TEST REPORT
DEPARTMENT OF ENERGY
(10 CFR Parts 429 and 430)
Energy Conservation Program: Test Procedures for Integrated Light-Emitting Diode Lamps

Report reference No..... :	AOC251203006ER
Compiled by……..…..... :	Bruce Lin
Approved by……..…..:	Robin Liu
Date of issue ..... :	2025-12-04
Contents ..... :	12 Pages

Testing laboratory

Name ..... :	Shenzhen AOCE Electronic Technology Service Co., Ltd
Address ..... :	Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Testing location ..... :	Same as above

Client

Name ..... :	Guangdong Fengshang Electronics Co., Ltd.
Address..... :	Room 201, Block 8, Yi 'an Scientific Innovation Park, No.23, Gangkou Road,Guicheng Street, NanhaiDistrict, Foshan City, Guangdong Province, China

Manufacturer

Name ..... :	Guangdong Fengshang Electronics Co., Ltd.
Address..... :	Room 201, Block 8, Yi ‘an Scientific Innovation Park, No.23, Gangkou Road,Guicheng Street, NanhaiDistrict, Foshan City, Guangdong Province, China

Test specification

Standard ..... :	DEPARTMENT OF ENERGY 10 CFR Parts 429 and 430) Energy Conservation Program: Test Procedures for Integrated Light-Emitting Diode Lamps
Test procedure ..... :	DEPARTMENT OF ENERGY (10 CFR Parts 429 and 430) Energy Conservation Program: Test Procedures for Integrated Light-Emitting Diode Lamps
Non-standard test method ..... :	N/A

Test item Description .....:	Desktop half-moon-shaped nail lamp
Trademark .....:	FENGSHANG
Model and/or type reference.....:	F-800M
Test Model…….....:	F-800M
Rating(s)(V/Hz).....:	100-240V~, 50/60Hz, 43W
Test case verdicts	
Test case does not apply to the test object :	N(N/A)
Test item does meet the requirement ....:	P(Pass)
Test item does not meet the requirement :	F(Fail)
Testing	
Date of receipt of test item ..... :	2024-12-17
Date(s) of performance of test….....:	2024-12-17 to 2025-12-03
Test item particulars:	10 CFR Parts 429 and 430
Lamp type:	☒Omni directional ☐Directional ☐Decorative
Model type (ANSI Standard Lamp Shape):	N/A
Base type (ANSI).....:	/
Control gear:	
- Integrated	☐
- External	☒
Use of lamp:	
- Indoor	☒
- Outdoor	☐
- Industry	☐
Envelope transparency:	
- Clear lamp	☐
- Non-clear lamp	☒
Dimmable lamp:	☐
Lamps with anti-glare shield:	☐
Lamp cap installed:	/
Declared data:	
Rated voltage ……..……(V):	100-240V~
Rated lamp power ……..…..…(W):	43W
Rated useful luminous flux……..……(lm):	4650 lm
Rated CCT ……..……..(K):	3000-6500K
Rated life time ……..…..(h):	20000h
Forward current of the LED chip.....(mA):	--

LED Manufacturer ……..…….....:	Guangdong Fengshang Electronics Co., Ltd.
LED Model.....:	F-800M

Table of Contents

1. Test Method

1.1 Photometric and Electrical Measurement	
Test Standard.....:	IES LM-79-08:Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products
Ambient Condition .....:	25.1℃
Stabilization time ……..…….....…...:	0.5h
Orientation(burning position) of SSL product during test …….....……:	5 base-up and 5 base-down
Test Method …….....……:	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 rated voltage and was stabilized before measurement. Lumen output, Lamp efficacy,Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm. Input power,Power factor,Voltage ,Current,were calculated from the digital power meter.
1.2 Standby Power Measurement	
Test Standard.....:	IEC 62301-2011:Household electrical appliances-Measurement of standby power
Ambient Condition.....:	25.1℃
Stabilization time …….....……...:	0.5h
Orientation(burning position) of SSL product during test …….....……:	5 base-up and 5 base-down
Test Method …….....…….…..:	Sections 5.3.4 Direct meter reading method. The sample was operated at rated voltage and was stabilized before measurement. The standby power were calculated from the digital power meter.

1.3 Luminous Flux and Color Maintenance Measurement

Orientation(burning position) of SSL product during test ……..……:	5 base-up and 5 base-down
Test Method ……..……:	Season the LED Lamp from 0 hours to 6000 hours. The sample are operated steady state (no cycling) for a period of 6000 hours, checked the lumen flux and Chromaticity Shift every 1000 hours. The samples are inspected at regular intervals (24 hours) throughout the 6000 hours. The time and date of failure of each lamp is recorded. The actual elapsed time for each light package is in hour.

1.4 In-Situ Temperature Measurement Test (ISTMT)

Test Method ……..……..……:	Maximum led source operating temperature measurements were taken on one test sample per model with a thermocouple and temperature meter. The SSL sample was allowed to reach thermal equilibrium for at least 3 hours before measurements were taken. Led source temperature was measured at the point as indicated by the included diagram in accordance with manufacturers declared hot spot location. The maximum temperature was recorded for the sample.

2. Test equipment list

Instrument	Equipment ID	Model	Calibration Date	Calibration Due Date
2m Integating Sphere	SENSING	SL-300	AOC-S-126	2026-04-13
DC source	OYHS	OYHS-Z120V-50A	AOC-S-062	2026-04-13
Digital power meter	HENGHE	WT310E	AOC-S-012	2026-04-13
Standard Lamp	SENSING	220V/150W	AOC-S-156	2026-06-05
Variable frequency power supply	WOSEN	BP6005	AOC-S-129	2026-04-13
Oscilloscope	TEKTRONIX	MDO3012	AOC-S-028	2026-04-13

3. Test Data

3.1 Initial Photometric and Electrical Measurement Test Results

Sample No.	Base Orientation	Voltage (V)	Current (A)	Lamp Power (W)	Power Factor	Light Output (Lumens)	Revised Lumen/ W	CCT (K)	CRI
S1	base-up	120.1	0.374	41.5	0.925	4559.29	109.8	6741	81.6
S2	base-up	120.0	0.374	41.5	0.925	4703.63	113.2	6681	82.6
S3	base-up	120.1	0.382	43.4	0.945	4646.35	107.1	6769	80.8
S4	base-up	120.1	0.375	41.7	0.926	4641.77	111.4	6802	80.0
S5	base-up	120.0	0.382	43.4	0.945	4563.87	105.2	6694	82.6
S6	base-down	120.1	0.376	42.1	0.931	4576.70	108.7	6748	83.6
S7	base-down	120.0	0.375	41.7	0.927	4531.80	108.6	6789	80.8
S8	base-down	120.0	0.376	42.0	0.930	4573.04	109.0	6762	83.6
S9	base-down	120.2	0.381	43.2	0.942	4586.32	106.3	6714	80.8
S10	base-down	120.0	0.382	43.4	0.946	4577.16	105.5	6721	80.1
Average		120.1	0.378	42.4	0.934	4595.99	108.5	6742	81.7

Sample No.	Base Orientation	R9	Duv	x (CIE1931)	y (CIE1931)	u' (CIE1976)	v' (CIE1976)	Standby Power
S1	base-up	1	0.00555	0.3068	0.3282	0.1945	0.4669	0.27
S2	base-up	2	0.00558	0.3089	0.3298	0.1959	0.4693	0.29
S3	base-up	1	0.00555	0.3077	0.3285	0.1951	0.4674	0.30
S4	base-up	2	0.00558	0.3092	0.3298	0.1961	0.4693	0.30
S5	base-up	2	0.00556	0.3074	0.3292	0.1949	0.4683	0.29
S6	base-down	2	0.00554	0.3069	0.3279	0.1877	0.4665	0.28
S7	base-down	2	0.00554	0.3071	0.3275	0.1947	0.4660	0.30
S8	base-down	1	0.00556	0.3083	0.3288	0.1955	0.4679	0.30
S9	base-down	1	0.00555	0.3086	0.3285	0.1957	0.4674	0.29
S10	base-down	2	0.00558	0.3080	0.3298	0.1953	0.4693	0.30
Average		2	0.00556	0.3079	0.3288	0.1945	0.4678	0.29

Sample No.	R1	R2	R3	R4	R5	R6	R7	R8
S1	80	84	89	82	83	78	86	71
S2	81	85	90	83	84	79	87	72
S3	79	83	88	81	82	78	85	70
S4	78	82	87	80	81	78	84	70
S5	81	85	90	83	84	79	87	72
S6	82	86	91	84	85	80	88	73
S7	79	83	88	81	82	78	85	70
S8	82	86	91	84	85	80	88	73
S9	79	83	88	81	82	78	85	70
S10	78	81	88	81	82	78	83	70
Average	80	84	89	82	83	79	86	71

3.2 In-Situ Temperature Measurement Test (ISTMT)

Sample No.	Base Orientation	Voltage (V)	Frequency (Hz)	Current (A)	Lamp Power (W)	Power Factor	Tested Case Temperature (Ts)℃	Tested ambient Temperature (Tc)℃	Normalized to 25℃
S1	base-up	120.0	60	0.374	41.5	0.925	56.7	25.1	56.6
S2	base-up	120.1	60	0.374	41.5	0.925	56.8		56.7
S3	base-up	120.2	60	0.382	43.4	0.945	58.0		57.9
S4	base-up	120.1	60	0.375	41.7	0.926	56.3		56.2
S5	base-up	120.2	60	0.382	43.4	0.945	56.4		56.3
S6	base-down	120.1	60	0.376	42.1	0.931	57.4		57.3
S7	base-down	120.2	60	0.375	41.7	0.927	56.5		56.4
S8	base-down	119.9	60	0.376	42.0	0.930	57.5		57.4
S9	base-down	120.2	60	0.381	43.2	0.942	57.8		57.7
S10	base-down	120.2	60	0.382	43.4	0.946	57.1		57.0
Average		120.1	60	0.378	42.4	0.934	57.1		57.0

3.3 Lumen Maintenance (%)

Sample No.	Base Orientation	Initial Light Output (lm)	Lumen Maintenance(%)						
			0 hours	1000 hours	2000 hours	3000 hours	4000 hours	5000 hours	6000 hours
S1	base-up	4559.29	100	98.37	98.27	98.17	98.06	98.05	97.91
S2	base-up	4703.63	100	98.81	96.82	96.59	96.48	96.37	96.26
S3	base-up	4646.35	100	98.13	97.14	96.91	96.81	96.69	96.58
S4	base-up	4641.77	100	98.25	97.26	97.03	96.92	96.81	96.70
S5	base-up	4563.87	100	97.75	96.77	96.54	96.44	96.32	96.21
S6	base-down	4576.70	100	97.71	96.73	96.50	96.40	96.28	96.17
S7	base-down	4531.80	100	97.51	96.54	96.30	96.20	96.08	95.97
S8	base-down	4573.04	100	98.13	97.14	96.91	96.81	96.69	96.58
S9	base-down	4586.32	100	98.17	97.19	96.95	96.85	96.73	96.62
S10	base-down	4577.16	100	97.80	96.82	96.59	96.49	96.37	96.26
Average		4595.99	100	98.06	97.07	96.85	96.75	96.64	96.53
Median		4576.93	100	98.13	96.98	96.75	96.65	96.53	96.42
Std.dev		49.06	0	0.36	0.46	0.49	0.49	0.52	0.51
Max		4703.63	100	98.81	98.27	98.17	98.06	98.05	97.91
Min		4531.80	100	97.51	96.54	96.30	96.20	96.08	95.97

3.4 Chromaticity Shift (△ u'v')

Sample No.	Base Orientation	u'	v'	CCT(K)	Chromaticity Shift(Δu'v')					
		0hr(Initial)			1000 hours	2000 hours	3000 hours	4000 hours	5000 hours	6000 hours
S1	base-up	0.1945	0.4669	6741	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005
S2	base-up	0.1959	0.4693	6681	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005
S3	base-up	0.1951	0.4674	6769	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005
S4	base-up	0.1961	0.4693	6802	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005
S5	base-up	0.1949	0.4683	6694	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005
S6	base-down	0.1877	0.4665	6748	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005
S7	base-down	0.1947	0.4660	6789	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005
S8	base-down	0.1955	0.4679	6762	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005
S9	base-down	0.1957	0.4674	6714	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005

S10	base-down	0.1953	0.4693	6721	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005
Average		0.1945	0.4678	6742	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005
Median		0.1952	0.4676	6745	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005
Std.dev		0.0023	0.0011	38	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Max		0.1961	0.4693	6802	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005
Min		0.1877	0.4660	6681	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005

3.5 Test Summary

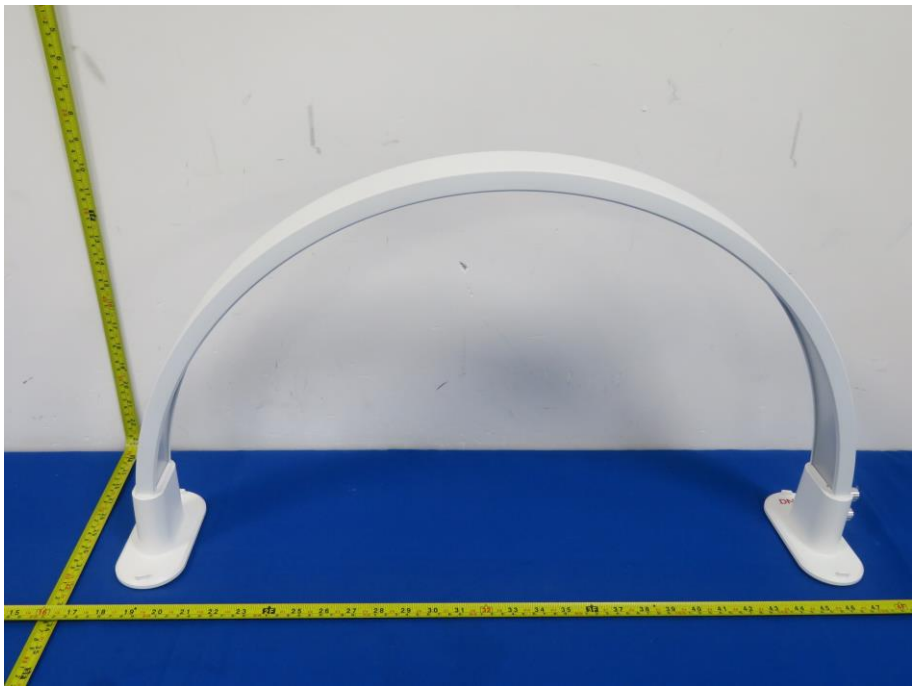
Tested Ambient Temperature (Ta)℃	Test Case Temperature (Ts)℃	Numbet of failures	Input Voltage (V)	Frequency (Hz)	Input current (A)	Input Power (W)	Average Lumen Maintenance at 6000 hours	Average Chromaticity Shift (Δ u'v') at 6000 hours
25.1	57.0	100%	120.1	60	0.378	42.4	96.53	0.0005

3.6 Lumen Maintenance Projection (IESNA TM-28-14 Method)

Criteria Item	Result
15000hours luminance of LED light source	94.59 %
Drive current on each LED light source	/
Reported L_{70} lumen maintenance life	35000 hours

4. Photo of sample

ATTACHMENT 1(S)



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