



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : XENM3-SA-FT-LED-HO-NW.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-4780  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]11/23/13  
[TEST DATE]11/23/13  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT]XENM3-SA-FT-LED-HO-NW  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[ABSOLUTE LUMENS]8281  
[SEARCH\_SOURCETYPE] LED  
[SEARCH\_APPLICATION] Outdoor

**CHARACTERISTICS**

IES Classification	Type III
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8281
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	108
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	5468
Maximum Candela Angle	25H 57.5V
Maximum Candela (<90 Degrees Vertical)	5468
Maximum Candela Angle (<90 Degrees Vertical)	25H 57.5V
Maximum Candela At 90 Degrees Vertical	4 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1150 (13.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	895.4	N.A.	10.8
FM - Front-Medium (30-60)	3870.1	N.A.	46.7
FH - Front-High (60-80)	2532.7	N.A.	30.6
FVH - Front-Very High (80-90)	68.8	N.A.	0.8
BL - Back-Low (0-30)	254.0	N.A.	3.1
BM - Back-Medium (30-60)	471.1	N.A.	5.7
BH - Back-High (60-80)	161.2	N.A.	1.9
BVH - Back-Very High (80-90)	7.9	N.A.	0.1
UL - Uplight-Low (90-100)	3.2	N.A.	0.0
UH - Uplight-High (100-180)	17.1	N.A.	0.2
Total	8281.5	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>22.5</u>	<u>25.0</u>	<u>35.0</u>	<u>45.0</u>	<u>55.0</u>	<u>65.0</u>	<u>75.0</u>
0.0	756	756	756	756	756	756	756	756	756	756
2.5	866	868	868	852	853	834	821	795	778	755
5.0	1178	1185	1174	1132	1141	1060	1003	926	866	810
7.5	1627	1635	1609	1549	1552	1424	1292	1143	998	881
10.0	2040	2009	1968	1898	1892	1762	1624	1430	1197	995
12.5	2368	2354	2320	2272	2250	2109	1917	1736	1463	1158
15.0	2510	2503	2482	2458	2452	2395	2244	1989	1713	1346
17.5	2555	2554	2541	2540	2546	2527	2465	2243	1914	1518
20.0	2439	2435	2478	2529	2555	2576	2573	2472	2182	1733
22.5	2387	2388	2399	2410	2428	2533	2692	2717	2487	1934
25.0	2372	2371	2382	2400	2415	2478	2775	2947	2742	2109
27.5	2387	2385	2376	2379	2396	2535	2833	3122	2984	2253
30.0	2532	2528	2479	2424	2426	2606	2899	3180	3106	2426
32.5	2735	2730	2687	2611	2603	2730	2946	3070	3168	2641
35.0	2950	2947	2869	2820	2858	2981	2931	2960	3138	2705
37.5	3239	3213	3139	3115	3173	3289	2993	2844	3007	2757
40.0	3481	3454	3392	3469	3572	3573	3141	2799	2919	2812
42.5	3818	3796	3716	3908	4021	3881	3353	2834	2813	2786
45.0	3978	3977	4078	4410	4520	4254	3578	2912	2678	2706
47.5	4029	4033	4184	4684	4841	4670	3872	3077	2598	2589
50.0	4133	4140	4400	4899	5007	4916	4219	3278	2540	2460
52.5	4186	4180	4542	5084	5157	4979	4510	3450	2539	2342
55.0	4432	4442	4857	5200	5216	5006	4622	3671	2587	2218
57.5	4048	4078	4886	5429	5468	5091	4628	3871	2759	2165
60.0	4025	4032	4631	5077	5175	5214	4712	4016	2986	2179
62.5	4018	4055	4725	4989	5016	5008	4853	4191	3209	2069
65.0	3582	3643	4444	4841	4930	4805	4785	4307	3006	1799
67.5	2486	2522	3101	3808	4103	4793	4713	3872	2941	1731
70.0	1868	1910	2248	2653	2881	4025	4227	3507	2806	1714
72.5	1152	1166	1382	1797	2028	2939	3216	3026	2588	1661
75.0	603	658	792	1149	1305	1851	2004	2255	2262	1592
77.5	181	217	327	549	650	936	1029	1332	1861	1500
80.0	41	43	96	139	161	288	411	614	1150	1127
82.5	14	15	33	36	37	53	89	182	423	659
85.0	4	4	7	10	11	12	15	28	75	252
87.5	0	0	1	2	2	3	3	4	5	21
90.0	0	0	1	2	2	3	3	4	4	4
92.5	0	0	1	2	2	3	4	4	4	4
95.0	0	0	1	2	2	3	3	4	4	4
97.5	0	0	1	2	2	3	3	4	4	5
100.0	0	0	1	2	2	3	3	4	4	4
102.5	0	0	1	2	2	2	3	3	4	4
105.0	0	1	1	2	2	2	3	3	4	4
107.5	0	0	1	2	2	2	3	3	4	4
110.0	0	0	1	2	2	2	3	3	4	4
112.5	0	0	1	2	2	2	3	3	4	4
115.0	0	0	1	2	2	2	3	3	4	4
117.5	0	1	1	2	2	2	3	3	4	4
120.0	0	0	1	2	2	2	3	3	4	4
122.5	0	0	1	2	2	2	3	3	4	4
125.0	0	1	1	2	2	2	3	4	4	4
127.5	0	1	1	2	2	2	3	4	4	4
130.0	0	0	1	2	2	2	3	3	4	4

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**CANDELA TABULATION - (Cont.)**

132.5	0	0	1	2	2	2	3	3	4	4
135.0	0	0	1	2	2	2	3	4	4	4
137.5	0	1	1	2	2	2	3	3	4	4
140.0	0	0	1	2	2	2	3	3	4	4
142.5	0	0	1	2	2	2	3	3	4	4
145.0	0	0	1	2	2	2	3	3	4	4
147.5	0	0	1	2	2	2	3	3	4	4
150.0	0	1	1	2	2	2	3	3	4	4
152.5	0	1	1	2	2	2	3	3	4	4
155.0	0	0	1	2	2	2	3	3	4	4
157.5	0	1	1	2	2	2	3	3	4	4
160.0	0	0	1	2	2	2	3	3	4	4
162.5	1	1	1	2	2	2	3	3	4	4
165.0	0	1	1	2	2	2	3	3	3	3
167.5	0	0	1	2	2	2	3	3	3	3
170.0	0	0	1	2	2	2	3	3	3	3
172.5	0	0	1	2	2	2	3	3	3	3
175.0	0	0	1	2	2	2	2	3	3	3
177.5	0	0	1	2	2	2	2	3	3	3
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	756	756	756	756	756	756	756	756	756	756
2.5	742	735	727	715	708	705	705	705	701	705
5.0	760	738	720	690	671	658	655	651	646	645
7.5	788	754	724	679	657	638	621	605	590	581
10.0	847	795	753	689	654	614	585	562	542	527
12.5	940	870	815	729	663	603	583	536	521	498
15.0	1045	951	887	787	692	646	554	511	477	456
17.5	1126	1007	933	824	769	671	531	474	445	421
20.0	1218	1068	976	856	857	658	538	458	411	378
22.5	1293	1098	988	907	811	654	552	450	372	337
25.0	1341	1110	998	914	797	658	577	448	338	305
27.5	1374	1112	990	939	786	668	583	406	303	273
30.0	1453	1137	992	943	810	685	534	357	274	246
32.5	1561	1152	980	886	847	716	465	329	252	229
35.0	1581	1125	931	826	839	694	457	312	240	215
37.5	1677	1162	920	749	775	682	453	313	230	199
40.0	1753	1226	943	693	697	655	433	315	217	166
42.5	1785	1283	972	684	605	597	399	298	191	112
45.0	1812	1311	994	679	531	535	346	259	158	93
47.5	1820	1316	1003	656	459	482	292	207	158	95
50.0	1812	1313	995	631	402	400	238	176	179	110
52.5	1770	1296	995	616	350	349	170	168	202	127
55.0	1744	1273	974	596	321	254	124	164	204	138
57.5	1682	1234	932	548	299	155	119	158	196	146
60.0	1616	1187	859	496	260	118	124	150	193	159
62.5	1439	1130	838	435	202	120	111	139	183	171
65.0	1322	1073	812	391	155	122	100	121	180	181
67.5	1159	946	702	335	127	119	84	108	145	56
70.0	1001	830	577	256	124	105	66	62	29	20
72.5	882	718	468	183	121	81	57	43	24	12
75.0	792	610	365	119	109	58	39	39	29	7
77.5	673	441	262	103	83	41	29	30	27	3

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CANDELA TABULATION - (Cont.)

80.0	538	306	144	91	51	26	21	11	11	4
82.5	348	159	66	60	27	15	9	3	2	6
85.0	143	51	29	22	9	5	4	2	1	0
87.5	16	8	5	4	4	4	3	2	1	0
90.0	3	3	3	3	4	4	3	2	1	0
92.5	4	4	4	4	4	4	4	3	1	0
95.0	4	4	4	4	5	5	4	3	2	1
97.5	4	4	4	5	5	5	5	4	2	1
100.0	4	4	4	5	5	5	5	4	3	1
102.5	4	4	4	5	5	5	5	4	3	2
105.0	4	4	5	5	5	5	5	4	3	2
107.5	4	4	5	5	5	5	5	4	3	2
110.0	4	4	5	5	5	5	5	4	3	2
112.5	4	4	5	5	5	5	5	4	3	2
115.0	4	4	5	5	5	6	5	4	3	2
117.5	4	5	5	5	6	6	5	4	3	2
120.0	4	4	5	5	6	6	5	4	3	2
122.5	4	5	5	5	6	6	6	5	4	3
125.0	4	5	5	5	6	6	6	5	4	3
127.5	4	5	5	5	6	6	6	5	4	3
130.0	5	5	5	5	6	6	6	5	4	3
132.5	4	5	5	5	6	6	6	5	4	3
135.0	4	5	5	5	5	6	5	5	4	3
137.5	4	4	5	5	5	5	5	4	3	3
140.0	4	4	4	5	5	5	5	4	3	2
142.5	4	4	4	5	5	5	5	4	3	2
145.0	4	4	4	5	5	5	4	4	3	2
147.5	4	4	4	5	5	5	4	3	3	2
150.0	4	4	5	5	5	5	4	3	3	2
152.5	4	5	5	5	5	5	4	3	3	2
155.0	4	4	4	5	5	5	4	3	2	2
157.5	4	4	4	4	4	4	4	3	2	1
160.0	4	4	4	4	4	4	4	3	2	1
162.5	4	4	4	4	4	4	3	3	2	1
165.0	4	4	4	4	4	4	3	2	1	1
167.5	4	4	4	4	4	4	3	2	1	1
170.0	3	3	4	4	4	3	3	2	1	1
172.5	3	3	3	3	3	3	3	2	1	0
175.0	3	3	3	3	3	3	2	2	1	0
177.5	3	3	3	3	3	3	2	1	1	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	756	756
2.5	702	707
5.0	641	644
7.5	578	580
10.0	521	523
12.5	486	485
15.0	449	448
17.5	412	410
20.0	365	362
22.5	327	324
25.0	288	288

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

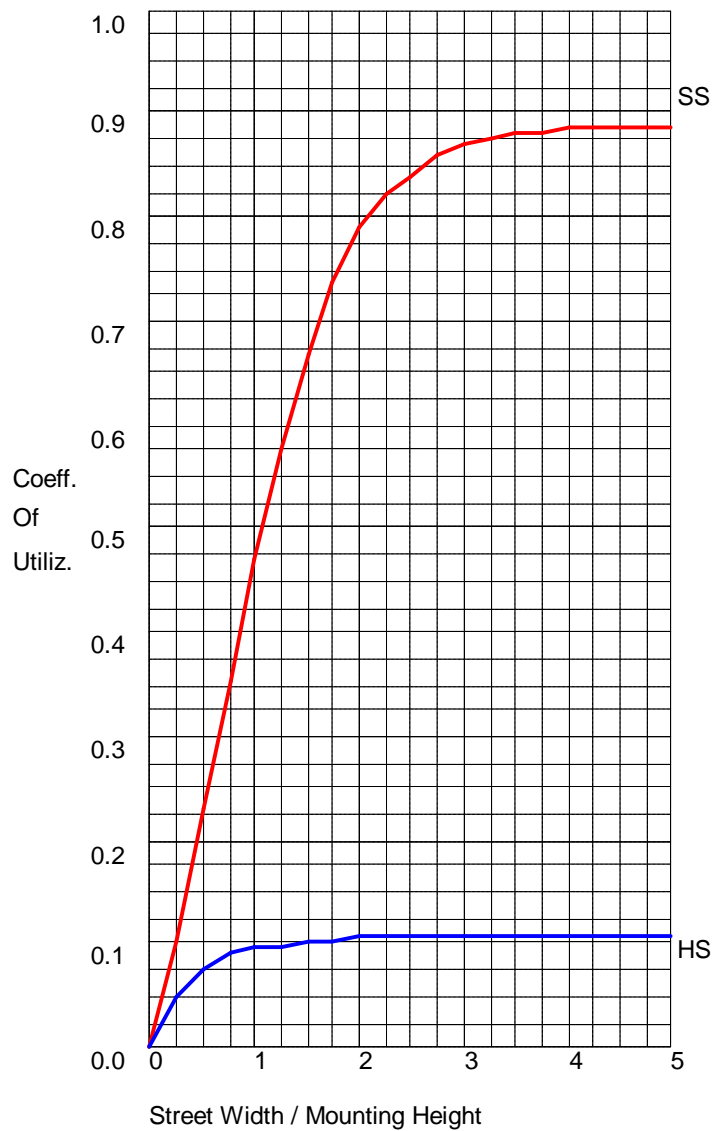
27.5	257	258
30.0	235	234
32.5	219	220
35.0	203	202
37.5	183	184
40.0	140	134
42.5	85	79
45.0	69	66
47.5	73	69
50.0	75	70
52.5	71	71
55.0	65	59
57.5	57	50
60.0	48	40
62.5	42	33
65.0	41	26
67.5	31	19
70.0	15	13
72.5	7	6
75.0	3	2
77.5	1	0
80.0	0	0
82.5	0	0
85.0	0	0
87.5	0	0
90.0	0	0
92.5	0	0
95.0	0	0
97.5	0	0
100.0	0	0
102.5	1	0
105.0	1	1
107.5	1	1
110.0	1	1
112.5	1	1
115.0	2	1
117.5	2	2
120.0	2	2
122.5	2	2
125.0	3	2
127.5	3	3
130.0	3	3
132.5	3	3
135.0	3	3
137.5	2	2
140.0	2	2
142.5	2	2
145.0	2	2
147.5	2	2
150.0	2	1
152.5	2	1
155.0	1	1
157.5	1	1
160.0	1	0
162.5	0	0
165.0	0	0

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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

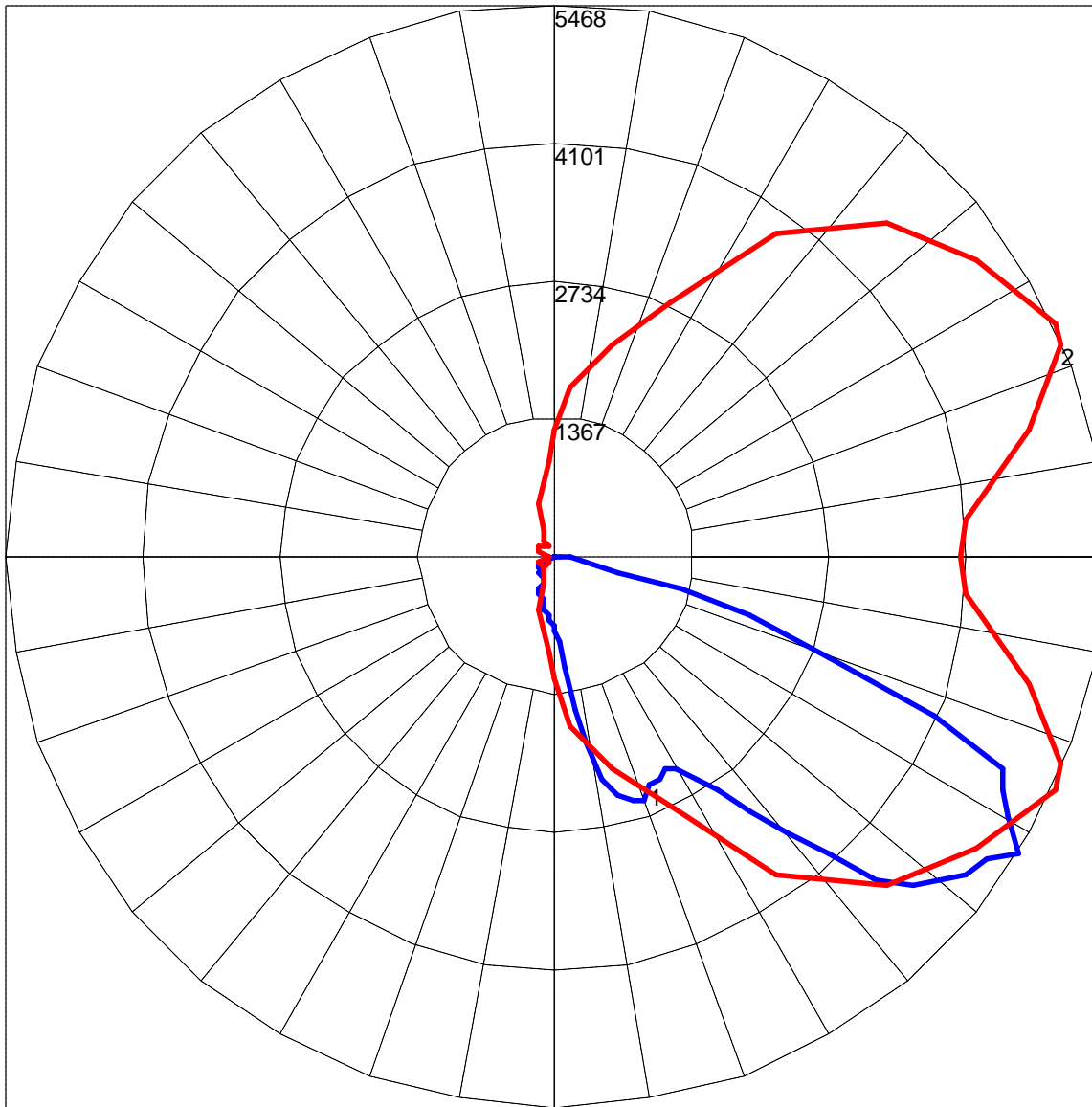


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	7367.0	89.0
Downward House Side	894.2	10.8
Downward Total	8261.2	99.8
Upward Street Side	8.3	0.1
Upward House Side	11.9	0.1
Upward Total	20.2	0.2
Total Flux	8281.4	100.0

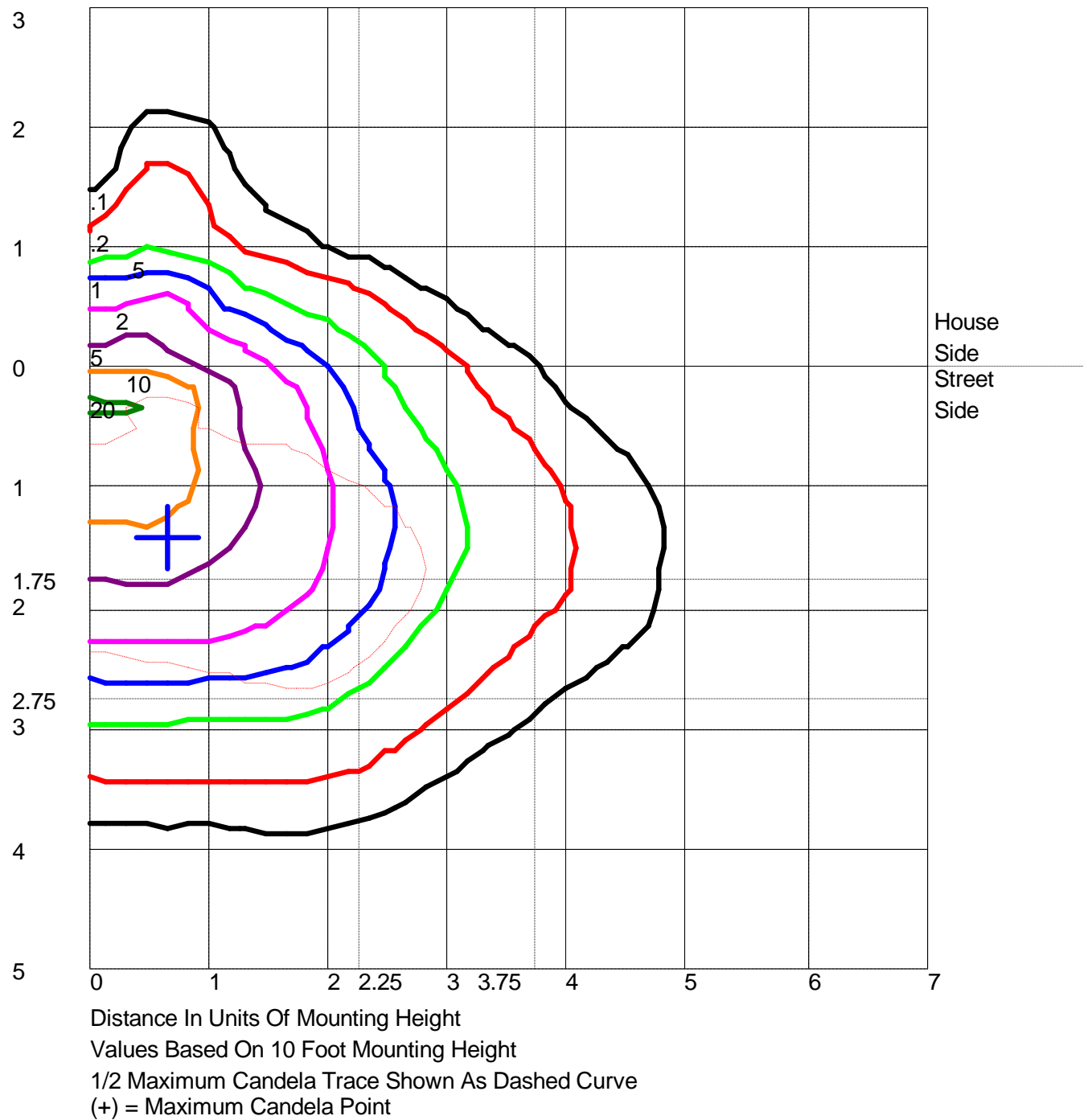


POLAR GRAPH

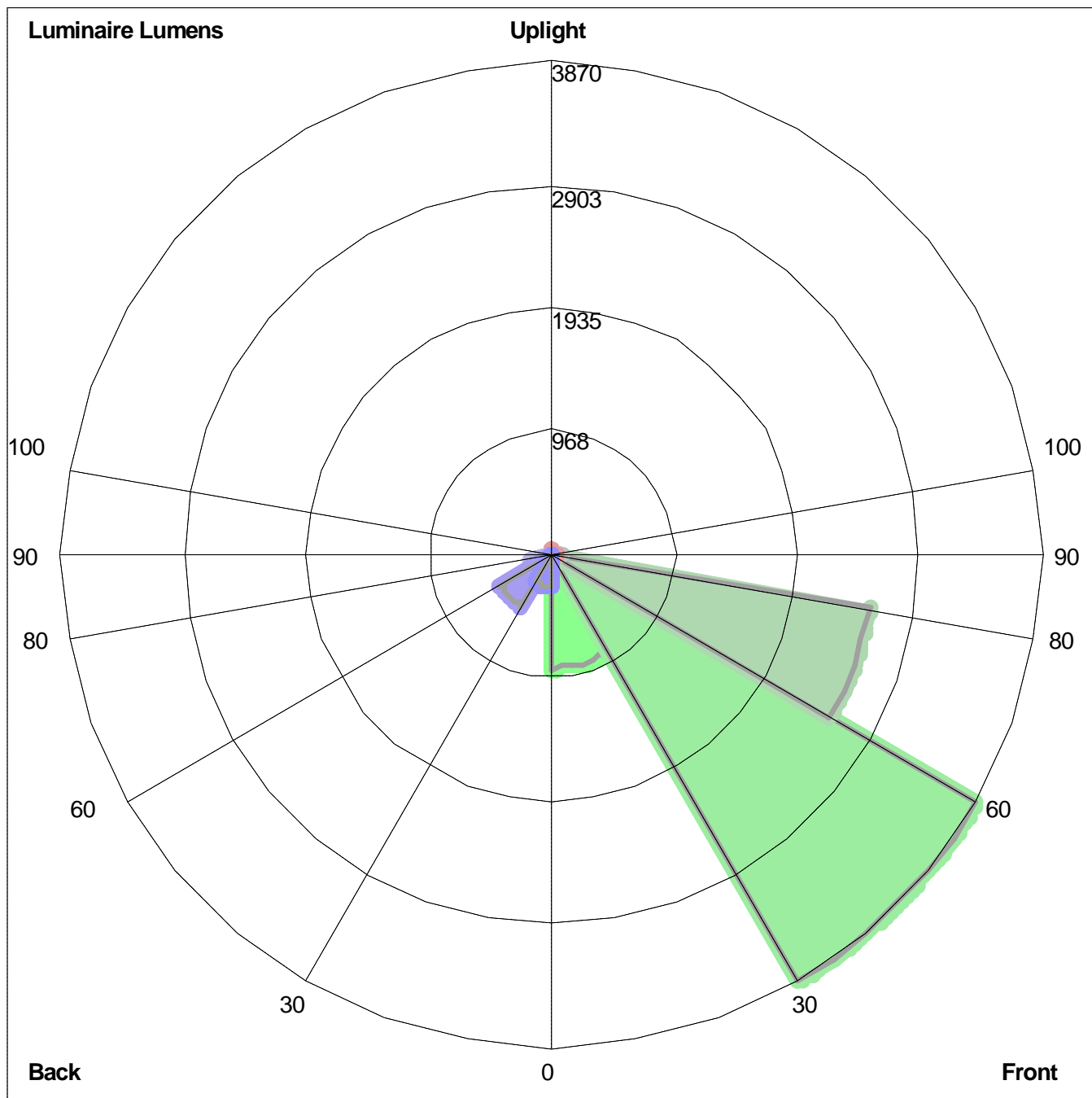


Maximum Candela = 5468 Located At Horizontal Angle = 25, Vertical Angle = 57.5  
# 1 - Vertical Plane Through Horizontal Angles (25 - 205) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (57.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=895.4, Medium=3870.1, High=2532.7, Very High=68.8  
Back: Low=254.0, Medium=471.1, High=161.2, Very High=7.9  
Uplight: Low=3.2, High=17.1

BUG Rating : B1-U2-G2