

**TEST REPORT
CEC TITLE 24****Appendix JA8 – Qualification Requirements for High Efficacy Light Sources****Report reference No.**.....: LCS220301083BS**Tested by**: Zero Huang (Project Engineer)

Zero Huang

Check by: Ian Luo (Director)

Ian Luo

Approved by: Jesse Liu (Manager)

Jesse Liu

Date of issue: April 06, 2022**Contents**.....: 12 pages**Testing laboratory****Name**: Shenzhen Southern LCS Compliance Testing Laboratory Ltd.**Address**: 101-201, No.39 Buliding, Xialang Industrial Zone, Heshuikou Community, Matian Street Guangming New District, Shenzhen,Guangdong Prov. 518000 China**Testing location**: As above**Client****Name**: HIFLY ILLUMINATION CO.,LIMITED**Address**.....: No.2-2, Nanfeng Second Street,Guzhen Town, ZHONGSHAN CITY, Guangdong 528421**Manufacturer****Name**: HIFLY ILLUMINATION CO.,LIMITED**Address**.....: No.2-2, Nanfeng Second Street,Guzhen Town, ZHONGSHAN CITY, Guangdong 528421**Test specification****Standard**.....: Appendix JA8 – Qualification Requirements for High Efficacy Light Sources**Test procedure**: Appendix JA8 – Qualification Requirements for High Efficacy Light Sources**Non-standard test method**: N/A

Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

Add: 101-201, No.39 Buliding, Xialang Industrial Zone, Heshuikou Community, Matian Street Guangming New District, Shenzhen,Guangdong Prov. 518000 China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



Test item Description	Denali Pendant 3CCT
Trademark	HIFLY ARTIKA
Model and/or type reference	PDT-DEC-XXXXXX ("XXXXXX" can be A to Z and/or 0 to 9 and/or blank (commercial code))
Test Model	PDT-DEC-BLJ
Rating(s)(V/Hz)	AC120V, 60Hz, 27W
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	March 21, 2022
Date(s) of performance of test.....	March 24, 2022-April 06, 2022
Test item particulars:	Title 24
Product type:	<input type="checkbox"/> LED light engine <input checked="" type="checkbox"/> inseparable SSL luminaire <input type="checkbox"/> other
Control gear	<input type="checkbox"/> Integrated <input checked="" type="checkbox"/> External
Use of lamp.....	<input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor <input type="checkbox"/> Industry
Envelope transparency:	
- Clear lamp	<input type="checkbox"/>
- Non-clear lamp	<input checked="" type="checkbox"/>
Dimmable lamp:	<input checked="" type="checkbox"/>
Lamps Diameter(inches):	
Lamp cap installed:	
Declared data:	
Rated voltage(V):	AC120V
Rated lamp power(W):	27W
Rated useful luminous flux.....(lm):	1300lm
Rated CCT(K):	3000K
Rated life time(h):	50000h
Forward current of the LED chip.....(mA):	60
LED Manufacturer	Lumileds Holding B.V.
LED Model.....	L128-AABBRA3500DDD





Table of Contents

1. Test Method	4
1.1 Photometric and Electrical Measurement	4
1.2 Standby Power Measurement	4
1.3 Luminous Flux and Color Maintenance Measurement	5
1.4 In-Situ Temperature Measurement Test (ISTMT)	5
1.5 Start Test 、Flicker、Dimming	5
2. Test equipment list	6
3. Test Data	7
3.1 Photoelectric Parameter Test Results	7
3.2 Spectral Data Over Visible Wavelengths of Sample:	8
4. ISTMT Test Results	9
4.1. Electrical data	9
4.2 Temperature data	9
4.3 TMP in LM-80 Report	9
5. Thermocouple contact photo	10
6. Flicker data	11
7. Photo of sample	12





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

Test Standard.....: IES LM-84: Approved Method: Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires

Ambient Condition: 28.6°C / 60%RH

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.

1.5 Start Test 、Flicker、Dimming

Ambient Condition.....: 25.1°C

Test Method.....: The sample was operated at 120 Volts AC, 60Hz.A photodetector is used to monitor the luminaire light output. Time 、Flicker 、Dimming shall be measured by a Flicker Photometer.





2. Test equipment list

Instrument	Equipment ID	Model	Calibration Date	Calibration Due Date
Integrating Sphere System	SLCS-S-038	SPR-3000	2021/06/21	2022/06/20
Digital Power Meter	SLCS-S-058	WT310	2021/06/21	2022/06/20
AC Testing Power Source	SLCS-S-111	APW-105N	2021/06/21	2022/06/20
Standard Lamp	SLCS-S-118	S11010017	2021/07/02	2022/07/01
Power Meter	SLCS-S-060	PF9800	2021/05/13	2022/05/12
Temperature Tester	SLCS-S-029	34970A	2021/05/13	2022/05/12
J thermocouple	SLCS-S-029	34901A	2021/05/13	2022/05/12
Flicker Photometer	SLCS-S-119	FP-210	2022/03/10	2023/03/09





3. Test Data

3.1 Photoelectric Parameter Test Results

Sample No.	Input Voltage (V AC)	Power (W)	Power Factor	Luminous Flux (lm)	Luminous Efficacy (lm/W)	CCT (K)
S1	120.21	27.66	0.984	1247.47	45.1	2855
S2	120.06	27.61	0.984	1264.54	45.8	2851
S3	120.11	27.58	0.984	1249.37	45.3	2850
Max	-	-	-	-	-	-
Min	-	-	0.984	1247.47	45.1	2850
Average	120.13	27.62	0.984	1253.79	45.4	2852

Sample No.	Color Rendering (Ra)	R9	Duv	6,000 hour lumen maintenance (%)	LM-80 and TM-21 Projected Time to L70 (hours)	6,000 hour survival rate (%)
S1	93.4	56	-0.00299	94.21	36000	100
S2	93.4	56	-0.00315	94.36	36000	100
S3	93.4	56	-0.0032	94.08	36000	100
Max	—	—	-0.00299	—	—	—
Min	93.4	56	-	94.08	36000	100
Average	—	—	—	—	—	—

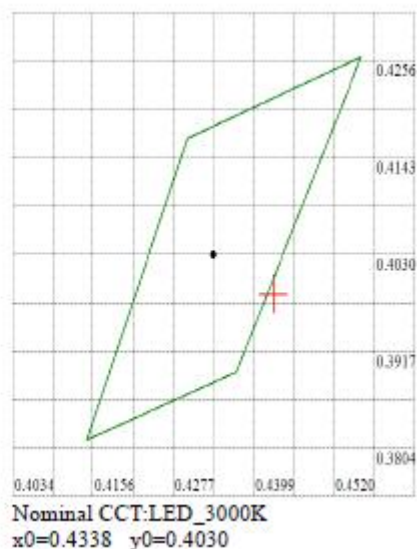
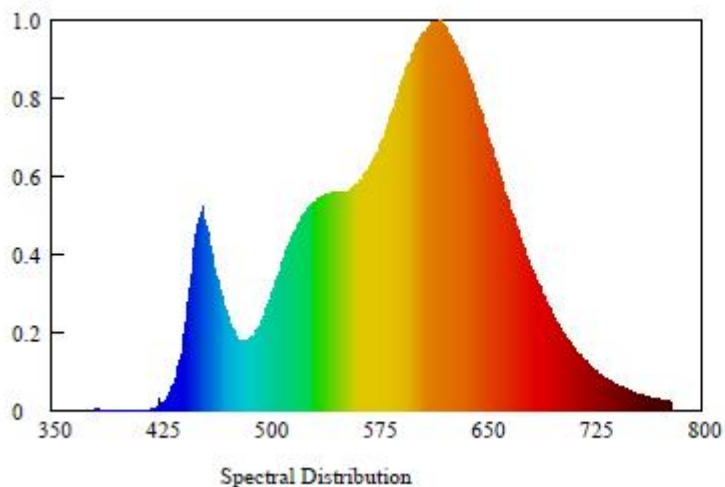
Sample No.	Minimum dimming level (%)	Frequencies (Hz)	Flicker (%)	Start Time (ms)	100% light output: Audible Noise (dBA)	20% light output: Audible Noise (dBA)
S1	10%	120.0	10.184	229.7	21	20
S2	10%	120.0	10.041	227.4	21	21
S3	10%	120.0	11.223	228.3	20	21
Max	-	—	11.223	229.7	21	21
Min	—	—	—	—	—	—
Average	10%	120.0	—	—	—	—





3.2 Spectral Data Over Visible Wavelengths of Sample:

Spectroradiometric Parameters





4. ISTMT Test Results

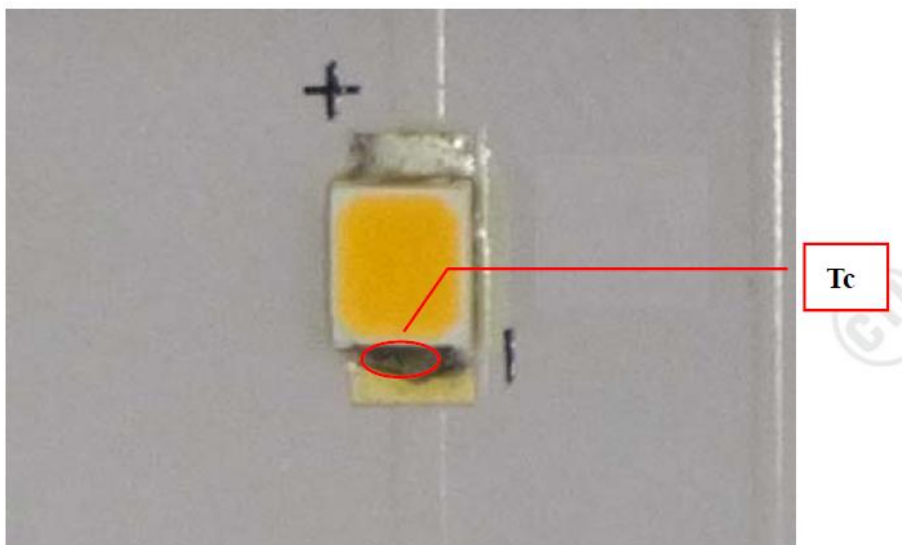
4.1. Electrical data

Criteria Item	Result
Input voltage	120.06V
Input current	0.2337A
Total power	27.61W
Power factor	0.984
Current on each LED module	50mA

4.2 Temperature data

Criteria Item	Result(°C)	Limit (°C)
Ambient temperature	25.3	---
Measured maximum Temperatuer @TEM _{LED}	62.3	105
Measured Temperatuer @TEM _{LED} (Normalized to 25°C)	62.0	

4.3 TMP in LM-80 Report





5. Thermocouple contact photo





6. Flicker data

Criteria Item	Result (%)
FlickerFullUnfiltered	10.463
FlickerFull1000Hz	10.450
FlickerFull400Hz	10.454
FlickerFull200Hz	10.457
FlickerFull90Hz	0.114
FlickerFull40Hz	0.070
FlickerDimmedUnfiltered	22.564
FlickerDimmed1000Hz	21.453
FlickerDimmed400Hz	20.777
FlickerDimmed200Hz	16.639
FlickerDimmed90Hz	0.136
FlickerDimmed40Hz	0.111
FlickerMinUnfiltered	12.634
FlickerMin1000Hz	12.278
FlickerMin400Hz	10.868
FlickerMin200Hz	7.554
FlickerMin90Hz	0.110
FlickerMin40Hz	0.083

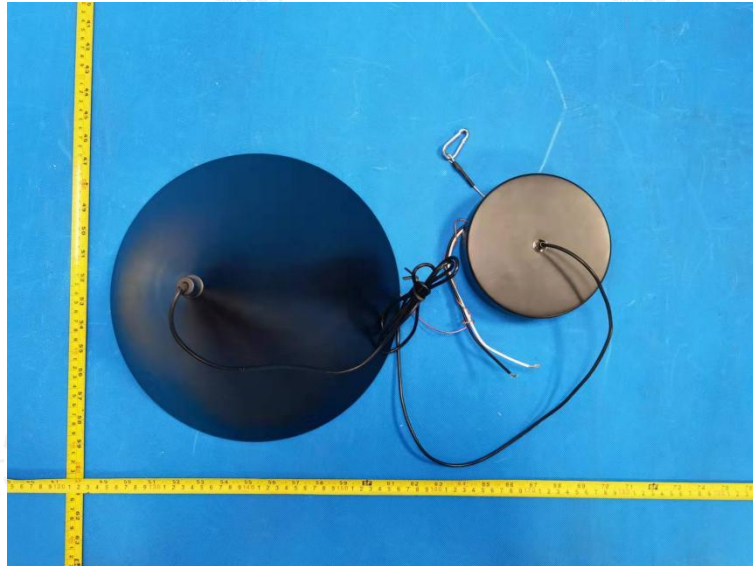
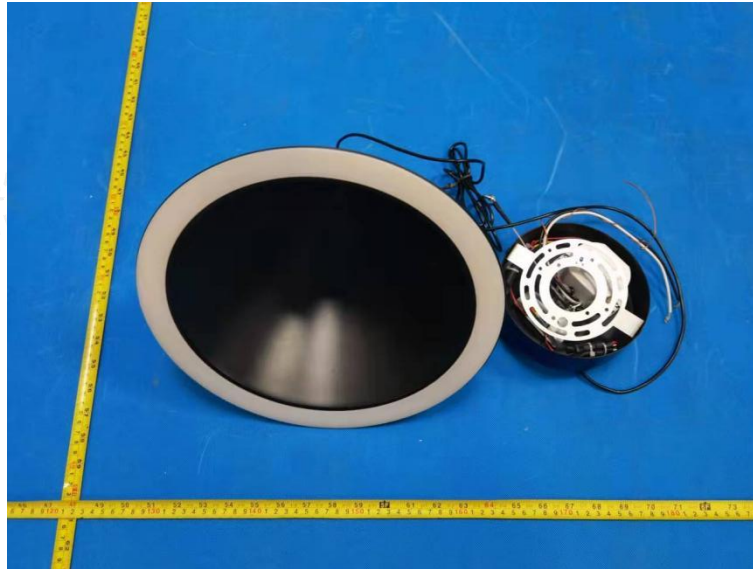




7. Photo of sample

ATTACHMENT 1(S)

PDT-DEC-BLJ



-----END OF REPORT-----

