

## Lightsource Test Report

### Product Information

Product Category: LED-Technik  
 Product Spec: LED-FL-070-W2-CW  
 Manufacturer: METOLIGHT  
 Buyer: 5069

Product Type: LED-HiPower-Fluter  
 Product Number: 1  
 Submitted Unit: 101305

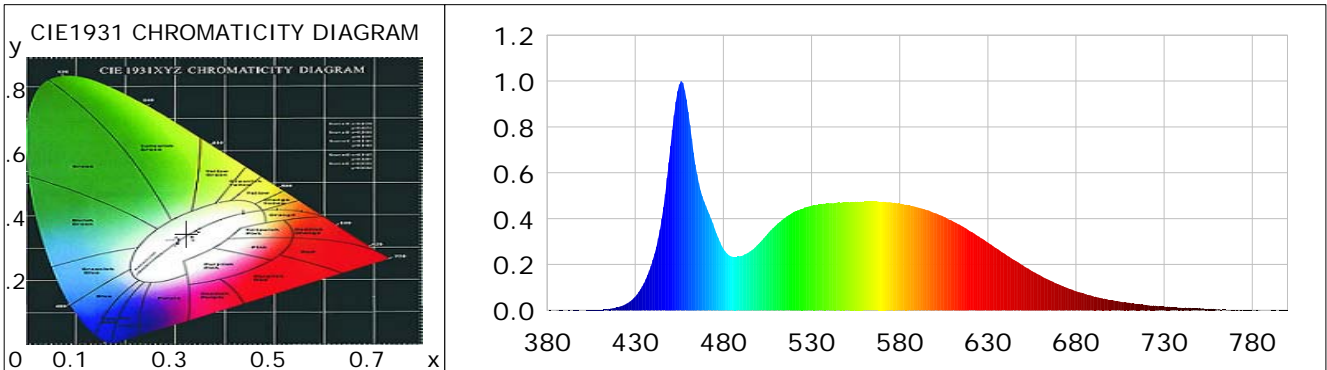
### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3229$   $y=0.3462$   $u(u')=0.1985$   $v=0.3191$   $v'=0.4787$   
 CCT:  $T_c=5918K$  ( $duv=0.00690$ ) Color Ratio:  $R=0.138$   $G=0.807$   $B=0.055$   
 Peak Wavelength: 456.2nm Half Bandwidth: 21.0nm  
 Dominant Wavelength: 509.0nm Color Purity: 0.032  
 CRI:  $R_a=82.4$ ,  $avgR(1\sim14)=74.8$ ,  $avgR(1\sim15)=74.8$  TM30:  $R_f=81$ ,  $R_g=91$   
 GAI:  $GAI\_BB\_8=86.4$ ,  $GAI\_BB\_15=93.3$ ,  $GAI\_EES=81.8$   

R1 =80	R2 =90	R3 =94	R4 =78	R5 =80	R6 =84	R7 =87	R8 =67
R9 =4	R10=74	R11=77	R12=53	R13=83	R14=97	R15=75	

Color Quality Scale:  $Q_a=80.7$ ,  $Q_f=81.0$ ,  $Q_p=79.3$ ,  $Q_g=89.2$   

Q1 =80	Q2 =97	Q3 =80	Q4 =71	Q5 =75	Q6 =77	Q7 =83	Q8 =88
Q9 =97	Q10=90	Q11=85	Q12=84	Q13=83	Q14=71	Q15=75	



### Photometric Parameters

Luminous Flux: 8331.0 lm	Efficiency: 122.51 lm/W	Radiant Power: 25.984 W
Total mains efficacy: 144.08 lm/W	Energy Efficiency Class: D (EU 2019/2015)	
Pupil Flux: 15289.35 Plm	Pupil Lumens Per Watt: 224.84 Plm/W	Pupil Factor (Kp): 1.835
Cirtopic Flux: 34781.28 lm		

### Electric Parameters

Voltage: 230.50V	Current: 0.3080A	Power: 68.00W
Power Factor: 0.9600	Frequency: 49.99Hz	

### Test Information

Scan Range: 380~800:1nm	Photometric Method: sphere-spectroradiometer
Stabilization Time: 0 ms ALC.: 1.0000	Photometric Condition: Sphere diameter: 2.00m, 4PI
Max of Signal: 45564 (2732)	CCD Integration Time: 63.35 ms

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0487	525	0.4432	119.4396	670	0.1145	30.8416
385	0.0010	0.2693	530	0.4560	122.8867	675	0.0980	26.3989
390	0.0006	0.1657	535	0.4627	124.6778	680	0.0832	22.4189
395	0.0010	0.2796	540	0.4667	125.7660	685	0.0717	19.3245
400	0.0009	0.2475	545	0.4707	126.8277	690	0.0605	16.3118
405	0.0013	0.3447	550	0.4709	126.8829	695	0.0521	14.0306
410	0.0025	0.6685	555	0.4737	127.6512	700	0.0444	11.9644
415	0.0064	1.7170	560	0.4747	127.9200	705	0.0383	10.3193
420	0.0132	3.5550	565	0.4756	128.1582	710	0.0336	9.0618
425	0.0287	7.7367	570	0.4730	127.4496	715	0.0274	7.3880
430	0.0599	16.1458	575	0.4705	126.7955	720	0.0237	6.3781
435	0.1185	31.9381	580	0.4659	125.5516	725	0.0207	5.5712
440	0.2203	59.3586	585	0.4584	123.5239	730	0.0173	4.6676
445	0.3997	107.7073	590	0.4492	121.0415	735	0.0129	3.4785
450	0.7168	193.1536	595	0.4379	118.0020	740	0.0106	2.8503
455	0.9854	265.5210	600	0.4240	114.2550	745	0.0106	2.8550
460	0.8662	233.4126	605	0.4078	109.8741	750	0.0109	2.9489
465	0.5941	160.0778	610	0.3895	104.9435	755	0.0064	1.7372
470	0.4565	123.0204	615	0.3692	99.4885	760	0.0037	1.0022
475	0.3565	96.0564	620	0.3443	92.7637	765	0.0039	1.0454
480	0.2683	72.2934	625	0.3214	86.6083	770	0.0015	0.4119
485	0.2340	63.0664	630	0.2955	79.6308	775	0.0032	0.8683
490	0.2373	63.9486	635	0.2698	72.6896	780	0.0008	0.2262
495	0.2567	69.1604	640	0.2437	65.6659	785	0.0004	0.1012
500	0.2902	78.2046	645	0.2194	59.1173	790	0.0003	0.0707
505	0.3331	89.7574	650	0.1955	52.6755	795	0.0009	0.2299
510	0.3728	100.4477	655	0.1712	46.1329	800	0.0011	0.3062
515	0.4039	108.8337	660	0.1513	40.7598			
520	0.4296	115.7611	665	0.1310	35.3132			

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%  
 Test Lab:  
 Operator: CRE

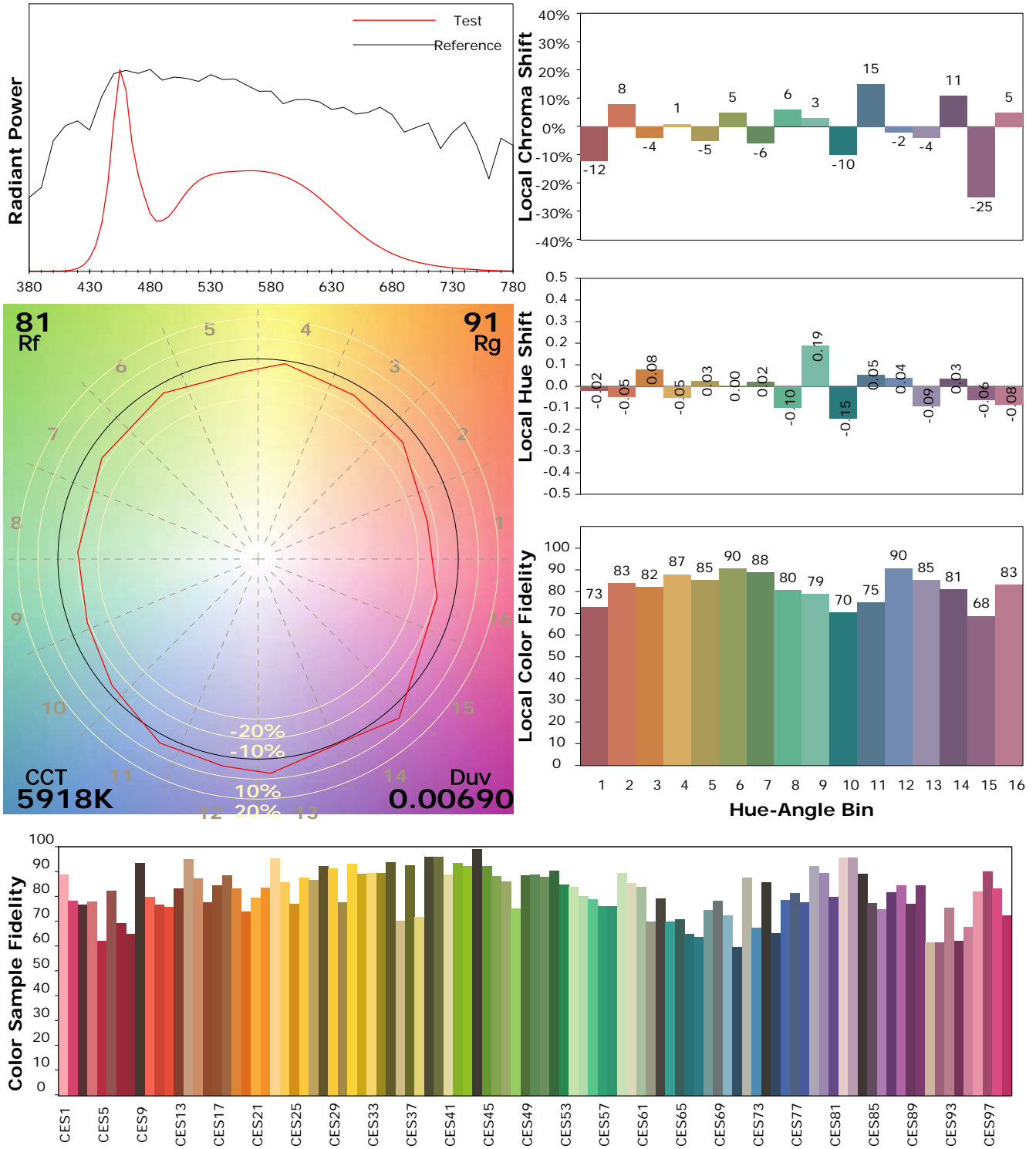
Test Device: Lisun LMS-9000B  
 Test Time: 2021-08-16 14:29:47  
 Inspector:

## IES TM-30-18 Color Rendition Report

### Product Information

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 Product Spec: LED-FL-070-W2-CW  
 Manufacturer: METOLIGHT  
 Buyer: 5069

Product Type: LED-HiPower-Fluter  
 Product Number: 1  
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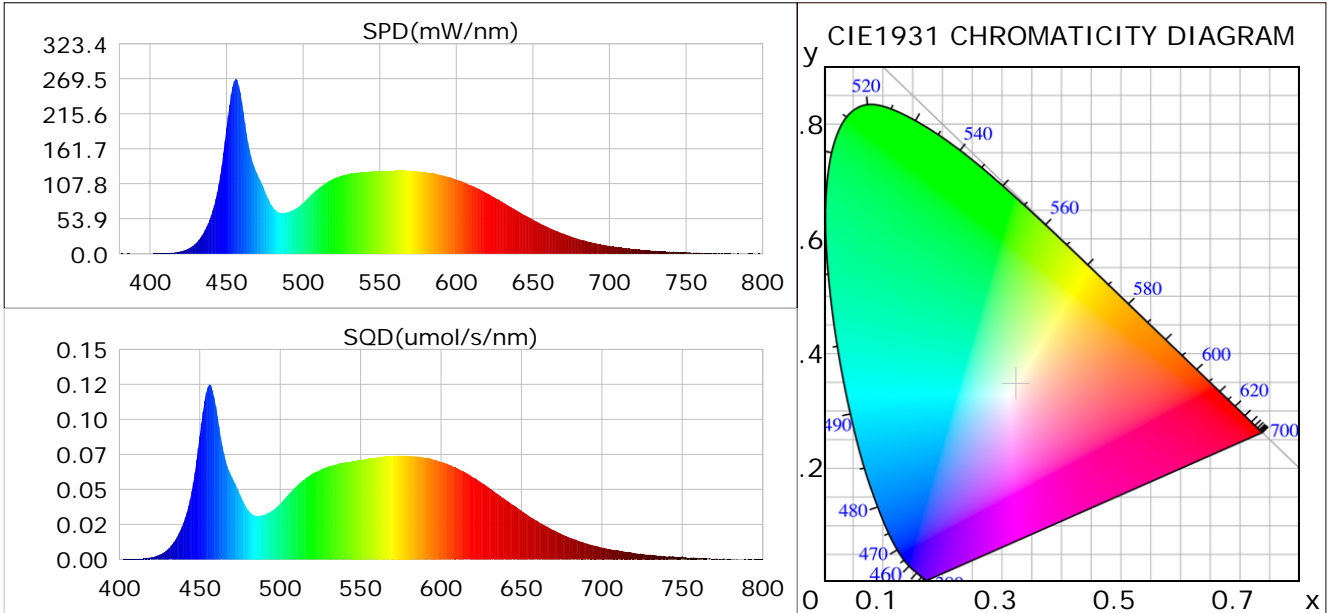
Condition: Tx:0.0°C, Ti:0.0°C, R.H.: 60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-08-16 14:29:47  
 Inspector:

## Plant optical param data

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3229$   $y=0.3462$   $u(u')=0.1985$   $v=0.3191$   $v'=0.4787$   
 CCT:  $T_c=5918K$  ( $duv=0.00690$ ) Color Ratio:  $R=0.138$   $G=0.807$   $B=0.055$   
 Peak Wavelength: 456.2nm Half Bandwidth: 21.0nm  
 Dominant Wavelength: 509.0nm Color Purity: 0.032  
 CRI:  $R_a=82.4$



### Plant Optical Param

$ \mu_v(lm): 8331.00$	$Q_v(lm.s): 8331.00$
$ \mu_e, \dot{E}(W/nm): 25.98$	$Q_e(J): 25.98$
$ \mu_e(W): 25.66$	$ \mu_{fr}(W): 0.34$
$ \zeta_e: 0.38$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.71$	$K_{fr}: 0.03$
$Erb\_Ratio: 0.70$	$PPF(umol/s): 116.26$
$PF_{uv}(360-400)(umol/s): 0.01$	$PPF(400-500)(umol/s): 31.24$
$PPF(500-600)(umol/s): 55.12$	$PPF(600-700)(umol/s): 29.90$
$PPF_r(700-800)(umol/s): 1.99$	$PPF.t(umol): 116.26$
$ \mu_{ch-A.t}(J): 1.94$	$ \mu_{ch-A}(W): 1.94$
$ \mu_{ch-B.t}(J): 1.48$	$ \mu_{ch-B}(W): 1.48$
$ \mu_b.t(J): 8.07$	$ \mu_b(W): 8.07$
$ \mu_y.t(J): 12.02$	$ \mu_y(W): 12.02$
$ \mu_r.t(J): 5.75$	$ \mu_r(W): 5.75$

### Electric Parameters

Voltage: 230.50V	Current: 0.3080A	Power: 68.00W
Power Factor: 0.9600	Frequency: 49.99Hz	

Condition:  $T_x:0.0^\circ C$ ,  $T_i:0.0^\circ C$ , R.H.: 60%  
 Test Lab:  
 Operator: CRE

Test Device: Lisun LMS-9000B  
 Test Time: 2021-08-16 14:29:47  
 Inspector: