

## Lightsource Test Report

### Product Information

Product Category: Endüstriyel

Product Spec: Bonus 100W 60D 5000K

Manufacturer: Fotonik Teknoloji ve Mühendislik

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3499$   $y=0.3612$   $u(u')=0.2110$   $v=0.3266$   $v'=0.4900$

CCT:  $T_c=4860K$  ( $duv=0.00286$ )

Color Ratio:  $R=0.160$   $G=0.795$   $B=0.045$

Peak Wavelength: 452.7nm

Half Bandwidth: 22.3nm

Dominant Wavelength: 571.9nm

Color Purity: 0.134

CRI:  $R_a=83.3$ ,  $avgR(1\sim14)=76.2$ ,  $avgR(1\sim15)=76.2$

TM30:  $R_f=83$ ,  $R_g=93$

GAI:  $GAI\_BB\_8=88.5$ ,  $GAI\_BB\_15=95.5$ ,  $GAI\_EES=79.5$

R1 =81

R2 =89

R3 =94

R4 =81

R5 =81

R6 =84

R7 =88

R8 =68

R9 =11

R10=74

R11=80

R12=56

R13=83

R14=97

R15=76

Color Quality Scale:  $Q_a=82.6$ ,  $Q_f=82.9$ ,  $Q_p=81.7$ ,  $Q_g=91.1$

Q1 =82

Q2 =98

Q3 =80

Q4 =74

Q5 =79

Q6 =81

Q7 =85

Q8 =89

Q9 =97

Q10=90

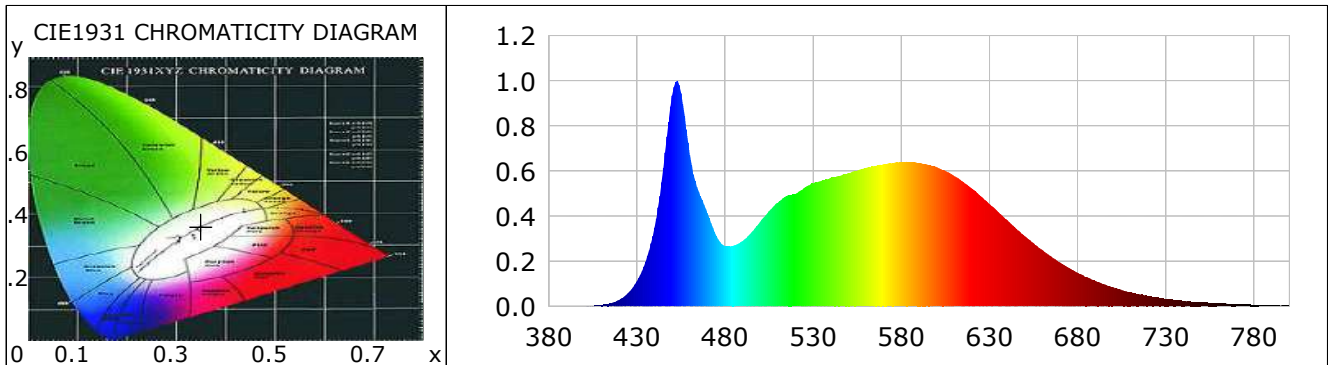
Q11=86

Q12=85

Q13=84

Q14=73

Q15=77



### Photometric Parameters

Luminous Flux: 14628 lm

Efficiency: 135.84 lm/W

Radiant Power: 45.399 W

EEL: 0.10

Energy Efficiency Class: A++ (EU 874-2012)

### Electric Parameters

Voltage: 220.10V

Current: 0.4930A

Power: 107.69W

Power Factor: 0.9920

Frequency: 49.99Hz

### Test Information

Scan Range: 380~800:1nm

Stabilization Time: 35 Min ALC.: 1.3068

Max of Signal: 47205 (1582)

Photometric Method: sphere-photometer (spec\_rev)

Photometric Condition: Sphere diameter: 2.00m, 4PI

CCD Integration Time: 22.62 ms

Condition:  $T_x:16.5^{\circ}C$ ,  $T_i:14.6^{\circ}C$ , R.H.:60%

Test Lab: Fotonik Teknoloji ve Mühendislik

Operator: Timur Özcan

Test Device: Lisun LMS-9000B

Test Time: 2021-01-29 10:19:24

Inspector:

## Lightsource Test Report

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Product Spec: Bonus 100W 60D 5000K

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0007	0.2412	525	0.5258	190.6676	670	0.1952	70.7777
385	0.0007	0.2554	530	0.5456	197.8390	675	0.1711	62.0318
390	0.0005	0.1973	535	0.5578	202.2837	680	0.1501	54.4361
395	0.0009	0.3440	540	0.5712	207.1320	685	0.1306	47.3687
400	0.0012	0.4384	545	0.5784	209.7299	690	0.1141	41.3630
405	0.0027	0.9639	550	0.5915	214.5016	695	0.0981	35.5590
410	0.0058	2.0884	555	0.6028	218.5818	700	0.0855	30.9934
415	0.0141	5.1288	560	0.6134	222.4446	705	0.0732	26.5276
420	0.0297	10.7743	565	0.6232	225.9908	710	0.0629	22.7973
425	0.0593	21.5176	570	0.6305	228.6204	715	0.0540	19.5807
430	0.1113	40.3679	575	0.6355	230.4579	720	0.0461	16.7172
435	0.2007	72.7817	580	0.6392	231.8005	725	0.0401	14.5391
440	0.3499	126.8961	585	0.6394	231.8429	730	0.0336	12.1869
445	0.6143	222.7554	590	0.6366	230.8262	735	0.0296	10.7256
450	0.9348	338.9660	595	0.6281	227.7433	740	0.0251	9.0872
455	0.9450	342.6597	600	0.6179	224.0503	745	0.0207	7.4894
460	0.6720	243.6673	605	0.6003	217.6612	750	0.0187	6.7728
465	0.5098	184.8488	610	0.5777	209.4888	755	0.0144	5.2281
470	0.4147	150.3928	615	0.5529	200.4961	760	0.0128	4.6577
475	0.3137	113.7595	620	0.5222	189.3484	765	0.0108	3.8996
480	0.2674	96.9614	625	0.4891	177.3552	770	0.0101	3.6592
485	0.2697	97.7955	630	0.4534	164.4072	775	0.0085	3.0985
490	0.2906	105.3696	635	0.4188	151.8525	780	0.0069	2.5091
495	0.3280	118.9502	640	0.3837	139.1229	785	0.0061	2.2157
500	0.3761	136.3721	645	0.3460	125.4743	790	0.0047	1.6869
505	0.4227	153.2862	650	0.3119	113.1020	795	0.0039	1.3984
510	0.4608	167.1086	655	0.2800	101.5341	800	0.0034	1.2218
515	0.4906	177.9125	660	0.2497	90.5513			
520	0.4985	180.7517	665	0.2218	80.4114			

Condition: Tx:16.5'C, Ti:14.6'C, R.H.:60%

Test Lab: Fotonik Teknoloji ve Mühendislik

Operator: Timur Özcan

Test Device: Lisun LMS-9000B

Test Time: 2021-01-29 10:19:24

Inspector:

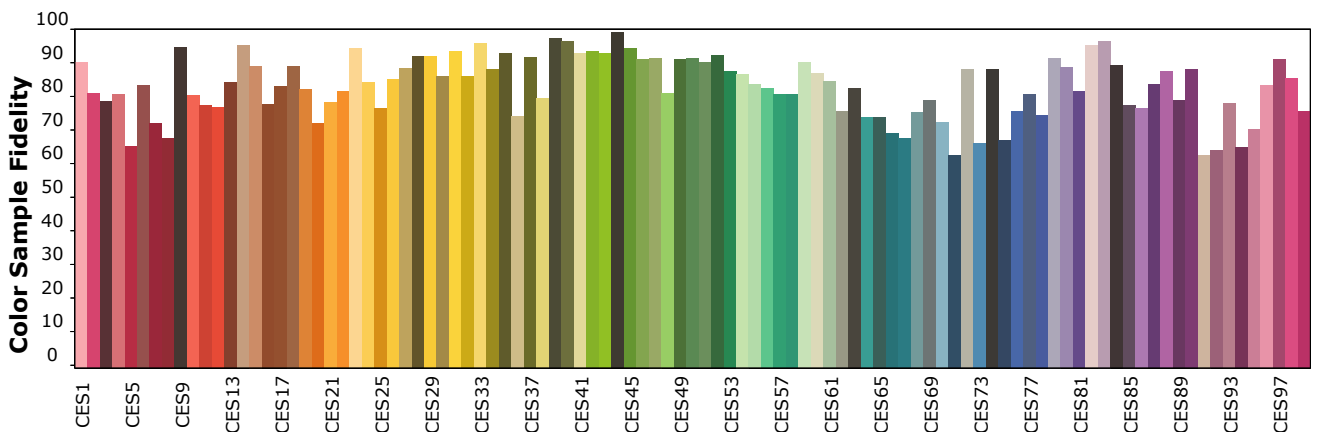
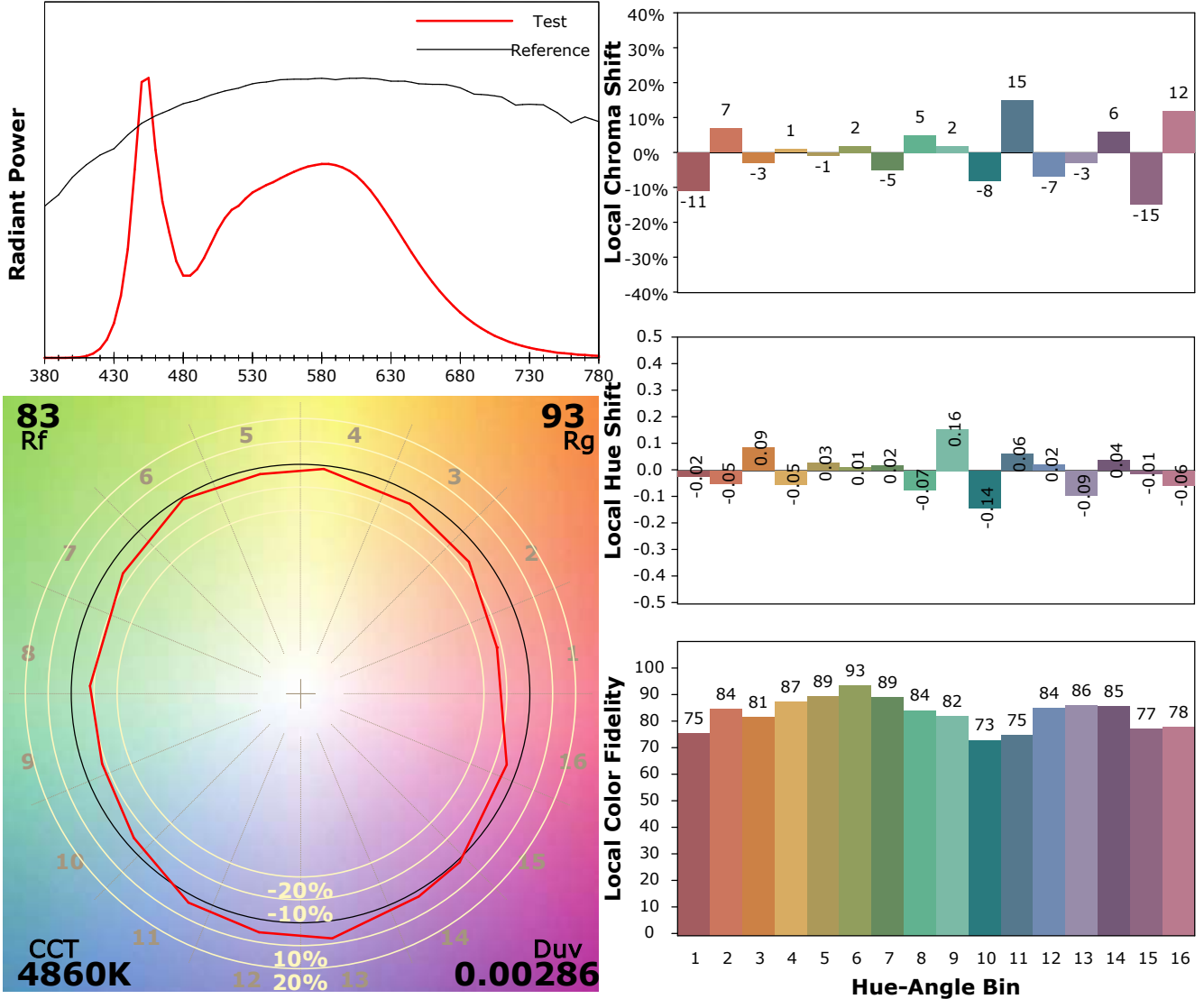
## IES TM-30-18 Color Rendition Report

### Product Information

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Manufacturer: Fotonik Teknoloji ve Mühendislik

Product Spec: Bonus 100W 60D 5000K



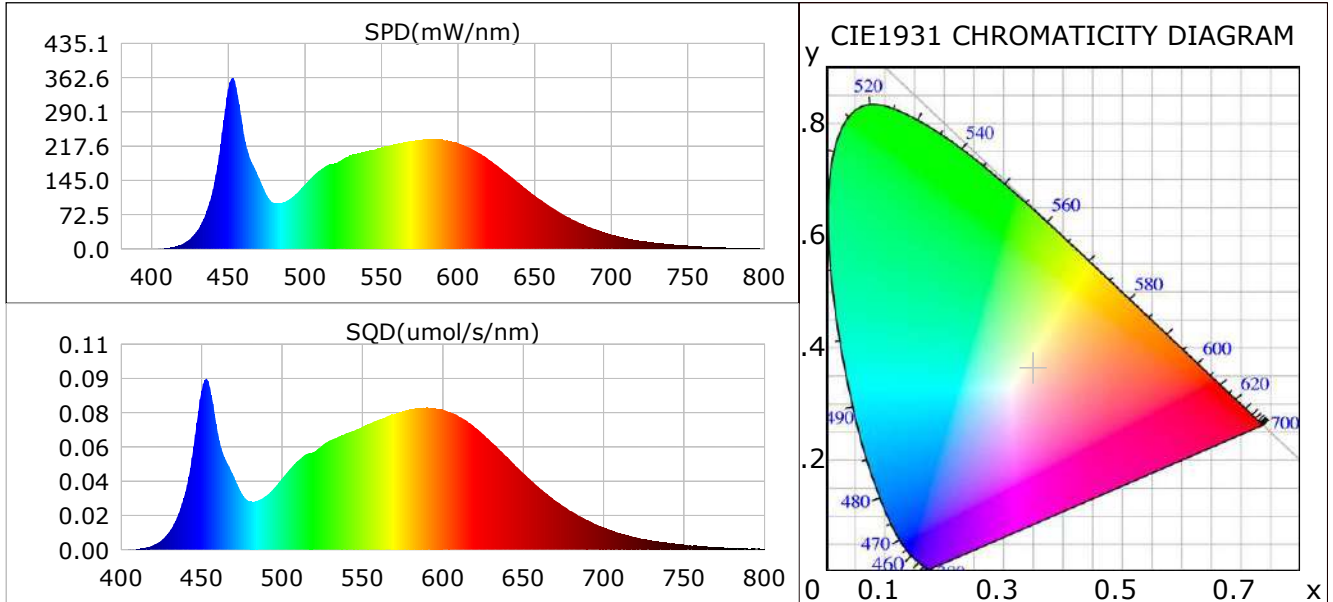
Condition: Tx:16.5'C, Ti:14.6'C, R.H.:60%  
Test Lab: Fotonik Teknoloji ve Mühendislik  
Operator: Timur Özcan

Test Device: Lisun LMS-9000B  
Test Time: 2021-01-29 10:19:24  
Inspector:

## Plant optical param data

### CIE Colorimetric Parameters

Chromaticity coordinates:  $x=0.3499$   $y=0.3612$   $u(u')=0.2110$   $v=0.3266$   $v'=0.4900$   
 CCT:  $T_c=4860K$  ( $duv=0.00286$ ) Color Ratio:  $R=0.160$   $G=0.795$   $B=0.045$   
 Peak Wavelength: 452.7nm Half Bandwidth: 22.3nm  
 Dominant Wavelength: 571.9nm Color Purity: 0.134  
 CRI:  $R_a=83.3$



### Plant Optical Param

$\mu_v$ (lm): 14628.36	$Q_v$ (lm.s): 14628.36
$\mu_e, \dot{E}$ (W/nm): 45.40	$Q_e$ (J): 45.40
$\mu_e$ (W): 44.49	$\mu_{fr}$ (W): 0.97
$\zeta_e$ : 0.41	$\zeta_{fr}$ : 0.01
PPE(umol/s/w): 1.90	Kfr: 0.05
Erb_Ratio: 1.00	PPF(umol/s): 204.91
PFuv(360-400)(umol/s): 0.02	PPF(400-500)(umol/s): 45.88
PPF(500-600)(umol/s): 95.81	PPF(600-700)(umol/s): 63.22
PPfr(700-800)(umol/s): 5.72	PPF.t(umol): 204.91
$\mu_{ch-A.t}$ (J): 3.55	$\mu_{ch-A}$ (W): 3.55
$\mu_{ch-B.t}$ (J): 2.28	$\mu_{ch-B}$ (W): 2.28
$\mu_b.t$ (J): 11.89	$\mu_b$ (W): 11.89
$\mu_y.t$ (J): 20.84	$\mu_y$ (W): 20.84
$\mu_r.t$ (J): 12.12	$\mu_r$ (W): 12.12

### Electric Parameters

Voltage: 220.10V	Current: 0.4930A	Power: 107.69W
Power Factor: 0.9920	Frequency: 49.99Hz	