



Report No.: GZE161131-S

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-T804-0020-XXA&B-J

Representative (Tested) Model: IK-T804-0020-30A&B-J
 IK-T804-0020-35A&B-J
 IK-T804-0020-40A&B-J
 IK-T804-0020-50A&B-J

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

Test & Report By:

Jack Luo

Engineer: Jack Luo

Date: Nov.14,2016

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

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

1.1 Product Information:

Organization Name	IKIO LED LIGHTING	
Brand Name	IKIO	
Model Number	IK-T804-0020-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	20W	
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 2x32T8/UNV ISN-SC	
Sample Number	GZE161131-S1,S2(3000K),S3(3500K), S4(4000K),S5(5000K)	
Lamp Length	1200	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.12, 2016
Date of Test	Nov.12, 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	2016-11-12	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T804-0020-30A&B-J with ballast OSRAM SYLVANIA QTP 2x32T8/UNV ISN-SC		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161131	120.0	60	0.1672	19.97	0.9951	5.00
-S1	277.0	60	0.0727	19.60	0.9734	6.92
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

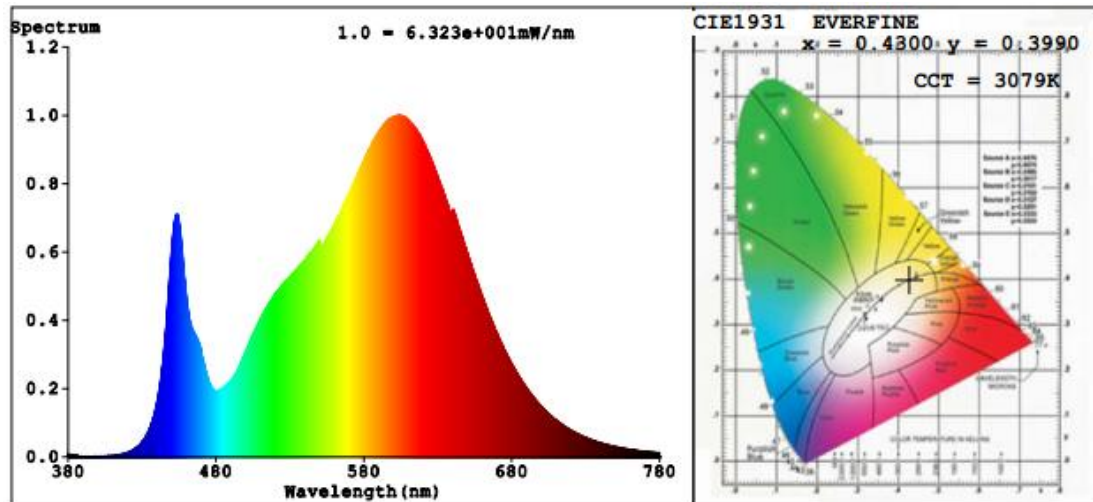
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	82	R9	11
Frequency (Hz)	60	R2	92	R10	81
CCT (K)	3079	R3	96	R11	80
Duv	-0.0010	R4	81	R12	68
Chromaticity (x, y)	x=0.4300 y=0.3990	R5	82	R13	85
Chromaticity (u', v')	u'=0.2483 v'=0.5183	R6	90	R14	99
Color Rendering Index (CRI)	83.5	R7	83	R15	75
R9	11	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)	2807	2803	Bare Lamp: >= 1600(-10%)
Luminous Efficacy (lm/W)	140.60	143.05	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	2016-11-12	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T804-0020-30A&B-J Connected to line voltage		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161131	120.0	60	0.1616	19.06	0.9829	8.72
-S1	277.0	60	0.0727	18.75	0.9315	14.31
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

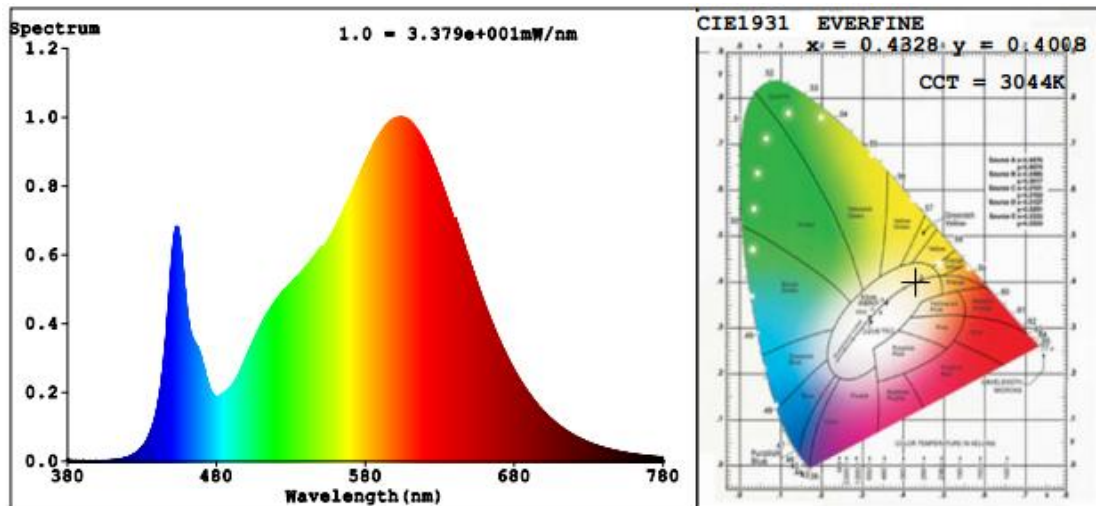
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	82	R9	8
Frequency (Hz)	60	R2	92	R10	80
CCT (K)	3044	R3	96	R11	79
Duv	-0.0007	R4	80	R12	68
Chromaticity (x, y)	x=0.4328 y=0.4008	R5	81	R13	84
Chromaticity (u', v')	u'=0.2493 v'=0.5195	R6	89	R14	99
Color Rendering Index (CRI)	82.8	R7	83	R15	74
R9	8	R8	59	--	--

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)	2714	2715	Bare Lamp: >= 1600(-10%)
Luminous Efficacy (lm/W)	142.39	144.80	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)
GZE161131-S1	With Ballast	120.0	60	2807	140.60	19.97
GZE161131-S1	Connected to line voltage	120.0	60	2714	142.39	19.06

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	2016-11-12	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T804-0020-30A&B-J with ballast OSRAM SYLVANIA QTP 2x32T8/UNV ISN-SC		

Electrical Measurement for 2-lamp in Lithonia 2PM3N 12 cell 2x4 parabolic:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161131	120.0	60	0.3336	39.93	0.9974	4.68
-S1,S2	277.0	60	0.1457	39.19	0.9713	6.35
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement for 2-lamp in Lithonia 2PM3N 12 cell 2x4 parabolic - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	7
Frequency (Hz)	60	R2	92	R10	80
CCT (K)	3019	R3	96	R11	78
Duv	-0.0013	R4	80	R12	68
Chromaticity (x, y)	x=0.4337 y=0.3996	R5	81	R13	84
Chromaticity (u', v')	u'=0.2504 v'=0.5191	R6	89	R14	99
Color Rendering Index (CRI)	82.4	R7	82	R15	74
R9	7	R8	59	--	--

Photometric Measurement 2-lamp in Lithonia 2PM3N 12 cell 2x4 parabolic – Goniophotometer Method:

Parameter	Result		DLC V4.0 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	4911.2	4904.6	In luminaire (2 lamps): >= 3000(-10%)
Luminous Efficacy (lm/W)	123.00	125.15	In luminaire: >= 100(-3%)
Zonal lumens in the 0-60° zone (%)	91.7	--	>= 75(-3)
SC: 0-180° (if applicable)	1.40	--	1.0-2.0(±0.1)
SC: 90-270° (if applicable)	1.19	--	1.0-2.0(±0.1)
Beam Angle (°)	103.6	--	--
Center Beam Candle Power (cd)	2014	--	--

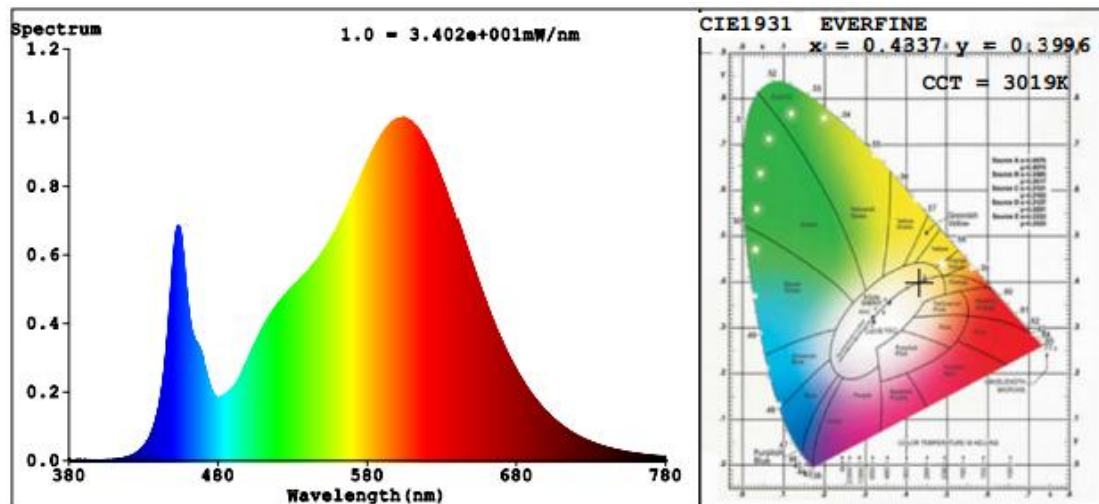
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Spectral Power Distribution & Chromaticity Diagram



Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,588.0	32.3%
0-40	2,627.0	53.5%
0-60	4,502.2	91.7%
60-90	407.0	8.3%
70-100	105.5	2.1%
90-120	0.3	0%
0-90	4,909.2	100%
90-180	1.3	0%
0-180	4,910.5	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	190.8	3.9%	90-100	0.0	0%
10-20	550.9	11.2%	100-110	0.1	0%
20-30	846.3	17.2%	110-120	0.2	0%
30-40	1,039.0	21.2%	120-130	0.3	0%
40-50	1,087.6	22.1%	130-140	0.2	0%
50-60	787.6	16.0%	140-150	0.2	0%
60-70	301.5	6.1%	150-160	0.1	0%
70-80	89.7	1.8%	160-170	0.1	0%
80-90	15.8	0.3%	170-180	0.0	0%

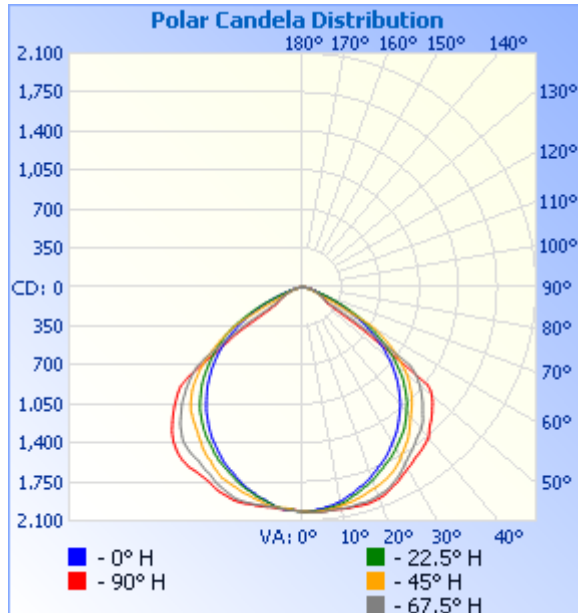
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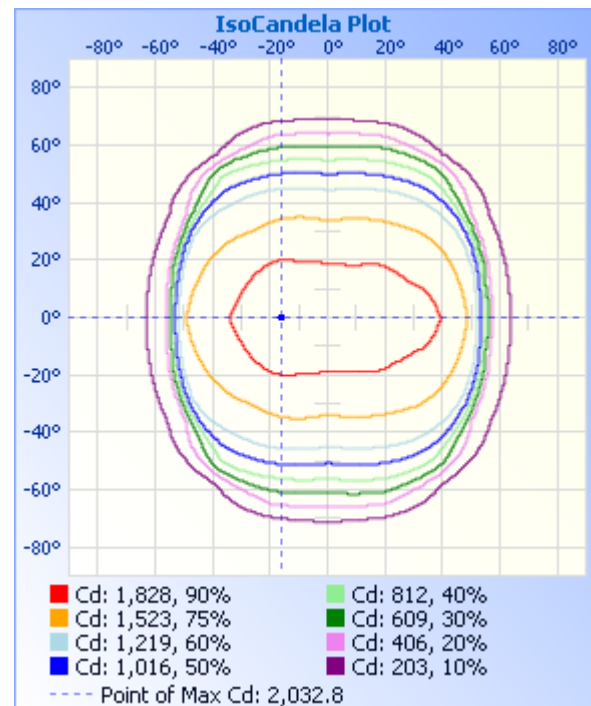
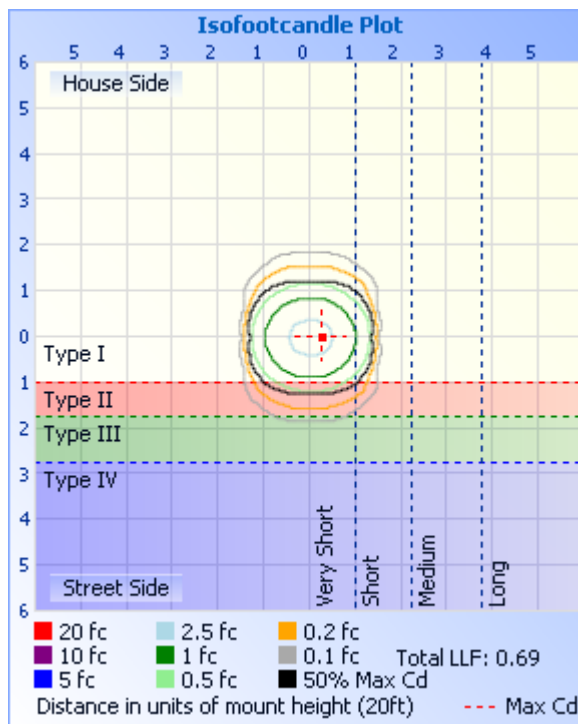
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width
17.0ft	6.97 fc	41.6 ft 45.7 ft
34.0ft	1.74 fc	83.2 ft 91.4 ft
51.0ft	0.77 fc	124.7 ft 137.2 ft
68.0ft	0.44 fc	166.3 ft 182.9 ft
85.0ft	0.28 fc	207.9 ft 228.6 ft
102.0ft	0.19 fc	249.5 ft 274.3 ft

■ Vert. Spread: 101.5°
■ Horiz. Spread: 106.7°



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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	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	2014	
5	2005	2006	1994	1996	1999	2011	2016	2028	2023	2023	2011	2016	2001	1998	1993	2000	
10	2002	1996	1973	1952	1955	1977	1992	2019	2023	2014	1991	1972	1940	1950	1977	1995	
15	2011	1989	1932	1893	1882	1915	1960	2012	2030	2014	1947	1906	1879	1888	1926	1999	
20	1995	1968	1888	1826	1808	1843	1917	1993	2019	1988	1907	1830	1794	1817	1887	1966	
25	1950	1909	1837	1742	1719	1759	1862	1935	1959	1925	1848	1753	1708	1743	1824	1902	
30	1915	1837	1751	1662	1615	1676	1766	1838	1886	1831	1761	1663	1601	1649	1739	1833	
35	1891	1787	1647	1563	1499	1580	1655	1744	1823	1739	1638	1564	1481	1552	1632	1789	
40	1810	1705	1542	1445	1368	1456	1514	1662	1762	1652	1503	1452	1349	1436	1537	1697	
45	1652	1545	1420	1290	1209	1308	1385	1526	1642	1519	1376	1309	1200	1290	1419	1541	
50	1460	1338	1234	1104	1027	1119	1226	1378	1516	1373	1220	1133	1030	1115	1236	1341	
55	724	936	978	901	820	908	1004	924	633	967	1015	925	842	931	992	867	
60	248	251	698	679	599	668	753	234	239	242	765	702	630	721	714	256	
65	183	177	198	417	379	419	182	178	189	181	204	460	424	457	206	182	
70	128	119	110	181	181	197	110	127	140	129	120	223	224	216	121	123	
75	85.5	74.0	61.2	75.7	86.3	76.4	63.6	84.0	96.9	84.6	67.2	93.2	103	91.8	67.1	78.1	
80	43.6	36.9	33.0	34.7	38.8	34.8	32.4	44.6	52.9	44.8	33.6	38.7	41.4	38.2	33.8	39.6	
85	14.5	12.0	10.3	10.7	11.6	10.7	11.2	14.9	18.0	14.8	10.9	11.1	11.9	11.3	11.1	13.2	
90	0.00	0.00	0.01	0.01	0.03	0.02	0.02	0.01	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	0.16	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	0.37	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	0.53	0.05	0.00	0.00	0.32	0.00	
110	0.00	0.00	0.16	0.00	0.00	0.00	0.21	0.00	0.11	0.11	0.79	0.00	0.00	0.00	0.48	0.48	
115	0.16	0.37	0.47	0.00	0.00	0.00	0.32	0.21	0.43	0.48	0.79	0.00	0.00	0.00	0.42	0.48	
120	0.48	0.42	0.48	0.00	0.00	0.00	0.47	0.58	0.53	0.42	0.79	0.00	0.00	0.00	0.42	0.48	
125	0.42	0.48	0.48	0.00	0.00	0.00	0.48	0.53	0.48	0.37	0.85	0.00	0.00	0.00	0.37	0.48	
130	0.48	0.58	0.37	0.00	0.00	0.00	0.42	0.53	0.48	0.48	0.48	0.05	0.11	0.00	0.00	0.48	
135	0.48	0.64	0.32	0.00	0.00	0.00	0.37	0.53	0.48	0.48	0.42	0.21	0.16	0.00	0.00	0.48	
140	0.48	0.64	0.16	0.00	0.00	0.00	0.27	0.53	0.48	0.48	0.11	0.32	0.21	0.16	0.00	0.43	
145	0.53	0.58	0.00	0.00	0.00	0.00	0.05	0.53	0.48	0.32	0.21	0.32	0.32	0.26	0.00	0.42	
150	0.53	0.37	0.00	0.00	0.00	0.00	0.05	0.53	0.48	0.32	0.16	0.53	0.48	0.37	0.32	0.21	
155	0.43	0.21	0.00	0.00	0.05	0.37	0.16	0.27	0.42	0.27	0.26	0.58	0.53	0.53	0.53	0.21	
160	0.42	0.21	0.00	0.26	0.26	0.53	0.31	0.27	0.58	0.37	0.37	0.58	0.53	0.58	0.53	0.32	
165	0.53	0.21	0.05	0.42	0.48	0.53	0.42	0.32	0.53	0.37	0.37	0.58	0.53	0.58	0.53	0.37	
170	0.58	0.21	0.32	0.37	0.48	0.53	0.42	0.43	0.48	0.37	0.37	0.58	0.53	0.58	0.53	0.37	
175	0.53	0.21	0.37	0.53	0.58	0.53	0.42	0.48	0.53	0.37	0.21	0.42	0.53	0.58	0.53	0.37	
180	0.37	0.21	0.42	0.53	0.69	0.64	0.42	0.27	0.27	0.37	0.21	0.42	0.53	0.53	0.58	0.43	

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2.3 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-12	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T804-0020-35A&B-J with ballast OSRAM SYLVANIA QTP 2x32T8/UNV ISN-SC		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161131	120.0	60	0.1660	19.89	0.9981	4.87
-S3	277.0	60	0.0733	19.77	0.9736	6.59
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

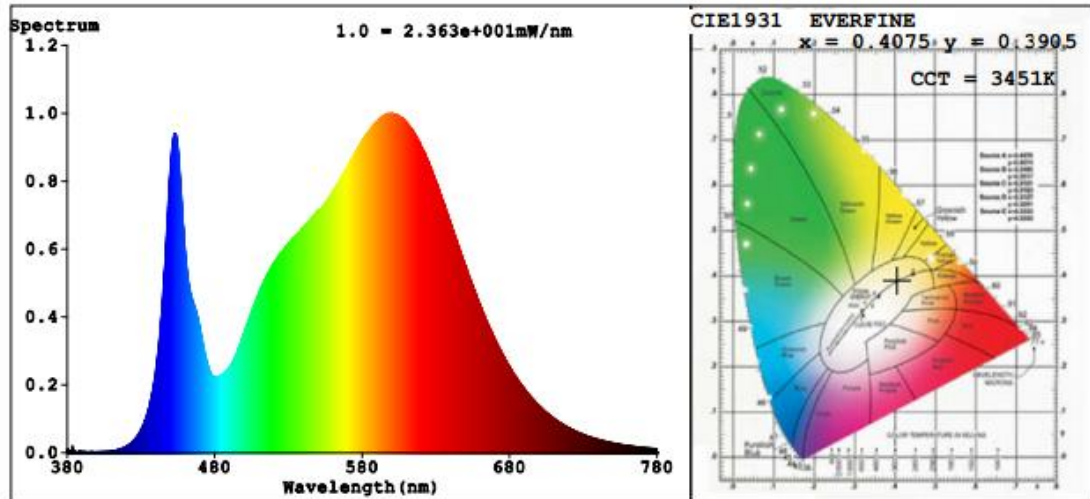
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	82	R9	10
Frequency (Hz)	60	R2	90	R10	77
CCT (K)	3451	R3	96	R11	80
Duv	-0.0006	R4	81	R12	62
Chromaticity (x, y)	x=0.4075 y=0.3905	R5	81	R13	84
Chromaticity (u', v')	u'=0.2372 v'=0.5115	R6	87	R14	98
Color Rendering Index (CRI)	83.0	R7	85	R15	75
R9	10	R8	63	--	--

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)	2858	2885	Bare Lamp: >= 1600(-10%)
Luminous Efficacy (lm/W)	143.69	145.93	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	2016-11-12	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T804-0020-40A&B-J with ballast OSRAM SYLVANIA QTP 2x32T8/UNV ISN-SC		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161131	120.0	60	0.1661	19.91	0.9987	5.34
-S4	277.0	60	0.0730	19.65	0.9711	5.91
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

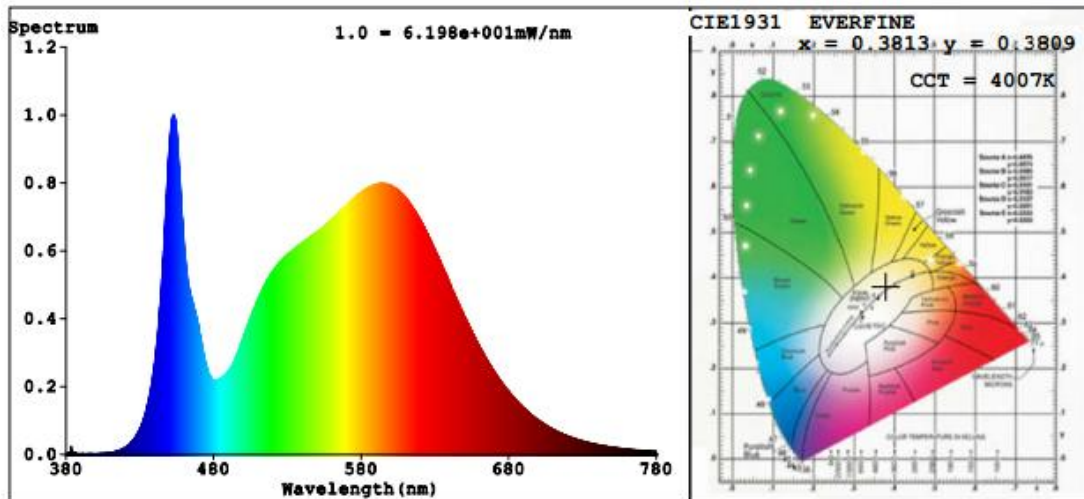
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	7
Frequency (Hz)	60	R2	89	R10	72
CCT (K)	4007	R3	94	R11	79
Duv	0.0017	R4	81	R12	56
Chromaticity (x, y)	x=0.3813 y=0.3809	R5	80	R13	83
Chromaticity (u', v')	u'=0.2240 v'=0.5035	R6	84	R14	97
Color Rendering Index (CRI)	82.3	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)	2898	2909	Bare Lamp: >= 1600(-10%)
Luminous Efficacy (lm/W)	145.55	148.04	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

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>

2.5 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-12	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	IK-T804-0020-50A&B-J with ballast OSRAM SYLVANIA QTP 2x32T8/UNV ISN-SC		

Electrical Measurement for Bare-lamp:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161131	120.0	60	0.1684	20.12	0.9957	4.66
-S5	277.0	60	0.0732	19.69	0.9714	6.17
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

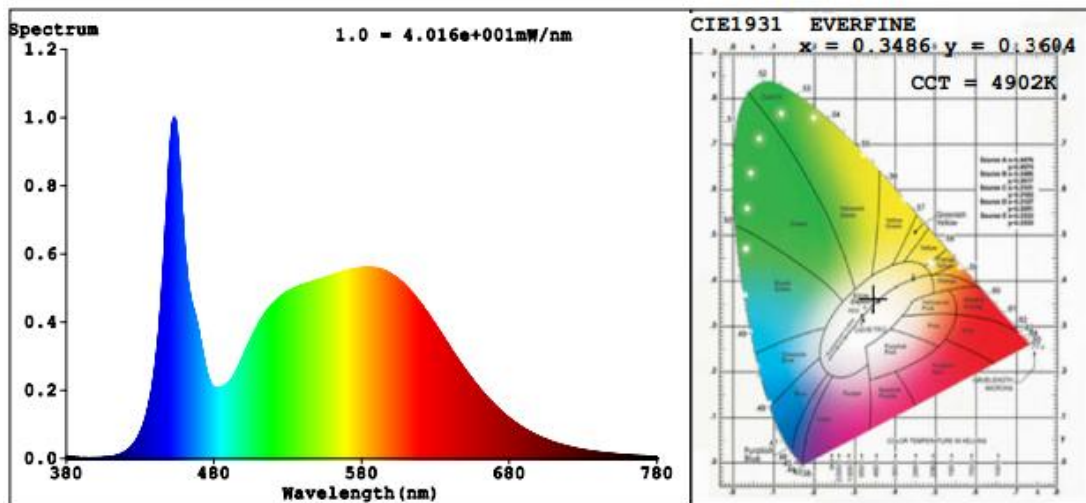
Chromaticity Measurement for Bare-lamp - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	7
Frequency (Hz)	60	R2	88	R10	71
CCT (K)	4902	R3	93	R11	78
Duv	0.0030	R4	80	R12	51
Chromaticity (x, y)	x=0.3486 y=0.3604	R5	80	R13	83
Chromaticity (u', v')	u'=0.2104 v'=0.4894	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)	2943	2933	Bare Lamp: >= 1600(-10%)
Luminous Efficacy (lm/W)	146.27	148.96	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 *******