

LM-79

Test Report

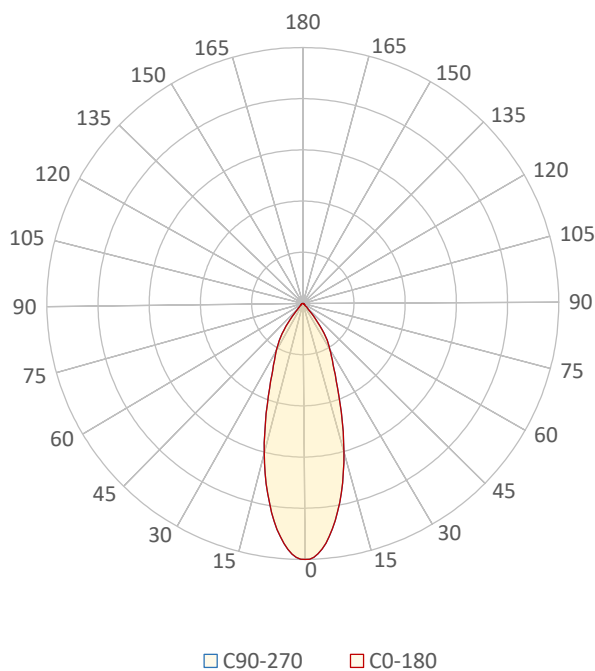
LM79-JADE-HP-4000K-CRI90-MEDIUM

General Discription

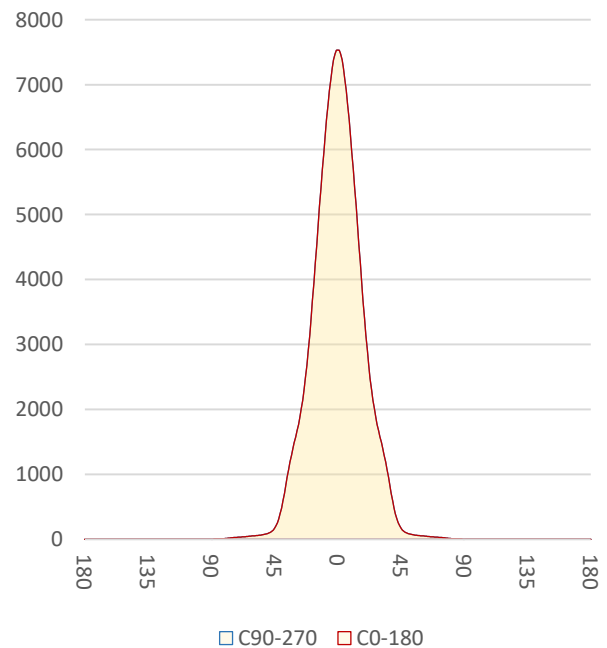
Item number	
Date and time	1-3-2021 14:23:28
CCT (Kelvin)	4012 K
Beam angle	35,3°
Luminous flux	3827 lm
Efficiency	96 lm/watt
Weighted energy	39,7 kWh/1000h
Power factor	0,98
CRI (RA)	92,0
Fidelity index Rf	Rf 89,8
Gammut index Rg	Rg 97,4
Peak	7532 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	7532 lx	1883 lx	837 lx	471 lx	301 lx																			
<i>*measured at center of beam</i>																								
Footcandles*	699,8 fcd	174,9 fcd	77,8 fcd	43,7 fcd	28,0 fcd																			
Beam width (meter)	0,6 m	1,3 m	1,9 m	2,5 m	3,2 m																			
Beam width (Feet)	2,1 ft	4,2 ft	6,3 ft	8,4 ft	10,5 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
7532lx	1883lx	837lx	471lx	301lx	209lx	154lx	118lx	93lx	75lx	62lx	52lx	45lx	38lx	33lx	29lx	26lx	23lx	21lx	19lx					
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					
699,8fcd	174,9fcd	77,8fcd	43,7fcd	28fcd	19,4fcd	14,3fcd	10,9fcd	8,6fcd	7fcd	5,8fcd	4,9fcd	4,1fcd	3,6fcd	3,1fcd	2,7fcd	2,4fcd	2,2fcd	1,9fcd	1,7fcd					
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°					
7532	7475	7253	6904	6462	5957	5411	4836	4249	3675	3143	2681	2301	2003	1771	1577	1395	1192	956	707					
100%	99%	96%	92%	86%	79%	72%	64%	56%	49%	42%	36%	31%	27%	24%	21%	19%	16%	13%	9%					
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°					
7532	7475	7253	6904	6462	5957	5411	4836	4249	3675	3143	2681	2301	2003	1771	1577	1395	1192	956	707					
100%	99%	96%	92%	86%	79%	72%	64%	56%	49%	42%	36%	31%	27%	24%	21%	19%	16%	13%	9%					
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°					
7532	7475	7253	6904	6462	5957	5411	4836	4249	3675	3143	2681	2301	2003	1771	1577	1395	1192	956	707					
100%	99%	96%	92%	86%	79%	72%	64%	56%	49%	42%	36%	31%	27%	24%	21%	19%	16%	13%	9%					
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°					
7532	7475	7253	6904	6462	5957	5411	4836	4249	3675	3143	2681	2301	2003	1771	1577	1395	1192	956	707					
100%	99%	96%	92%	86%	79%	72%	64%	56%	49%	42%	36%	31%	27%	24%	21%	19%	16%	13%	9%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
35,3°					75,2°					88,9°					98,1%					95,2%				



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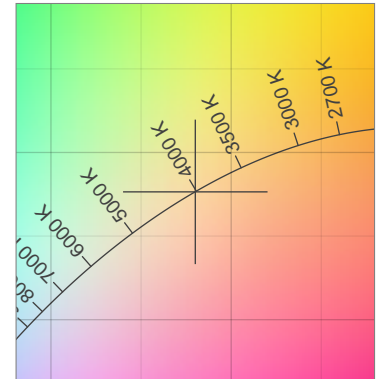
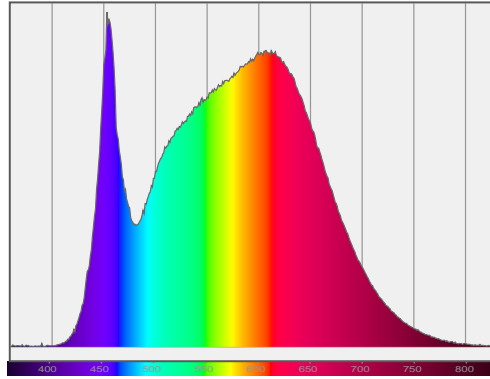
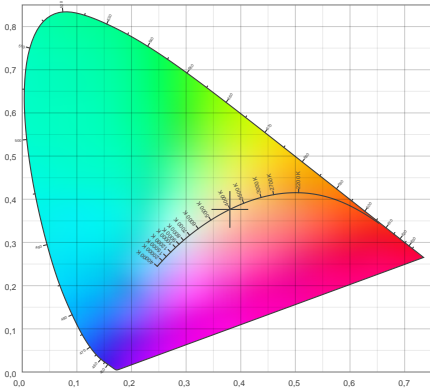
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Color details



CIE 1931

x: 0,380



Spectra

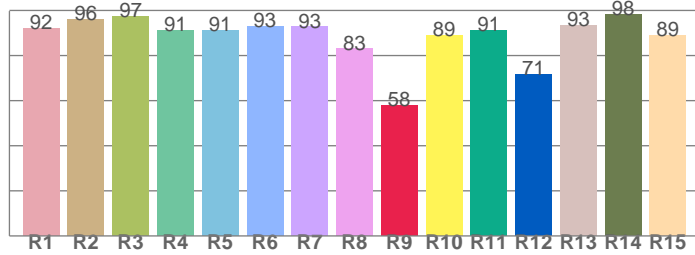
CIE 1931 ZOOM

4012 K

y: 0,376

Δuv : -0,0001

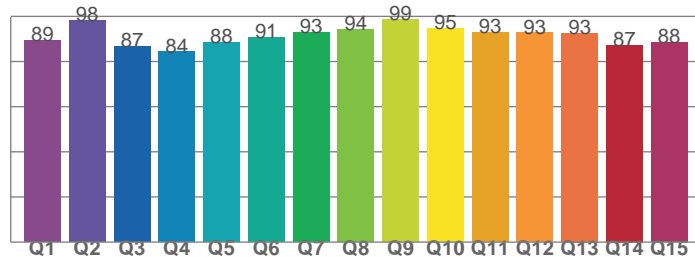
CRI: 92,0 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
92,1	95,9	97,2	91,2	91,1	92,8	92,7	83,0
R9	R10	R11	R12	R13	R14	R15	
57,9	88,8	91,3	71,5	93,4	98,4	88,8	

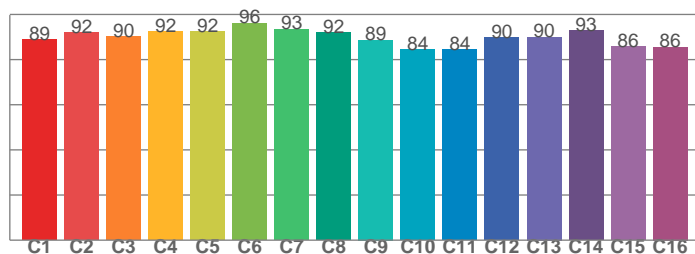
CQS: 90,6



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
89,4	98,1	86,7	84,3	88,3	90,6	92,8	94,3
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
98,8	94,7	93,0	92,7	92,6	87,3	88,4	

TM30: 89,8



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

C1	C2	C3	C4	C5	C6	C7	C8
88,9	92,1	90,3	92,4	92,4	96,1	93,4	92,1
C9	C10	C11	C12	C13	C14	C15	
88,6	84,4	84,5	89,7	90,0	92,9	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
4012 K	92,0	57,9	89,8	97,4	90,6	0,380	0,376	0,225	0,334	-0,0001



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TM30 details

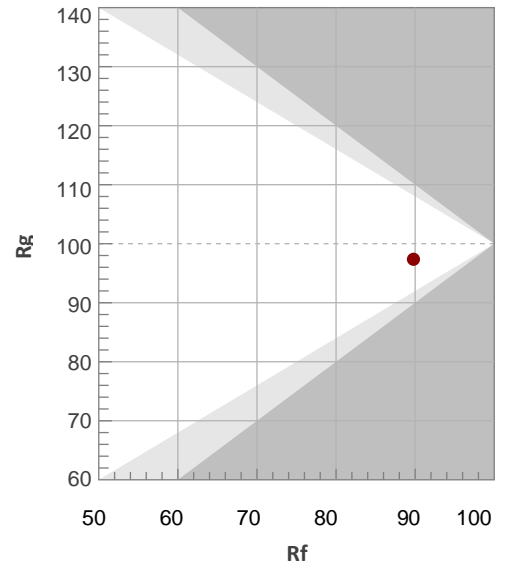
Rf 89,8

Fidelity index Rf

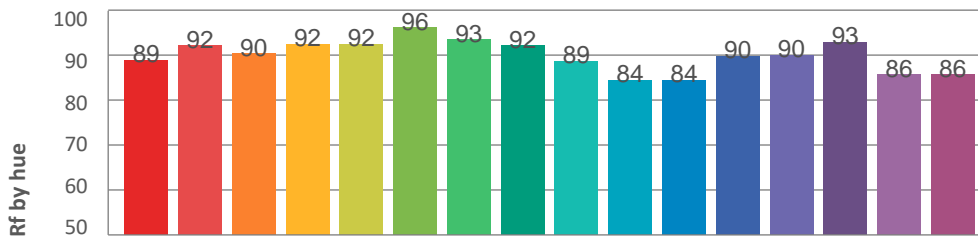
Rg 97,4

Gamut index Rg

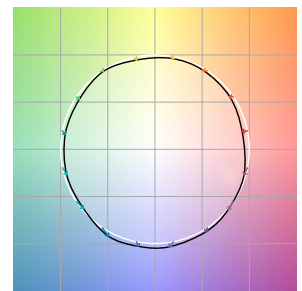
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	89	-6%	0%
2	92	-3%	2%
3	90	-2%	4%
4	92	-2%	1%
5	92	-3%	1%
6	96	-1%	0%
7	93	-4%	1%
8	92	-4%	3%
9	89	-3%	8%
10	84	-2%	10%
11	84	4%	10%
12	90	4%	3%
13	90	4%	-5%
14	93	3%	-4%
15	86	0%	-10%
16	86	-2%	-8%



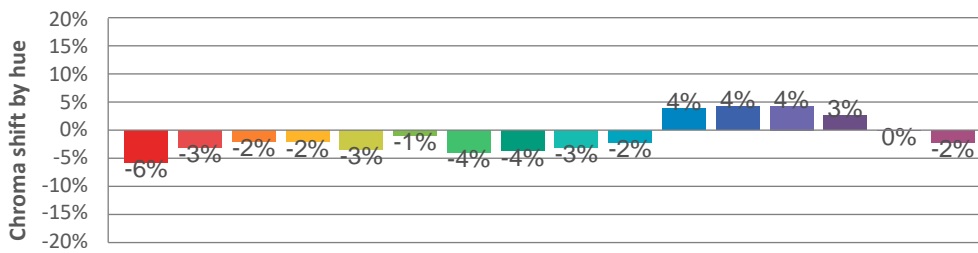
Hue binH



Color vector graphics



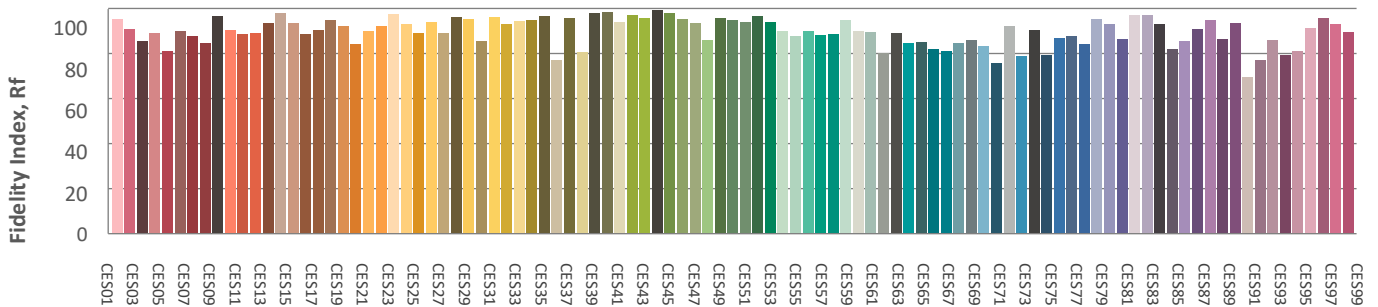
Hue bin



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	23,2	23,8	23,3	24,0	24,2	23,2	23,8	23,3	24,0	24,2
	3H	23,2	23,9	23,5	24,1	24,3	23,2	23,9	23,5	24,1	24,3
	4H	23,2	24,0	23,6	24,2	24,4	23,2	24,0	23,6	24,2	24,4
	6H	23,4	24,0	23,7	24,3	24,6	23,4	24,0	23,7	24,3	24,6
	8H	23,4	23,9	23,7	24,3	24,7	23,4	23,9	23,7	24,3	24,7
	12H	23,3	23,9	23,7	24,2	24,7	23,3	23,9	23,7	24,2	24,7
4H	2H	22,9	23,6	23,3	23,9	24,1	22,9	23,6	23,3	23,9	24,1
	3H	23,2	23,8	23,6	24,1	24,6	23,2	23,8	23,6	24,1	24,6
	4H	23,3	23,9	23,8	24,3	24,8	23,3	23,9	23,8	24,3	24,8
	6H	23,5	24,0	24,0	24,4	24,7	23,5	24,0	24,0	24,4	24,7
	8H	23,5	24,0	24,0	24,3	24,7	23,5	24,0	24,0	24,3	24,7
	12H	23,5	23,9	24,0	24,3	24,7	23,5	23,9	24,0	24,3	24,7
8H	4H	23,3	23,8	23,9	24,2	24,5	23,3	23,8	23,9	24,2	24,5
	6H	23,6	23,9	24,1	24,4	24,9	23,6	23,9	24,1	24,4	24,9
	8H	23,7	23,9	24,2	24,4	25,1	23,7	23,9	24,2	24,4	25,1
	12H	23,6	23,9	24,2	24,4	25,0	23,6	23,9	24,2	24,4	25,0
12H	4H	23,3	23,7	23,8	24,1	24,6	23,3	23,7	23,8	24,1	24,6
	6H	23,6	23,8	24,1	24,4	25,0	23,6	23,8	24,1	24,4	25,0
	8H	23,6	23,9	24,2	24,4	25,0	23,6	23,9	24,2	24,4	25,0
Variation of the observer position for the luminaire distance S											
S = 1.0H	3,8 / -3,1					3,8 / -3,1					
S = 1.5H	6,2 / -3,3					6,2 / -3,3					
S = 2.0H	8,1 / -3,6					8,1 / -3,6					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 3827lm total luminous flux											



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