

# Photometric Report

Exterior Projection Pro Compact – Wide

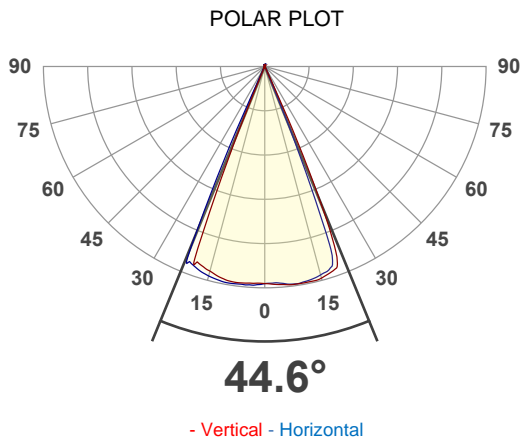
LM-79-08 Compliant

## GENERAL SPECIFICATIONS

Total Fixture Output:	5200 lm
Efficacy:	32.5 lm/W
Lens Option:	N/A
Beam Angle (50%):	44.6 °
Field Angle (10%):	46.6 °
Cutoff Angle (3%):	47.4 °
CRI:	72+
CQS:	67.7
TM-30 Rf:	69.3
TM-30 Rg:	96.9
TLCI:	47
Color Temperature:	7000 K



## SAMPLE MEASUREMENT

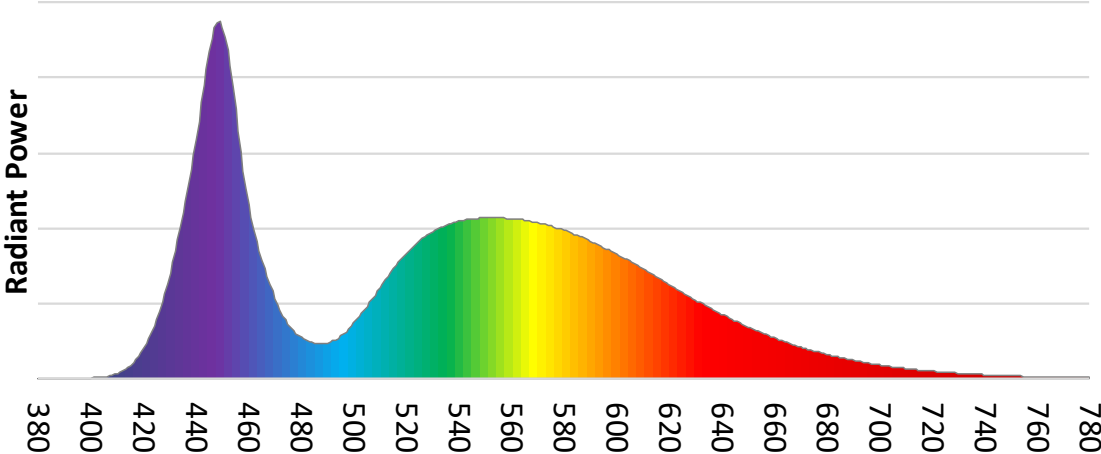


Catalog Number:	MAR-90560250
Measured Output:	5226 lm
Measured Peak:	11529 cd
Consumed Power:	160 W
Efficacy:	32.7 lm/W

Beam Angle (50%):	44.6 °
Field Angle (10%):	46.6 °
Cutoff Angle (3%):	47.4 °

Measurement Condition:	
Ambient Temperature:	25° +/- 5° C
AC Supply:	230V/50Hz
Fan Mode:	Regulated
Fixture Warm-up Time:	30 minutes

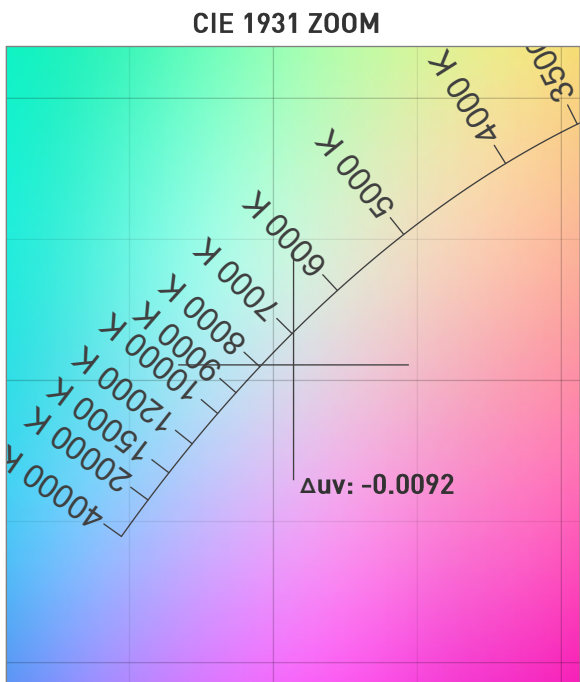
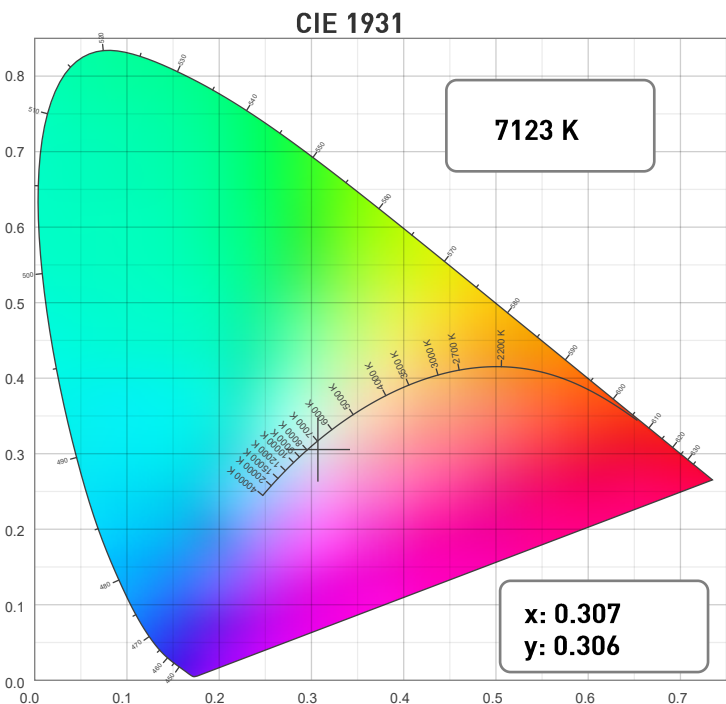
## SPECTRAL DISTRIBUTION



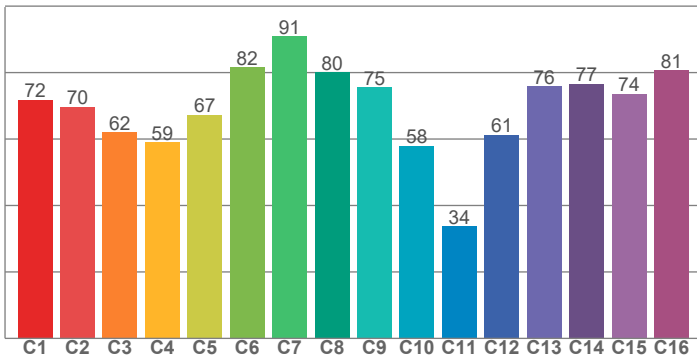
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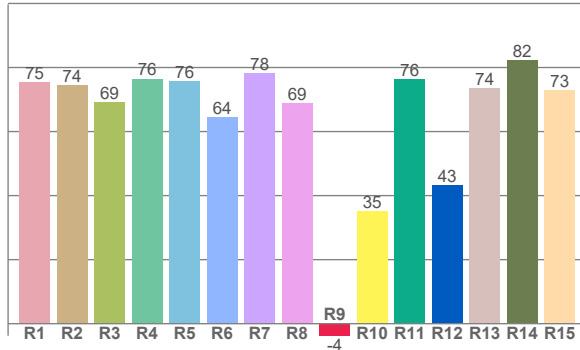
## CHROMATICITY



TM30: 69.4



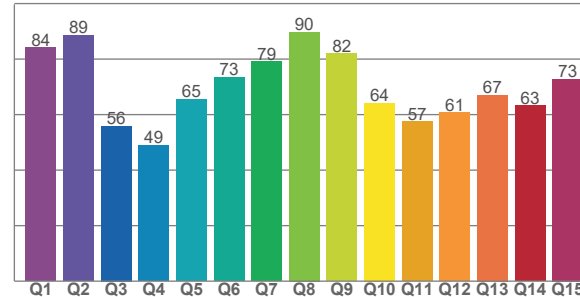
CRI: 72.8 (R1-R8)



## COLOR PARAMETERS

Color Temperature	Color Rendering Index	Red Component	Color Fidelity	Color Gamut
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg
7123 K	72.8	-3.8	69.4	97.1

CQS: 67.8



Television Lighting Consistency Index	Color Quality Scale	Color Coordinate CIE 1931	Color Coordinate CIE 1931	Color Coordinate CIE 1964	Color Coordinate CIE 1964	Color Deviation from Black Body
TLCI	CQS	x	y	u	v	$\Delta uv$
47	67.8	0.307	0.306	0.203	0.303	-0.0092

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TM30

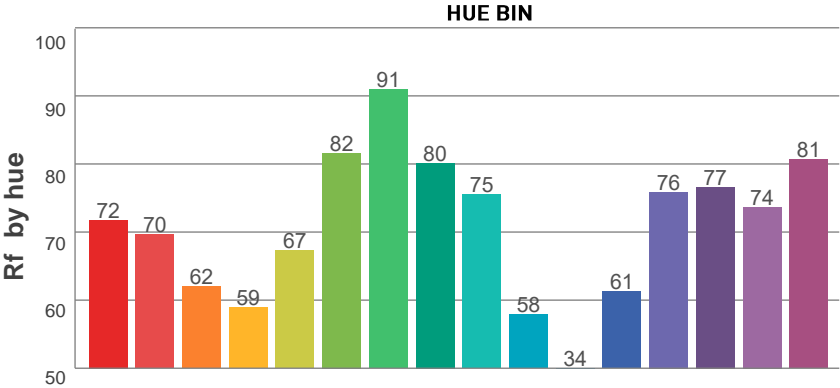
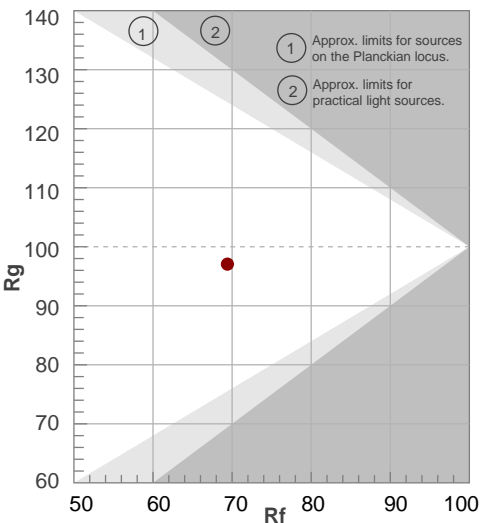
Rf 69.4

Fidelity index Rf

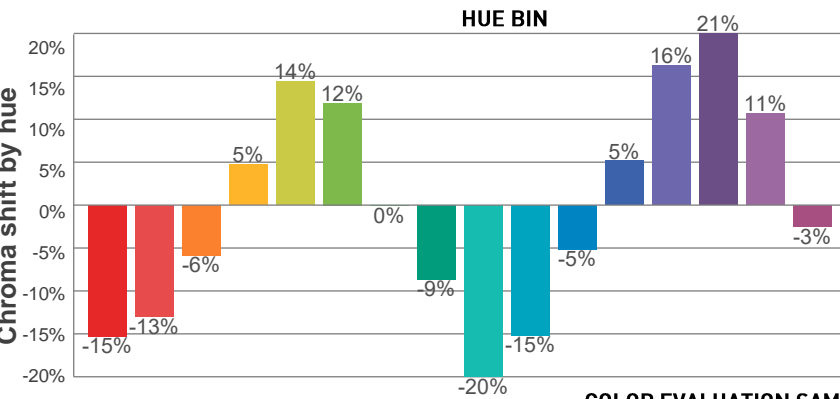
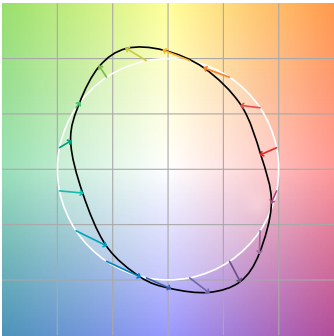
Rg 97.1

Gamut index Rg

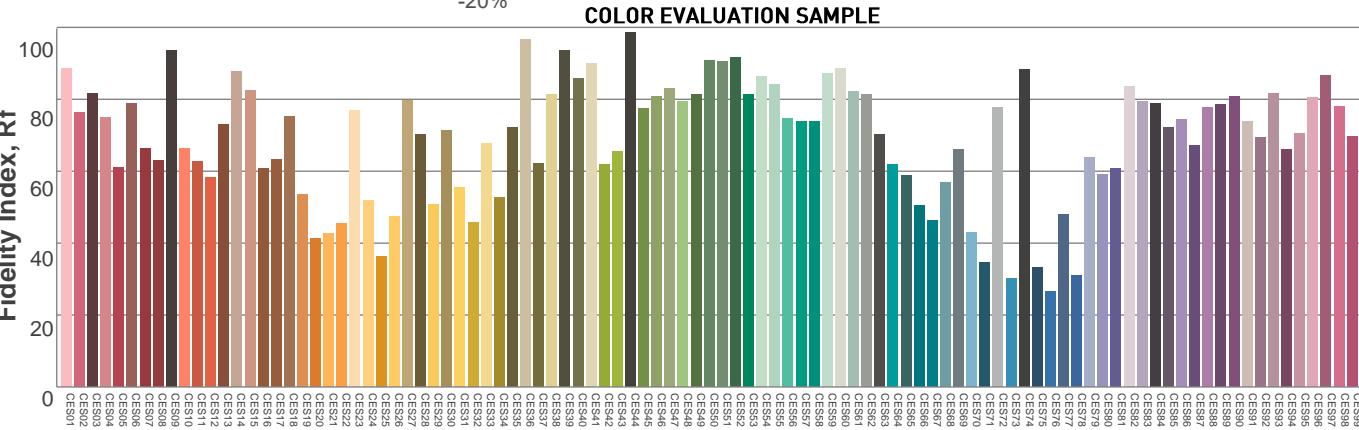
Hue Bin	Rf	Graphic shifts (%)	
		Chroma	Hue
1	72	-15%	-3%
2	70	-13%	11%
3	62	-6%	24%
4	59	5%	25%
5	67	14%	16%
6	82	12%	0%
7	91	0%	-6%
8	80	-9%	-8%
9	75	-20%	6%
10	58	-15%	26%
11	34	-5%	33%
12	61	5%	23%
13	76	16%	14%
14	77	21%	-2%
15	74	11%	-17%
16	81	-3%	-11%



COLOR VECTOR GRAPHICS



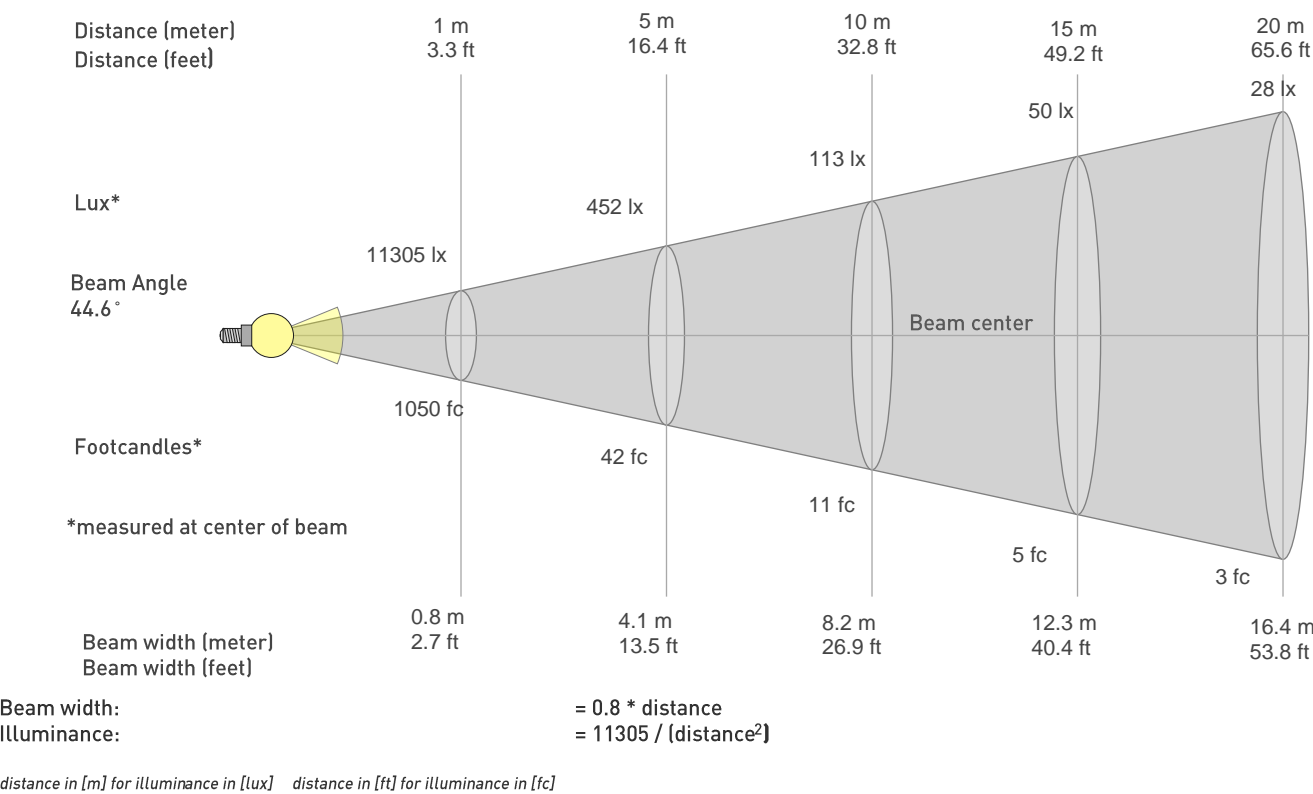
COLOR DISTORTION GRAPHICS



# Photometric Report

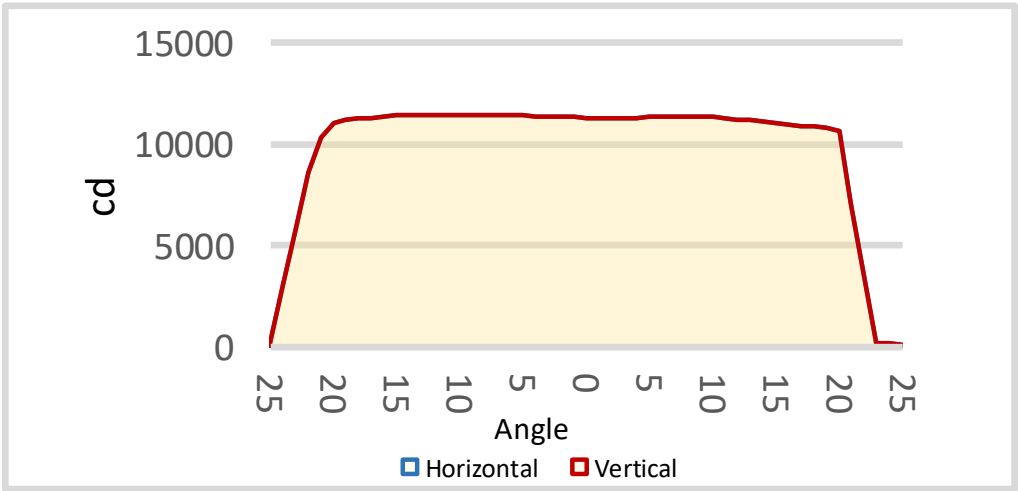
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## BEAM DETAILS



## BEAM ILLUMINANCE FROM 1-20M

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
11305lx	2826lx	1256lx	707lx	452lx	314lx	231lx	177lx	140lx	113lx	93lx	79lx	67lx	58lx	50lx	44lx	39lx	35lx	31lx	28lx
1050.2fc	262.6fc	116.7fc	65.6fc	42fc	29.2fc	21.4fc	16.4fc	13fc	10.5fc	8.7fc	7.3fc	6.2fc	5.4fc	4.7fc	4.1fc	3.6fc	3.2fc	2.9fc	2.6fc



BEAM ANGLE 50%	FIELD ANGLE 10%	CUTOFF ANGLE 3%
44.6°	46.6°	47.4°

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## TEST INFORMATION

Test date:	From February 14, 2025, to February 16, 2025
Date of receipt samples:	February 13, 2025
Quantity of receipt samples:	1 unit per model

## EQUIPMENT LIST

ID	Instrument	Model	Cal. date	Next cal. Date
Full-field Speed Goniophotometer	SLCS-S-112	GO-R5000	2024.06.14	2025.06.13
Digital Power Meter	SLCS-S-103	PF2010	2024.06.14	2025.06.13
AC Testing Power Source	SLCS-S-115	DPS1060	2024.06.14	2025.06.13
DC Testing Power Source	SLCS-S-116	WY12010-V110	2024.06.14	2025.06.13
Total Spectral Radiant Flux Standard Lamp	SLCS-S-143	D908S	2024.06.17	2025.06.16
Photometric colorimetric electric system (2-meter sphere)	SLCS-S-118	HASS 2000	2024.06.13	2025.06.13

## REFERENCE STANDARDS OR METHODS

ANSI/NEMA/ ANSLG C78.377-2017	Specifications for the Chromaticity of Solid-State Lighting Products
ANSI C82.77-2002	Harmonic Emission Limits Related Power Quality Requirements for Lighting Equipment
CIE Pub. No. 13.3-1995	Method of Measuring and Specifying Color Rendering of Light Sources
CIE Pub. No. 15:2004	Colorimetry
IES LM-79-08	Electrical and Photometric Measurements of Solid-State Lighting Products

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## TEST CONDUCTED AND METHOD

### Ambient Condition

The ambient temperature in which measurements are being taken was maintained at  $25 \pm 2$  °C, the air flow around the sample(s) being tested did not affect the performance.

### Power Supply Characteristics

The AC power supply had a sinusoidal voltage wave shape at the prescribed frequency (60 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

The voltage of AC power supply (RMS voltage) applied to the device under test was regulated to within 0.2 percent under load.

### Seasoning and Stabilization

No seasoning was performed in accordance with IESNA LM-79-08. And before the measurement, the sample was stabilized until the light output and power variations were less than 0.5% in 30 minutes intervals (3 readings, 15 minutes apart).

### Electrical Instrumentation

The calibration uncertainties of the instruments for AC voltage and current were less than 0.2 percent, and the calibration uncertainty of the AC power meter was less than 0.5 percent (9% confidence interval,  $k=2$ ).

### Color Measurement Method

Spectral radiant flux was measured by a sphere (2 meter)-spectroradiometer system, and the color characteristics (Color rendering index, correlated color temperature, chromaticity coordinate) were calculated from these by software automatically.

1 sample were measured as customer required.

### Total Luminous Flux Measurement Method

Total luminous flux was measured by both sphere-spectroradiometer system and goniophotometer.

Spectral radiant flux was measured by a sphere (2 meter)-spectroradiometer system, and the total luminous flux was calculated from these by software automatically.

Light intensity distribution was measured by a type C goniophotometer (with mirror) which can keep the sample in burn position when the tests conduct, and the total luminous flux was calculated from the intensity data by software automatically.

1 sample was measured by sphere method, and 1 sample was measured by goniophotometer method.

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

### Luminous Intensity Distribution Measurement Method

Light intensity distribution was measured by a type C goniophotometer (with mirror) which can keep the sample in burn position when the tests conduct, and the kinds of graph were generated by software automatically.

1 sample was measured as customer required.