

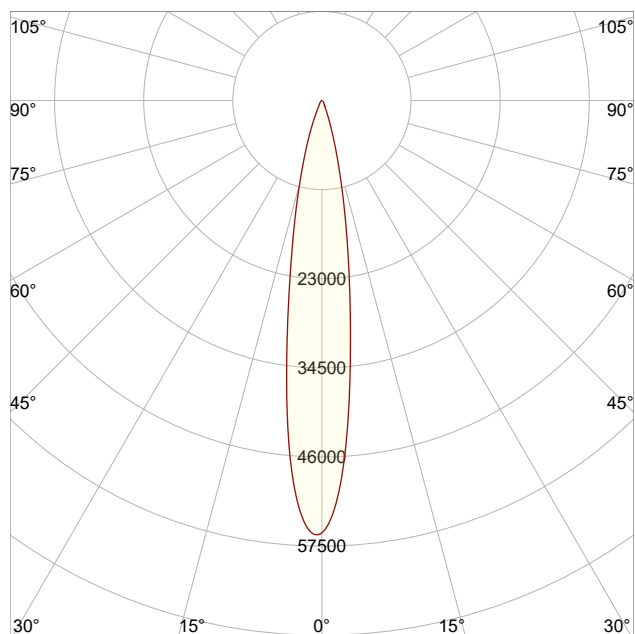
LM-79

Test Report

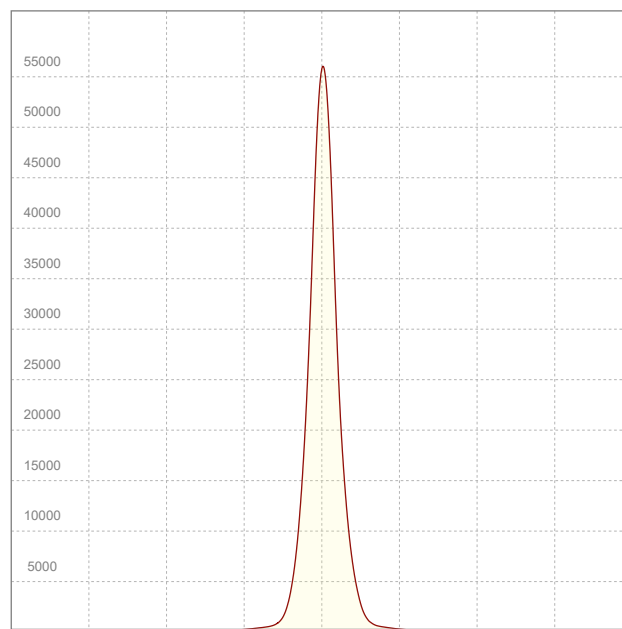
LM79-QUARTZ-2700K-CRI80-SPOT

General Discription

Item number	Q-BXX-2780-S
Date and time	5-1-2024 15:33:37
CCT (Kelvin)	2729 K
Beam angle	16,5°
Luminous flux	7605 lm
Efficiency	98 lm/watt
Weighted energy	77,2 kWh/1000h
Power factor	0,56
CRI (RA)	87,1
Fidelity index Rf	Rf 88,0
Gammut index Rg	Rg 98,5
Peak	55935 cd



Polar curve



Linear distribution diagram



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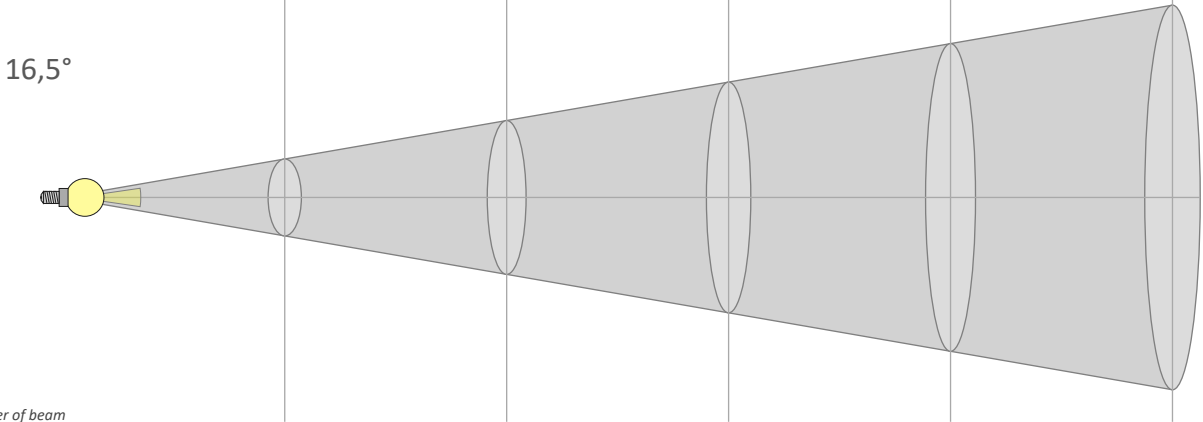
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Beam details	1m	2m	3m	4m	5m
Lux*	55653 lx	13913 lx	6184 lx	3478 lx	2226 lx



16,5°

*measured at center of beam

Footcandles*	5170,3 fcd	1292,6 fcd	574,5 fcd	323,1 fcd	206,8 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	3,8 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
55653lx	13913lx	6184lx	3478lx	2226lx	1546lx	1136lx	870lx	687lx	557lx	460lx	386lx	329lx	284lx	247lx	217lx	193lx	172lx	154lx	139lx
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
5170,3fcd	1292,6fcd	574,5fcd	323,1fcd	206,8fcd	143,6fcd	105,5fcd	80,8fcd	63,8fcd	51,7fcd	42,7fcd	35,9fcd	30,6fcd	26,4fcd	23fcd	20,2fcd	17,9fcd	16fcd	14,3fcd	12,9fcd

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°
55,7K	54,3K	51,9K	48,6K	44,4K	39,7K	34,9K	30,2K	26,0K	22,3K	19,0K	16,1K	13,5K	11,2K	9,3K	7,6K	6,2K	5,0K	4,1K	3,2K
100%	98%	93%	87%	80%	71%	63%	54%	47%	40%	34%	29%	24%	20%	17%	14%	11%	9%	7%	6%

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°
55,7K	54,3K	51,9K	48,6K	44,4K	39,7K	34,9K	30,2K	26,0K	22,3K	19,0K	16,1K	13,5K	11,2K	9,3K	7,6K	6,2K	5,0K	4,1K	3,2K
100%	98%	93%	87%	80%	71%	63%	54%	47%	40%	34%	29%	24%	20%	17%	14%	11%	9%	7%	6%

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°
55,7K	55,9K	55,0K	53,1K	50,2K	46,5K	42,1K	37,3K	32,5K	28,0K	24,0K	20,6K	17,8K	15,3K	13,0K	11,1K	9,4K	7,9K	6,7K	5,6K
100%	100%	99%	95%	90%	84%	76%	67%	58%	50%	43%	37%	32%	27%	23%	20%	17%	14%	12%	10%

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°
55,7K	55,9K	55,0K	53,1K	50,2K	46,5K	42,1K	37,3K	32,5K	28,0K	24,0K	20,6K	17,8K	15,3K	13,0K	11,1K	9,4K	7,9K	6,7K	5,6K
100%	100%	99%	95%	90%	84%	76%	67%	58%	50%	43%	37%	32%	27%	23%	20%	17%	14%	12%	10%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
16,5°	35,5°	48,8°	97,5%	94,2%



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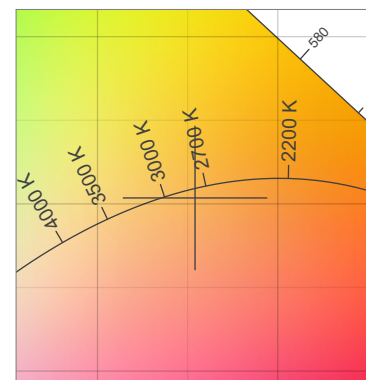
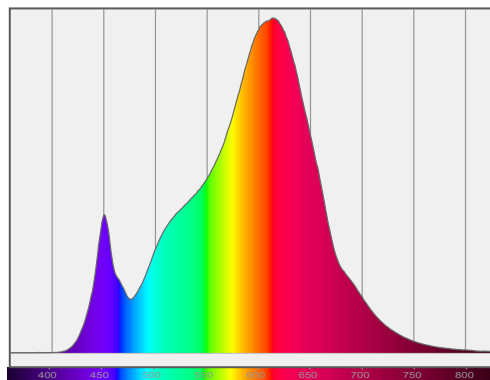
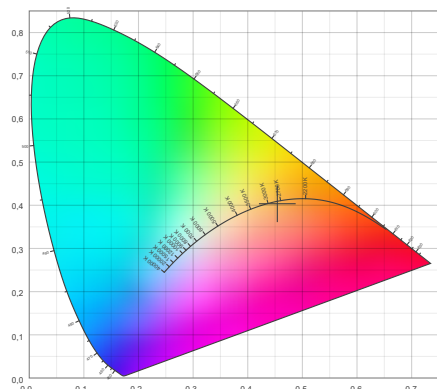
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Color details



CIE 1931

x: 0,454



Spectra

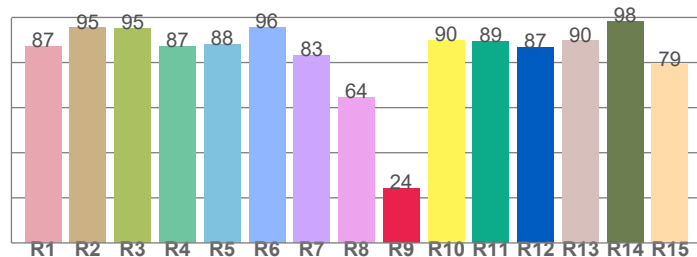
CIE 1931 ZOOM

2729 K

y: 0,404

Δuv : -0,0021

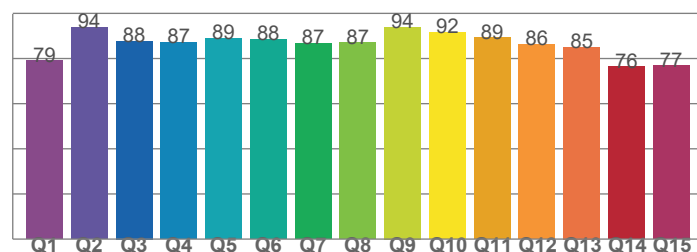
CRI: 87,1 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
87,3	95,4	95,2	87,2	88,3	95,6	83,3	64,4
R9	R10	R11	R12	R13	R14	R15	
24,2	89,9	89,5	86,8	89,6	98,2	79,0	

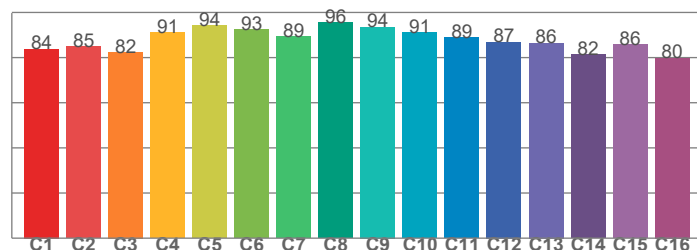
CQS: 85,4



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
78,9	93,8	87,7	87,1	89,0	88,5	86,7	87,0
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
93,9	91,7	89,2	86,2	85,1	76,3	76,8	

TM30: 88,0



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

C1	C2	C3	C4	C5	C6	C7	C8
83,8	85,0	82,4	91,1	94,1	92,6	89,3	95,6
C9	C10	C11	C12	C13	C14	C15	
93,6	91,3	88,9	86,9	86,5	81,5	85,7	

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
2729 K	87,1	24,2	88,0	98,5	85,4	0,454	0,404	0,262	0,349	-0,0021



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TM30 details

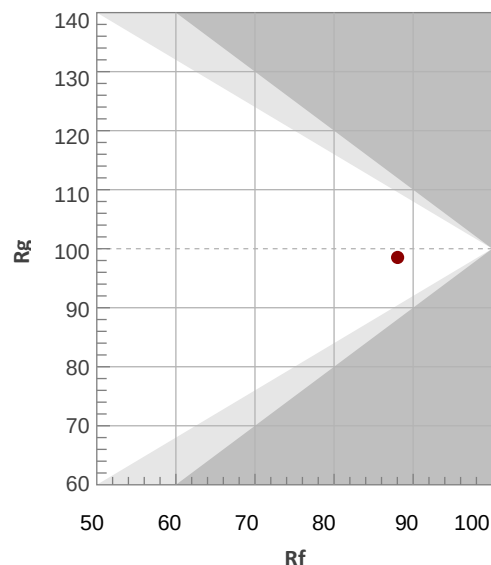
Rf 88,0

Fidelity index Rf

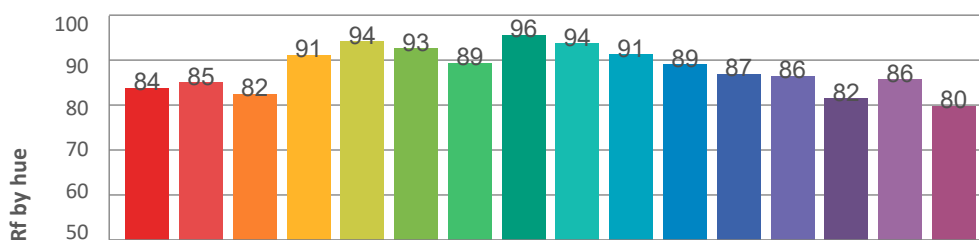
Rg 98,5

Gamut index Rg

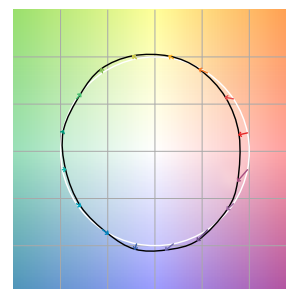
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	84	-9%	0%
2	85	-6%	6%
3	82	-2%	9%
4	91	2%	5%
5	94	4%	3%
6	93	4%	-1%
7	89	-1%	-7%
8	96	-1%	-2%
9	94	-3%	0%
10	91	-2%	5%
11	89	0%	7%
12	87	6%	-1%
13	86	5%	-9%
14	82	4%	-15%
15	86	-2%	-9%
16	80	-8%	-14%



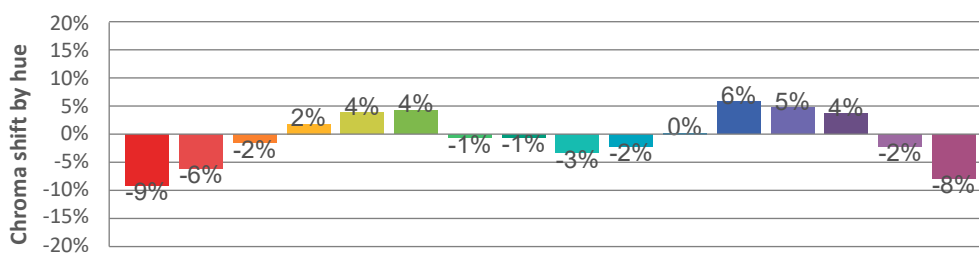
Hue binH



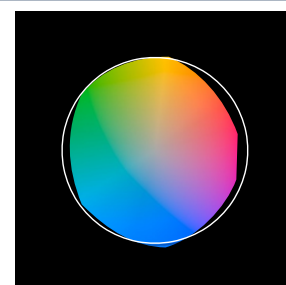
Color vector graphics



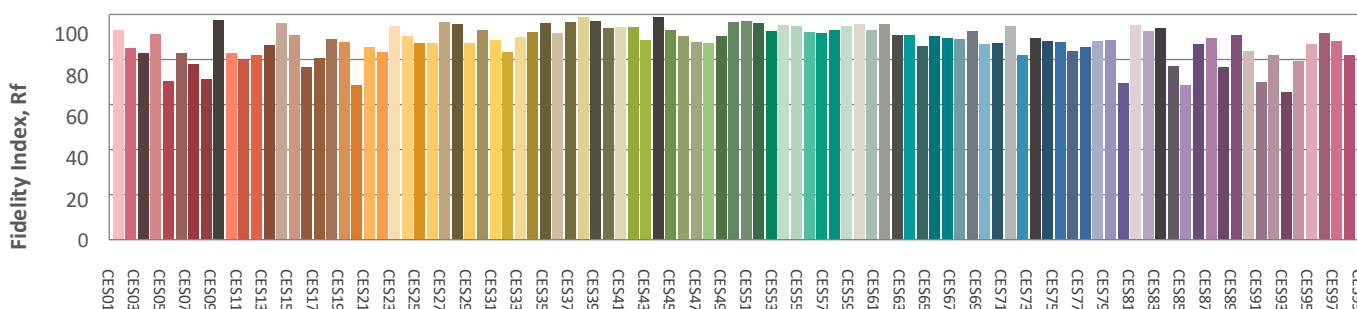
Hue bin



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 7605lm total luminous flux										



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