

Lightsource Test Report

Product Information

Product Category: LED-Leuchten
 Product Spec: LED-DEL-M-Modul-065-05W-CWM
 Manufacturer: METOLIGHT
 Buyer: 2320

Product Type: LED-Leuchten-Downlight-Magic
 Product Number: 1
 Submitted Unit: 103373

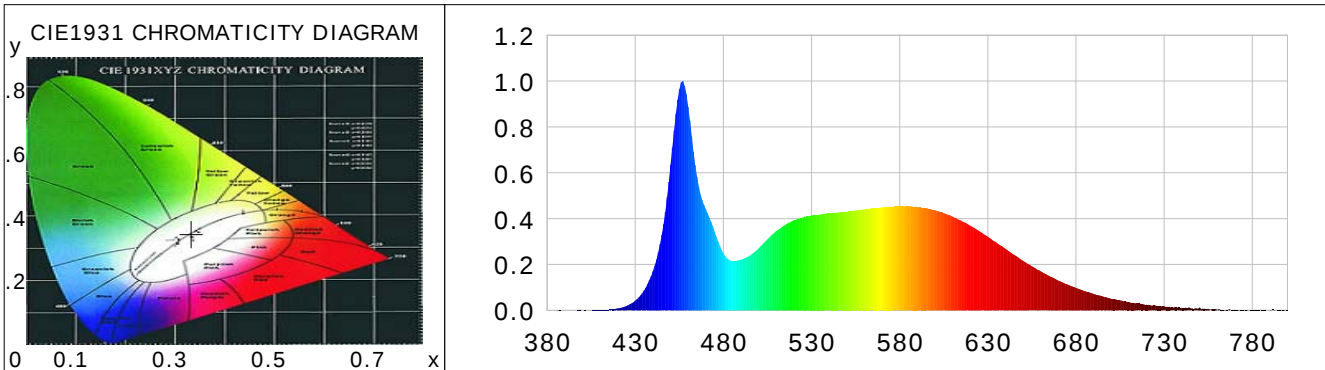
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3329$ $y=0.3449$ $u(u')=0.2057$ $v=0.3197$ $v'=0.4795$
 CCT: $T_c=5484K$ ($duv=0.00176$) Color Ratio: $R=0.154$ $G=0.792$ $B=0.055$
 Peak Wavelength: 456.7nm Half Bandwidth: 19.1nm
 Dominant Wavelength: 552.7nm Color Purity: 0.034
 CRI: $R_a=85.7$, $avgR(1\sim14)=79.7$, $avgR(1\sim15)=79.8$ TM30: $R_f=83$, $R_g=93$
 GAI: $GAI_BB_8=91.8$, $GAI_BB_15=98.3$, $GAI_EES=84.3$

R1 =85	R2 =93	R3 =95	R4 =82	R5 =84	R6 =88	R7 =86	R8 =71
R9 =22	R10=82	R11=82	R12=58	R13=89	R14=98	R15=81	

Color Quality Scale: $Q_a=82.5$, $Q_f=82.6$, $Q_p=81.9$, $Q_g=91.8$

Q1 =82	Q2 =97	Q3 =80	Q4 =72	Q5 =77	Q6 =80	Q7 =86	Q8 =90
Q9 =98	Q10=90	Q11=86	Q12=84	Q13=84	Q14=76	Q15=79	



Photometric Parameters

Luminous Flux: 558.60 lm	Efficiency: 106.40 lm/W	Radiant Power: 1.772 W
Total mains efficacy: 125.13 lm/W	Energy Efficiency Class: E (EU 2019/2015)	
Pupil Flux: 1005.90 Plm	Pupil Lumens Per Watt: 191.60 Plm/W	Pupil Factor (Kp): 1.801
Cirtpic Flux: 2284.36 lm		

Electric Parameters

Voltage: 231.00V	Current: 0.0230A	Power: 5.25W
Power Factor: 0.8950	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: 46103 (2669)	CCD Integration Time: 92.73 ms

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0068	525	0.4045	7.6443	670	0.1300	2.4571
385	0.0006	0.0117	530	0.4134	7.8116	675	0.1137	2.1489
390	0.0005	0.0088	535	0.4186	7.9104	680	0.0983	1.8575
395	0.0002	0.0037	540	0.4230	7.9934	685	0.0843	1.5938
400	0.0005	0.0088	545	0.4270	8.0682	690	0.0713	1.3473
405	0.0005	0.0087	550	0.4300	8.1252	695	0.0612	1.1570
410	0.0016	0.0306	555	0.4361	8.2414	700	0.0508	0.9599
415	0.0038	0.0718	560	0.4415	8.3436	705	0.0440	0.8307
420	0.0085	0.1601	565	0.4455	8.4182	710	0.0370	0.6990
425	0.0192	0.3632	570	0.4495	8.4944	715	0.0304	0.5753
430	0.0423	0.7996	575	0.4521	8.5437	720	0.0248	0.4693
435	0.0870	1.6443	580	0.4531	8.5625	725	0.0211	0.3989
440	0.1710	3.2316	585	0.4534	8.5675	730	0.0176	0.3326
445	0.3296	6.2280	590	0.4509	8.5215	735	0.0124	0.2352
450	0.6349	11.9985	595	0.4454	8.4173	740	0.0111	0.2090
455	0.9644	18.2247	600	0.4366	8.2497	745	0.0096	0.1809
460	0.8881	16.7820	605	0.4243	8.0180	750	0.0120	0.2260
465	0.5835	11.0261	610	0.4089	7.7264	755	0.0065	0.1221
470	0.4415	8.3433	615	0.3914	7.3970	760	0.0036	0.0680
475	0.3432	6.4850	620	0.3698	6.9887	765	0.0027	0.0501
480	0.2483	4.6918	625	0.3460	6.5382	770	0.0029	0.0545
485	0.2161	4.0844	630	0.3206	6.0592	775	0.0015	0.0283
490	0.2212	4.1807	635	0.2949	5.5726	780	0.0015	0.0282
495	0.2388	4.5118	640	0.2686	5.0755	785	0.0010	0.0182
500	0.2703	5.1077	645	0.2424	4.5815	790	0.0010	0.0197
505	0.3096	5.8505	650	0.2162	4.0856	795	0.0013	0.0253
510	0.3462	6.5432	655	0.1922	3.6323	800	0.0014	0.0255
515	0.3724	7.0376	660	0.1705	3.2219			
520	0.3932	7.4310	665	0.1491	2.8176			

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

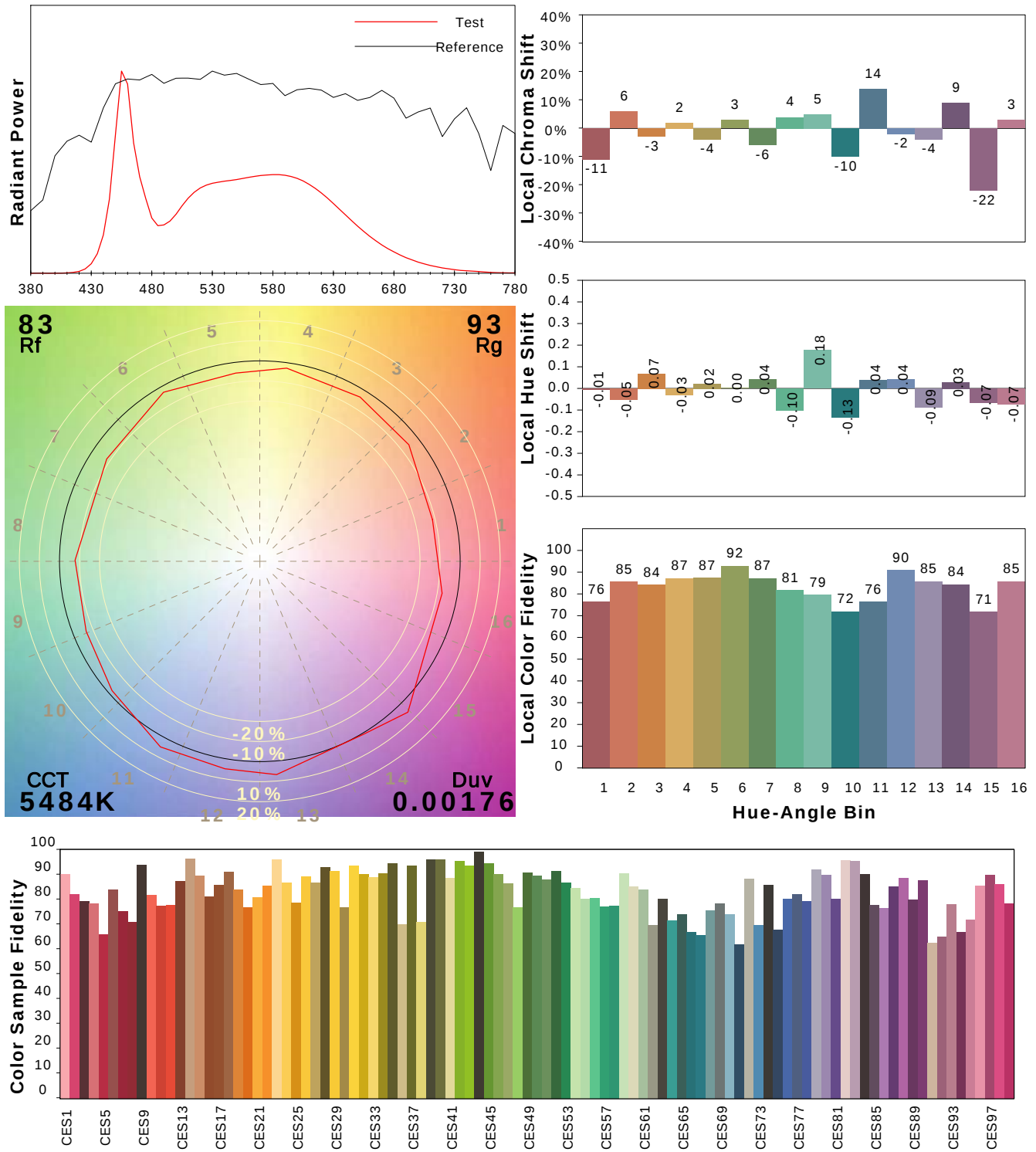
Test Device: Lisun LMS-9000B
 Test Time: 2021-08-12 11:05:50
 Inspector:

IES TM-30-18 Color Rendition Report

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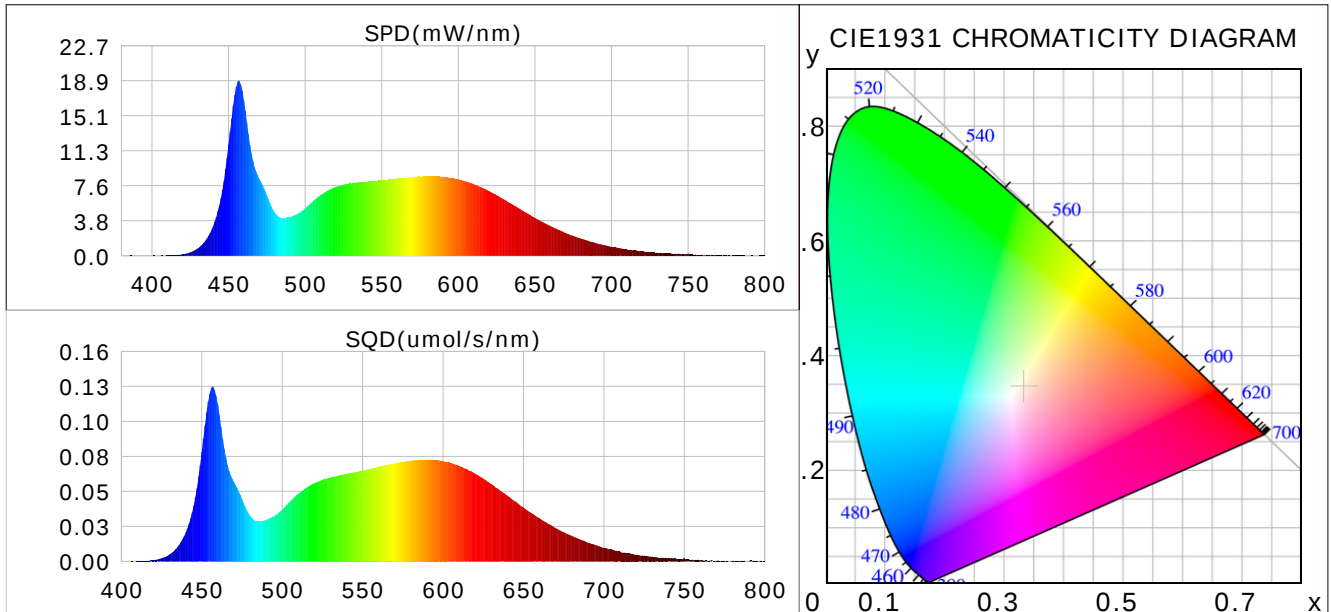
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Plant optical param data

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 CRI: Ra= 85.7



Plant Optical Param

$\mu_v(lm): 558.60$	$Q_v(lm.s): 558.60$
$\mu_e, \dot{E}(W/nm): 1.77$	$Q_e(J): 1.77$
$\mu_e(W): 1.75$	$\mu_{fr}(W): 0.03$
$\dot{C}_e: 0.33$	$\dot{C}_{fr}: 0.00$
$PPE(umol/s/w): 1.52$	$K_{fr}: 0.03$
$E_{rb_Ratio}: 0.81$	$PPF(umol/s): 7.98$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 2.05$
$PPF(500-600)(umol/s): 3.64$	$PPF(600-700)(umol/s): 2.29$
$PF_{fr}(700-800)(umol/s): 0.15$	$PPF.t(umol): 7.98$
$\mu_{ch-A.t}(J): 0.13$	$\mu_{ch-A}(W): 0.13$
$\mu_{ch-B.t}(J): 0.10$	$\mu_{ch-B}(W): 0.10$
$\mu_b.t(J): 0.53$	$\mu_b(W): 0.53$
$\mu_y.t(J): 0.79$	$\mu_y(W): 0.79$
$\mu_r.t(J): 0.44$	$\mu_r(W): 0.44$

Electric Parameters

Voltage: 231.00V	Current: 0.0230A	Power: 5.25W
Power Factor: 0.8950	Frequency: 49.99Hz	