LAMP83

LM2018 358

Photometric Measurement Report

Generated by Radiant Vision Systems Light Measurement Platform

Luminaire Model	L SU2811002				
Led & Driver Type	SAMSUNG	5630	&	TRIDONIC	-
Luminaire Type	SURFACE MOUNTED				
Luminaire Family	MARKT				
Holder	-				
Reflector / Lens Degree	60				
Brand	LAMP 83				
Date of issue	19.09.2018				

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 Colotimeter IC-PMI2)

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

Tested By:	Reviewed By:	Approved By:
Gökhan AKSEL	Anıl TOKER	Erdoğan EMREM
Test Technician	Physics Engineer	R&D Manager

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Luminaire Spectroradiometric Results

Luminous Flux (lm)	4035
CCT (K)	3,143
Cx	0.4253
Cy	0.3964
CRI	85
Luminous Efficacy (lm/W)	99.021
Angle (°)	63.0

Luminaire Electric Specifications

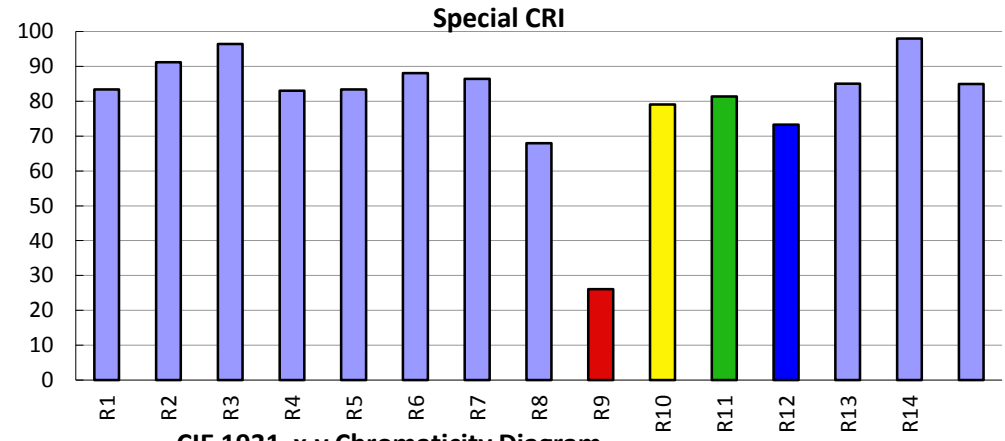
Voltage (VAC)	221.1
Current (A)	0.19
Power (W)	40.74873
Power Factor	0.97
LED Voltage(VDC)	99.3
LED Current(mA)	358
LED Power(W)	35.5494

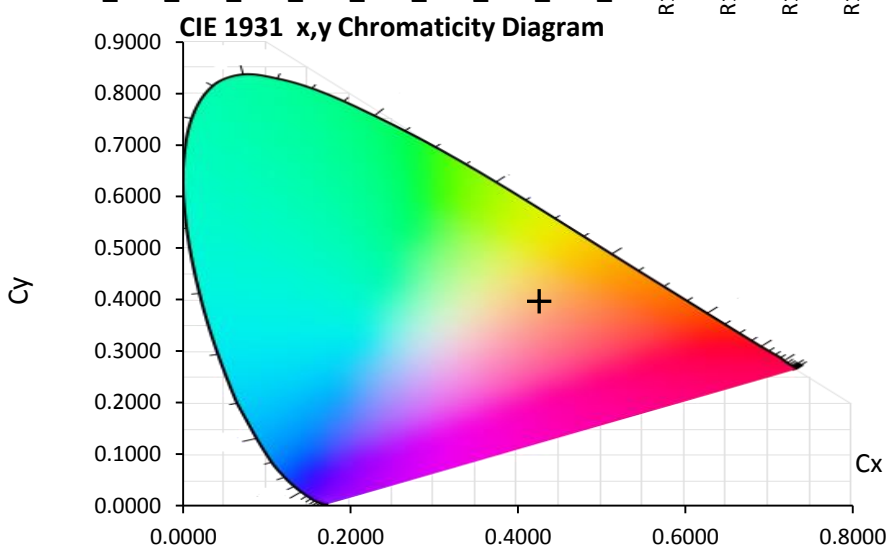
Measurement Preset Specifications

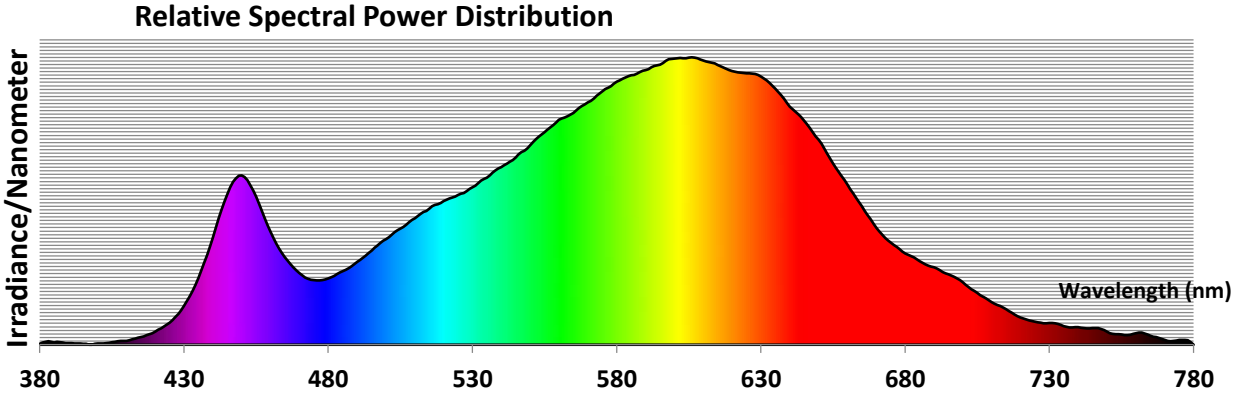
External ND Filter	NO
ND Filter	ND2
F-Number	8
Exposure Time (ms)	52.96
Distance(mm)	3135

Rendering Index

CRI	
R1	83.4
R2	91.2
R3	96.5
R4	83.0
R5	83.4
R6	88.1
R7	86.4
R8	68.0
R9	26.1
R10	79.1
R11	81.4
R12	73.3
R13	85.0
R14	98.0
CRI Ra	85.0







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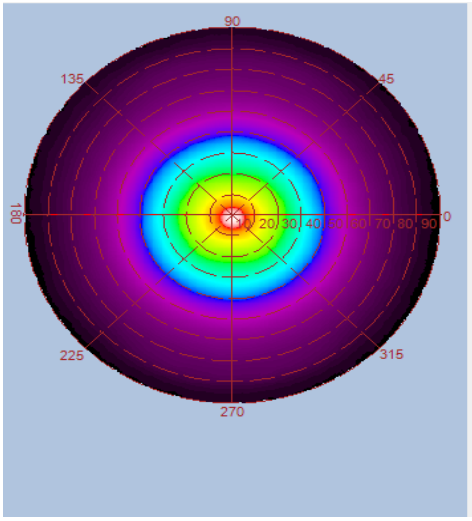
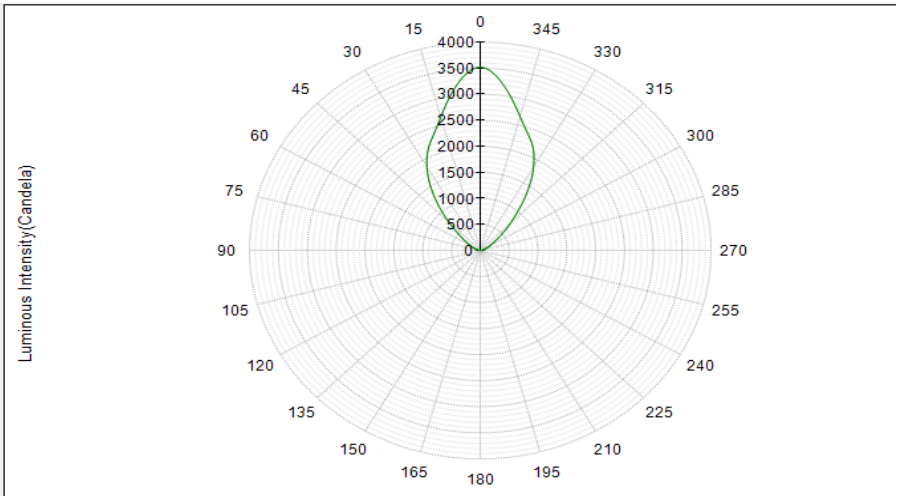
Intensity Distribution - Polar Curve

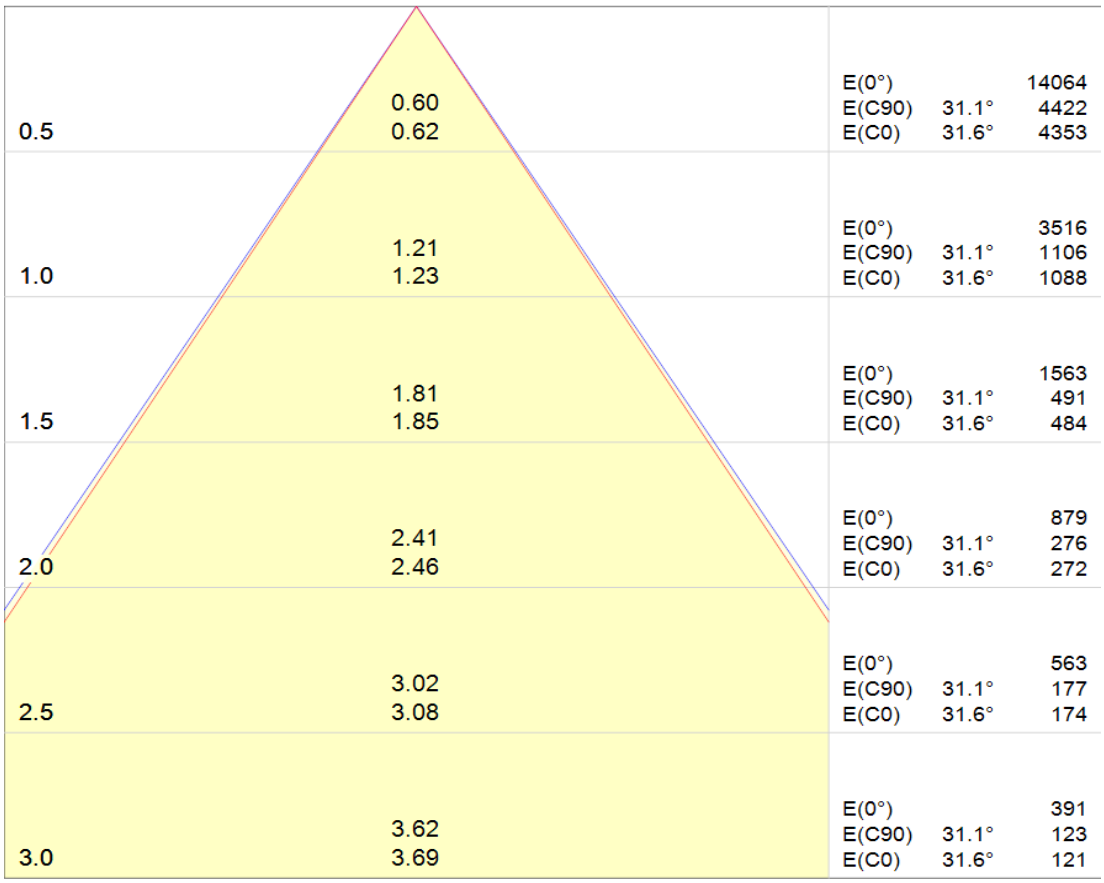
Intensity Radar Plot (ray trace to infinity)



Luminous Intensity Distribution



Cone Diagram



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UGR Table

Glare Evaluation According to UGR

ρ Ceiling		70	70	50	50	30	70	70	50	50	30
ρ Walls		50	30	50	30	30	50	30	50	30	30
ρ Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	19.0	20.0	19.3	20.2	20.4	19.1	20.1	19.4	20.3	20.5
	3H	19.5	20.4	19.8	20.6	20.9	19.4	20.3	19.7	20.5	20.8
	4H	19.7	20.6	20.1	20.8	21.1	19.5	20.3	19.8	20.6	20.9
	6H	20.0	20.7	20.3	21.0	21.3	19.6	20.3	19.9	20.6	20.9
	8H	20.0	20.7	20.4	21.0	21.3	19.6	20.3	19.9	20.6	20.9
	12H	20.0	20.7	20.4	21.0	21.3	19.6	20.3	20.0	20.6	20.9
4H	2H	19.2	20.0	19.5	20.2	20.5	19.2	20.1	19.6	20.3	20.6
	3H	19.8	20.5	20.1	20.8	21.1	19.6	20.3	20.0	20.7	21.0
	4H	20.2	20.8	20.5	21.1	21.4	19.8	20.4	20.2	20.8	21.1
	6H	20.5	21.0	20.9	21.4	21.8	19.9	20.5	20.4	20.8	21.2
	8H	20.6	21.0	21.0	21.4	21.8	20.0	20.5	20.4	20.8	21.3
	12H	20.6	21.0	21.0	21.4	21.8	20.0	20.4	20.5	20.8	21.3
8H	4H	20.2	20.7	20.6	21.0	21.5	19.9	20.3	20.3	20.7	21.1
	6H	20.6	21.0	21.1	21.4	21.8	20.0	20.4	20.5	20.8	21.3
	8H	20.7	21.0	21.2	21.5	22.0	20.1	20.4	20.6	20.9	21.4
	12H	20.8	21.0	21.3	21.5	22.0	20.2	20.5	20.7	20.9	21.4
12H	4H	20.2	20.6	20.6	21.0	21.4	19.9	20.3	20.3	20.7	21.1
	6H	20.6	20.9	21.1	21.4	21.8	20.0	20.4	20.5	20.8	21.3
	8H	20.7	21.0	21.2	21.5	22.0	20.1	20.4	20.6	20.9	21.4

Variation of the observerposition for the luminaire distance S

S = 1.0H	+0.7 / -1.1	+0.8 / -1.3
S = 1.5H	+1.7 / -1.7	+2.1 / -2.3
S = 2.0H	+3.0 / -2.1	+3.6 / -3.0
Standard table	BK02	BK02
Correction summand	2.6	2.4

Corrected glare indices referring to 4036lm total luminous flux

Sample Pictures