



Report No.: GZE161131-E

LM-79-08 Test Report

For

IKIO LED LIGHTING (Brand Name: IKIO)

8470 Allison Pointe Blvd, Suite 128
Indianapolis, IN 46250

Dual Mode Internal Driver (UL Type A and Type B)

Model name(s): IK-T802-0015-XXA&B-J

Representative (Tested) Model: IK-T802-0015-30A&B-J
IK-T802-0015-35A&B-J
IK-T802-0015-40A&B-J
IK-T802-0015-50A&B-J

Model Difference: All construction and rating are the same, except CCT

Test & Report By:

Jack Luo

Engineer: Jack Luo

Date: Nov.77,2016

Review By:

Tommy Liang

Manager: Tommy Liang

Note: 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/QR4909-A/2

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

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1.1 Product Information:

Organization Name	IKIO LED LIGHTING	
Brand Name	IKIO	
Model Number	IK-T802-0015-XXA&B-J	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Dual Mode Internal Driver (UL Type A and Type B)	
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60 Hz	
Nominal Power	15W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K,3500K,4000K,5000K	
LED Manufacturer	EVERLIGHT ELECTRONICS CO.,LTD	
LED Model	67-21S Series	
Test Ballast	OSRAM SYLVANIA QTP 3x32T8/UNV ISN-SC	
Sample Number	GZE161031-E1,E2,E3(3000K),E4(3500K), E5(4000K),E6(5000K)	
Lamp Length	600	mm
Lamp Width	--	mm
Number of Units (modular products)	N/A	s

Photo



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1.2 Test Specifications:

Date of Receipt	Nov.17,2016
Date of Test	Nov.17,2016
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
Reference Work Instruction	QD25

1.3 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.

2.1.1 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-17	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T802-0015-30A&B-J with ballast OSRAM SYLVANIA QTP 3x32T8/UNV ISN-SC		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161031	120.0	60	0.1330	15.68	0.9823	5.04
-E1	277.0	60	0.0620	15.48	0.9010	7.83
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

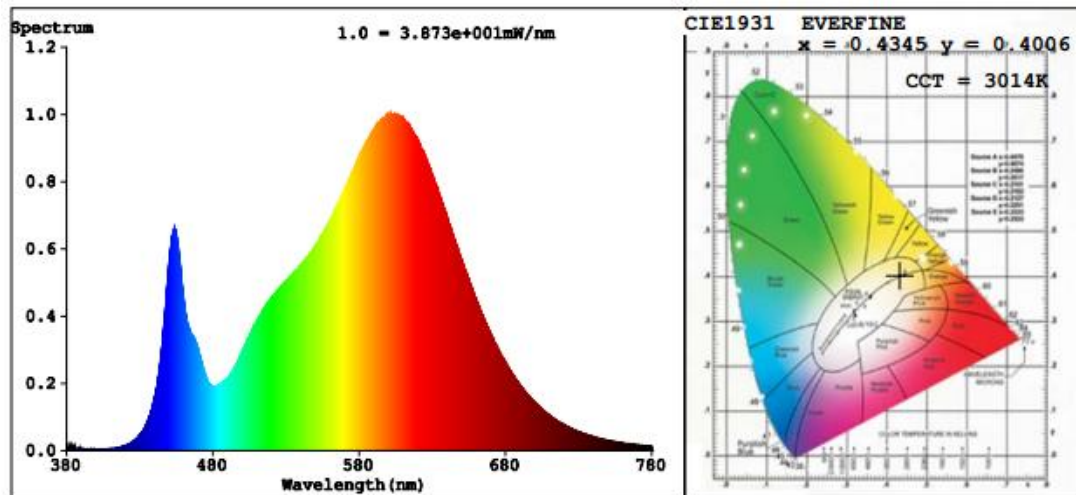
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	91	R10	80
CCT (K)	3014	R3	96	R11	78
Duv	-0.0010	R4	79	R12	68
Chromaticity (x, y)	x=0.4345 y=0.4006	R5	80	R13	83
Chromaticity (u', v')	u'=0.2505 v'=0.5197	R6	89	R14	98
Color Rendering Index (CRI)	82.0	R7	82	R15	73
R9	5	R8	58	--	--

Photometric Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.0 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	2059	2045	Bare Lamp: >= 800(-10%)
Luminous Efficacy (lm/W)	131.29	132.11	Bare lamp: >= 110(-3%)

Spectral Power Distribution & Chromaticity Diagram



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2.1.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-17	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T802-0015-30A&B-J Connected to line voltage		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161031 -E1	120.0	60	0.1245	14.63	0.9790	8.16
	277.0	60	0.0579	14.47	0.9026	12.74
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

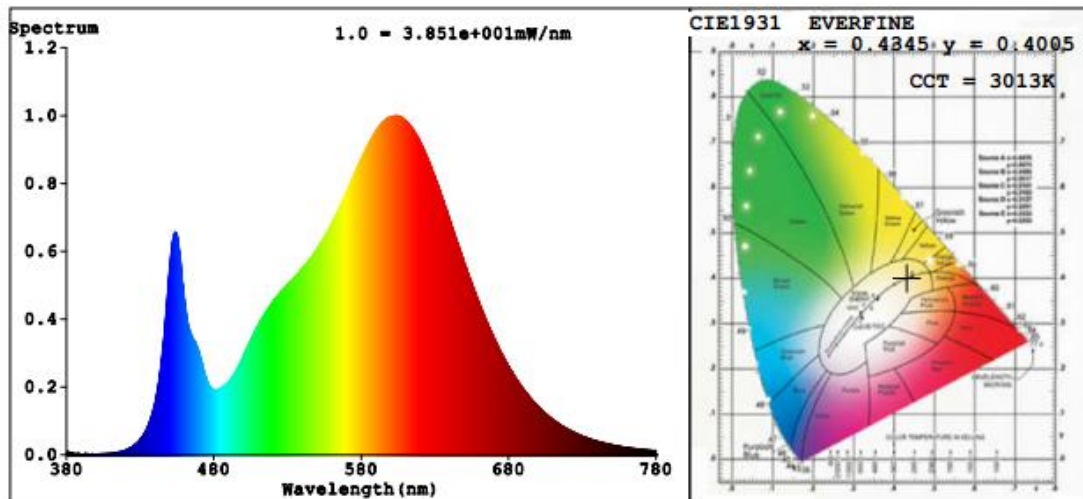
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	91	R10	80
CCT (K)	3013	R3	96	R11	77
Duv	-0.0001	R4	79	R12	68
Chromaticity (x, y)	x=0.4345 y=0.4005	R5	81	R13	83
Chromaticity (u', v')	u'=0.2505 v'=0.5196	R6	89	R14	98
Color Rendering Index (CRI)	81.9	R7	82	R15	73
R9	5	R8	58	--	--

Photometric Measurement for Bare-lamp –Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.0 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	1946	1943	Bare Lamp: >= 800(-10%)
Luminous Efficacy (lm/W)	133.01	134.28	Bare lamp: >= 110(-3%)

Spectral Power Distribution & Chromaticity Diagram



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Summary

Sample No.	Test Method	Voltage (Vac)	Frequency (Hz)	Lumen Output(lm)	Lumen Efficacy(lm/w)	Power (W)
GZE161031-E1	With Ballast	120.0	60	2059	131.29	15.68
GZE161031-E1	Connected to line voltage	120.0	60	1946	133.01	14.63

The measured lumen efficacy of test condition “with ballast” was more than test condition “Connect to line voltage”, but had more power consumption. So the following test will be conducted as test condition “with ballast”.

2.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-17	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T802-0015-30A&B-J with ballast OSRAM SYLVANIA QTP 3x32T8/UNV ISN-SC		

Electrical Measurement for 3-lamp in Lithonia 2PM3 9 cell 2x2 parabolic:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161031	120.0	60	0.3998	47.05	0.9806	5.69
-E1,E2,E3	277.0	60	0.1860	46.44	0.9015	7.42
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement for 3-lamp in Lithonia 2PM3 9 cell 2x2 parabolic - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	92	R10	80
CCT (K)	3030	R3	96	R11	77
Duv	-0.0011	R4	79	R12	68
Chromaticity (x, y)	x=0.4332 y=0.4001	R5	81	R13	83
Chromaticity (u', v')	u'=0.2499 v'=0.5193	R6	89	R14	98
Color Rendering Index (CRI)	82.0	R7	82	R15	74
R9	5	R8	58	--	--

Photometric Measurement 3-lamp in Lithonia 2PM3 9 cell 2x2 parabolic – Goniophotometer Method:

Parameter	Result		DLC V4.0 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	5140.5	5106.0	In luminaire (3 lamps): >= 2000(-10%)
Luminous Efficacy (lm/W)	109.26	109.95	In luminaire: >= 100(-3%)
Zonal lumens in the 0-60 °zone (%)	92.8	--	>= 75(-3)
SC: 0-180 °(if applicable)	1.20	--	1.0-2.0(±0.1)
SC: 90-270 °(if applicable)	1.26	--	1.0-2.0(±0.1)
Beam Angle (°)	93.3	--	--
Center Beam Candle Power (cd)	2495	--	--

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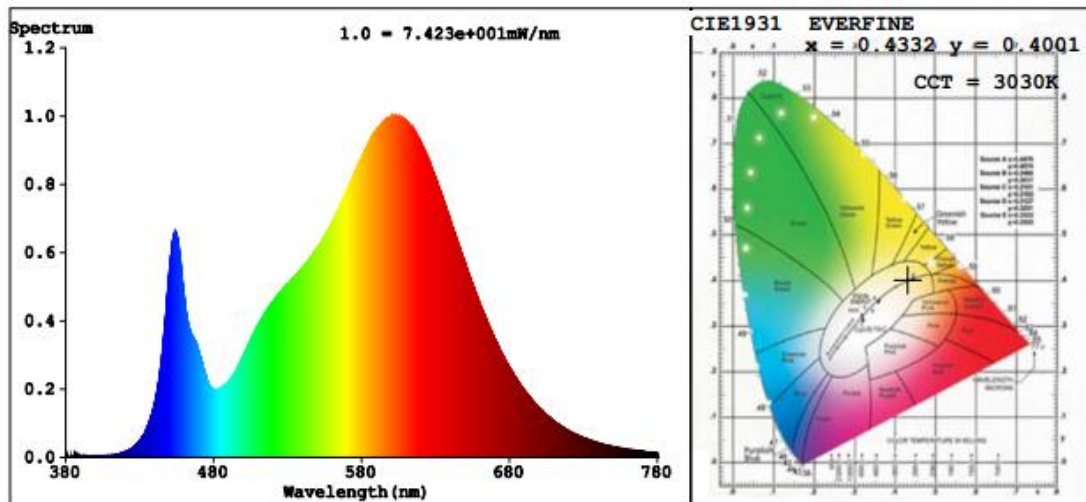
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Spectral Power Distribution & Chromaticity Diagram

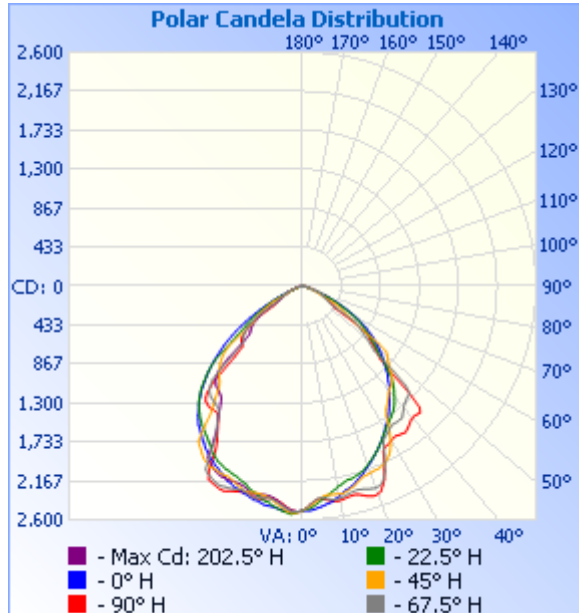


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,886.4	36.7%
0-40	3,012.2	58.6%
0-60	4,768.6	92.8%
60-90	365.0	7.1%
70-100	88.5	1.7%
90-120	1.1	0%
0-90	5,133.5	99.9%
90-180	6.3	0.1%
0-180	5,139.9	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	230.7	4.5%	90-100	0.0	0%
10-20	658.1	12.8%	100-110	0.2	0%
20-30	997.7	19.4%	110-120	0.9	0%
30-40	1,125.8	21.9%	120-130	1.5	0%
40-50	1,070.4	20.8%	130-140	1.4	0%
50-60	686.0	13.3%	140-150	1.0	0%
60-70	276.4	5.4%	150-160	0.7	0%
70-80	76.5	1.5%	160-170	0.5	0%
80-90	12.0	0.2%	170-180	0.2	0%

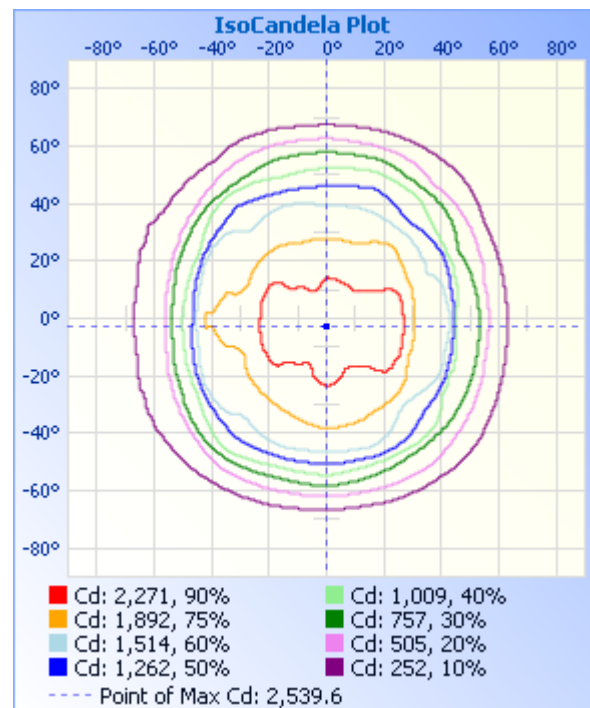
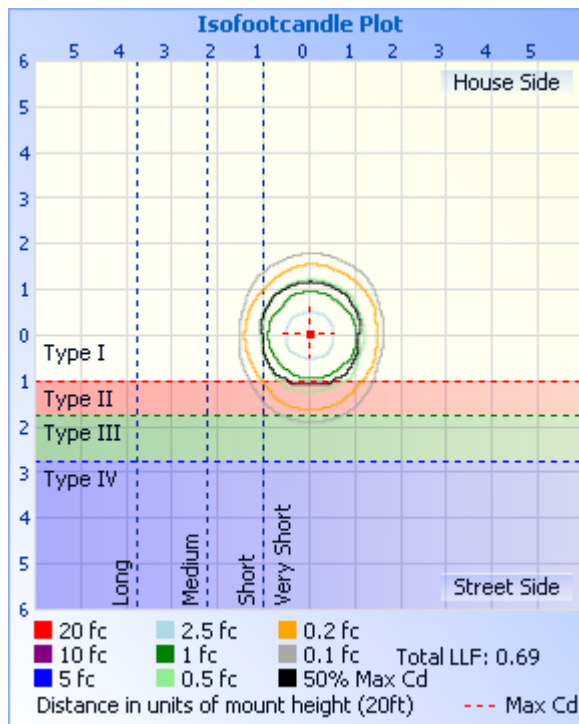
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	8.63 fc	38.3 ft	34.5 ft
34.0ft	2.16 fc	76.7 ft	68.9 ft
51.0ft	0.96 fc	115.0 ft	103.4 ft
68.0ft	0.54 fc	153.4 ft	137.9 ft
85.0ft	0.35 fc	191.7 ft	172.3 ft
102.0ft	0.24 fc	230.1 ft	206.8 ft

Vert. Spread: 96.9°
Horiz. Spread: 90.8°



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Table--1 UNIT: cd

C (DEG) γ (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338	
0	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	2495	
5	2438	2450	2464	2486	2461	2391	2361	2362	2376	2386	2395	2444	2505	2512	2482	2460	
10	2395	2358	2338	2379	2370	2264	2349	2394	2420	2415	2368	2352	2469	2425	2370	2391	
15	2379	2352	2253	2241	2262	2204	2284	2345	2400	2363	2353	2268	2403	2324	2372	2384	
20	2424	2305	2187	2091	2130	2117	2210	2388	2460	2396	2270	2235	2335	2233	2293	2392	
25	2404	2279	2085	1960	1992	1991	2167	2162	2149	2252	2266	2165	2232	2174	2261	2371	
30	1900	1992	2018	1848	1837	1847	1959	1894	1979	1902	2146	2056	2125	2051	2209	1926	
35	1698	1592	1859	1704	1677	1738	1632	1842	1987	1827	1802	1908	1984	1927	1908	1644	
40	1677	1482	1478	1517	1500	1588	1505	1752	1910	1782	1600	1761	1802	1796	1439	1599	
45	945	1319	1169	1356	1319	1361	1404	1688	1677	1680	1477	1577	1570	1590	1309	1238	
50	880	759	1025	1182	1128	1074	1234	969	1035	1042	1266	1265	1284	1264	1126	858	
55	646	602	620	933	921	861	722	746	684	792	1047	875	960	778	644	668	
60	297	274	417	612	674	644	473	321	349	348	521	566	610	523	458	301	
65	217	190	228	333	404	386	220	245	302	259	247	300	305	267	193	217	
70	142	122	115	146	176	152	133	147	164	157	120	114	116	103	114	141	
75	81.4	67.4	57.5	64.6	73.3	68.0	66.5	77.8	88.9	80.0	58.6	54.2	53.9	47.9	57.9	78.8	
80	40.3	32.3	27.4	27.4	29.8	29.4	31.0	35.8	42.2	35.6	27.2	24.7	23.9	22.5	27.0	37.3	
85	13.1	9.59	8.12	7.46	7.60	7.77	8.48	9.93	13.2	10.1	7.80	7.45	7.13	7.09	8.27	11.7	
90	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
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	0.06	0.00	
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.42	0.05	0.05	0.26	0.85	0.32	
110	0.42	0.48	0.64	0.16	0.16	0.21	0.05	0.00	0.38	0.48	1.17	0.42	0.53	0.95	1.59	1.28	
115	1.12	1.00	1.17	0.27	0.43	0.37	0.37	0.11	0.80	0.69	2.07	0.42	0.85	0.84	1.76	1.81	
120	1.54	1.48	1.54	1.11	0.48	0.79	1.17	0.74	1.12	1.17	2.07	0.95	1.12	1.38	2.02	1.91	
125	2.28	2.06	1.54	2.16	1.81	2.28	1.17	1.33	1.65	1.38	2.07	1.06	2.18	2.12	1.75	2.12	
130	2.45	2.12	1.54	1.97	2.07	1.96	1.22	1.33	1.65	1.27	1.59	1.27	2.18	2.28	1.54	2.12	
135	2.45	2.12	1.28	1.96	2.07	2.01	1.22	1.33	1.65	1.38	1.27	1.54	2.18	2.22	1.33	2.07	
140	2.45	2.17	1.06	1.96	2.13	2.01	0.91	1.38	1.65	1.48	0.69	1.70	2.23	2.12	0.85	2.18	
145	2.45	1.80	1.06	1.96	1.81	1.85	0.42	1.54	1.65	1.48	0.64	1.64	2.03	2.28	0.90	2.18	
150	2.50	1.59	0.80	1.86	2.13	1.69	0.32	1.59	1.65	1.48	0.74	1.64	2.39	2.33	1.06	2.18	
155	1.91	1.22	0.74	1.86	2.13	1.59	0.48	1.59	1.65	1.48	0.90	1.70	2.18	2.44	1.22	1.65	
160	1.86	1.17	0.74	1.86	2.13	1.59	1.17	1.59	1.70	1.48	1.22	1.38	2.08	2.57	1.54	1.33	
165	1.86	1.01	0.90	1.80	2.13	1.54	1.22	1.49	1.97	1.64	1.38	1.49	1.86	2.12	1.80	1.43	
170	2.02	1.27	1.22	2.37	2.13	1.85	1.27	1.38	1.97	1.64	1.38	1.49	2.82	2.81	1.96	1.38	
175	1.76	1.27	1.17	2.49	2.93	1.96	1.38	1.43	1.65	1.54	1.38	1.49	2.61	2.91	1.86	1.38	
180	1.54	1.32	1.43	2.49	2.77	2.07	1.38	1.33	1.65	1.54	1.33	1.27	2.50	2.65	1.86	1.38	

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2.3 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-17	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T802-0015-35A&B-J with ballast OSRAM SYLVANIA QTP 3x32T8/UNV ISN-SC		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161031	120.0	60	0.1332	15.64	0.9784	4.95
-E4	277.0	60	0.0627	15.65	0.9018	6.83
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

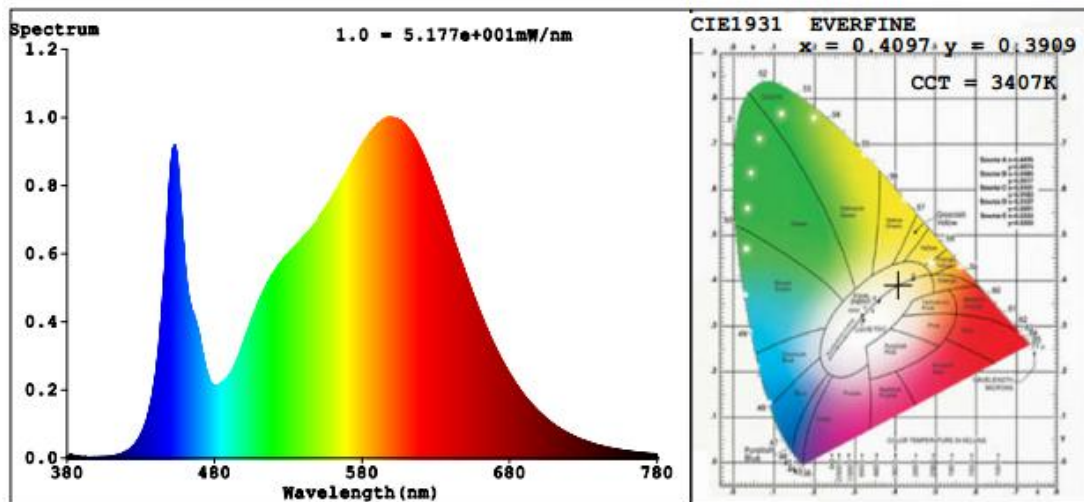
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	7
Frequency (Hz)	60	R2	90	R10	76
CCT (K)	3407	R3	96	R11	78
Duv	-0.0008	R4	80	R12	62
Chromaticity (x, y)	x=0.4097 y=0.3909	R5	81	R13	83
Chromaticity (u', v')	u'=0.2385 v'=0.5120	R6	86	R14	98
Color Rendering Index (CRI)	82.3	R7	84	R15	75
R9	7	R8	61	--	--

Photometric Measurement for Bare-lamp –Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.0 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	2086	2107	Bare Lamp: >= 800(-10%)
Luminous Efficacy (lm/W)	133.38	134.63	Bare lamp: >= 110(-3%)

Spectral Power Distribution & Chromaticity Diagram



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2.4 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-17	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T802-0015-40A&B-J with ballast OSRAM SYLVANIA QTP 3x32T8/UNV ISN-SC		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161031	120.0	60	0.1345	15.85	0.9821	5.33
-E5	277.0	60	0.0630	15.70	0.8996	6.72
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

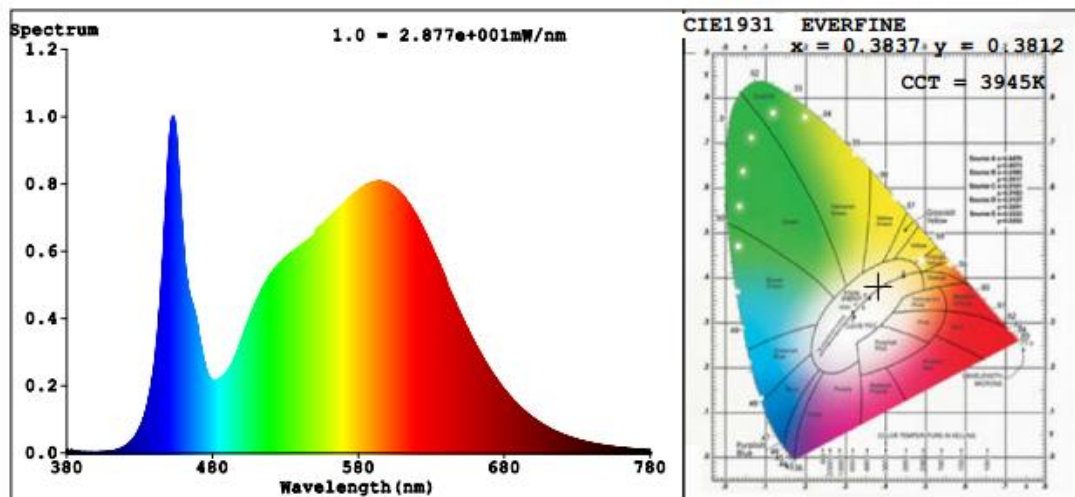
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	7
Frequency (Hz)	60	R2	89	R10	73
CCT (K)	3945	R3	94	R11	78
Duv	0.0011	R4	80	R12	56
Chromaticity (x, y)	x=0.3837 y=0.3812	R5	80	R13	83
Chromaticity (u', v')	u'=0.2255 v'=0.5040	R6	84	R14	97
Color Rendering Index (CRI)	82.1	R7	86	R15	75
R9	7	R8	64	--	--

Photometric Measurement for Bare-lamp –Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.0 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	2147	2139	Bare Lamp: >= 800(-10%)
Luminous Efficacy (lm/W)	135.46	136.24	Bare lamp: >= 110(-3%)

Spectral Power Distribution & Chromaticity Diagram



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

Report Format Number STD/QR4909-A/2

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2.5 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-17	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T802-0015-50A&B-J with ballast OSRAM SYLVANIA QTP 3x32T8/UNV ISN-SC		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161031	120.0	60	0.1321	15.55	0.9809	5.50
-E6	277.0	60	0.0611	15.27	0.9022	7.51
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

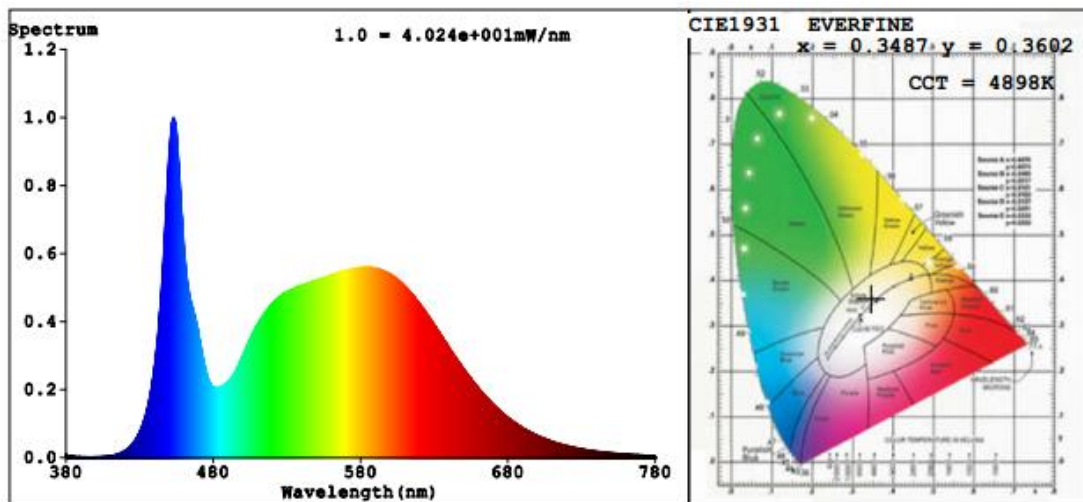
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	7
Frequency (Hz)	60	R2	88	R10	71
CCT (K)	4898	R3	93	R11	78
Duv	0.0028	R4	80	R12	51
Chromaticity (x, y)	x=0.3487 y=0.3602	R5	80	R13	83
Chromaticity (u', v')	u'=0.2105 v'=0.4893	R6	82	R14	96
Color Rendering Index (CRI)	82.3	R7	88	R15	75
R9	7	R8	67	--	--

Photometric Measurement for Bare-lamp –Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.0 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	2113	2091	Bare Lamp: >= 800(-10%)
Luminous Efficacy (lm/W)	135.88	136.94	Bare lamp: >= 110(-3%)

Spectral Power Distribution & Chromaticity Diagram



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3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2016-07-01	2017-06-30
ST-R-331	Spectral analysis system HAAS-2000	2016-07-01	2017-06-30
D204	Standard Lamp	2016-07-01	2017-06-30
PF2010	Power Meter for Integrating Sphere	2016-07-01	2017-06-30
EE-09	Goniophotometer system	2016-07-01	2017-06-30
D908S	Standard Lamp	2016-07-01	2017-06-30
PF210	Power Meter for Goniophotometer	2016-07-01	2017-06-30
ST-R-181A	Temperature Tester	2016-07-01	2017-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

******* END OF REPORT *******