



TEST REPORT

Reference Standard: IEC 60598-2-2

Luminaires - Part 2-2: Particular requirements - Recessed luminaires

Report Reference No.....	47025
Date of issue.....	27 June 2018
Total Number of Pages.....	8
Applicant's Name.....	LITE-TECH INDUSTRIES L.L.C
Address.....	13-B, Ras Al Khor Ind. No.1, PO. Box: 60305, Dubai, UAE.
Test specification:	
Standard(s).....	IEC 60598-2-2, 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.....	16024
Test Item Description.....	Recessed LED Down Light
Trademark/Identification mark.....	LITE-TECH
Manufacturer name.....	LITE-TECH INDUSTRIES L.L.C
Model/Type reference.....	32-29BEAN-S-16-840
Serial Number.....	Not Indicated
Ratings.....	220V-240V, 50/60Hz, 16W, IP44, Ta.45°C, 4000K, 1419lm



Testing Procedure and Testing Location:

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

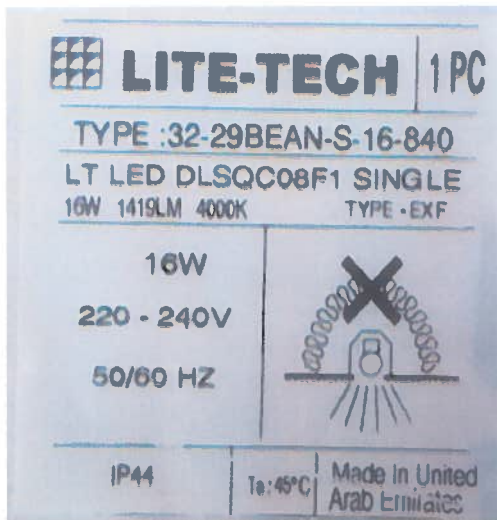
Summary of Testing:

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



Control Gear Marking:





Possible Test Case Verdicts:

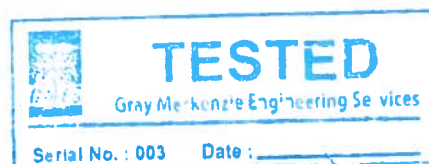
- test case not conducted to the test object.....: N/C
- test case does not apply to the test object.....: N/A
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

Testing

Date of receipt of test item: 19 June 2018
Date (s) of performance of tests: 21 June 2018 to 26 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 60598-2-2			
Clause	Requirement - Test	Result - Remark	Verdict
2.6 (3)	MARKING:		P
3.1	GENERAL:		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	MARKING ON LUMINAIRES:		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		N/A
	Symbol for class III luminaires		N/A
	Marking with IP numbers	IP44	P
	Model number or type reference	32-29BEAN-S-16-840	P
	Rated wattage or the designation	12W	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		P
	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.		N/A
3.3	Additional information:		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
2.6 (3.4)	TEST OF MARKING:		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 60598-2-2						
Clause	Requirement - Test	Result - Remark		Verdict		
2.7 (4.13)	MECHANICAL STRENGTH:				P	
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	0.35 Nm			
4.13.2	Metal parts enclosing live parts shall have adequate mechanical strength.	No Live Parts		P		
2.7 (4.14)	SUSPENSION AND ADJUSTING DEVICES:				P	
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 ²			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		
2.7 (4.21)	PROTECTIVE SHIELD:				N/A	
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		
2.8(11)	CREEPAGE DISTANCES AND CLEARANCES				P	
	Creepage and clearances distance (mm) between	Measured	Limit (mm)		P	
	Current carrying parts of different polarity	2.8Cr	2.2Cl	1.2Cr	0.2Cl	P
	Live parts and mounting surface	2.6Cr	2.2Cl	1.2Cr	0.2Cl	P
2.9 (7.2.1)	PROVISION FOR EARTHING:				P	
	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.	0.03Ω		P		
	Functional earth circuit shall be separated from live parts or accessible metal parts by double or reinforced insulation.			N/A		





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Clause	Requirement - Test	Result - Remark	Verdict
2.11 (5.2)	SUPPLY CONNECTION AND OTHER EXTERNAL WIRING		P
	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
2.12 (8.2)	PROTECTION AGAINST ELECTRIC SHOCK:		P
	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
2.13 (12.4)	THERMAL TEST: (normal use)		P
	Ambient Temperature: 45.0°C		-
	LED Driver:	49.4°C	P
	Enclosure:	46.3°C	
	Internal wire:	48.6°C	
2.14 (9)	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE		P
9.3.1	All luminaires shall be proof against humid conditions which may occur in normal use.	25°C 93%Rh 48h	P
2.15 (10.2)	INSULATION RESISTANCE AND ELECTRIC STRENGTH:		P
	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
	1480V AC 60Sec Electric Strength:	No Breakdown	P
2.15 (10.3)	LEAKAGE CURRENT/TOUCH CURRENT:		P
	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	0.02mA	P





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2.16 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		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

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

SASO	ESSENTIAL REQUIREMENTS:		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:

