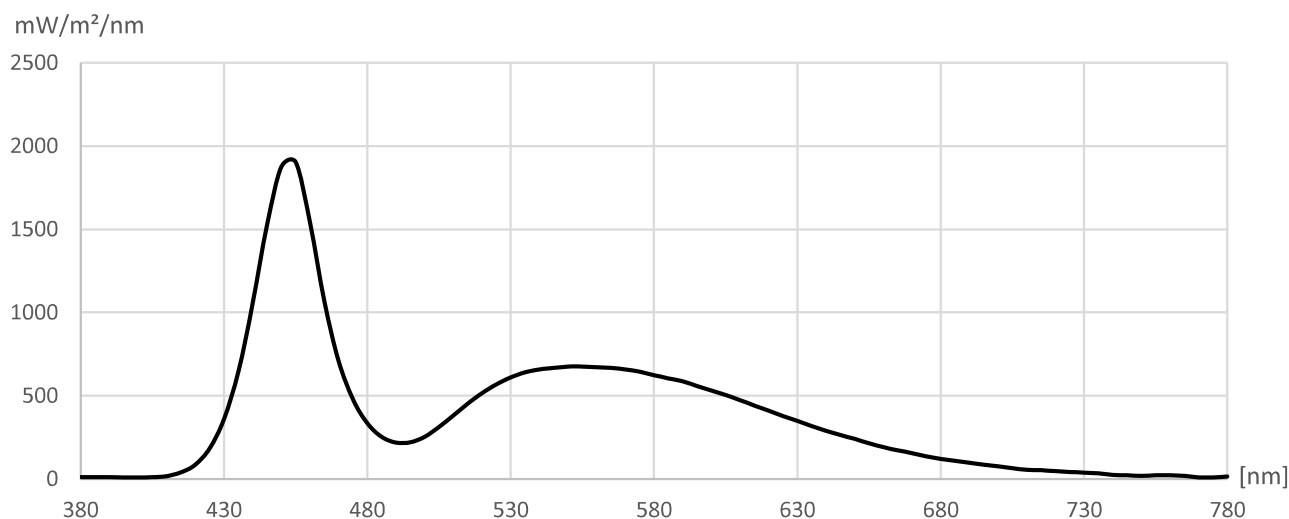


Measurement protocol

th•mann

Test object: Stairville
MH-X50+ LED Spot Moving Head
Item 250558 / @ 1 m

Measurement file: 250558_1m.CSV
Date of measurement: 31.01.2018
Time of measurement: 17:26:00



R1 = 84,7	Ra = 81,7
R2 = 84,5	Re = 75,6
R3 = 75,4	GAI = 100,7
R4 = 85,4	
R5 = 81,4	
R6 = 71,7	
R7 = 88,6	
R8 = 82,1	
R9 = 38,1	
R10 = 55,6	
R11 = 80,7	
R12 = 45,0	
R13 = 85,0	
R14 = 85,5	
R15 = 90,2	

Illuminance	41205,93 lx
Ee	150,221 W/m ²
LER	274,3 lm/W
correlated color temperature (CCT)	10612 K
Duv	-0,0118
Saturation	23,2 %
Dominant wavelength	467 nm
Peak wavelength	454 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,2848
y = 0,2717
CIE1976
u' = 0,2001
v' = 0,4297
CIE1960
u = 0,2001
v = 0,2865
TM30
Rf = -
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	10,80	440	1051,70	500	253,50	560	670,89	620	409,95	680	120,62	740	25,18
385	11,01	445	1521,82	505	312,41	565	667,31	625	378,34	685	108,09	745	22,23
390	10,14	450	1874,02	510	381,44	570	657,83	630	349,03	690	97,13	750	18,87
395	10,06	455	1902,79	515	452,73	575	643,98	635	318,01	695	85,90	755	21,66
400	9,36	460	1539,33	520	515,79	580	623,14	640	290,01	700	75,75	760	22,11
405	10,67	465	1064,03	525	567,90	585	604,97	645	263,71	705	64,80	765	18,48
410	17,30	470	709,53	530	609,84	590	586,43	650	240,49	710	55,24	770	9,98
415	39,12	475	479,33	535	640,30	595	558,99	655	214,77	715	52,73	775	9,89
420	86,00	480	334,75	540	658,36	600	530,57	660	191,05	720	46,65	780	14,64
425	184,04	485	253,73	545	667,27	605	504,29	665	172,77	725	42,52		
430	360,61	490	219,23	550	675,39	610	473,86	670	155,68	730	37,55		
435	646,50	495	220,37	555	675,59	615	441,87	675	136,17	735	33,40		

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

Sebastian Laske

Burgebrach, 31.01.2018

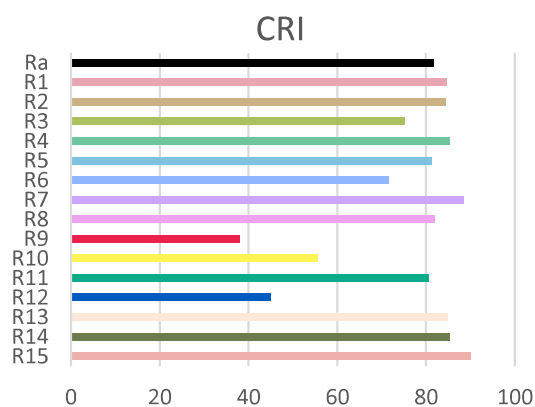
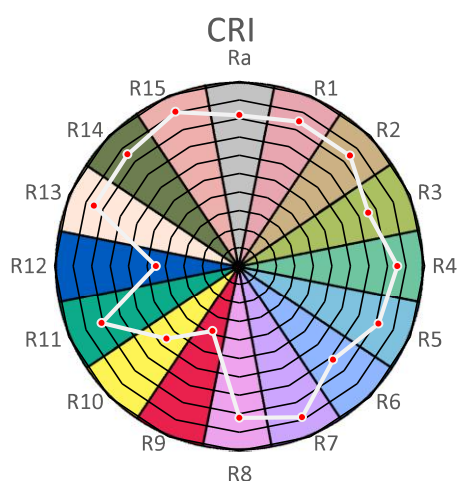
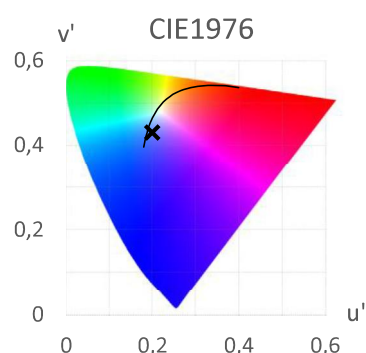
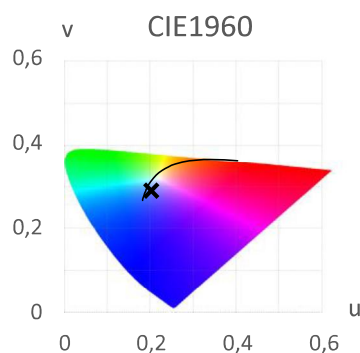
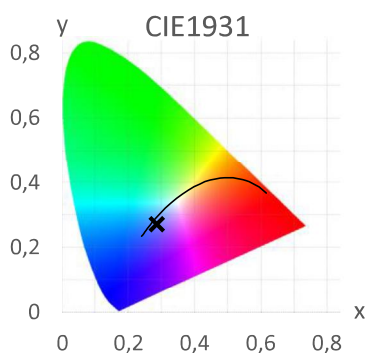
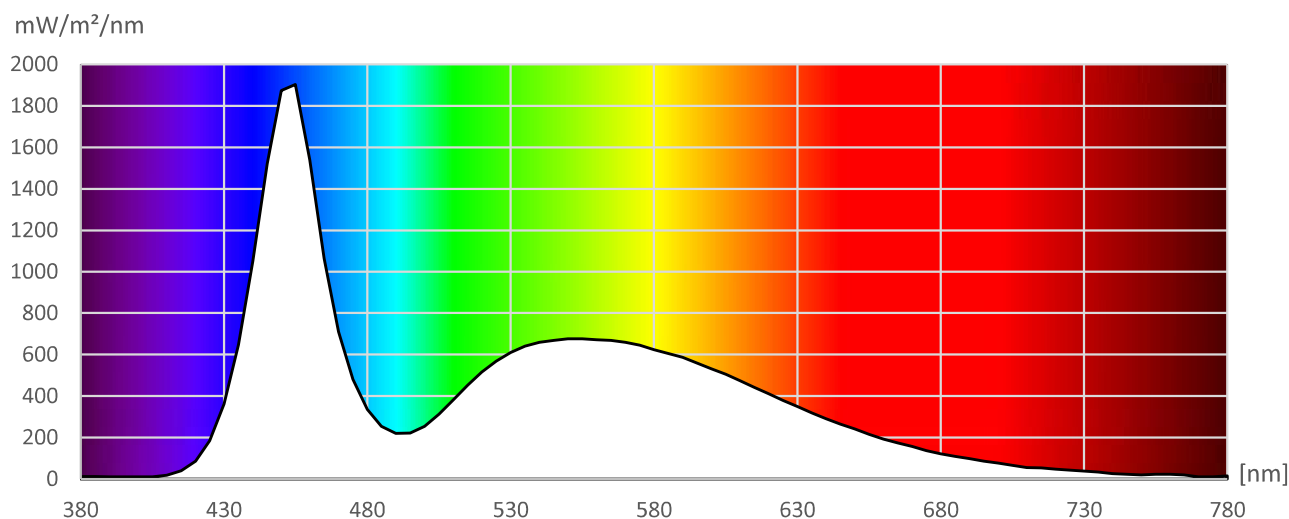
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-X50+ LED Spot Moving Head
Item 250558 / @ 1 m

Measurement file: 250558_1m.CSV
Date of measurement: 31.01.2018
Time of measurement: 17:26:00



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

Burgebrach, 31.01.2018

Sebastian Laske

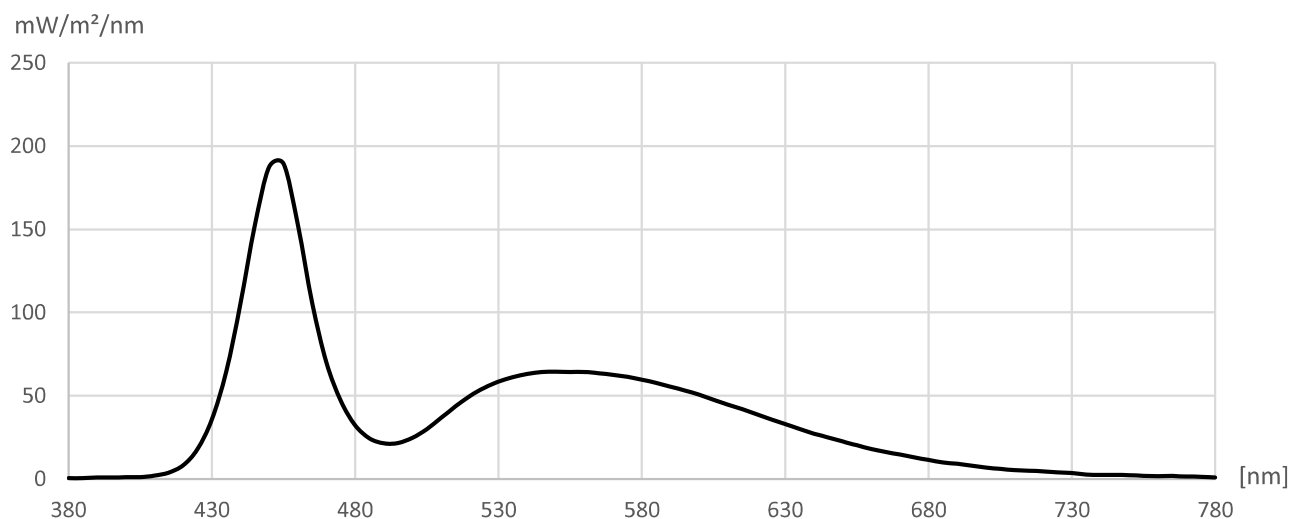
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-X50+ LED Spot Moving Head
Item 250558 / @ 3 m

Measurement file: 250558_3m.CSV
Date of measurement: 31.01.2018
Time of measurement: 17:25:36



R1 = 85,0	Ra = 81,8
R2 = 84,4	Re = 75,9
R3 = 74,6	GAI = 101,4
R4 = 86,0	
R5 = 81,4	
R6 = 71,3	
R7 = 88,8	
R8 = 83,1	
R9 = 40,8	
R10 = 55,3	
R11 = 81,3	
R12 = 44,6	
R13 = 85,3	
R14 = 85,0	
R15 = 91,3	

Illuminance	3942,96 lx
Ee	14,562 W/m ²
LER	270,8 lm/W
correlated color temperature (CCT)	11617 K
Duv	-0,0124
Saturation	24,8 %
Dominant wavelength	466 nm
Peak wavelength	451 nm
Flicker frequency	% < 2.5 Hz
Percent Flicker	< 2.5 %
Flicker index	% < 2.5

CIE1931
x = 0,2813
y = 0,2666
CIE1976
u' = 0,1996
v' = 0,4257
CIE1960
u = 0,1996
v = 0,2838
TM30
Rf = -
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	0,59	440	105,22	500	24,70	560	64,34	620	38,93	680	11,42	740	2,42
385	0,49	445	152,09	505	29,96	565	63,56	625	35,91	685	10,02	745	2,45
390	0,92	450	187,57	510	36,72	570	62,57	630	32,96	690	9,12	750	2,29
395	0,95	455	189,40	515	43,66	575	61,32	635	30,04	695	8,05	755	1,94
400	1,03	460	152,59	520	49,85	580	59,67	640	27,25	700	6,89	760	1,66
405	1,19	465	105,37	525	54,70	585	57,74	645	24,98	705	6,04	765	1,79
410	2,02	470	69,99	530	58,45	590	55,51	650	22,51	710	5,35	770	1,47
415	3,85	475	46,99	535	61,17	595	53,19	655	20,21	715	5,02	775	1,34
420	8,20	480	32,30	540	63,08	600	50,56	660	18,02	720	4,58	780	0,92
425	17,92	485	24,40	545	64,17	605	47,58	665	16,34	725	3,97		
430	35,81	490	21,39	550	64,42	610	44,72	670	14,64	730	3,58		
435	64,72	495	21,61	555	64,28	615	42,04	675	12,99	735	2,72		

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

Sebastian Laske

Burgebrach, 31.01.2018

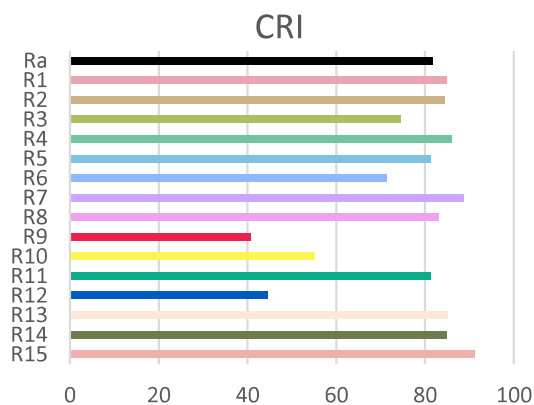
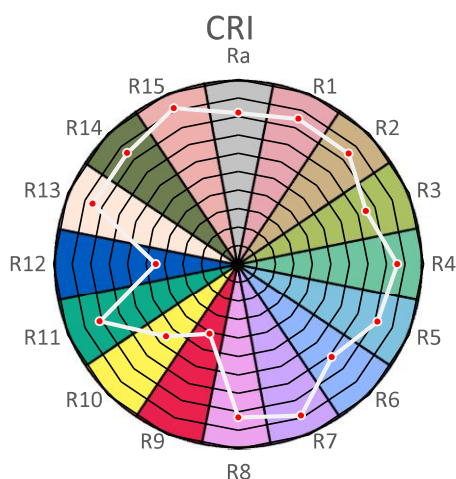
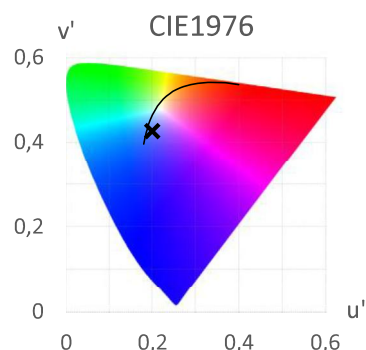
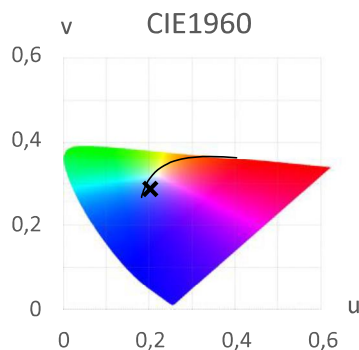
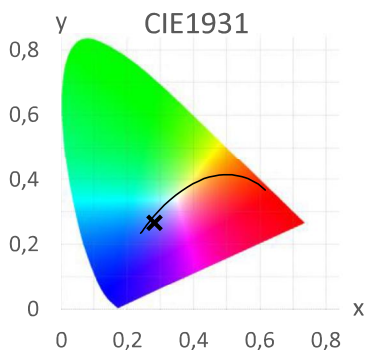
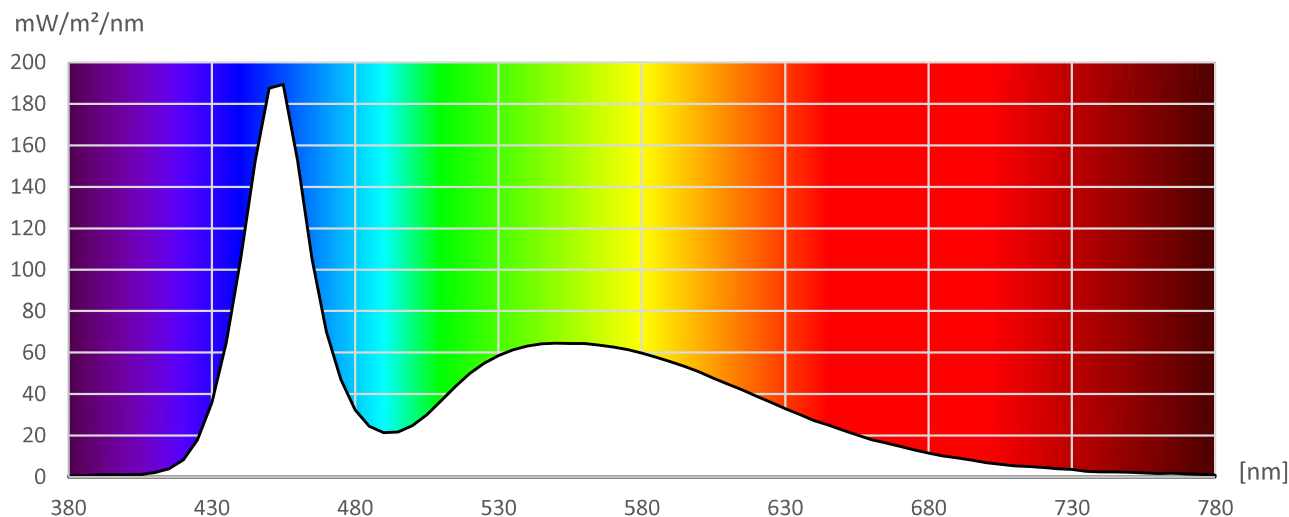
First, last name of inspector

Measurement protocol

th•mann

Test object: Stairville
MH-X50+ LED Spot Moving Head
Item 250558 / @ 3 m

Measurement file: 250558_3m.CSV
Date of measurement: 31.01.2018
Time of measurement: 17:25:36



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

Burgebrach, 31.01.2018

Sebastian Laske

First, last name of inspector