



IES ROAD REPORT

PHOTOMETRIC FILENAME : TMWP-LED-04L-40.IES

DESCRIPTIVE INFORMATION (From Photometric File)

[TEST] IESNA:LM-63-2002

[TEST] 3582

[TESTLAB] TUV SUD America

[TESTDATE] 11/14/2018 11:38:22 AM

[ISSUEDATE] 1/7/2019

[MANUFAC] LSI INDUSTRIES, INC

[LUMCAT] TMWP-LED-04L-40

[OTHER] TEST PROCEDURE: IESNA LM-79-08

[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED

[OTHER] SCALED FROM ORIGINAL TEST DATA

[SEARCH_SOURCETYPE] LED

[SEARCH_APPLICATION] Outdoor

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3913
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	31.23
Ballast Factor	1.00
Upward Waste Light Ratio	0.13
Maximum Candela	1350.086
Maximum Candela Angle	360H 20V
Maximum Candela (<90 Degrees Vertical)	1350.086
Maximum Candela Angle (<90 Degrees Vertical)	360H 20V
Maximum Candela At 90 Degrees Vertical	892.818 (22.8% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1119.427 (28.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT**PHOTOMETRIC FILENAME : TMWP-LED-04L-40.IES****LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	460.5	N.A.	11.8
FM - Front-Medium (30-60)	1132.8	N.A.	29.0
FH - Front-High (60-80)	854.2	N.A.	21.8
FVH - Front-Very High (80-90)	324.5	N.A.	8.3
BL - Back-Low (0-30)	290.8	N.A.	7.4
BM - Back-Medium (30-60)	292.4	N.A.	7.5
BH - Back-High (60-80)	58.0	N.A.	1.5
BVH - Back-Very High (80-90)	7.7	N.A.	0.2
UL - Uplight-Low (90-100)	230.7	N.A.	5.9
UH - Uplight-High (100-180)	261.4	N.A.	6.7
Total	3913.0	N.A.	100.0
BUG Rating	B1-U3-G3		

IES ROAD REPORT
PHOTOMETRIC FILENAME : TMWP-LED-04L-40.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	1022.360	1022.360	1022.360	1022.360	1022.360	1022.360	1022.360	1022.360	1022.360	1022.360
2.5	1106.559	1106.074	1094.933	1053.409	999.168	1023.561	1002.623	991.098	998.916	991.098
5.0	1150.537	1135.689	1117.154	1095.135	998.653	992.866	946.392	929.645	935.514	929.645
7.5	1176.577	1161.628	1139.780	1110.437	1004.613	946.928	912.707	879.950	884.132	879.950
10.0	1155.507	1191.909	1144.679	1090.438	1002.704	935.938	867.264	834.295	830.871	834.295
12.5	1214.333	1168.334	1167.082	1093.549	994.098	901.707	832.053	774.115	766.540	774.115
15.0	1189.324	1193.273	1124.235	1087.479	979.805	851.688	776.802	735.743	739.965	735.743
17.5	1162.324	1158.072	1140.749	1056.439	949.079	815.801	733.713	666.937	655.968	666.937
20.0	1350.086	1159.658	1108.508	1023.531	918.323	763.883	687.967	600.808	584.576	600.808
22.5	1201.252	1272.593	1069.600	1004.340	885.657	726.935	618.898	533.396	505.337	533.396
25.0	1294.663	1203.071	1035.399	988.421	856.668	687.169	549.648	452.247	424.895	452.247
27.5	1207.111	1206.919	1056.459	960.008	824.710	640.584	486.337	380.159	378.462	380.159
30.0	1195.818	1159.082	1119.558	944.271	790.519	598.879	426.258	336.191	298.657	336.191
32.5	1192.152	1137.356	1075.641	916.474	760.045	548.840	364.412	271.577	270.597	271.577
35.0	1127.770	1111.559	1040.945	897.485	727.470	502.276	307.677	233.831	206.761	233.831
37.5	1225.565	1056.964	1090.660	877.667	702.623	456.975	270.001	186.973	176.984	186.973
40.0	1143.477	1068.419	1013.461	872.304	679.462	414.188	256.395	153.732	141.248	153.732
42.5	1189.041	1069.287	1064.489	877.890	663.715	397.290	216.084	129.369	118.804	129.369
45.0	1180.930	1012.420	1022.208	882.910	644.655	369.806	175.843	107.118	100.896	107.118
47.5	1147.163	1055.409	1063.732	919.767	648.423	344.352	140.611	90.936	85.633	90.936
50.0	1188.384	1020.723	1025.167	942.473	612.242	307.070	111.966	76.533	69.432	76.533
52.5	1226.696	1056.278	1035.622	942.807	607.677	263.405	91.401	63.463	58.442	63.463
55.0	1200.838	1057.348	1061.085	944.302	586.354	215.568	76.109	53.604	50.170	53.604
57.5	1280.381	1093.600	1037.096	884.879	521.033	171.540	64.079	46.089	44.958	46.089
60.0	1206.495	1065.701	1036.470	900.121	475.257	117.784	54.604	40.483	39.140	40.483
62.5	1339.238	1105.801	1023.592	807.720	412.249	81.563	48.180	35.958	34.261	35.958
65.0	1174.476	1089.973	971.139	852.032	334.979	61.503	43.049	31.888	29.130	31.888
67.5	1206.990	1004.249	965.624	721.329	270.334	49.109	38.292	27.201	24.585	27.201
70.0	1217.474	1017.946	898.030	729.359	202.983	40.837	34.756	22.565	20.484	22.565
72.5	1170.920	1017.026	858.789	646.806	140.541	34.797	30.595	18.676	17.545	18.676
75.0	1183.506	1011.875	832.134	615.090	90.007	30.161	27.151	14.686	14.626	14.686
77.5	1144.820	978.543	800.145	539.659	65.240	26.585	23.817	11.060	11.939	11.060
80.0	1119.427	953.382	754.268	450.106	49.534	23.908	19.898	8.151	9.444	8.151
82.5	1040.763	902.869	714.309	407.128	42.211	21.504	16.060	5.454	6.151	5.454
85.0	1008.350	863.415	672.361	332.292	38.544	19.464	12.030	2.202	2.323	2.202
87.5	966.563	795.054	615.171	275.546	35.827	17.727	8.676	0.202	0.000	0.202
90.0	892.818	764.459	563.698	217.993	31.393	15.727	6.828	0.141	0.000	0.141
92.5	835.618	705.582	512.902	165.318	26.403	13.838	5.697	0.010	0.000	0.010
95.0	799.226	665.947	467.762	120.430	22.242	12.181	4.788	0.000	0.000	0.000
97.5	716.562	604.757	425.834	85.573	19.181	10.798	4.242	0.000	0.000	0.000
100.0	693.613	546.133	391.997	62.574	17.626	9.747	3.747	0.000	0.000	0.000
102.5	580.526	493.478	333.150	51.008	16.262	8.515	3.182	0.000	0.000	0.000
105.0	539.224	418.824	283.021	45.695	15.727	7.828	2.909	0.000	0.000	0.000
107.5	443.611	369.018	228.669	42.837	15.656	7.151	2.586	0.000	0.000	0.000
110.0	383.704	307.434	179.438	40.211	15.222	6.717	2.242	0.000	0.000	0.000
112.5	321.939	265.223	132.753	38.080	14.838	6.313	1.818	0.000	0.000	0.000
115.0	261.385	216.265	105.966	36.958	14.444	6.060	1.626	0.000	0.000	0.000
117.5	219.568	179.186	87.280	35.433	13.666	5.586	1.384	0.000	0.000	0.000
120.0	174.499	148.268	75.341	34.393	12.656	5.333	1.162	0.000	0.000	0.000
122.5	145.409	123.168	65.634	32.595	11.212	4.879	0.939	0.000	0.000	0.000
125.0	121.036	101.694	57.473	30.595	9.969	4.050	0.879	0.000	0.000	0.000
127.5	98.633	84.219	50.877	28.211	9.050	3.010	0.586	0.000	0.020	0.000
130.0	80.684	70.695	45.433	26.312	7.858	2.030	0.535	0.010	0.000	0.010

IES ROAD REPORT
PHOTOMETRIC FILENAME : TMWP-LED-04L-40.IES

CANDELA TABULATION - (Cont.)

132.5	66.887	59.624	40.231	23.989	6.868	1.566	0.566	0.061	0.263	0.061
135.0	57.271	51.332	36.564	21.434	5.868	1.616	0.677	0.172	0.374	0.172
137.5	50.635	46.089	34.292	18.161	5.424	1.636	0.374	0.354	0.616	0.354
140.0	46.665	41.918	31.332	15.121	4.475	1.747	0.495	0.465	0.576	0.465
142.5	41.635	38.110	27.534	12.454	3.919	1.828	0.434	0.788	0.838	0.788
145.0	37.453	34.100	23.625	10.293	3.353	1.556	0.808	1.151	0.990	1.151
147.5	32.383	29.403	20.090	8.596	2.656	1.545	0.949	1.061	0.929	1.061
150.0	27.433	24.807	17.030	6.980	2.101	1.343	1.020	1.071	1.263	1.071
152.5	23.504	21.403	14.494	5.303	1.949	1.091	1.151	1.343	1.323	1.343
155.0	20.595	18.737	12.181	3.454	1.465	0.980	1.232	1.495	1.374	1.495
157.5	17.858	16.010	10.424	1.353	0.939	1.192	1.424	1.414	1.454	1.414
160.0	15.181	13.616	8.868	0.949	0.990	1.384	1.495	1.687	1.636	1.687
162.5	12.424	11.686	6.545	1.182	1.081	1.283	1.768	1.707	1.465	1.707
165.0	9.313	8.666	3.798	0.899	1.202	1.505	1.646	1.788	1.909	1.788
167.5	5.626	5.222	1.384	1.020	1.182	1.485	1.848	1.788	1.717	1.788
170.0	1.333	1.929	1.303	1.454	1.404	1.697	1.848	1.899	1.960	1.899
172.5	0.889	1.151	1.242	1.566	1.596	1.596	1.697	1.778	2.061	1.778
175.0	1.333	1.273	1.333	1.556	1.707	1.697	1.848	1.838	1.828	1.838
177.5	1.616	1.424	1.505	1.646	1.657	1.758	1.778	1.879	1.788	1.879
180.0	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010

Vert. Angles **Horizontal Angles**

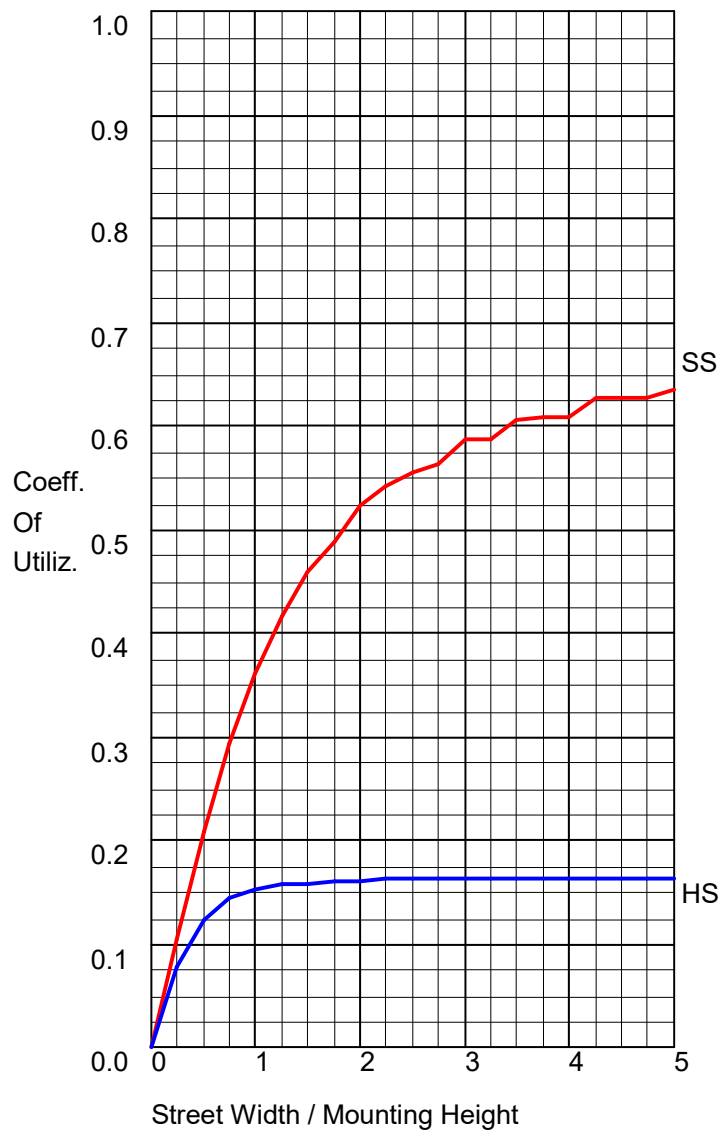
	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	1022.360	1022.360	1022.360	1022.360	1022.360	1022.360	1022.360
2.5	1002.623	1023.561	999.168	1053.409	1094.933	1106.074	1106.559
5.0	946.392	992.866	998.653	1095.135	1117.154	1135.689	1150.537
7.5	912.707	946.928	1004.613	1110.437	1139.780	1161.628	1176.577
10.0	867.264	935.938	1002.704	1090.438	1144.679	1191.909	1155.507
12.5	832.053	901.707	994.098	1093.549	1167.082	1168.334	1214.333
15.0	776.802	851.688	979.805	1087.479	1124.235	1193.273	1189.324
17.5	733.713	815.801	949.079	1056.439	1140.749	1158.072	1162.324
20.0	687.967	763.883	918.323	1023.531	1108.508	1159.658	1350.086
22.5	618.898	726.935	885.657	1004.340	1069.600	1272.593	1201.252
25.0	549.648	687.169	856.668	988.421	1035.399	1203.071	1294.663
27.5	486.337	640.584	824.710	960.008	1056.459	1206.919	1207.111
30.0	426.258	598.879	790.519	944.271	1119.558	1159.082	1195.818
32.5	364.412	548.840	760.045	916.474	1075.641	1137.356	1192.152
35.0	307.677	502.276	727.470	897.485	1040.945	1111.559	1127.770
37.5	270.001	456.975	702.623	877.667	1090.660	1056.964	1225.565
40.0	256.395	414.188	679.462	872.304	1013.461	1068.419	1143.477
42.5	216.084	397.290	663.715	877.890	1064.489	1069.287	1189.041
45.0	175.843	369.806	644.655	882.910	1022.208	1012.420	1180.930
47.5	140.611	344.352	648.423	919.767	1063.732	1055.409	1147.163
50.0	111.966	307.070	612.242	942.473	1025.167	1020.723	1188.384
52.5	91.401	263.405	607.677	942.807	1035.622	1056.278	1226.696
55.0	76.109	215.568	586.354	944.302	1061.085	1057.348	1200.838
57.5	64.079	171.540	521.033	884.879	1037.096	1093.600	1280.381
60.0	54.604	117.784	475.257	900.121	1036.470	1065.701	1206.495
62.5	48.180	81.563	412.249	807.720	1023.592	1105.801	1339.238
65.0	43.049	61.503	334.979	852.032	971.139	1089.973	1174.476
67.5	38.292	49.109	270.334	721.329	965.624	1004.249	1206.990
70.0	34.756	40.837	202.983	729.359	898.030	1017.946	1217.474
72.5	30.595	34.797	140.541	646.806	858.789	1017.026	1170.920
75.0	27.151	30.161	90.007	615.090	832.134	1011.875	1183.506
77.5	23.817	26.585	65.240	539.659	800.145	978.543	1144.820

IES ROAD REPORT
PHOTOMETRIC FILENAME : TMWP-LED-04L-40.IES

CANDELA TABULATION - (Cont.)

80.0	19.898	23.908	49.534	450.106	754.268	953.382	1119.427
82.5	16.060	21.504	42.211	407.128	714.309	902.869	1040.763
85.0	12.030	19.464	38.544	332.292	672.361	863.415	1008.350
87.5	8.676	17.727	35.827	275.546	615.171	795.054	966.563
90.0	6.828	15.727	31.393	217.993	563.698	764.459	892.818
92.5	5.697	13.838	26.403	165.318	512.902	705.582	835.618
95.0	4.788	12.181	22.242	120.430	467.762	665.947	799.226
97.5	4.242	10.798	19.181	85.573	425.834	604.757	716.562
100.0	3.747	9.747	17.626	62.574	391.997	546.133	693.613
102.5	3.182	8.515	16.262	51.008	333.150	493.478	580.526
105.0	2.909	7.828	15.727	45.695	283.021	418.824	539.224
107.5	2.586	7.151	15.656	42.837	228.669	369.018	443.611
110.0	2.242	6.717	15.222	40.211	179.438	307.434	383.704
112.5	1.818	6.313	14.838	38.080	132.753	265.223	321.939
115.0	1.626	6.060	14.444	36.958	105.966	216.265	261.385
117.5	1.384	5.586	13.666	35.433	87.280	179.186	219.568
120.0	1.162	5.333	12.656	34.393	75.341	148.268	174.499
122.5	0.939	4.879	11.212	32.595	65.634	123.168	145.409
125.0	0.879	4.050	9.969	30.595	57.473	101.694	121.036
127.5	0.586	3.010	9.050	28.211	50.877	84.219	98.633
130.0	0.535	2.030	7.858	26.312	45.433	70.695	80.684
132.5	0.566	1.566	6.868	23.989	40.231	59.624	66.887
135.0	0.677	1.616	5.868	21.434	36.564	51.332	57.271
137.5	0.374	1.636	5.424	18.161	34.292	46.089	50.635
140.0	0.495	1.747	4.475	15.121	31.332	41.918	46.665
142.5	0.434	1.828	3.919	12.454	27.534	38.110	41.635
145.0	0.808	1.556	3.353	10.293	23.625	34.100	37.453
147.5	0.949	1.545	2.656	8.596	20.090	29.403	32.383
150.0	1.020	1.343	2.101	6.980	17.030	24.807	27.433
152.5	1.151	1.091	1.949	5.303	14.494	21.403	23.504
155.0	1.232	0.980	1.465	3.454	12.181	18.737	20.595
157.5	1.424	1.192	0.939	1.353	10.424	16.010	17.858
160.0	1.495	1.384	0.990	0.949	8.868	13.616	15.181
162.5	1.768	1.283	1.081	1.182	6.545	11.686	12.424
165.0	1.646	1.505	1.202	0.899	3.798	8.666	9.313
167.5	1.848	1.485	1.182	1.020	1.384	5.222	5.626
170.0	1.848	1.697	1.404	1.454	1.303	1.929	1.333
172.5	1.697	1.596	1.596	1.566	1.242	1.151	0.889
175.0	1.848	1.697	1.707	1.556	1.333	1.273	1.333
177.5	1.778	1.758	1.657	1.646	1.505	1.424	1.616
180.0	1.010	1.010	1.010	1.010	1.010	1.010	1.010

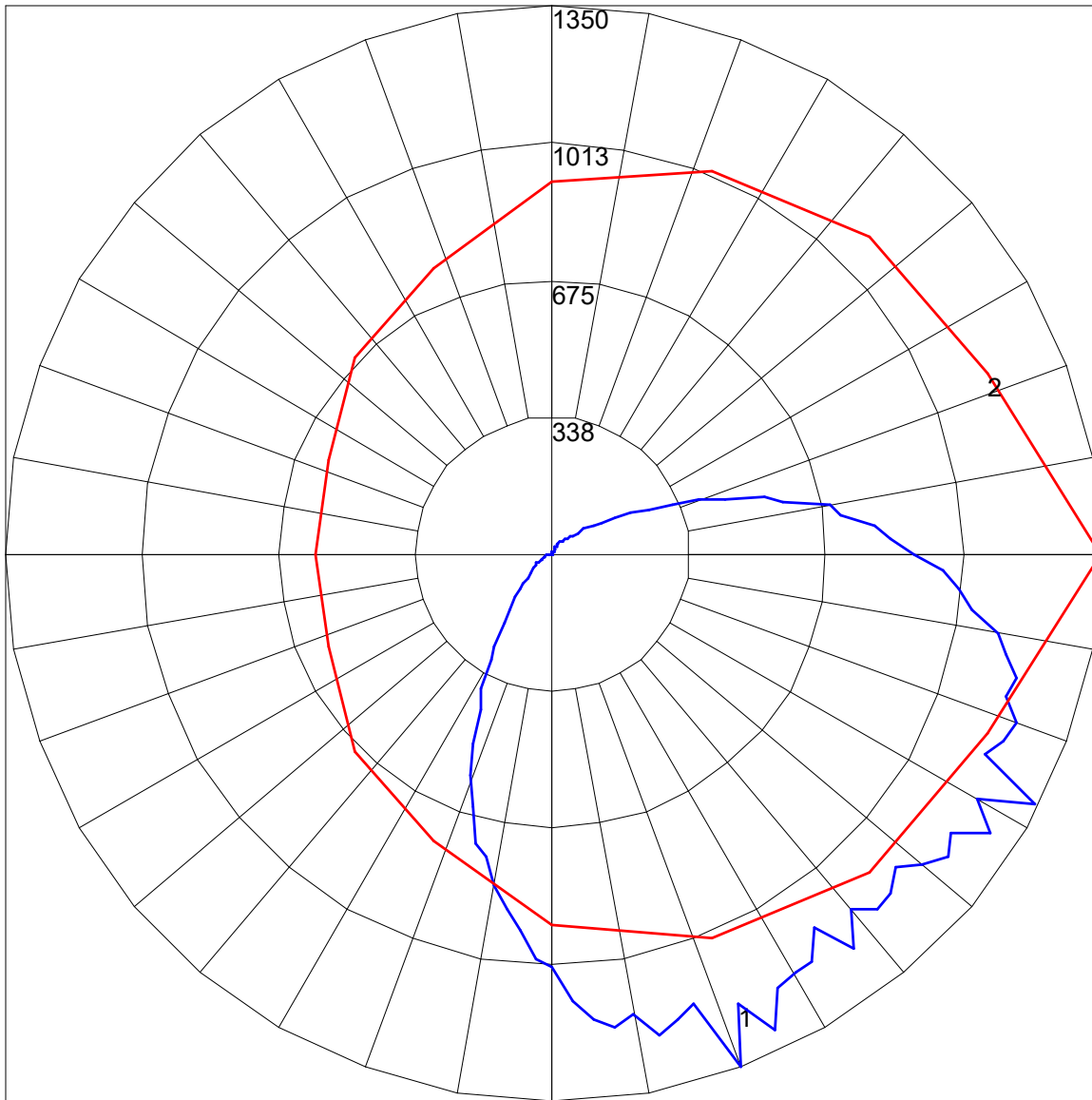
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

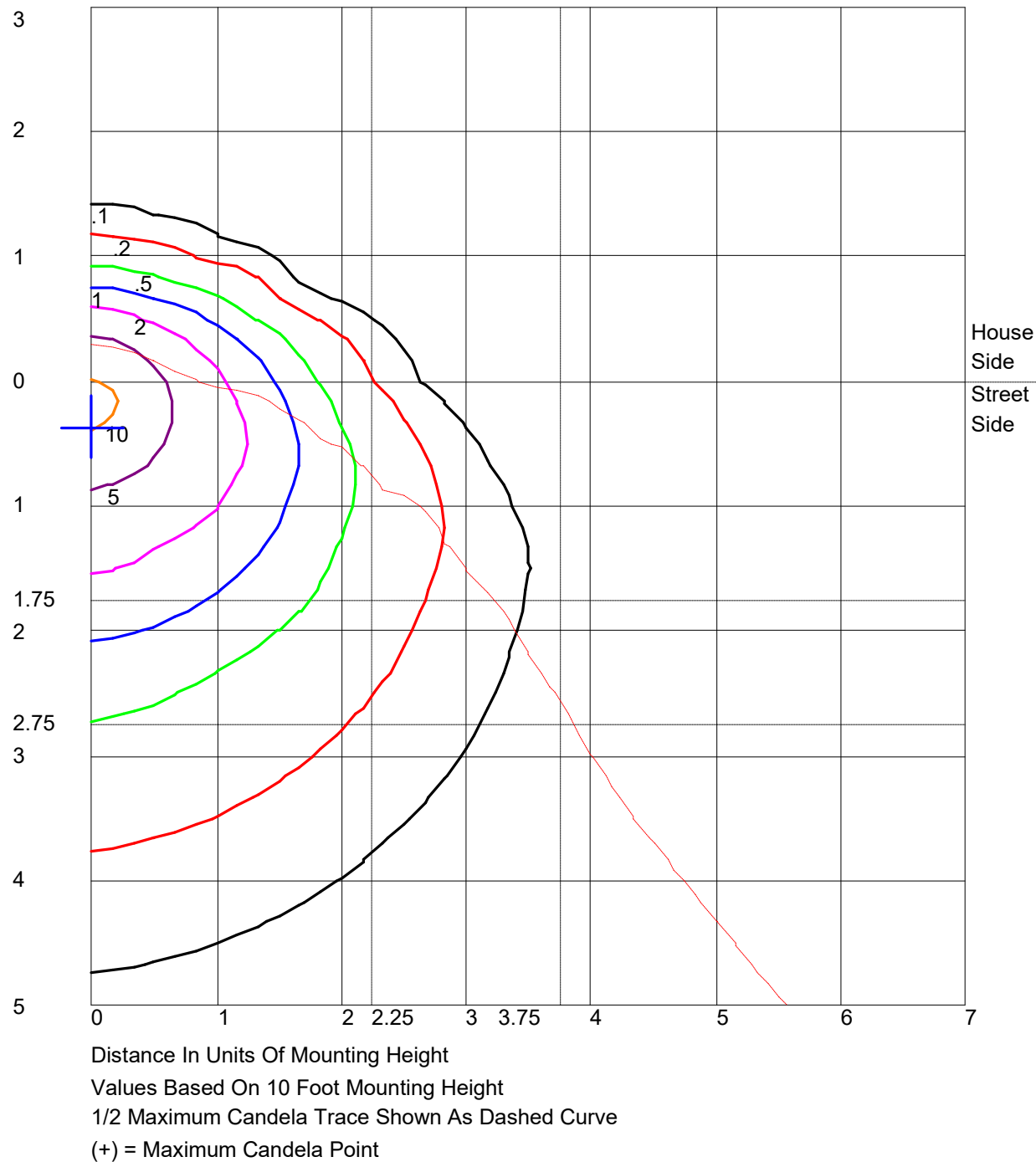
	Lumens	Percent Of Luminaire
Downward Street Side	2772.0	70.8
Downward House Side	648.9	16.6
Downward Total	3420.9	87.4
Upward Street Side	481.1	12.3
Upward House Side	11.0	0.3
Upward Total	492.1	12.6
Total Flux	3913.0	100.0

POLAR GRAPH

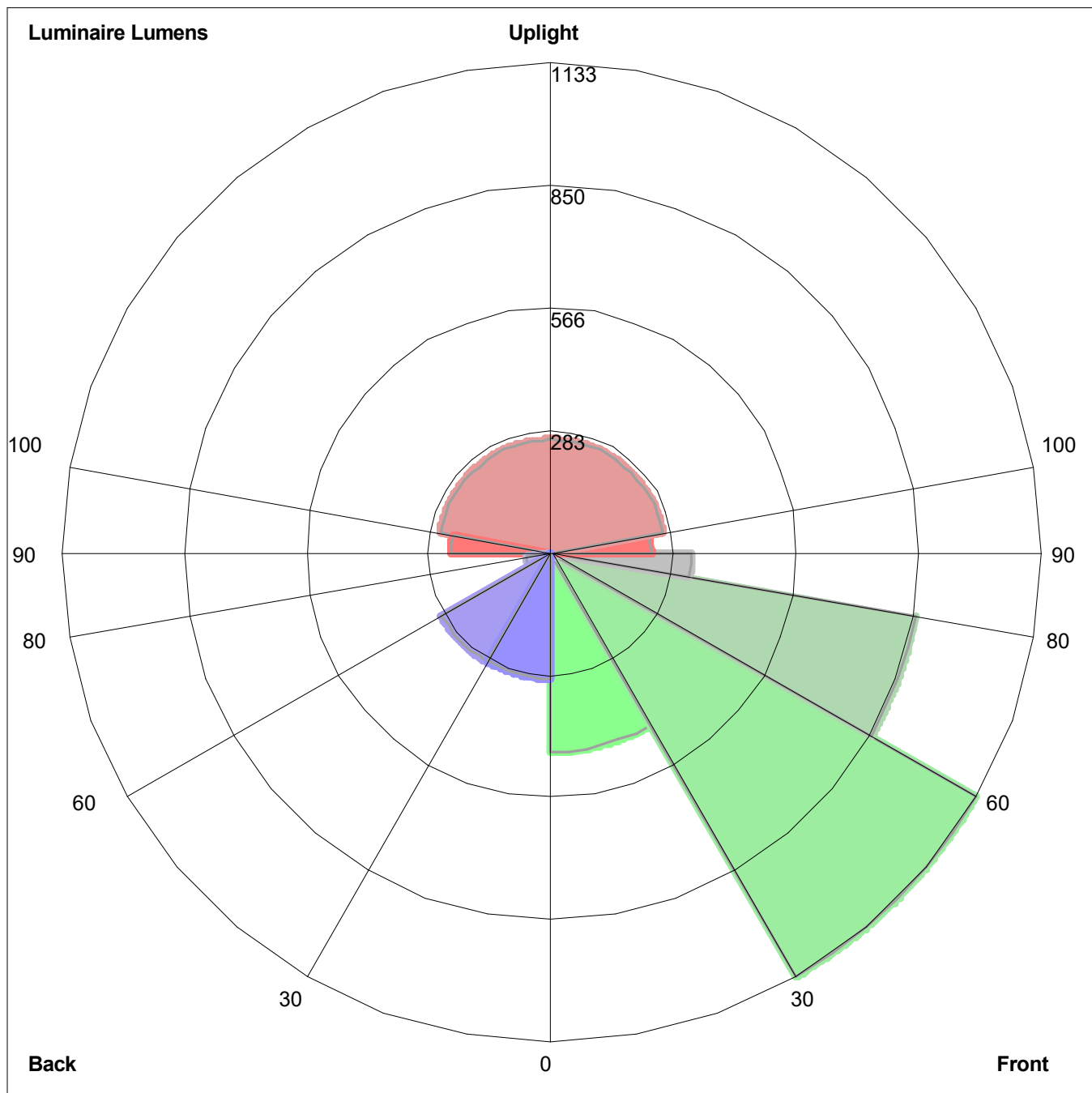


Maximum Candela = 1350.086 Located At Horizontal Angle = 360, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (360 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=460.5, Medium=1132.8, High=854.2, Very High=324.5
Back: Low=290.8, Medium=292.4, High=58.0, Very High=7.7
Uplight: Low=230.7, High=261.4

BUG Rating : B1-U3-G3