

LM-79

Test Report

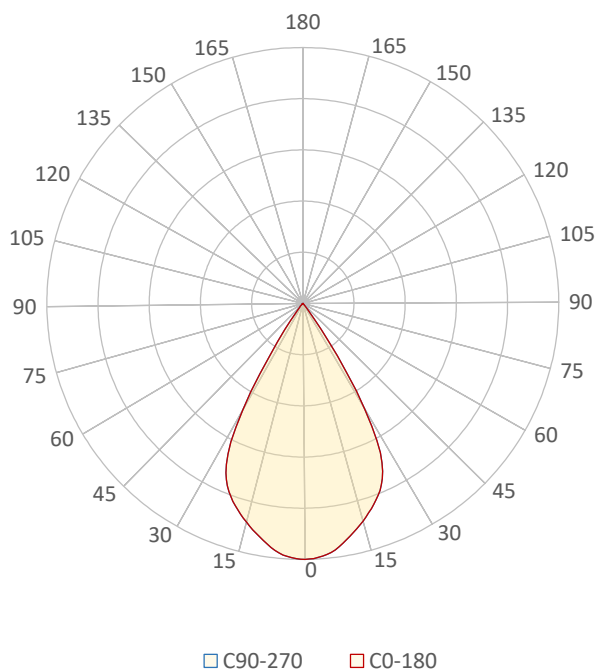
LM79-JADE-ZOOM-HP-3000K-CRI90-WIDE-

General Description

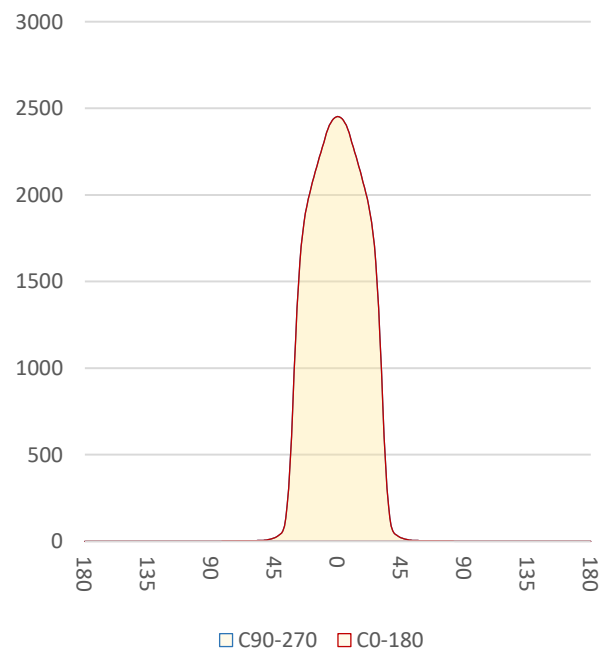
Item number	
Date and time	14-7-2021 10:42:10
CCT (Kelvin)	3000 K
Beam angle	59,4°
Luminous flux	1895 lm
Efficiency	57 lm/watt
Weighted energy	33,1 kWh/1000h
Power factor	0,98
CRI (RA)	91,5
Fidelity index Rf	Rf 89,2
Gammut index Rg	Rg 103,2
Peak	2453 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m														
Lux*	2453 lx	613 lx	273 lx	153 lx	98 lx														
*measured at center of beam																			
Footcandles*	227,9 fcd	57,0 fcd	25,3 fcd	14,2 fcd	9,1 fcd														
Beam width (meter)	1,1 m	2,3 m	3,4 m	4,6 m	5,7 m														
Beam width (Feet)	3,7 ft	7,5 ft	11,2 ft	15 ft	18,7 ft														
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
2453lx	613lx	273lx	153lx	98lx	68lx	50lx	38lx	30lx	25lx	20lx	17lx	15lx	13lx	11lx	10lx	8lx	8lx	7lx	6lx
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
227,9fcd	57fcd	25,3fcd	14,2fcd	9,1fcd	6,3fcd	4,7fcd	3,6fcd	2,8fcd	2,3fcd	1,9fcd	1,6fcd	1,3fcd	1,2fcd	1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd
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°
2453	2446	2429	2402	2357	2303	2248	2192	2134	2074	2010	1937	1843	1706	1493	1174	787	438	205	88
100%	100%	99%	98%	96%	94%	92%	89%	87%	85%	82%	79%	75%	70%	61%	48%	32%	18%	8%	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°
2453	2446	2429	2402	2357	2303	2248	2192	2134	2074	2010	1937	1843	1706	1493	1174	787	438	205	88
100%	100%	99%	98%	96%	94%	92%	89%	87%	85%	82%	79%	75%	70%	61%	48%	32%	18%	8%	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°
2453	2446	2429	2402	2357	2303	2248	2192	2134	2074	2010	1937	1843	1706	1493	1174	787	438	205	88
100%	100%	99%	98%	96%	94%	92%	89%	87%	85%	82%	79%	75%	70%	61%	48%	32%	18%	8%	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°
2453	2446	2429	2402	2357	2303	2248	2192	2134	2074	2010	1937	1843	1706	1493	1174	787	438	205	88
100%	100%	99%	98%	96%	94%	92%	89%	87%	85%	82%	79%	75%	70%	61%	48%	32%	18%	8%	4%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
59,4°		71,1°				78°				99,7%				99,2%					



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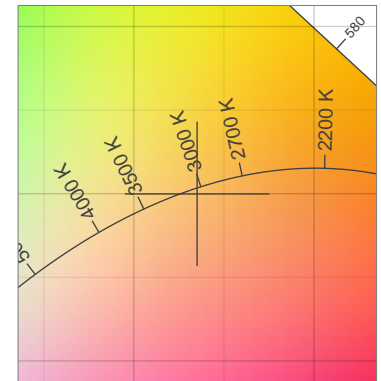
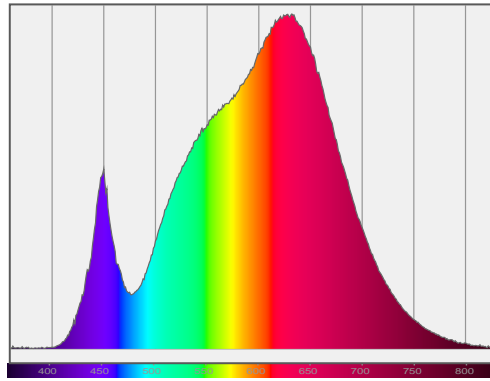
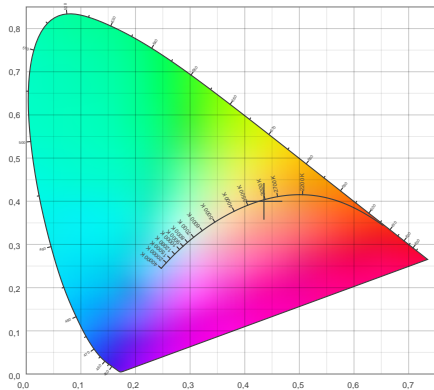
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Color details



CIE 1931

x: 0,435



Spectra

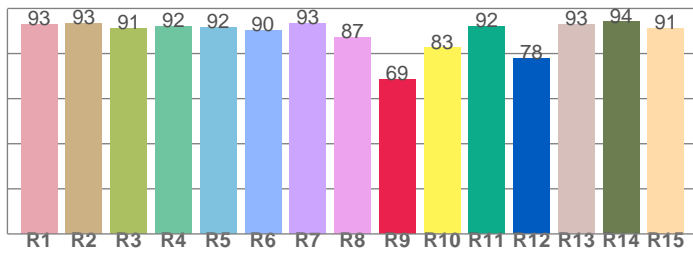
CIE 1931 ZOOM

3000 K

y: 0,400

$\Delta uv: -0,0014$

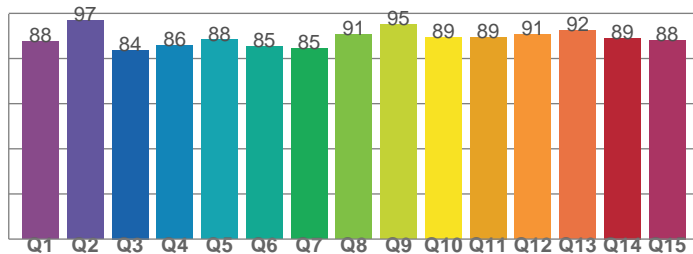
CRI: 91,5 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
93,0	93,4	91,2	92,2	91,5	90,4	93,2	87,2
R9	R10	R11	R12	R13	R14	R15	
68,7	82,5	92,1	78,0	92,8	94,1	91,1	

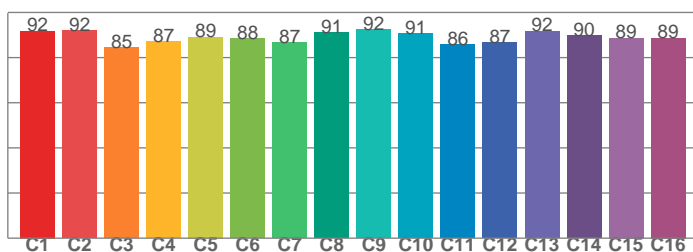
CQS: 88,5



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
87,6	97,0	83,7	85,7	88,3	85,5	84,6	90,7
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,2	89,3	89,5	90,8	92,4	89,1	88,2	

TM30: 89,2



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

C1	C2	C3	C4	C5	C6	C7	C8
91,8	91,9	84,6	87,2	89,1	88,4	86,7	91,2
C9	C10	C11	C12	C13	C14	C15	
92,3	90,7	85,7	86,6	91,7	89,8	88,6	

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
3000 K	91,5	68,7	89,2	103,2	88,5	0,435	0,400	0,251	0,346	-0,0014



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TM30 details

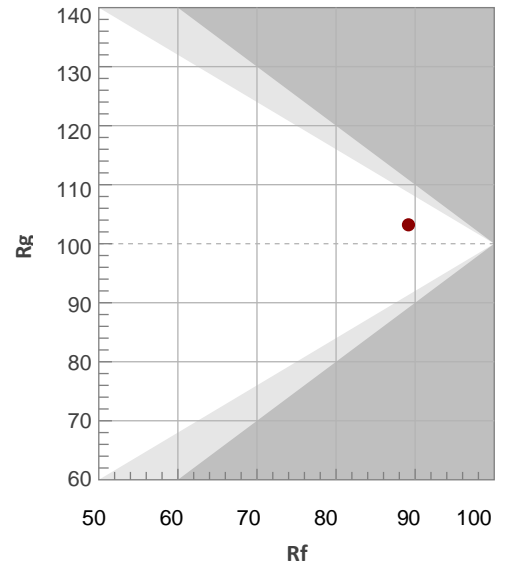
Rf 89,2

Fidelity index Rf

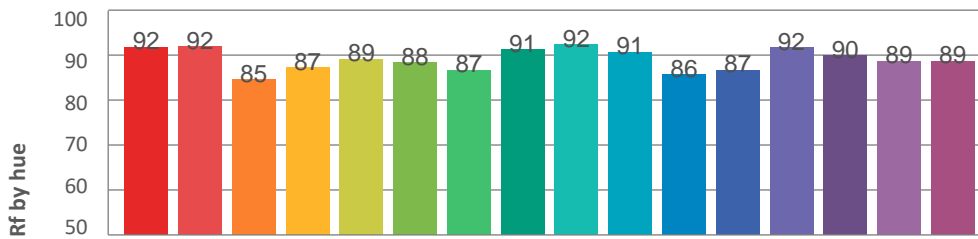
Rg 103,2

Gamut index Rg

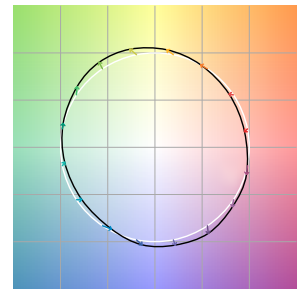
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	-2%
2	92	-3%	3%
3	85	0%	8%
4	87	4%	8%
5	89	7%	6%
6	88	8%	-1%
7	87	4%	-7%
8	91	0%	-6%
9	92	-3%	-3%
10	91	-5%	3%
11	86	-2%	10%
12	87	4%	7%
13	92	6%	1%
14	90	7%	-4%
15	89	3%	-7%
16	89	1%	-9%



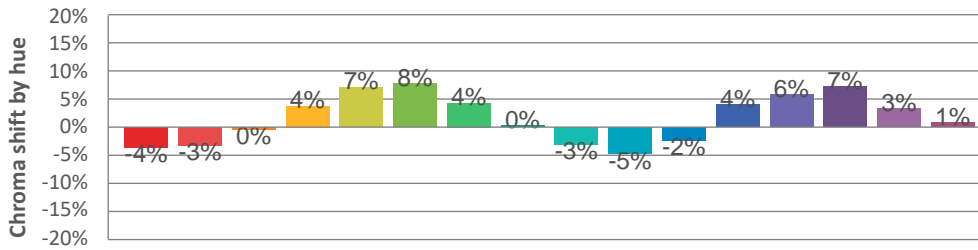
Hue binH



Color vector graphics



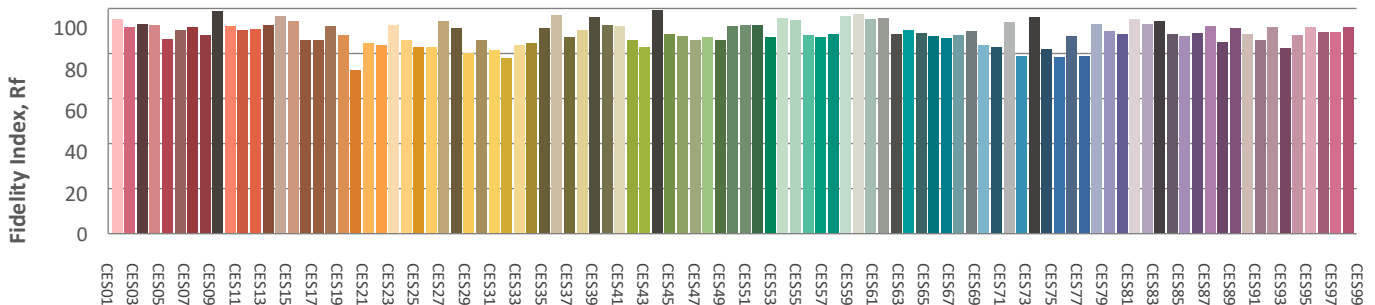
Hue bin



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	18,7	19,3	18,8	19,5	19,7	18,7	19,3	18,8	19,5	19,7
	3H	18,4	19,1	18,8	19,3	19,5	18,4	19,1	18,8	19,3	19,5
	4H	18,3	19,0	18,7	19,2	19,5	18,3	19,0	18,7	19,2	19,5
	6H	18,3	18,9	18,6	19,2	19,5	18,3	18,9	18,6	19,2	19,5
	8H	18,3	18,8	18,6	19,1	19,5	18,3	18,8	18,6	19,1	19,5
	12H	18,2	18,7	18,6	19,1	19,5	18,2	18,7	18,6	19,1	19,5
4H	2H	18,3	19,0	18,7	19,2	19,5	18,3	19,0	18,7	19,2	19,5
	3H	18,2	18,7	18,6	19,1	19,5	18,2	18,7	18,6	19,1	19,5
	4H	18,1	18,6	18,5	19,0	19,5	18,1	18,6	18,5	19,0	19,5
	6H	18,0	18,5	18,5	18,9	19,2	18,0	18,5	18,5	18,9	19,2
	8H	18,0	18,4	18,5	18,8	19,1	18,0	18,4	18,5	18,8	19,1
	12H	17,9	18,3	18,4	18,7	19,1	17,9	18,3	18,4	18,7	19,1
8H	4H	17,9	18,4	18,5	18,8	19,1	17,9	18,4	18,5	18,8	19,1
	6H	17,9	18,2	18,4	18,7	19,2	17,9	18,2	18,4	18,7	19,2
	8H	17,9	18,1	18,4	18,7	19,3	17,9	18,1	18,4	18,7	19,3
	12H	17,8	18,0	18,4	18,5	19,1	17,8	18,0	18,4	18,5	19,1
12H	4H	17,9	18,3	18,4	18,7	19,1	17,9	18,3	18,4	18,7	19,1
	6H	17,9	18,1	18,4	18,7	19,3	17,9	18,1	18,4	18,7	19,3
	8H	17,8	18,0	18,4	18,5	19,1	17,8	18,0	18,4	18,5	19,1
Variation of the observer position for the luminaire distance S											
S = 1.0H	6,8 / -13,4					6,8 / -13,4					
S = 1.5H	9,6 / -13,8					9,6 / -13,8					
S = 2.0H	11,6 / -13,9					11,6 / -13,9					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 1895lm total luminous flux											