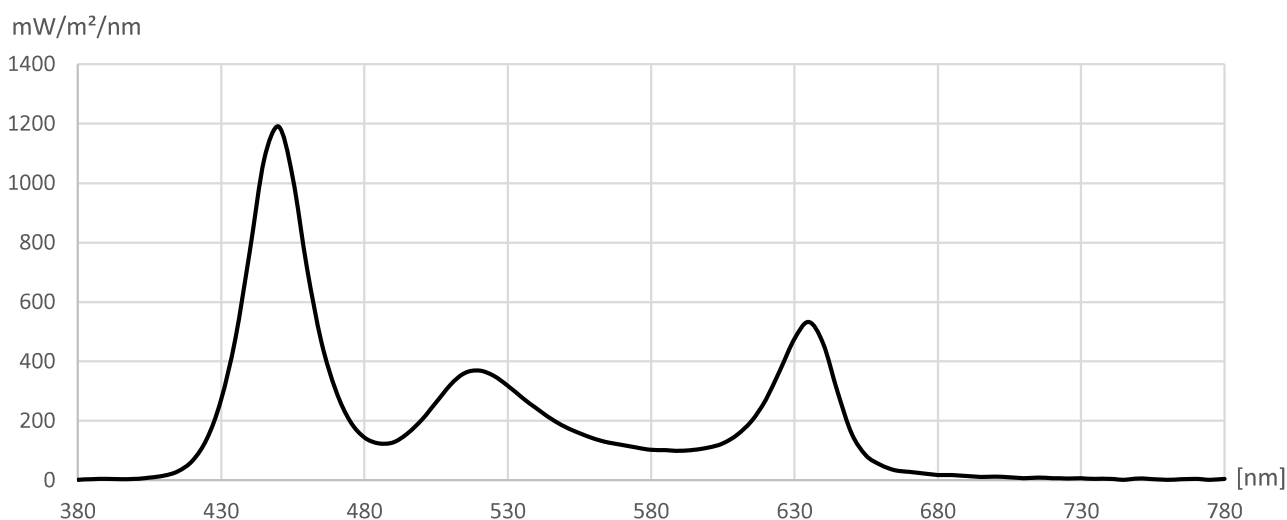


Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / all

Measurement file: 325876_2m_all.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:51:48



R1 = -	Ra = -	Illuminance	15422,72 lx	CIE1931
R2 = -	Re = -	Ee	74,967 W/m²	x = 0,2518
R3 = -	GAI = -	LER	205,7 lm/W	y = 0,2092
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,2012
R7 = -				v' = 0,3760
R8 = -		Saturation	42 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	456 nm	u = 0,2012
R11 = -		Peak wavelength	449 nm	v = 0,2507
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	1,85	440	770,38	500	203,70	560	140,46	620	271,47	680	18,00	740	5,00
385	4,01	445	1079,43	505	262,39	565	127,04	625	370,15	685	17,21	745	1,84
390	4,41	450	1190,01	510	321,25	570	118,82	630	475,21	690	14,69	750	6,12
395	3,21	455	1019,20	515	360,87	575	109,45	635	532,67	695	11,62	755	3,94
400	4,13	460	712,59	520	369,26	580	102,35	640	459,82	700	12,18	760	1,40
405	8,60	465	465,22	525	351,97	585	100,92	645	297,37	705	10,25	765	3,42
410	15,35	470	302,28	530	317,77	590	98,77	650	156,81	710	7,26	770	4,50
415	30,73	475	197,79	535	277,73	595	102,04	655	83,47	715	9,26	775	1,35
420	65,73	480	143,82	540	242,18	600	109,89	660	51,94	720	6,96	780	5,02
425	139,54	485	124,35	545	207,51	605	123,84	665	34,20	725	6,21		
430	269,78	490	127,16	550	179,51	610	153,02	670	27,90	730	6,43		
435	476,95	495	157,00	555	158,65	615	199,20	675	22,99	735	4,66		

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Burgebrach, 01.08.2018

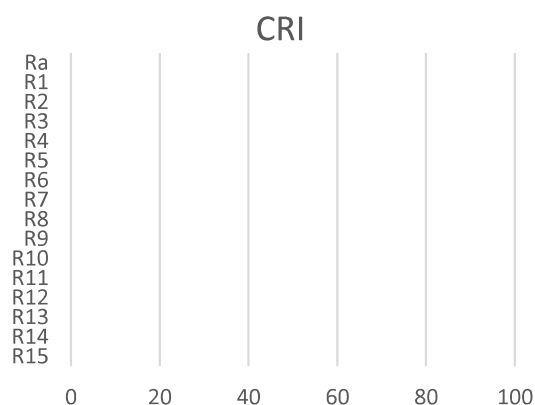
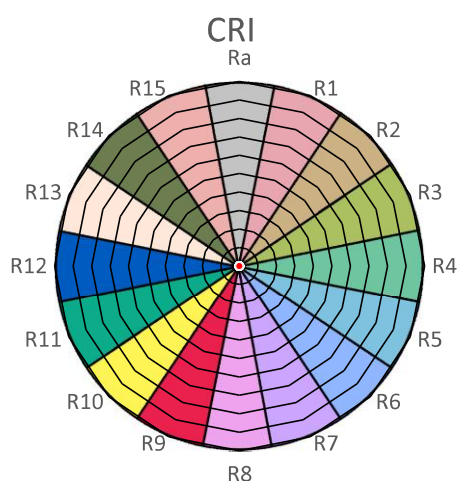
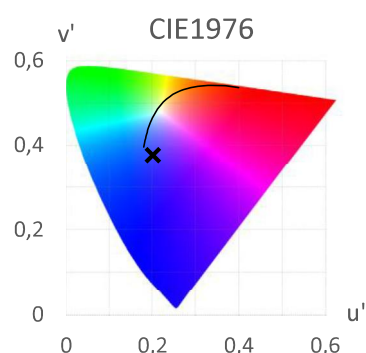
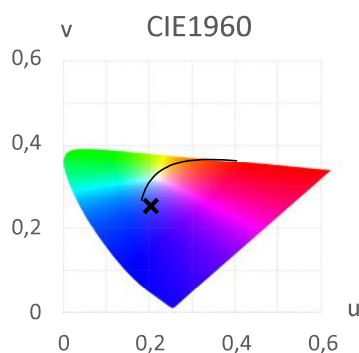
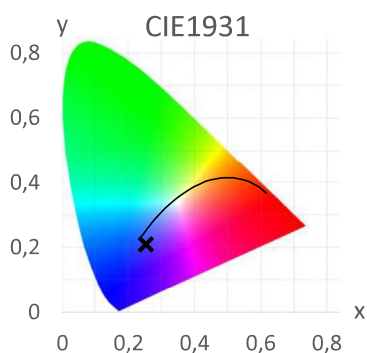
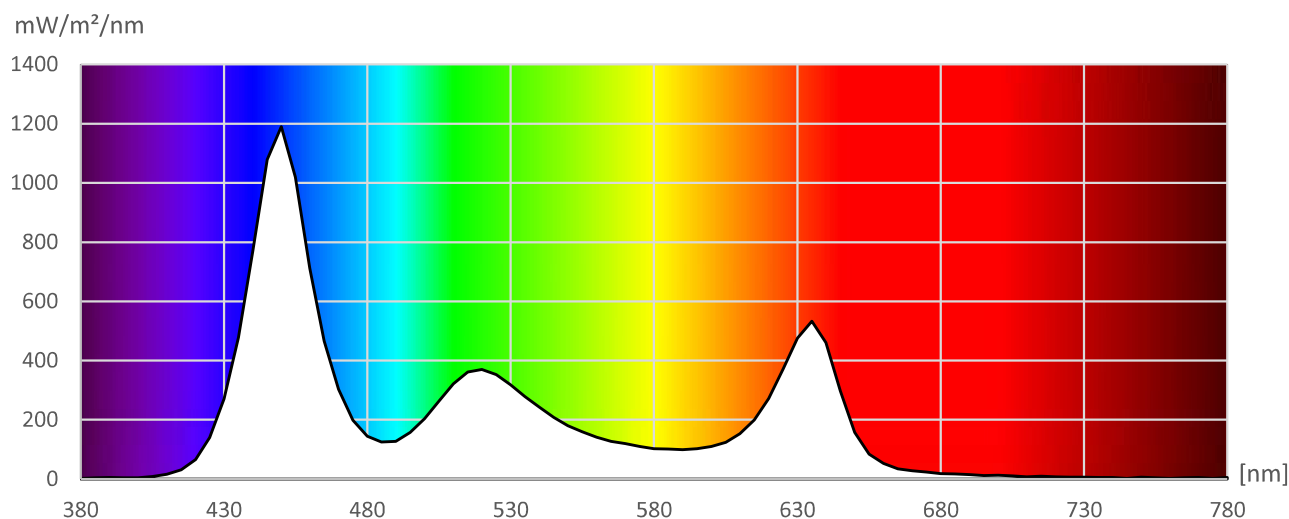
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / all

Measurement file: 325876_2m_all.CS
Date of measurement: 11.07.2018
Time of measurement: 10:51:48



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Burgebrach, 01.08.2018

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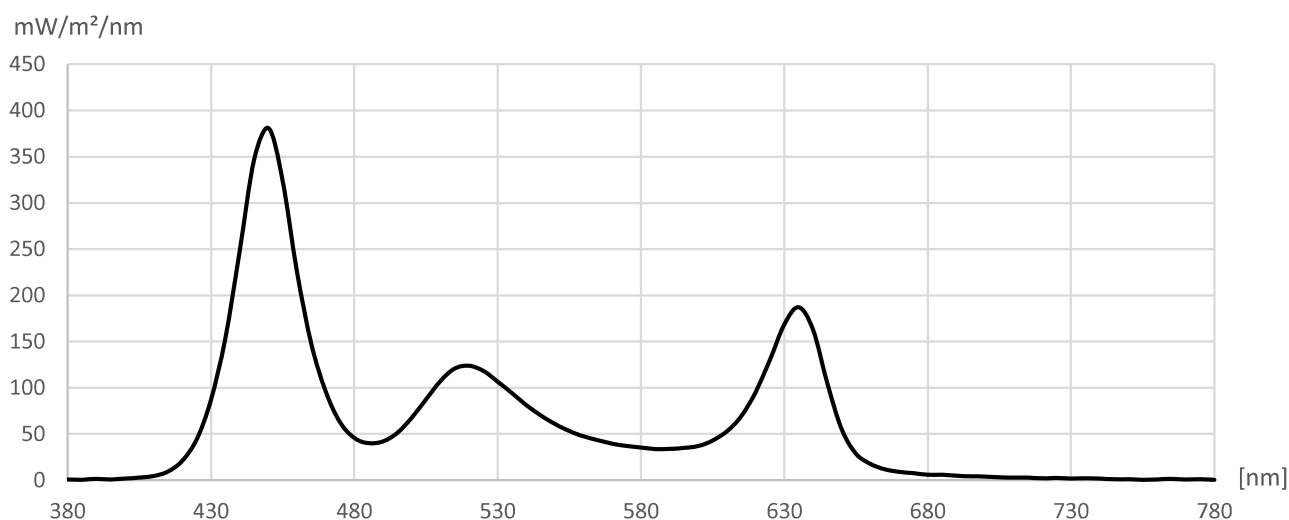
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / all

Measurement file: 325876_3m_all.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:52:03



R1 = -	Ra = -	Illuminance	5213,38 lx	CIE1931
R2 = -	Re = -	Ee	24,845 W/m ²	x = 0,2580
R3 = -	GAI = -	LER	209,8 lm/W	y = 0,2158
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,2034
R7 = -				v' = 0,3828
R8 = -		Saturation	39,3 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	454 nm	u = 0,2034
R11 = -		Peak wavelength	449 nm	v = 0,2552
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	0,70	440	247,43	500	67,56	560	47,33	620	95,44	680	6,07	740	1,83
385	0,51	445	346,25	505	87,57	565	43,39	625	129,96	685	5,88	745	1,09
390	1,51	450	381,07	510	107,34	570	39,59	630	168,37	690	4,88	750	1,05
395	0,92	455	324,72	515	120,81	575	36,93	635	187,21	695	4,27	755	0,62
400	1,96	460	226,01	520	123,81	580	35,43	640	162,92	700	4,01	760	0,95
405	2,76	465	147,69	525	118,21	585	33,75	645	104,47	705	3,12	765	1,40
410	4,65	470	96,10	530	106,65	590	33,86	650	55,60	710	2,90	770	0,87
415	9,59	475	62,64	535	94,04	595	34,83	655	28,85	715	2,81	775	1,23
420	21,11	480	45,76	540	81,46	600	36,92	660	17,72	720	2,03	780	0,45
425	44,43	485	40,06	545	70,18	605	42,96	665	11,88	725	2,63		
430	86,57	490	42,04	550	60,78	610	53,09	670	9,06	730	1,87		
435	152,92	495	51,11	555	53,30	615	69,44	675	7,68	735	2,12		

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Burgebrach, 01.08.2018

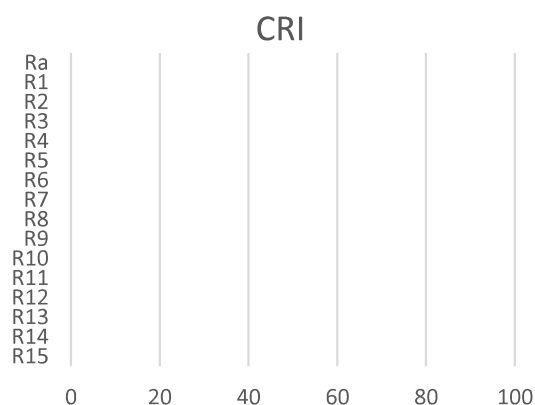
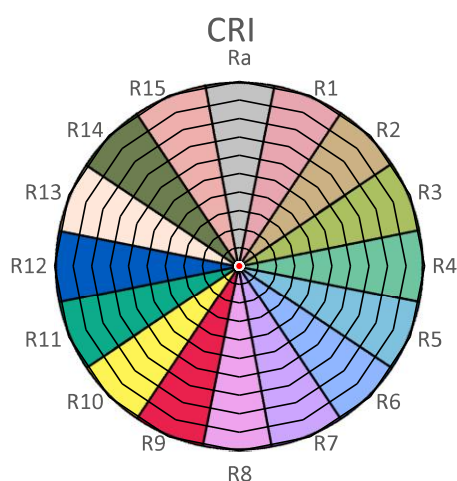
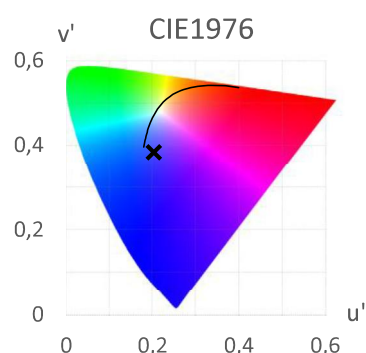
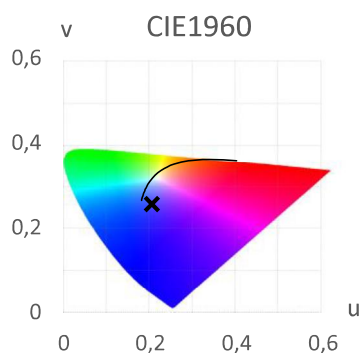
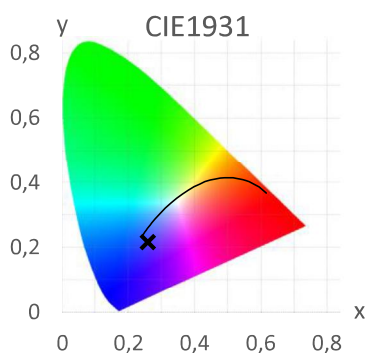
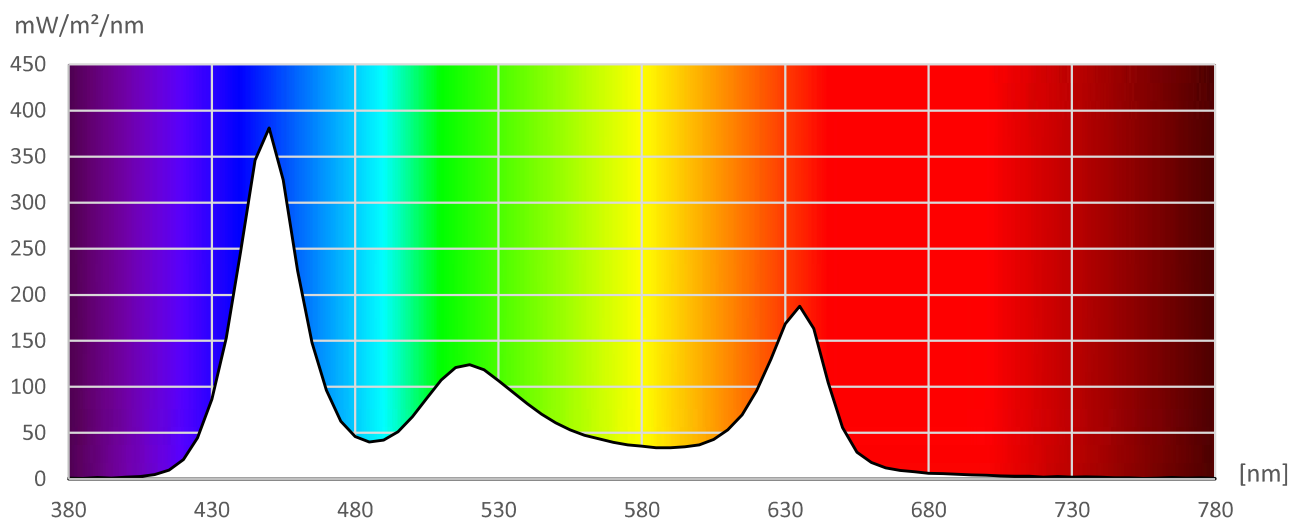
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / all

Measurement file: 325876_3m_all.CS
Date of measurement: 11.07.2018
Time of measurement: 10:52:03



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Burgebrach, 01.08.2018

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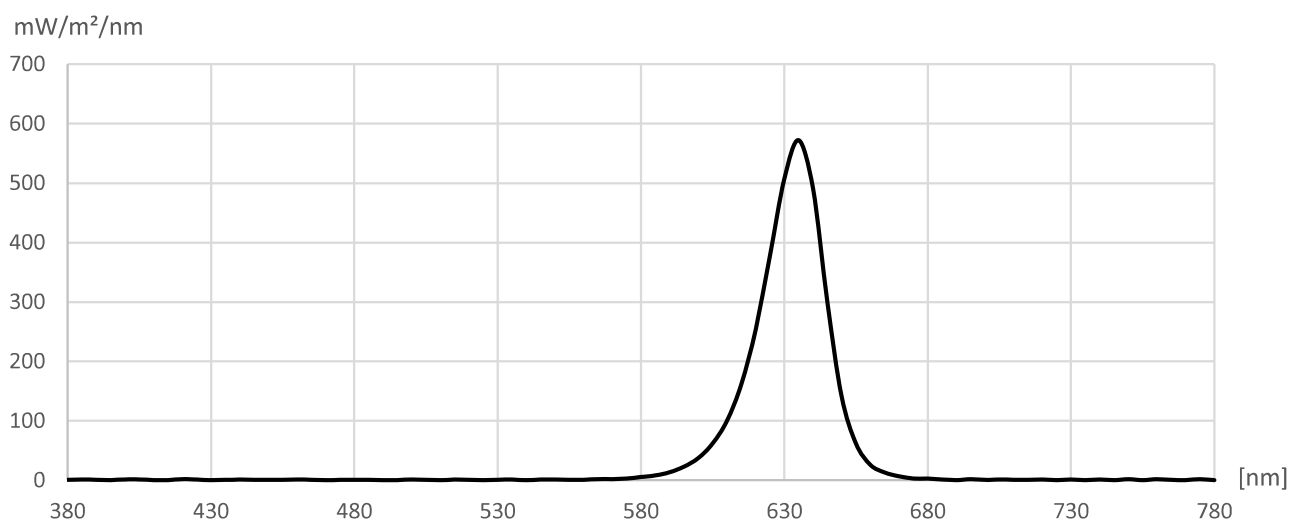
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / red

Measurement file: 325876_2m_r.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:52:37



R1 = -	Ra = -	Illuminance	2943,33 lx	CIE1931
R2 = -	Re = -	Ee	16,099 W/m²	x = 0,6891
R3 = -	GAI = -	LER	182,8 lm/W	y = 0,3048
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,5220
R7 = -				v' = 0,5196
R8 = -		Saturation	98,2 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	627 nm	u = 0,5220
R11 = -		Peak wavelength	634 nm	v = 0,3464
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	0,77	440	0,99	500	1,12	560	0,90	620	253,99	680	2,74	740	1,12
385	1,21	445	0,88	505	0,76	565	1,95	625	377,02	685	1,41	745	0,00
390	0,86	450	0,79	510	0,33	570	1,99	630	506,40	690	0,24	750	1,65
395	0,44	455	0,53	515	1,02	575	2,86	635	572,12	695	1,75	755	0,02
400	1,49	460	1,21	520	0,88	580	5,33	640	490,79	700	0,52	760	1,66
405	1,42	465	0,86	525	0,43	585	7,99	645	299,24	705	1,25	765	0,57
410	0,33	470	0,24	530	0,94	590	13,37	650	141,97	710	0,97	770	0,36
415	0,27	475	0,50	535	1,02	595	22,79	655	61,90	715	0,77	775	1,64
420	1,94	480	0,83	540	0,28	600	37,14	660	26,20	720	1,40	780	0,00
425	1,13	485	0,79	545	1,09	605	61,92	665	13,01	725	0,28		
430	0,37	490	0,32	550	1,20	610	100,10	670	6,77	730	1,37		
435	0,81	495	0,42	555	0,59	615	161,91	675	3,07	735	0,16		

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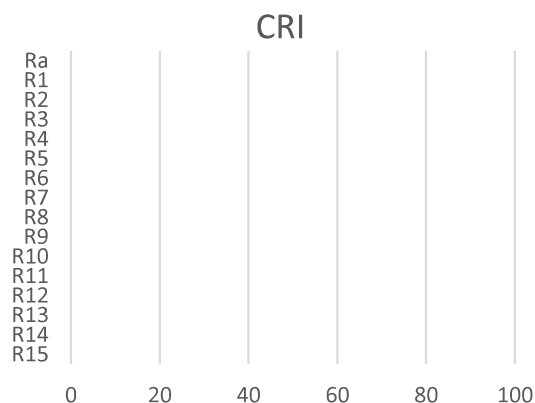
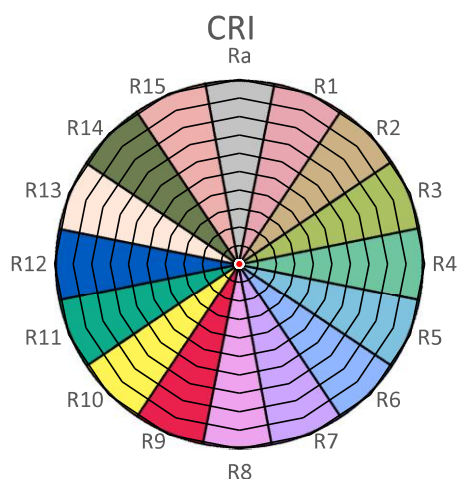
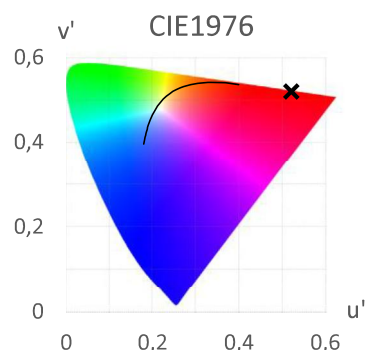
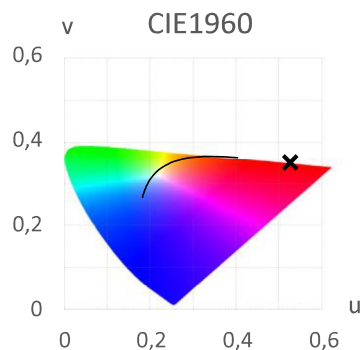
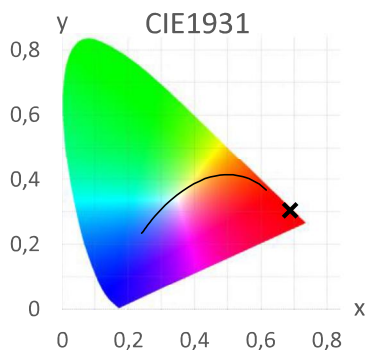
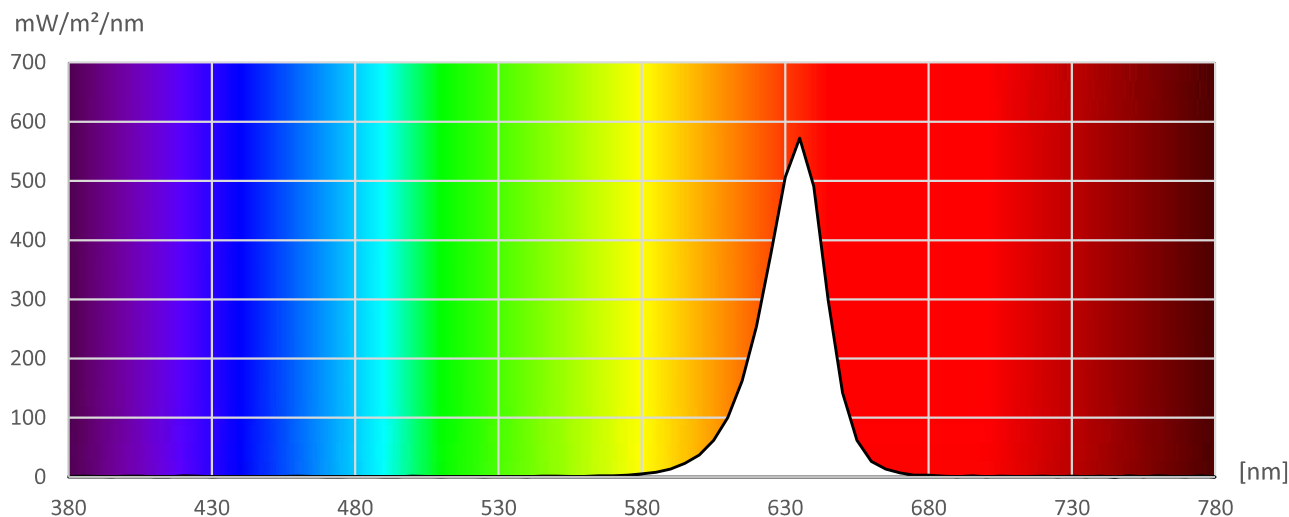
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / red

Measurement file: 325876_2m_r.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:52:37



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Burgebrach, 01.08.2018

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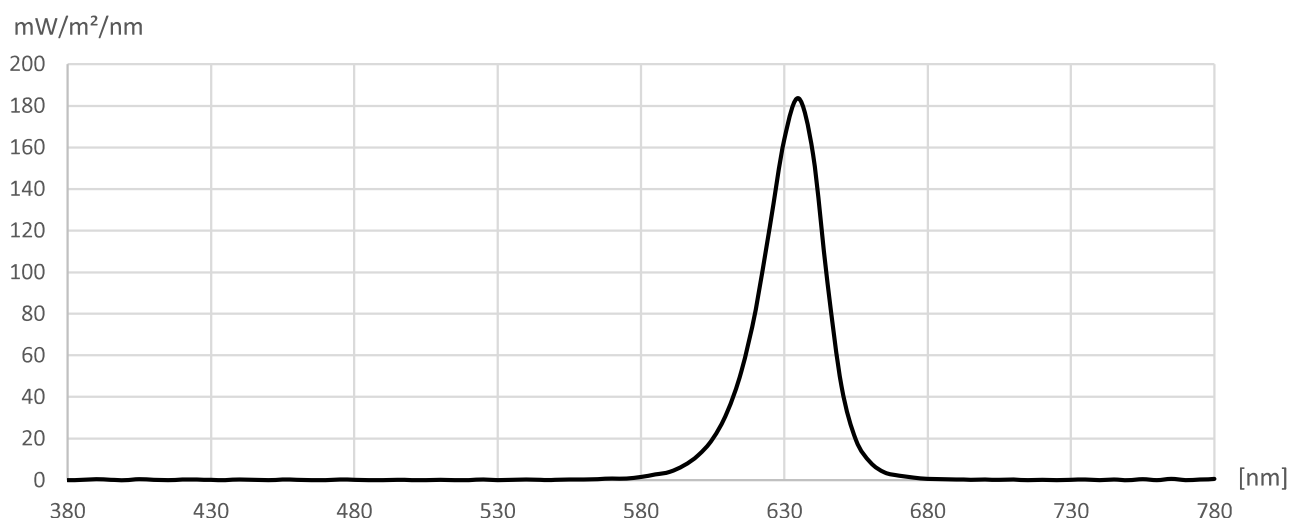
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / red

Measurement file: 325876_3m_r.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:52:47



R1 = -	Ra = -	Illuminance	945,46 lx	CIE1931
R2 = -	Re = -	Ee	5,159 W/m²	x = 0,6905
R3 = -	GAI = -	LER	183,3 lm/W	y = 0,3050
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,5232
R7 = -				v' = 0,5200
R8 = -		Saturation	98,6 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	627 nm	u = 0,5232
R11 = -		Peak wavelength	634 nm	v = 0,3467
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	0,12	440	0,33	500	0,12	560	0,33	620	82,11	680	0,66	740	0,00
385	0,15	445	0,22	505	0,03	565	0,55	625	122,01	685	0,58	745	0,36
390	0,49	450	0,00	510	0,27	570	0,84	630	163,75	690	0,33	750	0,00
395	0,26	455	0,31	515	0,02	575	0,85	635	183,60	695	0,27	755	0,54
400	0,00	460	0,25	520	0,12	580	1,61	640	156,68	700	0,28	760	0,00
405	0,48	465	0,02	525	0,33	585	2,74	645	95,16	705	0,15	765	0,66
410	0,20	470	0,10	530	0,09	590	4,06	650	45,18	710	0,30	770	0,12
415	0,01	475	0,30	535	0,24	595	7,08	655	19,42	715	0,00	775	0,34
420	0,31	480	0,25	540	0,33	600	12,04	660	8,71	720	0,27	780	0,60
425	0,30	485	0,03	545	0,14	605	19,78	665	3,75	725	0,06		
430	0,15	490	0,04	550	0,16	610	32,60	670	2,26	730	0,26		
435	0,12	495	0,21	555	0,36	615	52,45	675	1,29	735	0,38		

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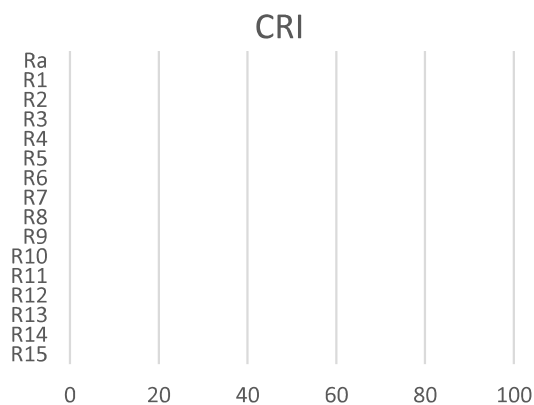
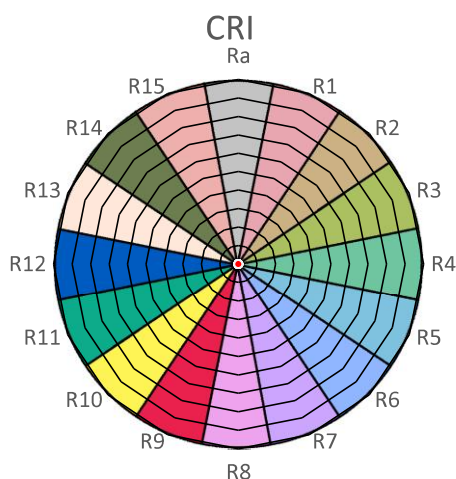
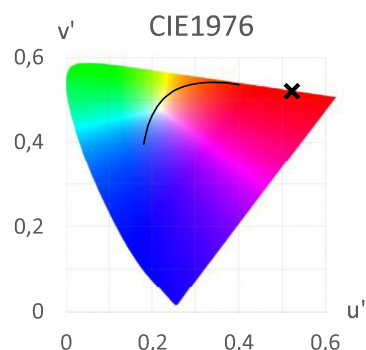
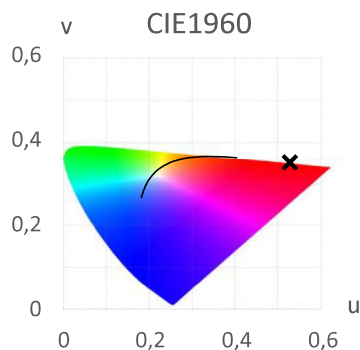
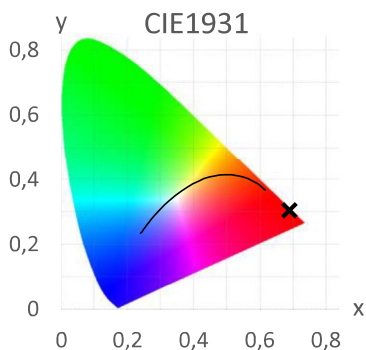
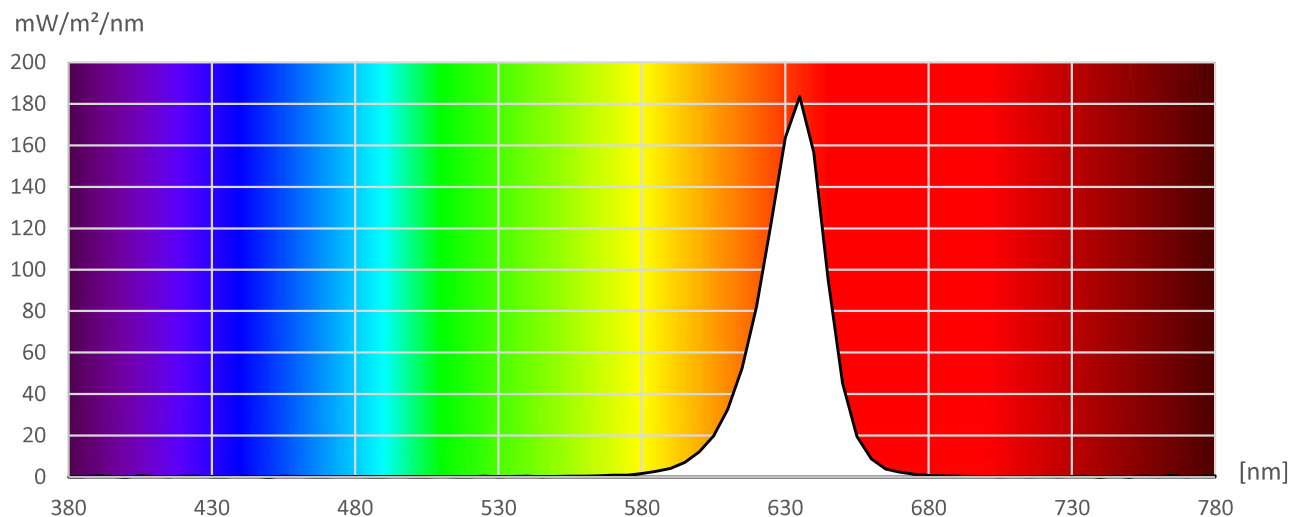
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / red

Measurement file: 325876_3m_r.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:52:47



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Burgebrach, 01.08.2018

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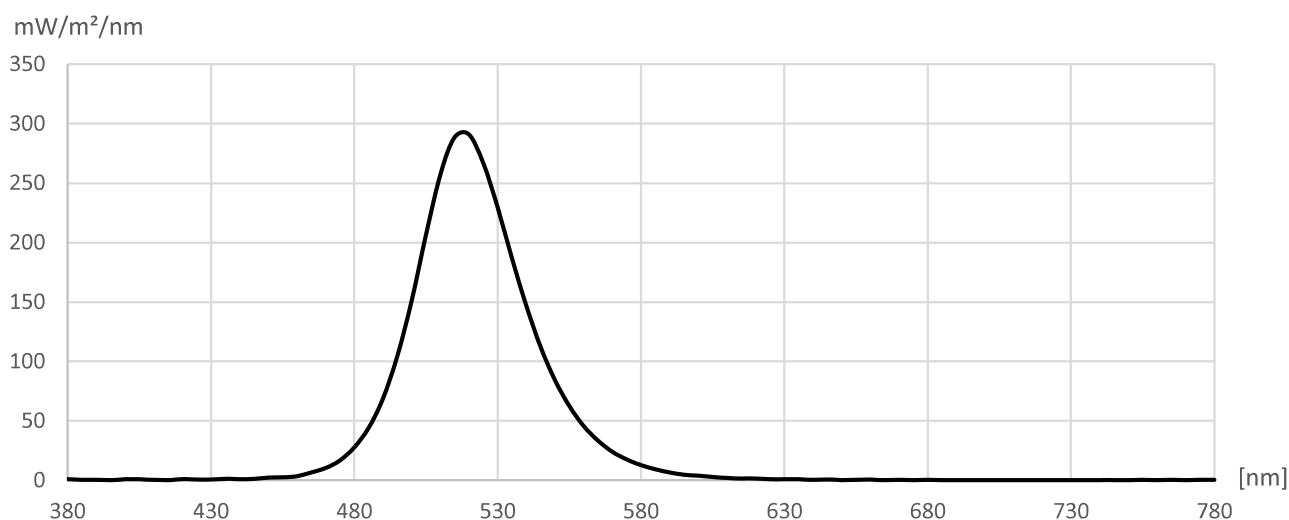
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / green

Measurement file: 325876_2m_g.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:53:12



R1 = -32,3	Ra = -13,8
R2 = 2,7	Re = -44,1
R3 = -0,5	GAI = 1,6
R4 = -52,9	
R5 = -6,5	
R6 = -4,8	
R7 = 8,6	
R8 = -25,0	
R9 = #####	
R10 = -80,6	
R11 = -78,6	
R12 = -16,8	
R13 = -35,7	
R14 = 49,6	
R15 = -36,1	

Illuminance	6262,16 lx
Ee	13,753 W/m²
LER	455,3 lm/W
correlated color temperature (CCT)	8129 K
Duv	0,1547
Saturation	69,6 %
Dominant wavelength	520 nm
Peak wavelength	517 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,1648
y = 0,6857
CIE1976
u' = 0,0605
v' = 0,5662
CIE1960
u = 0,0605
v = 0,3775
TM30
Rf = 2,0
Rg = 13,3

[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	0,82	440	0,88	500	151,02	560	45,53	620	1,50	680	0,29	740	0,20
385	0,44	445	1,22	505	206,77	565	33,40	625	0,76	685	0,07	745	0,14
390	0,32	450	2,27	510	257,16	570	24,00	630	0,91	690	0,05	750	0,02
395	0,13	455	2,44	515	288,41	575	17,57	635	0,78	695	0,11	755	0,25
400	0,79	460	3,45	520	290,86	580	12,76	640	0,25	700	0,00	760	0,00
405	0,78	465	6,49	525	266,72	585	9,22	645	0,68	705	0,16	765	0,31
410	0,38	470	10,29	530	229,33	590	6,62	650	0,19	710	0,00	770	0,00
415	0,10	475	16,77	535	186,30	595	4,66	655	0,33	715	0,08	775	0,31
420	0,97	480	27,80	540	147,15	600	3,86	660	0,49	720	0,11	780	0,33
425	0,61	485	43,94	545	112,08	605	2,80	665	0,01	725	0,00		
430	0,50	490	68,49	550	84,21	610	1,87	670	0,29	730	0,07		
435	1,29	495	104,45	555	62,37	615	1,49	675	0,00	735	0,00		

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Burgebrach, 01.08.2018

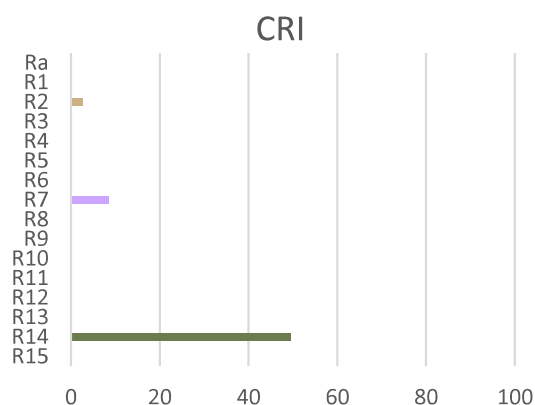
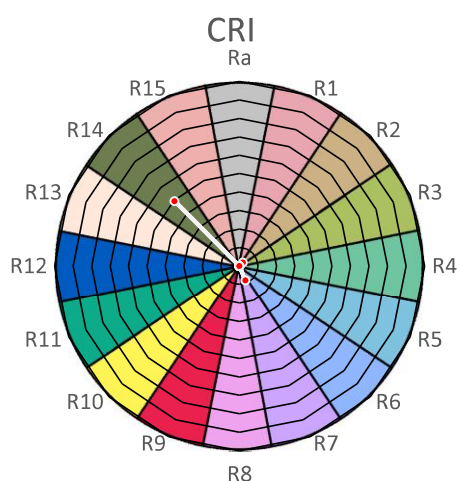
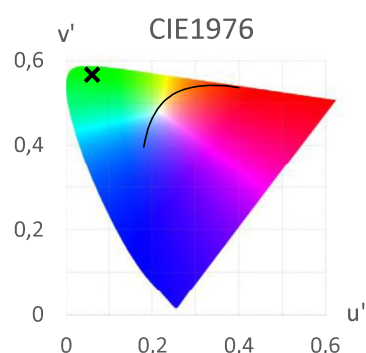
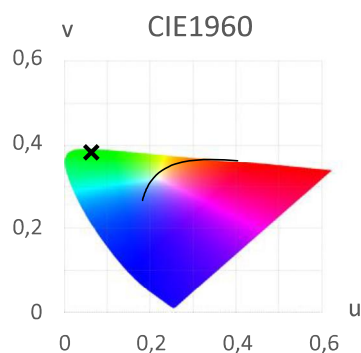
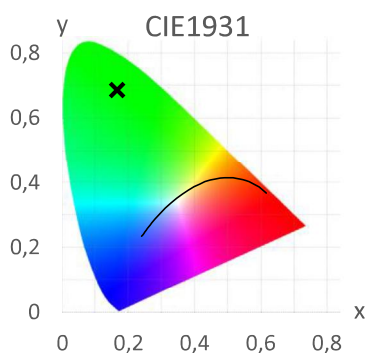
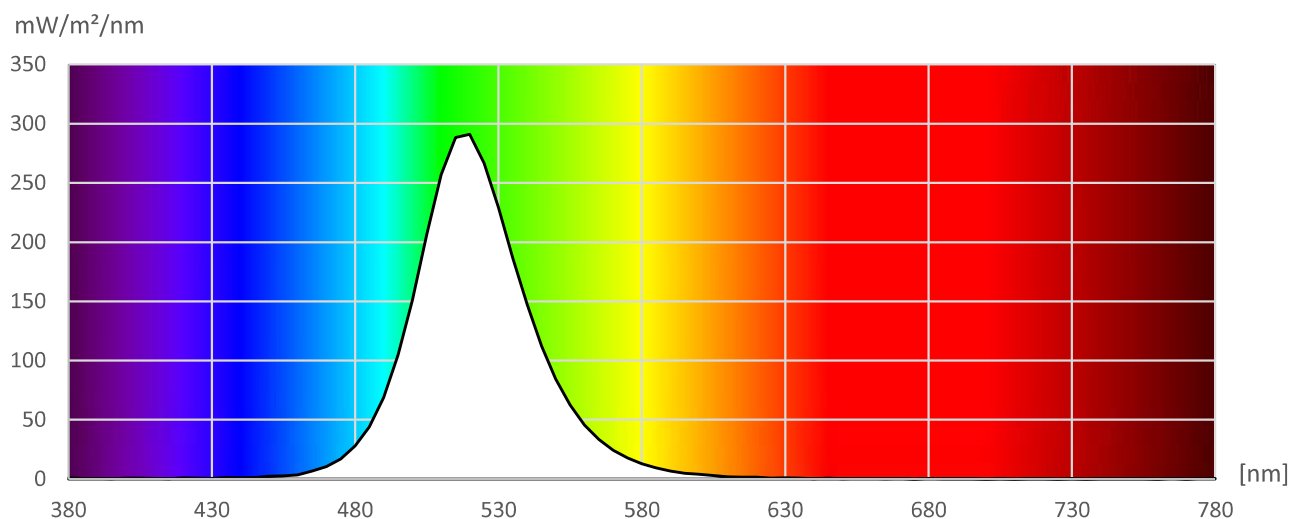
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / green

Measurement file: 325876_2m_g.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:53:12



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Burgebrach, 01.08.2018

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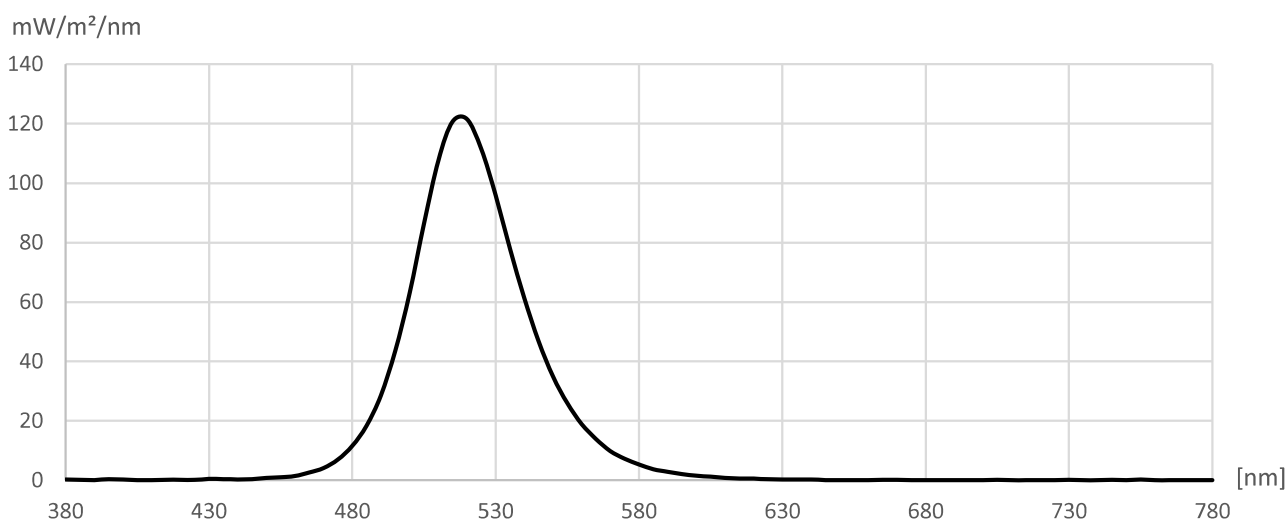
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / green

Measurement file: 325876_3m_g.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:53:25



R1 = -32,5	Ra = -14,4
R2 = 2,2	Re = -44,7
R3 = -1,4	GAI = 1,5
R4 = -53,7	
R5 = -6,7	
R6 = -5,2	
R7 = 7,6	
R8 = -25,6	
R9 = #####	
R10 = -81,5	
R11 = -79,4	
R12 = -17,1	
R13 = -35,9	
R14 = 49,1	
R15 = -36,3	

Illuminance	2612,51 lx
Ee	5,731 W/m²
LER	455,8 lm/W
correlated color temperature (CCT)	8130 K
Duv	0,155
Saturation	69,8 %
Dominant wavelength	520 nm
Peak wavelength	517 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,1643
y = 0,6870
CIE1976
u' = 0,0602
v' = 0,5664
CIE1960
u = 0,0602
v = 0,3776
TM30
Rf = 1,8
Rg = 12,9

[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	0,29	440	0,30	500	63,01	560	18,87	620	0,52	680	0,06	740	0,00
385	0,16	445	0,39	505	86,48	565	13,87	625	0,32	685	0,01	745	0,14
390	0,09	450	0,77	510	107,61	570	9,85	630	0,30	690	0,00	750	0,04
395	0,34	455	1,00	515	120,71	575	7,21	635	0,22	695	0,09	755	0,21
400	0,24	460	1,41	520	121,53	580	5,35	640	0,24	700	0,00	760	0,00
405	0,06	465	2,62	525	111,47	585	3,69	645	0,07	705	0,11	765	0,01
410	0,02	470	4,11	530	95,79	590	2,87	650	0,04	710	0,00	770	0,00
415	0,19	475	7,00	535	77,76	595	2,07	655	0,04	715	0,00	775	0,00
420	0,14	480	11,61	540	61,39	600	1,50	660	0,05	720	0,00	780	0,00
425	0,14	485	18,35	545	46,75	605	1,19	665	0,14	725	0,03		
430	0,43	490	28,57	550	34,92	610	0,80	670	0,14	730	0,10		
435	0,40	495	43,57	555	25,89	615	0,61	675	0,00	735	0,00		

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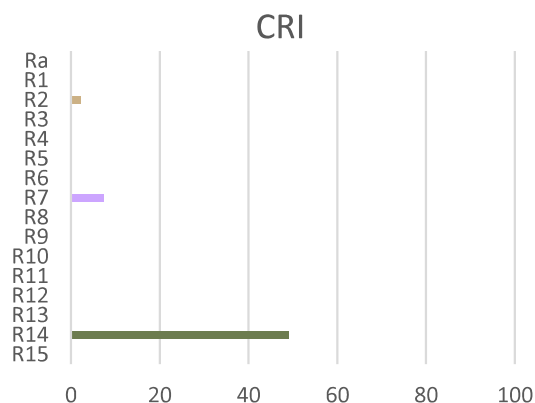
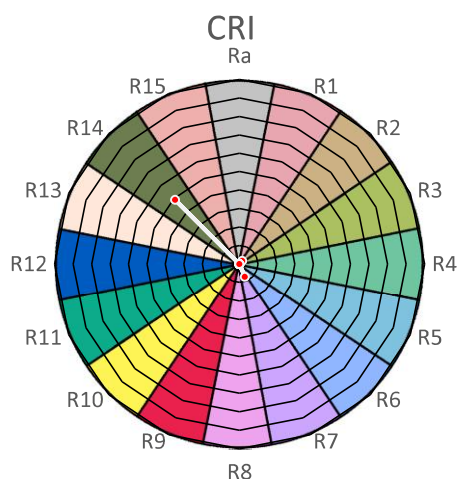
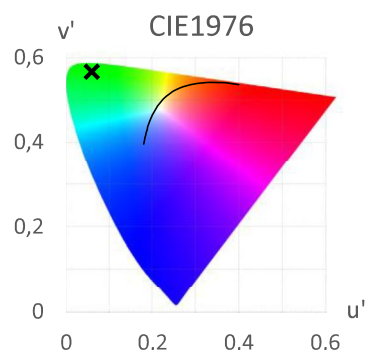
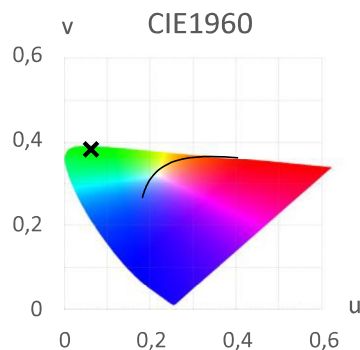
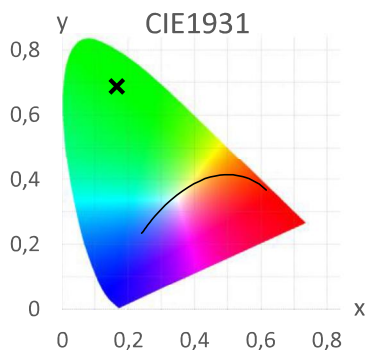
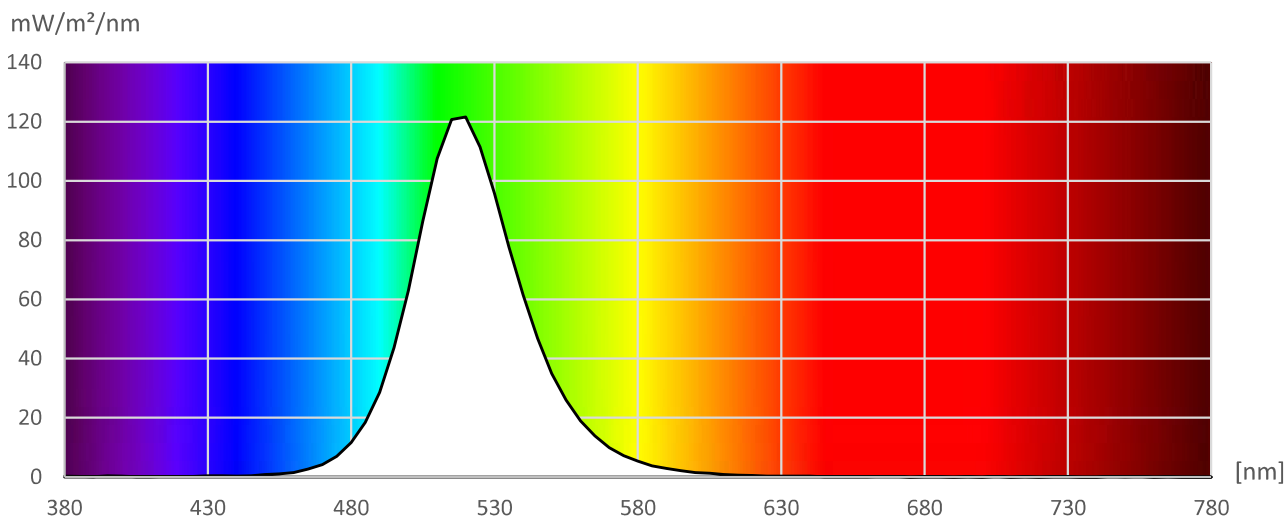
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / green

Measurement file: 325876_3m_g.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:53:25



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Burgebrach, 01.08.2018

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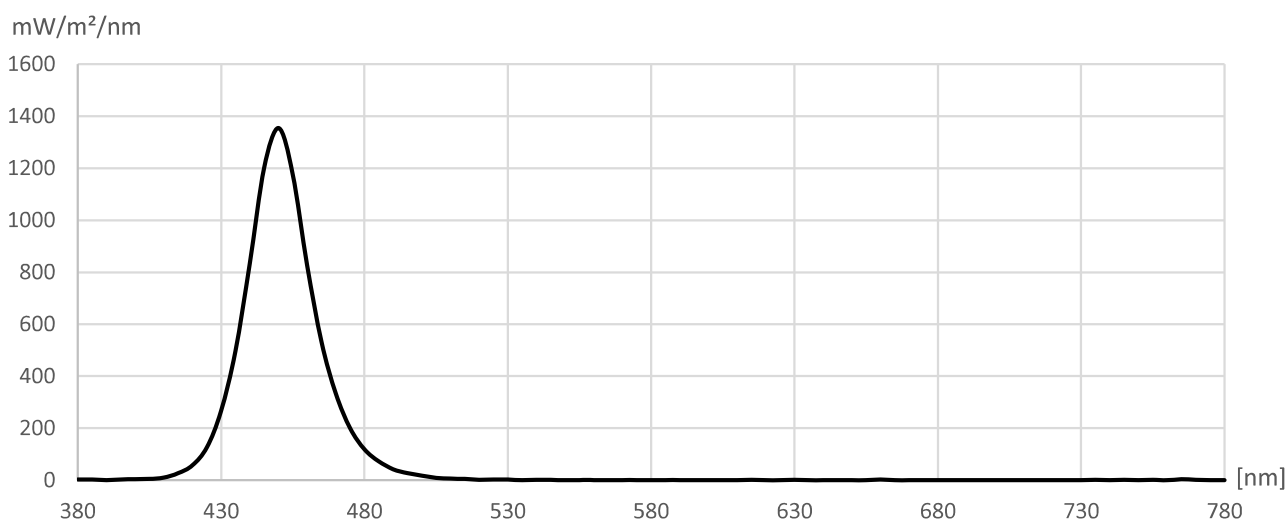
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / blue

Measurement file: 325876_2m_b.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:53:41



R1 = -	Ra = -	Illuminance	1352 lx	CIE1931
R2 = -	Re = -	Ee	39,010 W/m²	x = 0,1529
R3 = -	GAI = -	LER	34,7 lm/W	y = 0,0261
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,2033
R7 = -				v' = 0,0781
R8 = -		Saturation	98,6 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	440 nm	u = 0,2033
R11 = -		Peak wavelength	449 nm	v = 0,0520
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	2,97	440	833,11	500	17,67	560	0,94	620	0,71	680	0,00	740	0,00
385	2,68	445	1201,63	505	9,35	565	0,00	625	0,00	685	0,84	745	1,23
390	0,70	450	1354,42	510	6,37	570	0,83	630	2,19	690	0,00	750	0,00
395	3,34	455	1177,64	515	5,16	575	0,94	635	0,00	695	0,00	755	1,43
400	4,42	460	829,04	520	2,16	580	0,03	640	0,00	700	0,00	760	0,01
405	5,04	465	533,22	525	2,80	585	0,66	645	0,44	705	0,00	765	3,65
410	9,70	470	333,31	530	2,25	590	0,94	650	0,00	710	0,66	770	1,75
415	27,25	475	199,61	535	0,53	595	0,00	655	0,00	715	0,00	775	0,17
420	57,57	480	118,06	540	1,86	600	0,86	660	2,77	720	0,91	780	0,48
425	127,05	485	72,70	545	1,18	605	0,42	665	0,00	725	0,13		
430	265,44	490	42,75	550	0,00	610	0,17	670	0,62	730	0,30		
435	495,65	495	27,46	555	0,89	615	1,35	675	0,35	735	1,32		

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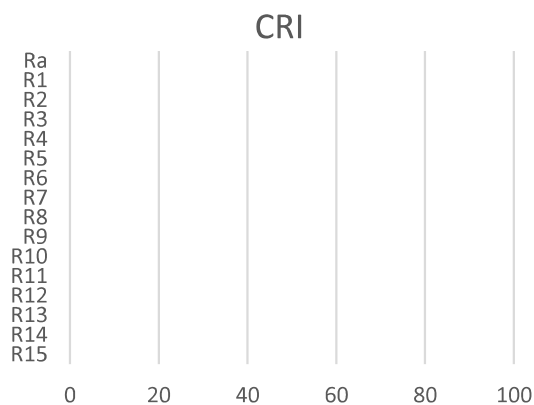
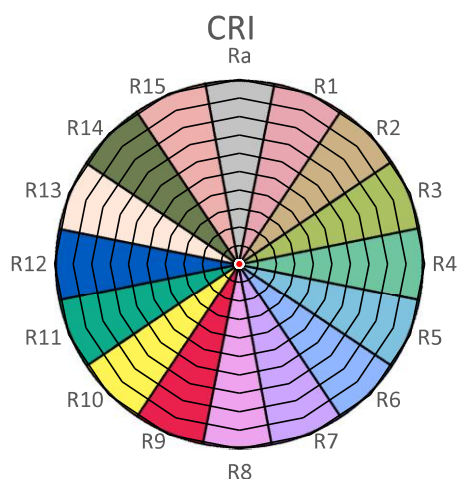
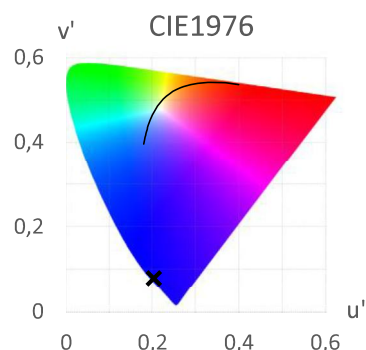
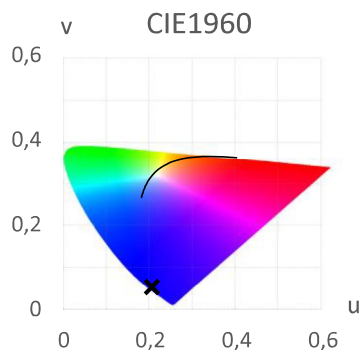
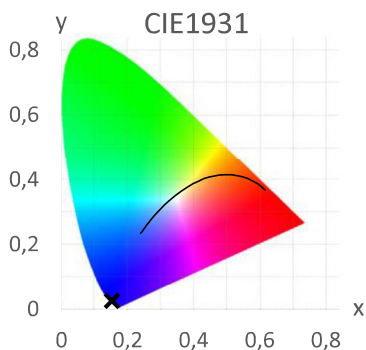
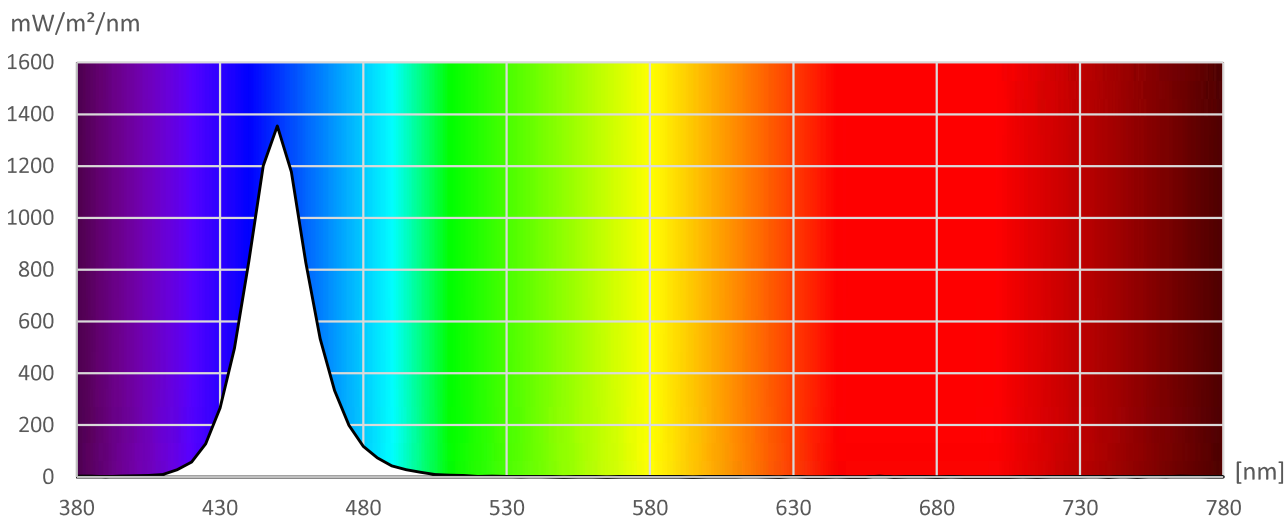
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / blue

Measurement file: 325876_2m_b.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:53:41



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Burgebrach, 01.08.2018

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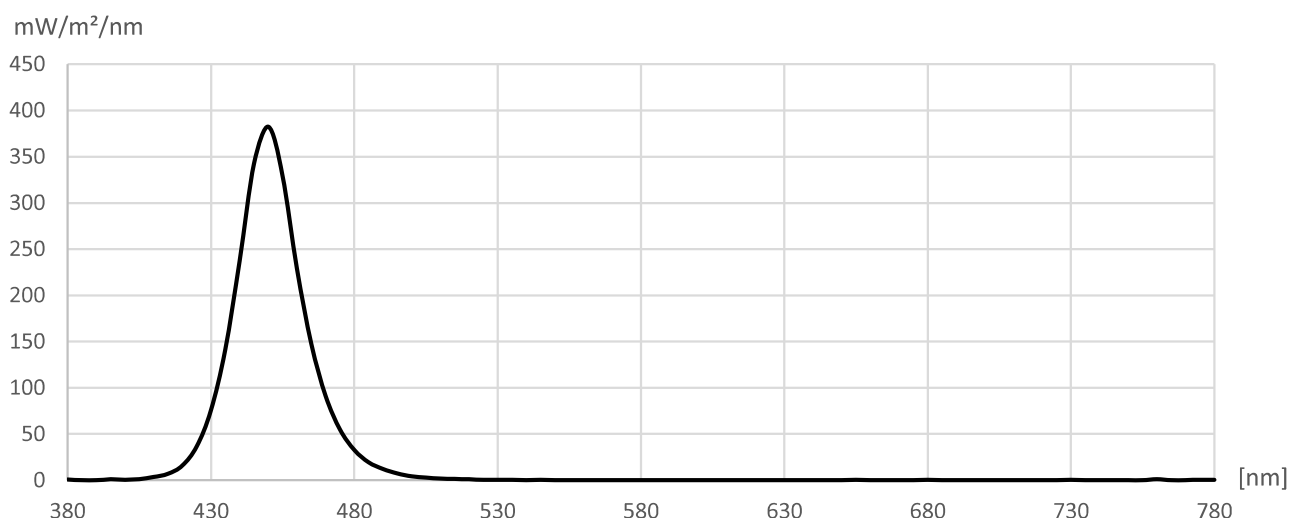
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / blue

Measurement file: 325876_3m_b.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:53:48



R1 = -	Ra = -	Illuminance	372,36 lx	CIE1931
R2 = -	Re = -	Ee	10,938 W/m²	x = 0,1528
R3 = -	GAI = -	LER	34,0 lm/W	y = 0,0256
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,2036
R7 = -				v' = 0,0766
R8 = -		Saturation	98,7 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	440 nm	u = 0,2036
R11 = -		Peak wavelength	449 nm	v = 0,0511
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	0,78	440	237,05	500	4,30	560	0,20	620	0,20	680	0,40	740	0,14
385	0,08	445	342,45	505	2,91	565	0,07	625	0,01	685	0,06	745	0,00
390	0,01	450	382,43	510	1,70	570	0,04	630	0,00	690	0,00	750	0,07
395	1,00	455	329,34	515	1,35	575	0,12	635	0,15	695	0,16	755	0,00
400	0,59	460	229,21	520	1,10	580	0,01	640	0,00	700	0,00	760	1,12
405	1,24	465	147,76	525	0,42	585	0,00	645	0,18	705	0,19	765	0,00
410	3,46	470	91,15	530	0,48	590	0,21	650	0,00	710	0,00	770	0,27
415	7,00	475	54,72	535	0,40	595	0,12	655	0,34	715	0,03	775	0,39
420	15,94	480	32,54	540	0,19	600	0,00	660	0,00	720	0,03	780	0,31
425	36,76	485	19,44	545	0,30	605	0,07	665	0,00	725	0,00		
430	75,29	490	12,09	550	0,23	610	0,00	670	0,26	730	0,31		
435	141,19	495	7,31	555	0,00	615	0,00	675	0,00	735	0,00		

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Burgebrach, 01.08.2018

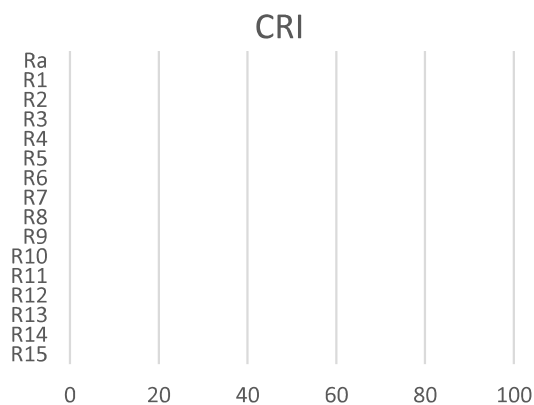
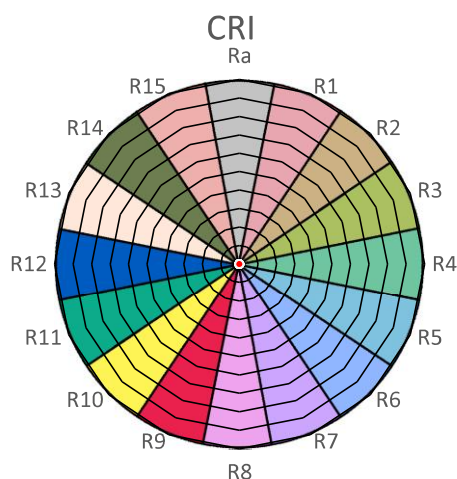
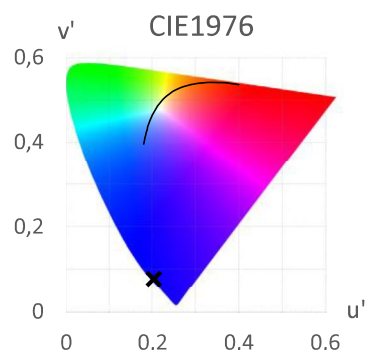
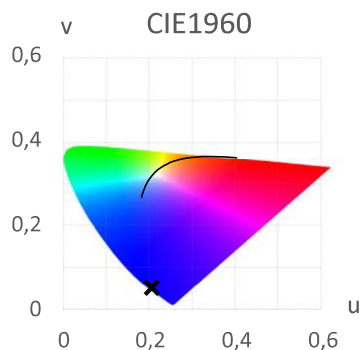
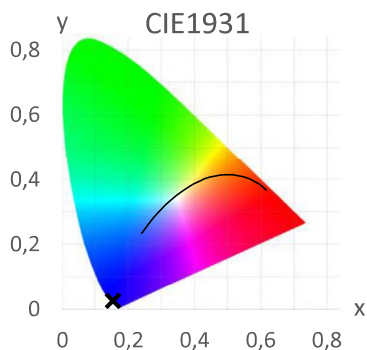
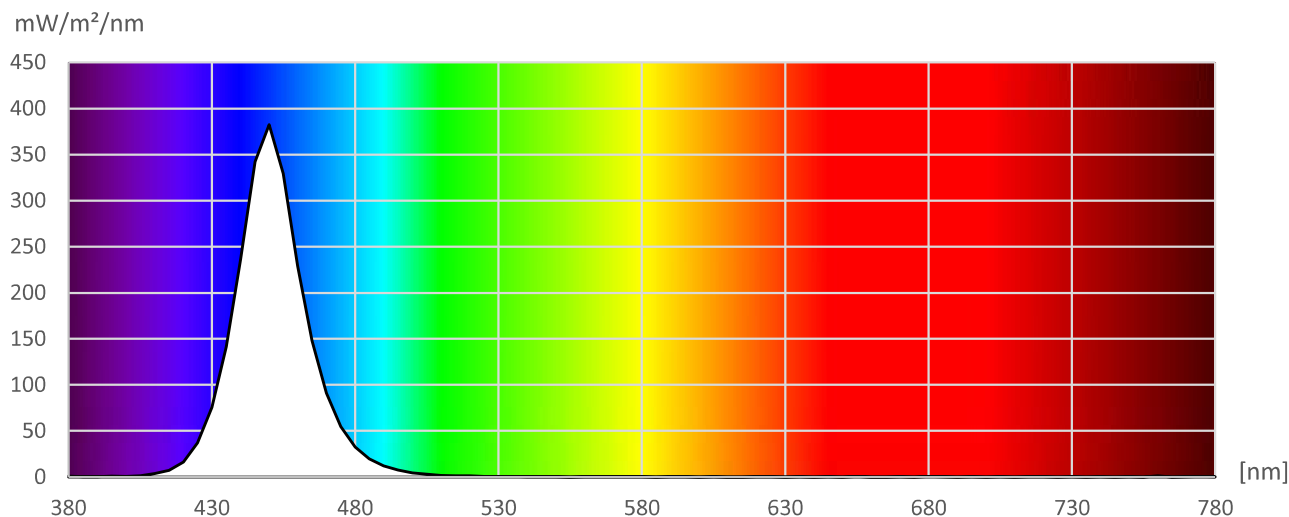
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / blue

Measurement file: 325876_3m_b.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:53:48



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Burgebrach, 01.08.2018

Sebastian Laske

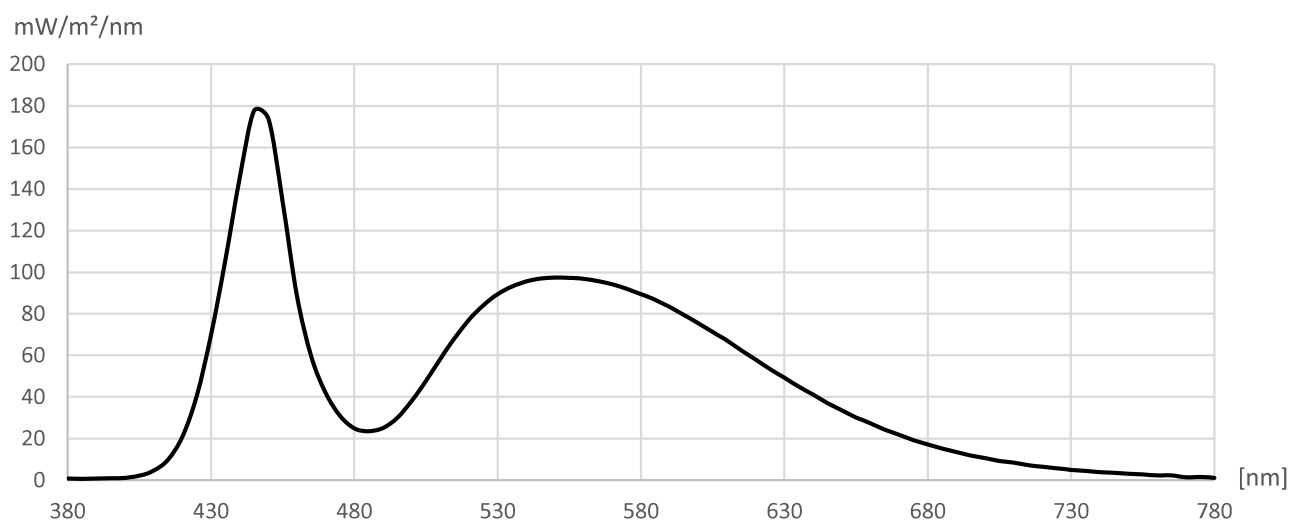
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / cw

Measurement file: 325876_2m_cw.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:54:13



R1 = 73,2	Ra = 73,5	Illuminance	5805,4 lx	CIE1931
R2 = 76,1	Re = 64,3	Ee	18,647 W/m ²	x = 0,3145
R3 = 75,6	GAI = 89,3	LER	311,3 lm/W	y = 0,3246
R4 = 75,6				
R5 = 74,0		correlated color temperature (CCT)	6439 K	CIE1976
R6 = 67,2		Duv	0	u' = 0,2007
R7 = 80,7				v' = 0,4662
R8 = 65,6		Saturation	7,1 %	
R9 = -12,1				CIE1960
R10 = 40,9		Dominant wavelength	482 nm	u = 0,2007
R11 = 73,6		Peak wavelength	447 nm	v = 0,3108
R12 = 45,9				
R13 = 72,7		Flicker frequency	% < 2.5 Hz	TM30
R14 = 86,0		Percent Flicker	< 2.5 %	Rf = 69,5
R15 = 69,2		Flicker index	% < 2.5	Rg = 95,8

[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	0,87	440	145,13	500	38,11	560	96,80	620	58,00	680	17,30	740	3,93
385	0,71	445	177,56	505	47,78	565	95,71	625	53,43	685	15,23	745	3,64
390	0,84	450	173,70	510	58,43	570	94,23	630	49,35	690	13,62	750	3,08
395	0,97	455	134,28	515	68,25	575	91,98	635	44,97	695	11,85	755	2,82
400	1,17	460	88,85	520	77,09	580	89,51	640	41,21	700	10,68	760	2,33
405	2,14	465	59,50	525	84,12	585	86,68	645	37,13	705	9,29	765	2,38
410	4,61	470	41,91	530	89,51	590	83,22	650	33,73	710	8,45	770	1,41
415	9,87	475	30,95	535	93,16	595	79,45	655	30,23	715	7,30	775	1,60
420	20,91	480	24,97	540	95,52	600	75,47	660	27,41	720	6,46	780	1,14
425	40,60	485	23,62	545	96,97	605	71,24	665	24,27	725	5,80		
430	69,42	490	25,14	550	97,41	610	67,15	670	21,91	730	4,98		
435	105,49	495	30,06	555	97,34	615	62,34	675	19,21	735	4,50		

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Burgebrach, 01.08.2018

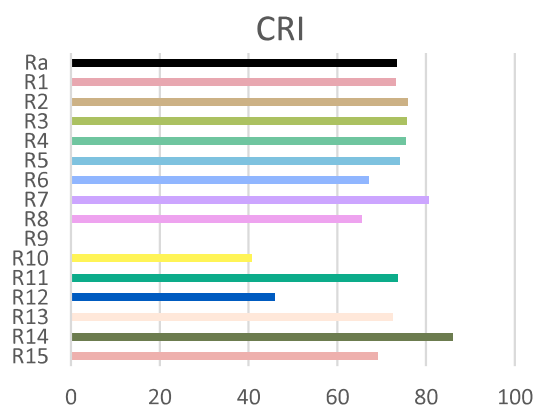
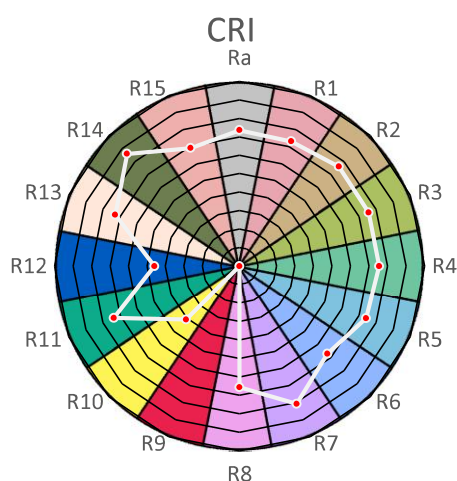
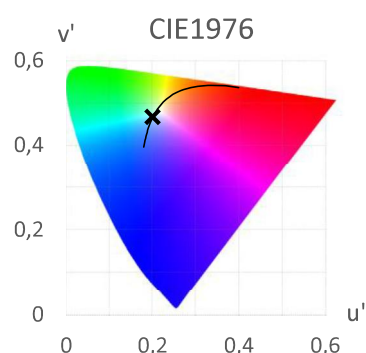
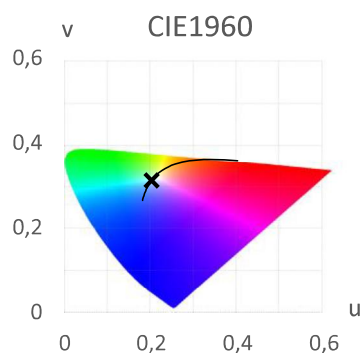
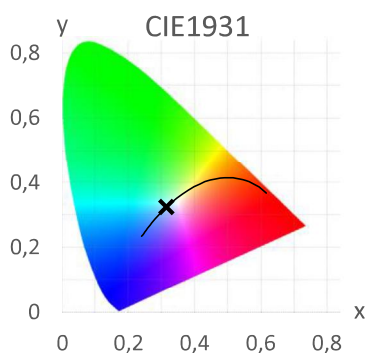
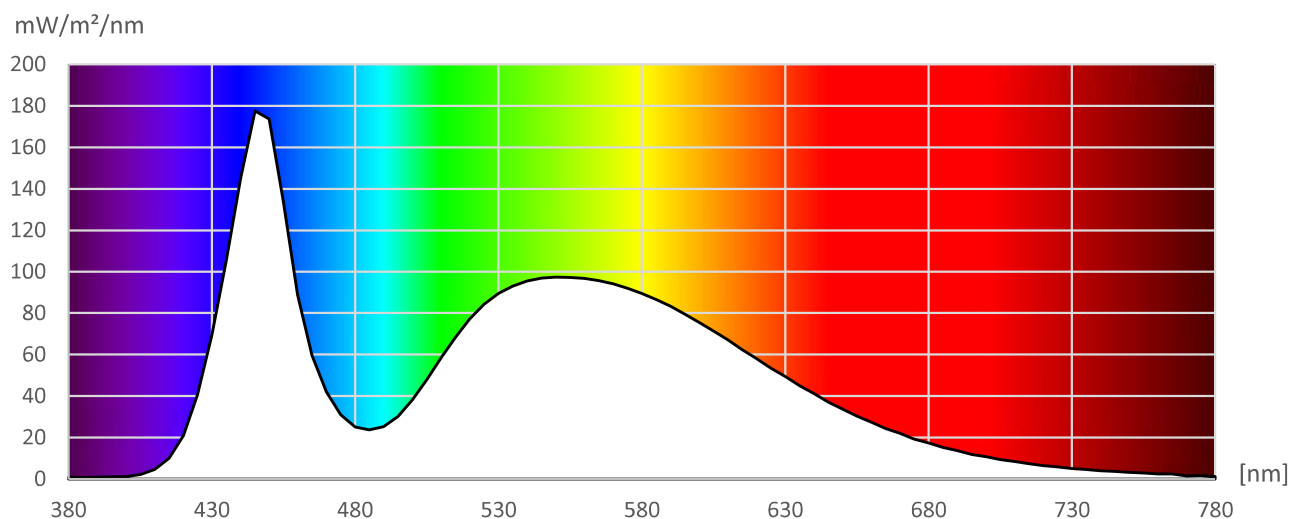
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 2 m / cw

Measurement file: 325876_2m_cw.CS
Date of measurement: 11.07.2018
Time of measurement: 10:54:13



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Burgebrach, 01.08.2018

Sebastian Laske

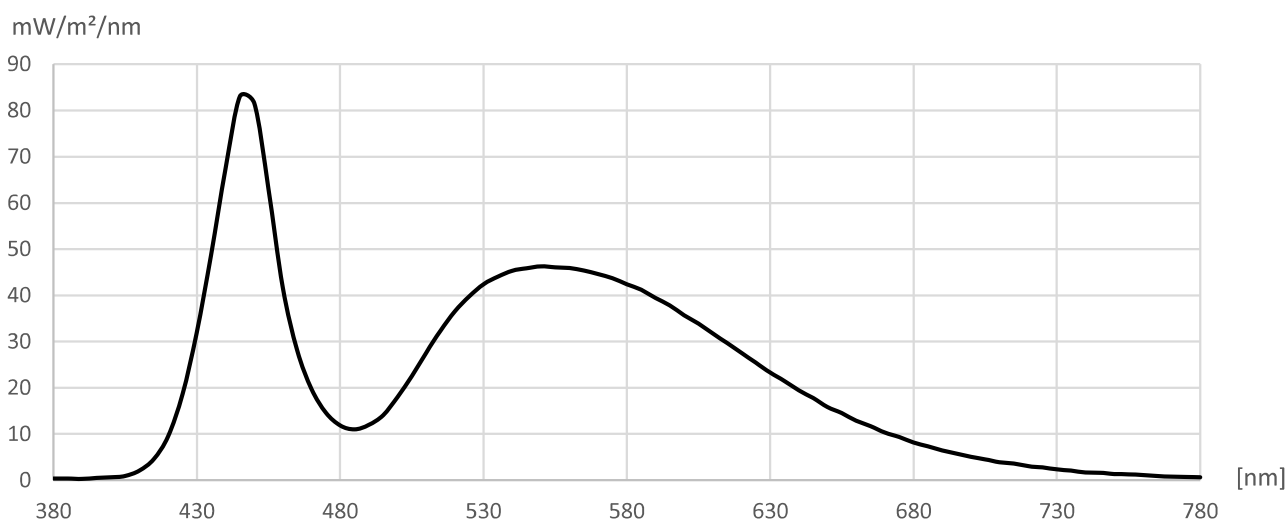
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / cw

Measurement file: 325876_3m_cw.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:54:27



R1 = 72,9	Ra = 73,4
R2 = 76,1	Re = 64,1
R3 = 75,9	GAI = 88,8
R4 = 75,4	
R5 = 73,7	
R6 = 67,2	
R7 = 80,8	
R8 = 65,2	
R9 = -13,2	
R10 = 41,0	
R11 = 73,3	
R12 = 45,7	
R13 = 72,5	
R14 = 86,2	
R15 = 68,8	

Illuminance	2750,8 lx
Ee	8,799 W/m²
LER	312,6 lm/W
correlated color temperature (CCT)	6368 K
Duv	0,0004
Saturation	6,6 %
Dominant wavelength	484 nm
Peak wavelength	447 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,3155
y = 0,3264
CIE1976
u' = 0,2008
v' = 0,4673
CIE1960
u = 0,2008
v = 0,3116
TM30
Rf = 69,6
Rg = 95,7

[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	0,38	440	67,37	500	18,01	560	45,88	620	27,54	680	8,15	740	1,68
385	0,35	445	83,00	505	22,56	565	45,39	625	25,44	685	7,33	745	1,64
390	0,28	450	81,56	510	27,61	570	44,62	630	23,30	690	6,43	750	1,37
395	0,49	455	63,19	515	32,32	575	43,70	635	21,46	695	5,78	755	1,29
400	0,63	460	41,75	520	36,50	580	42,42	640	19,47	700	5,04	760	1,15
405	0,92	465	28,14	525	39,76	585	41,19	645	17,77	705	4,54	765	0,93
410	2,12	470	19,73	530	42,41	590	39,43	650	15,87	710	3,91	770	0,78
415	4,57	475	14,64	535	44,08	595	37,81	655	14,51	715	3,62	775	0,74
420	9,57	480	11,84	540	45,32	600	35,68	660	12,90	720	3,03	780	0,64
425	18,66	485	11,01	545	45,85	605	33,88	665	11,69	725	2,77		
430	31,90	490	11,95	550	46,27	610	31,71	670	10,30	730	2,35		
435	48,76	495	14,09	555	46,07	615	29,69	675	9,34	735	2,08		

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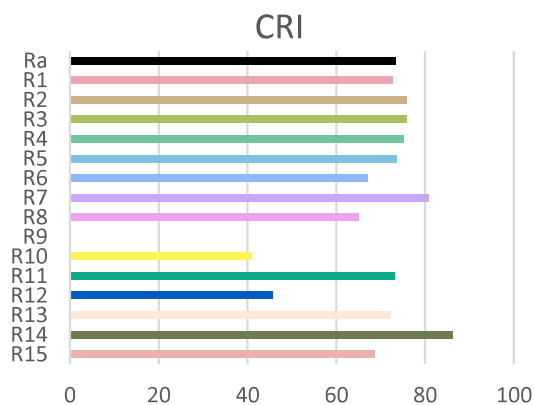
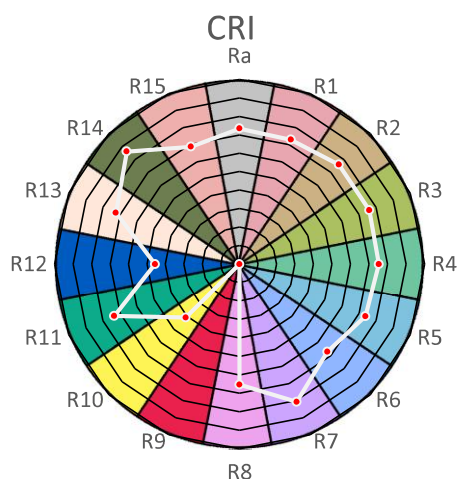
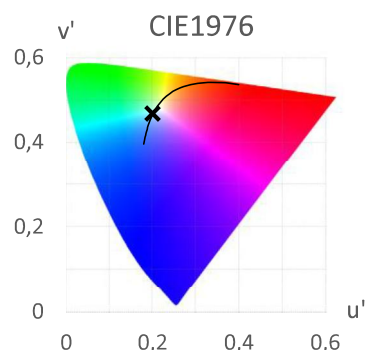
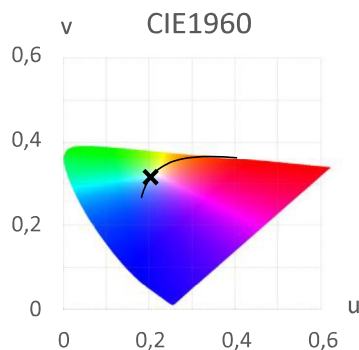
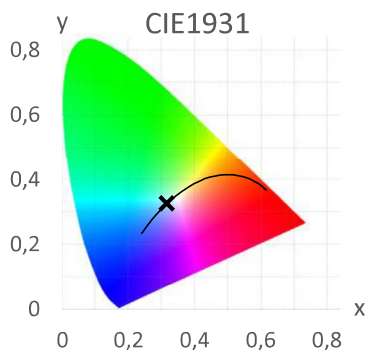
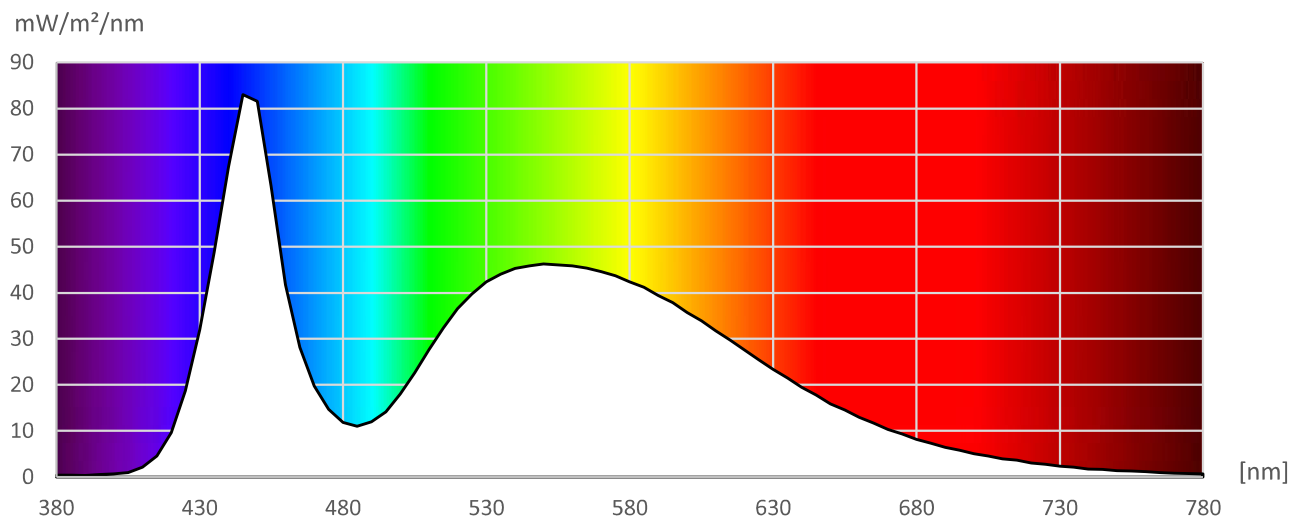
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-100 Beam 36.3W LED
Item 325876 / @ 3 m / cw

Measurement file: 325876_3m_cw.CS
Date of measurement: 11.07.2018
Time of measurement: 10:54:27



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Burgebrach, 01.08.2018

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First, last name of inspector