

# LM-79

## Test Report

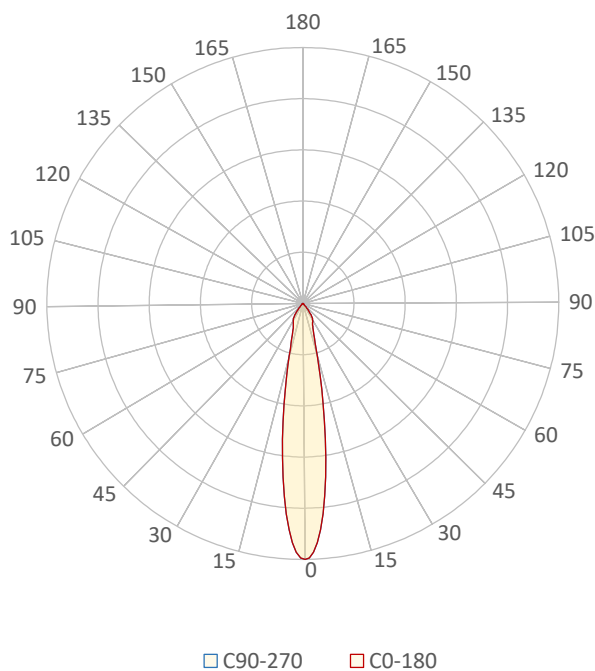
### LM79-JADE-HP-4000K-CRI95-SPOT

#### General Description

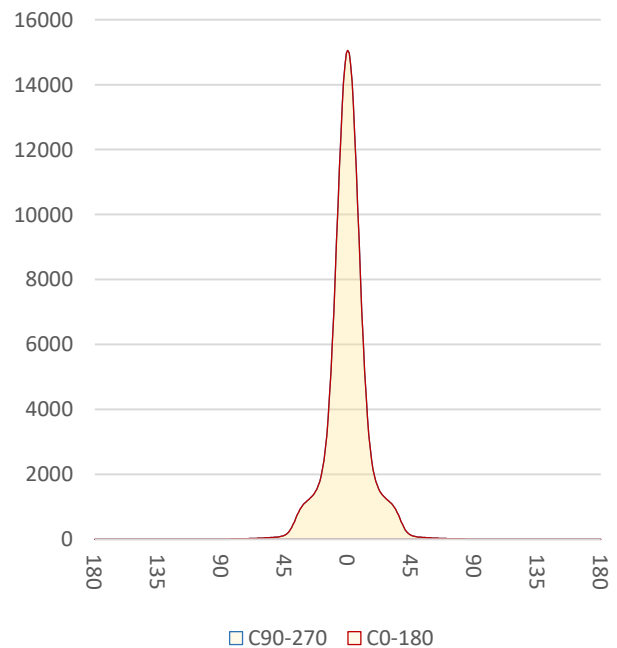
Item number	
Date and time	22-1-2021 16:44:37
CCT (Kelvin)	3812 K
Beam angle	19°
Luminous flux	3293 lm
Efficiency	84 lm/watt
Weighted energy	39,2 kWh/1000h
Power factor	0,97
CRI (RA)	97,3
Fidelity index Rf	Rf 94,2
Gammut index Rg	Rg 102,4
Peak	15055 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m														
Lux*	15055 lx	3764 lx	1673 lx	941 lx	602 lx														
*measured at center of beam																			
Footcandles*	1398,6 fcd	349,7 fcd	155,4 fcd	87,4 fcd	55,9 fcd														
Beam width (meter)	0,3 m	0,7 m	1 m	1,3 m	1,7 m														
Beam width (Feet)	1,1 ft	2,2 ft	3,3 ft	4,4 ft	5,5 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
15055lx	3764lx	1673lx	941lx	602lx	418lx	307lx	235lx	186lx	151lx	124lx	105lx	89lx	77lx	67lx	59lx	52lx	46lx	42lx	38lx
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
1398,6fcd	349,7fcd	155,4fcd	87,4fcd	55,9fcd	38,9fcd	28,5fcd	21,9fcd	17,3fcd	14fcd	11,6fcd	9,7fcd	8,3fcd	7,1fcd	6,2fcd	5,5fcd	4,8fcd	4,3fcd	3,9fcd	3,5fcd
<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°
15,1K	14,6K	13,3K	11,4K	9,2K	7,0K	5,2K	3,7K	2,8K	2,2K	1,8K	1,5K	1,4K	1,3K	1,2K	1,1K	1,1K	0,9K	0,7K	0,5K
100%	97%	89%	76%	61%	47%	34%	25%	18%	14%	12%	10%	9%	9%	8%	8%	7%	6%	5%	4%
<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°
15,1K	14,6K	13,3K	11,4K	9,2K	7,0K	5,2K	3,7K	2,8K	2,2K	1,8K	1,5K	1,4K	1,3K	1,2K	1,1K	1,1K	0,9K	0,7K	0,5K
100%	97%	89%	76%	61%	47%	34%	25%	18%	14%	12%	10%	9%	9%	8%	8%	7%	6%	5%	4%
<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°
15,1K	14,6K	13,3K	11,4K	9,2K	7,0K	5,2K	3,7K	2,8K	2,2K	1,8K	1,5K	1,4K	1,3K	1,2K	1,1K	1,1K	0,9K	0,7K	0,5K
100%	97%	89%	76%	61%	47%	34%	25%	18%	14%	12%	10%	9%	9%	8%	8%	7%	6%	5%	4%
<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°
15,1K	14,6K	13,3K	11,4K	9,2K	7,0K	5,2K	3,7K	2,8K	2,2K	1,8K	1,5K	1,4K	1,3K	1,2K	1,1K	1,1K	0,9K	0,7K	0,5K
100%	97%	89%	76%	61%	47%	34%	25%	18%	14%	12%	10%	9%	9%	8%	8%	7%	6%	5%	4%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
19°		45°				79,6°				98,4%				95,8%					



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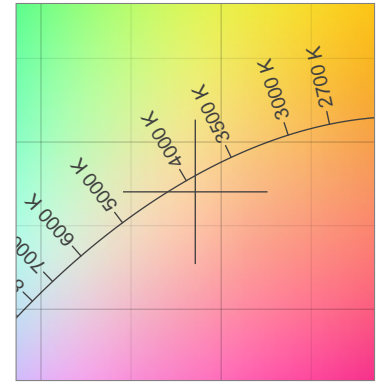
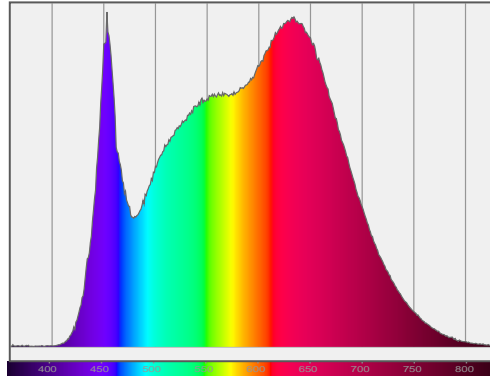
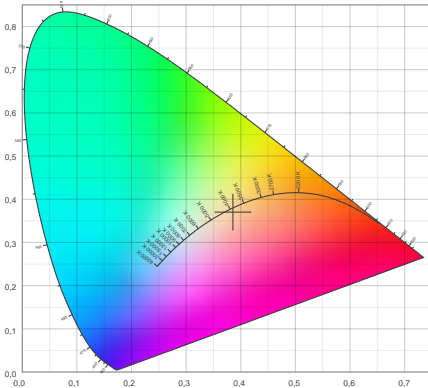
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# LM79-JADE-HP-4000K-CRI95-SPOT

### Color details



CIE 1931

x: 0,386



Spectra

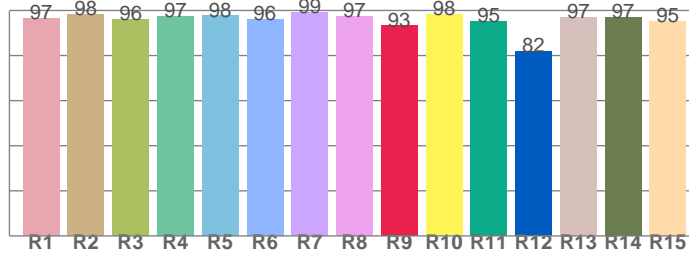
CIE 1931 ZOOM

3812 K

y: 0,370

$\Delta uv$ : -0,0045

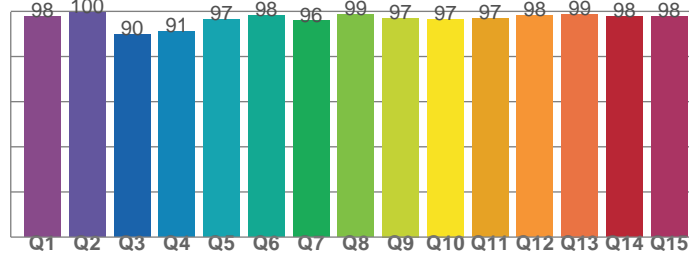
CRI: 97,3 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
96,5	98,3	95,9	97,4	97,6	95,9	99,3	97,4
R9	R10	R11	R12	R13	R14	R15	
93,1	98,2	95,1	82,0	96,9	96,9	95,2	

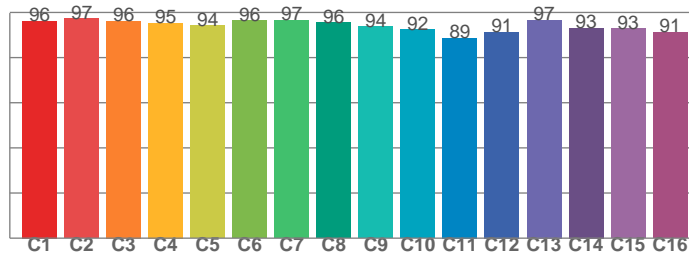
CQS: 95,8



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
97,6	99,5	89,7	91,1	96,5	98,3	95,8	98,6
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,1	96,6	97,0	98,1	98,9	97,6	97,8	

TM30: 94,2



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

C1	C2	C3	C4	C5	C6	C7	C8
96,1	97,4	96,3	95,3	94,1	96,4	96,6	95,6
C9	C10	C11	C12	C13	C14	C15	
93,7	92,3	88,7	91,4	96,7	93,1	92,7	

### 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	$\Delta uv$
3812 K	97,3	93,1	94,2	102,4	95,8	0,386	0,370	0,231	0,333	-0,0045



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### TM30 details

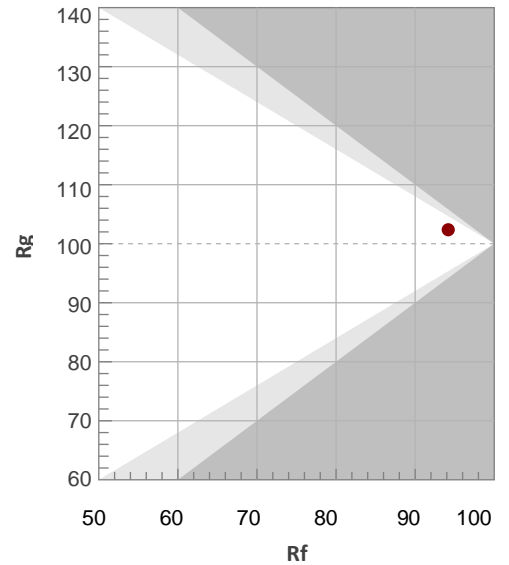
Rf 94,2

Fidelity index Rf

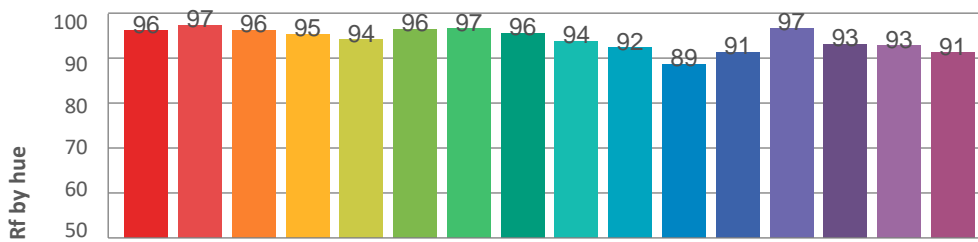
Rg 102,4

Gamut index Rg

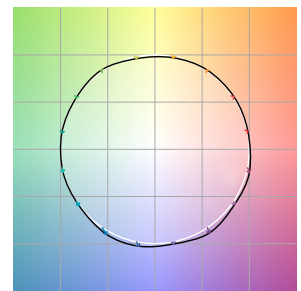
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	96	0%	0%
2	97	1%	0%
3	96	1%	1%
4	95	-1%	0%
5	94	-2%	1%
6	96	1%	1%
7	97	0%	1%
8	96	0%	2%
9	94	0%	5%
10	92	0%	5%
11	89	3%	7%
12	91	4%	3%
13	97	2%	0%
14	93	6%	-1%
15	93	3%	-2%
16	91	3%	-4%



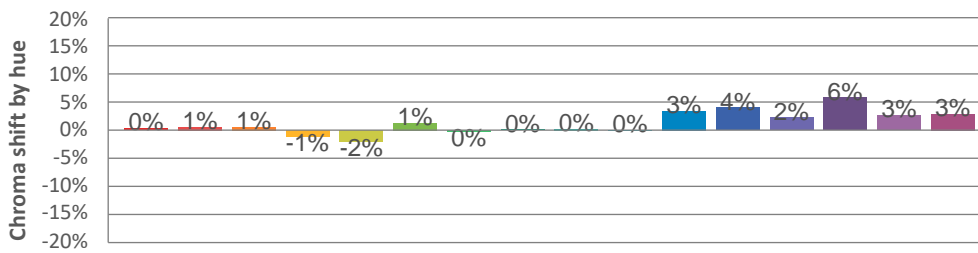
### Hue binH



### Color vector graphics



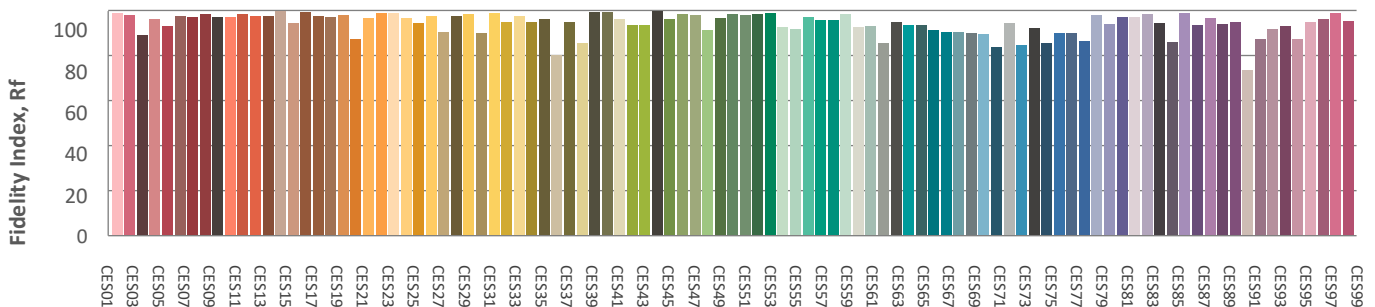
### Hue bin



### 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					
2H	2H	21,9	22,4	21,9	22,6	22,8	21,9	22,4	21,9	22,6	22,8
	3H	21,8	22,5	22,2	22,7	22,9	21,8	22,5	22,2	22,7	22,9
	4H	21,9	22,5	22,3	22,8	23,0	21,9	22,5	22,3	22,8	23,0
	6H	22,0	22,5	22,3	22,8	23,2	22,0	22,5	22,3	22,8	23,2
	8H	22,0	22,5	22,3	22,8	23,2	22,0	22,5	22,3	22,8	23,2
	12H	21,9	22,4	22,3	22,8	23,2	21,9	22,4	22,3	22,8	23,2
4H	2H	21,6	22,3	22,0	22,5	22,7	21,6	22,3	22,0	22,5	22,7
	3H	21,9	22,4	22,2	22,7	23,1	21,9	22,4	22,2	22,7	23,1
	4H	21,9	22,4	22,4	22,8	23,3	21,9	22,4	22,4	22,8	23,3
	6H	22,0	22,5	22,5	22,9	23,2	22,0	22,5	22,5	22,9	23,2
	8H	22,0	22,5	22,5	22,8	23,2	22,0	22,5	22,5	22,8	23,2
	12H	22,0	22,3	22,5	22,7	23,2	22,0	22,3	22,5	22,7	23,2
8H	4H	21,9	22,4	22,4	22,7	23,1	21,9	22,4	22,4	22,7	23,1
	6H	22,1	22,4	22,6	22,8	23,4	22,1	22,4	22,6	22,8	23,4
	8H	22,1	22,4	22,6	22,9	23,5	22,1	22,4	22,6	22,9	23,5
	12H	22,1	22,3	22,7	22,8	23,4	22,1	22,3	22,7	22,8	23,4
12H	4H	21,9	22,2	22,4	22,6	23,1	21,9	22,2	22,4	22,6	23,1
	6H	22,1	22,3	22,6	22,8	23,5	22,1	22,3	22,6	22,8	23,5
	8H	22,1	22,3	22,7	22,8	23,4	22,1	22,3	22,7	22,8	23,4
Variation of the observer position for the luminaire distance S											
S = 1.0H	3,9 / -3,4					3,9 / -3,4					
S = 1.5H	6,4 / -3,8					6,4 / -3,8					
S = 2.0H	8,3 / -4,2					8,3 / -4,2					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 3293lm total luminous flux											



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