IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-50-70CRI-IH.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12637
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/26/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-2-50-70CRI-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] 5000

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	14297
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.05
Maximum Candela	11134
Maximum Candela Angle	72.5H 62.5V
Maximum Candela (<90 Degrees Vertical)	11134
Maximum Candela Angle (<90 Degrees Vertical)	72.5H 62.5V
Maximum Candela At 90 Degrees Vertical	244 (1.7% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	945 (6.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-50-70CRI-IH.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1099.6	N.A.	7.7
FM - Front-Medium (30-60)	7411.0	N.A.	51.8
FH - Front-High (60-80)	2797.6	N.A.	19.6
FVH - Front-Very High (80-90)	129.1	N.A.	0.9
BL - Back-Low (0-30)	522.6	N.A.	3.7
BM - Back-Medium (30-60)	1104.0	N.A.	7.7
BH - Back-High (60-80)	413.2	N.A.	2.9
BVH - Back-Very High (80-90)	112.4	N.A.	0.8
UL - Uplight-Low (90-100)	201.9	N.A.	1.4
UH - Uplight-High (100-180)	505.5	N.A.	3.5
Total	14296.9	N.A.	100.0
BUG Rating	B2-U4-G2		

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-50-70CRI-IH.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	72.5	75.0
0.0	1513	1513	1513	1513	1513	1513	1513	1513	1513	1513
2.5	1494	1480	1487	1497	1496	1490	1473	1471	1479	1479
5.0	1612	1603	1634	1609	1613	1609	1622	1590	1500	1484
7.5	1497	1502	1507	1552	1599	1651	1654	1628	1619	1581
10.0	1658	1656	1611	1691	1659	1626	1646	1663	1666	1689
12.5	1770	1778	1721	1713	1770	1733	1686	1778	1859	1875
15.0	1875	1974	1935	1935	1912	1819	1923	1871	1995	1986
17.5	2213	2126	2178	2072	2132	2141	2048	2088	2155	2201
20.0	2396	2412	2454	2354	2327	2303	2368	2352	2344	2372
22.5	2855	2877	2868	2680	2747	2577	2642	2646	2601	2597
25.0	3228	3251	3244	3166	3032	3028	2977	2973	2933	2950
27.5	4125	4083	3974	3635	3603	3429	3431	3401	3377	3333
30.0	4847	4927	4725	4455	4204	4142	3991	3876	3851	3860
32.5	5476	5477	5463	5271	5103	4785	4716	4515	4482	4491
35.0	5271	5279	5344	5563	5831	5727	5598	5321	5093	4953
37.5	5347	5256	5235	5360	5885	6301	6491	6142	5690	5501
40.0	5742	5586	5486	5513	5861	6520	6798	7206	6269	6112
42.5	6135	5936	5787	5812	6100	6739	6944	7802	7088	6822
45.0	6258	6087	5939	6016	6376	7029	7442	7934	7903	7893
47.5	6103	5969	5829	6024	6530	7396	7996	7919	8592	8611
50.0	5719	5605	5492	5791	6487	7730	8464	8230	9264	9252
52.5	5082	4984	4892	5349	6209	7833	8834	8918	9732	9811
55.0	4286	4172	4104	4616	5665	7648	9153	9741	10279	10341
57.5	3334	3318	3251	3674	4727	7002	9224	10361	10493	10631
60.0	2386	2385	2387	2699	3496	5813	8730	10400	10589	10797
62.5	1416	1435	1501	1758	2315	4095	7719	10151	11134	10936
65.0	888	905	981	1130	1420	2340	6174	8836	10664	10634
67.5	606	605	632	792	986	1256	3962	6918	8930	9106
70.0	524	525	538	589	733	854	2167	5036	6804	7122
72.5	413	410	437	487	596	658	1123	3222	4445	4711
75.0	290	292	319	365	478	554	717	1810	2788	2937
77.5	188	207	237	273	355	457	549	1110	1696	1664
80.0	111	135	172	200	270	358	425	634	945	943
82.5	85	106	141	157	190	249	323	391	546	591
85.0	64	88	125	144	164	192	223	275	341	375
87.5	64	86	123	141	158	180	200	219	240	252
90.0	68	85	121	139	156	176	189	204	215	219
92.5	80	89	125	143	160	179	188	205	216	220
95.0	93	93	129	149	165	184	188	209	219	223
97.5	105	97	132	152	167	184	184	206	211	205
100.0	113	101	133	153	168	183	180	196	184	161
102.5	119	107	133	155	168	180	175	175	146	133
105.0	122	112	133	156	168	177	164	153	121	113
107.5	125	117	130	156	168	171	150	133	105	105
110.0	125	120	129	156	165	161	134	113	96	100
112.5	126	123	127	154	160	148	121	97	91	95
115.0	127	125	126	152	153	134	109	89	88	91
117.5	128	127	125	145	142	123	101	82	86	88
120.0	129	127	122	137	132	114	94	79	83	85
122.5	128	126	119	126	123	108	91	78	80	82
125.0	125	123	114	117	116	103	90	78	78	79
127.5	120	118	110	110	110	100	90	80	79	78
130.0	114	113	107	105	106	99	91	82	80	80

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

CANDELA TABULATION - (Cont.)

132.5	111	109	105	101	104	100	91	82	82	82
135.0	108	108	105	101	102	95	85	82	83	84
137.5	108	108	105	99	93	84	75	76	80	82
140.0	102	102	97	89	78	67	62	64	69	70
142.5	90	89	84	73	59	49	48	50	55	57
145.0	73	71	65	54	41	36	33	36	41	42
147.5	53	53	45	36	30	22	21	25	28	29
150.0	36	35	31	26	15	6	6	12	15	16
152.5	26	26	20	10	4	2	2	3	4	4
155.0	9	8	5	3	2	1	1	1	2	2
157.5	2	2	2	2	1	1	1	1	1	1
160.0	1	1	1	2	1	1	0	0	1	0
162.5	1	1	1	2	1	1	0	0	0	0
165.0	1	1	2	2	1	1	0	0	0	0
167.5	1	1	2	2	1	1	0	0	0	0
170.0	1	1	2	2	1	1	0	0	0	0
172.5	1	1	2	2	1	1	0	0	0	0
175.0	1	1	2	2	2	1	0	0	0	0
177.5	1	1	2	2	2	1	0	0	0	0
180.0	1	1	1	1	1	1	1	1	1	1

Vert. Angles	**Horizontal Angles**									
	85.0	**90.0**	**95.0**	**105.0**	**115.0**	**125.0**	**135.0**	**145.0**	**155.0**	**165.0**
0.0	1513	1513	1513	1513	1513	1513	1513	1513	1513	1513
2.5	1492	1494	1516	1557	1566	1578	1579	1567	1569	1558
5.0	1472	1514	1583	1624	1595	1592	1584	1570	1514	1450
7.5	1512	1537	1605	1607	1588	1488	1440	1441	1420	1392
10.0	1587	1607	1650	1607	1537	1504	1437	1361	1295	1239
12.5	1709	1738	1823	1774	1551	1439	1296	1188	1111	1088
15.0	1848	1883	1908	1785	1611	1367	1183	1071	956	907
17.5	2074	2059	2118	1890	1603	1257	1076	909	813	768
20.0	2303	2238	2259	1985	1592	1184	937	792	702	654
22.5	2645	2550	2583	2137	1496	1079	833	676	613	601
25.0	2956	2855	2771	2163	1494	973	718	607	563	534
27.5	3421	3202	3148	2285	1363	865	633	560	504	481
30.0	3904	3636	3453	2371	1260	746	591	507	458	437
32.5	4262	3929	3701	2367	1128	676	540	461	434	420
35.0	4666	4244	3913	2260	973	635	492	438	416	396
37.5	5204	4664	4088	2067	826	576	447	423	394	366
40.0	5687	5157	4224	1816	739	503	426	405	366	335
42.5	6174	5525	4408	1547	648	441	415	382	336	303
45.0	6901	5949	4514	1277	561	428	400	351	309	278
47.5	7387	6424	4610	1043	489	421	374	322	289	262
50.0	7972	6986	4536	854	437	402	348	302	276	250
52.5	8743	7331	4517	728	415	383	327	287	268	240
55.0	9339	7647	4264	651	415	361	307	277	260	233
57.5	9549	7577	3801	549	429	341	294	269	252	224
60.0	9712	7266	3063	460	412	324	281	260	239	208
62.5	9454	6702	2324	408	374	307	271	248	221	203
65.0	8349	5476	1552	383	335	291	259	230	240	257
67.5	6688	4001	1036	364	314	275	244	252	284	315
70.0	5029	2850	723	342	298	263	257	281	306	272
72.5	3280	1888	528	320	277	250	264	275	223	203
75.0	2068	1235	414	303	264	248	269	230	202	174
77.5	925	596	327	285	252	257	240	204	183	166

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

CANDELA TABULATION - (Cont.)

80.0	555	432	272	268	248	242	216	201	188	172
82.5	397	336	228	250	251	219	219	207	194	177
85.0	321	215	217	252	228	217	223	212	199	182
87.5	256	93	230	240	230	218	228	215	204	187
90.0	184	73	223	244	233	221	232	221	210	192
92.5	129	156	203	251	240	226	238	228	217	200
95.0	121	208	189	248	236	214	232	224	216	200
97.5	149	211	187	227	224	200	223	219	214	195
100.0	163	200	185	199	214	194	216	215	212	189
102.5	160	184	176	172	198	188	211	212	208	182
105.0	152	166	162	153	179	180	203	208	204	172
107.5	139	149	148	139	159	168	194	203	200	162
110.0	125	133	133	127	141	155	184	196	193	153
112.5	113	120	120	117	125	145	172	188	186	142
115.0	104	109	109	109	114	135	160	179	176	134
117.5	96	101	101	103	105	128	152	168	165	129
120.0	91	93	94	97	101	121	144	158	153	124
122.5	86	88	90	93	98	117	137	149	139	120
125.0	82	84	86	90	97	114	130	140	126	115
127.5	81	82	85	90	97	113	126	129	115	112
130.0	82	82	85	91	97	113	123	121	106	109
132.5	83	84	87	93	97	105	117	115	101	106
135.0	86	87	90	95	96	95	101	103	101	105
137.5	87	90	92	93	88	84	82	84	90	100
140.0	78	82	82	79	73	67	61	63	73	84
142.5	65	67	67	63	57	49	42	44	54	64
145.0	49	51	50	46	40	33	30	31	37	45
147.5	31	31	32	30	26	20	16	21	26	31
150.0	17	17	18	18	14	8	7	10	17	21
152.5	6	6	6	6	6	6	5	6	6	10
155.0	2	3	3	4	4	4	5	5	5	5
157.5	1	2	2	2	3	4	4	5	4	3
160.0	1	1	2	2	3	4	4	4	4	3
162.5	1	1	2	2	3	3	4	4	3	2
165.0	0	1	1	2	2	3	3	3	3	2
167.5	0	0	1	2	2	2	3	3	3	2
170.0	0	0	0	1	2	2	2	2	2	2
172.5	0	0	0	1	2	2	2	2	2	2
175.0	0	0	0	1	1	2	2	2	2	1
177.5	0	0	0	1	1	1	2	2	2	1
180.0	1	1	1	1	1	1	1	1	1	1

Vert. Angles	**Horizontal Angles**	
	175.0	**180.0**
0.0	1513	1513
2.5	1566	1576
5.0	1404	1403
7.5	1400	1397
10.0	1188	1182
12.5	1041	1030
15.0	871	867
17.5	735	736
20.0	636	634
22.5	585	583
25.0	519	518

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

CANDELA TABULATION - (Cont.)

27.5	473	471
30.0	443	442
32.5	418	418
35.0	394	393
37.5	364	364
40.0	332	334
42.5	301	305
45.0	278	282
47.5	260	264
50.0	244	248
52.5	230	232
55.0	214	216
57.5	195	196
60.0	168	165
62.5	171	174
65.0	225	223
67.5	276	268
70.0	179	158
72.5	141	118
75.0	105	75
77.5	100	58
80.0	105	55
82.5	109	59
85.0	113	65
87.5	117	74
90.0	122	93
92.5	129	116
95.0	132	135
97.5	132	148
100.0	134	157
102.5	137	162
105.0	143	164
107.5	148	163
110.0	150	160
112.5	150	155
115.0	147	151
117.5	143	145
120.0	138	140
122.5	133	135
125.0	128	129
127.5	121	123
130.0	116	117
132.5	111	112
135.0	109	109
137.5	106	105
140.0	90	89
142.5	69	69
145.0	50	51
147.5	33	33
150.0	23	23
152.5	14	13
155.0	5	5
157.5	2	1
160.0	1	0
162.5	1	0
165.0	1	0

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

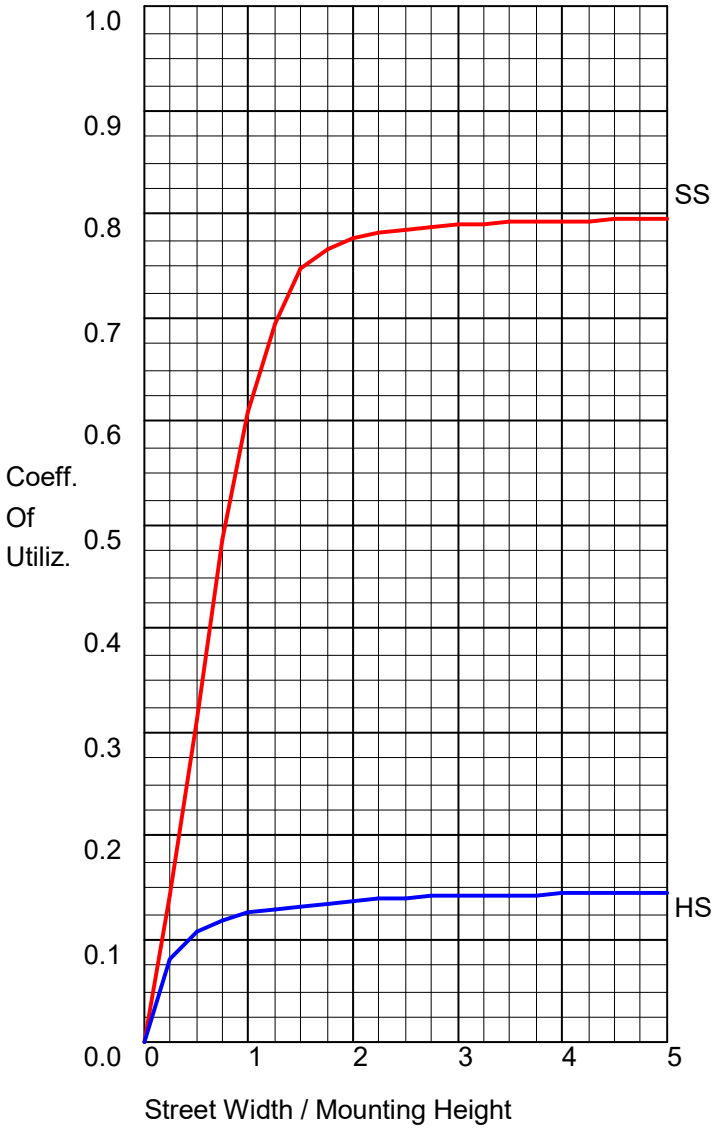
CANDELA TABULATION - (Cont.)

167.5	0	0
170.0	0	0
172.5	0	0
175.0	0	0
177.5	0	0
180.0	1	1

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-50-70CRI-IH.IES

COEFFICIENTS OF UTILIZATION



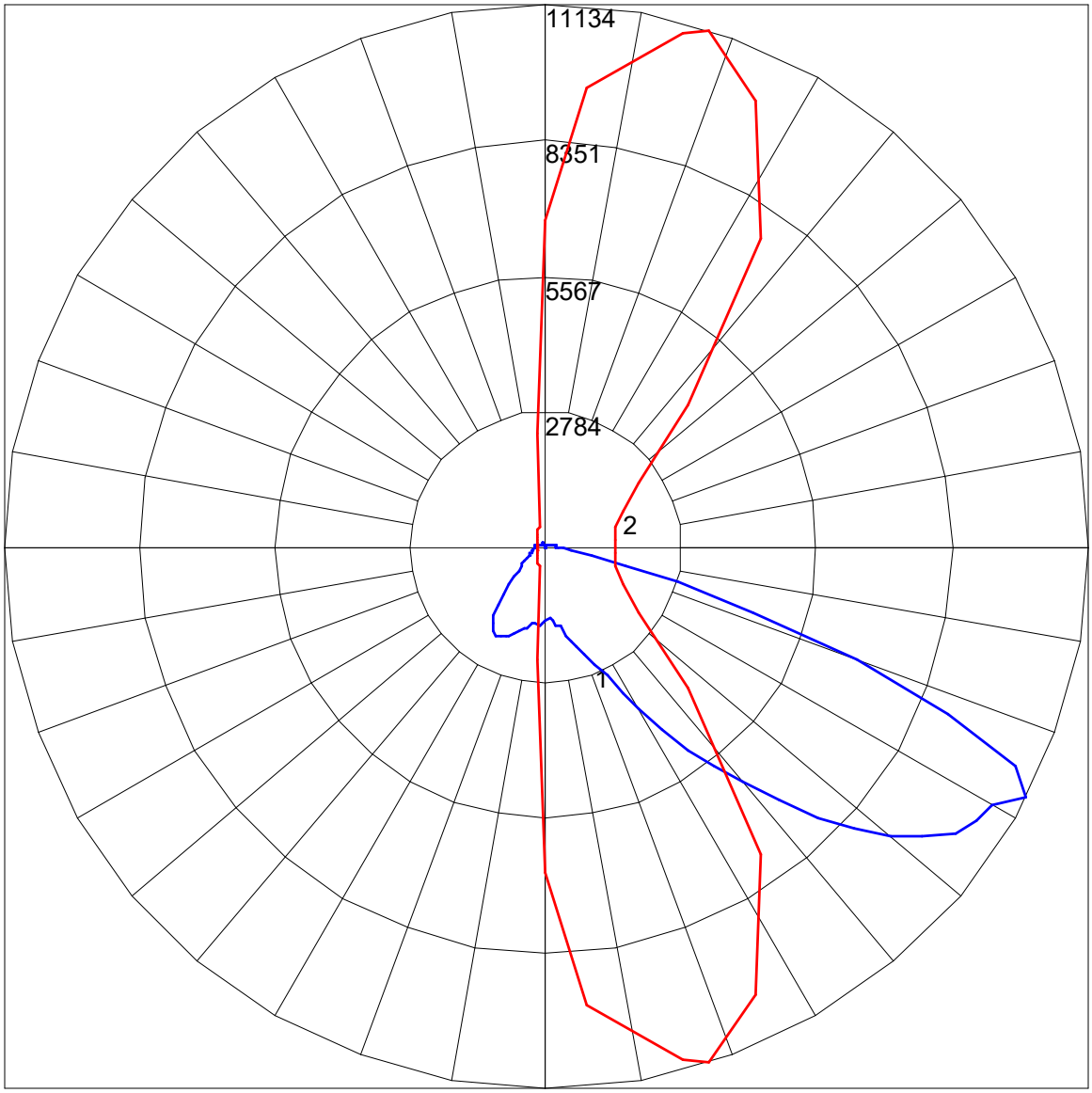
FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	11437.3	80.0
Downward House Side	2152.3	15.1
Downward Total	13589.6	95.1
Upward Street Side	325.4	2.3
Upward House Side	382.1	2.7
Upward Total	707.5	4.9
Total Flux	14297.1	100.0

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-50-70CRI-IH.IES

POLAR GRAPH

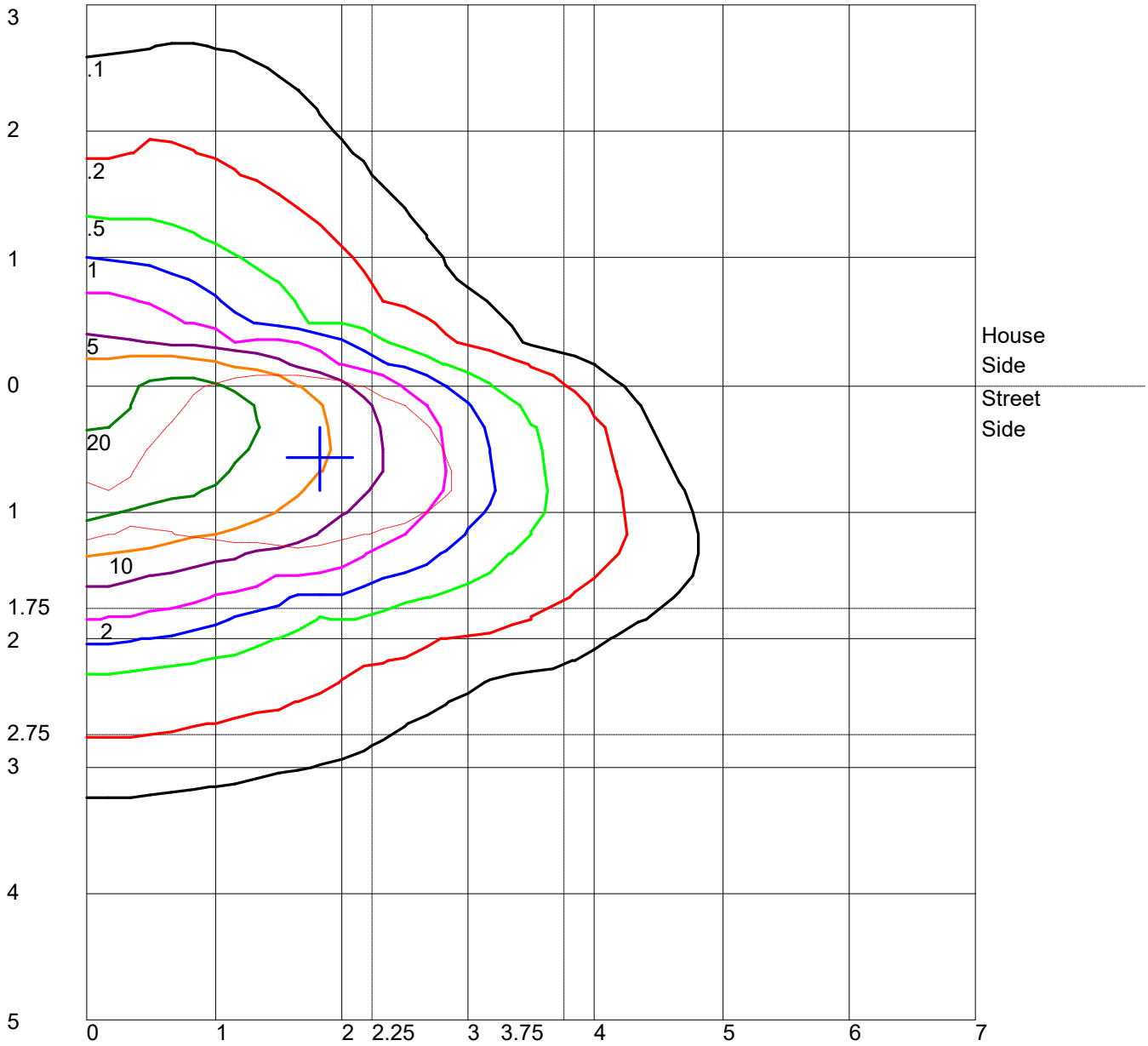


Maximum Candela = 11134 Located At Horizontal Angle = 72.5, Vertical Angle = 62.5
1 - Vertical Plane Through Horizontal Angles (72.5 - 252.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (62.5) (Through Max. Cd.)

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-50-70CRI-IH.IES

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE

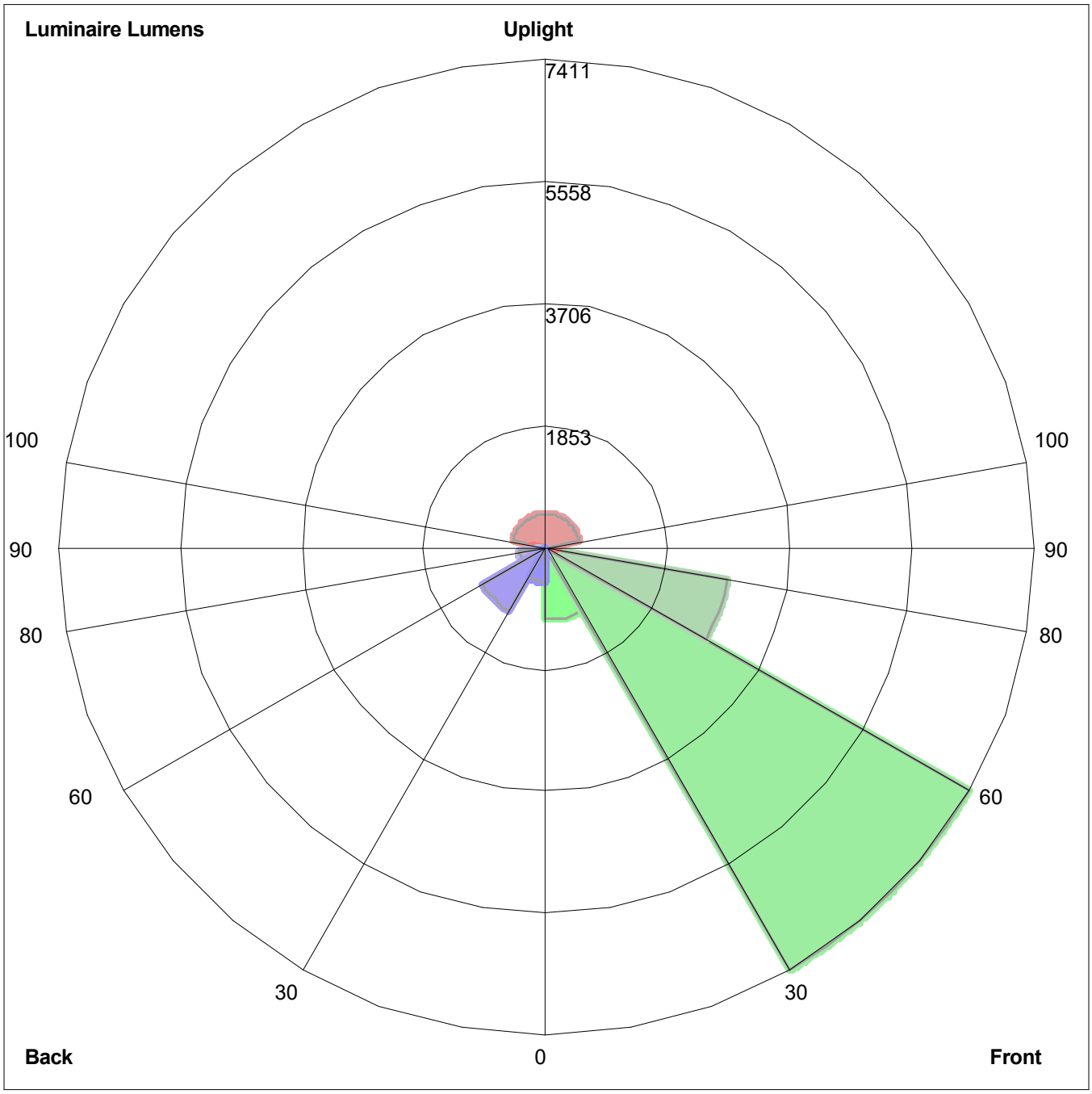


Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-50-70CRI-IH.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1099.6, Medium= 7411.0, High=2797.6, Very High=129.1
Back: Low=522.6, Medium= 1104.0, High=413.2, Very High=112.4
Uplight: Low=201.9, High=505.5

BUG Rating : B2-U4-G2

Photometric Toolbox® Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.