



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : XENM3-SA-FT-LED-SS-CW.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-4690  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]11/11/13  
[TEST DATE]11/22/13  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT]XENM3-SA-FT-LED-SS-CW  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[ABSOLUTE LUMENS]6160  
[SEARCH\_SOURCETYPE] LED  
[SEARCH\_APPLICATION] Outdoor

**CHARACTERISTICS**

IES Classification	Type IV
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6160
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	70
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	3971
Maximum Candela Angle	27.5H 60V
Maximum Candela (<90 Degrees Vertical)	3971
Maximum Candela Angle (<90 Degrees Vertical)	27.5H 60V
Maximum Candela At 90 Degrees Vertical	3 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1056 (17.1% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	657.6	N.A.	10.7
FM - Front-Medium (30-60)	2758.5	N.A.	44.8
FH - Front-High (60-80)	2037.4	N.A.	33.1
FVH - Front-Very High (80-90)	72.2	N.A.	1.2
BL - Back-Low (0-30)	175.3	N.A.	2.8
BM - Back-Medium (30-60)	326.2	N.A.	5.3
BH - Back-High (60-80)	112.1	N.A.	1.8
BVH - Back-Very High (80-90)	5.4	N.A.	0.1
UL - Uplight-Low (90-100)	2.5	N.A.	0.0
UH - Uplight-High (100-180)	13.2	N.A.	0.2
Total	6160.4	N.A.	100.0
BUG Rating	B1-U2-G2		

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**CANDELA TABULATION**

Vert. Angles	Horizontal Angles									
	<u>0.0</u>	<u>5.0</u>	<u>15.0</u>	<u>25.0</u>	<u>27.5</u>	<u>35.0</u>	<u>45.0</u>	<u>55.0</u>	<u>65.0</u>	<u>75.0</u>
0.0	511	511	511	511	511	511	511	511	511	511
2.5	578	578	573	571	561	557	547	529	515	504
5.0	797	794	779	763	743	721	680	628	576	539
7.5	1128	1144	1091	1045	1027	958	870	767	674	589
10.0	1508	1484	1439	1386	1363	1270	1129	953	802	662
12.5	1774	1748	1725	1641	1618	1538	1416	1213	978	780
15.0	1907	1892	1886	1859	1837	1774	1648	1478	1192	911
17.5	1931	1919	1919	1920	1917	1932	1858	1660	1405	1038
20.0	1909	1902	1917	1940	1937	1952	1966	1848	1617	1193
22.5	1779	1773	1808	1887	1901	1957	2022	2068	1837	1360
25.0	1743	1733	1756	1783	1785	1898	2119	2216	2043	1497
27.5	1723	1713	1728	1761	1766	1860	2181	2330	2239	1625
30.0	1757	1746	1735	1738	1753	1914	2159	2449	2372	1752
32.5	1890	1877	1842	1793	1798	1957	2171	2384	2420	1941
35.0	2000	1986	1963	1953	1969	2068	2139	2233	2440	2047
37.5	2180	2155	2108	2120	2175	2264	2114	2112	2347	2089
40.0	2372	2341	2276	2365	2416	2426	2180	2042	2259	2163
42.5	2627	2588	2535	2708	2739	2599	2295	2010	2136	2144
45.0	2876	2849	2846	3116	3106	2866	2419	2026	2024	2081
47.5	2880	2854	2923	3485	3480	3209	2589	2122	1894	2014
50.0	2969	2947	3065	3571	3570	3509	2860	2235	1803	1926
52.5	3005	2986	3274	3727	3678	3582	3168	2334	1778	1825
55.0	3117	3093	3352	3775	3745	3629	3331	2509	1811	1700
57.5	3184	3169	3646	3858	3770	3660	3309	2731	1899	1604
60.0	2891	2869	3434	3962	3971	3749	3402	2882	2036	1556
62.5	2993	2970	3535	3656	3637	3768	3466	2964	2229	1474
65.0	2962	2958	3545	3707	3677	3508	3507	3087	2234	1272
67.5	2327	2382	3006	3554	3588	3622	3477	2919	2127	1200
70.0	1778	1783	2149	2670	2838	3457	3324	2537	2108	1170
72.5	1237	1243	1549	2000	2205	2687	2815	2283	1988	1184
75.0	776	760	933	1359	1542	1860	1958	1954	1690	1142
77.5	380	402	512	874	949	1091	1088	1334	1516	1125
80.0	71	77	135	291	357	486	543	678	1056	896
82.5	20	21	48	64	69	83	156	245	450	601
85.0	7	7	11	15	16	17	22	40	102	246
87.5	2	1	3	3	4	4	4	5	7	26
90.0	0	0	1	2	2	3	3	3	3	3
92.5	1	1	1	2	2	3	3	3	3	3
95.0	0	0	1	2	2	2	3	3	3	3
97.5	1	0	1	2	2	2	3	3	3	3
100.0	1	1	1	2	2	2	2	3	3	3
102.5	1	1	1	2	2	2	2	3	3	3
105.0	0	1	1	2	2	2	2	3	3	3
107.5	1	1	1	2	2	2	2	3	3	3
110.0	0	1	1	2	2	2	2	3	3	3
112.5	1	1	1	2	2	2	2	3	3	3
115.0	1	1	1	2	2	2	2	3	3	3
117.5	1	0	1	2	2	2	2	3	3	3
120.0	0	0	1	2	2	2	2	3	3	3
122.5	0	1	1	2	2	2	2	3	3	3
125.0	0	0	1	2	2	2	2	3	3	3
127.5	0	1	1	2	2	2	2	3	3	3
130.0	1	1	1	2	2	2	2	3	3	3

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**CANDELA TABULATION - (Cont.)**

132.5	0	1	1	2	2	2	2	3	3	3
135.0	1	1	1	2	2	2	2	3	3	3
137.5	0	1	1	2	2	2	2	3	3	3
140.0	0	1	1	2	1	2	2	2	3	3
142.5	0	1	1	1	2	2	2	3	3	3
145.0	0	0	1	1	2	2	2	2	3	3
147.5	1	1	1	2	2	2	2	3	3	3
150.0	0	1	1	2	2	2	2	3	3	3
152.5	1	1	1	2	2	2	2	3	3	3
155.0	1	1	1	2	2	2	2	3	3	3
157.5	1	1	1	2	2	2	2	3	3	3
160.0	1	0	1	2	2	2	2	3	3	3
162.5	1	0	1	1	2	2	2	3	3	3
165.0	1	1	1	2	2	2	2	2	3	3
167.5	1	1	1	2	2	2	2	2	3	3
170.0	1	1	1	2	2	2	2	2	3	3
172.5	1	1	1	2	2	2	2	2	3	3
175.0	1	1	1	2	2	2	2	2	2	2
177.5	1	1	1	2	1	2	2	2	2	2
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	Horizontal Angles									
	<u>85.0</u>	<u>90.0</u>	<u>95.0</u>	<u>105.0</u>	<u>115.0</u>	<u>125.0</u>	<u>135.0</u>	<u>145.0</u>	<u>155.0</u>	<u>165.0</u>
0.0	511	511	511	511	511	511	511	511	511	511
2.5	498	493	489	485	484	484	487	487	487	489
5.0	508	497	488	478	471	462	453	444	438	435
7.5	526	508	495	477	455	433	421	412	405	398
10.0	560	530	512	478	441	420	403	393	380	371
12.5	625	585	556	496	449	426	405	380	355	343
15.0	704	647	613	531	495	446	378	347	329	318
17.5	769	704	662	566	569	434	362	329	305	287
20.0	835	740	686	623	585	440	373	311	271	251
22.5	874	751	692	684	547	457	389	299	242	224
25.0	900	767	698	681	534	465	396	285	221	199
27.5	927	759	692	698	556	460	401	251	199	182
30.0	964	765	696	677	583	472	336	232	184	171
32.5	1018	778	690	647	618	493	317	221	174	163
35.0	1031	747	651	594	628	469	311	222	166	151
37.5	1102	756	633	522	579	457	301	223	158	139
40.0	1189	794	641	485	474	442	290	217	141	111
42.5	1254	834	663	474	394	429	259	222	113	78
45.0	1289	862	685	465	343	419	227	190	93	74
47.5	1309	877	692	451	298	377	183	151	111	77
50.0	1324	876	700	442	264	297	136	134	143	80
52.5	1331	871	700	417	239	239	100	124	148	82
55.0	1345	875	713	400	219	158	91	115	141	88
57.5	1308	832	683	373	203	100	92	106	133	101
60.0	1281	772	631	328	181	97	90	103	126	114
62.5	1193	782	590	296	131	98	81	95	121	126
65.0	1093	766	573	264	91	99	66	80	120	123
67.5	940	668	511	231	94	92	52	68	55	17
70.0	801	608	417	180	103	73	43	33	20	10
72.5	689	515	355	121	99	54	33	30	18	6
75.0	591	435	271	89	79	41	31	24	20	3
77.5	500	321	191	90	55	26	19	12	7	2

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CANDELA TABULATION - (Cont.)

80.0	374	195	112	75	32	15	12	4	2	3
82.5	259	101	55	42	17	8	4	2	1	3
85.0	123	43	20	14	5	3	2	1	1	0
87.5	23	6	4	3	3	2	2	1	0	0
90.0	3	3	3	3	3	3	2	2	1	0
92.5	3	3	3	3	3	3	3	2	1	0
95.0	3	3	3	3	3	4	3	2	2	1
97.5	3	3	3	4	4	4	3	3	2	1
100.0	3	3	3	4	4	4	4	3	2	1
102.5	3	4	4	4	4	4	4	3	2	1
105.0	3	3	3	4	4	4	4	3	2	1
107.5	3	4	4	4	4	4	4	3	2	2
110.0	3	3	4	4	4	4	4	3	2	2
112.5	3	4	4	4	4	4	4	3	2	2
115.0	3	4	4	4	4	4	4	3	2	2
117.5	3	3	4	4	4	4	4	3	2	2
120.0	3	3	4	4	4	4	4	3	2	2
122.5	3	3	4	4	4	4	4	3	3	2
125.0	3	4	4	4	4	4	4	3	3	2
127.5	3	4	4	4	4	5	4	4	3	2
130.0	3	4	4	4	4	4	4	3	3	2
132.5	3	3	4	4	4	4	4	3	3	2
135.0	3	4	4	4	4	4	4	3	2	2
137.5	3	3	3	4	4	4	3	3	2	2
140.0	3	3	3	4	4	4	3	3	2	1
142.5	3	3	3	3	4	4	3	2	2	1
145.0	3	3	3	3	3	3	3	2	2	1
147.5	3	3	3	3	4	3	3	2	2	1
150.0	3	3	4	3	3	3	3	2	2	1
152.5	3	4	3	3	3	3	3	2	2	1
155.0	3	3	4	3	3	3	3	2	2	1
157.5	3	3	3	3	3	3	3	2	1	1
160.0	3	3	3	3	3	3	2	2	1	1
162.5	3	3	3	3	3	3	2	2	1	1
165.0	3	3	3	3	3	3	2	2	1	1
167.5	3	3	3	3	3	2	2	1	1	0
170.0	3	3	3	3	3	3	2	1	1	0
172.5	3	3	3	3	2	2	2	1	1	0
175.0	3	3	3	2	2	2	1	1	1	0
177.5	2	2	2	2	2	2	2	1	0	0
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Horizontal Angles  
Angles

	<u>175.0</u>	<u>180.0</u>
0.0	511	511
2.5	488	489
5.0	434	433
7.5	395	395
10.0	366	366
12.5	337	337
15.0	310	311
17.5	277	277
20.0	239	239
22.5	212	213
25.0	191	191

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**CANDELA TABULATION - (Cont.)**

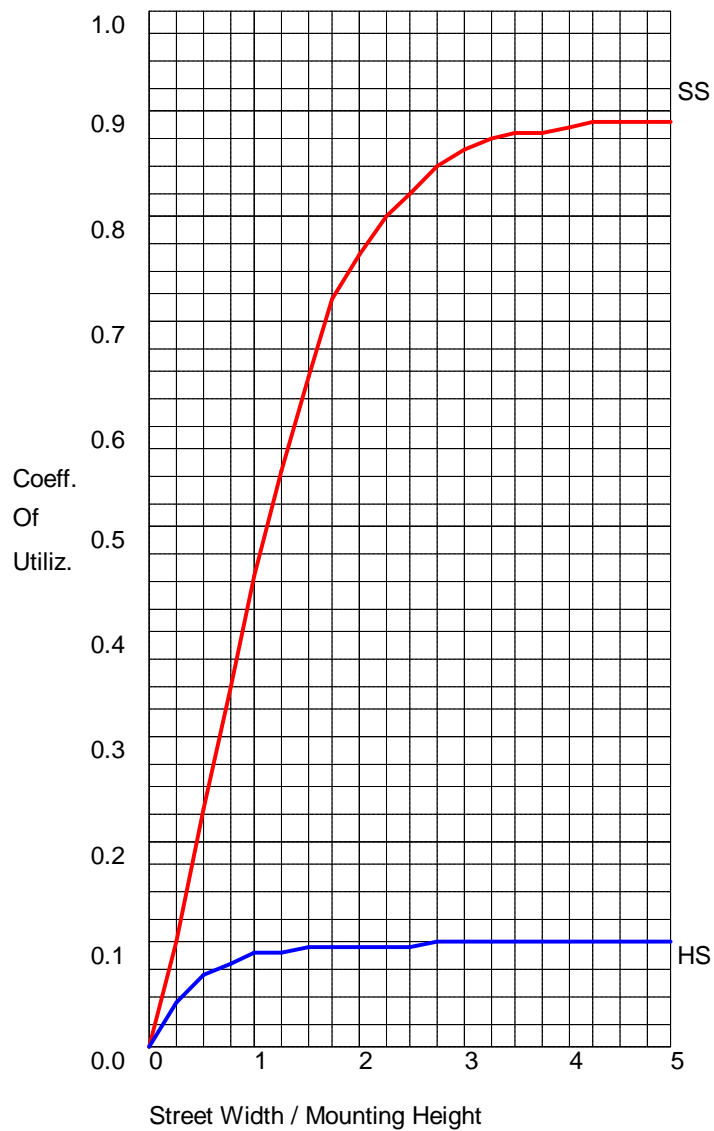
27.5	175	175
30.0	163	162
32.5	152	150
35.0	141	139
37.5	124	119
40.0	86	80
42.5	59	53
45.0	58	52
47.5	59	53
50.0	59	53
52.5	51	46
55.0	43	39
57.5	36	32
60.0	31	26
62.5	26	21
65.0	21	16
67.5	19	11
70.0	7	6
72.5	4	3
75.0	1	0
77.5	0	0
80.0	0	0
82.5	0	0
85.0	0	0
87.5	0	0
90.0	0	0
92.5	0	0
95.0	0	0
97.5	0	0
100.0	1	0
102.5	1	0
105.0	1	1
107.5	1	1
110.0	1	1
112.5	1	1
115.0	1	2
117.5	1	2
120.0	1	1
122.5	2	2
125.0	2	2
127.5	2	2
130.0	2	2
132.5	2	2
135.0	2	2
137.5	2	2
140.0	1	1
142.5	1	1
145.0	1	1
147.5	1	1
150.0	1	1
152.5	1	1
155.0	1	1
157.5	0	1
160.0	0	0
162.5	0	0
165.0	0	0

**IES ROAD REPORT**  
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**CANDELA TABULATION - (Cont.)**

<b>167.5</b>	0	0
<b>170.0</b>	0	0
<b>172.5</b>	0	0
<b>175.0</b>	0	0
<b>177.5</b>	0	0
<b>180.0</b>	2	2

COEFFICIENTS OF UTILIZATION

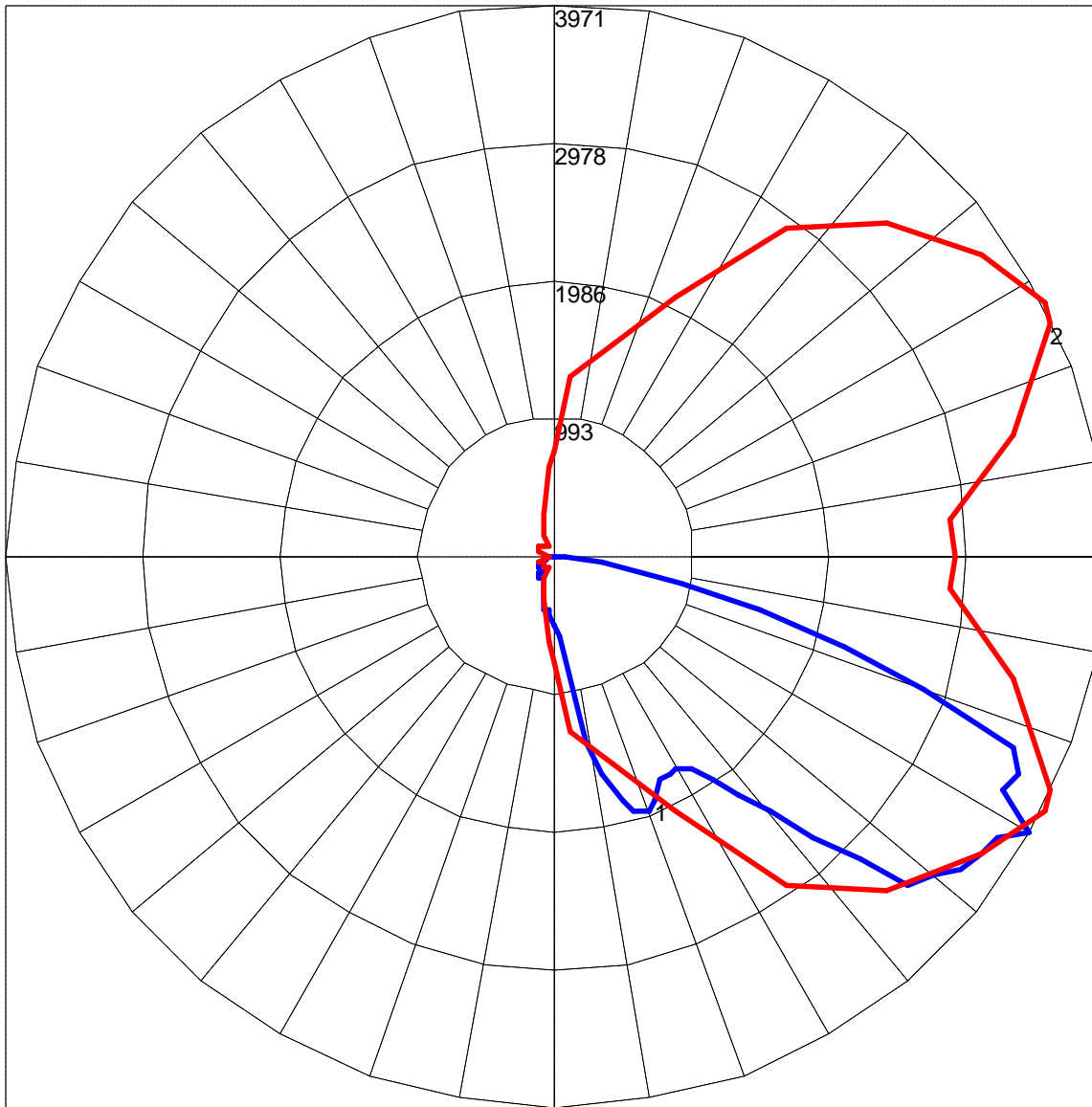


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	5525.7	89.7
Downward House Side	619.1	10.0
Downward Total	6144.8	99.7
Upward Street Side	6.9	0.1
Upward House Side	8.8	0.1
Upward Total	15.7	0.3
Total Flux	6160.5	100.0

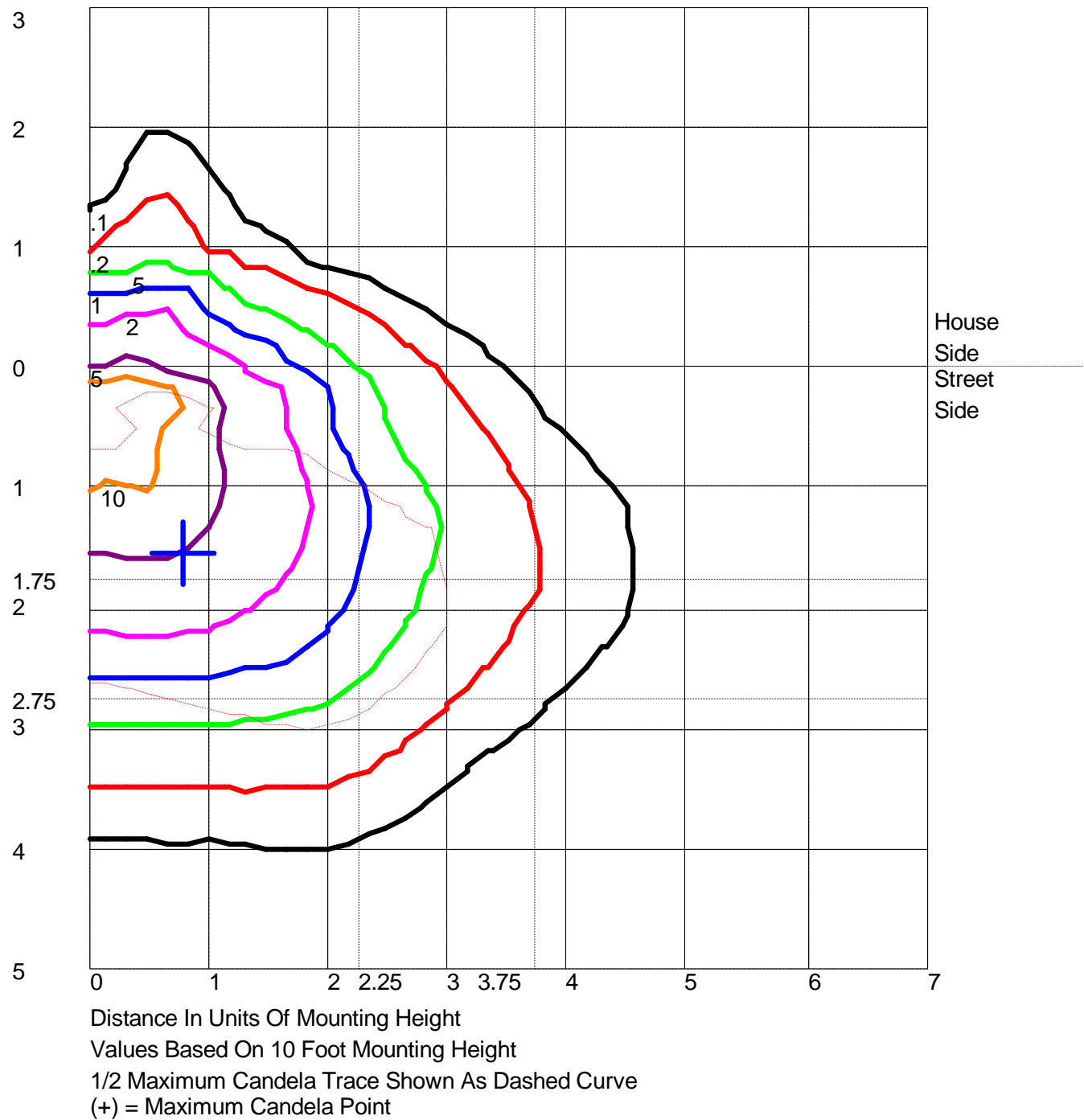


POLAR GRAPH

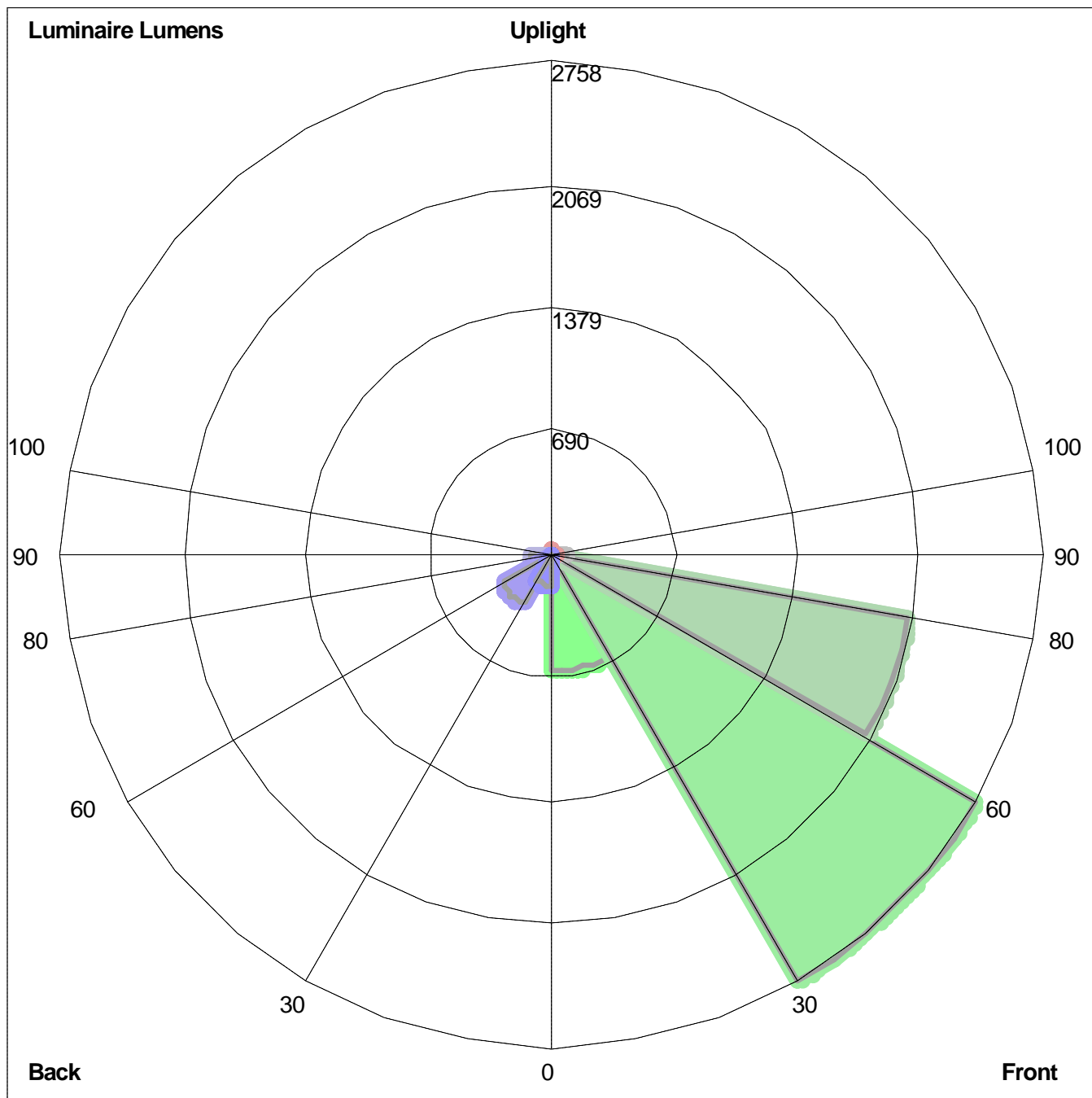


Maximum Candela = 3971 Located At Horizontal Angle = 27.5, Vertical Angle = 60  
# 1 - Vertical Plane Through Horizontal Angles (27.5 - 207.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (60) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=657.6, Medium=2758.5, High=2037.4, Very High=72.2  
Back: Low=175.3, Medium=326.2, High=112.1, Very High=5.4  
Uplight: Low=2.5, High=13.2

BUG Rating : B1-U2-G2