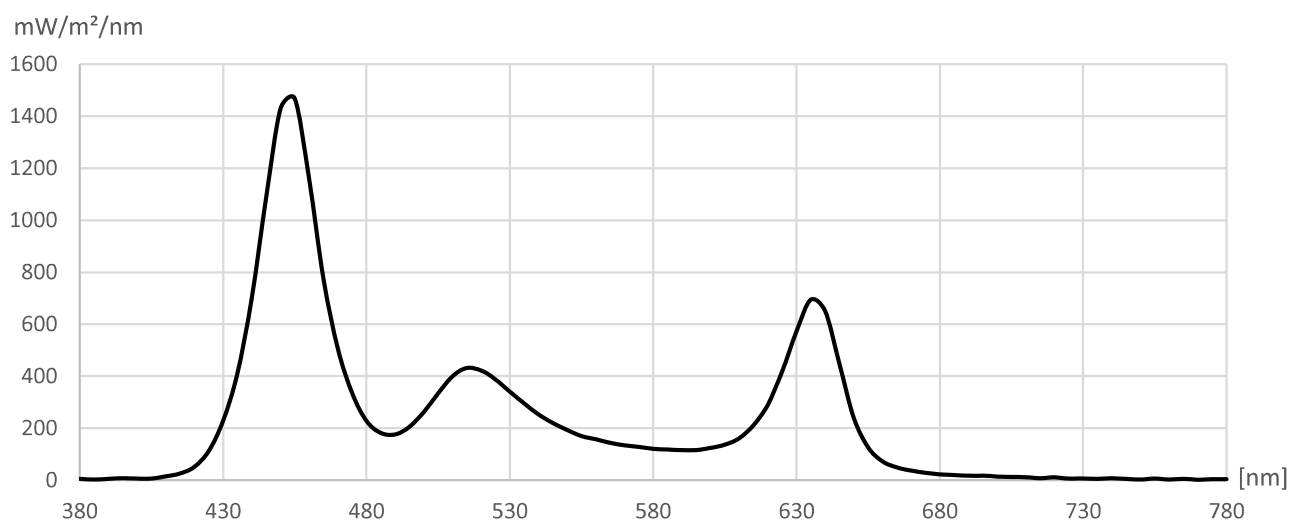


Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / all

Measurement file: 325877_all_1m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:26:13



R1 = -	Ra = -	Illuminance	17931,04 lx	CIE1931
R2 = -	Re = -	Ee	91,650 W/m ²	x = 0,2478
R3 = -	GAI = -	LER	195,6 lm/W	y = 0,2013
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,2014
R7 = -				v' = 0,3682
R8 = -		Saturation	44,3 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	455 nm	u = 0,2014
R11 = -		Peak wavelength	454 nm	v = 0,2455
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	5,60	440	700,44	500	262,72	560	157,09	620	290,75	680	23,00	740	7,63
385	2,33	445	1087,37	505	334,50	565	143,74	625	416,54	685	20,35	745	4,83
390	5,48	450	1429,10	510	399,97	570	134,34	630	571,63	690	17,33	750	2,70
395	7,32	455	1468,87	515	431,61	575	128,12	635	694,03	695	17,66	755	6,33
400	6,03	460	1161,17	520	422,48	580	120,94	640	649,99	700	14,16	760	2,52
405	6,29	465	775,41	525	387,86	585	117,99	645	445,47	705	12,63	765	5,59
410	14,56	470	506,64	530	340,12	590	116,10	650	241,74	710	12,03	770	2,00
415	25,75	475	334,16	535	295,70	595	115,81	655	126,55	715	7,89	775	4,08
420	51,94	480	227,42	540	253,26	600	123,95	660	72,57	720	11,04	780	3,49
425	112,99	485	182,38	545	220,61	605	136,62	665	49,95	725	6,24		
430	227,75	490	176,23	550	193,08	610	161,41	670	36,75	730	7,12		
435	410,90	495	205,41	555	170,15	615	211,92	675	28,74	735	5,14		

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Burgebrach, 11.07.2018

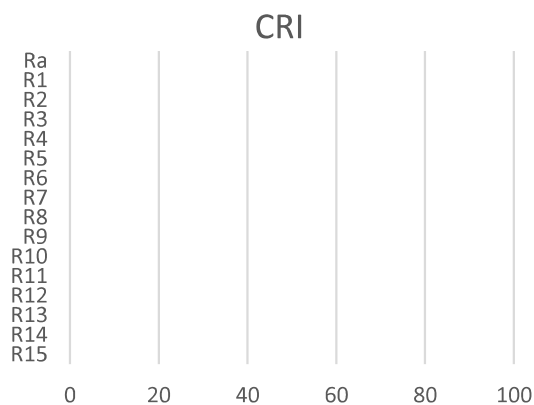
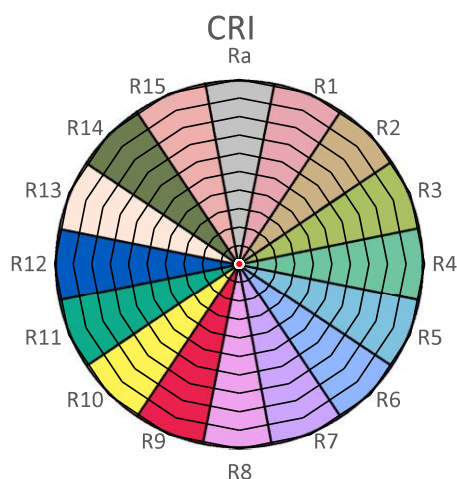
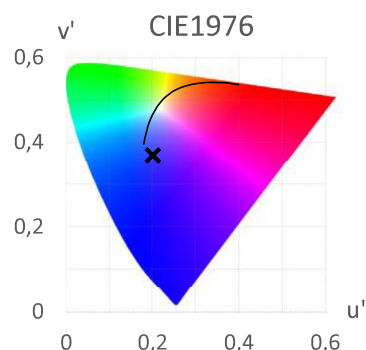
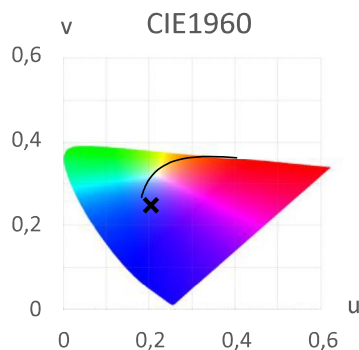
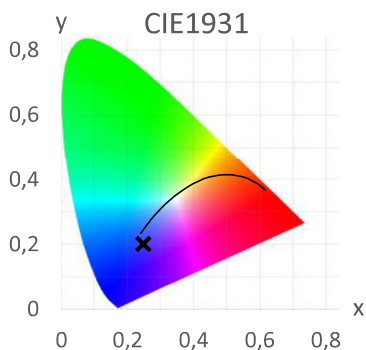
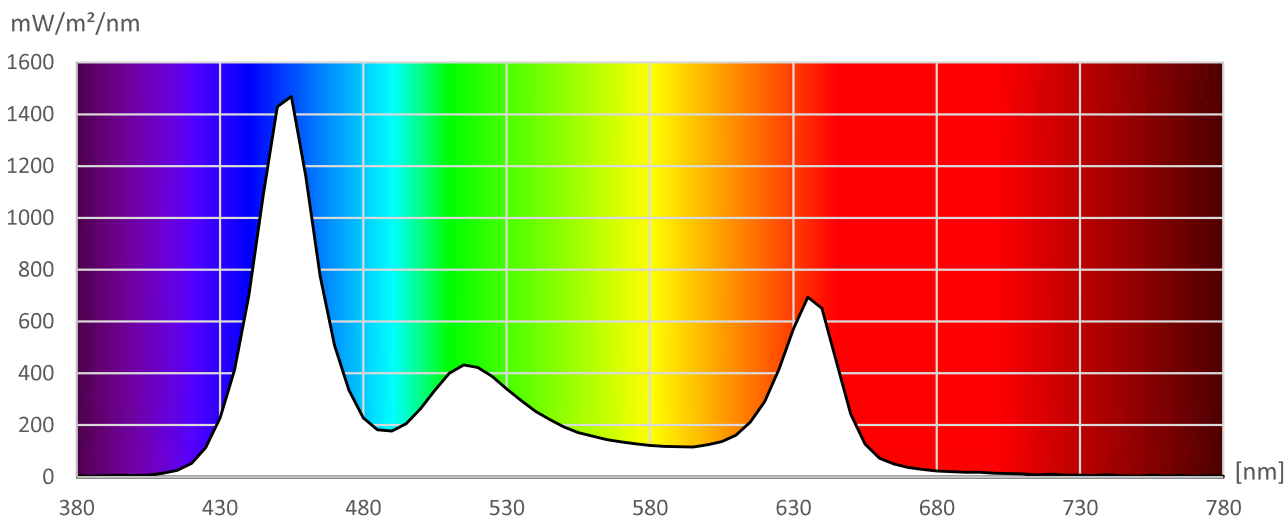
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / all

Measurement file: 325877_all_1m.CS'
Date of measurement: 11.07.2018
Time of measurement: 10:26:13



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Burgebrach, 11.07.2018

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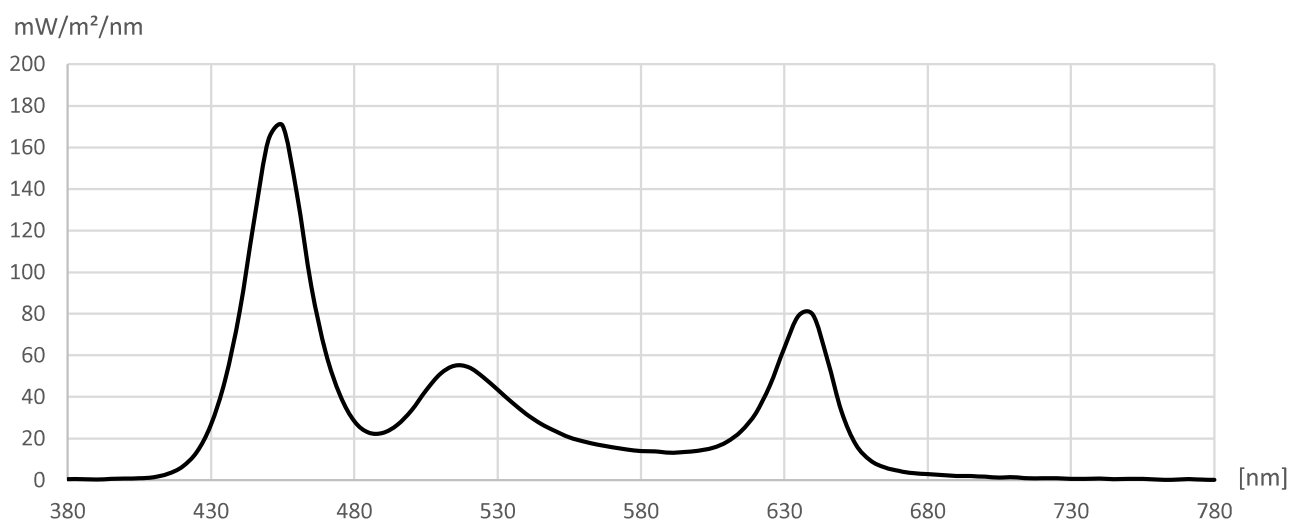
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / all

Measurement file: 325877_all_3m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:37:53



R1 = -	Ra = -	Illuminance	2185,45 lx	CIE1931
R2 = -	Re = -	Ee	10,976 W/m ²	x = 0,2452
R3 = -	GAI = -	LER	199,1 lm/W	y = 0,2075
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,1962
R7 = -				v' = 0,3736
R8 = -		Saturation	44,1 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	461 nm	u = 0,1962
R11 = -		Peak wavelength	454 nm	v = 0,2491
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	0,53	440	80,91	500	33,74	560	18,65	620	32,21	680	2,96	740	0,79
385	0,58	445	124,55	505	43,17	565	17,15	625	45,55	685	2,45	745	0,51
390	0,37	450	163,54	510	51,11	570	15,89	630	63,56	690	2,07	750	0,62
395	0,59	455	170,54	515	55,09	575	14,75	635	79,17	695	2,00	755	0,67
400	0,81	460	137,69	520	54,31	580	14,03	640	79,47	700	1,69	760	0,33
405	0,93	465	93,33	525	49,48	585	13,86	645	58,02	705	1,28	765	0,18
410	1,48	470	61,50	530	43,44	590	13,21	650	33,00	710	1,47	770	0,58
415	3,10	475	40,93	535	37,38	595	13,51	655	17,10	715	0,93	775	0,31
420	6,55	480	28,29	540	31,91	600	14,23	660	9,54	720	0,96	780	0,23
425	13,53	485	23,00	545	27,19	605	15,50	665	6,15	725	0,98		
430	26,57	490	22,76	550	23,68	610	18,45	670	4,43	730	0,65		
435	48,46	495	26,59	555	20,61	615	23,73	675	3,36	735	0,69		

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Burgebrach, 11.07.2018

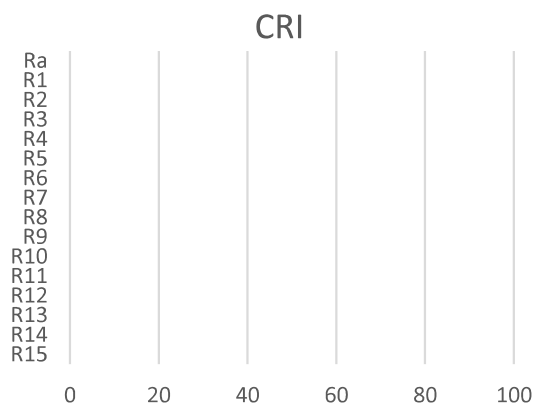
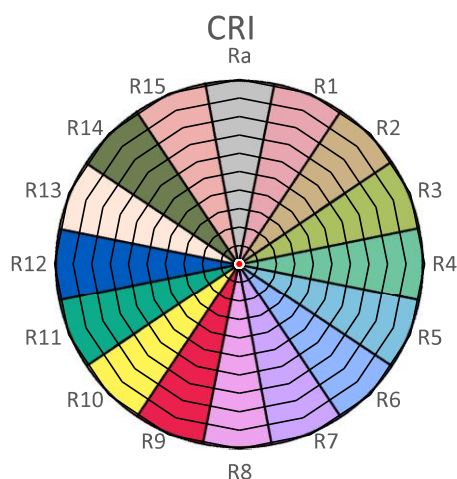
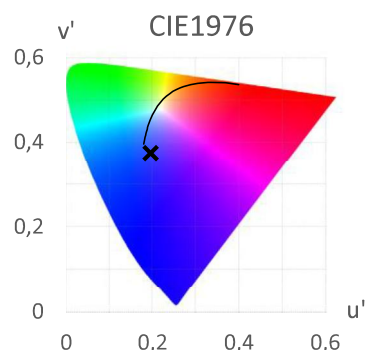
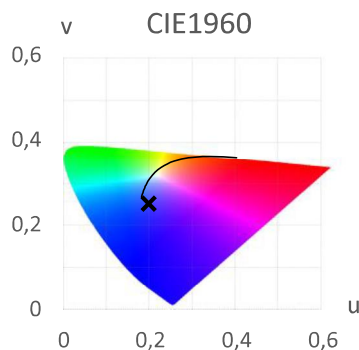
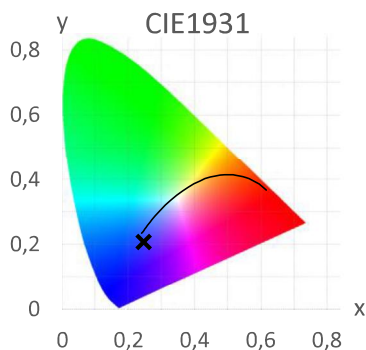
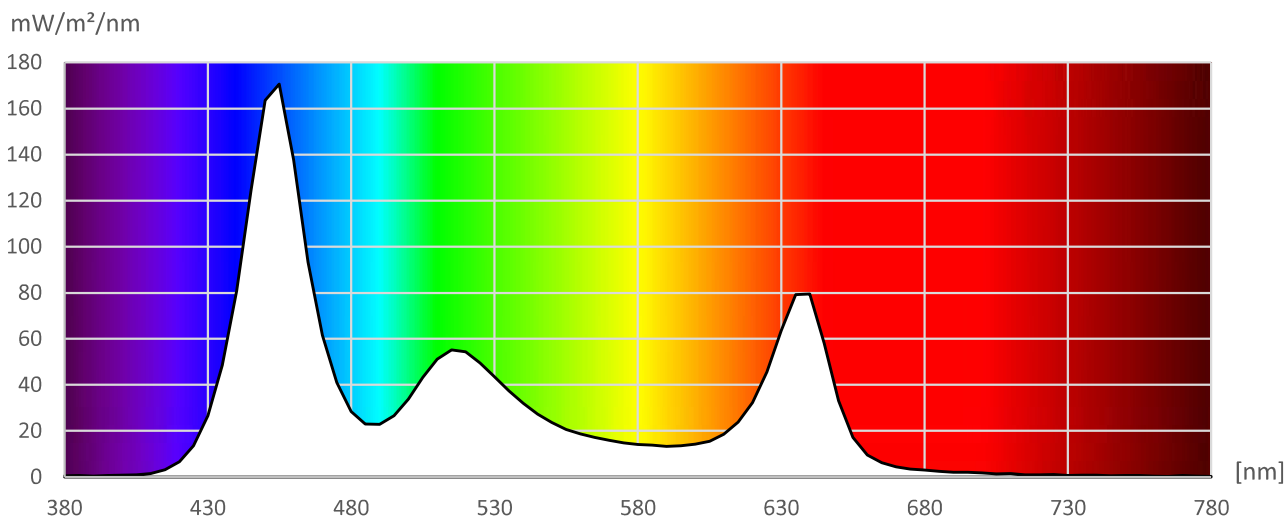
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / all

Measurement file: 325877_all_3m.CS'
Date of measurement: 11.07.2018
Time of measurement: 10:37:53



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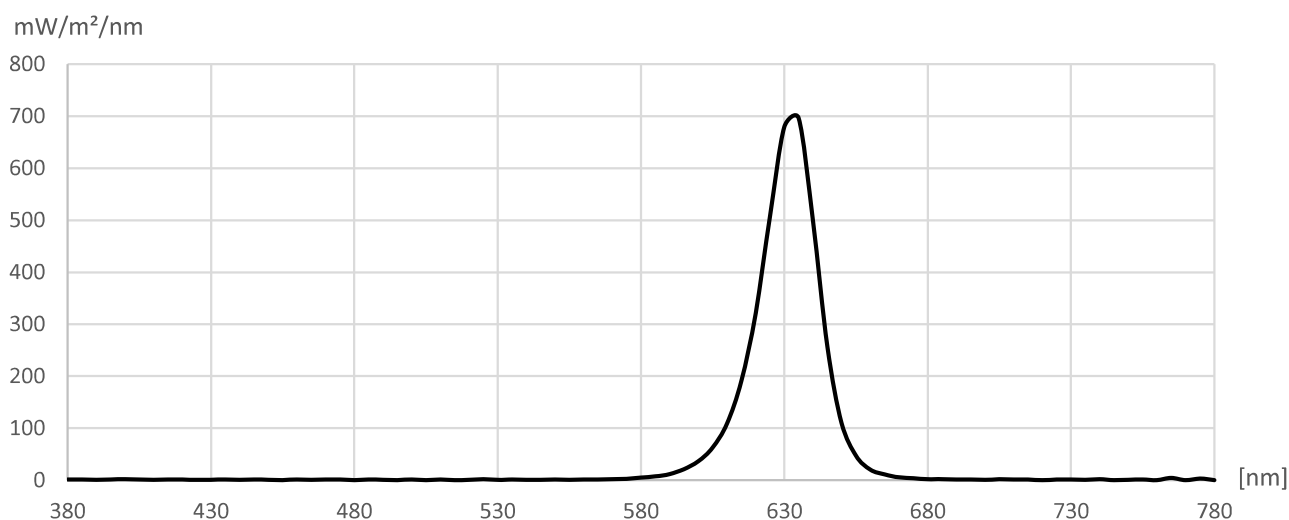
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / red

Measurement file: 325877_r_1m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:29:36



R1 = -	Ra = -	Illuminance	3445,83 lx	CIE1931
R2 = -	Re = -	Ee	18,376 W/m²	x = 0,6895
R3 = -	GAI = -	LER	187,5 lm/W	y = 0,3039
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,5236
R7 = -				v' = 0,5192
R8 = -		Saturation	98 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	628 nm	u = 0,5236
R11 = -		Peak wavelength	632 nm	v = 0,3461
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	1,54	440	0,70	500	1,19	560	1,38	620	321,58	680	1,78	740	2,07
385	1,38	445	1,49	505	0,26	565	1,36	625	505,61	685	2,32	745	0,25
390	1,06	450	0,97	510	1,45	570	2,18	630	679,07	690	1,31	750	1,05
395	1,66	455	0,49	515	0,31	575	2,84	635	695,92	695	1,62	755	1,34
400	2,12	460	1,14	520	0,65	580	5,12	640	498,08	700	0,81	760	0,02
405	1,45	465	0,56	525	1,91	585	7,27	645	256,35	705	1,74	765	4,48
410	0,61	470	1,44	530	0,59	590	11,81	650	110,11	710	1,21	770	0,22
415	1,42	475	1,45	535	1,38	595	21,38	655	47,33	715	1,27	775	2,98
420	1,14	480	0,44	540	0,85	600	36,31	660	20,62	720	0,31	780	0,34
425	0,77	485	1,37	545	0,84	605	62,80	665	11,08	725	1,23		
430	1,12	490	0,99	550	1,50	610	108,85	670	5,48	730	1,38		
435	1,29	495	0,49	555	0,96	615	190,96	675	4,17	735	0,77		

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Burgebrach, 11.07.2018

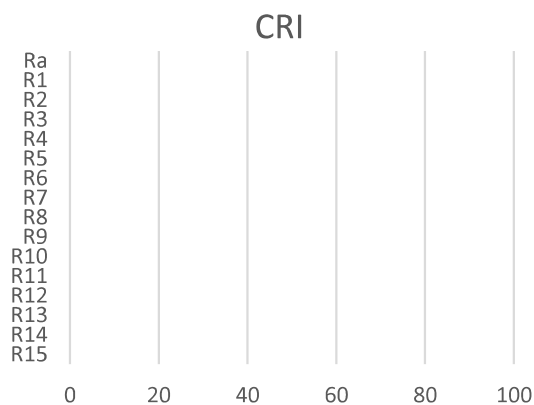
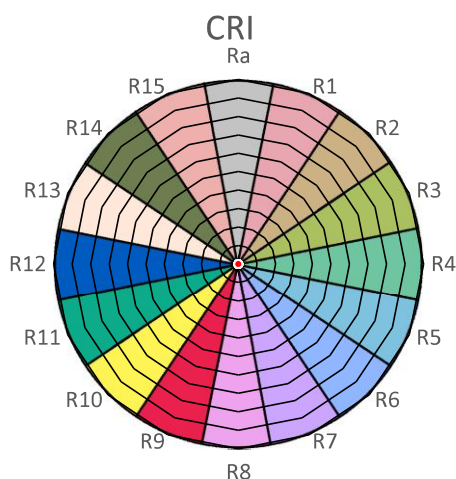
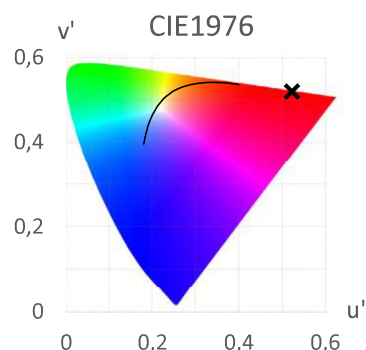
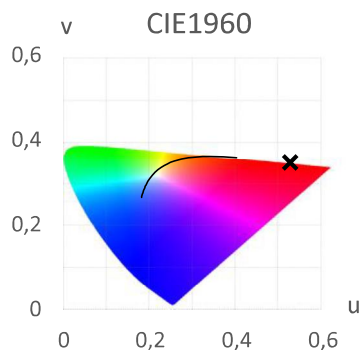
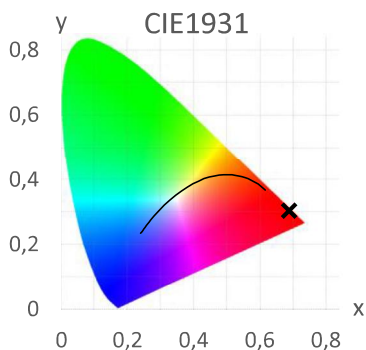
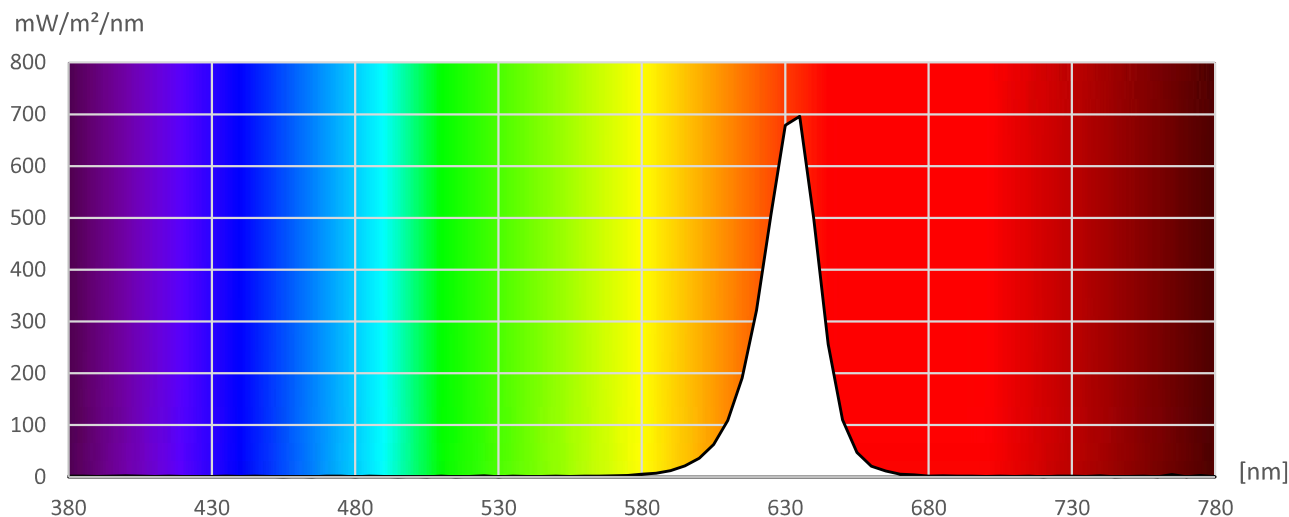
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / red

Measurement file: 325877_r_1m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:29:36



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Burgebrach, 11.07.2018

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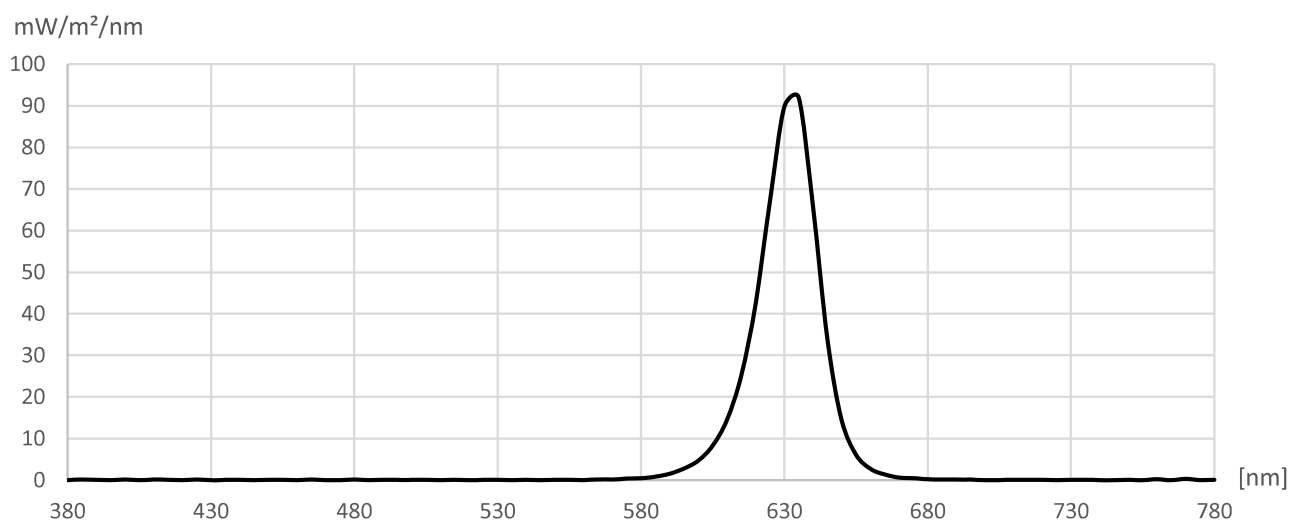
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / red

Measurement file: 325877_r_3m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:29:55



R1 = -	Ra = -	Illuminance	451,93 lx	CIE1931
R2 = -	Re = -	Ee	2,406 W/m²	x = 0,6927
R3 = -	GAI = -	LER	187,8 lm/W	y = 0,3036
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,5270
R7 = -				v' = 0,5197
R8 = -		Saturation	98,9 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	628 nm	u = 0,5270
R11 = -		Peak wavelength	632 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	0,05	440	0,09	500	0,07	560	0,06	620	42,57	680	0,23	740	0,05
385	0,19	445	0,00	505	0,11	565	0,20	625	66,91	685	0,17	745	0,00
390	0,11	450	0,12	510	0,03	570	0,18	630	89,74	690	0,14	750	0,13
395	0,02	455	0,10	515	0,07	575	0,42	635	92,00	695	0,16	755	0,00
400	0,21	460	0,03	520	0,00	580	0,51	640	65,73	700	0,00	760	0,22
405	0,04	465	0,16	525	0,07	585	0,84	645	33,91	705	0,06	765	0,00
410	0,15	470	0,03	530	0,09	590	1,56	650	14,54	710	0,08	770	0,31
415	0,12	475	0,04	535	0,04	595	2,82	655	6,17	715	0,09	775	0,03
420	0,00	480	0,15	540	0,13	600	4,71	660	2,76	720	0,10	780	0,09
425	0,18	485	0,00	545	0,01	605	8,28	665	1,38	725	0,03		
430	0,00	490	0,11	550	0,12	610	14,52	670	0,66	730	0,09		
435	0,07	495	0,07	555	0,09	615	25,29	675	0,52	735	0,12		

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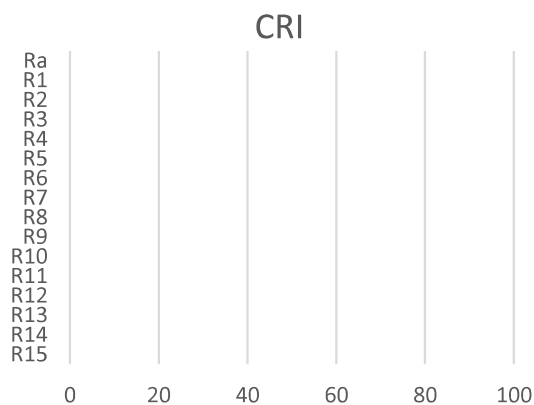
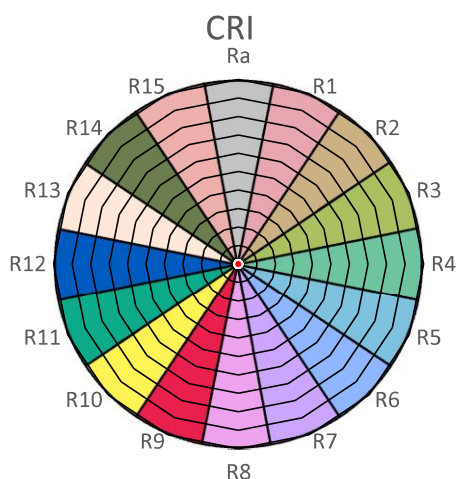
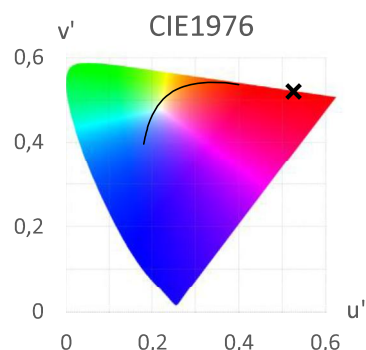
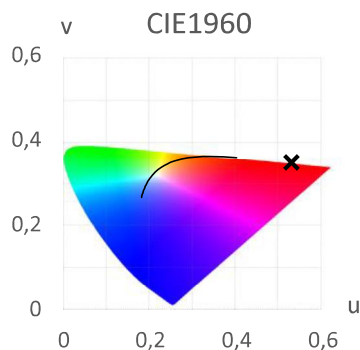
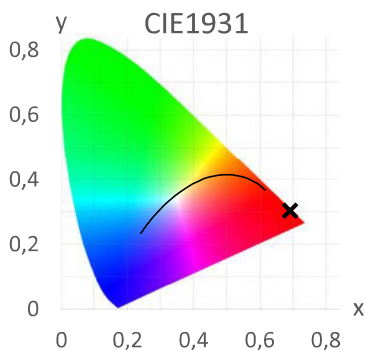
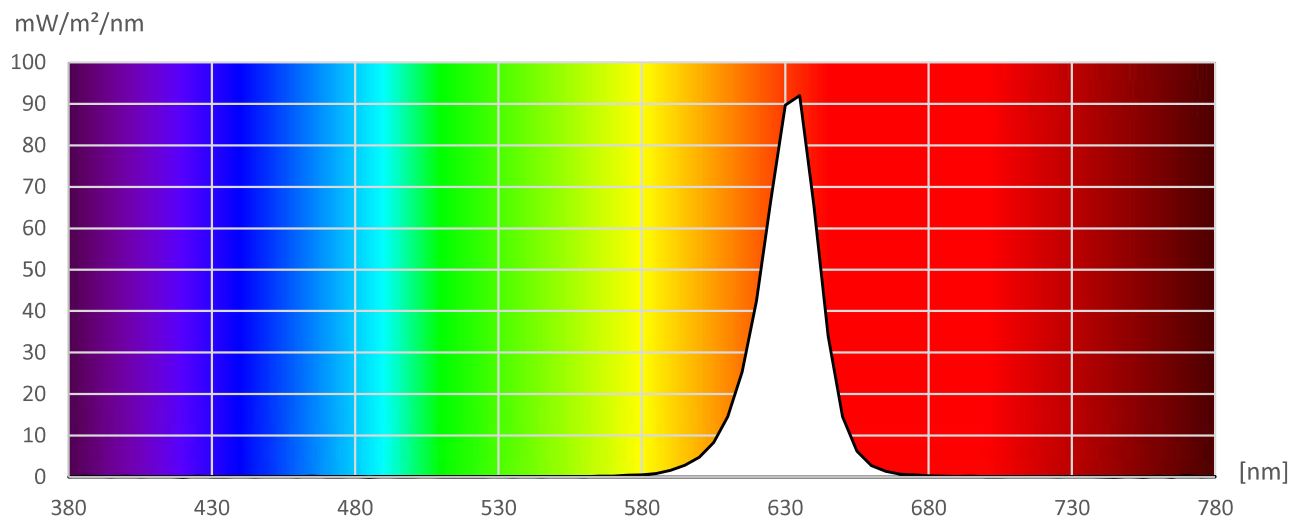
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / red

Measurement file: 325877_r_3m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:29:55



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Burgebrach, 11.07.2018

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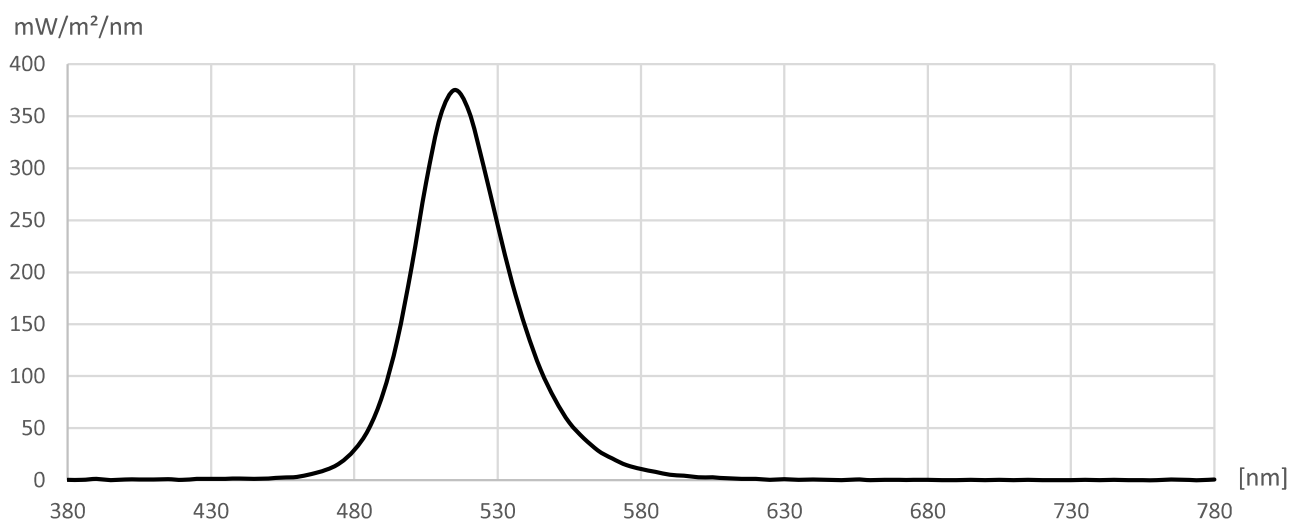
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / green

Measurement file: 325877_g_1m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:30:11



R1 = -33,7	Ra = -18,1
R2 = -2,0	Re = -48,3
R3 = -11,1	GAI = 1,3
R4 = -56,5	
R5 = -7,3	
R6 = -10,9	
R7 = 2,6	
R8 = -26,2	
R9 = #####	
R10 = -92,1	
R11 = -82,9	
R12 = -23,4	
R13 = -38,7	
R14 = 44,4	
R15 = -35,7	

Illuminance	6985,34 lx
Ee	15,982 W/m²
LER	437,1 lm/W
correlated color temperature (CCT)	8466 K
Duv	0,1606
Saturation	71 %
Dominant wavelength	517 nm
Peak wavelength	515 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,1457
y = 0,6902
CIE1976
u' = 0,0530
v' = 0,5652
CIE1960
u = 0,0530
v = 0,3768
TM30
Rf = 1,2
Rg = 11,2

[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	0,53	440	1,66	500	205,23	560	40,47	620	1,28	680	0,31	740	0,09
385	0,35	445	1,38	505	285,99	565	28,67	625	0,54	685	0,17	745	0,33
390	1,18	450	1,75	510	350,25	570	20,88	630	1,12	690	0,14	750	0,00
395	0,25	455	2,67	515	375,23	575	14,54	635	0,37	695	0,29	755	0,19
400	0,84	460	3,20	520	354,64	580	10,80	640	0,66	700	0,00	760	0,00
405	0,77	465	6,01	525	302,91	585	8,16	645	0,44	705	0,33	765	0,76
410	0,79	470	9,82	530	245,28	590	5,43	650	0,07	710	0,19	770	0,44
415	0,98	475	16,66	535	190,08	595	4,43	655	0,87	715	0,35	775	0,00
420	0,28	480	29,22	540	144,62	600	2,95	660	0,10	720	0,17	780	0,80
425	1,23	485	48,84	545	106,35	605	2,73	665	0,53	725	0,00		
430	1,27	490	83,00	550	77,70	610	1,85	670	0,27	730	0,13		
435	1,46	495	134,51	555	55,39	615	1,43	675	0,41	735	0,31		

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Sebastian Laske

Burgebrach, 11.07.2018

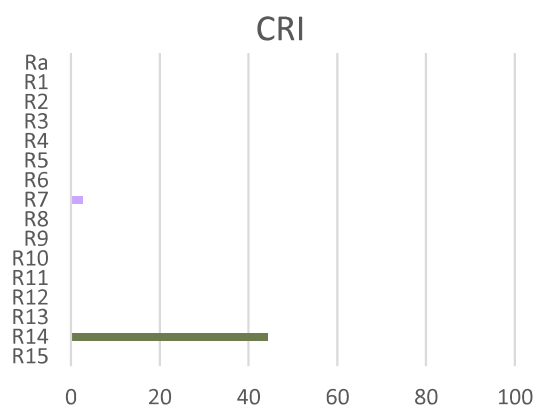
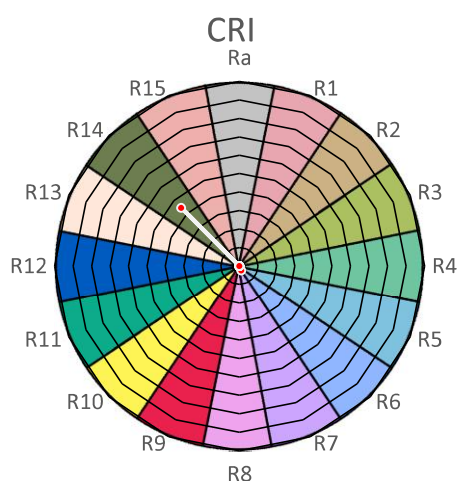
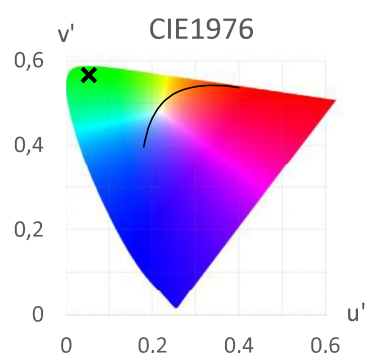
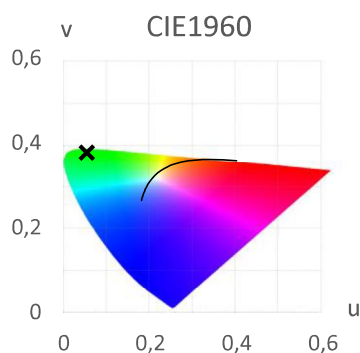
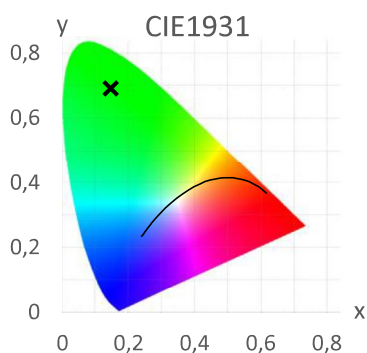
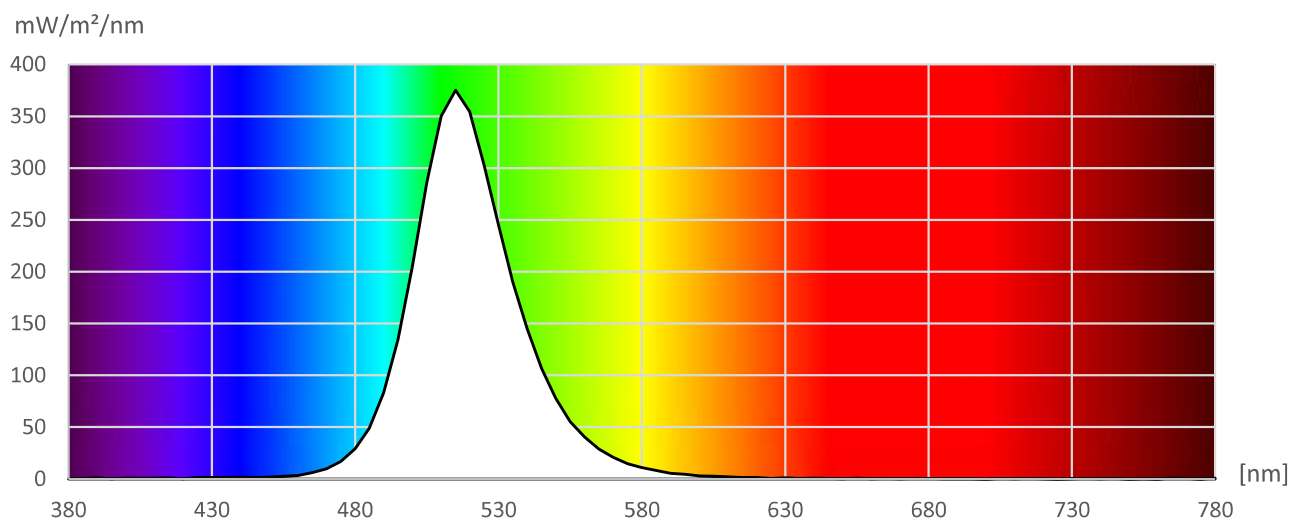
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / green

Measurement file: 325877_g_1m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:30:11



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Burgebrach, 11.07.2018

Sebastian Laske

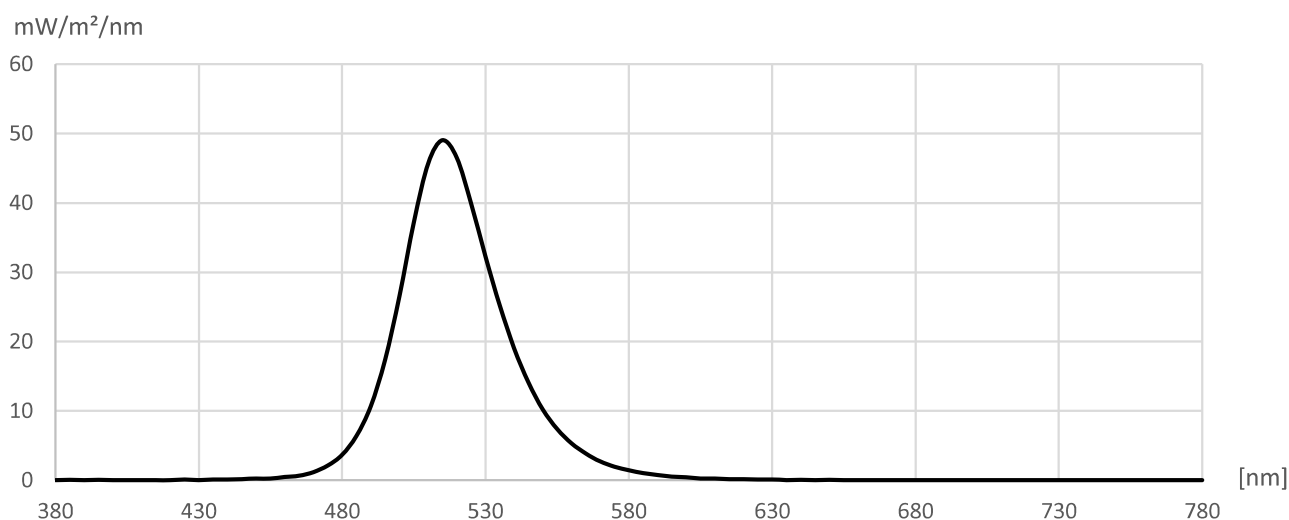
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / green

Measurement file: 325877_g_3m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:30:20



R1 = -34,0	Ra = -19,4
R2 = -3,0	Re = -49,5
R3 = -13,1	GAI = 1,2
R4 = -58,4	
R5 = -7,6	
R6 = -11,6	
R7 = 0,1	
R8 = -27,8	
R9 = #####	
R10 = -93,9	
R11 = -84,8	
R12 = -23,7	
R13 = -39,1	
R14 = 43,5	
R15 = -36,3	

Illuminance	916,59 lx
Ee	2,081 W/m ²
LER	440,6 lm/W
correlated color temperature (CCT)	8435 K
Duv	0,1609
Saturation	71,5 %
Dominant wavelength	517 nm
Peak wavelength	515 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,1460
y = 0,6937
CIE1976
u' = 0,0529
v' = 0,5659
CIE1960
u = 0,0529
v = 0,3773
TM30
Rf = 1,1
Rg = 10,3

[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	0,00	440	0,11	500	26,59	560	5,30	620	0,17	680	0,01	740	0,00
385	0,05	445	0,16	505	37,26	565	3,85	625	0,11	685	0,00	745	0,01
390	0,00	450	0,25	510	45,74	570	2,72	630	0,11	690	0,01	750	0,00
395	0,05	455	0,23	515	49,02	575	1,96	635	0,04	695	0,00	755	0,00
400	0,01	460	0,47	520	46,50	580	1,42	640	0,08	700	0,01	760	0,00
405	0,00	465	0,64	525	39,89	585	1,04	645	0,02	705	0,00	765	0,00
410	0,03	470	1,18	530	32,23	590	0,75	650	0,04	710	0,01	770	0,00
415	0,01	475	2,14	535	25,11	595	0,54	655	0,00	715	0,00	775	0,00
420	0,00	480	3,68	540	19,06	600	0,41	660	0,02	720	0,01	780	0,00
425	0,10	485	6,37	545	14,11	605	0,27	665	0,01	725	0,00		
430	0,02	490	10,68	550	10,20	610	0,24	670	0,02	730	0,00		
435	0,11	495	17,40	555	7,37	615	0,16	675	0,00	735	0,00		

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Burgebrach, 11.07.2018

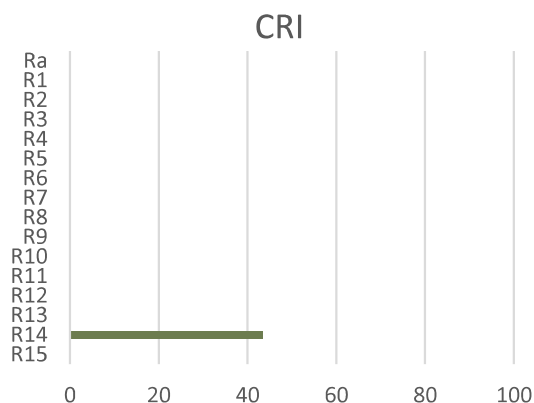
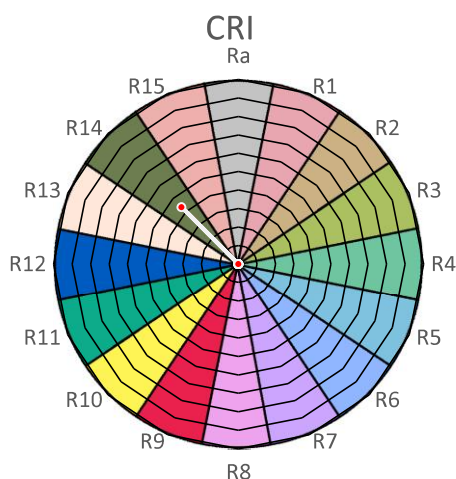
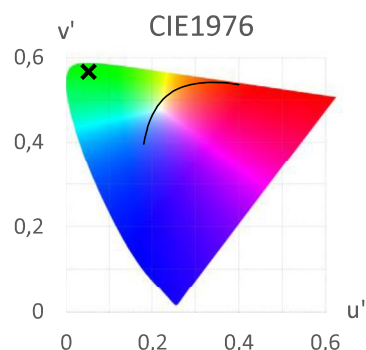
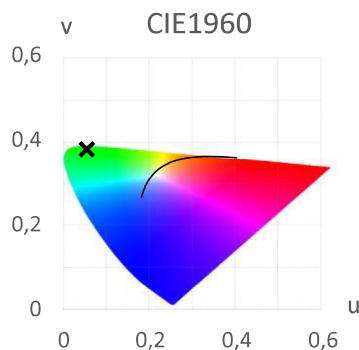
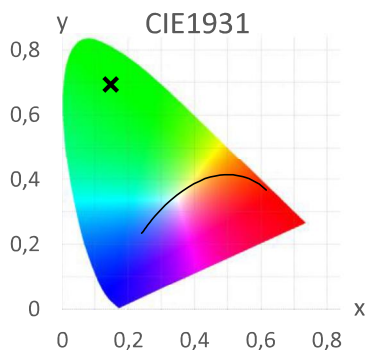
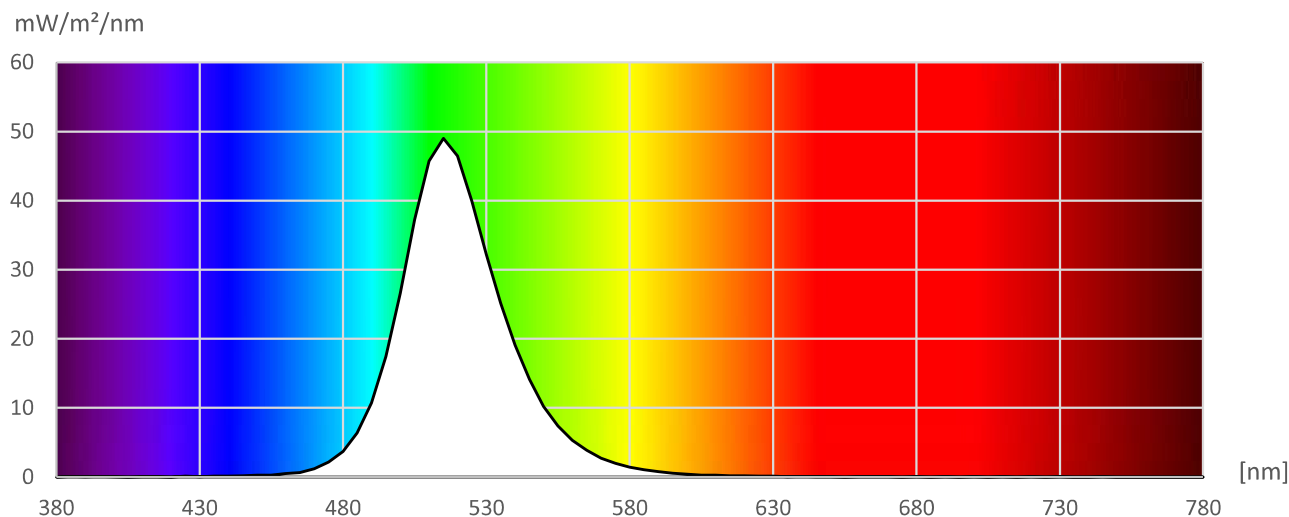
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / green

Measurement file: 325877_g_3m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:30:20



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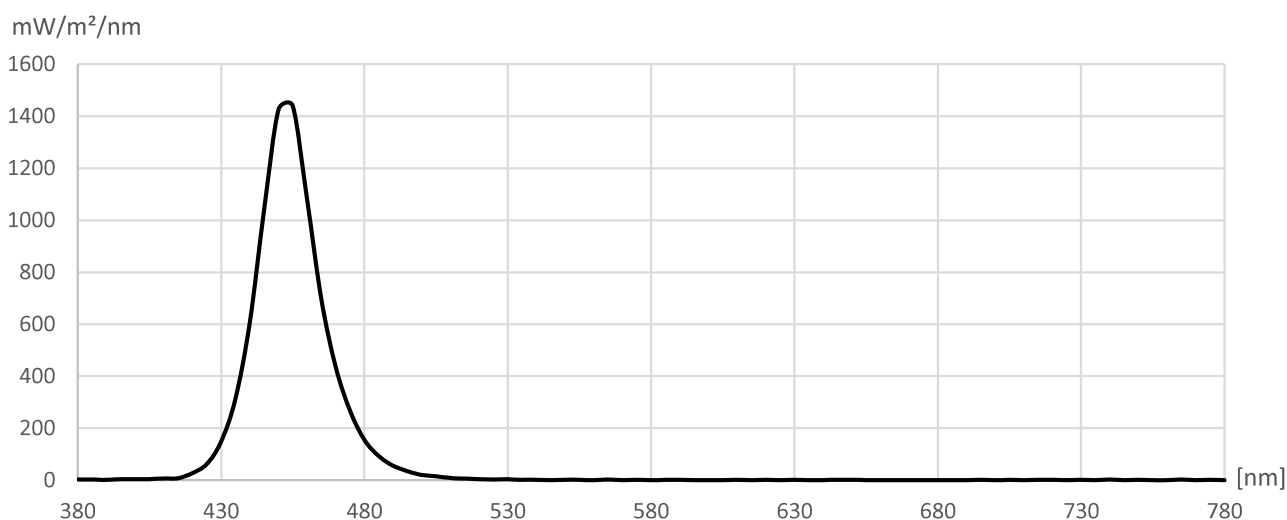
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / blue

Measurement file: 325877_b_1m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:30:35



R1 = -	Ra = -	Illuminance	1596,53 lx	CIE1931
R2 = -	Re = -	Ee	40,107 W/m²	x = 0,1503
R3 = -	GAI = -	LER	39,8 lm/W	y = 0,0301
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,1964
R7 = -				v' = 0,0885
R8 = -		Saturation	98,3 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	445 nm	u = 0,1964
R11 = -		Peak wavelength	451 nm	v = 0,0590
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	3,10	440	606,38	500	20,61	560	0,00	620	1,81	680	0,00	740	2,67
385	2,65	445	1041,88	505	15,12	565	2,28	625	0,32	685	0,99	745	0,00
390	1,21	450	1425,31	510	8,53	570	0,00	630	1,39	690	0,00	750	1,63
395	4,26	455	1440,03	515	6,44	575	1,43	635	0,00	695	1,45	755	0,61
400	3,64	460	1081,51	520	4,63	580	0,60	640	0,96	700	0,00	760	0,04
405	4,38	465	694,04	525	2,47	585	1,21	645	1,71	705	1,10	765	2,48
410	7,14	470	434,53	530	3,61	590	1,78	650	1,91	710	0,74	770	0,00
415	8,05	475	265,68	535	1,58	595	0,00	655	0,80	715	1,28	775	1,39
420	27,83	480	154,27	540	2,13	600	0,60	660	0,26	720	1,65	780	0,00
425	62,63	485	93,22	545	0,73	605	0,07	665	0,97	725	0,23		
430	148,09	490	56,27	550	2,19	610	1,46	670	0,00	730	1,76		
435	312,53	495	35,10	555	1,16	615	0,12	675	0,74	735	0,00		

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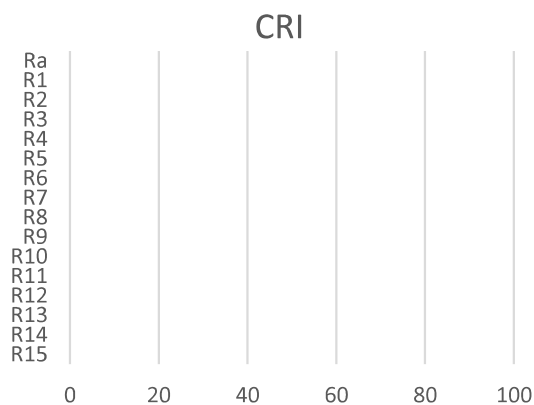
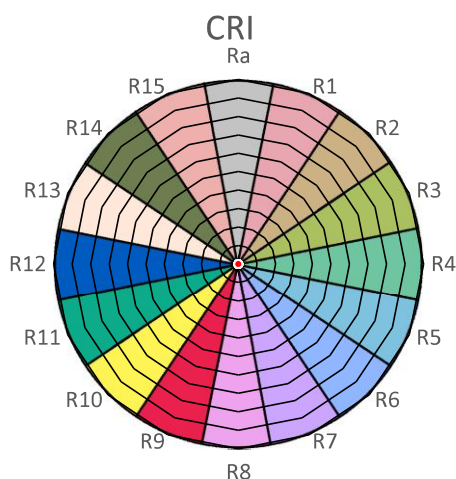
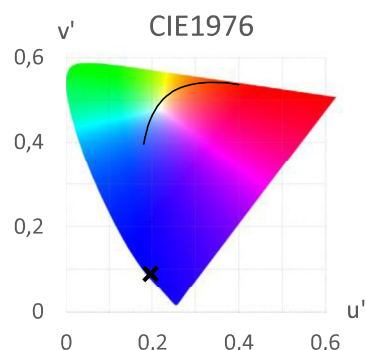
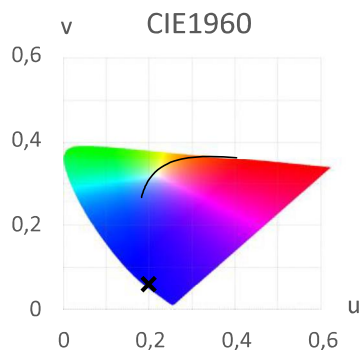
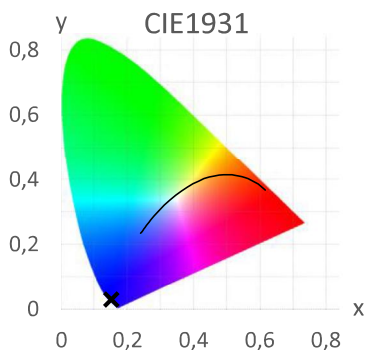
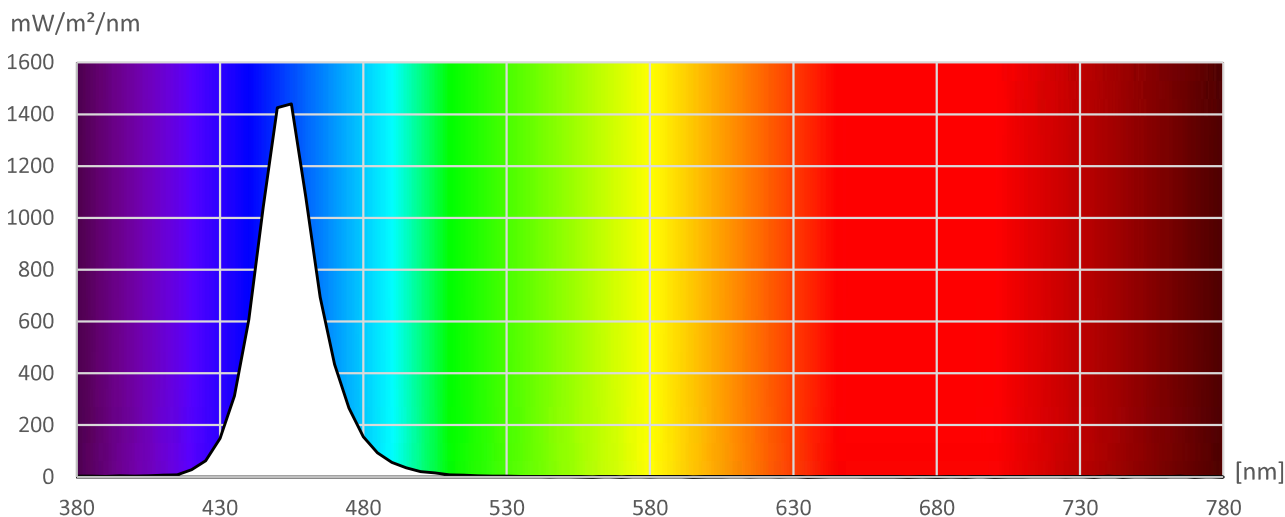
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / blue

Measurement file: 325877_b_1m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:30:35



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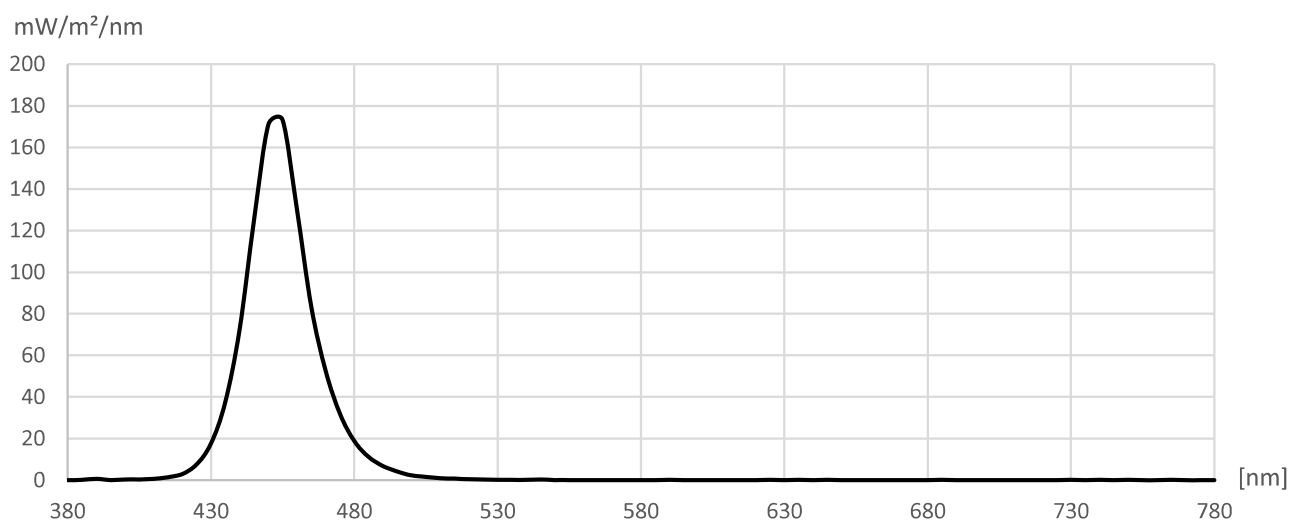
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / blue

Measurement file: 325877_b_3m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:30:51



R1 = -	Ra = -	Illuminance	189,4 lx	CIE1931
R2 = -	Re = -	Ee	4,808 W/m ²	x = 0,1500
R3 = -	GAI = -	LER	39,4 lm/W	y = 0,0297
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,1962
R7 = -				v' = 0,0875
R8 = -		Saturation	98,5 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	446 nm	u = 0,1962
R11 = -		Peak wavelength	451 nm	v = 0,0584
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	0,04	440	72,52	500	2,30	560	0,01	620	0,00	680	0,00	740	0,25
385	0,18	445	125,14	505	1,65	565	0,00	625	0,14	685	0,14	745	0,00
390	0,65	450	171,00	510	1,03	570	0,10	630	0,00	690	0,00	750	0,16
395	0,10	455	173,24	515	0,80	575	0,07	635	0,13	695	0,11	755	0,00
400	0,42	460	130,43	520	0,47	580	0,05	640	0,00	700	0,01	760	0,00
405	0,43	465	83,40	525	0,43	585	0,08	645	0,14	705	0,10	765	0,23
410	0,68	470	52,53	530	0,21	590	0,16	650	0,00	710	0,07	770	0,00
415	1,49	475	31,84	535	0,24	595	0,03	655	0,12	715	0,09	775	0,00
420	3,04	480	18,74	540	0,14	600	0,01	660	0,04	720	0,08	780	0,00
425	7,68	485	11,21	545	0,32	605	0,04	665	0,03	725	0,06		
430	17,58	490	6,88	550	0,12	610	0,01	670	0,00	730	0,21		
435	37,47	495	4,23	555	0,12	615	0,08	675	0,01	735	0,00		

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Burgebrach, 11.07.2018

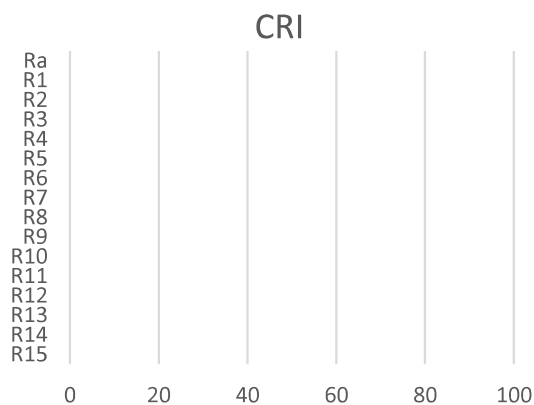
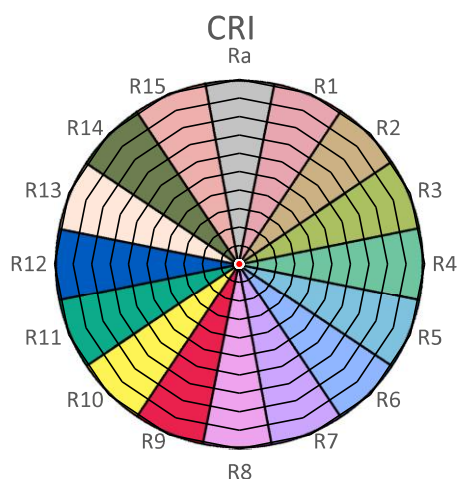
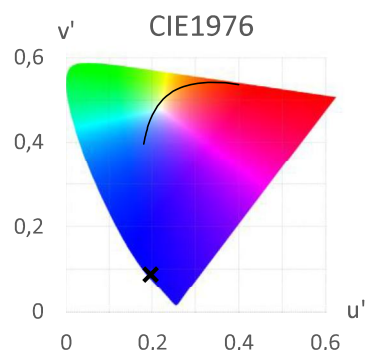
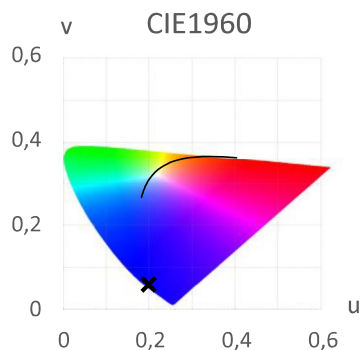
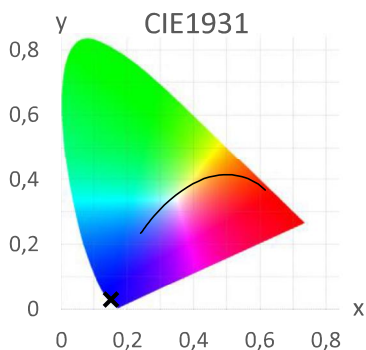
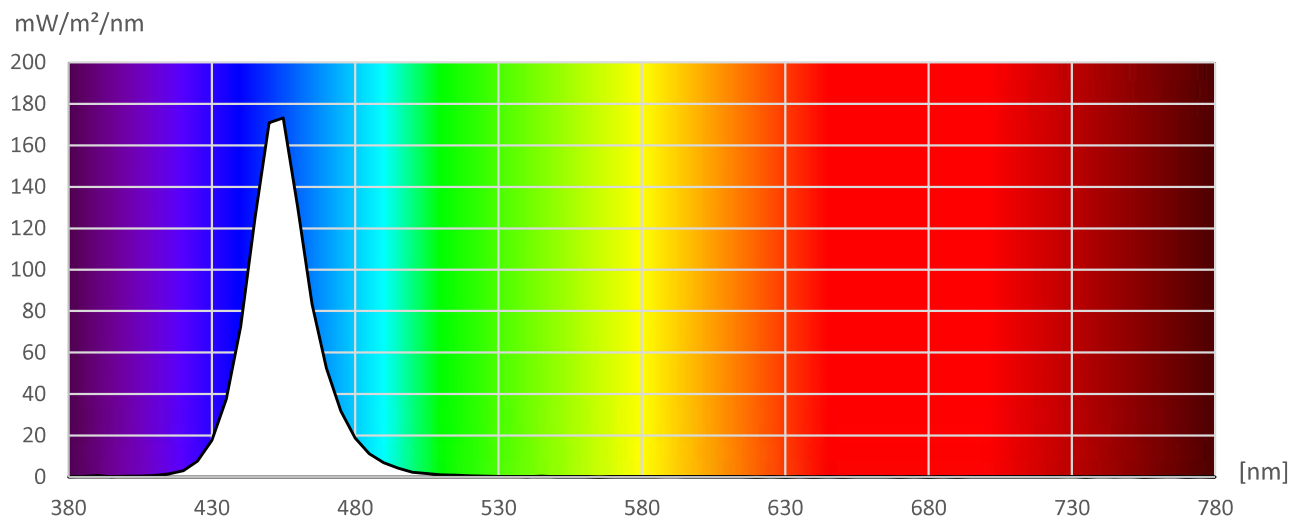
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / blue

Measurement file: 325877_b_3m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:30:51



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Burgebrach, 11.07.2018

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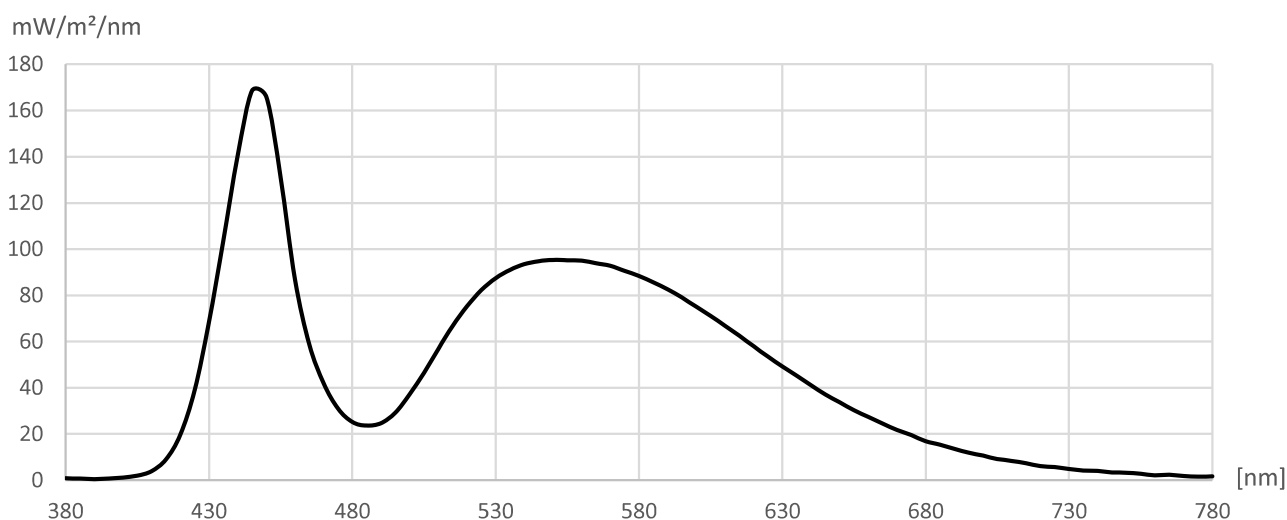
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / cw

Measurement file: 325877_cw_1m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:38:08



R1 = 73,6	Ra = 73,9	Illuminance	5709,43 lx	CIE1931
R2 = 76,6	Re = 64,8	Ee	18,305 W/m ²	x = 0,3165
R3 = 76,2	GAI = 89,3	LER	311,9 lm/W	y = 0,3261
R4 = 75,9				
R5 = 74,3		correlated color temperature (CCT)	6316 K	CIE1976
R6 = 67,7		Duv	-0,0002	u' = 0,2016
R7 = 81,0				v' = 0,4673
R8 = 65,7		Saturation	6,3 %	
R9 = -10,9				CIE1960
R10 = 42,0		Dominant wavelength	483 nm	u = 0,2016
R11 = 73,9		Peak wavelength	447 nm	v = 0,3115
R12 = 46,7				
R13 = 73,1		Flicker frequency	% < 2.5 Hz	TM30
R14 = 86,3		Percent Flicker	< 2.5 %	Rf = 69,9
R15 = 69,6		Flicker index	% < 2.5	Rg = 96,0

[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	0,81	440	140,37	500	37,20	560	94,96	620	57,90	680	16,96	740	4,03
385	0,75	445	168,53	505	46,52	565	93,89	625	53,51	685	15,35	745	3,42
390	0,48	450	165,76	510	56,89	570	92,76	630	49,23	690	13,57	750	3,27
395	0,79	455	131,30	515	66,73	575	90,61	635	45,25	695	11,87	755	2,75
400	1,17	460	87,16	520	75,18	580	88,39	640	41,10	700	10,62	760	2,16
405	1,97	465	58,76	525	82,24	585	85,67	645	37,12	705	9,20	765	2,36
410	3,97	470	41,92	530	87,44	590	82,59	650	33,76	710	8,38	770	1,89
415	9,01	475	30,96	535	91,03	595	79,05	655	30,25	715	7,35	775	1,58
420	19,76	480	25,21	540	93,43	600	75,10	660	27,41	720	6,08	780	1,64
425	39,13	485	23,62	545	94,77	605	71,15	665	24,52	725	5,65		
430	68,12	490	24,71	550	95,30	610	66,81	670	21,80	730	4,89		
435	103,46	495	29,25	555	95,19	615	62,45	675	19,53	735	4,26		

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Burgebrach, 11.07.2018

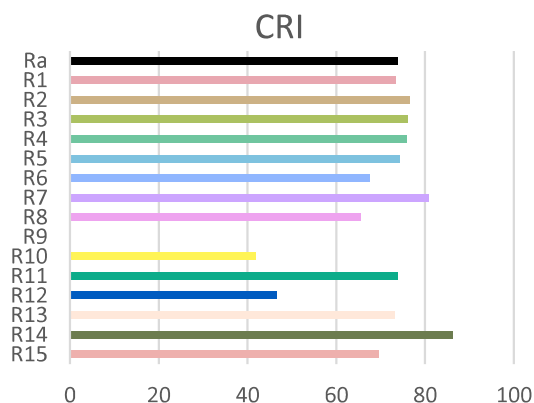
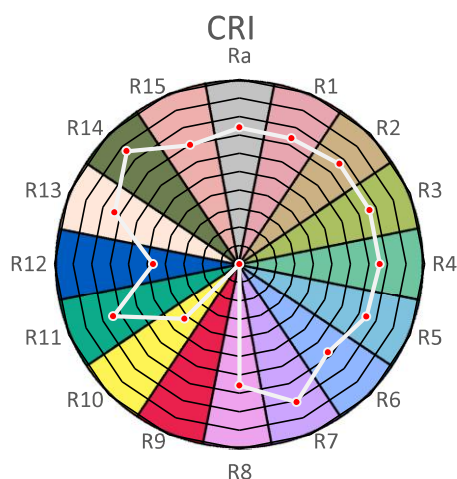
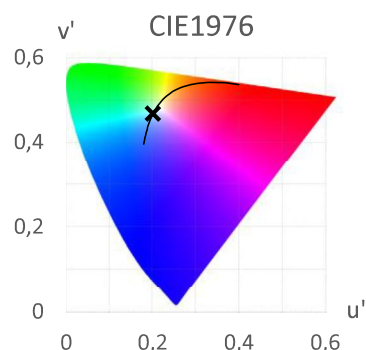
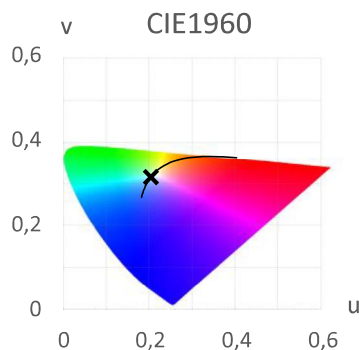
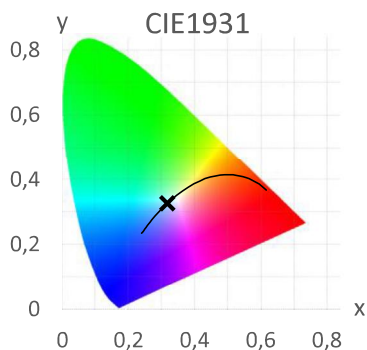
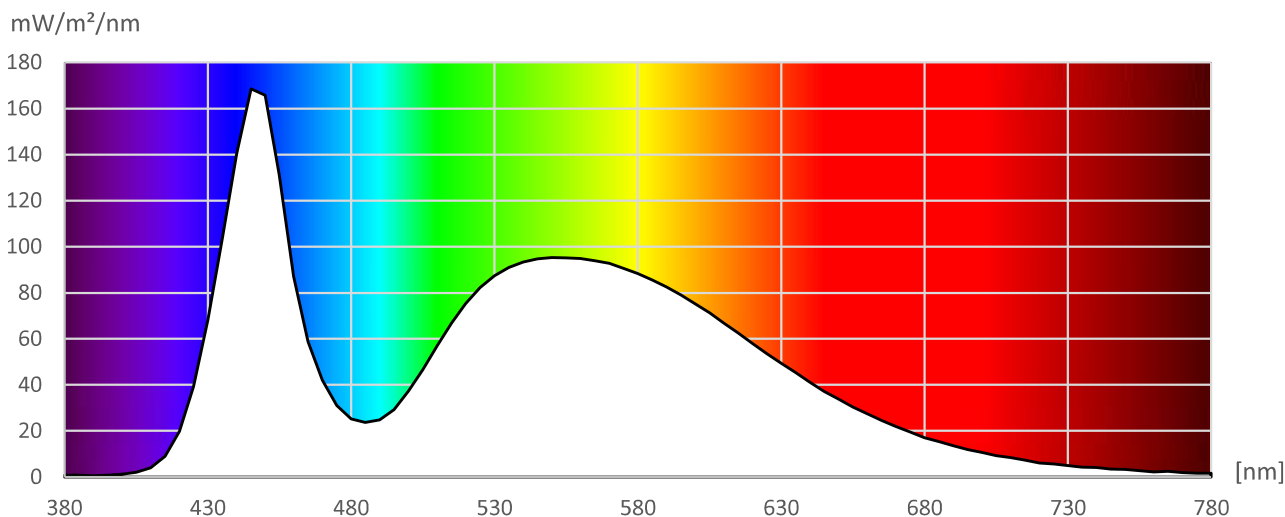
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 1 m / cw

Measurement file: 325877_cw_1m.CS
Date of measurement: 11.07.2018
Time of measurement: 10:38:08



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Burgebrach, 11.07.2018

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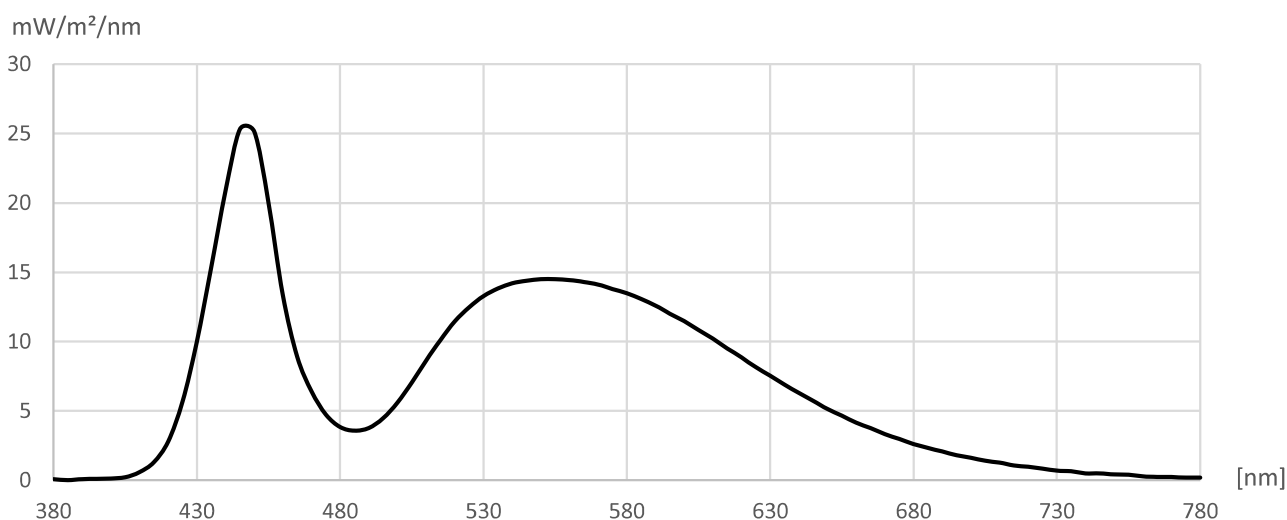
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / cw

Measurement file: 325877_cw_3m.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:38:20



R1 = 73,4	Ra = 73,9
R2 = 76,7	Re = 64,8
R3 = 76,5	GAI = 88,8
R4 = 75,8	
R5 = 74,2	
R6 = 67,8	
R7 = 81,1	
R8 = 65,5	
R9 = -11,4	
R10 = 42,3	
R11 = 73,6	
R12 = 46,5	
R13 = 73,1	
R14 = 86,5	
R15 = 69,5	

Illuminance	868,64 lx
Ee	2,771 W/m²
LER	313,4 lm/W
correlated color temperature (CCT)	6256 K
Duv	0
Saturation	5,9 %
Dominant wavelength	484 nm
Peak wavelength	447 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,3175
y = 0,3274
CIE1976
u' = 0,2018
v' = 0,4682
CIE1960
u = 0,2018
v = 0,3121
TM30
Rf = 70,1
Rg = 95,9

[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	0,07	440	20,85	500	5,60	560	14,44	620	8,85	680	2,62	740	0,50
385	0,02	445	25,31	505	7,05	565	14,30	625	8,16	685	2,33	745	0,49
390	0,08	450	25,13	510	8,64	570	14,11	630	7,53	690	2,07	750	0,42
395	0,11	455	20,07	515	10,10	575	13,79	635	6,89	695	1,80	755	0,41
400	0,12	460	13,39	520	11,45	580	13,48	640	6,30	700	1,63	760	0,27
405	0,21	465	8,93	525	12,47	585	13,06	645	5,72	705	1,40	765	0,25
410	0,58	470	6,41	530	13,29	590	12,59	650	5,13	710	1,27	770	0,23
415	1,29	475	4,73	535	13,83	595	12,02	655	4,66	715	1,07	775	0,19
420	2,80	480	3,83	540	14,19	600	11,47	660	4,15	720	0,97	780	0,20
425	5,69	485	3,57	545	14,38	605	10,83	665	3,76	725	0,84		
430	9,94	490	3,76	550	14,50	610	10,21	670	3,32	730	0,69		
435	15,30	495	4,47	555	14,49	615	9,51	675	2,98	735	0,64		

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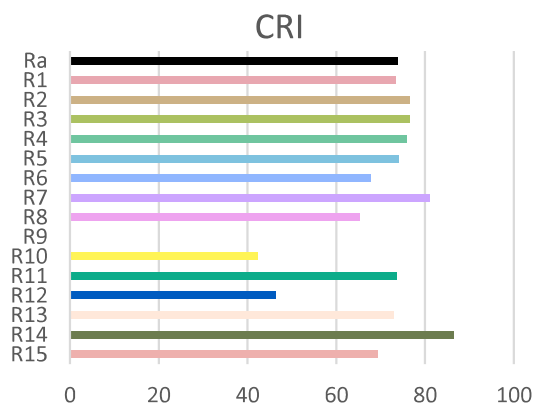
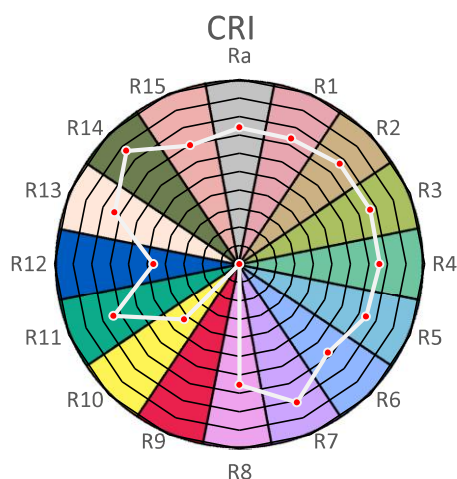
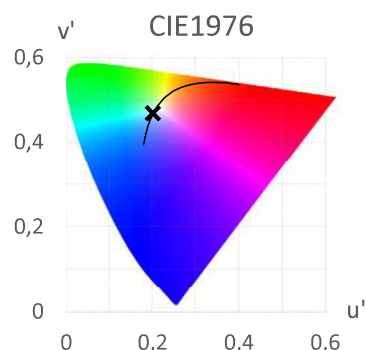
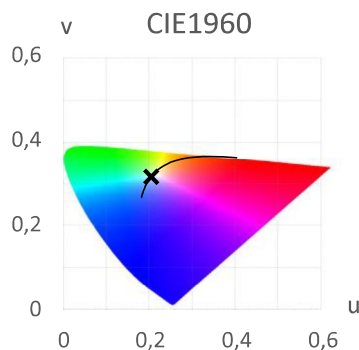
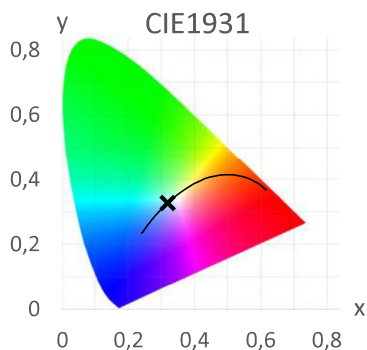
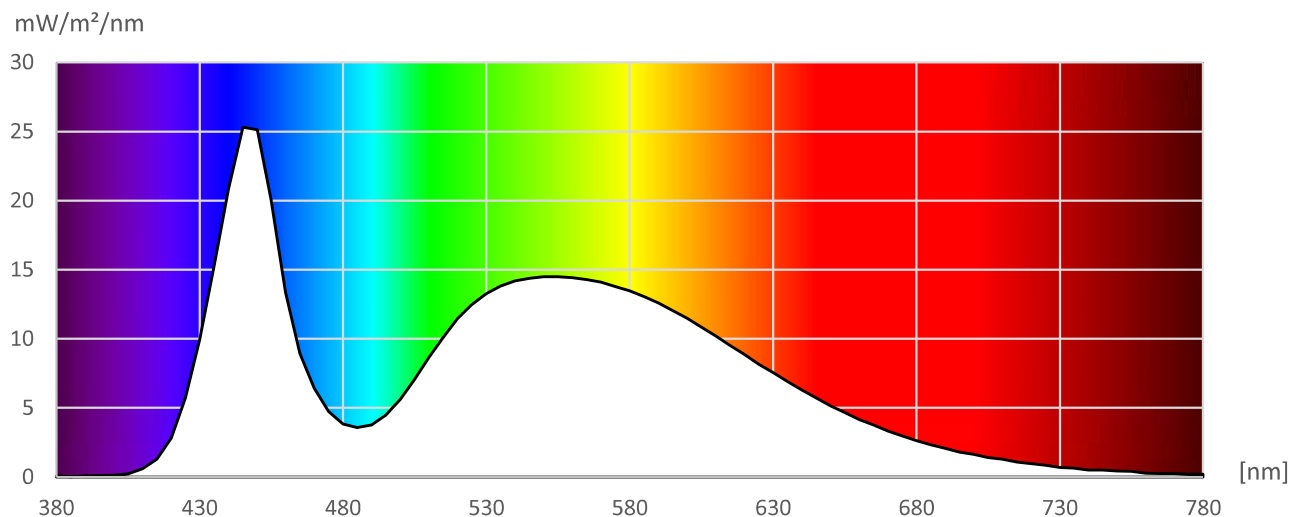
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-110 Wash LED Moving Head
Item 325877 / @ 3 m / cw

Measurement file: 325877_cw_3m.CS
Date of measurement: 11.07.2018
Time of measurement: 10:38:20



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Burgebrach, 11.07.2018

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First, last name of inspector