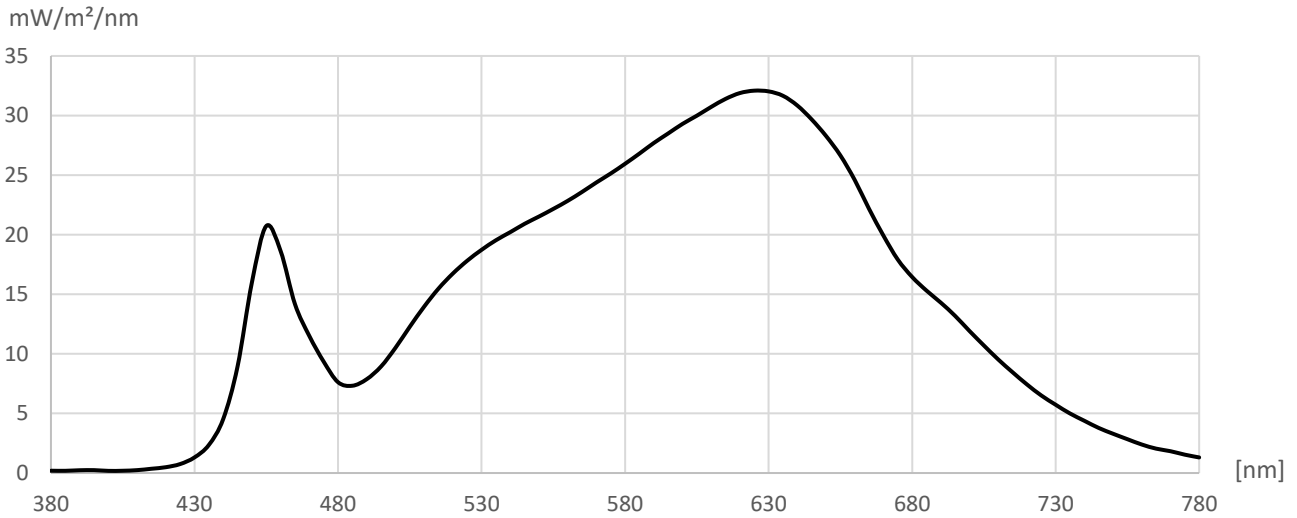


Measurement Protocol



Manufacturer: Flexfire LEDs, Inc.
 Type: ClickBright™ Tunable White LED Light Bar
 Model: LB-TW3050K

Measurement file: LB-TW3050K.CSV
 Date of measurement: 13.08.2024
 Time of measurement: 12:08:23



R1 = 93.0	Ra = 92.4	Illuminance	1,641.16 lx	CIE1931
R2 = 96.3	Re = 89.3	Ee	5.770 W/m²	x = 0.4305
R3 = 96.9	GAI = 60.2	LER	284.4 lm/W	y = 0.3992
R4 = 91.2				
R5 = 91.6	TLCI = 93.0	Correlated Color Temperature (CCT)	3,050 K	CIE1976
R6 = 94.0		Duv	-0.0011	u' = 0.2485
R7 = 92.6	PPFD			v' = 0.5185
R8 = 83.9	[μmol/m²s]	Saturation	48.90 %	
R9 = 64.3	26.15			CIE1960
R10 = 89.2		Dominant wavelength	582 nm	u = 0.2485
R11 = 90.7		Peak wavelength	627 nm	v = 0.3456
R12 = 74.0				
R13 = 94.0		Flicker frequency	% < 1.0	TM30
R14 = 97.6		Percent Flicker	< 1.0	Rf = 88.7
R15 = 90.2		Flicker index	% < 1.0	Rg = 98.9

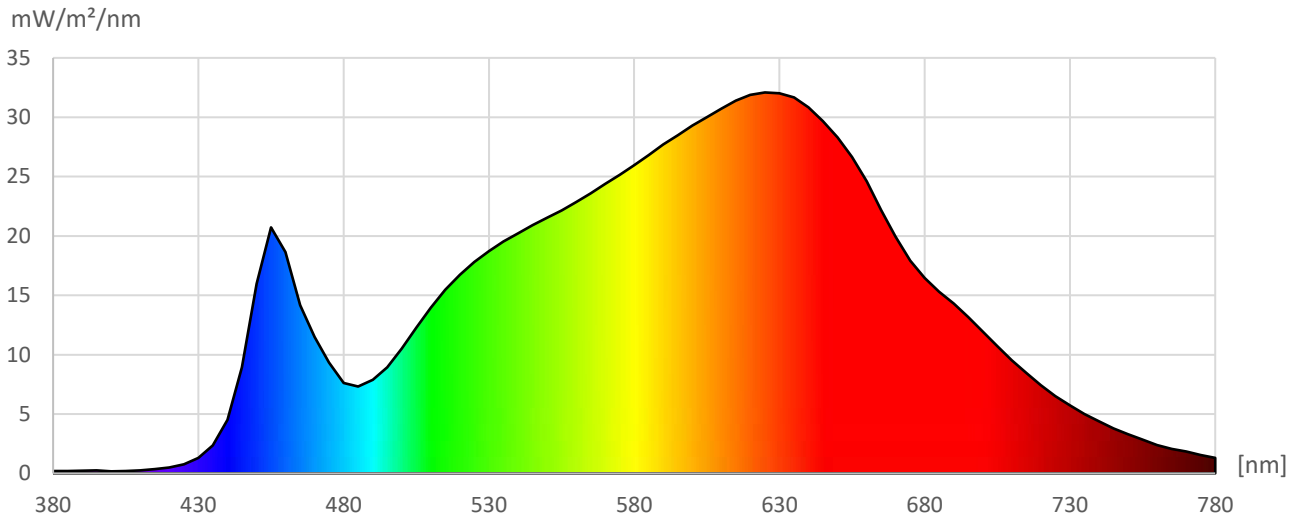
[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm
380	0.19	440	4.52	500	10.50	560	22.84	620	31.89	680	16.45	740	4.38
385	0.19	445	8.93	505	12.27	565	23.58	625	32.09	685	15.31	745	3.78
390	0.23	450	15.98	510	13.96	570	24.38	630	32.03	690	14.30	750	3.30
395	0.24	455	20.73	515	15.47	575	25.14	635	31.66	695	13.18	755	2.84
400	0.18	460	18.64	520	16.74	580	25.95	640	30.84	700	11.92	760	2.39
405	0.19	465	14.18	525	17.81	585	26.81	645	29.68	705	10.70	765	2.05
410	0.24	470	11.51	530	18.73	590	27.69	650	28.29	710	9.53	770	1.83
415	0.36	475	9.35	535	19.53	595	28.49	655	26.65	715	8.45	775	1.54
420	0.49	480	7.62	540	20.21	600	29.30	660	24.59	720	7.43	780	1.31
425	0.75	485	7.32	545	20.91	605	29.99	665	22.17	725	6.51		
430	1.31	490	7.87	550	21.52	610	30.72	670	19.92	730	5.73		
435	2.35	495	8.94	555	22.16	615	31.40	675	17.92	735	5.00		

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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	0.19	535	19.53	690	14.30								
385	0.19	540	20.21	695	13.18								
390	0.23	545	20.91	700	11.92								
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475	9.35	630	32.03										
480	7.62	635	31.66										
485	7.32	640	30.84										
490	7.87	645	29.68										
495	8.94	650	28.29										
500	10.50	655	26.65										
505	12.27	660	24.59										
510	13.96	665	22.17										
515	15.47	670	19.92										
520	16.74	675	17.92										
525	17.81	680	16.45										
530	18.73	685	15.31										

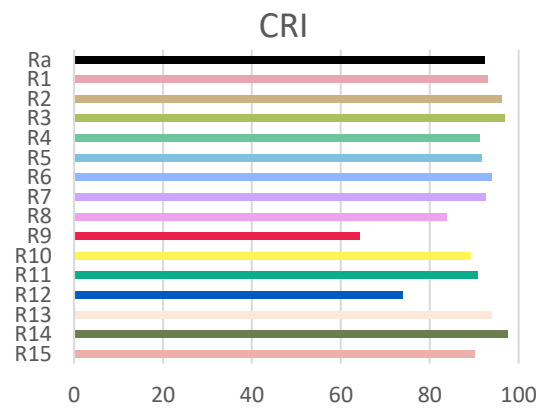
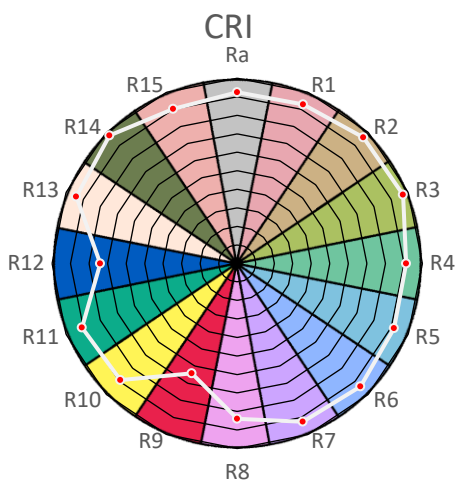
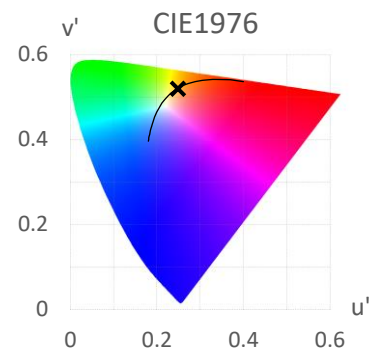
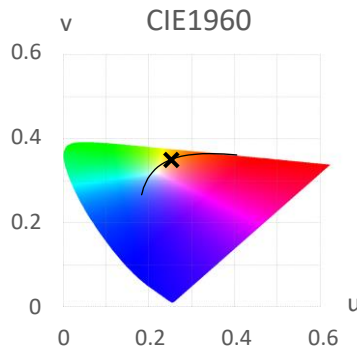
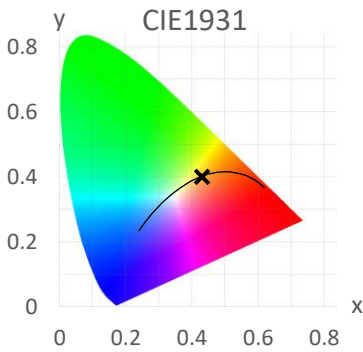
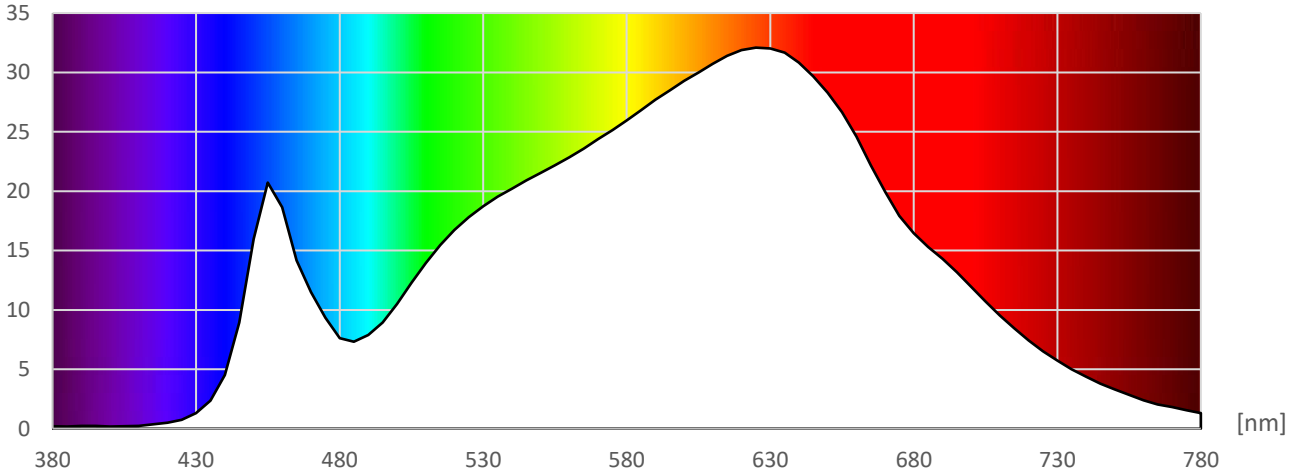
Measurement Protocol



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mW/m²/nm

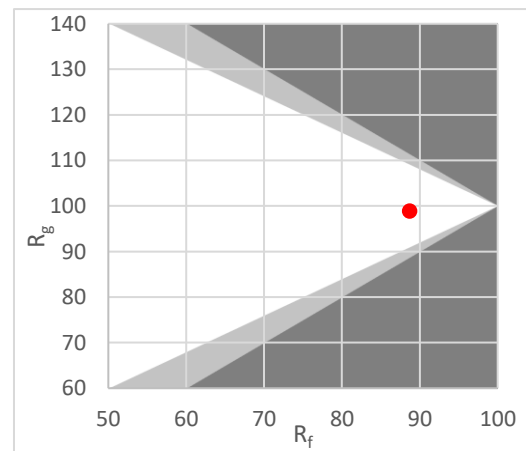
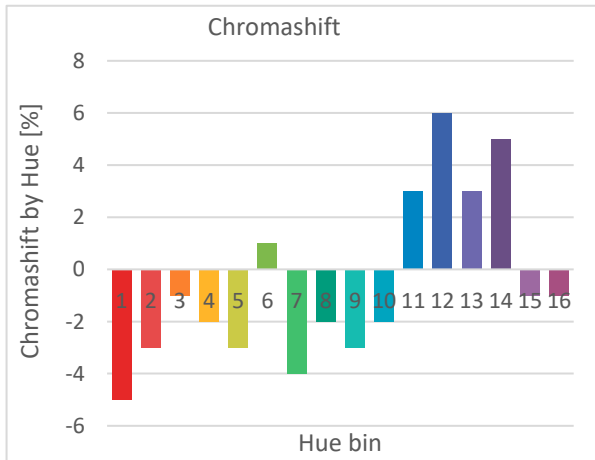
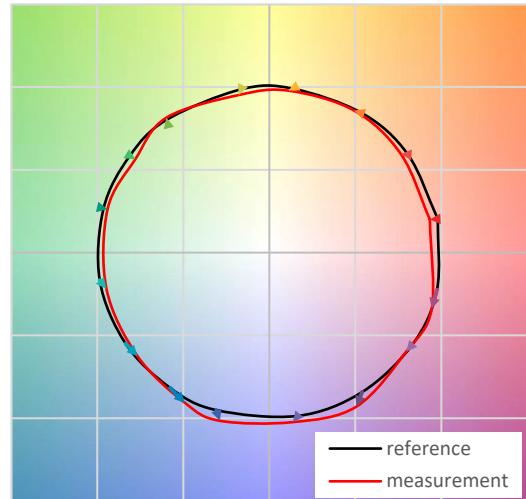
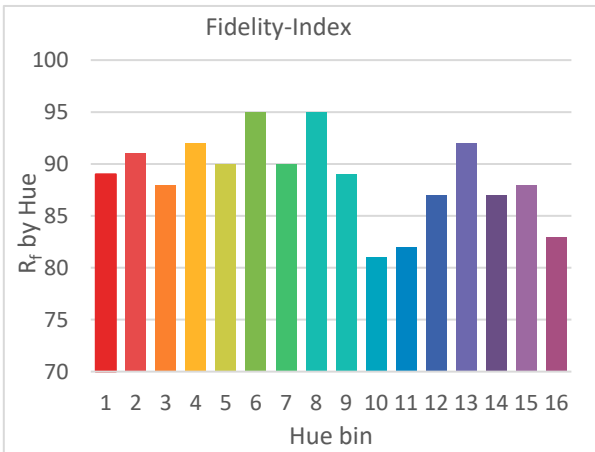
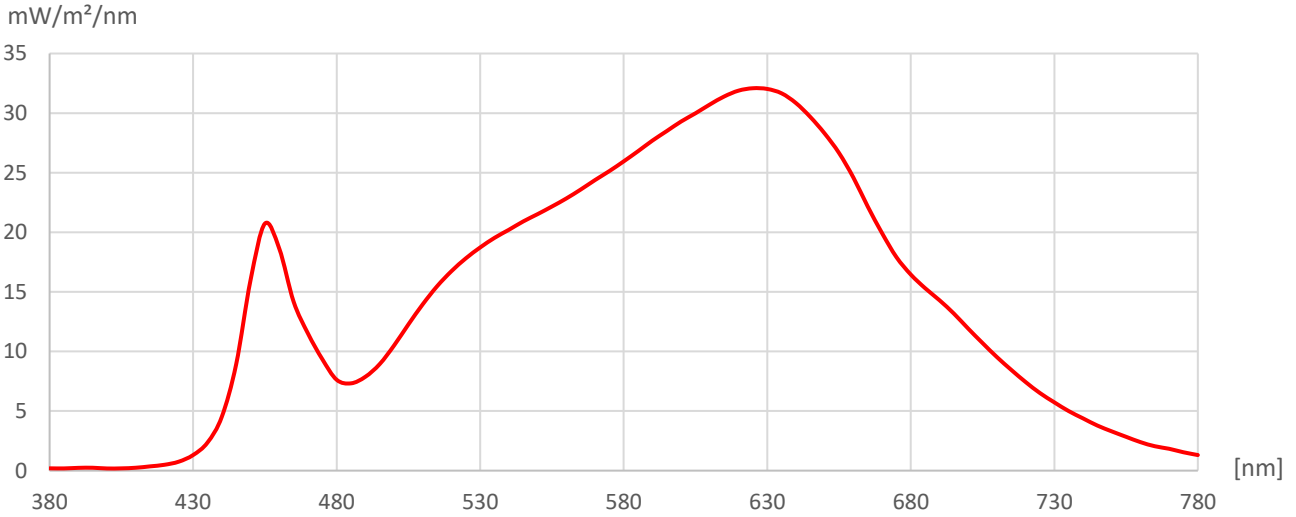


Measurement Protocol



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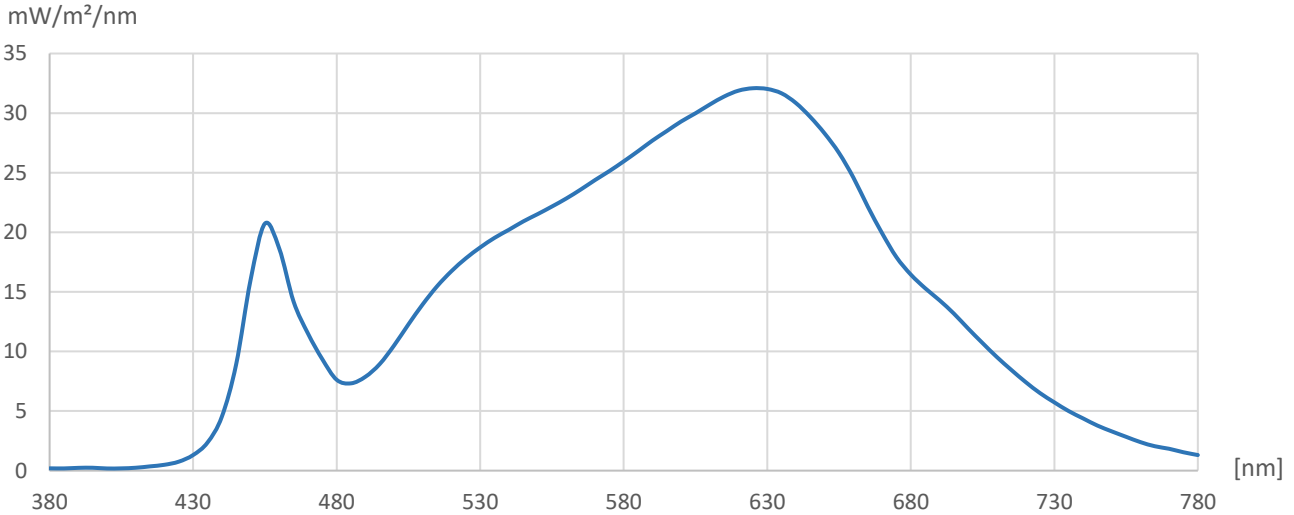


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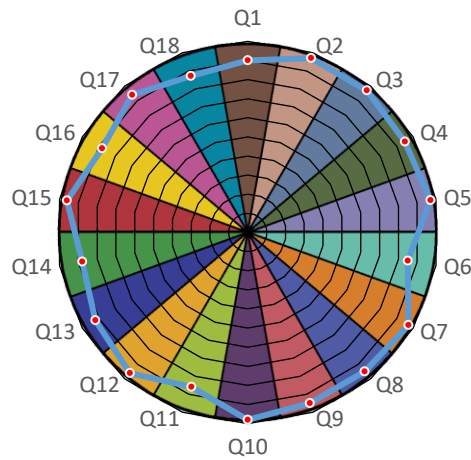
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correlated color temperature (CCT) 3,050 K
 TLCI 93

Reference Spectrum Plank

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



Test Colour	Value	Test Colour	Value	Test Colour	Value			
Q1	Dark skin	90	Q7	Orange	97	Q13	Blue	92
Q2	Light skin	97	Q8	Purplish blue	95	Q14	Green	88
Q3	Blue sky	97	Q9	Moderate red	95	Q15	Red	96
Q4	Foliage	95	Q10	Purple	98	Q16	Yellow	88
Q5	Blue flower	97	Q11	Yellow green	86	Q17	Magenta	94
Q6	Bluish green	85	Q12	Orange yellow	96	Q18	Cyan	87