

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: INVUE

Report Number: P140170

Luminaire Tested: **ENC-E02-LED-E1-SLR**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P140170
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33647)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENC-E02-LED-E1-SLR
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - 90° SPILL LIGHT ELIMINATOR RIGHT
Light Source: (42) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4869.2 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

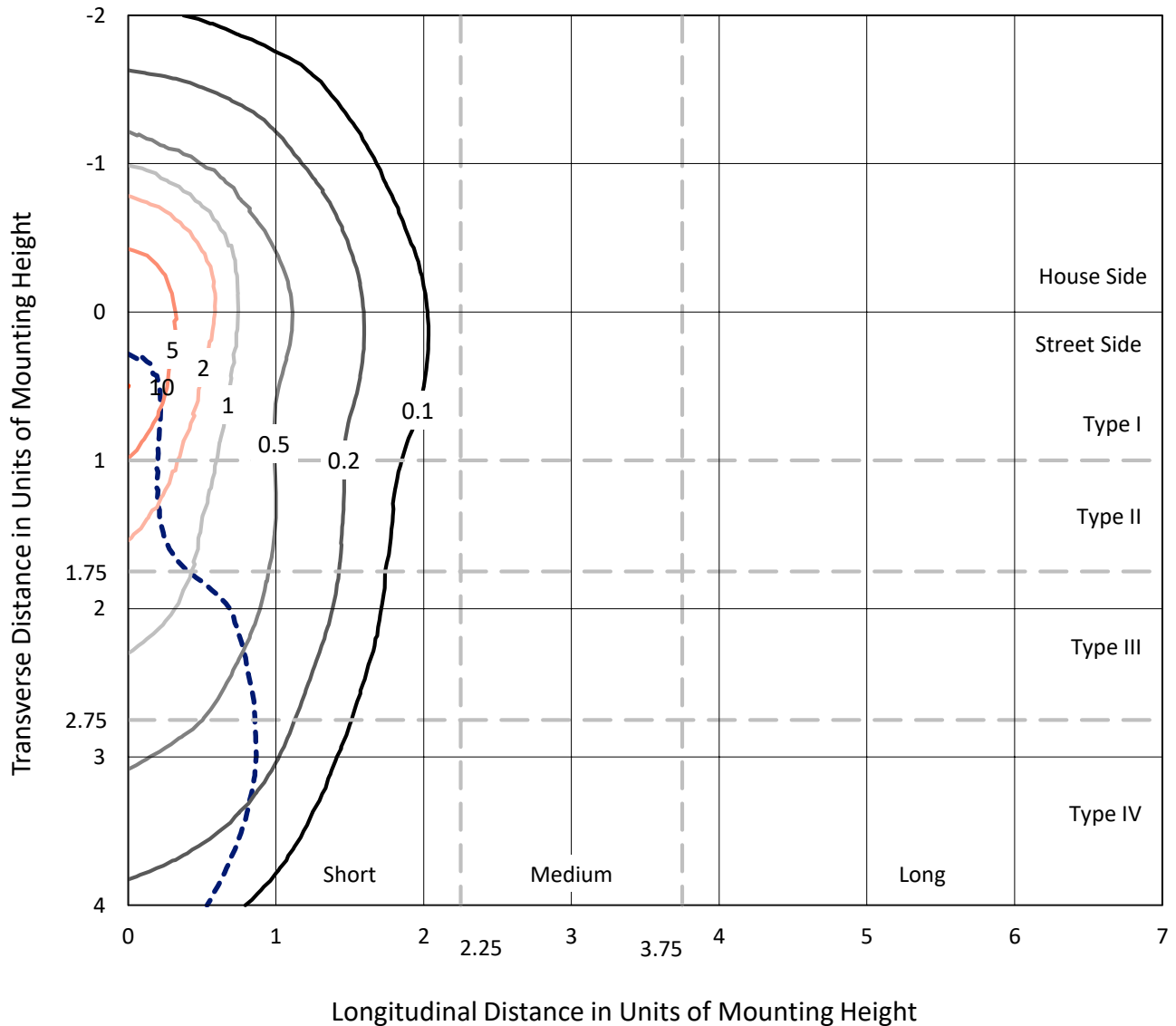
Input Watts (W): 46.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

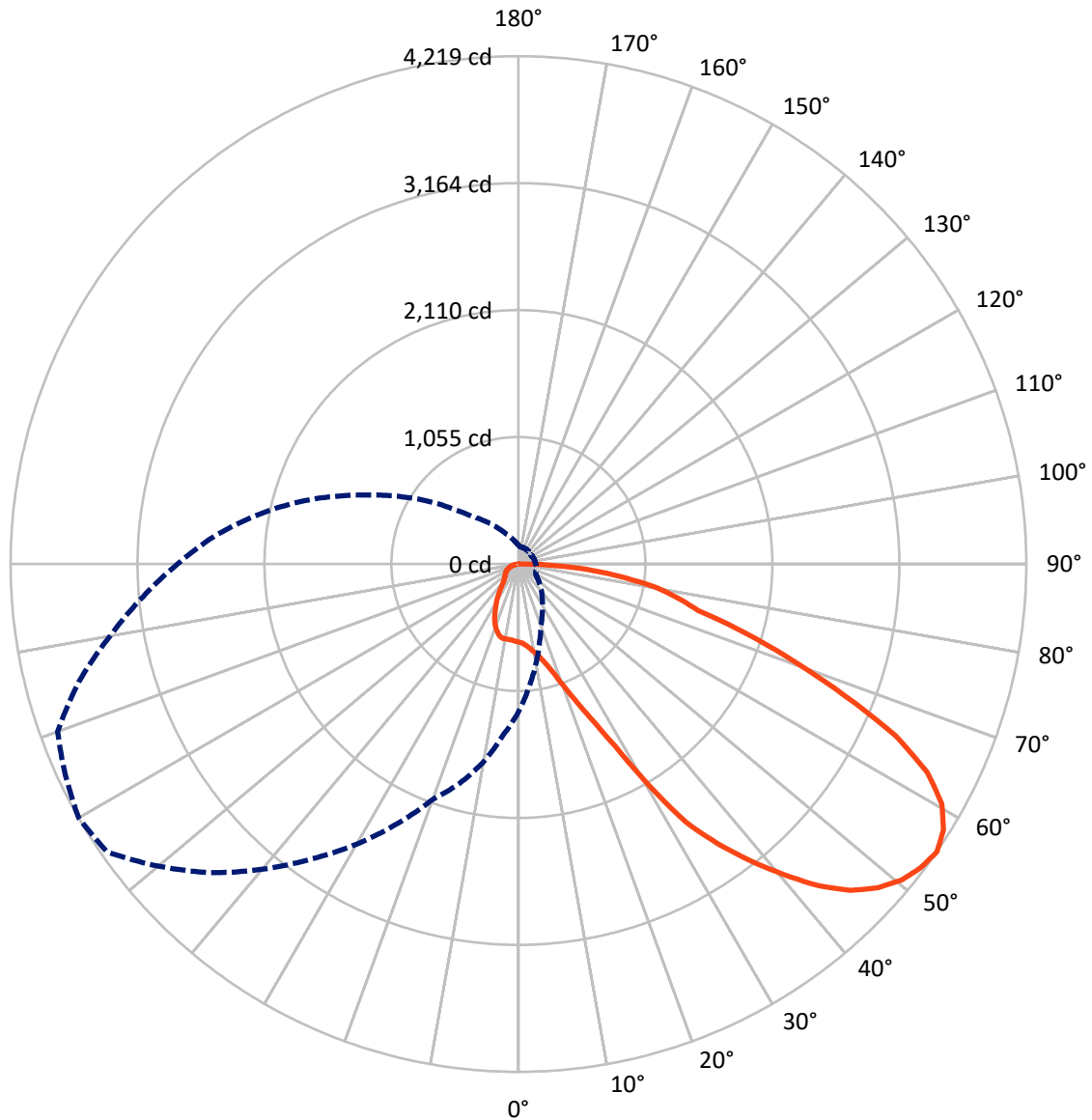
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 300-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1217.0	0.0	1217.0
	% Fixture	25.0	0.0	25.0
Street Side	Lumens	3652.1	0.0	3652.1
	% Fixture	75.0	0.0	75.0
Total	Lumens	4869.2	0.0	4869.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.9	1.3
10°-20°	210.1	4.3
20°-30°	407.8	8.4
30°-40°	640.8	13.2
40°-50°	856.6	17.6
50°-60°	1005.0	20.6
60°-70°	953.5	19.6
70°-80°	575.5	11.8
80°-90°	155.9	3.2
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°-90°	4869.2	100.0
0°-180°	4869.2	100.0



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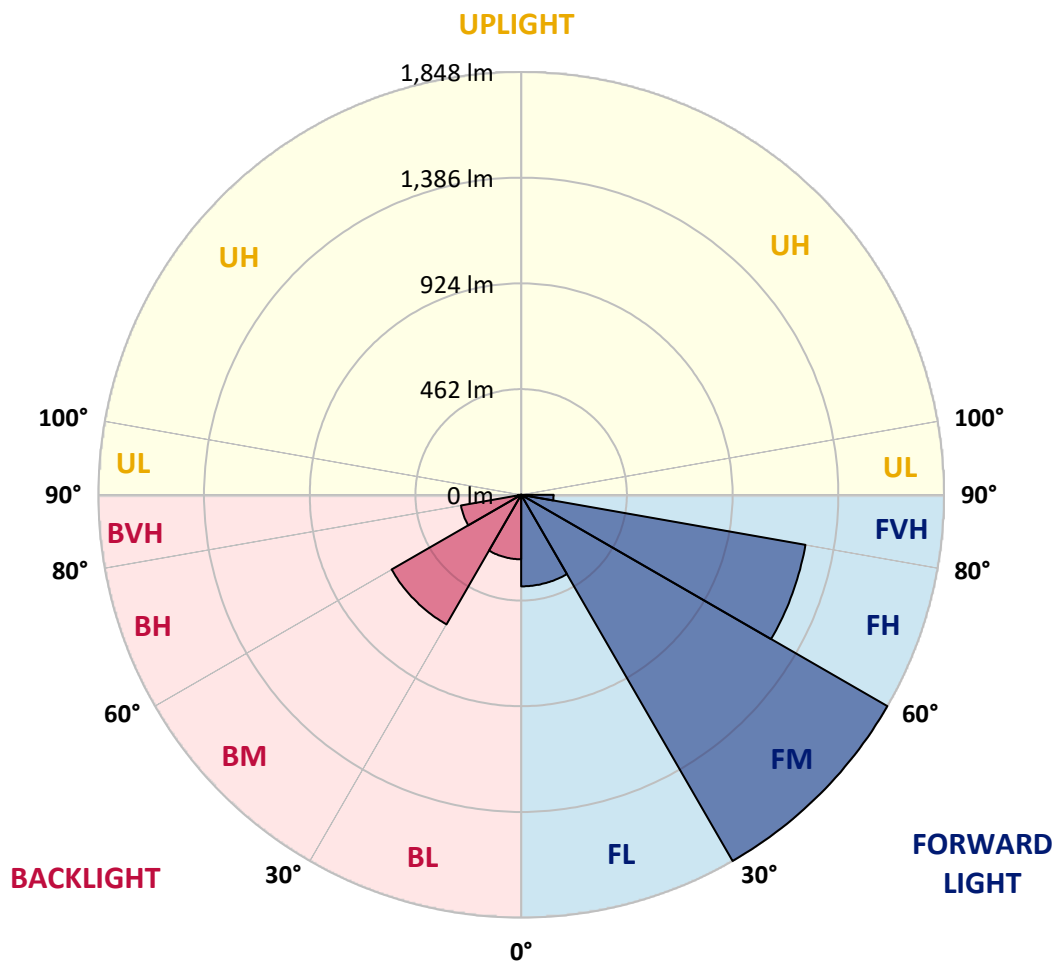
CATALOG NUMBER: ENC-E02-LED-E1-SLR

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	400.2	8.2			
FM	(30°-60°)	1848.4	38.0			
FH	(60°-80°)	1261.8	25.9			G1/1800
FVH	(80°-90°)	141.8	2.9			G2/225
BL	(0°-30°)	281.6	5.8	B1/500		
BM	(30°-60°)	654.0	13.4	B1/1000		
BH	(60°-80°)	267.2	5.5	B1/500		G1/500
BVH	(80°-90°)	14.1	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	649	649	649	649	649	649	649	649	649	649	649
2.5°	663	668	662	663	661	659	660	659	657	657	655
5°	679	680	676	675	673	670	671	668	666	664	660
7.5°	698	697	692	689	688	683	682	678	675	672	667
10°	727	719	713	708	706	700	695	693	688	681	677
12.5°	769	764	752	742	736	728	721	716	708	698	693
15°	844	828	814	799	787	774	757	744	730	713	700
17.5°	941	921	899	875	850	822	789	764	736	707	687
20°	1060	1023	992	946	900	856	804	760	720	682	653
22.5°	1194	1138	1075	1005	931	863	790	730	672	625	592
25°	1347	1259	1163	1057	951	850	760	685	623	567	530
27.5°	1441	1321	1206	1080	959	842	732	645	574	514	471
30°	1461	1340	1205	1068	943	815	695	598	519	456	413
32.5°	1475	1335	1185	1033	897	762	640	544	460	398	348
35°	1479	1316	1147	978	835	697	575	474	401	340	295
37.5°	1473	1285	1096	921	768	624	504	416	354	295	255
40°	1449	1246	1050	866	700	551	444	368	315	270	239
42.5°	1418	1201	999	802	634	493	396	335	290	258	232
45°	1379	1154	946	745	578	449	368	317	282	254	230
47.5°	1331	1104	895	702	540	427	362	317	282	252	226
50°	1286	1059	856	675	523	428	368	321	281	248	219
52.5°	1251	1032	840	665	525	438	380	327	284	248	217
55°	1229	1021	838	674	546	465	399	345	298	256	220
57.5°	1232	1033	862	711	594	512	437	377	318	266	221
60°	1263	1073	920	798	674	575	485	405	327	263	214
62.5°	1341	1167	1042	917	773	637	514	410	317	248	197
65°	1489	1336	1216	1060	855	663	511	395	298	224	174
67.5°	1634	1472	1303	1068	835	644	478	358	264	192	154
70°	1774	1564	1347	1058	777	554	399	299	210	160	132
72.5°	1682	1440	1218	933	668	455	318	217	161	132	114
75°	1284	1116	923	716	493	321	212	154	124	104	93
77.5°	924	799	641	470	308	203	144	110	92	78	72
80°	536	460	359	259	176	127	96	78	67	57	55
82.5°	335	268	190	128	90	70	56	48	40	35	30
85°	145	104	59	33	25	19	15	13	11	10	8
87.5°	5	5	5	5	5	5	6	6	6	6	5
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	649	649	649	649	649	649	649	649	649	649	649
2.5°	655	653	652	652	650	650	648	649	648	646	645
5°	659	656	654	652	649	648	646	646	643	640	639
7.5°	664	660	657	653	649	647	643	641	638	635	634
10°	674	667	662	657	650	646	640	637	634	630	628
12.5°	685	676	669	657	650	643	637	631	625	621	620
15°	685	674	659	648	638	628	622	616	609	606	605
17.5°	668	649	635	623	614	606	600	597	591	585	583
20°	629	607	591	578	568	560	558	555	552	552	553
22.5°	565	541	527	513	502	498	499	502	503	502	509
25°	501	478	459	446	433	436	432	439	442	443	451
27.5°	439	414	394	383	377	373	370	379	381	388	395
30°	373	350	327	318	313	310	311	319	324	334	340
32.5°	312	284	267	255	250	249	250	256	262	275	284
35°	260	233	219	212	205	202	205	207	209	220	231
37.5°	230	211	200	193	188	185	185	184	185	187	192
40°	217	203	193	186	182	180	179	178	177	177	177
42.5°	212	196	186	180	178	178	178	177	175	173	172
45°	208	191	180	175	175	175	176	175	173	170	167
47.5°	201	184	174	170	170	170	171	170	168	166	163
50°	193	175	165	162	161	161	160	159	158	156	153
52.5°	188	169	160	158	156	155	153	152	150	149	146
55°	187	165	157	155	153	150	146	144	140	139	137
57.5°	184	161	152	147	142	139	135	133	131	129	127
60°	174	149	138	135	132	131	129	127	124	121	117
62.5°	155	134	127	126	125	123	121	118	116	112	108
65°	140	126	122	120	119	116	114	112	109	106	102
67.5°	127	117	115	112	111	109	106	104	101	98	94
70°	115	107	106	104	102	101	97	94	93	89	86
72.5°	102	97	95	93	91	90	88	86	84	80	76
75°	85	83	82	80	79	77	74	71	70	67	64
77.5°	68	66	66	64	61	58	55	51	51	51	49
80°	48	46	43	42	40	38	35	33	31	31	31
82.5°	28	27	25	22	20	19	16	14	13	11	11
85°	6	6	4	4	3	3	3	2	2	1	1
87.5°	5	5	5	4	4	4	3	3	3	2	2
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	649	649	649	649	649	649	649	649	649	649	649
2.5°	645	644	642	638	637	636	637	637	636	637	638
5°	639	638	635	633	631	631	637	637	634	635	639
7.5°	634	634	632	631	632	635	640	644	643	649	651
10°	628	629	630	634	640	645	653	660	662	667	670
12.5°	622	626	631	639	647	655	664	672	673	678	682
15°	607	613	620	629	641	650	663	669	671	674	679
17.5°	584	587	592	602	615	627	642	652	658	662	664
20°	553	559	562	571	578	587	607	620	632	638	644
22.5°	510	517	524	533	537	543	562	582	600	612	619
25°	456	464	474	485	490	496	518	538	560	581	591
27.5°	402	412	422	435	443	450	469	488	511	531	541
30°	350	364	373	388	395	402	419	440	456	479	492
32.5°	296	306	323	340	348	355	371	389	403	426	445
35°	247	256	274	291	296	307	323	339	352	373	391
37.5°	201	216	230	243	254	262	277	291	298	318	337
40°	179	186	196	208	215	223	234	246	254	268	284
42.5°	171	171	174	180	189	193	203	209	220	226	240
45°	165	163	164	164	167	170	178	184	191	196	205
47.5°	160	156	155	153	152	154	160	165	168	172	175
50°	149	146	143	141	140	142	147	151	152	154	156
52.5°	143	139	136	133	133	135	139	142	143	144	146
55°	135	133	131	128	127	130	133	136	138	138	140
57.5°	125	123	125	124	123	125	129	132	133	133	134
60°	115	114	114	116	118	121	124	128	127	125	126
62.5°	106	105	106	109	112	115	119	122	119	117	117
65°	100	99	100	101	102	105	110	111	109	109	109
67.5°	92	91	90	91	92	93	97	98	98	98	98
70°	82	81	80	80	80	81	82	84	86	88	89
72.5°	71	69	69	69	67	68	69	73	75	77	79
75°	60	58	58	56	57	58	58	60	62	65	67
77.5°	47	47	47	46	46	47	48	48	50	53	56
80°	30	30	32	33	34	35	37	38	39	42	43
82.5°	11	12	13	13	16	20	21	24	26	29	29
85°	1	1	1	1	1	2	3	4	6	9	11
87.5°	2	1	1	1	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	649	649	649	649	649	649	649	649	649	649	649
2.5°	639	642	641	640	641	643	642	643	644	646	645
5°	640	643	644	644	646	649	649	650	651	653	653
7.5°	654	661	661	662	665	668	669	670	669	669	669
10°	675	683	684	689	693	692	692	693	691	689	686
12.5°	686	693	695	700	706	707	710	712	710	705	700
15°	683	689	693	699	706	710	716	718	717	711	705
17.5°	670	677	682	690	698	704	710	713	713	708	704
20°	649	657	664	673	683	690	697	699	699	697	700
22.5°	627	636	644	653	666	673	681	687	690	694	707
25°	599	603	613	623	641	653	670	686	702	720	746
27.5°	550	557	569	583	601	623	654	685	714	741	773
30°	509	522	535	551	570	591	627	667	702	734	769
32.5°	465	481	498	519	537	556	586	630	672	708	745
35°	414	431	448	470	489	513	540	583	631	672	716
37.5°	359	374	393	413	435	463	492	532	582	626	676
40°	307	323	342	364	386	416	449	487	533	580	633
42.5°	258	279	299	321	344	372	407	448	494	544	600
45°	217	233	254	272	297	324	360	406	459	512	571
47.5°	181	191	209	231	254	282	312	358	412	470	536
50°	159	164	177	197	219	247	273	313	367	424	492
52.5°	148	150	157	172	193	218	246	280	328	384	449
55°	142	143	145	156	174	197	225	252	295	348	411
57.5°	135	136	137	143	156	176	200	222	261	308	368
60°	128	130	132	134	143	156	174	193	220	261	310
62.5°	119	121	124	126	129	137	148	160	174	203	243
65°	111	113	114	115	117	119	123	126	133	150	178
67.5°	100	102	102	103	104	104	106	107	109	114	126
70°	91	92	93	94	94	94	93	94	93	93	98
72.5°	80	81	82	83	84	85	86	86	85	83	83
75°	68	68	70	71	72	75	77	75	75	74	74
77.5°	57	59	60	60	62	65	67	66	63	63	64
80°	44	45	46	47	48	51	54	55	53	54	54
82.5°	29	30	32	33	34	37	40	43	42	44	42
85°	13	15	16	16	19	22	26	29	33	34	31
87.5°	0	1	1	1	4	7	13	20	27	21	16
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	649	649	649	649	649	649	649	649	649	649	649
2.5°	645	646	647	648	648	650	651	653	654	654	654
5°	654	654	656	657	658	661	662	665	668	669	672
7.5°	667	667	667	670	671	673	675	680	684	686	689
10°	684	681	680	681	681	683	688	691	696	705	711
12.5°	694	689	689	686	688	690	695	702	710	723	735
15°	700	695	695	695	700	704	713	724	739	757	775
17.5°	702	702	706	709	720	728	744	760	779	804	831
20°	707	715	726	734	746	759	775	799	831	863	899
22.5°	724	744	758	776	796	812	831	865	900	940	985
25°	774	802	828	848	878	905	932	981	1026	1072	1133
27.5°	813	850	889	921	968	1007	1044	1103	1153	1229	1294
30°	816	862	915	967	1026	1082	1151	1209	1283	1374	1459
32.5°	798	848	909	972	1046	1122	1204	1297	1382	1484	1595
35°	771	828	895	966	1052	1143	1241	1357	1464	1591	1729
37.5°	738	802	878	961	1057	1164	1287	1425	1563	1729	1901
40°	700	766	852	947	1063	1196	1347	1509	1690	1888	2073
42.5°	665	733	823	930	1070	1240	1430	1631	1840	2042	2253
45°	640	712	804	925	1088	1291	1512	1745	1978	2199	2429
47.5°	613	690	793	928	1107	1329	1573	1830	2077	2331	2572
50°	570	661	783	936	1124	1353	1612	1885	2155	2429	2696
52.5°	524	615	757	933	1130	1360	1632	1921	2209	2498	2782
55°	482	569	712	905	1117	1353	1638	1942	2244	2549	2831
57.5°	437	525	652	848	1071	1323	1617	1932	2256	2582	2859
60°	378	466	585	759	990	1254	1549	1871	2203	2551	2827
62.5°	302	385	493	648	880	1137	1425	1745	2046	2426	2707
65°	217	287	377	515	715	977	1270	1550	1823	2203	2515
67.5°	147	195	260	367	535	764	1038	1296	1568	1923	2287
70°	107	133	169	238	354	530	747	985	1211	1536	1926
72.5°	87	100	120	152	216	327	492	676	861	1081	1453
75°	77	84	95	111	133	190	288	421	570	709	1020
77.5°	68	72	77	84	95	117	170	243	336	447	634
80°	54	58	62	67	74	83	105	140	195	246	362
82.5°	42	46	50	56	58	59	68	80	103	139	207
85°	31	34	36	38	38	39	41	44	59	102	151
87.5°	14	14	14	12	13	10	11	12	19	22	35
90°	0	0	0	0	0	0	0	0	0	0	0



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°	
0°	649	649	649	649	649	649	649	649	649	649	649	0°
2.5°	657	657	656	656	659	658	660	660	659	659	662	2.5°
5°	674	677	675	678	680	681	683	681	685	680	681	5°
7.5°	696	698	700	704	709	710	713	712	715	712	708	7.5°
10°	719	726	733	736	746	748	748	753	758	752	745	10°
12.5°	746	759	773	780	789	796	793	803	808	804	799	12.5°
15°	793	813	829	840	848	862	860	879	886	883	884	15°
17.5°	855	882	909	928	936	956	959	989	1008	1005	1000	17.5°
20°	934	973	1011	1035	1038	1090	1102	1128	1149	1157	1156	20°
22.5°	1034	1080	1122	1168	1211	1249	1276	1323	1342	1360	1355	22.5°
25°	1172	1236	1310	1350	1408	1443	1503	1563	1582	1599	1621	25°
27.5°	1369	1456	1508	1597	1660	1711	1806	1887	1933	1919	1912	27.5°
30°	1557	1664	1790	1913	2001	2129	2199	2265	2295	2251	2195	30°
32.5°	1716	1873	2058	2245	2409	2559	2603	2635	2578	2518	2354	32.5°
35°	1883	2082	2296	2536	2708	2855	2946	2980	2858	2680	2458	35°
37.5°	2083	2289	2520	2783	2978	3127	3167	3182	3018	2788	2572	37.5°
40°	2265	2500	2783	3026	3265	3390	3413	3405	3187	2915	2713	40°
42.5°	2466	2716	3035	3316	3526	3654	3633	3598	3350	3075	2852	42.5°
45°	2661	2922	3271	3579	3774	3868	3830	3743	3504	3198	2961	45°
47.5°	2832	3094	3466	3787	3940	4019	3978	3868	3610	3281	3021	47.5°
50°	2969	3261	3624	3932	4066	4126	4102	3943	3672	3332	3048	50°
52.5°	3076	3385	3744	4032	4129	4188	4174	3957	3680	3340	3035	52.5°
55°	3132	3444	3781	4074	4152	4219	4170	3905	3627	3310	2990	55°
57.5°	3140	3440	3750	4036	4133	4164	4092	3806	3519	3217	2926	57.5°
60°	3064	3330	3626	3925	4063	4041	3942	3634	3366	3088	2855	60°
62.5°	2894	3102	3383	3679	3867	3810	3730	3435	3162	2884	2745	62.5°
65°	2676	2812	2999	3289	3463	3447	3410	3191	2920	2655	2566	65°
67.5°	2462	2552	2650	2864	2945	2929	2934	2786	2590	2332	2334	67.5°
70°	2133	2208	2306	2439	2525	2437	2333	2174	2060	2025	2138	70°
72.5°	1659	1758	1828	1957	2032	1984	1899	1760	1631	1676	1929	72.5°
75°	1247	1304	1405	1524	1571	1542	1604	1620	1570	1540	1626	75°
77.5°	877	935	1050	1186	1287	1350	1449	1575	1587	1543	1380	77.5°
80°	589	629	700	817	980	1144	1281	1451	1433	1338	1160	80°
82.5°	361	407	467	568	686	845	974	1117	1112	1025	937	82.5°
85°	242	314	391	467	525	575	624	774	832	765	669	85°
87.5°	102	172	218	229	248	250	301	371	398	454	448	87.5°
90°	0	0	0	0	0	0	0	0	0	0	0	90°



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DISTRIBUTION (continued):

330°	335°	340°	345°	350°	355°	360°
649	649	649	649	649	649	649
663	662	662	662	663	662	663
683	681	680	680	679	679	679
709	705	705	702	701	698	698
744	740	739	731	731	724	727
795	795	795	785	783	771	769
883	875	882	865	864	848	844
1002	1002	988	980	975	952	941
1160	1161	1137	1115	1105	1079	1060
1361	1342	1312	1296	1280	1237	1194
1625	1617	1564	1506	1482	1417	1347
1884	1867	1782	1683	1622	1533	1441
2112	2000	1899	1780	1687	1576	1461
2231	2090	1943	1845	1728	1605	1475
2323	2172	2026	1899	1767	1628	1479
2440	2281	2120	1969	1808	1645	1473
2570	2388	2189	2006	1825	1639	1449
2678	2458	2224	2018	1819	1614	1418
2738	2487	2227	2005	1795	1583	1379
2766	2488	2207	1976	1763	1539	1331
2763	2463	2169	1937	1727	1493	1286
2733	2422	2125	1906	1696	1454	1251
2687	2378	2081	1885	1670	1422	1229
2635	2340	2049	1881	1655	1416	1232
2612	2344	2069	1853	1647	1429	1263
2597	2382	2110	1872	1660	1484	1341
2536	2435	2173	1940	1754	1613	1489
2463	2450	2198	1980	1861	1781	1634
2387	2434	2234	2085	2019	1987	1774
2265	2319	2133	2044	2024	2001	1682
1889	1899	1757	1708	1743	1689	1284
1358	1384	1292	1305	1419	1302	924
1006	904	846	885	994	827	536
829	671	569	622	664	488	335
638	512	421	340	324	209	145
501	370	206	116	78	5	5
0	0	0	0	0	0	0

(END OF REPORT)