

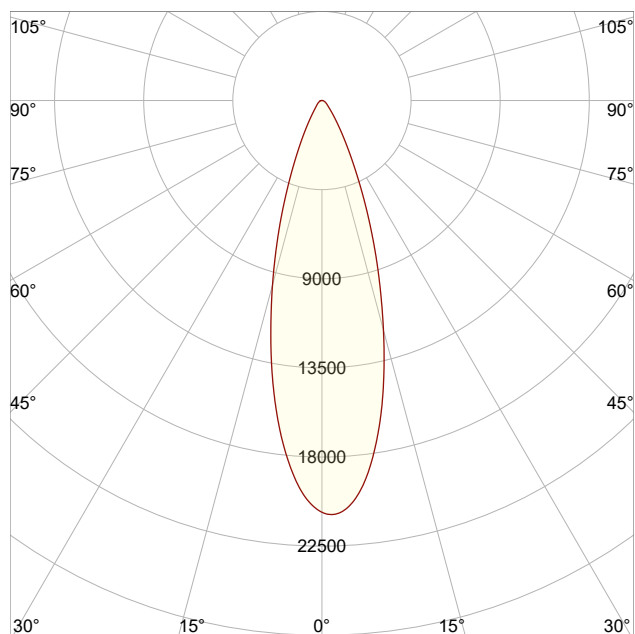
LM-79

Test Report

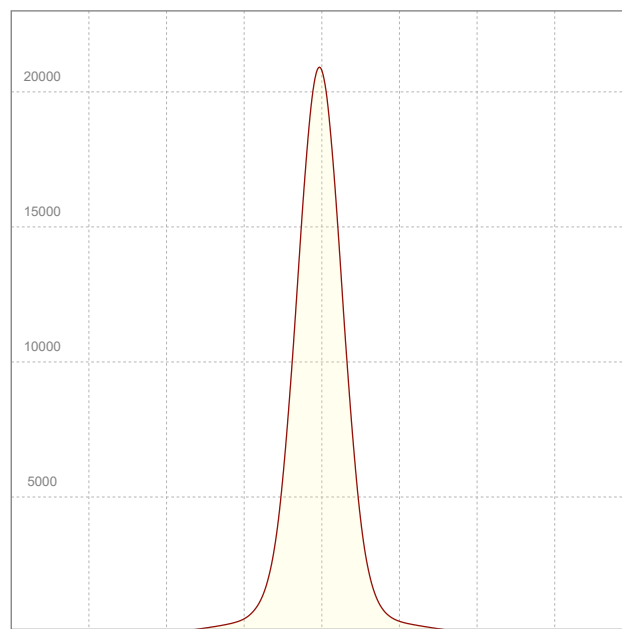
LM79-QUARTZ-3000K-CRI90-MEDIUM

General Discription

Item number	Q-X-X-3090-M
Date and time	5-1-2024 12:26:39
CCT (Kelvin)	3085 K
Beam angle	30,7°
Luminous flux	7920 lm
Efficiency	102 lm/watt
Weighted energy	77,8 kWh/1000h
Power factor	0,56
CRI (RA)	87,4
Fidelity index Rf	Rf 88,1
Gammut index Rg	Rg 98,7
Peak	20907 cd



Polar curve



Linear distribution diagram



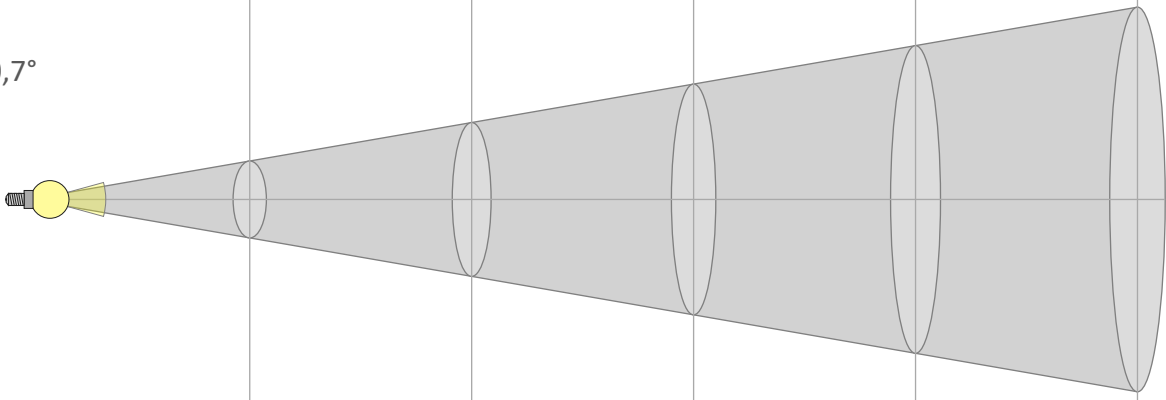
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Beam details					1m		2m		3m		4m		5m						
Lux*					20774 lx		5193 lx		2308 lx		1298 lx		831 lx						
30,7° 																			
*measured at center of beam																			
Footcandles*					1930,0 fcd		482,5 fcd		214,4 fcd		120,6 fcd		77,2 fcd						
Beam width (meter)					0,5 m		1,1 m		1,6 m		2,2 m		2,7 m						
Beam width (Feet)					1,8 ft		3,6 ft		5,4 ft		7,2 ft		9 ft						
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
20774lx	5193lx	2308lx	1298lx	831lx	577lx	424lx	325lx	256lx	208lx	172lx	144lx	123lx	106lx	92lx	81lx	72lx	64lx	58lx	52lx
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
1930fcd	482,5fcd	214,4fcd	120,6fcd	77,2fcd	53,6fcd	39,4fcd	30,2fcd	23,8fcd	19,3fcd	16fcd	13,4fcd	11,4fcd	9,8fcd	8,6fcd	7,5fcd	6,7fcd	6fcd	5,3fcd	4,8fcd
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°
20,8K	20,9K	20,5K	19,6K	18,3K	16,7K	14,9K	13,0K	11,1K	9,3K	7,6K	6,1K	4,8K	3,7K	2,9K	2,3K	1,8K	1,4K	1,1K	0,9K
100%	100%	98%	94%	88%	80%	72%	62%	53%	45%	37%	29%	23%	18%	14%	11%	8%	7%	5%	4%
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°
20,8K	20,9K	20,5K	19,6K	18,3K	16,7K	14,9K	13,0K	11,1K	9,3K	7,6K	6,1K	4,8K	3,7K	2,9K	2,3K	1,8K	1,4K	1,1K	0,9K
100%	100%	98%	94%	88%	80%	72%	62%	53%	45%	37%	29%	23%	18%	14%	11%	8%	7%	5%	4%
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°
20,8K	20,2K	19,2K	17,8K	16,1K	14,3K	12,4K	10,5K	8,8K	7,2K	5,7K	4,4K	3,4K	2,6K	2,0K	1,6K	1,2K	1,0K	0,8K	0,7K
100%	97%	92%	86%	78%	69%	60%	51%	42%	34%	27%	21%	16%	13%	10%	8%	6%	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°
20,8K	20,2K	19,2K	17,8K	16,1K	14,3K	12,4K	10,5K	8,8K	7,2K	5,7K	4,4K	3,4K	2,6K	2,0K	1,6K	1,2K	1,0K	0,8K	0,7K
100%	97%	92%	86%	78%	69%	60%	51%	42%	34%	27%	21%	16%	13%	10%	8%	6%	5%	4%	3%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
30,7°				58,3°				84,8°				96,8%				91,8%			



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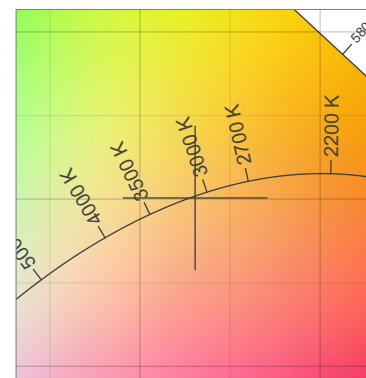
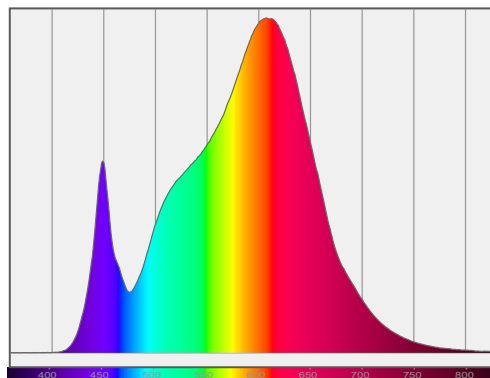
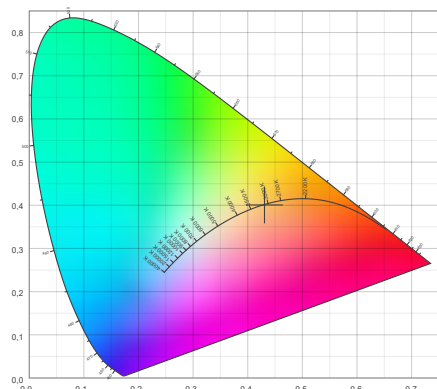
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Test Report

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Color details



CIE 1931

x: 0,431



Spectra

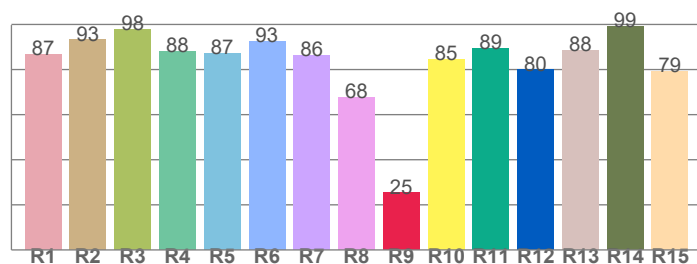
CIE 1931 ZOOM

3085 K

y: 0,401

Δuv : -0,0005

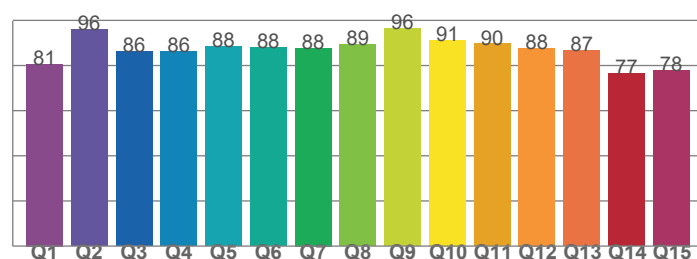
CRI: 87,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
86,8	93,2	97,8	87,9	87,2	92,6	86,3	67,6
R9	R10	R11	R12	R13	R14	R15	
25,3	84,5	89,5	79,9	88,5	99,1	79,2	

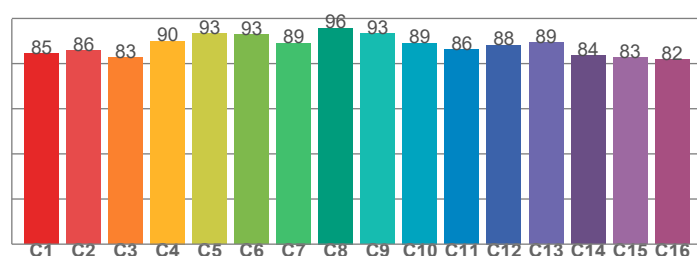
CQS: 86,0



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
80,7	96,0	86,2	86,2	88,4	88,0	87,8	89,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,4	91,3	89,7	87,8	86,7	76,5	77,8	

TM30: 88,1



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

C1	C2	C3	C4	C5	C6	C7	C8
84,5	85,9	82,7	90,1	93,3	92,8	89,2	95,8
C9	C10	C11	C12	C13	C14	C15	
93,3	89,2	86,4	88,3	89,3	83,5	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 deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3085 K	87,4	25,3	88,1	98,7	86,0	0,431	0,401	0,248	0,346	-0,0005



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Test Report

LM79-QUARTZ-3000K-CRI90-MEDIUM

TM30 details

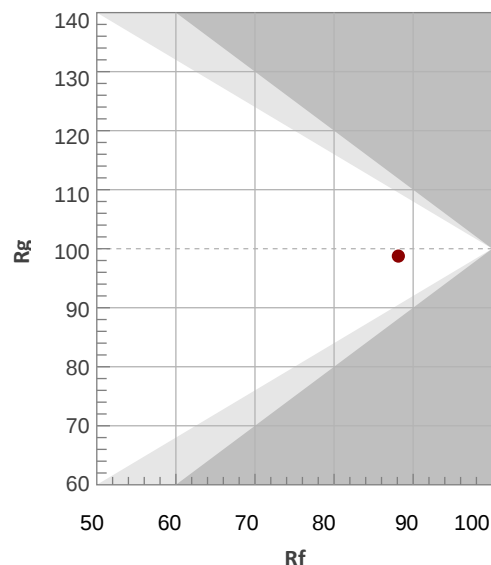
Rf 88,1

Fidelity index Rf

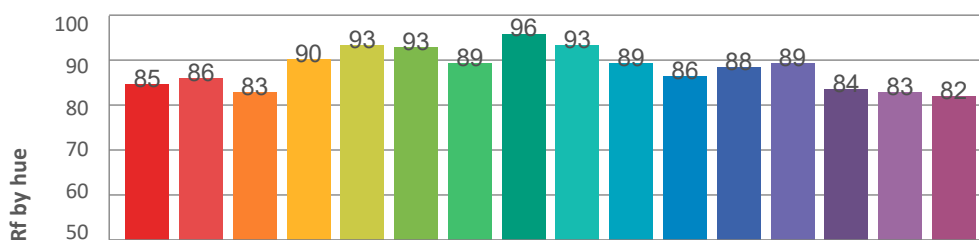
Rg 98,7

Gamut index Rg

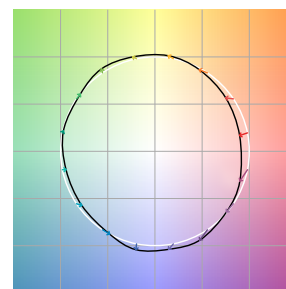
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	85	-9%	-1%
2	86	-6%	5%
3	83	-2%	9%
4	90	2%	6%
5	93	3%	4%
6	93	4%	-1%
7	89	-1%	-6%
8	96	-1%	-2%
9	93	-4%	1%
10	89	-4%	5%
11	86	0%	9%
12	88	6%	1%
13	89	5%	-6%
14	84	5%	-13%
15	83	-1%	-11%
16	82	-6%	-13%



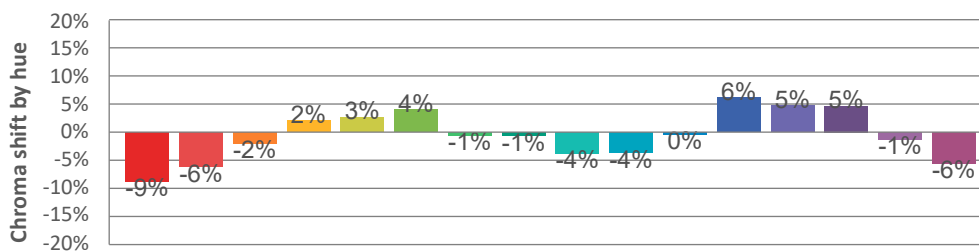
Hue binH



Color vector graphics



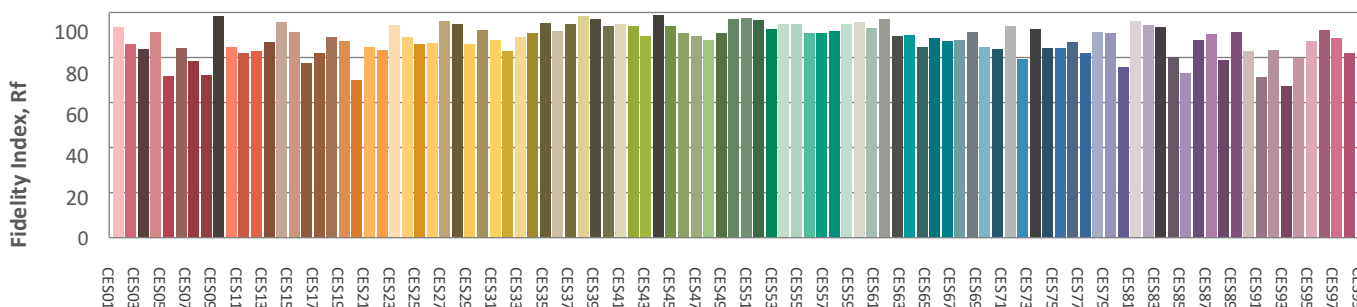
Hue bin



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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	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 7920lm total luminous flux										