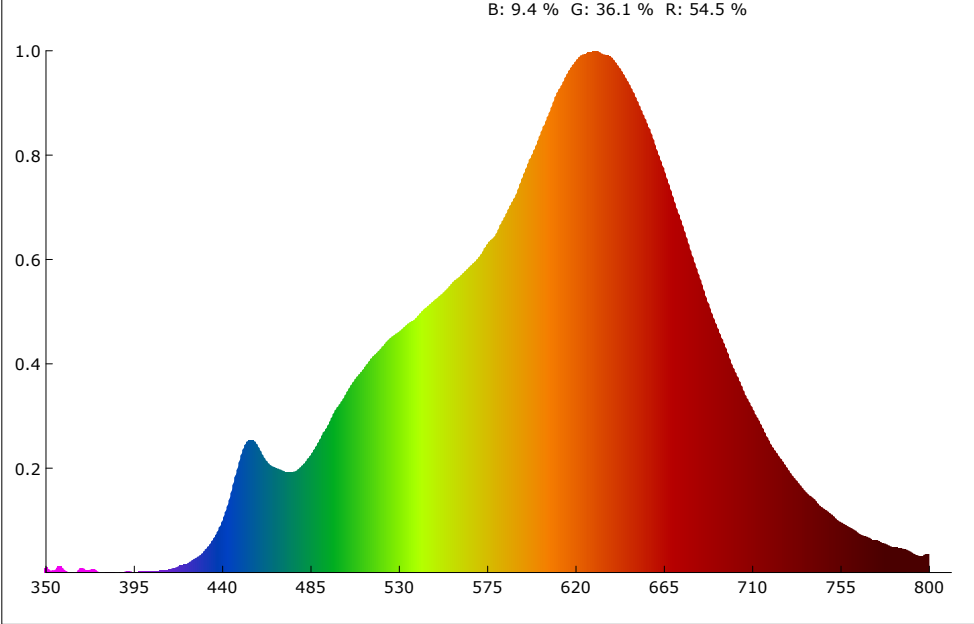
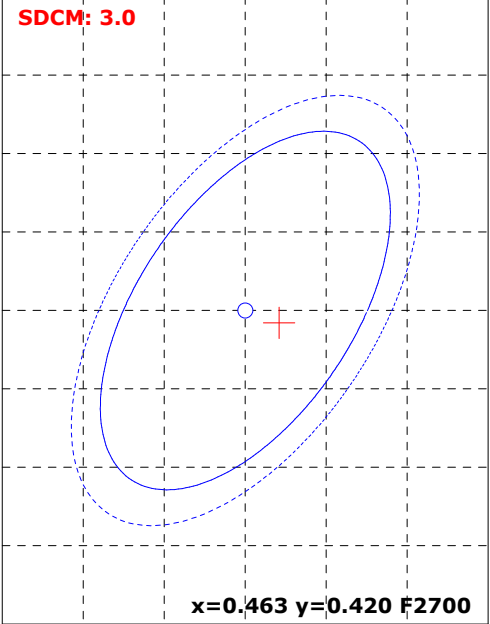


Spectrogram



SDCM



Color Parameter:

x: 0.4671 y: 0.4192 u: 0.2633 v: 0.3544 u': 0.2633 v': 0.5316
R_ratio: 54.5 % G_ratio: 36.1 % B_ratio: 9.4 % RedRatio: 26.6 % GreenRatio: 71.9 % BlueRatio: 1.5 %

Ra: 96.5 AvgR: 95.1
R1: 99.0 R2: 98.3 R3: 98.5 R4: 96.7 R5: 96.0 R6: 95.8 R7: 96.3 R8: 91.8
R9: 80.6 R10: 98.3 R11: 96.6 R12: 87.4 R13: 97.6 R14: 98.4 R15: 95.2

CCT: 2667 K Flux: 6282.825 lm PeakWave: 630.5 nm SDCM: 3.0
S/P: 1.3 CentralWave: 615.4 nm DominantWave: 583.6 nm CentroidWave: 607.7 nm
HalfWidth: 146.4 nm duv: 0.00250 purity: 66.1 % CQS: 88.9
LER(TM-30): 268.3 Ep: 23421.1 mw Rg: 97.6 Rf: 92.8
Red Ep: 11622.9 mw Near red Ep: 1955.8 mw Near infrared Ep: 124.7 mw

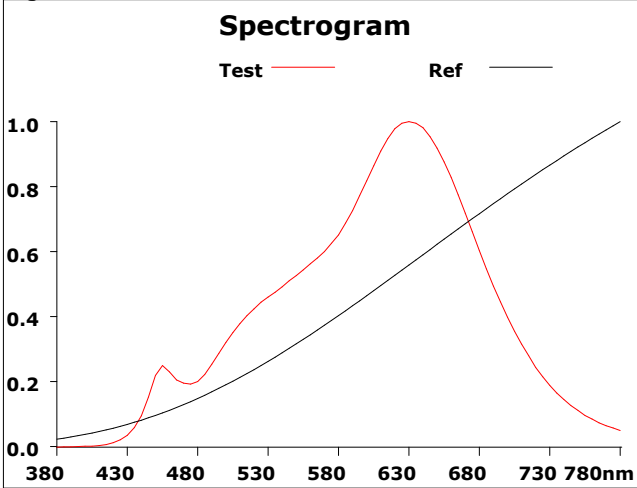
Electrical parameters:

Effic: 33.8 Lm/W Energy: 36.8 Effi: G
U: 220.0 V I: 1.230 A P: 185.900 W Pf: 0.687

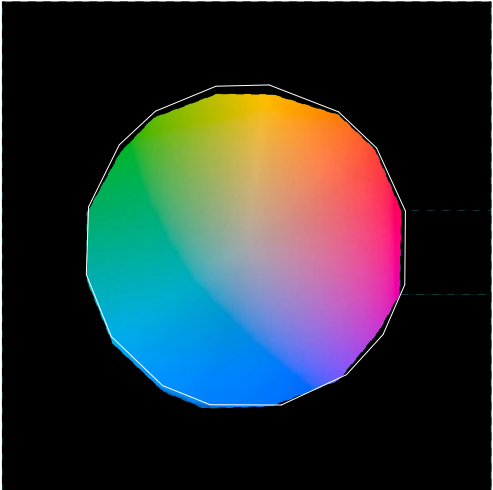
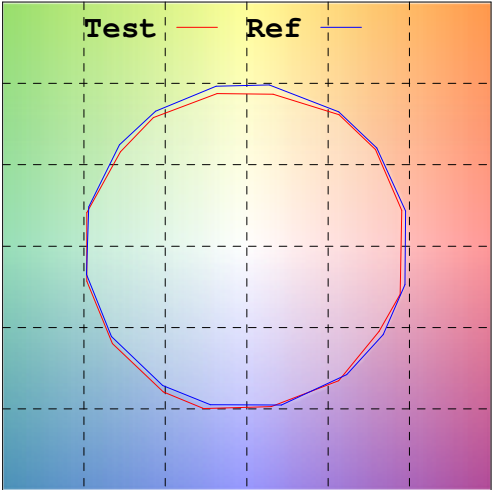
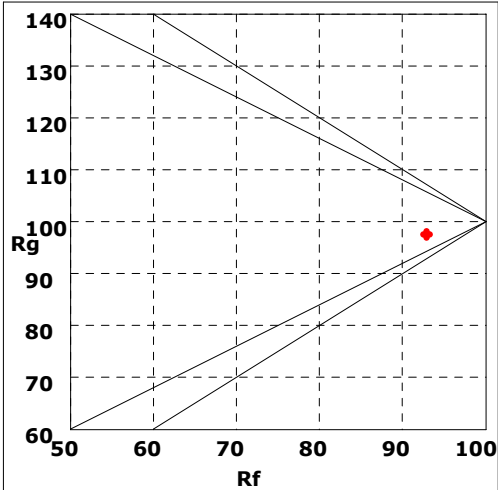
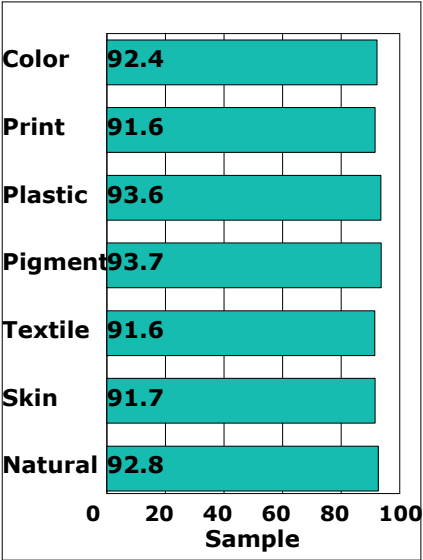
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/21/23

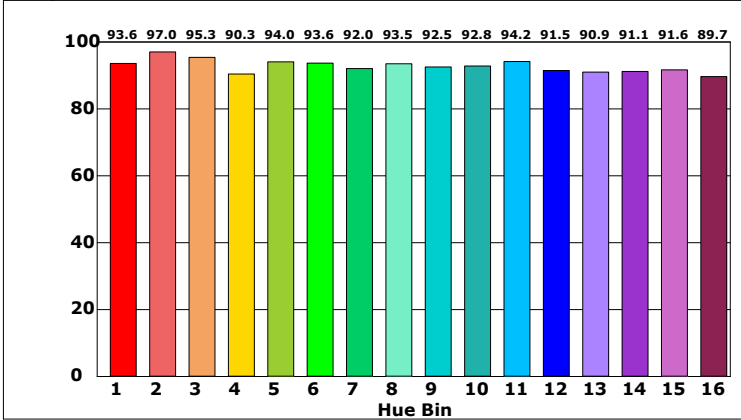
Rf: 92.8 CCT: 2667K u': 0.2633
Rg: 97.6 LER: 268.3 Duv: 0.00250 v': 0.5316



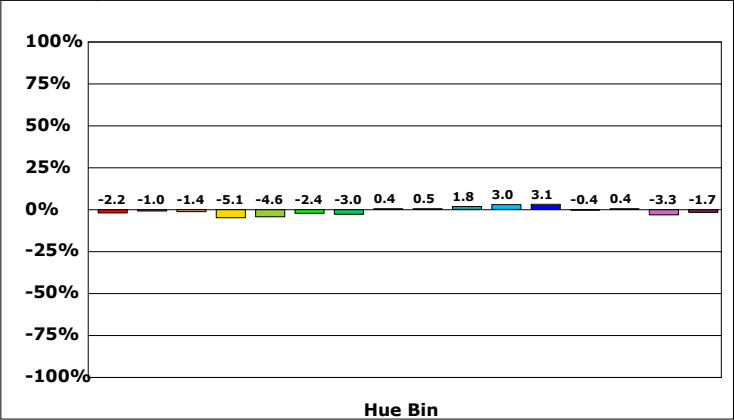
500			
Hue Bin	Rf	Chroma	Hue
1	93.6	-2.2%	1.0%
2	97.0	-1.0%	-0.4%
3	95.3	-1.4%	-1.2%
4	90.3	-5.1%	-3.4%
5	94.0	-4.6%	0.4%
6	93.6	-2.4%	3.2%
7	92.0	-3.0%	3.4%
8	93.5	0.4%	3.9%
9	92.5	0.5%	4.0%
10	92.8	1.8%	4.0%
11	94.2	3.0%	2.6%
12	91.5	3.1%	-3.5%
13	90.9	-0.4%	-6.4%
14	91.1	0.4%	-6.3%
15	91.6	-3.3%	0.1%
16	89.7	-1.7%	-6.4%



Rf by Bue

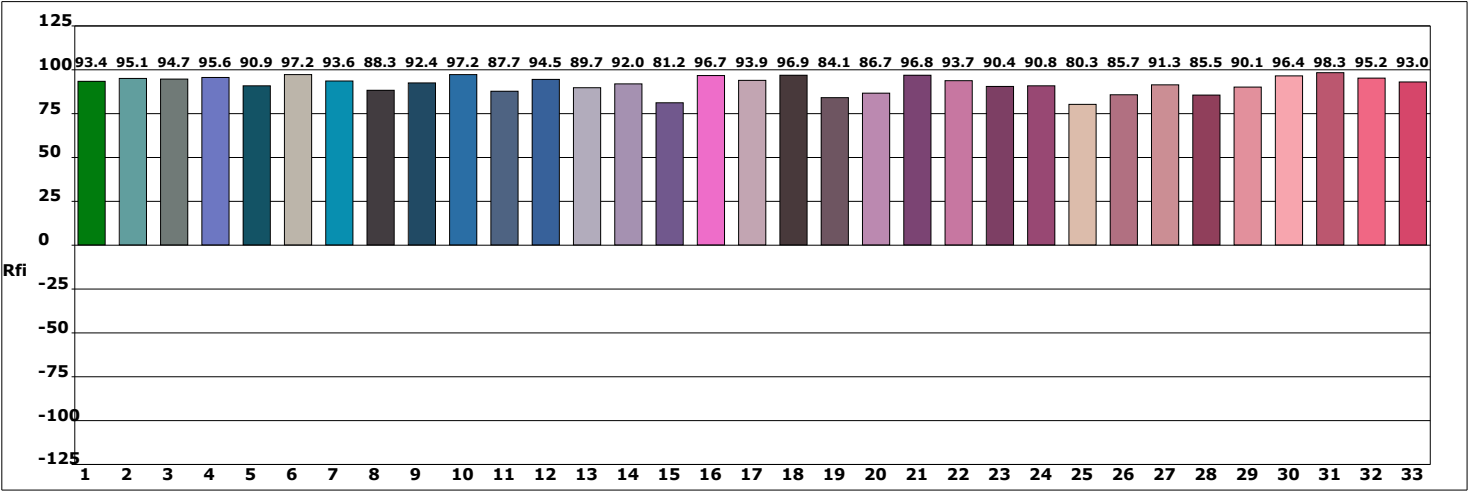
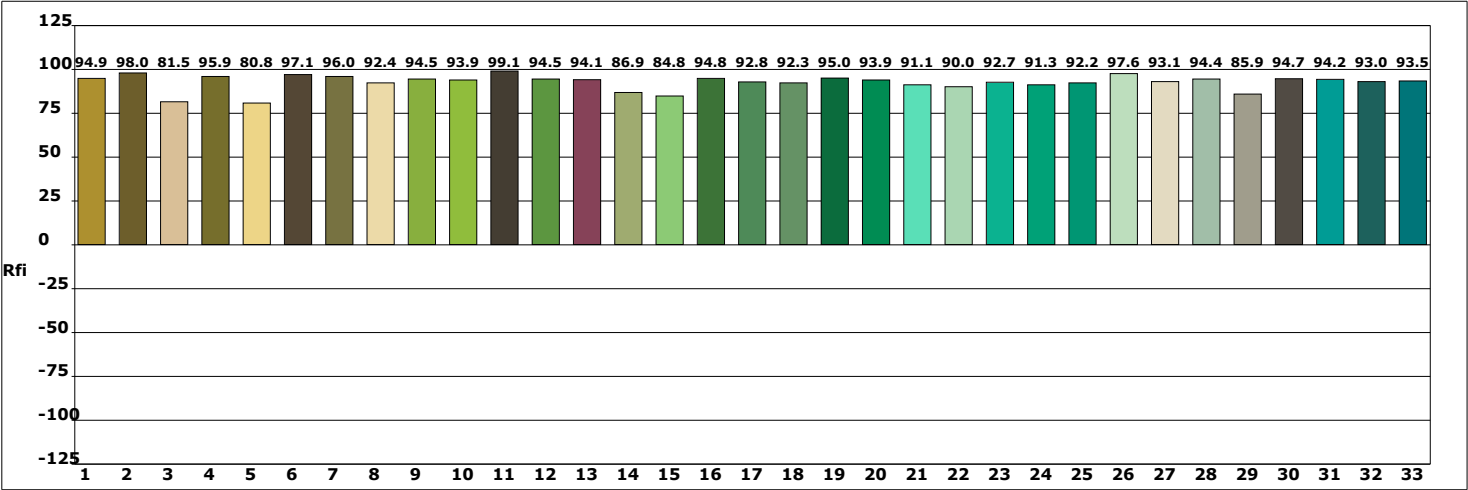
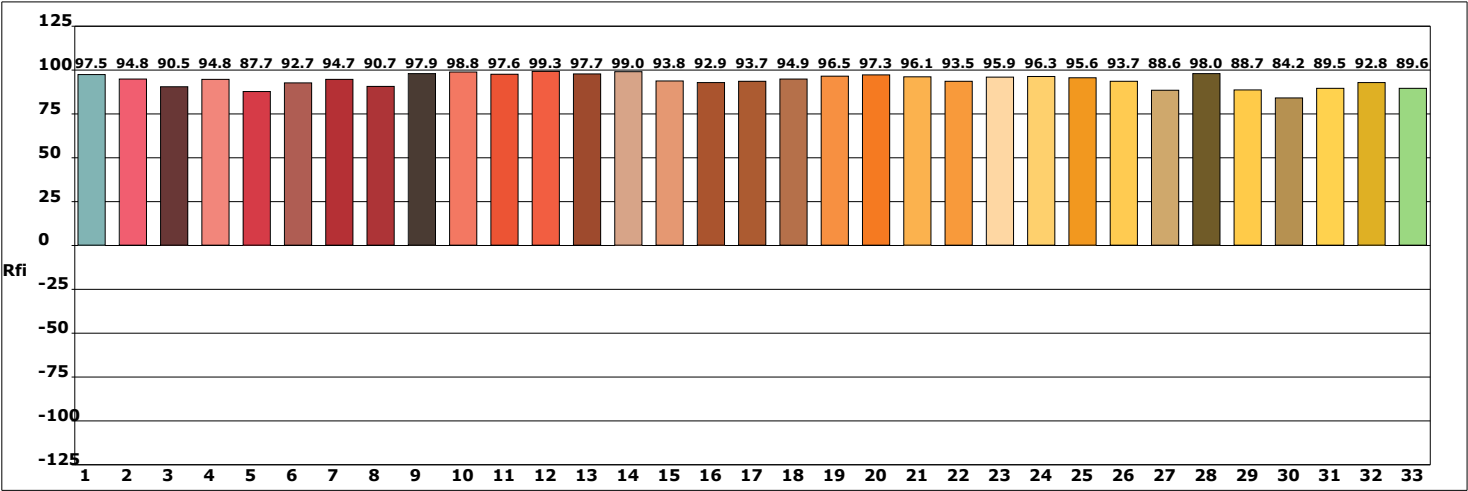


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

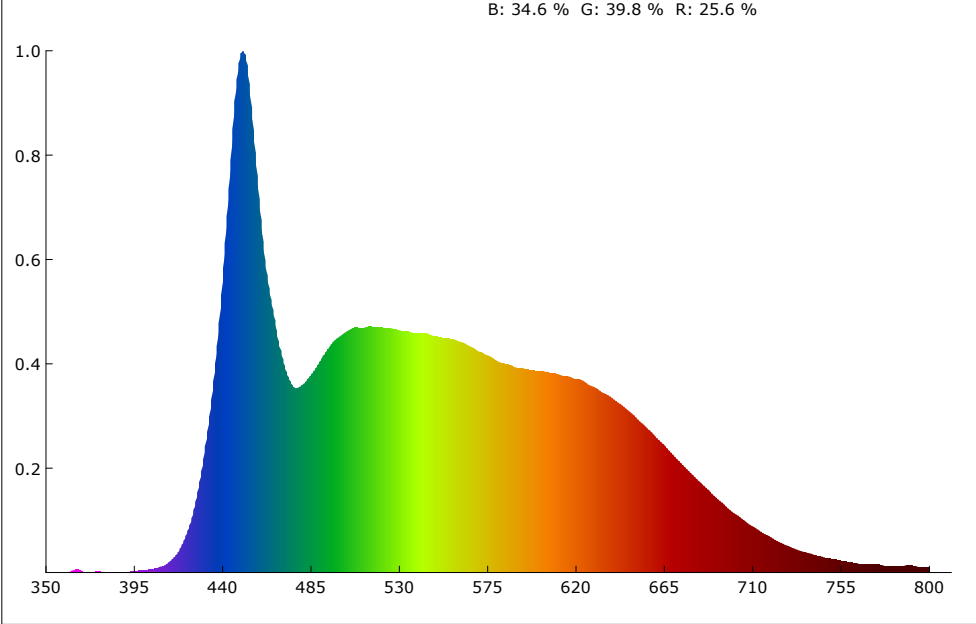
Manufacturer:
Test unit:
Date of observation: 10/21/23



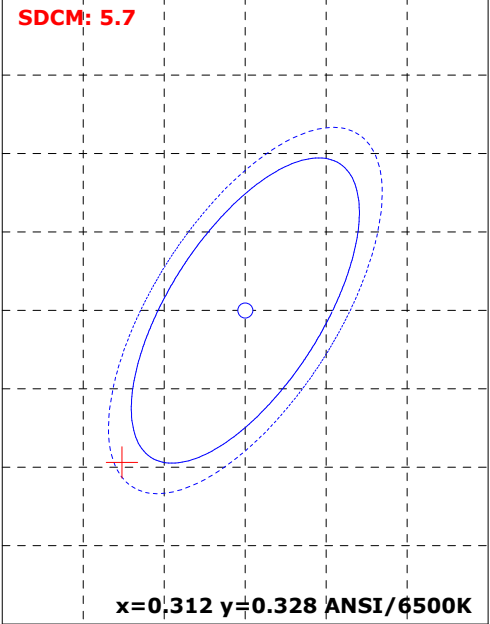
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/21/23

Spectrogram



SDCM



Color Parameter:

x: 0.3047	y: 0.3185	u: 0.1962	v: 0.3076	u': 0.1962	v': 0.4614
R_ratio: 25.6 %	G_ratio: 39.8 %	B_ratio: 34.6 %	RedRatio: 14.3 %	GreenRatio: 80.8 %	BlueRatio: 4.9 %
Ra: 95.8	AvgR: 93.7				
R1: 96.2	R2: 97.2	R3: 95.8	R4: 96.7	R5: 95.8	R6: 93.5
R7: 97.4	R8: 94.4				
R9: 83.7	R10: 92.7	R11: 96.3	R12: 74.9	R13: 97.4	R14: 97.8
R15: 96.0					
CCT: 7080 K	Flux: 9026.306 lm	PeakWave: 450.6 nm	SDCM: 5.7		
S/P: 2.5	CentralWave: 452.7 nm	DominantWave: 484.8 nm	CentroidWave: 547.9 nm		
HalfWidth: 27.1 nm	duv: 0.00190	purity: 10.9 %	CQS: 92.7		
LER(TM-30): 271.2	Ep: 33286.0 mw	Rg: 99.5	Rf: 91.6		
Red Ep: 8242.2 mw	Near red Ep: 1050.4 mw	Near infrared Ep: 77.9 mw			

Electrical parameters:

Effic: 49.3 Lm/W	Energy: 53.7	Effi: G	
U: 219.8 V	I: 1.214 A	P: 183.200 W	Pf: 0.686

Product model:

Product number:

Tester:

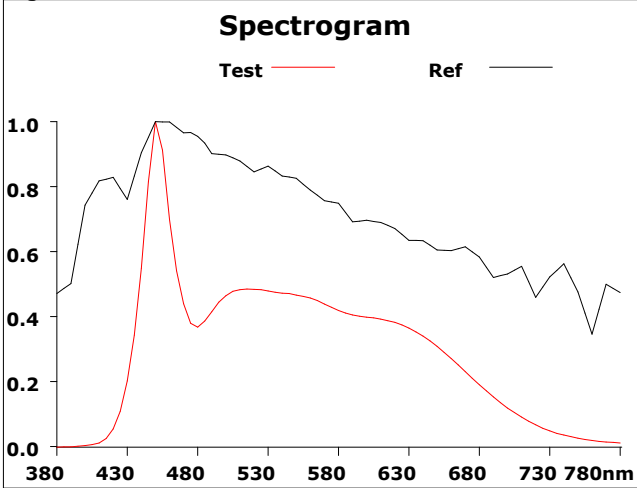
Remarks:

Manufacturer:

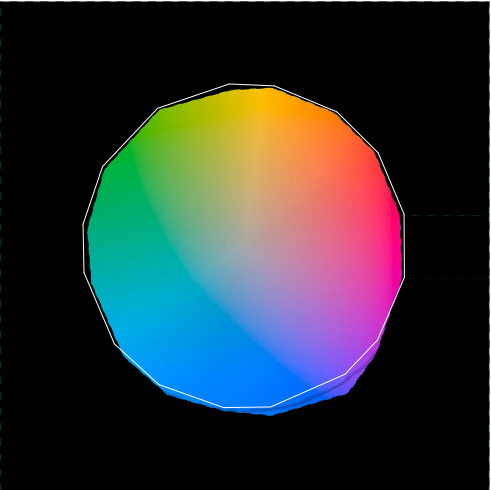
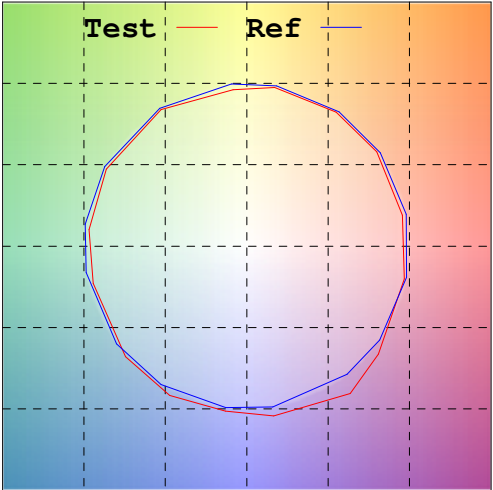
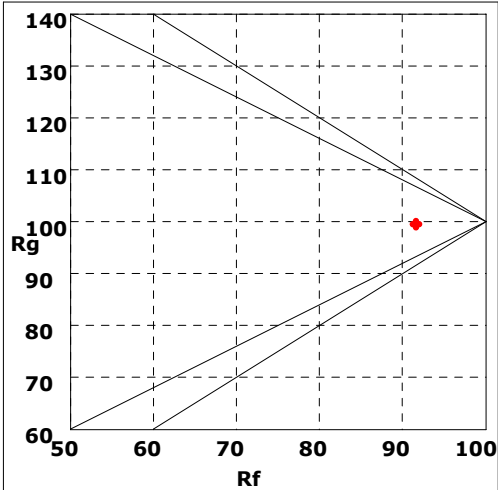
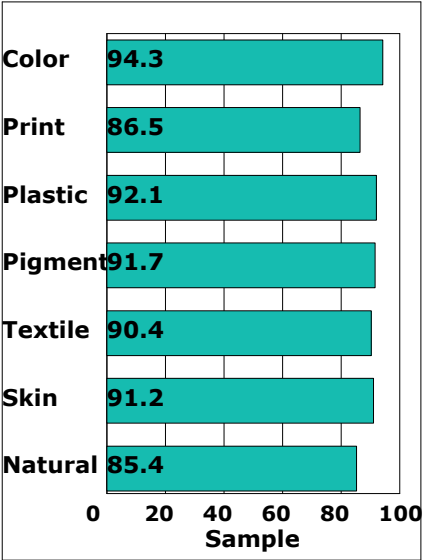
Test unit:

Date of observation: 10/21/23

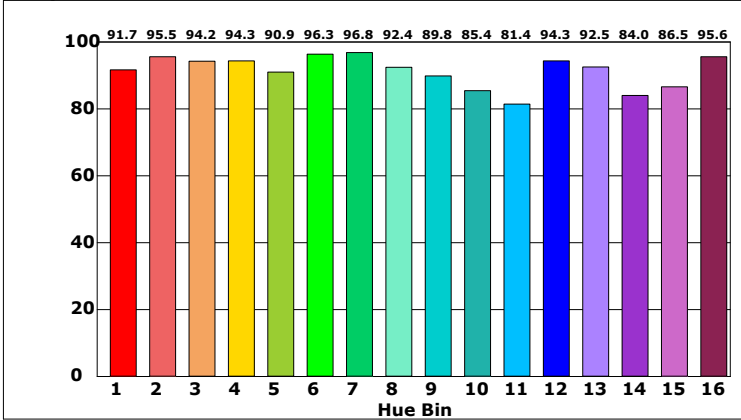
Rf: 91.6 CCT: 7080K u': 0.1962
Rg: 99.5 LER: 271.2 Duv: 0.00190 v': 0.4614



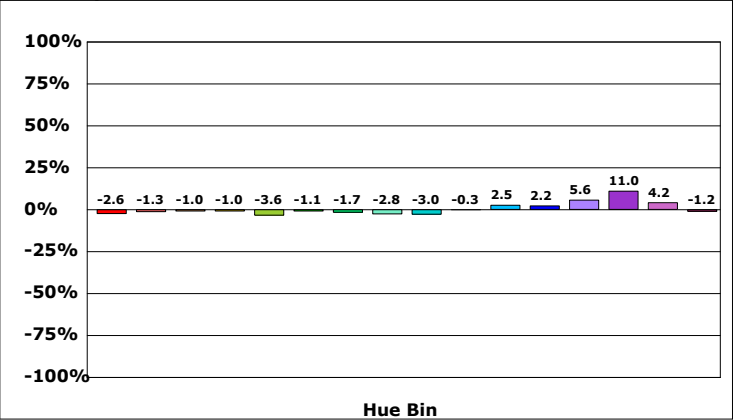
500			
Hue Bin	Rf	Chroma	Hue
1	91.7	-2.6%	-0.1%
2	95.5	-1.3%	1.7%
3	94.2	-1.0%	1.5%
4	94.3	-1.0%	0.9%
5	90.9	-3.6%	-0.3%
6	96.3	-1.1%	-0.1%
7	96.8	-1.7%	0.9%
8	92.4	-2.8%	2.8%
9	89.8	-3.0%	7.5%
10	85.4	-0.3%	9.6%
11	81.4	2.5%	8.1%
12	94.3	2.2%	0.3%
13	92.5	5.6%	-0.4%
14	84.0	11.0%	-4.8%
15	86.5	4.2%	-7.8%
16	95.6	-1.2%	-1.4%



Rf by Bue

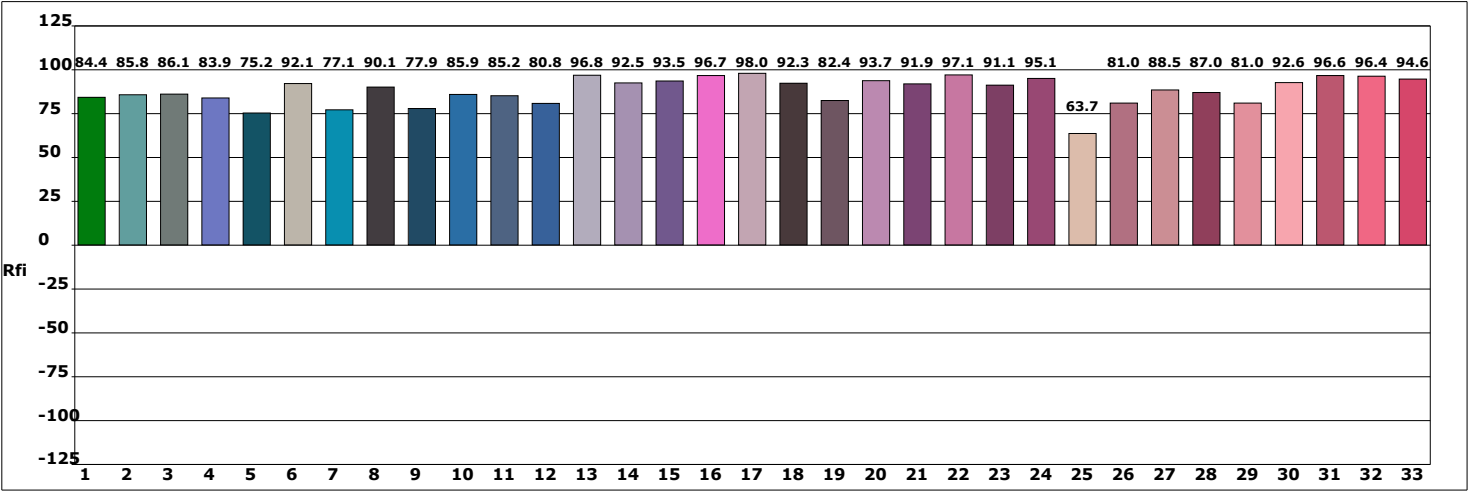
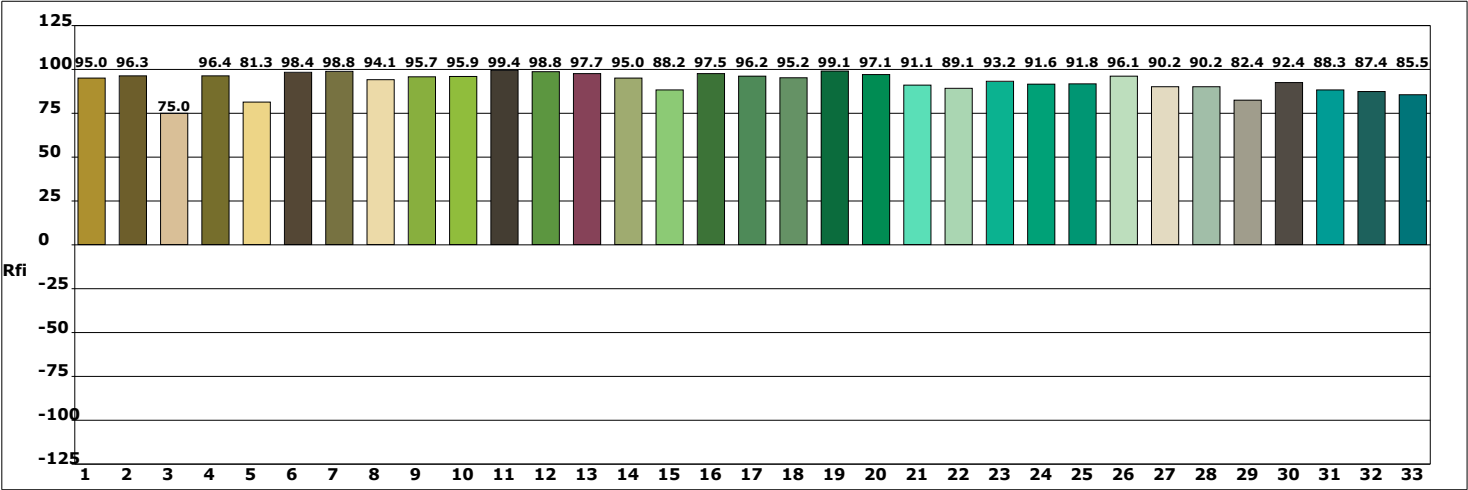
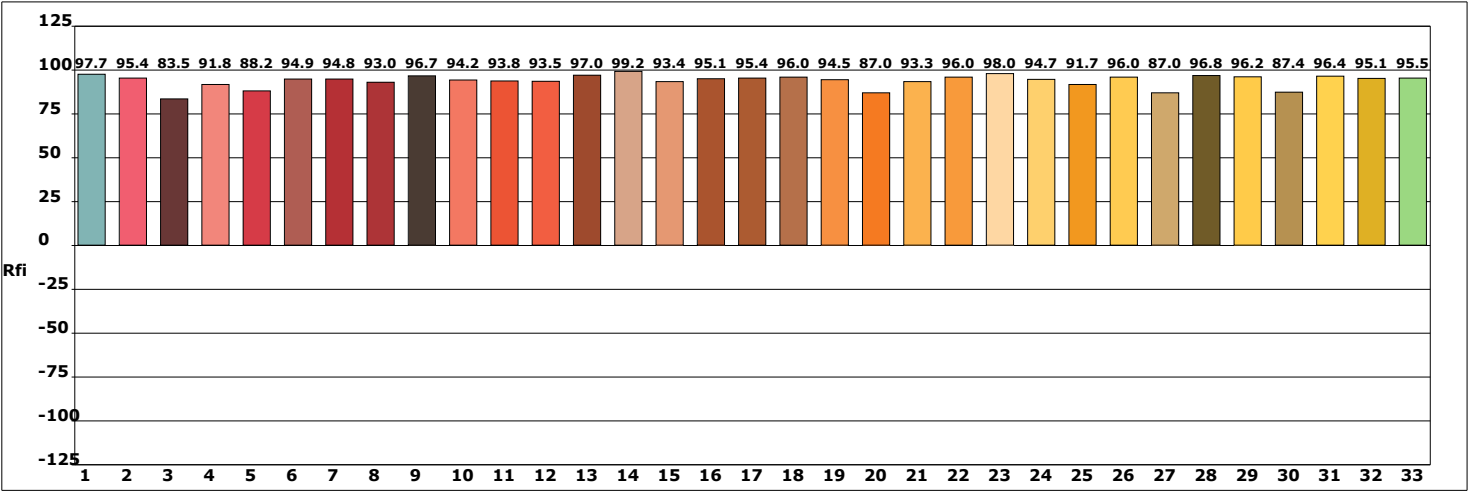


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

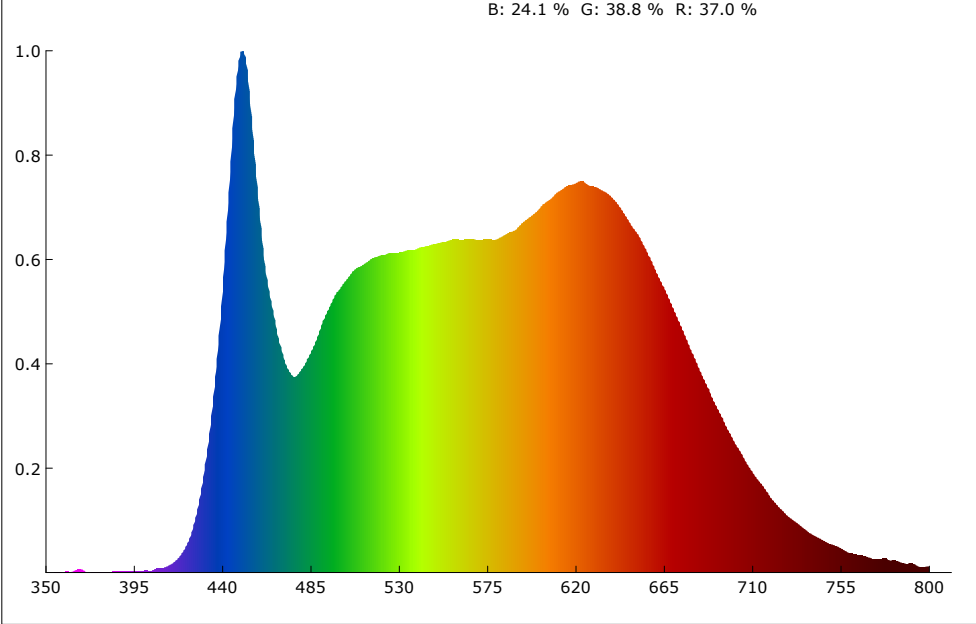
Manufacturer:
Test unit:
Date of observation: 10/21/23



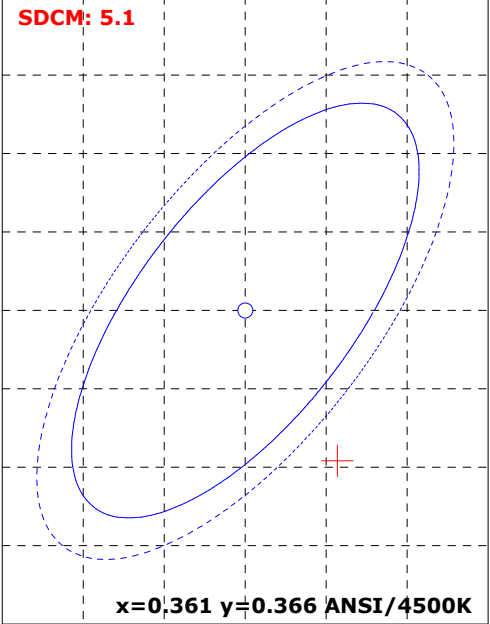
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/21/23

Spectrogram



SDCM



Color Parameter:

x: 0.3607 y: 0.3554 u: 0.2205 v: 0.3259 u': 0.2205 v': 0.4888
R_ratio: 37.0 % G_ratio: 38.8 % B_ratio: 24.1 % RedRatio: 19.1 % GreenRatio: 77.5 % BlueRatio: 3.4 %

Ra: 97.6 AvgR: 96.2
R1: 96.6 R2: 98.2 R3: 97.1 R4: 97.6 R5: 97.8 R6: 95.7 R7: 98.8 R8: 99.0
R9: 97.4 R10: 98.0 R11: 94.6 R12: 81.0 R13: 97.0 R14: 97.9 R15: 96.4

CCT: 4453 K Flux: 6762.773 lm PeakWave: 450.6 nm SDCM: 5.1
S/P: 2.0 CentralWave: 452.7 nm DominantWave: 580.7 nm CentroidWave: 571.1 nm
HalfWidth: 25.7 nm duv: -0.00402 purity: 14.9 % CQS: 90.5
LER(TM-30): 273.8 Ep: 24702.3 mw Rg: 101.8 Rf: 93.4
Red Ep: 8712.6 mw Near red Ep: 1114.7 mw Near infrared Ep: 53.0 mw

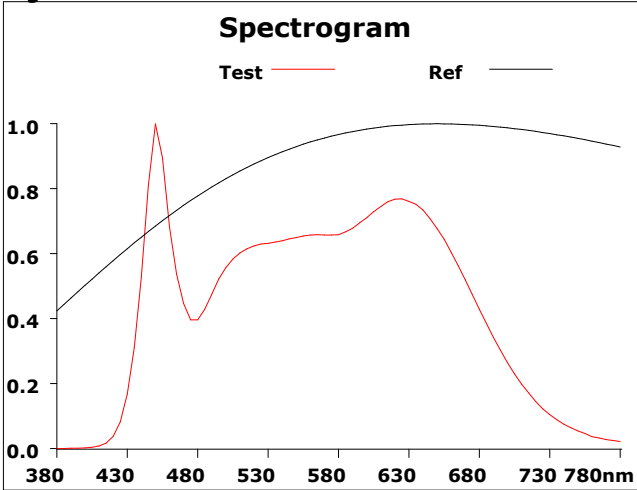
Electrical parameters:

Effic: 44.1 Lm/W Energy: 48.0 Effi: G
U: 220.0 V I: 1.034 A P: 153.400 W Pf: 0.674

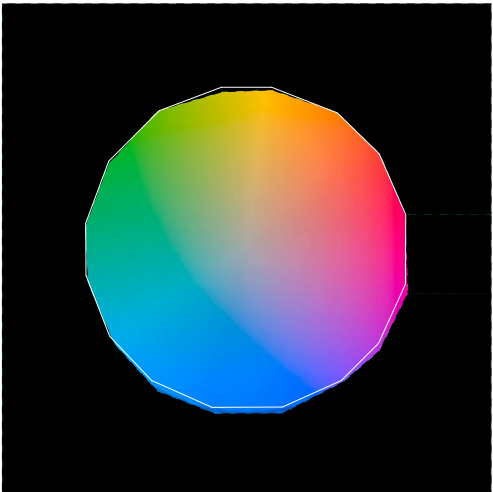
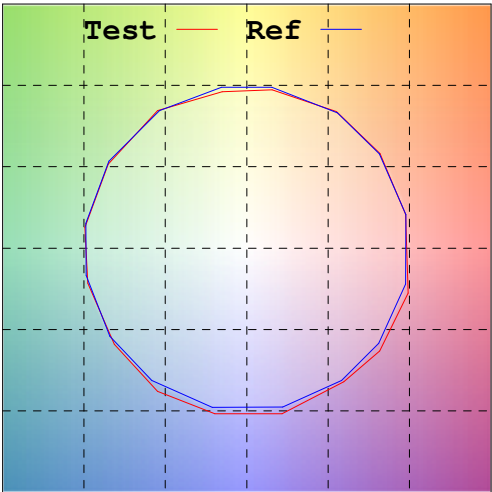
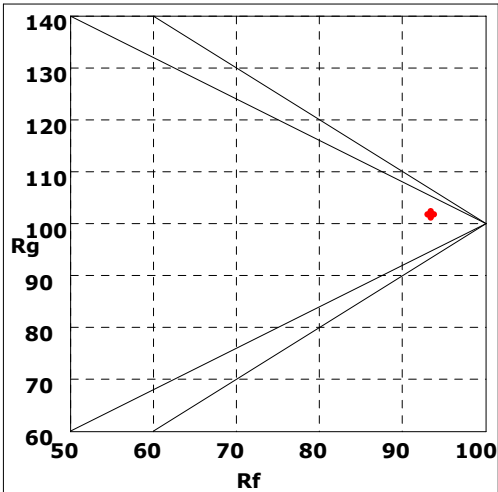
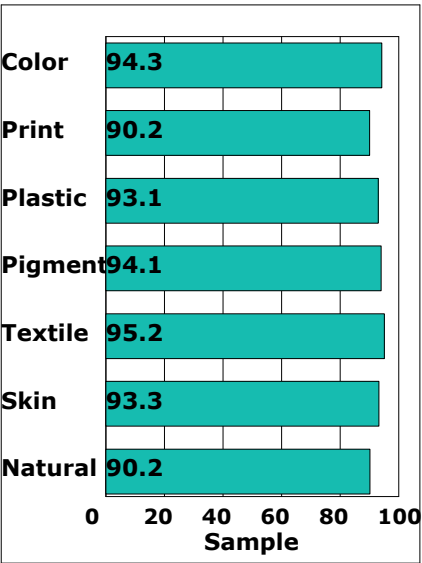
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/21/23

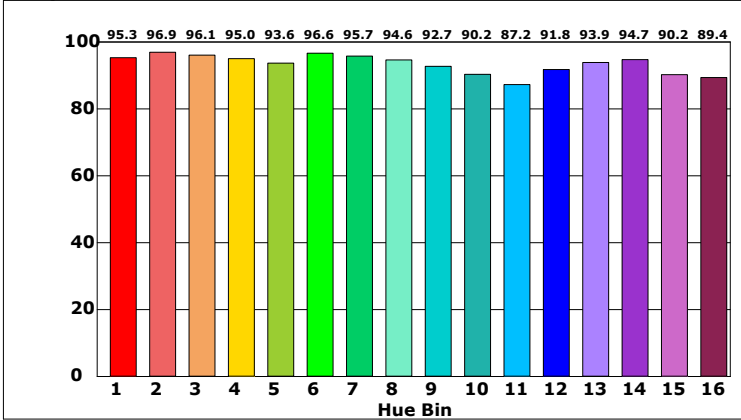
Rf: 93.4 CCT: 4453K u': 0.2205
Rg: 101.8 LER: 273.8 Duv: -0.00402 v': 0.4888



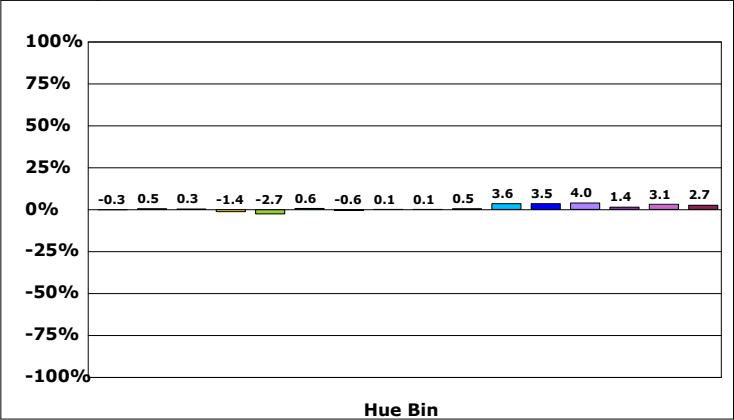
500			
Hue Bin	Rf	Chroma	Hue
1	95.3	-0.3%	0.2%
2	96.9	0.5%	-0.2%
3	96.1	0.3%	0.9%
4	95.0	-1.4%	-0.6%
5	93.6	-2.7%	0.1%
6	96.6	0.6%	1.0%
7	95.7	-0.6%	1.7%
8	94.6	0.1%	2.8%
9	92.7	0.1%	4.9%
10	90.2	0.5%	5.5%
11	87.2	3.6%	6.6%
12	91.8	3.5%	2.3%
13	93.9	4.0%	-1.1%
14	94.7	1.4%	0.7%
15	90.2	3.1%	-3.6%
16	89.4	2.7%	-5.2%



Rf by Bue

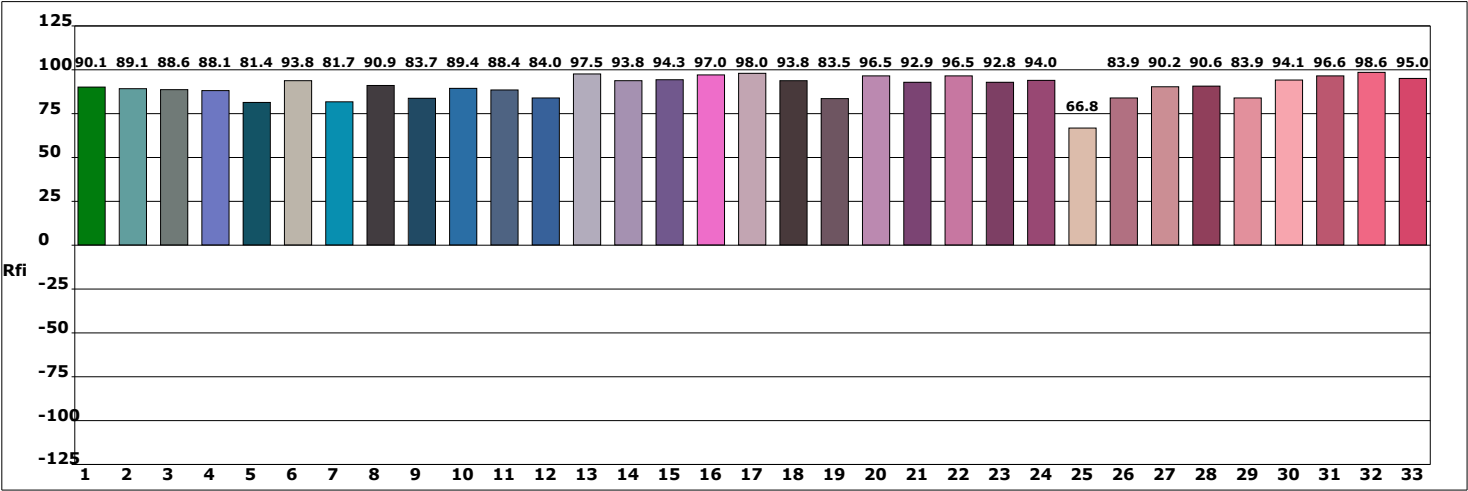
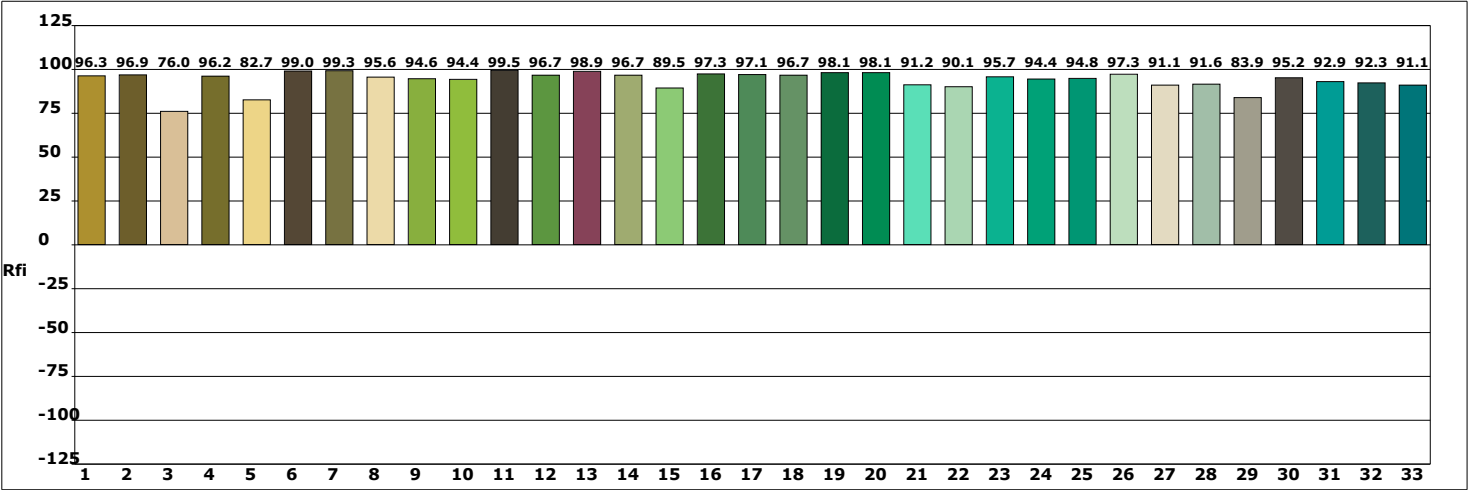
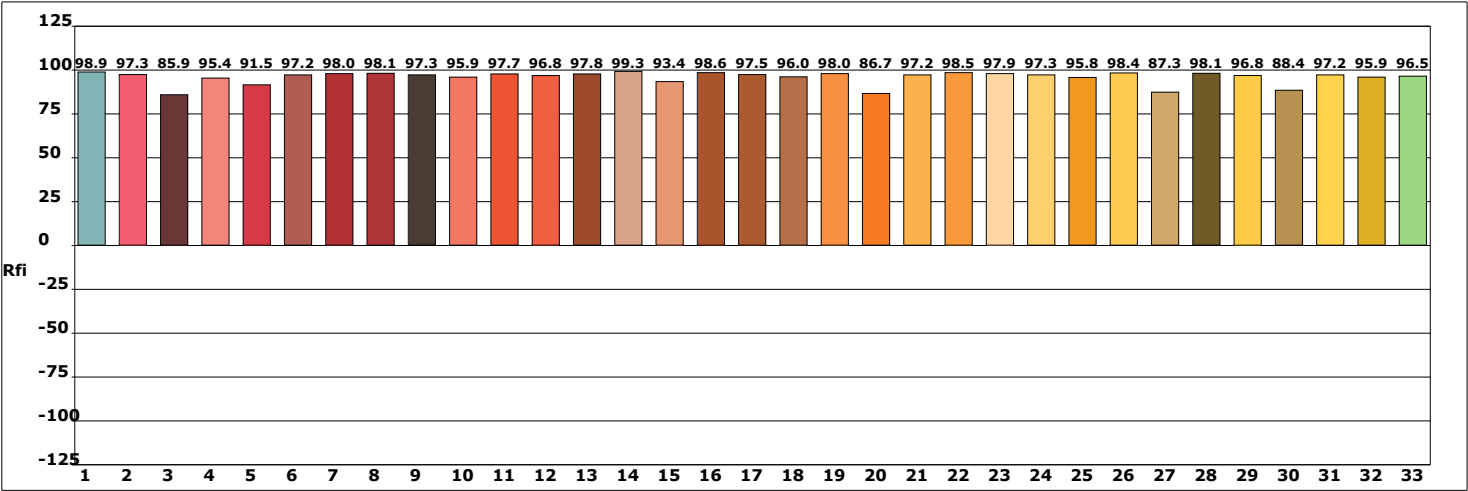


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/21/23



Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/21/23