

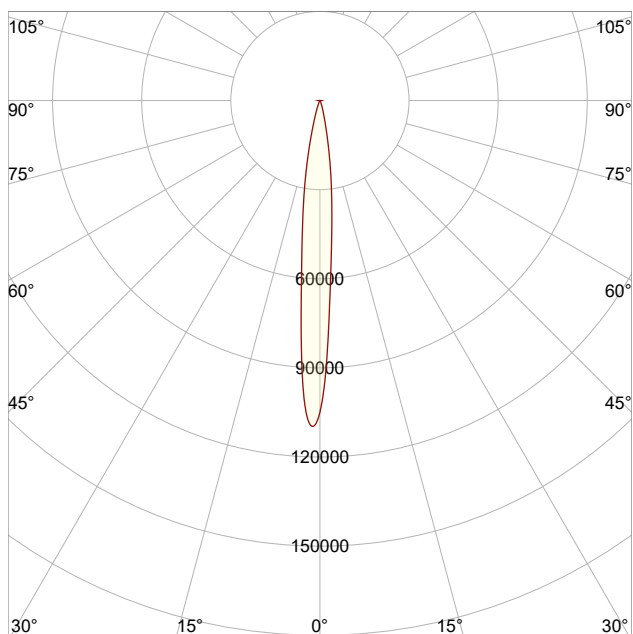
LM-79

Test Report

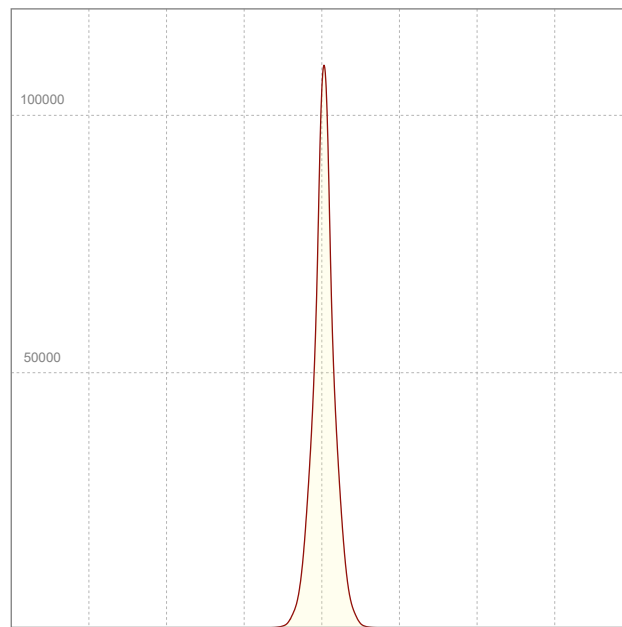
LM79-QUARTZ-2700K-CRI80-NARROW

General Discription

Item number	Q-BXX-2780-N
Date and time	5-1-2024 15:30:05
CCT (Kelvin)	2742 K
Beam angle	10,3°
Luminous flux	7832 lm
Efficiency	101 lm/watt
Weighted energy	77,2 kWh/1000h
Power factor	0,55
CRI (RA)	86,8
Fidelity index Rf	Rf 87,9
Gammut index Rg	Rg 98,3
Peak	109714 cd



Polar curve



Linear distribution diagram



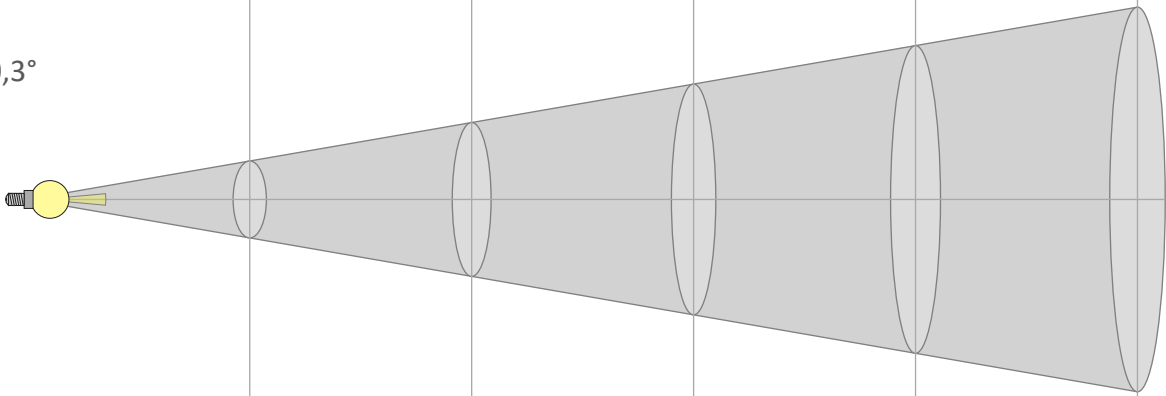
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Beam details					1m		2m		3m		4m		5m							
Lux*					104639 lx		26160 lx		11627 lx		6540 lx		4186 lx							
10,3° 																				
*measured at center of beam																				
Footcandles*					9721,3 fcd		2430,3 fcd		1080,1 fcd		607,6 fcd		388,9 fcd							
Beam width (meter)					0,2 m		0,4 m		0,5 m		0,7 m		0,9 m							
Beam width (Feet)					0,6 ft		1,2 ft		1,8 ft		2,4 ft		3 ft							
Beam intensities																				
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m	
104639 lx	26160 lx	11627 lx	6540 lx	4186 lx	2907 lx	2135 lx	1635 lx	1292 lx	1046 lx	865 lx	727 lx	619 lx	534 lx	465 lx	409 lx	362 lx	323 lx	290 lx	262 lx	
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	
9721,3 fcd	2430,3 fcd	1080,1 fcd	607,6 fcd	388,9 fcd	270 fcd	198,4 fcd	151,9 fcd	120 fcd	97,2 fcd	80,3 fcd	67,5 fcd	57,5 fcd	49,6 fcd	43,2 fcd	38 fcd	33,6 fcd	30 fcd	26,9 fcd	24,3 fcd	
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°	
105K	94K	79K	65K	54K	45K	38K	32K	27K	22K	17K	13K	10K	8K	6K	5K	4K	3K	2K	2K	
100%	90%	76%	62%	52%	43%	37%	31%	26%	21%	17%	13%	10%	8%	6%	5%	4%	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°	
105K	94K	79K	65K	54K	45K	38K	32K	27K	22K	17K	13K	10K	8K	6K	5K	4K	3K	2K	2K	
100%	90%	76%	62%	52%	43%	37%	31%	26%	21%	17%	13%	10%	8%	6%	5%	4%	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°	
105K	109K	108K	101K	88K	73K	59K	50K	42K	35K	30K	24K	20K	15K	12K	9K	7K	5K	4K	3K	
100%	104%	103%	96%	84%	69%	57%	47%	40%	34%	28%	23%	19%	15%	11%	9%	7%	5%	4%	3%	
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°	
105K	109K	108K	101K	88K	73K	59K	50K	42K	35K	30K	24K	20K	15K	12K	9K	7K	5K	4K	3K	
100%	104%	103%	96%	84%	69%	57%	47%	40%	34%	28%	23%	19%	15%	11%	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				
10,3°				26,1°				37,2°				97,8%				95,0%				



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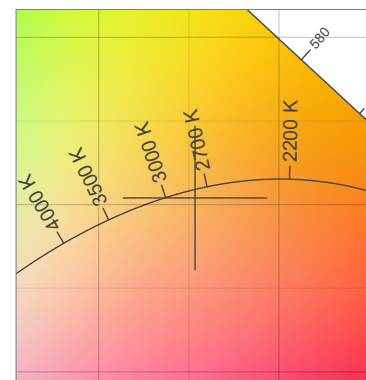
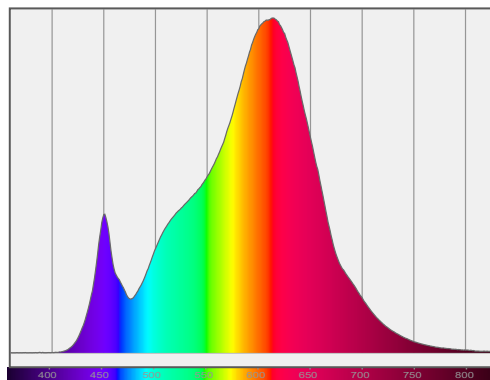
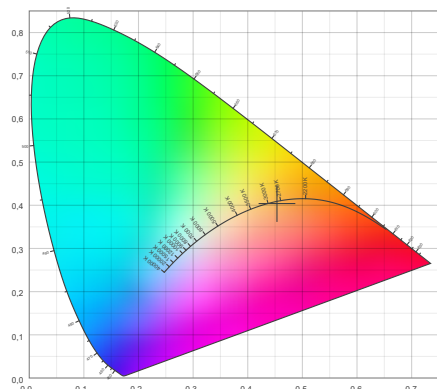
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Color details



CIE 1931

x: 0,453



Spectra

CIE 1931 ZOOM

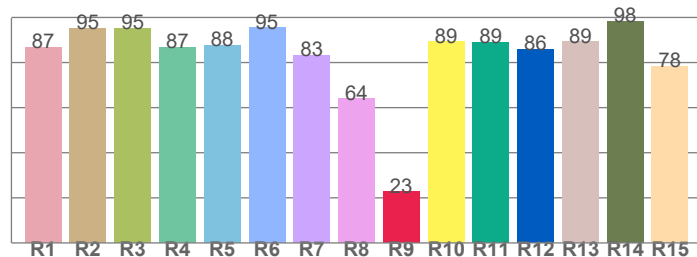
2742 K

y: 0,404

Δuv : -0,0019

CRI: 86,8 (R1-R8)

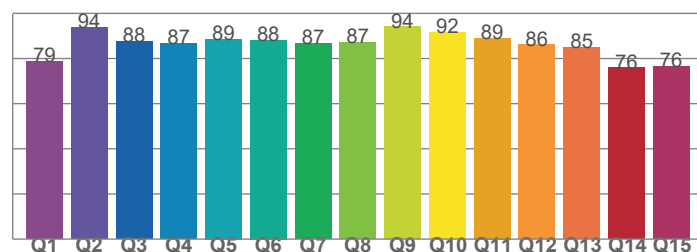
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
86,8	95,1	95,3	86,7	87,7	95,4	83,3	63,9
R9	R10	R11	R12	R13	R14	R15	
22,7	89,2	88,9	85,9	89,1	98,3	78,5	

CQS: 85,2

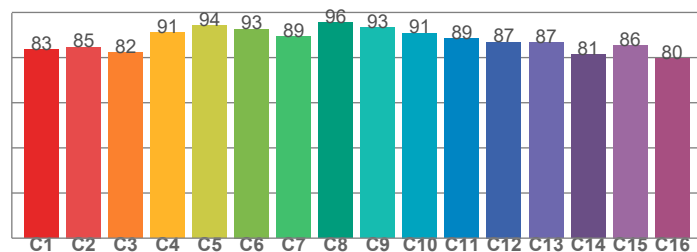
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
78,8	93,9	87,5	86,7	88,6	88,2	86,6	87,0
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,1	91,6	89,1	86,1	85,0	75,9	76,5	

TM30: 87,9

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



C1	C2	C3	C4	C5	C6	C7	C8
83,5	84,7	82,2	91,1	94,1	92,7	89,3	95,6
C9	C10	C11	C12	C13	C14	C15	
93,3	90,9	88,6	86,9	86,5	81,4	85,5	

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
2742 K	86,8	22,7	87,9	98,3	85,2	0,453	0,404	0,261	0,349	-0,0019



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TM30 details

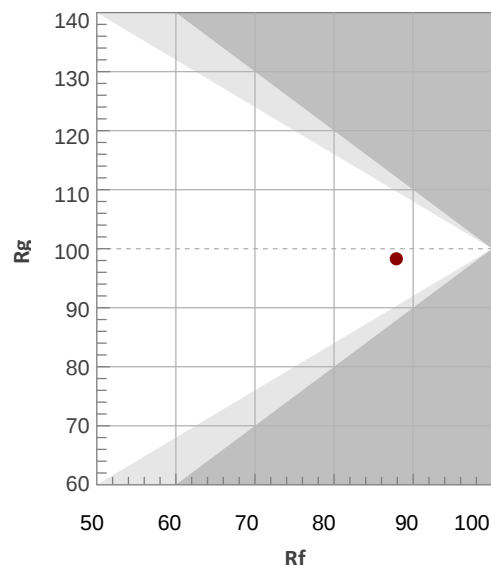
Rf 87,9

Fidelity index Rf

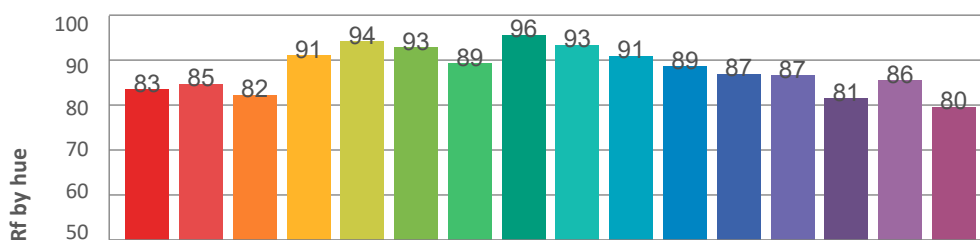
Rg 98,3

Gamut index Rg

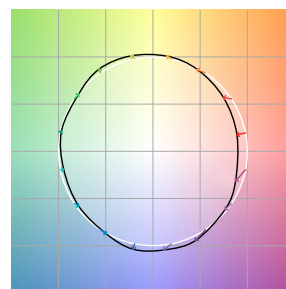
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	83	-9%	0%
2	85	-6%	6%
3	82	-2%	9%
4	91	2%	5%
5	94	4%	3%
6	93	4%	-1%
7	89	-1%	-7%
8	96	-1%	-2%
9	93	-4%	0%
10	91	-2%	5%
11	89	0%	8%
12	87	6%	0%
13	87	5%	-9%
14	81	4%	-15%
15	86	-2%	-9%
16	80	-8%	-14%



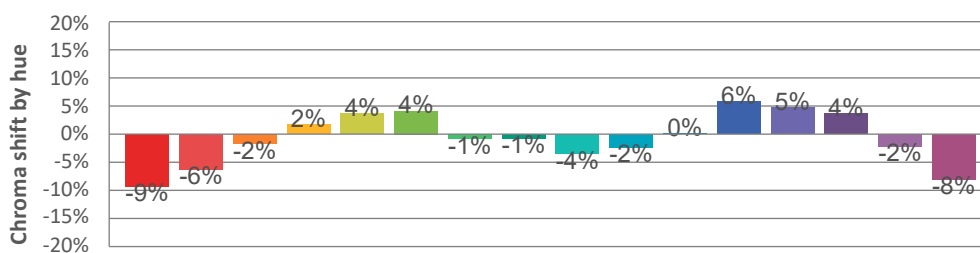
Hue binH



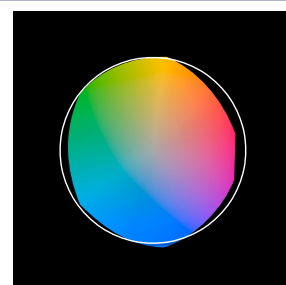
Color vector graphics



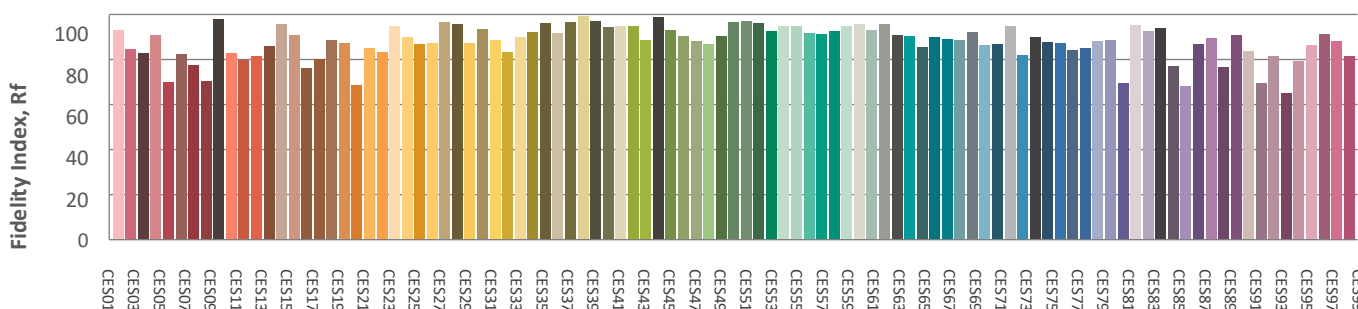
Hue bin



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
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 7832lm total luminous flux										



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