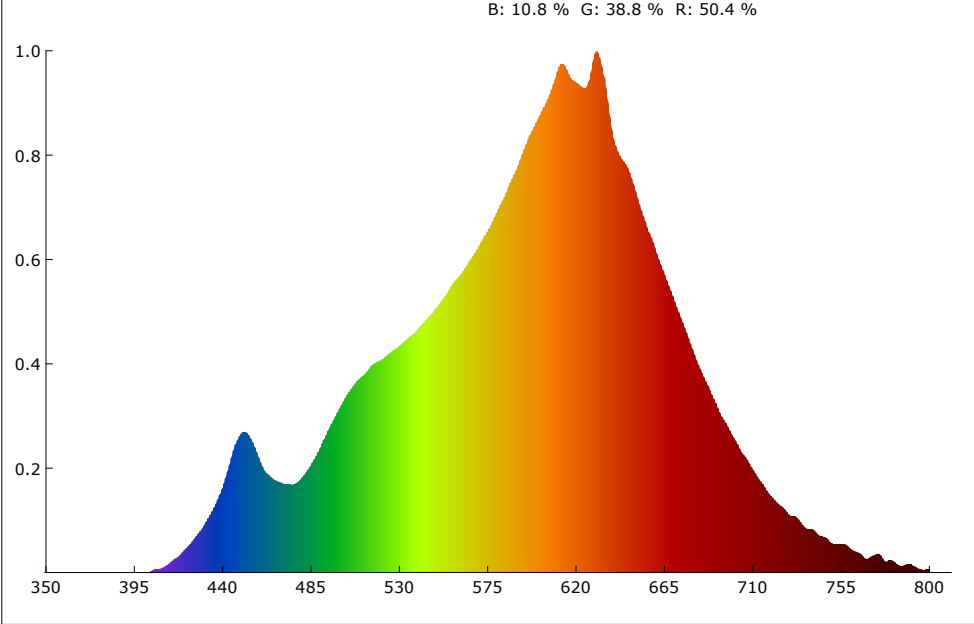
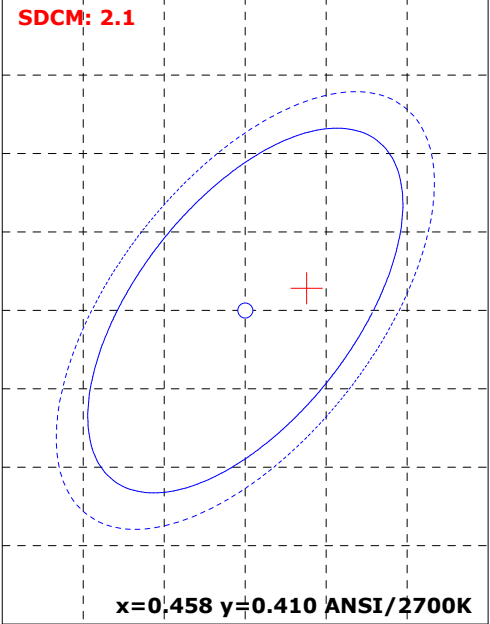


Spectrogram



SDCM



Color Parameter:

x: 0.4616	y: 0.4115	u: 0.2632	v: 0.3520	u': 0.2632	v': 0.5280
R_ratio: 50.4 %	G_ratio: 38.8 %	B_ratio: 10.8 %	RedRatio: 25.9 %	GreenRatio: 72.6 %	BlueRatio: 1.5 %
Ra: 92.6	AvgR: 90.4				
R1: 93.0	R2: 97.3	R3: 98.2	R4: 93.9	R5: 93.8	R6: 97.7
R7: 89.7	R8: 77.5	R9: 51.7	R10: 93.8	R11: 96.5	R12: 92.4
R13: 94.3	R14: 99.7	R15: 87.0			
CCT: 2683 K	Flux: 355.136 lm	PeakWave: 630.5 nm	SDCM: 2.1		
S/P: 1.3	CentralWave: 610.1 nm	DominantWave: 584.2 nm	CentroidWave: 597.1 nm		
HalfWidth: 123.8 nm	duv: 0.00022	purity: 62.1 %	CQS: 88.4		
LER(TM-30): 291.6	Ep: 1217.8 mw	Rg: 98.6	Rf: 92.2		
Red Ep: 579.3 mw	Near red Ep: 66.8 mw	Near infrared Ep: 2.4 mw			

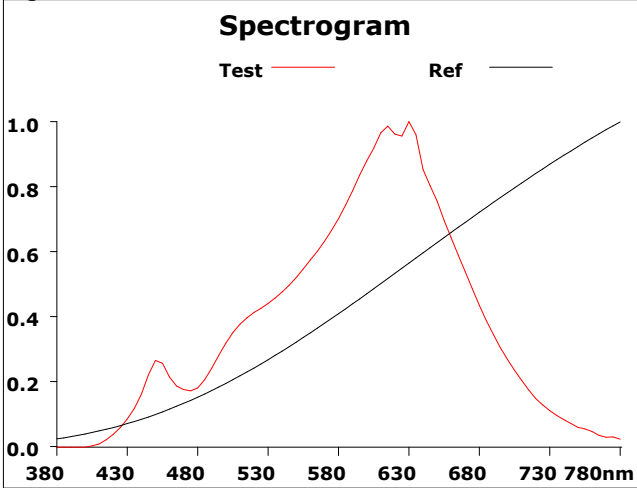
Electrical parameters:

Effic: 35.9 lm/W	Energy: 39.1	Effi: G	
U: 221.3 V	I: 0.048 A	P: 9.900 W	Pf: 0.919

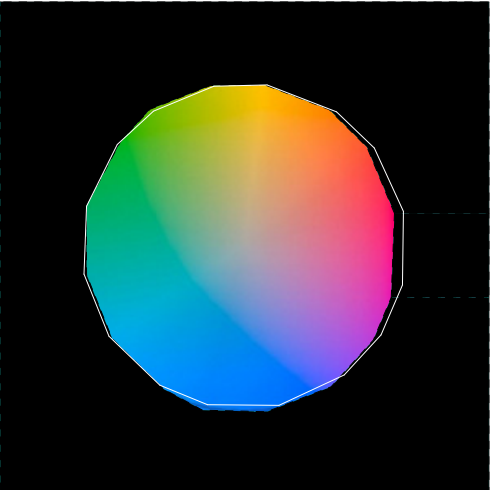
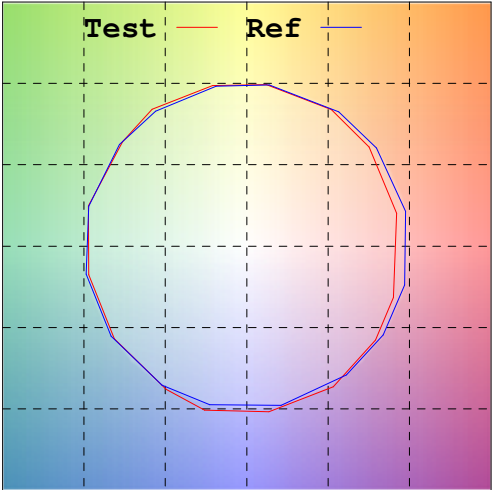
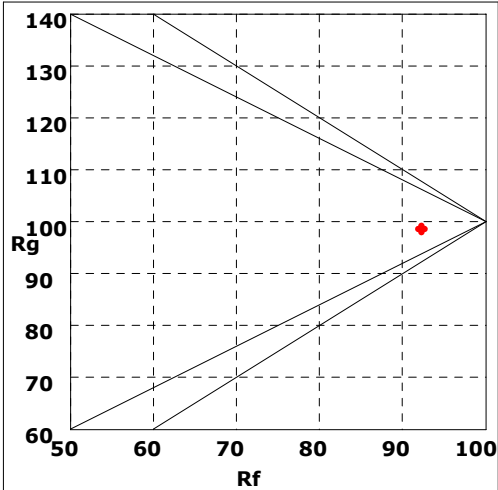
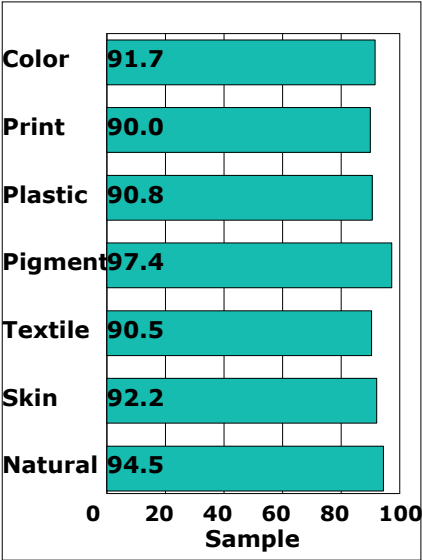
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/31/23

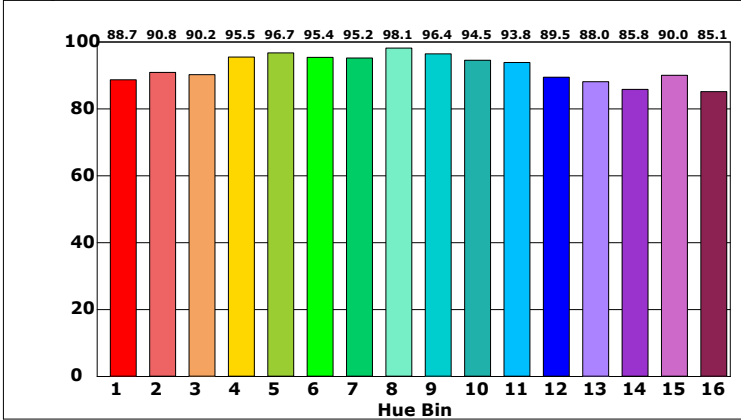
Rf: 92.2 CCT: 2683K u': 0.2632
Rg: 98.6 LER: 291.6 Duv: 0.00022 v': 0.5280



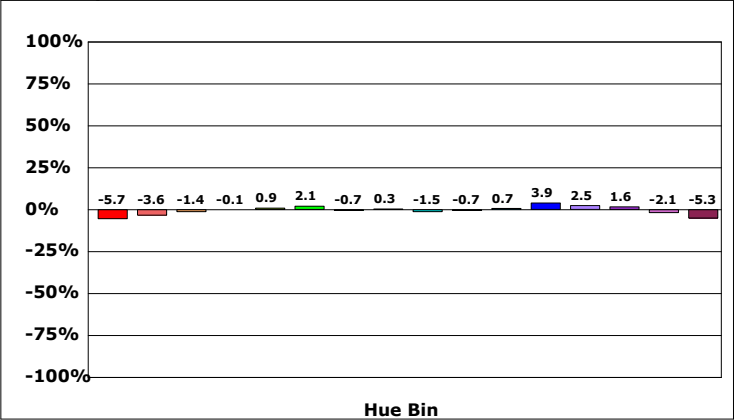
500			
Hue Bin	Rf	Chroma	Hue
1	88.7	-5.7%	-0.1%
2	90.8	-3.6%	3.0%
3	90.2	-1.4%	4.4%
4	95.5	-0.1%	1.8%
5	96.7	0.9%	2.1%
6	95.4	2.1%	1.1%
7	95.2	-0.7%	-2.4%
8	98.1	0.3%	-0.1%
9	96.4	-1.5%	0.6%
10	94.5	-0.7%	2.4%
11	93.8	0.7%	3.5%
12	89.5	3.9%	-2.5%
13	88.0	2.5%	-8.0%
14	85.8	1.6%	-10.6%
15	90.0	-2.1%	-5.2%
16	85.1	-5.3%	-8.9%



Rf by Bue

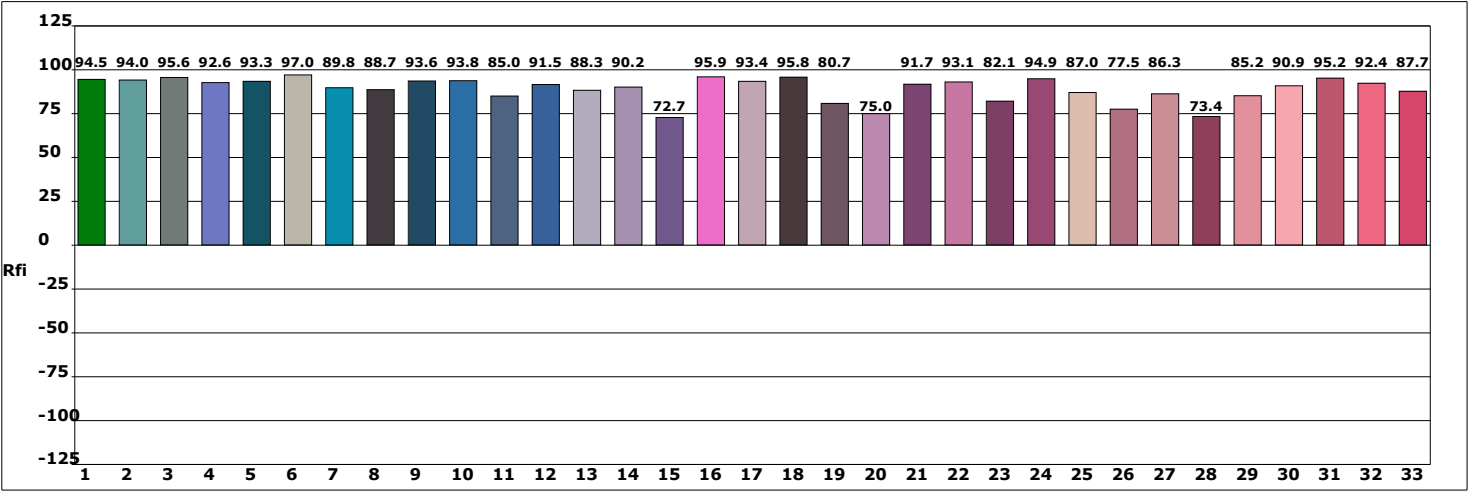
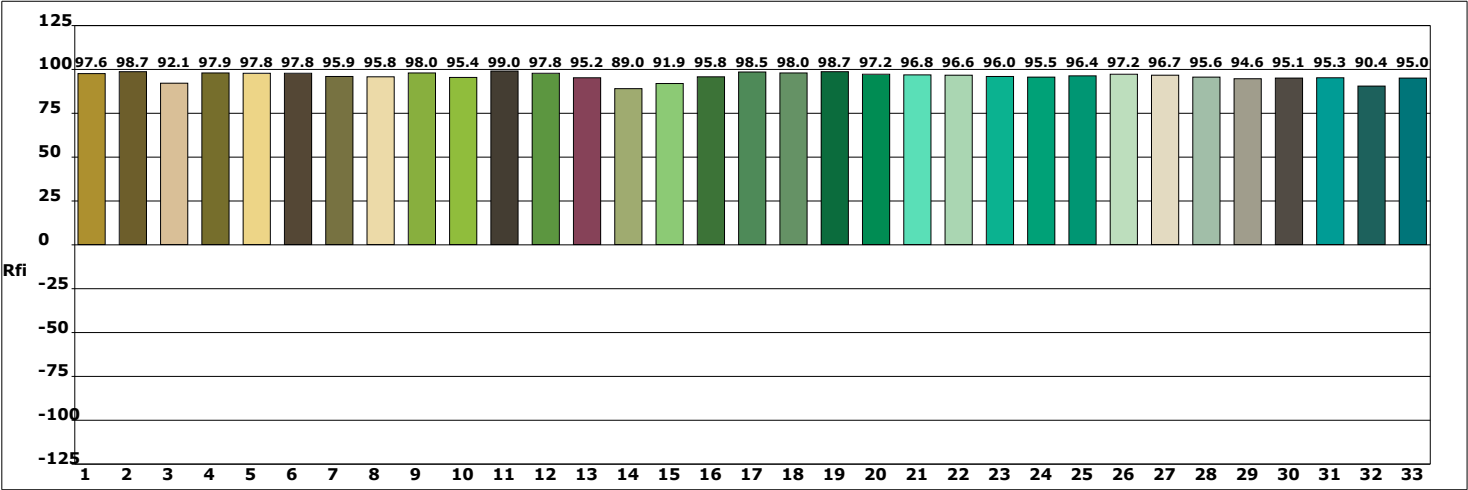
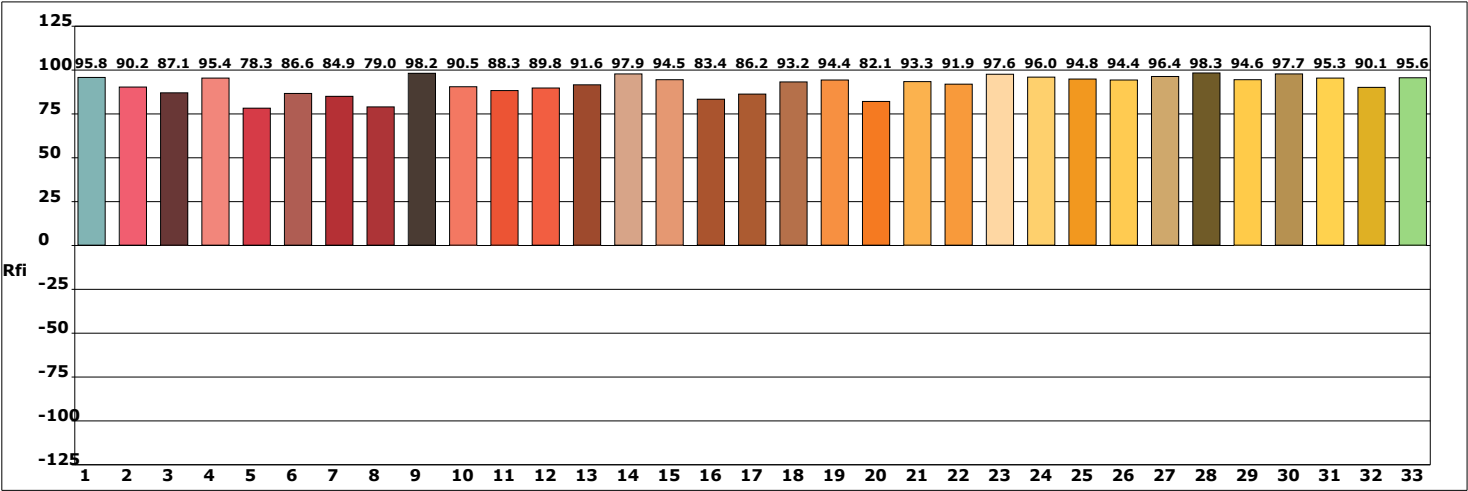


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

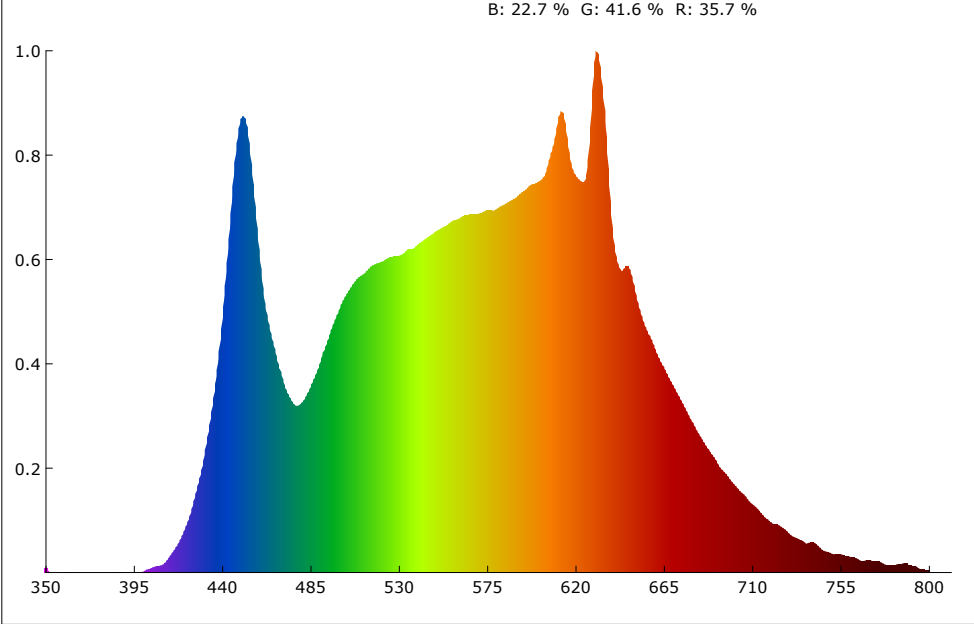
Manufacturer:
Test unit:
Date of observation: 10/31/23



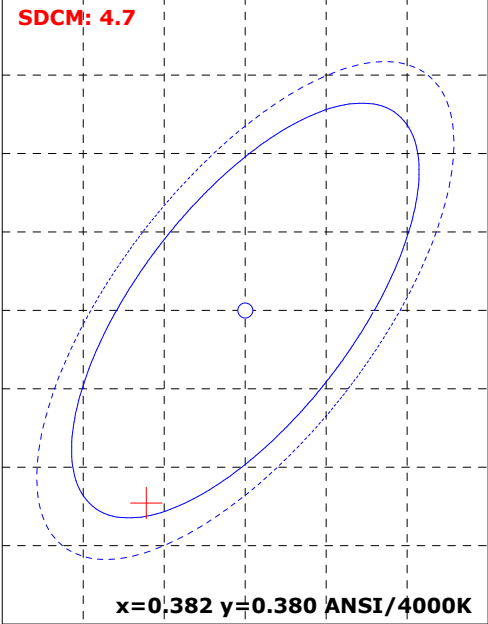
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/31/23

Spectrogram



SDCM



Color Parameter:

x: 0.3757	y: 0.3674	u: 0.2257	v: 0.3311	u': 0.2257	v': 0.4966
R_ratio: 35.7 %	G_ratio: 41.6 %	B_ratio: 22.7 %	RedRatio: 19.7 %	GreenRatio: 77.5 %	BlueRatio: 2.9 %
Ra: 95.4	AvgR: 93.2				
R1: 96.9	R2: 97.5	R3: 96.4	R4: 96.2	R5: 96.6	R6: 95.3
R7: 94.8	R8: 89.6	R9: 73.4	R10: 93.2	R11: 96.0	R12: 81.3
R13: 97.4	R14: 97.5	R15: 95.2			
CCT: 4066 K	Flux: 420.231 lm	PeakWave: 631.5 nm	SDCM: 4.7		
S/P: 1.8	CentralWave: 576.0 nm	DominantWave: 580.8 nm	CentroidWave: 567.8 nm		
HalfWidth: 153.2 nm	duv: -0.00304	purity: 23.0 %	CQS: 88.0		
LER(TM-30): 298.1	Ep: 1409.8 mw	Rg: 100.7	Rf: 91.8		
Red Ep: 485.6 mw	Near red Ep: 46.8 mw	Near infrared Ep: 2.3 mw			

Electrical parameters:

Effic: 42.3 Lm/W	Energy: 46.1	Effi: G	
U: 221.2 V	I: 0.048 A	P: 9.930 W	Pf: 0.919

Product model:

Product number:

Tester:

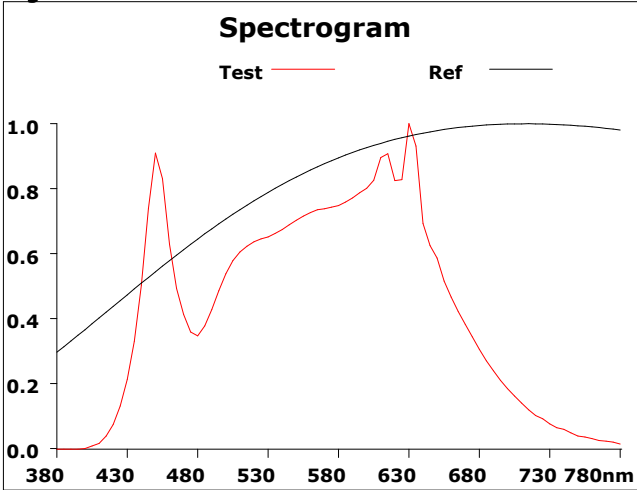
Remarks:

Manufacturer:

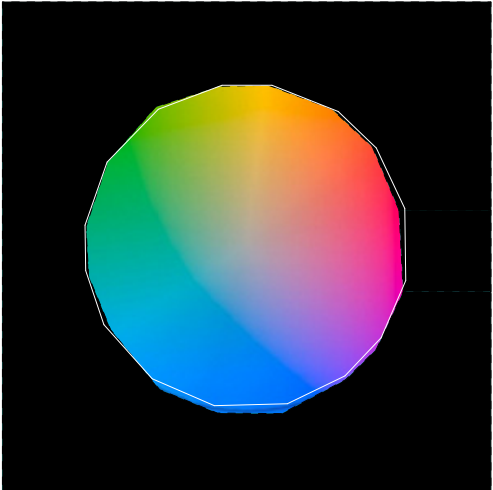
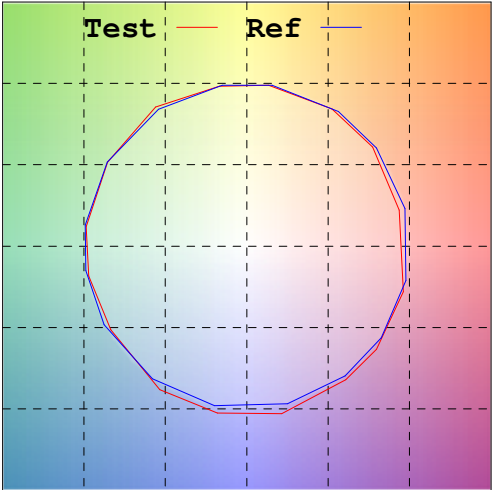
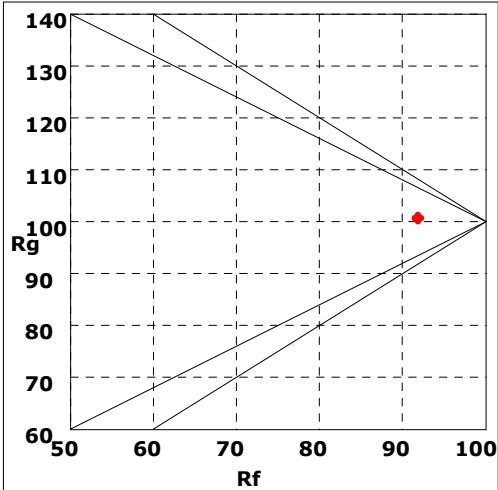
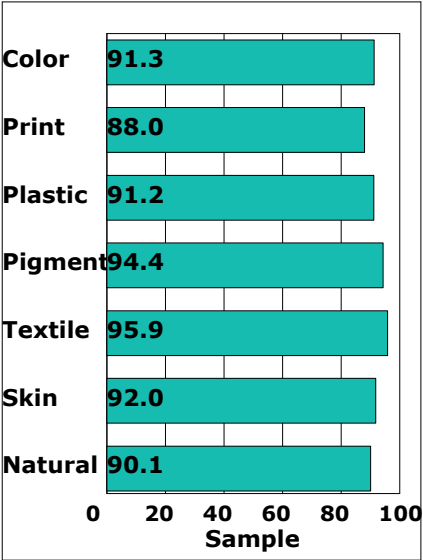
Test unit:

Date of observation: 10/31/23

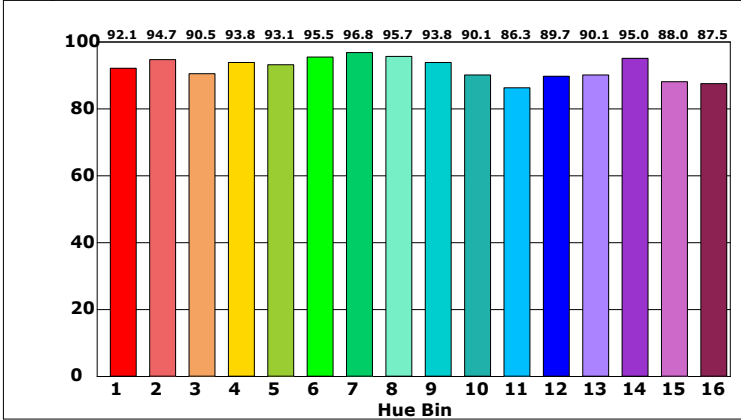
Rf: 91.8 CCT: 4066K u': 0.2257
Rg: 100.7 LER: 298.1 Duv: -0.00304 v': 0.4966



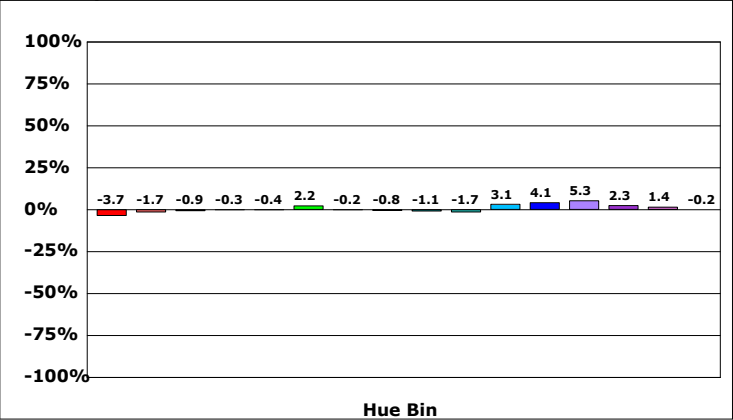
500			
Hue Bin	Rf	Chroma	Hue
1	92.1	-3.7%	-0.3%
2	94.7	-1.7%	1.7%
3	90.5	-0.9%	4.2%
4	93.8	-0.3%	2.2%
5	93.1	-0.4%	1.8%
6	95.5	2.2%	0.7%
7	96.8	-0.2%	-0.1%
8	95.7	-0.8%	0.9%
9	93.8	-1.1%	3.6%
10	90.1	-1.7%	5.1%
11	86.3	3.1%	7.5%
12	89.7	4.1%	2.6%
13	90.1	5.3%	-4.6%
14	95.0	2.3%	-1.0%
15	88.0	1.4%	-7.6%
16	87.5	-0.2%	-7.0%



Rf by Bue

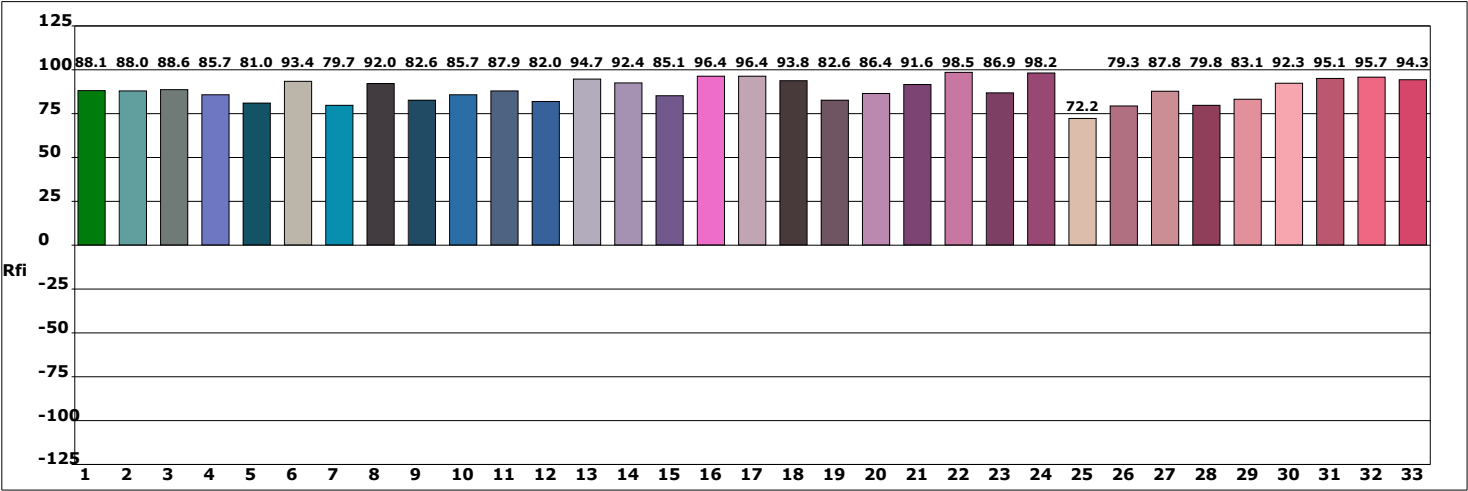
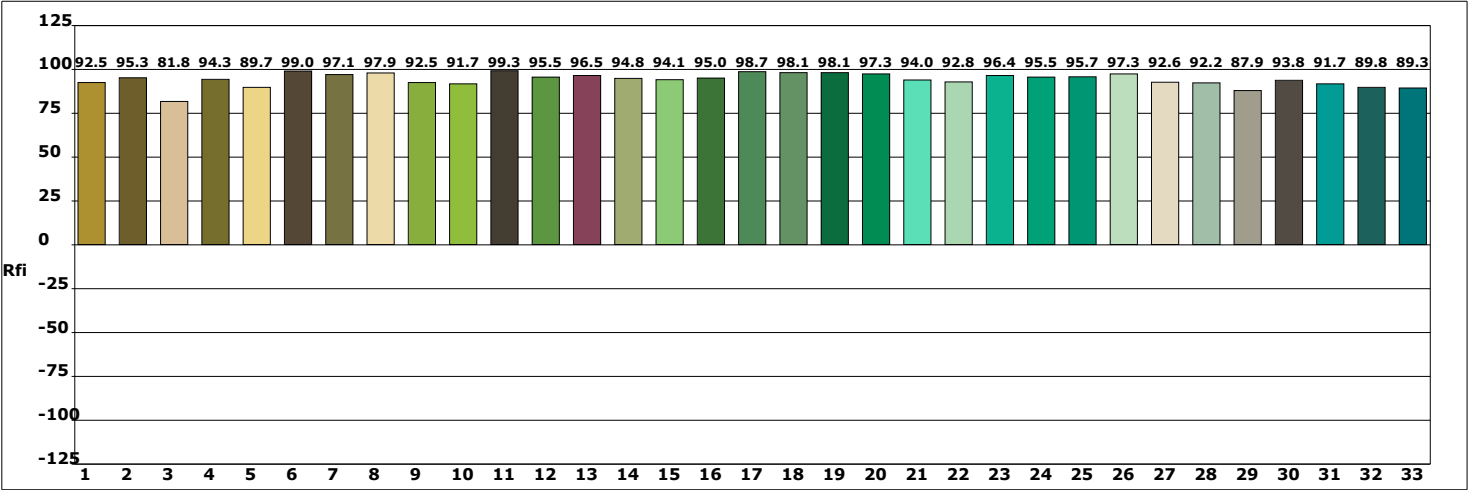
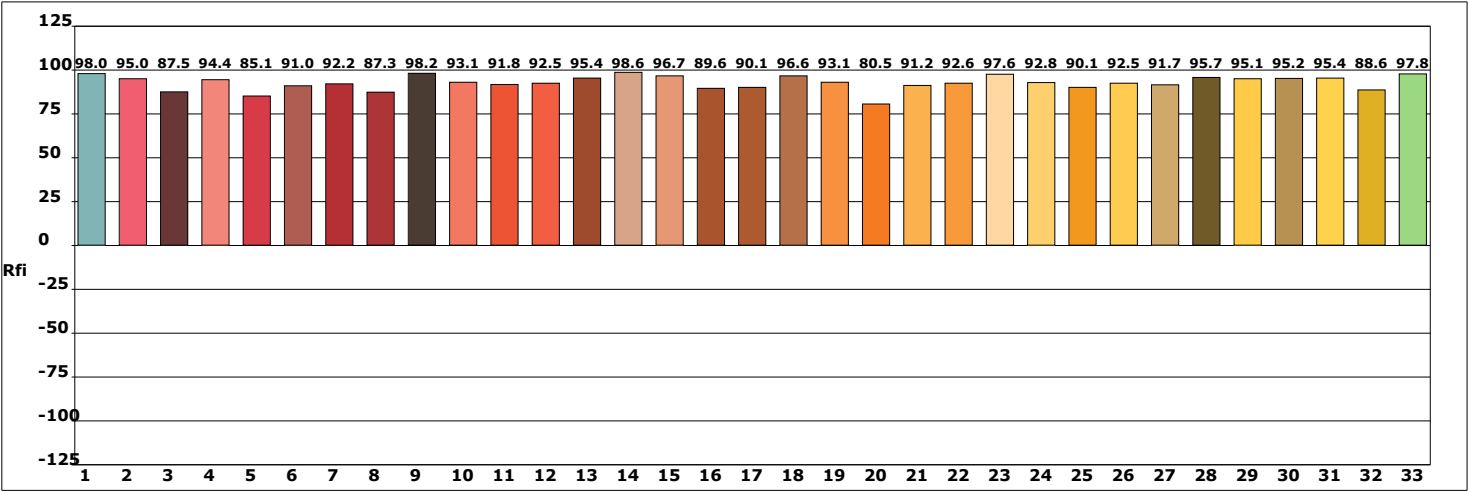


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

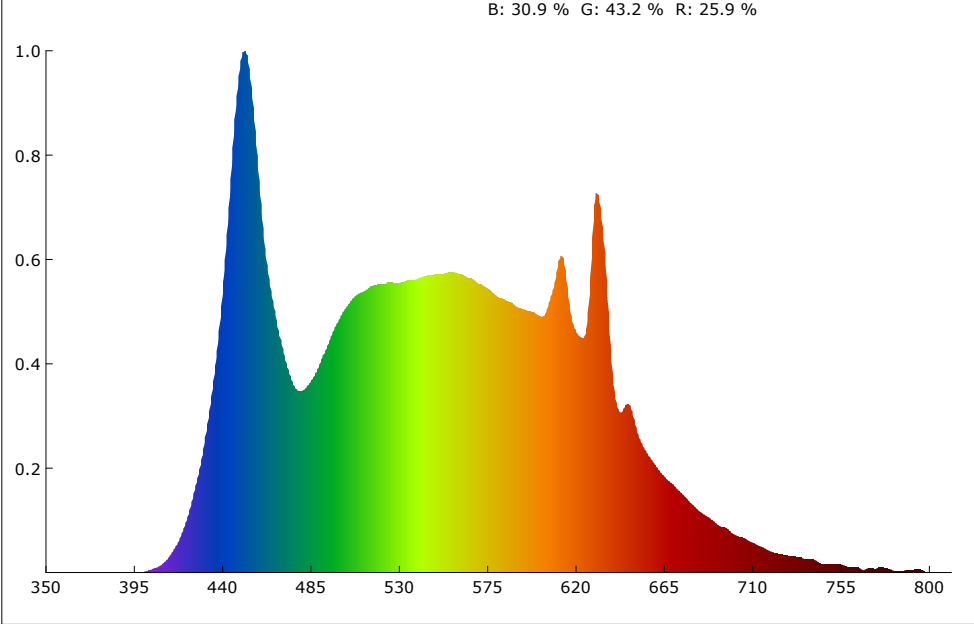
Manufacturer:
Test unit:
Date of observation: 10/31/23



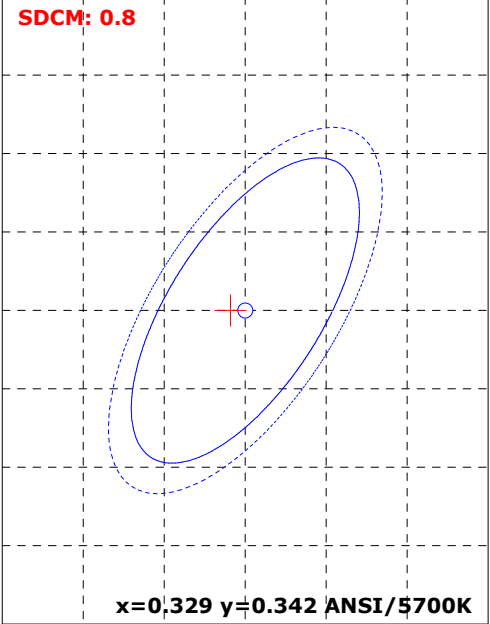
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/31/23

Spectrogram



SDCM



Color Parameter:

x: 0.3278	y: 0.3417	u: 0.2035	v: 0.3181	u': 0.2035	v': 0.4772
R_ratio: 25.9 %	G_ratio: 43.2 %	B_ratio: 30.9 %	RedRatio: 15.5 %	GreenRatio: 80.5 %	BlueRatio: 3.9 %
Ra: 92.7	AvgR: 89.4				
R1: 92.9	R2: 94.3	R3: 94.1	R4: 93.8	R5: 93.1	R6: 92.0
R7: 94.7	R8: 87.3				
R9: 63.1	R10: 85.8	R11: 93.8	R12: 74.6	R13: 93.3	R14: 96.5
R15: 91.2					
CCT: 5705 K	Flux: 448.082 lm	PeakWave: 451.6 nm	SDCM: 0.8		
S/P: 2.2	CentralWave: 453.3 nm	DominantWave: 513.4 nm	CentroidWave: 547.2 nm		
HalfWidth: 27.1 nm	duv: 0.00237	purity: 1.8 %	CQS: 91.0		
LER(TM-30): 302.0	Ep: 1483.5 mw	Rg: 99.0	Rf: 90.0		
Red Ep: 376.5 mw	Near red Ep: 26.4 mw	Near infrared Ep: 1.1 mw			

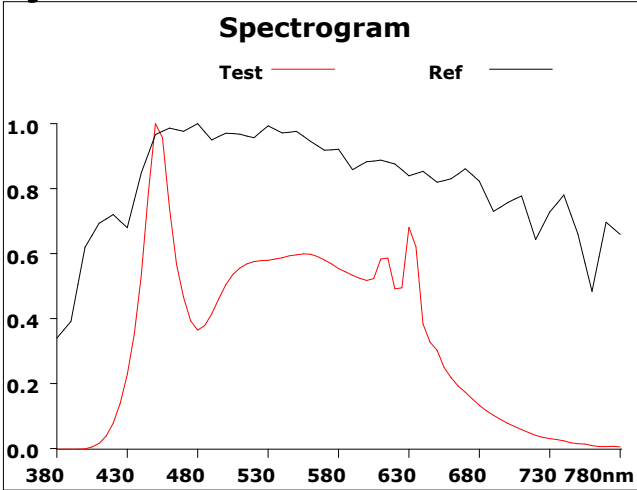
Electrical parameters:

Effic: 45.6 Lm/W	Energy: 49.6	Effi: G	
U: 221.2 V	I: 0.048 A	P: 9.830 W	Pf: 0.918

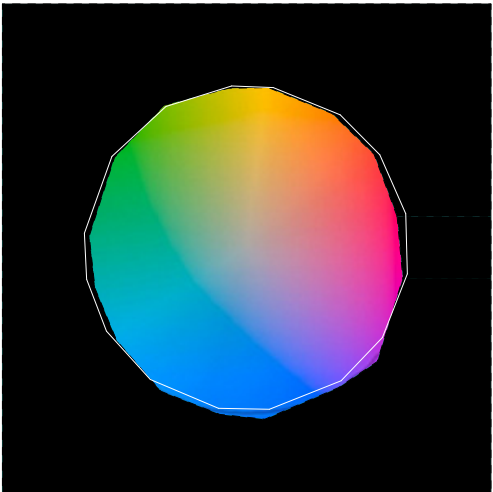
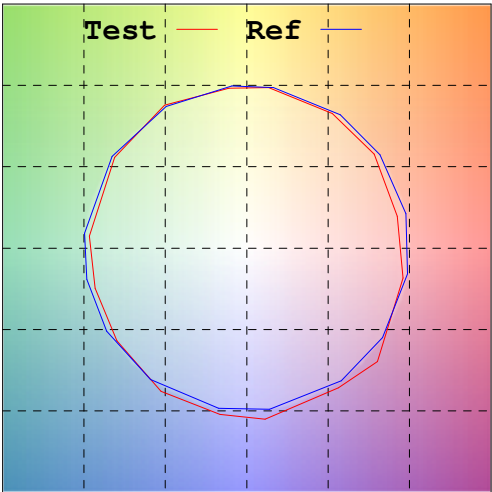
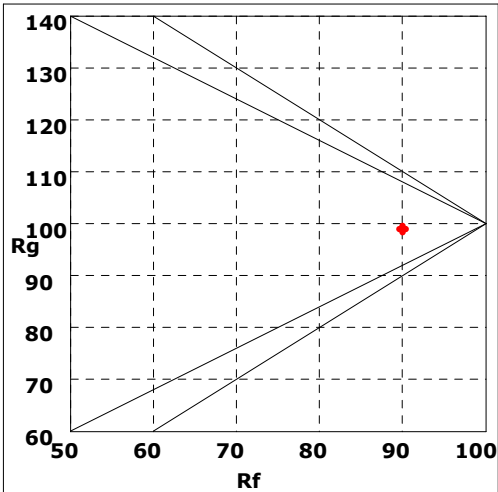
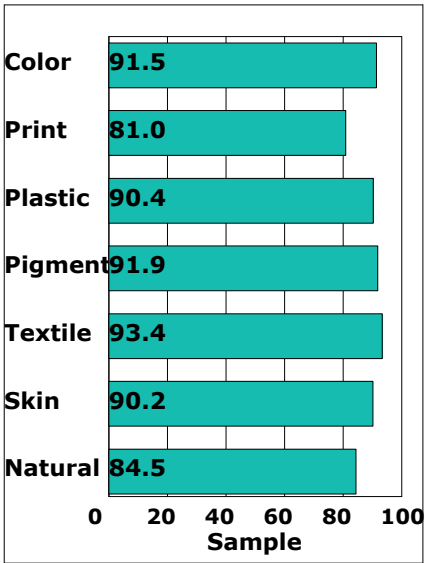
Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/31/23

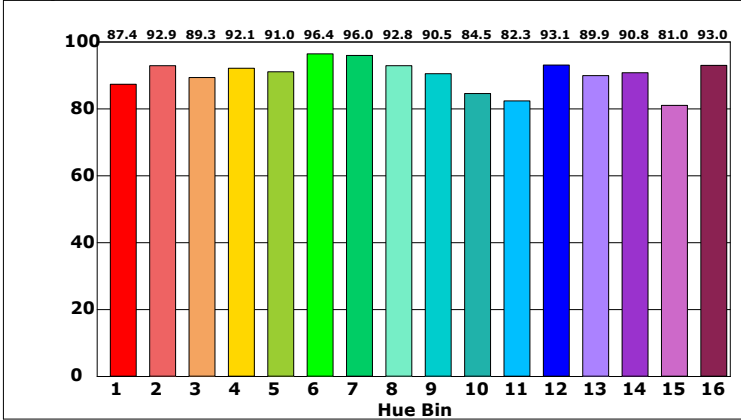
Rf: 90.0 CCT: 5705K u': 0.2035
Rg: 99.0 LER: 302.0 Duv: 0.00237 v': 0.4772



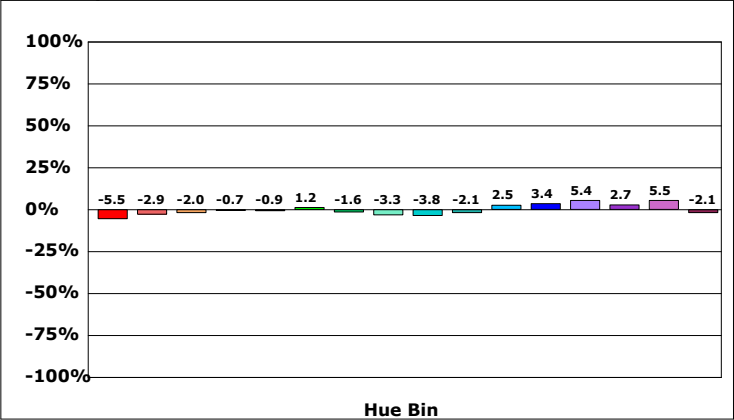
500			
Hue Bin	Rf	Chroma	Hue
1	87.4	-5.5%	-0.5%
2	92.9	-2.9%	2.4%
3	89.3	-2.0%	4.6%
4	92.1	-0.7%	2.9%
5	91.0	-0.9%	2.0%
6	96.4	1.2%	0.5%
7	96.0	-1.6%	-0.4%
8	92.8	-3.3%	1.2%
9	90.5	-3.8%	6.3%
10	84.5	-2.1%	8.4%
11	82.3	2.5%	9.4%
12	93.1	3.4%	1.6%
13	89.9	5.4%	-3.9%
14	90.8	2.7%	-3.8%
15	81.0	5.5%	-14.0%
16	93.0	-2.1%	-2.9%



Rf by Bue

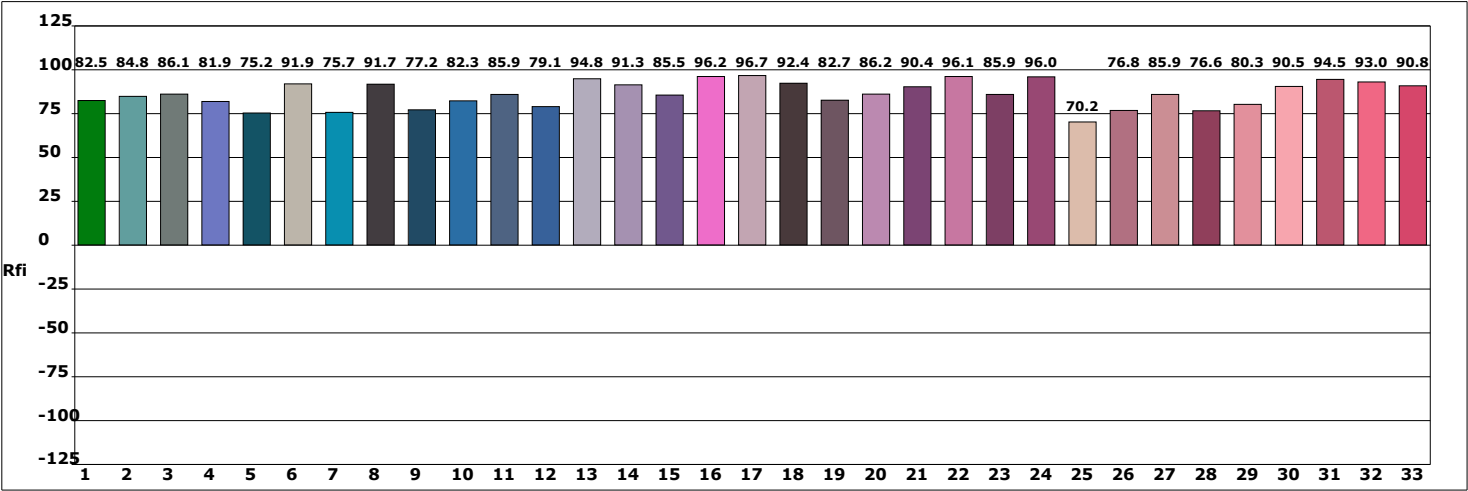
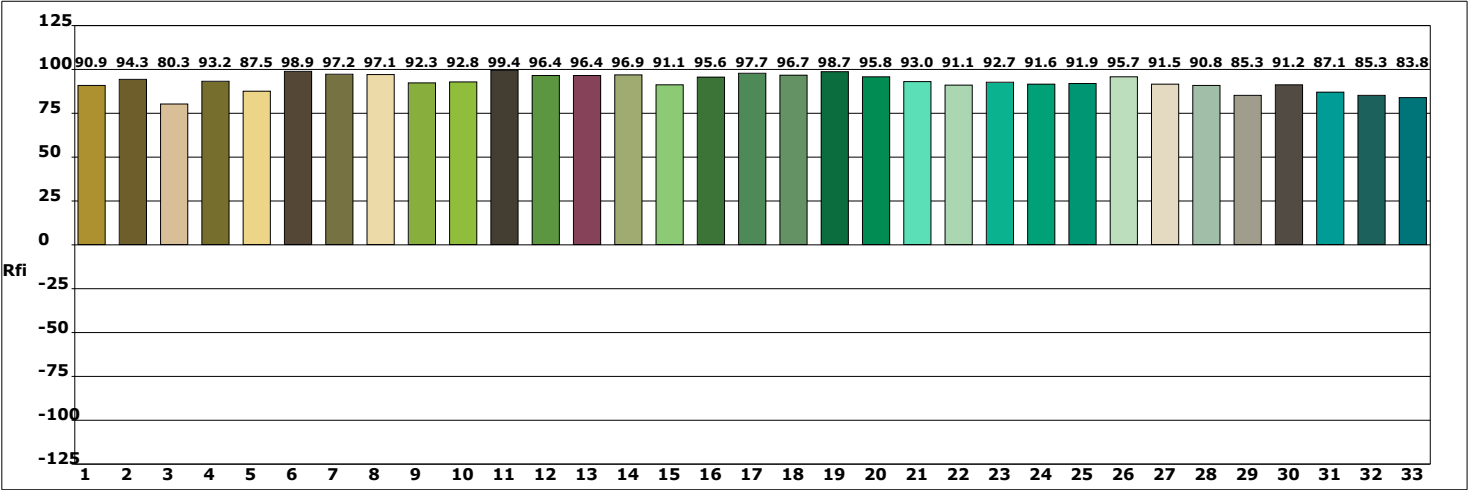
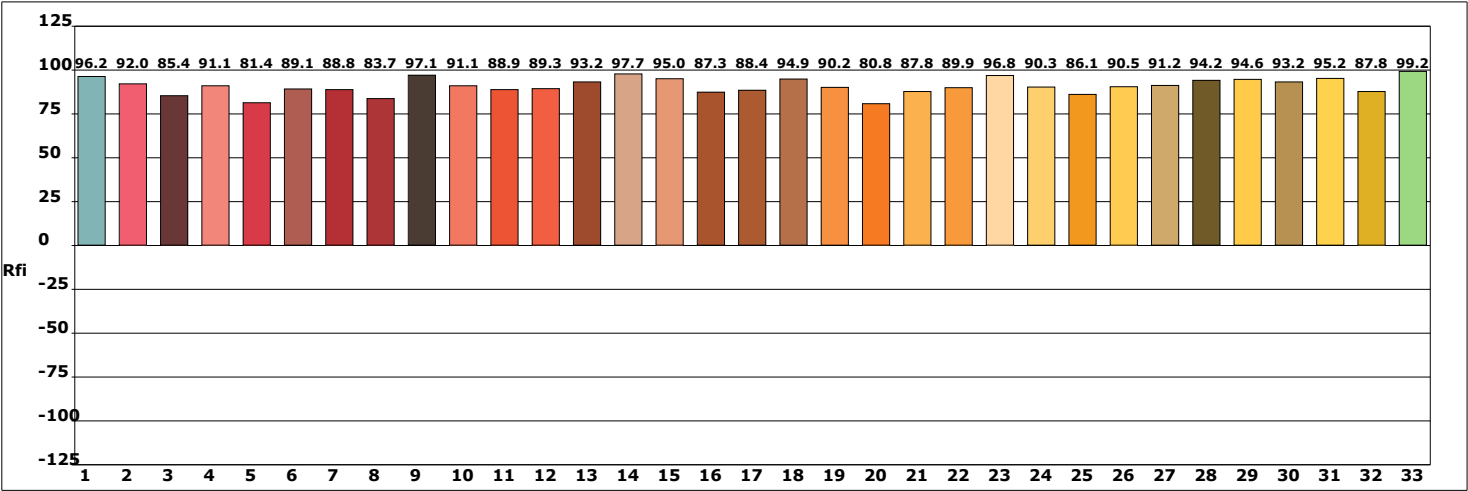


Chroma by Bue



Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/31/23



Product model:
Product number:
Tester:
Remarks:

Manufacturer:
Test unit:
Date of observation: 10/31/23