

**Test Datasheet**

Test Location:	<input type="checkbox"/>	1. B802, No.11 Caipin Road, Guangzhou Science City, Guangzhou, Guangdong, China
	<input checked="" type="checkbox"/>	2. R108, 1 st Floor No.69 GuangPu West Road, Guangzhou Science City, Guangzhou, Guangdong, China
	<input type="checkbox"/>	3. Other:
Project No.:	GZO130803-03A	Test by: Mountain Ye
Applicant:	Light Efficient Design, LLC	
Applicant Address	188 S. Northwest Highway, Cary, IL 60013, USA	
Standard/Method	IES LM-79 2008	

Test & Report By:

Mountain Ye

Mountain Ye

Date: 2013-09-02

Review By:

Tommy Liang

Tommy Liang

Test No.	Done +++	Test Name
1	X	Electrical and Photometric Measurements:

Model No.	Sample No.	Sample acceptance Y/N	Product Identification and Ratings
LED-8035E42	1309027-1	Y	LED Lamp, 120-277 Vac, 50/60Hz employed LED of SAMSUNG LED, TYPE 5630

Model name(s):	LED-8035E42, LED-8035E42C	Representative (Tested) Model:	LED-8035E42	All construction are the same, except model name
-----------------------	------------------------------	---	-------------	--

TEST METHODS

1. Seasoning in Sample Orientation:

See IES LM-80 report (LED products) or Energy Star Report for CFL/ILL.

2. Photometric and Electrical measurements – Light Distribution Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals.

3. Photometric and Electrical Measurements – Integrating Sphere Method:

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at least 5 nm intervals over the range of 380 to 780 nm.

1.1 Electrical and Photometric Measurements
(Refer to Work Instruction QD25)

IES LM-79 2008

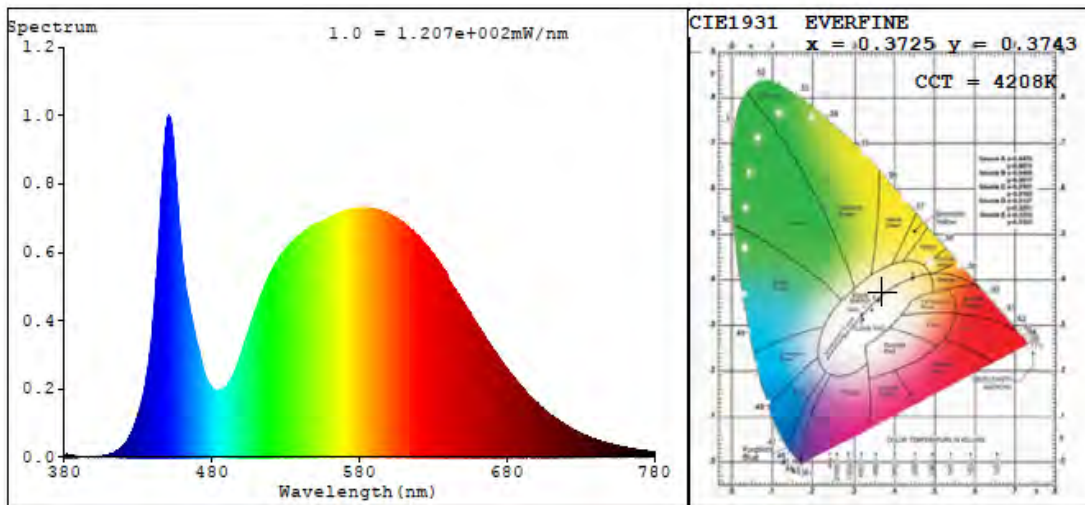
Electrical Measurement

Test date	2013-09-02		Test Ambient:	25.2 ° C		
Sample No.	Voltage (V AC)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD
1309027-1	120.0	60	0.5563	62.5	0.9370	10.17%
	277.0	60	0.2382	62.3	0.9441	16.42%

Photometric and Chromaticity Measurements

Test date	2013-09-02		Test Ambient:	25.2 ° C		
Sample No.	Voltage (V AC)		Frequency (Hz)			
1309027-1	120.0		60			
Lumen Flux (lm)	Efficacy (lm/w)		CRI	R9	CCT (K)	
5721	90.6		82.4	23	4208	
Chromaticity Coordinate			Duv			
x=0.3725 y=0.3743		u'=0.2208 v'=0.4993		0.0013		

Color Data:



Colorimetric Quantities

Chromaticity Coordinate: x=0.3725 y=0.3743/u'=0.2208 v'=0.4993

CCT=4208K(Duv=0.0013) Dominant WL:Ld =577.5nm Purity=24.1%

Peak WL:Lp=450.9nm FWHM=20.2nm

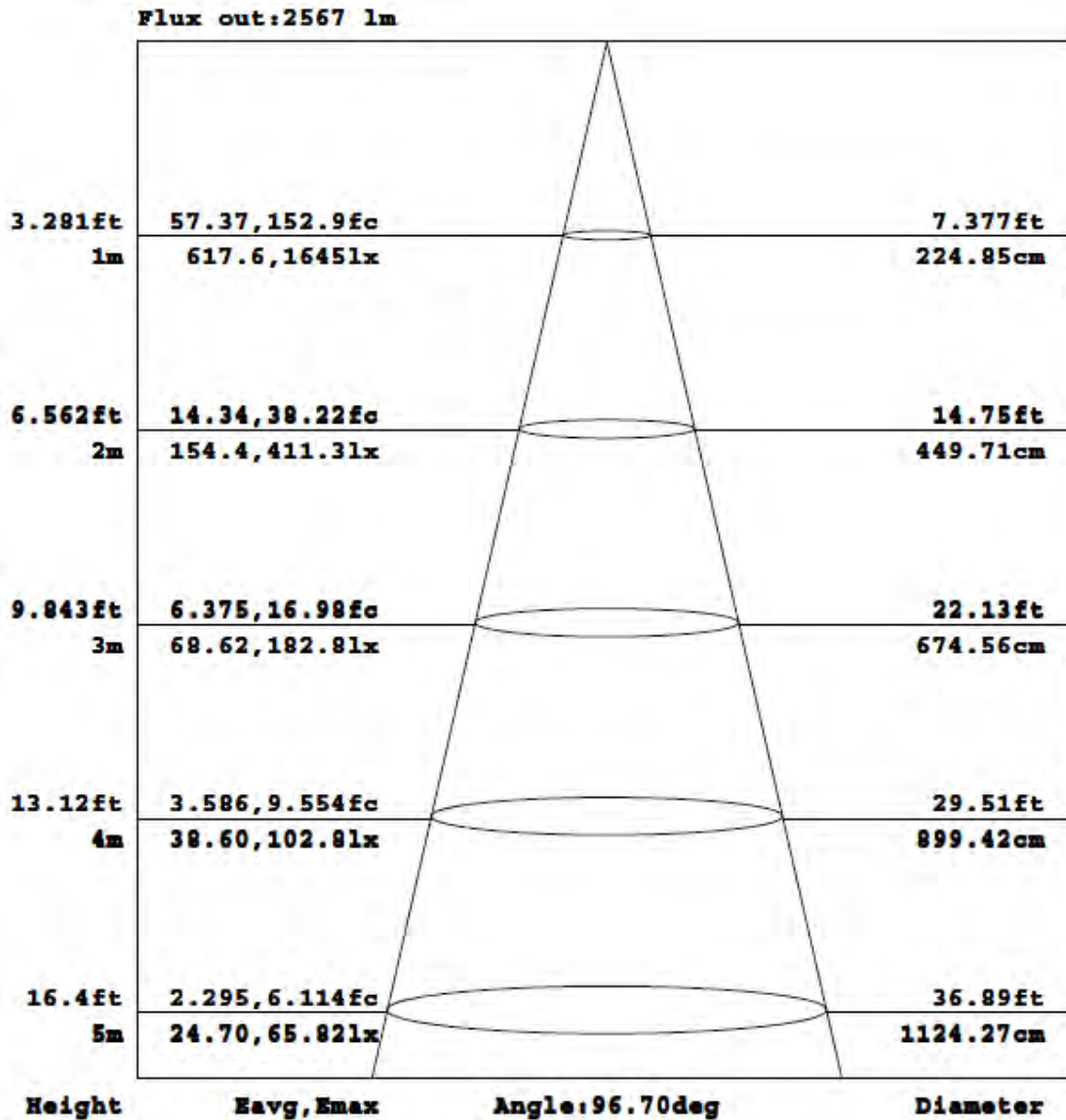
Render Index:Ra=82.4

R1 =81 R2 =86 R3 =89 R4 =82 R5 =80 R6 =80 R7 =89
R8 =72 R9 =23 R10=66 R11=79 R12=52 R13=82 R14=93 R15=78

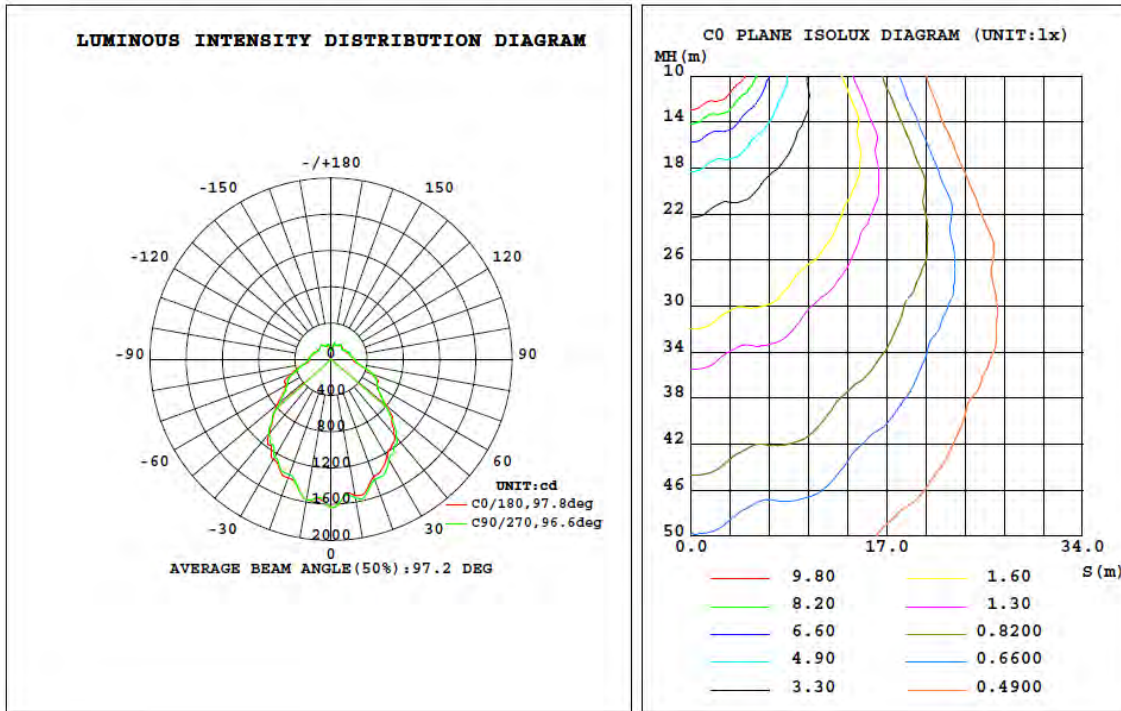
Zonal Lumen Summary

Zone	%Lamp / Luminaire
0 - 60	58.0 %
60 - 90	21.4%
0 - 90	79.4%
90 - 180	20.6%
0 - 180	100 %

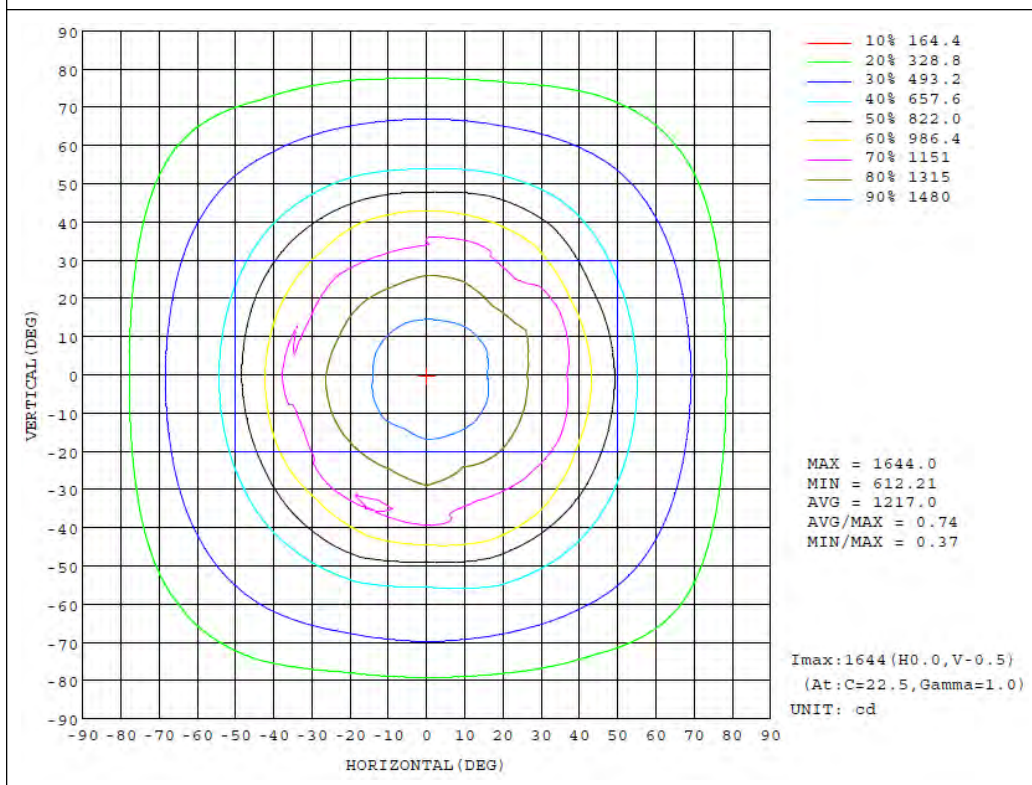
Illuminance Plots



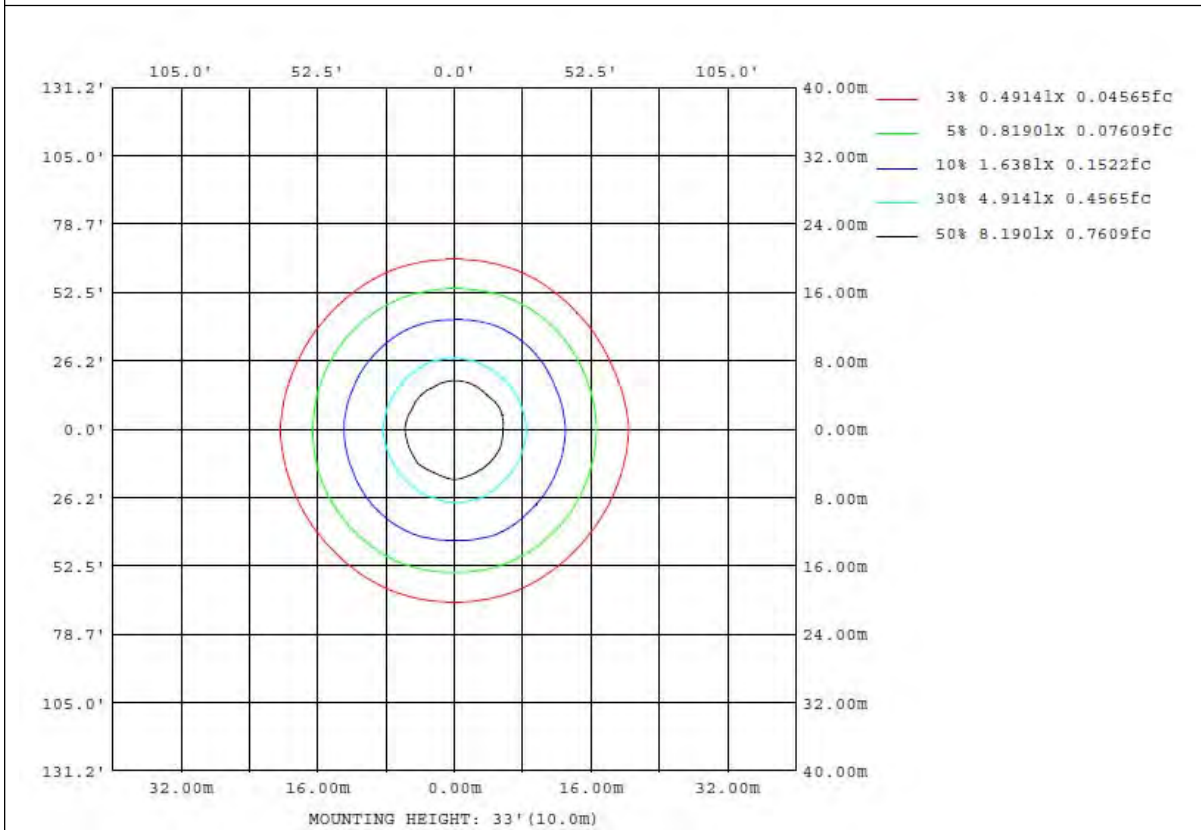
Candela Plots



ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



Candela Tabulation

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338			
0	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636	1636			
5	1533	1550	1546	1546	1528	1526	1520	1524	1546	1559	1540	1526	1531	1520	1524	1543			
10	1524	1532	1525	1531	1551	1568	1571	1570	1572	1592	1587	1585	1575	1564	1560	1563			
15	1504	1541	1551	1539	1527	1490	1503	1481	1452	1466	1460	1467	1451	1483	1511	1537			
20	1383	1417	1422	1401	1414	1362	1409	1376	1391	1394	1367	1381	1353	1392	1385	1415			
25	1331	1370	1372	1329	1395	1351	1351	1362	1347	1313	1319	1301	1329	1342	1307	1375			
30	1240	1259	1242	1221	1283	1212	1280	1223	1275	1215	1230	1211	1245	1220	1213	1285			
35	1164	1199	1204	1164	1217	1150	1206	1148	1158	1127	1139	1131	1145	1171	1114	1249			
40	1089	1088	1079	1136	1121	1069	1052	1050	1061	1047	1030	1086	1072	1063	1037	1051			
45	951	942	991	1016	964	977	911	921	911	921	909	939	920	910	951	896			
50	800	797	797	827	779	826	805	764	783	755	753	756	737	781	788	757			
55	659	669	687	716	667	690	658	641	640	631	634	641	622	648	659	640			
60	589	593	602	611	597	611	596	590	580	577	573	577	551	580	580	574			
65	578	552	543	564	559	558	550	549	570	532	518	528	520	527	525	534			
70	481	469	463	483	489	481	478	456	460	442	429	429	440	446	454	456			
75	387	382	378	398	394	383	395	364	377	367	353	361	361	361	374	365			
80	307	309	305	313	317	314	309	300	293	299	291	298	297	296	299	299			
85	256	266	262	260	277	265	263	261	250	260	258	254	265	259	260	261			
90	251	249	258	253	265	257	261	247	252	248	245	243	244	257	257	245			
95	242	244	251	241	242	247	252	236	238	235	235	235	234	230	239	232			
100	223	232	228	222	224	226	233	223	226	226	228	230	233	222	235	224			
105	216	222	219	228	219	216	222	217	208	208	206	215	215	207	208	213			
110	204	210	206	206	220	210	213	217	204	208	197	202	208	205	206	211			
115	189	195	194	188	200	190	189	196	191	192	183	185	192	186	187	191			
120	185	183	183	178	189	181	181	187	188	181	178	175	178	178	174	184			
125	173	172	177	171	173	171	171	171	174	175	170	169	166	171	169	173			
130	173	163	172	175	168	174	172	169	172	175	177	174	169	174	176	174			
135	178	167	169	175	173	176	173	175	180	182	186	180	177	183	181	181			
140	184	177	180	188	186	186	183	186	189	192	198	190	190	190	192	190			
145	193	188	191	191	196	192	195	194	193	197	199	194	192	196	197	201			
150	179	181	189	188	192	187	181	181	179	184	178	176	179	182	186	187			
155	167	169	170	173	169	173	166	166	166	166	166	167	165	166	174	173			
160	163	167	165	169	167	166	166	165	153	156	162	164	159	155	169	177			
165	168	168	172	169	177	166	167	169	165	164	172	175	172	164	172	169			
170	179	177	171	174	168	181	170	166	169	169	175	173	173	165	169	175			
175	121	125	122	123	125	120	123	118	115	115	112	113	118	118	120	120			
180	134	134	134	99.4	110	122	132	130	127	128	131	110	113	127	119	120			

Annex (Photo of Products):



Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2013-07-08	2014-07-07
ST-R-331	Spectral analysis system HAAS-2000	2013-06-21	2014-06-20
D204	Standard Lamp	2013-06-28	2014-06-27
PF2010	Power Meter for Integrating Sphere	2013-06-20	2014-06-19
EE-09	Goniophotometer system	2013-06-21	2014-06-20
D908S	Standard Lamp	2013-07-05	2014-07-04
PF210	Power Meter for Goniophotometer	2013-06-20	2014-06-19
ST-R-181A	Temperature Tester	2013-08-14	2014-08-13

***** END OF DATASHEET PACKAGE *****