



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xinhua Street, Guangming New district, Shenzhen 518107
Tel: (+86)755-2319 2554
Fax: (+86)755-2319 2815

Energy Star Test Report

For

L-TECH CORPORATION

(Brand Name: N/A)

Shaogangtou District, Qiaotou Town, Dongguan City

Model name(s):
LRKT3571-5CCT

Report Type: Testing and Report According to ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.2

Type of Luminaire: Downlight retrofits

Report Date: 2021-06-07

Test & Report By:

Garman Mo

Engineer: Garman Mo

Review By:

Johnson Sun

Manager: Johnson Sun

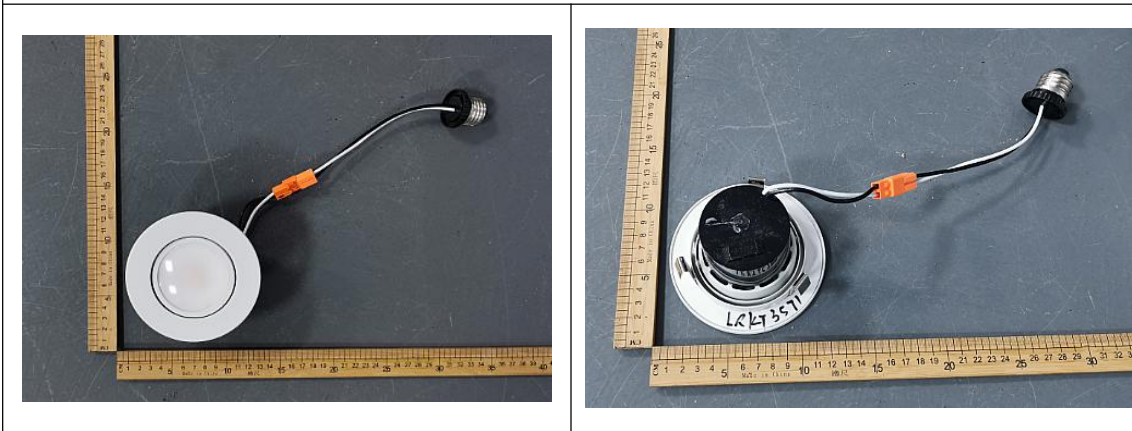
- Note: 1. The results contained in this report pertain only to the tested samples.
2. This report does not imply product certification, approval, or endorsement by A2LA or any agency of the Federal Government.
3. This report contains data that are not covered by the A2LA accreditation.



1.1 Product Information:		
Model Number	LRKT3571-5CCT	
Remark	N/A	
Representative (Tested) Model	LRKT3571-5CCT(2700K) LRKT3571-5CCT(3000K) LRKT3571-5CCT(3500K) LRKT3571-5CCT(4000K) LRKT3571-5CCT(5000K)	
Model Difference	N/A	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Downlight retrofits	
LED Manufacturer	Seoul Semiconductor Co. Ltd	
LED Model	SAWxC22B-xx	
Dimming	10%-100%	
Sample Number	JCE210313-DL-R1	
Date of Receipt	Apr.10,2021	
Luminaire Aperture (for Downlight retrofits)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
Recessed Can Model	H400/H400R	
Recessed Can UL File/Cert. No.	E252582	
Recessed Can Diameter, mm	4"	
Recessed Can Height, mm	5"	

1.2 Rated Values:	
Rated Voltage / Frequency	120Vac, 50/60Hz
Nominal Power	9.5W
Rated Initial Lamp Lumen	--
Declared CCT	2700K,3000K,3500K,4000K,5000K

1.3 Product Photos





1.4 Test Specifications:

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 8. Color Angular Uniformity 9. Dimming 10. Flicker 11. Operating Frequency 12. Starting Time 13. Transient Protection Test 14. In-Situ Temperature Measurement Test 15. Standby Power Consumption
Reference Standard	<ol style="list-style-type: none"> 1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2015 Specifications for the Chromaticity of Solid State Lighting Products 3. C82.77-10:2014 American National Standard for Lighting Equipment-Harmonic Emission Limits-Related Power Quality Requirements 4. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 5. CIE 15-2004 Technical Report Colorimetry 6. UL1993 4th Edition, Self-Ballasted Lamps and Lamp Adapters 7. ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) – Version 2.2 8. ANSI/IEEE C62.41.2:2002 IEEE Recommended Practice on Characterization of Surges in Low-Voltage(1000V and Less) AC Power Circuits 9. IEC 62301:2011 Household electrical appliances - Measurement of standby power 10. NEMA 77-2017 Standard for Temporal Light Artifacts: Test Methods and Guidance for Acceptance Criteria
Remark	<p>Below test and data are not covered by A2LA accreditation:</p> <ul style="list-style-type: none"> - Operating Frequency - Noise



1.5 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:

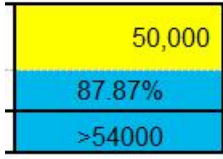
Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic 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 Summary of Test Result

Criteria Item	The Type of Luminaires	Requirement (ES for Luminaires V2.2)	Measured Value	Status
Input Wattage	All	≤ Rated Wattage	8.310W	Pass
Luminous Efficacy	Downlight retrofits	≥60 lm/W	83.88lm/W	Pass
Luminaire Minimum Light Output	Downlight retrofits	≤ 4.5" aperture: 345 lumens > 4.5" aperture: 575 lumens	697.06lm	Pass
Correlated Color Temperature (CCT)	Downlight retrofits	Shall be capable of providing at least one of the following nominal correlated color temperatures (CCTs): • 2700 Kelvin • 3000 Kelvin • 3500 Kelvin • 4000 Kelvin • 5000 Kelvin	2713K Duv=-0.0006	Pass
Color Rendering Index (CRI)	Downlight retrofits	Ra ≥ 80 R9 >0	Ra =93.5 R9 =62	Pass
Luminaire Zonal Lumen Density	Downlight retrofits	Luminaire shall deliver a minimum of 75% of total lumens within the 0-60° zone (axially symmetric about the nadir)	78.5	Pass
Color Angular Uniformity	Downlight retrofits	Throughout the beam angle, the variation of chromaticity shall be within a total linear distance of 0.006 from the weighted average point on the CIE 1976 (u',v') diagram.	0.0009	Pass
Lumen Maintenance	Solid State Option 1:	L70 lumen maintenance: ≥ 25,000 hours for indoor ≥ 35,000 hours for outdoor ≥ 50,000 hours for inseparable luminaires		Pass



Light Source Life	Solid State	L70 lumen maintenance: ≥ 25,000 hours for indoor ≥ 35,000 hours for outdoor ≥ 50,000 hours for inseparable luminaires	<table border="1"> <tr> <td>50,000</td> </tr> <tr> <td>87.87%</td> </tr> <tr> <td>>54000</td> </tr> </table>	50,000	87.87%	>54000	Pass
50,000							
87.87%							
>54000							
Color Maintenance	Downlight retrofits	$\Delta u'v' \leq 0.007$	Max.0.0032 in LM-80 report*	Pass			
Source Start Time	Downlight retrofits	<750 ms	80.0ms	Pass			
Power Factor	Solid State	Total luminaire input power ≤ 5 watts: PF ≥ 0.5 Total luminaire input power > 5 watts: PF ≥ 0.7	0.968	Pass			
Transient Protection	Solid State	The line transient shall consist of seven strikes of a 100 kHz ring wave, 2.5 kV level, for both common mode and differential mode.	Survival	Pass			
Standby Power Consumption	All Luminaires	Luminaires shall not draw power in the off state.	0W	Pass			
Operating Frequency	Solid State	Frequency ≥ 120 Hz	120.005Hz	Pass			
Maximum Measured Driver Case Temperature	Solid State	shall not exceed the driver manufacturer's maximum recommended temperature during in situ operation. ≤ 105 °C	96.3°C	Pass			
Maximum In-Situ Source Temperature	Solid State	Maximum permitted Ts temperature for L70≥50,000 hrs ≤ 105°C	100.3°C	Pass			
Dimming	Solid State	The luminaire and its components shall provide continuous dimming from 100% to 20% of total light output. Luminaire shall not emit	Validated	Pass			



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xihu Street, Guangming New district, Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

		noise above 24dBA at 1 meter or less at the minimum output.		
CCT	Solid State	Packaging shall clearly describe the nominal color designation in units of Kelvin (e.g. 2700K, 3000K).	2700K,3000K,3500K,4000K,5000K	Pass

Note: The information or data with an “*” are provided by the manufacturer.

Our laboratory has no responsibility for the decision of compliance with specification that based on the data or information with the “*”.



2.2.1 Electrical, Photometric and Chromaticity Measurements	IES LM-79 2008
--	-----------------------

Test date	2021-04-13	Test Ambient:	25 ± 1° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LRKT3571-5CCT(2700K)	Total Operating Time (min)	75

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
JCE210313-DL-R1	120.0	60	0.072	8.310	0.968

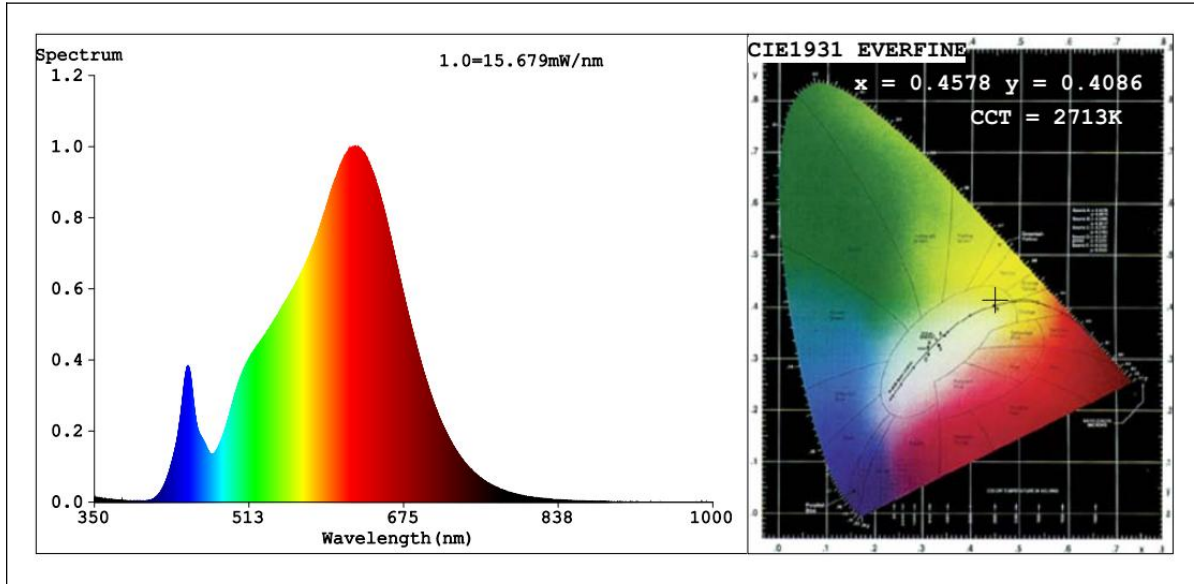
Sphere-Spectroradiometer Method(Self-absorption:1.0410):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	93.5
R9	62
CCT (K)	2713
Duv	-0.0006

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	697.06
Luminous Efficacy (lm/W)	83.88
Beam Angle°	105.1
Center Beam Candle Power (cd)	258

Spectral Power Distribution and Chromaticity Diagram



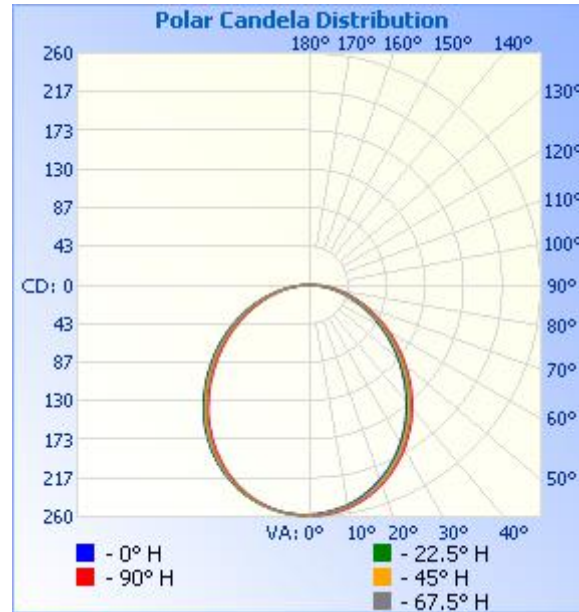
Colorimetric Parameters

Color Parameters:

Chromaticity Coordinate: $x=0.4578$ $y=0.4086$ $u'=0.2621$ $v'=0.5263$
 CCT=2713K (Duv=-0.0006) Dominant WL:Ld =584.3nm WL:Lc = --nm Purity=60.1%
 Ratio:R=26.5% G=71.2% B=2.3% Peak WL:Lp=624.7nm FWHM=146.1nm
 Render Index:Ra=93.5 AvgR=91.2 TM30:Rf=91 Rg=101

R1 =94	R2 =96	R3 =97	R4 =94	R5 =94	R6 =96	R7 =92	
R8 =83	R9 =62	R10=91	R11=96	R12=89	R13=95	R14=98	R15=90

Zonal Lumen Tabulation



Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	197.1	28.3%
0-40	318.7	45.7%
0-60	547.2	78.5%
60-90	147.2	21.1%
70-100	67.6	9.7%
90-120	1.3	0.2%
0-90	694.3	99.6%
90-180	2.7	0.4%
0-180	697.0	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	24.3	3.5%	90-100	0.6	0.1%
10-20	69.3	9.9%	100-110	0.4	0.1%
20-30	103.5	14.8%	110-120	0.4	0.1%
30-40	121.6	17.5%	120-130	0.3	0%
40-50	121.9	17.5%	130-140	0.3	0%
50-60	106.5	15.3%	140-150	0.3	0%
60-70	80.1	11.5%	150-160	0.2	0%
70-80	49.0	7.0%	160-170	0.1	0%
80-90	18.1	2.6%	170-180	0.0	0%



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xihu Street, Guangming New district, Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

Certificate #4703.03

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258
1	257	258	258	258	259	257	257	257	257	258	258	259	259	256	256	257	257
2	257	257	258	258	259	257	257	257	257	258	258	259	259	256	256	257	257
3	256	257	257	258	259	256	257	257	257	258	258	258	258	256	256	256	256
4	256	256	257	257	258	256	257	257	257	258	258	258	258	255	255	256	256
5	255	256	256	257	258	256	256	257	257	258	258	258	257	255	255	255	255
6	254	255	256	256	257	255	256	256	257	257	257	257	257	254	254	254	254
7	253	254	255	256	257	255	256	256	256	257	257	256	256	253	253	253	253
8	252	253	254	255	256	254	255	255	256	256	256	256	255	252	252	252	252
9	251	252	253	254	255	253	254	255	255	255	255	255	254	251	251	251	251
10	250	251	252	253	254	252	253	254	254	254	254	254	253	250	250	250	250
11	249	250	251	252	253	251	252	253	253	253	253	253	252	249	249	249	249
12	247	248	249	251	252	250	251	252	252	252	252	252	251	248	247	247	247
13	246	247	248	249	250	249	250	251	251	251	251	250	250	246	246	245	246
14	244	245	246	248	249	248	249	249	250	250	250	249	248	245	244	244	244
15	242	243	244	246	247	247	247	248	248	249	248	247	247	243	242	242	242
16	241	241	243	244	246	245	246	247	247	247	247	245	245	241	241	240	241
17	238	240	241	243	244	243	244	245	246	246	245	244	243	239	239	238	238
18	236	238	239	240	243	241	243	244	244	244	243	242	241	237	236	236	236
19	234	235	237	239	240	240	241	242	242	243	241	240	239	235	234	234	234
20	232	233	234	236	238	238	239	240	240	240	239	238	237	233	232	232	232
21	230	231	232	234	236	236	237	238	238	238	237	236	235	231	230	230	230
22	227	228	230	232	234	234	235	236	236	236	235	234	232	228	227	227	227
23	225	226	228	229	232	231	233	234	234	233	233	231	230	226	225	224	225
24	222	223	225	227	229	229	231	232	232	231	231	229	227	223	222	222	222
25	219	220	222	224	226	227	228	229	230	229	228	227	225	221	219	219	219
26	217	218	220	222	224	224	225	227	227	226	226	224	222	218	217	216	217
27	214	215	217	219	221	222	223	224	225	224	223	221	219	215	214	213	214
28	211	212	214	216	219	219	221	222	222	222	220	218	216	213	211	211	211
29	208	209	211	214	216	216	218	219	219	219	217	215	214	209	208	208	208
30	204	206	208	210	213	213	215	216	217	216	215	213	210	206	205	204	204



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xihu Street, Guangming New district, Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

Certificate #4703.03

31	201	203	205	208	210	210	212	213	214	213	212	209	207	203	202	201	201
32	198	199	201	204	206	207	209	210	210	210	208	206	204	200	199	198	198
33	195	196	198	201	204	204	206	207	208	207	206	203	201	197	196	195	195
34	191	192	195	198	200	201	203	204	204	204	202	200	197	193	192	191	191
35	188	190	192	194	197	197	199	200	201	200	199	196	194	190	189	187	188
36	184	186	188	191	194	194	196	197	198	197	196	193	190	187	185	184	184
37	181	182	184	187	191	191	193	194	195	194	192	190	187	183	181	180	181
38	177	178	181	184	187	187	189	190	191	190	188	186	184	180	178	177	177
39	173	174	177	180	183	183	185	186	187	186	185	183	179	176	174	173	173
40	170	171	174	176	180	180	182	183	184	183	182	179	176	173	171	170	170
41	166	167	170	173	176	176	178	180	180	179	178	175	172	169	167	166	166
42	163	164	166	169	173	172	174	176	176	176	174	171	168	165	164	163	163
43	158	159	162	166	168	168	171	173	173	172	170	167	164	161	159	158	158
44	155	156	159	162	165	165	167	169	169	168	166	163	160	157	155	155	155
45	151	152	155	158	161	161	163	164	165	164	162	159	157	154	152	151	151
46	146	149	151	154	158	157	160	161	162	161	159	156	152	149	148	147	146
47	143	144	147	151	153	154	156	157	158	157	155	152	148	146	144	143	143
48	139	140	143	146	150	149	151	153	154	153	151	147	145	142	140	139	139
49	135	136	139	143	146	146	148	150	150	149	147	144	140	138	137	135	135
50	131	132	135	139	142	142	144	145	146	145	143	140	136	134	132	131	131
51	128	129	132	134	138	137	140	141	142	141	139	135	133	131	129	128	128
52	123	125	127	131	134	134	136	138	138	138	135	132	128	127	125	123	123
53	120	121	124	127	130	130	132	133	134	133	131	128	124	123	121	120	120
54	116	117	120	123	126	126	129	129	131	130	127	124	121	119	117	116	116
55	112	113	116	119	123	122	124	126	126	126	123	120	116	115	113	112	112
56	108	109	112	116	118	118	120	122	122	121	119	116	113	111	109	108	108
57	104	106	109	111	115	115	117	118	119	118	115	112	109	107	105	104	104
58	100	102	104	108	111	110	112	114	115	113	111	108	104	103	101	100	100
59	96	97	100	104	107	106	108	110	110	109	107	104	101	99	97	96	96
60	93	94	97	100	103	103	105	106	107	106	103	100	97	96	94	93	93
61	89	90	93	96	100	99	101	102	103	101	99	96	92	92	90	89	89
62	85	87	89	93	96	95	97	98	99	98	96	92	89	88	86	85	85



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xihu Street, Guangming New district, Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

Certificate #4703.03

63	82	83	85	89	92	91	93	95	95	94	92	88	85	84	82	81	82
64	78	80	82	85	88	87	89	90	91	90	88	84	81	81	79	78	78
65	74	76	78	81	85	84	85	87	88	86	84	81	78	77	75	74	74
66	71	73	75	77	81	80	82	83	83	82	80	77	74	74	72	71	71
67	67	69	71	74	78	76	78	79	79	78	76	73	70	70	68	67	67
68	64	66	68	70	74	73	75	76	76	75	72	70	66	67	65	64	64
69	61	62	65	67	71	69	71	72	72	71	68	66	63	63	61	60	61
70	58	59	61	64	67	65	67	68	68	67	65	63	60	60	58	58	58
71	54	56	58	61	64	62	64	65	65	64	62	59	56	56	55	54	54
72	51	53	55	57	60	59	60	61	61	60	58	55	52	53	52	51	51
73	48	49	51	54	57	55	57	57	56	56	55	52	49	50	48	47	48
74	45	47	49	51	54	52	54	54	53	53	52	49	46	47	46	45	45
75	42	43	45	48	50	49	50	50	49	49	48	45	42	44	42	42	42
76	39	40	43	45	48	45	46	46	45	45	44	42	40	41	40	39	39
77	36	37	39	42	44	43	44	43	42	42	40	39	36	38	36	36	36
78	33	35	37	39	42	40	40	39	38	38	37	36	33	35	34	33	33
79	30	31	34	37	38	36	36	35	35	35	34	33	31	32	31	30	30
80	27	29	32	34	36	34	33	32	31	31	31	30	28	30	29	27	27
81	24	26	29	31	33	31	30	28	27	28	28	27	25	27	26	24	24
82	21	23	26	28	30	28	26	25	24	25	26	25	23	25	23	22	21
83	18	20	23	26	27	25	24	21	21	21	22	22	20	22	21	19	18
84	16	17	21	23	25	22	20	18	17	18	19	20	18	20	18	16	16
85	12	14	18	21	22	19	17	14	15	15	17	17	16	18	15	13	12
86	10	12	15	18	20	16	14	12	11	12	14	15	14	16	13	11	10
87	8	9	12	16	17	13	10	9	9	9	11	12	12	13	10	8	8
88	6	7	9	13	15	10	7	6	6	7	8	10	10	12	8	6	6
89	4	4	6	10	12	4	4	4	4	4	4	2	1	8	5	4	4
90	2	3	3	4	7	0	1	1	1	0	0	1	1	4	3	3	2
91	1	1	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1
92	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1
93	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0
94	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xihu Street, Guangming New district, Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

Certificate #4703.03

95	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0
96	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1
97	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1
98	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1
99	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1
100	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0
101	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0	1
102	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	1	0
103	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	0
104	1	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
105	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
106	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
107	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
108	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1
109	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
110	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
111	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	0	0
112	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
113	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0
114	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
115	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
116	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
117	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1
118	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
119	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
120	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
121	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0
122	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0
123	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0
124	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0
125	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
126	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3,Building 3, No. 17,Yigongliu road,Loucun community building, Xihu Street,Guangming New district,Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

Certificate #4703.03

127	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0
128	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0
129	0	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0
130	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1
131	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0
132	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1
133	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1
134	1	1	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
135	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0
136	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	1	1
137	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1
138	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0
139	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0
140	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1
141	1	0	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1
142	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1
143	1	1	1	0	1	0	0	0	0	0	1	0	0	1	0	1	1
144	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1
145	0	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0
146	1	1	1	1	1	0	0	0	0	0	0	0	0	1	0	1	1
147	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1
148	1	1	1	0	1	0	0	0	0	0	0	1	0	1	1	1	1
149	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1
150	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1
151	1	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	1
152	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	1	1
153	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1
154	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1
155	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1
156	1	1	1	1	1	0	1	0	0	0	0	0	1	1	1	1	1
157	1	1	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1
158	1	1	1	1	1	0	0	0	1	0	0	0	0	1	1	0	1



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xinhua Street, Guangming New district, Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

Certificate #4703.03

159	1	1	1	1	1	0	0	0	0	0	0	1	0	1	1	1	1
160	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	1	1
161	1	1	1	0	1	0	0	0	0	0	0	1	0	1	1	1	1
162	1	1	1	1	1	0	1	1	0	0	0	0	0	0	1	1	1
163	1	1	1	1	1	0	1	0	0	0	0	1	0	1	1	0	1
164	1	1	0	1	1	0	1	0	1	0	0	0	0	1	1	1	1
165	1	1	1	1	1	0	0	1	1	1	0	1	1	1	1	1	1
166	1	1	1	1	1	0	1	1	0	0	1	1	0	1	1	1	1
167	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	1
168	1	1	0	1	0	1	1	0	1	1	0	1	0	1	1	0	1
169	1	1	1	1	1	1	0	0	0	0	0	1	1	1	1	1	1
170	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1
171	0	1	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0
172	1	1	0	1	0	0	0	1	0	0	1	1	1	1	1	1	1
173	0	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0
174	1	1	0	0	0	0	0	1	1	0	0	0	1	0	0	1	1
175	0	1	1	1	1	1	1	1	0	1	0	0	0	1	0	1	0
176	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1
177	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	1
178	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1
179	1	1	0	1	1	1	1	1	0	1	1	1	1	0	1	1	1
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



2.2.2 Electrical, Photometric and Chromaticity Measurements	IES LM-79 2008
--	-----------------------

Test date	2021-04-13	Test Ambient:	25 ± 1° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LRKT3571-5CCT(3000K)	Total Operating Time (min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
JCE210313-DL-R1	120.0	60	0.072	8.324	0.963

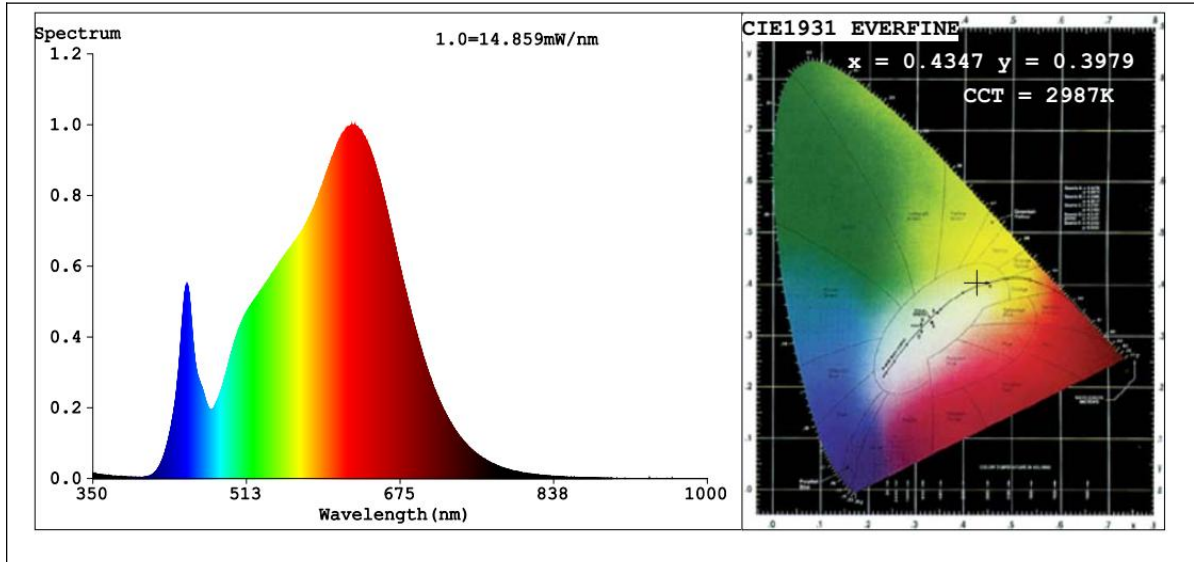
Sphere-Spectroradiometer Method(Self-absorption:1.0410):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	95.3
R9	73
CCT (K)	2987
Duv	-0.0022

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	703.6
Luminous Efficacy (lm/W)	84.53

Spectral Power Distribution and Chromaticity Diagram



Colorimetric Parameters

Color Parameters:

Chromaticity Coordinate: $x=0.4347$ $y=0.3979$ $u'=0.2518$ $v'=0.5186$
 CCT=2987K (Duv=-0.0022) Dominant WL:Ld =583.7nm WL:Lc = --nm Purity=49.9%
 Ratio:R=24.9% G=72.2% B=2.9% Peak WL:Lp=624.0nm FWHM=163.8nm
 Render Index:Ra=95.3 AvgR=93.5 TM30:Rf=93 Rg=102

R1 =97	R2 =98	R3 =97	R4 =96	R5 =97	R6 =97	R7 =94	
R8 =88	R9 =73	R10=94	R11=96	R12=89	R13=97	R14=98	R15=94



2.2.3 Electrical, Photometric and Chromaticity Measurements	IES LM-79 2008
--	-----------------------

Test date	2021-04-13	Test Ambient:	25 ± 1° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LRKT3571-5CCT(3500K)	Total Operating Time (min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
JCE210313-DL-R1	120.0	60	0.072	8.325	0.964

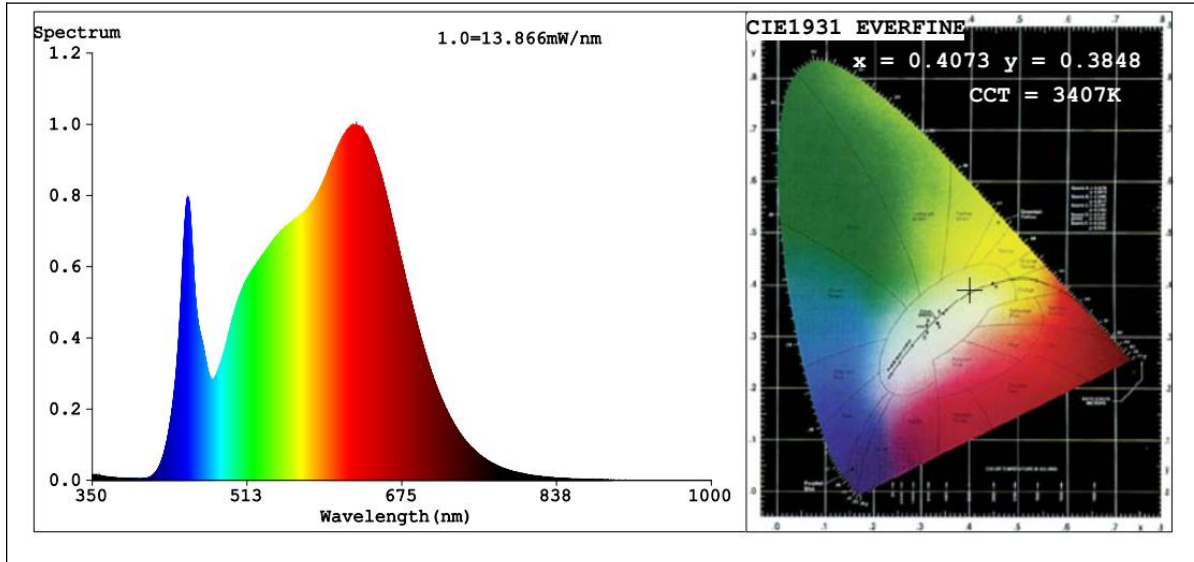
Sphere-Spectroradiometer Method(Self-absorption:1.0410):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	97.1
R9	86
CCT (K)	3407
Duv	-0.0030

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	714.8
Luminous Efficacy (lm/W)	85.86

Spectral Power Distribution and Chromaticity Diagram



Colorimetric Parameters

Color Parameters:

Chromaticity Coordinate: $x=0.4073$ $y=0.3848$ $u'=0.2395$ $v'=0.5091$

CCT=3407K (Duv=-0.0030) Dominant WL:Ld =582.6nm WL:Lc = --nm Purity=37.7%

Ratio:R=22.9% G=73.5% B=3.6% Peak WL:Lp=627.3nm FWHM=183.2nm

Render Index:Ra=97.1 AvgR=95.6 TM30:Rf=94 Rg=103

R1 =99	R2 =99	R3 =96	R4 =97	R5 =99	R6 =96	R7 =96	
R8 =94	R9 =86	R10=96	R11=96	R12=85	R13=99	R14=97	R15=98



2.2.4 Electrical, Photometric and Chromaticity Measurements	IES LM-79 2008
--	-----------------------

Test date	2021-04-13	Test Ambient:	25 ± 1° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LRKT3571-5CCT(4000K)	Total Operating Time (min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
JCE210313-DL-R1	120.0	60	0.072	8.308	0.964

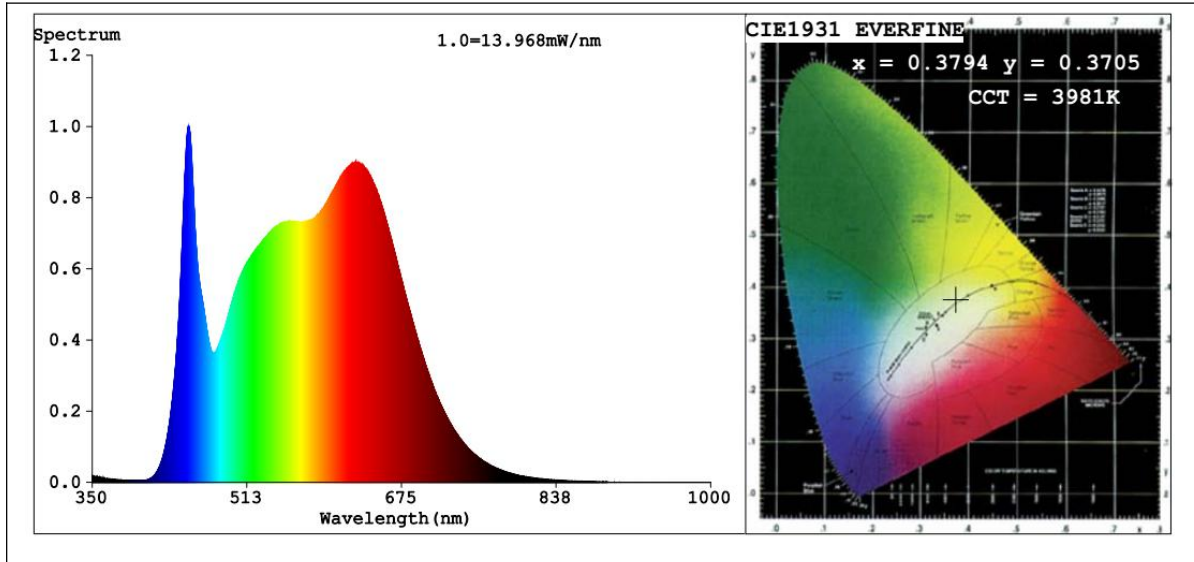
Sphere-Spectroradiometer Method(Self-absorption:1.0410):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	98.0
R9	97
CCT (K)	3981
Duv	-0.0027

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	715.0
Luminous Efficacy (lm/W)	86.06

Spectral Power Distribution and Chromaticity Diagram



Colorimetric Parameters

Color Parameters:

Chromaticity Coordinate: $x=0.3794$ $y=0.3705$ $u'=0.2270$ $v'=0.4986$
 CCT=3981K (Duv=-0.0027) Dominant WL:Ld =580.7nm WL:Lc = --nm Purity=25.0%
 Ratio:R=20.8% G=74.8% B=4.4% Peak WL:Lp=451.6nm FWHM=24.9nm
 Render Index:Ra=98.0 AvgR=96.4 TM30:Rf=95 Rg=102

R1 =99	R2 =99	R3 =95	R4 =98	R5 =99	R6 =96	R7 =99
R8 =99	R9 =97	R10=96	R11=96	R12=80	R13=99	R14=97 R15=98



2.2.5 Electrical, Photometric and Chromaticity Measurements	IES LM-79 2008
--	-----------------------

Test date	2021-04-13	Test Ambient:	25 ± 1° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LRKT3571-5CCT(5000K)	Total Operating Time (min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
JCE210313-DL-R1	120.0	60	0.072	8.304	0.964

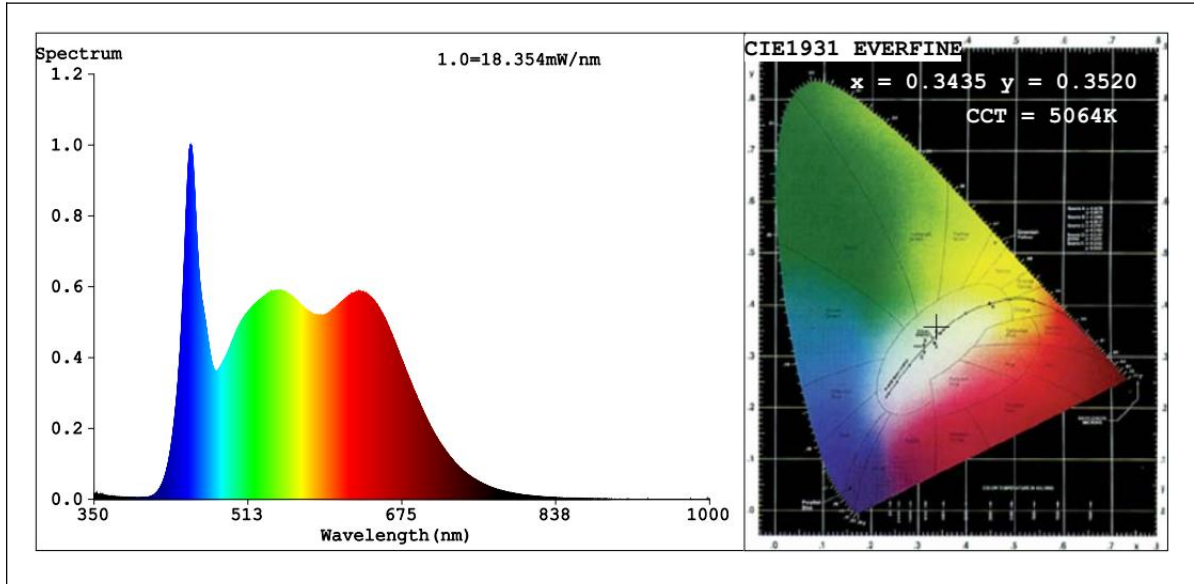
Sphere-Spectroradiometer Method(Self-absorption:1.0410):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	97.6
R9	97
CCT (K)	5064
Duv	0.0009

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	715.3
Luminous Efficacy (lm/W)	86.14

Spectral Power Distribution and Chromaticity Diagram



Colorimetric Parameters

Color Parameters:

Chromaticity Coordinate: $x=0.3435$ $y=0.3520$ / $u'=0.2102$ $v'=0.4846$
 CCT=5064K (Duv=0.0009) Dominant WL:Ld =570.9nm WL:Lc = --nm Purity=8.7%
 Ratio:R=17.9% G=76.5% B=5.6% Peak WL:Lp=451.9nm FWHM=25.0nm
 Render Index:Ra=97.6 AvgR=95.9 TM30:Rf=95 Rg=102

R1 =99	R2 =98	R3 =94	R4 =98	R5 =98	R6 =95	R7 =99	
R8 =99	R9 =97	R10=94	R11=96	R12=77	R13=100	R14=96	R15=97



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xihu Street, Guangming New district, Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

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

Test Data:

Test date	2021-04-13	Test Ambient	25.1°C
Sample No.		Maximum $\Delta u'v'$	
JCE210313-DL-R1		0.0009	



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3,Building 3, No. 17,Yigongliu road,Loucun community building, Xinhu Street,Guangming New district,Shenzhen 518107

Tel: (+86)755-2319 2554

Fax: (+86)755-2319 2815

C0				C90			
gamma	Δu'	Δv'	Δu'v'	gamma	Δu'	Δv'	Δu'v'
0	-0.00004	-0.00028	0.00028	0	-0.00003	-0.00057	0.00057
1	-0.00011	-0.00029	0.00031	1	0.00002	-0.00061	0.00061
2	-0.00011	-0.00029	0.00031	2	0.00004	-0.00056	0.00056
3	-0.00004	-0.00028	0.00028	3	0.00004	-0.00056	0.00056
4	-0.00011	-0.00029	0.00031	4	0.00004	-0.00056	0.00056
5	-0.00009	-0.00024	0.00025	5	0.00004	-0.00056	0.00056
6	-0.00004	-0.00028	0.00028	6	0.00004	-0.00056	0.00056
7	-0.00004	-0.00028	0.00028	7	0.00004	-0.00056	0.00056
8	0.00002	-0.00026	0.00026	8	0.00010	-0.00054	0.00055
9	0.00002	-0.00026	0.00026	9	0.00006	-0.00050	0.00050
10	0.00002	-0.00026	0.00026	10	0.00012	-0.00049	0.00050
11	-0.00002	-0.00022	0.00022	11	0.00006	-0.00050	0.00050
12	0.00002	-0.00026	0.00026	12	0.00012	-0.00049	0.00050
13	0.00007	-0.00030	0.00031	13	0.00014	-0.00043	0.00045
14	0.00009	-0.00025	0.00026	14	0.00014	-0.00043	0.00045
15	0.00011	-0.00019	0.00022	15	0.00025	-0.00046	0.00052
16	0.00009	-0.00025	0.00026	16	0.00021	-0.00042	0.00047
17	0.00011	-0.00019	0.00022	17	0.00027	-0.00040	0.00049
18	0.00017	-0.00018	0.00025	18	0.00023	-0.00036	0.00043
19	0.00006	-0.00015	0.00017	19	0.00029	-0.00035	0.00045
20	0.00017	-0.00018	0.00025	20	0.00025	-0.00031	0.00039
21	0.00017	-0.00018	0.00025	21	0.00029	-0.00035	0.00045
22	0.00024	-0.00016	0.00029	22	0.00025	-0.00031	0.00039
23	0.00019	-0.00012	0.00023	23	0.00031	-0.00029	0.00043
24	0.00019	-0.00012	0.00023	24	0.00040	-0.00022	0.00046
25	0.00021	-0.00007	0.00022	25	0.00038	-0.00028	0.00047
26	0.00015	-0.00008	0.00017	26	0.00033	-0.00024	0.00041
27	0.00021	-0.00007	0.00022	27	0.00040	-0.00022	0.00046
28	0.00028	-0.00005	0.00028	28	0.00035	-0.00019	0.00040
29	0.00034	-0.00004	0.00035	29	0.00035	-0.00019	0.00040
30	0.00023	-0.00002	0.00023	30	0.00037	-0.00013	0.00039
31	0.00030	0.00000	0.00030	31	0.00042	-0.00017	0.00045
32	0.00034	-0.00004	0.00035	32	0.00037	-0.00013	0.00039
33	0.00030	0.00000	0.00030	33	0.00032	-0.00009	0.00034
34	0.00032	0.00005	0.00032	34	0.00039	-0.00008	0.00040
35	0.00032	0.00005	0.00032	35	0.00037	-0.00013	0.00039
36	0.00030	0.00000	0.00030	36	0.00039	-0.00008	0.00040
37	0.00030	0.00000	0.00030	37	0.00039	-0.00008	0.00040
38	0.00030	0.00000	0.00030	38	0.00034	-0.00004	0.00035
39	0.00025	0.00004	0.00026	39	0.00034	-0.00004	0.00035
40	0.00036	0.00001	0.00036	40	0.00034	-0.00004	0.00035
41	0.00027	0.00009	0.00029	41	0.00034	-0.00004	0.00035
42	0.00023	-0.00002	0.00023	42	0.00039	-0.00008	0.00040
43	0.00014	0.00006	0.00016	43	0.00023	-0.00002	0.00023
44	0.00014	0.00006	0.00016	44	0.00028	-0.00005	0.00028
45	0.00017	-0.00003	0.00017	45	0.00028	-0.00005	0.00028
46	0.00019	0.00002	0.00019	46	0.00023	-0.00002	0.00023
47	0.00006	-0.00001	0.00006	47	0.00017	-0.00003	0.00017
48	0.00001	0.00003	0.00003	48	0.00015	-0.00008	0.00017
49	0.00006	-0.00001	0.00006	49	0.00010	-0.00005	0.00011
50	0.00004	-0.00006	0.00007	50	0.00004	-0.00006	0.00007
51	-0.00003	-0.00008	0.00008	51	0.00002	-0.00011	0.00012



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xinhu Street, Guangming New district, Shenzhen 518107

Tel: (+86)755-2319 2554

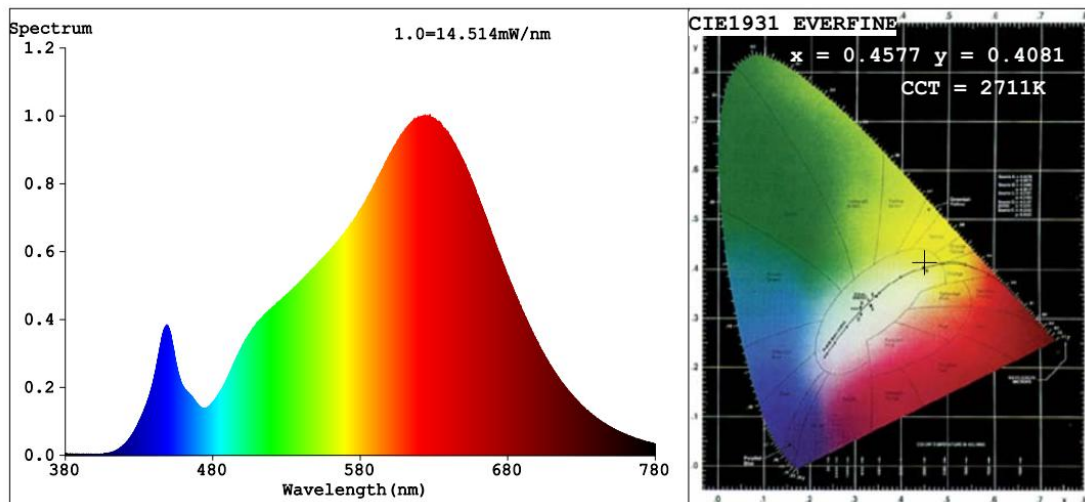
Fax: (+86)755-2319 2815

Certificate #4703.03

C180				C270			
gamma	Δu'	Δv'	Δu'v'	gamma	Δu'	Δv'	Δu'v'
0	-0.0004	-0.0028	0.0028	0	-0.0003	-0.0057	0.0057
1	-0.0015	-0.0025	0.0029	1	-0.0003	-0.0057	0.0057
2	-0.0015	-0.0025	0.0029	2	0.0004	-0.0056	0.0056
3	-0.0015	-0.0025	0.0029	3	0.0004	-0.0056	0.0056
4	-0.0015	-0.0025	0.0029	4	-0.0003	-0.0057	0.0057
5	-0.0020	-0.0021	0.0029	5	-0.0007	-0.0053	0.0054
6	-0.0020	-0.0021	0.0029	6	-0.0007	-0.0053	0.0054
7	-0.0020	-0.0021	0.0029	7	-0.0012	-0.0049	0.0051
8	-0.0013	-0.0020	0.0024	8	-0.0012	-0.0049	0.0051
9	-0.0013	-0.0020	0.0024	9	-0.0005	-0.0048	0.0048
10	-0.0018	-0.0016	0.0024	10	-0.0016	-0.0045	0.0048
11	-0.0022	-0.0012	0.0025	11	-0.0010	-0.0044	0.0045
12	-0.0016	-0.0011	0.0019	12	-0.0016	-0.0045	0.0048
13	-0.0016	-0.0011	0.0019	13	-0.0010	-0.0044	0.0045
14	-0.0014	-0.0005	0.0015	14	-0.0015	-0.0040	0.0043
15	-0.0014	-0.0005	0.0015	15	-0.0015	-0.0040	0.0043
16	-0.0018	-0.0001	0.0018	16	-0.0008	-0.0038	0.0039
17	-0.0012	0.0000	0.0012	17	-0.0013	-0.0035	0.0037
18	-0.0016	0.0004	0.0017	18	-0.0006	-0.0033	0.0034
19	-0.0016	0.0004	0.0017	19	-0.0017	-0.0031	0.0035
20	-0.0021	0.0008	0.0022	20	-0.0011	-0.0029	0.0031
21	-0.0014	0.0009	0.0017	21	-0.0015	-0.0025	0.0029
22	-0.0019	0.0013	0.0023	22	-0.0009	-0.0024	0.0025
23	-0.0017	0.0019	0.0025	23	-0.0009	-0.0024	0.0025
24	-0.0017	0.0019	0.0025	24	-0.0013	-0.0020	0.0024
25	-0.0021	0.0023	0.0031	25	-0.0013	-0.0020	0.0024
26	-0.0019	0.0028	0.0034	26	-0.0007	-0.0018	0.0020
27	-0.0026	0.0026	0.0037	27	-0.0011	-0.0015	0.0018
28	-0.0019	0.0028	0.0034	28	-0.0009	-0.0009	0.0013
29	-0.0022	0.0037	0.0043	29	-0.0009	-0.0009	0.0013
30	-0.0022	0.0037	0.0043	30	-0.0014	-0.0005	0.0015
31	-0.0016	0.0039	0.0042	31	-0.0014	-0.0005	0.0015
32	-0.0016	0.0039	0.0042	32	-0.0009	-0.0009	0.0013
33	-0.0020	0.0043	0.0047	33	-0.0007	-0.0004	0.0008
34	-0.0018	0.0048	0.0051	34	-0.0012	0.0000	0.0012
35	-0.0018	0.0048	0.0051	35	-0.0012	0.0000	0.0012
36	-0.0023	0.0052	0.0057	36	-0.0001	-0.0002	0.0002
37	-0.0023	0.0052	0.0057	37	-0.0005	0.0002	0.0006
38	-0.0016	0.0053	0.0056	38	-0.0016	0.0004	0.0017
39	-0.0027	0.0056	0.0062	39	-0.0012	0.0000	0.0012
40	-0.0027	0.0056	0.0062	40	-0.0010	0.0006	0.0011
41	-0.0032	0.0059	0.0067	41	-0.0021	0.0008	0.0022
42	-0.0032	0.0059	0.0067	42	-0.0010	0.0006	0.0011
43	-0.0038	0.0058	0.0069	43	-0.0021	0.0008	0.0022
44	-0.0038	0.0058	0.0069	44	-0.0016	0.0004	0.0017
45	-0.0043	0.0062	0.0075	45	-0.0023	0.0003	0.0023
46	-0.0036	0.0063	0.0073	46	-0.0021	0.0008	0.0022
47	-0.0043	0.0062	0.0075	47	-0.0027	0.0006	0.0028
48	-0.0043	0.0062	0.0075	48	-0.0025	-0.0003	0.0025
49	-0.0049	0.0060	0.0078	49	-0.0029	0.0001	0.0029
50	-0.0049	0.0060	0.0078	50	-0.0036	0.0000	0.0036
51	-0.0060	0.0063	0.0087	51	-0.0036	0.0000	0.0036

2.4 Electrical and Photometric Measurements, with dimming	IES LM-79 2008 ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.2
Noted: The noise test and data are not covered by A2LA accreditation	

Test date	2021-04-13		Test Ambient:	25±1° C
Dimmer Technology			Forward phase-cut	
Sample No.		Maximum Level	Minimum Level	
JCE210313-DL-R1	Input: 120.0V / 60Hz	Light outout(Lumen)	659.2	29.56
		Percentage	94.57%	4.48%



Color Parameters:

Chromaticity Coordinate: $x=0.4577$ $y=0.4081$ / $u'=0.2622$ $v'=0.5261$
 CCT=2711K (Duv=-0.0008) Dominant WL:Ld =584.4nm WL:Lc = --nm Purity=59.9%
 Ratio:R=26.5% G=71.2% B=2.3% Peak WL:Lp=624.0nm FWHM=145.7nm
 Render Index:Ra=93.4 AvgR=91.2 TM30:Rf=91 Rg=101

R1 =94 R2 =96 R3 =98 R4 =94 R5 =94 R6 =96 R7 =92
 R8 =83 R9 =62 R10=91 R11=96 R12=89 R13=94 R14=98 R15=90

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

Dimmer Technology	Peak Noise Reading (dBA)	Test Condition	Distance between the microphone and the UUT
LUTRON MACL-153M	13.5	Dimmer adjusted to lowest light output	< 1 m



ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xihu Street, Guangming New district, Shenzhen 518107
 Tel: (+86)755-2319 2554
 Fax: (+86)755-2319 2815

2.5 Flicker	NEMA 77-2017 ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.2
--------------------	---

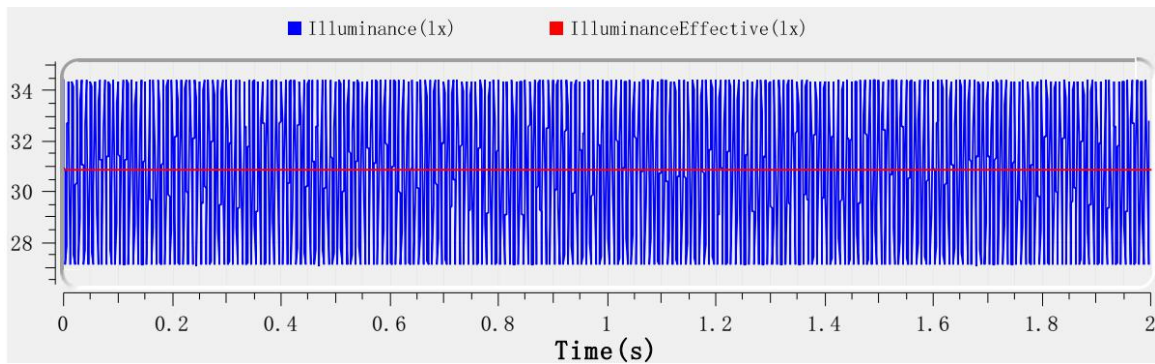
Dimming Technology	Forward phase-cut
Dimmer	LUTRON MACL-153M

Item	Short Term Flicker Indicator (Pst)	Stroboscopic Visibility Measure (SVM)
Maximum conduction	0.062	0.450
Intermediate conduction	0.215	0.732
Minimum conduction	1.558	0.373



2.6 Operating Frequency	ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.2
Noted: This test and data are not covered by A2LA accreditation	

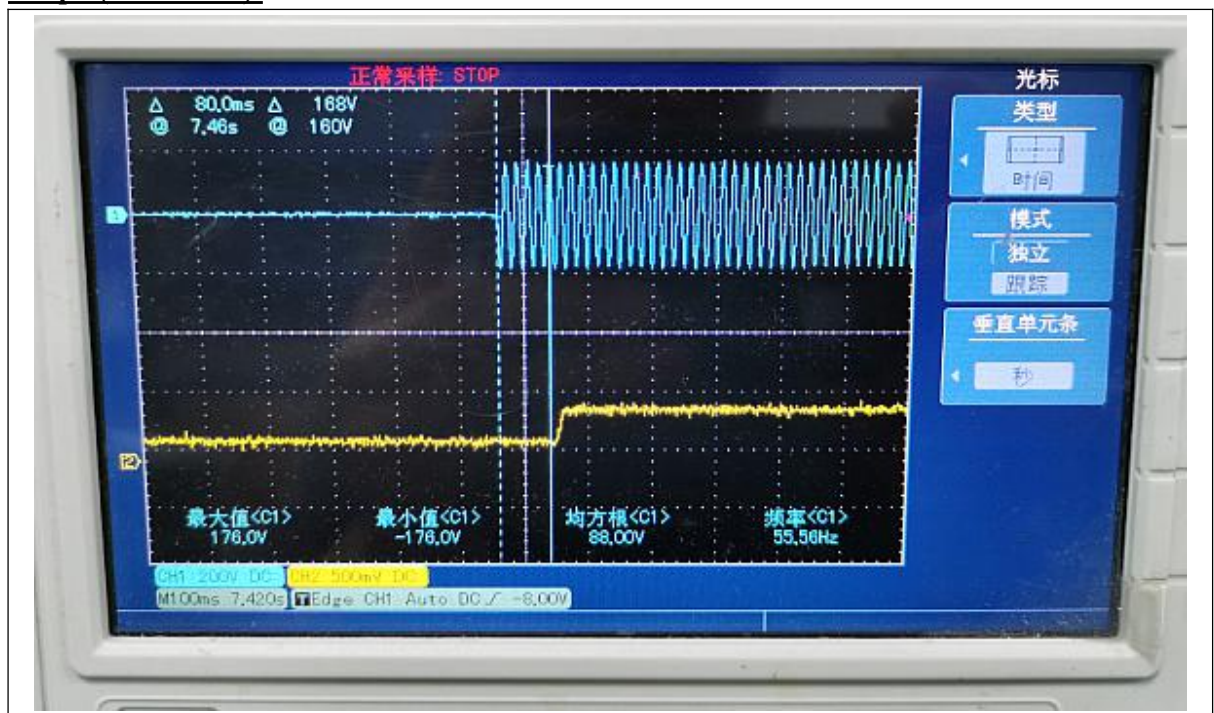
Test date	2021-04-13	Test Ambient:	25±1° C
Sample No.	Operating Frequency (Hz)		
JCE210313-DL-R1	120.005		



2.7 Starting Time	ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.2
-------------------	---

Test date	2021-04-13	Test Ambient:	25±1° C
Sample No.	Start Time (ms)		
JCE210313-DL-R1	80.0		

Graph (Start Time):





ShenZhen Xin An Biao Technology Service Co. Ltd Testing Center

Floor 3, Building 3, No. 17, Yigongliu road, Loucun community building, Xihu Street, Guangming New district, Shenzhen 518107
 Tel: (+86)755-2319 2554
 Fax: (+86)755-2319 2815

2.8 Transient Protection Test	ANSI/IEEE C62.41 ENERGY STAR® Program Requirements for Luminaires – Version 2.2
--------------------------------------	--

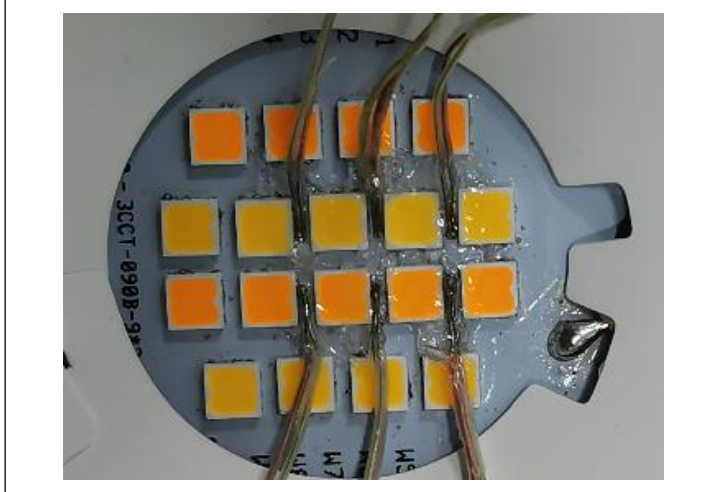
Test voltage: 120V,60Hz

Test date	2021-04-13	Test Ambient	25±1° C
Sample No.		Transient Protection Test - Seven Strikes	
JCE210313-DL-R1		Survival	

2.9 In-Situ Temperature Measurement Test (ISTMT) | UL1598-2008, 3rd Edition

Test date	2021-04-13	Test Ambient	25±5° C
Input Vol./Frequency	120.0V / 60Hz	Output Current of Single LED(mA)	131.7
Sample No.	LED Package Model	Maximum Measured LED Ts Point Temperature (°C)	Maximum permitted Ts temperature for L70 ≥ 50,000 hrs (°C)
JCE210313-DL-R1	SAWxC22B-xx	100.3	105

In-Situ Picture - Ts:



2.10 Maximum Measured Ballast or Driver Case Temperature	UL1598-2008, 3rd Edition
---	--

Test date	2021-04-13	Test Ambient	25±5° C
Sample No.	Maximum Measured Driver Case Temperature (°C)	Maximum Driver Case Temperature Limited (°C)	
JCE210313-DL-R1	96.3	105	

In-Situ Picture - Ts:





2.11 Standby Power Consumption:	ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.2
--	--

Test date	2021-04-13	Test Ambient:	25±1° C
Model Number	LRKT3571-5CCT(2700K)	Stabilization Time (min)	60

Electrical Measurement – when the luminaires turned off:

Sample No.	Standby Power Consumption(W):
JCE210313-DL-R1	0



3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-S-451	2 meter Integrating Sphere	Verified by D204 standard lamp	
ST-R-S-455	Spectral analysis system HAAS-1200	Verified by D204 standard lamp	
ST-R-S-452	Standard Lamp D204	2021-04-15	2022-04-14
ST-R-S-453	Power Meter for Integrating Sphere	2021-04-13	2022-04-06
ST-R-S-407	Goniophotometer system	Verified by S1530039 standard lamp	
ST-R-S-410	Standard Lamp S1530039	2021-04-15	2022-04-14
ST-R-S-408	Power Meter for Goniophotometer	2021-04-13	2022-04-06
ST-R-S-027	Digital Luxmeter	2021-04-08	2022-04-07
ST-R-S-016	Oscillograph	2021-04-13	2022-04-06
ST-R-S-017	Probe	2021-04-08	2022-04-07
ST-R-361	ZLB61012X	2020-08-19	2021-08-20
ST-R-414	LFA-3000	2020-12-18	2021-12-17
Uncertainty: Photometric Measurement (Sphere): 2.72%, k=2 Chromaticity Measurement (Sphere): 43.60K, k=2 Photometric Measurement (Goniophotometer): 3.44%, k=2			

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