

Scaled data based on original data using
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge
or Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: STREETWORKS

Report Number: P13100

Luminaire Tested: **TRU15S2F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-46-04
Report Number: P13100
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: TRU15S2F
Description: TRIBUTE AREA/SITE HID FIXTURE WITH TYPE 2F SEMI SPECULAR
HYDROFORMED REFLECTOR
Light Source: (1) MOGUL BASE ED23.5 HIGH PRESSURE SODIUM LAMP
USING MANUFACTURERS PUBLISHED DATA AND A BARE LAMP SUM FOR
THE LAMP UNDER TEST IN GONIOPHOTOMETER WITH TEST DISTANCE OF
25.0 FEET
LU150/ED23.5 150 WATTS
Ballast/Driver: -

Summary

Lumens per Lamp: 16000 (1 lamp)
Luminaire Lumens: 12677.7 lumens
Efficiency: 79.2%
Efficacy: 84.5 lumens/watt
Luminous Opening: Rectangular (W 1.1' x L: 1.1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

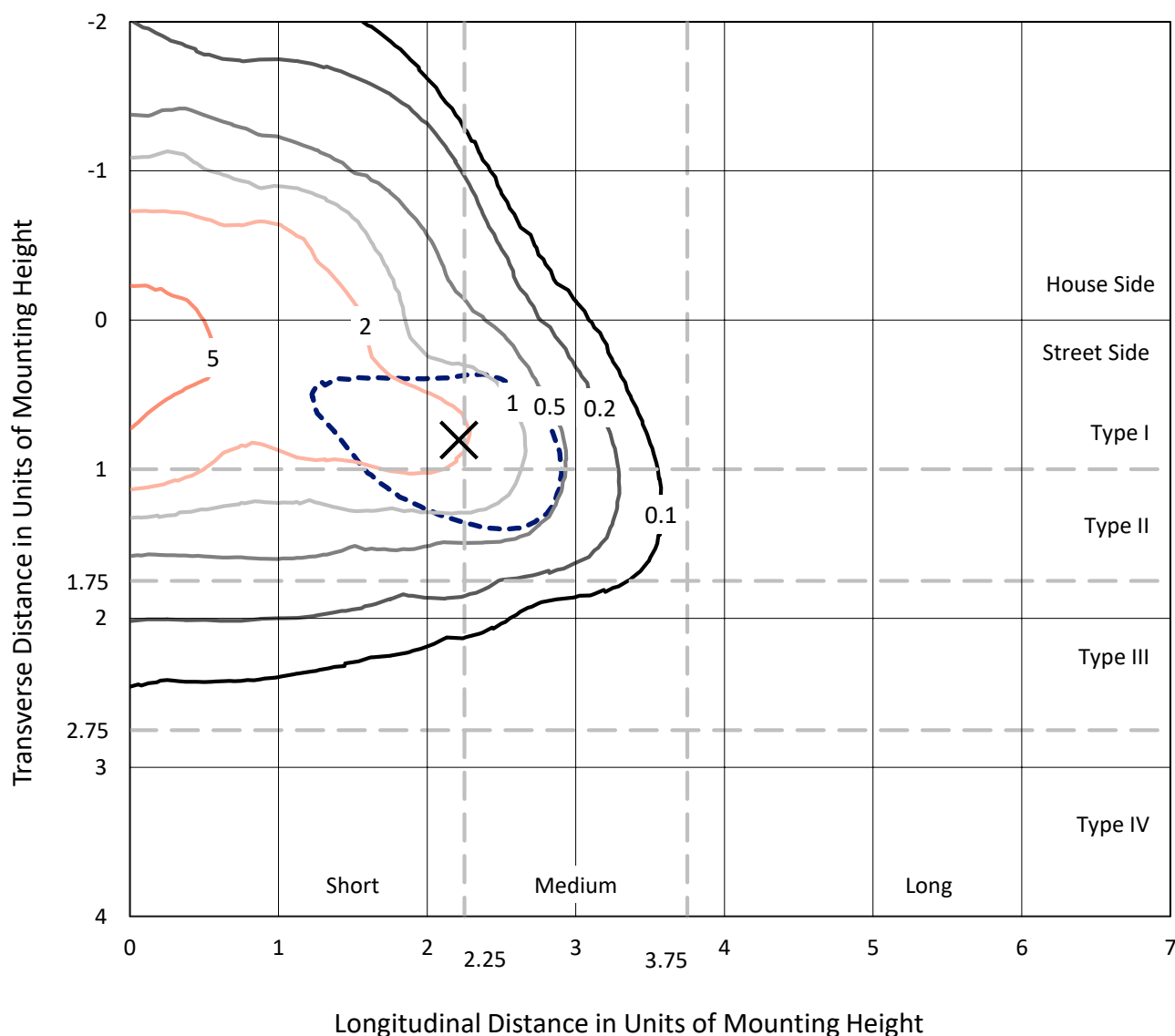
Input Watts (W): 150
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

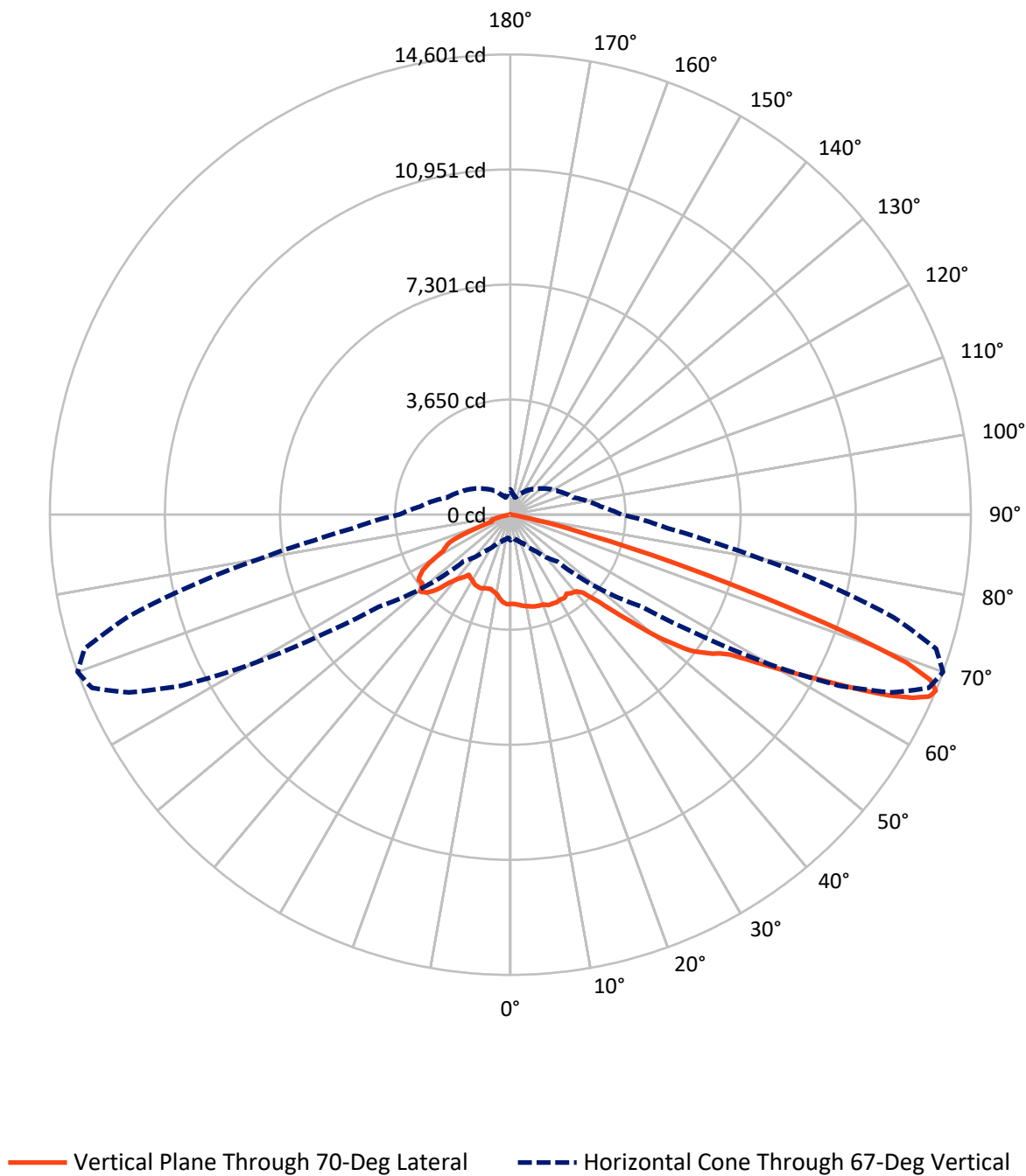
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.6 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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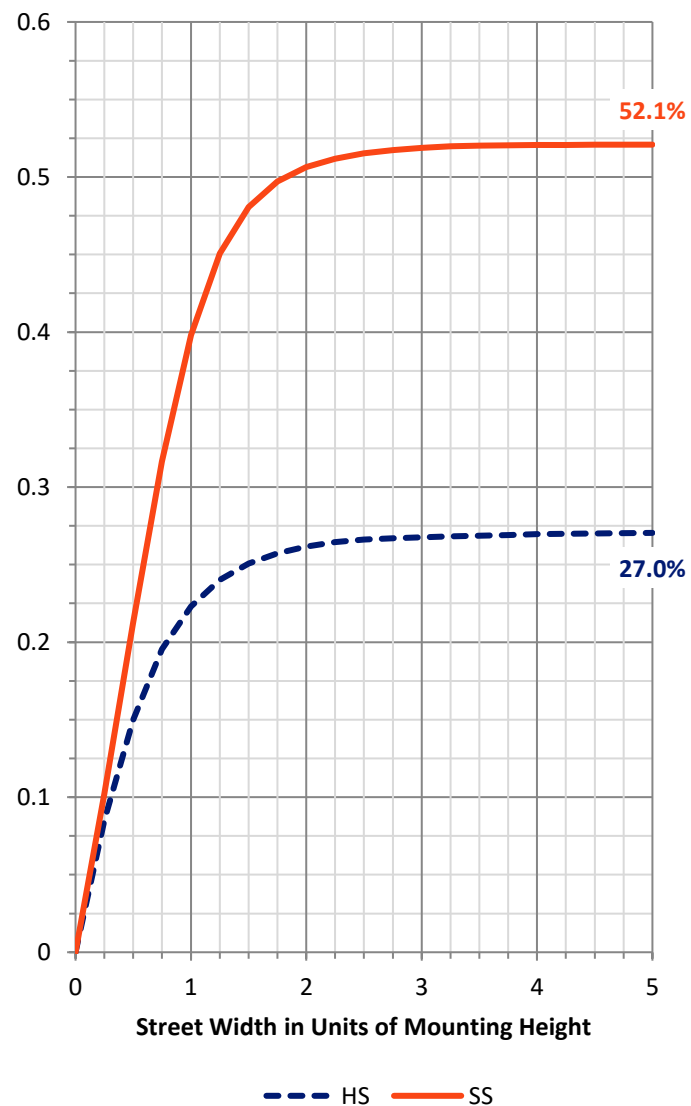
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4345.8	0.0	4345.8
	% Lamp	27.2	0.0	27.2
Street Side	Lumens	8331.9	0.0	8331.9
	% Lamp	52.1	0.0	52.1
Total	Lumens	12677.7	0.0	12677.7
	% Lamp	79.2	0.0	79.2

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	268.4	2.1	1.7
10°-20°	783.0	6.2	4.9
20°-30°	1259.1	9.9	7.9
30°-40°	1637.2	12.9	10.2
40°-50°	2207.8	17.4	13.8
50°-60°	2781.2	21.9	17.4
60°-70°	2891.1	22.8	18.1
70°-80°	825.7	6.5	5.2
80°-90°	24.2	0.2	0.2
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	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°	12677.7	100.0	79.2
0°-180°	12677.7	100.0	79.2

Coefficient of Utilization



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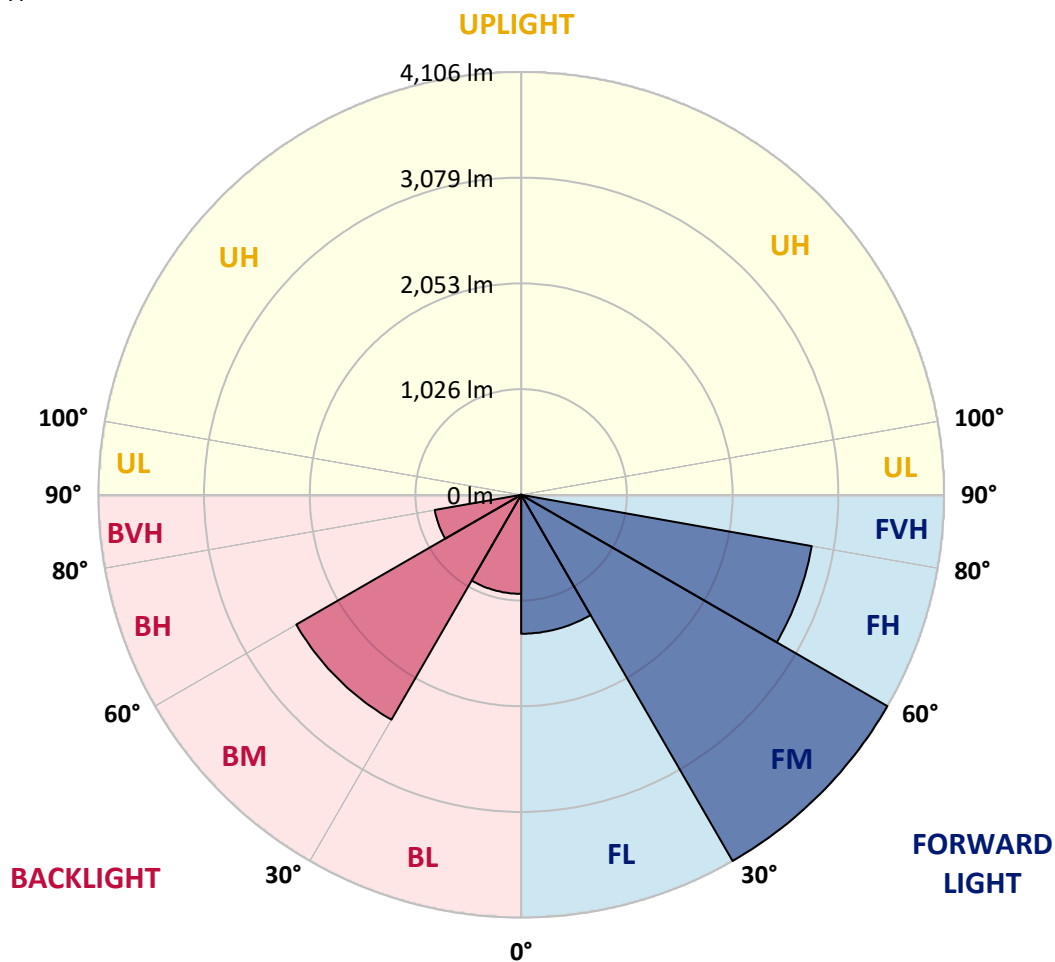
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1348.8	8.4			
FM	(30°-60°)	4105.6	25.7			
FH	(60°-80°)	2865.2	17.9			G2/5000
FVH	(80°-90°)	12.4	0.1			G1/100
BL	(0°-30°)	961.7	6.0	B2/1000		
BM	(30°-60°)	2520.7	15.8	B3/5000		
BH	(60°-80°)	851.6	5.3	B2/1000		G2/1000
BVH	(80°-90°)	11.8	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	
Trapped Light		3322.3	20.8			

BUG Rating: B3-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	2832	2832	2832	2832	2832	2832	2832	2832	2832	2832	2832
2.5°	2856	2845	2835	2861	2866	2858	2851	2859	2855	2854	2843
5°	2946	2915	2907	2913	2940	2944	2915	2917	2905	2901	2892
7.5°	3048	3034	3063	3087	3092	3048	3036	3020	3000	2987	2972
10°	3130	3122	3185	3199	3202	3138	3074	3060	3043	3024	3012
12.5°	3198	3203	3292	3326	3290	3199	3139	3131	3089	3062	3032
15°	3260	3266	3390	3381	3344	3249	3183	3168	3137	3121	3079
17.5°	3455	3471	3524	3526	3457	3374	3282	3252	3219	3187	3111
20°	3502	3508	3572	3564	3504	3409	3263	3240	3200	3158	3117
22.5°	3481	3496	3514	3492	3459	3356	3307	3270	3256	3220	3191
25°	3452	3460	3379	3331	3304	3276	3282	3273	3256	3233	3199
27.5°	3535	3516	3318	3214	3171	3274	3383	3362	3326	3295	3244
30°	3600	3506	3226	3105	3075	3273	3429	3413	3363	3300	3238
32.5°	3687	3559	3179	3025	3026	3243	3463	3459	3405	3331	3304
35°	3713	3536	3083	2897	2903	3137	3403	3385	3327	3292	3216
37.5°	3865	3658	3193	2966	2966	3200	3402	3412	3423	3389	3319
40°	3921	3687	3213	2984	2935	3135	3359	3410	3437	3431	3386
42.5°	3830	3594	3153	2950	2860	3018	3357	3449	3522	3544	3528
45°	3535	3398	3046	2911	2751	2917	3536	3665	3791	3923	3987
47.5°	3040	2966	2811	2792	2565	2863	3871	4146	4421	4644	4800
50°	2423	2414	2412	2577	2345	2847	4415	4862	5288	5653	5913
52.5°	1792	1800	1905	2067	2164	2825	4875	5443	5967	6452	6823
55°	1514	1526	1677	1967	2240	2981	5366	6031	6629	7139	7534
56°	1465	1424	1580	1919	2291	3023	5536	6176	6750	7284	7637
57°	1370	1332	1506	1878	2298	3047	5610	6243	6844	7324	7788
58°	1272	1255	1430	1829	2331	3032	5578	6250	6892	7492	8092
59°	1176	1164	1351	1756	2356	3064	5546	6321	7079	7845	8608
60°	1096	1119	1258	1670	2366	3104	5581	6523	7456	8436	9266
61°	1009	1002	1140	1566	2284	3101	5676	6770	7918	9006	9964
62°	921	917	1047	1452	2156	3050	5774	7067	8420	9657	10676
63°	946	943	1049	1367	2076	3047	5896	7371	8958	10445	11522
64°	891	864	1002	1266	1904	2847	5831	7498	9332	11012	12262
65°	859	826	939	1182	1725	2626	5684	7536	9641	11540	12897
66°	810	788	890	1096	1556	2363	5447	7429	9683	11828	13317
67°	814	734	841	1019	1415	2100	5087	7087	9500	11746	13346
68°	726	694	792	947	1286	1890	4643	6609	9054	11448	13048
69°	687	670	750	894	1161	1716	4199	6055	8402	10773	12322
70°	580	553	651	779	1015	1500	3677	5308	7514	9660	11083
71°	532	509	617	748	963	1373	3149	4503	6354	8215	9248
72°	436	415	529	702	896	1225	2477	3491	5014	6472	7248
73°	317	306	386	572	811	922	1730	2525	3717	4863	5508
74°	174	164	231	436	619	566	1165	1806	2667	3564	4036
75°	111	69	126	249	384	311	833	1293	1930	2526	2821
77.5°	33	19	22	36	54	111	362	494	687	890	950
80°	0	1	11	0	21	17	82	132	174	219	259



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
82.5°	8	14	8	26	27	23	37	57	60	72	78
85°	4	2	0	21	2	5	5	39	29	16	29
87.5°	7	0	3	3	0	3	0	1	1	3	7
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	67.5°	70°	72.5°	75°	77.5°	80°	82.5°	85°	90°	95°	105°
0°	2832	2832	2832	2832	2832	2832	2832	2832	2832	2832	2832
2.5°	2861	2840	2844	2853	2843	2848	2849	2840	2843	2837	2849
5°	2894	2874	2877	2870	2860	2851	2857	2847	2843	2828	2807
7.5°	2955	2924	2911	2905	2905	2860	2848	2842	2809	2761	2717
10°	2980	2948	2919	2900	2876	2839	2819	2796	2742	2670	2605
12.5°	3048	2992	2957	2940	2891	2884	2861	2807	2733	2643	2550
15°	3069	3015	2988	2954	2903	2863	2827	2802	2714	2602	2486
17.5°	3084	3033	2996	2959	2914	2875	2847	2801	2718	2620	2510
20°	3102	3042	3010	2979	2939	2946	2868	2827	2745	2660	2541
22.5°	3169	3119	3114	3057	3024	2972	2950	2885	2802	2708	2602
25°	3177	3121	3085	3046	2997	2957	2915	2864	2811	2696	2584
27.5°	3198	3144	3101	3069	3004	2956	2913	2861	2769	2673	2553
30°	3203	3125	3082	3052	2984	2936	2881	2849	2710	2598	2487
32.5°	3199	3153	3093	3040	2975	2930	2873	2803	2687	2571	2450
35°	3179	3079	3025	2965	2899	2841	2789	2734	2640	2531	2412
37.5°	3250	3161	3106	3056	3007	2956	2910	2883	2787	2704	2612
40°	3311	3202	3165	3099	3048	3043	3001	2979	2917	2843	2786
42.5°	3476	3385	3334	3302	3284	3254	3247	3221	3165	3081	3044
45°	3999	3949	3904	3878	3848	3806	3783	3770	3677	3560	3455
47.5°	4932	4903	4836	4752	4653	4579	4524	4508	4315	4011	3682
50°	6120	6138	6004	5764	5544	5372	5266	5189	4922	4435	3862
52.5°	7151	7172	6954	6529	6136	5860	5653	5469	5081	4450	3722
55°	7805	7786	7469	6921	6423	6051	5817	5653	5345	4696	3849
56°	7946	7975	7669	7050	6479	6055	5814	5635	5347	4711	3827
57°	8180	8269	8030	7276	6534	6027	5743	5549	5321	4720	3714
58°	8620	8793	8455	7555	6634	5994	5622	5409	5190	4637	3584
59°	9234	9409	8986	7920	6752	5943	5458	5175	4890	4389	3384
60°	9923	10084	9621	8344	6953	5921	5273	4889	4507	4040	3149
61°	10643	10793	10272	8795	7137	5856	4988	4484	4003	3595	2859
62°	11459	11567	10978	9345	7312	5801	4789	4104	3513	3173	2618
63°	12328	12479	11860	10058	7848	5969	4710	3925	3185	2931	2567
64°	13148	13316	12682	10813	8387	6237	4793	3858	2974	2726	2529
65°	13878	14012	13367	11534	9048	6746	5104	4044	3012	2746	2478
66°	14280	14477	13882	12165	9772	7432	5706	4517	3261	2885	2350
67°	14359	14601	14155	12582	10313	8037	6293	5011	3524	2889	2080
68°	14099	14321	13928	12498	10331	8110	6406	5069	3351	2469	1588
69°	13288	13419	12970	11626	9509	7390	5747	4487	2750	1777	1063
70°	11734	11641	11158	9738	7872	5987	4563	3518	2053	1254	766
71°	9629	9396	8864	7698	6095	4592	3498	2678	1637	1100	765
72°	7524	7264	6709	5778	4574	3510	2686	2057	1361	1004	780
73°	5693	5526	4922	4177	3303	2527	1960	1546	1134	911	816
74°	4138	3891	3407	2876	2244	1739	1365	1121	912	791	785
75°	2853	2642	2303	1921	1519	1179	941	819	713	682	724
77.5°	954	879	787	631	513	412	336	305	315	344	442
80°	257	252	233	203	152	127	126	110	88	114	147



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CANDELA DISTRIBUTION (continued):

	67.5°	70°	72.5°	75°	77.5°	80°	82.5°	85°	90°	95°	105°
82.5°	78	84	84	74	59	59	47	58	49	52	66
85°	14	19	26	24	10	38	6	10	41	8	37
87.5°	0	0	13	4	2	3	0	0	0	4	2
90°	0	0	0	0	0	0	0	0	0	0	0

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CANDELA DISTRIBUTION (continued):

	115°	125°	135°	145°	155°	165°	175°	180°
0°	2832	2832	2832	2832	2832	2832	2832	2832
2.5°	2839	2840	2839	2850	2850	2855	2847	2853
5°	2782	2753	2748	2746	2738	2734	2720	2728
7.5°	2663	2623	2611	2577	2540	2513	2500	2482
10°	2511	2474	2448	2408	2363	2343	2325	2354
12.5°	2451	2385	2345	2335	2293	2235	2217	2196
15°	2392	2309	2258	2211	2149	2111	2063	2058
17.5°	2398	2311	2231	2172	2114	2068	2049	2022
20°	2405	2307	2191	2113	2047	1998	1959	1954
22.5°	2437	2279	2164	2076	1995	1972	1906	1902
25°	2419	2234	2110	2006	1903	1853	1820	1830
27.5°	2414	2231	2098	2012	1883	1823	1794	1790
30°	2337	2208	2099	1978	1833	1759	1757	1720
32.5°	2304	2135	2023	1963	1812	1701	1652	1679
35°	2220	2041	1889	1849	1706	1604	1481	1486
37.5°	2370	2130	1954	1850	1711	1542	1476	1482
40°	2507	2211	1968	1779	1632	1483	1425	1417
42.5°	2783	2363	1933	1676	1523	1465	1374	1377
45°	3224	2621	1875	1584	1467	1548	1361	1373
47.5°	3583	2861	1783	1504	1381	1537	1290	1283
50°	3643	2825	1694	1421	1325	1498	1182	1168
52.5°	3355	2545	1574	1262	1164	1250	980	965
55°	3292	2378	1586	1246	1155	1142	972	1002
56°	3192	2271	1555	1212	1106	1072	976	972
57°	3095	2198	1516	1184	1064	1068	955	980
58°	3004	2099	1484	1170	1015	960	950	981
59°	2825	1961	1409	1137	963	895	938	986
60°	2652	1761	1348	1122	929	843	925	972
61°	2417	1617	1274	1054	849	757	882	902
62°	2213	1546	1224	1024	785	688	828	846
63°	2156	1548	1299	1048	809	714	849	886
64°	2029	1512	1255	1026	787	670	828	928
65°	1941	1494	1234	989	766	649	811	874
66°	1879	1467	1200	972	737	648	782	859
67°	1725	1429	1158	939	702	563	686	806
68°	1344	1193	1060	873	623	468	568	740
69°	837	743	756	690	511	412	452	629
70°	491	341	333	373	274	335	313	494
71°	451	267	194	176	152	409	299	446
72°	458	261	188	148	128	499	283	380
73°	459	259	220	135	130	553	296	306
74°	430	263	168	142	103	556	274	301
75°	411	259	158	127	95	529	224	241
77.5°	264	151	112	64	74	372	142	127
80°	108	37	19	0	0	156	20	5



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CANDELA DISTRIBUTION (continued):

	115°	125°	135°	145°	155°	165°	175°	180°
82.5°	41	42	35	39	9	31	17	17
85°	9	23	2	0	26	11	7	39
87.5°	5	5	2	0	0	0	1	4
90°	0	0	0	0	0	0	0	0

(END OF REPORT)