

LM-79

Test Report

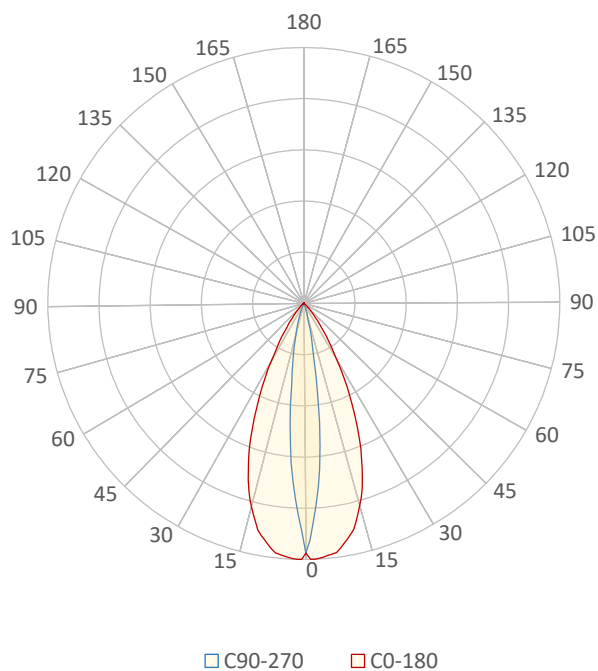
LM79-HYLO-4000K-CRI80-DEG12x46

General Discription

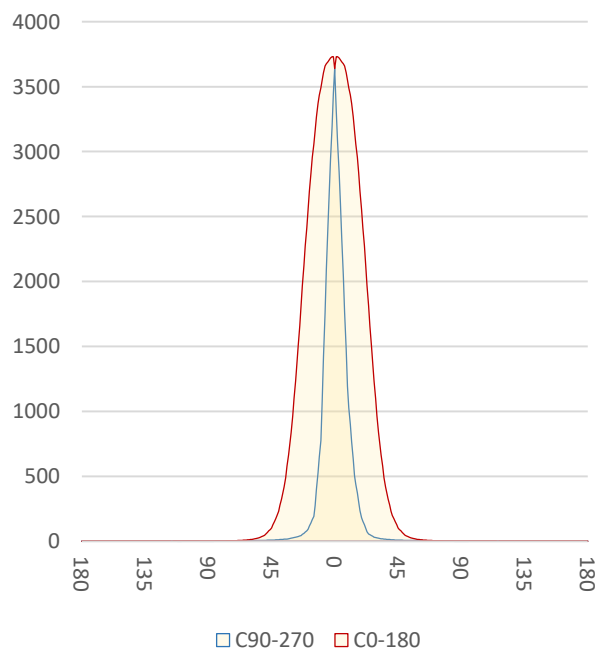
Item number	H-X-X-02-02-2-2
Date and time	29-6-2018 10:41:42
CCT (Kelvin)	3797 K
Beam angle	13,7 x 47,3°
Luminous flux	1364 lm
Efficiency	146 lm/watt
Weighted energy	9,4 kWh/1000h
Power factor	0,93
CRI (RA)	83,4
Fidelity index Rf	Rf 83,2
Gammut index Rg	Rg 98,1
Peak	3731 cd



Polar diagram



Cartesian diagram



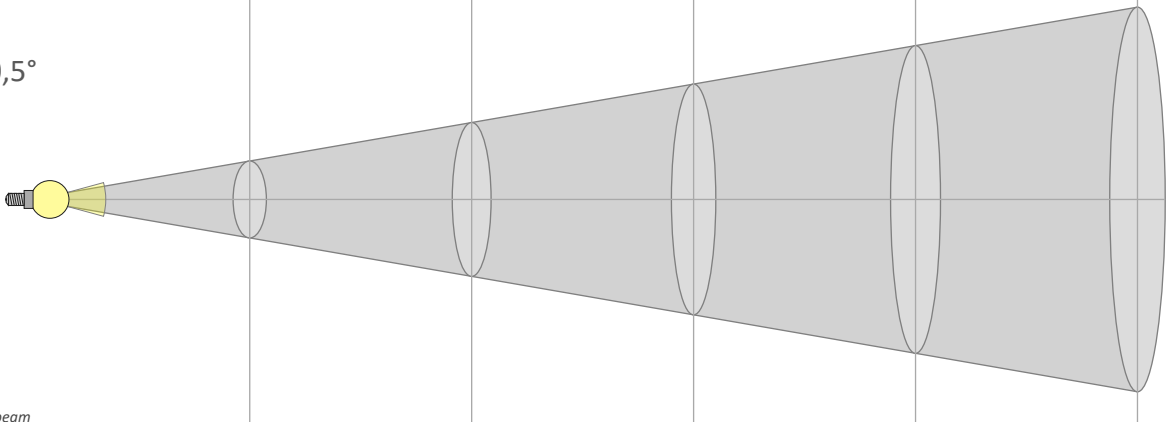
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Beam details				1m		2m		3m		4m		5m							
Lux*				3640 lx		910 lx		404 lx		227 lx		146 lx							
30,5° 																			
*measured at center of beam																			
Footcandles*				338,1 fcd		84,5 fcd		37,6 fcd		21,1 fcd		13,5 fcd							
Beam width (meter)				0,5 m		1,1 m		1,6 m		2,2 m		2,7 m							
Beam width (Feet)				1,8 ft		3,6 ft		5,4 ft		7,2 ft		8,9 ft							
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3640lx	910lx	404lx	227lx	146lx	101lx	74lx	57lx	45lx	36lx	30lx	25lx	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
338,1fcd	84,5fcd	37,6fcd	21,1fcd	13,5fcd	9,4fcd	6,9fcd	5,3fcd	4,2fcd	3,4fcd	2,8fcd	2,3fcd	2fcd	1,7fcd	1,5fcd	1,3fcd	1,2fcd	1fcd	0,9fcd	0,8fcd
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°
3640	3731	3706	3676	3608	3492	3371	3162	2953	2695	2414	2124	1814	1503	1233	966	751	578	418	325
100%	103%	102%	101%	99%	96%	93%	87%	81%	74%	66%	58%	50%	41%	34%	27%	21%	16%	11%	9%
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°
3640	3195	2683	2095	1417	777	526	275	168	119	80	62	44	38	32	27	22	18	16	14
100%	88%	74%	58%	39%	21%	14%	8%	5%	3%	2%	2%	1%	1%	1%	1%	1%	0%	0%	0%
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°
3640	3731	3706	3676	3608	3492	3371	3162	2953	2695	2414	2124	1814	1503	1233	966	751	578	418	325
100%	103%	102%	101%	99%	96%	93%	87%	81%	74%	66%	58%	50%	41%	34%	27%	21%	16%	11%	9%
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°
3640	3076	2603	2051	1478	1031	765	505	371	237	155	100	57	44	32	26	21	18	16	15
100%	85%	72%	56%	41%	28%	21%	14%	10%	7%	4%	3%	2%	1%	1%	1%	1%	1%	0%	0%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
30,5°				51,7°				66,6°				98,6%				96,3%			



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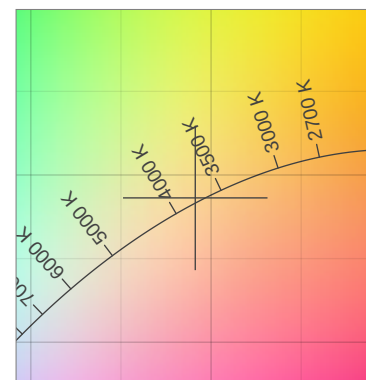
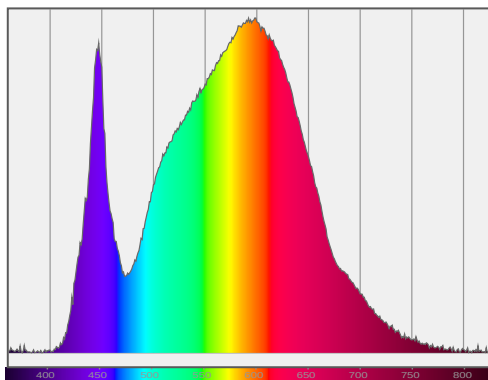
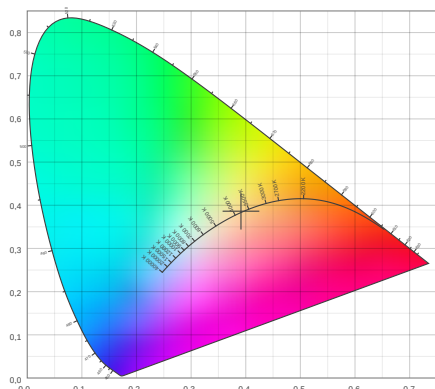
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Color details



CIE 1931

x: 0,391

3797 K

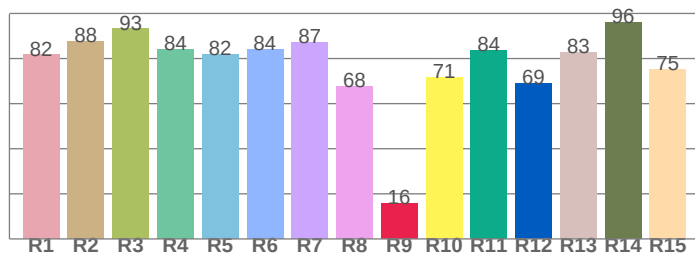
y: 0,386

Spectra

CIE 1931 ZOOM

Δuv : 0,0014

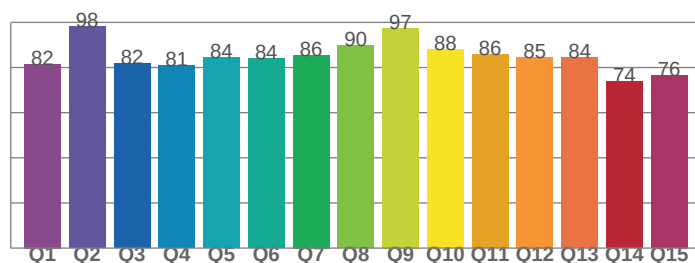
CRI: **83,4** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
81,6	87,6	93,2	84,1	81,9	83,9	87,0	67,6
R9	R10	R11	R12	R13	R14	R15	
15,6	71,5	83,7	69,1	82,6	96,1	75,0	

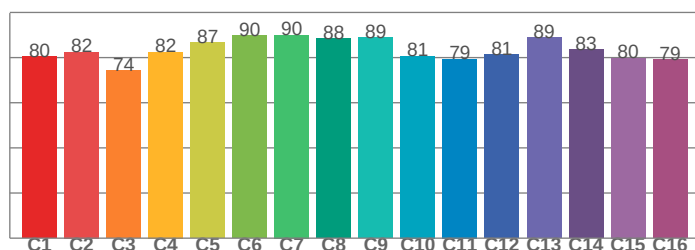
CQS: **83,8**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,5	98,3	81,7	81,0	84,3	84,2	85,5	89,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,5	87,9	85,7	84,7	84,5	73,7	76,4	

TM30: **83,2**



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

C1	C2	C3	C4	C5	C6	C7	C8
80,5	82,4	74,3	82,4	86,6	89,7	90,0	88,5
C9	C10	C11	C12	C13	C14	C15	
88,9	80,8	79,4	81,3	88,9	83,4	79,9	

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
3797 K	83,4	15,6	83,2	98,1	83,8	0,391	0,386	0,228	0,338	0,0014



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TM30 details

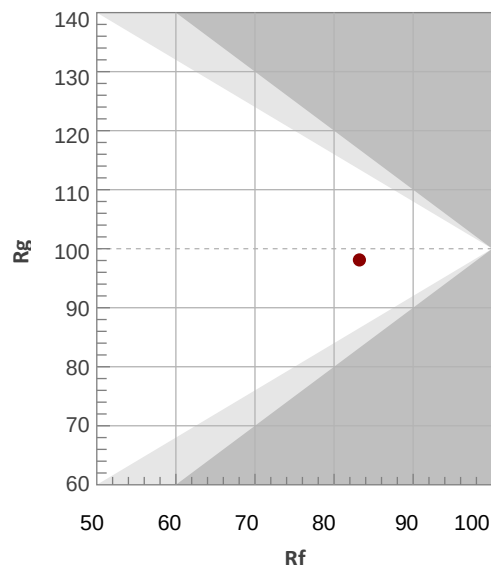
Rf 83,2

Fidelity index Rf

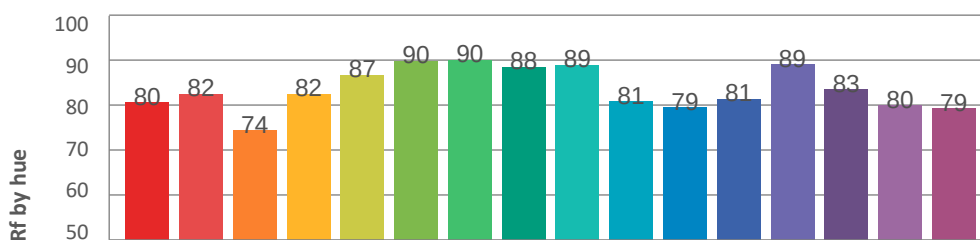
Rg 98,1

Gamut index Rg

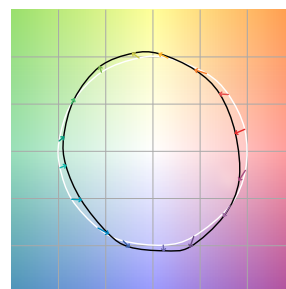
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	-2%
2	82	-7%	6%
3	74	-4%	12%
4	82	3%	10%
5	87	6%	6%
6	90	6%	-2%
7	90	0%	-6%
8	88	-4%	-5%
9	89	-7%	-1%
10	81	-8%	6%
11	79	-1%	12%
12	81	5%	7%
13	89	6%	-1%
14	83	7%	-9%
15	80	1%	-13%
16	79	-4%	-11%



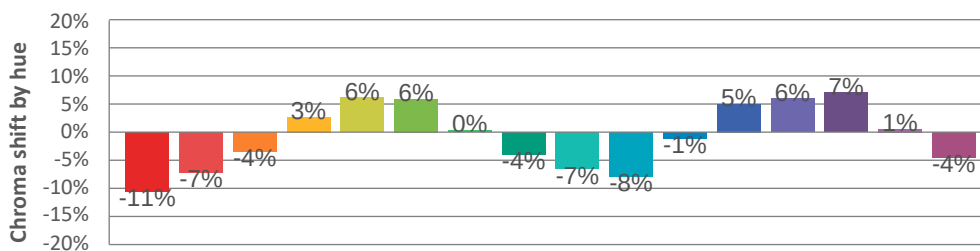
Hue binH



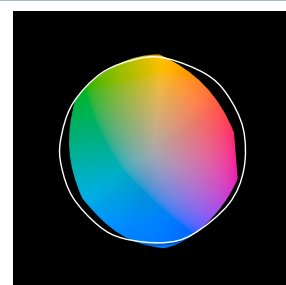
Color vector graphics



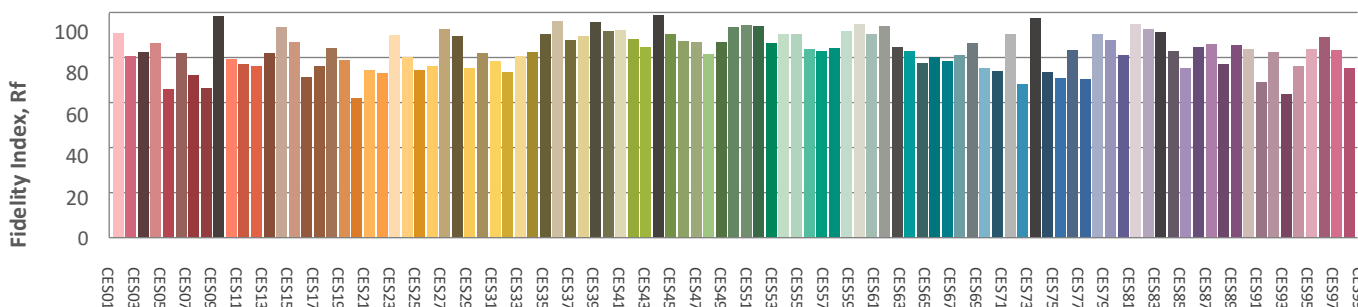
Hue bin



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	18,6	19,3	18,9	19,5	19,7	11,0	11,6	11,2	11,8	12,0
	3H	18,5	19,2	18,8	19,4	19,7	11,0	11,6	11,2	11,8	12,1
	4H	18,5	19,1	18,8	19,3	19,6	10,9	11,5	11,3	11,8	12,1
	6H	18,4	19,0	18,8	19,3	19,6	10,9	11,5	11,3	11,8	12,1
	8H	18,4	18,9	18,8	19,2	19,5	11,0	11,5	11,3	11,8	12,1
	12H	18,4	18,9	18,7	19,2	19,5	11,0	11,4	11,3	11,8	12,1
4H	2H	18,4	19,0	18,8	19,3	19,6	11,0	11,5	11,3	11,8	12,1
	3H	18,4	18,8	18,7	19,2	19,5	11,0	11,5	11,4	11,8	12,1
	4H	18,3	18,7	18,7	19,1	19,4	11,1	11,5	11,4	11,8	12,2
	6H	18,3	18,6	18,7	19,0	19,4	11,1	11,5	11,5	11,8	12,2
	8H	18,3	18,6	18,7	19,0	19,4	11,2	11,5	11,6	11,9	12,3
	12H	18,3	18,5	18,7	18,9	19,4	11,2	11,5	11,6	11,9	12,3
8H	4H	18,2	18,5	18,6	18,9	19,3	11,0	11,4	11,5	11,7	12,2
	6H	18,2	18,4	18,6	18,8	19,3	11,2	11,4	11,6	11,8	12,3
	8H	18,2	18,4	18,6	18,8	19,3	11,3	11,4	11,7	11,9	12,4
	12H	18,2	18,3	18,7	18,8	19,3	11,3	11,5	11,8	12,0	12,5
12H	4H	18,2	18,5	18,6	18,9	19,3	11,0	11,3	11,5	11,7	12,1
	6H	18,1	18,3	18,6	18,8	19,3	11,2	11,4	11,6	11,8	12,3
	8H	18,1	18,3	18,6	18,8	19,3	11,3	11,4	11,8	11,9	12,4
Variation of the observer position for the luminaire distance S											
S = 1,0H		+5,2 / -6,9					+4,1 / -3,5				
S = 1,5H		+8,0 / -8,2					+5,7 / -4,3				
S = 2,0H		+10,0 / -9,0					+7,5 / -4,9				
Standard table		BK00					BK01				
Correction summand		0,1					-6,8				
Corrected glare indices referring to 1364lm total luminous flux											



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