



## IES ROAD REPORT

PHOTOMETRIC FILENAME : ENM4-PT-3-LED-05L-40-IL.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] LED-11760

[TESTLAB] LSI INDUSTRIES, INC.

[ISSUE DATE] 06/10/2020

[TEST DATE] 04/26/20

[MANUFAC] LSI INDUSTRIES, INC.

[LUMCAT] ENM4-PT-3-LED-05L-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	4264
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	39
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	4672
Maximum Candela Angle	57.5H 60V
Maximum Candela (<90 Degrees Vertical)	4672
Maximum Candela Angle (<90 Degrees Vertical)	57.5H 60V
Maximum Candela At 90 Degrees Vertical	10 (0.2% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	201 (4.7% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	158.3	N.A.	3.7
FM - Front-Medium (30-60)	2528.0	N.A.	59.3
FH - Front-High (60-80)	1108.9	N.A.	26.0
FVH - Front-Very High (80-90)	26.4	N.A.	0.6
BL - Back-Low (0-30)	76.8	N.A.	1.8
BM - Back-Medium (30-60)	290.1	N.A.	6.8
BH - Back-High (60-80)	57.1	N.A.	1.3
BVH - Back-Very High (80-90)	6.3	N.A.	0.1
UL - Uplight-Low (90-100)	3.0	N.A.	0.1
UH - Uplight-High (100-180)	9.2	N.A.	0.2
Total	4264.1	N.A.	100.0
BUG Rating	B1-U1-G1		

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**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>0.0</b></u>	<u><b>5.0</b></u>	<u><b>15.0</b></u>	<u><b>25.0</b></u>	<u><b>35.0</b></u>	<u><b>45.0</b></u>	<u><b>55.0</b></u>	<u><b>57.5</b></u>	<u><b>65.0</b></u>	<u><b>75.0</b></u>
<b>0.0</b>	206	206	206	206	206	206	206	206	206	206
<b>2.5</b>	203	202	204	202	203	203	205	203	204	203
<b>5.0</b>	205	204	203	203	201	199	196	196	194	193
<b>7.5</b>	198	198	201	200	196	195	197	197	198	198
<b>10.0</b>	197	198	203	193	202	202	211	210	210	208
<b>12.5</b>	214	217	212	210	215	214	220	221	223	219
<b>15.0</b>	228	228	229	232	241	238	240	238	239	243
<b>17.5</b>	243	249	246	255	266	275	265	261	262	265
<b>20.0</b>	284	292	289	288	297	309	315	311	301	297
<b>22.5</b>	329	327	338	346	359	367	387	384	376	353
<b>25.0</b>	414	403	414	435	456	462	492	491	493	444
<b>27.5</b>	571	571	578	575	596	617	650	652	661	587
<b>30.0</b>	751	750	734	765	780	820	852	865	856	764
<b>32.5</b>	978	981	939	927	981	1022	1086	1088	1088	940
<b>35.0</b>	1178	1178	1159	1171	1173	1290	1322	1339	1290	1119
<b>37.5</b>	1491	1483	1426	1383	1412	1482	1534	1536	1476	1235
<b>40.0</b>	1747	1774	1733	1646	1644	1706	1727	1725	1619	1360
<b>42.5</b>	2084	2091	2035	1936	1894	1904	1879	1878	1736	1478
<b>45.0</b>	2433	2442	2385	2264	2180	2144	2054	2024	1864	1613
<b>47.5</b>	2769	2762	2741	2647	2565	2433	2272	2238	2060	1824
<b>50.0</b>	2991	2998	3056	3077	2921	2763	2575	2528	2356	2105
<b>52.5</b>	2988	3047	3227	3410	3416	3193	3070	3006	2776	2436
<b>55.0</b>	2786	2829	3063	3423	3677	3714	3794	3786	3363	2675
<b>57.5</b>	2252	2289	2667	3183	3703	4065	4438	4458	3803	2751
<b>60.0</b>	1456	1497	1890	2603	3455	4106	4653	4672	3891	2644
<b>62.5</b>	779	783	1090	1814	2852	3798	4474	4510	3730	2366
<b>65.0</b>	398	421	555	1046	1992	3130	3996	4074	3266	1858
<b>67.5</b>	233	246	317	542	1211	2122	3129	3233	2460	1190
<b>70.0</b>	160	168	213	352	657	1200	2056	2193	1571	692
<b>72.5</b>	118	124	154	266	436	602	1129	1243	839	299
<b>75.0</b>	80	85	111	208	332	345	491	537	377	145
<b>77.5</b>	57	59	82	173	263	228	220	238	197	92
<b>80.0</b>	44	46	63	136	201	143	119	121	121	68
<b>82.5</b>	35	36	50	108	134	87	71	72	80	53
<b>85.0</b>	24	26	38	77	79	45	43	44	46	36
<b>87.5</b>	15	16	27	44	29	17	16	16	15	17
<b>90.0</b>	4	4	6	10	6	4	3	3	3	3
<b>92.5</b>	1	1	2	2	2	2	2	2	2	2
<b>95.0</b>	1	1	1	2	2	2	2	2	2	2
<b>97.5</b>	1	1	1	2	2	2	2	2	2	1
<b>100.0</b>	1	1	1	2	2	2	2	2	1	1
<b>102.5</b>	1	1	1	2	2	2	2	2	1	1
<b>105.0</b>	1	1	1	2	2	2	2	2	1	1
<b>107.5</b>	1	1	1	2	2	2	2	2	1	1
<b>110.0</b>	1	1	1	2	2	2	2	2	1	1
<b>112.5</b>	1	1	1	2	2	2	2	2	2	2
<b>115.0</b>	1	1	1	2	2	2	2	2	2	2
<b>117.5</b>	1	1	2	2	2	2	2	2	2	2
<b>120.0</b>	2	2	2	2	2	2	2	2	2	2
<b>122.5</b>	2	2	2	2	2	2	2	2	2	2
<b>125.0</b>	2	2	2	2	2	2	2	2	2	2
<b>127.5</b>	2	2	2	2	2	2	2	2	2	2
<b>130.0</b>	2	2	2	2	2	2	2	2	2	2

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**CANDELA TABULATION - (Cont.)**

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

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	206	206	206	206	206	206	206	206	206	206
2.5	204	205	205	205	207	210	208	208	206	207
5.0	196	197	198	193	200	204	203	200	200	200
7.5	195	197	197	200	199	196	191	186	182	186
10.0	204	201	200	212	201	194	179	173	159	157
12.5	215	212	212	212	200	189	167	146	138	132
15.0	225	220	220	220	203	177	150	136	126	120
17.5	243	235	240	223	197	158	143	132	125	118
20.0	267	256	249	231	184	151	138	133	127	118
22.5	320	300	288	247	181	151	139	135	131	121
25.0	390	360	335	263	188	162	139	137	145	142
27.5	500	441	407	279	207	176	142	143	173	182
30.0	625	547	475	291	218	183	149	155	215	228
32.5	736	637	529	301	220	188	154	172	252	290
35.0	848	706	576	305	215	189	160	175	301	361
37.5	941	779	610	310	206	186	158	177	361	450
40.0	1037	843	653	314	198	178	156	172	421	449
42.5	1144	917	695	318	188	168	147	161	452	355
45.0	1295	1031	758	330	178	156	134	148	367	268
47.5	1512	1176	831	341	165	138	119	133	241	201
50.0	1735	1339	914	345	149	111	96	115	137	153
52.5	1933	1459	976	338	124	82	70	87	89	121
55.0	2027	1492	957	310	97	61	52	58	62	98
57.5	1997	1407	845	264	79	52	43	42	42	79
60.0	1834	1224	665	205	67	46	36	32	32	64
62.5	1529	956	454	148	58	40	30	24	24	52
65.0	1033	641	279	101	48	33	25	19	18	44
67.5	592	374	169	69	39	26	19	15	13	35
70.0	270	191	96	49	31	21	14	12	10	27
72.5	115	98	67	41	25	17	12	10	7	20
75.0	72	67	55	37	21	15	10	7	4	15
77.5	54	52	47	34	18	13	9	6	3	11

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**CANDELA TABULATION - (Cont.)**

80.0	48	44	39	30	16	12	8	5	2	9
82.5	36	33	31	25	15	11	8	5	2	7
85.0	22	21	23	18	12	10	8	4	2	6
87.5	11	10	12	12	10	9	7	4	2	5
90.0	2	2	4	7	8	8	6	4	1	3
92.5	2	1	3	6	7	7	5	3	1	1
95.0	2	1	3	5	6	6	5	3	1	1
97.5	2	1	2	4	5	5	4	3	1	1
100.0	2	1	2	3	4	4	3	3	1	1
102.5	2	2	2	3	3	3	3	2	1	1
105.0	2	2	2	3	3	3	3	2	2	1
107.5	2	2	2	3	3	3	3	2	2	1
110.0	2	2	2	3	3	3	3	2	2	1
112.5	2	2	2	3	3	3	3	2	2	1
115.0	2	2	2	3	3	3	3	3	2	1
117.5	2	2	2	3	3	3	3	3	2	1
120.0	2	2	2	3	3	3	3	3	2	2
122.5	2	2	2	3	3	3	3	3	2	2
125.0	2	2	3	3	3	3	3	3	2	2
127.5	2	2	3	3	3	3	3	3	2	2
130.0	2	2	3	3	3	3	3	3	2	2
132.5	2	2	3	3	3	3	3	3	2	2
135.0	2	2	2	3	3	3	3	3	2	2
137.5	2	2	2	2	2	3	3	2	2	1
140.0	2	2	2	2	2	2	2	2	2	1
142.5	1	2	2	2	2	2	2	2	1	1
145.0	1	2	2	2	2	2	2	2	1	1
147.5	1	2	2	2	2	2	2	2	1	1
150.0	1	2	2	2	2	2	2	2	1	1
152.5	1	1	2	2	2	2	2	2	1	1
155.0	1	1	2	2	2	2	2	1	1	1
157.5	1	1	1	2	2	2	2	1	1	0
160.0	1	1	1	1	2	1	1	1	1	0
162.5	1	1	1	1	1	1	1	1	1	0
165.0	1	1	1	1	1	1	1	1	0	0
167.5	1	1	1	1	1	1	1	1	0	0
170.0	1	1	1	1	1	1	1	1	0	0
172.5	1	1	1	1	1	1	1	1	0	0
175.0	1	1	1	1	1	1	1	1	0	0
177.5	1	1	1	1	1	1	1	1	0	0
180.0	1	1	1	1	1	1	1	1	1	1

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

	<u>175.0</u>	<u>180.0</u>
0.0	206	206
2.5	208	208
5.0	198	198
7.5	182	180
10.0	151	152
12.5	132	131
15.0	121	119
17.5	116	115
20.0	115	113
22.5	113	110
25.0	123	118

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

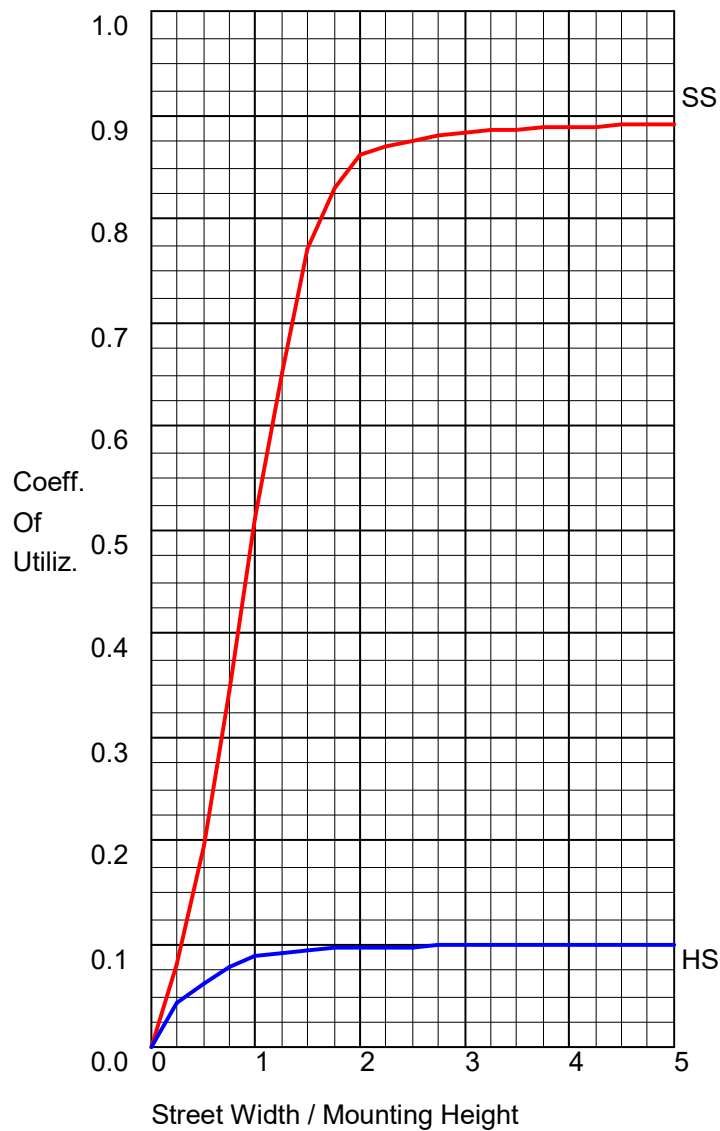
27.5	145	139
30.0	179	173
32.5	227	217
35.0	281	269
37.5	287	267
40.0	230	206
42.5	172	148
45.0	127	114
47.5	103	91
50.0	89	72
52.5	82	62
55.0	80	59
57.5	82	60
60.0	86	67
62.5	89	75
65.0	91	82
67.5	86	82
70.0	76	78
72.5	67	68
75.0	52	55
77.5	41	45
80.0	33	37
82.5	27	30
85.0	21	23
87.5	16	17
90.0	7	8
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	1	0
115.0	1	1
117.5	1	1
120.0	1	1
122.5	1	1
125.0	1	1
127.5	2	2
130.0	2	2
132.5	2	2
135.0	1	1
137.5	1	1
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

**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>	1	1

COEFFICIENTS OF UTILIZATION

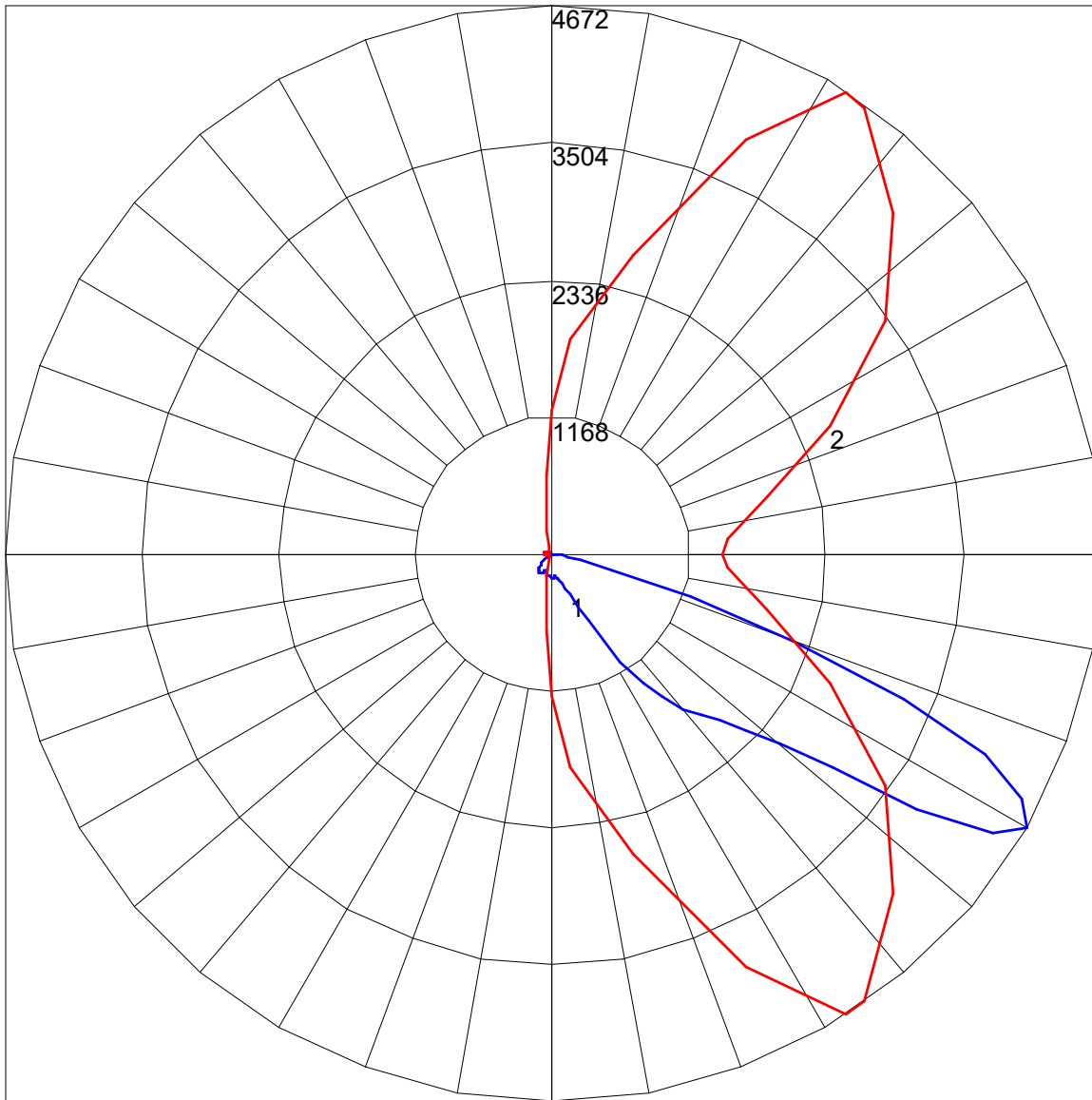


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	3821.6	89.6
Downward House Side	430.2	10.1
Downward Total	4251.8	99.7
Upward Street Side	5.1	0.1
Upward House Side	7.1	0.2
Upward Total	12.2	0.3
Total Flux	4264.0	100.0

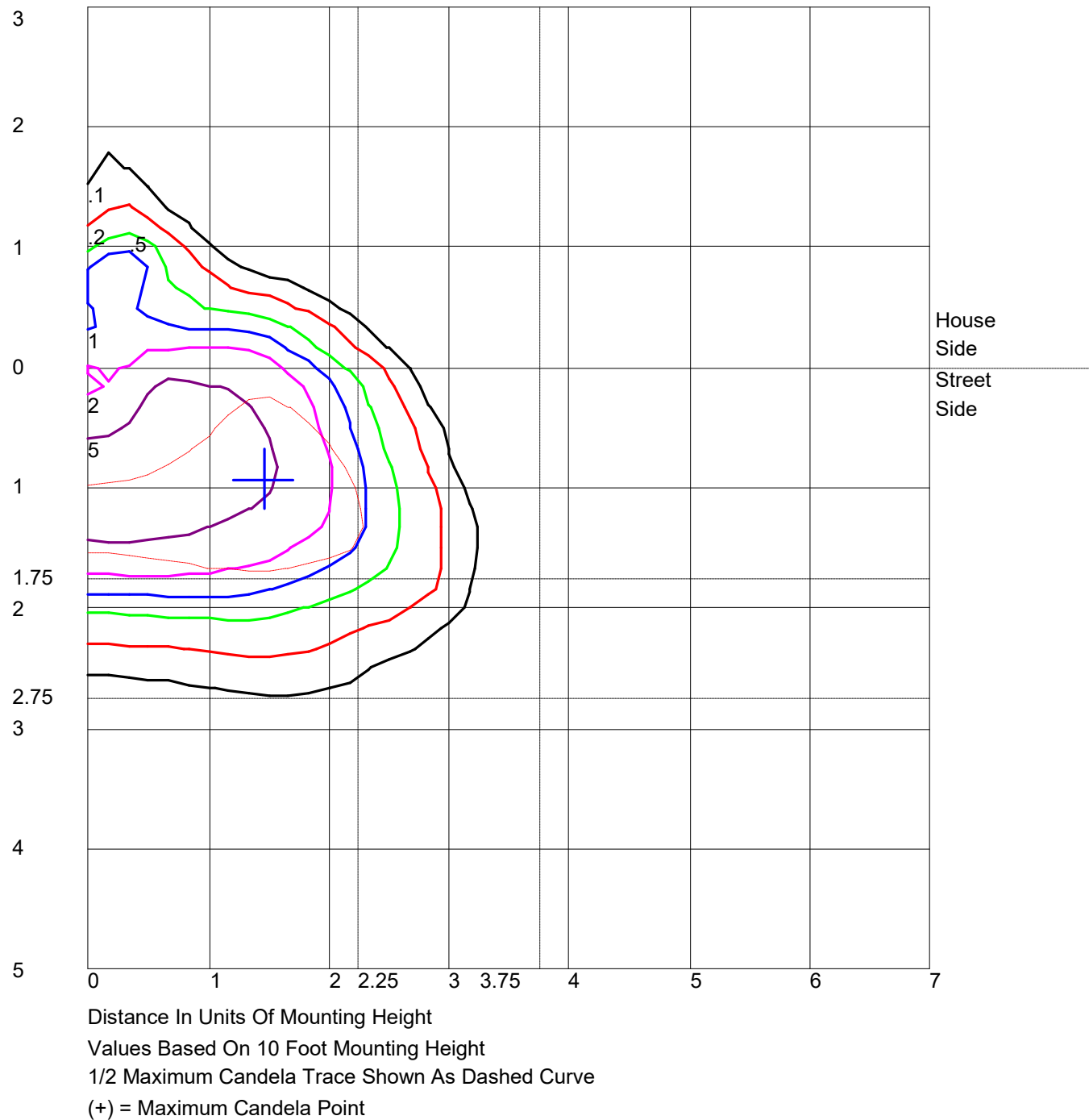


POLAR GRAPH

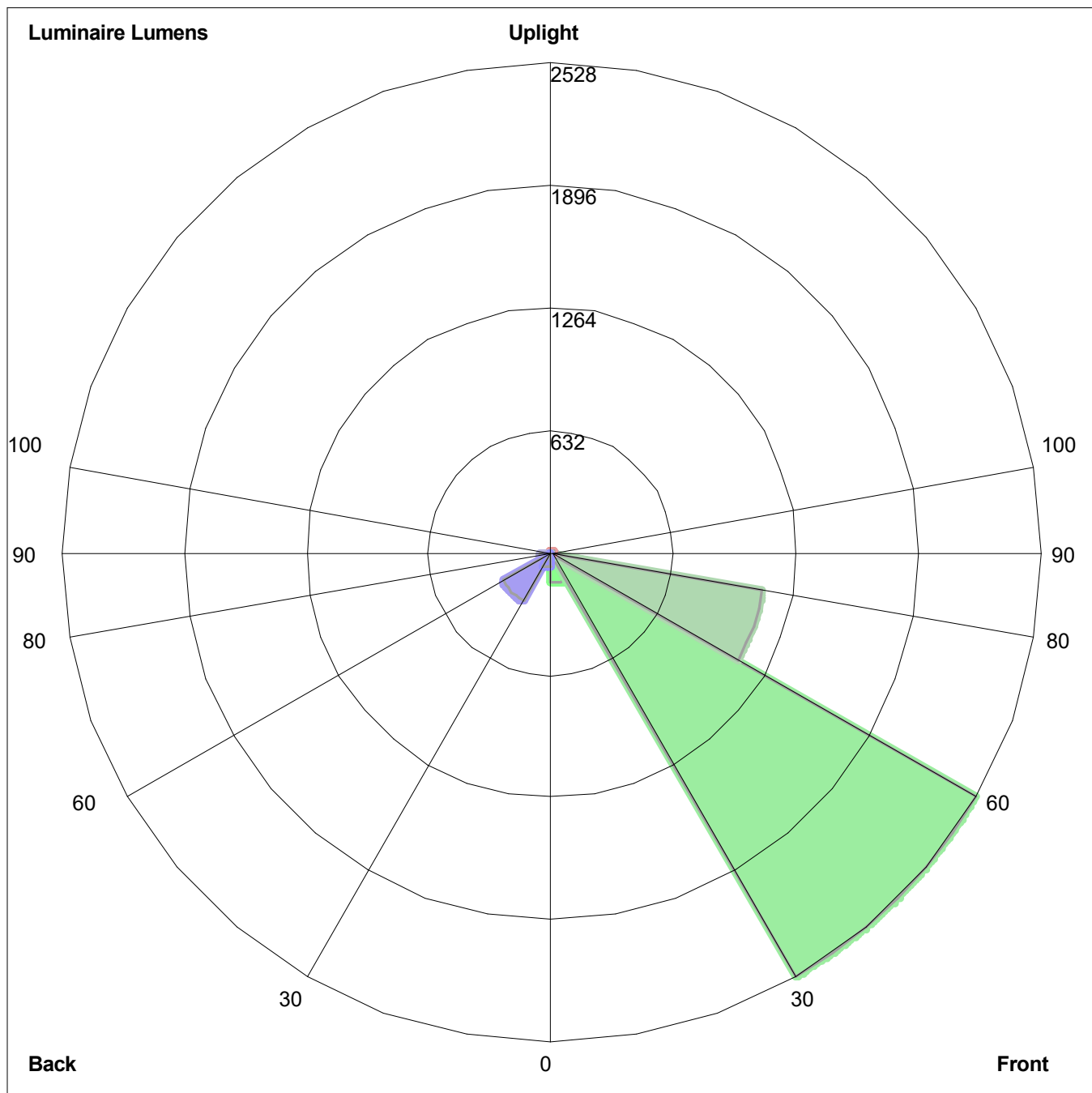


Maximum Candela = 4672 Located At Horizontal Angle = 57.5, Vertical Angle = 60  
# 1 - Vertical Plane Through Horizontal Angles (57.5 - 237.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (60) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=158.3, Medium= 2528.0, High=1108.9, Very High=26.4  
Back: Low=76.8, Medium=290.1, High=57.1, Very High=6.3  
Uplight: Low=3.0, High=9.2

BUG Rating : B1-U1-G1