IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-3-50-70CRI-IL.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12641
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/29/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-3-50-70CRI-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] 5000

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10468
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	70
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	8561
Maximum Candela Angle	35H 67.5V
Maximum Candela (<90 Degrees Vertical)	8561
Maximum Candela Angle (<90 Degrees Vertical)	35H 67.5V
Maximum Candela At 90 Degrees Vertical	264 (2.5% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1099 (10.5% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	554.2	N.A.	5.3
FM - Front-Medium (30-60)	4655.7	N.A.	44.5
FH - Front-High (60-80)	3859.8	N.A.	36.9
FVH - Front-Very High (80-90)	222.7	N.A.	2.1
BL - Back-Low (0-30)	124.7	N.A.	1.2
BM - Back-Medium (30-60)	338.0	N.A.	3.2
BH - Back-High (60-80)	227.4	N.A.	2.2
BVH - Back-Very High (80-90)	71.9	N.A.	0.7
UL - Uplight-Low (90-100)	129.4	N.A.	1.2
UH - Uplight-High (100-180)	283.8	N.A.	2.7
Total	10467.6	N.A.	100.0
BUG Rating	B1-U3-G2		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	5	15	25	30	35	45	55	65	75
0.0	447	447	447	447	447	447	447	447	447	447
2.5	511	505	501	496	501	490	486	474	464	458
5.0	703	695	690	670	671	655	636	588	534	485
7.5	819	822	798	811	821	826	798	713	640	549
10.0	891	902	924	897	909	916	862	847	766	638
12.5	926	924	926	946	942	937	960	924	901	731
15.0	1023	997	1011	1028	1007	1001	1006	1008	965	867
17.5	1050	1071	1060	1061	1095	1128	1080	1091	1083	991
20.0	1185	1200	1210	1240	1205	1206	1248	1218	1194	1153
22.5	1391	1380	1380	1403	1408	1421	1392	1405	1393	1320
25.0	1553	1564	1638	1710	1674	1658	1681	1666	1646	1626
27.5	1872	1906	1941	1957	2008	2082	2010	1991	2019	1832
30.0	2134	2115	2270	2384	2401	2410	2561	2419	2316	2144
32.5	2447	2472	2616	2692	2785	2908	2973	2902	2738	2502
35.0	2626	2649	2806	3093	3219	3285	3501	3469	3127	2720
37.5	2700	2762	2946	3315	3501	3758	3984	3887	3391	2966
40.0	2744	2770	3043	3518	3742	4067	4420	4245	3699	3118
42.5	2743	2782	3147	3720	3985	4345	4832	4558	4014	3227
45.0	2785	2841	3302	4013	4274	4651	5131	4867	4224	3343
47.5	2903	2957	3537	4369	4654	5065	5438	5222	4309	3598
50.0	2954	3013	3702	4681	5045	5472	5767	5435	4536	3791
52.5	2964	3022	3751	4838	5307	5779	6096	5608	4792	4055
55.0	3413	3405	3942	4959	5438	5894	6314	5797	5075	4596
57.5	5128	5043	5133	5475	5739	5982	6398	5817	5269	4974
60.0	6887	6852	6875	6838	6742	6433	6257	5534	5233	5327
62.5	7539	7594	7723	7903	7851	7440	6115	4998	5076	5710
65.0	6143	6249	7085	8235	8452	8135	6627	4382	4564	5722
67.5	2490	2584	3718	6488	7947	8561	7320	3932	3658	5412
70.0	1191	1198	1496	2725	4739	6883	7870	4472	2569	4246
72.5	937	947	1087	1543	2053	3002	7339	6252	1777	2460
75.0	779	803	903	1131	1335	1627	3800	5180	1654	881
77.5	664	684	751	905	1010	1176	1603	2779	985	408
80.0	582	598	641	715	766	886	1099	1075	582	279
82.5	496	507	533	577	611	672	844	790	477	257
85.0	322	331	346	374	400	446	615	703	436	250
87.5	176	187	201	224	246	275	397	482	350	202
90.0	87	92	111	133	149	164	219	264	210	156
92.5	45	49	69	86	93	101	125	147	137	141
95.0	49	47	67	82	86	93	109	116	127	132
97.5	54	49	68	82	87	93	107	113	124	113
100.0	58	51	69	82	88	93	105	109	115	96
102.5	60	53	69	83	88	93	104	104	101	76
105.0	61	55	68	83	89	93	101	95	86	64
107.5	62	58	67	84	89	92	96	85	70	58
110.0	63	61	66	84	88	91	89	72	59	53
112.5	63	62	65	82	86	87	78	61	52	51
115.0	63	63	65	80	82	80	68	56	47	50
117.5	64	64	64	75	75	72	61	51	44	49
120.0	64	63	62	69	68	65	57	49	42	47
122.5	63	62	58	61	61	60	53	47	42	45
125.0	61	61	55	57	57	56	52	47	43	45
127.5	58	57	53	53	54	53	50	47	44	45
130.0	55	54	51	50	52	51	49	48	45	46

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CANDELA TABULATION - (Cont.)

132.5	53	53	51	49	49	50	49	47	45	48
135.0	52	52	50	48	49	49	48	45	45	48
137.5	53	52	50	48	46	45	43	41	42	46
140.0	50	49	47	42	40	38	35	34	37	41
142.5	44	43	40	35	33	30	27	28	30	34
145.0	36	35	32	27	25	21	19	20	23	27
147.5	27	26	23	18	17	14	12	13	16	19
150.0	18	18	15	13	11	8	6	8	10	11
152.5	13	13	10	6	5	4	3	4	6	8
155.0	4	4	2	2	2	2	2	2	4	5
157.5	1	1	2	2	2	2	2	2	2	3
160.0	0	1	1	1	2	2	2	2	2	2
162.5	0	1	1	2	2	2	2	2	2	2
165.0	0	1	1	2	2	2	2	2	2	2
167.5	0	1	1	2	2	2	2	2	2	2
170.0	0	1	1	2	2	2	2	2	2	2
172.5	0	1	1	2	2	2	2	2	2	2
175.0	0	1	2	2	2	2	2	2	2	2
177.5	0	1	2	2	2	2	2	2	2	2
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	**Horizontal Angles**									
	85	**90**	**95**	**105**	**115**	**125**	**135**	**145**	**155**	**165**
0.0	447	447	447	447	447	447	447	447	447	447
2.5	452	446	443	438	425	419	415	413	407	404
5.0	464	458	444	420	399	383	362	346	324	308
7.5	481	461	442	409	373	324	282	266	260	253
10.0	518	488	457	396	324	275	264	253	243	236
12.5	548	508	470	383	291	272	254	242	242	238
15.0	633	542	496	371	295	271	254	248	229	216
17.5	700	584	517	370	307	275	256	224	201	190
20.0	823	660	573	397	327	283	231	197	177	166
22.5	978	751	650	436	342	264	201	172	160	160
25.0	1191	889	766	498	338	223	180	157	152	146
27.5	1375	1099	875	537	300	192	163	150	137	134
30.0	1685	1240	1044	536	236	176	156	139	126	120
32.5	1908	1416	1153	509	202	168	147	129	116	113
35.0	2079	1563	1192	449	187	160	136	120	111	105
37.5	2240	1652	1202	391	179	153	127	118	109	100
40.0	2339	1735	1230	332	172	142	125	120	105	85
42.5	2462	1864	1174	263	165	138	129	118	93	73
45.0	2549	1892	1154	219	160	141	133	109	89	72
47.5	2651	1939	1218	211	161	145	129	103	90	72
50.0	2862	2102	1234	209	169	153	124	102	92	74
52.5	3053	2259	1310	200	175	172	125	105	104	128
55.0	3439	2558	1422	180	149	169	142	122	156	164
57.5	3985	2942	1515	170	138	138	151	160	182	122
60.0	4595	3367	1627	160	135	130	156	170	143	91
62.5	5092	3673	1722	153	134	133	153	140	134	100
65.0	5256	3659	1452	149	135	140	139	115	126	104
67.5	4891	2962	995	147	133	138	129	126	116	101
70.0	3829	1873	512	141	137	145	133	122	117	103
72.5	1883	849	210	140	137	139	129	124	113	107
75.0	527	299	175	139	137	133	133	125	117	109
77.5	346	228	156	143	141	133	136	129	121	113

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CANDELA TABULATION - (Cont.)

80.0	257	196	144	146	140	134	140	132	125	116
82.5	203	163	141	156	145	137	145	136	129	122
85.0	172	125	133	157	148	141	150	141	131	124
87.5	141	105	129	159	149	141	153	143	134	125
90.0	117	89	134	158	150	140	153	146	138	128
92.5	109	91	132	157	151	138	153	149	143	133
95.0	100	114	124	153	147	132	146	145	141	133
97.5	92	125	120	140	137	122	139	137	137	126
100.0	94	120	115	121	128	115	131	133	133	119
102.5	93	109	106	105	117	110	125	127	128	111
105.0	86	97	97	93	105	106	119	122	123	101
107.5	78	86	90	86	96	100	113	118	117	92
110.0	70	78	81	80	87	94	109	114	113	85
112.5	65	71	73	75	80	90	103	110	106	78
115.0	61	65	68	72	75	86	98	105	99	72
117.5	57	61	64	69	72	83	93	99	92	66
120.0	53	57	60	65	69	80	90	93	82	62
122.5	51	54	57	63	68	77	86	87	73	61
125.0	49	52	55	61	67	76	82	80	65	58
127.5	49	51	54	61	66	74	77	73	59	56
130.0	49	51	53	60	65	72	73	65	54	53
132.5	50	52	54	61	63	66	67	60	52	52
135.0	51	53	55	60	60	57	57	53	49	51
137.5	50	52	53	56	54	49	43	41	42	48
140.0	46	48	49	49	45	39	31	30	33	38
142.5	38	40	41	40	35	30	23	21	25	29
145.0	31	31	31	30	26	20	15	14	16	20
147.5	22	22	22	21	18	13	9	9	11	13
150.0	13	13	13	13	11	8	6	5	6	8
152.5	9	9	9	9	7	6	4	3	3	4
155.0	6	6	6	6	6	5	3	2	2	2
157.5	3	4	4	4	4	4	3	2	2	2
160.0	2	3	3	3	4	4	2	2	2	1
162.5	2	2	3	3	4	3	2	2	2	1
165.0	2	2	3	3	4	3	2	2	2	1
167.5	2	2	2	3	4	3	2	2	2	1
170.0	2	2	2	3	3	3	2	2	2	1
172.5	2	2	2	3	3	3	2	2	1	1
175.0	2	2	2	3	3	3	2	2	1	0
177.5	2	2	2	3	3	3	2	2	1	0
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	**Horizontal Angles**	
	175	**180**
0.0	447	447
2.5	398	399
5.0	296	295
7.5	251	250
10.0	234	232
12.5	235	235
15.0	211	209
17.5	184	182
20.0	163	160
22.5	154	153
25.0	141	141

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CANDELA TABULATION - (Cont.)

27.5	129	127
30.0	117	115
32.5	110	109
35.0	105	104
37.5	97	94
40.0	82	79
42.5	73	73
45.0	71	71
47.5	71	72
50.0	75	76
52.5	141	145
55.0	164	168
57.5	69	69
60.0	64	67
62.5	64	65
65.0	63	61
67.5	63	57
70.0	61	51
72.5	63	46
75.0	67	41
77.5	68	38
80.0	70	36
82.5	73	39
85.0	75	41
87.5	77	45
90.0	78	51
92.5	82	65
95.0	84	76
97.5	84	85
100.0	82	90
102.5	81	91
105.0	78	89
107.5	77	86
110.0	75	82
112.5	73	78
115.0	72	74
117.5	70	71
120.0	68	69
122.5	65	66
125.0	62	63
127.5	59	60
130.0	56	57
132.5	53	53
135.0	52	52
137.5	50	50
140.0	41	41
142.5	31	31
145.0	22	22
147.5	14	14
150.0	9	9
152.5	5	5
155.0	2	1
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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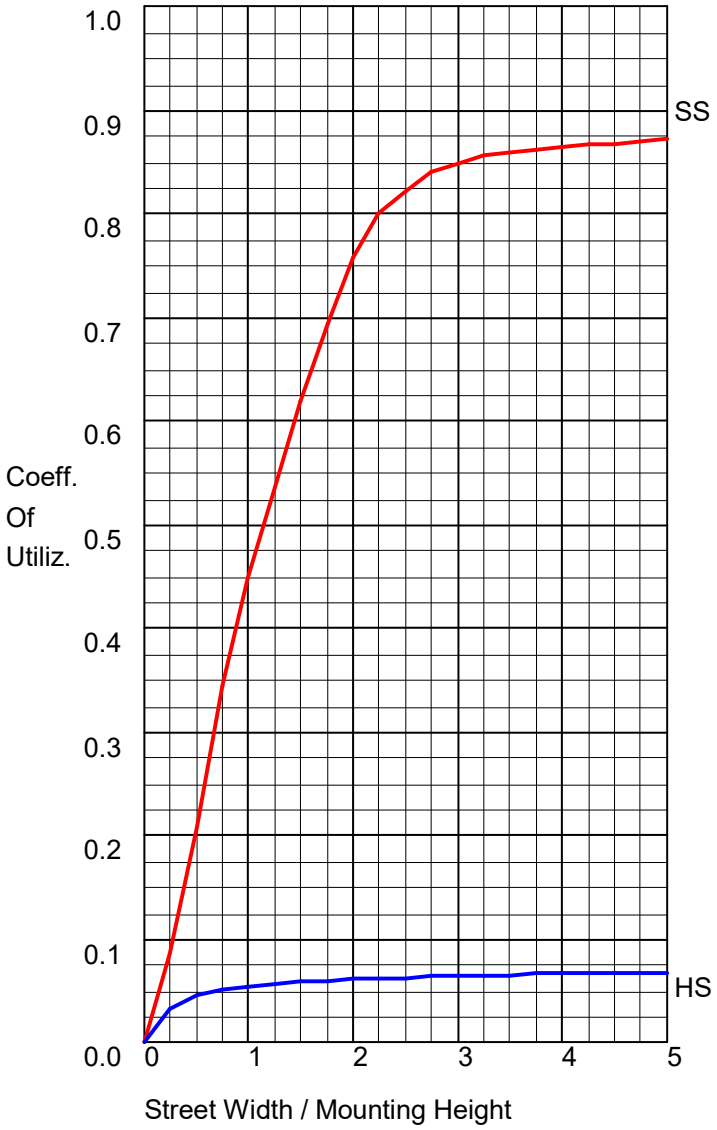
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	9292.5	88.8
Downward House Side	762.0	7.3
Downward Total	10054.5	96.1
Upward Street Side	184.6	1.8
Upward House Side	228.6	2.2
Upward Total	413.2	3.9
Total Flux	10467.7	100.0

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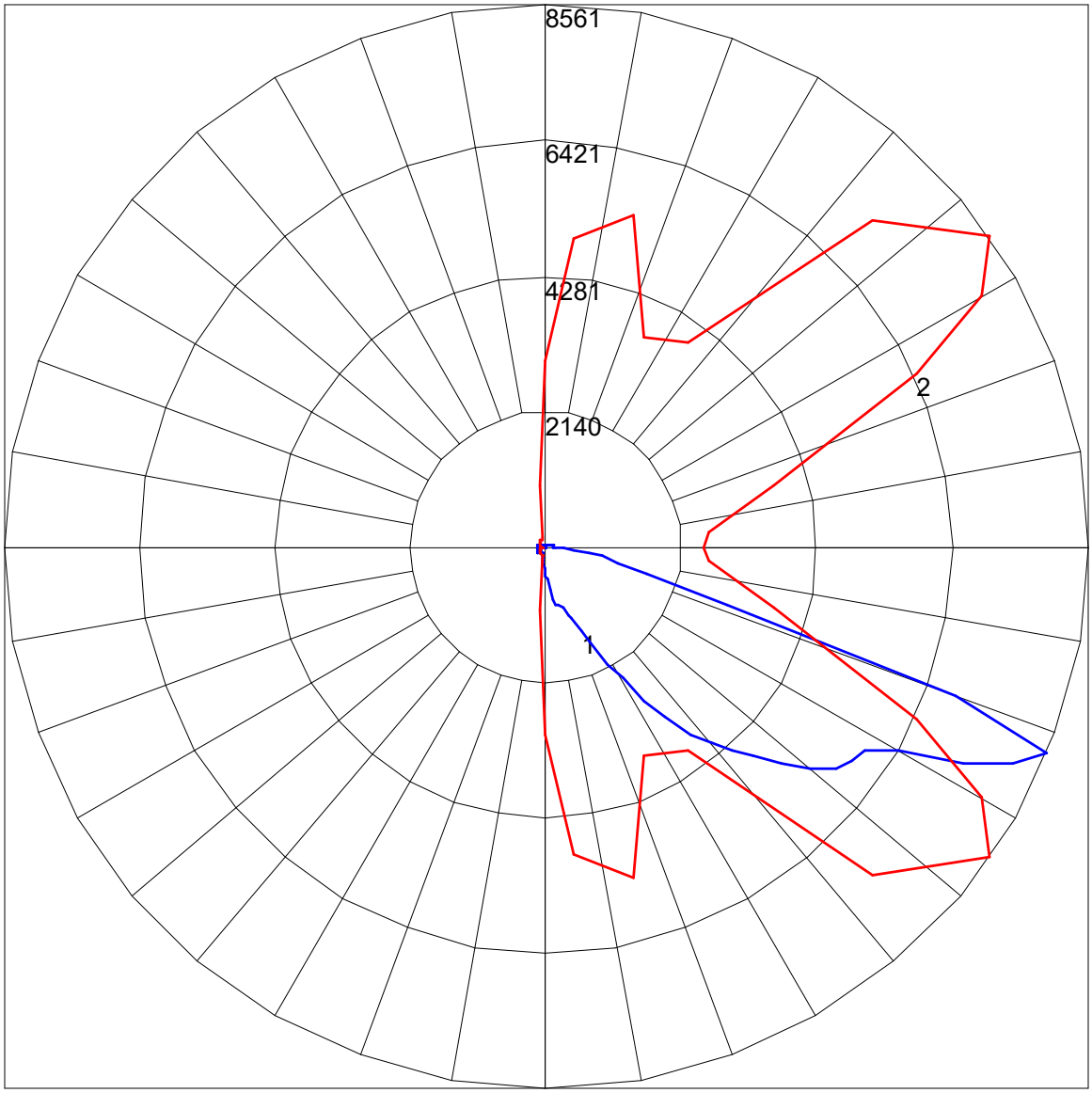
POLAR GRAPH



Maximum Candela = 8561 Located At Horizontal Angle = 35, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (35 - 215) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

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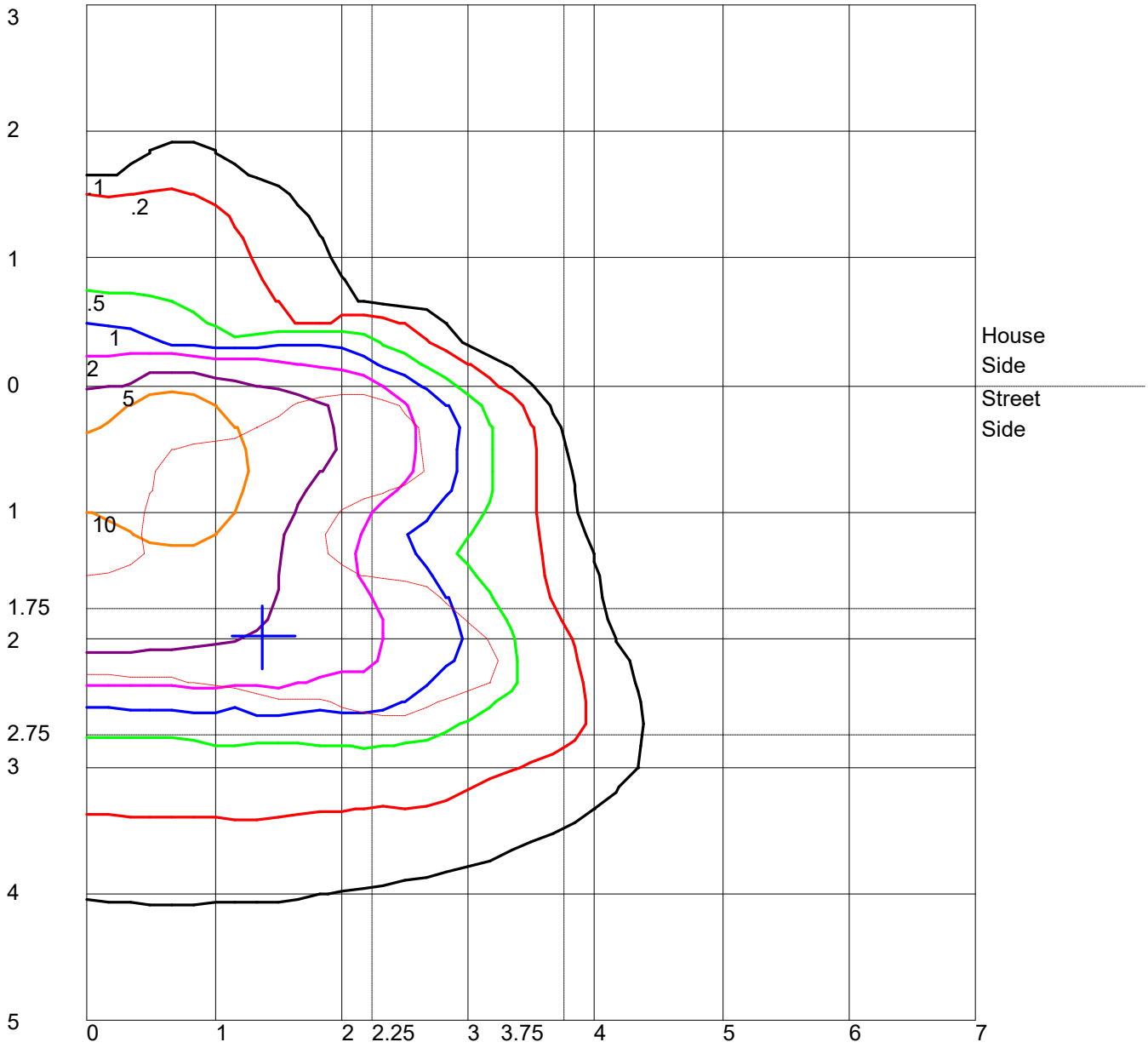
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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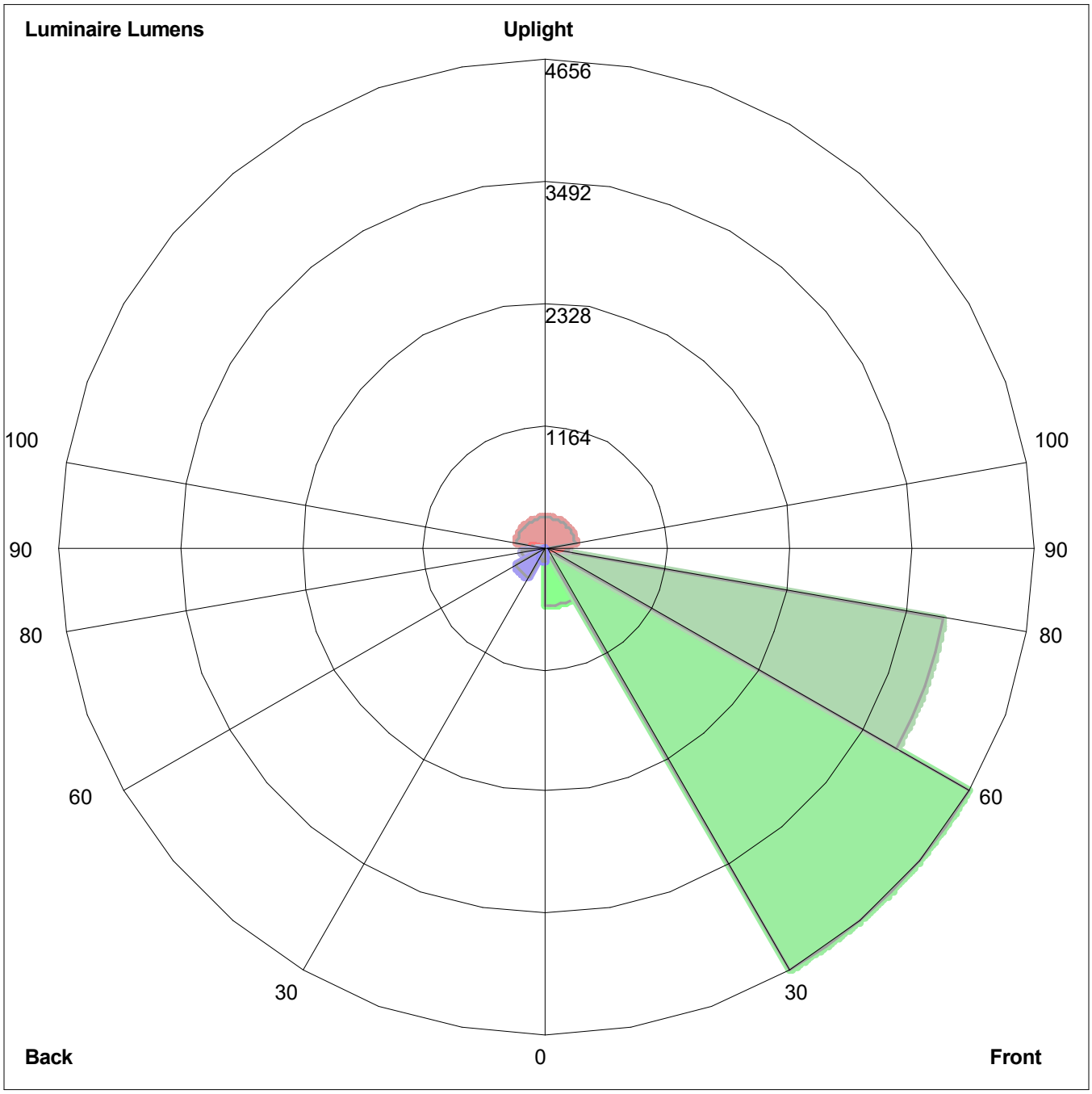
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=554.2, Medium=4655.7, High=3859.8, Very High=222.7
Back: Low=124.7, Medium=338.0, High=227.4, Very High=71.9
Uplight: Low=129.4, High=283.8

BUG Rating : B1-U3-G2

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