IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-FT-40-70CRI.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12571
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/05/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-FT-40-70CRI
[OTHER] TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.
[OTHER] SCALED FROM ORIGINAL TEST DATA
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Outdoor
[_SEARCH_COLORTEMP] 4000

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	21326
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	143
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	11349
Maximum Candela Angle	37.5H 67.5V
Maximum Candela (<90 Degrees Vertical)	11349
Maximum Candela Angle (<90 Degrees Vertical)	37.5H 67.5V
Maximum Candela At 90 Degrees Vertical	304 (1.4% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	2616 (12.3% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1077.7	N.A.	5.1
FM - Front-Medium (30-60)	6268.4	N.A.	29.4
FH - Front-High (60-80)	6697.8	N.A.	31.4
FVH - Front-Very High (80-90)	370.1	N.A.	1.7
BL - Back-Low (0-30)	963.5	N.A.	4.5
BM - Back-Medium (30-60)	3224.3	N.A.	15.1
BH - Back-High (60-80)	1565.1	N.A.	7.3
BVH - Back-Very High (80-90)	269.6	N.A.	1.3
UL - Uplight-Low (90-100)	245.4	N.A.	1.2
UH - Uplight-High (100-180)	643.9	N.A.	3.0
Total	21325.8	N.A.	100.0
BUG Rating	B3-U4-G3		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0.0	5.0	15.0	25.0	35.0	37.5	45.0	55.0	65.0	75.0
0.0	1874	1874	1874	1874	1874	1874	1874	1874	1874	1874
2.5	1955	1973	1967	1975	1971	1964	1956	1947	1929	1911
5.0	1857	1842	1887	1955	1995	1994	2009	2034	2029	1979
7.5	1913	1919	1855	1890	1887	1886	1870	1956	2042	2029
10.0	1903	1869	1907	1935	1929	1955	1954	1975	2017	2065
12.5	2011	2025	2048	2021	2011	2009	2001	2034	2025	2242
15.0	2114	2098	2129	2096	2176	2169	2155	2160	2191	2245
17.5	2314	2302	2333	2293	2241	2252	2296	2289	2314	2377
20.0	2440	2488	2499	2476	2545	2548	2376	2495	2489	2438
22.5	2694	2677	2727	2729	2664	2677	2657	2628	2612	2668
25.0	2973	2994	2958	2867	2958	2930	2799	2758	2809	2739
27.5	3244	3292	3232	3194	3110	3096	3062	2905	2866	2871
30.0	3678	3700	3668	3434	3396	3372	3211	3109	2959	3052
32.5	3933	3954	3894	3838	3706	3626	3505	3330	3132	3140
35.0	4274	4218	4134	4083	4071	4050	3806	3510	3245	3180
37.5	4568	4540	4419	4352	4333	4317	4268	3794	3442	3236
40.0	4941	4870	4773	4683	4638	4626	4643	4116	3657	3221
42.5	5402	5303	5180	5085	5011	5007	5019	4565	3819	3320
45.0	5915	5849	5684	5588	5482	5476	5422	5092	3992	3513
47.5	6535	6499	6324	6219	6096	6058	5932	5527	4383	3753
50.0	7258	7226	7053	7021	6828	6719	6586	6093	4842	4117
52.5	7851	7828	7748	7823	7613	7452	7294	6715	5513	4594
55.0	8176	8184	8208	8466	8422	8311	8090	7416	6228	4842
57.5	8354	8381	8546	8903	9122	9139	8868	8240	7010	5269
60.0	8438	8487	8760	9261	9649	9752	9620	8978	7795	5929
62.5	8511	8577	8978	9624	10155	10306	10238	9663	8313	6494
65.0	8416	8478	8960	9853	10624	10915	10994	10171	8576	6787
67.5	8069	8149	8740	9896	11229	11349	11196	10536	8428	6222
70.0	6707	6917	7769	9400	11205	11261	11197	10173	7486	5275
72.5	3886	4216	6011	7748	9874	10299	10912	8562	5913	3659
75.0	1793	2036	4159	5781	7657	8229	8715	6635	3953	1991
77.5	848	924	2090	3634	5253	5168	4750	4071	2112	1220
80.0	691	739	1194	1845	2616	2611	2192	2164	1318	906
82.5	550	604	848	1260	1433	1382	1258	1176	799	662
85.0	422	469	626	755	743	702	760	576	455	510
87.5	284	310	397	438	291	272	350	301	320	348
90.0	89	108	157	180	203	209	224	234	249	266
92.5	101	112	160	184	206	211	228	234	251	264
95.0	114	115	163	187	208	213	229	232	248	256
97.5	125	119	163	189	209	214	228	226	241	220
100.0	134	124	163	190	209	212	224	220	223	176
102.5	142	130	162	191	208	211	220	211	199	153
105.0	146	135	160	192	207	209	214	195	174	143
107.5	149	141	158	192	205	207	204	175	152	137
110.0	151	146	156	191	201	201	191	157	137	133
112.5	152	149	154	189	194	191	173	145	127	129
115.0	153	151	152	183	182	177	159	137	121	126
117.5	154	153	150	174	169	165	151	131	116	123
120.0	154	153	146	162	159	156	144	127	115	121
122.5	152	151	141	151	151	149	140	125	115	119
125.0	148	147	137	141	146	144	137	125	115	117
127.5	143	142	134	135	140	140	135	127	117	119
130.0	139	138	132	130	137	137	135	127	119	121

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CANDELA TABULATION - (Cont.)

132.5	136	135	131	128	135	136	132	122	120	124
135.0	136	136	133	129	127	125	119	115	121	127
137.5	133	134	127	115	106	103	99	101	112	126
140.0	115	115	107	95	83	81	78	84	96	111
142.5	94	92	86	73	58	57	57	64	78	92
145.0	70	70	62	51	41	41	40	46	58	71
147.5	47	46	42	35	26	24	20	27	40	48
150.0	34	33	30	20	9	8	6	11	22	30
152.5	17	16	11	6	2	2	2	5	8	14
155.0	6	5	3	2	2	2	2	2	4	6
157.5	2	2	2	2	2	2	2	2	2	3
160.0	2	2	2	2	2	2	2	2	2	3
162.5	2	1	2	2	2	2	2	2	2	3
165.0	1	1	2	2	2	2	2	2	2	3
167.5	1	1	2	2	2	2	2	2	2	3
170.0	2	1	2	2	2	2	2	2	3	3
172.5	1	1	2	2	2	2	2	2	3	3
175.0	1	1	2	2	2	2	2	2	2	3
177.5	2	1	2	2	2	2	2	2	3	3
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	**Horizontal Angles**									
	85.0	**90.0**	**95.0**	**105.0**	**115.0**	**125.0**	**135.0**	**145.0**	**155.0**	**165.0**
0.0	1874	1874	1874	1874	1874	1874	1874	1874	1874	1874
2.5	1897	1879	1880	1866	1851	1859	1851	1841	1836	1838
5.0	1930	1882	1846	1870	1972	1982	1955	1940	1911	1892
7.5	1993	1931	1907	1964	1987	1965	1936	1867	1790	1742
10.0	2031	1993	1952	2033	1965	1917	1821	1804	1798	1739
12.5	2227	2114	2075	2168	2008	1855	1803	1818	1788	1850
15.0	2312	2205	2172	2205	2024	1956	1837	1939	1962	1991
17.5	2462	2366	2346	2326	2082	1967	2104	2056	2054	2136
20.0	2609	2457	2462	2362	2166	2130	2124	2172	2213	2271
22.5	2771	2669	2649	2454	2213	2261	2261	2370	2334	2478
25.0	2845	2832	2744	2471	2317	2313	2413	2440	2533	2603
27.5	3019	2913	2921	2577	2354	2438	2505	2619	2640	2802
30.0	3106	2988	3027	2704	2454	2566	2660	2688	2801	2914
32.5	3115	3021	3034	2767	2522	2631	2700	2835	2989	3153
35.0	3144	3010	3050	2736	2509	2656	2807	2966	3077	3223
37.5	3139	3026	3081	2692	2491	2640	2848	2986	3101	3278
40.0	3115	3100	3044	2623	2475	2595	2869	2958	3119	3359
42.5	3194	3054	3058	2576	2426	2568	2817	2924	3151	3646
45.0	3227	3061	3086	2578	2311	2587	2758	2869	3221	3908
47.5	3296	3148	3025	2535	2227	2555	2684	2788	3493	3517
50.0	3397	3260	3046	2523	2136	2461	2589	2716	3473	3195
52.5	3652	3344	3166	2517	2092	2379	2470	2722	3233	2966
55.0	3897	3546	3248	2449	2058	2283	2341	2724	2974	2780
57.5	4229	3754	3321	2385	1965	2131	2197	2623	2743	2603
60.0	4530	3911	3453	2332	1838	1944	2015	2449	2515	2416
62.5	4717	3982	3398	2236	1685	1757	1829	2259	2281	2229
65.0	4637	3876	3152	2052	1511	1559	1641	2068	2046	2044
67.5	4186	3350	2736	1801	1368	1381	1476	1895	1796	1813
70.0	3298	2473	1948	1505	1214	1244	1324	1705	1524	1645
72.5	2120	1669	1221	1187	1047	1092	1165	1470	1329	1492
75.0	1187	1033	886	942	903	912	1021	1263	1060	1210
77.5	783	706	626	743	730	749	855	986	873	1121

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CANDELA TABULATION - (Cont.)

80.0	626	555	485	616	586	590	676	736	753	989
82.5	492	434	392	534	504	493	542	574	653	813
85.0	411	300	343	460	421	415	433	453	558	624
87.5	329	167	315	368	354	345	367	356	377	451
90.0	215	127	264	301	296	280	304	295	286	279
92.5	169	197	236	292	285	267	285	280	266	250
95.0	172	243	223	282	276	249	276	272	263	248
97.5	194	244	221	260	261	230	263	260	256	240
100.0	202	232	218	230	246	221	252	252	248	228
102.5	194	215	208	206	231	217	244	245	242	216
105.0	182	199	195	189	214	211	236	240	236	202
107.5	169	182	183	178	198	205	229	234	229	188
110.0	158	169	171	169	183	197	223	231	223	174
112.5	149	159	162	162	171	191	215	226	217	161
115.0	141	150	154	157	163	184	207	220	208	151
117.5	136	143	147	153	159	179	200	212	197	145
120.0	131	138	142	151	155	175	194	203	184	141
122.5	127	133	138	147	154	172	187	191	168	139
125.0	124	129	134	144	153	169	181	180	154	136
127.5	123	127	132	143	152	167	174	168	142	134
130.0	125	128	134	143	152	165	167	157	134	132
132.5	127	131	135	144	149	159	161	147	128	131
135.0	131	135	138	145	145	144	147	139	127	130
137.5	135	138	140	141	135	125	123	122	126	130
140.0	123	127	127	123	114	103	95	99	109	120
142.5	105	108	107	102	90	78	68	73	87	100
145.0	81	83	84	78	66	55	48	50	65	77
147.5	54	56	57	54	45	34	30	35	44	54
150.0	34	34	34	33	26	14	12	22	30	34
152.5	18	18	18	15	10	5	4	6	14	22
155.0	7	7	7	6	5	3	2	2	2	5
157.5	4	5	4	4	3	2	2	1	0	0
160.0	4	4	4	4	3	2	2	1	0	0
162.5	4	4	4	4	3	2	2	0	0	0
165.0	4	4	4	4	3	2	2	1	0	0
167.5	4	4	4	4	3	2	2	1	0	0
170.0	4	4	4	4	3	2	2	1	0	0
172.5	4	4	4	4	3	2	2	1	0	0
175.0	4	4	4	4	3	2	2	1	0	0
177.5	4	4	4	4	3	2	2	1	0	0
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	**Horizontal Angles**	
	175.0	**180.0**
0.0	1874	1874
2.5	1850	1866
5.0	1890	1876
7.5	1750	1742
10.0	1761	1771
12.5	1866	1877
15.0	1999	1924
17.5	2104	2209
20.0	2268	2217
22.5	2477	2477
25.0	2626	2599

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CANDELA TABULATION - (Cont.)

27.5	2860	2899
30.0	3038	3032
32.5	3256	3263
35.0	3341	3356
37.5	3417	3468
40.0	3578	3695
42.5	3897	3924
45.0	3511	3500
47.5	3242	3258
50.0	3077	3079
52.5	2921	2917
55.0	2763	2760
57.5	2588	2574
60.0	2405	2393
62.5	2221	2217
65.0	2053	2043
67.5	1811	1790
70.0	1669	1643
72.5	1432	1316
75.0	1181	1123
77.5	1172	1121
80.0	1121	1069
82.5	944	904
85.0	727	724
87.5	507	542
90.0	236	199
92.5	159	124
95.0	156	144
97.5	151	161
100.0	147	170
102.5	146	173
105.0	148	173
107.5	151	170
110.0	153	165
112.5	155	161
115.0	154	157
117.5	152	154
120.0	151	151
122.5	148	149
125.0	146	147
127.5	142	143
130.0	139	139
132.5	135	135
135.0	133	133
137.5	132	132
140.0	127	127
142.5	106	107
145.0	83	84
147.5	61	62
150.0	38	38
152.5	25	26
155.0	8	7
157.5	0	0
160.0	0	0
162.5	0	0
165.0	0	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	2	2

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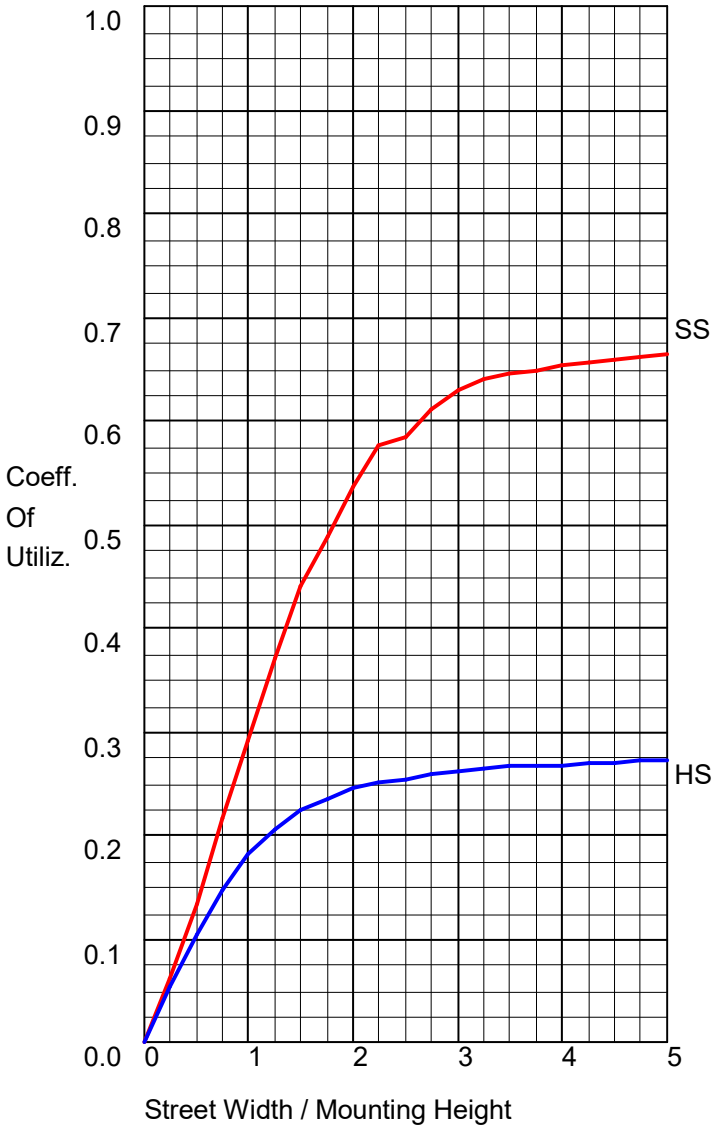
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	14413.9	67.6
Downward House Side	6022.5	28.2
Downward Total	20436.4	95.8
Upward Street Side	407.1	1.9
Upward House Side	482.2	2.3
Upward Total	889.3	4.2
Total Flux	21325.7	100.0

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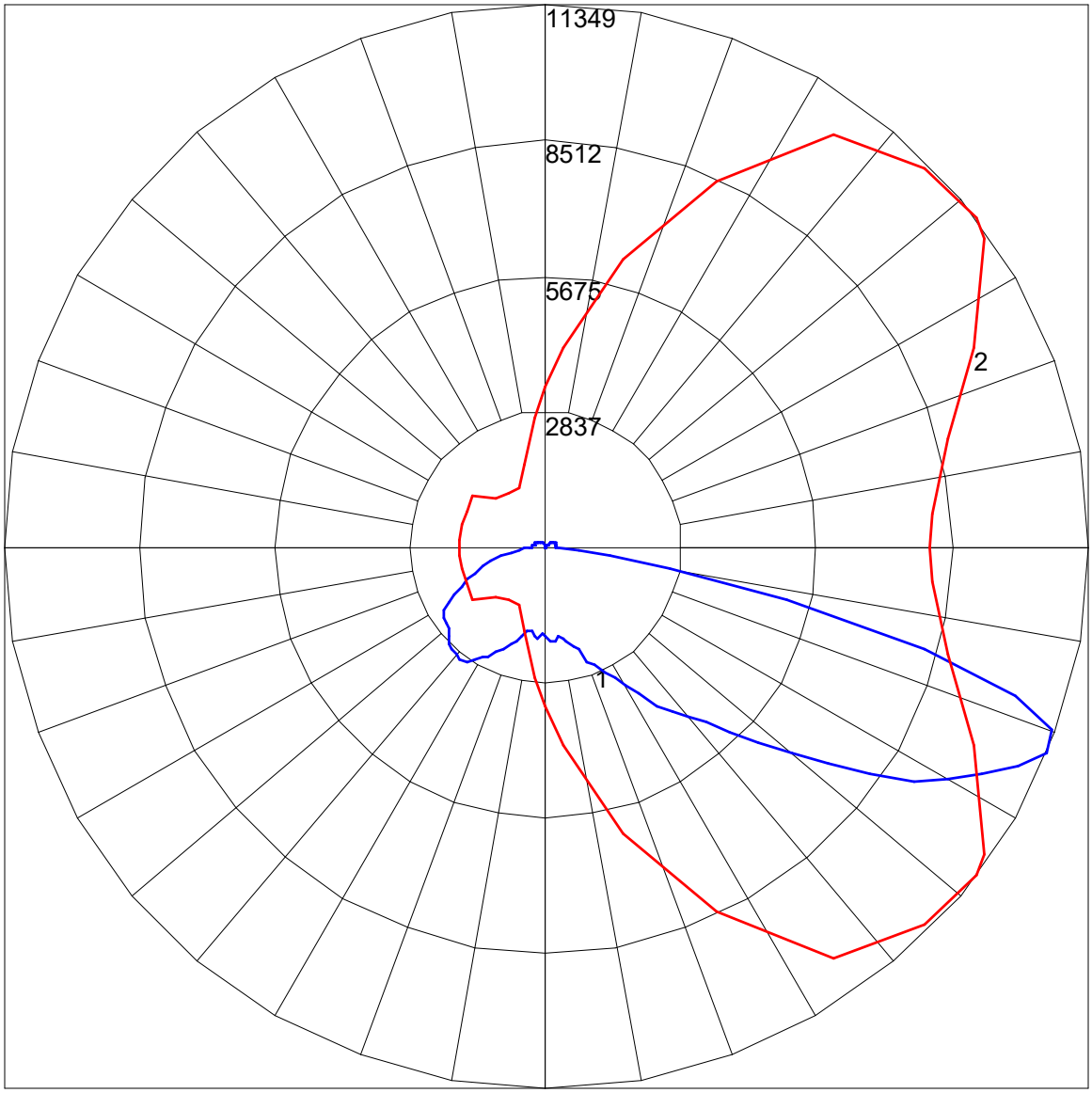
POLAR GRAPH



Maximum Candela = 11349 Located At Horizontal Angle = 37.5, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (37.5 - 217.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

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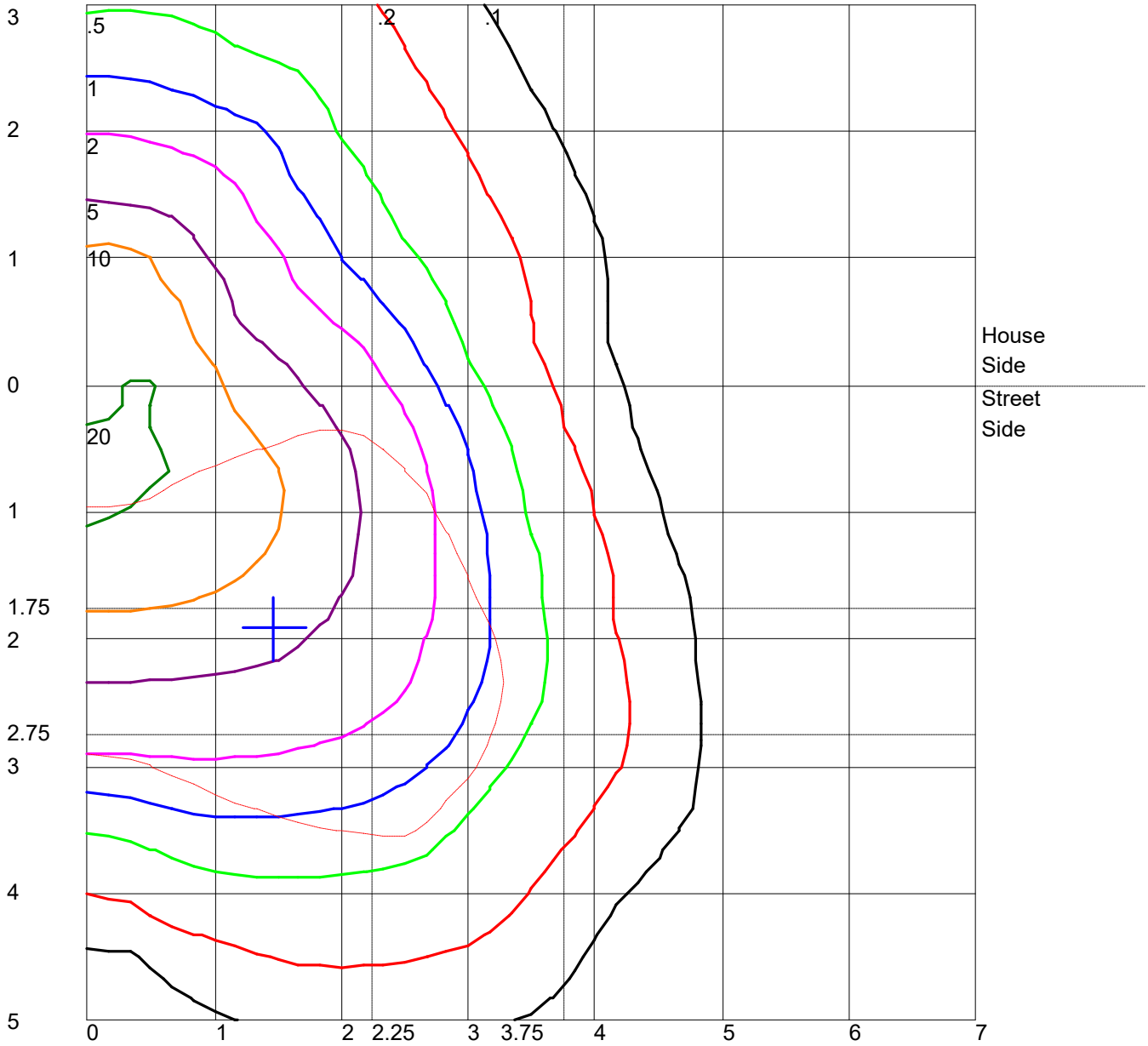
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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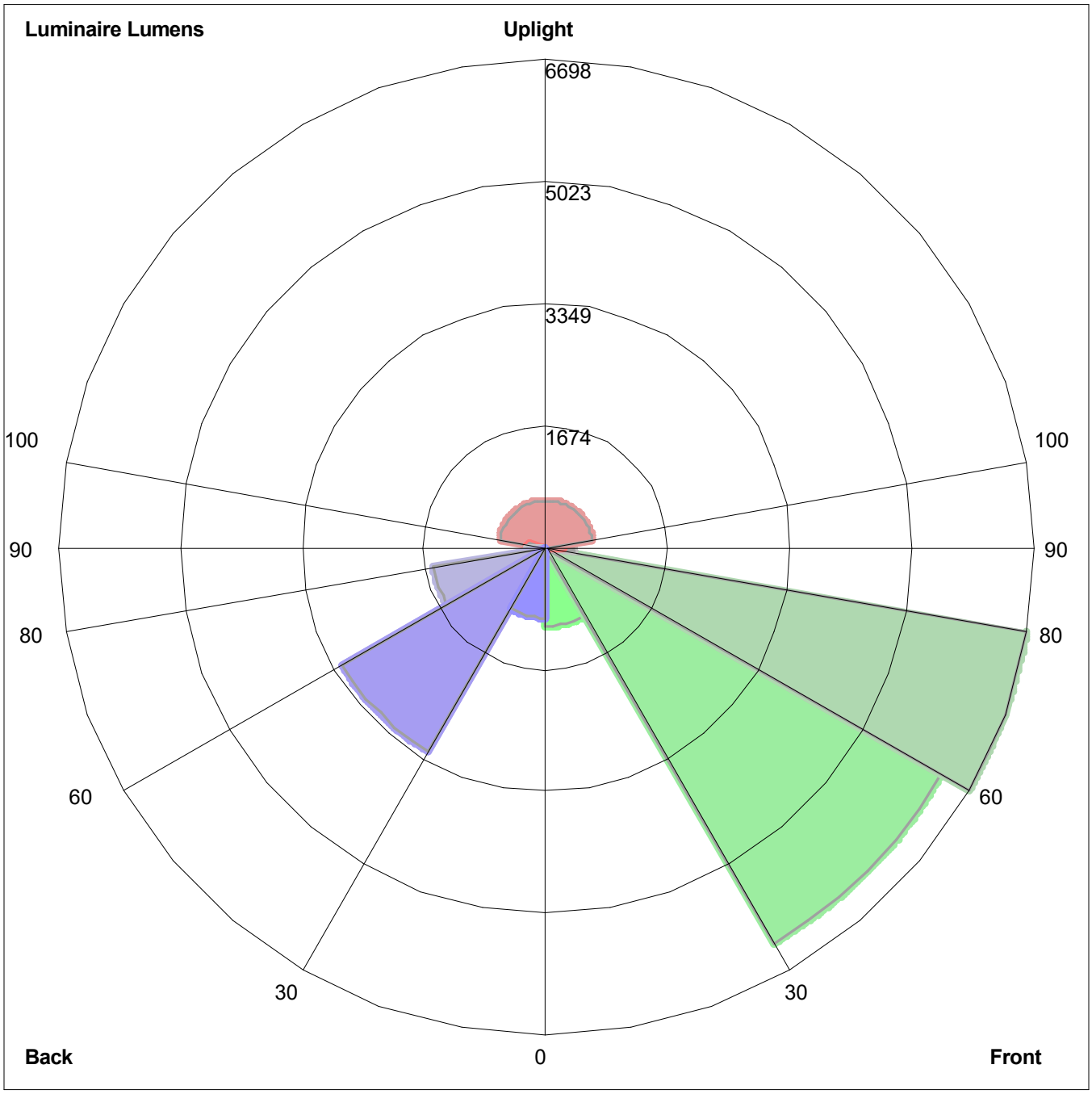
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1077.7, Medium=6268.4, High=6697.8, Very High=370.1
Back: Low=963.5, Medium=3224.3, High=1565.1, Very High=269.6
Uplight: Low=245.4, High=643.9

BUG Rating : B3-U4-G3

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