IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-3-40-70CRI-IH.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12640
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/26/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-3-40-70CRI-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 III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	16498
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	14509
Maximum Candela Angle	50H 67.5V
Maximum Candela (<90 Degrees Vertical)	14509
Maximum Candela Angle (<90 Degrees Vertical)	50H 67.5V
Maximum Candela At 90 Degrees Vertical	241 (1.5% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1239 (7.5% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	640.9	N.A.	3.9
FM - Front-Medium (30-60)	7007.6	N.A.	42.5
FH - Front-High (60-80)	6365.1	N.A.	38.6
FVH - Front-Very High (80-90)	211.7	N.A.	1.3
BL - Back-Low (0-30)	268.9	N.A.	1.6
BM - Back-Medium (30-60)	849.6	N.A.	5.1
BH - Back-High (60-80)	445.5	N.A.	2.7
BVH - Back-Very High (80-90)	118.4	N.A.	0.7
UL - Uplight-Low (90-100)	187.4	N.A.	1.1
UH - Uplight-High (100-180)	403.3	N.A.	2.4
Total	16498.4	N.A.	100.0
BUG Rating	B1-U3-G3		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	5	15	25	35	45	50	55	65	75
0.0	802	802	802	802	802	802	802	802	802	802
2.5	828	825	818	817	817	817	811	811	804	804
5.0	935	936	927	920	921	910	895	873	829	807
7.5	941	949	935	957	990	987	968	947	913	849
10.0	1008	1021	1038	1015	1030	993	980	997	968	908
12.5	1057	1057	1060	1069	1061	1084	1065	1050	1052	981
15.0	1157	1133	1146	1160	1141	1141	1122	1136	1093	1070
17.5	1202	1223	1210	1209	1272	1234	1215	1236	1220	1153
20.0	1343	1359	1366	1403	1364	1407	1418	1388	1342	1281
22.5	1580	1550	1566	1581	1597	1560	1560	1597	1564	1442
25.0	1730	1760	1846	1916	1857	1856	1832	1864	1815	1749
27.5	2176	2248	2265	2223	2315	2202	2221	2174	2200	1970
30.0	2690	2700	2783	2820	2726	2773	2703	2602	2505	2300
32.5	3517	3507	3529	3413	3390	3280	3326	3093	2932	2654
35.0	4062	4041	4059	4190	4034	3929	3864	3694	3308	2909
37.5	4495	4527	4564	4772	4858	4616	4450	4145	3582	3155
40.0	4983	4976	5068	5335	5487	5362	5076	4601	3906	3304
42.5	5519	5532	5640	5910	6121	6048	5716	5077	4258	3415
45.0	6239	6275	6430	6677	6781	6633	6335	5623	4482	3553
47.5	7126	7105	7335	7614	7597	7236	6878	6315	4634	3850
50.0	8019	7994	8271	8611	8570	7930	7445	6803	5020	4080
52.5	8985	8978	9196	9594	9622	8755	8085	7275	5565	4387
55.0	10011	10057	10226	10651	10609	9678	8880	7896	6348	4994
57.5	11072	11053	11270	11798	11779	10713	9877	8692	7193	5599
60.0	10910	11047	11531	12546	12872	12024	11060	9734	8076	6308
62.5	9413	9660	10443	11909	13491	13192	12398	11116	9220	7206
65.0	6075	6256	7681	10216	12433	14265	13810	12741	10428	8047
67.5	2035	2135	3287	6658	10936	13411	14509	13968	11042	8646
70.0	1270	1311	1605	2824	8100	11811	13216	14329	10858	8060
72.5	909	943	1113	1735	3756	9524	10928	11974	10429	6530
75.0	662	693	838	1216	2115	5172	6817	7380	8111	2770
77.5	449	469	614	936	1408	2264	2467	3591	2398	1029
80.0	301	326	436	704	971	1213	1187	1239	935	624
82.5	227	251	344	566	646	689	636	603	554	470
85.0	172	195	276	461	476	412	372	340	341	369
87.5	130	151	219	364	310	244	229	229	243	273
90.0	91	106	160	214	163	170	178	186	202	222
92.5	56	62	91	109	132	157	165	174	191	207
95.0	65	66	93	111	133	158	165	173	191	195
97.5	74	68	95	114	133	155	163	168	186	164
100.0	79	70	95	115	133	153	161	162	171	139
102.5	82	73	95	115	133	150	156	152	150	107
105.0	83	76	95	117	133	146	149	139	124	91
107.5	85	79	93	117	131	139	136	122	99	83
110.0	86	83	92	117	129	127	119	103	82	75
112.5	86	85	90	115	122	111	101	87	72	72
115.0	87	86	89	111	112	95	87	77	65	70
117.5	86	86	87	104	100	83	76	70	61	68
120.0	86	86	84	94	88	75	70	66	58	66
122.5	85	83	79	83	79	70	66	63	58	65
125.0	82	80	73	74	74	67	65	62	59	64
127.5	76	75	69	68	70	66	64	62	61	64
130.0	71	70	66	64	67	66	65	64	62	66

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CANDELA TABULATION - (Cont.)

132.5	68	67	65	62	65	66	65	64	63	67
135.0	66	66	64	61	63	62	62	61	62	68
137.5	66	66	64	60	58	56	54	55	59	66
140.0	63	62	59	54	48	46	46	47	53	59
142.5	55	54	51	44	37	34	35	37	42	50
145.0	45	44	41	34	26	24	26	27	32	39
147.5	34	33	28	22	18	15	15	16	22	28
150.0	22	22	19	16	10	8	9	10	14	18
152.5	17	16	13	7	5	4	5	6	9	12
155.0	5	5	3	2	2	2	3	3	6	7
157.5	2	2	2	2	2	2	2	2	4	5
160.0	0	1	1	2	2	2	2	2	3	4
162.5	0	1	1	2	2	2	2	2	3	4
165.0	0	1	1	2	2	2	2	2	3	4
167.5	0	1	2	2	2	2	2	2	3	4
170.0	0	1	2	2	2	2	2	2	3	4
172.5	0	1	2	2	2	2	2	3	3	4
175.0	1	1	2	2	2	2	2	3	3	4
177.5	1	1	2	2	2	2	2	2	3	4
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	802	802	802	802	802	802	802	802	802	802
2.5	807	805	806	803	796	799	791	792	791	786
5.0	813	818	810	802	793	783	766	735	702	686
7.5	816	819	813	804	780	717	662	635	616	593
10.0	840	851	836	806	718	657	606	573	541	520
12.5	873	879	868	803	674	612	555	517	501	489
15.0	940	916	914	791	662	586	529	502	468	453
17.5	1005	960	946	781	650	566	515	471	452	451
20.0	1118	1054	1014	796	644	562	495	476	453	443
22.5	1266	1148	1102	808	646	558	505	475	463	470
25.0	1476	1309	1202	846	655	567	513	485	474	477
27.5	1649	1510	1294	884	674	583	528	501	500	525
30.0	1961	1621	1437	916	684	599	547	521	534	595
32.5	2149	1766	1520	971	698	610	556	551	622	738
35.0	2301	1882	1552	972	695	611	565	592	731	939
37.5	2442	1960	1585	963	693	606	572	628	888	1132
40.0	2543	2047	1673	947	677	591	581	660	990	1084
42.5	2677	2189	1684	928	643	578	578	662	979	782
45.0	2770	2229	1750	925	587	553	549	608	838	577
47.5	2875	2325	1871	899	504	500	488	540	669	465
50.0	3105	2524	1907	872	432	430	427	467	521	413
52.5	3318	2743	2032	861	377	368	366	391	423	386
55.0	3836	3101	2233	832	350	336	326	342	356	365
57.5	4446	3545	2455	783	335	312	304	309	319	344
60.0	5027	3900	2732	711	312	299	289	290	293	327
62.5	5456	4142	2984	588	295	287	276	276	275	312
65.0	5591	4093	2779	471	283	276	267	260	266	336
67.5	5330	3364	1953	363	276	265	258	264	308	413
70.0	4321	2217	1098	291	264	256	264	296	389	521
72.5	2410	1130	423	268	255	249	280	344	383	339
75.0	805	466	343	257	245	254	258	276	219	244
77.5	514	348	275	251	242	256	236	218	204	211

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CANDELA TABULATION - (Cont.)

80.0	401	305	242	247	235	243	232	215	203	202
82.5	335	254	232	247	231	217	228	215	204	204
85.0	292	202	215	239	226	212	230	218	208	205
87.5	231	175	205	239	223	212	233	223	212	202
90.0	183	153	215	241	228	214	236	224	213	197
92.5	163	148	211	240	228	210	231	226	218	203
95.0	155	181	199	235	220	202	222	219	214	199
97.5	138	194	191	216	207	187	210	207	205	189
100.0	141	183	182	191	193	173	199	199	198	178
102.5	139	164	167	168	178	164	187	190	191	165
105.0	127	146	151	150	159	156	178	183	183	150
107.5	114	128	135	134	144	147	168	175	175	135
110.0	103	114	120	123	130	139	159	167	165	119
112.5	93	102	108	115	119	131	150	160	155	107
115.0	86	94	99	108	113	127	143	151	142	96
117.5	80	87	93	103	109	122	135	143	128	87
120.0	76	83	87	99	106	119	130	133	115	80
122.5	73	79	83	95	103	115	124	123	101	76
125.0	71	76	81	91	101	112	119	114	88	73
127.5	70	74	79	90	99	110	112	103	79	70
130.0	71	74	79	89	98	106	106	91	71	67
132.5	72	75	79	89	95	98	96	82	66	65
135.0	74	77	80	87	89	87	81	70	63	64
137.5	72	75	78	82	81	74	63	54	54	59
140.0	67	70	72	73	69	58	46	40	42	48
142.5	58	61	62	60	53	43	32	27	31	36
145.0	46	48	49	46	38	29	21	18	21	25
147.5	33	34	34	31	25	18	13	12	14	14
150.0	21	21	21	20	18	12	9	7	8	10
152.5	14	14	14	14	11	9	6	5	3	3
155.0	9	10	10	9	9	7	6	3	2	2
157.5	6	6	7	7	7	6	5	3	2	1
160.0	5	6	6	6	6	6	5	3	2	0
162.5	5	6	6	6	6	6	4	2	2	0
165.0	5	6	6	6	6	6	4	2	1	0
167.5	5	6	6	6	6	6	4	2	1	0
170.0	5	6	6	6	6	6	4	2	1	0
172.5	5	5	6	6	6	6	4	2	1	0
175.0	5	5	5	6	6	6	4	2	1	0
177.5	5	5	5	6	6	5	4	2	1	0
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	**Horizontal Angles**	
	175	**180**
0.0	802	802
2.5	784	783
5.0	684	680
7.5	587	585
10.0	511	510
12.5	480	480
15.0	443	439
17.5	441	441
20.0	438	433
22.5	460	457
25.0	478	477

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CANDELA TABULATION - (Cont.)

27.5	518	517
30.0	609	594
32.5	718	695
35.0	904	868
37.5	993	935
40.0	776	722
42.5	519	497
45.0	431	415
47.5	385	375
50.0	360	351
52.5	340	335
55.0	324	324
57.5	313	320
60.0	306	321
62.5	303	324
65.0	364	394
67.5	467	477
70.0	301	269
72.5	261	239
75.0	226	188
77.5	177	129
80.0	159	107
82.5	293	294
85.0	208	150
87.5	142	99
90.0	117	71
92.5	123	92
95.0	123	108
97.5	119	120
100.0	117	129
102.5	115	131
105.0	111	130
107.5	108	123
110.0	104	116
112.5	100	108
115.0	96	101
117.5	91	94
120.0	87	89
122.5	83	83
125.0	79	79
127.5	74	74
130.0	70	70
132.5	66	67
135.0	65	65
137.5	62	63
140.0	50	50
142.5	38	38
145.0	26	26
147.5	16	16
150.0	10	10
152.5	4	4
155.0	0	0
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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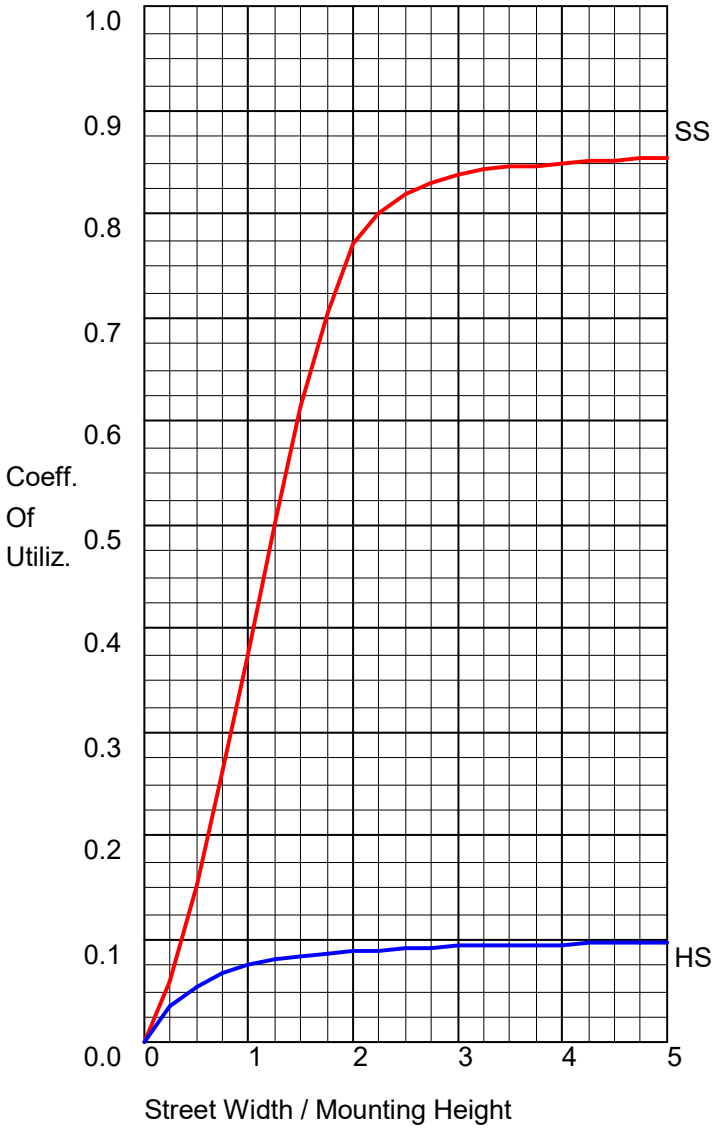
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	14225.3	86.2
Downward House Side	1682.3	10.2
Downward Total	15907.6	96.4
Upward Street Side	254.3	1.5
Upward House Side	336.4	2.0
Upward Total	590.7	3.6
Total Flux	16498.3	100.0

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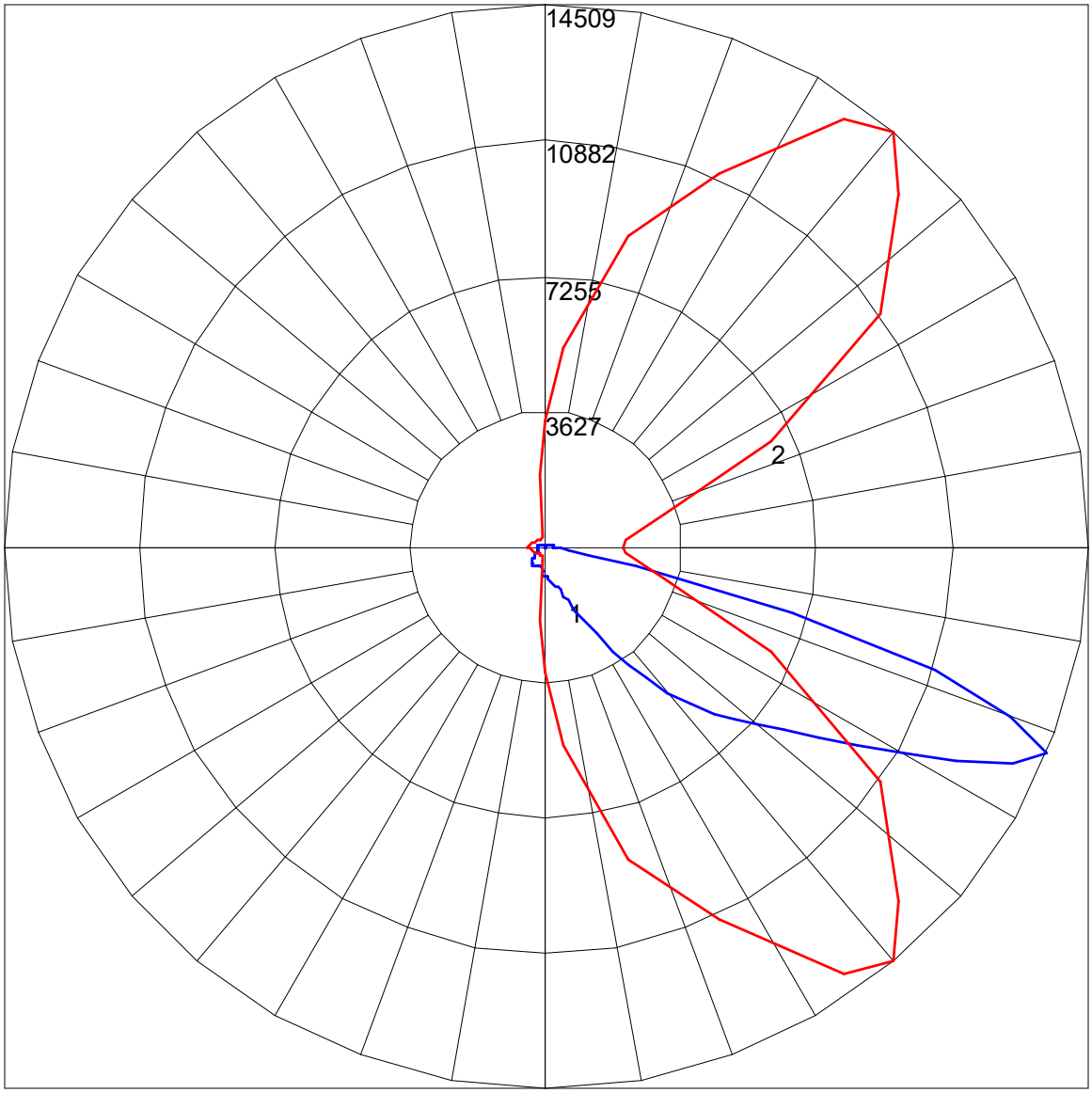
POLAR GRAPH



Maximum Candela = 14509 Located At Horizontal Angle = 50, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (50 - 230) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

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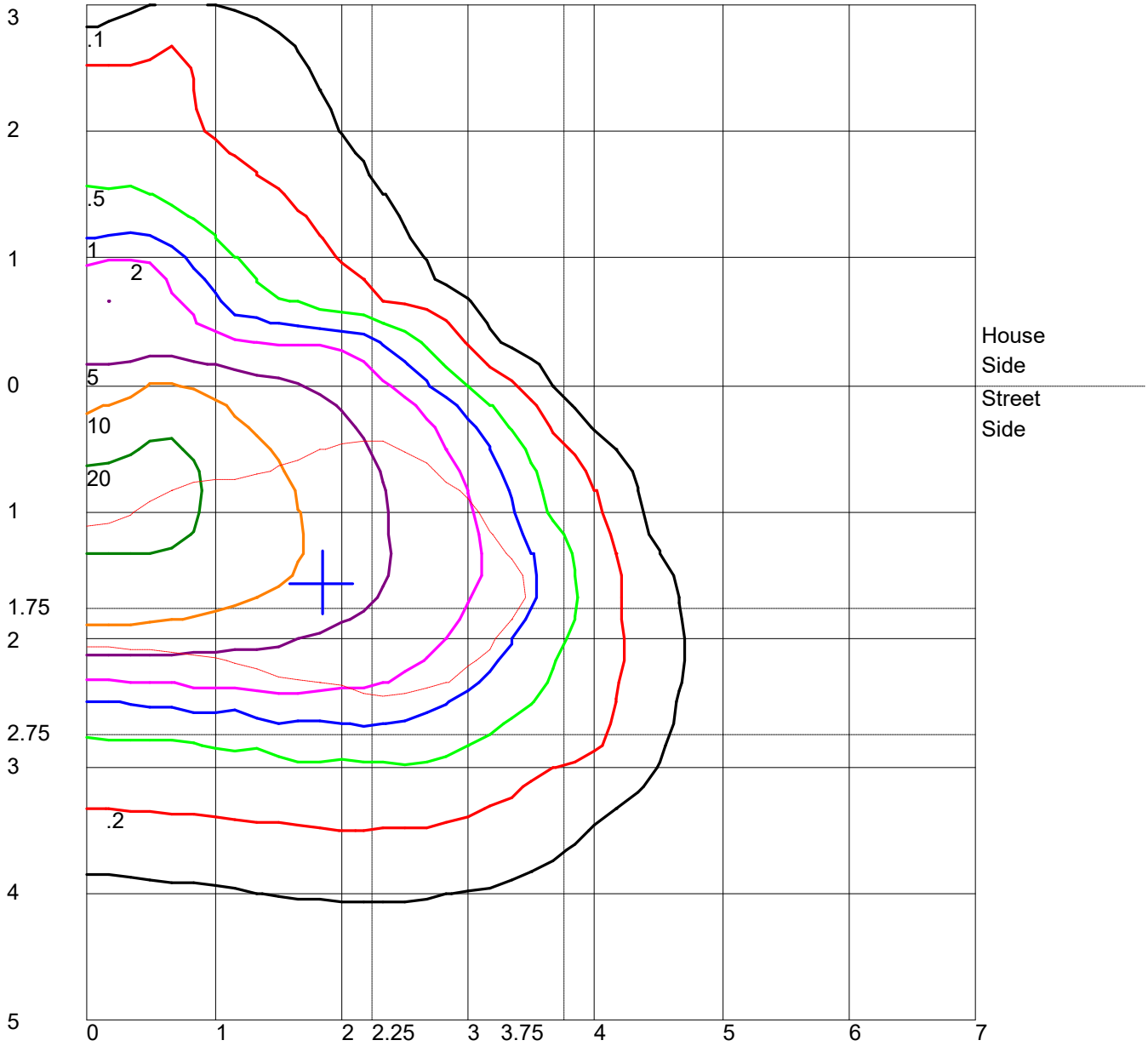
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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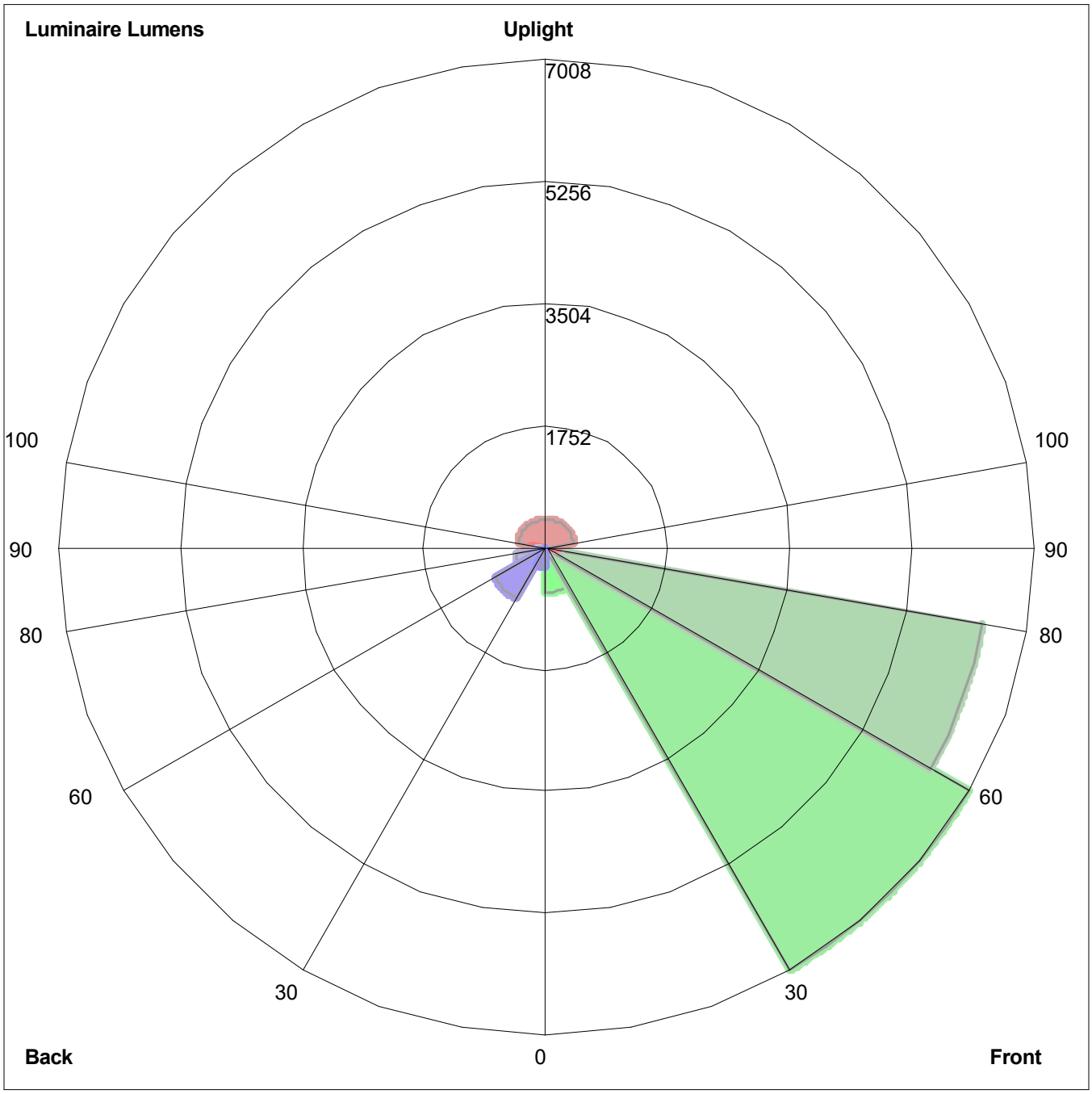
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=640.9, Medium=7007.6, High=6365.1, Very High=211.7
Back: Low=268.9, Medium=849.6, High=445.5, Very High=118.4
Uplight: Low=187.4, High=403.3

BUG Rating : B1-U3-G3

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