

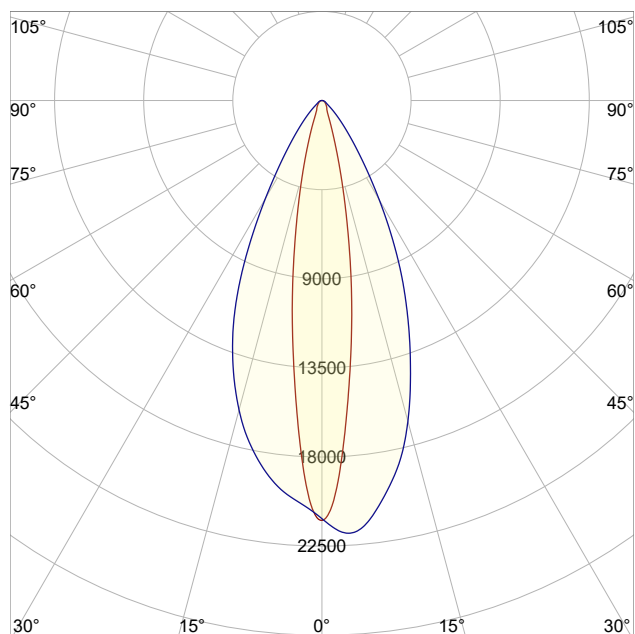
LM-79

Test Report

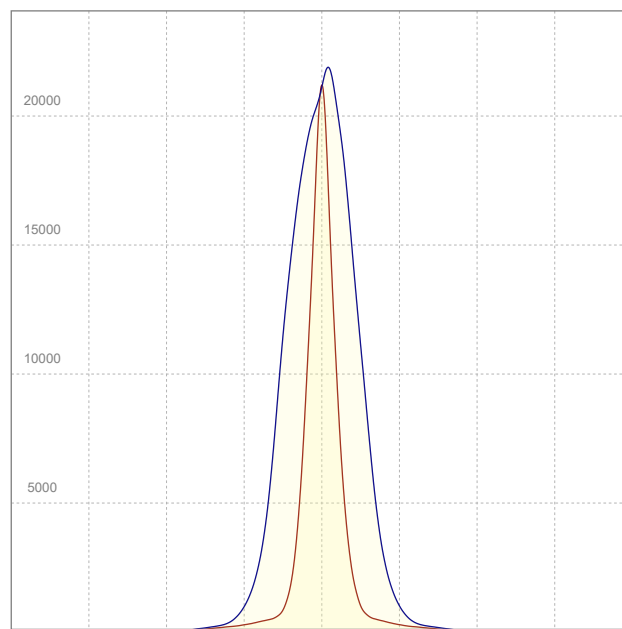
LM79-QUARTZ-1800K-CRI80-ELLIPTICAL

General Discription

Item number	Q-BXX-1880-E
Date and time	8-1-2024 10:47:17
CCT (Kelvin)	1863 K
Beam angle	45,9°
Luminous flux	8835 lm
Efficiency	115 lm/watt
Weighted energy	77,1 kWh/1000h
Power factor	0,53
CRI (RA)	73,9
Fidelity index Rf	Rf 79,4
Gammut index Rg	Rg 92,8
Peak	21887 cd



Polar curve



Linear distribution diagram



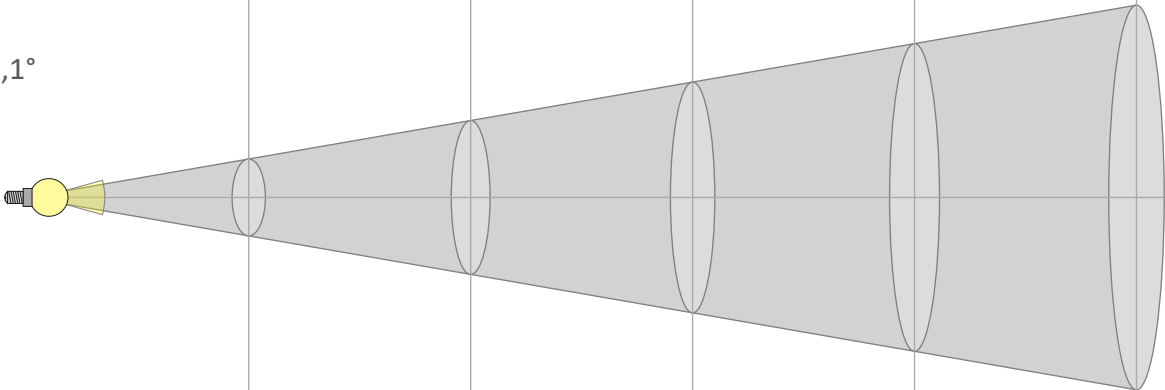
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Beam details				1m		2m		3m		4m		5m							
Lux*				21113 lx		5278 lx		2346 lx		1320 lx		845 lx							
31,1° 																			
*measured at center of beam																			
Footcandles*				1961,5 fcd		490,4 fcd		217,9 fcd		122,6 fcd		78,5 fcd							
Beam width (meter)				0,6 m		1,1 m		1,7 m		2,2 m		2,8 m							
Beam width (Feet)				1,8 ft		3,7 ft		5,5 ft		7,3 ft		9,1 ft							
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
21113lx	5278lx	2346lx	1320lx	845lx	586lx	431lx	330lx	261lx	211lx	174lx	147lx	125lx	108lx	94lx	82lx	73lx	65lx	58lx	53lx
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
1961,5fcd	490,4fcd	217,9fcd	122,6fcd	78,5fcd	54,5fcd	40fcd	30,6fcd	24,2fcd	19,6fcd	16,2fcd	13,6fcd	11,6fcd	10fcd	8,7fcd	7,7fcd	6,8fcd	6,1fcd	5,4fcd	4,9fcd
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°
21,1K	19,8K	16,7K	13,6K	10,8K	8,2K	5,9K	4,1K	2,8K	1,9K	1,3K	0,9K	0,7K	0,6K	0,5K	0,5K	0,5K	0,4K	0,4K	0,4K
100%	94%	79%	64%	51%	39%	28%	19%	13%	9%	6%	4%	3%	3%	3%	2%	2%	2%	2%	2%
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°
21,1K	21,7K	21,9K	21,5K	20,7K	19,7K	18,7K	17,5K	16,0K	14,5K	13,0K	11,5K	10,0K	8,6K	7,1K	5,8K	4,6K	3,6K	2,9K	2,3K
100%	103%	104%	102%	98%	93%	89%	83%	76%	69%	61%	54%	48%	41%	34%	27%	22%	17%	14%	11%
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°
21,1K	19,8K	16,8K	13,6K	10,8K	8,2K	6,1K	4,4K	3,1K	2,2K	1,6K	1,1K	0,8K	0,7K	0,6K	0,5K	0,5K	0,5K	0,4K	0,4K
100%	94%	79%	64%	51%	39%	29%	21%	15%	10%	7%	5%	4%	3%	3%	2%	2%	2%	2%	2%
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°
21,1K	20,6K	20,2K	19,7K	19,2K	18,5K	17,6K	16,7K	15,6K	14,4K	13,2K	11,8K	10,3K	8,7K	7,1K	5,7K	4,5K	3,5K	2,8K	2,2K
100%	98%	96%	94%	91%	87%	84%	79%	74%	68%	62%	56%	49%	41%	34%	27%	21%	17%	13%	10%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
31,1°				55,9°				79°				97,0%				91,9%			



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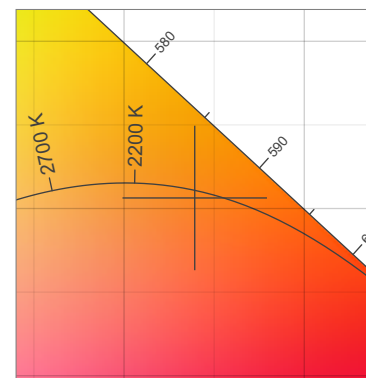
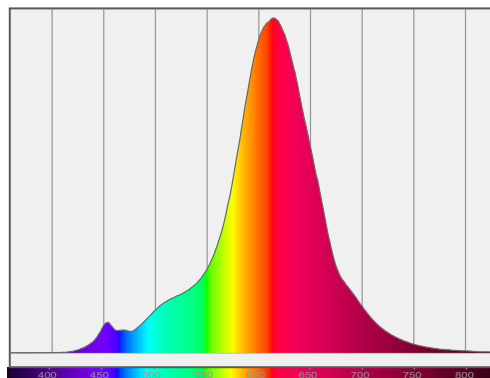
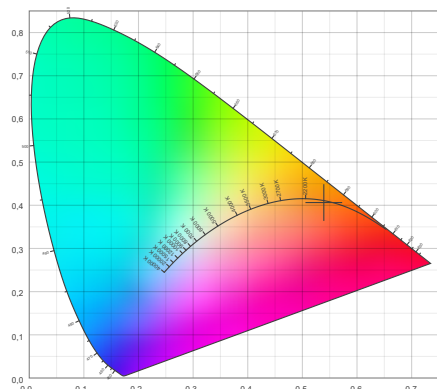
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Color details



CIE 1931

x: 0,539

1863 K

y: 0,406

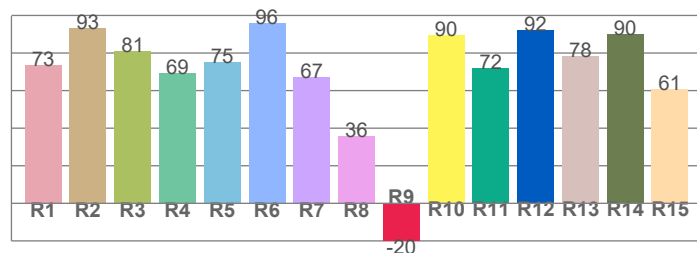


Spectra

CIE 1931 ZOOM

Δuv : -0,0013

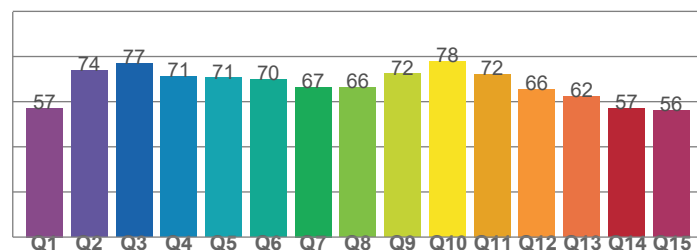
CRI: 73,9 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
73,4	93,2	81,0	69,2	75,4	96,1	67,3	35,6
R9	R10	R11	R12	R13	R14	R15	
-20,0	89,8	71,9	92,4	78,2	90,0	61,0	

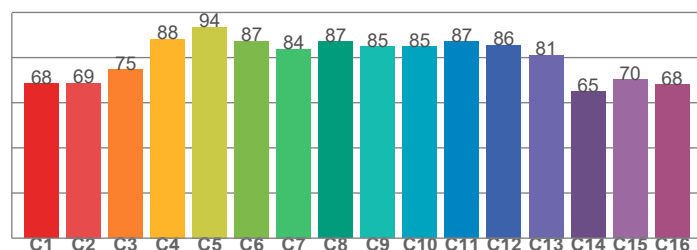
CQS: 66,2



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
57,2	74,0	77,1	71,1	70,5	69,9	66,5	66,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
72,3	77,8	72,2	65,6	62,3	56,9	56,2	

TM30: 79,4



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

C1	C2	C3	C4	C5	C6	C7	C8
68,4	68,8	74,7	88,2	93,6	87,4	83,8	87,2
C9	C10	C11	C12	C13	C14	C15	
84,9	84,9	87,1	85,6	81,1	65,0	70,3	

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
1863 K	73,9	-20,0	79,4	92,8	66,2	0,539	0,406	0,317	0,359	-0,0013



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Test Report

LM79-QUARTZ-1800K-CRI80-ELLIPTICAL

TM30 details

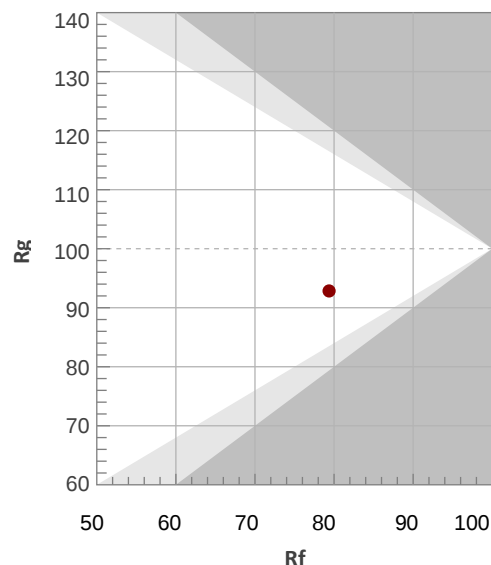
Rf 79,4

Fidelity index Rf

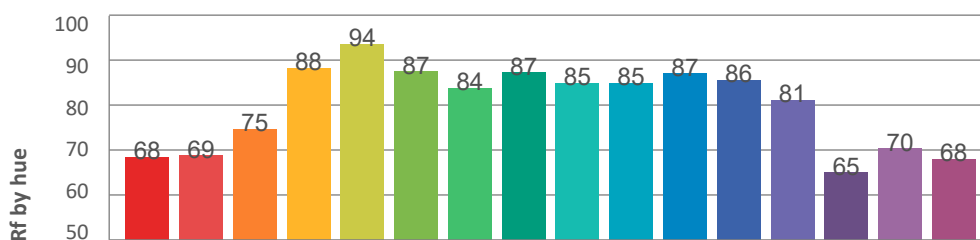
Rg 92,8

Gamut index Rg

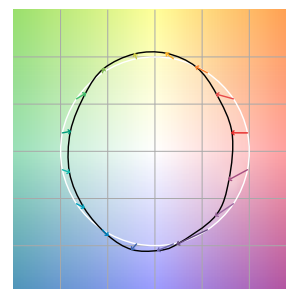
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	68	-16%	3%
2	69	-12%	14%
3	75	-1%	14%
4	88	4%	9%
5	94	5%	1%
6	87	3%	-4%
7	84	-5%	-10%
8	87	-8%	-3%
9	85	-7%	4%
10	85	-4%	8%
11	87	2%	8%
12	86	7%	-4%
13	81	4%	-18%
14	65	-5%	-35%
15	70	-9%	-21%
16	68	-17%	-14%



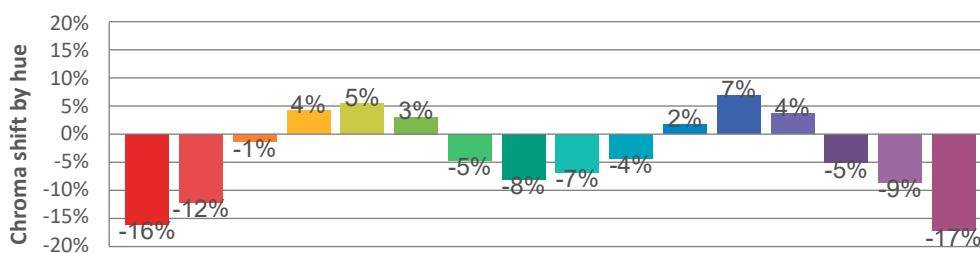
Hue binH



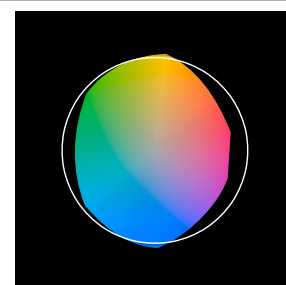
Color vector graphics



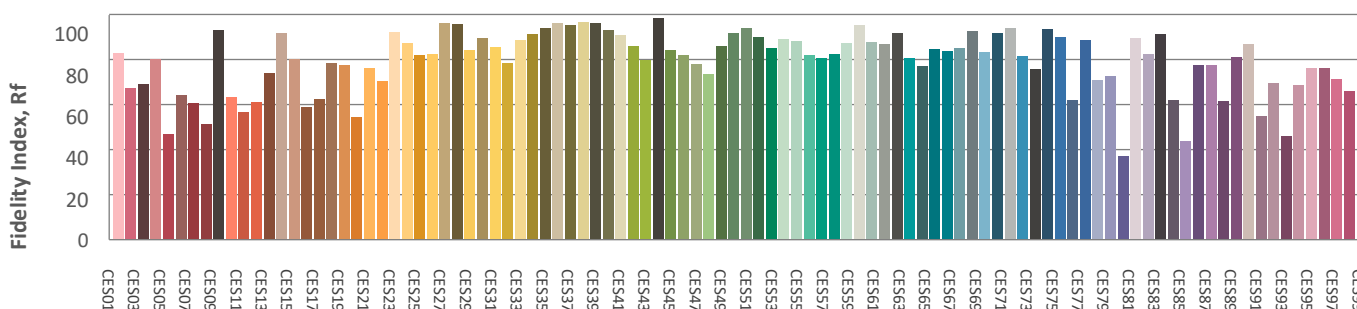
Hue bin



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
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 8835lm total luminous flux										