

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250417136GZU-002

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None

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Report format for LM-79_G

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Report No.: 250417136GZU-002

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWOWS72227OB

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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TEST: Electrical and Photometric as required to the IES LM-79 test standard.

AUTHORIZATION: The testing performed was authorized by signed quote number: QGZ250416085.

STANDARDS USED: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

IES LM-79-24 Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI C78.377-2017 (R2022) Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE: The client submitted one sample of model KWOWS72227OB. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250417136-004.

MANUFACTURER /FACTORY & ADDRESS: Shao Guan Weng Yuan Pearly Gates Furniture Manufacturing Co., Ltd.
GuanYing Industrial Park, GuanDu Economic Development Experimental Zone, Weng Yuan County, Guang Dong Province, PRC. 512625.

DATES OF TESTS: 27 April 2025

ISSUED BY: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

TEST LOCATION: Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

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TEST REPORT

SUMMARY

Model Number:	KWOWS72227OB
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWOWS72227OB

Criteria	Result
Total Lumen Output	96.5 lm
Total Power	5.8 W
Luminaire Efficacy	16.7 lm/W
S/MH(C0/180)	1.29
S/MH(C90/270)	1.23
Correlated Color Temperature (CCT)	2695 K
Color Rendering Index (CRI)	95
R9	75
Chromaticity Coordinate (x)	0.4578
Chromaticity Coordinate (y)	0.4063
Chromaticity Coordinate (u')	0.2631
Chromaticity Coordinate (v')	0.5254

Remark:

N/A

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TEST REPORT

EQUIPMENT LIST

Equipment Used	Model Number	Control Number
Goniophotometer System	Go-R5000	SA063-16
KONICA MINOLTA - Illuminance meter	CX-2B_WL	SA063-16-01
Standard Lamp	D215S	SA063-16-06
Digital Power Meter	PLM3000	SA063-16-09
AC power source for Goniophotometer	PCR-1000WH	SA063-16-10
Temperature Meter	S500-TH	SA047-182

GENERAL REMARK

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When determining for test conclusion, measurement uncertainty of tests has been considered.

Throughout this report a ☐ comma ☒ point is used as the decimal separator.

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TEST REPORT

TEST METHOD

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IES LM-79

Light Distribution and Output Measurements

Light Distribution and total light output (luminous flux) were measured using a Go-R5000 Type-C Rotating Mirror Goniophotometer. Temperature 25°C and relative humidity of 60% was measured at a position in the testing laboratory.

The lamp rotates only around the fixed vertical axle in the prescribed burning position. The lamp and mirror permit the measurement of luminous intensity at the direction of any horizontal or vertical angle without tilting the lamp. The lamp was allowed to stabilize before measurements were made.

Chromaticity Measurements

Chromaticity was measured using a 2 meters integrating sphere spectral lamp measurement system, 4 π geometry, with an interior coating reflectance no less than 95 %. Temperature was measured at a position inside the sphere shielded from direct light. Relative humidity of 65% was measured at a position in the testing laboratory.

Spectral radiant flux measurements were made using spectroradiometer attached to the detector port of the integrating sphere. Each lamp was allowed to stabilise before measurements were made. The calibration of the integrating sphere spectroradiometer system is by the reference/standard lamps which are traceable to National Institute of Metrology P.R. CHINA. Lamp efficacy (lumens per watt) for each lamp model was then computed based on the luminous flux result. Electrical measurements including voltage, power and power factor were measured using YOKOGAWA - Digital Power Meter., model WT310E.

Correction factor (self-absorption) has been considered when doing measurement.

Standard lamp used for Goniophotometer method:

Model: D215S

Current: 4.809A DC

Standard lamp used for integrating sphere:

Model: D204

Current: 3.948A DC

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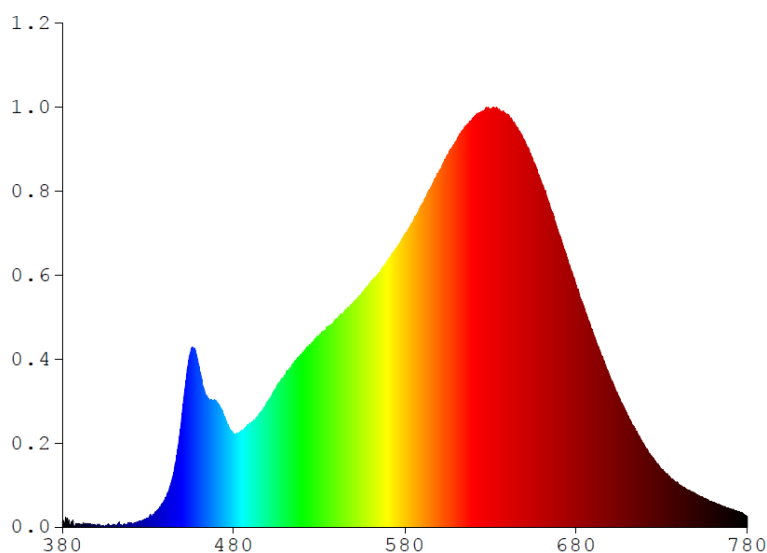
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWOWS722270B

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.1035	480	2.0762	580	6.5089	680	5.3723	780	0.2236
385	0.0731	485	2.1417	585	6.8230	685	4.8381		
390	0.0575	490	2.3164	590	7.1881	690	4.3009		
395	0.0779	495	2.5279	595	7.5403	695	3.7926		
400	0.0000	500	2.7980	600	7.9445	700	3.3121		
405	0.0280	505	3.1110	605	8.2837	705	2.8896		
410	0.0175	510	3.3788	610	8.5933	710	2.4818		
415	0.0372	515	3.6448	615	8.9133	715	2.1275		
420	0.0910	520	3.8563	620	9.1171	720	1.7993		
425	0.1316	525	4.0457	625	9.2603	725	1.5404		
430	0.1814	530	4.2587	630	9.3112	730	1.2893		
435	0.3455	535	4.4451	635	9.3080	735	1.0914		
440	0.6322	540	4.6267	640	9.1913	740	0.9460		
445	1.2012	545	4.8240	645	8.9181	745	0.8243		
450	2.5186	550	5.0078	650	8.5998	750	0.7344		
455	3.9264	555	5.2110	655	8.1382	755	0.6439		
460	3.5149	560	5.4225	660	7.6436	760	0.5449		
465	2.8641	565	5.6597	665	7.0973	765	0.4639		
470	2.7750	570	5.9372	670	6.5189	770	0.4041		
475	2.4167	575	6.2188	675	5.8455	775	0.3423		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWOWS722270B

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

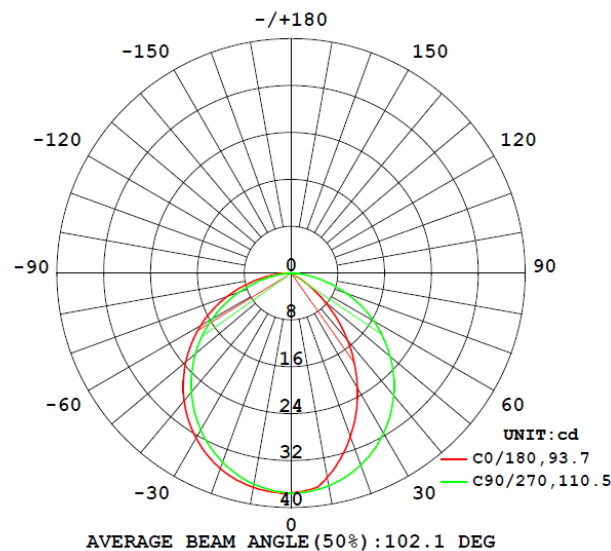
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit	Chromaticit	Chromaticit	Chromaticit
					y	y	y	y
					Coordinate	Coordinate	Coordinate	Coordinate
					(x)	(y)	(u')	(v')
KWOWS722270B								
S2504171 36-004	base-up	2695	95	75	0.4578	0.4063	0.2631	0.5254

Photometric and Electrical Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
KWOWS722270B							
S2504171 36-004	base-up	120.1	49.2	5.8	0.981	96.5	16.7

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWOWS722270B

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	37.4	37.4	37.4	37.5	37.5
5	37.1	37.0	37.1	37.2	37.3
10	35.4	35.4	36.4	36.7	36.8
15	32.7	32.9	34.4	35.7	36.0
20	29.6	30.0	32.1	34.5	34.8
25	26.3	26.8	29.7	32.6	33.3
30	22.7	23.6	27.3	30.5	31.6
35	18.9	20.5	24.9	28.3	29.5
40	15.0	17.4	22.5	26.0	27.3
45	11.2	14.5	20.3	23.8	24.8
50	7.4	11.9	18.3	21.4	22.1
55	3.8	9.7	16.7	18.6	19.3
60	0.5	7.9	14.4	15.6	16.3
65	0.0	6.8	11.3	12.5	13.2
70	0.0	5.4	8.1	9.3	10.0
75	0.0	3.3	5.1	6.2	6.8
80	0.0	1.4	2.4	3.2	3.8
85	0.0	0.2	0.5	0.9	1.3
90	0.0	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	0.1
135	0.0	0.0	0.0	0.1	0.1
140	0.0	0.0	0.1	0.1	0.1
145	0.1	0.1	0.1	0.1	0.1
150	0.1	0.1	0.1	0.1	0.1
155	0.1	0.1	0.1	0.1	0.1
160	0.1	0.1	0.1	0.1	0.1
165	0.1	0.1	0.1	0.1	0.1
170	0.1	0.1	0.1	0.1	0.1
175	0.1	0.1	0.1	0.1	0.1
180	0.1	0.0	0.1	0.1	0.1

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWOWS72227OB

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWOWS72227OB		
0-30	28.0	29.1
0-40	45.0	46.6
0-60	77.0	79.8
0-90	96.1	99.6
60-90	21.1	19.8
0-180	96.5	100.0

Beam Angle

Total Beam Angle(°)

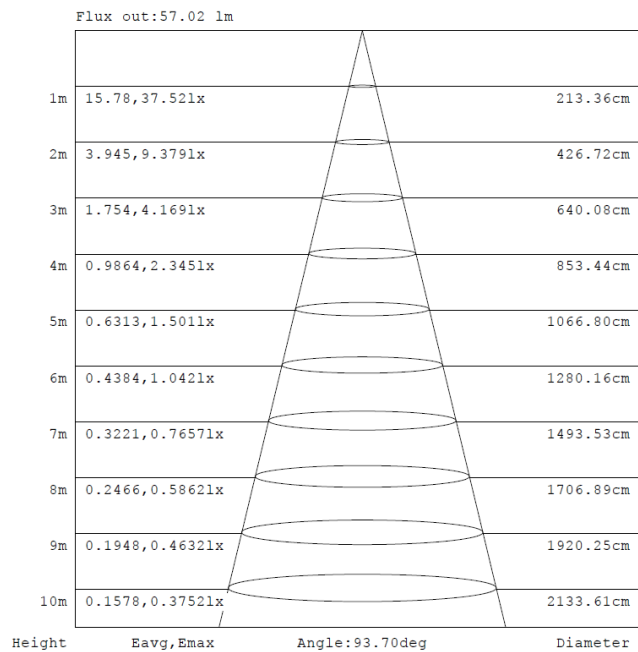
102.1

Illumination Plots

Model No.: KWOWS72227OB

Mount Height: 2.5 m

Illuminance - Cone of Light



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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TEST REPORT

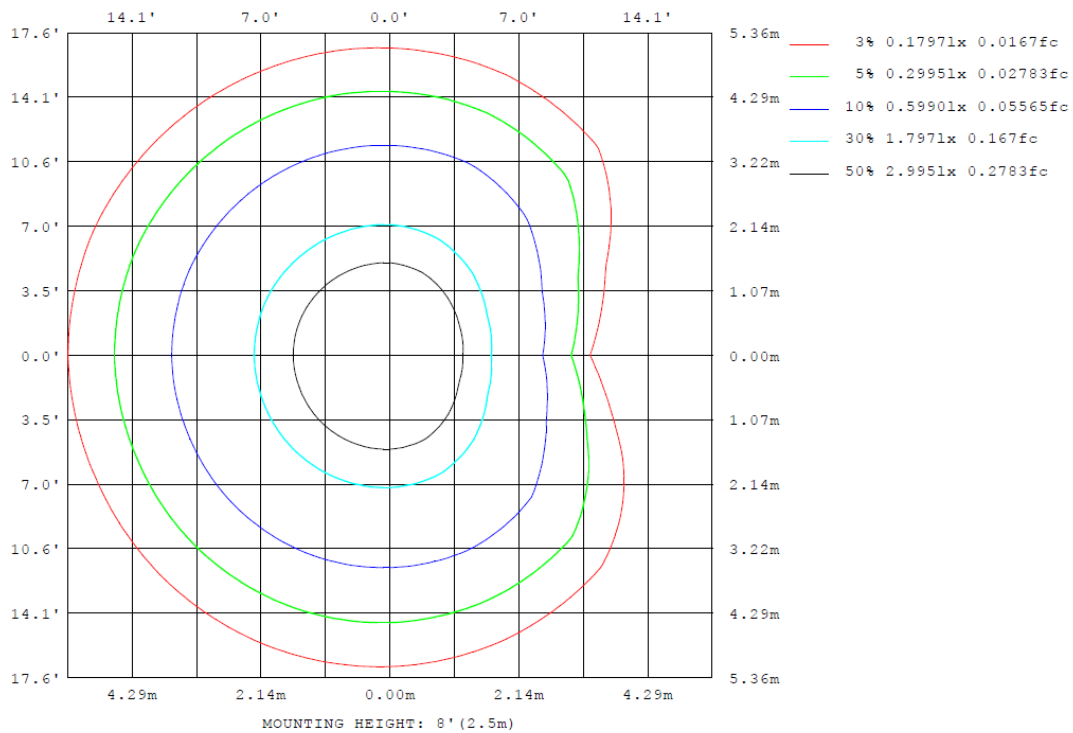
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWOWS72227OB

Model No.: KWOWS72227OB

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWOWS722270B

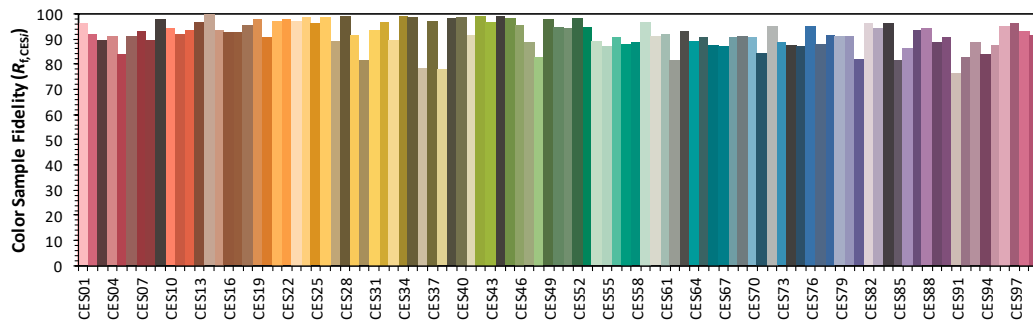
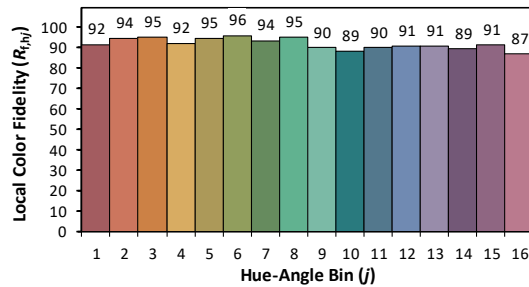
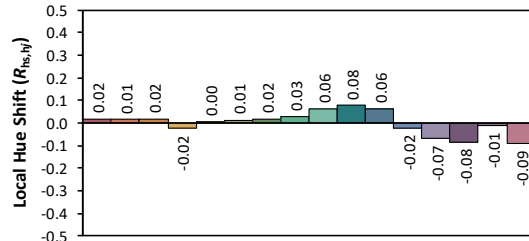
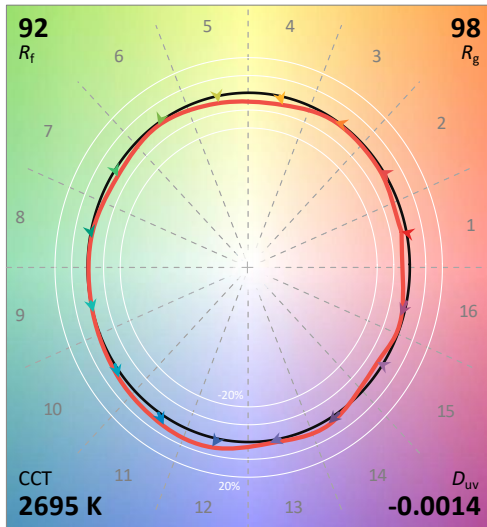
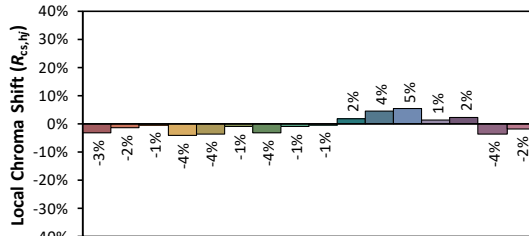
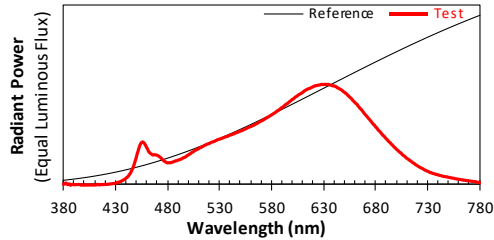
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/4/27

Model: KWOWS722270B



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4578
 y 0.4063
 u' 0.2631
 v' 0.5254

CIE 13.3-1995
(CRI)

R_a 95

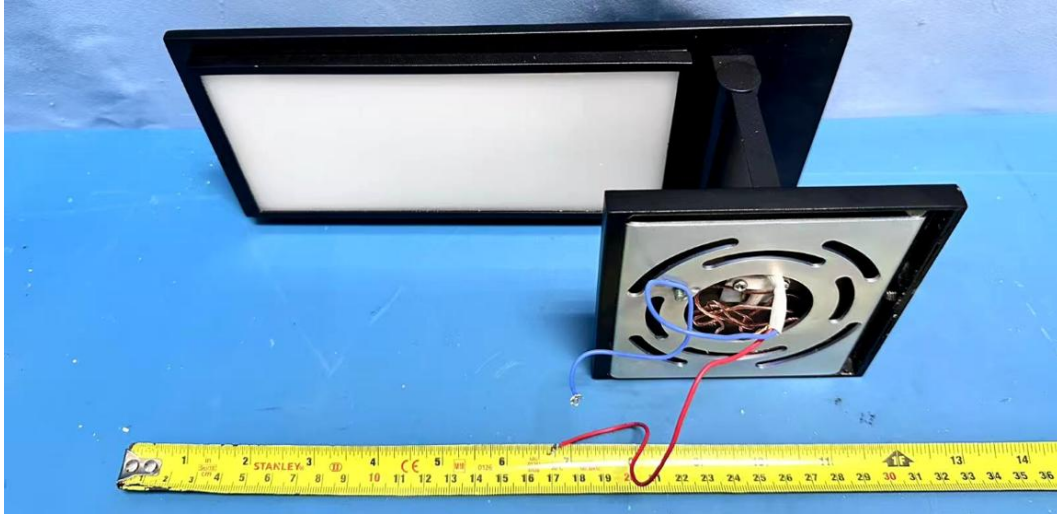
R_g 75

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWOWS72227OB



View of LED driver DS8W24VMB1UD-0000

***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

***** End of Report *****