

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: HALO

Report Number: P395151

Luminaire Tested: **TGS2S302[F;D;M]R[R;C][B;W]**

Test Date: 02/11/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P395151  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2001-646-3)  
Test Lab: INNOVATIONS CENTER(G1)  
Test Date: 02/11/2020  
Issue Date: 05/04/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: TGS2S302[F;D;M]R[R;C][B;W]  
Description: 3000K TWIN ROUND HEADS LED FLOOD, SELECTABLE LUMEN  
Light Source: 3000K CCT, 70 CRI LEDs  
Ballast/Driver: (1) Electronic Driver

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2508.3 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Luminous Opening: Rectangular (W 0.83' x L: 0.29' x H: 0')  
IES Classification: Type I - Short - Cutoff  
BUG Rating: B2 - U1 - G0

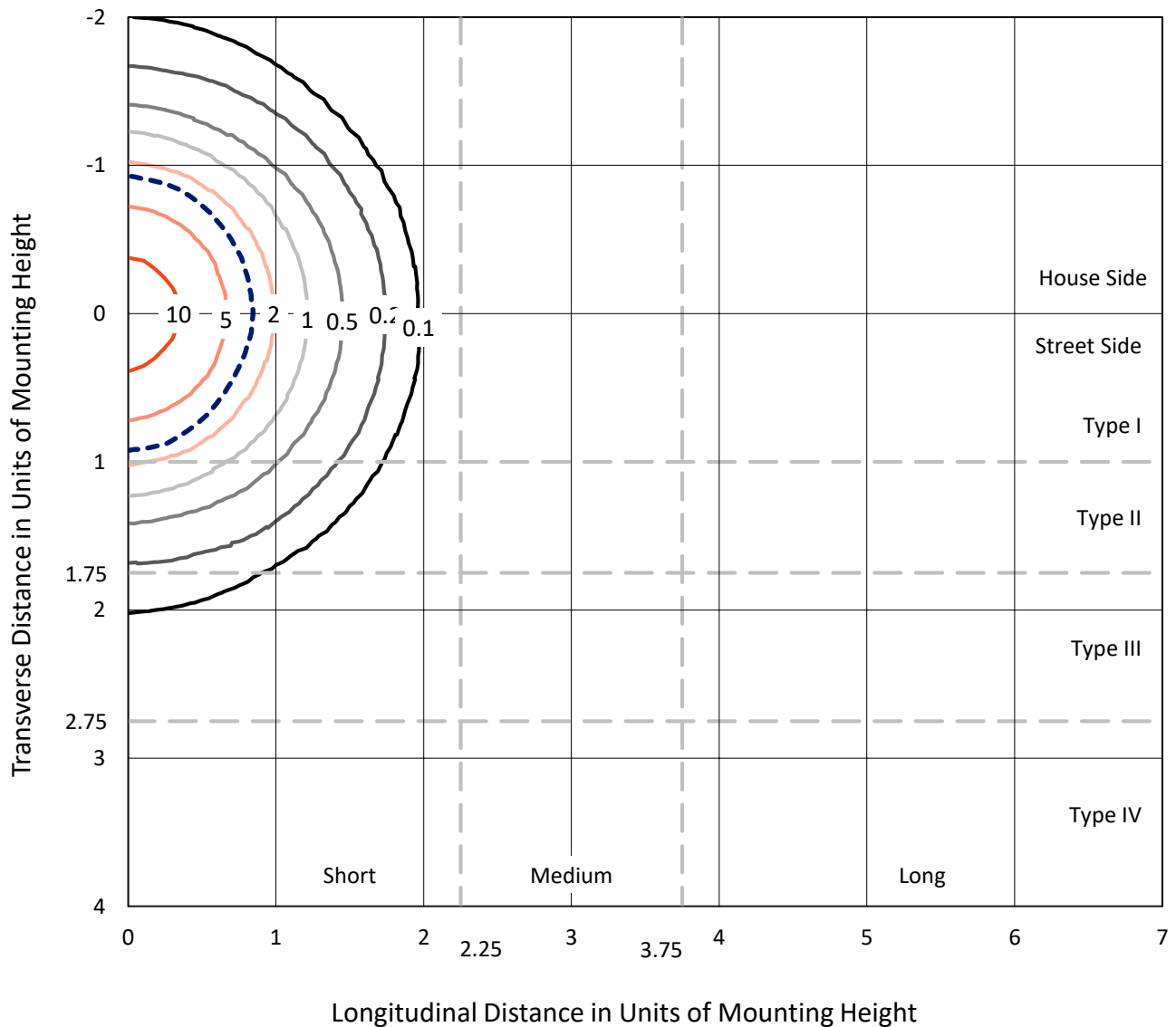
Input Watts (W): 21.6  
Input Voltage (V): 120.0  
Input Current (Ain): 0.18  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

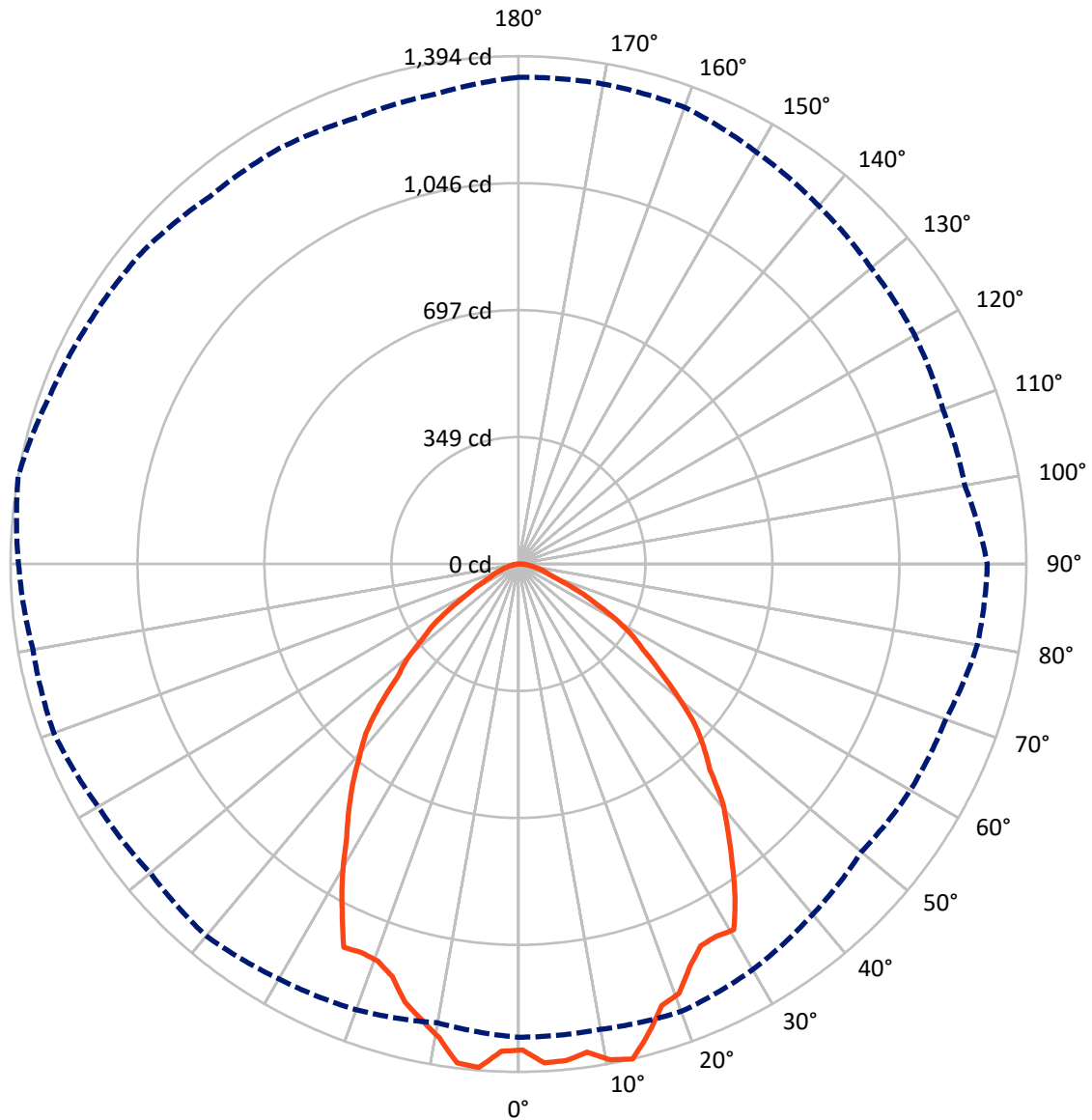
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.5 fc  
 Type I - Short - Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 260-Deg Lateral    - - - Horizontal Cone Through 12.5-Deg Vertical

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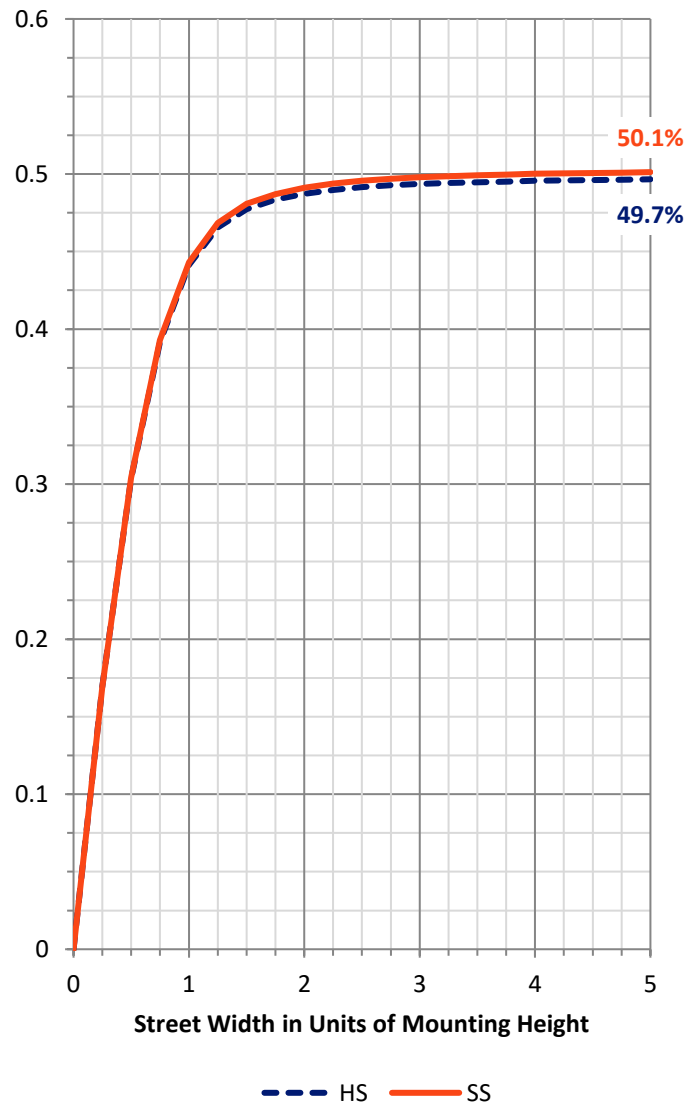
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1253.6	0.2	1253.8
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	1254.2	0.3	1254.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	2507.8	0.5	2508.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.0	5.1
10°-20°	359.6	14.3
20°-30°	524.5	20.9
30°-40°	575.3	22.9
40°-50°	474.5	18.9
50°-60°	272.7	10.9
60°-70°	119.1	4.7
70°-80°	45.5	1.8
80°-90°	9.7	0.4
90°-100°	0.5	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	2507.8	100.0
0°-180°	2508.3	100.0

**Coefficient of Utilization**



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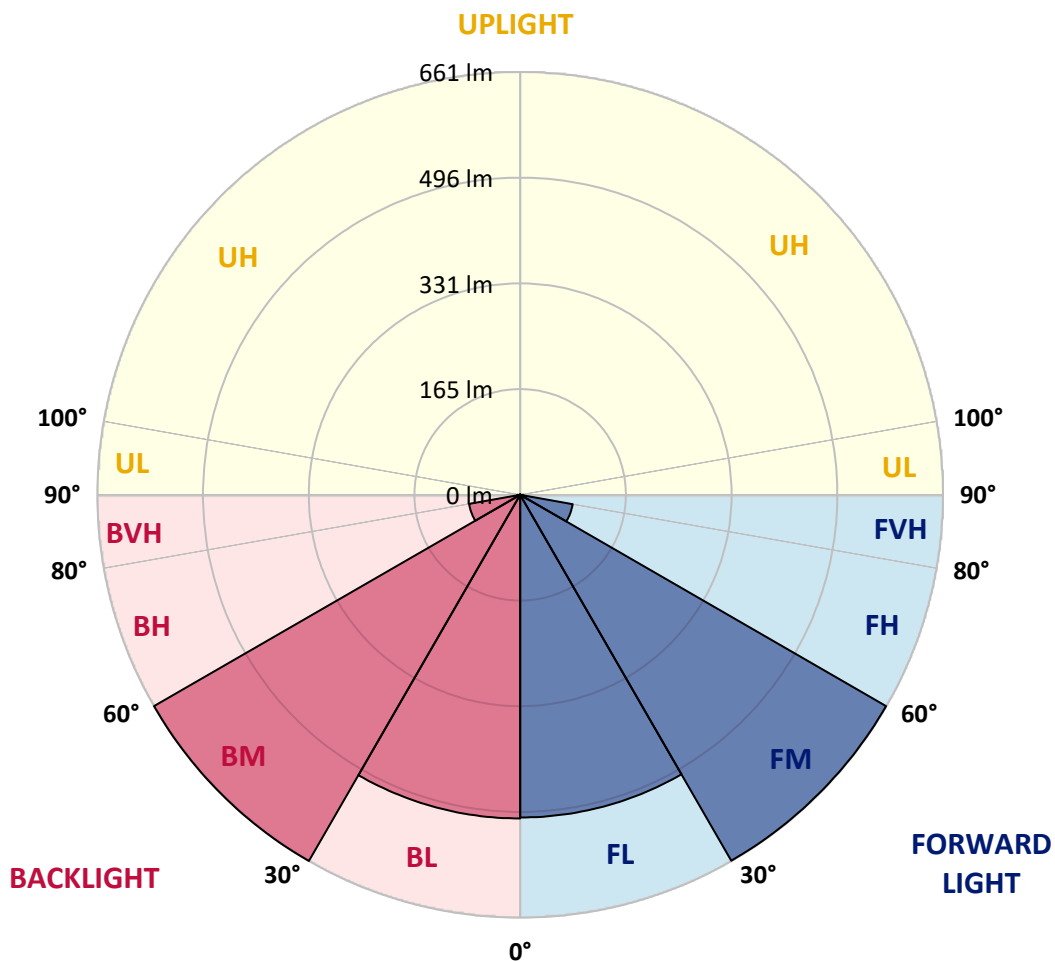
CATALOG NUMBER: TGS2S302[F;D;M]R[R;C][B;W]

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	504.8	20.1			
FM	(30°-60°)	661.0	26.4			
FH	(60°-80°)	83.4	3.3			G0/660
FVH	(80°-90°)	5.1	0.2			G0/10
BL	(0°-30°)	506.3	20.2	B2/1000		
BM	(30°-60°)	661.5	26.4	B1/1000		
BH	(60°-80°)	81.2	3.2	B0/110		G0/110
BVH	(80°-90°)	4.6	0.2			G0/10
UL	(90°-100°)	0.5	0.0		U1/10	
UH	(100°-180°)	0.2	0.0		U1/10	

**BUG Rating: B2-U1-G0**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
2.5°	1346	1328	1326	1325	1333	1320	1335	1332	1338	1327	1325
5°	1314	1296	1303	1320	1339	1349	1371	1384	1386	1374	1362
7.5°	1317	1306	1314	1328	1343	1342	1360	1383	1380	1378	1355
10°	1319	1300	1309	1322	1321	1306	1309	1303	1318	1311	1290
12.5°	1299	1297	1307	1286	1256	1229	1242	1248	1279	1287	1244
15°	1300	1280	1246	1242	1242	1228	1229	1222	1242	1229	1226
17.5°	1264	1215	1220	1219	1216	1186	1173	1183	1184	1180	1170
20°	1263	1223	1205	1173	1164	1157	1146	1147	1156	1160	1150
22.5°	1189	1188	1184	1167	1150	1144	1157	1156	1150	1144	1152
25°	1151	1109	1105	1115	1131	1135	1136	1143	1156	1151	1138
27.5°	1067	1060	1070	1066	1050	1032	1043	1048	1066	1064	1055
30°	1018	1002	1002	998	1009	1013	1007	998	981	968	966
32.5°	983	974	952	934	932	924	913	896	890	890	898
35°	952	926	906	881	858	841	829	824	822	809	805
37.5°	909	866	843	804	795	762	761	756	755	760	764
40°	799	773	753	734	708	696	681	686	686	691	692
42.5°	684	701	685	653	635	607	608	597	626	631	614
45°	603	571	570	567	554	542	542	540	543	537	538
47.5°	542	486	457	463	474	469	461	461	452	453	448
50°	427	429	403	379	383	393	401	398	403	396	398
52.5°	342	300	305	319	319	322	333	338	334	339	336
55°	242	246	239	251	261	260	268	279	286	274	276
57.5°	164	182	197	196	196	204	215	223	221	231	220
60°	142	137	135	154	153	152	165	166	162	165	159
62.5°	123	119	115	110	115	118	119	118	120	107	109
65°	104	101	97	93	93	90	90	90	88	88	89
67.5°	85	81	77	76	76	75	75	75	75	74	73
70°	68	64	60	59	59	59	59	59	58	58	57
72.5°	50	46	46	45	44	44	46	46	46	45	44
75°	36	33	31	31	32	33	34	34	34	34	34
77.5°	23	21	20	20	22	23	25	26	25	25	24
80°	14	12	12	14	15	15	17	17	18	17	16
82.5°	6	5	6	8	9	10	11	12	12	12	11
85°	1	2	2	3	4	5	6	6	6	6	5
87.5°	0	0	0	1	1	2	2	2	2	2	2
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0





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**CANDELA DISTRIBUTION (continued):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
2.5°	1320	1330	1327	1318	1318	1324	1317	1320	1319	1312	1318
5°	1345	1347	1336	1320	1313	1314	1301	1308	1321	1325	1341
7.5°	1347	1357	1350	1332	1329	1329	1303	1302	1320	1338	1321
10°	1287	1306	1321	1329	1340	1345	1320	1311	1310	1319	1311
12.5°	1240	1256	1264	1283	1306	1334	1338	1336	1310	1303	1316
15°	1231	1244	1258	1250	1238	1272	1297	1309	1305	1310	1333
17.5°	1165	1180	1198	1202	1225	1243	1246	1313	1333	1296	1278
20°	1161	1181	1168	1172	1193	1240	1234	1233	1266	1240	1227
22.5°	1168	1172	1173	1167	1165	1169	1184	1190	1197	1237	1235
25°	1128	1121	1102	1096	1097	1117	1122	1152	1157	1140	1165
27.5°	1054	1053	1064	1072	1072	1069	1049	1058	1084	1098	1112
30°	977	1005	1009	997	1000	1009	1011	1021	1035	1040	1072
32.5°	895	899	926	938	940	963	980	986	996	998	1015
35°	819	847	850	868	895	917	929	953	963	954	959
37.5°	764	769	795	809	835	866	884	908	910	910	905
40°	689	712	711	726	750	780	808	814	841	845	849
42.5°	623	622	631	639	663	694	662	685	723	757	765
45°	539	546	542	559	563	550	579	604	612	646	686
47.5°	438	457	462	466	457	472	516	532	545	544	581
50°	398	379	377	378	374	391	388	411	451	458	461
52.5°	324	327	318	293	297	287	309	338	340	383	405
55°	274	262	243	233	220	217	237	234	258	262	329
57.5°	215	192	191	176	175	167	154	158	197	241	249
60°	153	147	142	140	130	131	137	140	143	154	201
62.5°	110	107	106	106	108	112	116	120	125	129	140
65°	88	89	88	88	90	93	96	100	105	109	114
67.5°	72	73	72	72	72	73	76	79	84	90	97
70°	57	56	55	55	54	55	57	61	68	72	78
72.5°	44	42	41	40	40	39	43	46	50	55	61
75°	32	30	29	27	27	26	29	30	34	40	45
77.5°	23	22	19	17	16	15	17	18	22	26	32
80°	15	14	13	11	9	7	8	9	12	15	20
82.5°	10	9	7	6	4	3	2	3	5	9	14
85°	5	4	3	2	1	0	0	0	1	4	7
87.5°	1	1	0	0	0	0	0	0	0	1	3
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334	1334
2.5°	1325	1344	1351	1354	1371	1359	1360	1375	1360	1362	1375
5°	1351	1384	1388	1375	1369	1330	1315	1324	1313	1316	1339
7.5°	1304	1315	1321	1331	1353	1330	1321	1320	1294	1283	1293
10°	1307	1322	1333	1356	1384	1361	1338	1337	1311	1294	1291
12.5°	1317	1341	1351	1366	1394	1372	1353	1357	1332	1319	1333
15°	1323	1325	1316	1320	1337	1322	1309	1323	1326	1320	1337
17.5°	1265	1269	1260	1251	1274	1298	1259	1266	1260	1255	1279
20°	1239	1263	1255	1247	1258	1279	1260	1260	1249	1232	1228
22.5°	1201	1209	1193	1185	1202	1189	1187	1189	1193	1199	1234
25°	1174	1163	1158	1142	1161	1161	1159	1168	1180	1171	1207
27.5°	1135	1167	1158	1166	1157	1142	1148	1180	1162	1156	1120
30°	1087	1126	1125	1139	1165	1159	1160	1141	1122	1077	1077
32.5°	1026	1053	1060	1068	1092	1094	1091	1074	1047	1047	1044
35°	959	995	997	1010	1011	998	989	1012	1016	989	964
37.5°	909	916	917	923	935	938	936	937	926	904	919
40°	836	861	840	855	864	839	846	852	840	845	854
42.5°	777	774	772	759	770	787	777	773	767	768	789
45°	678	699	691	699	712	707	708	722	709	690	690
47.5°	599	617	606	631	647	646	652	635	622	612	600
50°	511	533	553	550	561	574	564	553	550	519	508
52.5°	410	457	470	474	482	466	460	458	453	441	421
55°	346	387	407	418	416	427	420	407	384	356	331
57.5°	298	307	328	349	367	351	347	337	334	302	265
60°	224	257	261	292	305	308	302	296	266	236	215
62.5°	169	199	212	232	237	243	241	227	201	182	165
65°	124	151	162	171	187	185	178	167	153	137	127
67.5°	101	108	121	125	131	140	134	122	116	106	105
70°	83	89	91	95	96	96	96	95	93	89	85
72.5°	66	72	76	78	80	82	81	79	76	73	68
75°	49	56	60	63	66	67	66	64	61	56	51
77.5°	36	43	46	49	51	53	52	49	46	43	37
80°	25	30	34	37	40	40	39	38	35	30	26
82.5°	17	21	25	28	30	30	30	28	25	20	16
85°	11	15	17	20	21	21	21	19	16	14	10
87.5°	6	8	11	13	14	15	14	13	10	8	5
90°	2	4	5	8	8	9	9	7	5	4	2
92.5°	0	1	2	3	4	4	4	3	2	1	0
95°	0	0	0	1	1	1	1	1	0	0	0
97.5°	0	0	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0	0	0



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REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°	
112.5°	0	0	0	0	0	0	0	0	0	0	0	0°
115°	0	0	0	0	0	0	0	0	0	0	0	2.5°
117.5°	0	0	0	0	0	0	0	0	0	0	0	5°
120°	0	0	0	0	0	0	0	0	0	0	0	7.5°
122.5°	0	0	0	0	0	0	0	0	0	0	0	10°
125°	0	0	0	0	0	0	0	0	0	0	0	12.5°
127.5°	0	0	0	0	0	0	0	0	0	0	0	15°
130°	0	0	0	0	0	0	0	0	0	0	0	17.5°
132.5°	0	0	0	0	0	0	0	0	0	0	0	20°
135°	0	0	0	0	0	0	0	0	0	0	0	22.5°
137.5°	0	0	0	0	0	0	0	0	0	0	0	25°
140°	0	0	0	0	0	0	0	0	0	0	0	27.5°
142.5°	0	0	0	0	0	0	0	0	0	0	0	30°
145°	0	0	0	0	0	0	0	0	0	0	0	32.5°
147.5°	0	0	0	0	0	0	0	0	0	0	0	35°
150°	0	0	0	0	0	0	0	0	0	0	0	37.5°
152.5°	0	0	0	0	0	0	0	0	0	0	0	40°
155°	0	0	0	0	0	0	0	0	0	0	0	42.5°
157.5°	0	0	0	0	0	0	0	0	0	0	0	45°
160°	0	0	0	0	0	0	0	0	1	1	0	47.5°
162.5°	0	0	0	0	0	0	0	0	1	1	0	50°
165°	0	0	0	0	0	0	0	0	0	1	1	52.5°
167.5°	0	0	0	0	0	0	0	1	0	1	1	55°
170°	0	0	0	0	0	0	0	0	0	0	0	57.5°
172.5°	0	0	0	0	0	0	0	0	0	0	0	60°
175°	0	0	0	0	0	0	0	0	0	0	0	62.5°
177.5°	0	0	0	0	0	0	0	0	0	0	0	65°
180°	0	0	0	0	0	0	0	0	0	0	0	67.5°
												70°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°
												110°



