

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241111186GZU-006

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None

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Report format for LM-79_G

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Report No.: 241111186GZU-006

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWWS71127XXXALB

Remark: "XXX" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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<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: QGZ241106002.
<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-79-19	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 KWWS71127XXXALB. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241111186-008.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Union Star Collection-Dongguan Denghuang HomeFurnishing Co., Ltd. No.5, Central Road, Yayuan Industrial Zone, Nancheng District, Dongguan City, Guangdong Province, 523000
<u>DATES OF TESTS:</u>	27 November 2024
<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:	KWWS71127XXXALB
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWWS71127XXXALB

Criteria	Result
Total Lumen Output	250.6 lm
Total Power	7.9 W
Luminaire Efficacy	31.9 lm/W
S/MH(C0/180)	1.40
S/MH(C90/270)	2.06
Correlated Color Temperature (CCT)	2438 K
Color Rendering Index (CRI)	94
R9	66
Chromaticity Coordinate (x)	0.4814
Chromaticity Coordinate (y)	0.4123
Chromaticity Coordinate (u')	0.2757
Chromaticity Coordinate (v')	0.5313

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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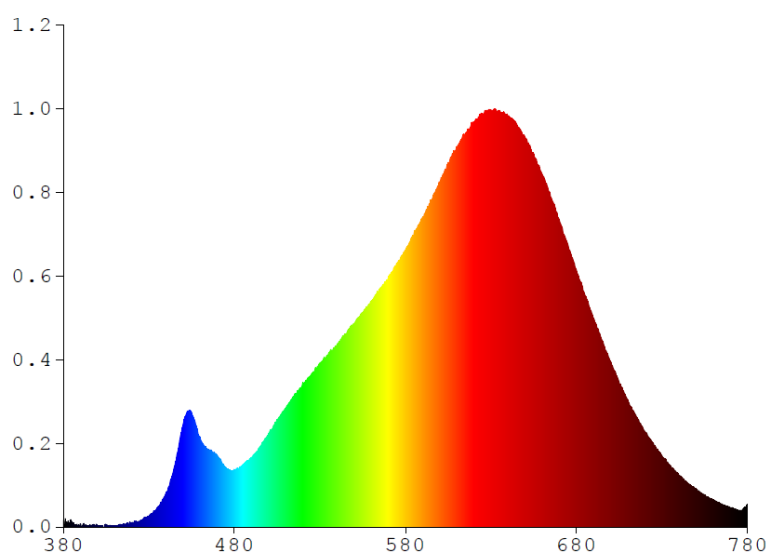
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWWS71127XXXALB

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.1223	480	1.0016	580	4.8436	680	4.4620	780	0.3908
385	0.0929	485	1.0943	585	5.1331	685	4.0403		
390	0.0478	490	1.2165	590	5.4048	690	3.6341		
395	0.0123	495	1.3996	595	5.7031	695	3.2527		
400	0.0000	500	1.6306	600	6.0109	700	2.8762		
405	0.0149	505	1.8736	605	6.3647	705	2.5052		
410	0.0245	510	2.0800	610	6.6465	710	2.2010		
415	0.0557	515	2.2990	615	6.8665	715	1.9176		
420	0.0751	520	2.5186	620	7.0814	720	1.6569		
425	0.1032	525	2.6694	625	7.2245	725	1.4397		
430	0.1801	530	2.8555	630	7.2768	730	1.2335		
435	0.3427	535	3.0215	635	7.2744	735	1.0579		
440	0.5957	540	3.1899	640	7.1820	740	0.9006		
445	1.0649	545	3.3828	645	7.0283	745	0.7553		
450	1.7828	550	3.5563	650	6.7966	750	0.6564		
455	1.9748	555	3.7519	655	6.4978	755	0.5557		
460	1.5479	560	3.9403	660	6.1516	760	0.4693		
465	1.3396	565	4.1516	665	5.7625	765	0.3963		
470	1.2411	570	4.3643	670	5.3356	770	0.3341		
475	1.0345	575	4.6106	675	4.8313	775	0.2861		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS71127XXXALB

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

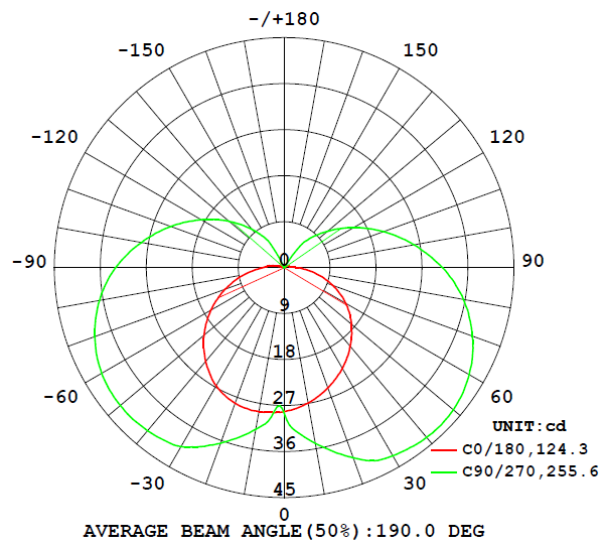
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y	Chromaticit y	Chromaticit y	Chromaticit y
					Coordinate (x)	Coordinate (y)	Coordinate (u')	Coordinate (v')
KWWS71127XXXALB								
S2411111 86-008	base-up	2438	94	66	0.4814	0.4123	0.2757	0.5313

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)
KWWS71127XXXALB							
S2411111 86-008	base-up	120.0	66.3	7.9	0.986	250.6	31.9

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS71127XXXALB

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	28.2	26.9	27.5	28.3	28.5
5	27.6	28.1	31.2	32.2	32.5
10	26.9	30.1	32.7	34.4	34.9
15	26.0	30.5	34.0	36.5	37.2
20	25.0	30.7	35.3	38.6	39.6
25	23.9	30.6	36.4	40.5	41.6
30	22.8	30.2	37.4	41.4	42.5
35	21.5	29.8	37.6	41.7	43.0
40	20.1	29.2	37.0	41.9	43.4
45	18.7	28.4	36.4	41.9	43.5
50	17.3	27.3	35.6	41.5	43.2
55	15.7	25.5	34.6	40.9	42.7
60	13.9	23.7	33.5	40.0	41.8
65	12.1	21.9	32.2	38.8	40.7
70	10.1	20.1	30.6	37.3	39.2
75	8.1	18.4	28.9	35.6	37.5
80	6.1	16.6	27.1	33.8	35.6
85	4.2	14.7	25.1	31.7	33.4
90	2.5	12.9	23.0	29.3	31.0
95	1.7	11.2	20.8	26.8	28.4
100	1.3	9.7	18.6	24.3	25.9
105	1.1	8.3	16.5	21.8	23.2
110	0.9	7.0	14.4	19.4	20.7
115	0.8	5.9	12.5	17.0	18.2
120	0.7	4.8	10.7	14.7	15.8
125	0.6	1.4	8.9	12.5	13.4
130	0.5	0.7	7.3	10.4	11.2
135	0.4	0.6	5.8	8.4	9.1
140	0.4	0.5	1.4	6.5	7.1
145	0.3	0.4	0.2	2.5	4.3
150	0.2	0.2	0.2	0.1	0.1
155	0.1	0.1	0.2	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	0.1	0.1	0.1	0.1

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS71127XXXALB

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWWS71127XXXALB		
0-30	28.1	11.2
0-40	50.0	20.0
0-60	105.6	42.1
0-90	188.4	75.2
60-90	82.8	33.1
0-180	250.6	100.0

Beam Angle

Total Beam Angle(°)

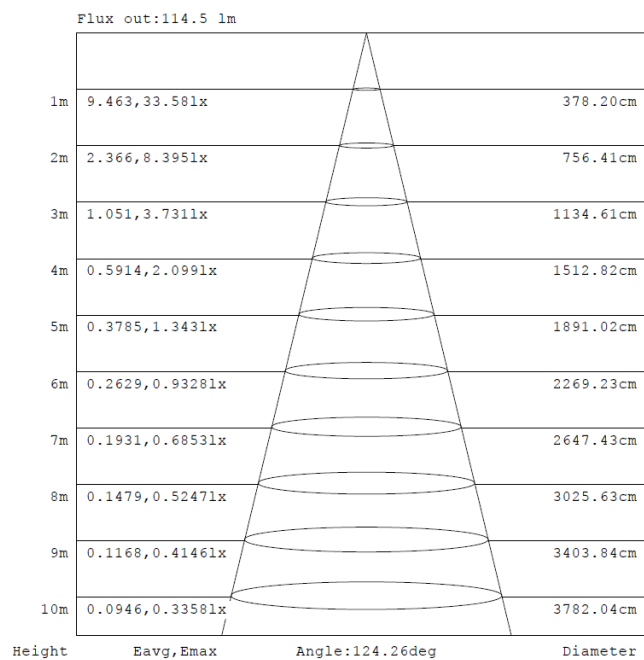
190.0

Illumination Plots

Model No.: KWWS71127XXXALB

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

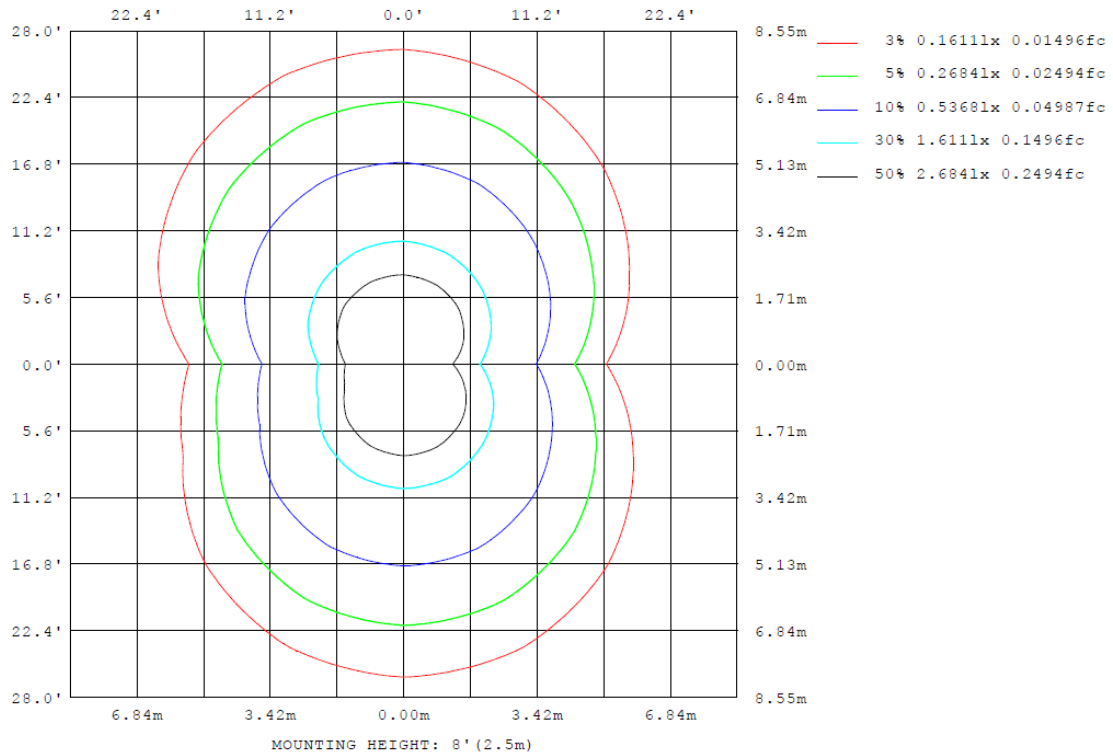
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS71127XXXALB

Model No.: KWWS71127XXXALB

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS71127XXXALB

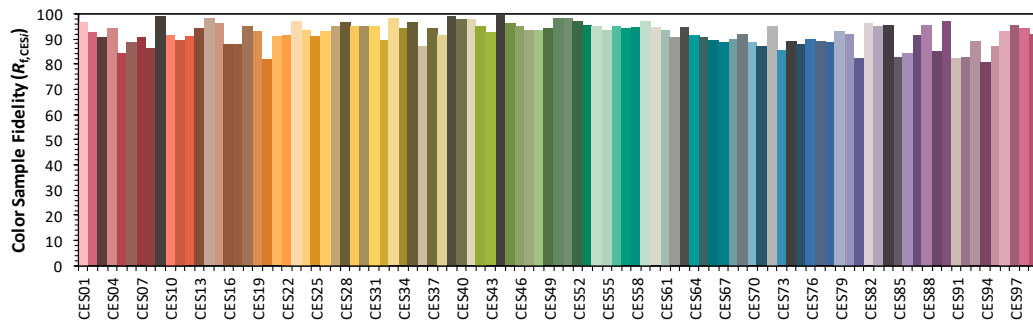
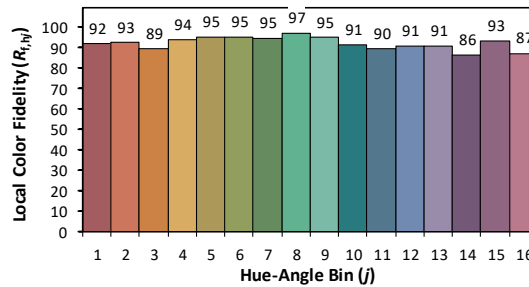
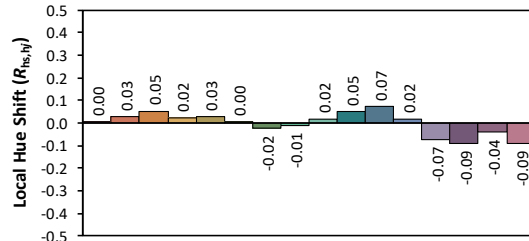
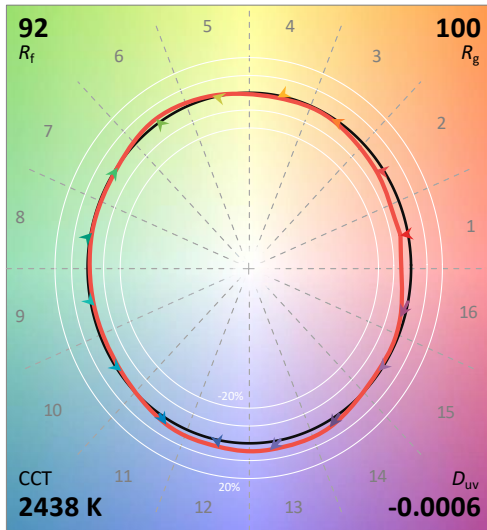
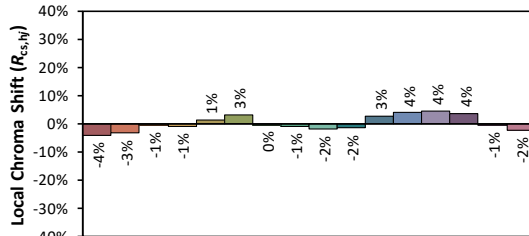
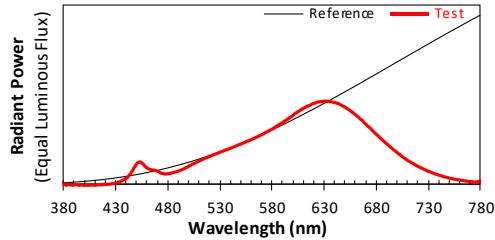
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/11/27

Model: KWWS71127XXXALB



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

x 0.4814
 y 0.4123
 u' 0.2757
 v' 0.5313

CIE 13.3-1995
(CRI)

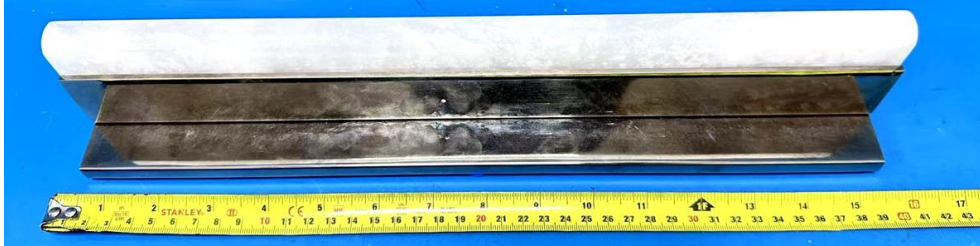
R_a 94
 R_g 66

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

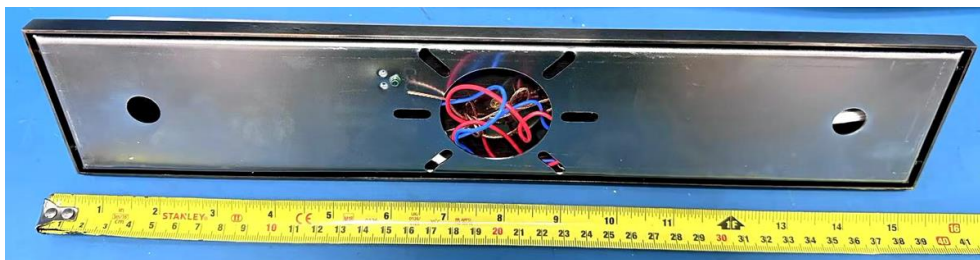
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWW571127XXXALB



External view of KWW571127XXXALB



View of LED driver PVD08-C020V42-UNV3-HE-P



View of LED

In Charge Of Tests:

Done Ye

Done Ye

Engineer

Attachment: None

Report Reviewed By

Shelley Ying

Shelley Ying

Reviewer

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