

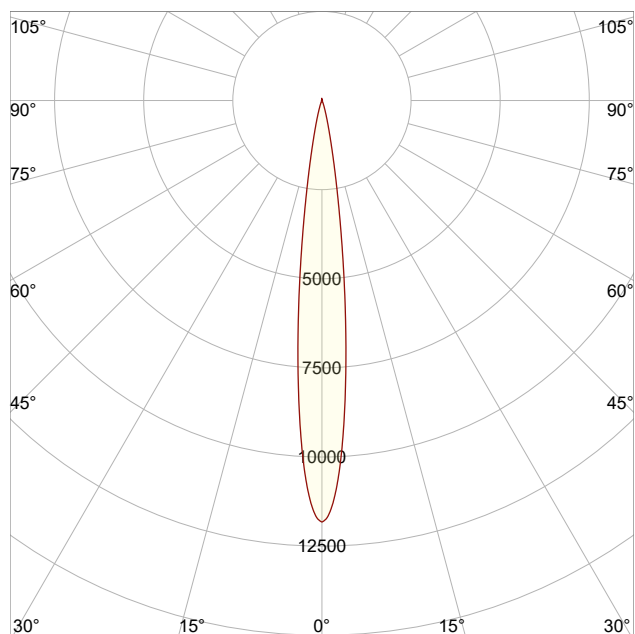
LM-79

Test Report

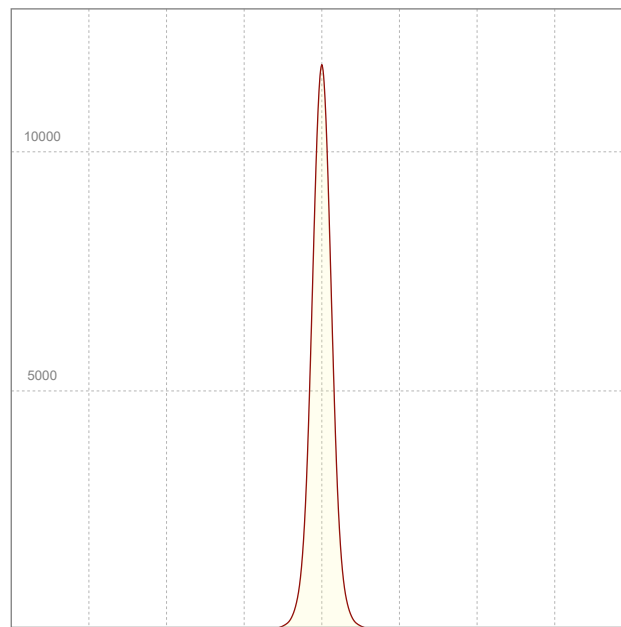
LM79-LINA-HP-2700K-30CM-12DEG

General Discription

Item number	LC-2-030-21-1
Date and time	22-1-2016 12:19:43
CCT (Kelvin)	2627 K
Beam angle	12,7°
Luminous flux	811 lm
Efficiency	66 lm/watt
Weighted energy	12,2 kWh/1000h
Power factor	0,89
CRI (RA)	82,4
Fidelity index Rf	Rf 85,8
Gammut index Rg	Rg 94,0
Peak	11808 cd



Polar curve



Linear distribution diagram



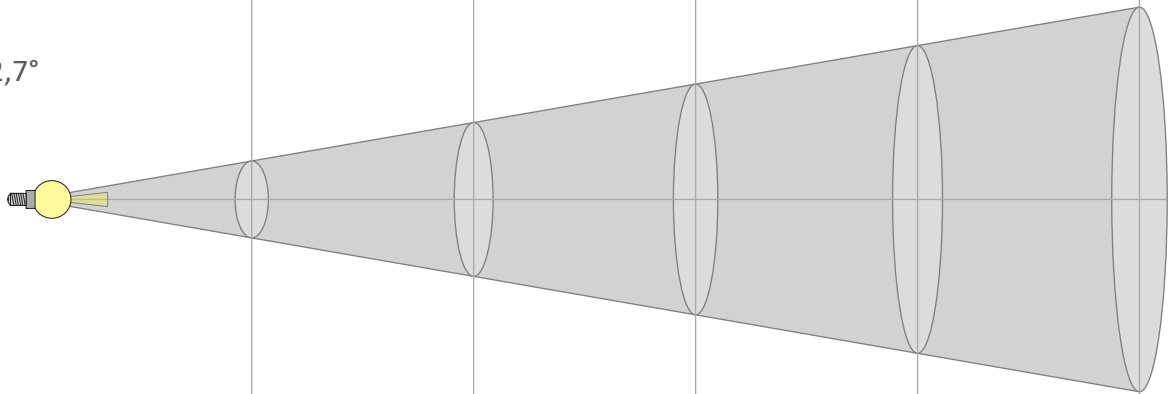
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Beam details					1m		2m		3m		4m		5m						
Lux*					11808 lx		2952 lx		1312 lx		738 lx		472 lx						
12,7° 																			
*measured at center of beam																			
Footcandles*					1097,0 fcd		274,2 fcd		121,9 fcd		68,6 fcd		43,9 fcd						
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		3,7 ft						
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
11808lx	2952lx	1312lx	738lx	472lx	328lx	241lx	184lx	146lx	118lx	98lx	82lx	70lx	60lx	52lx	46lx	41lx	36lx	33lx	30lx
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
1097fcd	274,2fcd	121,9fcd	68,6fcd	43,9fcd	30,5fcd	22,4fcd	17,1fcd	13,5fcd	11fcd	9,1fcd	7,6fcd	6,5fcd	5,6fcd	4,9fcd	4,3fcd	3,8fcd	3,4fcd	3fcd	2,7fcd
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°
11,8K	11,6K	11,0K	10,1K	8,9K	7,7K	6,4K	5,1K	4,0K	3,0K	2,3K	1,7K	1,2K	0,9K	0,7K	0,5K	0,4K	0,3K	0,2K	0,2K
100%	98%	93%	85%	76%	65%	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°
11,8K	11,6K	11,0K	10,1K	8,9K	7,7K	6,4K	5,1K	4,0K	3,0K	2,3K	1,7K	1,2K	0,9K	0,7K	0,5K	0,4K	0,3K	0,2K	0,2K
100%	98%	93%	85%	76%	65%	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°
11,8K	11,6K	11,0K	10,1K	8,9K	7,7K	6,4K	5,1K	4,0K	3,0K	2,3K	1,7K	1,2K	0,9K	0,7K	0,5K	0,4K	0,3K	0,2K	0,2K
100%	98%	93%	85%	76%	65%	54%	43%	34%	26%	19%	14%	10%	8%	6%	4%	3%	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°
11,8K	11,6K	11,0K	10,1K	8,9K	7,7K	6,4K	5,1K	4,0K	3,0K	2,3K	1,7K	1,2K	0,9K	0,7K	0,5K	0,4K	0,3K	0,2K	0,2K
100%	98%	93%	85%	76%	65%	54%	43%	34%	26%	19%	14%	10%	8%	6%	4%	3%	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°				24,3°				34,2°				95,4%				94,1%			



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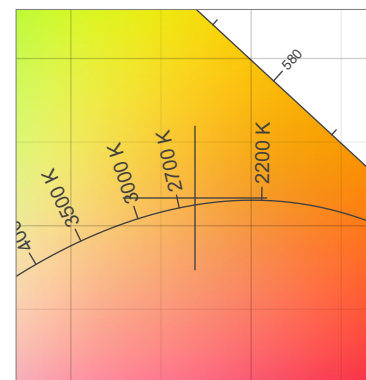
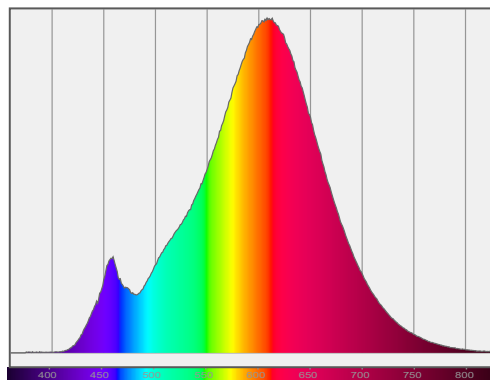
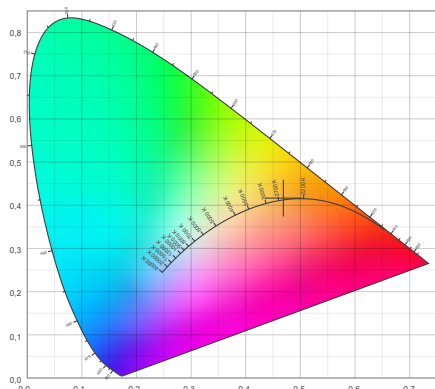
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Test Report

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Color details



CIE 1931

x: 0,469

2627 K

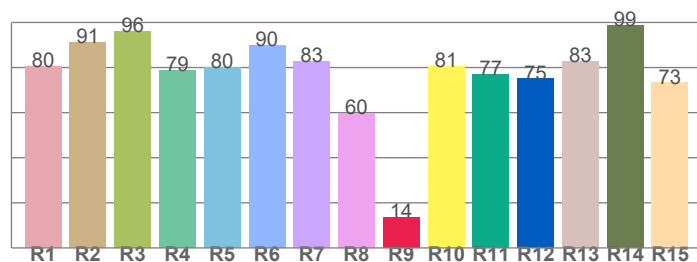
y: 0,417

Spectra

CIE 1931 ZOOM

 $\Delta uv: 0,0015$

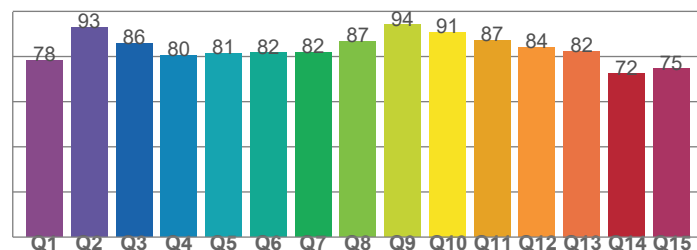
CRI: 82,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,4	91,3	96,2	78,9	80,1	89,9	82,9	59,7
R9	R10	R11	R12	R13	R14	R15	
13,7	80,6	76,9	75,0	82,7	98,6	73,3	

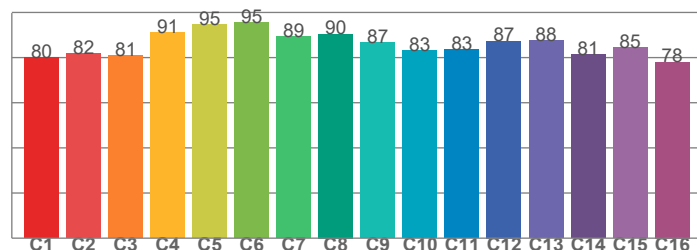
CQS: 82,4



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
78,3	92,8	85,7	80,4	81,5	81,7	81,9	86,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,1	90,8	87,1	84,1	82,4	72,4	74,5	

TM30: 85,8



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

C1	C2	C3	C4	C5	C6	C7	C8
80,0	81,9	80,9	91,1	94,7	95,4	89,4	90,4
C9	C10	C11	C12	C13	C14	C15	
86,7	83,3	83,5	87,4	87,6	81,4	84,6	

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 deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2627 K	82,4	13,7	85,8	94,0	82,4	0,469	0,417	0,266	0,354	0,0015

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Test Report

LM79-LINA-HP-2700K-30CM-12DEG

TM30 details

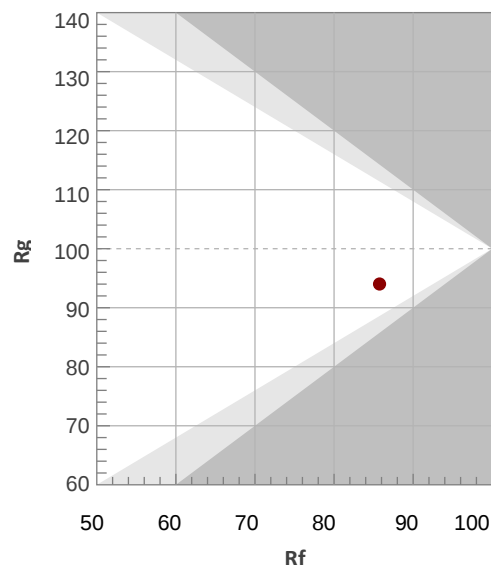
Rf 85,8

Fidelity index Rf

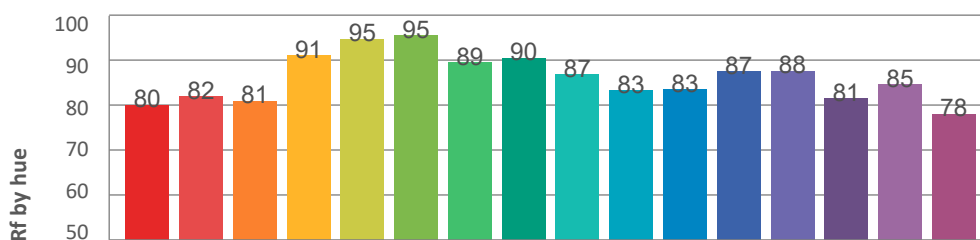
Rg 94,0

Gamut index Rg

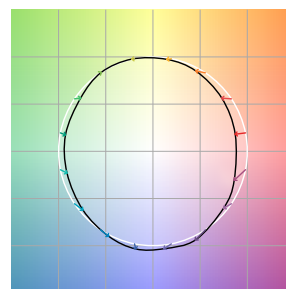
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	1%
2	82	-8%	6%
3	81	-4%	9%
4	91	-2%	5%
5	95	0%	3%
6	95	0%	-1%
7	89	-5%	-4%
8	90	-6%	1%
9	87	-6%	5%
10	83	-4%	10%
11	83	1%	11%
12	87	5%	2%
13	88	3%	-9%
14	81	3%	-15%
15	85	-4%	-8%
16	78	-10%	-13%



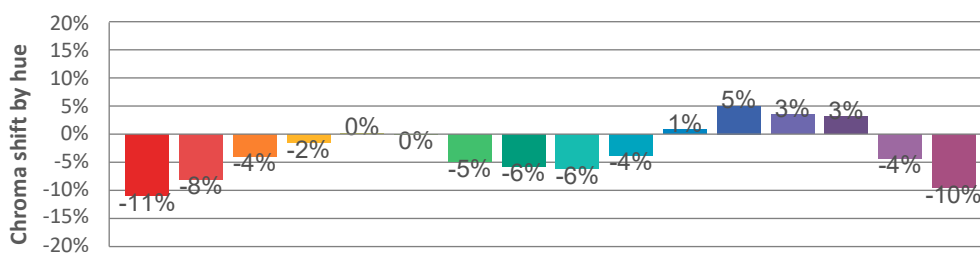
Hue binH



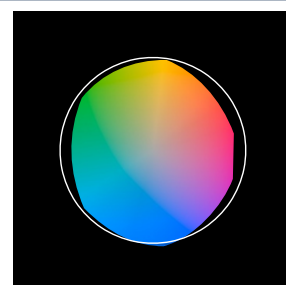
Color vector graphics



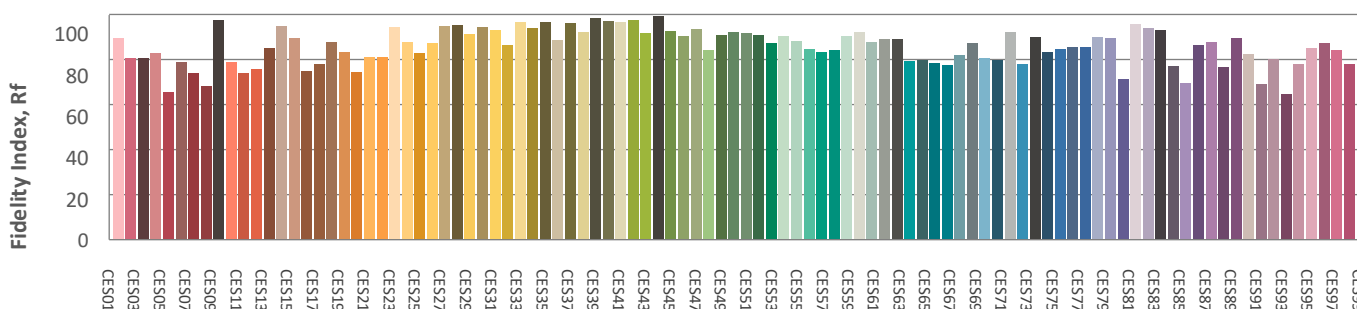
Hue bin



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				
2H	2H	5,7	6,0	5,8	6,2	6,5	5,7	6,0	5,8	6,2	6,5
	3H	6,7	7,2	7,1	7,4	7,7	6,7	7,2	7,1	7,4	7,7
	4H	7,4	7,9	7,8	8,1	8,4	7,4	7,9	7,8	8,1	8,4
	6H	8,5	8,8	8,8	9,2	9,6	8,5	8,8	8,8	9,2	9,6
	8H	9,2	9,6	9,6	10,0	10,4	9,2	9,6	9,6	10,0	10,4
	12H	10,3	10,7	10,7	11,1	11,5	10,3	10,7	10,7	11,1	11,5
4H	2H	6,0	6,5	6,4	6,7	7,0	6,0	6,5	6,4	6,7	7,0
	3H	7,5	7,9	7,9	8,3	8,7	7,5	7,9	7,9	8,3	8,7
	4H	8,3	8,6	8,7	9,1	9,6	8,3	8,6	8,7	9,1	9,6
	6H	9,5	10,0	10,1	10,3	10,7	9,5	10,0	10,1	10,3	10,7
	8H	10,5	10,9	11,0	11,2	11,7	10,5	10,9	11,0	11,2	11,7
	12H	11,8	12,0	12,3	12,5	13,0	11,8	12,0	12,3	12,5	13,0
8H	4H	8,6	9,0	9,2	9,4	9,8	8,6	9,0	9,2	9,4	9,8
	6H	10,3	10,5	10,9	11,0	11,6	10,3	10,5	10,9	11,0	11,6
	8H	11,5	11,7	12,1	12,3	12,9	11,5	11,7	12,1	12,3	12,9
	12H	13,1	13,3	13,8	13,8	14,5	13,1	13,3	13,8	13,8	14,5
12H	4H	8,7	9,0	9,3	9,5	10,0	8,7	9,0	9,3	9,5	10,0
	6H	10,6	10,8	11,2	11,4	12,0	10,6	10,8	11,2	11,4	12,0
	8H	11,9	12,1	12,6	12,6	13,3	11,9	12,1	12,6	12,6	13,3
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,1					0,1 / -0,1				
S = 1.5H		0,2 / -0,1					0,2 / -0,1				
S = 2.0H		0,2 / -0,4					0,2 / -0,4				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 811lm total luminous flux											



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