
TV Power Measurement Report

Model: LG 777

Funded By:



Prepared By:



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1. Test Specifics

Test Start Date	2020-08-26
Test Start Time	09:04:13
Test End Time	14:13:51
Test Duration	0 days 05:09:38
Tester Name	
Test Location	
Test Kit ID Number	
Make	LG
Model	777
Model year	
Manufacture Year	
Manufacture Month	
TV Technology Type	
Can TV play DV videos?	
Can TV play HDR10+ videos?	
Can TV play HLG videos?	
S/N	
Software Version	
Width (Inches)	
Height (Inches)	
Screen diagonal (Inches)	
Pixel Rows	
Pixel Columns	
Aspect Ratio (w/h)	
Screen Area (sq in)	1700
Price (USD)	
Default SDR Picture Mode	
Brightest SDR Picture Mode	
DefaultHDR10 Picture Mode	
Is ABC Universal for SDR?	
Is ABC Universal for HDR10?	
Is MDD Universal for SDR?	
Is MDD Universal for HDR10?	
Does TV have QS?	Yes
Does QS default to Off?	Yes

Test Start Date	2020-08-26
If so, how many seconds does it take to wake to HDMI signal?	8
Does manually adjusting backlight disable ABC?	
Notes (if any)	

2. Persistence Summary

2.1 SDR Persistence

Preset Picture Setting	ABC	MDD
Standard	On	On
Dynamic	Off	Off
Natural	On	Off
Movie	On	Off

2.2 HDR10 Persistence

Preset Picture Setting	ABC	MDD
Standard	Off	Off
Dynamic	Off	Off
Natural	Off	Off
Movie	Off	Off

2.3 HLG Persistence

Preset Picture Setting	ABC	MDD
Standard	Off	Off
Dynamic	Off	Off
Natural	Off	Off
Movie	Off	Off

3. Compliance with Additional Tests

3.1 On Mode Tests

Test Name	Preset Picture	ABC	Lux	MDD	Avg Luminance (Nits)	Power Limit (W)	Avg Power (W)	Power/Power Limit
default	aps	off		off	1.5		3.0	
default_100	aps	on	100.0	off	1.5		3.0	
default_35	aps	on	35.0	off	1.5		3.0	
default_12	aps	on	12.0	off	1.5		3.0	
default_3	aps	on	3.0	off	1.5		3.0	
default_measured					1.5	38.8	3.0	0.1
brightest	vivid	off		off	1.8		3.6	
brightest_measured					1.8	33.9	3.6	0.1
average_measured								0.1

Average Measured / Limit must be less than 1.0 to comply

Default PPS Power Limit Function

$$1.05*((0.001*area+0.38)*(1.00*luminance+0.00) + 0.01*area+18.12)$$

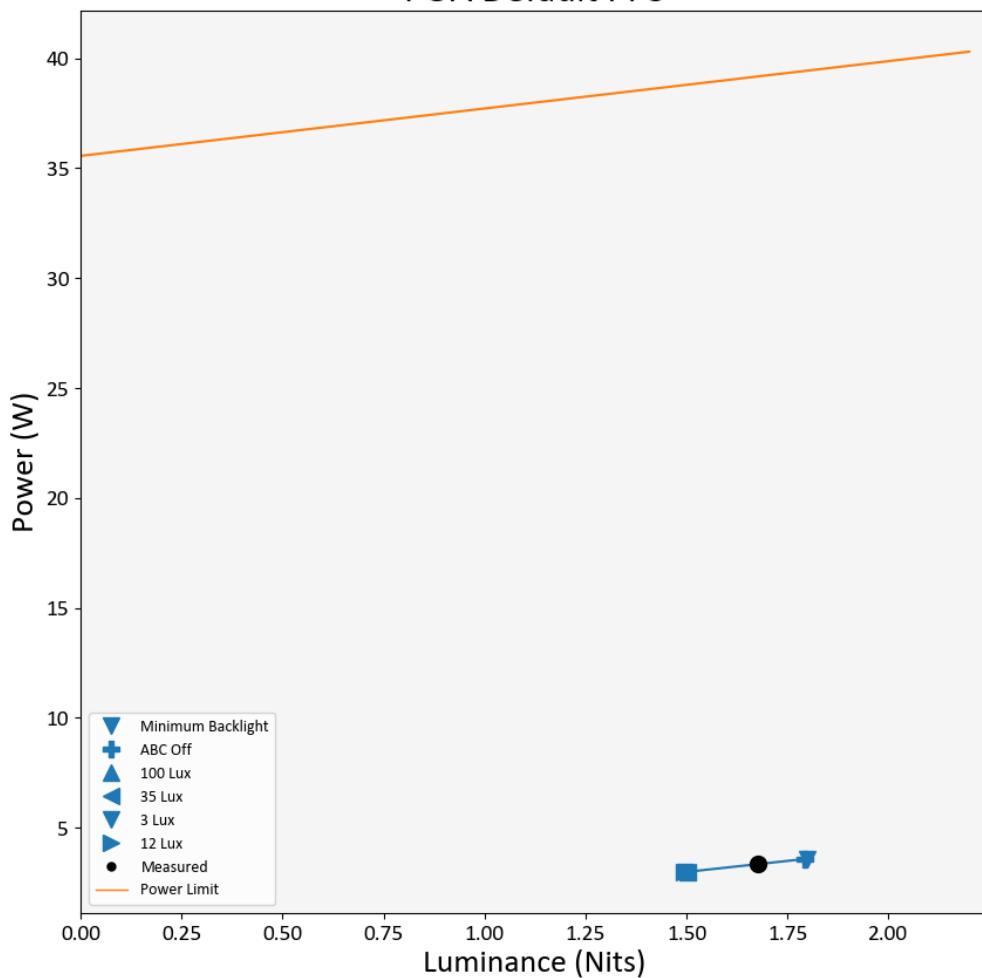
Brightest PPS Power Limit Function

$$1.05*((0.001*area+0.28)*(1.00*luminance+0.00) + 0.01*area+17.11)$$

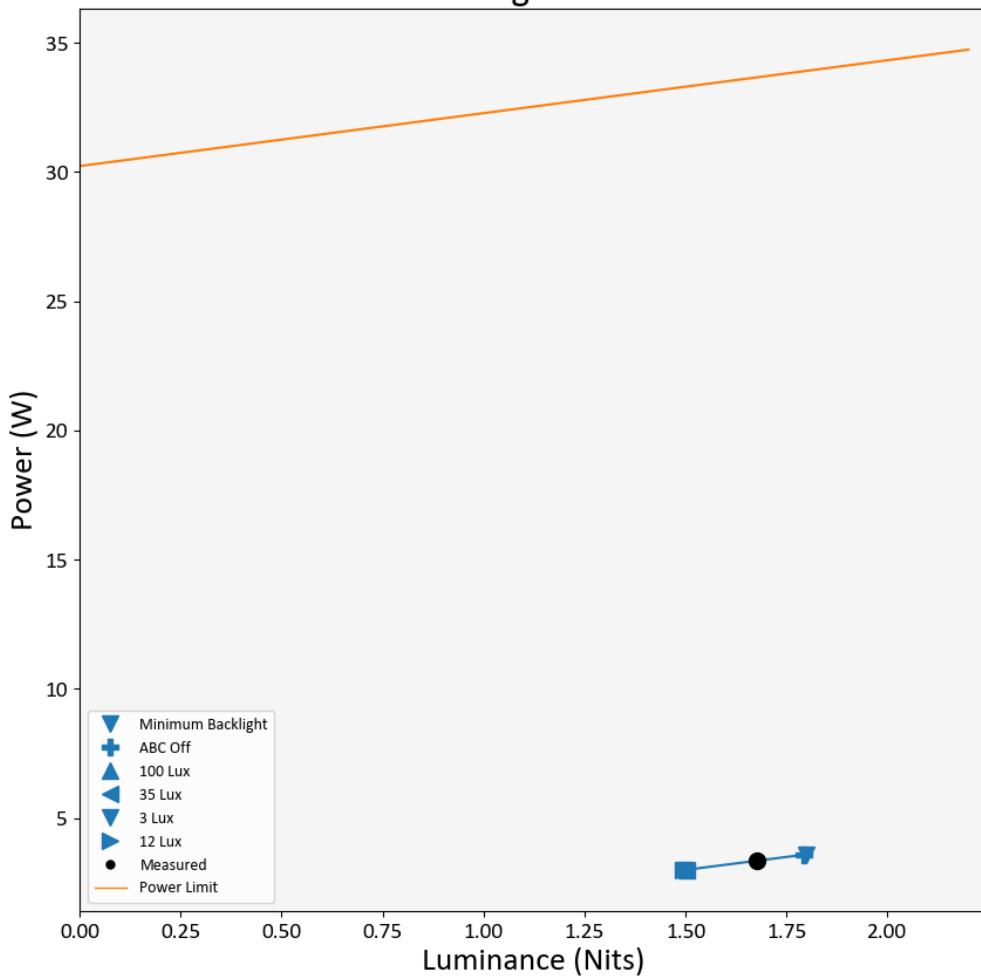
HDR Default PPS Power Limit Function

$$1.05*((0.002*area+0.38)*(1.00*luminance+0.00) + 0.01*area+17.67)$$

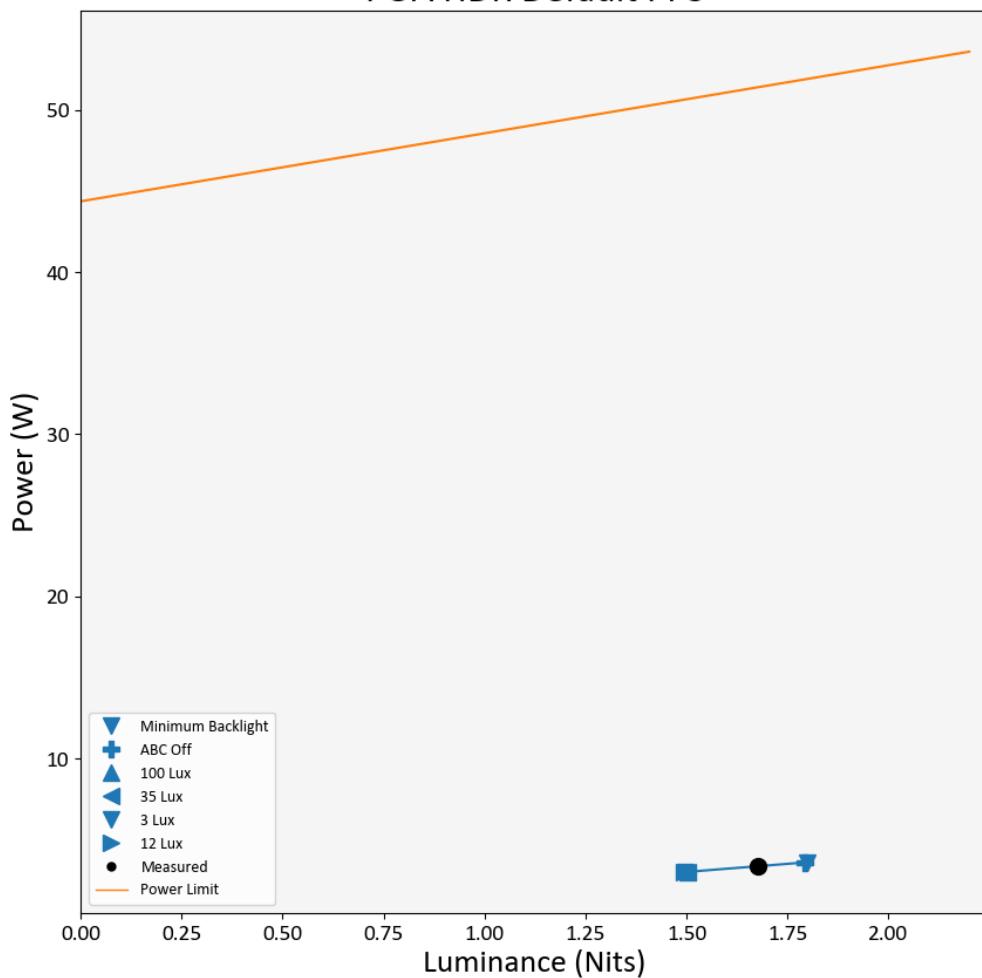
POA Default PPS



POA Brightest PPS



POA HDR Default PPS



3.2 Standby

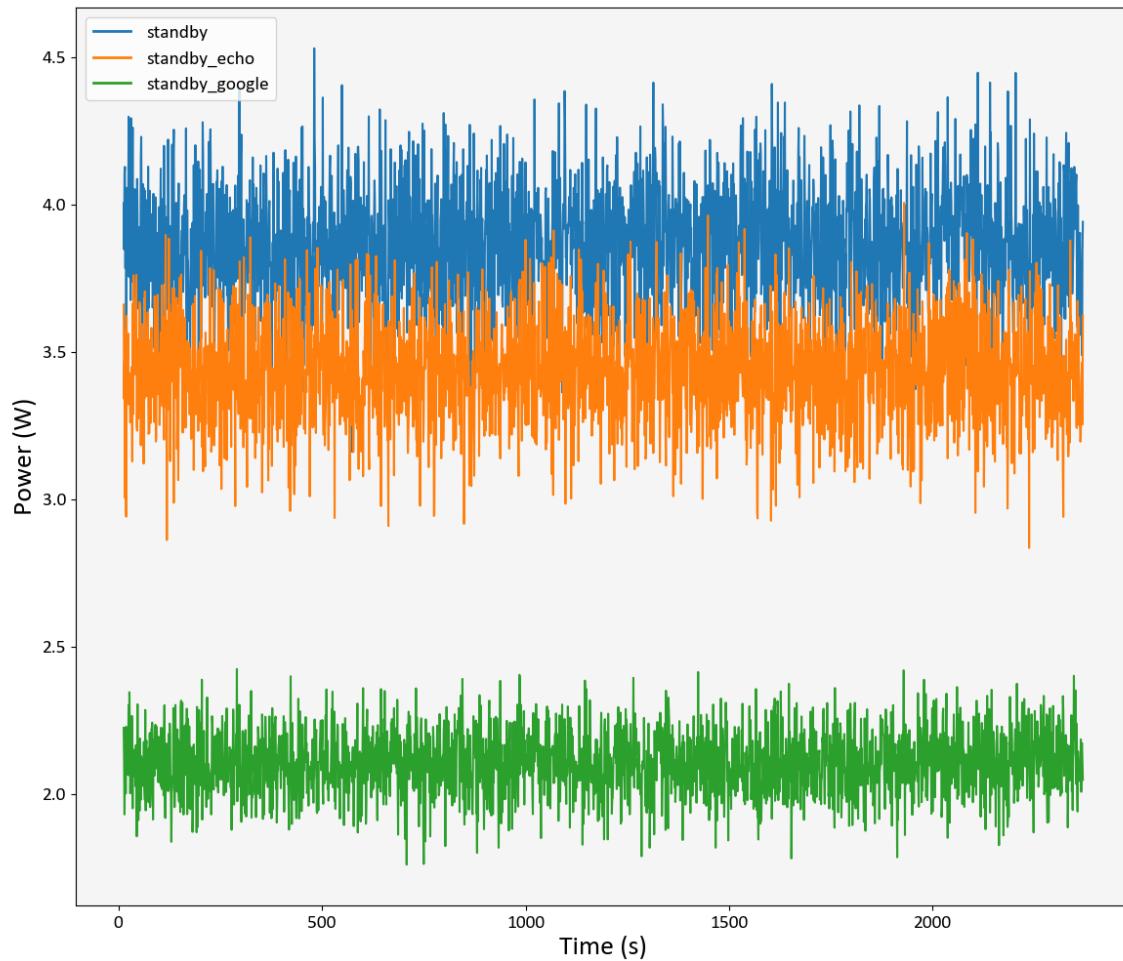
Test Name	QS	Wake Time (s)	Power Limit (W)	Avg Power (W)
standby	off	0.0	2	3.9
standby_echo	oob	0.0	2	3.4
standby_google	oob	0.0	2	2.1

Time to Wake from Standby

standby: 0 seconds

standby_echo: 0 seconds

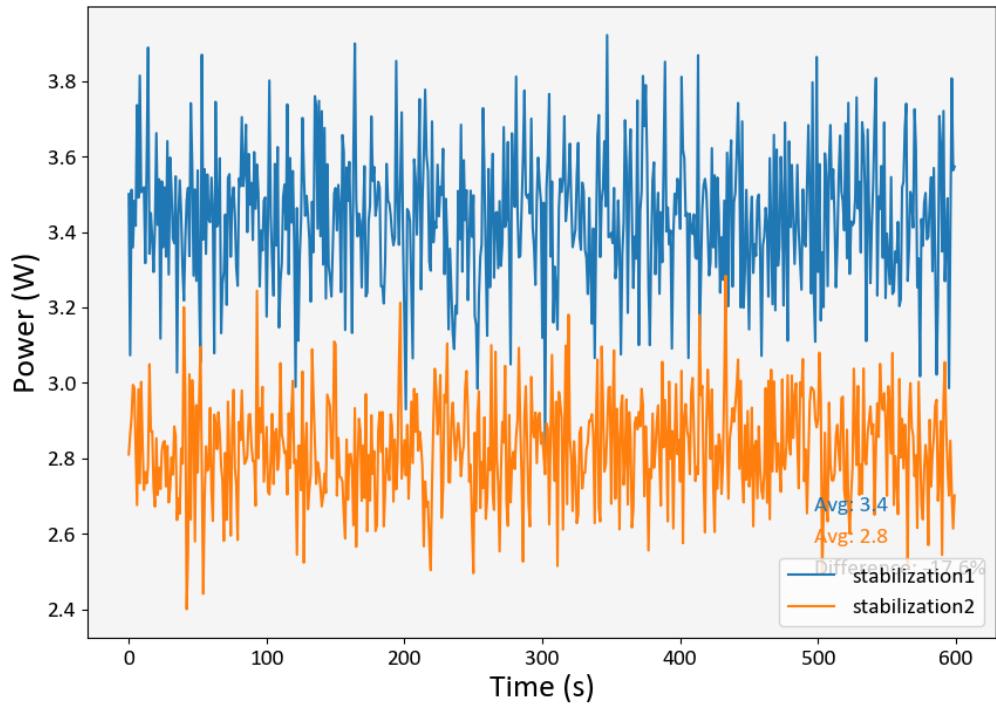
standby_google: 0 seconds



4. Supplemental Test Results

4.1 Stabilization

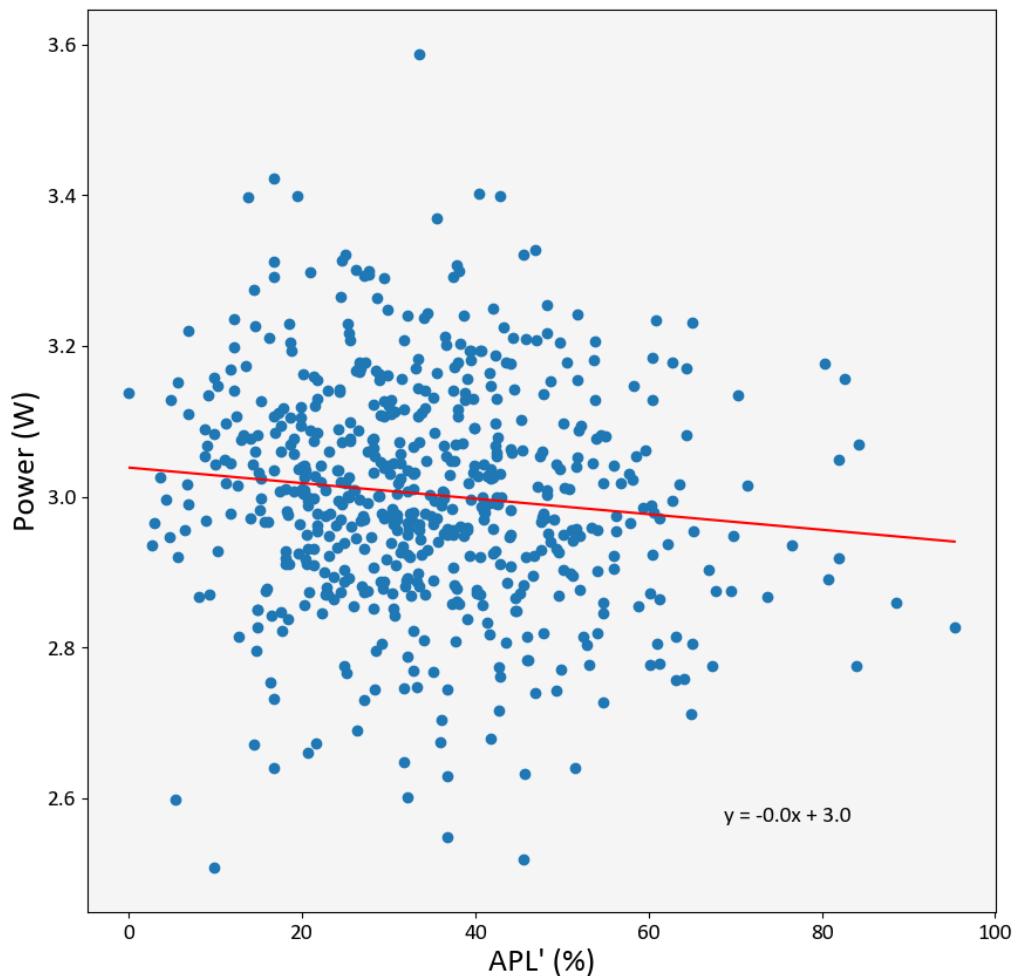
Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
stabilization1	600	IEC SDR	34.5	off	aps	off	1.7	3.4
stabilization2	600	IEC SDR	34.5	off	aps	off	1.4	2.8



4.2 APL' vs Power Charts

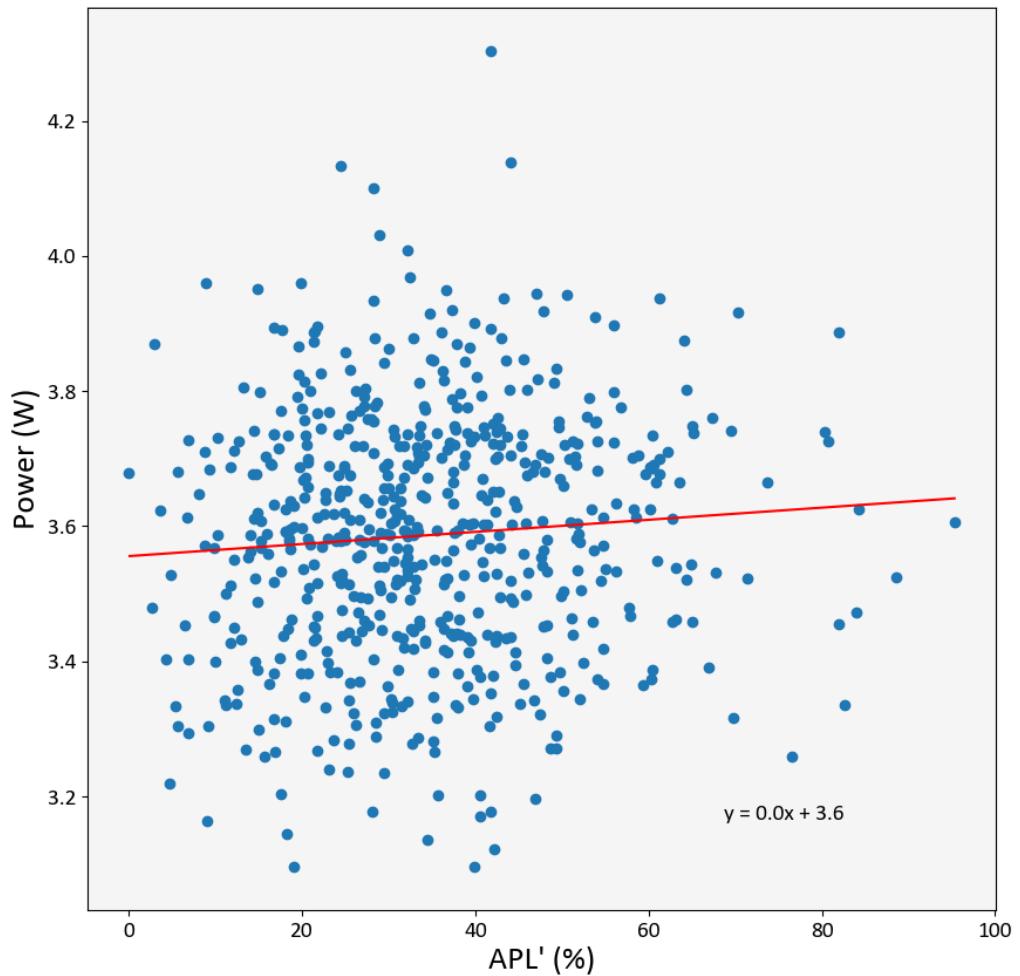
4.2.1 Default PPS: SDR

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	1.5	3.0



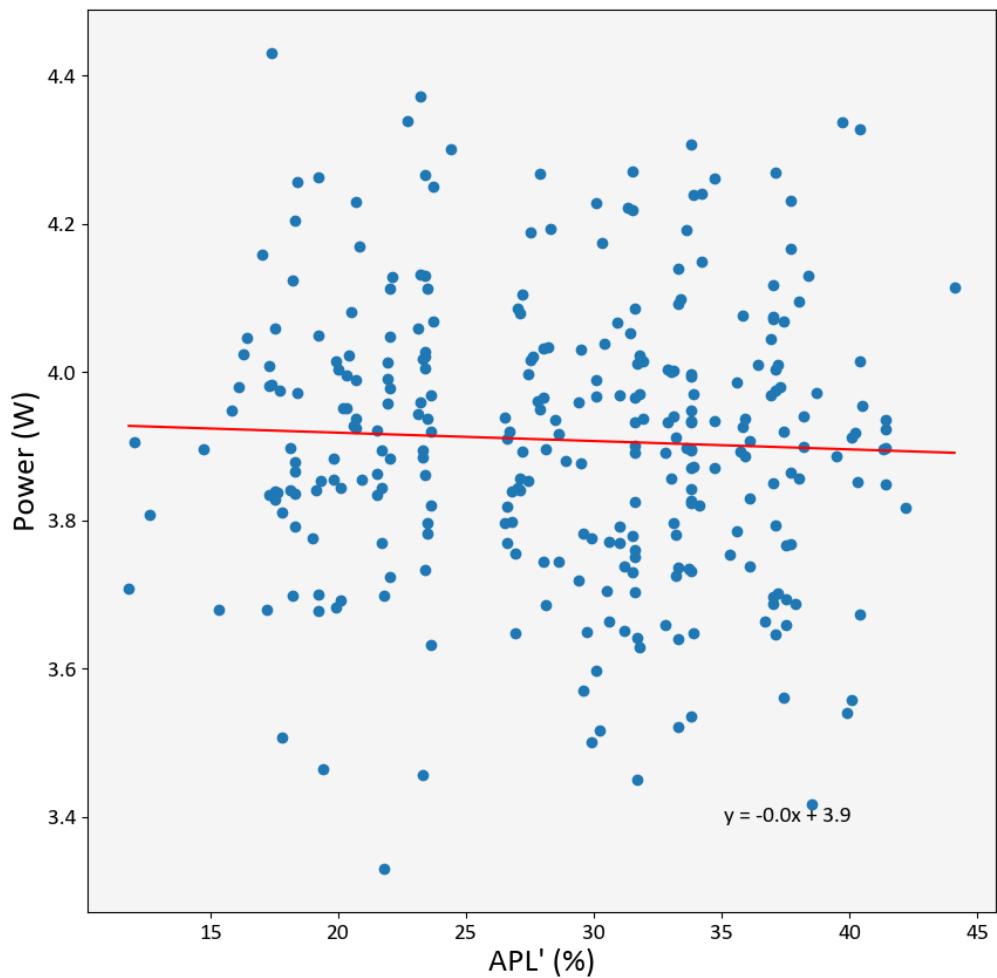
4.2.2 Brightest PPS: SDR

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	1.8	3.6



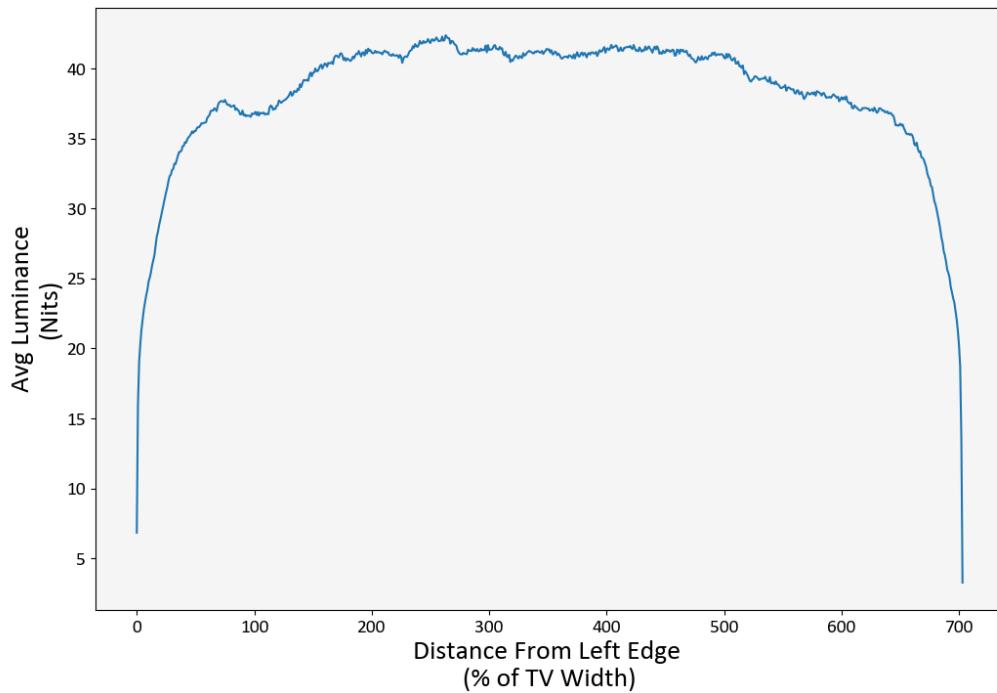
4.2.3 Default PPS: HDR

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

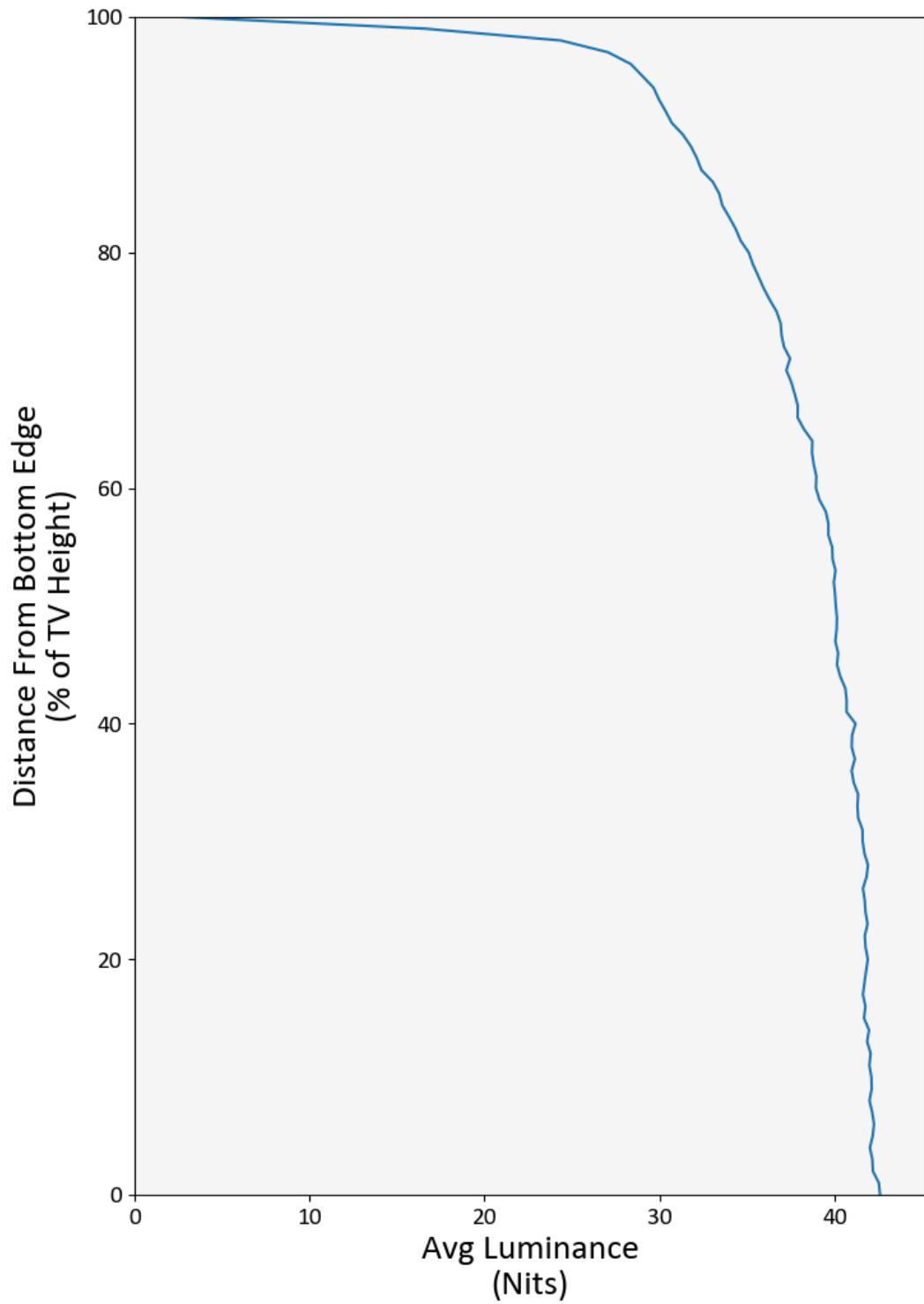


4.3 Light Directionality

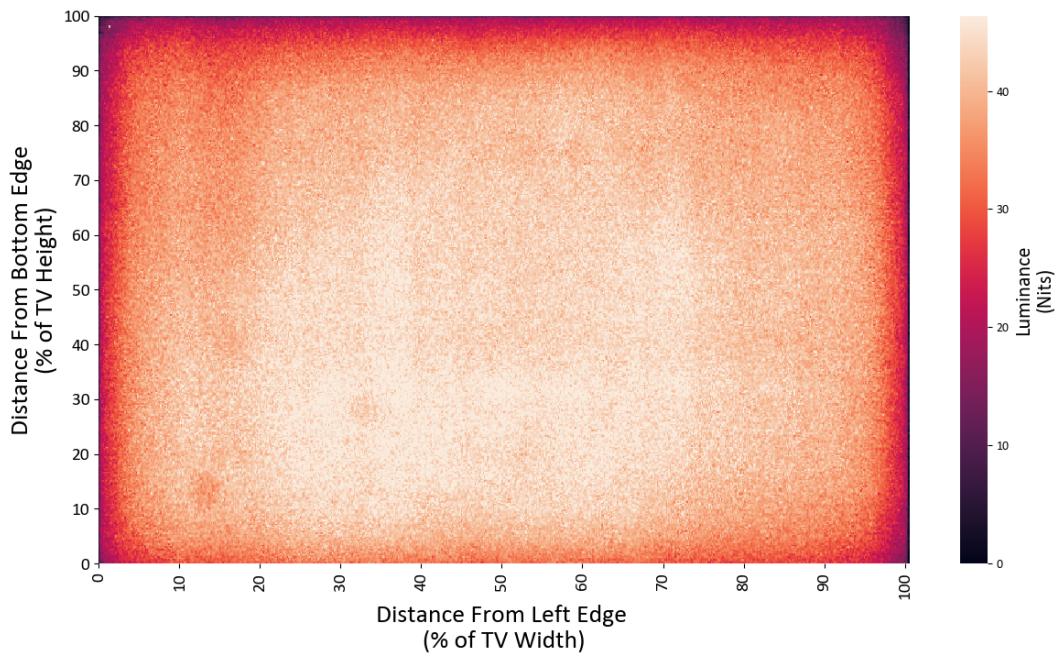
Average Luminance Along TV's Horizontal Axis



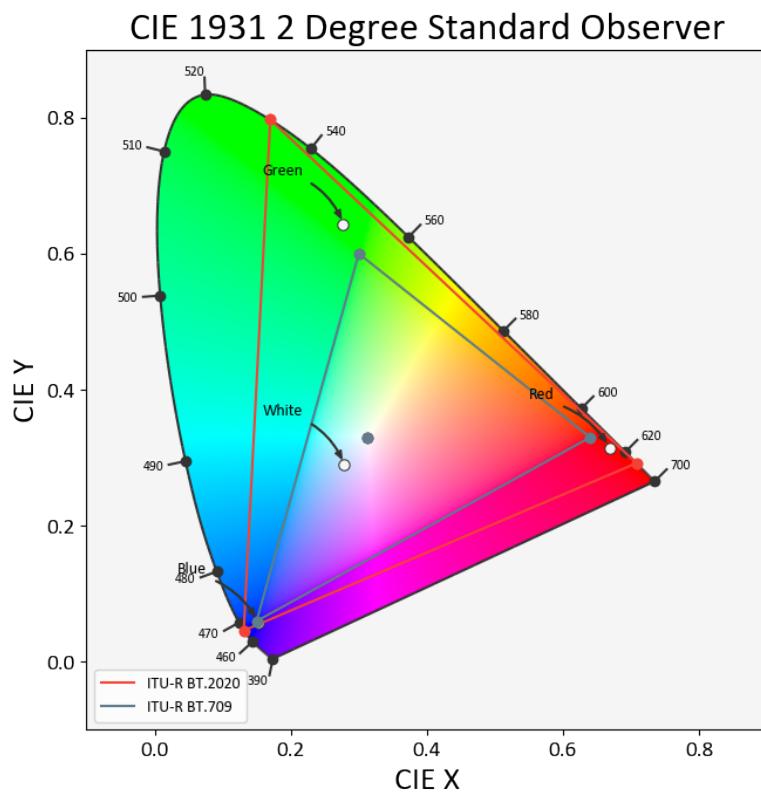
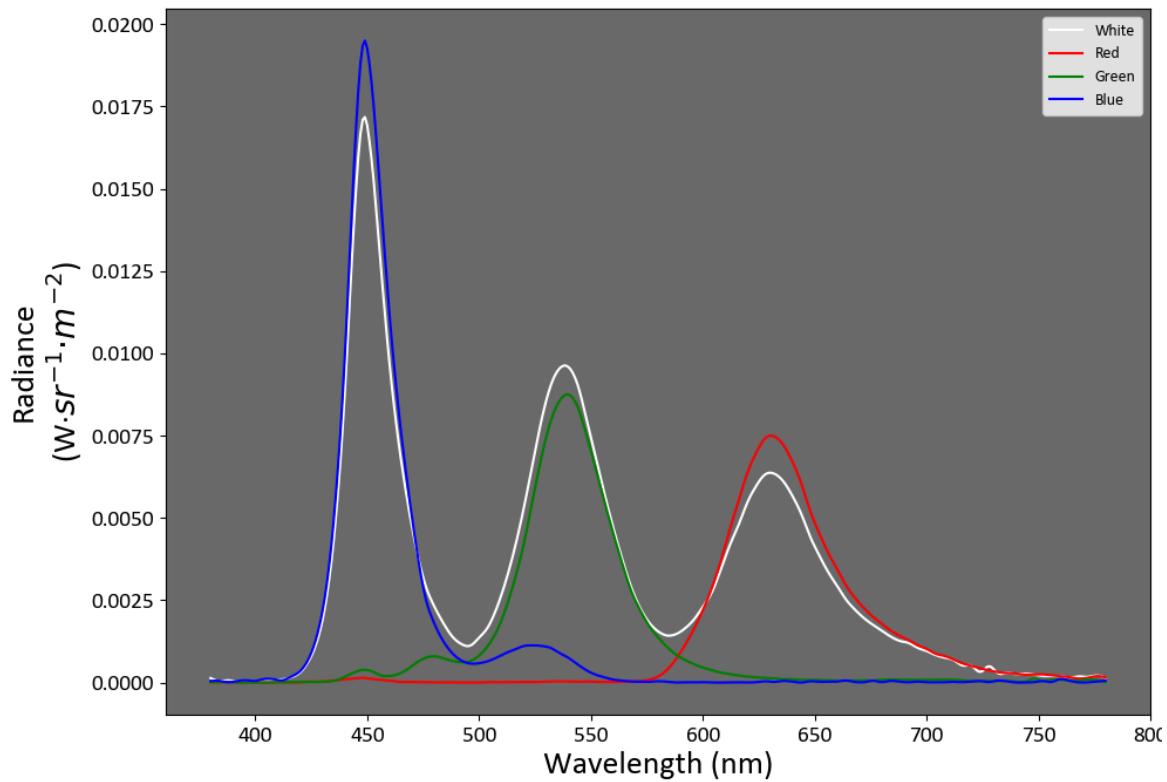
Average Luminance Along TV's Vertical Axis



Luminance Heatmap



4.4 Spectral Power Distribution



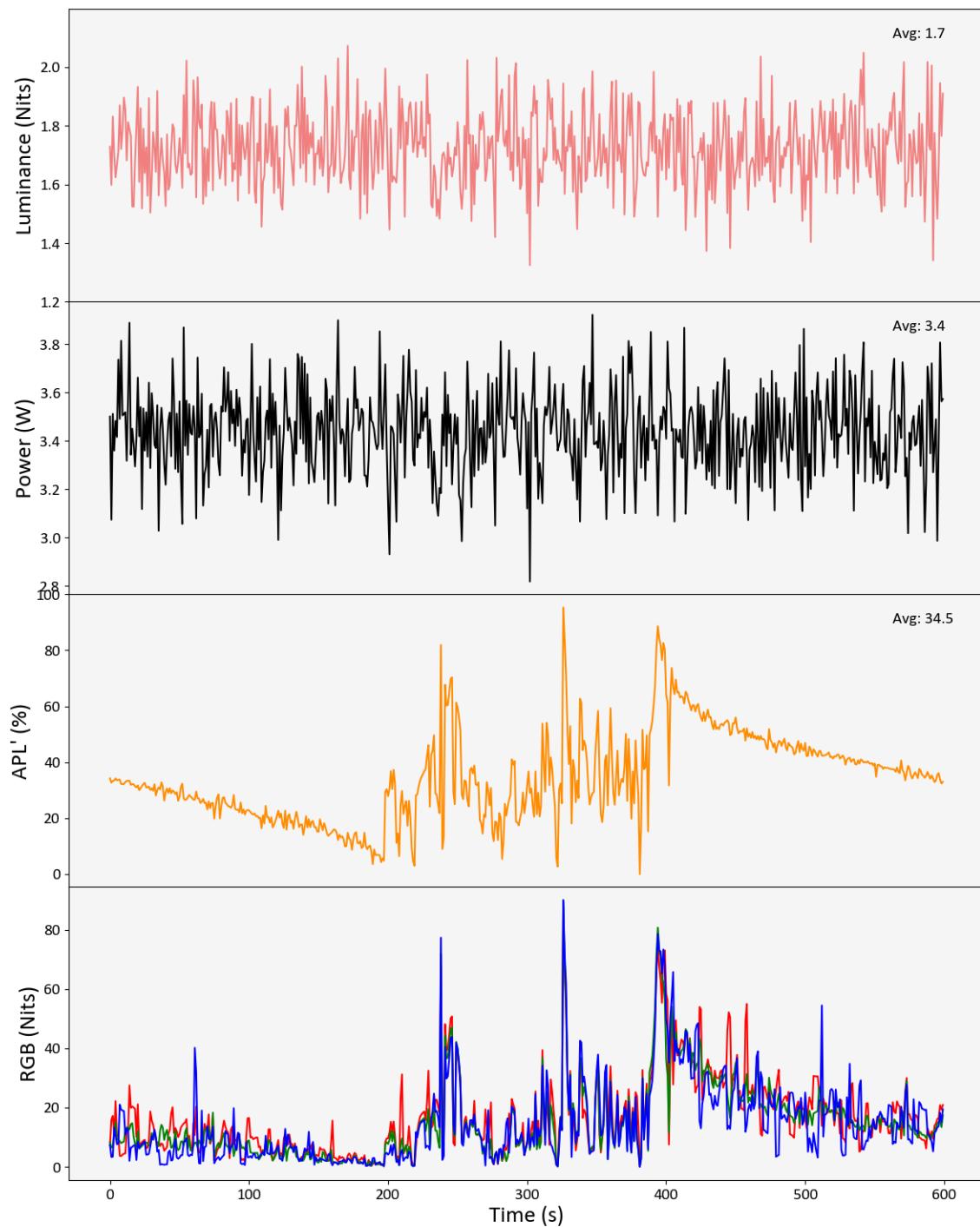
5. Test Results Table

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			1.7	3.4
stabilization2	600	IEC SDR	34.5	off		aps	off			1.4	2.8
default	600	IEC SDR	34.5	off		aps	off			1.5	3.0
default_3bar	30	3-bar	0.0	off		aps	off			1.5	3.0
brightest	600	IEC SDR	34.5	off		vivid	off			1.8	3.6
brightest_10%sd़r	25	SDR 10% Peak Brightness	0.0	off		vivid	off			1.8	3.6
hdr10	300	CLASP HDR10	28.7	off		standard	off			2.0	3.9
brightest_low_backlight	600	IEC SDR	34.5	on	3.0	vivid	off			1.8	3.6
hdr10_low_backlight	300	CLASP HDR10	28.7	on	3.0	standard	off			2.0	3.9
default_100	600	IEC SDR	34.5	on	100.0	aps	off			1.5	3.0
pps3_100	120	IEC SDR	27.0	on	100.0	cinema	off			1.4	2.8
pps4_100	120	IEC SDR	27.0	on	100.0	game	off			1.2	2.5
default_35	600	IEC SDR	34.5	on	35.0	aps	off			1.5	3.0
pps3_35	120	IEC SDR	27.0	on	35.0	cinema	off			1.9	3.8
pps4_35	120	IEC SDR	27.0	on	35.0	game	off			1.5	3.1
default_12	600	IEC SDR	34.5	on	12.0	aps	off			1.5	3.0
pps3_12	120	IEC SDR	27.0	on	12.0	cinema	off			1.2	2.4
pps4_12	120	IEC SDR	27.0	on	12.0	game	off			1.7	3.4
default_3	600	IEC SDR	34.5	on	3.0	aps	off			1.5	3.0
pps3_3	120	IEC SDR	27.0	on	3.0	cinema	off			1.3	2.5
pps4_3	120	IEC SDR	27.0	on	3.0	game	off			1.4	2.9
standby	2400		0.0					off	0.0	1.9	3.9
standby_echo	2400		0.0					oob	0.0	1.7	3.4
standby_google	2400		0.0					oob	0.0	1.1	2.1

6. Test Result Plots

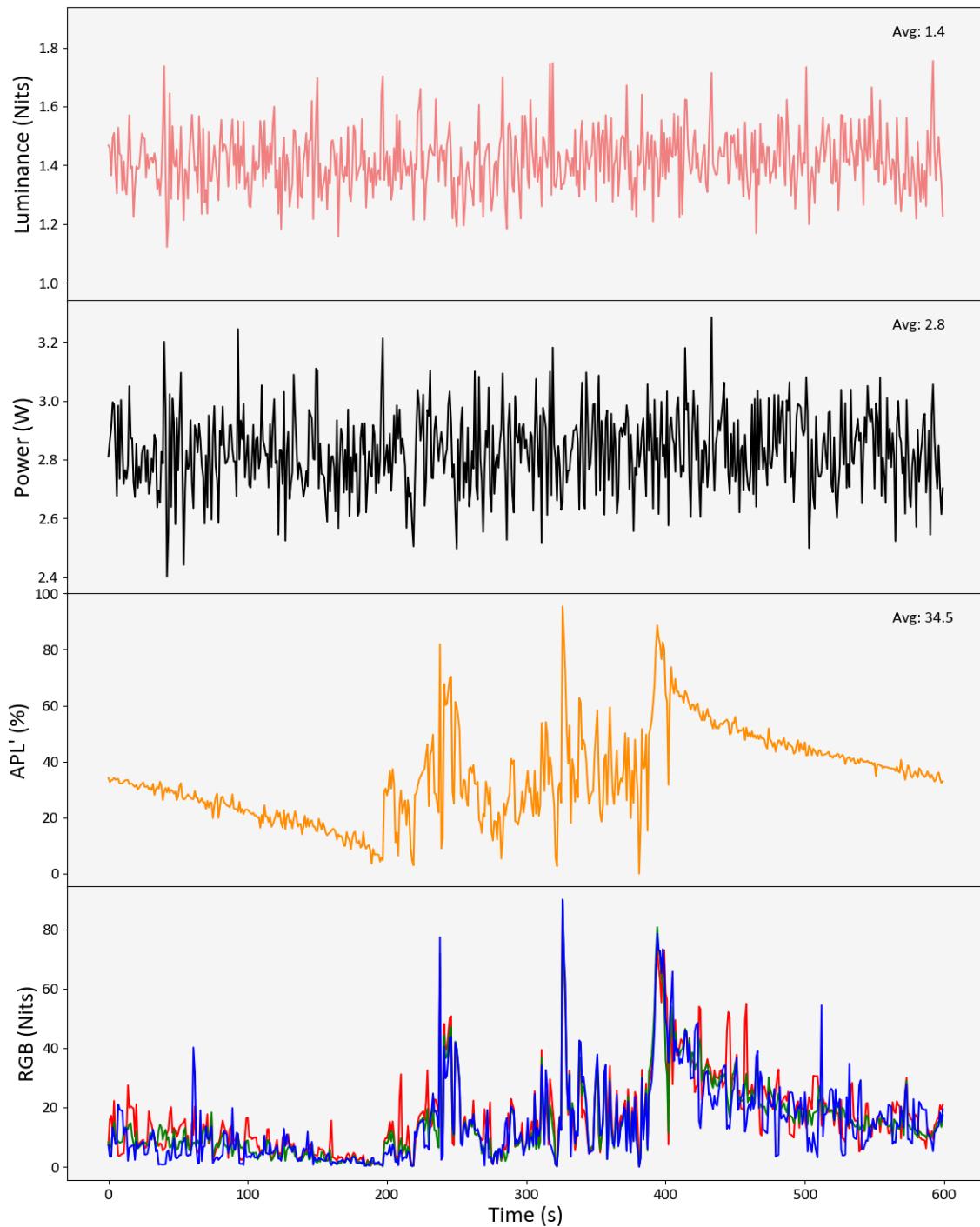
Test 9.1 - stabilization1

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	1.7	3.4



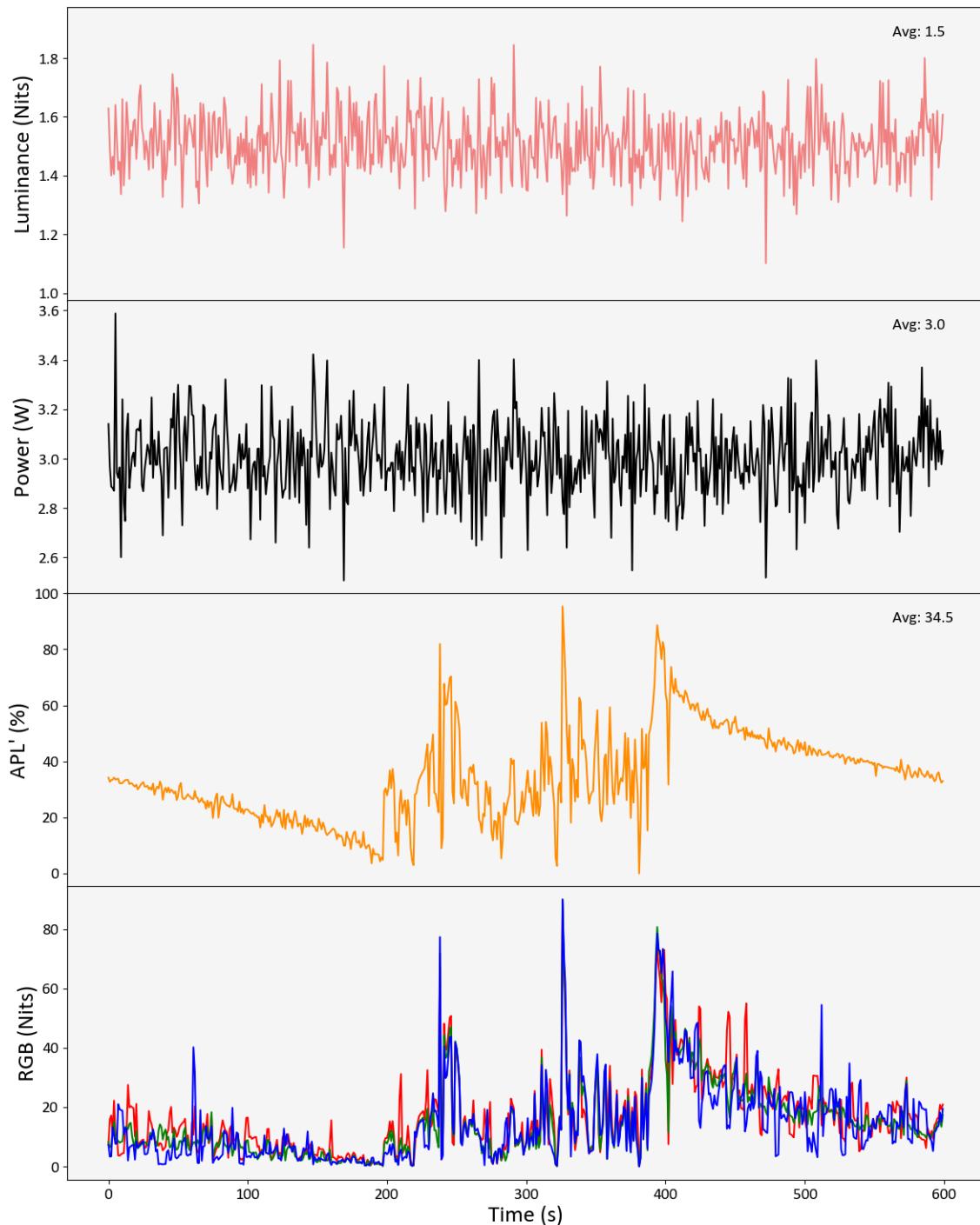
Test 9.2 - stabilization2

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	1.4	2.8



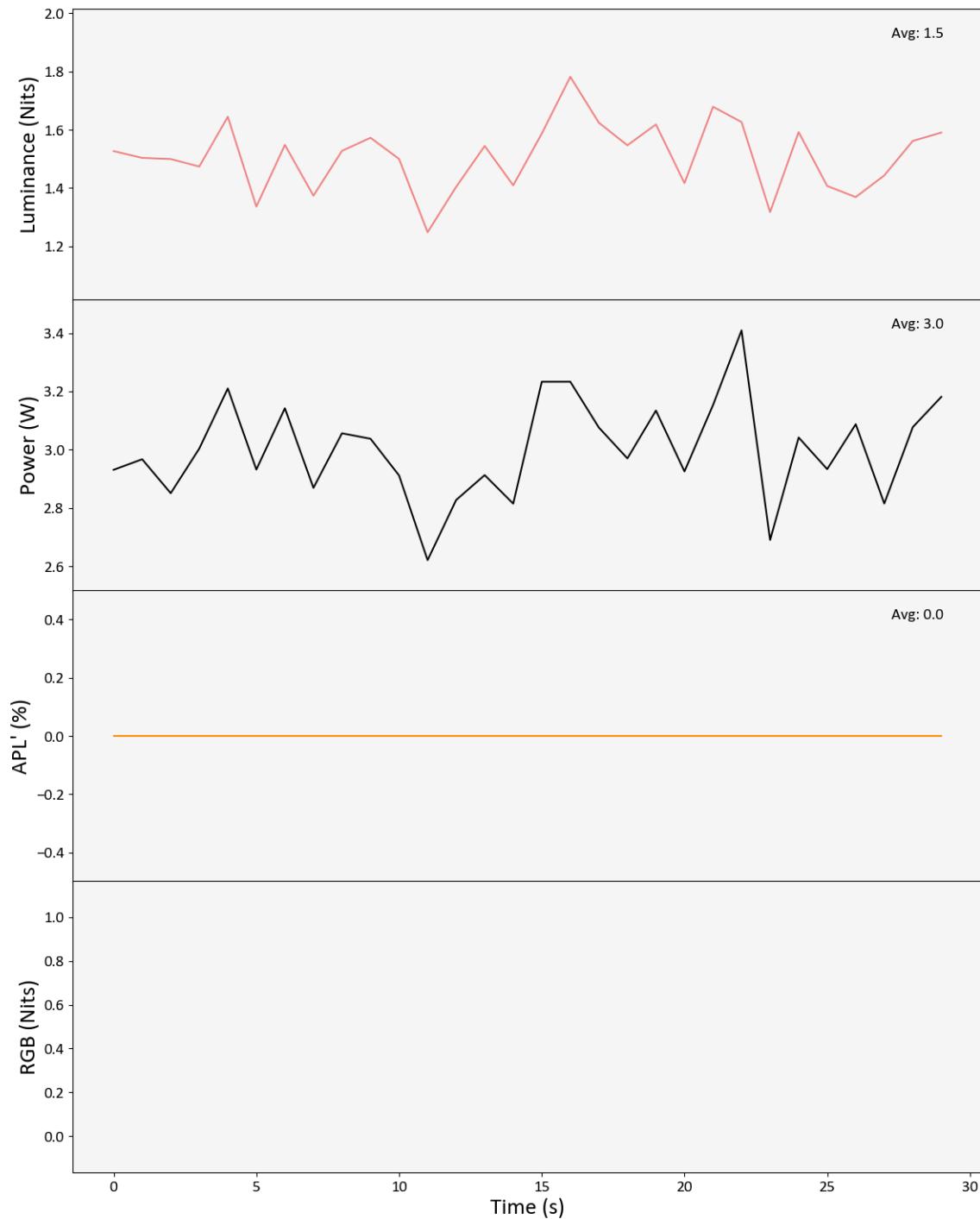
Test 10 - default

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	1.5	3.0



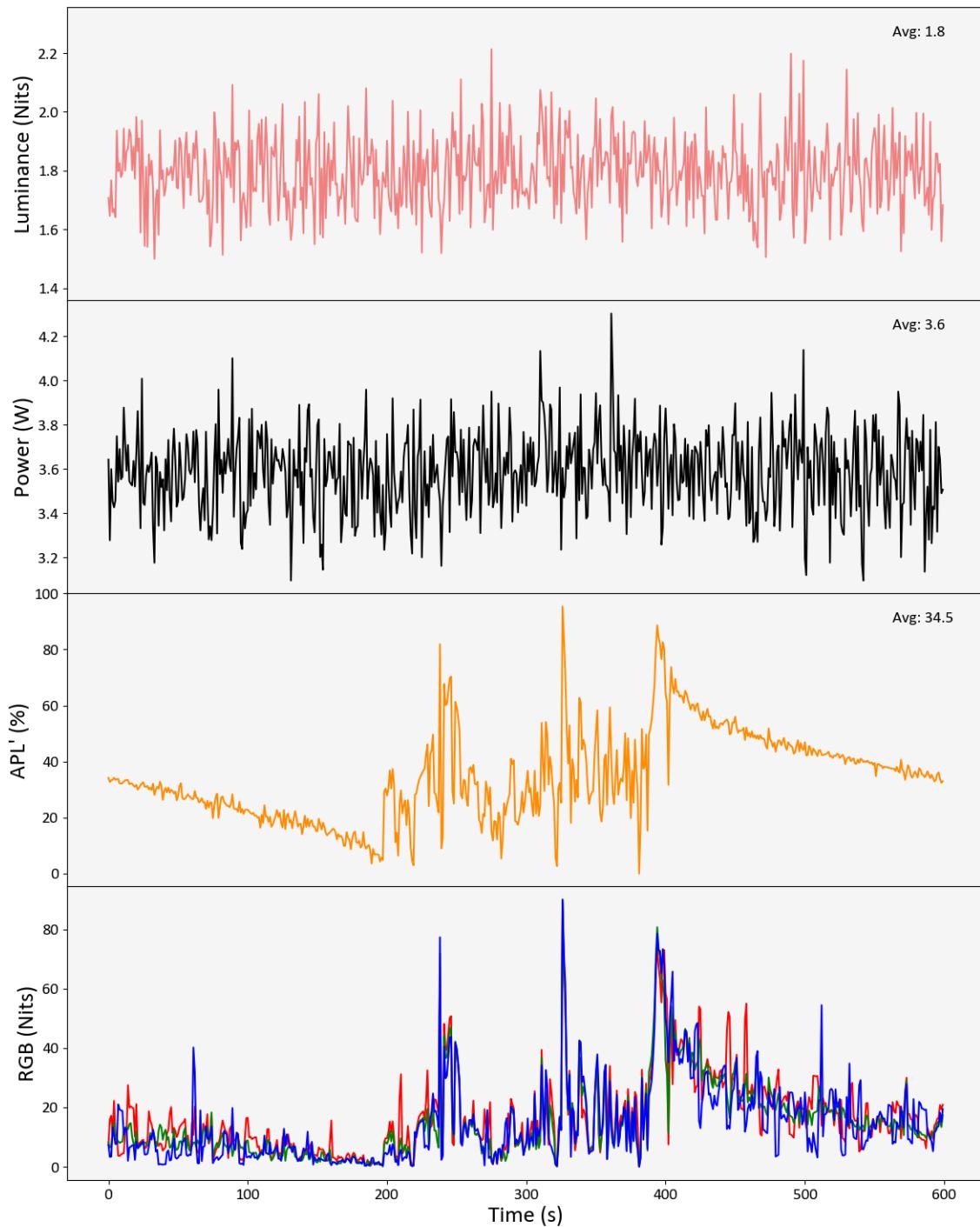
Test 11 - default_3bar

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default_3bar	30	3-bar	0.0	off	aps	off	1.5	3.0



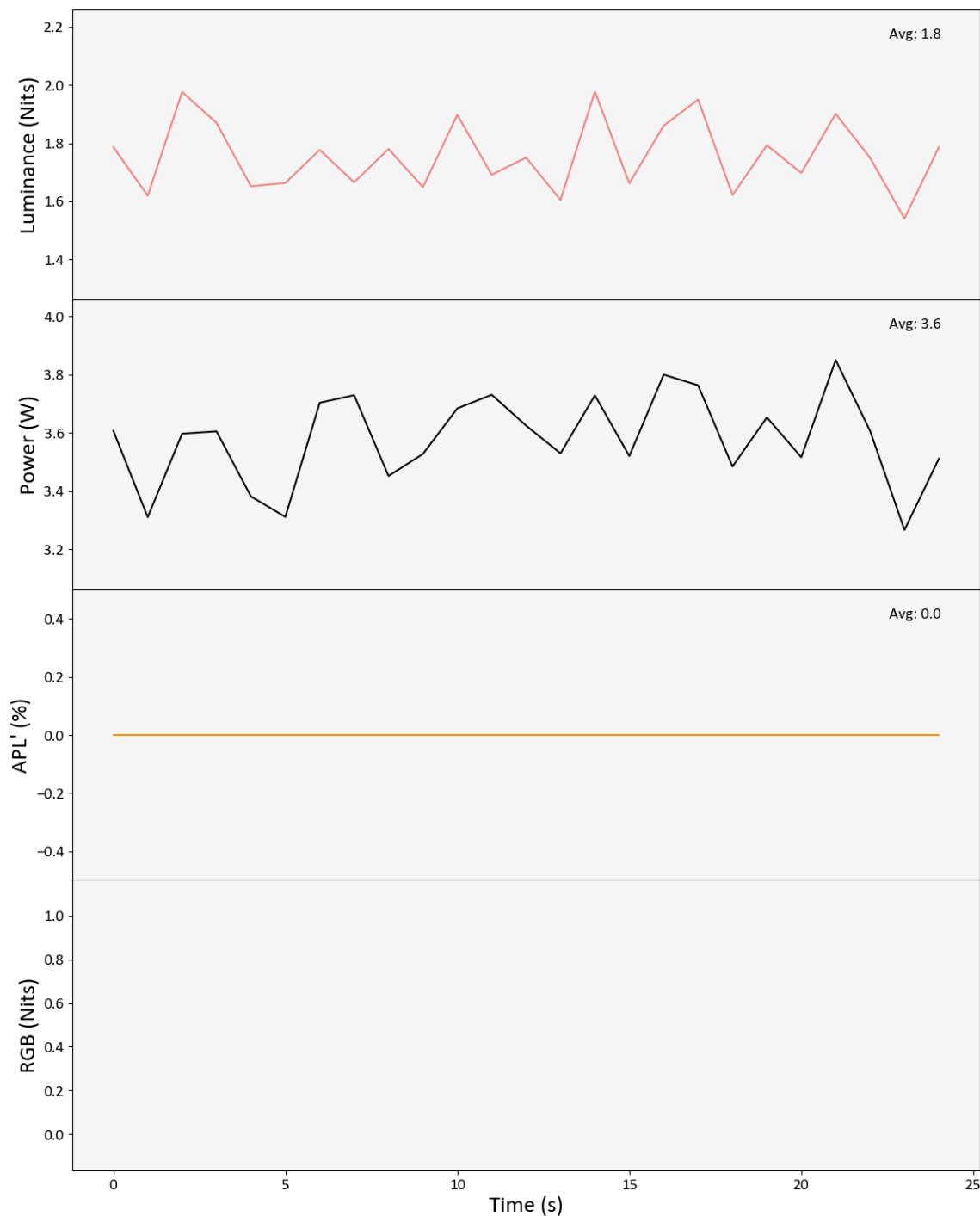
Test 12 - brightest

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	1.8	3.6



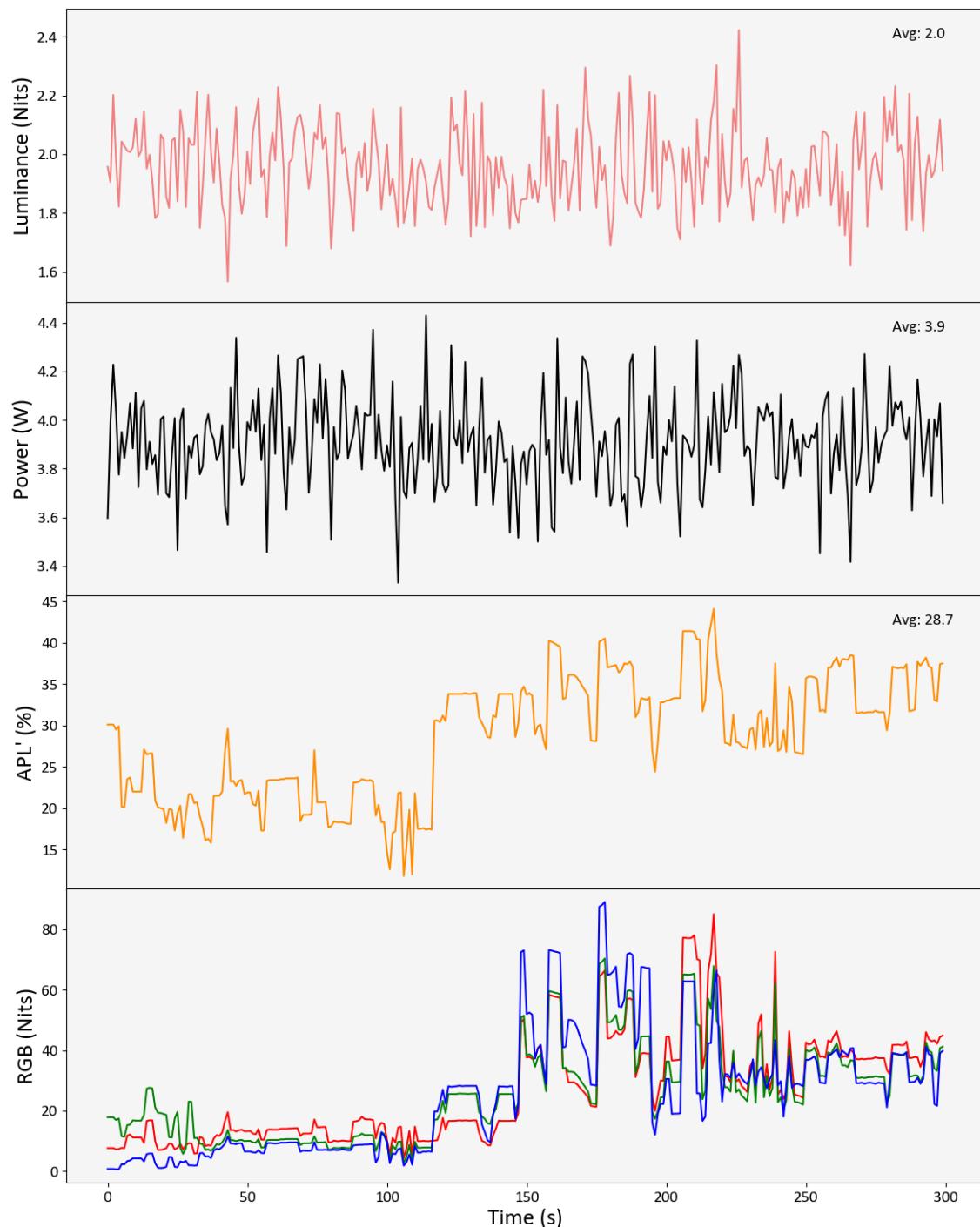
Test 13 - brightest_10%sdr

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
brightest_10%sdr	25	SDR 10% Peak Brightness	0.0	off	vivid	off	1.8	3.6



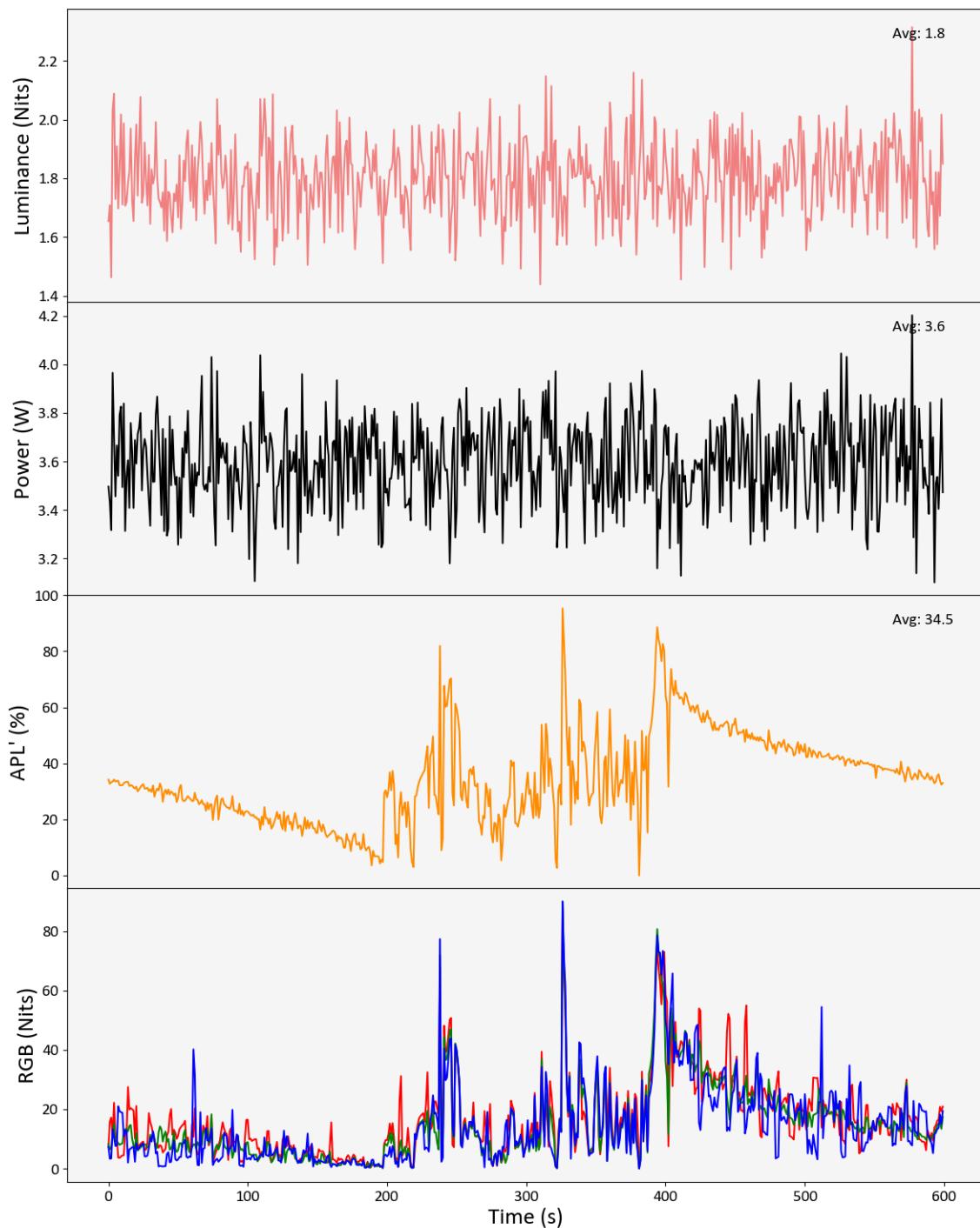
Test 14 - hdr10

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



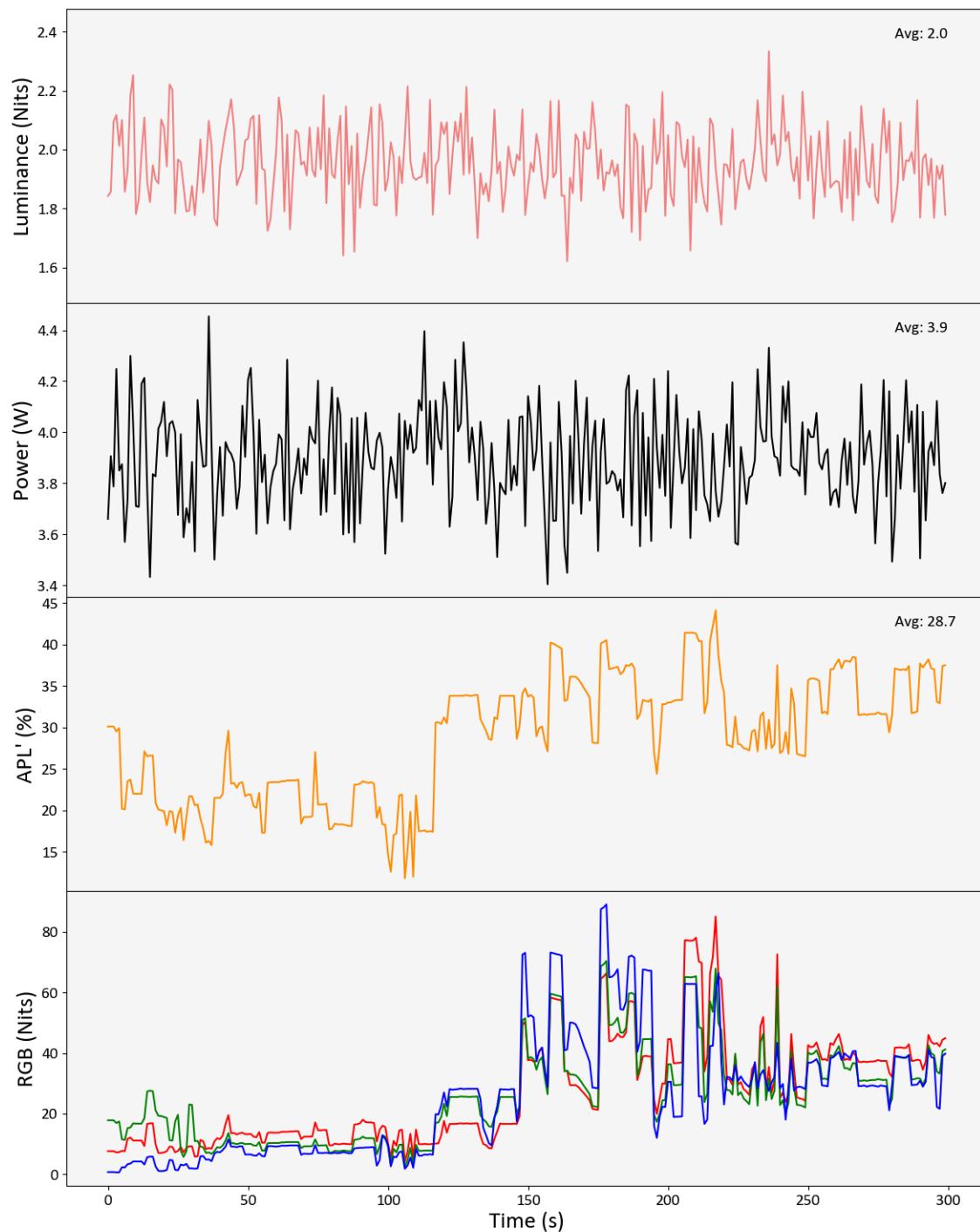
Test 15 - brightest_low_backlight

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	1.8	3.6



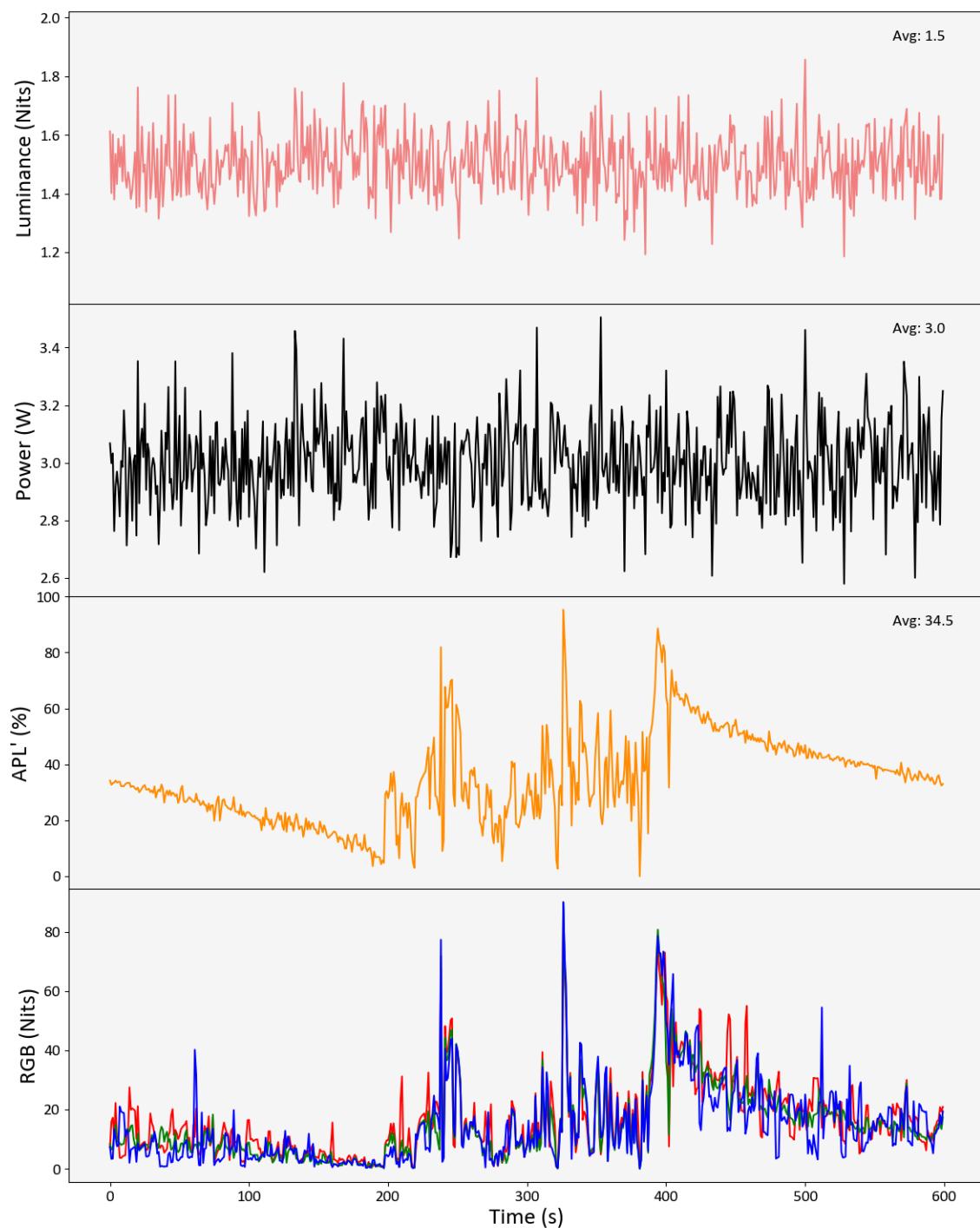
Test 16 - hdr10_low_backlight

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	2.0	3.9



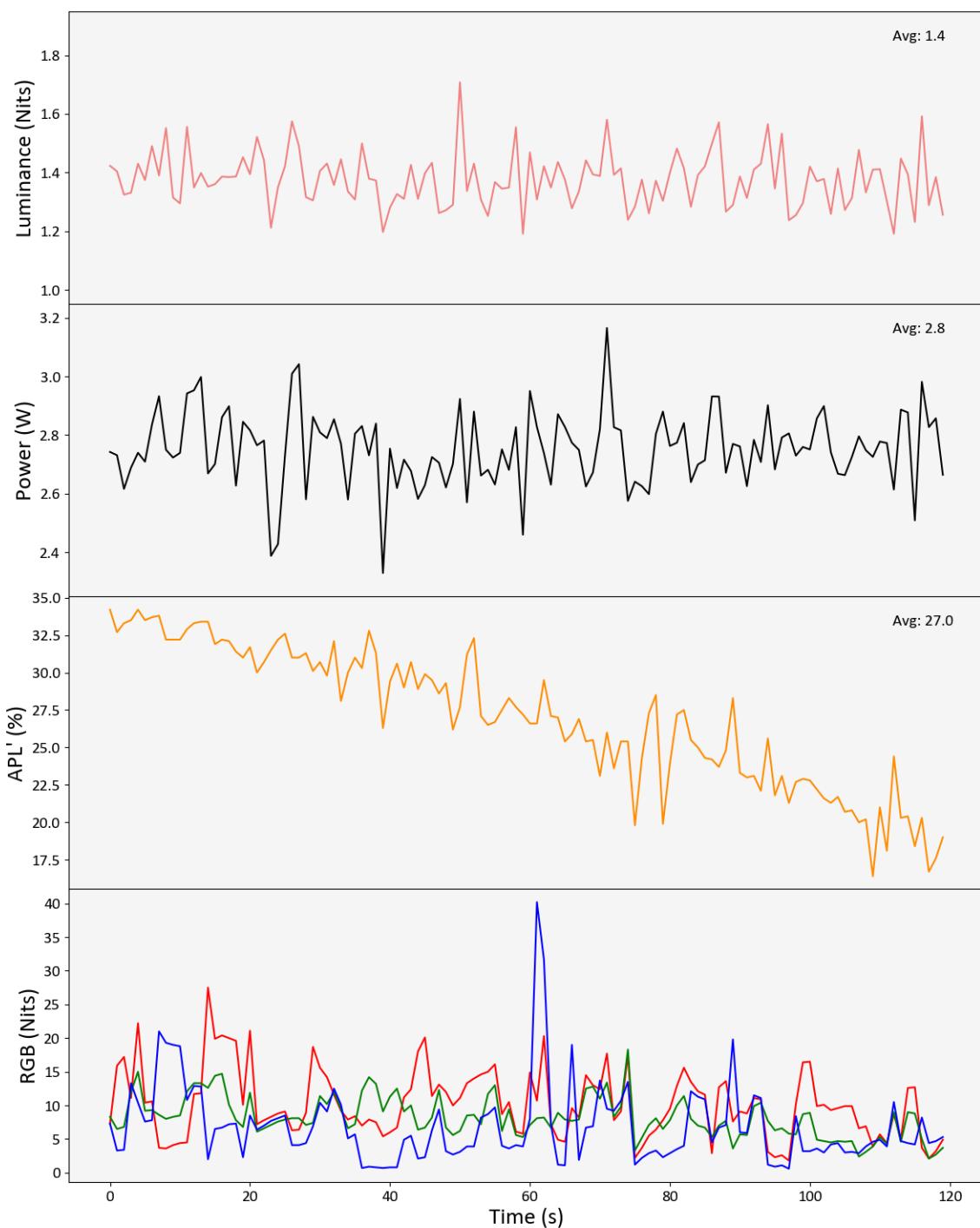
Test 17 - default_100

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default_100	600	IEC SDR	34.5	on	100.0	aps	off	1.5	3.0



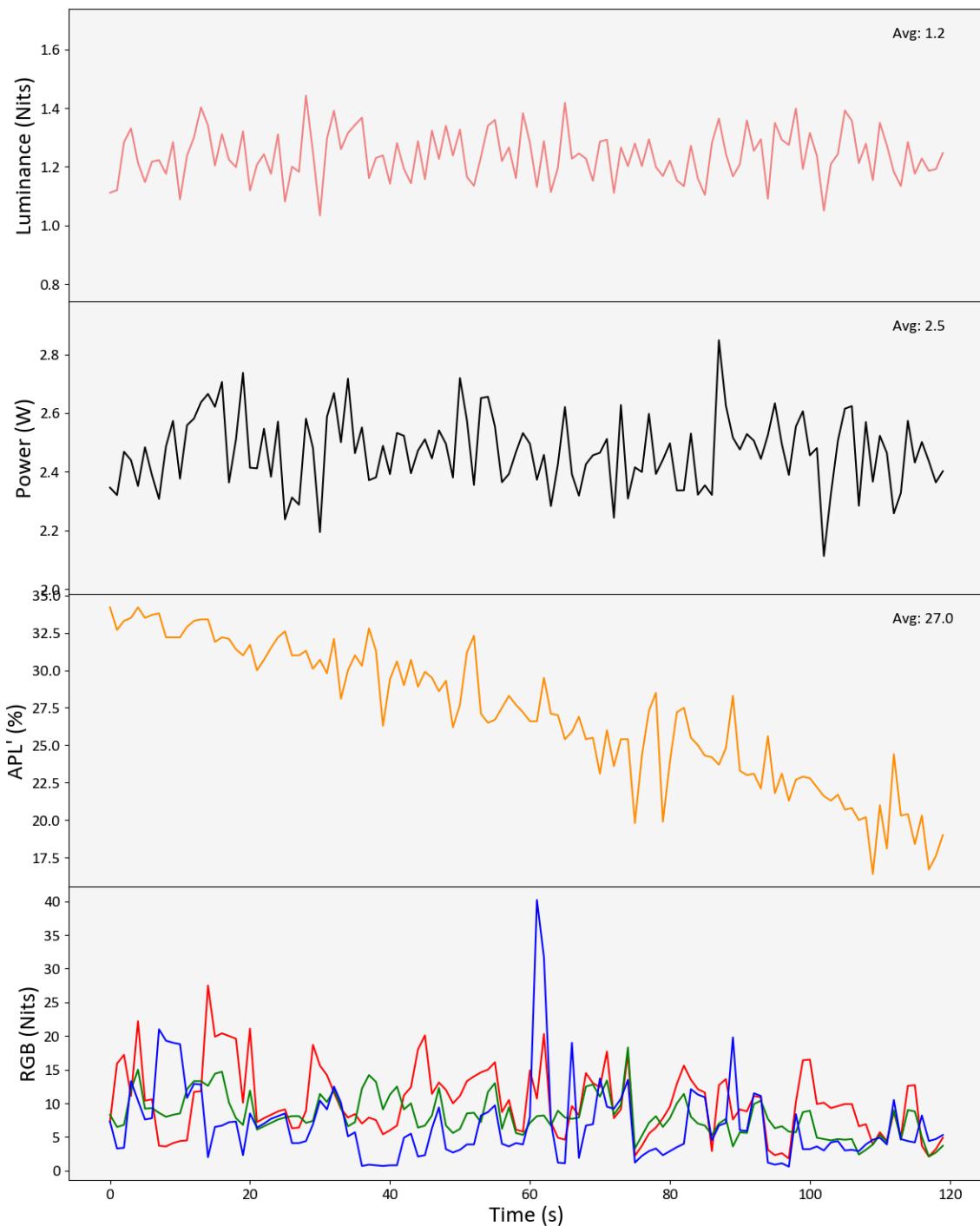
Test 18 - pps3_100

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
pps3_100	120	IEC SDR	27.0	on	100.0	cinema	off	1.4	2.8



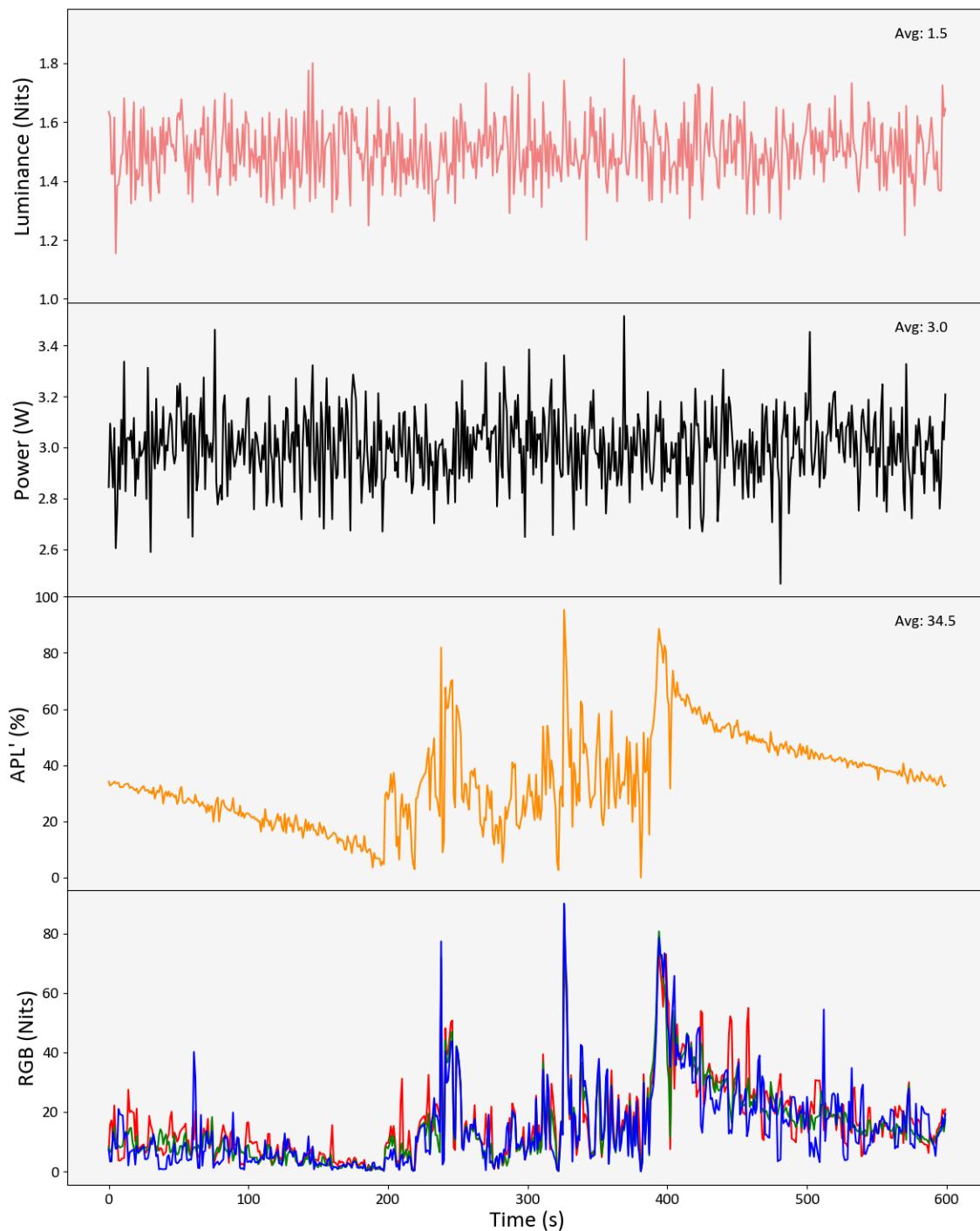
Test 19 - pps4_100

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
pps4_100	120	IEC SDR	27.0	on	100.0	game	off	1.2	2.5



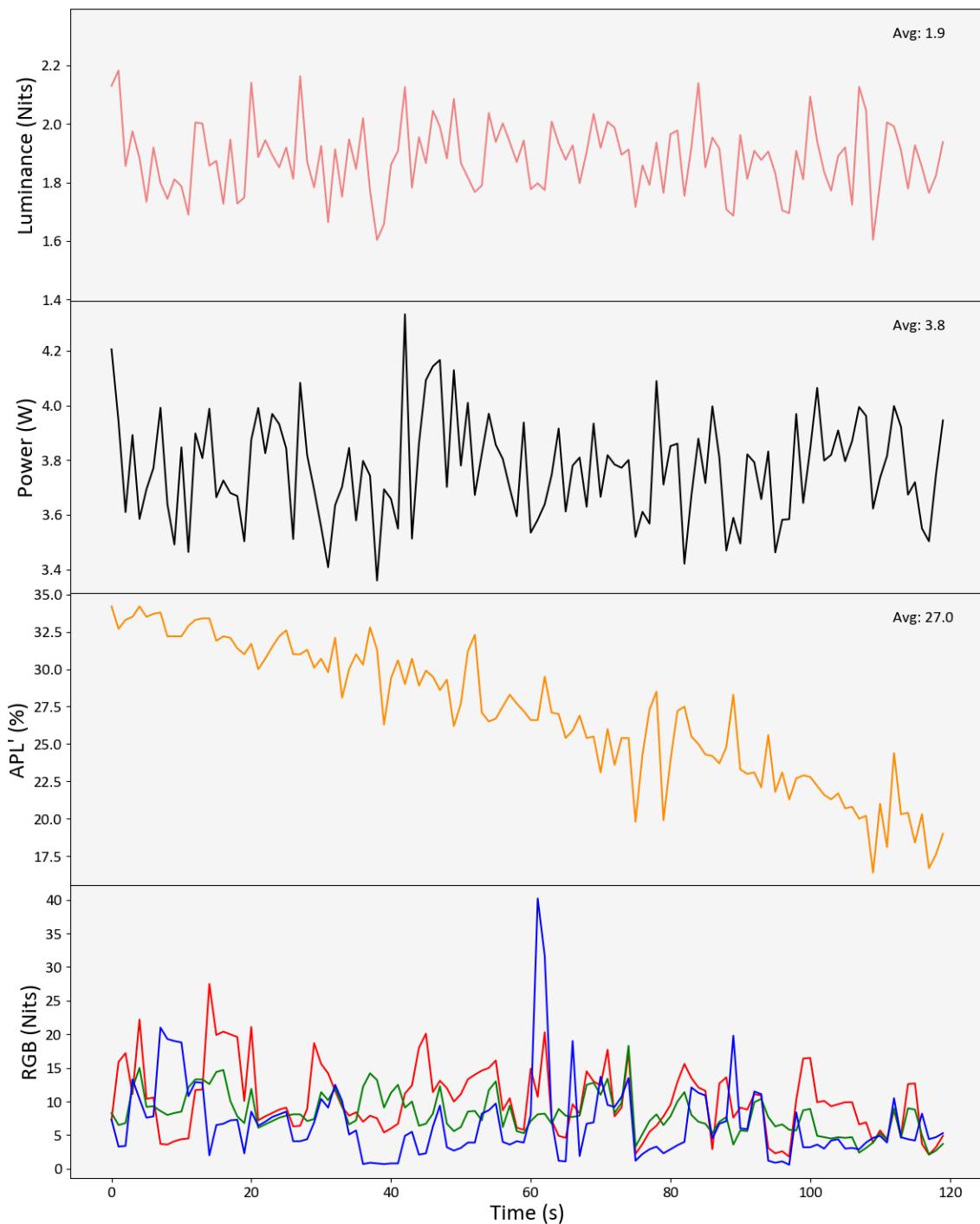
Test 20 - default_35

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default_35	600	IEC SDR	34.5	on	35.0	aps	off	1.5	3.0



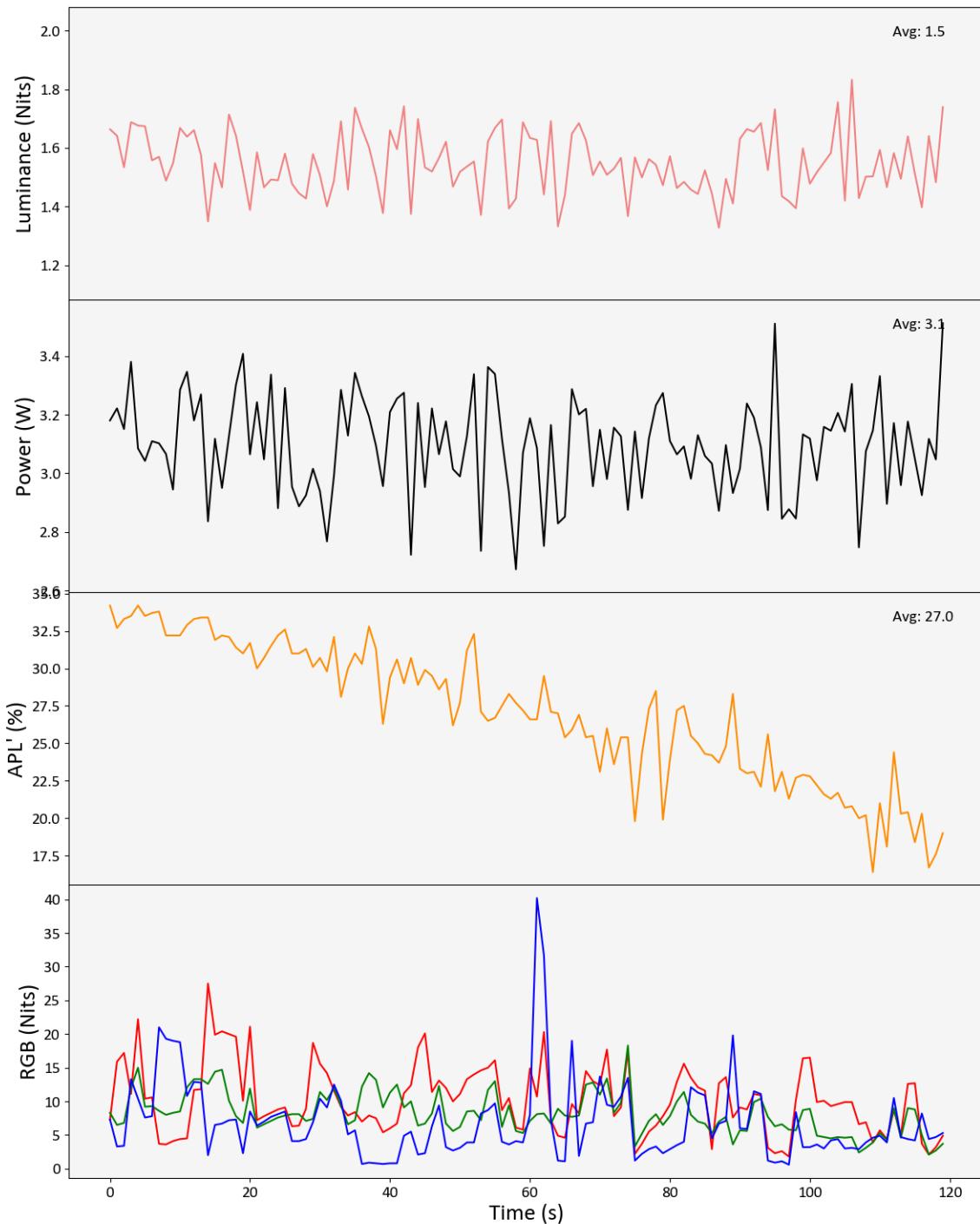
Test 21 - pps3_35

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
pps3_35	120	IEC SDR	27.0	on	35.0	cinema	off	1.9	3.8



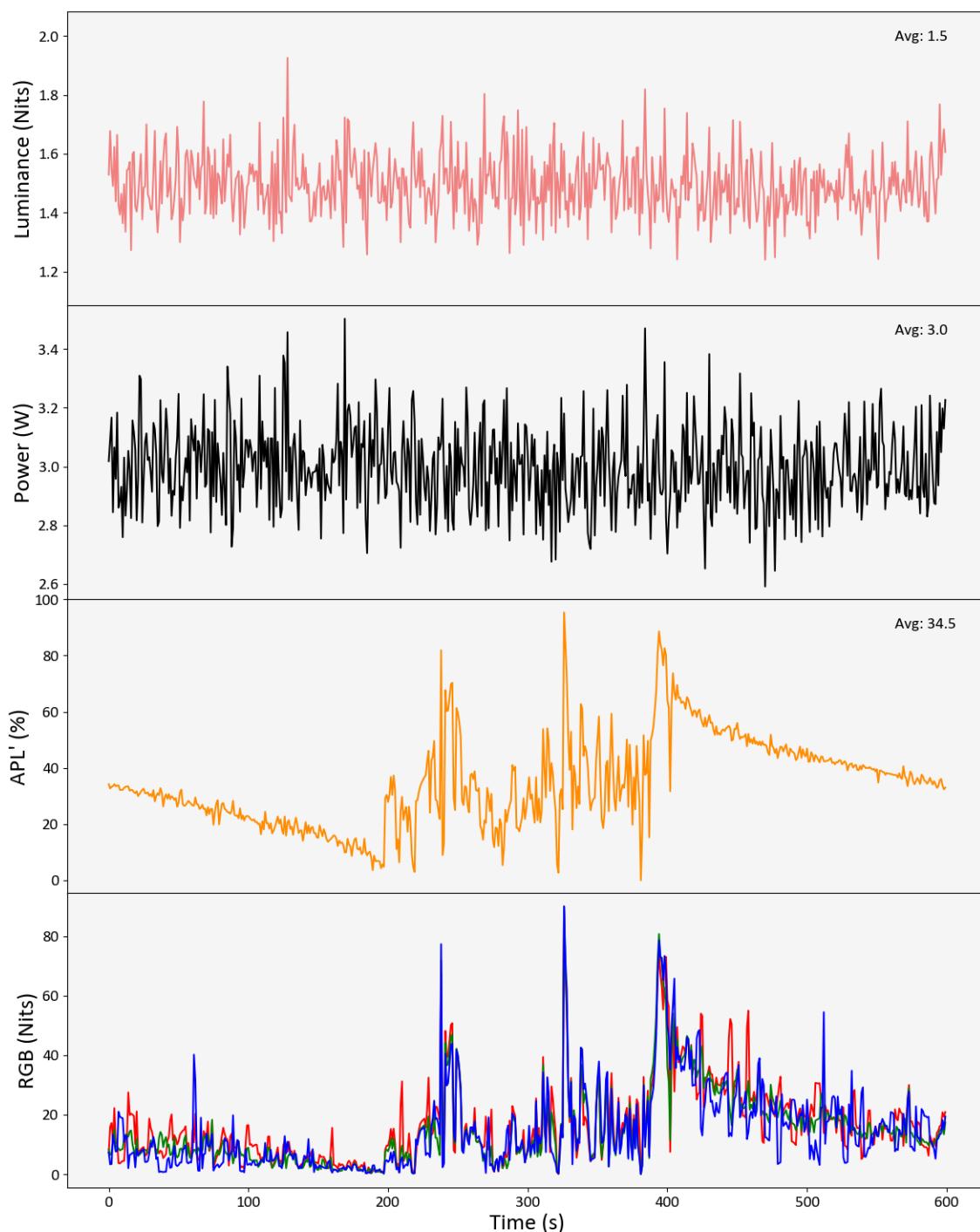
Test 22 - pps4_35

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
pps4_35	120	IEC SDR	27.0	on	35.0	game	off	1.5	3.1



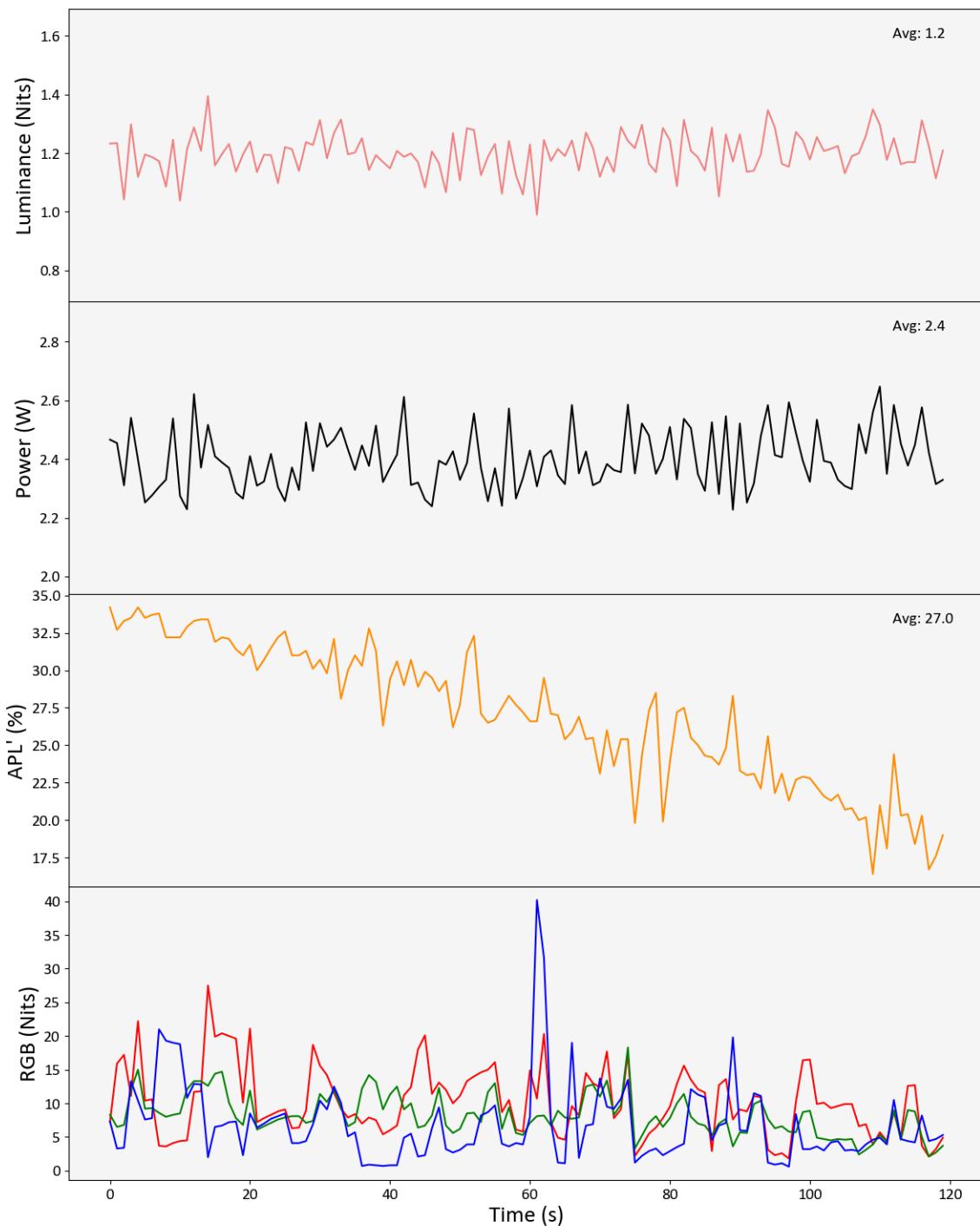
Test 23 - default_12

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default_12	600	IEC SDR	34.5	on	12.0	aps	off	1.5	3.0



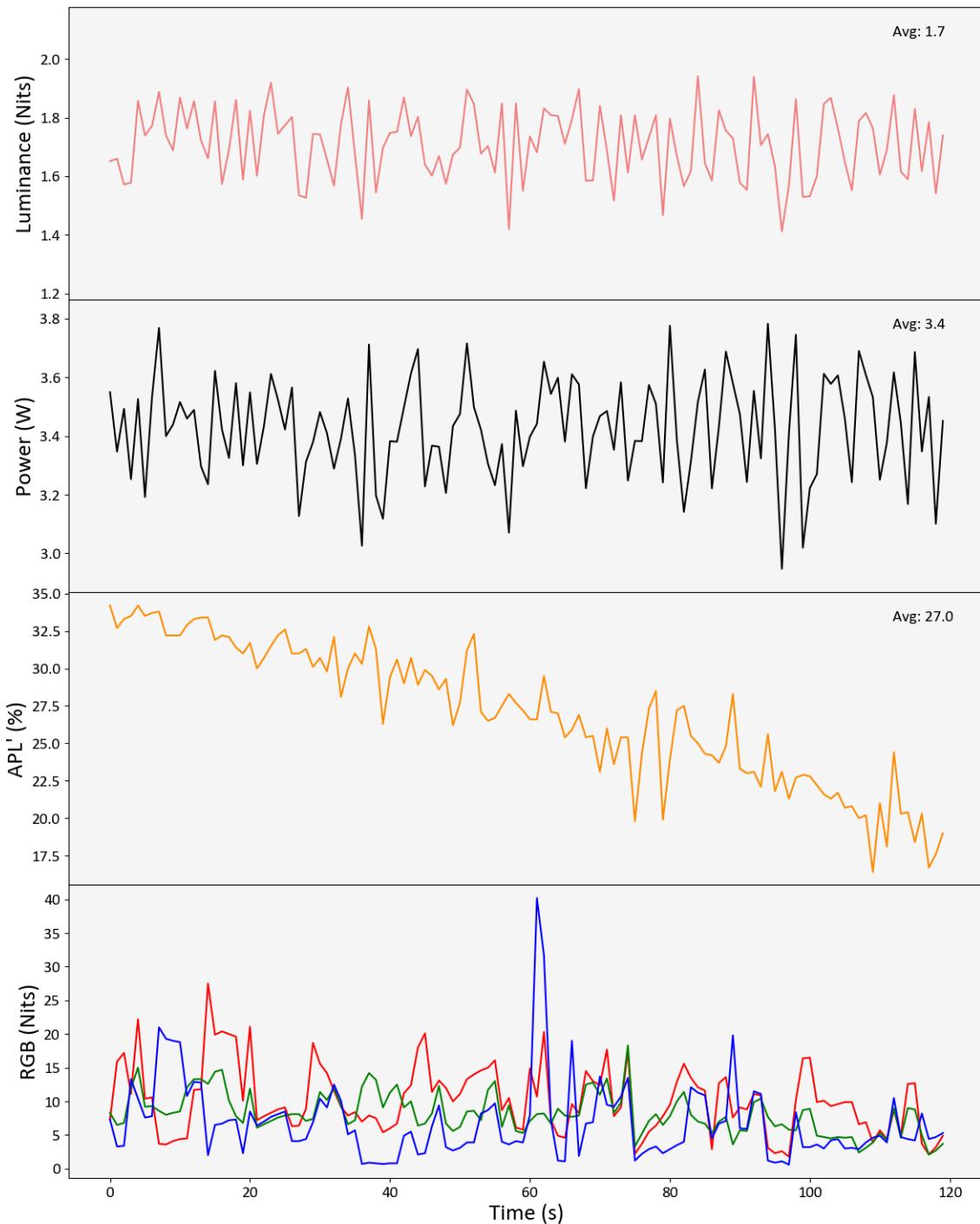
Test 24 - pps3_12

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
pps3_12	120	IEC SDR	27.0	on	12.0	cinema	off	1.2	2.4



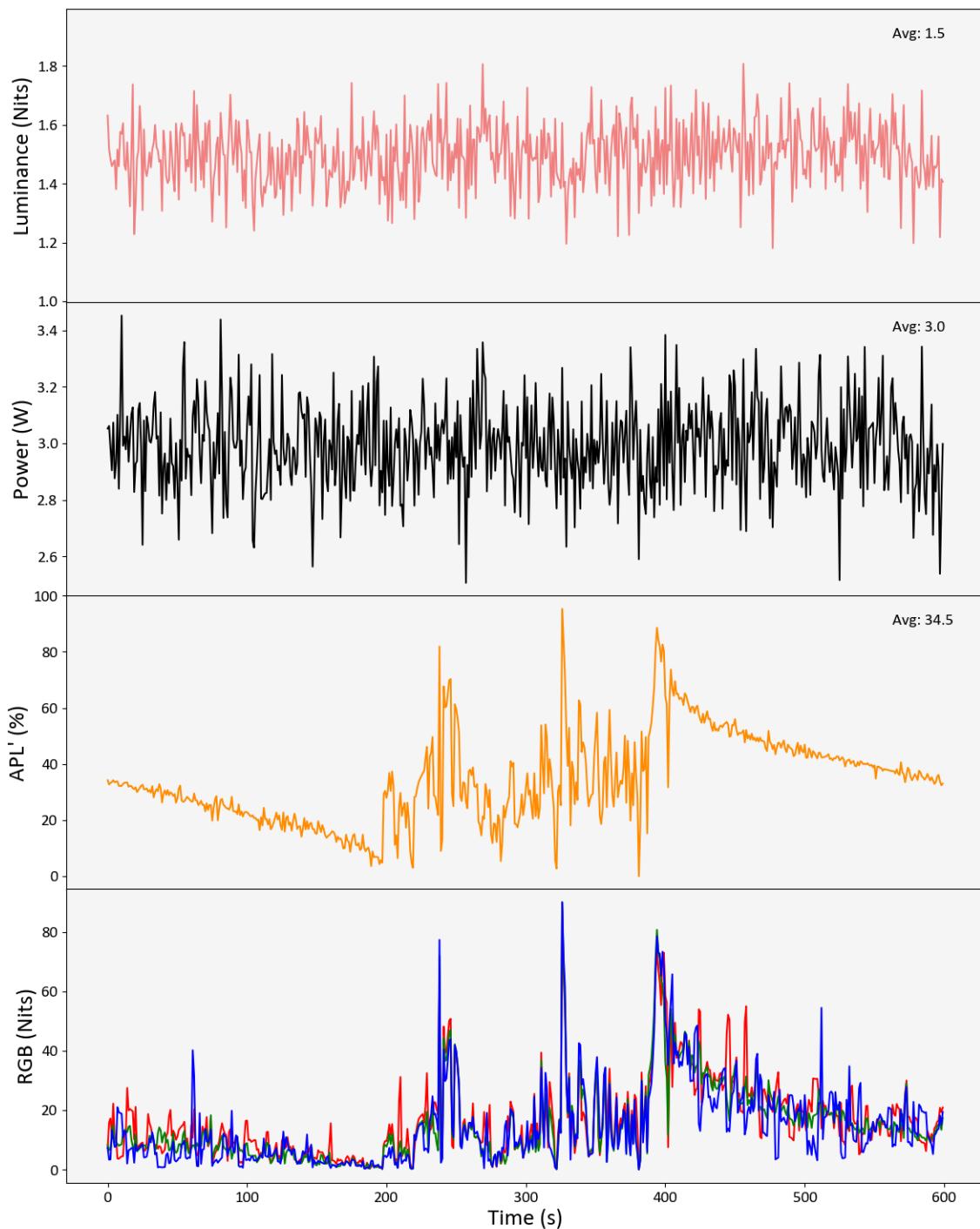
Test 25 - pps4_12

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
pps4_12	120	IEC SDR	27.0	on	12.0	game	off	1.7	3.4



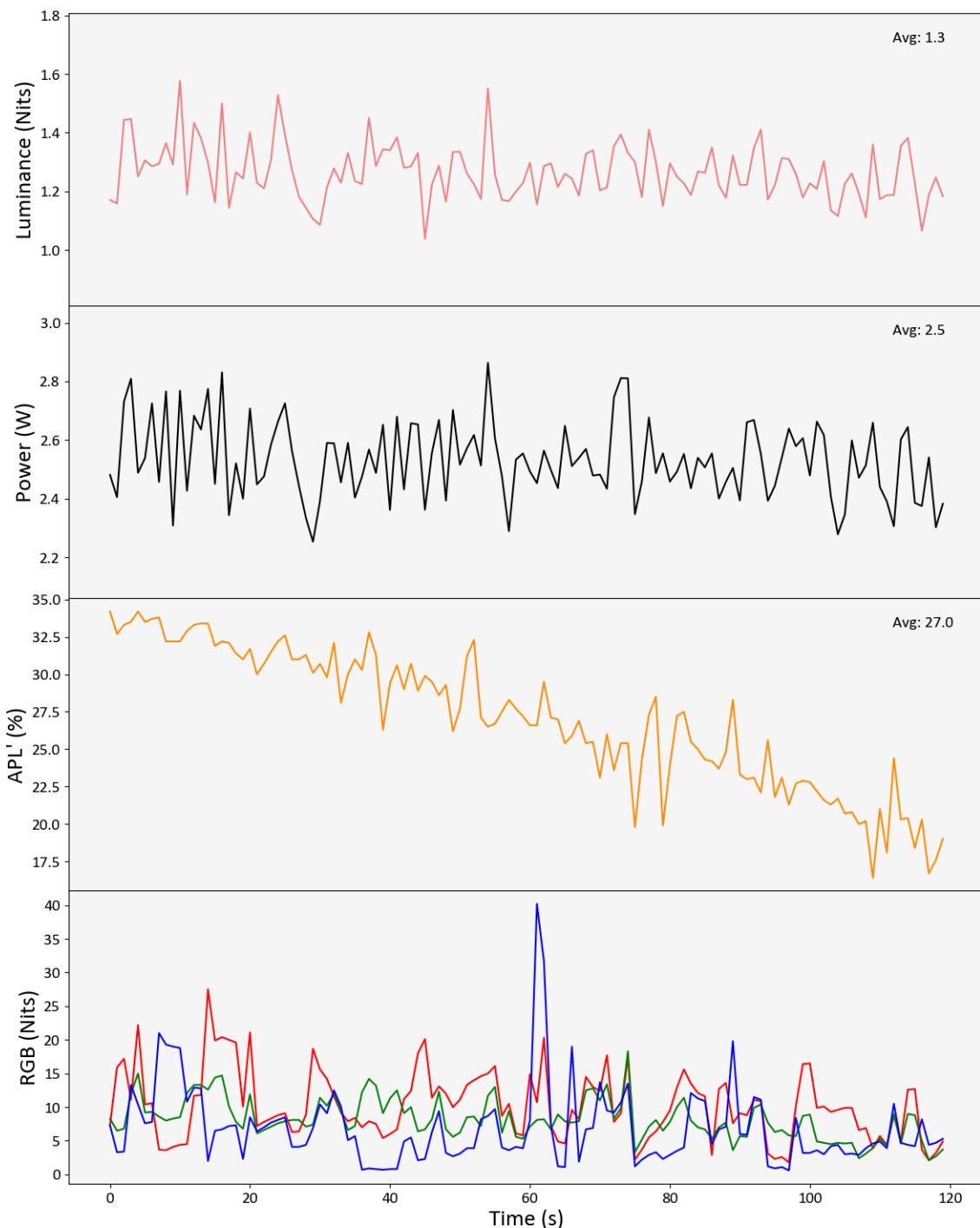
Test 26 - default_3

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
default_3	600	IEC SDR	34.5	on	3.0	aps	off	1.5	3.0



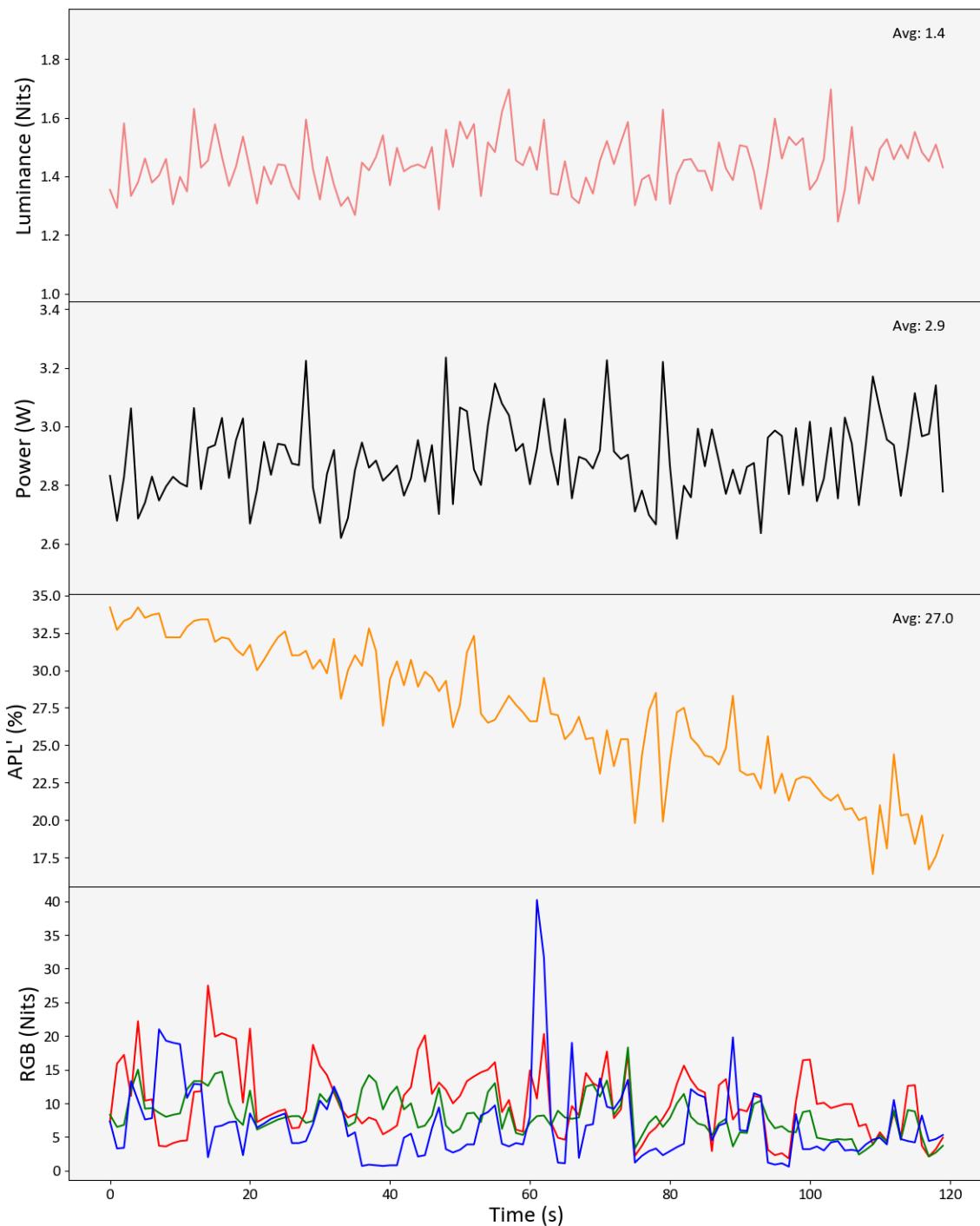
Test 27 - pps3_3

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
pps3_3	120	IEC SDR	27.0	on	3.0	cinema	off	1.3	2.5



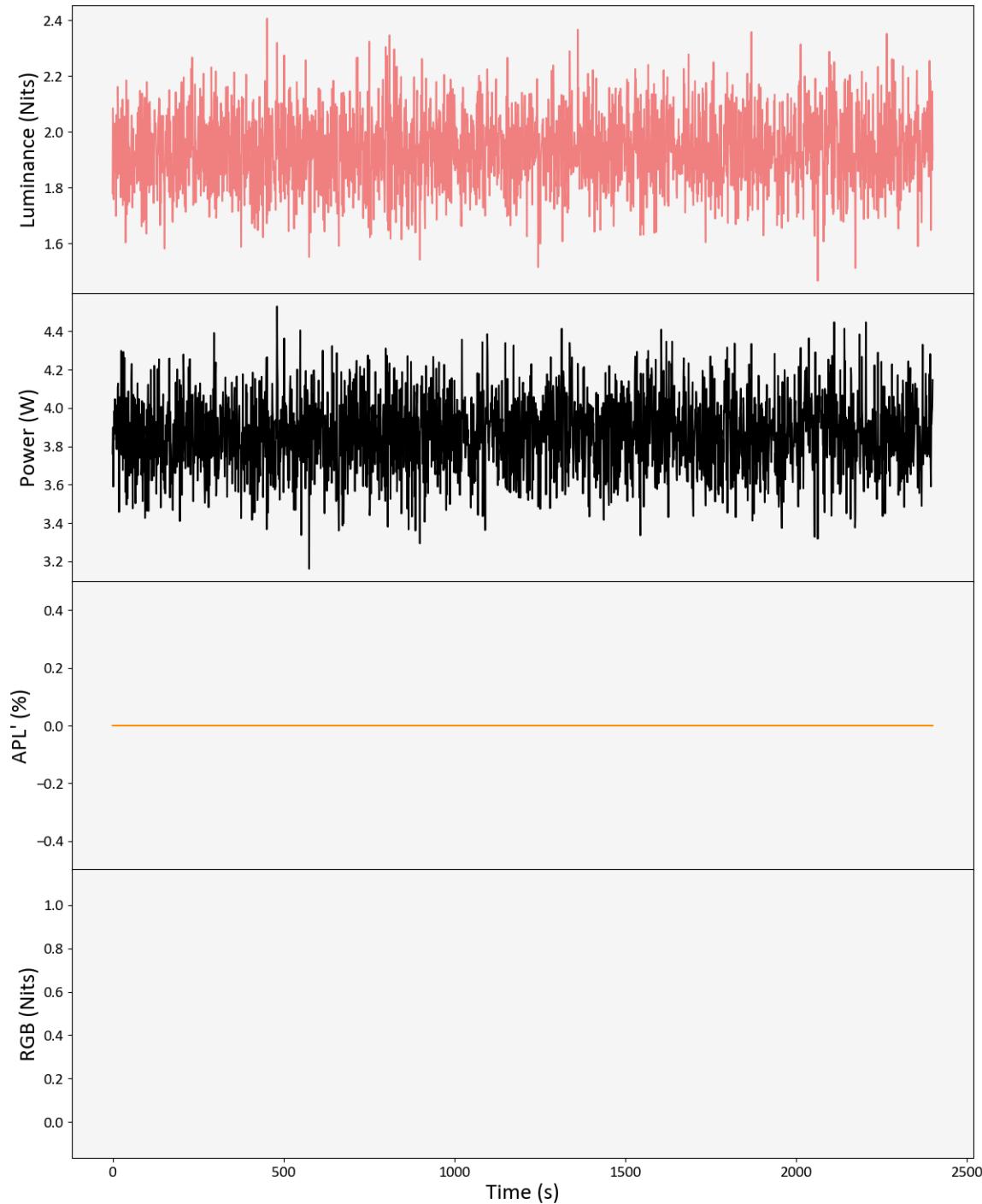
Test 28 - pps4_3

Test Name	Test Time (s)	Video	Avg APL' (%)	ABC	Lux	Preset Picture	MDD	Avg Luminance (Nits)	Avg Power (W)
pps4_3	120	IEC SDR	27.0	on	3.0	game	off	1.4	2.9



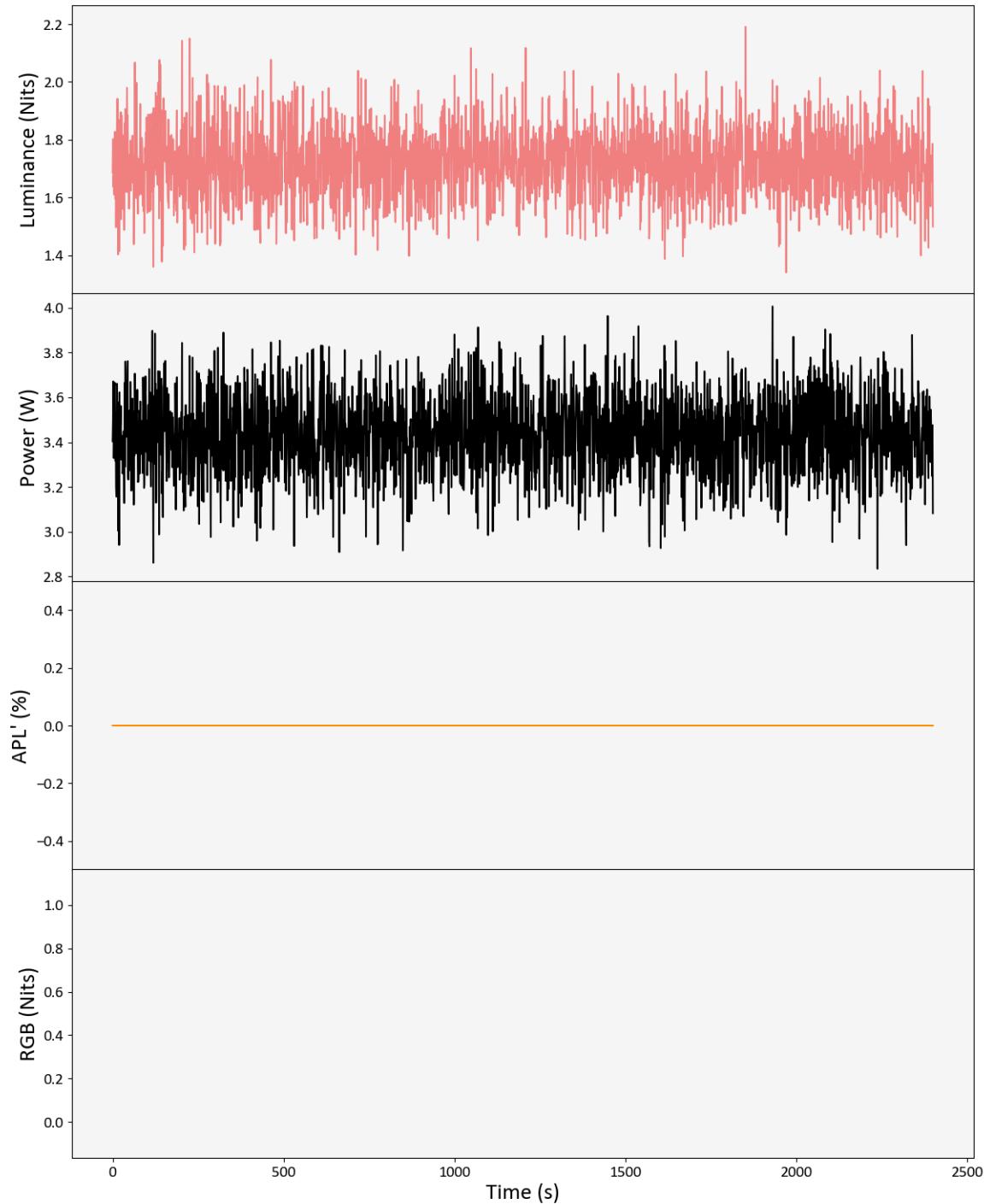
Test 29 - standby

Test Name	Test Time (s)	Avg APL' (%)	QS	Wake Time (s)	Avg Luminance (Nits)	Avg Power (W)
standby	2400	0.0	off	0.0	1.9	3.9



Test 31 - 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	1.7	3.4



Test 33 - 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	1.1	2.1

