IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-30-70CRI-IL.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12638
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/26/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-2-30-70CRI-IL
[_ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[OTHER] SCALED FROM ORIGINAL TEST DATA
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Outdoor
[_SEARCH_COLORTEMP] 3000

CHARACTERISTICS

IES Classification	Type I
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7862
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	53
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.06
Maximum Candela	9484
Maximum Candela Angle	80H 60V
Maximum Candela (<90 Degrees Vertical)	9484
Maximum Candela Angle (<90 Degrees Vertical)	80H 60V
Maximum Candela At 90 Degrees Vertical	173 (2.2% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	596 (7.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	922.9	N.A.	11.7
FM - Front-Medium (30-60)	3750.3	N.A.	47.7
FH - Front-High (60-80)	1567.6	N.A.	19.9
FVH - Front-Very High (80-90)	171.1	N.A.	2.2
BL - Back-Low (0-30)	226.7	N.A.	2.9
BM - Back-Medium (30-60)	488.0	N.A.	6.2
BH - Back-High (60-80)	206.2	N.A.	2.6
BVH - Back-Very High (80-90)	70.1	N.A.	0.9
UL - Uplight-Low (90-100)	128.3	N.A.	1.6
UH - Uplight-High (100-180)	330.5	N.A.	4.2
Total	7861.7	N.A.	100.0
BUG Rating	B1-U3-G2		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	5	15	25	35	45	55	65	75	80
0.0	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235
2.5	1277	1275	1289	1296	1280	1269	1249	1235	1230	1225
5.0	1450	1438	1463	1436	1436	1428	1426	1380	1268	1237
7.5	1318	1336	1340	1381	1421	1482	1482	1452	1392	1318
10.0	1488	1489	1438	1518	1490	1455	1487	1488	1500	1436
12.5	1593	1589	1528	1532	1591	1557	1486	1594	1664	1621
15.0	1679	1769	1733	1740	1696	1625	1729	1677	1783	1780
17.5	1976	1884	1921	1864	1912	1912	1849	1882	1973	1954
20.0	2090	2110	2159	2114	2079	2089	2151	2135	2140	2154
22.5	2328	2370	2350	2290	2427	2340	2418	2417	2372	2510
25.0	2366	2363	2430	2522	2553	2710	2738	2733	2720	2779
27.5	2407	2391	2445	2481	2761	2921	3138	3179	3088	3248
30.0	2223	2259	2317	2490	2739	3205	3527	3621	3588	3597
32.5	2014	2024	2172	2350	2761	3223	3884	4222	4223	4156
35.0	1736	1742	1882	2202	2667	3294	4122	4777	4698	4549
37.5	1458	1456	1592	1922	2529	3332	4217	5186	5235	4988
40.0	1184	1171	1300	1619	2236	3235	4271	5575	5796	5464
42.5	926	937	1042	1321	1910	2988	4247	5859	6299	6187
45.0	738	747	837	1076	1589	2633	4176	6123	6974	6773
47.5	624	628	692	897	1288	2251	3993	6078	7627	7583
50.0	586	584	621	785	1062	1868	3627	6047	8163	8247
52.5	614	603	600	730	915	1485	3197	5880	8484	8304
55.0	878	845	716	717	835	1140	2743	5458	8622	8648
57.5	1562	1496	1216	877	784	913	2119	4841	8605	8980
60.0	1871	1806	1611	1331	883	790	1428	3927	8560	9484
62.5	1342	1304	1271	1320	1172	664	906	2918	8285	9419
65.0	1006	1010	978	979	1014	790	616	1915	7376	8311
67.5	927	929	891	861	799	779	545	1105	5278	6546
70.0	865	868	818	786	726	660	643	648	3196	4401
72.5	675	681	666	688	675	611	647	495	1434	2194
75.0	574	574	546	551	607	581	567	593	564	947
77.5	504	509	501	505	554	580	506	689	314	382
80.0	462	469	464	464	513	596	498	530	329	278
82.5	394	398	412	431	484	559	539	419	343	229
85.0	241	257	276	294	352	462	518	376	305	230
87.5	129	139	164	176	195	241	303	312	217	187
90.0	70	80	106	118	132	146	166	173	158	153
92.5	56	62	86	97	107	116	120	130	140	141
95.0	63	63	87	99	109	119	119	132	140	121
97.5	72	67	90	103	110	120	118	131	130	98
100.0	78	71	91	103	111	119	115	124	103	84
102.5	82	74	91	105	111	118	111	110	85	83
105.0	84	77	90	105	110	114	105	96	75	80
107.5	86	81	89	106	110	110	95	84	69	75
110.0	87	84	87	106	109	104	85	73	65	70
112.5	87	85	87	105	107	95	78	64	61	67
115.0	88	87	87	102	101	87	72	60	60	63
117.5	89	88	86	98	95	82	67	56	58	60
120.0	89	88	84	92	88	77	64	53	56	58
122.5	89	88	83	86	84	74	62	52	54	55
125.0	87	87	80	82	80	71	60	53	52	52
127.5	84	84	79	78	77	69	60	54	52	52
130.0	83	82	77	75	75	68	62	55	53	54

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CANDELA TABULATION - (Cont.)

132.5	80	80	76	73	73	69	62	56	55	56
135.0	80	79	75	73	72	66	57	55	56	56
137.5	80	79	76	71	66	58	51	51	55	57
140.0	75	75	71	63	54	45	42	43	47	50
142.5	65	64	60	52	40	34	32	33	37	40
145.0	52	52	47	38	29	25	22	23	28	29
147.5	38	37	33	26	19	13	13	15	17	18
150.0	26	25	23	17	10	2	3	7	10	10
152.5	18	18	13	7	2	0	0	1	2	2
155.0	6	6	3	2	0	0	0	0	0	0
157.5	2	2	1	0	0	0	0	0	0	0
160.0	0	1	0	0	0	0	0	0	0	0
162.5	0	1	0	0	0	0	0	0	0	0
165.0	0	1	1	1	0	0	0	0	0	0
167.5	0	1	1	1	0	0	0	0	0	0
170.0	1	1	1	1	0	0	0	0	0	0
172.5	1	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	2	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	**Horizontal Angles**									
	85	**90**	**95**	**105**	**115**	**125**	**135**	**145**	**155**	**165**
0.0	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235
2.5	1234	1232	1239	1258	1260	1249	1233	1201	1187	1189
5.0	1225	1245	1286	1263	1177	1099	1023	937	868	798
7.5	1283	1283	1312	1199	1037	847	690	590	532	480
10.0	1357	1343	1328	1107	884	648	487	372	311	278
12.5	1480	1459	1452	1123	709	475	320	253	230	226
15.0	1604	1584	1490	1057	610	349	242	228	220	213
17.5	1823	1735	1630	999	491	267	231	214	206	203
20.0	2036	1879	1695	933	396	244	220	206	201	188
22.5	2345	2135	1910	890	319	241	214	198	181	176
25.0	2634	2361	1983	790	284	237	210	181	165	153
27.5	3065	2640	2185	692	278	234	196	165	141	136
30.0	3495	2983	2310	578	277	227	181	145	127	122
32.5	3847	3194	2357	476	267	214	159	130	120	121
35.0	4243	3400	2384	391	256	197	141	124	119	118
37.5	4752	3687	2379	337	239	175	129	125	119	113
40.0	5227	4037	2310	312	220	153	129	128	113	92
42.5	5711	4271	2226	294	197	136	137	126	94	75
45.0	6368	4537	2128	280	180	142	143	108	84	71
47.5	6764	4749	1952	293	179	151	135	95	84	72
50.0	7122	5077	1732	344	214	176	121	95	87	98
52.5	7589	5268	1539	296	226	229	132	101	123	142
55.0	8101	5560	1316	232	176	208	172	142	166	172
57.5	8391	5461	1052	191	149	146	179	187	167	127
60.0	8731	5297	772	172	148	127	167	190	123	104
62.5	8577	4987	589	156	143	132	174	141	107	94
65.0	7600	4134	435	146	134	150	156	116	105	91
67.5	6114	3140	342	145	132	164	128	117	104	92
70.0	4457	2186	286	146	137	150	122	114	107	95
72.5	2612	1376	227	142	145	133	122	114	107	99
75.0	1423	887	185	139	145	130	124	117	110	101
77.5	492	368	155	143	139	130	126	120	114	103

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CANDELA TABULATION - (Cont.)

80.0	312	261	137	154	141	132	130	122	116	107
82.5	222	202	121	160	146	134	135	126	120	115
85.0	177	130	126	165	153	137	144	131	123	124
87.5	154	57	142	161	150	137	141	140	129	114
90.0	125	40	133	153	145	134	141	133	126	115
92.5	87	87	117	155	149	136	143	137	130	120
95.0	79	124	109	151	145	129	139	135	131	121
97.5	95	127	108	137	138	122	134	132	128	118
100.0	102	121	108	118	132	118	130	130	127	115
102.5	99	110	104	101	122	116	127	128	126	111
105.0	92	102	97	89	110	112	124	126	125	108
107.5	86	92	90	82	98	107	121	125	122	103
110.0	80	84	83	76	87	99	115	122	121	98
112.5	73	76	75	71	79	92	109	119	117	94
115.0	67	71	70	68	72	86	103	114	112	91
117.5	63	65	64	65	67	83	97	108	107	89
120.0	60	61	60	62	64	79	92	102	99	87
122.5	56	58	58	60	63	75	87	96	92	85
125.0	54	55	55	58	62	73	84	90	85	84
127.5	53	53	54	57	62	73	81	85	80	81
130.0	54	54	55	58	62	72	80	80	75	79
132.5	55	55	56	60	61	67	75	78	72	77
135.0	57	57	59	60	61	60	66	71	72	77
137.5	58	60	60	60	56	52	52	58	63	73
140.0	52	53	53	50	46	41	38	43	52	60
142.5	42	43	43	39	34	31	28	29	38	46
145.0	32	32	32	28	24	21	18	20	26	33
147.5	19	19	18	16	14	11	10	13	17	21
150.0	10	10	9	9	7	3	2	5	11	13
152.5	2	2	2	2	2	2	1	2	4	7
155.0	0	0	0	0	1	0	1	1	2	2
157.5	0	0	0	0	0	0	1	1	2	2
160.0	0	0	0	0	0	0	0	1	2	2
162.5	0	0	0	0	0	0	0	1	2	2
165.0	0	0	0	0	0	0	0	1	2	2
167.5	0	0	0	0	0	0	0	1	2	2
170.0	0	0	0	0	0	0	0	1	1	2
172.5	0	0	0	0	0	0	0	0	1	1
175.0	0	0	0	0	0	0	0	0	1	1
177.5	0	0	0	0	0	0	0	0	0	1
180.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	**Horizontal Angles**	
	175	**180**
0.0	1235	1235
2.5	1191	1198
5.0	786	776
7.5	470	470
10.0	263	265
12.5	223	223
15.0	208	206
17.5	202	202
20.0	183	183
22.5	169	168
25.0	147	148

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CANDELA TABULATION - (Cont.)

27.5	132	132
30.0	123	122
32.5	122	122
35.0	121	120
37.5	112	110
40.0	89	87
42.5	76	75
45.0	73	73
47.5	75	75
50.0	114	121
52.5	147	153
55.0	152	153
57.5	95	98
60.0	81	82
62.5	73	74
65.0	67	66
67.5	64	60
70.0	63	56
72.5	63	52
75.0	65	49
77.5	67	46
80.0	69	44
82.5	76	48
85.0	84	56
87.5	76	55
90.0	79	63
92.5	83	77
95.0	84	87
97.5	84	94
100.0	86	99
102.5	88	102
105.0	91	103
107.5	95	103
110.0	98	103
112.5	99	101
115.0	98	99
117.5	97	98
120.0	95	97
122.5	94	95
125.0	91	92
127.5	87	88
130.0	84	84
132.5	81	82
135.0	80	80
137.5	79	79
140.0	65	66
142.5	51	51
145.0	36	36
147.5	23	23
150.0	15	15
152.5	9	9
155.0	3	3
157.5	1	0
160.0	1	0
162.5	1	0
165.0	1	0

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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	0	0

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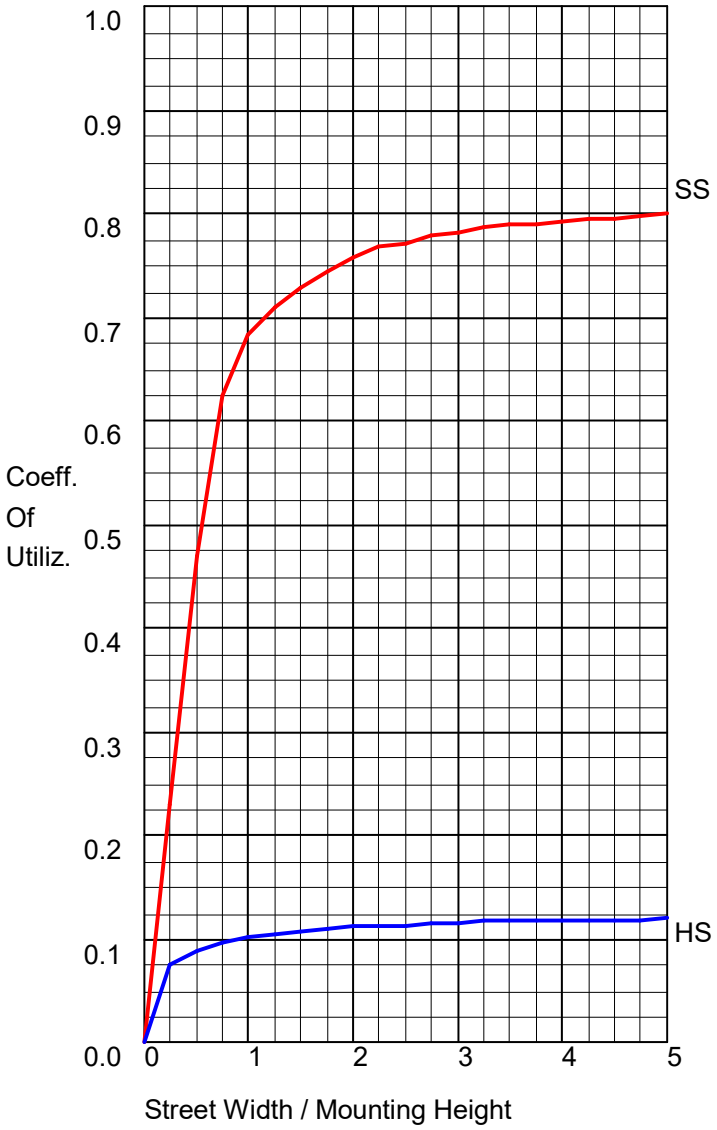
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	6411.9	81.6
Downward House Side	991.0	12.6
Downward Total	7402.9	94.2
Upward Street Side	218.2	2.8
Upward House Side	240.6	3.1
Upward Total	458.8	5.8
Total Flux	7861.7	100.0

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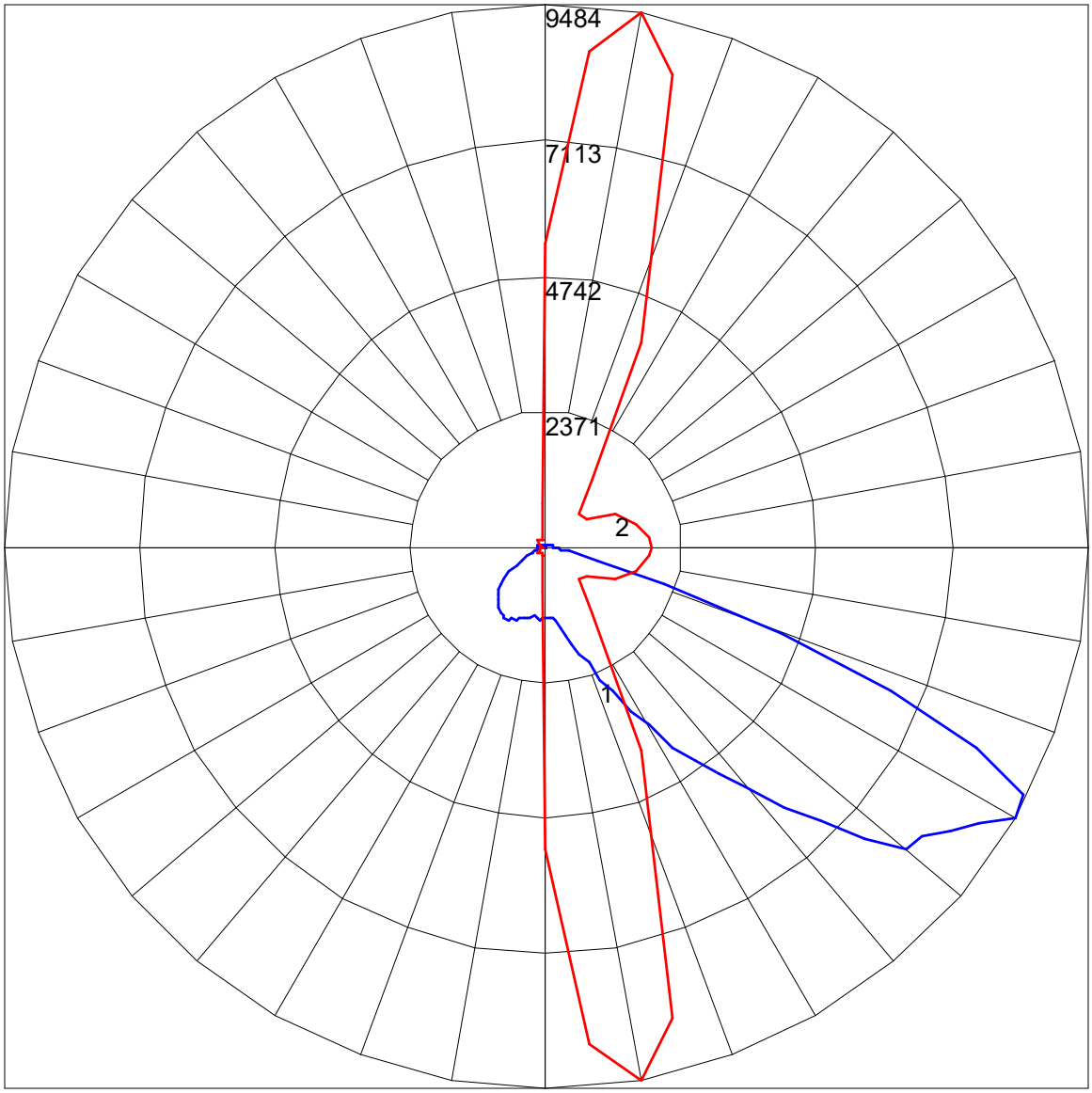
POLAR GRAPH



Maximum Candela = 9484 Located At Horizontal Angle = 80, Vertical Angle = 60
1 - Vertical Plane Through Horizontal Angles (80 - 260) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (60) (Through Max. Cd.)

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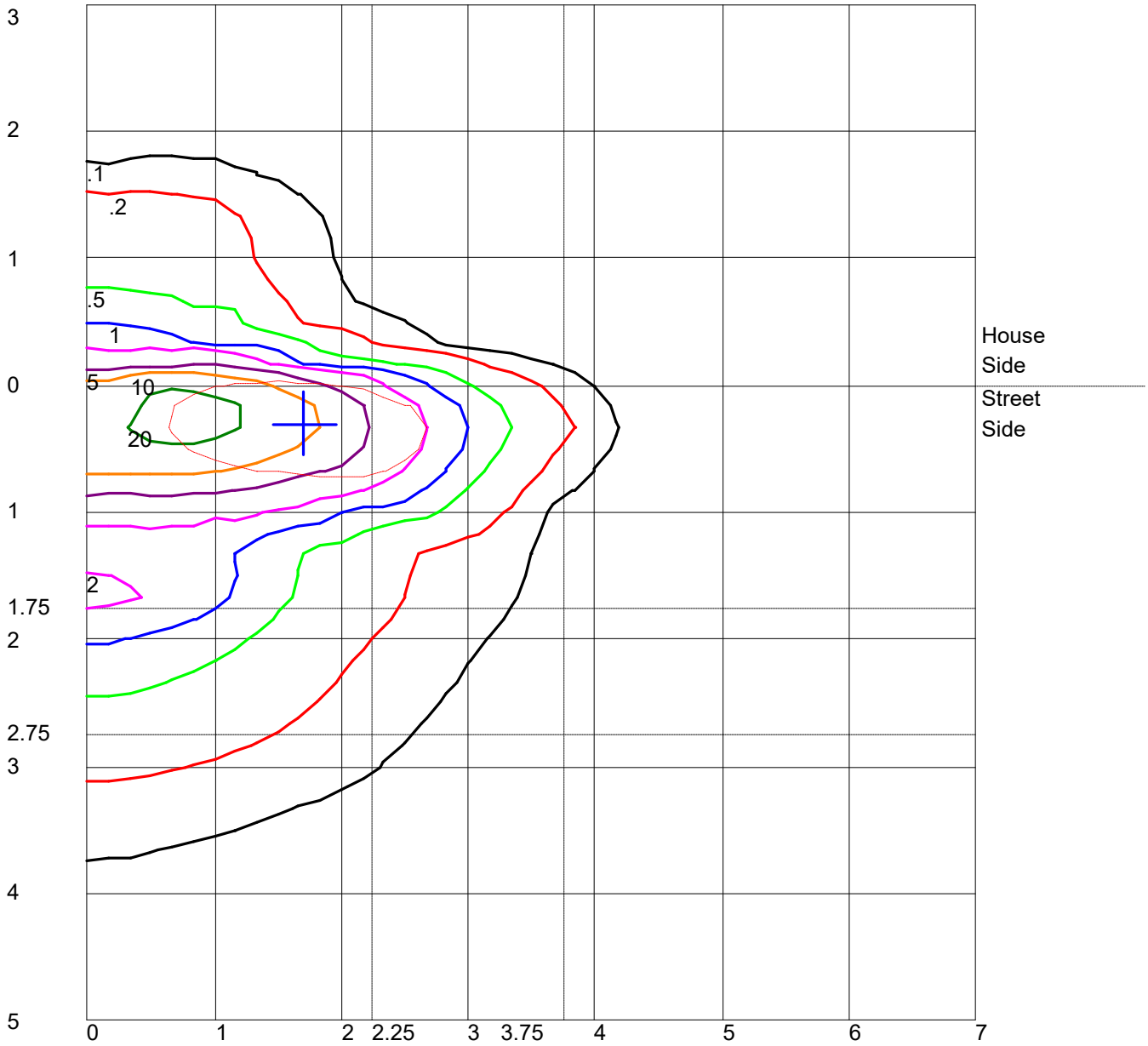
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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

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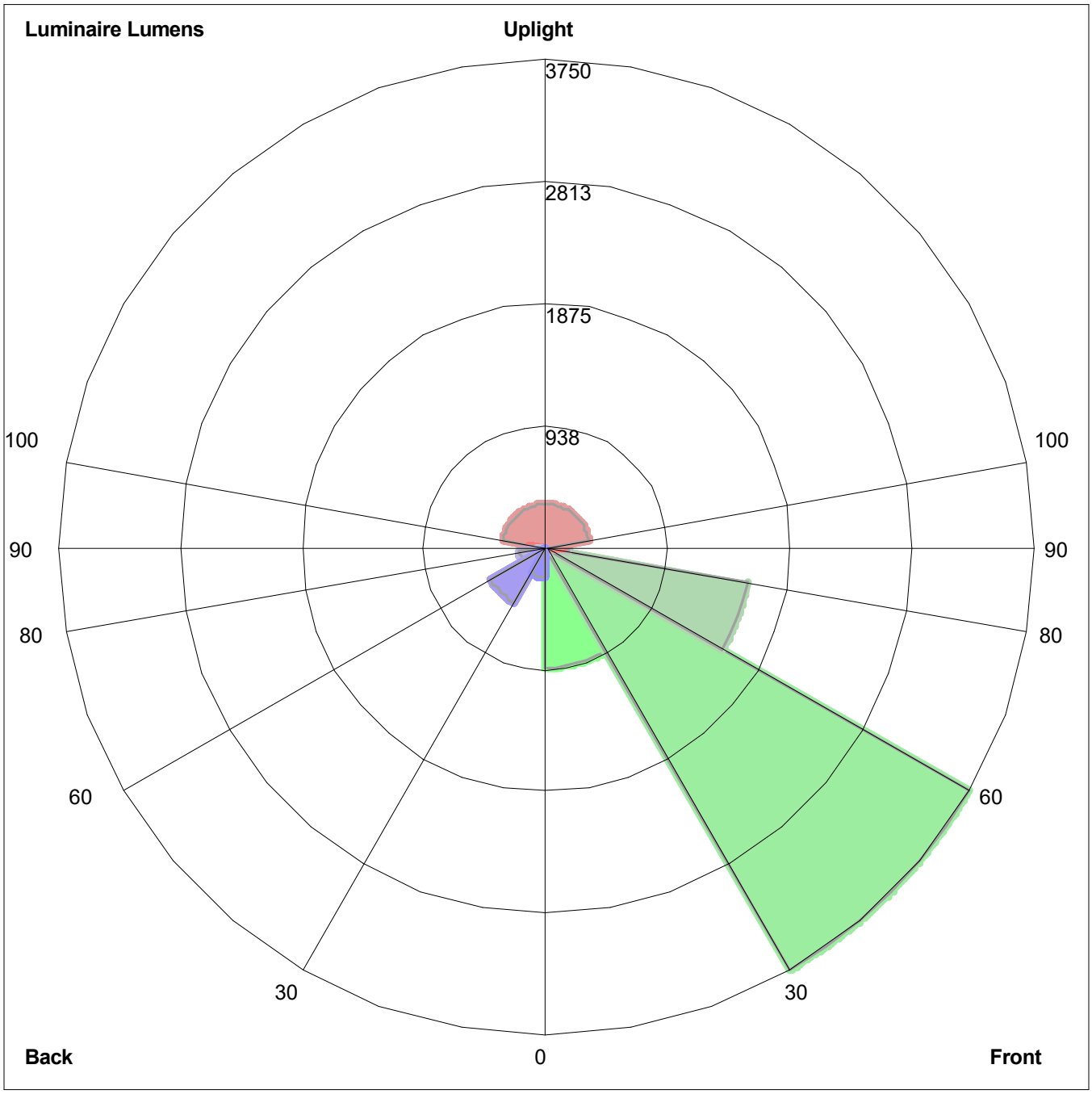
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=922.9, Medium=3750.3, High=1567.6, Very High=171.1
Back: Low=226.7, Medium=488.0, High=206.2, Very High=70.1
Uplight: Low=128.3, High=330.5

BUG Rating : B1-U3-G2

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