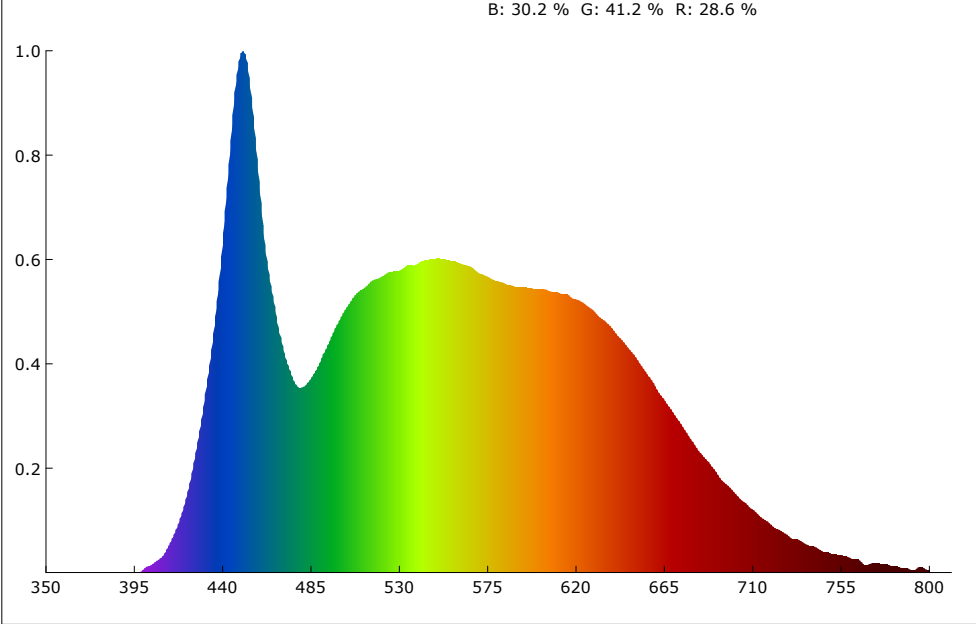
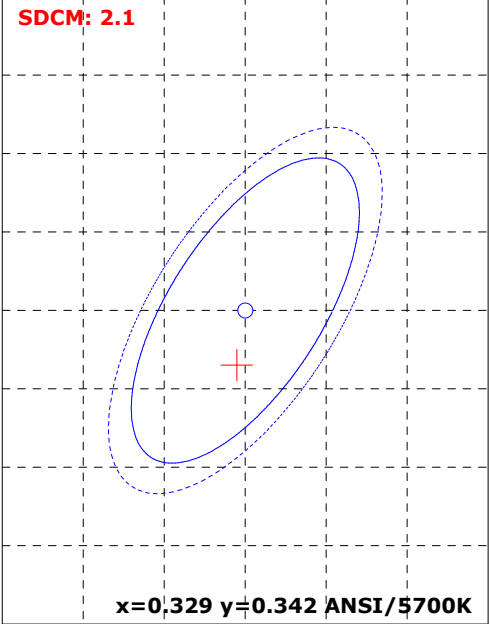


Spectrogram



SDCM



Color Parameter:

x: 0.3282	y: 0.3382	u: 0.2051	v: 0.3170	u': 0.2051	v': 0.4755
R_ratio: 28.6 %	G_ratio: 41.2 %	B_ratio: 30.2 %	RedRatio: 15.5 %	GreenRatio: 80.6 %	BlueRatio: 3.9 %
Ra: 92.6	AvgR: 89.8				
R1: 93.4	R2: 93.7	R3: 92.2	R4: 93.7	R5: 93.4	R6: 90.3
R7: 94.4	R8: 89.7	R9: 69.8	R10: 84.2	R11: 93.6	R12: 76.1
R13: 93.5	R14: 95.5	R15: 92.8			
CCT: 5688 K	Flux: 745.262 lm	PeakWave: 450.6 nm	SDCM: 2.1		
S/P: 2.2	CentralWave: 452.5 nm	DominantWave: 504.8 nm	CentroidWave: 554.7 nm		
HalfWidth: 30.0 nm	duv: 0.00043	purity: 1.5 %	CQS: 89.0		
LER(TM-30): 282.8	Ep: 2635.1 mw	Rg: 100.3	Rf: 90.0		
Red Ep: 727.7 mw	Near red Ep: 90.8 mw	Near infrared Ep: 3.5 mw			

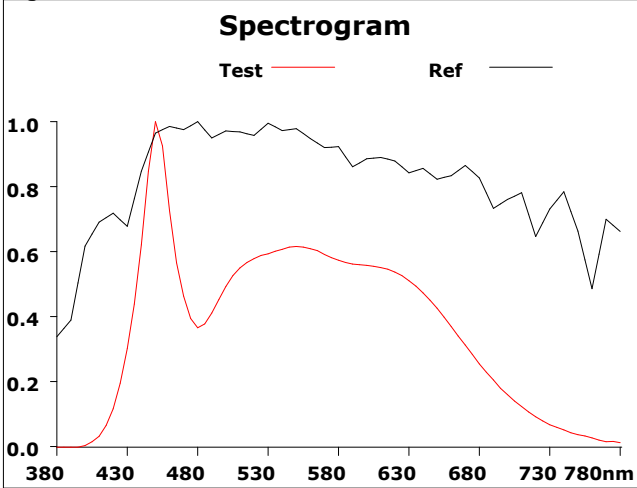
Electrical parameters:

Effic: 23.2 Lm/W	Energy: 25.2	Effi: G	
U: 221.2 V	I: 0.256 A	P: 32.150 W	Pf: 0.567

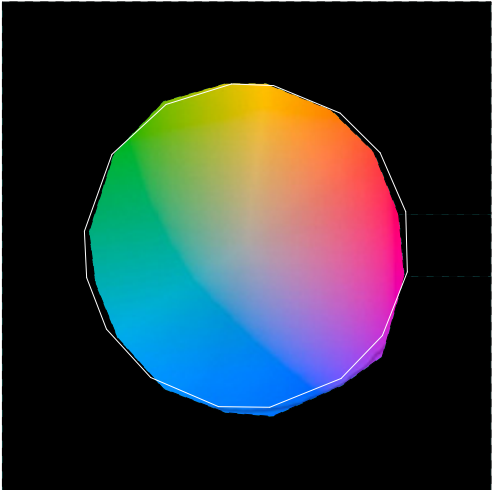
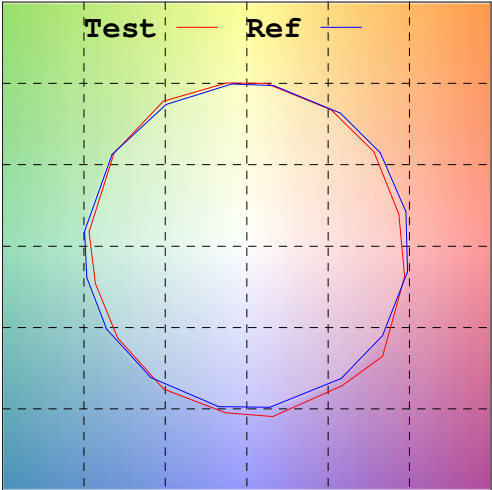
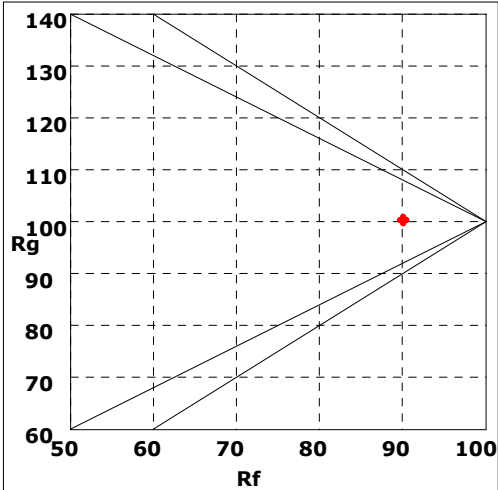
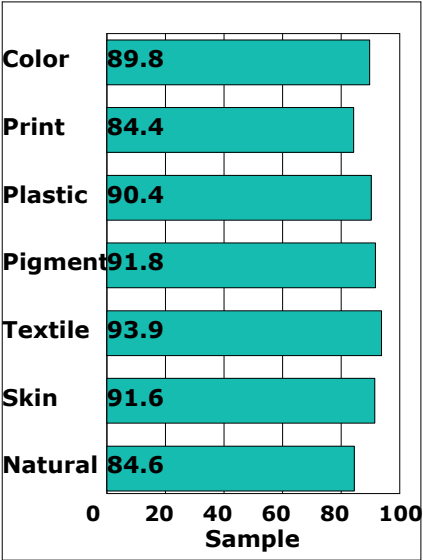
Product model:
Product number:
Tester:
Remarks:

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

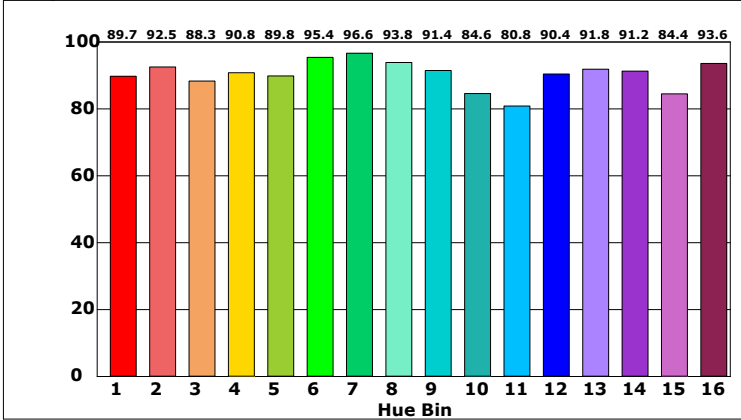
Rf: 90.0 CCT: 5688K u': 0.2051
Rg: 100.3 LER: 282.8 Duv: 0.00043 v': 0.4755



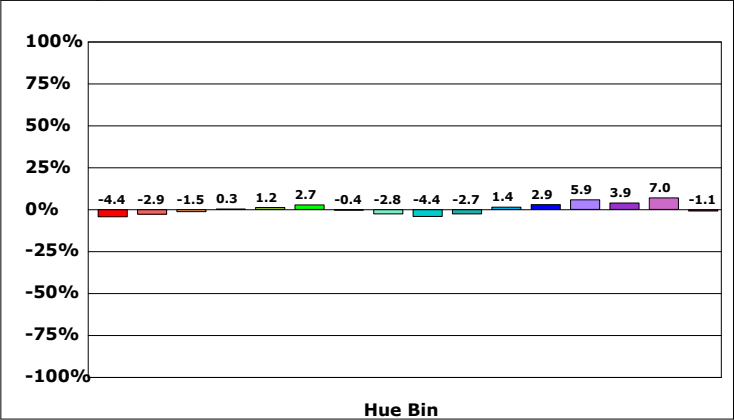
500			
Hue Bin	Rf	Chroma	Hue
1	89.7	-4.4%	-0.8%
2	92.5	-2.9%	2.6%
3	88.3	-1.5%	5.6%
4	90.8	0.3%	4.7%
5	89.8	1.2%	3.2%
6	95.4	2.7%	0.3%
7	96.6	-0.4%	-1.3%
8	93.8	-2.8%	-0.1%
9	91.4	-4.4%	4.8%
10	84.6	-2.7%	8.0%
11	80.8	1.4%	10.6%
12	90.4	2.9%	4.9%
13	91.8	5.9%	0.6%
14	91.2	3.9%	-2.1%
15	84.4	7.0%	-10.7%
16	93.6	-1.1%	-3.1%



Rf by Bue

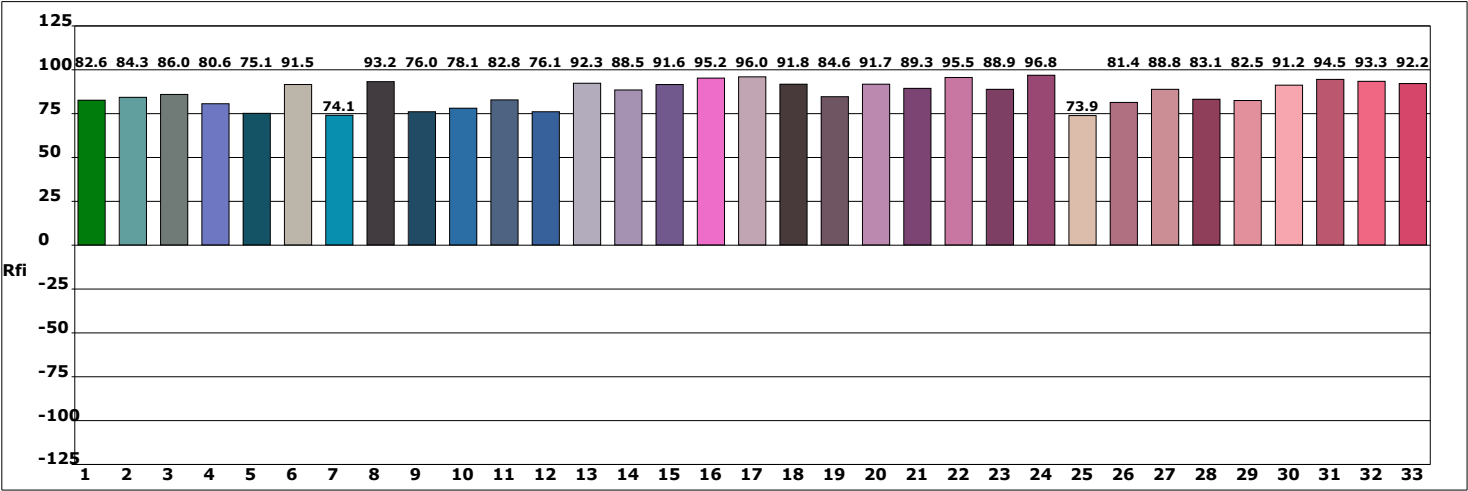
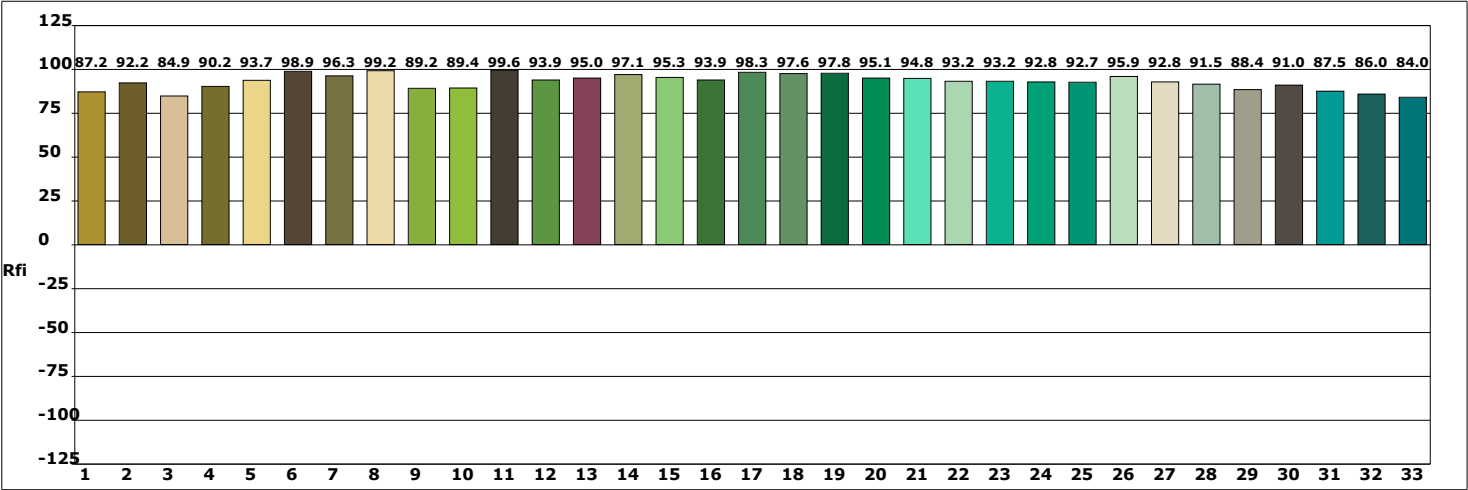
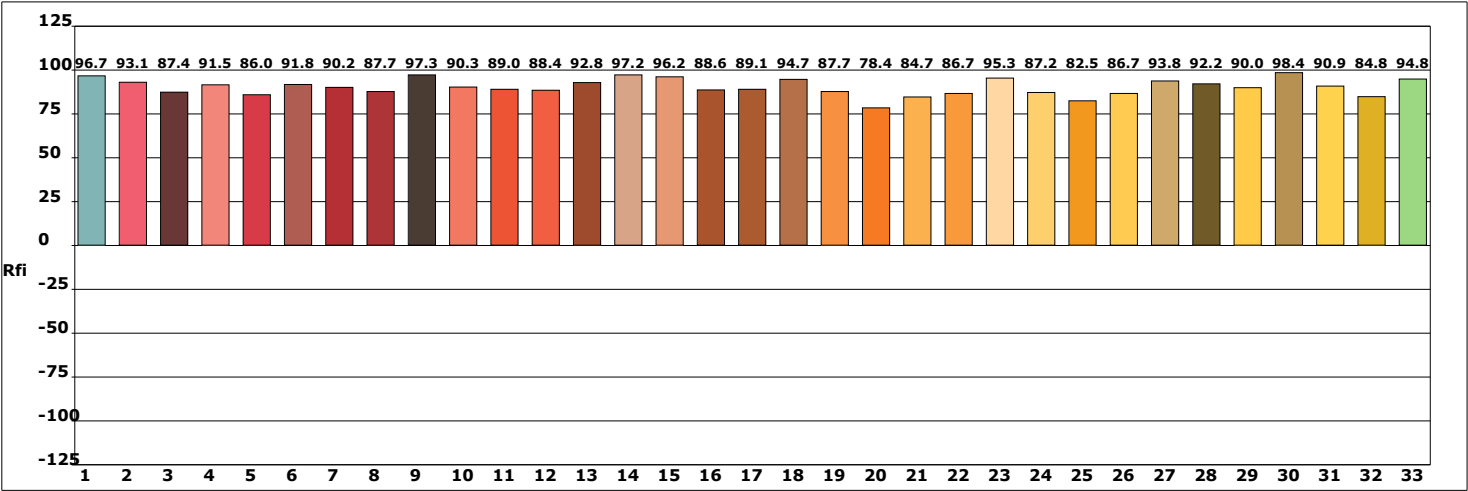


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

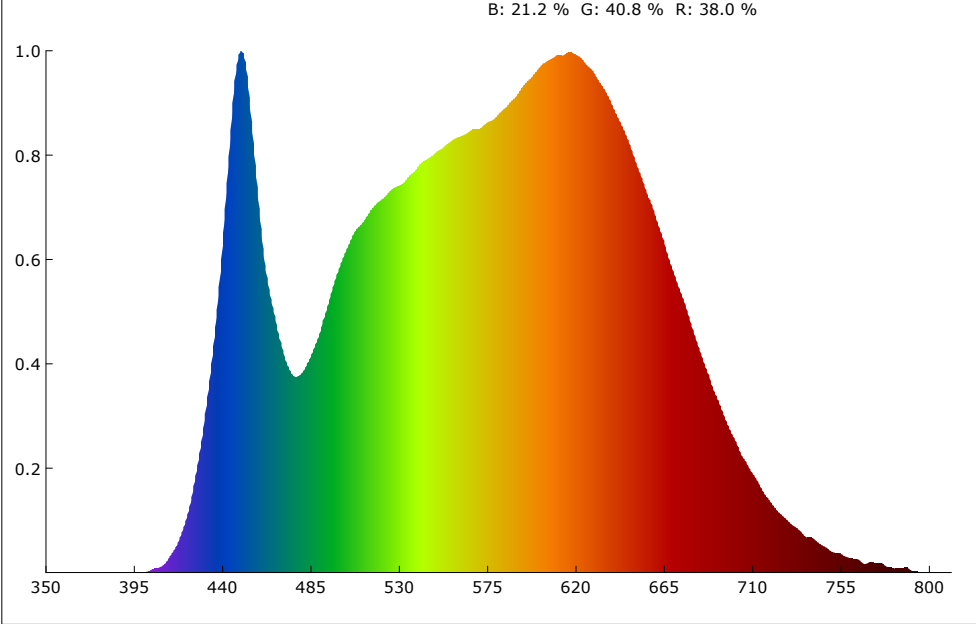
Manufacturer:
Test unit:
Date of observation: 09/26/23



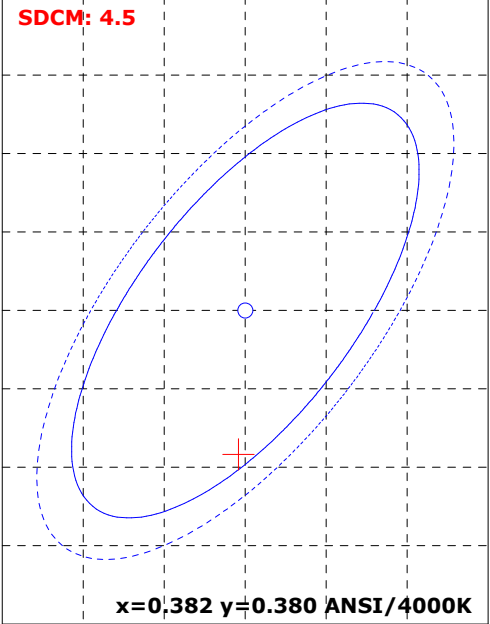
Product model:
Product number:
Tester:
Remarks:

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

Spectrogram



SDCM



Color Parameter:

x: 0.3814	y: 0.3705	u: 0.2283	v: 0.3326	u': 0.2283	v': 0.4989
R_ratio: 38.0 %	G_ratio: 40.8 %	B_ratio: 21.2 %	RedRatio: 19.8 %	GreenRatio: 77.5 %	BlueRatio: 2.7 %
Ra: 94.5	AvgR: 92.2				
R1: 95.7	R2: 96.5	R3: 95.5	R4: 95.1	R5: 95.6	R6: 94.5
R7: 94.5	R8: 88.8	R9: 71.9	R10: 90.8	R11: 95.1	R12: 81.5
R13: 96.1	R14: 97.0	R15: 94.1			

CCT: 3925 K	Flux: 649.311 lm	PeakWave: 617.6 nm	SDCM: 4.5
S/P: 1.8	CentralWave: 584.5 nm	DominantWave: 581.3 nm	CentroidWave: 572.2 nm
HalfWidth: 183.4 nm	duv: -0.00328	purity: 25.7 %	CQS: 86.8
LER(TM-30): 292.5	Ep: 2219.7 mw	Rg: 101.2	Rf: 91.4
Red Ep: 814.8 mw	Near red Ep: 76.4 mw	Near infrared Ep: 1.3 mw	

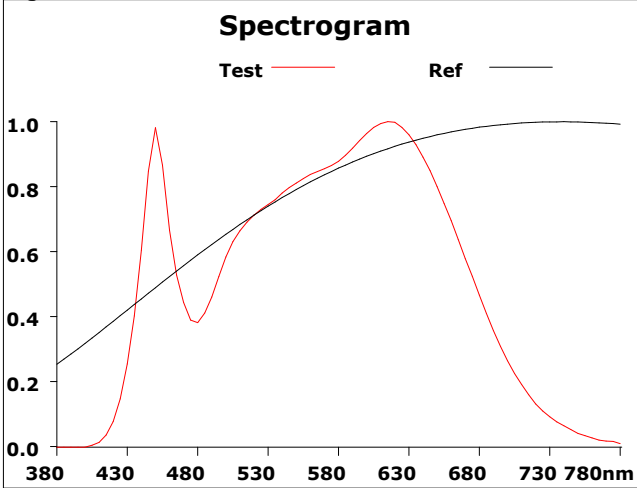
Electrical parameters:

Effic: 21.9 Lm/W	Energy: 23.9	Effi: G	
U: 221.3 V	I: 0.237 A	P: 29.620 W	Pf: 0.564

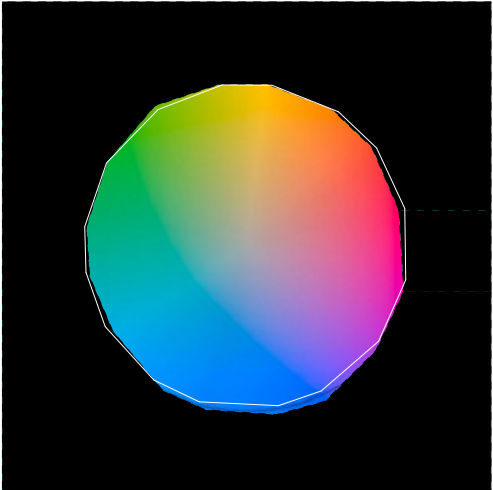
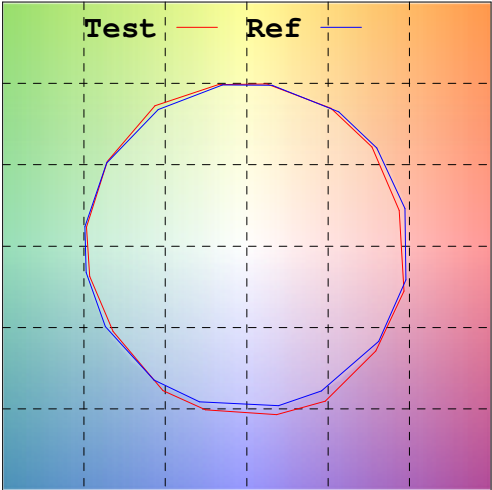
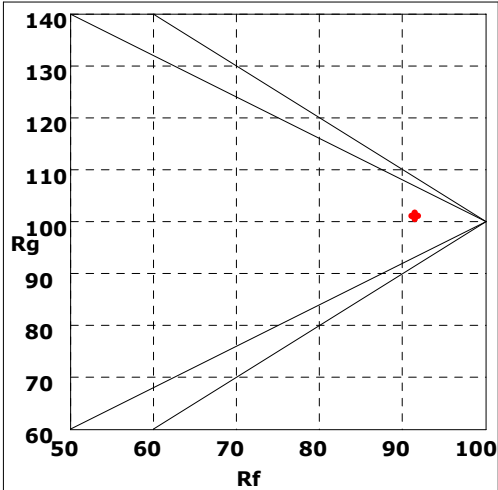
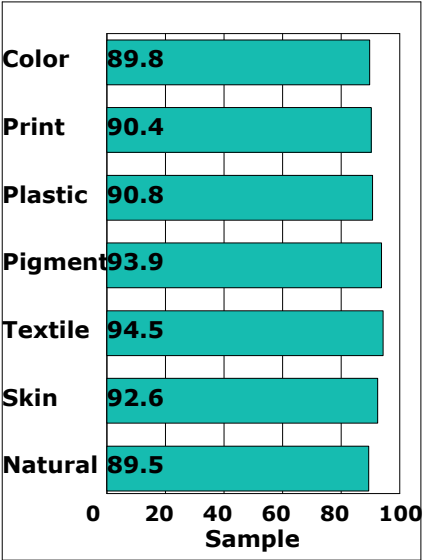
Product model:
Product number:
Tester:
Remarks:

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

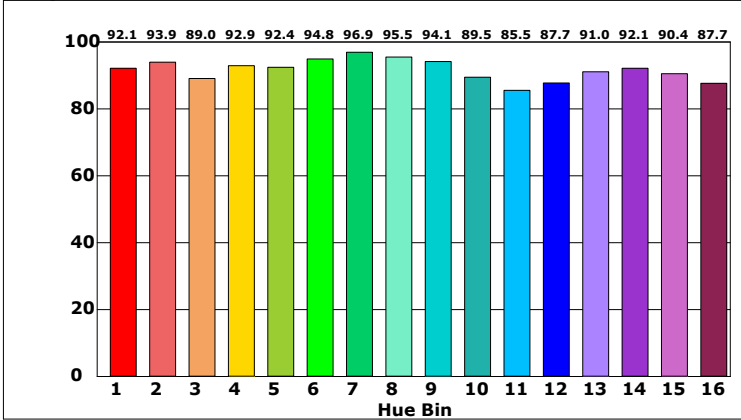
Rf: 91.4 CCT: 3925K u': 0.2283
Rg: 101.2 LER: 292.5 Duv: -0.00328 v': 0.4989



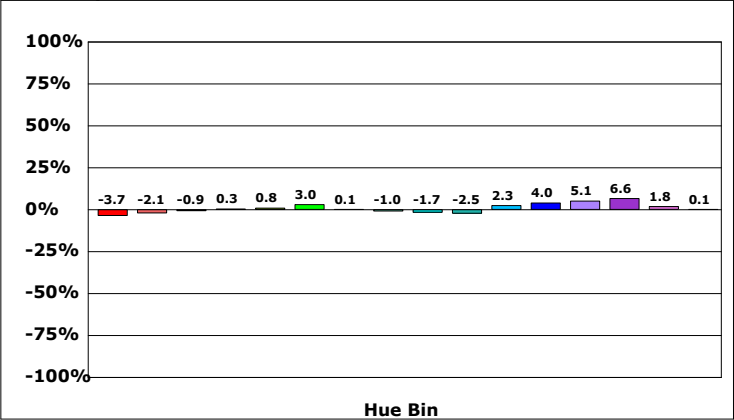
500			
Hue Bin	Rf	Chroma	Hue
1	92.1	-3.7%	-0.6%
2	93.9	-2.1%	2.1%
3	89.0	-0.9%	5.0%
4	92.9	0.3%	3.3%
5	92.4	0.8%	2.5%
6	94.8	3.0%	0.2%
7	96.9	0.1%	-1.1%
8	95.5	-1.0%	-0.1%
9	94.1	-1.7%	2.8%
10	89.5	-2.5%	5.1%
11	85.5	2.3%	8.3%
12	87.7	4.0%	4.5%
13	91.0	5.1%	-2.2%
14	92.1	6.6%	-1.4%
15	90.4	1.8%	-5.9%
16	87.7	0.1%	-7.1%



Rf by Bue

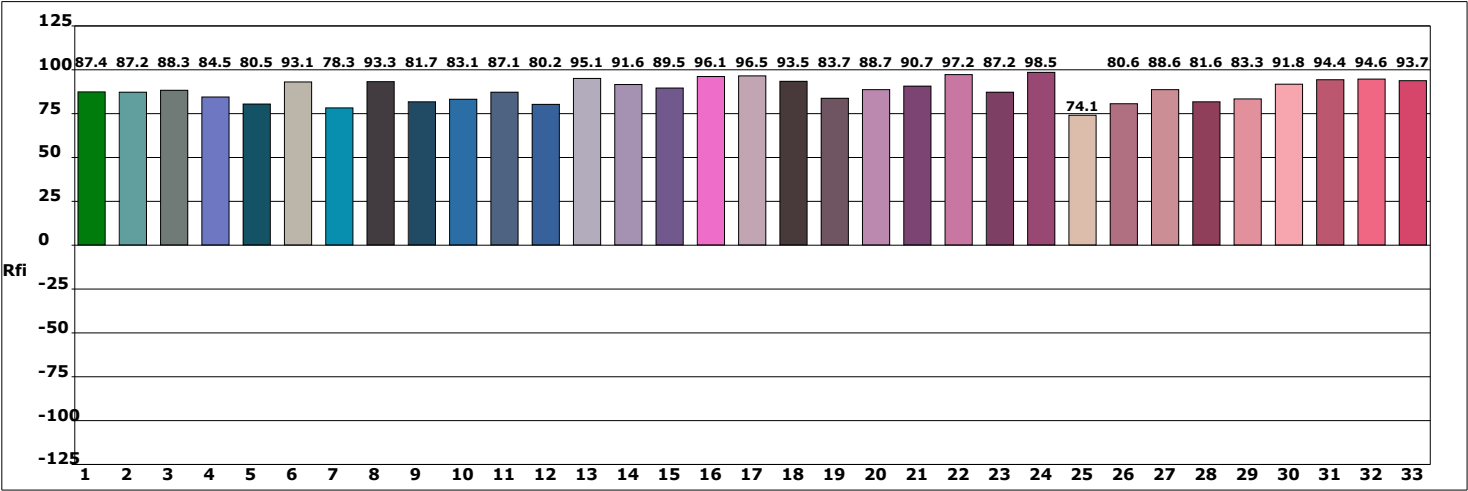
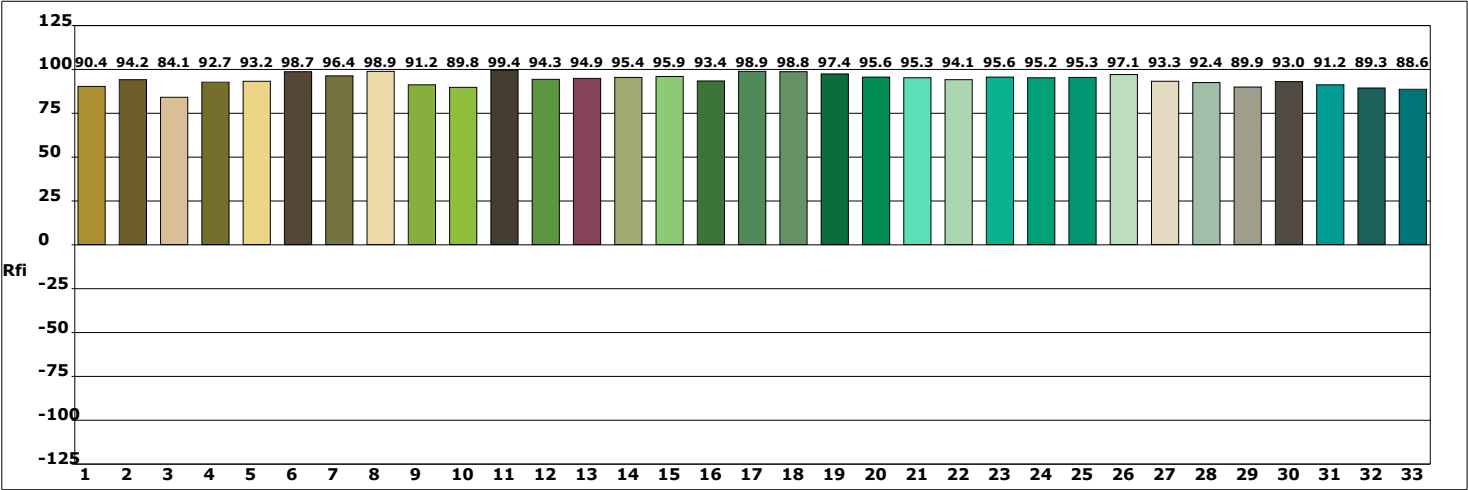
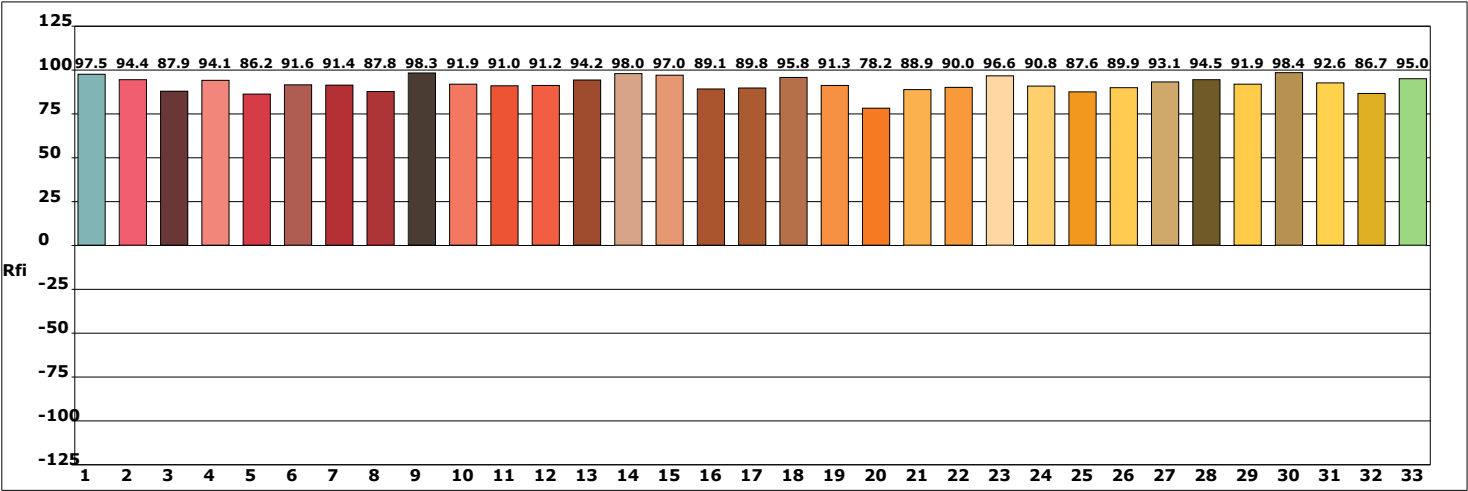


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

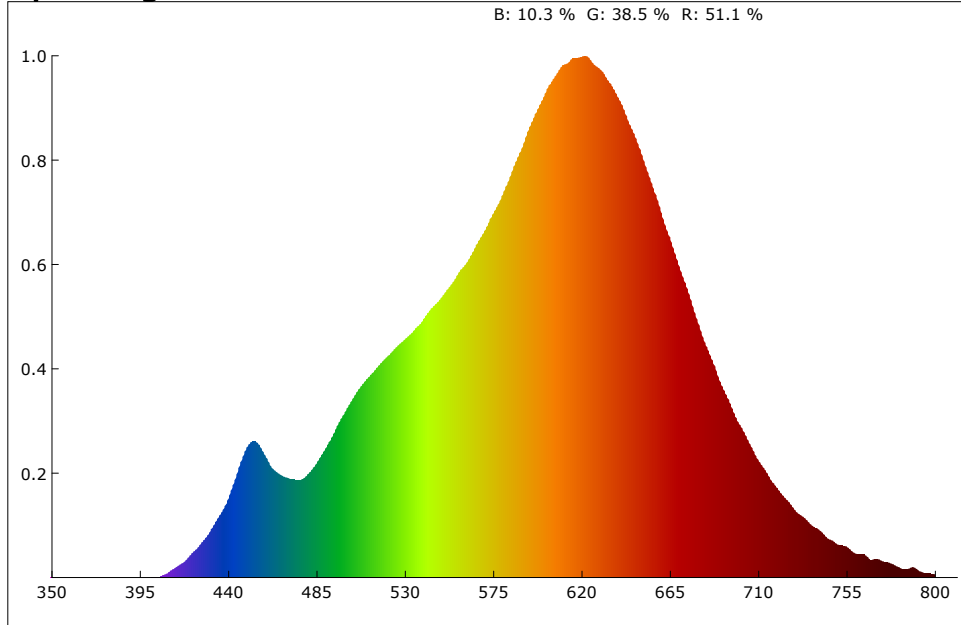
Manufacturer:
Test unit:
Date of observation: 09/26/23



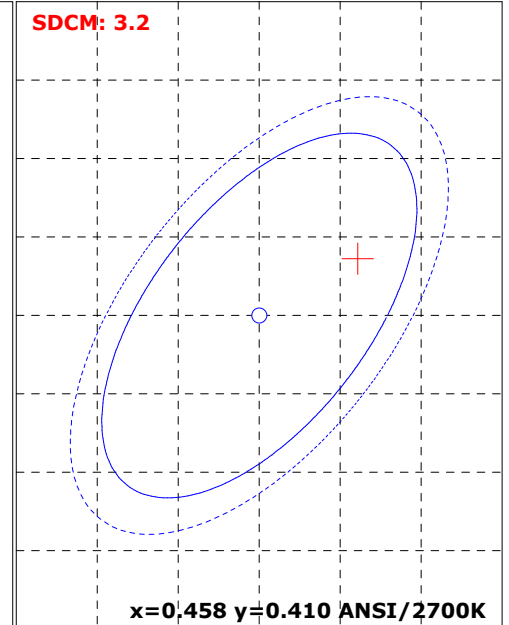
Product model:
Product number:
Tester:
Remarks:

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

Spectrogram



SDCM



Color Parameter:

x: 0.4639 y: 0.4137 u: 0.2637 v: 0.3528 u': 0.2637 v': 0.5292
R_ratio: 51.1 % G_ratio: 38.5 % B_ratio: 10.3 % RedRatio: 25.8 % GreenRatio: 72.8 % BlueRatio: 1.5 %

Ra: 92.1 AvgR: 89.6
R1: 91.9 R2: 96.6 R3: 98.7 R4: 92.8 R5: 92.7 R6: 97.5 R7: 89.6 R8: 77.0
R9: 50.9 R10: 92.2 R11: 94.7 R12: 90.3 R13: 93.1 R14: 99.7 R15: 86.1

CCT: 2668 K Flux: 585.873 lm PeakWave: 621.6 nm SDCM: 3.2
S/P: 1.3 CentralWave: 609.5 nm DominantWave: 584.1 nm CentroidWave: 599.1 nm
HalfWidth: 136.5 nm duv: 0.00085 purity: 63.4 % CQS: 87.7
LER(TM-30): 288.6 Ep: 2029.9 mw Rg: 97.7 Rf: 92.0
Red Ep: 975.4 mw Near red Ep: 117.9 mw Near infrared Ep: 4.0 mw

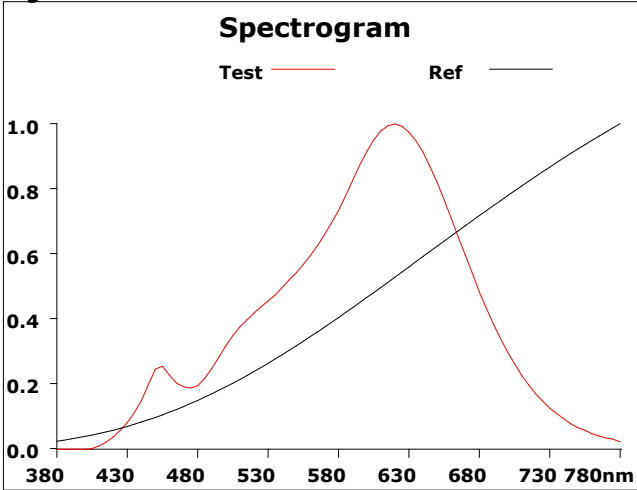
Electrical parameters:

Effic: 17.9 lm/W Energy: 19.5 Effi: G
U: 221.3 V I: 0.261 A P: 32.790 W Pf: 0.567

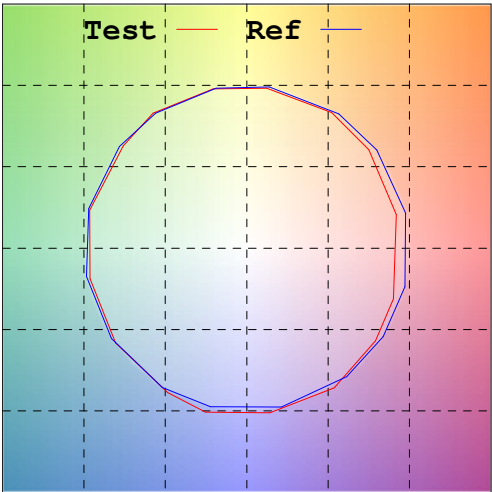
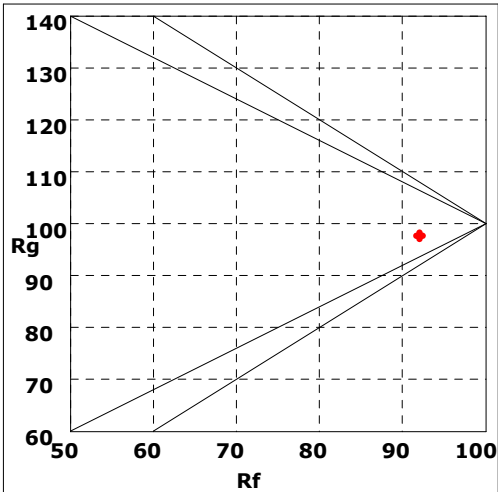
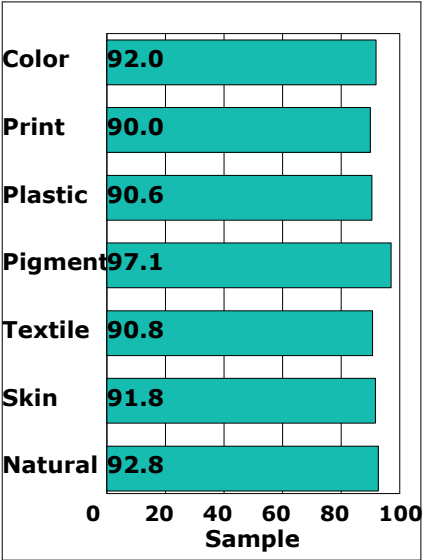
Product model:
Product number:
Tester:
Remarks:

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

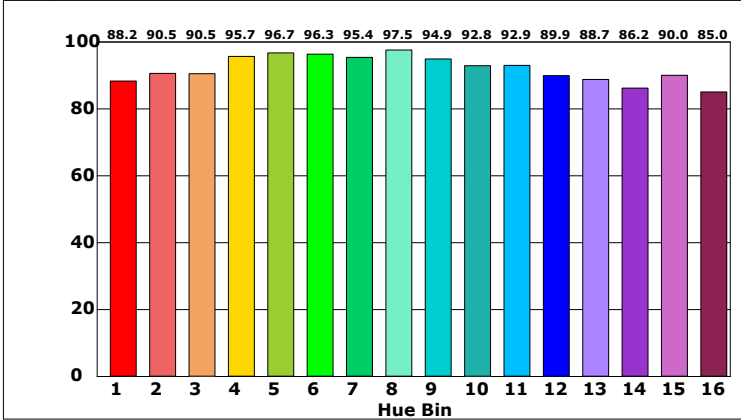
Rf: 92.0 CCT: 2668K u': 0.2637
Rg: 97.7 LER: 288.6 Duv: 0.00085 v': 0.5292



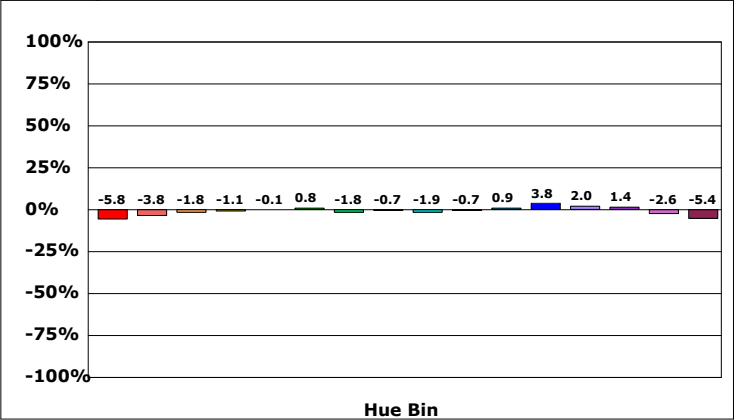
500			
Hue Bin	Rf	Chroma	Hue
1	88.2	-5.8%	0.2%
2	90.5	-3.8%	2.9%
3	90.5	-1.8%	4.1%
4	95.7	-1.1%	1.4%
5	96.7	-0.1%	1.9%
6	96.3	0.8%	1.1%
7	95.4	-1.8%	-1.7%
8	97.5	-0.7%	0.7%
9	94.9	-1.9%	1.8%
10	92.8	-0.7%	3.8%
11	92.9	0.9%	4.4%
12	89.9	3.8%	-2.2%
13	88.7	2.0%	-7.7%
14	86.2	1.4%	-10.3%
15	90.0	-2.6%	-4.8%
16	85.0	-5.4%	-8.7%



Rf by Bue

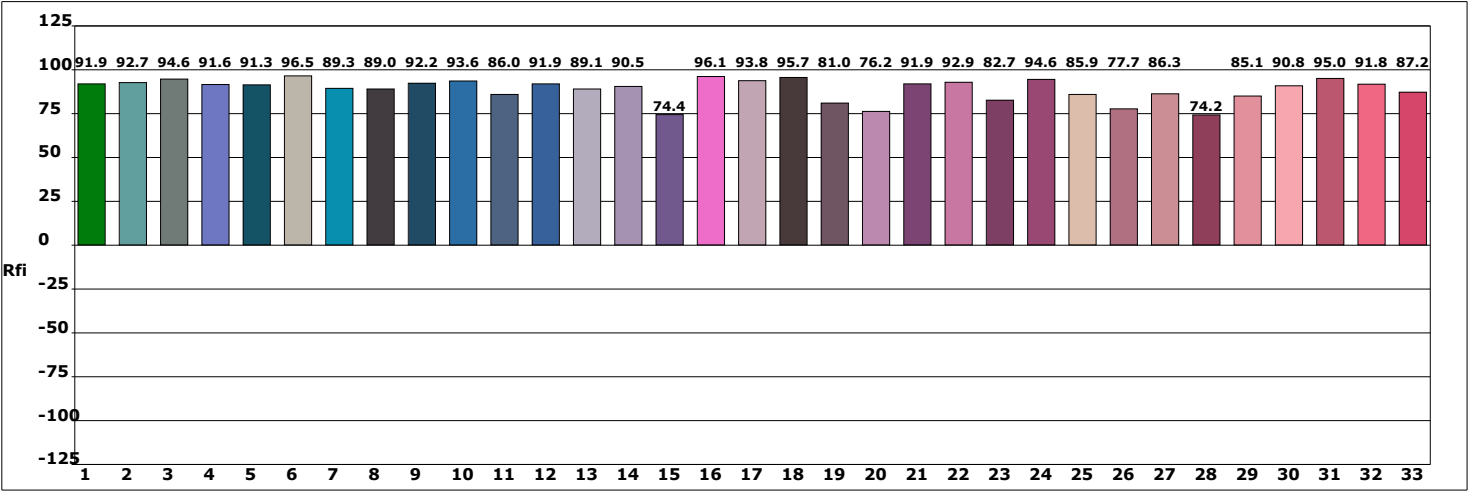
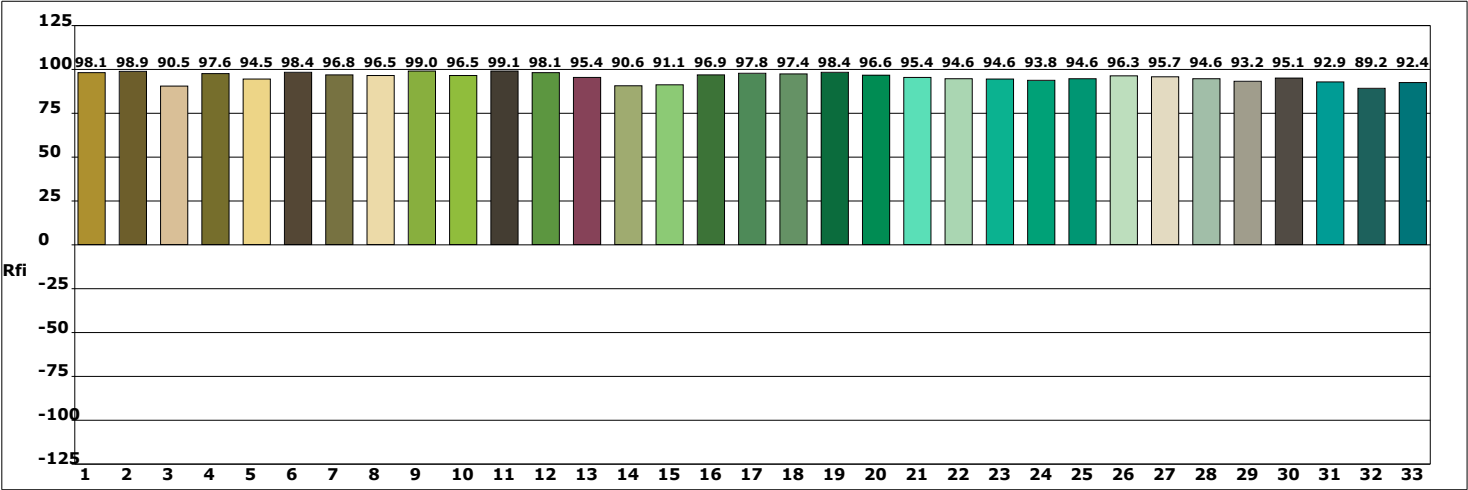
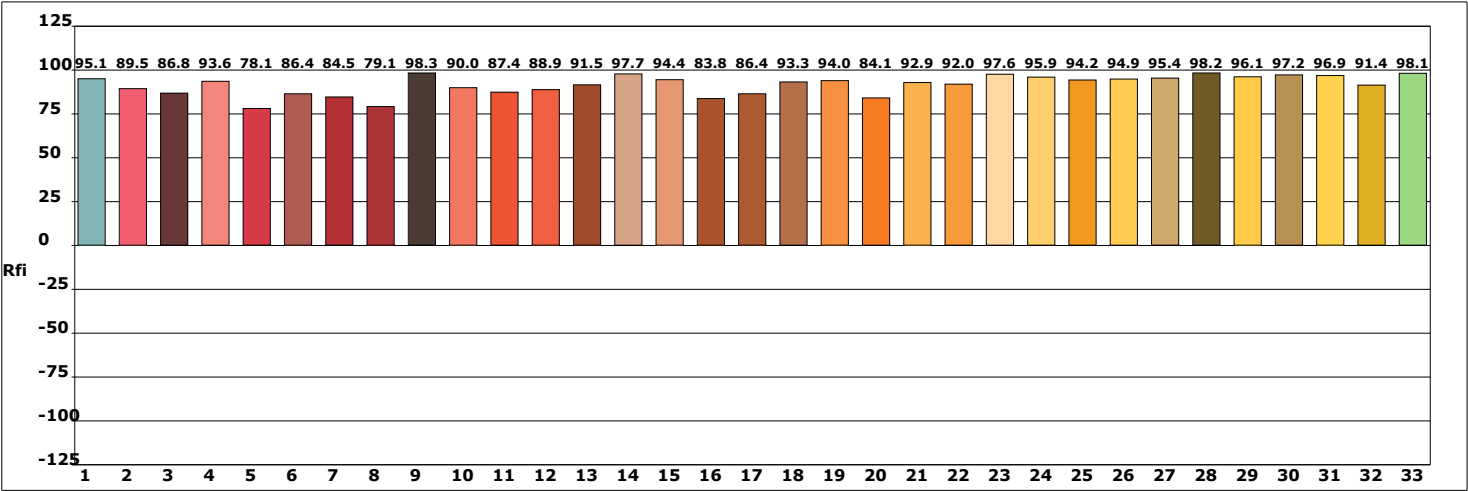


Chroma by Bue



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