

# Original Data

## Relevant Standards

- IES LM-79-2008
- ANSI C82.77:2014

## Prepared For RAB lighting INC

408 W 14th St New York, NY 10014 United States

## Prepared By RAB lighting INC

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**Project Number**  
2024120504-R2

**Data Number**  
2024/12/6

**Test Date**  
2024/12/3

## 1.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2024/12/3	PLC-9-O-8FA-HYB-G24Q	A1
2	Goniophotometer Test	2024/12/3	PLC-9-O-8FA-HYB-G24Q	A1
3	THD and PF Test	2024/12/3	PLC-9-O-8FA-HYB-G24Q	A1

### 1.1 Test Summary

Requirement Category	Test Method	Requirements	Test value	
<b>Integrating Sphere system</b>				
Power (W)	IES LM-79-2008	9 ±10%	8.6	
Lamp Output for bare lamp (lm)	IES LM-79-2008	1050 ±10%	1101	
Lamp Efficacy (lm/W)	IES LM-79-2008	> 105.0	124.7	
Allowable CCTs* (K)	IES LM-79-2008	7 step	6532±510	
		4 step	6532±340	
		7 step	5029±283	
		4 step	5029±220	
		7 step	3985±275	4028
		4 step	3985±154	
		7 step	3465±245	3483
		4 step	3465±124	
		7 step	3045±175	3069
		4 step	3045±100	
		7 step	2725 ± 145	2713
		4 step	2725 ± 83	
CRI	IES LM-79-2008 CIE 13.3-1995	>80	82.0	
R9	IES LM-79-2008 CIE 13.3-1995	>0	5	
Rf	ANSI/IES TM-30-18	>70	83	
Rg	ANSI/IES TM-30-18	>89	96	
Rcs,h1	ANSI/IES TM-30-18	Rcs=>-12%,h1<=23%		
Power Factor	ANSI C82.77:2014	>0.9	0.8751	
Total Harmonic Distortion (A%)	ANSI C82.77:2014	<25%	21.30%	
<b>Goniophotometer system</b>				
Lamp Output (lm)	IES LM-79-2008	1050 ±10%	1126.2	
Luminaire Efficacy(lm/W)	IES LM-79-2008	> 105.0	131.1	
Beam Angle	IES LM-79-2008		344.9	

## 2.0 Production Description

**Luminaire Description:** PLC-9-O-8FA-HYB-G24Q

**Electrical Specification:** 120V~277V,50/60HZ

**Light source:**

**Manufacturer Of Light Source:** Seoul Semiconductor Co.,LTD

### Photos of Luminaire Characteristics



### 3.0 LM-79 Measurement and Test Results

#### 3.1 Integrating Sphere Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Opreate time (Min.)	15	Stabilization time (Min.)	15
Temperature (°C)	25.3	Humidity %	55

Test Method
<p>The samples were tested according to the IES LM-79-2008.</p> <p>Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.</p>

#### Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Flux (lm)	Efficacy (lm/W)
25.3	120.51	60.00	0.072	8.643	0.9903	1117.0	129.2
25.3	277.76	60.00	0.036	8.829	0.8751	1101.0	124.7

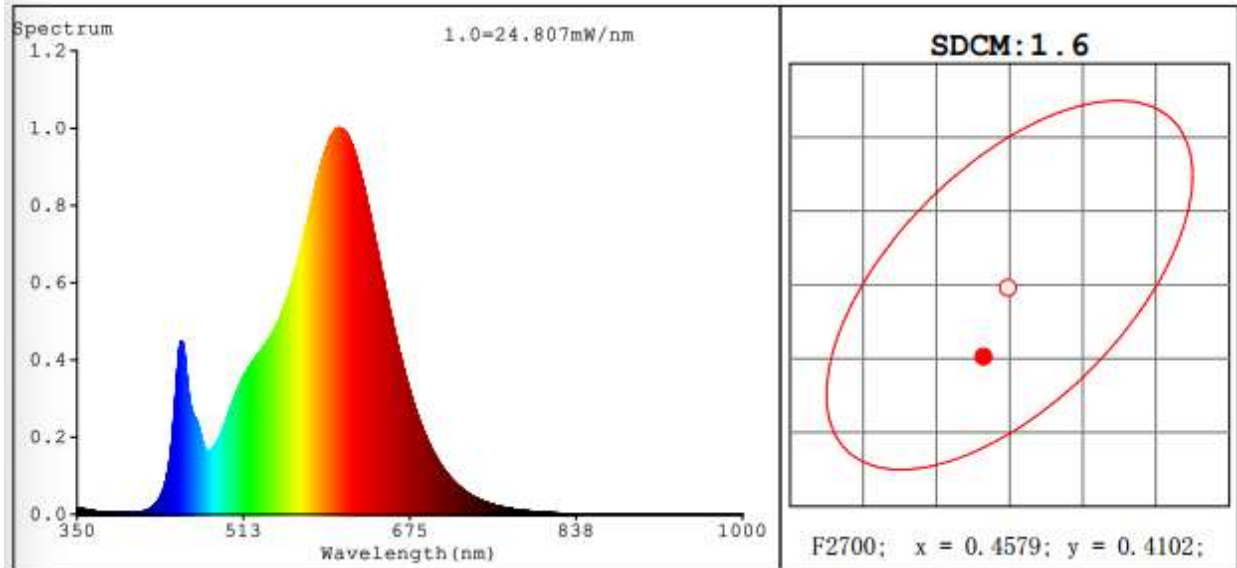
#### Test Result

Tc(K)	色差(Duv)	Rf	Rg	Ra	R9	SDCM
2713	-1.2E-03	84	96	82.3	6.2	1.6
2723	-1.5E-03	83	96	82.0	5.2	2.1

### 3.1 Integrating Sphere Test

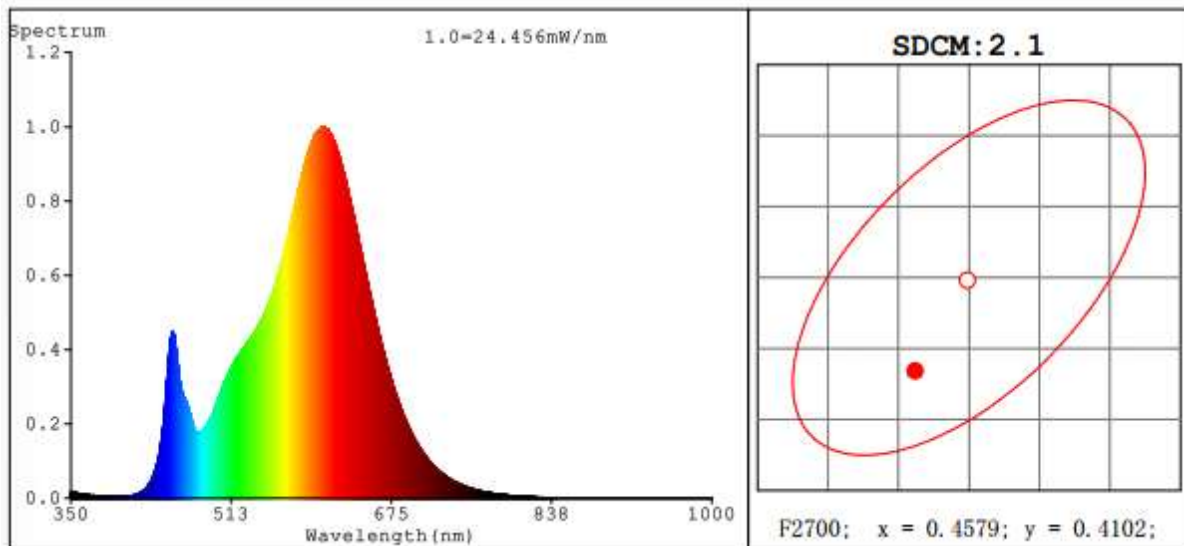
#### Spectroradiometric Parameters

120V



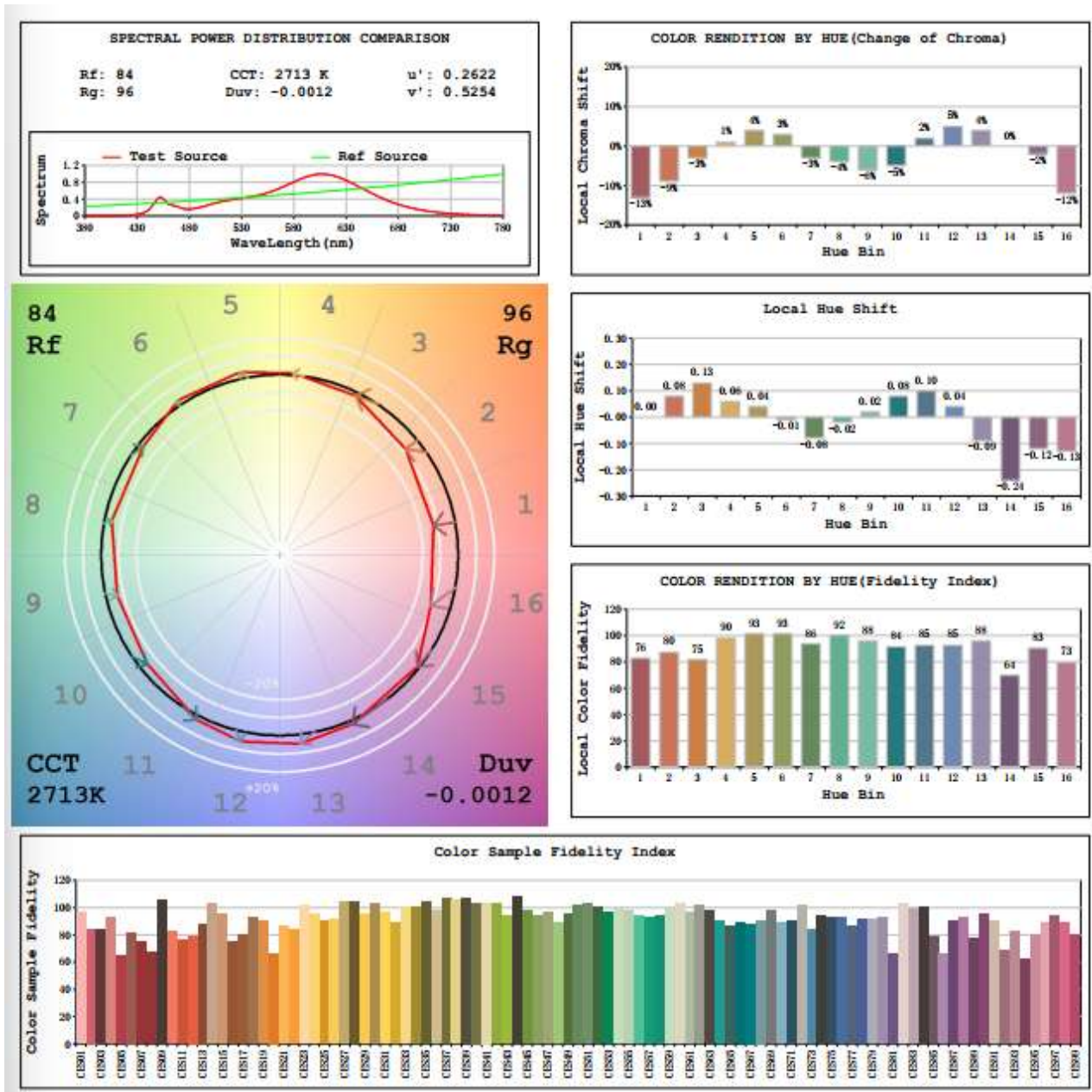
R1 =81.5 R2 =92.9 R3 =93.6 R4 =79.8 R5 =82.0 R6 =92.5 R7 =80.2  
 R8 =56.1 R9 =6.2 R10=84.5 R11=80.0 R12=77.0 R13=84.4 R14=97.2 R15=73.2

277V



R1 =81.3 R2 =93.2 R3 =92.9 R4 =79.0 R5 =81.8 R6 =92.6 R7 =79.6  
 R8 =55.4 R9 =5.2 R10=85.0 R11=78.9 R12=77.0 R13=84.3 R14=96.8 R15=73.0

### 3.2 Integrating Sphere Test - Minimum CCT



### 3.1 Integrating Sphere Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Opreate time (Min.)	15	Stabilization time (Min.)	15
Temperature (°C)	25.3	Humidity %	55

Test Method
<p>The samples were tested according to the IES LM-79-2008.</p> <p>Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.</p>

#### Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Flux (lm)	Efficacy (lm/W)
25.3	120.47	60.00	0.071	8.471	0.9907	1099.0	129.7
25.3	277.71	60.00	0.036	8.785	0.8763	1124.0	127.9

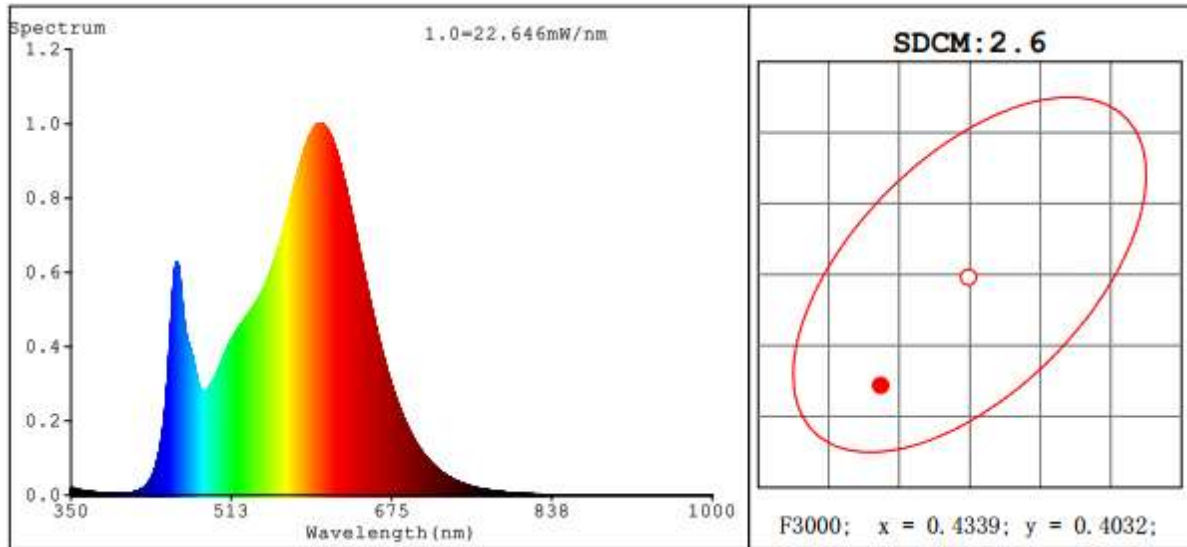
#### Test Result

Tc(K)	色差(Duv)	Rf	Rg	Ra	R9	SDCM
3069	-1.6E-03	83	94	83.1	9.6	2.6
3069	-1.6E-03	83	94	83.1	9.8	2.6

### 3.1 Integrating Sphere Test

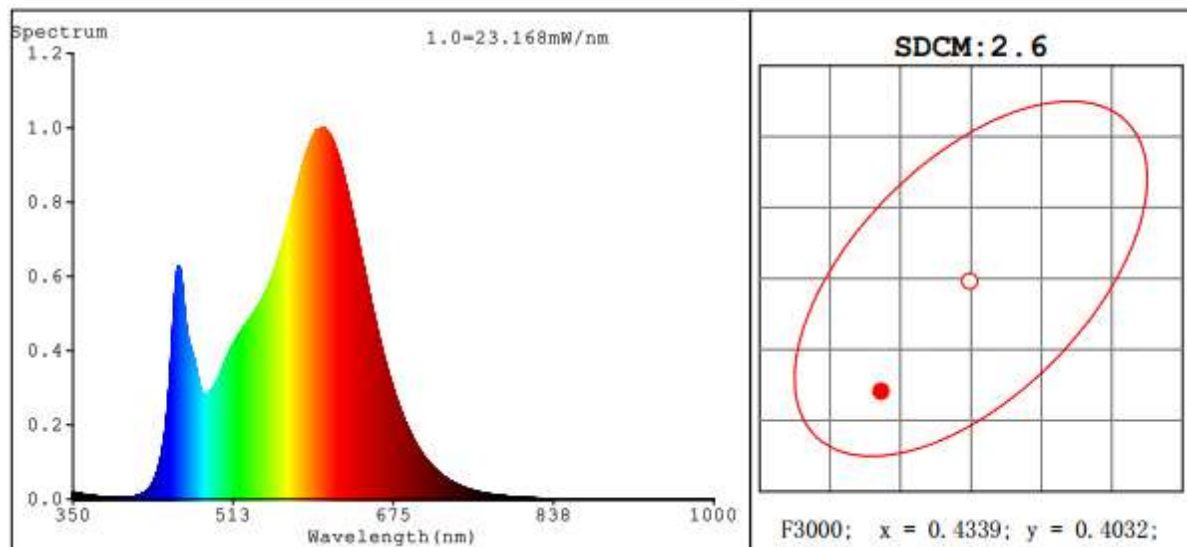
#### Spectroradiometric Parameters

120V



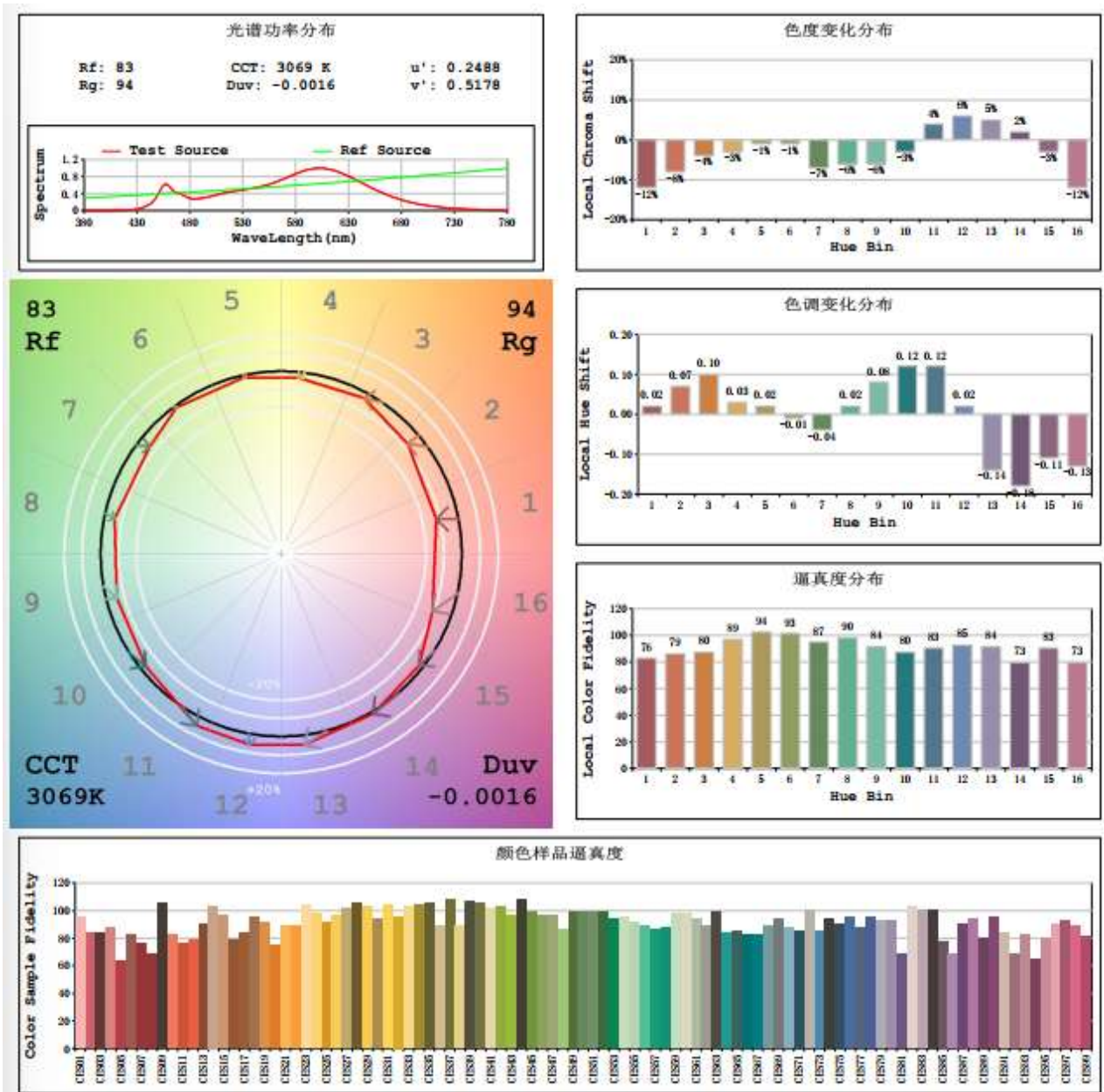
R1 =83.2 R2 =95.2 R3 =91.4 R4 =79.4 R5 =83.8 R6 =93.8 R7 =79.9  
R8 =58.1 R9 =9.6 R10=89.0 R11=79.1 R12=74.5 R13=86.6 R14=96.0 R15=75.4

277V



R1 =83.3 R2 =95.4 R3 =91.3 R4 =79.3 R5 =83.8 R6 =93.9 R7 =79.9  
R8 =58.3 R9 =9.8 R10=89.2 R11=79.0 R12=74.6 R13=86.8 R14=95.9 R15=75.6

### 3.2 Integrating Sphere Test - Minimum CCT



### 3.1 Integrating Sphere Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Opreate time (Min.)	15	Stabilization time (Min.)	15
Temperature (°C)	25.3	Humidity %	55

Test Method
<p>The samples were tested according to the IES LM-79-2008.</p> <p>Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.</p>

#### Test Conditions

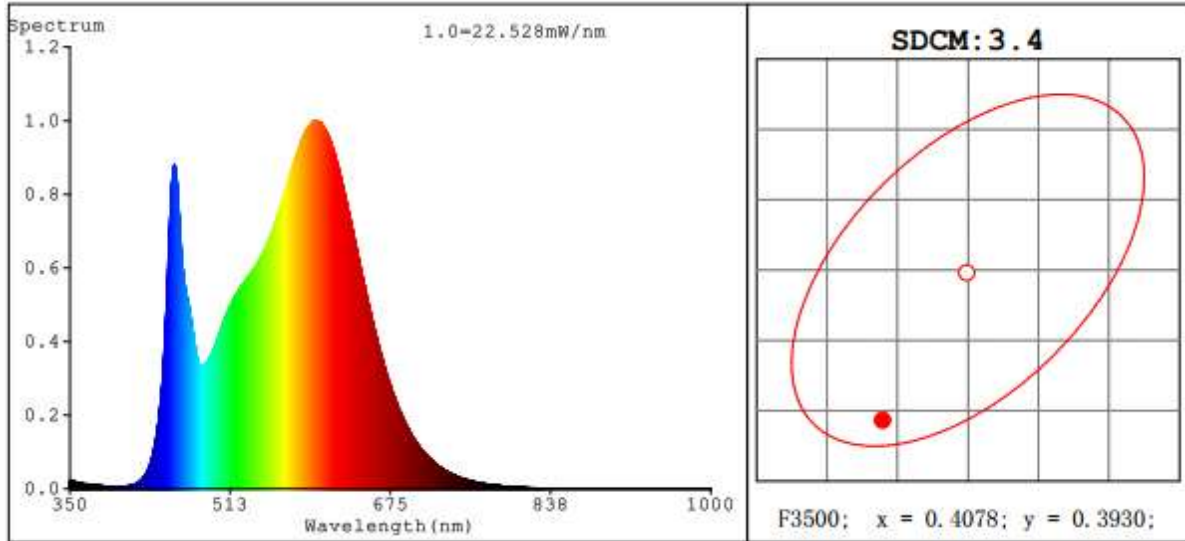
Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Flux (lm)	Efficacy (lm/W)
25.3	120.46	60.00	0.069	8.248	0.9905	1176.0	142.6
25.3	277.71	60.00	0.035	8.575	0.8704	1199.0	139.8

#### Test Result

Tc(K)	色差(Duv)	Rf	Rg	Ra	R9	SDCM
3484	-2.0E-03	84	94	84.4	14.2	3.4
3483	-2.1E-03	84	94	84.4	14.4	3.5

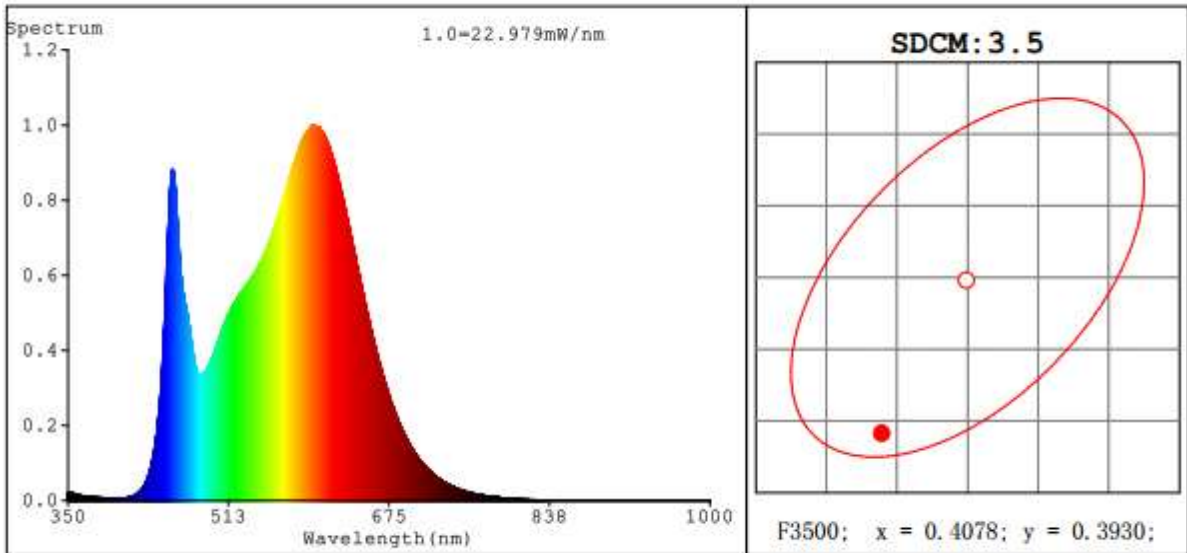
## Spectroradiometric Parameters

120V



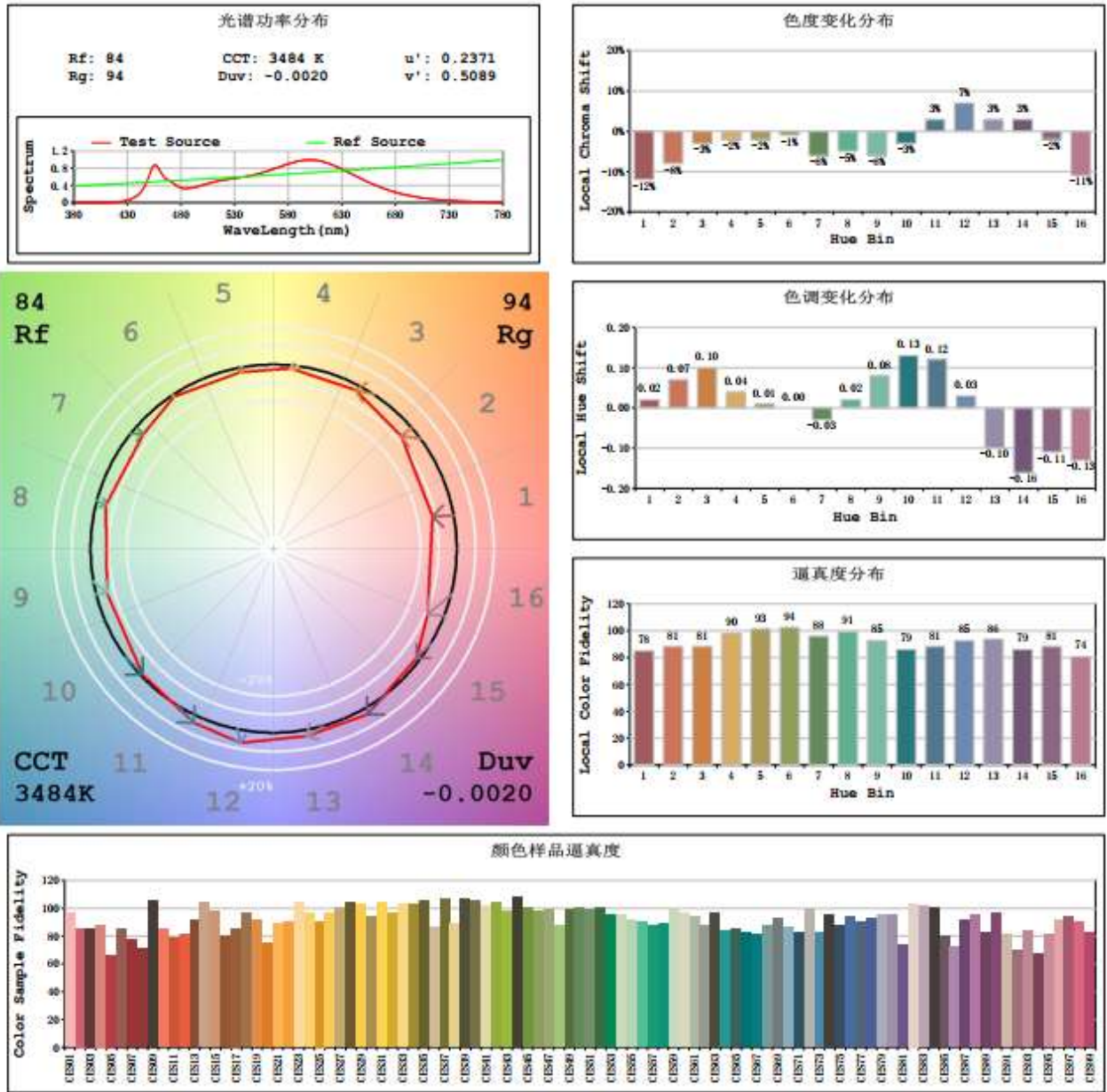
R1 =84.5 R2 =95.3 R3 =93.1 R4 =80.8 R5 =84.7 R6 =92.6 R7 =81.9  
 R8 =62.0 R9 =14.2 R10=88.3 R11=80.5 R12=70.4 R13=87.8 R14=97.0 R15=77.7

277V



R1 =84.6 R2 =95.4 R3 =92.9 R4 =80.8 R5 =84.7 R6 =92.6 R7 =81.9  
 R8 =62.1 R9 =14.4 R10=88.6 R11=80.5 R12=70.5 R13=88.0 R14=96.9 R15=77.8

### 3.2 Integrating Sphere Test - Minimum CCT



### 3.1 Integrating Sphere Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Opreate time (Min.)	15	Stabilization time (Min.)	15
Temperature (°C)	25.3	Humidity %	55

Test Method
<p>The samples were tested according to the IES LM-79-2008.</p> <p>Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.</p>

#### Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Flux (lm)	Efficacy (lm/W)
25.3	120.46	60.00	0.072	8.567	0.9907	1200.0	140.1
25.3	277.71	60.00	0.036	8.845	0.8776	1218.0	137.7

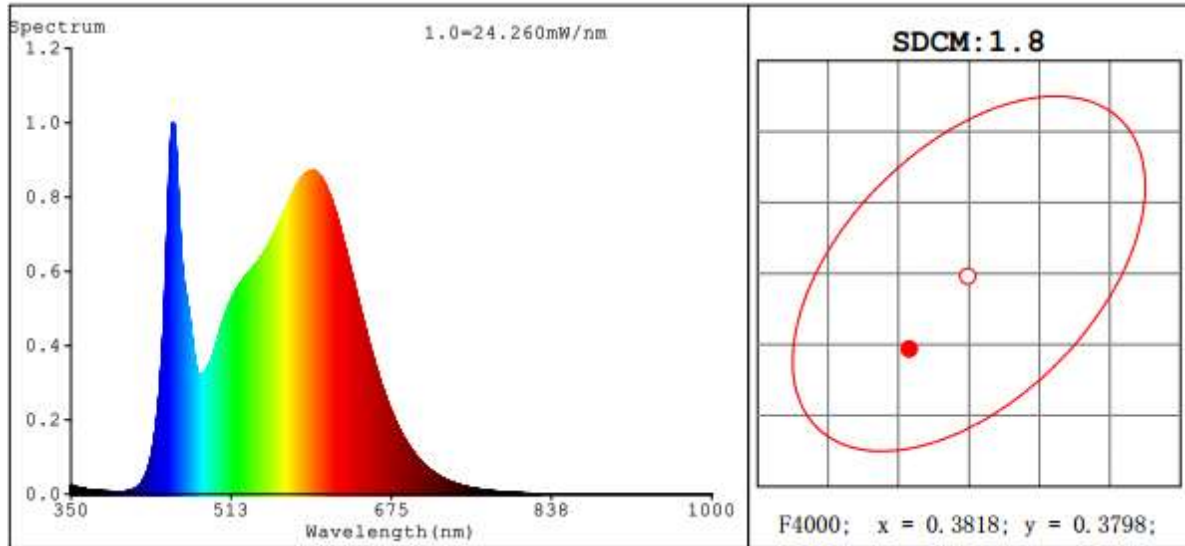
#### Test Result

Tc(K)	色差(Duv)	Rf	Rg	Ra	R9	SDCM
4028	1.0E-04	84	94	84	10.2	1.8
4033	0.0E+00	84	94	84	10.5	1.9

### 3.1 Integrating Sphere Test

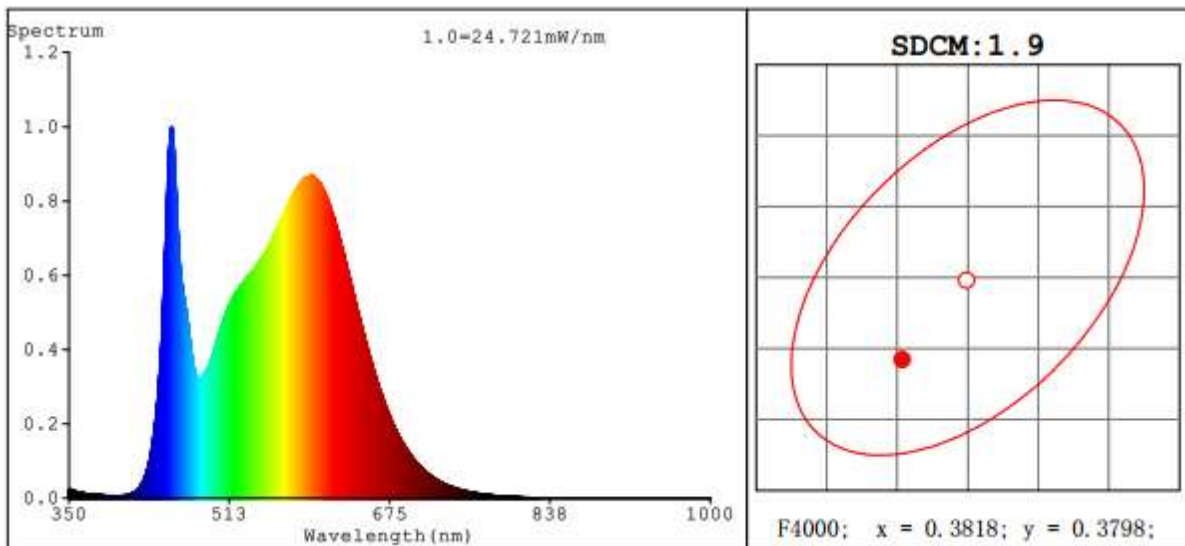
#### Spectroradiometric Parameters

120V



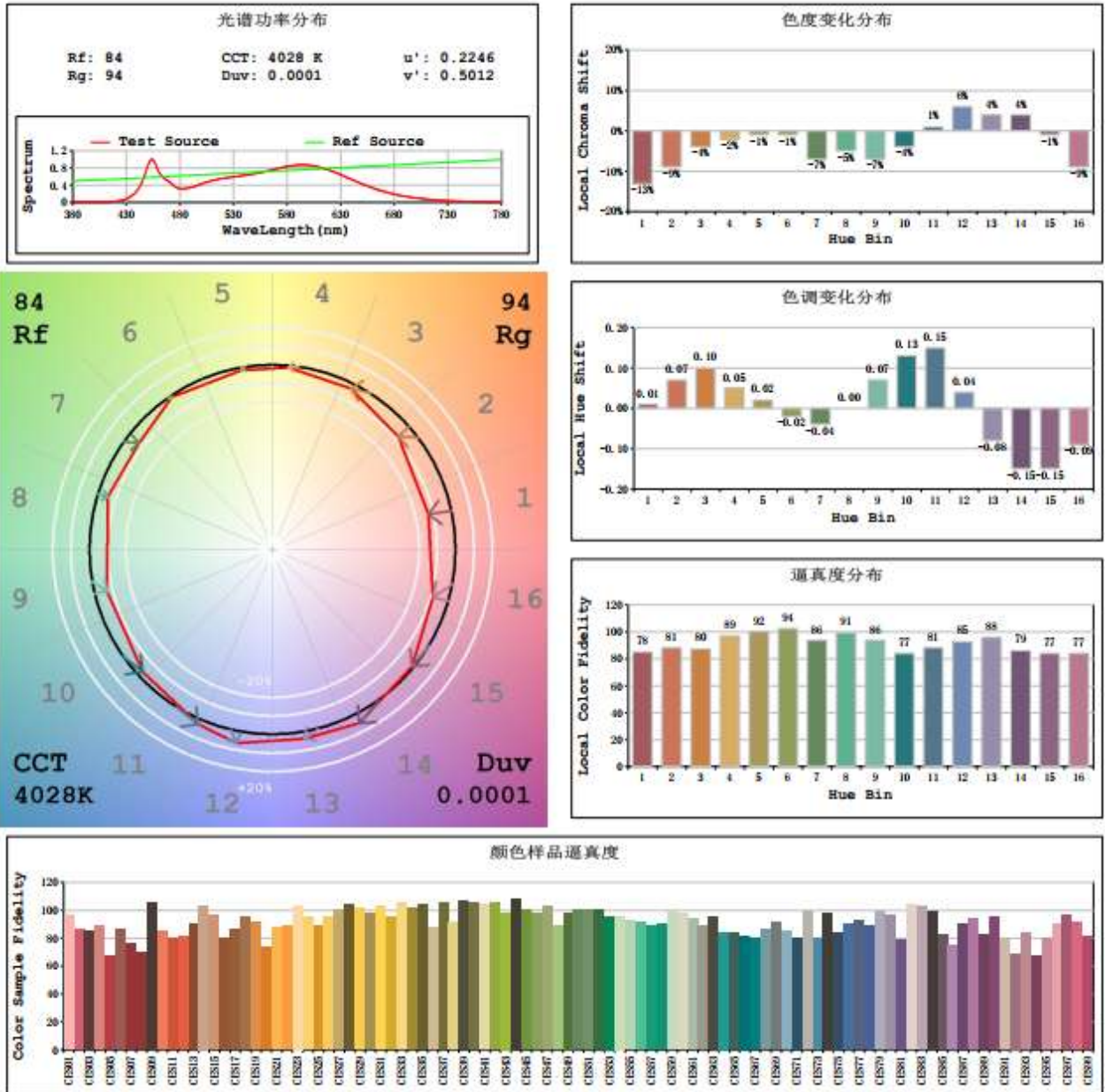
R1 =82.9 R2 =92.5 R3 =95.7 R4 =81.0 R5 =82.8 R6 =88.8 R7 =84.6  
 R8 =63.8 R9 =10.2 R10=81.6 R11=80.3 R12=63.7 R13=85.7 R14=98.3 R15=76.4

277V



R1 =82.9 R2 =92.6 R3 =95.6 R4 =81.0 R5 =82.8 R6 =88.9 R7 =84.5  
 R8 =63.8 R9 =10.5 R10=81.9 R11=80.2 R12=63.8 R13=85.9 R14=98.3 R15=76.5

### 3.2 Integrating Sphere Test - Minimum CCT



### 3.1 Integrating Sphere Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Opreate time (Min.)	15	Stabilization time (Min.)	15
Temperature (°C)	25.3	Humidity %	55

Test Method
<p>The samples were tested according to the IES LM-79-2008.</p> <p>Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.</p> <p>The sample is operated off ballast Model C2642UNVME</p>

#### Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Flux (lm)	Efficacy (lm/W)
25.3	120.50	60.00	0.204	24.49	0.9974	1196.0	97.7
25.3	277.77	60.00	0.089	24.19	0.9803	1177.0	97.3

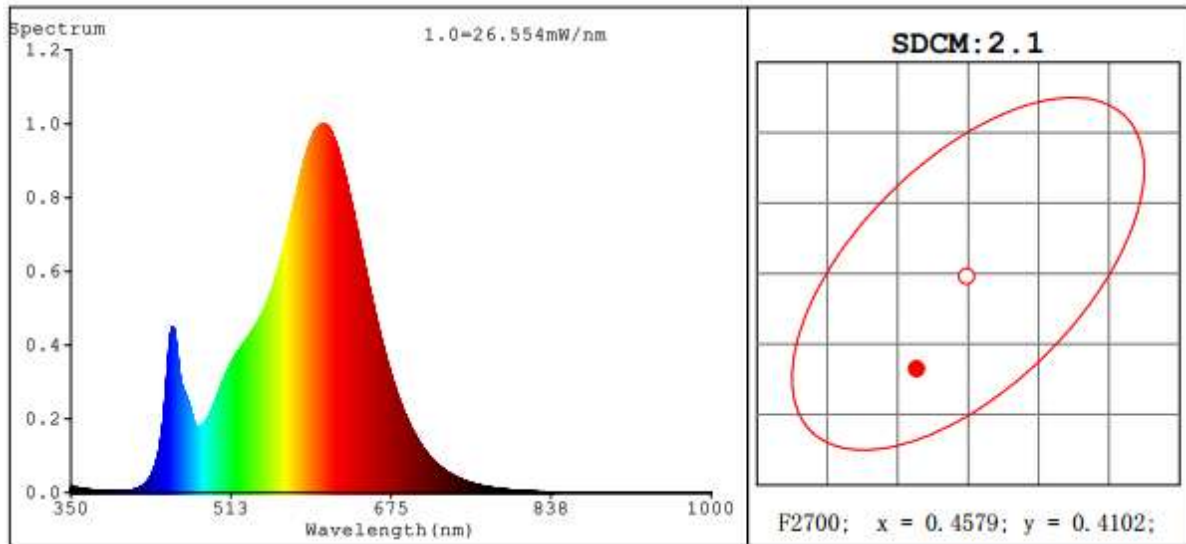
#### Test Result

Tc(K)	色差(Duv)	Rf	Rg	Ra	R9	SDCM
2720	-1.6E-03	83	96	81.9	5.2	2.1
2723	-1.7E-03	83	96	81.8	5.0	2.2

### 3.1 Integrating Sphere Test

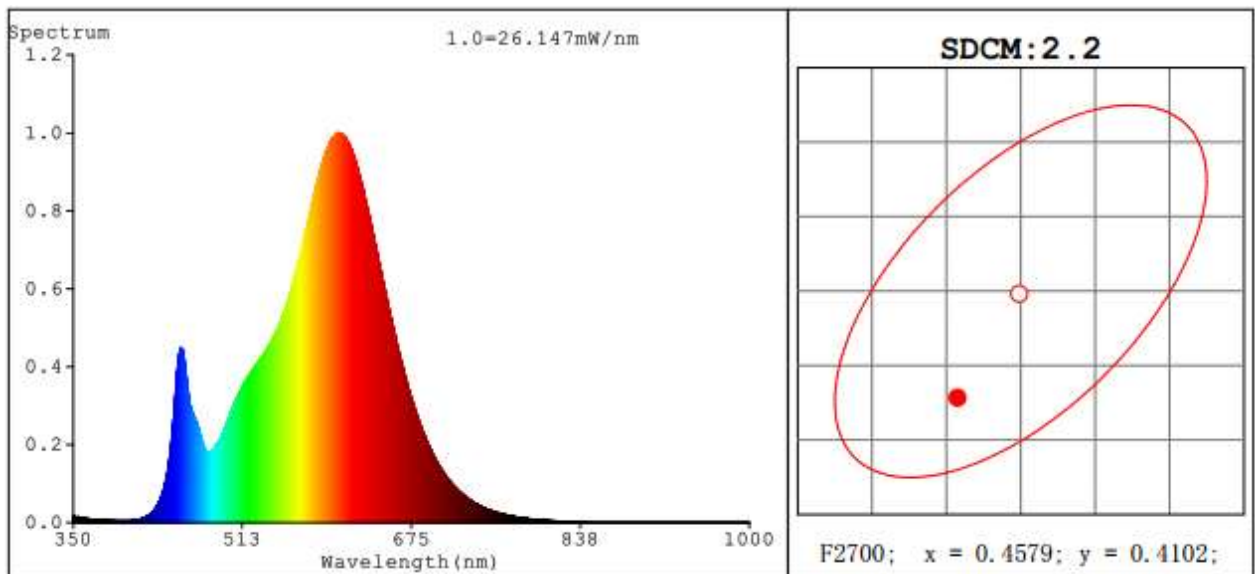
#### Spectroradiometric Parameters

120V



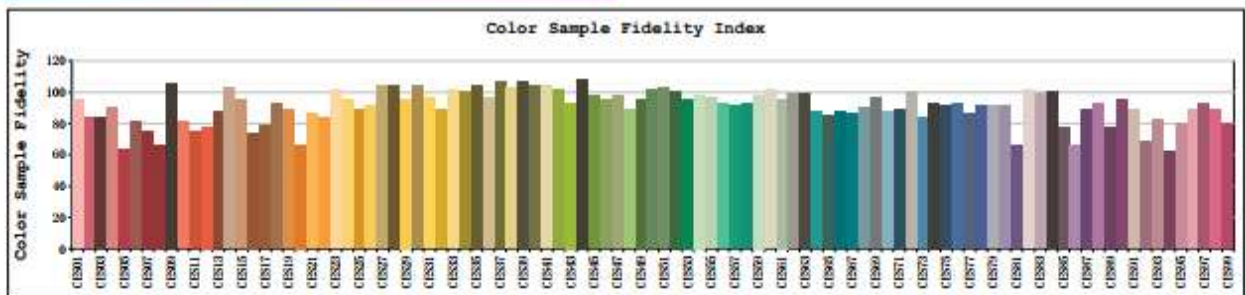
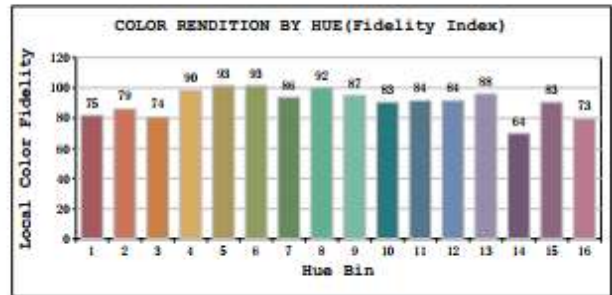
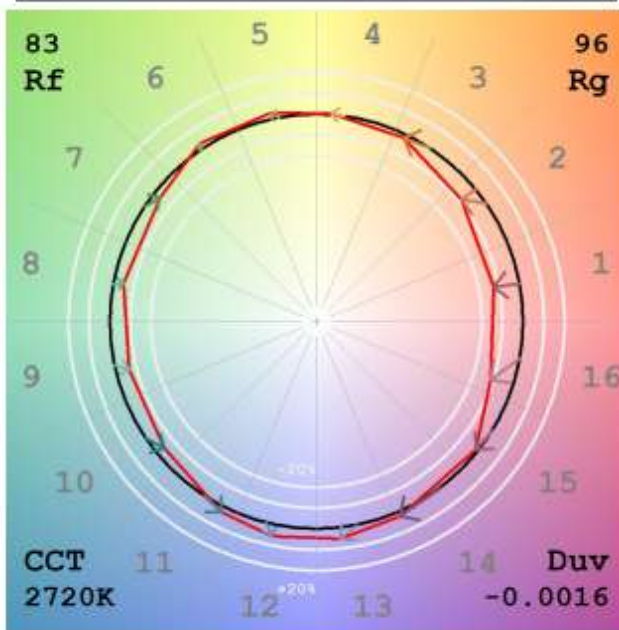
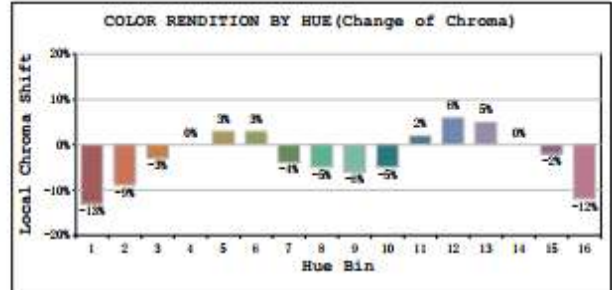
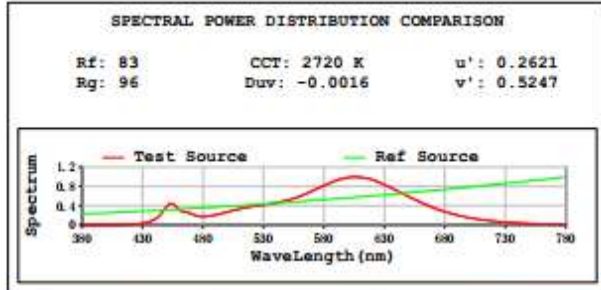
R1 =81.2 R2 =93.2 R3 =92.8 R4 =79.0 R5 =81.8 R6 =92.7 R7 =79.5  
 R8 =55.3 R9 =5.2 R10=85.0 R11=78.8 R12=77.0 R13=84.3 R14=96.8 R15=73.0

277V



R1 =81.1 R2 =93.3 R3 =92.6 R4 =78.7 R5 =81.8 R6 =92.8 R7 =79.3  
 R8 =55.1 R9 =5.0 R10=85.2 R11=78.5 R12=77.0 R13=84.2 R14=96.7 R15=72.9

### 3.2 Integrating Sphere Test - Minimum CCT



### 3.1 Integrating Sphere Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Opreate time (Min.)	15	Stabilization time (Min.)	15
Temperature (°C)	25.3	Humidity %	55

Test Method
<p>The samples were tested according to the IES LM-79-2008.</p> <p>Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.</p> <p>The sample is operated off ballast Model C2642UNVME</p>

#### Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Flux (lm)	Efficacy (lm/W)
25.3	120.50	60.00	0.201	24.120	0.9971	1241.0	102.9
25.3	277.77	60.00	0.089	24.180	0.9805	1234.0	102.1

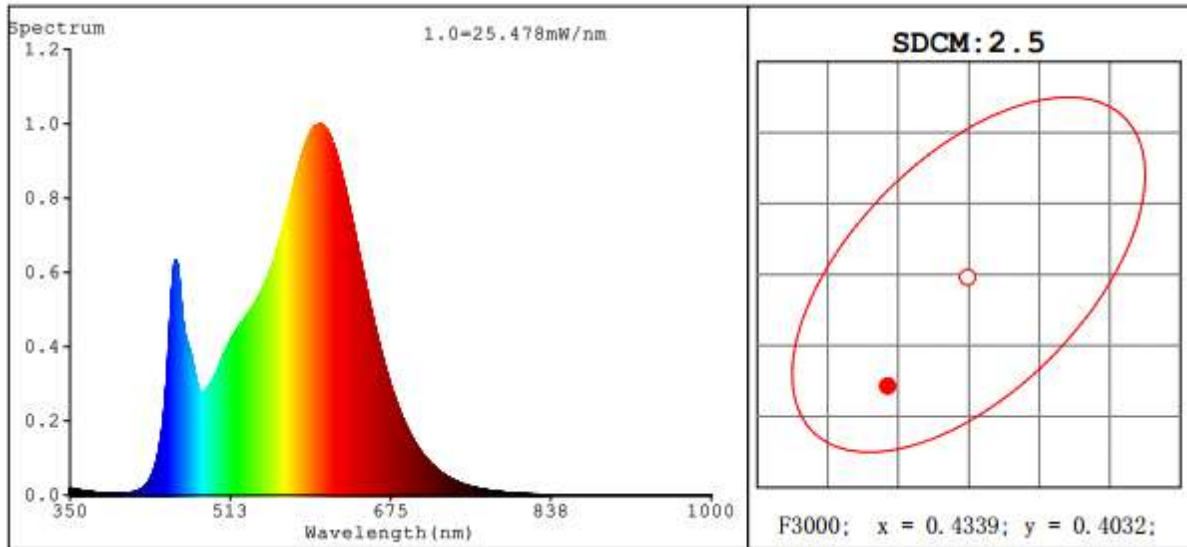
#### Test Result

Tc(K)	色差(Duv)	Rf	Rg	Ra	R9	SDCM
3059	-1.6E-03	83	94	83	10.0	2.4
3061	-1.7E-03	83	94	83	9.9	2.5

### 3.1 Integrating Sphere Test

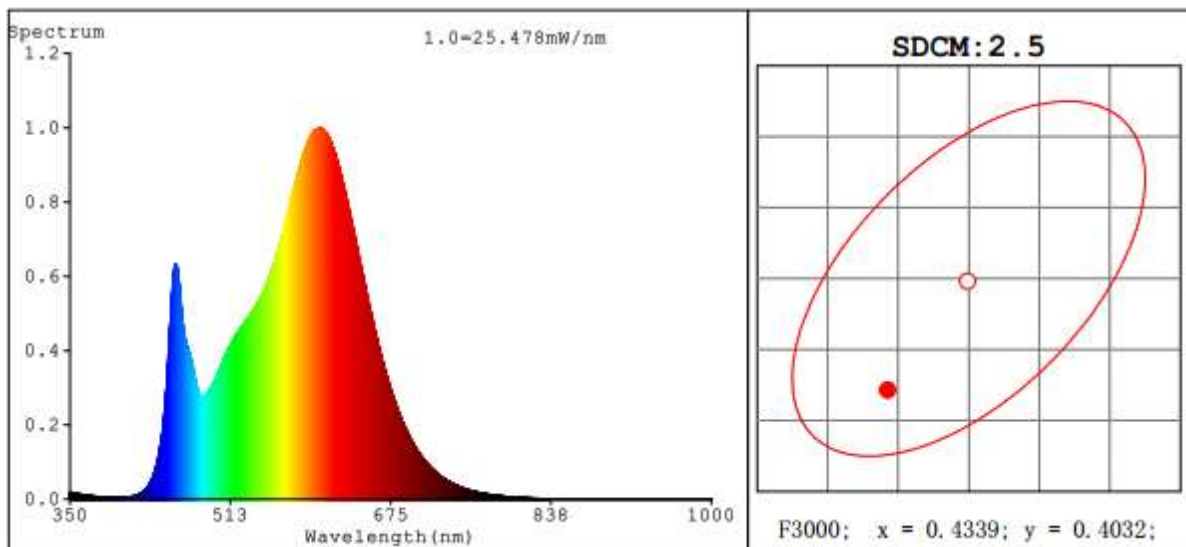
#### Spectroradiometric Parameters

120V



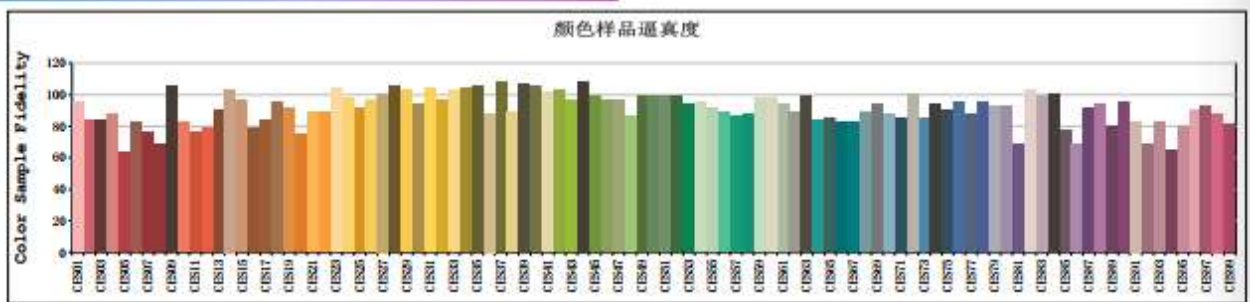
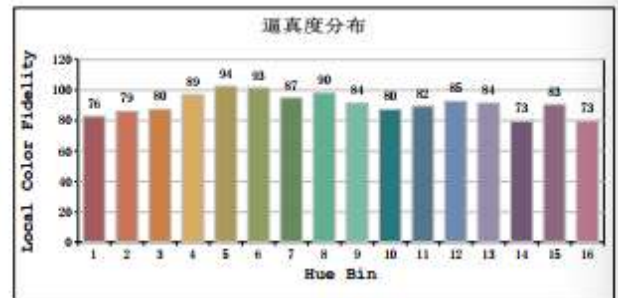
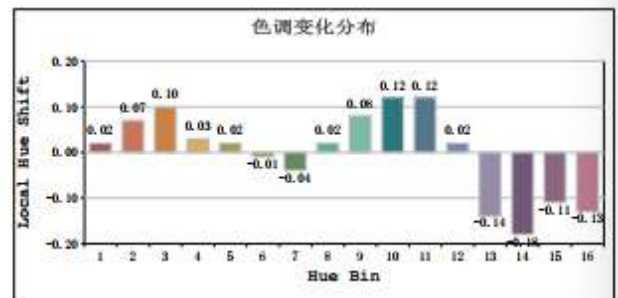
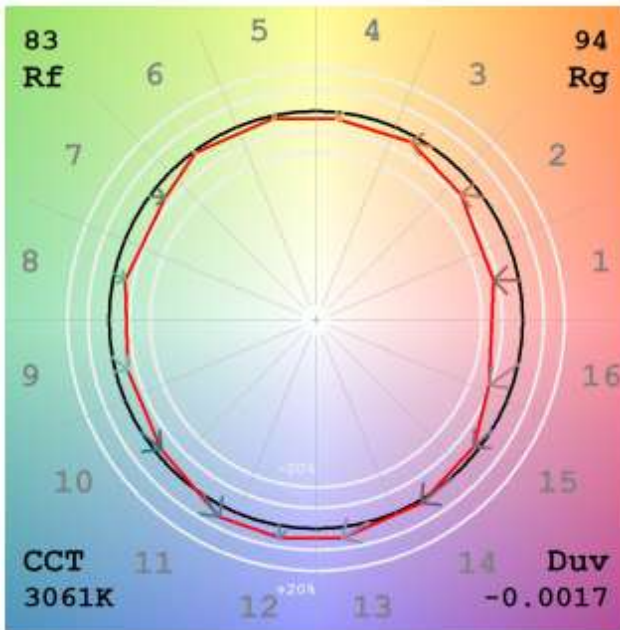
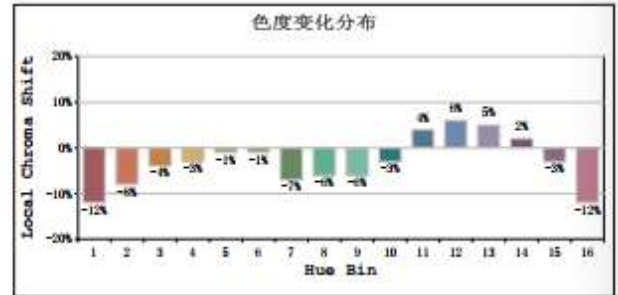
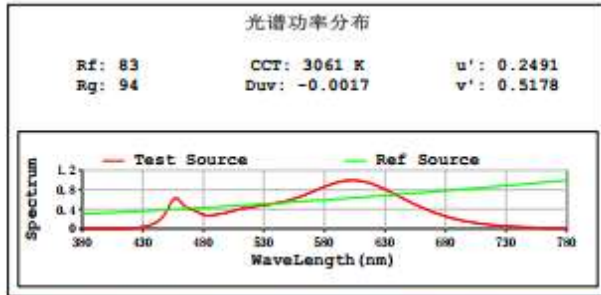
R1 =83.3 R2 =95.4 R3 =91.3 R4 =79.4 R5 =83.8 R6 =93.9 R7 =79.9  
 R8 =58.2 R9 =9.9 R10=89.2 R11=79.1 R12=74.6 R13=86.8 R14=95.9 R15=75.5

277V



R1 =83.3 R2 =95.3 R3 =91.3 R4 =79.4 R5 =83.9 R6 =93.9 R7 =79.9  
 R8 =58.2 R9 =9.9 R10=89.2 R11=79.1 R12=74.6 R13=86.8 R14=95.9 R15=75.5

### 3.2 Integrating Sphere Test - Minimum CCT



### 3.1 Integrating Sphere Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Opreate time (Min.)	15	Stabilization time (Min.)	15
Temperature (°C)	25.3	Humidity %	55

Test Method
<p>The samples were tested according to the IES LM-79-2008.</p> <p>Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.</p> <p>The sample is operated off ballast Model C2642UNVME</p>

#### Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Flux (lm)	Efficacy (lm/W)
25.3	120.50	60.00	0.197	23.690	0.9968	1299.0	109.7
25.3	277.77	60.00	0.088	23.830	0.9797	1299.0	109.0

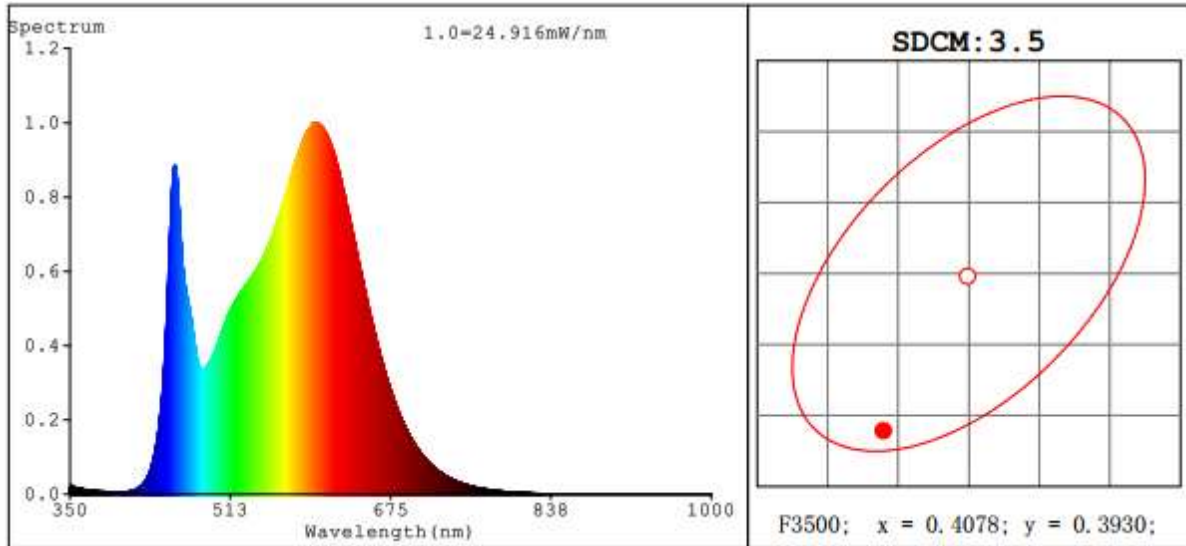
#### Test Result

Tc(K)	色差(Duv)	Rf	Rg	Ra	R9	SDCM
3482	-2.1E-03	84	94	84	14.6	3.5
3482	-2.1E-03	84	94	84	14.6	3.5

### 3.1 Integrating Sphere Test

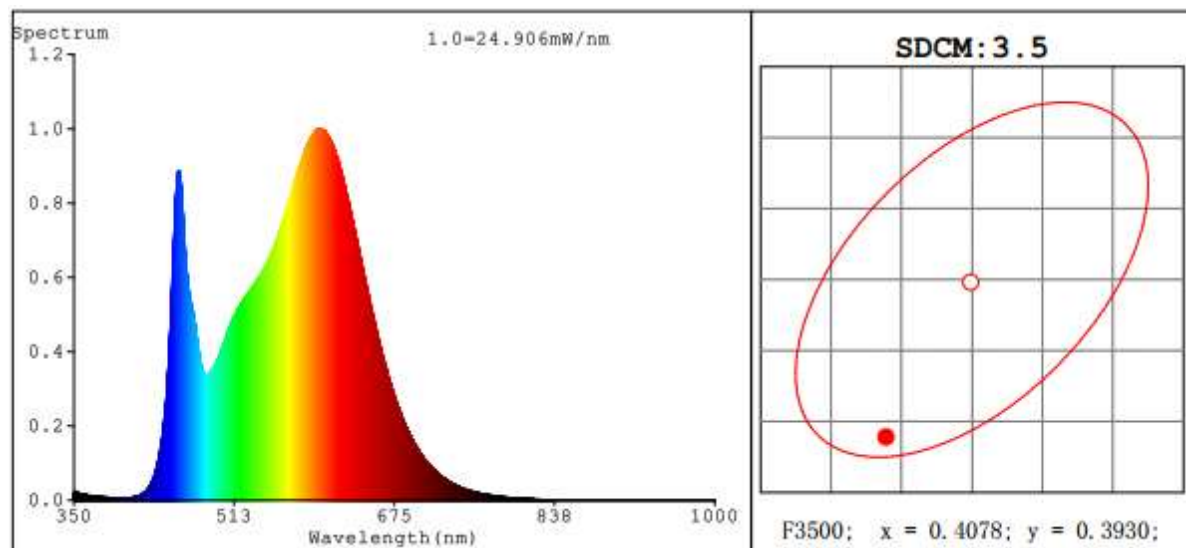
#### Spectroradiometric Parameters

120V



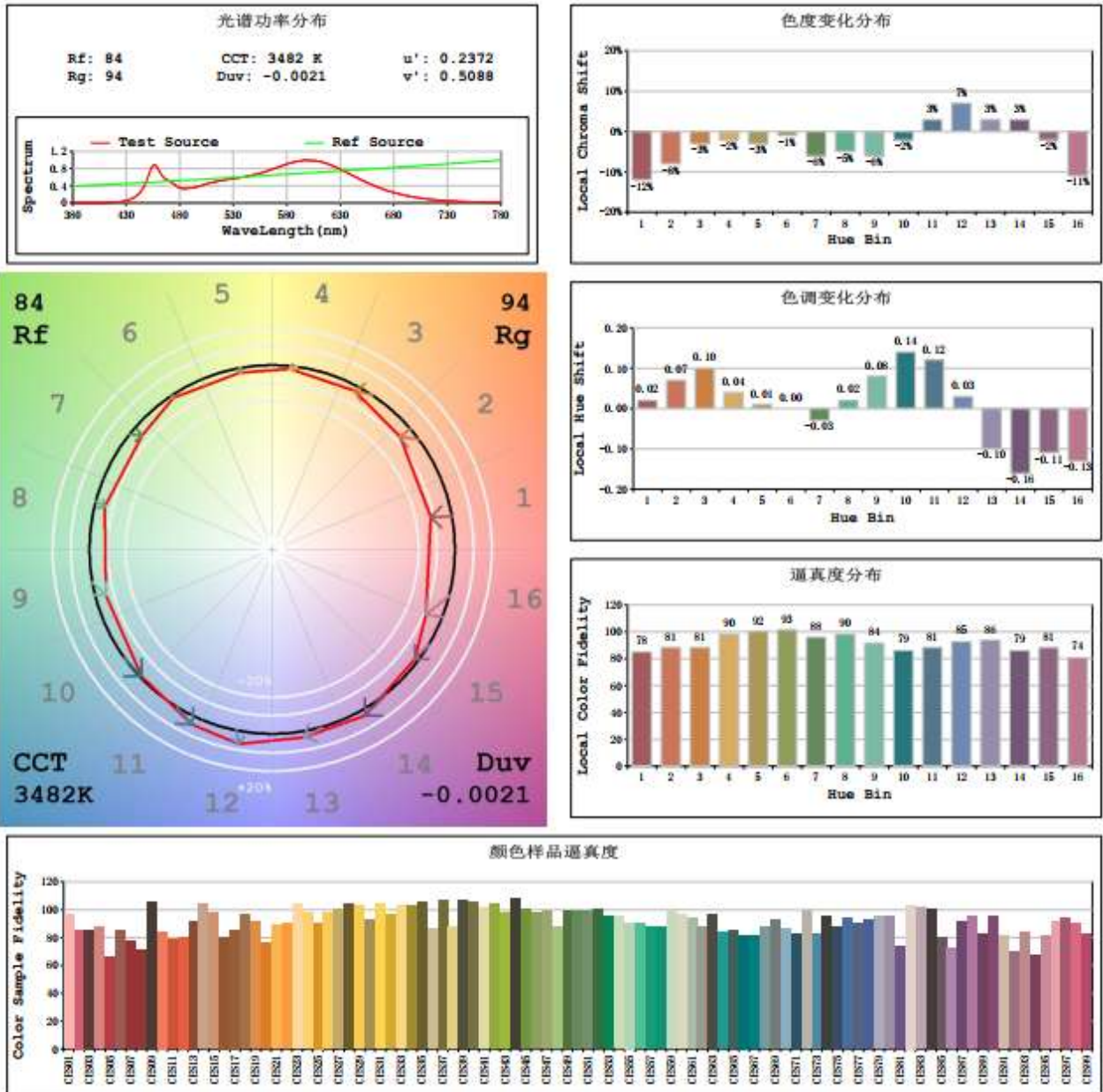
R1 =84.7 R2 =95.6 R3 =92.6 R4 =80.6 R5 =84.7 R6 =92.8 R7 =81.8  
R8 =62.1 R9 =14.6 R10=89.0 R11=80.3 R12=70.6 R13=88.1 R14=96.7 R15=77.9

277V



R1 =84.6 R2 =95.6 R3 =92.7 R4 =80.6 R5 =84.8 R6 =92.8 R7 =81.7  
R8 =62.0 R9 =14.6 R10=88.9 R11=80.3 R12=70.5 R13=88.0 R14=96.8 R15=77.8

### 3.2 Integrating Sphere Test - Minimum CCT



### 3.1 Integrating Sphere Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Opreate time (Min.)	15	Stabilization time (Min.)	15
Temperature (°C)	25.3	Humidity %	55

Test Method
<p>The samples were tested according to the IES LM-79-2008.</p> <p>Photometric paramters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.</p> <p>The sample is operated off ballast Model C2642UNVME</p>

#### Test Conditions

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Flux (lm)	Efficacy (lm/W)
25.3	120.50	60.00	0.200	23.950	0.9968	1304.0	108.9
25.3	277.77	60.00	0.089	24.080	0.9800	1304.0	108.3

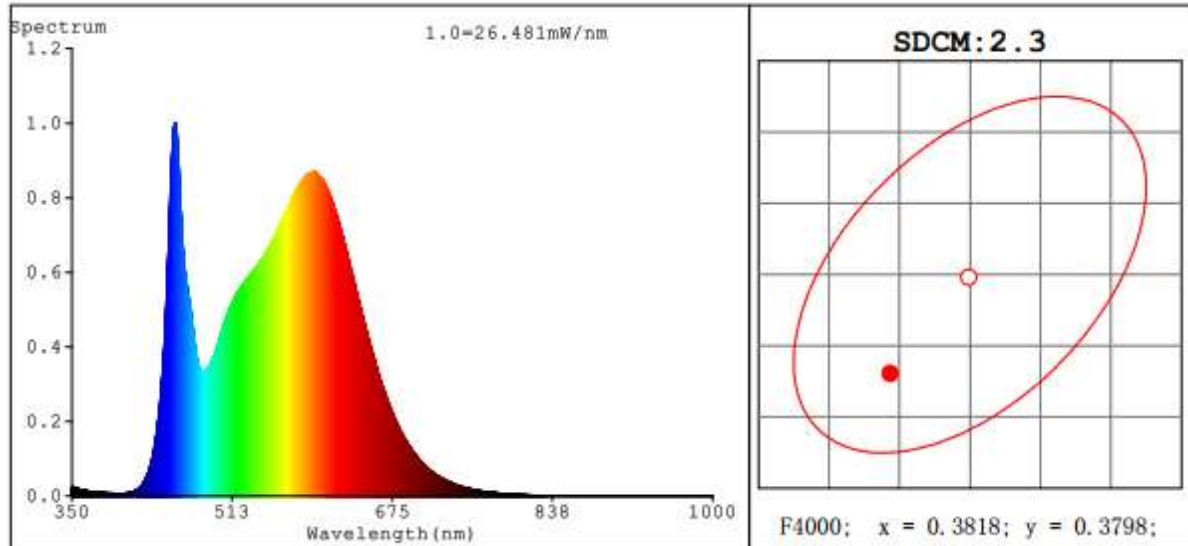
#### Test Result

Tc(K)	色差(Duv)	Rf	Rg	Ra	R9	SDCM
4044	-2.0E-04	84	94	84	10.9	2.3
4044	-2.0E-04	84	94	84	10.9	2.3

### 3.1 Integrating Sphere Test

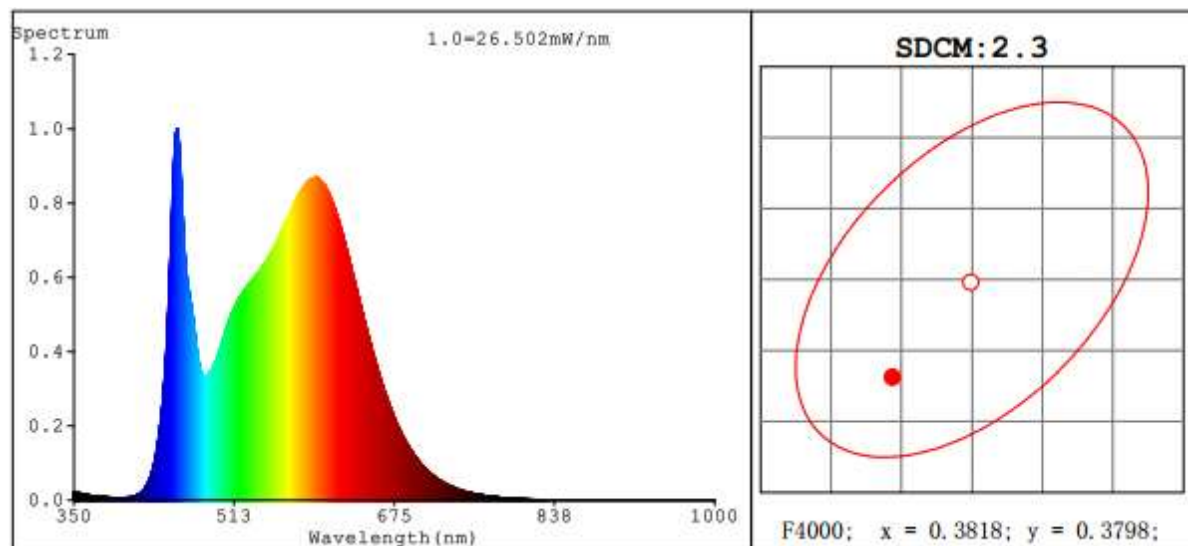
#### Spectroradiometric Parameters

120V



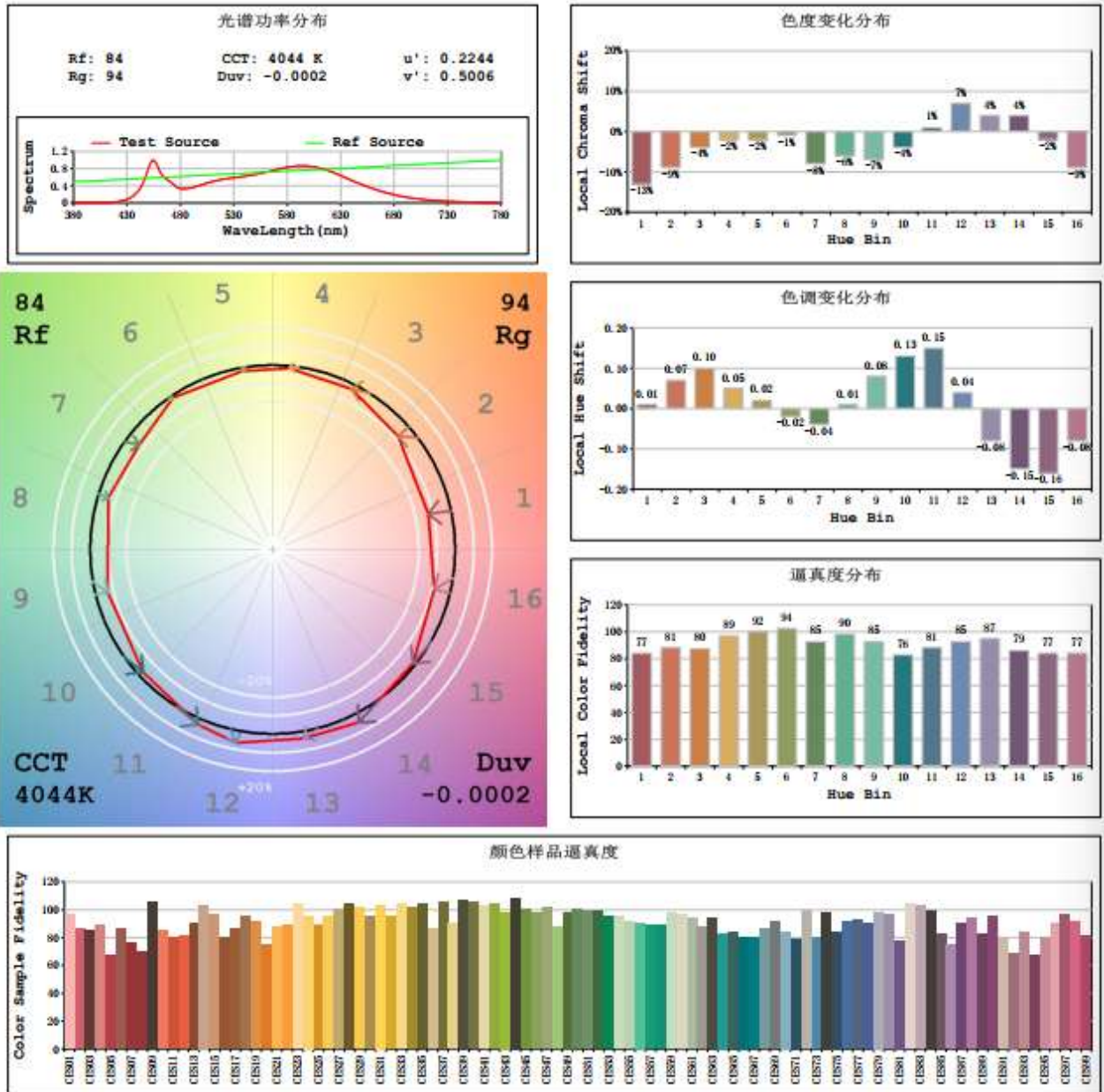
R1 =83.1 R2 =93.0 R3 =95.3 R4 =80.6 R5 =82.9 R6 =89.2 R7 =84.2  
 R8 =63.8 R9 =10.9 R10=82.7 R11=79.8 R12=64.0 R13=86.1 R14=98.1 R15=76.8

277V



R1 =83.1 R2 =93.0 R3 =95.3 R4 =80.6 R5 =82.9 R6 =89.2 R7 =84.2  
 R8 =63.8 R9 =10.9 R10=82.7 R11=79.8 R12=64.0 R13=86.1 R14=98.1 R15=76.7

### 3.2 Integrating Sphere Test - Minimum CCT



### 3.3 Goniophotometer Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	0
Operate time (Min.)	15	Stabilization time (Min.)	15

#### Test Method

The samples were tested according to the IES LM-79-2008. Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25° C ± 1° C. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ± 0.2 percent under load.

The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 0.5° vertical intervals and 10° horizontal intervals.

#### Test Conditions

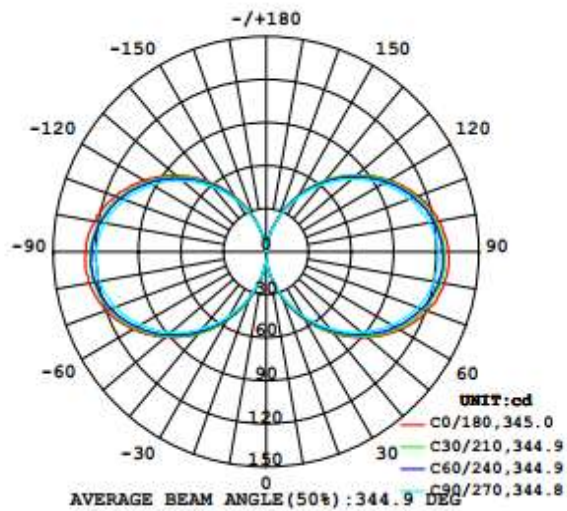
Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
25.3	120.00	60.00	0.071	8.6	0.990

#### Test Result

Flux(lm)	Beam Angle	Zonal Lumen Requirement(0°-60°)	SC (0°-180°)	SC (90°-270°)	Efficacy (lm/W)
1126.19	344.9	19.2%	6.08	5.98	131.1

### 3.3 Goniophotometer Test

#### Light Distribution Curve



#### Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixt	Zone	Lumens
0-20	8.17	0.70	0.70	0-10	1.06
0-30	28.31	2.50	2.50	10-20	7.11
0-40	67.58	6.00	6.00	20-30	20.14
0-60	217.06	19.30	19.30	30-40	39.27
0-80	451.69	40.10	40.10	40-50	62.51
0-90	584.96	51.90	52.00	50-60	86.97
10-90	583.90	51.80	51.90	60-70	109.15
20-40	59.41	5.30	5.30	70-80	125.48
20-50	121.92	10.80	10.80	80-90	133.27
40-70	258.63	23.00	23.00	90-100	131.24
60-80	234.63	20.80	20.80	100-110	120.08
70-80	125.48	11.10	11.20	110-120	101.62
80-90	133.27	11.80	11.80	120-130	78.81
90-110	251.32	22.30	22.30	130-140	54.92
90-120	352.94	31.30	31.40	140-150	33.10
90-130	431.76	38.30	38.40	150-160	15.73
90-150	519.78	46.20	46.20	160-170	4.62
90-180	540.41	48.00	48.00	170-180	0.29
110-180	289.09	25.70	25.70		
0-180	1125.37	99.90	100.00		

## 5.0 THD and PF Test

Model No.	PLC-9-O-8FA-HYB-G24Q	Sample ID.	A1
Temperature (°C)	25.3	Humidity %	49

Test Method
<p>The samples were tested according to the ANSI C82.77:2002.</p> <p>The total harmonic distortion shall be measured to the 40th order.</p> <p>The ambient temperature condition was maintained at 25° C ± 1° C. The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion were calculated.</p>

### Test Results

Temperature (°C)	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD
25.3	120.00	60.00	0.072	8.64	0.990	17.28%
25.3	277.02	60.00	0.036	8.83	0.875	21.30%