

# LM-79

## Test Report

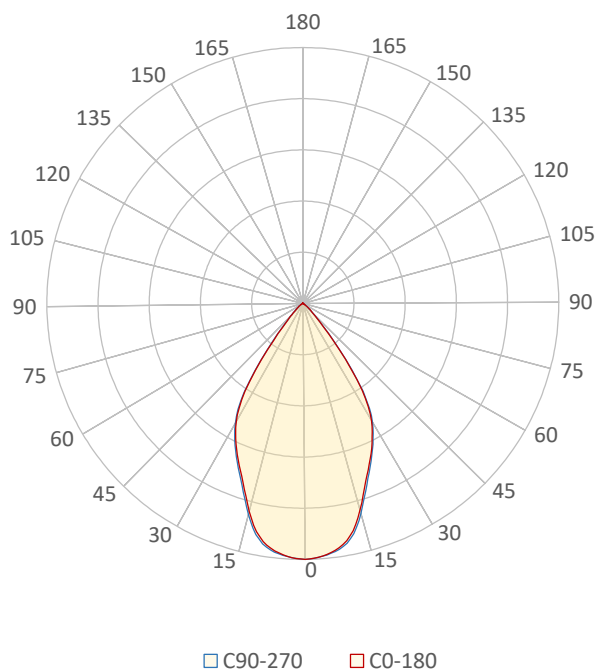
# LM79-RUBY-8-4000K-CRI90-FLOOD

### General Description

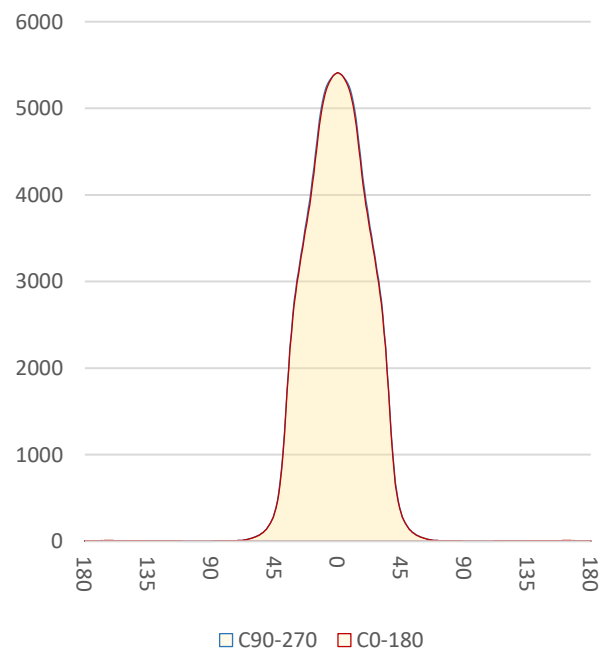
Item number	RU-38-X-X-03-3-X
Date and time	10-6-2020 14:43:56
CCT (Kelvin)	3998 K
Beam angle	63,2°
Luminous flux	4936 lm
Efficiency	88 lm/watt
Weighted energy	56,1 kWh/1000h
Power factor	0,97
CRI (RA)	92,3
Fidelity index Rf	Rf 90,1
Gammut index Rg	Rg 97,7
Peak	5415 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	5413 lx	1353 lx	601 lx	338 lx	217 lx																			
*measured at center of beam																								
Footcandles*	502,9 fcd	125,7 fcd	55,9 fcd	31,4 fcd	20,1 fcd																			
Beam width (meter)	1,2 m	2,4 m	3,7 m	4,9 m	6,1 m																			
Beam width (Feet)	4 ft	8 ft	12 ft	16 ft	20,1 ft																			
<b>Beam intensities</b>																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
5413lx	1353lx	601lx	338lx	217lx	150lx	110lx	85lx	67lx	54lx	45lx	38lx	32lx	28lx	24lx	21lx	19lx	17lx	15lx	14lx					
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					
502,9fcd	125,7fcd	55,9fcd	31,4fcd	20,1fcd	14fcd	10,3fcd	7,9fcd	6,2fcd	5fcd	4,2fcd	3,5fcd	3fcd	2,6fcd	2,2fcd	2fcd	1,7fcd	1,6fcd	1,4fcd	1,3fcd					
<b>Intensities in 0° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
5413	5402	5362	5306	5230	5109	4928	4685	4394	4109	3877	3679	3490	3287	3090	2873	2594	2223	1745	1195					
100%	100%	99%	98%	97%	94%	91%	87%	81%	76%	72%	68%	64%	61%	57%	53%	48%	41%	32%	22%					
<b>Intensities in 90° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
5413	5395	5364	5321	5268	5164	4990	4753	4470	4176	3941	3736	3533	3330	3129	2922	2648	2254	1768	1251					
100%	100%	99%	98%	97%	95%	92%	88%	83%	77%	73%	69%	65%	62%	58%	54%	49%	42%	33%	23%					
<b>Intensities in 180° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
5413	5402	5362	5306	5230	5109	4928	4685	4394	4109	3877	3679	3490	3287	3090	2873	2594	2223	1745	1195					
100%	100%	99%	98%	97%	94%	91%	87%	81%	76%	72%	68%	64%	61%	57%	53%	48%	41%	32%	22%					
<b>Intensities in 270° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
5413	5395	5364	5321	5268	5164	4990	4753	4470	4176	3941	3736	3533	3330	3129	2922	2648	2254	1768	1251					
100%	100%	99%	98%	97%	95%	92%	88%	83%	77%	73%	69%	65%	62%	58%	54%	49%	42%	33%	23%					
<b>Beam angle 50%</b>					<b>Field angle 10%</b>					<b>Cutoff angle 2,5%</b>					<b>Intensity ratio in 120° cone</b>					<b>Intensity ratio in 90° cone</b>				
62,9°					84°					102,1°					99,0%					95,6%				



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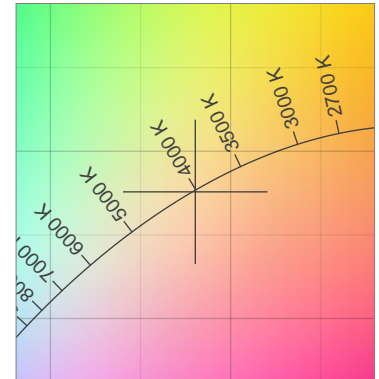
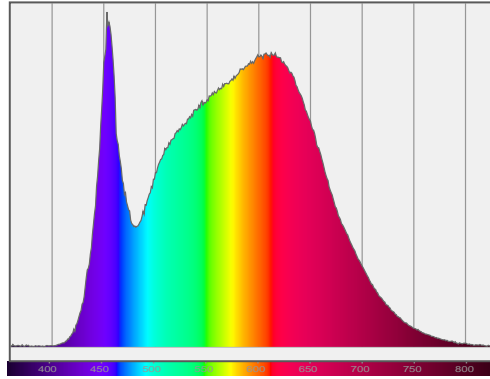
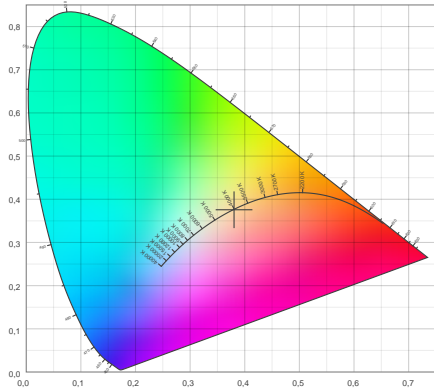
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### LM79-RUBY-8-4000K-CRI90-FLOOD

#### Color details



CIE 1931

x: 0,380



Spectra

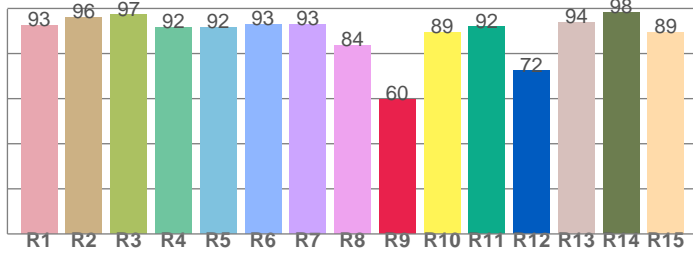
CIE 1931 ZOOM

3998 K

y: 0,376

$\Delta uv: -0,0005$

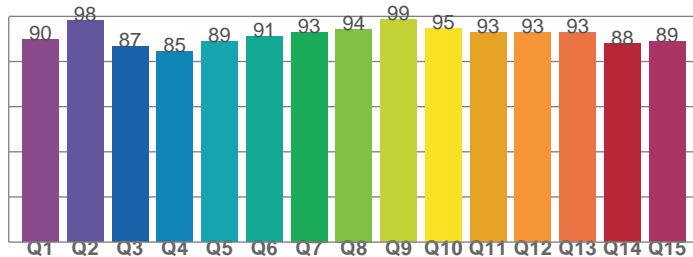
CRI: 92,3 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
92,5	96,1	97,2	91,7	91,6	93,0	92,9	83,6
R9	R10	R11	R12	R13	R14	R15	
59,6	89,3	91,8	72,3	93,8	98,3	89,4	

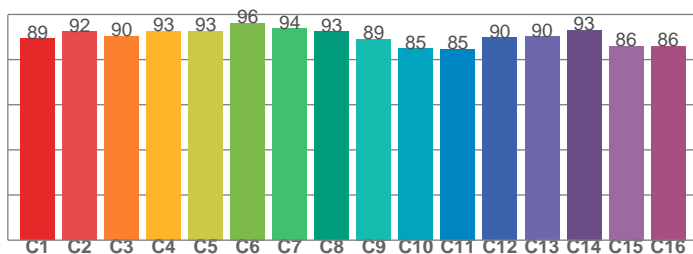
CQS: 90,8



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
89,9	98,2	86,7	84,6	88,8	91,2	93,1	94,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
98,8	94,7	93,0	92,7	92,7	87,8	88,8	

TM30: 90,1



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

C1	C2	C3	C4	C5	C6	C7	C8
89,3	92,3	90,4	92,6	92,6	96,3	93,9	92,5
C9	C10	C11	C12	C13	C14	C15	
89,1	85,0	84,7	89,7	90,2	93,1	86,1	

#### 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	$\Delta uv$
3998 K	92,3	59,6	90,1	97,7	90,8	0,380	0,376	0,225	0,334	-0,0005



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### TM30 details

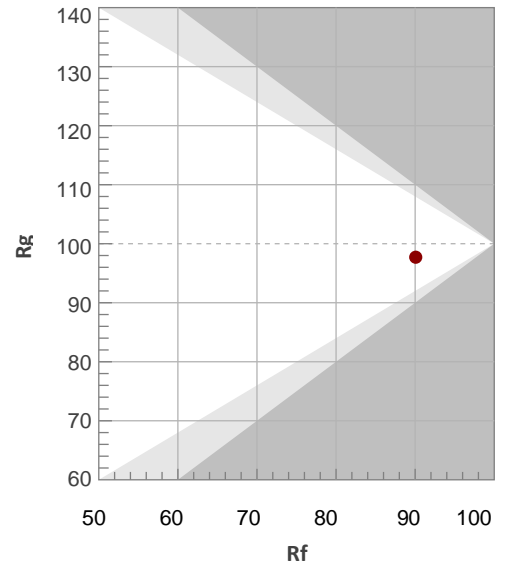
Rf 90,1

Fidelity index Rf

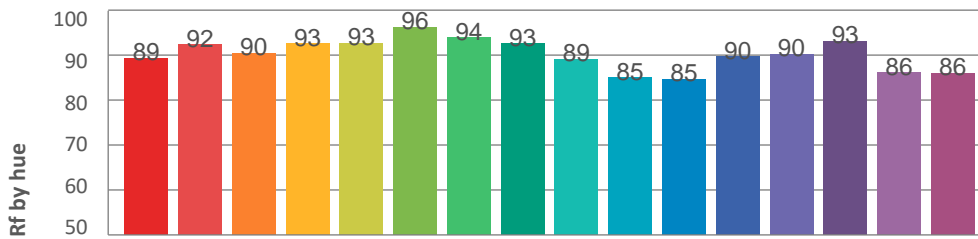
Rg 97,7

Gamut index Rg

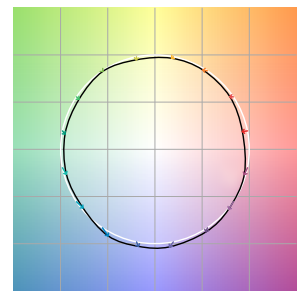
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	89	-5%	0%
2	92	-3%	2%
3	90	-2%	4%
4	93	-2%	2%
5	93	-3%	1%
6	96	-1%	0%
7	94	-4%	1%
8	93	-3%	3%
9	89	-3%	7%
10	85	-2%	9%
11	85	4%	10%
12	90	4%	3%
13	90	4%	-5%
14	93	3%	-4%
15	86	0%	-9%
16	86	-2%	-8%



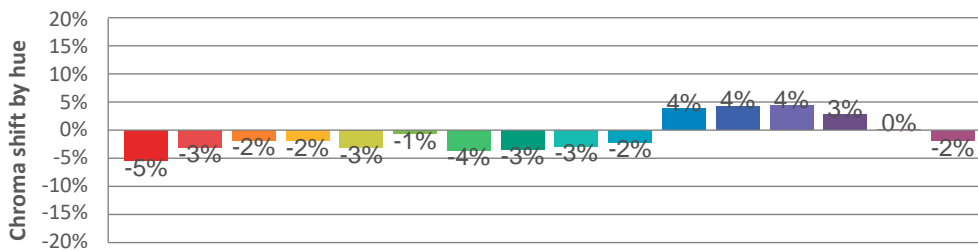
### Hue binH



### Color vector graphics



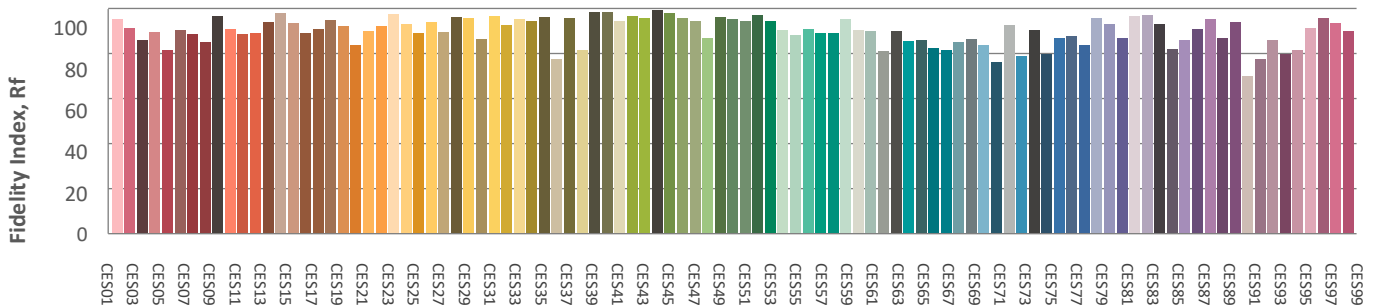
### Hue bin



### Color distortion graphics



### Color Evaluation Sample



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