

SUMMARY

Test Condition: 15V 60Hz for SL07B

Criteria	Result
Total Lumen Output (lm)	95.4676
Total Power(W)	1.7298
Lamp Luminaire Efficacy (lm/W)	55.19
Power Factor	0.6504
Field Angle (°)	360
Correlated Color Temperature (CCT)	2964
Color Rendering Index (CRI)	98
Color Rendering Index (R ₉)	94
Fidelity Index (R _f)	94
Gamut Index (R _g)	99
Chromaticity Coordinate (x)	0.4387
Chromaticity Coordinate (y)	0.4034
Chromaticity Coordinate (u')	0.2520
Chromaticity Coordinate (v')	0.5214
In-situ Case Temperature of LED/COB (°C)	44.2
Drive Current of LED/COB (mA)	200
Projection Life Time, Reported L70 (hours)	>42000

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RESULTS OF TESTS

Test Condition: 15V 60Hz for SL07B

Total operation burning time: 70 min

Stabilization time: 60 min

Photometric Measurements at 25°C

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	CIE 31' Chromaticity Coordinate (x)	CIE 31' Chromaticity Coordinate (y)	CIE 76' Chromaticity Coordinate (u')	CIE 76' Chromaticity Coordinate (v')
SL07B							
0231201-15-005	N/A	2964	98	0.4387	0.4034	0.2520	0.5214

Photometric and Electrical Measurements at 25°C

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (A)	Lamp Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
SL07B							
0231201-15-005	N/A	15.0	0.1771	1.7298	0.6504	95.4676	55.19

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SL07B		
0-30	1.958	2.05
0-40	5.059	5.30
0-60	17.239	18.06
0-90	47.97	50.25
0-180	95.468	100.0

Beam Angle

	Horizontal Spread (°)	Vertical Spread (°)
SL07B		
Beam (50%)	360.0	360.0
Beam Angle	360.0	

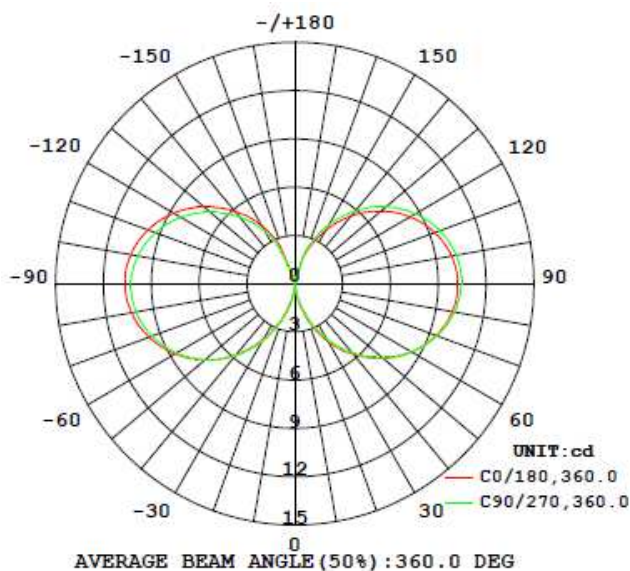
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RESULTS OF TESTS (cont'd)

Intensity (Candlepower) Summary at 25°C – Candelas

Test Condition: 15V 60Hz for SL07B

G \ C(°)	0	22.5	45	67.5	90
0	0.000	0.000	0.000	0.000	0.000
5	0.167	0.158	0.139	0.114	0.086
10	0.752	0.727	0.674	0.614	0.561
15	1.521	1.485	1.421	1.346	1.281
20	2.370	2.333	2.267	2.187	2.118
25	3.251	3.212	3.148	3.070	3.006
30	4.126	4.092	4.029	3.957	3.901
35	4.975	4.950	4.894	4.827	4.784
40	5.721	5.703	5.652	5.596	5.568
45	6.497	6.486	6.441	6.394	6.373
50	7.217	7.209	7.177	7.142	7.133
55	7.882	7.877	7.854	7.830	7.832
60	8.471	8.472	8.459	8.446	8.457
65	8.987	8.996	8.990	8.990	9.014
70	9.427	9.439	9.443	9.452	9.485
75	9.774	9.794	9.805	9.827	9.872
80	10.027	10.056	10.077	10.107	10.163
85	10.187	10.218	10.251	10.294	10.357
90	10.236	10.276	10.319	10.373	10.449



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RESULTS OF TESTS (cont'd)

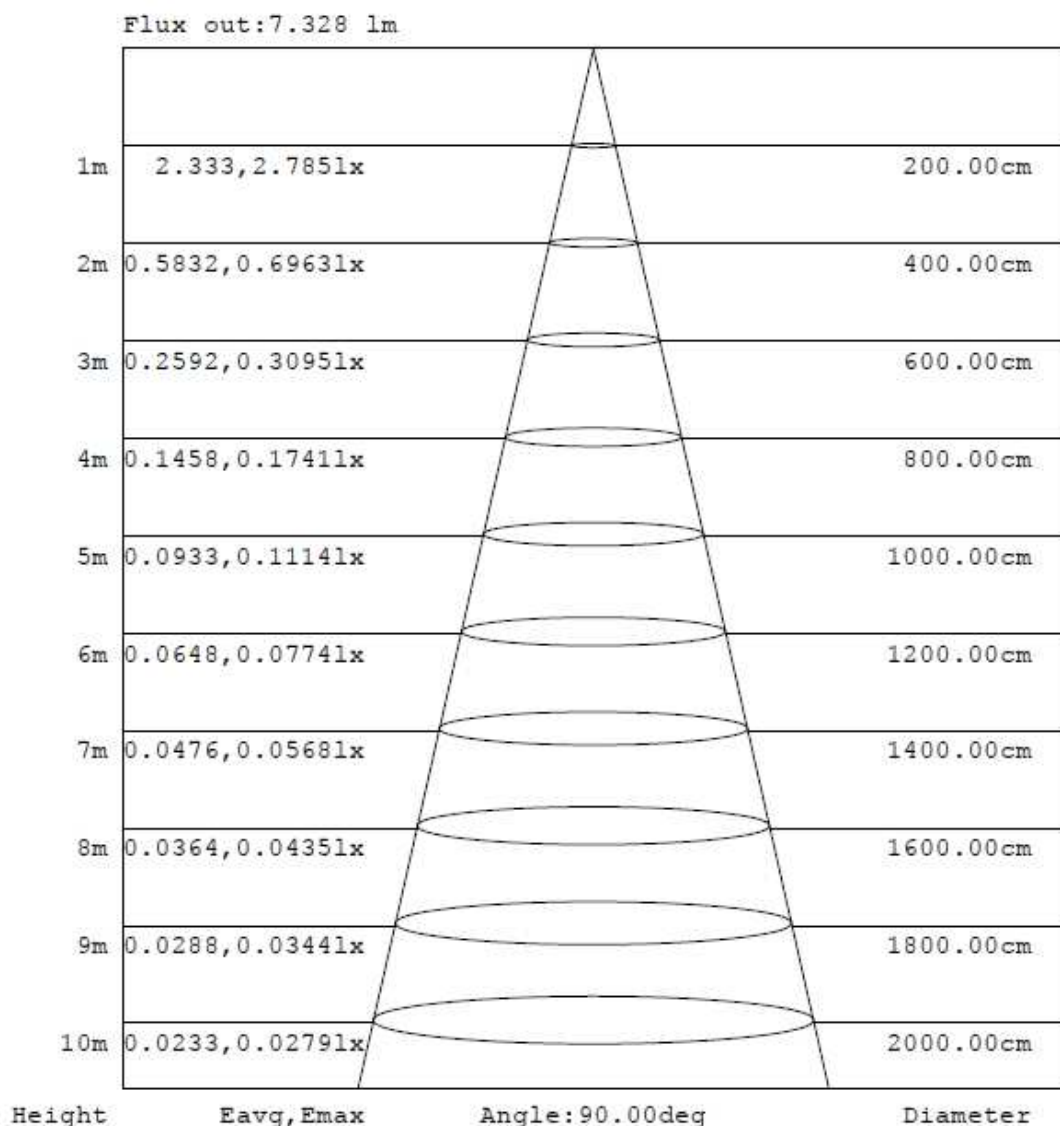
Test Condition: 15V 60Hz for SL07B

Illumination Plots

Model No.: SL07B

Mount Height: 10 m

Illuminance - Cone of Light



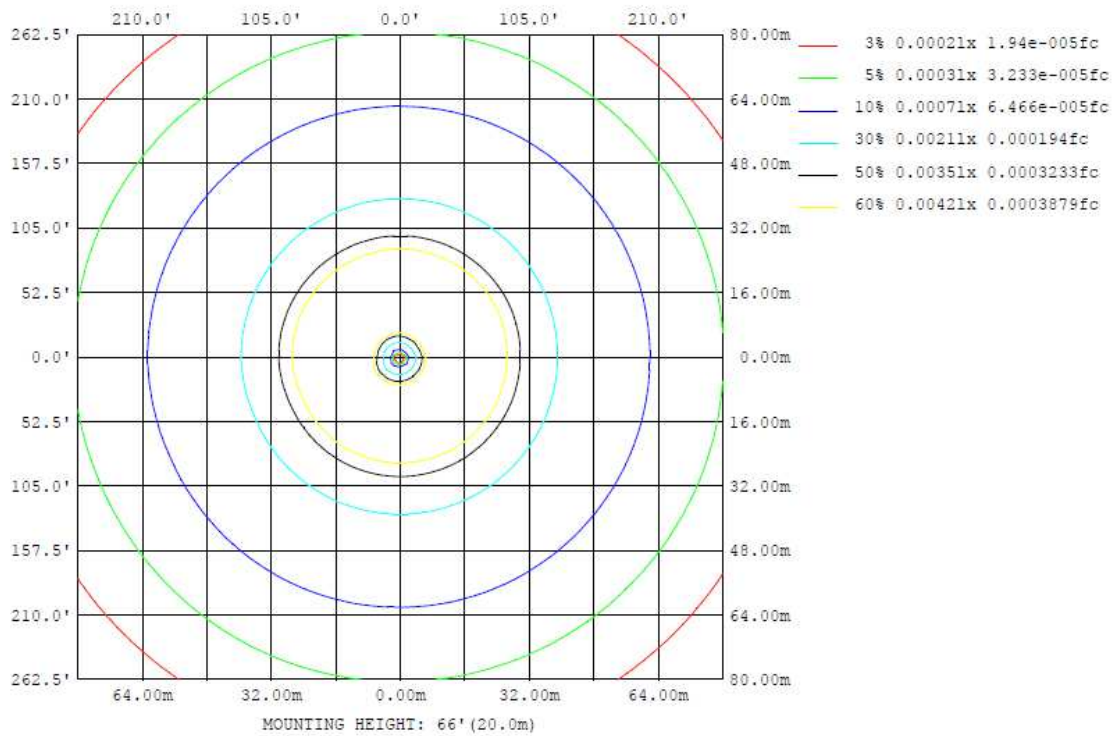
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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RESULTS OF TESTS (cont'd)

Test Condition: 15V 60Hz for SL07B

Model No.: SL07B
Mount Height: 20 m
Isoillumination Plot



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RESULTS OF TESTS (cont'd)

Test Condition: 15V 60Hz for SL07B

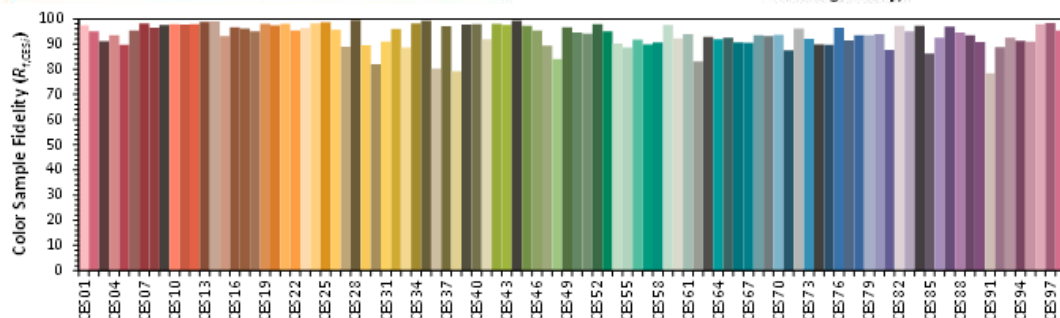
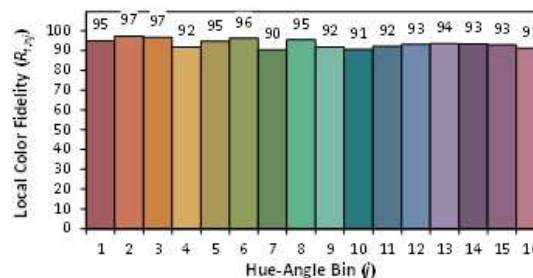
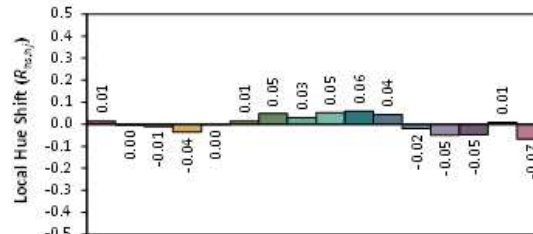
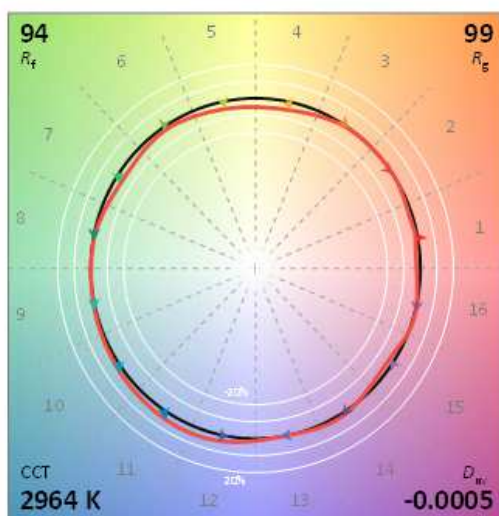
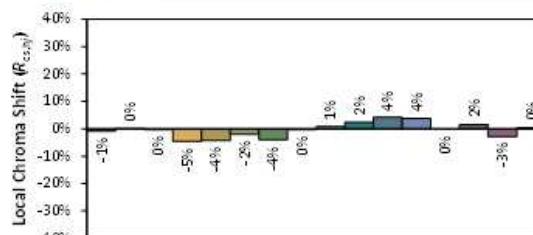
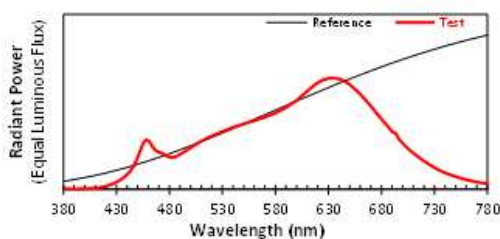
ANSI/IES TM-30-18 Color Rendition Report

Source: LED

Manufacturer: STERLING LIGHTING LLC

Date: 12/18/2023

Model: SL07B



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4387
y 0.4034
u' 0.2520
v' 0.5214

CIE 13.3-1995
(CRI)
R_a 98
R₉ 94

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RESULTS OF TESTS (cont'd)

IN SITU TEMPERATURE MEASUREMENT TEST

Test Results of LED chip temperature and current

TMP led: CXA1304	
In-situ case temperature of LED source (°C)	Limit single led chip temperature(°C)
44.2	85
Measured Drive current for each LED package/array/module (mA)	Limit single led chip current (mA)
200	692

Note: In-situ case temperature was corrected to ambient temperature at 25°C in above table.

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RESULTS OF TESTS (cont'd)

IN SITU TEMPERATURE MEASUREMENT TEST

Lumen Maintenance Life Projection (Cont'd) - led chip point 1

The Calculation is based on the Illumination Engineering Society's TM-21-11: Projecting Long Term Lumen Maintenance of LED Light Sources.

Table 1: Report at each LM-80 Test Condition					
Description of LED Light Source Tested (manufacturer, model, catalog number)		Manufacturer: Cree LEDModel: CXA1304Report No:CLD-AP144 Rev5Issued: Jun. 11, 201			
Test Condition 1 - 85°C Case Temp					
Sample size	25	Sample size	-	Sample size	-
Number of failures	0	Number of failures	-	Number of failures	-
DUT drive current used in the test (mA)	692	DUT drive current used in the test (mA)	-	DUT drive current used in the test (mA)	-
Test duration (hours)	7,056	Test duration (hours)	-	Test duration (hours)	-
Test duration used for projection (hour to hour)	2,016 - 7,056	Test duration used for projection (hour to hour)	-	Test duration used for projection (hour to hour)	-
Tested case temperature (°C)	85	Tested case temperature (°C)	-	Tested case temperature (°C)	-
α	2.424E-06	α	-	α	-
B	0.985	B	-	B	-
Reported L70(7k) (hours)	>42000	Reported L70(7k) (hours)	-	Reported L70(7k) (hours)	-

Table 2: Interpolation Report (projection based on <i>in-situ</i> temperature entered)	
$T_{s,1}$ (°C)	85.00
$T_{s,1}$ (K)	358.15
α_1	2.424E-06
B_1	0.985
$T_{s,2}$ (°C)	-
$T_{s,2}$ (K)	-
α_2	-
B_2	-
E_{θ}/k_{θ}	-
A	-
B_0	0.985
$T_{s,i}$ (°C)	44.20
$T_{s,i}$ (K)	317.35
α_i	2.424E-06
Reported L70(7k) at 44.2°C (hours)	>42000

In-Situ Inputs

Drive current for each LED package/array/module (mA):	200
<i>In-situ</i> case temperature (T_c , °C):	44.2
Percentage of initial lumens to project to (e.g. for L70, enter 70):	70

Results

Time (t) at which to estimate lumen maintenance (hours):	50,000
Lumen maintenance at time (t) (%):	87.30%
Reported L70 (hours):	>42000

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