

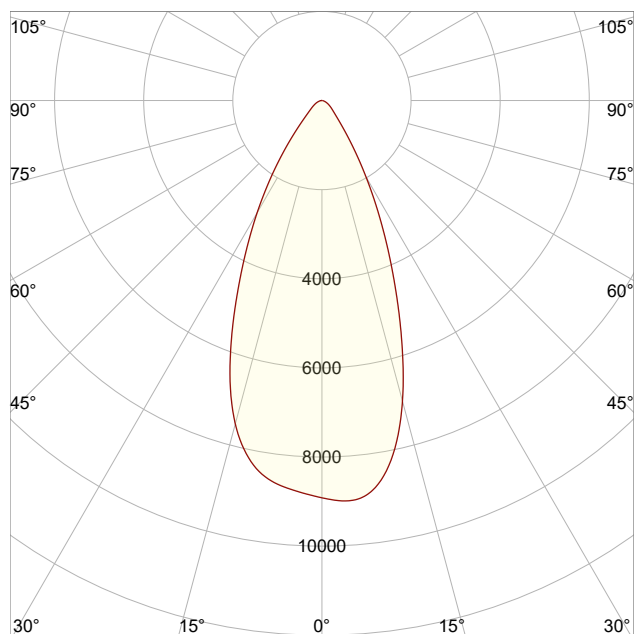
LM-79

Test Report

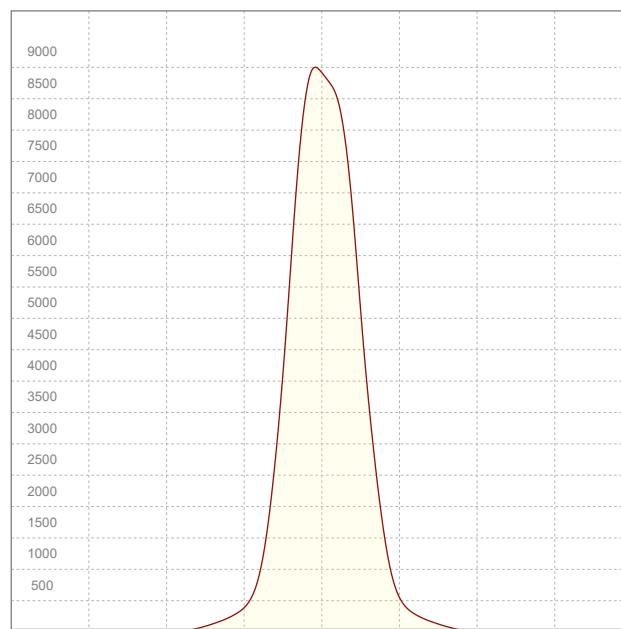
LM79-QUARTZ-2200K-CRI80-WIDE

General Discription

Item number	Q-BXX-2280-W
Date and time	5-1-2024 16:12:36
CCT (Kelvin)	2222 K
Beam angle	45,8°
Luminous flux	6269 lm
Efficiency	81 lm/watt
Weighted energy	77,1 kWh/1000h
Power factor	0,55
CRI (RA)	85,2
Fidelity index Rf	Rf 86,2
Gammut index Rg	Rg 99,7
Peak	9000 cd



Polar curve



Linear distribution diagram



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LM-79

Test Report

LM79-QUARTZ-2200K-CRI80-WIDE

Beam details	1m	2m	3m	4m	5m
Lux*	8915 lx	2229 lx	991 lx	557 lx	357 lx

45,8°

*measured at center of beam

Footcandles*	828,2 fcd	207,1 fcd	92,0 fcd	51,8 fcd	33,1 fcd
Beam width (meter)	0,8 m	1,7 m	2,5 m	3,4 m	4,2 m
Beam width (Feet)	2,8 ft	5,5 ft	8,3 ft	11,1 ft	13,9 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
8915lx	2229lx	991lx	557lx	357lx	248lx	182lx	139lx	110lx	89lx	74lx	62lx	53lx	45lx	40lx	35lx	31lx	28lx	25lx	22lx
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
828,2fcd	207,1fcd	92fcd	51,8fcd	33,1fcd	23fcd	16,9fcd	12,9fcd	10,2fcd	8,3fcd	6,8fcd	5,8fcd	4,9fcd	4,2fcd	3,7fcd	3,2fcd	2,9fcd	2,6fcd	2,3fcd	2,1fcd

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°
8915	8976	8999	8936	8742	8404	7927	7321	6611	5827	5043	4299	3624	3010	2462	1973	1557	1211	942	740
100%	101%	101%	100%	98%	94%	89%	82%	74%	65%	57%	48%	41%	34%	28%	22%	17%	14%	11%	8%

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°
8915	8976	8999	8936	8742	8404	7927	7321	6611	5827	5043	4299	3624	3010	2462	1973	1557	1211	942	740
100%	101%	101%	100%	98%	94%	89%	82%	74%	65%	57%	48%	41%	34%	28%	22%	17%	14%	11%	8%

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°
8915	8845	8773	8694	8580	8397	8116	7738	7249	6661	5991	5298	4619	3998	3427	2906	2417	1975	1580	1245
100%	99%	98%	98%	96%	94%	91%	87%	81%	75%	67%	59%	52%	45%	38%	33%	27%	22%	18%	14%

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°
8915	8845	8773	8694	8580	8397	8116	7738	7249	6661	5991	5298	4619	3998	3427	2906	2417	1975	1580	1245
100%	99%	98%	98%	96%	94%	91%	87%	81%	75%	67%	59%	52%	45%	38%	33%	27%	22%	18%	14%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
45,8°	77°	112,4°	96,8%	90,8%



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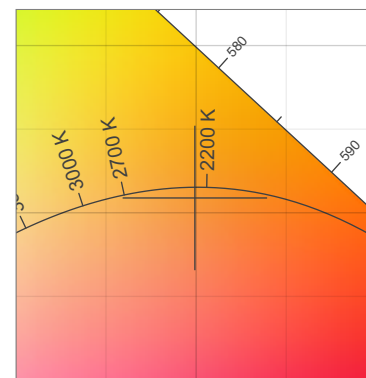
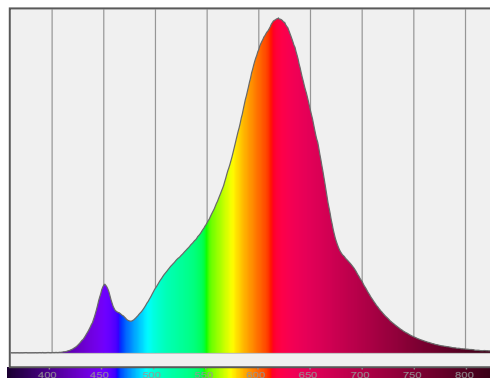
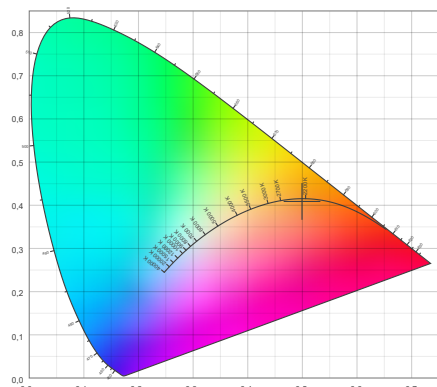
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LM-79

Test Report

LM79-QUARTZ-2200K-CRI80-WIDE

Color details



CIE 1931

x: 0,499



Spectra

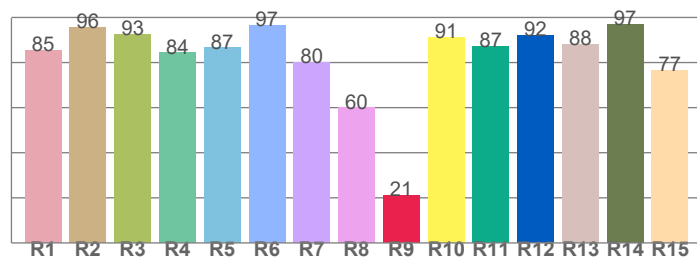
CIE 1931 ZOOM

2222 K

y: 0,409

Δuv : -0,0021

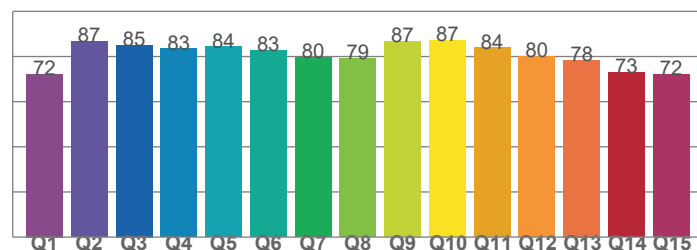
CRI: 85,2 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
85,4	95,7	92,7	84,3	86,6	96,6	80,1	59,9
R9	R10	R11	R12	R13	R14	R15	
21,2	91,2	87,1	92,2	88,2	97,0	76,6	

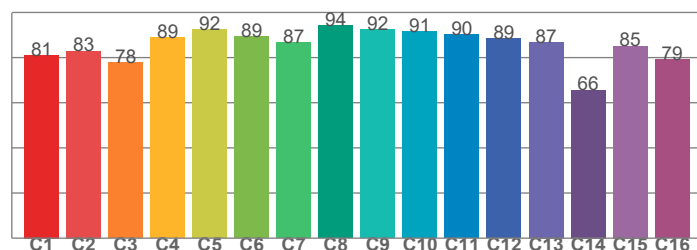
CQS: 79,9



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
72,2	86,8	85,1	83,4	84,3	82,7	79,6	79,1
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
86,7	87,1	83,9	80,0	78,5	72,9	72,0	

TM30: 86,2



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

C1	C2	C3	C4	C5	C6	C7	C8
81,1	83,0	77,8	88,9	92,3	89,4	86,6	94,1
C9	C10	C11	C12	C13	C14	C15	
92,5	91,4	90,1	88,6	86,8	65,7	85,2	

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
2222 K	85,2	21,2	86,2	99,7	79,9	0,499	0,409	0,289	0,355	-0,0021



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LM-79

Test Report

LM79-QUARTZ-2200K-CRI80-WIDE

TM30 details

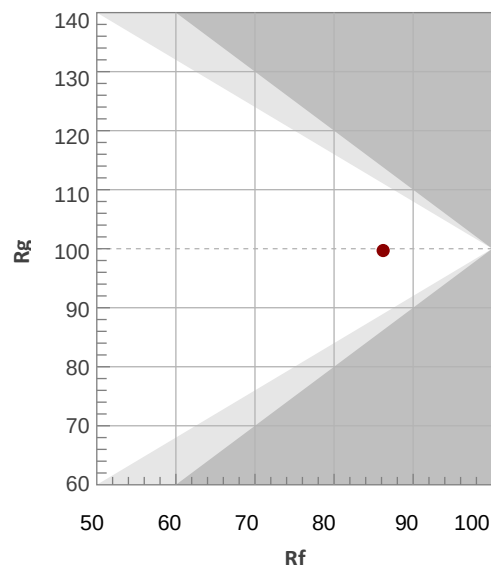
Rf 86,2

Fidelity index Rf

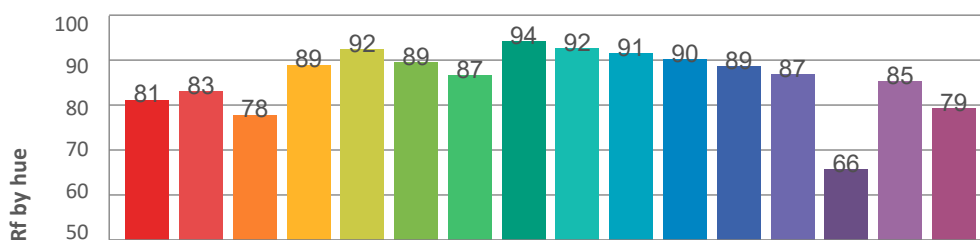
Rg 99,7

Gamut index Rg

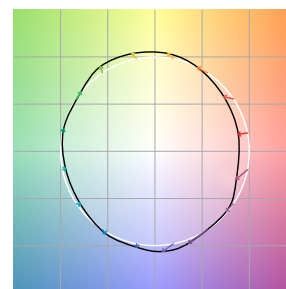
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-10%	0%
2	83	-7%	7%
3	78	-1%	11%
4	89	4%	7%
5	92	6%	4%
6	89	7%	-2%
7	87	0%	-9%
8	94	0%	-4%
9	92	-4%	-1%
10	91	-3%	3%
11	90	1%	5%
12	89	3%	1%
13	87	6%	-13%
14	66	1%	-24%
15	85	-2%	-11%
16	79	-10%	-12%



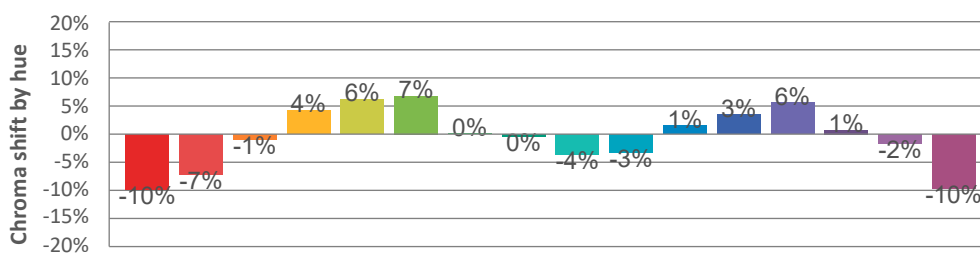
Hue binH



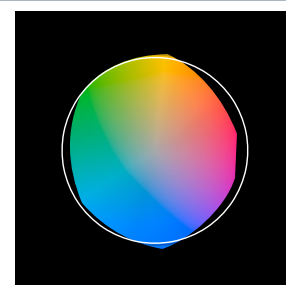
Color vector graphics



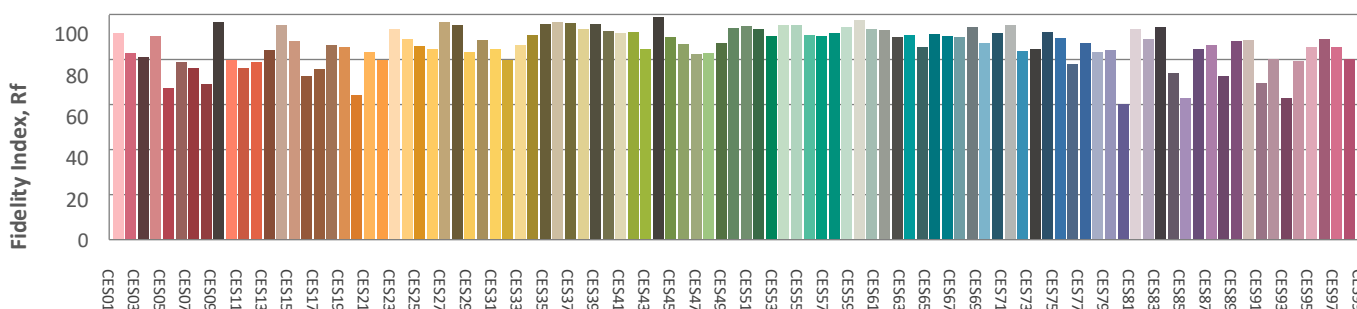
Hue bin



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
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	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 6269lm total luminous flux										



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