

**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.:	GZO130803-08A	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-8025E42	1309023-1	Y	LED Lamp, 120-277 Vac, 60Hz employed LED of SAMSUNG LED, TYPE 5630

Model name(s):	LED-8025E42, LED-8025E42C	Representative (Tested) Model:	LED-8025E42	All construction are the same, except model name
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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

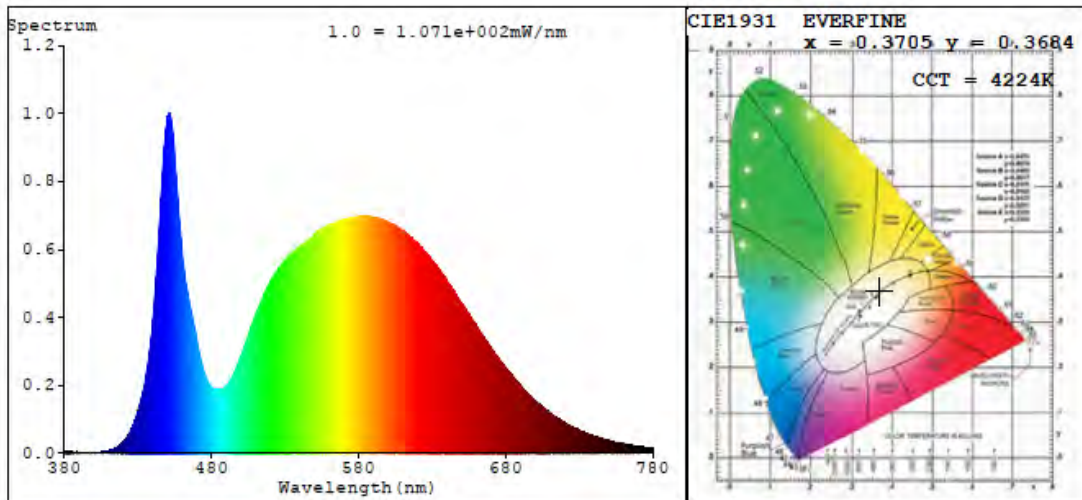
Electrical Measurement

Test date	2013-09-02		Test Ambient:	25.2 ° C		
Sample No.	Voltage (V AC)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD
1309023-1	119.9	60	0.4550	54.4	0.9973	11.34%
	277.0	60	0.2051	52.6	0.9254	16.20%

Photometric and Chromaticity Measurements

Test date	2013-09-02		Test Ambient:	25.2 ° C		
Sample No.	Voltage (V AC)		Frequency (Hz)			
1309023-1	119.9		60			
Lumen Flux (lm)	Efficacy (lm/w)		CRI	R9	CCT (K)	
4955	91.46		82.9	26	4224	
Chromaticity Coordinate			Duv			
x=0.3705 y=0.3684		u'=0.2219 v'=0.4963		-0.0010		

Color Data:



Colorimetric Quantities

Chromaticity Coordinate: x=0.3705 y=0.3684/u'=0.2219 v'=0.4963

CCT=4224K(Duv=-0.0010) Dominant WL:Ld =578.8nm Purity=21.7%

Peak WL:Lp=451.3nm FWHM=20.4nm

Render Index:Ra=82.9

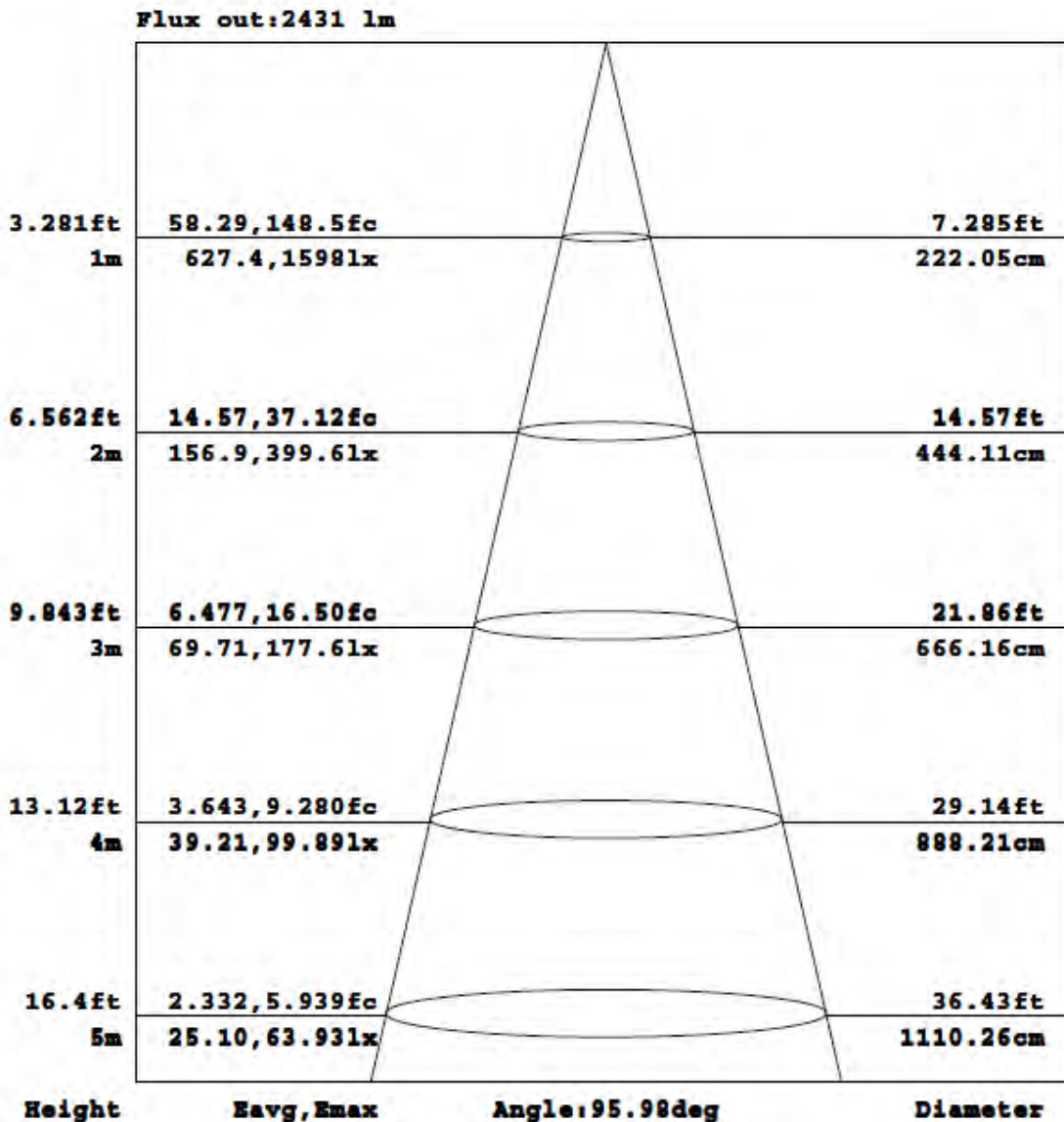
R1 =82 R2 =87 R3 =89 R4 =82 R5 =81 R6 =80 R7 =89

R8 =73 R9 =26 R10=67 R11=79 R12=53 R13=83 R14=94 R15=80

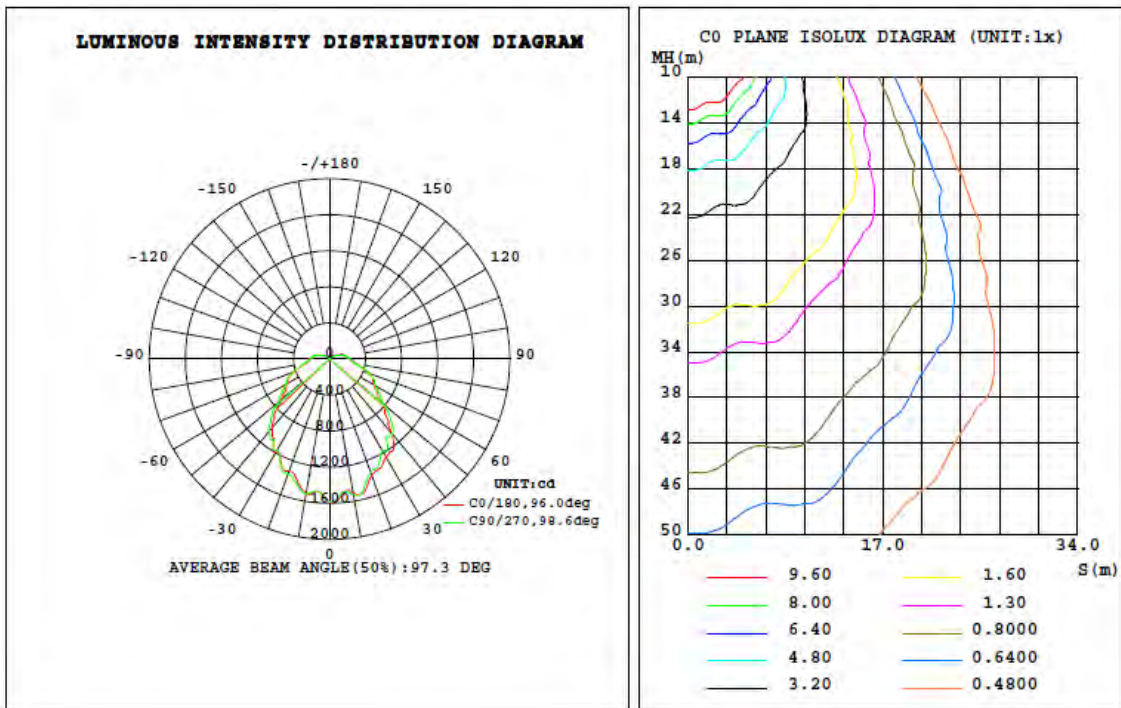
Zonal Lumen Summary

Zone	Lumens	%Lamp / Luminaire
0 - 60	3143	63.4 %
60 - 90	1173	23.7 %
0 - 90	4316	87.1 %
90 - 180	640	12.9 %
0 - 180	4956	100 %

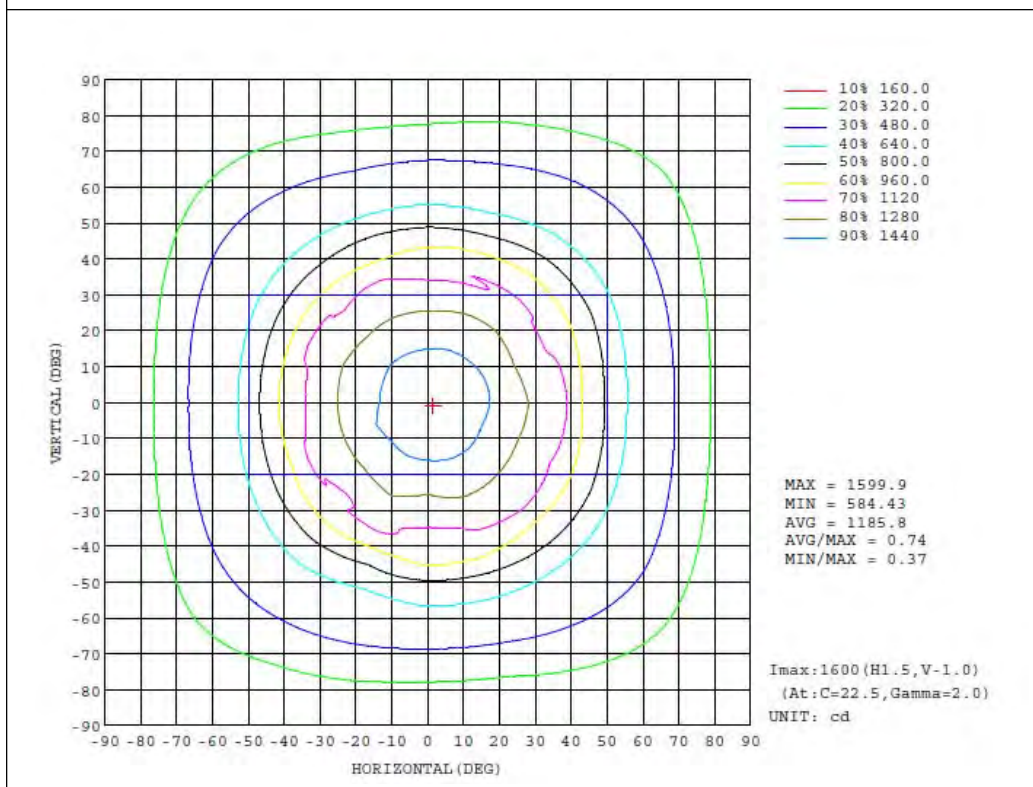
Illuminance Plots



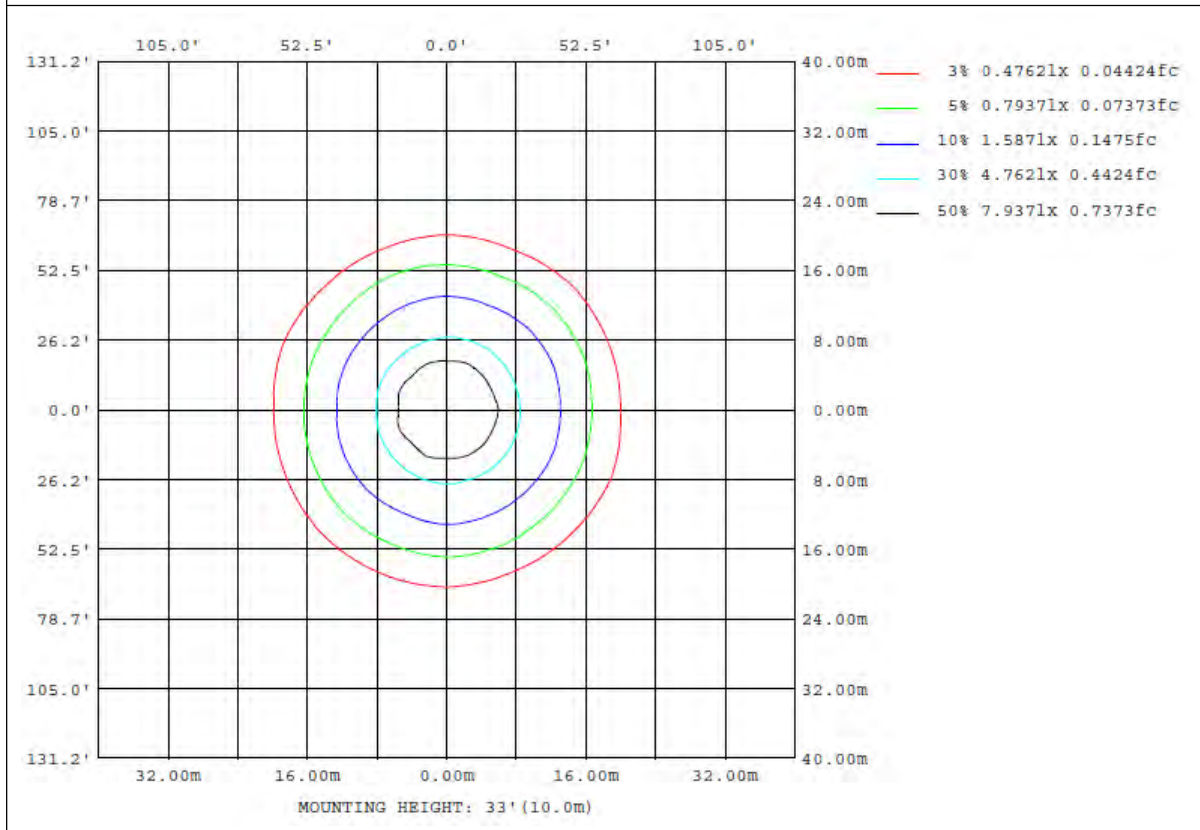
Candela Plots



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	1587	1587	1587	1587	1587	1587	1587	1587	1587	1587	1587	1587	1587	1587	1587	1587			
5	1520	1527	1525	1515	1495	1489	1469	1474	1474	1484	1493	1477	1471	1487	1474	1509			
10	1501	1480	1491	1500	1524	1538	1534	1542	1514	1543	1546	1546	1519	1547	1521	1522			
15	1514	1491	1504	1496	1476	1464	1424	1448	1393	1401	1430	1429	1428	1465	1470	1500			
20	1377	1360	1363	1385	1333	1368	1321	1381	1321	1353	1345	1329	1358	1343	1357	1373			
25	1337	1326	1325	1366	1291	1346	1282	1284	1282	1297	1271	1296	1289	1313	1328	1311			
30	1254	1216	1232	1218	1171	1225	1161	1250	1190	1253	1187	1221	1173	1232	1199	1166			
35	1231	1153	1162	1159	1108	1170	1089	1141	1077	1148	1112	1136	1094	1112	1129	1136			
40	1075	1085	1088	1049	1085	1060	1033	1010	999	1019	998	999	1046	1055	1051	1048			
45	878	928	914	965	970	895	914	857	874	862	883	866	917	909	928	950			
50	771	813	797	786	784	737	760	745	706	728	710	736	748	742	796	815			
55	650	662	660	670	674	621	634	617	591	602	595	619	640	635	667	676			
60	571	584	578	587	591	568	570	545	541	548	543	566	562	554	585	588			
65	524	566	545	534	548	537	531	517	510	542	510	500	521	516	541	529			
70	461	487	463	452	461	464	447	447	419	433	415	416	425	445	458	469			
75	375	392	377	361	369	364	347	358	337	347	343	341	345	359	372	391			
80	306	311	301	286	285	295	290	284	271	265	277	281	292	308	304	316			
85	258	248	252	244	243	261	243	248	239	235	244	237	235	258	246	257			
90	227	229	231	237	233	236	229	242	225	226	225	220	212	218	223	229			
95	219	219	222	217	208	208	214	213	199	207	200	203	201	209	215	227			
100	183	189	194	187	186	185	177	189	179	180	180	186	188	184	185	196			
105	172	164	168	166	171	166	159	162	163	154	157	152	162	165	161	170			
110	149	144	144	136	137	154	140	140	139	129	135	128	137	147	142	142			
115	120	114	117	114	108	117	109	107	108	104	106	104	106	118	116	121			
120	98.2	93.1	95.1	92.0	87.9	94.9	86.5	87.4	86.3	84.7	85.7	84.6	82.7	93.0	89.1	95.3			
125	73.0	70.5	70.4	68.0	64.1	64.9	62.9	60.6	61.7	60.7	60.9	60.8	60.4	64.2	64.1	70.6			
130	53.5	53.4	50.8	52.5	50.6	49.1	49.1	48.6	48.8	48.9	48.7	50.3	49.8	52.3	51.6	53.3			
135	45.1	43.3	41.9	41.7	41.3	41.9	43.7	43.9	43.9	43.3	41.1	45.0	44.9	44.6	45.9	47.8			
140	41.6	40.0	40.9	41.1	39.8	40.3	41.1	39.7	40.9	41.1	39.1	41.1	41.5	40.9	42.7	42.1			
145	36.1	34.8	34.1	33.4	32.6	32.2	33.2	29.1	32.9	33.0	32.5	33.0	34.1	33.5	36.5	36.9			
150	25.1	25.7	24.8	24.0	23.2	21.6	21.7	19.8	20.0	20.3	19.3	19.6	20.6	21.5	24.2	25.4			
155	13.4	14.1	12.6	12.4	11.8	10.7	10.1	9.86	9.85	9.68	9.76	9.67	9.99	10.5	11.3	12.4			
160	8.96	8.95	8.63	8.89	8.59	8.68	8.42	8.06	8.08	8.26	7.93	7.84	8.06	8.67	8.72	8.69			
165	7.46	7.23	7.16	7.28	7.09	7.11	6.76	6.54	6.46	6.48	6.37	6.22	6.35	6.74	7.06	7.27			
170	6.36	6.23	6.17	6.02	6.04	6.06	5.62	5.45	5.42	5.39	5.27	5.18	5.41	5.59	5.71	6.01			
175	5.53	5.50	5.43	5.34	5.36	5.23	4.99	4.92	5.16	4.97	4.80	4.76	4.84	4.96	4.99	5.18			
180	4.45	4.62	4.70	4.77	5.10	5.07	4.78	4.61	4.69	4.92	4.70	4.71	4.84	4.91	4.99	4.92			

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

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