



LM-79 Distribution Test Report (Luminaire)

Total Luminous Flux, Luminous Intensity Distribution and
Electrical Characteristics of Customer Submitted Luminaire

CURTIS-STRAUS

Report No.: PHM-RPT-180223-01
Date: February 23, 2018

LM-79 Distribution Testing: Total Luminous Flux, Luminous Intensity Distribution, Electrical Characteristics and Efficacy.

Report Prepared for:

**Vantage Lighting
181 Narragansett Park Drive
East Providence, RI 02916
USA
Telephone: (860) 564-4512**

**Description : 4" RD WW
Model Tested: A4VOFLEDWWU-1135K
WO/CS#: S0461**

**Report Issue Date: February 23, 2018
Date of Test(s): February 19-22, 2018
Total Number of Pages : 9 (including this page)**

Report Reviewed by:

**Mark Razvi
Photometric Lab Supervisor
Curtis-Straus**



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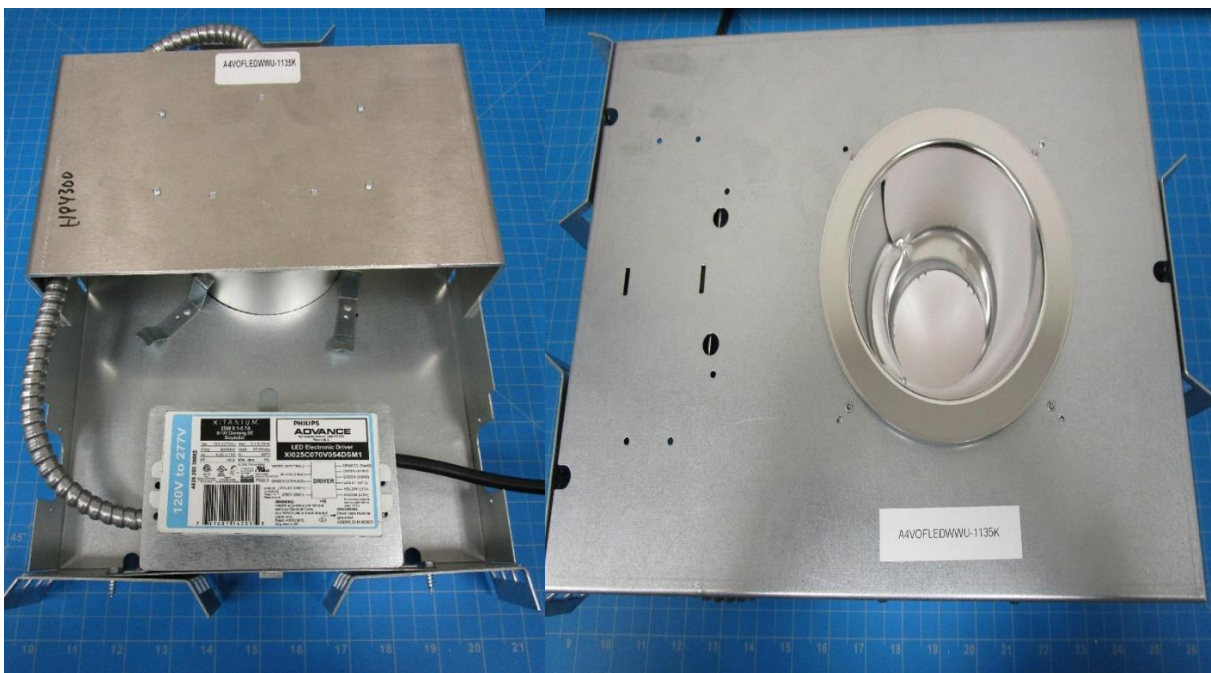
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DETAILED PRODUCT DESCRIPTION

Model #	A4VOFLEDWWU-1135K
CS/WO#	S0461
Description	4" RD WW
Supply Voltage	120VAC

Pictures:





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Curtis-Straus Photometric Testing Information

Photometric Testing is performed in accordance with the procedures outlined in LM-79-2008 . The test sample is evaluated for photometric and electrical characteristics using the equipment listed below.

Curtis-Straus Environmental Testing Info

Curtis-Straus testing laboratory temperature during testing: 25.9 °C .

LIST OF EQUIPMENT USED:

Description	Model No.	Serial No.	Asset No	Cal. Date	Cal. Due
Yokogawa Power Meter	WT-310E	C2SK10001V	2360	04-21-17	04-21-18
Chroma AC Power Supply	61603	616030001283	2355	04-21-17	04-21-18
LabSphere Type-C GoniometerSystem	PM-150-140	022172153	AA-30058-195	02-09-18	03-09-18
Digital Thermometer	4627	160739886	2392	09-07-16	09-07-18

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LM-79-2008 Distribution Test Data

Model # A4VOFLEDWWU-1135K
CS/WO# S0461
Description 4" RD WW
Supply Voltage 120VAC

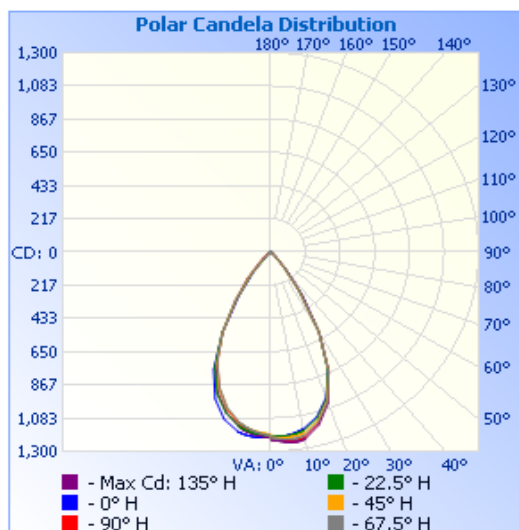
Result of Tests

Photometric and Electrical Test Data

Input Voltage: 120 VAC
Base Orientation: Base Up

Lumens (lm)	Watts (W)	Volts (VAC)	Amps (A)	Efficacy	PF	Ithd (%)
1131.89	15.02	120.21	0.13	75.35	0.9845	0.20

Luminous Intensity Summary: Cd



Illumination Cone of Light
Mounting Ht: 10 ft.

	Illuminance at a Distance	
	Center Beam fc	Beam Width
1.7ft	418 fc	1.9 ft 1.9 ft
3.3ft	111 fc	3.7 ft 3.7 ft
5.0ft	48.4 fc	5.6 ft 5.6 ft
6.7ft	26.9 fc	7.5 ft 7.4 ft
8.3ft	17.5 fc	9.3 ft 9.2 ft
10.0ft	12.1 fc	11.2 ft 11.1 ft

■ Vert. Spread: 58.4°
■ Horiz. Spread: 58.1°



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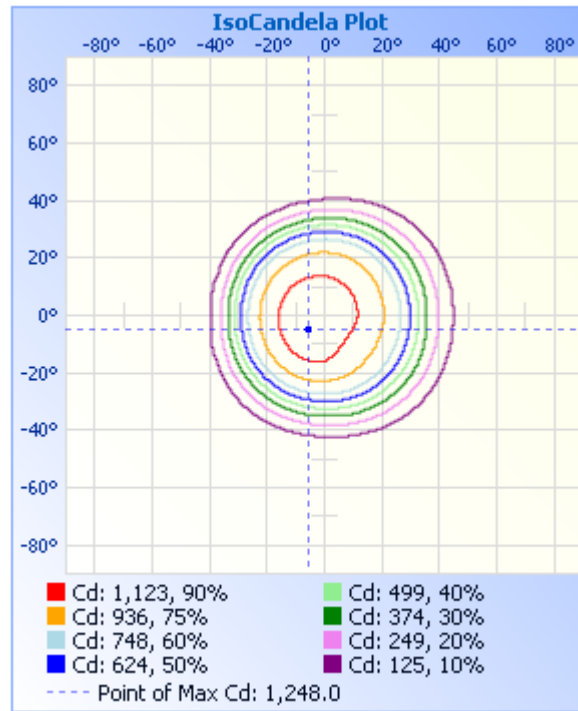
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IsoCandela Plot



Zonal Lumens Summary

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	795.7	70.3%
0-40	1,019.1	90%
0-60	1,091.1	96.4%
60-90	16.7	1.5%
70-100	12.6	1.1%
90-120	10.5	0.9%
0-90	1,107.9	97.9%
90-180	24.0	2.1%
0-180	1,131.9	100%

Lumens per Zone

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	114.4	10.1%	90-100	3.5	0.3%
10-20	309.0	27.3%	100-110	3.5	0.3%
20-30	372.2	32.9%	110-120	3.5	0.3%
30-40	223.5	19.7%	120-130	3.4	0.3%
40-50	58.3	5.1%	130-140	3.2	0.3%
50-60	13.7	1.2%	140-150	2.8	0.3%
60-70	7.7	0.7%	150-160	2.2	0.2%
70-80	5.0	0.4%	160-170	1.4	0.1%
80-90	4.0	0.4%	170-180	0.5	0%



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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	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209
0.1	1208	1204	1206	1212	1218	1225	1226	1223	1208	1194	1188	1196	1204	1208	1210	1210	1209
0.2	1208	1204	1207	1213	1219	1226	1226	1223	1208	1194	1188	1196	1204	1208	1209	1210	1209
0.3	1207	1204	1207	1213	1219	1226	1227	1223	1208	1194	1188	1196	1203	1208	1209	1210	1209
0.4	1207	1204	1207	1213	1220	1227	1227	1223	1208	1194	1187	1195	1203	1208	1209	1210	1208
0.5	1207	1204	1207	1213	1220	1227	1227	1223	1208	1194	1187	1195	1202	1207	1208	1209	1208
0.6	1207	1204	1207	1214	1220	1227	1228	1224	1208	1194	1187	1195	1202	1207	1208	1209	1208
0.7	1207	1204	1207	1214	1221	1228	1228	1224	1208	1194	1186	1194	1201	1207	1208	1209	1208
0.8	1207	1204	1207	1214	1221	1228	1228	1224	1209	1193	1186	1194	1201	1206	1208	1209	1208
0.9	1206	1204	1207	1215	1222	1229	1229	1224	1209	1193	1186	1194	1201	1206	1207	1208	1208
1	1206	1204	1208	1215	1222	1229	1229	1224	1209	1193	1185	1193	1200	1205	1207	1208	1207
1.1	1206	1204	1208	1215	1222	1229	1229	1225	1209	1193	1185	1193	1200	1205	1207	1208	1207
1.2	1206	1204	1208	1215	1223	1230	1230	1225	1209	1193	1185	1192	1199	1205	1206	1208	1207
1.3	1206	1204	1208	1216	1223	1230	1230	1225	1209	1192	1184	1192	1199	1204	1206	1207	1207
1.4	1206	1204	1208	1216	1224	1230	1230	1225	1209	1192	1184	1192	1198	1204	1206	1207	1207
1.5	1205	1204	1208	1216	1224	1231	1231	1225	1209	1192	1184	1191	1198	1204	1206	1207	1206
1.6	1205	1204	1208	1217	1224	1231	1231	1226	1209	1192	1183	1191	1198	1203	1205	1207	1206
1.7	1205	1204	1208	1217	1225	1231	1232	1226	1209	1192	1183	1191	1197	1203	1205	1206	1206
1.8	1205	1204	1209	1217	1225	1232	1232	1226	1209	1192	1183	1190	1197	1202	1205	1206	1206
1.9	1205	1204	1209	1218	1226	1232	1232	1226	1210	1191	1182	1190	1197	1202	1204	1206	1206
2	1205	1204	1209	1218	1226	1233	1233	1227	1210	1191	1182	1190	1196	1201	1204	1205	1206
2.1	1204	1204	1209	1218	1226	1233	1233	1227	1210	1191	1181	1189	1196	1201	1204	1205	1205
2.2	1204	1204	1209	1218	1227	1233	1233	1227	1210	1191	1181	1189	1196	1200	1203	1205	1205
2.3	1204	1204	1209	1219	1227	1234	1234	1227	1210	1191	1181	1188	1195	1200	1203	1205	1205
2.4	1204	1204	1209	1219	1228	1234	1234	1228	1210	1191	1180	1188	1195	1200	1203	1204	1205
2.5	1204	1204	1210	1219	1228	1234	1234	1228	1210	1190	1180	1187	1194	1199	1203	1204	1205
2.6	1204	1204	1210	1220	1228	1235	1235	1228	1210	1190	1180	1187	1194	1199	1202	1204	1204
2.7	1203	1204	1210	1220	1229	1235	1235	1228	1210	1190	1179	1186	1194	1198	1202	1204	1204
2.8	1203	1204	1210	1220	1229	1235	1235	1229	1210	1190	1179	1186	1193	1198	1202	1203	1204
2.9	1203	1204	1210	1220	1229	1236	1236	1229	1210	1190	1179	1185	1193	1197	1201	1203	1204
3	1203	1204	1210	1220	1230	1236	1236	1229	1210	1189	1178	1185	1192	1197	1201	1203	1204
3.1	1203	1204	1210	1221	1230	1236	1236	1229	1210	1189	1178	1184	1192	1197	1201	1203	1204
3.2	1203	1204	1210	1221	1231	1237	1237	1229	1210	1189	1178	1184	1191	1196	1201	1202	1203
3.3	1202	1204	1211	1221	1231	1237	1237	1229	1210	1189	1177	1183	1191	1196	1200	1202	1203



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3.4	1202	1204	1211	1221	1231	1238	1238	1230	1210	1189	1177	1182	1191	1195	1200	1202	1203
3.5	1202	1204	1211	1221	1232	1238	1238	1230	1210	1189	1176	1182	1190	1195	1200	1201	1203
3.6	1202	1204	1211	1222	1232	1238	1239	1230	1210	1188	1176	1181	1190	1194	1199	1201	1202
3.7	1202	1204	1211	1222	1232	1239	1239	1230	1210	1188	1176	1181	1189	1194	1199	1201	1202
3.8	1202	1204	1211	1222	1233	1239	1239	1230	1210	1188	1175	1180	1189	1194	1199	1201	1202
3.9	1201	1204	1211	1222	1233	1239	1240	1230	1210	1188	1175	1180	1188	1193	1199	1200	1202
4	1201	1204	1211	1222	1233	1240	1240	1230	1210	1188	1175	1179	1188	1193	1198	1200	1201
4.1	1201	1204	1212	1223	1233	1240	1241	1230	1210	1187	1174	1179	1187	1192	1198	1200	1201
4.2	1201	1204	1212	1223	1234	1240	1241	1231	1209	1187	1174	1178	1187	1192	1197	1199	1201
4.3	1201	1204	1212	1223	1234	1241	1242	1231	1209	1187	1173	1178	1186	1191	1197	1199	1201
4.4	1201	1204	1212	1223	1234	1241	1242	1231	1209	1186	1173	1177	1186	1191	1196	1199	1200
4.5	1200	1204	1212	1224	1235	1241	1242	1231	1209	1186	1172	1176	1186	1190	1196	1198	1200
4.6	1200	1204	1212	1224	1235	1242	1243	1231	1209	1186	1172	1176	1185	1190	1195	1198	1200
4.7	1200	1204	1212	1224	1235	1242	1243	1231	1209	1186	1171	1175	1185	1190	1195	1198	1200
4.8	1200	1203	1212	1224	1235	1242	1243	1231	1209	1185	1171	1174	1184	1189	1194	1197	1199
4.9	1200	1203	1212	1225	1236	1243	1243	1231	1209	1185	1170	1174	1184	1189	1194	1197	1199
5	1199	1203	1212	1225	1236	1243	1244	1231	1209	1185	1170	1173	1183	1188	1193	1197	1199
5.1	1199	1203	1212	1225	1236	1244	1244	1231	1209	1184	1169	1172	1183	1187	1193	1196	1198
5.2	1198	1203	1212	1225	1236	1244	1244	1231	1209	1184	1169	1171	1182	1187	1192	1196	1198
5.3	1198	1202	1212	1225	1236	1244	1245	1232	1208	1184	1168	1171	1181	1186	1192	1196	1198
5.4	1197	1202	1212	1225	1236	1244	1245	1232	1208	1183	1168	1170	1181	1186	1191	1195	1198
5.5	1197	1202	1212	1225	1236	1245	1245	1232	1208	1183	1167	1169	1180	1185	1191	1195	1197
5.6	1197	1202	1212	1226	1236	1245	1245	1232	1208	1183	1166	1169	1180	1185	1190	1194	1197
5.7	1196	1201	1212	1226	1237	1245	1245	1232	1208	1182	1166	1168	1179	1184	1190	1194	1197
5.8	1196	1201	1212	1226	1237	1246	1246	1232	1208	1182	1165	1167	1179	1184	1189	1193	1196
5.9	1195	1201	1212	1226	1237	1246	1246	1232	1208	1182	1165	1166	1178	1183	1189	1193	1196
6	1195	1200	1212	1226	1237	1246	1246	1232	1207	1181	1164	1166	1177	1182	1189	1192	1195
6.1	1194	1200	1212	1226	1237	1246	1246	1232	1207	1181	1163	1165	1176	1182	1188	1192	1195
6.2	1194	1200	1211	1226	1237	1247	1246	1232	1207	1180	1163	1164	1176	1181	1188	1191	1194
6.3	1194	1199	1211	1226	1237	1247	1246	1232	1207	1179	1162	1164	1175	1180	1187	1191	1194
6.4	1193	1199	1211	1226	1237	1247	1247	1232	1206	1179	1161	1163	1174	1180	1187	1190	1193
6.5	1193	1199	1211	1226	1237	1247	1247	1232	1206	1178	1161	1162	1174	1179	1186	1190	1192
6.6	1192	1198	1211	1226	1237	1247	1247	1232	1206	1177	1160	1161	1173	1179	1185	1189	1192
6.7	1192	1198	1211	1226	1237	1247	1247	1232	1206	1177	1159	1161	1172	1178	1185	1189	1191
6.8	1191	1197	1211	1226	1238	1247	1247	1232	1205	1176	1158	1160	1171	1177	1184	1188	1191
6.9	1191	1197	1211	1226	1238	1247	1247	1232	1205	1176	1158	1159	1170	1177	1184	1188	1190
7	1190	1196	1210	1226	1238	1248	1247	1232	1205	1175	1157	1158	1170	1176	1183	1187	1190
7.1	1190	1196	1210	1226	1238	1248	1247	1232	1204	1174	1156	1157	1169	1175	1182	1187	1190
7.2	1189	1196	1210	1226	1238	1248	1248	1232	1204	1174	1156	1156	1168	1174	1182	1186	1189
7.3	1189	1195	1210	1226	1238	1248	1248	1232	1203	1173	1155	1155	1167	1174	1181	1186	1189



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7.4	1188	1195	1210	1225	1238	1248	1248	1232	1203	1172	1154	1154	1166	1173	1180	1185	1188
7.5	1187	1194	1210	1225	1238	1248	1248	1232	1202	1172	1153	1153	1165	1172	1180	1184	1188
7.6	1187	1194	1209	1225	1238	1248	1248	1231	1202	1171	1152	1153	1164	1171	1179	1184	1187
7.7	1186	1193	1209	1225	1238	1248	1248	1231	1202	1171	1152	1152	1163	1171	1178	1183	1187
7.8	1186	1193	1209	1224	1238	1247	1248	1231	1201	1170	1151	1151	1162	1170	1177	1182	1186
7.9	1185	1193	1209	1224	1237	1247	1248	1231	1201	1169	1150	1150	1162	1169	1176	1182	1186
8	1184	1192	1208	1224	1237	1247	1247	1231	1200	1169	1149	1149	1161	1168	1176	1181	1185
8.1	1184	1192	1208	1224	1237	1247	1247	1231	1200	1168	1148	1148	1160	1167	1175	1180	1185
8.2	1183	1191	1207	1223	1237	1247	1247	1231	1199	1167	1148	1147	1159	1167	1174	1180	1184
8.3	1182	1191	1207	1223	1237	1246	1247	1230	1199	1167	1147	1146	1158	1166	1173	1179	1183
8.4	1182	1190	1206	1223	1237	1246	1247	1230	1198	1166	1146	1145	1157	1165	1172	1178	1183
8.5	1181	1190	1206	1222	1236	1246	1247	1229	1198	1165	1145	1144	1156	1164	1172	1177	1182
8.6	1181	1189	1205	1222	1236	1246	1246	1229	1197	1164	1144	1143	1155	1163	1171	1177	1182
8.7	1180	1189	1205	1221	1235	1245	1246	1228	1196	1164	1143	1142	1154	1162	1170	1176	1181
8.8	1179	1189	1205	1221	1235	1244	1246	1228	1196	1163	1142	1141	1153	1161	1169	1175	1180
8.9	1179	1188	1204	1221	1234	1243	1246	1227	1195	1162	1141	1140	1152	1160	1168	1174	1180
9	1178	1188	1204	1220	1233	1243	1245	1227	1195	1161	1140	1139	1151	1159	1166	1173	1179
9.1	1178	1187	1203	1220	1233	1242	1244	1227	1194	1160	1139	1138	1150	1158	1165	1172	1178
9.2	1177	1186	1202	1219	1232	1241	1243	1226	1194	1159	1138	1137	1149	1157	1164	1171	1178
9.3	1176	1186	1202	1219	1231	1240	1242	1226	1193	1159	1137	1136	1148	1156	1163	1170	1177
9.4	1176	1185	1201	1218	1231	1239	1242	1225	1192	1158	1136	1135	1147	1155	1162	1170	1176
9.5	1175	1184	1201	1218	1230	1239	1241	1224	1192	1157	1135	1134	1146	1154	1161	1169	1175
9.6	1174	1184	1200	1217	1229	1238	1240	1224	1191	1156	1134	1132	1144	1153	1160	1168	1174
9.7	1173	1183	1199	1216	1228	1237	1239	1223	1190	1155	1133	1131	1143	1152	1159	1167	1174
9.8	1172	1183	1199	1215	1227	1236	1238	1222	1189	1154	1132	1130	1142	1150	1158	1166	1173
9.9	1171	1182	1198	1214	1226	1235	1238	1222	1189	1153	1131	1129	1141	1149	1157	1165	1172
10	1170	1181	1198	1213	1225	1234	1237	1221	1188	1152	1130	1128	1140	1148	1156	1164	1171
15	1113	1122	1138	1148	1154	1159	1165	1156	1128	1084	1056	1050	1061	1069	1082	1097	1113
20	1010	1019	1028	1038	1041	1045	1046	1042	1019	985	947	938	944	954	972	999	1011
25	844	844	854	858	859	861	857	859	846	829	798	791	791	802	814	837	843
30	607	602	602	601	599	601	601	601	602	610	602	602	603	603	603	612	607
35	338	311	303	300	310	324	338	345	351	374	382	390	381	377	368	360	338
40	143	124	117	119	124	136	150	157	168	186	207	223	230	214	193	170	143
45	44	36	36	38	41	44	43	45	48	62	80	100	112	104	79	59	44
50	11	9	10	11	11	11	10	9	11	17	33	53	61	53	35	18	11
55	8	7	7	8	9	8	7	7	7	10	17	29	35	31	21	12	8
60	7	8	7	8	9	8	7	7	7	8	12	19	23	21	14	10	7
65	5	7	6	6	7	6	5	5	5	6	8	12	13	12	9	7	5
70	5	5	5	5	6	5	5	4	4	5	5	7	8	8	6	5	5
75	4	4	9	5	5	4	4	4	4	4	4	5	5	5	5	4	4



LM-79 Distribution Test Report (Luminaire)

Total Luminous Flux, Luminous Intensity Distribution and Electrical Characteristics of Customer Submitted Luminaire

Report No.: PHM-RPT-180223-01

Date: February 23, 2018

CURTIS-STRAUS

80	4	4	7	5	4	4	3	4	3	3	4	4	4	4	4	4	4
85	3	4	5	4	4	3	3	3	3	3	3	4	4	4	4	3	3
90	3	3	4	5	5	4	3	3	3	3	3	3	3	3	4	3	3
95	3	3	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3
100	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3
105	3	3	4	3	3	3	3	4	3	3	3	3	3	4	4	3	3
110	3	3	4	3	3	3	3	4	3	3	3	4	3	4	3	3	3
115	3	3	5	4	3	3	4	4	3	4	3	3	3	4	3	3	3
120	3	3	5	5	3	4	4	4	3	3	3	3	3	4	3	3	3
125	3	4	5	5	4	4	5	4	3	4	4	4	4	4	4	4	3
130	4	4	5	5	4	4	5	4	3	3	4	3	3	4	4	4	3
135	4	4	5	5	4	4	5	4	3	4	4	4	4	4	4	4	4
140	4	4	6	5	4	4	4	4	4	4	4	4	4	5	5	4	4
145	4	4	6	5	4	5	4	4	4	4	4	4	5	5	5	5	4
150	5	5	5	5	5	5	4	4	4	4	4	5	5	5	5	5	5
155	5	5	5	5	5	5	4	4	4	5	5	5	5	5	5	5	5
160	5	5	5	5	5	5	4	4	4	5	5	5	5	5	5	5	5
165	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5
170	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
175	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
180	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5