

LM-79

Test Report

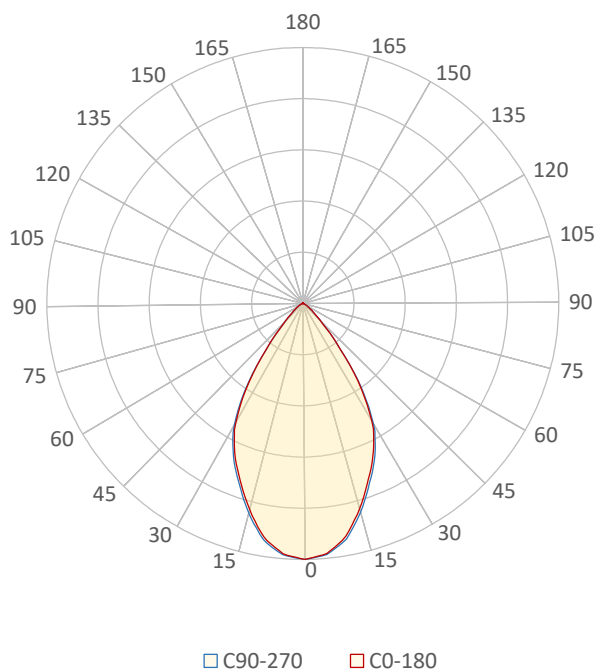
LM79-RUBY-6-4000K-CRI80-FLOOD

General Description

Item number	RU-16-X-X-03-3-X
Date and time	18-11-2016 15:32:48
CCT (Kelvin)	3850 K
Beam angle	64°
Luminous flux	3004 lm
Efficiency	105 lm/watt
Weighted energy	28,6 kWh/1000h
Power factor	0,99
CRI (RA)	82,4
Fidelity index Rf	Rf 84,5
Gammut index Rg	Rg 97,6
Peak	3079 cd



Polar diagram



CLS LED BV
info@cls-led.com
www.cls-led.com

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Beam details	1m	2m	3m	4m	5m																			
Lux*	3078 lx	770 lx	342 lx	192 lx	123 lx																			
<i>*measured at center of beam</i>																								
Footcandles*	286,0 fcd	71,5 fcd	31,8 fcd	17,9 fcd	11,4 fcd																			
Beam width (meter)	1,2 m	2,5 m	3,7 m	5 m	6,2 m																			
Beam width (Feet)	4,1 ft	8,1 ft	12,2 ft	16,3 ft	20,3 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
3078lx	770lx	342lx	192lx	123lx	86lx	63lx	48lx	38lx	31lx	25lx	21lx	18lx	16lx	14lx	12lx	11lx	10lx	9lx	8lx					
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					
286fcd	71,5fcd	31,8fcd	17,9fcd	11,4fcd	7,9fcd	5,8fcd	4,5fcd	3,5fcd	2,9fcd	2,4fcd	2fcd	1,7fcd	1,5fcd	1,3fcd	1,1fcd	1fcd	0,9fcd	0,8fcd	0,7fcd					
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°					
3078	3068	3038	3007	2933	2852	2753	2624	2495	2375	2256	2141	2035	1929	1795	1658	1484	1253	1021	811					
100%	100%	99%	98%	95%	93%	89%	85%	81%	77%	73%	70%	66%	63%	58%	54%	48%	41%	33%	26%					
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°					
3078	3077	3051	3020	2968	2883	2799	2670	2536	2411	2300	2189	2078	1968	1840	1690	1539	1288	1029	800					
100%	100%	99%	98%	96%	94%	91%	87%	82%	78%	75%	71%	68%	64%	60%	55%	50%	42%	33%	26%					
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°					
3078	3068	3038	3007	2933	2852	2753	2624	2495	2375	2256	2141	2035	1929	1795	1658	1484	1253	1021	811					
100%	100%	99%	98%	95%	93%	89%	85%	81%	77%	73%	70%	66%	63%	58%	54%	48%	41%	33%	26%					
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°					
3078	3077	3051	3020	2968	2883	2799	2670	2536	2411	2300	2189	2078	1968	1840	1690	1539	1288	1029	800					
100%	100%	99%	98%	96%	94%	91%	87%	82%	78%	75%	71%	68%	64%	60%	55%	50%	42%	33%	26%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
63,5°					89,3°					112,6°					98,1%					92,6%				



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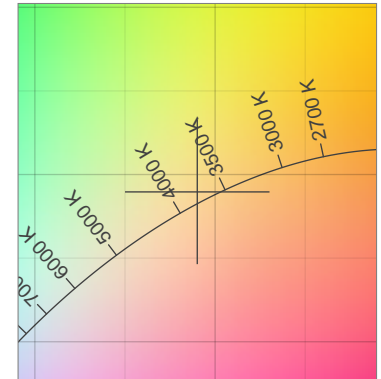
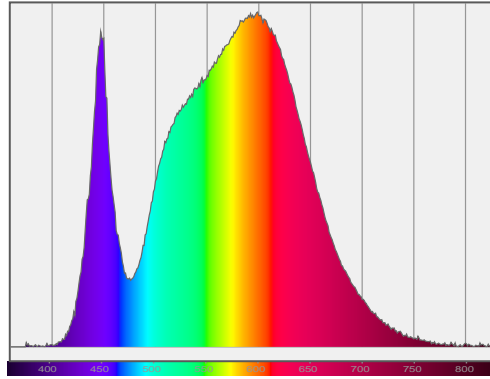
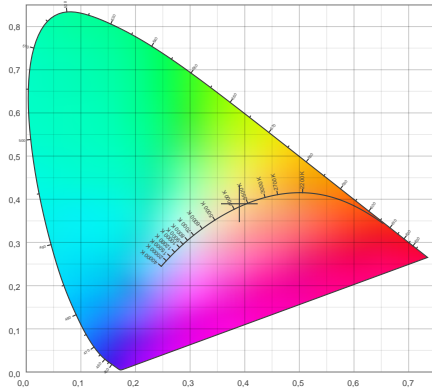
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Color details



CIE 1931

x: 0,390



Spectra

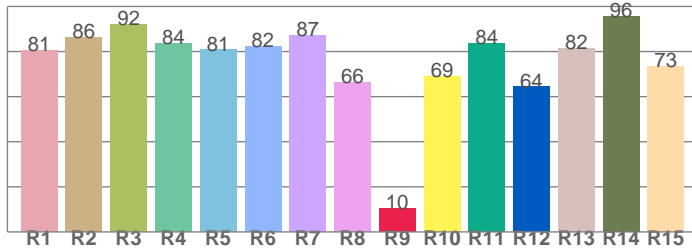
CIE 1931 ZOOM

3850 K

y: 0,390

Δuv : 0,0032

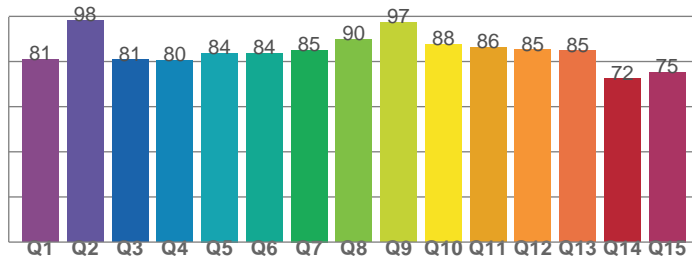
CRI: 82,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,6	86,4	92,2	83,7	80,7	82,4	87,0	66,3
R9	R10	R11	R12	R13	R14	R15	
10,3	68,9	83,6	64,3	81,6	95,6	73,3	

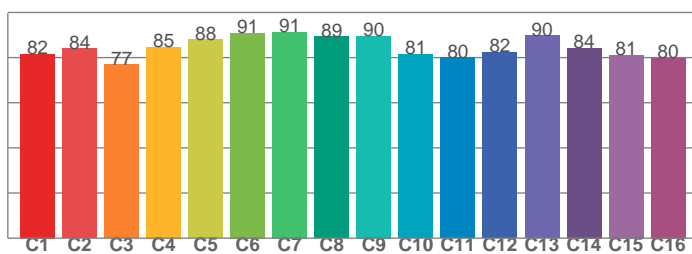
CQS: 83,3



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,0	98,3	80,7	80,3	83,8	83,5	85,1	89,7
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,3	87,7	86,1	85,2	84,7	72,3	75,4	

TM30: 84,5



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

C1	C2	C3	C4	C5	C6	C7	C8
81,7	84,1	76,8	84,7	88,1	90,9	91,3	89,4
C9	C10	C11	C12	C13	C14	C15	
89,6	81,5	80,1	82,4	89,8	84,3	81,1	

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
3850 K	82,4	10,3	84,5	97,6	83,3	0,390	0,390	0,226	0,339	0,0032



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info@cls-led.com
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TM30 details

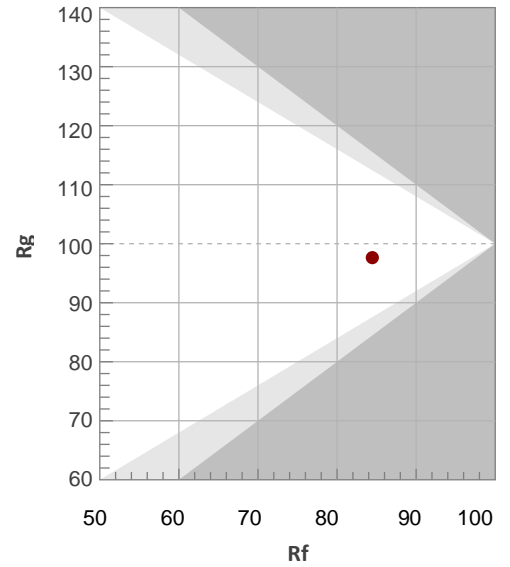
Rf 84,5

Fidelity index Rf

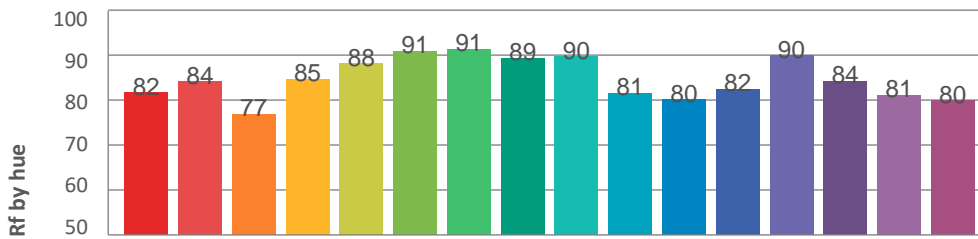
Rg 97,6

Gamut index Rg

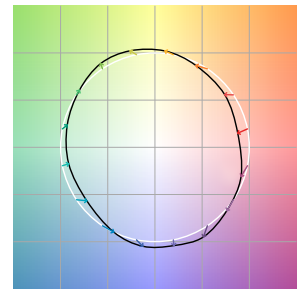
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	82	-11%	-2%
2	84	-8%	5%
3	77	-4%	12%
4	85	2%	10%
5	88	5%	6%
6	91	6%	-1%
7	91	0%	-6%
8	89	-4%	-5%
9	90	-7%	-1%
10	81	-9%	7%
11	80	-1%	14%
12	82	5%	8%
13	90	6%	-1%
14	84	7%	-10%
15	81	1%	-13%
16	80	-4%	-12%



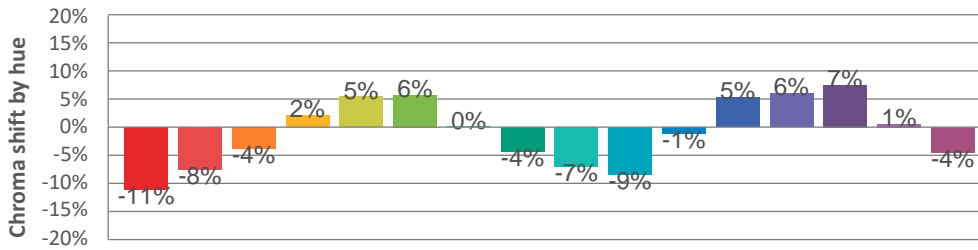
Hue binH



Color vector graphics



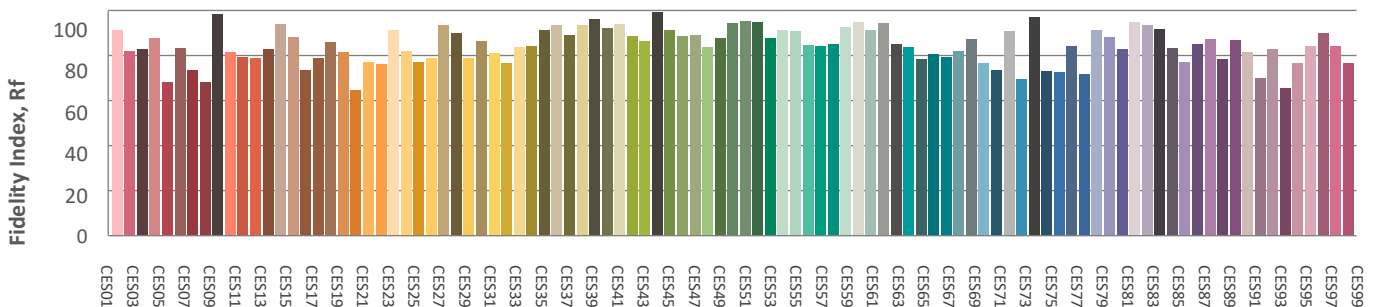
Hue bin



Color distortion graphics



Color Evaluation Sample



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 info@cls-led.com
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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
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 3004lm total luminous flux										



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