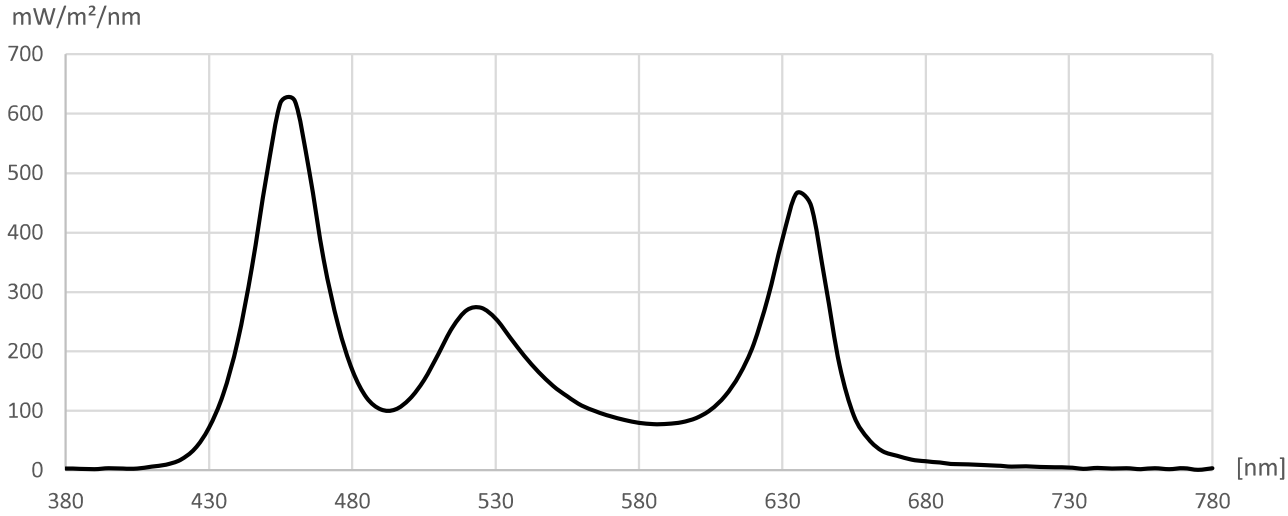
Measurement protocol

thomann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 1 m / all

Measurement file: 281569_1m_all.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:14:13



R1	= 37,9	Ra	= 54,3	Illuminance	11914,82 lx	CIE1931	
R2	= 72,2	Re	= 36,7	Ee	51,668 W/m²	x	= 0,2811
R3	= 72,9	GAI	= 150,5	LER	230,6 lm/W	y	= 0,2556
R4	= 46,3						
R5	= 53,5			correlated color temperature (CCT)	13106 K	CIE1976	
R6	= 74,0			Duv	-0,0186	u'	= 0,2042
R7	= 70,0					v'	= 0,4179
R8	= 7,3			Saturation	26,6 %		
R9	= #####					CIE1960	
R10	= 49,1			Dominant wavelength	458 nm	u	= 0,2042
R11	= 35,1			Peak wavelength	458 nm	v	= 0,2786
R12	= 65,2						
R13	= 44,8			Flicker frequency	% < 2.5 Hz	TM30	
R14	= 79,6			Percent Flicker	< 2.5 %	Rf	= 67,0
R15	= 14,9			Flicker index	% < 2.5	Rg	= 115,3

[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	2,86	440	216,71	500	120,04	560	109,03	620	212,27	680	15,12	740	4,07
385	2,53	445	342,33	505	151,95	565	98,89	625	289,66	685	12,93	745	2,88
390	1,88	450	494,42	510	195,73	570	90,82	630	387,65	690	10,14	750	3,32
395	3,49	455	618,14	515	240,33	575	84,66	635	466,42	695	9,98	755	2,04
400	2,68	460	621,20	520	269,30	580	79,73	640	445,19	700	8,65	760	3,46
405	2,74	465	502,67	525	273,13	585	77,58	645	314,19	705	7,92	765	1,88
410	5,91	470	354,54	530	255,15	590	77,95	650	176,97	710	6,06	770	3,53
415	9,42	475	244,87	535	223,51	595	80,75	655	91,80	715	6,60	775	0,93
420	17,55	480	168,02	540	192,40	600	87,97	660	52,70	720	5,32	780	3,55
425	35,97	485	122,42	545	165,36	605	101,54	665	32,09	725	5,23		
430	71,27	490	102,25	550	141,98	610	124,87	670	24,35	730	4,72		
435	128,17	495	102,08	555	124,16	615	160,39	675	18,00	735	2,59		

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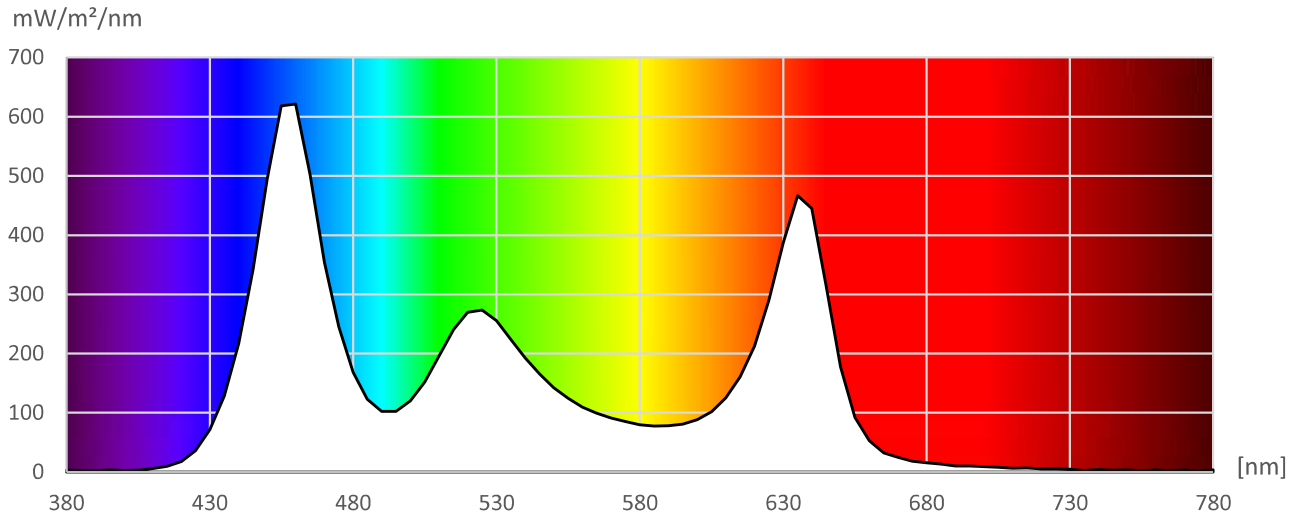
Sebastian Laske

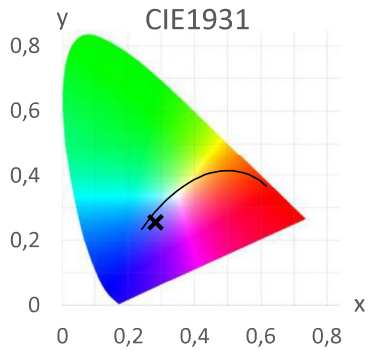
First, last name of inspector

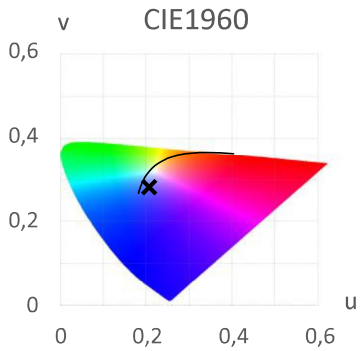
Burgebrach, 11.07.2018

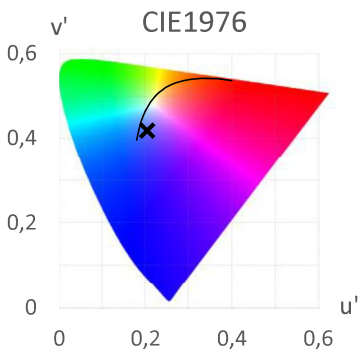
Measurement protocol

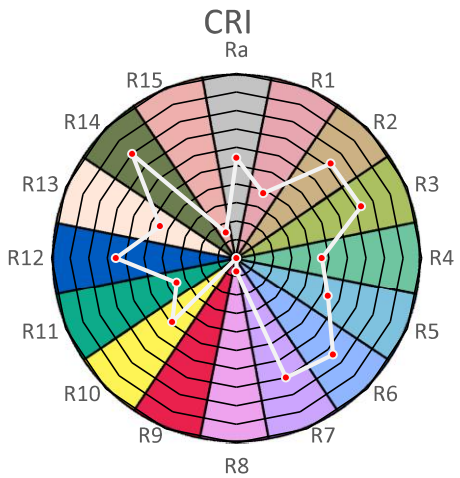
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 1 m / all	Measurement file: Date of measurement: Time of measurement:	281569_1m_all.CS' 11.07.2018 10:14:13

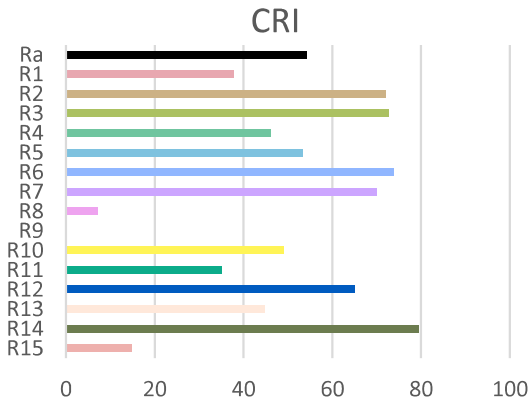












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Burgebrach, 11.07.2018

Sebastian Laske

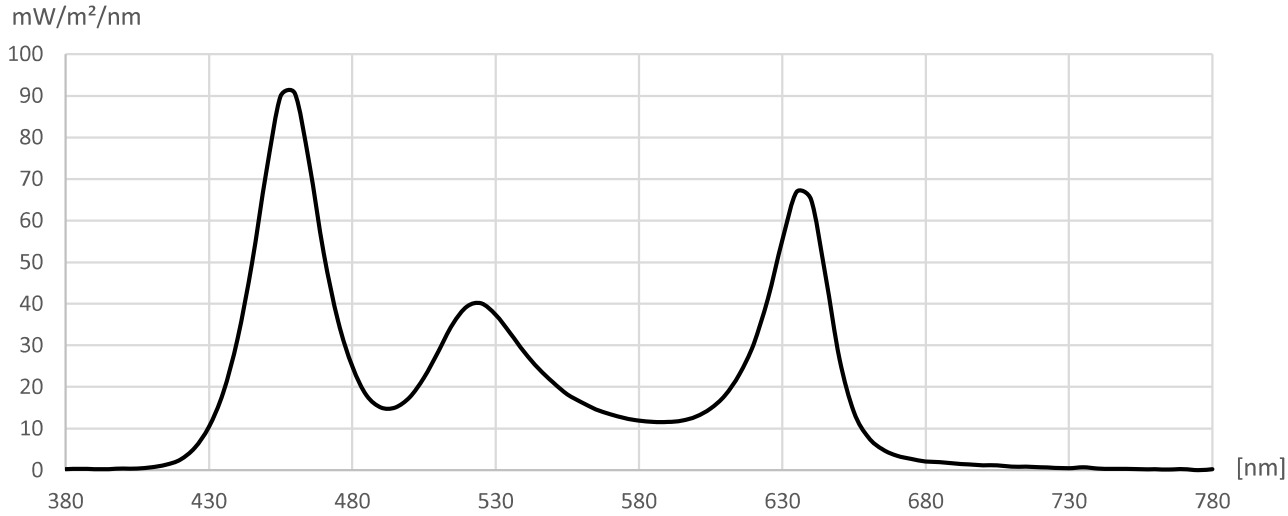
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 3 m / all

Measurement file: 281569_3m_all.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:14:26



R1	= 40,0	Ra	= 55,7	Illuminance	1748,55 lx	CIE1931	
R2	= 73,3	Re	= 38,5	Ee	7,549 W/m²	x	= 0,2806
R3	= 73,3	GAI	= 149,2	LER	231,6 lm/W	y	= 0,2566
R4	= 48,3						
R5	= 55,2			correlated color temperature (CCT)	13060 K	CIE1976	
R6	= 75,2			Duv	-0,0177	u'	= 0,2034
R7	= 70,6					v'	= 0,4185
R8	= 9,5			Saturation	26,5 %		
R9	= #####					CIE1960	
R10	= 51,3			Dominant wavelength	459 nm	u	= 0,2034
R11	= 37,6			Peak wavelength	458 nm	v	= 0,2790
R12	= 65,6						
R13	= 46,6			Flicker frequency	% < 2.5 Hz	TM30	
R14	= 80,0			Percent Flicker	< 2.5 %	Rf	= 67,6
R15	= 17,2			Flicker index	% < 2.5	Rg	= 114,8

[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	0,27	440	31,67	500	17,57	560	16,34	620	30,38	680	2,13	740	0,42
385	0,36	445	49,78	505	22,27	565	14,64	625	41,21	685	1,93	745	0,35
390	0,28	450	71,88	510	28,57	570	13,50	630	55,20	690	1,61	750	0,32
395	0,28	455	89,84	515	35,08	575	12,52	635	66,95	695	1,42	755	0,22
400	0,41	460	90,58	520	39,34	580	11,95	640	65,09	700	1,21	760	0,22
405	0,41	465	73,75	525	40,09	585	11,63	645	46,84	705	1,16	765	0,16
410	0,70	470	52,25	530	37,38	590	11,59	650	26,79	710	0,87	770	0,29
415	1,35	475	35,86	535	33,00	595	11,95	655	14,02	715	0,85	775	0,03
420	2,55	480	24,87	540	28,40	600	12,89	660	7,92	720	0,74	780	0,24
425	5,43	485	18,00	545	24,41	605	14,84	665	4,98	725	0,59		
430	10,41	490	15,09	550	21,12	610	18,02	670	3,48	730	0,50		
435	18,69	495	15,09	555	18,26	615	23,05	675	2,74	735	0,70		

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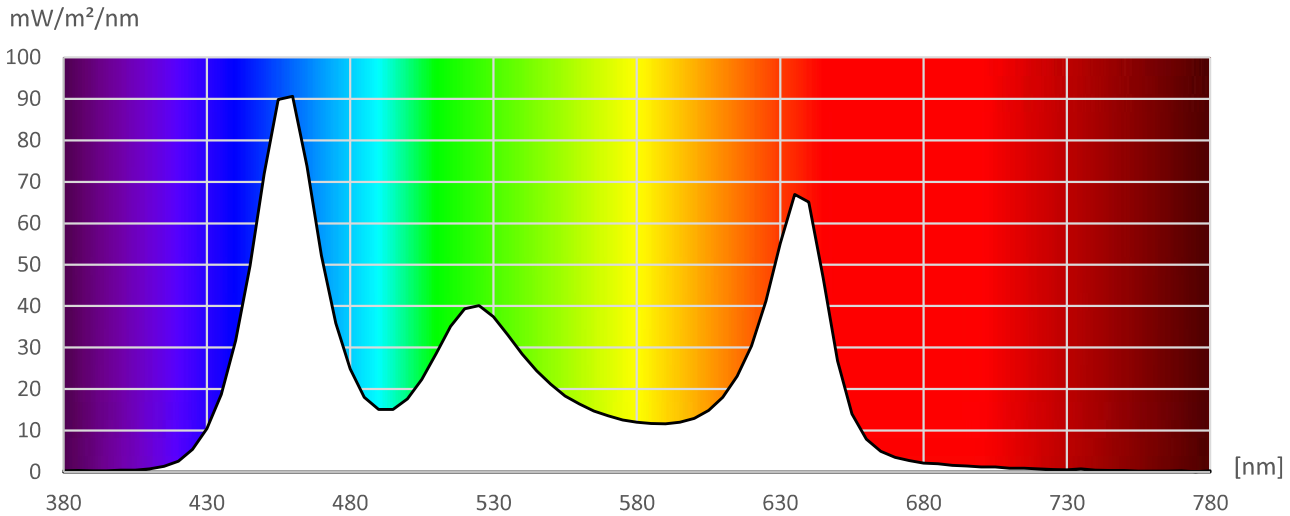
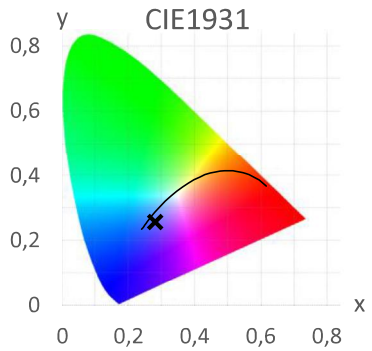
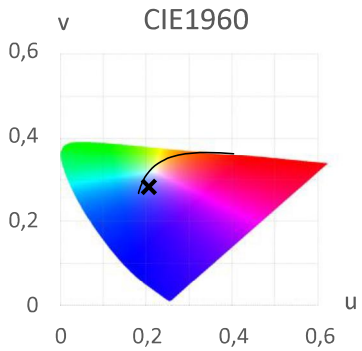
Burgebrach, 11.07.2018

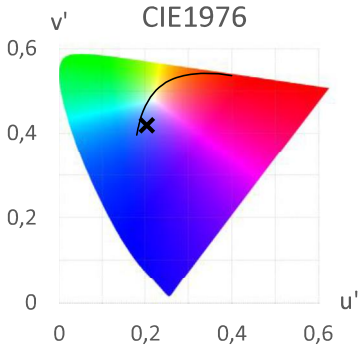
Measurement protocol

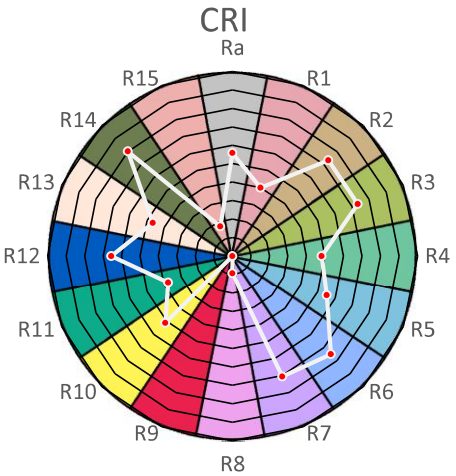
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 3 m / all	Measurement file: Date of measurement: Time of measurement:	281569_3m_all.CS' 11.07.2018 10:14:26

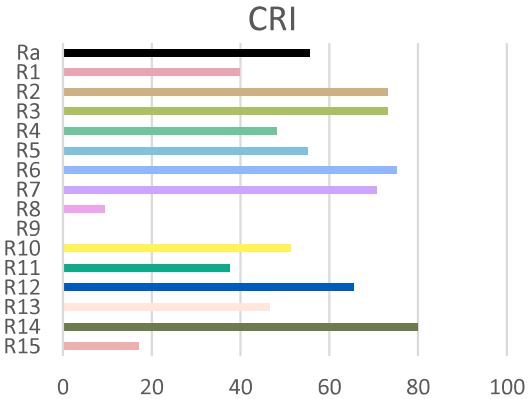












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Burgebrach, 11.07.2018

Sebastian Laske

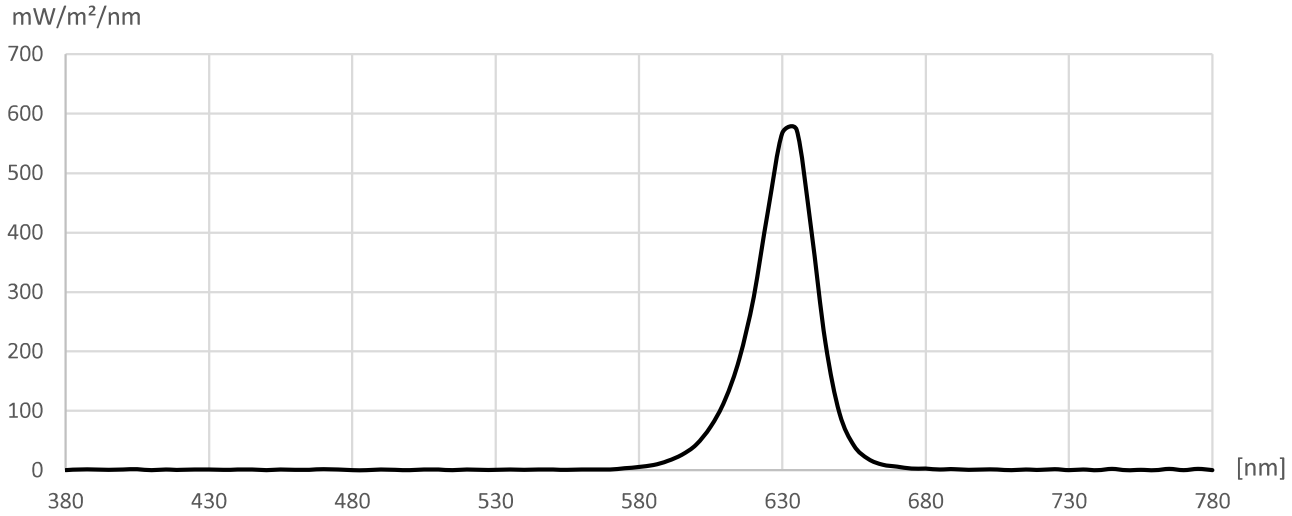
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 1 m / red

Measurement file: 281569_1m_r.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:14:43



R1	=	-	Ra = -	Illuminance	3120,18 lx	CIE1931	
R2	=	-	Re = -	Ee	16,015 W/m²	x =	0,6867
R3	=	-	GAI = -	LER	194,8 lm/W	y =	0,3069
R4	=	-					
R5	=	-		correlated color temperature (CCT)	< 1600 K	CIE1976	
R6	=	-		Duv	-	u' =	0,5173
R7	=	-				v' =	0,5202
R8	=	-		Saturation	97,9 %		
R9	=	-				CIE1960	
R10	=	-		Dominant wavelength	626 nm	u =	0,5173
R11	=	-		Peak wavelength	632 nm	v =	0,3468
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	0,06	440	1,06	500	0,12	560	1,34	620	291,60	680	2,78	740	0,00
385	1,48	445	1,16	505	1,17	565	1,45	625	435,05	685	1,18	745	2,35
390	1,20	450	0,25	510	1,14	570	1,40	630	567,28	690	2,01	750	0,14
395	0,58	455	1,22	515	0,06	575	3,15	635	572,76	695	0,58	755	0,73
400	1,43	460	0,52	520	1,24	580	5,66	640	407,87	700	1,46	760	0,14
405	1,62	465	0,86	525	0,76	585	8,71	645	214,42	705	1,02	765	2,15
410	0,00	470	1,61	530	0,48	590	15,62	650	95,82	710	0,37	770	0,36
415	1,26	475	1,16	535	1,12	595	26,01	655	41,67	715	1,17	775	2,19
420	0,45	480	0,32	540	0,89	600	43,11	660	19,08	720	0,49	780	0,39
425	1,33	485	0,00	545	1,22	605	73,30	665	9,18	725	1,61		
430	1,22	490	1,18	550	1,06	610	118,30	670	5,87	730	0,07		
435	0,58	495	0,57	555	0,53	615	187,83	675	3,01	735	1,46		

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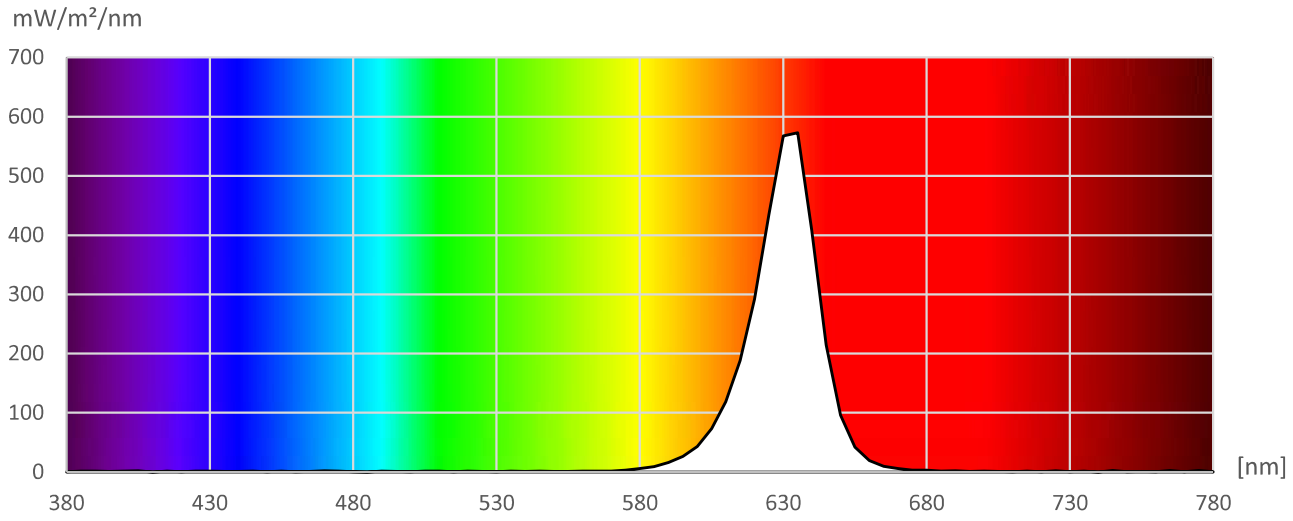
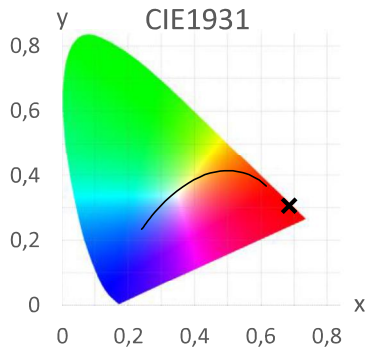
First, last name of inspector

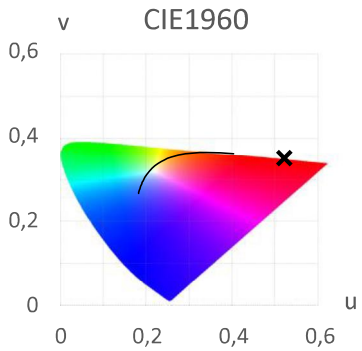
Burgebrach, 11.07.2018

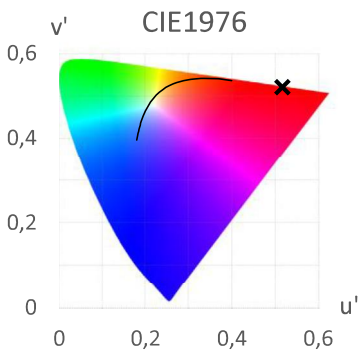
Measurement protocol

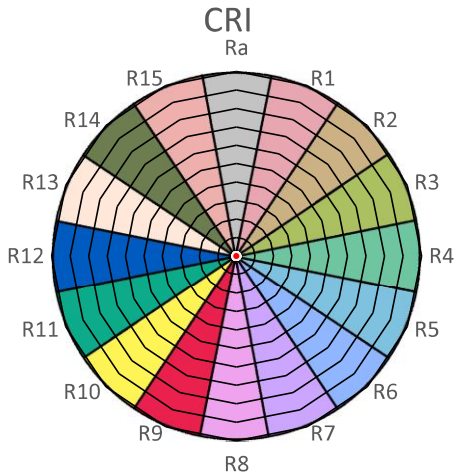
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 1 m / red	Measurement file: Date of measurement: Time of measurement:	281569_1m_r.CSV 11.07.2018 10:14:43

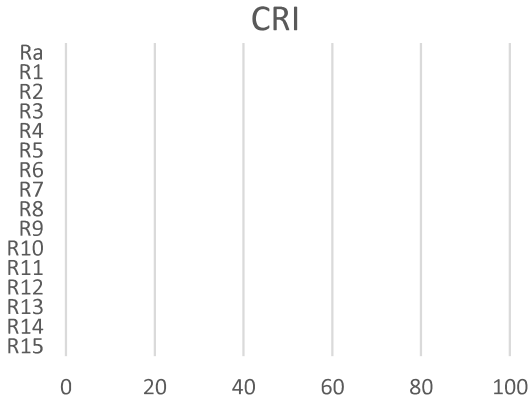












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Burgebrach, 11.07.2018

Sebastian Laske

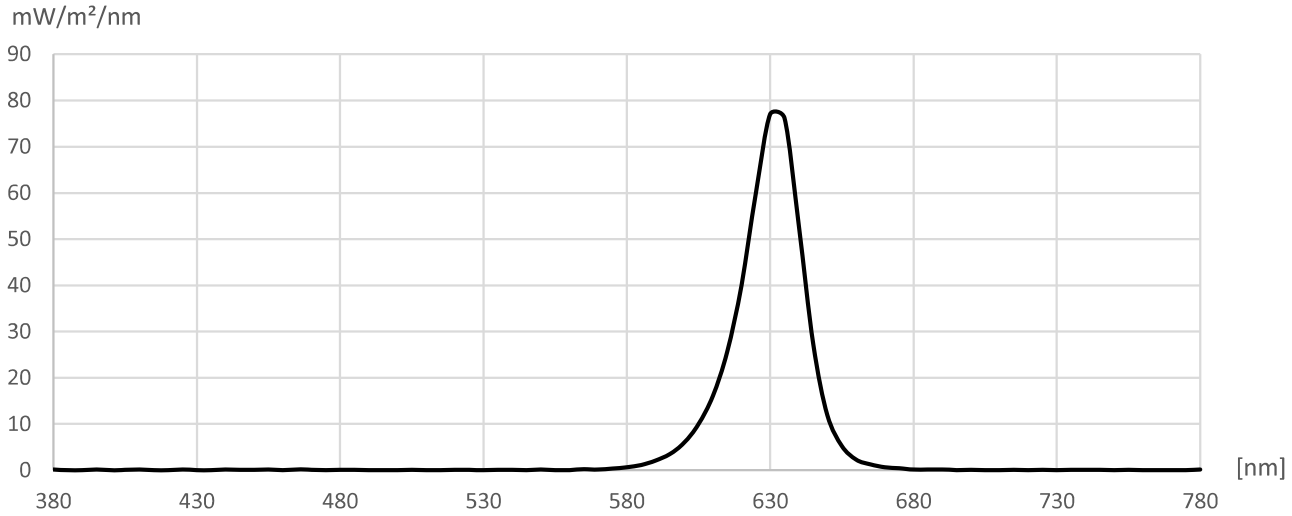
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 3 m / red

Measurement file: 281569_3m_r.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:14:52



R1	=	-	Ra	=	-	Illuminance	418,28 lx
R2	=	-	Re	=	-	Ee	2,124 W/m²
R3	=	-	GAI	=	-	LER	196,9 lm/W
R4	=	-					
R5	=	-				correlated color temperature (CCT)	< 1600 K
R6	=	-				Duv	-
R7	=	-					
R8	=	-				Saturation	98,5 %
R9	=	-					
R10	=	-				Dominant wavelength	626 nm
R11	=	-				Peak wavelength	632 nm
R12	=	-					
R13	=	-				Flicker frequency	% < 2.5 Hz
R14	=	-				Percent Flicker	< 2.5 %
R15	=	-				Flicker index	% < 2.5

CIE1931		
x	=	0,6888
y	=	0,3067
CIE1976		
u'	=	0,5195
v'	=	0,5206
CIE1960		
u	=	0,5195
v	=	0,3470
TM30		
Rf	=	-
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	0,17	440	0,14	500	0,03	560	0,04	620	40,10	680	0,14	740	0,11
385	0,02	445	0,07	505	0,07	565	0,23	625	59,75	685	0,16	745	0,08
390	0,00	450	0,08	510	0,04	570	0,15	630	77,03	690	0,15	750	0,04
395	0,18	455	0,15	515	0,01	575	0,39	635	76,17	695	0,05	755	0,06
400	0,00	460	0,02	520	0,10	580	0,62	640	52,84	700	0,11	760	0,00
405	0,08	465	0,19	525	0,06	585	1,16	645	27,22	705	0,04	765	0,05
410	0,14	470	0,10	530	0,01	590	2,09	650	11,88	710	0,04	770	0,01
415	0,02	475	0,01	535	0,08	595	3,47	655	5,30	715	0,07	775	0,02
420	0,00	480	0,07	540	0,08	600	5,95	660	2,32	720	0,02	780	0,16
425	0,15	485	0,09	545	0,04	605	9,97	665	1,24	725	0,11		
430	0,05	490	0,03	550	0,16	610	16,09	670	0,64	730	0,05		
435	0,00	495	0,04	555	0,03	615	25,68	675	0,42	735	0,10		

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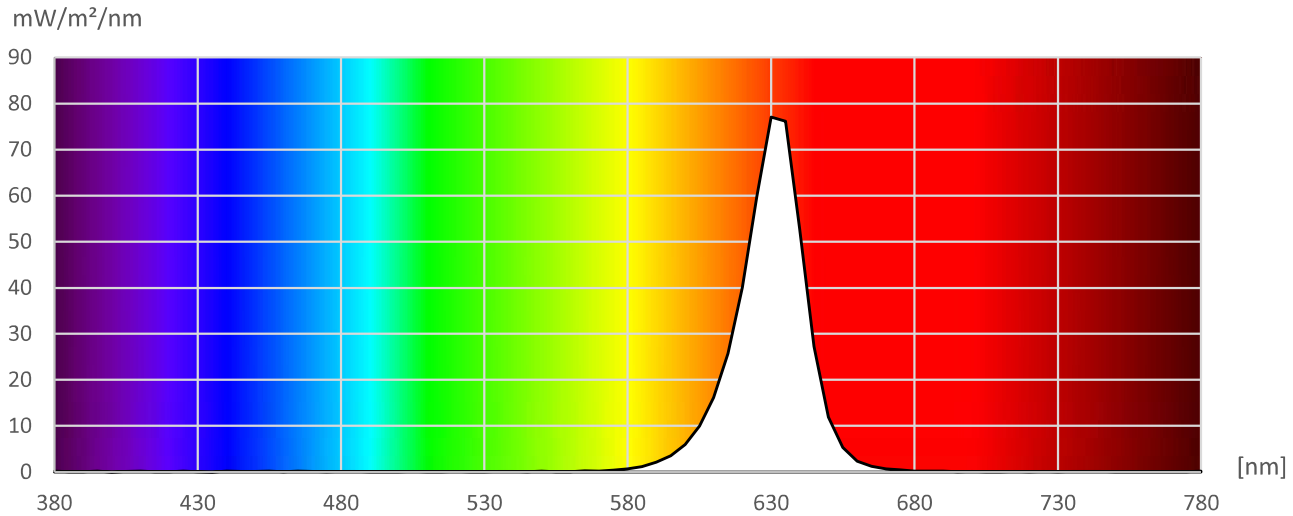
Sebastian Laske

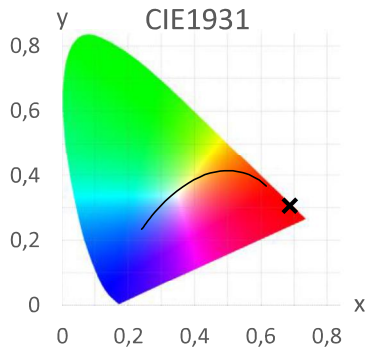
First, last name of inspector

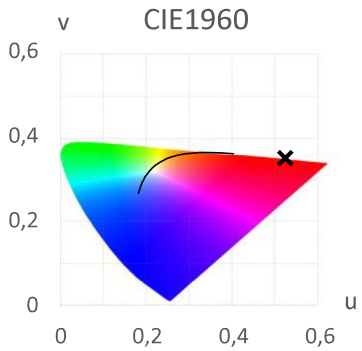
Burgebrach, 11.07.2018

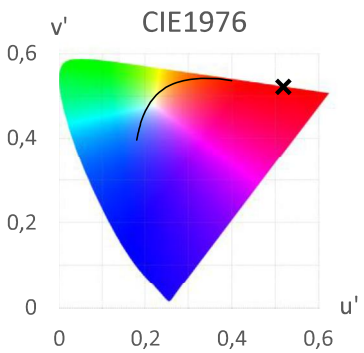
Measurement protocol

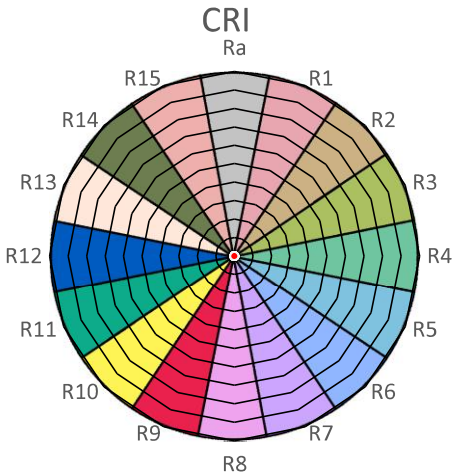
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 3 m / red	Measurement file: Date of measurement: Time of measurement:	281569_3m_r.CSV 11.07.2018 10:14:52

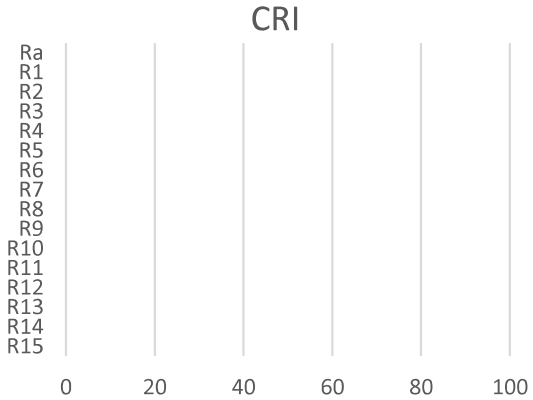












Thomann GmbH
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Burgebrach, 11.07.2018

Sebastian Laske

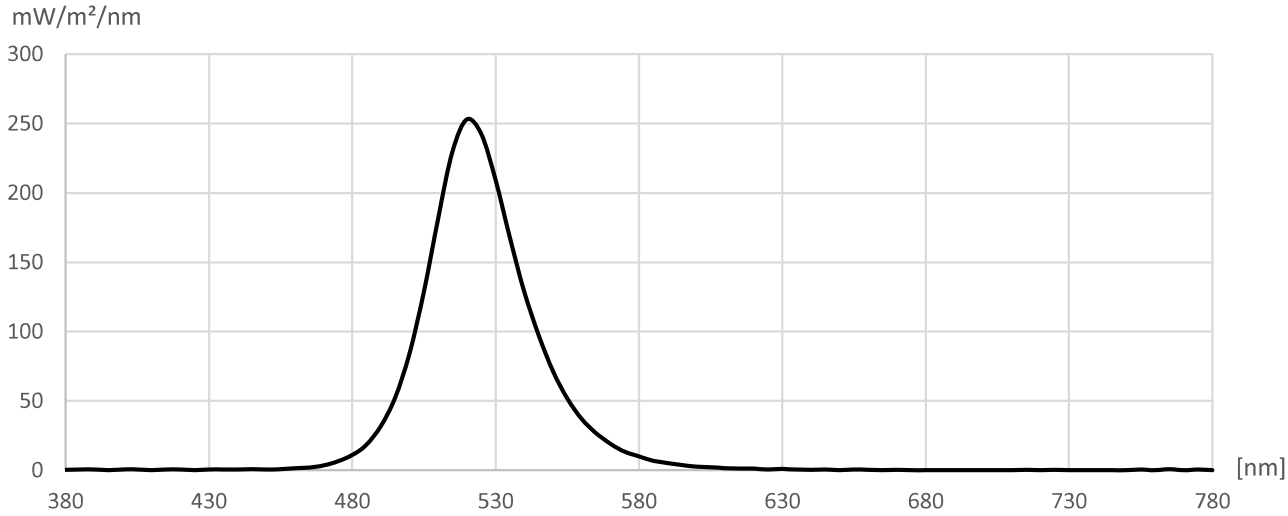
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 1 m / green

Measurement file: 281569_1m_g.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:15:17



R1	= -34,4	Ra	= -20,0	Illuminance	5153,87 lx	CIE1931	
R2	= -4,0	Re	= -50,7	Ee	10,605 W/m²	x	= 0,1730
R3	= -12,4	GAI	= 0,9	LER	486,0 lm/W	y	= 0,7152
R4	= -59,7						
R5	= -8,8			correlated color temperature (CCT)	7818 K	CIE1976	
R6	= -11,1			Duv	0,1559	u'	= 0,0616
R7	= 0,0					v'	= 0,5729
R8	= -29,8			Saturation	76,6 %		
R9	= #####					CIE1960	
R10	= -95,6			Dominant wavelength	524 nm	u	= 0,0616
R11	= -88,4			Peak wavelength	519 nm	v	= 0,3819
R12	= -25,7						
R13	= -38,9			Flicker frequency	% < 2.5 Hz	TM30	
R14	= 44,0			Percent Flicker	< 2.5 %	Rf	= 1,2
R15	= -38,4			Flicker index	% < 2.5	Rg	= 10,4

[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm
380	0,31	440	0,59	500	84,64	560	36,85	620	1,15	680	0,02	740	0,06
385	0,56	445	0,67	505	129,31	565	26,87	625	0,53	685	0,01	745	0,02
390	0,59	450	0,47	510	182,60	570	19,16	630	0,88	690	0,10	750	0,00
395	0,06	455	0,81	515	230,00	575	13,39	635	0,51	695	0,17	755	0,44
400	0,59	460	1,50	520	252,97	580	9,96	640	0,36	700	0,03	760	0,00
405	0,59	465	1,95	525	242,50	585	6,85	645	0,62	705	0,11	765	0,74
410	0,06	470	3,43	530	209,01	590	5,22	650	0,16	710	0,04	770	0,00
415	0,65	475	6,47	535	167,10	595	3,76	655	0,59	715	0,26	775	0,49
420	0,55	480	11,04	540	128,80	600	2,67	660	0,34	720	0,03	780	0,00
425	0,17	485	18,40	545	97,61	605	2,26	665	0,00	725	0,28		
430	0,65	490	31,98	550	71,39	610	1,43	670	0,31	730	0,10		
435	0,45	495	52,57	555	51,78	615	1,34	675	0,00	735	0,10		

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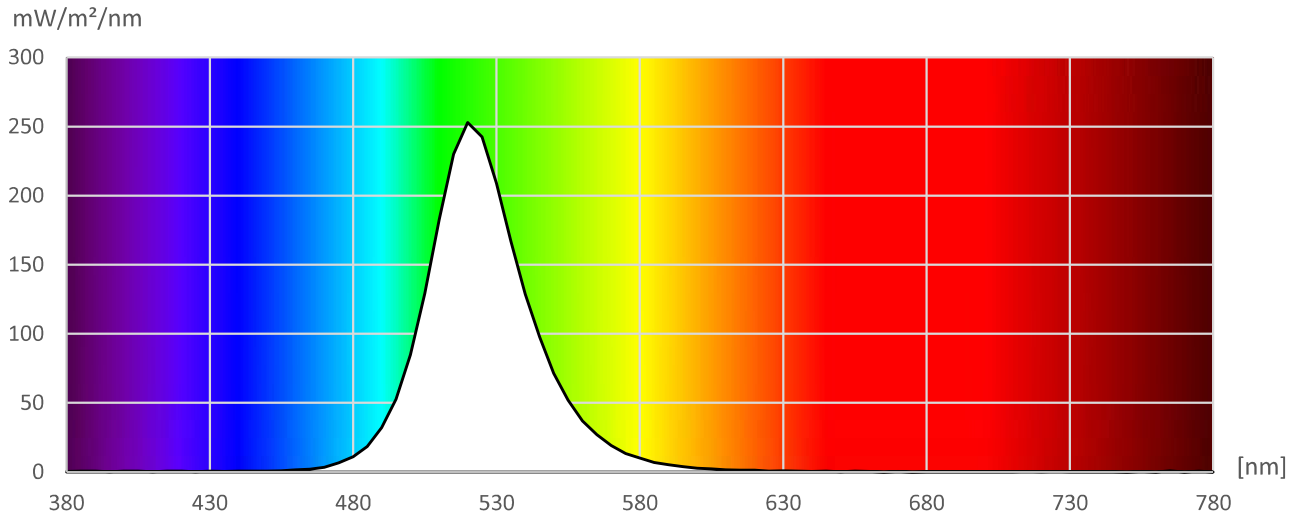
Sebastian Laske

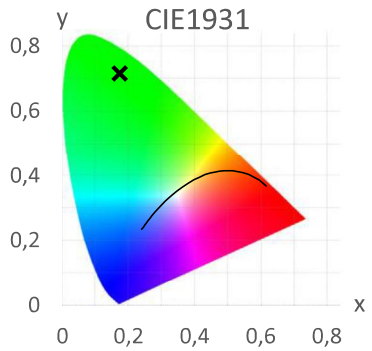
First, last name of inspector

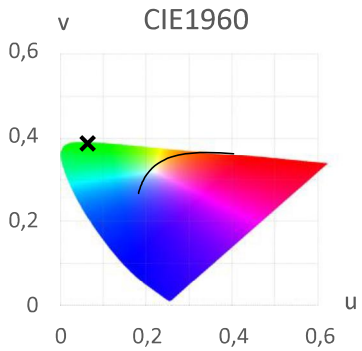
Burgebrach, 11.07.2018

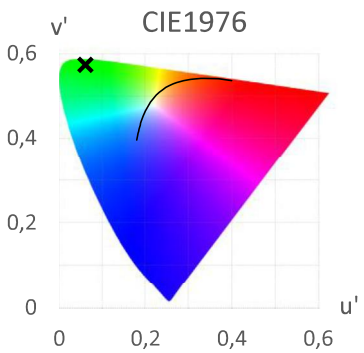
Measurement protocol

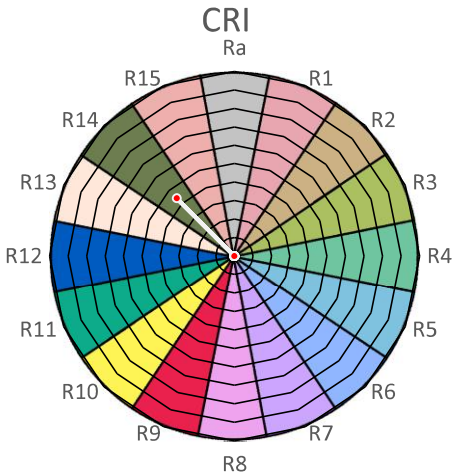
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 1 m / green	Measurement file: Date of measurement: Time of measurement:	281569_1m_g.CSV 11.07.2018 10:15:17

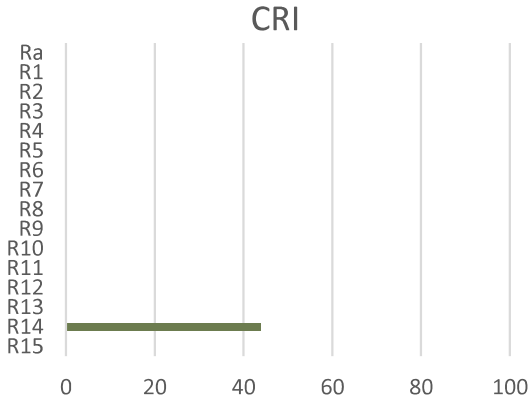












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Burgebrach, 11.07.2018

Sebastian Laske

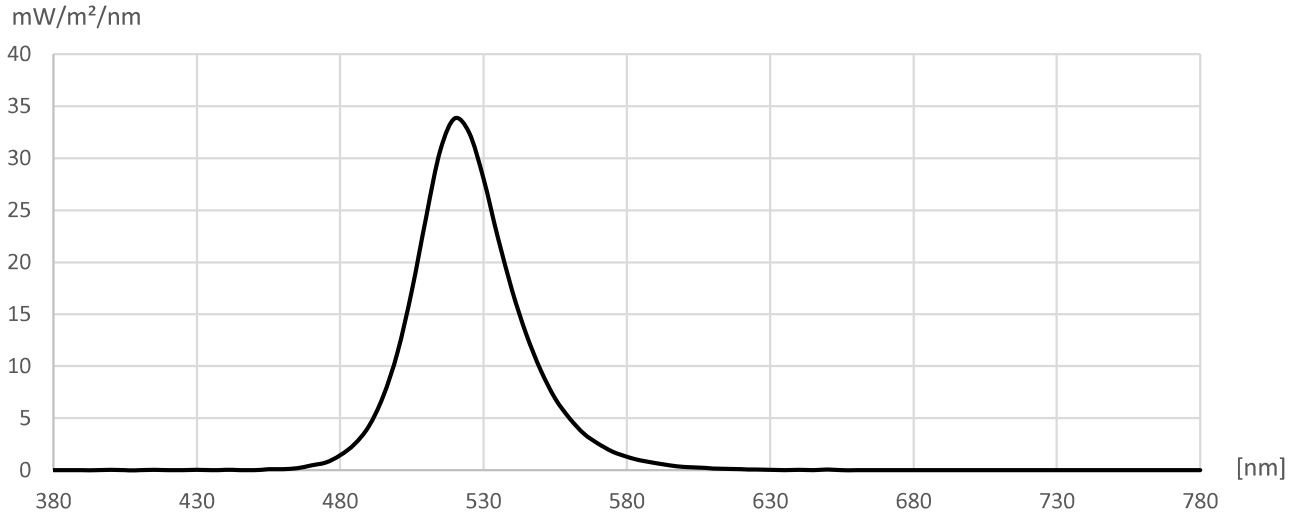
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 3 m / green

Measurement file: 281569_3m_g.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:15:27



R1	= -35,2	Ra	= -22,4	Illuminance	689,05 lx	CIE1931	
R2	= -5,8	Re	= -53,0	Ee	1,409 W/m²	x	= 0,1720
R3	= -16,1	GAI	= 0,7	LER	488,9 lm/W	y	= 0,7189
R4	= -63,0						
R5	= -9,4			correlated color temperature (CCT)	7816 K	CIE1976	
R6	= -12,6			Duv	0,1566	u'	= 0,0610
R7	= -4,3					v'	= 0,5735
R8	= -32,4			Saturation	77,3 %		
R9	= #####					CIE1960	
R10	= -99,0			Dominant wavelength	524 nm	u	= 0,0610
R11	= -91,8			Peak wavelength	519 nm	v	= 0,3823
R12	= -26,9						
R13	= -39,9			Flicker frequency	% < 2.5 Hz	TM30	
R14	= 42,3			Percent Flicker	< 2.5 %	Rf	= 0,9
R15	= -39,3			Flicker index	% < 2.5	Rg	= 9,0

[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	0,03	500	11,33	560	4,99	620	0,09	680	0,00	740	0,00
385	0,02	445	0,02	505	17,30	565	3,51	625	0,08	685	0,00	745	0,00
390	0,00	450	0,01	510	24,40	570	2,57	630	0,04	690	0,00	750	0,00
395	0,00	455	0,09	515	30,79	575	1,80	635	0,02	695	0,00	755	0,00
400	0,04	460	0,11	520	33,82	580	1,30	640	0,03	700	0,00	760	0,00
405	0,00	465	0,19	525	32,46	585	0,93	645	0,00	705	0,00	765	0,00
410	0,00	470	0,47	530	28,02	590	0,69	650	0,06	710	0,00	770	0,00
415	0,04	475	0,75	535	22,35	595	0,47	655	0,00	715	0,00	775	0,00
420	0,00	480	1,44	540	17,29	600	0,32	660	0,00	720	0,00	780	0,00
425	0,01	485	2,50	545	13,04	605	0,27	665	0,00	725	0,00		
430	0,04	490	4,21	550	9,59	610	0,16	670	0,00	730	0,00		
435	0,00	495	7,10	555	6,90	615	0,14	675	0,00	735	0,00		

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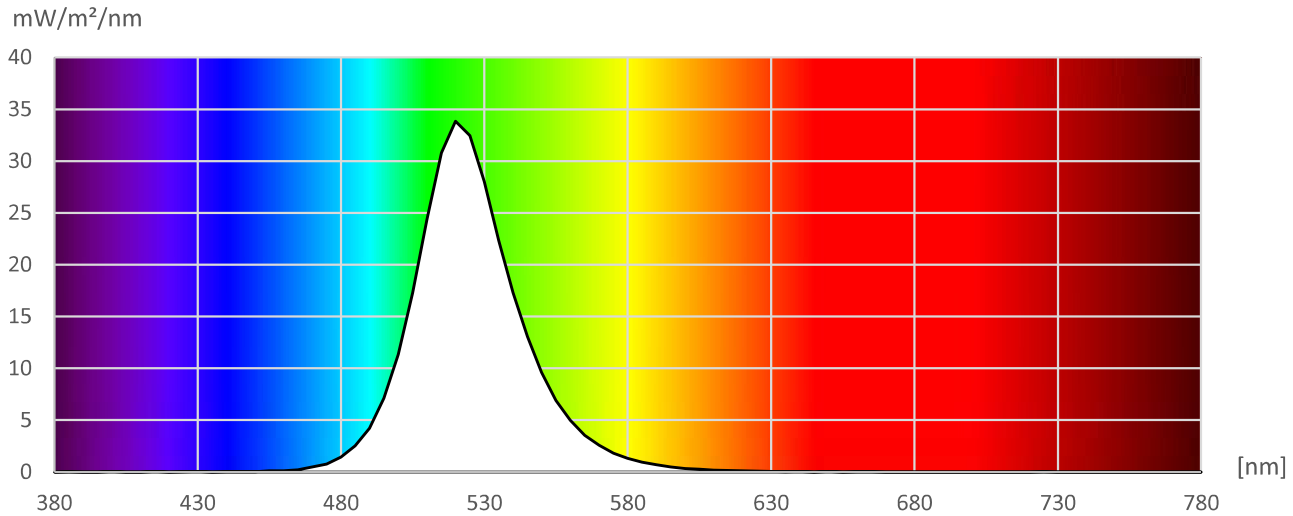
Sebastian Laske

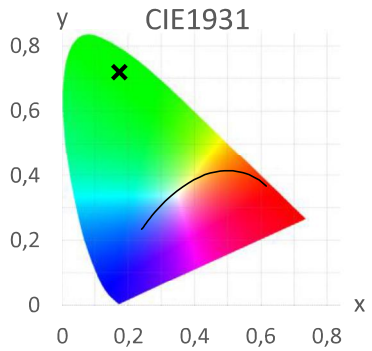
First, last name of inspector

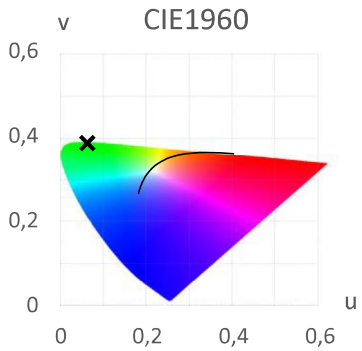
Burgebrach, 11.07.2018

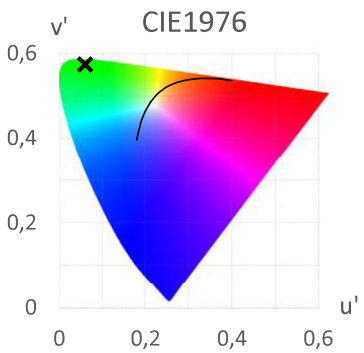
Measurement protocol

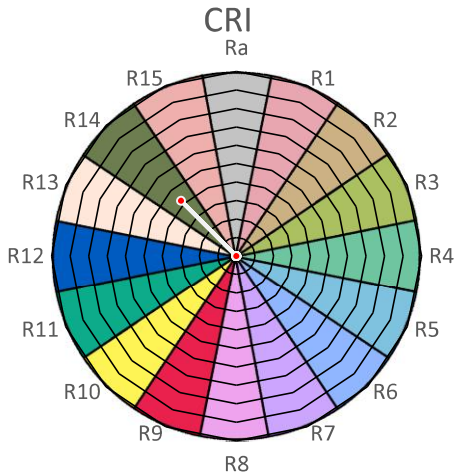
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 3 m / green	Measurement file: Date of measurement: Time of measurement:	281569_3m_g.CSV 11.07.2018 10:15:27

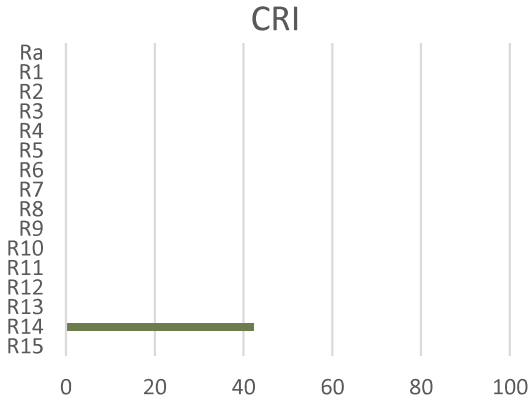












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Burgebrach, 11.07.2018

Sebastian Laske

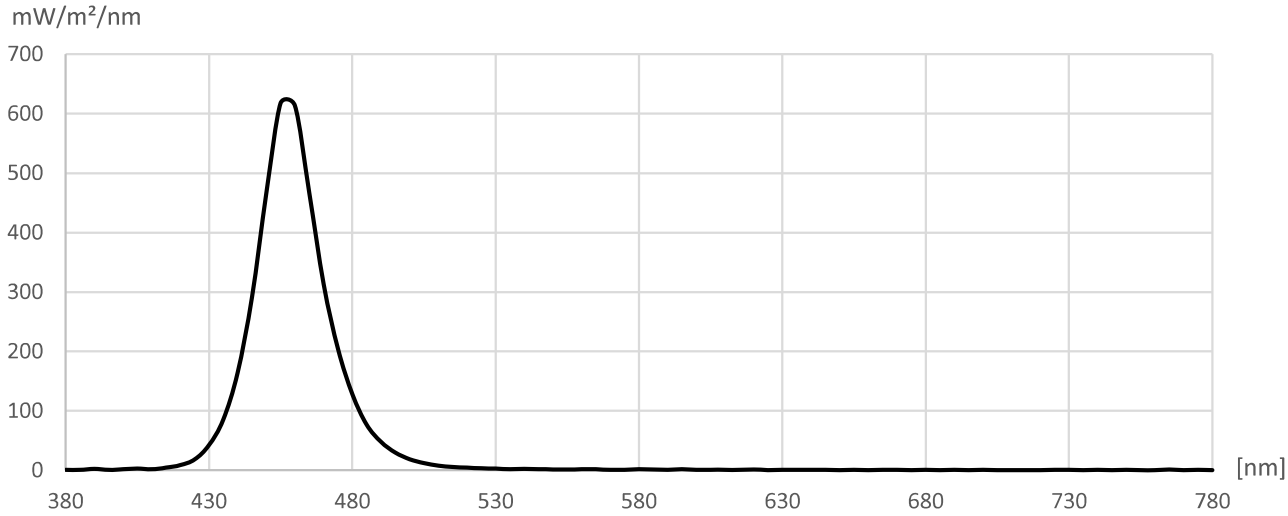
First, last name of inspector

Measurement protocol

thomann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 1 m / blue

Measurement file: 281569_1m_b.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:15:47



R1	= -	Ra	= -	Illuminance	956,88 lx	CIE1931	
R2	= -	Re	= -	Ee	18,393 W/m²	x	= 0,1456
R3	= -	GAI	= -	LER	52,0 lm/W	y	= 0,0414
R4	= -						
R5	= -			correlated color temperature (CCT)	> 50000 K	CIE1976	
R6	= -			Duv	-	u'	= 0,1816
R7	= -					v'	= 0,1163
R8	= -			Saturation	97,6 %		
R9	= -					CIE1960	
R10	= -			Dominant wavelength	454 nm	u	= 0,1816
R11	= -			Peak wavelength	458 nm	v	= 0,0775
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	0,75	440	163,99	500	18,48	560	1,61	620	1,46	680	0,78	740	0,77
385	0,58	445	291,26	505	11,99	565	1,62	625	0,44	685	0,15	745	0,16
390	2,13	450	467,05	510	7,72	570	0,76	630	0,84	690	0,72	750	0,82
395	0,49	455	617,17	515	5,57	575	0,73	635	0,73	695	0,15	755	0,28
400	1,65	460	613,72	520	4,30	580	1,83	640	0,50	700	0,70	760	0,00
405	2,65	465	466,88	525	3,22	585	1,19	645	0,76	705	0,00	765	1,27
410	1,61	470	313,04	530	2,77	590	0,61	650	0,00	710	0,23	770	0,00
415	4,28	475	203,81	535	1,87	595	1,65	655	0,75	715	0,00	775	0,92
420	8,66	480	127,77	540	2,12	600	0,75	660	0,29	720	0,32	780	0,07
425	18,19	485	77,13	545	1,90	605	0,77	665	0,71	725	0,58		
430	41,85	490	47,89	550	1,51	610	0,94	670	0,66	730	0,64		
435	85,13	495	29,77	555	1,10	615	0,49	675	0,05	735	0,00		

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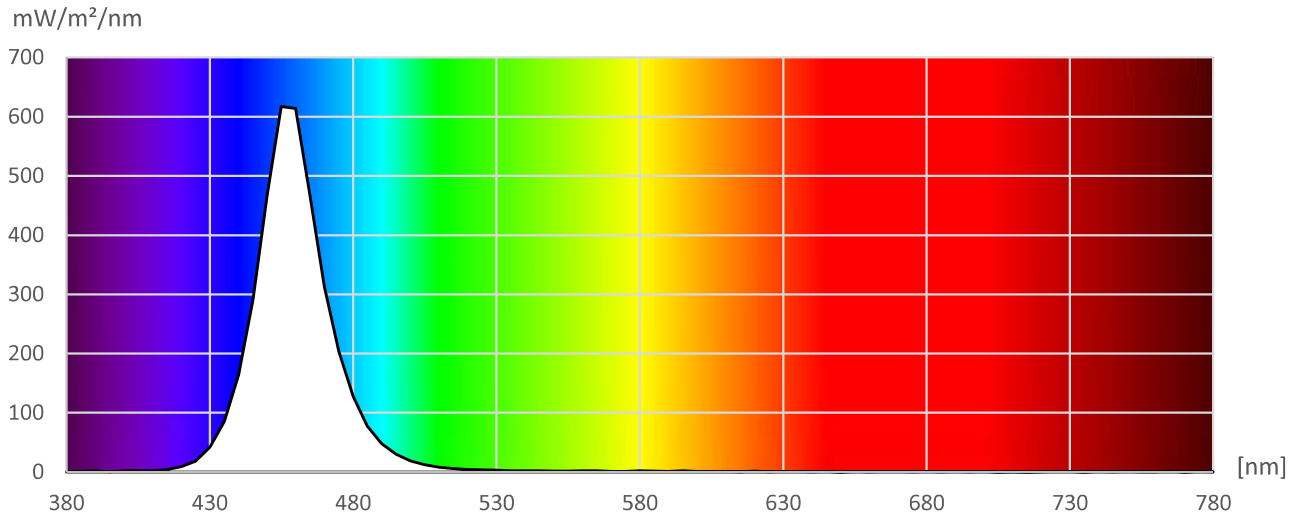
Sebastian Laske

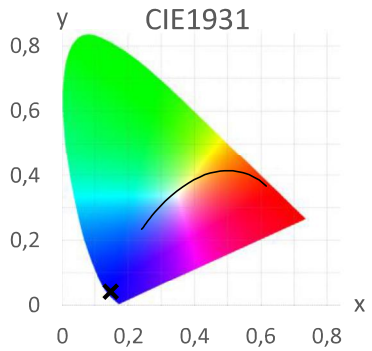
First, last name of inspector

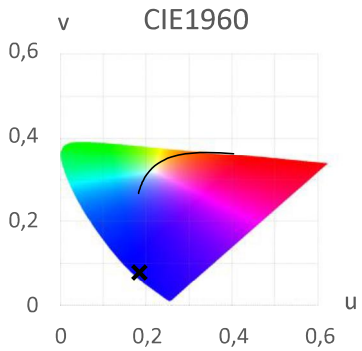
Burgebrach, 11.07.2018

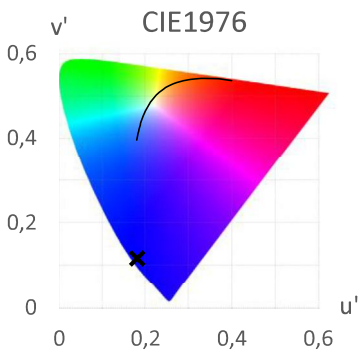
Measurement protocol

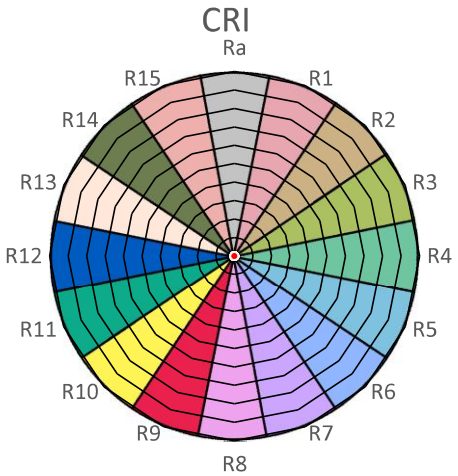
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 1 m / blue	Measurement file: Date of measurement: Time of measurement:	281569_1m_b.CSV 11.07.2018 10:15:47

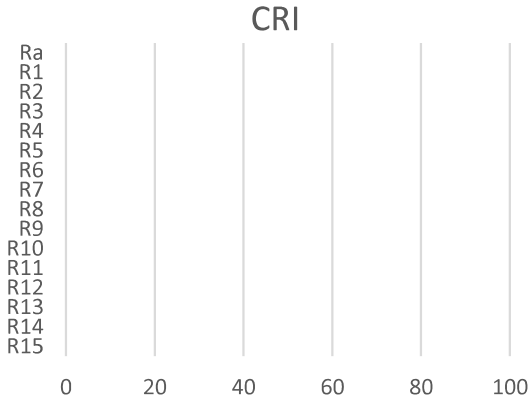












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Burgebrach, 11.07.2018

Sebastian Laske

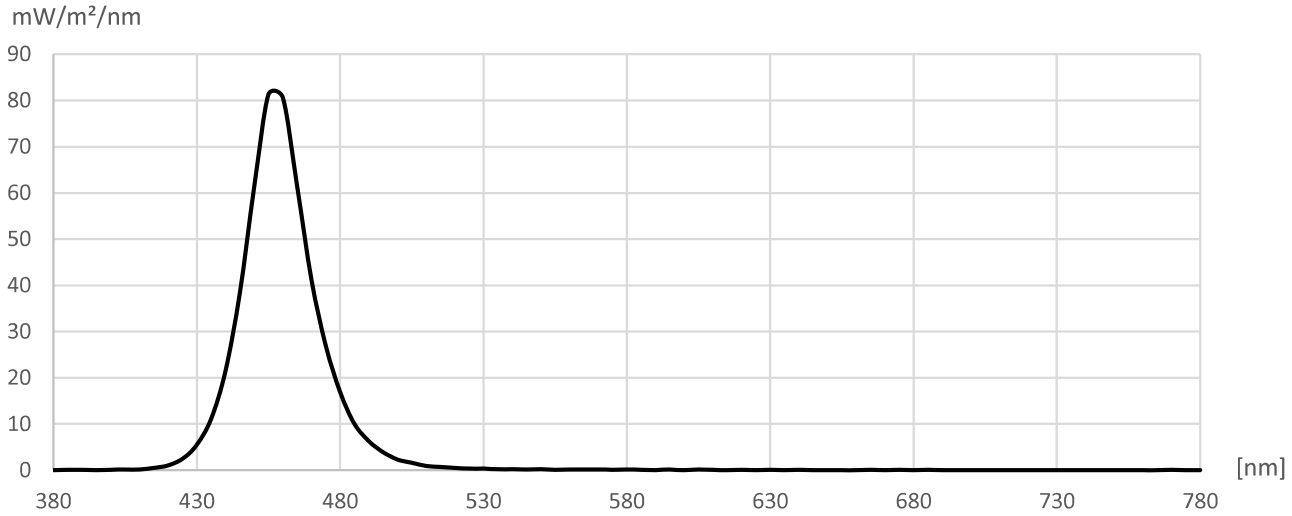
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 3 m / blue

Measurement file: 281569_3m_b.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:16:00



R1	=	-	Ra	=	-	Illuminance	123,27 lx
R2	=	-	Re	=	-	Ee	2,404 W/m²
R3	=	-	GAI	=	-	LER	51,3 lm/W
R4	=	-					
R5	=	-				correlated color temperature (CCT)	> 50000 K
R6	=	-				Duv	-
R7	=	-					
R8	=	-				Saturation	97,9 %
R9	=	-					
R10	=	-				Dominant wavelength	454 nm
R11	=	-				Peak wavelength	458 nm
R12	=	-					
R13	=	-				Flicker frequency	% < 2.5 Hz
R14	=	-				Percent Flicker	< 2.5 %
R15	=	-				Flicker index	% < 2.5

CIE1931		
x	=	0,1451
y	=	0,0407
CIE1976		
u'	=	0,1815
v'	=	0,1144
CIE1960		
u	=	0,1815
v	=	0,0763
TM30		
Rf	=	-
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	0,00	440	21,47	500	2,33	560	0,16	620	0,12	680	0,00	740	0,00
385	0,08	445	38,37	505	1,58	565	0,14	625	0,01	685	0,07	745	0,00
390	0,09	450	61,37	510	0,95	570	0,19	630	0,11	690	0,00	750	0,00
395	0,00	455	81,26	515	0,70	575	0,12	635	0,00	695	0,00	755	0,00
400	0,13	460	80,65	520	0,52	580	0,15	640	0,11	700	0,00	760	0,00
405	0,14	465	61,49	525	0,35	585	0,11	645	0,03	705	0,04	765	0,00
410	0,15	470	41,17	530	0,35	590	0,06	650	0,02	710	0,00	770	0,10
415	0,52	475	26,86	535	0,21	595	0,13	655	0,00	715	0,00	775	0,00
420	1,07	480	16,85	540	0,24	600	0,02	660	0,00	720	0,00	780	0,04
425	2,50	485	10,06	545	0,15	605	0,15	665	0,08	725	0,00		
430	5,49	490	6,29	550	0,22	610	0,07	670	0,00	730	0,00		
435	11,09	495	3,92	555	0,10	615	0,00	675	0,08	735	0,00		

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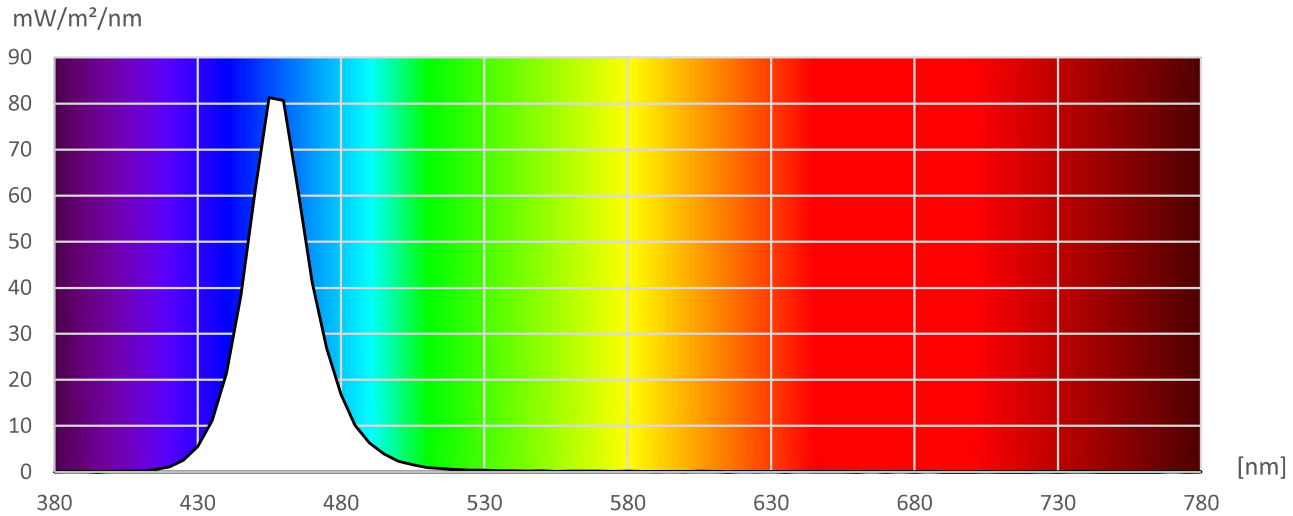
Sebastian Laske

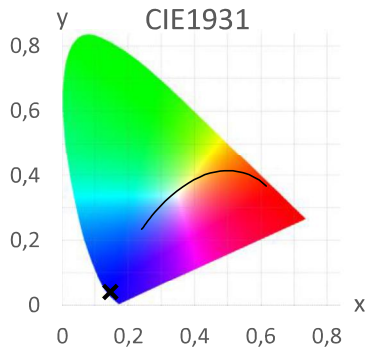
First, last name of inspector

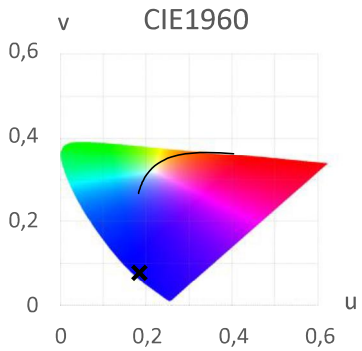
Burgebrach, 11.07.2018

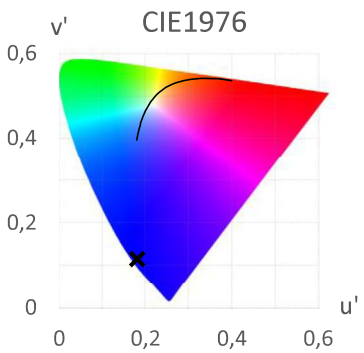
Measurement protocol

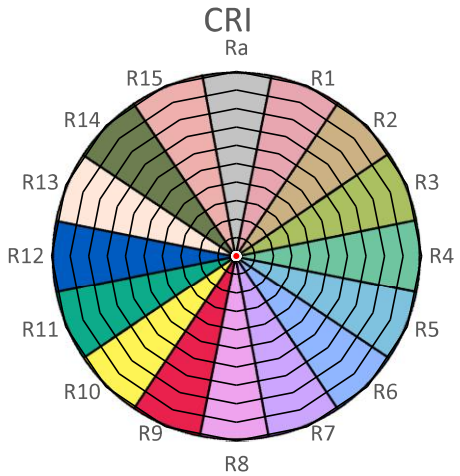
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 3 m / blue	Measurement file: Date of measurement: Time of measurement:	281569_3m_b.CSV 11.07.2018 10:16:00

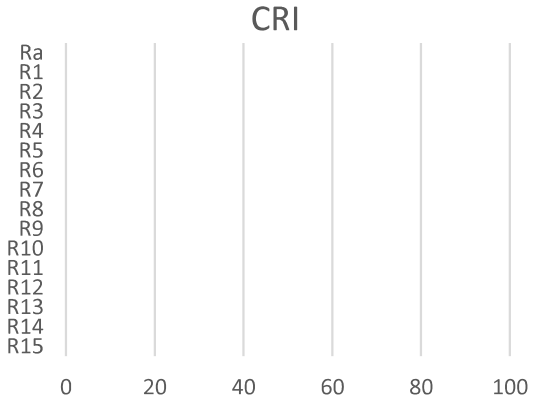












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Burgebrach, 11.07.2018

Sebastian Laske

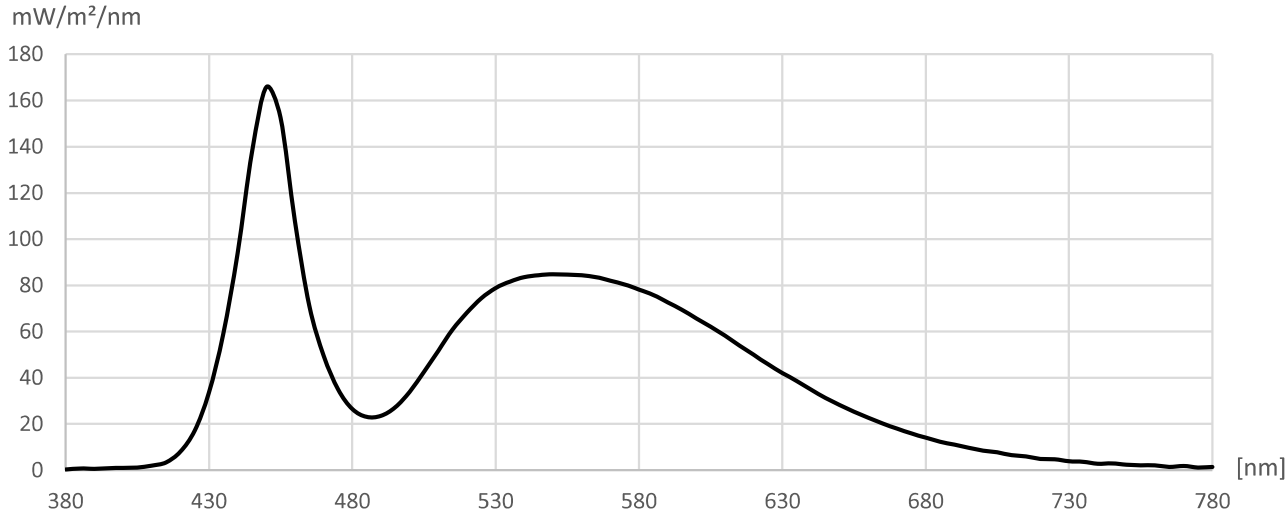
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 1 m / cw

Measurement file: 281569_1m_cw.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:16:35



R1	= 73,2	Ra	= 75,0	Illuminance	5094,15 lx	CIE1931	
R2	= 78,9	Re	= 65,3	Ee	16,113 W/m²	x	= 0,3125
R3	= 80,1	GAI	= 86,8	LER	316,1 lm/W	y	= 0,3273
R4	= 75,5						
R5	= 73,6			correlated color temperature (CCT)	6527 K	CIE1976	
R6	= 69,8			Duv	0,0024	u'	= 0,1984
R7	= 84,1					v'	= 0,4674
R8	= 64,8			Saturation	7,5 %		
R9	= -14,8					CIE1960	
R10	= 47,1			Dominant wavelength	485 nm	u	= 0,1984
R11	= 71,9			Peak wavelength	451 nm	v	= 0,3116
R12	= 43,0						
R13	= 74,1			Flicker frequency	% < 2.5 Hz	TM30	
R14	= 88,7			Percent Flicker	< 2.5 %	Rf	= 71,9
R15	= 69,2			Flicker index	% < 2.5	Rg	= 93,9

[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	0,27	440	93,93	500	33,94	560	84,31	620	49,97	680	14,13	740	2,84
385	0,79	445	137,76	505	42,65	565	83,58	625	45,90	685	12,36	745	2,99
390	0,59	450	165,85	510	51,69	570	81,97	630	42,11	690	11,08	750	2,33
395	0,89	455	152,59	515	60,85	575	80,40	635	38,63	695	9,73	755	2,15
400	1,05	460	107,89	520	68,14	580	78,15	640	34,91	700	8,54	760	2,10
405	1,17	465	71,22	525	74,36	585	75,82	645	31,23	705	7,72	765	1,49
410	2,04	470	49,55	530	78,82	590	72,62	650	28,31	710	6,54	770	1,84
415	3,42	475	35,02	535	81,64	595	69,47	655	25,35	715	5,99	775	1,21
420	8,03	480	26,43	540	83,54	600	65,66	660	22,79	720	4,91	780	1,49
425	17,23	485	23,12	545	84,39	605	62,05	665	20,23	725	4,72		
430	33,50	490	23,49	550	84,79	610	58,17	670	18,00	730	3,87		
435	58,92	495	27,26	555	84,62	615	53,98	675	15,90	735	3,69		

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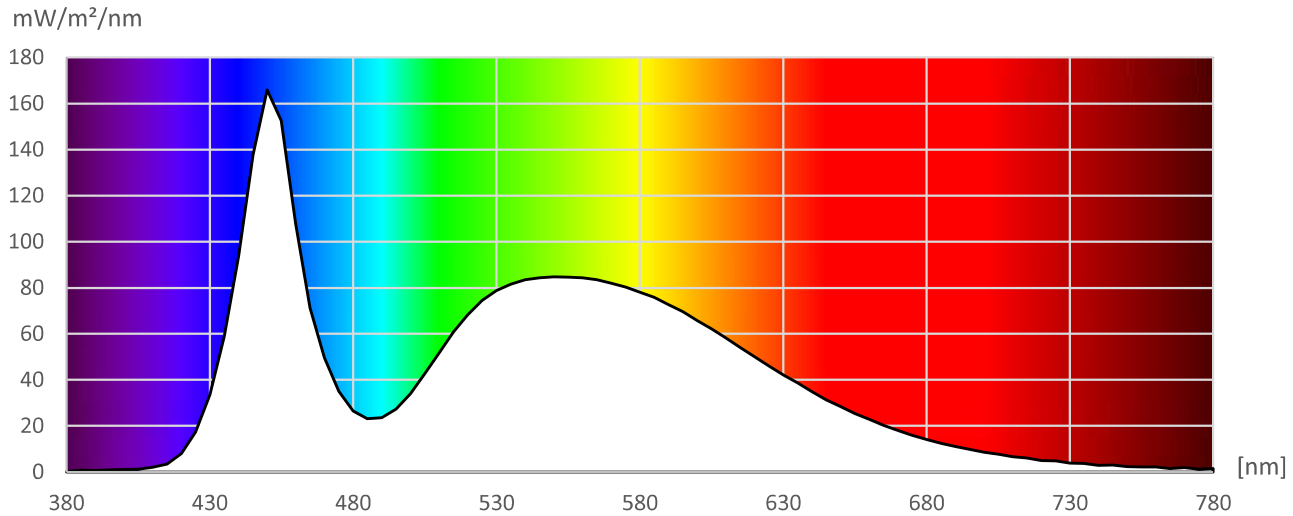
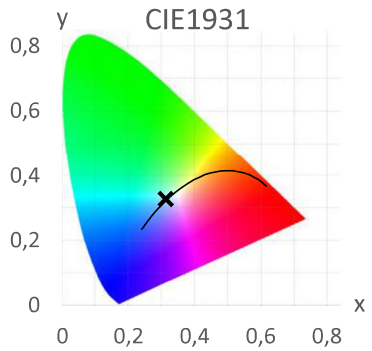
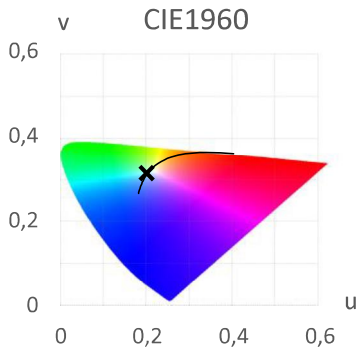
Burgebrach, 11.07.2018

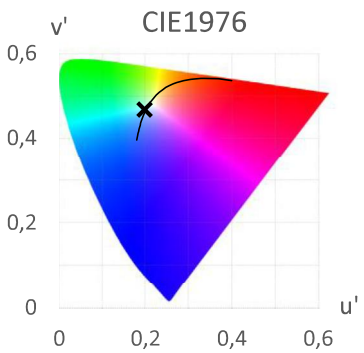
Measurement protocol

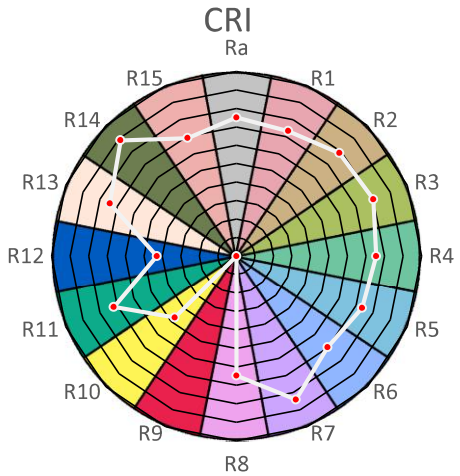
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 1 m / cw	Measurement file: Date of measurement: Time of measurement:	281569_1m_cw.CS 11.07.2018 10:16:35

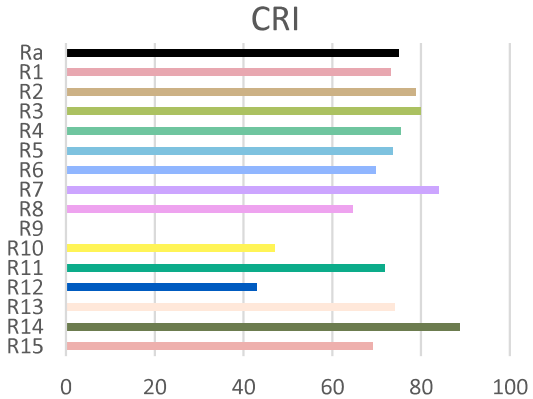












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Burgebrach, 11.07.2018

Sebastian Laske

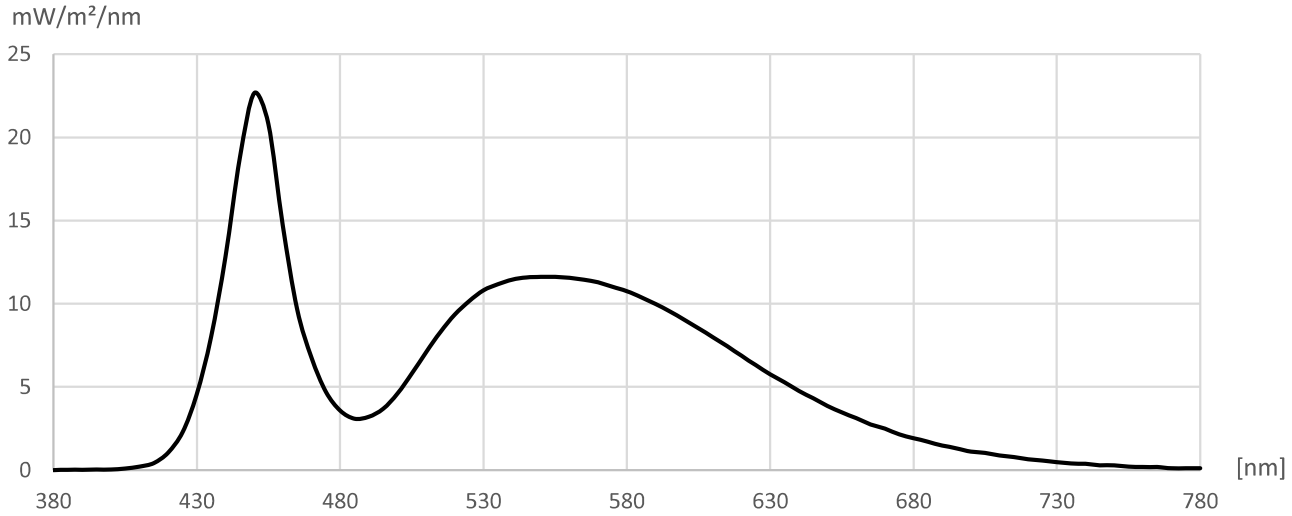
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
LED Par 64 CX-3 RGBW 18x8W
Item 281569 / @ 3 m / cw

Measurement file: 281569_3m_cw.CSV
Date of measurement: 11.07.2018
Time of measurement: 10:16:52



R1	= 73,0	Ra	= 74,9	Illuminance	698,73 lx	CIE1931	
R2	= 78,8	Re	= 65,1	Ee	2,198 W/m²	x	= 0,3132
R3	= 80,1	GAI	= 86,6	LER	317,9 lm/W	y	= 0,3280
R4	= 75,4						
R5	= 73,5			correlated color temperature (CCT)	6481 K	CIE1976	
R6	= 69,7			Duv	0,0024	u'	= 0,1986
R7	= 84,1					v'	= 0,4679
R8	= 64,5			Saturation	7,2 %		
R9	= -15,4					CIE1960	
R10	= 47,0			Dominant wavelength	485 nm	u	= 0,1986
R11	= 71,7			Peak wavelength	451 nm	v	= 0,3119
R12	= 42,8						
R13	= 74,0			Flicker frequency	% < 2.5 Hz	TM30	
R14	= 88,7			Percent Flicker	< 2.5 %	Rf	= 71,8
R15	= 69,0			Flicker index	% < 2.5	Rg	= 93,9

[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	0,01	440	12,83	500	4,61	560	11,55	620	6,87	680	1,93	740	0,38
385	0,03	445	18,77	505	5,82	565	11,45	625	6,32	685	1,71	745	0,30
390	0,02	450	22,67	510	7,10	570	11,29	630	5,77	690	1,49	750	0,30
395	0,05	455	20,82	515	8,30	575	11,02	635	5,29	695	1,32	755	0,22
400	0,04	460	14,72	520	9,36	580	10,76	640	4,78	700	1,12	760	0,19
405	0,10	465	9,68	525	10,16	585	10,40	645	4,32	705	1,04	765	0,19
410	0,21	470	6,77	530	10,81	590	9,99	650	3,87	710	0,88	770	0,12
415	0,44	475	4,72	535	11,17	595	9,55	655	3,47	715	0,79	775	0,12
420	1,07	480	3,58	540	11,46	600	9,05	660	3,13	720	0,67	780	0,13
425	2,29	485	3,11	545	11,59	605	8,54	665	2,76	725	0,58		
430	4,56	490	3,21	550	11,62	610	8,00	670	2,49	730	0,49		
435	8,01	495	3,70	555	11,62	615	7,45	675	2,15	735	0,40		

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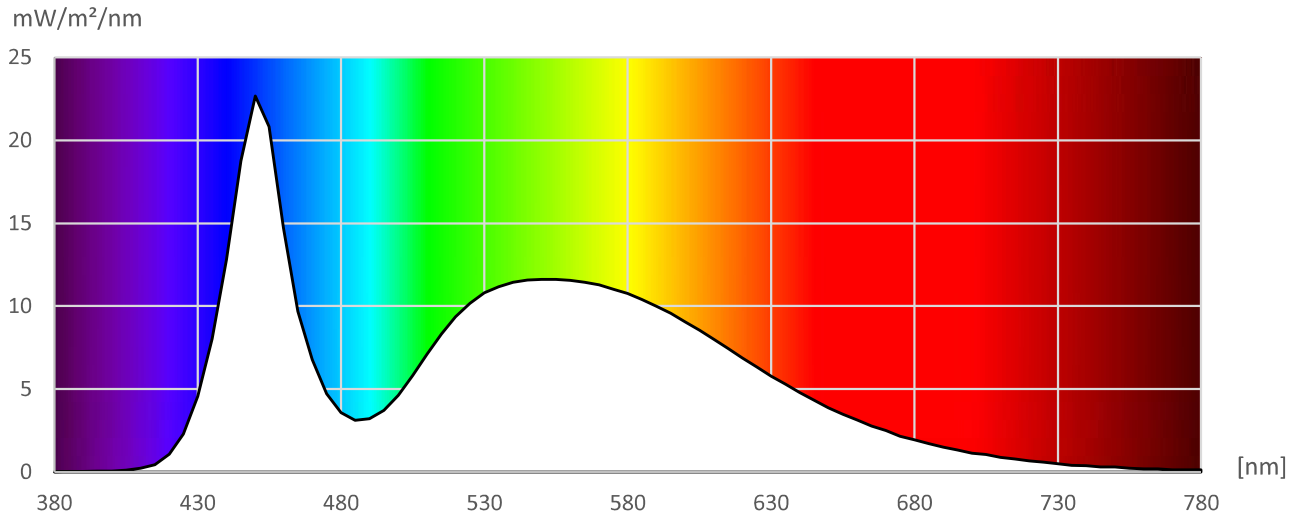
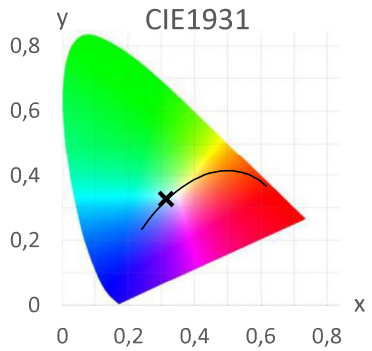
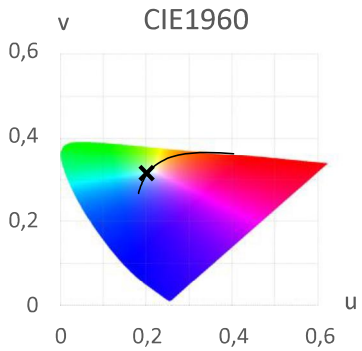
Burgebrach, 11.07.2018

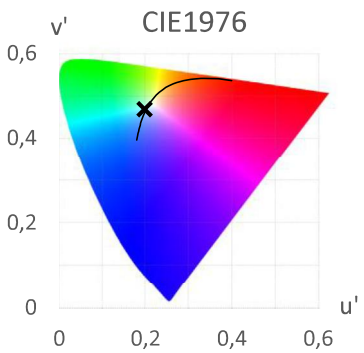
Measurement protocol

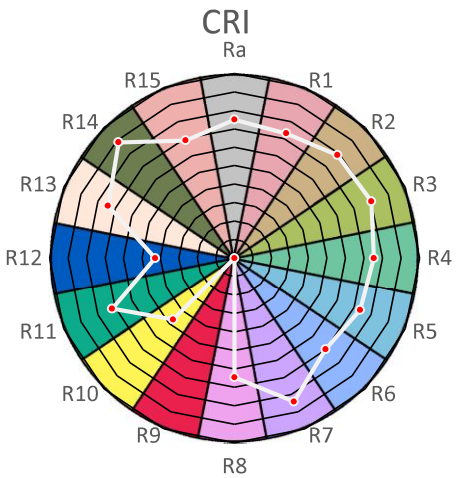
Test object:	Stairville LED Par 64 CX-3 RGBW 18x8W Item 281569 / @ 3 m / cw	Measurement file: Date of measurement: Time of measurement:	281569_3m_cw.CS 11.07.2018 10:16:52

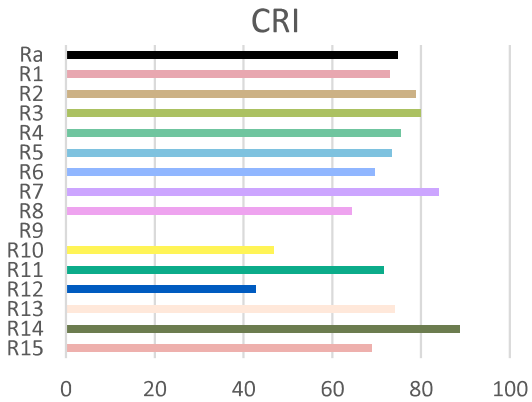












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Burgebrach, 11.07.2018

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