LM-79-08 Test Report

For

ATG Electronics Corp.

(Brand Name: ATG ELECTRONICS)

10588 MONTE VISTA AVE MONTCLAIR, CA 91763

LED Luminaires

Model name(s): LFID8-66X-XXYYB8-Y-ZZ

Remark: Where "XX" can be any number, represents up light color temperature, "YY" can be any number, represents down light color temperature

Representative (Tested) Model: LFID8-66X-3030B8-Y-ZZ
LFID8-66X-5050B8-Y-ZZ

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

Test & Report By:

Leo Wang

Engineer: Leo Wang

Review By:

Garman Mo

Manager: Garman Mo

Date: Nov.30,2019

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	ATG ELECTRONICS	
Model Number	LFID8-66X-XXYYB8-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	66W	
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-D1(3000K),D2(5000K)	
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	Nov.20,2019
Date of Test	Nov.23,2019
Test item	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	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

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 °C ±1 °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) 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 ºC ±1 ºC. 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	LFID8-66X-3030B8-Y-ZZ	Total Operating Time (min)	90

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JBE191004-D1	120.0	60	0.5678	67.41	0.9894	7.77
	277.0	60	0.2758	69.35	0.9076	14.03

Chromaticity Measurement - Sphere-Spectroradiometer Method:

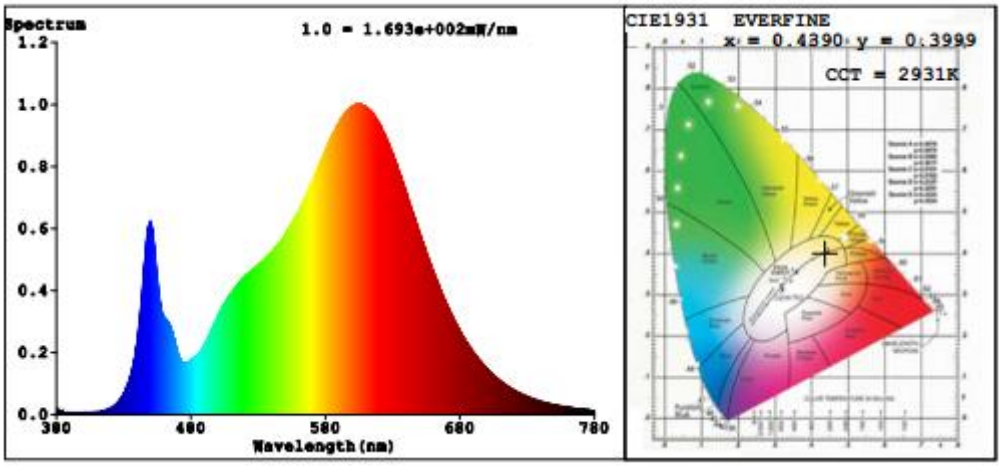
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	2931
Duv	-0.0019
Chromaticity (x, y)	x=0.4390 y=0.3999
Chromaticity (u', v')	u'=0.2537 v'=0.5200
Color Rendering Index (CRI)	83.1
R9	9

Special Color Rendering Indices			
R1	82	R9	9
R2	92	R10	82
R3	96	R11	81
R4	81	R12	75
R5	83	R13	84
R6	80	R14	98
R7	82	R15	74
R8	59	--	--

Photometric Measurement –Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	10041	10197
Luminous Efficacy (lm/W)	148.95	147.04

Spectral Power Distribution & Chromaticity Diagram



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	LFID8-66X-5050B8-Y-ZZ	Total Operating Time (min)	90

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JBE191004-D2	120.0	60	0.5640	66.98	0.9897	7.75
	277.0	60	0.2518	68.91	0.9878	13.98

Chromaticity Measurement - Sphere-Spectroradiometer Method:

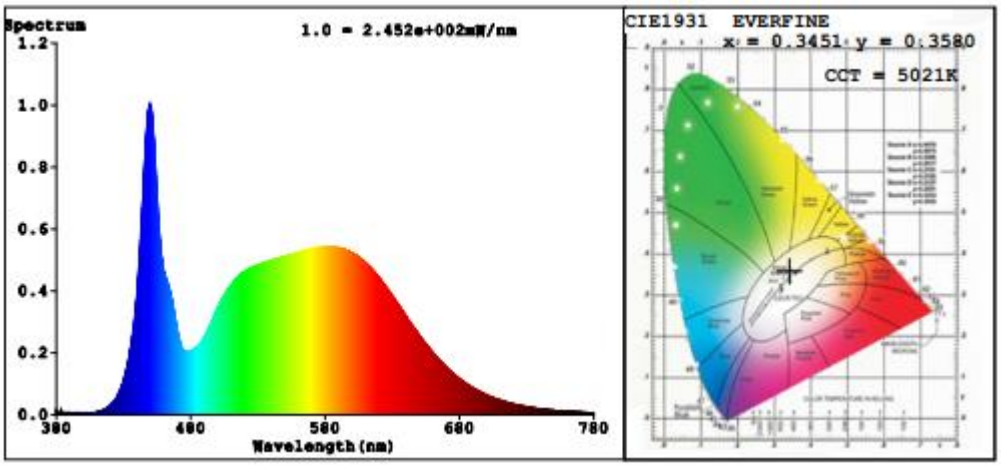
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	5021
Duv	0.0032
Chromaticity (x, y)	x=0.3451 y=0.3580
Chromaticity (u', v')	u'=0.2090 v'=0.4878
Color Rendering Index (CRI)	83.1
R9	9

Special Color Rendering Indices			
R1	81	R9	9
R2	87	R10	70
R3	92	R11	83
R4	84	R12	62
R5	82	R13	83
R6	83	R14	96
R7	87	R15	76
R8	68	--	--

Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	10580	10744
Luminous Efficacy (lm/W)	157.96	155.91

Spectral Power Distribution & Chromaticity Diagram



2.3 Performance Assessment:

Model name	CCT(K)	Total Luminous (lm)	Power (W)	Luminous Efficacy (lm/W)
LFID8-66X-3030B8-Y-ZZ	3000K	10041	67.41	148.95
LFID8-66X-3535B8-Y-ZZ	3500K	10176*1	67.20*2	151.43*3
LFID8-66X-4040B8-Y-ZZ	4000K	10311*1	67.20*2	153.44*3
LFID8-66X-5050B8-Y-ZZ	5000K	10580	66.98	157.96

*1: This value is calculated and the calculation formula is as below:
10176= (10580-10041)/4*1+10041
10311= (10580-10041)/4*2+10041

*2: This value is calculated and the calculation formula is as below:
67.20= (66.98+67.41)/2

*3: This value is calculated and the calculation formula is as below:
151.43= (10176/67.20)
153.44= (10311/67.20)

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 ********