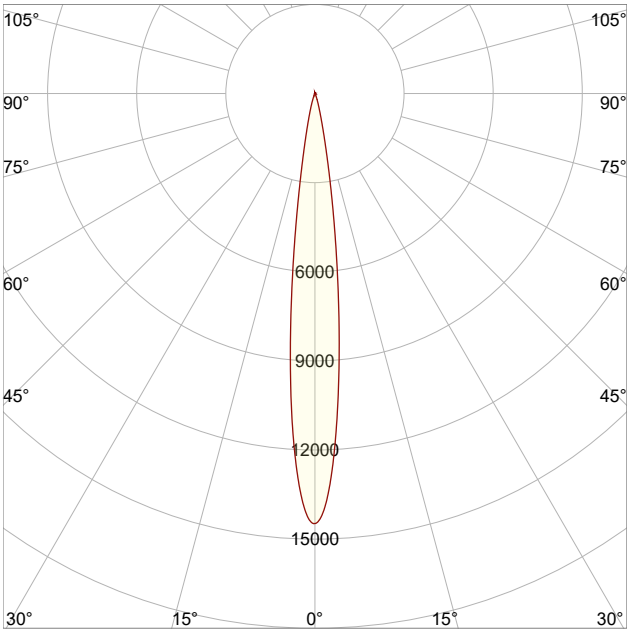
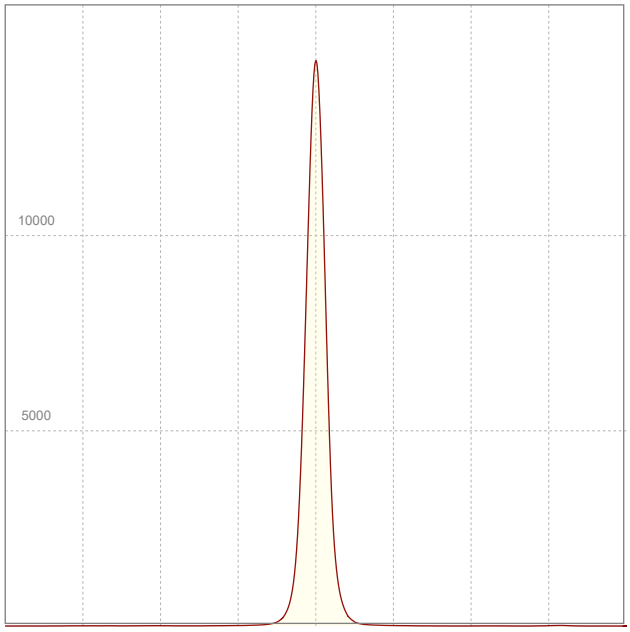
LM-79
Test Report

LM79-LINA-HP-4000K-30CM-12DEG

General Discription	
Item number	LC-2-030-23-1
Date and time	13-1-2015 14:39:32
CCT (Kelvin)	3825 K
Beam angle	12,7°
Luminous flux	987 lm
Efficiency	82 lm/watt
Weighted energy	12,1 kWh/1000h
Power factor	0,89
CRI (RA)	84,3
Fidelity index Rf	Rf 85,6
Gammut index Rg	Rg 96,3
Peak	14463 cd



Polar curve



Linear distribution diagram

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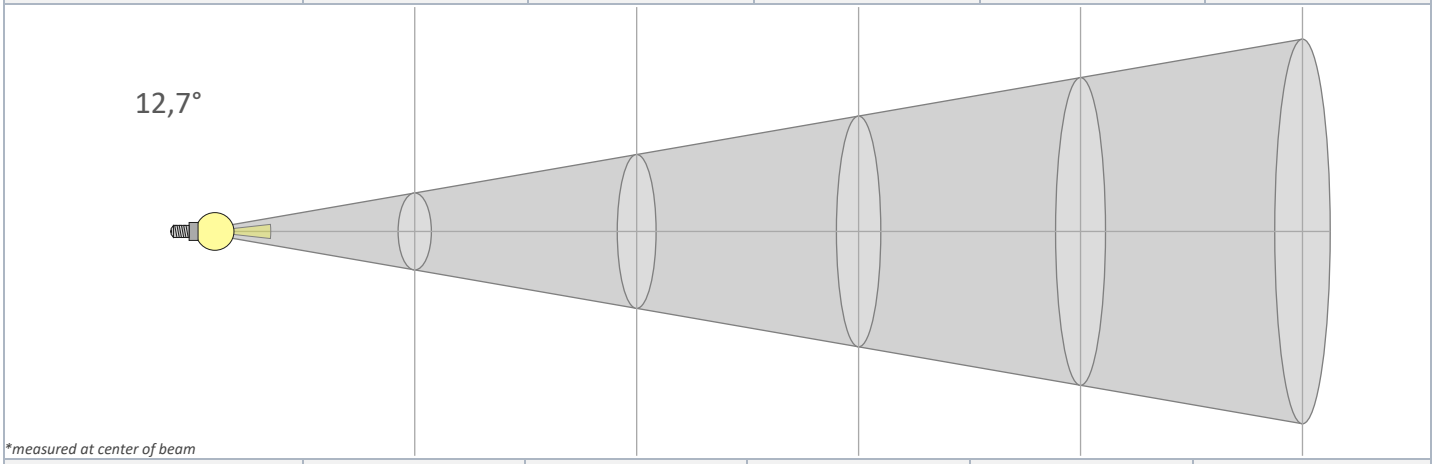
Beam details	1m	2m	3m	4m	5m
*Lux**	14456 lx	3614 lx	1606 lx	903 lx	578 lx



*measured at center of beam

*Footcandles**	1343,0 fcd	335,7 fcd	149,2 fcd	83,9 fcd	53,7 fcd
Beam width (meter)	0,2 m	0,4 m	0,7 m	0,9 m	1,1 m
Beam width (Feet)	0,7 ft	1,5 ft	2,2 ft	2,9 ft	3,6 ft

Beam intensities

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
14456lx	3614lx	1606lx	903lx	578lx	402lx	295lx	226lx	178lx	145lx	119lx	100lx	86lx	74lx	64lx	56lx	50lx	45lx	40lx	36lx
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
1343fcd	335,7fcd	149,2fcd	83,9fcd	53,7fcd	37,3fcd	27,4fcd	21fcd	16,6fcd	13,4fcd	11,1fcd	9,3fcd	7,9fcd	6,9fcd	6fcd	5,2fcd	4,6fcd	4,1fcd	3,7fcd	3,4fcd

Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
14,5K	14,2K	13,4K	12,2K	10,8K	9,3K	7,7K	6,3K	4,9K	3,8K	2,8K	2,0K	1,5K	1,1K	0,8K	0,6K	0,5K	0,4K	0,3K	0,2K
100%	98%	92%	84%	75%	64%	54%	43%	34%	26%	19%	14%	10%	8%	6%	4%	3%	3%	2%	2%

Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
14,5K	14,2K	13,4K	12,2K	10,8K	9,3K	7,7K	6,3K	4,9K	3,8K	2,8K	2,0K	1,5K	1,1K	0,8K	0,6K	0,5K	0,4K	0,3K	0,2K
100%	98%	92%	84%	75%	64%	54%	43%	34%	26%	19%	14%	10%	8%	6%	4%	3%	3%	2%	2%

Intensities in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
14,5K	14,2K	13,5K	12,4K	11,0K	9,4K	7,8K	6,2K	4,7K	3,5K	2,6K	1,9K	1,4K	1,1K	0,8K	0,6K	0,5K	0,4K	0,3K	0,2K
100%	98%	93%	86%	76%	65%	54%	43%	33%	24%	18%	13%	10%	8%	6%	4%	4%	3%	2%	2%

Intensities in 270° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
14,5K	14,2K	13,5K	12,4K	11,0K	9,4K	7,8K	6,2K	4,7K	3,5K	2,6K	1,9K	1,4K	1,1K	0,8K	0,6K	0,5K	0,4K	0,3K	0,2K
100%	98%	93%	86%	76%	65%	54%	43%	33%	24%	18%	13%	10%	8%	6%	4%	4%	3%	2%	2%

Beam angle 50%	*Field angle 10%*	*Cutoff angle 2,5%*	*Intensity ratio in 120° cone*	*Intensity ratio in 90° cone*
12,7°	24,1°	34,4°	95,5%	94,2%

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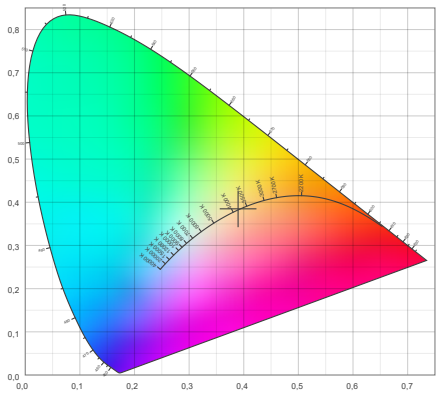
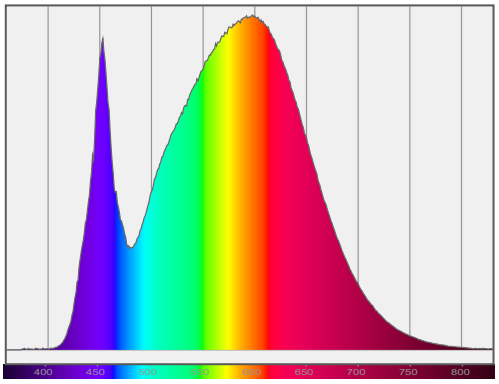
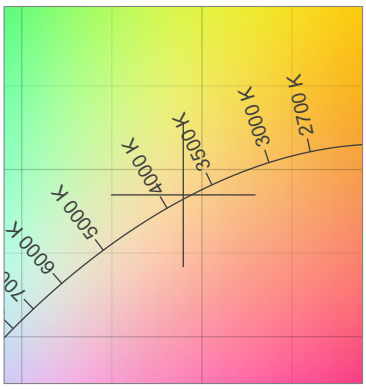
Color details

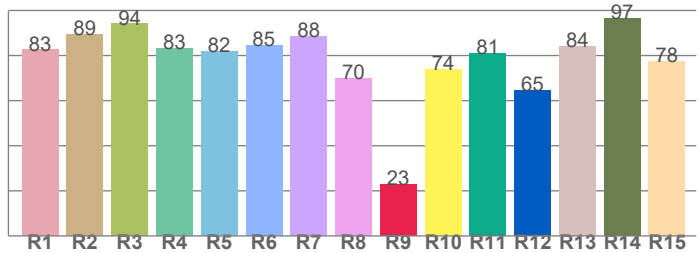






CIE 1931	x: 0,390		Spectra	*CIE 1931 ZOOM*
3825 K	y: 0,385			Δuv: 0,0012

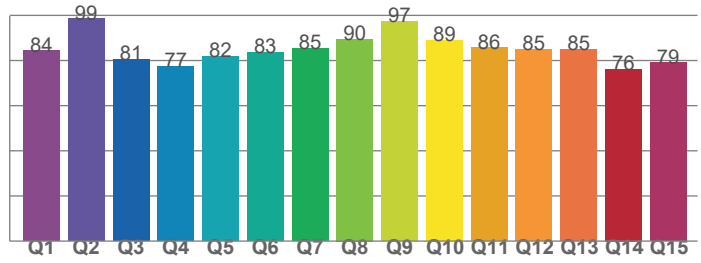
CRI: **84,3** (R1-R8)



CRI values, R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8
82,5	**89,3**	**94,0**	**83,1**	**82,0**	**84,7**	**88,5**	**69,9**
R9	R10	R11	R12	R13	R14	R15	
22,7	**74,0**	**81,0**	**64,6**	**83,9**	**96,5**	**77,5**	

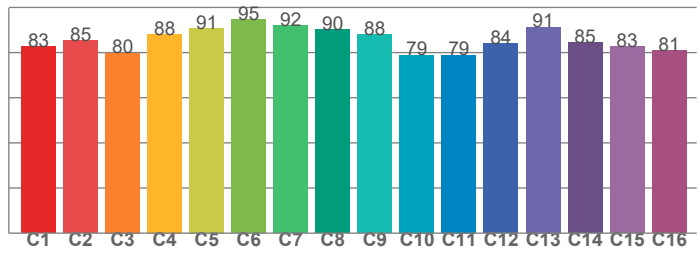
CQS: **84,0**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
84,3	**98,5**	**80,5**	**77,4**	**82,0**	**83,5**	**85,3**	**89,5**
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,4	**88,9**	**85,7**	**85,0**	**85,0**	**76,2**	**79,0**	

TM30: **85,6**



TM30 values, 16 binned values out of total of 99 values

C1	C2	C3	C4	C5	C6	C7	C8
82,8	**85,2**	**79,8**	**88,2**	**90,8**	**94,7**	**91,9**	**90,2**
C9	C10	C11	C12	C13	C14	C15	
88,0	**79,0**	**79,0**	**84,0**	**91,3**	**84,5**	**82,8**	

Color parameters

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3825 K	**84,3**	**22,7**	**85,6**	**96,3**	**84,0**	**0,390**	**0,385**	**0,228**	**0,338**	**0,0012**

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TM30 details

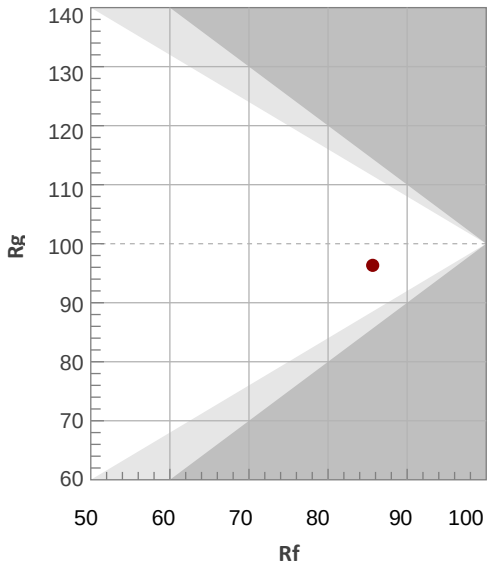
Rf 85,6

Fidelity index Rf

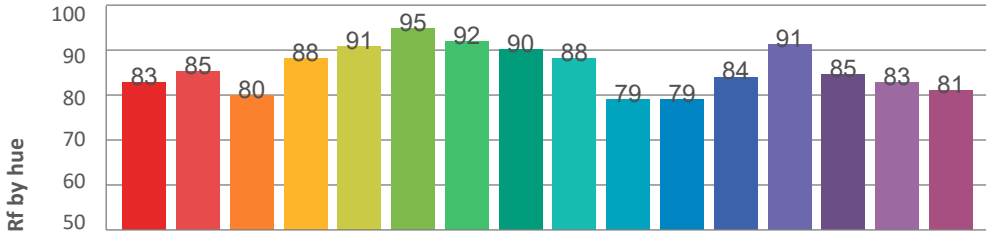
Rg 96,3

Gammut index Rg

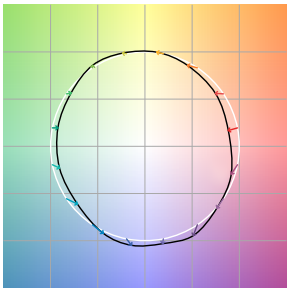
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	83	-10%	-1%
2	85	-7%	5%
3	80	-4%	10%
4	88	0%	7%
5	91	1%	4%
6	95	2%	-2%
7	92	-4%	-4%
8	90	-6%	-1%
9	88	-7%	5%
10	79	-7%	11%
11	79	1%	14%
12	84	6%	7%
13	91	5%	-2%
14	85	7%	-10%
15	83	0%	-12%
16	81	-5%	-11%



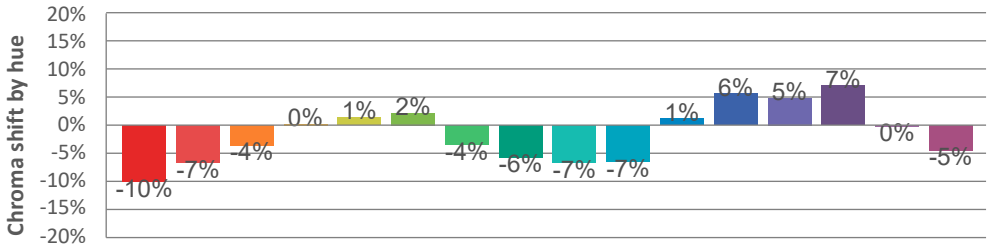
Hue binH



Color vector graphics

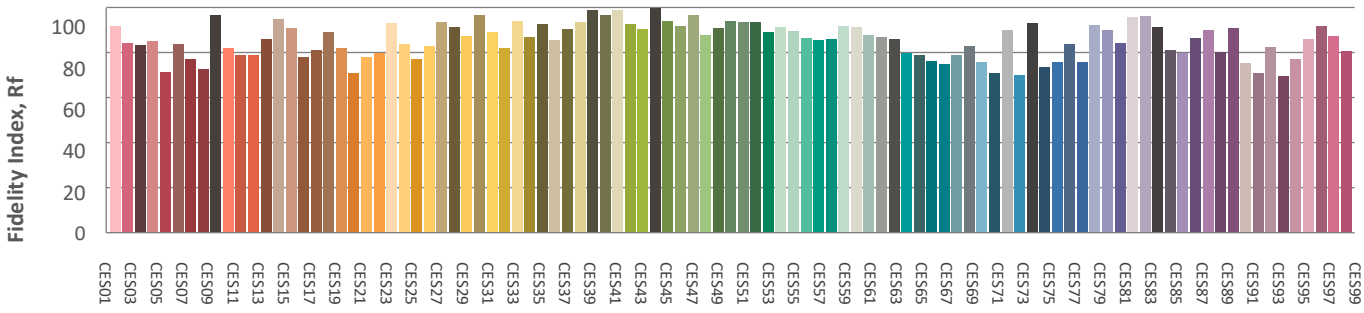


Hue bin



Color distortion graphics

Color Evaluation Sample



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Glare Evaluation According to UGR

p Ceiling	70	70	50	50	30	70	70	50	50	30
p Walls	50	30	50	30	30	50	30	50	30	30
p 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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 987lm total luminous flux										

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