

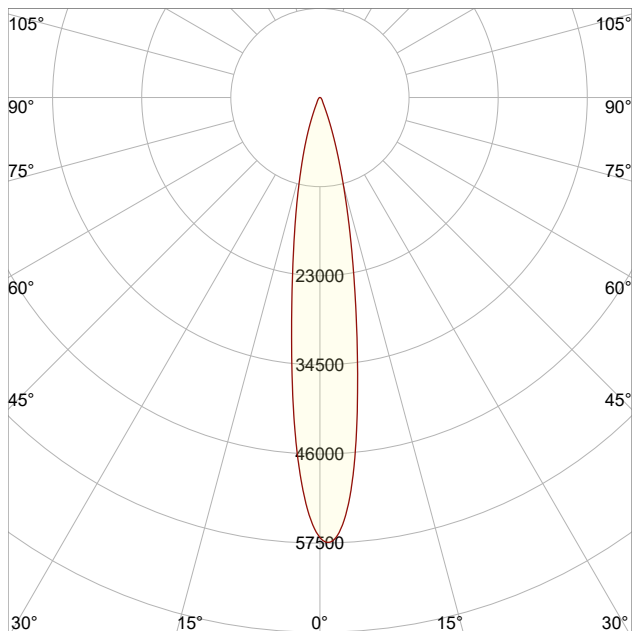
LM-79

Test Report

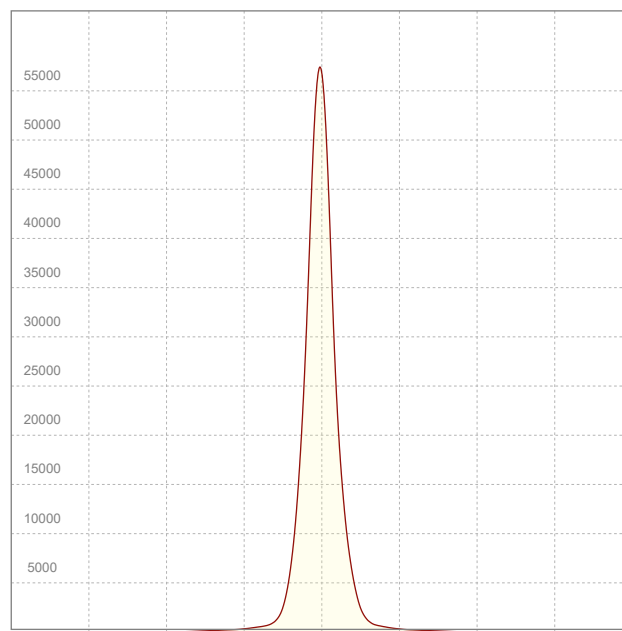
LM79-QUARTZ-4000K-CRI80-SPOT

General Discription

Item number	Q-BXX-4080-S
Date and time	5-1-2024 14:25:40
CCT (Kelvin)	4062 K
Beam angle	16,7°
Luminous flux	8257 lm
Efficiency	106 lm/watt
Weighted energy	77,7 kWh/1000h
Power factor	0,56
CRI (RA)	88,3
Fidelity index Rf	Rf 87,6
Gammut index Rg	Rg 99,9
Peak	57387 cd



Polar curve



Linear distribution diagram



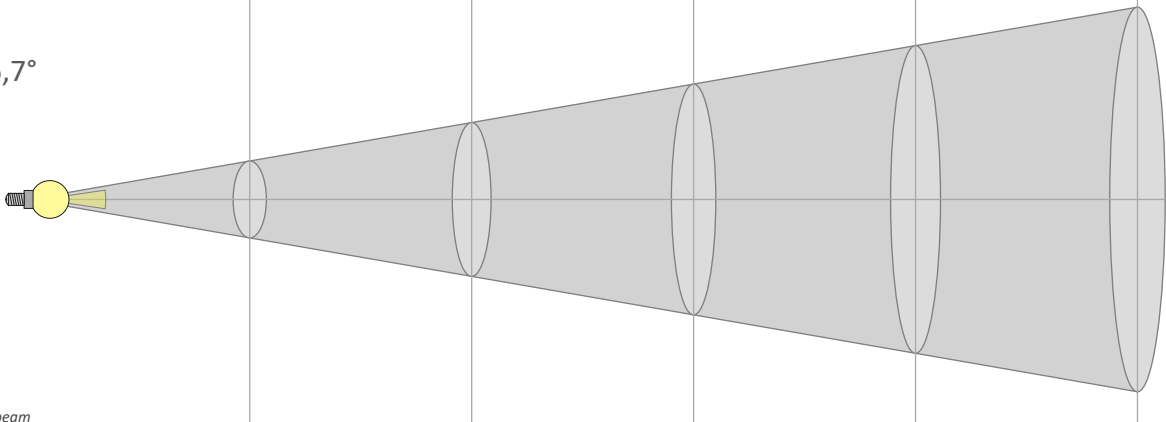
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Beam details				1m		2m		3m		4m		5m							
Lux*				56667 lx		14167 lx		6296 lx		3542 lx		2267 lx							
16,7° 																			
*measured at center of beam																			
Footcandles*				5264,5 fcd		1316,1 fcd		584,9 fcd		329,0 fcd		210,6 fcd							
Beam width (meter)				0,3 m		0,6 m		0,9 m		1,2 m		1,5 m							
Beam width (Feet)				1 ft		1,9 ft		2,9 ft		3,9 ft		4,8 ft							
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
56667lx	14167lx	6296lx	3542lx	2267lx	1574lx	1156lx	885lx	700lx	567lx	468lx	394lx	335lx	289lx	252lx	221lx	196lx	175lx	157lx	142lx
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
5264,5fcd	1316,1fcd	584,9fcd	329fcd	210,6fcd	146,2fcd	107,4fcd	82,3fcd	65fcd	52,6fcd	43,5fcd	36,6fcd	31,2fcd	26,9fcd	23,4fcd	20,6fcd	18,2fcd	16,2fcd	14,6fcd	13,2fcd
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°
56,7K	57,3K	56,8K	55,2K	52,5K	48,9K	44,5K	39,7K	34,9K	30,4K	26,3K	22,6K	19,4K	16,5K	13,9K	11,7K	9,7K	8,1K	6,6K	5,4K
100%	101%	100%	97%	93%	86%	78%	70%	62%	54%	46%	40%	34%	29%	25%	21%	17%	14%	12%	10%
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°
56,7K	57,3K	56,8K	55,2K	52,5K	48,9K	44,5K	39,7K	34,9K	30,4K	26,3K	22,6K	19,4K	16,5K	13,9K	11,7K	9,7K	8,1K	6,6K	5,4K
100%	101%	100%	97%	93%	86%	78%	70%	62%	54%	46%	40%	34%	29%	25%	21%	17%	14%	12%	10%
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°
56,7K	55,0K	52,2K	48,6K	44,4K	39,6K	34,7K	30,1K	26,0K	22,5K	19,4K	16,9K	14,6K	12,6K	10,8K	9,2K	7,9K	6,7K	5,7K	4,8K
100%	97%	92%	86%	78%	70%	61%	53%	46%	40%	34%	30%	26%	22%	19%	16%	14%	12%	10%	8%
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°
56,7K	55,0K	52,2K	48,6K	44,4K	39,6K	34,7K	30,1K	26,0K	22,5K	19,4K	16,9K	14,6K	12,6K	10,8K	9,2K	7,9K	6,7K	5,7K	4,8K
100%	97%	92%	86%	78%	70%	61%	53%	46%	40%	34%	30%	26%	22%	19%	16%	14%	12%	10%	8%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
16,7°				36,7°				50,9°				97,4%				93,8%			



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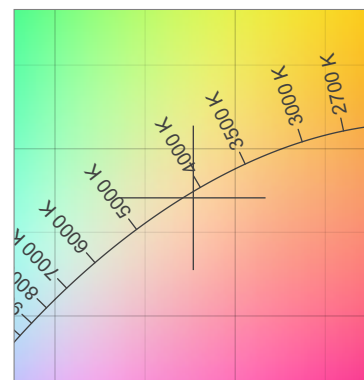
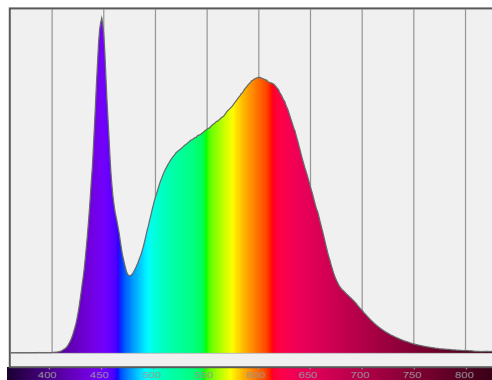
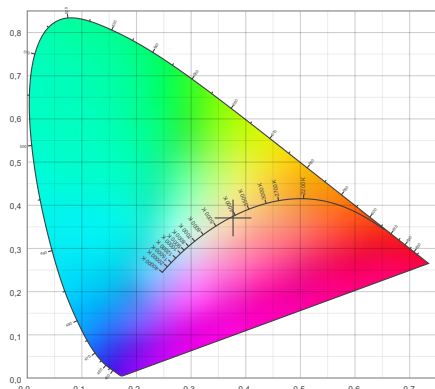
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Test Report

LM79-QUARTZ-4000K-CRI80-SPOT

Color details



CIE 1931

x: 0,377

4062 K

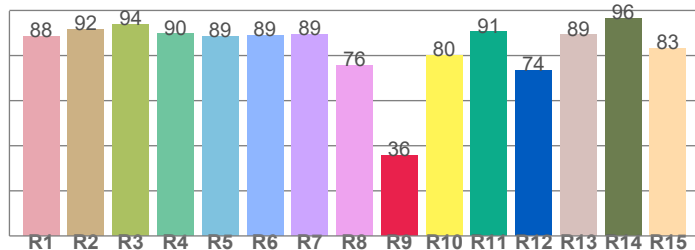
y: 0,371

Spectra

CIE 1931 ZOOM

$\Delta uv: -0,0018$

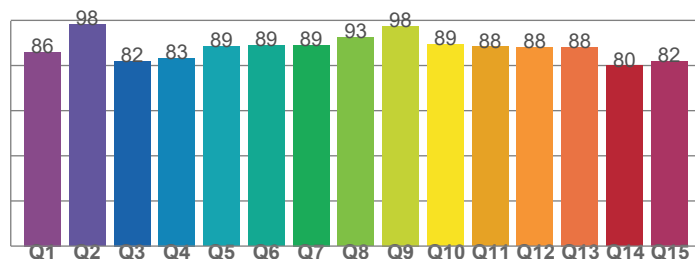
CRI: **88,3** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
88,5	91,7	93,9	89,6	88,6	88,9	89,4	75,6
R9	R10	R11	R12	R13	R14	R15	
35,7	80,2	90,6	73,6	89,3	96,4	83,2	

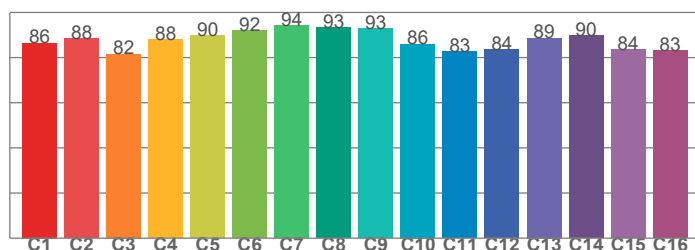
CQS: **87,1**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
86,0	98,3	82,0	83,4	88,5	89,0	89,1	92,5
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,5	89,5	88,3	87,9	88,2	79,9	82,0	

TM30: **87,6**



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

C1	C2	C3	C4	C5	C6	C7	C8
86,5	88,4	81,6	88,0	89,8	91,9	94,1	93,4
C9	C10	C11	C12	C13	C14	C15	
92,8	86,0	82,8	83,6	88,7	89,9	83,5	

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
4062 K	88,3	35,7	87,6	99,9	87,1	0,377	0,371	0,225	0,332	-0,0018



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Test Report

LM79-QUARTZ-4000K-CRI80-SPOT

TM30 details

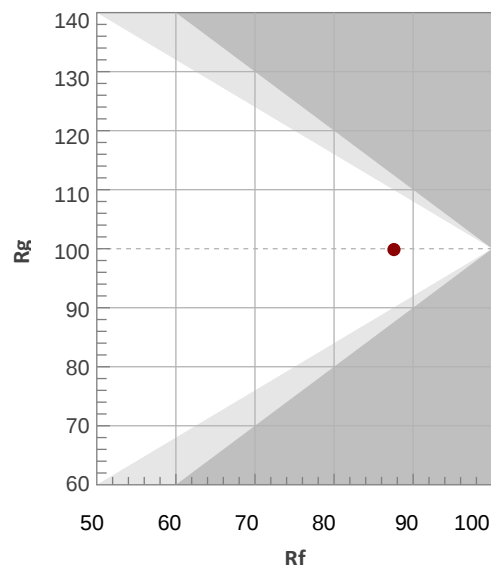
Rf 87,6

Fidelity index Rf

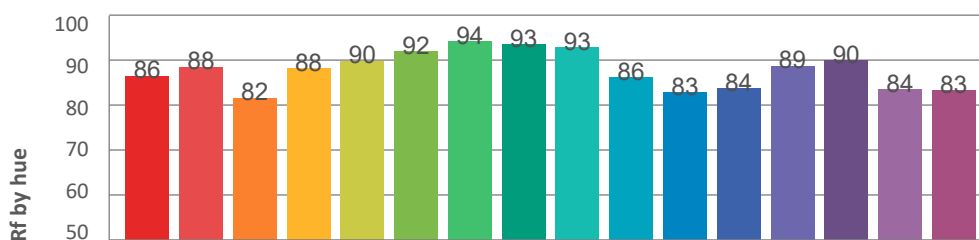
Rg 99,9

Gamut index Rg

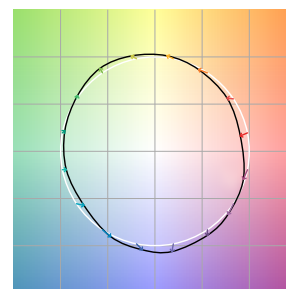
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	86	-8%	-2%
2	88	-5%	4%
3	82	-2%	10%
4	88	2%	7%
5	90	4%	5%
6	92	5%	0%
7	94	1%	-4%
8	93	-2%	-3%
9	93	-4%	1%
10	86	-6%	6%
11	83	1%	11%
12	84	5%	7%
13	89	8%	-3%
14	90	5%	-3%
15	84	1%	-12%
16	83	-2%	-11%



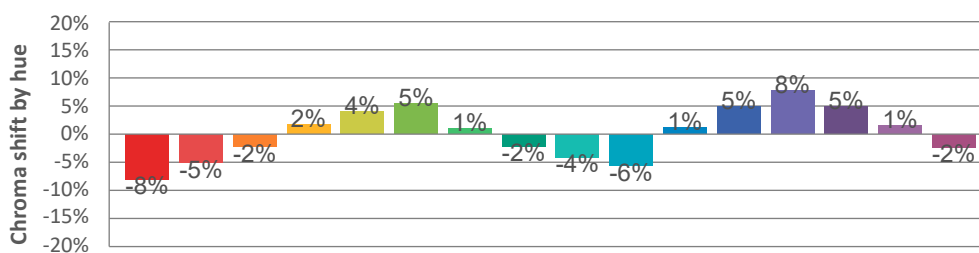
Hue binH



Color vector graphics



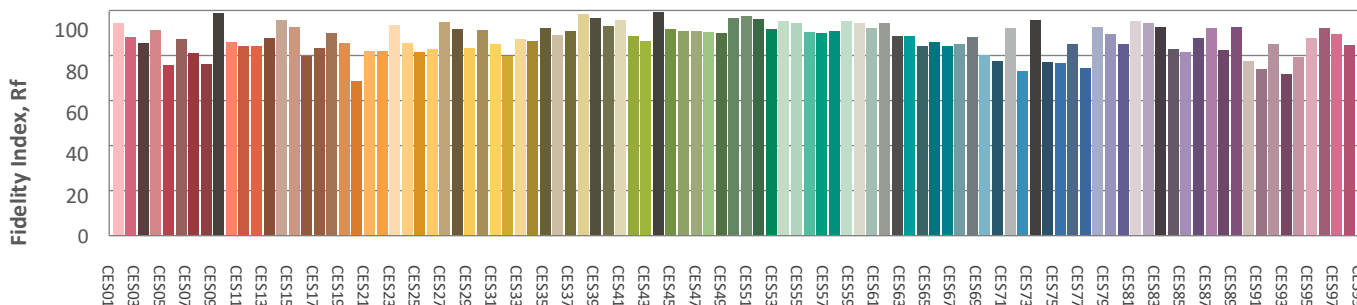
Hue bin



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
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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
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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 8257lm total luminous flux										



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