

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: P395152

Luminaire Tested: **TGS2S402[F;D;M]R[R;C][B;W]**

Test Date: 02/11/2020

Test Information

Test Method: LM-79-08
Report Number: P395152
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: TGS2S402[F;D;M]R[R;C][B;W]
Description: 4000K TWIN ROUND HEAD LED FLOOD, SELECTABLE LUMEN
Light Source: 4000K CCT, 70 CRI LEDs
Ballast/Driver: (1) Electronic Driver

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2630.5 lumens
Efficiency: N/A
Efficacy: 121.8 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

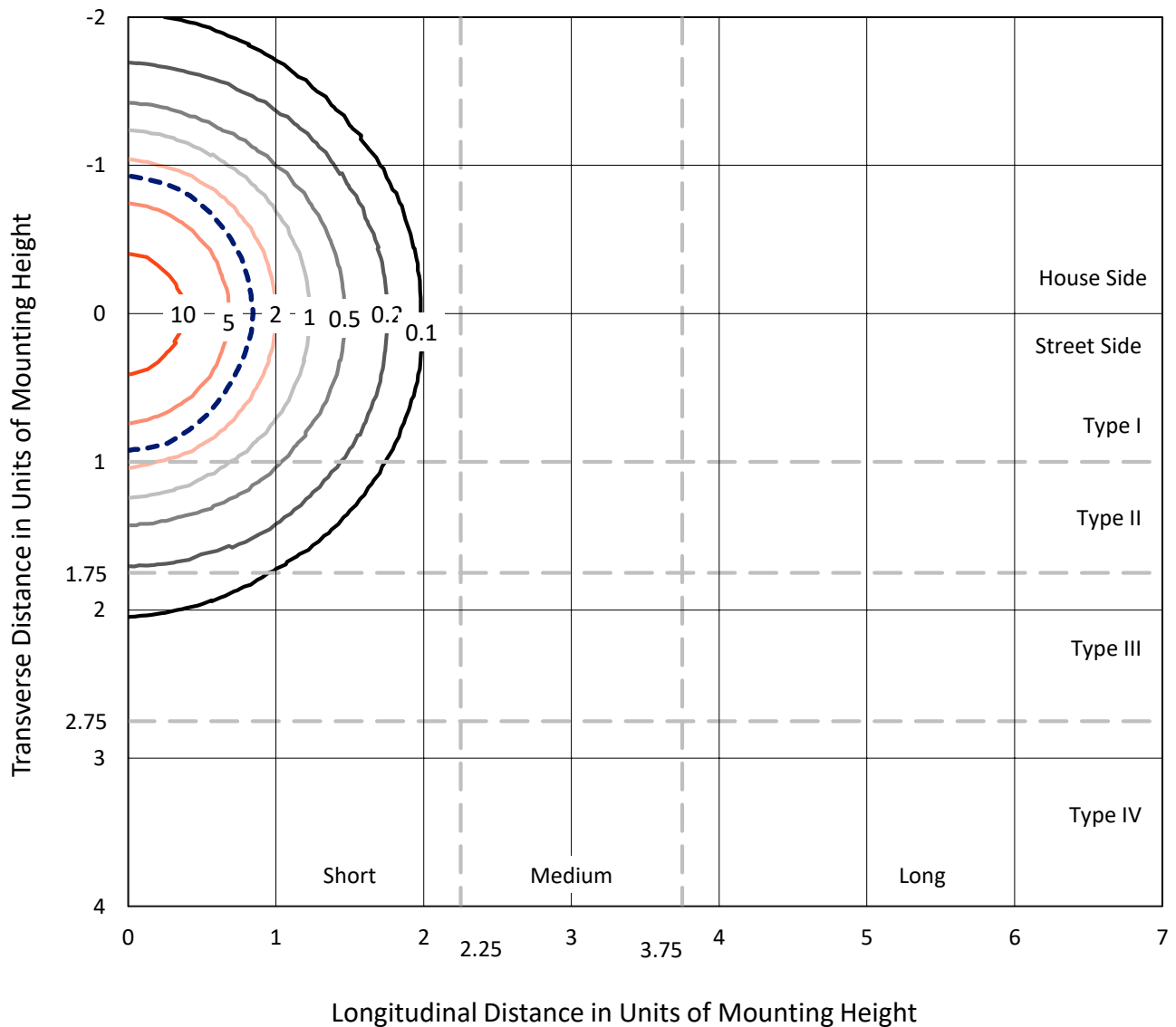
Input Watts (W): 21.6
Input Voltage (V): 120.0
Input Current (Ain): 0.18
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

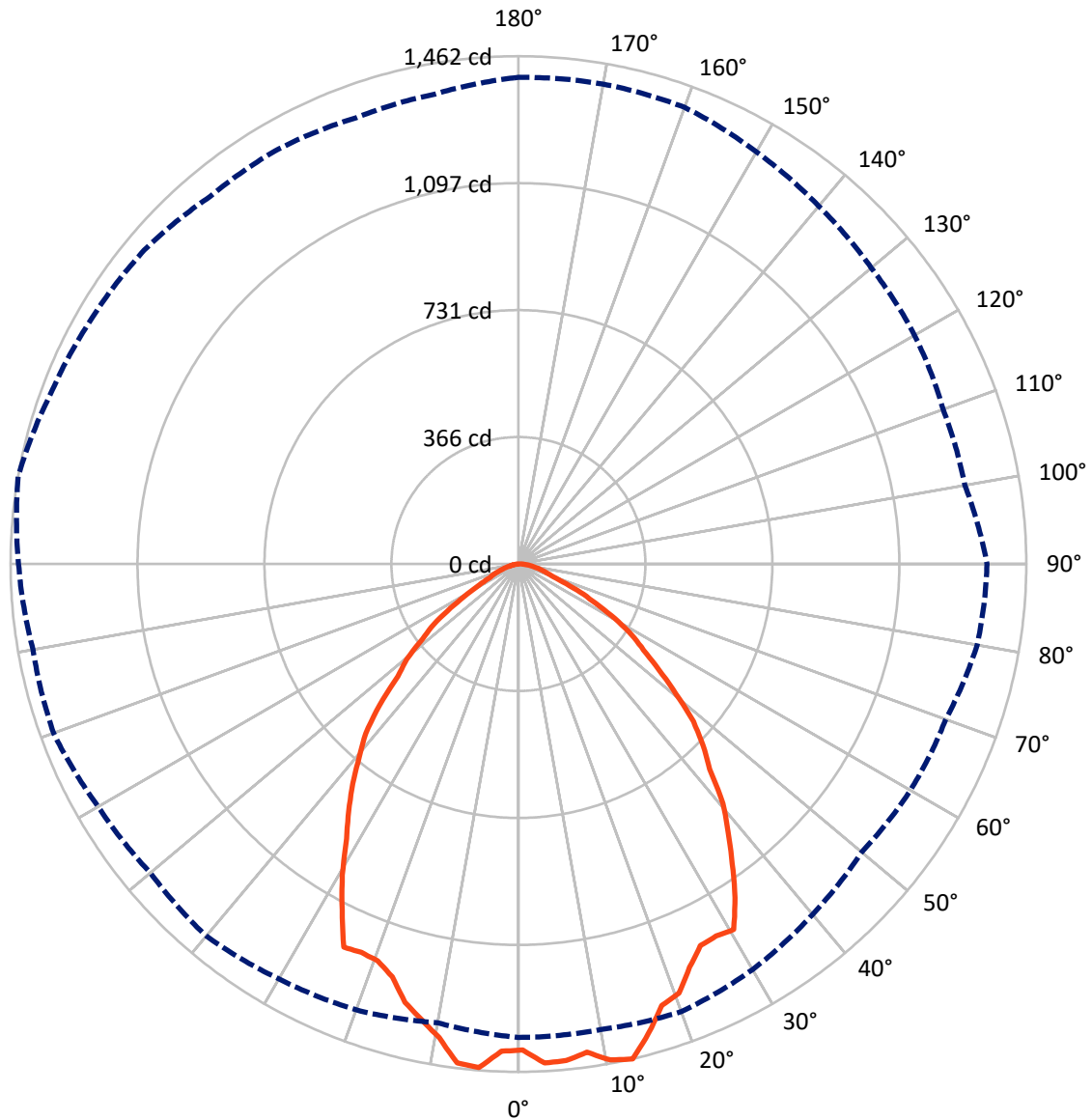
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.1 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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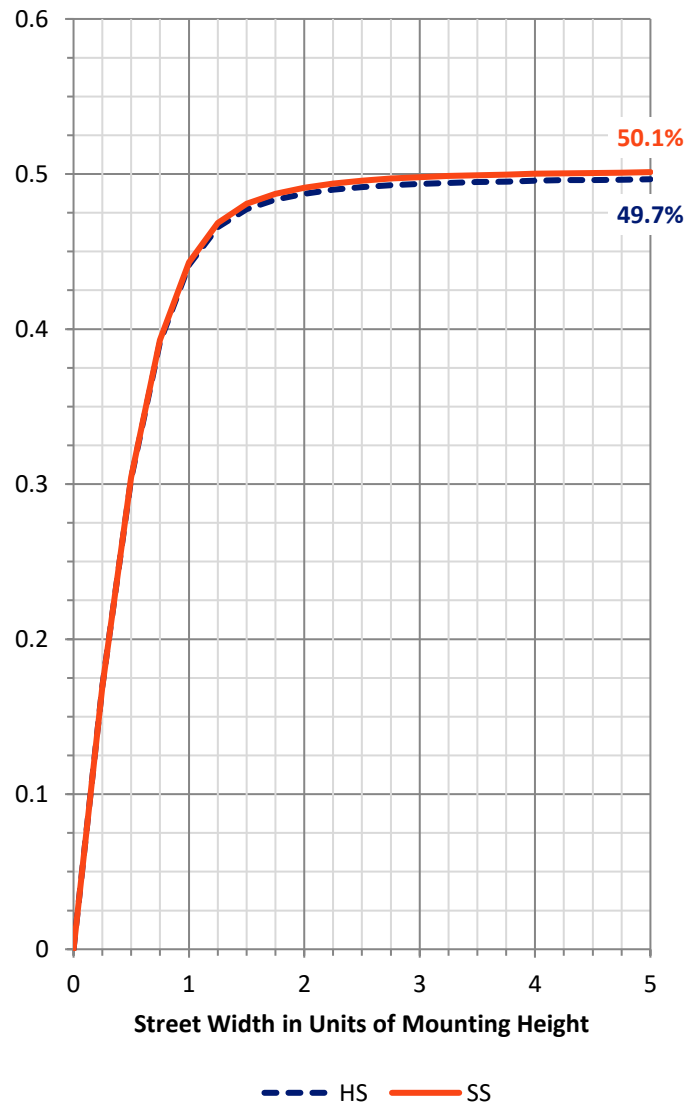
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1314.7	0.2	1314.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	1315.3	0.3	1315.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	2630.0	0.5	2630.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.2	5.1
10°-20°	377.2	14.3
20°-30°	550.1	20.9
30°-40°	603.3	22.9
40°-50°	497.7	18.9
50°-60°	286.0	10.9
60°-70°	124.9	4.7
70°-80°	47.8	1.8
80°-90°	9.9	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°	2630.0	100.0
0°-180°	2630.5	100.0

Coefficient of Utilization



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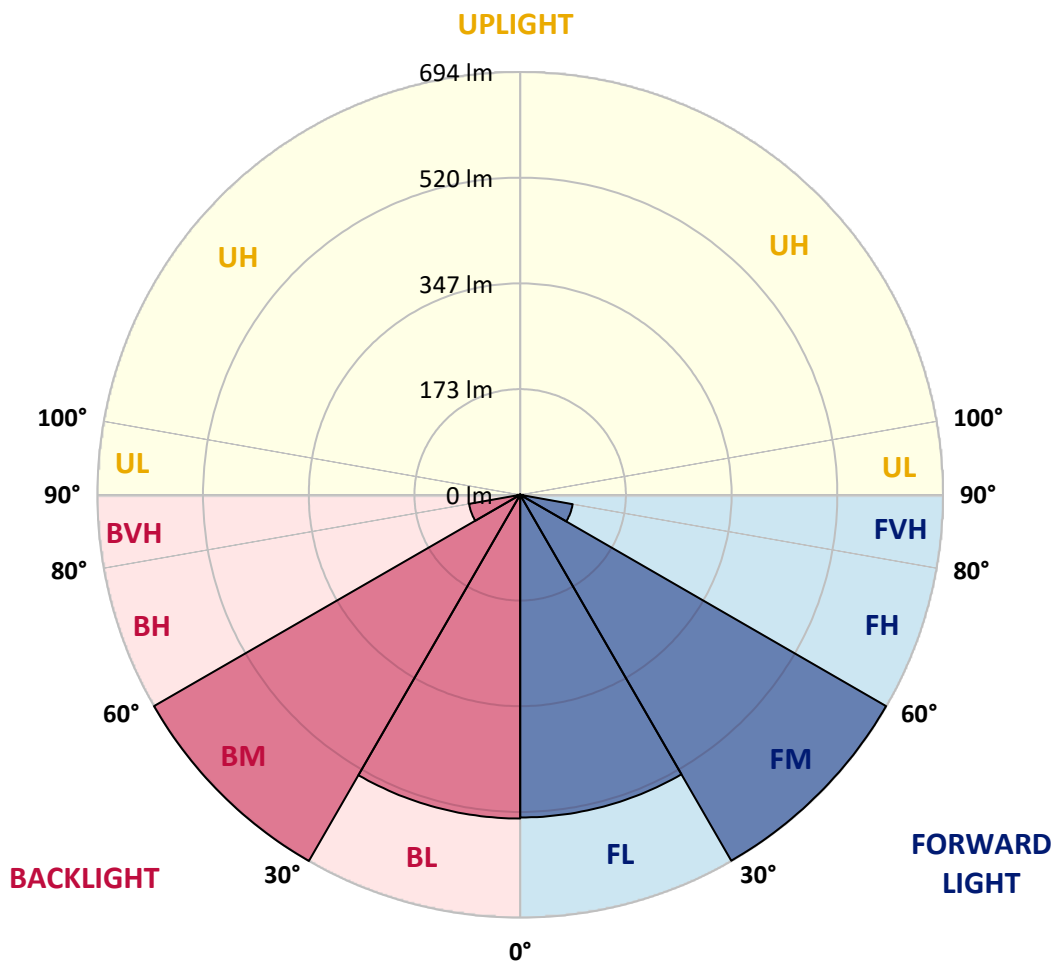
CATALOG NUMBER: TGS2S402[F;D;M]R[R;C][B;W]

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	529.4	20.1			
FM	(30°-60°)	693.2	26.4			
FH	(60°-80°)	87.5	3.3			G0/660
FVH	(80°-90°)	5.2	0.2			G0/10
BL	(0°-30°)	531.1	20.2	B2/1000		
BM	(30°-60°)	693.8	26.4	B1/1000		
BH	(60°-80°)	85.2	3.2	B0/110		G0/110
BVH	(80°-90°)	4.7	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°	1399	1399	1399	1399	1399	1399	1399	1399	1399	1399	1399
2.5°	1411	1393	1391	1390	1398	1385	1400	1397	1403	1392	1390
5°	1378	1360	1367	1385	1404	1414	1438	1452	1454	1441	1429
7.5°	1381	1370	1378	1393	1408	1407	1427	1451	1447	1445	1422
10°	1383	1364	1373	1387	1386	1370	1373	1367	1382	1375	1353
12.5°	1363	1361	1371	1348	1317	1290	1303	1309	1341	1349	1305
15°	1364	1342	1307	1303	1303	1287	1289	1281	1303	1289	1285
17.5°	1326	1274	1279	1278	1275	1244	1231	1241	1242	1238	1228
20°	1325	1282	1264	1231	1220	1213	1202	1203	1212	1216	1206
22.5°	1247	1246	1242	1224	1206	1200	1213	1212	1206	1200	1208
25°	1207	1164	1159	1170	1186	1190	1191	1199	1212	1207	1194
27.5°	1119	1112	1122	1118	1102	1082	1094	1100	1118	1116	1107
30°	1068	1051	1051	1047	1058	1062	1056	1047	1029	1015	1013
32.5°	1031	1021	998	980	978	969	957	940	933	933	942
35°	998	972	950	924	900	882	869	864	862	849	845
37.5°	953	909	884	844	834	799	798	793	792	797	801
40°	838	810	790	770	742	730	714	720	720	725	726
42.5°	718	735	719	684	666	637	638	626	657	662	644
45°	633	599	598	595	581	569	569	567	570	564	565
47.5°	569	510	479	485	498	491	483	483	474	475	470
50°	448	450	422	398	402	412	420	417	422	415	417
52.5°	358	315	320	335	335	338	349	354	350	355	352
55°	254	258	251	263	274	273	281	292	300	287	289
57.5°	172	191	207	205	205	214	225	234	232	243	230
60°	149	143	141	161	160	159	173	174	170	173	167
62.5°	129	125	121	116	121	124	125	124	126	113	115
65°	109	106	102	97	97	94	94	94	92	92	93
67.5°	89	85	81	79	79	78	78	78	78	77	76
70°	71	67	63	62	62	62	62	62	61	61	60
72.5°	53	49	48	47	46	46	48	48	48	47	46
75°	38	35	32	32	34	35	36	36	36	36	36
77.5°	24	22	21	21	23	24	26	27	26	26	25
80°	14	12	12	14	15	16	18	18	19	18	17
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°	1399	1399	1399	1399	1399	1399	1399	1399	1399	1399	1399
2.5°	1384	1395	1392	1382	1382	1389	1381	1385	1383	1376	1382
5°	1410	1412	1401	1385	1377	1378	1365	1372	1386	1390	1406
7.5°	1412	1424	1415	1397	1394	1394	1367	1366	1384	1403	1386
10°	1349	1370	1386	1394	1405	1410	1385	1375	1374	1383	1375
12.5°	1301	1317	1326	1345	1370	1399	1403	1401	1374	1367	1380
15°	1292	1305	1319	1311	1299	1334	1361	1373	1369	1374	1398
17.5°	1221	1238	1256	1261	1284	1304	1307	1377	1398	1360	1340
20°	1217	1239	1226	1230	1251	1301	1295	1294	1328	1301	1286
22.5°	1225	1230	1231	1224	1221	1227	1242	1248	1255	1298	1296
25°	1183	1176	1155	1149	1150	1172	1177	1208	1213	1196	1221
27.5°	1106	1105	1116	1124	1124	1121	1101	1110	1137	1151	1167
30°	1025	1054	1058	1046	1049	1058	1060	1071	1085	1091	1124
32.5°	938	943	971	984	986	1010	1028	1034	1045	1047	1064
35°	859	888	891	911	939	962	975	999	1010	1000	1006
37.5°	801	806	834	849	875	909	927	952	954	954	949
40°	723	746	745	762	787	818	848	854	882	886	890
42.5°	654	653	662	670	696	728	695	719	758	794	802
45°	566	573	569	586	591	577	607	634	642	677	720
47.5°	459	479	484	488	479	496	541	558	572	571	609
50°	417	398	395	396	392	410	407	432	473	480	483
52.5°	340	343	333	308	312	301	324	354	356	402	424
55°	287	275	255	245	230	227	249	246	271	275	345
57.5°	225	201	200	185	184	175	161	166	206	253	261
60°	160	154	149	147	136	137	143	147	150	161	211
62.5°	116	113	111	112	114	118	122	126	131	135	147
65°	92	93	92	92	94	97	101	105	110	115	120
67.5°	75	76	75	75	75	76	80	83	88	94	102
70°	60	59	58	58	57	58	60	64	71	75	82
72.5°	46	44	43	42	42	41	45	48	53	58	64
75°	34	31	30	28	28	27	30	31	36	42	47
77.5°	24	23	20	18	17	16	18	19	23	27	34
80°	16	14	13	11	9	7	8	9	12	16	21
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°	1399	1399	1399	1399	1399	1399	1399	1399	1399	1399	1399
2.5°	1390	1409	1416	1421	1438	1426	1427	1442	1427	1429	1442
5°	1416	1452	1456	1442	1436	1395	1379	1389	1377	1380	1404
7.5°	1368	1379	1386	1396	1419	1395	1386	1384	1358	1345	1357
10°	1371	1387	1398	1423	1452	1428	1403	1402	1375	1358	1355
12.5°	1381	1406	1417	1433	1462	1439	1419	1424	1397	1383	1398
15°	1388	1390	1380	1384	1402	1387	1373	1388	1391	1385	1402
17.5°	1327	1331	1322	1312	1336	1362	1320	1328	1321	1316	1341
20°	1300	1325	1316	1308	1319	1341	1321	1321	1310	1293	1287
22.5°	1260	1268	1251	1243	1261	1247	1245	1247	1251	1258	1295
25°	1232	1219	1214	1198	1217	1217	1215	1226	1238	1229	1266
27.5°	1190	1224	1214	1223	1213	1198	1204	1238	1218	1212	1175
30°	1140	1181	1180	1195	1221	1215	1216	1197	1177	1129	1130
32.5°	1076	1105	1112	1120	1145	1147	1144	1126	1098	1098	1095
35°	1006	1044	1046	1059	1060	1047	1038	1061	1065	1038	1011
37.5°	953	961	962	968	981	984	982	983	971	948	964
40°	877	903	881	897	906	880	887	894	881	886	896
42.5°	815	812	809	796	807	825	815	810	804	805	828
45°	711	733	725	733	746	741	742	757	743	724	724
47.5°	629	647	636	662	678	677	683	666	653	642	630
50°	536	559	580	577	588	602	592	580	577	544	533
52.5°	430	479	493	498	506	488	482	480	475	463	442
55°	362	406	426	439	437	448	441	426	403	374	347
57.5°	313	322	344	366	385	369	364	353	350	317	278
60°	235	269	274	307	320	323	317	311	279	248	225
62.5°	178	209	222	244	249	255	253	238	211	191	173
65°	130	158	170	180	196	194	187	176	160	144	133
67.5°	106	114	127	131	137	147	140	128	122	111	110
70°	87	93	95	100	101	101	101	100	97	93	89
72.5°	69	75	79	82	84	86	85	83	80	76	71
75°	52	59	63	66	69	70	69	67	64	59	54
77.5°	38	45	48	52	54	56	55	52	49	45	39
80°	26	31	36	39	42	42	41	40	37	31	27
82.5°	18	22	26	29	31	31	31	29	26	21	17
85°	11	15	18	21	22	22	22	20	17	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°

'395152
TGS2S402[F;D;M]R[R;C][B;W]

TION (continued):

340°	350°	360°
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
1	1	0
1	1	0
1	1	0
1	1	0
1	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

(END OF REPORT)