

LM-79

Test Report

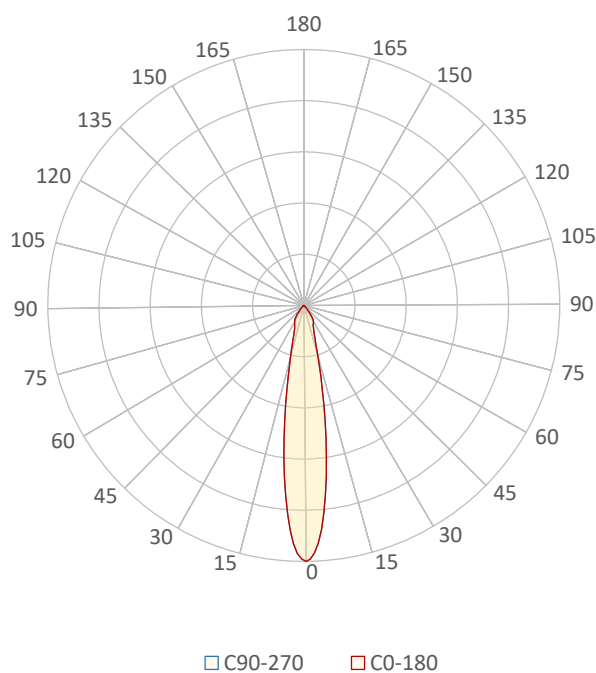
LM79-JADE-HP-3500K-CRI90-SPOT

General Discription

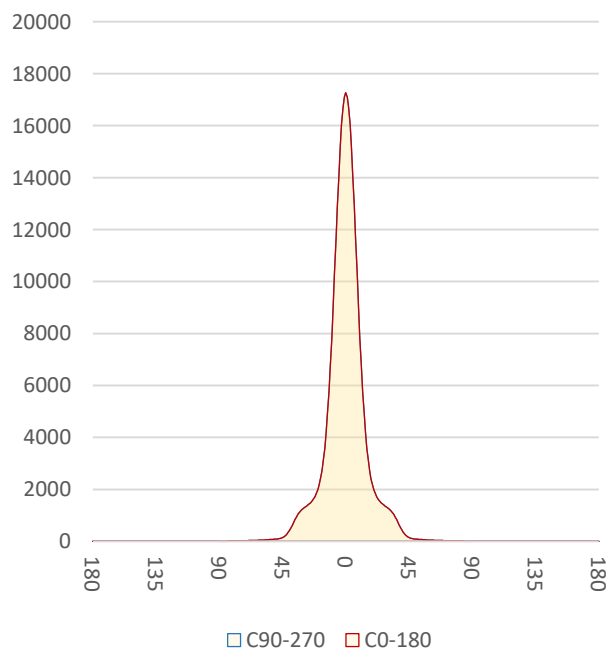
Item number	
Date and time	1-3-2021 14:06:19
CCT (Kelvin)	3534 K
Beam angle	18,7°
Luminous flux	3704 lm
Efficiency	92 lm/watt
Weighted energy	40,2 kWh/1000h
Power factor	0,99
CRI (RA)	92,8
Fidelity index Rf	Rf 90,0
Gammut index Rg	Rg 96,7
Peak	17267 cd



Polar diagram



Cartesian diagram



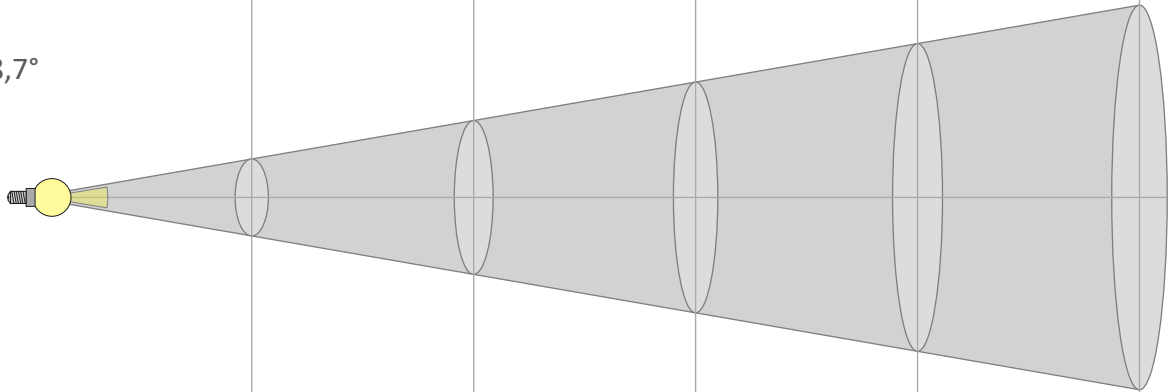
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Beam details				1m		2m		3m		4m		5m							
Lux*				17267 lx		4317 lx		1919 lx		1079 lx		691 lx							
18,7° 																			
*measured at center of beam																			
Footcandles*				1604,1 fcd		401,0 fcd		178,2 fcd		100,3 fcd		64,2 fcd							
Beam width (meter)				0,3 m		0,7 m		1 m		1,3 m		1,6 m							
Beam width (Feet)				1,1 ft		2,2 ft		3,2 ft		4,3 ft		5,4 ft							
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
17267lx	4317lx	1919lx	1079lx	691lx	480lx	352lx	270lx	213lx	173lx	143lx	120lx	102lx	88lx	77lx	67lx	60lx	53lx	48lx	43lx
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
1604,1fcd	401fcd	178,2fcd	100,3fcd	64,2fcd	44,6fcd	32,7fcd	25,1fcd	19,8fcd	16fcd	13,3fcd	11,1fcd	9,5fcd	8,2fcd	7,1fcd	6,3fcd	5,6fcd	5fcd	4,4fcd	4fcd
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°
17,3K	16,7K	15,2K	12,9K	10,3K	7,9K	5,8K	4,2K	3,1K	2,4K	2,0K	1,7K	1,6K	1,4K	1,4K	1,3K	1,2K	1,0K	0,8K	0,6K
100%	97%	88%	75%	60%	45%	33%	24%	18%	14%	11%	10%	9%	8%	8%	7%	7%	6%	5%	4%
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°
17,3K	16,7K	15,2K	12,9K	10,3K	7,9K	5,8K	4,2K	3,1K	2,4K	2,0K	1,7K	1,6K	1,4K	1,4K	1,3K	1,2K	1,0K	0,8K	0,6K
100%	97%	88%	75%	60%	45%	33%	24%	18%	14%	11%	10%	9%	8%	8%	7%	7%	6%	5%	4%
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°
17,3K	16,7K	15,2K	12,9K	10,3K	7,9K	5,8K	4,2K	3,1K	2,4K	2,0K	1,7K	1,6K	1,4K	1,4K	1,3K	1,2K	1,0K	0,8K	0,6K
100%	97%	88%	75%	60%	45%	33%	24%	18%	14%	11%	10%	9%	8%	8%	7%	7%	6%	5%	4%
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°
17,3K	16,7K	15,2K	12,9K	10,3K	7,9K	5,8K	4,2K	3,1K	2,4K	2,0K	1,7K	1,6K	1,4K	1,4K	1,3K	1,2K	1,0K	0,8K	0,6K
100%	97%	88%	75%	60%	45%	33%	24%	18%	14%	11%	10%	9%	8%	8%	7%	7%	6%	5%	4%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
18,7°				43,8°				79,8°				98,4%				95,7%			



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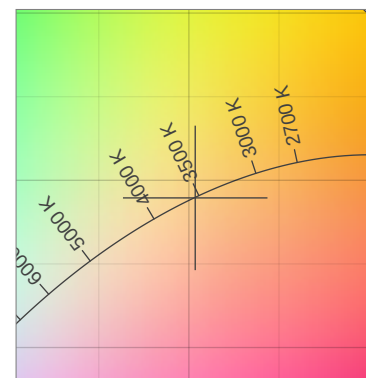
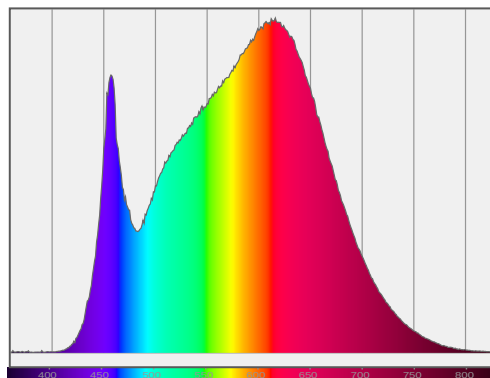
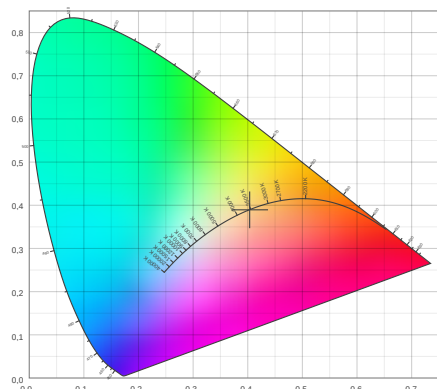
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Color details



CIE 1931

x: 0,404

3534 K

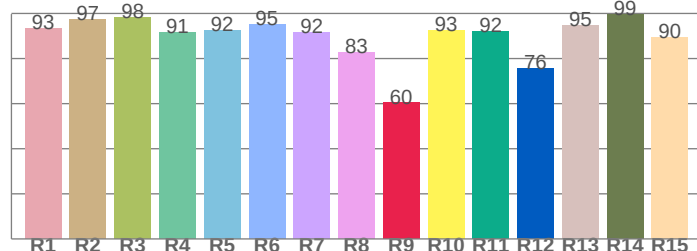
y: 0,389

Spectra

CIE 1931 ZOOM

$\Delta uv: -0,0002$

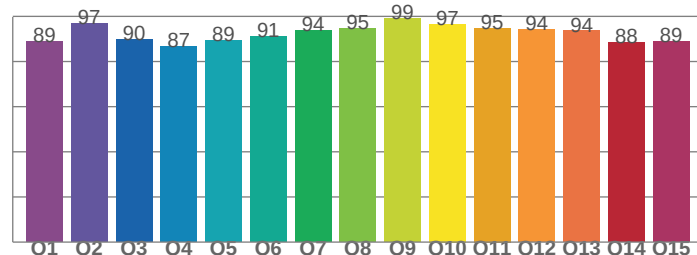
CRI: 92,8 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
93,3	97,5	98,5	91,5	92,3	95,2	91,7	82,6
R9	R10	R11	R12	R13	R14	R15	
60,3	92,7	92,1	75,5	94,8	99,5	89,6	

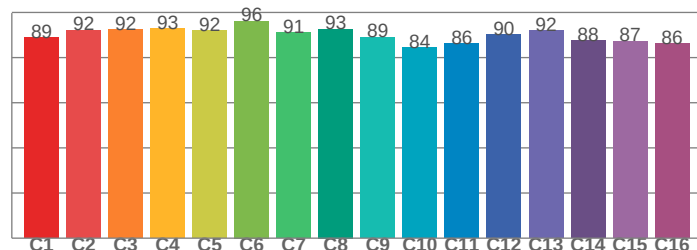
CQS: 91,6



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
88,8	97,0	89,8	86,6	89,2	91,2	93,7	94,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
99,0	96,6	94,9	94,1	93,6	88,4	88,9	

TM30: 90,0



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

C1	C2	C3	C4	C5	C6	C7	C8
89,0	92,1	92,4	92,9	92,0	96,2	91,0	92,7
C9	C10	C11	C12	C13	C14	C15	
89,0	84,4	86,3	90,2	92,1	87,6	87,2	

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
3534 K	92,8	60,3	90,0	96,7	91,6	0,404	0,389	0,235	0,340	-0,0002



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TM30 details

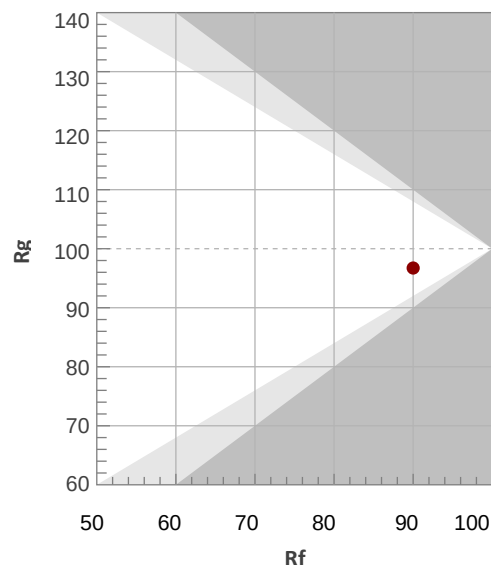
Rf 90,0

Fidelity index Rf

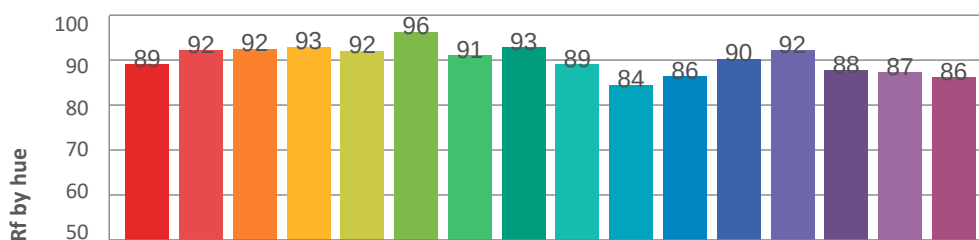
Rg 96,7

Gamut index Rg

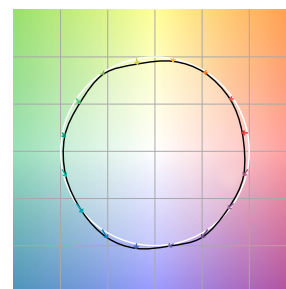
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	89	-5%	1%
2	92	-3%	2%
3	92	-2%	3%
4	93	-3%	0%
5	92	-6%	0%
6	96	-2%	0%
7	91	-5%	2%
8	93	-3%	4%
9	89	-2%	7%
10	84	0%	11%
11	86	4%	8%
12	90	5%	0%
13	92	1%	-5%
14	88	4%	-9%
15	87	-2%	-7%
16	86	-3%	-7%



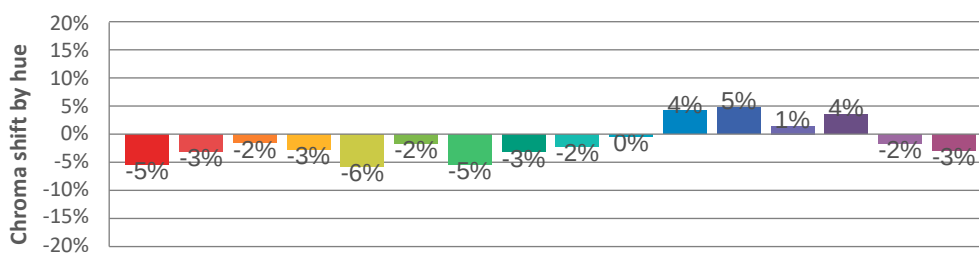
Hue binH



Color vector graphics



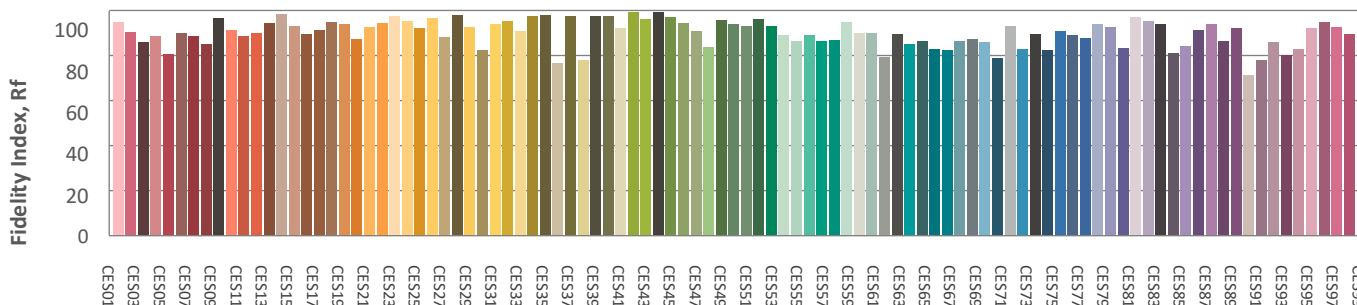
Hue bin



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	22,4	22,9	22,4	23,1	23,3	22,4	22,9	22,4	23,1	23,3
	3H	22,3	23,0	22,7	23,2	23,4	22,3	23,0	22,7	23,2	23,4
	4H	22,4	23,0	22,8	23,3	23,5	22,4	23,0	22,8	23,3	23,5
	6H	22,5	23,0	22,8	23,3	23,7	22,5	23,0	22,8	23,3	23,7
	8H	22,5	23,0	22,8	23,3	23,7	22,5	23,0	22,8	23,3	23,7
	12H	22,4	22,9	22,8	23,3	23,7	22,4	22,9	22,8	23,3	23,7
4H	2H	22,1	22,8	22,5	23,0	23,2	22,1	22,8	22,5	23,0	23,2
	3H	22,4	22,9	22,7	23,2	23,6	22,4	22,9	22,7	23,2	23,6
	4H	22,4	22,9	22,9	23,3	23,8	22,4	22,9	22,9	23,3	23,8
	6H	22,5	23,1	23,0	23,4	23,7	22,5	23,1	23,0	23,4	23,7
	8H	22,5	23,0	23,0	23,3	23,7	22,5	23,0	23,0	23,3	23,7
	12H	22,5	22,9	23,0	23,3	23,7	22,5	22,9	23,0	23,3	23,7
8H	4H	22,4	22,9	22,9	23,2	23,6	22,4	22,9	22,9	23,2	23,6
	6H	22,6	22,9	23,1	23,4	23,9	22,6	22,9	23,1	23,4	23,9
	8H	22,7	22,9	23,2	23,4	24,0	22,7	22,9	23,2	23,4	24,0
	12H	22,6	22,8	23,2	23,3	23,9	22,6	22,8	23,2	23,3	23,9
12H	4H	22,4	22,7	22,9	23,1	23,6	22,4	22,7	22,9	23,1	23,6
	6H	22,6	22,9	23,1	23,4	24,0	22,6	22,9	23,1	23,4	24,0
	8H	22,6	22,8	23,2	23,3	23,9	22,6	22,8	23,2	23,3	23,9
Variation of the observer position for the luminaire distance S											
S = 1.0H		3,8 / -3,3					3,8 / -3,3				
S = 1.5H		6,2 / -3,7					6,2 / -3,7				
S = 2.0H		8,1 / -4,0					8,1 / -4,0				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 3704lm total luminous flux											



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