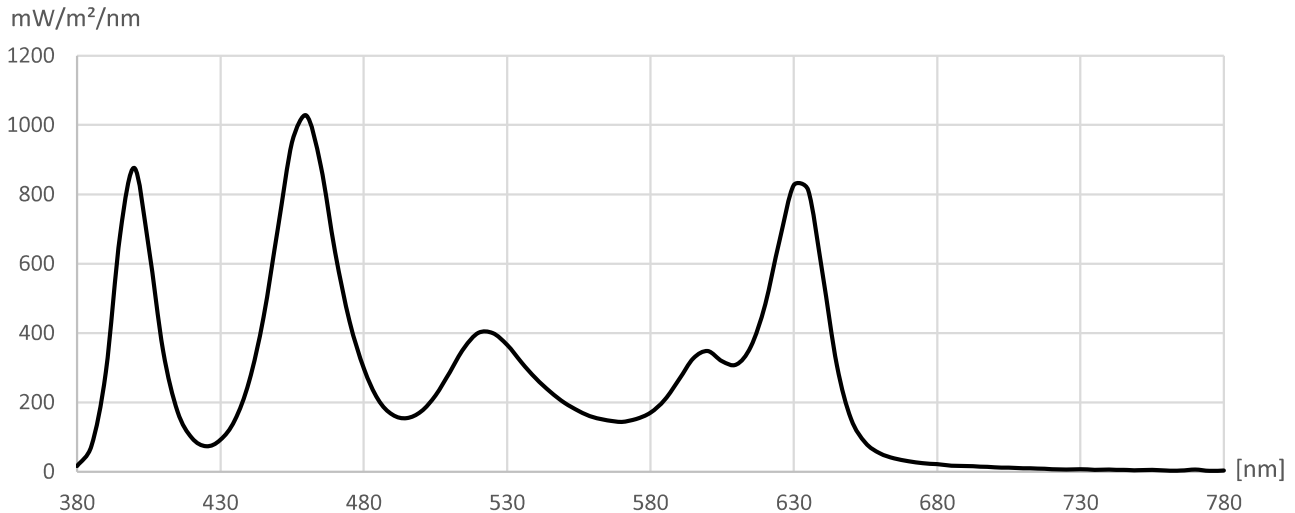


Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / all

Measurement file: 404358_1m_all_25deg.
 Date of measurement: 07.03.2018
 Time of measurement: 18:00:22



R1 = 24,3	Ra = 47,5	Illuminance	20750,75 lx	CIE1931
R2 = 55,9	Re = 30,2	Ee	101,070 W/m ²	x = 0,3132
R3 = 87,0	GAI = 149,9	LER	205,3 lm/W	y = 0,2581
R4 = 34,0				
R5 = 34,3		correlated color temperature (CCT)	7626 K	CIE1976
R6 = 47,5		Duv	-0,039	u' = 0,2290
R7 = 79,2				v' = 0,4246
R8 = 18,2		Saturation	20,5 %	
R9 = #####				CIE1960
R10 = 16,1		Dominant wavelength	#NV	u = 0,2290
R11 = 16,9		Peak wavelength	458 nm	v = 0,2830
R12 = 41,6				
R13 = 28,0		Flicker frequency	% < 2.5 Hz	TM30
R14 = 84,9		Percent Flicker	< 2.5 %	Rf = 70,3
R15 = 8,6		Flicker index	% < 2.5	Rg = 118,0

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	16,51	440	260,45	500	173,59	560	157,10	620	482,26	680	22,04	740	5,85
385	74,89	445	444,64	505	220,45	565	148,44	625	664,40	685	16,99	745	5,45
390	287,30	450	702,43	510	287,60	570	143,98	630	826,66	690	16,67	750	4,01
395	685,15	455	949,97	515	356,60	575	152,25	635	812,27	695	14,92	755	5,65
400	875,88	460	1027,36	520	400,25	580	170,05	640	571,82	700	12,68	760	3,21
405	647,72	465	882,63	525	399,63	585	207,97	645	306,54	705	11,55	765	3,34
410	349,08	470	632,77	530	365,61	590	266,65	650	152,91	710	10,17	770	6,48
415	174,00	475	434,20	535	315,43	595	327,12	655	84,04	715	9,24	775	2,32
420	97,44	480	297,70	540	269,37	600	347,77	660	53,44	720	7,44	780	3,37
425	73,80	485	208,59	545	231,25	605	319,04	665	38,64	725	6,39		
430	91,84	490	164,42	550	198,81	610	309,23	670	30,59	730	7,19		
435	148,05	495	154,76	555	174,91	615	360,91	675	24,31	735	5,67		

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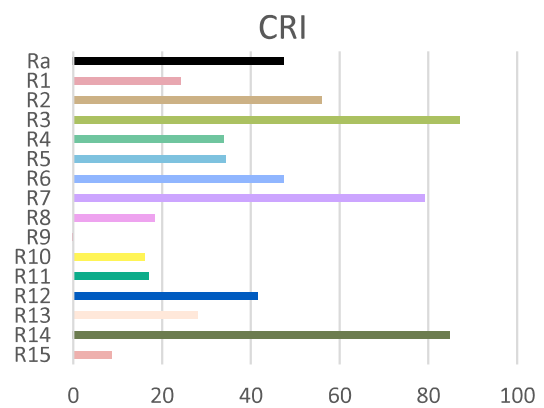
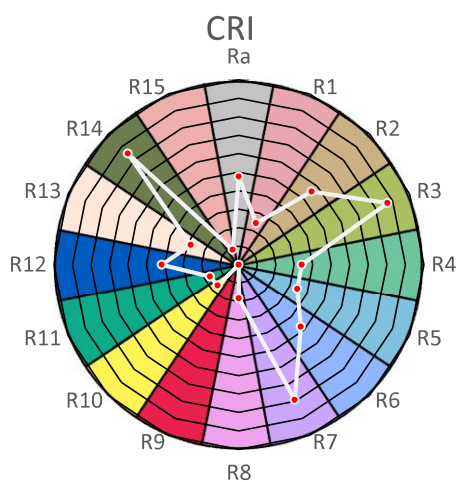
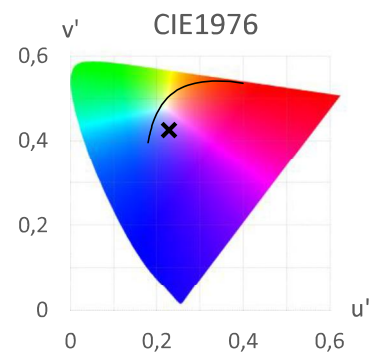
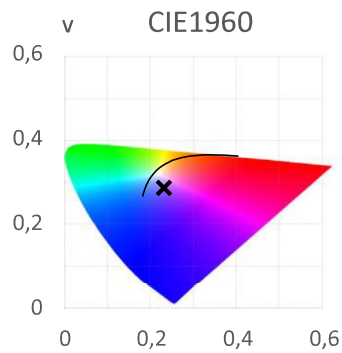
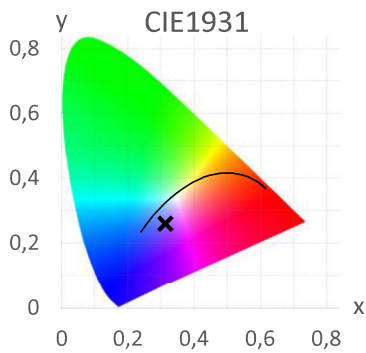
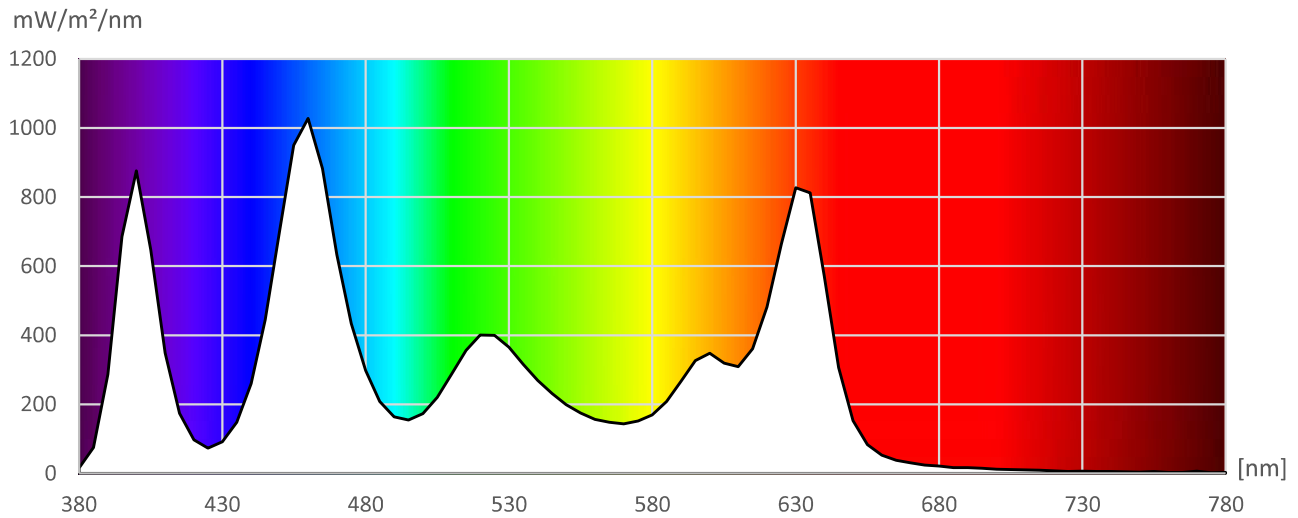
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / all

Measurement file: 404358_1m_all_25
 Date of measurement: 07.03.2018
 Time of measurement: 18:00:22



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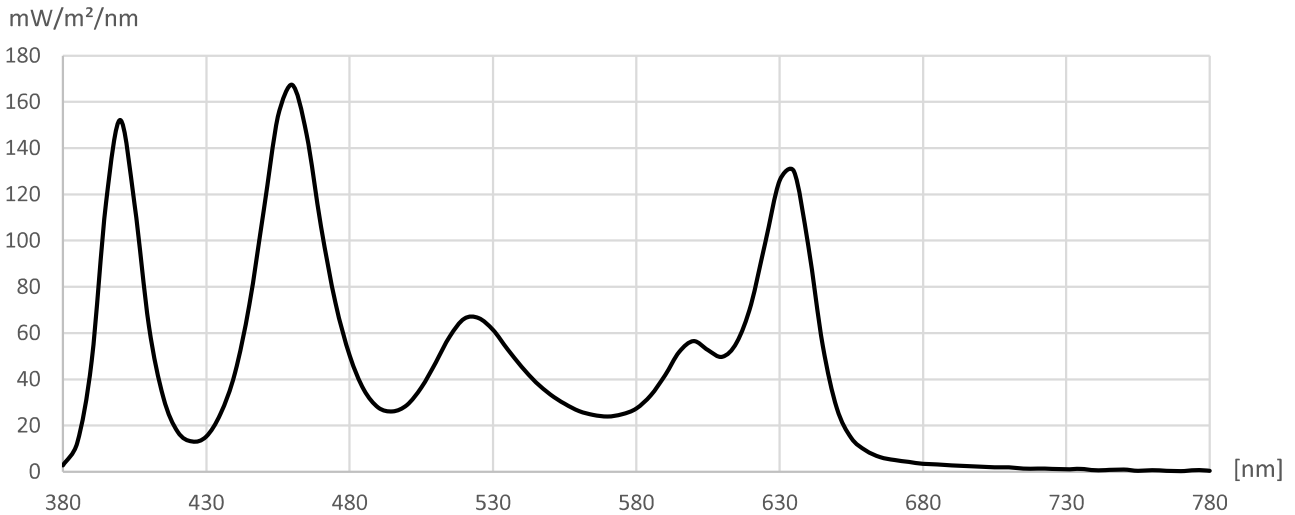
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / all

Measurement file: 404358_3m_all_25deg.
 Date of measurement: 07.03.2018
 Time of measurement: 18:00:49



R1 = 27,0	Ra = 49,6	Illuminance	3388,29 lx	CIE1931
R2 = 58,3	Re = 32,7	Ee	16,680 W/m ²	x = 0,3088
R3 = 85,9	GAI = 148,7	LER	203,1 lm/W	y = 0,2584
R4 = 36,7				
R5 = 38,0		correlated color temperature (CCT)	8182 K	CIE1976
R6 = 51,6		Duv	-0,0359	u' = 0,2253
R7 = 78,9		Saturation	36,5 %	v' = 0,4241
R8 = 20,0				
R9 = #####				CIE1960
R10 = 21,4		Dominant wavelength	#NV	u = 0,2253
R11 = 21,0		Peak wavelength	458 nm	v = 0,2827
R12 = 46,9				
R13 = 31,0		Flicker frequency	% < 2.5 Hz	TM30
R14 = 84,5		Percent Flicker	< 2.5 %	Rf = 70,7
R15 = 11,6		Flicker index	% < 2.5	Rg = 116,6

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	2,75	440	42,65	500	28,93	560	26,25	620	72,42	680	3,45	740	0,63
385	12,58	445	72,20	505	36,45	565	24,63	625	98,90	685	3,15	745	0,74
390	47,95	450	113,10	510	47,24	570	23,90	630	125,87	690	2,73	750	0,93
395	116,48	455	153,48	515	58,54	575	24,83	635	129,93	695	2,46	755	0,39
400	152,16	460	167,37	520	66,23	580	27,35	640	97,50	700	2,18	760	0,69
405	115,70	465	145,93	525	66,43	585	33,00	645	54,58	705	1,94	765	0,41
410	63,01	470	106,16	530	61,29	590	41,76	650	27,44	710	1,84	770	0,26
415	32,14	475	73,20	535	53,08	595	51,83	655	14,67	715	1,35	775	0,72
420	17,23	480	50,19	540	45,50	600	56,53	660	9,20	720	1,38	780	0,41
425	13,07	485	35,52	545	38,69	605	52,58	665	6,39	725	1,27		
430	15,23	490	27,81	550	33,47	610	49,68	670	5,06	730	1,02		
435	25,08	495	26,10	555	29,35	615	55,90	675	4,24	735	1,24		

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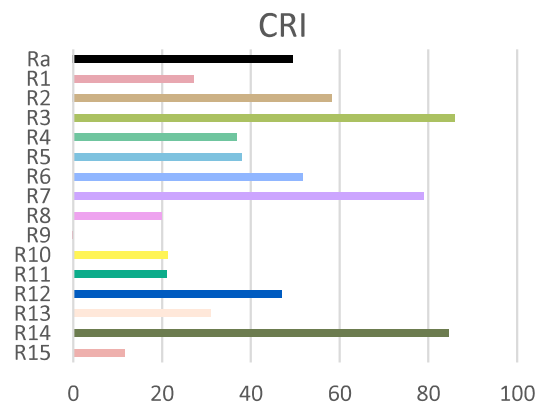
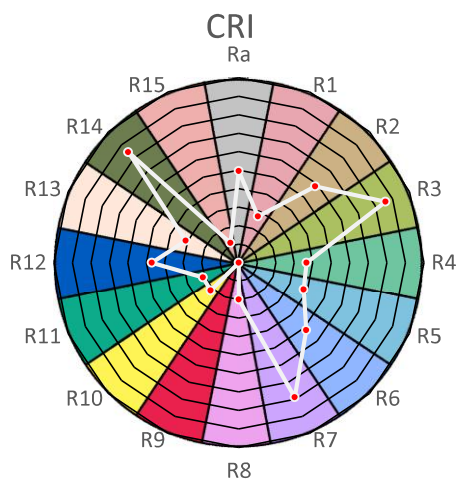
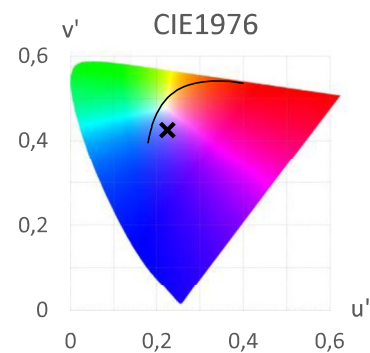
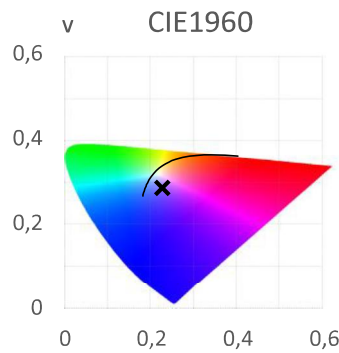
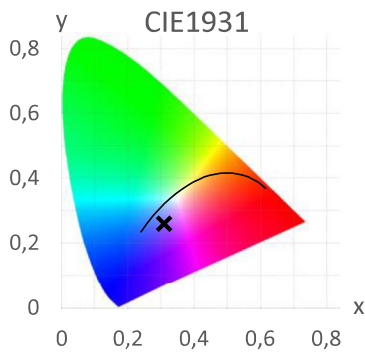
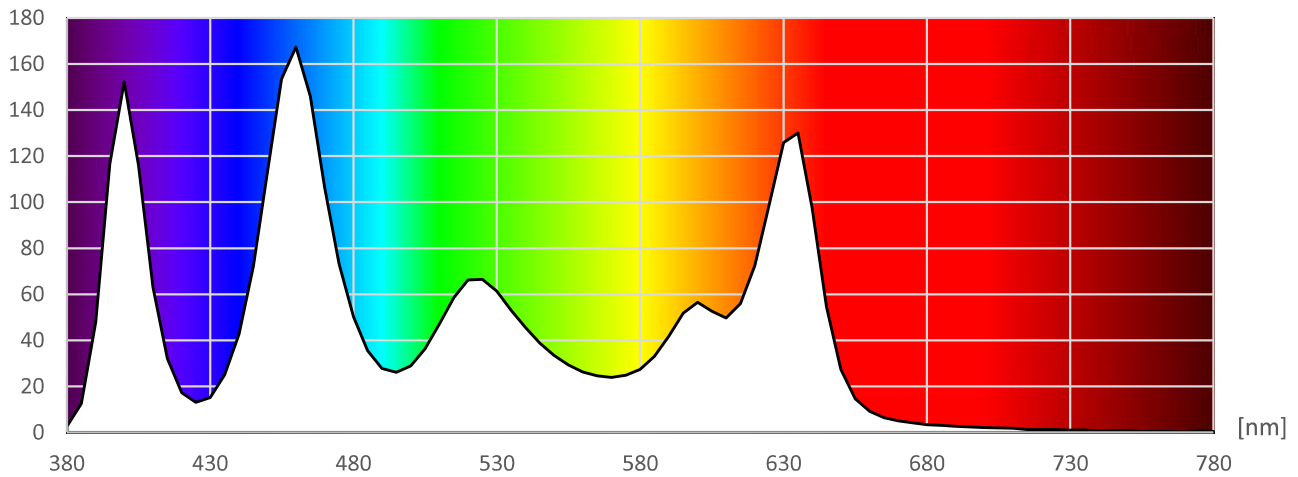
Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / all

Measurement file: 404358_3m_all_25
 Date of measurement: 07.03.2018
 Time of measurement: 18:00:49

mW/m²/nm



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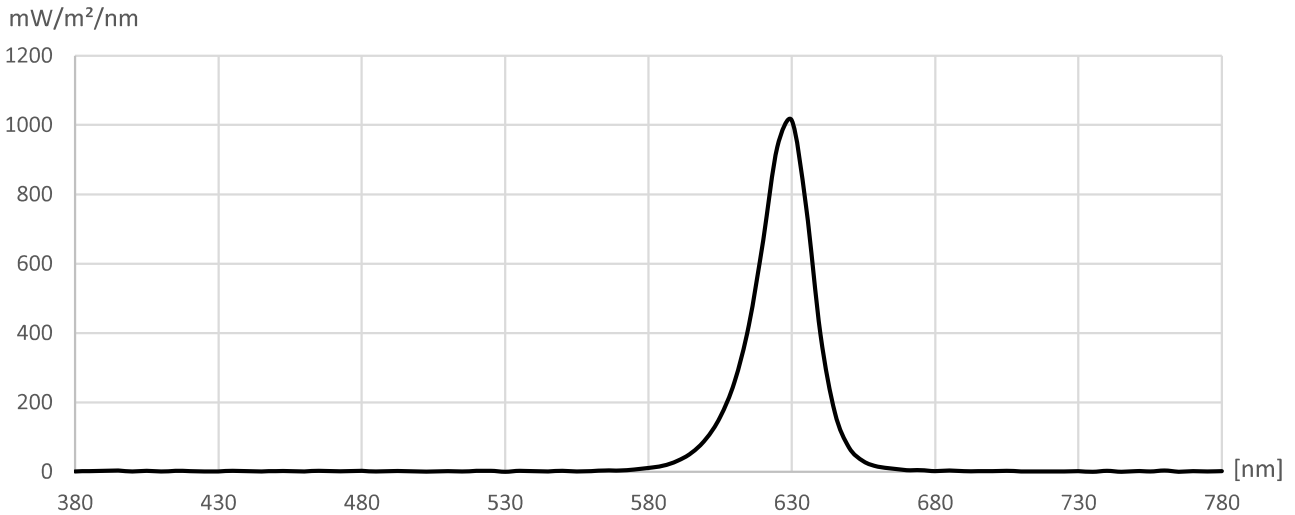
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / red

Measurement file: 404358_1m_r_25deg.C
 Date of measurement: 07.03.2018
 Time of measurement: 17:57:15



R1 = -	Ra = -	Illuminance	5736,51 lx	CIE1931
R2 = -	Re = -	Ee	26,169 W/m ²	x = 0,6819
R3 = -	GAI = -	LER	219,2 lm/W	y = 0,3114
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,5076
R7 = -				v' = 0,5216
R8 = -		Saturation	97,9 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	623 nm	u = 0,5076
R11 = -		Peak wavelength	628 nm	v = 0,3477
R12 = -				
R13 = -		Flicker frequency	% < 2.5 Hz	TM30
R14 = -		Percent Flicker	< 2.5 %	Rf = -
R15 = -		Flicker index	% < 2.5	Rg = -

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	1,18	440	1,51	500	0,69	560	2,03	620	668,06	680	1,86	740	2,66
385	1,49	445	1,13	505	0,46	565	3,91	625	937,46	685	3,37	745	0,00
390	2,65	450	2,10	510	1,80	570	3,22	630	1013,38	690	1,42	750	2,06
395	3,32	455	1,66	515	0,67	575	6,53	635	763,59	695	1,93	755	0,91
400	0,91	460	1,18	520	2,18	580	10,68	640	395,31	700	1,59	760	3,37
405	2,64	465	2,42	525	2,51	585	16,94	645	170,16	705	2,28	765	0,25
410	0,98	470	1,27	530	0,25	590	31,22	650	70,23	710	1,09	770	2,01
415	2,28	475	1,89	535	2,57	595	53,95	655	30,33	715	1,11	775	0,48
420	1,97	480	2,31	540	1,78	600	93,46	660	14,98	720	1,06	780	1,88
425	1,02	485	0,46	545	1,11	605	157,03	665	9,47	725	0,99		
430	1,08	490	2,14	550	2,57	610	259,16	670	4,45	730	1,28		
435	2,69	495	1,71	555	0,94	615	422,37	675	4,84	735	0,00		

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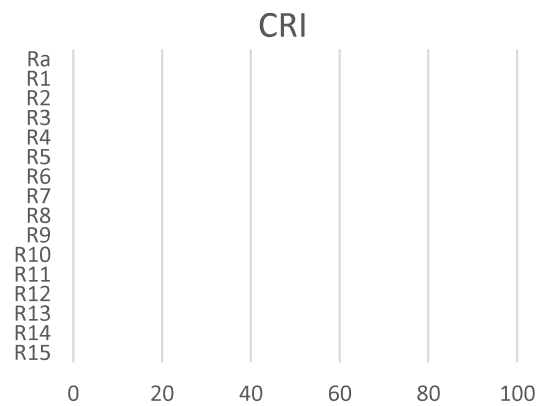
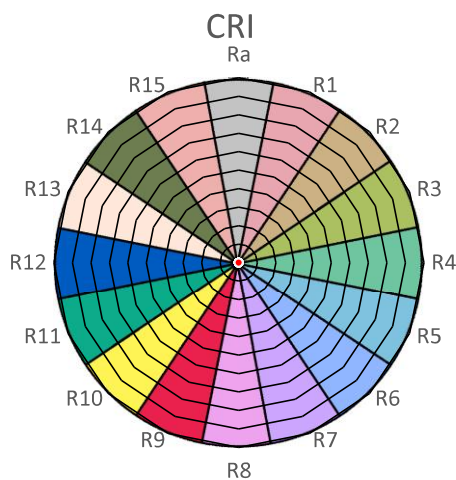
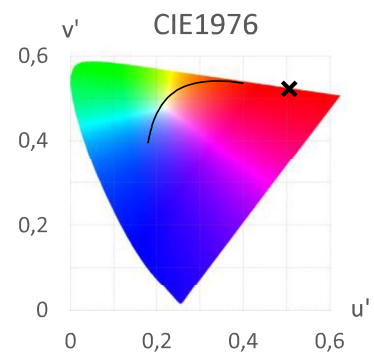
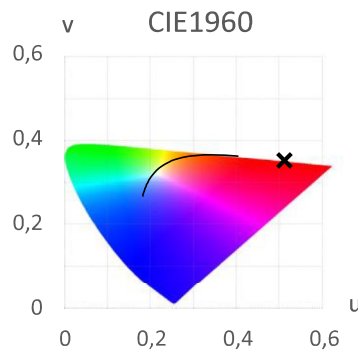
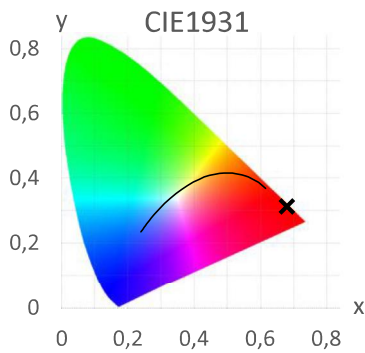
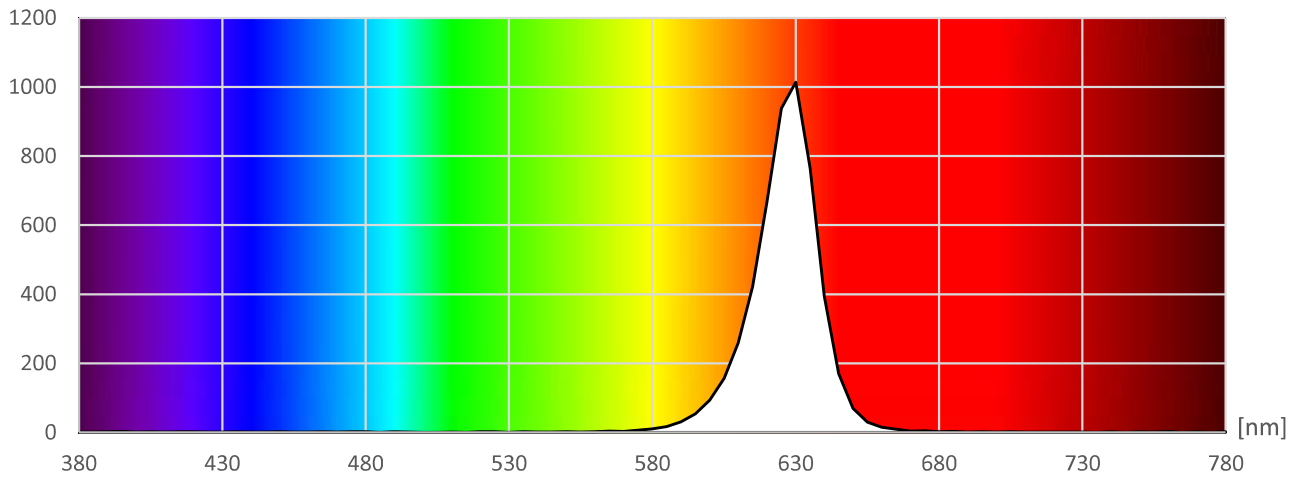
Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / red

Measurement file: 404358_1m_r_25d
 Date of measurement: 07.03.2018
 Time of measurement: 17:57:15

mW/m²/nm



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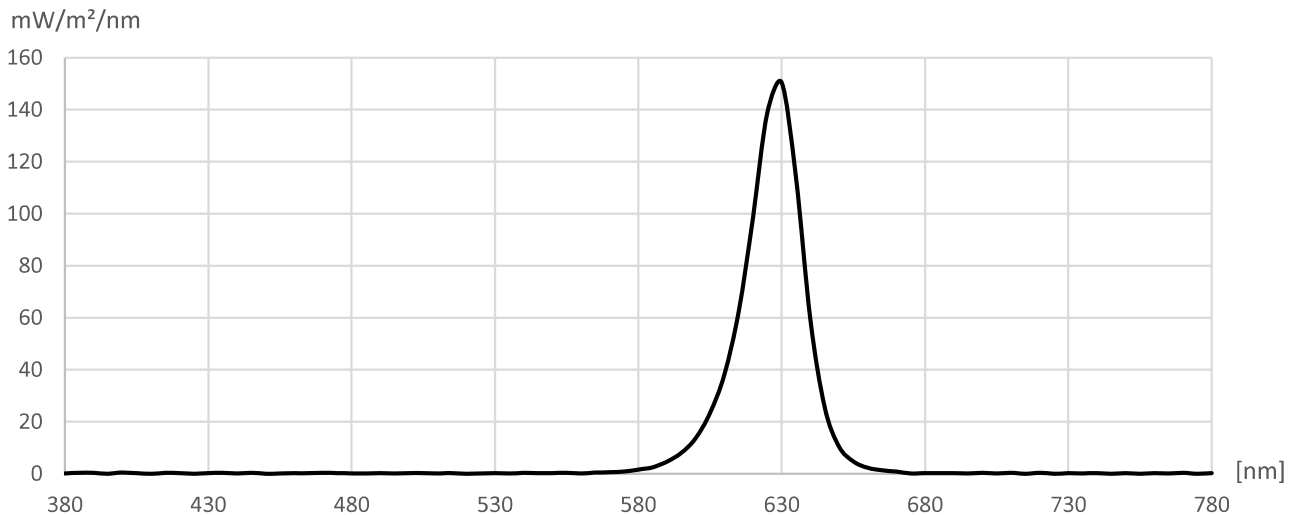
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / red

Measurement file: 404358_3m_r_25deg.C
 Date of measurement: 07.03.2018
 Time of measurement: 17:57:34



R1 = -	Ra = -	Illuminance	847,41 lx	CIE1931
R2 = -	Re = -	Ee	3,866 W/m²	x = 0,6833
R3 = -	GAI = -	LER	219,2 lm/W	y = 0,3114
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,5090
R7 = -				v' = 0,5219
R8 = -		Saturation	98,3 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	623 nm	u = 0,5090
R11 = -		Peak wavelength	628 nm	v = 0,3479
R12 = -				
R13 = -		Flicker frequency	% < 2.5 Hz	TM30
R14 = -		Percent Flicker	< 2.5 %	Rf = -
R15 = -		Flicker index	% < 2.5	Rg = -

[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm
380	0,13	440	0,09	500	0,27	560	0,13	620	98,72	680	0,20	740	0,22
385	0,39	445	0,30	505	0,22	565	0,42	625	138,61	685	0,18	745	0,01
390	0,29	450	0,02	510	0,08	570	0,54	630	150,43	690	0,23	750	0,22
395	0,04	455	0,06	515	0,28	575	0,84	635	114,05	695	0,10	755	0,00
400	0,44	460	0,22	520	0,00	580	1,61	640	59,26	700	0,30	760	0,23
405	0,20	465	0,17	525	0,12	585	2,49	645	25,49	705	0,12	765	0,11
410	0,01	470	0,39	530	0,22	590	4,68	650	10,56	710	0,34	770	0,34
415	0,31	475	0,26	535	0,06	595	7,99	655	4,75	715	0,02	775	0,00
420	0,26	480	0,15	540	0,31	600	13,61	660	2,27	720	0,29	780	0,22
425	0,01	485	0,12	545	0,23	605	23,27	665	1,35	725	0,04		
430	0,25	490	0,24	550	0,27	610	38,09	670	0,78	730	0,18		
435	0,38	495	0,11	555	0,35	615	62,39	675	0,13	735	0,16		

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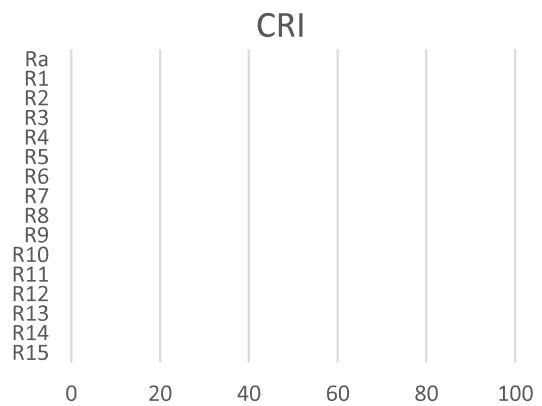
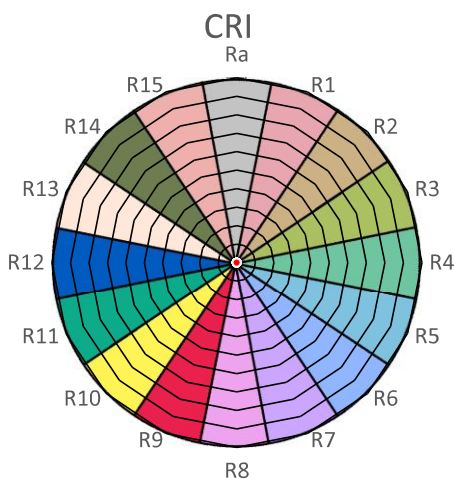
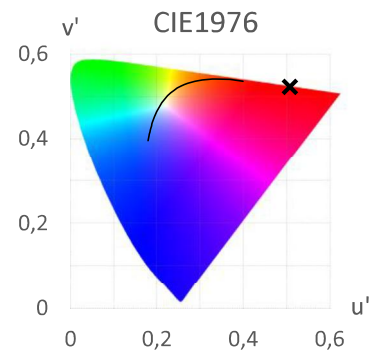
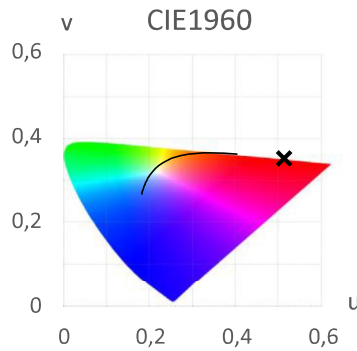
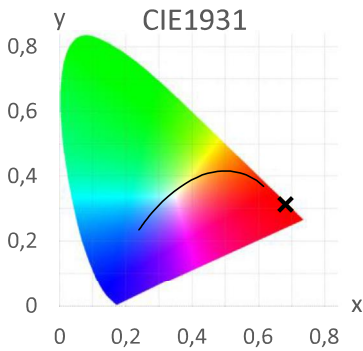
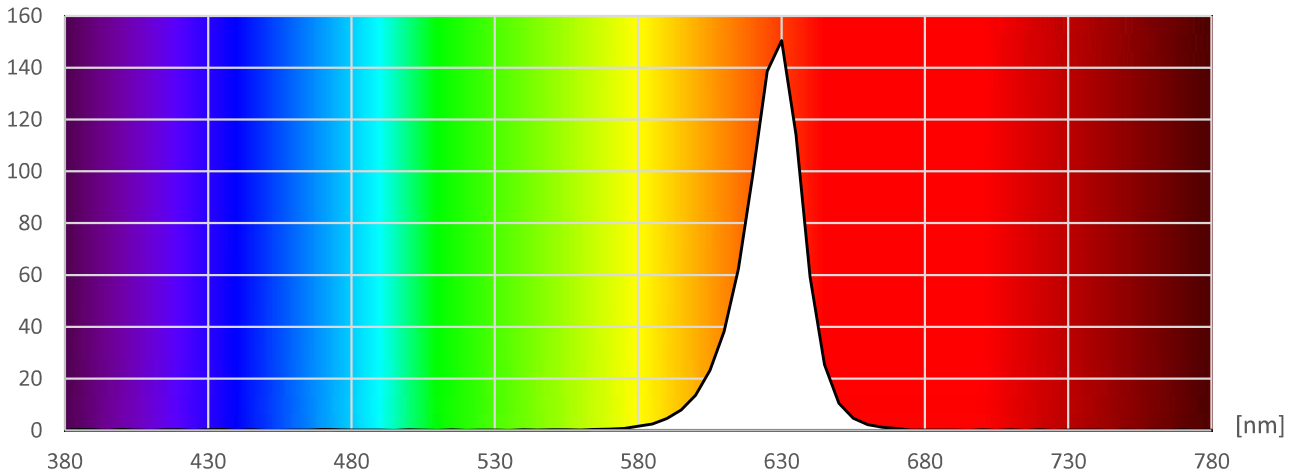
Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / red

Measurement file: 404358_3m_r_25d
 Date of measurement: 07.03.2018
 Time of measurement: 17:57:34

mW/m²/nm



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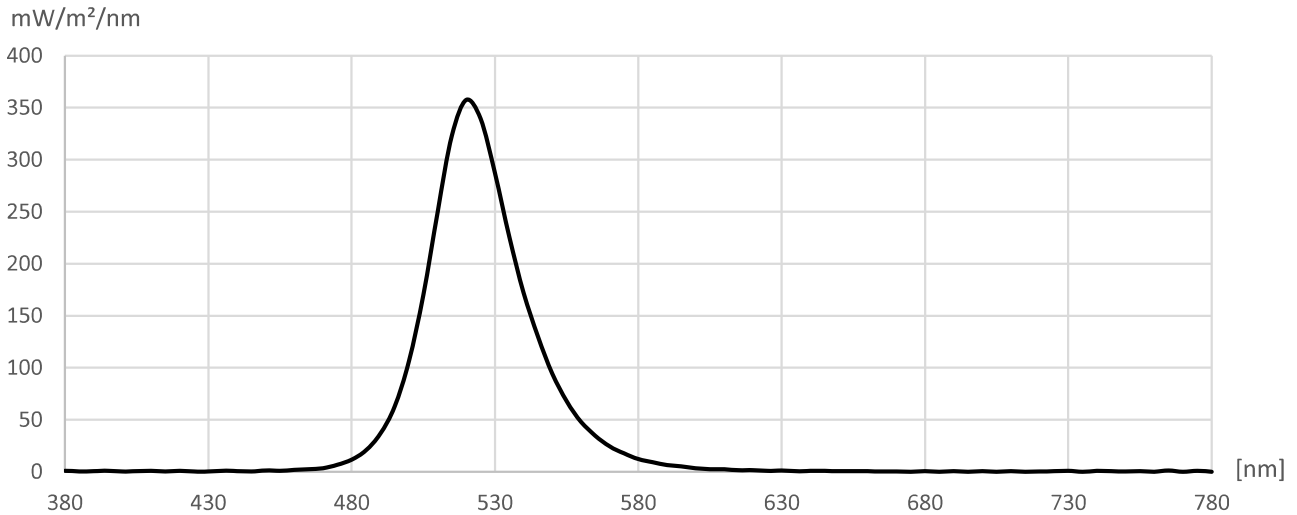
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / green

Measurement file: 404358_1m_g_25deg.C
 Date of measurement: 07.03.2018
 Time of measurement: 17:57:52



R1 = -35,1	Ra = -22,4	Illuminance	6992,82 lx	CIE1931
R2 = -6,6	Re = -53,1	Ee	14,303 W/m ²	x = 0,1711
R3 = -17,6	GAI = 0,7	LER	488,9 lm/W	y = 0,7224
R4 = -62,0				
R5 = -9,4		correlated color temperature (CCT)	7814 K	CIE1976
R6 = -13,8		Duv	0,1573	u' = 0,0604
R7 = -3,4				v' = 0,5740
R8 = -31,3		Saturation	77,9 %	
R9 = #####				CIE1960
R10 = #####		Dominant wavelength	524 nm	u = 0,0604
R11 = -91,4		Peak wavelength	519 nm	v = 0,3827
R12 = -29,3				
R13 = -40,1		Flicker frequency	% < 2.5 Hz	TM30
R14 = 41,4		Percent Flicker	< 2.5 %	Rf = 0,9
R15 = -38,8		Flicker index	% < 2.5	Rg = 9,4

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	0,90	440	0,60	500	106,40	560	48,02	620	1,58	680	0,48	740	0,72
385	0,40	445	0,25	505	170,17	565	34,73	625	0,75	685	0,00	745	0,47
390	0,50	450	1,26	510	250,27	570	24,42	630	1,20	690	0,59	750	0,20
395	1,01	455	0,83	515	323,13	575	17,64	635	0,47	695	0,00	755	0,52
400	0,11	460	1,69	520	357,52	580	12,13	640	0,74	700	0,52	760	0,05
405	0,53	465	2,48	525	339,33	585	9,15	645	0,76	705	0,03	765	1,08
410	0,82	470	3,43	530	286,79	590	6,33	650	0,46	710	0,52	770	0,00
415	0,21	475	6,66	535	225,38	595	5,16	655	0,69	715	0,00	775	0,92
420	0,78	480	11,67	540	172,35	600	3,36	660	0,43	720	0,21	780	0,00
425	0,19	485	20,48	545	130,09	605	2,44	665	0,28	725	0,47		
430	0,11	490	36,34	550	94,39	610	2,31	670	0,27	730	0,83		
435	0,99	495	62,57	555	67,70	615	1,35	675	0,06	735	0,00		

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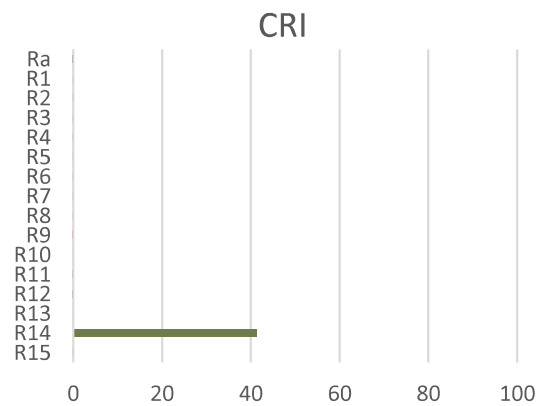
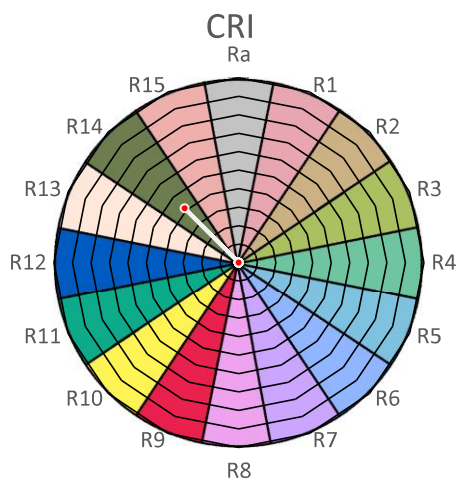
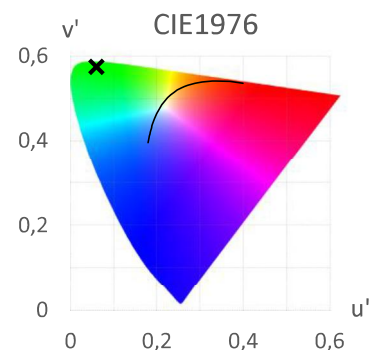
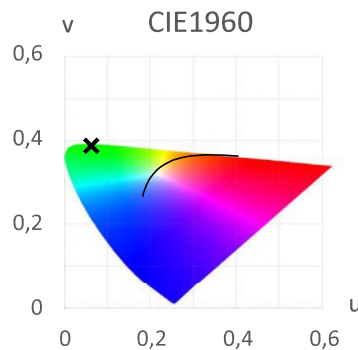
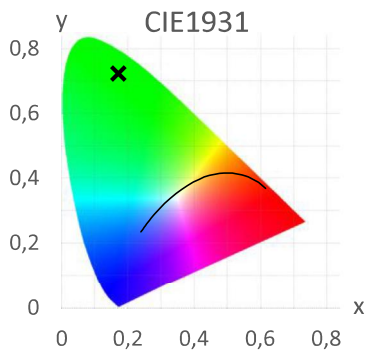
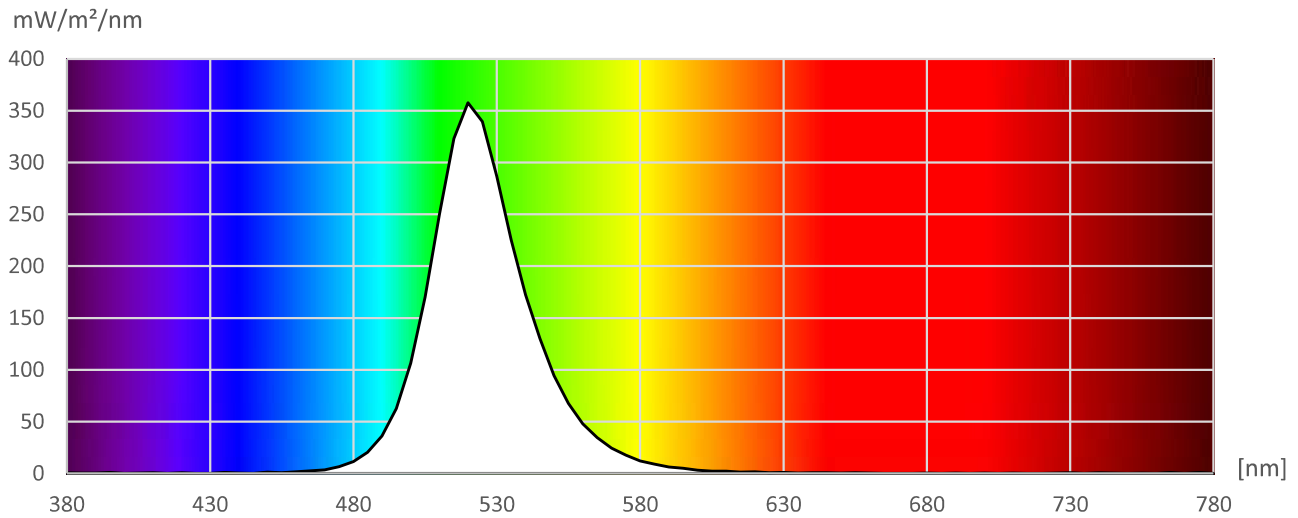
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / green

Measurement file: 404358_1m_g_25c
 Date of measurement: 07.03.2018
 Time of measurement: 17:57:52



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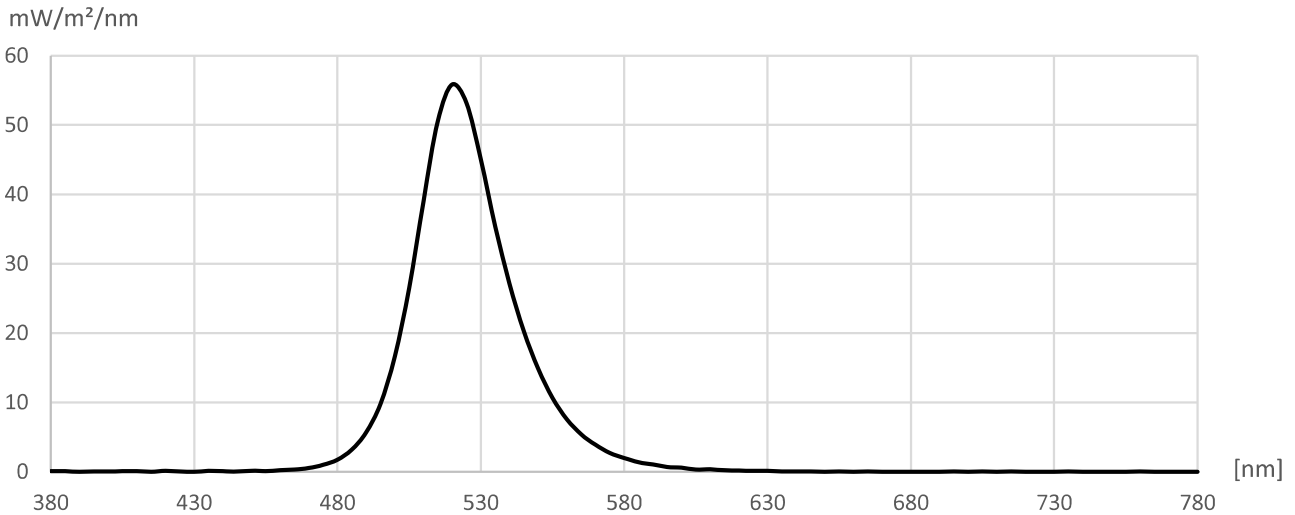
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / green

Measurement file: 404358_3m_g_25deg.C
 Date of measurement: 07.03.2018
 Time of measurement: 17:58:09



R1 = -35,6	Ra = -23,5	Illuminance	1094,86 lx	CIE1931
R2 = -7,5	Re = -54,3	Ee	2,227 W/m²	x = 0,1707
R3 = -19,4	GAI = 0,7	LER	491,6 lm/W	y = 0,7242
R4 = -63,5				
R5 = -9,7		correlated color temperature (CCT)	7811 K	CIE1976
R6 = -14,5		Duv	0,1576	u' = 0,0602
R7 = -5,3				v' = 0,5743
R8 = -32,6		Saturation	78,3 %	
R9 = #####				CIE1960
R10 = #####		Dominant wavelength	524 nm	u = 0,0602
R11 = -93,0		Peak wavelength	519 nm	v = 0,3829
R12 = -30,1				
R13 = -40,7		Flicker frequency	% < 2.5 Hz	TM30
R14 = 40,6		Percent Flicker	< 2.5 %	Rf = 0,8
R15 = -39,4		Flicker index	% < 2.5	Rg = 8,7

[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm
380	0,09	440	0,06	500	16,63	560	7,54	620	0,16	680	0,00	740	0,00
385	0,06	445	0,02	505	26,55	565	5,40	625	0,14	685	0,01	745	0,00
390	0,00	450	0,15	510	39,08	570	3,89	630	0,11	690	0,00	750	0,00
395	0,05	455	0,09	515	50,51	575	2,72	635	0,05	695	0,03	755	0,00
400	0,02	460	0,23	520	55,86	580	1,99	640	0,04	700	0,00	760	0,04
405	0,06	465	0,31	525	53,17	585	1,35	645	0,04	705	0,03	765	0,00
410	0,09	470	0,52	530	45,02	590	1,05	650	0,01	710	0,00	770	0,01
415	0,00	475	1,00	535	35,33	595	0,68	655	0,06	715	0,03	775	0,00
420	0,14	480	1,74	540	27,17	600	0,58	660	0,00	720	0,00	780	0,00
425	0,03	485	3,18	545	20,31	605	0,30	665	0,05	725	0,00		
430	0,00	490	5,66	550	14,87	610	0,34	670	0,00	730	0,00		
435	0,11	495	9,78	555	10,65	615	0,21	675	0,01	735	0,04		

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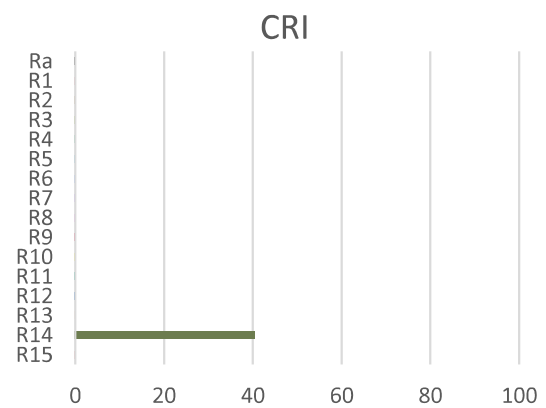
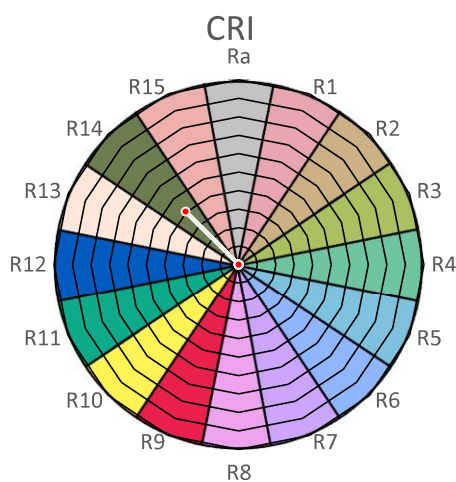
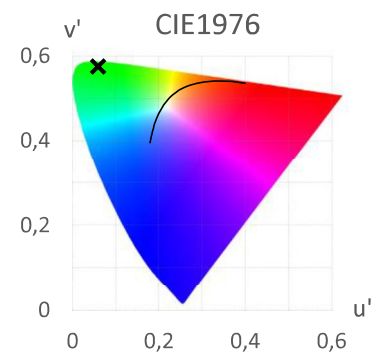
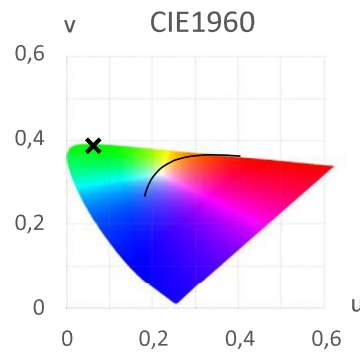
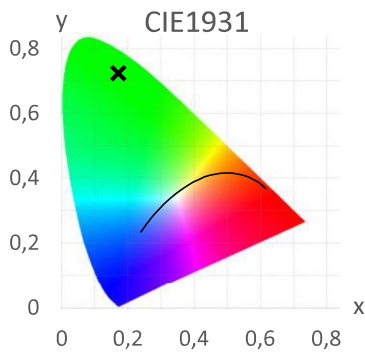
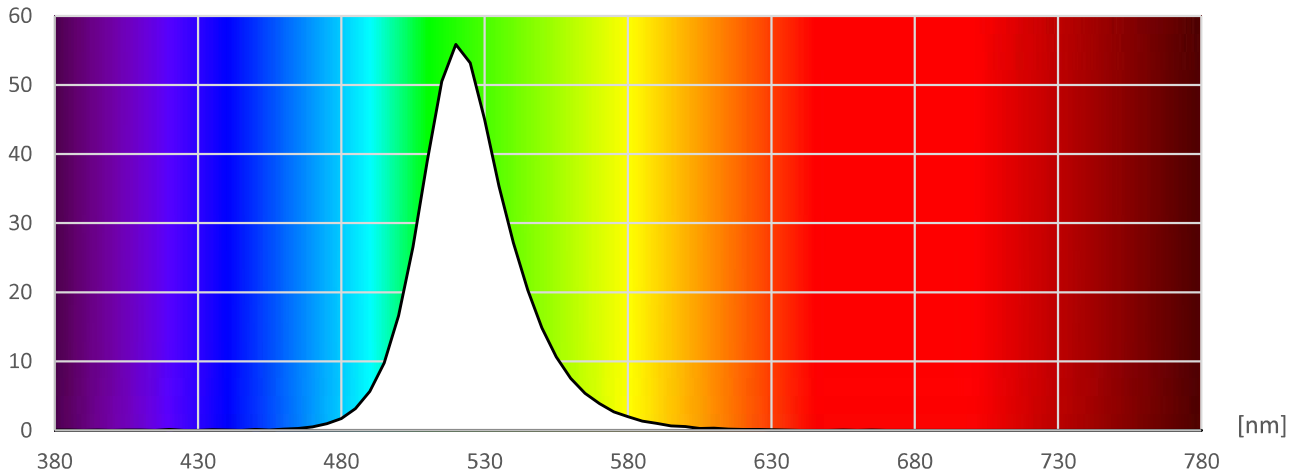
Measurement protocol

th•mann

Test object: Stairville
Retro Flat Par 18x10W RGBWA UV
Item 404358 / @ 3 m / 25° / green

Measurement file: 404358_3m_g_25c
Date of measurement: 07.03.2018
Time of measurement: 17:58:09

mW/m²/nm



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Burgebrach, 07.03.2018

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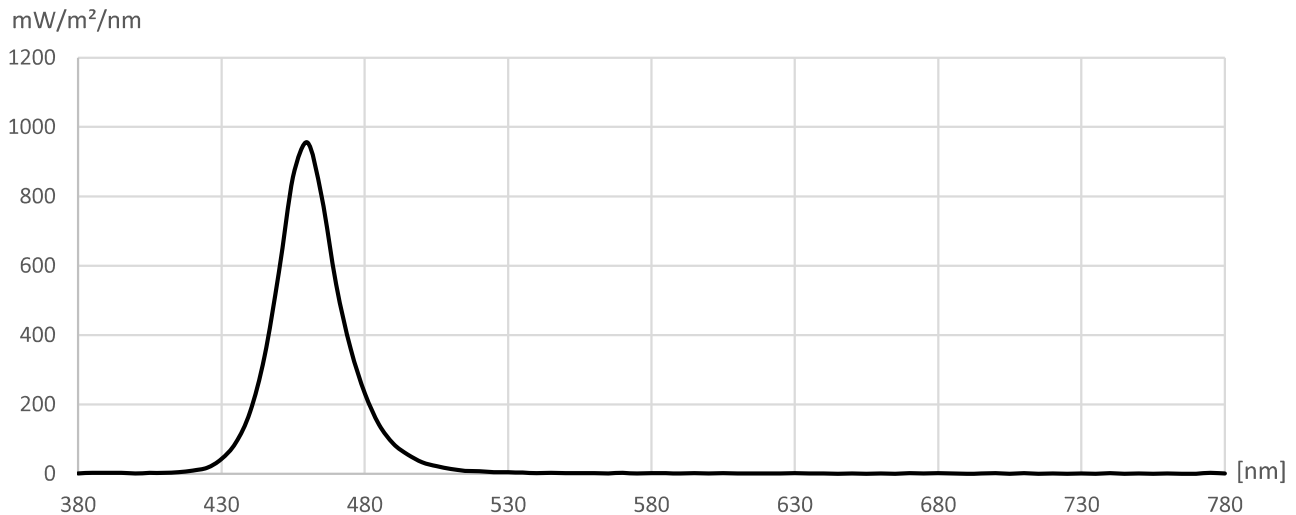
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Retro Flat Par 18x10W RGBWA UV
Item 404358 / @ 1 m / 25° / blue

Measurement file: 404358_1m_b_25deg.C
Date of measurement: 07.03.2018
Time of measurement: 17:58:32



R1 = -	Ra = -	Illuminance	1519,55 lx	CIE1931
R2 = -	Re = -	Ee	27,248 W/m ²	x = 0,1425
R3 = -	GAI = -	LER	55,8 lm/W	y = 0,0455
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,1748
R7 = -				v' = 0,1256
R8 = -		Saturation	97,8 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	457 nm	u = 0,1748
R11 = -		Peak wavelength	458 nm	v = 0,0837
R12 = -				
R13 = -		Flicker frequency	% < 2.5 Hz	TM30
R14 = -		Percent Flicker	< 2.5 %	Rf = -
R15 = -		Flicker index	% < 2.5	Rg = -

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	1,04	440	178,56	500	32,94	560	1,61	620	1,18	680	1,32	740	1,35
385	2,43	445	337,76	505	21,75	565	1,21	625	1,00	685	0,56	745	0,01
390	2,43	450	581,03	510	14,02	570	2,15	630	1,43	690	0,20	750	0,38
395	2,61	455	855,95	515	8,47	575	0,92	635	0,61	695	0,34	755	0,00
400	1,13	460	955,76	520	7,35	580	1,75	640	1,12	700	1,62	760	0,88
405	2,20	465	797,92	525	4,76	585	1,34	645	0,26	705	0,16	765	0,00
410	2,32	470	546,08	530	4,07	590	0,93	650	1,11	710	1,41	770	0,00
415	4,50	475	361,62	535	3,34	595	1,51	655	0,05	715	0,00	775	2,35
420	9,28	480	231,49	540	1,65	600	0,66	660	0,49	720	0,92	780	0,65
425	17,62	485	142,14	545	2,90	605	1,69	665	0,00	725	0,00		
430	41,98	490	86,53	550	1,63	610	0,88	670	1,86	730	1,09		
435	88,82	495	55,57	555	1,38	615	0,76	675	0,74	735	0,06		

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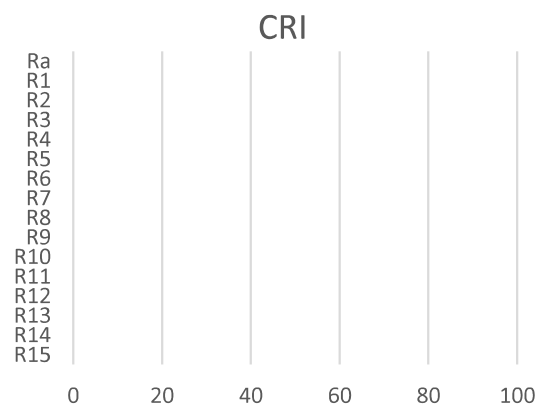
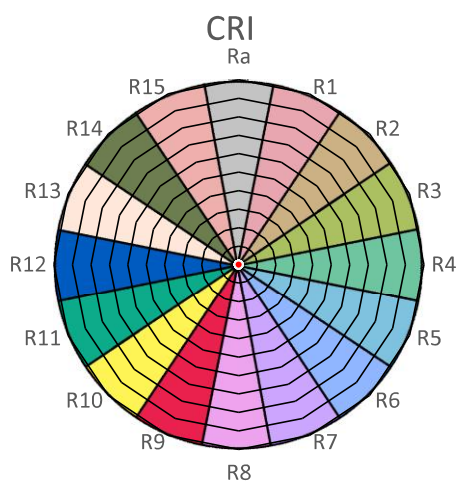
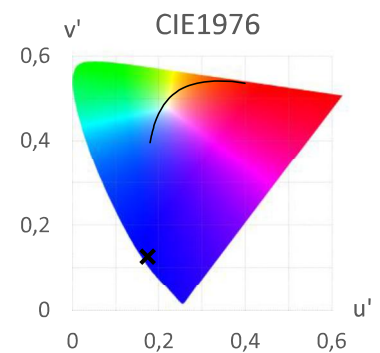
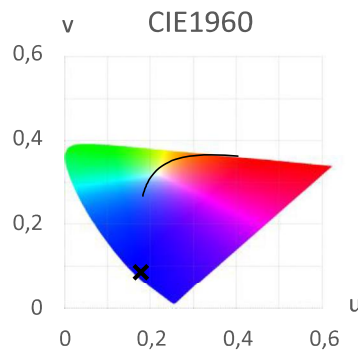
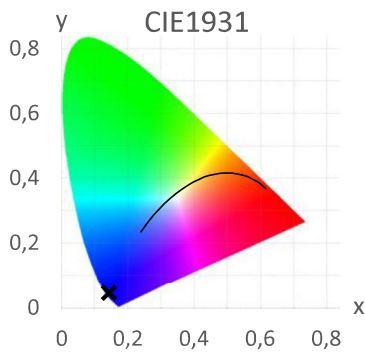
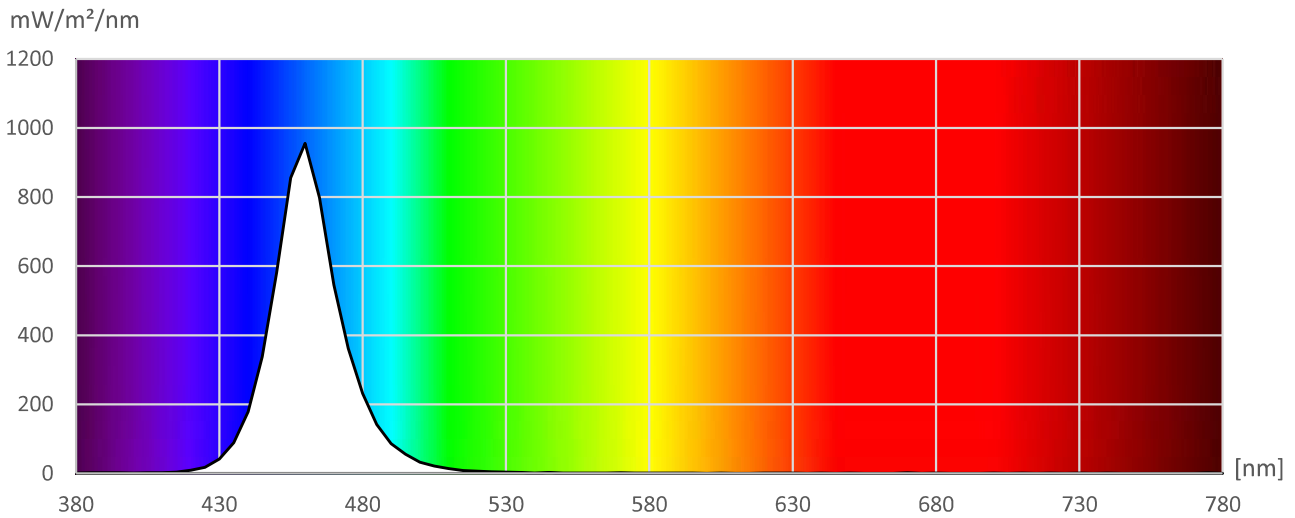
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / blue

Measurement file: 404358_1m_b_25c
 Date of measurement: 07.03.2018
 Time of measurement: 17:58:32



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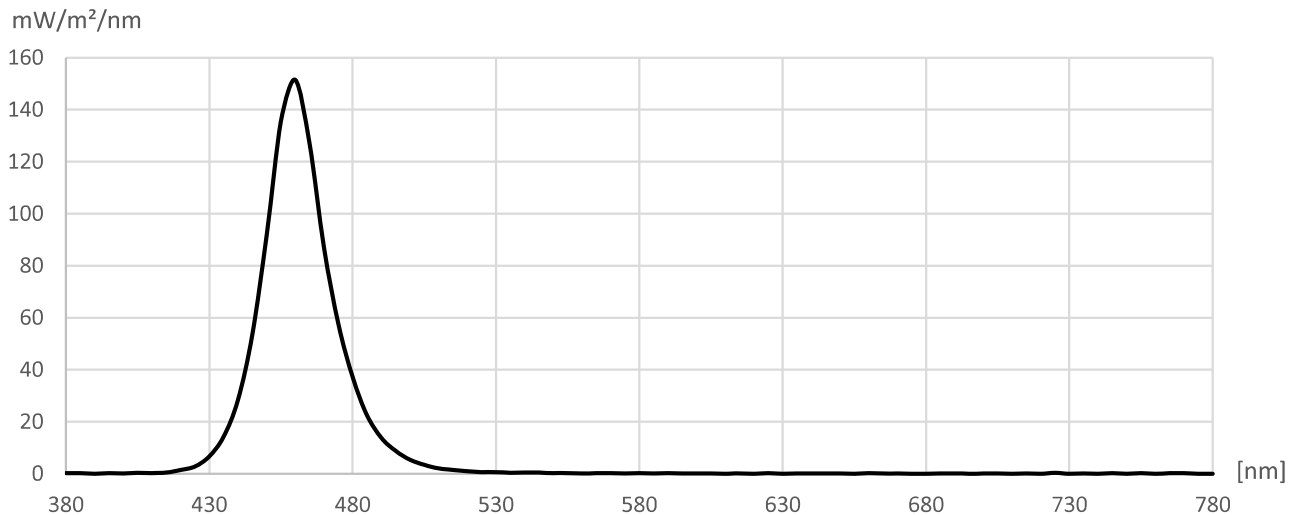
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / blue

Measurement file: 404358_3m_b_25deg.C
 Date of measurement: 07.03.2018
 Time of measurement: 17:58:44



R1 = -	Ra = -	Illuminance	238,72 lx	CIE1931
R2 = -	Re = -	Ee	4,311 W/m ²	x = 0,1421
R3 = -	GAI = -	LER	55,4 lm/W	y = 0,0451
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,1745
R7 = -				v' = 0,1246
R8 = -		Saturation	98 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	457 nm	u = 0,1745
R11 = -		Peak wavelength	458 nm	v = 0,0831
R12 = -				
R13 = -		Flicker frequency	% < 2.5 Hz	TM30
R14 = -		Percent Flicker	< 2.5 %	Rf = -
R15 = -		Flicker index	% < 2.5	Rg = -

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	0,21	440	28,36	500	5,40	560	0,10	620	0,00	680	0,01	740	0,00
385	0,21	445	53,55	505	3,41	565	0,18	625	0,26	685	0,09	745	0,17
390	0,01	450	91,93	510	2,05	570	0,27	630	0,01	690	0,11	750	0,00
395	0,21	455	135,35	515	1,50	575	0,12	635	0,12	695	0,03	755	0,22
400	0,08	460	151,45	520	0,93	580	0,25	640	0,05	700	0,05	760	0,00
405	0,34	465	126,86	525	0,63	585	0,07	645	0,15	705	0,12	765	0,17
410	0,29	470	87,00	530	0,63	590	0,23	650	0,11	710	0,00	770	0,24
415	0,45	475	57,61	535	0,39	595	0,12	655	0,00	715	0,15	775	0,00
420	1,42	480	37,03	540	0,45	600	0,14	660	0,17	720	0,00	780	0,00
425	2,79	485	22,64	545	0,43	605	0,14	665	0,04	725	0,31		
430	6,63	490	13,88	550	0,23	610	0,03	670	0,12	730	0,00		
435	14,21	495	8,78	555	0,27	615	0,16	675	0,01	735	0,15		

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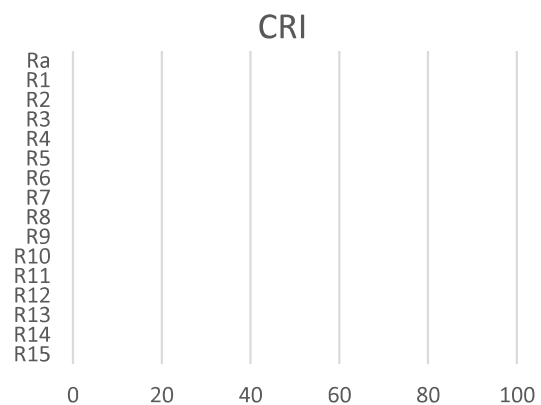
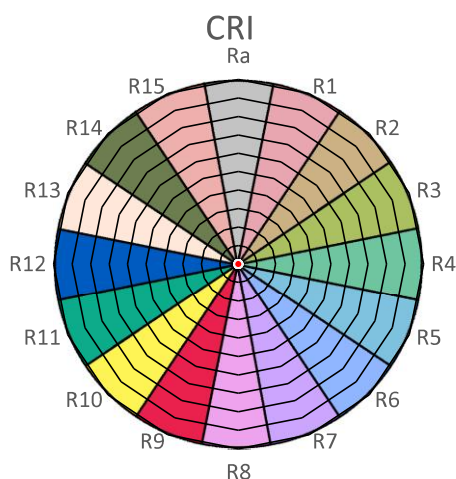
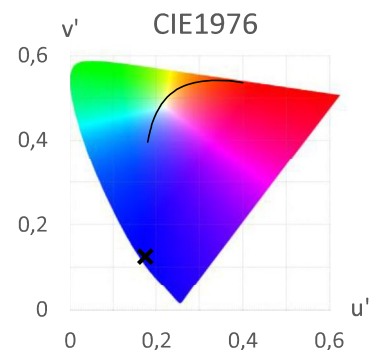
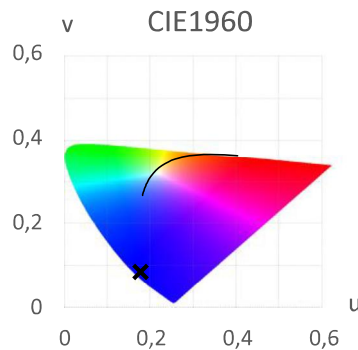
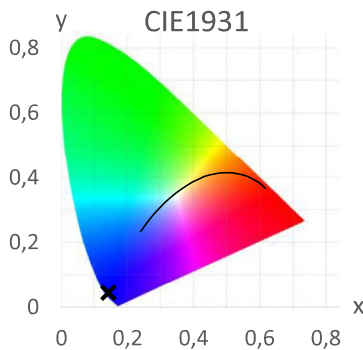
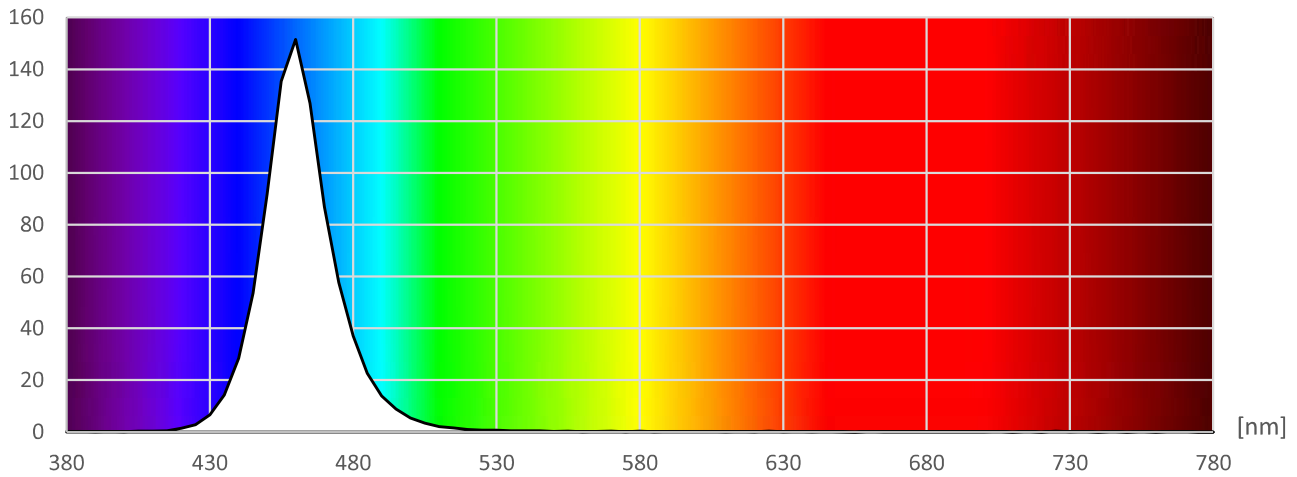
Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / blue

Measurement file: 404358_3m_b_25c
 Date of measurement: 07.03.2018
 Time of measurement: 17:58:44

mW/m²/nm



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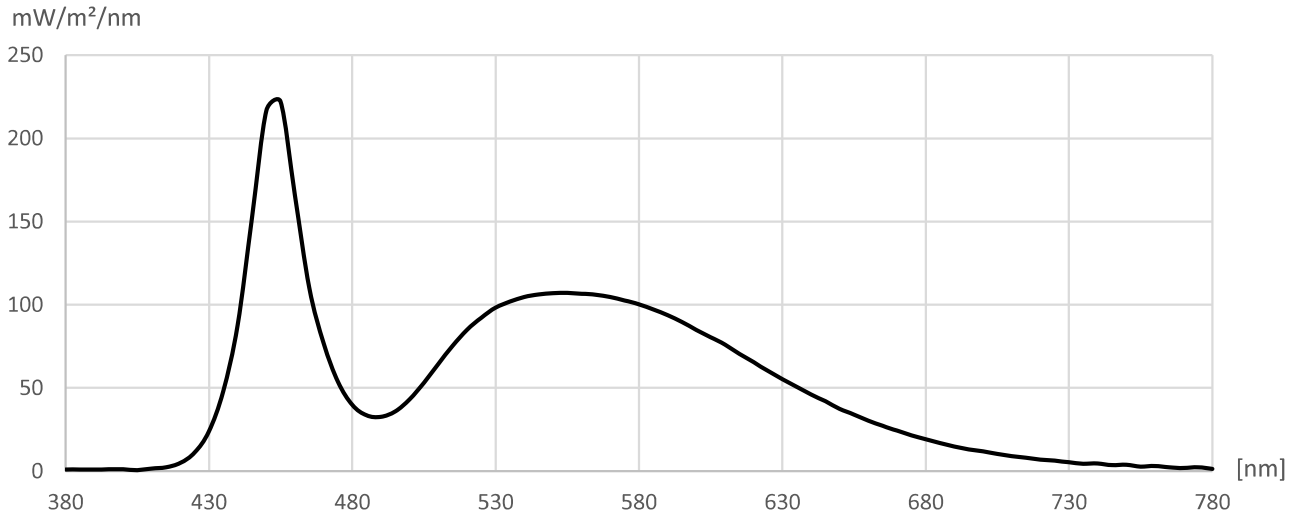
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / white

Measurement file: 404358_1m_w_25deg.l
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:11



R1 = 75,1	Ra = 77,0	Illuminance	6498,38 lx	CIE1931
R2 = 82,1	Re = 67,6	Ee	20,638 W/m ²	x = 0,3139
R3 = 83,3	GAI = 86,4	LER	314,9 lm/W	y = 0,3278
R4 = 75,8				
R5 = 74,7		correlated color temperature (CCT)	6448 K	CIE1976
R6 = 72,7		Duv	0,002	u' = 0,1991
R7 = 86,0		Saturation	7 %	v' = 0,4678
R8 = 65,8				
R9 = -8,1				CIE1960
R10 = 53,9		Dominant wavelength	485 nm	u = 0,1991
R11 = 71,6		Peak wavelength	451 nm	v = 0,3119
R12 = 42,5				
R13 = 76,9		Flicker frequency	% < 2.5 Hz	TM30
R14 = 90,6		Percent Flicker	< 2.5 %	Rf = 73,2
R15 = 71,7		Flicker index	% < 2.5	Rg = 93,2

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	0,98	440	87,78	500	43,28	560	106,71	620	65,58	680	19,23	740	4,62
385	1,11	445	152,46	505	53,31	565	106,09	625	60,25	685	16,91	745	3,65
390	0,94	450	216,77	510	64,62	570	104,65	630	55,44	690	14,89	750	3,89
395	1,15	455	222,23	515	75,33	575	102,66	635	50,76	695	13,19	755	2,84
400	1,13	460	166,02	520	84,95	580	100,29	640	46,14	700	11,87	760	3,16
405	0,69	465	110,20	525	92,29	585	97,26	645	42,03	705	10,50	765	2,32
410	1,69	470	76,84	530	98,37	590	93,71	650	37,47	710	9,09	770	1,90
415	2,42	475	53,68	535	101,94	595	89,77	655	34,13	715	8,07	775	2,39
420	4,98	480	39,78	540	104,72	600	84,95	660	30,38	720	7,03	780	1,44
425	11,32	485	33,59	545	106,30	605	80,59	665	27,26	725	6,31		
430	23,87	490	32,72	550	107,01	610	76,07	670	24,37	730	5,35		
435	48,07	495	36,02	555	107,11	615	70,52	675	21,62	735	4,57		

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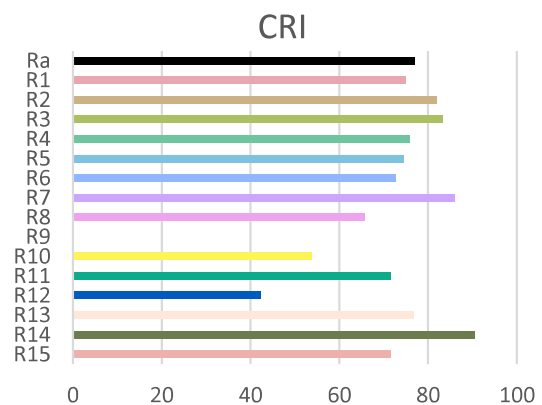
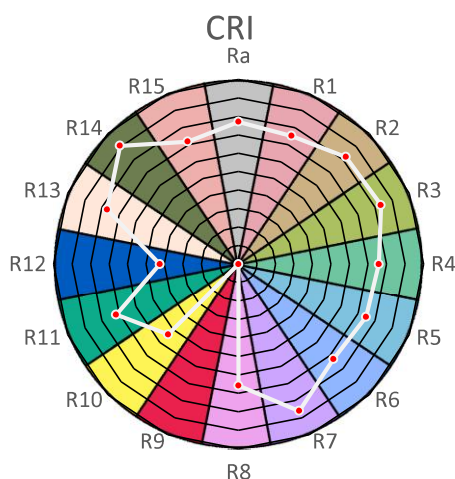
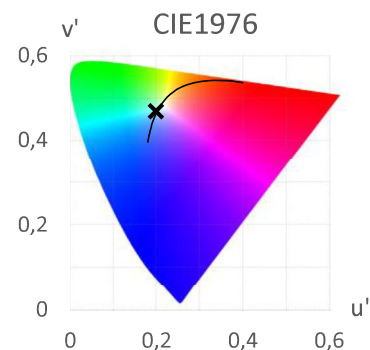
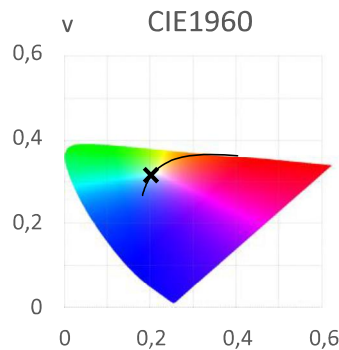
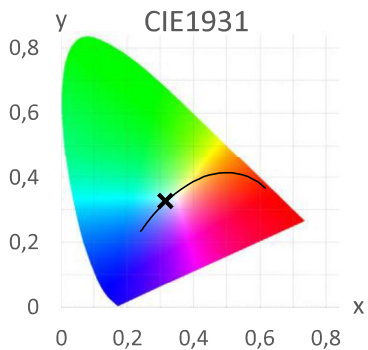
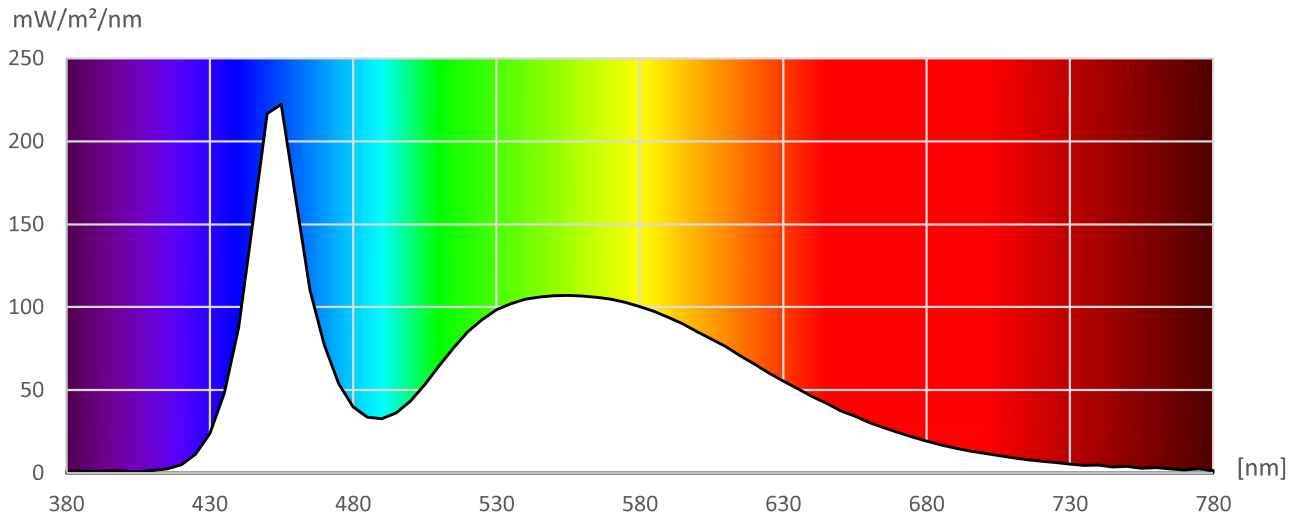
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / white

Measurement file: 404358_1m_w_25
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:11



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Burgebrach, 07.03.2018

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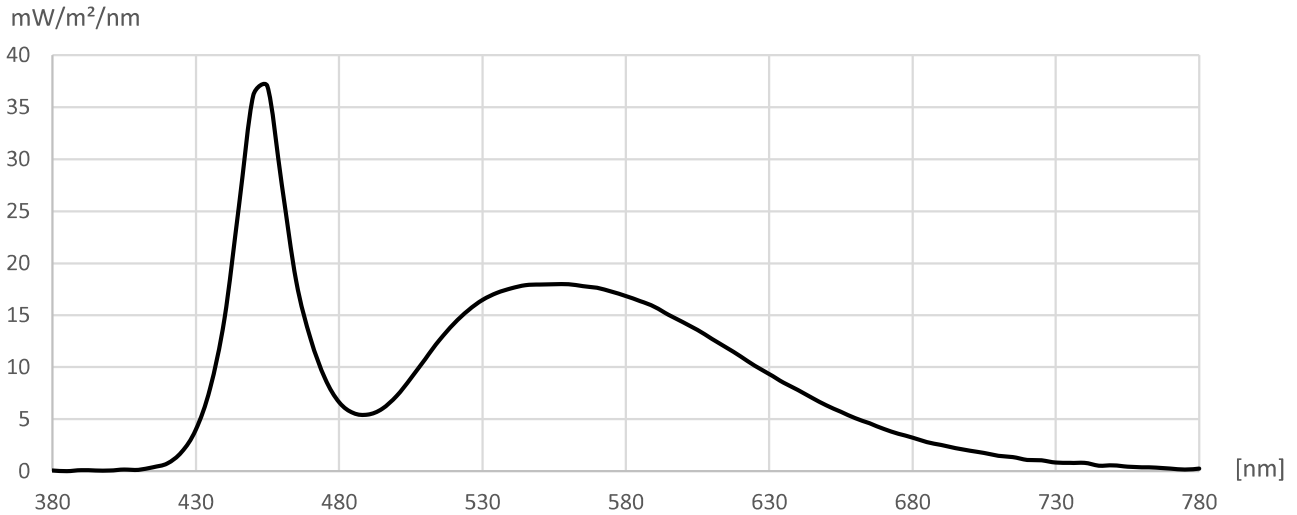
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / white

Measurement file: 404358_3m_w_25deg.l
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:22



R1 = 74,9	Ra = 76,8	Illuminance	1091,15 lx	CIE1931
R2 = 82,0	Re = 67,5	Ee	3,449 W/m ²	x = 0,3147
R3 = 83,4	GAI = 86,1	LER	316,4 lm/W	y = 0,3288
R4 = 75,6				
R5 = 74,5		correlated color temperature (CCT)	6395 K	CIE1976
R6 = 72,6		Duv	0,0021	u' = 0,1993
R7 = 86,0		Saturation	6,6 %	v' = 0,4685
R8 = 65,6				
R9 = -8,7				CIE1960
R10 = 53,7		Dominant wavelength	486 nm	u = 0,1993
R11 = 71,3		Peak wavelength	451 nm	v = 0,3123
R12 = 42,3				
R13 = 76,7		Flicker frequency	% < 2.5 Hz	TM30
R14 = 90,6		Percent Flicker	< 2.5 %	Rf = 73,1
R15 = 71,5		Flicker index	% < 2.5	Rg = 93,1

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	0,07	440	14,67	500	7,23	560	17,98	620	11,05	680	3,24	740	0,81
385	0,01	445	25,43	505	8,94	565	17,80	625	10,14	685	2,79	745	0,54
390	0,10	450	36,13	510	10,81	570	17,63	630	9,36	690	2,52	750	0,56
395	0,09	455	37,02	515	12,61	575	17,28	635	8,52	695	2,23	755	0,44
400	0,06	460	27,60	520	14,18	580	16,84	640	7,81	700	1,98	760	0,38
405	0,16	465	18,31	525	15,47	585	16,36	645	7,04	705	1,75	765	0,35
410	0,14	470	12,75	530	16,47	590	15,81	650	6,34	710	1,50	770	0,27
415	0,39	475	8,94	535	17,14	595	15,02	655	5,72	715	1,36	775	0,17
420	0,74	480	6,61	540	17,57	600	14,32	660	5,12	720	1,10	780	0,25
425	1,84	485	5,59	545	17,89	605	13,58	665	4,60	725	1,04		
430	3,98	490	5,45	550	17,95	610	12,74	670	4,05	730	0,84		
435	7,96	495	6,00	555	17,97	615	11,89	675	3,62	735	0,80		

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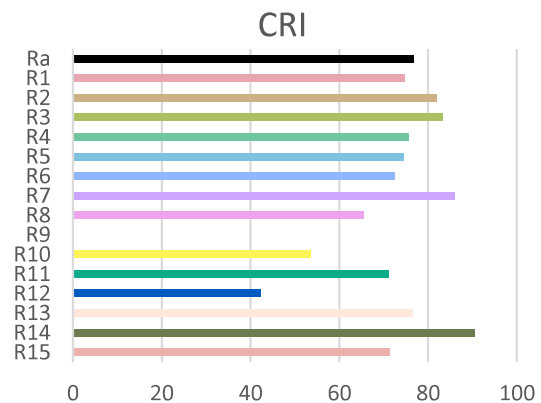
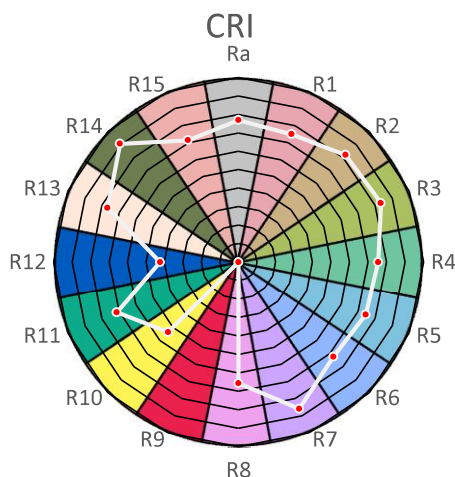
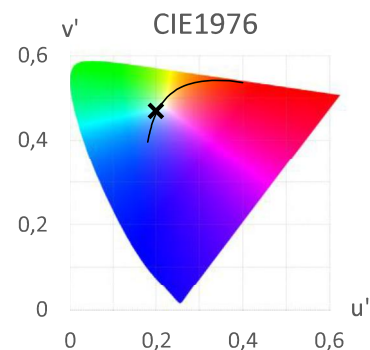
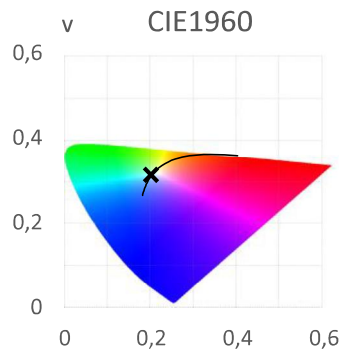
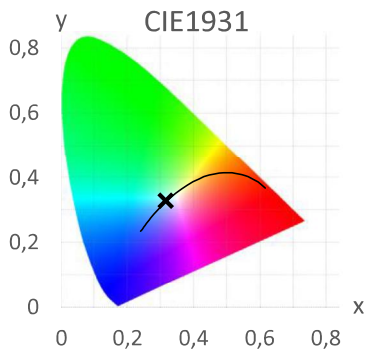
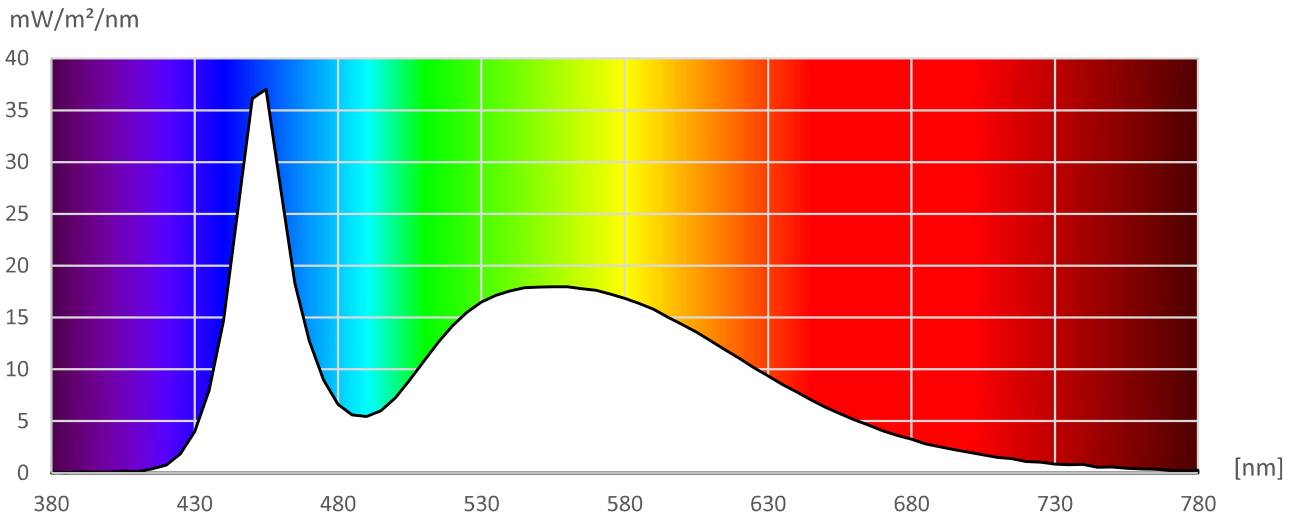
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / white

Measurement file: 404358_3m_w_25
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:22



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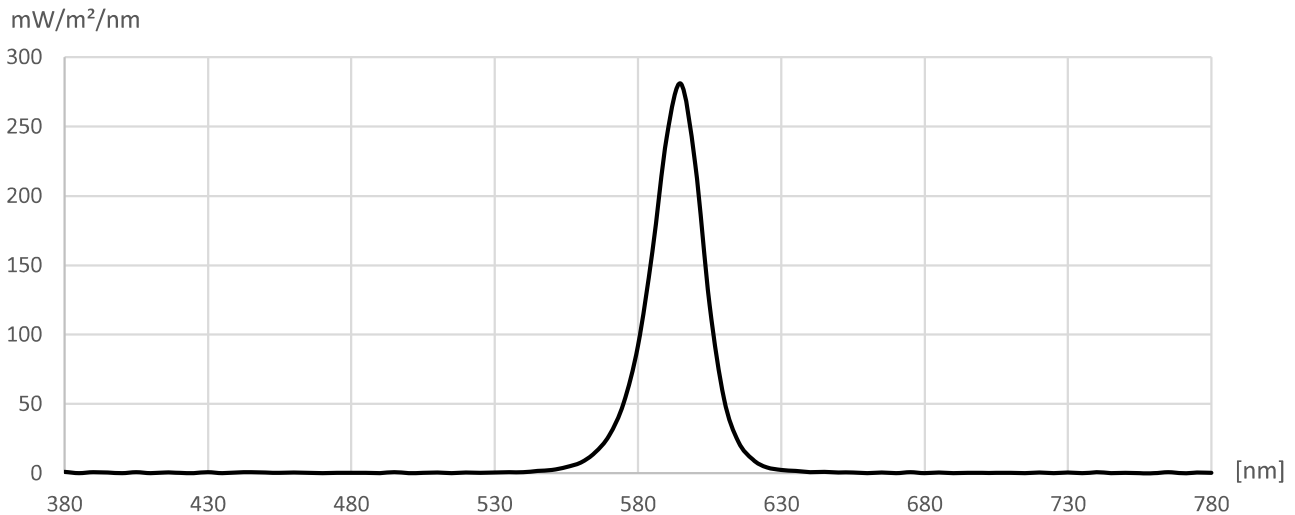
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / amber

Measurement file: 404358_1m_a_25deg.C
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:35



R1 = -	Ra = -	Illuminance	3249,86 lx	CIE1931
R2 = -	Re = -	Ee	6,729 W/m ²	x = 0,5802
R3 = -	GAI = -	LER	482,9 lm/W	y = 0,4156
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,3399
R7 = -				v' = 0,5479
R8 = -		Saturation	98,9 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	591 nm	u = 0,3399
R11 = -		Peak wavelength	594 nm	v = 0,3653
R12 = -				
R13 = -		Flicker frequency	% < 2.5 Hz	TM30
R14 = -		Percent Flicker	< 2.5 %	Rf = -
R15 = -		Flicker index	% < 2.5	Rg = -

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	1,04	440	0,62	500	0,12	560	7,72	620	9,90	680	0,06	740	0,67
385	0,06	445	0,75	505	0,20	565	14,86	625	4,22	685	0,50	745	0,16
390	0,77	450	0,47	510	0,60	570	27,24	630	2,45	690	0,00	750	0,24
395	0,43	455	0,23	515	0,11	575	50,61	635	1,61	695	0,36	755	0,00
400	0,14	460	0,47	520	0,50	580	92,10	640	0,87	700	0,21	760	0,00
405	0,71	465	0,30	525	0,34	585	159,66	645	0,99	705	0,25	765	0,77
410	0,01	470	0,16	530	0,55	590	242,37	650	0,48	710	0,25	770	0,00
415	0,64	475	0,31	535	0,82	595	280,79	655	0,64	715	0,00	775	0,43
420	0,23	480	0,22	540	0,78	600	222,84	660	0,04	720	0,47	780	0,39
425	0,13	485	0,37	545	1,60	605	121,29	665	0,63	725	0,00		
430	0,69	490	0,15	550	2,35	610	53,76	670	0,00	730	0,56		
435	0,04	495	0,67	555	4,47	615	22,74	675	0,69	735	0,00		

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Burgebrach, 07.03.2018

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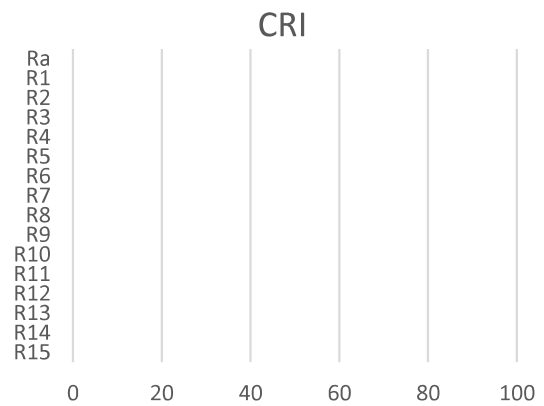
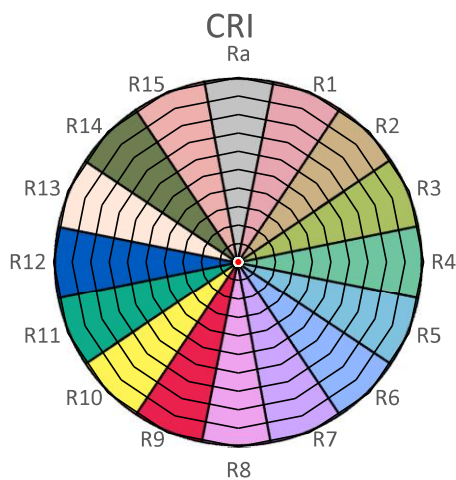
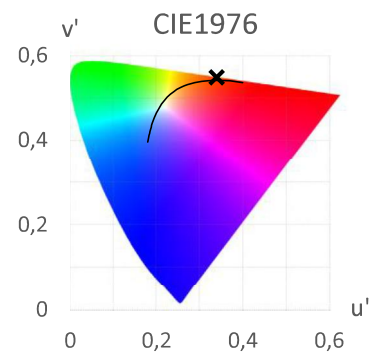
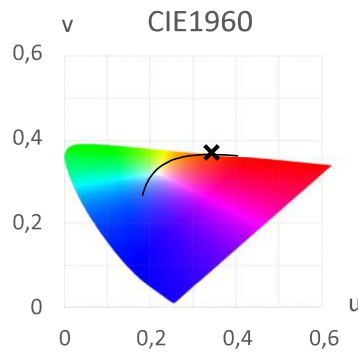
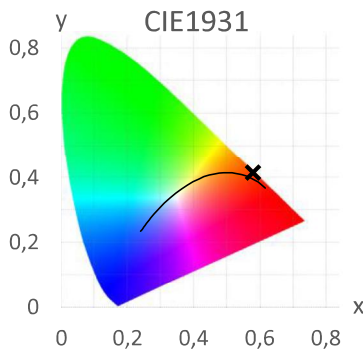
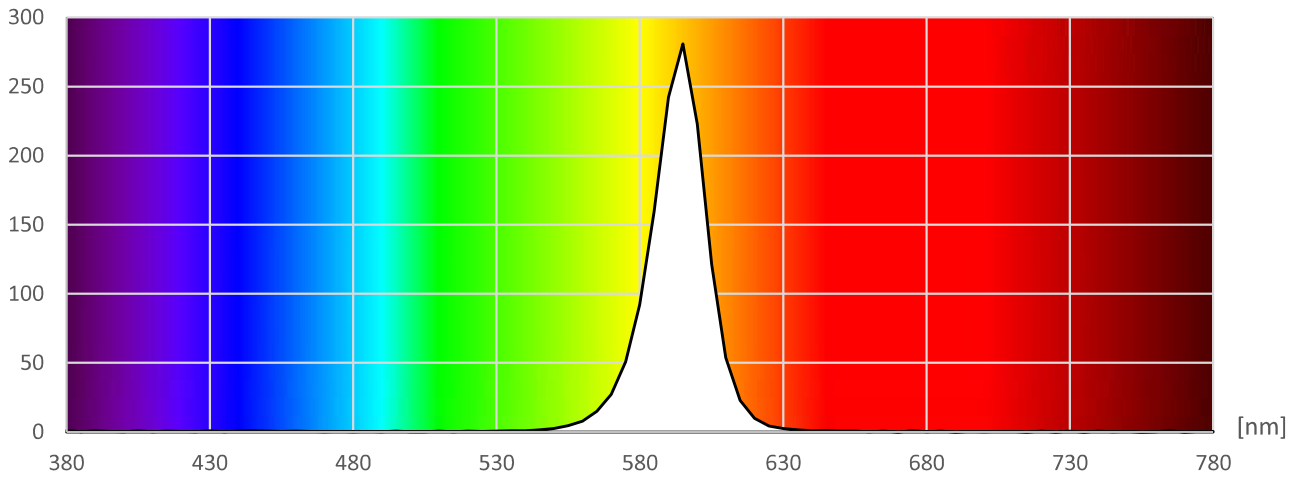
Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / amber

Measurement file: 404358_1m_a_25c
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:35

mW/m²/nm



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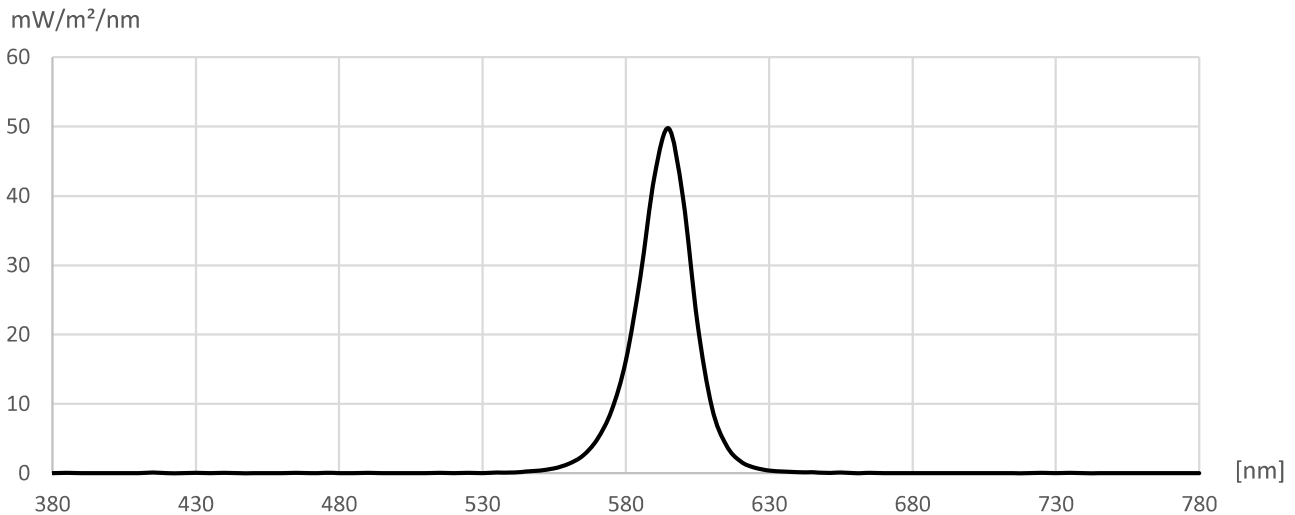
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / amber

Measurement file: 404358_3m_a_25deg.C
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:43



R1 = -	Ra = -	Illuminance	573,88 lx	CIE1931
R2 = -	Re = -	Ee	1,179 W/m ²	x = 0,5819
R3 = -	GAI = -	LER	486,9 lm/W	y = 0,4160
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,3409
R7 = -				v' = 0,5483
R8 = -		Saturation	99,6 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	591 nm	u = 0,3409
R11 = -		Peak wavelength	594 nm	v = 0,3656
R12 = -				
R13 = -		Flicker frequency	% < 2.5 Hz	TM30
R14 = -		Percent Flicker	< 2.5 %	Rf = -
R15 = -		Flicker index	% < 2.5	Rg = -

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	0,03	440	0,07	500	0,02	560	1,36	620	1,70	680	0,00	740	0,00
385	0,05	445	0,00	505	0,00	565	2,53	625	0,82	685	0,02	745	0,00
390	0,00	450	0,01	510	0,02	570	4,86	630	0,38	690	0,00	750	0,00
395	0,03	455	0,03	515	0,07	575	9,01	635	0,26	695	0,00	755	0,00
400	0,00	460	0,00	520	0,00	580	16,26	640	0,13	700	0,00	760	0,00
405	0,00	465	0,07	525	0,07	585	28,18	645	0,14	705	0,00	765	0,00
410	0,02	470	0,00	530	0,01	590	42,89	650	0,04	710	0,00	770	0,01
415	0,09	475	0,04	535	0,10	595	49,71	655	0,12	715	0,00	775	0,00
420	0,00	480	0,04	540	0,10	600	39,63	660	0,00	720	0,00	780	0,00
425	0,01	485	0,00	545	0,23	605	21,63	665	0,05	725	0,05		
430	0,04	490	0,05	550	0,41	610	9,54	670	0,00	730	0,00		
435	0,00	495	0,00	555	0,71	615	4,05	675	0,01	735	0,07		

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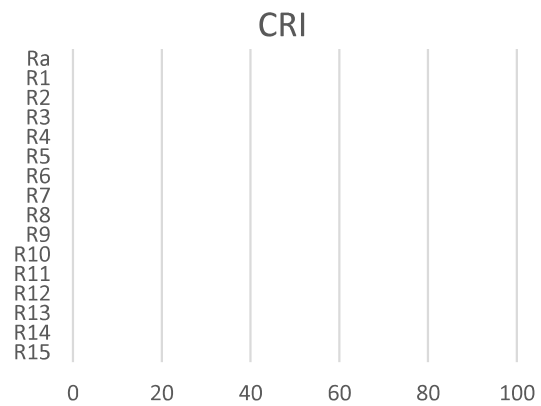
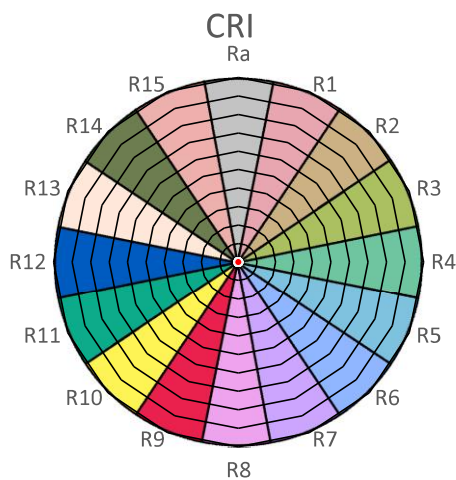
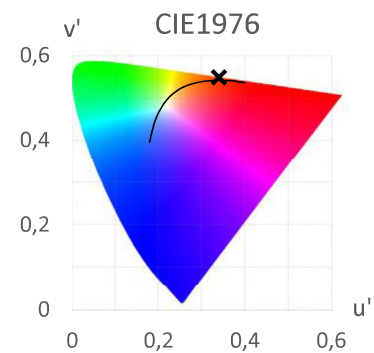
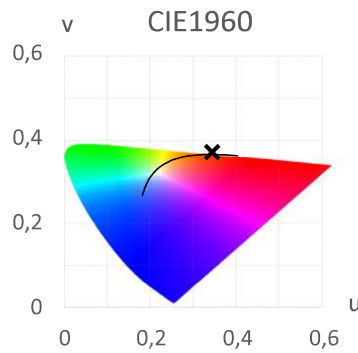
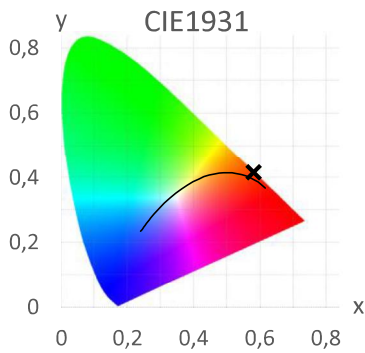
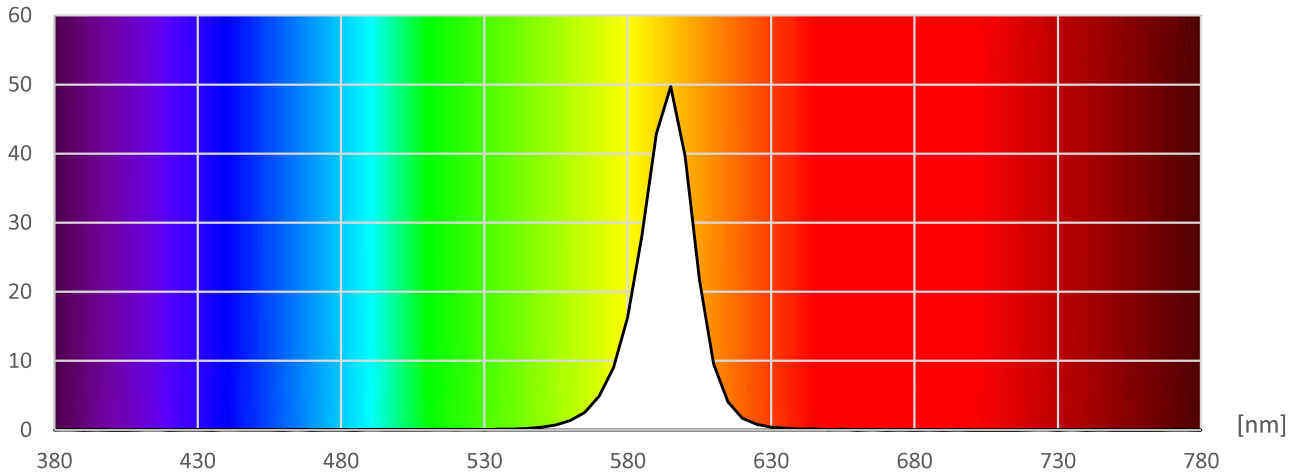
Measurement protocol

th•mann

Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 3 m / 25° / amber

Measurement file: 404358_3m_a_25c
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:43

mW/m²/nm



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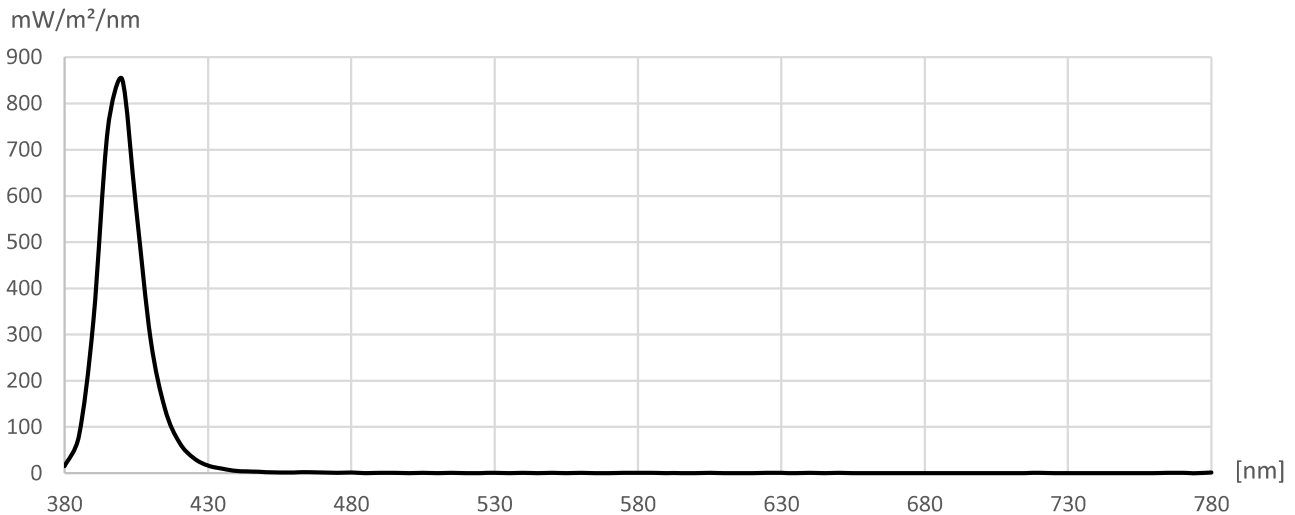
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / uv

Measurement file: 404358_1m_uv_25deg
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:55



R1 = -	Ra = -	Illuminance	52,37 lx	CIE1931
R2 = -	Re = -	Ee	15,974 W/m ²	x = 0,1797
R3 = -	GAI = -	LER	3,3 lm/W	y = 0,0289
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,2405
R7 = -				v' = 0,0871
R8 = -		Saturation	110 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	#NV	u = 0,2405
R11 = -		Peak wavelength	399 nm	v = 0,0581
R12 = -				
R13 = -		Flicker frequency	% < 2.5 Hz	TM30
R14 = -		Percent Flicker	< 2.5 %	Rf = -
R15 = -		Flicker index	% < 2.5	Rg = -

[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	15,17	440	4,93	500	0,24	560	0,67	620	0,31	680	0,01	740	0,29
385	81,30	445	3,95	505	1,08	565	0,46	625	0,64	685	0,36	745	0,00
390	329,09	450	2,64	510	0,24	570	0,01	630	0,58	690	0,15	750	0,35
395	743,14	455	1,75	515	1,13	575	0,86	635	0,10	695	0,33	755	0,27
400	852,70	460	1,94	520	0,15	580	0,96	640	0,69	700	0,05	760	0,01
405	570,79	465	1,99	525	0,56	585	0,90	645	0,00	705	0,37	765	0,83
410	289,80	470	1,74	530	1,16	590	0,10	650	0,65	710	0,00	770	0,75
415	139,04	475	0,75	535	0,51	595	0,57	655	0,00	715	0,48	775	0,00
420	66,27	480	1,40	540	0,85	600	0,07	660	0,55	720	0,69	780	1,88
425	32,96	485	0,46	545	0,03	605	0,69	665	0,00	725	0,00		
430	16,66	490	1,08	550	1,15	610	0,30	670	0,38	730	0,27		
435	9,74	495	0,80	555	0,38	615	0,53	675	0,06	735	0,06		

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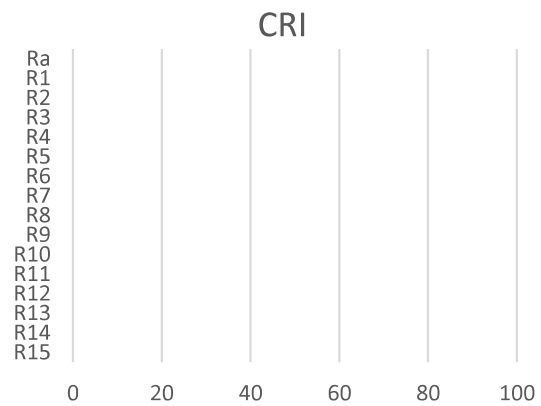
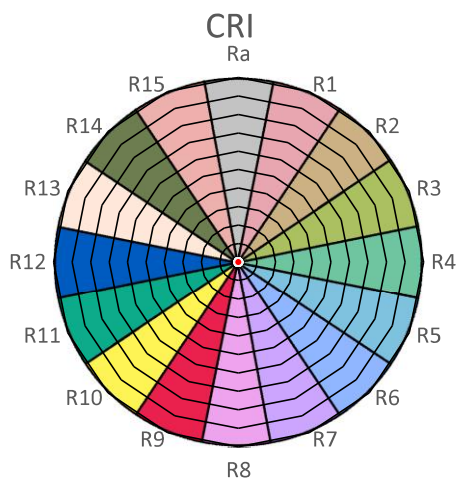
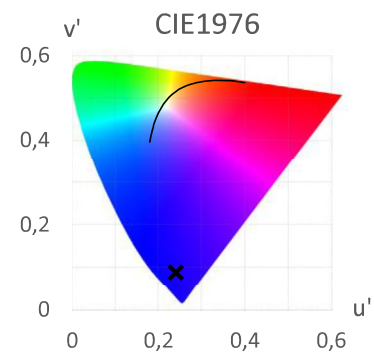
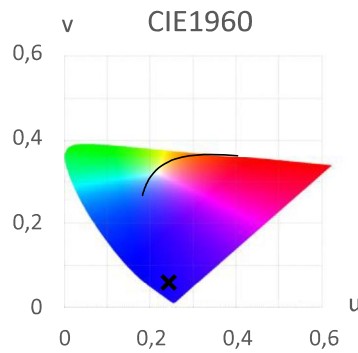
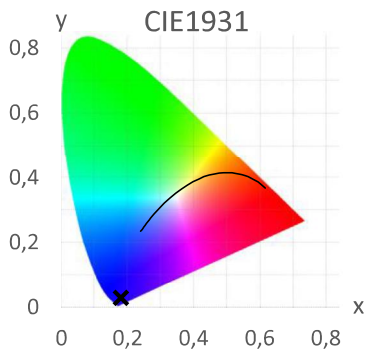
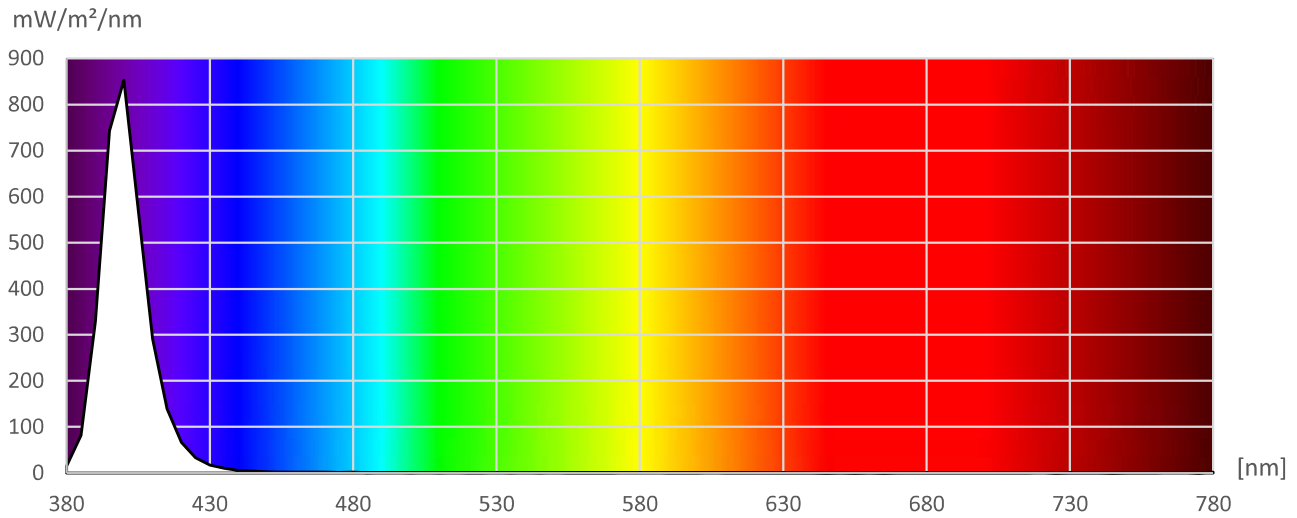
First, last name of inspector

Measurement protocol



Test object: Stairville
 Retro Flat Par 18x10W RGBWA UV
 Item 404358 / @ 1 m / 25° / uv

Measurement file: 404358_1m_uv_25
 Date of measurement: 07.03.2018
 Time of measurement: 17:59:55



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