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

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12643
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/29/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-FT-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 IV
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	9986
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	7978
Maximum Candela Angle	30H 67.5V
Maximum Candela (<90 Degrees Vertical)	7978
Maximum Candela Angle (<90 Degrees Vertical)	30H 67.5V
Maximum Candela At 90 Degrees Vertical	142 (1.4% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1393 (13.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	812.1	N.A.	8.1
FM - Front-Medium (30-60)	4010.0	N.A.	40.2
FH - Front-High (60-80)	3751.4	N.A.	37.6
FVH - Front-Very High (80-90)	160.3	N.A.	1.6
BL - Back-Low (0-30)	171.4	N.A.	1.7
BM - Back-Medium (30-60)	373.4	N.A.	3.7
BH - Back-High (60-80)	207.1	N.A.	2.1
BVH - Back-Very High (80-90)	67.5	N.A.	0.7
UL - Uplight-Low (90-100)	117.9	N.A.	1.2
UH - Uplight-High (100-180)	314.7	N.A.	3.2
Total	9985.8	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	762	762	762	762	762	762	762	762	762	762
2.5	893	891	865	861	860	862	850	830	809	789
5.0	986	981	953	986	980	997	1017	981	928	868
7.5	1353	1318	1305	1289	1260	1220	1133	1039	1008	945
10.0	1444	1428	1424	1458	1436	1446	1384	1287	1103	1054
12.5	1599	1544	1598	1615	1595	1569	1515	1468	1328	1138
15.0	1630	1610	1607	1630	1654	1698	1724	1630	1594	1299
17.5	1826	1773	1825	1836	1834	1797	1825	1861	1789	1550
20.0	2047	2037	2047	1997	2012	2039	1972	2023	1994	1735
22.5	2214	2214	2269	2289	2246	2191	2236	2162	2177	1976
25.0	2432	2455	2508	2422	2448	2505	2392	2327	2354	2133
27.5	2543	2550	2558	2656	2689	2643	2674	2536	2443	2336
30.0	2533	2576	2660	2720	2734	2855	2843	2737	2535	2537
32.5	2423	2434	2557	2796	2903	2974	3088	2924	2711	2653
35.0	2339	2332	2436	2695	2841	3055	3300	3094	2843	2695
37.5	2258	2262	2358	2601	2759	2992	3504	3366	3045	2713
40.0	2256	2258	2353	2586	2736	2950	3547	3596	3283	2776
42.5	2408	2389	2478	2668	2783	2979	3575	3929	3413	2949
45.0	2707	2698	2761	2899	2948	3106	3616	4125	3607	3116
47.5	3163	3155	3224	3309	3278	3371	3728	4279	3951	3354
50.0	3696	3666	3758	3892	3790	3778	3913	4403	4274	3728
52.5	3950	3957	4137	4426	4352	4282	4122	4528	4468	3849
55.0	4064	4068	4280	4722	4768	4714	4357	4492	4374	4001
57.5	4703	4676	4662	4880	4933	4938	4612	4240	4242	4173
60.0	5946	6000	5811	5531	5310	5030	4515	3850	3965	4425
62.5	6751	6839	6909	6933	6532	5774	4067	3472	3524	4508
65.0	6897	7017	7234	7736	7673	7216	4226	3041	2900	4183
67.5	6528	6613	6974	7791	7978	7904	6026	2504	2207	3343
70.0	5025	5067	5860	6887	7308	7628	6854	2964	1569	2324
72.5	1963	2199	3232	4927	6081	7025	6330	4089	1019	1239
75.0	699	762	1299	2118	2849	4218	6014	3618	707	588
77.5	515	532	692	1135	1377	1896	3008	2261	664	313
80.0	361	371	434	626	738	964	1342	1393	707	241
82.5	200	210	235	288	337	430	663	695	473	288
85.0	107	117	134	164	198	253	375	472	333	241
87.5	60	65	85	113	133	142	193	231	195	158
90.0	41	45	63	78	85	91	115	135	128	131
92.5	46	46	64	77	83	90	101	105	113	125
95.0	52	49	65	79	85	92	104	107	116	119
97.5	56	51	67	80	86	92	104	107	113	99
100.0	59	53	69	82	86	92	103	104	104	82
102.5	61	57	69	82	87	92	101	98	90	69
105.0	64	60	69	84	88	93	98	89	76	65
107.5	65	64	69	86	89	92	92	77	65	61
110.0	67	66	70	86	90	91	84	67	60	60
112.5	68	68	71	86	87	86	75	62	56	59
115.0	69	69	71	83	83	79	68	59	53	58
117.5	71	71	71	78	77	74	65	57	52	57
120.0	72	72	69	73	71	69	62	56	52	57
122.5	72	71	67	68	68	66	61	56	53	56
125.0	70	69	65	65	66	65	61	56	53	55
127.5	68	67	64	64	65	64	61	57	54	56
130.0	66	66	64	62	63	63	62	58	56	57

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CANDELA TABULATION - (Cont.)

132.5	66	65	64	62	63	64	61	57	57	59
135.0	66	66	65	62	61	61	56	53	56	61
137.5	65	65	62	57	54	52	47	47	52	59
140.0	58	57	53	48	45	41	37	39	45	53
142.5	48	47	43	37	33	30	29	31	36	44
145.0	37	35	31	26	23	21	21	22	27	33
147.5	24	24	22	18	17	14	10	14	19	24
150.0	18	18	15	10	7	5	5	6	11	15
152.5	7	6	5	3	3	2	2	4	6	9
155.0	2	2	2	2	2	2	2	3	4	6
157.5	0	1	2	2	2	2	2	2	3	4
160.0	0	1	2	2	2	2	2	2	3	3
162.5	0	1	2	2	2	2	2	2	3	3
165.0	0	1	2	2	2	2	2	2	2	3
167.5	0	1	2	2	2	2	2	2	3	3
170.0	0	1	2	2	2	2	2	2	3	3
172.5	0	1	2	2	2	2	2	2	2	3
175.0	1	1	2	2	2	2	2	2	2	3
177.5	1	1	2	2	2	2	2	2	2	3
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	762	762	762	762	762	762	762	762	762	762
2.5	774	774	766	753	730	702	680	674	668	661
5.0	811	790	767	708	665	674	666	640	623	606
7.5	853	815	779	692	678	635	588	538	485	430
10.0	920	863	793	727	652	577	449	340	295	253
12.5	1052	965	847	780	647	446	321	238	203	192
15.0	1155	1047	929	821	587	356	224	188	180	176
17.5	1298	1159	1016	839	509	265	184	173	171	166
20.0	1442	1254	1119	838	422	200	176	164	161	162
22.5	1563	1432	1212	832	318	183	168	156	154	152
25.0	1730	1493	1285	793	230	178	162	149	145	146
27.5	1884	1599	1389	730	197	172	157	141	136	133
30.0	1935	1695	1421	610	192	165	150	134	125	127
32.5	2082	1746	1464	515	187	160	143	125	126	133
35.0	2154	1819	1494	433	184	155	133	125	137	149
37.5	2226	1939	1499	334	177	149	126	135	149	153
40.0	2313	2000	1507	261	171	142	129	150	153	132
42.5	2495	2036	1534	222	164	135	143	157	127	95
45.0	2577	2158	1524	208	156	141	161	140	101	80
47.5	2678	2185	1533	209	153	153	164	114	92	75
50.0	2863	2219	1469	230	188	167	145	104	90	78
52.5	2908	2321	1435	196	196	215	129	101	102	137
55.0	3076	2427	1350	175	149	213	151	121	187	232
57.5	3319	2535	1353	164	142	141	188	201	250	215
60.0	3619	2827	1393	156	141	125	184	248	183	90
62.5	3806	2898	1348	148	137	121	191	192	112	90
65.0	3854	2801	1159	143	130	149	166	122	117	96
67.5	3457	2362	880	140	121	151	118	122	117	97
70.0	2594	1540	481	133	127	135	124	131	112	98
72.5	1305	711	234	129	125	133	125	117	113	101
75.0	572	371	174	129	134	130	122	119	114	108
77.5	380	261	151	127	133	121	126	121	117	112

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CANDELA TABULATION - (Cont.)

80.0	277	215	137	135	129	122	129	123	117	113
82.5	211	170	123	144	134	125	134	127	121	116
85.0	168	120	120	152	139	131	139	130	124	119
87.5	130	87	116	149	141	133	144	136	127	120
90.0	99	70	121	142	138	127	142	138	133	123
92.5	85	85	120	143	141	128	144	142	137	128
95.0	86	109	113	141	140	124	142	144	141	133
97.5	90	115	109	130	130	116	134	137	137	132
100.0	94	109	105	114	121	109	126	129	132	125
102.5	92	101	98	101	113	106	120	124	127	117
105.0	86	93	93	92	105	105	116	120	123	109
107.5	80	88	89	87	98	104	114	118	120	101
110.0	76	82	84	83	92	101	112	117	117	93
112.5	72	78	80	81	87	97	110	116	113	87
115.0	69	74	76	79	84	95	107	114	109	82
117.5	65	70	73	78	82	93	104	111	103	77
120.0	63	68	70	76	79	92	101	107	95	74
122.5	61	65	68	74	79	90	98	101	89	73
125.0	60	63	66	73	78	88	95	94	81	71
127.5	60	62	66	73	78	87	92	89	74	70
130.0	61	63	66	73	78	86	87	82	69	69
132.5	61	64	67	73	76	82	83	76	66	67
135.0	64	66	69	74	74	73	75	71	65	66
137.5	65	67	69	70	68	62	61	61	64	65
140.0	60	61	63	62	57	51	47	48	54	61
142.5	50	52	53	51	45	39	33	36	43	49
145.0	38	40	40	38	33	29	24	26	31	37
147.5	27	28	28	27	23	18	16	18	22	27
150.0	17	18	18	17	14	9	8	11	14	18
152.5	10	10	10	10	8	6	4	5	9	12
155.0	6	6	6	6	5	4	2	3	3	5
157.5	4	4	4	4	4	3	2	2	2	2
160.0	3	3	3	4	3	3	2	2	2	2
162.5	3	3	3	3	3	2	2	2	2	2
165.0	3	3	3	3	3	2	2	2	2	1
167.5	3	3	3	3	3	2	2	2	2	1
170.0	3	3	3	3	3	2	2	2	2	1
172.5	3	3	3	3	3	2	2	2	1	1
175.0	3	3	3	3	3	2	2	2	1	0
177.5	3	3	3	3	3	2	2	1	1	0
180.0	2	2	2	2	2	2	2	2	2	2

Vert. Angles	**Horizontal Angles**	
	175	**180**
0.0	762	762
2.5	660	661
5.0	598	604
7.5	407	411
10.0	235	238
12.5	184	181
15.0	175	175
17.5	164	163
20.0	160	160
22.5	149	149
25.0	141	141

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CANDELA TABULATION - (Cont.)

27.5	129	130
30.0	127	126
32.5	138	137
35.0	153	153
37.5	153	152
40.0	120	116
42.5	90	87
45.0	78	77
47.5	74	74
50.0	81	81
52.5	167	180
55.0	242	249
57.5	149	148
60.0	72	78
62.5	70	74
65.0	71	74
67.5	68	67
70.0	67	62
72.5	67	57
75.0	67	51
77.5	70	47
80.0	73	43
82.5	75	41
85.0	74	41
87.5	76	42
90.0	78	47
92.5	82	57
95.0	86	70
97.5	87	80
100.0	85	86
102.5	82	89
105.0	79	88
107.5	78	86
110.0	78	85
112.5	78	83
115.0	79	82
117.5	78	80
120.0	78	79
122.5	78	78
125.0	77	77
127.5	75	75
130.0	73	73
132.5	70	70
135.0	68	69
137.5	67	67
140.0	65	65
142.5	53	53
145.0	41	41
147.5	30	30
150.0	19	20
152.5	13	13
155.0	6	6
157.5	2	2
160.0	1	0
162.5	1	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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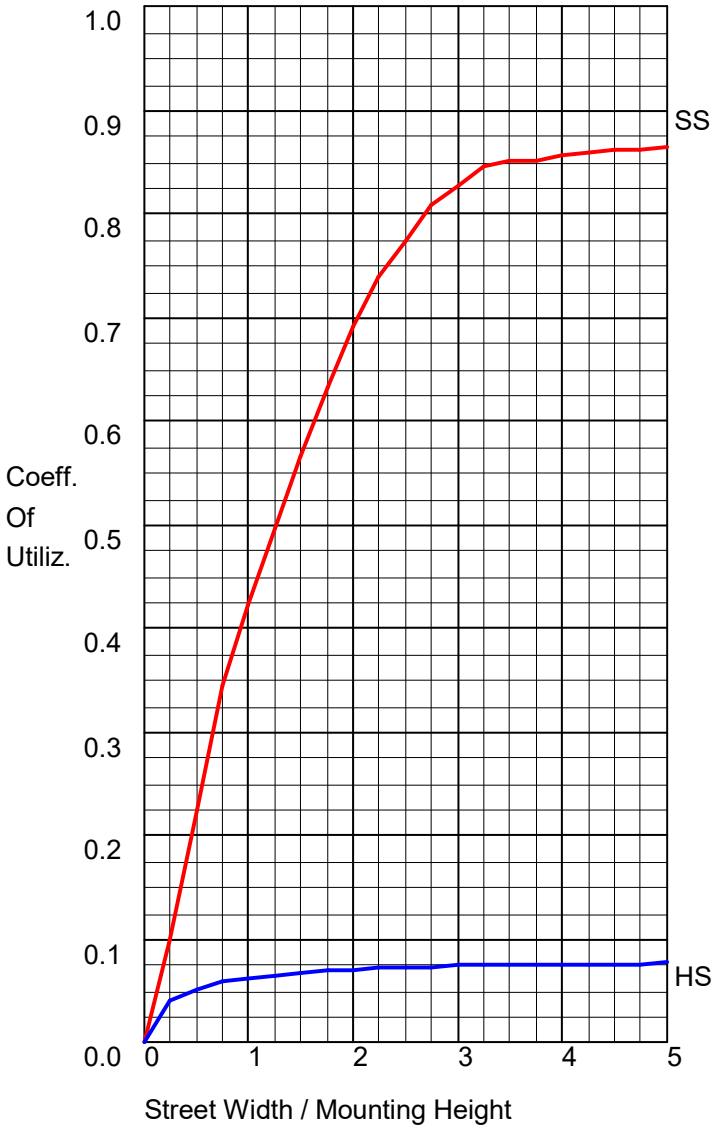
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	8733.7	87.5
Downward House Side	819.4	8.2
Downward Total	9553.1	95.7
Upward Street Side	187.1	1.9
Upward House Side	245.5	2.5
Upward Total	432.6	4.3
Total Flux	9985.7	100.0

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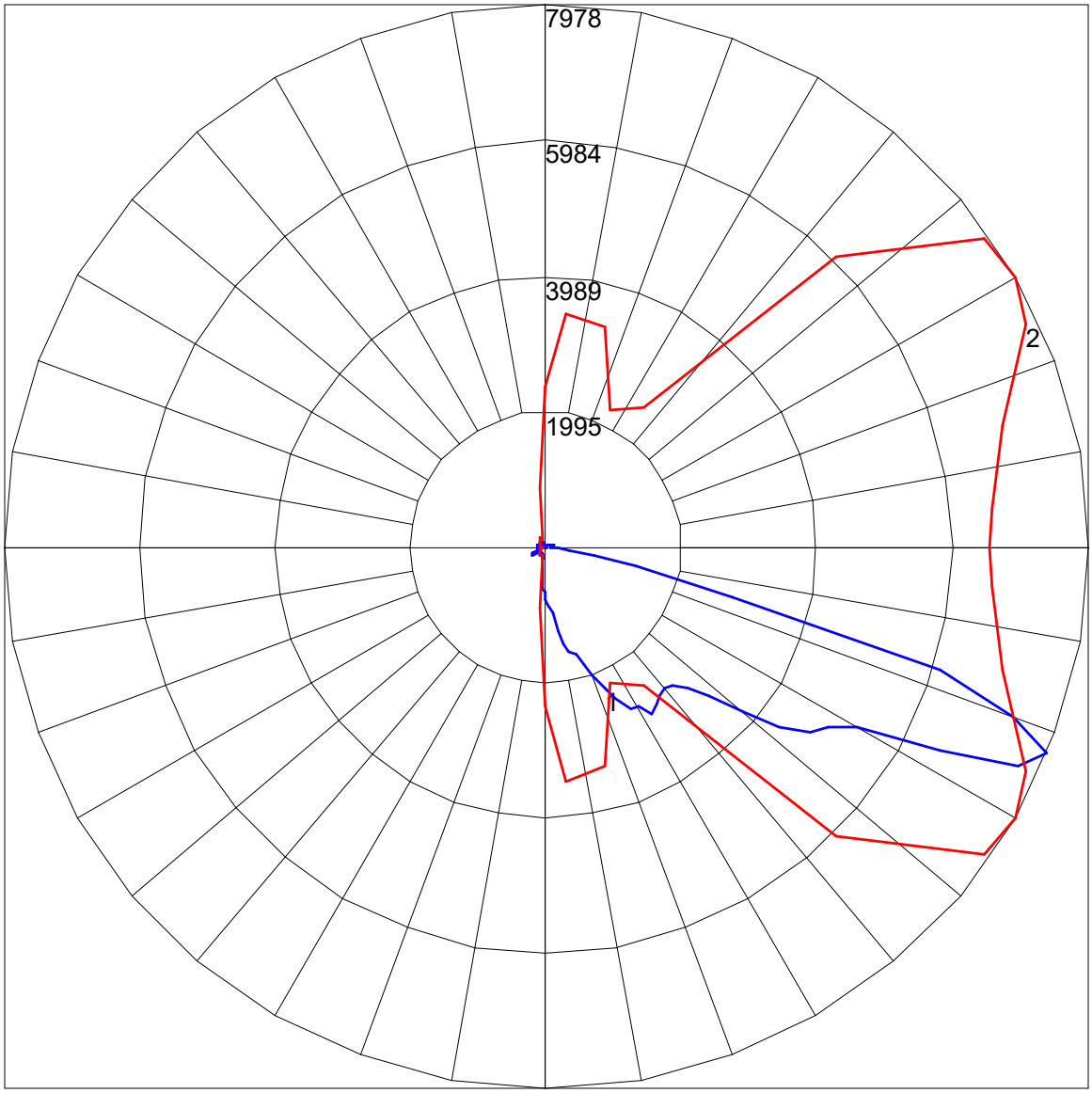
POLAR GRAPH



Maximum Candela = 7978 Located At Horizontal Angle = 30, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (30 - 210) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

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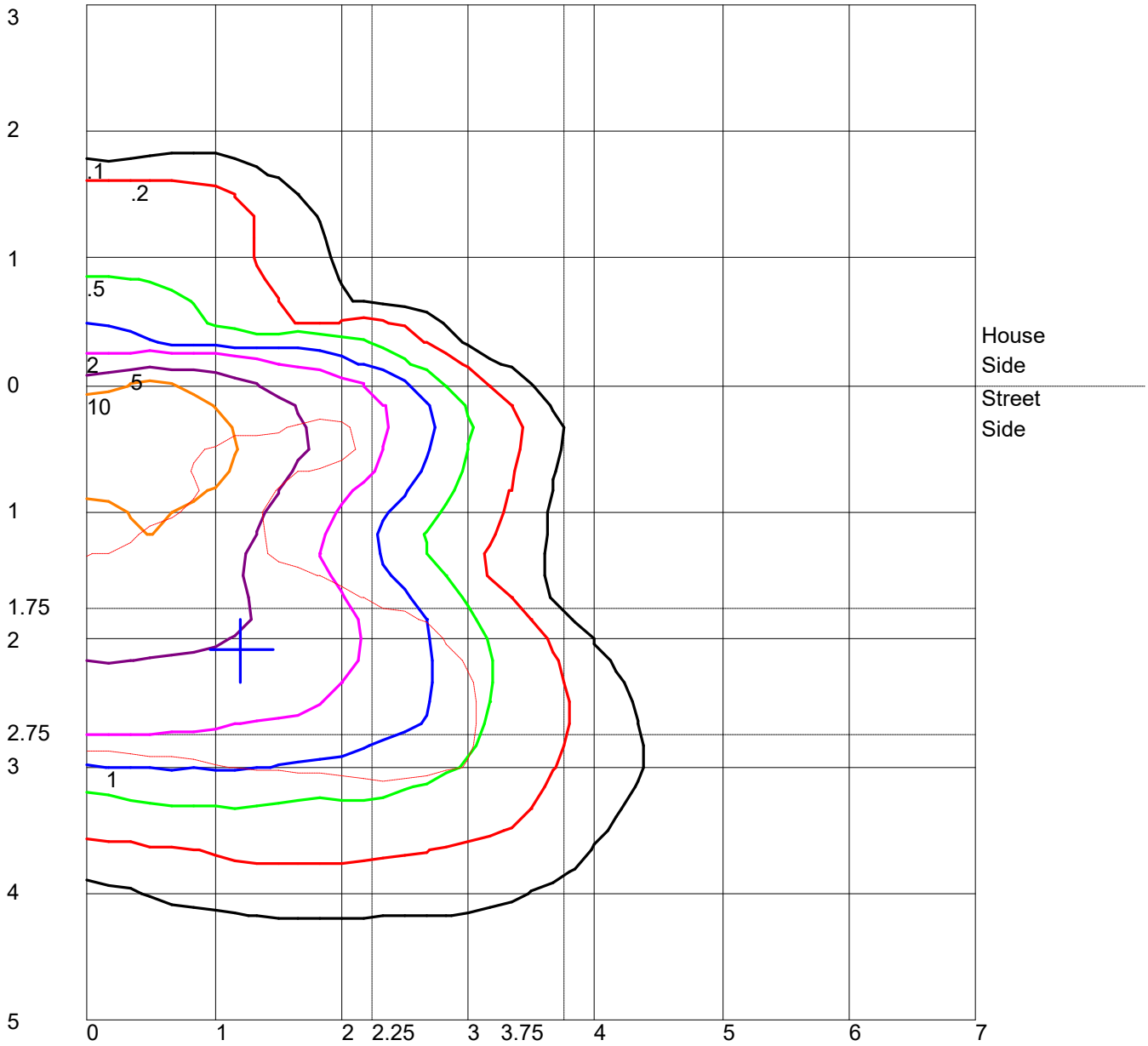
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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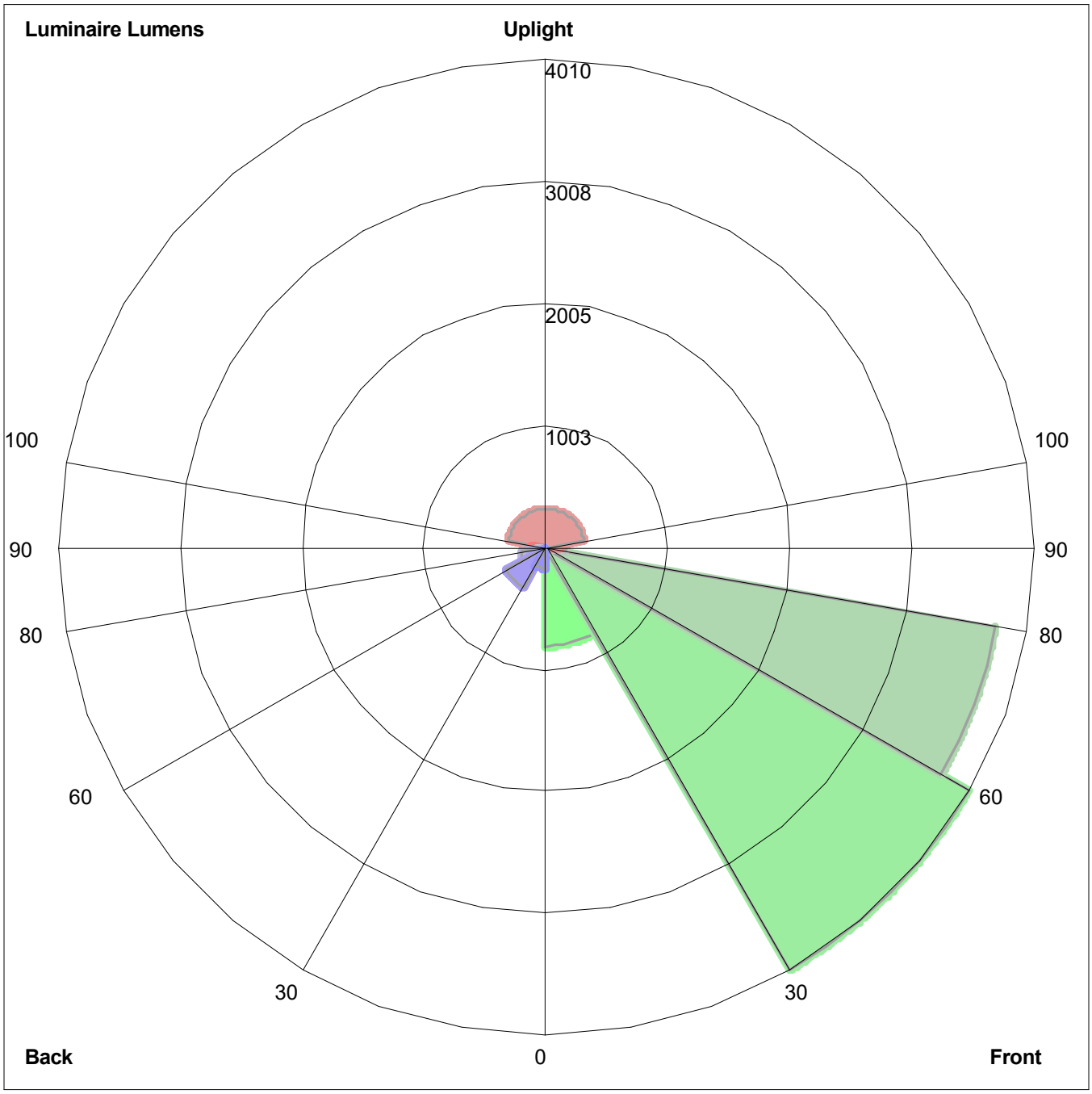
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=812.1, Medium= 4010.0, High=3751.4, Very High=160.3
Back: Low=171.4, Medium=373.4, High=207.1, Very High=67.5
Uplight: Low=117.9, High=314.7

BUG Rating : B1-U3-G2

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