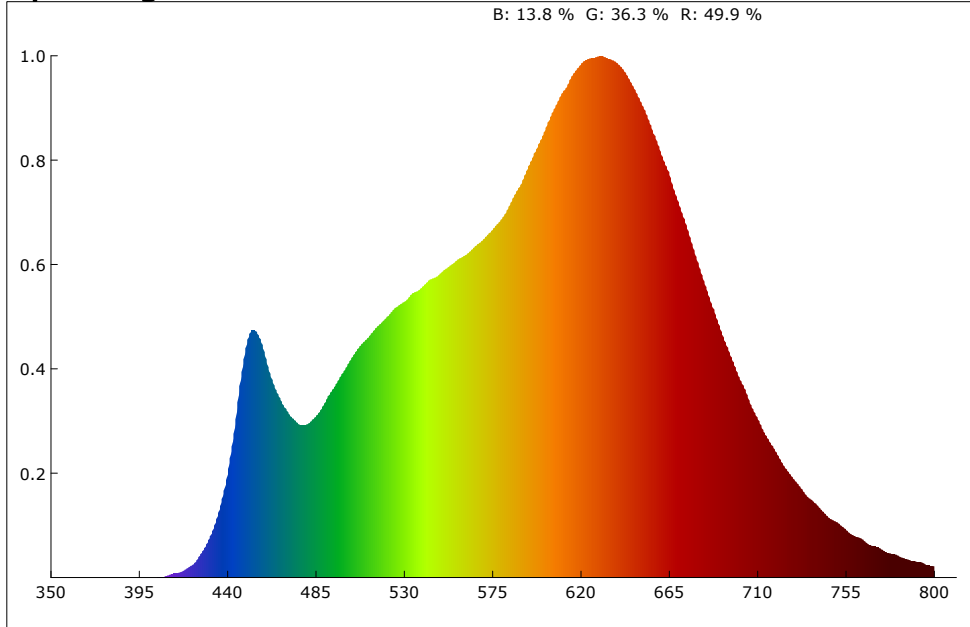
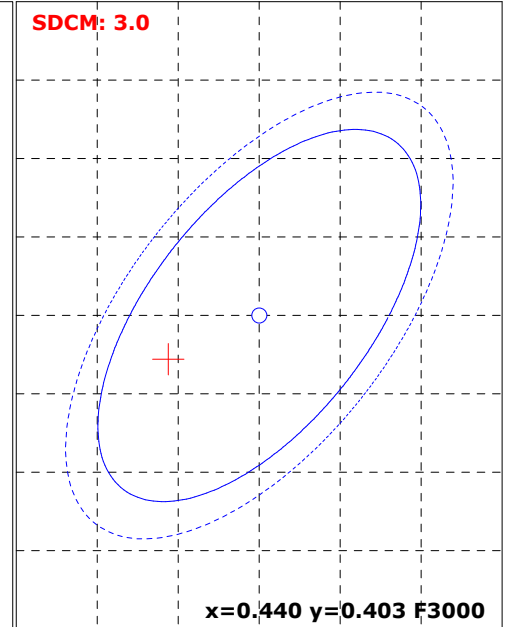


Spectrogram



SDCM



Color Parameter:

x: 0.4344 y: 0.3972 u: 0.2519 v: 0.3455 u': 0.2519 v': 0.5182
 R_ratio: 49.9 % G_ratio: 36.3 % B_ratio: 13.8 % RedRatio: 24.8 % GreenRatio: 73.0 % BlueRatio: 2.2 %

Ra: 95.9 AvgR: 95.1
 R1: 97.9 R2: 97.5 R3: 99.2 R4: 97.5 R5: 95.3 R6: 91.9 R7: 94.3 R8: 94.1
 R9: 91.0 R10: 95.9 R11: 95.1 R12: 84.5 R13: 96.8 R14: 98.7 R15: 97.5

CCT: 2986 K Flux: 5287.644 lm PeakWave: 630.5 nm SDCM: 3.0
 S/P: 1.5 CentralWave: 605.5 nm DominantWave: 583.8 nm CentroidWave: 598.3 nm
 HalfWidth: 165.6 nm duv: -0.00243 purity: 49.6 % CQS: 91.2
 LER(TM-30): 264.1 Ep: 20020.7 mw Rg: 100.7 Rf: 94.0
 Red Ep: 9218.0 mw Near red Ep: 1482.6 mw Near infrared Ep: 77.2 mw

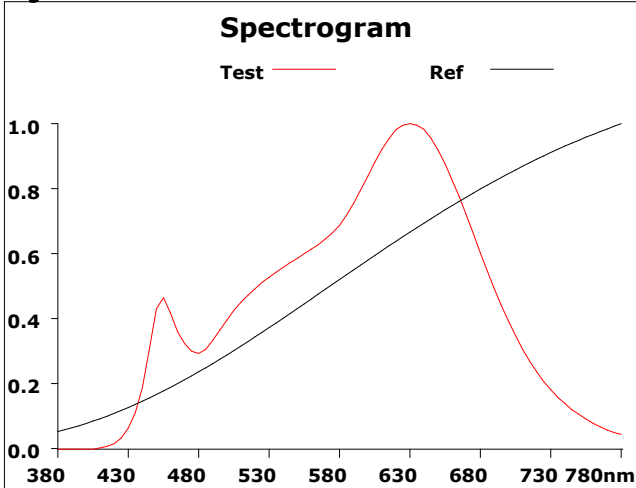
Electrical parameters:

Effic: 18.4 Lm/W Energy: 20.0 Effi: G
 U: 222.3 V I: 1.335 A P: 288.100 W Pf: 0.971

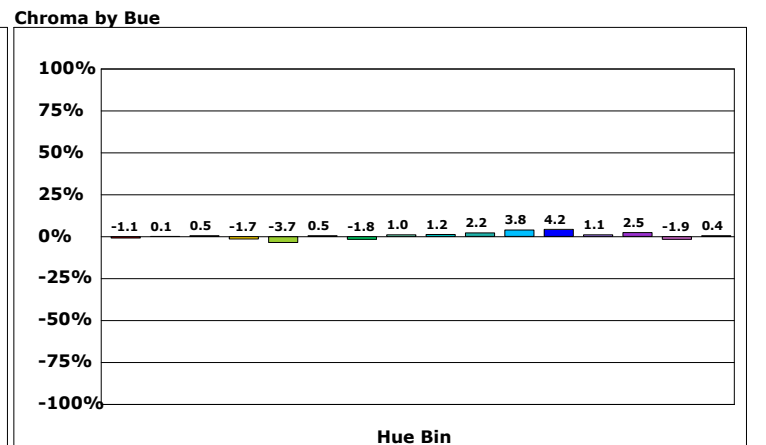
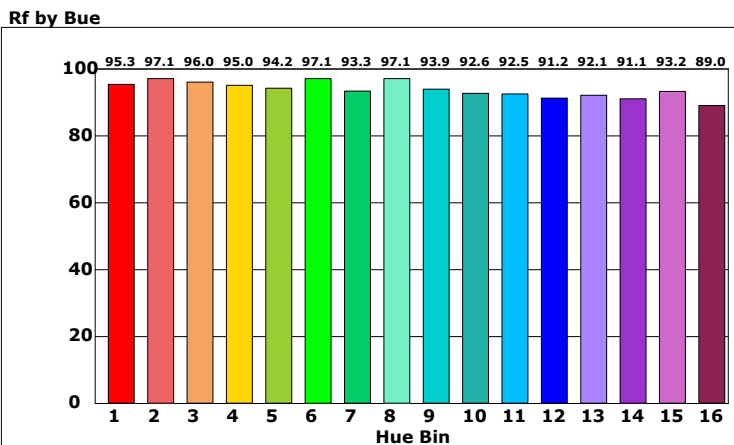
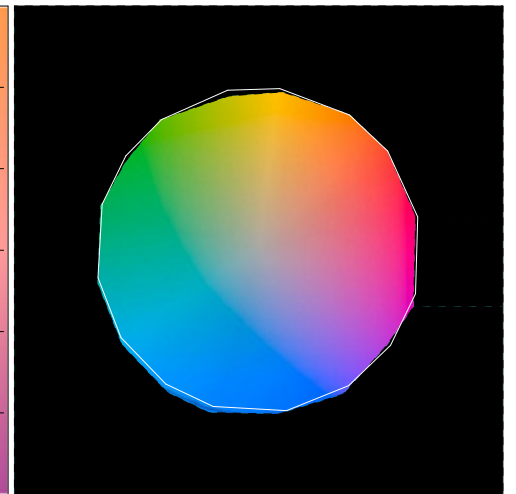
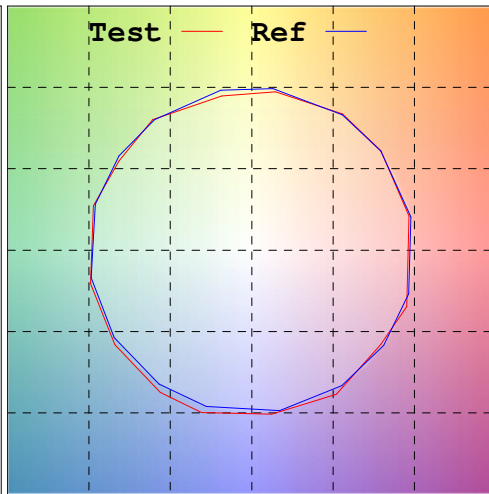
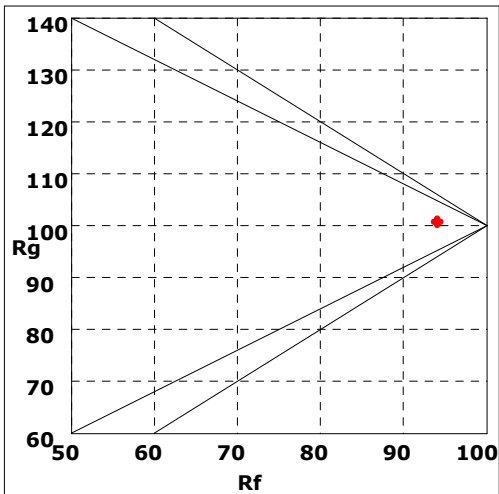
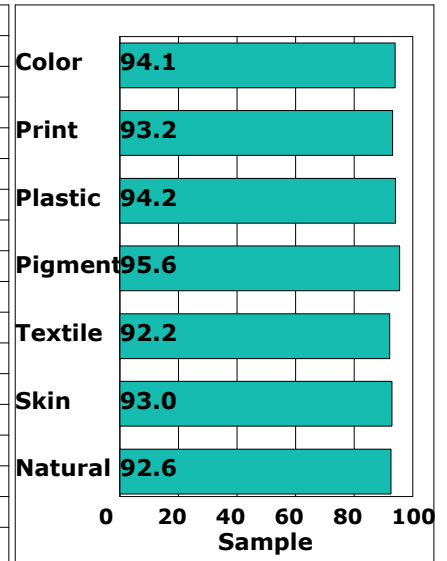
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Rf: 94.0 CCT: 2986K u': 0.2519
 Rg: 100.7 LER: 264.1 Duv: -0.00243 v': 0.5182

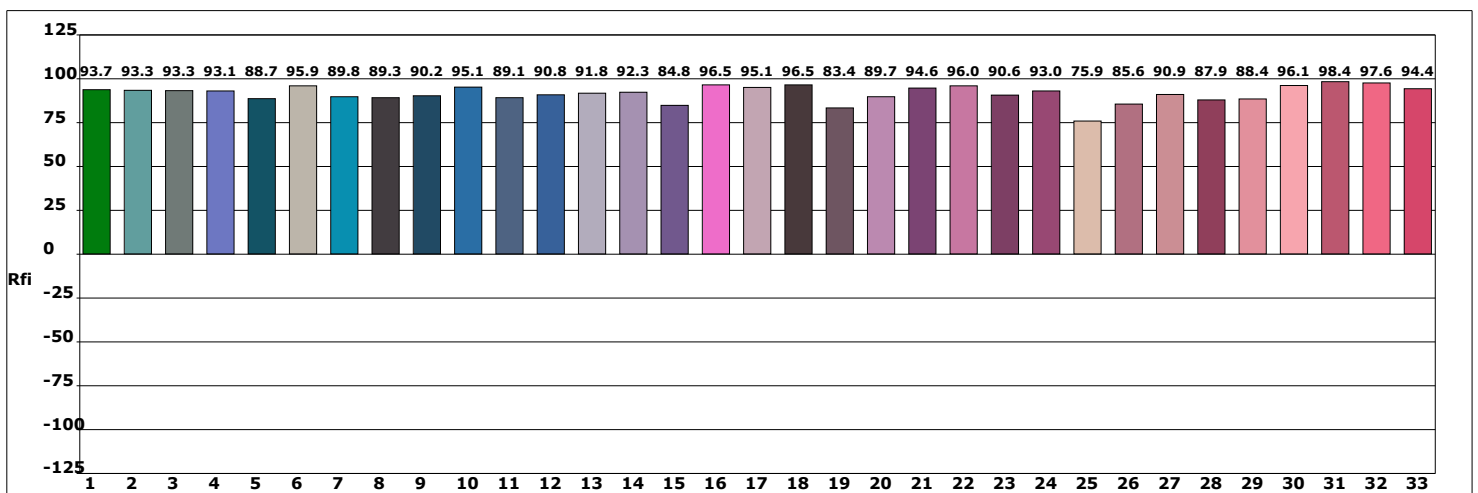
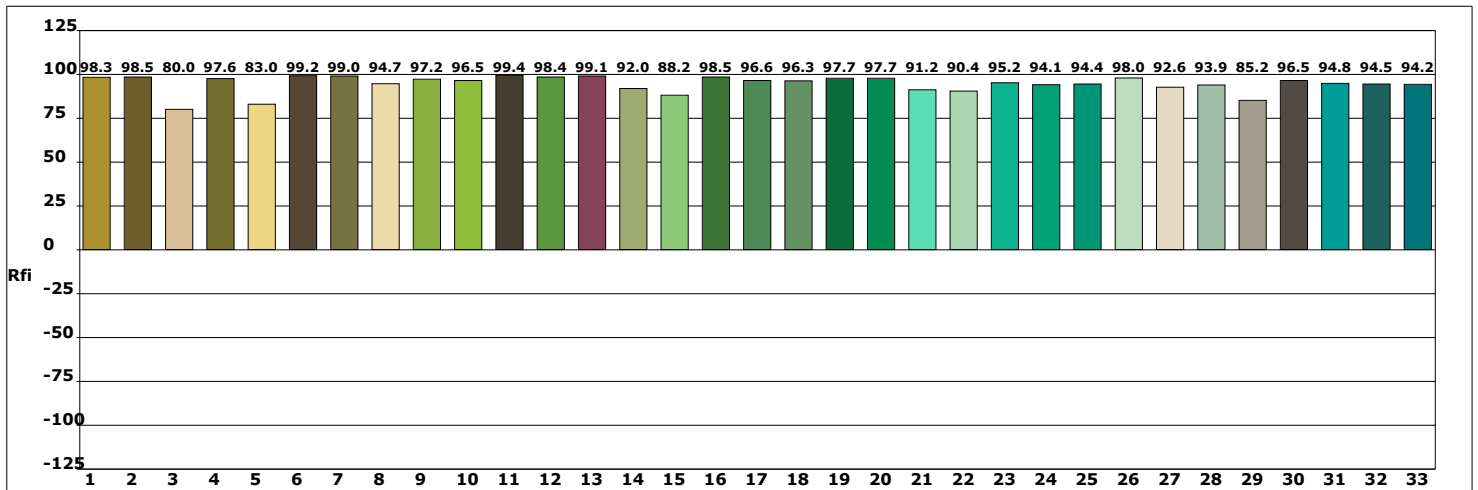
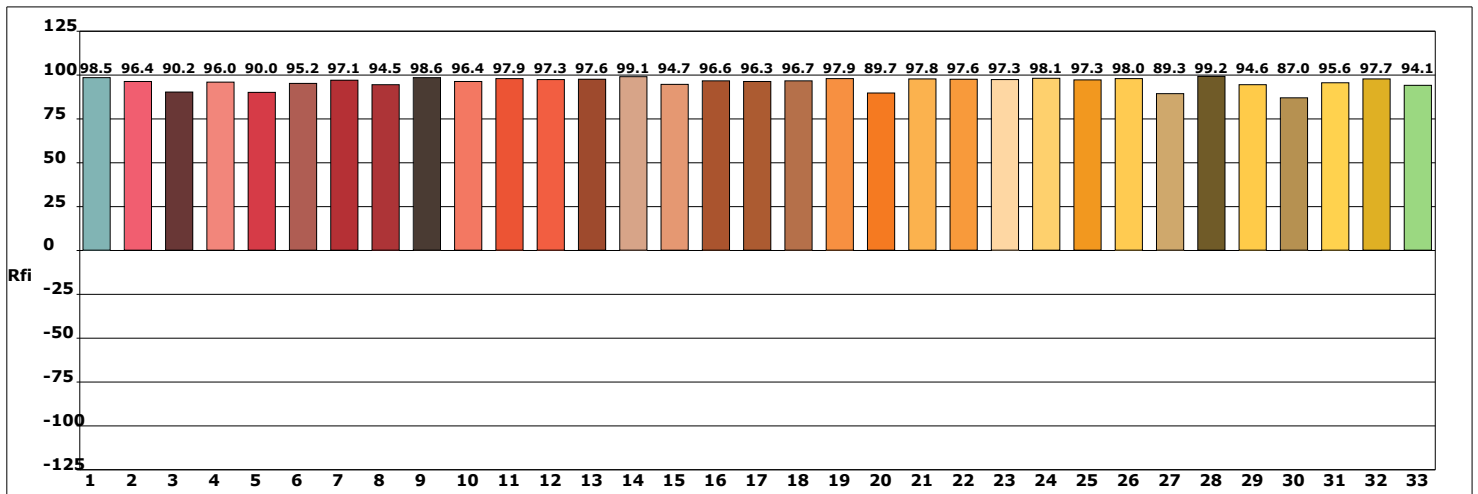


	500		
Hue Bin	Rf	Chroma	Hue
1	95.3	-1.1%	0.8%
2	97.1	0.1%	0.2%
3	96.0	0.5%	0.2%
4	95.0	-1.7%	-1.9%
5	94.2	-3.7%	-0.0%
6	97.1	0.5%	1.0%
7	93.3	-1.8%	2.6%
8	97.1	1.0%	1.2%
9	93.9	1.2%	3.3%
10	92.6	2.2%	3.8%
11	92.5	3.8%	3.4%
12	91.2	4.2%	-2.1%
13	92.1	1.1%	-5.3%
14	91.1	2.5%	-5.8%
15	93.2	-1.9%	-0.4%
16	89.0	0.4%	-7.9%



Product model:
 Product number:
 Tester:
 Remarks:

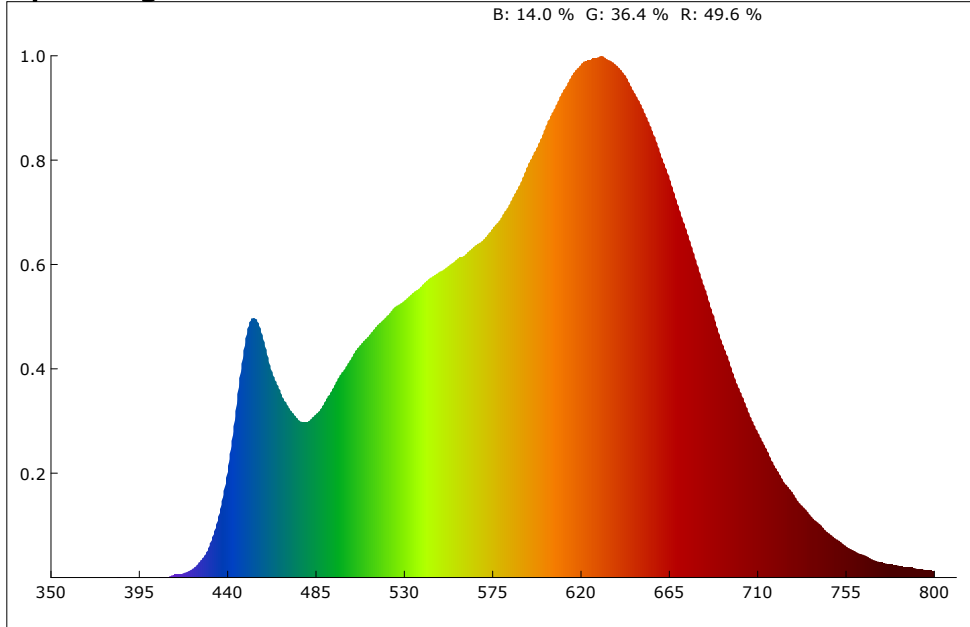
Manufacturer:
 Test unit:
 Date of observation: 09/11/23



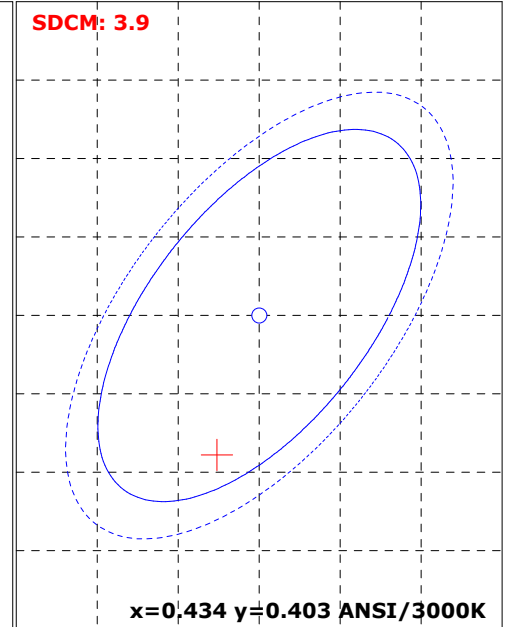
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Spectrogram



SDCM



Color Parameter:

x: 0.4312 y: 0.3941 u: 0.2512 v: 0.3444 u': 0.2512 v': 0.5166
 R_ratio: 49.6 % G_ratio: 36.4 % B_ratio: 14.0 % RedRatio: 24.7 % GreenRatio: 73.1 % BlueRatio: 2.3 %

Ra: 96.3 AvgR: 95.5
 R1: 97.1 R2: 96.9 R3: 98.7 R4: 98.2 R5: 96.6 R6: 93.2 R7: 95.3 R8: 95.1
 R9: 91.9 R10: 94.9 R11: 94.9 R12: 85.7 R13: 96.5 R14: 99.1 R15: 98.7

CCT: 3015 K Flux: 2979.436 lm PeakWave: 630.5 nm SDCM: 3.9
 S/P: 1.5 CentralWave: 604.5 nm DominantWave: 584.0 nm CentroidWave: 595.6 nm
 HalfWidth: 165.6 nm duv: -0.00321 purity: 47.7 % CQS: 90.8
 LER(TM-30): 269.3 Ep: 11063.2 mw Rg: 100.7 Rf: 93.6
 Red Ep: 5129.9 mw Near red Ep: 687.3 mw Near infrared Ep: 24.6 mw

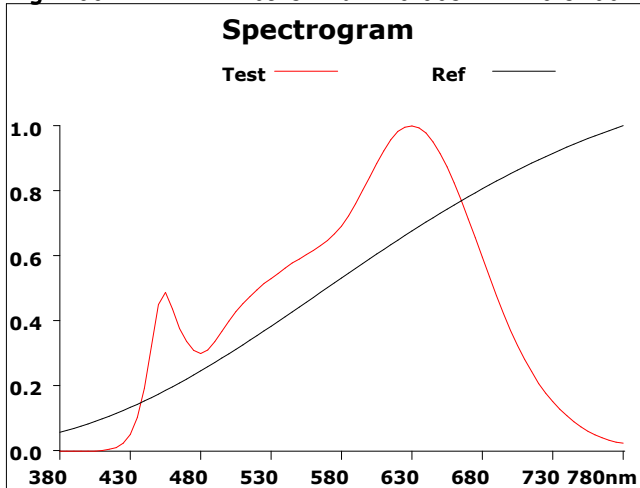
Electrical parameters:

Effic: 10.3 Lm/W Energy: 11.2 Effi: G
 U: 222.6 V I: 1.333 A P: 288.600 W Pf: 0.972

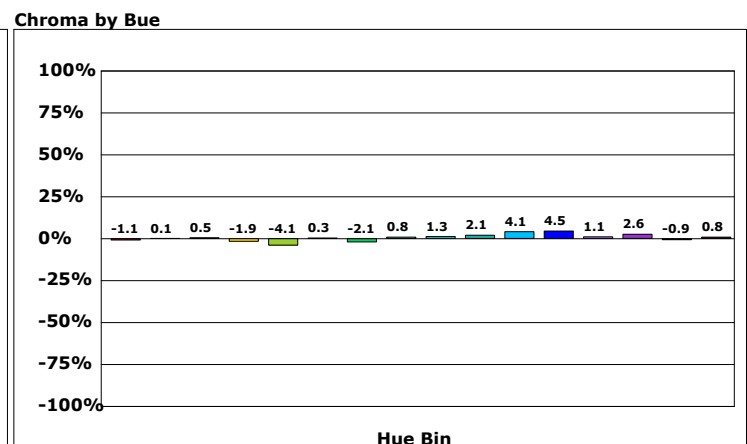
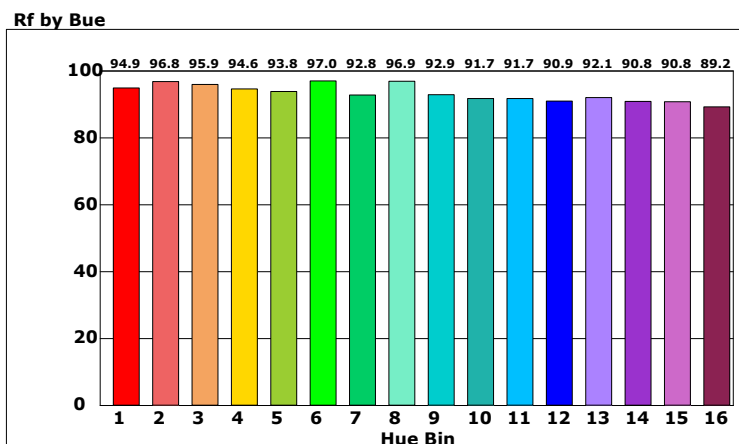
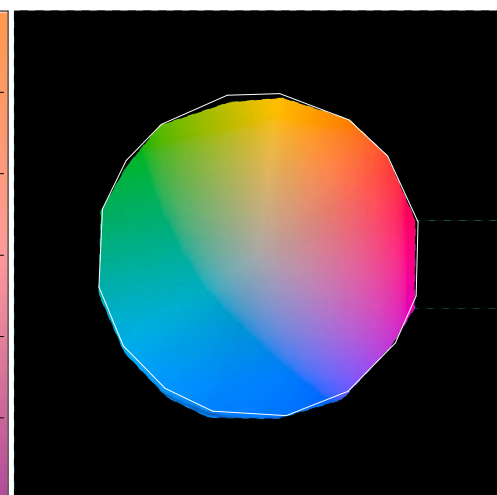
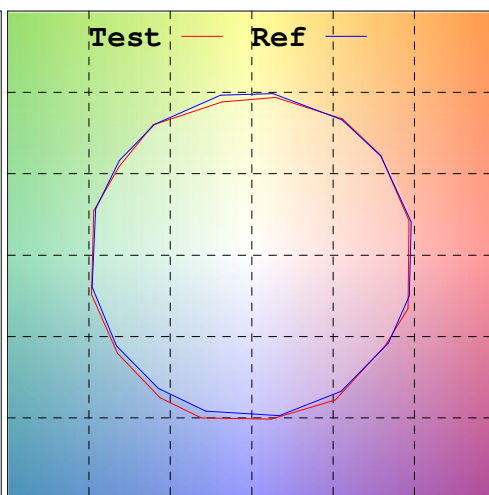
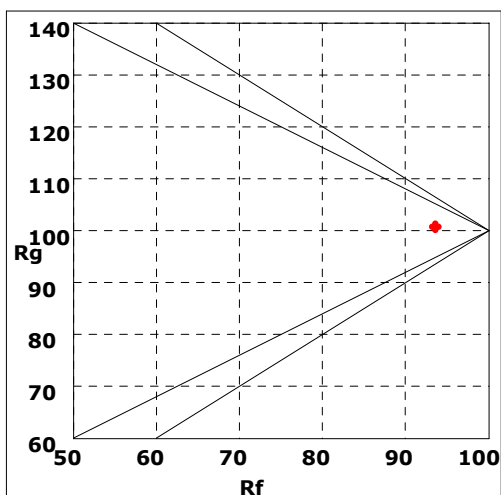
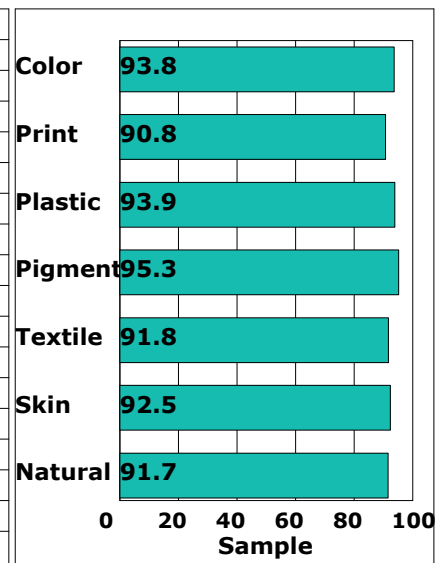
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Rf: 93.6 CCT: 3015K u': 0.2512
 Rg: 100.7 LER: 269.3 Duv: -0.00321 v': 0.5166

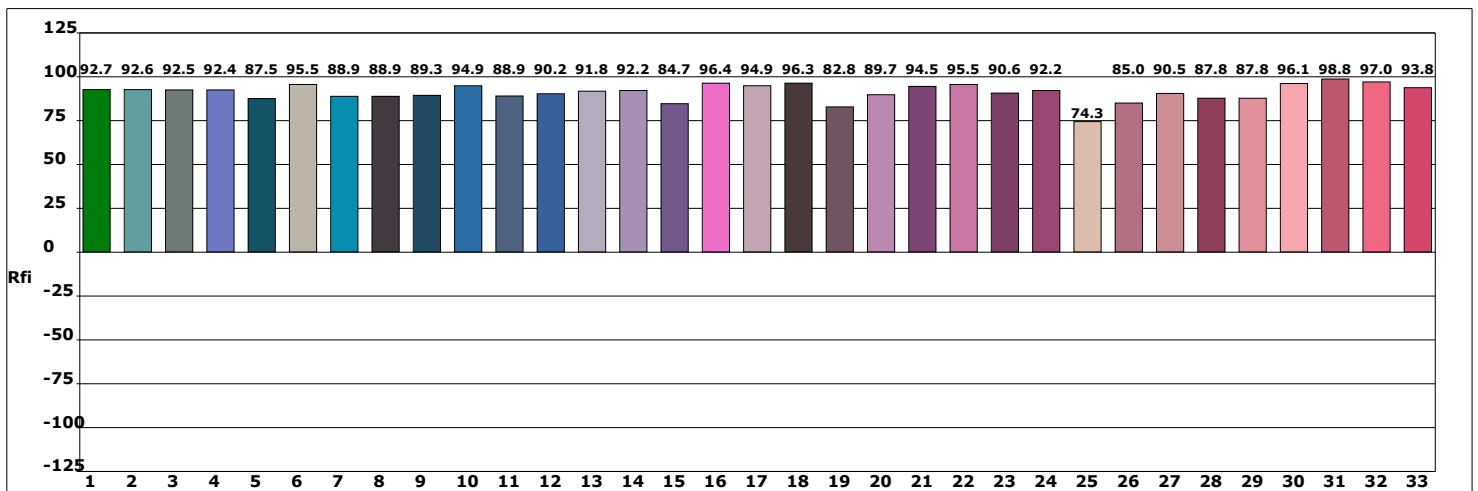
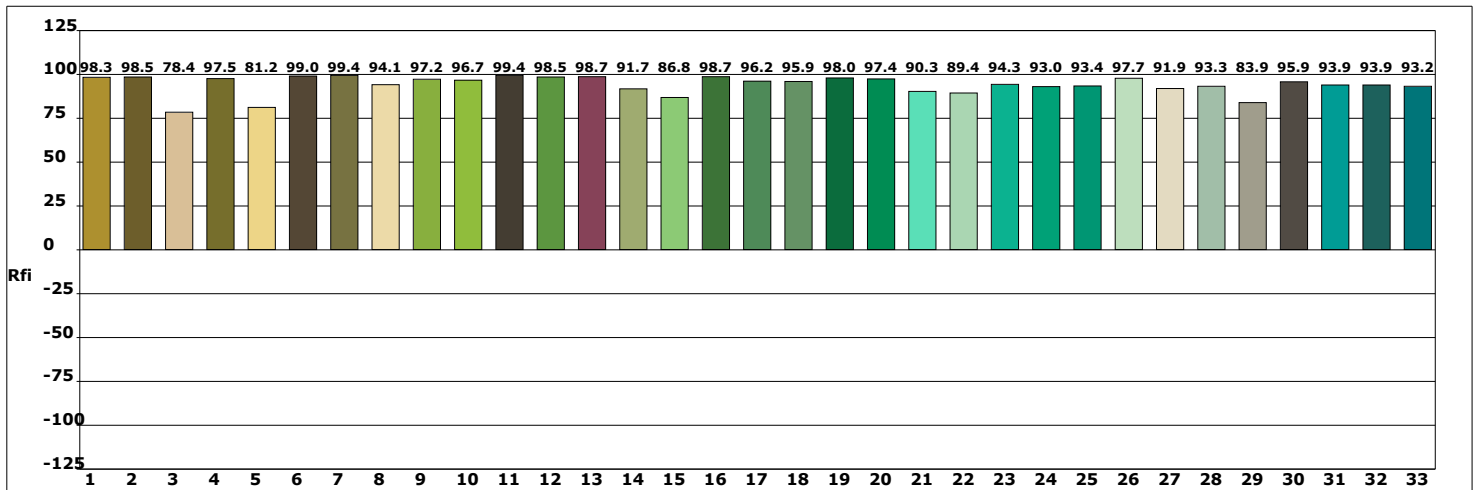
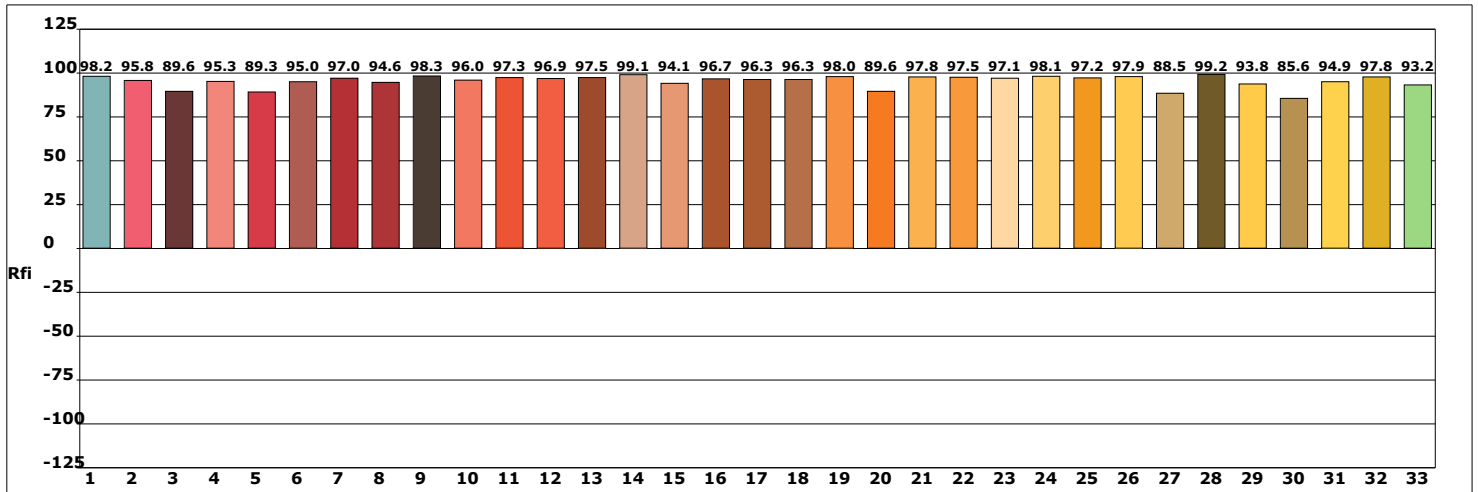


500			
Hue Bin	Rf	Chroma	Hue
1	94.9	-1.1%	1.0%
2	96.8	0.1%	0.3%
3	95.9	0.5%	0.2%
4	94.6	-1.9%	-2.0%
5	93.8	-4.1%	-0.1%
6	97.0	0.3%	1.0%
7	92.8	-2.1%	2.9%
8	96.9	0.8%	1.5%
9	92.9	1.3%	4.3%
10	91.7	2.1%	4.0%
11	91.7	4.1%	3.9%
12	90.9	4.5%	-1.9%
13	92.1	1.1%	-5.3%
14	90.8	2.6%	-5.9%
15	90.8	-0.9%	-2.4%
16	89.2	0.8%	-7.7%



Product model:
 Product number:
 Tester:
 Remarks:

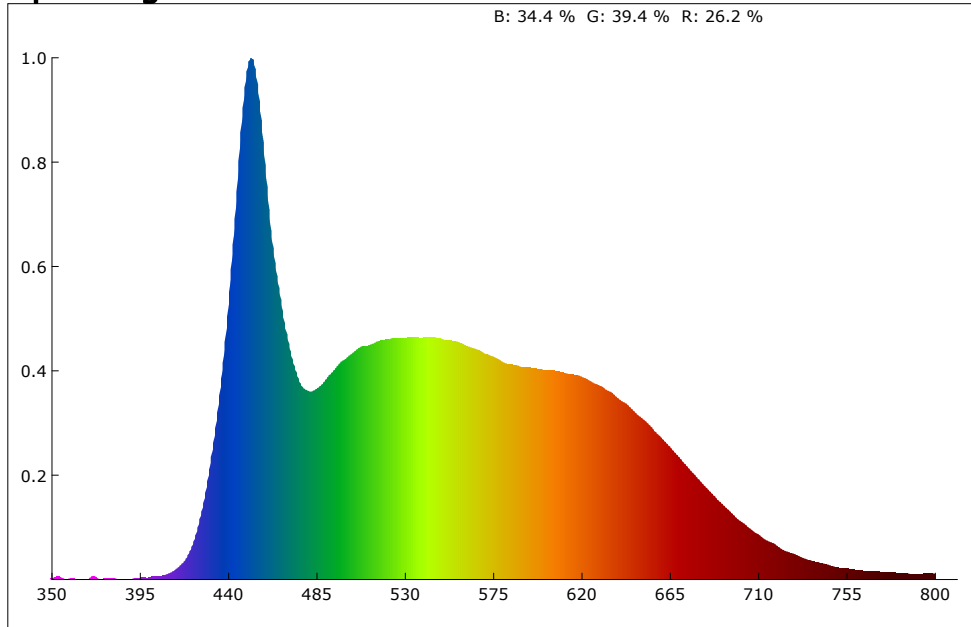
Manufacturer:
 Test unit:
 Date of observation: 09/11/23



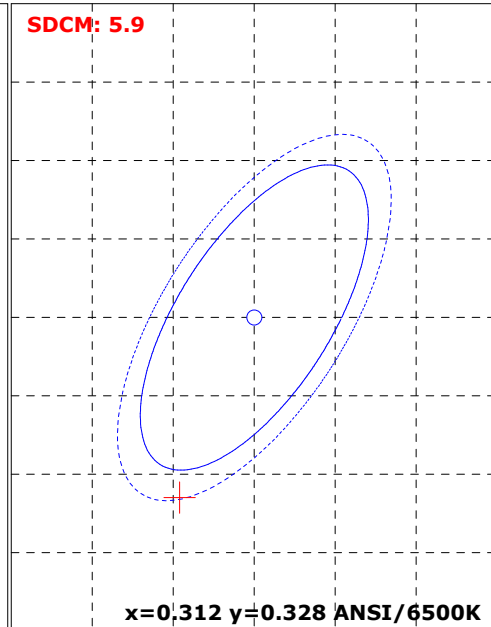
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Spectrogram



SDCM



Color Parameter:

x: 0.3077 y: 0.3167 u: 0.1990 v: 0.3072 u': 0.1990 v': 0.4608
 R_ratio: 26.2 % G_ratio: 39.4 % B_ratio: 34.4 % RedRatio: 14.7 % GreenRatio: 80.3 % BlueRatio: 5.0 %

Ra: 95.9 AvgR: 94.2
 R1: 96.4 R2: 97.6 R3: 95.1 R4: 97.1 R5: 95.9 R6: 93.3 R7: 97.1 R8: 95.3
 R9: 88.1 R10: 93.3 R11: 96.8 R12: 73.7 R13: 98.2 R14: 97.2 R15: 97.3

CCT: 6919 K Flux: 3868.888 lm PeakWave: 452.3 nm SDCM: 5.9
 S/P: 2.4 CentralWave: 454.3 nm DominantWave: 482.8 nm CentroidWave: 548.4 nm
 HalfWidth: 28.8 nm duv: -0.00065 purity: 10.1 % CQS: 90.3
 LER(TM-30): 271.1 Ep: 14269.8 mw Rg: 99.8 Rf: 90.6
 Red Ep: 3620.8 mw Near red Ep: 426.5 mw Near infrared Ep: 30.8 mw

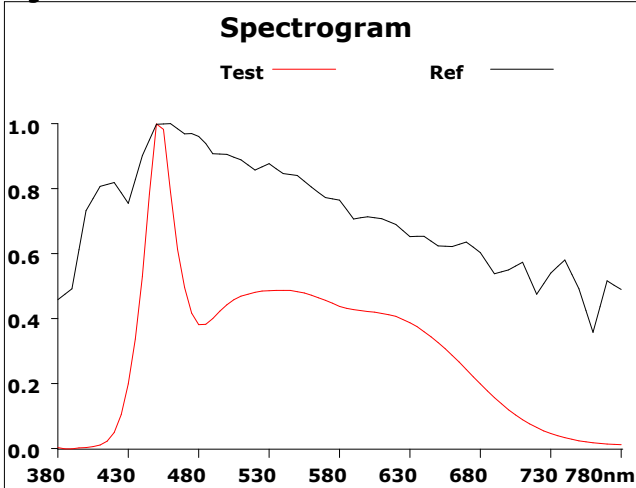
Electrical parameters:

Effic: 12.6 Lm/W Energy: 13.7 Effi: G
 U: 222.3 V I: 1.422 A P: 307.700 W Pf: 0.973

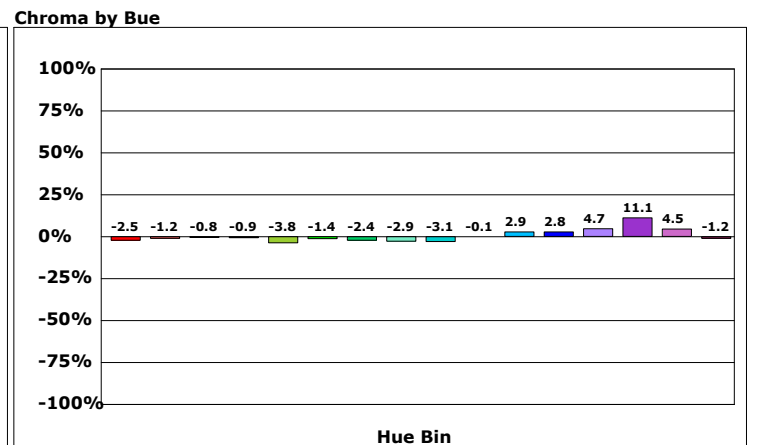
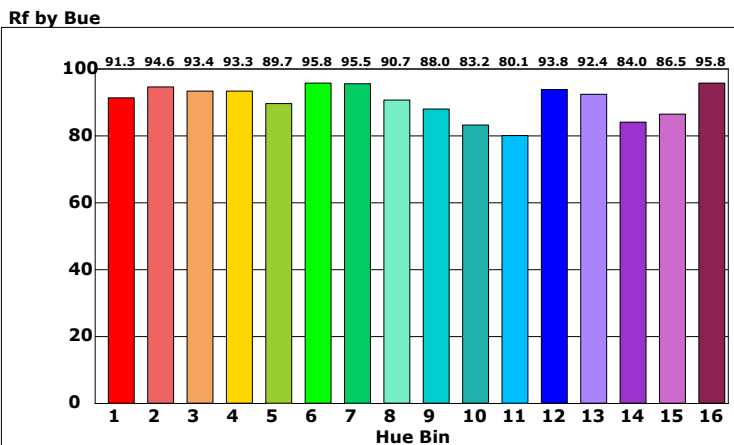
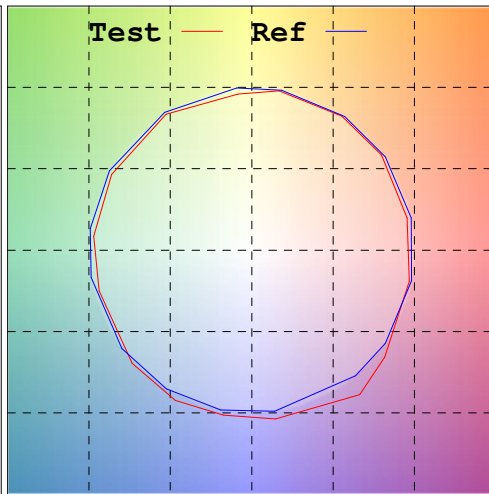
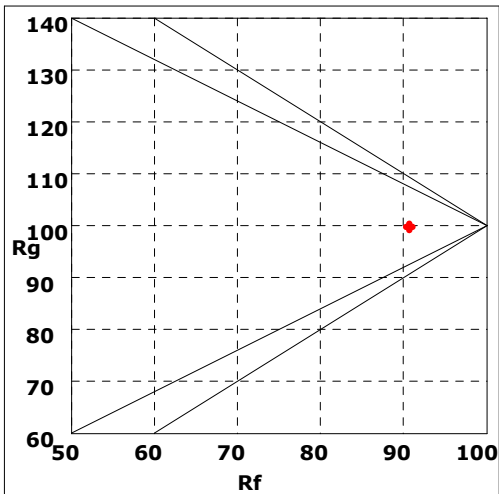
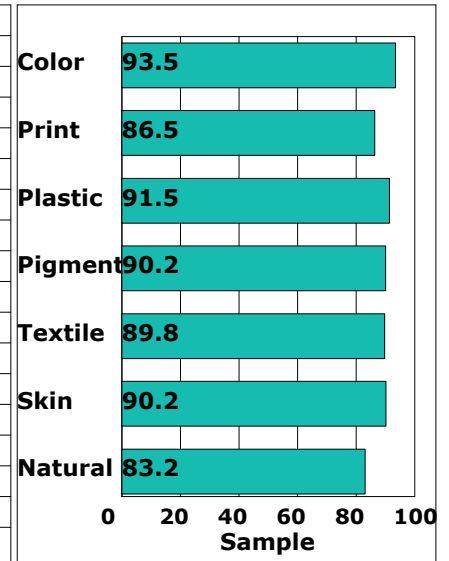
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Rf: 90.6 CCT: 6919K u': 0.1990
 Rg: 99.8 LER: 271.1 Duv: -0.00065 v': 0.4608

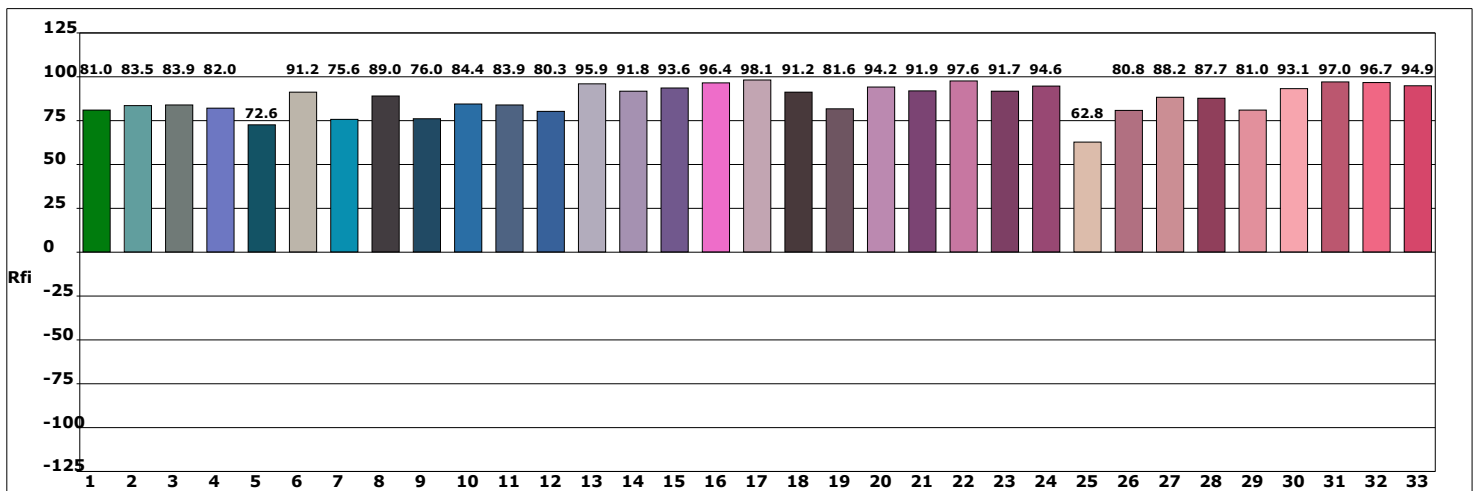
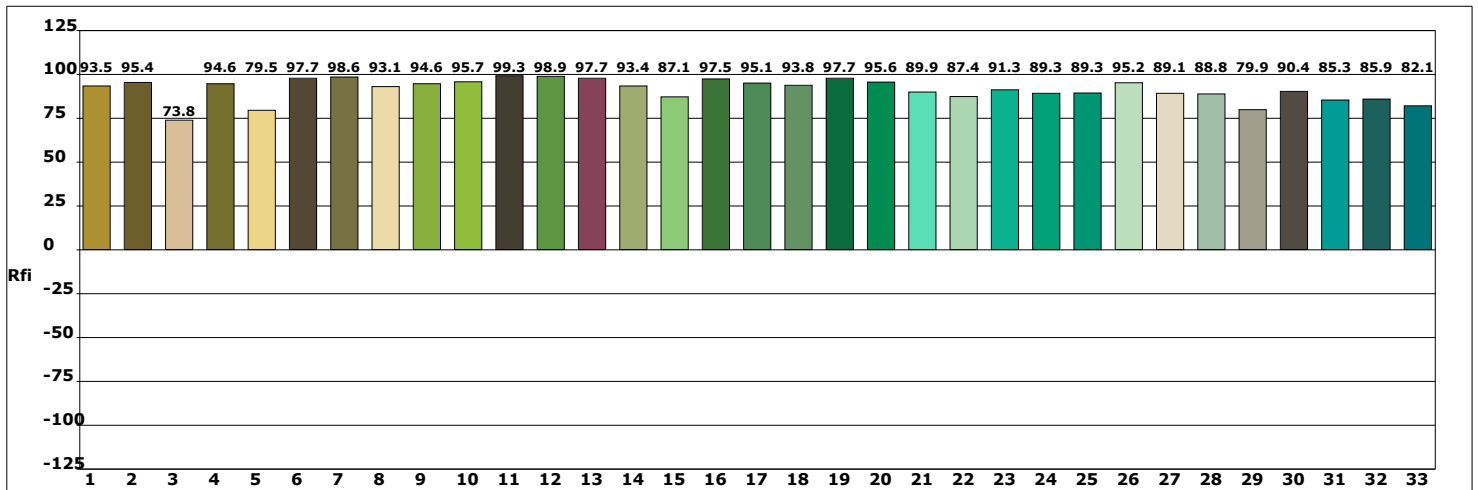
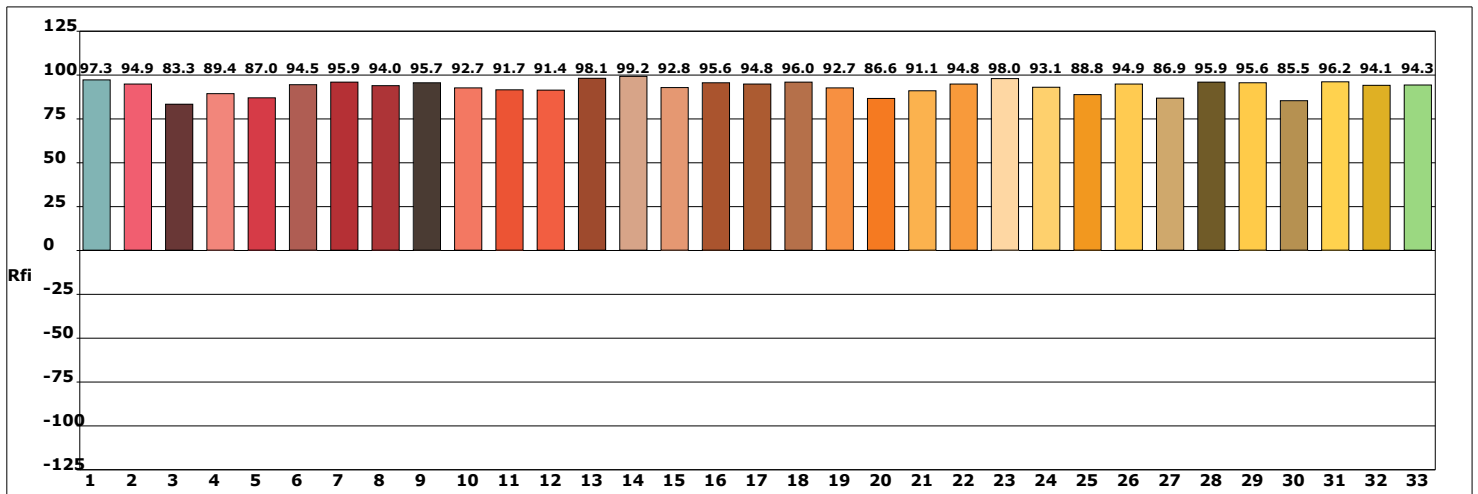


Hue Bin	Rf	Chroma	Hue
		500	
1	91.3	-2.5%	0.5%
2	94.6	-1.2%	2.3%
3	93.4	-0.8%	1.6%
4	93.3	-0.9%	1.4%
5	89.7	-3.8%	-0.1%
6	95.8	-1.4%	0.0%
7	95.5	-2.4%	1.1%
8	90.7	-2.9%	3.9%
9	88.0	-3.1%	9.0%
10	83.2	-0.1%	11.0%
11	80.1	2.9%	8.6%
12	93.8	2.8%	2.3%
13	92.4	4.7%	-0.4%
14	84.0	11.1%	-4.3%
15	86.5	4.5%	-7.2%
16	95.8	-1.2%	-0.7%



Product model:
 Product number:
 Tester:
 Remarks:

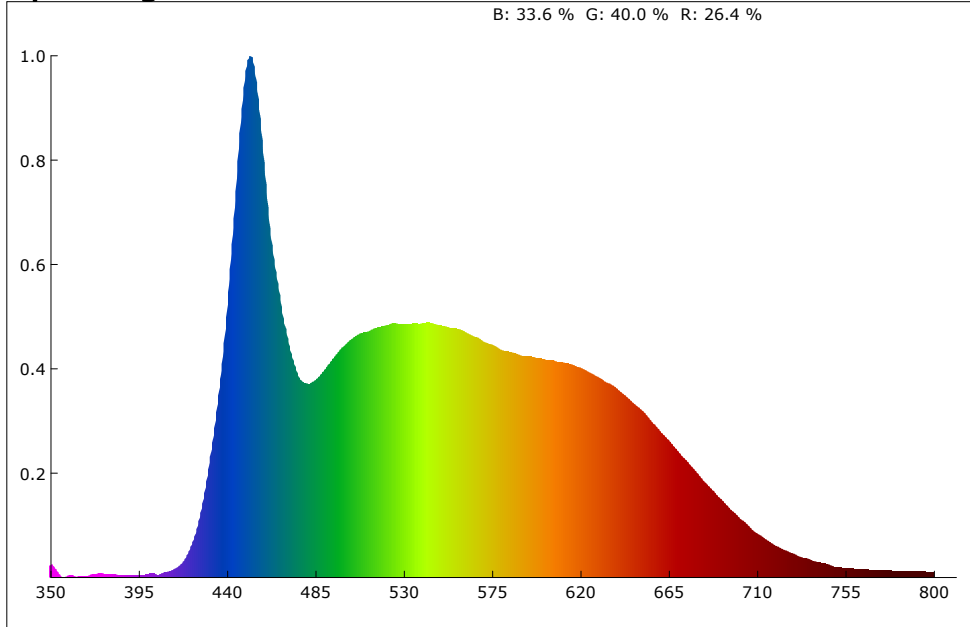
Manufacturer:
 Test unit:
 Date of observation: 09/11/23



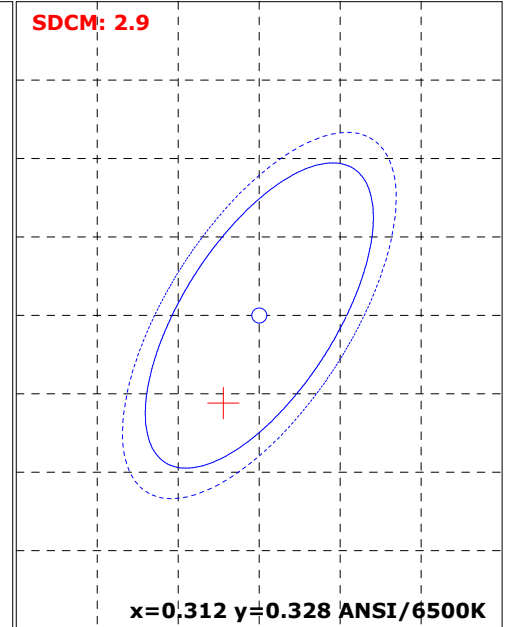
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Spectrogram



SDCM



Color Parameter:

x: 0.3101 y: 0.3226 u: 0.1984 v: 0.3096 u': 0.1984 v': 0.4644
 R_ratio: 26.4 % G_ratio: 40.0 % B_ratio: 33.6 % RedRatio: 14.6 % GreenRatio: 80.6 % BlueRatio: 4.8 %

Ra: 95.4 AvgR: 93.3
 R1: 96.0 R2: 97.4 R3: 95.7 R4: 95.6 R5: 95.0 R6: 93.3 R7: 96.9 R8: 93.6
 R9: 82.3 R10: 92.6 R11: 95.8 R12: 73.4 R13: 97.6 R14: 97.7 R15: 96.0

CCT: 6714 K Flux: 7300.856 lm PeakWave: 452.3 nm SDCM: 2.9
 S/P: 2.4 CentralWave: 454.3 nm DominantWave: 485.6 nm CentroidWave: 548.6 nm
 HalfWidth: 28.6 nm duv: 0.00120 purity: 8.7 % CQS: 91.3
 LER(TM-30): 274.9 Ep: 26561.8 mw Rg: 99.3 Rf: 90.6
 Red Ep: 6783.4 mw Near red Ep: 739.7 mw Near infrared Ep: 57.3 mw

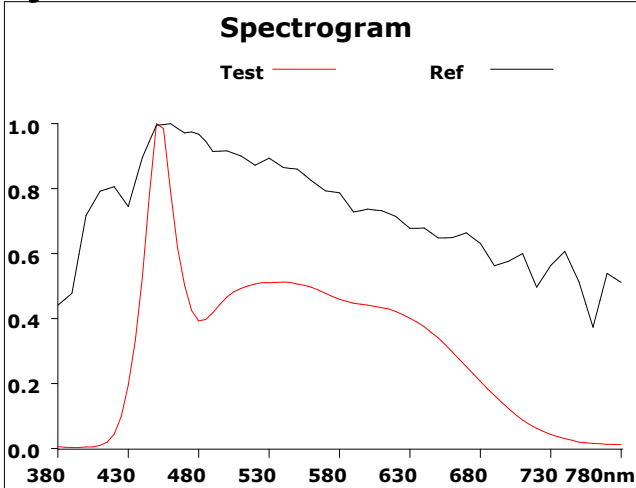
Electrical parameters:

Effic: 23.6 Lm/W Energy: 25.7 Effi: G
 U: 222.9 V I: 1.425 A P: 309.100 W Pf: 0.973

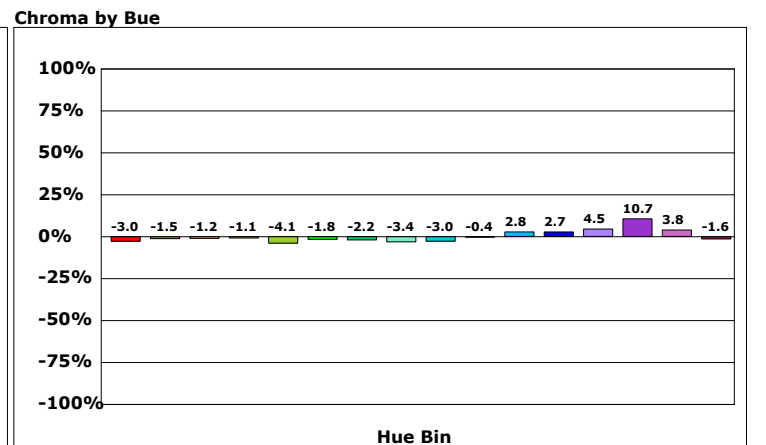
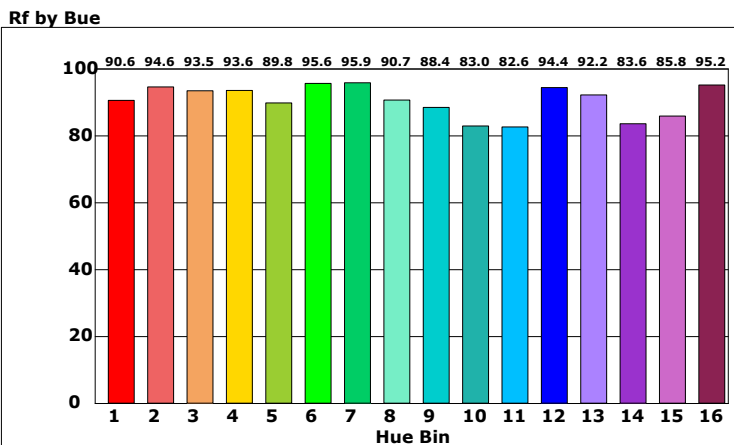
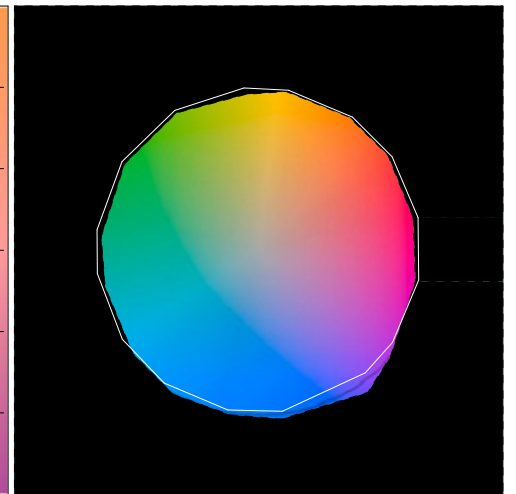
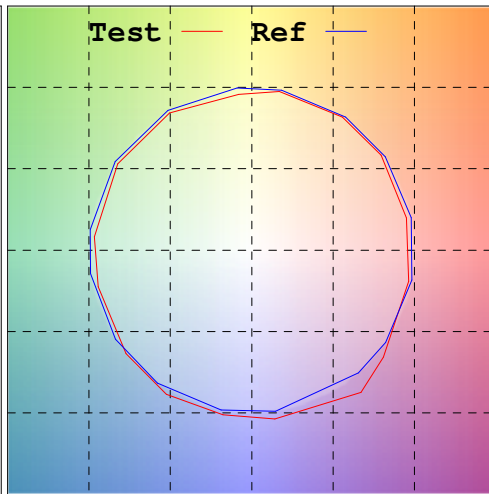
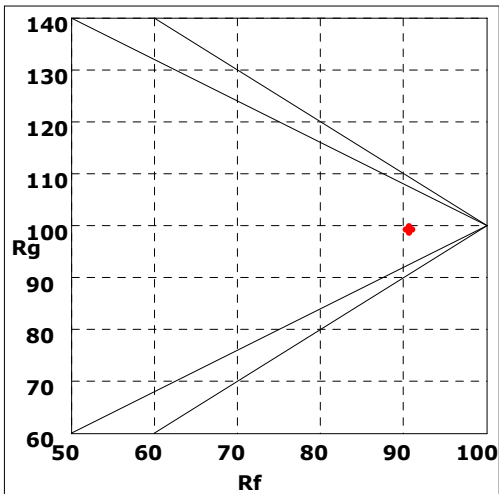
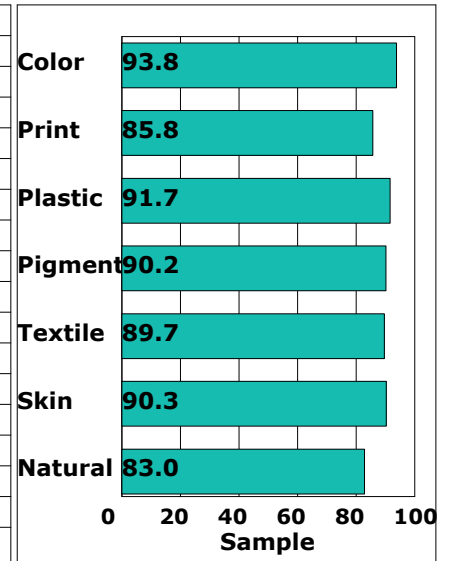
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Rf: 90.6 CCT: 6714K u': 0.1984
 Rg: 99.3 LER: 274.9 Duv: 0.00120 v': 0.4644

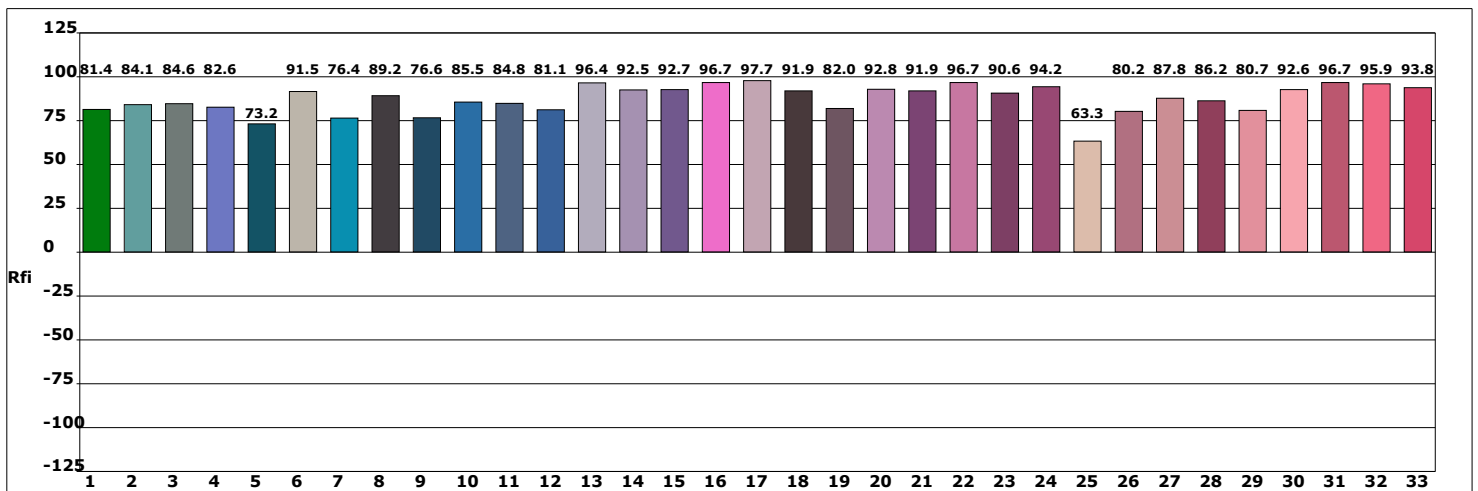
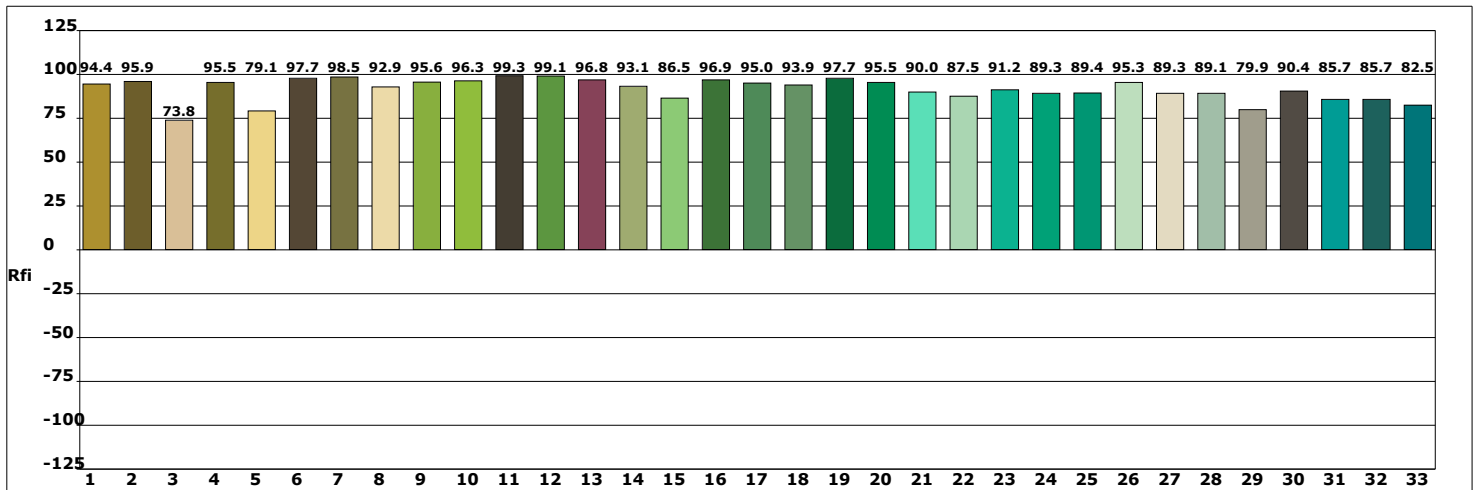
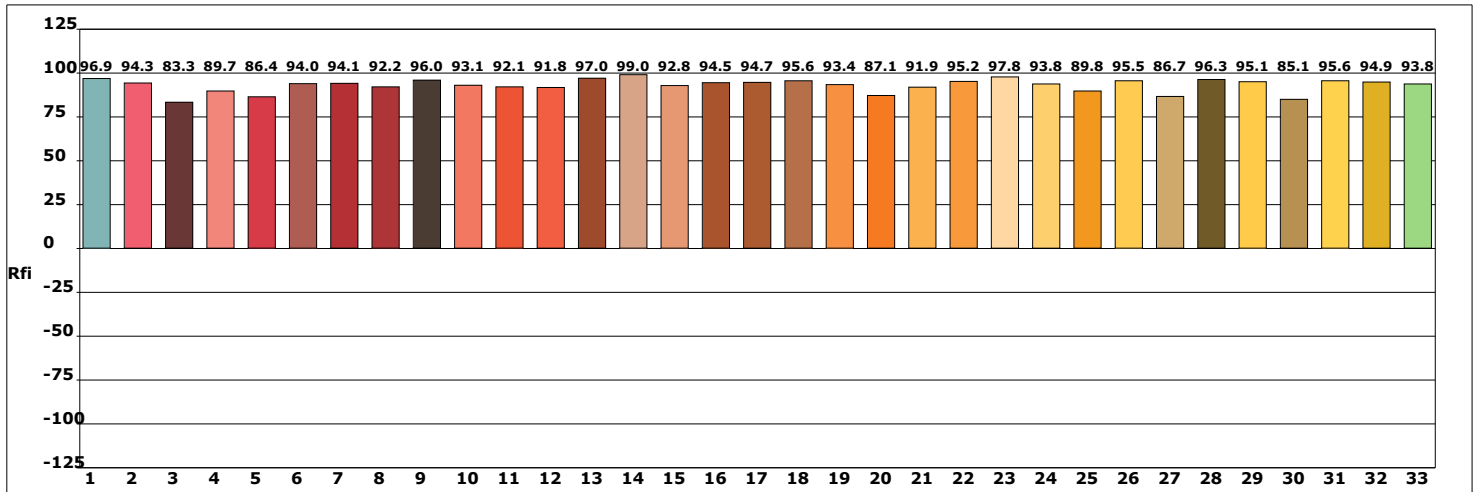


Hue Bin	Rf	Chroma	Hue
1	90.6	-3.0%	0.3%
2	94.6	-1.5%	2.2%
3	93.5	-1.2%	1.6%
4	93.6	-1.1%	1.2%
5	89.8	-4.1%	-0.3%
6	95.6	-1.8%	-0.0%
7	95.9	-2.2%	0.3%
8	90.7	-3.4%	3.6%
9	88.4	-3.0%	8.9%
10	83.0	-0.4%	10.9%
11	82.6	2.8%	8.4%
12	94.4	2.7%	1.7%
13	92.2	4.5%	-1.3%
14	83.6	10.7%	-5.3%
15	85.8	3.8%	-8.2%
16	95.2	-1.6%	-1.1%



Product model:
 Product number:
 Tester:
 Remarks:

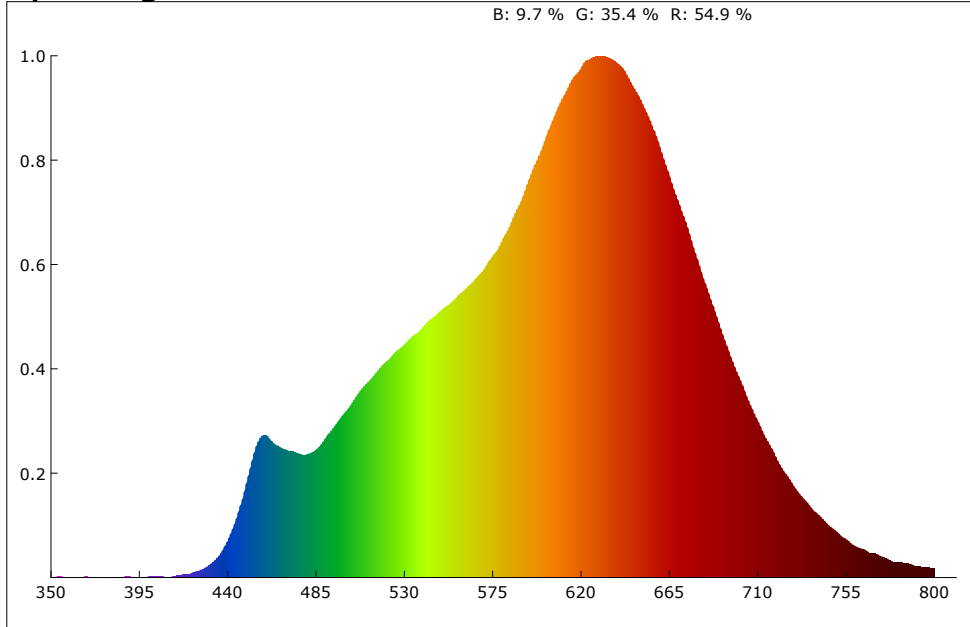
Manufacturer:
 Test unit:
 Date of observation: 09/11/23



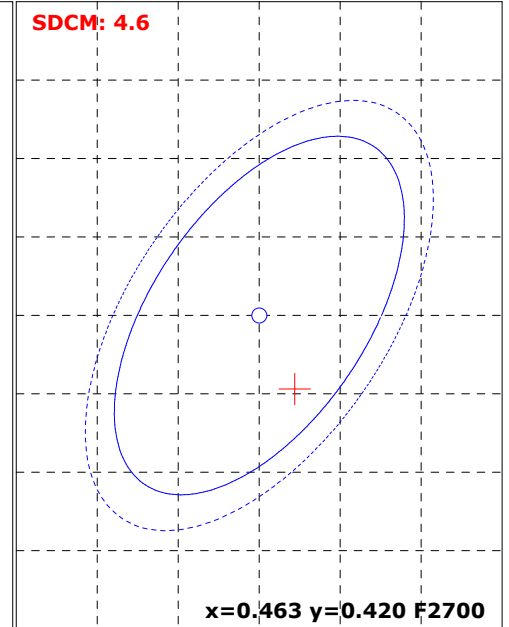
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Spectrogram



SDCM



Color Parameter:

x: 0.4672 y: 0.4153 u: 0.2651 v: 0.3535 u': 0.2651 v': 0.5303
 R_ratio: 54.9 % G_ratio: 35.4 % B_ratio: 9.7 % RedRatio: 27.0 % GreenRatio: 71.3 % BlueRatio: 1.7 %

Ra: 96.1 AvgR: 95.0
 R1: 99.1 R2: 98.2 R3: 98.4 R4: 96.9 R5: 97.7 R6: 94.3 R7: 93.7 R8: 90.7
 R9: 81.8 R10: 97.2 R11: 96.1 R12: 87.6 R13: 98.6 R14: 98.9 R15: 95.7

CCT: 2636 K Flux: 5059.943 lm PeakWave: 628.5 nm SDCM: 4.6
 S/P: 1.3 CentralWave: 617.6 nm DominantWave: 584.2 nm CentroidWave: 606.7 nm
 HalfWidth: 142.5 nm duv: 0.00116 purity: 64.9 % CQS: 85.7
 LER(TM-30): 265.2 Ep: 19078.7 mw Rg: 96.2 Rf: 89.9
 Red Ep: 9646.9 mw Near red Ep: 1441.0 mw Near infrared Ep: 61.4 mw

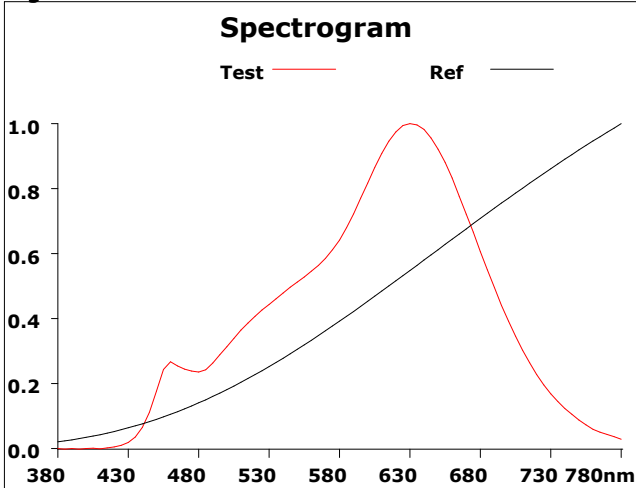
Electrical parameters:

Effic: 16.5 Lm/W Energy: 18.0 Effi: G
 U: 222.9 V I: 1.410 A P: 305.800 W Pf: 0.973

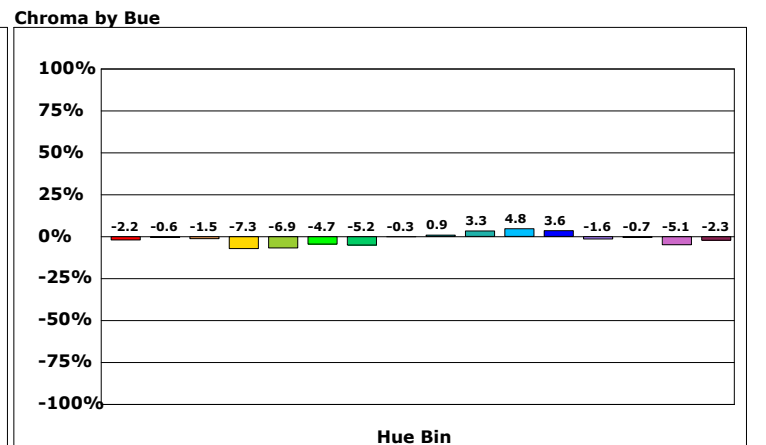
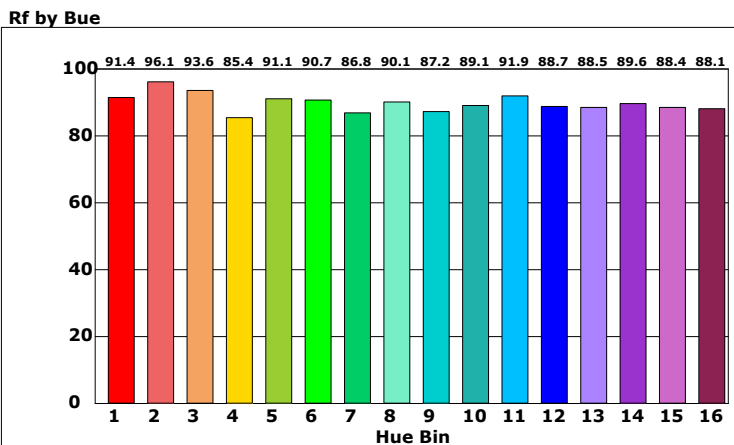
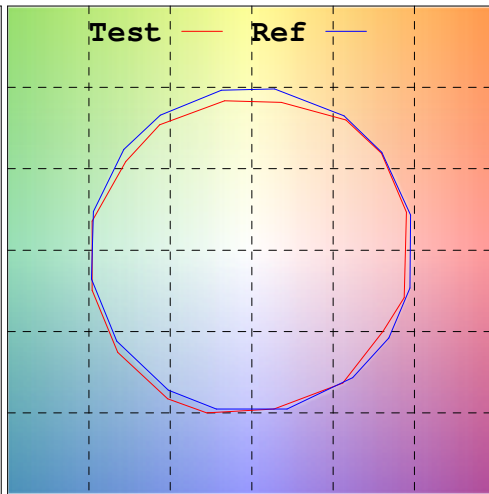
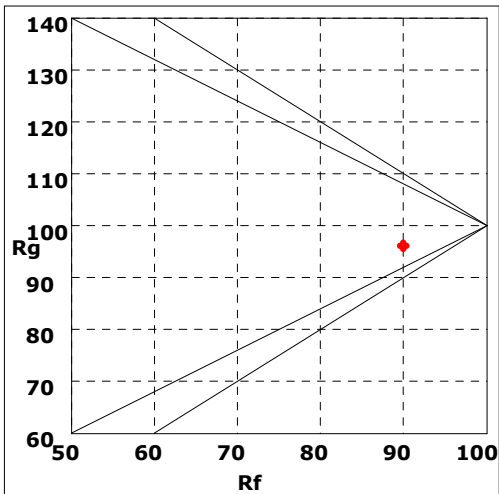
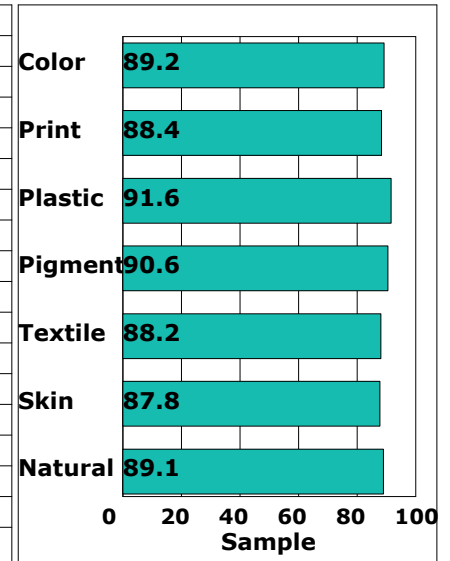
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Rf: 89.9 CCT: 2636K u': 0.2651
 Rg: 96.2 LER: 265.2 Duv: 0.00116 v': 0.5303

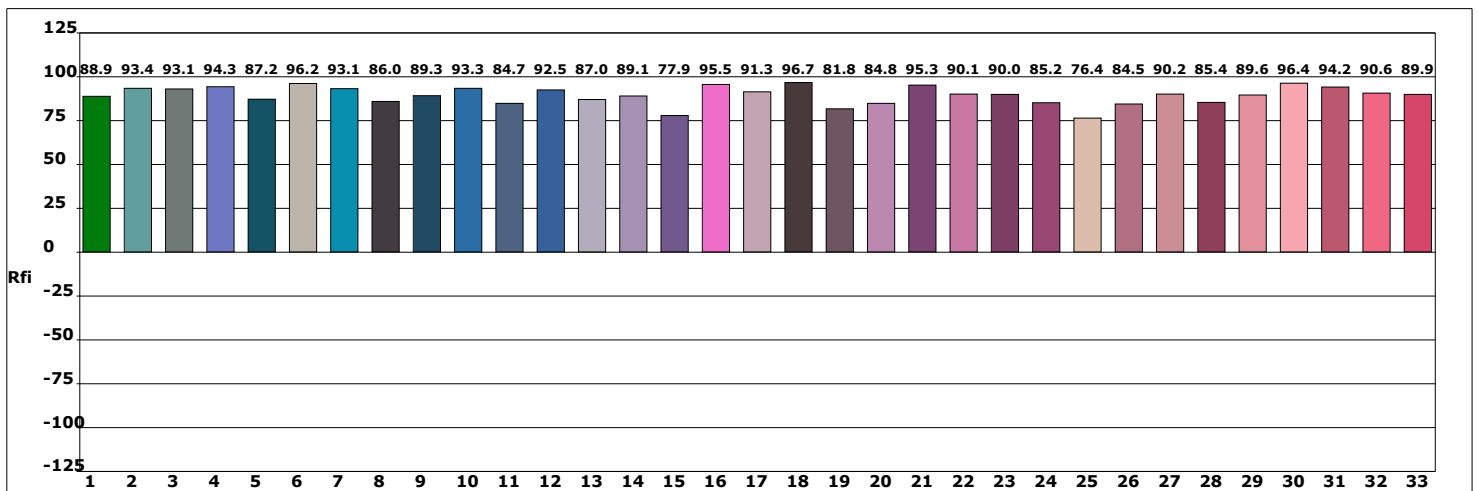
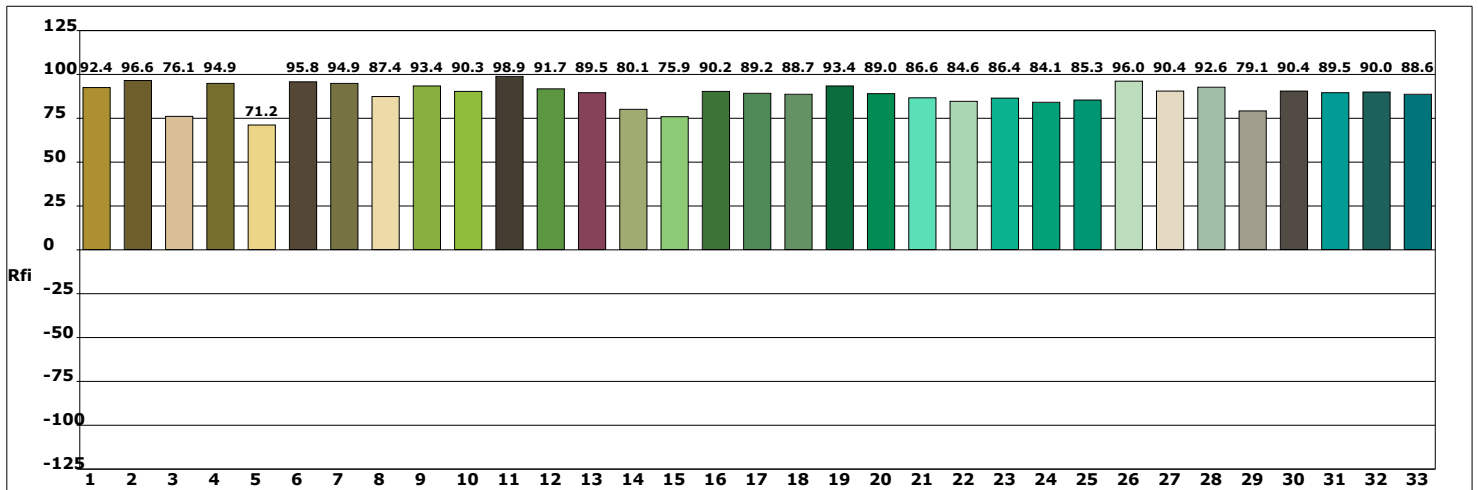
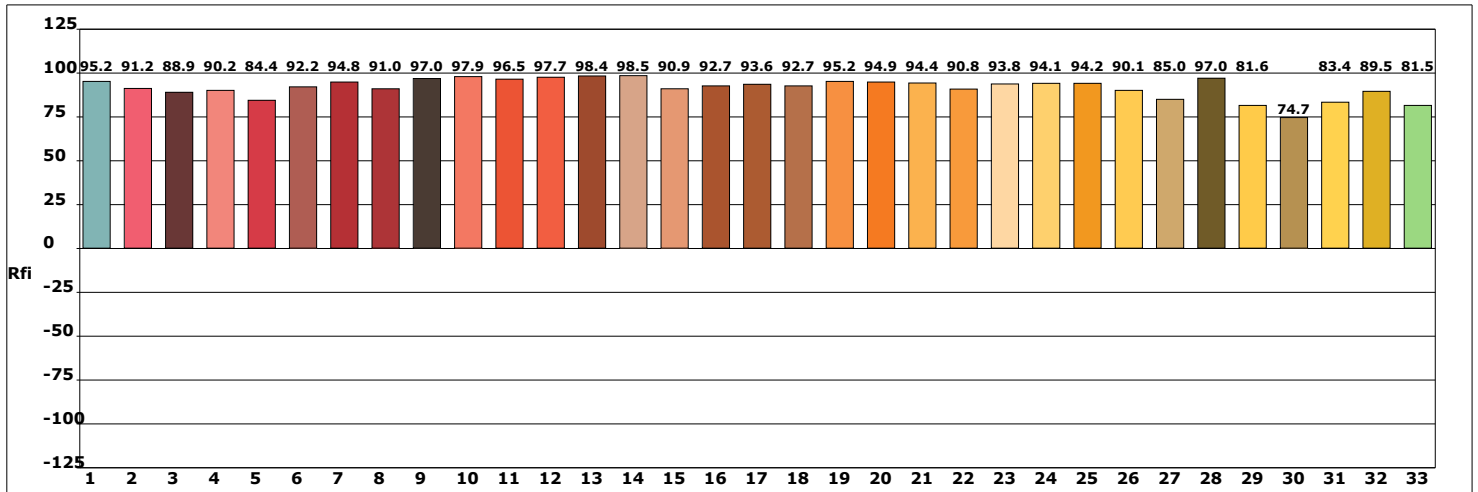


Hue Bin	Rf	Chroma	Hue
1	91.4	-2.2%	2.2%
2	96.1	-0.6%	-0.5%
3	93.6	-1.5%	-2.3%
4	85.4	-7.3%	-5.6%
5	91.1	-6.9%	-0.8%
6	90.7	-4.7%	3.6%
7	86.8	-5.2%	5.6%
8	90.1	-0.3%	6.0%
9	87.2	0.9%	6.9%
10	89.1	3.3%	5.9%
11	91.9	4.8%	2.6%
12	88.7	3.6%	-5.3%
13	88.5	-1.6%	-8.0%
14	89.6	-0.7%	-7.1%
15	88.4	-5.1%	1.5%
16	88.1	-2.3%	-6.4%



Product model:
 Product number:
 Tester:
 Remarks:

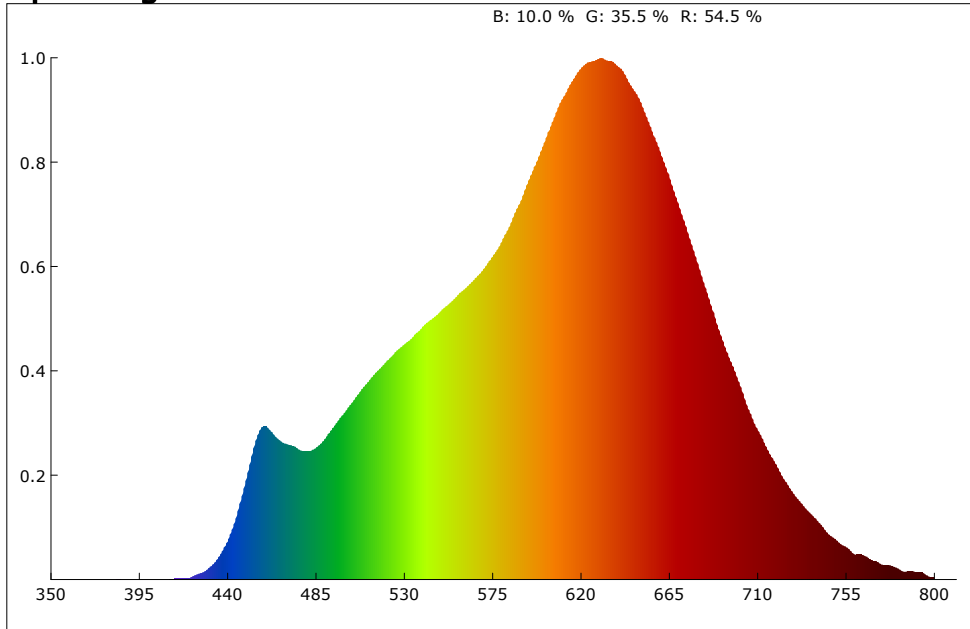
Manufacturer:
 Test unit:
 Date of observation: 09/11/23



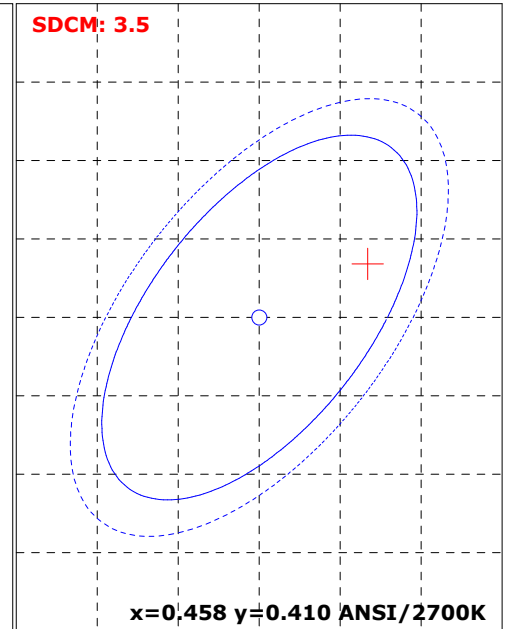
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Spectrogram



SDCM



Color Parameter:

x: 0.4645 y: 0.4135 u: 0.2642 v: 0.3528 u': 0.2642 v': 0.5292
 R_ratio: 54.5 % G_ratio: 35.5 % B_ratio: 10.0 % RedRatio: 26.8 % GreenRatio: 71.4 % BlueRatio: 1.8 %

Ra: 95.9 AvgR: 94.8
 R1: 99.1 R2: 98.1 R3: 98.2 R4: 96.9 R5: 97.4 R6: 93.8 R7: 93.3 R8: 90.6
 R9: 82.0 R10: 96.8 R11: 96.3 R12: 86.6 R13: 98.5 R14: 99.0 R15: 95.8

CCT: 2658 K Flux: 2457.051 lm PeakWave: 630.5 nm SDCM: 3.5
 S/P: 1.3 CentralWave: 616.6 nm DominantWave: 584.2 nm CentroidWave: 605.1 nm
 HalfWidth: 142.4 nm duv: 0.00072 purity: 63.6 % CQS: 85.9
 LER(TM-30): 267.5 Ep: 9184.7 mw Rg: 96.4 Rf: 89.8
 Red Ep: 4642.3 mw Near red Ep: 644.7 mw Near infrared Ep: 17.4 mw

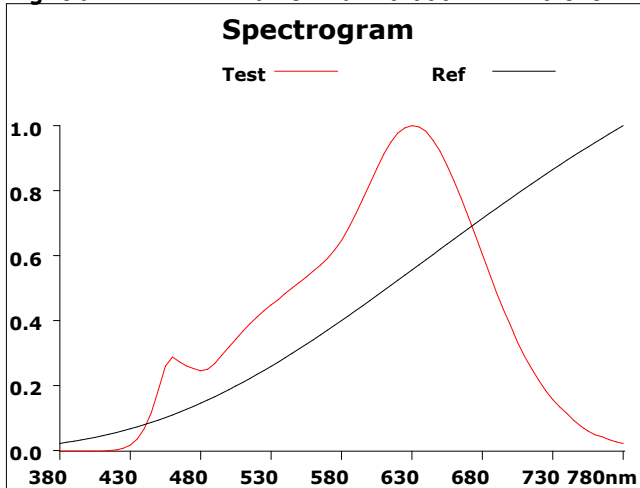
Electrical parameters:

Effic: 8.0 Lm/W Energy: 8.7 Effi: G
 U: 223.0 V I: 1.409 A P: 305.800 W Pf: 0.973

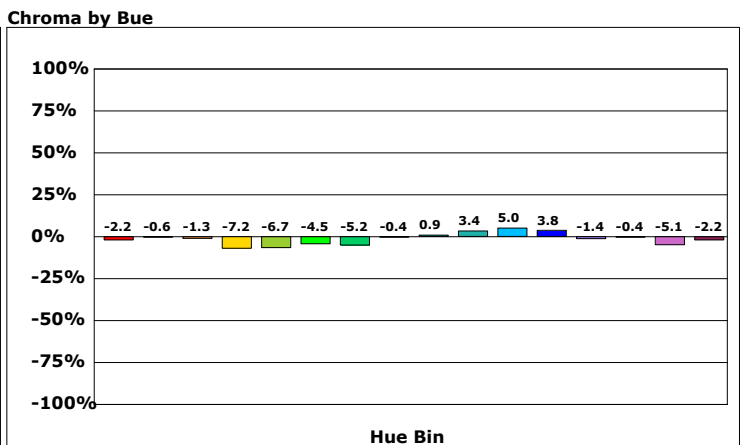
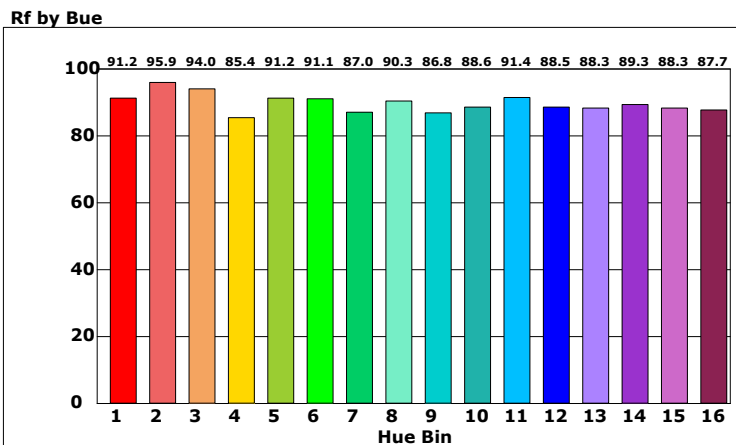
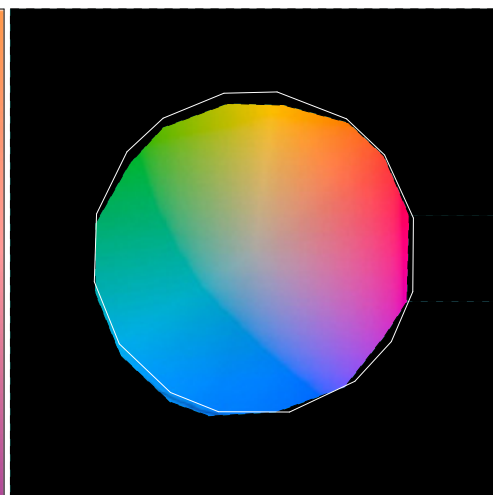
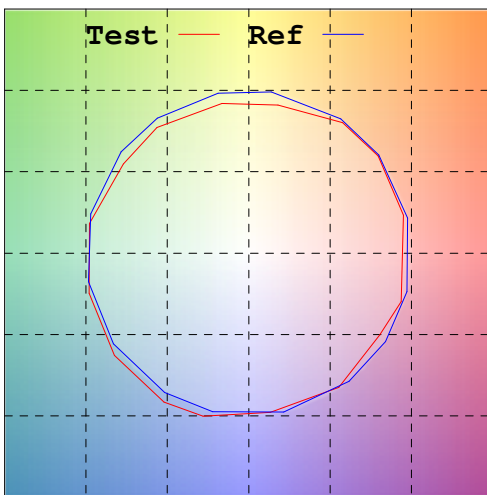
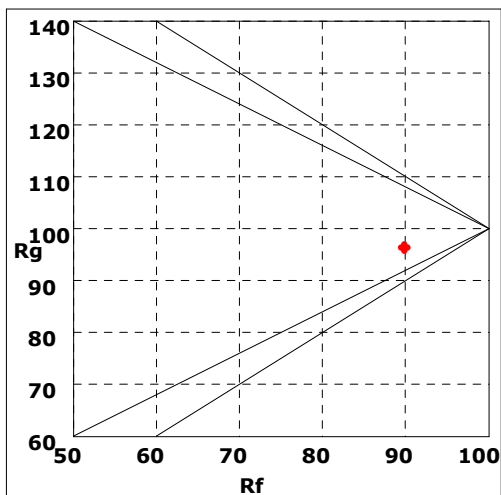
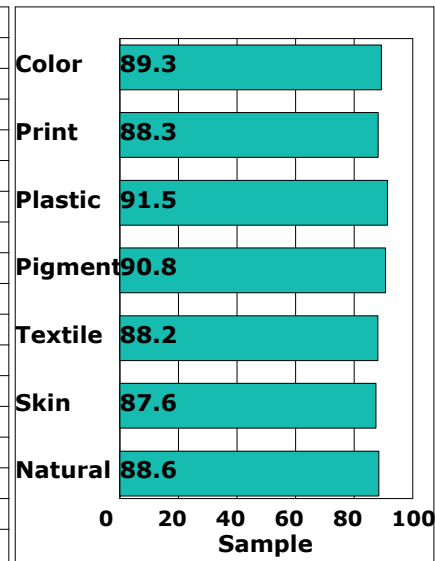
Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23

Rf: 89.8 CCT: 2658K u': 0.2642
 Rg: 96.4 LER: 267.5 Duv: 0.00072 v': 0.5292

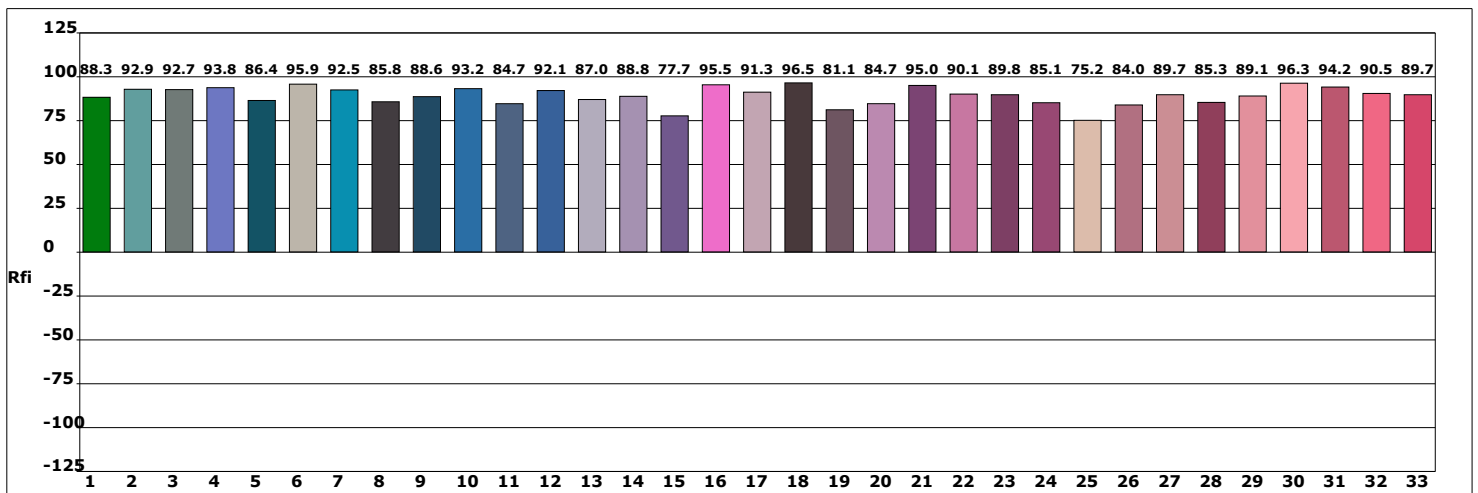
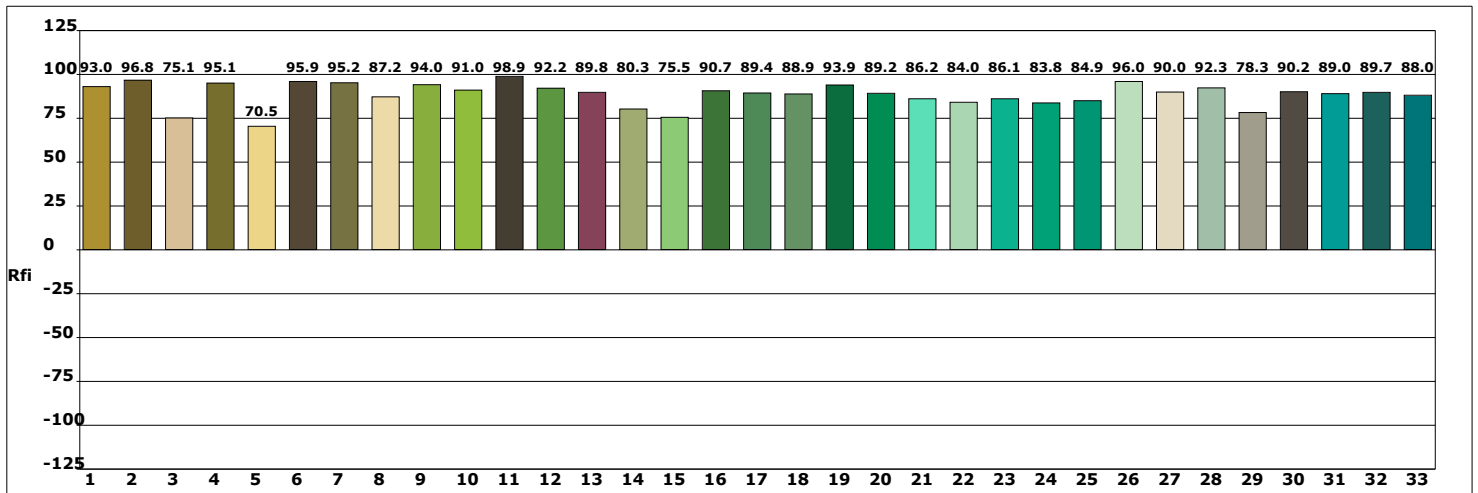
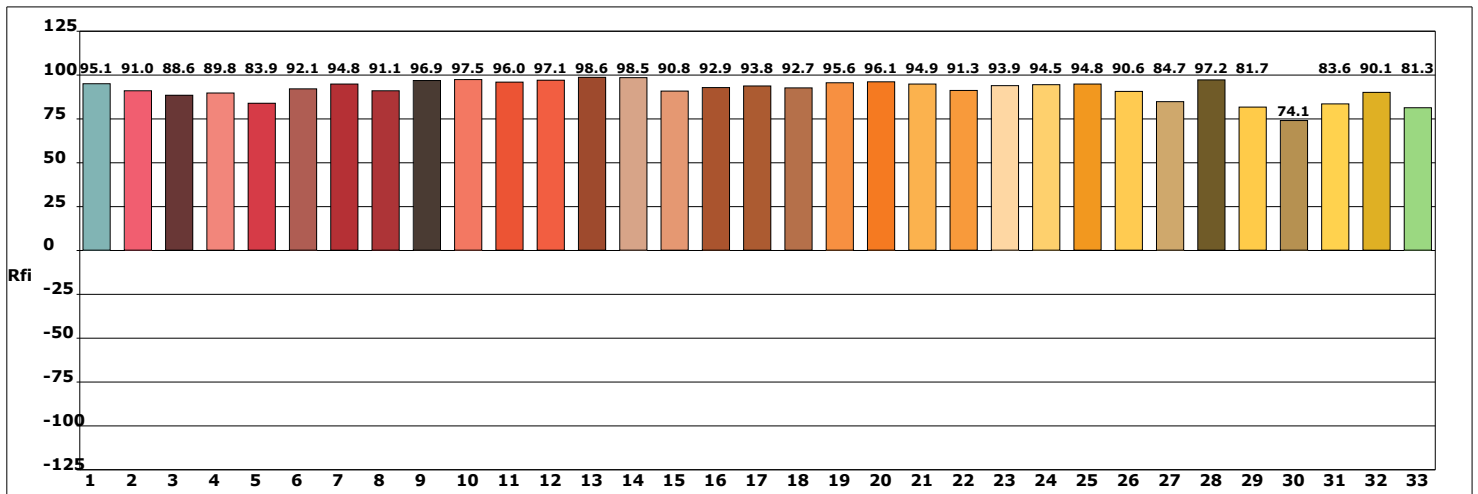


Hue Bin	Rf	Chroma	Hue
1	91.2	-2.2%	2.3%
2	95.9	-0.6%	-0.4%
3	94.0	-1.3%	-2.1%
4	85.4	-7.2%	-5.7%
5	91.2	-6.7%	-0.9%
6	91.1	-4.5%	3.3%
7	87.0	-5.2%	5.4%
8	90.3	-0.4%	5.8%
9	86.8	0.9%	7.1%
10	88.6	3.4%	6.3%
11	91.4	5.0%	2.9%
12	88.5	3.8%	-5.2%
13	88.3	-1.4%	-8.2%
14	89.3	-0.4%	-7.3%
15	88.3	-5.1%	1.4%
16	87.7	-2.2%	-6.7%



Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23



Product model:
 Product number:
 Tester:
 Remarks:

Manufacturer:
 Test unit:
 Date of observation: 09/11/23