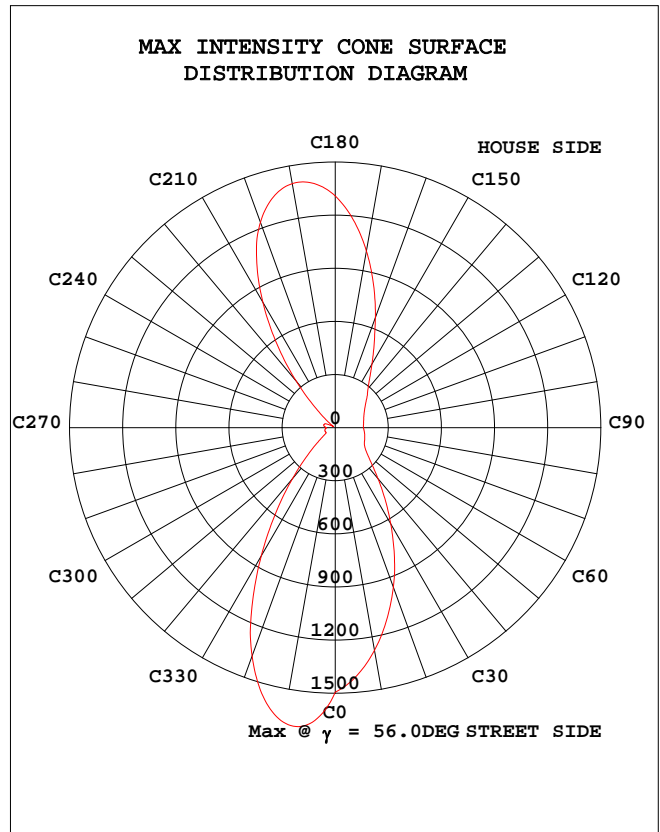
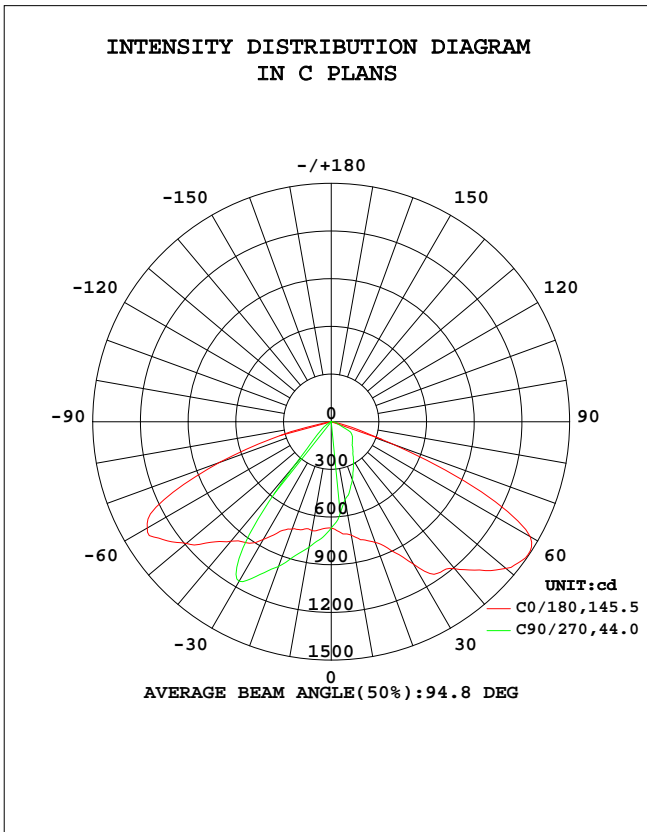


STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:27.59V I:0.7312A P:20.18W PF:1.000 Freq:0Hz Lamp Flux:2492.91x1 lm		
NAME: Integrated Solar Led Street Light	TYPE:	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.: SHENZHEN LEADRAY OPTOELECTRONIC CO.,LTD.	SUR.:	Shielding Angle:N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 123.55 lm/W			
MODEL	LRC20W	I _{max} (cd)	1494	η street_up(%)	0.1
NOMINAL POWER(W)	20	LOR(%)	100.0	η street_down(%)	55.2
RATED VOLTAGE(V)	27.5	TOTAL FLUX(lm)	2493	η house_up(%)	0.1
NOMINAL FLUX(lm)	2492.91	MAXIMUM @(C,γ)	0,56.0	η house_down(%)	44.6
LAMPS INSIDE	1	η up(%)	0.1	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	27.5	η down(%)	99.9	SLI	15.927

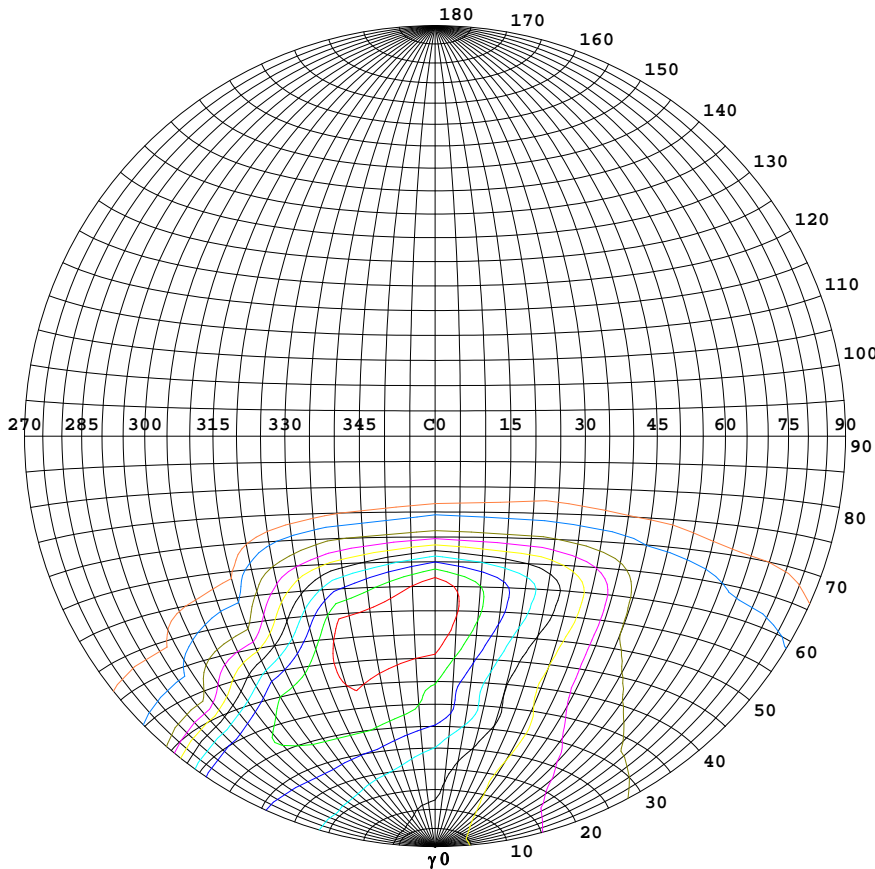


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.3361]
 Remarks:

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:27.59V I:0.7312A P:20.18W PF:1.000 Freq:0Hz Lamp Flux:2492.91x1 lm		
NAME: Integrated Solar Led Street Light	TYPE:	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.: SHENZHEN LEADRAY OPTOELECTRONIC CO.,LTD.	SUR.:	Shielding Angle:N/A



Classification:

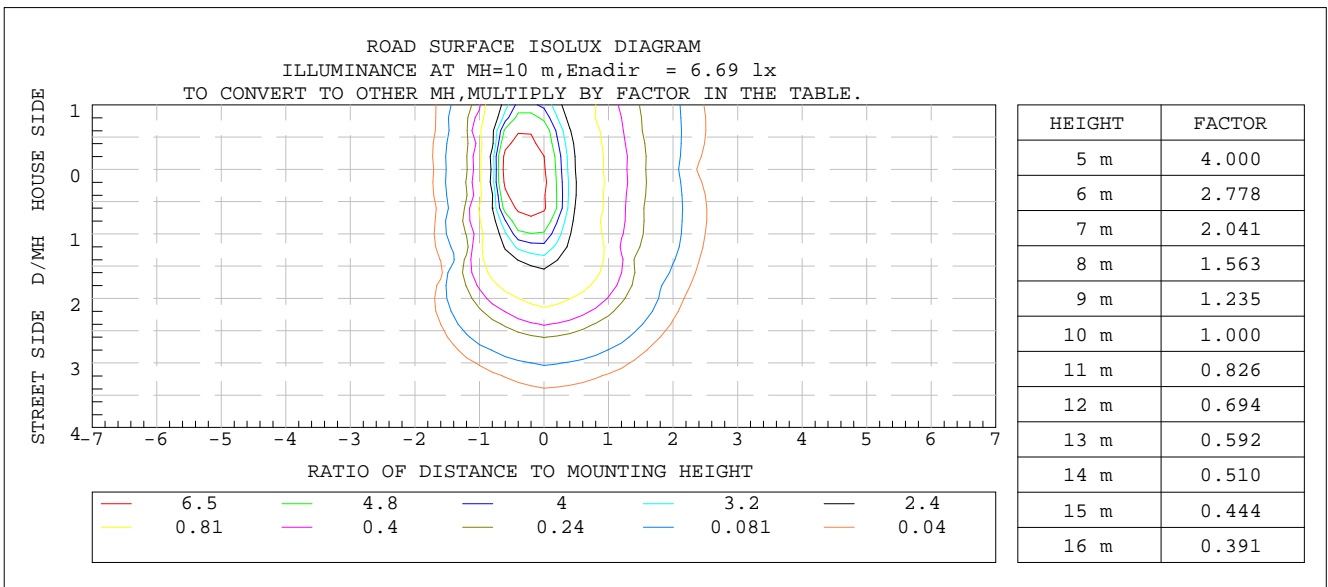
IES:Type III - Short
 CIE:Broad - Short
 IES:Cut-off
 CIE:Full cut-off
 Max.At80:21.40cd/klm
 Max.At90:0.8792cd/klm
 Max.80-90:21.40cd/klm

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	1494
90%	1344
80%	1195
70%	1046
60%	896
50%	747
40%	598
30%	448
20%	299
10%	149
5%	75

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.3361]
 Remarks:

COEFFICIENT OF UTILIZATION CURVE AND ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.5DEG
 Operators: Seth
 Test Date: 2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity: 65.7%
 Test Distance: 26.000m [K=1.3361]
 Remarks:

ZONAL FLUX DIAGRAM

Test:U:27.59V I:0.7312A P:20.18W PF:1.000 Freq:0Hz Lamp Flux:2492.91x1 lm		
NAME: Integrated Solar Led Street Light	TYPE:	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.: SHENZHEN LEADRAY OPTOELECTRONIC CO.,LTD.	SUR.:	Shielding Angle:N/A

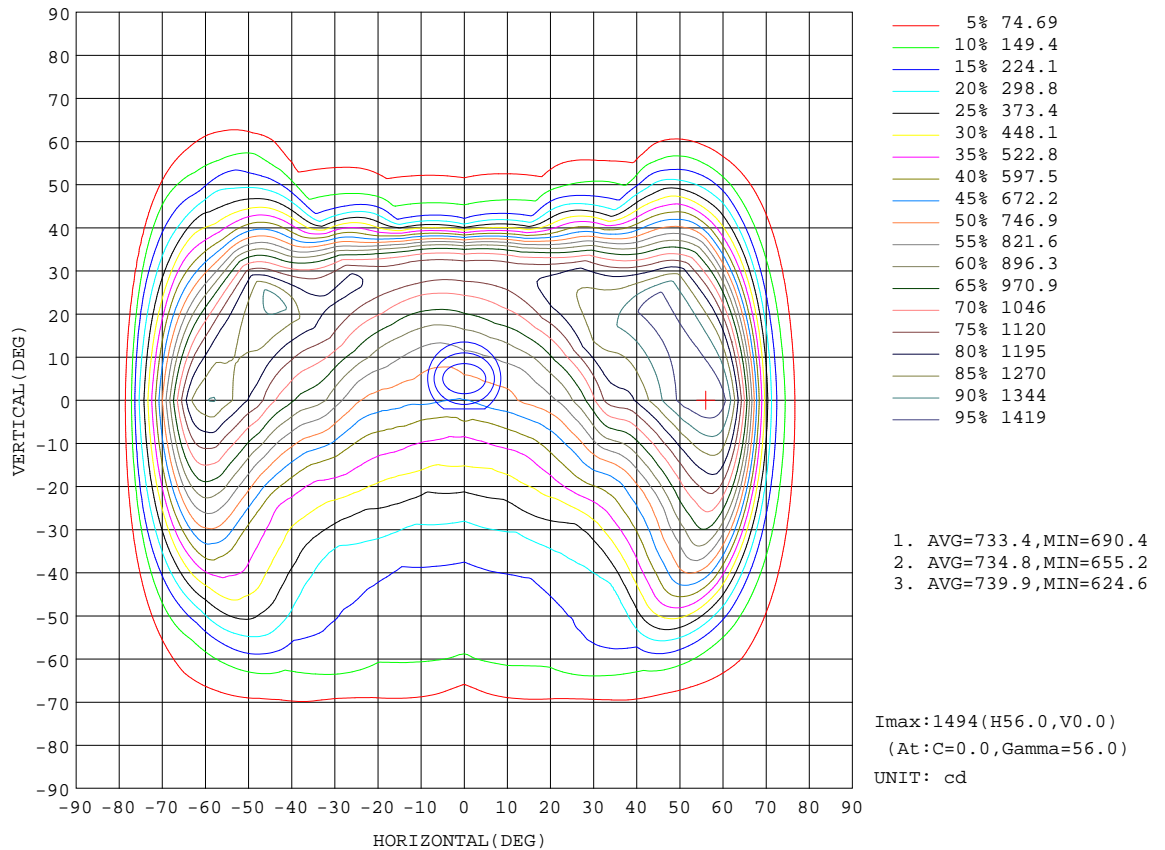
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum,lamp
10	724.2	569.3	499.1	550.6	695.2	742.6	801.0	788.6	0- 10	63.80	63.80	2.56,2.56
20	807.9	496.2	389.7	481.2	717.9	883.9	969.2	959.1	10- 20	195.2	259.0	10.4,10.4
30	1034	454.1	281.6	408.0	854.9	1097	1159	1207	20- 30	351.2	610.2	24.5,24.5
40	1207	356.0	211.2	323.5	981.2	1152	375.5	1195	30- 40	495.8	1106	44.4,44.4
50	1436	308.5	174.5	268.8	1191	389.3	88.43	548.8	40- 50	488.0	1594	63.9,63.9
60	1446	284.0	146.3	248.5	1336	90.96	27.41	126.6	50- 60	470.0	2064	82.8,82.8
70	408.5	147.7	46.75	147.3	746.8	22.69	0	11.76	60- 70	334.8	2399	96.2,96.2
80	17.73	34.97	30.22	39.37	44.47	0	0	0.2023	70- 80	85.11	2484	99.6,99.6
90	0.0733	0.0044	0.0004	0.2004	0.6924	0.1346	2.192	0.3372	80- 90	5.349	2489	99.9,99.9
100	0	0	0	0	1.598	0.4109	2.318	0.2683	90-100	0.5779	2490	99.9,99.9
110	0.2735	0	0	0	3.254	0.2044	0	0.1349	100-110	0.4113	2490	99.9,99.9
120	0.2077	0.5446	0.0673	0.4700	2.769	0.2044	0	0.1349	110-120	0.4122	2491	99.9,99.9
130	0.2077	1.090	2.187	1.079	1.177	0.2044	0	0.1349	120-130	0.5541	2491	99.9,99.9
140	0.2077	1.090	1.778	1.079	1.177	0.2726	0.0683	0.1349	130-140	0.6035	2492	100,100
150	0.2077	1.159	1.025	1.079	1.039	0.4786	0.2723	0.2039	140-150	0.4787	2492	100,100
160	0.2077	1.159	1.025	1.146	0.4847	0.6133	0.3417	0.4046	150-160	0.3618	2493	100,100
170	0.2077	1.022	0.9567	1.146	0.4154	0.6133	0.5453	0.5417	160-170	0.2100	2493	100,100
180	0.2769	0.6815	0.7517	1.143	0.2769	0.6815	0.7517	0.8744	170-180	0.0684	2493	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.3361]
 Remarks:

ISOCANDELA DIAGRAM

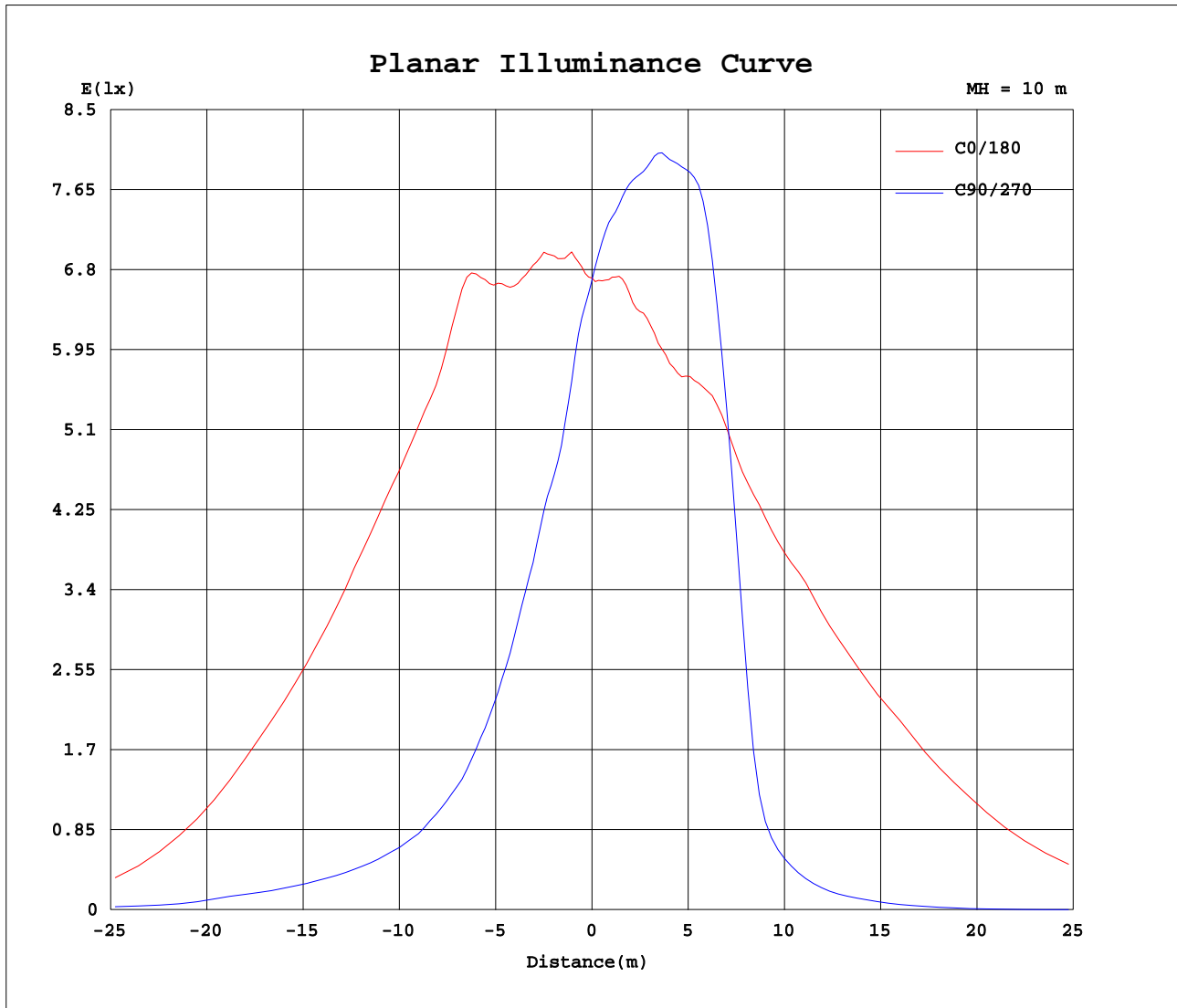
Test:U:27.59V I:0.7312A P:20.18W PF:1.000 Freq:0Hz Lamp Flux:2492.91x1 lm		
NAME: Integrated Solar Led Street Light	TYPE:	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.: SHENZHEN LEADRAY OPTOELECTRONIC CO.,LTD.	SUR.:	Shielding Angle:N/A



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.5DEG
 Operators: Seth
 Test Date: 2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity: 65.7%
 Test Distance: 26.000m [K=1.3361]
 Remarks:

Planar Illuminance Curve



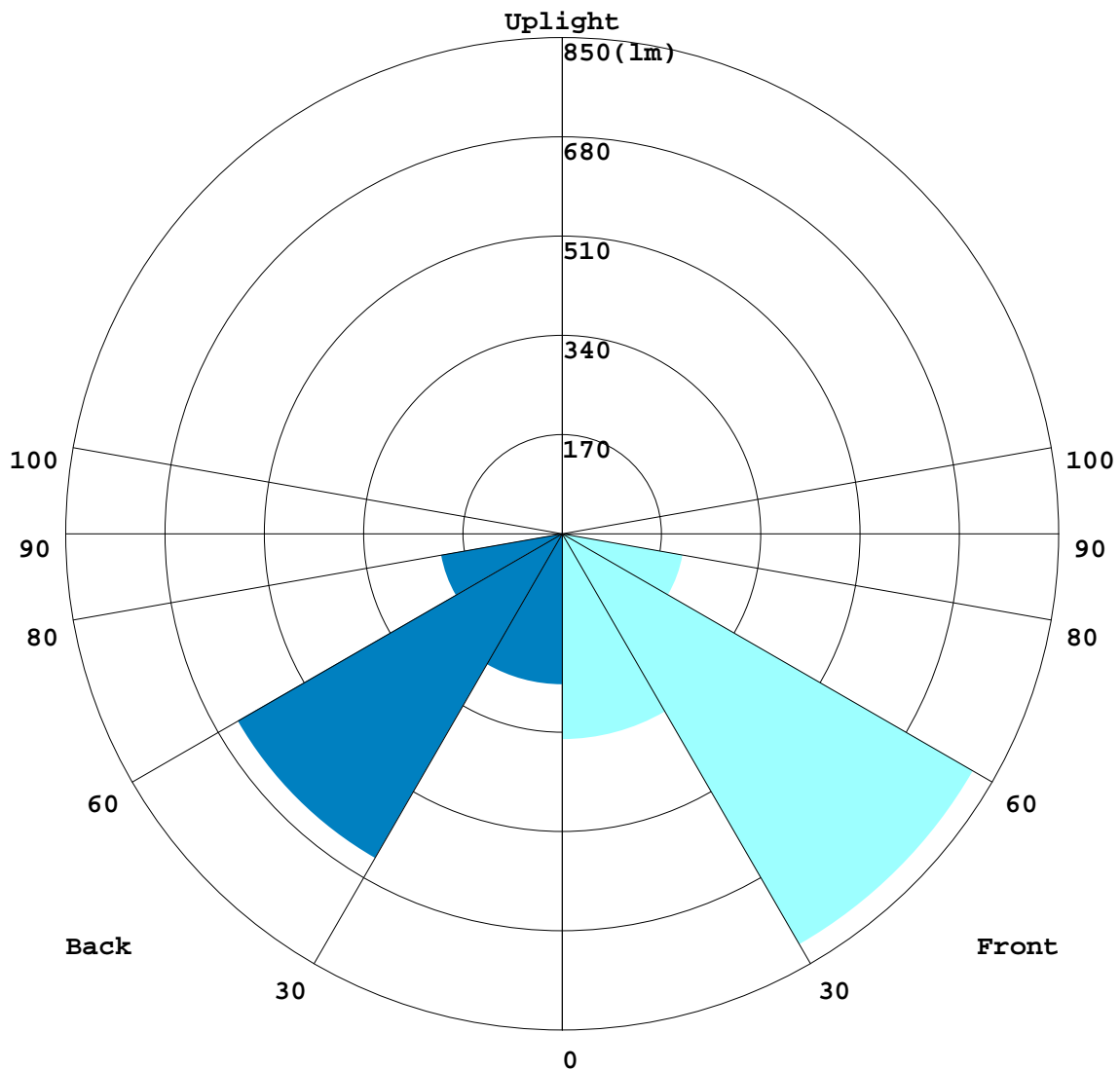
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 24.5DEG
 Operators: Seth
 Test Date: 2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity: 65.7%
 Test Distance: 26.000m [K=1.3361]
 Remarks:

LCS REPORT

Test:U:27.59V I:0.7312A P:20.18W PF:1.000 Freq:0Hz Lamp Flux:2492.9lx1 lm		
NAME: Integrated Solar Led Street Light	TYPE:	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.: SHENZHEN LEADRAY OPTOELECTRONIC CO.,LTD.	SUR.:	Shielding Angle:N/A

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.3361]
 Remarks:

BUG REPORT

Test:U:27.59V I:0.7312A P:20.18W PF:1.000 Freq:0Hz Lamp Flux:2492.91x1 lm		
NAME: Integrated Solar Led Street Light	TYPE:	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.: SHENZHEN LEADRAY OPTOELECTRONIC CO.,LTD.	SUR.:	Shielding Angle:N/A

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	352.11	14.1
FM - Front-Medium(30-60)	812.47	32.6
FH - Front-High(60-80)	209.62	8.4
FVH - Front-Very High(80-90)	2.4787	0.1
Total Forward Light	1378.6	55.3

BL - Back-Low(0-30)	258.09	10.4
BM - Back-Medium(30-60)	641.3	25.7
BH - Back-High(60-80)	210.3	8.4
BVH - Back-Very High(80-90)	2.8701	0.1
Total Back Light	1114.4	44.7

UL - Uplight-Low(90-100)	0.57794	0.0
UH - Uplight-High(100-180)	3.0999	0.1
Total Up Light	3.6779	0.1

BUG(Back,Up,Glare) Rating	B1-U1-G1
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	1112.6	1.8061	1114.4
Street Side	1376.7	1.8718	1378.6

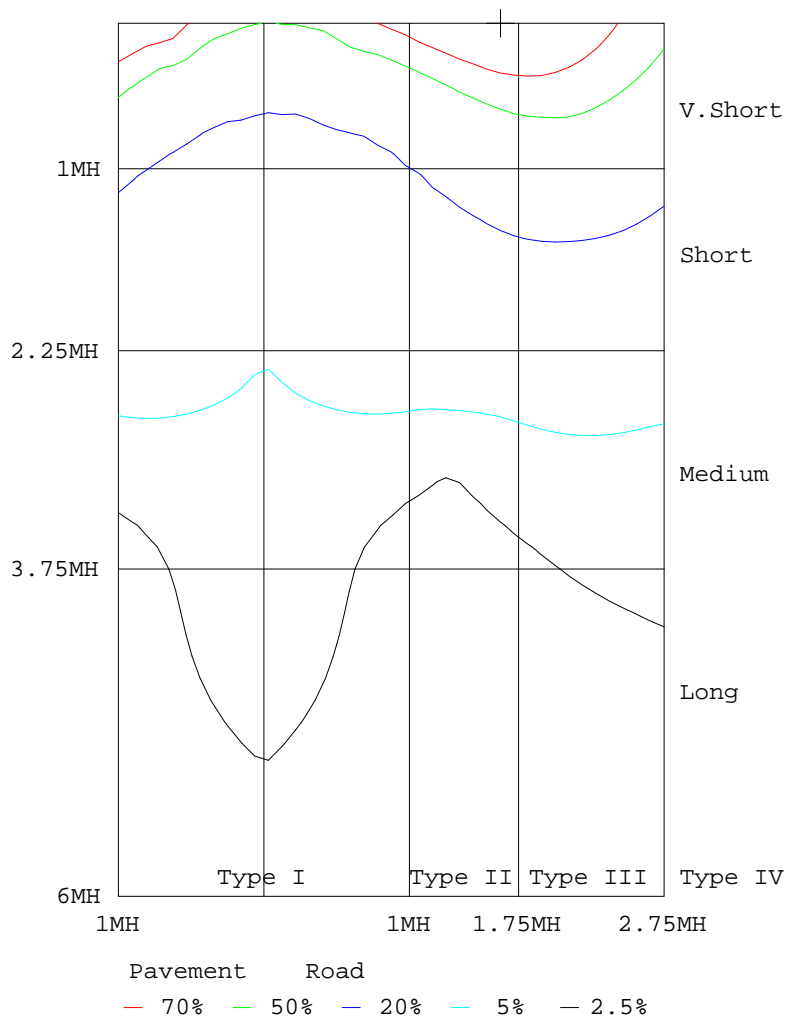
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:Seth
Test Date:2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
Humidity:65.7%
Test Distance:26.000m [K=1.3361]
Remarks:

ROAD ISOCANDELA REPORT

Test:U:27.59V I:0.7312A P:20.18W PF:1.000 Freq:0Hz Lamp Flux:2492.91x1 lm		
NAME: Integrated Solar Led Street Light	TYPE:	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.: SHENZHEN LEADRAY OPTOELECTRONIC CO.,LTD.	SUR.:	Shielding Angle:N/A

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.3361]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:27.59V I:0.7312A P:20.18W PF:1.000 Freq:0Hz Lamp Flux:2492.91x1 lm		
NAME: Integrated Solar Led Street Light	TYPE:	WEIGHT:N/A
SPEC.:N/A	DIM.:	SERIAL No.:N/A
MFR.: SHENZHEN LEADRAY OPTOELECTRONIC CO.,LTD.	SUR.:	Shielding Angle:N/A

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	671	669	670	668	669	668	668	669	671	669	670	668	669	668	668	669			
5	701	661	621	593	595	588	603	630	677	684	705	721	738	736	732	716			
10	724	645	569	526	499	513	551	607	695	720	743	767	801	801	789	755			
15	769	634	532	466	451	462	510	600	703	767	804	829	870	883	861	807			
20	808	638	496	418	390	407	481	582	718	828	884	924	969	990	959	900			
25	893	665	480	371	330	354	446	569	760	910	993	1020	1060	1077	1094	1028			
30	1034	700	454	322	282	304	408	579	855	1024	1097	1147	1159	1160	1207	1198			
35	1164	710	401	278	238	259	366	571	930	1140	1197	1083	967	1065	1260	1306			
40	1207	696	356	242	211	229	323	547	981	1229	1152	642	375	643	1195	1361			
45	1320	735	329	217	187	206	288	546	1073	1340	845	195	154	222	939	1428			
50	1436	794	309	197	175	192	269	548	1191	1373	389	109	88.4	126	549	1432			
55	1492	868	294	180	164	177	257	578	1293	1212	171	65.2	55.8	68.0	254	1302			
60	1446	894	284	169	146	162	248	597	1336	870	91.0	37.9	27.4	36.0	127	1017			
65	1042	705	232	140	83.1	134	217	546	1161	510	50.7	14.7	6.81	10.3	59.6	624			
70	409	324	148	87.8	46.8	83.6	147	365	747	297	22.7	1.60	0.00	0.20	11.8	274			
75	133	113	67.9	29.3	38.3	28.7	76.4	156	322	117	3.07	0.00	0.00	0.00	0.34	64.8			
80	17.7	31.3	35.0	21.1	30.2	20.1	39.4	53.3	44.5	25.2	0.00	0.00	0.00	0.00	0.20	1.48			
85	0.28	0.62	1.00	5.62	1.63	7.81	3.54	0.68	1.03	0.41	0.00	0.00	0.00	0.07	0.20	0.41			
90	0.07	0.07	0.00	0.01	0.00	0.01	0.20	0.14	0.69	0.48	0.13	0.32	2.19	2.03	0.34	0.41			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.55	0.21	1.36	3.28	1.69	0.34	0.54			
100	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	1.60	0.82	0.41	1.09	2.32	0.41	0.27	0.47			
105	0.07	0.34	0.00	0.00	0.00	0.00	0.00	0.00	2.91	0.82	0.20	0.07	0.41	0.07	0.13	0.47			
110	0.27	0.75	0.00	0.00	0.00	0.00	0.00	0.20	3.25	0.82	0.20	0.07	0.00	0.07	0.13	0.47			
115	0.21	1.03	0.14	0.00	0.00	0.00	0.00	0.34	3.26	0.55	0.20	0.07	0.00	0.07	0.13	0.47			
120	0.21	1.17	0.54	0.13	0.07	0.00	0.47	0.34	2.77	0.48	0.20	0.07	0.00	0.07	0.13	0.47			
125	0.21	1.17	0.55	0.95	1.96	1.08	0.61	0.61	2.08	0.41	0.20	0.07	0.00	0.07	0.13	0.47			
130	0.21	1.23	1.09	1.76	2.19	1.15	1.08	0.95	1.18	0.41	0.20	0.07	0.00	0.07	0.13	0.47			
135	0.21	1.03	1.09	2.17	2.05	1.22	1.08	1.01	1.18	0.41	0.20	0.07	0.07	0.07	0.13	0.47			
140	0.21	1.03	1.09	2.17	1.78	1.22	1.08	1.08	1.18	0.41	0.27	0.14	0.07	0.07	0.13	0.54			
145	0.21	0.96	1.09	2.17	1.09	1.35	1.08	1.08	1.04	0.41	0.27	0.14	0.14	0.27	0.27	0.54			
150	0.21	0.96	1.16	2.11	1.03	1.42	1.08	1.08	1.04	0.41	0.48	0.27	0.27	0.20	0.20	0.68			
155	0.21	0.89	1.16	1.97	1.03	1.42	1.08	1.08	0.76	0.41	0.61	0.34	0.28	0.27	0.40	0.61			
160	0.21	0.76	1.16	1.77	1.03	1.42	1.15	1.08	0.48	0.41	0.61	0.34	0.34	0.34	0.40	0.61			
165	0.21	0.69	1.16	1.63	1.09	1.42	1.15	0.88	0.42	0.41	0.61	0.48	0.41	0.41	0.47	0.61			
170	0.21	0.69	1.02	1.23	0.96	1.22	1.15	0.88	0.42	0.41	0.61	0.48	0.55	0.47	0.54	0.68			
175	0.21	0.69	1.02	1.02	0.89	1.02	1.08	0.88	0.42	0.41	0.61	0.54	0.55	0.54	0.74	0.88			
180	0.28	0.69	0.68	0.62	0.75	0.81	1.14	0.88	0.28	0.27	0.68	0.88	0.75	0.74	0.87	1.01			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2016-11-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.3361]
 Remarks: