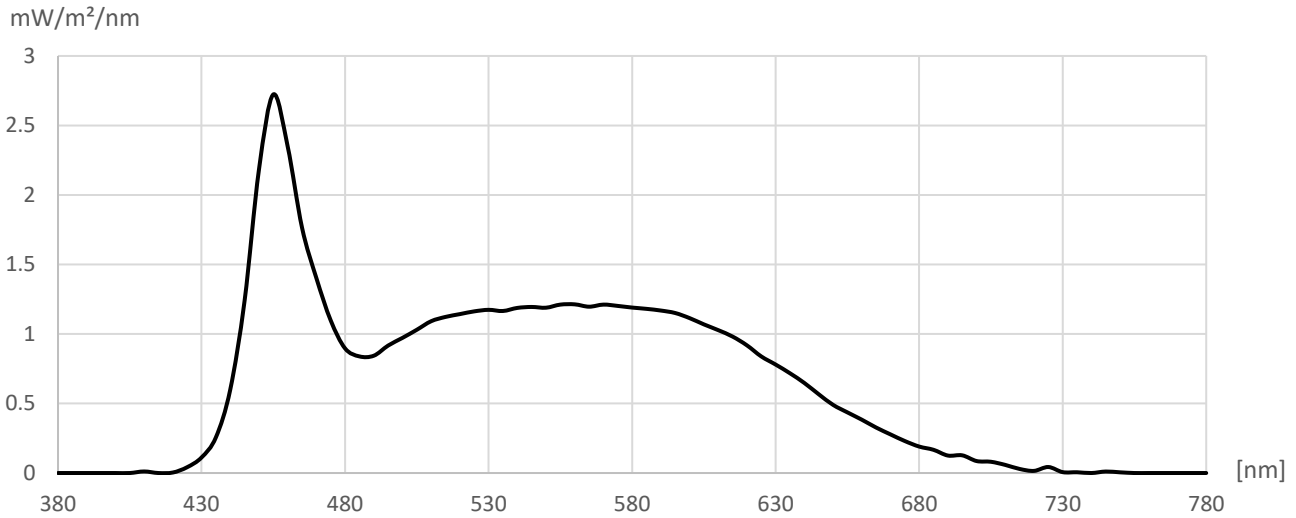


Measurement Protocol



Manufacturer: Flexfire LEDs, Inc.
 Type: White LED Sign Modules
 Model: MOD-65K

Measurement file: MOD-65K.CSV
 Date of measurement: 25.10.2023
 Time of measurement: 15:37:47



R1 = 85.1	Ra = 85.6	Illuminance	81.59 lx	CIE1931
R2 = 94.8	Re = 79.6	Ee	0.261 W/m ²	x = 0.3129
R3 = 94.5	GAI = 85.8	LER	312.6 lm/W	y = 0.3346
R4 = 80.4				
R5 = 84.0	TLCI = 76.0	Correlated Color Temperature (CCT)	6,454 K	CIE1976
R6 = 89.7		Duv	0.0060	u' = 0.1959
R7 = 86.1	PPFD			v' = 0.4713
R8 = 70.1	[μmol/m ² s]	Saturation	6.80 %	
R9 = 18.1	1.18			CIE1960
R10 = 86.1		Dominant wavelength	490 nm	u = 0.1959
R11 = 81.3		Peak wavelength	455 nm	v = 0.3142
R12 = 58.6				
R13 = 88.9		Flicker frequency	% < 1.0	TM30
R14 = 97.5		Percent Flicker	< 1.0	Rf = 81.1
R15 = 79.1		Flicker index	% < 1.0	Rg = 92.5

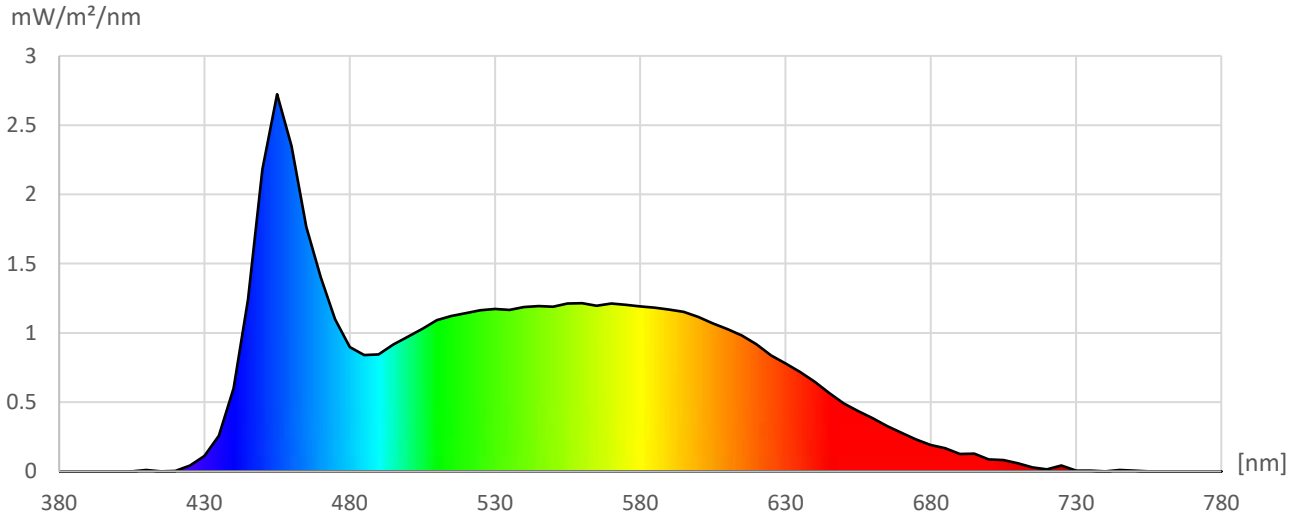
[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm	[nm]	mW/m ² /nm
380	0.00	440	0.60	500	0.97	560	1.21	620	0.92	680	0.19	740	0.00
385	0.00	445	1.24	505	1.03	565	1.20	625	0.84	685	0.17	745	0.01
390	0.00	450	2.18	510	1.09	570	1.21	630	0.78	690	0.13	750	0.00
395	0.00	455	2.72	515	1.12	575	1.20	635	0.72	695	0.13	755	0.00
400	0.00	460	2.35	520	1.14	580	1.19	640	0.65	700	0.09	760	0.00
405	0.00	465	1.77	525	1.16	585	1.18	645	0.57	705	0.08	765	0.00
410	0.01	470	1.40	530	1.17	590	1.17	650	0.49	710	0.06	770	0.00
415	0.00	475	1.10	535	1.17	595	1.15	655	0.44	715	0.03	775	0.00
420	0.00	480	0.90	540	1.19	600	1.11	660	0.38	720	0.02	780	0.00
425	0.04	485	0.84	545	1.19	605	1.07	665	0.33	725	0.04		
430	0.11	490	0.84	550	1.19	610	1.03	670	0.28	730	0.01		
435	0.26	495	0.92	555	1.21	615	0.98	675	0.23	735	0.01		

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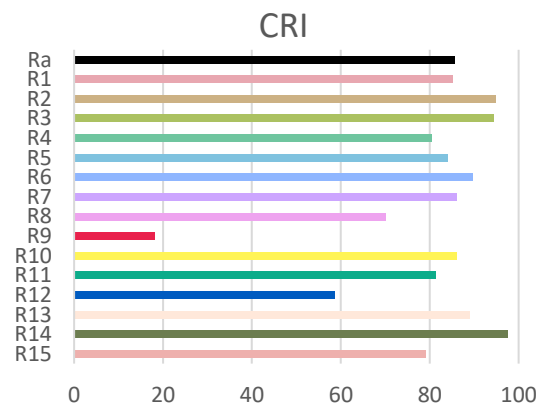
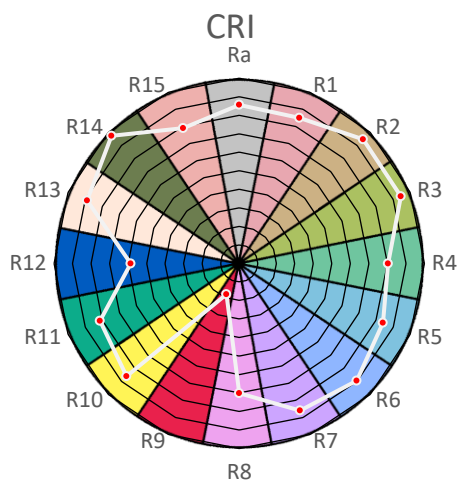
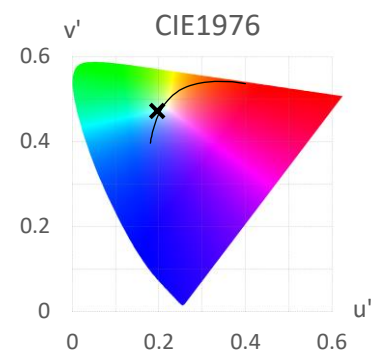
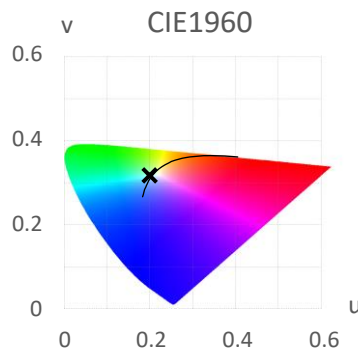
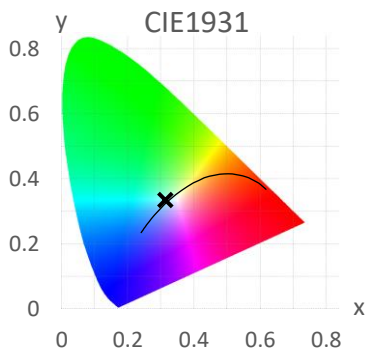
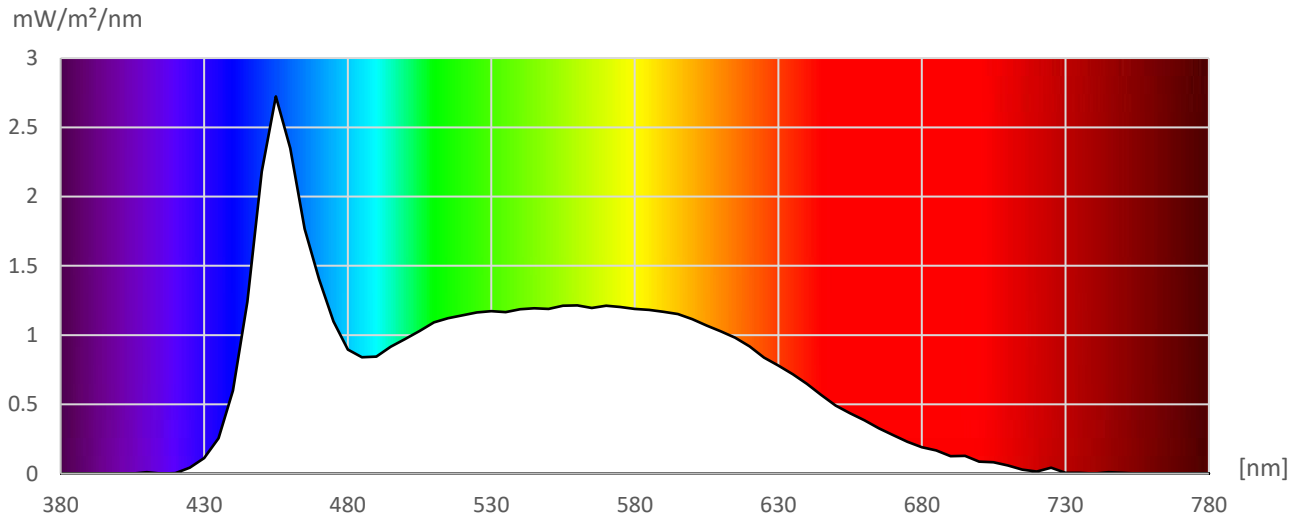
[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm	[nm]	mW/m²/nm
380	0.00	535	1.17	690	0.13								
385	0.00	540	1.19	695	0.13								
390	0.00	545	1.19	700	0.09								
395	0.00	550	1.19	705	0.08								
400	0.00	555	1.21	710	0.06								
405	0.00	560	1.21	715	0.03								
410	0.01	565	1.20	720	0.02								
415	0.00	570	1.21	725	0.04								
420	0.00	575	1.20	730	0.01								
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470	1.40	625	0.84	780	0.00								
475	1.10	630	0.78										
480	0.90	635	0.72										
485	0.84	640	0.65										
490	0.84	645	0.57										
495	0.92	650	0.49										
500	0.97	655	0.44										
505	1.03	660	0.38										
510	1.09	665	0.33										
515	1.12	670	0.28										
520	1.14	675	0.23										
525	1.16	680	0.19										
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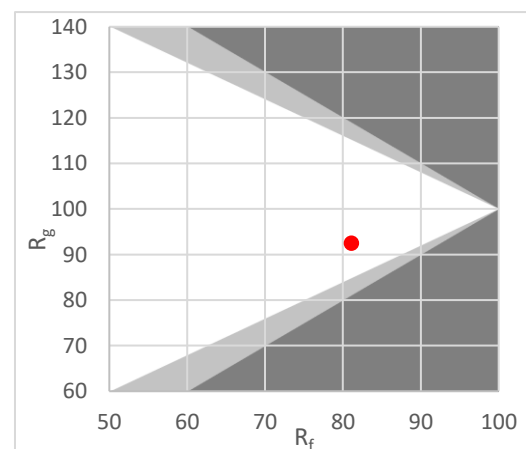
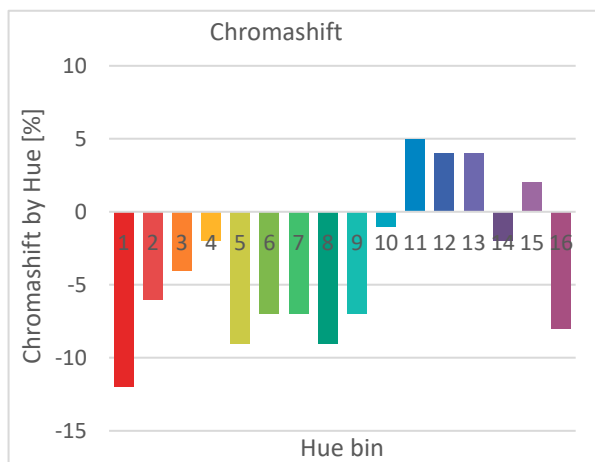
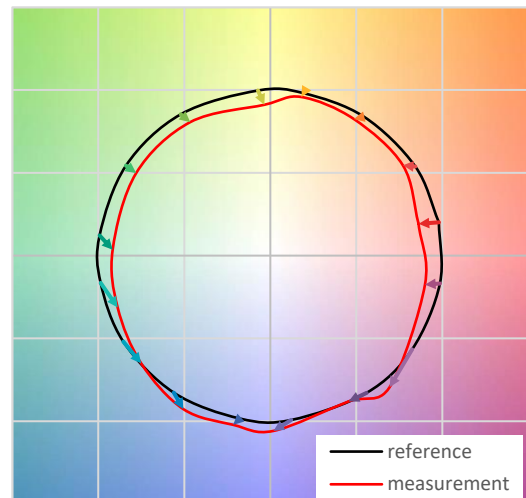
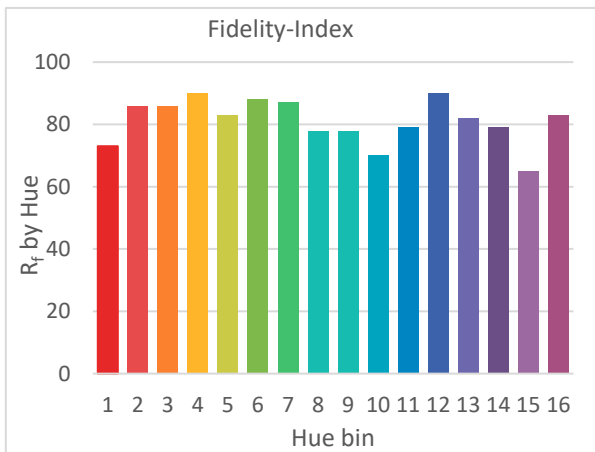
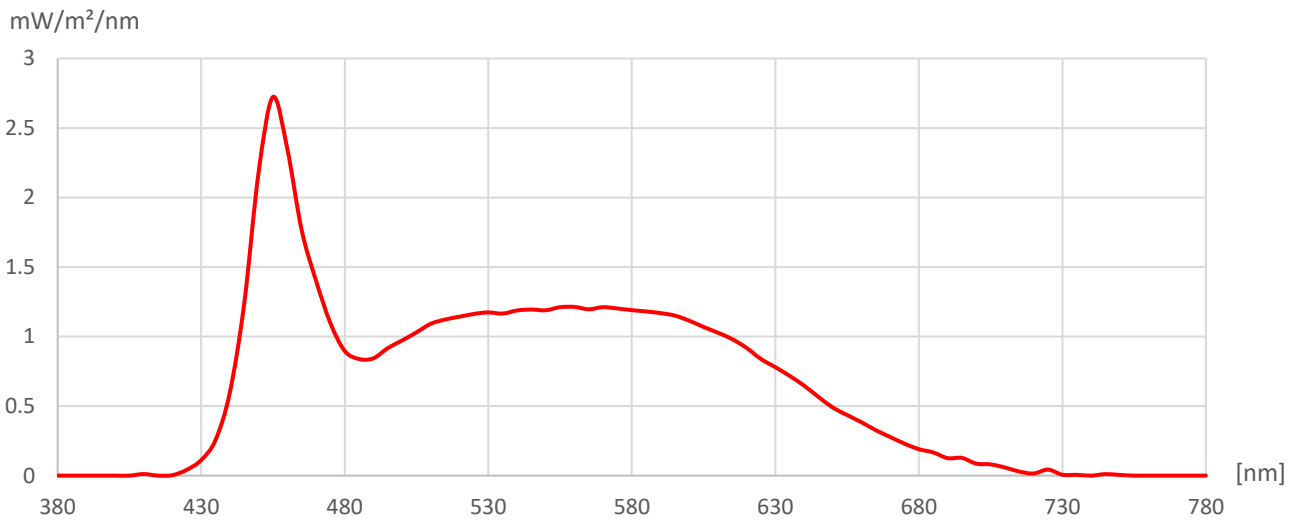


Measurement Protocol



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 Model: MOD-65K

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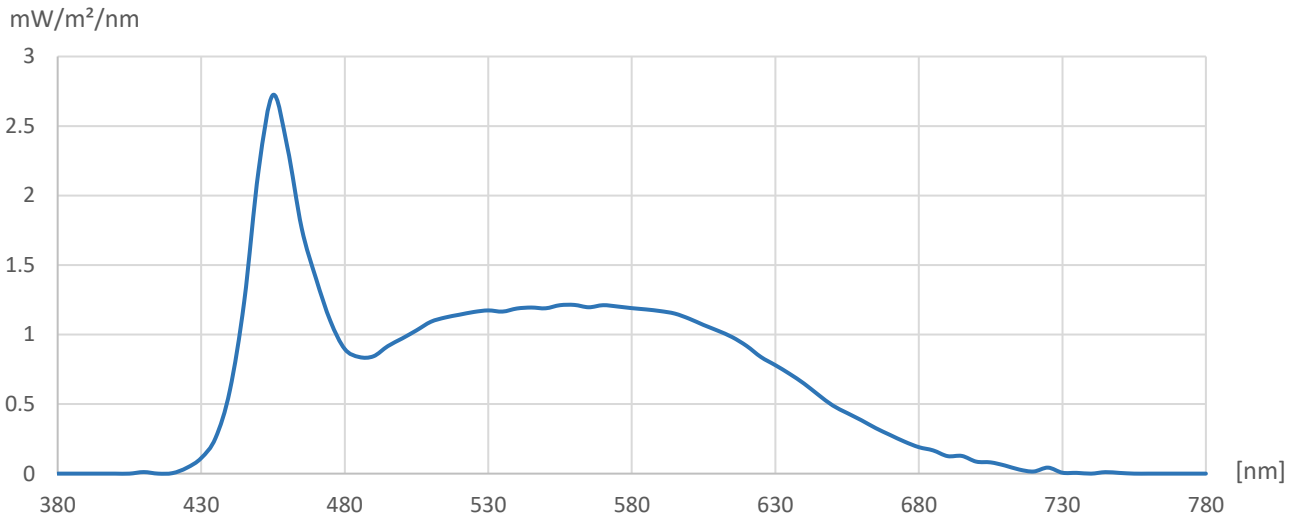


Measurement Protocol



Manufacturer: Flexfire LEDs, Inc.
 Type: White LED Sign Modules
 Model: MOD-65K

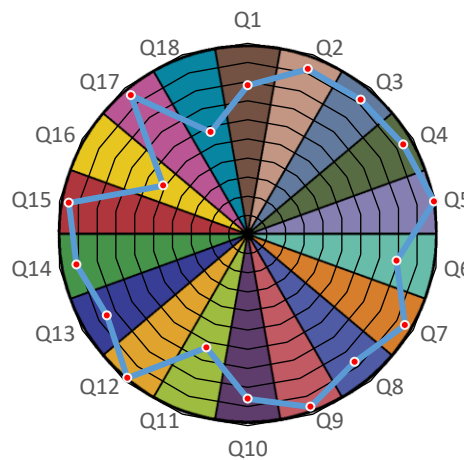
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correlated color temperature (CCT) 6,454 K
 TLCI 76

Referencec Spectrum Daylight

	Lightness	Chroma	Hue
R	3	2	0
R/Y	0	1	-2
Y	0	0	-2
Y/G	0	0	0
G	-1	0	1
G/C	-1	0	1
C	0	1	0
C/B	0	-1	-4
B	0	-1	0
B/M	2	1	3
M	2	1	3
M/R	4	1	2



Test Colour	Value	Test Colour	Value	Test Colour	Value
Q1 Dark skin	78	Q7 Orange	95	Q13 Blue	85
Q2 Light skin	92	Q8 Purplish blue	87	Q14 Green	91
Q3 Blue sky	92	Q9 Moderate red	96	Q15 Red	95
Q4 Foliage	94	Q10 Purple	86	Q16 Yellow	51
Q5 Blue flower	99	Q11 Yellow green	63	Q17 Magenta	95
Q6 Bluish green	79	Q12 Orange yellow	98	Q18 Cyan	57