

Lightsource Test Report

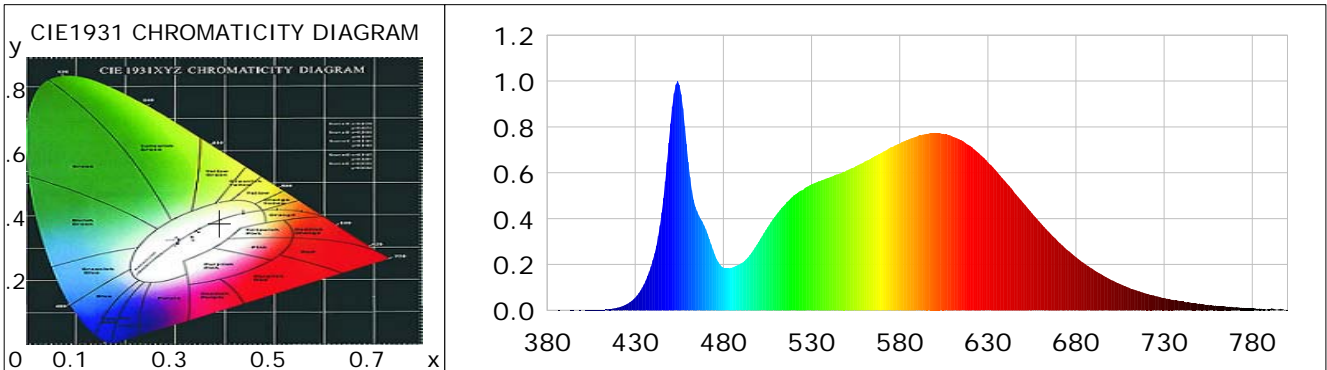
Product Information

Product Category: LED-Lampen
 Product Spec: LED-SLG39-E40-45-NW
 Manufacturer: METOLIGHT
 Buyer: 3811

Product Type: LED-Strassenlampen
 Product Number: 1
 Submitted Unit: 105235

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3899$ $y=0.3787$ $u(u')=0.2306$ $v=0.3359$ $v'=0.5038$
 CCT: $T_c=3766K$ ($duv=-0.00171$) Color Ratio: $R=0.196$ $G=0.771$ $B=0.033$
 Peak Wavelength: 454.0nm Half Bandwidth: 16.4nm
 Dominant Wavelength: 580.8nm Color Purity: 0.307
 CRI: $R_a=85.1$, $avgR(1\sim14)=79.1$, $avgR(1\sim15)=79.2$ TM30: $R_f=84$, $R_g=97$
 GAI: $GAI_BB_8=96.9$, $GAI_BB_15=104.9$, $GAI_EES=72.6$
 R1 =85 R2 =91 R3 =94 R4 =84 R5 =84 R6 =86 R7 =87 R8 =70
 R9 =25 R10=77 R11=82 R12=59 R13=86 R14=97 R15=80
 Color Quality Scale: $Q_a=83.6$, $Q_f=83.4$, $Q_p=84.7$, $Q_g=95.0$
 Q1 =85 Q2 =98 Q3 =78 Q4 =74 Q5 =81 Q6 =84 Q7 =86 Q8 =89
 Q9 =97 Q10=88 Q11=85 Q12=85 Q13=85 Q14=78 Q15=80



Photometric Parameters

Luminous Flux: 6654.6 lm Efficiency: 147.95 lm/W Radiant Power: 20.697 W
 Total mains efficacy: 147.95 lm/W Energy Efficiency Class: D (EU 2019/2015)
 Pupil Flux: 9724.23 Plm Pupil Lumens Per Watt: 216.19 Plm/W Pupil Factor (Kp): 1.461
 Circopic Flux: 19439.42 lm

Electric Parameters

Voltage: 230.90V Current: 0.2020A Power: 44.98W
 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: 47472 (2555) CCD Integration Time: 48.05 ms

Condition: Tx:22.6'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-11 15:14:04
 Inspector:

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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	0.0626	525	0.5244	78.8206	670	0.2992	44.9697
385	0.0006	0.0830	530	0.5495	82.6044	675	0.2634	39.5971
390	0.0006	0.0861	535	0.5641	84.7878	680	0.2322	34.8977
395	0.0009	0.1421	540	0.5791	87.0467	685	0.2027	30.4700
400	0.0007	0.1015	545	0.5936	89.2367	690	0.1767	26.5686
405	0.0014	0.2035	550	0.6107	91.7952	695	0.1540	23.1506
410	0.0030	0.4441	555	0.6282	94.4333	700	0.1322	19.8648
415	0.0059	0.8852	560	0.6479	97.3946	705	0.1147	17.2446
420	0.0119	1.7936	565	0.6687	100.5186	710	0.0990	14.8887
425	0.0262	3.9338	570	0.6888	103.5336	715	0.0849	12.7674
430	0.0555	8.3370	575	0.7115	106.9530	720	0.0722	10.8486
435	0.1138	17.0992	580	0.7280	109.4325	725	0.0625	9.4019
440	0.2186	32.8673	585	0.7449	111.9698	730	0.0542	8.1545
445	0.4266	64.1227	590	0.7595	114.1637	735	0.0455	6.8365
450	0.8141	122.3678	595	0.7696	115.6931	740	0.0397	5.9631
455	0.9829	147.7534	600	0.7739	116.3309	745	0.0331	4.9739
460	0.6474	97.3209	605	0.7699	115.7272	750	0.0295	4.4309
465	0.4324	65.0034	610	0.7576	113.8798	755	0.0244	3.6626
470	0.3538	53.1774	615	0.7425	111.6113	760	0.0194	2.9236
475	0.2447	36.7835	620	0.7171	107.7997	765	0.0164	2.4581
480	0.1869	28.0914	625	0.6844	102.8777	770	0.0129	1.9395
485	0.1870	28.1170	630	0.6455	97.0362	775	0.0110	1.6583
490	0.2046	30.7606	635	0.6053	90.9909	780	0.0096	1.4450
495	0.2409	36.2155	640	0.5608	84.3012	785	0.0072	1.0834
500	0.2987	44.9008	645	0.5141	77.2748	790	0.0053	0.7948
505	0.3621	54.4378	650	0.4691	70.5076	795	0.0045	0.6825
510	0.4171	62.6966	655	0.4236	63.6779	800	0.0027	0.4125
515	0.4621	69.4661	660	0.3803	57.1605			
520	0.5014	75.3709	665	0.3390	50.9607			

Condition: Tx:22.6'C, Ti:0.0'C, R.H.:60%
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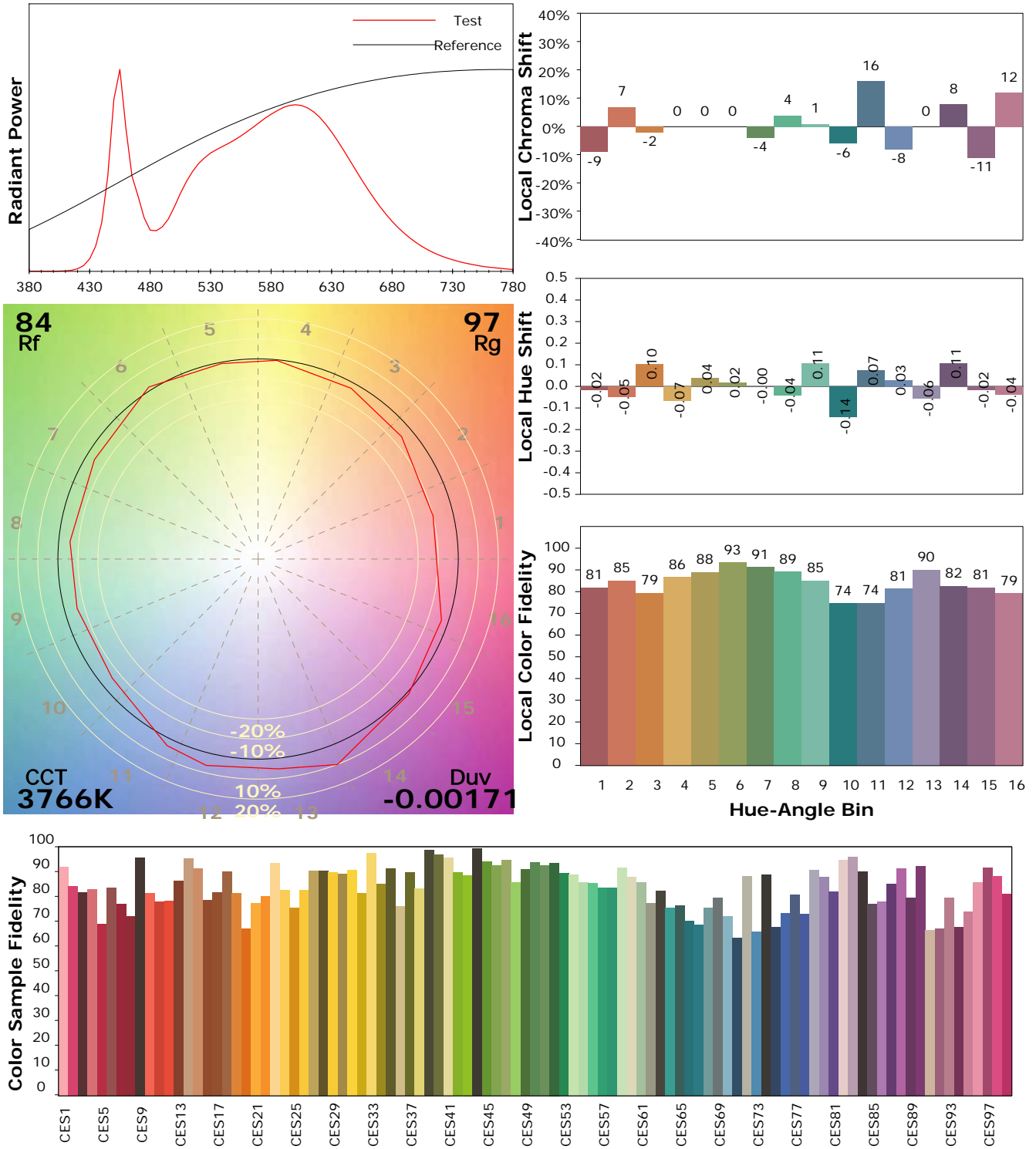
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IES TM-30-18 Color Rendition Report

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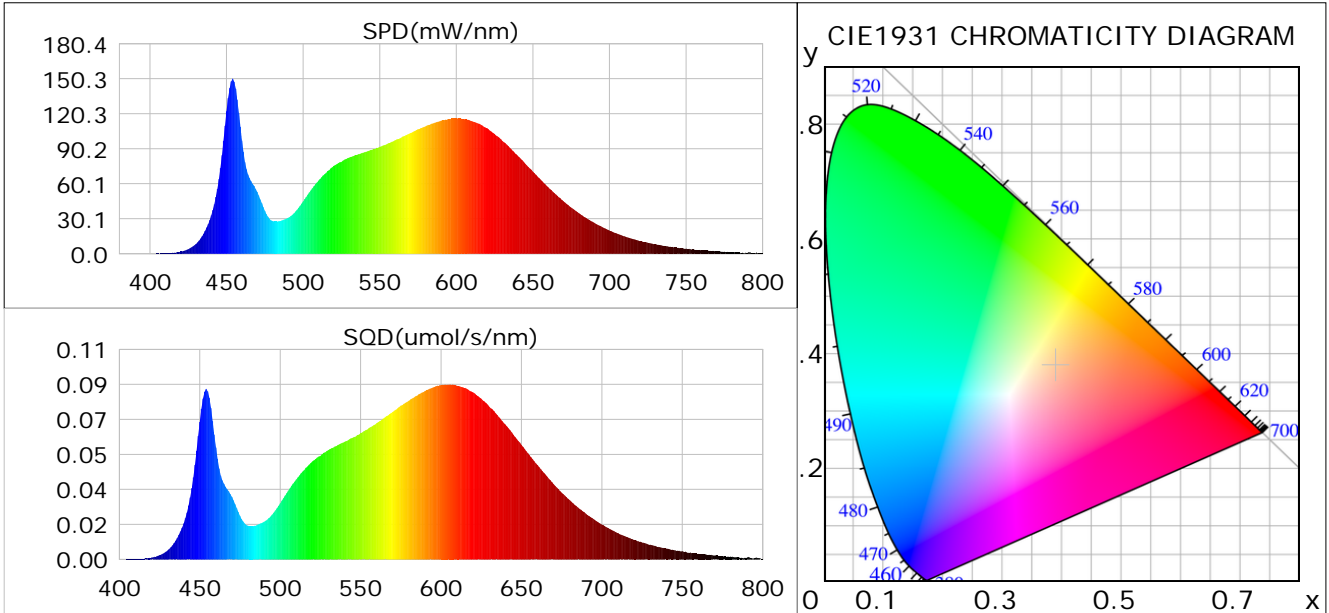
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Plant optical param data

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 CRI: $R_a=85.1$



Plant Optical Param

$ \mu_v(lm): 6654.60$	$Q_v(lm.s): 6654.60$
$ \mu_e, \dot{E}(W/nm): 20.70$	$Q_e(J): 20.70$
$ \mu_e(W): 20.11$	$ \mu_{fr}(W): 0.62$
$ \zeta_e: 0.45$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 2.11$	$K_{fr}: 0.08$
$Erb_Ratio: 1.75$	$PPF(umol/s): 95.09$
$PF_{uv}(360-400)(umol/s): 0.01$	$PPF(400-500)(umol/s): 15.46$
$PPF(500-600)(umol/s): 42.30$	$PPF(600-700)(umol/s): 37.34$
$PPF_{fr}(700-800)(umol/s): 3.65$	$PPF.t(umol): 95.09$
$ \mu_{ch-A.t}(J): 1.59$	$ \mu_{ch-A}(W): 1.59$
$ \mu_{ch-B.t}(J): 0.93$	$ \mu_{ch-B}(W): 0.93$
$ \mu_b.t(J): 4.00$	$ \mu_b(W): 4.00$
$ \mu_y.t(J): 9.14$	$ \mu_y(W): 9.14$
$ \mu_r.t(J): 7.13$	$ \mu_r(W): 7.13$

Electric Parameters

Voltage: 230.90V	Current: 0.2020A	Power: 44.98W
Power Factor: 0.9600	Frequency: 49.99Hz	

Condition: $T_x: 22.6^\circ C$, $T_i: 0.0^\circ C$, R.H.: 60%
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