

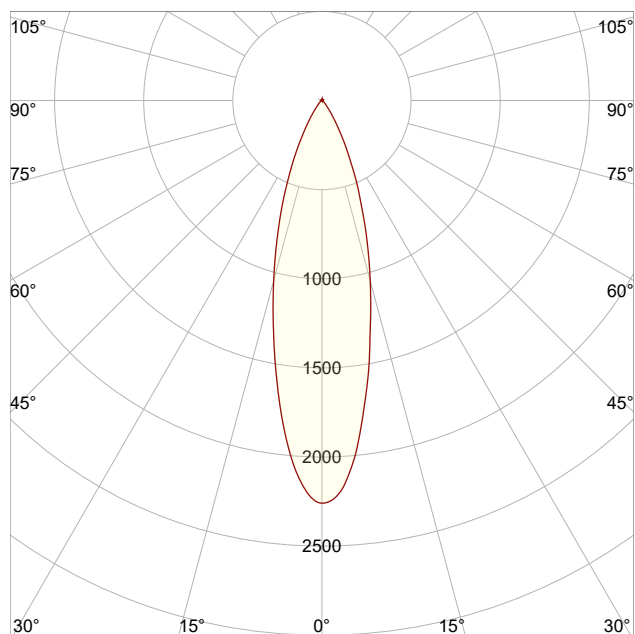
LM-79

Test Report

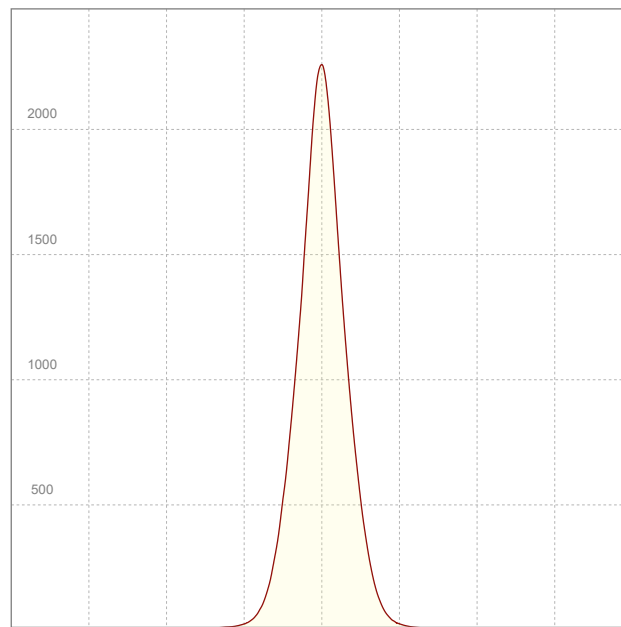
LM79-LINA-HP-3000K-30CM-32DEG

General Discription

Item number	LC-2-030-22-3
Date and time	13-1-2015 14:07:21
CCT (Kelvin)	3034 K
Beam angle	28°
Luminous flux	774 lm
Efficiency	64 lm/watt
Weighted energy	12,1 kWh/1000h
Power factor	0,89
CRI (RA)	82,8
Fidelity index Rf	Rf 84,6
Gammut index Rg	Rg 97,9
Peak	2256 cd



Polar curve



Linear distribution diagram



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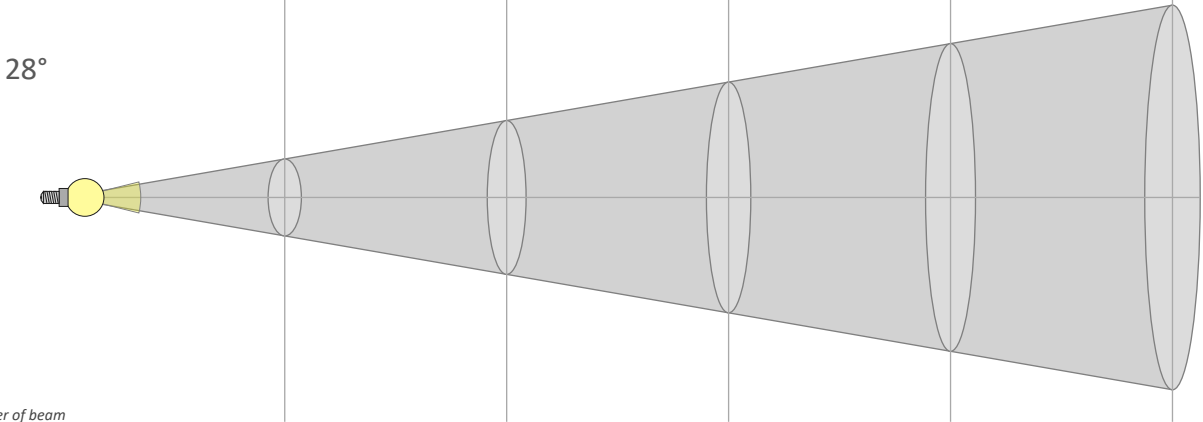
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Beam details	1m	2m	3m	4m	5m
Lux*	2255 lx	564 lx	251 lx	141 lx	90 lx



28°

*measured at center of beam

Footcandles*	209,5 fcd	52,4 fcd	23,3 fcd	13,1 fcd	8,4 fcd
Beam width (meter)	0,5 m	1 m	1,5 m	2 m	2,5 m
Beam width (Feet)	1,6 ft	3,3 ft	4,9 ft	6,6 ft	8,2 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
2255lx	564lx	251lx	141lx	90lx	63lx	46lx	35lx	28lx	23lx	19lx	16lx	13lx	12lx	10lx	9lx	8lx	7lx	6lx	6lx
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
209,5fcd	52,4fcd	23,3fcd	13,1fcd	8,4fcd	5,8fcd	4,3fcd	3,3fcd	2,6fcd	2,1fcd	1,7fcd	1,5fcd	1,2fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd	0,5fcd

Intensities in 0° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
2255	2224	2110	1932	1719	1516	1306	1129	966	813	669	550	439	340	265	196	147	108	81	59
100%	99%	94%	86%	76%	67%	58%	50%	43%	36%	30%	24%	19%	15%	12%	9%	7%	5%	4%	3%

Intensities in 90° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
2255	2224	2110	1932	1719	1516	1306	1129	966	813	669	550	439	340	265	196	147	108	81	59
100%	99%	94%	86%	76%	67%	58%	50%	43%	36%	30%	24%	19%	15%	12%	9%	7%	5%	4%	3%

Intensities in 180° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
2255	2207	2083	1909	1710	1505	1309	1129	965	812	676	551	439	347	267	200	149	111	81	60
100%	98%	92%	85%	76%	67%	58%	50%	43%	36%	30%	24%	19%	15%	12%	9%	7%	5%	4%	3%

Intensities in 270° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
2255	2207	2083	1909	1710	1505	1309	1129	965	812	676	551	439	347	267	200	149	111	81	60
100%	98%	92%	85%	76%	67%	58%	50%	43%	36%	30%	24%	19%	15%	12%	9%	7%	5%	4%	3%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
28°	58,3°	76,8°	95,2%	92,8%



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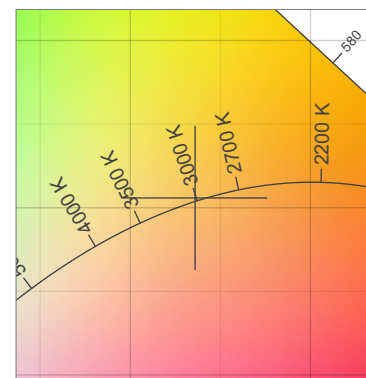
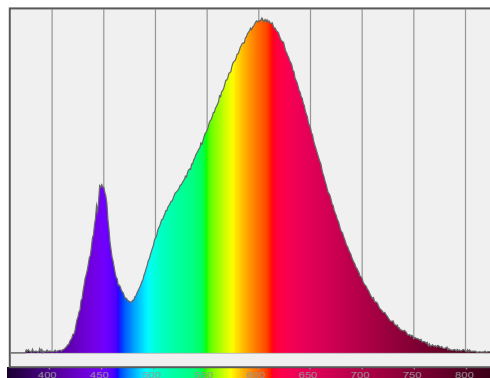
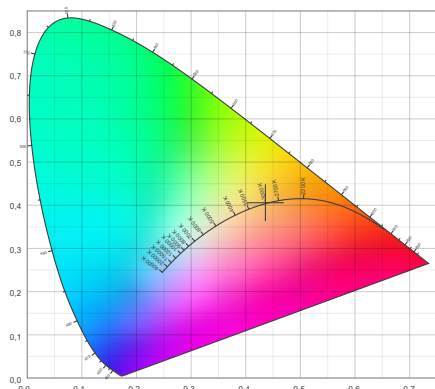
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Color details



CIE 1931

x: 0,436



Spectra

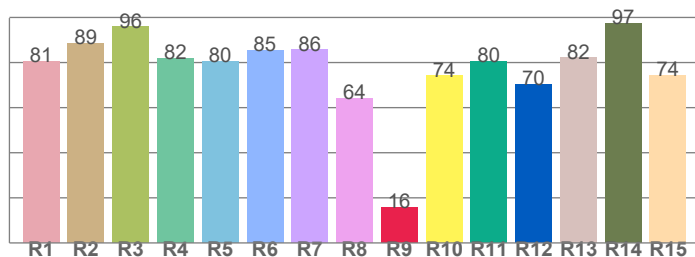
CIE 1931 ZOOM

3034 K

y: 0,406

Δuv : 0,0008

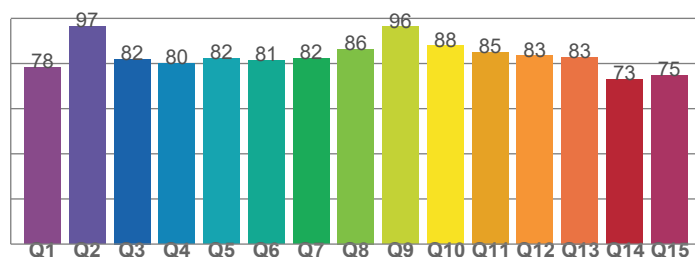
CRI: 82,8 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,7	88,7	95,8	81,9	80,4	85,3	85,7	64,1
R9	R10	R11	R12	R13	R14	R15	
15,9	74,2	80,4	70,2	82,1	97,5	74,3	

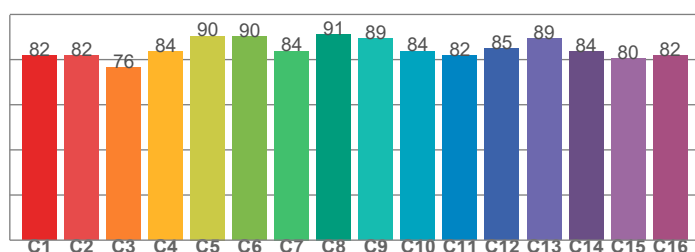
CQS: 82,2



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
78,2	96,6	82,0	80,1	82,2	81,4	82,3	86,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,3	87,8	85,1	83,4	82,9	73,0	74,7	

TM30: 84,6



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

C1	C2	C3	C4	C5	C6	C7	C8
81,7	81,8	76,4	83,7	90,5	90,2	83,8	91,3
C9	C10	C11	C12	C13	C14	C15	
89,3	83,8	81,7	84,9	89,4	83,7	80,4	

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
3034 K	82,8	15,9	84,6	97,9	82,2	0,436	0,406	0,249	0,348	0,0008



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Test Report

LM79-LINA-HP-3000K-30CM-32DEG

TM30 details

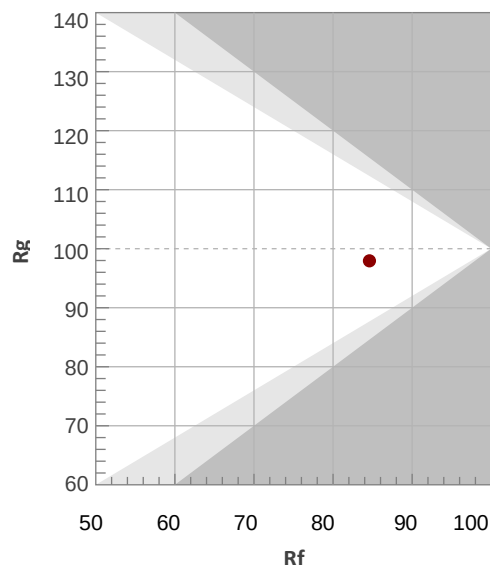
Rf 84,6

Fidelity index R_f

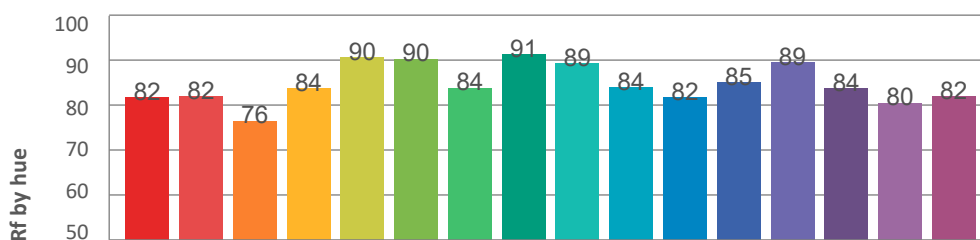
Rg 97,9

Gammut index Rg

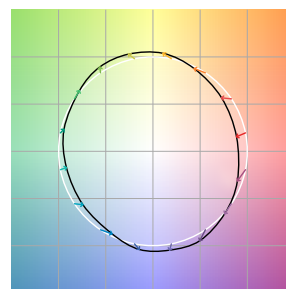
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	82	-10%	-2%
2	82	-8%	7%
3	76	-3%	12%
4	84	4%	10%
5	90	6%	5%
6	90	6%	-3%
7	84	0%	-10%
8	91	-3%	-4%
9	89	-7%	-1%
10	84	-7%	6%
11	82	-3%	12%
12	85	5%	6%
13	89	6%	-3%
14	84	6%	-11%
15	80	0%	-13%
16	82	-6%	-13%



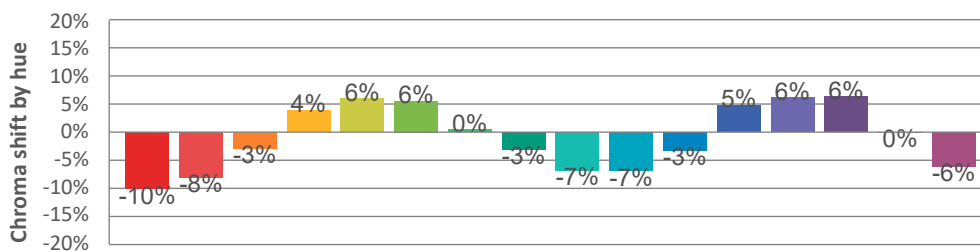
Hue binH



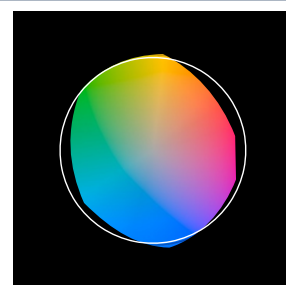
Color vector graphics



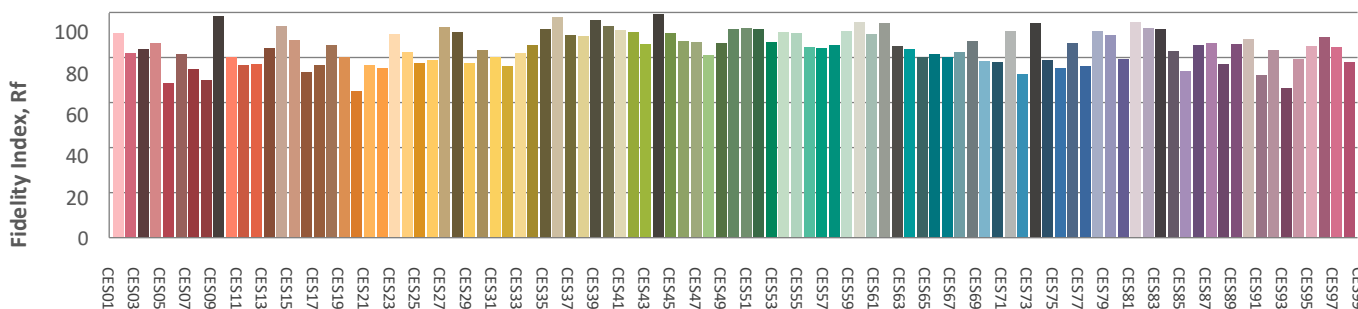
Hue bin



Color distortion graphics



Color Evaluation Sample



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Test Report

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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
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
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 774lm total luminous flux										



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