

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: P596112

Luminaire Tested: **MSA-SA4A-AMB-U-SLR-HSS**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596112
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-26)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-AMB-U-SLR-HSS
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH
AND SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (64) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1736 lumens
Efficiency: N/A
Efficacy: 22.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B0 - U0 - G1

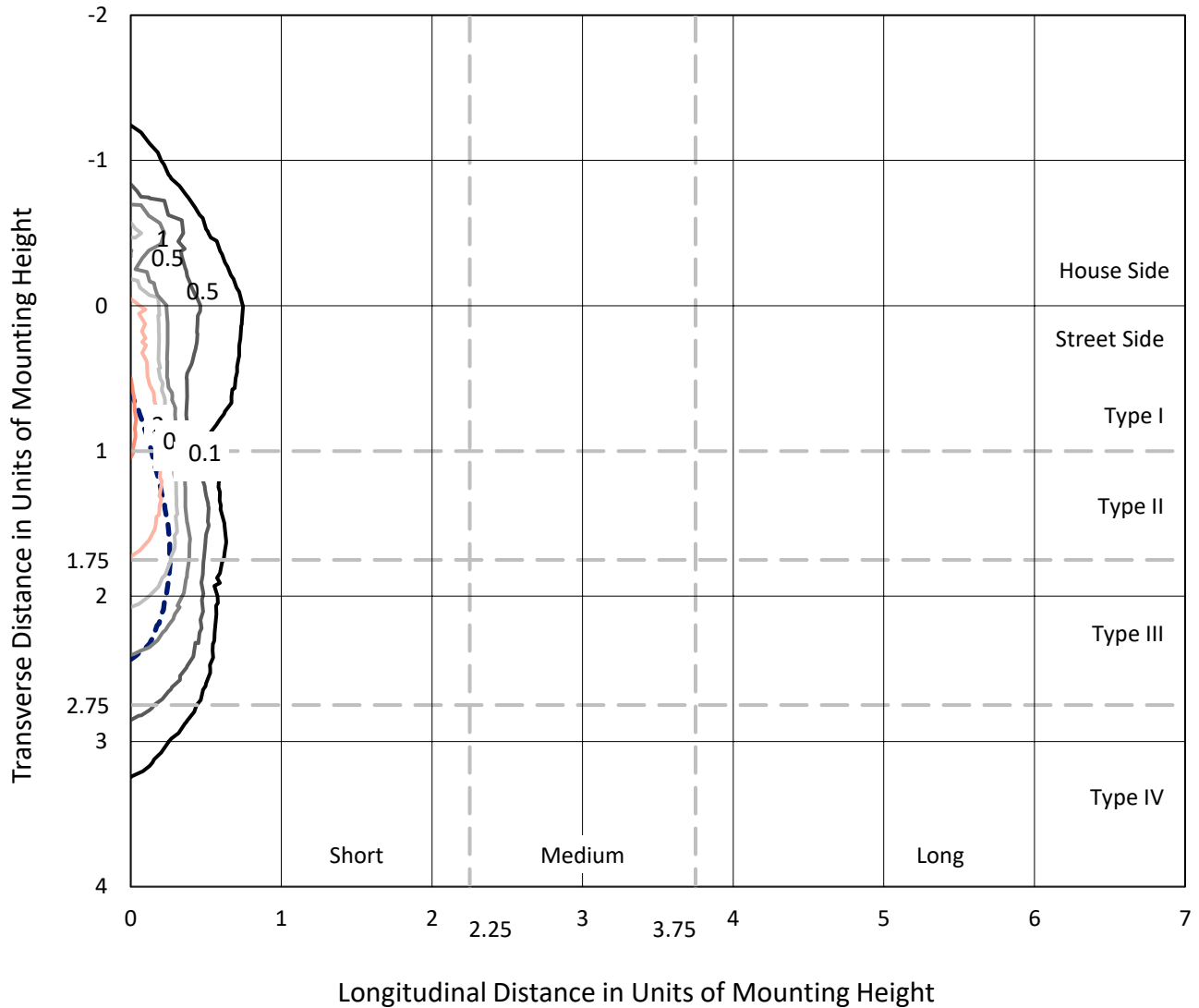
Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

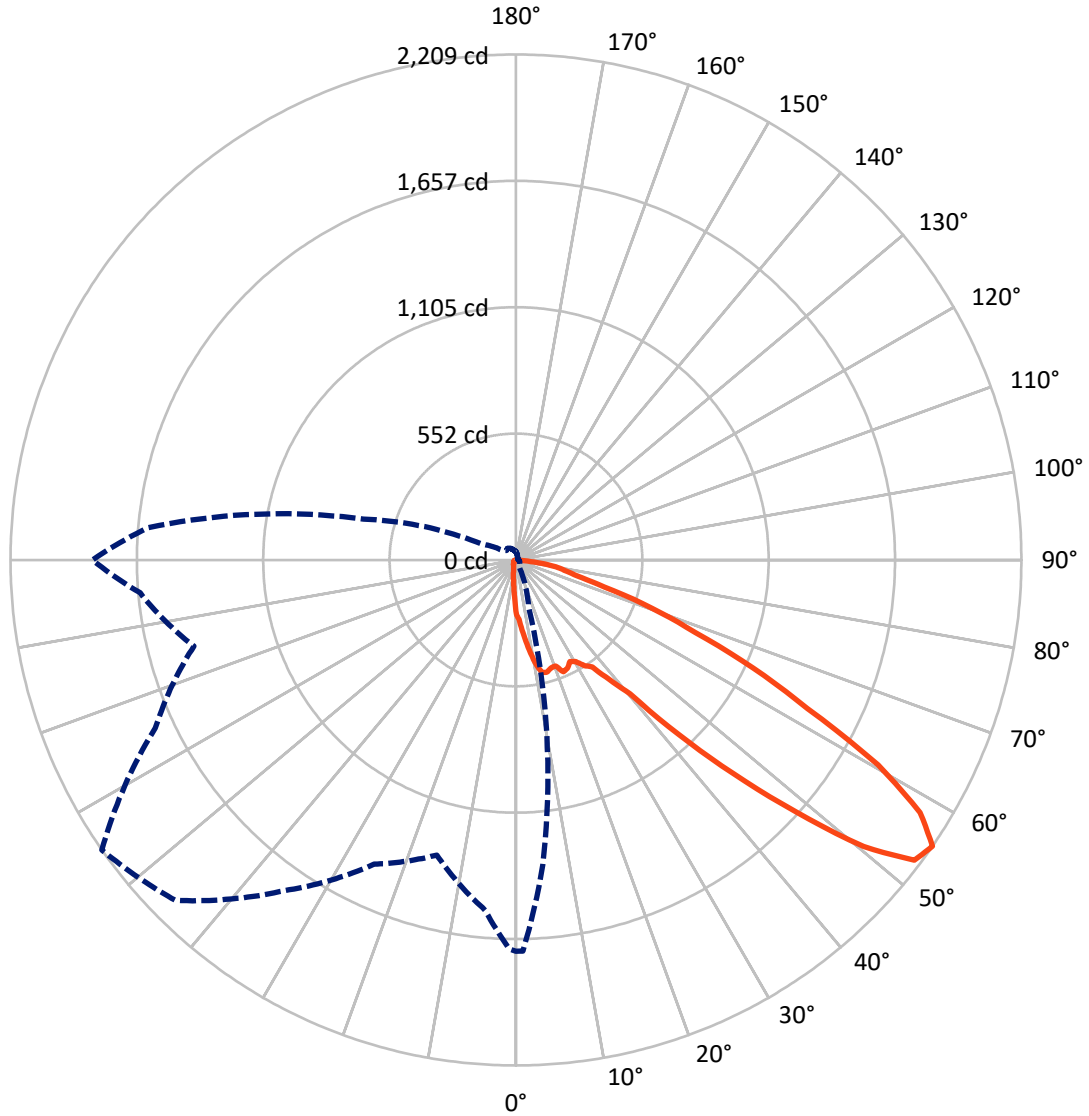
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.7 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 305-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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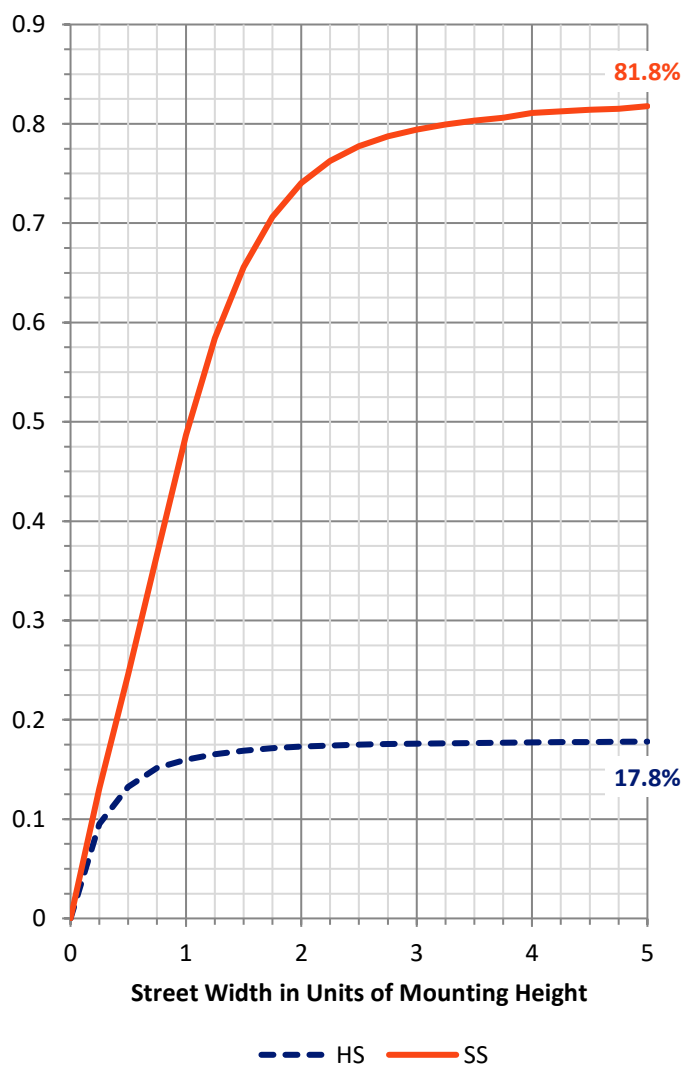
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	311.4	0.0	311.4
	% Fixture	17.9	0.0	17.9
Street Side	Lumens	1424.6	0.0	1424.6
	% Fixture	82.1	0.0	82.1
Total	Lumens	1736.0	0.0	1736.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.5	1.2
10°-20°	55.9	3.2
20°-30°	123.7	7.1
30°-40°	186.6	10.7
40°-50°	336.8	19.4
50°-60°	485.6	28.0
60°-70°	376.5	21.7
70°-80°	132.2	7.6
80°-90°	17.3	1.0
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°	1736.0	100.0
0°-180°	1736.0	100.0

Coefficient of Utilization

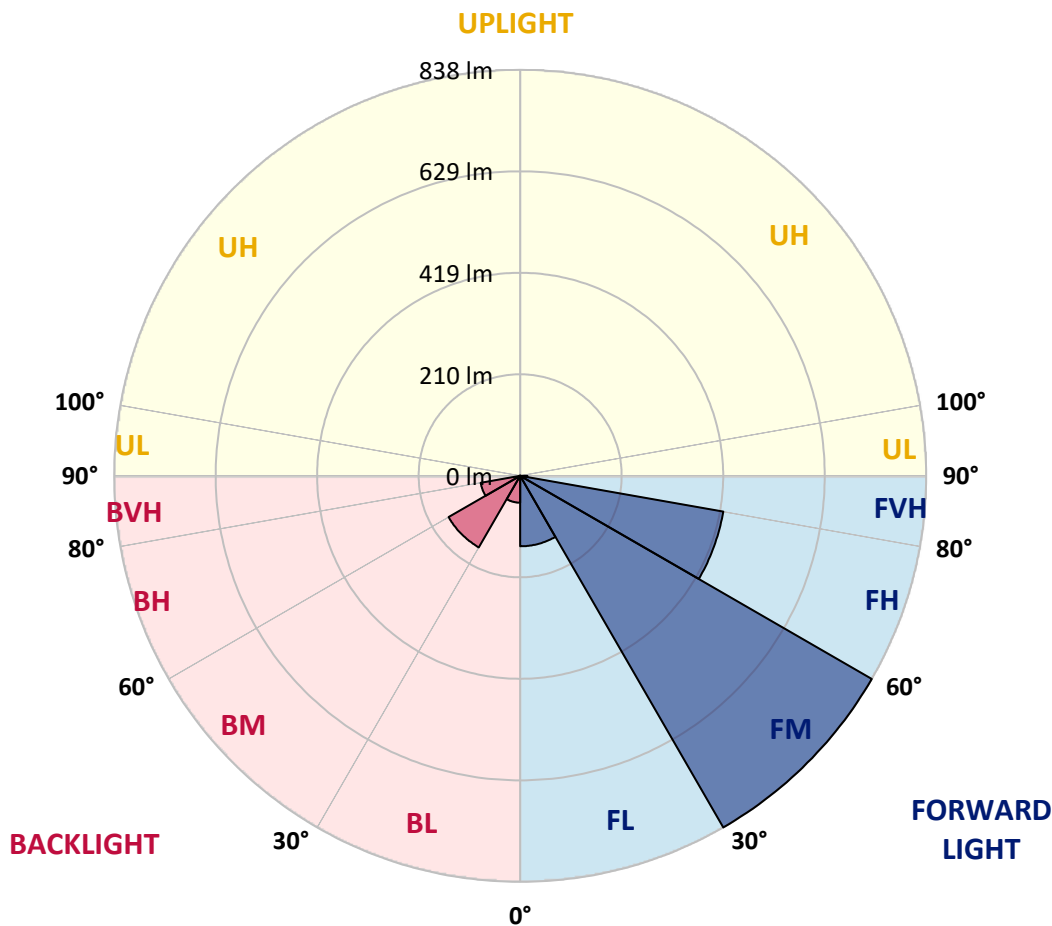


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	145.5	8.4			
FM (30°-60°)	838.4	48.3			
FH (60°-80°)	425.9	24.5			G0/660
FVH (80°-90°)	14.8	0.9			G1/100
BL (0°-30°)	55.5	3.2	B0/110		
BM (30°-60°)	170.6	9.8	B0/220		
BH (60°-80°)	82.7	4.8	B0/110		G0/110
BVH (80°-90°)	2.5	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1
 Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	238	238	238	238	238	238	238	238	238	238	238
2.5°	307	316	281	310	266	258	276	259	225	235	199
5°	376	380	341	316	278	239	208	198	193	195	183
7.5°	364	369	328	288	227	186	162	154	153	154	155
10°	307	311	276	239	196	177	158	136	120	107	97
12.5°	293	294	268	232	194	169	138	108	82	64	56
15°	301	298	275	231	187	141	100	69	53	42	38
17.5°	344	344	317	234	165	108	68	51	37	33	33
20°	456	457	387	227	137	78	51	38	32	30	30
22.5°	603	611	495	228	108	59	40	33	29	28	28
25°	713	710	553	226	88	46	35	30	28	27	27
27.5°	695	710	562	215	75	40	32	28	26	24	25
30°	825	820	691	219	65	35	29	27	25	23	23
32.5°	923	934	741	216	53	32	28	25	23	22	22
35°	1014	1019	831	203	49	31	26	24	22	20	20
37.5°	1154	1160	874	194	46	30	26	23	21	19	19
40°	1246	1259	953	179	41	31	26	23	20	18	17
42.5°	1390	1402	1031	174	36	28	25	22	19	17	16
45°	1492	1490	1103	172	33	27	27	21	19	16	14
47.5°	1545	1566	1167	178	31	26	27	21	17	15	13
50°	1580	1590	1240	190	29	25	26	22	17	15	13
52.5°	1636	1635	1305	211	29	25	24	23	18	15	13
55°	1710	1710	1339	214	30	25	23	21	18	15	12
57.5°	1699	1716	1345	201	30	25	23	21	18	14	11
60°	1586	1596	1255	171	29	24	21	20	17	13	10
62.5°	1405	1395	1087	130	27	22	20	18	15	12	9
65°	1134	1177	889	90	24	20	18	16	14	11	8
67.5°	871	914	654	60	21	19	17	15	13	10	7
70°	603	608	425	38	20	19	17	14	12	10	7
72.5°	413	413	250	28	18	16	14	12	11	9	7
75°	272	287	165	21	16	14	11	12	12	10	8
77.5°	197	208	124	17	15	13	10	12	11	9	6
80°	138	146	70	12	11	10	9	9	8	7	4
82.5°	80	89	31	7	8	7	4	7	7	6	3
85°	17	22	7	5	6	5	3	5	6	5	3
87.5°	2	3	3	4	5	4	4	6	6	5	4
90°	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°	238	238	238	238	238	238	238	238	238	238	238
2.5°	233	241	201	169	161	155	145	141	170	171	213
5°	202	194	179	153	117	98	105	127	151	158	185
7.5°	154	135	126	113	88	63	64	89	111	120	135
10°	93	89	82	75	67	60	53	55	71	85	97
12.5°	53	52	51	52	50	49	46	47	57	64	72
15°	37	36	37	37	39	40	42	41	46	49	52
17.5°	31	30	31	31	33	36	37	38	40	45	47
20°	29	29	28	27	30	32	34	37	50	54	54
22.5°	28	27	26	25	27	29	31	48	76	84	74
25°	27	26	25	24	25	27	30	68	99	125	113
27.5°	25	24	23	23	23	25	30	74	120	177	194
30°	23	23	21	21	22	22	27	62	122	203	245
32.5°	22	21	19	19	20	21	24	34	64	102	119
35°	20	19	18	18	18	19	22	25	34	47	46
37.5°	19	18	17	16	17	18	20	24	29	39	44
40°	17	16	16	15	16	18	19	23	27	38	44
42.5°	15	15	14	14	15	16	17	21	26	37	44
45°	14	14	13	13	13	15	15	19	25	37	43
47.5°	13	13	12	12	13	14	15	18	24	36	43
50°	12	12	11	11	12	13	14	17	23	35	42
52.5°	12	11	10	10	11	12	14	16	22	33	39
55°	11	11	10	9	10	12	13	16	22	31	37
57.5°	10	10	9	9	10	11	12	14	20	30	35
60°	9	9	8	8	9	10	11	13	19	28	33
62.5°	7	8	8	7	8	9	10	12	18	26	30
65°	6	7	7	7	7	8	9	11	16	24	27
67.5°	6	7	6	6	6	7	8	10	15	22	24
70°	5	6	6	6	6	6	7	9	14	21	22
72.5°	5	6	6	6	5	5	6	8	12	19	20
75°	6	7	7	7	4	4	5	8	11	16	16
77.5°	3	5	5	5	4	2	4	7	11	14	13
80°	1	3	4	4	3	1	3	5	8	10	10
82.5°	1	3	4	3	2	0	1	3	4	7	6
85°	1	3	3	3	1	0	1	2	2	4	3
87.5°	1	3	3	3	2	0	1	1	2	1	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	238	238	238	238	238	238	238	238	238	238	238
2.5°	213	212	208	219	233	227	234	255	260	330	324
5°	185	200	194	184	185	198	247	298	305	375	370
7.5°	134	144	151	157	156	168	230	296	329	379	373
10°	99	116	125	141	161	169	195	261	307	345	356
12.5°	72	86	107	126	153	175	198	253	286	306	341
15°	55	63	75	98	129	157	194	252	316	350	380
17.5°	49	54	58	70	101	146	200	266	386	428	462
20°	52	53	56	66	85	128	177	313	465	519	573
22.5°	62	57	61	71	87	128	197	387	660	770	801
25°	100	72	83	110	136	170	236	455	811	951	1011
27.5°	179	196	206	218	202	206	224	393	741	867	889
30°	270	267	232	180	147	131	155	357	775	862	895
32.5°	133	97	70	66	69	93	130	378	882	946	961
35°	48	48	50	55	64	88	136	387	973	1045	1027
37.5°	46	47	49	55	64	90	144	403	1121	1238	1141
40°	46	49	50	55	63	88	158	420	1227	1381	1273
42.5°	46	50	52	56	63	84	164	444	1350	1499	1388
45°	46	52	55	59	63	79	169	477	1404	1644	1444
47.5°	47	54	58	62	64	74	169	537	1488	1704	1505
50°	46	54	58	64	62	72	159	585	1552	1759	1546
52.5°	42	50	55	63	61	71	159	631	1591	1797	1583
55°	39	46	56	63	58	70	164	689	1615	1851	1649
57.5°	38	45	55	61	56	70	175	712	1587	1871	1703
60°	36	44	56	55	54	75	179	702	1470	1811	1704
62.5°	33	40	54	50	52	75	180	655	1286	1649	1619
65°	29	35	45	46	47	72	173	558	1099	1426	1450
67.5°	26	31	38	41	41	68	162	443	844	1216	1259
70°	23	27	33	35	36	60	147	325	593	882	1007
72.5°	20	23	28	29	28	50	115	227	337	580	691
75°	17	20	22	22	20	33	77	134	226	331	406
77.5°	15	17	18	17	16	22	41	65	161	203	239
80°	12	14	14	12	11	15	19	28	80	104	115
82.5°	7	8	9	8	6	10	12	13	31	40	43
85°	5	6	5	4	1	5	6	4	0	0	1
87.5°	2	3	2	2	0	0	1	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	238	238	238	238	238	238	238	238	238	238
2.5°	297	271	259	272	269	251	262	269	318	307
5°	379	343	318	290	290	319	383	330	382	376
7.5°	422	413	384	391	391	409	410	366	382	364
10°	388	414	456	461	431	417	410	343	321	307
12.5°	426	469	504	519	491	442	389	335	309	293
15°	432	481	509	506	487	460	408	340	318	301
17.5°	487	506	496	492	490	471	468	423	374	344
20°	546	497	494	479	483	500	580	575	504	456
22.5°	659	582	531	524	527	628	788	731	656	603
25°	829	614	524	513	550	705	891	865	775	713
27.5°	768	645	502	452	502	697	756	812	774	695
30°	718	619	515	453	518	634	731	863	837	825
32.5°	766	632	550	486	504	656	794	950	974	923
35°	841	696	574	525	583	704	879	1007	1052	1014
37.5°	939	757	662	600	653	785	941	1165	1221	1154
40°	1044	880	769	754	764	866	979	1289	1326	1246
42.5°	1138	1029	1043	968	923	973	1045	1377	1468	1390
45°	1215	1205	1329	1370	1165	1118	1125	1421	1575	1492
47.5°	1273	1407	1644	1645	1427	1249	1173	1465	1601	1545
50°	1318	1539	1969	1910	1549	1320	1220	1439	1596	1580
52.5°	1377	1686	2180	2091	1690	1391	1247	1475	1637	1636
55°	1457	1739	2209	2104	1764	1467	1335	1537	1700	1710
57.5°	1500	1673	2083	1925	1710	1432	1348	1557	1710	1699
60°	1498	1507	1818	1657	1495	1353	1344	1492	1625	1586
62.5°	1439	1266	1429	1360	1233	1168	1289	1374	1435	1405
65°	1367	1096	1139	1108	1000	956	1153	1178	1211	1134
67.5°	1239	924	844	832	771	748	927	945	941	871
70°	1058	733	632	557	524	516	736	709	701	603
72.5°	841	543	403	312	319	364	592	523	486	413
75°	628	349	271	220	224	280	442	361	349	272
77.5°	389	247	216	184	199	209	283	238	228	197
80°	200	167	177	140	151	133	164	155	163	138
82.5°	82	93	94	56	78	82	109	101	100	80
85°	41	31	24	16	28	31	41	26	30	17
87.5°	0	1	1	1	3	3	6	4	3	2
90°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)