



Report No.: GZE160118-F

NVLAP LAB CODE 201011-0

LM-79-08 Test Report

For

L-TECH CORPORTION (Brand Name: L-TECH CORP)

SHAOGANGTOU DISTRICT.QIAOTOU TOWN.DONGGUAN
CITY.GUANGDONG PROVINCE,CHINA

LED DOWNLIGHT

Model name(s): CLED8A/P/R-40 WITH TCLD840HZ(CLKT840)

Representative (Tested) Model: CLED8A/P/R-40 WITH TCLD840HZ(CLKT840)(3000K)
CLED8A/P/R-40 WITH TCLD840HZ(CLKT840)(4000K)

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

Test & Report By:

Johnson Sun

Engineer: Johnson Sun

Date: Jan.13,2016

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/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>

U.S. Department of Energy

Lighting Facts™ Uniform LM-79 Reporting Template
Laboratory Information:

Name of Test Laboratory	Standard-Tech Co. Ltd
Date of Test Report	Jan.13, 2016
Test Report No.	GZE160118-F
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	L-TECH CORPORTION	
Brand Name	L-TECH CORP	
Model Number	CLED8A/P/R-40 WITH TCLD840HZ(CLKT840)(3000K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED DOWNLIGHT	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Integrating Sphere
Goniophotometer
Electrical Measurements:
Output
Output

Input Wattage	--	42.18	W
Input Current	--	0.3551	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9899	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	3032.2	lm
Initial Lumen Efficacy	--	71.89	lm/w
Correlated color temperature / CCT	3018	--	K
Color rendering index / CRI	84.9	--	
R9 Value	21	--	
Duv	0.0011	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)	-----	1808	cd
Beam angle (if applicable)		80.7	°
Zonal lumens in the 0°-60° zone		91.6	%
Zonal lumens in the 60°-90° zone		8.4	%
Zonal lumens in the 90°-120° zone		0	%
Zonal lumens in the 120°-180° zone		0	%

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Date of Test Report	Jan.13, 2016
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Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	L-TECH CORPORTION	
Brand Name	L-TECH CORP	
Model Number	CLED8A/P/R-40 WITH TCLD840HZ(CLKT840)(4000K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED DOWNLIGHT	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Integrating Sphere
Goniophotometer
Electrical Measurements:
Output
Output

Input Wattage	42.06	--	W
Input Current	0.3543	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9893	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	3093	--	lm
Initial Lumen Efficacy	73.54	--	lm/w
Correlated color temperature / CCT	4075	--	K
Color rendering index / CRI	83.5	--	
R9 Value	16	--	
Duv	0.0013	--	
Luminous Intensity Distribution			
Center beam candlepower (if applicable)			cd
Beam angle (if applicable)			°
Zonal lumens in the 0 °-60 ° zone	-----	-----	%
Zonal lumens in the 60 °-90 ° zone			%
Zonal lumens in the 90 °-120 ° zone			%
Zonal lumens in the 120 °-180 ° zone			%

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Test Specifications:	
Date of Receipt	Jan.11,2016
Date of Test	Jan.12,2016
Test item	: Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters
Reference Standard	IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources CIE 15-2004 Technical Report Colorimetry IESNA LM-16-93 Practical Guide to Colorimetry of Light Source IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems UL1993 4 th Edition, Self-Ballasted Lamps and Lamp Adapters ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) – Version 2.0
Reference Work Instruction	QD25
Remark	Below test and data are not covered by NVLAP accreditation: - Operating Frequency

Test Methods

1. Photometric and Electrical measurements – Light Distribution Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, 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 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. Photometric and Electrical Measurements – Integrating Sphere Method:

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

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1. Product Information:

Brand Name	L-TECH CORP
Model Number	GZE160118-F
Luminaire Type	LED DOWNLIGHT
Rated Voltage / Frequency	120Vac, 60 Hz
Nominal Power	43W
Rated Initial Lamp Lumen	--
Declared CCT	3000K,4000K
LED Manufacturer	Seoul Semiconductor Co.,Ltd
LED Model	STWxC2SB
Sample Receipt Date	Jan.11,2015
Sample Number	GZE160118-F1,F2,F3(3000K),F4(4000K)

Photo



2.1 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2016-01-12	Test Ambient:	25.0 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	CLED8A/P/R-40 WITH TCLD840HZ(CLKT840)(3000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
GZE160118-F1	120.0	60	0.3551	42.18	0.9899
GZE160118-F2	120.0	60	0.3550	42.12	0.9886
GZE160118-F3	120.0	60	0.3540	42.07	0.9903
Average			0.3547	42.12	0.9896

Sphere-Spectroradiometer Method:

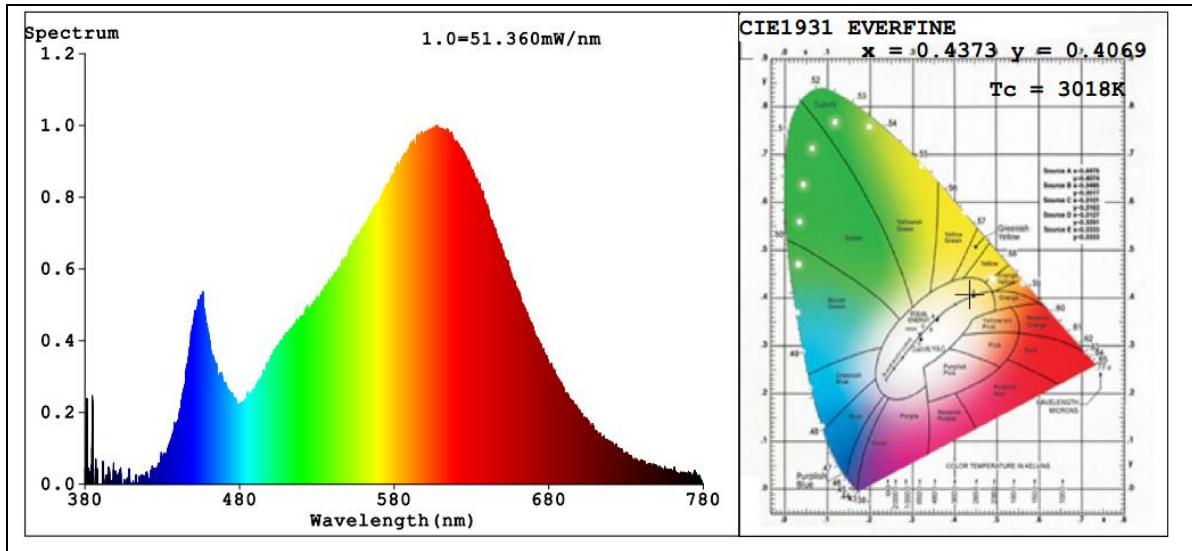
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	84.9
R9	21
CCT (K)	3018
Chromaticity (x, y)	x=0.4373 y=0.4069
Chromaticity (u', v')	u'=0.2496 v'=0.5226
Duv	0.0011

Special Color Rendering Indices			
R1	83	R9	21
R2	92	R10	82
R3	97	R11	81
R4	82	R12	72
R5	83	R13	86
R6	90	R14	99
R7	85	R15	77
R8	65	--	--

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	3032.2
Luminous Efficacy (lm/W)	71.89
Beam Angle °	80.7
Center Beam Candle Power (cd)	1808

Spectral Power Distribution and Chromaticity Diagram



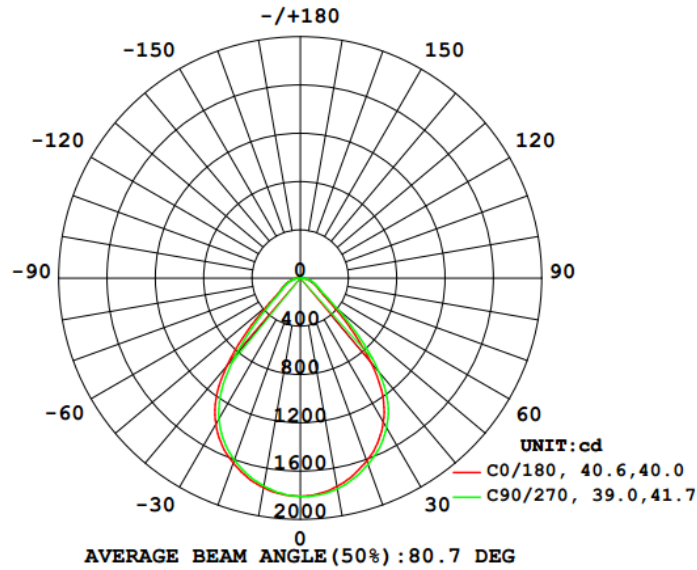
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Zonal Lumen Tabulation



Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,347.4	44.4%
0-40	2,087.0	68.8%
0-60	2,777.7	91.6%
60-90	253.7	8.4%
70-100	111.7	3.7%
90-120	0.2	0%
0-90	3,031.4	100%
90-180	0.4	0%
0-180	3,031.7	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	170.2	5.6%	90-100	0.1	0%
10-20	478.7	15.8%	100-110	0.0	0%
20-30	698.4	23.0%	110-120	0.0	0%
30-40	739.7	24.4%	120-130	0.0	0%
40-50	474.0	15.6%	130-140	0.0	0%
50-60	216.7	7.1%	140-150	0.0	0%
60-70	142.1	4.7%	150-160	0.0	0%
70-80	86.8	2.9%	160-170	0.0	0%
80-90	24.8	0.8%	170-180	0.0	0%

2.2 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2016-01-12	Test Ambient:	25.0 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	CLED8A/P/R-40 WITH TCLD840HZ(CLKT840)(4000K)		

Electrical Measurement:

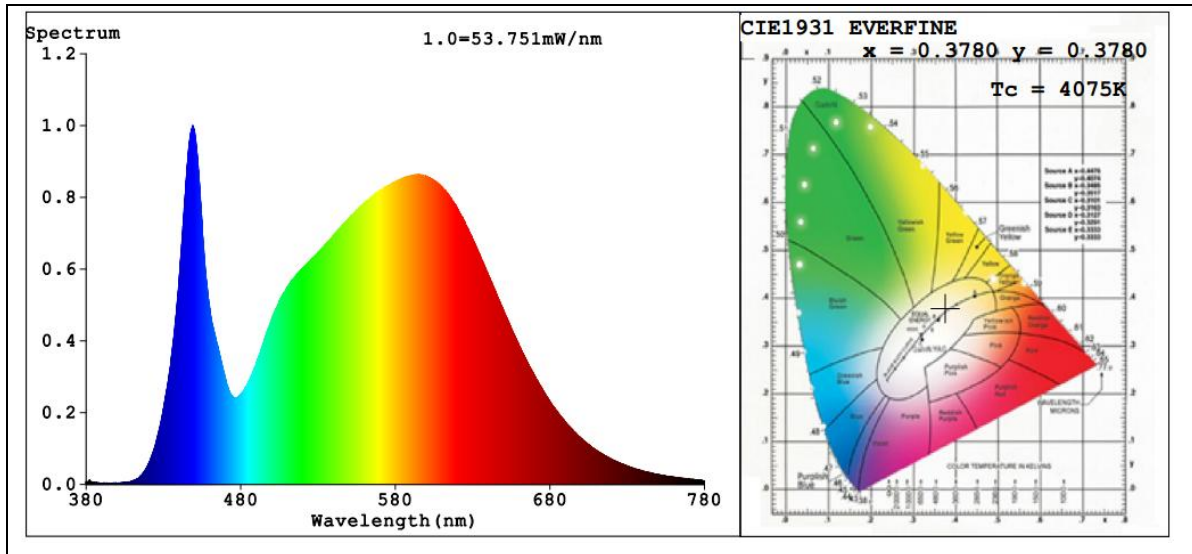
Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
GZE160118-F4	120.0	60	0.3543	42.06	0.9893

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	83.5
R9	16
CCT (K)	4075
Chromaticity (x, y)	x=0.3780 y=0.3780
Chromaticity (u', v')	u'=0.2230 v'=0.5018
Duv	0.0013
Total Luminous (lm)	3093
Luminous Efficacy (lm/W)	73.54

Special Color Rendering Indices			
R1	82	R9	16
R2	88	R10	72
R3	93	R11	82
R4	83	R12	64
R5	82	R13	83
R6	84	R14	96
R7	88	R15	77
R8	68	--	--

Spectral Power Distribution and Chromaticity Diagram



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2.2 Color Spatial Uniformity	IES LM-79 2008 ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.0
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Test Data (Model CLED8A/P/R-40 WITH TCLD840HZ(CLKT840)(3000K)):

Test date	2016-01-12	Test Ambient	25.1°C
Sample No.		Maximum $\Delta u'v'$	
GZE160118-F1		0.003	

Gamma\C	CIE u'	CIE v'	$du'v'$	CIE u'	CIE v'	$du'v'$
-61	0.2471	0.5218	0.0022	0.247	0.5216	0.0023
-60	0.2472	0.5218	0.0021	0.2471	0.5217	0.0022
-59	0.2472	0.5219	0.0021	0.2471	0.5218	0.0021
-58	0.2472	0.5219	0.0021	0.2472	0.5218	0.0021
-57	0.2474	0.522	0.0018	0.2472	0.5218	0.0021
-56	0.2474	0.522	0.0019	0.2473	0.5219	0.0019
-55	0.2473	0.522	0.0019	0.2473	0.5219	0.002
-54	0.2472	0.5219	0.0021	0.2472	0.5218	0.0021
-53	0.2472	0.5218	0.002	0.2472	0.5217	0.0021
-52	0.247	0.5216	0.0023	0.247	0.5215	0.0023
-51	0.2469	0.5213	0.0025	0.247	0.5214	0.0023
-50	0.247	0.5212	0.0024	0.2469	0.5212	0.0025

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-49	0.2469	0.5211	0.0025	0.247	0.5211	0.0024
-48	0.2469	0.521	0.0025	0.2472	0.521	0.0023
-47	0.2473	0.5211	0.0022	0.2473	0.521	0.0022
-46	0.2475	0.5211	0.002	0.2476	0.5211	0.0019
-45	0.2478	0.5212	0.0017	0.2478	0.5212	0.0017
-44	0.2481	0.5213	0.0014	0.2482	0.5213	0.0013
-43	0.2482	0.5214	0.0012	0.2484	0.5214	0.001
-42	0.2488	0.5216	0.0006	0.2488	0.5216	0.0007
-41	0.249	0.5217	0.0004	0.249	0.5217	0.0004
-40	0.2492	0.5218	0.0002	0.2493	0.5219	0.0002
-39	0.2496	0.5221	0.0004	0.2495	0.522	0.0002
-38	0.2498	0.5222	0.0005	0.2498	0.5221	0.0005
-37	0.2499	0.5223	0.0007	0.2499	0.5222	0.0007
-36	0.25	0.5223	0.0008	0.25	0.5223	0.0008
-35	0.25	0.5223	0.0008	0.2501	0.5223	0.0009
-34	0.25	0.5224	0.0008	0.2503	0.5225	0.0011
-33	0.2501	0.5225	0.0009	0.2502	0.5225	0.0011
-32	0.25	0.5224	0.0009	0.2502	0.5225	0.0011
-31	0.25	0.5224	0.0009	0.2502	0.5225	0.001
-30	0.2499	0.5224	0.0008	0.2501	0.5225	0.001

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-29	0.2501	0.5225	0.0009	0.2501	0.5224	0.0009
-28	0.25	0.5224	0.0009	0.2501	0.5224	0.0009
-27	0.25	0.5224	0.0008	0.2502	0.5225	0.001
-26	0.2499	0.5224	0.0008	0.2502	0.5225	0.001
-25	0.2499	0.5224	0.0008	0.2501	0.5224	0.0009
-24	0.2498	0.5224	0.0007	0.2501	0.5224	0.0009
-23	0.2499	0.5224	0.0007	0.2501	0.5224	0.0009
-22	0.2499	0.5224	0.0008	0.2501	0.5224	0.0009
-21	0.2499	0.5224	0.0007	0.2501	0.5224	0.0009
-20	0.2499	0.5224	0.0007	0.25	0.5224	0.0009
-19	0.2499	0.5224	0.0007	0.25	0.5224	0.0008
-18	0.2498	0.5223	0.0007	0.25	0.5224	0.0008
-17	0.2499	0.5223	0.0007	0.25	0.5223	0.0008
-16	0.2498	0.5224	0.0007	0.25	0.5224	0.0008
-15	0.2498	0.5223	0.0006	0.25	0.5223	0.0008
-14	0.2498	0.5223	0.0006	0.2499	0.5223	0.0007
-13	0.25	0.5224	0.0008	0.2499	0.5223	0.0007
-12	0.2499	0.5223	0.0007	0.2499	0.5223	0.0007
-11	0.2499	0.5223	0.0007	0.2499	0.5223	0.0007
-10	0.2499	0.5223	0.0007	0.2499	0.5223	0.0007

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-9	0.2499	0.5223	0.0007	0.2498	0.5223	0.0006
-8	0.2499	0.5223	0.0007	0.2499	0.5223	0.0007
-7	0.2499	0.5223	0.0007	0.2499	0.5222	0.0006
-6	0.2498	0.5223	0.0006	0.2498	0.5223	0.0006
-5	0.2499	0.5223	0.0007	0.2498	0.5222	0.0006
-4	0.2498	0.5223	0.0006	0.2498	0.5222	0.0006
-3	0.2498	0.5223	0.0006	0.2498	0.5222	0.0006
-2	0.2498	0.5222	0.0006	0.2498	0.5222	0.0006
-1	0.2498	0.5222	0.0006	0.2498	0.5222	0.0006
0	0.2499	0.5225	0.0008	0.2499	0.5225	0.0008
1	0.2498	0.5222	0.0006	0.2498	0.5222	0.0006
2	0.2498	0.5223	0.0006	0.2497	0.5222	0.0005
3	0.2498	0.5222	0.0006	0.2497	0.5222	0.0005
4	0.2498	0.5223	0.0006	0.2497	0.5222	0.0005
5	0.2498	0.5222	0.0005	0.2497	0.5222	0.0005
6	0.2498	0.5222	0.0005	0.2497	0.5222	0.0005
7	0.2498	0.5222	0.0006	0.2497	0.5222	0.0005
8	0.2498	0.5222	0.0006	0.2497	0.5222	0.0005
9	0.2498	0.5222	0.0005	0.2498	0.5222	0.0005
10	0.2497	0.5222	0.0005	0.2497	0.5222	0.0005

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11	0.2498	0.5222	0.0005	0.2497	0.5222	0.0004
12	0.2498	0.5222	0.0006	0.2497	0.5222	0.0005
13	0.2497	0.5222	0.0005	0.2497	0.5222	0.0005
14	0.2498	0.5222	0.0006	0.2497	0.5222	0.0005
15	0.2498	0.5222	0.0005	0.2497	0.5222	0.0005
16	0.2497	0.5222	0.0005	0.2495	0.5221	0.0003
17	0.2497	0.5222	0.0005	0.2495	0.5221	0.0003
18	0.2498	0.5222	0.0006	0.2495	0.5221	0.0003
19	0.2498	0.5222	0.0006	0.2495	0.5221	0.0003
20	0.2497	0.5222	0.0005	0.2496	0.5221	0.0004
21	0.2498	0.5222	0.0006	0.2496	0.5221	0.0003
22	0.2498	0.5222	0.0005	0.2496	0.5221	0.0003
23	0.2498	0.5222	0.0005	0.2496	0.5221	0.0003
24	0.2498	0.5222	0.0006	0.2496	0.5222	0.0004
25	0.2498	0.5222	0.0006	0.2496	0.5222	0.0004
26	0.2498	0.5222	0.0006	0.2495	0.5221	0.0003
27	0.2498	0.5223	0.0006	0.2495	0.5221	0.0003
28	0.2496	0.5222	0.0004	0.2496	0.5221	0.0003
29	0.2497	0.5222	0.0004	0.2496	0.5221	0.0003
30	0.2497	0.5222	0.0004	0.2496	0.5221	0.0004

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31	0.2497	0.5222	0.0005	0.2497	0.5221	0.0004
32	0.2498	0.5222	0.0005	0.2496	0.5221	0.0003
33	0.2498	0.5222	0.0005	0.2496	0.5221	0.0003
34	0.2498	0.5222	0.0005	0.2496	0.5221	0.0003
35	0.2496	0.522	0.0004	0.2496	0.522	0.0003
36	0.2496	0.522	0.0003	0.2496	0.522	0.0003
37	0.2495	0.5219	0.0002	0.2495	0.5219	0.0003
38	0.2494	0.5218	0.0002	0.2494	0.5219	0.0002
39	0.2491	0.5217	0.0004	0.249	0.5216	0.0005
40	0.2489	0.5215	0.0006	0.2488	0.5215	0.0007
41	0.2486	0.5214	0.001	0.2487	0.5214	0.0008
42	0.2484	0.5213	0.0012	0.2484	0.5213	0.0011
43	0.2482	0.5212	0.0014	0.2479	0.5211	0.0016
44	0.2478	0.521	0.0018	0.2478	0.521	0.0018
45	0.2476	0.5209	0.002	0.2476	0.5209	0.002
46	0.2473	0.5208	0.0023	0.2471	0.5207	0.0025
47	0.247	0.5207	0.0026	0.247	0.5207	0.0026
48	0.2468	0.5208	0.0027	0.2469	0.5207	0.0027
49	0.2467	0.5208	0.0029	0.2466	0.5207	0.003
50	0.2467	0.521	0.0028	0.2465	0.5208	0.003

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51	0.2467	0.5211	0.0027	0.2466	0.521	0.0028
52	0.2467	0.5213	0.0026	0.2466	0.5212	0.0028
53	0.2469	0.5216	0.0024	0.2468	0.5214	0.0025
54	0.247	0.5217	0.0023	0.247	0.5217	0.0023
55	0.2471	0.5219	0.0021	0.2472	0.5218	0.0021
56	0.2472	0.5219	0.0021	0.2471	0.5218	0.0022
57	0.2471	0.5219	0.0022	0.2472	0.5219	0.0021
58	0.2471	0.5218	0.0022	0.2472	0.5219	0.0021
59	0.2471	0.5218	0.0022	0.2472	0.5219	0.0021
60	0.247	0.5218	0.0022	0.2471	0.5218	0.0021
61	0.2469	0.5217	0.0024	0.2469	0.5217	0.0024

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3. Electrical and Photometric Measurements, with dimming	IES LM-79 2008 ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.0
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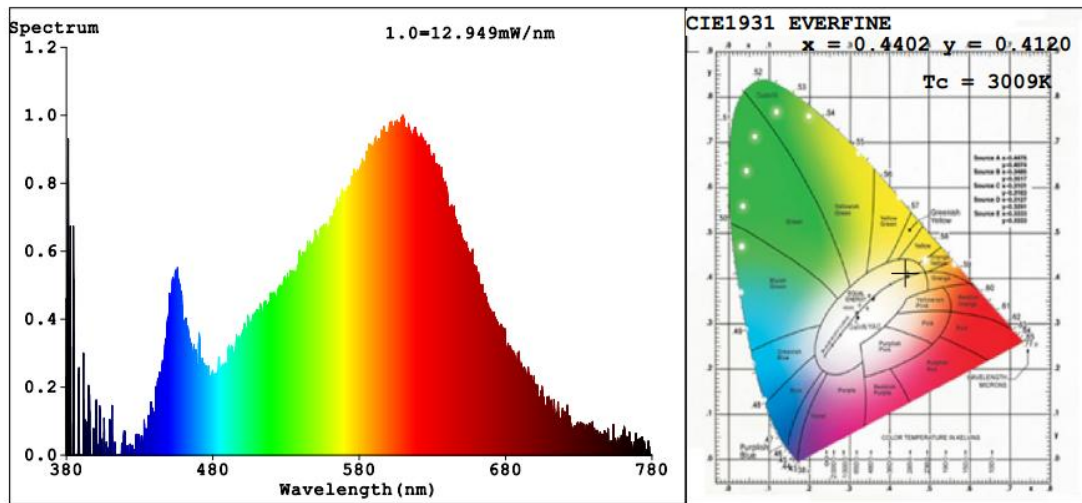
Test date	2016-01-12	Test Ambient:	25.1°C		
Dimmer Model		LEVITON MFG CO INC (E31373), Cat. No. 6681			
Sample No.	Input	Luminous flux (lm)	CCT (K)	CRI	P.F.
GZE160118-F1	120.0 V / 60 Hz	593.9	3009	85.5	0.3047
GZE160118-F2	120.0 V / 60 Hz	590.8	2971	85.2	0.2931
GZE160118-F3	120.0 V / 60 Hz	587.4	2947	85.4	0.2865
Average		590.4	2976	85.4	0.2948

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Color Parameters:

Chromaticity Coordinate: $x=0.4402$ $y=0.4120$ / $u'=0.2493$ $v'=0.5249$

$T_c=3009K$ (Duv=0.0027) Dominant WL: $\lambda_d = 581.9nm$ Purity=55.8%

Peak WL: $\lambda_p=609.8nm$ HWL: $\lambda_{hd}=132.3nm$

Render Index: $R_a=85.5$ CRI=80.6

R1 =84 R2 =93 R3 =97 R4 =83 R5 =84 R6 =91 R7 =86

R8 =66 R9 =23 R10=84 R11=82 R12=70 R13=86 R14=99 R15=78

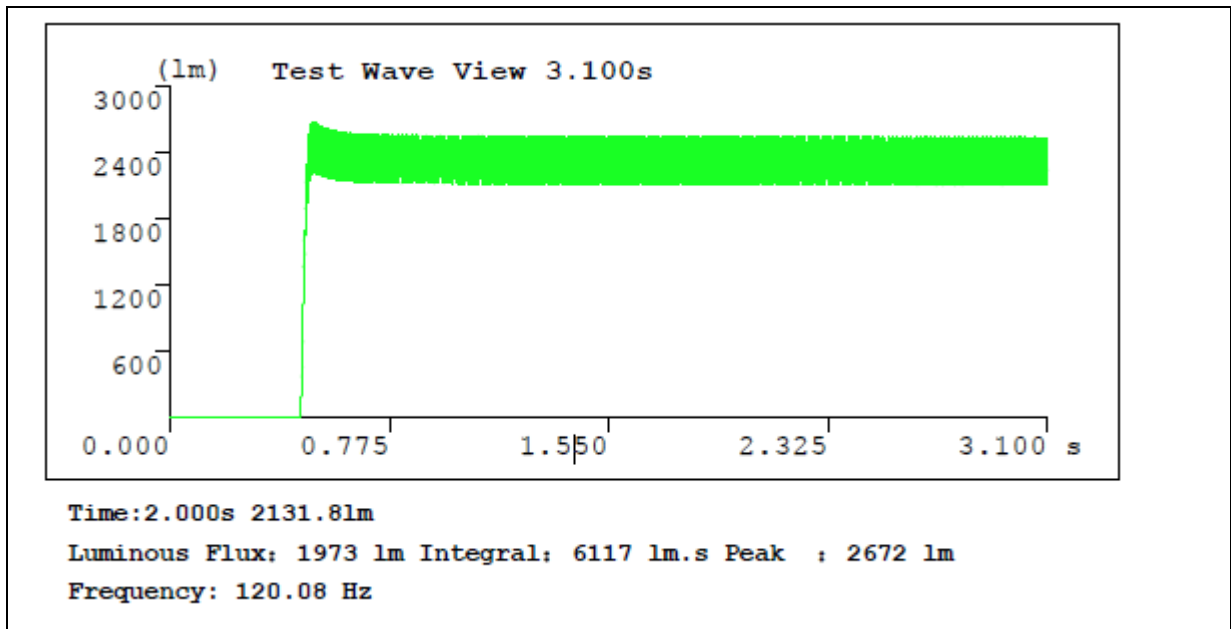
The luminaires [can] ~~lean not~~ provide less than 20% of total light output with continuous dimmer.

Dimmer	Peak Noise Reading (dBA)	Test Condition	Distance between the microphone and the UUT
LEVITON MFG CO INC (E31373), Cat. No. 6681	20.2	Dimmer adjusted to lowest light output	< 1 m

4 Operating Frequency	ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) - Version 2.0
Noted: This test and data are not covered by NVLAP accreditation	

Test date	2016-01-12	Test Ambient:	25.1°C
Sample No.		Operating Frequency (Hz)	
GZE160118-F1		120.08	
GZE160118-F2		120.10	
GZE160118-F3		120.20	
Average		120.13	

Graph:



<p>5 Starting Time (Refer to Work Instruction QD28)</p>	<p>ENERGY STAR® Program Requirements Product</p> <p>Specification for Luminaires (Light Fixtures) - Version 2.0</p>
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Test date	2016-01-12	Test Ambient:	25.1°C
Sample No.	Start Time (ms)		
GZE160118-F1	410		
GZE160118-F2	395		
GZE160118-F3	387		
Average	397		

Graph (Start Time):



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Report No.: GZE160118-F

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

Report Format Number STD/QR4910-A/1

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6. Transient Protection Test <i>(Refer to Work Instruction QD34)</i>	ANSI/IEEE C62.41 ENERGY STAR® Program Requirements for Luminaires – Version 2.0
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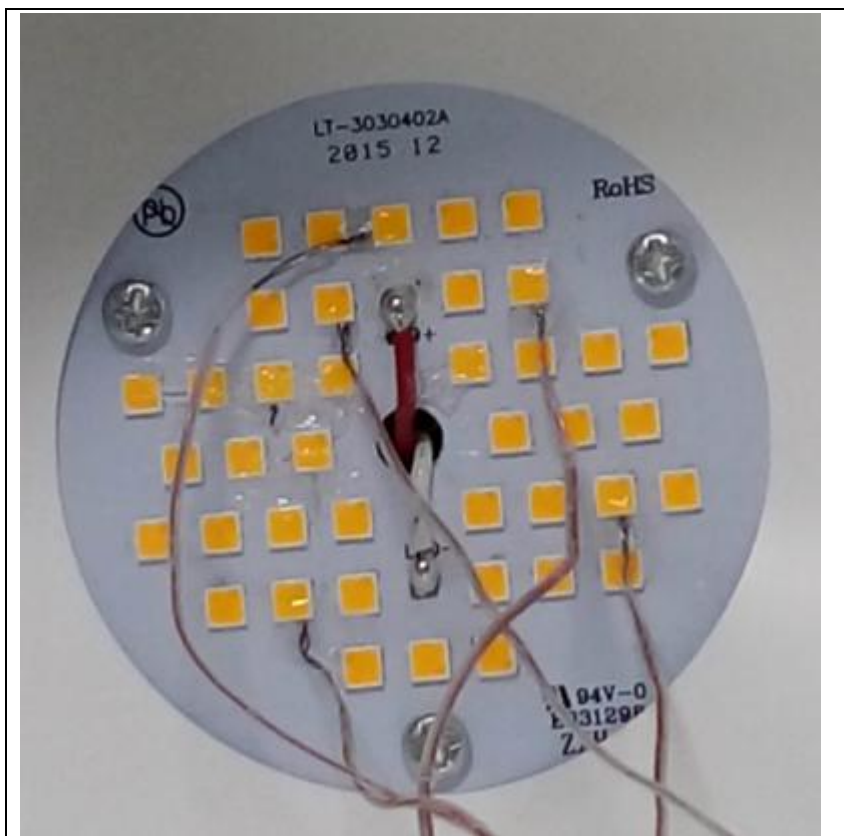
Test voltage: 120V,60Hz

Test date	2016-01-16	Test Ambient	25.1°C
Sample No.		Transient Protection Test - Seven Strikes	
GZE160118-F1		Pass	
GZE160118-F2		Pass	
GZE160118-F3		Pass	

7.1 In-Situ Temperature Measurement Test (ISTMT)	UL1993-2012, 4th Edition
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Test date	2016-01-12	Test Ambient	25.1°C
Input Vol./Frequency	120 V / 60 Hz	Output Current of Driver(mA)	148
Sample No.	LED Package Model	Maximum Measured LED Ts Point Temperature (°C)	Maximum LED Ts Point Temperature Limited (°C)
GZE160118-F1	STWxC2SB	64.1	105

In-Situ Picture - Ts:



Laboratory: Standard-Tech Co. Ltd Testing Center
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7.2 Maximum Measured Ballast or Driver Case Temperature	UL1598-2008, 3 rd Edition UL1993-2012, 4 th Edition
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Test date	2016-01-12	Test Ambient	25.1°C
Sample No.	Maximum Measured Driver Case Temperature (°C)	Maximum Driver Case Temperature Limited (°C)	
GZE160118-F1	70.5	105	

In-Situ Picture - Ts:



8. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2015-07-01	2016-06-30
ST-R-331	Spectral analysis system HAAS-2000	2015-07-01	2016-06-30
EE-09	Goniophotometer system	2015-07-01	2016-06-30
D908S	Standard Lamp	2015-07-01	2016-06-30
D204	Standard Lamp	2015-07-01	2016-06-30
PF2010	Power Meter for Integrating Sphere	2015-07-01	2016-06-30
PF210	Power Meter for Goniophotometer	2015-07-01	2016-06-30
EE-015	Flux Meter	2015-07-01	2016-06-30
ST-R-277	Oscillograph	2015-07-01	2016-06-30
ST-R-EM01	Surge Generator	2015-07-01	2016-06-30
ST-R-EM02	EMC Coupler/Decoupler Module	2015-07-01	2016-06-30
Uncertainty Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

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