IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-3-40-70CRI-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-3-40-70CRI-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 III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10639
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	8701
Maximum Candela Angle	35H 67.5V
Maximum Candela (<90 Degrees Vertical)	8701
Maximum Candela Angle (<90 Degrees Vertical)	35H 67.5V
Maximum Candela At 90 Degrees Vertical	268 (2.5% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1117 (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)	563.3	N.A.	5.3
FM - Front-Medium (30-60)	4731.9	N.A.	44.5
FH - Front-High (60-80)	3923.0	N.A.	36.9
FVH - Front-Very High (80-90)	226.3	N.A.	2.1
BL - Back-Low (0-30)	126.7	N.A.	1.2
BM - Back-Medium (30-60)	343.5	N.A.	3.2
BH - Back-High (60-80)	231.0	N.A.	2.2
BVH - Back-Very High (80-90)	73.0	N.A.	0.7
UL - Uplight-Low (90-100)	131.4	N.A.	1.2
UH - Uplight-High (100-180)	288.4	N.A.	2.7
Total	10638.5	N.A.	100.0
BUG Rating	B1-U3-G3		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	5	15	25	30	35	45	55	65	75
0.0	454	454	454	454	454	454	454	454	454	454
2.5	519	513	509	504	509	498	494	482	472	465
5.0	715	706	701	681	682	666	646	598	543	493
7.5	832	835	811	824	834	840	811	725	650	558
10.0	906	917	939	912	924	931	876	861	779	648
12.5	941	939	941	961	957	952	976	939	916	743
15.0	1040	1013	1028	1045	1023	1017	1022	1024	981	881
17.5	1067	1089	1077	1078	1113	1146	1098	1109	1101	1007
20.0	1204	1220	1230	1260	1225	1226	1268	1238	1214	1172
22.5	1414	1403	1403	1426	1431	1444	1415	1428	1416	1342
25.0	1578	1590	1665	1738	1701	1685	1709	1693	1673	1653
27.5	1903	1937	1973	1989	2041	2116	2043	2024	2052	1862
30.0	2169	2150	2307	2423	2440	2449	2603	2459	2354	2179
32.5	2487	2512	2659	2736	2831	2956	3022	2949	2783	2543
35.0	2669	2692	2852	3144	3272	3339	3558	3526	3178	2765
37.5	2744	2807	2994	3369	3558	3819	4049	3951	3446	3015
40.0	2789	2815	3093	3576	3803	4134	4492	4314	3760	3169
42.5	2788	2828	3199	3781	4050	4416	4911	4633	4080	3280
45.0	2831	2887	3356	4079	4344	4727	5215	4947	4293	3398
47.5	2950	3005	3595	4440	4730	5148	5527	5307	4380	3657
50.0	3002	3062	3763	4758	5128	5562	5861	5524	4610	3853
52.5	3012	3071	3812	4917	5394	5874	6196	5700	4870	4121
55.0	3469	3461	4006	5040	5527	5990	6417	5892	5158	4671
57.5	5212	5126	5217	5565	5833	6080	6503	5912	5355	5055
60.0	7000	6964	6988	6950	6852	6538	6359	5625	5319	5414
62.5	7662	7718	7849	8032	7979	7562	6215	5080	5159	5803
65.0	6244	6351	7201	8370	8590	8268	6735	4454	4639	5816
67.5	2531	2626	3779	6594	8077	8701	7440	3996	3718	5501
70.0	1210	1218	1520	2770	4817	6996	7999	4545	2611	4315
72.5	952	963	1105	1568	2087	3051	7459	6354	1806	2500
75.0	792	816	918	1149	1357	1654	3862	5265	1681	895
77.5	675	695	763	920	1027	1195	1629	2824	1001	415
80.0	592	608	651	727	779	900	1117	1093	592	284
82.5	504	515	542	586	621	683	858	803	485	261
85.0	327	336	352	380	407	453	625	714	443	254
87.5	179	190	204	228	250	279	403	490	356	205
90.0	88	93	113	135	151	167	223	268	213	159
92.5	46	50	70	87	95	103	127	149	139	143
95.0	50	48	68	83	87	95	111	118	129	134
97.5	55	50	69	83	88	95	109	115	126	115
100.0	59	52	70	83	89	95	107	111	117	98
102.5	61	54	70	84	89	95	106	106	103	77
105.0	62	56	69	84	90	95	103	97	87	65
107.5	63	59	68	85	90	94	98	86	71	59
110.0	64	62	67	85	89	92	90	73	60	54
112.5	64	63	66	83	87	88	79	62	53	52
115.0	64	64	66	81	83	81	69	57	48	51
117.5	65	65	65	76	76	73	62	52	45	50
120.0	65	64	63	70	69	66	58	50	43	48
122.5	64	63	59	62	62	61	54	48	43	46
125.0	62	62	56	58	58	57	53	48	44	46
127.5	59	58	54	54	55	54	51	48	45	46
130.0	56	55	52	51	53	52	50	49	46	47

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CANDELA TABULATION - (Cont.)

132.5	54	54	52	50	50	51	50	48	46	49
135.0	53	53	51	49	50	50	49	46	46	49
137.5	54	53	51	49	47	46	44	42	43	47
140.0	51	50	48	43	41	39	36	35	38	42
142.5	45	44	41	36	34	30	27	28	30	35
145.0	37	36	33	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	454	454	454	454	454	454	454	454	454	454
2.5	459	453	450	445	432	426	422	420	414	411
5.0	472	465	451	427	406	389	368	352	329	313
7.5	489	469	449	416	379	329	287	270	264	257
10.0	526	496	464	402	329	280	268	257	247	240
12.5	557	516	478	389	296	276	258	246	246	242
15.0	643	551	504	377	300	275	258	252	233	220
17.5	711	594	525	376	312	279	260	228	204	193
20.0	836	671	582	404	332	288	235	200	180	169
22.5	994	763	661	443	348	268	204	175	163	163
25.0	1210	904	779	506	344	227	183	160	154	148
27.5	1397	1117	889	546	305	195	166	152	139	136
30.0	1713	1260	1061	545	240	179	159	141	128	122
32.5	1939	1439	1172	517	205	171	149	131	118	115
35.0	2113	1589	1212	456	190	163	138	122	113	107
37.5	2277	1679	1222	397	182	155	129	120	111	102
40.0	2377	1763	1250	337	175	144	127	122	107	86
42.5	2502	1895	1193	267	168	140	131	120	95	74
45.0	2591	1923	1173	223	163	143	135	111	90	73
47.5	2694	1971	1238	214	164	147	131	105	91	73
50.0	2909	2136	1254	212	172	155	126	104	93	75
52.5	3103	2296	1331	203	178	175	127	107	106	130
55.0	3495	2600	1445	183	151	172	144	124	159	167
57.5	4050	2990	1540	173	140	140	153	163	185	124
60.0	4670	3422	1654	163	137	132	159	173	145	92
62.5	5175	3733	1750	155	136	135	155	142	136	102
65.0	5342	3719	1476	151	137	142	141	117	128	106
67.5	4971	3010	1011	149	135	140	131	128	118	103
70.0	3892	1904	520	143	139	147	135	124	119	105
72.5	1914	863	213	142	139	141	131	126	115	109
75.0	536	304	178	141	139	135	135	127	119	111
77.5	352	232	159	145	143	135	138	131	123	115

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CANDELA TABULATION - (Cont.)

80.0	261	199	146	148	142	136	142	134	127	118
82.5	206	166	143	159	147	139	147	138	131	124
85.0	175	127	135	160	150	143	152	143	133	126
87.5	143	107	131	162	151	143	155	145	136	127
90.0	119	90	136	161	152	142	155	148	140	130
92.5	111	92	134	160	153	140	155	151	145	135
95.0	102	116	126	155	149	134	148	147	143	135
97.5	94	127	122	142	139	124	141	139	139	128
100.0	96	122	117	123	130	117	133	135	135	121
102.5	95	111	108	107	119	112	127	129	130	113
105.0	87	99	99	95	107	108	121	124	125	103
107.5	79	87	91	87	98	102	115	120	119	94
110.0	71	79	82	81	88	96	111	116	115	86
112.5	66	72	74	76	81	91	105	112	108	79
115.0	62	66	69	73	76	87	100	107	101	73
117.5	58	62	65	70	73	84	95	101	93	67
120.0	54	58	61	66	70	81	91	95	83	63
122.5	52	55	58	64	69	78	87	88	74	62
125.0	50	53	56	62	68	77	83	81	66	59
127.5	50	52	55	62	67	75	78	74	60	57
130.0	50	52	54	61	66	73	74	66	55	54
132.5	51	53	55	62	64	67	68	61	53	53
135.0	52	54	56	61	61	58	58	54	50	52
137.5	51	53	54	57	55	50	44	42	43	49
140.0	47	49	50	50	46	40	32	30	34	39
142.5	39	41	42	41	36	30	23	21	25	29
145.0	31	32	32	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	454	454
2.5	405	406
5.0	301	300
7.5	255	254
10.0	238	236
12.5	239	239
15.0	214	212
17.5	187	185
20.0	166	163
22.5	157	156
25.0	143	143

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CANDELA TABULATION - (Cont.)

27.5	131	129
30.0	119	117
32.5	112	111
35.0	107	106
37.5	99	96
40.0	83	80
42.5	74	74
45.0	72	72
47.5	72	73
50.0	76	77
52.5	143	147
55.0	167	171
57.5	70	70
60.0	65	68
62.5	65	66
65.0	64	62
67.5	64	58
70.0	62	52
72.5	64	47
75.0	68	42
77.5	69	39
80.0	71	37
82.5	74	40
85.0	76	42
87.5	78	46
90.0	79	52
92.5	83	66
95.0	85	77
97.5	85	86
100.0	83	91
102.5	82	92
105.0	79	90
107.5	78	87
110.0	76	83
112.5	74	79
115.0	73	75
117.5	71	72
120.0	69	70
122.5	66	67
125.0	63	64
127.5	60	61
130.0	57	58
132.5	54	54
135.0	53	53
137.5	51	51
140.0	42	42
142.5	31	32
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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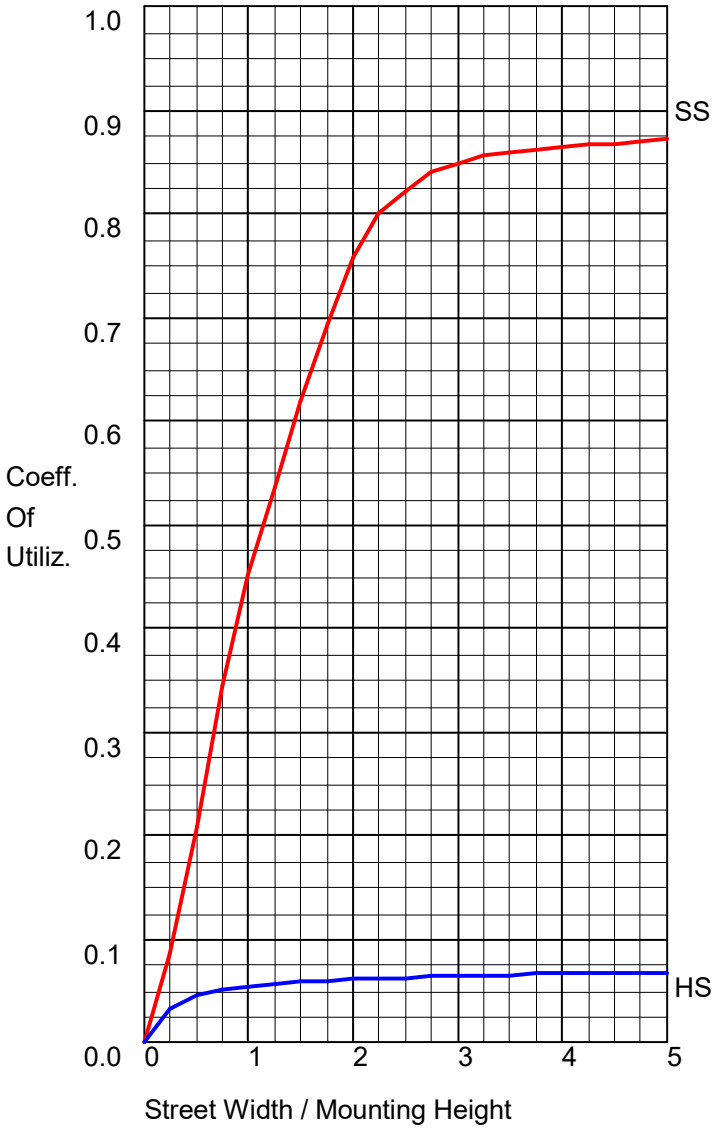
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	9444.5	88.8
Downward House Side	774.2	7.3
Downward Total	10218.7	96.1
Upward Street Side	187.7	1.8
Upward House Side	232.1	2.2
Upward Total	419.8	3.9
Total Flux	10638.5	100.0

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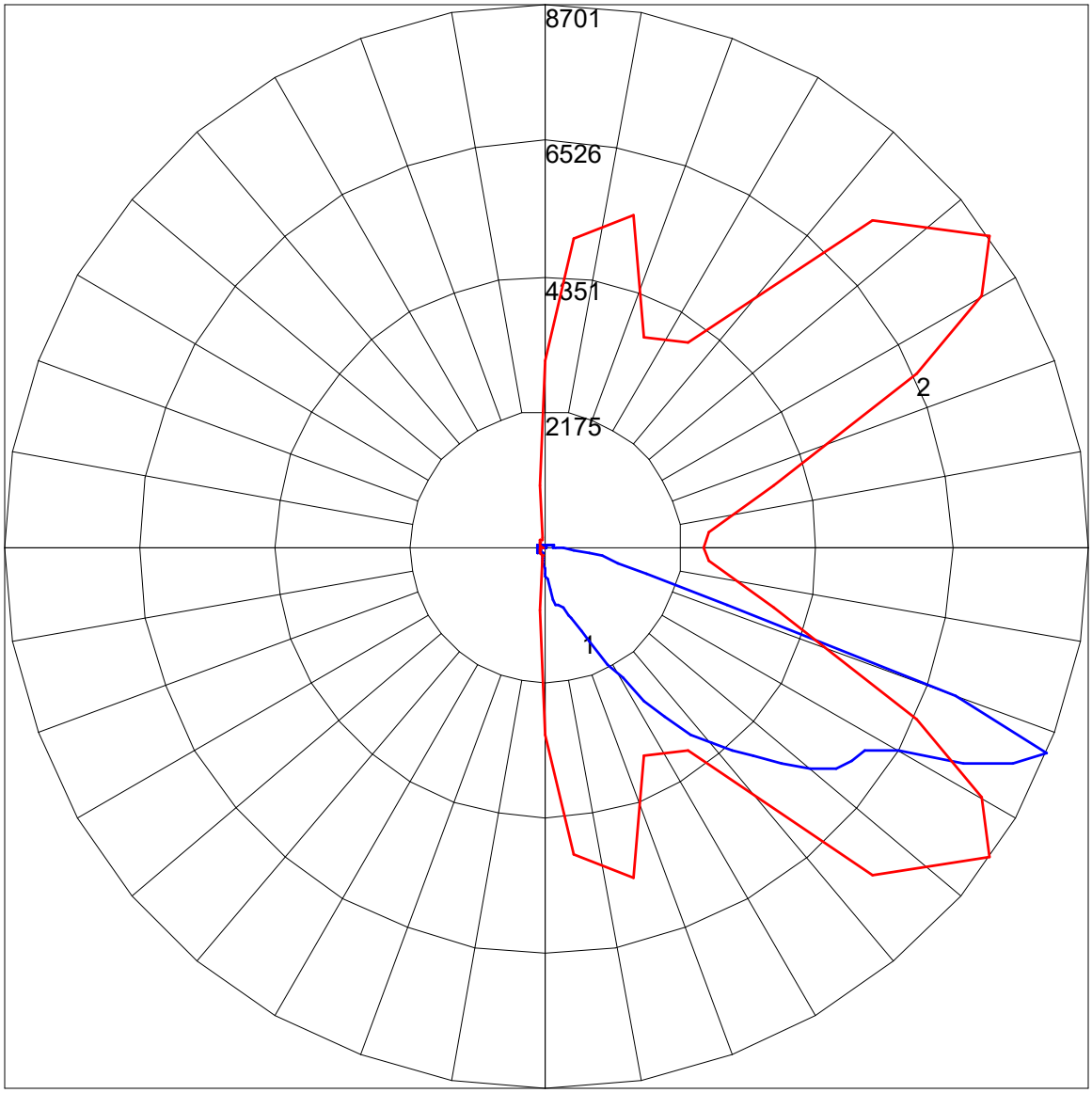
POLAR GRAPH



Maximum Candela = 8701 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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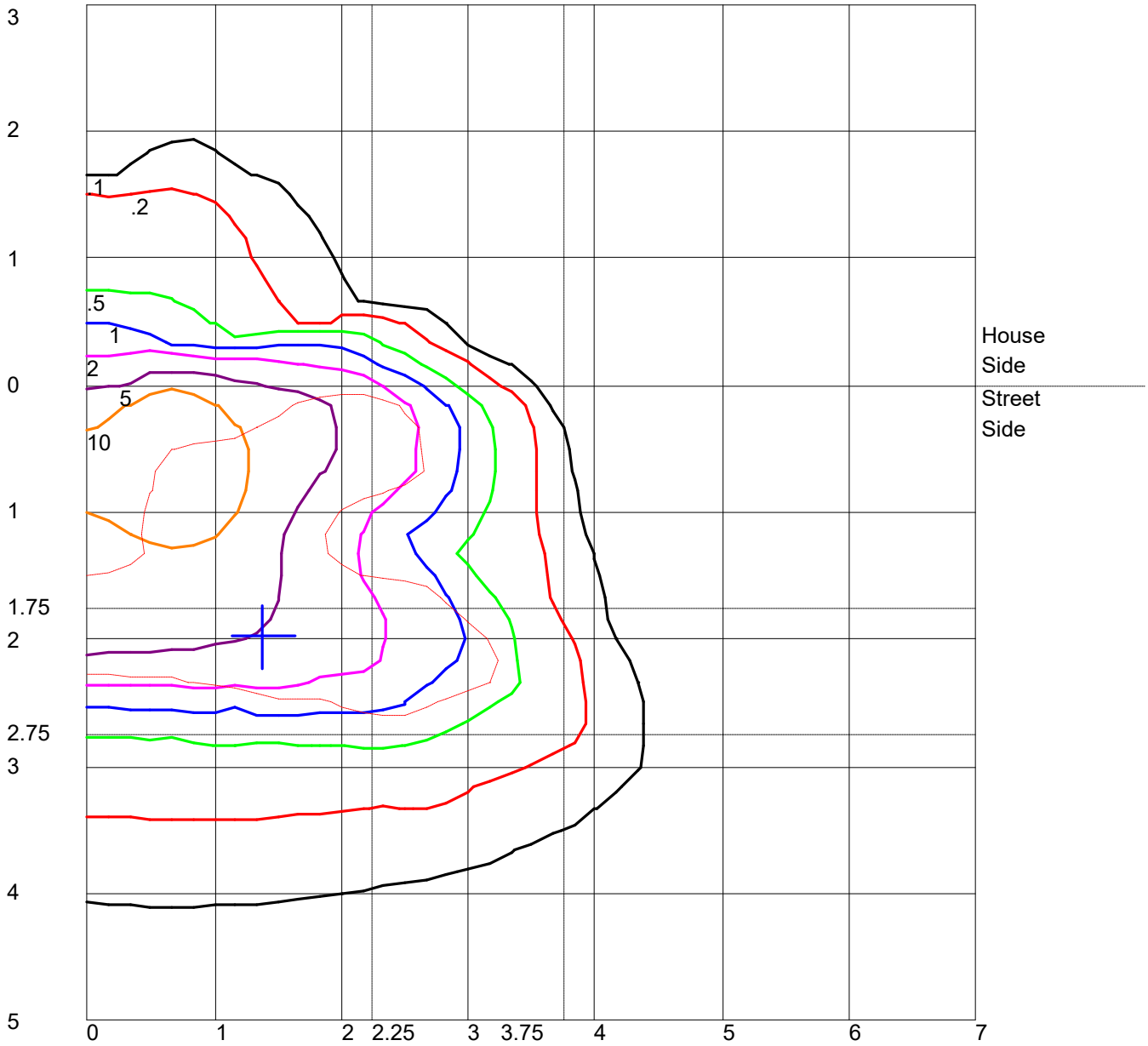
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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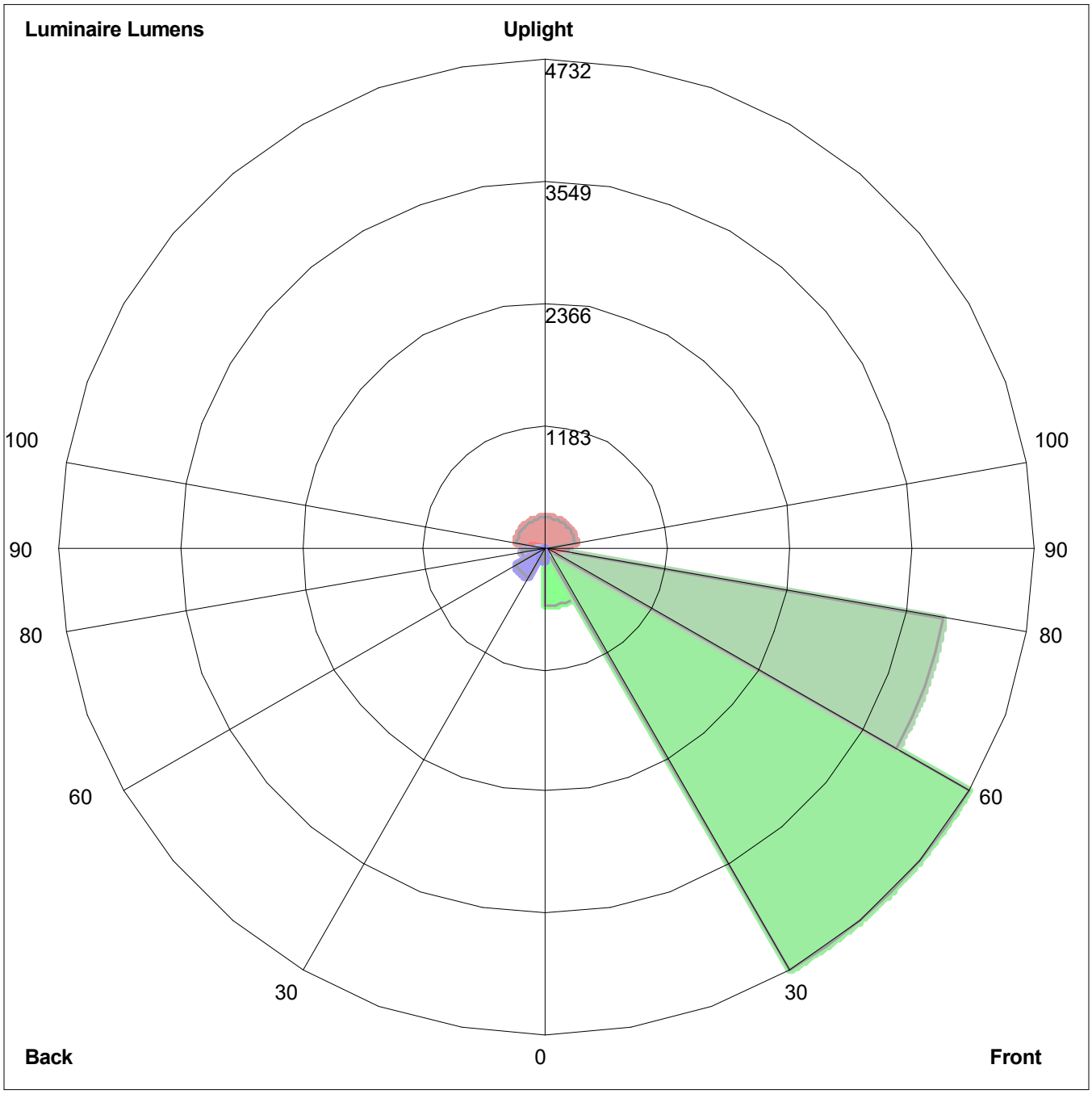
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=563.3, Medium=4731.9, High= 3923.0, Very High=226.3
Back: Low=126.7, Medium=343.5, High=231.0, Very High=73.0
Uplight: Low=131.4, High=288.4

BUG Rating : B1-U3-G3

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