

## LM-79-08 Test Report

For

### ATG Electronics Corp.

(Brand Name: )

10588 MONTE VISTA AVE MONTCLAIR, CA 91763

### LED Luminaires

Model name(s): LFDR8-57X-XXB8-Y-ZZ

Remark: Where "XX" can be any number, represents color temperature

Representative (Tested) Model: LFDR8-57X-30B8-Y-ZZ

LFDR8-57X-50B8-Y-ZZ

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

Test & Report By:

*Leo Wang*

Engineer: Leo Wang

Date: Nov.30,2019

Review By:



*Garman Mo*

Manager: Garman Mo

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	ATG Electronics Corp.	
Brand Name		
Model Number	LFDR8-57X-XXB8-Y-ZZ	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Luminaires	
Rated Voltage / Frequency	100-277Vac, 50/60Hz	
Nominal Power	57W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K,3500K,4000K,5000K	
LED Manufacturer	Shenzhen Runlite Technology Co.,Ltd	
LED Model	T28351-W29SC0D2FB3C0-XXXX	
Sample Number	JBE191004-C1(3000K),C2(5000K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
<b>Photo</b>		
		

**1.2 Test Specifications:**

Date of Receipt	Nov.20,2019
Date of Test	Nov.23,2019
Test item	<ol style="list-style-type: none"> <li>1. Total Luminous Flux</li> <li>2. Luminous Distribution Intensity</li> <li>3. Luminous Efficacy</li> <li>4. Correlated Color Temperature</li> <li>5. Color Rendering Index</li> <li>6. Chromaticity Coordinate</li> <li>7. Electrical Parameters</li> </ol>
Reference Standard	<ol style="list-style-type: none"> <li>1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</li> <li>2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products</li> <li>3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources</li> <li>4. CIE 15-2004 Technical Report Colorimetry</li> <li>5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source</li> <li>6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems</li> </ol>

**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  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  horizontal intervals.

**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  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . 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 Electrical, Photometric and Chromaticity Measurements

Test date	2019-12-23	Test Ambient:	25 ± 1 °C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LFDR8-57X-30B8-Y-ZZ	Total Operating Time (min)	90

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JBE191004-	120.0	60	0.4712	55.89	0.9885	11.99
C1	277.0	60	0.2174	56.89	0.9448	13.38

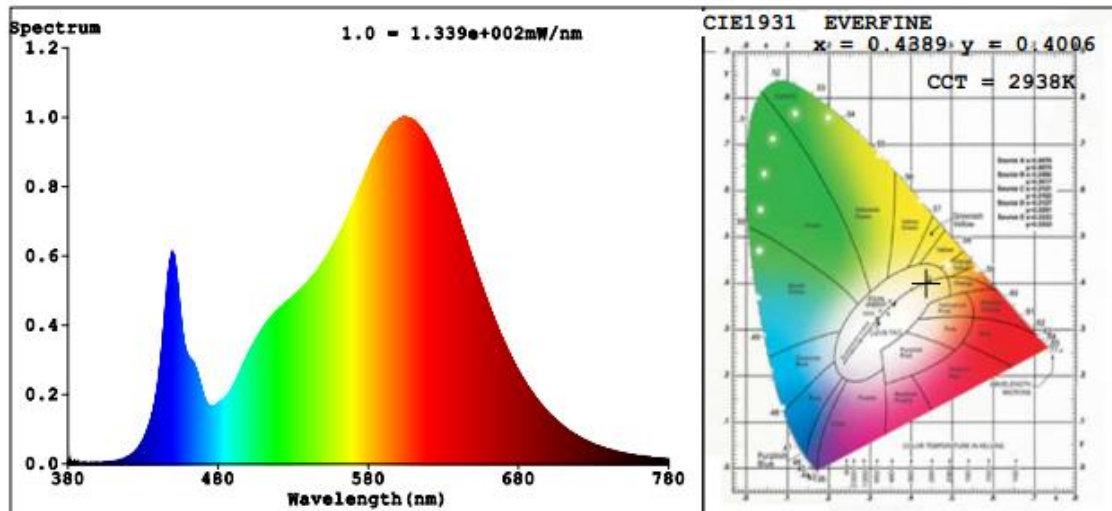
### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	82	R9	8
Frequency (Hz)	60	R2	92	R10	81
CCT (K)	2938	R3	96	R11	81
Duv	-0.0016	R4	81	R12	74
Chromaticity (x, y)	x=0.4389 y=0.4006	R5	82	R13	84
Chromaticity (u', v')	u'=0.2534 v'=0.5203	R6	90	R14	98
Color Rendering Index (CRI)	82.9	R7	82	R15	74
R9	8	R8	59	--	--

### Photometric Measurement –Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	7276	7305
Luminous Efficacy (lm/W)	130.18	128.41

**Spectral Power Distribution & Chromaticity Diagram**



**Laboratory: Standard-Tech Co., Ltd. Testing Center**

Report Format Number STD-QP019-409-B/0

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>

## 2.2 Electrical, Photometric and Chromaticity Measurements

Test date	2019-12-23	Test Ambient:	25 ± 1 °C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LFDR8-57X-50B8-Y-ZZ	Total Operating Time (min)	90

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JBE191004-	120.0	60	0.4524	53.66	0.9885	11.97
C2	277.0	60	0.2087	54.62	0.9447	13.35

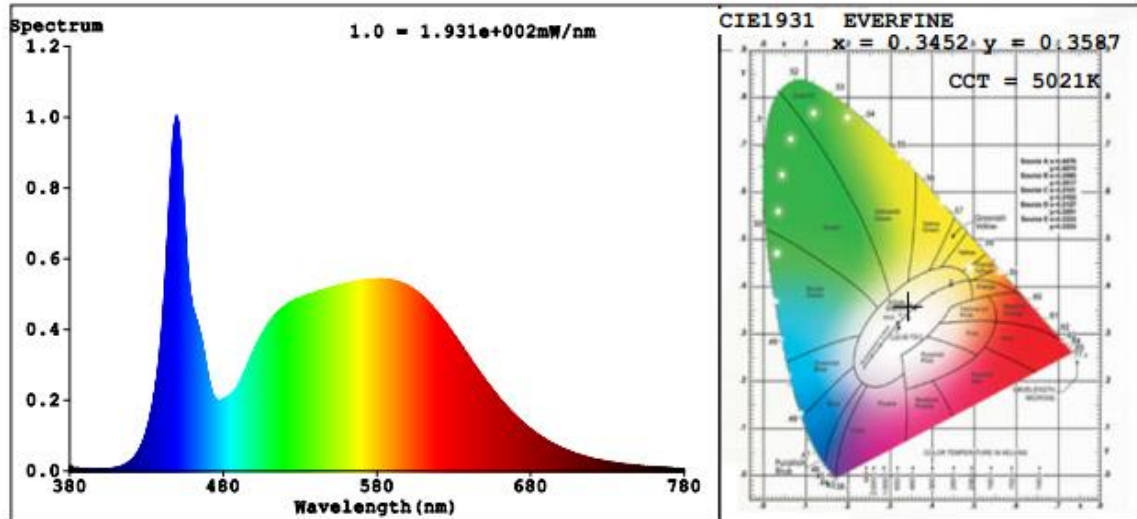
### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	8
Frequency (Hz)	60	R2	87	R10	69
CCT (K)	5021	R3	91	R11	83
Duv	0.0035	R4	83	R12	61
Chromaticity (x, y)	x=0.3452 y=0.3587	R5	82	R13	82
Chromaticity (u', v')	u'=0.2087 v'=0.4881	R6	82	R14	95
Color Rendering Index (CRI)	82.8	R7	87	R15	76
R9	8	R8	68	--	--

### Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	7453	7483
Luminous Efficacy (lm/W)	138.89	137.00

**Spectral Power Distribution & Chromaticity Diagram**



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### 2.3 Performance Assessment:

Model name	CCT(K)	Total Luminous (lm)	Power (W)	Luminous Efficacy (lm/W)
LFDR8-57X-30B8-Y-ZZ	3000K	7276	55.89	130.18
LFDR8-57X-35B8-Y-ZZ	3500K	7320 <sup>*1</sup>	54.78 <sup>*2</sup>	133.63 <sup>*3</sup>
LFDR8-57X-40B8-Y-ZZ	4000K	7365 <sup>*1</sup>	54.78 <sup>*2</sup>	134.45 <sup>*3</sup>
LFDR8-57X-50B8-Y-ZZ	5000K	7453	53.66	138.89

\*1: This value is calculated and the calculation formula is as below:

$$7320 = (7453 - 7276) / 4 * 1 + 7276$$

$$7365 = (7453 - 7276) / 4 * 2 + 7276$$

\*2: This value is calculated and the calculation formula is as below:

$$54.78 = (53.66 + 55.89) / 2$$

\*3: This value is calculated and the calculation formula is as below:

$$133.63 = (7320 / 54.78)$$

$$134.45 = (7365 / 54.78)$$



**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	2019-07-03	2020-07-02
ST-R-333	Power Meter for Integrating Sphere	2019-06-27	2020-06-26
Expand Uncertainty: Photometric Measurement (Sphere):2.66%, k=2 Chromaticity Measurement(Sphere):28.6K, k=2 Photometric Measurement(Goniophotometer):2.76%, k=2			

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