
TV Power Measurement Report

Model: LG UN55FDA

Funded By:



Prepared By:



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1. Test Specifics

Test Start Date	2020-04-30
Test Start Time	18:06:25
Test End Time	20:46:00
Test Duration	0 days 02:39:35
Tester Name	ryan
Lab Name	demo
Lab Address	111 s st
Make	lg
Model	un55fda
Model Year	2020
Serial Number	555ddd
Software Version	1.1.1
Manufacture Year	2020
Manufacture Month	1
Screen Diagonal (inches)	55.000000
Pixel Rows	1080
Pixel Columns	1920
Screen Area (sq in)	1700.000000
TV Technology Type	LED
Humidity (%)	10.000000
Temperature (Celcius)	10.000000

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	standard	off	off	25.9		22.9	
default_measured				25.9	91.3	22.9	0.3
brightest	dynamic	off	off	28.3		27.3	
brightest_measured				28.3	88.3	27.3	0.3
hdr	standard		off	100.0		120.0	
hdr_measured				100.0	177.6	120.0	0.7
passing_pps							3/3

Default PPS Power Limit Function

Minimum of:

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

Brightest PPS Power Limit Function

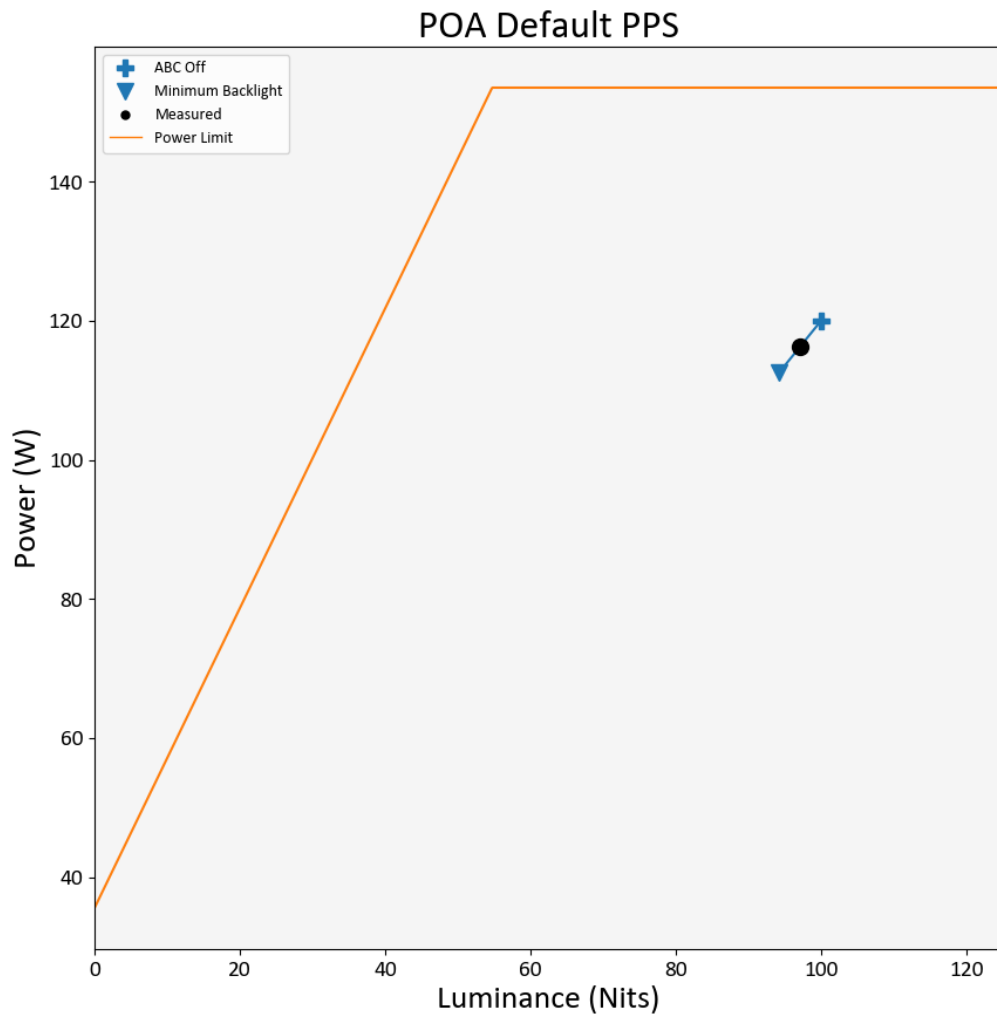
Minimum of:

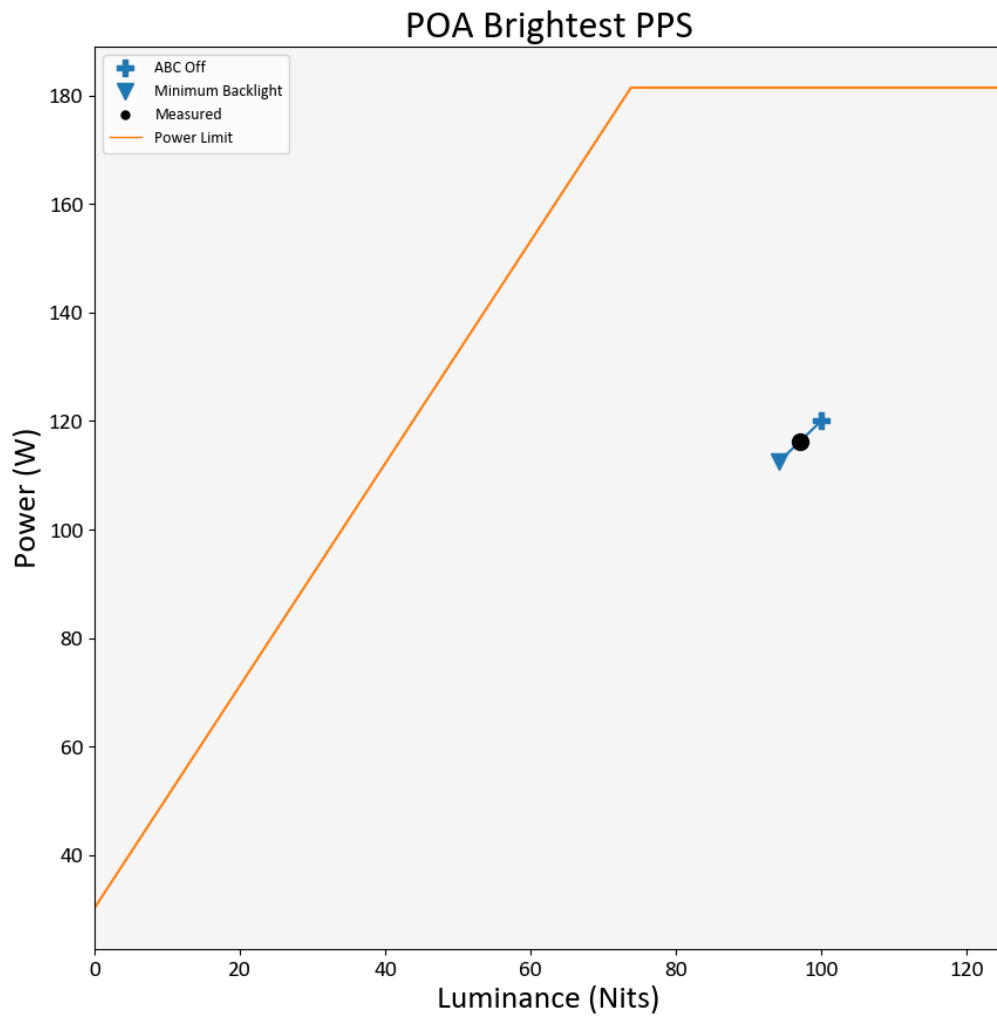
- $1.05 * ((0.001 * \text{area} + 0.28) * (1.00 * \text{luminance} + 0.00) + 0.01 * \text{area} + 17.11)$
- $1.10 * ((0.089 * \text{area}) + 13.650)$

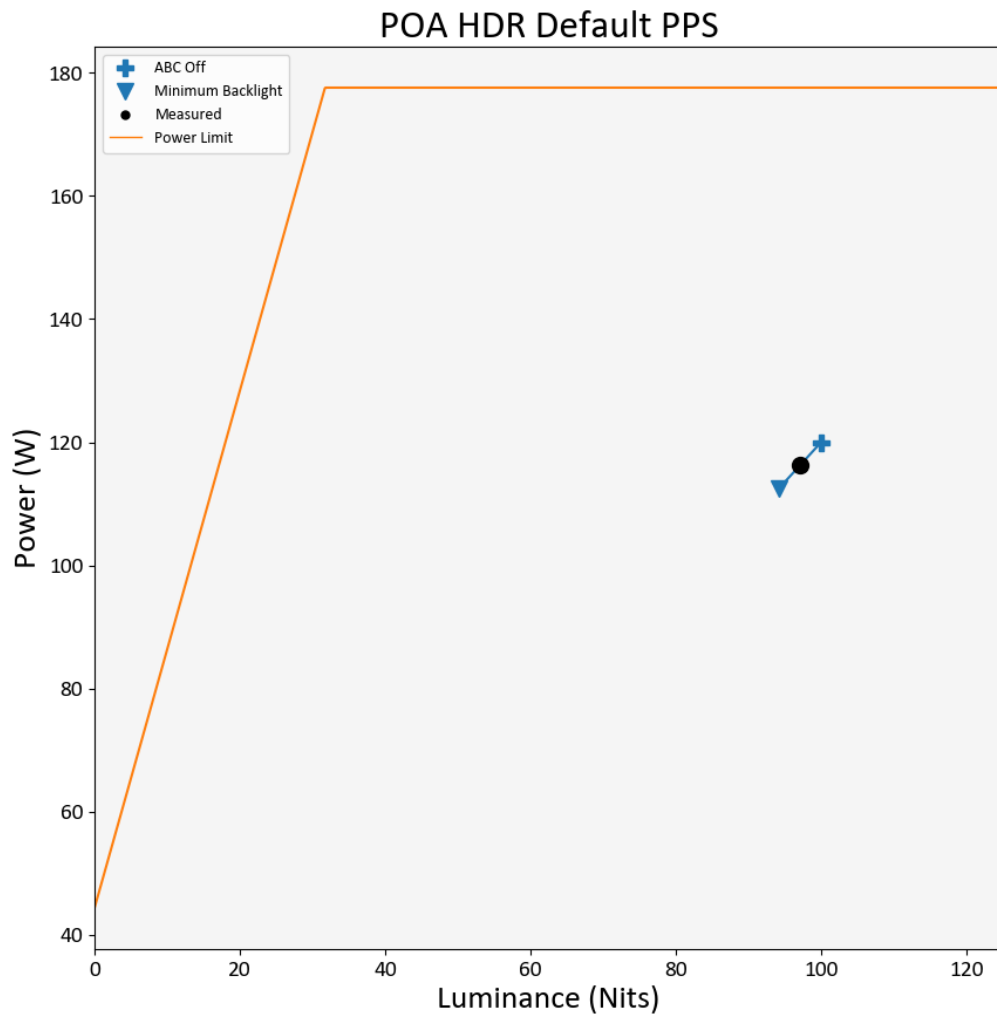
HDR Default PPS Power Limit Function

Minimum of:

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







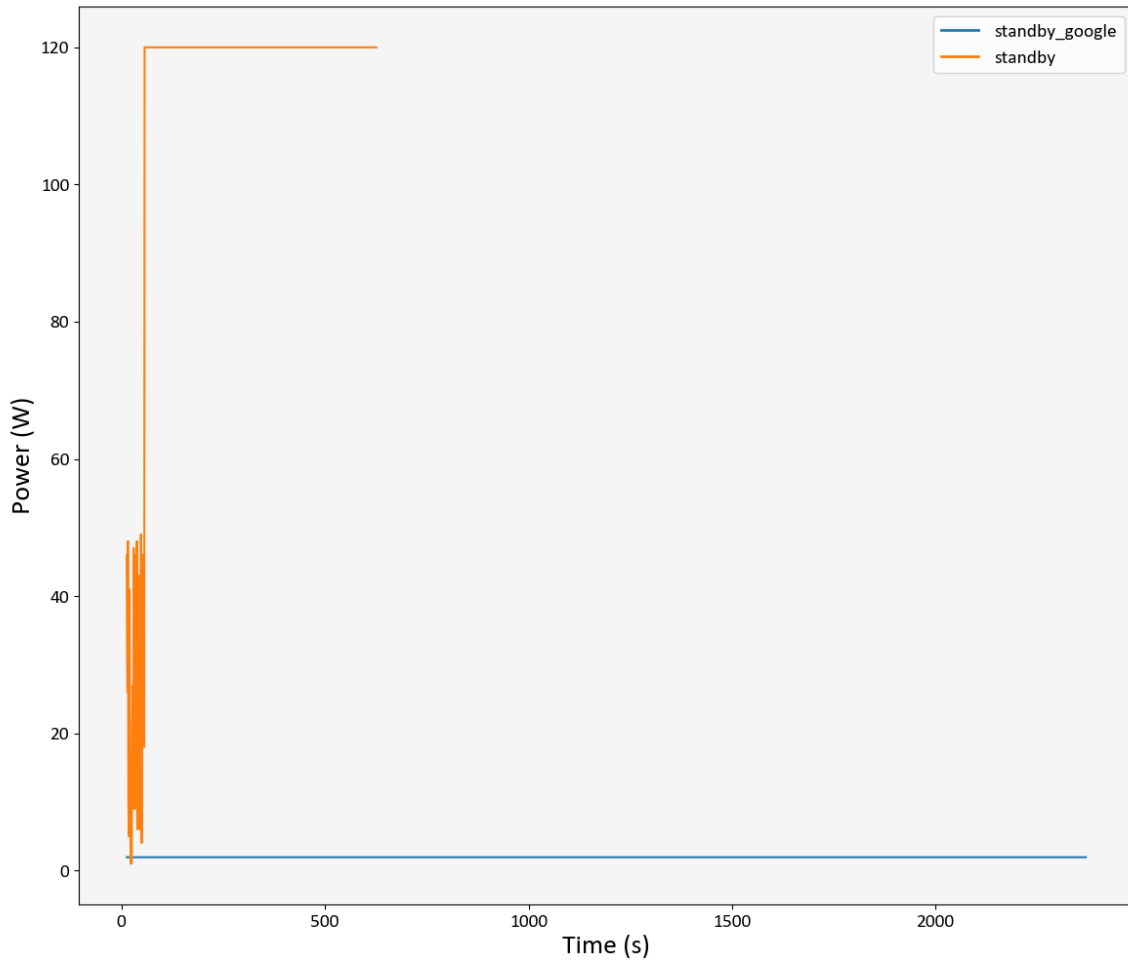
2.2 Standby

Test Name	QS	Wake Time (s)	Power Limit (W)	Avg Power (W)
standby_google	off	0.0	2	1.9
standby	off	0.0	2	111.9

Time to Wake from Standby

standby_google: 0 seconds

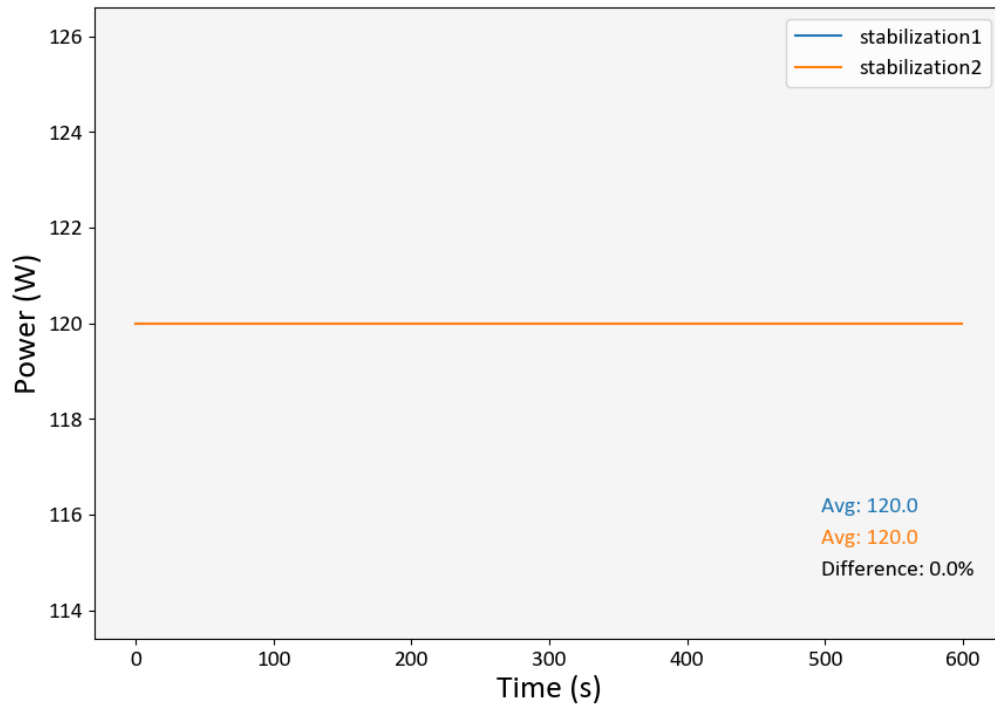
standby: 0 seconds



3. Supplemental Test Results

3.1 Stabilization

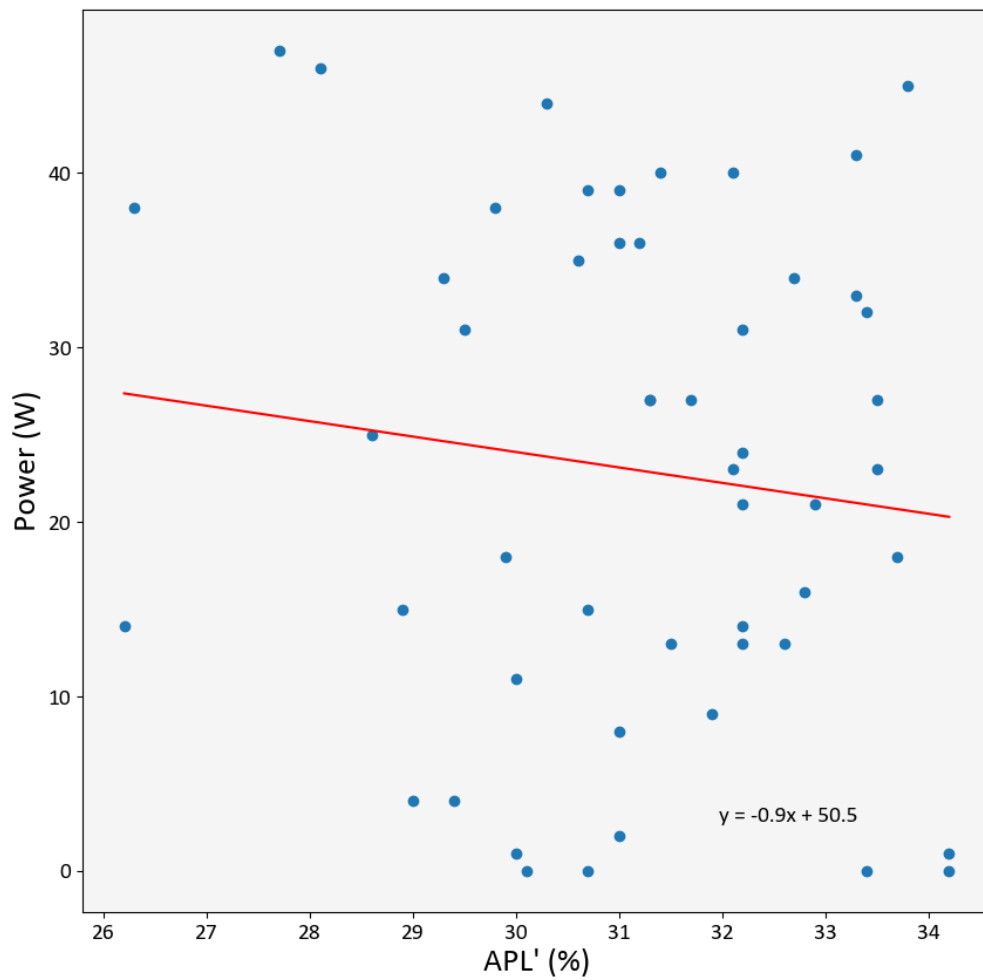
Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
stabilization1	6	IEC SDR	33.6	off	standard	off	100.0	120.0
stabilization2	600	IEC SDR	34.5		standard	off	100.0	120.0



3.2 APL' vs Power Charts

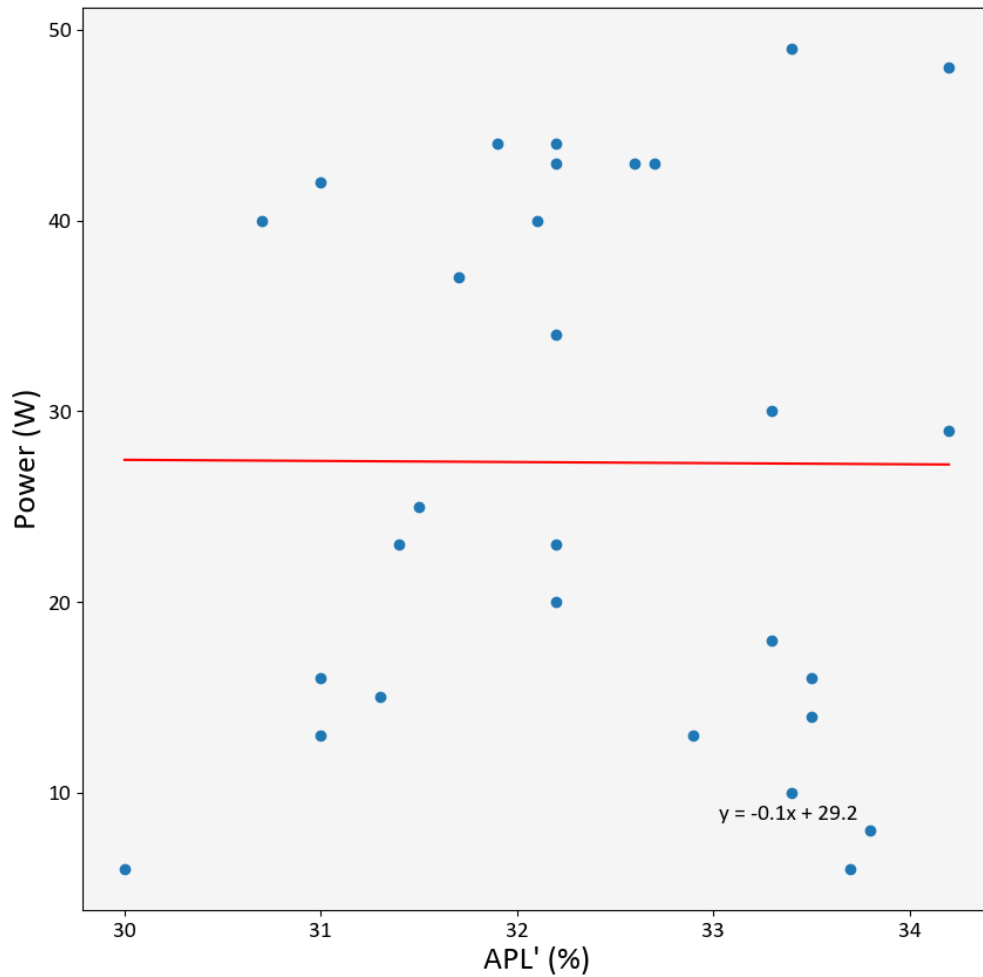
3.2.1 Default PPS: SDR

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default	600	IEC SDR	31.2	off	standard	off	25.9	22.9



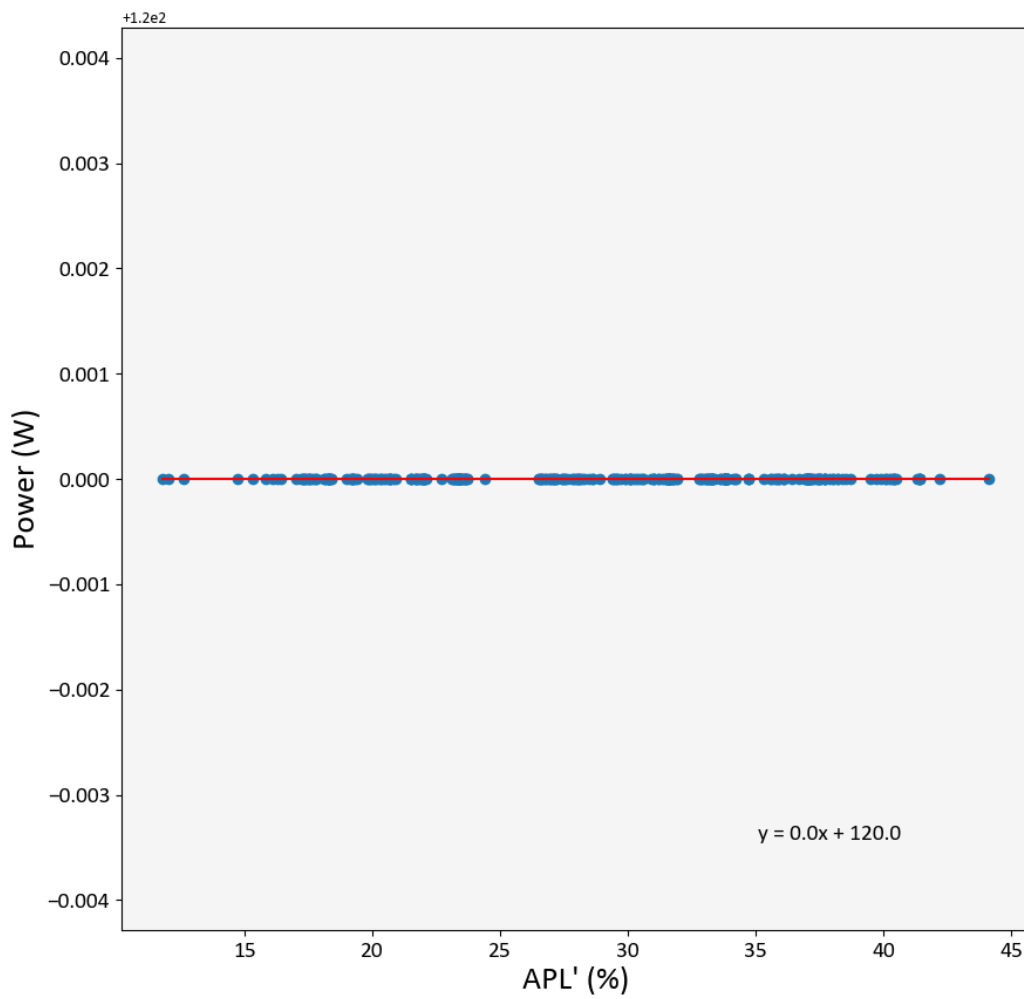
3.2.2 Brightest PPS: SDR

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
brightest	600	IEC SDR	32.4	off	dynamic	off	28.3	27.3



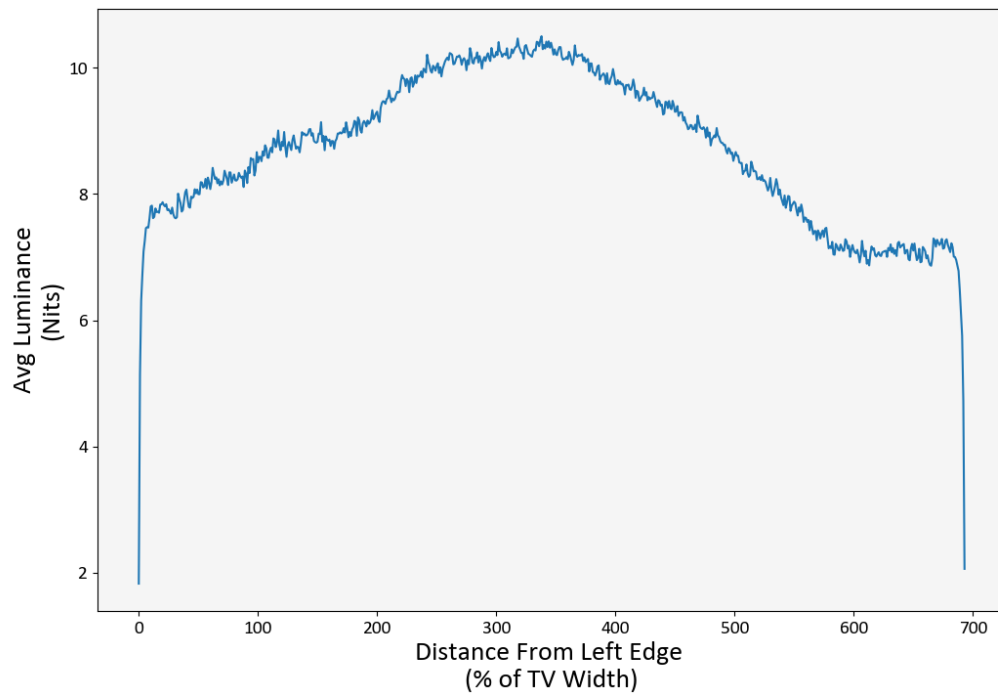
3.2.3 Default PPS: HDR

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	100.0	120.0

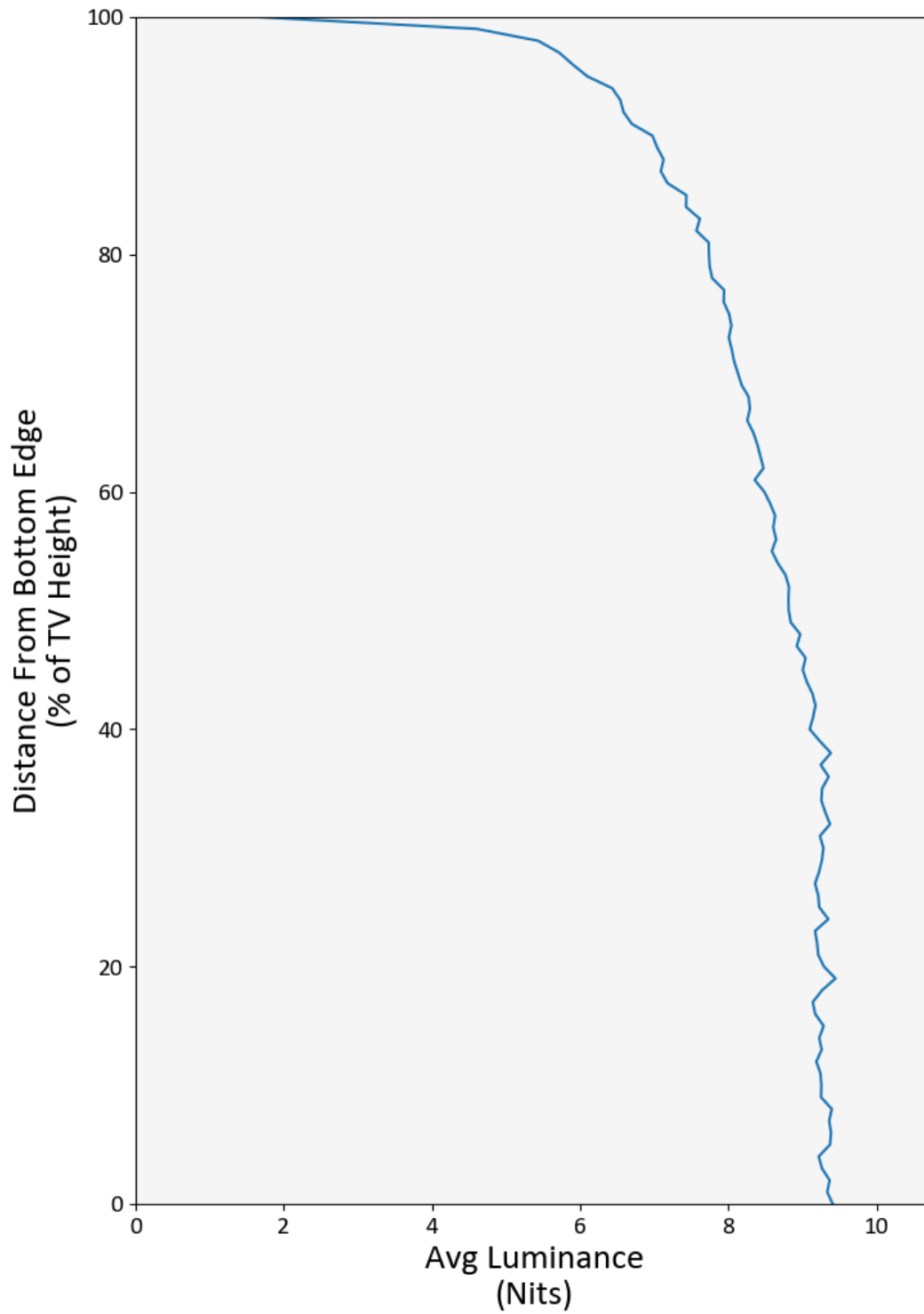


3.3 Light Directionality

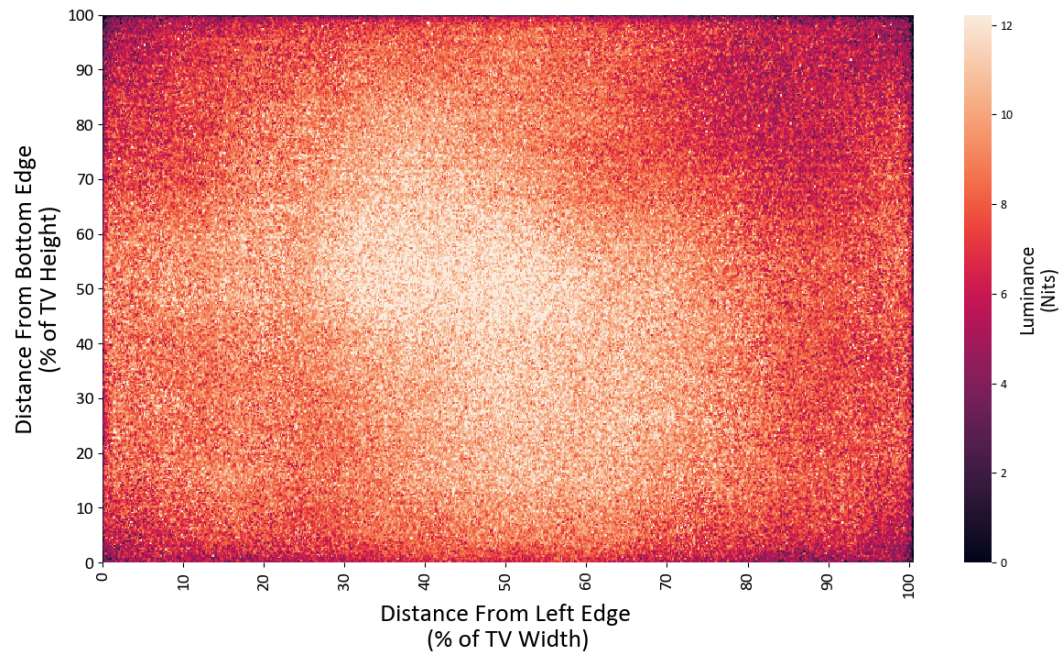
Average Luminance Along TV's Horizontal Axis



Average Luminance Along TV's Vertical Axis



Luminance Heatmap



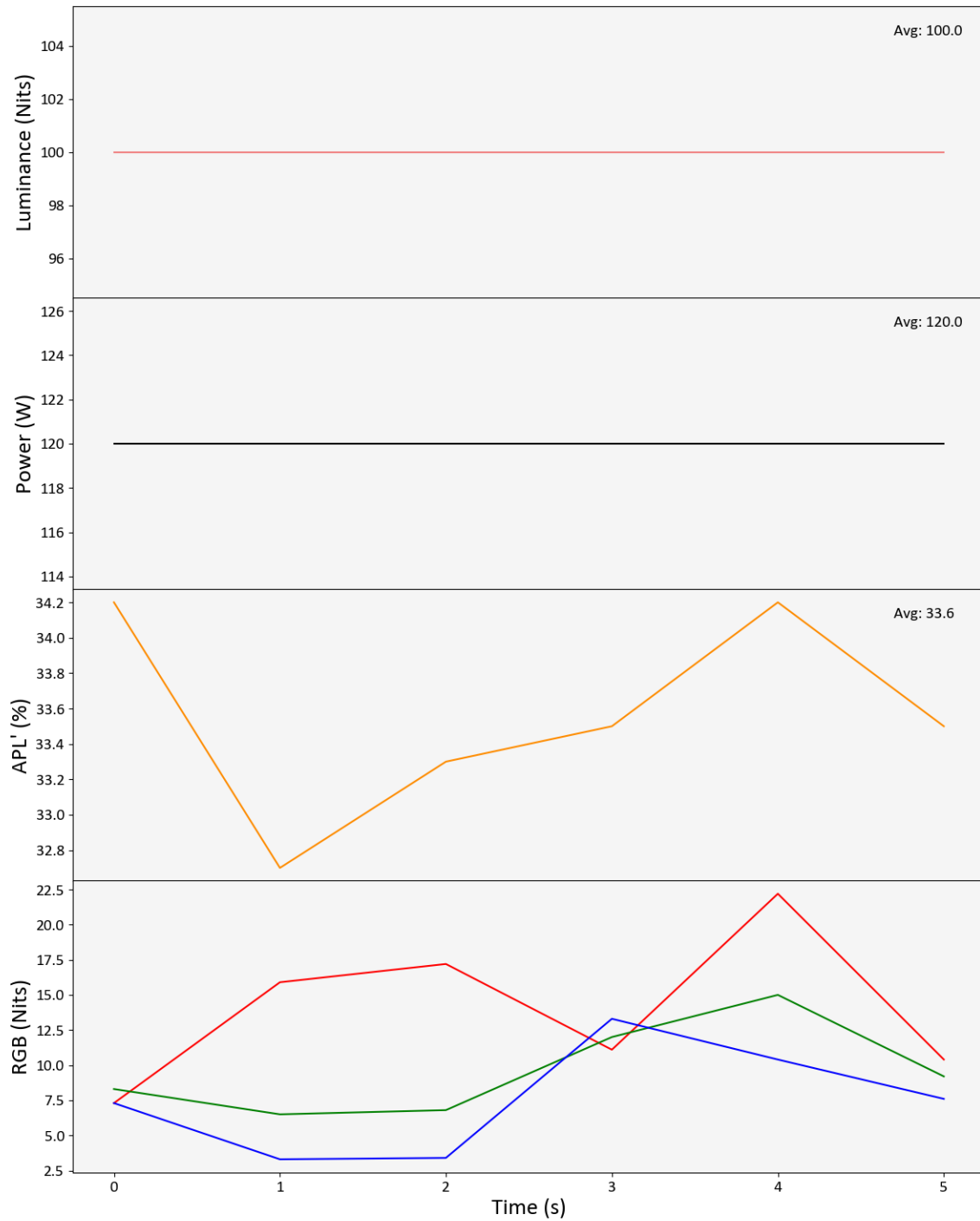
4. Test Results Table

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	QS	Wake Time (s)	Avg Luminance (Nits)	Avg Power (W)
stabilization1	6	IEC SDR	33.6	off	standard	off			100.0	120.0
standby_google	2400		0.0				off	0.0	100.0	1.9
default	600	IEC SDR	31.2	off	standard	off			25.9	22.9
default_low_backlight	600	IEC SDR	31.6	off	standard	off			24.0	23.3
brightest	600	IEC SDR	32.4	off	dynamic	off			28.3	27.3
stabilization2	600	IEC SDR	34.5		standard	off			100.0	120.0
brightest_low_backlight	600	IEC SDR	34.5	off	dynamic	off			100.0	120.0
hdr10	300	CLASP HDR10	28.7	off	standard	off			100.0	120.0
hdr10_low_backlight	300	CLASP HDR10	28.7	off	standard	off			100.0	120.0
standby	2400		0.0				off	0.0	93.2	111.9
hdr	300	CLASP HDR10	28.7		standard	off			100.0	120.0
hdr_low_backlight	300	CLASP HDR10	13.2		standard	off	oob		94.2	112.5

5. Test Result Plots

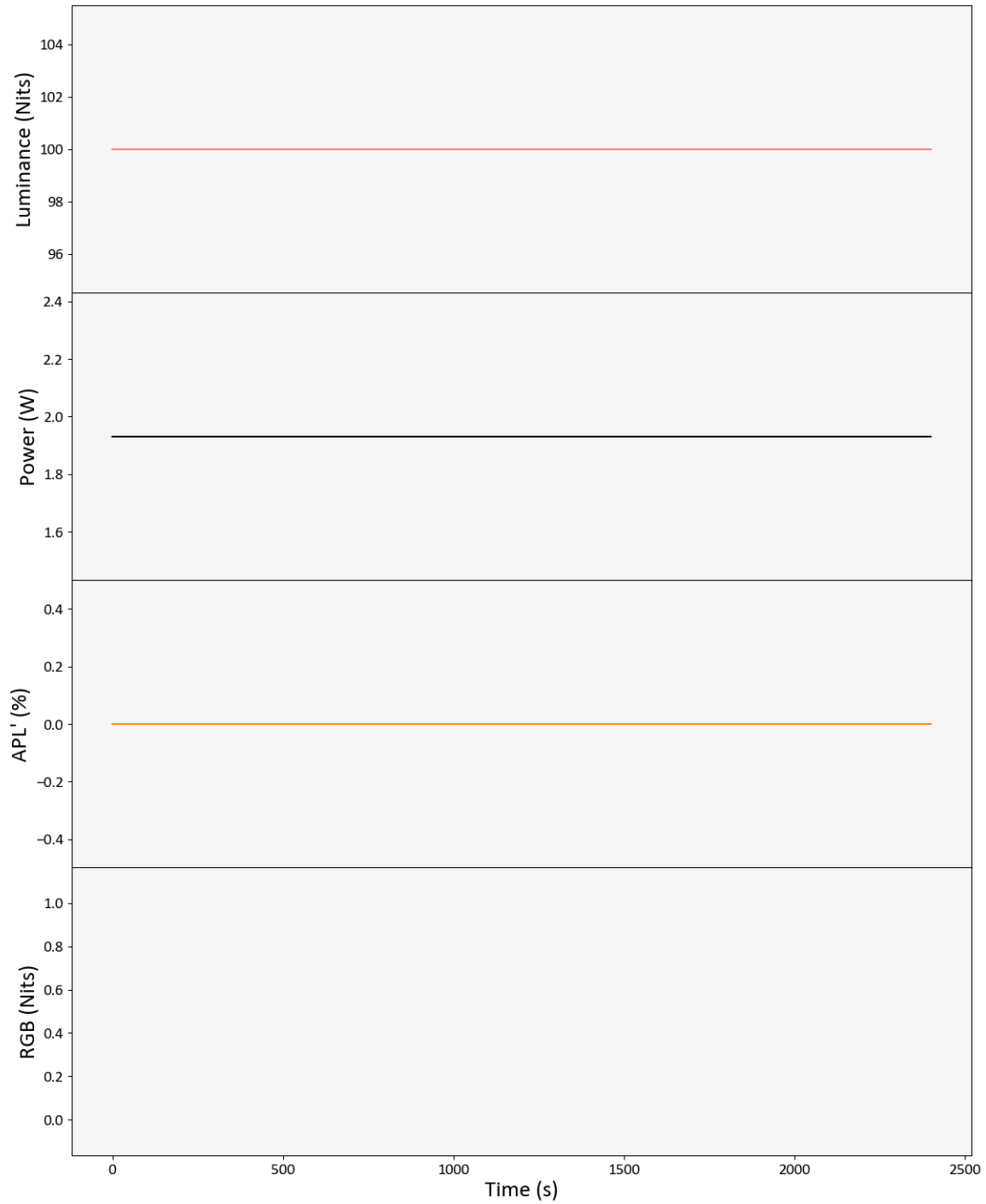
Test 2.1 - stabilization1

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
stabilization1	6	IEC SDR	33.6	off	standard	off	100.0	120.0



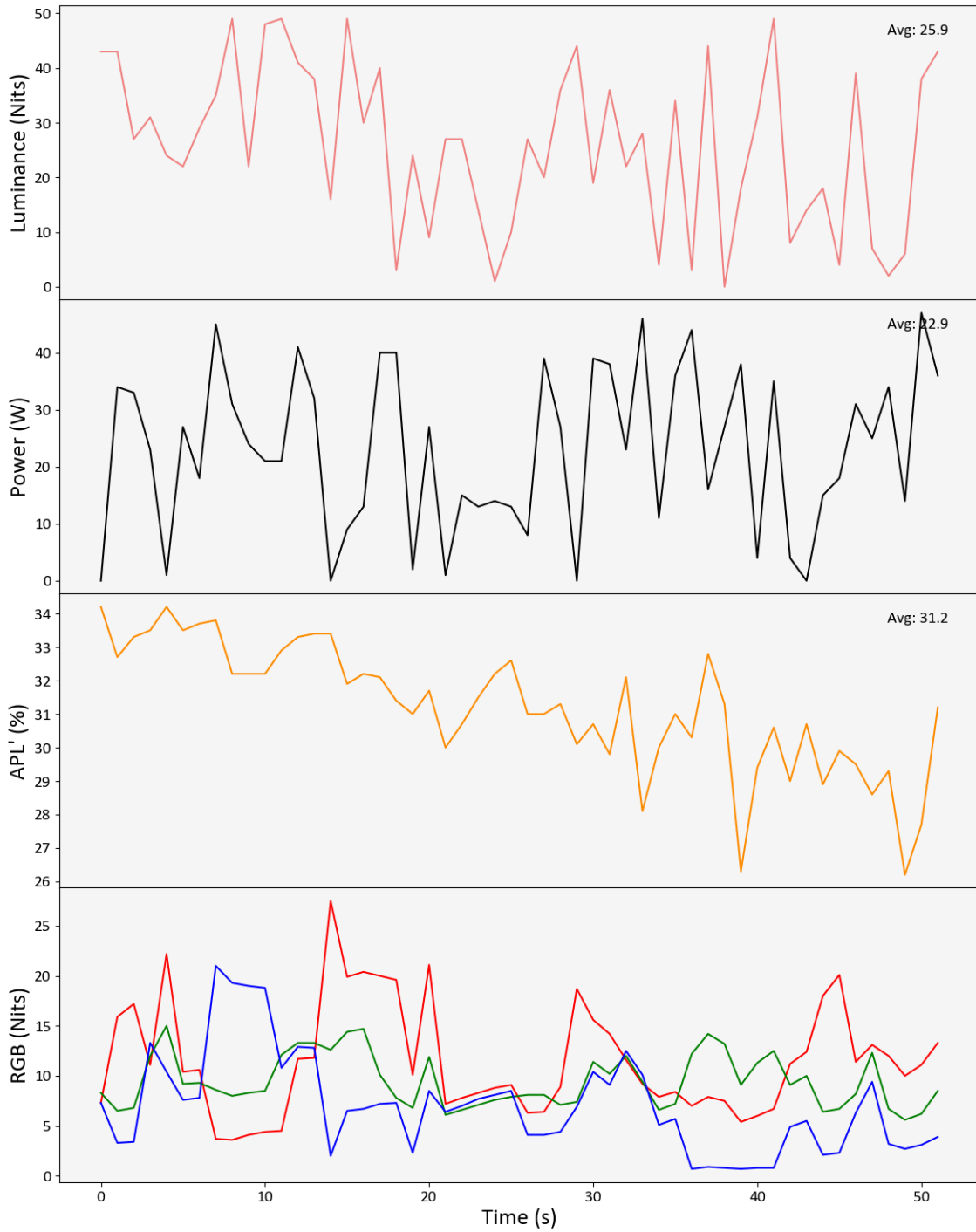
Test 5 - standby_google

Test Name	Test Time (s)	Avg APL' (%)	QS	Wake Time (s)	Avg Luminance (Nits)	Avg Power (W)
standby_google	2400	0.0	off	0.0	100.0	1.9



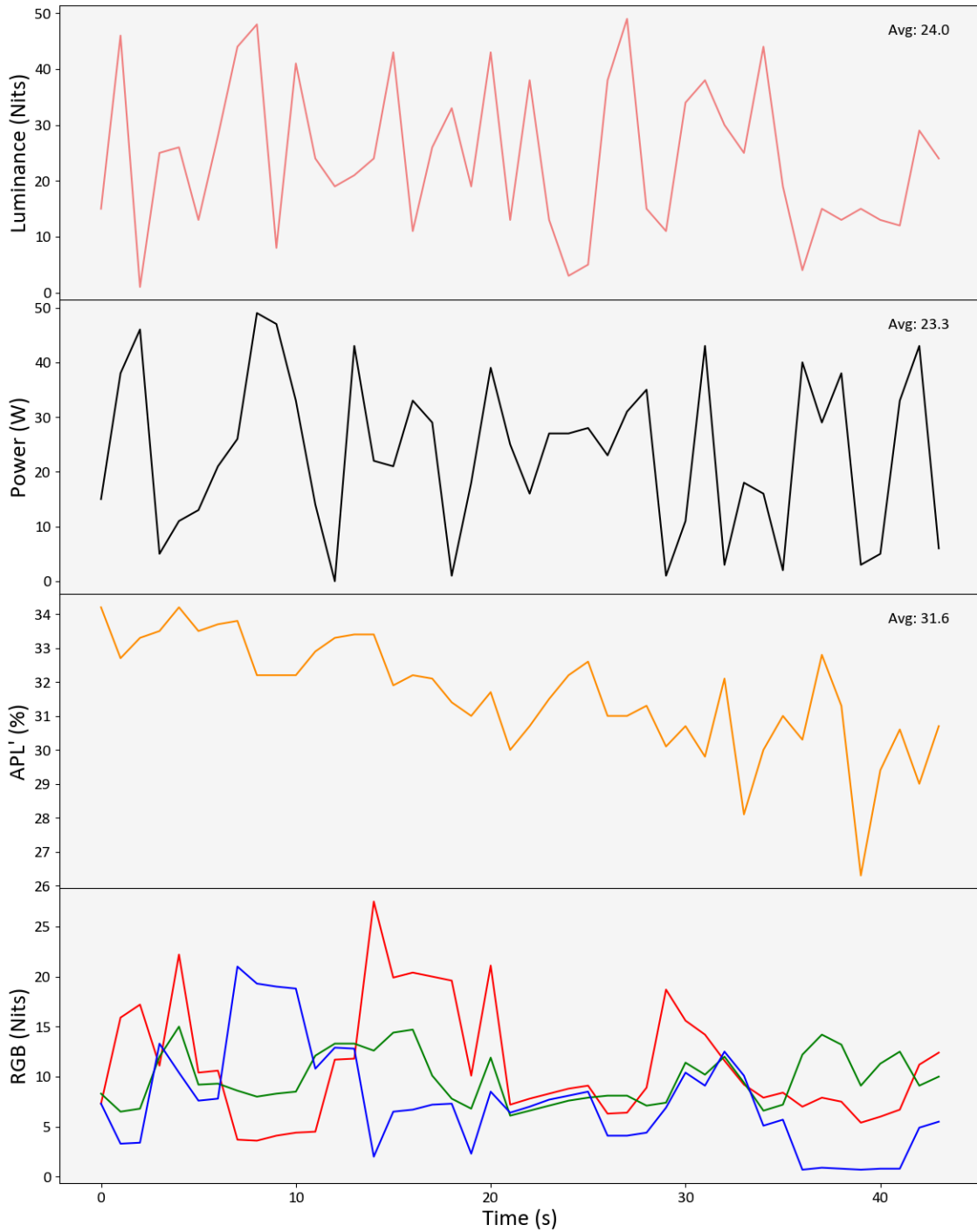
Test 7 - default

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default	600	IEC SDR	31.2	off	standard	off	25.9	22.9



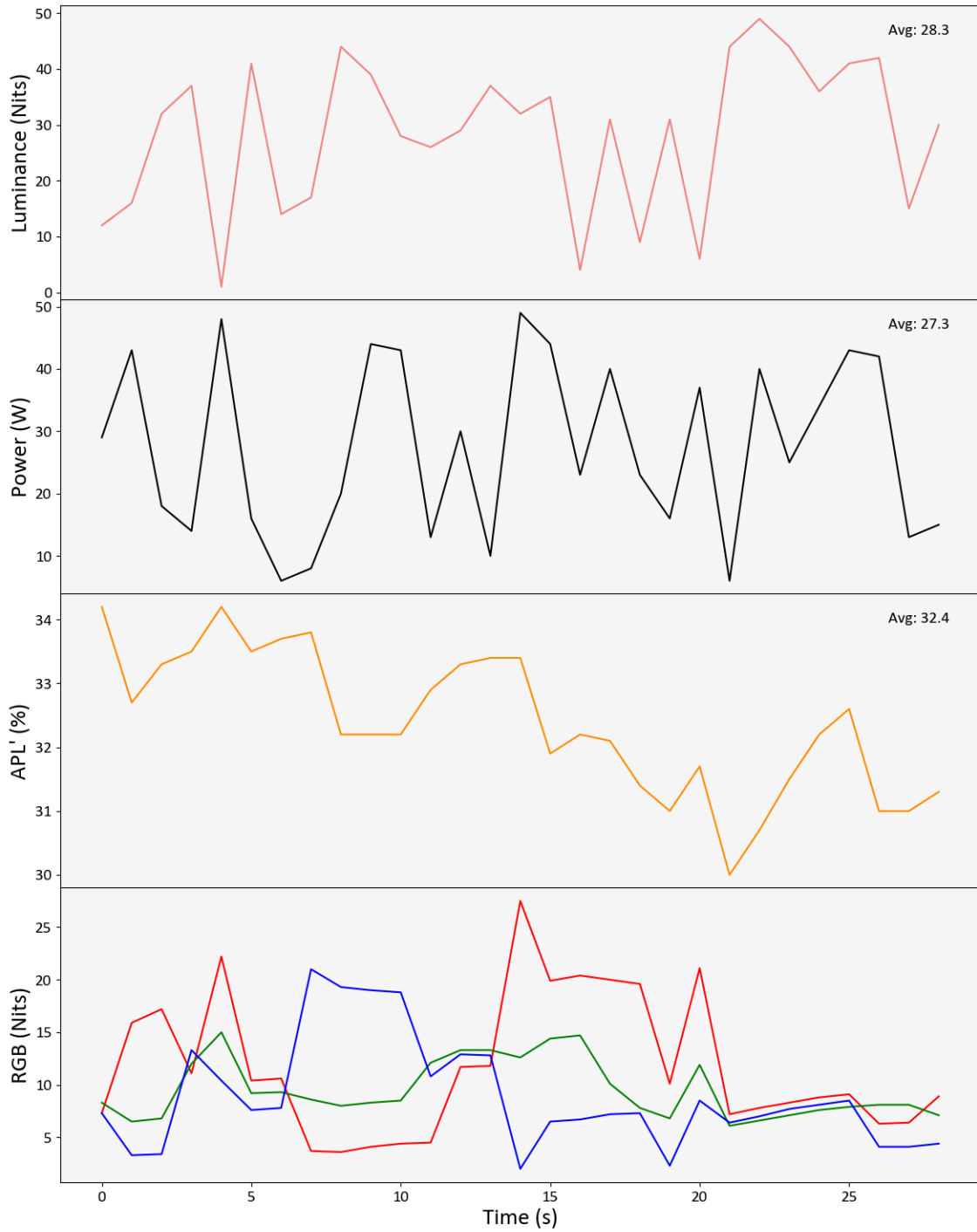
Test 8 - default_low_backlight

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default_low_backlight	600	IEC SDR	31.6	off	standard	off	24.0	23.3



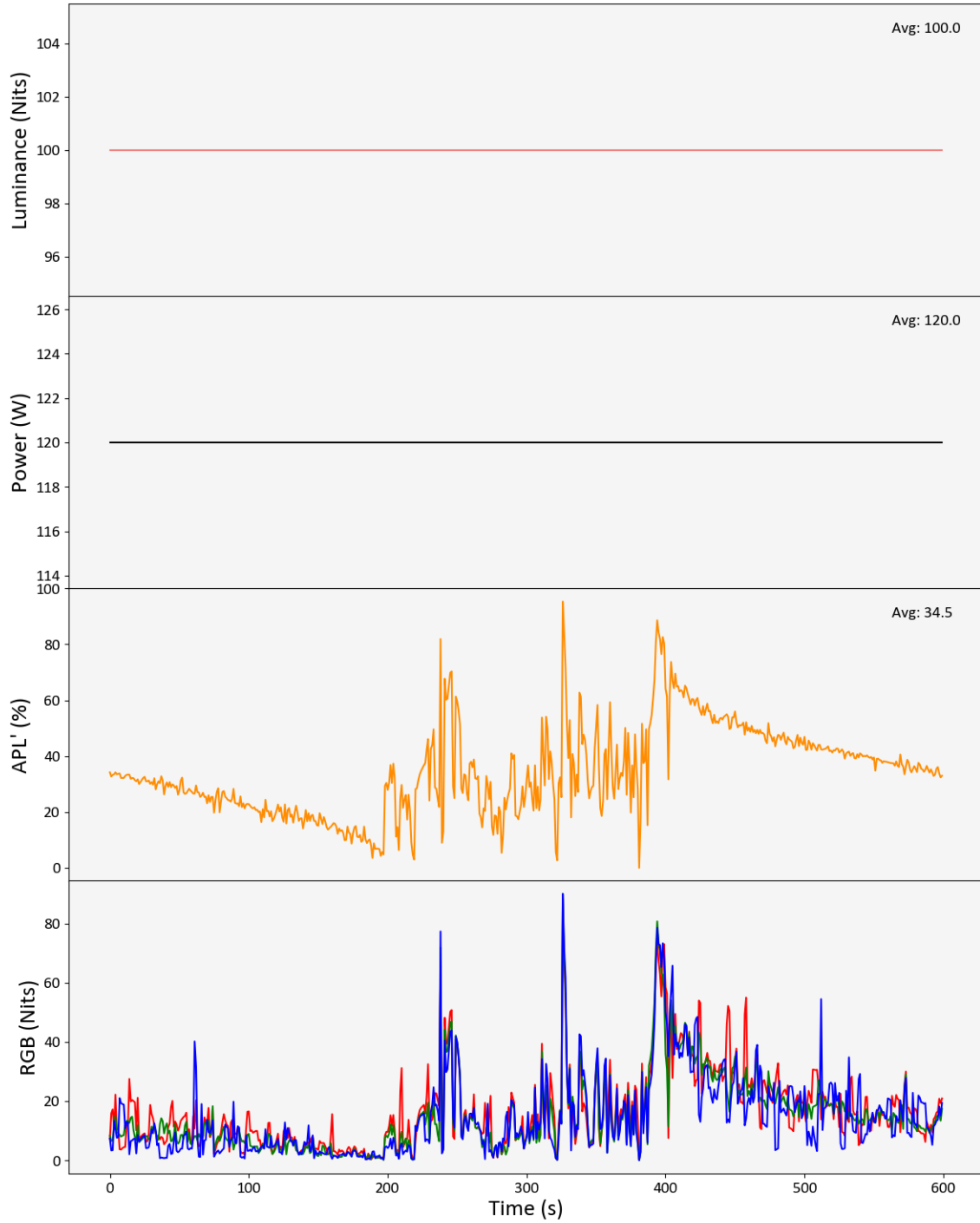
Test 9 - brightest

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
brightest	600	IEC SDR	32.4	off	dynamic	off	28.3	27.3



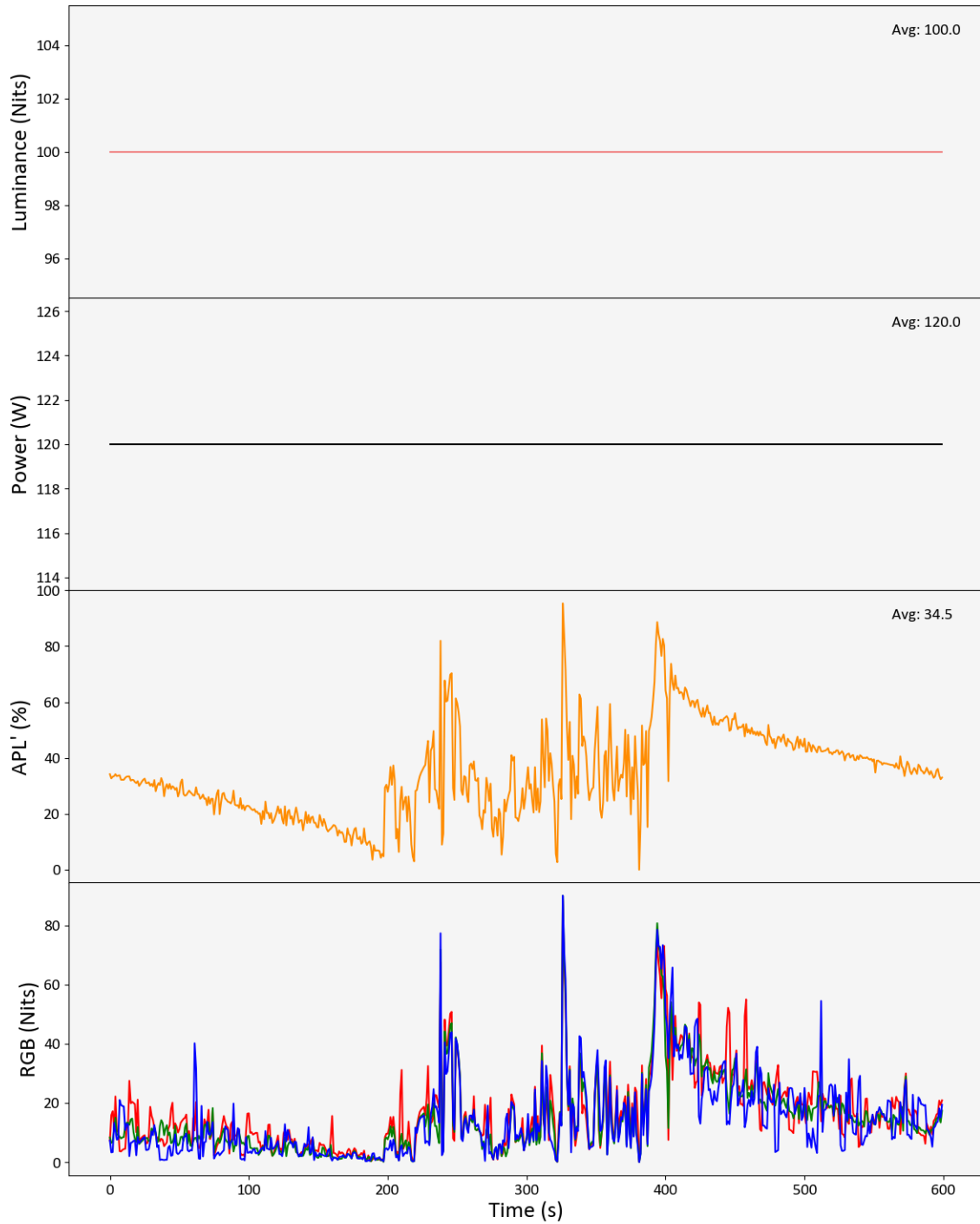
Test 9.2 - stabilization2

Test Name	Test Time (s)	Video	Avg APL' (%)	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
stabilization2	600	IEC SDR	34.5	standard	off	100.0	120.0



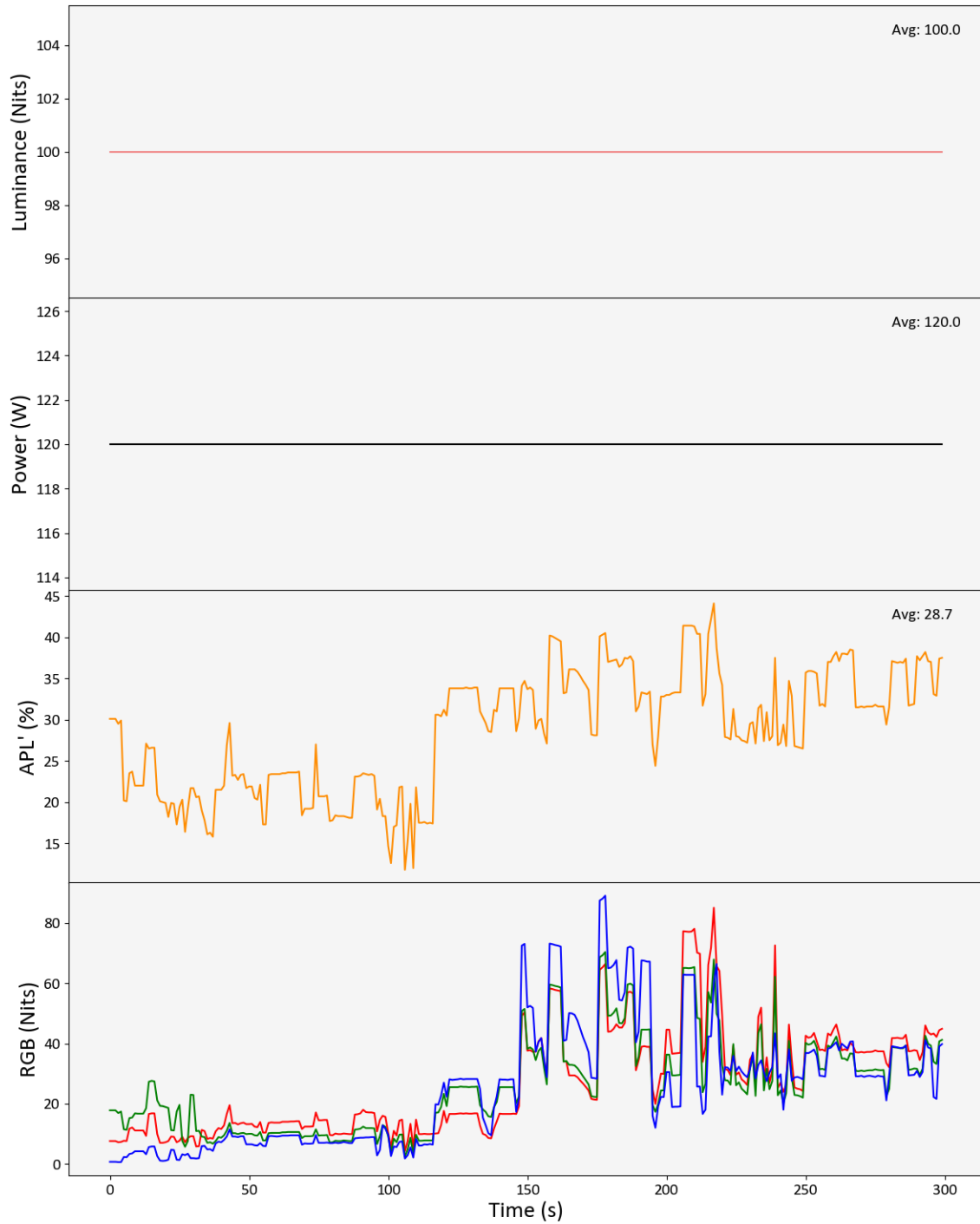
Test 10 - brightest_low_backlight

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
brightest_low_backlight	600	IEC SDR	34.5	off	dynamic	off	100.0	120.0



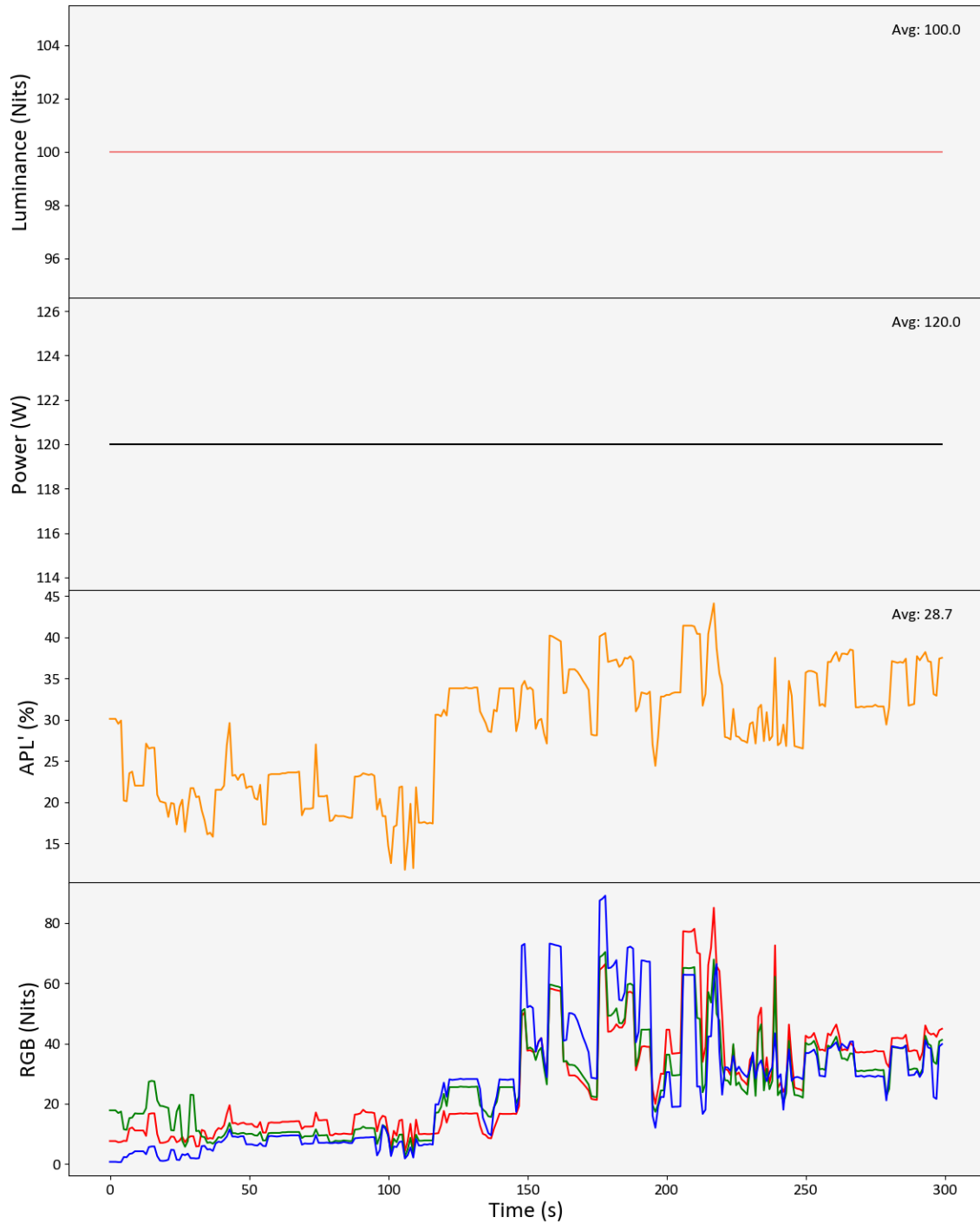
Test 11 - hdr10

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	100.0	120.0



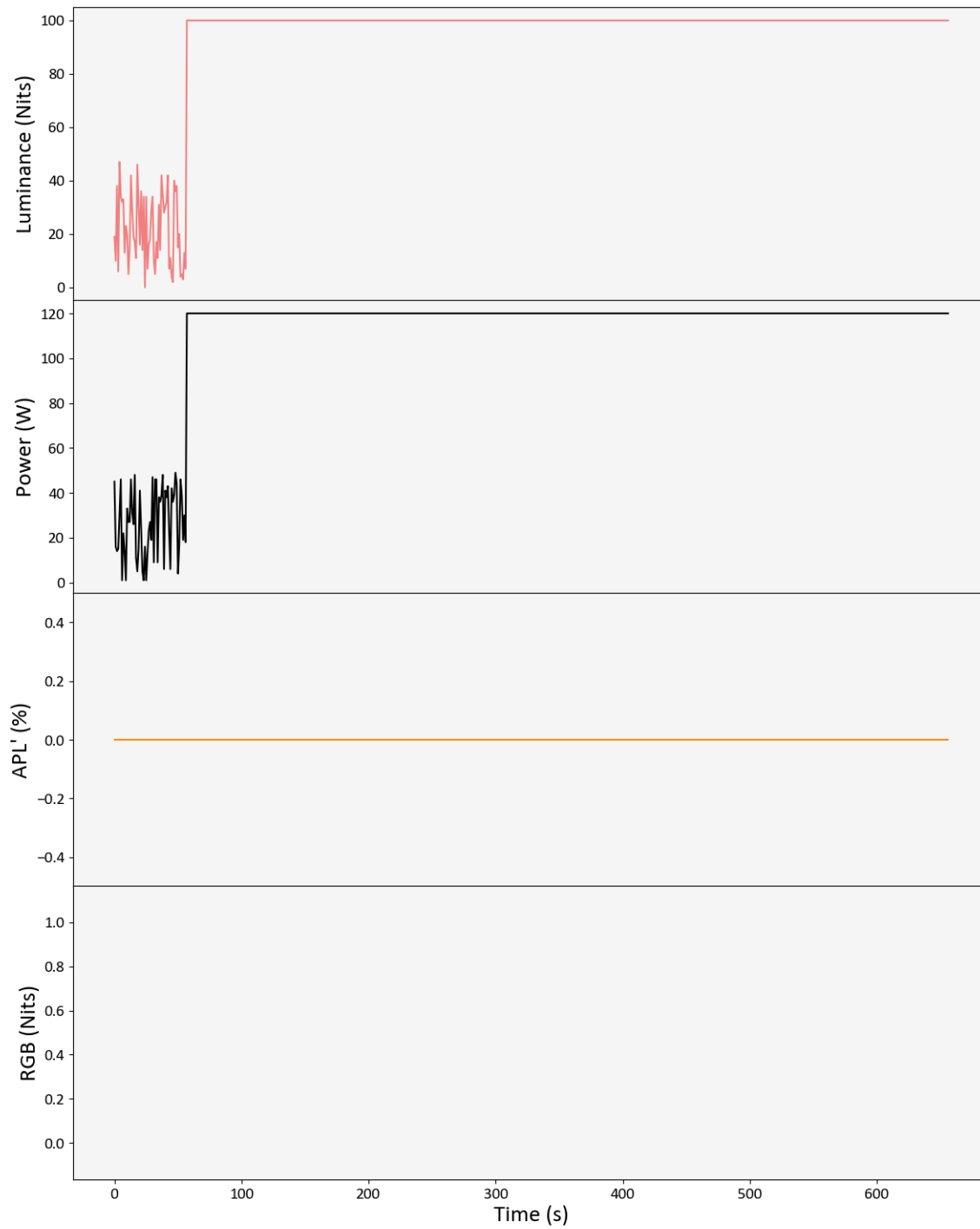
Test 12 - hdr10_low_backlight

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
hdr10_low_backlight	300	CLASP HDR10	28.7	off	standard	off	100.0	120.0



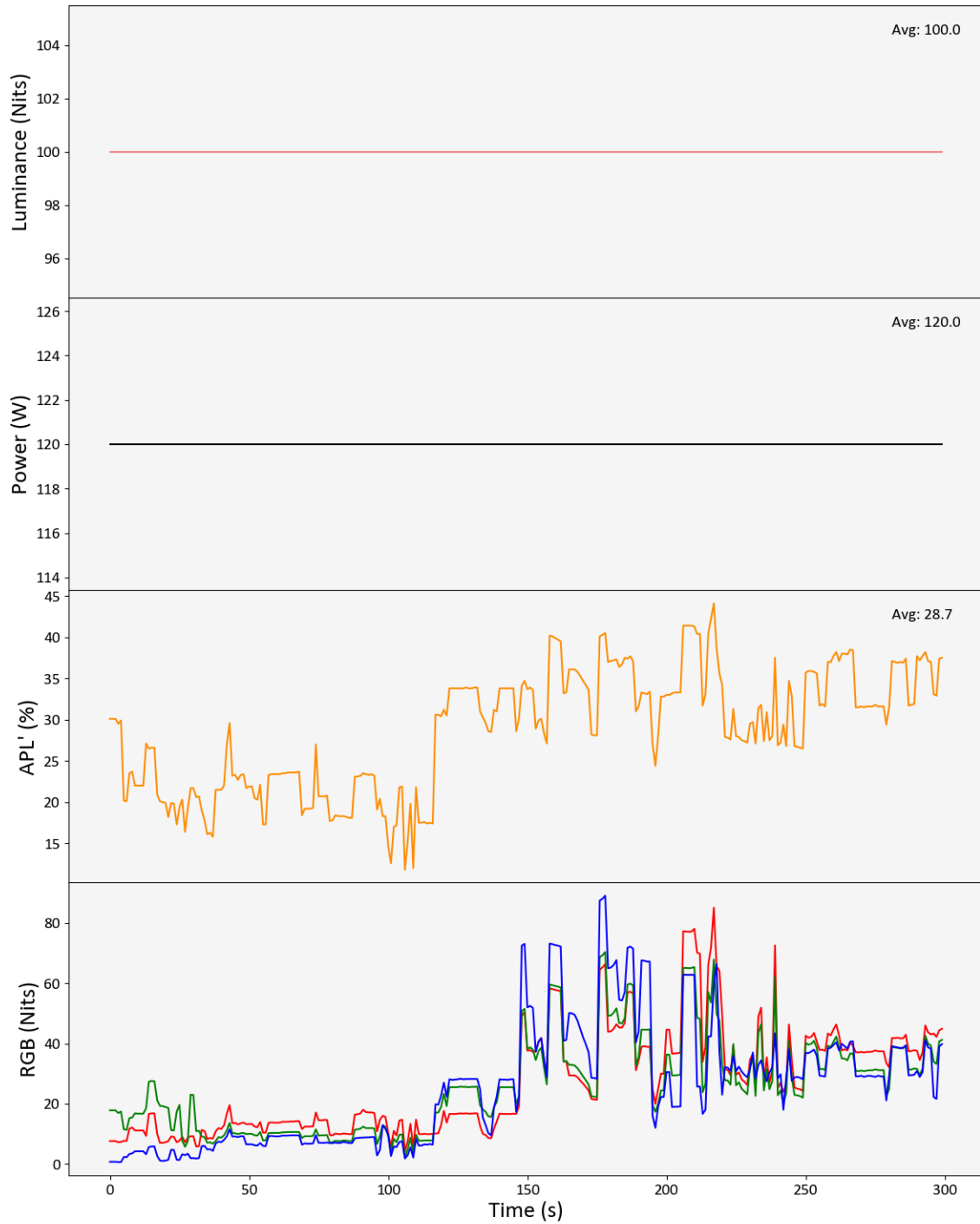
Test 13 - standby

Test Name	Test Time (s)	Avg APL' (%)	QS	Wake Time (s)	Avg Luminance (Nits)	Avg Power (W)
standby	2400	0.0	off	0.0	93.2	111.9



Test 14 - hdr

Test Name	Test Time (s)	Video	Avg APL' (%)	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
hdr	300	CLASP HDR10	28.7	standard	off	100.0	120.0



Test 15 - hdr_low_backlight

Test Name	Test Time (s)	Video	Avg APL' (%)	Preset Picture	MDD	QS	Avg Luminance (Nits)	Avg Power (W)
hdr_low_backlight	300	CLASP HDR10	13.2	standard	off	oob	94.2	112.5

