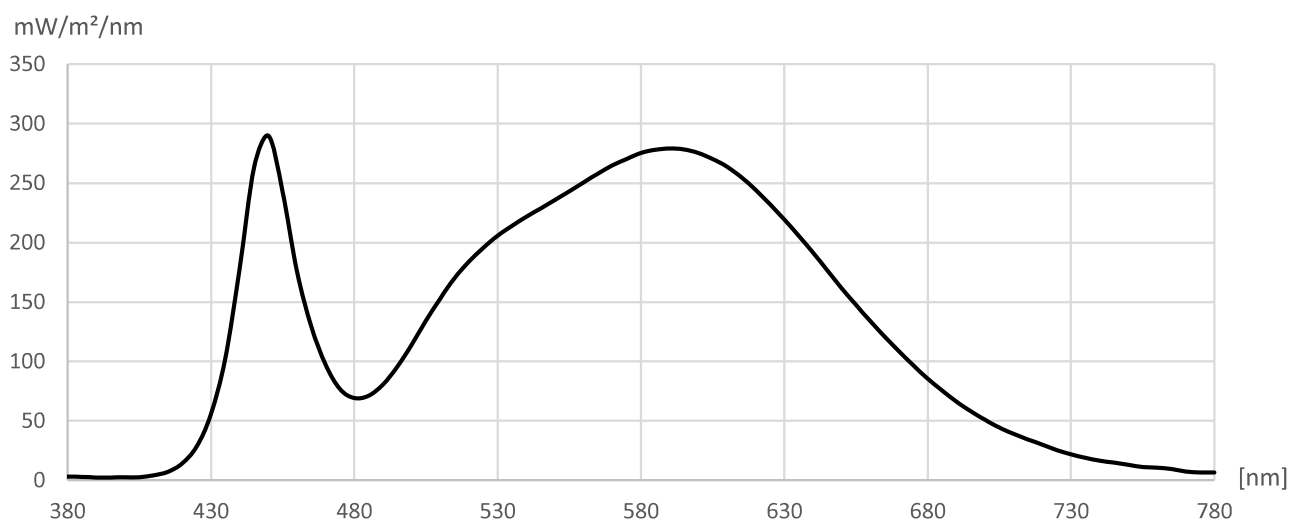


Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / all / @ 1 m

Measurement file: 347497_1m_all.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:37:34



R1 = 80,0	Ra = 81,5	Illuminance	16471,42 lx	CIE1931
R2 = 86,5	Re = 74,7	Ee	50,999 W/m ²	x = 0,3834
R3 = 91,0	GAI = 73,4	LER	323,0 lm/W	y = 0,3782
R4 = 80,9				
R5 = 79,5		correlated color temperature (CCT)	3930 K	CIE1976
R6 = 80,6		Duv	-0,0002	u' = 0,2265
R7 = 86,8				v' = 0,5027
R8 = 66,9		Saturation	28,5 %	
R9 = 13,0				CIE1960
R10 = 67,3		Dominant wavelength	579 nm	u = 0,2265
R11 = 78,5		Peak wavelength	449 nm	v = 0,3351
R12 = 57,8				
R13 = 81,2		Flicker frequency	% < 2.5 Hz	TM30
R14 = 94,8		Percent Flicker	< 2.5 %	Rf = 80,2
R15 = 75,2		Flicker index	% < 2.5	Rg = 97,3

[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	2,98	440	177,97	500	113,94	560	250,65	620	244,07	680	85,59	740	16,42
385	2,84	445	263,08	505	134,48	565	257,97	625	232,19	685	75,60	745	14,88
390	2,33	450	289,85	510	153,15	570	264,72	630	219,41	690	66,22	750	12,91
395	2,36	455	243,11	515	170,07	575	270,30	635	205,70	695	58,03	755	11,22
400	2,53	460	176,01	520	183,95	580	275,33	640	191,53	700	50,87	760	10,62
405	2,63	465	129,35	525	195,48	585	277,99	645	176,44	705	44,38	765	9,47
410	4,20	470	97,15	530	205,80	590	279,10	650	161,62	710	39,10	770	7,40
415	7,18	475	76,56	535	213,96	595	278,39	655	147,53	715	34,26	775	6,65
420	14,22	480	69,15	540	221,58	600	275,39	660	133,82	720	29,94	780	6,52
425	28,50	485	71,04	545	228,68	605	270,26	665	120,84	725	25,36		
430	55,40	490	80,45	550	235,83	610	263,76	670	108,45	730	21,75		
435	102,34	495	95,49	555	243,06	615	254,91	675	96,65	735	18,86		

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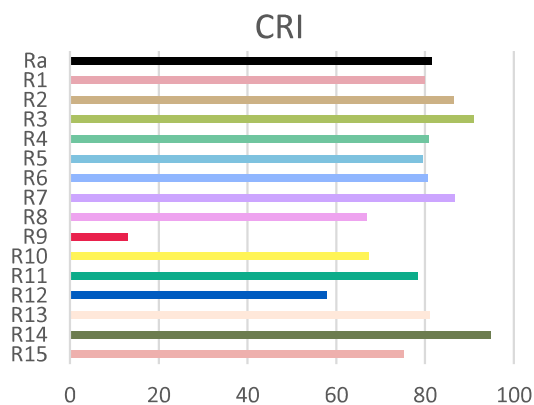
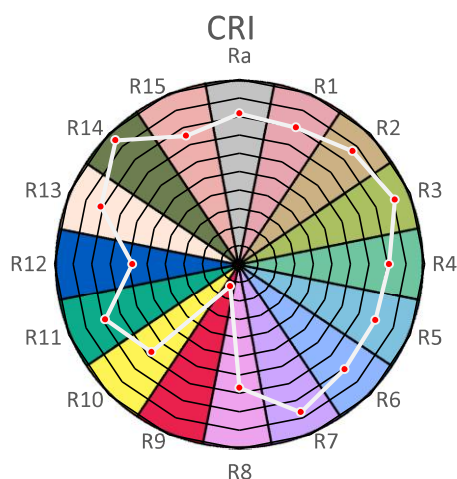
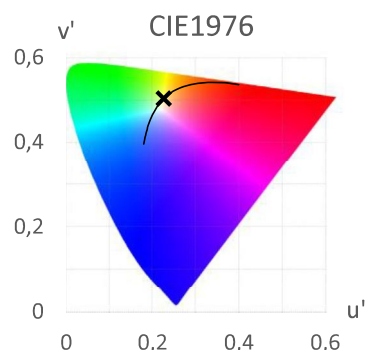
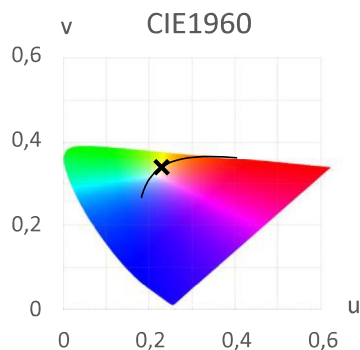
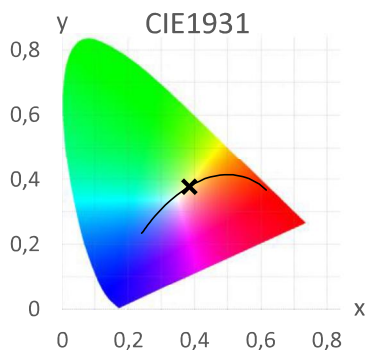
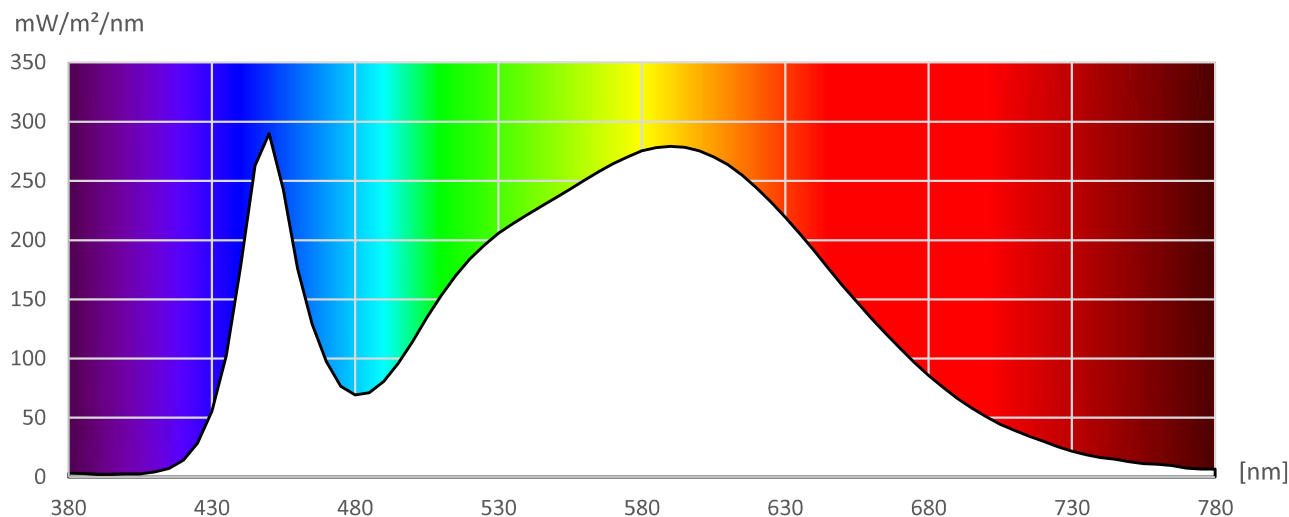
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / all / @ 1 m

Measurement file: 347497_1m_all.CS'
Date of measurement: 28.01.2020
Time of measurement: 10:37:34



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Burgebrach, 28.01.2020

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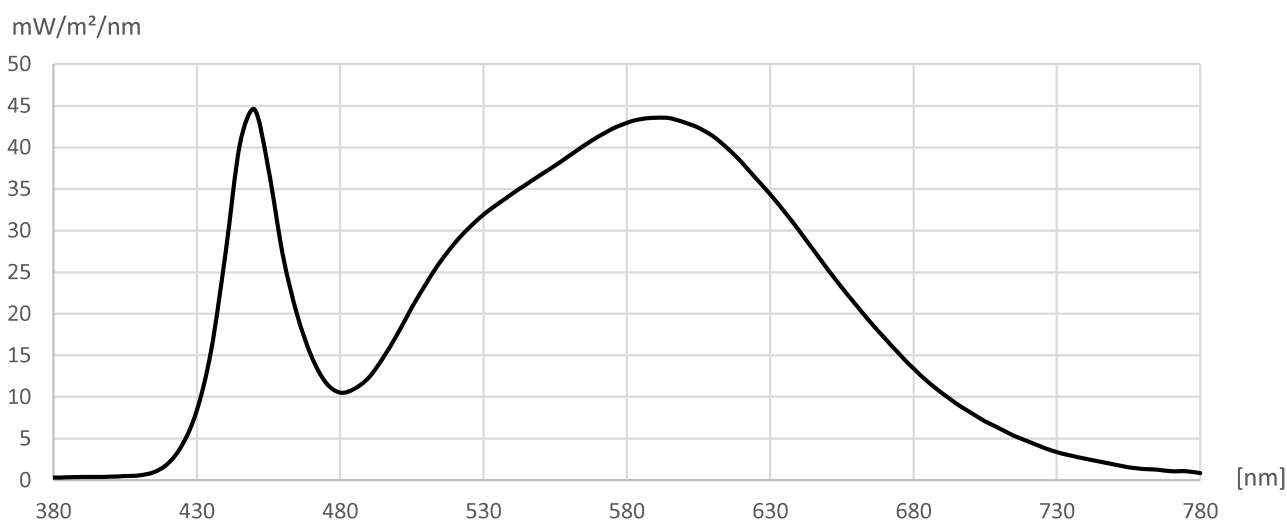
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / all / @ 3 m

Measurement file: 347497_3m_all.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:37:45



R1 = 79,9	Ra = 81,4	Illuminance	2565,81 lx	CIE1931
R2 = 86,5	Re = 74,6	Ee	7,931 W/m ²	x = 0,3850
R3 = 91,0	GAI = 72,8	LER	323,5 lm/W	y = 0,3793
R4 = 80,8				
R5 = 79,4		correlated color temperature (CCT)	3896 K	CIE1976
R6 = 80,5		Duv	-0,0001	u' = 0,2271
R7 = 86,7				v' = 0,5034
R8 = 66,7		Saturation	29,3 %	
R9 = 12,8				CIE1960
R10 = 67,2		Dominant wavelength	579 nm	u = 0,2271
R11 = 78,4		Peak wavelength	449 nm	v = 0,3356
R12 = 57,7				
R13 = 81,1		Flicker frequency	% < 2.5 Hz	TM30
R14 = 94,8		Percent Flicker	< 2.5 %	Rf = 80,1
R15 = 75,1		Flicker index	% < 2.5	Rg = 97,3

[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	0,31	440	27,22	500	17,59	560	39,01	620	38,21	680	13,44	740	2,59
385	0,34	445	40,38	505	20,77	565	40,20	625	36,31	685	11,84	745	2,23
390	0,39	450	44,58	510	23,66	570	41,27	630	34,36	690	10,47	750	1,90
395	0,39	455	37,44	515	26,28	575	42,23	635	32,28	695	9,20	755	1,56
400	0,43	460	27,13	520	28,51	580	42,95	640	30,02	700	8,12	760	1,37
405	0,50	465	19,90	525	30,36	585	43,41	645	27,68	705	7,08	765	1,26
410	0,60	470	14,89	530	31,93	590	43,57	650	25,40	710	6,25	770	1,10
415	0,98	475	11,71	535	33,21	595	43,50	655	23,16	715	5,37	775	1,10
420	2,03	480	10,54	540	34,42	600	43,02	660	21,06	720	4,67	780	0,87
425	4,34	485	11,00	545	35,58	605	42,34	665	18,97	725	3,97		
430	8,36	490	12,35	550	36,71	610	41,35	670	17,05	730	3,37		
435	15,57	495	14,72	555	37,83	615	39,91	675	15,16	735	2,95		

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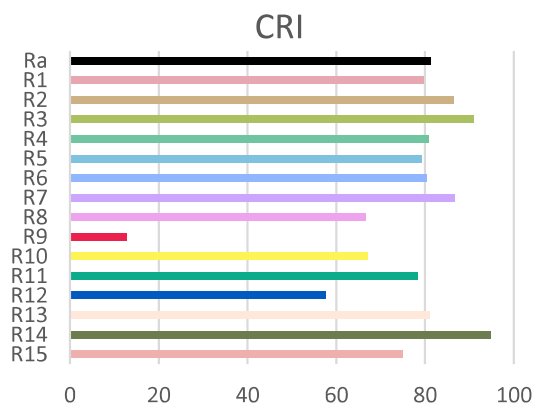
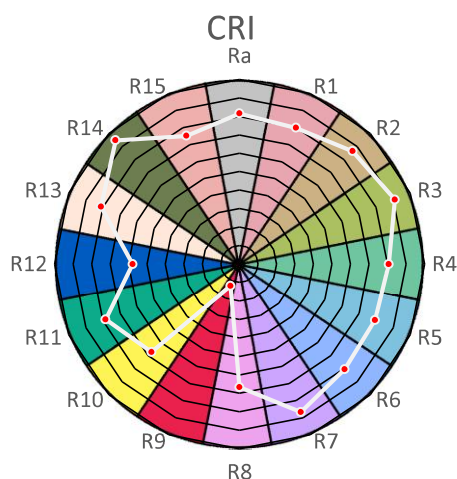
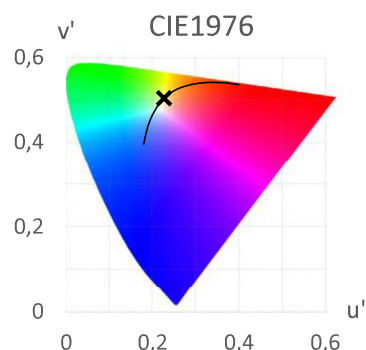
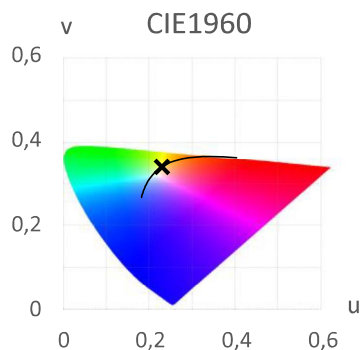
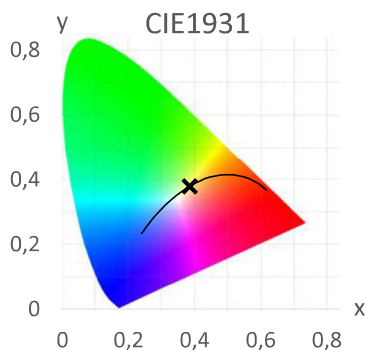
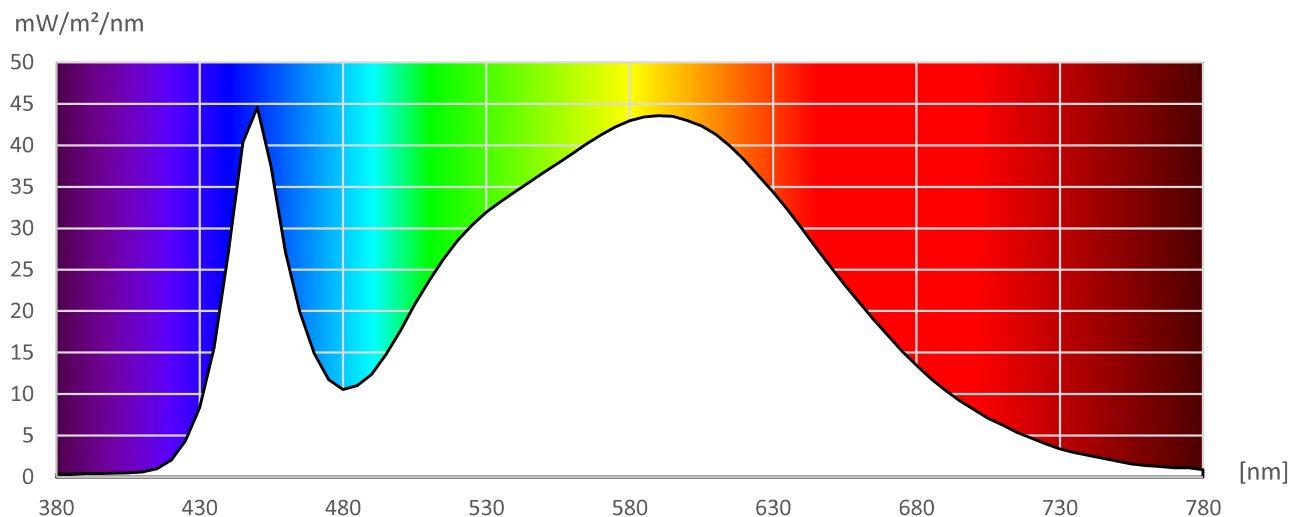
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / all / @ 3 m

Measurement file: 347497_3m_all.CS'
Date of measurement: 28.01.2020
Time of measurement: 10:37:45



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Burgebrach, 28.01.2020

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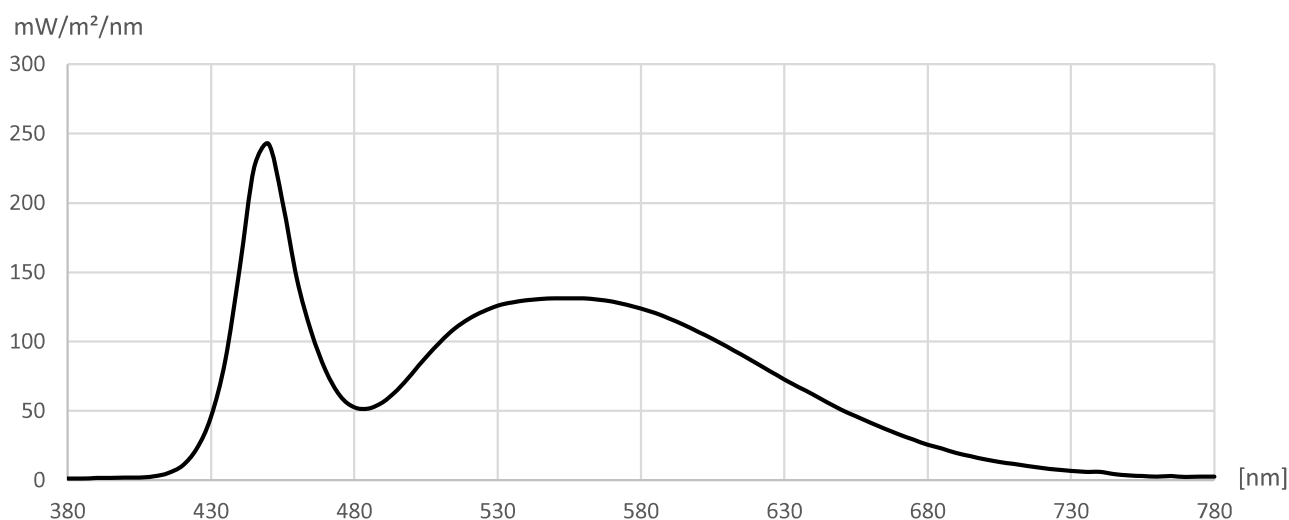
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / cw / @ 1 m

Measurement file: 347497_1m_cw.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:37:58



R1 = 76,3	Ra = 78,9	Illuminance	8262,24 lx	CIE1931
R2 = 82,4	Re = 70,4	Ee	26,259 W/m ²	x = 0,3161
R3 = 86,1	GAI = 86,0	LER	314,6 lm/W	y = 0,3371
R4 = 79,2				
R5 = 77,4		correlated color temperature (CCT)	6273 K	CIE1976
R6 = 75,9		Duv	0,0056	u' = 0,1972
R7 = 86,5				v' = 0,4731
R8 = 67,4		Saturation	5,5 %	
R9 = -3,9				CIE1960
R10 = 57,8		Dominant wavelength	492 nm	u = 0,1972
R11 = 77,2		Peak wavelength	449 nm	v = 0,3154
R12 = 52,4				
R13 = 77,5		Flicker frequency	% < 2.5 Hz	TM30
R14 = 92,4		Percent Flicker	< 2.5 %	Rf = 77,7
R15 = 71,1		Flicker index	% < 2.5	Rg = 95,1

[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	1,13	440	152,50	500	76,66	560	131,12	620	84,66	680	25,75	740	6,02
385	1,25	445	225,18	505	88,87	565	130,25	625	78,70	685	22,84	745	4,49
390	1,59	450	242,62	510	99,83	570	128,87	630	72,73	690	19,75	750	3,56
395	1,69	455	200,74	515	109,33	575	126,45	635	67,21	695	17,27	755	3,03
400	1,91	460	145,20	520	116,51	580	123,70	640	61,89	700	15,16	760	2,65
405	2,02	465	106,97	525	121,79	585	120,50	645	56,12	705	13,16	765	3,00
410	2,75	470	79,20	530	125,88	590	116,50	650	50,83	710	11,78	770	2,36
415	5,17	475	60,82	535	128,27	595	112,11	655	46,06	715	10,16	775	2,61
420	10,52	480	52,58	540	129,71	600	107,04	660	41,61	720	8,90	780	2,62
425	22,89	485	51,78	545	130,73	605	101,89	665	37,19	725	7,66		
430	45,47	490	56,37	550	131,17	610	96,30	670	33,02	730	6,85		
435	86,34	495	65,13	555	131,13	615	90,51	675	29,22	735	6,06		

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Burgebrach, 28.01.2020

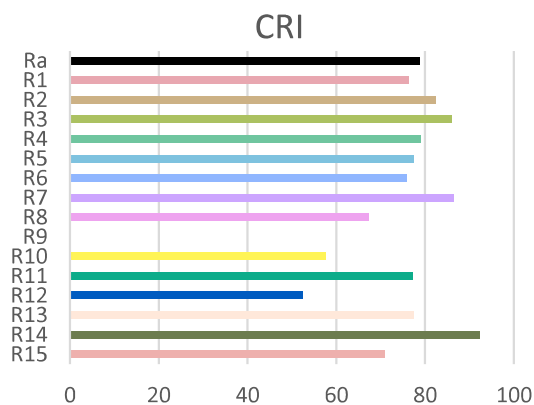
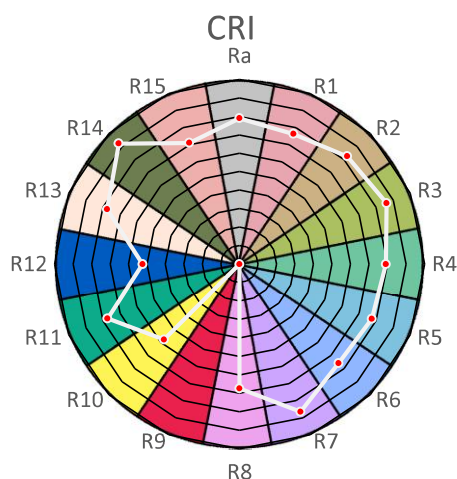
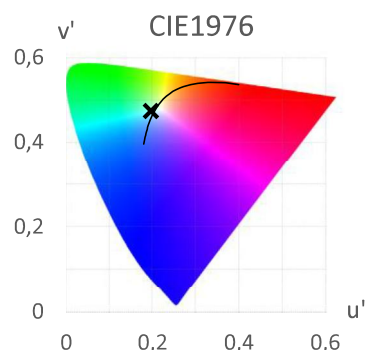
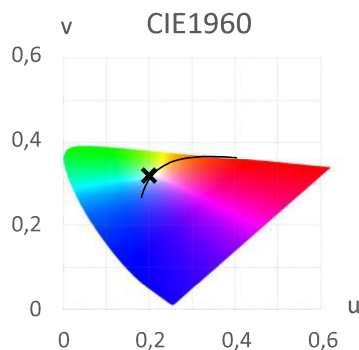
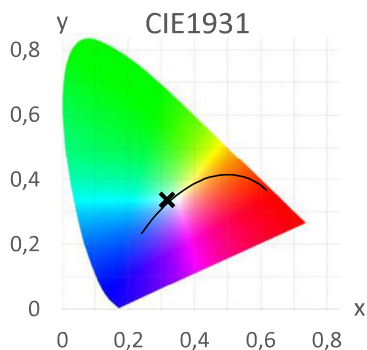
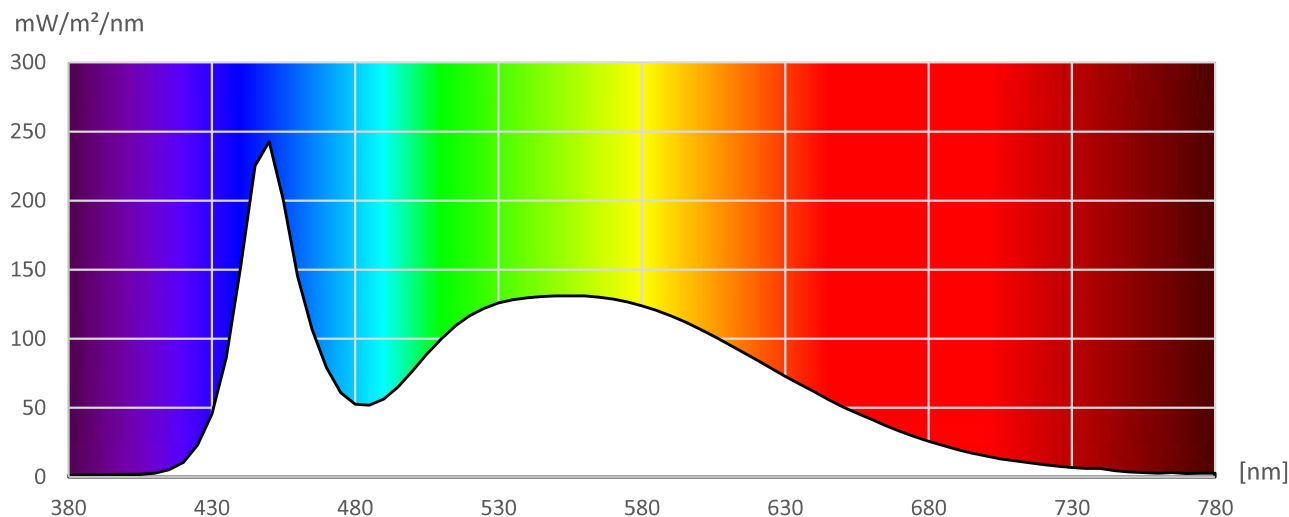
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / cw / @ 1 m

Measurement file: 347497_1m_cw.CS
Date of measurement: 28.01.2020
Time of measurement: 10:37:58



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Burgebrach, 28.01.2020

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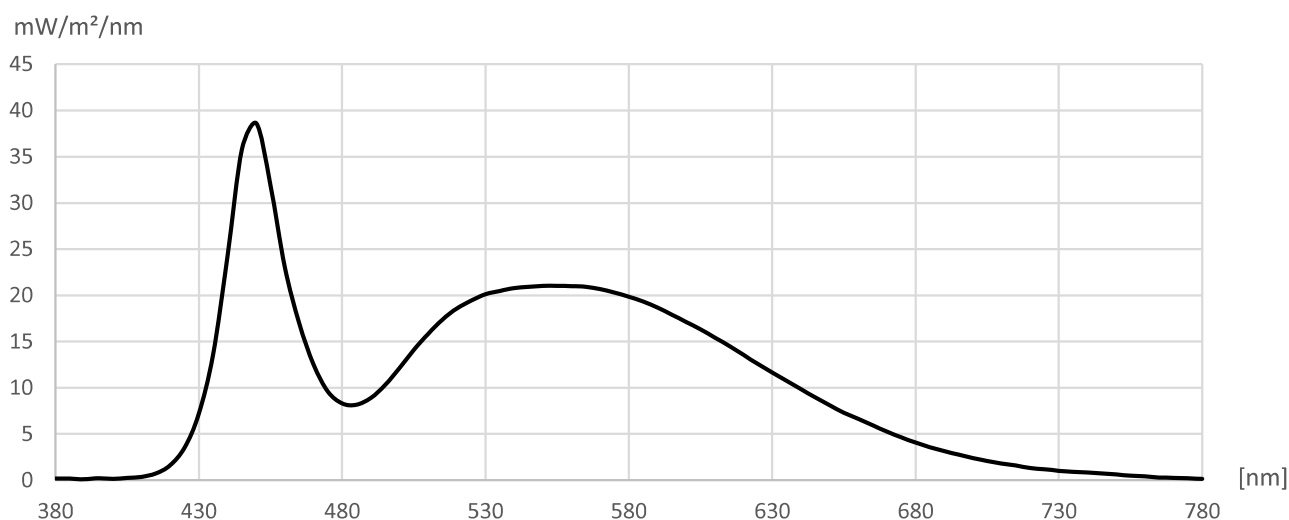
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / cw / @ 3 m

Measurement file: 347497_3m_cw.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:38:09



R1 = 76,0	Ra = 78,6
R2 = 82,2	Re = 70,0
R3 = 86,0	GAI = 85,7
R4 = 78,9	
R5 = 77,1	
R6 = 75,6	
R7 = 86,4	
R8 = 67,0	
R9 = -5,0	
R10 = 57,3	
R11 = 76,8	
R12 = 52,0	
R13 = 77,2	
R14 = 92,4	
R15 = 70,7	

Illuminance	1321,56 lx
Ee	4,178 W/m²
LER	316,3 lm/W
correlated color temperature (CCT)	6229 K
Duv	0,0057
Saturation	5,2 %
Dominant wavelength	493 nm
Peak wavelength	449 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,3169
y = 0,3380
CIE1976
u' = 0,1974
v' = 0,4737
CIE1960
u = 0,1974
v = 0,3158
TM30
Rf = 77,5
Rg = 95,0

[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	0,17	440	24,20	500	12,14	560	21,00	620	13,54	680	4,10	740	0,83
385	0,17	445	35,79	505	14,10	565	20,92	625	12,60	685	3,58	745	0,73
390	0,10	450	38,60	510	15,85	570	20,67	630	11,66	690	3,15	750	0,62
395	0,22	455	31,99	515	17,37	575	20,30	635	10,76	695	2,77	755	0,48
400	0,16	460	23,10	520	18,58	580	19,85	640	9,85	700	2,40	760	0,42
405	0,26	465	17,00	525	19,42	585	19,33	645	8,96	705	2,07	765	0,30
410	0,36	470	12,53	530	20,11	590	18,67	650	8,13	710	1,82	770	0,26
415	0,73	475	9,58	535	20,49	595	17,92	655	7,31	715	1,59	775	0,21
420	1,62	480	8,30	540	20,77	600	17,13	660	6,65	720	1,33	780	0,14
425	3,55	485	8,18	545	20,91	605	16,32	665	5,94	725	1,19		
430	7,16	490	8,90	550	21,01	610	15,43	670	5,27	730	1,03		
435	13,60	495	10,30	555	21,04	615	14,52	675	4,64	735	0,91		

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Burgebrach, 28.01.2020

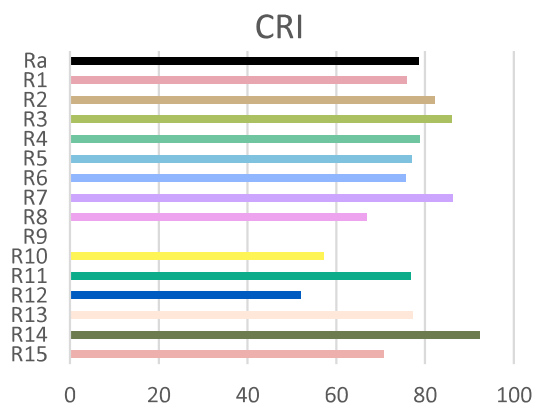
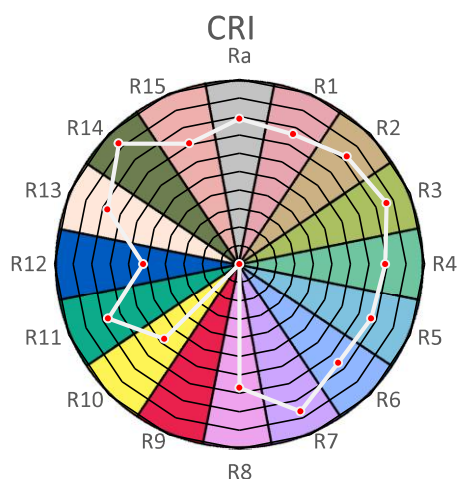
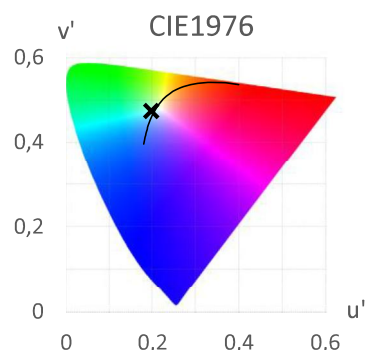
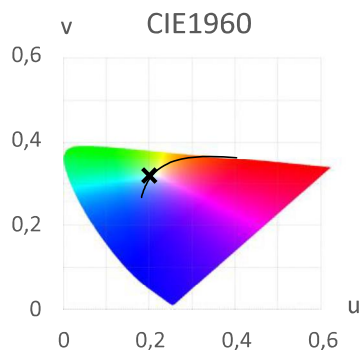
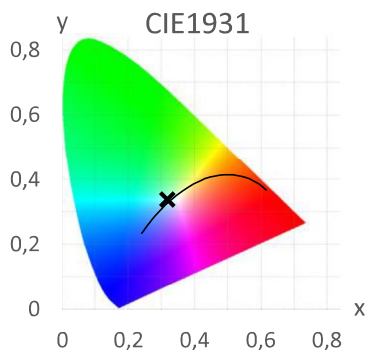
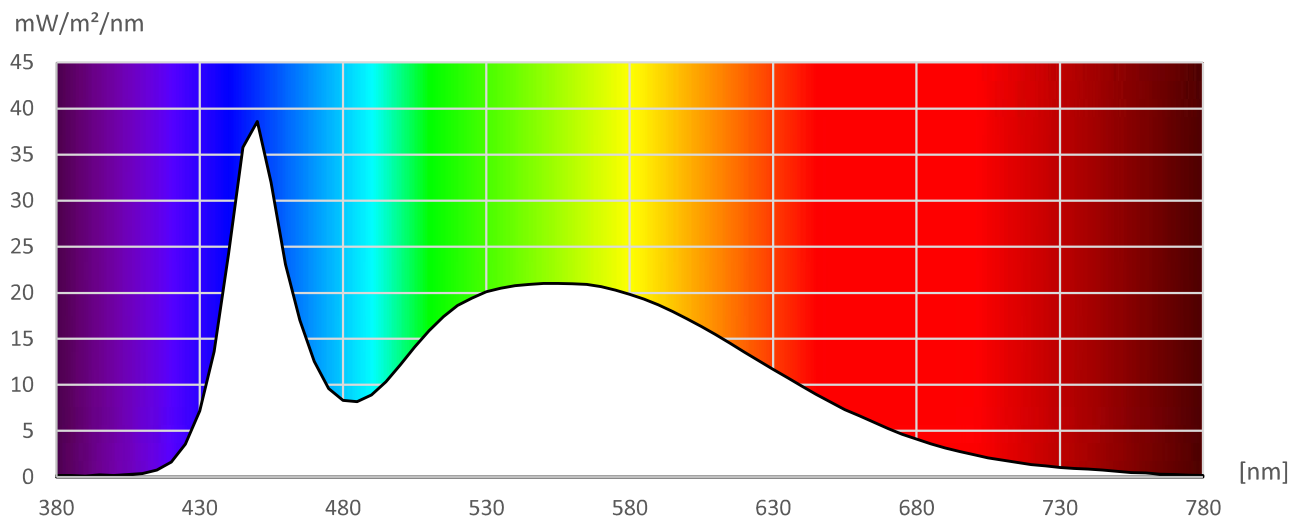
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / cw / @ 3 m

Measurement file: 347497_3m_cw.CS
Date of measurement: 28.01.2020
Time of measurement: 10:38:09



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Burgebrach, 28.01.2020

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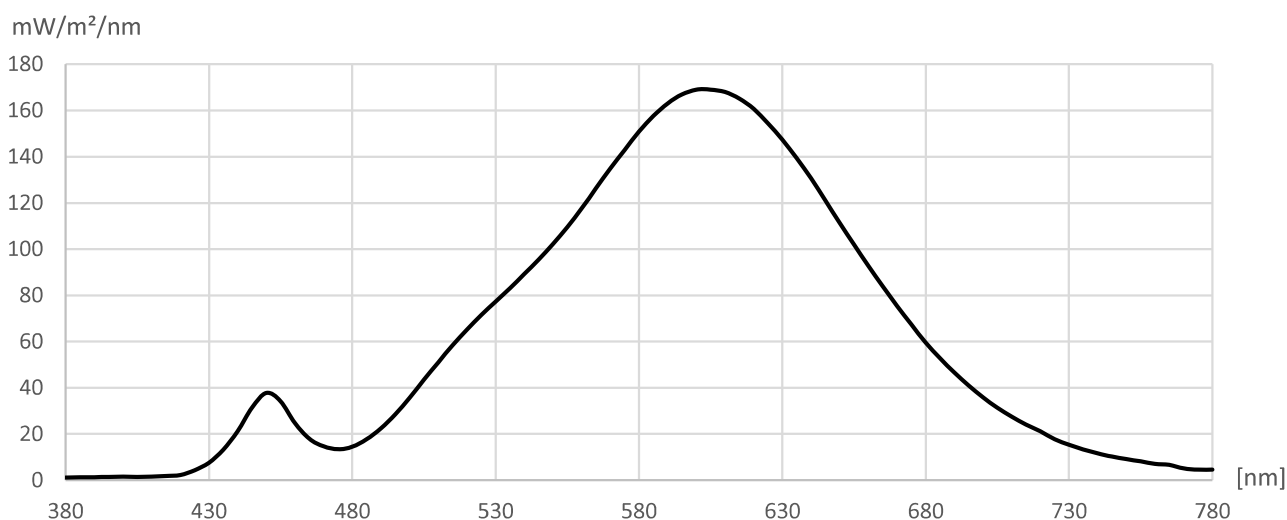
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / ww / @ 1 m

Measurement file: 347497_1m_ww.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:38:21



R1 = 73,2	Ra = 77,0	Illuminance	8114,44 lx	CIE1931
R2 = 83,8	Re = 68,9	Ee	24,356 W/m²	x = 0,4785
R3 = 95,4	GAI = 29,0	LER	333,2 lm/W	y = 0,4368
R4 = 74,6				
R5 = 71,6		correlated color temperature (CCT)	2650 K	CIE1976
R6 = 78,2		Duv	0,0078	u' = 0,2627
R7 = 84,7				v' = 0,5397
R8 = 54,4		Saturation	74,8 %	
R9 = -5,3				CIE1960
R10 = 63,5		Dominant wavelength	581 nm	u = 0,2627
R11 = 70,2		Peak wavelength	601 nm	v = 0,3598
R12 = 52,6				
R13 = 74,6		Flicker frequency	% < 2.5 Hz	TM30
R14 = 97,0		Percent Flicker	< 2.5 %	Rf = 81,0
R15 = 65,4		Flicker index	% < 2.5	Rg = 90,6

[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	1,21	440	21,24	500	35,76	560	117,61	620	160,63	680	59,65	740	11,62
385	1,24	445	31,47	505	43,58	565	126,27	625	154,46	685	52,81	745	10,20
390	1,35	450	37,80	510	51,11	570	134,81	630	147,35	690	46,66	750	9,14
395	1,47	455	34,16	515	58,38	575	142,86	635	139,33	695	41,02	755	8,16
400	1,50	460	24,72	520	65,19	580	150,81	640	130,63	700	35,87	760	7,13
405	1,45	465	17,95	525	71,52	585	157,55	645	120,98	705	31,47	765	6,64
410	1,62	470	14,65	530	77,35	590	163,08	650	111,40	710	27,58	770	5,15
415	1,81	475	13,39	535	83,09	595	166,89	655	102,01	715	24,17	775	4,56
420	2,30	480	14,50	540	89,16	600	168,96	660	92,81	720	21,14	780	4,59
425	4,36	485	17,66	545	95,42	605	169,03	665	83,99	725	17,71		
430	7,57	490	22,42	550	102,17	610	167,96	670	75,45	730	15,39		
435	13,22	495	28,57	555	109,56	615	165,08	675	67,32	735	13,36		

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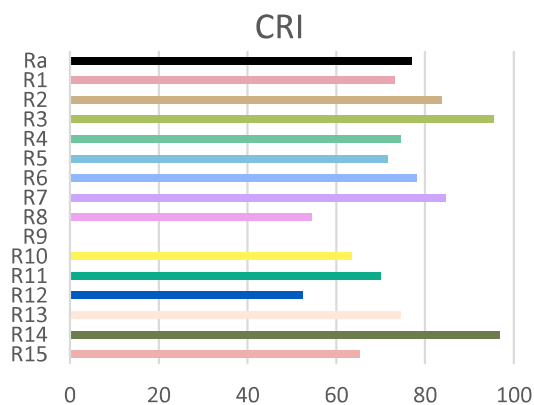
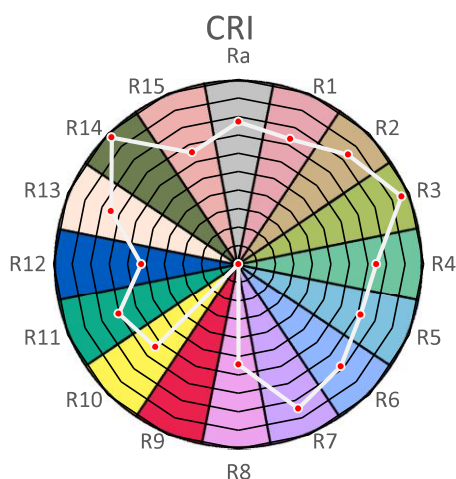
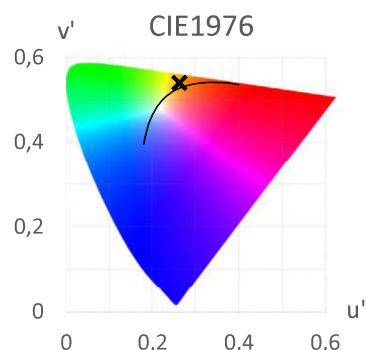
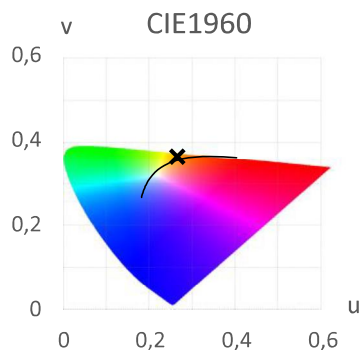
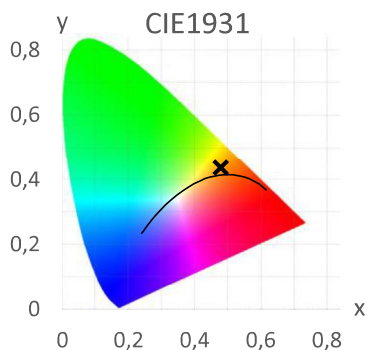
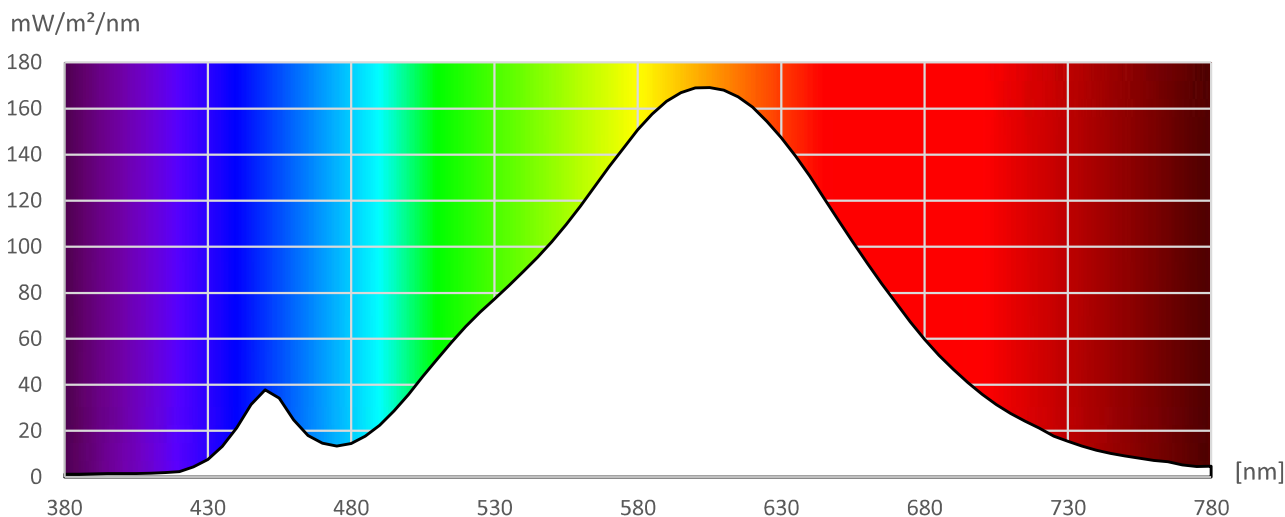
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / ww / @ 1 m

Measurement file: 347497_1m_ww.C
Date of measurement: 28.01.2020
Time of measurement: 10:38:21



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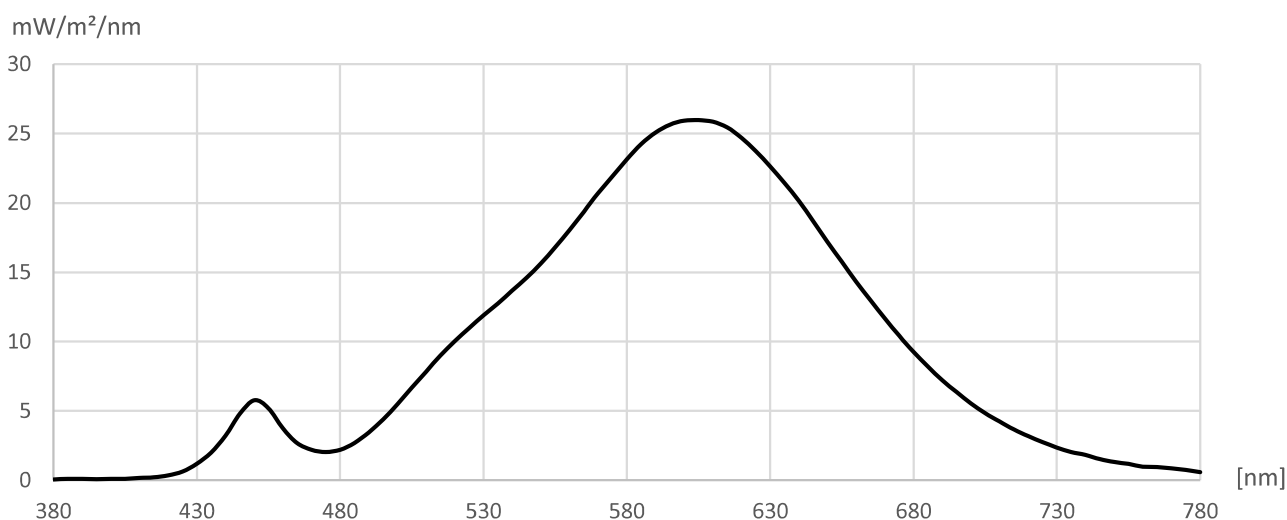
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / ww / @ 3 m

Measurement file: 347497_3m_ww.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:38:31



R1 = 73,3	Ra = 77,1	Illuminance	1245,84 lx	CIE1931
R2 = 83,8	Re = 69,0	Ee	3,736 W/m ²	x = 0,4790
R3 = 95,5	GAI = 28,7	LER	333,4 lm/W	y = 0,4371
R4 = 74,6				
R5 = 71,6		correlated color temperature (CCT)	2645 K	CIE1976
R6 = 78,3		Duv	0,0079	u' = 0,2629
R7 = 84,7				v' = 0,5398
R8 = 54,5		Saturation	75,1 %	
R9 = -5,1				CIE1960
R10 = 63,6		Dominant wavelength	581 nm	u = 0,2629
R11 = 70,3		Peak wavelength	601 nm	v = 0,3599
R12 = 52,7				
R13 = 74,6		Flicker frequency	% < 2.5 Hz	TM30
R14 = 97,0		Percent Flicker	< 2.5 %	Rf = 81,1
R15 = 65,5		Flicker index	% < 2.5	Rg = 90,6

[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	0,05	440	3,21	500	5,49	560	18,05	620	24,68	680	9,27	740	1,82
385	0,10	445	4,79	505	6,69	565	19,37	625	23,73	685	8,20	745	1,52
390	0,09	450	5,76	510	7,84	570	20,69	630	22,63	690	7,21	750	1,32
395	0,08	455	5,20	515	8,98	575	21,91	635	21,43	695	6,38	755	1,18
400	0,09	460	3,75	520	10,03	580	23,15	640	20,14	700	5,54	760	0,98
405	0,10	465	2,68	525	10,97	585	24,24	645	18,68	705	4,84	765	0,95
410	0,16	470	2,20	530	11,89	590	25,07	650	17,18	710	4,25	770	0,86
415	0,21	475	2,04	535	12,75	595	25,64	655	15,76	715	3,66	775	0,74
420	0,35	480	2,20	540	13,67	600	25,92	660	14,31	720	3,19	780	0,58
425	0,63	485	2,69	545	14,59	605	25,96	665	12,98	725	2,76		
430	1,19	490	3,45	550	15,62	610	25,85	670	11,66	730	2,36		
435	2,00	495	4,39	555	16,80	615	25,44	675	10,41	735	2,03		

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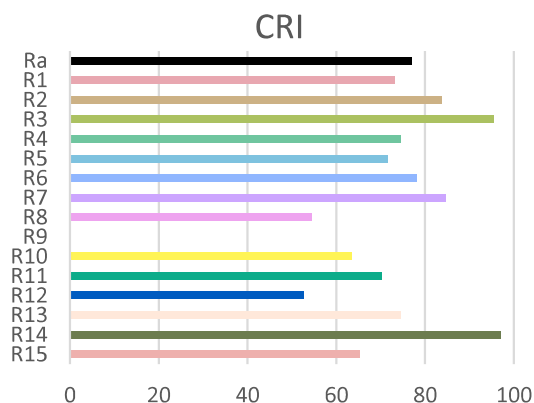
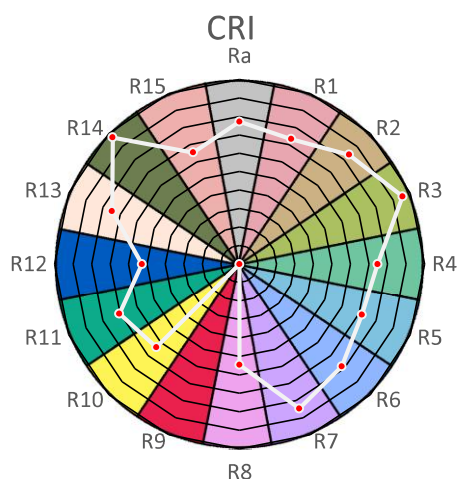
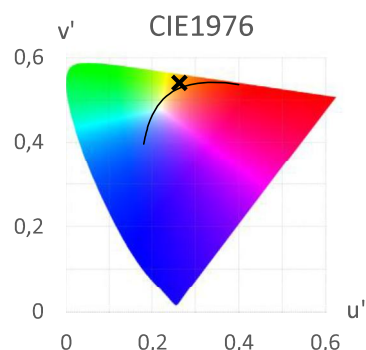
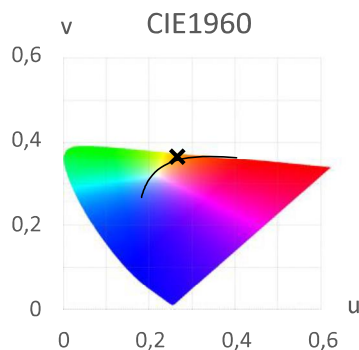
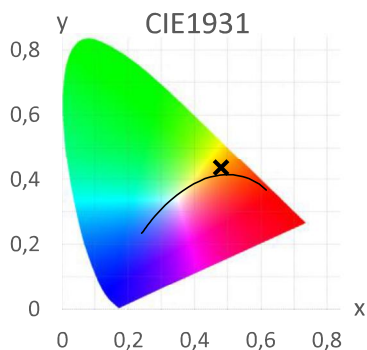
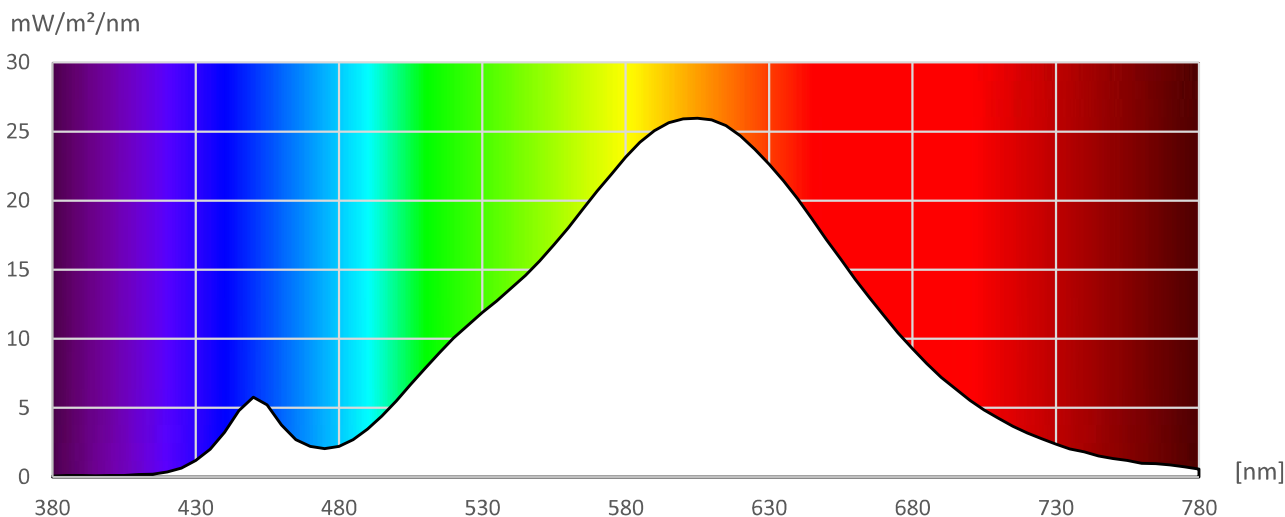
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 18x4W 2in1 CW/WW
347497 / ww / @ 3 m

Measurement file: 347497_3m_ww.C
Date of measurement: 28.01.2020
Time of measurement: 10:38:31



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