

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: P95397

Luminaire Tested: **VFS-K-B40-3-LED-E1-NSR-SG**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P95397  
REPORT SCALED FROM IESNA LM79-08 TEST DATA (P22801)  
Test Lab: INNOVATION CENTER  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: VFS-K-B40-3-LED-E1-NSR-SG  
Description: ARCHITECTURAL FLOOD LUMINAIRE  
NARROW SYMMETRIC ROUND WITH SOFTENING GLASS DISTRIBUTION  
WITH 40 LED'S, 350mA DRIVE CURRENT  
Light Source: -  
Ballast/Driver: -

**Summary**

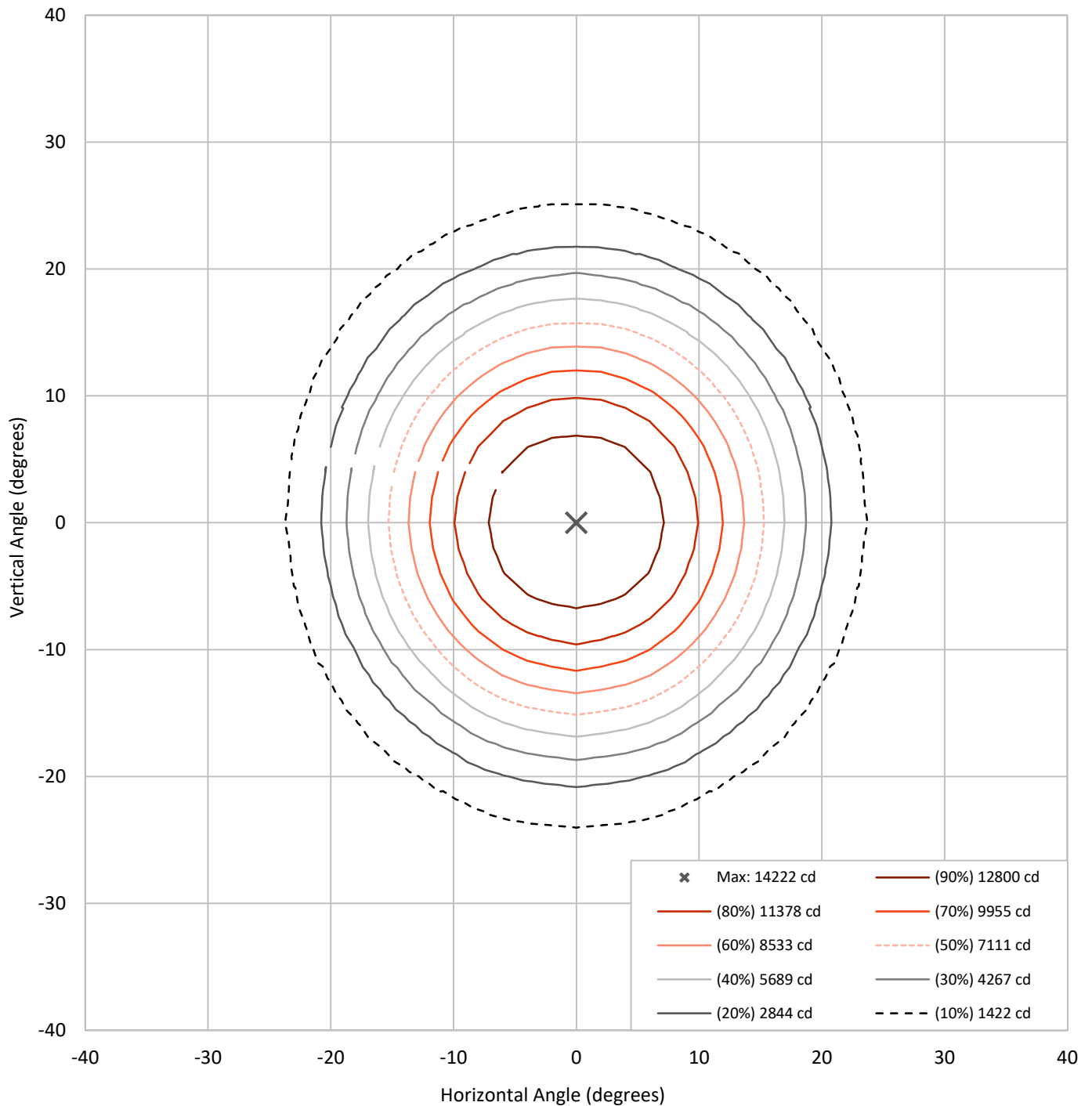
Lumens per Lamp:	N/A	NEMA Type:	4H x 4V
Luminaire Lumens:	4017 lumens	Max Intensity:	14222 candela
Efficiency:	N/A	Max Intensity Angle:	0°H x 0°V
Efficacy:	89.3 lumens/watt		
Luminous Opening:	(L: 0.83 ' x W: 0 ' x H: 0.5 ')		
Beam Angle (50%):	30.6°H x 30.9°V	Field Angle (10%):	47.2°H x 49°V
Beam Lumens:	2373.1 lumens	Field Lumens:	3558.1 lumens
Beam Efficiency:	59.1%	Field Efficiency:	88.6%

Input Watts (W): 45  
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: 25 FT



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### Iso-Candela Plot





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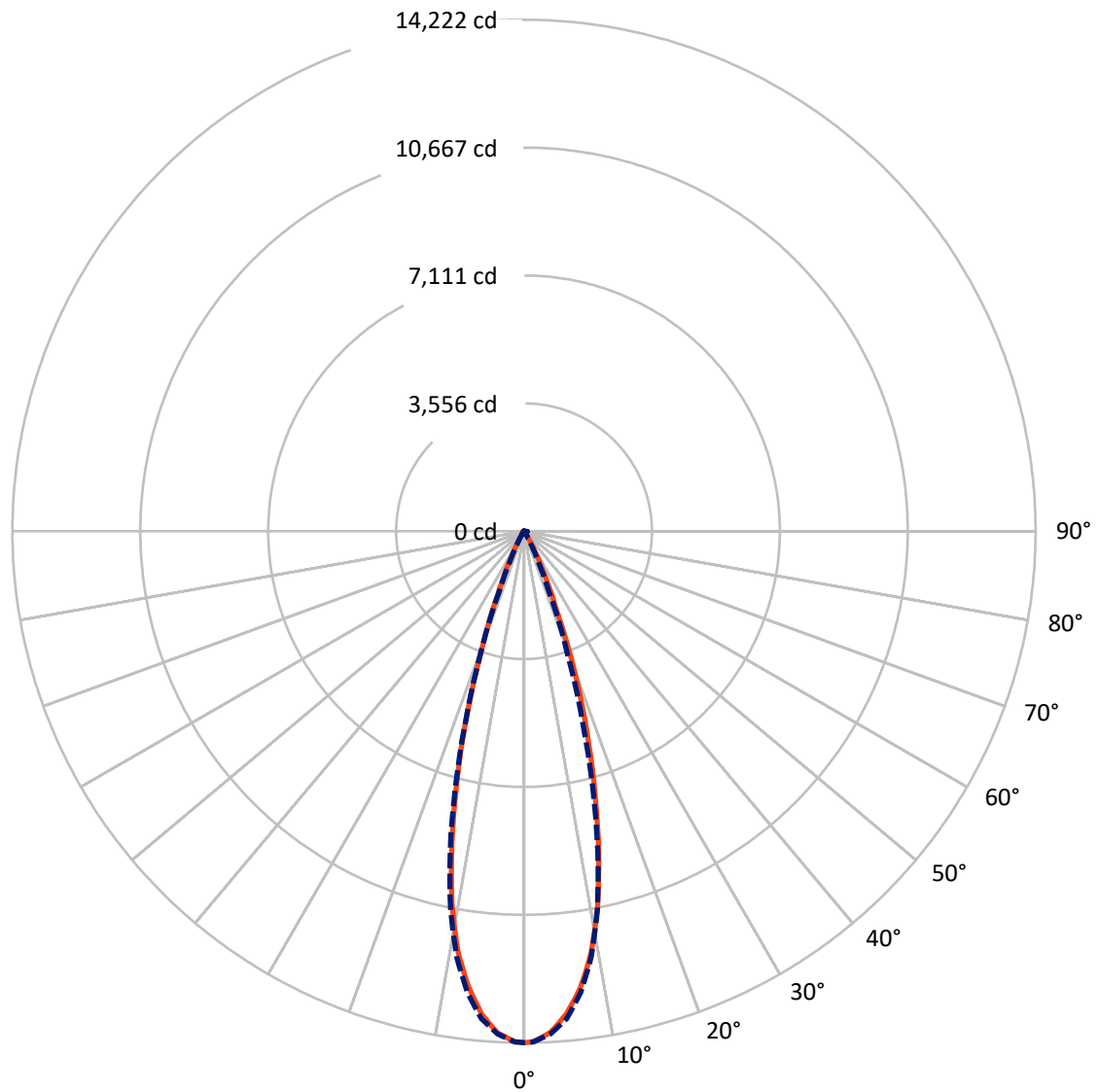
### Lumen Table

90	1.7	4.6	5.1	3.5	1.6	3.5	5.1	4.6	1.7										
80	1.7	4.6	5.1	3.5	1.6	3.5	5.1	4.6	1.7										
70	1.8	1.0	0.9	0.6	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.5	0.6	0.9	1.0	1.8			
60		0.7	0.6	0.4	0.5	0.8	0.9	0.9	0.9	0.9	0.8	0.5	0.4	0.6	0.7				
50	1.5	0.6	0.4	0.4	0.7	1.0	1.3	1.4	1.4	1.3	1.0	0.7	0.4	0.4	0.6	1.5			
40		0.4	0.3	0.5	0.9	1.5	2.7	4.7	4.7	2.7	1.5	0.9	0.5	0.3	0.4				
30	1.3	0.3	0.3	0.5	1.2	3.6	17.8	44.3	44.3	17.8	3.6	1.2	0.5	0.3	0.3	1.3			
20		0.2	0.2	0.5	1.7	13.1	92.3	208.7	208.7	92.3	13.1	1.7	0.5	0.2	0.2				
10	1.1	0.2	0.2	0.5	2.1	29.2	194.5	374.0	374.0	194.5	29.2	2.1	0.5	0.2	0.2	1.1			
0		0.2	0.2	0.5	2.1	27.6	189.1	370.8	370.8	189.1	27.6	2.1	0.5	0.2	0.2				
-10	1.2	0.2	0.2	0.5	1.5	10.8	80.7	192.7	192.7	80.7	10.8	1.5	0.5	0.2	0.2	1.2			
-20		0.3	0.3	0.5	1.1	2.9	13.4	34.5	34.5	13.4	2.9	1.1	0.5	0.3	0.3				
-30	1.5	0.4	0.3	0.5	0.8	1.4	2.3	3.4	3.4	2.3	1.4	0.8	0.5	0.3	0.4	1.5			
-40		0.6	0.4	0.4	0.7	1.0	1.3	1.3	1.3	1.3	1.0	0.7	0.4	0.4	0.6				
-50	1.8	0.8	0.6	0.4	0.5	0.7	0.9	0.8	0.8	0.9	0.7	0.5	0.4	0.6	0.8	1.8			
-60		1.0	0.9	0.7	0.5	0.5	0.7	0.6	0.6	0.7	0.5	0.5	0.7	0.9	1.0				
-70	1.7	4.6	5.2	3.5	1.6	3.5	5.2	4.6	1.7						1.7				
-80		4.6	5.2	3.5	1.6	3.5	5.2	4.6	1.7										
-90	1.7	4.6	5.2	3.5	1.6	3.5	5.2	4.6	1.7										
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90

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### Luminous Intensity Polar Plot

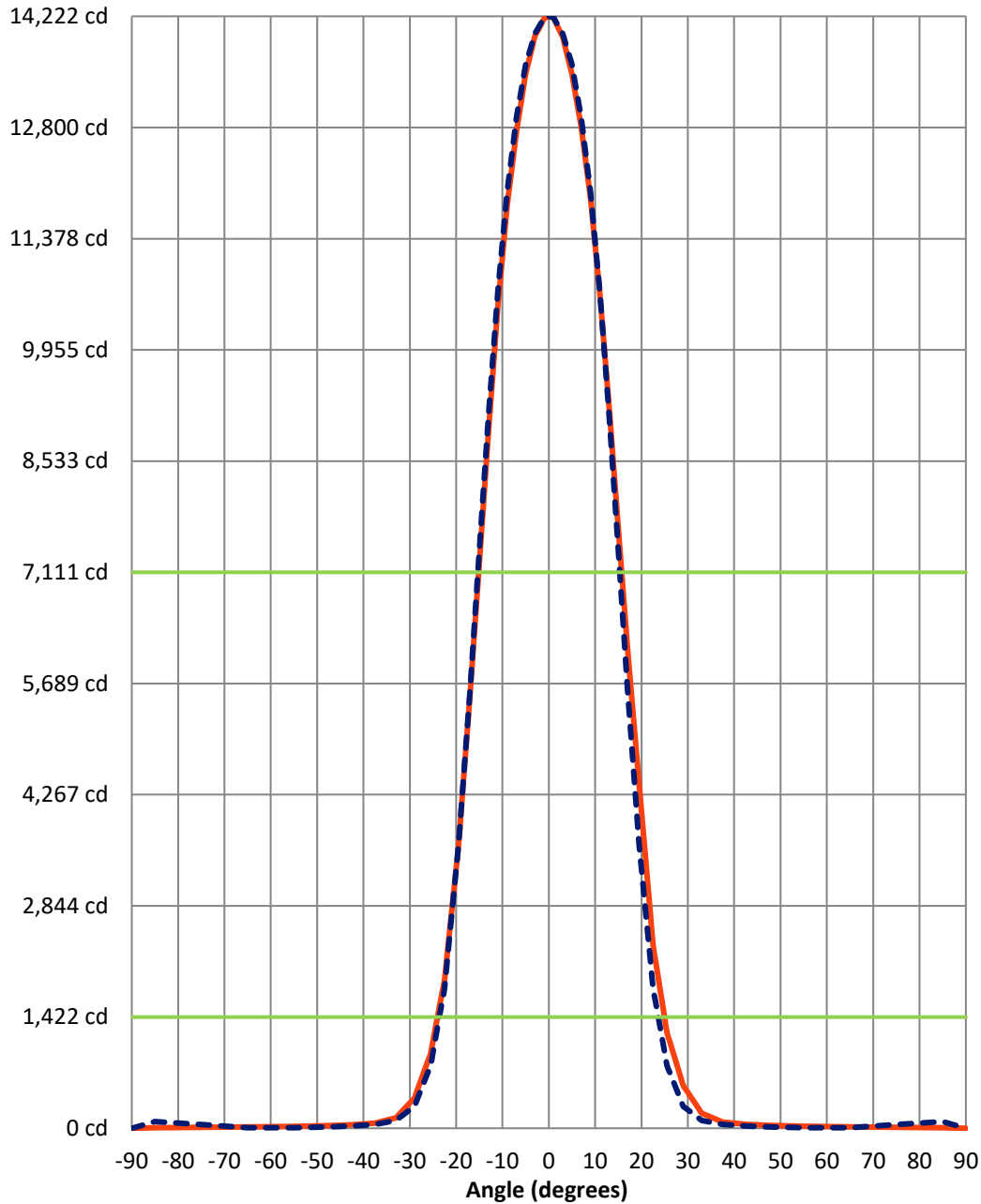


— Vertical Distribution Through 0-Deg      - - - Horizontal Distribution Through 0-Deg

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### Luminous Intensity Plot



**Beam:**  
 H Angle: 30.6°  
 V Angle: 30.9°  
 Lumens: 2373.1  
 Efficiency: 59.1%

**Field:**  
 H Angle: 47.2°  
 V Angle: 49°  
 Lumens: 3558.1  
 Efficiency: 88.6%

**Spill:**  
 Lumens: 458.9  
 Efficiency: 11.4%

— Vertical Distribution through 0-Deg  
 - - Horizontal Distribution through 0-Deg



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FIELD  
BEAM

**CANDELA DISTRIBUTION:**

	0°	1°	3°	5°	7°	9°	11°	13°	15°	17°	19.5°
90°	0	0	0	0	0	0	0	0	0	0	0
85°	7	10	15	12	11	13	19	30	42	53	63
75°	12	12	15	18	20	20	18	17	16	16	15
65°	18	18	19	21	23	25	26	25	25	24	22
55°	26	25	26	27	29	30	31	32	32	32	30
47.5°	37	37	37	38	39	40	40	41	40	40	38
42.5°	51	50	50	50	51	51	51	50	49	48	46
37.5°	80	79	78	77	76	74	71	67	64	61	56
33°	192	186	181	170	157	138	126	111	99	87	75
29°	548	542	523	488	439	325	241	226	195	154	118
25.5°	1225	1245	1203	1103	984	838	703	560	427	298	196
22.5°	2341	2388	2286	2123	1870	1612	1356	1076	811	591	349
19.5°	4394	4274	4112	3830	3374	2906	2404	1898	1418	1028	650
17°	6126	6189	5989	5633	5043	4394	3668	2921	2183	1568	974
15°	7666	7734	7517	7112	6490	5711	4821	3884	2932	2111	1306
13°	9235	9300	9036	8595	7921	7034	6015	4920	3775	2736	1689
11°	10686	10739	10477	10004	9229	8327	7200	5968	4642	3409	2112
9°	11893	11926	11698	11249	10489	9495	8274	6928	5471	4062	2536
7°	12802	12834	12633	12229	11504	10486	9212	7767	6208	4639	2933
5°	13480	13512	13326	12945	12253	11251	9960	8444	6786	5128	3264
3°	13955	13963	13775	13382	12673	11734	10451	8897	7187	5434	3496
1°	14201	14186	13972	13571	12894	11952	10678	9116	7383	5593	3612
0°	14222	14207	13999	13602	12920	11972	10701	9128	7388	5598	3616
-1°	14193	14171	13967	13572	12883	11937	10664	9080	7331	5551	3577
-3°	13968	13937	13758	13343	12647	11656	10369	8786	7070	5321	3400
-5°	13486	13448	13273	12885	12163	11109	9797	8218	6578	4937	3127
-7°	12739	12684	12499	12102	11371	10316	8962	7449	5934	4404	2755
-9°	11795	11709	11479	10969	10200	9226	7913	6506	5151	3714	2324
-11°	10507	10405	10153	9704	8923	7939	6711	5439	4266	3066	1881
-13°	8924	8806	8575	8175	7470	6558	5441	4347	3365	2393	1458
-15°	7227	7113	6912	6561	5923	5128	4192	3304	2531	1788	1092
-17°	5550	5435	5259	4980	4455	3798	3051	2382	1820	1290	797
-19.5°	3604	3515	3388	3193	2836	2384	1898	1484	1137	812	511
-22.5°	1902	1850	1800	1693	1504	1269	1032	827	624	375	226
-25.5°	959	932	906	852	748	620	508	410	289	210	160
-29°	387	376	368	249	235	222	211	181	144	118	95
-33°	134	131	130	125	115	104	98	91	83	75	67
-37.5°	66	66	66	66	65	64	63	61	59	56	53
-42.5°	45	46	46	46	47	47	47	47	47	46	44
-47.5°	34	34	35	36	36	38	38	39	39	38	37
-55°	24	24	25	26	28	29	30	31	31	31	30
-65°	17	17	18	20	22	24	25	25	24	23	22
-75°	12	12	15	18	20	19	18	17	16	16	15
-85°	7	11	15	12	11	13	19	30	42	53	63
-90°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	22.5°	25.5°	29°	33°	37.5°	42.5°	47.5°	55°	65°	75°	85°
90°	0	0	0	0	0	0	0	0	0	0	0
85°	72	79	83	87	90	92	94	94	95	96	96
75°	15	17	19	29	41	55	66	80	89	94	96
65°	21	20	19	18	18	21	32	52	76	90	95
55°	29	27	24	22	20	18	19	30	59	84	95
47.5°	36	33	30	26	23	20	18	21	47	80	94
42.5°	42	39	35	30	26	22	19	19	39	76	94
37.5°	51	46	40	34	29	24	20	18	33	72	94
33°	64	55	47	39	32	25	21	16	30	68	93
29°	87	68	55	44	35	27	21	16	26	65	92
25.5°	136	92	66	49	37	28	21	15	23	62	91
22.5°	197	128	80	55	40	29	21	14	21	60	90
19.5°	325	176	99	61	42	29	20	13	18	57	89
17°	436	211	121	67	43	29	20	12	16	55	89
15°	678	232	143	72	44	30	20	11	15	53	88
13°	865	241	167	78	46	30	19	11	13	52	88
11°	1069	437	185	83	47	30	19	10	12	51	87
9°	1279	493	197	88	47	29	18	9	10	50	87
7°	1473	543	206	92	48	29	18	8	9	49	86
5°	1634	584	215	96	49	29	18	7	8	48	86
3°	1745	610	220	98	49	29	17	7	8	48	85
1°	1797	619	221	99	49	29	17	7	7	48	85
0°	1793	803	281	100	49	29	17	7	7	48	85
-1°	1766	609	220	99	48	29	17	7	7	48	85
-3°	1671	582	216	96	48	28	17	7	7	48	85
-5°	1530	541	211	92	47	28	17	7	8	48	85
-7°	1340	494	201	87	46	28	17	8	8	49	86
-9°	1134	438	190	82	45	28	17	8	9	49	86
-11°	925	242	169	76	44	28	17	8	10	50	86
-13°	728	235	147	71	43	28	18	9	11	51	87
-15°	445	225	124	66	41	27	18	10	13	52	87
-17°	356	193	105	61	40	27	18	10	14	53	88
-19.5°	222	151	85	55	39	27	18	11	16	55	88
-22.5°	164	105	70	50	37	27	19	13	19	58	89
-25.5°	109	79	59	46	35	26	20	14	22	61	90
-29°	75	62	51	42	33	26	20	16	26	64	91
-33°	59	52	45	38	31	25	20	17	30	68	92
-37.5°	49	45	40	34	29	24	20	18	34	72	93
-42.5°	41	38	34	30	26	22	19	20	41	76	94
-47.5°	35	33	30	26	23	20	19	22	48	81	94
-55°	28	26	24	22	20	19	20	30	60	85	95
-65°	20	19	18	18	18	22	32	53	77	90	95
-75°	15	16	20	29	41	56	67	81	89	94	96
-85°	72	79	84	87	90	92	94	95	95	96	96
-90°	0	0	0	0	0	0	0	0	0	0	0





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**CANDELA DISTRIBUTION (continued):**

	90°
90°	0
85°	0
75°	0
65°	0
55°	0
47.5°	0
42.5°	0
37.5°	0
33°	0
29°	0
25.5°	0
22.5°	0
19.5°	0
17°	0
15°	0
13°	0
11°	0
9°	0
7°	0
5°	0
3°	0
1°	0
0°	0
-1°	0
-3°	0
-5°	0
-7°	0
-9°	0
-11°	0
-13°	0
-15°	0
-17°	0
-19.5°	0
-22.5°	0
-25.5°	0
-29°	0
-33°	0
-37.5°	0
-42.5°	0
-47.5°	0
-55°	0
-65°	0
-75°	0
-85°	0
-90°	0

(END OF REPORT)