

## Lightsource Test Report

### Product Information

Product Category: LED-Technik  
 Product Spec: LED-FL-050-W2-CW  
 Manufacturer: METOLIGHT  
 Buyer: 5069

Product Type: LED-HiPower-Fluter  
 Product Number: 1  
 Submitted Unit: 101304

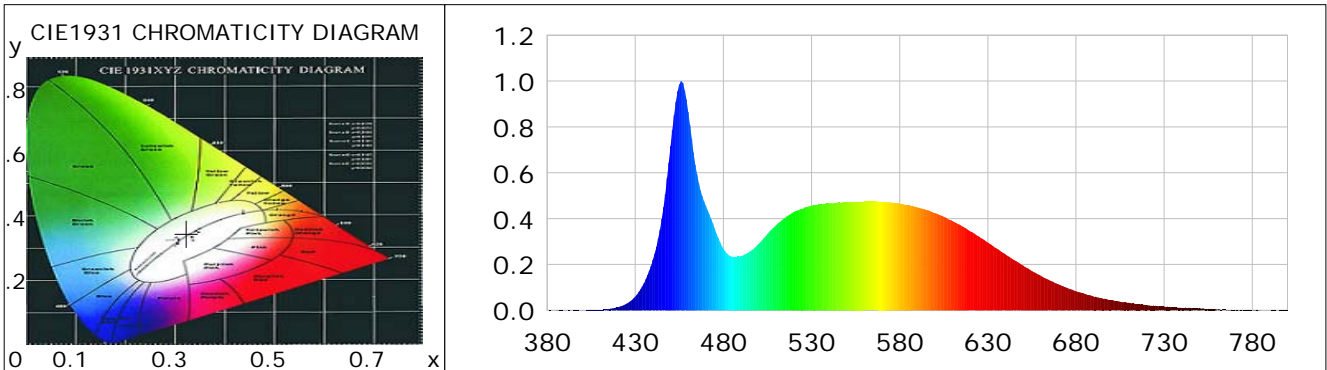
### CIE Colorimetric Parameters

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: 6107.0 lm	Efficiency: 126.96 lm/W	Radiant Power: 19.047 W
Total mains efficacy: 149.31 lm/W	Energy Efficiency Class: D (EU 2019/2015)	
Pupil Flux: 11207.78 Plm	Pupil Lumens Per Watt: 233.01 Plm/W	Pupil Factor (Kp): 1.835
Cirtopic Flux: 25496.25 lm		

### Electric Parameters

Voltage: 230.50V	Current: 0.2190A	Power: 48.10W
Power Factor: 0.9520	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

## Lightsource Test Report

### Product Information

Product Category: LED-Technik  
 Product Spec: LED-FL-050-W2-CW  
 Manufacturer: METOLIGHT  
 Buyer: 5069

Product Type: LED-HiPower-Fluter  
 Product Number: 1  
 Submitted Unit: 101304

WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0357	525	0.4432	87.5546	670	0.1145	22.6083
385	0.0010	0.1974	530	0.4560	90.0815	675	0.0980	19.3516
390	0.0006	0.1215	535	0.4627	91.3945	680	0.0832	16.4341
395	0.0010	0.2050	540	0.4667	92.1922	685	0.0717	14.1658
400	0.0009	0.1814	545	0.4707	92.9704	690	0.0605	11.9573
405	0.0013	0.2527	550	0.4709	93.0109	695	0.0521	10.2851
410	0.0025	0.4900	555	0.4737	93.5741	700	0.0444	8.7705
415	0.0064	1.2587	560	0.4747	93.7711	705	0.0383	7.5645
420	0.0132	2.6060	565	0.4756	93.9457	710	0.0336	6.6427
425	0.0287	5.6714	570	0.4730	93.4263	715	0.0274	5.4157
430	0.0599	11.8356	575	0.4705	92.9469	720	0.0237	4.6754
435	0.1185	23.4121	580	0.4659	92.0350	725	0.0207	4.0840
440	0.2203	43.5125	585	0.4584	90.5486	730	0.0173	3.4216
445	0.3997	78.9543	590	0.4492	88.7289	735	0.0129	2.5499
450	0.7168	141.5903	595	0.4379	86.5008	740	0.0106	2.0894
455	0.9854	194.6389	600	0.4240	83.7541	745	0.0106	2.0929
460	0.8662	171.1020	605	0.4078	80.5427	750	0.0109	2.1616
465	0.5941	117.3443	610	0.3895	76.9284	755	0.0064	1.2735
470	0.4565	90.1795	615	0.3692	72.9296	760	0.0037	0.7346
475	0.3565	70.4137	620	0.3443	68.0000	765	0.0039	0.7663
480	0.2683	52.9943	625	0.3214	63.4878	770	0.0015	0.3019
485	0.2340	46.2305	630	0.2955	58.3730	775	0.0032	0.6365
490	0.2373	46.8772	635	0.2698	53.2848	780	0.0008	0.1658
495	0.2567	50.6977	640	0.2437	48.1361	785	0.0004	0.0742
500	0.2902	57.3275	645	0.2194	43.3356	790	0.0003	0.0518
505	0.3331	65.7962	650	0.1955	38.6135	795	0.0009	0.1685
510	0.3728	73.6327	655	0.1712	33.8175	800	0.0011	0.2245
515	0.4039	79.7800	660	0.1513	29.8788			
520	0.4296	84.8581	665	0.1310	25.8862			

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

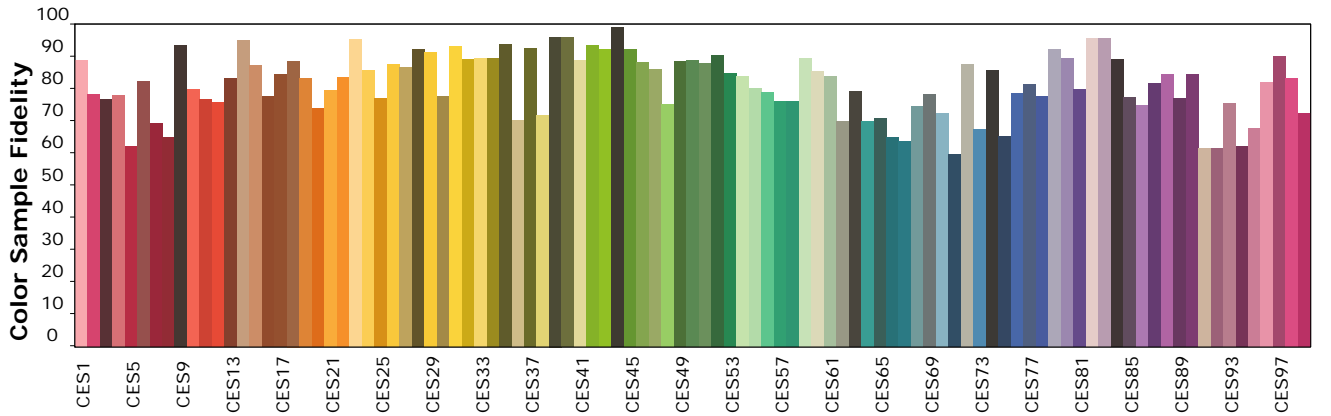
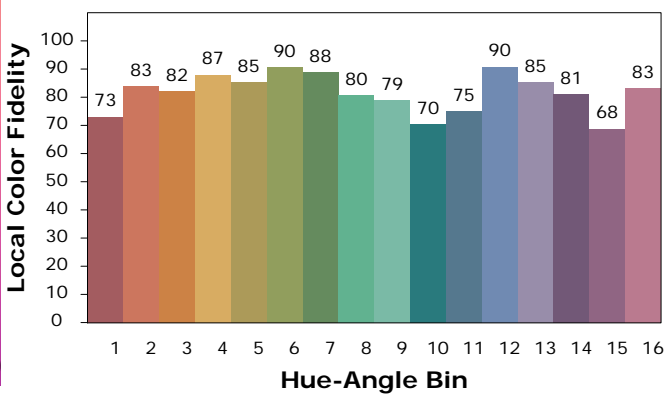
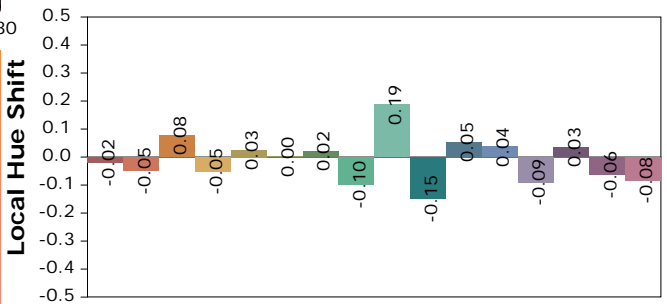
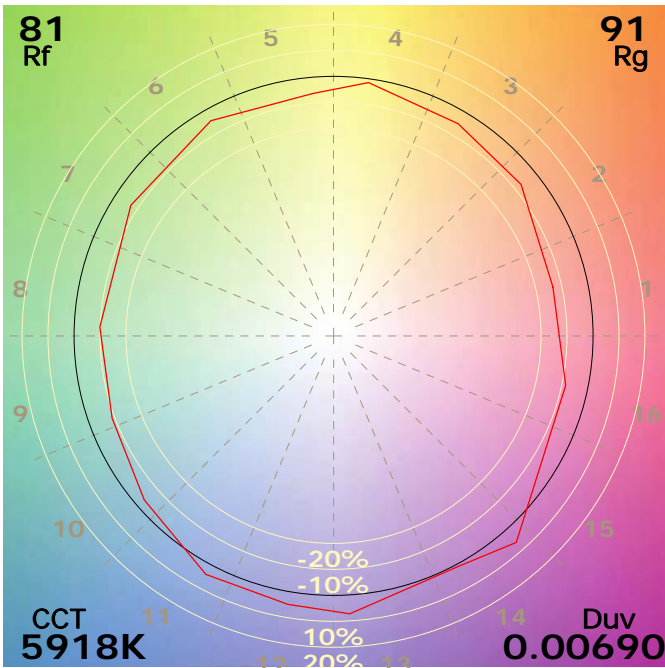
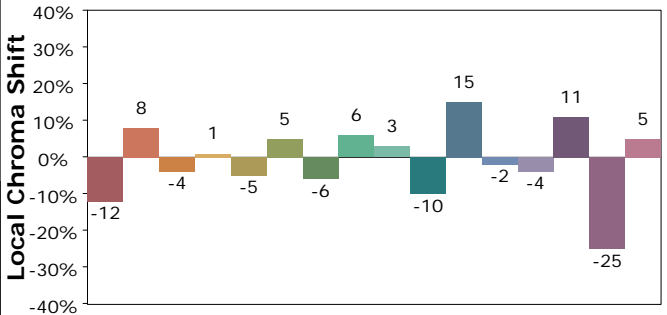
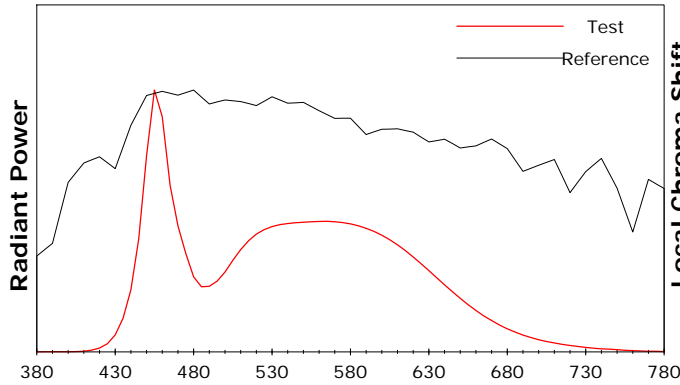
Test Device: Lisun LMS-9000B  
 Test Time: 2021-08-16 14:29:47  
 Inspector:

## IES TM-30-18 Color Rendition Report

### Product Information

Product Category: LED-Technik  
 Product Spec: LED-FL-050-W2-CW  
 Manufacturer: METOLIGHT  
 Buyer: 5069

Product Type: LED-HiPower-Fluter  
 Product Number: 1  
 Submitted Unit: 101304



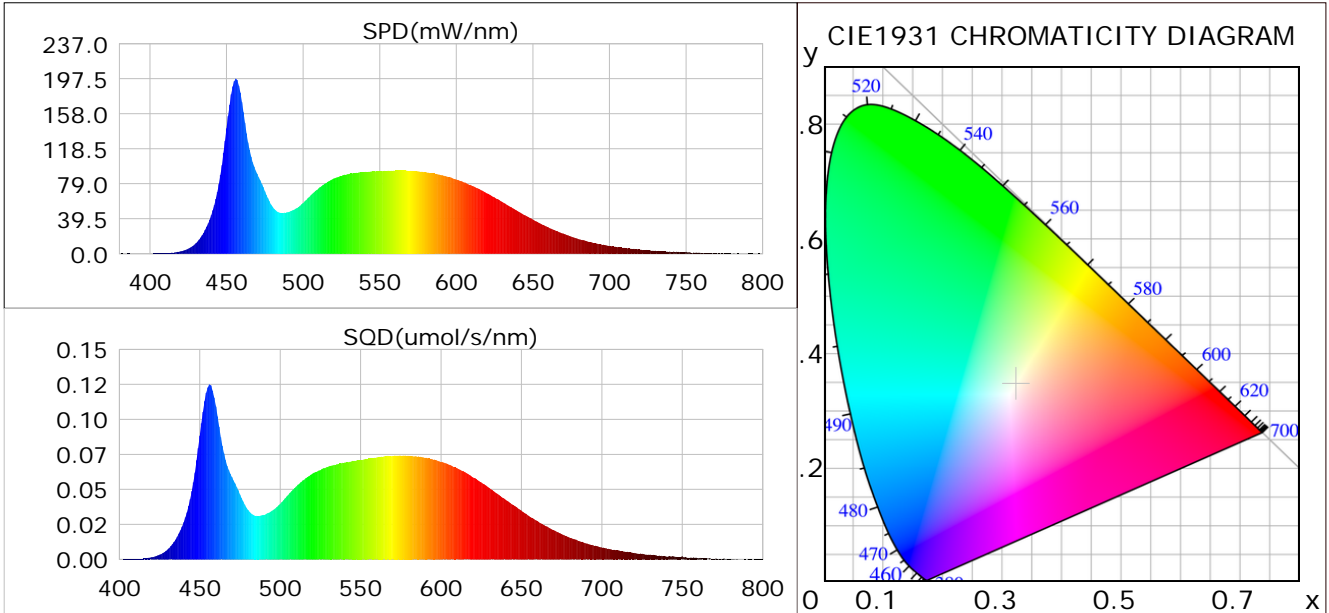
Condition: Tx:0.0°C, Ti:0.0°C, R.H.: 60%  
 Test Lab:  
 Operator: CRE

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): 6107.00$	$Q_v(lm.s): 6107.00$
$ \mu_e, \dot{E}(W/nm): 19.05$	$Q_e(J): 19.05$
$ \mu_e(W): 18.81$	$ \mu_{fr}(W): 0.25$
$ \zeta_e: 0.39$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.77$	$K_{fr}: 0.03$
$Erb\_Ratio: 0.70$	$PPF(umol/s): 85.22$
$PF_{uv}(360-400)(umol/s): 0.01$	$PPF(400-500)(umol/s): 22.90$
$PPF(500-600)(umol/s): 40.41$	$PPF(600-700)(umol/s): 21.91$
$PPF_{fr}(700-800)(umol/s): 1.46$	$PPF.t(umol): 85.22$
$ \mu_{ch-A.t}(J): 1.42$	$ \mu_{ch-A}(W): 1.42$
$ \mu_{ch-B.t}(J): 1.09$	$ \mu_{ch-B}(W): 1.09$
$ \mu_b.t(J): 5.92$	$ \mu_b(W): 5.92$
$ \mu_y.t(J): 8.81$	$ \mu_y(W): 8.81$
$ \mu_r.t(J): 4.22$	$ \mu_r(W): 4.22$

### Electric Parameters

Voltage: 230.50V	Current: 0.2190A	Power: 48.10W
Power Factor: 0.9520	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: