

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: P10702

Luminaire Tested: **OVZ10SXX3E**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-31-95  
Report Number: P10702  
Test Lab: PEACHTREE CITY  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: OVZ10SXX3E  
Description: 100W HPS TYPE III ROADWAY  
Light Source: 150W HPS CL ED-23.5  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 9500 (1 lamp)  
Luminaire Lumens: 7256.6 lumens  
Efficiency: 76.4%  
Efficacy: 72.6 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 1.12' x H: 0.42')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U3 - G2

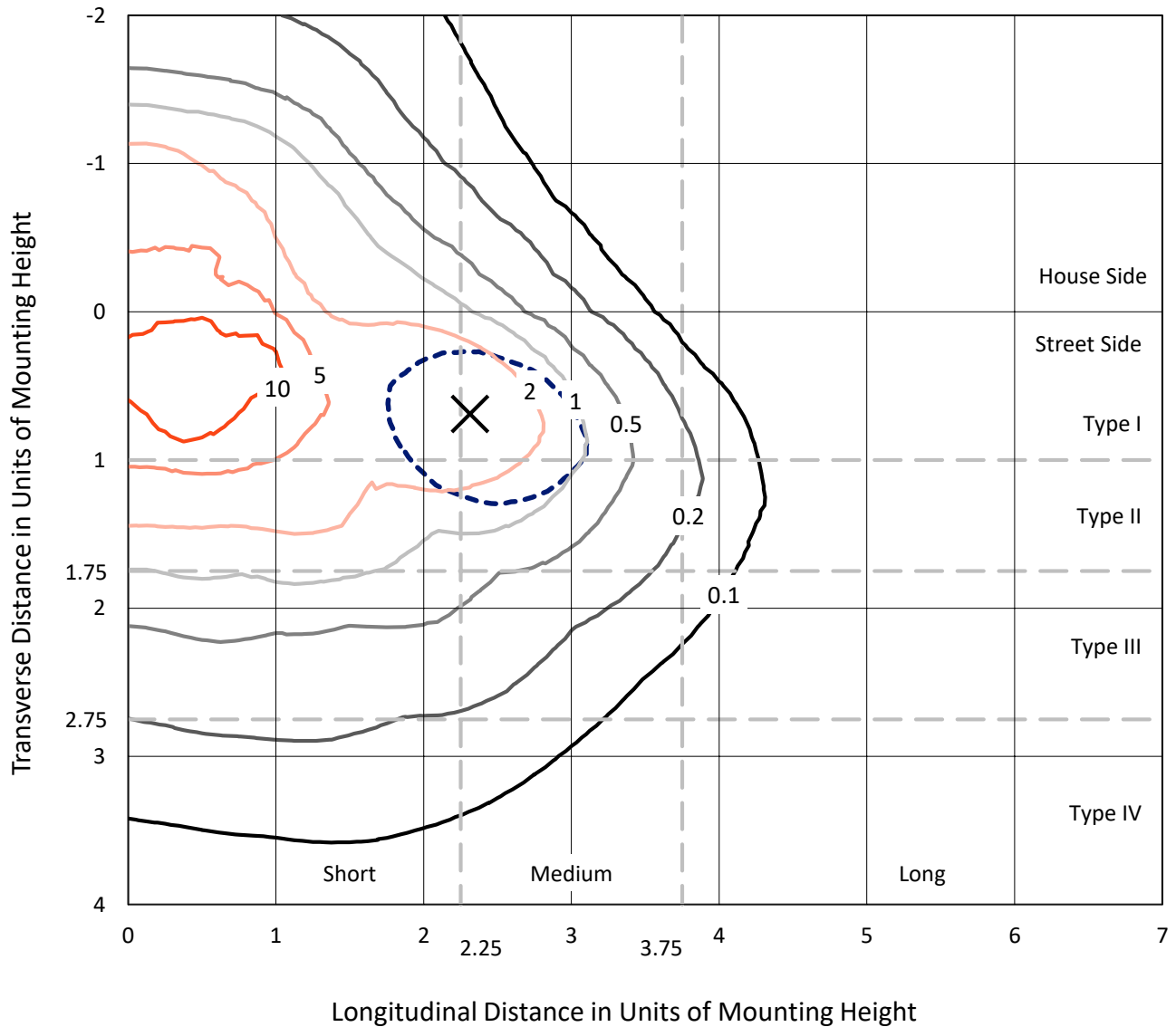
Input Watts (W): 100  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

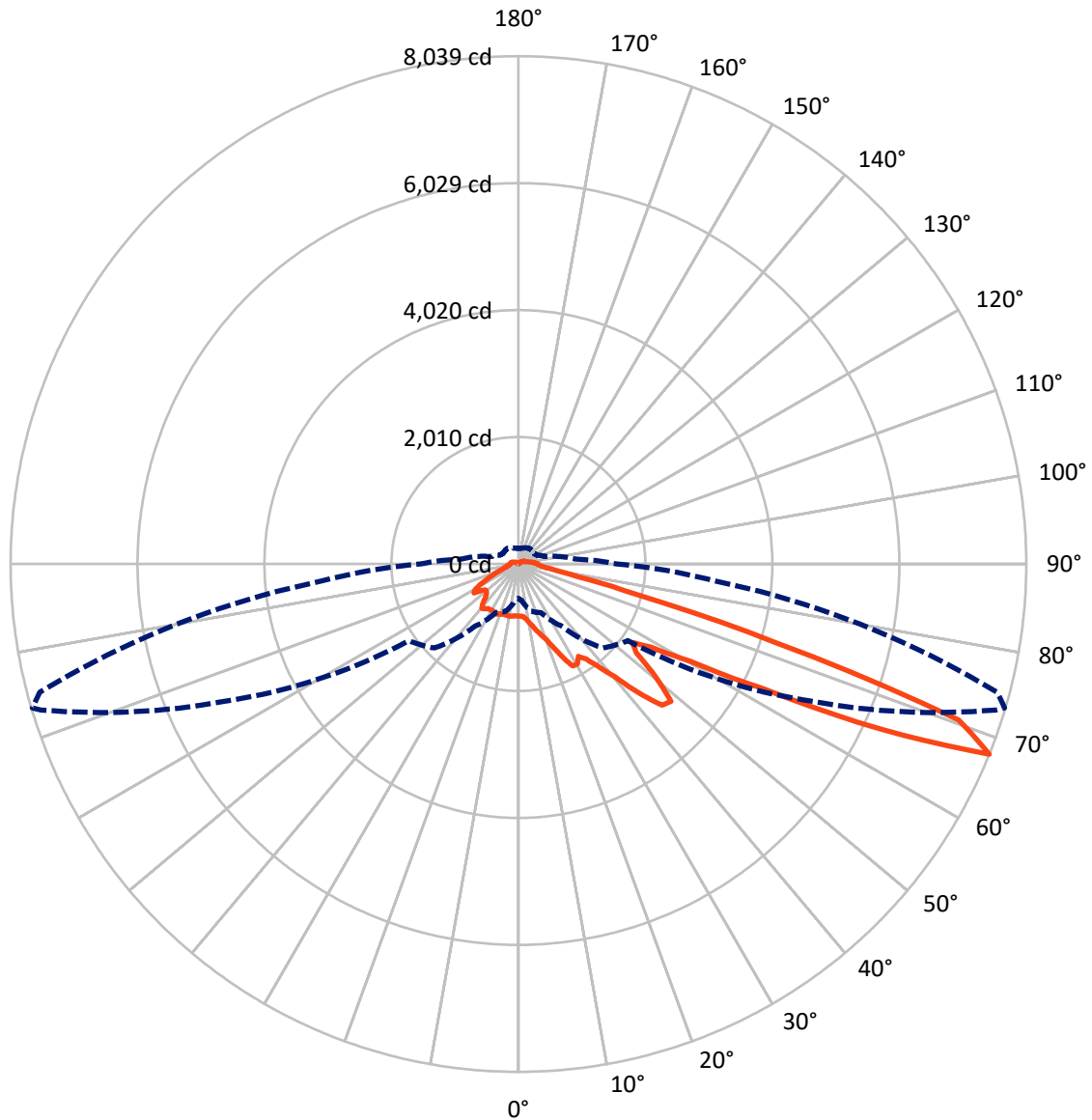
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 19.4 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 73.4-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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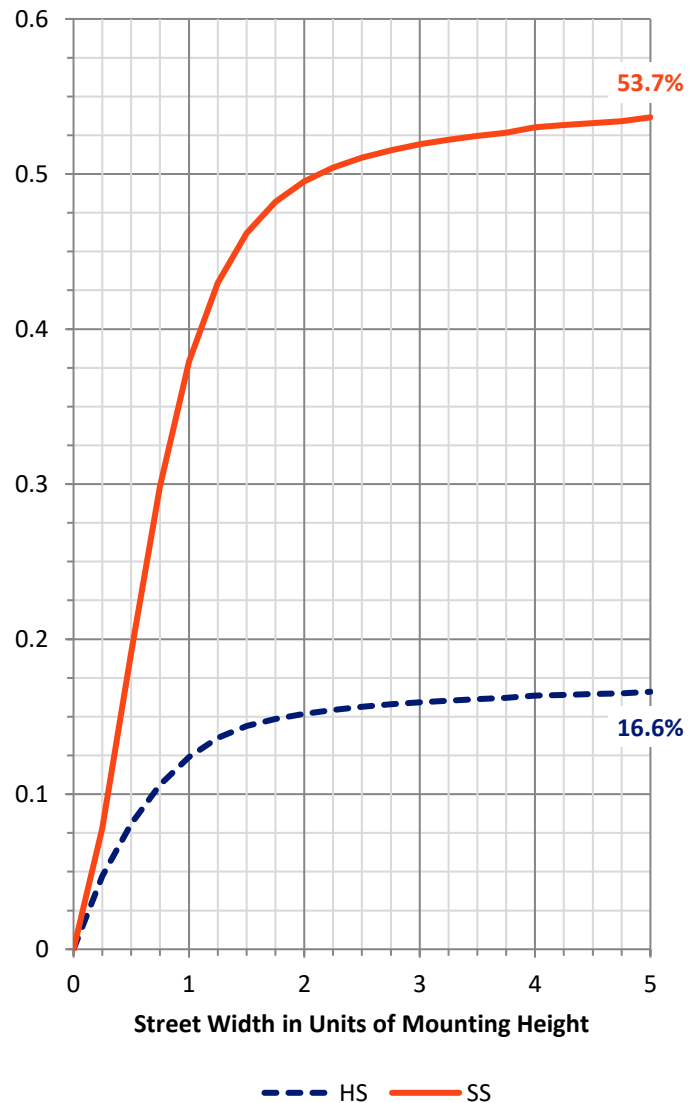
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1624.5	124.5	1749.0
	% Lamp	17.1	1.3	18.4
<b>Street Side</b>	Lumens	5206.8	300.8	5507.6
	% Lamp	54.8	3.2	58.0
<b>Total</b>	Lumens	6831.3	425.3	7256.6
	% Lamp	71.9	4.5	76.4

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	81.5	1.1	0.9
10°-20°	297.3	4.1	3.1
20°-30°	612.6	8.4	6.4
30°-40°	996.2	13.7	10.5
40°-50°	1258.6	17.3	13.2
50°-60°	1183.2	16.3	12.5
60°-70°	1382.7	19.1	14.6
70°-80°	739.3	10.2	7.8
80°-90°	279.9	3.9	2.9
90°-100°	189.7	2.6	2.0
100°-110°	109.4	1.5	1.2
110°-120°	69.6	1.0	0.7
120°-130°	37.1	0.5	0.4
130°-140°	14.5	0.2	0.2
140°-150°	4.3	0.1	0.0
150°-160°	0.7	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	6831.3	94.1	71.9
0°-180°	7256.6	100.0	76.4

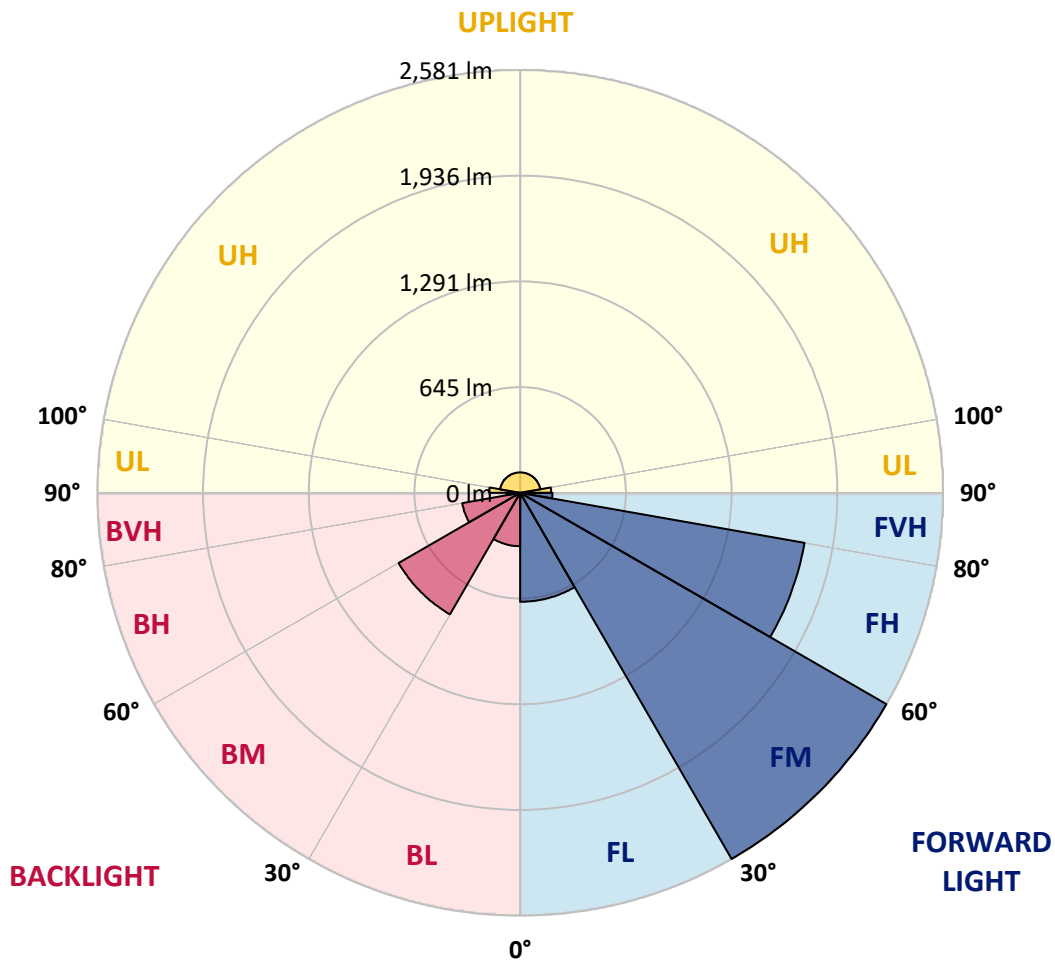


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Lamp	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	665.4	7.0			
FM (30°-60°)	2581.4	27.2			
FH (60°-80°)	1762.8	18.6			G1/1800
FVH (80°-90°)	197.2	2.1			G2/225
BL (0°-30°)	326.0	3.4	B1/500		
BM (30°-60°)	856.6	9.0	B1/1000		
BH (60°-80°)	359.2	3.8	B1/500		G1/500
BVH (80°-90°)	82.7	0.9			G1/100
UL (90°-100°)	189.7	2.0		U3/500	
UH (100°-180°)	124.5	1.3		U3/500	
Trapped Light	2243.4	23.6			

**BUG Rating: B1-U3-G2**  
 Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	73.4°	75°	85°
0°	824	824	824	824	824	824	824	824	824	824	824
2.5°	835	834	834	832	829	827	826	826	825	825	824
5°	858	858	856	853	848	845	842	841	839	838	835
7.5°	928	925	923	917	909	900	889	882	876	877	867
10°	1026	1026	1028	1024	1014	1002	981	960	943	940	913
12.5°	1167	1165	1184	1186	1181	1155	1114	1061	1010	1003	946
15°	1352	1359	1393	1423	1424	1378	1298	1191	1098	1078	985
17.5°	1546	1560	1616	1674	1681	1623	1516	1339	1185	1160	1023
20°	1613	1634	1750	1873	1940	1891	1693	1454	1285	1254	1097
22.5°	1595	1616	1758	1945	2110	2133	1936	1636	1442	1409	1224
25°	1538	1558	1682	1942	2196	2313	2292	1951	1635	1604	1371
27.5°	1508	1533	1657	1908	2203	2438	2731	2275	1828	1763	1456
30°	1546	1574	1728	1966	2182	2657	3161	2474	1836	1754	1436
32.5°	1611	1637	1846	2134	2401	2960	3257	2361	1742	1677	1472
35°	1635	1662	1928	2340	2805	3189	2971	2309	1845	1780	1573
37.5°	1744	1774	2028	2607	3119	3226	2773	2607	2059	1975	1885
40°	1853	1884	2173	2856	3130	3139	2887	2824	2338	2277	2178
42.5°	1766	1786	2096	2935	2979	3045	2955	2975	2781	2710	2185
45°	1562	1557	1799	2591	2852	2929	2929	3294	3190	3059	1878
47.5°	1423	1418	1579	2150	2678	2728	2804	3584	3248	3019	1564
50°	1359	1348	1484	1922	2452	2565	2751	3630	2827	2563	1312
52.5°	1258	1257	1372	1729	2199	2524	2739	3425	2336	2099	1127
55°	1094	1095	1229	1525	2013	2590	2820	2973	2187	2028	1193
57.5°	926	940	1119	1314	1847	2781	2530	2861	2489	2333	1361
60°	806	811	1013	1142	1771	2800	2189	3172	3114	2978	1785
62.5°	738	751	916	1046	1765	2493	2232	3553	4340	4277	2435
65°	634	660	831	962	1556	2196	2206	4316	6312	6268	3007
67.5°	543	580	773	849	1205	1880	2114	5148	8039	7843	3148
70°	498	529	650	781	941	1668	2008	4657	7393	7156	2380
72.5°	465	489	583	751	844	1388	1583	3224	4274	3949	1310
75°	437	457	542	690	800	984	1093	1646	1918	1751	686
77.5°	417	433	507	619	703	686	760	909	952	882	431
80°	394	406	483	548	540	477	556	614	589	555	332
82.5°	350	359	435	453	402	373	425	443	427	415	293
85°	313	321	384	376	329	316	347	352	353	350	266
87.5°	321	326	368	349	300	281	298	304	317	320	249
90°	363	367	392	356	299	273	277	275	296	298	228
92.5°	349	350	368	324	288	264	263	261	273	273	207
95°	269	271	283	263	251	234	233	241	242	239	184
97.5°	207	209	222	224	223	205	200	214	210	207	165
100°	173	174	187	197	199	186	177	187	178	176	144
102.5°	151	152	159	172	168	160	157	157	148	145	126
105°	139	139	143	152	147	140	138	134	125	123	114
107.5°	129	130	131	139	135	128	125	118	113	112	110
110°	120	120	120	128	130	122	117	113	109	108	107



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	73.4°	75°	85°
112.5°	108	108	109	118	124	118	110	108	107	105	103
115°	94	94	96	106	113	108	101	102	101	100	98
117.5°	82	81	83	92	97	93	91	93	92	92	89
120°	73	73	75	77	79	79	80	82	82	82	81
122.5°	63	63	64	66	69	70	73	76	76	76	76
125°	54	54	55	56	57	59	63	66	65	65	65
127.5°	47	47	47	47	48	49	53	55	55	55	54
130°	41	41	41	41	40	40	44	44	45	44	44
132.5°	36	36	36	35	33	33	34	35	35	35	34
135°	32	32	32	30	28	25	26	26	25	25	25
137.5°	28	28	28	26	22	19	18	17	18	18	17
140°	24	24	24	22	18	14	12	12	11	11	11
142.5°	21	21	21	19	14	10	8	7	7	7	6
145°	18	18	18	16	11	6	4	3	3	3	3
147.5°	15	15	15	13	9	4	3	2	2	2	2
150°	12	12	12	10	6	3	1	1	1	2	2
152.5°	9	9	9	8	4	2	1	1	1	2	2
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





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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	824	824	824	824	824	824	824	824	824	824	824
2.5°	824	823	822	823	823	823	823	822	822	822	822
5°	834	831	825	820	820	821	821	823	823	822	822
7.5°	863	854	834	820	813	808	805	800	792	788	789
10°	895	877	842	817	803	796	784	771	762	758	758
12.5°	915	885	836	806	787	773	778	762	753	746	746
15°	939	896	833	800	778	762	757	756	732	725	726
17.5°	965	911	839	798	762	734	725	723	687	673	672
20°	1025	956	848	776	730	703	702	690	654	639	638
22.5°	1134	1039	873	768	714	704	697	673	642	630	628
25°	1233	1098	881	792	734	726	714	668	624	608	605
27.5°	1269	1090	856	802	770	753	748	675	609	607	612
30°	1239	1040	843	845	839	791	785	693	625	628	638
32.5°	1283	1062	851	852	938	820	732	683	648	650	658
35°	1400	1165	860	831	1010	816	700	691	697	691	692
37.5°	1851	1572	897	823	1028	791	708	743	737	707	703
40°	2011	1600	922	844	966	780	739	751	729	693	686
42.5°	1707	1259	848	814	876	773	725	717	702	676	668
45°	1329	996	745	738	778	733	679	681	681	671	669
47.5°	1152	876	694	677	700	684	643	661	680	693	682
50°	983	805	670	646	660	657	643	678	709	715	712
52.5°	894	765	666	659	666	662	661	657	623	608	596
55°	941	814	716	747	723	707	679	579	483	472	472
57.5°	1071	951	849	785	695	658	577	449	384	378	376
60°	1380	1155	819	634	526	507	444	373	333	331	331
62.5°	1674	1229	699	479	405	419	371	337	306	302	304
65°	1767	1146	561	379	323	340	326	306	281	275	277
67.5°	1552	901	449	329	292	301	302	281	261	249	251
70°	1082	644	348	282	281	298	293	262	241	224	223
72.5°	678	442	274	242	268	307	301	246	221	200	196
75°	439	324	226	210	243	304	310	236	199	176	170
77.5°	317	259	197	189	211	265	297	227	178	153	149
80°	264	224	180	173	184	209	254	214	162	136	132
82.5°	237	201	167	158	166	167	196	192	148	121	118
85°	216	180	152	148	158	145	150	159	132	108	106
87.5°	196	161	138	146	154	130	119	123	113	95	92
90°	178	147	129	146	145	122	100	97	94	83	81
92.5°	163	138	125	148	135	117	88	79	78	76	76
95°	151	133	123	149	124	110	79	70	68	67	68
97.5°	140	127	120	143	115	99	70	60	57	56	56
100°	127	119	116	131	104	87	60	49	45	42	42
102.5°	117	112	111	119	94	76	51	39	32	24	23
105°	111	109	106	108	86	67	43	29	19	9	7
107.5°	108	105	101	97	77	57	35	20	8	2	1
110°	105	102	94	86	69	49	28	13	3	1	1



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	102	98	87	78	62	41	21	8	1	1	1
115°	96	92	81	69	54	34	16	4	1	1	2
117.5°	88	84	73	62	46	28	12	2	1	1	1
120°	81	77	66	53	38	22	8	2	1	1	1
122.5°	74	71	59	45	32	17	6	2	2	2	2
125°	64	61	49	38	25	13	4	2	1	1	1
127.5°	53	50	41	30	19	9	4	2	1	1	1
130°	43	41	33	23	14	7	4	2	1	1	1
132.5°	33	31	25	18	11	6	4	2	2	1	1
135°	24	23	18	13	8	5	3	2	1	1	2
137.5°	17	16	12	9	6	5	3	2	1	1	1
140°	11	10	8	6	6	5	3	2	1	1	2
142.5°	6	6	5	5	5	5	3	2	1	1	1
145°	3	3	3	5	5	5	3	2	1	1	1
147.5°	2	2	3	5	5	5	3	2	1	1	1
150°	2	2	3	4	5	5	3	2	1	1	1
152.5°	2	2	3	4	5	5	3	2	1	1	1
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

(END OF REPORT)