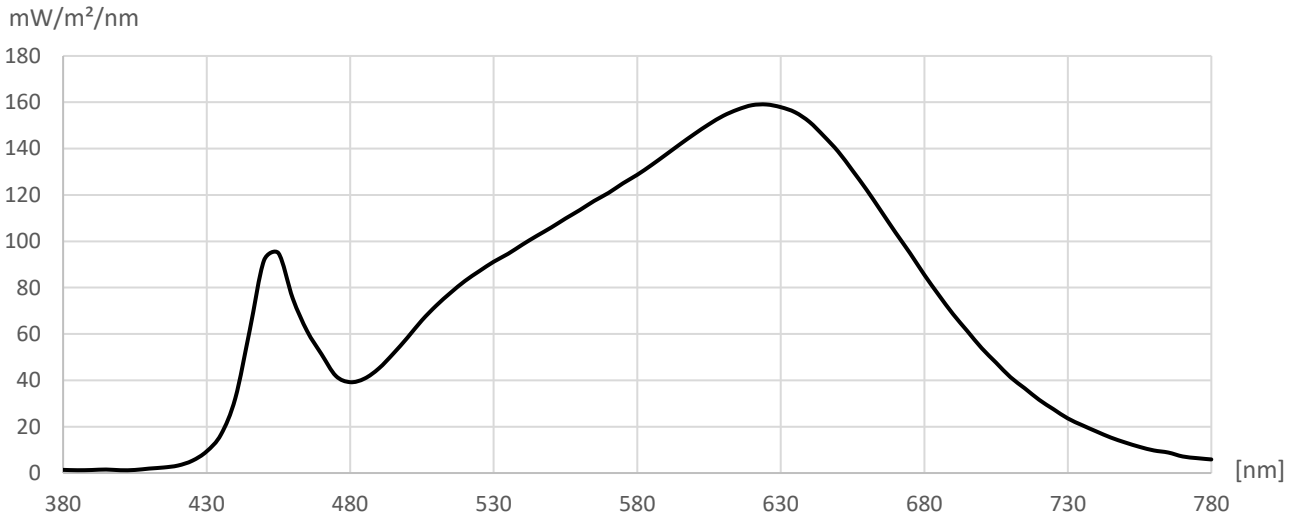


Measurement Protocol



Manufacturer: Flexfire LEDs, Inc.
 Type: White LED Light Sheet
 Model: LST-30K

Measurement file: LST-30K.CSV
 Date of measurement: 11.12.2023
 Time of measurement: 17:13:27



R1 = 93.3	Ra = 92.9	Illuminance	8,153.53 lx	CIE1931
R2 = 96.7	Re = 90.1	Ee	28.544 W/m ²	x = 0.4290
R3 = 97.6	GAI = 61.7	LER	285.6 lm/W	y = 0.3970
R4 = 92.0				
R5 = 92.6	TLCI = 93.0	Correlated Color Temperature (CCT)	3,058 K	CIE1976
R6 = 94.9		Duv	-0.0017	u' = 0.2485
R7 = 92.2	PPFD			v' = 0.5174
R8 = 83.6	[μmol/m ² s]	Saturation	47.90 %	
R9 = 64.2	130.50			CIE1960
R10 = 90.9		Dominant wavelength	582 nm	u = 0.2485
R11 = 92.1		Peak wavelength	623 nm	v = 0.3449
R12 = 78.9				
R13 = 94.4		Flicker frequency	% < 1.0	TM30
R14 = 98.3		Percent Flicker	< 1.0	Rf = 90.0
R15 = 90.5		Flicker index	% < 1.0	Rg = 99.8

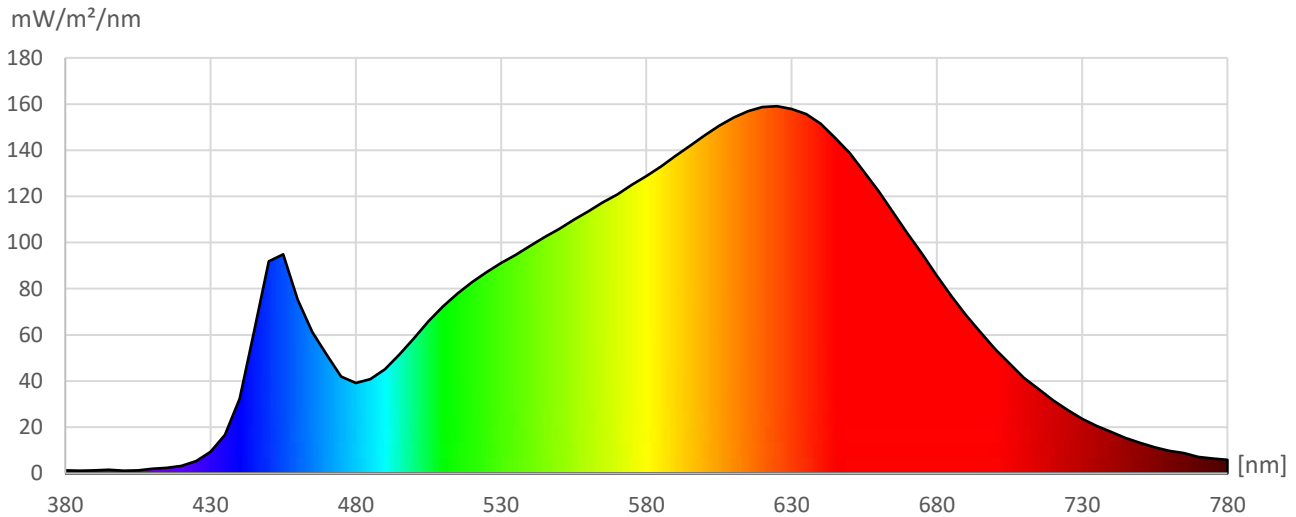
[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	1.36	440	32.31	500	58.48	560	113.49	620	158.75	680	85.58	740	17.91
385	1.21	445	61.54	505	65.91	565	117.44	625	159.06	685	76.91	745	15.30
390	1.30	450	91.81	510	72.27	570	120.89	630	157.90	690	68.62	750	13.17
395	1.51	455	94.92	515	77.82	575	125.01	635	155.70	695	61.26	755	11.28
400	1.21	460	75.34	520	82.89	580	128.71	640	151.53	700	53.89	760	9.74
405	1.32	465	61.28	525	87.15	585	132.93	645	145.43	705	47.64	765	8.84
410	1.92	470	51.33	530	91.19	590	137.42	650	138.74	710	41.39	770	7.15
415	2.38	475	41.93	535	94.60	595	141.98	655	130.55	715	36.55	775	6.42
420	3.22	480	39.22	540	98.58	600	146.38	660	122.08	720	31.62	780	5.86
425	5.31	485	40.75	545	102.34	605	150.53	665	112.94	725	27.54		
430	9.33	490	45.14	550	105.93	610	154.18	670	103.75	730	23.56		
435	16.63	495	51.50	555	109.82	615	156.87	675	94.94	735	20.64		

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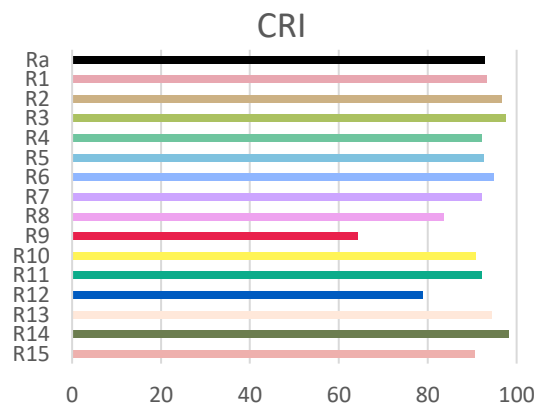
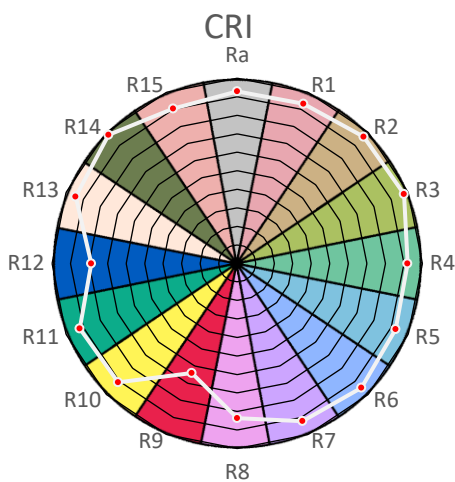
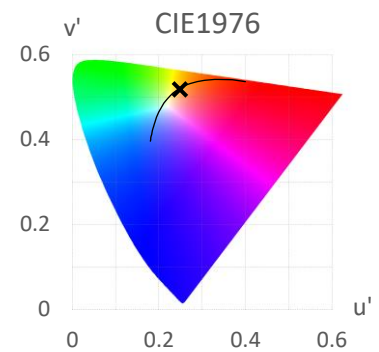
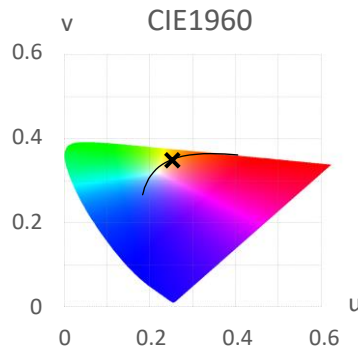
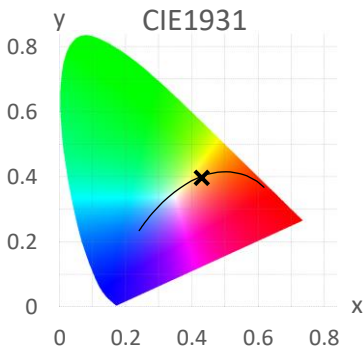
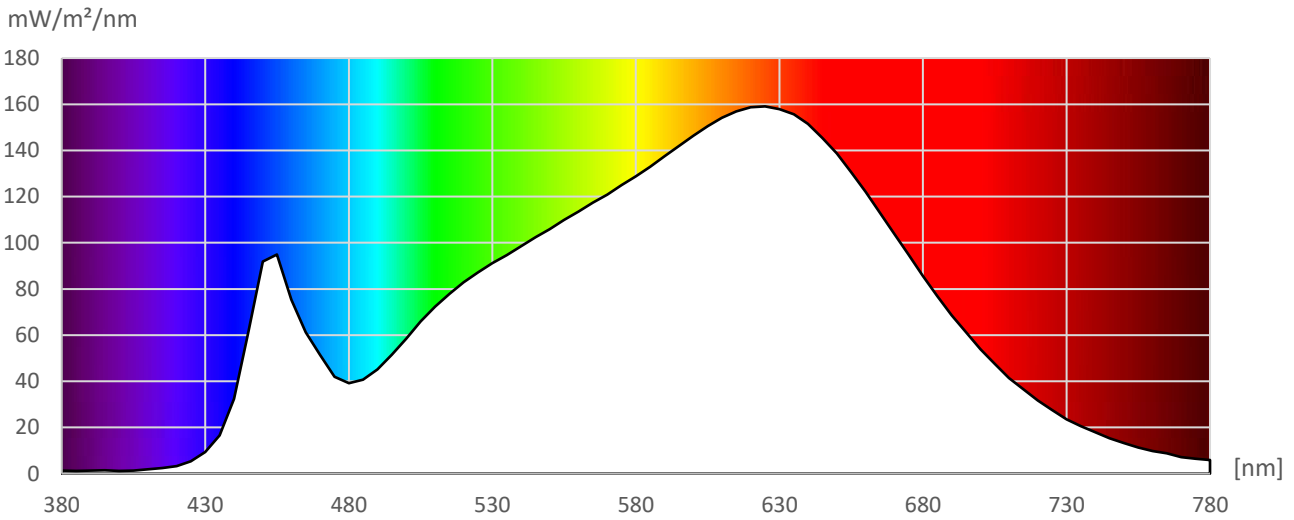
[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm
380	1.36	535	94.60	690	68.62								
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470	51.33	625	159.06	780	5.86								
475	41.93	630	157.90										
480	39.22	635	155.70										
485	40.75	640	151.53										
490	45.14	645	145.43										
495	51.50	650	138.74										
500	58.48	655	130.55										
505	65.91	660	122.08										
510	72.27	665	112.94										
515	77.82	670	103.75										
520	82.89	675	94.94										
525	87.15	680	85.58										
530	91.19	685	76.91										

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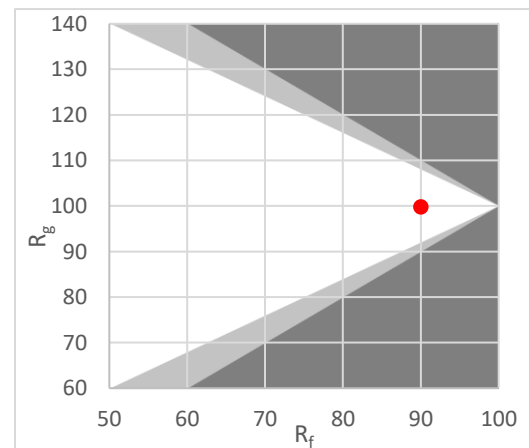
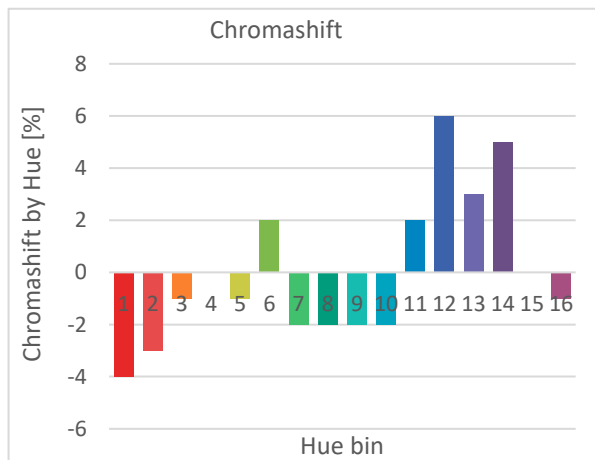
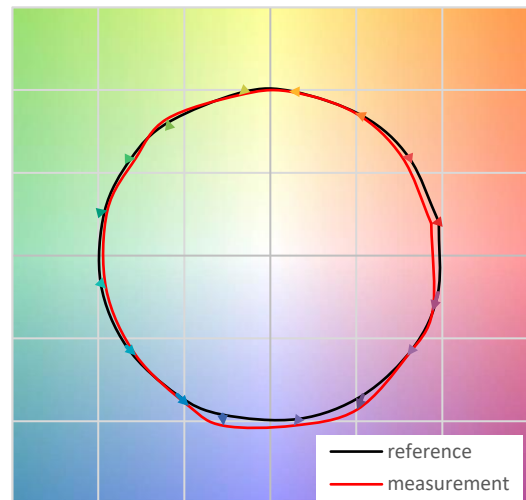
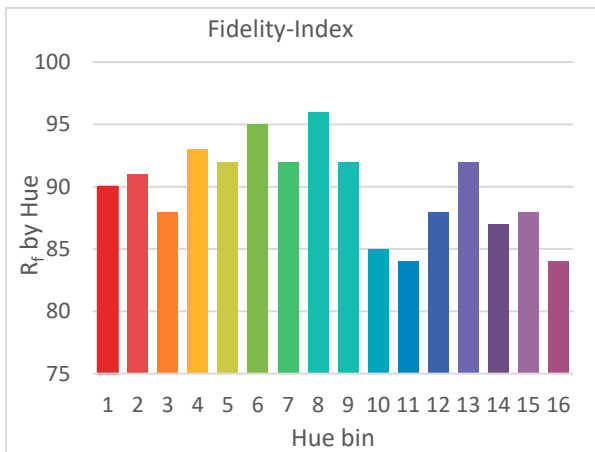
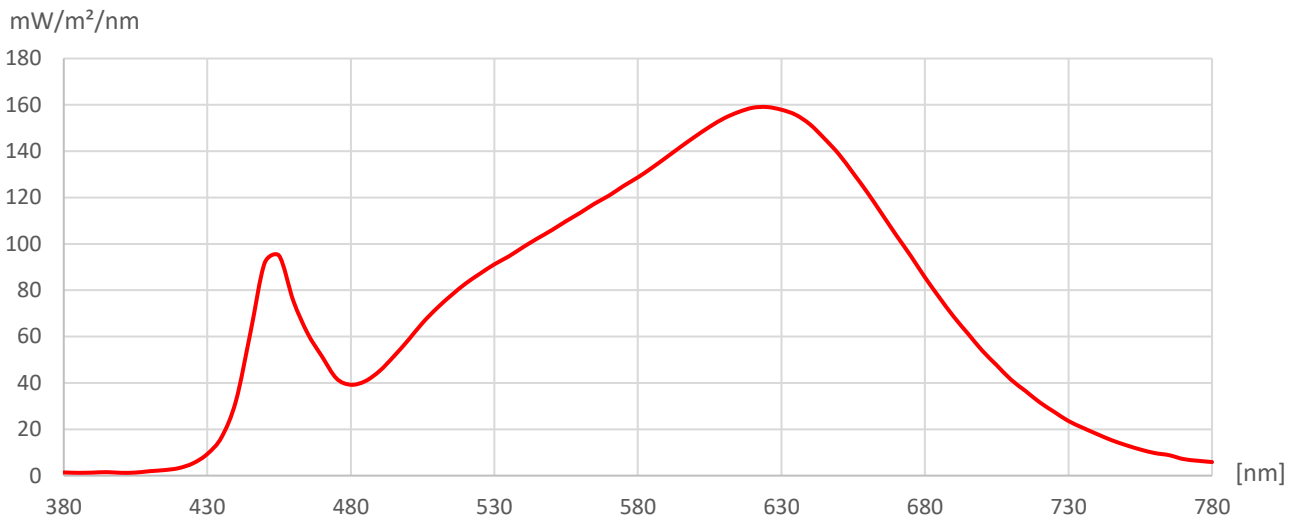


Measurement Protocol



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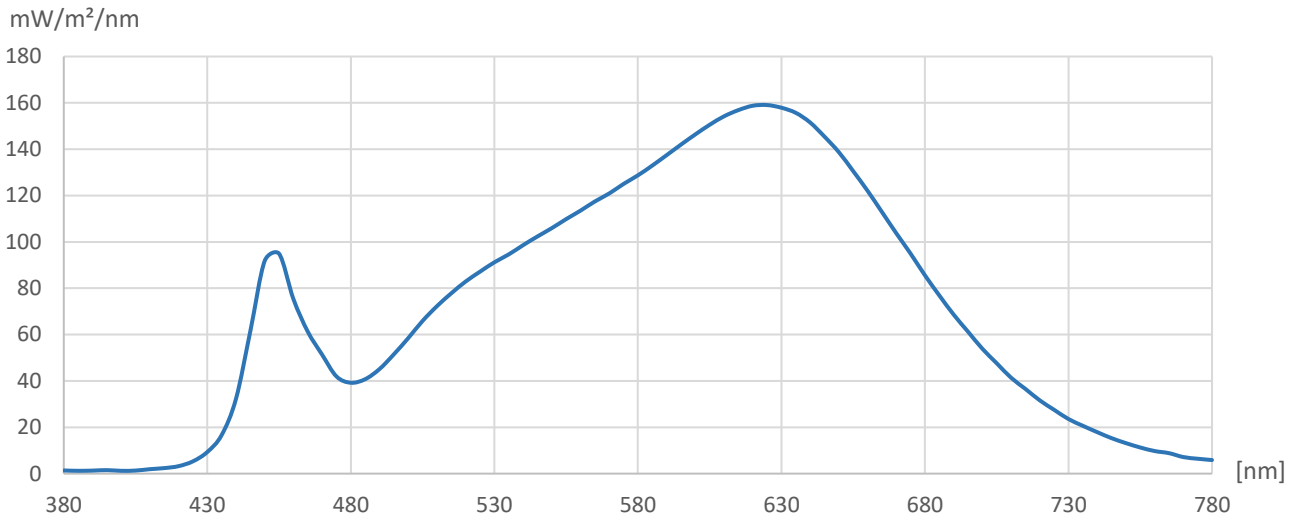


Measurement Protocol



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 Model: LST-30K

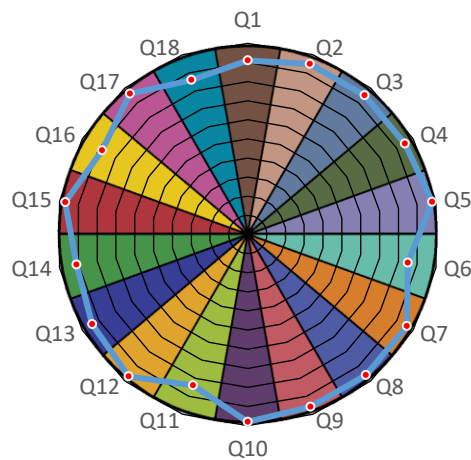
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correlated color temperature (CCT) 3,058 K
 TLCI 93

Reference Spectrum Plank

	Lightness	Chroma	Hue
R	1	0	0
R/Y	0	0	-1
Y	0	0	-1
Y/G	0	0	0
G	0	0	1
G/C	0	0	1
C	0	0	1
C/B	0	0	-1
B	0	-1	-1
B/M	1	0	2
M	1	0	2
M/R	1	0	2



Test Colour	Value	Test Colour	Value	Test Colour	Value
Q1 Dark skin	91	Q7 Orange	96	Q13 Blue	94
Q2 Light skin	95	Q8 Purplish blue	96	Q14 Green	91
Q3 Blue sky	95	Q9 Moderate red	96	Q15 Red	97
Q4 Foliage	95	Q10 Purple	98	Q16 Yellow	88
Q5 Blue flower	98	Q11 Yellow green	84	Q17 Magenta	96
Q6 Bluish green	85	Q12 Orange yellow	97	Q18 Cyan	86