

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: P31773

Luminaire Tested: **OVW15SXX3D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-31-95
Report Number: P31773
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: OVW15SXX3D
Description: STREET WORKS LARGE COBRA HEAD HPS ROADWAY FIXTURE (TX DOT FIXTURE B, BATCH M-275) WITH CLEAR FLAT GLASS LENS, SHIM UNDERNEATH SOCKET BRACKET, HYDROFORMED SEMI SPECULAR REFLECTOR, AND GASKET MATERIAL ON REFLECTOR. FIXTURE LEVELED
Light Source: (1) MOGUL BASE E18 CLEAR HIGH PRESSURE SODIUM LAMP LU150 150 WATTS 150 WATTS
Ballast/Driver: (1) COOPER LIGHTING MAGNETIC BALLAST 8447D93507

Summary

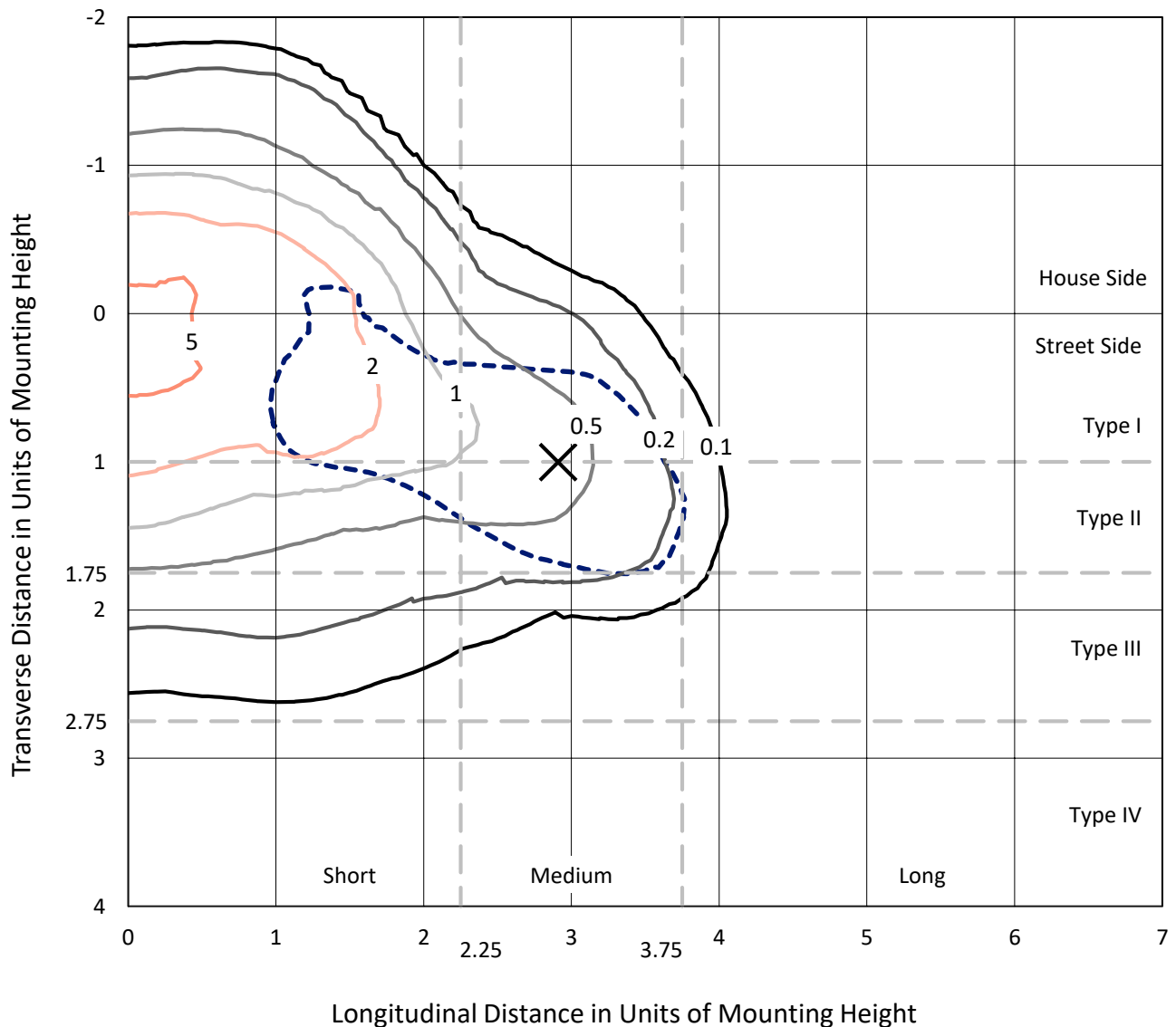
Lumens per Lamp: 16000 (1 lamp)
Luminaire Lumens: 11718.7 lumens
Efficiency: 73.2%
Efficacy: 78.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.17' x L: 1.33' x H: 0.25')
IES Classification: Type II - Medium - Cutoff
BUG Rating: B2 - U1 - G2

Input Watts (W): 150.1
Input Voltage (V): 51.31
Input Current (A_{in}): 3.50
Voltage Rise (V): 2.2
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 4 HR
Ambient Temperature (°C): 25
Test Distance: 28.75 FT

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Iso-Footcandle Lines of Horizontal Illumination

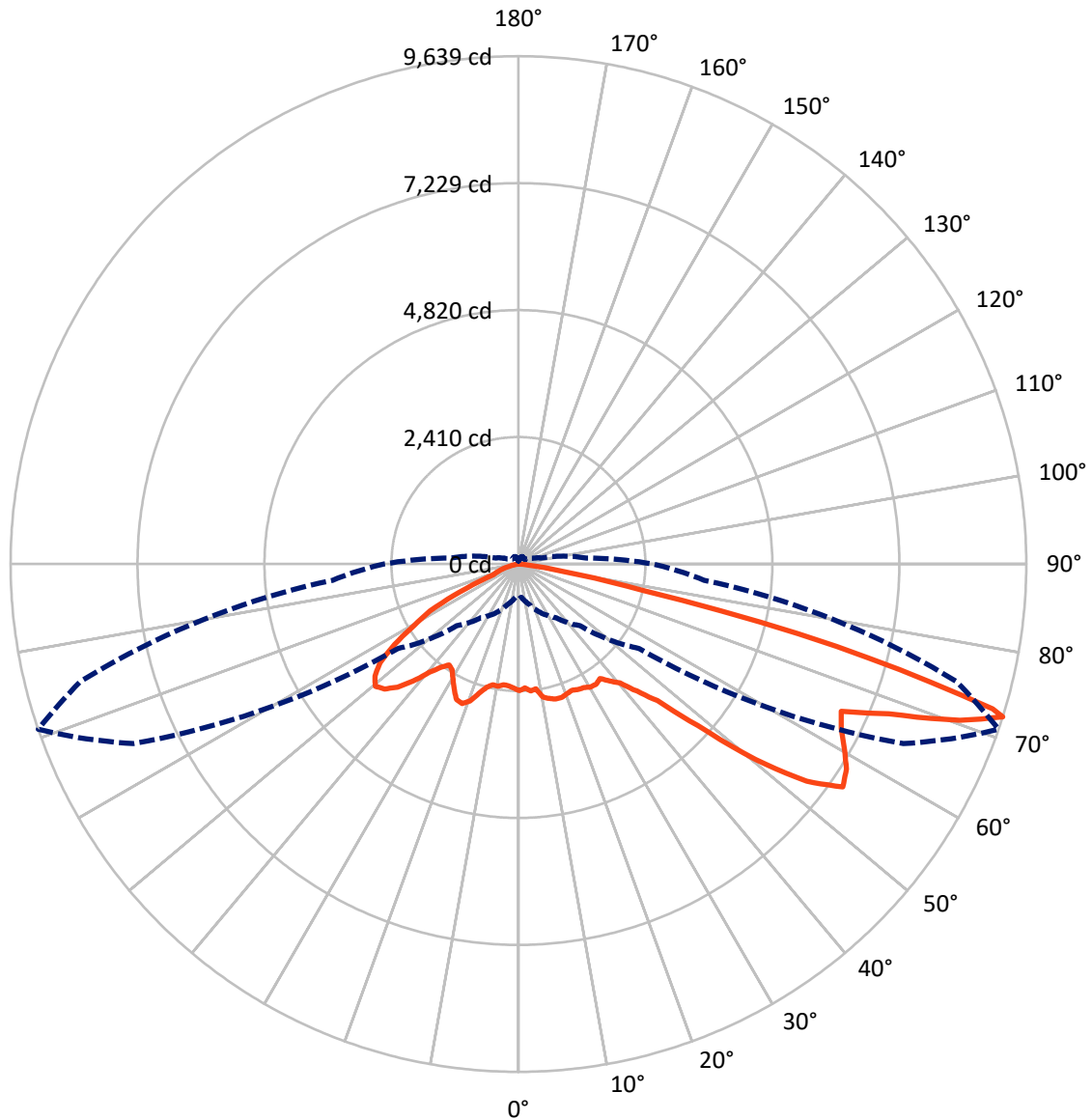
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7 fc
 Type II - Medium - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 71-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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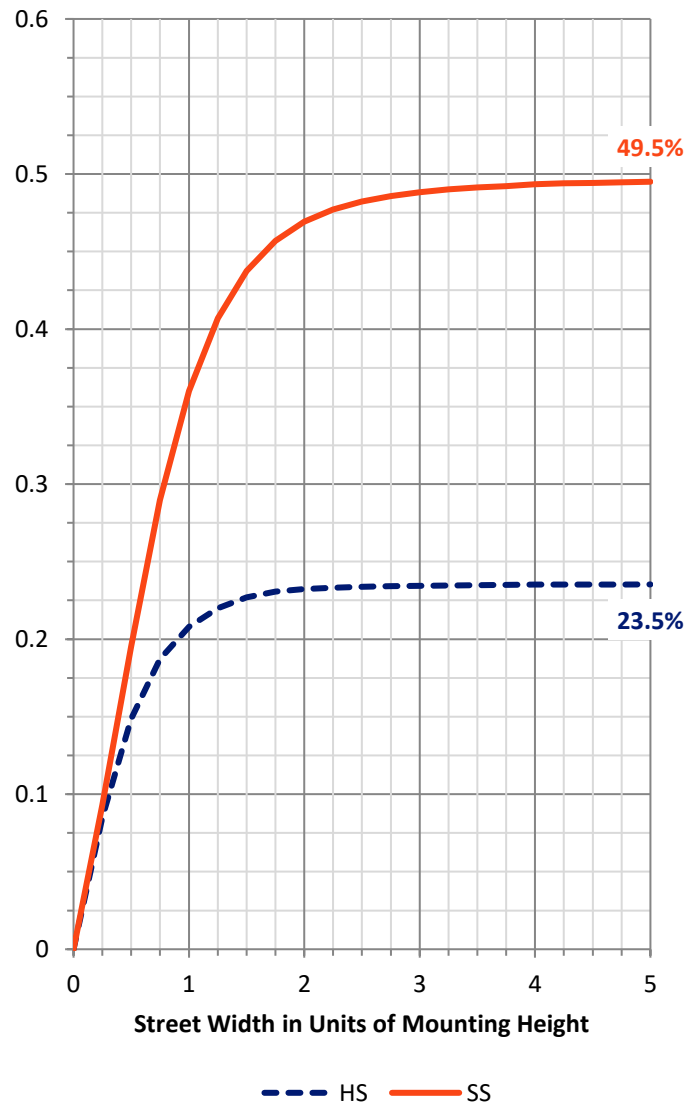
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3787.0	7.0	3793.9
	% Lamp	23.7	0.0	23.7
Street Side	Lumens	7918.5	6.3	7924.8
	% Lamp	49.5	0.0	49.5
Total	Lumens	11705.5	13.2	11718.7
	% Lamp	73.2	0.1	73.2

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	228.6	2.0	1.4
10°-20°	721.7	6.2	4.5
20°-30°	1202.0	10.3	7.5
30°-40°	1542.6	13.2	9.6
40°-50°	2071.2	17.7	12.9
50°-60°	2685.3	22.9	16.8
60°-70°	2060.3	17.6	12.9
70°-80°	1142.1	9.7	7.1
80°-90°	51.8	0.4	0.3
90°-100°	5.9	0.1	0.0
100°-110°	7.4	0.1	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	11705.5	99.9	73.2
0°-180°	11718.7	100.0	73.2

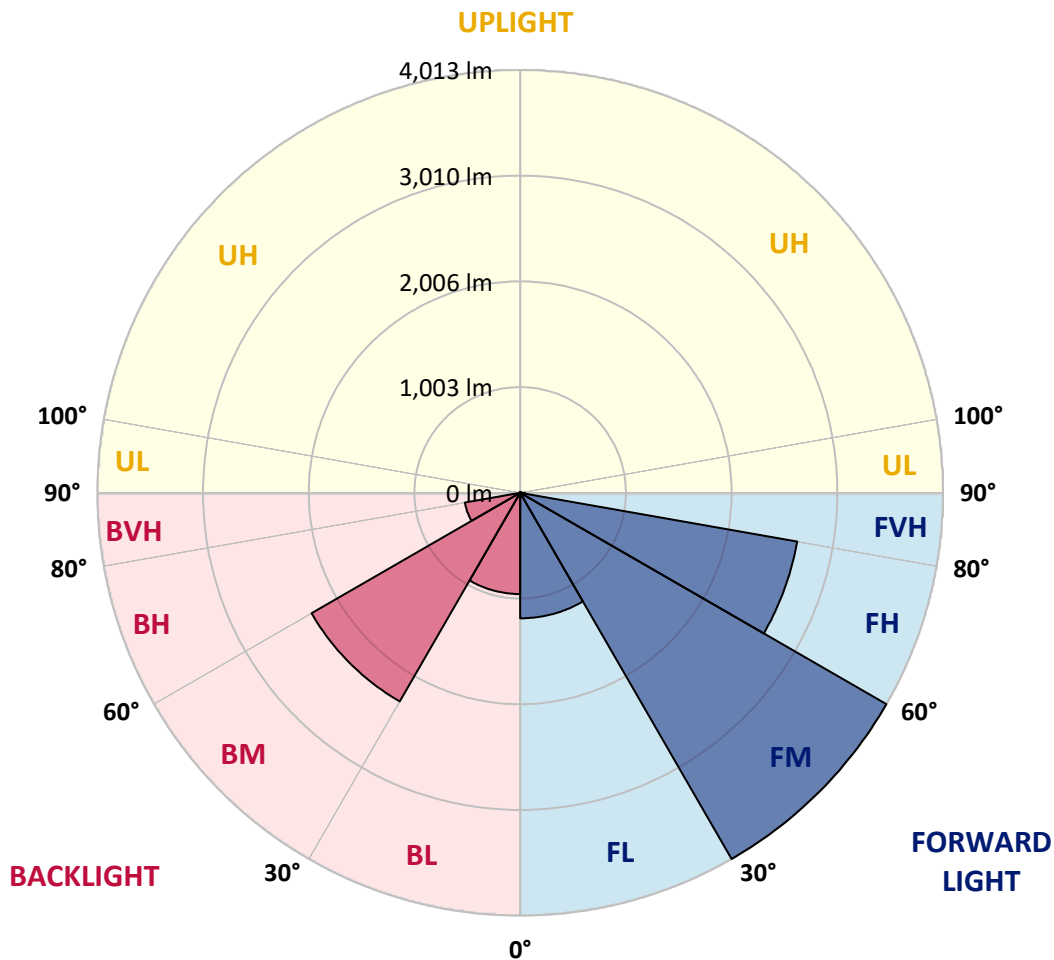


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1191.2	7.4			
FM	(30°-60°)	4012.9	25.1			
FH	(60°-80°)	2669.7	16.7			G2/5000
FVH	(80°-90°)	44.7	0.3			G1/100
BL	(0°-30°)	961.1	6.0	B2/1000		
BM	(30°-60°)	2286.2	14.3	B2/2500		
BH	(60°-80°)	532.7	3.3	B2/1000		G2/1000
BVH	(80°-90°)	7.0	0.0			G0/10
UL	(90°-100°)	5.9	0.0		U1/10	
UH	(100°-180°)	7.0	0.0		U1/10	
Trapped Light		4281.3	26.8			

BUG Rating: B2-U1-G2
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	71°	75°	85°
0°	2403	2403	2403	2403	2403	2403	2403	2403	2403	2403	2403
2.5°	2478	2426	2442	2466	2455	2429	2422	2422	2356	2346	2336
5°	2384	2533	2498	2511	2475	2462	2386	2351	2420	2391	2378
7.5°	2588	2606	2548	2573	2548	2506	2500	2464	2391	2433	2402
10°	2759	2762	2708	2711	2684	2640	2642	2597	2571	2478	2480
12.5°	2970	2953	2891	2857	2815	2777	2728	2577	2618	2578	2522
15°	3112	3130	3048	3001	2937	2828	2746	2622	2660	2633	2595
17.5°	3177	3201	3126	3095	2995	2839	2706	2708	2662	2620	2615
20°	3046	3232	3155	3139	3044	2895	2784	2666	2628	2598	2613
22.5°	3024	3213	3150	2977	2997	2970	2715	2666	2602	2442	2557
25°	3155	3172	3148	3139	3117	3028	2882	2728	2637	2580	2513
27.5°	3064	3092	3081	3115	3123	3093	2930	2786	2655	2569	2457
30°	2817	2990	3028	3099	3062	3208	3188	2815	2708	2527	2453
32.5°	2842	2850	2908	3026	3161	3294	3272	2884	2715	2584	2431
35°	2828	2819	2806	2944	3190	3383	3345	3015	2668	2604	2424
37.5°	2824	2804	2613	2846	3183	3421	3275	3059	2815	2675	2597
40°	2777	2764	2597	2753	3097	3415	3294	3170	2970	2866	2779
42.5°	2733	2726	2562	2593	2966	3335	3474	3365	3297	3190	3126
45°	2660	2655	2522	2589	2755	3237	3612	3992	3699	3727	3616
47.5°	2606	2509	2471	2522	2699	3197	4100	4717	4584	4378	4001
50°	2515	2498	2384	2427	2569	3277	4818	6147	5832	5317	4589
52.5°	2384	2373	2260	2267	2455	3308	5705	7366	6851	6154	4986
55°	2209	2196	2096	2122	2367	3457	6203	8108	7470	6500	5086
57.5°	1918	1914	1902	1982	2200	3306	5958	8072	7340	6567	5102
60°	1550	1547	1672	1843	2102	2822	5122	7508	7108	6518	4982
62.5°	1230	1241	1350	1683	1965	2509	4371	7097	6876	6167	4405
65°	1023	994	1183	1529	1812	2316	3841	6825	6735	6170	3878
67.5°	892	884	1050	1428	1705	2127	3446	7042	7581	7158	3583
70°	753	742	906	1216	1521	1922	3208	7784	8889	7985	3474
72°	670	633	795	1024	1246	1656	2795	8063	9639	8601	3539
72.5°	659	633	779	983	1181	1547	2593	8043	9411	8365	3425
75°	433	528	630	759	799	759	1523	6258	6240	4762	2160
77.5°	87	326	417	355	246	300	826	2553	2422	2000	864
80°	55	87	100	89	107	162	369	901	852	664	311
82.5°	44	45	53	56	73	93	156	269	275	204	133
85°	18	13	27	16	33	36	62	55	78	49	20
87.5°	22	16	18	11	27	13	16	15	20	0	5
90°	0	0	2	0	4	5	0	2	7	0	0
92.5°	4	4	7	2	7	0	4	2	13	0	11
95°	0	2	11	2	11	4	4	2	15	2	2
97.5°	0	7	4	5	13	5	7	7	9	0	2
100°	25	13	15	5	5	7	13	13	13	9	13
102.5°	15	9	15	7	2	9	7	5	9	7	5
105°	4	13	16	20	11	5	9	9	11	13	15
107.5°	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°	71°	75°	85°
110°	0	0	0	0	0	0	0	0	0	0	0
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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2403	2403	2403	2403	2403	2403	2403	2403	2403	2403	2403
2.5°	2391	2384	2366	2351	2347	2338	2349	2362	2356	2304	2340
5°	2369	2304	2327	2311	2291	2282	2282	2287	2275	2285	2278
7.5°	2386	2369	2316	2293	2267	2242	2229	2218	2207	2222	2209
10°	2453	2424	2369	2327	2280	2245	2213	2182	2164	2169	2165
12.5°	2497	2458	2393	2262	2271	2242	2185	2136	2094	2091	2082
15°	2571	2544	2453	2366	2293	2236	2160	2085	2036	2027	2016
17.5°	2628	2640	2615	2498	2384	2256	2140	2047	1982	1962	1943
20°	2659	2733	2811	2682	2511	2331	2154	2043	1965	1907	1885
22.5°	2609	2719	2888	2806	2584	2407	2162	1949	1911	1843	1834
25°	2533	2617	2842	2810	2606	2420	2189	1914	1863	1787	1754
27.5°	2451	2491	2679	2680	2520	2342	2154	1903	1783	1707	1652
30°	2415	2420	2515	2526	2355	2242	2073	1827	1692	1601	1579
32.5°	2391	2371	2371	2375	2262	2100	1931	1694	1519	1467	1456
35°	2447	2356	2324	2322	2107	1969	1832	1590	1447	1374	1281
37.5°	2584	2553	2513	2371	2122	1892	1665	1496	1361	1265	1245
40°	2800	2804	2749	2548	2224	1825	1572	1394	1234	1139	1121
42.5°	3223	3235	3079	2859	2367	1758	1452	1294	1125	1021	1015
45°	3692	3588	3406	3077	2457	1660	1399	1194	1037	952	935
47.5°	4092	4318	3679	3173	2355	1541	1354	1132	990	886	863
50°	4720	4955	3912	3059	2127	1488	1277	1090	941	832	779
52.5°	5020	5222	3836	2880	1894	1394	1201	964	857	721	706
55°	4995	5017	3698	2506	1656	1299	1121	953	784	631	633
57.5°	4909	4864	3290	2074	1445	1210	1039	870	688	551	542
60°	4289	4076	2689	1698	1303	1148	964	792	615	448	426
62.5°	3718	3146	2122	1563	1266	1075	870	566	335	227	229
65°	3203	2631	1532	786	493	415	386	240	138	98	95
67.5°	2538	1485	635	340	237	215	240	220	140	104	109
70°	2548	1321	528	277	202	178	189	184	122	69	73
72°	2544	1292	442	224	160	142	156	156	111	60	69
72.5°	2478	1230	422	215	147	133	144	142	107	66	66
75°	1410	826	288	167	120	100	98	95	71	56	58
77.5°	591	393	175	104	89	53	58	40	27	27	36
80°	238	186	86	62	45	22	20	13	13	9	22
82.5°	100	75	40	29	31	9	7	5	2	0	11
85°	18	7	2	0	0	0	0	0	0	0	0
87.5°	5	4	0	0	4	0	0	4	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	5	2	7	5	5	2	7	7	0	0	0
95°	2	5	9	4	5	0	4	5	0	0	0
97.5°	4	5	4	4	5	7	11	2	9	11	0
100°	11	22	7	15	18	15	25	20	9	16	11
102.5°	4	5	2	11	22	11	15	9	9	11	15
105°	7	5	13	11	22	13	9	9	15	9	7
107.5°	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°
110°	0	0	0	0	0	0	0	0	0	0	0
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

(END OF REPORT)