IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-FT-30-70CRI.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-30-70CRI
[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] 3000

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	20475
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	10896
Maximum Candela Angle	37.5H 67.5V
Maximum Candela (<90 Degrees Vertical)	10896
Maximum Candela Angle (<90 Degrees Vertical)	37.5H 67.5V
Maximum Candela At 90 Degrees Vertical	292 (1.4% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	2512 (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)	1034.7	N.A.	5.1
FM - Front-Medium (30-60)	6018.3	N.A.	29.4
FH - Front-High (60-80)	6430.5	N.A.	31.4
FVH - Front-Very High (80-90)	355.3	N.A.	1.7
BL - Back-Low (0-30)	925.0	N.A.	4.5
BM - Back-Medium (30-60)	3095.7	N.A.	15.1
BH - Back-High (60-80)	1502.7	N.A.	7.3
BVH - Back-Very High (80-90)	258.8	N.A.	1.3
UL - Uplight-Low (90-100)	235.6	N.A.	1.2
UH - Uplight-High (100-180)	618.3	N.A.	3.0
Total	20474.9	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	1799	1799	1799	1799	1799	1799	1799	1799	1799	1799
2.5	1877	1894	1889	1896	1892	1886	1878	1869	1852	1835
5.0	1783	1769	1812	1877	1915	1914	1929	1953	1948	1900
7.5	1837	1842	1781	1815	1812	1811	1795	1878	1961	1948
10.0	1827	1794	1831	1858	1852	1877	1876	1896	1937	1983
12.5	1931	1944	1966	1940	1931	1929	1921	1953	1944	2153
15.0	2030	2014	2044	2012	2089	2082	2069	2074	2104	2155
17.5	2222	2210	2240	2202	2152	2162	2204	2198	2222	2282
20.0	2343	2389	2399	2377	2443	2446	2281	2395	2390	2341
22.5	2587	2570	2618	2620	2558	2570	2551	2523	2508	2562
25.0	2854	2875	2840	2753	2840	2813	2687	2648	2697	2630
27.5	3115	3161	3103	3067	2986	2972	2940	2789	2752	2756
30.0	3531	3552	3522	3297	3260	3237	3083	2985	2841	2930
32.5	3776	3796	3739	3685	3558	3481	3365	3197	3007	3015
35.0	4103	4050	3969	3920	3909	3888	3654	3370	3116	3053
37.5	4386	4359	4243	4178	4160	4145	4098	3643	3305	3107
40.0	4744	4676	4583	4496	4453	4441	4458	3952	3511	3092
42.5	5186	5091	4973	4882	4811	4807	4819	4383	3667	3188
45.0	5679	5616	5457	5365	5263	5258	5206	4889	3833	3373
47.5	6274	6240	6072	5971	5853	5816	5695	5306	4208	3603
50.0	6968	6938	6772	6741	6556	6451	6323	5850	4649	3953
52.5	7538	7516	7439	7511	7309	7155	7003	6447	5293	4411
55.0	7850	7857	7881	8128	8086	7979	7767	7120	5980	4649
57.5	8021	8047	8205	8548	8758	8774	8514	7911	6730	5059
60.0	8101	8148	8410	8891	9264	9363	9236	8620	7484	5692
62.5	8171	8235	8620	9240	9750	9895	9830	9277	7981	6235
65.0	8080	8140	8602	9460	10200	10479	10555	9765	8234	6516
67.5	7747	7824	8391	9501	10781	10896	10749	10116	8092	5974
70.0	6439	6641	7459	9025	10758	10812	10750	9767	7187	5065
72.5	3731	4048	5771	7439	9480	9888	10477	8220	5677	3513
75.0	1721	1955	3993	5550	7351	7901	8367	6370	3795	1912
77.5	814	887	2007	3489	5043	4962	4560	3909	2028	1171
80.0	663	710	1146	1771	2512	2507	2105	2078	1265	870
82.5	528	580	814	1210	1376	1327	1208	1129	767	636
85.0	405	450	601	725	713	674	730	553	437	490
87.5	273	298	381	421	279	261	336	289	307	334
90.0	85	104	151	173	195	201	215	225	239	255
92.5	97	108	154	177	198	203	219	225	241	253
95.0	109	110	156	180	200	205	220	223	238	246
97.5	120	114	156	181	201	205	219	217	231	211
100.0	129	119	156	182	201	204	215	211	214	169
102.5	136	125	156	183	200	203	211	203	191	147
105.0	140	130	154	184	199	201	205	187	167	137
107.5	143	135	152	184	197	199	196	168	146	132
110.0	145	140	150	183	193	193	183	151	132	128
112.5	146	143	148	181	186	183	166	139	122	124
115.0	147	145	146	176	175	170	153	132	116	121
117.5	148	147	144	167	162	158	145	126	111	118
120.0	148	147	140	156	153	150	138	122	110	116
122.5	146	145	135	145	145	143	134	120	110	114
125.0	142	141	132	135	140	138	132	120	110	112
127.5	137	136	129	130	134	134	130	122	112	114
130.0	133	132	127	125	132	132	130	122	114	116

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CANDELA TABULATION - (Cont.)

132.5	131	130	126	123	130	131	127	117	115	119
135.0	131	131	128	124	122	120	114	110	116	122
137.5	128	129	122	110	102	99	95	97	108	121
140.0	110	110	103	91	80	78	75	81	92	107
142.5	90	88	83	70	56	55	55	61	75	88
145.0	67	67	60	49	39	39	38	44	56	68
147.5	45	44	40	34	25	23	19	26	38	46
150.0	33	32	29	19	9	8	6	11	21	29
152.5	16	15	11	6	2	2	2	5	8	13
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	1799	1799	1799	1799	1799	1799	1799	1799	1799	1799
2.5	1821	1804	1805	1792	1777	1785	1777	1768	1763	1765
5.0	1853	1807	1772	1795	1893	1903	1877	1863	1835	1817
7.5	1913	1854	1831	1886	1908	1887	1859	1793	1719	1672
10.0	1950	1913	1874	1952	1887	1841	1748	1732	1726	1670
12.5	2138	2030	1992	2081	1928	1781	1731	1745	1717	1776
15.0	2220	2117	2085	2117	1943	1878	1764	1862	1884	1912
17.5	2364	2272	2252	2233	1999	1889	2020	1974	1972	2051
20.0	2505	2359	2364	2268	2080	2045	2039	2085	2125	2180
22.5	2660	2563	2543	2356	2125	2171	2171	2275	2241	2379
25.0	2731	2719	2635	2372	2225	2221	2317	2343	2432	2499
27.5	2899	2797	2804	2474	2260	2341	2405	2515	2535	2690
30.0	2982	2869	2906	2596	2356	2464	2554	2581	2689	2798
32.5	2991	2900	2913	2657	2421	2526	2592	2722	2870	3027
35.0	3019	2890	2928	2627	2409	2550	2695	2848	2954	3094
37.5	3014	2905	2958	2585	2392	2535	2734	2867	2977	3147
40.0	2991	2976	2923	2518	2376	2491	2755	2840	2995	3225
42.5	3067	2932	2936	2473	2329	2466	2705	2807	3025	3501
45.0	3098	2939	2963	2475	2219	2484	2648	2755	3092	3752
47.5	3164	3022	2904	2434	2138	2453	2577	2677	3354	3377
50.0	3261	3130	2924	2422	2051	2363	2486	2608	3334	3068
52.5	3506	3211	3040	2417	2009	2284	2371	2613	3104	2848
55.0	3742	3405	3118	2351	1976	2192	2248	2615	2855	2669
57.5	4060	3604	3188	2290	1887	2046	2109	2518	2634	2499
60.0	4349	3755	3315	2239	1765	1866	1935	2351	2415	2320
62.5	4529	3823	3262	2147	1618	1687	1756	2169	2190	2140
65.0	4452	3721	3026	1970	1451	1497	1576	1985	1964	1962
67.5	4019	3216	2627	1729	1313	1326	1417	1819	1724	1741
70.0	3166	2374	1870	1445	1166	1194	1271	1637	1463	1579
72.5	2035	1602	1172	1140	1005	1048	1119	1411	1276	1432
75.0	1140	992	851	904	867	876	980	1213	1018	1162
77.5	752	678	601	713	701	719	821	947	838	1076

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CANDELA TABULATION - (Cont.)

80.0	601	533	466	591	563	566	649	707	723	950
82.5	472	417	376	513	484	473	520	551	627	781
85.0	395	288	329	442	404	398	416	435	536	599
87.5	316	160	302	353	340	331	352	342	362	433
90.0	206	122	253	289	284	269	292	283	275	268
92.5	162	189	227	280	274	256	274	269	255	240
95.0	165	233	214	271	265	239	265	261	253	238
97.5	186	234	212	250	251	221	253	250	246	230
100.0	194	223	209	221	236	212	242	242	238	219
102.5	186	206	200	198	222	208	234	235	232	207
105.0	175	191	187	181	205	203	227	230	227	194
107.5	162	175	176	171	190	197	220	225	220	180
110.0	152	162	164	162	176	189	214	222	214	167
112.5	143	153	156	156	164	183	206	217	208	155
115.0	135	144	148	151	156	177	199	211	200	145
117.5	131	137	141	147	153	172	192	204	189	139
120.0	126	132	136	145	149	168	186	195	177	135
122.5	122	128	132	141	148	165	180	183	161	133
125.0	119	124	129	138	147	162	174	173	148	131
127.5	118	122	127	137	146	160	167	161	136	129
130.0	120	123	129	137	146	158	160	151	129	127
132.5	122	126	130	138	143	153	155	141	123	126
135.0	126	130	132	139	139	138	141	133	122	125
137.5	130	132	134	135	130	120	118	117	121	125
140.0	118	122	122	118	109	99	91	95	105	115
142.5	101	104	103	98	86	75	65	70	84	96
145.0	78	80	81	75	63	53	46	48	62	74
147.5	52	54	55	52	43	33	29	34	42	52
150.0	33	33	33	32	25	13	12	21	29	33
152.5	17	17	17	14	10	5	4	6	13	21
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	1799	1799
2.5	1776	1792
5.0	1815	1801
7.5	1680	1672
10.0	1691	1700
12.5	1792	1802
15.0	1919	1847
17.5	2020	2121
20.0	2178	2129
22.5	2378	2378
25.0	2521	2495

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CANDELA TABULATION - (Cont.)

27.5	2746	2783
30.0	2917	2911
32.5	3126	3133
35.0	3208	3222
37.5	3281	3330
40.0	3435	3548
42.5	3742	3767
45.0	3371	3360
47.5	3113	3128
50.0	2954	2956
52.5	2804	2801
55.0	2653	2650
57.5	2485	2471
60.0	2309	2298
62.5	2132	2129
65.0	1971	1961
67.5	1739	1719
70.0	1602	1577
72.5	1375	1263
75.0	1134	1078
77.5	1125	1076
80.0	1076	1026
82.5	906	868
85.0	698	695
87.5	487	520
90.0	227	191
92.5	153	119
95.0	150	138
97.5	145	155
100.0	141	163
102.5	140	166
105.0	142	166
107.5	145	163
110.0	147	158
112.5	149	155
115.0	148	151
117.5	146	148
120.0	145	145
122.5	142	143
125.0	140	141
127.5	136	137
130.0	133	133
132.5	130	130
135.0	128	128
137.5	127	127
140.0	122	122
142.5	102	103
145.0	80	81
147.5	59	60
150.0	36	36
152.5	24	25
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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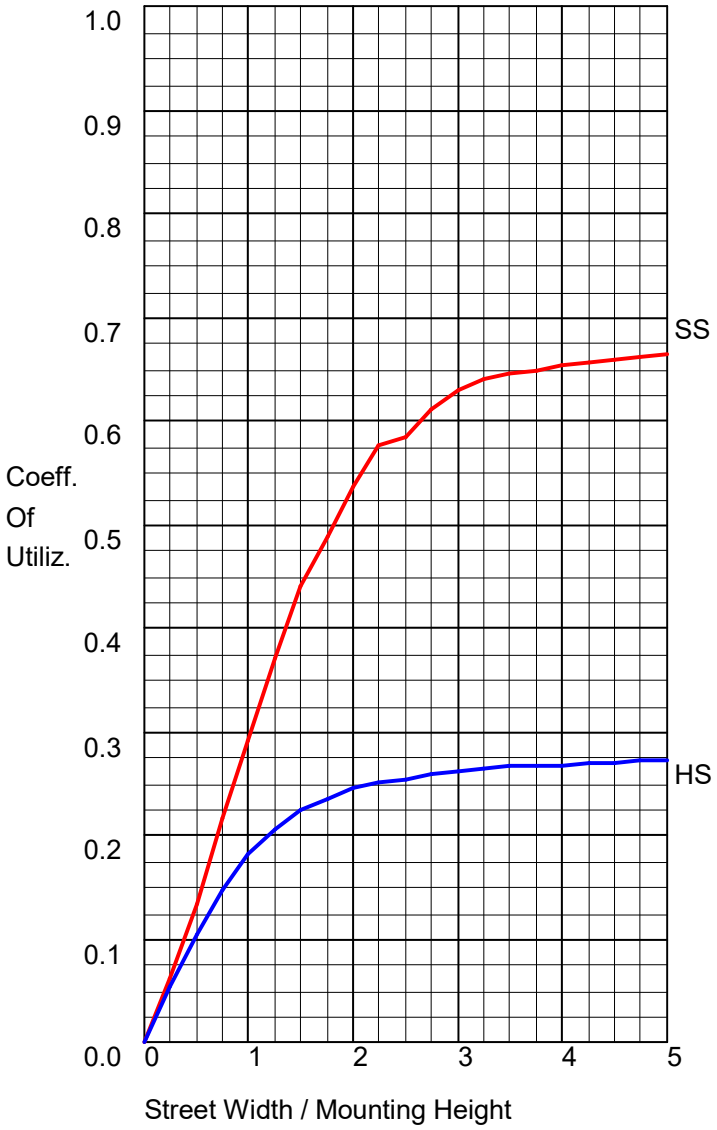
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	13838.9	67.6
Downward House Side	5782.3	28.2
Downward Total	19621.2	95.8
Upward Street Side	391.0	1.9
Upward House Side	463.0	2.3
Upward Total	854.0	4.2
Total Flux	20475.2	100.0

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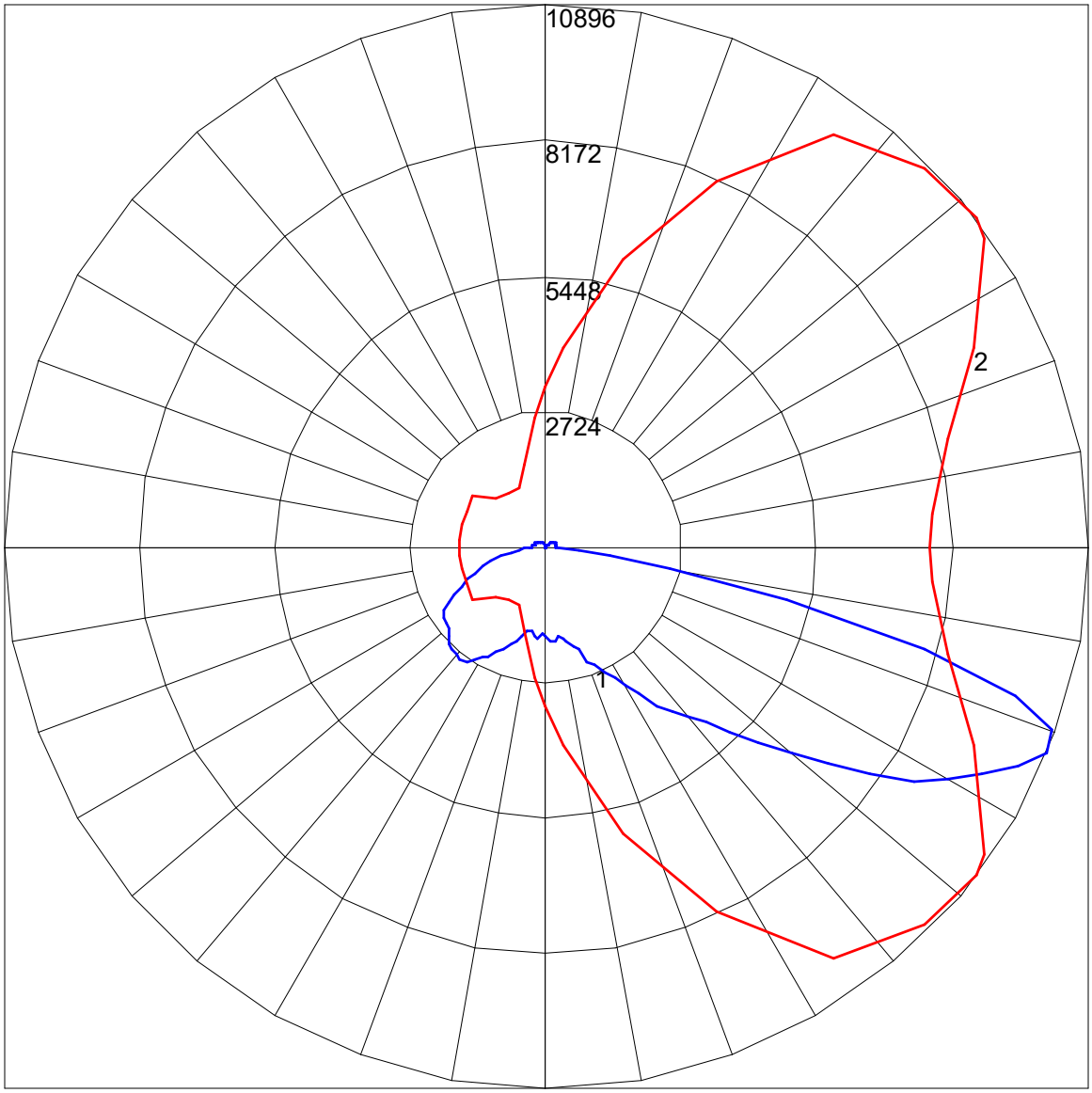
POLAR GRAPH



Maximum Candela = 10896 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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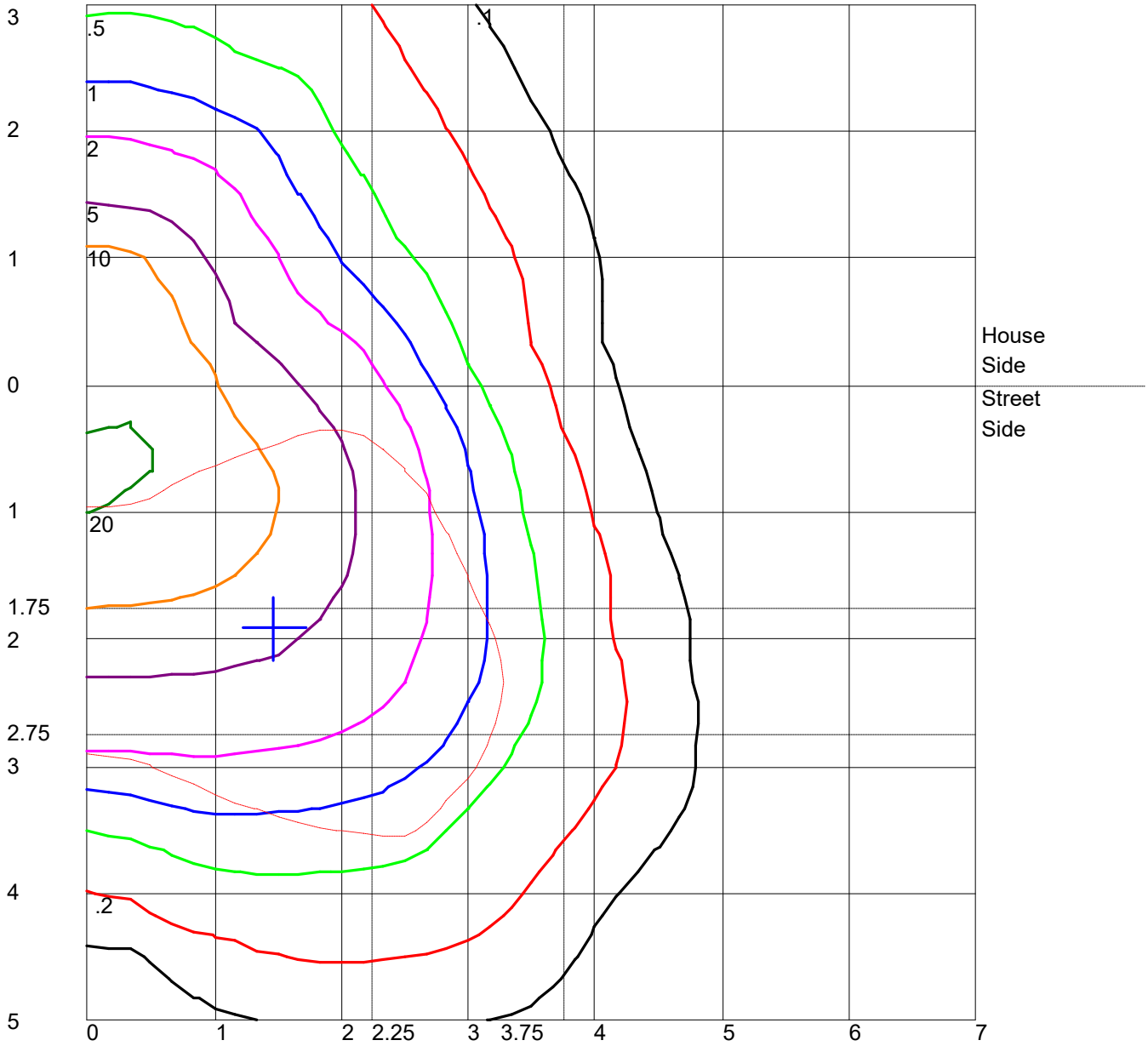
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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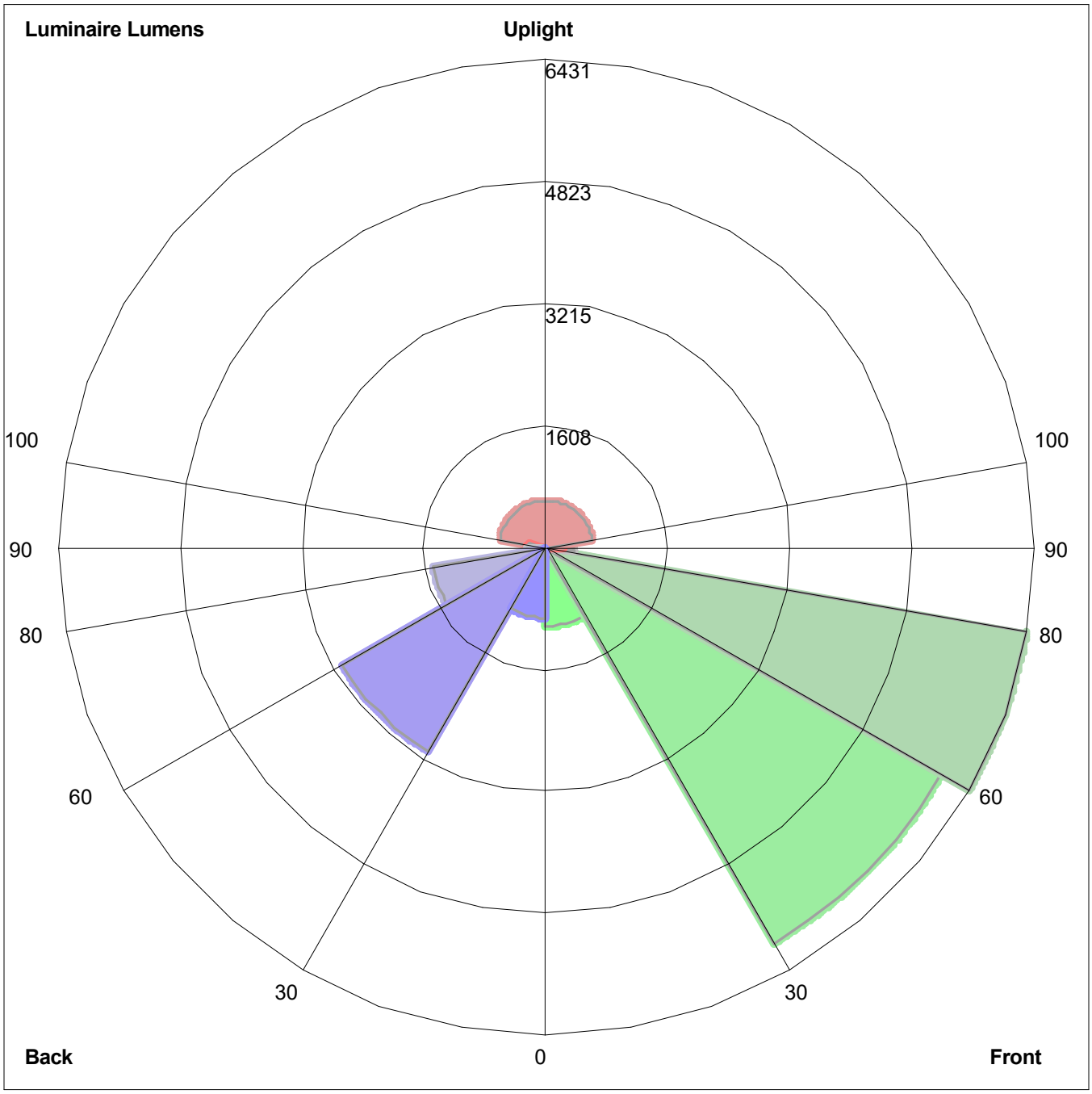
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1034.7, Medium=6018.3, High=6430.5, Very High=355.3
Back: Low=925.0, Medium=3095.7, High=1502.7, Very High=258.8
Uplight: Low=235.6, High=618.3

BUG Rating : B3-U4-G3

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