IES ROAD REPORT
PHOTOMETRIC FILENAME : MPP-LED-20L-SIL-2-40-70CRI.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LED-12569
[TESTLAB] LSI INDUSTRIES, INC.
[ISSUEDATE] 03/30/21
[TESTDATE] 03/05/21
[MANUFAC] LSI INDUSTRIES, INC.
[LUMCAT] MPP-LED-20L-SIL-2-40-70CRI
[_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 II
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	21067
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	141
Total Luminaire Watts	149
Ballast Factor	1.00
Upward Waste Light Ratio	0.05
Maximum Candela	12601
Maximum Candela Angle	72.5H 62.5V
Maximum Candela (<90 Degrees Vertical)	12601
Maximum Candela Angle (<90 Degrees Vertical)	72.5H 62.5V
Maximum Candela At 90 Degrees Vertical	337 (1.6% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1109 (5.3% 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-2-40-70CRI.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1291.8	N.A.	6.1
FM - Front-Medium (30-60)	7859.7	N.A.	37.3
FH - Front-High (60-80)	3227.3	N.A.	15.3
FVH - Front-Very High (80-90)	225.2	N.A.	1.1
BL - Back-Low (0-30)	1106.4	N.A.	5.3
BM - Back-Medium (30-60)	4586.7	N.A.	21.8
BH - Back-High (60-80)	1508.7	N.A.	7.2
BVH - Back-Very High (80-90)	253.0	N.A.	1.2
UL - Uplight-Low (90-100)	282.8	N.A.	1.3
UH - Uplight-High (100-180)	725.5	N.A.	3.4
Total	21067.1	N.A.	100.0
BUG Rating	B3-U4-G3		

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-2-40-70CRI.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	1802	1802	1802	1802	1802	1802	1802	1802	1802	1802
2.5	1836	1832	1850	1878	1878	1870	1856	1815	1806	1806
5.0	1890	1881	1910	1945	1951	1940	1917	1889	1876	1885
7.5	1949	1939	1888	1908	1886	1890	1959	1963	1927	1916
10.0	1998	2005	2012	2017	2036	1980	1937	2008	1984	1988
12.5	2182	2219	2184	2161	2138	2086	2123	2046	2186	2190
15.0	2283	2279	2298	2289	2354	2263	2257	2308	2272	2358
17.5	2575	2563	2593	2457	2497	2611	2462	2551	2478	2549
20.0	2769	2768	2797	2760	2844	2745	2847	2817	2749	2748
22.5	3223	3195	3255	3167	3155	3099	3118	3075	3090	3073
25.0	3810	3787	3694	3607	3633	3459	3444	3489	3376	3374
27.5	4717	4739	4632	4446	4134	4025	3911	3863	3777	3763
30.0	5649	5688	5601	5293	5069	4601	4484	4350	4273	4287
32.5	5907	5934	6021	6196	5957	5485	5311	4959	4874	4744
35.0	5694	5655	5764	6150	6619	6336	6150	5638	5395	5258
37.5	5873	5820	5816	5993	6429	6837	6918	6588	5949	5765
40.0	6240	6165	6134	6204	6498	6881	7097	7697	6596	6436
42.5	6517	6382	6352	6416	6732	7136	7321	8019	7624	7248
45.0	6449	6356	6344	6485	6899	7490	7806	7892	8644	8395
47.5	6160	6116	6110	6375	6908	7824	8181	8002	9143	9143
50.0	5808	5759	5742	6058	6750	8060	8671	8410	9412	9468
52.5	5181	5139	5154	5475	6360	8079	9142	9235	9722	9887
55.0	4340	4320	4414	4703	5652	7747	9420	9993	10161	10374
57.5	3476	3465	3527	3854	4726	6917	9360	10492	10866	11024
60.0	2434	2464	2556	2832	3553	5647	8943	10819	11480	11501
62.5	1504	1524	1588	1814	2354	3872	7925	10592	12601	12021
65.0	1227	1226	1241	1287	1474	2188	6257	9851	12212	12408
67.5	1070	1069	1067	1112	1169	1257	4062	8218	10419	10821
70.0	792	803	853	936	1026	1037	2067	5915	7618	8237
72.5	634	646	642	662	844	904	1118	3393	4851	5205
75.0	538	562	563	571	655	759	857	1922	2970	3181
77.5	444	487	493	498	567	643	723	1279	1874	1857
80.0	397	438	445	436	489	562	610	861	1109	1101
82.5	352	373	392	382	423	479	529	647	778	779
85.0	280	301	328	327	357	407	444	493	561	585
87.5	170	195	251	266	288	321	348	369	389	392
90.0	111	139	202	228	248	272	282	300	313	318
92.5	127	141	205	231	252	274	278	299	311	316
95.0	147	146	208	236	255	276	273	299	309	312
97.5	165	151	209	237	256	272	264	292	295	280
100.0	175	156	207	238	255	268	256	276	259	236
102.5	183	163	205	239	253	264	249	252	216	198
105.0	187	170	200	239	252	259	237	224	183	178
107.5	189	176	195	238	250	250	219	195	163	165
110.0	190	181	189	236	246	238	198	170	151	156
112.5	189	184	184	232	240	220	180	151	143	148
115.0	187	185	180	226	228	202	165	137	136	141
117.5	187	185	178	216	214	187	154	128	132	135
120.0	185	183	174	202	199	175	146	123	127	129
122.5	183	181	168	186	186	166	140	120	123	123
125.0	178	176	161	171	175	159	137	120	119	119
127.5	171	169	155	158	165	154	137	121	119	119
130.0	162	160	151	148	158	151	138	123	120	120

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	155	155	148	143	153	148	133	123	123	123
135.0	152	151	147	142	145	135	123	123	126	126
137.5	151	151	146	133	124	115	109	115	123	125
140.0	135	134	127	113	99	88	91	98	107	109
142.5	111	111	103	90	70	66	70	78	87	90
145.0	87	86	79	62	49	46	50	58	66	69
147.5	61	58	52	43	34	24	29	38	44	46
150.0	42	41	37	29	14	7	10	21	26	26
152.5	25	26	18	10	3	1	2	6	9	10
155.0	9	8	6	2	0	0	0	1	2	2
157.5	2	2	1	0	0	0	0	0	0	0
160.0	2	2	0	0	0	0	0	0	0	0
162.5	2	2	0	0	0	0	0	0	0	0
165.0	2	2	0	0	0	0	0	0	0	0
167.5	2	1	1	0	0	0	0	0	0	0
170.0	2	1	1	0	0	0	0	0	0	0
172.5	2	1	1	1	0	0	0	0	0	0
175.0	2	1	1	1	0	0	0	0	0	0
177.5	2	2	1	1	1	0	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	1802	1802	1802	1802	1802	1802	1802	1802	1802	1802
2.5	1792	1781	1782	1790	1781	1798	1811	1802	1806	1822
5.0	1799	1776	1780	1850	1864	1856	1882	1857	1842	1833
7.5	1864	1818	1830	1893	1904	1855	1798	1719	1728	1747
10.0	1940	1895	1893	1942	1919	1800	1829	1794	1782	1734
12.5	2128	2043	2088	2114	1931	1885	1815	1787	1771	1874
15.0	2323	2200	2246	2244	2092	2026	1885	1951	1927	1981
17.5	2543	2435	2524	2446	2245	2090	2122	2039	2068	2282
20.0	2768	2724	2754	2603	2448	2273	2157	2319	2391	2525
22.5	3198	3077	3082	2887	2608	2422	2432	2599	2724	3002
25.0	3482	3490	3368	3135	2832	2585	2691	2944	3114	3319
27.5	3998	3873	3839	3403	2967	2866	3042	3302	3499	3751
30.0	4367	4305	4248	3783	3243	3207	3376	3601	3813	4129
32.5	4721	4638	4614	4147	3480	3521	3604	3927	4258	4496
35.0	5174	5011	4957	4327	3661	3722	3881	4258	4414	4608
37.5	5621	5462	5368	4459	3827	3878	4132	4357	4492	4631
40.0	6158	5949	5756	4514	3985	3940	4245	4380	4488	4560
42.5	6658	6472	6050	4578	4045	4035	4234	4323	4335	4298
45.0	7226	6728	6505	4665	3889	4163	4138	4134	3978	3854
47.5	7907	7336	6788	4592	3900	4058	3944	3815	3544	3399
50.0	8529	8018	7002	4643	3833	3850	3673	3441	3135	2981
52.5	9356	8676	7318	4560	3686	3573	3344	3094	2783	2683
55.0	10137	9158	7521	4179	3459	3215	3002	2754	2526	2479
57.5	10718	9847	7303	3841	3197	2880	2644	2484	2320	2290
60.0	11248	9913	6873	3503	2826	2485	2326	2238	2104	2056
62.5	11345	9648	6075	3115	2425	2100	2026	1978	1854	1790
65.0	10767	8469	4851	2592	1905	1726	1741	1710	1585	1504
67.5	8961	6227	3388	1890	1483	1360	1428	1407	1280	1238
70.0	6183	3955	2152	1274	1114	1073	1123	1073	1011	995
72.5	3904	2526	1444	944	913	862	885	844	807	780
75.0	2530	1782	1109	807	826	741	726	687	660	666
77.5	1197	924	816	731	751	640	613	587	587	586

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	725	668	636	664	667	549	528	521	549	566
82.5	540	512	504	590	561	471	466	485	568	616
85.0	435	328	408	509	459	413	423	461	572	648
87.5	360	175	359	409	380	353	364	414	470	477
90.0	267	123	303	337	325	305	309	292	272	248
92.5	211	215	259	336	324	302	308	292	275	251
95.0	206	280	237	333	321	294	304	291	276	252
97.5	224	292	247	311	309	280	297	285	274	249
100.0	240	280	251	268	295	268	290	281	272	243
102.5	235	260	242	235	274	260	283	278	270	236
105.0	221	237	227	208	248	251	276	274	267	228
107.5	203	214	209	190	223	237	267	270	264	219
110.0	184	192	191	177	198	220	256	264	257	208
112.5	168	175	173	164	175	204	241	257	250	199
115.0	155	160	159	154	159	191	225	248	242	190
117.5	143	148	147	147	147	179	211	235	230	182
120.0	135	139	139	140	141	171	199	220	215	175
122.5	127	130	131	134	138	163	189	207	198	170
125.0	121	123	124	130	137	159	181	195	181	164
127.5	119	120	123	128	137	157	174	182	166	159
130.0	119	120	123	129	138	157	170	171	155	155
132.5	122	123	125	132	137	152	166	163	147	151
135.0	127	127	129	135	135	139	152	155	144	149
137.5	130	131	132	131	127	123	129	133	139	149
140.0	120	123	122	117	109	103	100	107	119	134
142.5	100	103	103	96	87	80	74	80	95	109
145.0	79	79	80	74	66	58	53	54	70	84
147.5	51	53	54	51	45	36	34	39	48	59
150.0	30	30	31	31	26	17	14	23	34	41
152.5	14	14	15	14	10	6	6	9	17	26
155.0	4	4	5	5	4	4	4	5	7	10
157.5	0	1	1	2	2	2	3	4	4	5
160.0	0	0	0	1	2	2	3	4	4	4
162.5	0	0	0	1	2	2	3	4	4	3
165.0	0	0	0	1	2	2	3	4	4	3
167.5	0	0	0	1	2	2	3	3	4	3
170.0	0	0	0	1	2	2	3	3	4	3
172.5	0	0	0	1	2	2	2	3	3	3
175.0	0	0	0	1	1	2	2	3	3	2
177.5	0	0	0	1	2	2	2	3	3	2
180.0	1	1	1	1	1	1	1	1	1	1

Vert. Angles	**Horizontal Angles**	
	175.0	**180.0**
0.0	1802	1802
2.5	1812	1827
5.0	1796	1780
7.5	1715	1733
10.0	1732	1690
12.5	1862	1875
15.0	1981	1914
17.5	2287	2333
20.0	2620	2516
22.5	3041	3037
25.0	3452	3464

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	3877	3931
30.0	4389	4375
32.5	4624	4625
35.0	4735	4769
37.5	4765	4854
40.0	4688	4794
42.5	4353	4432
45.0	3839	3904
47.5	3384	3422
50.0	2978	3007
52.5	2673	2696
55.0	2466	2480
57.5	2263	2273
60.0	2000	2021
62.5	1721	1709
65.0	1408	1403
67.5	1174	1162
70.0	956	939
72.5	737	711
75.0	626	593
77.5	527	487
80.0	512	462
82.5	595	542
85.0	647	602
87.5	331	329
90.0	162	115
92.5	163	128
95.0	168	150
97.5	172	171
100.0	175	187
102.5	179	198
105.0	183	203
107.5	187	206
110.0	190	206
112.5	192	204
115.0	193	200
117.5	192	195
120.0	189	191
122.5	184	187
125.0	179	181
127.5	172	174
130.0	165	167
132.5	158	159
135.0	154	155
137.5	152	153
140.0	140	141
142.5	117	118
145.0	91	92
147.5	66	67
150.0	45	45
152.5	31	32
155.0	13	12
157.5	6	6
160.0	4	4
162.5	3	3
165.0	3	3

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.

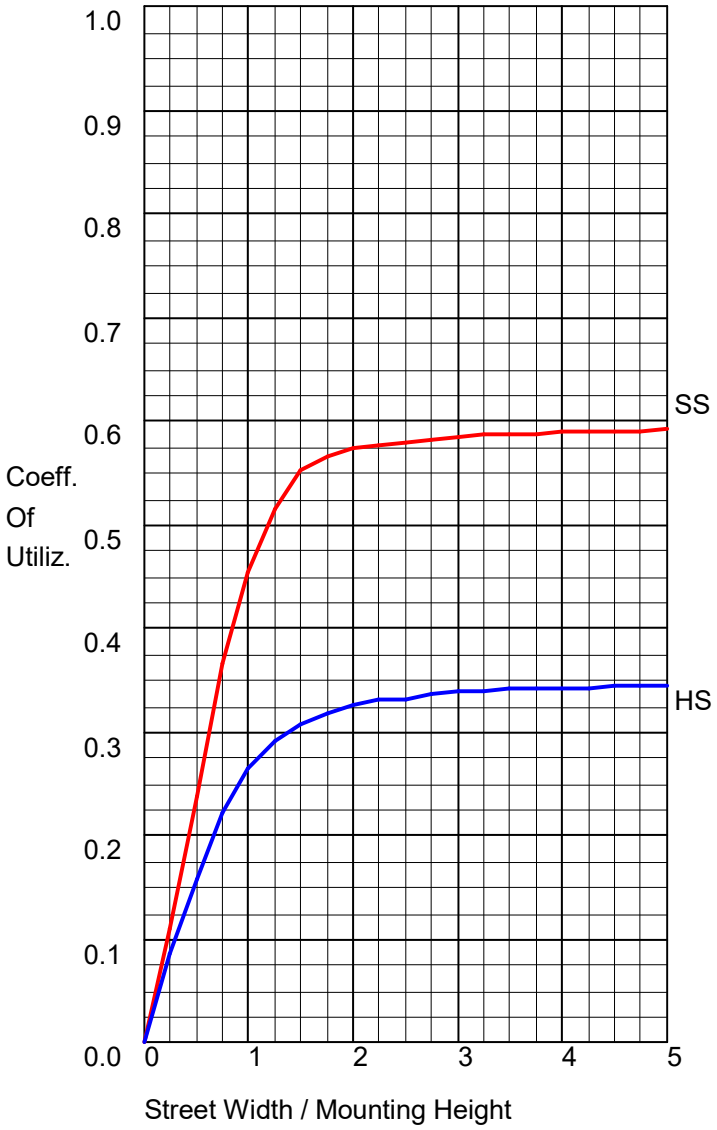
CANDELA TABULATION - (Cont.)

167.5	2	2
170.0	2	2
172.5	2	2
175.0	2	2
177.5	2	2
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-2-40-70CRI.IES

COEFFICIENTS OF UTILIZATION



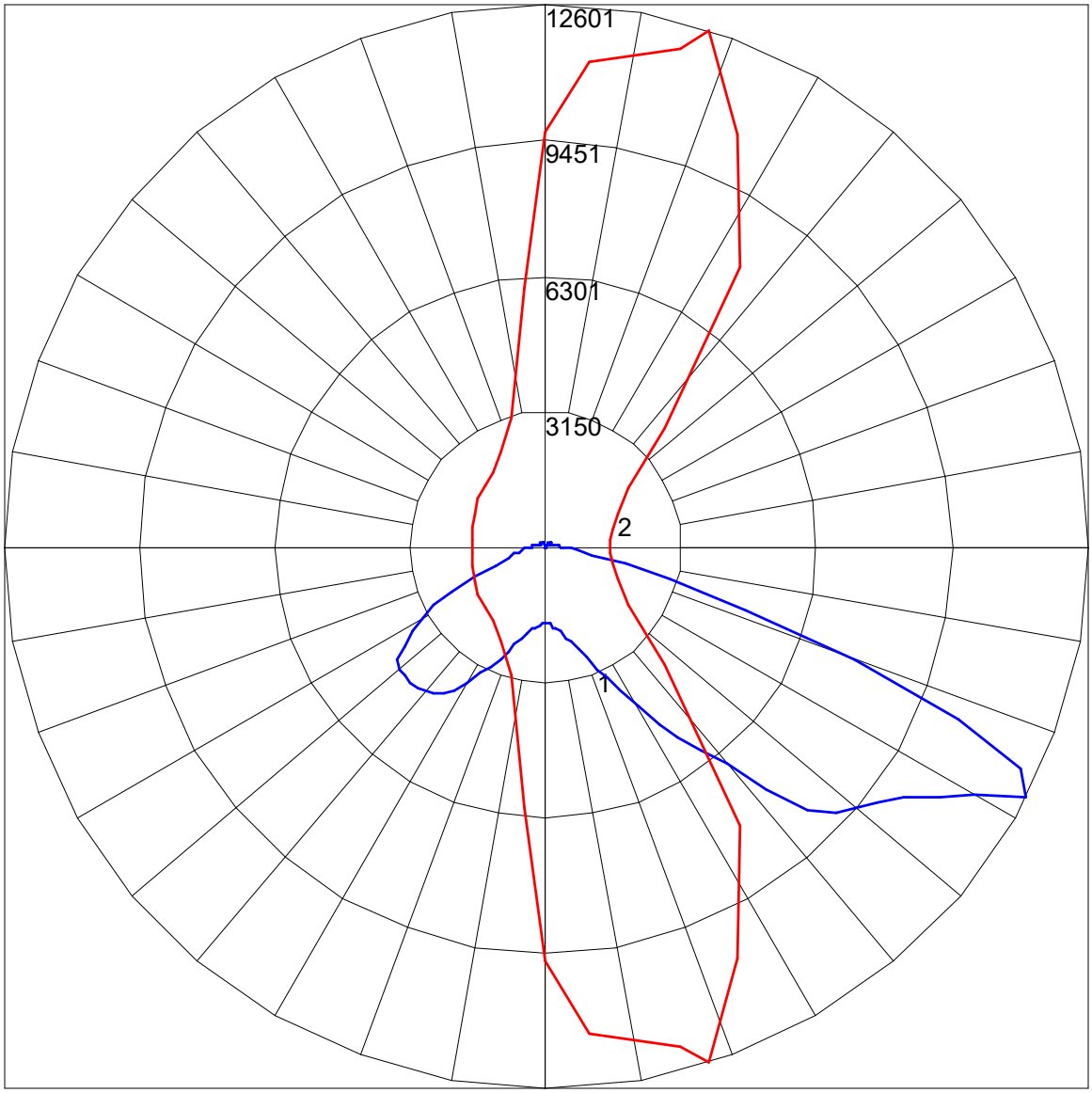
FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	12604.0	59.8
Downward House Side	7454.7	35.4
Downward Total	20058.7	95.2
Upward Street Side	481.1	2.3
Upward House Side	527.1	2.5
Upward Total	1008.2	4.8
Total Flux	21066.9	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-2-40-70CRI.IES

POLAR GRAPH

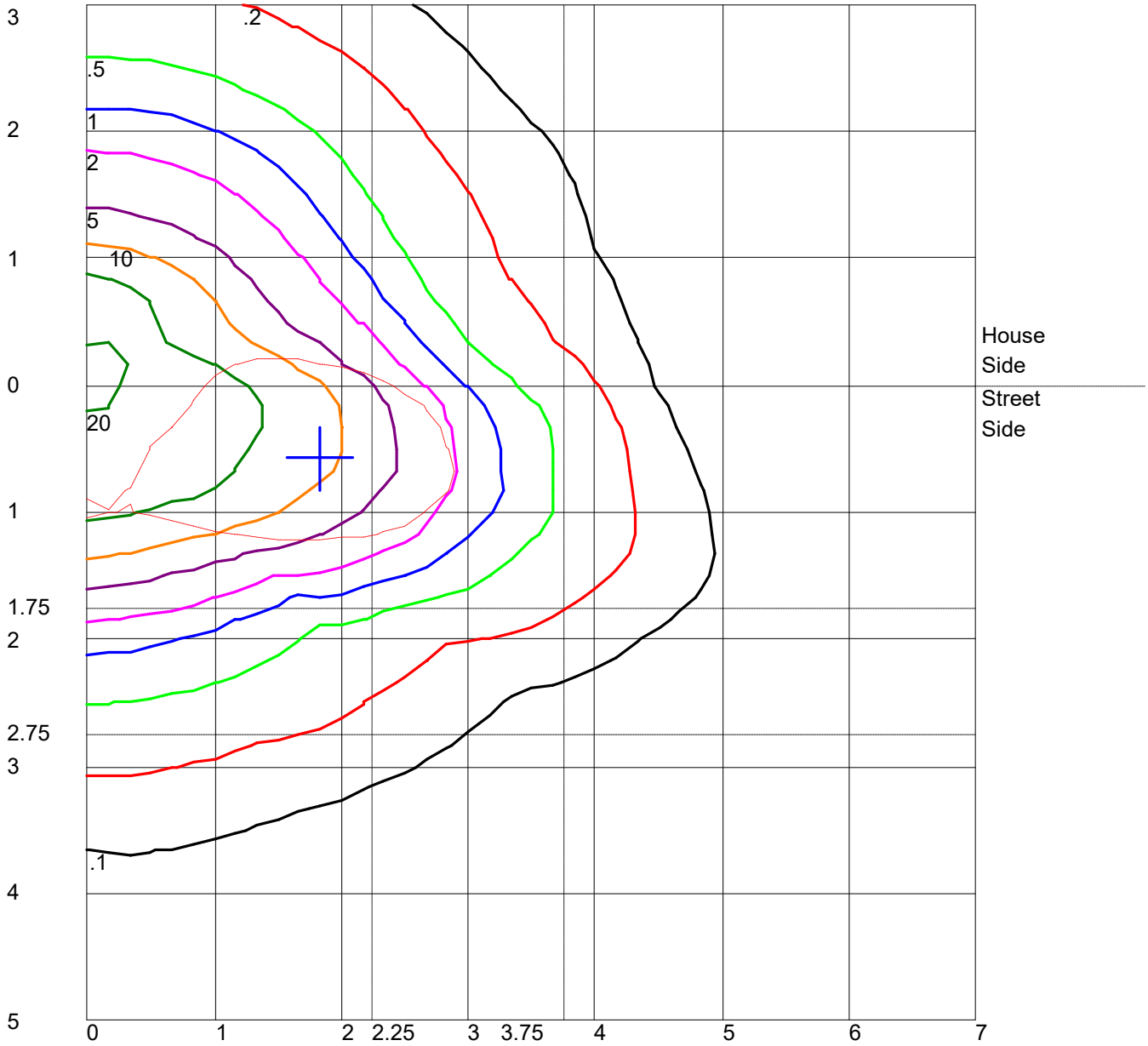


Maximum Candela = 12601 Located At Horizontal Angle = 72.5, Vertical Angle = 62.5
1 - Vertical Plane Through Horizontal Angles (72.5 - 252.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (62.5) (Through Max. Cd.)

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-2-40-70CRI.IES

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE

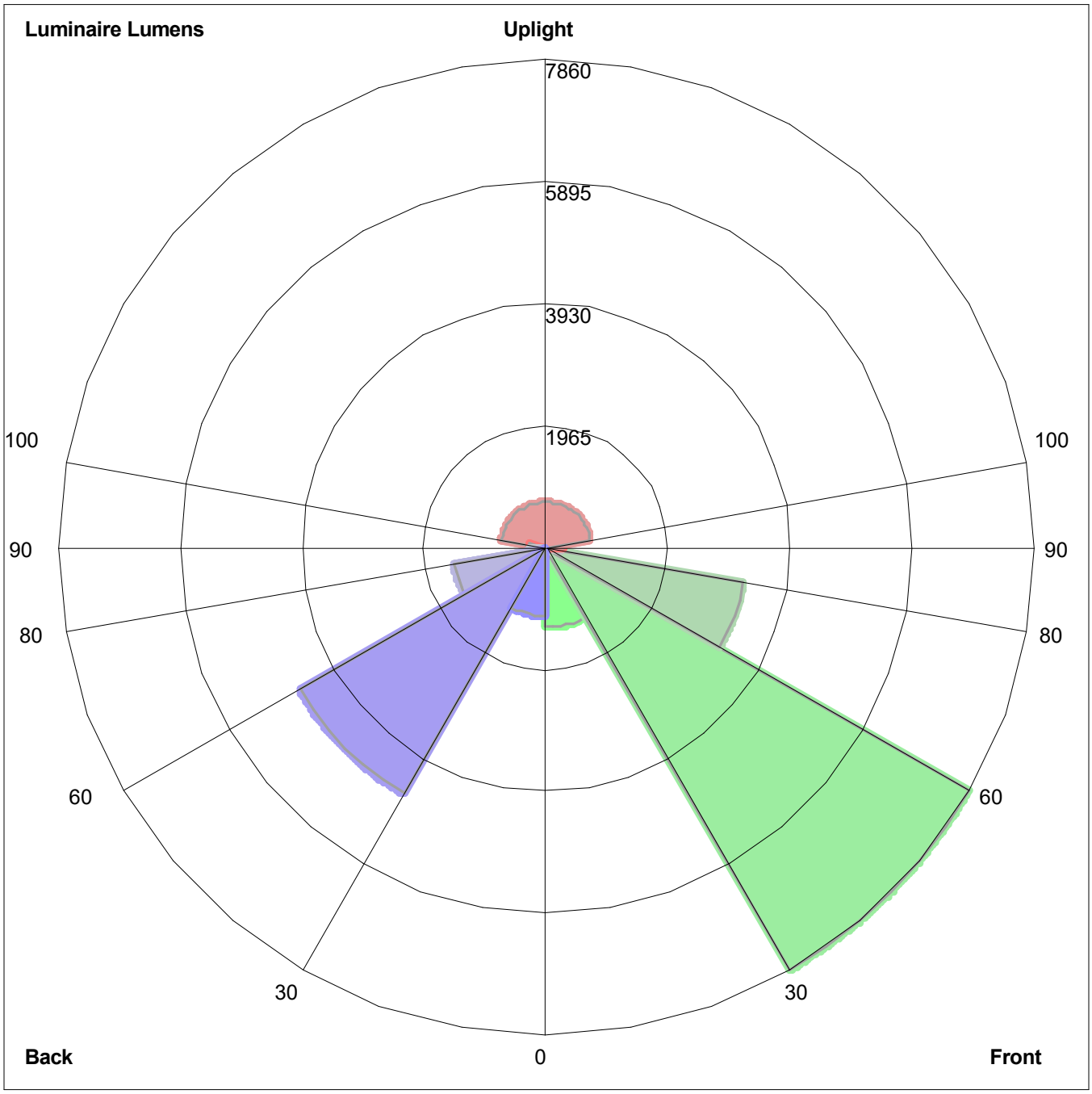


Distance In Units Of Mounting Height
Values Based On 10 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

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-2-40-70CRI.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1291.8, Medium=7859.7, High=3227.3, Very High=225.2
Back: Low=1106.4, Medium=4586.7, High=1508.7, Very High=253.0
Uplight: Low=282.8, High=725.5

BUG Rating : B3-U4-G3

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.