

# Photometrics Pro

## Luminaire Photometric Report

**Filename:** AST-MWP09-30WBMDA1-abd-120V-12

**Manufacturer:** SMART LIGHT CO., LTD

**Luminaire Cat:** AST-MWP09-30WBMDA1-ab30

**Lamp Output:** 1 lamp, rated Lumens/lamp: 3804.1

**Max Candela:** 1,474.3 at Horizontal: 0°, Vertical: 20°

**Input Wattage:** 30.94

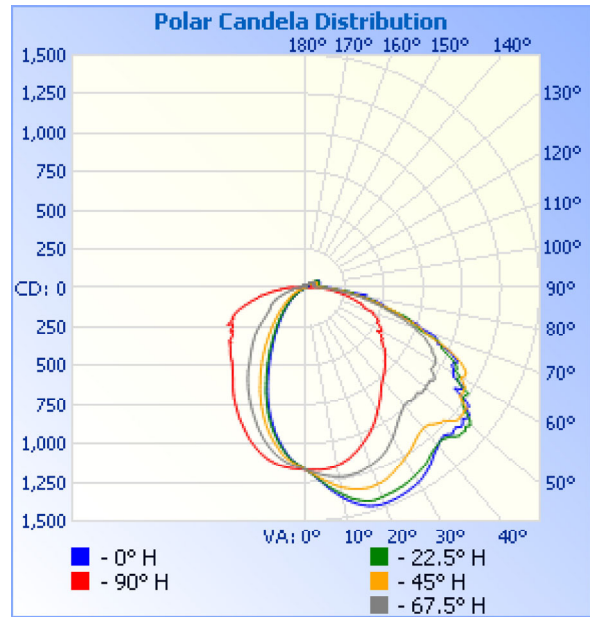
**Luminous Opening:** Point

**Test:** BLC2210008E-A-PL

**Test Lab:** UTEST TECHNICAL LABORATORY CO.LTD

**Photometry :** Type C

**Nema Type:** 7 X 7



### Roadway Summary

Cutoff Classification:	SEMICUTOFF	
Distribution:	TYPE IV, VERY SHORT	
Max Cd, 90 Deg Vert:	141.1	
Max Cd, 80 to <90 Deg:	449.3	
	Lumens	% Lamp
Downward Street Side:	2,702.6	71%
Downward House Side:	904.7	23.8%
Downward Total:	3,607.3	94.8%
Upward Street Side:	159.5	4.2%
Upward House Side:	37.3	1%
Upward Total:	196.8	5.2%
<b>Total Lumens:</b>	<b>3,804.1</b>	<b>100%</b>

### Flood Summary

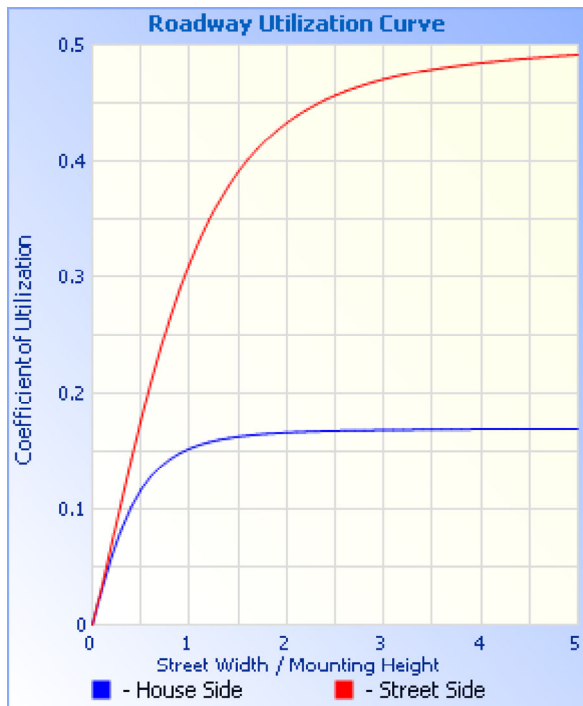
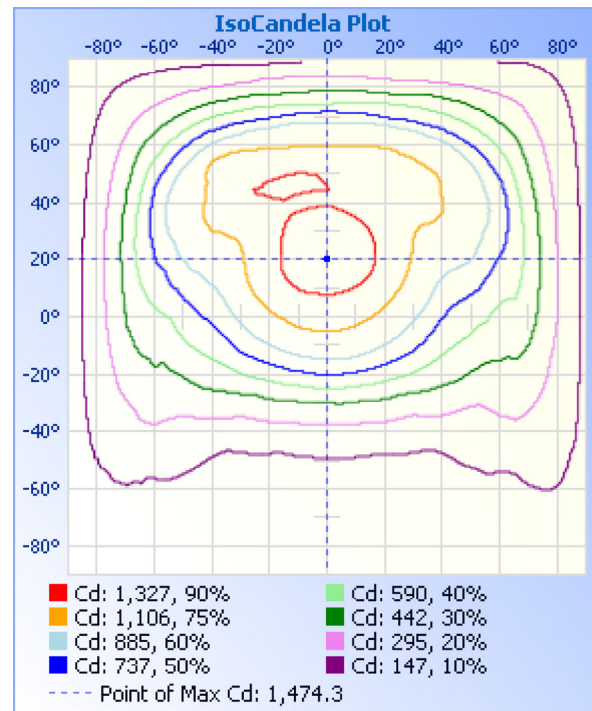
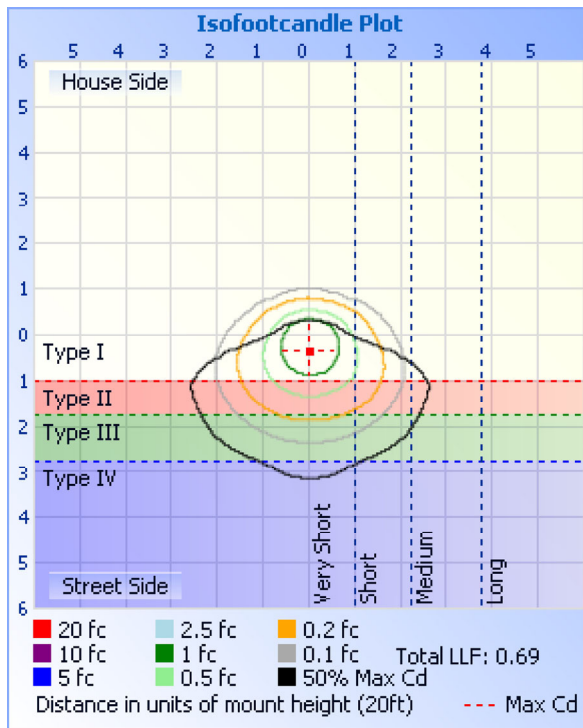
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	92.7%	3,526.8	173	138
Beam (50%):	66.8%	2,541.2	118.8	91.6
<b>Total:</b>	<b>100%</b>	<b>3,802.5</b>		

### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	892.5	23.5%	23.5%
0-40	1,419.0	37.3%	37.3%
0-60	2,575.2	67.7%	67.7%
60-90	1,031.8	27.1%	27.1%
70-100	555.9	14.6%	14.6%
90-120	130.6	3.4%	3.4%
0-90	3,607.1	94.8%	94.8%
90-180	196.8	5.2%	5.2%
0-180	3,803.9	100%	100%

### Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	111.9	2.9%	90-100	53.0	1.4%
10-20	319.1	8.4%	100-110	38.8	1%
20-30	461.5	12.1%	110-120	38.8	1%
30-40	526.5	13.8%	120-130	29.6	0.8%
40-50	568.6	14.9%	130-140	18.4	0.5%
50-60	587.6	15.4%	140-150	10.4	0.3%
60-70	529.0	13.9%	150-160	5.4	0.1%
70-80	345.2	9.1%	160-170	2.0	0.1%
80-90	157.7	4.1%	170-180	0.4	0%



**Illuminance at a Distance**

	Center Beam fc	Beam Width	
2.5R	187 fc	5.1 ft	8.5 ft
5.0R	46.7 fc	10.3 ft	16.9 ft
7.5R	20.7 fc	15.4 ft	25.4 ft
10.0R	11.7 fc	20.6 ft	33.8 ft
12.5R	7.47 fc	25.7 ft	42.3 ft
15.0R	5.19 fc	30.8 ft	50.7 ft

Vert. Spread: 91.6°  
Horiz. Spread: 118.8°

**Coefficients Of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.18	1.18	1.18	1.18	1.14	1.14	1.14	.95	1.08	1.08	1.08	1.03	1.03	1.03	.97	.97	.97	.95
1	1.06	1.01	.96	.91	1.03	.98	.93	.77	.92	.89	.86	.88	.85	.82	.83	.81	.79	.76
2	.96	.87	.79	.73	.92	.84	.77	.63	.80	.74	.69	.76	.71	.67	.72	.68	.64	.62
3	.87	.75	.67	.60	.84	.73	.65	.53	.70	.63	.57	.66	.60	.55	.63	.58	.54	.51

4	.79	.66	.57	.50	.76	.65	.56	.45	.61	.54	.48	.58	.52	.47	.56	.50	.46	.43
5	.73	.59	.50	.43	.70	.58	.49	.39	.55	.47	.41	.52	.46	.40	.50	.44	.39	.37
6	.67	.53	.44	.37	.65	.52	.43	.34	.49	.42	.36	.47	.40	.35	.45	.39	.34	.32
7	.62	.48	.39	.33	.60	.47	.38	.30	.45	.37	.32	.43	.36	.31	.41	.35	.30	.28
8	.58	.44	.35	.29	.56	.43	.34	.27	.41	.34	.28	.39	.33	.28	.38	.32	.27	.25
9	.54	.40	.32	.26	.52	.39	.31	.24	.38	.30	.25	.36	.30	.25	.35	.29	.25	.23
10	.50	.37	.29	.24	.49	.36	.29	.22	.35	.28	.23	.34	.27	.23	.32	.27	.22	.21

**Candela Table - Type C**

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167	1167
1	1183	1182	1181	1174	1168	1163	1159	1155	1154	1152	1155	1160	1165	1172	1176	1181	1183
2	1200	1198	1194	1182	1169	1159	1150	1142	1141	1140	1145	1155	1164	1177	1188	1198	1200
3	1220	1217	1207	1190	1169	1155	1142	1131	1129	1130	1137	1148	1162	1183	1199	1217	1220
4	1239	1235	1221	1197	1171	1150	1131	1119	1116	1118	1128	1143	1161	1188	1211	1236	1239
5	1261	1255	1236	1205	1170	1144	1120	1104	1101	1105	1118	1137	1160	1192	1224	1254	1261
6	1287	1275	1249	1212	1169	1139	1108	1088	1084	1089	1107	1130	1156	1199	1236	1272	1287
7	1307	1294	1263	1218	1167	1132	1094	1069	1062	1069	1094	1121	1154	1203	1253	1291	1307
8	1329	1312	1276	1222	1165	1123	1079	1049	1040	1049	1079	1110	1151	1207	1263	1309	1329
9	1350	1330	1289	1228	1161	1113	1062	1028	1018	1029	1063	1100	1148	1209	1274	1327	1350
10	1370	1346	1299	1232	1157	1103	1042	1006	996	1009	1042	1089	1143	1211	1285	1343	1370
11	1388	1363	1309	1235	1151	1090	1022	983	973	986	1023	1076	1136	1211	1294	1358	1388
12	1405	1381	1318	1235	1144	1073	1002	960	949	964	1004	1062	1130	1209	1302	1373	1405
13	1422	1394	1326	1236	1137	1059	983	937	922	940	985	1048	1122	1207	1309	1387	1422
14	1435	1405	1332	1233	1129	1044	962	907	896	916	965	1033	1112	1204	1315	1400	1435
15	1448	1416	1338	1234	1119	1027	940	882	869	890	944	1017	1103	1200	1320	1414	1448
16	1458	1425	1342	1231	1109	1011	917	856	841	864	923	1002	1092	1196	1323	1423	1458
17	1465	1431	1345	1227	1099	992	894	829	813	837	898	983	1080	1191	1326	1435	1465
18	1470	1434	1347	1221	1087	975	871	801	782	805	876	966	1068	1185	1329	1439	1470
19	1474	1432	1345	1217	1073	957	849	773	752	777	852	948	1056	1179	1329	1442	1474
20	1474	1429	1342	1212	1062	939	823	742	722	748	827	927	1042	1175	1329	1443	1474
21	1474	1428	1341	1206	1050	920	803	713	691	719	804	908	1029	1169	1327	1441	1474
22	1473	1425	1336	1198	1038	902	775	685	661	689	777	890	1012	1161	1324	1440	1473
23	1472	1424	1330	1192	1025	880	749	656	629	657	752	872	998	1150	1319	1431	1472
24	1469	1422	1321	1185	1011	864	724	627	595	627	726	855	983	1142	1314	1425	1469
25	1466	1419	1313	1176	997	845	700	598	565	598	700	835	968	1135	1309	1421	1466
26	1463	1416	1303	1166	982	828	674	568	536	571	672	817	955	1125	1303	1415	1463
27	1458	1412	1293	1153	967	807	649	540	509	543	647	798	940	1115	1295	1409	1458
28	1453	1406	1284	1139	951	788	623	513	484	514	623	779	925	1106	1285	1404	1453
29	1450	1400	1275	1125	932	771	598	487	456	487	598	762	909	1095	1276	1395	1450
30	1442	1394	1263	1112	916	754	574	462	432	464	572	744	893	1082	1265	1388	1442
31	1436	1388	1255	1096	900	739	552	435	410	438	548	725	878	1069	1254	1378	1436
32	1424	1381	1245	1079	884	722	526	413	388	414	523	708	862	1056	1245	1370	1424
33	1413	1375	1234	1064	867	704	503	391	369	392	499	688	847	1040	1235	1355	1413
34	1402	1368	1223	1049	851	684	480	371	349	372	476	668	830	1029	1225	1342	1402
35	1387	1357	1211	1034	834	664	458	351	329	353	453	648	814	1015	1212	1327	1387
36	1373	1345	1201	1020	817	643	438	332	312	335	428	624	798	1003	1196	1313	1373
37	1355	1334	1191	1011	800	621	416	314	296	318	408	604	779	992	1184	1300	1355
38	1340	1323	1182	1000	787	597	397	297	280	300	388	585	761	980	1170	1290	1340
39	1330	1319	1177	990	775	578	379	281	264	284	370	568	744	968	1162	1278	1330
40	1318	1312	1175	981	766	562	362	265	249	269	352	553	733	959	1152	1268	1318
41	1307	1309	1176	982	756	547	344	248	236	254	335	537	716	952	1148	1259	1307
42	1299	1305	1180	979	747	534	326	233	223	239	319	521	705	949	1142	1251	1299
43	1296	1317	1198	990	737	520	309	220	211	225	301	506	694	954	1142	1250	1296
44	1307	1326	1210	986	726	510	294	207	198	212	286	490	682	949	1144	1258	1307
45	1328	1349	1225	989	716	498	279	194	185	200	270	475	671	950	1150	1257	1328
46	1316	1366	1225	981	706	484	263	181	173	188	256	462	666	957	1168	1275	1316

47	1313	1364	1255	981	691	473	247	170	163	176	242	448	659	962	1178	1277	1313
48	1335	1373	1279	1002	682	461	232	159	152	165	229	433	653	969	1188	1277	1335
49	1333	1357	1292	998	672	448	218	148	141	154	216	419	643	968	1191	1277	1333
50	1311	1375	1292	1004	660	433	205	138	132	144	202	401	635	975	1194	1284	1311
51	1329	1354	1292	992	649	415	193	128	123	135	191	382	625	983	1194	1296	1329
52	1331	1304	1285	997	644	395	183	119	114	125	179	364	616	998	1187	1283	1331
53	1290	1260	1293	989	615	380	172	111	105	116	168	346	613	989	1180	1283	1290
54	1293	1245	1239	1009	607	363	163	103	98	107	159	330	592	983	1173	1246	1293
55	1237	1230	1204	1010	587	352	153	93	90	99	149	315	604	965	1152	1224	1237
56	1148	1230	1210	986	592	340	145	86	83	91	141	304	580	959	1144	1185	1148
57	1191	1242	1203	955	574	330	136	79	75	84	134	292	565	955	1134	1186	1191
58	1185	1161	1204	960	574	321	129	72	68	77	126	282	555	943	1135	1185	1185
59	1105	1128	1175	962	532	309	121	64	61	70	119	274	559	936	1121	1179	1105
60	1088	1143	1148	955	552	302	114	58	55	63	113	267	542	913	1096	1141	1088
61	1083	1098	1164	952	557	303	107	52	49	56	105	261	557	918	1078	1105	1083
62	1060	1096	1163	936	541	289	100	46	43	50	100	258	533	917	1070	1086	1060
63	1062	1077	1142	907	531	280	94	40	37	44	93	253	528	902	1078	1077	1062
64	1082	1039	1111	900	507	274	87	35	32	39	86	246	523	890	1050	1046	1082
65	1043	989	1070	875	512	268	81	30	27	33	79	242	554	870	1012	992	1043
66	1016	951	1018	848	505	261	75	25	22	28	72	231	526	848	987	974	1016
67	918	946	960	833	499	254	68	21	18	23	67	222	505	852	944	943	918
68	903	915	894	793	478	243	60	16	13	19	61	211	514	815	911	933	903
69	892	830	829	765	459	233	55	13	10	14	55	208	497	783	873	877	892
70	848	773	802	740	453	220	51	9	6	11	49	200	488	759	820	809	848
71	766	742	768	689	398	207	47	6	4	8	46	188	468	718	768	747	766
72	756	712	723	666	390	194	40	4	3	4	40	167	454	675	717	706	756
73	671	697	653	608	376	175	34	3	3	4	33	161	431	637	688	711	671
74	624	660	629	572	371	165	30	3	3	3	30	150	411	614	657	684	624
75	571	586	596	528	339	149	28	2	3	4	27	139	384	567	630	672	571
76	533	523	550	514	323	141	23	3	3	3	23	126	365	545	579	584	533
77	515	492	496	464	298	140	21	2	3	3	19	126	346	510	545	521	515
78	495	455	474	425	278	123	18	2	3	4	17	113	319	473	507	471	495
79	465	448	428	389	267	120	18	3	3	3	15	104	311	444	475	434	465
80	406	407	395	373	241	114	16	3	3	3	14	101	291	407	449	437	406
81	356	366	361	336	224	101	14	3	3	4	13	91	265	370	404	384	356
82	356	321	330	295	205	99	14	3	3	3	12	88	244	345	351	349	356
83	391	295	280	262	182	82	13	3	3	3	12	85	225	320	327	306	391
84	299	302	258	229	178	83	13	3	3	3	11	76	207	296	290	283	299
85	226	248	236	212	158	80	12	3	3	4	11	78	185	269	251	287	226
86	236	201	204	188	136	82	12	2	3	3	11	75	164	239	227	250	236
87	190	192	176	165	124	70	12	3	4	4	10	72	158	205	212	202	190
88	154	159	163	137	105	64	12	4	3	3	11	67	142	176	178	189	154
89	165	140	132	120	91	57	11	3	3	4	10	61	127	161	160	154	165
90	133	132	115	104	80	53	11	4	4	4	10	53	111	140	141	137	133
91	128	119	100	86	65	47	11	2	4	4	10	48	96	117	120	123	128
92	112	108	91	72	43	39	10	3	4	4	9	44	83	101	101	110	112
93	106	102	83	64	37	36	11	3	4	4	10	37	45	83	90	103	106
94	102	97	79	60	33	33	11	4	4	3	9	33	36	71	80	97	102
95	100	94	75	57	29	30	11	4	4	3	10	31	33	64	75	93	100

96	97	91	72	55	24	29	11	4	4	4	9	29	29	58	71	90	97
97	94	88	70	55	19	29	10	4	4	5	9	28	26	56	69	86	94
98	91	86	69	55	9	28	11	4	4	4	10	28	23	56	67	83	91
99	87	84	68	55	2	27	10	4	4	4	10	27	16	56	66	81	87
100	85	81	67	55	3	28	10	4	4	4	9	26	6	56	65	79	85
101	84	80	66	55	3	28	10	4	4	4	9	26	2	58	65	78	84
102	83	80	66	54	2	27	10	3	4	4	9	26	3	57	65	77	83
103	84	80	66	55	2	27	10	4	4	4	9	25	3	57	65	77	84
104	84	81	67	54	2	27	10	4	4	4	9	25	3	57	65	77	84
105	85	82	68	55	3	28	10	4	4	4	9	25	3	57	66	78	85
106	86	83	69	55	4	28	10	4	4	4	9	25	3	57	66	79	86
107	87	84	70	56	6	28	10	4	4	4	8	25	3	57	67	79	87
108	89	85	71	57	7	28	11	3	4	4	9	25	3	56	68	80	89
109	90	86	71	56	9	28	10	4	4	4	9	25	4	57	68	81	90
110	91	86	73	57	14	28	10	3	4	4	8	25	4	57	69	82	91
111	92	86	73	58	19	28	10	3	4	4	9	26	4	57	68	83	92
112	92	87	74	58	20	29	11	4	4	4	8	26	4	58	69	83	92
113	92	87	74	59	19	28	11	4	4	4	9	26	5	58	68	82	92
114	92	87	74	59	19	29	11	4	4	4	9	26	5	59	68	82	92
115	92	87	74	59	19	29	11	3	4	4	9	26	5	58	67	81	92
116	91	88	73	60	19	29	11	3	4	4	9	26	6	59	67	81	91
117	91	87	73	60	19	29	11	4	4	4	9	26	6	59	65	80	91
118	90	86	72	59	20	30	11	4	4	4	9	27	8	59	64	78	90
119	88	84	71	58	19	30	11	4	4	4	9	27	8	58	63	76	88
120	87	82	69	59	19	29	11	4	4	4	9	27	8	58	62	74	87
121	85	78	68	59	19	29	11	4	4	4	9	26	8	57	61	72	85
122	80	76	67	58	18	29	12	4	4	5	9	27	8	57	60	70	80
123	72	72	66	58	18	29	11	4	4	4	9	27	8	55	59	68	72
124	64	68	64	56	18	29	11	4	4	4	9	27	9	55	57	65	64
125	55	65	63	56	17	29	11	4	4	4	9	26	8	54	55	62	55
126	45	63	62	54	17	29	11	4	4	4	9	27	8	53	54	60	45
127	39	61	60	53	16	28	10	4	4	4	9	26	8	52	53	57	39
128	36	58	59	52	17	29	11	4	4	4	9	26	8	51	51	55	36
129	33	55	57	51	16	28	11	4	4	4	9	26	8	50	50	52	33
130	30	53	56	50	16	28	10	4	4	4	9	25	8	49	49	49	30
131	28	51	54	50	15	28	11	4	4	4	9	25	8	49	47	47	28
132	25	48	51	49	15	27	11	5	4	4	9	25	8	48	44	44	25
133	23	47	48	49	15	27	11	4	4	4	8	25	7	47	42	43	23
134	21	44	45	48	14	26	10	4	5	4	8	24	7	46	38	40	21
135	19	43	42	48	14	25	10	3	4	4	8	24	8	46	36	39	19
136	18	42	40	47	14	25	10	5	4	5	8	24	8	46	34	37	18
137	17	40	38	46	13	25	10	5	5	5	8	23	7	45	32	35	17
138	15	38	36	46	13	24	10	4	4	4	8	23	7	44	31	33	15
139	14	35	35	45	13	23	9	4	5	4	7	22	6	43	29	30	14
140	12	33	34	44	13	22	10	4	4	4	7	22	6	42	29	28	12
141	10	30	33	42	13	22	9	5	4	5	7	21	6	41	28	24	10
142	9	26	34	41	12	22	9	5	4	4	8	21	6	39	28	21	9
143	8	24	33	39	12	21	9	5	4	4	7	20	5	38	27	19	8
144	8	22	33	38	11	20	8	4	5	5	8	20	5	37	27	16	8

145	7	20	32	37	11	19	8	5	4	4	8	19	5	36	27	14	7
146	7	20	32	35	11	19	8	5	5	4	8	19	5	35	26	14	7
147	7	20	32	34	11	18	8	5	5	4	8	18	5	33	25	12	7
148	6	20	31	33	10	18	8	5	5	5	8	18	6	32	25	12	6
149	7	19	30	32	10	17	8	3	5	5	8	17	6	30	24	12	7
150	7	20	29	31	10	16	8	4	5	5	8	17	6	29	23	11	7
151	7	19	28	29	9	15	8	5	5	5	8	16	5	28	22	10	7
152	7	18	26	27	9	15	7	5	4	5	7	16	6	26	20	10	7
153	7	17	26	25	9	15	7	5	5	4	8	15	7	25	19	9	7
154	7	17	24	23	9	14	7	5	5	5	7	14	6	24	18	9	7
155	6	16	23	21	9	14	7	5	5	5	7	14	7	22	16	8	6
156	6	15	21	19	8	13	7	5	5	5	7	13	7	21	16	8	6
157	6	15	21	17	8	12	7	5	4	5	7	13	6	20	15	7	6
158	7	13	19	16	8	11	6	5	4	5	5	12	7	19	14	7	7
159	7	13	18	14	8	11	6	5	4	5	7	11	7	18	13	6	7
160	6	12	17	13	8	10	6	5	5	5	6	11	6	16	12	6	6
161	6	12	16	12	7	10	5	5	5	5	7	11	6	15	11	6	6
162	6	11	14	10	7	9	6	5	5	5	6	10	5	13	10	6	6
163	6	11	12	9	6	9	5	5	5	5	6	10	6	12	10	6	6
164	6	10	11	8	6	8	6	5	5	5	6	9	6	11	9	5	6
165	6	10	9	7	6	8	5	6	5	5	6	8	6	10	8	5	6
166	6	9	9	6	6	7	6	5	4	5	5	8	5	9	7	4	6
167	6	8	7	7	6	7	6	4	5	5	5	7	5	8	6	4	6
168	5	8	7	5	6	7	5	5	5	5	5	8	4	7	7	5	5
169	6	7	6	6	5	6	5	5	5	5	5	7	4	6	6	4	6
170	5	6	5	4	6	6	5	5	5	5	5	7	3	6	6	4	5
171	4	5	5	4	4	5	5	5	4	4	5	7	4	5	5	3	4
172	4	5	4	5	5	5	5	5	5	5	6	6	5	4	4	4	4
173	4	4	5	5	5	5	5	5	5	4	5	6	5	3	4	3	4
174	4	4	5	5	5	5	5	5	4	5	5	6	4	4	4	4	4
175	5	4	4	5	4	4	5	5	4	5	5	5	4	4	5	3	5
176	4	4	5	4	4	4	4	5	5	5	5	5	4	4	4	4	4
177	4	4	4	4	5	4	4	4	4	4	5	5	5	4	4	4	4
178	5	5	4	4	4	4	4	5	4	5	5	5	3	4	5	4	5
179	5	5	4	5	4	4	4	4	4	5	4	5	4	4	4	5	5
180	4	4	4	5	5	5	4	5	5	4	4	4	5	4	5	5	4

**Luminaire Report Summary**

IESNA:LM-63-2002  
[TEST] BLC2210008E-A-PL  
[ISSUE DATE] 2022/11/09  
[MANUFAC] ASHART LIGHT CO., LTD  
[LUMCAT] AST-MWP09-30WBMDA1-ab30  
[LUMINAIRE]  
[LAMP CAT]  
[LAMP]  
[\_VOLTAGE] 120.0 V  
[\_CURRENT] 0.260 A  
[\_POWERFACTOR] 0.991  
[\_THD] 12.21  
[TESTLAB] UTEST TECHNICAL LABORATORY CO.LTD  
[\_TESTINST] GPM-3000  
[\_TESTDIST] 14.140 m [K=1.0000]  
[\_TESTTEMPERATURE] 25.3 'C  
[\_TESTHUMIDITY]  
[\_TESTOPERATOR]  
[BALLAST]  
[BALLASTCAT]  
FILE: CANDELA MULTIPLIER: 1  
FILE: VERTICAL ANGLES: 181, HORIZONTAL ANGLES: 17  
FILE: COORDINATE SYSTEM: TYPE C  
FILE: UNIT OF MEASURE: METRIC  
FILE: BALLAST FACTOR: 1

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Reported data calculated from manufacturer's data file, based on IES recommended methods.