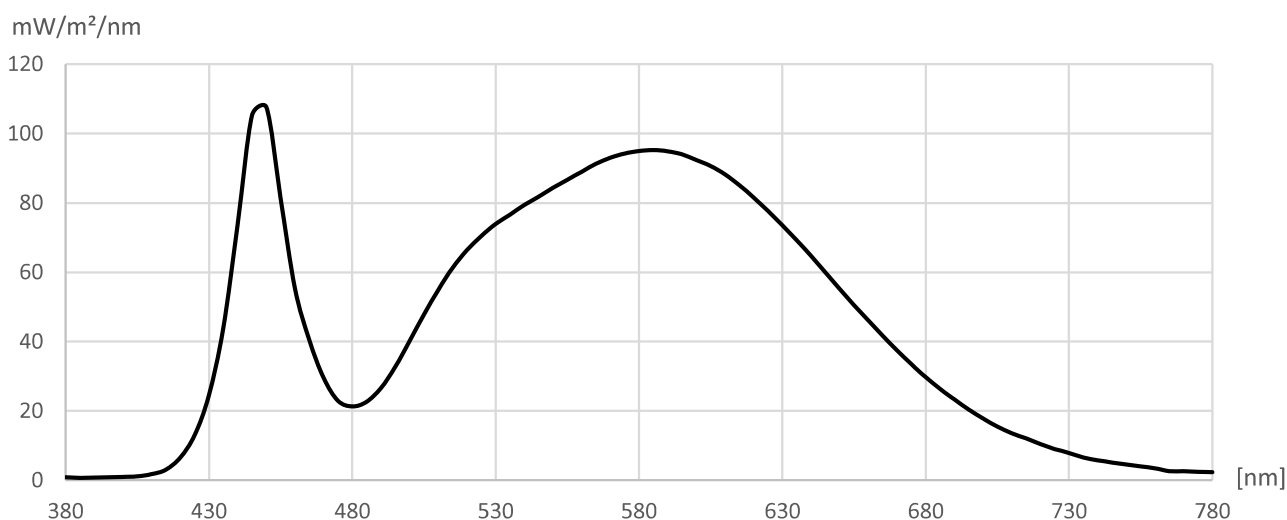


Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / all / @ 1 m

Measurement file: 347477_1m_all.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:27:57



R1 = 78,7	Ra = 80,2	Illuminance	5745,12 lx	CIE1931
R2 = 84,4	Re = 73,1	Ee	17,805 W/m ²	x = 0,3771
R3 = 88,4	GAI = 75,2	LER	322,7 lm/W	y = 0,3759
R4 = 80,4				
R5 = 78,3		correlated color temperature (CCT)	4086 K	CIE1976
R6 = 77,8		Duv	0,0006	u' = 0,2233
R7 = 86,5				v' = 0,5007
R8 = 67,5		Saturation	25,9 %	
R9 = 11,6				CIE1960
R10 = 62,7		Dominant wavelength	578 nm	u = 0,2233
R11 = 78,0		Peak wavelength	447 nm	v = 0,3338
R12 = 55,0				
R13 = 79,4		Flicker frequency	% < 2.5 Hz	TM30
R14 = 93,3		Percent Flicker	< 2.5 %	Rf = 78,8
R15 = 74,1		Flicker index	% < 2.5	Rg = 97,2

[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	0,88	440	73,79	500	40,17	560	88,98	620	81,53	680	29,76	740	5,78
385	0,68	445	105,22	505	47,88	565	91,26	625	77,67	685	26,39	745	5,14
390	0,79	450	107,61	510	54,95	570	92,99	630	73,54	690	23,31	750	4,56
395	0,82	455	81,52	515	61,26	575	94,21	635	69,20	695	20,39	755	4,03
400	0,96	460	55,44	520	66,35	580	94,93	640	64,72	700	17,81	760	3,45
405	1,12	465	40,44	525	70,42	585	95,23	645	59,95	705	15,54	765	2,65
410	1,77	470	29,47	530	73,93	590	94,90	650	55,19	710	13,57	770	2,58
415	3,09	475	22,92	535	76,61	595	94,00	655	50,55	715	12,07	775	2,45
420	6,59	480	21,28	540	79,38	600	92,39	660	46,12	720	10,48	780	2,30
425	13,10	485	22,64	545	81,78	605	90,65	665	41,70	725	9,00		
430	24,49	490	26,55	550	84,31	610	88,18	670	37,43	730	7,87		
435	43,78	495	32,72	555	86,66	615	85,09	675	33,48	735	6,57		

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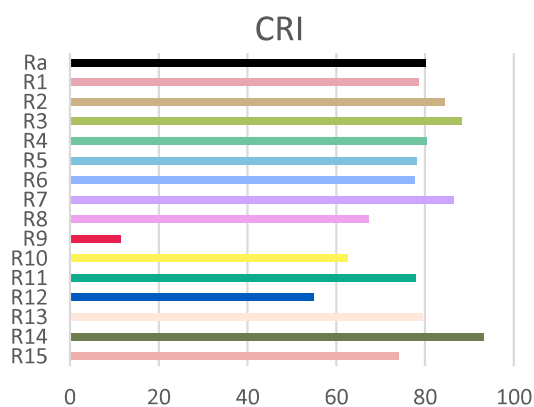
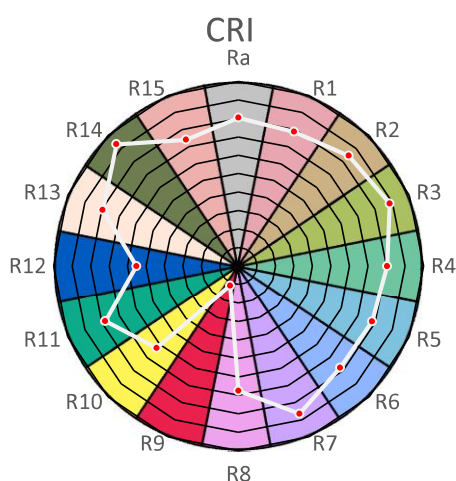
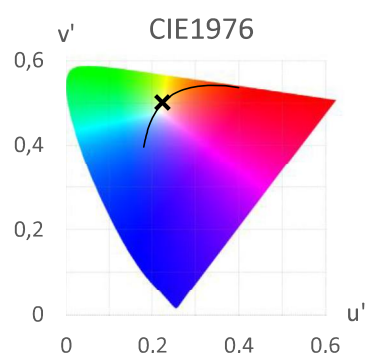
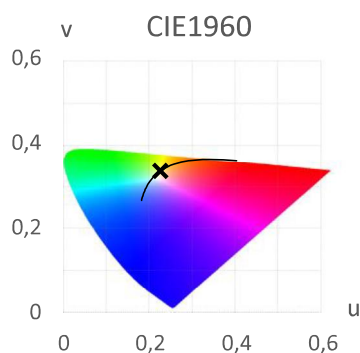
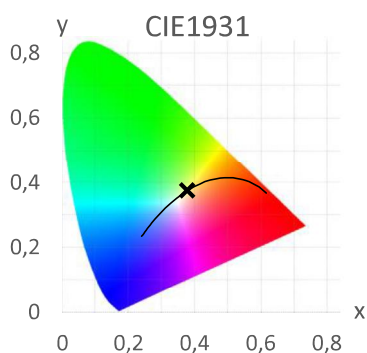
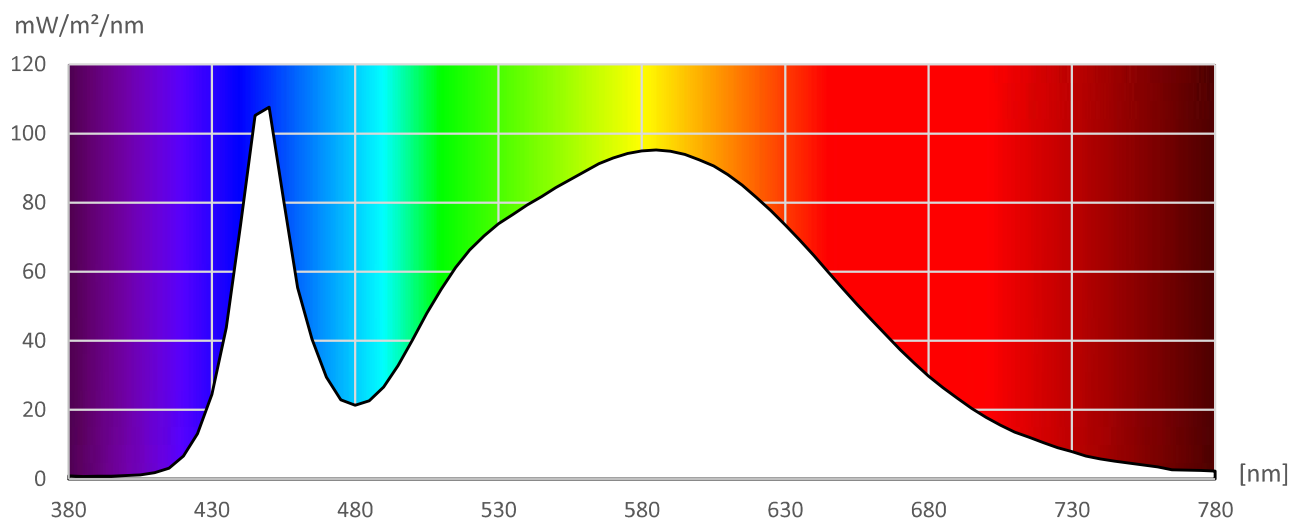
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / all / @ 1 m

Measurement file: 347477_1m_all.CS'
Date of measurement: 28.01.2020
Time of measurement: 10:27:57



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Burgebrach, 27.01.2020

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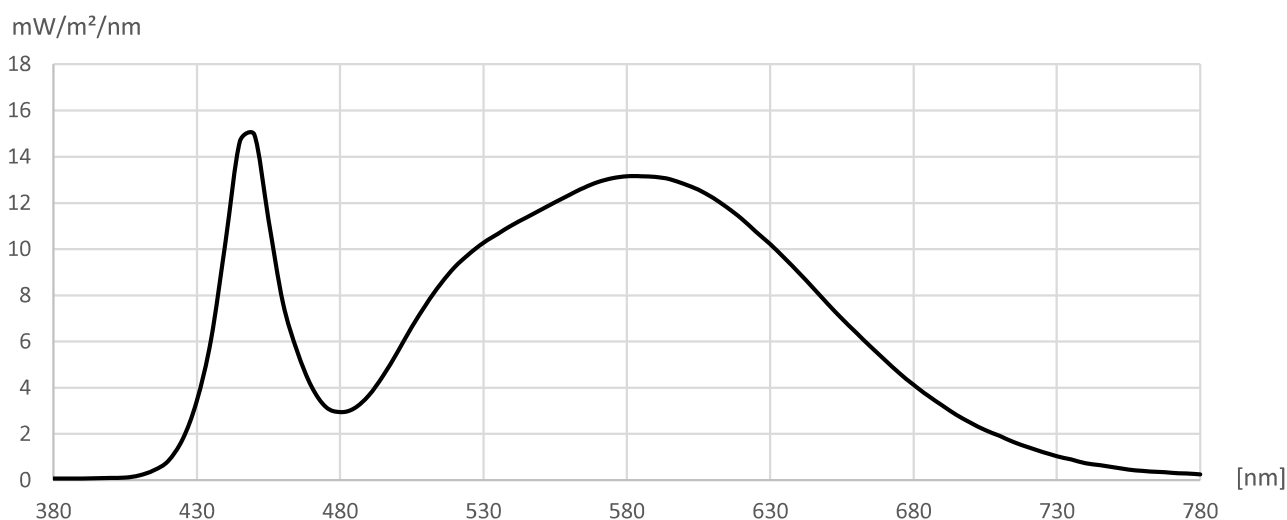
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / all / @ 3 m

Measurement file: 347477_3m_all.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:28:11



R1 = 78,7	Ra = 80,2	Illuminance	796,97 lx	CIE1931
R2 = 84,4	Re = 73,1	Ee	2,465 W/m²	x = 0,3769
R3 = 88,3	GAI = 75,3	LER	323,3 lm/W	y = 0,3758
R4 = 80,4				
R5 = 78,3		correlated color temperature (CCT)	4091 K	CIE1976
R6 = 77,7		Duv	0,0006	u' = 0,2232
R7 = 86,5				v' = 0,5006
R8 = 67,6		Saturation	25,8 %	
R9 = 11,8				CIE1960
R10 = 62,5		Dominant wavelength	578 nm	u = 0,2232
R11 = 78,1		Peak wavelength	447 nm	v = 0,3338
R12 = 54,8				
R13 = 79,4		Flicker frequency	% < 2.5 Hz	TM30
R14 = 93,3		Percent Flicker	< 2.5 %	Rf = 78,8
R15 = 74,1		Flicker index	% < 2.5	Rg = 97,2

[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm
380	0,07	440	10,31	500	5,55	560	12,35	620	11,31	680	4,13	740	0,74
385	0,07	445	14,66	505	6,64	565	12,66	625	10,76	685	3,66	745	0,65
390	0,08	450	14,96	510	7,62	570	12,90	630	10,21	690	3,23	750	0,56
395	0,09	455	11,31	515	8,48	575	13,07	635	9,61	695	2,83	755	0,46
400	0,10	460	7,71	520	9,22	580	13,15	640	8,98	700	2,48	760	0,40
405	0,12	465	5,59	525	9,79	585	13,15	645	8,31	705	2,17	765	0,37
410	0,21	470	4,06	530	10,28	590	13,12	650	7,65	710	1,92	770	0,33
415	0,43	475	3,17	535	10,67	595	13,02	655	7,00	715	1,65	775	0,29
420	0,84	480	2,95	540	11,04	600	12,82	660	6,38	720	1,43	780	0,26
425	1,77	485	3,11	545	11,37	605	12,56	665	5,79	725	1,23		
430	3,42	490	3,67	550	11,70	610	12,22	670	5,20	730	1,04		
435	6,10	495	4,52	555	12,02	615	11,80	675	4,64	735	0,90		

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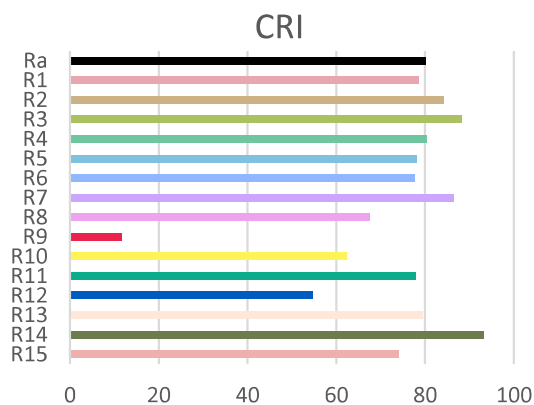
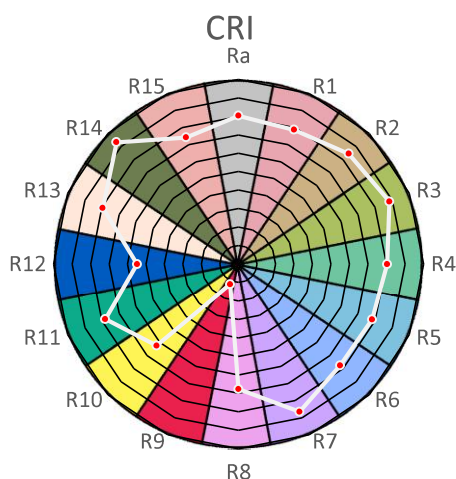
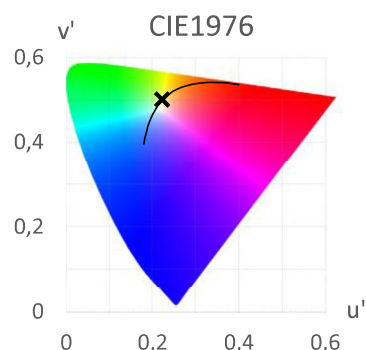
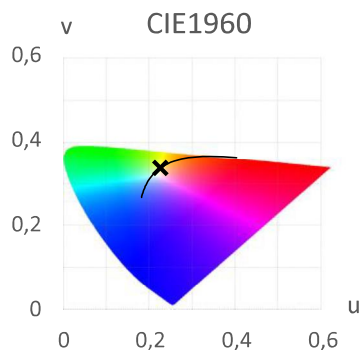
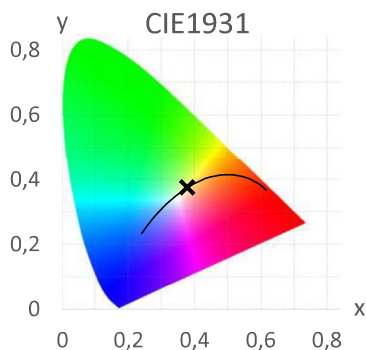
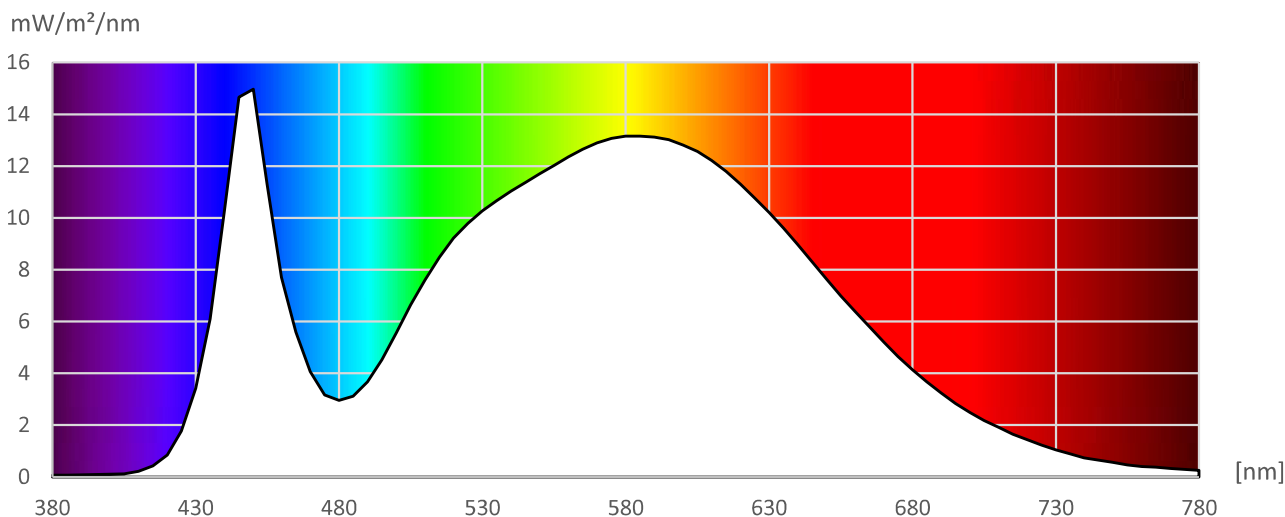
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / all / @ 3 m

Measurement file: 347477_3m_all.CS'
Date of measurement: 28.01.2020
Time of measurement: 10:28:11



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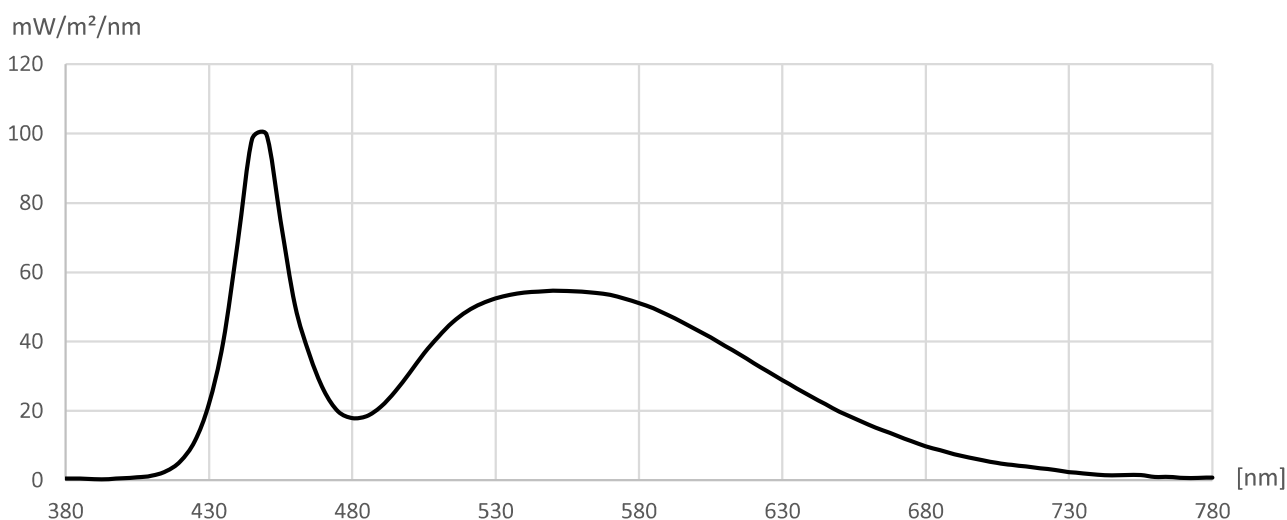
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / cw / @ 1 m

Measurement file: 347477_1m_cw.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:28:34



R1 = 73,4	Ra = 76,3	Illuminance	3396,25 lx	CIE1931
R2 = 79,5	Re = 67,1	Ee	10,602 W/m ²	x = 0,3170
R3 = 84,0	GAI = 84,5	LER	320,3 lm/W	y = 0,3408
R4 = 77,1				
R5 = 75,0		correlated color temperature (CCT)	6213 K	CIE1976
R6 = 72,8		Duv	0,0071	u' = 0,1964
R7 = 84,5				v' = 0,4751
R8 = 64,5		Saturation	5,1 %	
R9 = -14,6				CIE1960
R10 = 51,7		Dominant wavelength	495 nm	u = 0,1964
R11 = 75,4		Peak wavelength	447 nm	v = 0,3168
R12 = 50,0				
R13 = 74,2		Flicker frequency	% < 2.5 Hz	TM30
R14 = 91,3		Percent Flicker	< 2.5 %	Rf = 75,7
R15 = 67,2		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	0,50	440	68,38	500	31,00	560	54,41	620	33,80	680	9,80	740	1,59
385	0,50	445	98,33	505	36,60	565	53,99	625	31,35	685	8,71	745	1,43
390	0,26	450	99,75	510	41,42	570	53,49	630	28,90	690	7,50	750	1,47
395	0,34	455	74,92	515	45,56	575	52,36	635	26,52	695	6,60	755	1,50
400	0,62	460	50,61	520	48,72	580	51,11	640	24,13	700	5,70	760	0,92
405	0,81	465	36,43	525	50,93	585	49,57	645	21,96	705	4,96	765	0,98
410	1,28	470	26,01	530	52,45	590	47,71	650	19,76	710	4,41	770	0,63
415	2,59	475	19,85	535	53,44	595	45,66	655	17,94	715	3,96	775	0,70
420	5,46	480	17,94	540	54,11	600	43,43	660	16,05	720	3,47	780	0,79
425	11,28	485	18,51	545	54,42	605	41,20	665	14,44	725	3,00		
430	21,96	490	21,19	550	54,64	610	38,76	670	12,83	730	2,36		
435	39,93	495	25,65	555	54,57	615	36,37	675	11,27	735	2,01		

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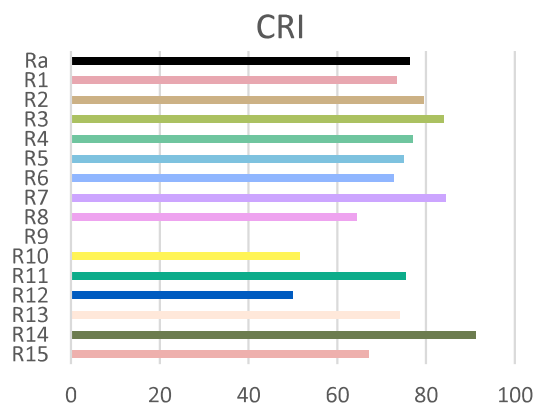
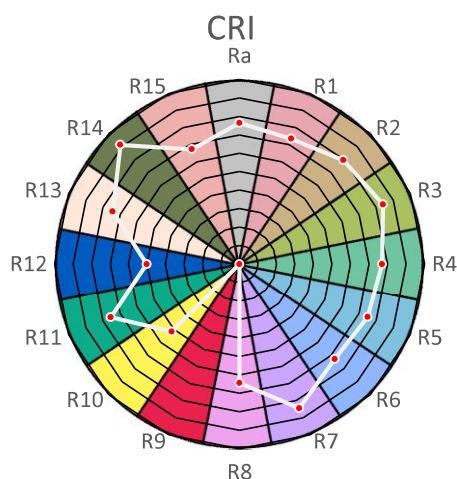
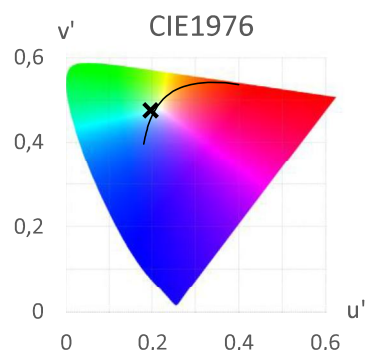
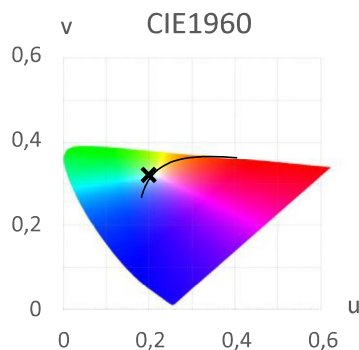
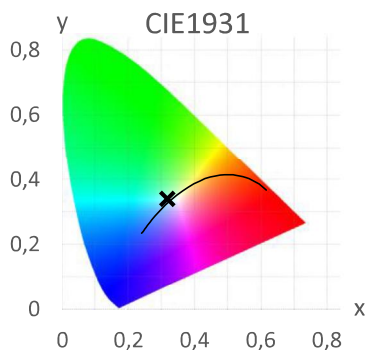
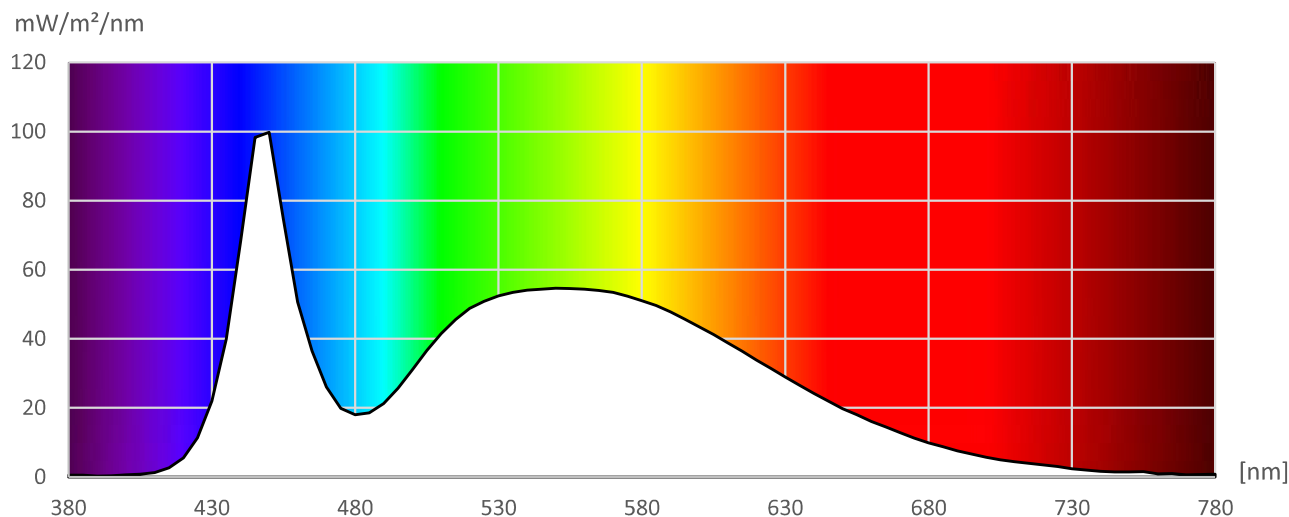
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / cw / @ 1 m

Measurement file: 347477_1m_cw.CS
Date of measurement: 28.01.2020
Time of measurement: 10:28:34



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Burgebrach, 27.01.2020

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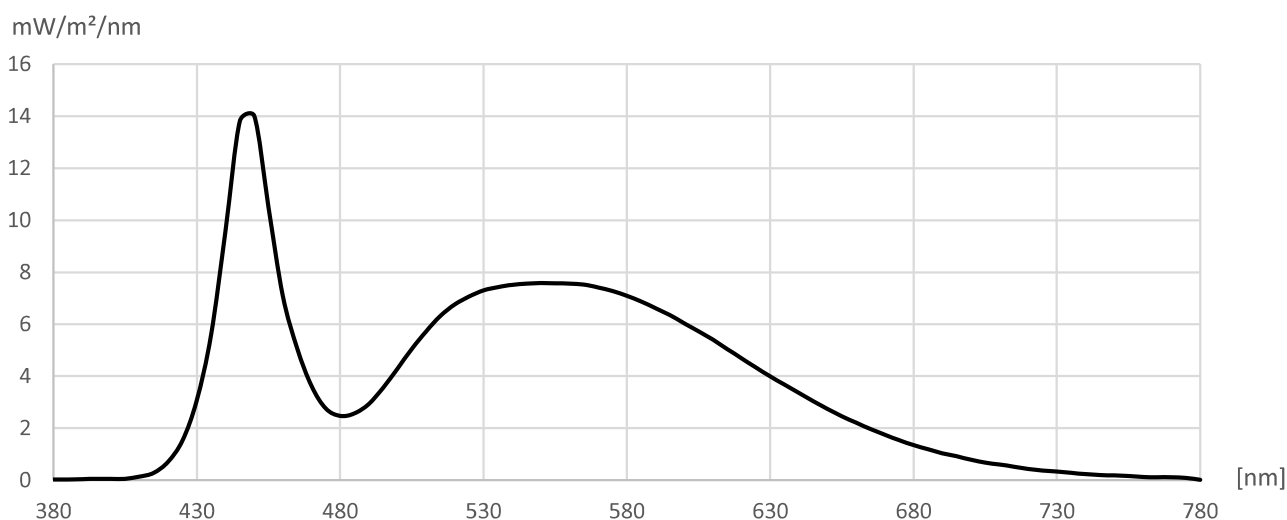
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / cw / @ 3 m

Measurement file: 347477_3m_cw.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:28:48



R1 = 73,5	Ra = 76,4
R2 = 79,5	Re = 67,1
R3 = 83,9	GAI = 84,8
R4 = 77,2	
R5 = 75,1	
R6 = 72,8	
R7 = 84,5	
R8 = 64,6	
R9 = -14,3	
R10 = 51,7	
R11 = 75,5	
R12 = 49,9	
R13 = 74,4	
R14 = 91,2	
R15 = 67,4	

Illuminance	471,64 lx
Ee	1,472 W/m²
LER	320,5 lm/W
correlated color temperature (CCT)	6244 K
Duv	0,0068
Saturation	5,3 %
Dominant wavelength	494 nm
Peak wavelength	447 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,3164
y = 0,3397
CIE1976
u' = 0,1964
v' = 0,4745
CIE1960
u = 0,1964
v = 0,3163
TM30
Rf = 75,6
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	0,03	440	9,59	500	4,30	560	7,56	620	4,69	680	1,36	740	0,24
385	0,03	445	13,82	505	5,06	565	7,53	625	4,34	685	1,20	745	0,20
390	0,04	450	14,01	510	5,73	570	7,41	630	4,00	690	1,04	750	0,18
395	0,06	455	10,54	515	6,31	575	7,28	635	3,67	695	0,92	755	0,17
400	0,06	460	7,11	520	6,76	580	7,09	640	3,36	700	0,79	760	0,12
405	0,06	465	5,08	525	7,06	585	6,87	645	3,04	705	0,68	765	0,12
410	0,14	470	3,62	530	7,30	590	6,61	650	2,74	710	0,61	770	0,12
415	0,28	475	2,75	535	7,42	595	6,35	655	2,47	715	0,52	775	0,09
420	0,71	480	2,48	540	7,52	600	6,04	660	2,21	720	0,44	780	0,02
425	1,54	485	2,57	545	7,56	605	5,73	665	1,97	725	0,38		
430	3,06	490	2,93	550	7,58	610	5,41	670	1,75	730	0,33		
435	5,59	495	3,56	555	7,57	615	5,05	675	1,54	735	0,28		

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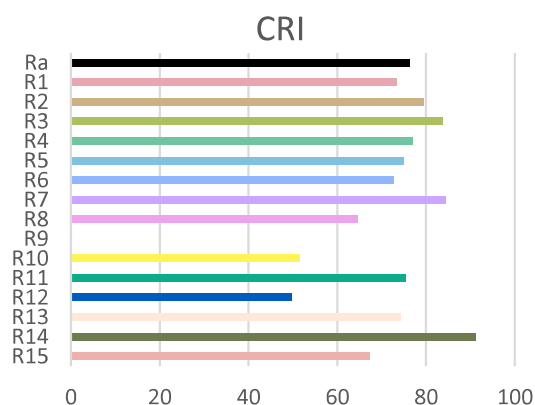
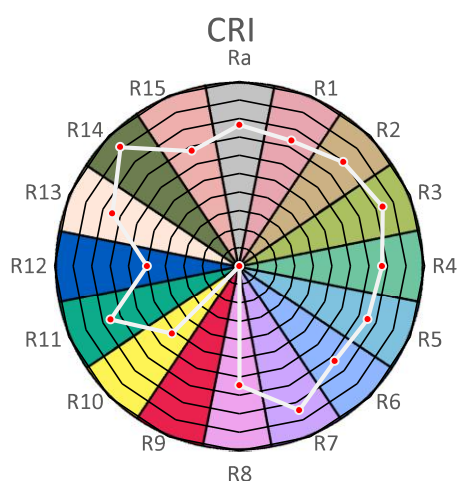
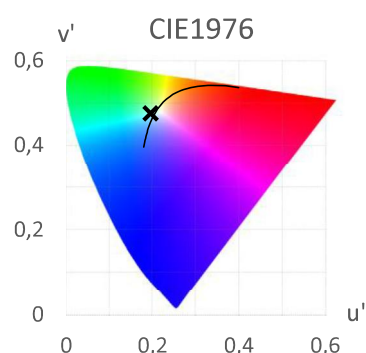
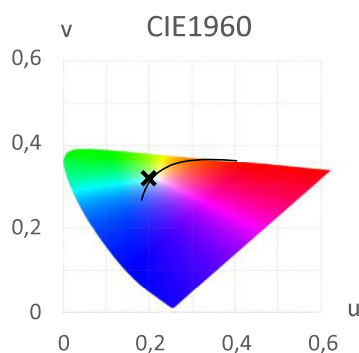
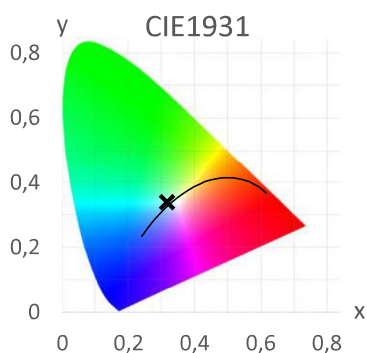
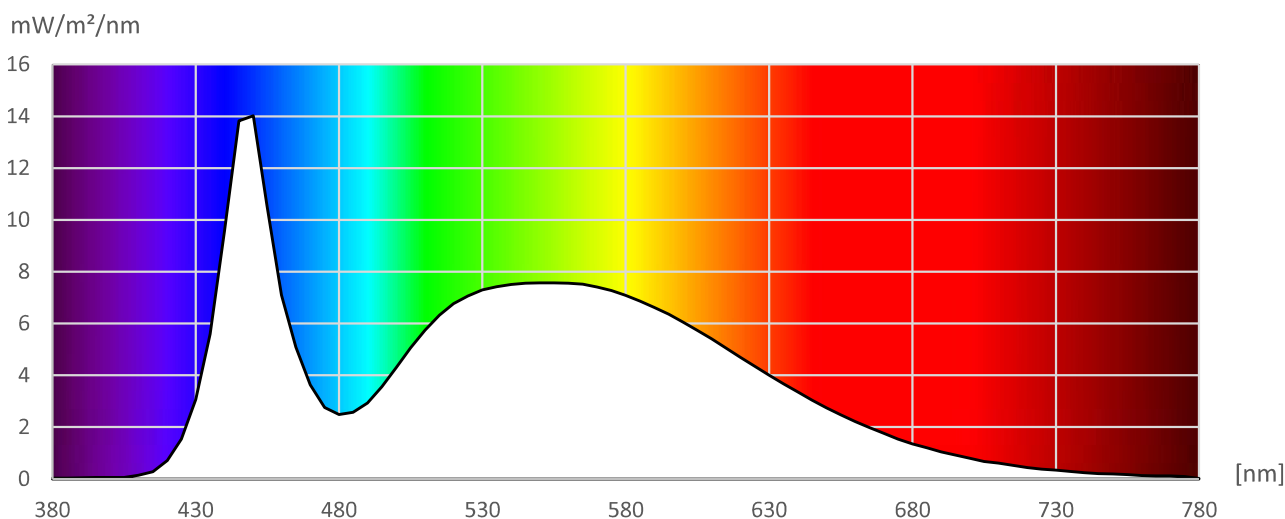
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / cw / @ 3 m

Measurement file: 347477_3m_cw.CS
Date of measurement: 28.01.2020
Time of measurement: 10:28:48



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Burgebrach, 27.01.2020

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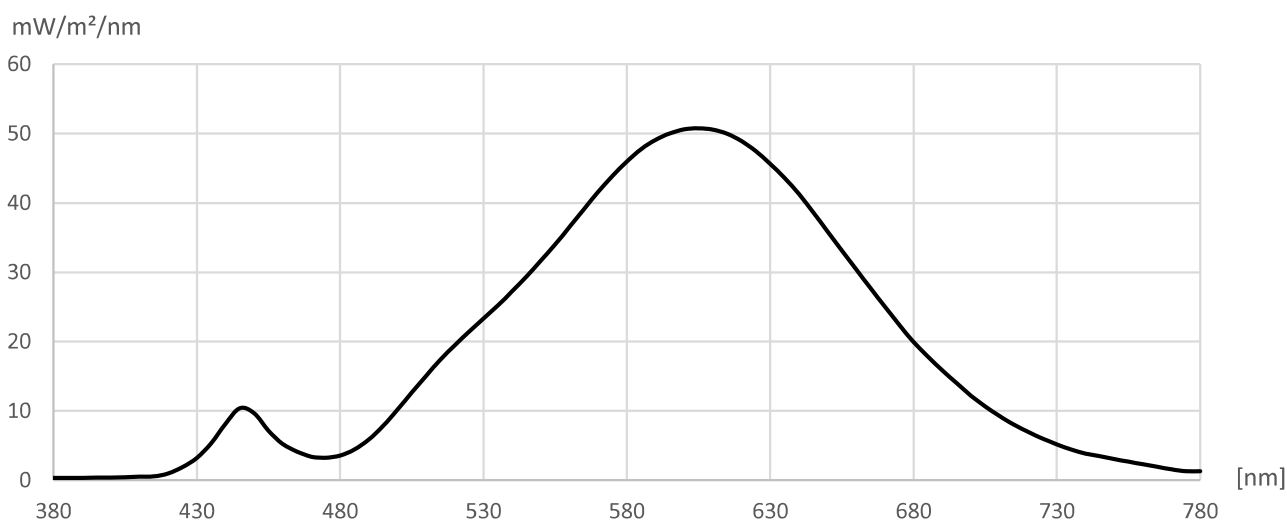
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / ww / @ 1 m

Measurement file: 347477_1m_ww.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:29:04



R1 = 72,7	Ra = 76,5	Illuminance	2471,47 lx	CIE1931
R2 = 82,6	Re = 68,4	Ee	7,513 W/m²	x = 0,4821
R3 = 93,5	GAI = 27,2	LER	328,9 lm/W	y = 0,4394
R4 = 74,5				
R5 = 70,7		correlated color temperature (CCT)	2623 K	CIE1976
R6 = 75,9		Duv	0,0085	u' = 0,2639
R7 = 85,9				v' = 0,5411
R8 = 56,2		Saturation	76,7 %	
R9 = -2,0				CIE1960
R10 = 60,6		Dominant wavelength	581 nm	u = 0,2639
R11 = 69,4		Peak wavelength	605 nm	v = 0,3607
R12 = 50,2				
R13 = 73,7		Flicker frequency	% < 2.5 Hz	TM30
R14 = 95,8		Percent Flicker	< 2.5 %	Rf = 80,7
R15 = 65,7		Flicker index	% < 2.5	Rg = 90,9

[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	0,35	440	8,14	500	10,19	560	36,53	620	48,91	680	19,98	740	3,86
385	0,33	445	10,39	505	12,67	565	39,09	625	47,46	685	17,85	745	3,48
390	0,34	450	9,65	510	15,07	570	41,56	630	45,65	690	15,85	750	3,06
395	0,38	455	7,15	515	17,38	575	43,87	635	43,59	695	14,02	755	2,67
400	0,38	460	5,24	520	19,47	580	45,97	640	41,28	700	12,20	760	2,31
405	0,43	465	4,13	525	21,42	585	47,76	645	38,62	705	10,67	765	1,95
410	0,51	470	3,40	530	23,34	590	49,10	650	35,92	710	9,26	770	1,56
415	0,55	475	3,25	535	25,22	595	50,00	655	33,15	715	8,03	775	1,31
420	0,99	480	3,57	540	27,24	600	50,59	660	30,42	720	6,96	780	1,31
425	1,89	485	4,42	545	29,38	605	50,77	665	27,70	725	6,01		
430	3,20	490	5,87	550	31,67	610	50,56	670	25,02	730	5,18		
435	5,30	495	7,83	555	34,01	615	49,97	675	22,42	735	4,45		

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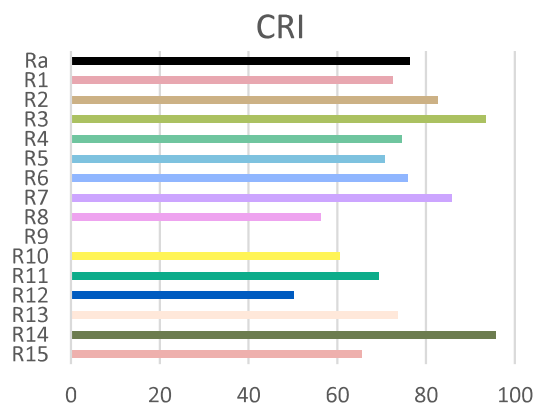
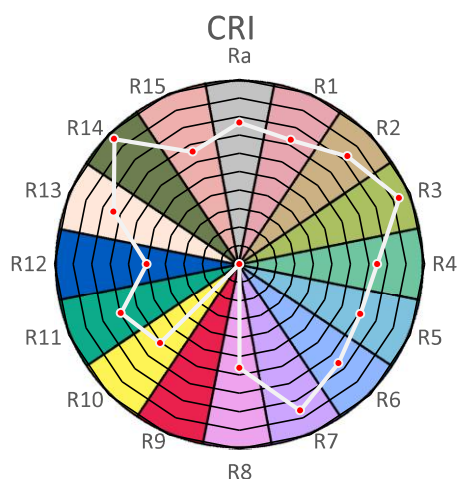
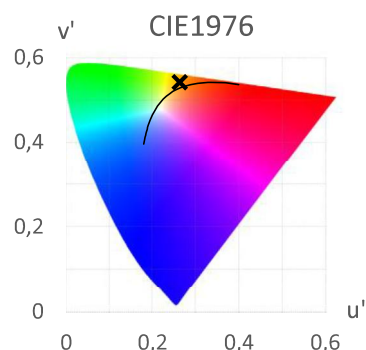
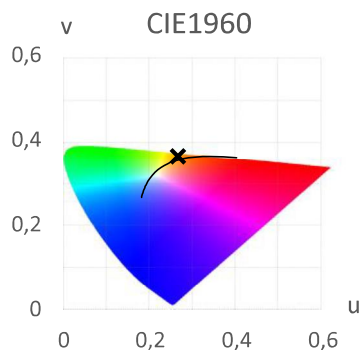
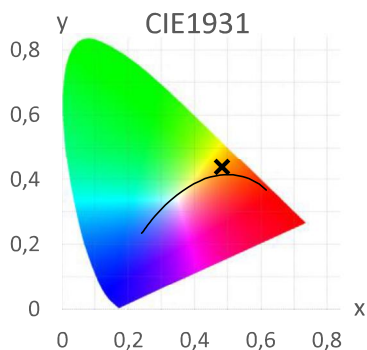
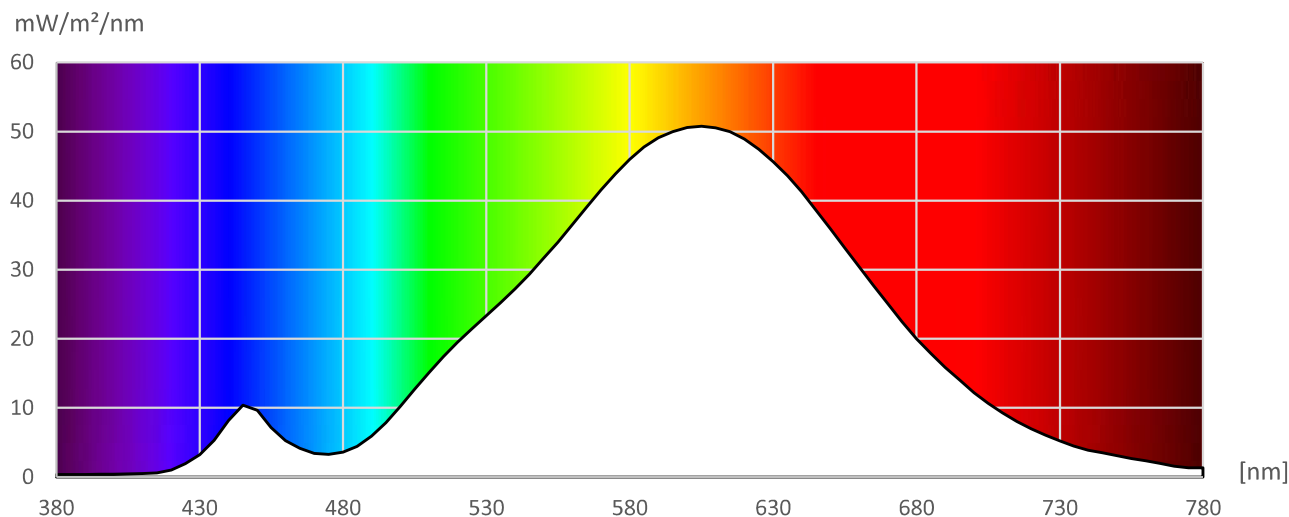
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / ww / @ 1 m

Measurement file: 347477_1m_ww.C
Date of measurement: 28.01.2020
Time of measurement: 10:29:04



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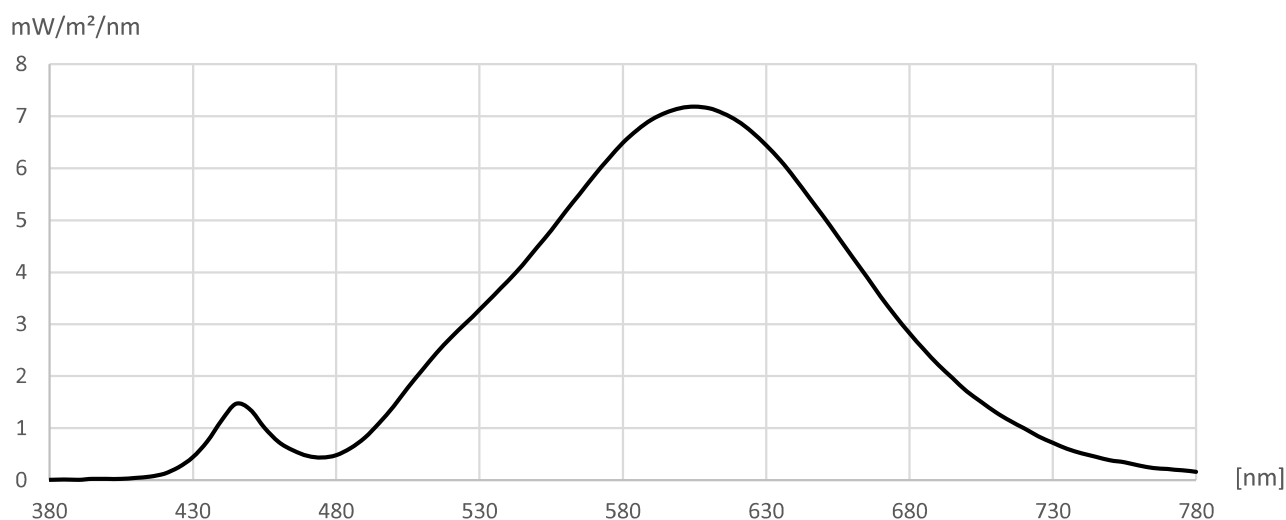
First, last name of inspector

Measurement protocol

th.mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / ww / @ 3 m

Measurement file: 347477_3m_ww.CSV
Date of measurement: 28.01.2020
Time of measurement: 10:29:19



R1 = 72,6	Ra = 76,4
R2 = 82,5	Re = 68,2
R3 = 93,4	GAI = 26,9
R4 = 74,4	
R5 = 70,6	
R6 = 75,8	
R7 = 85,8	
R8 = 56,0	
R9 = -2,4	
R10 = 60,5	
R11 = 69,3	
R12 = 49,9	
R13 = 73,6	
R14 = 95,8	
R15 = 65,6	

Illuminance	348,65 lx
Ee	1,057 W/m²
LER	329,9 lm/W
correlated color temperature (CCT)	2618 K
Duv	0,0085
Saturation	76,9 %
Dominant wavelength	581 nm
Peak wavelength	605 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,4826
y = 0,4396
CIE1976
u' = 0,2641
v' = 0,5412
CIE1960
u = 0,2641
v = 0,3608
TM30
Rf = 80,6
Rg = 90,9

[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	1,15	500	1,42	560	5,16	620	6,91	680	2,83	740	0,52
385	0,02	445	1,47	505	1,78	565	5,51	625	6,70	685	2,51	745	0,45
390	0,01	450	1,36	510	2,12	570	5,86	630	6,44	690	2,22	750	0,38
395	0,03	455	1,01	515	2,45	575	6,18	635	6,15	695	1,96	755	0,34
400	0,02	460	0,73	520	2,74	580	6,49	640	5,81	700	1,71	760	0,28
405	0,03	465	0,57	525	3,01	585	6,74	645	5,44	705	1,51	765	0,24
410	0,04	470	0,47	530	3,28	590	6,93	650	5,07	710	1,31	770	0,21
415	0,07	475	0,44	535	3,56	595	7,07	655	4,68	715	1,14	775	0,19
420	0,13	480	0,48	540	3,84	600	7,16	660	4,29	720	1,00	780	0,16
425	0,25	485	0,62	545	4,14	605	7,18	665	3,91	725	0,85		
430	0,44	490	0,82	550	4,47	610	7,15	670	3,53	730	0,72		
435	0,74	495	1,10	555	4,81	615	7,06	675	3,16	735	0,61		

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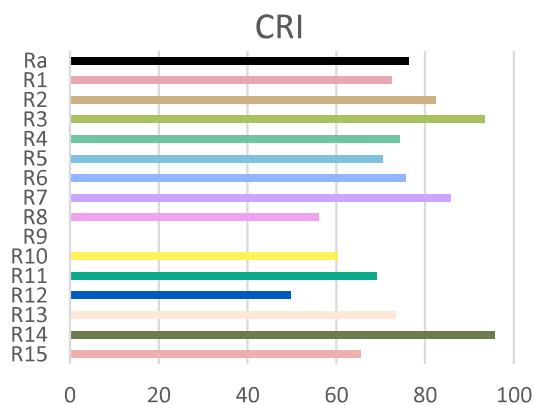
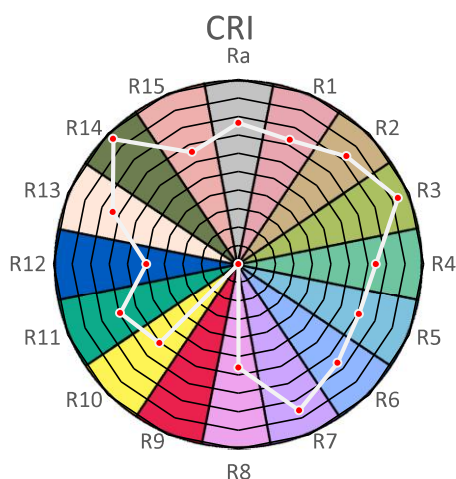
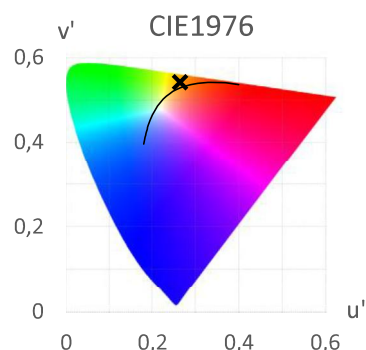
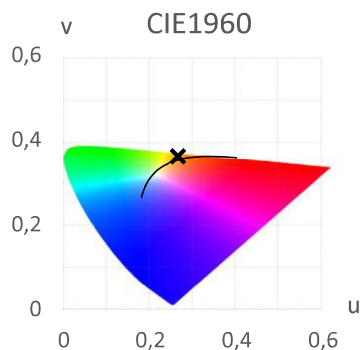
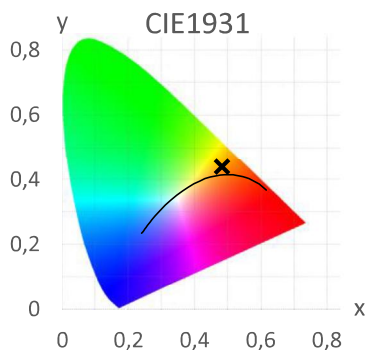
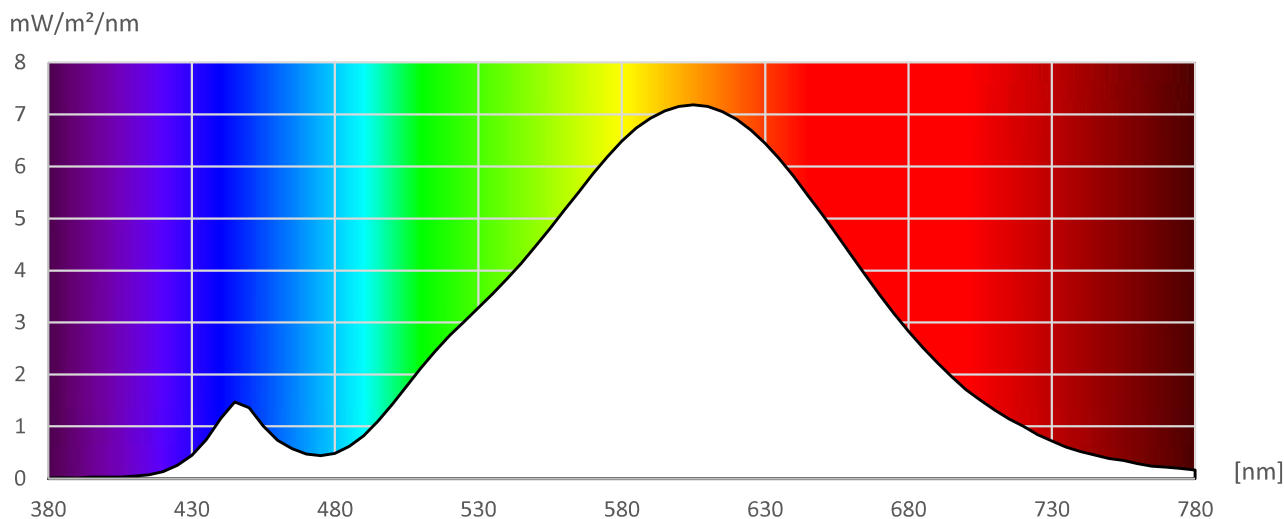
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
DCL Flat Par 5x4W 2in1 CW/WW
347477 / ww / @ 3 m

Measurement file: 347477_3m_ww.C
Date of measurement: 28.01.2020
Time of measurement: 10:29:19



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