

LM-79-08 Test Report

For

Beyond LED Technology (Beyond LED)

No. 13, QiFang Industrial Park, TongYi Industrial District, Guzhen Town, Zhongshan City,
Guangdong Province, China, 528421

Direct Linear Ambient Luminaires

Model name(s): BLT-T8-60P8FT-INT2(XXXXK)-F

Remark: Where “XXXX” can be any number, represents color
temperature

This is multiple listed report, the Project Number of the original report is
JBE200202-D

Representative (Tested) Model:
ZS-T8-60P8FT-INT2(3000K)-F

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

Test & Report By:

Garman Mo

Engineer: Garman Mo

Date: Apr.29, 2020

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.

1.1 Product Information:

Organization Name	zhongshan zohnson lighting co.,ltd	
Brand Name	N/A	
Model Number	ZS-T8-60P8FT-INT2(XXXXX)-F	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Direct Linear Ambient Luminaires	
Rated Voltage / Frequency	100-277Vac, 50/60Hz	
Nominal Power	60W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K,3500K,4000K,4500K,5000K	
LED Manufacturer	Hongli Zhihui Group Co.,Ltd. Guangzhou Branch	
LED Model	HL-AM-2835HW-S1-08-HR3	
Sample Number	JBE200202-D1(3000K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
Photo		
		
		

1.2 Test Specifications:

Date of Receipt	Feb.20,2019
Date of Test	Feb.21,2019
Test item	<ol style="list-style-type: none"> 1. Total Luminous Flux 2. Luminous Efficacy 3. Correlated Color Temperature 4. Color Rendering Index 5. Chromaticity Coordinate 6. 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

1.3 Test Methods

<p>1) 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° C ± 1° 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.</p>
<p>2) 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° C ± 1° 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.</p>

2.1 Electrical, Photometric and Chromaticity Measurements

Test date	2020-02-21	Test Ambient:	25±1 °C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	ZS-T8-60P8FT-INT2(3000K)-F	Total Operating Time (min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JBE200202-	120.0	60	0.5540	61.03	0.9180	23.20
D1	277.0	60	0.2338	60.39	0.9325	19.50
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

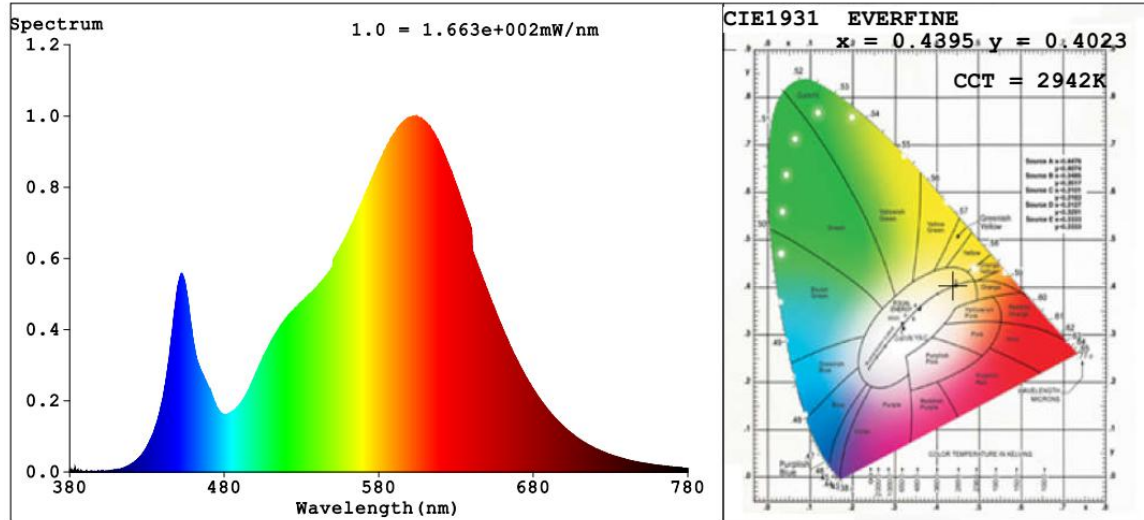
Chromaticity Measurement - Sphere-Spectroradiometer Method(Self-absorption):

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	78	R9	0
Frequency (Hz)	60	R2	90	R10	77
CCT (K)	2942	R3	96	R11	75
Duv	-0.0011	R4	77	R12	68
Chromaticity (x, y)	x=0.4395 y=0.4023	R5	78	R13	81
Chromaticity (u', v')	u'=0.2530 v'=0.5211	R6	87	R14	98
Color Rendering Index (CRI)	80.0	R7	80	R15	70
R9	0	R8	54	--	--

Photometric Measurement - Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.4 Pass Criteria	
Test Voltage (V)	120	277	--	
Frequency (Hz)	60	60	--	
Total Luminous (lm)	8265	8323	>=375 lm/ft (-10%)	
Luminous Efficacy (lm/W)	135.43	137.82	Standard: >= 105(-3%)	Premium: >= 130(-3%)

Spectral Power Distribution & Chromaticity Diagram



3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-418	3 meter Integrating Sphere	Verified by D204 standard lamp	
ST-R-327	Spectral analysis system HAAS-2000	Verified by D204 standard lamp	
ST-R-332	Standard Lamp	2019-07-09	2020-07-08
ST-R-333	Power Meter for Integrating Sphere	2019-06-27	2020-06-26
ST-R-405	Temperature Probe for Integrating Sphere	2020-01-23	2021-01-22
Expand Uncertainty: Photometric Measurement (Sphere):3.06%, k=2 Chromaticity Measurement(Sphere):43.46K, k=2			

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