

**Photometric Measurement Report**

Generated by Radiant Vision Systems Light Measurement Platform

Luminaire Model	L AN4141031				
Led & Driver Type	CREE	XP-G2	&	RECOM	RACD03-700
Luminaire Type	ANKASTRE				
Luminaire Family	DROP				
Holder	-				
Reflector / Lens Degree	0				
Brand	LAMP 83				
Date of issue	22.11.2017				

**Test Standards**

EN 13032-1:2012 and EN 13032-4:2013 Light and Lighting. Measurement and presentation of photometric data of lamps and luminaires

IESNA LM-79-08 Approved Method: Electrical and Photometric Measurements of SSL Products(Type-C)

**Test and Test Method**

The photometric measurements listed in this report are performed by a Radiant Vision Systems PM-NFMS™ near field goniometer system. The NFMS system performs brightness and color measurements as a function of viewing angle. It provides accurate near-field luminance distribution data and generates far field distribution data.

**Test Equipment**

Name	Serial / Version
The PM-NFMS™ system consists of a PM-Series™ Imaging Colorimeter IC-PMI2	SN# 79046501
NFMS 800 two-axis goniometer	SN# 641502001
SP-1000 spectrometer	SN# 3017942276
PM-NFMS™ software	Version 4.9.9
ProSource™ Software	Version 10.2.2

The measurement data is preserved as a set of images Radiant Source Model™(RSMX). The ProSource™ Software (Version 10.2.2) was been used to convert the RSMX to a ray set(LTD file)

**Laboratory Environment and Conditions**

The measurement was done in the photometric laboratory of Lamp83 (Istanbul). It is a climate controlled dark room. Also a AC/DC power stabilisation unit is used(Pyramid Plus PPS310,8KW,10kVA,SN# 073010T0066).

Temperature:	25°C	(± 1 °C)
Moisture:	60%	(± 10 %)

The luminaire was thermally stabilized for **at least 45 minutes** on the goniometer. The end of the stabilization period has been reached if in the last 10 minutes the luminance output has not changed by more than ± 0.5%.

**Equipment Specifications**

Precision: 0.25° (NFMS Goniometer)

Luminance (Y): ± 3% (Imaging Colorimeter IC-PMI2)

Color Accuracy: ± 0.002 Illuminant A type source (Spectrometer SP-1000)

**Tested By:**

Gökhan AKSEL  
Test Technician

**Reviewed By:**

Anıl TOKER  
Physics Engineer

**Approved By:**

Erdoğan EMREM  
R&D Manager

LAMP83 Aydınlatma San. Ve Tic. A.Ş

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## Luminaire Spectroradiometric Results

Luminous Flux (lm)	215
CCT (K)	3,027
Cx	0.4331
Cy	0.3994
CRI	83.4
Luminous Efficacy (lm/W)	48.577
Angle (°)	65.0

## Luminaire Electric Specifications

Voltage (VAC)	221.3
Current (A)	0.05
Power (W)	4.426
Power Factor	0.4
LED Voltage(VDC)	3.01
LED Current(mA)	708
LED Power(W)	2.13108

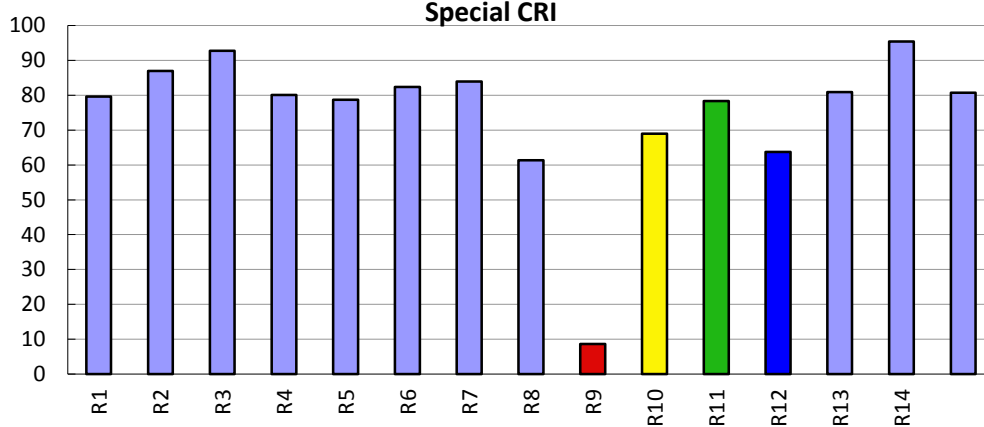
## Measurement Preset Specifications

External ND Filter	NO
ND Filter	ND3
F-Number	8
Exposure Time (ms)	127.44
Distance(mm)	2010

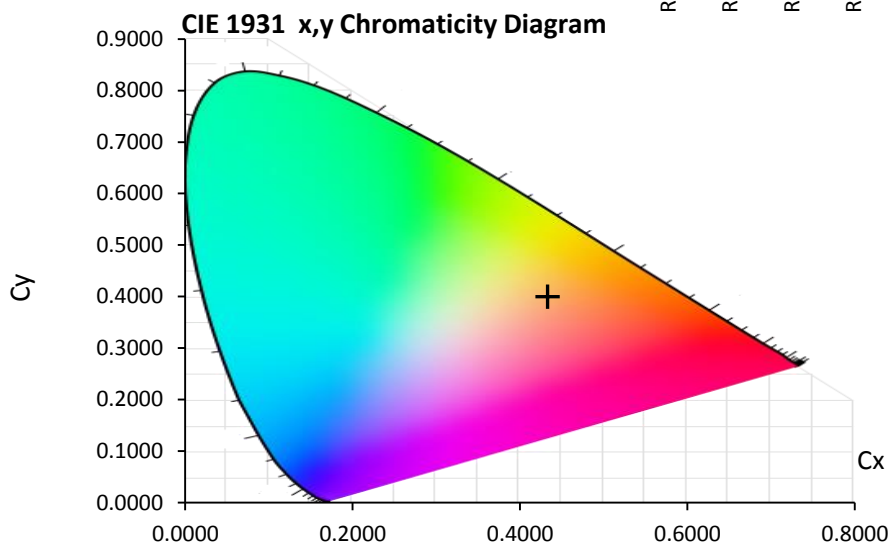
## Rendering Index

CRI	
R1	79.6
R2	87.0
R3	92.8
R4	80.1
R5	78.7
R6	82.4
R7	84.0
R8	61.3
R9	8.6
R10	69.0
R11	78.4
R12	63.7
R13	80.9
R14	95.4
CRI Ra	80.7

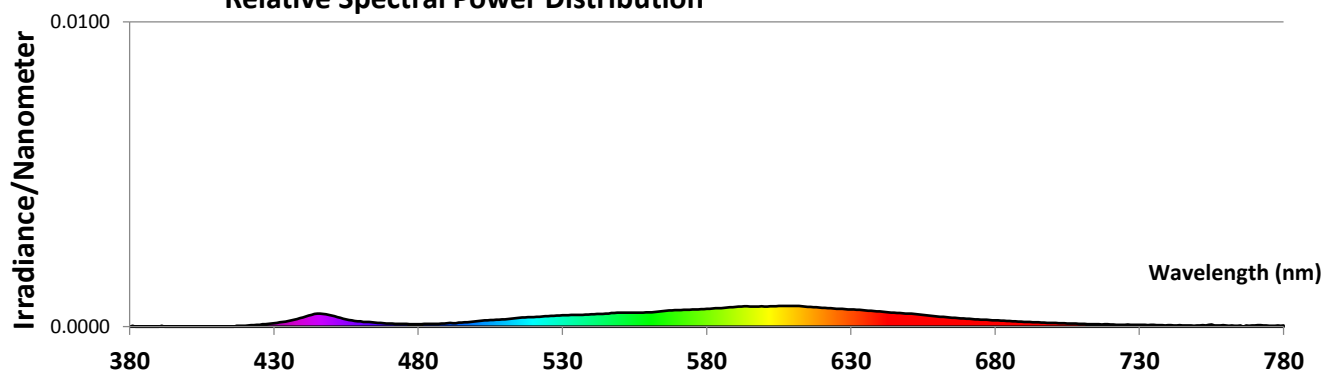
## Special CRI



## CIE 1931 x,y Chromaticity Diagram



## Relative Spectral Power Distribution

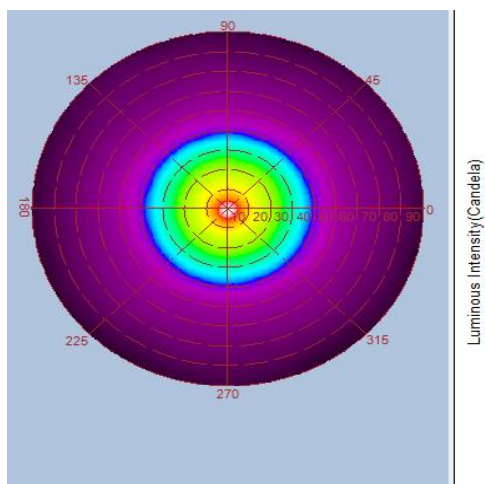


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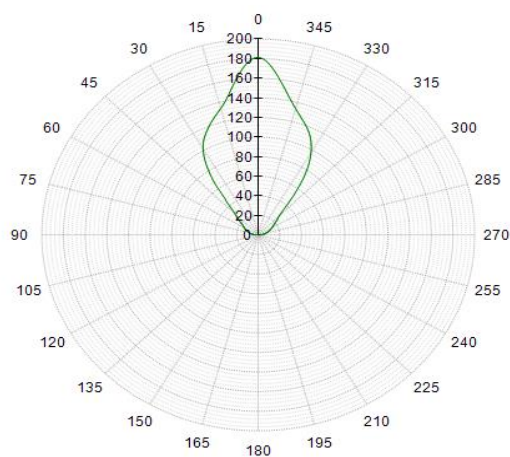
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## Intensity Distribution - Polar Curve

Intensity Radar Plot (ray trace to infinity)



Luminous Intensity Distribution



## Cone Diagram

0.5	0.62 0.64	E(0°) 722 E(C90) 223 E(C0) 217
1.0	1.24 1.28	E(0°) 180 E(C90) 56 E(C0) 54
1.5	1.85 1.92	E(0°) 80 E(C90) 25 E(C0) 24
2.0	2.47 2.56	E(0°) 45 E(C90) 14 E(C0) 14
2.5	3.09 3.20	E(0°) 29 E(C90) 9 E(C0) 9
3.0	3.71 3.84	E(0°) 20 E(C90) 6 E(C0) 6

Distance [m]

Cone Diameter [m]

Illuminance [lx]

— C0 - C180 (Half value angle: 65.2°)

— C90 - C270 (Half value angle: 63.4°)

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### UGR Table

## Sample Pictures