

LM-79

Test Report

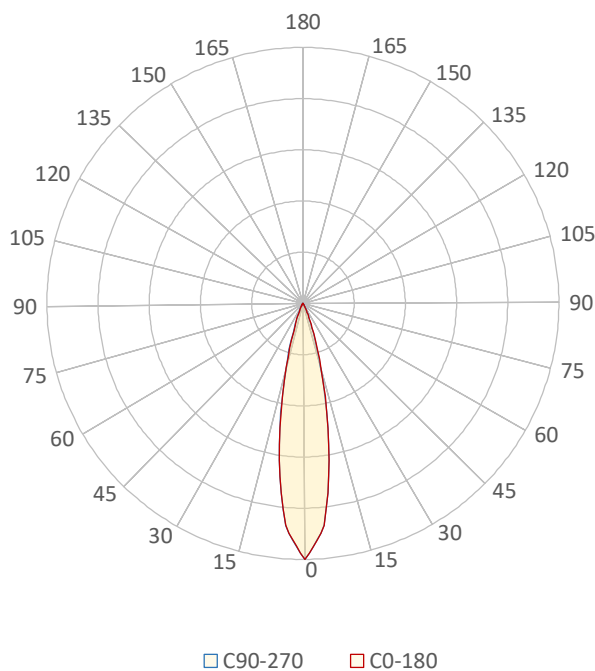
LM79-OTIS-XL-3000K-CRI80-SPOT

General Description

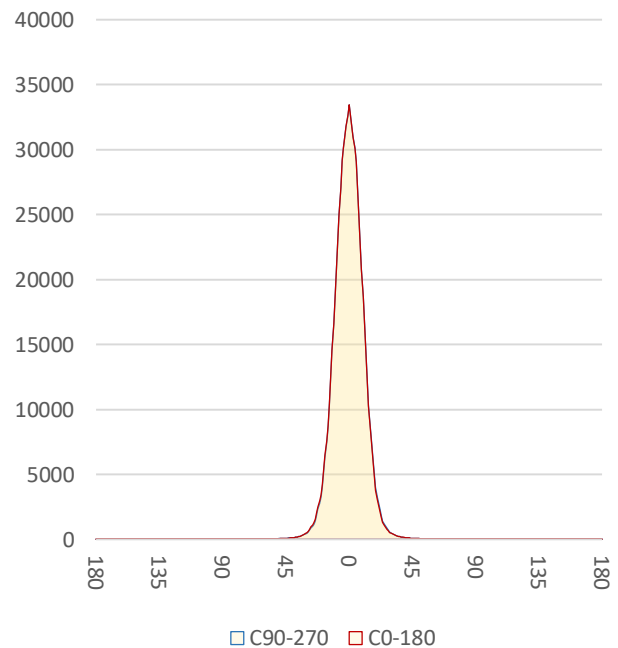
Item number	
Date and time	28-8-2019 16:00:21
CCT (Kelvin)	3052 K
Beam angle	21,4°
Luminous flux	5545 lm
Efficiency	101 lm/watt
Weighted energy	55,0 kWh/1000h
Power factor	0,99
CRI (RA)	80,8
Fidelity index Rf	Rf 84,2
Gammut index Rg	Rg 94,8
Peak	33612 cd



Polar diagram



Cartesian diagram



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info@cls-led.com
www.cls-led.com

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Beam details	1m	2m	3m	4m	5m														
Lux*	33447 lx	8362 lx	3716 lx	2090 lx	1338 lx														
*measured at center of beam																			
Footcandles*	3107,4 fcd	776,8 fcd	345,3 fcd	194,2 fcd	124,3 fcd														
Beam width (meter)	0,4 m	0,8 m	1,1 m	1,5 m	1,9 m														
Beam width (Feet)	1,2 ft	2,5 ft	3,7 ft	5 ft	6,2 ft														
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
33447lx	8362lx	3716lx	2090lx	1338lx	929lx	683lx	523lx	413lx	334lx	276lx	232lx	198lx	171lx	149lx	131lx	116lx	103lx	93lx	84lx
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
3107,4fcd	776,8fcd	345,3fcd	194,2fcd	124,3fcd	86,3fcd	63,4fcd	48,6fcd	38,4fcd	31,1fcd	25,7fcd	21,6fcd	18,4fcd	15,9fcd	13,8fcd	12,1fcd	10,8fcd	9,6fcd	8,6fcd	7,8fcd
Intensities in 0° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
33,4K	33,5K	33,6K	32,5K	30,9K	29,2K	27,6K	26,0K	23,7K	21,1K	18,6K	16,0K	13,5K	11,8K	10,2K	8,6K	7,0K	5,3K	4,7K	4,0K
100%	100%	100%	97%	92%	87%	83%	78%	71%	63%	56%	48%	40%	35%	30%	26%	21%	16%	14%	12%
Intensities in 90° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
33,4K	33,5K	33,6K	32,5K	30,9K	29,2K	27,6K	26,0K	23,7K	21,1K	18,6K	16,0K	13,5K	11,8K	10,2K	8,6K	7,0K	5,3K	4,7K	4,0K
100%	100%	100%	97%	92%	87%	83%	78%	71%	63%	56%	48%	40%	35%	30%	26%	21%	16%	14%	12%
Intensities in 180° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
33,4K	33,4K	33,3K	32,6K	30,9K	29,1K	27,4K	25,6K	23,5K	21,0K	18,5K	16,0K	13,5K	11,5K	9,9K	8,3K	6,7K	5,1K	4,1K	3,5K
100%	100%	100%	97%	92%	87%	82%	77%	70%	63%	55%	48%	40%	34%	30%	25%	20%	15%	12%	11%
Intensities in 270° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
33,4K	33,4K	33,3K	32,6K	30,9K	29,1K	27,4K	25,6K	23,5K	21,0K	18,5K	16,0K	13,5K	11,5K	9,9K	8,3K	6,7K	5,1K	4,1K	3,5K
100%	100%	100%	97%	92%	87%	82%	77%	70%	63%	55%	48%	40%	34%	30%	25%	20%	15%	12%	11%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
21,4°		39,2°				52,5°				99,3%				98,6%					



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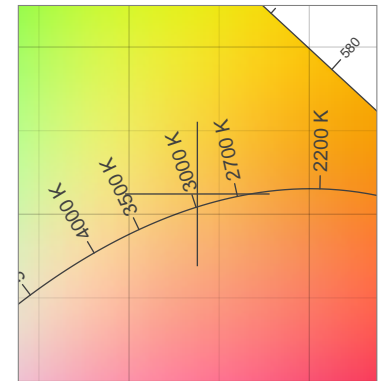
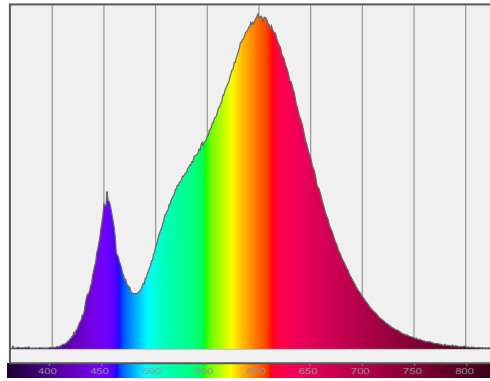
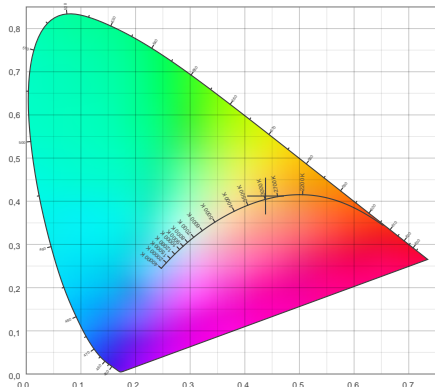
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Color details



CIE 1931

x: 0,438



Spectra

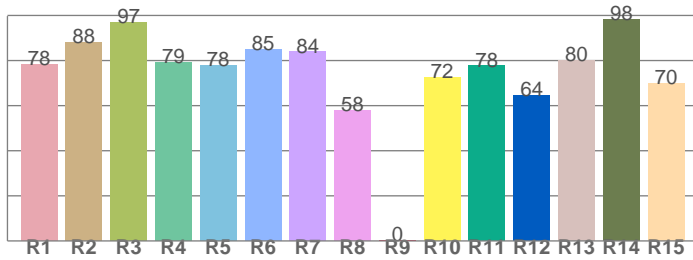
CIE 1931 ZOOM

3052 K

y: 0,412

Δuv : 0,0031

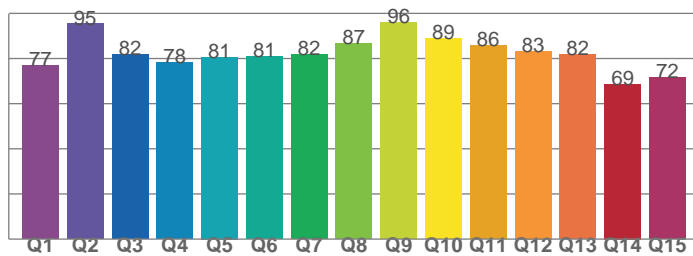
CRI: 80,8 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
78,2	88,0	96,8	79,2	77,8	84,8	83,9	57,8
R9	R10	R11	R12	R13	R14	R15	
0,4	72,5	77,6	64,4	80,3	98,2	69,7	

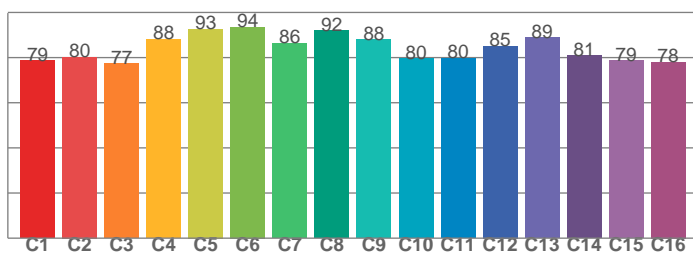
CQS: 81,0



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
76,8	95,4	81,9	78,3	80,7	80,9	81,8	86,5
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,9	88,8	85,7	83,3	81,8	68,7	71,6	

TM30: 84,2



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

C1	C2	C3	C4	C5	C6	C7	C8
78,6	80,2	77,3	88,2	92,6	93,5	86,4	92,0
C9	C10	C11	C12	C13	C14	C15	
88,0	79,6	79,7	85,1	88,9	81,0	78,8	

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
3052 K	80,8	0,4	84,2	94,8	81,0	0,438	0,412	0,248	0,350	0,0031



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info@cls-led.com
www.cls-led.com

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TM30 details

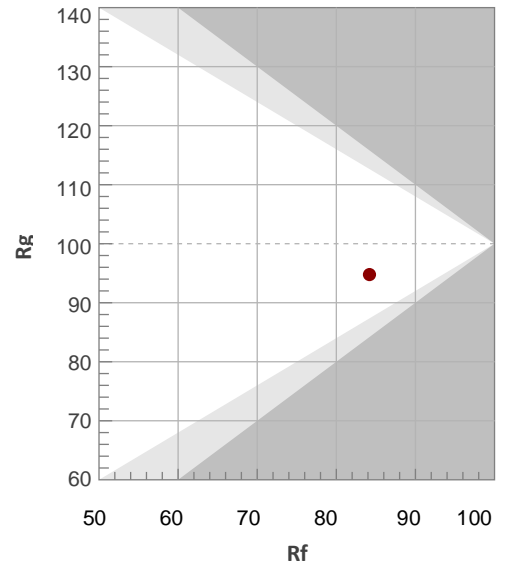
Rf 84,2

Fidelity index Rf

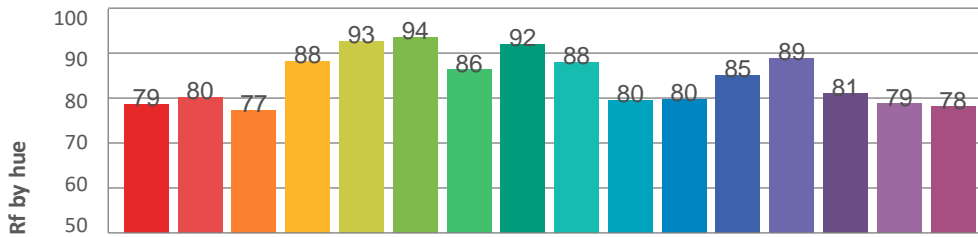
Rg 94,8

Gamut index Rg

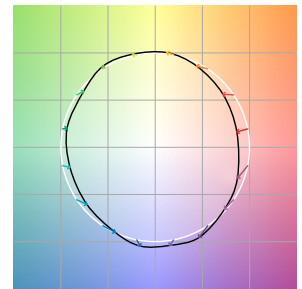
Hue Bin	Rf	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	-1%
2	80	-9%	7%
3	77	-4%	11%
4	88	1%	8%
5	93	1%	4%
6	94	2%	-2%
7	86	-4%	-7%
8	92	-5%	-2%
9	88	-7%	3%
10	80	-6%	10%
11	80	-2%	15%
12	85	6%	5%
13	89	5%	-5%
14	81	5%	-14%
15	79	-3%	-14%
16	78	-8%	-15%



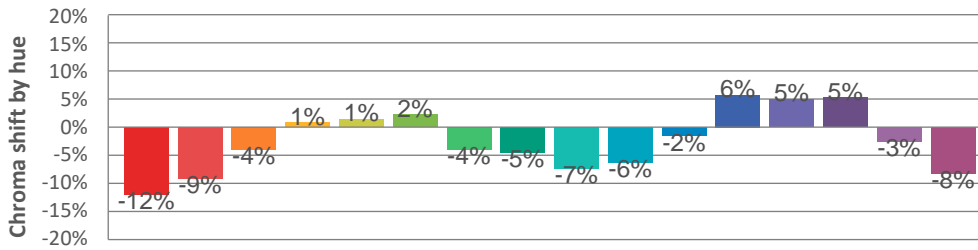
Hue binH



Color vector graphics



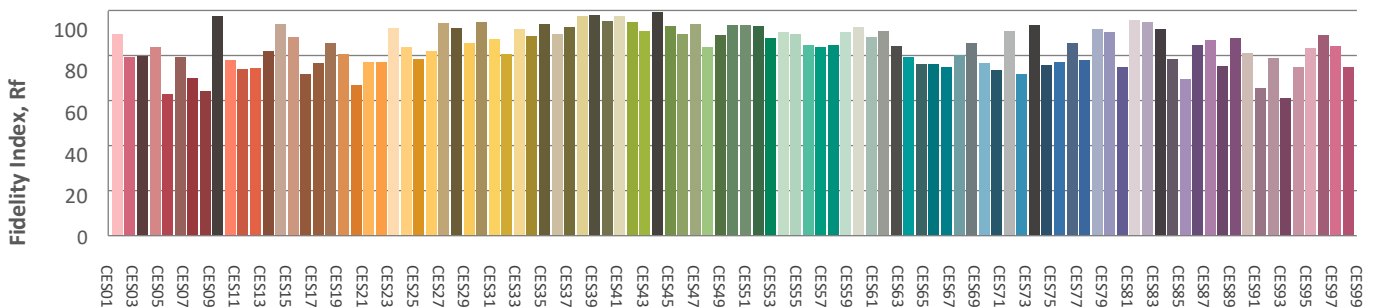
Hue bin



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
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n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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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 5545lm total luminous flux										



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