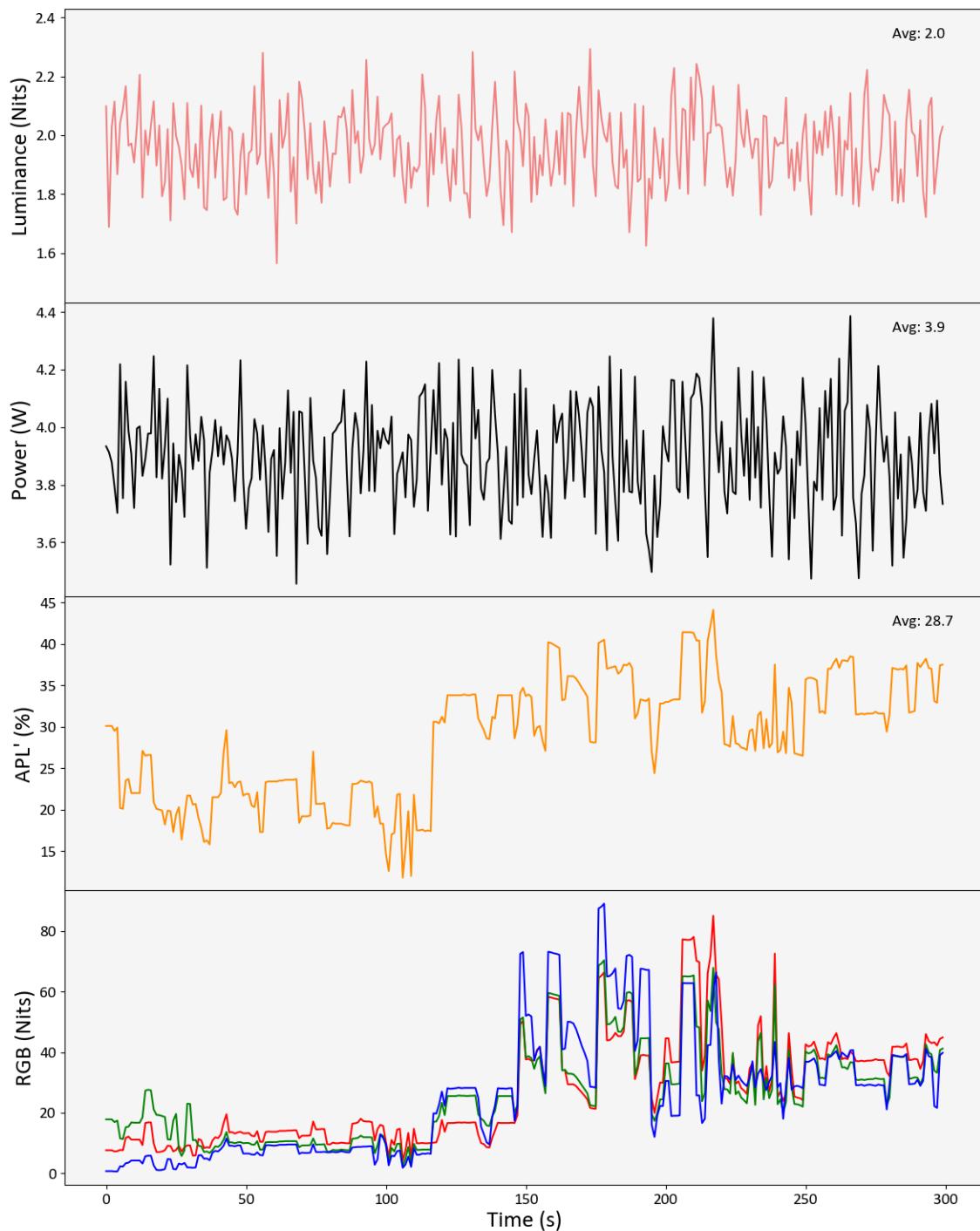
Test 13 - brightest_low_backlight

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
brightest_low_backlight	600	IEC SDR	34.5	on	3.0	vivid	off	61.6	123.8



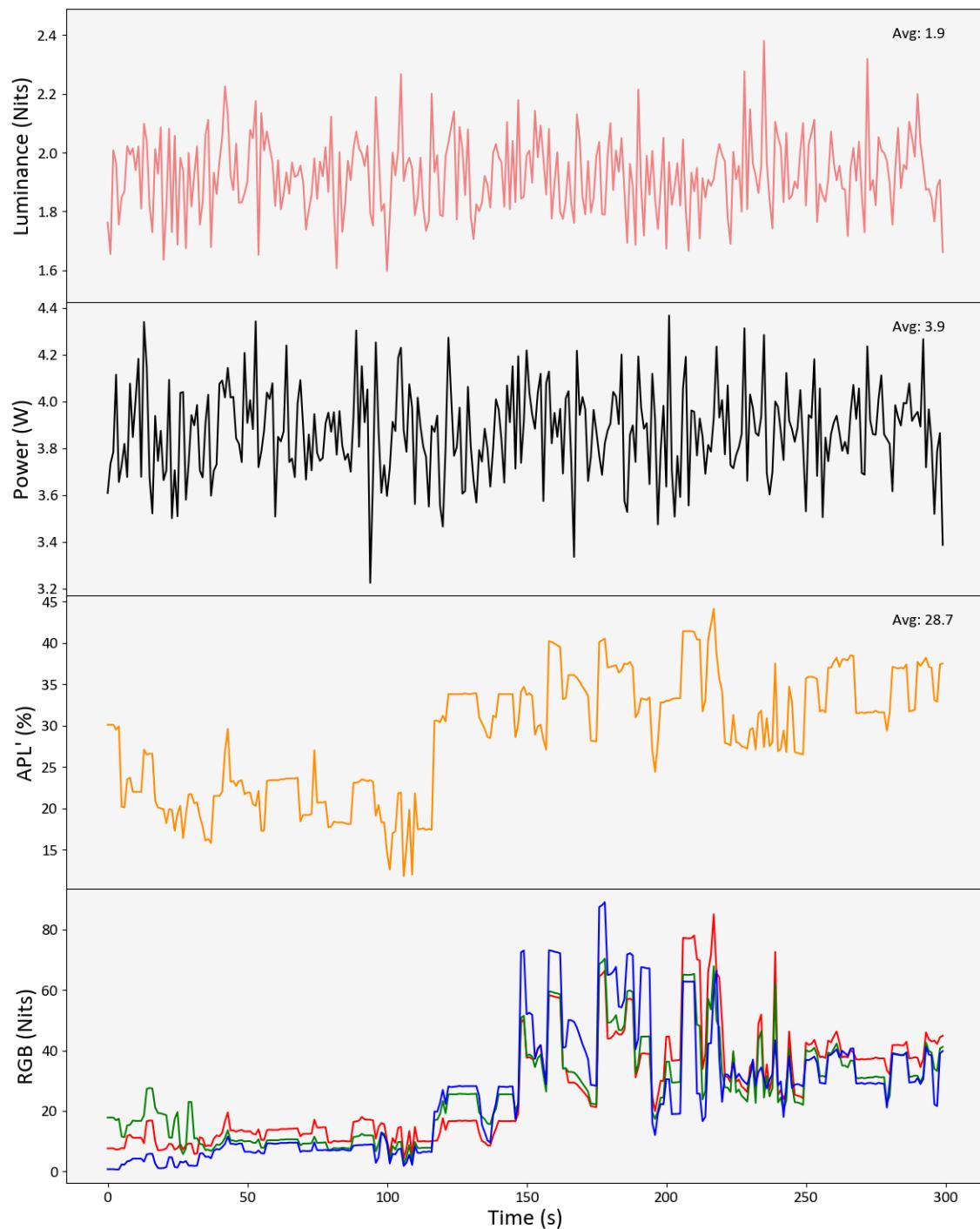
Test 14 - hdr10

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
hdr10	300	CLASP HDR10	28.7	off	standard	off	2.0	3.9



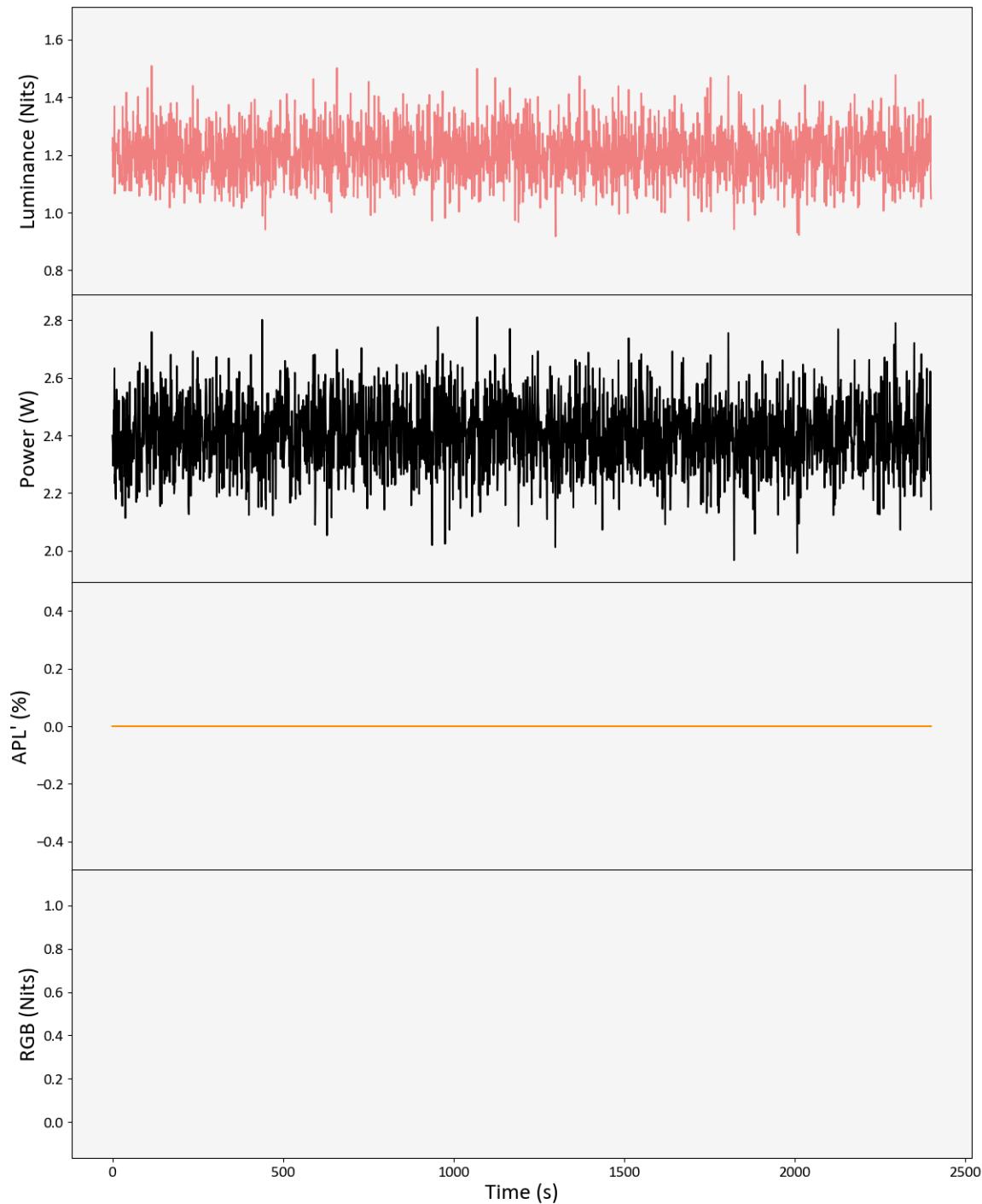
Test 15 - hdr10_low_backlight

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
hdr10_low_backlight	300	CLASP HDR10	28.7	on	3.0	standard	off	1.9	3.9



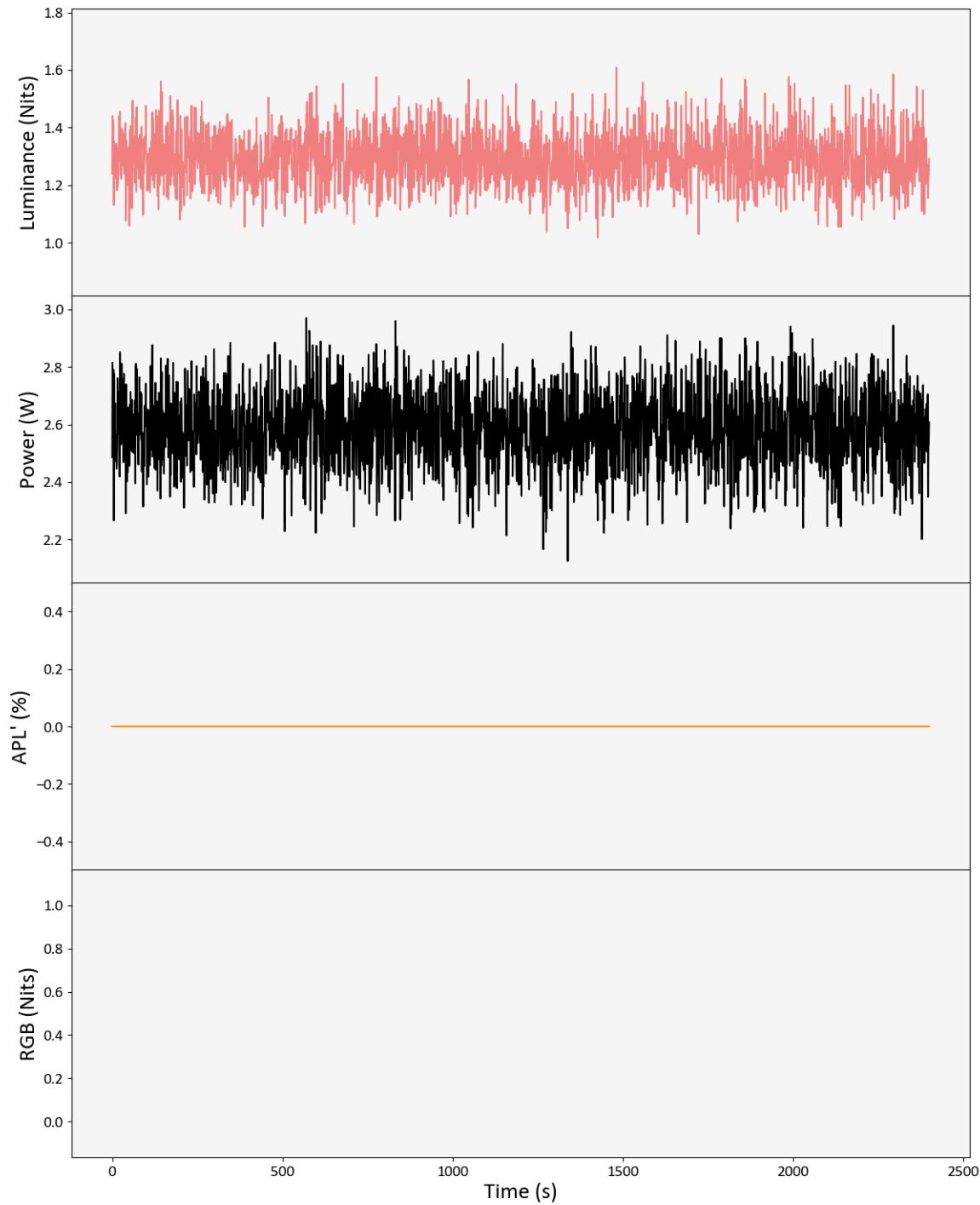
Test 16 - standby

Test Name	Test Time (s)	Avg APL' (%)	QS	Wake Time (s)	Avg Luminance (Nits)	Avg Power (W)
standby	2400	0.0	off	0.0	1.2	2.4



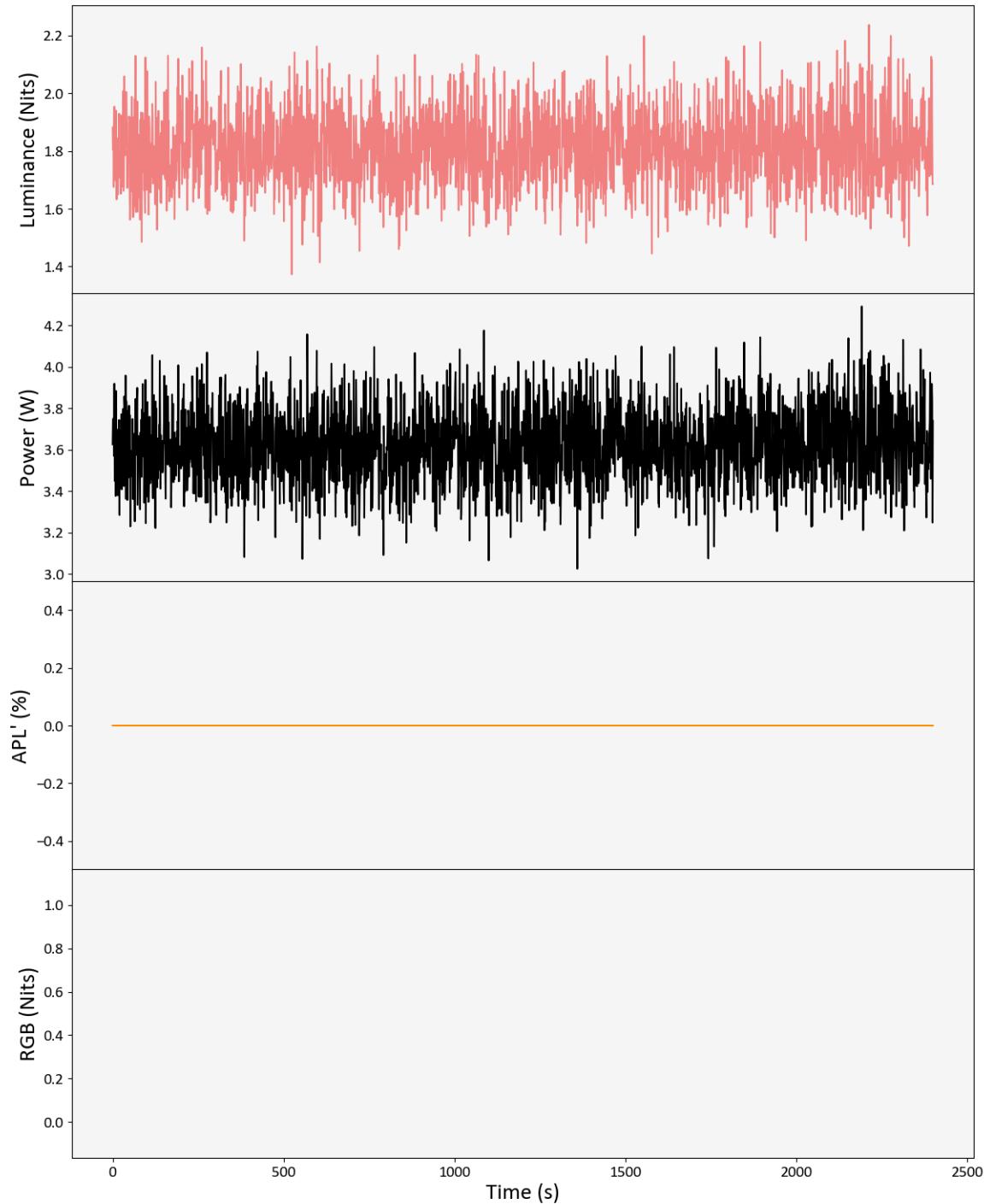
Test 18 - standby_echo

Test Name	Test Time (s)	Avg APL' (%)	QS	Wake Time (s)	Avg Luminance (Nits)	Avg Power (W)
standby_echo	2400	0.0	oob	0.0	1.3	2.6



Test 20 - standby_google

Test Name	Test Time (s)	Avg APL' (%)	QS	Wake Time (s)	Avg Luminance (Nits)	Avg Power (W)
standby_google	2400	0.0	oob	0.0	1.8	3.6



Test 100 - new_test

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
new_test	600	IEC SDR	34.5	off	aps	off	51.8	103.3

