

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: LUMARK

Report Number: P23086

Luminaire Tested: **XTOR9ARL-N**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P23086
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: XTOR9ARL-N
Description: LUMARK CROSSTOUR MAXX LED 85W - 3500K, REFRACTIVE LENS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5702.3 lumens
Efficiency: N/A
Efficacy: 69.5 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.71' x L: 0.33' x H: 0.17')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B1 - U3 - G2

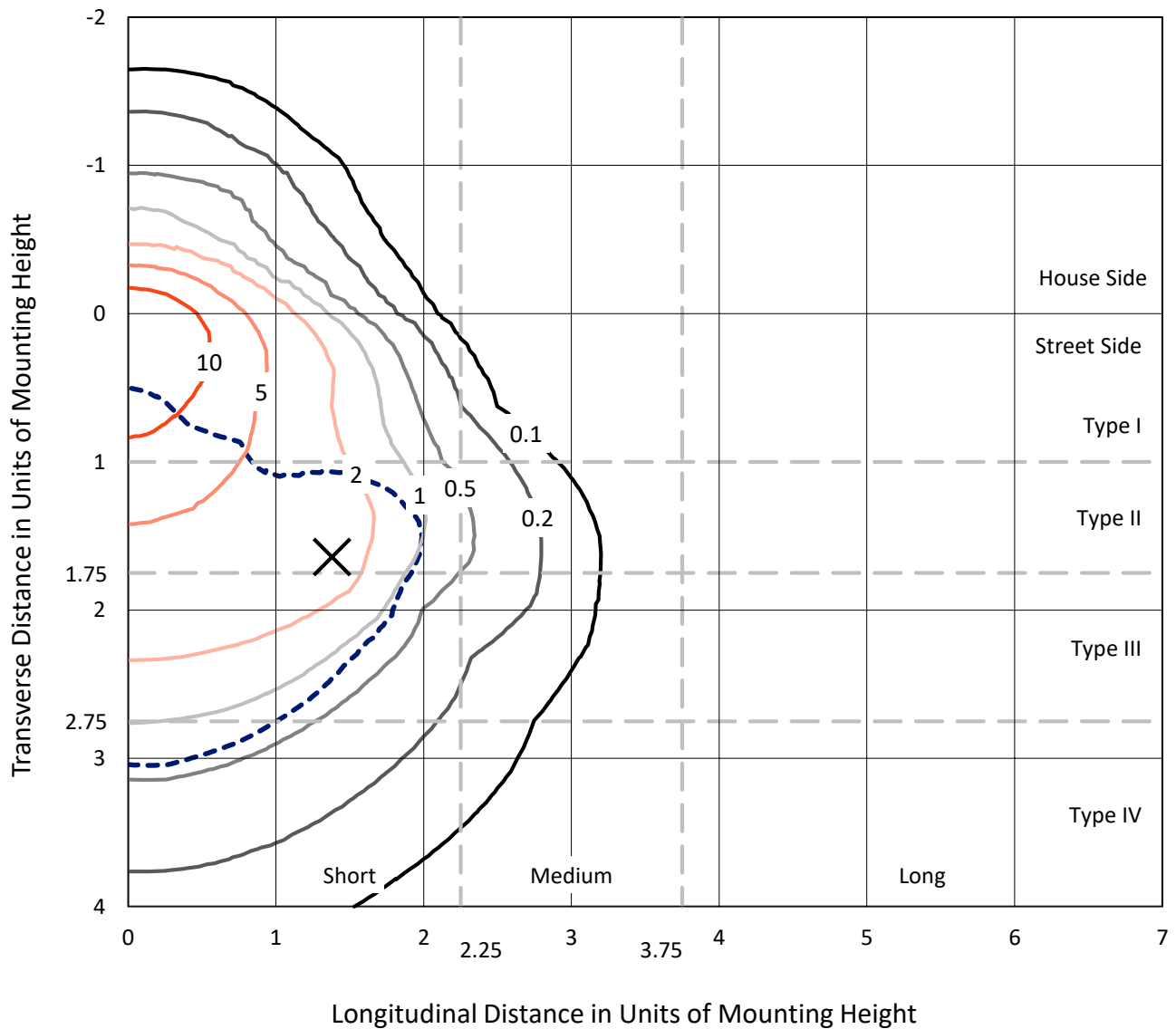
Input Watts (W): 82
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

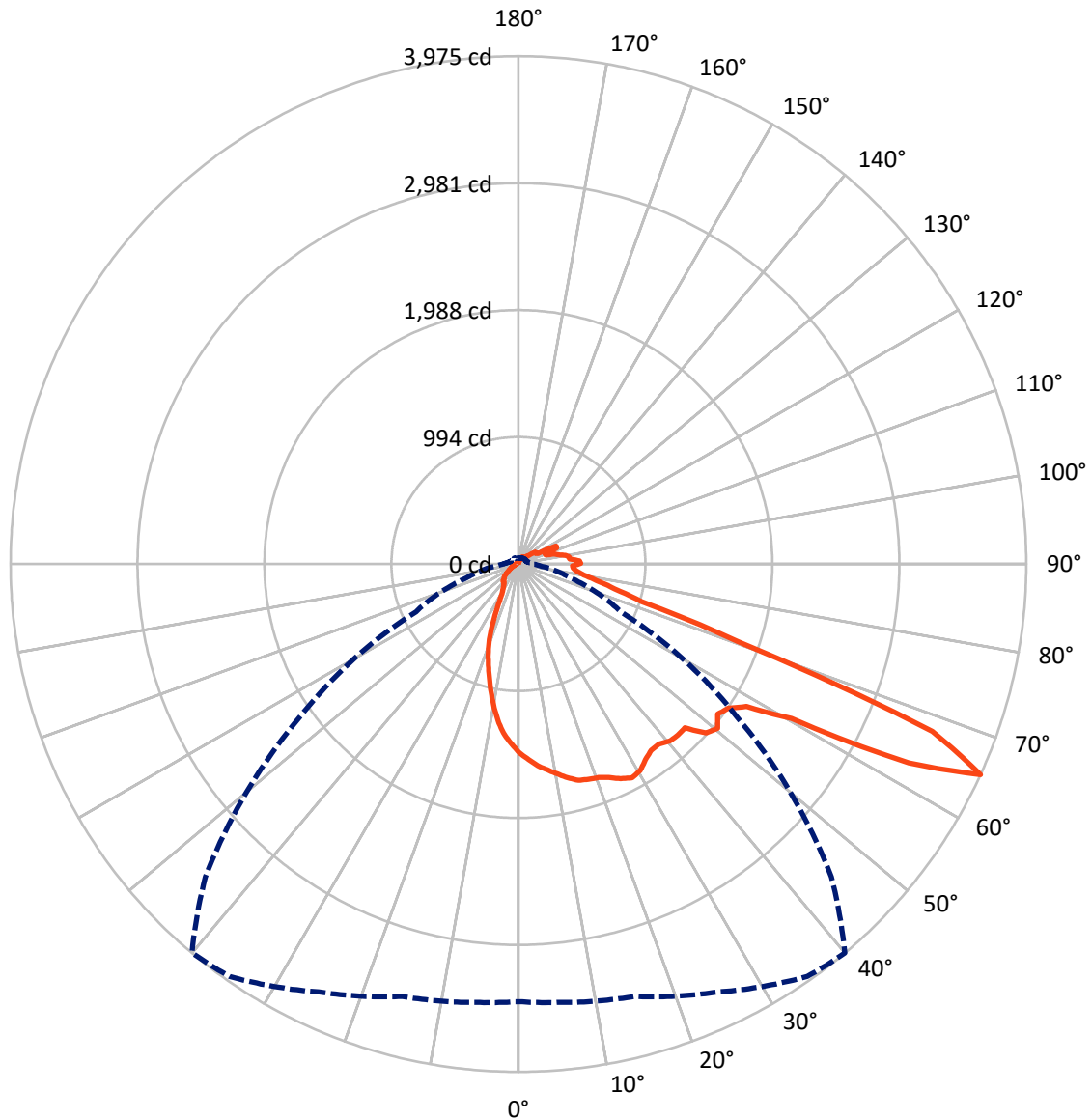
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.4 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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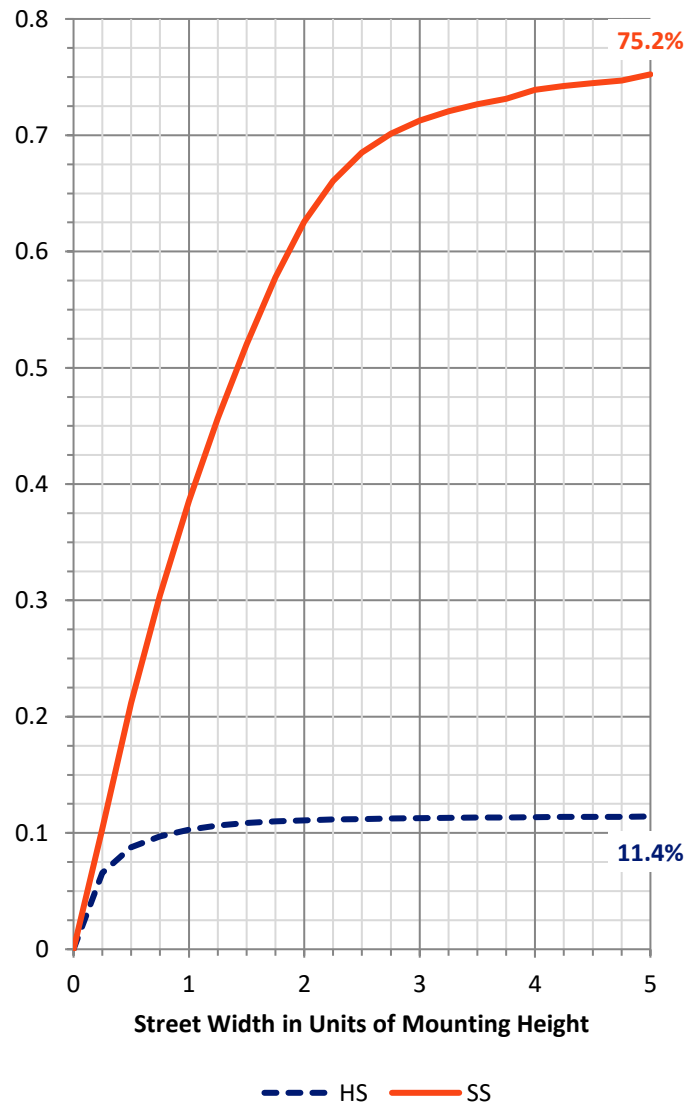
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	663.4	41.5	704.9
	% Fixture	11.6	0.7	12.4
Street Side	Lumens	4449.5	547.9	4997.4
	% Fixture	78.0	9.6	87.6
Total	Lumens	5112.9	589.5	5702.3
	% Fixture	89.7	10.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.7	2.4
10°-20°	382.6	6.7
20°-30°	548.5	9.6
30°-40°	666.1	11.7
40°-50°	768.2	13.5
50°-60°	863.5	15.1
60°-70°	1097.7	19.3
70°-80°	424.2	7.4
80°-90°	223.4	3.9
90°-100°	208.2	3.7
100°-110°	146.1	2.6
110°-120°	119.1	2.1
120°-130°	50.4	0.9
130°-140°	30.4	0.5
140°-150°	19.5	0.3
150°-160°	12.3	0.2
160°-170°	3.4	0.1
170°-180°	0.0	0.0
0°-90°	5112.9	89.7
0°-180°	5702.3	100.0

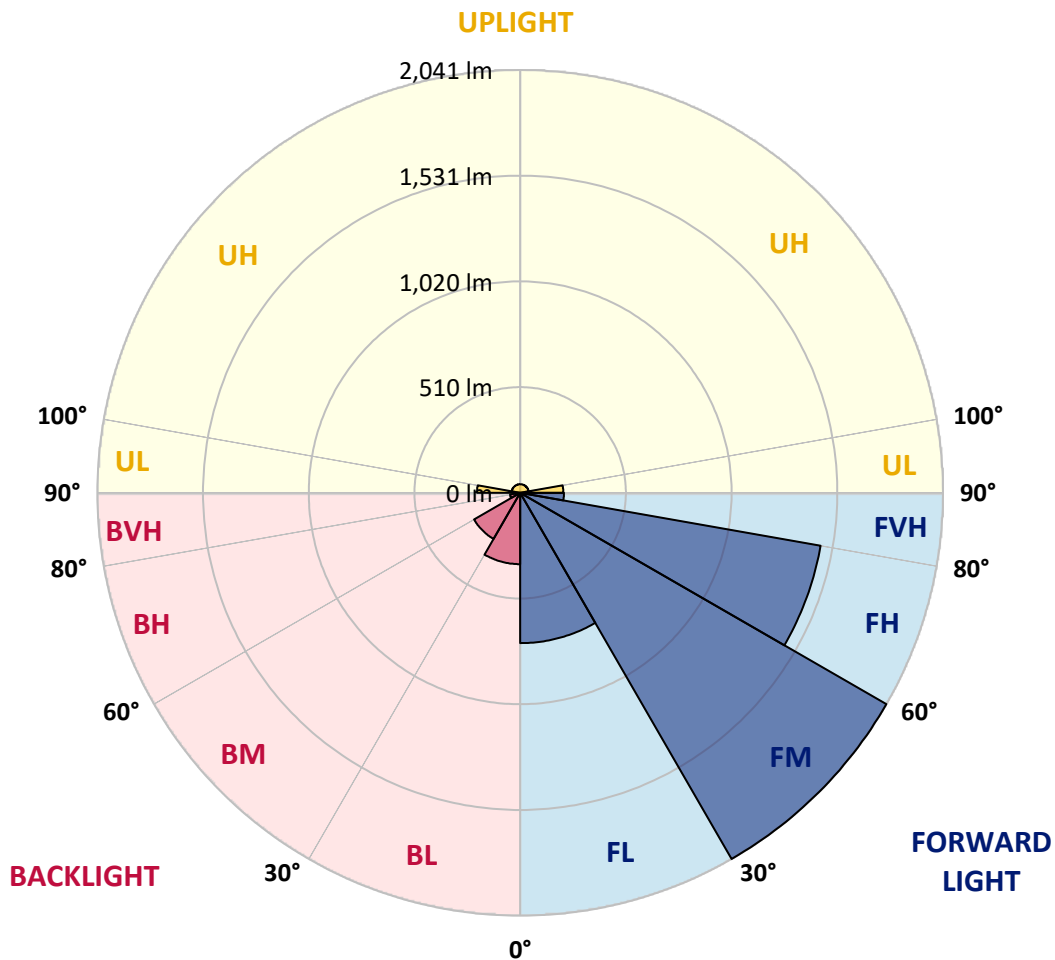


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	725.3	12.7			
FM	(30°-60°)	2040.7	35.8			
FH	(60°-80°)	1472.2	25.8			G1/1800
FVH	(80°-90°)	211.3	3.7			G2/225
BL	(0°-30°)	344.4	6.0	B1/500		
BM	(30°-60°)	257.1	4.5	B1/1000		
BH	(60°-80°)	49.8	0.9	B0/110		G0/110
BVH	(80°-90°)	12.1	0.2			G1/100
UL	(90°-100°)	208.2	3.7		U3/500	
UH	(100°-180°)	41.5	0.7		U2/50	

BUG Rating: B1-U3-G2
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1482	1482	1482	1482	1482	1482	1482	1482	1482	1482	1482
2.5°	1520	1528	1536	1532	1530	1532	1530	1522	1516	1510	1500
5°	1588	1592	1596	1595	1588	1587	1579	1564	1551	1533	1510
7.5°	1657	1656	1654	1649	1638	1626	1615	1595	1576	1550	1513
10°	1716	1716	1707	1702	1685	1670	1651	1618	1592	1557	1509
12.5°	1768	1767	1756	1752	1735	1717	1692	1652	1610	1567	1507
15°	1810	1809	1794	1786	1773	1756	1733	1686	1635	1576	1504
17.5°	1870	1868	1843	1818	1793	1772	1751	1711	1650	1579	1494
20°	1945	1943	1914	1873	1820	1784	1759	1720	1654	1573	1475
22.5°	1996	1996	1976	1934	1863	1815	1773	1714	1654	1565	1451
25°	1981	1981	1976	1967	1914	1861	1806	1712	1650	1558	1427
27.5°	1957	1959	1945	1939	1922	1895	1846	1719	1637	1547	1400
30°	1987	1986	1953	1908	1879	1876	1861	1732	1618	1527	1363
32.5°	2059	2054	2010	1923	1839	1826	1824	1747	1600	1504	1323
35°	2098	2092	2065	1979	1839	1789	1769	1752	1584	1478	1276
37.5°	2110	2105	2068	2006	1876	1788	1728	1714	1573	1446	1224
40°	2179	2175	2111	2003	1898	1823	1721	1646	1562	1408	1167
42.5°	2366	2361	2265	2062	1888	1830	1751	1570	1544	1368	1105
45°	2347	2343	2310	2248	1938	1828	1757	1528	1501	1319	1036
47.5°	2353	2350	2303	2178	2075	1977	1797	1544	1426	1269	961
50°	2437	2432	2369	2260	2129	2022	1841	1539	1326	1219	873
52.5°	2687	2660	2576	2341	2077	1952	1811	1536	1243	1163	774
55°	2553	2545	2471	2341	2130	1992	1855	1521	1215	1089	666
57.5°	2666	2661	2580	2413	2213	2104	1969	1607	1193	981	546
60°	3001	3008	2954	2796	2545	2455	2405	1732	1123	817	414
62.5°	3312	3337	3433	3523	3520	3431	3203	1953	1003	612	278
65°	3425	3445	3504	3696	3941	3975	3465	2091	885	420	173
67.5°	3228	3233	3251	3302	3410	3495	2848	1934	790	263	124
70°	2566	2545	2512	2309	1932	1820	1445	1516	723	180	103
72.5°	1733	1778	1579	1290	1090	1009	842	999	602	136	87
75°	1194	1200	1116	985	859	779	669	634	426	112	75
77.5°	919	935	854	739	664	625	564	508	261	97	67
80°	740	750	701	598	549	519	463	407	181	85	60
82.5°	688	688	638	558	512	460	399	333	154	75	54
85°	764	755	715	625	532	431	338	290	139	67	48
87.5°	726	725	673	603	518	424	307	268	131	62	43
90°	786	777	745	650	602	487	306	279	123	59	38
92.5°	795	792	776	737	659	479	296	287	116	59	36
95°	776	781	743	664	568	404	318	277	109	60	35
97.5°	562	575	538	482	461	400	338	243	104	58	34
100°	414	416	379	369	470	374	295	210	99	55	33
102.5°	410	412	430	498	496	321	237	192	95	54	33
105°	408	416	482	581	449	292	205	178	91	51	32
107.5°	475	482	509	453	320	229	179	170	89	51	32
110°	474	475	433	367	290	224	169	160	90	51	32



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
112.5°	625	618	553	475	402	324	198	149	90	48	31
115°	569	565	533	479	400	327	192	131	85	44	29
117.5°	330	324	290	243	206	180	146	121	79	41	26
120°	179	178	171	173	171	164	145	108	69	37	23
122.5°	139	139	135	144	149	160	150	90	60	33	22
125°	117	120	128	141	159	159	134	82	62	31	21
127.5°	122	125	133	151	152	133	105	76	52	31	20
130°	141	140	141	143	118	99	90	68	45	29	19
132.5°	134	133	123	112	89	86	80	59	42	26	20
135°	105	104	97	86	76	75	70	57	40	26	19
137.5°	83	82	77	72	70	68	65	61	41	27	20
140°	68	68	68	68	65	66	62	64	47	29	21
142.5°	65	65	63	61	60	62	64	60	46	29	22
145°	60	60	62	60	61	66	64	55	44	28	23
147.5°	61	62	62	65	69	62	55	52	43	28	22
150°	69	70	73	72	64	60	58	49	36	28	21
152.5°	74	74	71	66	63	60	54	42	29	26	19
155°	66	66	66	61	55	51	45	34	25	26	18
157.5°	58	58	56	52	46	41	36	29	22	24	18
160°	48	48	46	41	36	33	29	26	22	23	17
162.5°	37	37	34	32	29	27	24	21	21	22	16
165°	27	27	26	25	23	22	19	20	21	20	15
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°	1482	1482	1482	1482	1482	1482	1482	1482	1482	1482	1482
2.5°	1494	1488	1469	1452	1435	1417	1413	1399	1395	1392	1387
5°	1497	1483	1450	1419	1387	1355	1336	1311	1304	1294	1290
7.5°	1493	1471	1422	1374	1324	1275	1235	1200	1185	1169	1175
10°	1482	1452	1385	1318	1247	1175	1113	1070	1044	1025	1027
12.5°	1472	1434	1348	1257	1162	1067	985	936	907	889	888
15°	1461	1414	1305	1188	1066	952	869	828	797	780	780
17.5°	1443	1384	1250	1104	958	842	768	718	674	640	644
20°	1414	1343	1182	1007	852	745	666	573	492	447	451
22.5°	1380	1296	1104	904	760	643	525	397	326	291	294
25°	1344	1245	1022	809	669	524	364	268	235	226	227
27.5°	1302	1188	930	724	566	381	261	226	216	213	213
30°	1252	1121	832	632	441	280	228	209	205	203	204
32.5°	1196	1046	739	532	330	238	210	195	190	190	191
35°	1133	970	650	430	263	216	191	183	212	225	223
37.5°	1065	883	558	330	231	196	177	205	194	168	165
40°	990	792	452	260	210	175	176	183	158	151	150
42.5°	908	695	346	214	184	163	200	152	139	133	132
45°	820	595	263	185	164	153	166	135	128	122	120
47.5°	725	495	204	158	143	165	137	122	117	113	112
50°	622	396	174	138	129	166	118	114	109	111	111
52.5°	514	301	157	120	114	129	102	110	101	96	95
55°	405	220	136	105	102	103	95	94	96	97	96
57.5°	296	162	115	93	95	88	80	91	87	81	79
60°	204	134	95	82	87	76	78	73	69	64	63
62.5°	146	113	80	71	75	66	67	62	56	53	52
65°	118	94	67	62	63	59	56	52	48	46	45
67.5°	99	78	58	55	54	51	48	46	41	39	39
70°	83	66	50	46	46	43	40	40	36	36	36
72.5°	69	58	44	40	40	38	36	36	32	32	32
75°	58	50	39	34	36	35	32	31	28	26	26
77.5°	52	43	34	31	32	30	29	26	23	21	21
80°	46	38	31	28	30	27	26	23	20	18	18
82.5°	41	35	28	26	28	25	24	20	16	15	14
85°	37	32	26	24	26	24	22	17	13	12	12
87.5°	33	29	24	23	25	22	21	15	11	10	9
90°	31	27	23	22	24	21	19	13	9	8	8
92.5°	29	26	22	22	24	21	19	13	9	8	9
95°	28	25	22	22	24	22	19	13	10	9	9
97.5°	28	25	22	22	22	21	18	13	10	9	9
100°	27	24	21	21	21	21	17	13	10	9	9
102.5°	27	24	21	21	20	20	16	13	10	9	9
105°	26	23	21	20	20	17	15	12	10	9	9
107.5°	26	23	21	19	19	16	14	11	9	8	8
110°	25	22	21	19	18	15	13	11	9	8	8



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	24	21	20	18	17	14	13	10	9	8	8
115°	23	20	19	17	17	13	12	10	8	8	8
117.5°	22	20	18	17	16	13	11	9	8	8	8
120°	21	19	17	17	16	12	11	9	8	8	8
122.5°	20	18	17	17	15	12	11	9	8	8	8
125°	19	18	17	16	15	11	10	8	8	8	8
127.5°	18	17	16	16	14	11	10	8	8	8	8
130°	18	17	16	15	14	10	9	8	8	7	8
132.5°	18	17	16	15	13	10	9	8	7	7	7
135°	18	17	15	14	13	9	9	7	7	7	7
137.5°	19	17	15	13	12	9	8	7	7	7	7
140°	20	17	14	13	12	9	8	7	7	7	7
142.5°	20	17	14	13	11	8	8	7	7	7	7
145°	19	17	13	12	11	8	8	7	7	7	7
147.5°	17	15	13	12	11	8	8	7	7	7	7
150°	16	14	12	11	11	8	8	7	7	7	7
152.5°	15	13	12	11	10	8	8	7	7	7	7
155°	15	13	12	11	10	8	8	7	6	6	6
157.5°	16	13	12	11	10	8	7	7	6	6	6
160°	16	13	12	11	10	8	7	6	6	6	6
162.5°	16	14	12	10	10	7	7	6	6	6	6
165°	15	14	12	10	10	7	7	6	6	6	6
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)