



## IES ROAD REPORT

PHOTOMETRIC FILENAME : ENM4-PT-2-LED-10L-40-IL.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] LED-11747

[TESTLAB] LSI INDUSTRIES, INC.

[ISSUE DATE] 06/10/2020

[TEST DATE] 04/23/20

[MANUFAC] LSI INDUSTRIES, INC.

[LUMCAT] ENM4-PT-2-LED-10L-40-IL

[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

[OTHER] TEST PROCEDURE: IESNA LM-79-08

[SEARCH\_SOURCETYPE] LED

[SEARCH\_APPLICATION] Outdoor

[FACTORED] SCALED FROM ORIGINAL TEST DATA

### CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7550
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	77
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	7765
Maximum Candela Angle	80H 57.5V
Maximum Candela (<90 Degrees Vertical)	7765
Maximum Candela Angle (<90 Degrees Vertical)	80H 57.5V
Maximum Candela At 90 Degrees Vertical	8 (0.1% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	301 (4.0% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	588.3	N.A.	7.8
FM - Front-Medium (30-60)	4277.9	N.A.	56.7
FH - Front-High (60-80)	1369.7	N.A.	18.1
FVH - Front-Very High (80-90)	29.7	N.A.	0.4
BL - Back-Low (0-30)	317.5	N.A.	4.2
BM - Back-Medium (30-60)	791.3	N.A.	10.5
BH - Back-High (60-80)	160.1	N.A.	2.1
BVH - Back-Very High (80-90)	5.4	N.A.	0.1
UL - Uplight-Low (90-100)	2.3	N.A.	0.0
UH - Uplight-High (100-180)	7.7	N.A.	0.1
Total	7549.9	N.A.	100.0
BUG Rating	B1-U1-G1		

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**CANDELA TABULATION**

Vert. Angles	Horizontal Angles									
	0	5	15	25	35	45	55	65	75	80
0.0	773	773	773	773	773	773	773	773	773	773
2.5	787	790	790	796	796	798	800	786	782	770
5.0	790	795	814	809	831	778	776	759	737	729
7.5	809	821	842	800	813	780	793	822	800	774
10.0	856	856	886	823	847	858	867	854	831	805
12.5	929	976	932	912	935	921	930	915	910	911
15.0	1002	1046	1024	1049	1077	1028	1037	1016	1027	996
17.5	1068	1110	1092	1115	1146	1196	1144	1165	1184	1127
20.0	1216	1245	1247	1225	1263	1279	1329	1305	1333	1318
22.5	1320	1329	1361	1394	1406	1410	1523	1526	1582	1568
25.0	1521	1475	1512	1543	1580	1564	1726	1847	1863	1854
27.5	1731	1781	1796	1733	1760	1803	1942	2232	2336	2254
30.0	2010	1975	1947	1965	1994	2080	2244	2706	2826	2775
32.5	2367	2397	2259	2170	2253	2341	2675	3301	3465	3408
35.0	2746	2689	2595	2531	2495	2717	3080	3772	4100	3991
37.5	3132	3091	2943	2810	2890	2988	3444	4122	4370	4415
40.0	3287	3287	3223	3185	3226	3334	3727	4253	4565	4534
42.5	3331	3332	3320	3347	3493	3631	4076	4353	4642	4697
45.0	3228	3242	3258	3371	3628	3945	4440	4636	4856	5001
47.5	2980	2994	3049	3211	3555	4053	4802	5096	5211	5412
50.0	2629	2616	2702	2880	3295	3966	5143	5615	5630	5868
52.5	2160	2177	2272	2474	2901	3688	5392	6164	6195	6590
55.0	1659	1677	1772	2009	2410	3203	5410	6623	6840	7309
57.5	1183	1204	1290	1495	1892	2639	5067	6733	7283	7765
60.0	825	842	914	1059	1364	1947	4411	6414	7359	7700
62.5	597	601	662	745	915	1323	3581	5594	6927	7067
65.0	422	428	471	563	663	852	2693	4650	5875	5876
67.5	287	293	314	396	508	583	1822	3522	4673	4538
70.0	176	179	188	262	371	432	1110	2416	3191	2932
72.5	133	132	133	165	254	316	614	1473	1852	1429
75.0	90	92	92	108	172	226	331	899	903	551
77.5	61	61	62	67	109	159	198	516	477	305
80.0	39	41	44	42	60	102	125	283	301	213
82.5	37	37	35	33	36	51	73	144	197	165
85.0	28	28	26	27	29	36	43	70	101	99
87.5	17	16	15	15	16	22	27	35	36	36
90.0	5	5	4	4	4	4	4	4	5	4
92.5	2	2	2	2	1	0	0	0	0	0
95.0	2	1	2	2	1	0	0	0	0	0
97.5	2	1	2	2	1	0	0	0	0	0
100.0	2	1	2	2	1	0	0	0	0	0
102.5	2	1	2	2	1	0	0	0	0	0
105.0	2	1	2	2	1	0	0	0	0	0
107.5	2	2	2	2	1	0	0	0	0	0
110.0	2	2	2	2	1	0	0	0	0	0
112.5	2	2	2	2	1	0	0	0	0	0
115.0	3	2	2	2	1	0	0	0	0	0
117.5	3	3	2	2	2	1	0	0	0	1
120.0	4	3	3	2	2	1	0	0	1	1
122.5	4	4	3	3	2	1	0	1	1	1
125.0	4	4	4	3	2	1	0	1	2	2
127.5	5	5	4	3	2	2	1	1	2	2
130.0	5	5	4	4	2	2	1	1	2	2

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**CANDELA TABULATION - (Cont.)**

132.5	5	5	4	4	2	2	1	1	2	2
135.0	5	4	4	3	2	2	1	1	2	2
137.5	2	2	2	2	1	0	0	0	0	1
140.0	0	0	1	1	0	0	0	0	0	0
142.5	0	0	1	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	1	0	0	0	0	0	0	0
177.5	0	0	1	1	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	773	773	773	773	773	773	773	773	773	773
2.5	773	768	773	771	765	765	770	770	760	757
5.0	740	734	721	716	720	718	706	710	698	682
7.5	772	767	751	752	715	680	627	636	625	645
10.0	799	778	755	765	682	660	632	614	583	610
12.5	864	850	836	787	704	660	627	646	654	685
15.0	956	932	880	794	696	683	686	717	741	726
17.5	1082	1017	962	845	721	717	770	790	784	779
20.0	1231	1175	1083	899	764	803	807	824	778	707
22.5	1473	1335	1259	1020	844	863	843	752	614	510
25.0	1747	1628	1475	1110	979	922	767	566	413	305
27.5	2139	1917	1740	1247	1077	903	598	367	250	207
30.0	2629	2318	2039	1397	1165	805	426	243	199	181
32.5	3104	2778	2359	1542	1209	662	287	206	178	167
35.0	3665	3240	2715	1704	1171	497	239	185	166	156
37.5	4114	3703	3012	1822	1058	343	215	173	151	140
40.0	4284	3924	3150	1918	901	267	195	160	134	122
42.5	4518	4118	3271	1928	649	236	178	143	115	100
45.0	4837	4388	3430	1868	392	212	159	123	94	80
47.5	5235	4711	3588	1691	288	188	137	100	76	63
50.0	5699	5027	3700	1401	246	166	113	80	61	49
52.5	6255	5260	3733	1028	223	145	90	62	48	37
55.0	6829	5309	3620	692	206	122	70	46	36	27
57.5	6988	5060	3288	496	189	99	53	33	26	16
60.0	6671	4532	2805	410	183	81	39	22	15	7
62.5	5792	3799	2240	340	176	64	27	12	8	4
65.0	4673	2896	1625	260	153	50	18	6	6	3
67.5	3330	2007	1024	185	116	37	12	4	5	3
70.0	1984	1208	574	129	79	25	9	5	5	3
72.5	862	601	315	95	50	15	9	7	4	2
75.0	369	317	195	68	28	12	10	7	4	2
77.5	233	217	127	45	18	12	11	8	4	2

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**CANDELA TABULATION - (Cont.)**

80.0	183	154	82	25	14	12	11	8	4	2
82.5	132	94	49	12	11	11	11	8	4	3
85.0	76	48	23	6	8	10	10	8	4	3
87.5	28	12	4	3	6	9	9	6	4	2
90.0	1	1	2	3	6	8	8	6	3	2
92.5	0	1	2	3	5	8	7	4	3	2
95.0	0	1	1	2	4	6	5	3	2	2
97.5	0	1	1	2	3	4	3	3	2	2
100.0	0	1	1	2	2	3	3	2	2	2
102.5	0	1	1	2	2	2	2	2	2	2
105.0	0	1	1	2	2	2	2	2	2	2
107.5	0	1	1	2	2	2	2	2	2	2
110.0	0	1	1	2	2	2	2	2	2	2
112.5	0	1	1	2	2	2	2	2	2	2
115.0	1	1	2	2	2	2	2	2	2	2
117.5	1	2	2	2	2	2	2	2	2	2
120.0	2	2	2	2	2	2	2	2	2	2
122.5	2	2	2	2	3	3	3	3	3	3
125.0	2	2	2	3	3	3	3	3	3	3
127.5	2	2	3	3	3	3	3	3	3	3
130.0	2	2	3	3	3	3	3	3	3	3
132.5	2	3	3	3	3	3	3	3	3	3
135.0	2	2	2	3	3	3	3	3	3	3
137.5	1	1	2	2	2	2	2	3	3	3
140.0	0	0	0	1	1	2	2	2	2	2
142.5	0	0	0	1	1	1	2	2	2	2
145.0	0	0	0	0	1	1	2	2	2	2
147.5	0	0	0	0	1	2	2	2	2	2
150.0	0	0	0	0	1	2	2	2	2	2
152.5	0	0	0	1	1	2	2	2	2	2
155.0	0	0	0	1	1	2	2	2	2	2
157.5	0	0	0	0	1	2	2	2	2	2
160.0	0	0	0	0	1	1	2	2	2	2
162.5	0	0	0	0	1	1	2	2	2	2
165.0	0	0	0	0	0	1	1	2	2	2
167.5	0	0	0	0	0	1	1	2	2	1
170.0	0	0	0	0	0	0	1	1	1	1
172.5	0	0	0	0	0	0	1	1	1	1
175.0	0	0	0	0	0	0	1	1	1	1
177.5	0	0	0	0	0	0	0	1	1	1
180.0	0	0	0	0	0	0	0	0	0	0

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

	<b>175</b>	<b>180</b>
<b>0.0</b>	773	773
<b>2.5</b>	750	735
<b>5.0</b>	672	664
<b>7.5</b>	639	627
<b>10.0</b>	625	595
<b>12.5</b>	699	680
<b>15.0</b>	781	767
<b>17.5</b>	815	791
<b>20.0</b>	696	664
<b>22.5</b>	467	460
<b>25.0</b>	269	262

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**CANDELA TABULATION - (Cont.)**

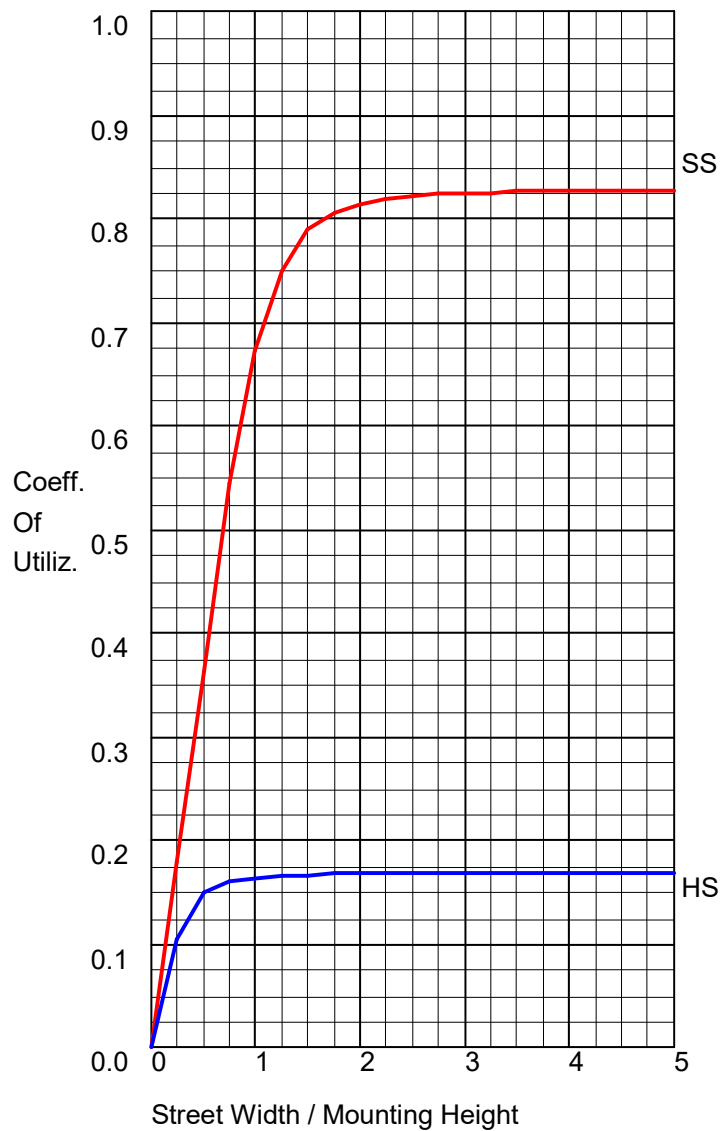
27.5	199	198
30.0	178	178
32.5	169	168
35.0	156	156
37.5	139	141
40.0	119	118
42.5	95	94
45.0	76	75
47.5	59	58
50.0	45	44
52.5	33	33
55.0	22	22
57.5	12	12
60.0	5	5
62.5	2	2
65.0	1	2
67.5	2	2
70.0	2	2
72.5	1	1
75.0	1	1
77.5	1	1
80.0	1	1
82.5	1	1
85.0	1	2
87.5	1	1
90.0	1	1
92.5	1	1
95.0	1	1
97.5	1	1
100.0	1	1
102.5	1	1
105.0	1	1
107.5	1	1
110.0	1	1
112.5	1	1
115.0	1	1
117.5	2	2
120.0	2	2
122.5	2	3
125.0	3	3
127.5	3	3
130.0	3	3
132.5	4	4
135.0	3	3
137.5	2	2
140.0	2	2
142.5	2	2
145.0	1	1
147.5	1	1
150.0	2	1
152.5	2	2
155.0	1	2
157.5	1	1
160.0	1	1
162.5	1	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

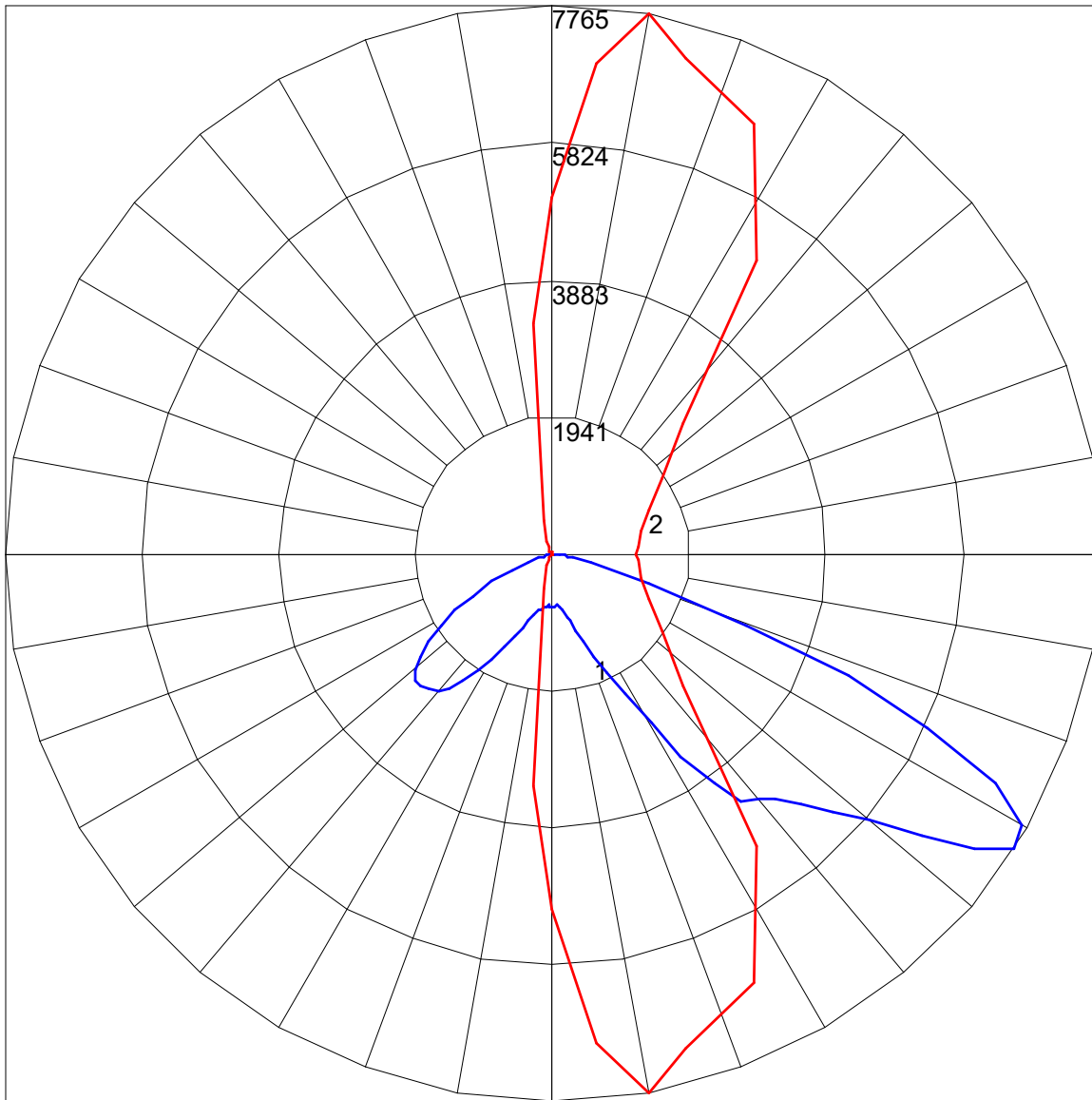


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	6265.7	83.0
Downward House Side	1274.3	16.9
Downward Total	7540.0	99.9
Upward Street Side	3.2	0.0
Upward House Side	6.7	0.1
Upward Total	9.9	0.1
Total Flux	7549.9	100.0

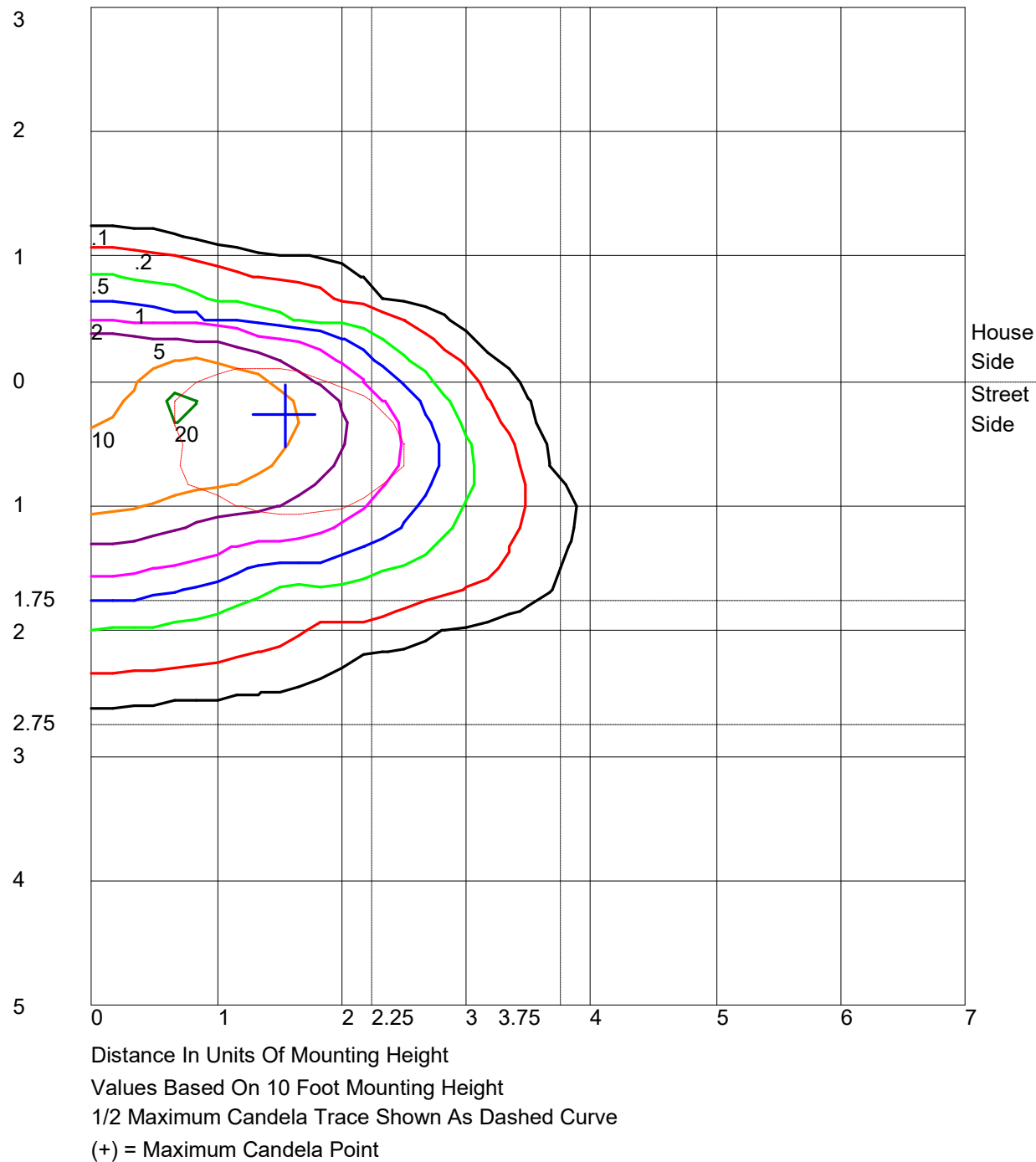


POLAR GRAPH

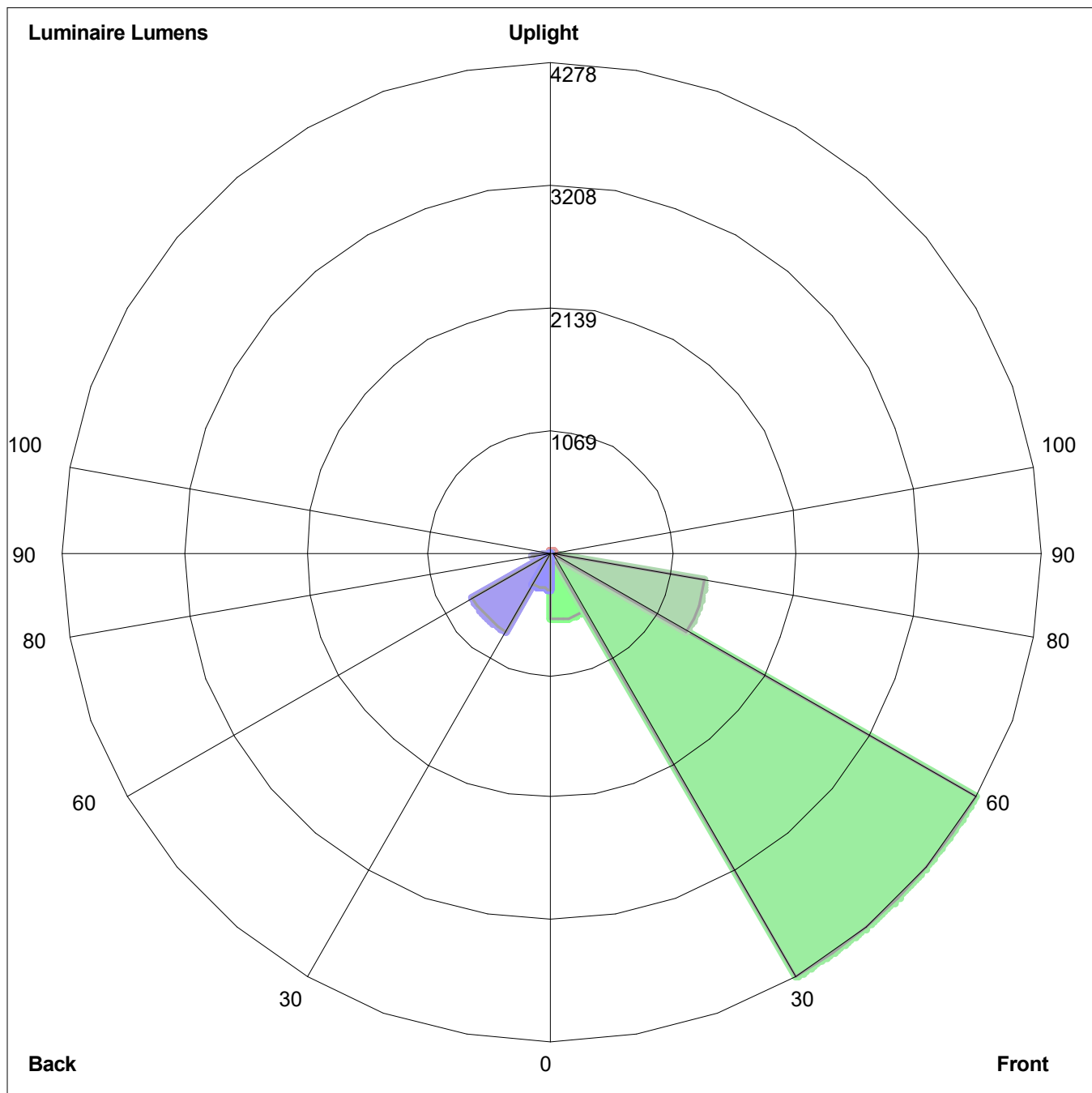


Maximum Candela = 7765 Located At Horizontal Angle = 80, Vertical Angle = 57.5  
# 1 - Vertical Plane Through Horizontal Angles (80 - 260) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (57.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=588.3, Medium=4277.9, High=1369.7, Very High=29.7  
Back: Low=317.5, Medium=791.3, High=160.1, Very High=5.4  
Uplight: Low=2.3, High=7.7

BUG Rating : B1-U1-G1