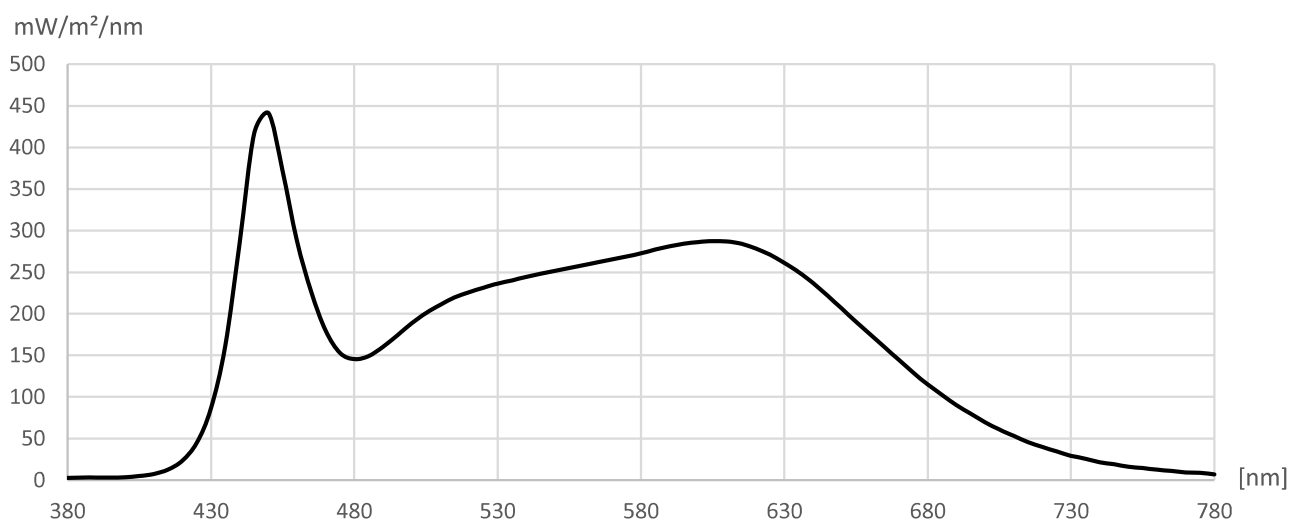


Measurement protocol

th.mann

Test object: Stairville
RevueLED 120 COB True White
443734 / all / @ 1 m

Measurement file: 443734_all_1m.CSV
Date of measurement: 10.12.2019
Time of measurement: 12:56:05



R1 = 95,9	Ra = 94,1	Illuminance	18287,54 lx	CIE1931
R2 = 96,6	Re = 91,9	Ee	64,050 W/m²	x = 0,3501
R3 = 94,8	GAI = 95,3	LER	285,5 lm/W	y = 0,3388
R4 = 94,9				
R5 = 95,7		correlated color temperature (CCT)	4745 K	CIE1976
R6 = 91,8		Duv	-0,0087	u' = 0,2200
R7 = 93,4				v' = 0,4790
R8 = 89,4		Saturation	6,7 %	
R9 = 73,2				CIE1960
R10 = 91,1		Dominant wavelength	591 nm	u = 0,2200
R11 = 94,6		Peak wavelength	449 nm	v = 0,3193
R12 = 76,3				
R13 = 96,7		Flicker frequency	348,1 Hz	TM30
R14 = 96,8		Percent Flicker	2,8 %	Rf = 88,7
R15 = 97,0		Flicker index	0,004	Rg = 101,4

[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	2,66	440	285,14	500	188,49	560	258,51	620	278,34	680	115,47	740	21,58
385	3,36	445	415,95	505	201,10	565	262,09	625	271,10	685	102,62	745	19,15
390	3,04	450	441,31	510	210,92	570	265,40	630	261,10	690	90,34	750	16,17
395	3,20	455	372,04	515	219,72	575	268,91	635	250,14	695	79,86	755	14,56
400	3,58	460	287,94	520	225,99	580	272,65	640	236,93	700	69,78	760	12,70
405	4,93	465	226,45	525	231,34	585	277,17	645	221,91	705	61,00	765	11,26
410	7,52	470	179,63	530	236,43	590	281,02	650	206,63	710	53,35	770	9,36
415	12,91	475	152,95	535	240,23	595	284,10	655	190,49	715	45,89	775	8,89
420	23,58	480	145,54	540	244,51	600	286,22	660	175,36	720	39,99	780	7,21
425	44,98	485	149,22	545	247,99	605	287,30	665	159,71	725	34,52		
430	86,05	490	160,15	550	251,62	610	286,89	670	144,57	730	29,48		
435	161,22	495	174,19	555	255,12	615	284,13	675	129,14	735	25,98		

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Burgebrach, 10.12.2019

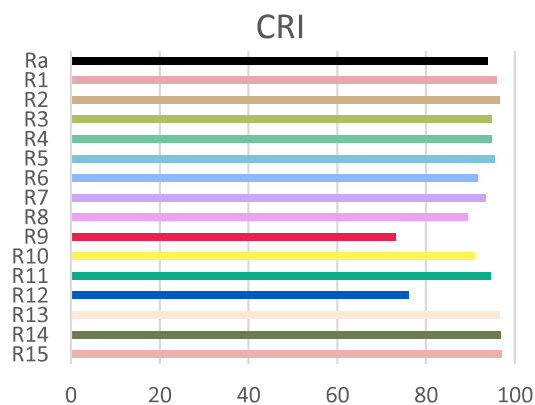
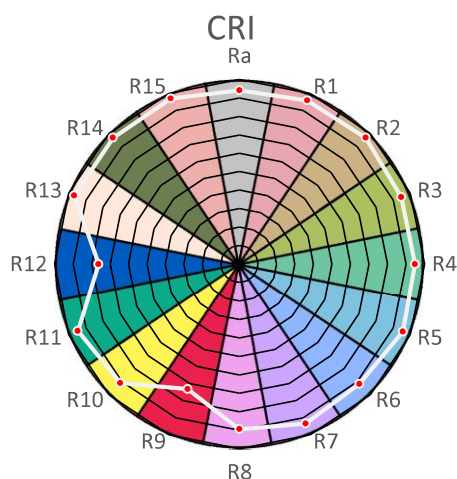
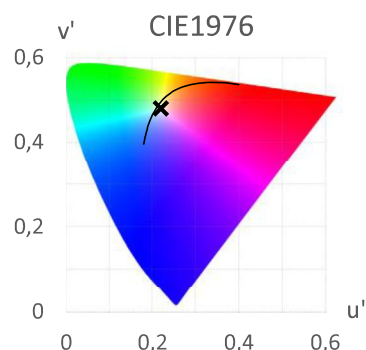
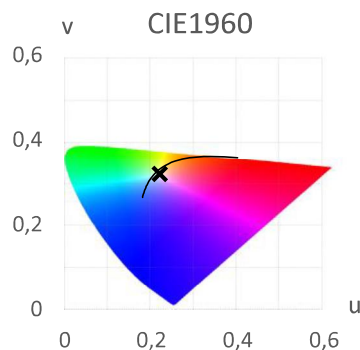
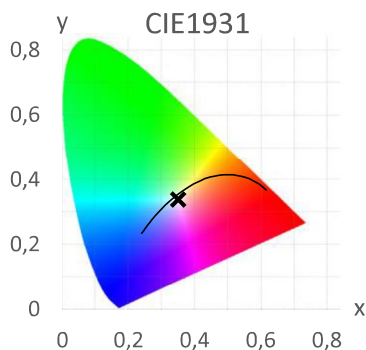
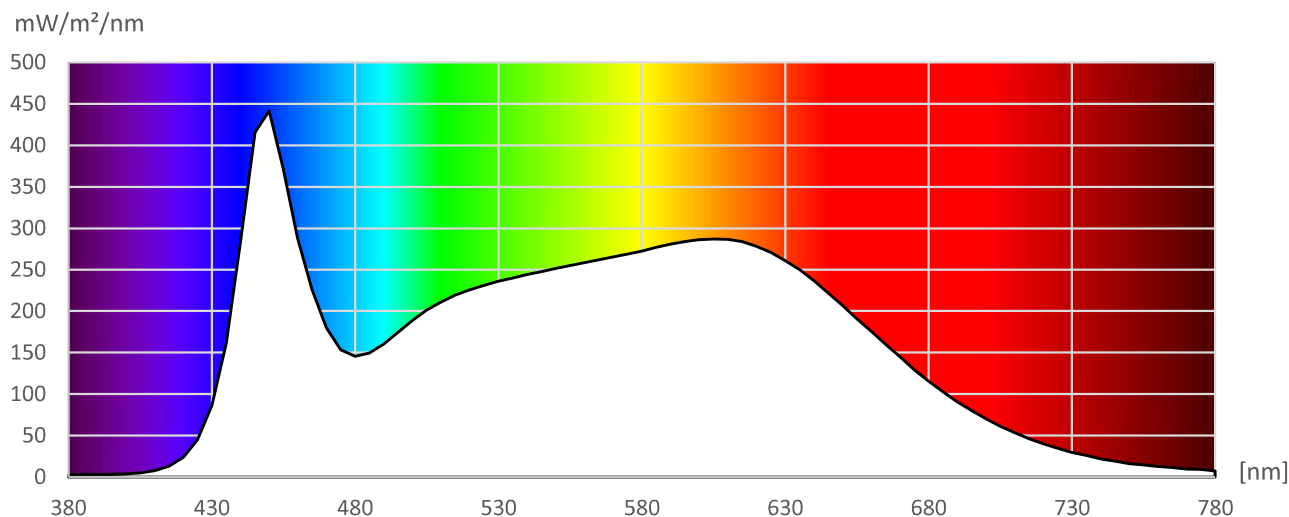
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
RevueLED 120 COB True White
443734 / all / @ 1 m

Measurement file: 443734_all_1m.CS'
Date of measurement: 10.12.2019
Time of measurement: 12:56:05



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Burgebrach, 10.12.2019

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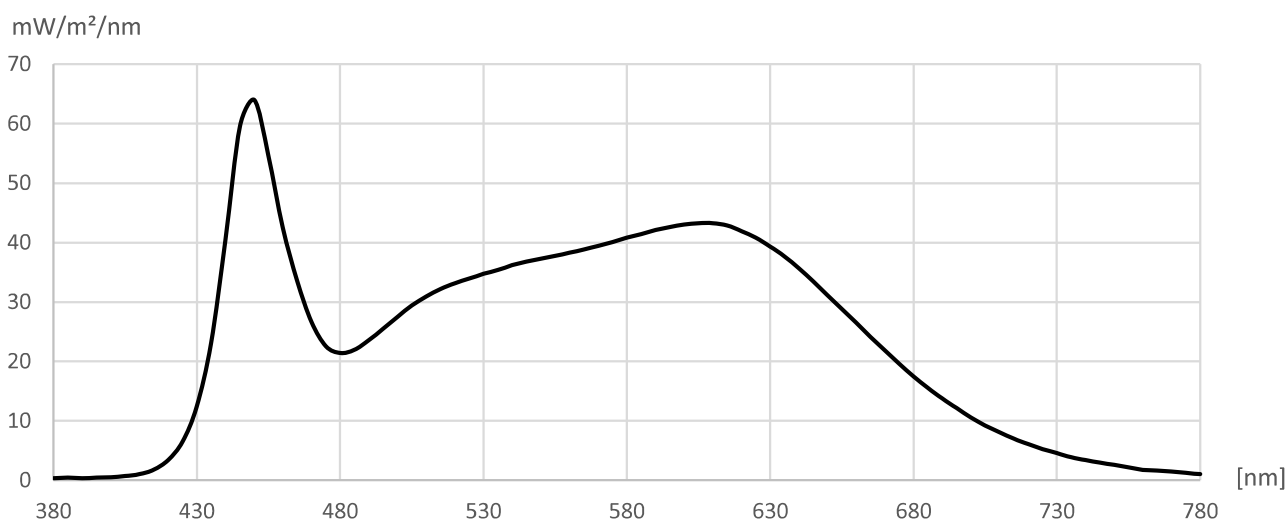
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
RevueLED 120 COB True White
443734 / all / @ 3 m

Measurement file: 443734_all_3m.CSV
Date of measurement: 10.12.2019
Time of measurement: 12:56:17



R1 = 96,0	Ra = 94,1	Illuminance	2716,49 lx	CIE1931
R2 = 96,8	Re = 91,9	Ee	9,505 W/m²	x = 0,3532
R3 = 95,1	GAI = 94,5	LER	285,8 lm/W	y = 0,3406
R4 = 94,9				
R5 = 95,7		correlated color temperature (CCT)	4635 K	CIE1976
R6 = 92,0		Duv	-0,0089	u' = 0,2214
R7 = 93,2				v' = 0,4804
R8 = 89,0		Saturation	8,1 %	
R9 = 72,9				CIE1960
R10 = 91,6		Dominant wavelength	590 nm	u = 0,2214
R11 = 94,5		Peak wavelength	449 nm	v = 0,3203
R12 = 76,8				
R13 = 96,8		Flicker frequency	% < 2.5 Hz	TM30
R14 = 97,0		Percent Flicker	< 2.5 %	Rf = 88,8
R15 = 97,0		Flicker index	% < 2.5	Rg = 101,3

[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	0,32	440	40,47	500	27,51	560	38,28	620	41,91	680	17,50	740	3,38
385	0,44	445	59,46	505	29,40	565	38,83	625	40,83	685	15,54	745	2,97
390	0,34	450	63,99	510	30,92	570	39,42	630	39,33	690	13,77	750	2,59
395	0,45	455	54,63	515	32,14	575	40,06	635	37,66	695	12,14	755	2,18
400	0,51	460	42,52	520	33,13	580	40,80	640	35,67	700	10,58	760	1,76
405	0,70	465	33,59	525	33,91	585	41,40	645	33,47	705	9,23	765	1,64
410	1,03	470	26,62	530	34,74	590	42,08	650	31,12	710	8,10	770	1,47
415	1,77	475	22,56	535	35,37	595	42,60	655	28,85	715	6,98	775	1,24
420	3,43	480	21,43	540	36,17	600	43,00	660	26,49	720	6,09	780	1,03
425	6,53	485	21,94	545	36,77	605	43,24	665	24,12	725	5,25		
430	12,40	490	23,54	550	37,28	610	43,26	670	21,86	730	4,56		
435	23,06	495	25,48	555	37,74	615	42,85	675	19,61	735	3,86		

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Burgebrach, 10.12.2019

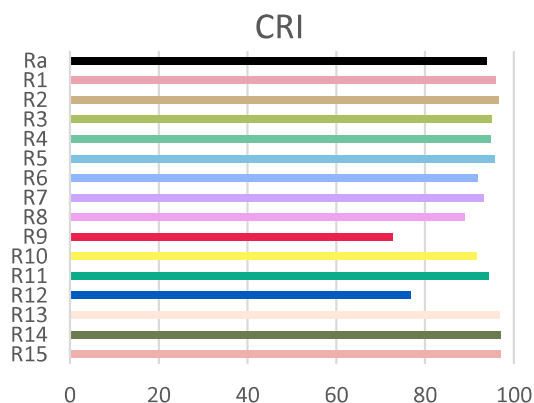
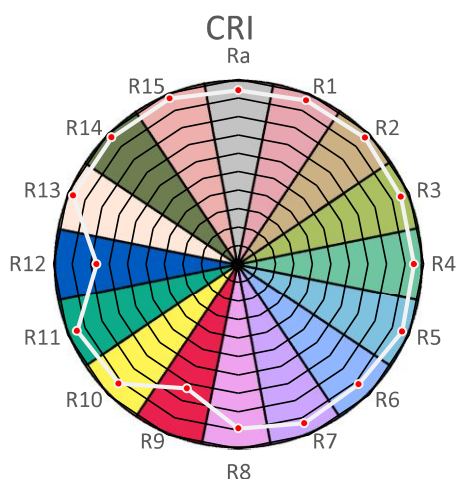
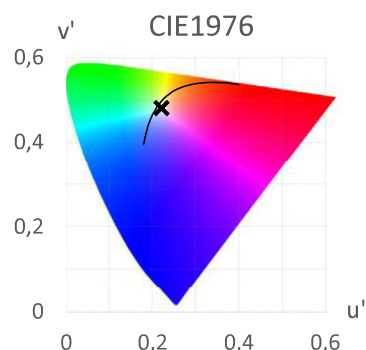
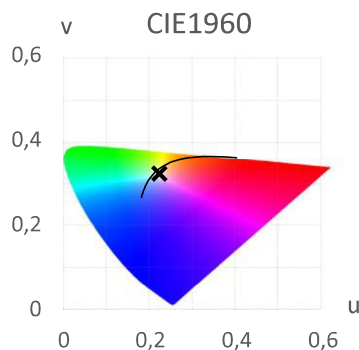
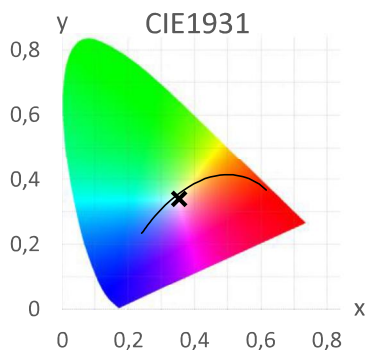
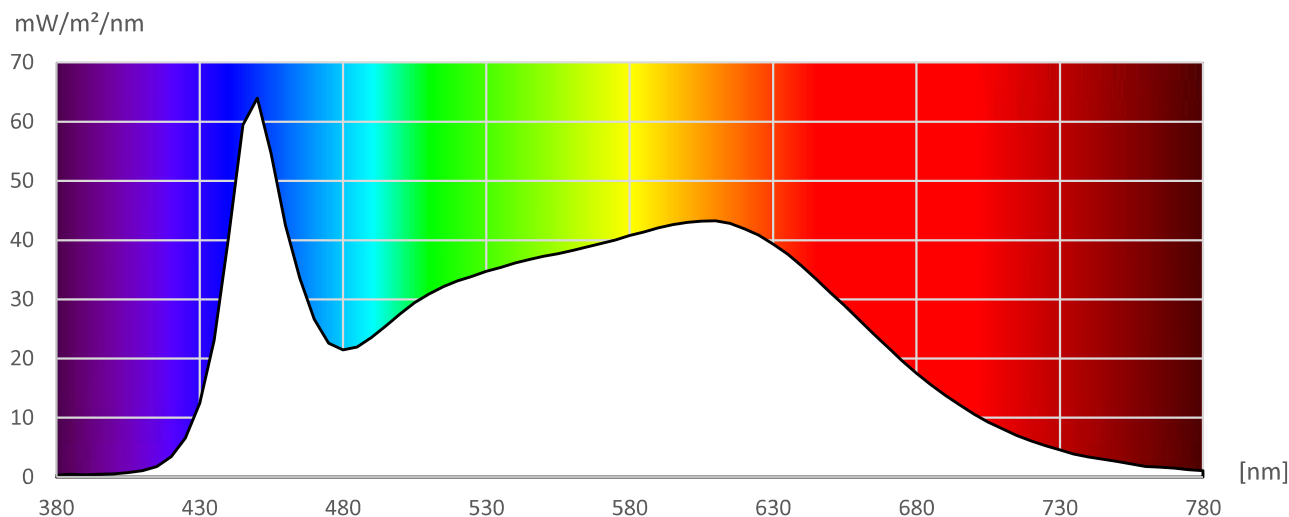
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
RevueLED 120 COB True White
443734 / all / @ 3 m

Measurement file: 443734_all_3m.CS'
Date of measurement: 10.12.2019
Time of measurement: 12:56:17



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Burgebrach, 10.12.2019

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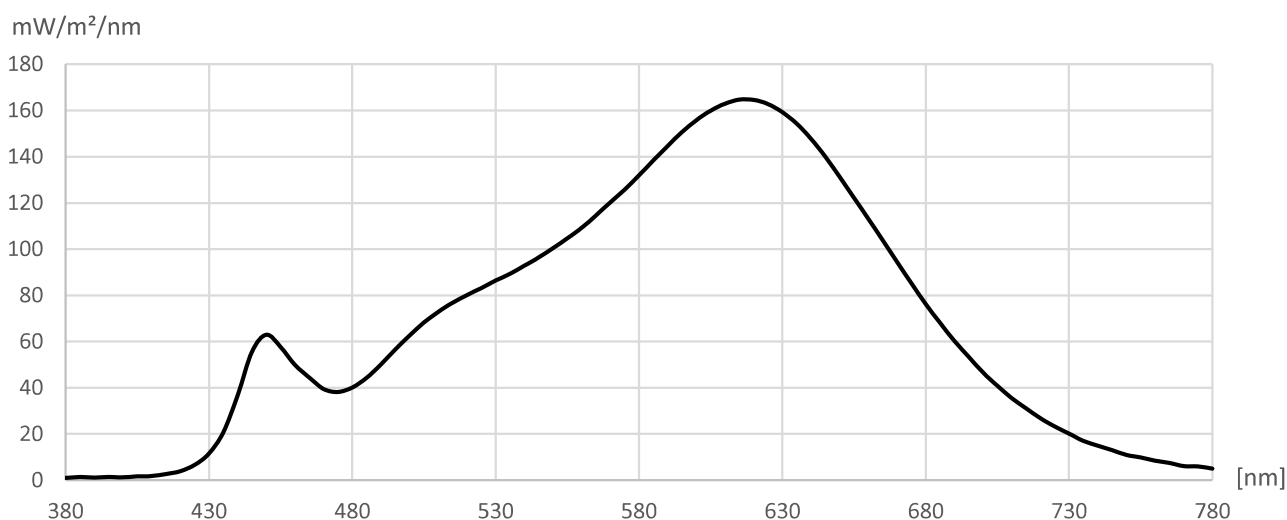
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
RevueLED 120 COB True White
443734 / ww / @ 1 m

Measurement file: 443734_ww_1m.CSV
Date of measurement: 10.12.2019
Time of measurement: 12:56:32



R1 = 91,4	Ra = 91,6	Illuminance	8133,69 lx	CIE1931
R2 = 96,3	Re = 88,8	Ee	27,420 W/m²	x = 0,4440
R3 = 98,4	GAI = 52,1	LER	296,6 lm/W	y = 0,4085
R4 = 91,6				
R5 = 91,7		correlated color temperature (CCT)	2913 K	CIE1976
R6 = 96,5		Duv	0,0008	u' = 0,2533
R7 = 90,0				v' = 0,5242
R8 = 77,2		Saturation	55,8 %	
R9 = 49,7				CIE1960
R10 = 91,4		Dominant wavelength	582 nm	u = 0,2533
R11 = 93,0		Peak wavelength	617 nm	v = 0,3494
R12 = 85,7				
R13 = 92,7		Flicker frequency	% < 2.5 Hz	TM30
R14 = 99,8		Percent Flicker	< 2.5 %	Rf = 90,9
R15 = 86,0		Flicker index	% < 2.5	Rg = 97,7

[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	0,96	440	36,71	500	62,66	560	109,25	620	164,56	680	76,35	740	15,00
385	1,36	445	55,64	505	68,27	565	114,55	625	162,79	685	68,14	745	13,05
390	1,21	450	62,94	510	72,83	570	120,22	630	159,21	690	60,37	750	10,98
395	1,41	455	57,66	515	76,80	575	125,68	635	154,34	695	53,35	755	9,85
400	1,23	460	49,89	520	80,08	580	131,92	640	147,71	700	46,65	760	8,52
405	1,68	465	44,44	525	83,19	585	138,34	645	139,92	705	40,96	765	7,50
410	1,78	470	39,49	530	86,38	590	144,61	650	131,30	710	35,61	770	6,11
415	2,70	475	38,19	535	89,36	595	150,58	655	122,24	715	31,16	775	5,97
420	3,89	480	40,17	540	92,76	600	155,73	660	113,18	720	26,83	780	5,07
425	6,72	485	44,24	545	96,34	605	159,86	665	103,93	725	23,23		
430	11,50	490	50,11	550	100,41	610	162,92	670	94,40	730	20,23		
435	20,69	495	56,55	555	104,66	615	164,64	675	85,23	735	17,07		

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Burgebrach, 10.12.2019

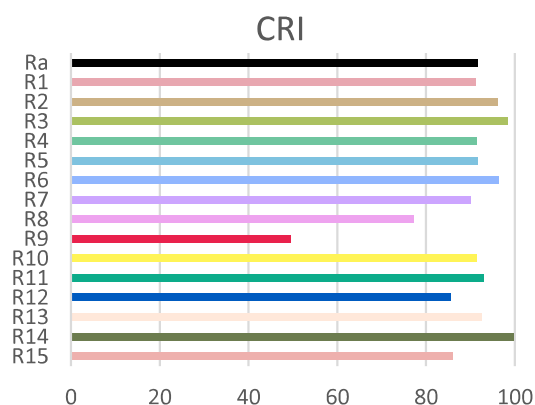
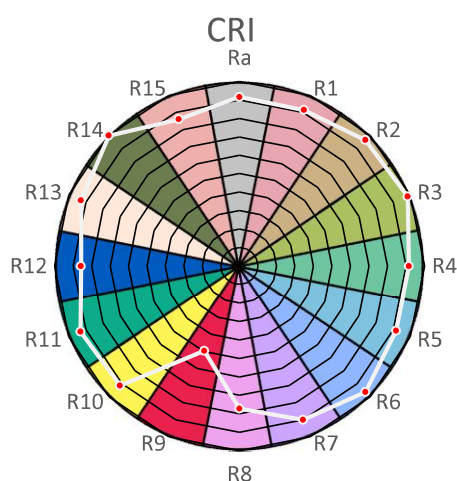
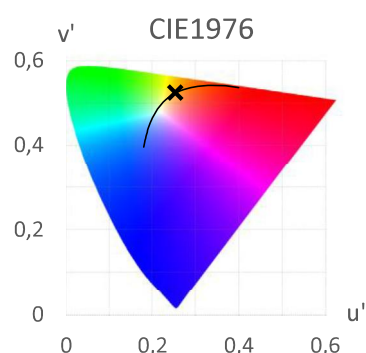
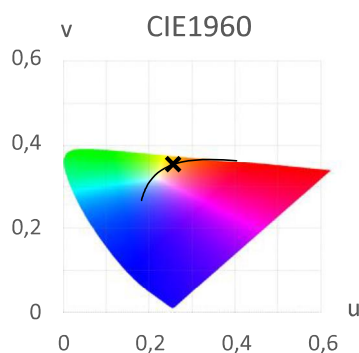
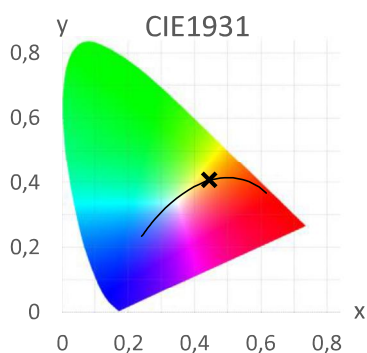
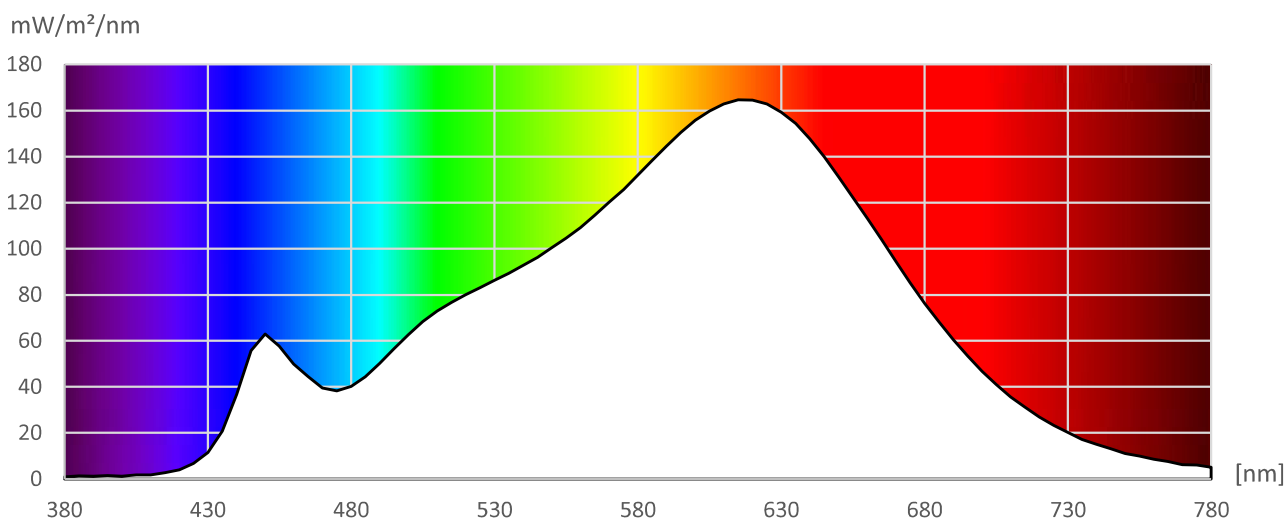
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
RevueLED 120 COB True White
443734 / ww / @ 1 m

Measurement file: 443734_ww_1m.C
Date of measurement: 10.12.2019
Time of measurement: 12:56:32



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Burgebrach, 10.12.2019

Sebastian Laske

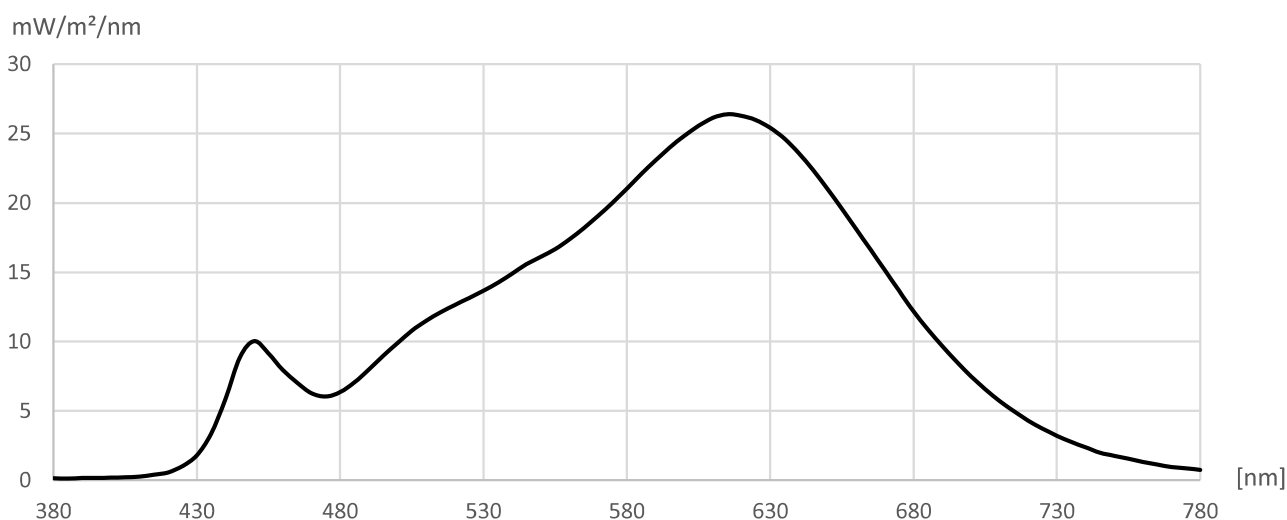
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
 RevueLED 120 COB True White
 443734 / ww / @ 3 m

Measurement file: 443734_ww_3m.CSV
 Date of measurement: 10.12.2019
 Time of measurement: 12:56:44



R1 = 91,4	Ra = 91,6	Illuminance	1296,31 lx	CIE1931
R2 = 96,3	Re = 88,7	Ee	4,370 W/m²	x = 0,4445
R3 = 98,5	GAI = 52,0	LER	296,7 lm/W	y = 0,4084
R4 = 91,5				
R5 = 91,6		correlated color temperature (CCT)	2906 K	CIE1976
R6 = 96,4		Duv	0,0007	u' = 0,2536
R7 = 90,1				v' = 0,5242
R8 = 77,2		Saturation	56 %	
R9 = 49,7				CIE1960
R10 = 91,2		Dominant wavelength	582 nm	u = 0,2536
R11 = 92,9		Peak wavelength	615 nm	v = 0,3495
R12 = 85,5				
R13 = 92,7		Flicker frequency	% < 2.5 Hz	TM30
R14 = 99,8		Percent Flicker	< 2.5 %	Rf = 90,8
R15 = 86,1		Flicker index	% < 2.5	Rg = 97,7

[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	0,14	440	5,86	500	9,89	560	17,38	620	26,28	680	12,20	740	2,39
385	0,12	445	8,87	505	10,79	565	18,18	625	25,98	685	10,88	745	1,98
390	0,16	450	10,03	510	11,49	570	19,06	630	25,41	690	9,68	750	1,77
395	0,17	455	9,16	515	12,11	575	20,01	635	24,62	695	8,55	755	1,54
400	0,19	460	7,95	520	12,63	580	21,02	640	23,58	700	7,50	760	1,33
405	0,21	465	7,04	525	13,15	585	22,08	645	22,35	705	6,57	765	1,13
410	0,26	470	6,28	530	13,67	590	23,06	650	21,01	710	5,73	770	0,94
415	0,40	475	6,04	535	14,24	595	23,99	655	19,59	715	4,99	775	0,86
420	0,57	480	6,35	540	14,90	600	24,82	660	18,11	720	4,30	780	0,74
425	1,03	485	7,05	545	15,57	605	25,55	665	16,63	725	3,73		
430	1,79	490	7,98	550	16,11	610	26,12	670	15,14	730	3,22		
435	3,35	495	8,98	555	16,66	615	26,40	675	13,64	735	2,76		

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Burgebrach, 10.12.2019

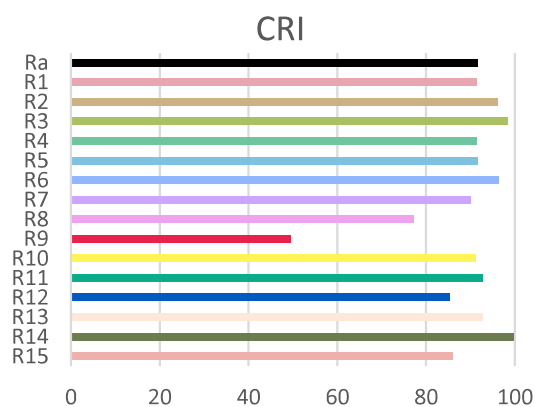
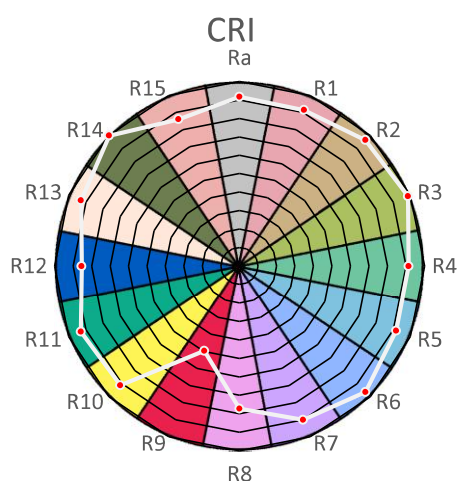
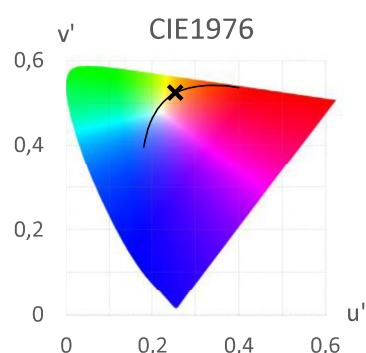
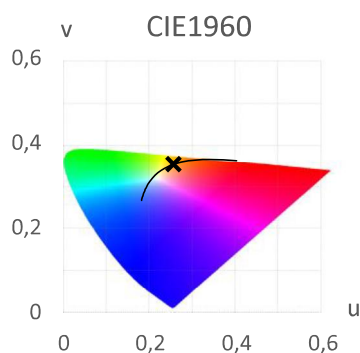
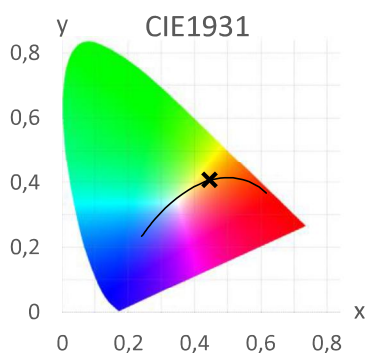
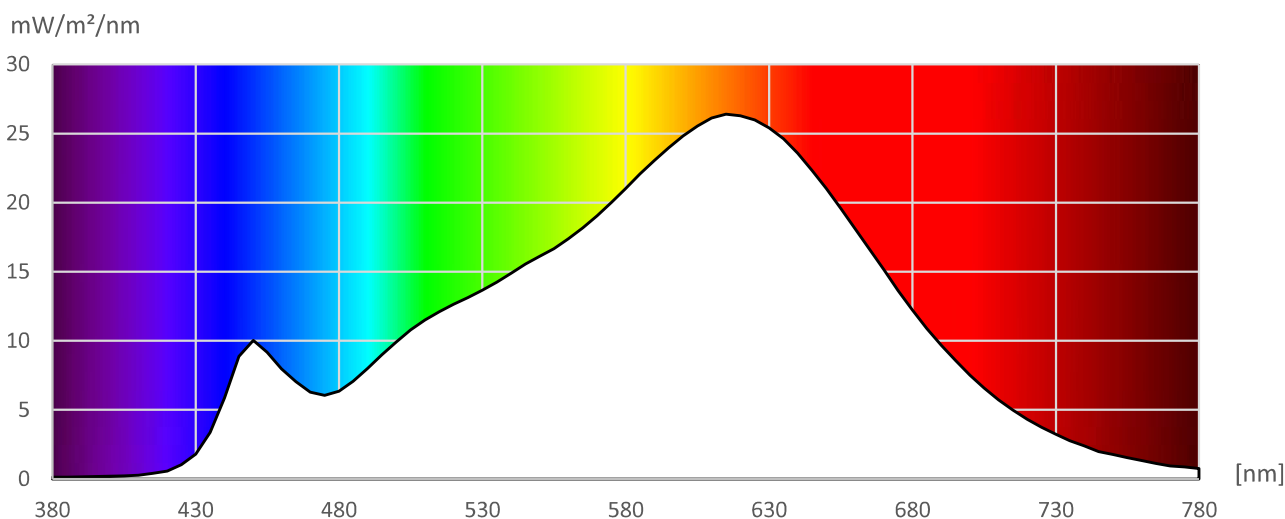
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
RevueLED 120 COB True White
443734 / ww / @ 3 m

Measurement file: 443734_ww_3m.C
Date of measurement: 10.12.2019
Time of measurement: 12:56:44



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Burgebrach, 10.12.2019

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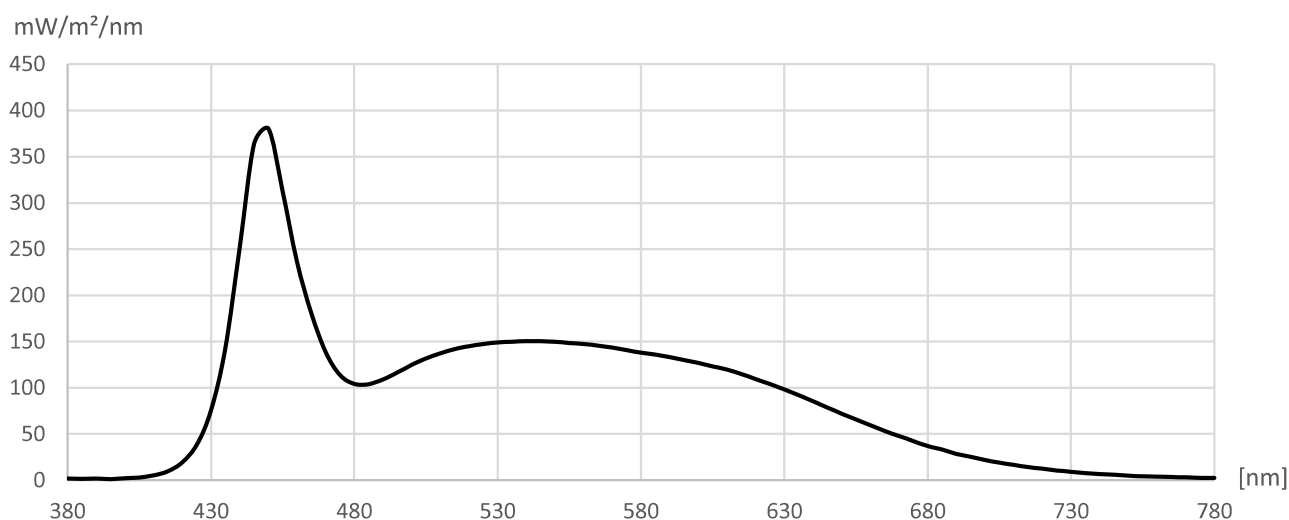
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
RevueLED 120 COB True White
443734 / cw / @ 1 m

Measurement file: 443734_cw_1m.CSV
Date of measurement: 10.12.2019
Time of measurement: 12:56:57



R1 = 91,6	Ra = 90,2
R2 = 92,0	Re = 86,4
R3 = 88,8	GAI = 101,8
R4 = 92,7	
R5 = 91,1	
R6 = 85,5	
R7 = 92,8	
R8 = 87,3	
R9 = 58,3	
R10 = 78,6	
R11 = 92,6	
R12 = 65,7	
R13 = 92,4	
R14 = 93,8	
R15 = 92,1	

Illuminance	9999,89 lx
Ee	36,101 W/m²
LER	277,0 lm/W
correlated color temperature (CCT)	8452 K
Duv	-0,0031
Saturation	17,4 %
Dominant wavelength	475 nm
Peak wavelength	447 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,2927
y = 0,2963
CIE1976
u' = 0,1961
v' = 0,4467
CIE1960
u = 0,1961
v = 0,2978
TM30
Rf = 85,1
Rg = 98,9

[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	1,78	440	251,11	500	124,74	560	147,42	620	109,40	680	37,03	740	6,63
385	1,47	445	363,49	505	131,86	565	145,69	625	104,04	685	33,21	745	5,90
390	1,82	450	380,30	510	137,22	570	143,47	630	98,29	690	28,57	750	5,02
395	1,32	455	313,22	515	141,79	575	140,76	635	92,06	695	25,33	755	4,11
400	2,08	460	236,75	520	144,97	580	138,04	640	85,34	700	21,84	760	4,01
405	3,02	465	180,87	525	147,20	585	135,86	645	78,72	705	19,02	765	3,52
410	5,25	470	138,53	530	149,05	590	133,16	650	72,12	710	16,62	770	3,10
415	9,75	475	113,66	535	149,90	595	130,16	655	65,84	715	14,13	775	2,69
420	19,43	480	104,19	540	150,46	600	126,79	660	59,72	720	12,47	780	2,44
425	38,31	485	103,90	545	150,33	605	123,27	665	53,39	725	10,59		
430	75,14	490	109,01	550	149,70	610	119,75	670	47,88	730	9,23		
435	142,00	495	116,44	555	148,52	615	114,97	675	42,42	735	7,65		

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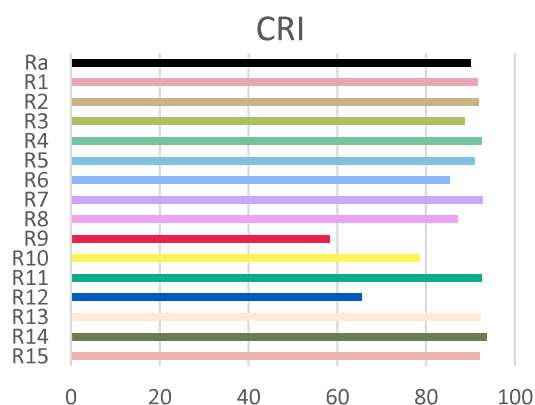
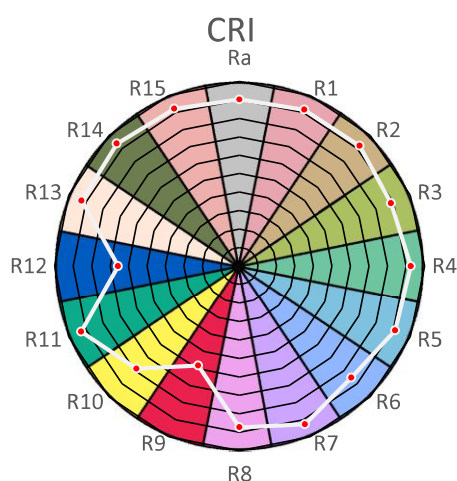
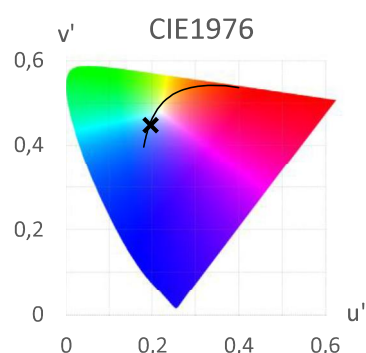
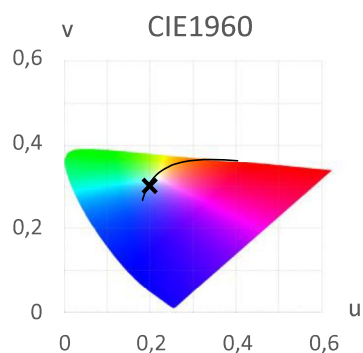
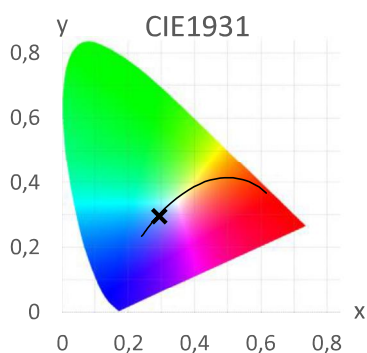
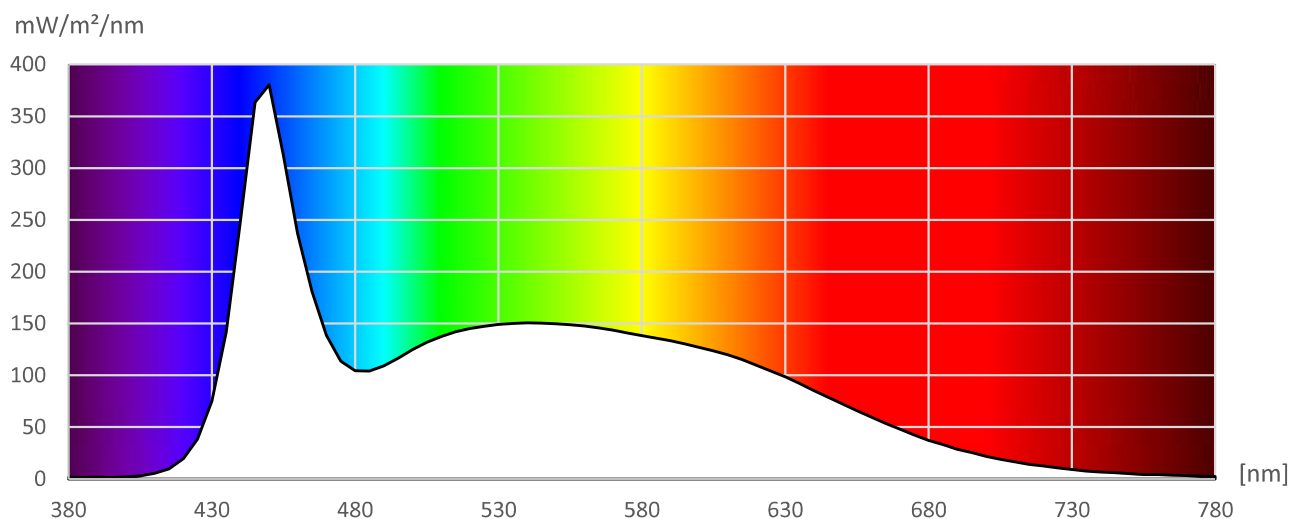
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
RevueLED 120 COB True White
443734 / cw / @ 1 m

Measurement file: 443734_cw_1m.CS
Date of measurement: 10.12.2019
Time of measurement: 12:56:57



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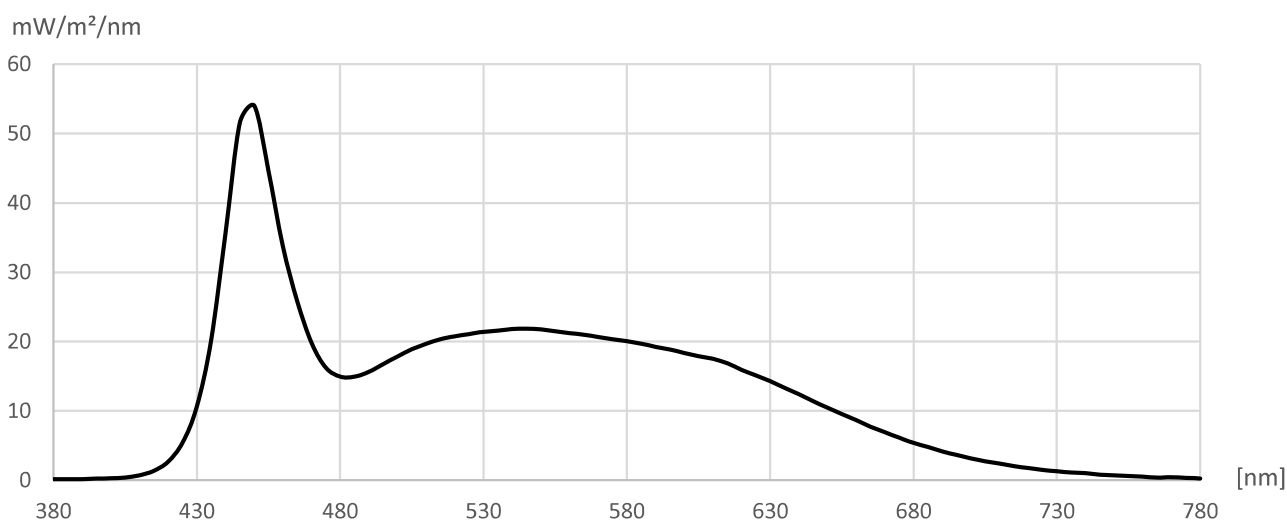
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
RevueLED 120 COB True White
443734 / cw / @ 3 m

Measurement file: 443734_cw_3m.CSV
Date of measurement: 10.12.2019
Time of measurement: 12:57:08



R1 = 91,6	Ra = 90,2
R2 = 92,1	Re = 86,3
R3 = 88,8	GAI = 101,5
R4 = 92,6	
R5 = 91,0	
R6 = 85,6	
R7 = 92,8	
R8 = 87,1	
R9 = 57,9	
R10 = 78,6	
R11 = 92,5	
R12 = 65,9	
R13 = 92,4	
R14 = 93,8	
R15 = 92,1	

Illuminance	1444,04 lx
Ee	5,188 W/m²
LER	278,4 lm/W
correlated color temperature (CCT)	8259 K
Duv	-0,003
Saturation	16,7 %
Dominant wavelength	475 nm
Peak wavelength	447 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,2942
y = 0,2981
CIE1976
u' = 0,1965
v' = 0,4480
CIE1960
u = 0,1965
v = 0,2987
TM30
Rf = 85,1
Rg = 98,9

[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	0,17	440	35,61	500	17,87	560	21,23	620	15,93	680	5,38	740	1,01
385	0,17	445	51,55	505	18,89	565	20,99	625	15,13	685	4,81	745	0,81
390	0,17	450	54,03	510	19,67	570	20,67	630	14,27	690	4,17	750	0,71
395	0,22	455	44,70	515	20,33	575	20,33	635	13,34	695	3,64	755	0,61
400	0,27	460	33,82	520	20,77	580	20,04	640	12,41	700	3,17	760	0,52
405	0,41	465	25,87	525	21,09	585	19,70	645	11,38	705	2,74	765	0,37
410	0,72	470	19,83	530	21,41	590	19,25	650	10,46	710	2,42	770	0,45
415	1,37	475	16,23	535	21,58	595	18,86	655	9,56	715	2,02	775	0,35
420	2,69	480	14,94	540	21,83	600	18,37	660	8,66	720	1,78	780	0,27
425	5,44	485	14,92	545	21,86	605	17,91	665	7,72	725	1,49		
430	10,58	490	15,63	550	21,76	610	17,51	670	6,93	730	1,29		
435	20,15	495	16,73	555	21,47	615	16,86	675	6,14	735	1,10		

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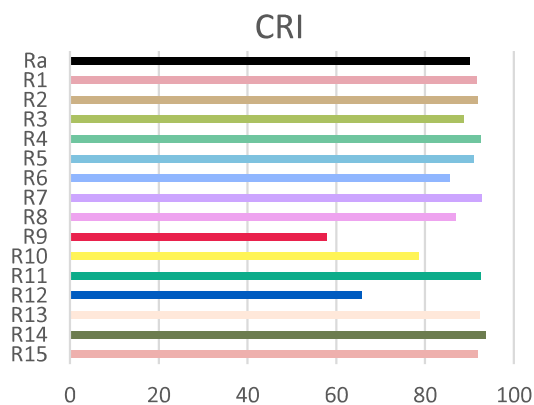
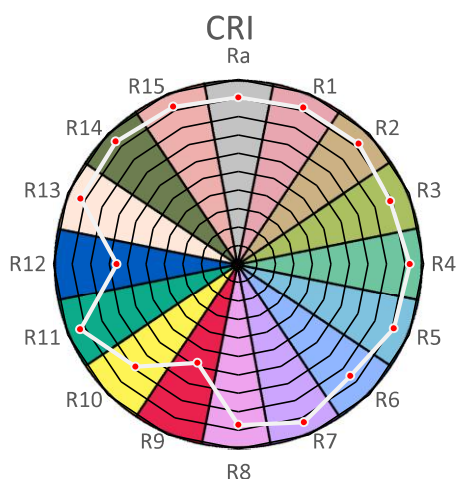
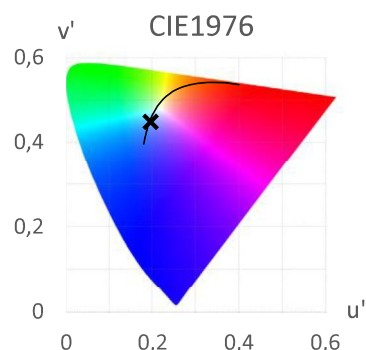
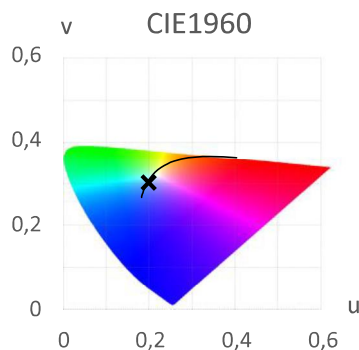
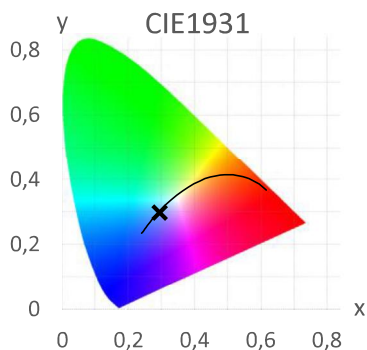
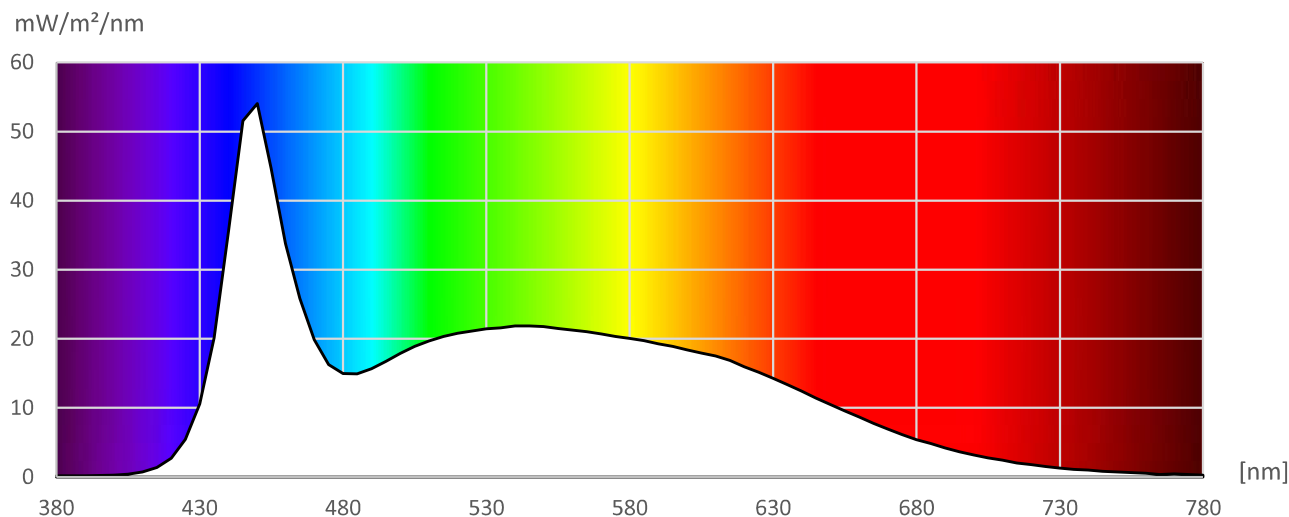
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
RevueLED 120 COB True White
443734 / cw / @ 3 m

Measurement file: 443734_cw_3m.CS
Date of measurement: 10.12.2019
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