

LM-79

Test Report

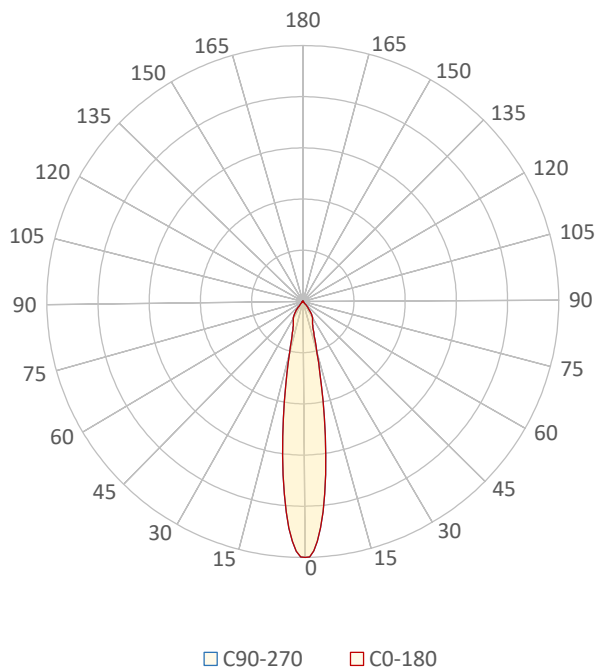
LM79-JADE-HP-3000K-CRI90-SPOT

General Description

Item number	
Date and time	22-1-2021 15:53:23
CCT (Kelvin)	3062 K
Beam angle	18,9°
Luminous flux	3607 lm
Efficiency	91 lm/watt
Weighted energy	39,6 kWh/1000h
Power factor	0,97
CRI (RA)	92,8
Fidelity index Rf	Rf 90,8
Gammut index Rg	Rg 97,5
Peak	16603 cd



Polar diagram



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Beam details	1m	2m	3m	4m	5m														
Lux*	16603 lx	4151 lx	1845 lx	1038 lx	664 lx														
*measured at center of beam																			
Footcandles*	1542,5 fcd	385,6 fcd	171,4 fcd	96,4 fcd	61,7 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														
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
16603lx	4151lx	1845lx	1038lx	664lx	461lx	339lx	259lx	205lx	166lx	137lx	115lx	98lx	85lx	74lx	65lx	57lx	51lx	46lx	42lx
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
1542,5fcd	385,6fcd	171,4fcd	96,4fcd	61,7fcd	42,8fcd	31,5fcd	24,1fcd	19fcd	15,4fcd	12,7fcd	10,7fcd	9,1fcd	7,9fcd	6,9fcd	6fcd	5,3fcd	4,8fcd	4,3fcd	3,9fcd
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°
16,6K	16,2K	14,7K	12,6K	10,1K	7,7K	5,6K	4,1K	3,0K	2,3K	1,9K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	1,0K	0,8K	0,6K
100%	98%	89%	76%	61%	46%	34%	25%	18%	14%	12%	10%	9%	9%	8%	8%	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°
16,6K	16,2K	14,7K	12,6K	10,1K	7,7K	5,6K	4,1K	3,0K	2,3K	1,9K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	1,0K	0,8K	0,6K
100%	98%	89%	76%	61%	46%	34%	25%	18%	14%	12%	10%	9%	9%	8%	8%	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°
16,6K	16,2K	14,7K	12,6K	10,1K	7,7K	5,6K	4,1K	3,0K	2,3K	1,9K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	1,0K	0,8K	0,6K
100%	98%	89%	76%	61%	46%	34%	25%	18%	14%	12%	10%	9%	9%	8%	8%	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°
16,6K	16,2K	14,7K	12,6K	10,1K	7,7K	5,6K	4,1K	3,0K	2,3K	1,9K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	1,0K	0,8K	0,6K
100%	98%	89%	76%	61%	46%	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					
18,9°		44,5°				79,6°				98,3%				95,7%					



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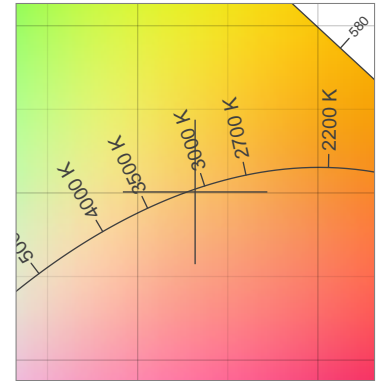
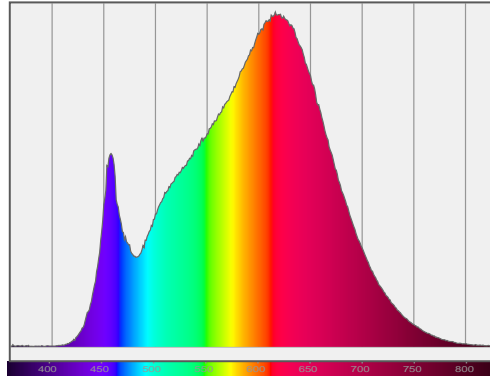
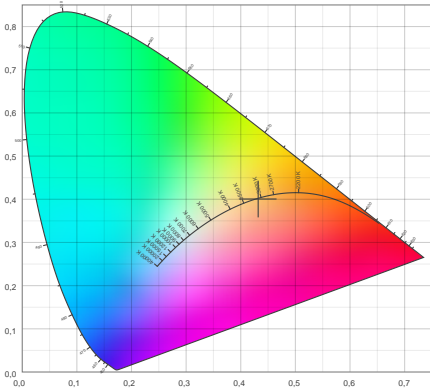
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Color details



CIE 1931

x: 0,432



Spectra

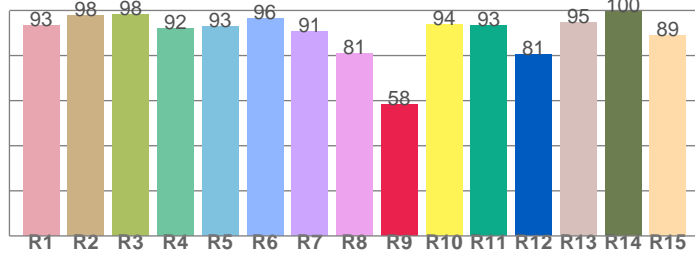
CIE 1931 ZOOM

3062 K

y: 0,401

Δuv : -0,0007

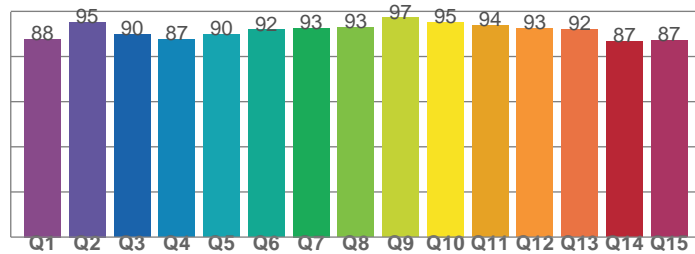
CRI: 92,8 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
93,4	97,8	98,3	92,2	93,0	96,3	90,7	80,9
R9	R10	R11	R12	R13	R14	R15	
58,2	93,7	93,2	80,5	94,8	99,8	89,0	

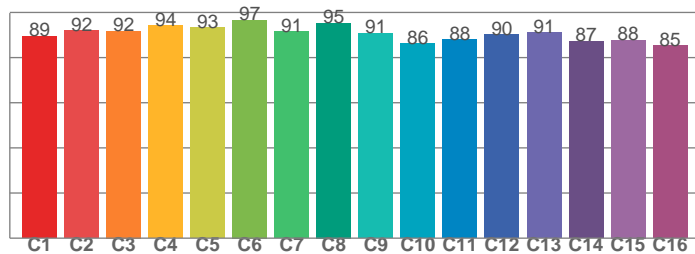
CQS: 90,8



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
87,7	95,3	89,8	87,5	89,9	91,8	92,7	92,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,1	95,3	93,7	92,6	92,0	86,7	87,1	

TM30: 90,8



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

C1	C2	C3	C4	C5	C6	C7	C8
89,5	91,9	91,8	94,1	93,2	96,6	91,5	95,4
C9	C10	C11	C12	C13	C14	C15	
90,8	86,3	87,9	90,2	91,1	87,3	87,8	

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
3062 K	92,8	58,2	90,8	97,5	90,8	0,432	0,401	0,249	0,346	-0,0007



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TM30 details

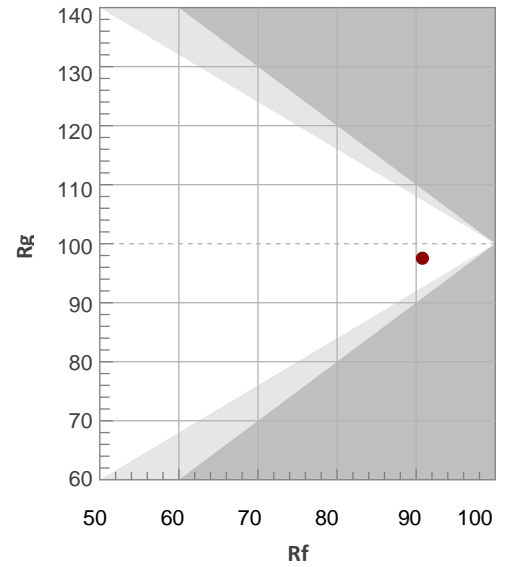
Rf 90,8

Fidelity index Rf

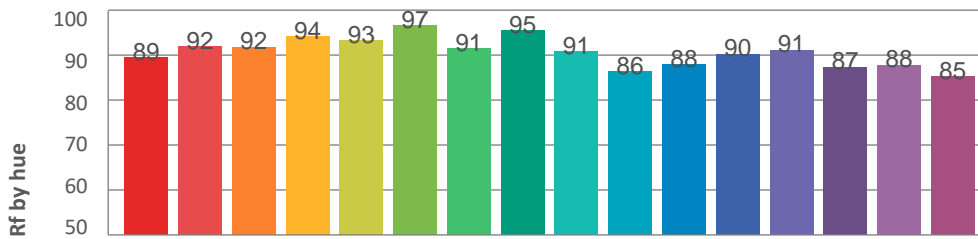
Rg 97,5

Gamut index Rg

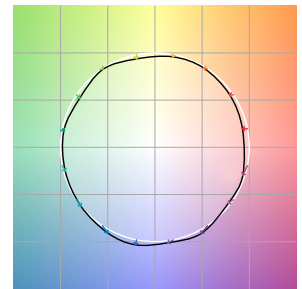
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	89	-5%	1%
2	92	-3%	3%
3	92	-1%	4%
4	94	-2%	0%
5	93	-4%	1%
6	97	-1%	0%
7	91	-5%	1%
8	95	-2%	2%
9	91	-2%	6%
10	86	0%	8%
11	88	3%	9%
12	90	5%	0%
13	91	2%	-6%
14	87	3%	-10%
15	88	-2%	-6%
16	85	-3%	-11%



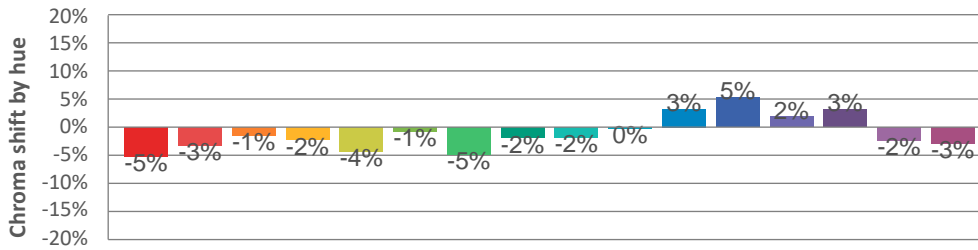
Hue binH



Color vector graphics



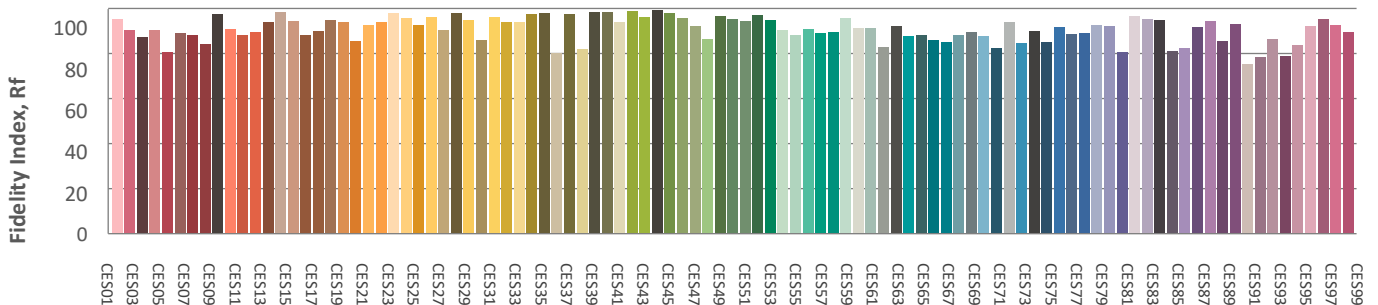
Hue bin



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	22,2	22,7	22,3	22,9	23,1	22,2	22,7	22,3	22,9	23,1
	3H	22,1	22,8	22,5	23,0	23,2	22,1	22,8	22,5	23,0	23,2
	4H	22,2	22,9	22,6	23,1	23,3	22,2	22,9	22,6	23,1	23,3
	6H	22,3	22,9	22,6	23,2	23,5	22,3	22,9	22,6	23,2	23,5
	8H	22,3	22,8	22,6	23,1	23,5	22,3	22,8	22,6	23,1	23,5
	12H	22,2	22,8	22,6	23,1	23,5	22,2	22,8	22,6	23,1	23,5
4H	2H	21,9	22,6	22,3	22,8	23,0	21,9	22,6	22,3	22,8	23,0
	3H	22,2	22,7	22,5	23,1	23,5	22,2	22,7	22,5	23,1	23,5
	4H	22,3	22,7	22,7	23,2	23,7	22,3	22,7	22,7	23,2	23,7
	6H	22,4	22,9	22,9	23,2	23,6	22,4	22,9	22,9	23,2	23,6
	8H	22,4	22,8	22,9	23,2	23,5	22,4	22,8	22,9	23,2	23,5
	12H	22,3	22,7	22,8	23,1	23,5	22,3	22,7	22,8	23,1	23,5
8H	4H	22,3	22,7	22,8	23,1	23,4	22,3	22,7	22,8	23,1	23,4
	6H	22,4	22,7	22,9	23,2	23,7	22,4	22,7	22,9	23,2	23,7
	8H	22,5	22,7	23,0	23,2	23,9	22,5	22,7	23,0	23,2	23,9
	12H	22,4	22,6	23,0	23,1	23,7	22,4	22,6	23,0	23,1	23,7
12H	4H	22,2	22,6	22,7	23,0	23,4	22,2	22,6	22,7	23,0	23,4
	6H	22,4	22,7	22,9	23,2	23,8	22,4	22,7	22,9	23,2	23,8
	8H	22,4	22,6	23,0	23,1	23,7	22,4	22,6	23,0	23,1	23,7
Variation of the observer position for the luminaire distance S											
S = 1.0H	3,9 / -3,3					3,9 / -3,3					
S = 1.5H	6,3 / -3,7					6,3 / -3,7					
S = 2.0H	8,2 / -4,0					8,2 / -4,0					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 3607lm total luminous flux											



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