

### TEST REPORT



Reference Standard: IEC 60598-2-1

Luminaires - Part 2-1: Particular requirements - Fixed general purposed luminaires

Report Reference No. .... :	47041
Date of issue..... :	27 June 2018
Total Number of Pages..... :	8
<b>Applicant's Name</b> ..... :	<b>LITE-TECH INDUSTRIES L.L.C</b>
Address..... :	13-B, Ras Al Khor Ind. No.1, PO. Box: 60305, Dubai, UAE.
<b>Test specification:</b>	
Standard(s)..... :	IEC 60598-2-1, IEC 60598-1
Test Report Form No. .... :	GMES/LAB/FRM/-021 Rev 01, Jan'18
Test Report Form(s) Originator..... :	Gray Mackenzie Engineering Services LLC
Master TRF..... :	04-January-2018
Client Document No..... :	N/A
Client Reference No..... :	N/A
Lab Reference No..... :	N/A
Job No..... :	23759
Data Sheet No..... :	16040
Test Item Description..... :	LED Luminaire
Trademark/Identification mark..... :	LITE-TECH
Manufacturer name..... :	LITE-TECH INDUSTRIES L.L.C
Model/Type reference..... :	42-BULKSTAR-1340-20-840-EU
Serial Number..... :	Not Indicated
Ratings..... :	220V-240V, 50/60Hz, 20W, IP65, Ta.45°C, 4000K, 3015lm



**Testing Procedure and Testing Location:**

<input checked="" type="checkbox"/> <b>Testing Laboratory:</b>	Gray Mackenzie Engineering Services LLC
<b>Tested By (name+signature).....:</b>	Jhay Figuerrez 
<b>Approved By (name+signature).....:</b>	Harish N. Vasavan 

**Summary of Testing:**

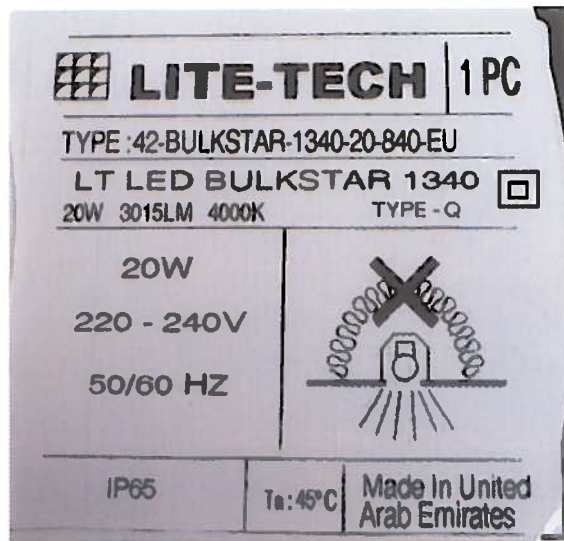
The product complies with the requirements of the tests performed as per IEC 60598-2-1, IEC 60598-1.

The product complies with the KUCAS and SASO Essential Requirements.

**Note:** Clause No 4 & 12 of IEC 60598-1 are not covered under GAC Scope of accreditation.

**Copy of Marking Plate:**

Luminaire Marking:





**Possible Test Case Verdicts:**

- test case not conducted to the test object..... : N/C
- test case does not apply to the test object..... : N/A
- test object does meet the requirement ..... : P (Pass)
- test object does not meet the requirement..... : F (Fail)

**Testing** .....

Date of receipt of test item..... : 19 June 2018  
Date (s) of performance of tests ..... : 22 June 2018 to 27 June 2018  
Laboratory Temperature..... : 23±2°C

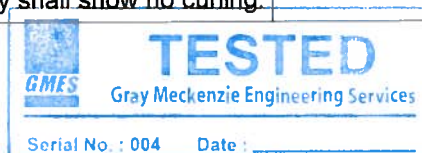
**General Remarks:**

The test results presented in this report relate only to the object tested.  
This report shall not be reproduced in full/partial without the written approval of the Issuing testing laboratory.  
"(See Enclosure #)" refers to additional information appended to the report.  
"(See appended table)" refers to a table appended to the report.  
Throughout this report a point is used as the decimal separator.





IEC 60598-2-1			
Clause	Requirement - Test	Result - Remark	Verdict
1.5 (3)	<b>MARKING:</b>		P
3.1	<b>GENERAL:</b>		P
	Any written instructions related to safety shall be in a language which is acceptable in the country in which the equipment is to be installed.		P
3.2	<b>MARKING ON LUMINAIRES:</b>		P
	Mark of origin	LITE-TECH	P
	Rated voltage(s) in volts	220-240V	P
	rated maximum ambient temperature $t_a$	Ta 45°C	P
	Symbol for class II luminaires		P
	Symbol for class III luminaires		N/A
	Marking with IP numbers	IP65	P
	Model number or type reference	42-BULKSTAR-1340-20-840-EU	P
	Rated wattage or the designation	20W	P
	Symbol for luminaires for lamps of similar shape to "cool beam"		N/A
	Except for type Z attachments, terminations shall be marked to identify live, neutral and earth		P
	Symbol for minimum distance from lighted objects		N/A
	Symbol for rough service luminaires		N/A
	Symbol for luminaires for cracked protective shield		N/A
	Luminaires incorporating a protective shield		N/A
	maximum number of luminaires that may be interconnected or the maximum total current		N/A
	Relevant symbol for luminaires not suitable for covering with thermally insulated material.		P
3.3	<b>Additional information:</b>		P
	All details which are necessary to ensure proper installation, use and maintenance shall be given		P
3.3.2	Nominal Frequency:	50/60Hz	P
3.3.3	Operating temperature:	Ta 45°C	P
3.3.17	Supply cord replacement instruction		N/A
1.5 (3.4)	<b>TEST OF MARKING:</b>		P
	After the test, the marking shall be legible,		P
	marking labels shall not be easily removable and		P
	They shall show no curling.		P





IEC 60598-2-1				
Clause	Requirement - Test	Result - Remark		Verdict
<b>1.6 (4.13)</b>	<b>MECHANICAL STRENGTH:</b>			<b>P</b>
4.13.1	Luminaires shall have adequate mechanical strength and be so constructed as to be safe after such rough handling as may be expected in normal use.	Applied impact energy		P
		Fragile	Other	
		0.20 Nm	-	
4.13.2	Metal parts enclosing live parts shall have adequate mechanical strength.			P
<b>1.6 (4.14)</b>	<b>SUSPENSION AND ADJUSTING DEVICES:</b>			<b>P</b>
4.14.1	Mechanical suspensions shall have adequate factors of safety.			P
4.14.2	The mass of the luminaire suspended by flexible cables or cords shall not exceed 5 kg.			N/A
	The total nominal cross-sectional area of the conductors of flexible cables or cords suspending pendants shall be such that the stress in the conductors does not exceed 15 N/mm <sup>2</sup>			N/A
4.14.3	Adjusting devices and means of adjustment shall be so constructed that cords or cables are not pressed, clamped, damaged or twisted along the longitudinal axis by more than 360° during operation			N/A
<b>1.6 (4.21)</b>	<b>PROTECTIVE SHIELD:</b>			<b>N/A</b>
4.21.4	inspection and by the following tests:			N/A
	- the protective shield shall comply with the impact test of 4.13.1 with the impact energy of Table 4.3 for fragile parts;			N/A
	- parts of the lamp compartment, if of insulating material, shall comply with the resistance to flame and ignition test of 13.3.2.			N/A
<b>1.7 (11)</b>	<b>CREEPAGE DISTANCES AND CLEARANCES</b>			<b>P</b>
	Creepage and clearances distance (mm) between	Measured	Limit (mm)	P
	Current carrying parts of different polarity	2.2Cr 2.0Cl	1.2Cr 0.2Cl	P
	Live parts and mounting surface	2.3Cr 2.2Cl	1.2Cr 0.2Cl	P
<b>1.8 (7.2.1)</b>	<b>PROVISION FOR EARTHING:</b>			<b>N/A</b>
	Metal parts separated from live parts by double insulation or by reinforced insulation, are not regarded as likely to become live in the event of an insulation fault.			N/A
	The earthing connections shall be of low resistance.	-		N/A
	Functional earth circuit shall be separated from live parts or accessible metal parts by double or reinforced insulation.			N/A





IEC 60598-2-1			
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<b>1.10 (5.2)</b>	<b>SUPPLY CONNECTION AND OTHER EXTERNAL WIRING</b>		<b>P</b>
	Luminaires shall be provided with one of the following means of connection to the supply:		-
	- fixed luminaires	Terminal	P
	- portable luminaires		N/A
	- track-mounted luminaires		N/A
	- semi-luminaires		N/A
<b>1.11 (8.2)</b>	<b>PROTECTION AGAINST ELECTRIC SHOCK:</b>		<b>P</b>
	Luminaires shall be so constructed that their live parts are not accessible when		P
	the luminaire has been installed and		P
	wired as in normal use, and		P
	when it is opened as necessary for replacing lamps or (replaceable) starters		N/A
<b>1.12 (12.4)</b>	<b>THERMAL TEST: (normal use)</b>		<b>P</b>
		Ambient Temperature: 45.0°C	-
	LED Driver:	48.1°C	P
	Enclosure:	48.9°C	
	Internal wire:	47.8°C	
<b>1.13 (9)</b>	<b>RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE</b>		<b>P</b>
9.3.1	All luminaires shall be proof against humid conditions which may occur in normal use.	25°C 93%Rh 48h	P
<b>1.14 (10.2)</b>	<b>INSULATION RESISTANCE AND ELECTRIC STRENGTH:</b>		<b>P</b>
	The insulation resistance and the electric strength of luminaires shall be adequate.	Between live parts and Enclosure	P
	500V DC Insulation Resistance:	>99.99MΩ	P
	2960V AC 60Sec Electric Strength:	No Breakdown	P
<b>1.14 (10.3)</b>	<b>LEAKAGE CURRENT/TOUCH CURRENT:</b>		<b>P</b>
	The touch current or protective conductor current that may occur during normal operation of the luminaire shall not exceed the values given in Table 10.3	0.03mA	P





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Clause	Requirement - Test	Result - Remark	Verdict
1.15 (13)	<b>RESISTANCE TO HEAT, FIRE AND TRACKING</b>		P
13.2	External parts of insulating material providing protection against electric shock,		N/A
	and parts of insulating material retaining current-carrying parts or SELV parts in position shall be sufficiently resistant to heat.	BPT 125°C	P
13.3	Parts of insulating material retaining current-carrying parts or		P
	SELV parts in position		N/A
	And external parts of insulating material providing protection against electric shock	GWT 650°C	P
	shall be resistant to flame and ignition.	No Flame	P

<b>Kucas</b>	<b>ESSENTIAL REQUIREMENTS:</b>		P
	Rated Voltage:	220-240V	P
	Rated Frequency:	50/60Hz	P
	Plug:		N/A
	Country of Origin:	UAE	P
	Instruction Manual:		P

<b>SASO</b>	<b>ESSENTIAL REQUIREMENTS:</b>		P
	Rated Voltage:	220-240V	P
	Rated Frequency:	50/60Hz	P
	Plug:		N/A
	Country of Origin:	UAE	P
	Instruction Manual:		P





PHOTOGRAPH OF TEST OBJECT:

