TL-749

TEST REPORT

For

Globalux Lighting LLC

Model Number:	LSR-8-54-MVD-830/40/50	
Report Type:	Electrical, Photometric and ISTMT tests according to the following standards and show the compliance to DLC Program SSL Technical Requirements V4.4	
Standards:	IES LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products ANSI C82.77-10-2014: Harmonic Emission Limits – Related Power Quality Requirements for Lighting ANSI/UL 1598-2008: Standard for Safety of Luminaires	
Test Engineer:	George Yang	George Yang
Report Number:	RKSB190613013-10-2	
Sample Size:	One sample was received on 2019-06-13 and used for testing.	
Test Date:	2019-06-24 to 2019-09-09	
Report Date:	2019-09-09	
Reviewed By:	Ray Gao/ EE Engineer	Ray Gao
Prepared By:	Bay Area Compliance Laboratories Corp. (Kunshan). No.248 Chenghu Road, Kunshan, Jiangsu province, China. Tel: +86-0512-86175000 Fax:+86-0512-88934268	

1. Product Information and Description

Product Primary Use:	Retrofit Kits for Direct Linear Ambient Luminaires
Voltage And Frequency:	120-277VAC, 50/60Hz
LED Source Manufacturer:	Seoul Semiconductor Co., LTD
LED Source Model:	STW8A2PD-XX
Driver Model:	SIE 40-I1000 120-277 W D1 R
Luminaire length:	8ft
Auxiliary Ballast Model:	NA
Auxiliary Housing Model:	Lithonia TC2 32 MVOLT GEB10IS

2. Product Rated Values

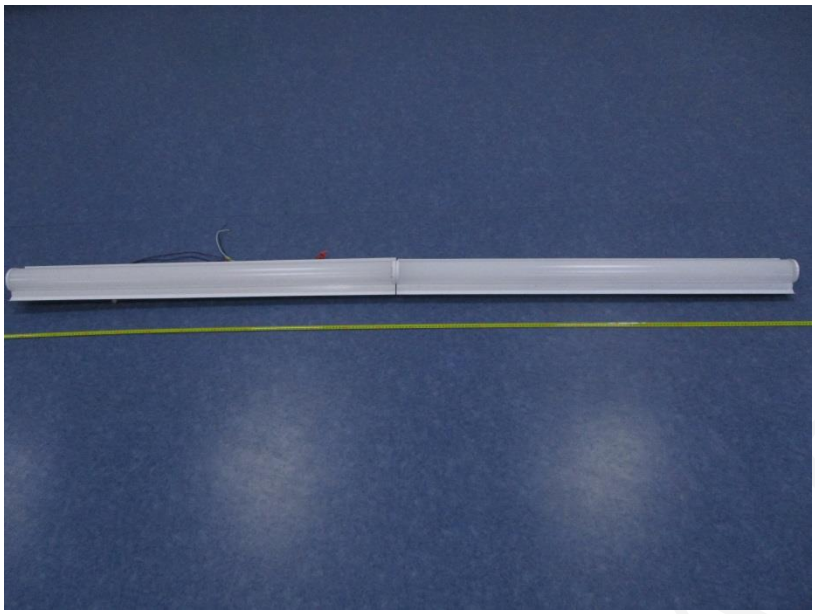
Test Model	CCT(K)	Light Output (lm)	Power(W)	Luminious Efficacy (lm/W)
	3500	6026	46	131
	4000	6072	46	132
	5000	6118	46	133

3. Test List

Test Model	Test Item			
	Goniophotometer Test	Integrating Sphere Test	THDi and PF Test	In-Situ Temperature Measurement Test
	NA	Yes	Yes	Yes

4. Product Photo

Product photo of model: ETLSRK-8FT/FG/46/YDM 835(A3+B3+EM)



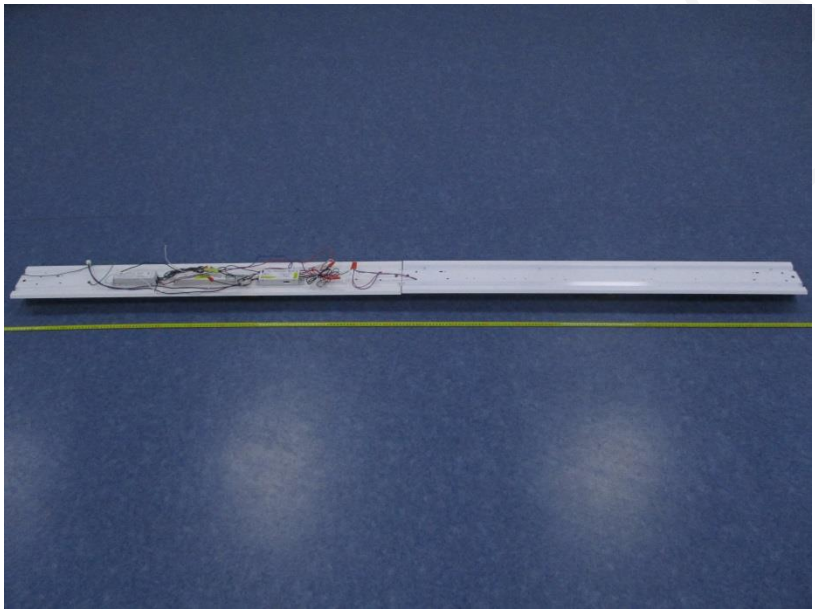
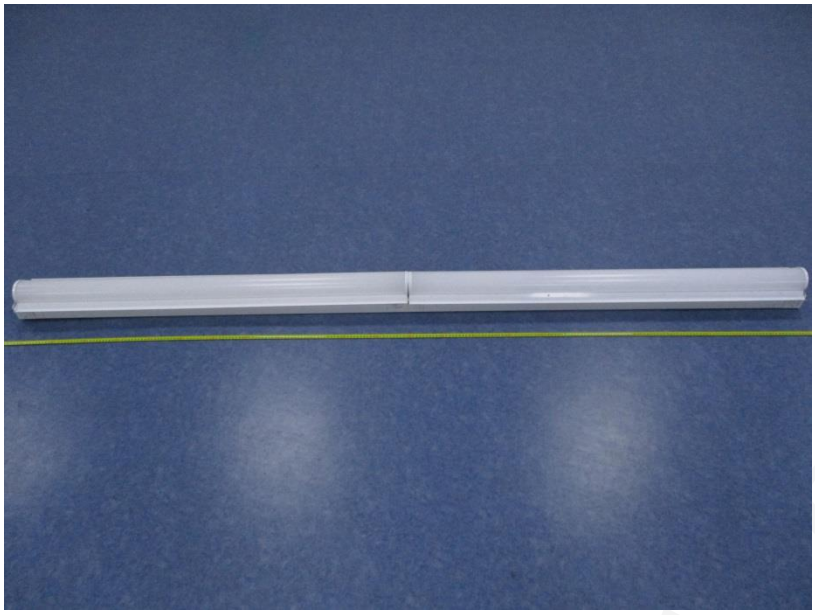
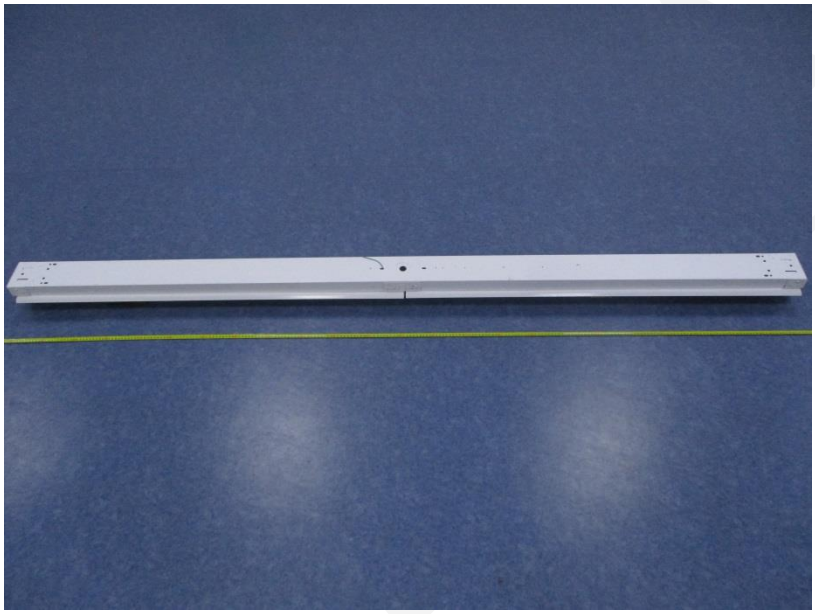


Photo of Product Installed in the Fixture





5. Test Result

Integrating Sphere Test; Orientation: Downward; Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
Light Output(lm)	6404.27	≥3000	≥2700	Pass
Power(W)	46.08	None.	None.	N/A
Total Efficacy(lm/W)	138.99	≥130	≥126.1	Pass
CCT(K)	3449	3220~3710	3220~3710	Pass
Duv	0.00001	-0.0055~0.0065	-0.0055~0.0065	Pass
R_a	82.4	≥80	≥78	Pass

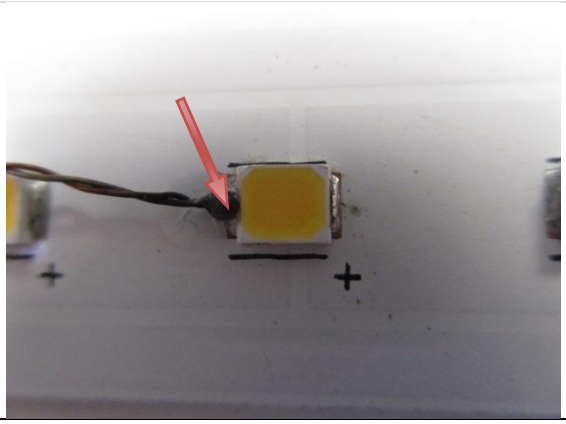
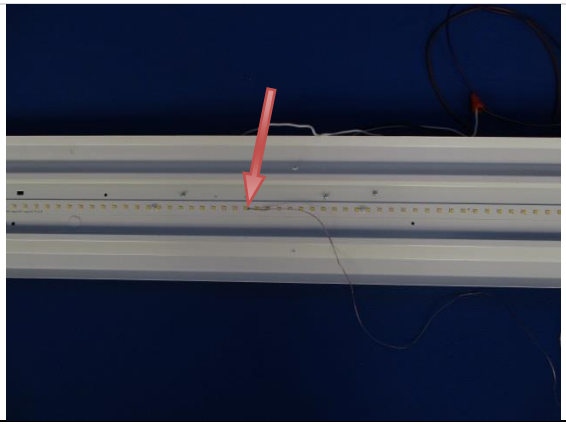
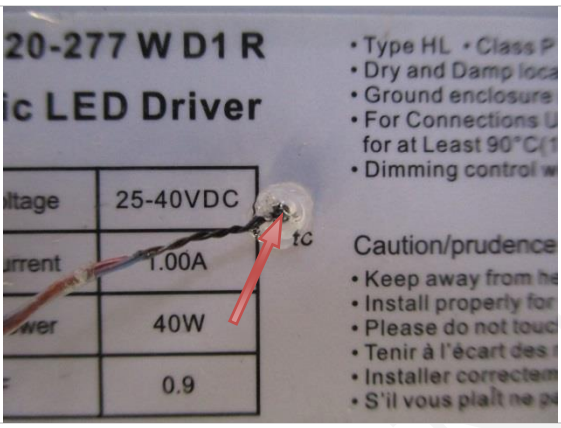
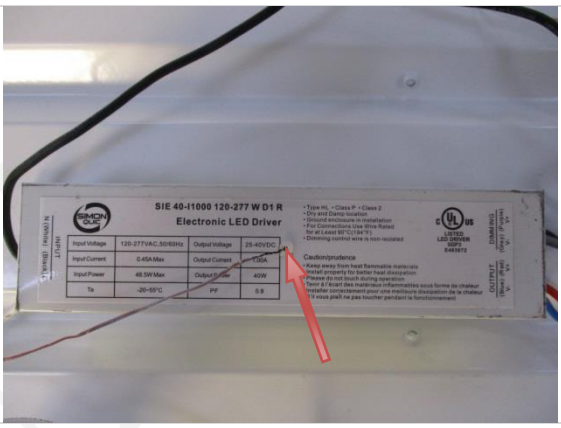
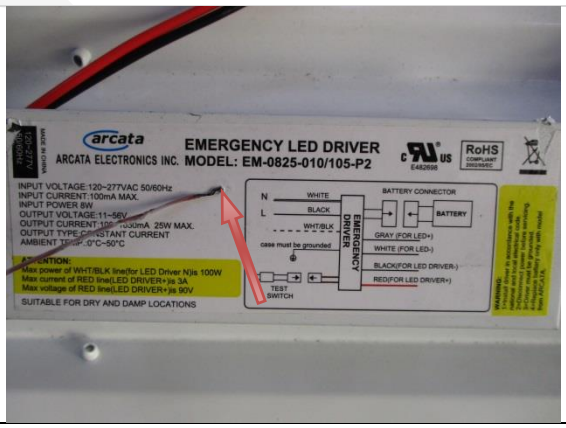
THDi、PF Test; Orientation: Downward;

Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor	0.9925	≥0.9	≥0.87	Pass
120	THDi	5.63%	≤20%	≤25%	Pass
277	Power Factor	0.9561	≥0.9	≥0.87	Pass
277	THDi	4.68%	≤20%	≤25%	Pass

In-Situ Temperature Measurement Test: Test Voltage: 120V 60Hz;

Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
TMP_{LED}(°C)	50.6	≤105	With tolerance of ≤ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass
$TMP_{c\#1}$(°C)	51.4	≤90	With tolerance of ≤ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass
$TMP_{c\#2}$(°C)	34.9	N/A	N/A	N/A
Drive Current/Individual LED source(mA)	70.8	≤200	With +5% tolerance	Pass
TM-21 Projected Lumen Maintenance at 50000hours	91.42%	L_{70} Life≥50000	L_{70} Life≥50000	Pass
L_{70} Lumen Maintenance Life (Hours)	>54000			
L_{90} Lumen Maintenance Life (Hours)	>54000	>36000	>36000	Pass

Note:
1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V4.4.
3. The conclusion is for reference only. Test report that indicate product performance meets DLC Technical Requirements do not represent official DLC product qualification. All decisions regarding product qualification are made by the DLC.

TMP_{LED}(Zoomed-in View)	TMP_{LED} (Bird's-eye View)
	
$TMP_{C\#1}$(Zoomed-in View)	$TMP_{C\#!}$ (Bird's-eye View)
	
$TMP_{C\#2}$(Zoomed-in View)	$TMP_{C\#2}$ (Bird's-eye View)
	

Test Data

[Integrating Sphere System]

Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.3869	46.08	0.9925	6404.27	138.99

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
19.123	3449	0.00001	0.4082	0.3922	0.2370	0.5123

Color Rendering Index

Ra
82.4

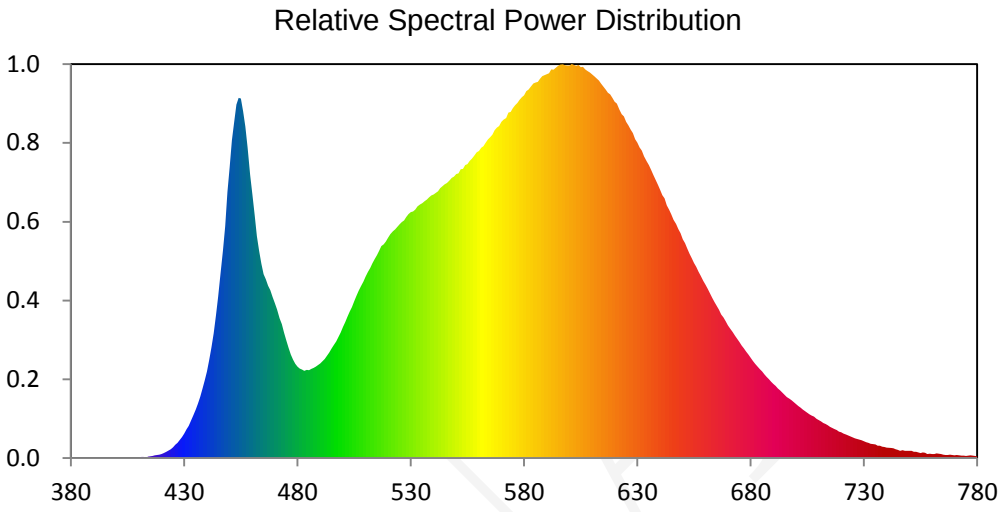
R1	R2	R3	R4
81	90	96	80

R5	R6	R7	R8
81	86	84	62

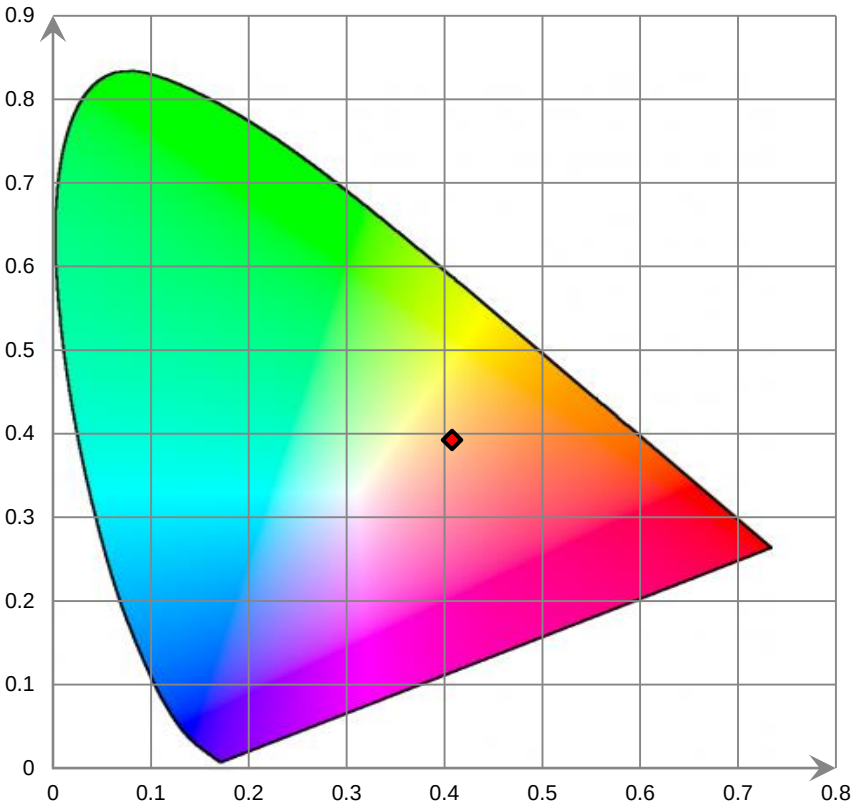
R9	R10	R11	R12
9	75	78	60

R13	R14	R15
83	98	75

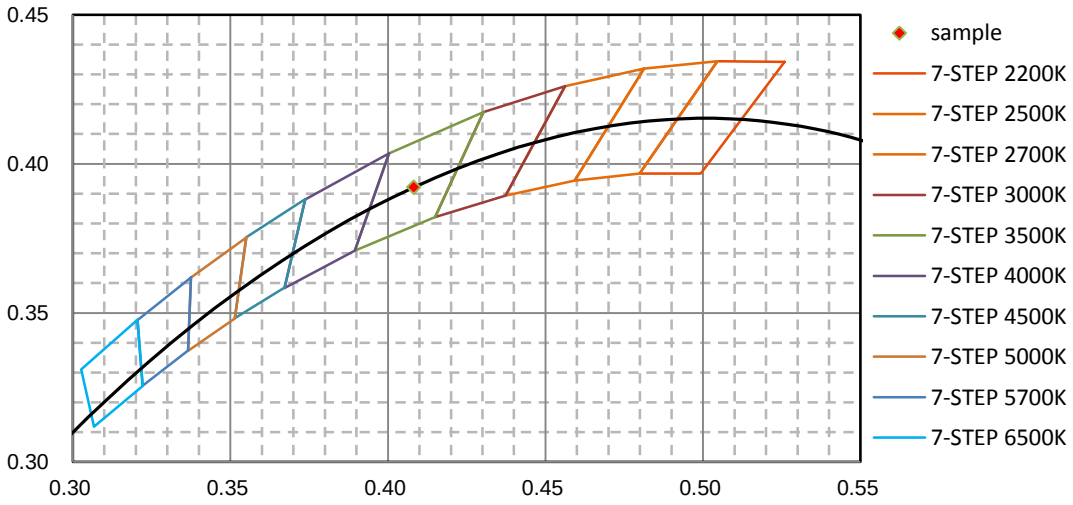
Fidelity Index R_f	83
Gamut Index R_g	95
Rcs h1	-12%
SDCM(ANSI C78.376-2014)	0.7



CIE 1931 x y Chromaticity Diagram



7-Step Chromaticity Quadrangles



6. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
Integrating Sphere	INVENTFINE	Dia 1.5m	JWWCV090112	2019-01-23	2020-01-22
Power Meter	INVENTFINE	WT500	GSJWQ20009	2019-04-23	2020-04-22
Spectral photometer	INVENTFINE	CMS-3S	GSGSE100017	2019-01-23	2020-01-22
AC Power Supply	INVENTFINE	CHP500	JWJSD010071	2019-04-23	2020-04-22
Standard Light Source	INVENTFINE	N/A	JWWCR020106	2018-12-24	2019-12-23
Thermal Meter	KEJIAN	TA298	N/A	2018-12-01	2019-11-30
DC Power Supply	INVENTFINE	WL3005	JWWCP020069	2019-04-23	2020-04-22
Digital Multimeter	FLUKE	115C	37840512WS	2018-09-06	2019-09-05
Hybrid Recorder	YOKOGAWA	DR230	4TJH0903	2019-04-24	2020-04-23
Power Supply	SC	SC/BP-11003	1608110030553	2018-11-30	2019-11-29

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

7. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with IES LM-79-08. The ambient temperature of the sample was maintained at 25°C±1°C during measurement. And relative humidity is less than 65%.The product was operated in its intended orientation in application during all testing.

Integrating Sphere System
The system includes AC power source, digital power meter, DC power supply, Spectroradiometer, and integrating sphere. The integrating sphere system is calibrated by standard spectrum light source before measurement. 4π geometry was used during measurement.

ISTMT Test
The LED which has the highest temperature was measured at the location of LED case which is specified by LED source manufacturer and detailed by LM-80 report. The drive current of LED package/module/ array was calculated as the total output current of the driver measured by multimeter, divided by the number of branches in parallel of LEDs.

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