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

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12637
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/26/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-2-40-70CRI-IH
[_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 II
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	14531
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.05
Maximum Candela	11316
Maximum Candela Angle	72.5H 62.5V
Maximum Candela (<90 Degrees Vertical)	11316
Maximum Candela Angle (<90 Degrees Vertical)	72.5H 62.5V
Maximum Candela At 90 Degrees Vertical	248 (1.7% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	960 (6.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1117.6	N.A.	7.7
FM - Front-Medium (30-60)	7532.3	N.A.	51.8
FH - Front-High (60-80)	2843.4	N.A.	19.6
FVH - Front-Very High (80-90)	131.2	N.A.	0.9
BL - Back-Low (0-30)	531.2	N.A.	3.7
BM - Back-Medium (30-60)	1122.1	N.A.	7.7
BH - Back-High (60-80)	420.0	N.A.	2.9
BVH - Back-Very High (80-90)	114.3	N.A.	0.8
UL - Uplight-Low (90-100)	205.3	N.A.	1.4
UH - Uplight-High (100-180)	513.7	N.A.	3.5
Total	14531.1	N.A.	100.0
BUG Rating	B2-U4-G2		

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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	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538
2.5	1518	1504	1511	1522	1520	1514	1497	1495	1503	1503
5.0	1638	1629	1661	1635	1639	1635	1649	1616	1525	1508
7.5	1522	1527	1532	1577	1625	1678	1681	1655	1645	1607
10.0	1685	1683	1637	1719	1686	1653	1673	1690	1693	1717
12.5	1799	1807	1749	1741	1799	1761	1714	1807	1889	1906
15.0	1906	2006	1967	1967	1943	1849	1954	1902	2028	2019
17.5	2249	2161	2214	2106	2167	2176	2082	2122	2190	2237
20.0	2435	2451	2494	2393	2365	2341	2407	2390	2382	2411
22.5	2902	2924	2915	2724	2792	2619	2685	2689	2644	2639
25.0	3281	3304	3297	3218	3082	3078	3026	3022	2981	2998
27.5	4192	4150	4039	3694	3662	3485	3487	3457	3432	3388
30.0	4926	5008	4802	4528	4273	4210	4056	3939	3914	3923
32.5	5566	5567	5552	5357	5186	4863	4793	4589	4555	4564
35.0	5357	5365	5431	5654	5926	5821	5690	5408	5176	5034
37.5	5435	5342	5321	5448	5981	6404	6597	6243	5783	5591
40.0	5836	5677	5576	5603	5957	6627	6909	7324	6372	6212
42.5	6235	6033	5882	5907	6200	6849	7058	7930	7204	6934
45.0	6360	6187	6036	6114	6480	7144	7564	8064	8032	8022
47.5	6203	6067	5924	6123	6637	7517	8127	8049	8733	8752
50.0	5813	5697	5582	5886	6593	7856	8602	8365	9416	9403
52.5	5165	5066	4972	5437	6311	7961	8979	9064	9891	9972
55.0	4356	4240	4171	4692	5758	7773	9303	9900	10447	10510
57.5	3389	3372	3304	3734	4804	7117	9375	10531	10665	10805
60.0	2425	2424	2426	2743	3553	5908	8873	10570	10762	10974
62.5	1439	1458	1526	1787	2353	4162	7845	10317	11316	11115
65.0	903	920	997	1148	1443	2378	6275	8981	10838	10808
67.5	616	615	642	805	1002	1277	4027	7031	9076	9255
70.0	533	534	547	599	745	868	2202	5118	6915	7239
72.5	420	417	444	495	606	669	1141	3275	4518	4788
75.0	295	297	324	371	486	563	729	1840	2834	2985
77.5	191	210	241	277	361	464	558	1128	1724	1691
80.0	113	137	175	203	274	364	432	644	960	958
82.5	86	108	143	160	193	253	328	397	555	601
85.0	65	89	127	146	167	195	227	279	347	381
87.5	65	87	125	143	161	183	203	223	244	256
90.0	69	86	123	141	159	179	192	207	219	223
92.5	81	90	127	145	163	182	191	208	220	224
95.0	95	95	131	151	168	187	191	212	223	227
97.5	107	99	134	154	170	187	187	209	214	208
100.0	115	103	135	156	171	186	183	199	187	164
102.5	121	109	135	158	171	183	178	178	148	135
105.0	124	114	135	159	171	180	167	155	123	115
107.5	127	119	132	159	171	174	152	135	107	107
110.0	127	122	131	159	168	164	136	115	98	102
112.5	128	125	129	157	163	150	123	99	92	97
115.0	129	127	128	154	155	136	111	90	89	92
117.5	130	129	127	147	144	125	103	83	87	89
120.0	131	129	124	139	134	116	96	80	84	86
122.5	130	128	121	128	125	110	92	79	81	83
125.0	127	125	116	119	118	105	91	79	79	80
127.5	122	120	112	112	112	102	91	81	80	79
130.0	116	115	109	107	108	101	92	83	81	81

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CANDELA TABULATION - (Cont.)

132.5	113	111	107	103	106	102	92	83	83	83
135.0	110	110	107	103	104	97	86	83	84	85
137.5	110	110	107	101	95	85	76	77	81	83
140.0	104	104	99	90	79	68	63	65	70	71
142.5	91	90	85	74	60	50	49	51	56	58
145.0	74	72	66	55	42	37	34	37	42	43
147.5	54	54	46	37	30	22	21	25	28	29
150.0	37	36	32	26	15	6	6	12	15	16
152.5	26	26	20	10	4	2	2	3	4	4
155.0	9	8	5	3	2	1	1	1	2	2
157.5	2	2	2	2	1	1	1	1	1	1
160.0	1	1	1	2	1	1	0	0	1	0
162.5	1	1	1	2	1	1	0	0	0	0
165.0	1	1	2	2	1	1	0	0	0	0
167.5	1	1	2	2	1	1	0	0	0	0
170.0	1	1	2	2	1	1	0	0	0	0
172.5	1	1	2	2	1	1	0	0	0	0
175.0	1	1	2	2	2	1	0	0	0	0
177.5	1	1	2	2	2	1	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	1538	1538	1538	1538	1538	1538	1538	1538	1538	1538
2.5	1516	1518	1541	1582	1592	1604	1605	1593	1595	1583
5.0	1496	1539	1609	1651	1621	1618	1610	1596	1539	1474
7.5	1537	1562	1631	1633	1614	1512	1464	1465	1443	1415
10.0	1613	1633	1677	1633	1562	1529	1461	1383	1316	1259
12.5	1737	1766	1853	1803	1576	1463	1317	1207	1129	1106
15.0	1878	1914	1939	1814	1637	1389	1202	1089	972	922
17.5	2108	2093	2153	1921	1629	1278	1094	924	826	781
20.0	2341	2275	2296	2017	1618	1203	952	805	713	665
22.5	2688	2592	2625	2172	1520	1097	847	687	623	611
25.0	3004	2902	2816	2198	1518	989	730	617	572	543
27.5	3477	3254	3200	2322	1385	879	643	569	512	489
30.0	3968	3696	3510	2410	1281	758	601	515	465	444
32.5	4332	3993	3762	2406	1146	687	549	469	441	427
35.0	4742	4313	3977	2297	989	645	500	445	423	402
37.5	5289	4740	4155	2101	840	585	454	430	400	372
40.0	5780	5241	4293	1846	751	511	433	412	372	340
42.5	6275	5615	4480	1572	659	448	422	388	341	308
45.0	7014	6046	4588	1298	570	435	407	357	314	283
47.5	7508	6529	4685	1060	497	428	380	327	294	266
50.0	8102	7100	4610	868	444	409	354	307	281	254
52.5	8886	7451	4591	740	422	389	332	292	272	244
55.0	9492	7772	4334	662	422	367	312	282	264	237
57.5	9705	7701	3863	558	436	347	299	273	256	228
60.0	9871	7385	3113	468	419	329	286	264	243	211
62.5	9609	6812	2362	415	380	312	275	252	225	206
65.0	8486	5566	1577	389	340	296	263	234	244	261
67.5	6797	4066	1053	370	319	280	248	256	289	320
70.0	5111	2897	735	348	303	267	261	286	311	276
72.5	3334	1919	537	325	282	254	268	280	227	206
75.0	2102	1255	421	308	268	252	273	234	205	177
77.5	940	606	332	290	256	261	244	207	186	169

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CANDELA TABULATION - (Cont.)

80.0	564	439	276	272	252	246	220	204	191	175
82.5	404	341	232	254	255	223	223	210	197	180
85.0	326	219	221	256	232	221	227	215	202	185
87.5	260	95	234	244	234	222	232	219	207	190
90.0	187	74	227	248	237	225	236	225	213	195
92.5	131	159	206	255	244	230	242	232	221	203
95.0	123	211	192	252	240	218	236	228	220	203
97.5	151	214	190	231	228	203	227	223	217	198
100.0	166	203	188	202	218	197	220	219	215	192
102.5	163	187	179	175	201	191	214	215	211	185
105.0	154	169	165	156	182	183	206	211	207	175
107.5	141	151	150	141	162	171	197	206	203	165
110.0	127	135	135	129	143	158	187	199	196	155
112.5	115	122	122	119	127	147	175	191	189	144
115.0	106	111	111	111	116	137	163	182	179	136
117.5	98	103	103	105	107	130	154	171	168	131
120.0	92	95	96	99	103	123	146	161	155	126
122.5	87	89	91	95	100	119	139	151	141	122
125.0	83	85	87	91	99	116	132	142	128	117
127.5	82	83	86	91	99	115	128	131	117	114
130.0	83	83	86	92	99	115	125	123	108	111
132.5	84	85	88	95	99	107	119	117	103	108
135.0	87	88	91	97	98	97	103	105	103	107
137.5	88	91	93	95	89	85	83	85	91	102
140.0	79	83	83	80	74	68	62	64	74	85
142.5	66	68	68	64	58	50	43	45	55	65
145.0	50	52	51	47	41	34	30	31	38	46
147.5	32	32	33	30	26	20	16	21	26	31
150.0	17	17	18	18	14	8	7	10	17	21
152.5	6	6	6	6	6	6	5	6	6	10
155.0	2	3	3	4	4	4	5	5	5	5
157.5	1	2	2	2	3	4	4	5	4	3
160.0	1	1	2	2	3	4	4	4	4	3
162.5	1	1	2	2	3	3	4	4	3	2
165.0	0	1	1	2	2	3	3	3	3	2
167.5	0	0	1	2	2	2	3	3	3	2
170.0	0	0	0	1	2	2	2	2	2	2
172.5	0	0	0	1	2	2	2	2	2	2
175.0	0	0	0	1	1	2	2	2	2	1
177.5	0	0	0	1	1	1	2	2	2	1
180.0	1	1	1	1	1	1	1	1	1	1

Vert. Angles	**Horizontal Angles**	
	175.0	**180.0**
0.0	1538	1538
2.5	1592	1602
5.0	1427	1426
7.5	1423	1420
10.0	1207	1201
12.5	1058	1047
15.0	885	881
17.5	747	748
20.0	646	644
22.5	595	593
25.0	528	526

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CANDELA TABULATION - (Cont.)

27.5	481	479
30.0	450	449
32.5	425	425
35.0	400	399
37.5	370	370
40.0	337	339
42.5	306	310
45.0	283	287
47.5	264	268
50.0	248	252
52.5	234	236
55.0	218	220
57.5	198	199
60.0	171	168
62.5	174	177
65.0	229	227
67.5	281	272
70.0	182	161
72.5	143	120
75.0	107	76
77.5	102	59
80.0	107	56
82.5	111	60
85.0	115	66
87.5	119	75
90.0	124	95
92.5	131	118
95.0	134	137
97.5	134	150
100.0	136	160
102.5	139	165
105.0	145	167
107.5	150	166
110.0	152	163
112.5	152	158
115.0	149	153
117.5	145	147
120.0	140	142
122.5	135	137
125.0	130	131
127.5	123	125
130.0	118	119
132.5	113	114
135.0	111	111
137.5	108	107
140.0	91	90
142.5	70	70
145.0	51	52
147.5	34	34
150.0	23	23
152.5	14	13
155.0	5	5
157.5	2	1
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	1	1

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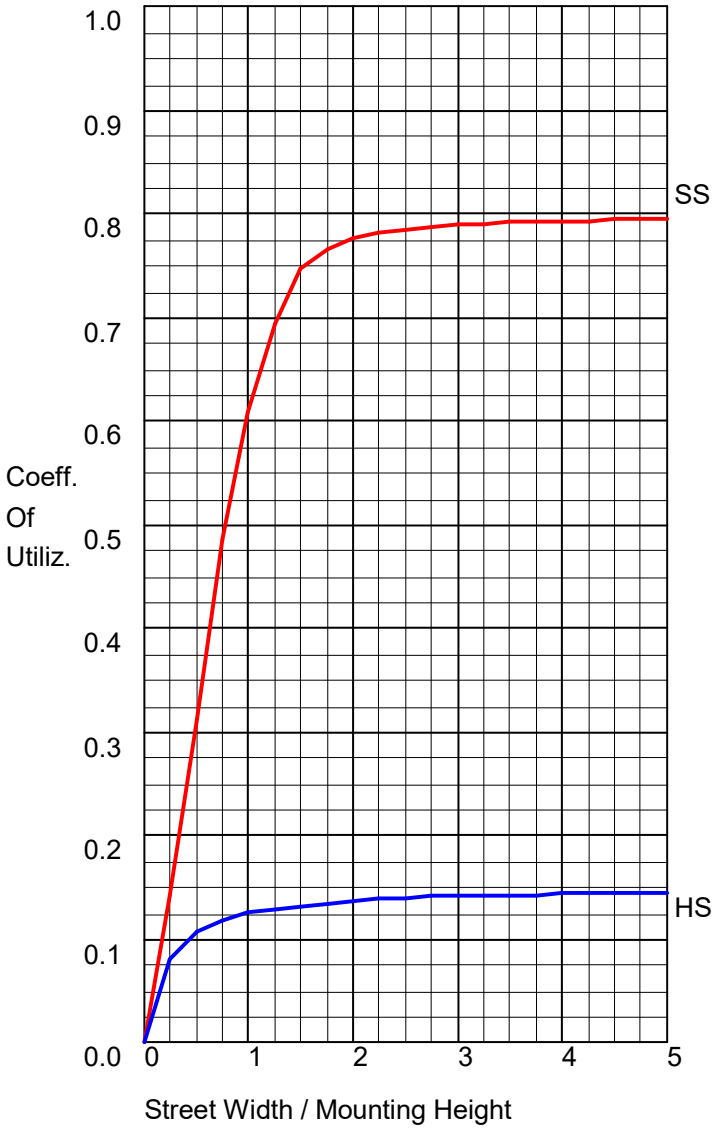
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	11624.5	80.0
Downward House Side	2187.5	15.1
Downward Total	13812.0	95.1
Upward Street Side	330.6	2.3
Upward House Side	388.3	2.7
Upward Total	718.9	4.9
Total Flux	14530.9	100.0

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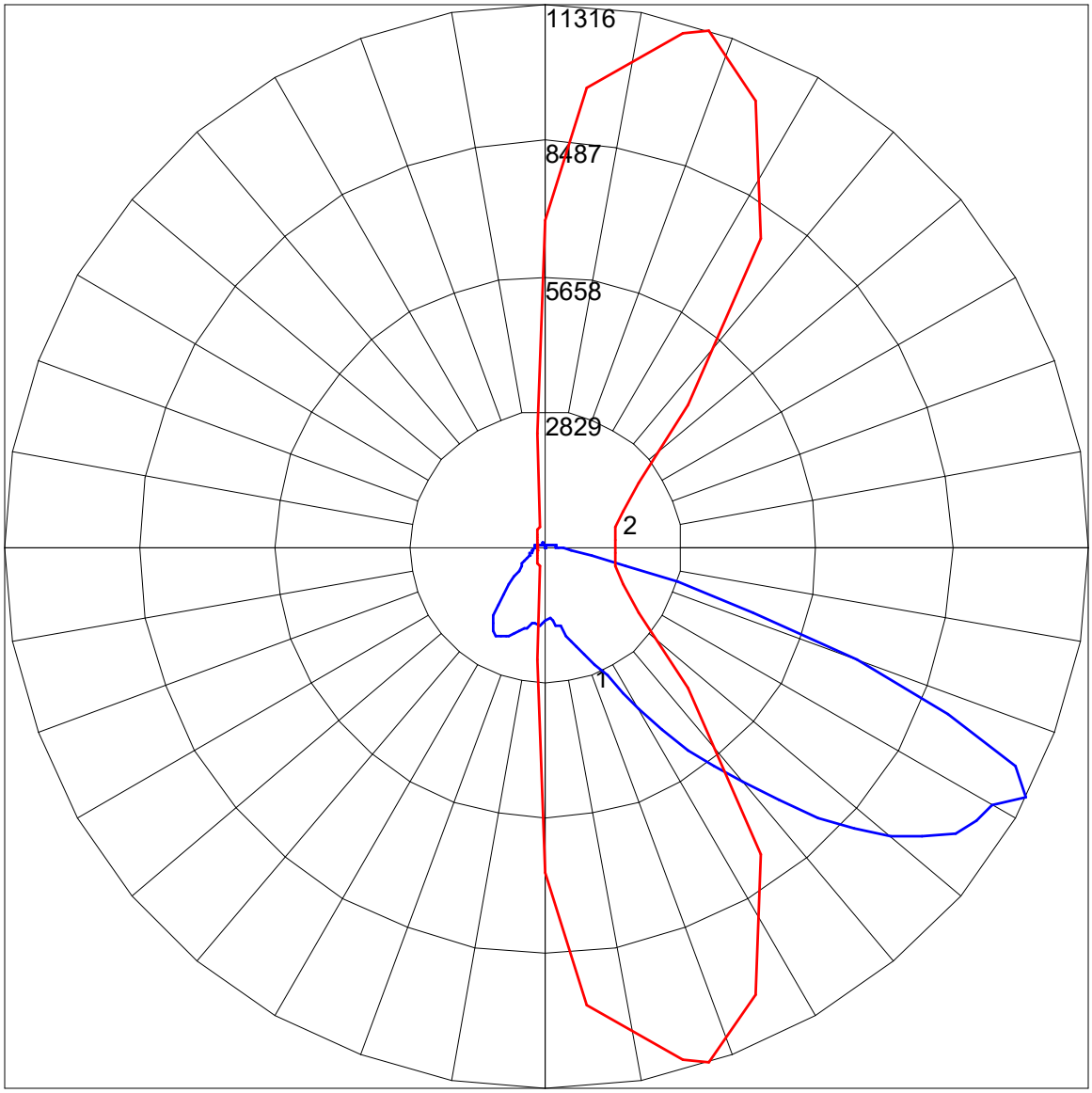
POLAR GRAPH



Maximum Candela = 11316 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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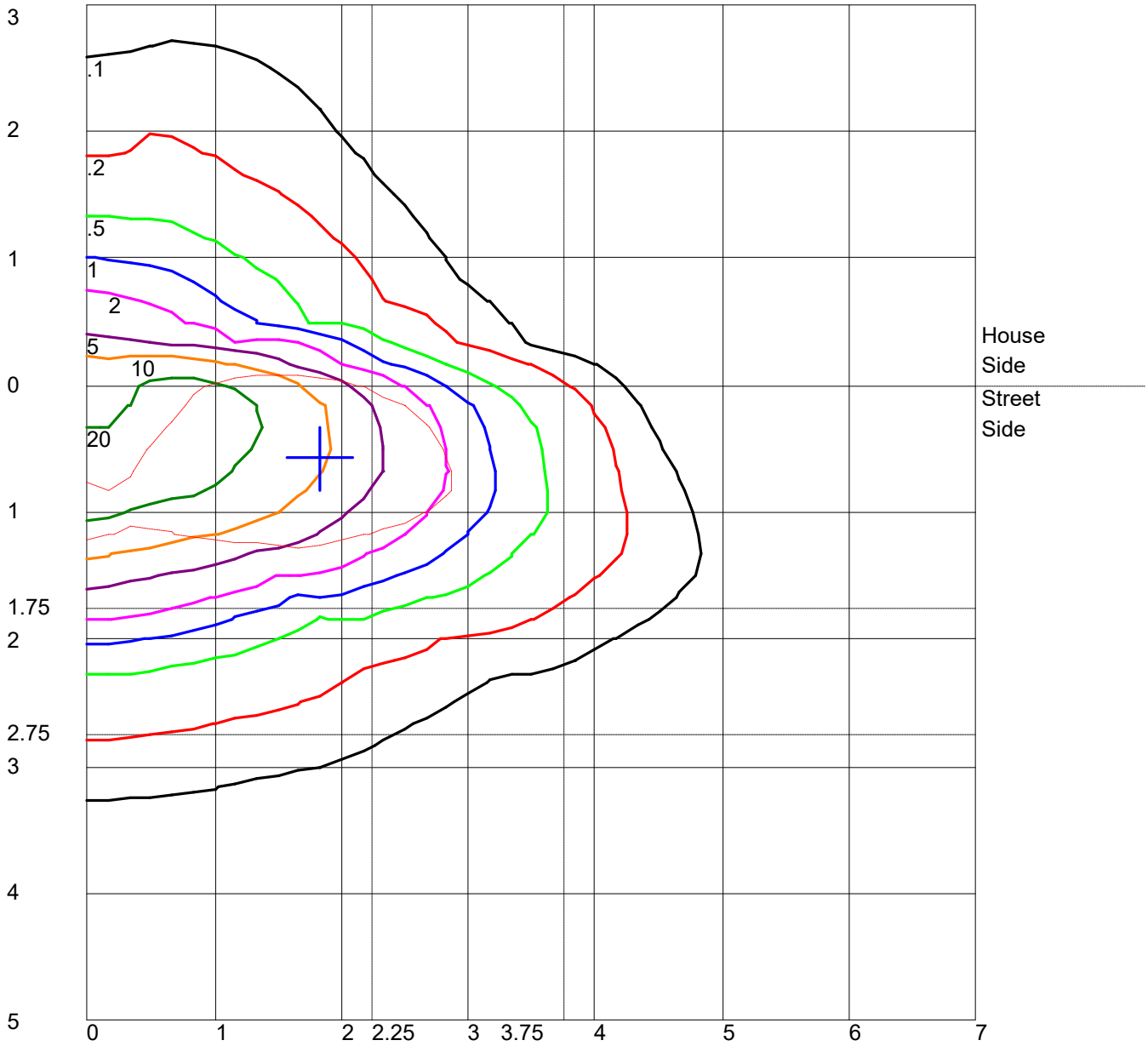
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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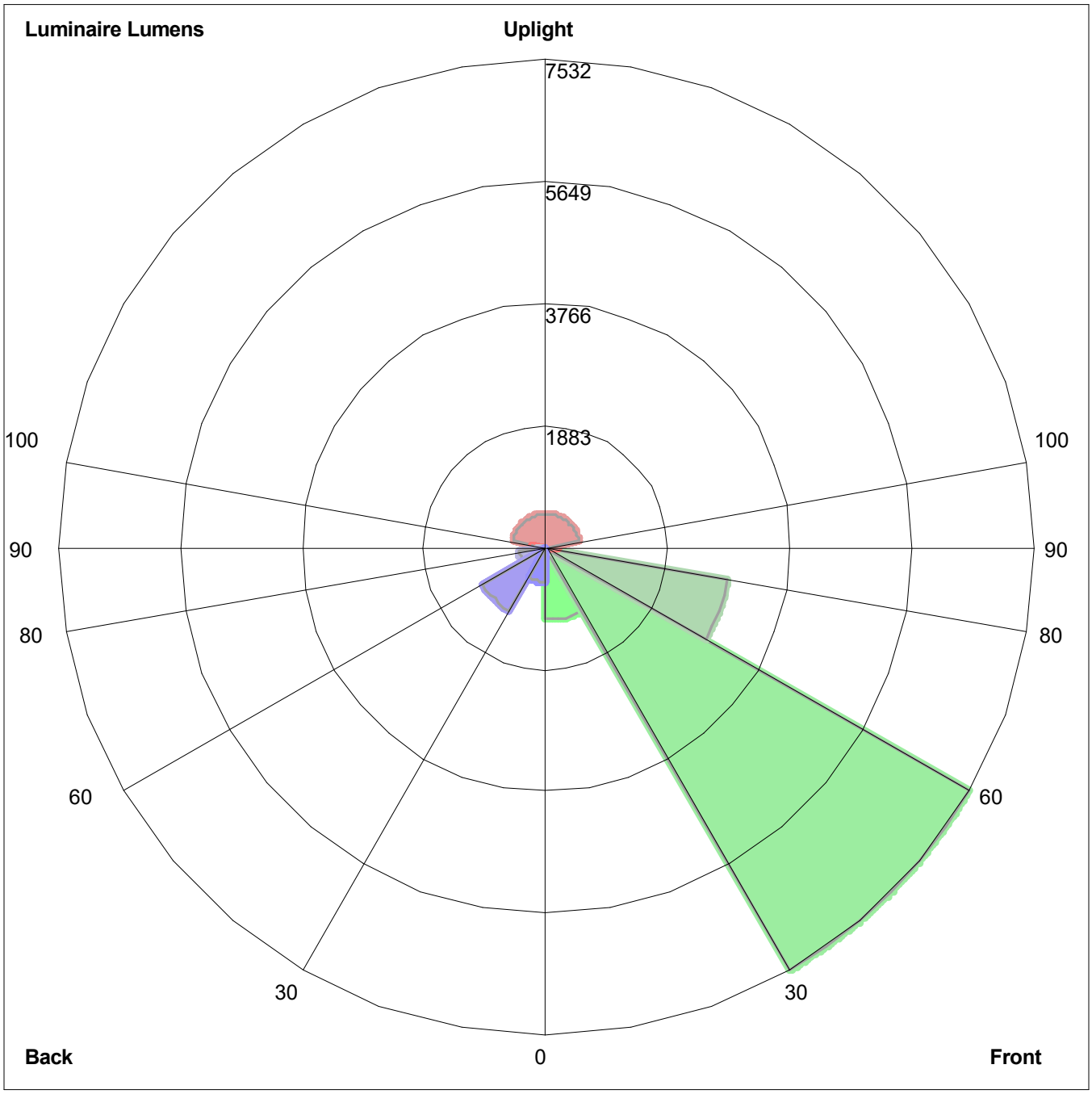
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1117.6, Medium=7532.3, High=2843.4, Very High=131.2
Back: Low=531.2, Medium=1122.1, High=420.0, Very High=114.3
Uplight: Low=205.3, High=513.7

BUG Rating : B2-U4-G2

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