

LM-79

Test Report

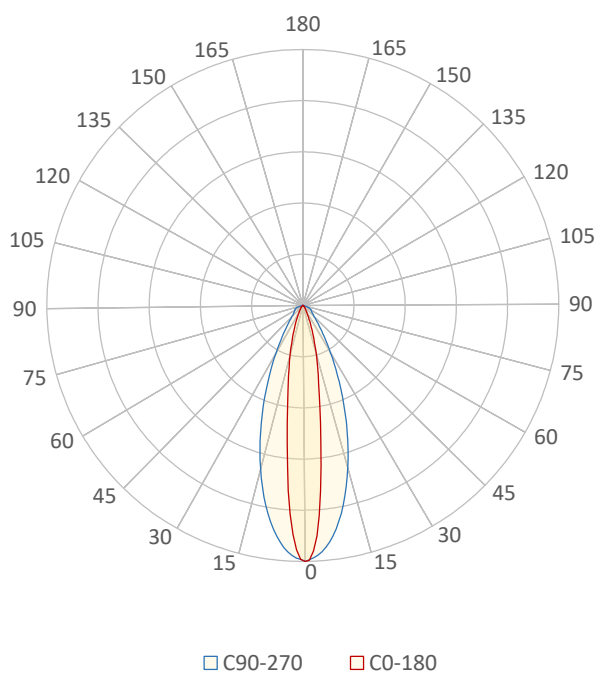
LM79-CLS-JADE-HD-3000K-CRI95-SPOT [ELIPTICAL BEAMSHAPER]

General Discription

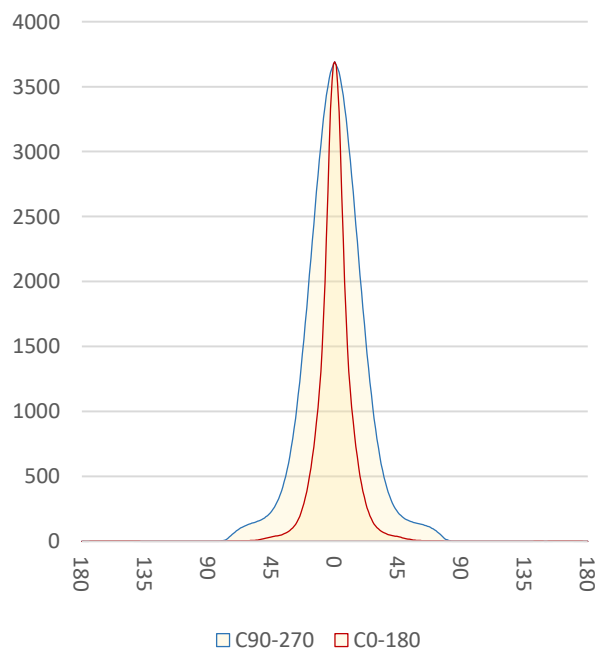
Item number	
Date and time	28-4-2020 16:44:20
CCT (Kelvin)	2983 K
Beam angle	39,4°
Luminous flux	1472 lm
Efficiency	62 lm/watt
Weighted energy	23,7 kWh/1000h
Power factor	0,96
CRI (RA)	96,6
Fidelity index Rf	Rf 94,6
Gammut index Rg	Rg 104,1
Peak	3712 cd



Polar diagram



Cartesian diagram



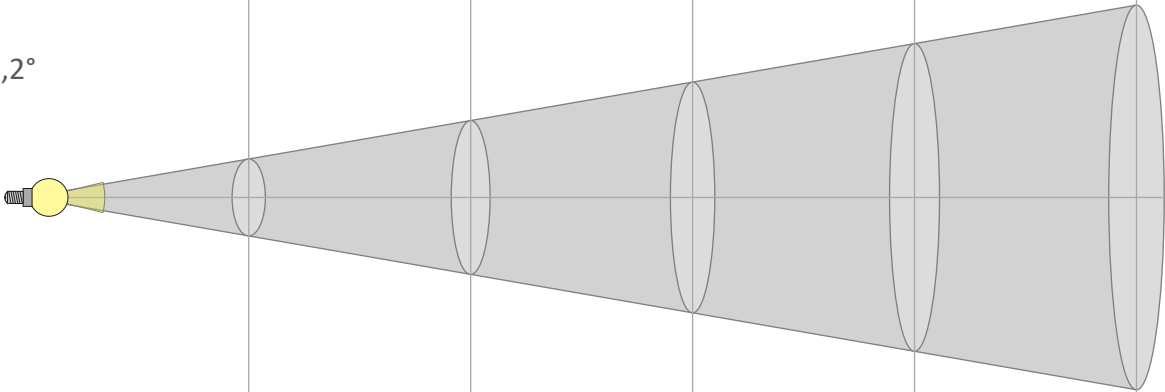
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Beam details				1m		2m		3m		4m		5m							
Lux*				3691 lx		923 lx		410 lx		231 lx		148 lx							
27,2° 																			
*measured at center of beam																			
Footcandles*				342,9 fcd		85,7 fcd		38,1 fcd		21,4 fcd		13,7 fcd							
Beam width (meter)				0,5 m		1 m		1,5 m		1,9 m		2,4 m							
Beam width (Feet)				1,6 ft		3,2 ft		4,8 ft		6,3 ft		7,9 ft							
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3691lx	923lx	410lx	231lx	148lx	103lx	75lx	58lx	46lx	37lx	31lx	26lx	22lx	19lx	16lx	14lx	13lx	11lx	10lx	9lx
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
342,9fcd	85,7fcd	38,1fcd	21,4fcd	13,7fcd	9,5fcd	7fcd	5,4fcd	4,2fcd	3,4fcd	2,8fcd	2,4fcd	2fcd	1,7fcd	1,5fcd	1,3fcd	1,2fcd	1,1fcd	0,9fcd	0,9fcd
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°
3691	3547	3035	2332	1718	1304	1027	818	642	498	384	292	221	168	130	104	84	69	58	50
100%	96%	82%	63%	47%	35%	28%	22%	17%	13%	10%	8%	6%	5%	4%	3%	2%	2%	2%	1%
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°
3691	3644	3564	3431	3257	3051	2815	2567	2308	2052	1799	1558	1332	1128	946	790	656	547	458	385
100%	99%	97%	93%	88%	83%	76%	70%	63%	56%	49%	42%	36%	31%	26%	21%	18%	15%	12%	10%
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°
3691	3526	3014	2320	1720	1307	1032	822	648	503	387	295	225	171	132	105	86	72	61	52
100%	96%	82%	63%	47%	35%	28%	22%	18%	14%	10%	8%	6%	5%	4%	3%	2%	2%	2%	1%
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°
3691	3645	3560	3429	3256	3046	2814	2564	2308	2051	1800	1558	1332	1127	947	788	655	543	451	378
100%	99%	96%	93%	88%	83%	76%	69%	63%	56%	49%	42%	36%	31%	26%	21%	18%	15%	12%	10%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
27,2°				58,7°				100,6°				94,1%				86,0%			



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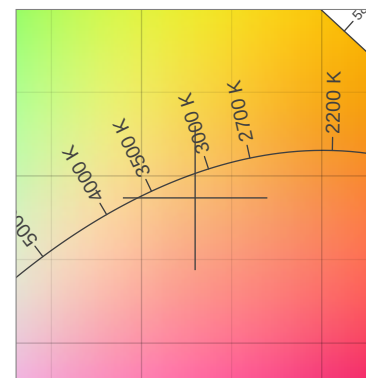
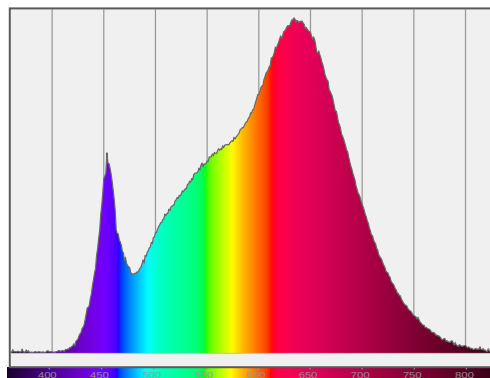
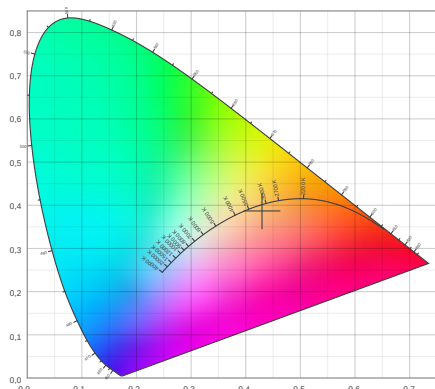
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Color details



CIE 1931

x: 0,430



Spectra

CIE 1931 ZOOM

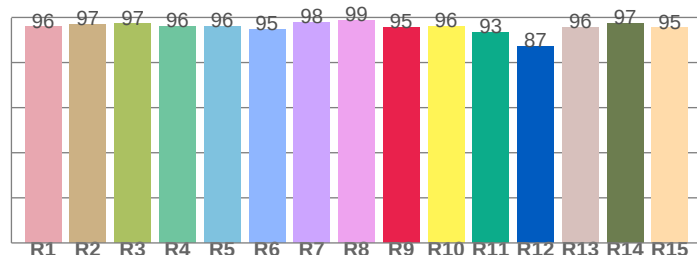
2983 K

y: 0,387

Δuv : -0,0061

CRI: 96,6 (R1-R8)

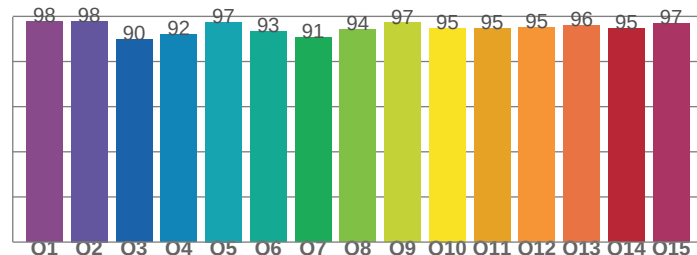
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
95,8	97,0	97,2	96,0	96,2	94,6	97,6	98,5
R9	R10	R11	R12	R13	R14	R15	
95,5	96,0	93,5	87,0	95,7	97,4	95,4	

CQS: 94,1

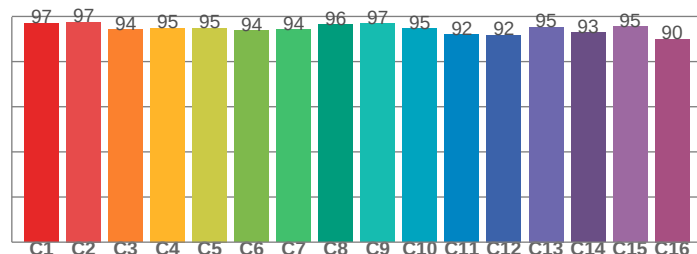
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
97,8	97,9	89,8	92,1	97,5	93,5	90,5	94,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,1	94,8	94,8	95,2	95,8	94,7	97,0	

TM30: 94,6

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



C1	C2	C3	C4	C5	C6	C7	C8
97,0	97,5	94,2	94,9	94,9	93,8	94,1	96,4
C9	C10	C11	C12	C13	C14	C15	
96,8	94,7	91,9	91,8	95,3	92,9	95,4	

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
2983 K	96,6	95,5	94,6	104,1	94,1	0,430	0,387	0,253	0,342	-0,0061



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TM30 details

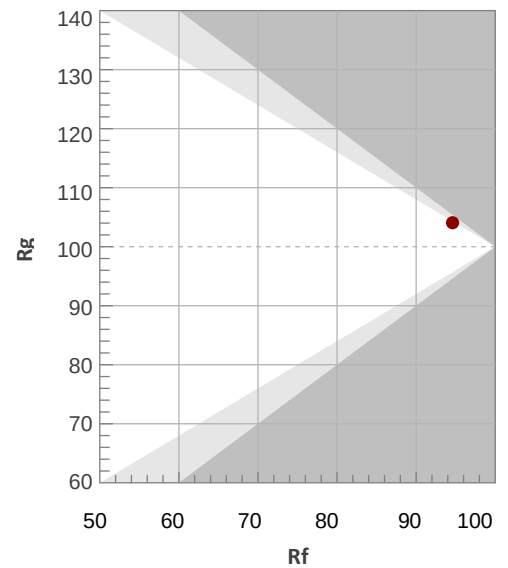
Rf 94,6

Fidelity index Rf

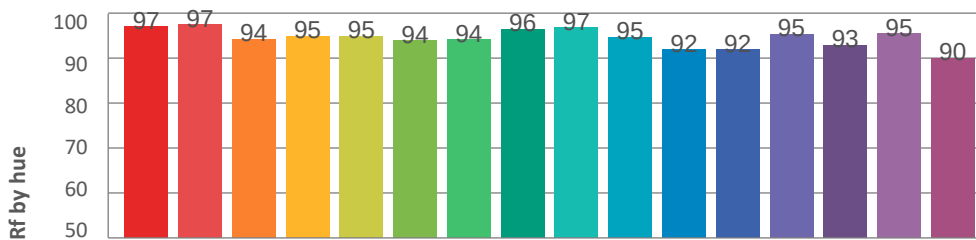
Rg 104,1

Gamut index Rg

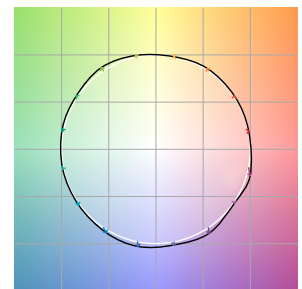
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	97	0%	0%
2	97	1%	1%
3	94	1%	2%
4	95	0%	1%
5	95	2%	2%
6	94	4%	0%
7	94	2%	0%
8	96	2%	-2%
9	97	1%	1%
10	95	1%	3%
11	92	3%	5%
12	92	5%	2%
13	95	3%	-2%
14	93	5%	-3%
15	95	1%	-1%
16	90	3%	-8%



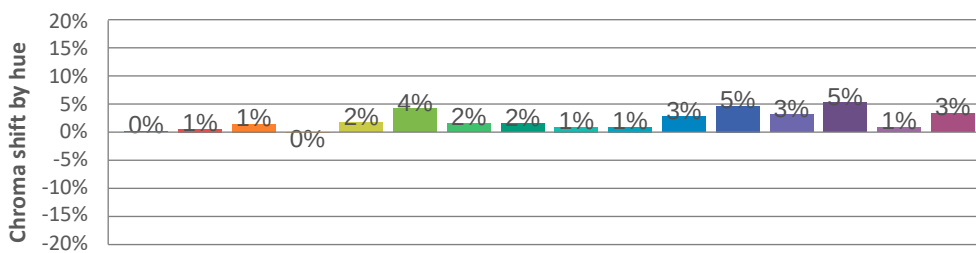
Hue binH



Color vector graphics



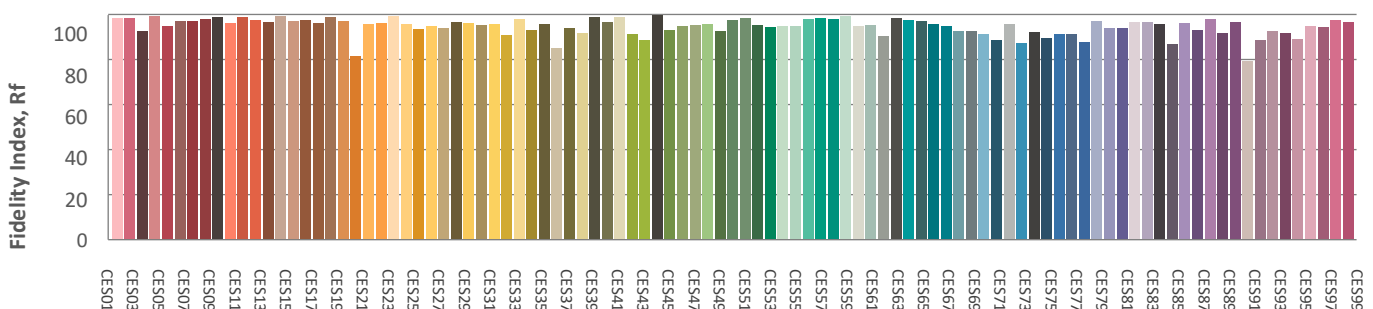
Hue bin



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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 1472lm total luminous flux										



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