



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : XGBM-FTA-LED-HO-CW-HSS.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-5356A  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]03/30/16  
[TEST DATE]03/30/16  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT]XGBM-FTA-LED-HO-CW-HSS  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]Tested with new Flat Black HSS Shield  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[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	20838
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	287.5
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	13793
Maximum Candela Angle	20H 62.5V
Maximum Candela (<90 Degrees Vertical)	13793
Maximum Candela Angle (<90 Degrees Vertical)	20H 62.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	3638 (17.5% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	2351.9	N.A.	11.3
FM - Front-Medium (30-60)	8073.1	N.A.	38.7
FH - Front-High (60-80)	7148.1	N.A.	34.3
FVH - Front-Very High (80-90)	434.8	N.A.	2.1
BL - Back-Low (0-30)	1255.5	N.A.	6.0
BM - Back-Medium (30-60)	1299.8	N.A.	6.2
BH - Back-High (60-80)	266.7	N.A.	1.3
BVH - Back-Very High (80-90)	8.3	N.A.	0.0
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	20838.2	N.A.	100.0
BUG Rating	B3-U0-G3		

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**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>0</b></u>	<u><b>5</b></u>	<u><b>15</b></u>	<u><b>20</b></u>	<u><b>25</b></u>	<u><b>35</b></u>	<u><b>45</b></u>	<u><b>55</b></u>	<u><b>65</b></u>	<u><b>75</b></u>
<b>0.0</b>	4959	4959	4959	4959	4959	4959	4959	4959	4959	4959
<b>2.5</b>	5056	5097	5062	5052	5057	5021	4998	4988	4960	4950
<b>5.0</b>	5228	5266	5230	5216	5216	5157	5116	5074	5020	4986
<b>7.5</b>	5608	5590	5482	5403	5371	5313	5255	5193	5100	5028
<b>10.0</b>	5867	5901	5888	5866	5870	5818	5502	5310	5195	5079
<b>12.5</b>	5926	5967	5943	5906	5899	5895	5861	5680	5314	5186
<b>15.0</b>	5674	5732	5794	5824	5909	5968	5890	5945	5521	5364
<b>17.5</b>	5245	5307	5374	5434	5555	5779	6002	6042	6051	5573
<b>20.0</b>	4923	4964	5017	5060	5165	5420	5855	6211	6306	5778
<b>22.5</b>	5105	5166	5194	5204	4980	5108	5614	6298	6528	6030
<b>25.0</b>	4934	4974	5001	5014	5074	5224	5281	6168	6770	6588
<b>27.5</b>	4892	4918	4914	4921	4968	5127	5079	5865	7021	7083
<b>30.0</b>	4974	5001	4950	4915	4935	5040	5263	5578	7048	7347
<b>32.5</b>	5478	5570	5117	5071	5037	5015	5258	5542	6784	7310
<b>35.0</b>	5799	5839	5775	5717	5552	5178	5362	5834	6238	7089
<b>37.5</b>	6188	6196	6027	5938	5924	5734	5528	5718	5759	6950
<b>40.0</b>	6606	6546	6390	6308	6298	6443	5805	5617	5461	6723
<b>42.5</b>	7494	7492	7162	6766	6672	6963	6532	5523	5541	6257
<b>45.0</b>	8119	8116	7903	7747	7763	7331	6705	5539	5281	5851
<b>47.5</b>	8824	8789	8420	8452	8650	8276	6992	5849	5127	5452
<b>50.0</b>	9625	9606	9423	9377	9577	8971	7286	6159	5010	5073
<b>52.5</b>	10295	10298	10185	10569	10672	9435	8063	6282	5000	4812
<b>55.0</b>	10296	10378	10648	11449	11497	10242	8546	6598	5144	4779
<b>57.5</b>	10570	10630	10602	11283	11556	10762	9146	7164	5541	4816
<b>60.0</b>	11712	11787	11932	12298	11723	10871	9753	7474	5424	4611
<b>62.5</b>	12221	12326	13177	13793	13065	10948	10132	7628	5351	4323
<b>65.0</b>	10811	10997	12321	13206	13294	12127	10127	7906	5231	3894
<b>67.5</b>	10017	10051	10868	11361	11500	11972	10399	7653	4971	3603
<b>70.0</b>	9823	9885	10616	10815	10768	10496	9801	6913	4849	3147
<b>72.5</b>	8637	8773	9484	9995	10728	10339	7844	6481	4541	2653
<b>75.0</b>	6494	6557	7273	8153	9271	9113	7146	5479	3781	2153
<b>77.5</b>	3929	3870	4435	5237	6208	6484	5840	4566	3159	1636
<b>80.0</b>	2059	2005	2314	2812	3217	3543	3638	3430	2290	1425
<b>82.5</b>	948	980	1054	1164	1274	1420	1654	1767	1516	891
<b>85.0</b>	464	486	517	561	590	632	639	628	631	432
<b>87.5</b>	256	260	279	295	297	290	277	245	160	92
<b>90.0</b>	0	0	0	0	0	0	0	0	0	0
<b>92.5</b>	0	0	0	0	0	0	0	0	0	0
<b>95.0</b>	0	0	0	0	0	0	0	0	0	0
<b>97.5</b>	0	0	0	0	0	0	0	0	0	0
<b>100.0</b>	0	0	0	0	0	0	0	0	0	0
<b>102.5</b>	0	0	0	0	0	0	0	0	0	0
<b>105.0</b>	0	0	0	0	0	0	0	0	0	0
<b>107.5</b>	0	0	0	0	0	0	0	0	0	0
<b>110.0</b>	0	0	0	0	0	0	0	0	0	0
<b>112.5</b>	0	0	0	0	0	0	0	0	0	0
<b>115.0</b>	0	0	0	0	0	0	0	0	0	0
<b>117.5</b>	0	0	0	0	0	0	0	0	0	0
<b>120.0</b>	0	0	0	0	0	0	0	0	0	0
<b>122.5</b>	0	0	0	0	0	0	0	0	0	0
<b>125.0</b>	0	0	0	0	0	0	0	0	0	0
<b>127.5</b>	0	0	0	0	0	0	0	0	0	0
<b>130.0</b>	0	0	0	0	0	0	0	0	0	0

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**CANDELA TABULATION - (Cont.)**

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

Vert. Angles	Horizontal Angles									
	<u>85</u>	<u>90</u>	<u>95</u>	<u>105</u>	<u>115</u>	<u>125</u>	<u>135</u>	<u>145</u>	<u>155</u>	<u>165</u>
0.0	4959	4959	4959	4959	4959	4959	4959	4959	4959	4959
2.5	4935	4922	4922	4909	4910	4898	4919	4914	4906	4931
5.0	4958	4930	4910	4878	4839	4790	4761	4719	4688	4697
7.5	4969	4937	4910	4841	4736	4647	4612	4553	4512	4500
10.0	4990	4948	4904	4791	4637	4545	4486	4346	4021	3896
12.5	5041	4996	4928	4741	4583	4451	4009	3759	3573	3421
15.0	5171	5105	5000	4724	4520	4044	3680	3293	2916	2642
17.5	5307	5210	5066	4741	4456	3773	3228	2620	2107	1778
20.0	5424	5268	5091	4734	4105	3511	2641	1874	1305	1046
22.5	5543	5354	5132	4712	3956	3136	1995	1226	757	593
25.0	5731	5497	5233	4767	3800	2690	1454	774	511	459
27.5	5963	5660	5364	4767	3558	2123	1090	621	453	406
30.0	6129	5765	5431	4535	3230	1668	926	618	410	351
32.5	6091	5674	5311	4274	2811	1289	931	619	353	290
35.0	6036	5552	5187	4014	2270	1142	909	614	308	265
37.5	6015	5507	5129	3749	1698	1080	859	501	308	256
40.0	5862	5405	5036	3371	1296	990	809	404	286	203
42.5	5675	5301	4943	2942	944	902	708	380	254	199
45.0	5554	5157	4818	2491	710	745	570	344	249	169
47.5	5444	5044	4706	2043	612	581	465	350	167	108
50.0	5369	4948	4595	1644	547	458	370	282	128	78
52.5	5399	4879	4476	1310	492	372	336	198	100	42
55.0	5208	4625	4221	1105	446	290	217	123	78	36
57.5	5101	4384	3854	975	439	265	133	59	50	26
60.0	4786	4102	3458	891	414	190	66	39	25	16
62.5	4249	3649	2845	754	337	132	52	29	7	3
65.0	3572	3135	2352	584	273	80	39	12	1	0
67.5	3085	2750	1906	476	163	65	22	3	0	0
70.0	2716	2376	1440	439	110	45	9	0	0	0
72.5	2057	1816	916	347	74	33	5	0	0	0
75.0	1444	1283	585	228	50	15	3	0	0	0
77.5	900	872	350	114	33	8	2	0	0	0

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**CANDELA TABULATION - (Cont.)**

80.0	667	603	193	81	20	7	2	0	0	0
82.5	352	278	99	49	13	8	2	0	0	0
85.0	166	103	28	26	8	6	3	0	0	0
87.5	38	16	11	11	7	5	3	1	0	0
90.0	0	0	0	0	0	0	0	0	0	0
92.5	0	0	0	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0	0	0	0
97.5	0	0	0	0	0	0	0	0	0	0
100.0	0	0	0	0	0	0	0	0	0	0
102.5	0	0	0	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0	0	0	0
107.5	0	0	0	0	0	0	0	0	0	0
110.0	0	0	0	0	0	0	0	0	0	0
112.5	0	0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0	0
117.5	0	0	0	0	0	0	0	0	0	0
120.0	0	0	0	0	0	0	0	0	0	0
122.5	0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0	0
127.5	0	0	0	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0	0	0	0
132.5	0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0	0
137.5	0	0	0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0	0	0	0
142.5	0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0	0
147.5	0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0	0
152.5	0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0	0
157.5	0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

**Vert. Horizontal Angles**  
**Angles**

	<u>175</u>	<u>180</u>
0.0	4959	4959
2.5	4919	4994
5.0	4673	4746
7.5	4485	4553
10.0	3849	3917
12.5	3318	3386
15.0	2484	2542
17.5	1607	1565
20.0	899	863
22.5	523	504
25.0	437	433

IES ROAD REPORT  
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CANDELA TABULATION - (Cont.)

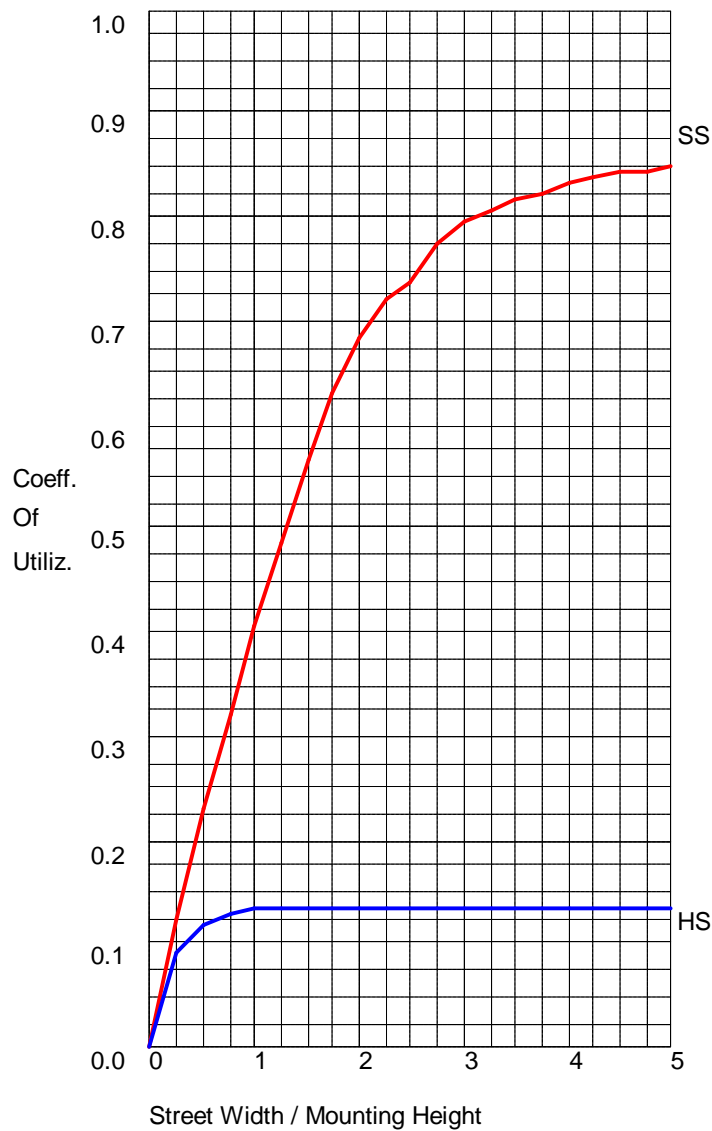
27.5	378	377
30.0	308	305
32.5	268	262
35.0	255	244
37.5	233	220
40.0	197	189
42.5	189	183
45.0	129	117
47.5	95	79
50.0	64	49
52.5	38	31
55.0	32	28
57.5	20	18
60.0	6	6
62.5	0	0
65.0	0	0
67.5	0	0
70.0	0	0
72.5	0	0
75.0	0	0
77.5	0	0
80.0	0	0
82.5	0	0
85.0	0	0
87.5	0	0
90.0	0	0
92.5	0	0
95.0	0	0
97.5	0	0
100.0	0	0
102.5	0	0
105.0	0	0
107.5	0	0
110.0	0	0
112.5	0	0
115.0	0	0
117.5	0	0
120.0	0	0
122.5	0	0
125.0	0	0
127.5	0	0
130.0	0	0
132.5	0	0
135.0	0	0
137.5	0	0
140.0	0	0
142.5	0	0
145.0	0	0
147.5	0	0
150.0	0	0
152.5	0	0
155.0	0	0
157.5	0	0
160.0	0	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>	0	0

COEFFICIENTS OF UTILIZATION

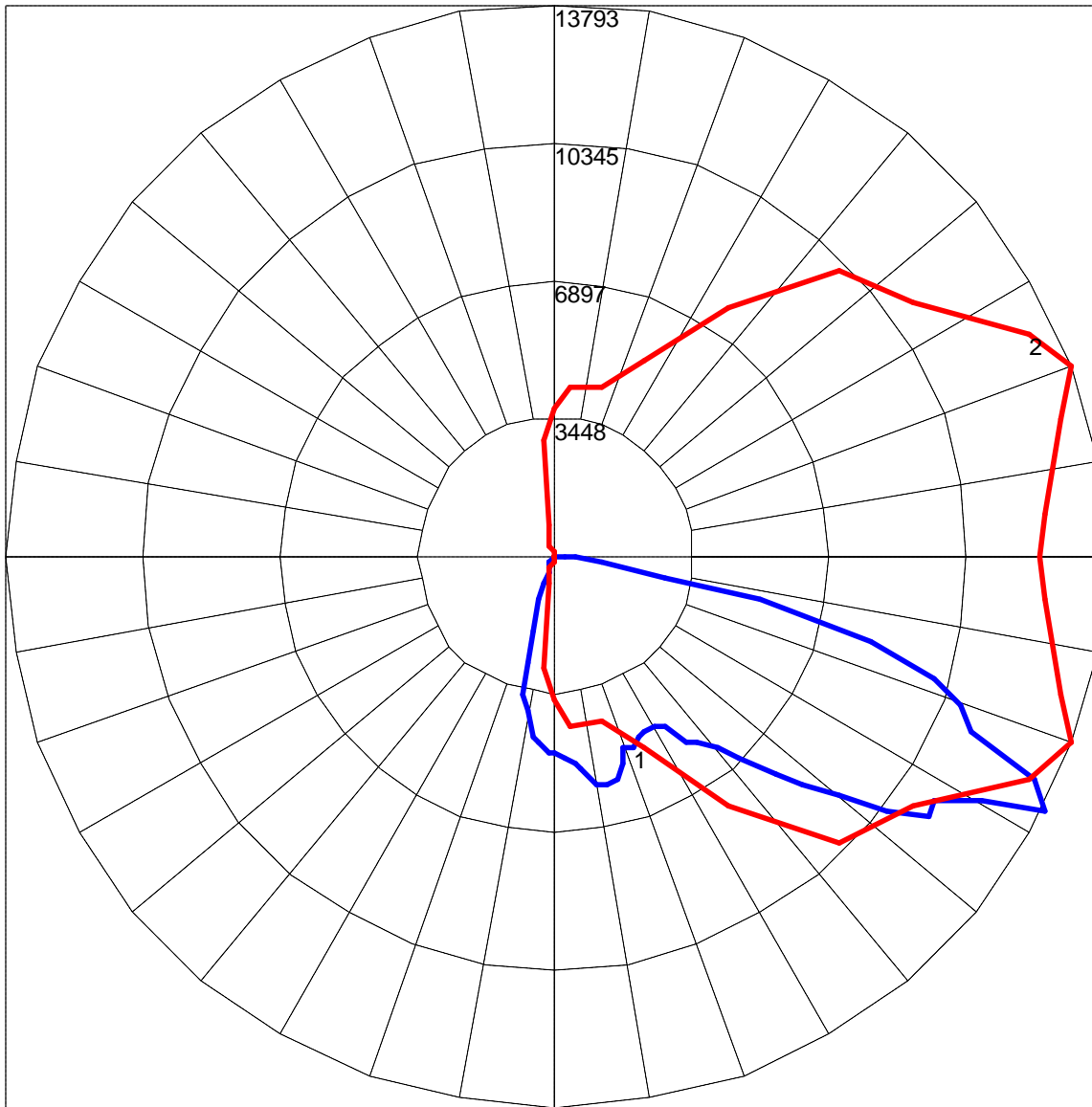


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	18007.9	86.4
Downward House Side	2830.3	13.6
Downward Total	20838.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	20838.2	100.0

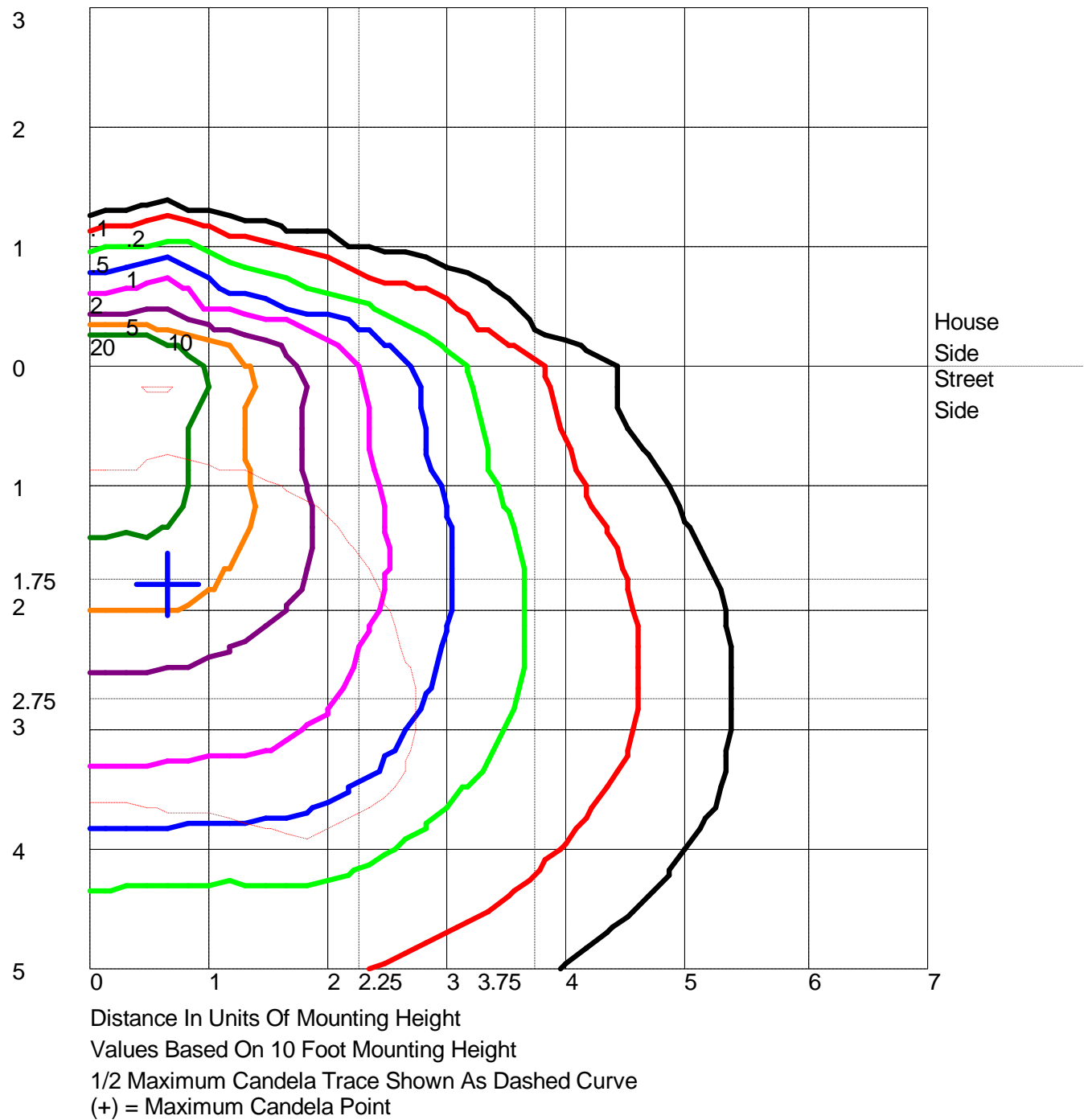


POLAR GRAPH

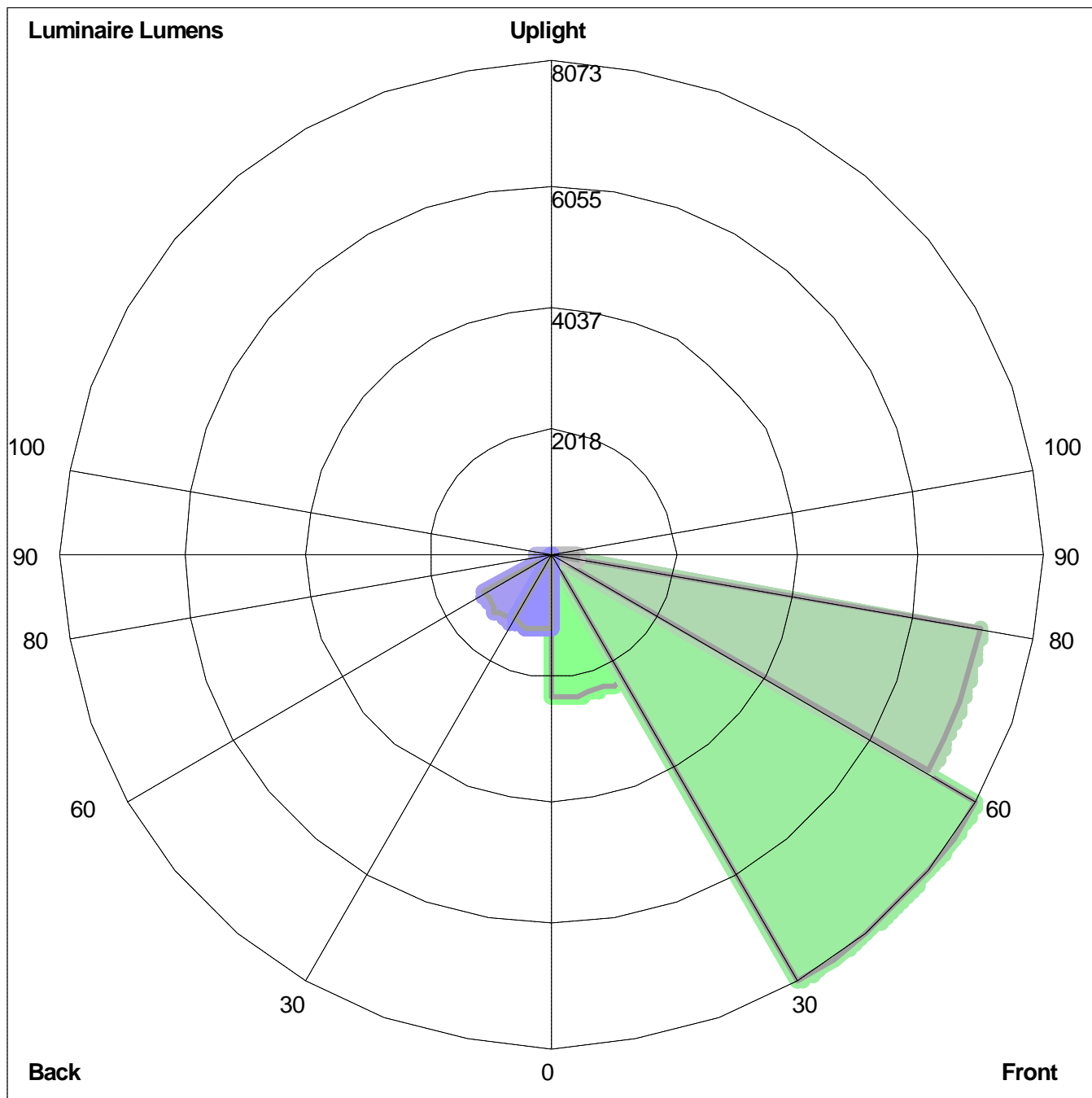


Maximum Candela = 13793 Located At Horizontal Angle = 20, Vertical Angle = 62.5  
# 1 - Vertical Plane Through Horizontal Angles (20 - 200) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (62.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=2351.9, Medium=8073.1, High=7148.1, Very High=434.8  
Back: Low=1255.5, Medium=1299.8, High=266.7, Very High=8.3  
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G3