

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: P407860

Luminaire Tested: **ALS7A40-DL**

Issue Date: 08/27/2020

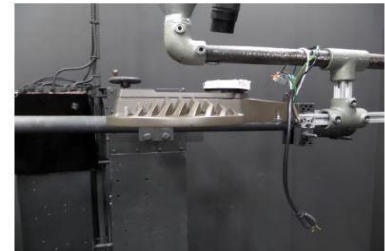
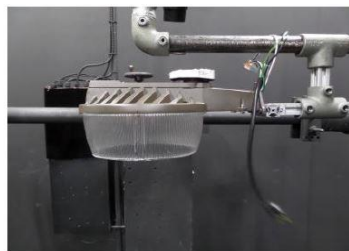
Test Information

Test Method: LM-79-08
Report Number: P407860
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2006-852-15)
Test Lab: INNOVATIONS CENTER(G1)
Issue Date: 08/27/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ALS7A40-DL
Description: HALO OUTDOOR BARN LIGHT STANDARD 7000LM W/ DROP LENS
Light Source: (78) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7010.4 lumens
Efficiency: N/A
Efficacy: 145.4 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.67' x H: 0.25')
IES Classification: Type V - Short - Cutoff
BUG Rating: B3 - U3 - G1

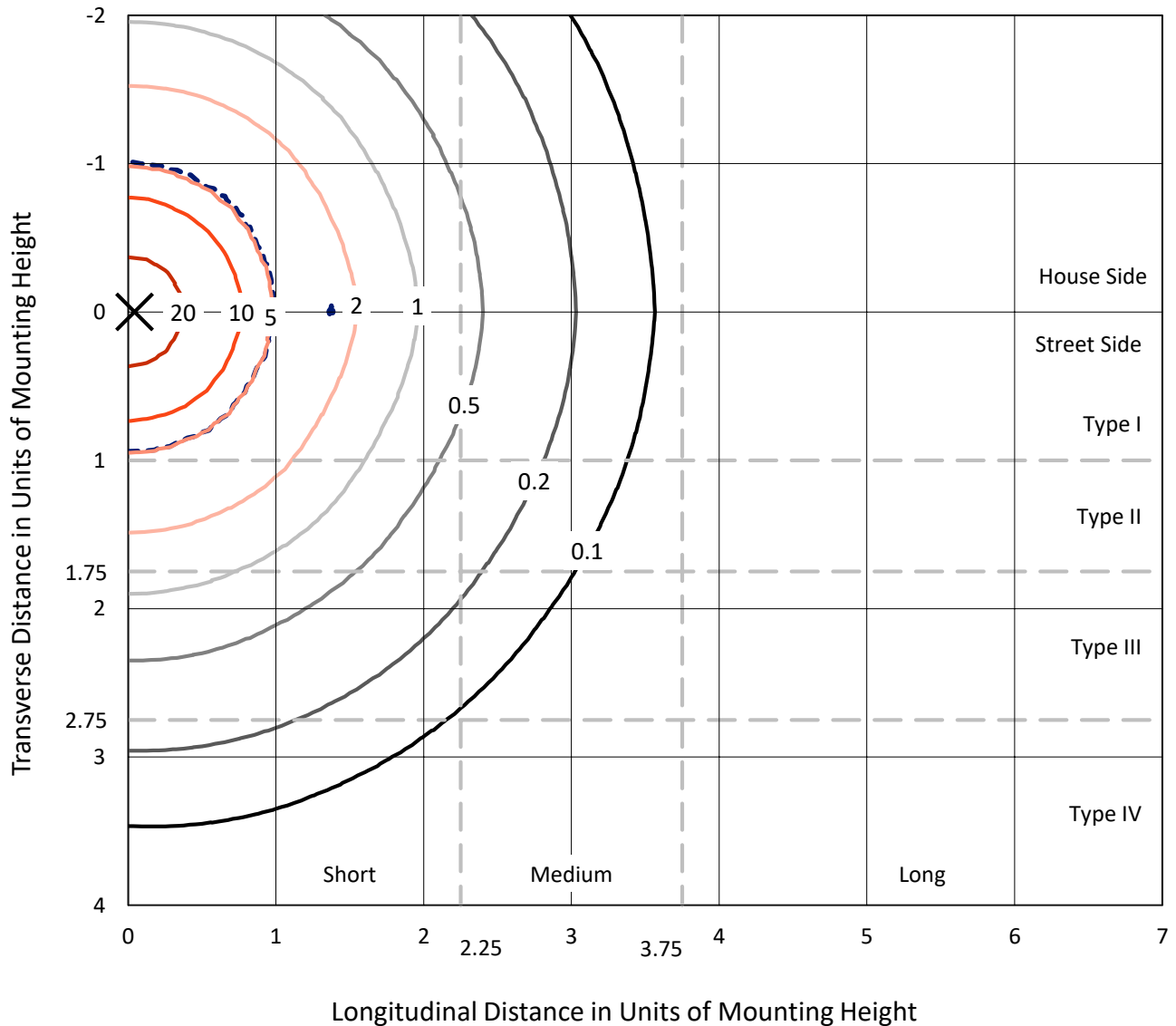
Input Watts (W): 48.2
Input Voltage (V): 120.0
Input Current (Ain): 0.404
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

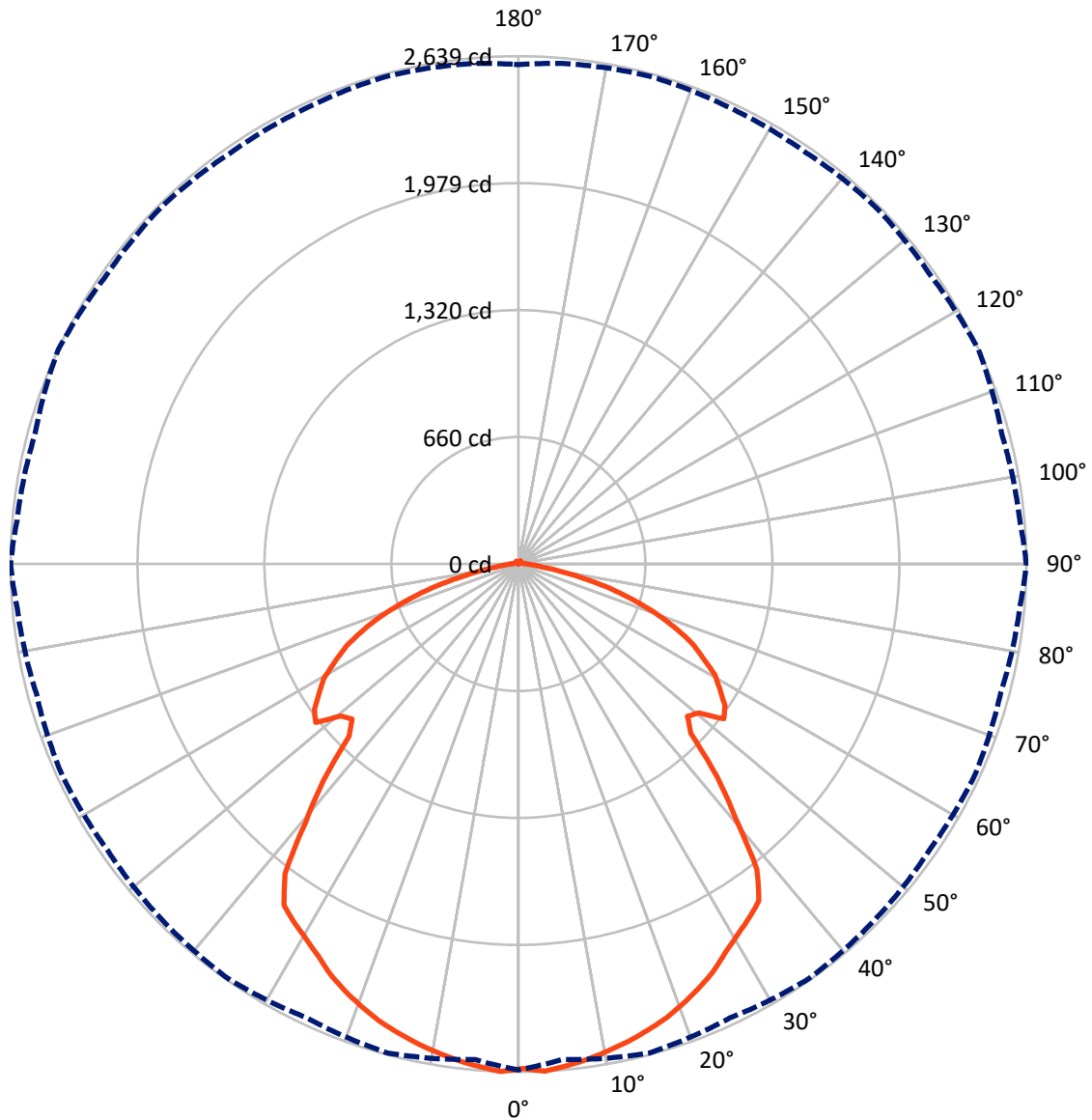
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 26.2 fc
 Type V - Short - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 2.5-Deg Vertical

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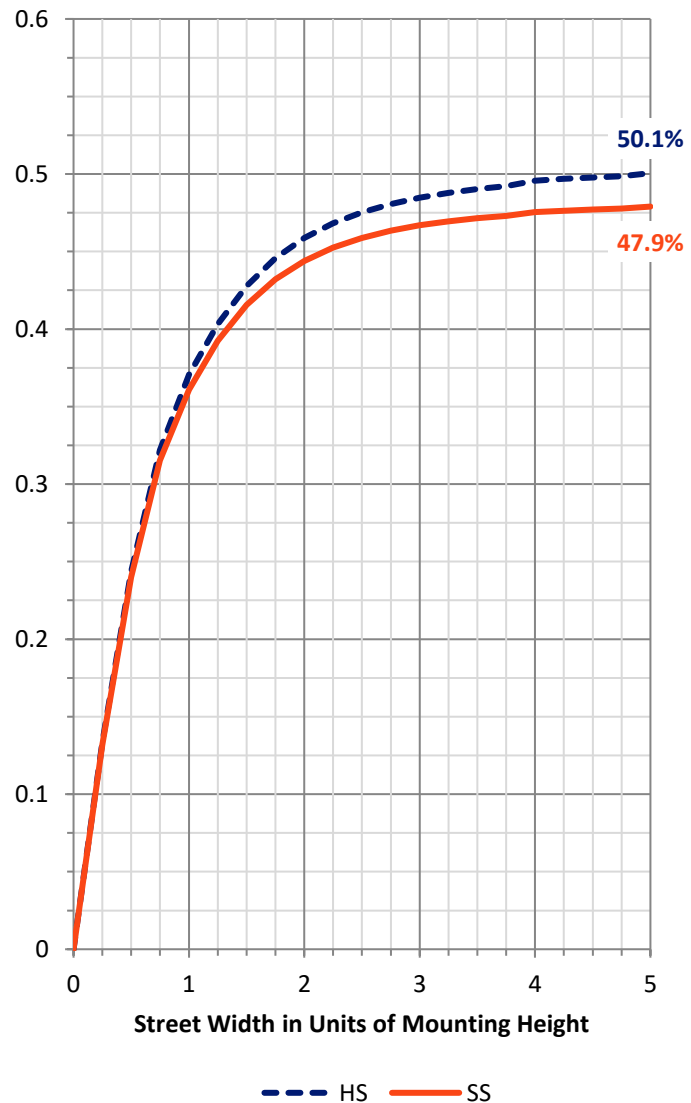
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3540.9	46.9	3587.8
	% Fixture	50.5	0.7	51.2
Street Side	Lumens	3368.6	54.0	3422.6
	% Fixture	48.1	0.8	48.8
Total	Lumens	6909.6	100.9	7010.4
	% Fixture	98.6	1.4	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	246.6	3.5
10°-20°	705.1	10.1
20°-30°	1080.4	15.4
30°-40°	1283.4	18.3
40°-50°	1007.1	14.4
50°-60°	1065.0	15.2
60°-70°	918.6	13.1
70°-80°	494.2	7.0
80°-90°	109.1	1.6
90°-100°	31.8	0.5
100°-110°	18.4	0.3
110°-120°	11.3	0.2
120°-130°	10.9	0.2
130°-140°	12.8	0.2
140°-150°	10.5	0.2
150°-160°	4.5	0.1
160°-170°	0.7	0.0
170°-180°	0.1	0.0
0°-90°	6909.6	98.6
0°-180°	7010.4	100.0



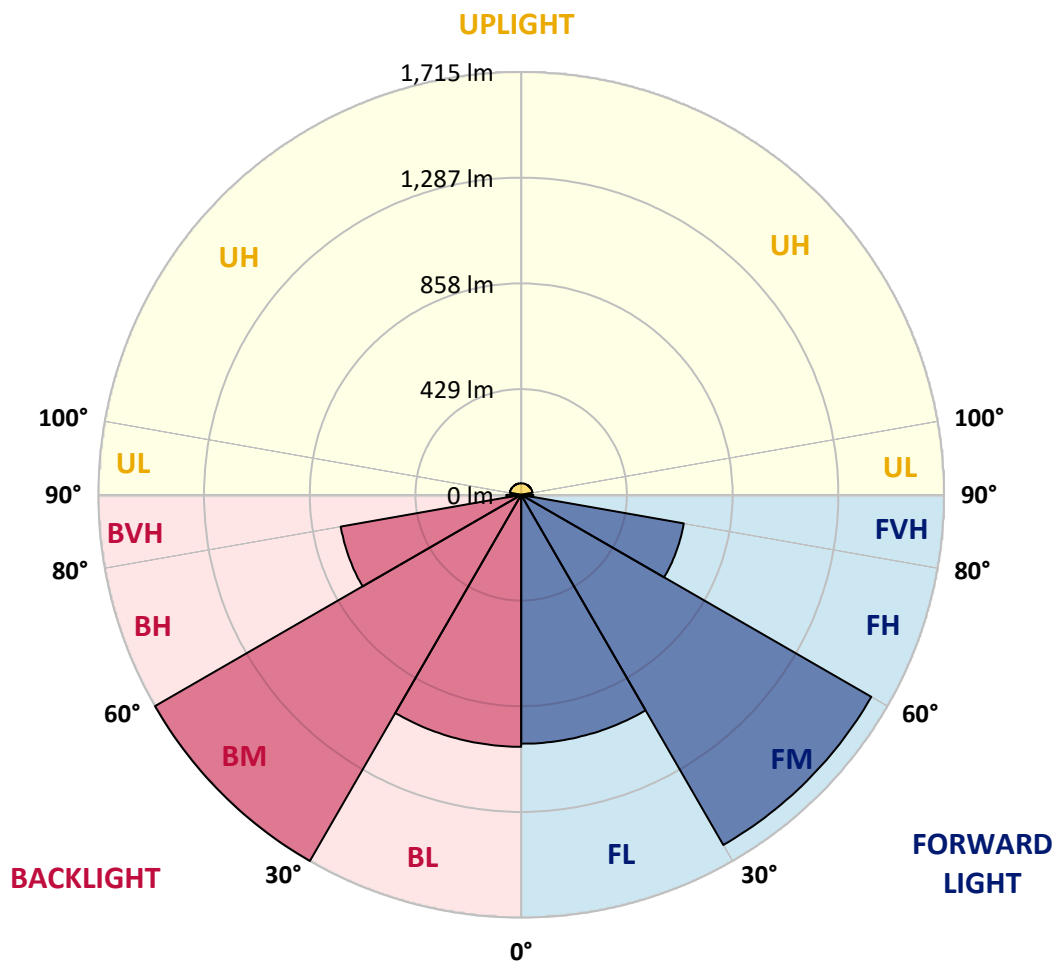
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1009.8	14.4			
FM	(30°-60°)	1640.2	23.4			
FH	(60°-80°)	669.7	9.6			G1/1800
FVH	(80°-90°)	48.9	0.7			G1/100
BL	(0°-30°)	1022.3	14.6	B3/2500		
BM	(30°-60°)	1715.4	24.5	B2/2500		
BH	(60°-80°)	743.1	10.6	B2/1000		G1/1800
BVH	(80°-90°)	60.2	0.9			G1/100
UL	(90°-100°)	31.8	0.5		U2/50	
UH	(100°-180°)	46.9	0.7		U2/50	

BUG Rating: B3-U3-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2622	2622	2622	2622	2622	2622	2622	2622	2622	2622	2622
2.5°	2629	2585	2630	2602	2630	2617	2602	2613	2594	2615	2639
5°	2614	2570	2613	2585	2614	2600	2584	2596	2577	2595	2619
7.5°	2589	2546	2590	2564	2592	2581	2561	2577	2557	2574	2598
10°	2561	2518	2563	2537	2566	2558	2537	2551	2531	2548	2572
12.5°	2532	2492	2535	2512	2538	2525	2506	2522	2503	2517	2545
15°	2501	2466	2504	2482	2505	2495	2473	2492	2475	2488	2514
17.5°	2463	2429	2468	2449	2475	2463	2440	2459	2441	2451	2481
20°	2424	2391	2429	2413	2436	2424	2396	2416	2404	2414	2440
22.5°	2375	2345	2382	2371	2396	2384	2354	2373	2358	2369	2396
25°	2316	2290	2333	2325	2351	2339	2305	2323	2309	2319	2348
27.5°	2255	2232	2274	2272	2294	2285	2255	2268	2258	2262	2288
30°	2191	2171	2218	2215	2240	2230	2198	2217	2206	2212	2239
32.5°	2124	2107	2150	2153	2182	2180	2151	2171	2161	2170	2197
35°	2053	2040	2071	2072	2098	2101	2083	2102	2101	2118	2151
37.5°	1810	1789	1782	1819	1853	1878	1892	1918	1946	1988	2014
40°	1518	1529	1549	1538	1582	1609	1625	1649	1670	1704	1738
42.5°	1340	1340	1357	1347	1378	1383	1366	1392	1429	1476	1515
45°	1201	1201	1200	1206	1218	1202	1169	1178	1186	1225	1255
47.5°	1126	1113	1099	1120	1125	1113	1074	1083	1119	1176	1182
50°	1184	1185	1199	1193	1199	1176	1135	1132	1144	1204	1215
52.5°	1198	1197	1209	1209	1229	1230	1201	1207	1237	1308	1336
55°	1169	1166	1172	1171	1185	1192	1163	1170	1205	1270	1302
57.5°	1126	1126	1121	1120	1124	1124	1093	1102	1147	1214	1235
60°	1066	1066	1058	1059	1057	1060	1032	1038	1086	1147	1174
62.5°	976	980	975	966	977	975	958	956	1001	1058	1078
65°	900	907	903	879	875	880	871	881	925	969	989
67.5°	810	814	815	796	787	789	771	787	823	861	873
70°	682	682	692	693	690	689	674	682	709	729	746
72.5°	539	549	561	559	562	558	557	561	579	602	607
75°	413	420	430	426	425	426	422	435	448	456	469
77.5°	287	288	290	296	299	294	291	301	303	316	323
80°	172	171	171	175	173	177	180	185	197	201	203
82.5°	107	108	109	112	111	113	114	117	123	125	123
85°	77	76	76	78	77	78	78	79	82	84	85
87.5°	53	54	54	54	54	55	55	56	58	58	59
90°	37	38	38	39	39	40	39	40	41	42	43
92.5°	30	31	31	31	32	32	32	32	33	33	34
95°	26	26	26	26	27	27	26	27	27	28	27
97.5°	23	23	24	24	24	24	24	24	24	25	24
100°	21	21	21	21	22	22	21	22	22	22	22
102.5°	18	19	19	19	19	19	19	19	20	20	20
105°	17	18	18	18	18	18	18	18	18	18	18
107.5°	15	16	16	16	16	16	16	16	17	17	17
110°	13	13	14	14	15	15	14	13	14	14	14



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	13	13	14	13	13	14	13	12	13	12	12
115°	12	13	13	12	12	13	12	12	12	11	11
117.5°	11	12	12	12	13	14	13	11	11	11	10
120°	12	12	12	12	14	14	13	11	11	11	11
122.5°	14	15	14	13	15	15	15	12	11	11	11
125°	18	19	17	15	15	17	17	15	12	12	11
127.5°	22	23	21	18	15	16	18	16	14	12	11
130°	24	26	26	22	17	17	19	19	16	13	13
132.5°	26	26	28	23	19	16	19	21	19	15	14
135°	25	25	27	25	20	17	19	22	21	18	16
137.5°	22	23	26	25	20	17	19	22	22	20	17
140°	19	21	24	23	19	18	18	22	22	22	18
142.5°	16	17	21	21	20	18	18	20	20	20	19
145°	13	14	16	18	20	17	16	17	19	18	19
147.5°	12	12	14	16	18	16	15	16	17	16	18
150°	10	10	11	14	15	14	13	14	15	15	16
152.5°	8	8	9	11	12	12	11	11	12	13	13
155°	6	6	7	8	9	9	9	9	9	10	11
157.5°	4	4	5	5	6	6	7	7	7	7	8
160°	3	3	3	4	4	4	4	4	5	5	5
162.5°	2	2	2	2	2	2	2	2	3	3	3
165°	2	1	2	1	1	2	2	2	2	2	2
167.5°	2	2	2	2	2	1	2	1	1	1	1
170°	1	1	1	1	1	1	2	1	1	1	1
172.5°	1	1	1	1	1	1	1	1	1	1	2
175°	1	1	1	1	1	1	1	1	1	1	1
177.5°	1	1	1	1	1	1	1	1	1	1	1
180°	1	1	1	1	1	1	1	1	1	1	1



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	117°	125°	135°	145°	155°	165°	175°	180°
0°	2622	2622	2622	2622	2622	2622	2622	2622	2622	2622	2622
2.5°	2615	2601	2638	2632	2614	2624	2608	2613	2625	2611	2595
5°	2598	2584	2620	2614	2595	2607	2593	2601	2613	2601	2584
7.5°	2577	2565	2601	2596	2576	2589	2576	2583	2595	2583	2568
10°	2554	2545	2580	2571	2554	2566	2553	2559	2569	2557	2543
12.5°	2527	2517	2549	2543	2523	2539	2522	2527	2536	2527	2514
15°	2499	2491	2521	2516	2496	2513	2495	2500	2508	2495	2480
17.5°	2465	2462	2492	2487	2467	2485	2471	2473	2478	2465	2452
20°	2430	2426	2458	2453	2434	2453	2442	2446	2452	2438	2425
22.5°	2388	2389	2419	2415	2396	2418	2408	2415	2420	2411	2396
25°	2340	2342	2370	2368	2354	2374	2365	2375	2385	2376	2365
27.5°	2285	2292	2322	2314	2298	2326	2317	2330	2345	2337	2326
30°	2234	2243	2270	2265	2247	2271	2264	2279	2294	2286	2276
32.5°	2190	2195	2213	2214	2197	2216	2213	2227	2233	2223	2216
35°	2143	2135	2155	2150	2132	2144	2142	2148	2149	2137	2134
37.5°	2024	2024	2038	2028	2009	2013	2020	2032	2037	2050	2060
40°	1739	1738	1763	1780	1762	1780	1745	1737	1758	1761	1751
42.5°	1519	1501	1490	1501	1480	1495	1488	1498	1483	1469	1448
45°	1270	1244	1245	1257	1283	1326	1306	1300	1308	1316	1333
47.5°	1177	1131	1121	1124	1123	1158	1165	1172	1176	1158	1150
50°	1202	1143	1105	1105	1114	1142	1135	1120	1105	1081	1076
52.5°	1320	1256	1225	1223	1235	1264	1257	1249	1238	1232	1234
55°	1292	1244	1221	1227	1240	1270	1260	1252	1237	1222	1220
57.5°	1230	1182	1165	1167	1175	1209	1214	1216	1215	1209	1208
60°	1170	1125	1105	1110	1114	1140	1144	1150	1146	1141	1144
62.5°	1069	1037	1022	1024	1028	1060	1069	1076	1077	1076	1074
65°	976	955	940	944	946	972	973	974	974	972	972
67.5°	866	853	839	848	856	871	874	897	903	904	908
70°	741	736	740	745	758	783	788	805	810	821	828
72.5°	601	599	615	621	631	647	657	665	666	668	671
75°	464	466	481	485	494	508	520	529	531	541	534
77.5°	332	331	342	354	361	375	391	394	397	408	397
80°	210	218	223	226	230	240	250	253	257	258	257
82.5°	124	131	133	135	136	140	146	149	154	152	154
85°	86	90	89	90	91	96	97	101	102	104	105
87.5°	60	62	62	63	64	66	66	67	68	71	71
90°	43	45	44	45	46	46	45	47	46	46	47
92.5°	34	35	35	35	35	35	34	34	34	34	34
95°	28	29	29	29	29	29	28	28	27	27	27
97.5°	24	25	25	25	25	25	24	23	22	22	22
100°	22	23	22	23	22	22	21	20	19	19	18
102.5°	19	20	20	20	20	20	19	17	15	15	15
105°	18	18	18	18	17	18	16	15	13	13	13
107.5°	17	18	18	18	17	17	16	14	12	12	12
110°	14	14	15	15	15	15	13	12	10	11	11



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	117°	125°	135°	145°	155°	165°	175°	180°
112.5°	12	12	12	13	12	12	12	10	8	8	8
115°	11	11	11	11	11	11	10	9	7	6	6
117.5°	10	10	10	10	10	10	9	8	7	5	6
120°	10	10	10	10	10	10	9	8	6	5	5
122.5°	10	10	10	11	11	11	9	8	6	5	5
125°	10	10	10	10	11	11	9	8	7	5	5
127.5°	11	9	10	10	11	11	9	8	6	5	4
130°	12	10	10	11	11	11	9	8	6	4	4
132.5°	14	11	12	13	13	13	10	9	7	5	4
135°	16	13	14	14	15	14	12	11	8	5	4
137.5°	18	16	16	17	16	16	15	14	9	5	4
140°	20	18	19	18	18	18	17	15	10	5	4
142.5°	20	20	19	19	20	19	18	17	11	5	4
145°	19	18	19	19	20	19	20	17	12	5	4
147.5°	18	18	19	18	19	19	20	17	11	5	4
150°	17	16	17	18	18	19	18	15	10	5	4
152.5°	14	14	15	15	16	17	16	12	8	4	3
155°	11	12	12	13	13	14	13	10	6	3	3
157.5°	8	9	9	10	10	10	9	7	4	2	2
160°	6	6	7	7	7	7	6	5	3	2	2
162.5°	3	3	4	4	4	4	3	3	2	2	2
165°	2	2	2	2	2	2	2	2	2	2	2
167.5°	1	1	2	2	1	2	2	2	2	2	2
170°	1	1	1	1	1	1	1	2	1	2	2
172.5°	1	1	1	2	1	1	1	1	2	1	2
175°	1	1	1	1	1	1	1	1	1	1	1
177.5°	1	1	1	1	1	1	1	1	1	1	1
180°	1	1	1	1	1	1	1	1	1	1	1

(END OF REPORT)