IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-50-70CRI.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12569
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/05/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-2-50-70CRI
[_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] 5000

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	20728
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	139
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.05
Maximum Candela	12398
Maximum Candela Angle	72.5H 62.5V
Maximum Candela (<90 Degrees Vertical)	12398
Maximum Candela Angle (<90 Degrees Vertical)	72.5H 62.5V
Maximum Candela At 90 Degrees Vertical	332 (1.6% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1091 (5.3% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1271.0	N.A.	6.1
FM - Front-Medium (30-60)	7733.1	N.A.	37.3
FH - Front-High (60-80)	3175.2	N.A.	15.3
FVH - Front-Very High (80-90)	221.5	N.A.	1.1
BL - Back-Low (0-30)	1088.6	N.A.	5.3
BM - Back-Medium (30-60)	4512.9	N.A.	21.8
BH - Back-High (60-80)	1484.3	N.A.	7.2
BVH - Back-Very High (80-90)	248.9	N.A.	1.2
UL - Uplight-Low (90-100)	278.3	N.A.	1.3
UH - Uplight-High (100-180)	713.9	N.A.	3.4
Total	20727.7	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	45.0	55.0	65.0	72.5	75.0
0.0	1773	1773	1773	1773	1773	1773	1773	1773	1773	1773
2.5	1806	1803	1820	1848	1848	1840	1826	1786	1777	1777
5.0	1860	1851	1879	1914	1920	1909	1886	1859	1846	1855
7.5	1918	1908	1858	1877	1856	1860	1927	1931	1896	1885
10.0	1966	1973	1980	1985	2003	1948	1906	1976	1952	1956
12.5	2147	2183	2149	2126	2104	2052	2089	2013	2151	2155
15.0	2246	2242	2261	2252	2316	2227	2221	2271	2235	2320
17.5	2534	2522	2551	2417	2457	2569	2422	2510	2438	2508
20.0	2724	2723	2752	2716	2798	2701	2801	2772	2705	2704
22.5	3171	3144	3203	3116	3104	3049	3068	3025	3040	3024
25.0	3749	3726	3635	3549	3575	3403	3389	3433	3322	3320
27.5	4641	4663	4557	4374	4067	3960	3848	3801	3716	3702
30.0	5558	5596	5511	5208	4987	4527	4412	4280	4204	4218
32.5	5812	5838	5924	6096	5861	5397	5225	4879	4796	4668
35.0	5602	5564	5671	6051	6512	6234	6051	5547	5308	5173
37.5	5778	5726	5722	5897	6325	6727	6807	6482	5853	5672
40.0	6140	6066	6035	6104	6393	6770	6983	7573	6490	6332
42.5	6412	6279	6250	6313	6624	7021	7203	7890	7501	7131
45.0	6345	6254	6242	6381	6788	7369	7680	7765	8505	8260
47.5	6061	6018	6012	6272	6797	7698	8049	7873	8996	8996
50.0	5714	5666	5650	5960	6641	7930	8531	8275	9260	9316
52.5	5098	5056	5071	5387	6258	7949	8995	9086	9565	9728
55.0	4270	4250	4343	4627	5561	7622	9268	9832	9997	10207
57.5	3420	3409	3470	3792	4650	6806	9209	10323	10691	10847
60.0	2395	2424	2515	2786	3496	5556	8799	10645	11295	11316
62.5	1480	1499	1562	1785	2316	3810	7797	10421	12398	11827
65.0	1207	1206	1221	1266	1450	2153	6156	9692	12015	12208
67.5	1053	1052	1050	1094	1150	1237	3997	8086	10251	10647
70.0	779	790	839	921	1009	1020	2034	5820	7495	8104
72.5	624	636	632	651	830	889	1100	3338	4773	5121
75.0	529	553	554	562	644	747	843	1891	2922	3130
77.5	437	479	485	490	558	633	711	1258	1844	1827
80.0	391	431	438	429	481	553	600	847	1091	1083
82.5	346	367	386	376	416	471	520	637	765	766
85.0	275	296	323	322	351	400	437	485	552	576
87.5	167	192	247	262	283	316	342	363	383	386
90.0	109	137	199	224	244	268	277	295	308	313
92.5	125	139	202	227	248	270	274	294	306	311
95.0	145	144	205	232	251	272	269	294	304	307
97.5	162	149	206	233	252	268	260	287	290	275
100.0	172	153	204	234	251	264	252	272	255	232
102.5	180	160	202	235	249	260	245	248	213	195
105.0	184	167	197	235	248	255	233	220	180	175
107.5	186	173	192	234	246	246	215	192	160	162
110.0	187	178	186	232	242	234	195	167	149	153
112.5	186	181	181	228	236	216	177	149	141	146
115.0	184	182	177	222	224	199	162	135	134	139
117.5	184	182	175	213	211	184	152	126	130	133
120.0	182	180	171	199	196	172	144	121	125	127
122.5	180	178	165	183	183	163	138	118	121	121
125.0	175	173	158	168	172	156	135	118	117	117
127.5	168	166	153	155	162	152	135	119	117	117
130.0	159	157	149	146	155	149	136	121	118	118

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CANDELA TABULATION - (Cont.)

132.5	153	153	146	141	151	146	131	121	121	121
135.0	150	149	145	140	143	133	121	121	124	124
137.5	149	149	144	131	122	113	107	113	121	123
140.0	133	132	125	111	97	87	90	96	105	107
142.5	109	109	101	89	69	65	69	77	86	89
145.0	86	85	78	61	48	45	49	57	65	68
147.5	60	57	51	42	33	24	29	37	43	45
150.0	41	40	36	29	14	7	10	21	26	26
152.5	25	26	18	10	3	1	2	6	9	10
155.0	9	8	6	2	0	0	0	1	2	2
157.5	2	2	1	0	0	0	0	0	0	0
160.0	2	2	0	0	0	0	0	0	0	0
162.5	2	2	0	0	0	0	0	0	0	0
165.0	2	2	0	0	0	0	0	0	0	0
167.5	2	1	1	0	0	0	0	0	0	0
170.0	2	1	1	0	0	0	0	0	0	0
172.5	2	1	1	1	0	0	0	0	0	0
175.0	2	1	1	1	0	0	0	0	0	0
177.5	2	2	1	1	1	0	0	0	0	0
180.0	1	1	1	1	1	1	1	1	1	1

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	1773	1773	1773	1773	1773	1773	1773	1773	1773	1773
2.5	1763	1752	1753	1761	1752	1769	1782	1773	1777	1793
5.0	1770	1747	1751	1820	1834	1826	1852	1827	1812	1803
7.5	1834	1789	1801	1863	1873	1825	1769	1691	1700	1719
10.0	1909	1864	1863	1911	1888	1771	1800	1765	1753	1706
12.5	2094	2010	2054	2080	1900	1855	1786	1758	1742	1844
15.0	2286	2165	2210	2208	2058	1993	1855	1920	1896	1949
17.5	2502	2396	2483	2407	2209	2056	2088	2006	2035	2245
20.0	2723	2680	2710	2561	2409	2236	2122	2282	2353	2484
22.5	3147	3027	3032	2841	2566	2383	2393	2557	2680	2954
25.0	3426	3434	3314	3085	2786	2543	2648	2897	3064	3266
27.5	3934	3811	3777	3348	2919	2820	2993	3249	3443	3691
30.0	4297	4236	4180	3722	3191	3155	3322	3543	3752	4063
32.5	4645	4563	4540	4080	3424	3464	3546	3864	4189	4424
35.0	5091	4930	4877	4257	3602	3662	3819	4189	4343	4534
37.5	5531	5374	5282	4387	3765	3816	4065	4287	4420	4556
40.0	6059	5853	5663	4441	3921	3877	4177	4309	4416	4487
42.5	6551	6368	5953	4504	3980	3970	4166	4253	4265	4229
45.0	7110	6620	6400	4590	3826	4096	4071	4067	3914	3792
47.5	7780	7218	6679	4518	3837	3993	3881	3754	3487	3344
50.0	8392	7889	6889	4568	3771	3788	3614	3386	3085	2933
52.5	9205	8536	7200	4487	3627	3515	3290	3044	2738	2640
55.0	9974	9011	7400	4112	3403	3163	2954	2710	2485	2439
57.5	10545	9688	7185	3779	3146	2834	2601	2444	2283	2253
60.0	11067	9753	6762	3447	2781	2445	2289	2202	2070	2023
62.5	11162	9493	5977	3065	2386	2066	1993	1946	1824	1761
65.0	10594	8333	4773	2550	1874	1698	1713	1682	1559	1480
67.5	8817	6127	3333	1860	1459	1338	1405	1384	1259	1218
70.0	6083	3891	2117	1253	1096	1056	1105	1056	995	979
72.5	3841	2485	1421	929	898	848	871	830	794	767
75.0	2489	1753	1091	794	813	729	714	676	649	655
77.5	1178	909	803	719	739	630	603	578	578	577

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CANDELA TABULATION - (Cont.)

80.0	713	657	626	653	656	540	519	513	540	557
82.5	531	504	496	581	552	463	458	477	559	606
85.0	428	323	401	501	452	406	416	454	563	638
87.5	354	172	353	402	374	347	358	407	462	469
90.0	263	121	298	332	320	300	304	287	268	244
92.5	208	212	255	331	319	297	303	287	271	247
95.0	203	275	233	328	316	289	299	286	272	248
97.5	220	287	243	306	304	275	292	280	270	245
100.0	236	275	247	264	290	264	285	276	268	239
102.5	231	256	238	231	270	256	278	274	266	232
105.0	217	233	223	205	244	247	272	270	263	224
107.5	200	211	206	187	219	233	263	266	260	215
110.0	181	189	188	174	195	216	252	260	253	205
112.5	165	172	170	161	172	201	237	253	246	196
115.0	153	157	156	152	156	188	221	244	238	187
117.5	141	146	145	145	145	176	208	231	226	179
120.0	133	137	137	138	139	168	196	216	212	172
122.5	125	128	129	132	136	160	186	204	195	167
125.0	119	121	122	128	135	156	178	192	178	161
127.5	117	118	121	126	135	154	171	179	163	156
130.0	117	118	121	127	136	154	167	168	153	153
132.5	120	121	123	130	135	150	163	160	145	149
135.0	125	125	127	133	133	137	150	153	142	147
137.5	128	129	130	129	125	121	127	131	137	147
140.0	118	121	120	115	107	101	98	105	117	132
142.5	98	101	101	94	86	79	73	79	93	107
145.0	78	78	79	73	65	57	52	53	69	83
147.5	50	52	53	50	44	35	33	38	47	58
150.0	30	30	31	31	26	17	14	23	33	40
152.5	14	14	15	14	10	6	6	9	17	26
155.0	4	4	5	5	4	4	4	5	7	10
157.5	0	1	1	2	2	2	3	4	4	5
160.0	0	0	0	1	2	2	3	4	4	4
162.5	0	0	0	1	2	2	3	4	4	3
165.0	0	0	0	1	2	2	3	4	4	3
167.5	0	0	0	1	2	2	3	3	4	3
170.0	0	0	0	1	2	2	3	3	4	3
172.5	0	0	0	1	2	2	2	3	3	3
175.0	0	0	0	1	1	2	2	3	3	2
177.5	0	0	0	1	2	2	2	3	3	2
180.0	1	1	1	1	1	1	1	1	1	1

Vert. Angles	**Horizontal Angles**	
	175.0	**180.0**
0.0	1773	1773
2.5	1783	1798
5.0	1767	1751
7.5	1687	1705
10.0	1704	1663
12.5	1832	1845
15.0	1949	1883
17.5	2250	2295
20.0	2578	2475
22.5	2992	2988
25.0	3396	3408

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CANDELA TABULATION - (Cont.)

27.5	3815	3868
30.0	4318	4305
32.5	4550	4551
35.0	4659	4692
37.5	4688	4776
40.0	4613	4717
42.5	4283	4361
45.0	3777	3841
47.5	3330	3367
50.0	2930	2959
52.5	2630	2653
55.0	2426	2440
57.5	2227	2236
60.0	1968	1988
62.5	1693	1681
65.0	1385	1380
67.5	1155	1143
70.0	941	924
72.5	725	700
75.0	616	583
77.5	519	479
80.0	504	455
82.5	585	533
85.0	637	592
87.5	326	324
90.0	159	113
92.5	160	126
95.0	165	148
97.5	169	168
100.0	172	184
102.5	176	195
105.0	180	200
107.5	184	203
110.0	187	203
112.5	189	201
115.0	190	197
117.5	189	192
120.0	186	188
122.5	181	184
125.0	176	178
127.5	169	171
130.0	162	164
132.5	155	156
135.0	152	153
137.5	150	151
140.0	138	139
142.5	115	116
145.0	90	91
147.5	65	66
150.0	44	44
152.5	31	31
155.0	13	12
157.5	6	6
160.0	4	4
162.5	3	3
165.0	3	3

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CANDELA TABULATION - (Cont.)

167.5	2	2
170.0	2	2
172.5	2	2
175.0	2	2
177.5	2	2
180.0	1	1

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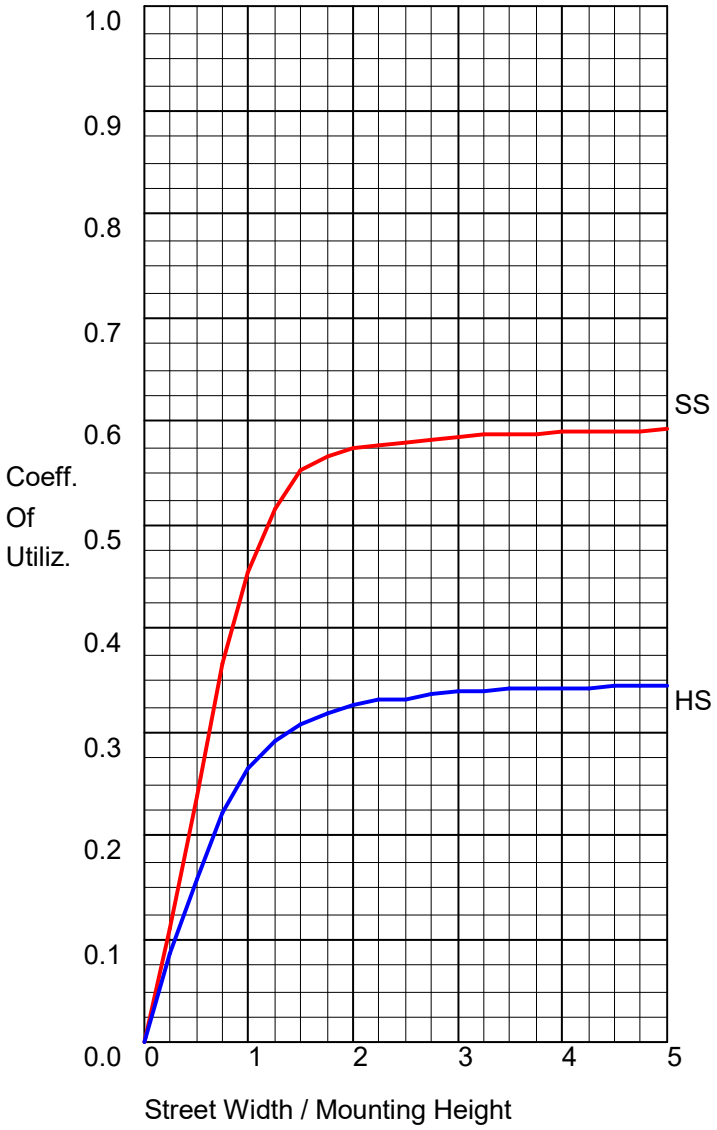
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	12400.9	59.8
Downward House Side	7334.7	35.4
Downward Total	19735.6	95.2
Upward Street Side	473.5	2.3
Upward House Side	518.7	2.5
Upward Total	992.2	4.8
Total Flux	20727.8	100.0

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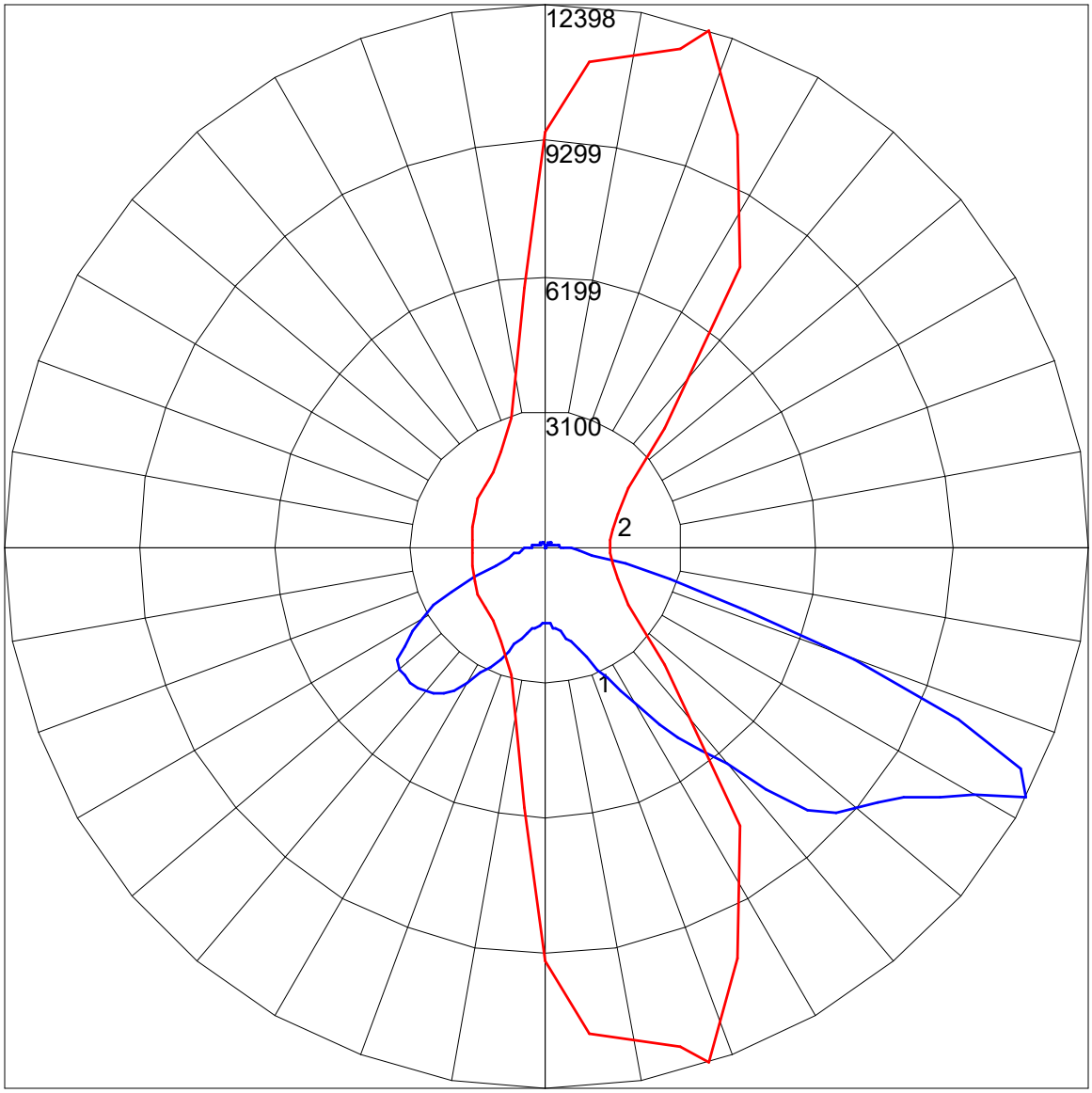
POLAR GRAPH



Maximum Candela = 12398 Located At Horizontal Angle = 72.5, Vertical Angle = 62.5
1 - Vertical Plane Through Horizontal Angles (72.5 - 252.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (62.5) (Through Max. Cd.)

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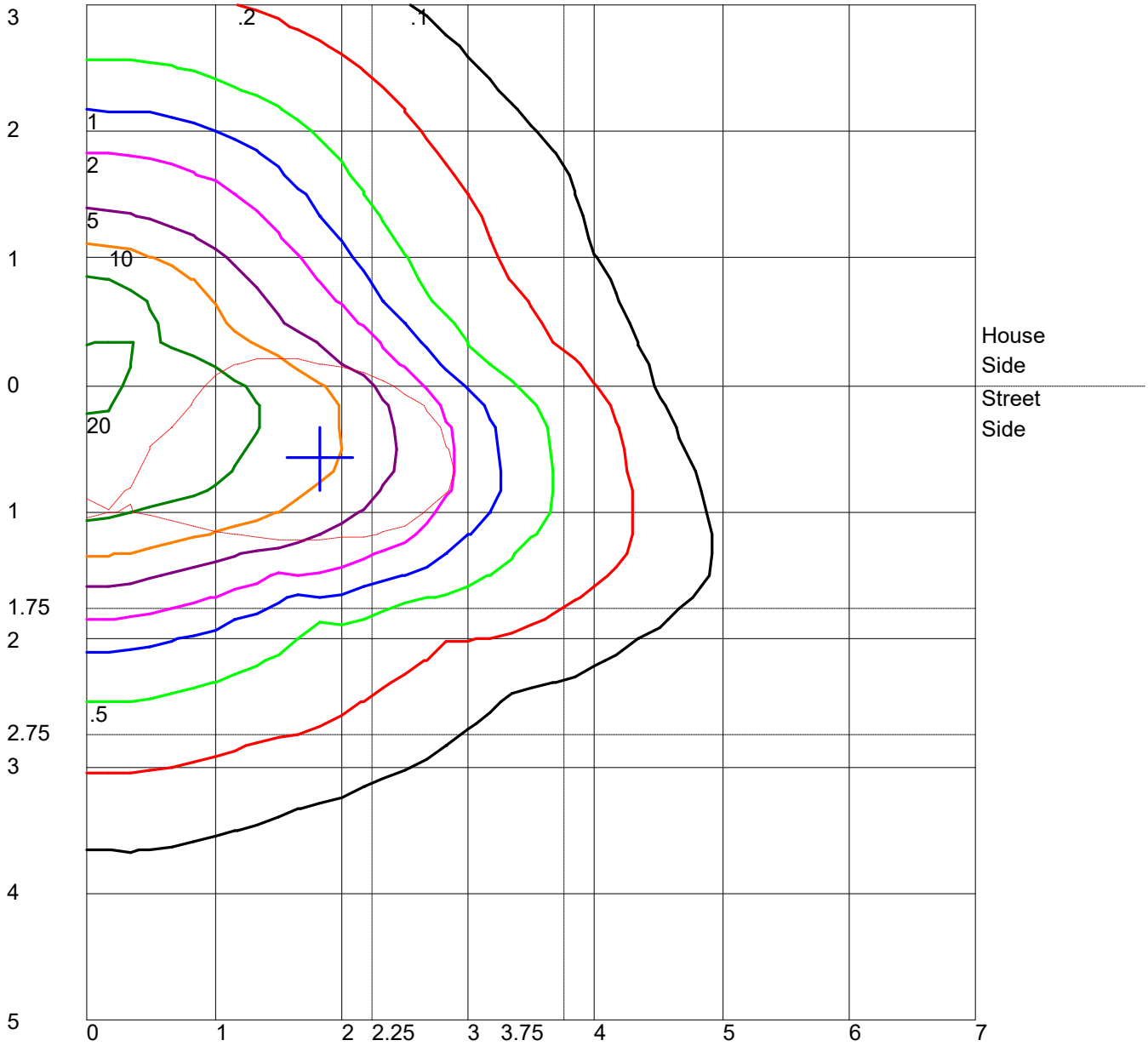
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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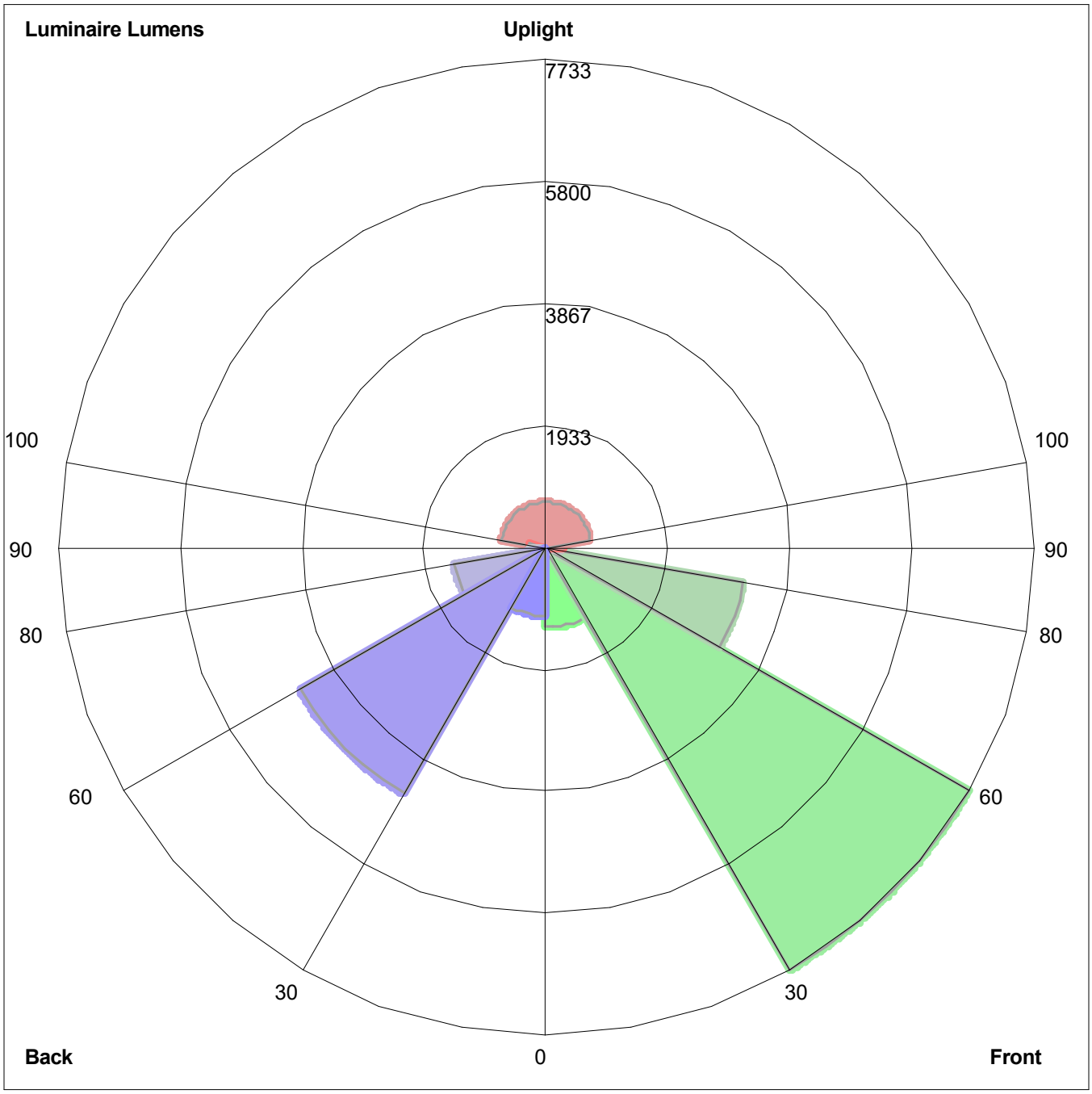
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low= 1271.0, Medium=7733.1, High=3175.2, Very High=221.5
Back: Low=1088.6, Medium=4512.9, High=1484.3, Very High=248.9
Uplight: Low=278.3, High=713.9

BUG Rating : B3-U4-G3

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