



## IES ROAD REPORT

PHOTOMETRIC FILENAME : ENM4-PT-2-LED-18L-30-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-18L-30-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	12504
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	12859
Maximum Candela Angle	80H 57.5V
Maximum Candela (<90 Degrees Vertical)	12859
Maximum Candela Angle (<90 Degrees Vertical)	80H 57.5V
Maximum Candela At 90 Degrees Vertical	14 (0.1% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	499 (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)	974.3	N.A.	7.8
FM - Front-Medium (30-60)	7084.2	N.A.	56.7
FH - Front-High (60-80)	2268.1	N.A.	18.1
FVH - Front-Very High (80-90)	49.3	N.A.	0.4
BL - Back-Low (0-30)	525.8	N.A.	4.2
BM - Back-Medium (30-60)	1310.3	N.A.	10.5
BH - Back-High (60-80)	265.2	N.A.	2.1
BVH - Back-Very High (80-90)	9.0	N.A.	0.1
UL - Uplight-Low (90-100)	3.9	N.A.	0.0
UH - Uplight-High (100-180)	14.1	N.A.	0.1
Total	12504.2	N.A.	100.0
BUG Rating	B2-U2-G2		

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**CANDELA TABULATION**

Vert. Angles	Horizontal Angles									
	<u>0</u>	<u>5</u>	<u>15</u>	<u>25</u>	<u>35</u>	<u>45</u>	<u>55</u>	<u>65</u>	<u>75</u>	<u>80</u>
<b>0.0</b>	1281	1281	1281	1281	1281	1281	1281	1281	1281	1281
<b>2.5</b>	1304	1307	1307	1318	1318	1321	1325	1301	1295	1275
<b>5.0</b>	1309	1316	1348	1340	1375	1288	1285	1256	1220	1207
<b>7.5</b>	1339	1360	1395	1325	1347	1292	1314	1361	1325	1283
<b>10.0</b>	1417	1418	1467	1362	1402	1421	1436	1415	1377	1334
<b>12.5</b>	1538	1616	1542	1510	1549	1525	1540	1516	1507	1508
<b>15.0</b>	1659	1733	1696	1737	1784	1703	1718	1683	1700	1650
<b>17.5</b>	1768	1839	1808	1847	1897	1981	1894	1930	1960	1866
<b>20.0</b>	2014	2063	2064	2030	2091	2118	2200	2161	2207	2182
<b>22.5</b>	2185	2201	2253	2308	2328	2334	2521	2526	2620	2597
<b>25.0</b>	2519	2442	2504	2555	2616	2590	2858	3059	3086	3070
<b>27.5</b>	2867	2949	2975	2870	2914	2986	3217	3696	3868	3732
<b>30.0</b>	3328	3270	3224	3253	3302	3444	3717	4481	4680	4595
<b>32.5</b>	3920	3970	3741	3594	3731	3877	4431	5466	5738	5644
<b>35.0</b>	4547	4453	4298	4190	4132	4499	5101	6245	6789	6609
<b>37.5</b>	5187	5119	4874	4654	4787	4949	5703	6827	7237	7312
<b>40.0</b>	5444	5444	5337	5275	5342	5521	6171	7043	7560	7509
<b>42.5</b>	5516	5518	5498	5543	5784	6012	6750	7210	7687	7778
<b>45.0</b>	5346	5368	5395	5583	6008	6534	7353	7678	8042	8282
<b>47.5</b>	4934	4959	5048	5318	5887	6712	7953	8438	8630	8963
<b>50.0</b>	4354	4332	4475	4769	5456	6568	8517	9299	9323	9717
<b>52.5</b>	3577	3606	3762	4097	4804	6107	8928	10207	10259	10912
<b>55.0</b>	2747	2776	2935	3326	3991	5304	8958	10968	11327	12104
<b>57.5</b>	1959	1993	2137	2475	3132	4370	8391	11149	12061	12859
<b>60.0</b>	1365	1394	1513	1753	2258	3225	7304	10621	12186	12751
<b>62.5</b>	988	995	1096	1233	1515	2190	5931	9264	11471	11703
<b>65.0</b>	699	708	781	932	1097	1410	4460	7701	9729	9731
<b>67.5</b>	475	485	519	656	842	965	3018	5833	7739	7515
<b>70.0</b>	291	297	311	435	614	715	1839	4001	5285	4856
<b>72.5</b>	219	219	221	272	421	524	1017	2440	3067	2366
<b>75.0</b>	149	153	151	178	284	374	548	1488	1496	912
<b>77.5</b>	101	101	103	110	181	263	328	855	791	505
<b>80.0</b>	65	69	73	69	99	169	206	468	499	352
<b>82.5</b>	61	61	59	55	60	85	121	239	326	273
<b>85.0</b>	46	46	43	44	47	60	72	115	167	164
<b>87.5</b>	28	28	26	26	28	36	44	58	60	60
<b>90.0</b>	8	8	7	6	6	6	6	6	8	6
<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>	6	6	5	4	3	1	0	1	1	1
<b>122.5</b>	6	6	6	5	4	2	0	1	2	2
<b>125.0</b>	7	7	6	5	4	2	1	1	3	3
<b>127.5</b>	8	8	6	6	4	3	1	2	3	4
<b>130.0</b>	8	8	6	6	4	3	1	2	4	4

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**CANDELA TABULATION - (Cont.)**

132.5	8	8	7	6	4	4	1	2	4	4
135.0	8	7	6	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	1281	1281	1281	1281	1281	1281	1281	1281	1281	1281
2.5	1280	1273	1280	1276	1266	1267	1274	1275	1258	1254
5.0	1225	1215	1194	1186	1193	1188	1169	1175	1155	1130
7.5	1278	1271	1244	1245	1184	1126	1039	1053	1035	1068
10.0	1323	1288	1251	1267	1130	1093	1046	1017	965	1011
12.5	1430	1407	1385	1303	1166	1093	1039	1070	1084	1134
15.0	1583	1543	1457	1315	1152	1130	1137	1187	1228	1202
17.5	1792	1684	1593	1399	1194	1187	1275	1308	1297	1290
20.0	2038	1946	1793	1489	1265	1329	1337	1365	1288	1171
22.5	2440	2211	2085	1688	1397	1429	1396	1244	1017	844
25.0	2894	2697	2443	1838	1621	1528	1270	937	684	506
27.5	3542	3175	2881	2064	1785	1496	991	607	414	342
30.0	4354	3839	3376	2313	1929	1332	705	403	330	299
32.5	5141	4600	3907	2552	2002	1096	475	341	295	276
35.0	6069	5366	4497	2821	1940	823	396	306	275	259
37.5	6813	6133	4988	3018	1752	568	357	286	250	232
40.0	7094	6499	5216	3175	1491	442	324	264	222	203
42.5	7481	6820	5417	3193	1074	391	295	237	191	166
45.0	8010	7267	5681	3093	649	350	263	204	156	132
47.5	8669	7801	5941	2800	476	311	227	166	127	106
50.0	9436	8324	6127	2320	408	275	186	132	101	81
52.5	10358	8710	6182	1702	370	240	149	103	80	61
55.0	11308	8791	5996	1146	340	202	117	76	60	44
57.5	11572	8379	5444	820	314	164	87	55	42	28
60.0	11048	7505	4645	680	303	134	64	37	25	12
62.5	9592	6291	3709	562	291	106	45	19	14	6
65.0	7738	4797	2691	430	253	83	30	9	9	5
67.5	5514	3323	1696	306	192	61	19	7	8	5
70.0	3285	2000	951	214	130	40	16	8	8	6
72.5	1428	995	521	157	83	26	16	11	7	4
75.0	610	525	324	113	47	20	17	12	6	4
77.5	385	360	209	74	30	20	18	14	6	4

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**CANDELA TABULATION - (Cont.)**

80.0	304	256	137	42	23	20	18	14	6	4
82.5	219	156	81	20	18	18	18	14	6	5
85.0	125	79	38	11	14	17	17	13	6	5
87.5	46	20	6	6	10	16	15	11	6	4
90.0	2	2	3	5	9	14	14	9	6	4
92.5	0	1	3	5	8	13	12	7	5	4
95.0	0	1	2	4	6	9	8	6	4	4
97.5	0	1	2	4	6	6	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	1281	1281
2.5	1241	1218
5.0	1113	1100
7.5	1058	1038
10.0	1035	985
12.5	1158	1127
15.0	1293	1271
17.5	1349	1310
20.0	1153	1099
22.5	773	762
25.0	445	434

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**CANDELA TABULATION - (Cont.)**

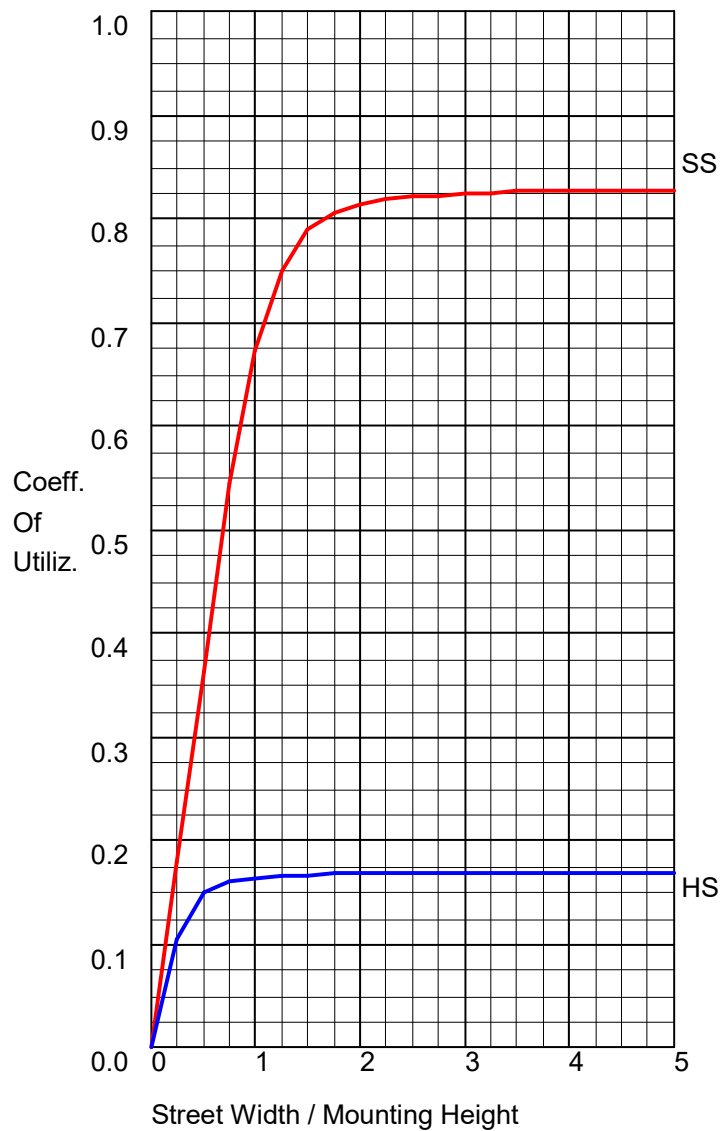
<b>27.5</b>	<b>329</b>	<b>328</b>
<b>30.0</b>	<b>295</b>	<b>295</b>
<b>32.5</b>	<b>280</b>	<b>279</b>
<b>35.0</b>	<b>258</b>	<b>258</b>
<b>37.5</b>	<b>231</b>	<b>233</b>
<b>40.0</b>	<b>197</b>	<b>195</b>
<b>42.5</b>	<b>158</b>	<b>155</b>
<b>45.0</b>	<b>125</b>	<b>125</b>
<b>47.5</b>	<b>97</b>	<b>96</b>
<b>50.0</b>	<b>74</b>	<b>73</b>
<b>52.5</b>	<b>54</b>	<b>54</b>
<b>55.0</b>	<b>37</b>	<b>36</b>
<b>57.5</b>	<b>20</b>	<b>19</b>
<b>60.0</b>	<b>8</b>	<b>8</b>
<b>62.5</b>	<b>4</b>	<b>4</b>
<b>65.0</b>	<b>2</b>	<b>3</b>
<b>67.5</b>	<b>3</b>	<b>3</b>
<b>70.0</b>	<b>3</b>	<b>3</b>
<b>72.5</b>	<b>2</b>	<b>1</b>
<b>75.0</b>	<b>1</b>	<b>1</b>
<b>77.5</b>	<b>2</b>	<b>1</b>
<b>80.0</b>	<b>2</b>	<b>2</b>
<b>82.5</b>	<b>2</b>	<b>2</b>
<b>85.0</b>	<b>2</b>	<b>3</b>
<b>87.5</b>	<b>2</b>	<b>2</b>
<b>90.0</b>	<b>2</b>	<b>2</b>
<b>92.5</b>	<b>2</b>	<b>2</b>
<b>95.0</b>	<b>2</b>	<b>1</b>
<b>97.5</b>	<b>2</b>	<b>1</b>
<b>100.0</b>	<b>2</b>	<b>1</b>
<b>102.5</b>	<b>2</b>	<b>2</b>
<b>105.0</b>	<b>1</b>	<b>1</b>
<b>107.5</b>	<b>1</b>	<b>2</b>
<b>110.0</b>	<b>2</b>	<b>2</b>
<b>112.5</b>	<b>2</b>	<b>1</b>
<b>115.0</b>	<b>2</b>	<b>2</b>
<b>117.5</b>	<b>3</b>	<b>3</b>
<b>120.0</b>	<b>4</b>	<b>4</b>
<b>122.5</b>	<b>4</b>	<b>5</b>
<b>125.0</b>	<b>5</b>	<b>5</b>
<b>127.5</b>	<b>6</b>	<b>6</b>
<b>130.0</b>	<b>6</b>	<b>6</b>
<b>132.5</b>	<b>6</b>	<b>6</b>
<b>135.0</b>	<b>6</b>	<b>6</b>
<b>137.5</b>	<b>4</b>	<b>4</b>
<b>140.0</b>	<b>3</b>	<b>3</b>
<b>142.5</b>	<b>3</b>	<b>3</b>
<b>145.0</b>	<b>2</b>	<b>2</b>
<b>147.5</b>	<b>2</b>	<b>2</b>
<b>150.0</b>	<b>3</b>	<b>2</b>
<b>152.5</b>	<b>3</b>	<b>3</b>
<b>155.0</b>	<b>2</b>	<b>3</b>
<b>157.5</b>	<b>2</b>	<b>2</b>
<b>160.0</b>	<b>1</b>	<b>1</b>
<b>162.5</b>	<b>1</b>	<b>1</b>
<b>165.0</b>	<b>1</b>	<b>0</b>

**IES ROAD REPORT**  
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**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

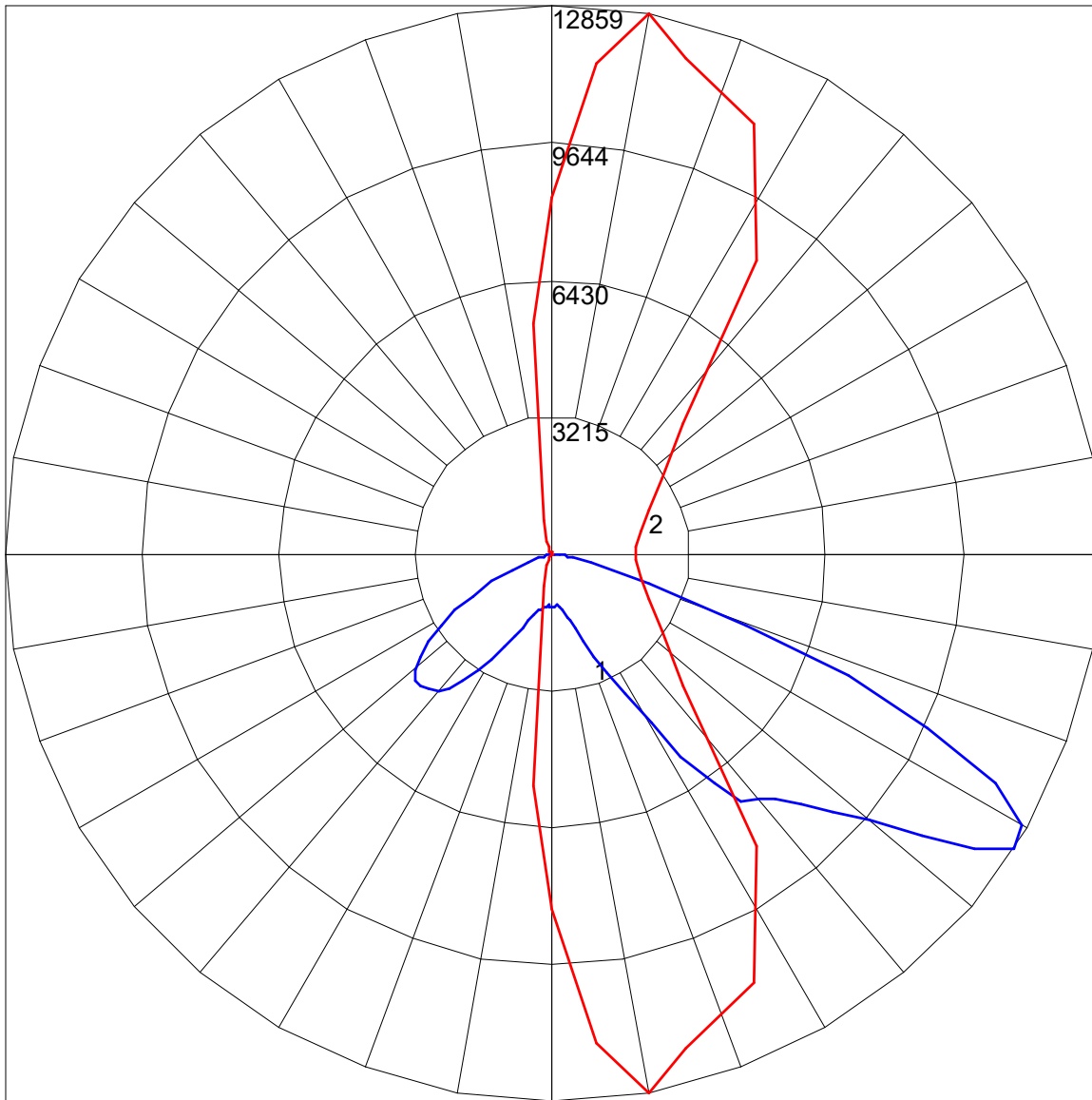


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	10375.9	83.0
Downward House Side	2110.3	16.9
Downward Total	12486.2	99.9
Upward Street Side	5.7	0.0
Upward House Side	12.3	0.1
Upward Total	18.0	0.1
Total Flux	12504.2	100.0

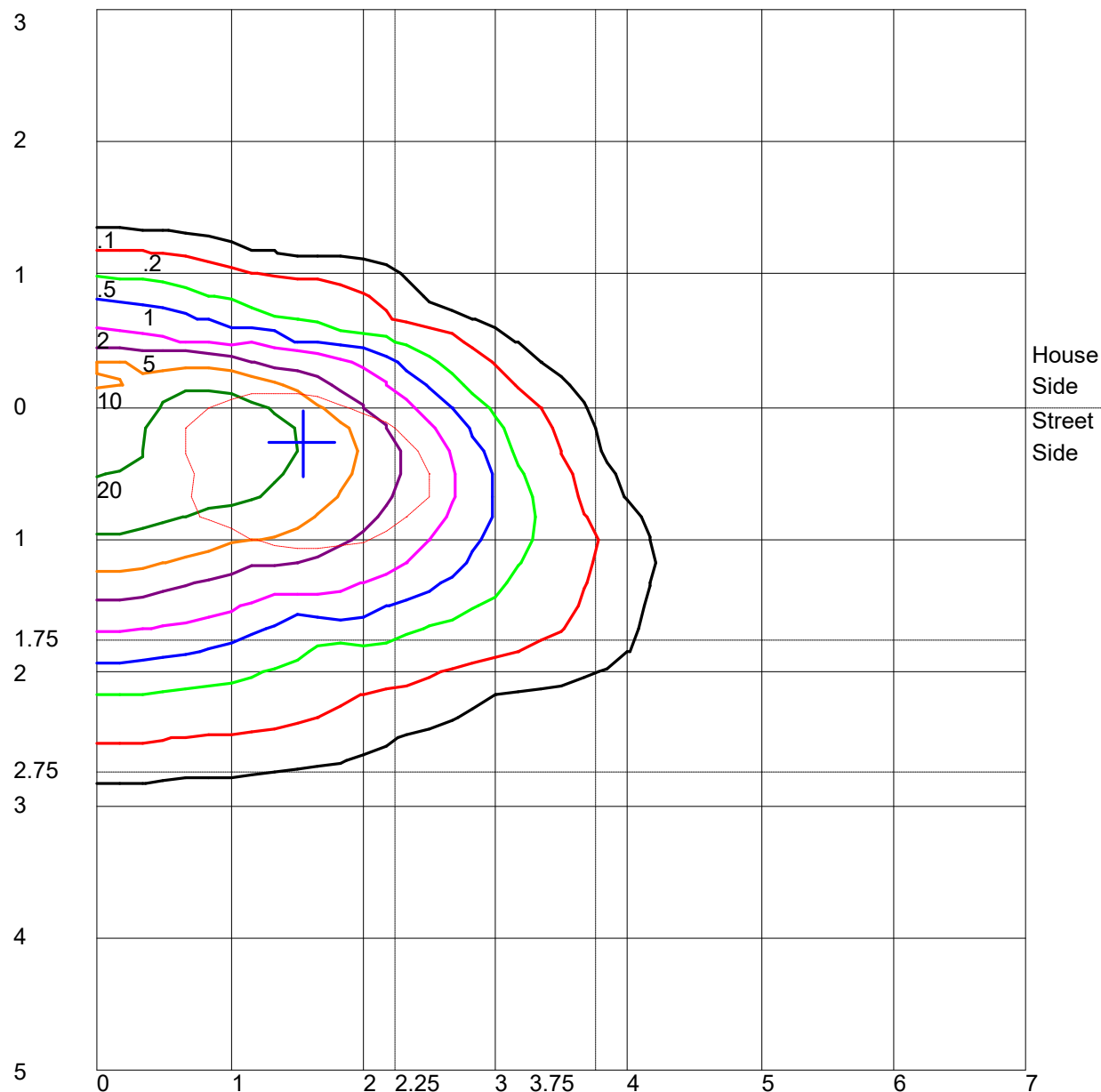


POLAR GRAPH



Maximum Candela = 12859 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



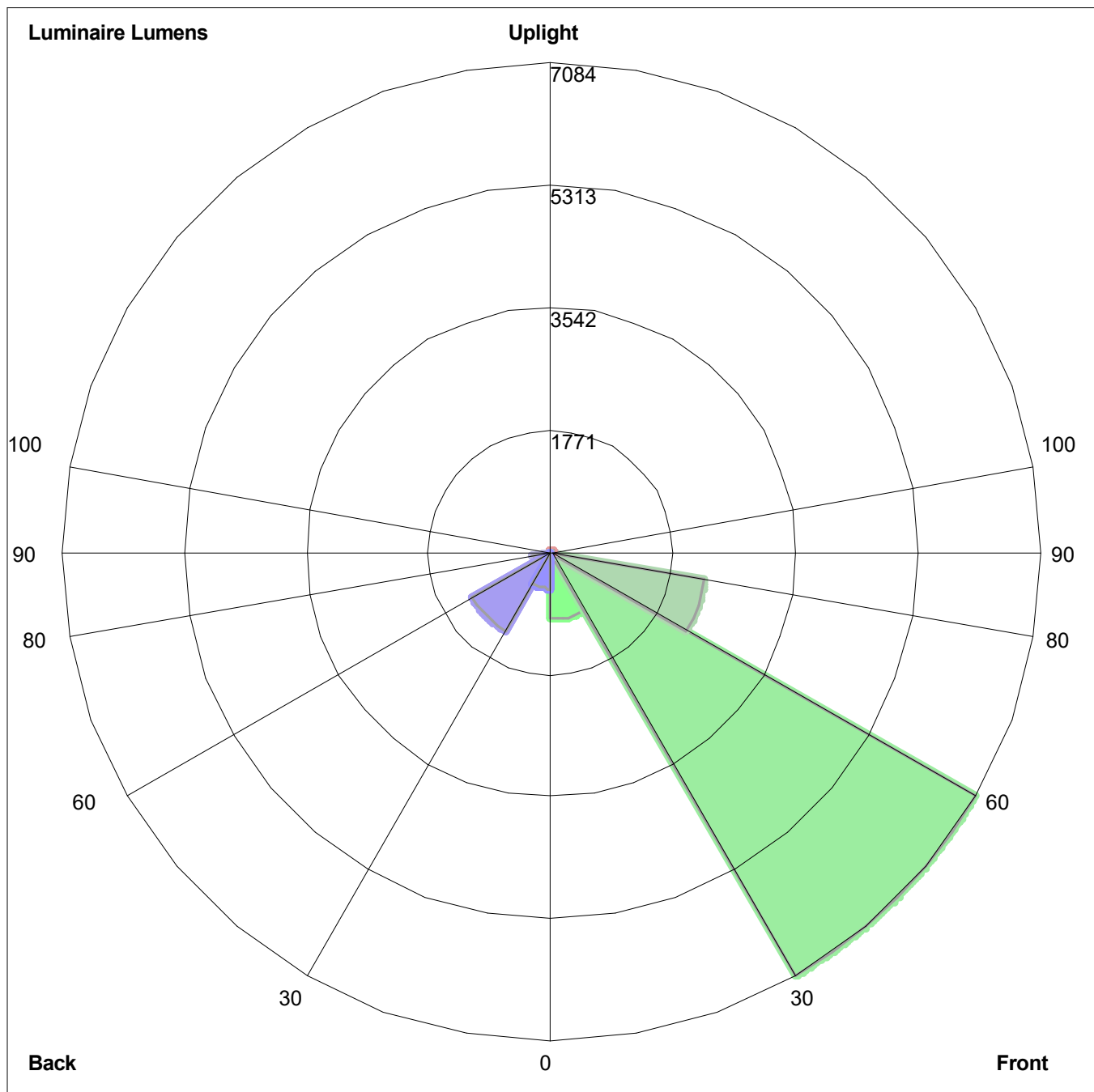
Distance In Units Of Mounting Height

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=974.3, Medium=7084.2, High=2268.1, Very High=49.3  
Back: Low=525.8, Medium=1310.3, High=265.2, Very High=9.0  
Uplight: Low=3.9, High=14.1

BUG Rating : B2-U2-G2