IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-3-30-70CRI-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-3-30-70CRI-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] 3000

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10214
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	69
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	8354
Maximum Candela Angle	35H 67.5V
Maximum Candela (<90 Degrees Vertical)	8354
Maximum Candela Angle (<90 Degrees Vertical)	35H 67.5V
Maximum Candela At 90 Degrees Vertical	257 (2.5% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1072 (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)	540.8	N.A.	5.3
FM - Front-Medium (30-60)	4543.2	N.A.	44.5
FH - Front-High (60-80)	3766.4	N.A.	36.9
FVH - Front-Very High (80-90)	217.3	N.A.	2.1
BL - Back-Low (0-30)	121.6	N.A.	1.2
BM - Back-Medium (30-60)	329.7	N.A.	3.2
BH - Back-High (60-80)	221.8	N.A.	2.2
BVH - Back-Very High (80-90)	70.1	N.A.	0.7
UL - Uplight-Low (90-100)	126.1	N.A.	1.2
UH - Uplight-High (100-180)	277.0	N.A.	2.7
Total	10214.0	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	436	436	436	436	436	436	436	436	436	436
2.5	498	493	489	484	489	478	474	463	453	446
5.0	686	678	673	654	655	639	620	574	521	473
7.5	799	802	779	791	801	806	779	696	624	536
10.0	870	880	902	876	887	894	841	827	748	622
12.5	903	902	903	923	919	914	937	902	879	713
15.0	999	973	987	1003	982	976	981	983	942	846
17.5	1024	1046	1034	1035	1069	1100	1054	1065	1057	967
20.0	1156	1171	1181	1210	1176	1177	1217	1189	1166	1125
22.5	1358	1347	1347	1369	1374	1386	1359	1371	1360	1288
25.0	1515	1527	1599	1669	1633	1618	1641	1625	1606	1587
27.5	1827	1860	1894	1910	1960	2032	1961	1943	1970	1788
30.0	2082	2064	2215	2326	2343	2351	2499	2361	2260	2092
32.5	2388	2412	2553	2627	2718	2838	2901	2831	2672	2442
35.0	2563	2585	2738	3019	3141	3206	3416	3385	3051	2655
37.5	2635	2695	2875	3235	3416	3667	3887	3793	3309	2895
40.0	2678	2703	2970	3433	3651	3969	4313	4142	3610	3043
42.5	2677	2715	3071	3630	3888	4240	4715	4448	3917	3149
45.0	2718	2772	3222	3916	4171	4538	5007	4750	4122	3262
47.5	2832	2885	3452	4263	4541	4943	5306	5095	4205	3511
50.0	2882	2940	3613	4568	4923	5340	5627	5304	4426	3699
52.5	2892	2948	3660	4721	5179	5640	5949	5473	4676	3957
55.0	3331	3323	3846	4839	5306	5751	6161	5657	4952	4485
57.5	5004	4921	5009	5343	5600	5837	6244	5676	5141	4853
60.0	6721	6686	6709	6673	6579	6277	6105	5401	5107	5198
62.5	7356	7410	7536	7712	7661	7260	5967	4877	4953	5571
65.0	5995	6098	6914	8036	8247	7938	6466	4276	4454	5584
67.5	2430	2521	3628	6331	7755	8354	7143	3837	3570	5282
70.0	1162	1169	1459	2659	4625	6717	7680	4364	2507	4143
72.5	914	925	1061	1505	2004	2929	7161	6100	1734	2400
75.0	760	783	881	1103	1303	1588	3708	5055	1614	859
77.5	648	667	733	883	986	1147	1564	2711	961	398
80.0	568	584	625	698	748	864	1072	1049	568	273
82.5	484	494	520	563	596	656	824	771	466	251
85.0	314	323	338	365	391	435	600	686	425	244
87.5	172	182	196	219	240	268	387	470	342	197
90.0	84	89	108	130	145	160	214	257	205	153
92.5	44	48	67	84	91	99	122	143	133	137
95.0	48	46	65	80	84	91	107	113	124	129
97.5	53	48	66	80	84	91	105	110	121	110
100.0	57	50	67	80	85	91	103	107	112	94
102.5	59	52	67	81	85	91	102	102	99	74
105.0	60	54	66	81	86	91	99	93	84	62
107.5	60	57	65	82	86	90	94	83	68	57
110.0	61	60	64	82	85	88	86	70	58	52
112.5	61	60	63	80	84	84	76	60	51	50
115.0	61	61	63	78	80	78	66	55	46	49
117.5	62	62	62	73	73	70	60	50	43	48
120.0	62	61	60	67	66	63	56	48	41	46
122.5	61	60	57	60	60	59	52	46	41	44
125.0	60	60	54	56	56	55	51	46	42	44
127.5	57	56	52	52	53	52	49	46	43	44
130.0	54	53	50	49	51	50	48	47	44	45

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CANDELA TABULATION - (Cont.)

132.5	52	52	50	48	48	49	48	46	44	47
135.0	51	51	49	47	48	48	47	44	44	47
137.5	52	51	49	47	45	44	42	40	41	45
140.0	49	48	46	41	39	37	35	34	36	40
142.5	43	42	39	35	33	29	26	27	29	34
145.0	36	35	32	26	24	20	18	19	22	26
147.5	26	25	22	17	16	13	12	12	15	18
150.0	17	17	14	12	11	8	6	8	10	11
152.5	12	12	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	436	436	436	436	436	436	436	436	436	436
2.5	441	435	432	427	415	409	405	403	397	395
5.0	453	446	433	410	390	373	353	338	316	301
7.5	469	450	431	399	364	316	276	259	253	247
10.0	505	476	445	386	316	269	257	247	237	230
12.5	535	495	459	373	284	265	248	236	236	232
15.0	617	529	484	362	288	264	248	242	224	211
17.5	683	570	504	361	300	268	250	219	196	185
20.0	803	644	559	388	319	277	226	192	173	162
22.5	954	733	635	425	334	257	196	168	156	156
25.0	1162	868	748	486	330	218	176	154	148	142
27.5	1341	1072	854	524	293	187	159	146	133	131
30.0	1645	1210	1019	523	230	172	153	135	123	117
32.5	1862	1382	1125	496	197	164	143	126	113	110
35.0	2029	1526	1164	438	182	156	132	117	108	103
37.5	2186	1612	1173	381	175	149	124	115	107	98
40.0	2282	1693	1200	324	168	138	122	117	103	83
42.5	2402	1819	1145	256	161	134	126	115	91	71
45.0	2488	1846	1126	214	156	137	130	107	86	70
47.5	2587	1892	1189	205	157	141	126	101	87	70
50.0	2793	2051	1204	204	165	149	121	100	89	72
52.5	2979	2204	1278	195	171	168	122	103	102	125
55.0	3356	2496	1387	176	145	165	138	119	153	160
57.5	3888	2871	1479	166	134	134	147	156	178	119
60.0	4484	3285	1588	156	132	127	153	166	139	88
62.5	4969	3584	1680	149	131	130	149	136	131	98
65.0	5129	3571	1417	145	132	136	135	112	123	102
67.5	4773	2890	971	143	130	134	126	123	113	99
70.0	3737	1828	499	137	133	141	130	119	114	101
72.5	1838	829	205	136	133	135	126	121	110	105
75.0	515	292	171	135	133	130	130	122	114	107
77.5	338	223	153	139	137	130	132	126	118	110

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CANDELA TABULATION - (Cont.)

80.0	251	191	140	142	136	131	136	129	122	113
82.5	198	159	137	153	141	133	141	132	126	119
85.0	168	122	130	154	144	137	146	137	128	121
87.5	137	103	126	156	145	137	149	139	131	122
90.0	114	86	131	155	146	136	149	142	134	125
92.5	107	88	129	154	147	134	149	145	139	130
95.0	98	111	121	149	143	129	142	141	137	130
97.5	90	122	117	136	133	119	135	133	133	123
100.0	92	117	112	118	125	112	128	130	130	116
102.5	91	107	104	103	114	108	122	124	125	108
105.0	84	95	95	91	103	104	116	119	120	99
107.5	76	84	87	84	94	98	110	115	114	90
110.0	68	76	79	78	84	92	107	111	110	83
112.5	63	69	71	73	78	87	101	108	104	76
115.0	60	63	66	70	73	84	96	103	97	70
117.5	56	60	62	67	70	81	91	97	89	64
120.0	52	56	59	63	67	78	87	91	80	60
122.5	50	53	56	61	66	75	84	84	71	60
125.0	48	51	54	60	65	74	80	78	63	57
127.5	48	50	53	60	64	72	75	71	58	55
130.0	48	50	52	59	63	70	71	63	53	52
132.5	49	51	53	60	61	64	65	59	51	51
135.0	50	52	54	59	59	56	56	52	48	50
137.5	49	51	52	55	53	48	42	40	41	47
140.0	45	47	48	48	44	38	31	29	33	37
142.5	37	39	40	39	35	29	22	20	24	28
145.0	30	31	31	29	25	19	14	13	15	19
147.5	21	21	21	20	17	12	9	9	11	12
150.0	12	12	12	12	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	436	436
2.5	389	390
5.0	289	288
7.5	245	244
10.0	229	227
12.5	229	229
15.0	205	204
17.5	180	178
20.0	159	156
22.5	151	150
25.0	137	137

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CANDELA TABULATION - (Cont.)

27.5	126	124
30.0	114	112
32.5	108	107
35.0	103	102
37.5	95	92
40.0	80	77
42.5	71	71
45.0	69	69
47.5	69	70
50.0	73	74
52.5	137	141
55.0	160	164
57.5	67	67
60.0	62	65
62.5	62	63
65.0	61	60
67.5	61	56
70.0	60	50
72.5	61	45
75.0	65	40
77.5	66	37
80.0	68	36
82.5	71	38
85.0	73	40
87.5	75	44
90.0	76	50
92.5	80	63
95.0	82	74
97.5	82	83
100.0	80	87
102.5	79	88
105.0	76	86
107.5	75	84
110.0	73	80
112.5	71	76
115.0	70	72
117.5	68	69
120.0	66	67
122.5	63	64
125.0	60	61
127.5	58	59
130.0	55	56
132.5	52	52
135.0	51	51
137.5	49	49
140.0	40	40
142.5	30	31
145.0	21	21
147.5	13	13
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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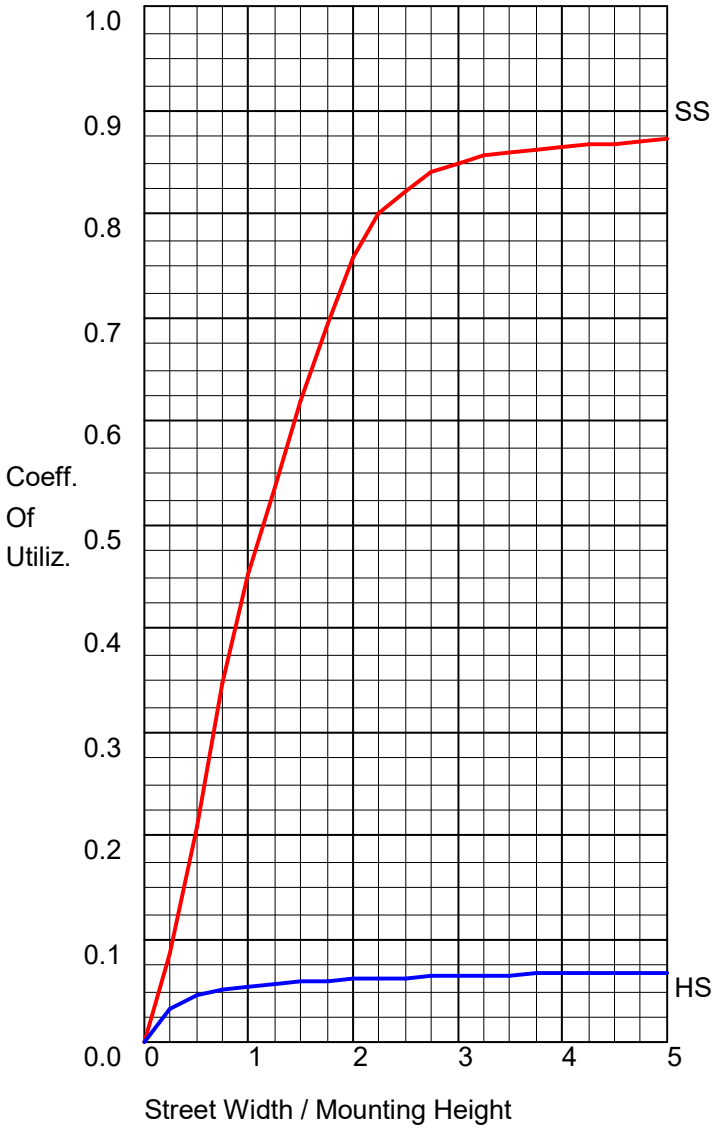
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	9067.7	88.8
Downward House Side	743.2	7.3
Downward Total	9810.9	96.1
Upward Street Side	180.3	1.8
Upward House Side	222.9	2.2
Upward Total	403.2	3.9
Total Flux	10214.1	100.0

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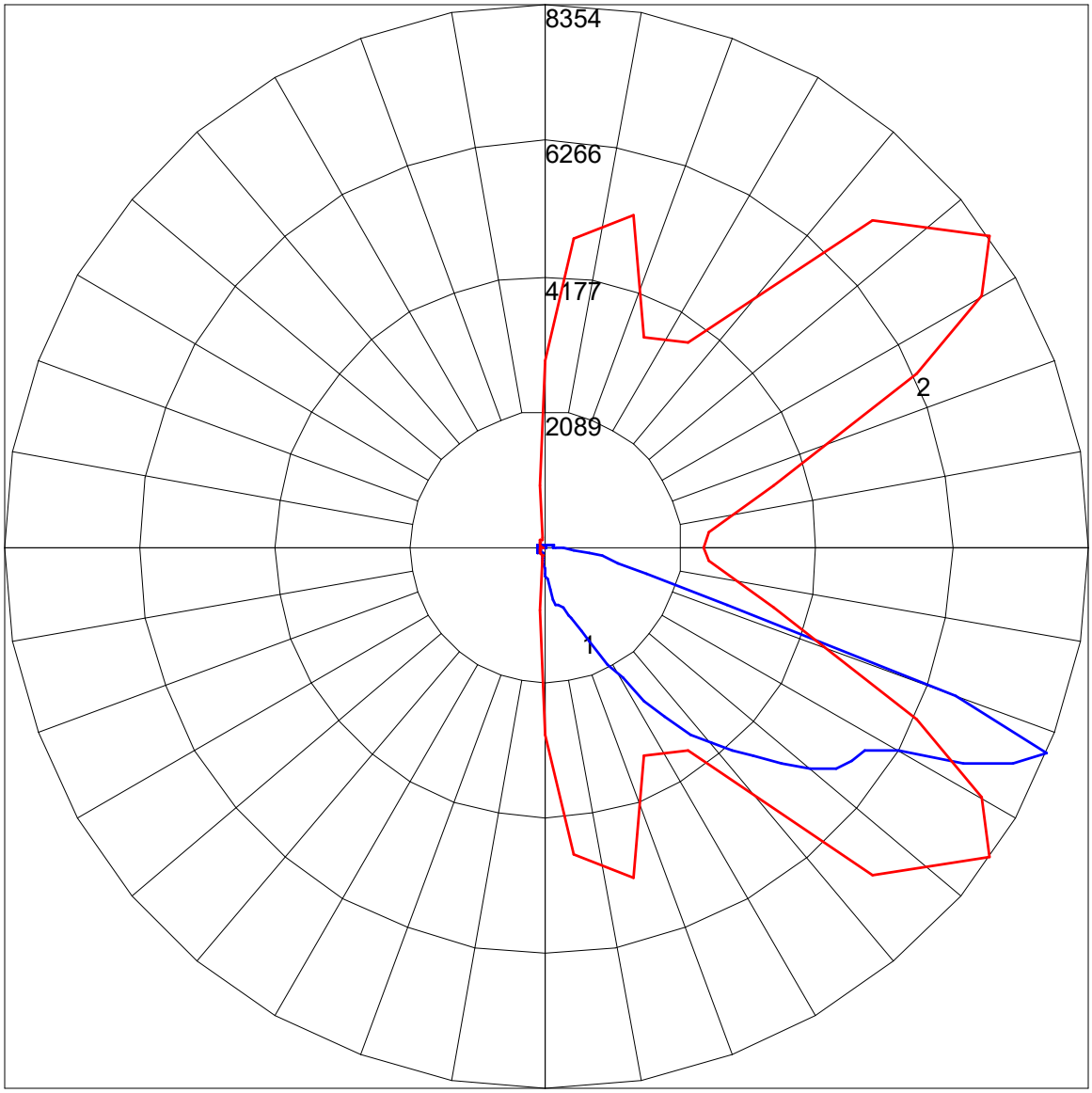
POLAR GRAPH



Maximum Candela = 8354 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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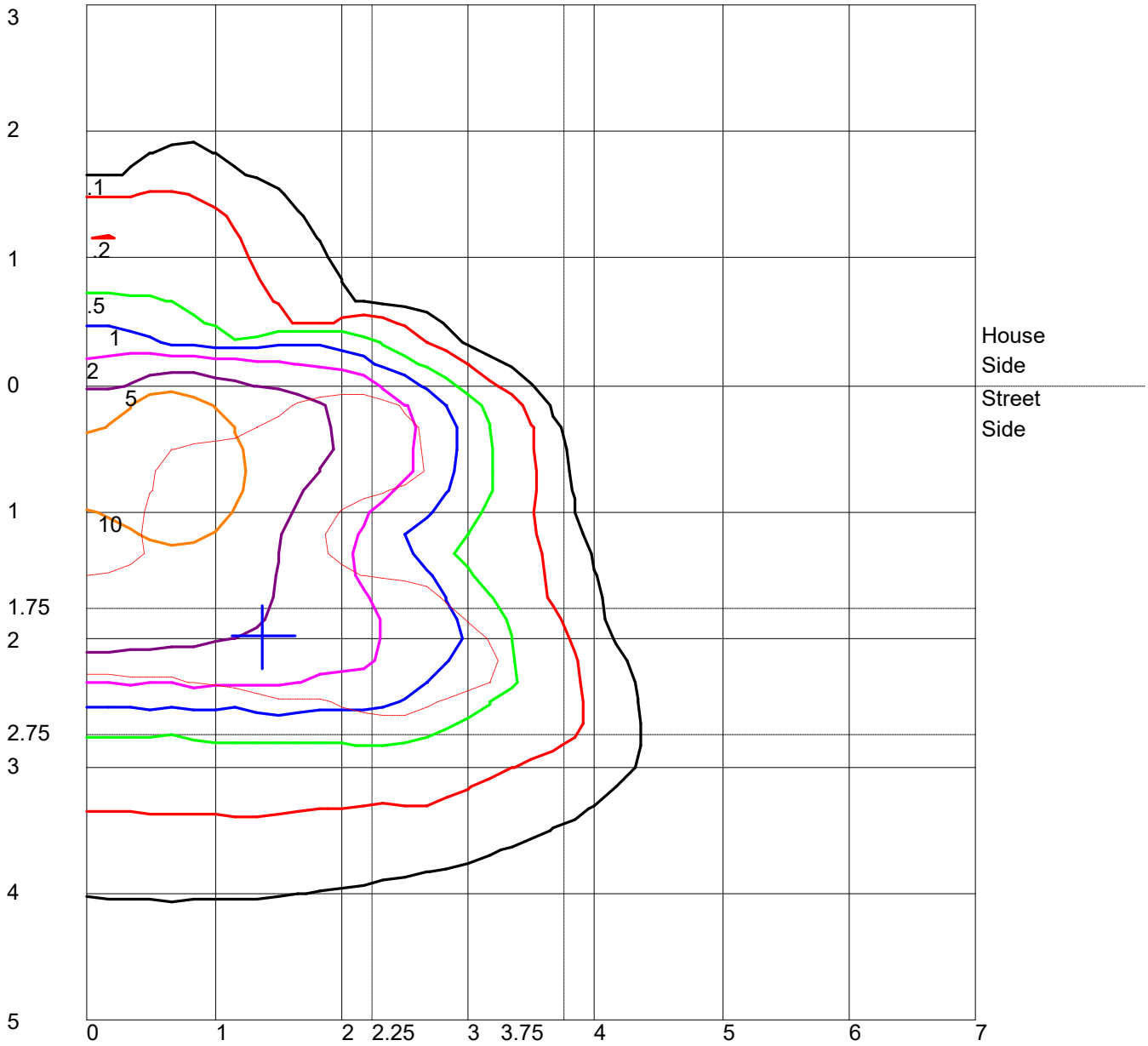
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



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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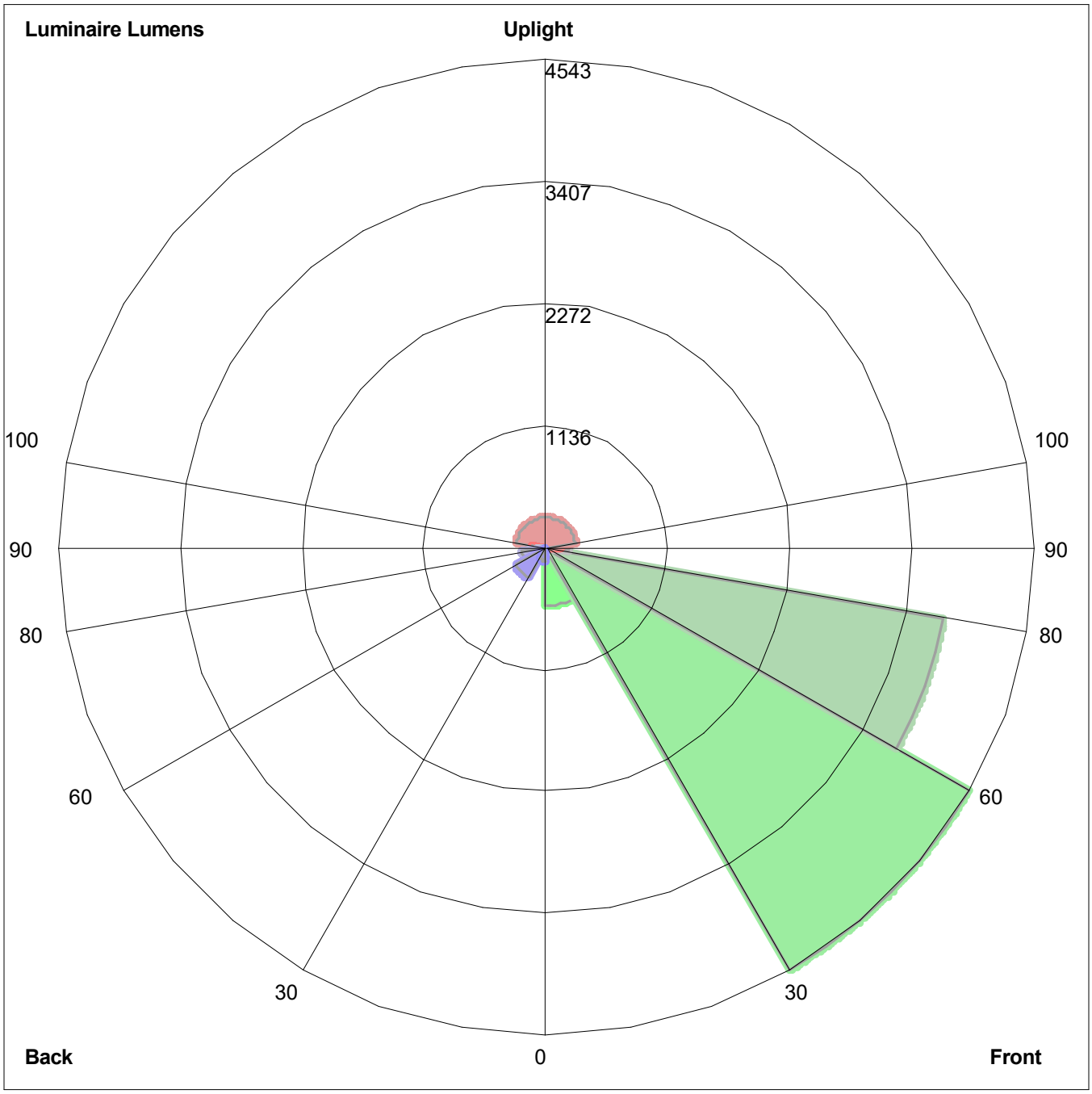
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=540.8, Medium=4543.2, High=3766.4, Very High=217.3
Back: Low=121.6, Medium=329.7, High=221.8, Very High=70.1
Uplight: Low=126.1, High=277.0

BUG Rating : B1-U3-G2

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