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Test report of

IES LM-79-08

Approved Method: Electrical and Photometric

Measurements of Solid-State Lighting Products

Applicant:

LIGHT EFFICIENT DESIGN

Address:

188 S. Northwest Highway Cary, IL 60013 USA

For Product:

Indoor Retrofit Kit -- Retrofit Kits for Direct Linear Ambient Luminaires

Product Model No.:

RP-LBE-G2-6W-2FT-1L-835-[OCN, Blank]-10V,
RP-LBE-G2-6W-2FT-1L-850-[OCN, Blank]-10V,
RP-LBE-G2-8W-2FT-1L-835-[OCN, Blank]-10V,
RP-LBE-G2-8W-2FT-1L-850-[OCN, Blank]-10V,
RP-LBE-G2-10W-2FT-1L-835-[OCN, Blank]-10V,
RP-LBE-G2-10W-2FT-1L-850-[OCN, Blank]-10V,
RP-LBE-G2-12W-2FT-1L-835-[OCN, Blank]-10V,
RP-LBE-G2-12W-2FT-1L-850-[OCN, Blank]-10V

Test laboratory: Shenzhen Belling Efficiency Testing Lab Co.,Ltd, 1Floor, No.1 Building, Meibaohe Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong Prov.518101 China.

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Project Engineer

Technical Manager

Note: The test data was only valid for the test sample(s). This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Shenzhen Belling Efficiency Testing Lab Co.,Ltd. This report must not be used by the customer to claim product certification, approval, or endorsement By NVLAP, NIST, or any agency of the U.S. Government.



1 General

1.1 Product Information

Manufacturer	LIGHT EFFICIENT DESIGN
Manufacturer Address	188 S. Northwest Highway Cary, IL 60013 USA
Brand Name	REMPHOS OR LIGHT EFFICIENT DESIGN
Luminaire Type	Indoor Retrofit Kit -- Retrofit Kits for Direct Linear Ambient Luminaires
Test in fixture	A.L.P. SEP220
Test Model Number	RP-LBE-G2-6W-2FT-1L-835-[OCN, Blank]-10V, RP-LBE-G2-6W-2FT-1L-850-[OCN, Blank]-10V, RP-LBE-G2-8W-2FT-1L-835-[OCN, Blank]-10V, RP-LBE-G2-8W-2FT-1L-850-[OCN, Blank]-10V, RP-LBE-G2-10W-2FT-1L-835-[OCN, Blank]-10V, RP-LBE-G2-10W-2FT-1L-850-[OCN, Blank]-10V, RP-LBE-G2-12W-2FT-1L-835-[OCN, Blank]-10V, RP-LBE-G2-12W-2FT-1L-850-[OCN, Blank]-10V
Rated Inputs	AC 100-277V 50/60Hz
Field-Adjustable Product	Yes, Wattage setting: 6W, 8W, 10W, 12W
Nominal CCT	3500K, 5000K
Dimming Capability	Continuous
Integral Control Sensors	Optional
Date of Receipt Samples	2020-10-12
Date of test	2020-10-20 to 2020-11-23
Burning Time Before Test	0hour(For New Products)

1.2 Standards or methods

- ANSI C78.377-2017:Specifications for the Chromaticity of Solid State Lighting Products
- ANSI C82.77-10:2014:Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment - Solid State
- CIE Publication No.13.3-1995:Method of Measuring and Specifying Color Rendering of Light Sources
- IESNA LM-79-08 Approved Method: Electric & Photometric Measurement of Solid-state Lighting Products



1.3 Equipment list

Device	Manufacture	Model No.	Serial No.	Calibration due date
Goniophotometric System	SENSING	GMS-3000	N.A	2021-04-02
AC Power Source	ALL POWER	APW-110N	992257	2021-04-02
Total Luminous Flux Standard Lamp	SENSING	110V/100W	S1510065	2021-04-08
Total Spectral Radiant Flux Standard Lamp	SENSING	12V/20W	LSD12201731	2021-04-08
Digital Power Meter	YOKOGAWA	WT310	C2QM02030V	2021-04-02
Integral Sphere	SENSING	SPR-600M	N.A	2021-04-02
Digital Power Meter	YOKOGAWA	WT210	91L929742	2021-04-02
Optical Color and Electrical Measurement System	SENSING	SPR-3000	S1101108	2021-04-02
Environment Measurer	XUYAO	HS-1	N/A	2021-04-08
Environment Measurer	XUYAO	HS-1	N/A	2021-04-08
Stop watch	KISLO	K610	N/A	2021-04-27
Digital Anemometer	TECMAN	TD8901	026141	2021-09-09

Statement of Traceability: Shenzhen Belling Efficiency Testing Lab Co.,Ltd attests that all calibration has been performed using suitable standards traceable to national primary standards and International System of Unit (SI).



2 Test conducted and method

2.1 Ambient Condition

The ambient temperature in which measurements are being taken was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, the air flow around the sample(s) being tested did not affect the performance.

2.2 Power Supply Characteristics

The AC power supply had a sinusoidal voltage wave shape at the prescribed frequency (60 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

The voltage of AC power supply (RMS voltage) applied to the device under test was regulated to within ± 0.2 percent under load.

2.3 Seasoning and Stabilization

No seasoning was performed in accordance with IESNA LM-79-08. And before the measurement, the sample was stabilized until the light output and power variations were less than 0.5% in 30 minutes intervals (3 readings, 15 minutes apart).

2.4 Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The integrating sphere system is calibrated by standard light source before measurement. The system and standard light source has been calibrated regularly and traceable to the National Primary Standards. 4π geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

Integrating Sphere Uncertainty: The uncertainty of the light output (luminous flux) measurements is $U=1.8\%$ ($K=2$), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is $U=20\text{K}$ ($K=2$), at the 95% confidence level. The uncertainty of the CRI is $U=1.8(K=2)$, at the 95% confidence level. The uncertainty of power meter AC current $U=0.18\%$ of rdg, AC Voltage $U=0.16\%$ of rdg, Power $U=0.20\%$ ($K=2$), at the 95% confidence level.



2.5 Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement. The standard light source has been calibrated regularly and traceable to the National Primary Standards.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report. The method according to IESNA LM-79-08 following chapter.

Goniophotometer Uncertainty :The uncertainty of the luminous intensity is $U=1.6\%$ ($K=2$), at the 95% confidence level.



3 Test Result Summary

3.1 Integrating Sphere System (Total operating time for integrating sphere test: 1.0 hour)

3.1.1 Model Number: RP-LBE-G2-6W-2FT-1L-835-[OCN, Blank]-10V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
119.99	60	0.048	5.73	0.986

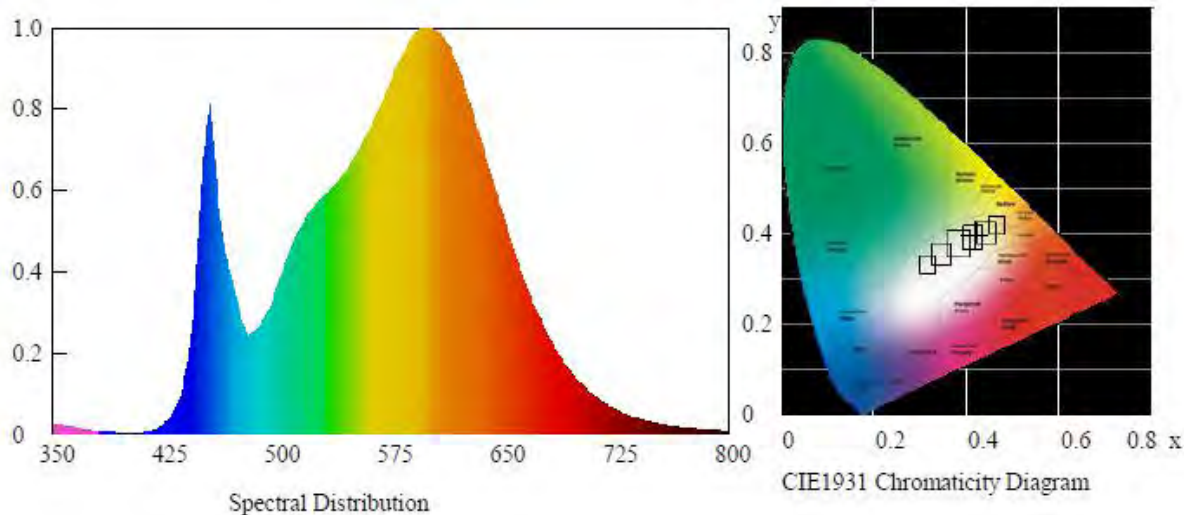
Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)	CRI	R9
915.08	159.7	3360	83.0	7

Chromaticity Coordinate

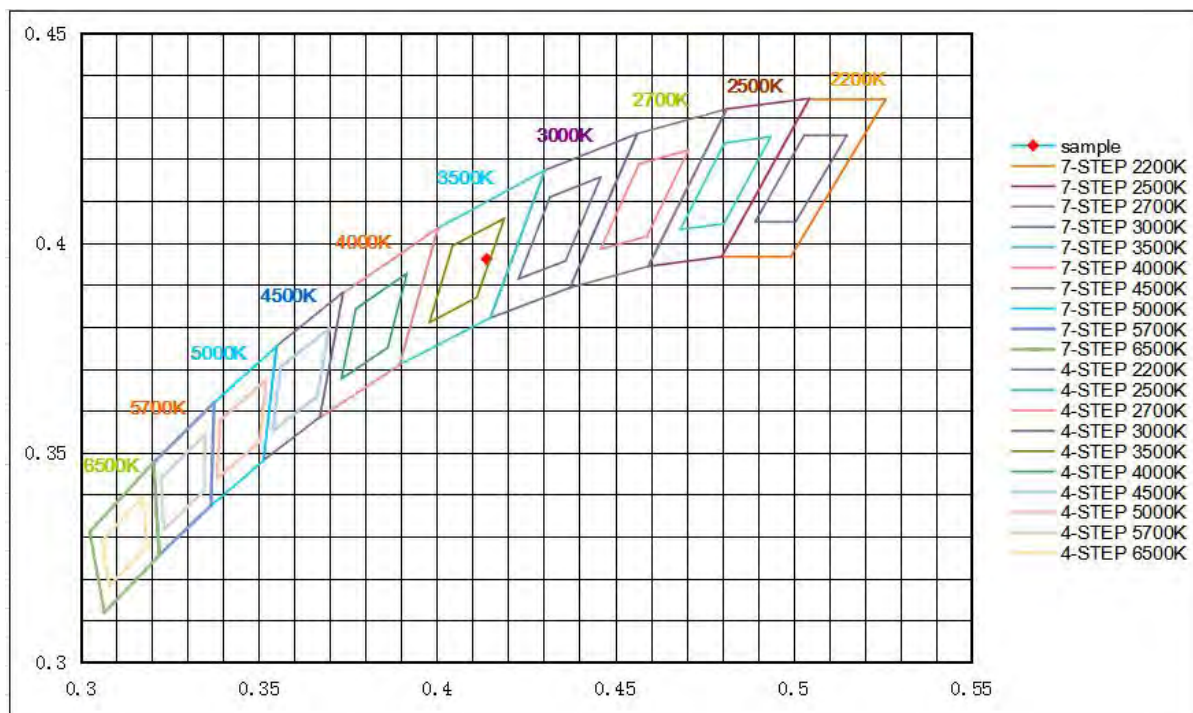
Duv	x	y	u'	v'
+0.00051	0.4140	0.3961	0.2392	0.5148

Spectral Distribution





7/4 Step Quadrangle



**3.1.2 Model Number: RP-LBE-G2-6W-2FT-1L-850-[OCN, Blank]-10V****Electrical data**

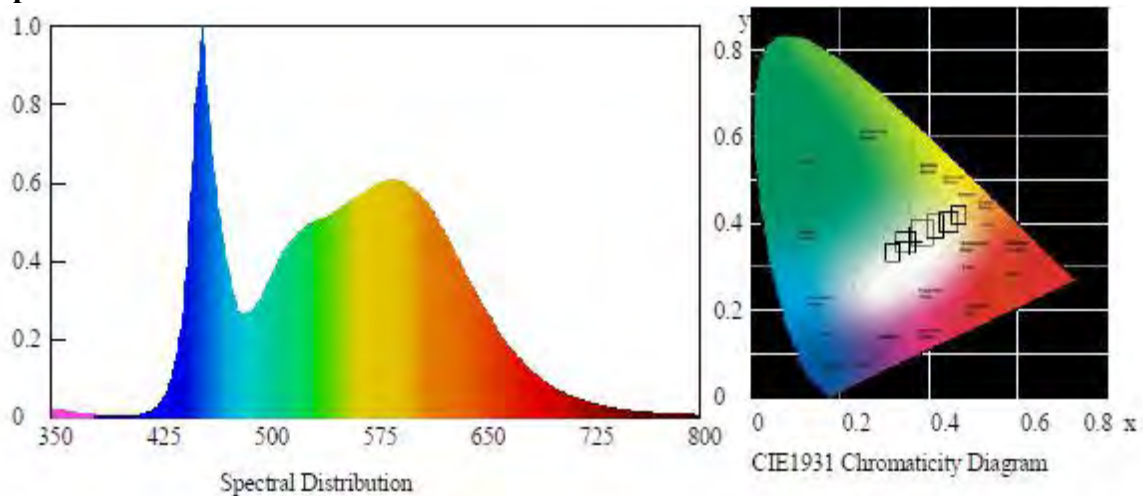
Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.12	60	0.048	5.70	0.986

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)	CRI	R9
927.33	162.7	4797	83.5	10

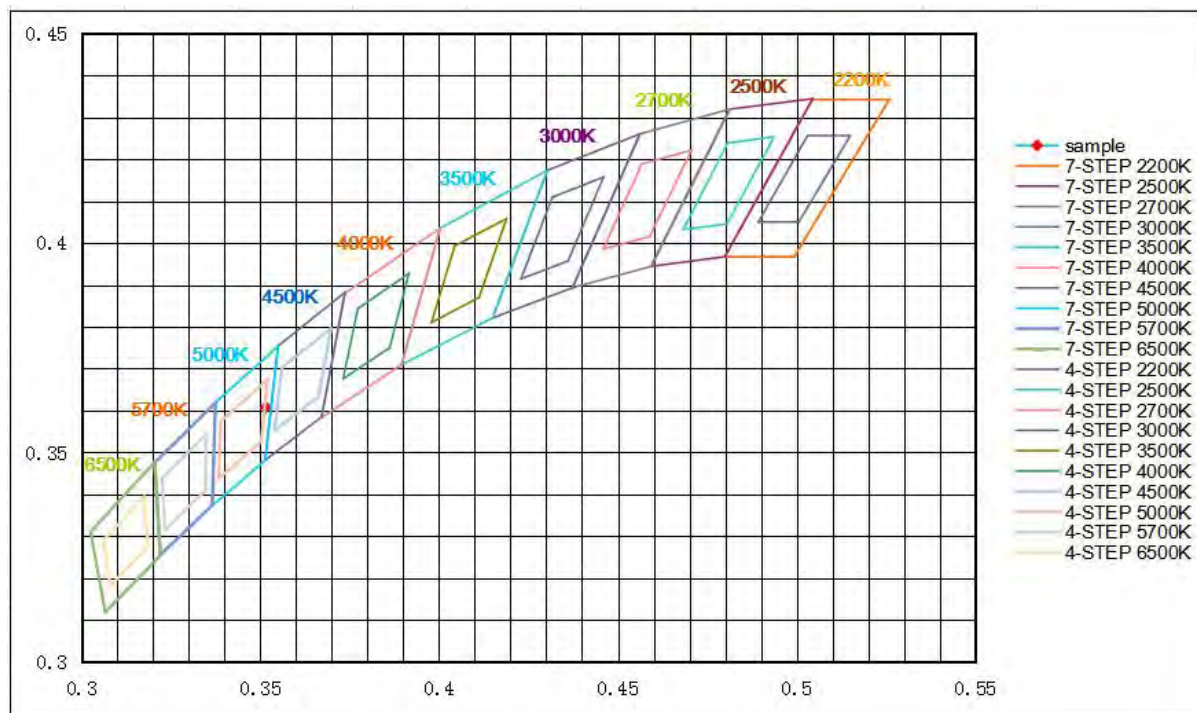
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00201	0.3516	0.3608	0.2123	0.49

Spectral Distribution



7/4 Step Quadrangle





3.1.3 Model Number: RP-LBE-G2-8W-2FT-1L-835-[OCN, Blank]-10V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.07	60	0.064	7.61	0.991

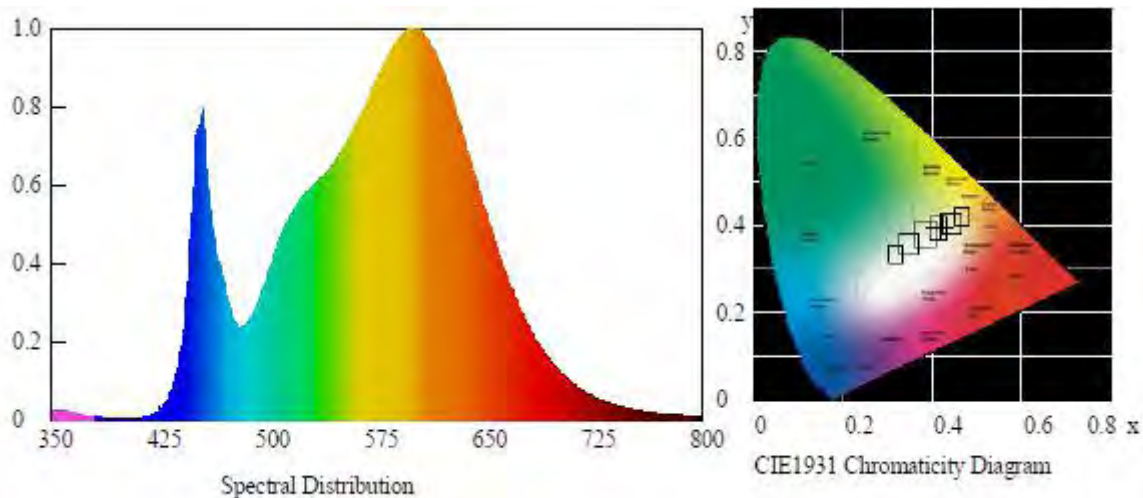
Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)	CRI	R9
1206.95	158.6	3386	82.8	6

Chromaticity Coordinate

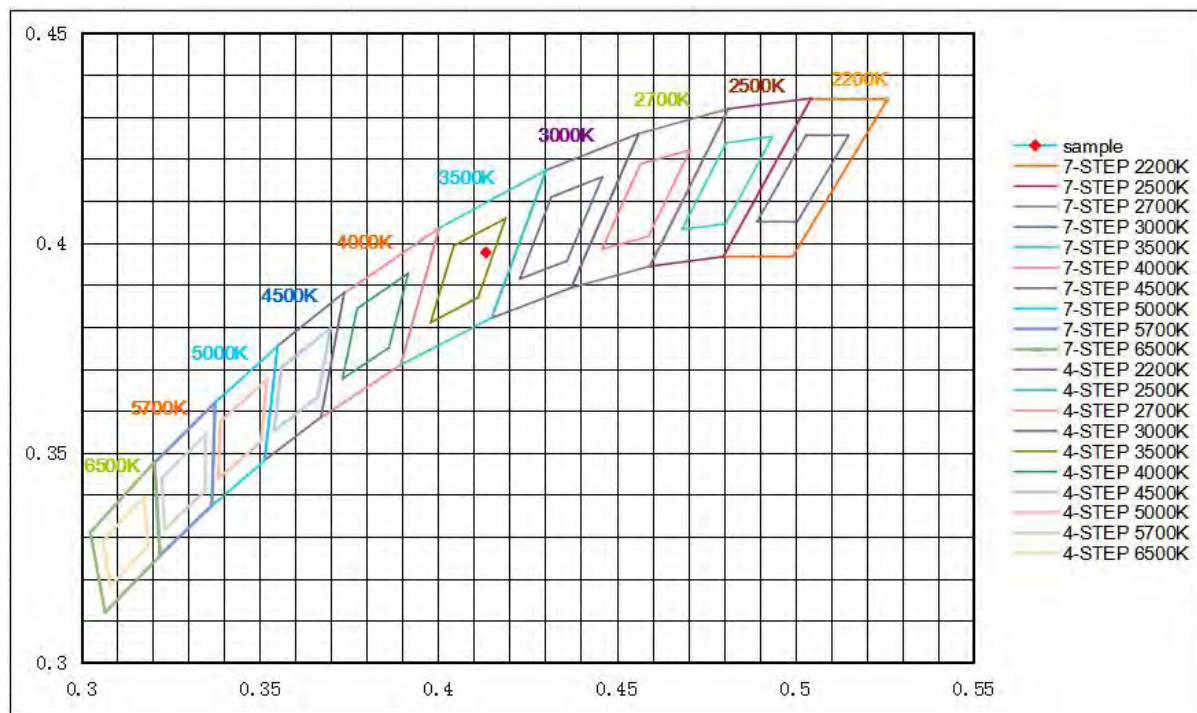
Duv	x	y	u'	v'
+0.00131	0.4134	0.3977	0.2381	0.5153

Spectral Distribution





7/4 Step Quadrangle





3.1.4 Model Number: RP-LBE-G2-8W-2FT-1L-850-[OCN, Blank]-10V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.07	60	0.064	7.62	0.991

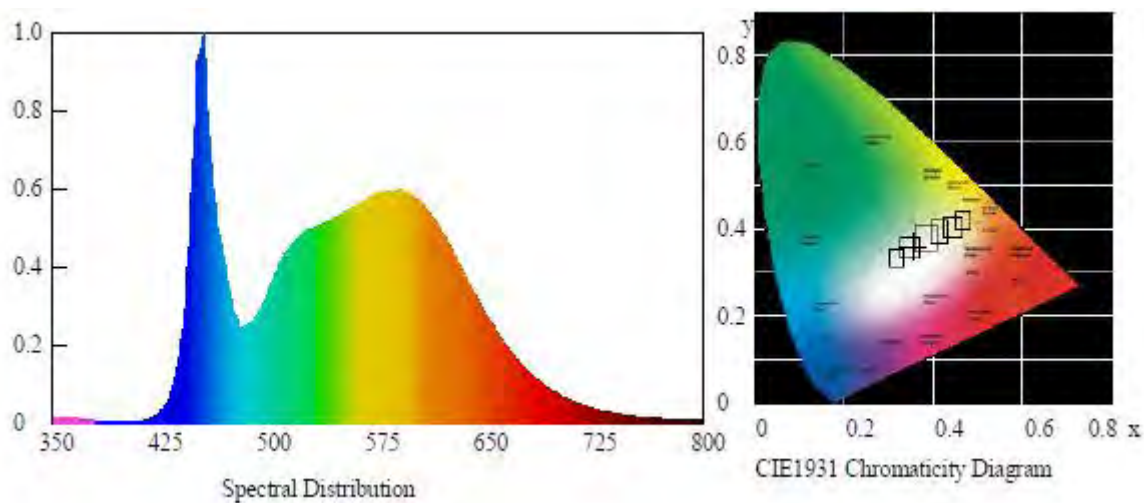
Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)	CRI	R9
1226.82	161.0	4850	83.5	10

Chromaticity Coordinate

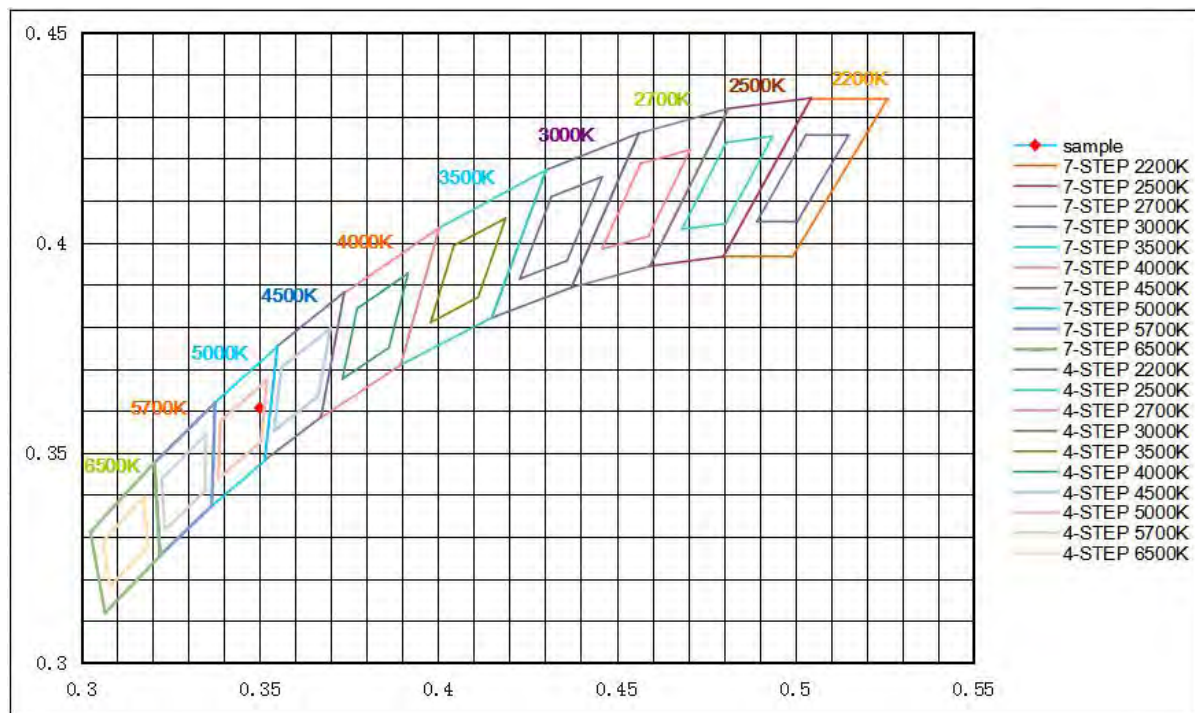
Duv	x	y	u'	v'
+0.00253	0.3501	0.3607	0.2113	0.4898

Spectral Distribution





7/4 Step Quadrangle



**3.1.5 Model Number: RP-LBE-G2-10W-2FT-1L-835-[OCN, Blank]-10V****Electrical data**

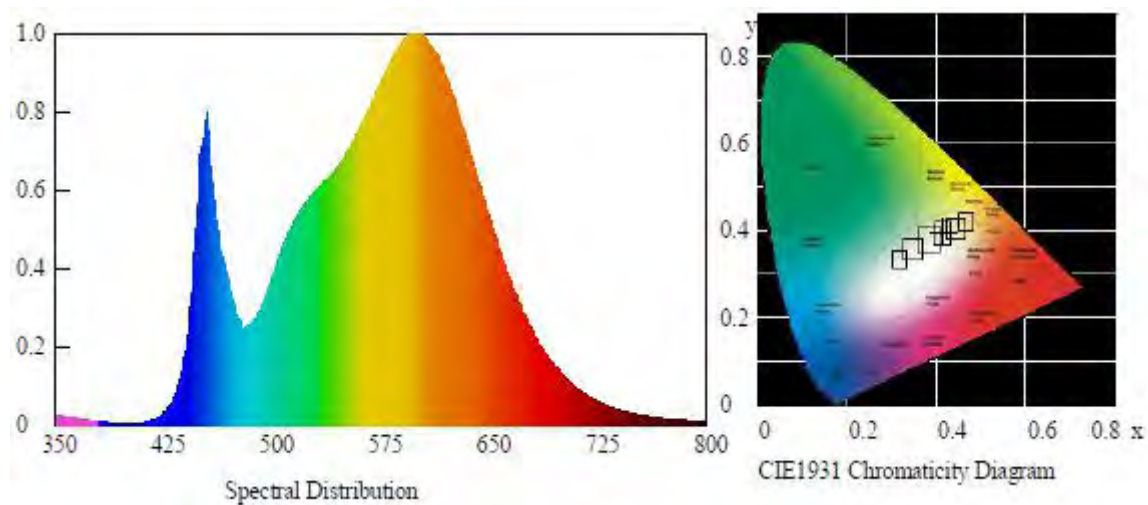
Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.16	60	0.079	9.47	0.994

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)	CRI	R9
1492.47	157.6	3407	82.7	5

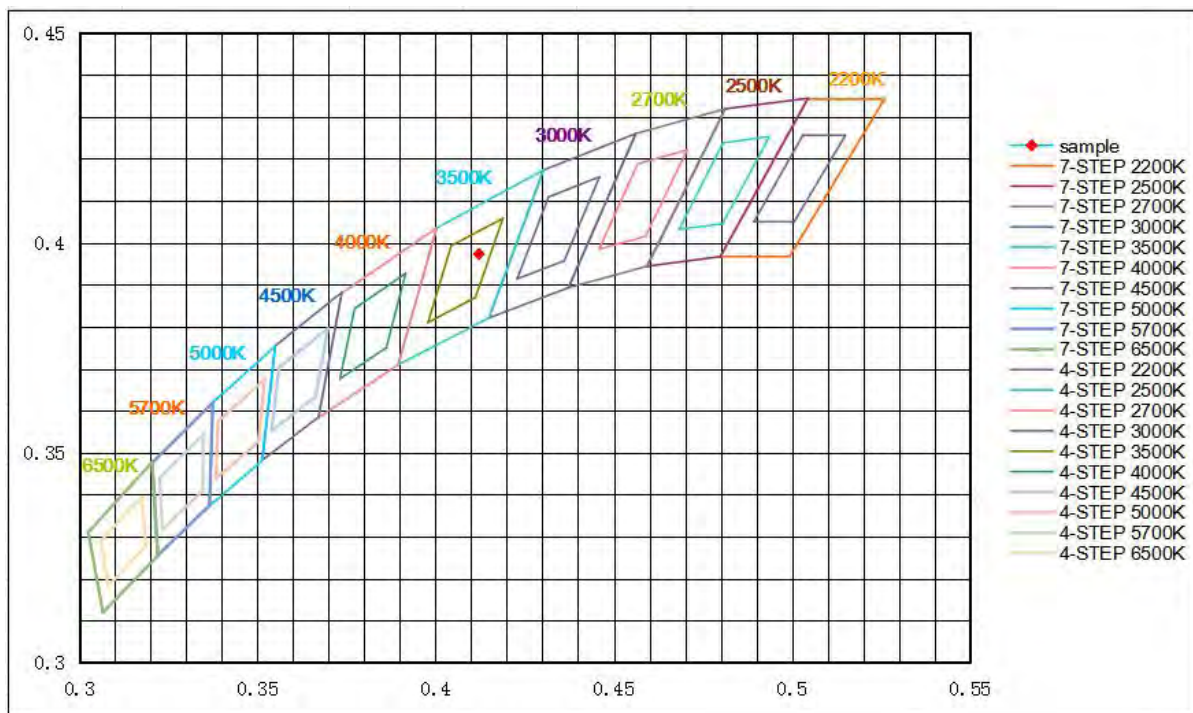
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00139	0.4122	0.3973	0.2375	0.515

Spectral Distribution



7/4 Step Quadrangle



**3.1.6 Model Number: RP-LBE-G2-10W-2FT-1L-850-[OCN, Blank]-10V****Electrical data**

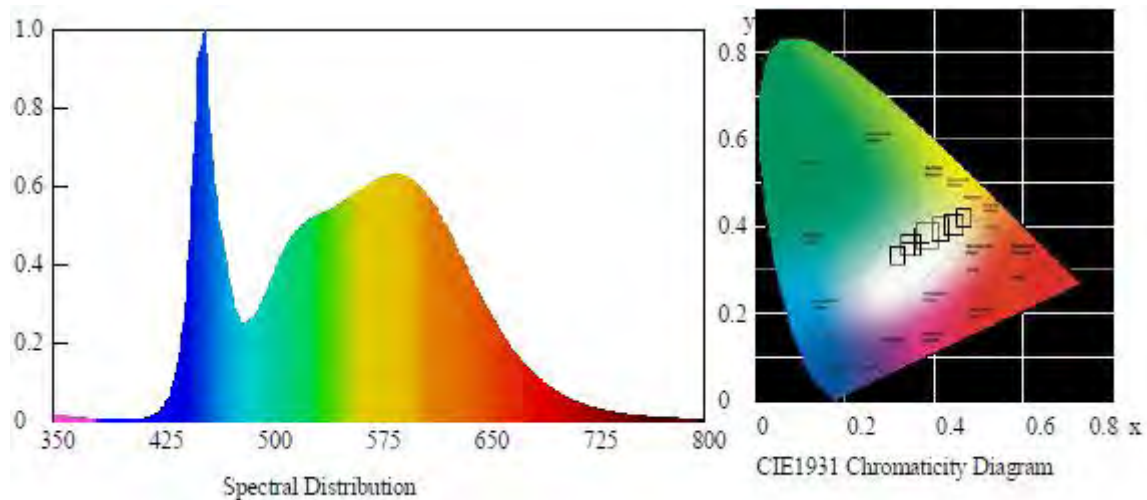
Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.09	60	0.080	9.51	0.994

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)	CRI	R9
1524.45	160.3	4766	82.7	5

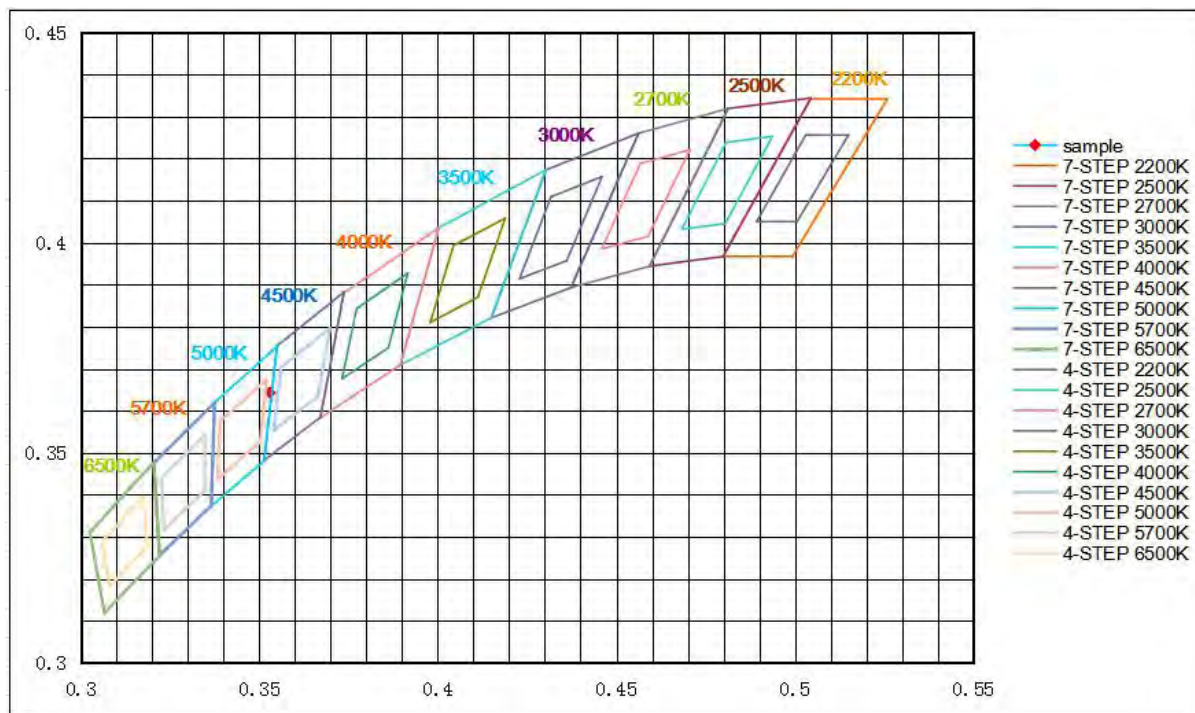
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00321	0.3530	0.3643	0.2118	0.4919

Spectral Distribution



7/4 Step Quadrangle



**3.1.7 Model Number: RP-LBE-G2-12W-2FT-1L-835-[OCN, Blank]-10V****Electrical data**

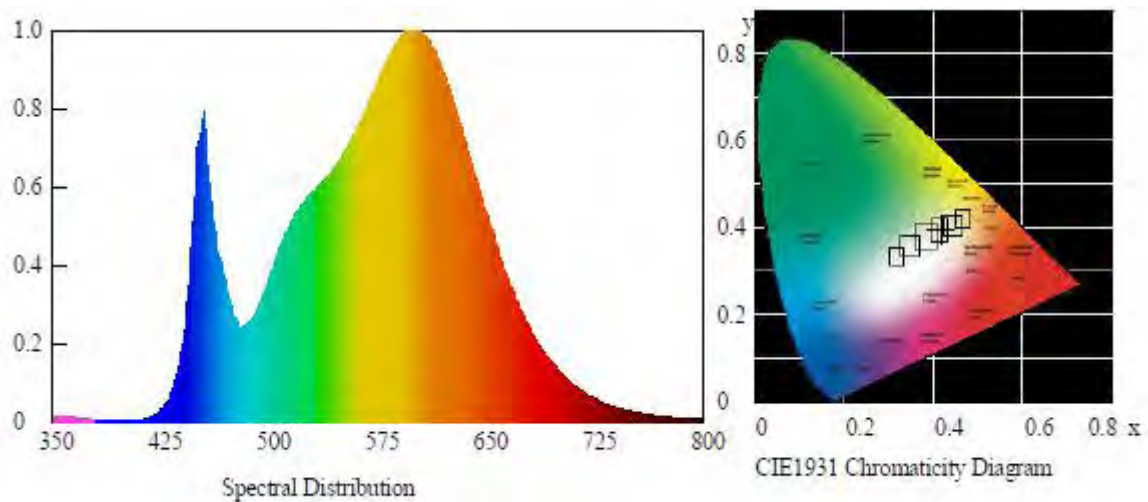
Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.12	60	0.096	11.53	0.995

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)	CRI	R9
1806.75	156.7	3366	82.7	6

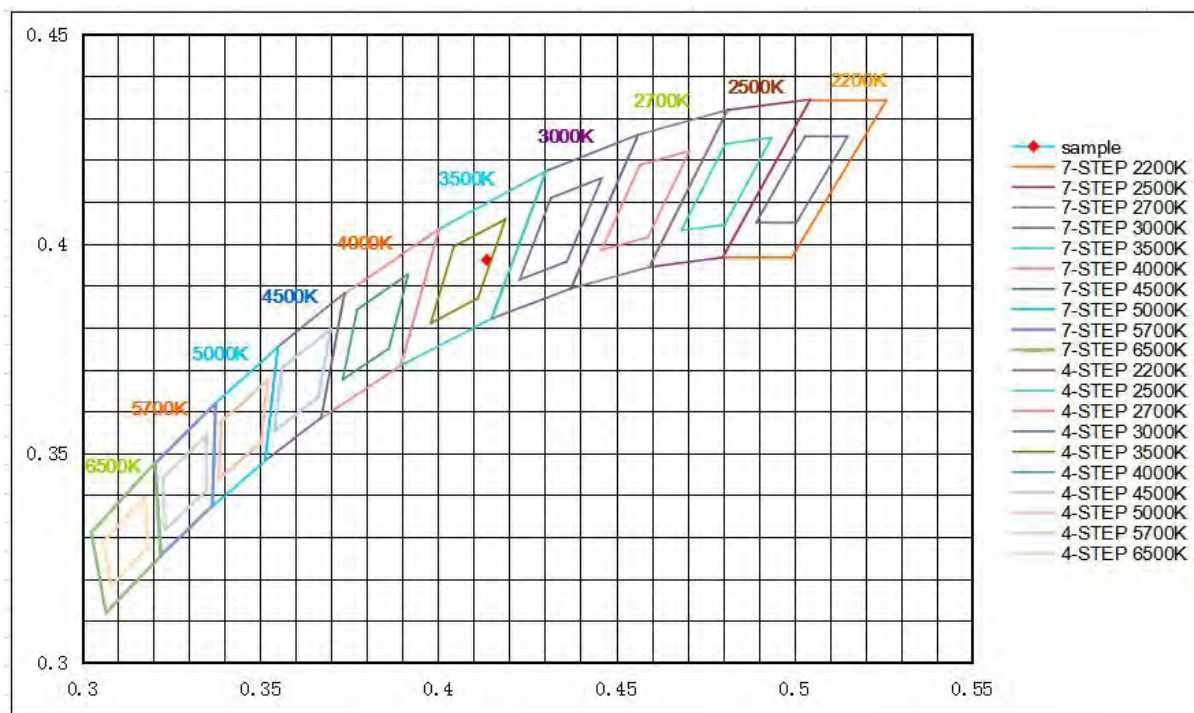
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00057	0.4137	0.3961	0.2389	0.5147

Spectral Distribution



7/4 Step Quadrangle



**3.1.8 Model Number: RP-LBE-G2-12W-2FT-1L-850-[OCN, Blank]-10V****Electrical data**

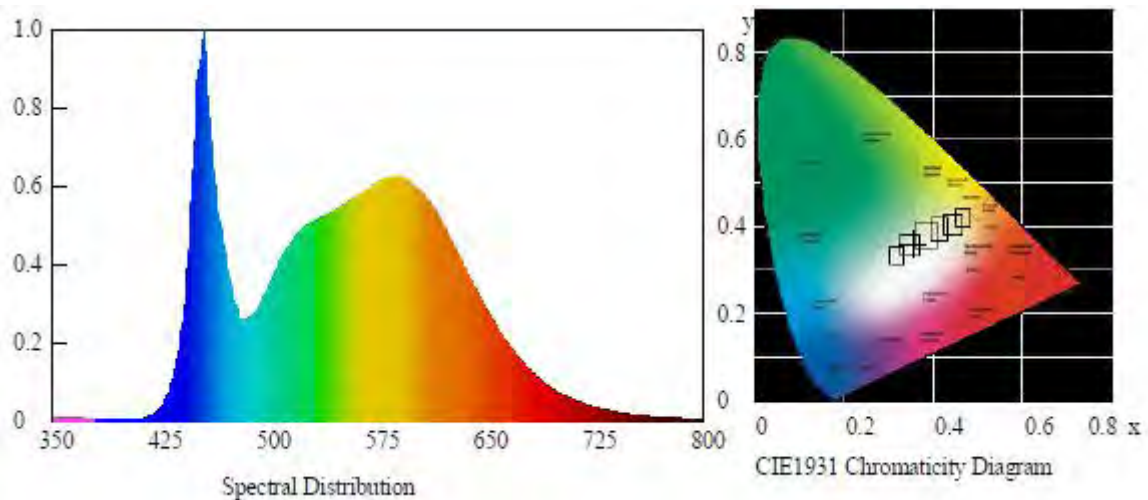
Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.04	60	0.096	11.48	0.995

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)	CRI	R9
1824.17	158.9	4784	83.3	9

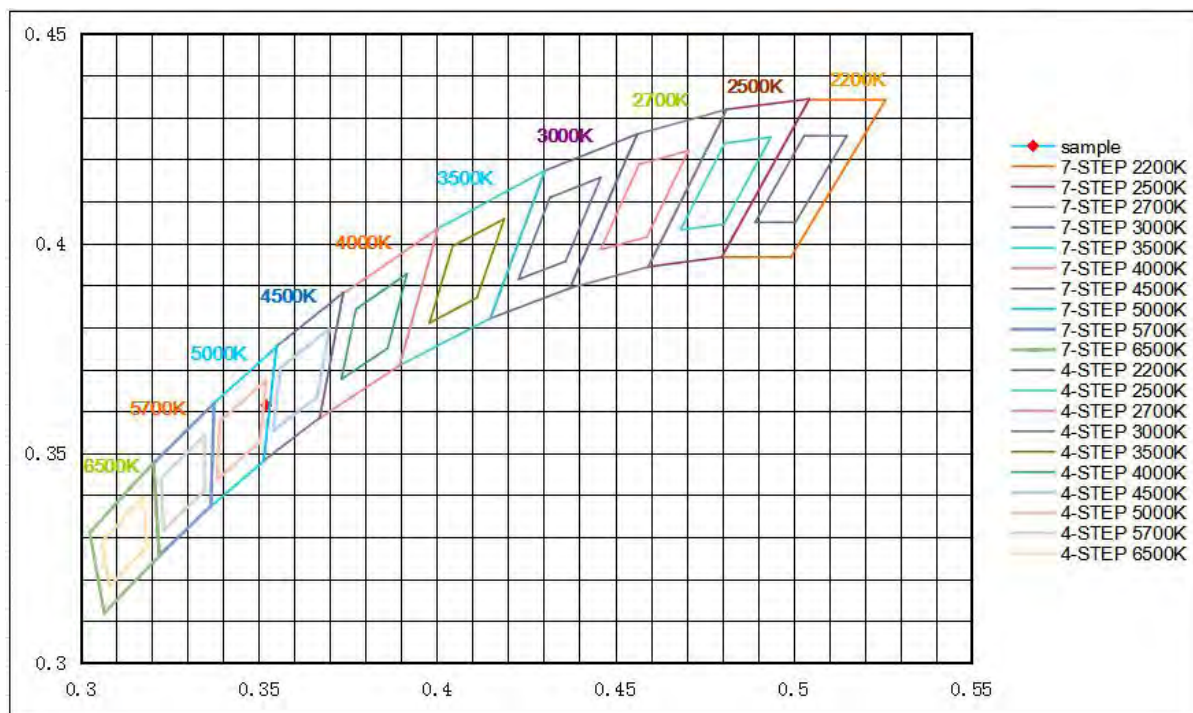
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00215	0.3521	0.3614	0.2123	0.4904

Spectral Distribution



7/4 Step Quadrangle





3.2 Goniophotometer System (Total operating time for luminous intensity distribution: 1.0 hour)

3.2.1 Model Number: RP-LBE-G2-12W-2FT-1L-835-[OCN, Blank]-10V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.08	60	0.096	11.49	0.9955

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)
1803.76	157.01	74.17

**Zonal Flux Diagram**

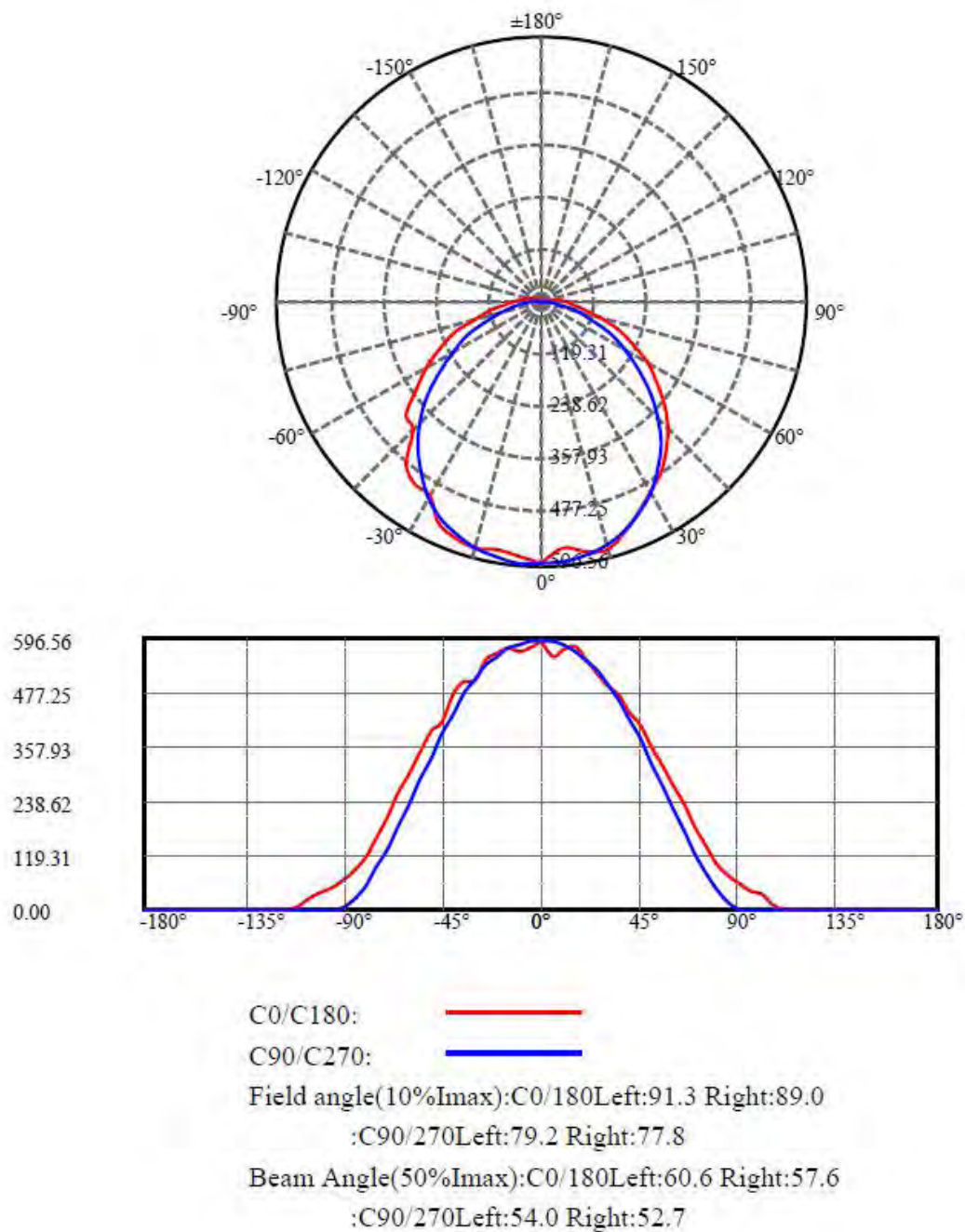
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	588.575	0.000	0	0.00%	0.00%
5.0	583.649	14.014	14.014	0.00%	0.78%
10.0	578.320	41.567	55.581	0.00%	3.08%
15.0	569.556	68.091	123.672	0.00%	6.86%
20.0	553.082	92.521	216.193	0.00%	11.99%
25.0	530.173	113.613	329.807	0.00%	18.28%
30.0	502.052	130.629	460.436	0.00%	25.53%
35.0	472.296	143.480	603.915	0.00%	33.48%
40.0	436.852	151.684	755.6	0.00%	41.89%
45.0	396.259	154.257	909.857	0.00%	50.44%
50.0	354.496	151.701	1061.558	0.00%	58.85%
55.0	308.922	144.249	1205.807	0.00%	66.85%
60.0	262.654	132.118	1337.926	0.00%	74.17%
65.0	216.553	116.496	1454.422	0.00%	80.63%
70.0	170.839	98.090	1552.512	0.00%	86.07%
75.0	128.496	78.241	1630.753	0.00%	90.41%
80.0	91.545	58.877	1689.63	0.00%	93.67%
85.0	62.639	41.896	1731.525	0.00%	96.00%
90.0	42.961	28.914	1760.439	0.00%	97.60%
95.0	30.284	20.055	1780.494	0.00%	98.71%
100.0	18.430	13.237	1793.731	0.00%	99.44%
105.0	6.615	6.701	1800.432	0.00%	99.82%
110.0	0.811	1.941	1802.373	0.00%	99.92%
115.0	0.142	0.241	1802.615	0.00%	99.94%
120.0	0.193	0.081	1802.696	0.00%	99.94%
125.0	0.219	0.095	1802.791	0.00%	99.95%
130.0	0.270	0.106	1802.898	0.00%	99.95%
135.0	0.245	0.104	1803.002	0.00%	99.96%
140.0	0.335	0.107	1803.109	0.00%	99.96%
145.0	0.399	0.122	1803.231	0.00%	99.97%
150.0	0.464	0.127	1803.358	0.00%	99.98%
155.0	0.451	0.116	1803.474	0.00%	99.98%
160.0	0.528	0.103	1803.577	0.00%	99.99%
165.0	0.464	0.082	1803.658	0.00%	99.99%
170.0	0.502	0.057	1803.716	0.00%	100.00%
175.0	0.451	0.034	1803.75	0.00%	100.00%
180.0	0.545	0.012	1803.762	0.00%	100.00%



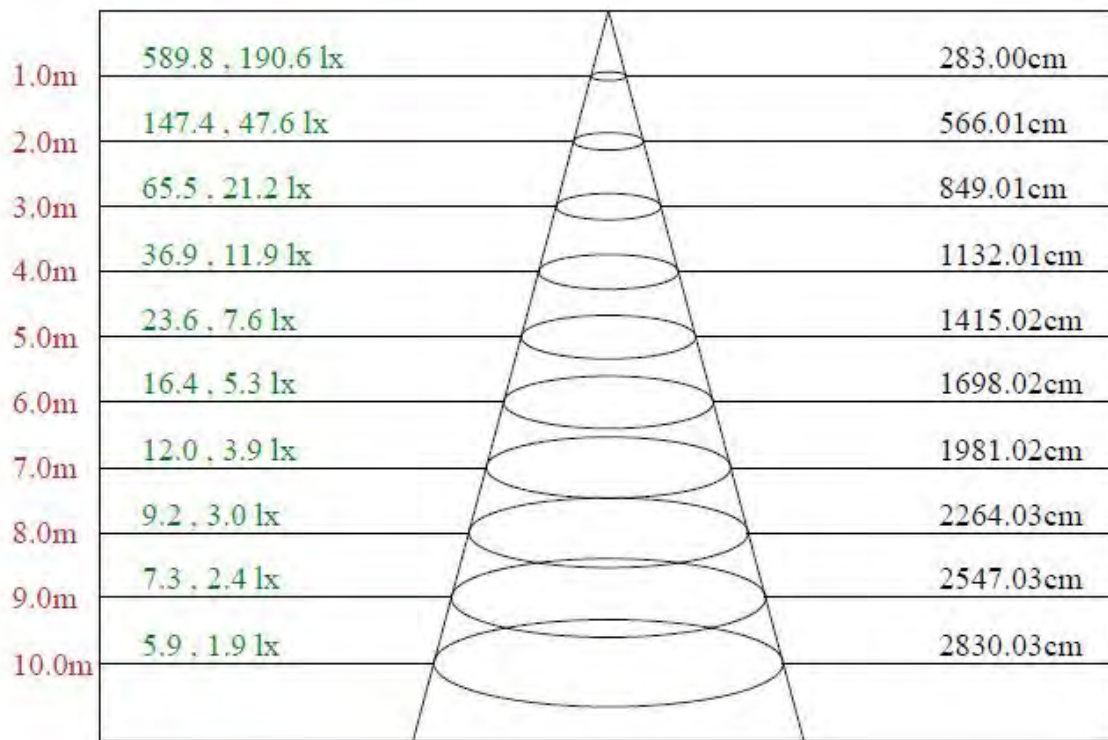
Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





Lux distance Curve



Max , Ave

Beam angle of C112.5 plane 109.50

**Luminous Intensity Distribution Data**

C/ $\gamma(^{\circ})$	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	588.58	556.20	570.82	577.00	551.46	520.16	493.39	470.33	434.70
22.5	588.58	574.52	562.17	548.37	530.87	509.25	486.60	460.86	428.32
45.0	588.58	573.70	567.11	554.76	535.19	511.92	484.54	451.59	415.14
67.5	588.58	582.35	572.67	558.46	538.69	512.54	481.04	445.00	404.02
90.0	588.58	587.50	580.08	567.52	549.81	525.93	496.27	460.03	418.02
112.5	588.58	596.56	588.94	574.11	554.34	531.28	502.45	468.89	430.79
135.0	588.58	593.47	585.64	574.52	557.84	536.84	508.42	473.62	435.94
157.5	588.58	590.17	583.79	574.32	558.67	532.72	509.66	483.09	451.59
180.0	588.58	576.17	566.08	573.91	565.05	547.14	503.07	499.16	474.86
202.5	588.58	587.91	586.67	579.05	563.82	540.96	513.78	483.30	453.44
225.0	588.58	577.61	572.47	564.43	554.55	538.69	515.42	485.98	450.35
247.5	588.58	592.44	590.79	580.29	561.55	538.28	510.89	479.80	445.00
270.0	588.58	589.35	583.58	572.88	557.43	535.60	507.60	472.59	430.38
292.5	588.58	591.82	584.82	573.70	560.73	537.25	508.63	475.27	439.03
315.0	588.58	582.97	575.97	569.79	556.40	534.37	507.60	474.45	438.00
337.5	588.58	585.64	581.53	569.79	552.90	529.84	503.48	472.80	440.06
360.0	588.58	556.20	570.82	577.00	551.46	520.16	493.39	470.33	434.70
C/ $\gamma(^{\circ})$	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	403.20	360.36	314.65	275.52	228.16	181.21	135.29	99.46	73.31
22.5	391.87	353.36	310.33	263.79	219.93	175.03	132.41	95.96	71.04
45.0	375.19	332.98	291.79	246.90	202.63	160.62	124.38	89.16	62.81
67.5	359.34	312.18	264.41	217.04	171.95	130.35	95.55	66.93	40.98
90.0	372.93	322.89	271.20	220.54	170.71	122.11	78.66	42.83	14.42
112.5	385.90	337.10	289.32	238.66	190.27	146.00	107.90	77.22	47.57
135.0	397.84	355.83	313.62	268.11	223.43	181.01	140.03	100.70	71.66
157.5	414.93	377.04	334.83	292.00	247.11	198.72	151.56	110.79	81.75
180.0	409.99	394.34	344.92	299.21	257.20	205.10	155.47	114.70	84.22
202.5	421.94	385.08	343.48	302.50	258.02	208.19	162.47	117.79	86.28
225.0	413.29	371.90	329.68	285.41	240.93	200.16	156.30	115.93	80.72
247.5	404.84	359.54	311.36	262.14	213.54	167.21	125.41	91.22	63.22
270.0	385.69	335.24	284.38	232.69	183.07	134.67	91.84	52.92	21.42
292.5	396.40	349.04	297.76	249.37	201.39	156.30	116.96	84.63	55.19
315.0	401.96	359.95	316.50	269.55	225.28	181.01	140.03	102.55	72.49
337.5	404.84	365.10	324.53	279.03	231.25	185.74	141.68	101.93	75.16
360.0	403.20	360.36	314.65	275.52	228.16	181.21	135.29	99.46	73.31
C/ $\gamma(^{\circ})$	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	55.39	42.42	32.33	11.33	0.41	0.21	0.21	0.41	0.41
22.5	53.33	40.77	28.62	5.35	0.21	0.21	0.41	0.62	0.62
45.0	46.13	33.77	12.77	0.21	0.00	0.41	0.41	0.41	0.41
67.5	24.30	8.03	0.62	0.21	0.21	0.41	0.62	0.41	0.41
90.0	0.00	0.82	0.62	0.00	0.00	0.00	0.00	0.00	0.00
112.5	28.62	15.65	0.21	0.00	0.00	0.00	0.00	0.00	0.00
135.0	51.28	37.89	24.09	2.06	0.00	0.00	0.00	0.00	0.21
157.5	59.72	45.30	34.39	18.74	1.85	0.00	0.00	0.00	0.00
180.0	63.01	46.74	35.42	24.30	5.77	0.00	0.00	0.00	0.21
202.5	64.04	47.57	36.45	23.68	3.91	0.00	0.00	0.00	0.21
225.0	58.89	42.63	31.09	10.50	0.00	0.00	0.00	0.21	0.21
247.5	37.48	22.24	5.35	0.00	0.00	0.00	0.00	0.00	0.00
270.0	3.30	0.21	0.00	0.21	0.41	0.41	0.41	0.41	0.62
292.5	33.15	18.74	0.21	0.00	0.00	0.21	0.21	0.41	0.41
315.0	52.30	38.30	20.39	0.62	0.00	0.21	0.41	0.41	0.21
337.5	56.42	43.45	32.33	8.65	0.21	0.21	0.41	0.21	0.41
360.0	55.39	42.42	32.33	11.33	0.41	0.21	0.21	0.41	0.41



C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.41	0.41	0.41	0.62	0.62	0.41	0.21	0.62	0.41
22.5	0.21	0.41	0.62	0.41	0.62	0.41	0.62	0.62	0.21
45.0	0.41	0.41	0.62	0.41	0.62	0.41	0.62	0.62	0.41
67.5	0.41	0.62	0.62	0.62	0.62	0.62	0.62	0.41	0.41
90.0	0.21	0.21	0.21	0.41	0.21	0.41	0.41	0.41	0.41
112.5	0.00	0.21	0.00	0.41	0.21	0.62	0.41	0.41	0.21
135.0	0.21	0.21	0.00	0.41	0.21	0.41	0.41	0.41	0.62
157.5	0.21	0.21	0.41	0.21	0.41	0.41	0.41	0.41	0.62
180.0	0.00	0.00	0.21	0.41	0.21	0.41	0.41	0.41	0.41
202.5	0.00	0.00	0.41	0.41	0.41	0.41	0.41	0.41	0.41
225.0	0.21	0.21	0.41	0.41	0.62	0.62	0.41	0.62	0.41
247.5	0.00	0.41	0.21	0.21	0.41	0.62	0.41	0.41	0.41
270.0	0.62	0.62	0.82	0.82	0.62	0.82	1.03	1.03	0.82
292.5	0.21	0.41	0.41	0.62	0.41	0.41	0.21	0.41	0.62
315.0	0.41	0.41	0.41	0.41	0.41	0.62	0.41	0.41	0.41
337.5	0.41	0.62	0.62	0.62	0.62	0.82	0.41	0.41	0.41
360.0	0.41	0.41	0.41	0.62	0.62	0.41	0.21	0.62	0.41
C/γ(°)	180.0								
0.0	0.55								
22.5	0.55								
45.0	0.55								
67.5	0.55								
90.0	0.55								
112.5	0.55								
135.0	0.55								
157.5	0.55								
180.0	0.55								
202.5	0.55								
225.0	0.55								
247.5	0.55								
270.0	0.55								
292.5	0.55								
315.0	0.55								
337.5	0.55								
360.0	0.55								



4 Additional Test

Electrical data at 277V

Model Number	Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
RP-LBE-G2-12W-2FT-1L-835-[OCN, Blank]-10V	Power Factor	277	60	0.941
	THD	277	60	11.8%

5 Performance Assessment

Model name	CCT(K)	Total Luminous(lm)	Power(W)	Luminous Efficacy(lm/W)
RP-LBE-G2-6W-2FT-1L-835-[OCN, Blank]-10V	3500	915.08	5.73	159.7
RP-LBE-G2-6W-2FT-1L-840-[OCN, Blank]-10V	4000	919.16 *1	5.72 *2	160.8 *3
RP-LBE-G2-6W-2FT-1L-850-[OCN, Blank]-10V	5000	927.33	5.70	162.7

*1: This value is calculated and the calculation formula is as below:

$$919.16 = (927.33 - 915.08) / 3 + 915.08$$

*2: This value is calculated and the calculation formula is as below:

$$5.72 = (5.73 + 5.70) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$160.8 = 919.16 / 5.72$$

Model name	CCT(K)	Total Luminous(lm)	Power(W)	Luminous Efficacy(lm/W)
RP-LBE-G2-8W-2FT-1L-835-[OCN, Blank]-10V	3500	1206.95	7.61	158.6
RP-LBE-G2-8W-2FT-1L-840-[OCN, Blank]-10V	4000	1213.57 *1	7.62 *2	159.4 *3
RP-LBE-G2-8W-2FT-1L-850-[OCN, Blank]-10V	5000	1226.82	7.62	161.0

*1: This value is calculated and the calculation formula is as below:

$$1213.57 = (1226.82 - 1206.95) / 3 + 1206.95$$

*2: This value is calculated and the calculation formula is as below:

$$7.62 = (7.61 + 7.62) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$159.4 = 1213.57 / 7.62$$



Model name	CCT(K)	Total Luminous(lm)	Power(W)	Luminous Efficacy(lm/W)
RP-LBE-G2-10W-2FT-1L-835-[OCN, Blank]-10V	3500	1492.47	9.47	157.6
RP-LBE-G2-10W-2FT-1L-840-[OCN, Blank]-10V	4000	1503.13 * ¹	9.49 * ²	158.4 * ³
RP-LBE-G2-10W-2FT-1L-850-[OCN, Blank]-10V	5000	1524.45	9.51	160.3

*1: This value is calculated and the calculation formula is as below:

$$1503.13 = (1524.45 - 1492.47) / 3 + 1492.47$$

*2: This value is calculated and the calculation formula is as below:

$$9.49 = (9.47 + 9.51) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$158.4 = 1503.13 / 9.49$$

Model name	CCT(K)	Total Luminous(lm)	Power(W)	Luminous Efficacy(lm/W)
RP-LBE-G2-12W-2FT-1L-835-[OCN, Blank]-10V	3500	1806.75	11.53	156.7
RP-LBE-G2-12W-2FT-1L-840-[OCN, Blank]-10V	4000	1812.56 * ¹	11.51 * ²	157.5 * ³
RP-LBE-G2-12W-2FT-1L-850-[OCN, Blank]-10V	5000	1824.17	11.48	158.9

*1: This value is calculated and the calculation formula is as below:

$$1812.56 = (1824.17 - 1806.75) / 3 + 1806.75$$

*2: This value is calculated and the calculation formula is as below:

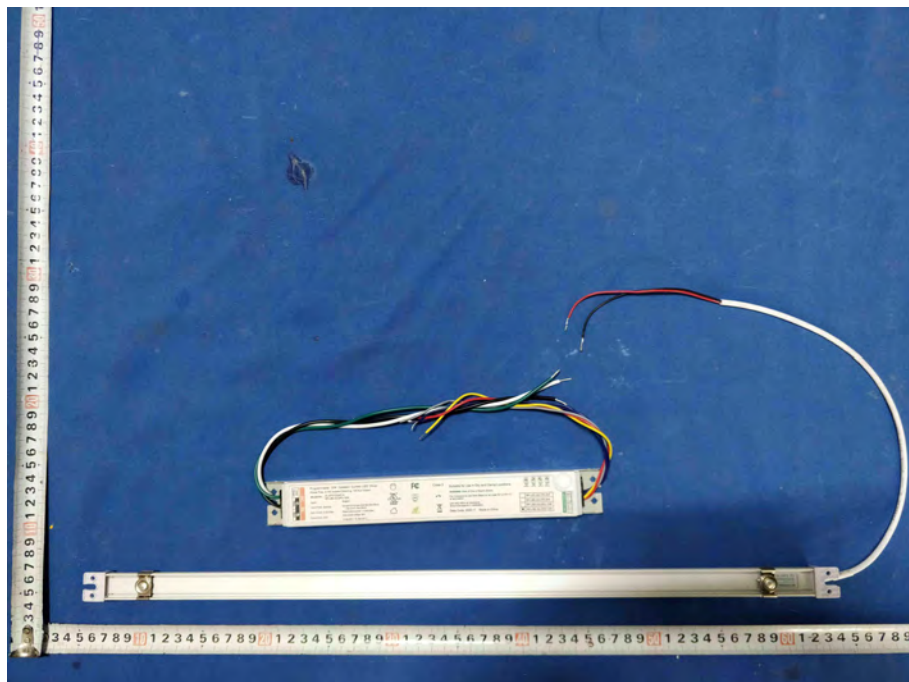
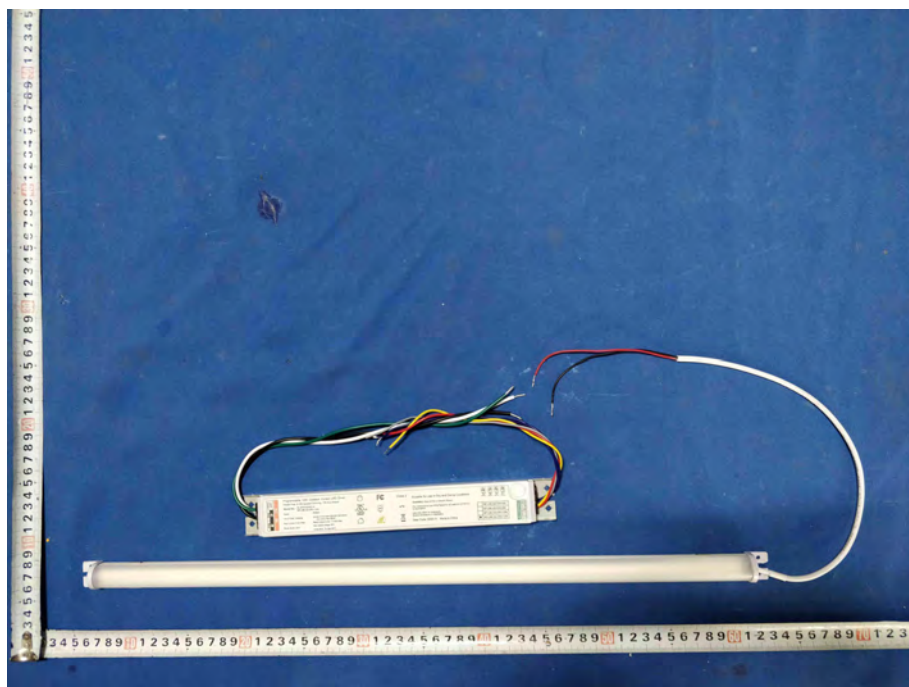
$$11.51 = (11.53 + 11.48) / 2$$

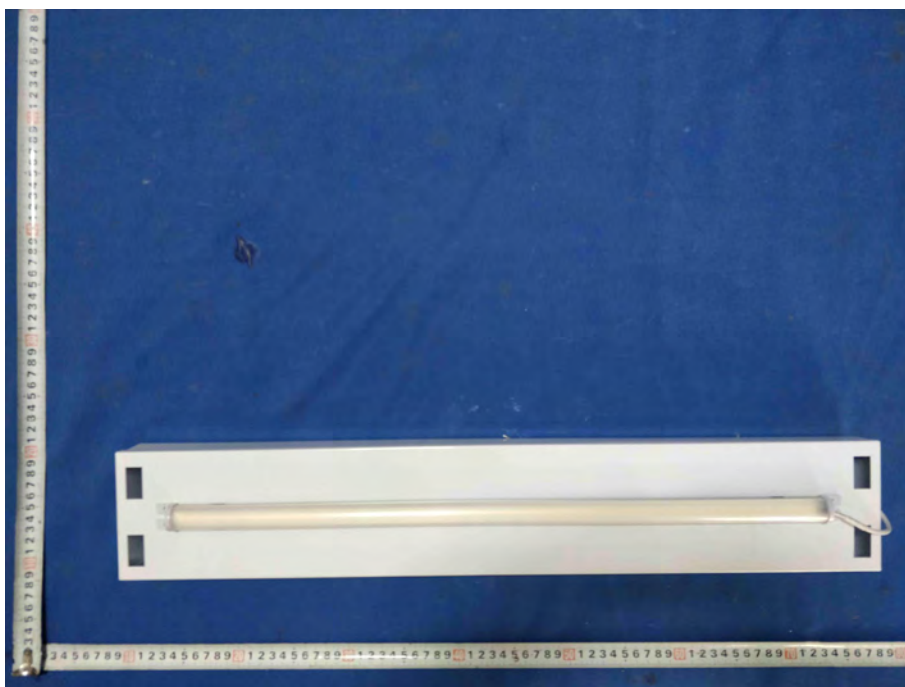
*3: This value is calculated and the calculation formula is as below:

$$157.5 = 1812.56 / 11.51$$



Photo Document





End of test report