



ENERGY EFFICIENCY CERTIFICATION (EEC): Test Report - Cover Page

Customer Name: Royal Pacific Ltd.

Address: 4931 Paseo Del Norte Ne, Albuquerque, NM, 87113-1528, United States.

Product Category: Ceiling Fan with Light Kits

Brand Name(s): RP Lighting & Fans

Model Name(s): 52" Sabio

Model Number(s): 1022BN-BN-ES, 1022BN-WT-ES, 1022OB-WT-ES, 1022WW-WW-ES, 1022MBK-MBK-ES

Representative (tested) Model: 1022WW-WW-ES

Model Differences: Color

The sample(s) tested is(are) compliant with the following applied standards/regulations:

ENERGY STAR® PROGRAM REQUIREMENTS FOR RESIDENTIAL CEILING FANS AND CEILING FAN LIGHT KITS - VERSION 4.0 - Issue Date 2018/06/15

Test Location Name: UL Verification Services (Guangzhou) Co., Ltd.

Test Location Address: Room 101,201,301,501,502,503, Building A1, Nansha Science and Technology Innovation Center, No. 25, South Huanshi Avenue, Nansha District, Guangzhou China 511458

Testing Performed Under: UL Lab Private Label WMTL
 CTDSP/SMTL EPA 3rd Party Other - <specify>

UL Project No.: 4790478992.1-2a

Evaluator: Xianzhuo Zheng

Reviewer: Chuxian Jiang

Certifier: Jasmin Wang

Issued: 2022-11-02

Revised: N/A

(yyyy-mm-dd)

(yyyy-mm-dd)

Form-ULID-001234 (DCS: 00-VS-F0417), Version 7.1 The information and documentation involving UL Mark services are provided on behalf of UL Verification Services Inc. or any authorized licensee of UL Verification Services Inc.. The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products.

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Additional information:

1. ES CFLK Test Report – Refer to Report No. 4790478992.2-1a for details.
2. ES CF Test Report – Refer to Report No. 14402972-2a for details.

Project History:

N/A

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Test Report

Customer Company & Address:			
Company Name: ZHONGSHAN CO-TECH INDUSTRIES LTD.			
Add: NANLANG INDUSTRIES AREA,NANLANG ZHONGSHAN CHINA			
Contact Person:	KUN	Email:	co_tech@126.com
Telephone:	760-87896624	Fax:	760-87891381

Manufacturer:	ZHONGSHAN CO-TECH INDUSTRIES LTD.
Country of Origin:	China
Country of Export:	USA
Brand Name:	RP LIGHTING & FANS
Product Description:	Ceiling Fan with Light Kits
Representative (Tested) Model:	1022WW-WW-ES
Model Number:	1022BN-BN-ES, 1022BN-WT-ES, 1022OB-WT-ES, 1022WW-WW-ES, 1022MBK-MBK-ES
Model Differences:	Color
Electrical Specification:	120V/60Hz

Test Laboratory & Address:			
UL Verification Services (Guangzhou) Co., Ltd.			
Address: Room 101,201,301,501,502,503, Building A1, Nansha Science and Technology Innovation Center, No. 25, South Huanshi Avenue, Nansha District, Guangzhou China 511458			
Telephone:	+86 20 28667188	Fax:	+86 20 83486605

Receipt of Test Samples	2019-10-23	Test Period	2019-10-23~2019-10-24
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Handled By	Approved By
Xian Zhuo Zheng / Xianzhuo Zheng	 / Liny Lan
Test Personnel Name & Signatory	Approval Name & Signatory

The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.

Test Report

Testing Regulation

<input type="checkbox"/> DOE	DEPARTMENT OF ENERGY Office of Energy Efficiency and Renewable Energy 10 CFR Parts 429 and 430 [Docket No.EERE-2013-BT-TP-0050] RIN: 1904-AD10
<input type="checkbox"/> CEC	CEC-400-2017-002 California Code of Regulations, Title 20, Sections 1601 through 1608
<input checked="" type="checkbox"/> ES	ENERGY STAR® PROGRAM REQUIREMENTS FOR RESIDENTIAL CEILING FANS AND CEILING FAN LIGHT KITS - VERSION 4.0 - Issue Date 2018/06/15
<input type="checkbox"/> NRCAN	Amendment 16 to the Energy Efficiency Regulations, 2016: SOR/2019-163 was published in Canada Gazette Part II on June 12, 2019 for Airflow of Ceiling Fans

Statement of Results

Test Flow	Test Method	Sample ID (Lab)	Sample Serial No.	Pass/Fail/NA
Ceiling Fan Energy Efficiency Testing	Appendix U to Subpart B of Part 430 – Uniform Test Method for Measuring the Energy Consumption of Ceiling Fan	2640501	N/A	Pass
		2640503	N/A	

Deviation from Test Method (if any)

N/A

Remark (if any)

1.The measurement result for the sample received are according to the Accuracy Method decision rule.
 2.This report test data trace to DOE report: 13083282-2a.

Test Report

Test Flow : Ceiling Fan Energy Efficiency Testing

1. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
GVS-LE-CF001	Power Meter	2019-07-19	2020-07-18
GVS-LE-CF002	Digital Tachometer	2019-07-21	2020-07-20
GVS-LE-CF003	Tem.& Hum.& Atm. Record	2019-07-19	2020-07-18
GVS-LE-CF004	Distance Measure Meter	2019-07-25	2020-07-24
GVS-LE-CF005	Chamber	2019-07-21	2020-07-20
GVS-LE-CF007	Rotating Sensor Arm System	2019-07-21	2020-07-20
GVS-LE-CF009~020	Air Speed Sensor	2019-10-16	2020-10-15

2. Test Sample Information

Product Description	Ceiling Fan with Light Kits		
Representative (Tested) Model	1022WW-WW-ES		
Light Kit Model Number	LM04A-130-120V		
Motor Model Number	153x14MM	Number of Blades	3
Fan Size(inch)	52	Blade Pitch Angle(°)	12
Speed Control Type/Model No.	Pull Chain	Downrod Length(inch)	N/A
Blade Description	Standard Flat	Mounting Method	Hugger Only
Blade Weight(g)	1.3kg/3pcs	DOE Products Category	LSSD
Blade Edge Thickness(inch)	0.1968	Flow-Direction Control Type/Model No.	Slide Switch
High of pull chain above floor	< 203 cm	Minimun Warranty Statement	3 years
Blades Lowest Point to Ceiling	Hugger: 9.25inches		

3. Test Result

Hugger Mounting Method								
Sample ID	Measured Airfow(CFM)			Measured Power(W)				Efficiency (CFM/W)
	High	Medium	Low	High	Medium	Low	standby	
001	4424.49	/	1885.81	56.01	/	13.39	0.00	89.78
002	4572.26	/	1908.49	55.88	/	13.41	0.00	92.38
Average of Sample	4498.37	/	1897.15	55.94	/	13.40	0.00	91.08
LCL/0.9 for Airflow	4745.47	/	2069.16	/	/	/	/	96.75
UCL/1.1 for Power	/	/	/	51.21	/	12.26	0.00	/
Represented Value	4498.37	/	1897.15	55.94	/	13.40	0.00	91.08
ES Minimum Efficiency(CFM/W)	76.00		ES Minimum High Speed Airflow(CFM)				2949.60	
ES Result (Pass/Fail)	Pass							

Test Report

4. Test Data

LSSD+Hugger -001

Sample ID	001	Tested Date	2019/10/24		Tested By	Chuxian		
Room Temp.(°C)	21.6	Relative Humidity(%)	49.3		Barometric Pressure(PSI)	14.7		
Low Speed Testing Model								
Max. RPM	84	Min. RPM	78		Voltage(V)	120.00		
Frequency(Hz)	59.990	Power P1(W)	13.39		Current(A)	0.2326		
Sensor #	Sensor Dist. From Center (inch)	Velocity in FPM - Axis #				Average Vel. (FPM)	Circle area (sq. Ft.)	Air Delivery (CFM)
		A	B	C	D			
1	0	64.21	65.96	50.07	69.87	62.53	0.0873	5.46
2	4	100.28	84.39	50.86	90.70	81.56	0.6981	56.93
3	8	122.58	109.63	70.42	125.19	106.96	1.3963	149.35
4	12	130.83	135.21	118.47	150.54	133.76	2.0944	280.15
5	16	115.04	132.90	142.46	155.81	136.56	2.7925	381.34
6	20	85.59	107.87	121.75	128.00	110.79	3.4907	386.75
7	24	58.62	96.36	87.65	93.75	84.10	4.1888	352.26
8	28	36.88	73.40	52.99	60.66	55.98	4.8869	273.57
Total Air Flow of Low Speed(CFM)								1885.81
High Speed Testing Model								
Max. RPM	189	Min. RPM	180		Voltage(V)	119.93		
Frequency(Hz)	59.990	Power P2(W)	56.01		Current(A)	0.4703		
Sensor #	Sensor Dist. From Center	Velocity in FPM - Axis #				Average Vel. (FPM)	Circle area (sq. Ft.)	Air Delivery (CFM)
		A	B	C	D			
1	0	146.63	150.19	133.01	172.46	150.57	0.0873	13.15
2	4	191.39	208.36	200.92	222.82	205.87	0.6981	143.72
3	8	264.60	272.28	276.10	305.64	279.66	1.3963	390.49
4	12	306.87	324.39	333.34	346.41	327.75	2.0944	686.44
5	16	307.60	315.85	331.04	345.19	324.92	2.7925	907.34
6	20	242.24	240.59	249.76	269.65	250.55	3.4907	874.61
7	24	180.96	193.05	176.89	195.37	186.57	4.1888	781.48
8	28	126.11	142.89	111.91	132.51	128.35	4.8869	627.26
Total Air Flow of High Speed(CFM)								4424.49
Standby Testing Model								
Voltage(V)	120.00		Frequency(Hz)		0.000			
Power P0(W)	0.00		Current(A)		0.0000			

Test Report

LSSD+Hugger -002

Sample ID	002	Tested Date	2019/10/24		Tested By	Chuxian		
Room Temp.(°C)	21.1	Relative Humidity(%)	49.5		Barometric Pressure(Psi)	14.7		
Low Speed Testing Model								
Max. RPM	83	Min. RPM	78		Voltage(V)	120.00		
Frequency(Hz)	59.990	Power P1(W)	13.41		Current(A)	0.2327		
Sensor #	Sensor Dist. From Center (inch)	Velocity in FPM - Axis #				Average Vel. (FPM)	Circle area (sq. Ft.)	Air Delivery (CFM)
		A	B	C	D			
1	0	63.79	77.87	57.39	77.35	69.10	0.0873	6.03
2	4	97.88	99.19	49.55	100.22	86.71	0.6981	60.53
3	8	123.03	126.70	63.87	130.22	110.96	1.3963	154.93
4	12	127.98	141.10	114.24	154.33	134.41	2.0944	281.52
5	16	109.73	135.94	144.16	159.68	137.38	2.7925	383.62
6	20	82.91	112.07	123.27	131.09	112.33	3.4907	392.12
7	24	53.65	102.95	90.28	93.92	85.20	4.1888	356.88
8	28	32.92	77.47	49.80	63.14	55.83	4.8869	272.86
Total Air Flow of Low Speed(CFM)								1908.49
High Speed Testing Model								
Max. RPM	189	Min. RPM	180		Voltage(V)	119.93		
Frequency(Hz)	59.990	Power P2(W)	55.88		Current(A)	0.4692		
Sensor #	Sensor Dist. From Center	Velocity in FPM - Axis #				Average Vel. (FPM)	Circle area (sq. Ft.)	Air Delivery (CFM)
		A	B	C	D			
1	0	151.19	176.16	131.24	162.97	155.39	0.0873	13.57
2	4	197.32	243.13	214.08	226.11	220.16	0.6981	153.69
3	8	274.15	305.42	297.58	304.91	295.52	1.3963	412.63
4	12	313.43	340.02	349.22	346.74	337.35	2.0944	706.55
5	16	308.23	324.85	339.69	355.34	332.03	2.7925	927.18
6	20	240.37	252.81	250.74	281.40	256.33	3.4907	894.77
7	24	178.00	215.06	172.26	207.34	193.16	4.1888	809.12
8	28	125.76	162.86	111.00	136.29	133.98	4.8869	654.74
Total Air Flow of High Speed(CFM)								4572.26
Standby Testing Model								
Voltage(V)		120.00		Frequency(Hz)		0.000		
Power P0(W)		0.00		Current(A)		0.0000		

Test Report

5. Test Sample Photo(s)



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