

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

251110010GZU-012

ISSUE DATE

31 December 2025

REVISION DATE

None

NUMBER OF PAGES

14

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

© 2024 INTERTEK



Report No.: 251110010GZU-012

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. PBCH80427XXX

Remark: "XXX" 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: QGZ251106008.
<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 PBCH80427XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S251110010-014.
<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>	04 December 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

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

TEST REPORT

SUMMARY

Model Number:	PBCH80427XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For PBCH80427XXX

Criteria	Result
Total Lumen Output	2810.9 lm
Total Power	42.5 W
Luminaire Efficacy	66.1 lm/W
S/MH(C0/180)	1.14
S/MH(C90/270)	1.19
Correlated Color Temperature (CCT)	2703 K
Color Rendering Index (CRI)	93
R9	58
Chromaticity Coordinate (x)	0.4577
Chromaticity Coordinate (y)	0.4071
Chromaticity Coordinate (u')	0.2627
Chromaticity Coordinate (v')	0.5257

Remark:

N/A

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

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

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

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

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

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

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

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

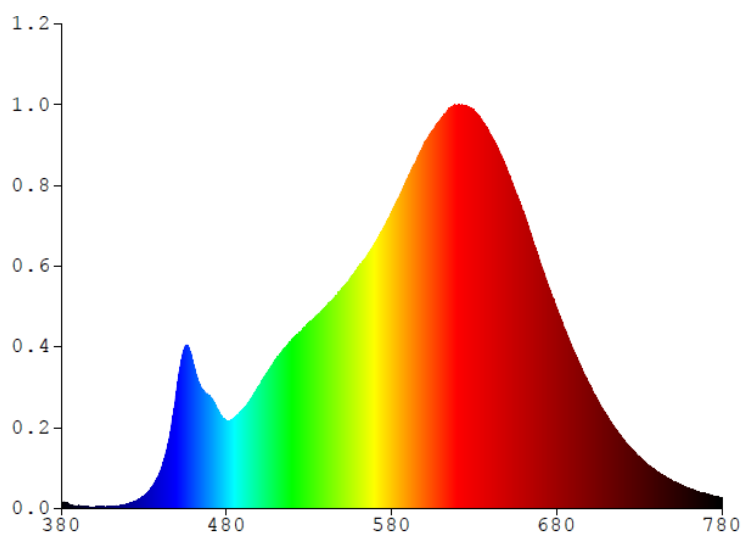
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For PBCH80427XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	7.3483	480	90.1460	580	304.820	680	206.2900	780	10.5290
385	3.1044	485	93.2100	585	321.970	685	184.3000		
390	2.8425	490	102.1200	590	340.730	690	163.1800		
395	1.7615	495	112.7600	595	357.970	695	143.9000		
400	1.2704	500	126.6500	600	376.810	700	126.8800		
405	1.7100	505	140.3800	605	389.210	705	110.7900		
410	1.9542	510	153.1200	610	400.920	710	96.1190		
415	2.6651	515	164.1700	615	412.130	715	83.3990		
420	4.5125	520	174.9000	620	414.890	720	71.6220		
425	7.7000	525	182.1600	625	414.570	725	61.5160		
430	12.7850	530	190.9100	630	409.340	730	52.9880		
435	22.3980	535	199.3200	635	398.290	735	45.4080		
440	38.4000	540	206.8000	640	384.800	740	38.6870		
445	68.8470	545	216.2800	645	368.180	745	33.3290		
450	122.960	550	225.9700	650	348.320	750	28.5060		
455	166.580	555	237.1300	655	325.750	755	24.5440		
460	148.760	560	248.9600	660	304.320	760	20.7730		
465	123.030	565	259.9900	665	278.930	765	17.6110		
470	115.190	570	272.7300	670	252.860	770	15.1800		
475	101.450	575	288.1400	675	224.080	775	12.8820		



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80427XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

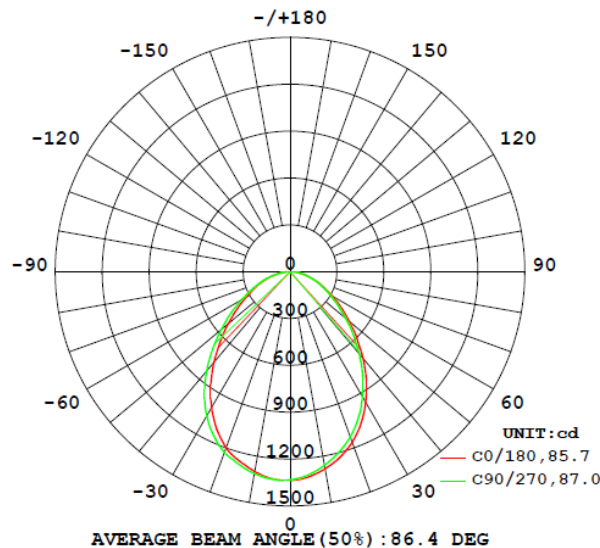
Photometric Measurements at 25°C – Distribution Method

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')
PBCH80427XXX								
S2511100 10-014	base-up	2703	93	58	0.4577	0.4071	0.2627	0.5257

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	Lumen Efficacy
						(Lumens)	(Lumens Per Watt)
PBCH80427XXX							
S2511100 10-014	base-up	120.1	356.5	42.5	0.99	2810.9	66.1

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80427XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	1336.7	1331.7	1331.3	1331.4	1332.1
5	1319.0	1303.4	1302.9	1303.8	1306.5
10	1281.6	1257.2	1254.2	1255.5	1259.2
15	1230.6	1194.7	1190.1	1193.6	1198.3
20	1161.5	1116.2	1111.5	1118.9	1124.9
25	1072.0	1022.5	1018.5	1027.9	1033.2
30	965.5	917.0	915.0	923.4	925.5
35	848.4	802.6	802.6	809.1	808.6
40	724.4	685.1	686.4	688.5	687.4
45	604.3	577.6	576.9	572.9	572.1
50	494.7	472.7	472.6	464.7	463.0
55	396.3	379.5	380.9	371.6	369.1
60	310.1	296.9	298.3	290.8	291.1
65	238.9	228.2	230.4	223.8	226.9
70	179.1	167.9	173.7	169.3	174.9
75	123.0	112.8	119.7	118.4	126.0
80	72.4	64.3	71.6	73.6	80.0
85	30.3	23.8	30.7	35.7	39.8
90	4.6	0.5	3.4	5.4	7.5
95	1.6	1.1	0.8	0.8	0.3
100	1.1	0.8	0.7	0.5	0.2
105	0.7	0.5	0.6	0.3	0.3
110	0.4	0.4	0.5	0.4	0.3
115	0.4	0.4	0.5	0.4	0.4
120	0.5	0.6	0.5	0.6	0.5
125	0.7	0.8	0.8	0.7	0.7
130	0.9	1.0	1.0	1.0	0.9
135	1.1	1.2	1.2	1.2	1.2
140	1.4	1.5	1.5	1.4	1.4
145	1.6	1.7	1.7	1.6	1.6
150	1.7	1.8	1.8	1.8	1.8
155	1.9	1.9	1.9	1.9	1.9
160	1.9	1.9	1.9	1.9	1.9
165	2.0	2.0	2.0	2.0	1.9
170	1.9	1.9	1.9	1.9	1.9
175	1.9	1.9	1.9	1.9	1.9
180	1.8	1.8	1.8	1.8	1.8

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80427XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
PBCH80427XXX		
0-30	974.9	34.7
0-40	1519.6	54.1
0-60	2375.2	84.5
0-90	2805.1	99.8
60-90	429.9	15.3
0-180	2810.9	100.0

Beam Angle

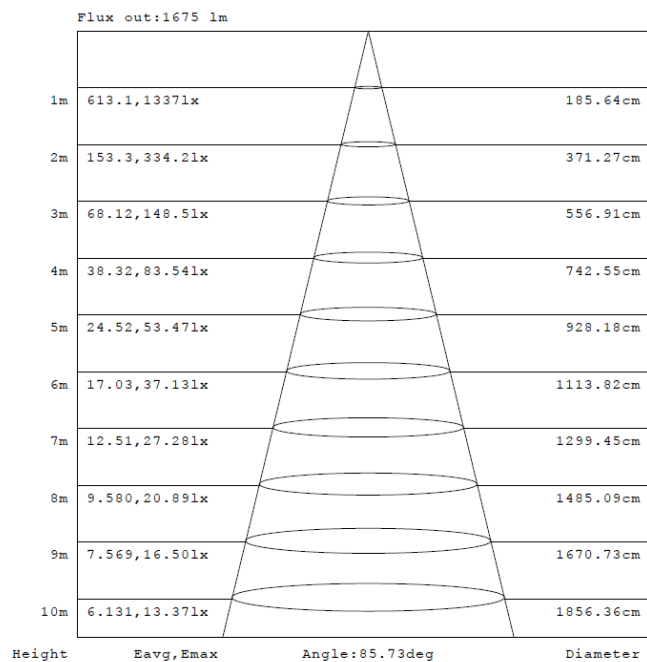
Total Beam Angle(°)
86.4

Illumination Plots

Model No.: PBCH80427XXX

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.

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

TEST REPORT

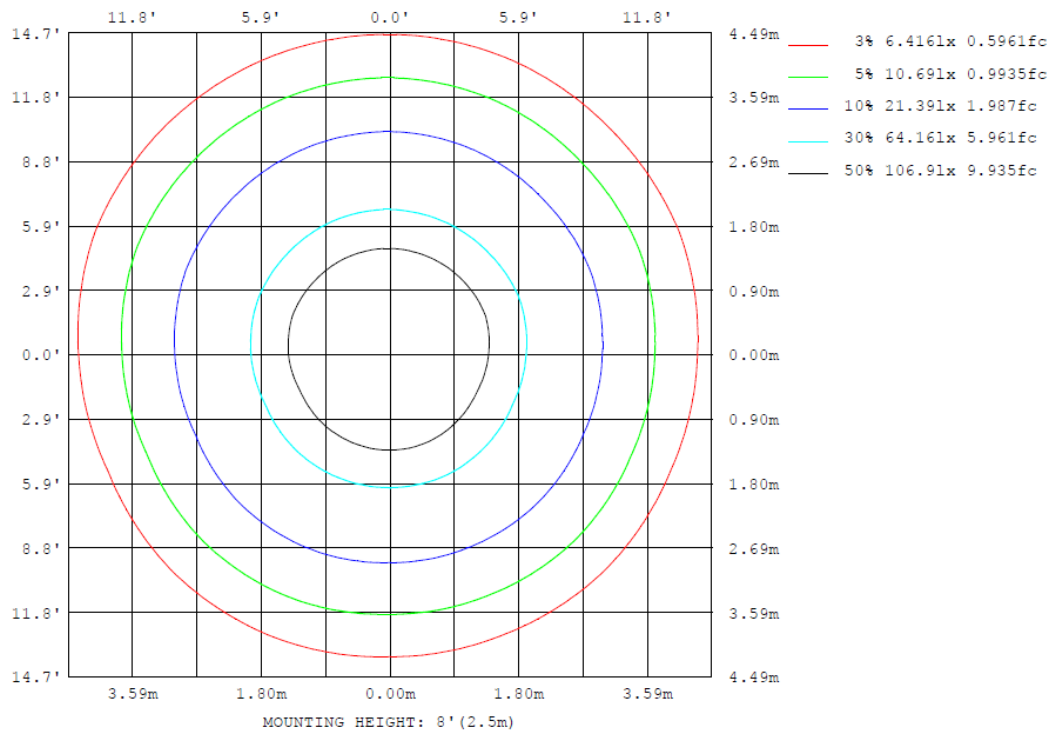
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80427XXX

Model No.: PBCH80427XXX

Mount Height: 2.5 m

Isoillumination Plot



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80427XXX

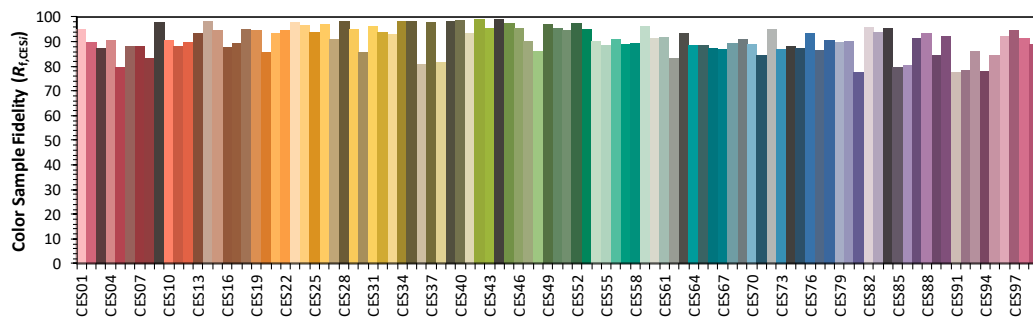
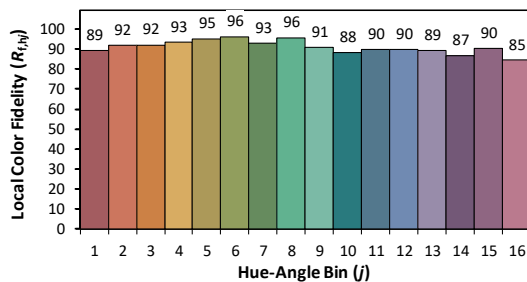
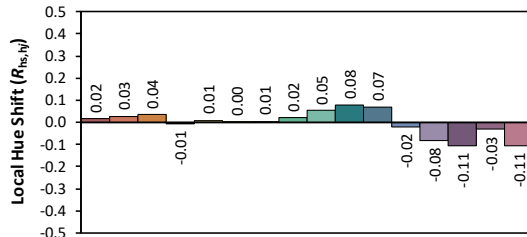
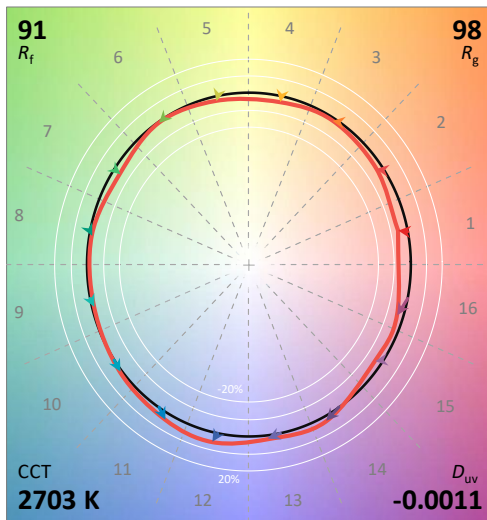
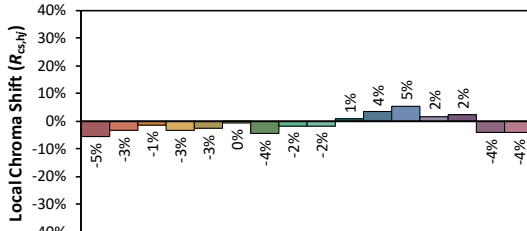
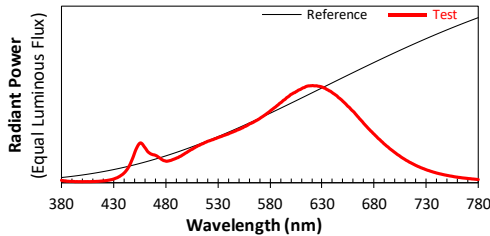
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/12/4

Model: PBCH80427XXX



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

x 0.4577
 y 0.4071
 u' 0.2627
 v' 0.5257

CIE 13.3-1995
(CRI)
 R_a 93
 R_g 58

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

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

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of PBCH80427XXX

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

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of PBCH80427XXX

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

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS45W1200C2036F5UD-0000



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 *****