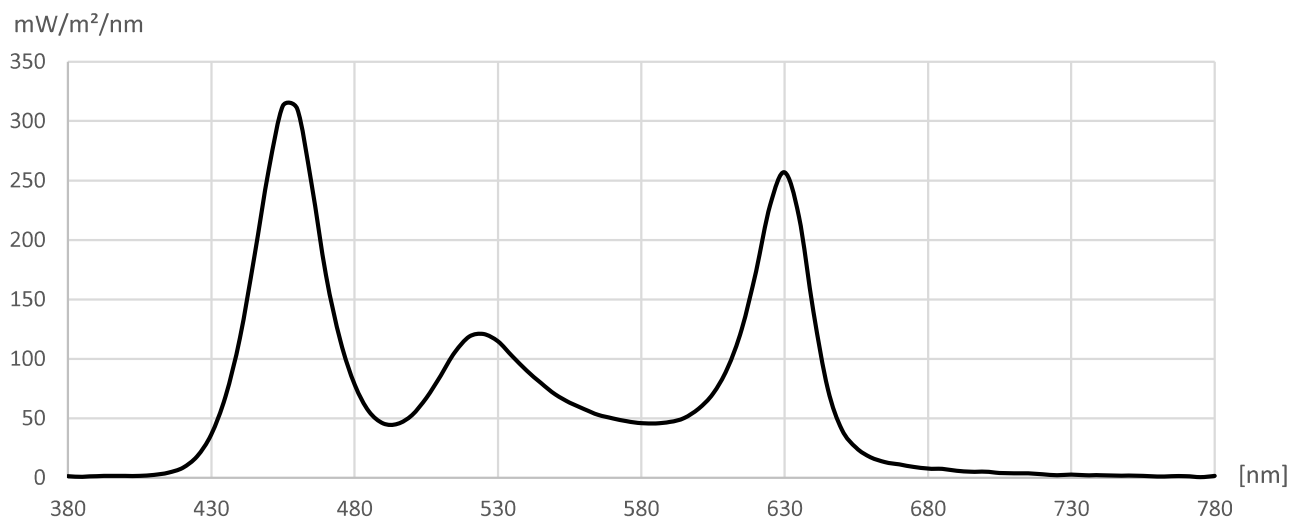


Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / all

Measurement file: 387902_1m_all_2.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:19:19



R1 = 24,2	Ra = 46,5	Illuminance	6127,92 lx	CIE1931
R2 = 62,4	Re = 28,8	Ee	25,894 W/m ²	x = 0,2999
R3 = 74,4	GAI = 155,5	LER	236,7 lm/W	y = 0,2518
R4 = 33,4				
R5 = 39,6		correlated color temperature (CCT)	9917 K	CIE1976
R6 = 59,6		Duv	-0,0342	u' = 0,2213
R7 = 72,5				v' = 0,4180
R8 = 6,0		Saturation	33,6 %	
R9 = #####				CIE1960
R10 = 33,6		Dominant wavelength	#NV	u = 0,2213
R11 = 20,1		Peak wavelength	458 nm	v = 0,2787
R12 = 56,7				
R13 = 31,4		Flicker frequency	% < 2.5 Hz	TM30
R14 = 78,0		Percent Flicker	< 2.5 %	Rf = 67,2
R15 = 2,0		Flicker index	% < 2.5	Rg = 119,7

[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	1,22	440	117,74	500	52,72	560	57,77	620	173,69	680	7,62	740	2,21
385	0,89	445	185,82	505	67,22	565	52,80	625	229,44	685	7,36	745	1,72
390	1,42	450	259,02	510	86,02	570	50,05	630	256,87	690	5,88	750	1,70
395	1,45	455	312,81	515	105,58	575	47,48	635	219,60	695	5,00	755	1,59
400	1,45	460	310,40	520	118,64	580	45,81	640	140,02	700	5,14	760	1,00
405	1,53	465	247,04	525	120,90	585	45,73	645	74,94	705	4,10	765	1,20
410	2,42	470	170,29	530	114,60	590	46,88	650	40,53	710	3,67	770	1,42
415	4,20	475	115,13	535	102,10	595	50,31	655	25,15	715	3,68	775	0,43
420	8,36	480	78,29	540	90,32	600	58,12	660	17,18	720	3,00	780	1,57
425	18,07	485	55,89	545	79,67	605	70,69	665	13,16	725	2,10		
430	36,36	490	45,77	550	70,10	610	91,84	670	11,22	730	2,64		
435	68,50	495	45,29	555	63,16	615	124,86	675	9,13	735	1,99		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

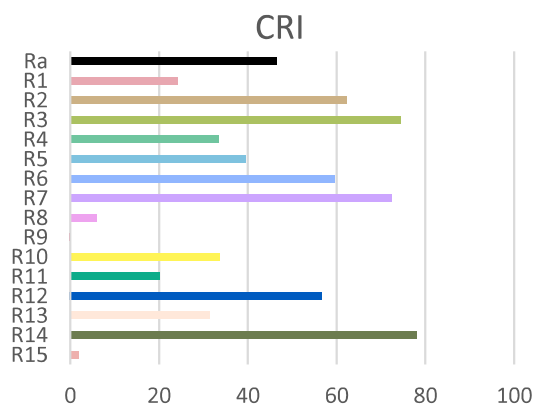
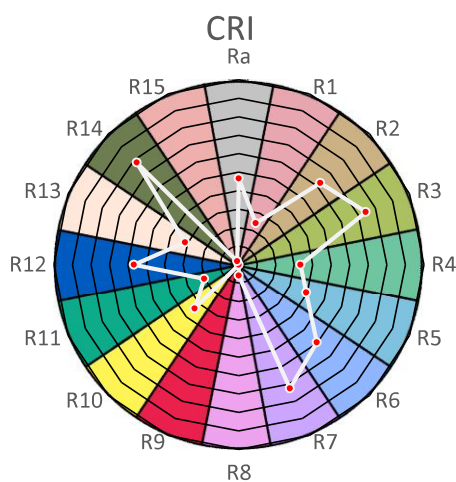
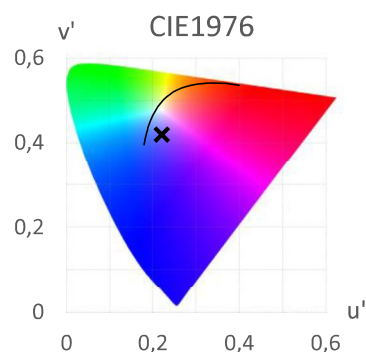
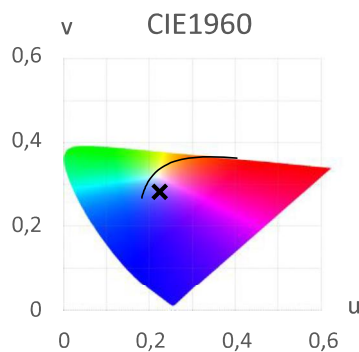
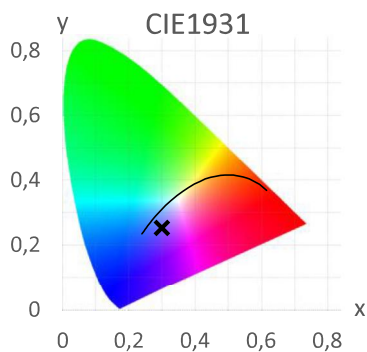
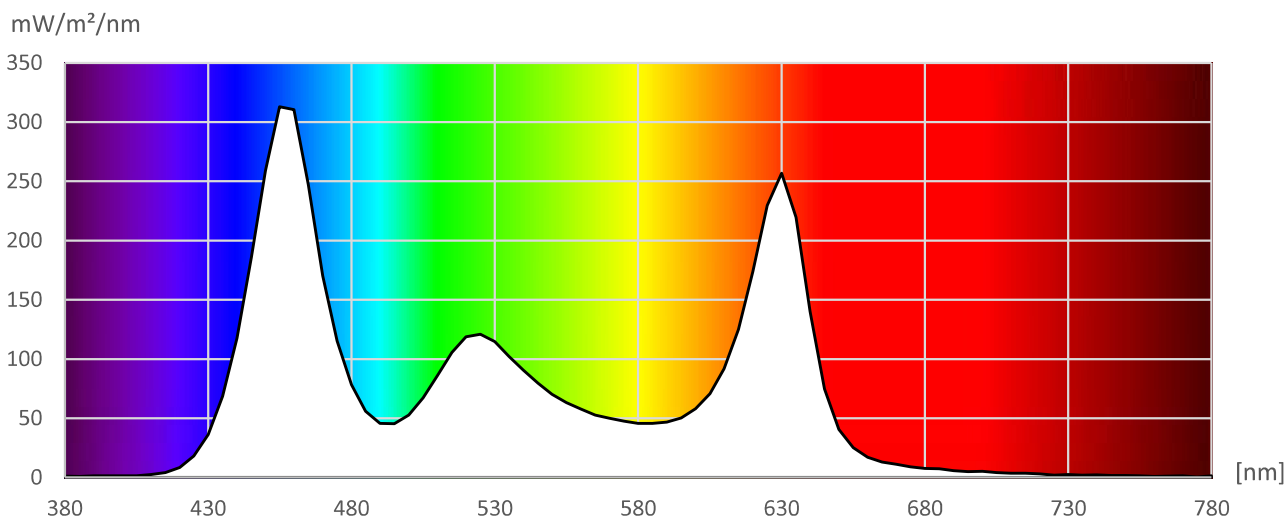
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / all

Measurement file: 387902_1m_all_2.
Date of measurement: 06.07.2018
Time of measurement: 07:19:19



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Burgebrach, 06.07.2018

Sebastian Laske

First, last name of inspector

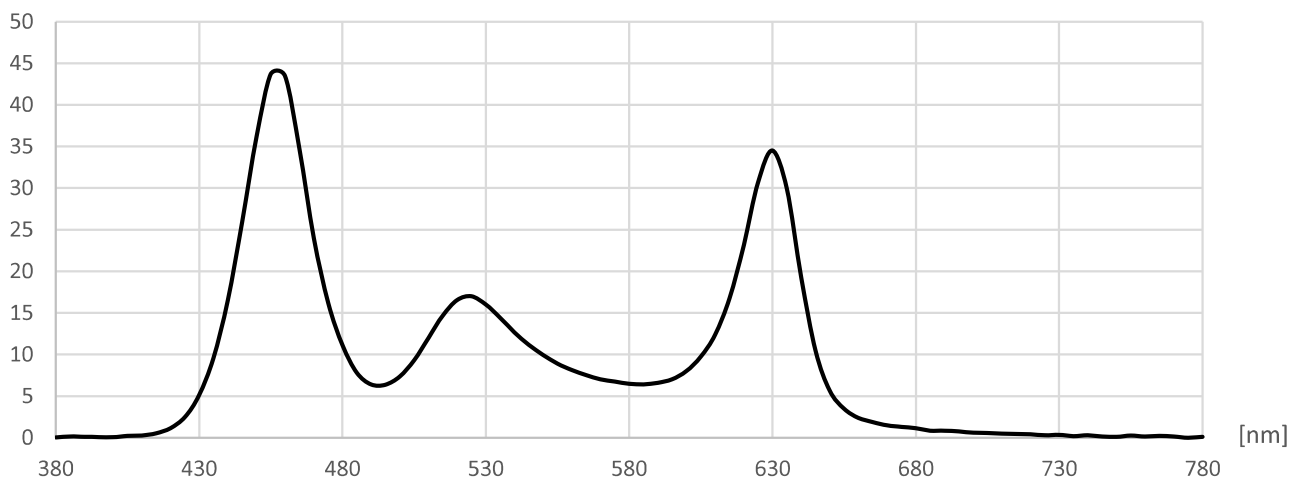
Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / all

Measurement file: 387902_3m_all_2.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:19:34

mW/m²/nm



R1 = 27,5	Ra = 48,9
R2 = 64,4	Re = 31,7
R3 = 74,5	GAI = 153,9
R4 = 36,9	
R5 = 42,9	
R6 = 62,2	
R7 = 73,4	
R8 = 9,5	
R9 = #####	
R10 = 37,7	
R11 = 24,4	
R12 = 58,6	
R13 = 34,6	
R14 = 78,4	
R15 = 5,8	

Illuminance	852,54 lx
Ee	3,589 W/m ²
LER	237,5 lm/W
correlated color temperature (CCT)	10406 K
Duv	-0,0324
Saturation	31 %
Dominant wavelength	#NV
Peak wavelength	458 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,2972
y = 0,2518
CIE1976
u' = 0,2190
v' = 0,4175
CIE1960
u = 0,2190
v = 0,2784
TM30
Rf = 67,9
Rg = 117,7

[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	16,51	500	7,37	560	8,14	620	23,18	680	1,15	740	0,28
385	0,16	445	25,96	505	9,32	565	7,53	625	30,68	685	0,86	745	0,15
390	0,11	450	36,20	510	12,01	570	7,04	630	34,52	690	0,85	750	0,11
395	0,09	455	43,69	515	14,68	575	6,74	635	29,95	695	0,74	755	0,25
400	0,06	460	43,46	520	16,54	580	6,50	640	19,27	700	0,61	760	0,14
405	0,21	465	34,71	525	16,98	585	6,42	645	10,45	705	0,58	765	0,21
410	0,28	470	24,00	530	16,01	590	6,62	650	5,66	710	0,47	770	0,13
415	0,54	475	16,21	535	14,40	595	7,03	655	3,49	715	0,47	775	0,00
420	1,16	480	11,09	540	12,68	600	8,00	660	2,39	720	0,40	780	0,12
425	2,50	485	7,84	545	11,18	605	9,73	665	1,89	725	0,28		
430	5,09	490	6,41	550	9,95	610	12,39	670	1,49	730	0,35		
435	9,57	495	6,39	555	8,89	615	16,78	675	1,32	735	0,20		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

First, last name of inspector

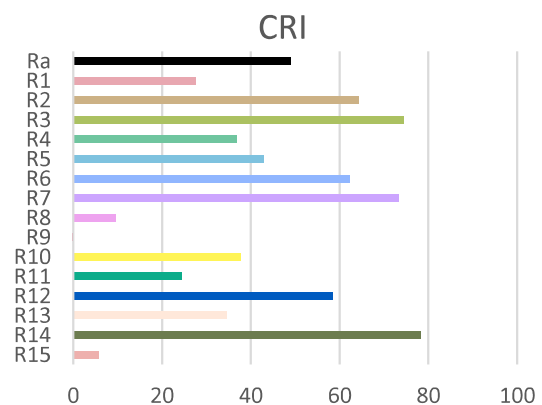
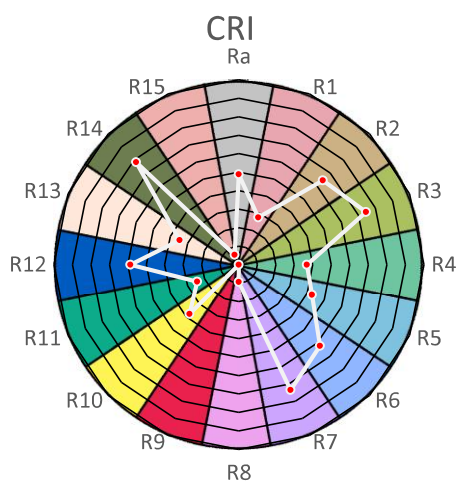
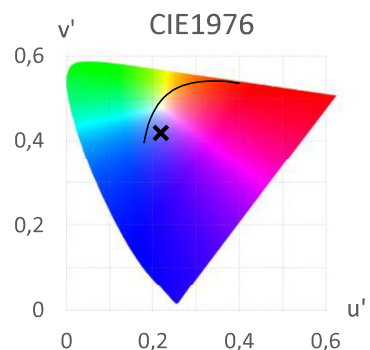
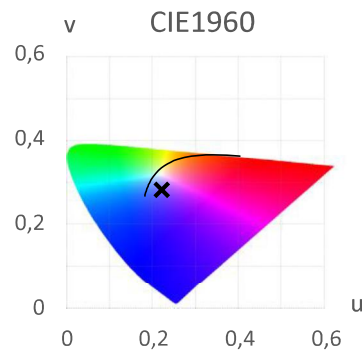
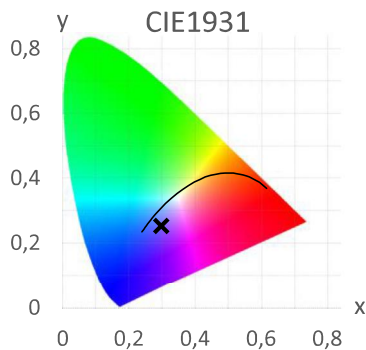
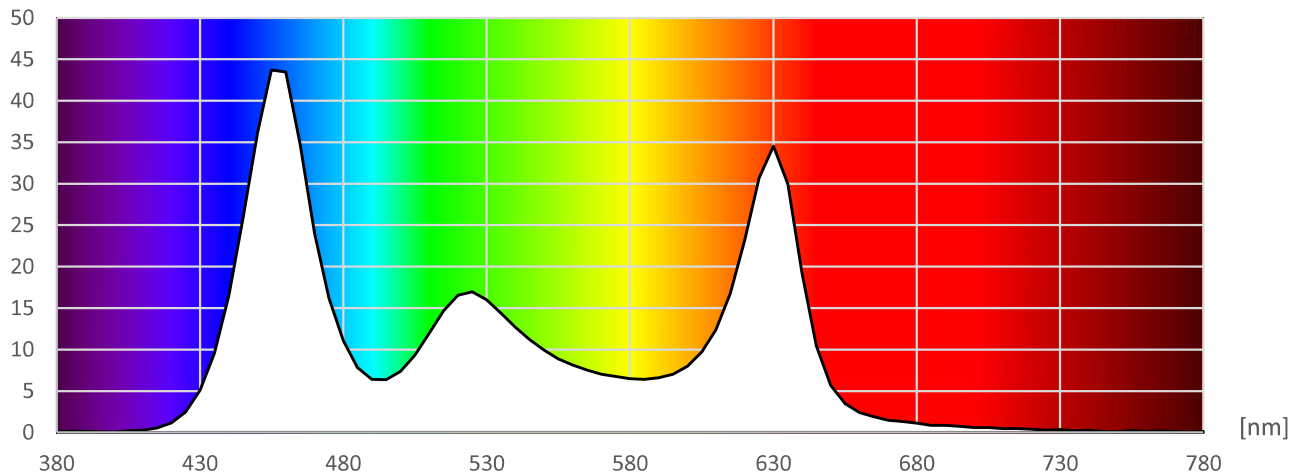
Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / all

Measurement file: 387902_3m_all_2.
Date of measurement: 06.07.2018
Time of measurement: 07:19:34

mW/m²/nm



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Burgebrach, 06.07.2018

Sebastian Laske

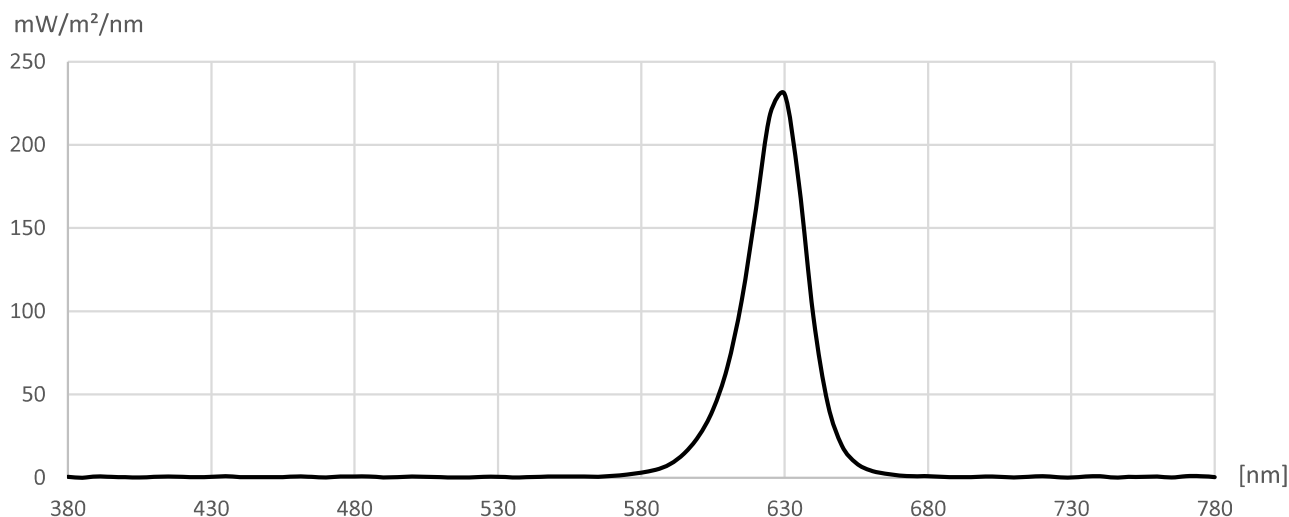
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / red

Measurement file: 387902_1m_red.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:17:36



R1 = -	Ra = -	Illuminance	1400,4 lx	CIE1931
R2 = -	Re = -	Ee	6,341 W/m ²	x = 0,6788
R3 = -	GAI = -	LER	220,8 lm/W	y = 0,3125
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,5035
R7 = -				v' = 0,5216
R8 = -		Saturation	97,5 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	622 nm	u = 0,5035
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	0,50	440	0,45	500	0,66	560	0,65	620	161,95	680	0,97	740	0,86
385	0,06	445	0,40	505	0,56	565	0,62	625	218,69	685	0,48	745	0,11
390	0,76	450	0,36	510	0,27	570	1,19	630	230,61	690	0,32	750	0,50
395	0,52	455	0,37	515	0,21	575	1,88	635	176,45	695	0,35	755	0,47
400	0,30	460	0,81	520	0,15	580	3,05	640	96,94	700	0,71	760	0,69
405	0,20	465	0,50	525	0,63	585	4,77	645	44,41	705	0,56	765	0,10
410	0,51	470	0,25	530	0,52	590	8,13	650	19,39	710	0,23	770	0,90
415	0,68	475	0,69	535	0,25	595	14,63	655	8,73	715	0,58	775	1,00
420	0,48	480	0,75	540	0,26	600	24,82	660	4,29	720	0,94	780	0,35
425	0,29	485	0,79	545	0,60	605	40,89	665	2,53	725	0,35		
430	0,50	490	0,25	550	0,74	610	66,33	670	1,35	730	0,09		
435	0,99	495	0,38	555	0,68	615	106,44	675	0,83	735	0,75		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

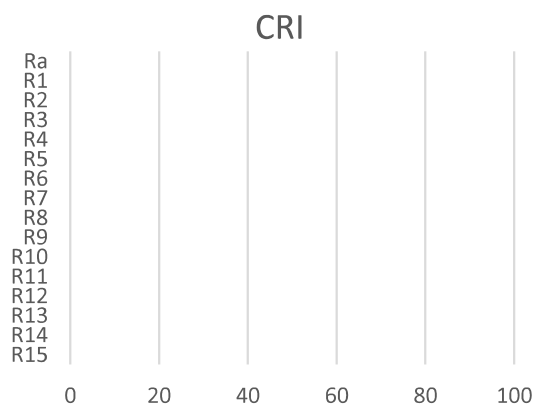
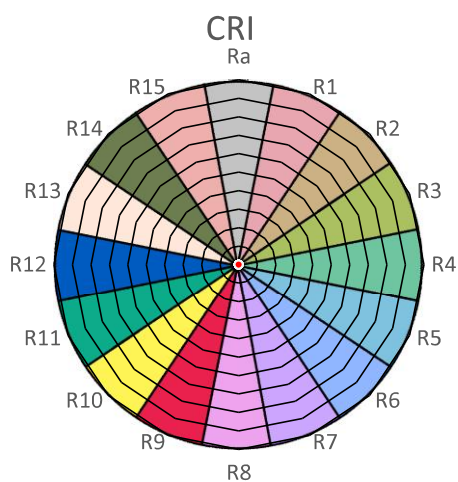
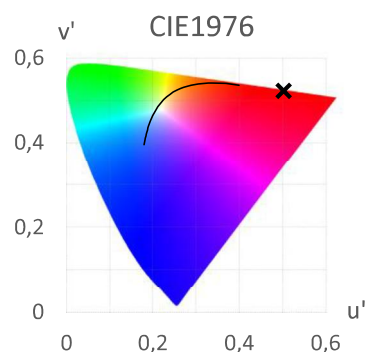
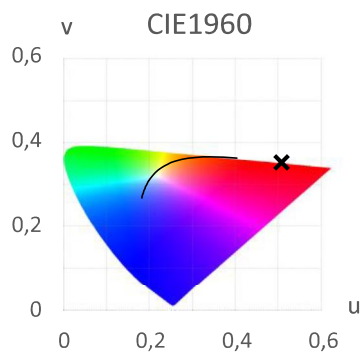
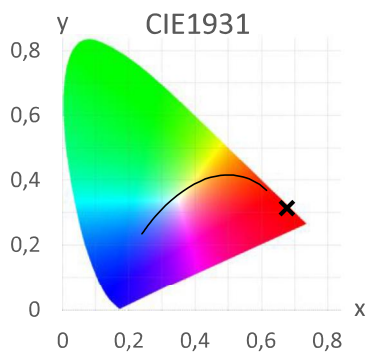
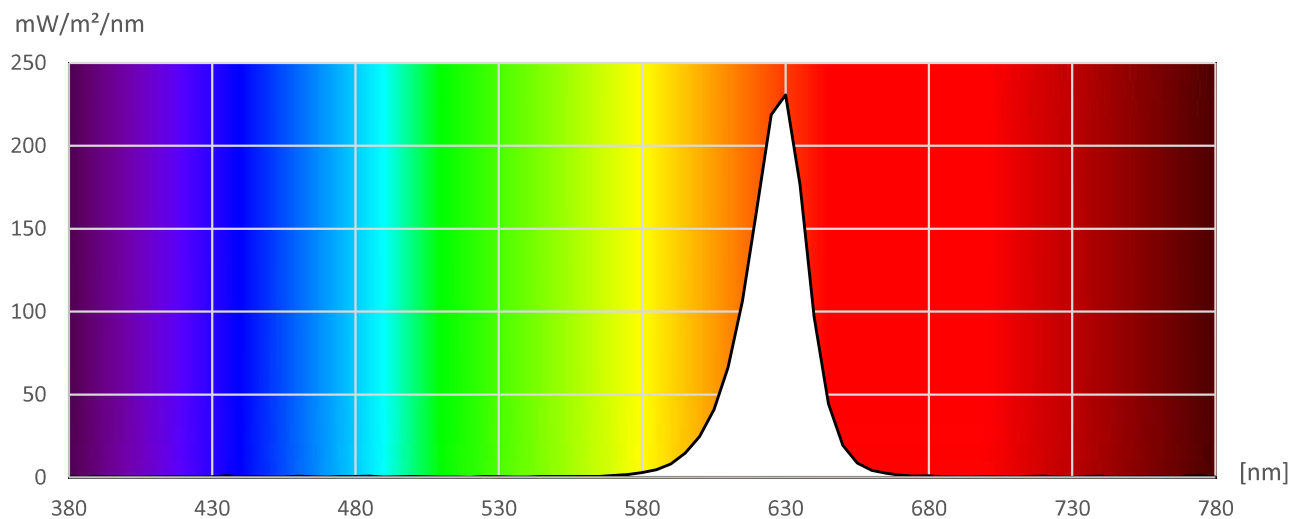
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / red

Measurement file: 387902_1m_red.C
Date of measurement: 06.07.2018
Time of measurement: 07:17:36



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Burgebrach, 06.07.2018

Sebastian Laske

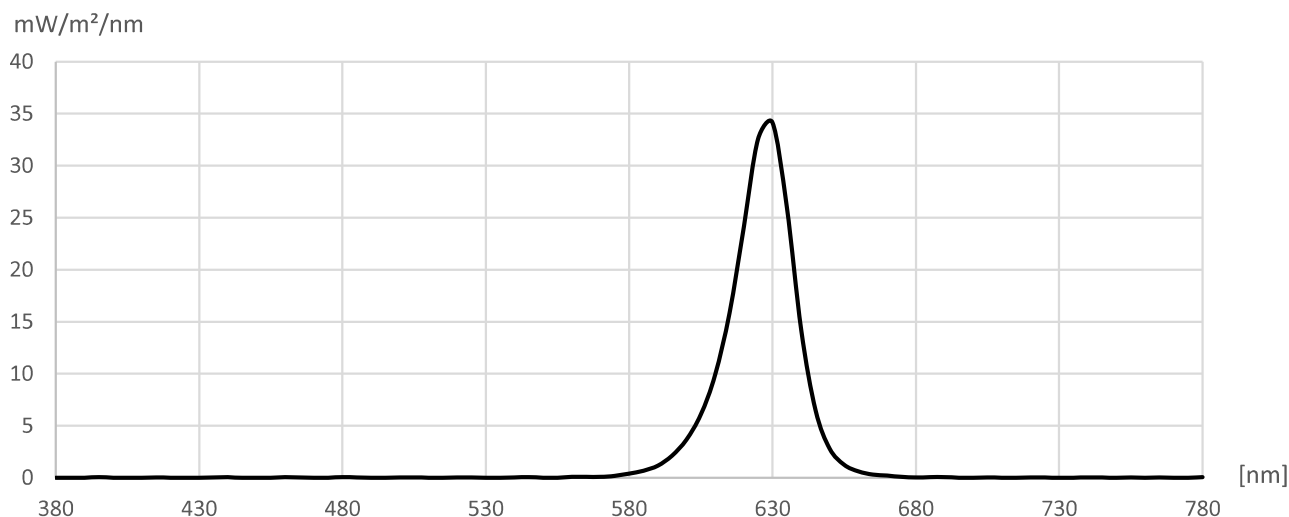
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / red

Measurement file: 387902_3m_red.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:17:47



R1 = -	Ra = -	Illuminance	204,8 lx	CIE1931
R2 = -	Re = -	Ee	0,920 W/m ²	x = 0,6854
R3 = -	GAI = -	LER	222,6 lm/W	y = 0,3127
R4 = -				
R5 = -		correlated color temperature (CCT)	< 1600 K	CIE1976
R6 = -		Duv	-	u' = 0,5094
R7 = -				v' = 0,5229
R8 = -		Saturation	99,4 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	622 nm	u = 0,5094
R11 = -		Peak wavelength	628 nm	v = 0,3486
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	0,01	440	0,04	500	0,03	560	0,07	620	24,16	680	0,03	740	0,01
385	0,00	445	0,00	505	0,02	565	0,09	625	32,55	685	0,05	745	0,01
390	0,00	450	0,00	510	0,01	570	0,09	630	34,16	690	0,07	750	0,00
395	0,06	455	0,01	515	0,00	575	0,17	635	26,04	695	0,00	755	0,02
400	0,00	460	0,04	520	0,03	580	0,40	640	14,20	700	0,00	760	0,00
405	0,00	465	0,02	525	0,03	585	0,68	645	6,49	705	0,02	765	0,03
410	0,00	470	0,00	530	0,00	590	1,16	650	2,80	710	0,01	770	0,00
415	0,02	475	0,00	535	0,00	595	2,13	655	1,25	715	0,00	775	0,00
420	0,01	480	0,05	540	0,03	600	3,66	660	0,60	720	0,03	780	0,06
425	0,00	485	0,03	545	0,06	605	6,06	665	0,30	725	0,01		
430	0,00	490	0,00	550	0,01	610	9,90	670	0,20	730	0,00		
435	0,03	495	0,00	555	0,00	615	15,86	675	0,09	735	0,01		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

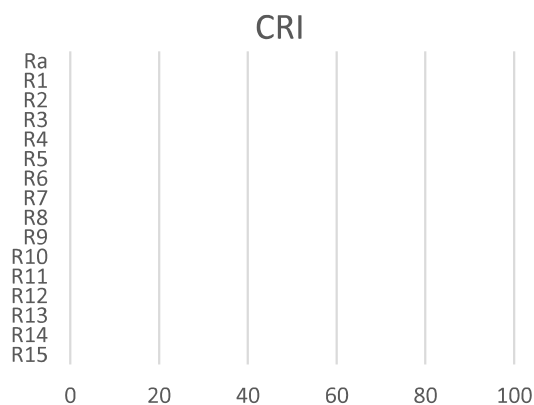
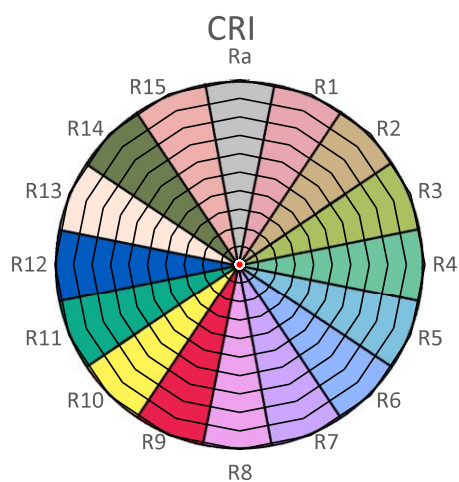
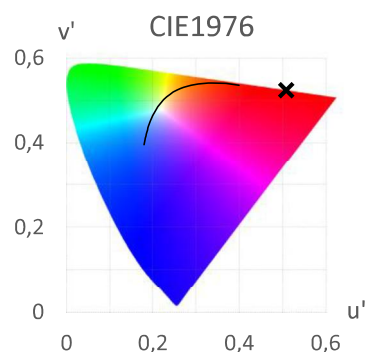
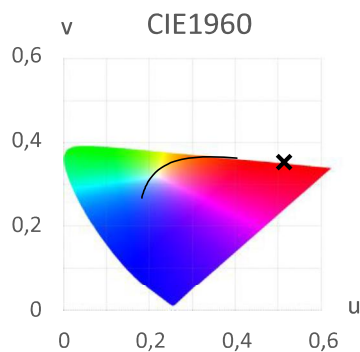
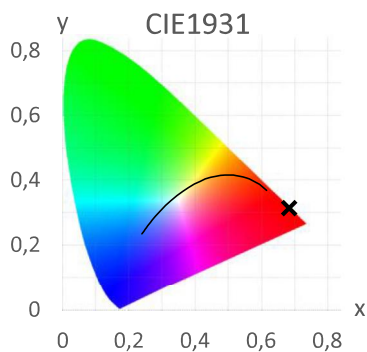
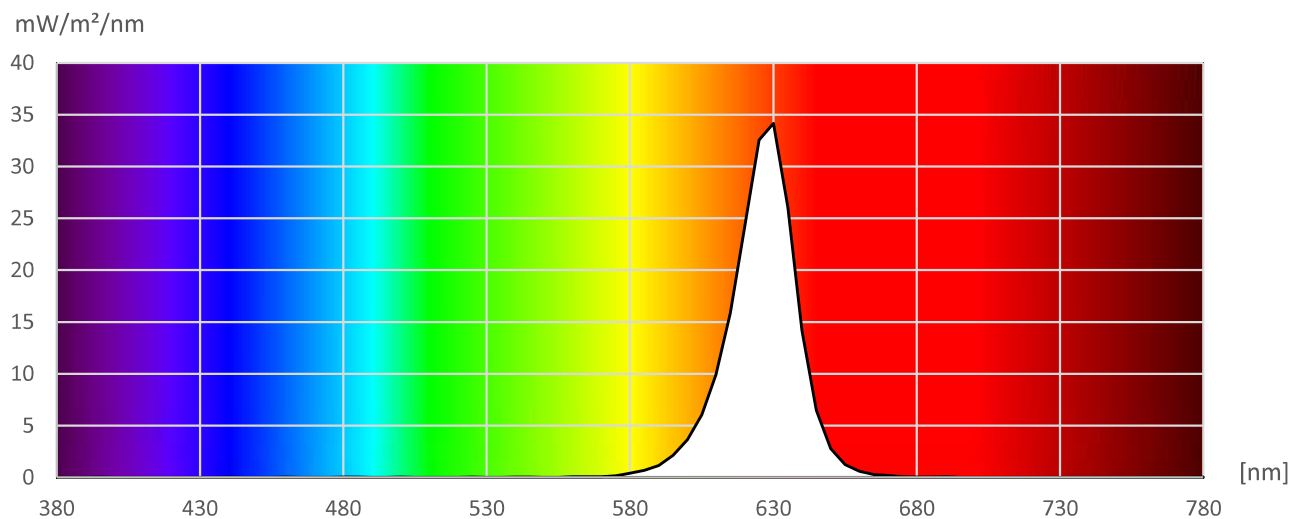
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / red

Measurement file: 387902_3m_red.C:
Date of measurement: 06.07.2018
Time of measurement: 07:17:47



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

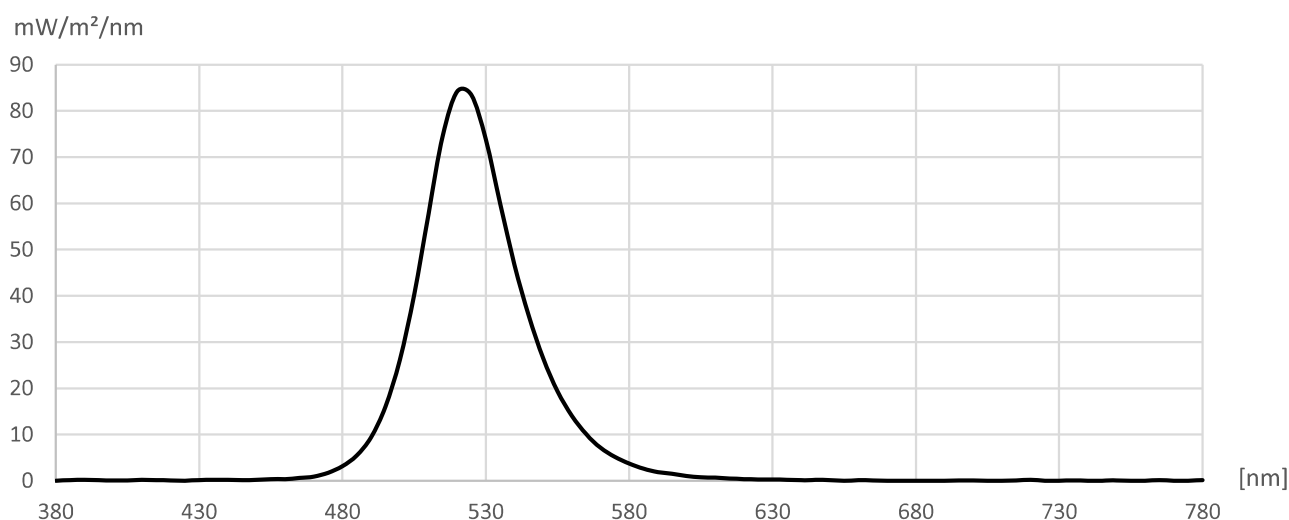
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / green

Measurement file: 387902_1m_green.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:18:03



R1 = -34,2	Ra = -20,5
R2 = -4,4	Re = -51,2
R3 = -13,2	GAI = 0,8
R4 = -60,6	
R5 = -8,9	
R6 = -10,9	
R7 = -1,1	
R8 = -30,8	
R9 = #####	
R10 = -96,1	
R11 = -89,8	
R12 = -26,0	
R13 = -38,4	
R14 = 43,7	
R15 = -38,9	

Illuminance	1788,54 lx
Ee	3,600 W/m ²
LER	496,9 lm/W
correlated color temperature (CCT)	7677 K
Duv	0,1538
Saturation	78,3 %
Dominant wavelength	526 nm
Peak wavelength	522 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,1809
y = 0,7175
CIE1976
u' = 0,0643
v' = 0,5741
CIE1960
u = 0,0643
v = 0,3827
TM30
Rf = 1,2
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	0,19	500	26,13	560	14,05	620	0,37	680	0,02	740	0,02
385	0,14	445	0,14	505	40,30	565	10,06	625	0,30	685	0,01	745	0,02
390	0,20	450	0,16	510	57,79	570	7,15	630	0,28	690	0,00	750	0,09
395	0,10	455	0,34	515	74,59	575	5,17	635	0,21	695	0,07	755	0,00
400	0,07	460	0,36	520	84,16	580	3,73	640	0,10	700	0,07	760	0,00
405	0,05	465	0,59	525	83,40	585	2,60	645	0,16	705	0,00	765	0,14
410	0,19	470	0,89	530	73,81	590	1,87	650	0,15	710	0,00	770	0,01
415	0,14	475	1,74	535	59,86	595	1,48	655	0,00	715	0,08	775	0,02
420	0,08	480	3,19	540	46,75	600	1,03	660	0,09	720	0,18	780	0,16
425	0,02	485	5,41	545	35,73	605	0,76	665	0,09	725	0,00		
430	0,15	490	9,40	550	26,51	610	0,65	670	0,01	730	0,02		
435	0,18	495	16,06	555	19,33	615	0,50	675	0,00	735	0,08		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

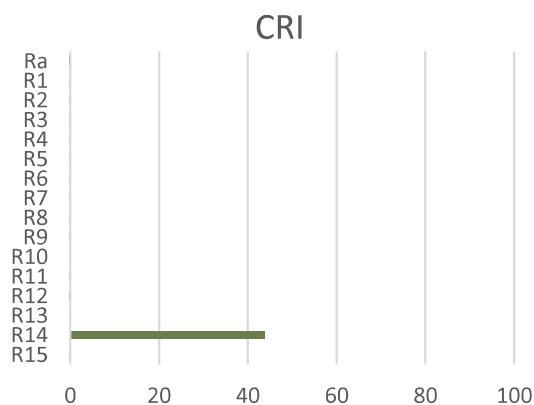
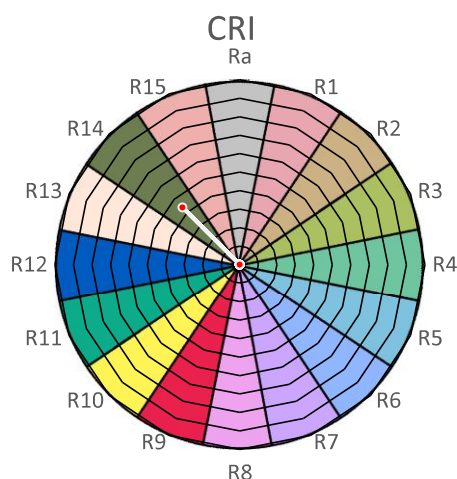
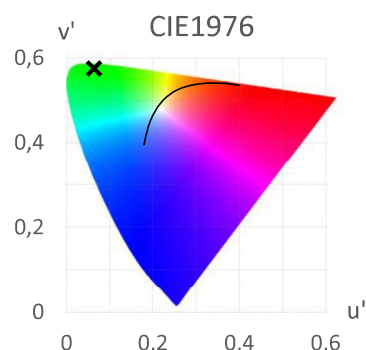
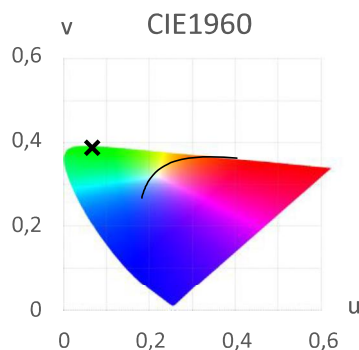
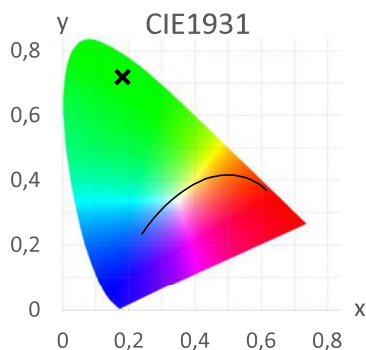
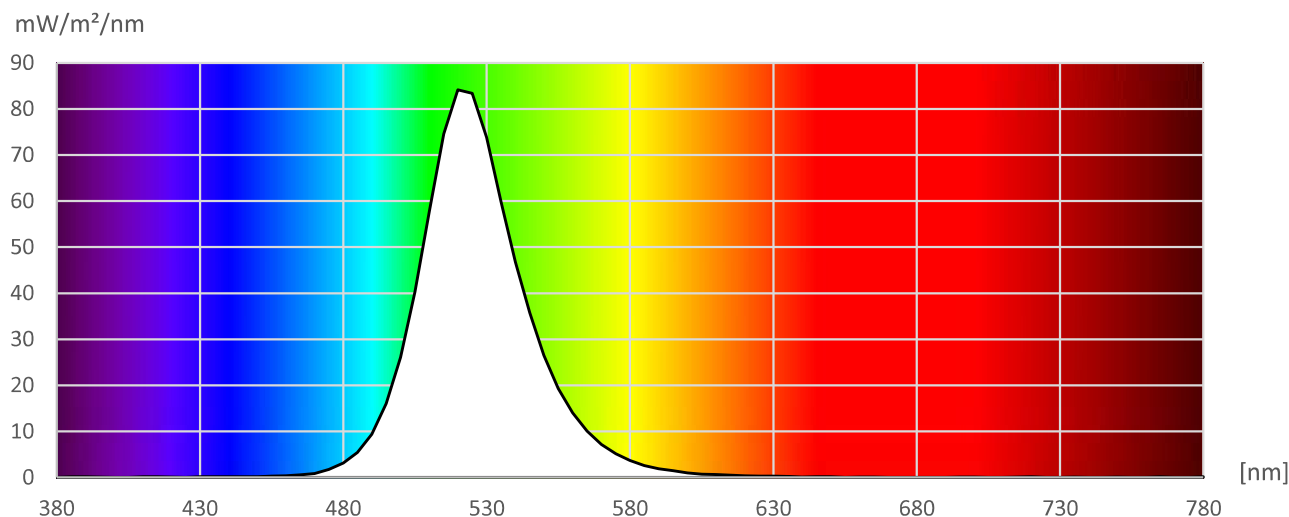
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / green

Measurement file: 387902_1m_green
Date of measurement: 06.07.2018
Time of measurement: 07:18:03



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Burgebrach, 06.07.2018

Sebastian Laske

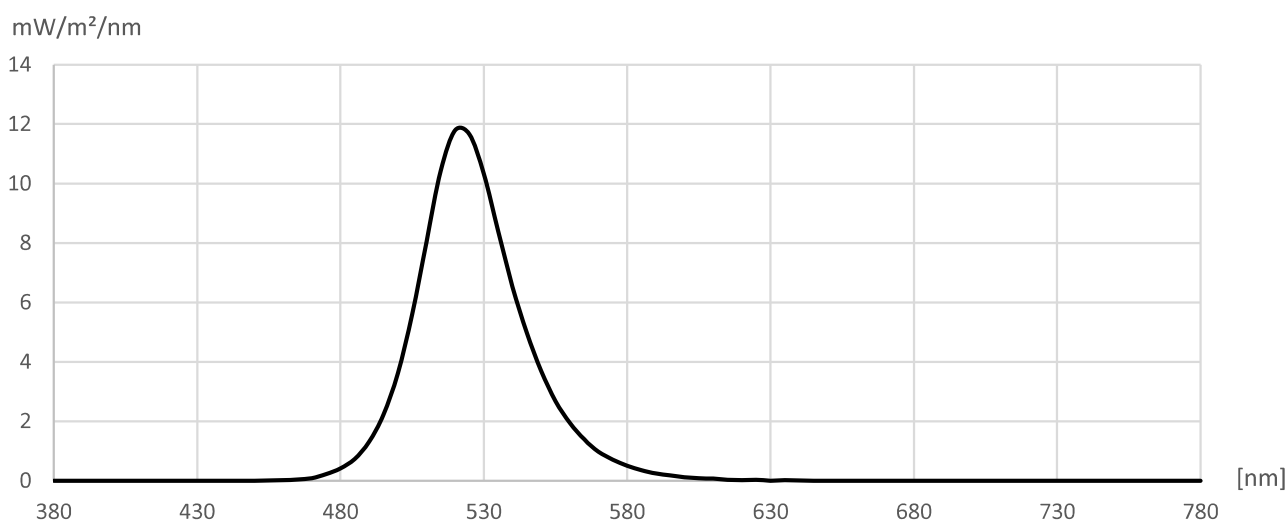
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / green

Measurement file: 387902_3m_green.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:18:14



R1 = -35,5	Ra = -24,3
R2 = -7,3	Re = -54,9
R3 = -19,2	GAI = 0,6
R4 = -65,9	
R5 = -9,9	
R6 = -13,6	
R7 = -7,8	
R8 = -34,9	
R9 = #####	
R10 = #####	
R11 = -95,4	
R12 = -28,6	
R13 = -40,2	
R14 = 40,8	
R15 = -40,4	

Illuminance	249,1 lx
Ee	0,498 W/m²
LER	500,6 lm/W
correlated color temperature (CCT)	7680 K
Duv	0,1551
Saturation	79,5 %
Dominant wavelength	526 nm
Peak wavelength	522 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,1791
y = 0,7234
CIE1976
u' = 0,0633
v' = 0,5750
CIE1960
u = 0,0633
v = 0,3833
TM30
Rf = 0,7
Rg = 7,9

[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	0,00	440	0,00	500	3,61	560	1,95	620	0,02	680	0,00	740	0,00
385	0,00	445	0,00	505	5,61	565	1,39	625	0,03	685	0,00	745	0,00
390	0,00	450	0,00	510	8,05	570	0,98	630	0,00	690	0,00	750	0,00
395	0,00	455	0,01	515	10,43	575	0,71	635	0,02	695	0,00	755	0,00
400	0,00	460	0,02	520	11,79	580	0,50	640	0,01	700	0,00	760	0,00
405	0,00	465	0,04	525	11,65	585	0,35	645	0,00	705	0,00	765	0,00
410	0,00	470	0,09	530	10,32	590	0,24	650	0,00	710	0,00	770	0,00
415	0,00	475	0,22	535	8,39	595	0,18	655	0,00	715	0,00	775	0,00
420	0,00	480	0,42	540	6,54	600	0,12	660	0,00	720	0,00	780	0,00
425	0,00	485	0,73	545	4,99	605	0,09	665	0,00	725	0,00		
430	0,00	490	1,31	550	3,70	610	0,07	670	0,00	730	0,00		
435	0,00	495	2,23	555	2,68	615	0,03	675	0,00	735	0,00		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

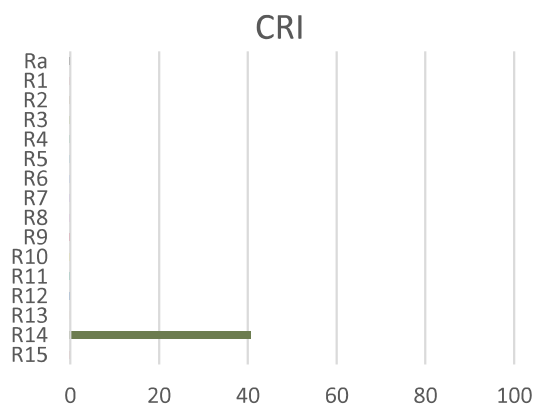
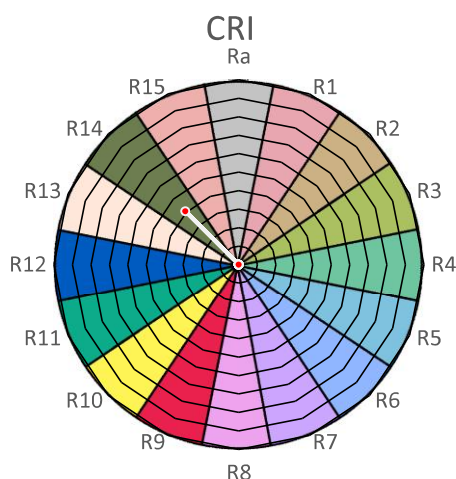
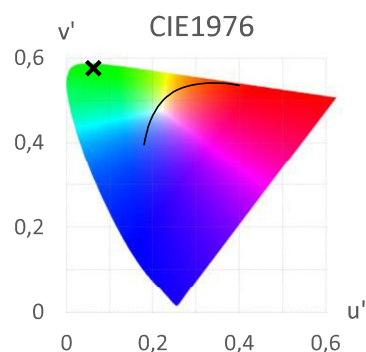
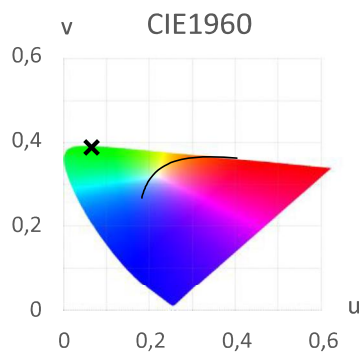
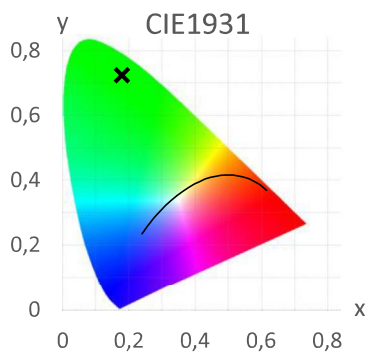
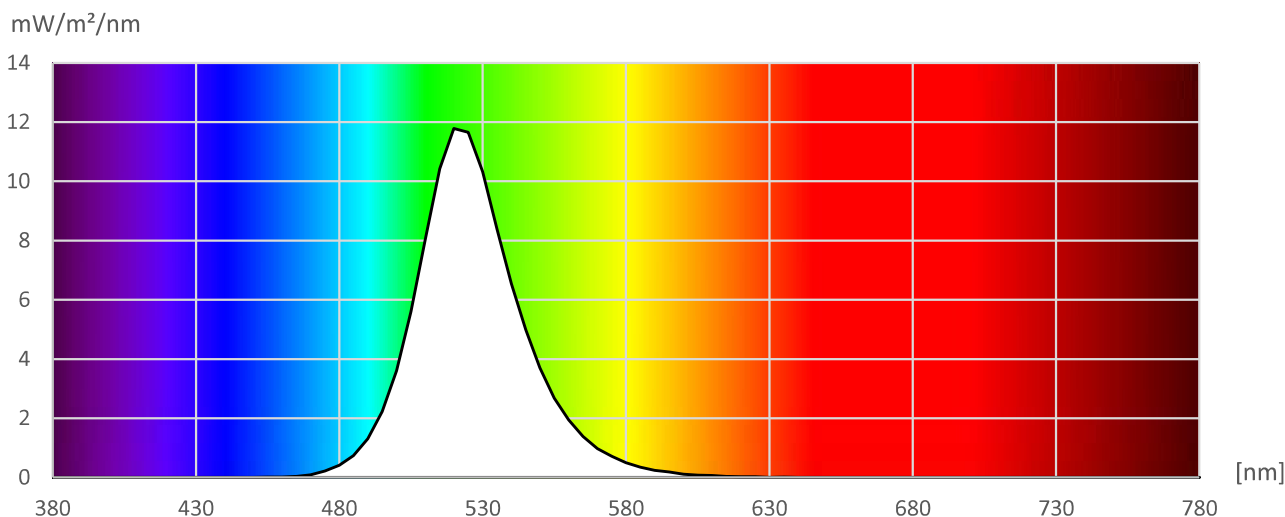
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / green

Measurement file: 387902_3m_green
Date of measurement: 06.07.2018
Time of measurement: 07:18:14



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Burgebrach, 06.07.2018

Sebastian Laske

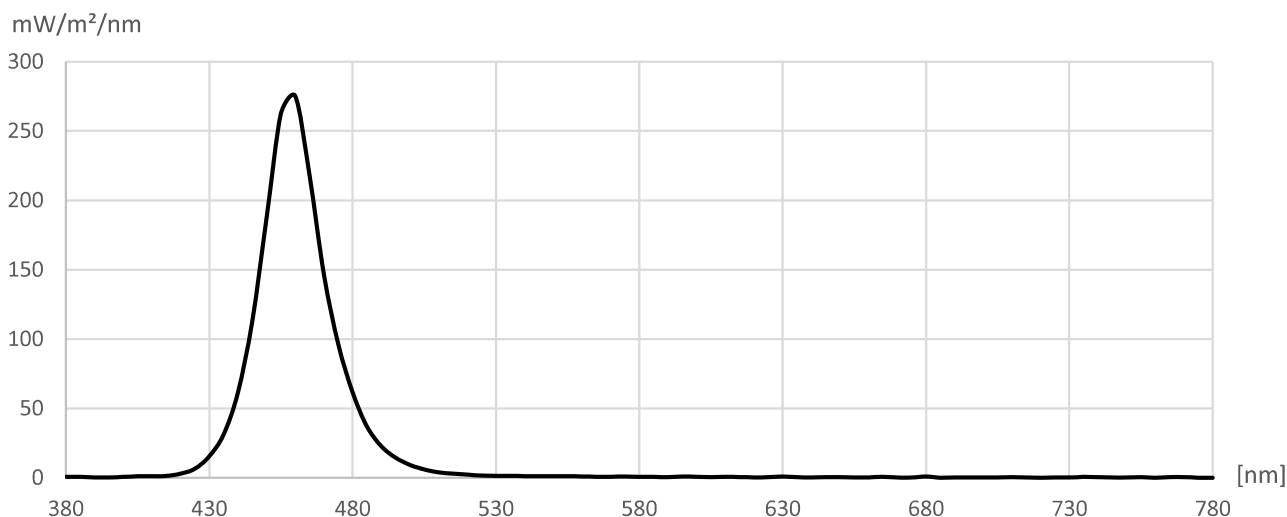
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / blue

Measurement file: 387902_1m_blue.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:18:32



R1 = -	Ra = -	Illuminance	450,43 lx	CIE1931
R2 = -	Re = -	Ee	8,043 W/m²	x = 0,1451
R3 = -	GAI = -	LER	56,0 lm/W	y = 0,0452
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,1785
R7 = -				v' = 0,1250
R8 = -		Saturation	97 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	455 nm	u = 0,1785
R11 = -		Peak wavelength	458 nm	v = 0,0834
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	0,55	440	61,52	500	9,28	560	0,98	620	0,30	680	0,78	740	0,40
385	0,67	445	113,15	505	5,91	565	0,75	625	0,39	685	0,02	745	0,24
390	0,18	450	188,26	510	3,85	570	0,76	630	0,82	690	0,21	750	0,11
395	0,18	455	262,30	515	2,93	575	0,91	635	0,40	695	0,26	755	0,43
400	0,57	460	275,36	520	2,23	580	0,65	640	0,20	700	0,11	760	0,00
405	1,04	465	217,82	525	1,53	585	0,57	645	0,40	705	0,17	765	0,40
410	1,19	470	146,18	530	1,43	590	0,37	650	0,49	710	0,39	770	0,50
415	1,25	475	96,03	535	1,33	595	0,93	655	0,13	715	0,15	775	0,03
420	2,88	480	61,27	540	1,22	600	0,69	660	0,23	720	0,04	780	0,06
425	6,53	485	37,14	545	1,16	605	0,40	665	0,59	725	0,19		
430	15,43	490	22,76	550	1,20	610	0,74	670	0,14	730	0,20		
435	31,17	495	14,38	555	1,05	615	0,52	675	0,08	735	0,56		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

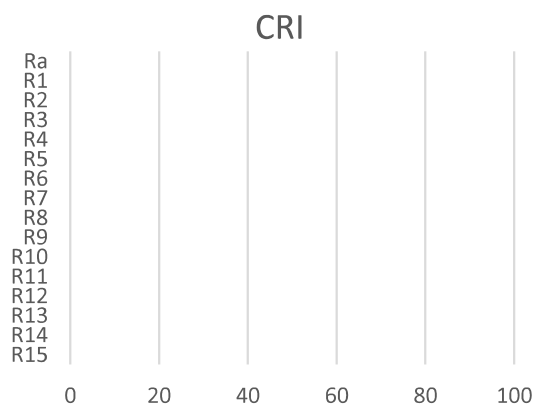
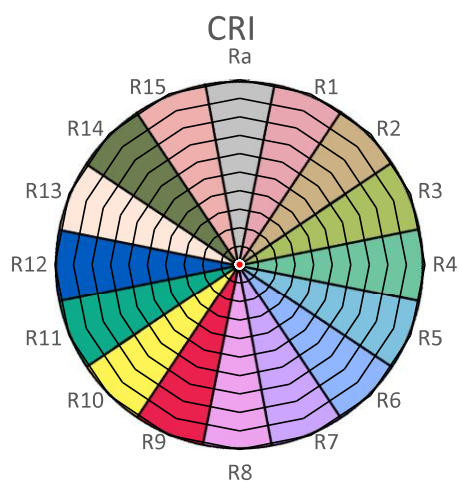
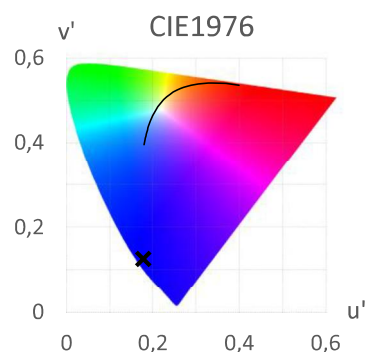
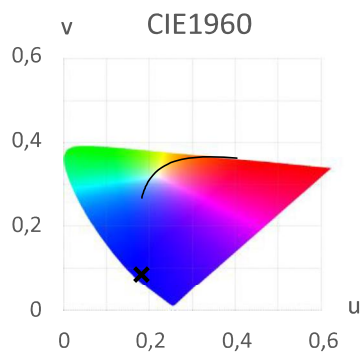
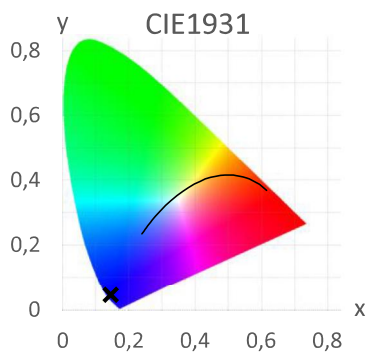
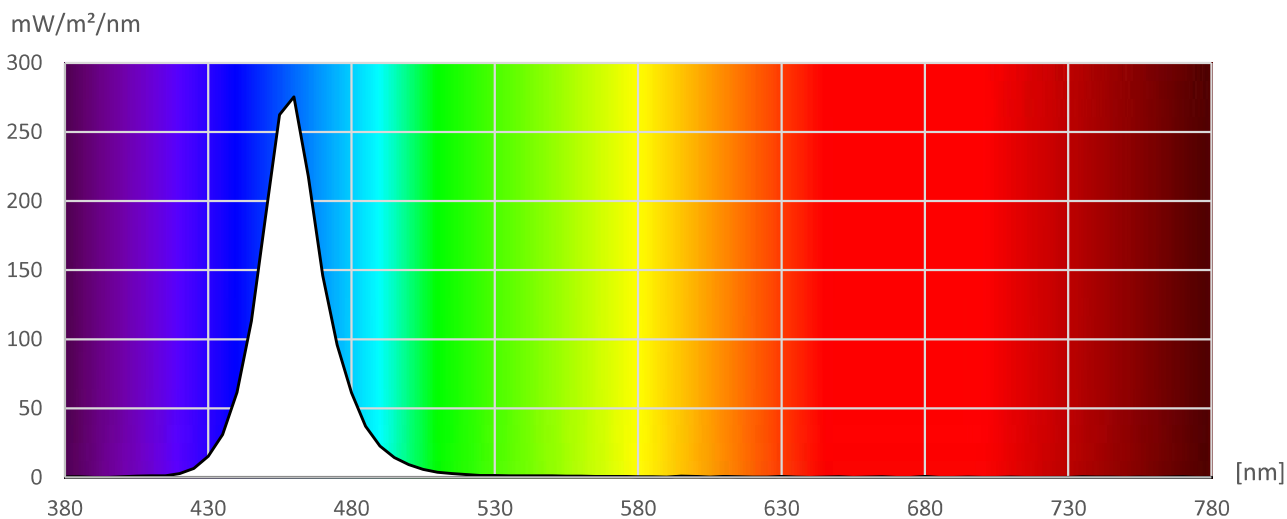
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / blue

Measurement file: 387902_1m_blue.c
Date of measurement: 06.07.2018
Time of measurement: 07:18:32



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Burgebrach, 06.07.2018

Sebastian Laske

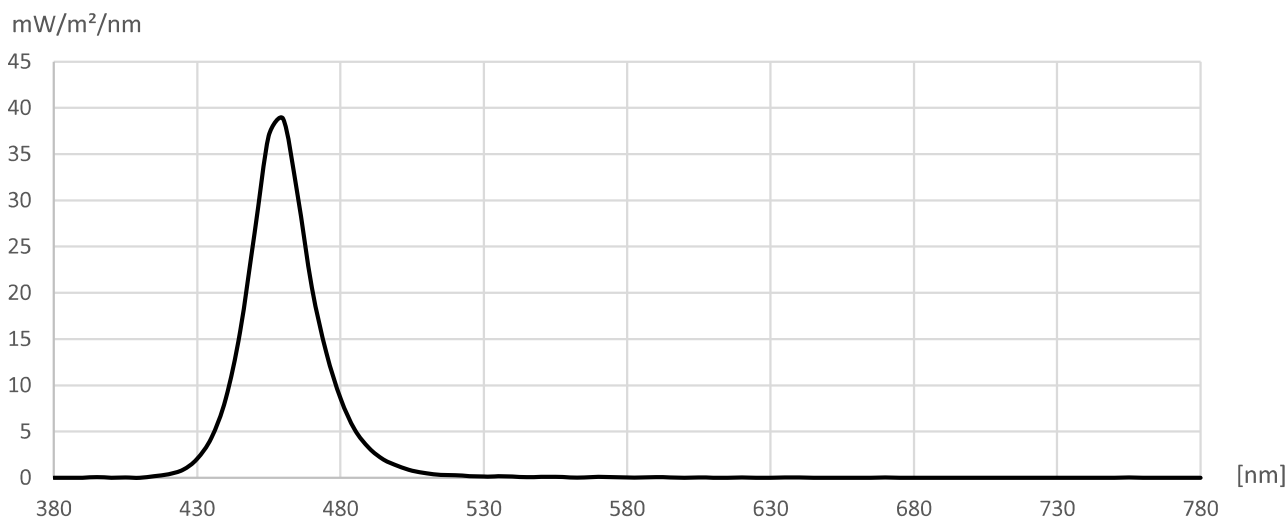
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / blue

Measurement file: 387902_3m_blue.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:18:38



R1 = -	Ra = -	Illuminance	59,25 lx	CIE1931
R2 = -	Re = -	Ee	1,115 W/m ²	x = 0,1434
R3 = -	GAI = -	LER	53,2 lm/W	y = 0,0425
R4 = -				
R5 = -		correlated color temperature (CCT)	> 50000 K	CIE1976
R6 = -		Duv	-	u' = 0,1780
R7 = -				v' = 0,1187
R8 = -		Saturation	97,9 %	
R9 = -				CIE1960
R10 = -		Dominant wavelength	455 nm	u = 0,1780
R11 = -		Peak wavelength	458 nm	v = 0,0791
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	0,00	440	8,57	500	1,28	560	0,04	620	0,04	680	0,00	740	0,00
385	0,00	445	15,84	505	0,77	565	0,02	625	0,00	685	0,00	745	0,00
390	0,01	450	26,46	510	0,48	570	0,11	630	0,00	690	0,00	750	0,00
395	0,08	455	36,97	515	0,32	575	0,06	635	0,04	695	0,00	755	0,02
400	0,01	460	38,84	520	0,28	580	0,03	640	0,03	700	0,00	760	0,00
405	0,03	465	30,69	525	0,18	585	0,02	645	0,00	705	0,00	765	0,00
410	0,00	470	20,60	530	0,12	590	0,06	650	0,00	710	0,01	770	0,00
415	0,18	475	13,57	535	0,15	595	0,05	655	0,00	715	0,00	775	0,00
420	0,38	480	8,55	540	0,13	600	0,00	660	0,00	720	0,00	780	0,00
425	0,85	485	5,21	545	0,07	605	0,03	665	0,00	725	0,00		
430	2,03	490	3,20	550	0,08	610	0,01	670	0,03	730	0,00		
435	4,32	495	1,97	555	0,10	615	0,00	675	0,00	735	0,00		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

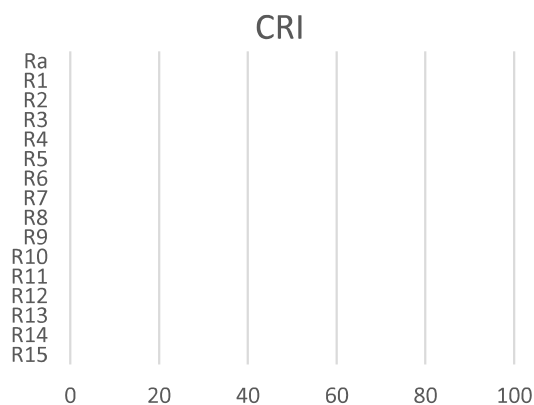
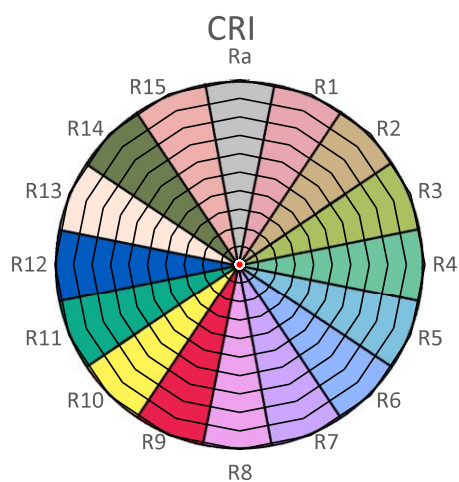
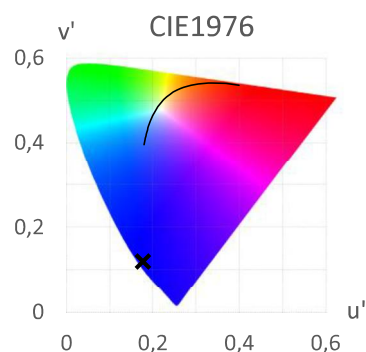
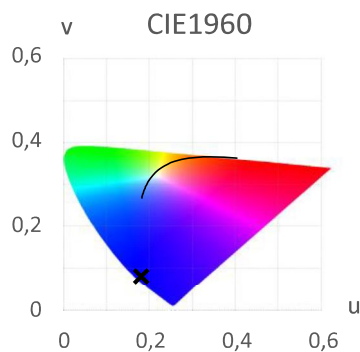
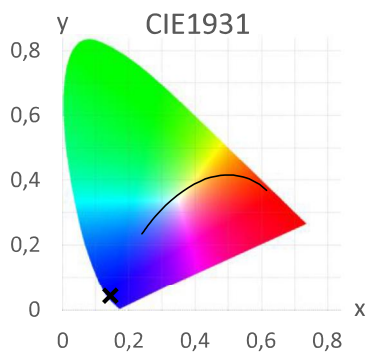
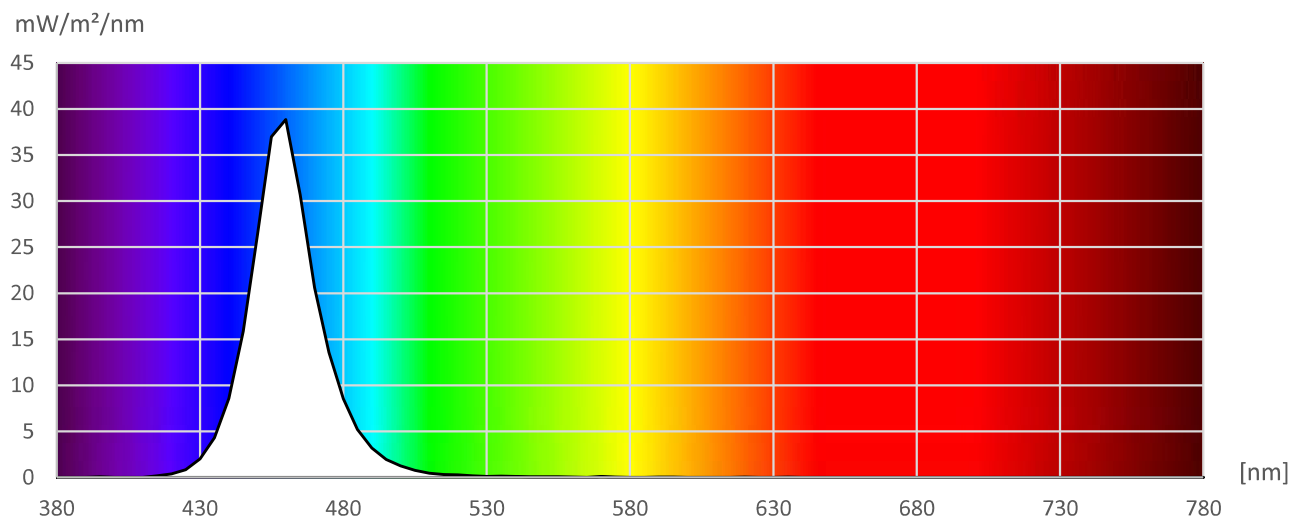
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / blue

Measurement file: 387902_3m_blue.c
Date of measurement: 06.07.2018
Time of measurement: 07:18:38



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

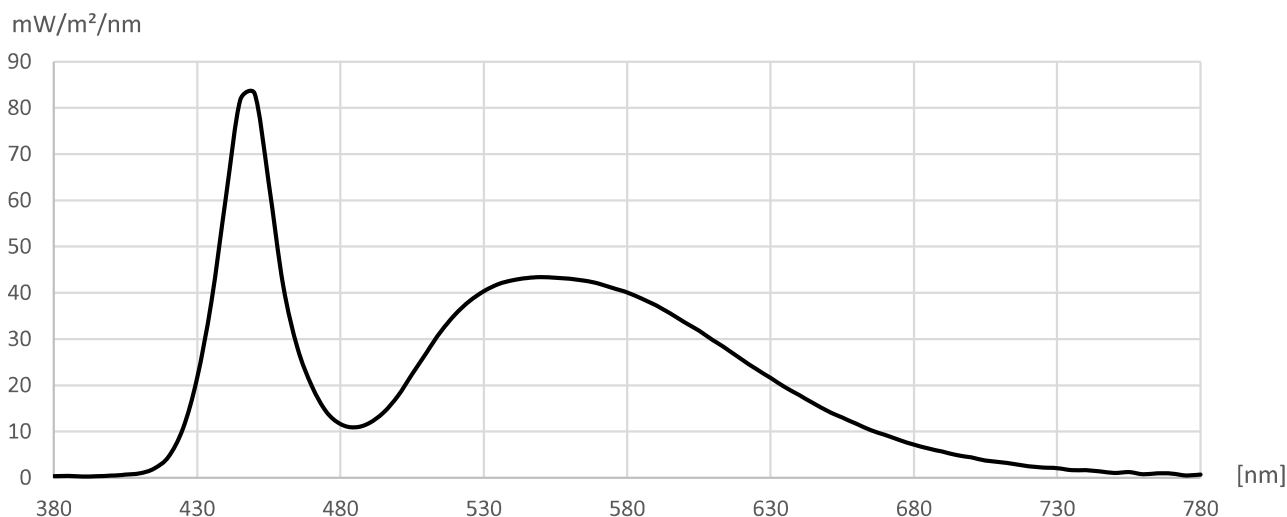
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / white

Measurement file: 387902_1m_white.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:18:52



R1 = 72,3	Ra = 73,7	Illuminance	2602,3 lx	CIE1931
R2 = 76,8	Re = 64,0	Ee	8,195 W/m ²	x = 0,3144
R3 = 77,9	GAI = 87,3	LER	317,5 lm/W	y = 0,3288
R4 = 75,2				
R5 = 73,3		correlated color temperature (CCT)	6413 K	CIE1976
R6 = 68,0		Duv	0,0022	u' = 0,1991
R7 = 81,9		Saturation	6,8 %	v' = 0,4684
R8 = 64,1				
R9 = -17,4				CIE1960
R10 = 43,0		Dominant wavelength	486 nm	u = 0,1991
R11 = 72,8		Peak wavelength	447 nm	v = 0,3123
R12 = 44,0				
R13 = 72,6		Flicker frequency	% < 2.5 Hz	TM30
R14 = 87,5		Percent Flicker	< 2.5 %	Rf = 70,6
R15 = 67,8		Flicker index	% < 2.5	Rg = 94,9

[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	0,31	440	60,51	500	17,70	560	43,03	620	25,56	680	7,14	740	1,63
385	0,42	445	81,68	505	22,44	565	42,63	625	23,55	685	6,34	745	1,36
390	0,26	450	83,15	510	27,10	570	42,03	630	21,60	690	5,65	750	1,05
395	0,30	455	63,87	515	31,59	575	41,03	635	19,59	695	4,89	755	1,21
400	0,44	460	41,73	520	35,29	580	40,10	640	17,87	700	4,38	760	0,78
405	0,66	465	28,09	525	38,22	585	38,73	645	16,09	705	3,72	765	0,94
410	0,97	470	19,85	530	40,37	590	37,28	650	14,41	710	3,38	770	0,91
415	2,00	475	14,28	535	41,88	595	35,56	655	13,02	715	2,99	775	0,48
420	4,55	480	11,61	540	42,69	600	33,66	660	11,64	720	2,51	780	0,70
425	10,66	485	10,88	545	43,20	605	31,82	665	10,30	725	2,19		
430	21,45	490	11,80	550	43,37	610	29,73	670	9,23	730	2,09		
435	38,06	495	14,10	555	43,26	615	27,74	675	8,14	735	1,63		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

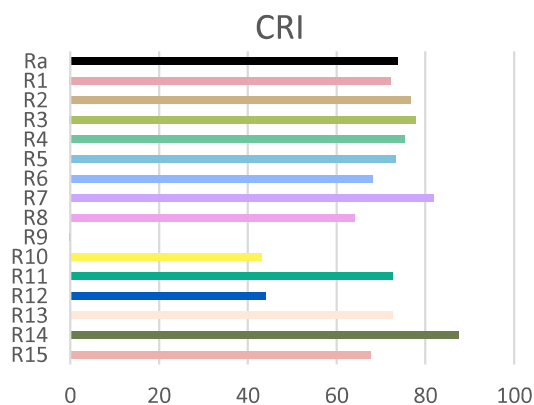
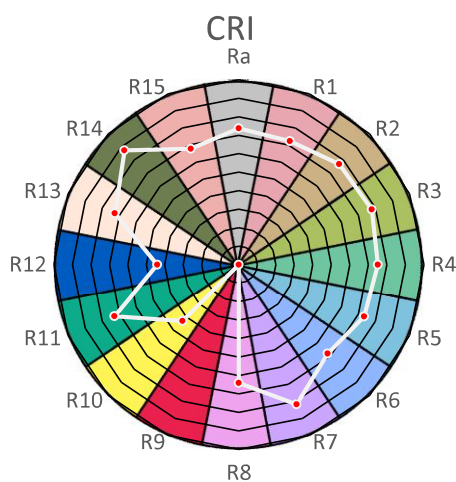
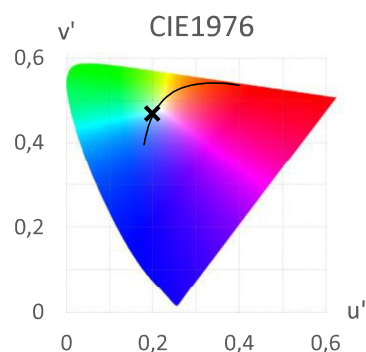
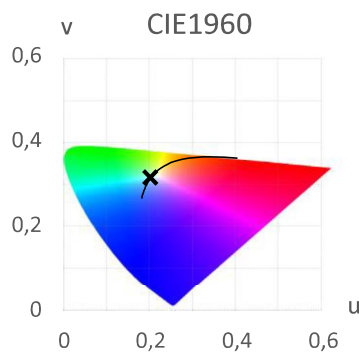
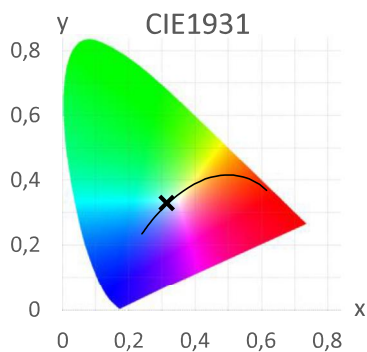
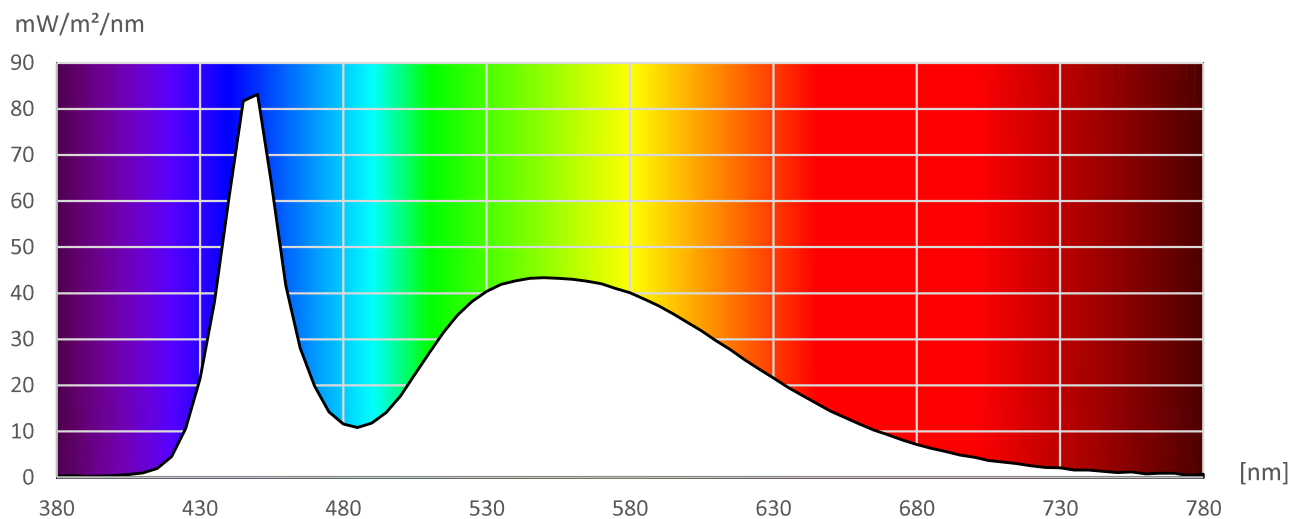
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 1 m / white

Measurement file: 387902_1m_white
Date of measurement: 06.07.2018
Time of measurement: 07:18:52



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Burgebrach, 06.07.2018

Sebastian Laske

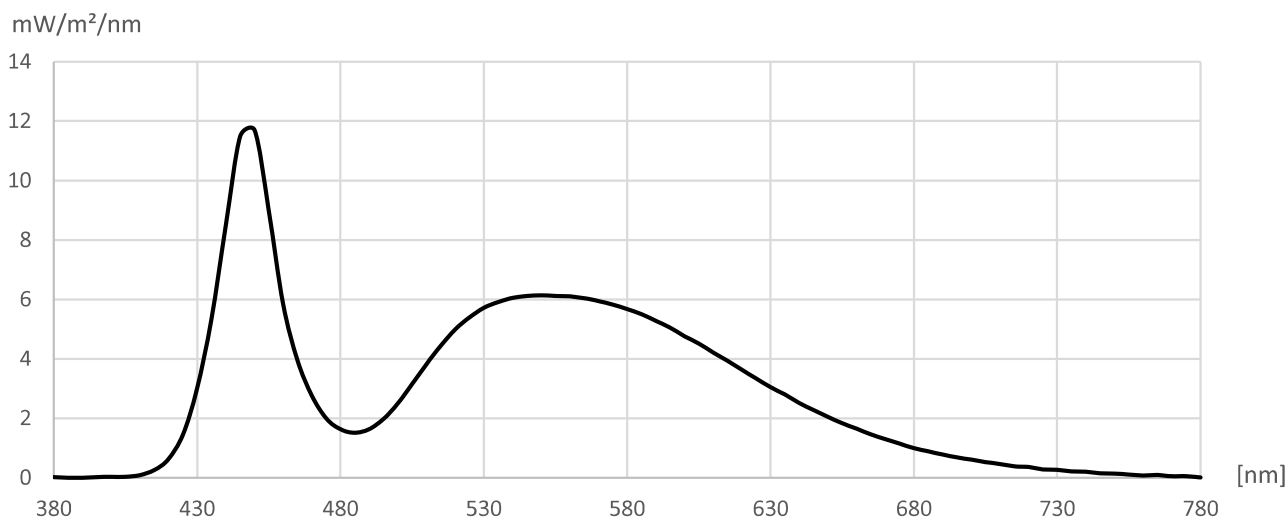
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / white

Measurement file: 387902_3m_white.CSV
Date of measurement: 06.07.2018
Time of measurement: 07:19:06



R1 = 72,1	Ra = 73,6	Illuminance	368,24 lx	CIE1931
R2 = 76,7	Re = 63,8	Ee	1,152 W/m ²	x = 0,3152
R3 = 78,0	GAI = 87,0	LER	319,6 lm/W	y = 0,3297
R4 = 75,1				
R5 = 73,1		correlated color temperature (CCT)	6366 K	CIE1976
R6 = 67,9		Duv	0,0023	u' = 0,1993
R7 = 81,9				v' = 0,4691
R8 = 63,8		Saturation	6,4 %	
R9 = -18,2				CIE1960
R10 = 42,9		Dominant wavelength	486 nm	u = 0,1993
R11 = 72,5		Peak wavelength	447 nm	v = 0,3127
R12 = 43,7				
R13 = 72,4		Flicker frequency	% < 2.5 Hz	TM30
R14 = 87,5		Percent Flicker	< 2.5 %	Rf = 70,5
R15 = 67,5		Flicker index	% < 2.5	Rg = 94,9

[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	0,02	440	8,49	500	2,50	560	6,10	620	3,63	680	1,00	740	0,20
385	0,00	445	11,49	505	3,16	565	6,04	625	3,34	685	0,89	745	0,15
390	0,00	450	11,70	510	3,83	570	5,95	630	3,05	690	0,78	750	0,14
395	0,02	455	9,01	515	4,44	575	5,82	635	2,80	695	0,68	755	0,11
400	0,03	460	5,86	520	4,99	580	5,67	640	2,52	700	0,61	760	0,08
405	0,03	465	3,96	525	5,39	585	5,51	645	2,28	705	0,52	765	0,09
410	0,09	470	2,77	530	5,72	590	5,28	650	2,05	710	0,46	770	0,05
415	0,26	475	2,00	535	5,91	595	5,05	655	1,83	715	0,39	775	0,05
420	0,63	480	1,63	540	6,05	600	4,77	660	1,65	720	0,36	780	0,01
425	1,45	485	1,52	545	6,11	605	4,52	665	1,46	725	0,28		
430	2,99	490	1,63	550	6,14	610	4,22	670	1,30	730	0,27		
435	5,33	495	1,98	555	6,12	615	3,93	675	1,14	735	0,22		

Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Sebastian Laske

Burgebrach, 06.07.2018

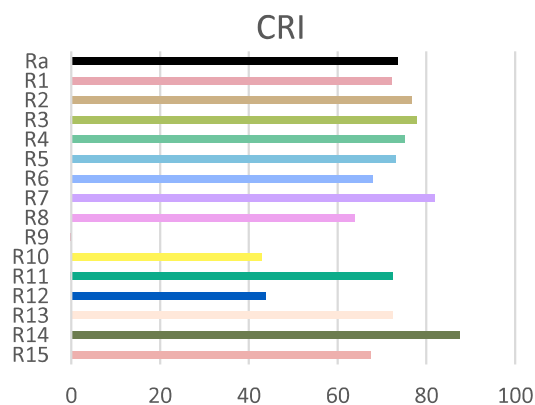
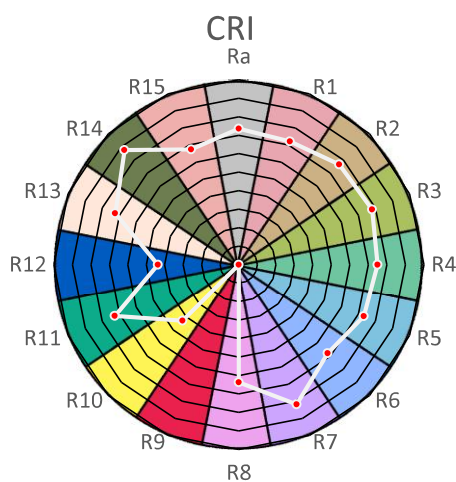
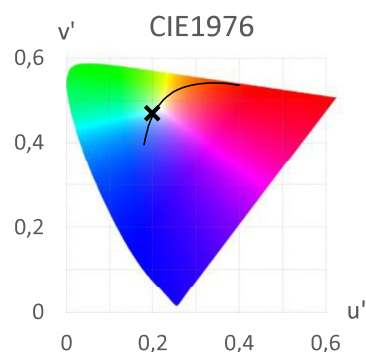
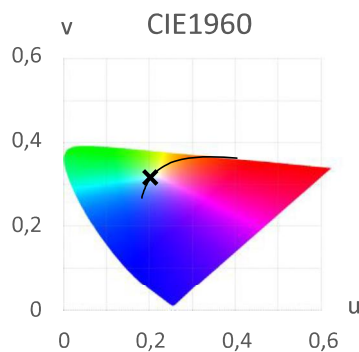
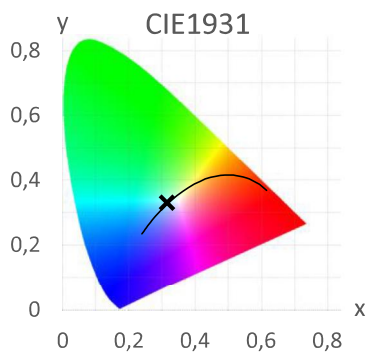
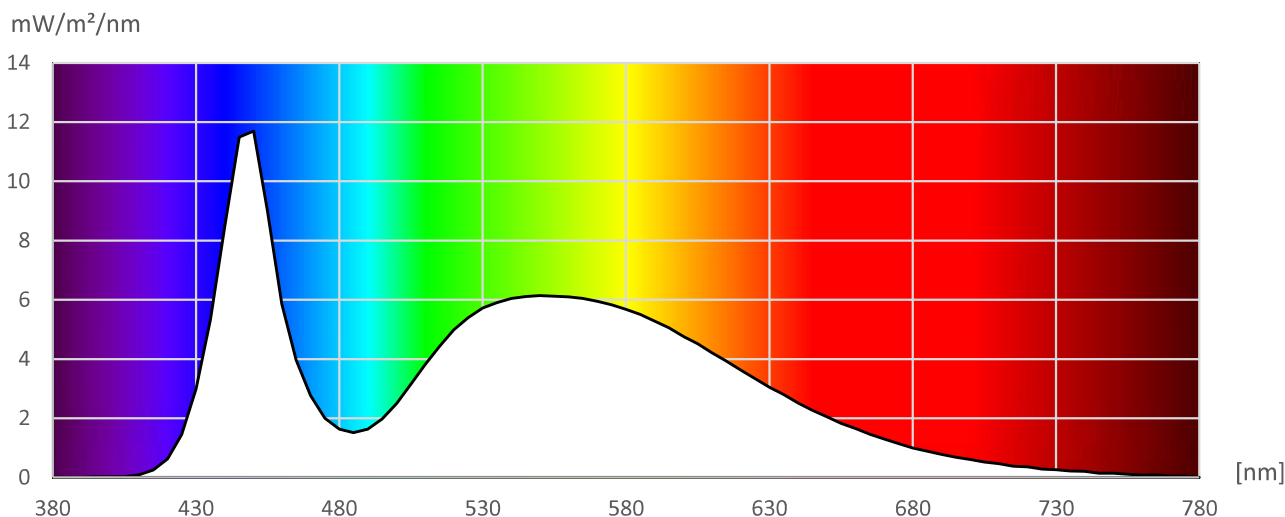
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
Outdoor Stage Par 12x4W Quad
Item 387902 / @ 3 m / white

Measurement file: 387902_3m_white
Date of measurement: 06.07.2018
Time of measurement: 07:19:06



Thomann GmbH
Hans-Thomann-Str. 1
D-96138 Burgebrach, Germany

Burgebrach, 06.07.2018

Sebastian Laske

First, last name of inspector