

LM-79

Test Report

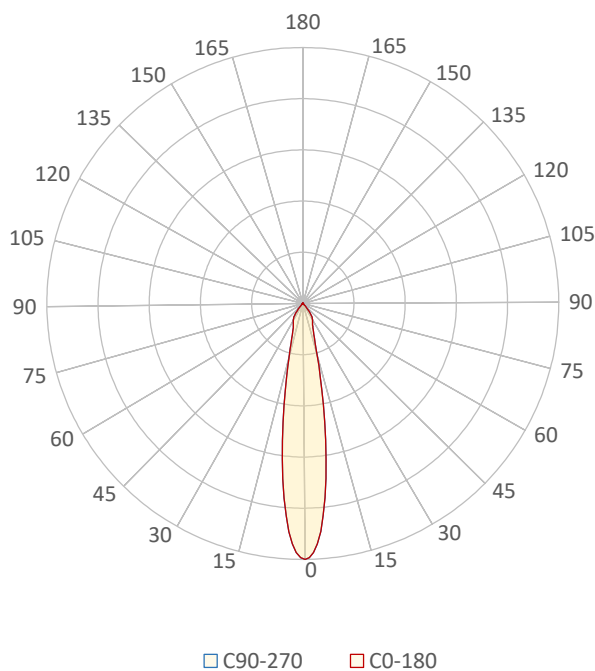
LM79-JADE-HP-2700K-CRI90-SPOT

General Discription

Item number	
Date and time	22-1-2021 14:22:55
CCT (Kelvin)	2773 K
Beam angle	19,1°
Luminous flux	3633 lm
Efficiency	88 lm/watt
Weighted energy	41,1 kWh/1000h
Power factor	0,97
CRI (RA)	92,6
Fidelity index Rf	Rf 91,8
Gammut index Rg	Rg 98,6
Peak	16474 cd



Polar diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	16474 lx	4119 lx	1830 lx	1030 lx	659 lx																			
*measured at center of beam																								
Footcandles*	1530,5 fcd	382,6 fcd	170,1 fcd	95,7 fcd	61,2 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					
16474lx	4119lx	1830lx	1030lx	659lx	458lx	336lx	257lx	203lx	165lx	136lx	114lx	97lx	84lx	73lx	64lx	57lx	51lx	46lx	41lx					
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					
1530,5fcd	382,6fcd	170,1fcd	95,7fcd	61,2fcd	42,5fcd	31,2fcd	23,9fcd	18,9fcd	15,3fcd	12,6fcd	10,6fcd	9,1fcd	7,8fcd	6,8fcd	6fcd	5,3fcd	4,7fcd	4,2fcd	3,8fcd					
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°					
16,5K	16,0K	14,7K	12,6K	10,1K	7,7K	5,7K	4,1K	3,0K	2,4K	1,9K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	1,0K	0,8K	0,6K					
100%	97%	89%	76%	61%	47%	35%	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°					
16,5K	16,0K	14,7K	12,6K	10,1K	7,7K	5,7K	4,1K	3,0K	2,4K	1,9K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	1,0K	0,8K	0,6K					
100%	97%	89%	76%	61%	47%	35%	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°					
16,5K	16,0K	14,7K	12,6K	10,1K	7,7K	5,7K	4,1K	3,0K	2,4K	1,9K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	1,0K	0,8K	0,6K					
100%	97%	89%	76%	61%	47%	35%	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°					
16,5K	16,0K	14,7K	12,6K	10,1K	7,7K	5,7K	4,1K	3,0K	2,4K	1,9K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	1,0K	0,8K	0,6K					
100%	97%	89%	76%	61%	47%	35%	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				
19,1°					45°					80,5°					98,4%					95,9%				



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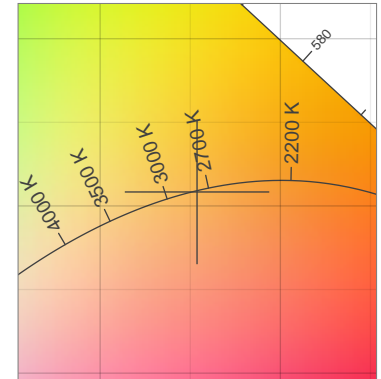
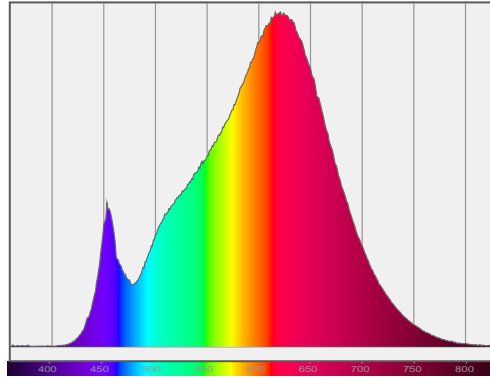
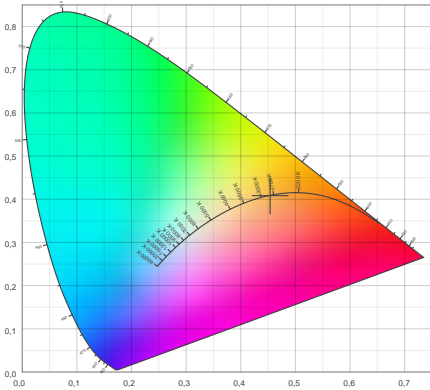
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Color details



CIE 1931

x: 0,454



Spectra

CIE 1931 ZOOM

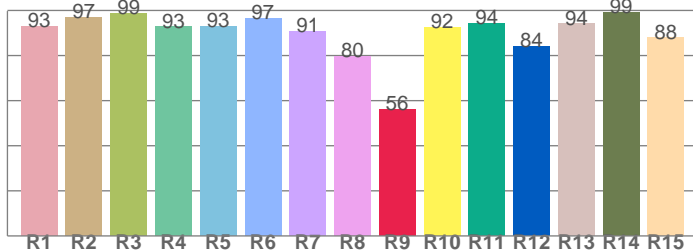
2773 K

y: 0,408

$\Delta uv: -0,0003$

CRI: 92,6 (R1-R8)

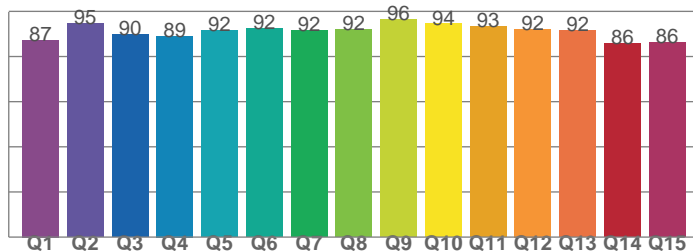
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
92,8	97,0	98,8	92,7	92,8	96,6	90,7	79,7
R9	R10	R11	R12	R13	R14	R15	
56,0	92,4	94,2	84,2	94,0	99,3	87,8	

CQS: 90,6

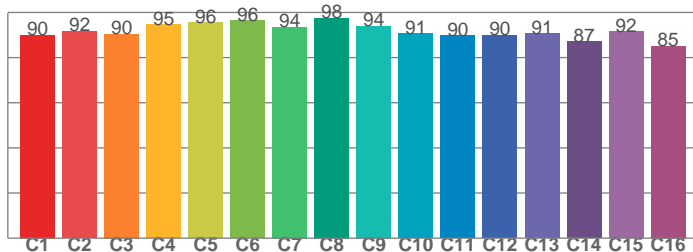
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
87,3	94,8	89,9	89,1	91,6	92,5	91,7	92,1
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,4	94,5	93,4	92,2	91,5	85,7	86,1	

TM30: 91,8

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



C1	C2	C3	C4	C5	C6	C7	C8
89,9	91,7	90,5	94,6	95,6	96,4	93,5	97,5
C9	C10	C11	C12	C13	C14	C15	
94,0	90,7	89,9	89,9	90,7	87,1	91,5	

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
2773 K	92,6	56,0	91,8	98,6	90,6	0,454	0,408	0,260	0,350	-0,0003



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TM30 details

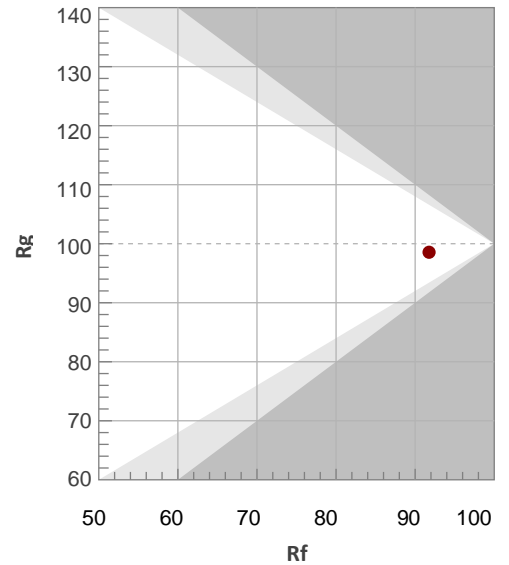
Rf 91,8

Fidelity index Rf

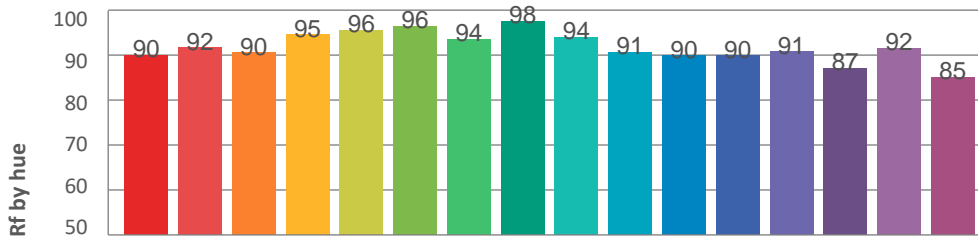
Rg 98,6

Gamut index Rg

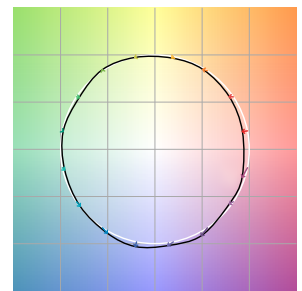
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-5%	0%
2	92	-4%	3%
3	90	-1%	5%
4	95	-2%	1%
5	96	0%	2%
6	96	1%	0%
7	94	-3%	-1%
8	98	-1%	0%
9	94	-2%	3%
10	91	-1%	6%
11	90	2%	7%
12	90	5%	0%
13	91	3%	-7%
14	87	3%	-10%
15	92	-2%	-4%
16	85	-4%	-11%



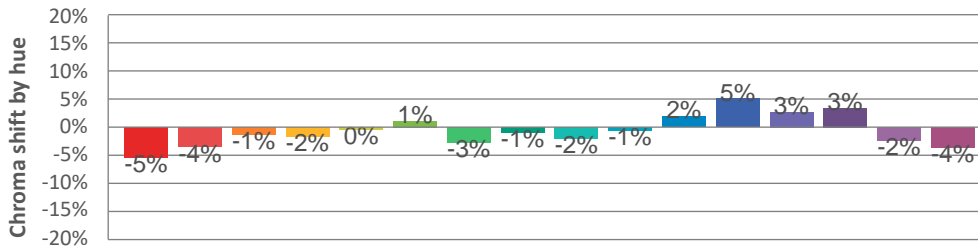
Hue binH



Color vector graphics



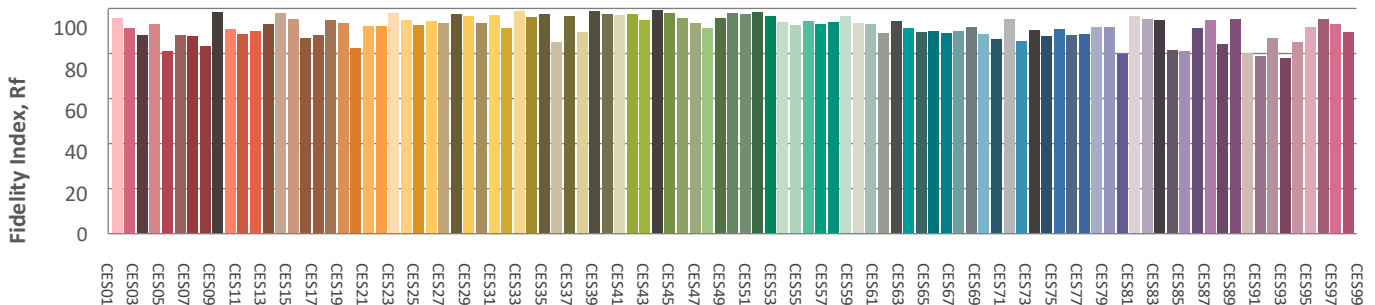
Hue bin



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	22,3	22,8	22,4	23,0	23,2	22,3	22,8	22,4	23,0	23,2
	3H	22,2	22,9	22,6	23,1	23,2	22,2	22,9	22,6	23,1	23,2
	4H	22,2	22,9	22,6	23,1	23,4	22,2	22,9	22,6	23,1	23,4
	6H	22,4	22,9	22,6	23,2	23,5	22,4	22,9	22,6	23,2	23,5
	8H	22,3	22,9	22,7	23,2	23,6	22,3	22,9	22,7	23,2	23,6
	12H	22,3	22,8	22,6	23,2	23,6	22,3	22,8	22,6	23,2	23,6
4H	2H	22,0	22,7	22,4	22,9	23,1	22,0	22,7	22,4	22,9	23,1
	3H	22,2	22,7	22,6	23,1	23,5	22,2	22,7	22,6	23,1	23,5
	4H	22,3	22,8	22,7	23,2	23,7	22,3	22,8	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	23,6	22,3	22,7	22,8	23,1	23,6
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	22,5	22,7	23,0	23,2	23,8	22,5	22,7	23,0	23,2	23,8
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	23,2	23,8	22,4	22,6	23,0	23,2	23,8
Variation of the observer position for the luminaire distance S											
S = 1.0H	3,8 / -3,5					3,8 / -3,5					
S = 1.5H	6,3 / -3,9					6,3 / -3,9					
S = 2.0H	8,2 / -4,2					8,2 / -4,2					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 3633lm total luminous flux											



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