



IES ROAD REPORT

PHOTOMETRIC FILENAME : ENM4-PT-3-LED-18L-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-18L-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	15455
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	16934
Maximum Candela Angle	57.5H 60V
Maximum Candela (<90 Degrees Vertical)	16934
Maximum Candela Angle (<90 Degrees Vertical)	57.5H 60V
Maximum Candela At 90 Degrees Vertical	35 (0.2% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	729 (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)	573.8	N.A.	3.7
FM - Front-Medium (30-60)	9162.9	N.A.	59.3
FH - Front-High (60-80)	4019.2	N.A.	26.0
FVH - Front-Very High (80-90)	95.9	N.A.	0.6
BL - Back-Low (0-30)	278.4	N.A.	1.8
BM - Back-Medium (30-60)	1051.4	N.A.	6.8
BH - Back-High (60-80)	206.8	N.A.	1.3
BVH - Back-Very High (80-90)	22.8	N.A.	0.1
UL - Uplight-Low (90-100)	10.7	N.A.	0.1
UH - Uplight-High (100-180)	33.0	N.A.	0.2
Total	15454.9	N.A.	100.0
BUG Rating	B2-U2-G2		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	<u>0.0</u>	<u>5.0</u>	<u>15.0</u>	<u>25.0</u>	<u>35.0</u>	<u>45.0</u>	<u>55.0</u>	<u>57.5</u>	<u>65.0</u>	<u>75.0</u>
0.0	748	748	748	748	748	748	748	748	748	748
2.5	736	732	738	734	736	737	741	737	739	736
5.0	743	738	736	736	730	721	712	710	703	701
7.5	718	717	728	726	710	705	715	713	719	718
10.0	715	716	736	700	731	731	764	760	760	754
12.5	777	786	768	760	778	774	799	800	809	794
15.0	827	826	830	842	875	864	871	862	867	880
17.5	881	901	890	924	964	997	961	946	949	960
20.0	1029	1058	1049	1045	1076	1118	1140	1126	1089	1076
22.5	1192	1184	1225	1254	1301	1331	1403	1393	1362	1280
25.0	1502	1461	1500	1576	1653	1676	1783	1779	1787	1608
27.5	2068	2070	2093	2083	2159	2237	2357	2364	2394	2127
30.0	2722	2719	2661	2773	2826	2972	3089	3135	3102	2770
32.5	3544	3554	3404	3360	3557	3704	3935	3942	3945	3406
35.0	4269	4268	4199	4245	4250	4677	4792	4855	4674	4057
37.5	5406	5376	5169	5012	5116	5371	5561	5566	5351	4477
40.0	6332	6429	6280	5965	5960	6183	6261	6252	5867	4931
42.5	7555	7577	7377	7017	6864	6901	6811	6808	6292	5356
45.0	8818	8853	8643	8206	7902	7772	7445	7336	6756	5846
47.5	10035	10012	9936	9594	9298	8819	8236	8112	7467	6610
50.0	10843	10866	11078	11154	10589	10015	9332	9163	8539	7629
52.5	10831	11045	11697	12360	12380	11573	11128	10896	10063	8830
55.0	10096	10255	11100	12407	13326	13462	13751	13723	12190	9697
57.5	8162	8298	9667	11536	13422	14733	16087	16157	13783	9970
60.0	5278	5425	6850	9435	12522	14883	16864	16934	14102	9585
62.5	2823	2836	3950	6576	10337	13766	16217	16348	13520	8577
65.0	1444	1527	2013	3793	7221	11344	14482	14766	11839	6735
67.5	843	891	1147	1966	4391	7690	11340	11718	8918	4314
70.0	579	609	770	1275	2381	4350	7454	7950	5696	2507
72.5	427	451	558	965	1581	2182	4092	4504	3040	1083
75.0	292	310	404	753	1204	1250	1778	1945	1365	527
77.5	208	215	296	626	952	825	797	863	714	334
80.0	161	165	230	493	729	519	430	437	437	248
82.5	125	129	183	393	485	316	256	262	289	193
85.0	88	94	139	279	287	163	157	161	166	132
87.5	54	59	98	158	106	61	58	59	56	62
90.0	13	14	23	35	20	14	12	12	9	9
92.5	4	5	7	9	7	8	8	9	7	7
95.0	2	2	4	6	7	7	7	7	7	6
97.5	2	2	4	6	7	7	7	7	6	5
100.0	2	2	4	6	7	7	6	6	5	5
102.5	2	2	4	6	7	7	6	6	5	5
105.0	3	3	4	6	7	7	6	6	5	5
107.5	3	3	4	6	7	7	6	6	5	5
110.0	4	4	4	7	7	7	6	6	5	5
112.5	4	4	5	7	7	7	6	6	6	6
115.0	4	4	5	7	7	7	7	6	6	6
117.5	5	5	6	7	8	8	7	7	6	7
120.0	6	6	6	7	8	8	7	7	7	7
122.5	6	6	7	7	8	8	7	7	7	7
125.0	7	7	7	8	9	8	7	7	7	7
127.5	7	7	7	8	9	9	7	7	7	8
130.0	7	7	7	8	9	9	8	7	7	8

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PHOTOMETRIC FILENAME : ENM4-PT-3-LED-18L-40-IL.IES

CANDELA TABULATION - (Cont.)

132.5	7	7	7	8	8	9	8	7	7	8
135.0	6	6	6	7	7	7	7	7	7	7
137.5	2	2	4	5	6	6	5	5	5	6
140.0	1	1	3	4	5	5	4	4	4	5
142.5	1	1	3	4	4	4	4	4	4	4
145.0	1	1	3	4	4	4	4	4	4	4
147.5	0	1	2	4	4	4	4	4	4	4
150.0	0	1	2	4	4	4	4	4	4	4
152.5	0	1	2	4	4	4	4	4	4	4
155.0	1	1	2	4	4	4	4	4	4	4
157.5	0	1	2	4	4	4	4	4	4	4
160.0	0	1	2	3	4	4	3	3	4	4
162.5	0	1	2	3	4	3	3	3	3	3
165.0	0	1	2	4	4	4	3	3	3	3
167.5	0	1	2	4	4	4	3	3	3	3
170.0	1	1	2	4	4	4	4	3	3	3
172.5	0	1	2	4	4	4	3	3	3	3
175.0	0	1	2	4	4	4	3	3	3	3
177.5	1	1	2	4	4	4	4	3	3	3
180.0	2	2	2	2	2	2	2	2	2	2

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	748	748	748	748	748	748	748	748	748	748
2.5	739	744	744	744	749	760	752	753	747	752
5.0	710	715	717	699	725	739	736	724	726	724
7.5	705	713	713	725	720	710	692	673	660	673
10.0	738	730	724	768	727	705	648	626	576	569
12.5	778	769	768	767	726	684	606	531	500	480
15.0	816	796	796	797	736	640	543	494	456	435
17.5	883	852	871	809	715	574	517	480	452	428
20.0	968	928	904	838	667	549	498	480	461	428
22.5	1160	1087	1044	895	658	549	503	489	476	440
25.0	1415	1304	1213	953	683	587	504	496	526	513
27.5	1814	1598	1475	1010	749	637	513	519	629	660
30.0	2267	1981	1720	1055	788	665	542	564	779	828
32.5	2669	2308	1918	1091	799	683	560	622	914	1052
35.0	3074	2560	2088	1106	781	685	579	635	1089	1308
37.5	3411	2823	2212	1122	747	674	574	643	1310	1631
40.0	3757	3056	2368	1138	716	645	564	623	1524	1627
42.5	4148	3325	2517	1154	681	611	532	582	1638	1288
45.0	4693	3736	2747	1195	645	566	487	535	1329	973
47.5	5482	4262	3012	1236	599	501	430	483	875	728
50.0	6288	4853	3313	1251	540	402	346	416	496	555
52.5	7007	5289	3537	1226	450	297	253	315	324	439
55.0	7345	5408	3470	1123	352	223	188	212	224	355
57.5	7237	5100	3064	958	287	187	155	150	153	286
60.0	6646	4436	2409	741	244	166	132	114	114	233
62.5	5543	3466	1646	537	209	145	110	88	87	190
65.0	3746	2325	1011	365	174	121	89	69	65	158
67.5	2147	1357	611	250	140	95	67	55	48	127
70.0	979	692	348	179	112	76	51	42	35	98
72.5	418	356	242	148	90	61	42	35	24	73
75.0	261	243	201	133	75	53	37	25	16	54
77.5	195	190	169	123	66	48	33	21	10	40

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PHOTOMETRIC FILENAME : ENM4-PT-3-LED-18L-40-IL.IES

CANDELA TABULATION - (Cont.)

80.0	175	159	140	109	59	43	30	17	9	32
82.5	129	118	114	90	53	41	29	17	8	27
85.0	80	77	83	64	45	38	27	16	8	23
87.5	40	36	45	42	37	33	25	14	7	19
90.0	9	8	14	25	30	28	22	13	5	11
92.5	7	5	11	20	25	25	18	12	4	4
95.0	7	4	10	18	23	22	17	11	4	4
97.5	6	5	8	14	19	18	14	10	5	4
100.0	6	5	8	12	15	14	12	9	5	4
102.5	6	6	7	9	12	12	11	9	5	4
105.0	6	6	7	9	11	12	10	9	6	4
107.5	6	6	7	9	10	11	10	9	7	4
110.0	6	7	8	9	10	10	10	9	7	4
112.5	6	7	8	9	10	10	10	9	7	5
115.0	7	7	8	9	10	10	10	9	7	5
117.5	7	7	9	9	10	10	10	9	7	5
120.0	7	8	9	9	10	10	10	9	8	6
122.5	7	9	9	9	10	11	10	9	8	6
125.0	8	9	9	10	10	11	11	10	8	7
127.5	8	9	9	10	10	11	11	10	9	7
130.0	9	9	9	10	10	11	11	10	9	7
132.5	8	9	9	10	10	11	11	10	9	7
135.0	8	8	9	9	10	10	10	9	8	7
137.5	7	7	7	8	9	9	9	8	7	5
140.0	6	6	7	7	8	8	8	7	6	4
142.5	5	6	6	7	7	8	7	7	5	4
145.0	5	6	6	7	7	7	7	7	5	3
147.5	5	6	6	7	7	7	7	6	4	3
150.0	5	6	6	6	7	7	7	6	4	2
152.5	5	5	6	6	7	7	7	6	4	2
155.0	5	5	6	6	7	7	6	5	4	2
157.5	4	5	5	6	6	6	6	4	3	1
160.0	4	4	5	5	6	5	5	4	2	1
162.5	4	4	4	5	5	5	4	4	2	1
165.0	4	4	4	4	5	4	4	3	1	0
167.5	4	4	4	4	4	4	4	3	1	0
170.0	3	4	4	4	4	4	4	3	1	0
172.5	3	4	4	4	4	4	4	3	1	0
175.0	3	4	4	4	4	4	4	3	1	0
177.5	3	3	4	4	4	3	3	3	1	0
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Horizontal Angles
Angles

	<u>175.0</u>	<u>180.0</u>
0.0	748	748
2.5	754	755
5.0	716	718
7.5	658	654
10.0	548	553
12.5	477	475
15.0	439	430
17.5	420	417
20.0	416	409
22.5	409	399
25.0	444	427

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

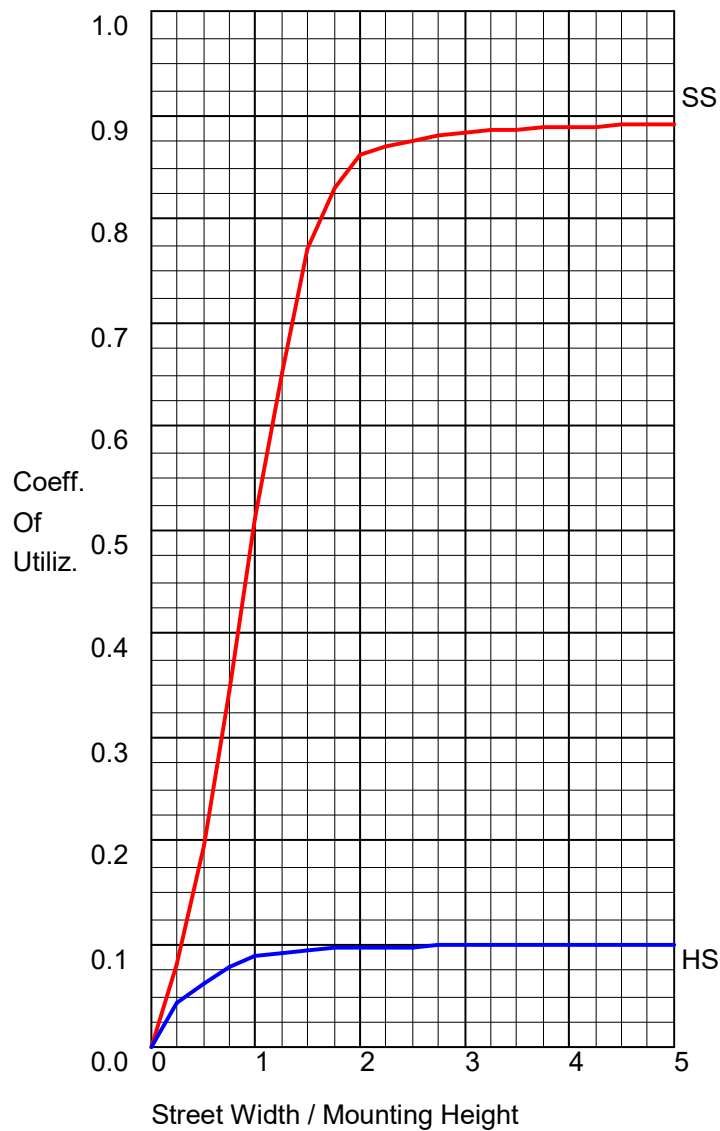
27.5	527	502
30.0	650	626
32.5	822	786
35.0	1019	975
37.5	1039	966
40.0	835	746
42.5	623	535
45.0	460	413
47.5	375	329
50.0	321	261
52.5	296	226
55.0	289	213
57.5	298	218
60.0	312	242
62.5	323	273
65.0	329	297
67.5	312	297
70.0	277	284
72.5	243	248
75.0	189	200
77.5	149	163
80.0	120	135
82.5	98	109
85.0	75	85
87.5	56	62
90.0	26	28
92.5	0	0
95.0	0	0
97.5	1	0
100.0	1	0
102.5	1	0
105.0	1	0
107.5	1	0
110.0	1	1
112.5	2	1
115.0	3	2
117.5	3	3
120.0	4	4
122.5	4	4
125.0	5	5
127.5	6	6
130.0	6	6
132.5	6	6
135.0	5	4
137.5	3	3
140.0	1	1
142.5	1	1
145.0	1	0
147.5	1	0
150.0	1	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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PHOTOMETRIC FILENAME : ENM4-PT-3-LED-18L-40-IL.IES

CANDELA TABULATION - (Cont.)

167.5	0	0
170.0	0	0
172.5	0	0
175.0	0	0
177.5	0	0
180.0	2	2

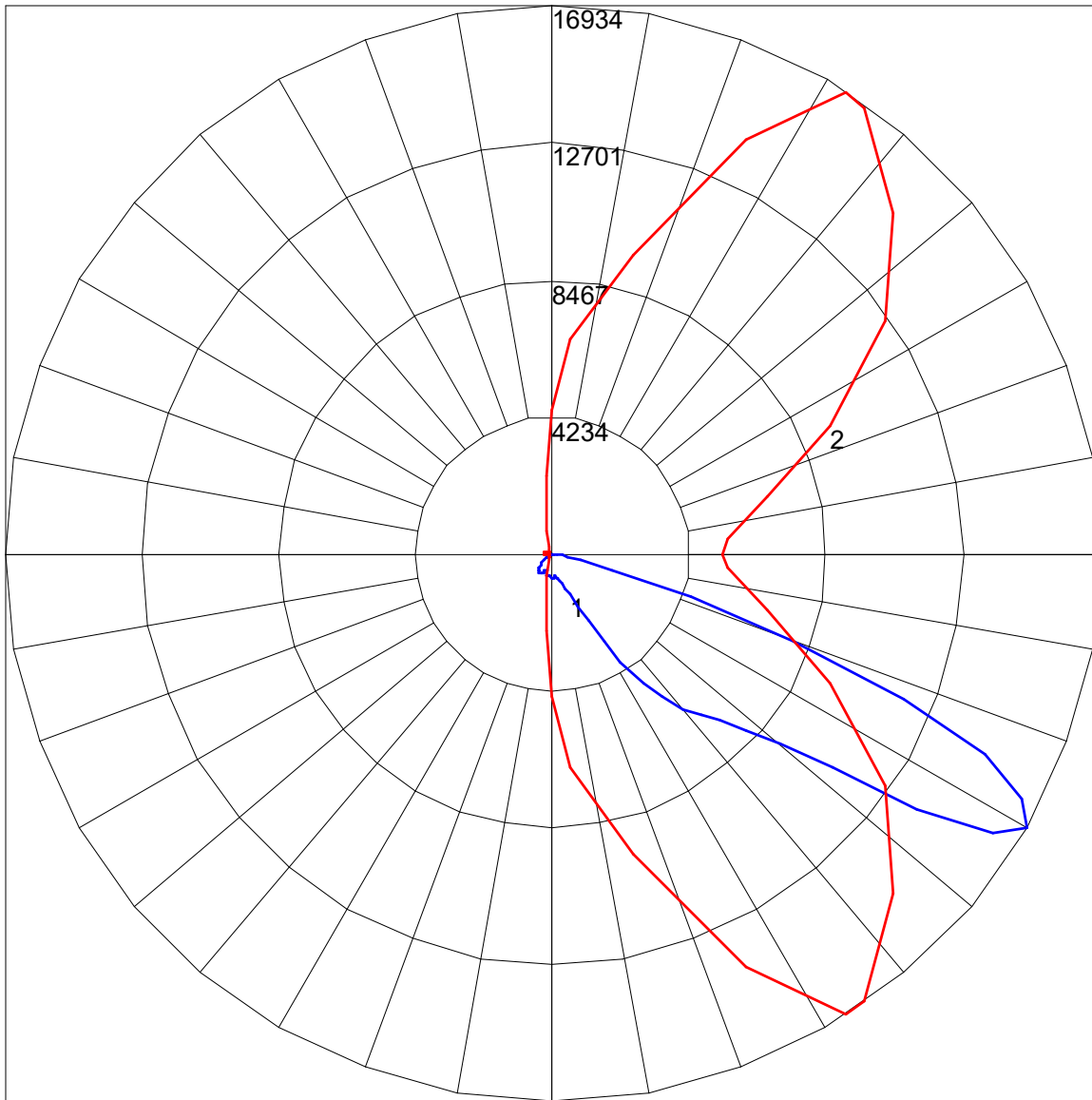
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

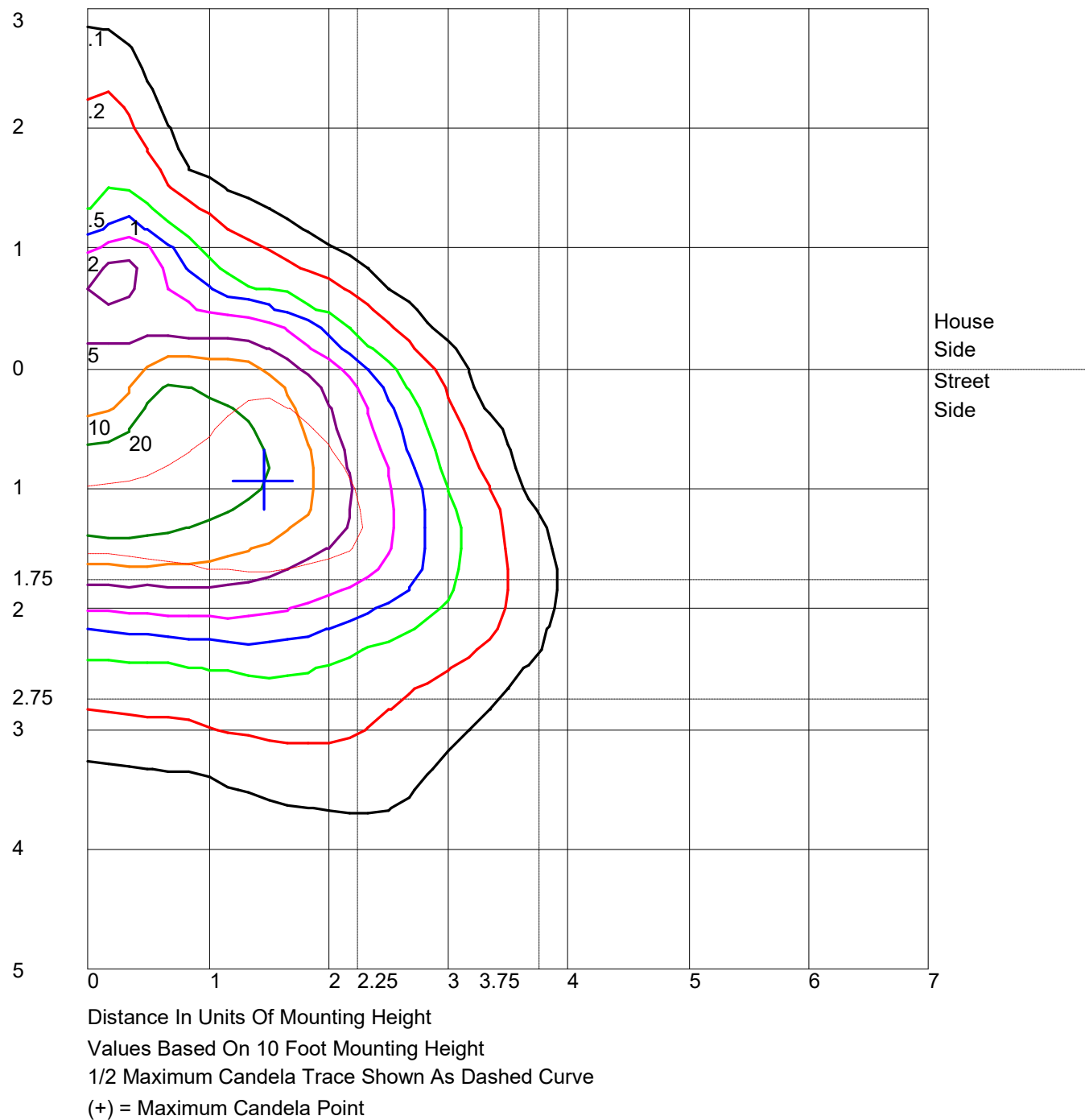
	Lumens	Percent Of Luminaire
Downward Street Side	13851.8	89.6
Downward House Side	1559.4	10.1
Downward Total	15411.2	99.7
Upward Street Side	18.4	0.1
Upward House Side	25.2	0.2
Upward Total	43.6	0.3
Total Flux	15454.8	100.0

POLAR GRAPH

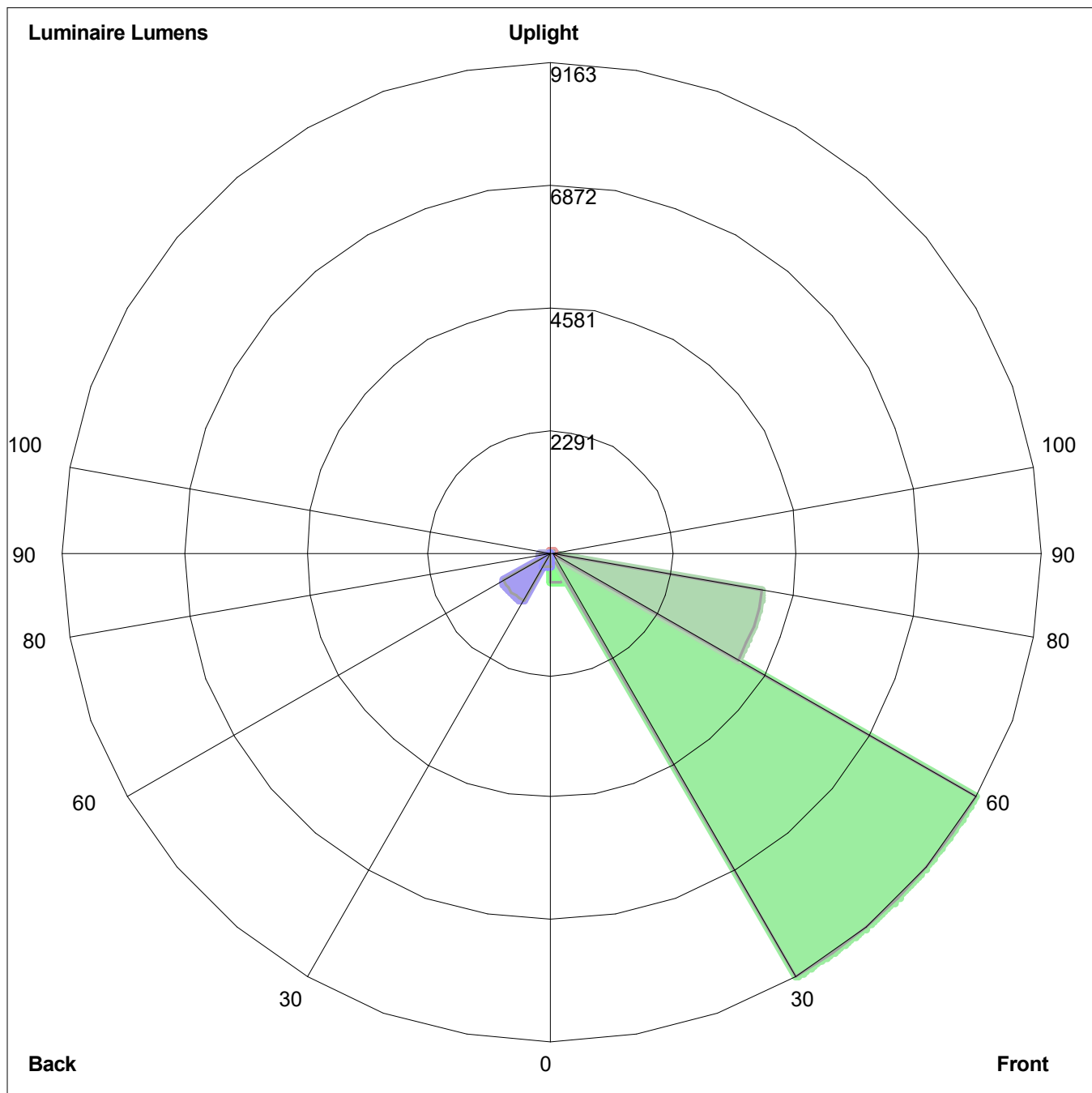


Maximum Candela = 16934 Located At Horizontal Angle = 57.5, Vertical Angle = 60
1 - Vertical Plane Through Horizontal Angles (57.5 - 237.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (60) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=573.8, Medium=9162.9, High=4019.2, Very High=95.9
Back: Low=278.4, Medium=1051.4, High=206.8, Very High=22.8
Uplight: Low=10.7, High=33.0

BUG Rating : B2-U2-G2