

LM-79

Test Report

LM79-HYLO-4000K-CRI80-DEG61

General Discription

Item number H-X-X-02-02-4-4

Date and time 29-6-2018 10:30:27

CCT (Kelvin) 3807 K

Beam angle 58,1°

Luminous flux 847 lm

Efficiency 91 lm/watt

Weighted energy 9,4 kWh/1000h

Power factor 0,93

CRI (RA) 83,6

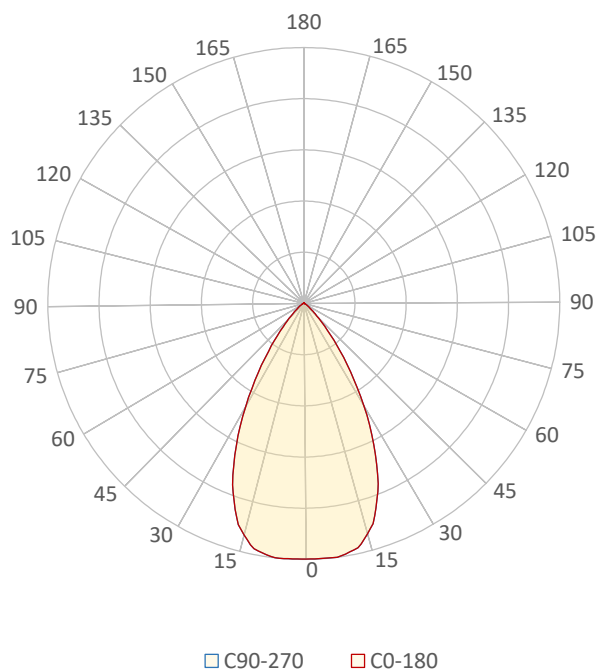
Fidelity index Rf Rf 83,1

Gammut index Rg Rg 98,4

Peak 894 cd



Polar diagram



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Beam details	1m	2m	3m	4m	5m
Lux*	893 lx	223 lx	99 lx	56 lx	36 lx

58,1°

*measured at center of beam

Footcandles*	83,0 fcd	20,7 fcd	9,2 fcd	5,2 fcd	3,3 fcd
Beam width (meter)	1,1 m	2,2 m	3,3 m	4,4 m	5,6 m
Beam width (Feet)	3,6 ft	7,3 ft	10,9 ft	14,6 ft	18,2 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
893lx	223lx	99lx	56lx	36lx	25lx	18lx	14lx	11lx	9lx	7lx	6lx	5lx	5lx	4lx	3lx	3lx	3lx	2lx	2lx
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
83fcd	20,7fcd	9,2fcd	5,2fcd	3,3fcd	2,3fcd	1,7fcd	1,3fcd	1fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd

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°
893	893	894	894	892	883	875	849	821	783	732	681	616	549	482	414	347	290	234	187
100%	100%	100%	100%	100%	99%	98%	95%	92%	88%	82%	76%	69%	62%	54%	46%	39%	33%	26%	21%

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°
893	893	894	894	892	883	875	849	821	783	732	681	616	549	482	414	347	290	234	187
100%	100%	100%	100%	100%	99%	98%	95%	92%	88%	82%	76%	69%	62%	54%	46%	39%	33%	26%	21%

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°
893	893	894	894	892	883	875	849	821	783	732	681	616	549	482	414	347	290	234	187
100%	100%	100%	100%	100%	99%	98%	95%	92%	88%	82%	76%	69%	62%	54%	46%	39%	33%	26%	21%

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°
893	893	894	894	892	883	875	849	821	783	732	681	616	549	482	414	347	290	234	187
100%	100%	100%	100%	100%	99%	98%	95%	92%	88%	82%	76%	69%	62%	54%	46%	39%	33%	26%	21%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
58,1°	87,3°	109°	97,3%	92,6%



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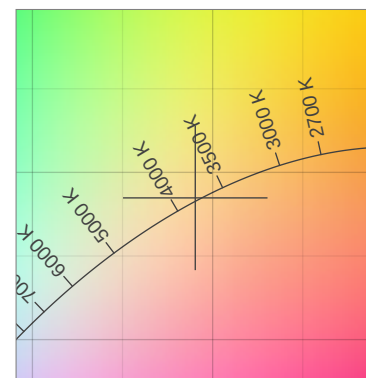
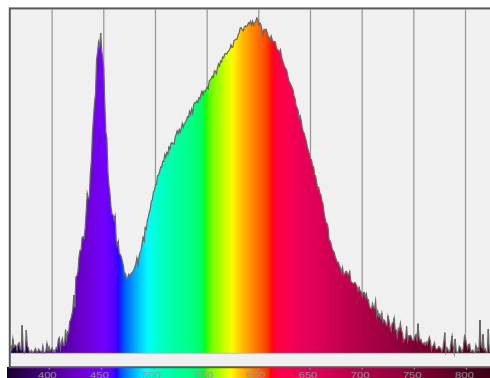
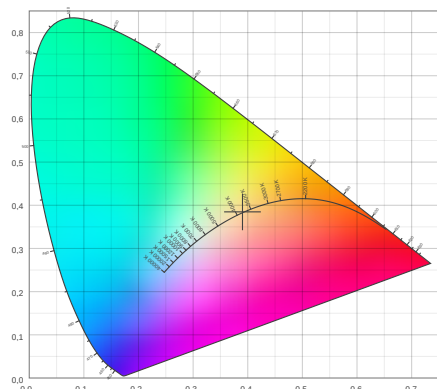
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Color details



CIE 1931

x: 0,390

3807 K

y: 0,385



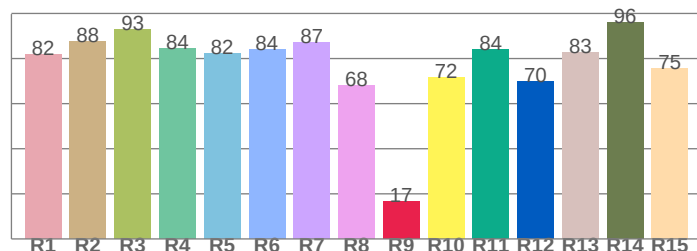
Spectra

CIE 1931 ZOOM

Δuv : 0,0009

CRI: **83,6** (R1-R8)

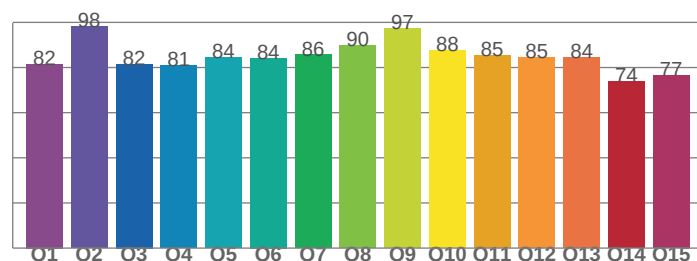
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
81,9	87,8	93,1	84,4	82,3	84,1	87,0	68,1
R9	R10	R11	R12	R13	R14	R15	
16,7	71,8	84,1	69,8	82,9	96,0	75,5	

CQS: **83,8**

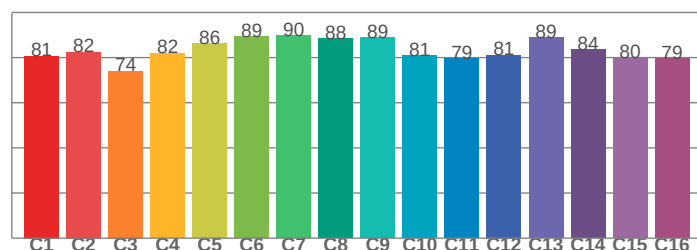
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,6	98,2	81,6	81,1	84,4	84,2	85,6	89,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,4	87,7	85,5	84,6	84,5	74,0	76,6	

TM30: **83,1**

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



C1	C2	C3	C4	C5	C6	C7	C8
80,7	82,5	74,1	81,9	86,2	89,3	89,7	88,4
C9	C10	C11	C12	C13	C14	C15	
88,9	81,0	79,5	81,1	88,8	83,7	80,1	

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
3807 K	83,6	16,7	83,1	98,4	83,8	0,390	0,385	0,228	0,338	0,0009



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TM30 details

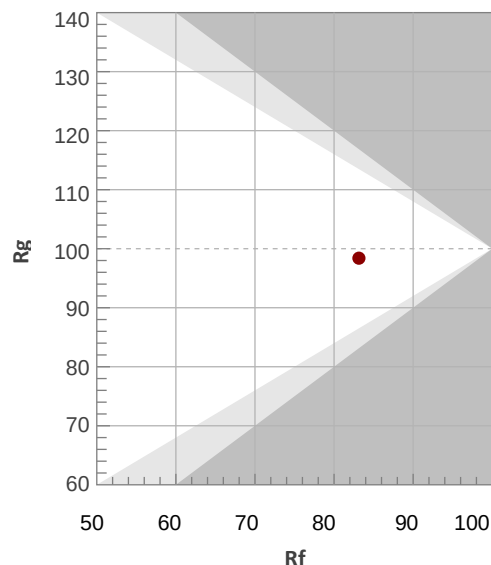
Rf 83,1

Fidelity index Rf

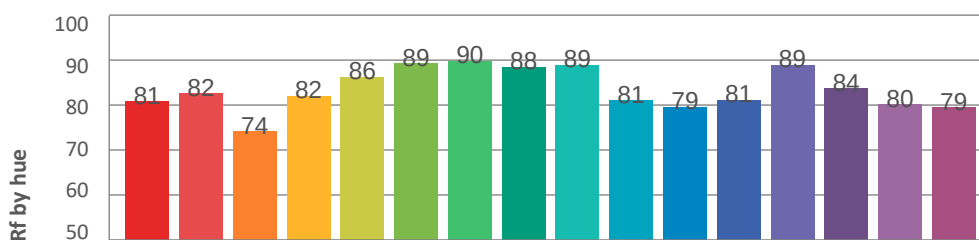
Rg 98,4

Gamut index Rg

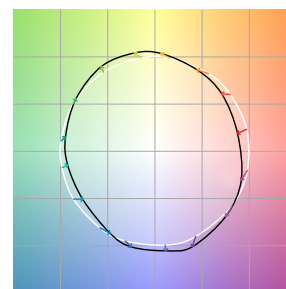
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-10%	-2%
2	82	-7%	6%
3	74	-3%	12%
4	82	3%	10%
5	86	7%	6%
6	89	6%	-2%
7	90	1%	-6%
8	88	-4%	-5%
9	89	-6%	-2%
10	81	-8%	6%
11	79	-1%	12%
12	81	5%	7%
13	89	6%	0%
14	84	7%	-9%
15	80	1%	-13%
16	79	-4%	-11%



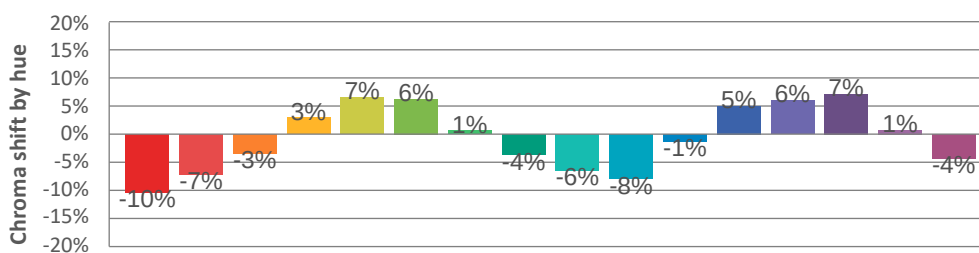
Hue binH



Color vector graphics



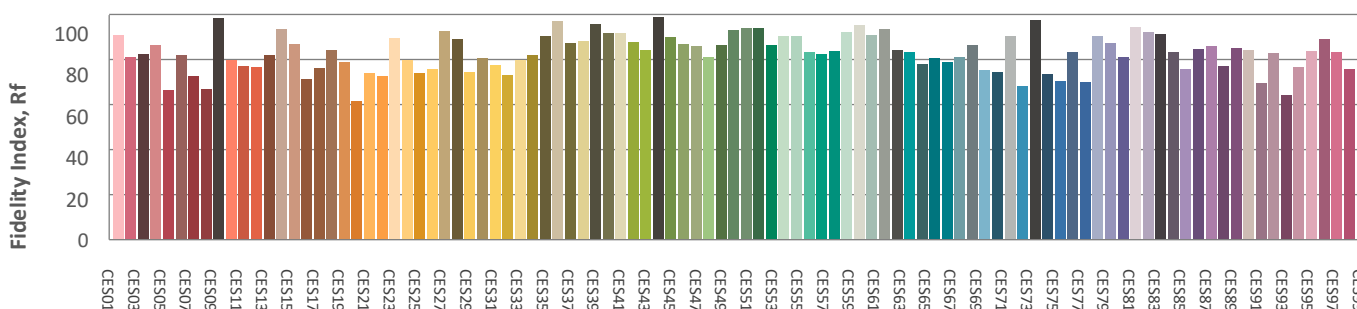
Hue bin



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	17,6	18,4	17,9	18,6	18,8	17,6	18,4	17,9	18,6	18,8
	3H	17,6	18,2	17,9	18,5	18,8	17,6	18,2	17,9	18,5	18,8
	4H	17,5	18,2	17,9	18,5	18,7	17,5	18,2	17,9	18,5	18,7
	6H	17,5	18,1	17,9	18,4	18,7	17,5	18,1	17,9	18,4	18,7
	8H	17,5	18,0	17,8	18,4	18,7	17,5	18,0	17,8	18,4	18,7
	12H	17,5	18,0	17,8	18,3	18,7	17,5	18,0	17,8	18,3	18,7
4H	2H	17,5	18,1	17,8	18,4	18,7	17,5	18,1	17,8	18,4	18,7
	3H	17,5	18,0	17,8	18,3	18,7	17,5	18,0	17,8	18,3	18,7
	4H	17,5	17,9	17,9	18,3	18,7	17,5	17,9	17,9	18,3	18,7
	6H	17,5	17,8	17,9	18,2	18,6	17,5	17,8	17,9	18,2	18,6
	8H	17,5	17,8	17,9	18,2	18,6	17,5	17,8	17,9	18,2	18,6
	12H	17,5	17,8	17,9	18,2	18,6	17,5	17,8	17,9	18,2	18,6
8H	4H	17,4	17,7	17,8	18,1	18,6	17,4	17,7	17,8	18,1	18,6
	6H	17,4	17,7	17,9	18,1	18,6	17,4	17,7	17,9	18,1	18,6
	8H	17,4	17,6	17,9	18,1	18,6	17,4	17,6	17,9	18,1	18,6
	12H	17,4	17,6	17,9	18,1	18,6	17,4	17,6	17,9	18,1	18,6
12H	4H	17,4	17,7	17,8	18,1	18,5	17,4	17,7	17,8	18,1	18,5
	6H	17,4	17,6	17,9	18,1	18,5	17,4	17,6	17,9	18,1	18,5
	8H	17,4	17,6	17,9	18,0	18,6	17,4	17,6	17,9	18,0	18,6
Variation of the observer position for the luminaire distance S											
S = 1,0H		+3,5 / -4,5					+3,5 / -4,5				
S = 1,5H		+6,1 / -5,7					+6,1 / -5,7				
S = 2,0H		+8,1 / -6,7					+8,1 / -6,7				
Standard table		BK00					BK00				
Correction summand		-0,7					-0,7				
Corrected glare indices referring to 847lm total luminous flux											



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