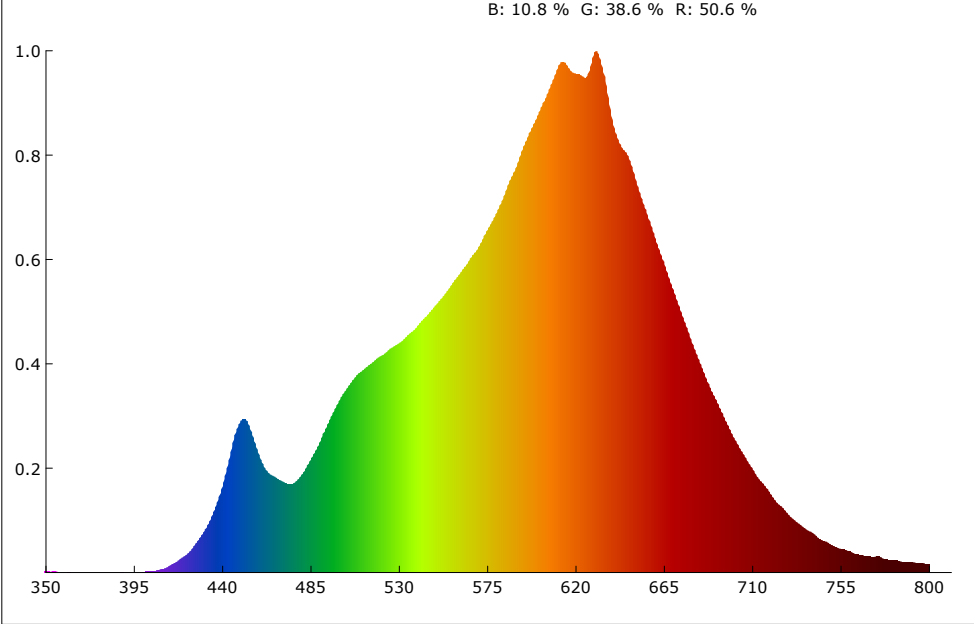
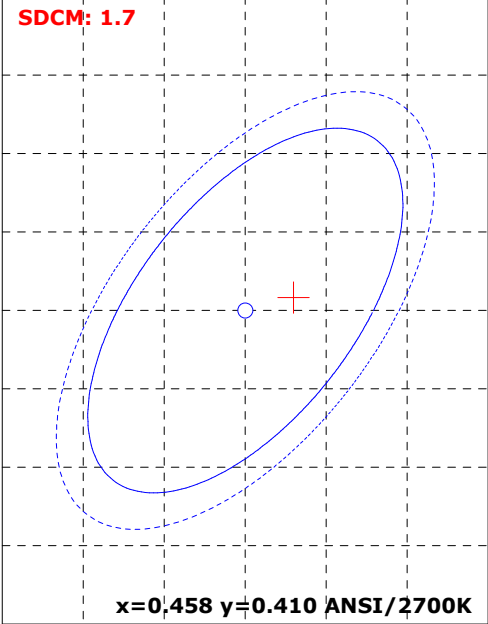


Spectrogram



SDCM



Color Parameter:

x: 0.4608	y: 0.4109	u: 0.2630	v: 0.3517	u': 0.2630	v': 0.5275
R_ratio: 50.6 %	G_ratio: 38.6 %	B_ratio: 10.8 %	RedRatio: 26.0 %	GreenRatio: 72.5 %	BlueRatio: 1.5 %
Ra: 93.1	AvgR: 91.2				
R1: 93.7	R2: 97.7	R3: 98.2	R4: 95.1	R5: 95.2	R6: 97.3
R7: 89.7	R8: 78.4	R9: 54.5	R10: 95.1	R11: 97.9	R12: 93.0
R13: 94.9	R14: 99.6	R15: 87.7			
CCT: 2688 K	Flux: 1726.208 lm	PeakWave: 630.5 nm	SDCM: 1.7		
S/P: 1.3	CentralWave: 609.9 nm	DominantWave: 584.3 nm	CentroidWave: 597.1 nm		
HalfWidth: 126.3 nm	duv: -0.00001	purity: 61.7 %	CQS: 88.7		
LER(TM-30): 290.6	Ep: 5940.3 mw	Rg: 98.7	Rf: 92.6		
Red Ep: 2837.5 mw	Near red Ep: 313.0 mw	Near infrared Ep: 17.5 mw			

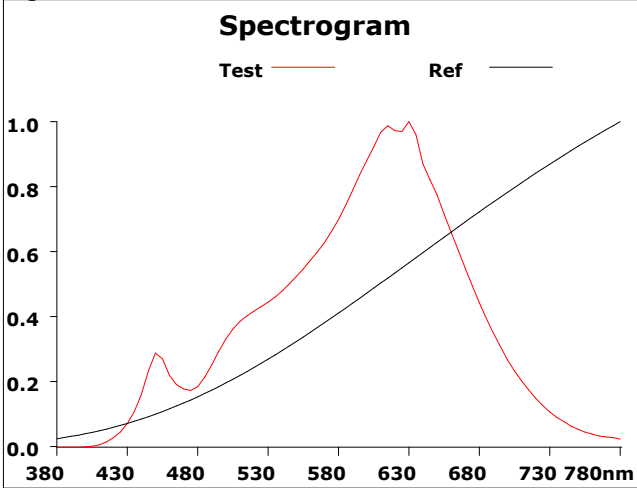
Electrical parameters:

Effic: 57.0 Lm/W	Energy: 62.1	Effi: G	
U: 221.4 V	I: 0.139 A	P: 30.280 W	Pf: 0.981

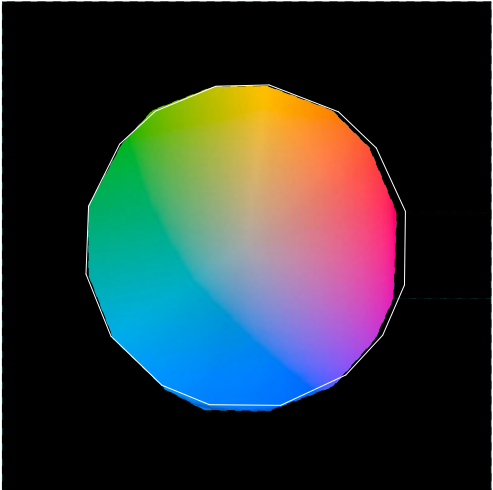
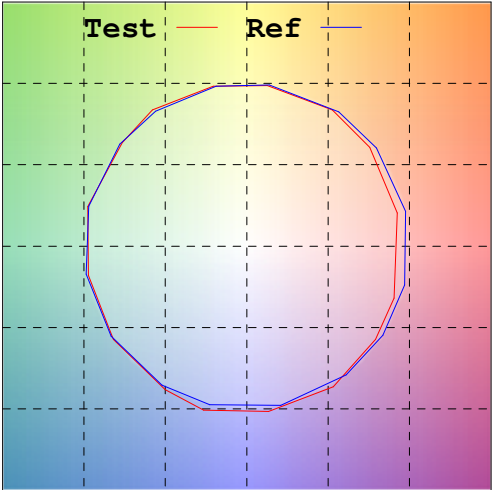
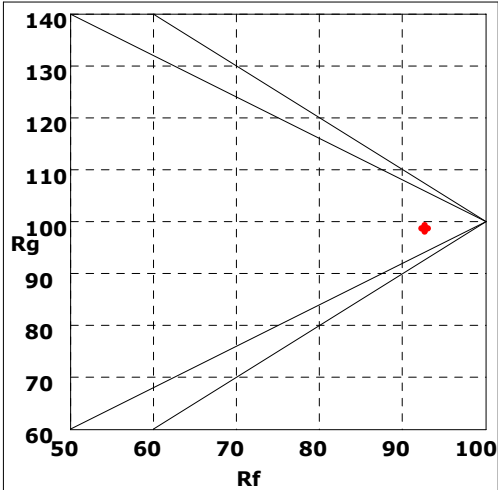
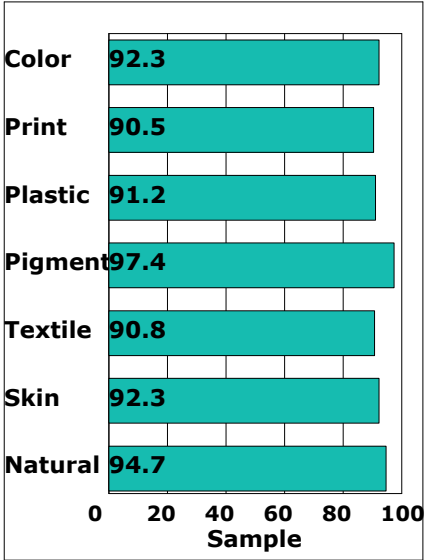
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 09/26/23

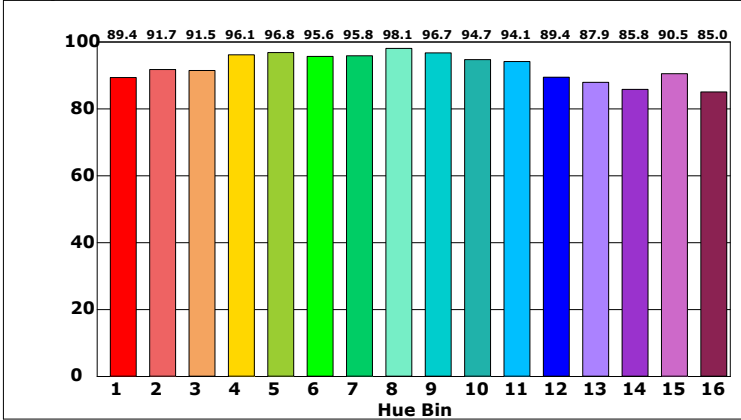
Rf: 92.6 CCT: 2688K u': 0.2630
Rg: 98.7 LER: 290.6 Duv: -0.00001 v': 0.5275



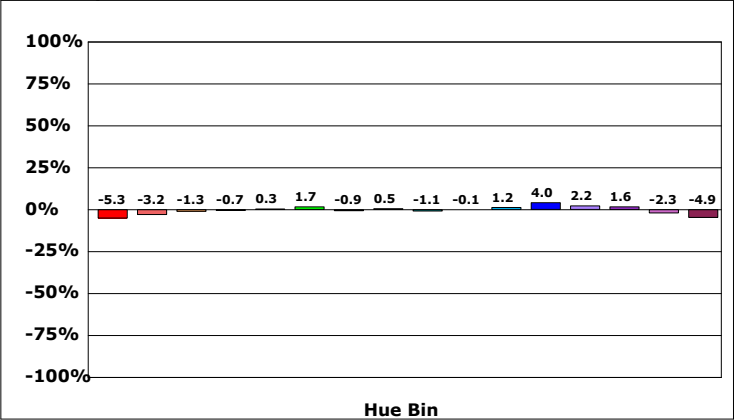
500			
Hue Bin	Rf	Chroma	Hue
1	89.4	-5.3%	0.1%
2	91.7	-3.2%	2.6%
3	91.5	-1.3%	3.8%
4	96.1	-0.7%	1.0%
5	96.8	0.3%	1.7%
6	95.6	1.7%	1.3%
7	95.8	-0.9%	-1.8%
8	98.1	0.5%	0.3%
9	96.7	-1.1%	1.0%
10	94.7	-0.1%	2.5%
11	94.1	1.2%	3.2%
12	89.4	4.0%	-2.9%
13	87.9	2.2%	-8.2%
14	85.8	1.6%	-10.6%
15	90.5	-2.3%	-4.7%
16	85.0	-4.9%	-9.1%



Rf by Bue

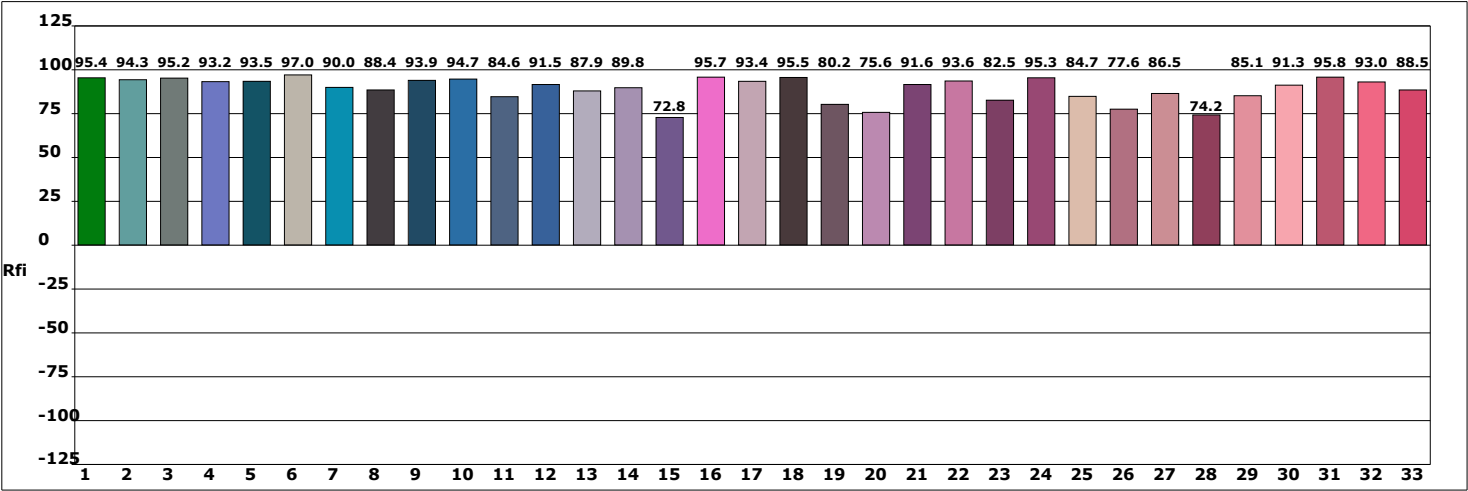
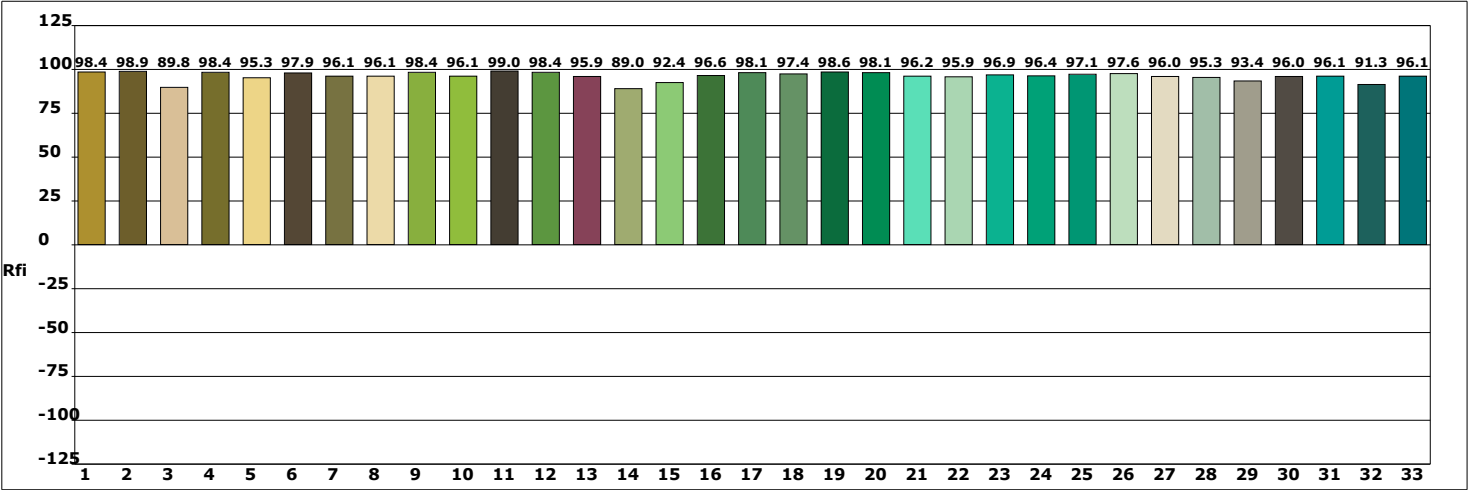
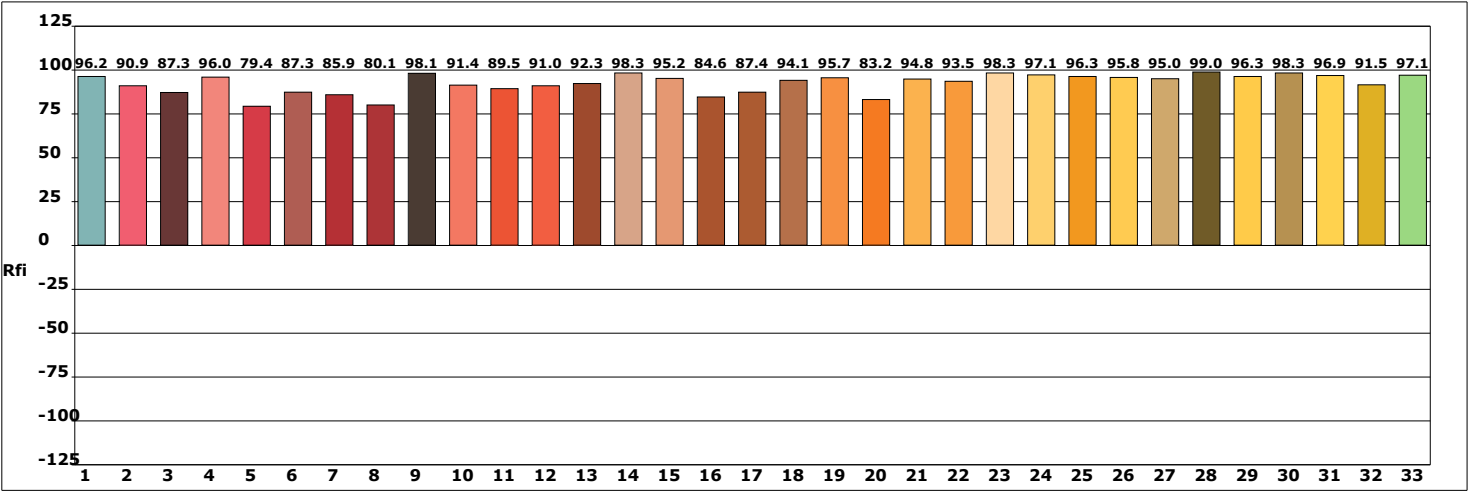


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

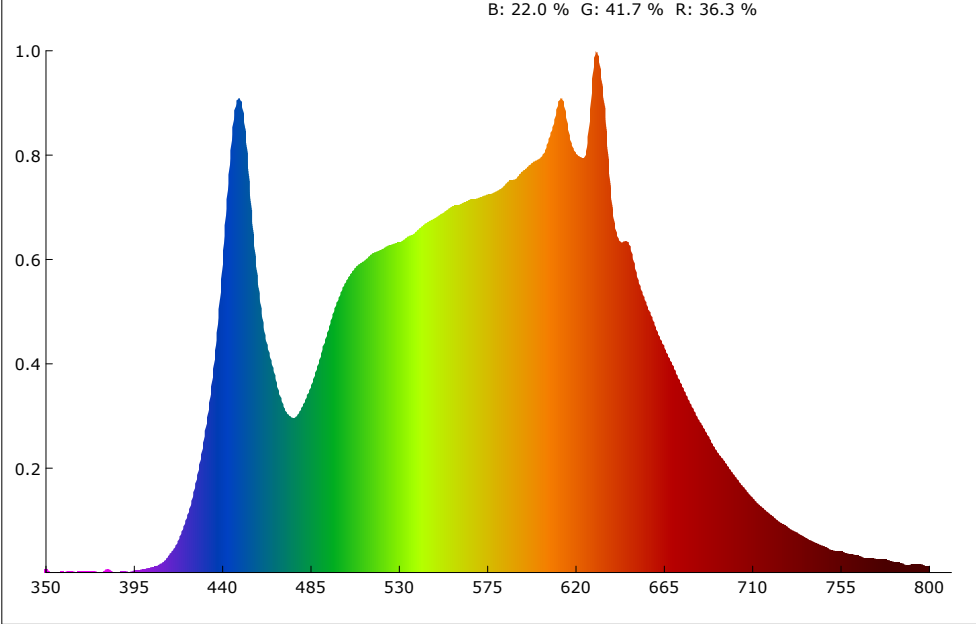
Manufacturer:
Test unit:
Date of observation: 09/26/23



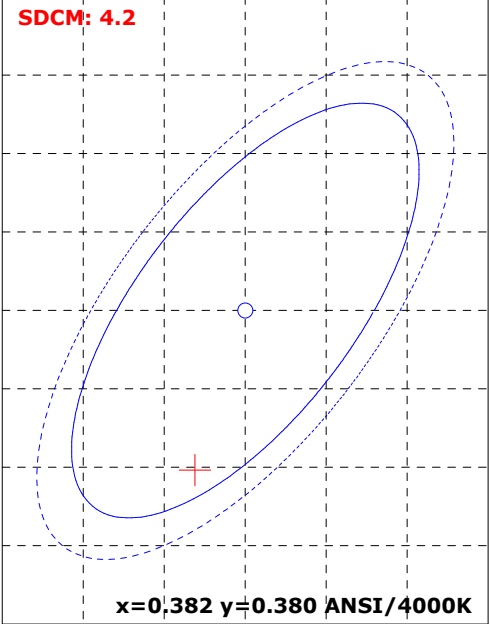
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 09/26/23

Spectrogram



SDCM



Color Parameter:

x: 0.3787	y: 0.3695	u: 0.2269	v: 0.3321	u': 0.2269	v': 0.4981
R_ratio: 36.3 %	G_ratio: 41.7 %	B_ratio: 22.0 %	RedRatio: 19.8 %	GreenRatio: 77.6 %	BlueRatio: 2.7 %
Ra: 94.5	AvgR: 92.2				
R1: 96.1	R2: 96.3	R3: 95.2	R4: 95.3	R5: 96.4	R6: 94.8
R7: 94.1	R8: 88.5	R9: 70.9	R10: 90.8	R11: 95.1	R12: 83.1
R13: 96.1	R14: 96.8	R15: 93.8			
CCT: 3991 K	Flux: 2010.986 lm	PeakWave: 630.5 nm	SDCM: 4.2		
S/P: 1.8	CentralWave: 577.0 nm	DominantWave: 580.9 nm	CentroidWave: 569.3 nm		
HalfWidth: 160.0 nm	duv: -0.00291	purity: 24.5 %	CQS: 87.5		
LER(TM-30): 296.7	Ep: 6777.8 mw	Rg: 101.6	Rf: 91.6		
Red Ep: 2366.5 mw	Near red Ep: 243.4 mw	Near infrared Ep: 14.6 mw			

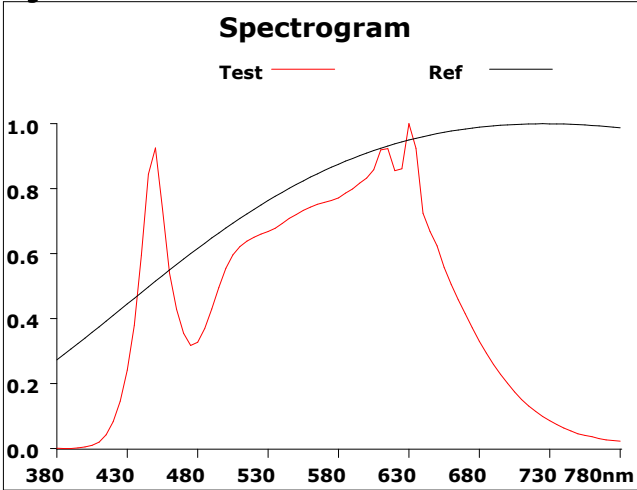
Electrical parameters:

Effic: 66.4 Lm/W	Energy: 72.3	Effi: G	
U: 221.5 V	I: 0.139 A	P: 30.290 W	Pf: 0.981

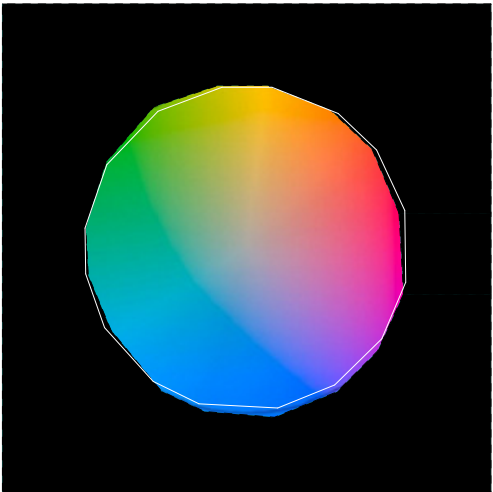
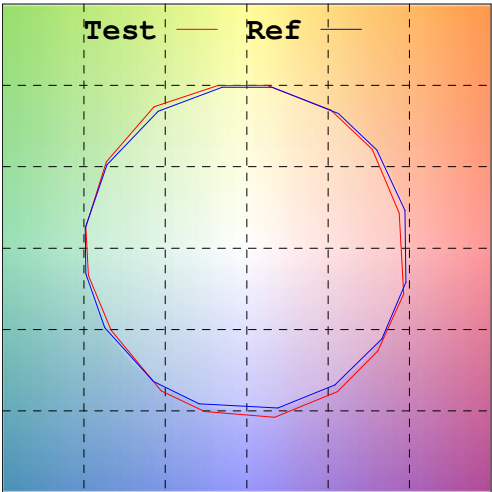
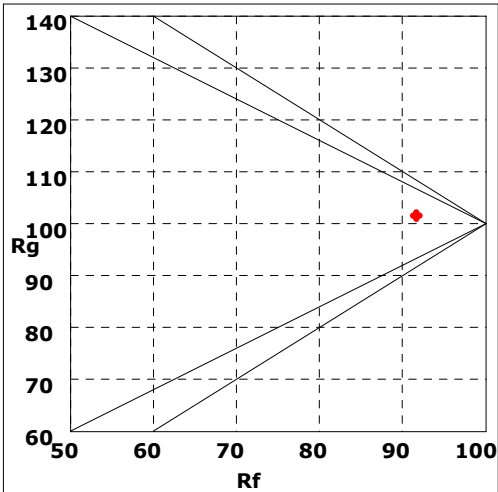
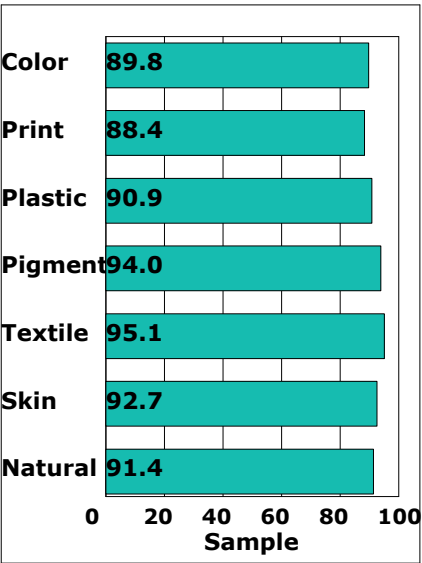
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 09/26/23

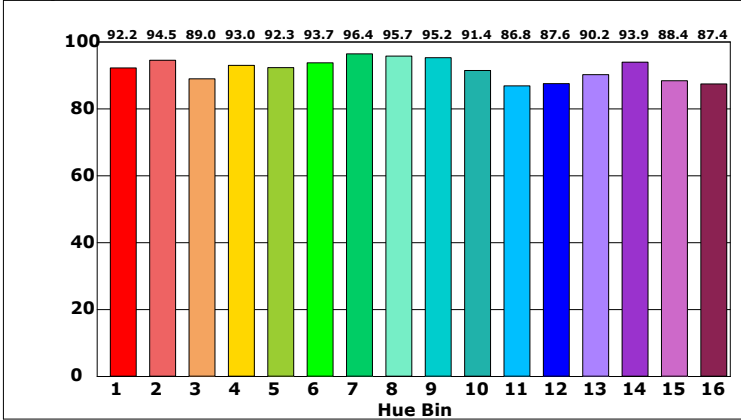
Rf: 91.6 CCT: 3991K u': 0.2269
Rg: 101.6 LER: 296.7 Duv: -0.00291 v': 0.4981



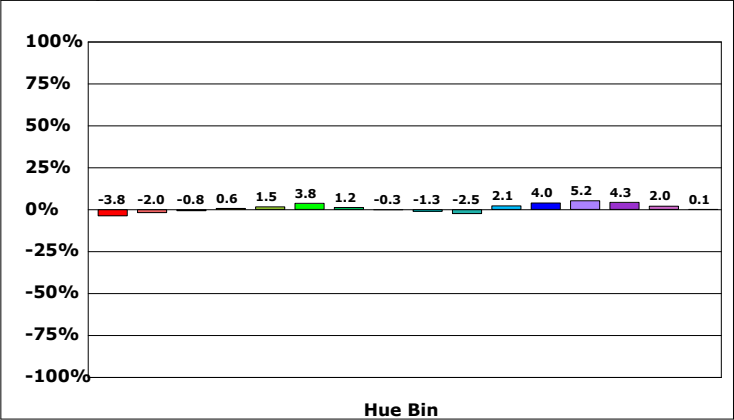
500			
Hue Bin	Rf	Chroma	Hue
1	92.2	-3.8%	-1.0%
2	94.5	-2.0%	1.9%
3	89.0	-0.8%	5.1%
4	93.0	0.6%	3.4%
5	92.3	1.5%	2.7%
6	93.7	3.8%	0.6%
7	96.4	1.2%	-1.2%
8	95.7	-0.3%	-0.7%
9	95.2	-1.3%	1.4%
10	91.4	-2.5%	3.6%
11	86.8	2.1%	7.4%
12	87.6	4.0%	4.1%
13	90.2	5.2%	-3.1%
14	93.9	4.3%	-1.0%
15	88.4	2.0%	-7.7%
16	87.4	0.1%	-7.3%



Rf by Bue

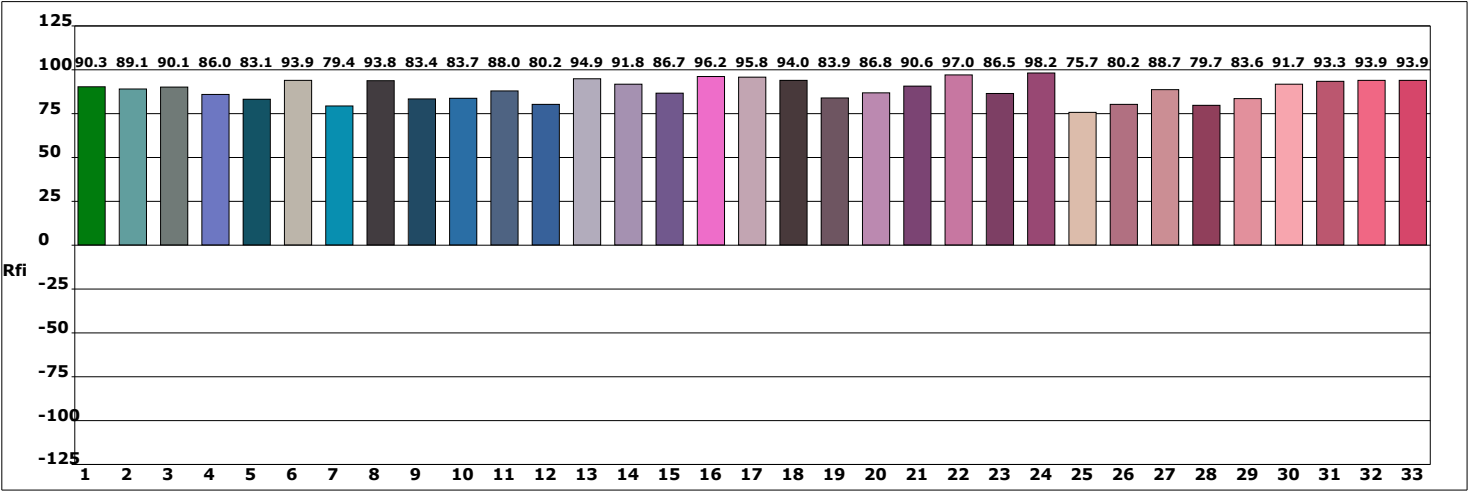
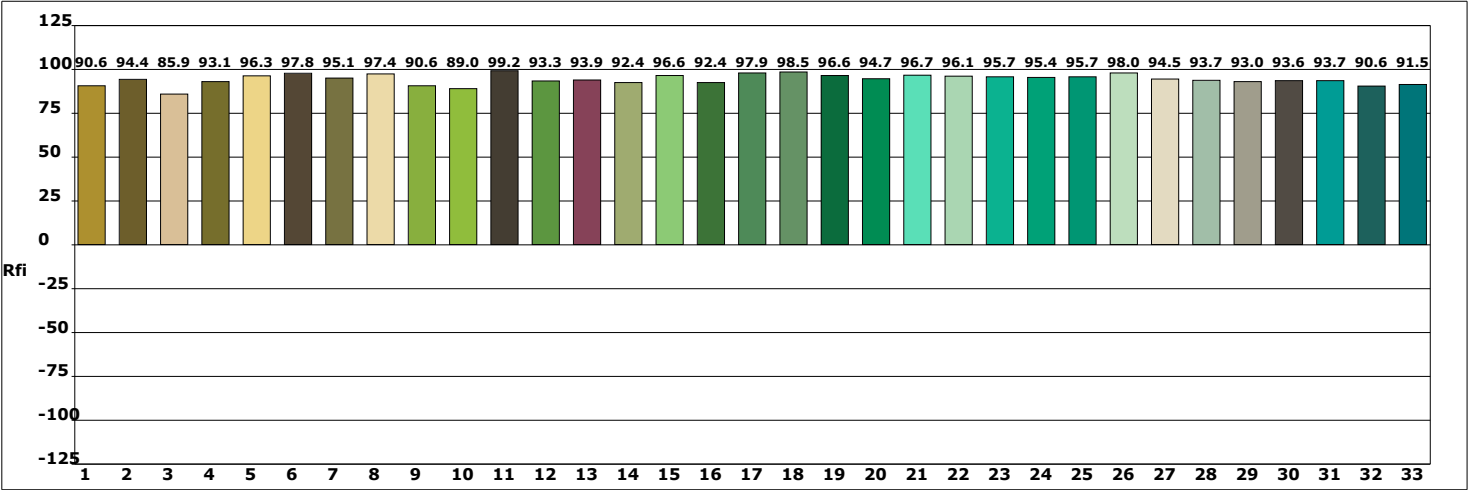
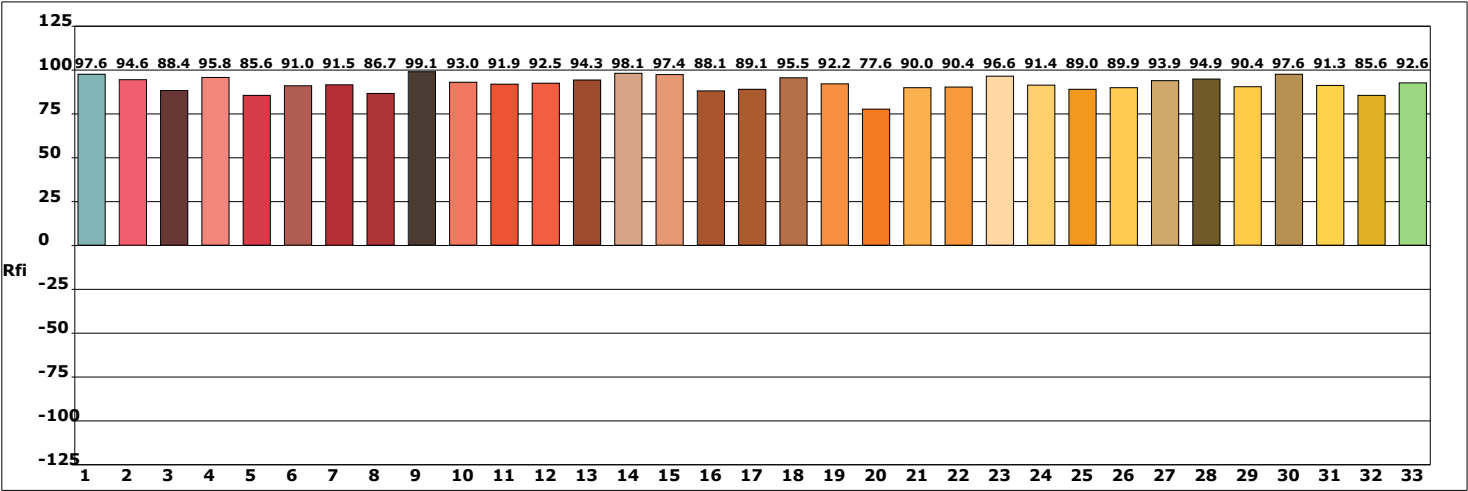


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

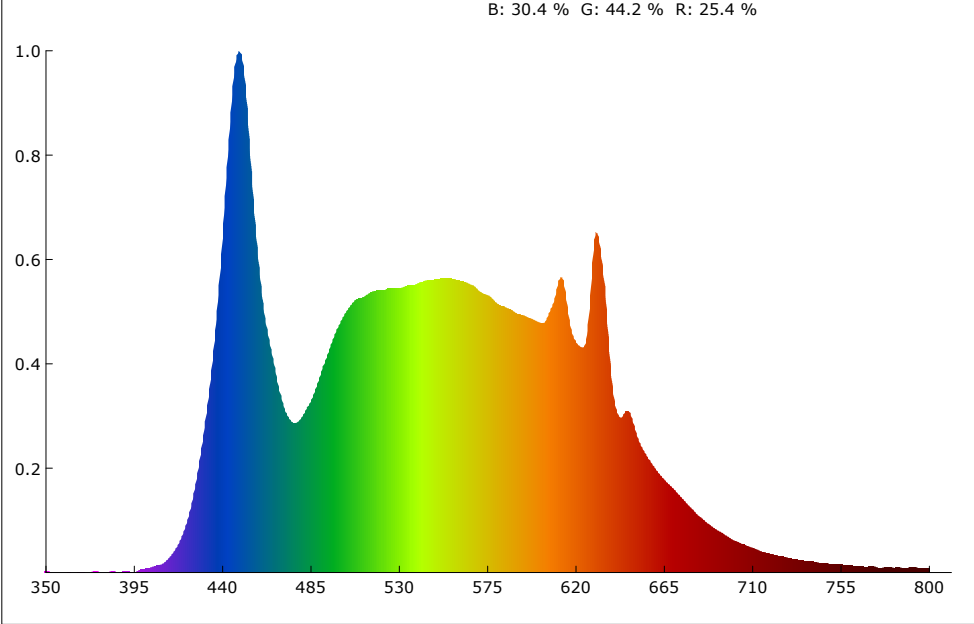
Manufacturer:
Test unit:
Date of observation: 09/26/23



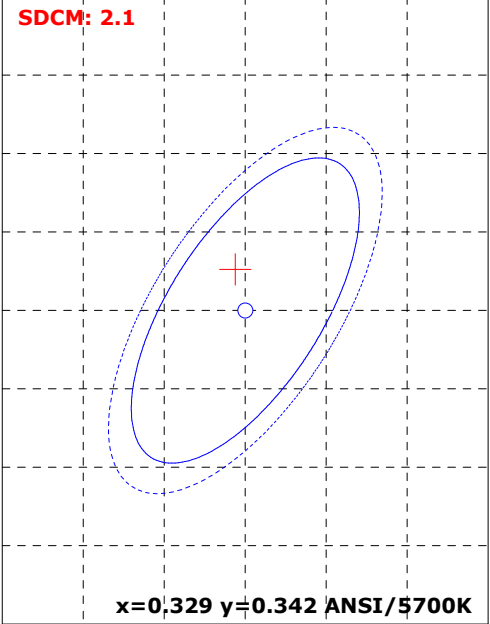
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 09/26/23

Spectrogram



SDCM



Color Parameter:

x: 0.3281	y: 0.3443	u: 0.2027	v: 0.3190	u': 0.2027	v': 0.4785		
R_ratio: 25.4 %	G_ratio: 44.2 %	B_ratio: 30.4 %	RedRatio: 15.1 %	GreenRatio: 81.3 %	BlueRatio: 3.6 %		
Ra: 90.2	AvgR: 86.2						
R1: 90.3	R2: 91.4	R3: 91.8	R4: 91.3	R5: 90.6	R6: 88.8	R7: 93.1	R8: 84.6
R9: 52.8	R10: 79.6	R11: 91.6	R12: 73.4	R13: 90.2	R14: 95.4	R15: 87.8	
CCT: 5692 K	Flux: 2203.055 lm		PeakWave: 448.6 nm		SDCM: 2.1		
S/P: 2.1	CentralWave: 449.8 nm		DominantWave: 523.0 nm		CentroidWave: 546.7 nm		
HalfWidth: 23.7 nm	duv: 0.00356		purity: 2.2 %		CQS: 90.1		
LER(TM-30): 305.6	Ep: 7209.9 mw		Rg: 99.6		Rf: 88.6		
Red Ep: 1795.6 mw	Near red Ep: 122.5 mw		Near infrared Ep: 12.1 mw				

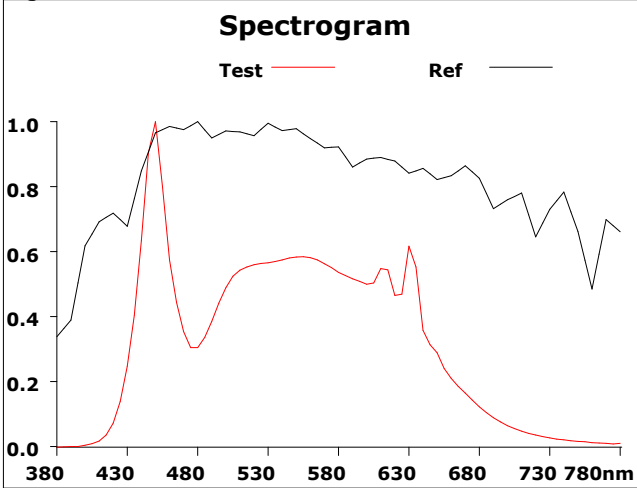
Electrical parameters:

Effic: 73.2 Lm/W	Energy: 79.7	Effi: G	
U: 221.4 V	I: 0.138 A	P: 30.090 W	Pf: 0.981

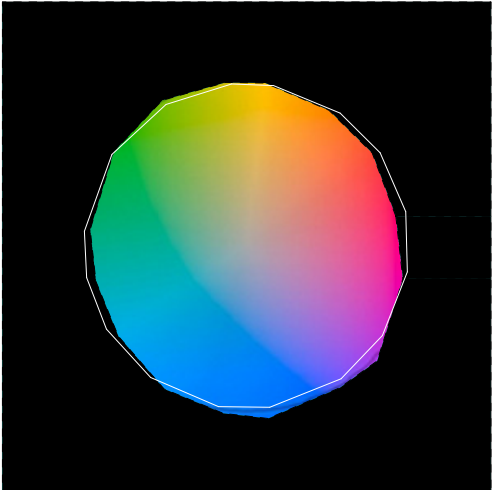
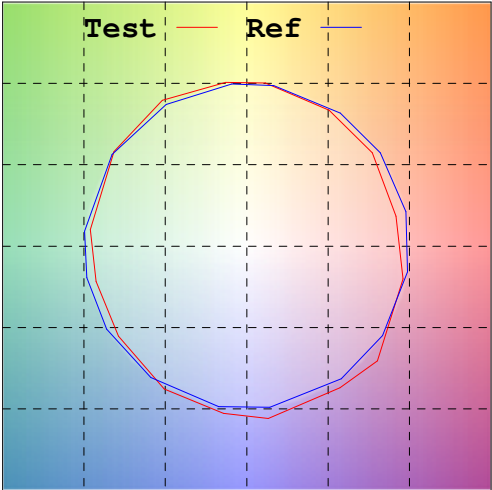
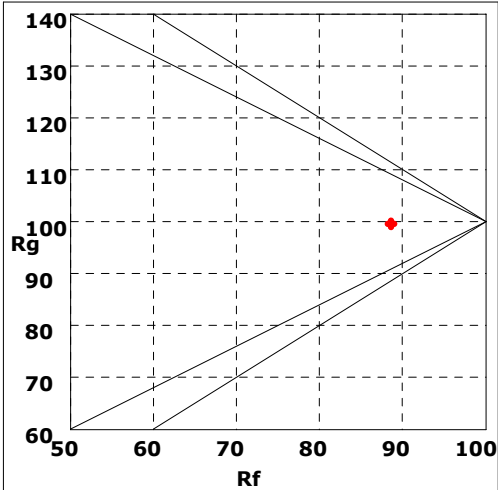
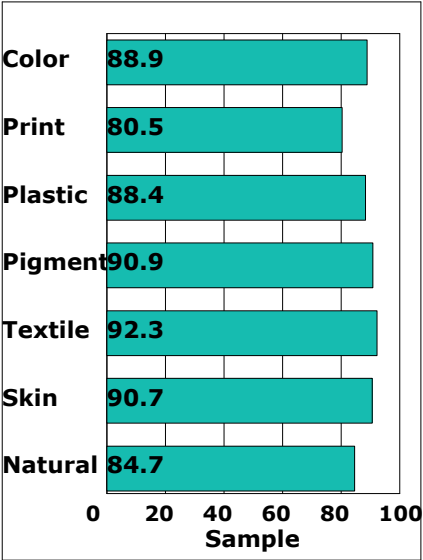
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 09/26/23

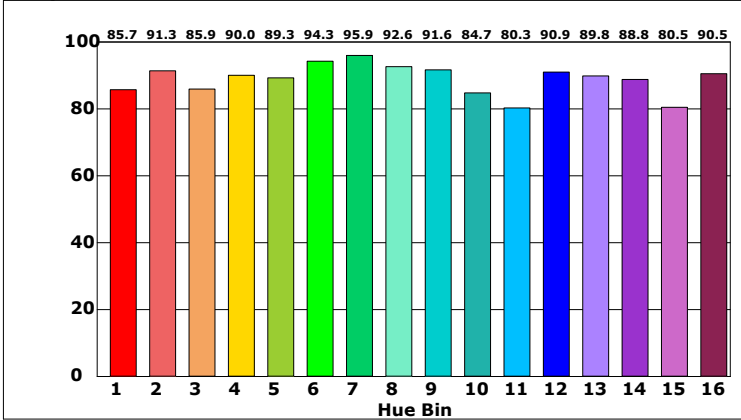
Rf: 88.6 CCT: 5692K u': 0.2027
Rg: 99.6 LER: 305.6 Duv: 0.00356 v': 0.4785



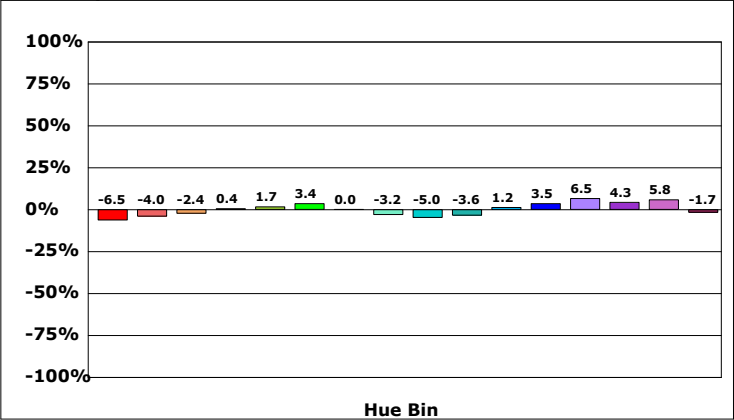
500			
Hue Bin	Rf	Chroma	Hue
1	85.7	-6.5%	-1.6%
2	91.3	-4.0%	2.7%
3	85.9	-2.4%	6.7%
4	90.0	0.4%	5.3%
5	89.3	1.7%	3.5%
6	94.3	3.4%	0.6%
7	95.9	0.0%	-2.0%
8	92.6	-3.2%	-1.5%
9	91.6	-5.0%	3.5%
10	84.7	-3.6%	7.5%
11	80.3	1.2%	10.9%
12	90.9	3.5%	3.8%
13	89.8	6.5%	-2.3%
14	88.8	4.3%	-3.8%
15	80.5	5.8%	-14.6%
16	90.5	-1.7%	-4.7%



Rf by Bue

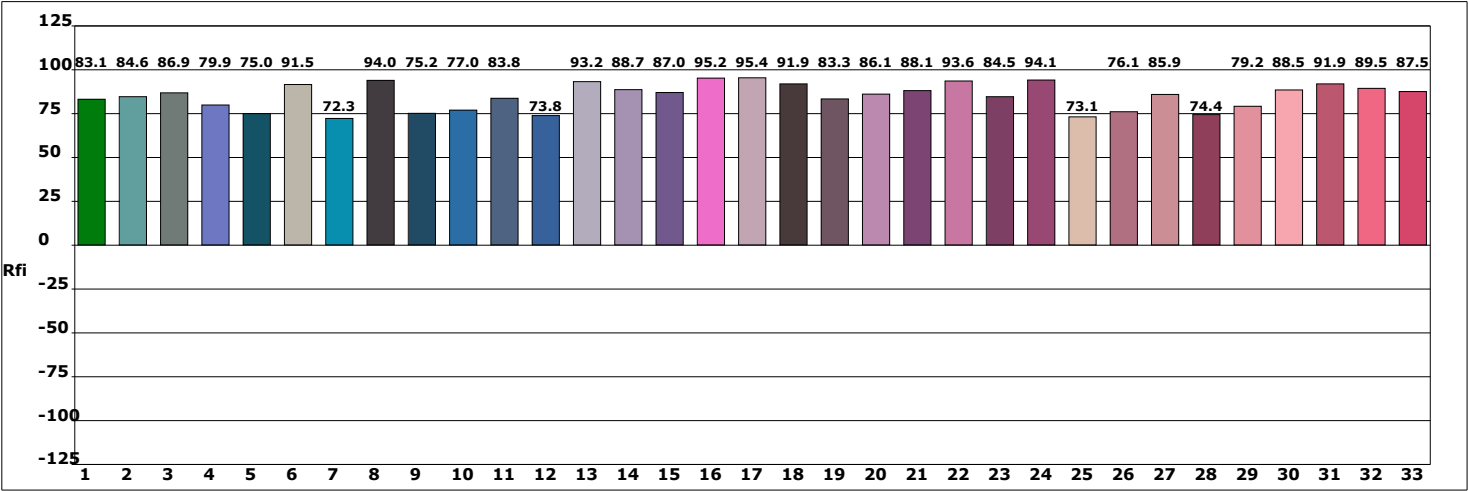
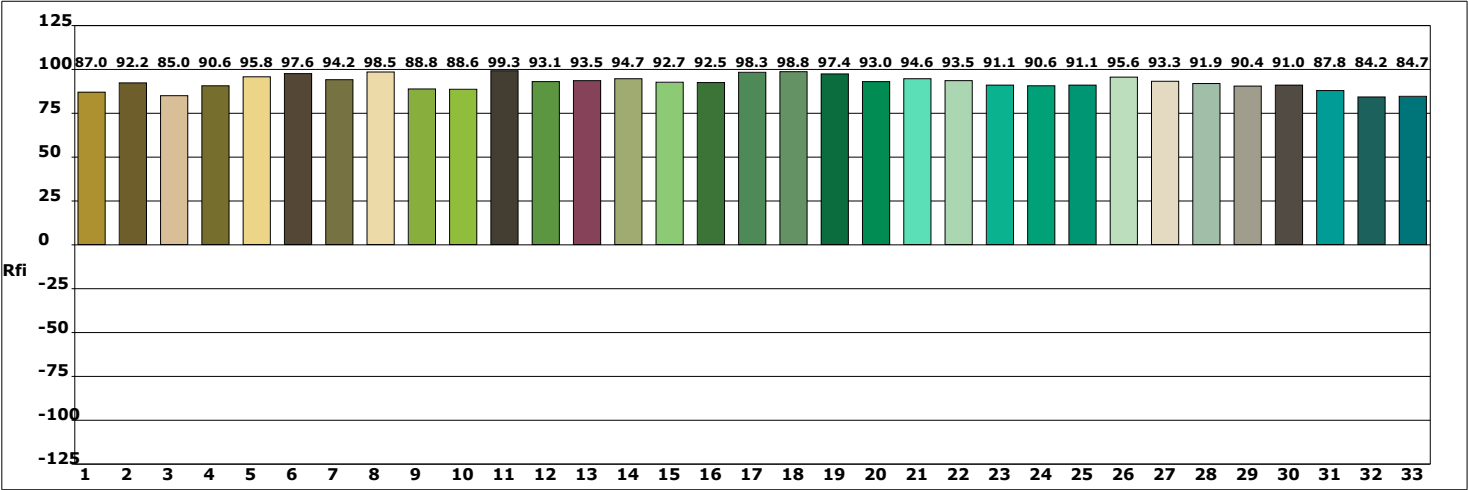
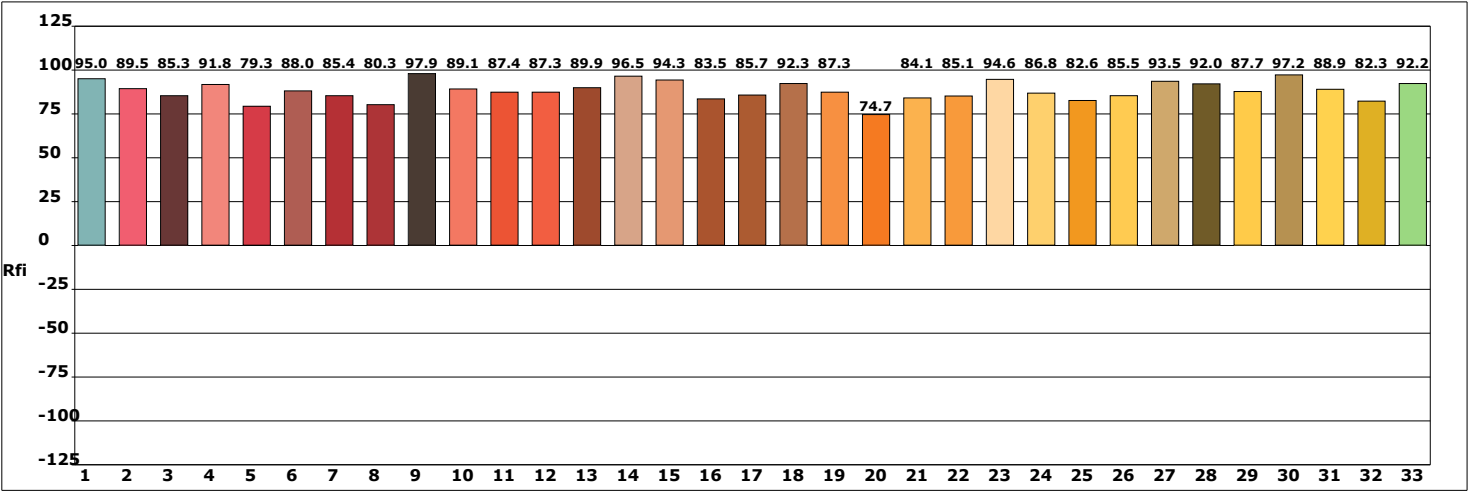


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 09/26/23



Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 09/26/23