

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-013

ISSUE DATE

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REVISION DATE

None

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13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 250623168GZU-013

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLBA79027X

Remark: "X" represents the color of the appearance.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

7400 LINDER AVE. SKOKIE, IL, 60077

Email: jrivero@visualcomfort.com

Phone No.: 847-410-4552

<u>TEST:</u>	Electrical and Photometric as required to the IES LM-79 test standard.
<u>AUTHORIZATION:</u>	The testing performed was authorized by signed quote number: QGZ250619128.
<u>STANDARDS USED:</u>	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
<u>DESCRIPTION OF SAMPLE:</u>	The client submitted one sample of model SLBA79027X. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-014.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Guangzhou Xiongyi Precision Metalworking Co., Ltd Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450
<u>DATES OF TESTS:</u>	11 July 2025
<u>ISSUED BY:</u>	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
<u>TEST LOCATION:</u>	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:	SLBA79027X
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLBA79027X

Criteria	Result
Total Lumen Output	875.6 lm
Total Power	14.5 W
Luminaire Efficacy	60.4 lm/W
S/MH(C0/180)	0.95
S/MH(C90/270)	0.79
Correlated Color Temperature (CCT)	2731 K
Color Rendering Index (CRI)	91
R9	68
Chromaticity Coordinate (x)	0.4567
Chromaticity Coordinate (y)	0.4088
Chromaticity Coordinate (u')	0.2612
Chromaticity Coordinate (v')	0.5262

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: 3.958A DC

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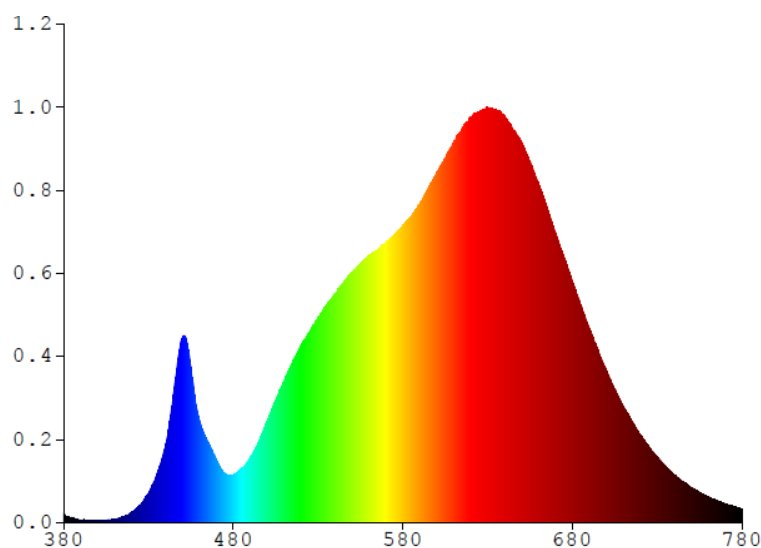
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLBA79027X

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	1.2311	480	6.5620	580	40.8740	680	33.2320	780	1.8669
385	0.6105	485	7.4278	585	42.1560	685	29.9090		
390	0.3503	490	8.9566	590	43.8160	690	26.7300		
395	0.3286	495	11.0860	595	46.0100	695	23.8550		
400	0.2463	500	13.9920	600	48.2360	700	20.9410		
405	0.3302	505	16.8070	605	50.1750	705	18.4100		
410	0.4773	510	19.4590	610	52.3550	710	16.0070		
415	0.7887	515	22.0620	615	54.2860	715	13.9940		
420	1.3929	520	24.4310	620	55.6930	720	12.0650		
425	2.3955	525	26.2640	625	56.5550	725	10.4910		
430	4.0329	530	28.1760	630	57.0840	730	9.0040		
435	6.6556	535	29.8790	635	56.9410	735	7.7623		
440	10.6060	540	31.4870	640	55.9920	740	6.6199		
445	18.1070	545	33.0150	645	54.1020	745	5.6854		
450	25.4520	550	34.4190	650	52.3920	750	4.8865		
455	21.1670	555	35.6520	655	49.6800	755	4.1697		
460	14.1220	560	36.7870	660	46.8140	760	3.5839		
465	11.1120	565	37.4760	665	43.4510	765	3.0477		
470	8.6283	570	38.4740	670	39.9190	770	2.5986		
475	6.8022	575	39.5440	675	35.9490	775	2.2295		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA79027X

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

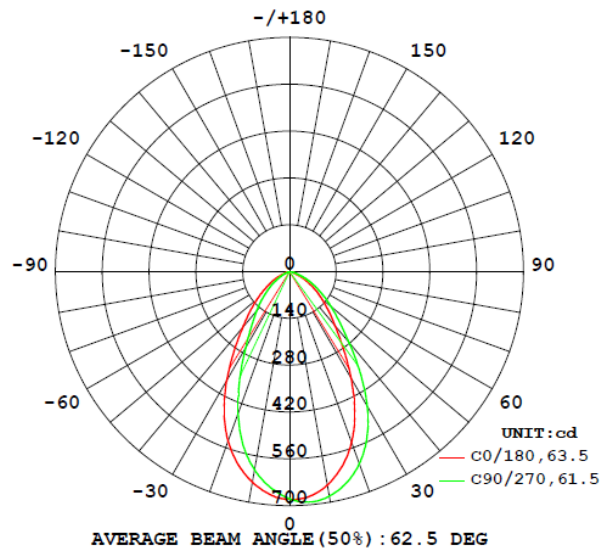
Photometric Measurements at 25°C – Distribution Method

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')
SLBA79027X								
S2506231 68-014	base-up	2731	91	68	0.4567	0.4088	0.2612	0.5262

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)
SLBA79027X							
S2506231 68-014	base-up	120.0	122.7	14.5	0.985	875.6	60.4

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA79027X

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	681.7	680.3	679.5	679.3	679.1
5	674.8	682.9	688.0	690.9	691.4
10	648.6	666.3	676.3	681.2	681.8
15	604.1	629.6	645.2	653.7	654.7
20	543.1	576.1	595.8	608.1	610.9
25	462.3	502.8	527.2	543.5	548.5
30	368.9	411.8	438.5	457.5	465.4
35	280.7	318.4	342.7	360.0	369.4
40	212.9	241.0	259.2	272.0	278.5
45	164.9	185.0	198.3	206.5	210.1
50	126.3	143.2	153.5	159.6	162.1
55	92.2	107.0	115.5	120.9	122.9
60	63.2	75.3	82.5	86.7	87.9
65	38.0	48.7	55.1	58.9	59.9
70	16.9	25.3	30.9	34.4	35.6
75	5.6	8.8	12.0	14.4	15.3
80	3.0	4.0	4.7	5.2	5.5
85	1.3	2.0	2.5	2.8	2.9
90	0.1	0.5	0.9	1.1	1.2
95	0.0	0.0	0.0	0.0	0.1
100	0.0	0.0	0.0	0.0	0.0
105	0.1	0.1	0.0	0.0	0.0
110	0.1	0.1	0.1	0.1	0.1
115	0.1	0.1	0.1	0.1	0.1
120	0.1	0.1	0.1	0.1	0.1
125	0.2	0.2	0.2	0.2	0.1
130	0.3	0.3	0.2	0.2	0.2
135	0.4	0.4	0.3	0.3	0.3
140	0.5	0.5	0.5	0.4	0.4
145	0.6	0.6	0.6	0.6	0.6
150	0.7	0.7	0.7	0.7	0.7
155	0.8	0.8	0.8	0.8	0.8
160	0.9	0.9	0.9	0.9	0.8
165	0.9	0.9	0.9	0.9	0.9
170	0.9	0.9	0.9	0.9	0.9
175	0.8	0.8	0.9	0.9	0.8
180	0.8	0.8	0.8	0.8	0.8

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA79027X

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLBA79027X		
0-30	438.1	50.0
0-40	616.4	70.4
0-60	825.6	94.3
0-90	874.1	99.8
60-90	48.5	5.5
0-180	875.6	100.0

Beam Angle

Total Beam Angle(°)

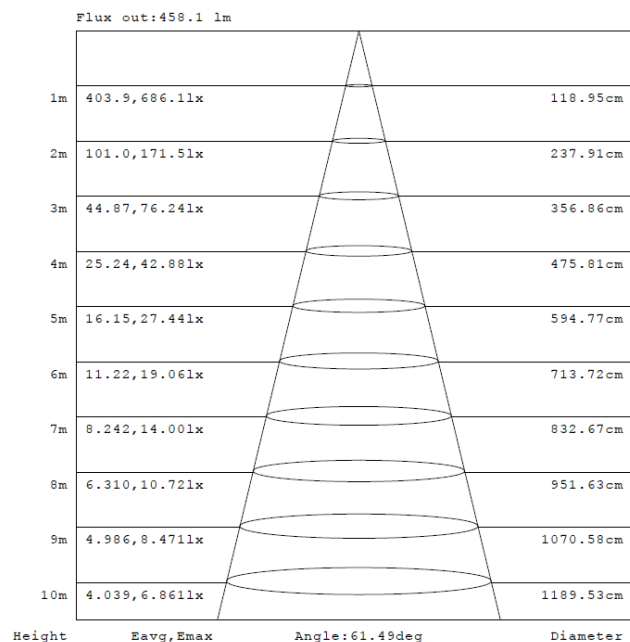
62.5

Illumination Plots

Model No.: SLBA79027X

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

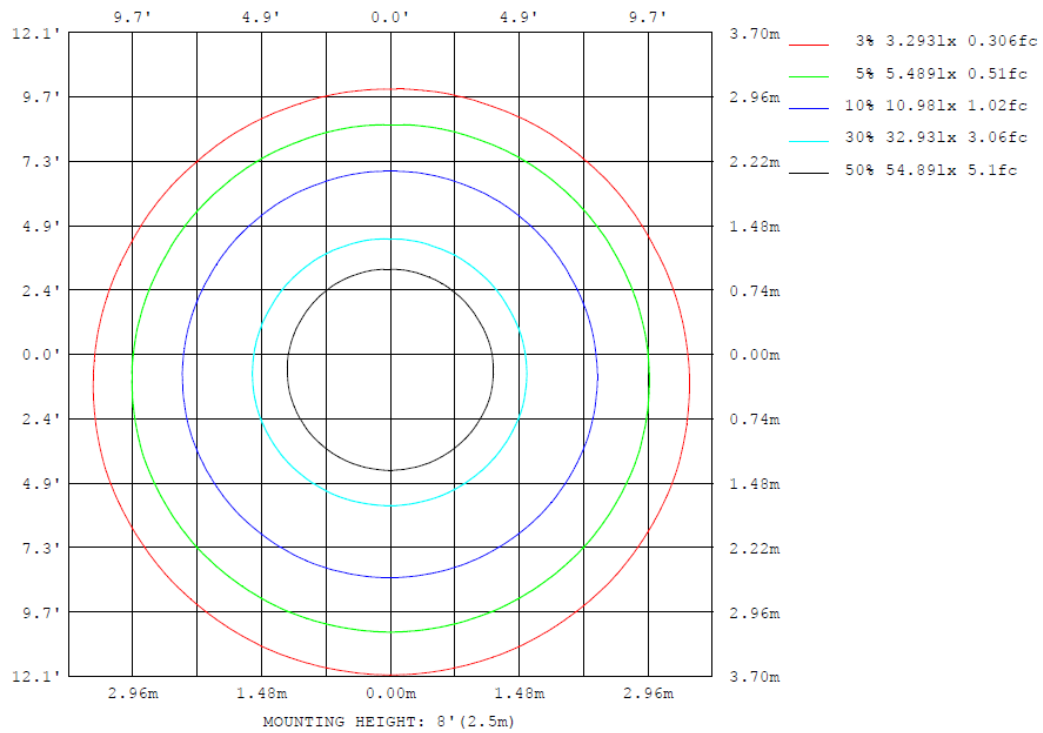
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA79027X

Model No.: SLBA79027X

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA79027X

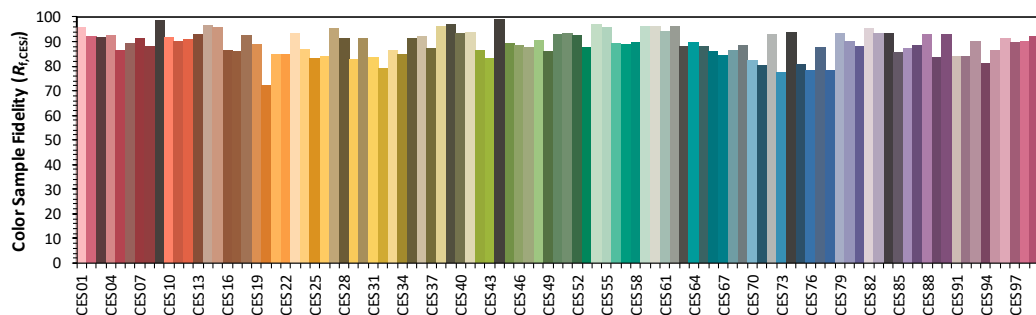
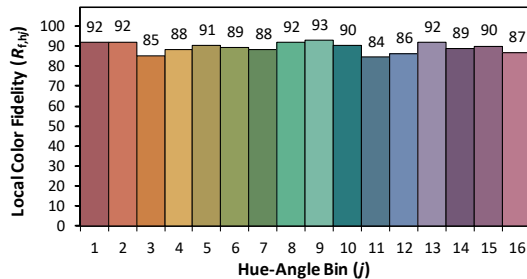
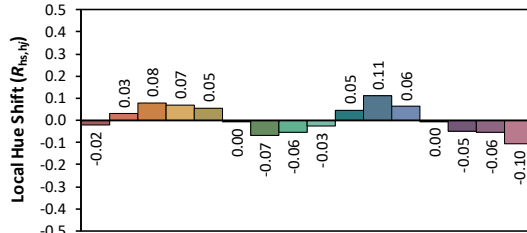
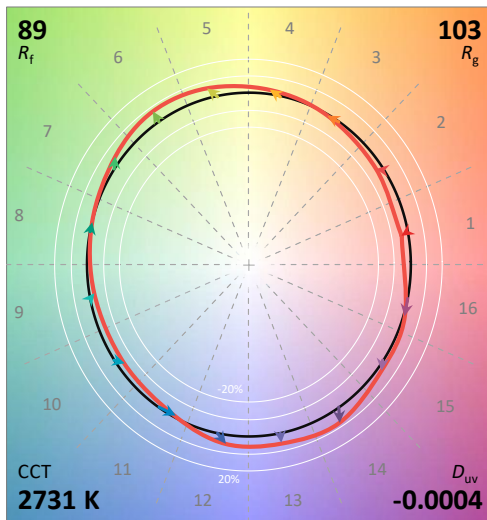
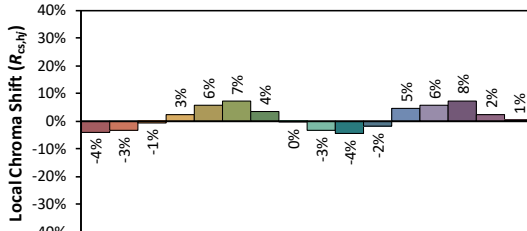
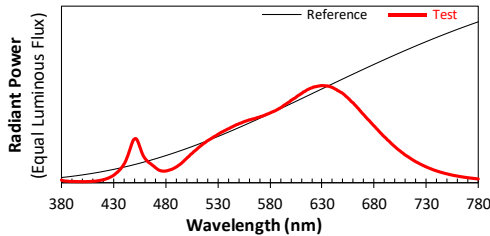
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/11

Model: SLBA79027X



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

x 0.4567
 y 0.4088
 u' 0.2612
 v' 0.5262

CIE 13.3-1995
(CRI)
 R_a 91
 R_g 68

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

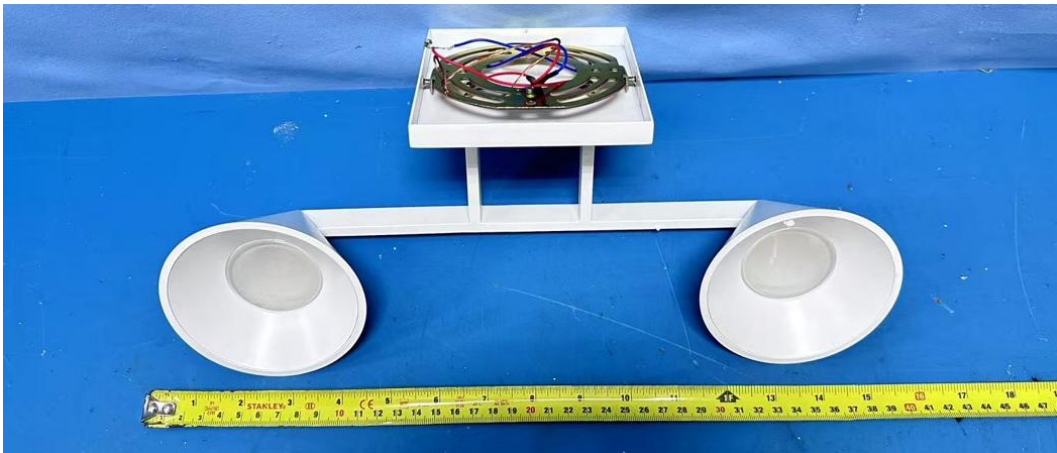
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of SLBA79027X



External view of SLBA79027X

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver PTB20W-0400-38-VCC1(AB0258)



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 *****