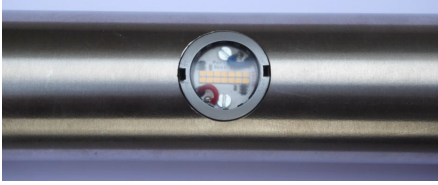


# Report of Photometry & Chromaticity for Footfall Lighting Ltd. SPOT MODULE (HANDRAIL LED)

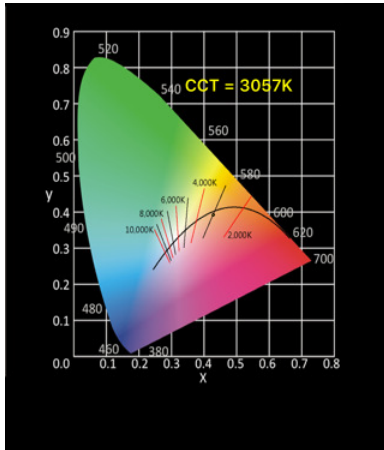
## A. Product Description



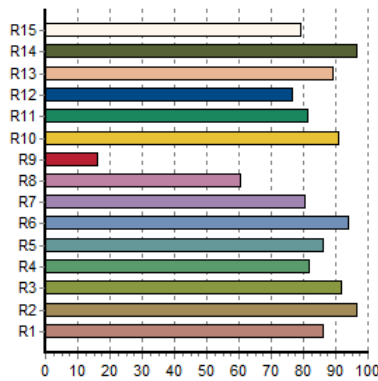
Product Name	SPOT MODULE	Sample Number	SPOT MODULE
Date	20-08-2018		
Manufacturer	Footfall Lighting		
Tester	lightlab photometrics	Reviewer	KB
Temperature	25degC	Re. Humidity(%)	50
Spectrum Range	: 380 ~ 780 nm.	Wavelength Step	: 1 nm.

## C. Photometry and Chromaticity

CIE_x	0.4282	$\Delta v$	-0.0034
CIE_y	0.3927	Ld(nm)	583.9
CIE_u'	0.2498	Purity(%)	46.0
CIE_v'	0.5155	FWHM(nm)	117.0
CCT(K)	3057	SP ratio	1.46
Luminaire lumens	100	PPFD(umol/sec m <sup>2</sup> )	
Lp(nm)	607.0		0.8
TLCI(Qa)	73.62	GAI	59.2

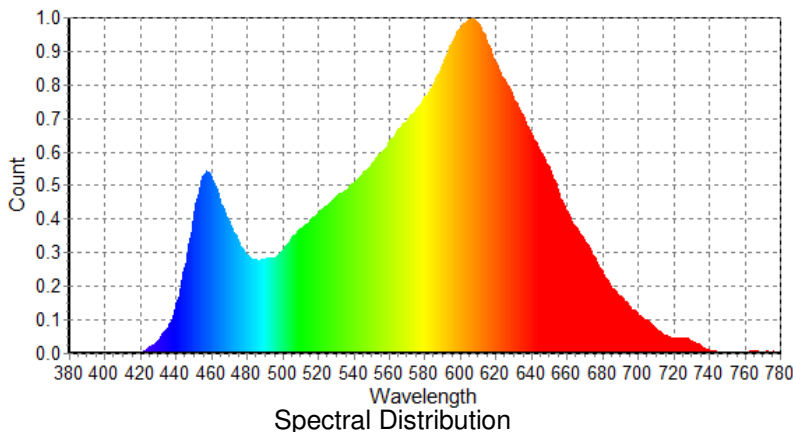


CIE1931 Chromaticity Diagram

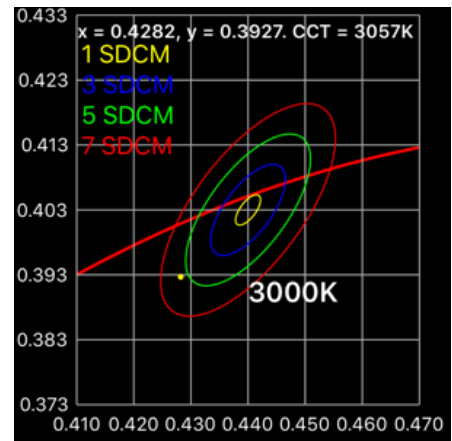


CRI(Ra)	85	Re(thru R1~R15)	81
Qa	85		
R1	86.4	R6	94.4
R2	96.9	R7	80.7
R3	92.4	R8	61.0
R4	82.2	R9	16.4
R5	86.6	R10	91.5
		R11	81.9
		R12	77.2
		R13	89.8
		R14	96.9
		R15	79.5

## Histogram Diagram of CRI

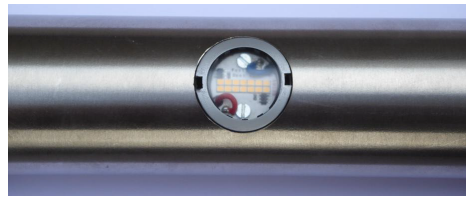


Spectral Distribution



IEC SDCM

filename : SPOT-MODULE.LDT  
 meas. number : 2670  
 luminaire number : SPOT MODULE  
 date / operator : 20-08-2018



**default lamp type(s)**

no of lamps	lamp type	luminaire lumens	input wattage
1	LED MODULE	100 lm	2.6 W

**dimensions**

luminaire	luminous area
length : 200 mm	diameter : 20 mm
width : 50 mm	height : 1 mm
height : 50 mm	

**coordinate system**

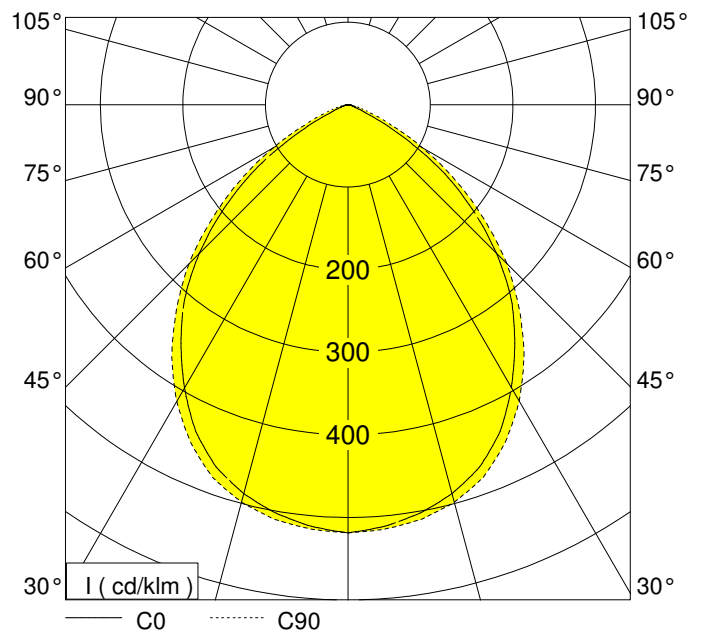
no of planes : 7	samples / plane : 37
first c-plane : 0.0 °	first gamma-angle : 0.0 °
step angle : 15.0 °	step angle : 5.0 °
last c-plane : 90.0 °	last gamma-angle : 180.0 °
symmetrics : symmetry to C0 / C90	

**performance**

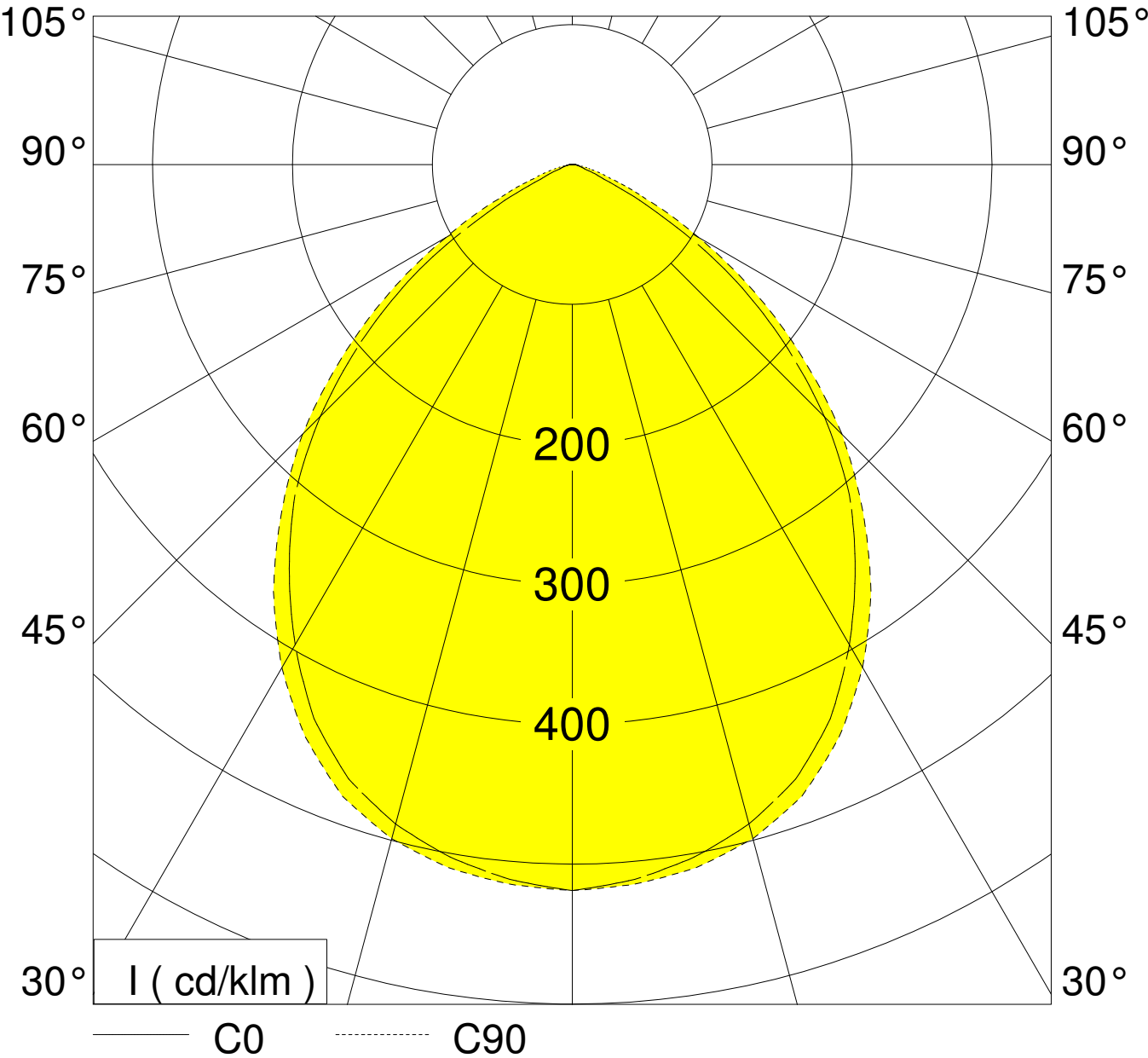
light output ratio : 100.0 %
DFF : 99.9 %
UFF : 0.1 %

**classification**

LiTG / DIN : A50
UTE : 1.00C
CIE : 65 94 99 100 100
BZ : 2 2 2 2 2 2 2 2
Ambient Temperature : 25 degC
Input Voltage : 240 V
Circuit Watts : 2.6W
Amps (running) : 0.025A
V.A. : 6.05VA
Power Factor : 0.43
CCT : 3057K (measured): 3050K (declared)
CRI (Ra) : 85
S/P Ratio : 1.5
Luminaire Lumens : 100 LLm
Output Current DC : 71.9mA
Output Voltage DC : 23.8V
Output Power : 1.71W
Luminaire Lm/circ.Watt : 38.5 LLm/circ.Watt
Driver Efficiency : 66%
Driver Details : ECOPAC ECP15-24VL



Measurements made are in absolute units. The luminaire is treated as if it was a lamp as it is not possible to measure each LED separately - hence an LOR of 100%  
The Light output ratio in real terms would be less than 100%. If it was possible to compare real LED lumens with the total output from the luminaire we could obtain an actual LOR  
This also means that the total lumens emitted from the LED's would be greater than the Luminaire Lumens measured. In reality the LED lumens would approximate to this value divided by the actual Light Output.



	C 0.0	C 15.0	C 30.0	C 45.0	C 60.0	C 75.0	C 90.0	
0.0°	518.50	518.50	518.50	518.50	518.50	518.50	518.50	
5.0°	512.50	513.20	513.90	514.10	514.30	515.10	515.90	
10.0°	502.30	503.40	504.50	505.50	506.50	508.20	509.90	
15.0°	487.60	488.60	489.70	490.70	491.70	495.10	498.40	
20.0°	467.00	468.10	469.20	471.00	472.80	476.40	480.00	
25.0°	436.60	440.10	443.70	443.60	443.50	447.40	451.20	
30.0°	396.00	400.70	405.30	404.50	403.60	409.30	414.90	
35.0°	352.50	353.10	353.70	357.50	361.20	366.60	372.10	
40.0°	308.20	304.00	299.80	305.80	312.00	317.50	322.90	
45.0°	254.60	250.40	246.20	250.70	255.20	263.90	272.50	
50.0°	196.70	192.80	188.90	194.90	200.90	208.00	215.10	
55.0°	138.40	134.60	130.70	139.00	147.30	153.20	159.10	
60.0°	74.60	77.80	81.10	89.30	97.30	100.80	104.20	
65.0°	24.80	31.00	37.10	45.50	53.90	56.00	58.10	
70.0°	9.90	11.50	13.10	18.90	24.60	26.80	29.10	
75.0°	6.40	6.80	7.20	9.40	11.60	13.10	14.60	
80.0°	3.80	4.20	4.60	5.30	6.00	6.30	6.60	
85.0°	2.40	2.50	2.60	2.70	2.80	2.30	1.80	
90.0°	1.60	1.50	1.40	1.20	1.00	0.60	0.20	
95.0°	0.80	0.80	0.80	0.50	0.20	0.10	0.00	
100.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
105.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
110.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
115.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
125.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
130.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
135.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
140.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
145.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
150.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
155.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
160.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
165.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
170.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
175.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
180.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
								cd / klm

