

Lightsource Test Report

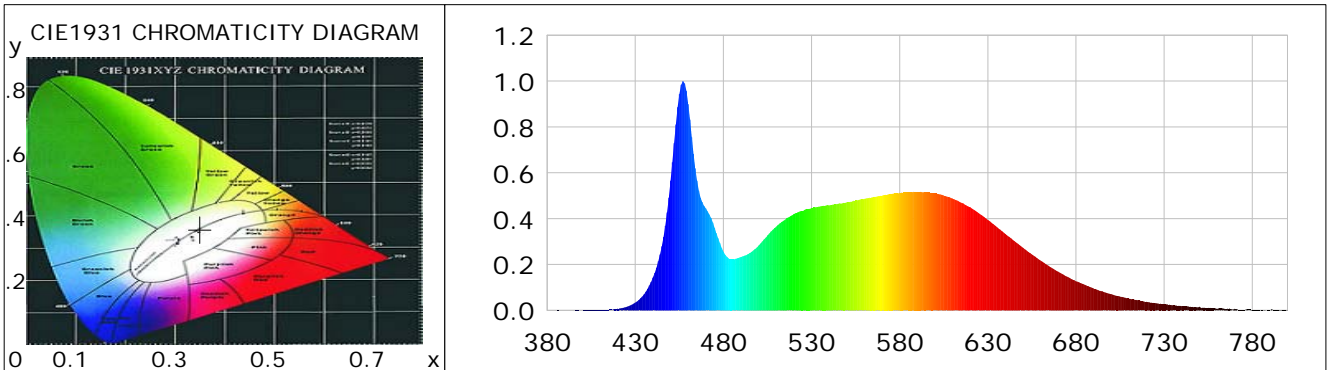
Product Information

Product Category: LED-Lampen
 Product Spec: LED-SLG381-E40-20-DW
 Manufacturer: METOLIGHT
 Buyer: 3811

Product Type: LED-Strassenlampen
 Product Number: 1
 Submitted Unit: 102937

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3502$ $y=0.3590$ $u(u')=0.2120$ $v=0.3260$ $v'=0.4890$
 CCT: $T_c=4840K$ ($duv=0.00167$) Color Ratio: $R=0.166$ $G=0.784$ $B=0.050$
 Peak Wavelength: 457.1nm Half Bandwidth: 17.6nm
 Dominant Wavelength: 591.3nm Color Purity: 0.128
 CRI: $R_a=85.7$, $avgR(1\sim14)=79.7$, $avgR(1\sim15)=79.8$ TM30: $R_f=82$, $R_g=92$
 GAI: $GAI_BB_8=89.3$, $GAI_BB_15=97.3$, $GAI_EES=80.0$
 R1 =86 R2 =94 R3 =96 R4 =81 R5 =84 R6 =89 R7 =86 R8 =71
 R9 =26 R10=83 R11=81 R12=54 R13=89 R14=98 R15=81
 Color Quality Scale: $Q_a=83.6$, $Q_f=83.8$, $Q_p=82.3$, $Q_g=91.1$
 Q1 =80 Q2 =96 Q3 =82 Q4 =74 Q5 =77 Q6 =79 Q7 =86 Q8 =90
 Q9 =98 Q10=93 Q11=89 Q12=88 Q13=87 Q14=78 Q15=80



Photometric Parameters

Luminous Flux: 2948.5 lm Efficiency: 145.82 lm/W Radiant Power: 9.259 W
 Total mains efficacy: 171.49 lm/W Energy Efficiency Class: C (EU 2019/2015)
 Pupil Flux: 5036.06 Plm Pupil Lumens Per Watt: 249.06 Plm/W Pupil Factor (Kp): 1.708
 Circopic Flux: 11101.99 lm

Electric Parameters

Voltage: 230.90V Current: 0.0920A Power: 20.22W
 Power Factor: 0.9450 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: 46082 (2474) CCD Integration Time: 64.26 ms

Lightsource Test Report

Product Information

Product Category: LED-Lampen
 Product Spec: LED-SLG381-E40-20-DW
 Manufacturer: METOLIGHT
 Buyer: 3811

Product Type: LED-Strassenlampen
 Product Number: 1
 Submitted Unit: 102937

WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0342	525	0.4329	38.7879	670	0.1683	15.0788
385	0.0003	0.0272	530	0.4461	39.9729	675	0.1469	13.1665
390	0.0002	0.0204	535	0.4537	40.6571	680	0.1269	11.3733
395	0.0004	0.0325	540	0.4578	41.0258	685	0.1113	9.9730
400	0.0009	0.0826	545	0.4648	41.6519	690	0.0956	8.5658
405	0.0010	0.0888	550	0.4707	42.1745	695	0.0829	7.4265
410	0.0017	0.1528	555	0.4791	42.9324	700	0.0707	6.3368
415	0.0035	0.3139	560	0.4865	43.5985	705	0.0605	5.4227
420	0.0072	0.6456	565	0.4945	44.3070	710	0.0522	4.6774
425	0.0152	1.3605	570	0.5005	44.8481	715	0.0444	3.9744
430	0.0335	3.0048	575	0.5078	45.5006	720	0.0370	3.3193
435	0.0700	6.2682	580	0.5129	45.9603	725	0.0321	2.8721
440	0.1426	12.7813	585	0.5158	46.2155	730	0.0274	2.4588
445	0.2799	25.0831	590	0.5165	46.2849	735	0.0220	1.9672
450	0.5658	50.7036	595	0.5152	46.1694	740	0.0185	1.6576
455	0.9432	84.5169	600	0.5108	45.7742	745	0.0157	1.4032
460	0.8991	80.5690	605	0.5011	44.9001	750	0.0158	1.4128
465	0.5655	50.6694	610	0.4874	43.6763	755	0.0106	0.9519
470	0.4452	39.8938	615	0.4696	42.0835	760	0.0066	0.5878
475	0.3600	32.2587	620	0.4496	40.2897	765	0.0061	0.5493
480	0.2563	22.9668	625	0.4228	37.8829	770	0.0064	0.5700
485	0.2228	19.9627	630	0.3942	35.3270	775	0.0036	0.3205
490	0.2327	20.8474	635	0.3641	32.6228	780	0.0026	0.2295
495	0.2503	22.4291	640	0.3328	29.8231	785	0.0014	0.1217
500	0.2832	25.3730	645	0.3027	27.1263	790	0.0010	0.0908
505	0.3271	29.3068	650	0.2727	24.4378	795	0.0015	0.1384
510	0.3654	32.7463	655	0.2440	21.8619	800	0.0031	0.2764
515	0.3957	35.4534	660	0.2166	19.4046			
520	0.4208	37.7105	665	0.1910	17.1108			

Condition: Tx:21.8'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

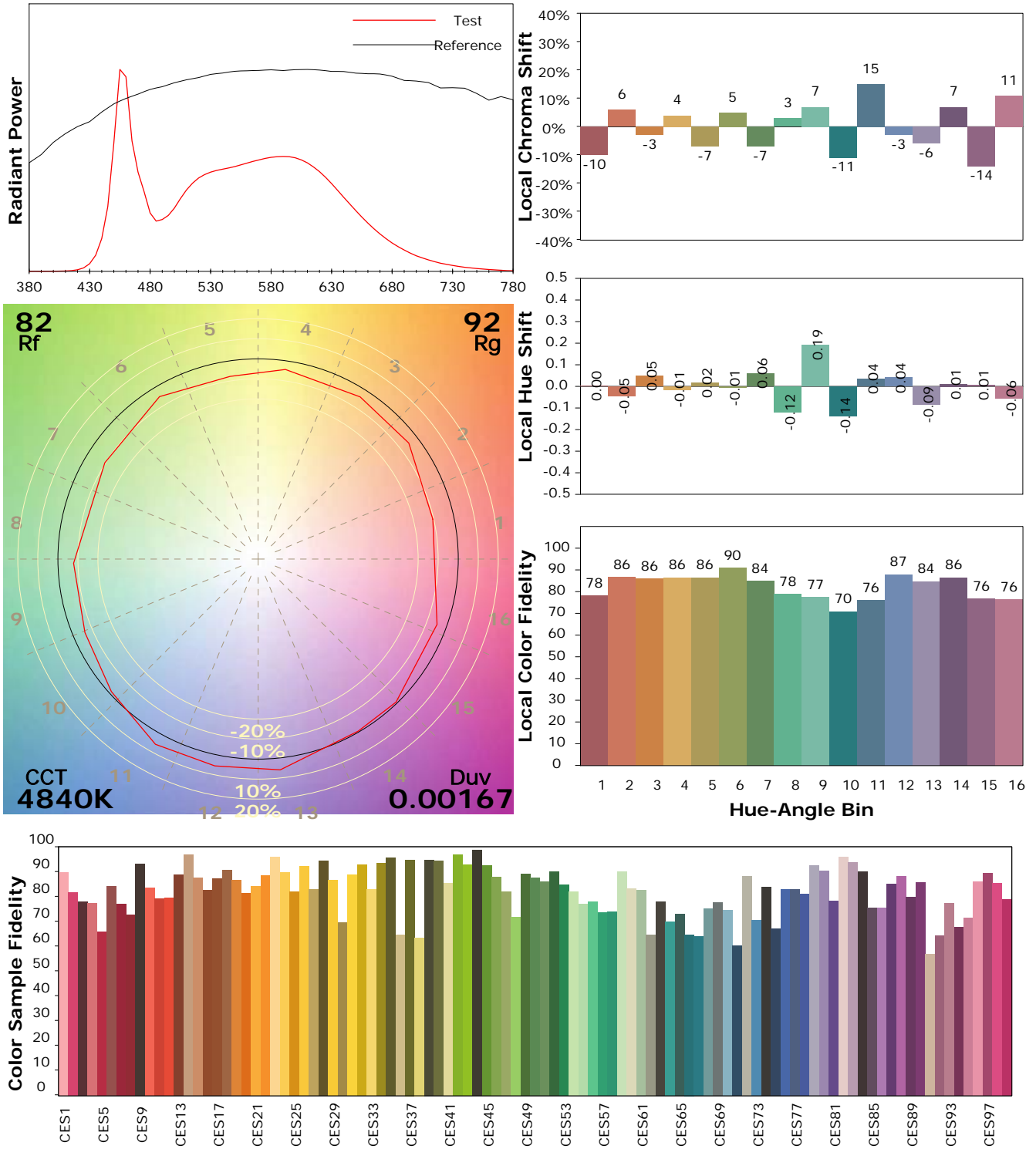
Test Device: Lisun LMS-9000B
 Test Time: 2021-02-12 11:16:23
 Inspector:

IES TM-30-18 Color Rendition Report

Product Information

Product Category: LED-Lampen
 Product Spec: LED-SLG381-E40-20-DW
 Manufacturer: METOLIGHT
 Buyer: 3811

Product Type: LED-Strassenlampen
 Product Number: 1
 Submitted Unit: 102937



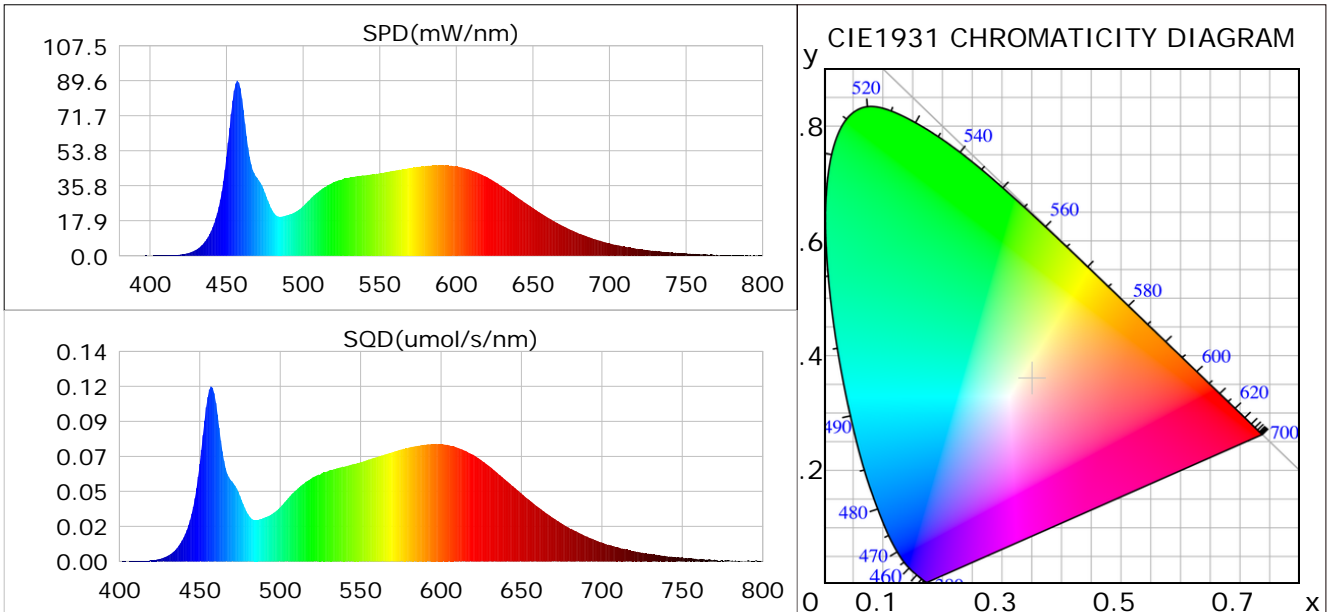
Condition: Tx:21.8°C, Ti:0.0°C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-12 11:16:23
 Inspector:

Plant optical param data

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3502$ $y=0.3590$ $u(u')=0.2120$ $v=0.3260$ $v'=0.4890$
 CCT: $T_c=4840K$ ($duv=0.00167$) Color Ratio: $R=0.166$ $G=0.784$ $B=0.050$
 Peak Wavelength: 457.1nm Half Bandwidth: 17.6nm
 Dominant Wavelength: 591.3nm Color Purity: 0.128
 CRI: $R_a=85.7$



Plant Optical Param

$ \mu_v(lm): 2948.50$	$Q_v(lm.s): 2948.50$
$ \mu_e, \dot{E}(W/nm): 9.26$	$Q_e(J): 9.26$
$ \mu_e(W): 9.09$	$ \mu_{fr}(W): 0.18$
$ \zeta_e: 0.45$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 2.08$	$K_{fr}: 0.05$
$Erb_Ratio: 1.03$	$PPF(umol/s): 41.96$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 9.50$
$PPF(500-600)(umol/s): 19.06$	$PPF(600-700)(umol/s): 13.40$
$PPF_{fr}(700-800)(umol/s): 1.07$	$PPF.t(umol): 41.96$
$ \mu_{ch-A.t}(J): 0.68$	$ \mu_{ch-A}(W): 0.68$
$ \mu_{ch-B.t}(J): 0.49$	$ \mu_{ch-B}(W): 0.49$
$ \mu_b.t(J): 2.45$	$ \mu_b(W): 2.45$
$ \mu_y.t(J): 4.14$	$ \mu_y(W): 4.14$
$ \mu_r.t(J): 2.57$	$ \mu_r(W): 2.57$

Electric Parameters

Voltage: 230.90V	Current: 0.0920A	Power: 20.22W
Power Factor: 0.9450	Frequency: 49.99Hz	

Condition: $T_x: 21.8^\circ C$, $T_i: 0.0^\circ C$, R.H.: 60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-12 11:16:23
 Inspector: