IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-40-70CRI-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-2-40-70CRI-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] 4000

CHARACTERISTICS

IES Classification	Type I
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8188
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	55
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.06
Maximum Candela	9878
Maximum Candela Angle	80H 60V
Maximum Candela (<90 Degrees Vertical)	9878
Maximum Candela Angle (<90 Degrees Vertical)	80H 60V
Maximum Candela At 90 Degrees Vertical	180 (2.2% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	621 (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)	961.3	N.A.	11.7
FM - Front-Medium (30-60)	3906.2	N.A.	47.7
FH - Front-High (60-80)	1632.8	N.A.	19.9
FVH - Front-Very High (80-90)	178.2	N.A.	2.2
BL - Back-Low (0-30)	236.1	N.A.	2.9
BM - Back-Medium (30-60)	508.2	N.A.	6.2
BH - Back-High (60-80)	214.8	N.A.	2.6
BVH - Back-Very High (80-90)	73.0	N.A.	0.9
UL - Uplight-Low (90-100)	133.7	N.A.	1.6
UH - Uplight-High (100-180)	344.1	N.A.	4.2
Total	8188.4	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	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286
2.5	1330	1328	1343	1350	1333	1322	1301	1286	1281	1276
5.0	1510	1498	1524	1496	1496	1487	1485	1437	1321	1288
7.5	1373	1392	1396	1438	1480	1544	1544	1512	1450	1373
10.0	1550	1551	1498	1581	1552	1515	1549	1550	1562	1496
12.5	1659	1655	1591	1596	1657	1622	1548	1660	1733	1688
15.0	1749	1842	1805	1812	1767	1693	1801	1747	1857	1854
17.5	2058	1962	2001	1941	1991	1991	1926	1960	2055	2035
20.0	2177	2198	2249	2202	2165	2176	2240	2224	2229	2243
22.5	2425	2468	2448	2385	2528	2437	2518	2517	2471	2614
25.0	2464	2461	2531	2627	2659	2823	2852	2847	2833	2894
27.5	2507	2490	2547	2584	2876	3042	3268	3311	3216	3383
30.0	2315	2353	2413	2593	2853	3338	3674	3772	3737	3746
32.5	2098	2108	2262	2448	2876	3357	4045	4397	4399	4329
35.0	1808	1814	1960	2293	2778	3431	4293	4976	4893	4738
37.5	1519	1517	1658	2002	2634	3470	4392	5401	5453	5195
40.0	1233	1220	1354	1686	2329	3369	4448	5807	6037	5691
42.5	965	976	1085	1376	1989	3112	4424	6103	6561	6444
45.0	769	778	872	1121	1655	2742	4350	6377	7264	7054
47.5	650	654	721	934	1342	2345	4159	6331	7944	7898
50.0	610	608	647	818	1106	1946	3778	6298	8502	8590
52.5	639	628	625	760	953	1547	3330	6124	8837	8649
55.0	915	880	746	747	870	1187	2857	5685	8980	9007
57.5	1627	1558	1267	913	817	951	2207	5042	8963	9353
60.0	1949	1881	1678	1386	920	823	1487	4090	8916	9878
62.5	1398	1358	1324	1375	1221	692	944	3039	8629	9810
65.0	1048	1052	1019	1020	1056	823	642	1995	7683	8656
67.5	966	968	928	897	832	811	568	1151	5497	6818
70.0	901	904	852	819	756	687	670	675	3329	4584
72.5	703	709	694	717	703	636	674	516	1494	2285
75.0	598	598	569	574	632	605	591	618	587	986
77.5	525	530	522	526	577	604	527	718	327	398
80.0	481	489	483	483	534	621	519	552	343	290
82.5	410	415	429	449	504	582	561	436	357	239
85.0	251	268	287	306	367	481	540	392	318	240
87.5	134	145	171	183	203	251	316	325	226	195
90.0	73	83	110	123	137	152	173	180	165	159
92.5	58	65	90	101	111	121	125	135	146	147
95.0	66	66	91	103	114	124	124	137	146	126
97.5	75	70	94	107	115	125	123	136	135	102
100.0	81	74	95	107	116	124	120	129	107	88
102.5	85	77	95	109	116	123	116	115	89	86
105.0	88	80	94	109	115	119	109	100	78	83
107.5	90	84	93	110	115	115	99	87	72	78
110.0	91	87	91	110	114	108	89	76	68	73
112.5	91	89	91	109	111	99	81	67	64	70
115.0	92	91	91	106	105	91	75	62	62	66
117.5	93	92	90	102	99	85	70	58	60	62
120.0	93	92	88	96	92	80	67	55	58	60
122.5	93	92	86	90	87	77	65	54	56	57
125.0	91	91	83	85	83	74	63	55	54	54
127.5	88	87	82	81	80	72	63	56	54	54
130.0	86	85	80	78	78	71	65	57	55	56

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CANDELA TABULATION - (Cont.)

132.5	83	83	79	76	76	72	65	58	57	58
135.0	83	82	78	76	75	69	59	57	58	58
137.5	83	82	79	74	69	60	53	53	57	59
140.0	78	78	74	66	56	47	44	45	49	52
142.5	68	67	62	54	42	35	33	34	39	42
145.0	54	54	49	40	30	26	23	24	29	30
147.5	40	39	34	27	20	14	14	16	18	19
150.0	27	26	24	18	10	2	3	7	10	10
152.5	19	19	14	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	1286	1286	1286	1286	1286	1286	1286	1286	1286	1286
2.5	1285	1283	1291	1310	1312	1301	1284	1251	1236	1238
5.0	1276	1297	1339	1315	1226	1145	1065	976	904	831
7.5	1336	1336	1367	1249	1080	882	719	614	554	500
10.0	1413	1399	1383	1153	921	675	507	387	324	290
12.5	1541	1520	1512	1170	738	495	333	264	240	235
15.0	1671	1650	1552	1101	635	364	252	237	229	222
17.5	1899	1807	1698	1040	511	278	241	223	215	211
20.0	2121	1957	1765	972	412	254	229	215	209	196
22.5	2442	2224	1989	927	332	251	223	206	189	183
25.0	2743	2459	2065	823	296	247	219	189	172	159
27.5	3192	2750	2276	721	290	244	204	172	147	142
30.0	3640	3107	2406	602	288	236	189	151	132	127
32.5	4007	3327	2455	496	278	223	166	135	125	126
35.0	4419	3541	2483	407	267	205	147	129	124	123
37.5	4949	3840	2478	351	249	182	134	130	124	118
40.0	5444	4205	2406	325	229	159	134	133	118	96
42.5	5948	4448	2318	306	205	142	143	131	98	78
45.0	6633	4726	2216	292	187	148	149	112	87	74
47.5	7045	4946	2033	305	186	157	141	99	87	75
50.0	7418	5288	1804	358	223	183	126	99	91	102
52.5	7904	5487	1603	308	235	238	137	105	128	148
55.0	8438	5791	1371	242	183	217	179	148	173	179
57.5	8740	5688	1096	199	155	152	186	195	174	132
60.0	9094	5517	804	179	154	132	174	198	128	108
62.5	8933	5194	613	163	149	137	181	147	111	98
65.0	7916	4306	453	152	140	156	163	121	109	95
67.5	6368	3270	356	151	137	171	133	122	108	96
70.0	4642	2277	298	152	143	156	127	119	111	99
72.5	2721	1433	236	148	151	139	127	119	111	103
75.0	1482	924	193	145	151	135	129	122	115	105
77.5	512	383	161	149	145	135	131	125	119	107

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CANDELA TABULATION - (Cont.)

80.0	325	272	143	160	147	137	135	127	121	111
82.5	231	210	126	167	152	140	141	131	125	120
85.0	184	135	131	172	159	143	150	136	128	129
87.5	160	59	148	168	156	143	147	146	134	119
90.0	130	42	139	159	151	140	147	139	131	120
92.5	91	91	122	161	155	142	149	143	135	125
95.0	82	129	114	157	151	134	145	141	136	126
97.5	99	132	112	143	144	127	140	137	133	123
100.0	106	126	113	123	138	123	135	135	132	120
102.5	103	115	108	105	127	121	132	133	131	116
105.0	96	106	101	93	115	117	129	131	130	112
107.5	90	96	94	85	102	111	126	130	127	107
110.0	83	87	86	79	91	103	120	127	126	102
112.5	76	79	78	74	82	96	114	124	122	98
115.0	70	74	73	71	75	90	107	119	117	95
117.5	66	68	67	68	70	86	101	112	111	93
120.0	62	64	63	65	67	82	96	106	103	91
122.5	58	60	60	62	66	78	91	100	96	89
125.0	56	57	57	60	65	76	87	94	89	87
127.5	55	55	56	59	65	76	84	89	83	84
130.0	56	56	57	60	65	75	83	83	78	82
132.5	57	57	58	62	64	70	78	81	75	80
135.0	59	59	61	63	64	63	69	74	75	80
137.5	60	62	62	62	58	54	54	60	66	76
140.0	54	55	55	52	48	43	40	45	54	62
142.5	44	45	45	41	35	32	29	30	40	48
145.0	33	33	33	29	25	22	19	21	27	34
147.5	20	20	19	17	15	11	10	14	18	22
150.0	10	10	9	9	7	3	2	5	11	14
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	1286	1286
2.5	1240	1248
5.0	819	808
7.5	490	490
10.0	274	276
12.5	232	232
15.0	217	215
17.5	210	210
20.0	191	191
22.5	176	175
25.0	153	154

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CANDELA TABULATION - (Cont.)

27.5	138	137
30.0	128	127
32.5	127	127
35.0	126	125
37.5	117	115
40.0	93	91
42.5	79	78
45.0	76	76
47.5	78	78
50.0	119	126
52.5	153	159
55.0	158	159
57.5	99	102
60.0	84	85
62.5	76	77
65.0	70	69
67.5	67	63
70.0	66	58
72.5	66	54
75.0	68	51
77.5	70	48
80.0	72	46
82.5	79	50
85.0	88	58
87.5	79	57
90.0	82	66
92.5	86	80
95.0	87	91
97.5	88	98
100.0	90	103
102.5	92	106
105.0	95	107
107.5	99	107
110.0	102	107
112.5	103	105
115.0	102	103
117.5	101	102
120.0	99	101
122.5	98	99
125.0	95	96
127.5	91	92
130.0	87	88
132.5	84	85
135.0	83	83
137.5	82	82
140.0	68	69
142.5	53	53
145.0	38	38
147.5	24	24
150.0	16	16
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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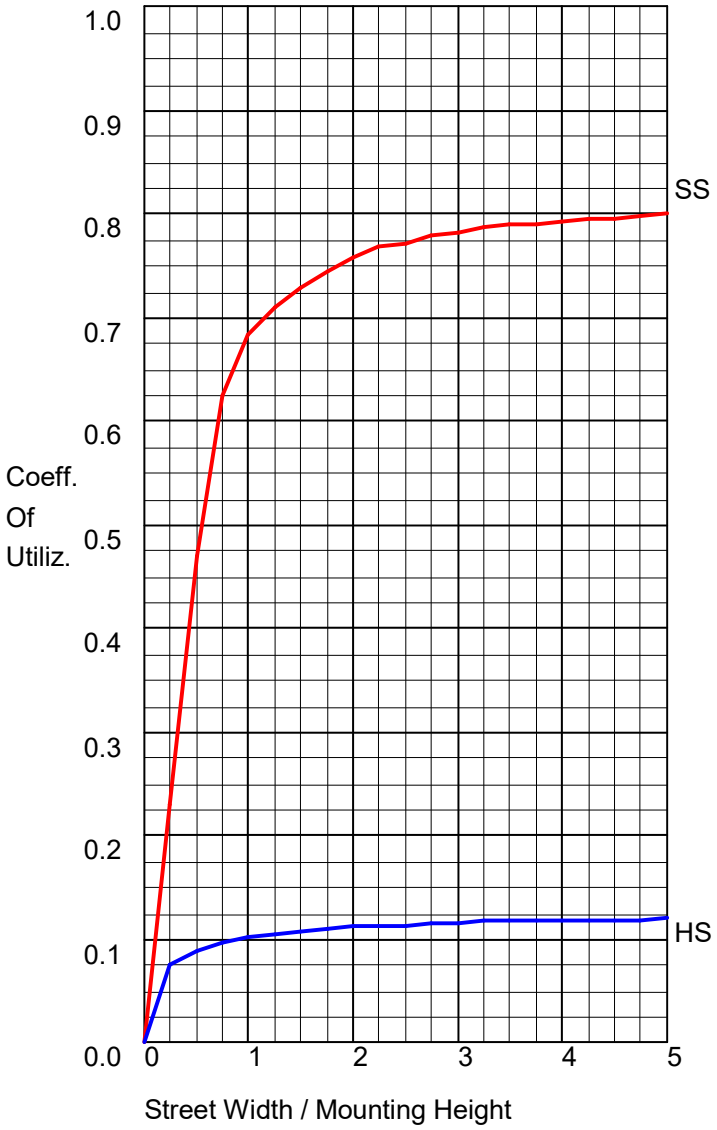
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	6678.4	81.6
Downward House Side	1032.1	12.6
Downward Total	7710.5	94.2
Upward Street Side	227.3	2.8
Upward House Side	250.5	3.1
Upward Total	477.8	5.8
Total Flux	8188.3	100.0

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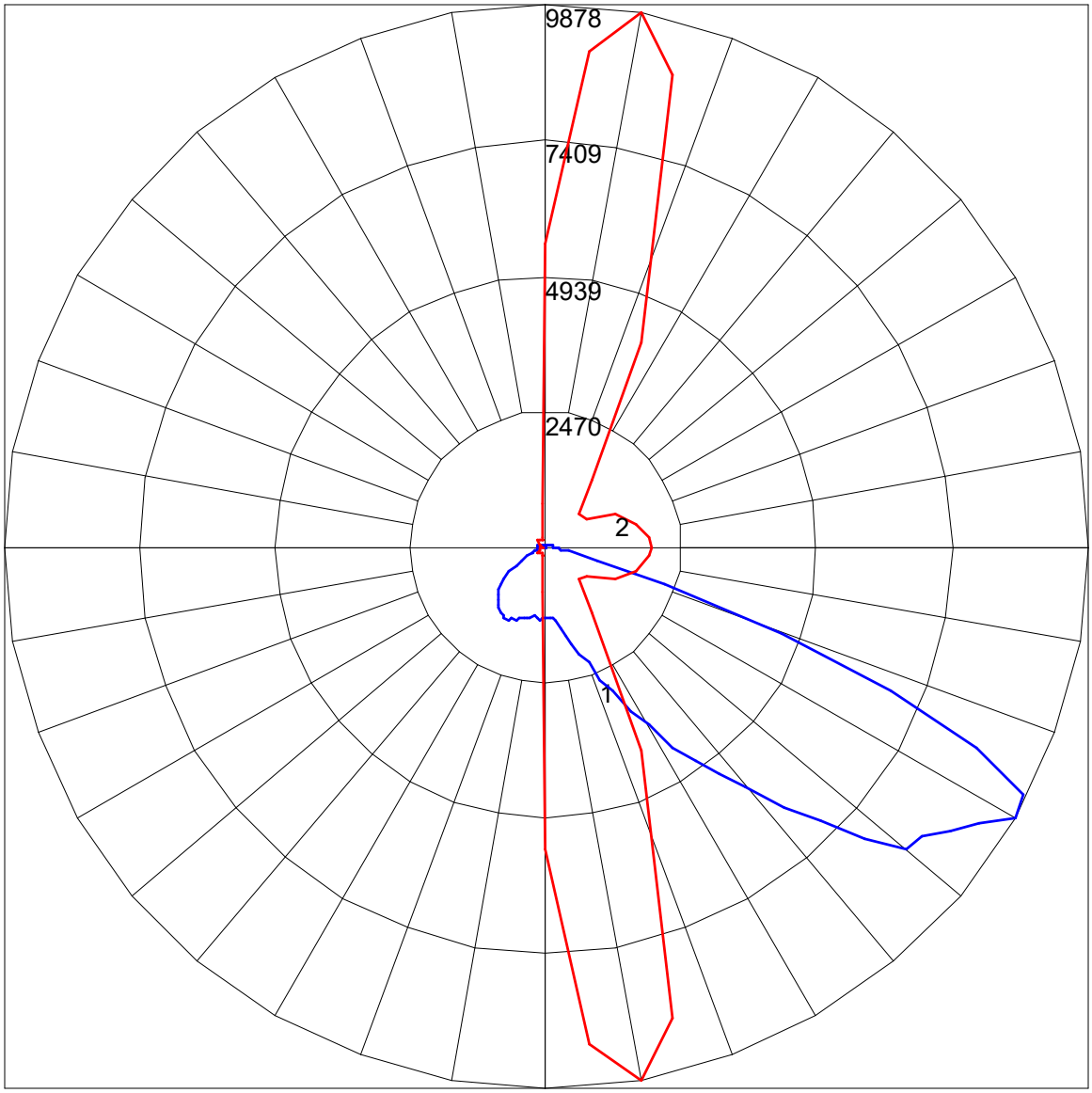
POLAR GRAPH



Maximum Candela = 9878 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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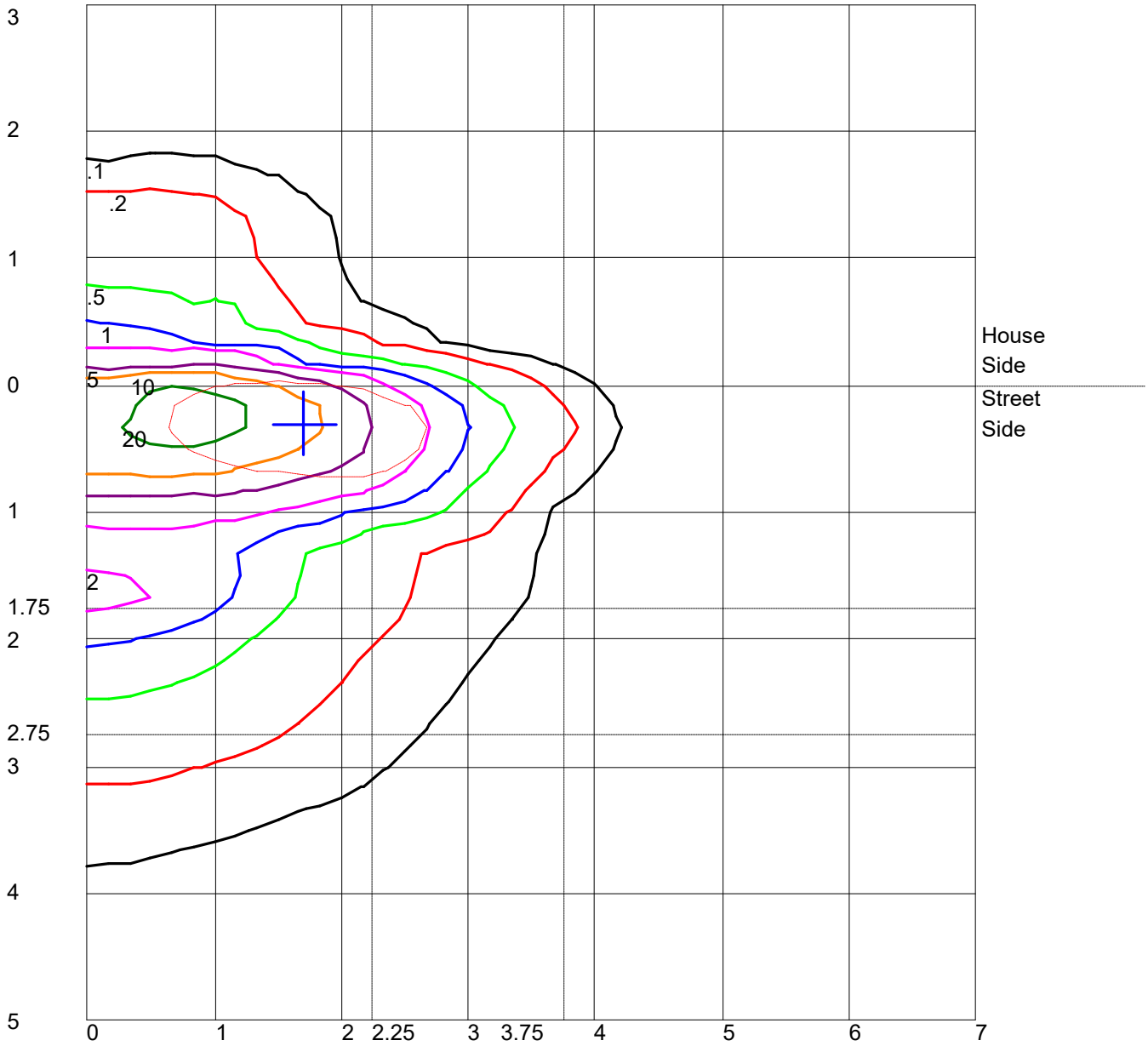
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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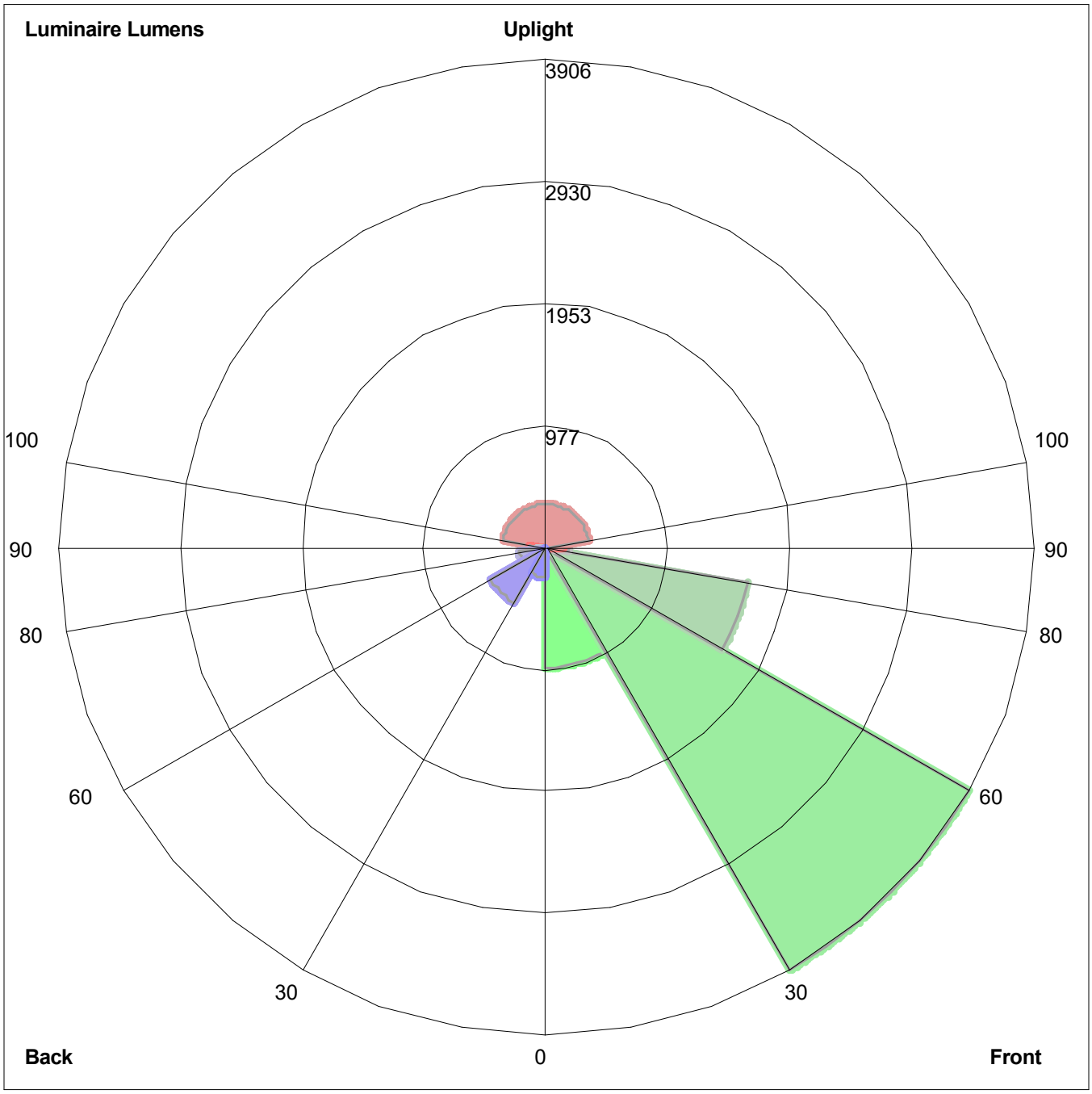
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=961.3, Medium=3906.2, High=1632.8, Very High=178.2
Back: Low=236.1, Medium=508.2, High=214.8, Very High=73.0
Uplight: Low=133.7, High=344.1

BUG Rating : B1-U3-G2

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