

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: LUMIERE

Report Number: G2-1802-569-13

Luminaire Tested: **203-FL-8LED4010-12-BK-LSL**

Test Date: 04/07/18

Test Information

Test Method: LM-79-08
Report Number: G2-1802-569-13
Test Lab: INNOVATION CENTER(G2)
Test Date: 04/07/18
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMIERE
Catalog Number: 203-FL-8LED4010-12-BK-LSL
Description: CAMBRIA 203 LED LUMINAIRE, 8 WATT, 4000K CCT, 10 DEGREE SPOT OPTIC, FLUSH HOOD BLACK, LINEAR SPREAD LENS
Light Source: (1) SORAA 4000K 90 CRI LED
SM16-07-10D-940-03
Ballast/Driver: (1) CHROMA POWER SUPPLY IN0004

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 309.9 lumens
Efficiency: N/A
Efficacy: 38.7 lumens/watt
Spacing Criteria (0/90/45): 0.2 / 0.95 / 0.25
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

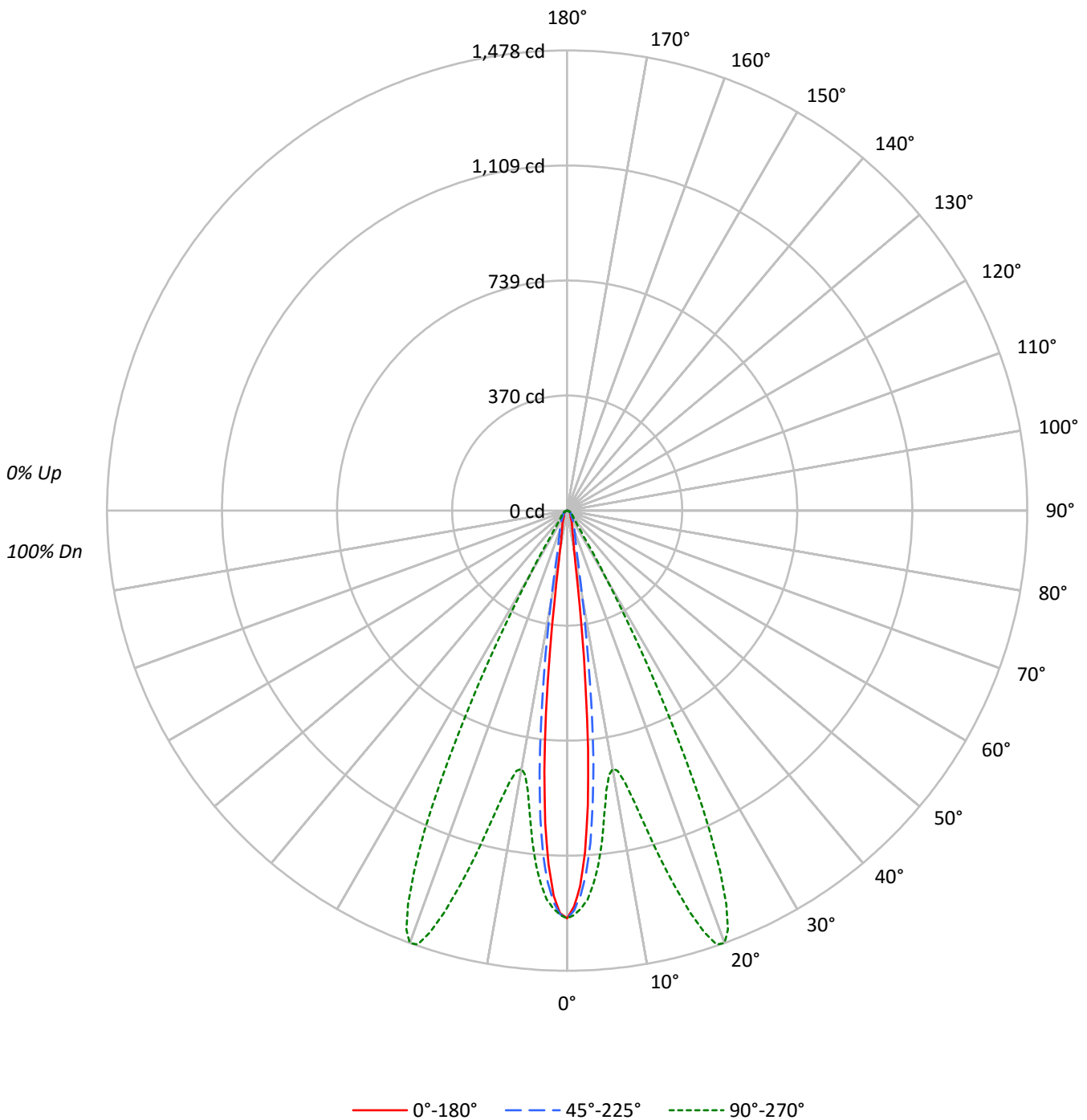
Input Watts (W): 8
Input Voltage (V): 12.0
Input Current (A_{in}): 0.706
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 27.4%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 3 HR
Ambient Temperature (°C): 24.9
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	114	111	108	106	111	109	106	105	105	103	101	101	100	98	98	96	95	94	94	94	94	94	94	94		
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88	88	88	88	88	88	88		
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82	82	82	82	82	82	82		
4	99	92	86	82	97	90	86	82	88	84	81	86	83	80	85	82	79	78	78	78	78	78	78	78		
5	94	87	81	77	93	86	81	77	84	80	76	82	79	76	81	78	75	74	74	74	74	74	74	74		
6	91	82	77	73	89	82	76	73	80	76	72	79	75	72	78	74	71	70	70	70	70	70	70	70		
7	87	79	73	69	86	78	73	69	77	72	69	76	71	68	74	71	68	67	67	67	67	67	67	67		
8	84	75	70	66	82	75	69	66	73	69	66	72	68	65	72	68	65	64	64	64	64	64	64	64		
9	81	72	67	63	79	71	66	63	71	66	63	70	66	63	69	65	62	61	61	61	61	61	61	61		
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	63	60	59	59	59	59	59	59	59		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	646327	646327	646327
5°	381353	567077	416022
10°	63626	421834	66632
15°	33712	590977	32179
20°	23627	776014	22577
25°	16876	526964	15243
30°	13103	135590	12534
35°	11444	35536	11444
40°	10949	23186	10305
45°	10466	18141	9768
50°	9978	16119	9211
55°	9462	14623	8602
60°	7894	12828	6907
65°	7005	10507	7005
70°	5770	8655	5770
75°	3813	7625	3813
80°	2841	5683	2841
85°	0	0	5661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.2	23.0
10°-20°	94.0	30.3
20°-30°	85.3	27.5
30°-40°	21.9	7.1
40°-50°	14.6	4.7
50°-60°	11.5	3.7
60°-70°	7.5	2.4
70°-80°	3.3	1.1
80°-90°	0.7	0.2
90°-100°	0.0	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°-30°	250.5	80.8
0°-40°	272.4	87.9
0°-60°	298.5	96.3
0°-90°	309.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	309.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1310	1310	1310	1310	1310	
5°	770	941	1145	990	840	48
15°	66	107	1157	106	63	19
25°	31	50	968	49	28	14
35°	19	27	59	26	19	12
45°	15	18	26	18	14	12
55°	11	13	17	13	10	9
65°	6	8	9	8	6	6
75°	2	3	4	3	2	3
85°	0	1	0	1	1	0
90°	0	0	0	0	0	



TEST NUMBER: G2-1802-569-13

CATALOG NUMBER: 203-FL-8LED4010-12-BK-LSL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310
1°	1272	1280	1277	1280	1278	1283	1280	1280	1283	1285	1284
2°	1206	1221	1215	1222	1217	1226	1223	1225	1231	1235	1236
3°	1099	1125	1116	1127	1122	1135	1132	1139	1152	1165	1167
4°	950	964	974	990	984	1003	1003	1015	1038	1060	1070
5°	770	787	798	819	817	840	843	862	895	927	941
6°	568	588	601	627	628	653	662	685	726	767	808
7°	382	401	411	434	438	462	473	499	544	573	644
8°	246	261	269	285	292	309	319	342	383	419	490
9°	167	175	180	190	197	207	215	232	267	301	367
10°	127	131	134	141	145	151	157	169	192	220	275
11°	110	108	110	115	118	122	125	133	149	169	210
12°	94	93	94	98	101	103	105	113	123	138	167
13°	82	82	83	86	88	91	92	98	107	117	138
14°	72	72	74	77	79	81	83	88	95	104	119
15°	66	65	67	69	71	73	75	79	85	93	107
16°	59	59	61	63	65	67	69	72	78	85	97
17°	55	55	56	58	60	62	63	66	71	79	88
18°	51	51	52	54	56	57	59	62	66	73	81
19°	48	48	49	51	52	54	55	58	62	67	76
20°	45	45	46	48	50	51	52	55	58	63	70
21°	42	42	43	45	47	48	49	52	55	59	65
22°	39	39	40	42	44	45	46	49	52	55	61
23°	36	36	37	38	40	42	43	46	49	52	57
24°	33	33	34	35	37	39	40	43	46	49	53
25°	31	30	31	32	34	36	37	41	44	47	50
26°	28	28	29	30	32	33	34	38	41	44	48
27°	26	26	27	28	29	30	32	35	38	42	45
28°	25	25	25	26	27	28	29	32	36	39	43
29°	24	23	24	25	26	26	27	30	33	37	40
30°	23	22	23	23	24	25	26	28	31	34	38
32.5°	21	21	21	22	22	23	23	24	26	29	33
35°	19	19	20	20	21	21	21	22	23	25	27
37.5°	18	18	18	19	20	20	20	21	21	22	24
40°	17	17	18	18	19	19	19	20	20	20	21
42.5°	16	16	17	17	18	18	18	18	19	19	19
45°	15	15	15	16	17	17	17	17	18	18	18
47.5°	14	14	14	15	16	16	16	16	17	17	17
50°	13	13	13	14	14	15	15	15	16	15	16
52.5°	11	12	12	12	13	14	14	14	14	14	15
55°	11	10	11	11	12	12	13	13	13	13	13
57.5°	9	9	9	10	11	11	11	12	12	12	12
60°	8	8	8	8	10	10	10	10	10	11	11
62.5°	7	7	7	7	8	9	9	9	9	9	9
65°	6	6	6	6	7	7	8	8	8	8	8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
67.5°	5	5	5	5	6	6	6	7	7	7	7
70°	4	4	4	4	5	5	5	6	6	6	6
72.5°	3	3	3	3	4	4	4	4	4	4	4
75°	2	2	2	3	3	3	3	3	3	3	3
77.5°	2	2	2	2	2	2	2	2	2	2	2
80°	1	1	1	1	1	1	2	2	2	2	2
82.5°	1	1	1	1	1	1	1	1	1	1	1
85°	0	1	1	1	1	1	1	1	1	1	1
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CATALOG NUMBER: 203-FL-8LED4010-12-BK-LSL

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310
1°	1291	1290	1291	1291	1292	1297	1295	1295	1297	1299	1300
2°	1249	1252	1257	1261	1263	1267	1269	1273	1276	1279	1280
3°	1190	1197	1208	1219	1223	1229	1236	1241	1246	1251	1252
4°	1109	1122	1139	1153	1161	1172	1184	1193	1201	1204	1201
5°	994	1017	1044	1069	1079	1095	1113	1127	1139	1145	1142
6°	857	891	930	967	980	1002	1029	1046	1063	1069	1066
7°	705	749	800	849	867	896	930	954	975	982	979
8°	560	615	665	739	764	786	840	873	897	907	902
9°	426	505	569	653	685	723	772	820	848	860	855
10°	334	416	492	587	626	670	734	791	826	842	835
11°	263	343	427	533	580	631	714	786	830	852	842
12°	209	282	368	486	541	601	710	803	862	892	876
13°	171	231	316	444	509	581	721	844	921	962	939
14°	145	193	272	405	483	569	748	905	1004	1055	1028
15°	126	165	234	372	461	562	784	978	1102	1157	1126
16°	115	145	205	341	441	558	821	1050	1197	1256	1220
17°	104	130	185	312	418	550	846	1116	1287	1349	1307
18°	96	119	164	283	392	534	865	1167	1357	1424	1378
19°	89	109	148	255	361	509	870	1200	1404	1474	1421
20°	82	100	134	225	326	472	851	1200	1409	1478	1430
21°	76	93	121	197	286	424	804	1164	1375	1441	1398
22°	70	85	110	170	244	368	731	1090	1296	1364	1326
23°	65	78	100	147	203	308	634	983	1189	1258	1206
24°	60	72	90	126	168	249	525	839	1057	1126	1076
25°	56	66	82	110	139	198	417	695	900	968	918
26°	52	60	73	96	116	157	319	552	734	798	753
27°	49	56	67	85	99	126	235	420	571	629	587
28°	46	52	61	76	86	105	173	305	426	477	457
29°	43	48	56	68	75	88	128	210	303	346	328
30°	41	45	51	60	66	76	98	145	205	238	224
32.5°	36	39	42	47	51	56	64	77	88	98	92
35°	30	33	36	39	42	44	47	53	57	59	58
37.5°	25	28	30	33	34	36	38	41	44	45	44
40°	22	23	25	27	28	29	31	32	35	36	35
42.5°	20	21	22	23	24	24	26	27	28	30	29
45°	18	19	19	20	20	21	22	23	25	26	26
47.5°	17	17	18	18	18	19	19	20	22	23	23
50°	16	16	16	17	17	17	17	18	20	21	20
52.5°	15	15	15	15	15	15	16	16	18	18	18
55°	14	14	14	14	14	14	14	15	16	17	16
57.5°	12	12	12	12	13	13	13	13	14	15	14
60°	11	11	11	11	11	11	11	12	12	13	12
62.5°	10	10	10	9	9	9	10	10	10	11	11
65°	8	8	8	8	8	8	8	9	9	9	9



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CATALOG NUMBER: 203-FL-8LED4010-12-BK-LSL

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
67.5°	7	7	7	7	7	7	7	7	8	8	8
70°	6	6	6	6	6	6	6	6	6	6	6
72.5°	4	5	5	5	5	5	5	5	5	5	5
75°	3	3	3	3	4	3	3	4	4	4	4
77.5°	2	2	2	2	2	2	3	2	3	3	2
80°	2	2	2	2	2	2	2	2	2	2	2
82.5°	1	1	1	1	1	1	1	1	1	1	1
85°	1	1	1	1	1	1	1	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: G2-1802-569-13

CATALOG NUMBER: 203-FL-8LED4010-12-BK-LSL

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310	1310
1°	1298	1298	1301	1299	1300	1301	1302	1299	1297	1299	1299
2°	1278	1278	1278	1273	1274	1270	1270	1262	1258	1258	1256
3°	1247	1246	1244	1236	1236	1229	1224	1208	1196	1192	1183
4°	1199	1197	1193	1178	1179	1167	1147	1129	1107	1096	1080
5°	1138	1131	1121	1100	1100	1078	1062	1024	990	976	949
6°	1058	1049	1034	1005	1004	972	946	896	848	830	796
7°	968	953	930	895	889	846	810	750	688	660	618
8°	887	863	830	791	777	722	674	603	535	498	446
9°	834	800	754	712	691	621	557	480	403	345	308
10°	807	761	695	656	625	542	467	382	302	247	214
11°	804	742	661	615	574	477	391	301	226	183	159
12°	826	741	636	580	531	420	323	237	176	144	127
13°	870	758	624	554	492	366	264	188	142	120	108
14°	936	790	619	534	458	316	216	154	120	104	95
15°	1013	832	622	519	427	270	181	132	106	93	85
16°	1089	875	626	504	397	235	155	116	96	84	77
17°	1158	913	625	484	365	203	136	105	87	78	71
18°	1208	939	616	458	333	179	122	95	80	72	65
19°	1244	947	593	428	298	158	111	88	74	67	61
20°	1247	935	555	384	262	141	101	81	69	62	57
21°	1212	901	503	338	226	126	93	75	64	58	54
22°	1140	836	437	284	191	113	85	70	60	54	50
23°	1038	744	366	235	161	102	78	65	56	51	47
24°	911	629	295	190	136	91	72	60	52	48	45
25°	765	507	230	154	117	83	66	56	49	46	42
26°	598	392	179	128	102	75	62	52	47	43	39
27°	459	293	141	107	89	68	56	49	44	41	36
28°	337	195	113	92	78	62	52	46	42	38	34
29°	234	146	93	79	70	57	49	43	39	35	32
30°	160	108	78	69	62	52	45	41	37	33	29
32.5°	80	66	56	52	48	42	38	35	31	28	25
35°	54	48	43	41	39	35	32	29	26	24	22
37.5°	41	38	35	34	32	29	27	24	23	21	21
40°	33	31	29	28	27	25	23	21	21	20	19
42.5°	27	26	24	23	23	21	20	19	19	18	18
45°	24	22	21	20	20	19	19	18	18	17	17
47.5°	21	20	19	18	18	17	17	17	16	16	16
50°	19	18	17	17	16	16	16	15	15	15	15
52.5°	17	16	15	15	15	14	14	14	14	13	13
55°	15	14	14	14	13	13	13	13	13	12	12
57.5°	14	13	12	12	12	12	12	12	11	11	11
60°	12	11	11	11	11	10	10	10	10	10	10
62.5°	10	10	9	9	9	9	9	9	9	9	9
65°	9	8	8	8	8	8	8	8	8	7	7



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CATALOG NUMBER: 203-FL-8LED4010-12-BK-LSL

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
67.5°	7	7	7	7	7	7	6	6	6	6	6
70°	6	6	6	6	5	5	5	5	5	5	5
72.5°	5	5	5	4	4	4	4	4	4	4	4
75°	4	3	3	3	3	3	3	3	3	3	3
77.5°	2	2	2	2	2	2	2	2	2	2	2
80°	2	2	2	2	1	2	2	2	1	1	1
82.5°	1	1	1	1	1	1	1	1	1	1	1
85°	0	0	1	1	1	0	0	1	1	1	1
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CATALOG NUMBER: 203-FL-8LED4010-12-BK-LSL

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1310	1310	1310	1310	1310	1310	1310	1310
1°	1298	1297	1296	1298	1300	1295	1293	1293
2°	1252	1251	1245	1249	1252	1241	1239	1238
3°	1173	1166	1155	1162	1166	1147	1143	1138
4°	1062	1049	1032	1041	1043	1018	1012	1006
5°	920	882	878	886	889	856	850	840
6°	758	710	727	714	711	674	666	654
7°	576	522	512	522	516	474	467	451
8°	399	352	360	347	321	307	302	290
9°	267	230	221	225	206	197	194	186
10°	184	161	155	157	145	140	138	133
11°	140	126	125	121	114	111	110	107
12°	114	105	104	100	97	94	93	90
13°	99	92	90	89	84	81	80	79
14°	87	81	80	78	75	72	71	69
15°	78	73	72	70	67	65	64	63
16°	71	66	65	64	61	59	58	57
17°	65	62	60	59	56	55	53	52
18°	61	58	56	54	52	51	50	49
19°	57	54	52	51	49	47	46	46
20°	53	51	49	48	46	44	43	43
21°	50	48	46	45	43	41	40	40
22°	47	44	42	41	39	38	36	36
23°	44	41	39	38	36	34	33	33
24°	41	37	36	35	33	32	31	30
25°	38	34	33	32	30	29	28	28
26°	35	32	31	30	28	27	26	26
27°	32	30	28	28	26	25	25	25
28°	30	28	27	26	25	24	23	24
29°	28	26	25	25	24	23	22	22
30°	26	25	24	24	23	22	21	22
32.5°	24	23	22	22	21	20	20	20
35°	22	21	21	21	20	19	19	19
37.5°	20	20	19	19	19	18	17	17
40°	19	18	18	18	18	17	16	16
42.5°	18	18	17	17	16	16	15	15
45°	17	16	16	16	15	15	14	14
47.5°	15	15	15	15	14	14	13	13
50°	14	14	14	14	13	12	12	12
52.5°	13	13	13	12	12	11	11	11
55°	12	12	12	11	11	10	10	10
57.5°	11	11	10	10	9	9	9	9
60°	9	9	9	9	8	7	7	7
62.5°	8	8	8	7	7	6	6	6
65°	7	7	7	6	6	6	5	6



TEST NUMBER: G2-1802-569-13

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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
67.5°	6	6	5	5	5	5	5	5
70°	5	5	4	4	4	4	4	4
72.5°	4	4	4	3	3	3	3	3
75°	3	3	3	2	2	2	2	2
77.5°	2	2	2	2	2	1	1	1
80°	1	1	1	1	1	1	1	1
82.5°	1	1	1	1	1	1	1	1
85°	1	0	0	0	1	1	0	1
87.5°	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0

(END OF REPORT)