

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P130055

Luminaire Tested: **HL618TAT - HLM6927 - HL6FL - ERT702**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130055
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33460)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL618TAT - HLM6927 - HL6FL - ERT702
Description: HALO ALLSLOPE 6" 30W, Drop Opal Plastic Lens, White Polymer Trim
Ring "Dead Front", Wet Location - Showerlight using 40 Degree Optic at a
6-12 Pitch
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1320.0 lumens
Efficiency: N/A
Efficacy: 47.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.84 / 1.09
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

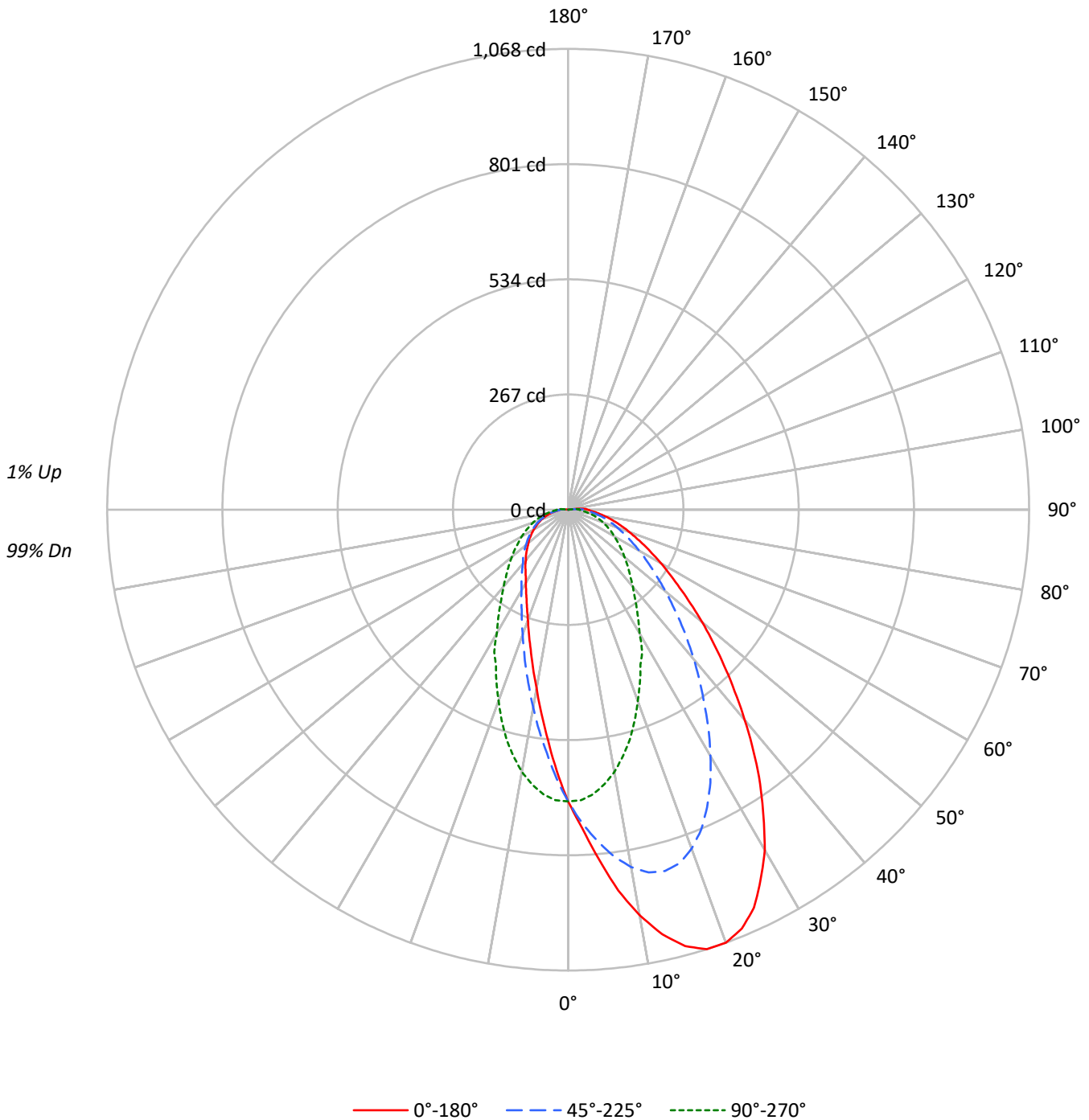
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

Luminous Intensity Polar Plot





TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	89	87	85	83
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	85	73	65	59	82	72	64	58	70	63	58	67	61	57	65	60	56	54
5	79	66	58	52	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	61	52	46	71	60	52	46	58	51	45	56	50	45	54	49	44	42
7	68	55	47	41	66	55	47	41	53	46	41	52	45	41	50	44	40	38
8	64	51	43	38	62	50	43	37	49	42	37	48	41	37	46	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	40351	40351	40351
5°	47549	38765	31387
10°	55235	35724	24375
15°	60400	31787	19326
20°	61858	27280	15754
25°	59655	23206	13361
30°	54439	19780	11712
35°	47614	16957	10567
40°	40522	14845	9685
45°	34080	13272	9070
50°	28564	11990	8463
55°	23763	10939	7997
60°	20275	10138	7521
65°	17454	9357	7018
70°	15132	8675	6557
75°	13432	7874	5906
80°	11792	6856	5073
85°	10518	5937	4241



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.6	4.8
10°-20°	174.5	13.2
20°-30°	234.0	17.7
30°-40°	233.3	17.7
40°-50°	200.5	15.2
50°-60°	158.6	12.0
60°-70°	118.1	8.9
70°-80°	79.3	6.0
80°-90°	43.6	3.3
90°-100°	14.5	1.1
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°	472.1	35.8
0°-40°	705.4	53.4
0°-60°	1064.5	80.6
0°-90°	1305.5	98.9
90°-120°	14.5	1.1
90°-150°	14.5	1.1
90°-180°	14.0	1.1
0°-180°	1320.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	676	676	676	676	676	
5°	812	770	662	566	536	82
15°	1047	867	551	379	335	295
25°	1018	761	396	255	228	464
35°	775	550	276	188	172	483
45°	511	367	199	145	136	396
55°	315	236	145	112	106	285
65°	194	152	104	83	78	193
75°	116	95	68	54	51	124
85°	62	51	35	26	25	56
90°	45	37	26	20	20	25
95°	28	10	18	5	13	13
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	676	676	676	676	676	676	676	676	676	676	676
2.5°	738	746	744	732	745	744	732	731	725	726	722
5°	812	821	816	805	817	799	792	791	777	770	761
7.5°	890	896	890	874	885	860	847	845	823	810	795
10°	954	962	956	933	945	915	911	889	859	841	818
12.5°	1008	1017	1012	987	992	956	934	921	886	861	831
15°	1047	1056	1046	1020	1024	984	958	940	897	867	831
17.5°	1068	1076	1065	1037	1037	995	965	943	894	859	818
20°	1068	1076	1065	1035	1033	987	956	929	877	836	792
22.5°	1051	1060	1046	1015	1011	964	930	902	847	804	757
25°	1018	1023	1012	980	973	927	892	862	806	761	715
27.5°	966	975	962	931	926	878	842	812	755	713	665
30°	911	915	902	872	865	820	785	752	701	659	614
32.5°	842	846	834	806	800	757	723	694	644	605	561
35°	775	777	766	739	730	692	660	633	585	550	512
37.5°	705	710	696	673	662	631	599	573	530	500	465
40°	636	640	629	606	598	570	541	519	482	453	422
42.5°	571	575	566	545	539	511	489	467	435	408	380
45°	511	514	506	490	481	458	438	419	387	367	341
47.5°	455	456	448	431	430	407	389	373	346	328	307
50°	405	404	396	387	381	359	345	332	310	294	270
52.5°	357	358	351	341	342	321	307	296	277	263	248
55°	315	318	312	302	296	283	272	263	246	236	222
57.5°	279	281	277	268	263	251	242	235	220	212	200
60°	248	249	243	237	234	223	221	209	197	190	180
62.5°	219	220	217	209	207	198	192	186	176	170	160
65°	194	194	192	185	183	176	170	166	157	152	146
67.5°	170	171	168	164	161	156	151	148	140	136	130
70°	150	151	148	145	144	137	134	132	125	121	117
72.5°	133	132	130	128	126	122	118	116	111	108	104
75°	116	115	114	111	110	106	104	102	97	95	91
77.5°	101	100	99	97	96	92	90	89	85	83	80
80°	86	86	85	83	83	80	78	77	73	71	69
82.5°	73	73	72	71	70	68	66	65	62	60	58
85°	62	62	61	60	59	57	55	54	52	51	49
87.5°	52	52	51	50	49	48	47	46	44	43	41
90°	45	45	44	43	43	42	40	40	38	37	36
92.5°	41	41	41	39	38	36	34	31	28	27	27
95°	28	29	28	27	24	21	17	15	10	10	9
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



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
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



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	676	676	676	676	676	676	676	676	676	676	676
2.5°	708	714	704	690	699	689	682	674	662	666	649
5°	742	742	724	704	706	690	676	662	643	640	620
7.5°	768	762	737	710	707	682	663	642	619	610	586
10°	801	771	739	706	695	667	656	617	589	577	549
12.5°	790	770	732	693	678	643	614	585	555	538	510
15°	783	758	714	672	652	615	582	551	517	499	471
17.5°	767	736	689	643	619	579	545	512	478	460	431
20°	738	703	655	607	580	540	506	471	440	419	392
22.5°	704	665	615	564	540	499	467	434	402	382	357
25°	660	622	573	524	498	458	427	396	367	349	324
27.5°	613	575	528	483	457	419	389	371	336	318	296
30°	564	525	483	440	417	382	354	331	305	290	271
32.5°	515	482	442	401	380	349	323	302	280	266	249
35°	470	437	402	365	347	317	295	276	255	244	230
37.5°	426	398	365	333	315	289	270	252	235	225	212
40°	386	361	333	303	289	265	249	233	217	208	197
42.5°	357	327	302	275	264	243	229	214	200	192	183
45°	316	295	274	251	240	223	210	199	186	179	171
47.5°	285	267	250	229	220	206	197	184	173	166	160
50°	256	242	227	209	202	189	178	170	160	155	149
52.5°	232	219	206	191	185	174	165	158	149	144	138
55°	208	198	188	174	170	160	152	145	138	134	128
57.5°	188	180	171	159	156	147	140	134	128	124	119
60°	170	163	156	146	143	135	129	124	118	115	111
62.5°	154	148	141	132	130	124	118	114	109	106	102
65°	139	134	128	120	119	113	108	104	100	97	94
67.5°	125	120	116	109	107	102	98	95	91	89	86
70°	112	108	104	98	97	94	89	86	82	80	78
72.5°	99	96	92	88	86	83	79	77	74	73	71
75°	87	84	82	77	76	73	70	68	65	63	61
77.5°	76	74	72	67	66	64	61	59	57	55	53
80°	66	64	62	58	57	55	52	50	48	47	46
82.5°	56	54	52	49	48	46	44	42	40	39	38
85°	47	45	44	41	40	38	36	35	33	32	31
87.5°	40	38	37	34	34	32	30	29	28	27	26
90°	34	33	32	30	29	28	27	26	25	24	23
92.5°	27	27	27	26	27	26	25	24	23	22	21
95°	12	13	15	16	18	19	18	18	17	16	14
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



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
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



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	676	676	676	676	676	676	676	676	676	676	676
2.5°	650	654	644	645	633	623	619	621	610	618	620
5°	616	614	601	596	581	566	558	559	550	553	553
7.5°	578	572	554	548	530	516	505	502	493	492	492
10°	535	528	510	500	480	466	454	450	434	438	436
12.5°	495	489	466	455	434	419	408	404	394	391	390
15°	453	444	422	401	395	379	367	361	353	352	348
17.5°	414	403	383	372	352	341	331	325	318	317	314
20°	376	365	348	336	321	308	299	294	288	285	283
22.5°	343	332	315	306	292	280	272	268	262	261	258
25°	310	302	287	279	266	255	249	246	240	238	237
27.5°	284	276	263	255	243	235	229	227	222	221	219
30°	260	253	241	235	224	216	211	210	204	205	202
32.5°	240	234	223	217	209	201	197	195	191	191	189
35°	221	217	207	202	194	188	184	182	179	179	177
37.5°	204	200	193	188	181	175	172	170	168	167	166
40°	190	187	180	176	169	163	161	160	158	157	156
42.5°	177	175	169	165	159	155	152	151	148	148	148
45°	165	163	158	154	149	145	143	141	140	139	139
47.5°	154	153	148	145	140	137	134	133	131	131	130
50°	144	143	139	136	131	128	126	125	123	123	122
52.5°	135	133	130	127	123	120	118	117	116	116	115
55°	126	125	121	118	115	112	110	110	108	108	107
57.5°	117	116	113	110	107	105	103	102	101	101	100
60°	108	108	104	102	99	97	96	95	94	93	93
62.5°	97	99	97	94	92	90	88	88	87	86	86
65°	92	91	89	87	84	83	81	80	80	80	78
67.5°	82	83	81	79	77	75	74	73	72	72	72
70°	76	76	74	72	70	68	67	66	65	65	65
72.5°	68	68	66	64	62	61	60	59	59	58	58
75°	60	59	58	57	55	54	53	52	52	51	51
77.5°	52	51	50	49	47	47	45	45	45	44	44
80°	44	44	42	41	40	39	39	38	38	37	37
82.5°	36	36	35	34	33	32	32	31	31	31	30
85°	30	29	28	28	27	26	26	25	25	25	25
87.5°	25	25	24	23	22	22	22	21	21	21	21
90°	22	22	21	21	20	20	20	19	19	19	19
92.5°	20	19	18	16	15	14	15	15	16	17	17
95°	13	11	8	6	5	5	5	6	8	9	11
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



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
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



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	676	676	676	676
2.5°	610	610	615	606
5°	543	543	546	536
7.5°	485	482	482	475
10°	428	427	427	421
12.5°	382	381	383	376
15°	340	341	342	335
17.5°	307	307	305	302
20°	278	278	276	272
22.5°	253	254	254	249
25°	233	233	233	228
27.5°	215	215	216	211
30°	200	200	200	196
32.5°	187	187	187	183
35°	176	176	175	172
37.5°	165	165	164	163
40°	155	155	155	152
42.5°	147	147	146	145
45°	138	138	137	136
47.5°	130	129	129	128
50°	122	122	121	120
52.5°	115	115	114	114
55°	108	107	107	106
57.5°	100	100	100	99
60°	93	93	92	92
62.5°	86	86	85	85
65°	79	79	78	78
67.5°	72	72	71	71
70°	65	65	64	65
72.5°	58	58	57	58
75°	51	51	51	51
77.5°	44	44	44	44
80°	37	37	37	37
82.5°	31	31	30	31
85°	25	25	25	25
87.5°	21	21	21	21
90°	19	19	19	20
92.5°	17	18	18	18
95°	12	12	12	13
97.5°	0	0	0	0
100°	0	0	0	0
102.5°	0	0	0	0
105°	0	0	0	0
107.5°	0	0	0	0
110°	0	0	0	0



TEST NUMBER: P130055

CATALOG NUMBER: HL618TAT - HLM6927 - HL6FL - ERT702

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)