

Scaled data based on original data using
LM-31-95 IESNA Approved Method for Photometric Testing of Roadway Luminaires
Using Incandescent Filament and High Intensity Discharge Lamps

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: STREETWORKS

Report Number: 767429

Luminaire Tested: **OVZ15SXX2E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: 767429
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: OVZ15SXX2E
Description: 150W HPS TYPE II ROADWAY
Light Source: 150W HPS CL ED-23.5
Ballast/Driver: -

Summary

Lumens per Lamp: 16000 (1 lamp)
Luminaire Lumens: 11956 lumens
Efficiency: 74.7%
Efficacy: 79.7 lumens/watt
Luminous Opening: Point Source (0' x 0' x 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U3 - G3

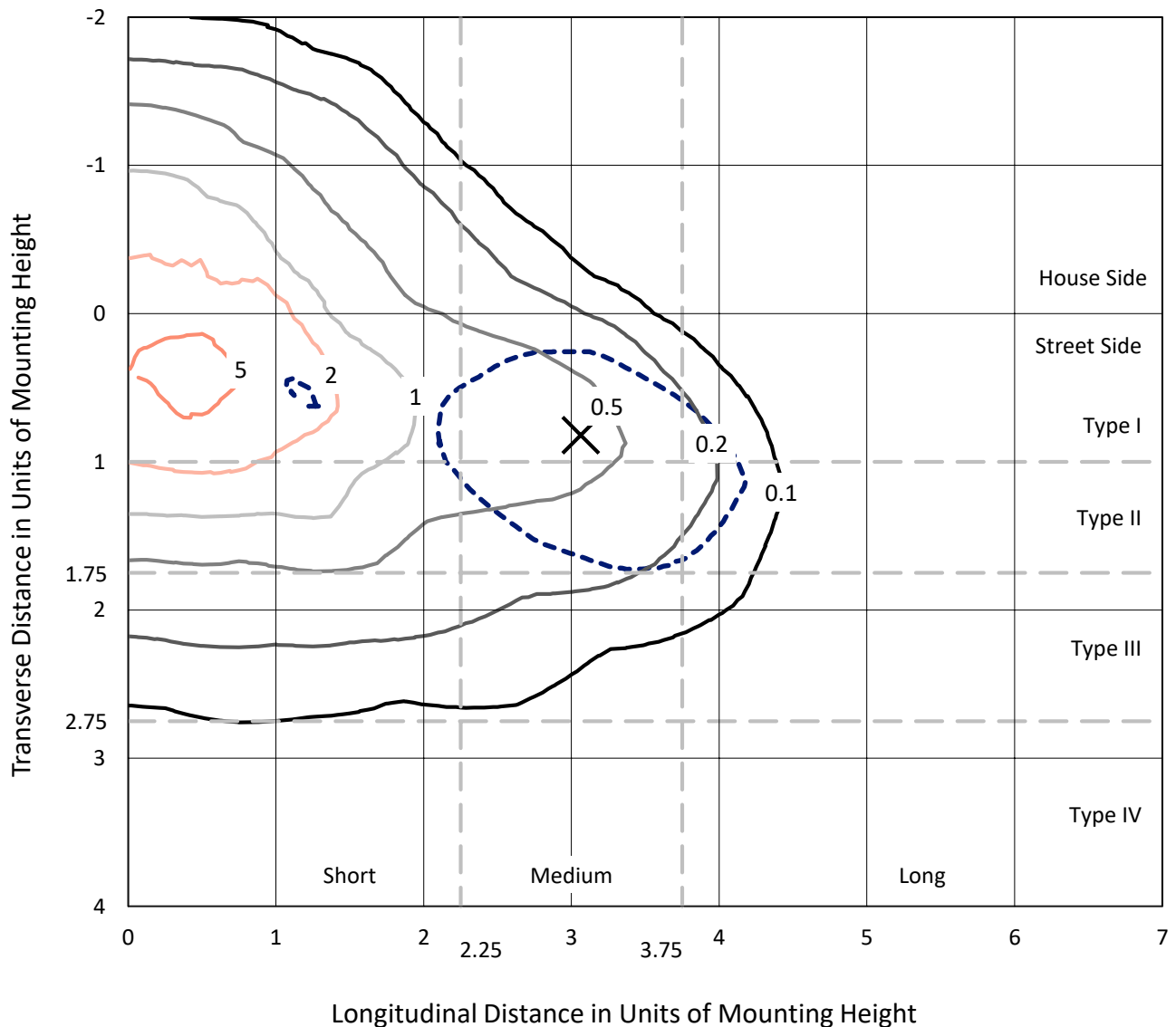
Input Watts (W): 150
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

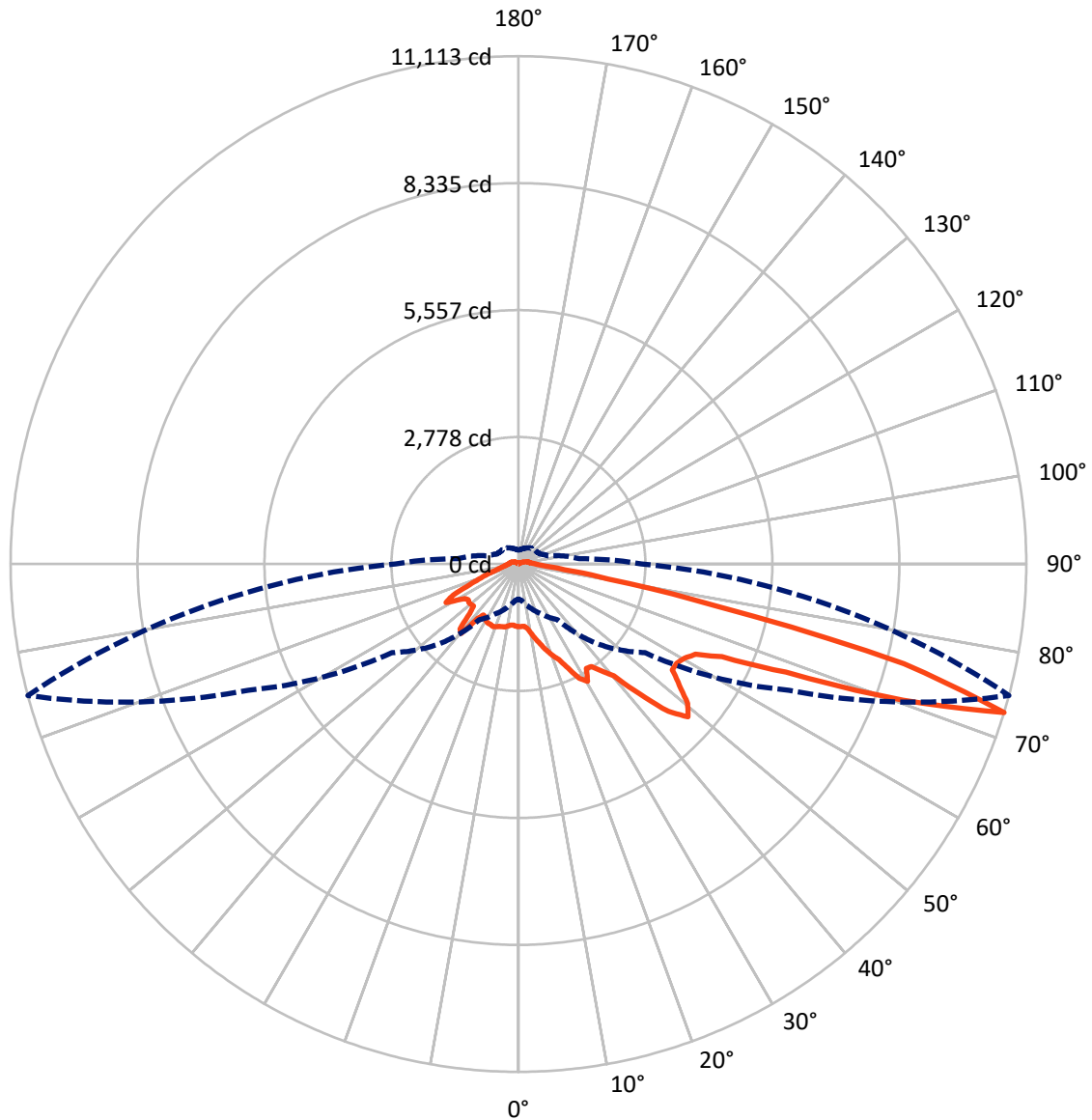
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.5 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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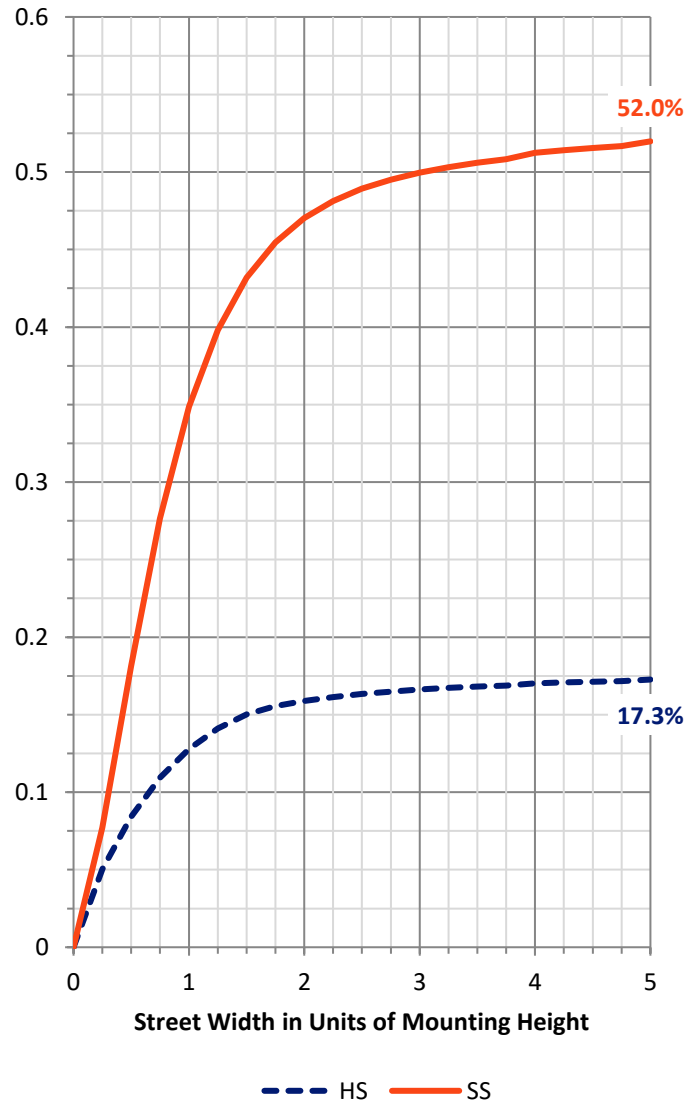
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2841.1	177.6	3018.7
	% Lamp	17.8	1.1	18.9
Street Side	Lumens	8510.5	426.7	8937.3
	% Lamp	53.2	2.7	55.9
Total	Lumens	11351.6	604.4	11956.0
	% Lamp	70.9	3.8	74.7

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	134.1	1.1	0.8
10°-20°	480.4	4.0	3.0
20°-30°	958.1	8.0	6.0
30°-40°	1539.6	12.9	9.6
40°-50°	1990.7	16.7	12.4
50°-60°	1989.6	16.6	12.4
60°-70°	1998.7	16.7	12.5
70°-80°	1714.3	14.3	10.7
80°-90°	546.0	4.6	3.4
90°-100°	286.0	2.4	1.8
100°-110°	171.6	1.4	1.1
110°-120°	93.4	0.8	0.6
120°-130°	44.7	0.4	0.3
130°-140°	16.5	0.1	0.1
140°-150°	4.1	0.0	0.0
150°-160°	0.5	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	11351.6	94.9	70.9
0°-180°	11956.0	100.0	74.7

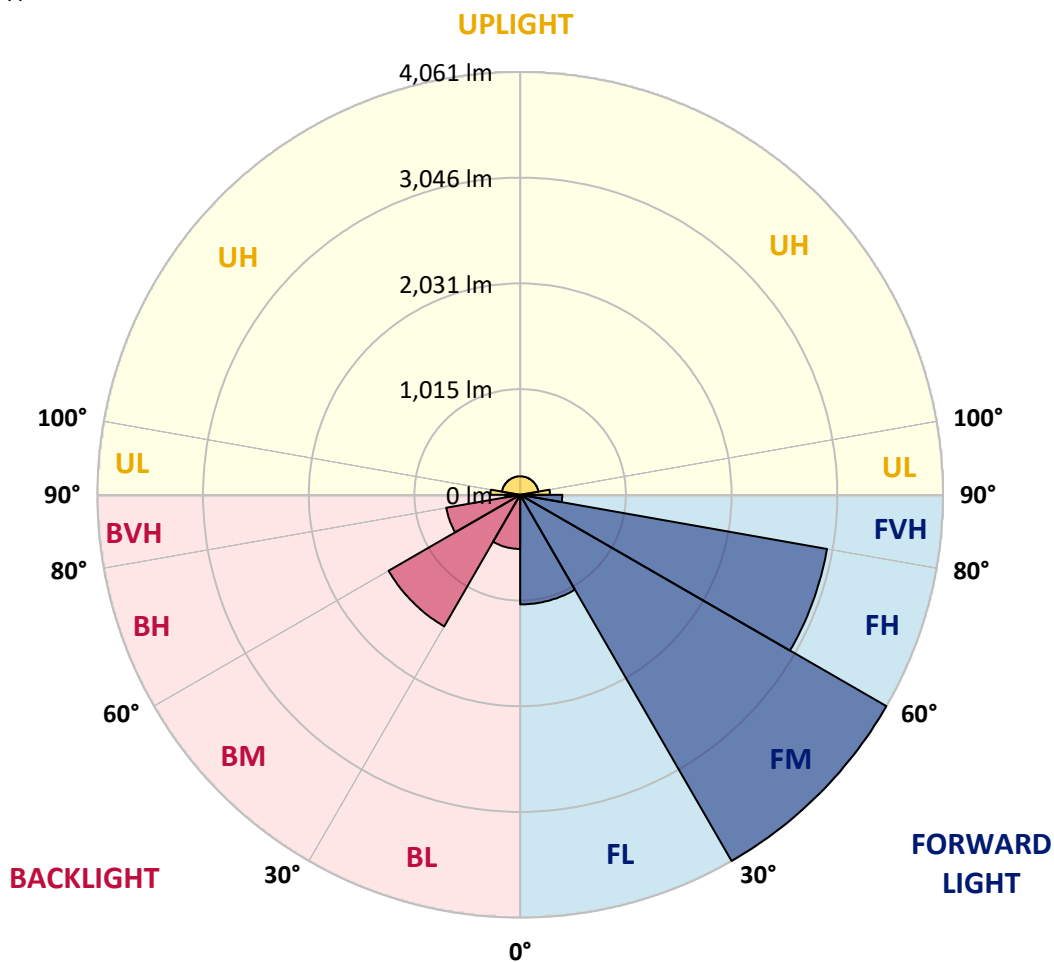


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1052.6	6.6			
FM (30°-60°)	4061.2	25.4			
FH (60°-80°)	2992.6	18.7			G2/5000
FVH (80°-90°)	404.2	2.5			G3/500
BL (0°-30°)	520.0	3.3	B2/1000		
BM (30°-60°)	1458.8	9.1	B2/2500		
BH (60°-80°)	720.4	4.5	B2/1000		G2/1000
BVH (80°-90°)	141.9	0.9			G2/225
UL (90°-100°)	286.0	1.8		U3/500	
UH (100°-180°)	177.6	1.1		U3/500	
Trapped Light	4044.0	25.3			

BUG Rating: B2-U3-G3
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1374	1374	1374	1374	1374	1374	1374	1374	1374	1374	1374
2.5°	1384	1401	1401	1379	1384	1368	1379	1368	1368	1368	1368
5°	1460	1465	1438	1438	1417	1422	1406	1390	1368	1363	1374
7.5°	1557	1547	1536	1536	1514	1492	1455	1438	1422	1401	1390
10°	1698	1693	1714	1682	1671	1628	1606	1568	1547	1482	1449
12.5°	1893	1903	1931	1925	1909	1860	1833	1752	1682	1590	1541
15°	2163	2174	2185	2250	2228	2168	2055	1952	1822	1682	1611
17.5°	2358	2369	2439	2601	2617	2515	2320	2158	1985	1801	1687
20°	2412	2439	2639	2861	2958	2893	2677	2374	2136	1914	1785
22.5°	2390	2423	2688	2974	3153	3272	3044	2563	2271	2049	1909
25°	2401	2423	2644	3017	3331	3585	3423	3023	2525	2174	2022
27.5°	2444	2477	2682	3104	3482	3780	4023	3634	2834	2282	2071
30°	2509	2536	2817	3277	3607	3958	4748	4126	2980	2277	1995
32.5°	2563	2601	2936	3472	3861	4391	5186	4104	2725	2190	1941
35°	2617	2698	3039	3623	4321	4845	4970	3823	2752	2244	2060
37.5°	2725	2801	3163	3829	4688	4867	4521	4077	2974	2439	2401
40°	2671	2769	3299	4083	4553	4613	4548	4521	3212	3028	3115
42.5°	2487	2579	3163	4039	4180	4423	4797	4505	3883	3823	3585
45°	2282	2336	2823	3661	3948	4375	4553	4618	4602	3921	3293
47.5°	2098	2120	2433	3277	3769	4337	4061	5024	4997	3423	2639
50°	2022	2022	2309	2861	3688	4061	3775	5489	4797	2871	2168
52.5°	1958	1968	2212	2704	3515	3791	3980	5646	4407	2520	1985
55°	1817	1844	2022	2520	3196	3861	4310	5483	4088	2304	1812
57.5°	1590	1601	1801	2250	2904	4088	4353	4986	4088	2185	1736
60°	1363	1352	1633	1958	2688	4321	4034	4872	4180	2282	1812
62.5°	1200	1217	1514	1720	2596	4180	3904	4970	4348	2542	2120
65°	1114	1146	1390	1606	2547	3818	3964	4937	4894	3185	2628
67.5°	995	1027	1265	1514	2239	3385	3715	5267	6316	4034	2796
70°	865	892	1152	1346	1833	2861	3482	5975	8928	5056	2915
72.5°	768	800	990	1206	1487	2482	3380	6532	11113	5413	2688
75°	703	741	887	1109	1292	2309	2909	6024	8717	3439	1747
77.5°	649	687	822	1022	1260	1763	2228	4223	4396	1866	1065
80°	627	649	811	984	1184	1195	1520	2314	1995	1054	703
82.5°	627	644	806	930	963	838	1054	1271	1022	692	497
85°	562	589	671	708	703	649	746	784	595	508	406
87.5°	497	514	568	616	552	541	562	546	427	438	351
90°	476	476	530	541	487	476	460	449	368	384	308
95°	389	400	427	400	395	373	362	362	260	276	238
105°	195	200	211	216	222	216	216	205	195	184	178
115°	130	124	135	141	151	151	141	141	76	70	135
125°	65	65	70	81	76	76	81	81	38	38	76
135°	43	38	43	43	38	32	27	27	11	11	27
145°	22	22	16	16	11	11	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
175°	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1374	1374	1374	1374	1374	1374	1374	1374	1374	1374
2.5°	1368	1363	1357	1390	1390	1228	1422	1422	1422	1417
5°	1363	1341	1341	1352	1374	1195	1384	1401	1406	1417
7.5°	1368	1346	1330	1314	1325	1125	1325	1325	1336	1341
10°	1417	1374	1341	1319	1309	1109	1319	1309	1298	1287
12.5°	1498	1406	1357	1341	1336	1114	1330	1325	1303	1287
15°	1525	1417	1341	1319	1303	1076	1271	1244	1228	1222
17.5°	1579	1428	1314	1238	1184	990	1184	1119	1082	1082
20°	1666	1455	1271	1168	1114	946	1109	1044	984	984
22.5°	1774	1482	1265	1152	1103	952	1049	984	930	919
25°	1828	1455	1255	1179	1114	957	1006	941	898	887
27.5°	1849	1455	1228	1184	1125	990	984	903	876	876
30°	1774	1433	1260	1228	1163	1076	1033	930	919	930
32.5°	1725	1368	1276	1336	1217	1098	1076	979	963	973
35°	1806	1352	1249	1428	1255	1022	1092	1022	1054	1071
37.5°	2179	1487	1276	1422	1238	1076	1103	1076	1098	1092
40°	2958	1968	1352	1379	1195	1103	1125	1103	1109	1092
42.5°	3104	1914	1390	1341	1184	1044	1141	1114	1087	1071
45°	2525	1514	1314	1282	1195	1022	1114	1082	1060	1060
47.5°	1974	1341	1238	1206	1184	979	1044	1044	1060	1060
50°	1839	1363	1184	1146	1136	946	1027	1038	1092	1103
52.5°	1785	1374	1173	1125	1103	963	1065	1071	1130	1136
55°	1633	1346	1200	1152	1125	1027	1082	1027	1038	1038
57.5°	1590	1390	1260	1195	1163	1033	946	817	795	800
60°	1687	1557	1422	1287	1168	903	784	616	589	595
62.5°	1941	1795	1406	1141	941	687	622	514	481	476
65°	2217	1584	1033	849	725	552	535	460	422	422
67.5°	1947	1157	768	627	611	497	481	422	389	379
70°	1655	871	622	535	487	470	433	384	346	346
72.5°	1336	681	519	476	465	433	384	346	314	303
75°	930	519	433	449	492	422	341	308	276	270
77.5°	660	416	362	416	508	427	303	270	238	238
80°	487	357	324	276	470	427	287	243	211	205
82.5°	384	308	281	222	373	389	287	216	195	184
85°	330	276	254	184	292	308	270	195	168	162
87.5°	287	243	233	146	233	238	227	178	151	151
90°	249	216	216	205	200	184	178	151	135	130
95°	211	195	200	184	162	124	114	108	97	97
105°	173	162	146	124	92	59	43	27	16	11
115°	130	114	92	65	43	22	11	0	0	0
125°	70	59	43	22	11	0	0	0	0	0
135°	22	16	5	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
175°	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)