



## IES ROAD REPORT

PHOTOMETRIC FILENAME : ENM4-PT-2-LED-18L-50-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  
[MANUFACT] LSI INDUSTRIES, INC.  
[LUMCAT] ENM4-PT-2-LED-18L-50-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	14265
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	14672
Maximum Candela Angle	80H 57.5V
Maximum Candela (<90 Degrees Vertical)	14672
Maximum Candela Angle (<90 Degrees Vertical)	80H 57.5V
Maximum Candela At 90 Degrees Vertical	16 (0.1% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	570 (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)	1111.7	N.A.	7.8
FM - Front-Medium (30-60)	8083.2	N.A.	56.7
FH - Front-High (60-80)	2588.1	N.A.	18.1
FVH - Front-Very High (80-90)	56.2	N.A.	0.4
BL - Back-Low (0-30)	599.9	N.A.	4.2
BM - Back-Medium (30-60)	1495.1	N.A.	10.5
BH - Back-High (60-80)	302.6	N.A.	2.1
BVH - Back-Very High (80-90)	10.2	N.A.	0.1
UL - Uplight-Low (90-100)	4.2	N.A.	0.0
UH - Uplight-High (100-180)	14.2	N.A.	0.1
Total	14265.4	N.A.	100.0
BUG Rating	B2-U2-G2		

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**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<b>0</b>	<b>5</b>	<b>15</b>	<b>25</b>	<b>35</b>	<b>45</b>	<b>55</b>	<b>65</b>	<b>75</b>	<b>80</b>
<b>0.0</b>	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461
<b>2.5</b>	1488	1492	1492	1503	1504	1508	1512	1485	1477	1455
<b>5.0</b>	1494	1501	1538	1528	1569	1470	1467	1433	1392	1378
<b>7.5</b>	1527	1552	1591	1512	1537	1474	1499	1553	1512	1464
<b>10.0</b>	1616	1619	1674	1555	1600	1622	1638	1614	1571	1522
<b>12.5</b>	1755	1844	1760	1723	1767	1740	1758	1729	1719	1721
<b>15.0</b>	1893	1978	1936	1982	2035	1943	1960	1920	1940	1882
<b>17.5</b>	2017	2098	2063	2107	2165	2260	2161	2202	2236	2129
<b>20.0</b>	2298	2353	2356	2316	2386	2416	2510	2465	2518	2490
<b>22.5</b>	2494	2512	2571	2633	2656	2663	2877	2882	2990	2963
<b>25.0</b>	2874	2787	2857	2916	2985	2955	3261	3490	3521	3503
<b>27.5</b>	3272	3365	3394	3275	3325	3407	3670	4217	4414	4259
<b>30.0</b>	3797	3731	3679	3712	3768	3930	4241	5113	5340	5243
<b>32.5</b>	4473	4530	4268	4101	4258	4424	5055	6237	6547	6441
<b>35.0</b>	5188	5081	4904	4781	4714	5134	5821	7126	7746	7541
<b>37.5</b>	5918	5841	5561	5310	5462	5647	6508	7790	8258	8343
<b>40.0</b>	6211	6211	6090	6019	6095	6299	7041	8036	8626	8568
<b>42.5</b>	6294	6296	6273	6324	6600	6860	7702	8227	8771	8875
<b>45.0</b>	6100	6125	6156	6370	6855	7455	8390	8760	9176	9450
<b>47.5</b>	5630	5658	5760	6068	6717	7658	9075	9628	9847	10227
<b>50.0</b>	4968	4942	5106	5442	6226	7495	9718	10610	10638	11088
<b>52.5</b>	4082	4114	4292	4674	5482	6968	10187	11647	11706	12451
<b>55.0</b>	3134	3168	3349	3795	4554	6052	10222	12515	12925	13811
<b>57.5</b>	2235	2274	2438	2825	3574	4986	9575	12722	13762	14672
<b>60.0</b>	1558	1590	1726	2001	2576	3680	8334	12119	13905	14550
<b>62.5</b>	1128	1135	1251	1407	1728	2499	6767	10571	13088	13353
<b>65.0</b>	798	808	891	1064	1252	1609	5089	8787	11101	11103
<b>67.5</b>	542	554	593	749	961	1101	3443	6656	8831	8575
<b>70.0</b>	332	339	355	496	700	816	2098	4566	6030	5541
<b>72.5</b>	250	250	252	311	481	598	1160	2784	3500	2700
<b>75.0</b>	170	175	173	203	325	427	625	1698	1706	1041
<b>77.5</b>	115	115	117	126	206	300	375	976	902	576
<b>80.0</b>	74	79	84	79	113	193	236	534	570	402
<b>82.5</b>	70	70	67	63	68	97	138	272	372	312
<b>85.0</b>	52	52	49	50	53	68	82	131	191	187
<b>87.5</b>	32	31	29	29	31	41	50	66	68	68
<b>90.0</b>	9	9	8	7	7	7	7	7	9	7
<b>92.5</b>	4	4	4	4	2	0	0	0	1	1
<b>95.0</b>	3	2	3	3	1	0	0	0	0	0
<b>97.5</b>	3	2	3	3	1	0	0	0	0	0
<b>100.0</b>	3	2	3	3	1	0	0	0	0	0
<b>102.5</b>	3	2	3	3	1	0	0	0	0	0
<b>105.0</b>	3	2	3	3	1	0	0	0	0	0
<b>107.5</b>	3	3	3	3	1	0	0	0	0	0
<b>110.0</b>	4	4	4	4	2	1	0	0	0	0
<b>112.5</b>	4	4	4	4	2	1	0	0	0	0
<b>115.0</b>	5	4	4	4	2	1	0	0	1	1
<b>117.5</b>	6	5	4	4	3	1	0	0	1	1
<b>120.0</b>	7	6	5	4	3	1	0	1	1	1
<b>122.5</b>	7	7	6	5	4	2	0	1	2	2
<b>125.0</b>	8	8	7	5	4	2	1	1	3	3
<b>127.5</b>	9	9	7	6	4	3	1	2	3	4
<b>130.0</b>	9	9	7	7	4	3	1	2	4	4

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**CANDELA TABULATION - (Cont.)**

132.5	9	9	8	7	4	4	1	2	4	4
135.0	9	8	7	6	4	3	1	2	4	4
137.5	4	4	4	3	2	1	0	0	1	1
140.0	1	1	1	1	0	0	0	0	0	0
142.5	0	1	1	1	0	0	0	0	0	0
145.0	0	1	1	1	0	0	0	0	0	0
147.5	0	1	1	1	0	0	0	0	0	0
150.0	1	1	1	1	0	0	0	0	0	0
152.5	1	1	1	1	0	0	0	0	0	0
155.0	1	1	1	1	0	0	0	0	0	0
157.5	1	1	1	1	0	0	0	0	0	0
160.0	0	1	1	0	0	0	0	0	0	0
162.5	1	1	1	0	0	0	0	0	0	0
165.0	1	1	1	0	0	0	0	0	0	0
167.5	1	1	1	1	0	0	0	0	0	0
170.0	1	1	1	1	0	0	0	0	0	0
172.5	0	1	1	1	0	0	0	0	0	0
175.0	1	1	1	1	0	0	0	0	0	0
177.5	1	1	1	1	0	0	0	0	0	0
180.0	1	1	1	1	1	1	1	1	1	1

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	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461
2.5	1460	1452	1460	1456	1445	1446	1454	1455	1435	1431
5.0	1398	1386	1362	1354	1361	1356	1334	1341	1318	1290
7.5	1458	1450	1420	1421	1351	1285	1185	1202	1181	1219
10.0	1510	1470	1427	1446	1290	1247	1193	1160	1101	1154
12.5	1632	1605	1580	1487	1331	1247	1185	1221	1236	1294
15.0	1806	1761	1662	1500	1315	1290	1297	1355	1401	1371
17.5	2045	1921	1817	1597	1362	1355	1455	1493	1480	1472
20.0	2325	2220	2046	1699	1444	1517	1525	1558	1470	1336
22.5	2784	2523	2379	1926	1594	1630	1592	1420	1160	963
25.0	3302	3077	2788	2097	1850	1743	1449	1069	781	577
27.5	4041	3623	3287	2356	2036	1707	1131	693	472	390
30.0	4968	4380	3853	2639	2201	1520	804	460	377	341
32.5	5866	5249	4458	2912	2284	1251	542	389	336	315
35.0	6925	6122	5131	3219	2213	939	452	350	314	295
37.5	7774	6997	5692	3443	2000	648	407	327	285	265
40.0	8095	7415	5952	3623	1701	505	370	302	253	231
42.5	8536	7782	6181	3643	1226	446	336	270	218	189
45.0	9139	8291	6482	3529	740	400	300	232	178	151
47.5	9891	8901	6779	3195	543	355	259	189	144	120
50.0	10767	9499	6991	2648	466	314	213	151	115	92
52.5	11818	9938	7054	1942	422	274	170	117	91	69
55.0	12903	10031	6841	1308	388	230	133	87	68	50
57.5	13205	9560	6212	936	358	187	99	63	48	31
60.0	12606	8564	5300	776	345	153	73	42	28	14
62.5	10944	7179	4233	642	332	121	51	22	16	7
65.0	8830	5473	3071	491	289	95	35	10	10	5
67.5	6292	3792	1935	350	219	70	22	8	9	5
70.0	3748	2282	1086	244	149	46	18	9	9	6
72.5	1629	1135	595	179	94	29	18	13	8	4
75.0	696	599	370	129	53	23	20	14	7	4
77.5	440	410	239	85	35	23	21	16	7	4

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**CANDELA TABULATION - (Cont.)**

80.0	347	292	156	48	26	23	21	16	7	4
82.5	250	178	92	23	21	21	21	16	7	5
85.0	142	90	43	13	16	20	20	15	7	5
87.5	52	23	7	6	12	18	17	13	7	4
90.0	2	2	3	5	10	16	16	10	6	4
92.5	0	1	3	5	9	15	14	8	5	4
95.0	0	1	2	4	7	10	9	6	4	4
97.5	0	1	2	4	6	7	6	5	4	4
100.0	0	1	2	4	4	5	5	4	3	4
102.5	0	1	2	3	4	4	4	4	3	4
105.0	0	1	2	3	4	4	4	4	3	4
107.5	0	1	2	3	4	4	4	4	3	4
110.0	1	1	2	4	4	4	4	4	4	4
112.5	1	2	2	4	4	4	4	4	4	4
115.0	1	2	3	4	4	4	4	4	4	4
117.5	2	3	3	4	4	4	4	4	4	4
120.0	3	3	4	4	4	4	4	4	4	4
122.5	4	4	4	4	5	5	5	5	5	5
125.0	4	4	4	5	5	5	5	5	5	5
127.5	4	4	5	5	5	5	5	6	6	6
130.0	4	4	5	5	5	5	5	6	6	6
132.5	4	5	5	5	5	5	6	6	6	6
135.0	4	4	4	5	5	5	5	6	6	6
137.5	1	2	3	3	4	4	4	5	5	5
140.0	0	1	1	1	2	3	4	4	4	4
142.5	0	0	0	1	2	2	3	4	4	4
145.0	0	0	0	1	1	2	3	4	4	4
147.5	0	0	0	1	1	3	4	4	4	4
150.0	0	0	0	1	2	3	4	4	4	4
152.5	0	0	0	1	2	3	4	4	4	4
155.0	0	0	0	1	2	3	4	4	4	4
157.5	0	0	0	1	2	3	4	4	4	4
160.0	0	0	0	1	1	2	3	4	4	3
162.5	0	0	0	1	1	2	3	4	4	3
165.0	0	0	0	0	1	1	2	3	3	3
167.5	0	0	0	0	1	1	2	3	3	2
170.0	0	0	0	0	1	1	1	2	2	2
172.5	0	0	0	0	0	1	1	2	2	2
175.0	0	0	0	0	0	1	1	2	2	2
177.5	0	0	0	0	0	1	1	1	2	1
180.0	1	1	1	1	1	1	1	1	1	1

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

	<b>175</b>	<b>180</b>
0.0	1461	1461
2.5	1416	1389
5.0	1270	1255
7.5	1207	1184
10.0	1181	1124
12.5	1321	1286
15.0	1475	1450
17.5	1539	1495
20.0	1316	1254
22.5	883	870
25.0	508	495

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**CANDELA TABULATION - (Cont.)**

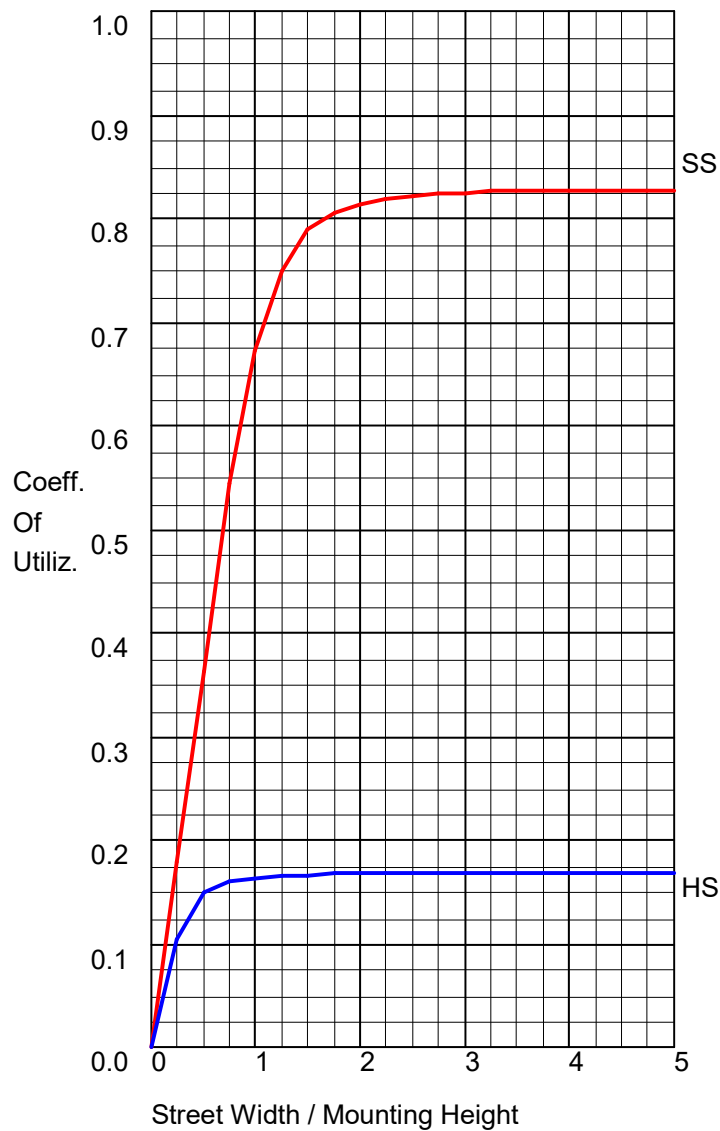
27.5	376	374
30.0	336	336
32.5	319	318
35.0	294	294
37.5	264	266
40.0	225	223
42.5	180	177
45.0	142	142
47.5	111	110
50.0	85	84
52.5	62	62
55.0	42	41
57.5	23	22
60.0	9	9
62.5	4	4
65.0	2	3
67.5	3	3
70.0	3	3
72.5	2	1
75.0	1	1
77.5	2	1
80.0	2	2
82.5	2	2
85.0	2	3
87.5	2	2
90.0	2	2
92.5	2	2
95.0	2	1
97.5	2	1
100.0	2	1
102.5	2	2
105.0	1	1
107.5	1	2
110.0	2	2
112.5	2	1
115.0	2	2
117.5	3	3
120.0	4	4
122.5	4	5
125.0	5	5
127.5	6	6
130.0	6	6
132.5	7	7
135.0	6	6
137.5	4	4
140.0	3	3
142.5	3	3
145.0	2	2
147.5	2	2
150.0	3	2
152.5	3	3
155.0	2	3
157.5	2	2
160.0	1	1
162.5	1	1
165.0	1	0

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : ENM4-PT-2-LED-18L-50-IL.IES**

**CANDELA TABULATION - (Cont.)**

<b>167.5</b>	<b>1</b>	<b>0</b>
<b>170.0</b>	<b>1</b>	<b>0</b>
<b>172.5</b>	<b>1</b>	<b>0</b>
<b>175.0</b>	<b>1</b>	<b>0</b>
<b>177.5</b>	<b>1</b>	<b>0</b>
<b>180.0</b>	<b>1</b>	<b>1</b>

COEFFICIENTS OF UTILIZATION

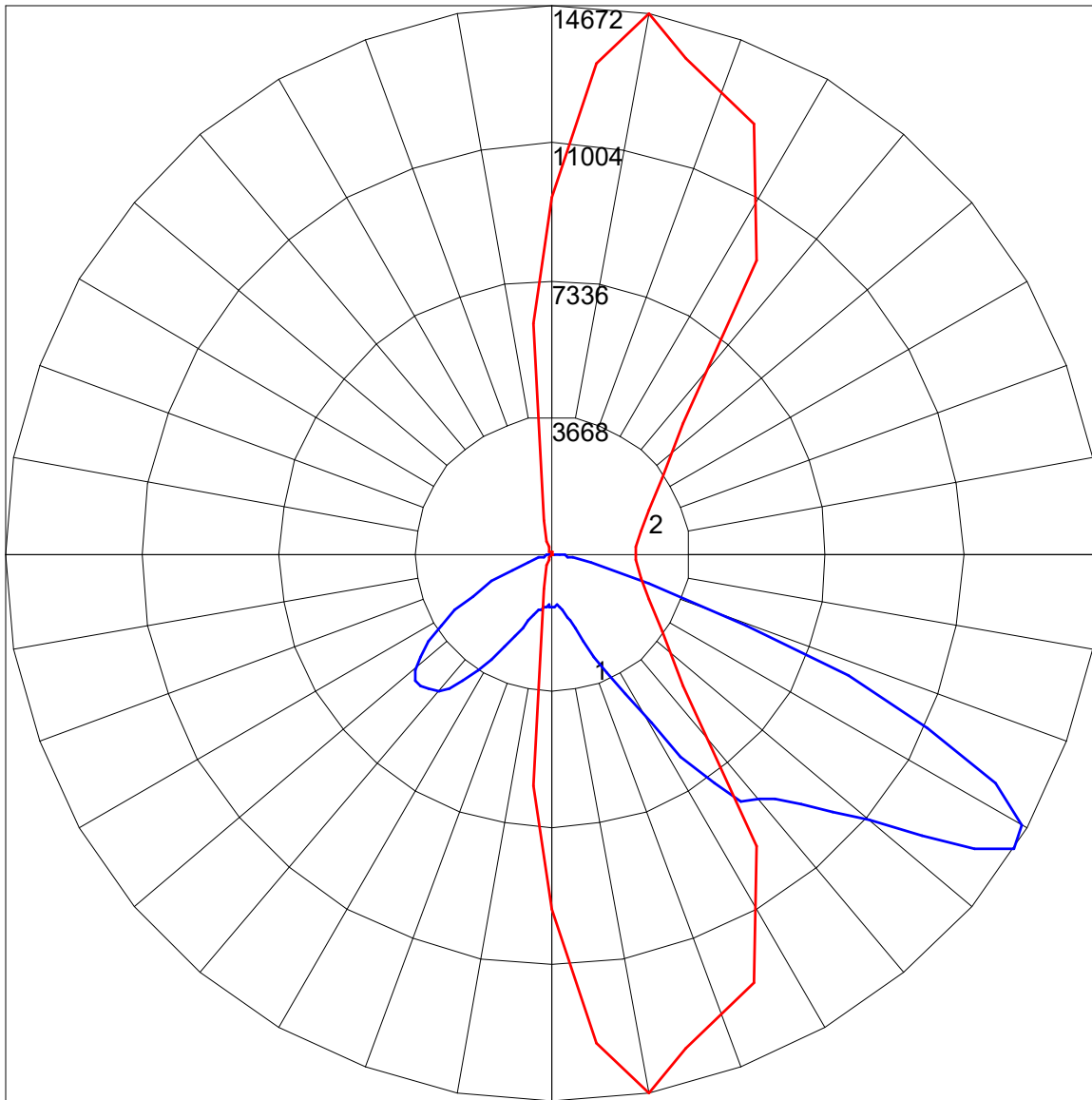


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	11839.2	83.0
Downward House Side	2407.8	16.9
Downward Total	14247.0	99.9
Upward Street Side	6.0	0.0
Upward House Side	12.5	0.1
Upward Total	18.5	0.1
Total Flux	14265.5	100.0

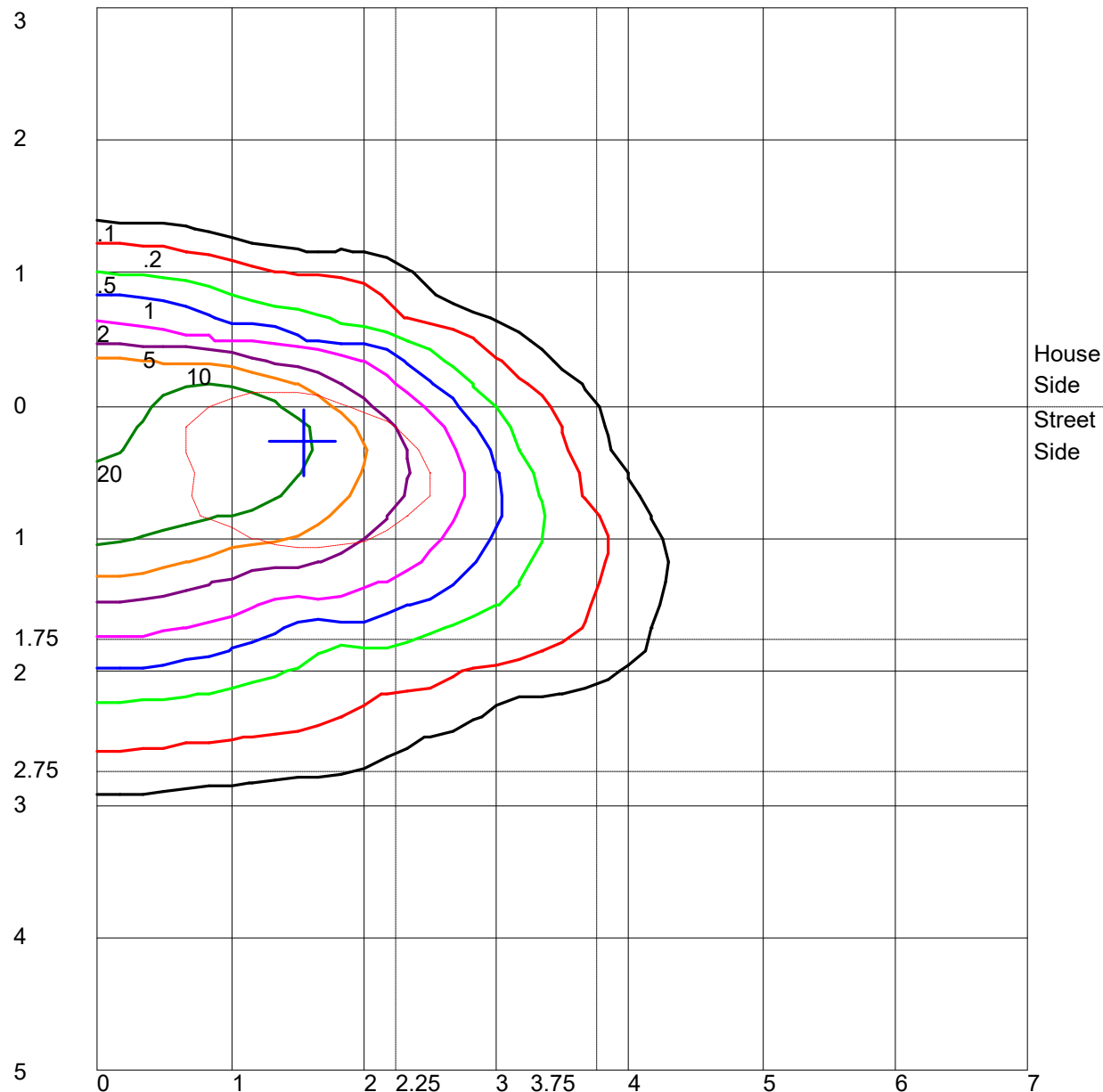


POLAR GRAPH



Maximum Candela = 14672 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



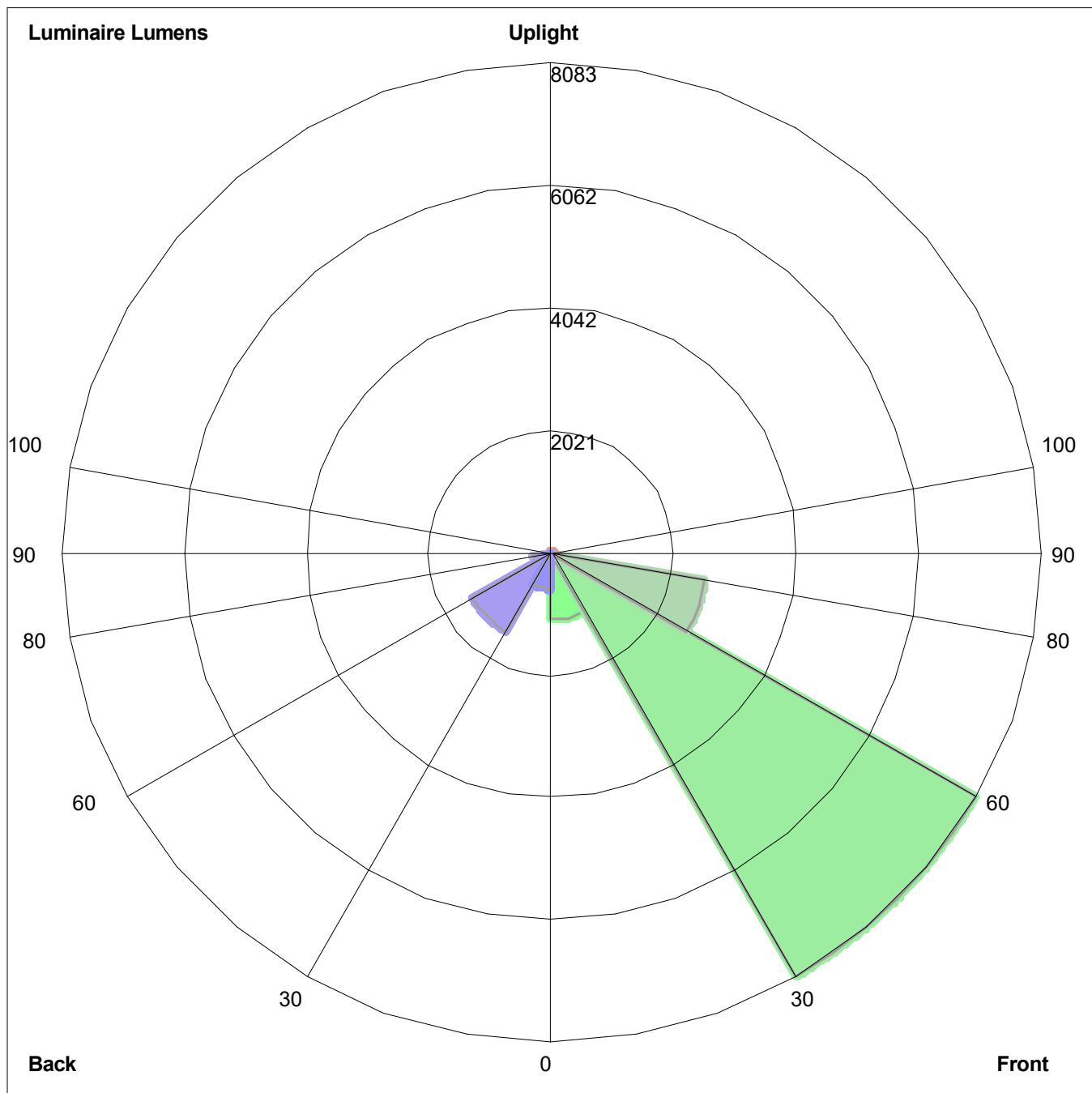
Distance In Units Of Mounting Height

Values Based On 10 Foot Mounting Height

1/2 Maximum Candela Trace Shown As Dashed Curve

(+) = Maximum Candela Point

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1111.7, Medium=8083.2, High=2588.1, Very High=56.2  
Back: Low=599.9, Medium=1495.1, High=302.6, Very High=10.2  
Uplight: Low=4.2, High=14.2

BUG Rating : B2-U2-G2