

Energy Star Test Report

For

Best Lighting Products, Inc.

(Brand Name: Best Lighting Products, Inc.)

1213, Etna Pkwy PATASKALA, Ohio, U.S.A.

Model name(s):ULD7-XX

Report Type:	Testing and Report According to ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.1
Type of Luminaire:	Cove or Under Cabinet Mount
Report Date:	2018-07-17

Test & Report By:

Garman Mo

Engineer: Garman Mo

Review By:

John Li

Manager: John Li

Note: 1. The results contained in this report pertain only to the rested samples.

2. This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0


Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road,Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

Fax: 8620-32290422

<http://www.standard-tech.com>

1.1 Product Information:		
Model Number	ULD7-XX	
Remark	“XX” could be 27/30/35/40/50 refers to CCT.	
Representative (Tested) Model	ULD7-27	
Model Difference	N/A	
Type of Luminaire	Cove or Under Cabinet Mount	
LED Manufacturer	EVERLIGHT ELECTRONICS CO., LTD	
LED Model	67-21S Series (3000K)	
Dimming	Dimmable	
Sample Number	JCE180610-D1	
Date of Receipt	Jun.30,2018	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
1.2 Rated Values:		
Rated Voltage / Frequency	120Vac, 60 Hz	
Nominal Power	10.5W	
Rated Initial Lamp Lumen	--	
Declared CC	2700K, 3000K, 3500K, 4000K, 5000K	
Sample Number	JCE180610-D1	
Photo		
		

Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

1.3 Test Specifications:	
Date of Receipt	Jun.30,2018
Date of Test	Jul.01,2018
Test item	<ol style="list-style-type: none"> 1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none"> 1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products 3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 4. CIE 15-2004 Technical Report Colorimetry 5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source 6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems 7. UL1993 4th Edition, Self-Ballasted Lamps and Lamp Adapters 8. ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) – Version 2.1
Reference Work Instruction	QD25
Remark	Below test and data are not covered by NVLAP accreditation: - Operating Frequency

1.4 Test Methods**1) Photometric and Light Distribution Measurement – Goniophotometer Method:**

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals.

2) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

2.1 Electrical, Photometric and Chromaticity Measurements
(Refer to Work Instruction QD25)

IES LM-79 2008

Test date	2018-07-01	Test Ambient:	25.0 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	ULD7-27		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
JCE180610-D1	120.0	60	0.0878	10.44	0.9905

Sphere-Spectroradiometer Method:

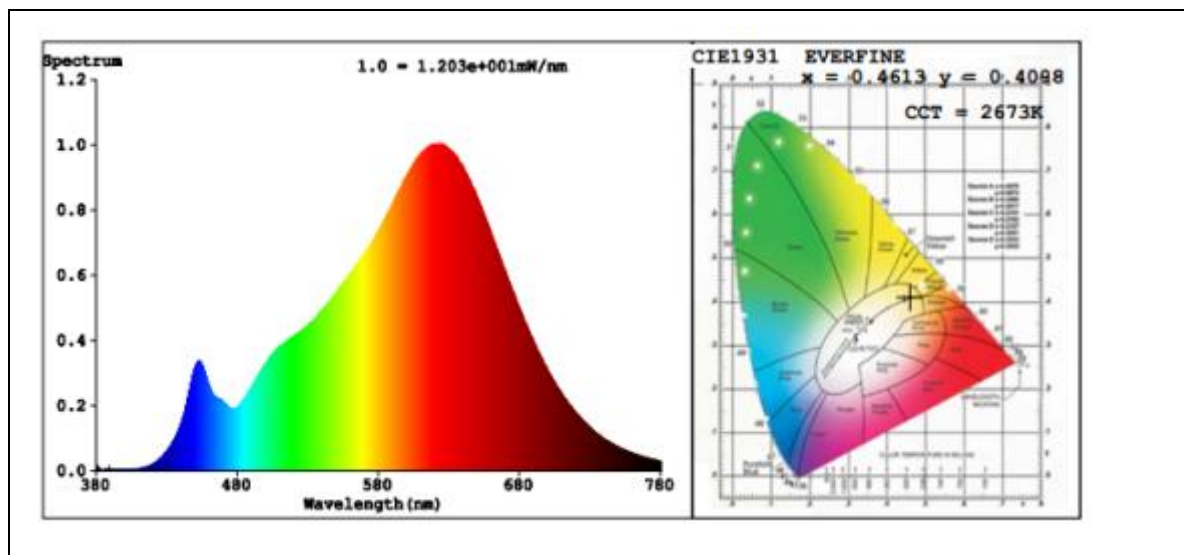
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	92.6
R9	56
CCT (K)	2673
Chromaticity (x, y)	x=0.4613 y=0.4098
Chromaticity (u', v')	u'=0.2638 v'=0.5273
Duv	-0.0004

Special Color Rendering Indices			
R1	93	R9	56
R2	98	R10	95
R3	98	R11	95
R4	93	R12	89
R5	93	R13	94
R6	97	R14	100
R7	90	R15	88
R8	79	--	--

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	628.49
Luminous Efficacy (lm/W)	60.20
Beam Angle °	107.6
Zonal Lumen Density(0-60 °)	80
Center Beam Candle Power (cd)	228

Spectral Power Distribution and Chromaticity Diagram



Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

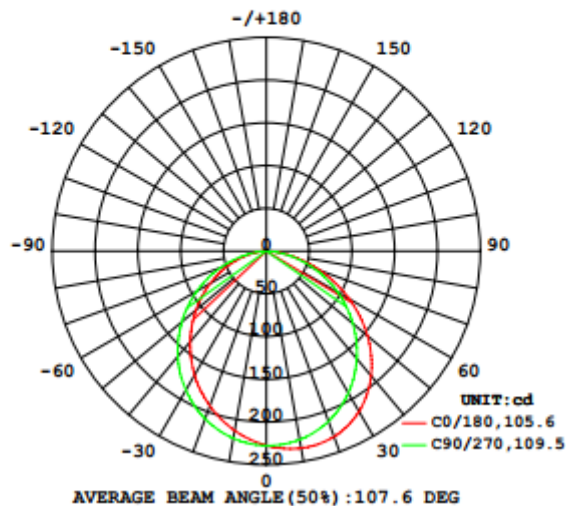
Tel: 8620-3229 0320

Fax: 8620-32290422

<http://www.standard-tech.com>

Zonal Lumen Tabulation

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	176.2	28%
0-40	287.6	45.8%
0-60	502.5	80%
60-90	125.9	20%
70-100	50.8	8.1%
90-120	0.0	0%
0-90	628.4	100%
90-180	0.0	0%
0-180	628.4	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	%Total
0-10	21.5	3.4%	90-100	0.0	0%
10-20	61.6	9.8%	100-110	0	0%
20-30	93.1	14.8%	110-120	0.0	0%
30-40	111.4	17.7%	120-130	0.0	0%
40-50	113.9	18.1%	130-140	0.0	0%
50-60	100.9	16.1%	140-150	0.0	0%
60-70	75.1	12.0%	150-160	0.0	0%
70-80	41.0	6.5%	160-170	0.0	0%
80-90	9.8	1.6%	170-180	0.0	0%

Laboratory: Standard-Tech Co., Ltd Testing Center
 NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

Table--1 UNIT: cd

C (DEG) \ γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5		
0	228	228	228	228	228	228	228	228	228	228	228	228	228	228	228	228		
5	232	232	231	229	227	225	223	222	221	222	222	224	226	228	230	231		
10	234	234	231	228	224	220	216	214	213	214	216	219	222	227	230	233		
15	234	233	230	225	219	213	208	205	204	204	207	211	217	223	228	233		
20	231	230	226	220	212	204	198	194	193	194	197	202	209	217	224	229		
25	225	224	219	212	203	194	187	182	181	182	185	191	199	209	217	223		
30	217	216	210	202	192	182	174	169	168	169	172	179	188	198	208	215		
35	205	204	198	190	179	168	160	154	153	154	159	166	175	186	196	203		
40	190	189	184	175	164	154	145	139	138	139	144	151	161	172	182	189		
45	173	173	168	159	149	138	130	124	123	124	128	136	145	156	166	173		
50	154	154	149	142	132	122	114	108	107	108	113	119	129	139	148	154		
55	134	133	130	123	114	105	97.8	92.6	91.7	92.6	96.5	103	112	121	129	134		
60	112	112	109	104	96.3	88.2	81.1	77.0	75.9	76.8	80.2	86.1	93.7	102	108	112		
65	89.5	89.5	87.7	83.8	77.7	71.3	65.3	61.3	60.2	60.9	63.9	69.0	75.5	81.9	87.0	90.1		
70	67.4	67.7	66.6	63.9	59.3	53.7	48.9	45.6	44.7	45.3	47.7	51.7	56.9	61.8	65.5	67.7		
75	45.5	45.8	45.3	43.7	40.5	36.5	32.9	30.4	29.9	30.3	32.0	34.9	38.6	42.0	44.4	45.9		
80	25.5	25.7	25.6	24.7	22.8	20.4	18.3	16.8	16.7	16.9	17.7	19.3	21.3	23.4	24.9	25.8		
85	9.75	9.99	9.93	9.35	8.17	7.74	7.02	6.59	6.62	6.58	6.71	6.92	7.28	8.56	9.51	10.0		
90	0.06	0.09	0.14	0.18	0.12	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.03	0.05	0.09		
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00		
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00		
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00		
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00		
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00		
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00		
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00		
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00		
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.00		
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00		
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

2.2 Color Spatial Uniformity
IES LM-79 2008
ENERGY STAR® Program Requirements
Product Specification for Luminaires (Light
Fixtures) - Version 2.1
Test Data :

Test date	2018-07-01	Test Ambient	25.1°C
Sample No.		Maximum $\Delta u'v'$	
JCE180610-D1		0.0012	

Gamma\C	CIE u'	CIE v'	$du'v'$	CIE u'	CIE v'	$du'v'$
-80	0.2641	0.5261	0.001	0.2631	0.5255	0.0001
-79	0.2641	0.5261	0.001	0.263	0.5255	0.0002
-78	0.2641	0.5261	0.001	0.263	0.5255	0.0002
-77	0.264	0.5261	0.001	0.263	0.5255	0.0003
-76	0.264	0.5261	0.0009	0.2629	0.5255	0.0003
-75	0.2639	0.526	0.0008	0.2628	0.5254	0.0004
-74	0.2641	0.526	0.001	0.2627	0.5254	0.0005
-73	0.264	0.526	0.0009	0.2627	0.5254	0.0005
-72	0.2639	0.526	0.0009	0.2627	0.5254	0.0006
-71	0.264	0.526	0.0009	0.2628	0.5254	0.0004
-70	0.2639	0.526	0.0008	0.2628	0.5255	0.0004
-69	0.2642	0.526	0.0011	0.2627	0.5254	0.0005
-68	0.2642	0.526	0.0011	0.2628	0.5254	0.0004
-67	0.2641	0.526	0.001	0.2628	0.5254	0.0004
-66	0.264	0.526	0.001	0.2627	0.5254	0.0005
-65	0.264	0.526	0.0009	0.2626	0.5254	0.0006
-64	0.2643	0.526	0.0012	0.2628	0.5254	0.0004
-63	0.2642	0.526	0.0011	0.2628	0.5254	0.0004
-62	0.2642	0.526	0.0011	0.2627	0.5254	0.0005
-61	0.2642	0.526	0.0011	0.2627	0.5254	0.0005
-60	0.2641	0.526	0.001	0.2629	0.5255	0.0004
-59	0.2641	0.526	0.001	0.2628	0.5254	0.0004
-58	0.264	0.5259	0.0009	0.2628	0.5254	0.0004
-57	0.2641	0.526	0.001	0.2628	0.5254	0.0005
-56	0.2641	0.526	0.001	0.2627	0.5254	0.0005
-55	0.264	0.5259	0.0009	0.2629	0.5255	0.0003
-54	0.2642	0.5259	0.001	0.2629	0.5254	0.0003
-53	0.2641	0.5259	0.001	0.2629	0.5254	0.0004
-52	0.264	0.5259	0.0009	0.2628	0.5255	0.0004
-51	0.264	0.5259	0.0009	0.2628	0.5254	0.0004

Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

-50	0.2641	0.5259	0.001	0.2628	0.5254	0.0005
-49	0.2641	0.5259	0.0009	0.2629	0.5255	0.0003
-48	0.264	0.5259	0.0009	0.2629	0.5254	0.0003
-47	0.264	0.5259	0.0009	0.2629	0.5254	0.0003
-46	0.2641	0.5259	0.0009	0.2629	0.5255	0.0003
-45	0.264	0.5259	0.0009	0.2629	0.5254	0.0003
-44	0.264	0.5259	0.0008	0.2629	0.5254	0.0004
-43	0.2639	0.5259	0.0008	0.2628	0.5254	0.0004
-42	0.2639	0.5258	0.0007	0.2628	0.5254	0.0004
-41	0.264	0.5258	0.0009	0.263	0.5254	0.0002
-40	0.264	0.5258	0.0008	0.263	0.5254	0.0003
-39	0.2639	0.5258	0.0007	0.263	0.5254	0.0003
-38	0.2638	0.5258	0.0007	0.263	0.5254	0.0003
-37	0.2638	0.5258	0.0006	0.2629	0.5254	0.0003
-36	0.2637	0.5258	0.0006	0.2629	0.5254	0.0003
-35	0.2637	0.5258	0.0005	0.2629	0.5254	0.0003
-34	0.2637	0.5257	0.0005	0.2629	0.5254	0.0003
-33	0.2638	0.5258	0.0006	0.2629	0.5254	0.0004
-32	0.2637	0.5258	0.0005	0.2628	0.5254	0.0004
-31	0.2637	0.5258	0.0005	0.2628	0.5254	0.0004
-30	0.2636	0.5257	0.0005	0.263	0.5254	0.0003
-29	0.2636	0.5257	0.0004	0.263	0.5254	0.0003
-28	0.2635	0.5257	0.0004	0.263	0.5254	0.0003
-27	0.2635	0.5257	0.0003	0.263	0.5254	0.0003
-26	0.2635	0.5257	0.0003	0.263	0.5254	0.0003
-25	0.2634	0.5257	0.0002	0.2629	0.5254	0.0003
-24	0.2634	0.5257	0.0002	0.2629	0.5254	0.0003
-23	0.2633	0.5256	0.0002	0.2629	0.5254	0.0003
-22	0.2633	0.5256	0.0001	0.2629	0.5254	0.0004
-21	0.2632	0.5256	0.0001	0.2629	0.5254	0.0004
-20	0.2632	0.5256	0	0.2629	0.5254	0.0004
-19	0.2632	0.5256	0	0.2628	0.5254	0.0004
-18	0.2631	0.5256	0.0001	0.2629	0.5254	0.0004
-17	0.2633	0.5256	0.0001	0.2628	0.5254	0.0004
-16	0.2632	0.5256	0.0001	0.2628	0.5254	0.0004
-15	0.2632	0.5256	0	0.2628	0.5254	0.0004
-14	0.2632	0.5256	0	0.2628	0.5254	0.0004
-13	0.2631	0.5255	0.0001	0.2628	0.5254	0.0005
-12	0.2631	0.5256	0.0001	0.2628	0.5254	0.0005
-11	0.2631	0.5256	0.0001	0.2628	0.5254	0.0005

Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

-10	0.2631	0.5255	0.0001	0.2628	0.5253	0.0005
-9	0.2631	0.5255	0.0001	0.2627	0.5253	0.0005
-8	0.263	0.5255	0.0002	0.2627	0.5254	0.0005
-7	0.263	0.5255	0.0002	0.2628	0.5253	0.0005
-6	0.263	0.5255	0.0002	0.2627	0.5253	0.0005
-5	0.263	0.5255	0.0002	0.2628	0.5253	0.0005
-4	0.263	0.5255	0.0002	0.2628	0.5253	0.0005
-3	0.263	0.5255	0.0002	0.2627	0.5253	0.0005
-2	0.2629	0.5255	0.0003	0.2628	0.5253	0.0005
-1	0.2629	0.5255	0.0003	0.2627	0.5254	0.0005
0	0.2631	0.5258	0.0002	0.2631	0.5258	0.0002
1	0.2629	0.5255	0.0003	0.2627	0.5253	0.0005
2	0.2629	0.5255	0.0003	0.2627	0.5253	0.0005
3	0.2629	0.5255	0.0003	0.2627	0.5253	0.0005
4	0.2629	0.5255	0.0003	0.2628	0.5253	0.0005
5	0.2629	0.5255	0.0003	0.2628	0.5253	0.0005
6	0.2629	0.5255	0.0003	0.2628	0.5254	0.0005
7	0.2629	0.5255	0.0003	0.2627	0.5254	0.0005
8	0.2629	0.5255	0.0003	0.2628	0.5253	0.0005
9	0.2629	0.5255	0.0003	0.2628	0.5254	0.0005
10	0.2629	0.5255	0.0003	0.2628	0.5254	0.0005
11	0.2629	0.5255	0.0003	0.2628	0.5254	0.0005
12	0.2629	0.5255	0.0003	0.2628	0.5254	0.0004
13	0.2629	0.5255	0.0003	0.2628	0.5254	0.0004
14	0.2629	0.5255	0.0003	0.2628	0.5254	0.0004
15	0.2629	0.5255	0.0003	0.2627	0.5254	0.0005
16	0.2629	0.5255	0.0003	0.2627	0.5254	0.0005
17	0.2627	0.5255	0.0005	0.2627	0.5253	0.0005
18	0.2627	0.5255	0.0005	0.2627	0.5254	0.0005
19	0.2628	0.5255	0.0004	0.2628	0.5254	0.0005
20	0.2628	0.5255	0.0004	0.2628	0.5254	0.0005
21	0.2628	0.5255	0.0004	0.2628	0.5254	0.0004
22	0.2628	0.5255	0.0004	0.2628	0.5254	0.0004
23	0.2628	0.5255	0.0004	0.2628	0.5254	0.0004
24	0.2628	0.5255	0.0004	0.2629	0.5254	0.0004
25	0.2628	0.5255	0.0004	0.2629	0.5254	0.0004
26	0.2628	0.5255	0.0004	0.2629	0.5254	0.0004
27	0.2628	0.5255	0.0003	0.2629	0.5254	0.0003
28	0.2628	0.5255	0.0004	0.2628	0.5254	0.0004
29	0.2628	0.5255	0.0004	0.2628	0.5254	0.0004

Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

30	0.2627	0.5255	0.0005	0.2628	0.5254	0.0004
31	0.2627	0.5255	0.0005	0.2629	0.5254	0.0004
32	0.2627	0.5255	0.0005	0.2629	0.5254	0.0003
33	0.2627	0.5255	0.0005	0.2629	0.5254	0.0003
34	0.2628	0.5255	0.0004	0.2629	0.5254	0.0003
35	0.2627	0.5255	0.0005	0.2629	0.5254	0.0003
36	0.2628	0.5255	0.0004	0.2628	0.5254	0.0004
37	0.2627	0.5255	0.0005	0.2629	0.5254	0.0004
38	0.2627	0.5255	0.0005	0.2629	0.5254	0.0004
39	0.2628	0.5255	0.0004	0.2629	0.5254	0.0003
40	0.2626	0.5255	0.0006	0.2629	0.5254	0.0003
41	0.2626	0.5255	0.0006	0.2629	0.5254	0.0003
42	0.2626	0.5255	0.0006	0.2628	0.5254	0.0004
43	0.2626	0.5255	0.0006	0.2628	0.5254	0.0004
44	0.2626	0.5255	0.0006	0.2629	0.5254	0.0003
45	0.2626	0.5255	0.0006	0.2629	0.5254	0.0003
46	0.2626	0.5255	0.0006	0.2629	0.5255	0.0003
47	0.2624	0.5255	0.0008	0.2628	0.5254	0.0004
48	0.2625	0.5255	0.0007	0.2628	0.5254	0.0004
49	0.2625	0.5255	0.0007	0.2629	0.5254	0.0004
50	0.2625	0.5255	0.0007	0.2629	0.5254	0.0003
51	0.2625	0.5255	0.0007	0.2628	0.5254	0.0005
52	0.2625	0.5255	0.0007	0.2628	0.5254	0.0004
53	0.2625	0.5255	0.0007	0.2628	0.5254	0.0004
54	0.2624	0.5255	0.0008	0.2628	0.5254	0.0004
55	0.2624	0.5255	0.0008	0.2628	0.5254	0.0004
56	0.2624	0.5255	0.0008	0.2628	0.5254	0.0004
57	0.2624	0.5255	0.0007	0.2628	0.5254	0.0004
58	0.2625	0.5255	0.0007	0.2627	0.5254	0.0005
59	0.2623	0.5255	0.0009	0.2628	0.5254	0.0005
60	0.2623	0.5255	0.0009	0.2628	0.5254	0.0004
61	0.2624	0.5255	0.0008	0.2627	0.5254	0.0005
62	0.2624	0.5255	0.0008	0.2628	0.5255	0.0004
63	0.2622	0.5254	0.001	0.2628	0.5254	0.0004
64	0.2622	0.5255	0.0009	0.2627	0.5254	0.0005
65	0.2623	0.5255	0.0009	0.2628	0.5254	0.0005
66	0.2623	0.5255	0.0009	0.2628	0.5254	0.0004
67	0.2622	0.5255	0.001	0.2628	0.5254	0.0004
68	0.2623	0.5255	0.0009	0.2629	0.5254	0.0003
69	0.2623	0.5255	0.0009	0.2626	0.5254	0.0006

Laboratory: Standard-Tech Co., Ltd Testing Center
 NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

70	0.2622	0.5255	0.001	0.2627	0.5254	0.0005
71	0.2622	0.5255	0.0009	0.2628	0.5254	0.0004
72	0.2623	0.5255	0.0009	0.2628	0.5255	0.0004
73	0.2623	0.5255	0.0008	0.2626	0.5254	0.0006
74	0.2624	0.5255	0.0008	0.2627	0.5254	0.0005
75	0.2624	0.5256	0.0007	0.2628	0.5254	0.0004
76	0.2625	0.5255	0.0007	0.2629	0.5255	0.0003
77	0.2625	0.5256	0.0007	0.2629	0.5255	0.0003
78	0.2625	0.5256	0.0006	0.263	0.5255	0.0002
79	0.2625	0.5256	0.0006	0.2631	0.5255	0.0002
80	0.2626	0.5257	0.0006	0.2631	0.5255	0.0001

Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0

Report Format Number STD/QR4910-A/1

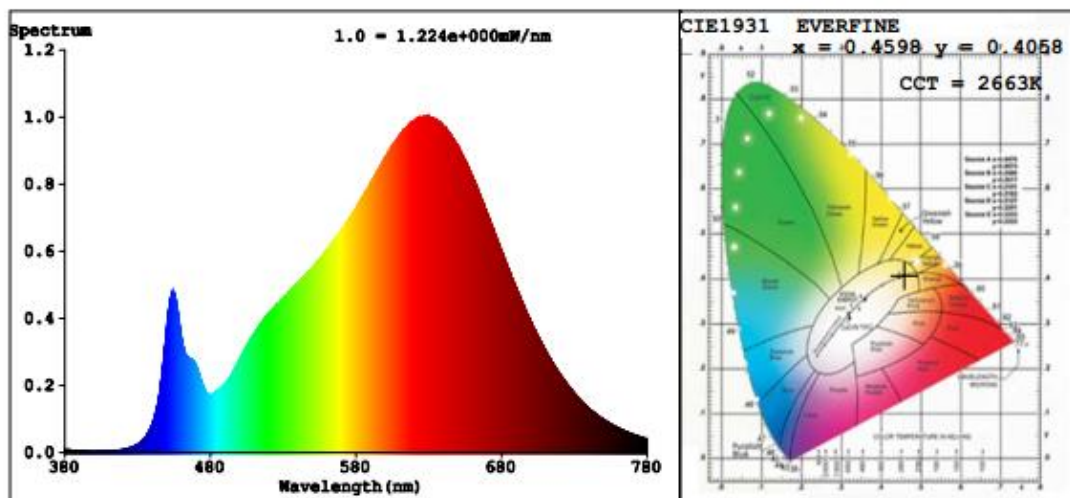
Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

3. Electrical and Photometric Measurements, with dimming

**IES LM-79 2008
ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.1**

Test date	2018-07-01	Test Ambient:	25.1°C
Dimmer Model	LEVITON MFG CO INC (E31373), Cat. No. 6681		
Sample No.		Maximum Level	Minimum Level
JCE180610-D1	Input: 120.0 V / 60 Hz	Light output (Lumen)	579.3
		Percentage(%)	92.2
			53.1
			8.4



Colorimetric Parameters

Chromaticity Coordinate: x=0.4598 y=0.4058 u'=0.2646 v'=0.5255

CCT=2663K (Duv=-0.0018) Dominant WL: λ_d = 585.0nm Purity=59.8%

Peak WL: λ_p = 629.2nm FWHM=149.2nm

Render Index: Ra=93.7 CRI=91.3

R1 =94 R2 =98 R3 =98 R4 =93 R5 =94 R6 =96 R7 =92

R8 =84 R9 =66 R10=94 R11=94 R12=82 R13=95 R14=99 R15=91

The luminaires [can] ~~lean not~~ provide less than 20% of total light output with continuous dimmer.

Dimmer	Peak Noise Reading (dBA)	Test Condition	Distance between the microphone and the UUT
LEVITON MFG CO INC (E31373), Cat. No. 6681	22.5	Dimmer adjusted to lowest light output	< 1 m

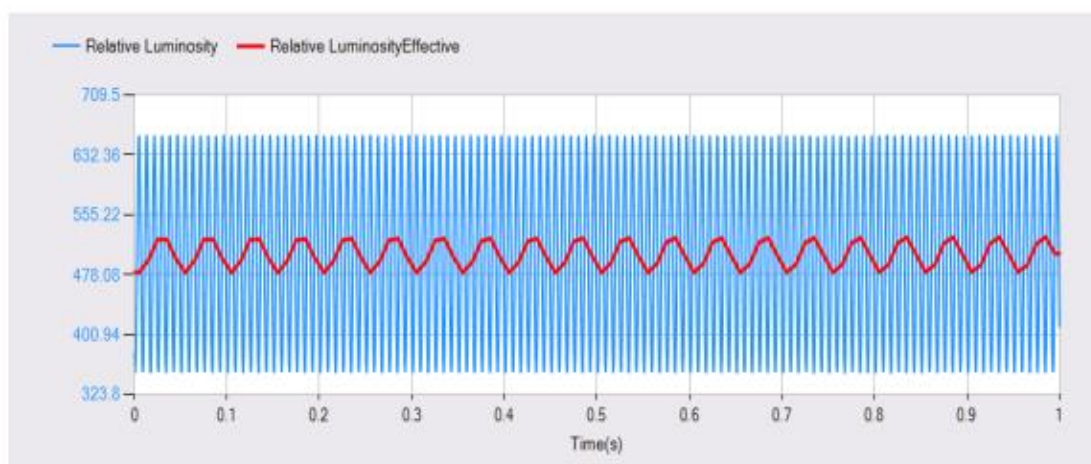
4. Flicker	NEMA 77-2017 ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.1
-------------------	---

Dimming Technology	phase-cut
Dimmer	LEVITON MFG CO INC (E31373), Cat. No. 6681

Item	Short Term Flicker Indicator (Pst)	Stroboscopic Visibility Measure (SVM)
Full light output	0.090	1.123
Maximum Level (100%)	0.104	1.186
Minimum Level (20%)	0.215	1.141

5. Operating Frequency**ENERGY STAR[®] Program Requirements
Product Specification for Luminaires
(Light Fixtures) - Version 2.1****Noted: This test and data are not covered by NVLAP accreditation**

Test date	2018-07-01	Test Ambient:	25.1°C
Sample No.	Operating Frequency (Hz)		
JCE180610-D1	120.02		

**Laboratory: Standard-Tech Co., Ltd Testing Center
NVLAP CODE: 201011-0**

Report Format Number STD/QR4910-A/1

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

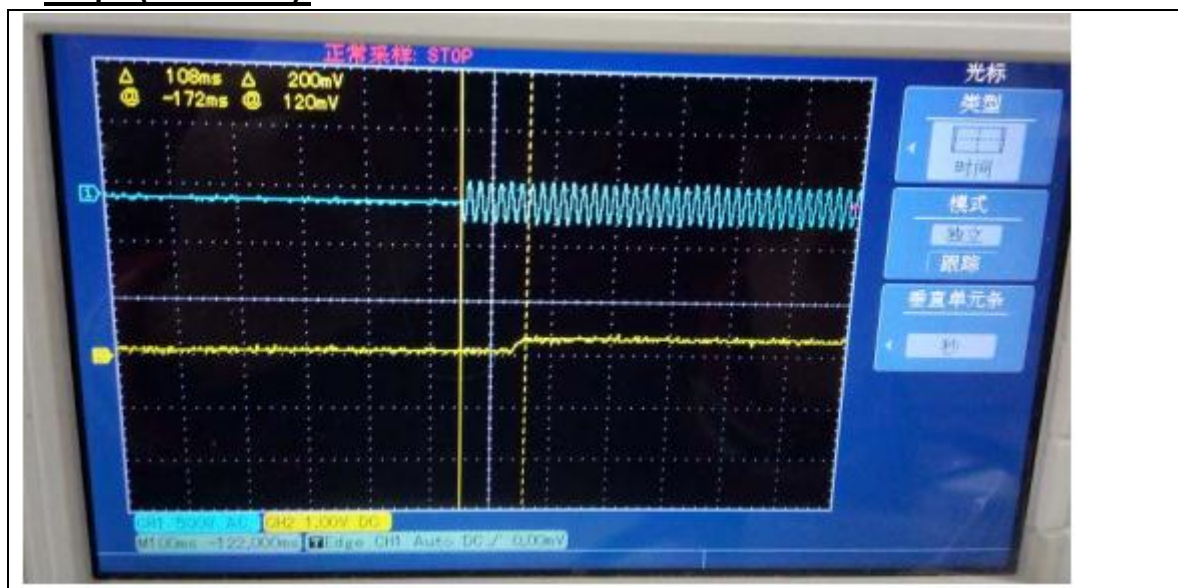
Tel: 8620-3229 0320

Fax: 8620-32290422

<http://www.standard-tech.com>

6. Starting Time
(Refer to Work Instruction QD28)
ENERGY STAR[®] Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.1

Test date	2018-07-01	Test Ambient:	25.1°C
Sample No.	Start Time (ms)		
JCE180610-D1	108		

Graph (Start Time):


7. Transient Protection Test <i>(Refer to Work Instruction QD34)</i>	ANSI/IEEE C62.41 ENERGY STAR® Program Requirements for Luminaires – Version 2.1
--	--

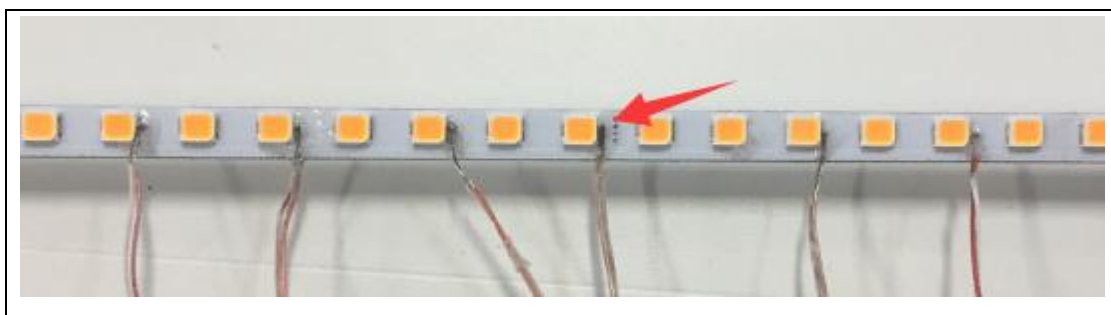
Test date	2018-07-01	Test Ambient	25.1°C
Sample No.		Transient Protection Test - Seven Strikes	
JCE180610-D1		Pass	

8.1 In-Situ Temperature Measurement Test (ISTMT)

UL1598-2008, 3rd Edition

Test date	2018-07-01	Test Ambient	25.1°C
Input Vol./Frequency	120 V / 60 Hz	Output Current of Single LED(mA)	49.7
Sample No.	LED Package Model	Maximum Measured LED Ts Point Temperature (°C)	Maximum LED Ts Point Temperature Limited (°C)
JCE180610-D1	67-21S Series (3000K)	54.7	105

In-Situ Picture - Ts:



8.2 Maximum Measured Ballast or Driver Case Temperature | **UL1598-2008, 3rd Edition**

Test date	2018-07-01	Test Ambient	25.1°C
Sample No.	Maximum Measured Driver Case Temperature (°C)	Maximum Driver Case Temperature Limited (°C)	
JCE180610-D1	52.8	105	

In-Situ Picture - Ts:

9. Off-State Power Consumption:**ENERGY STAR® Program Requirements
Product Specification for Luminaires
(Light Fixtures) - Version 2.1**

Test date	2018-07-01	Test Ambient:	25.0 °C
Model Number	ULD7-27	Stabilization Time (min)	90

Electrical Measurement – when the luminaires turned off:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)
JCE180610-D1	120.0	60	0	0.008

10. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2018-07-01	2019-06-30
ST-R-331	Spectral analysis system HAAS-2000	2018-07-01	2019-06-30
EE-09	Goniophotometer system	2018-07-01	2019-06-30
D908S	Standard Lamp	2018-07-01	2019-06-30
D204	Standard Lamp	2018-07-01	2019-06-30
PF2010	Power Meter for Integrating Sphere	2018-07-01	2019-06-30
PF210	Power Meter for Goniophotometer	2018-07-01	2019-06-30
EE-015	Flux Meter	2018-07-01	2019-06-30
ST-R-277	Oscillograph	2018-07-01	2019-06-30
ST-R-EM01	Surge Generator	2018-07-01	2019-06-30
ST-R-EM02	EMC Coupler/Decoupler Module	2018-07-01	2019-06-30
Uncertainty Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

******* END OF DATASHEET PACKAGE *******