

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: io LED

Report Number: P273472

Luminaire Tested: **0.05-12W-830-90ASYM-STD-UNV-AN-3F0**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P273472  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1708-246-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0  
Description: iO LIGHTING SERIES 2.0 LINEAR LED LUMINAIRE. 90 DEGREE ASYMMETRIC OPTIC.  
V2 HIGH OUTPUT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1820.6 lumens  
Efficiency: N/A  
Efficacy: 67.7 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 0.97 / 1.19  
Luminous Opening: Rectangular (W 2.92' x L: 0.21' x H: 0')  
CIE Type: Direct

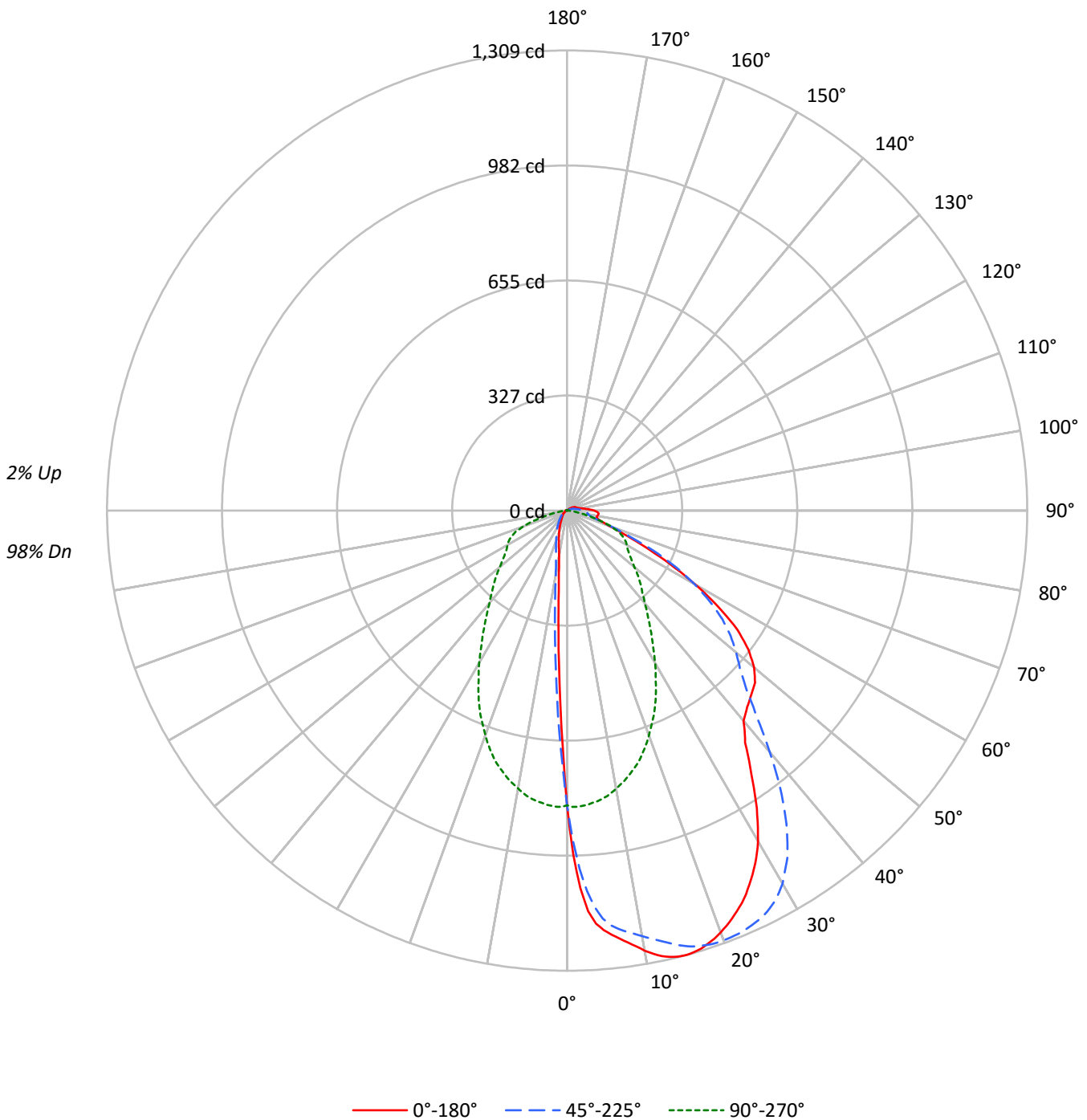
Input Watts (W): 26.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	100	100	100	98					98			
1	109	105	101	98	106	103	99	96	98	95	93	94	91	89	90	88	86	84					84			
2	100	93	87	82	98	91	85	80	87	82	78	84	80	76	80	77	74	72					72			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	65	72	68	64	62					62			
4	85	74	66	59	83	72	65	59	70	63	58	67	61	57	65	60	56	54					54			
5	78	66	58	52	76	65	57	51	63	56	51	61	55	50	59	53	49	47					47			
6	73	60	52	45	71	59	51	45	57	50	45	55	49	44	53	48	44	42					42			
7	67	55	46	40	66	54	46	40	52	45	40	50	44	39	49	43	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	46	40	35	45	39	35	33					33			
9	59	46	38	33	57	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	42	35	30	54	42	35	30	41	34	29	40	34	29	39	33	29	27					27			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	14845	14845	14845
5°	21303	14830	5032
10°	22862	14444	2356
15°	24006	13809	1651
20°	24073	12819	1263
25°	23533	11630	958
30°	22214	10227	716
35°	19744	8953	562
40°	18060	7955	486
45°	18563	7390	451
50°	19126	6890	413
55°	18283	6671	340
60°	14951	6944	213
65°	10186	7335	251
70°	6526	6940	311
75°	6160	4996	342
80°	8875	3264	510
85°	18292	2236	1016



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.8	4.0
10°-20°	200.6	11.0
20°-30°	303.4	16.7
30°-40°	348.8	19.2
40°-50°	335.0	18.4
50°-60°	279.8	15.4
60°-70°	151.4	8.3
70°-80°	55.6	3.1
80°-90°	32.9	1.8
90°-100°	19.4	1.1
100°-110°	10.2	0.6
110°-120°	6.3	0.3
120°-130°	3.3	0.2
130°-140°	1.1	0.1
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°-30°	576.8	31.7
0°-40°	925.6	50.8
0°-60°	1540.4	84.6
0°-90°	1780.3	97.8
90°-120°	35.9	2.0
90°-150°	40.3	2.2
90°-180°	40.0	2.2
0°-180°	1820.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	838	838	838	838	838	
5°	1198	1165	834	391	283	116
15°	1309	1282	753	122	90	368
25°	1204	1286	595	71	49	551
35°	913	1088	414	43	26	574
45°	741	722	295	26	18	573
55°	592	539	216	14	11	516
65°	243	272	175	7	6	251
75°	90	76	73	5	5	102
85°	90	56	11	4	5	72
90°	77	46	2	3	4	42
95°	54	35	2	3	4	41
105°	30	18	2	2	3	33
115°	24	9	2	2	2	23
125°	12	2	2	2	2	12
135°	2	2	2	2	2	2
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P273472

CATALOG NUMBER: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	838	838	838	838	838	838	838	838	838	838	838
1°	977	974	977	962	963	968	968	959	964	943	939
2°	1075	1073	1073	1060	1060	1064	1062	1051	1051	1029	1020
3°	1141	1138	1137	1127	1127	1129	1127	1118	1114	1095	1084
4°	1178	1177	1174	1167	1167	1169	1167	1161	1158	1142	1132
5°	1198	1198	1194	1189	1189	1191	1188	1185	1181	1172	1165
6°	1213	1211	1210	1204	1204	1205	1203	1200	1197	1191	1186
7°	1227	1225	1223	1217	1218	1217	1215	1211	1209	1204	1199
8°	1241	1239	1238	1231	1231	1230	1228	1223	1221	1215	1210
9°	1255	1253	1252	1245	1245	1244	1241	1237	1232	1225	1219
10°	1271	1269	1268	1261	1260	1258	1255	1251	1244	1237	1229
11°	1284	1284	1280	1275	1273	1272	1269	1265	1257	1248	1240
12°	1296	1296	1292	1287	1285	1284	1281	1277	1268	1261	1250
13°	1303	1303	1300	1295	1295	1294	1291	1288	1279	1272	1261
14°	1308	1308	1305	1300	1301	1300	1298	1296	1288	1282	1272
15°	1309	1310	1306	1302	1304	1303	1302	1300	1296	1290	1282
16°	1307	1309	1305	1301	1304	1303	1303	1301	1300	1296	1290
17°	1303	1305	1302	1298	1302	1301	1301	1301	1302	1299	1295
18°	1296	1299	1297	1294	1298	1299	1299	1298	1302	1301	1299
19°	1288	1291	1290	1288	1292	1294	1294	1295	1300	1301	1301
20°	1277	1281	1280	1279	1285	1286	1288	1290	1297	1299	1301
21°	1265	1270	1270	1269	1275	1278	1281	1284	1292	1296	1300
22°	1252	1257	1257	1257	1264	1268	1271	1278	1287	1294	1299
23°	1237	1242	1242	1243	1251	1256	1260	1268	1280	1290	1296
24°	1222	1226	1227	1228	1237	1242	1246	1256	1271	1284	1291
25°	1204	1209	1209	1211	1221	1226	1231	1243	1260	1275	1286
26°	1183	1189	1191	1193	1203	1208	1214	1227	1247	1263	1279
27°	1162	1168	1171	1171	1184	1189	1196	1210	1233	1250	1270
28°	1139	1145	1145	1150	1162	1168	1175	1191	1215	1234	1258
29°	1114	1120	1120	1126	1138	1145	1152	1170	1192	1216	1243
30°	1086	1092	1093	1098	1111	1118	1126	1146	1168	1195	1225
32.5°	1004	1011	1011	1022	1032	1044	1050	1072	1101	1131	1167
35°	913	920	919	925	941	948	960	983	1013	1050	1088
37.5°	832	836	834	839	850	861	870	888	918	957	996
40°	781	782	780	779	784	788	793	804	826	859	897
42.5°	758	755	752	749	746	746	744	746	754	773	800
45°	741	740	736	732	726	724	720	712	707	711	722
47.5°	725	722	718	714	707	704	697	685	676	670	667
50°	694	690	686	683	677	674	667	656	647	636	627
52.5°	650	645	643	640	634	630	624	616	608	600	586
55°	592	589	587	588	581	579	575	565	558	550	539
57.5°	511	509	510	515	514	515	515	510	504	494	481
60°	422	420	422	427	428	431	434	438	439	431	417
62.5°	330	327	328	331	331	335	339	346	353	354	350
65°	243	240	240	241	240	243	245	247	255	266	272



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
67.5°	174	172	172	172	172	173	172	174	178	185	193
70°	126	125	125	125	124	125	126	126	128	131	135
72.5°	102	101	101	100	98	98	97	96	95	96	98
75°	90	90	89	88	86	85	83	81	79	77	76
77.5°	86	86	85	83	81	79	78	74	71	68	65
80°	87	86	85	83	80	79	77	73	69	64	60
82.5°	89	89	88	85	82	80	78	74	69	64	58
85°	90	89	88	85	82	80	77	72	67	62	56
87.5°	85	84	83	80	76	75	72	67	63	57	52
90°	77	75	74	71	68	66	64	59	55	51	46
92.5°	65	64	63	60	58	56	54	50	47	44	41
95°	54	53	52	50	48	47	45	42	40	37	35
97.5°	45	44	43	42	40	39	38	36	34	32	30
100°	38	38	37	36	34	33	32	31	29	27	26
102.5°	33	33	32	31	30	29	28	27	25	23	22
105°	30	29	29	28	27	26	25	23	21	20	18
107.5°	28	27	27	26	24	24	23	21	19	17	16
110°	26	26	25	24	23	22	21	20	17	15	13
112.5°	25	25	24	23	22	21	20	18	16	14	11
115°	24	23	23	22	20	19	18	16	14	11	9
117.5°	21	21	21	19	18	17	16	14	12	9	7
120°	19	18	18	17	15	14	14	12	9	7	5
122.5°	16	15	15	14	13	12	11	9	7	5	4
125°	12	12	12	11	10	9	8	7	5	4	2
127.5°	10	9	9	8	7	7	6	5	3	2	2
130°	7	7	6	6	5	4	3	2	2	2	2
132.5°	4	4	4	3	2	2	2	2	2	2	2
135°	2	2	2	2	2	2	2	2	2	2	2
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



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
180°	0	0	0	0	0	0	0	0	0	0	0





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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	838	838	838	838	838	838	838	838	838	838	838
1°	933	911	903	897	890	880	874	867	854	843	830
2°	1007	979	965	949	939	923	908	889	866	843	817
3°	1068	1038	1017	995	983	963	938	910	876	841	802
4°	1116	1086	1062	1036	1022	1000	967	930	884	839	788
5°	1151	1124	1100	1072	1057	1034	994	946	892	834	772
6°	1175	1151	1129	1103	1088	1064	1019	964	900	831	755
7°	1191	1171	1152	1129	1113	1091	1042	981	906	826	738
8°	1203	1185	1169	1149	1135	1113	1063	997	912	820	721
9°	1211	1194	1181	1163	1151	1132	1081	1009	915	812	701
10°	1221	1202	1190	1175	1164	1148	1098	1022	919	803	681
11°	1231	1210	1198	1184	1174	1160	1112	1033	922	794	660
12°	1240	1218	1206	1192	1183	1169	1124	1044	925	785	640
13°	1251	1225	1213	1200	1190	1177	1135	1054	927	775	619
14°	1260	1236	1220	1206	1197	1184	1144	1064	928	764	598
15°	1269	1245	1227	1211	1202	1189	1152	1071	929	753	576
16°	1278	1254	1234	1216	1208	1195	1159	1078	929	741	554
17°	1287	1264	1241	1222	1214	1202	1165	1085	928	727	531
18°	1295	1272	1251	1229	1221	1208	1171	1091	926	712	510
19°	1299	1279	1258	1237	1226	1214	1177	1097	923	697	487
20°	1301	1285	1265	1243	1230	1218	1182	1102	919	680	464
21°	1302	1290	1270	1249	1236	1223	1187	1106	915	663	443
22°	1303	1293	1277	1256	1241	1228	1192	1112	913	647	422
23°	1301	1294	1280	1260	1247	1232	1197	1117	909	632	401
24°	1298	1295	1284	1265	1253	1237	1202	1121	904	613	381
25°	1296	1295	1285	1268	1258	1243	1205	1124	898	595	362
26°	1292	1294	1287	1273	1262	1247	1209	1126	890	576	343
27°	1286	1291	1289	1278	1267	1253	1214	1128	881	556	326
28°	1279	1288	1290	1282	1272	1258	1220	1132	872	536	309
29°	1270	1283	1288	1285	1278	1265	1225	1137	862	519	294
30°	1257	1276	1286	1287	1282	1270	1230	1139	853	500	281
32.5°	1211	1248	1272	1290	1291	1283	1245	1146	826	454	250
35°	1141	1197	1243	1280	1290	1295	1264	1154	798	414	221
37.5°	1059	1120	1190	1251	1275	1290	1279	1161	764	376	202
40°	959	1027	1110	1199	1234	1270	1285	1163	728	344	185
42.5°	855	924	1012	1117	1170	1224	1276	1156	685	317	172
45°	759	818	904	1020	1083	1154	1246	1134	642	295	162
47.5°	680	719	793	909	978	1066	1203	1104	596	273	153
50°	624	641	691	790	857	952	1138	1072	555	250	142
52.5°	578	579	603	672	733	825	1046	1027	522	231	131
55°	528	521	529	571	613	688	923	972	497	216	119
57.5°	473	460	460	481	507	563	768	890	475	204	109
60°	408	393	388	399	414	452	623	778	450	196	101
62.5°	338	324	319	323	330	357	481	642	416	187	93
65°	269	257	250	252	255	276	360	494	368	175	86



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
67.5°	200	198	194	195	199	207	265	358	302	159	77
70°	142	147	149	150	151	156	190	249	225	134	67
72.5°	101	106	112	115	116	118	137	170	159	104	53
75°	77	79	83	89	89	91	100	115	108	73	40
77.5°	63	63	65	69	70	71	75	80	71	49	27
80°	57	55	54	55	56	56	57	55	47	32	17
82.5°	53	50	47	46	45	44	43	38	31	19	9
85°	51	46	42	39	38	36	33	27	20	11	5
87.5°	47	42	38	34	32	30	25	19	12	6	2
90°	42	38	34	29	27	25	20	13	7	2	2
92.5°	37	34	30	26	23	21	15	9	4	2	2
95°	32	30	26	22	20	17	12	6	2	2	2
97.5°	28	26	22	18	16	14	8	3	2	2	2
100°	24	22	19	15	13	10	5	2	2	2	2
102.5°	20	18	15	11	9	7	3	2	2	2	2
105°	16	14	12	8	6	4	2	2	2	2	2
107.5°	14	11	9	6	4	3	2	2	2	2	2
110°	11	9	6	4	2	2	2	2	2	2	2
112.5°	9	6	4	2	2	2	2	2	2	2	2
115°	7	4	2	2	2	2	2	2	2	2	2
117.5°	5	3	2	2	2	2	2	2	2	2	2
120°	3	2	2	2	2	2	2	2	2	2	2
122.5°	2	2	2	2	2	2	2	2	2	2	2
125°	2	2	2	2	2	2	2	2	2	2	2
127.5°	2	2	2	2	2	2	2	2	2	2	2
130°	2	2	2	2	2	2	2	2	2	2	2
132.5°	2	2	2	2	2	2	2	2	2	2	2
135°	2	2	2	2	2	2	2	2	2	2	2
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



TEST NUMBER: P273472

CATALOG NUMBER: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

180°	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P273472

CATALOG NUMBER: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	838	838	838	838	838	838	838	838	838	838	838
1°	813	797	783	777	769	760	757	736	727	720	712
2°	788	761	736	730	711	691	679	649	631	618	603
3°	763	723	689	677	653	623	602	566	541	523	503
4°	735	685	641	623	596	558	530	490	460	439	417
5°	708	648	594	572	541	497	464	423	391	369	346
6°	680	610	548	522	490	441	406	364	332	310	289
7°	651	572	505	476	443	392	354	315	284	264	242
8°	623	536	464	434	400	348	311	274	243	224	208
9°	594	501	424	393	360	308	273	237	212	196	181
10°	565	467	388	357	325	275	240	210	187	173	161
11°	537	435	355	323	293	244	214	187	167	155	145
12°	509	404	325	294	264	220	192	169	152	142	133
13°	482	375	297	268	239	199	174	154	140	131	123
14°	455	346	273	242	218	182	160	142	130	122	115
15°	430	321	248	222	200	167	148	132	122	114	108
16°	405	297	228	205	184	155	137	124	115	107	102
17°	380	276	211	189	170	144	129	117	108	101	96
18°	358	256	195	175	158	135	121	110	102	96	90
19°	336	237	181	163	148	128	115	105	97	90	85
20°	315	221	169	153	139	121	109	99	91	85	80
21°	296	206	159	144	131	115	104	94	86	80	76
22°	278	193	150	136	125	110	99	89	82	76	72
23°	260	182	142	129	119	104	94	84	78	73	69
24°	243	172	135	123	114	100	89	80	74	69	65
25°	229	163	128	118	108	95	85	77	71	66	62
26°	217	154	122	113	104	90	81	73	68	63	59
27°	205	147	117	108	99	86	77	70	65	60	56
28°	195	140	112	103	95	83	74	67	62	57	53
29°	185	134	108	99	91	79	71	64	59	54	50
30°	176	128	103	95	87	76	68	61	56	51	46
32.5°	158	116	94	86	79	69	62	55	49	44	41
35°	143	106	85	78	72	63	55	49	43	39	36
37.5°	131	97	78	71	66	57	50	43	38	34	31
40°	120	90	72	66	60	52	44	38	33	30	27
42.5°	113	84	66	61	56	47	40	34	29	26	23
45°	107	79	62	56	51	43	36	30	26	23	20
47.5°	101	74	58	52	47	39	32	27	23	20	18
50°	95	69	54	48	43	35	29	24	20	17	15
52.5°	88	64	49	44	39	32	26	21	17	15	14
55°	81	59	45	40	36	29	23	18	14	13	12
57.5°	72	53	40	36	32	26	19	15	12	11	11
60°	65	47	35	32	29	22	16	12	10	9	9
62.5°	58	41	31	28	25	19	13	10	9	8	7
65°	51	35	27	24	21	15	10	8	7	6	6



TEST NUMBER: P273472

CATALOG NUMBER: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
67.5°	44	29	22	19	17	11	8	6	5	5	5
70°	36	24	17	15	12	8	6	5	5	5	5
72.5°	28	18	13	11	8	6	5	5	5	5	5
75°	20	13	8	7	5	4	4	4	5	5	5
77.5°	14	9	5	4	4	4	4	4	5	5	5
80°	9	5	3	4	4	4	4	4	4	5	5
82.5°	5	3	3	3	3	4	4	4	4	4	4
85°	2	3	3	3	3	3	4	4	4	4	4
87.5°	2	2	3	3	3	3	3	3	4	4	4
90°	2	2	2	3	3	3	3	3	3	4	4
92.5°	2	2	2	2	2	3	3	3	3	3	3
95°	2	2	2	2	2	2	3	3	3	3	3
97.5°	2	2	2	2	2	2	2	3	3	3	3
100°	2	2	2	2	2	2	2	2	2	3	3
102.5°	2	2	2	2	2	2	2	2	2	2	2
105°	2	2	2	2	2	2	2	2	2	2	2
107.5°	2	2	2	2	2	2	2	2	2	2	2
110°	2	2	2	2	2	2	2	2	2	2	2
112.5°	2	2	2	2	2	2	2	2	2	2	2
115°	2	2	2	2	2	2	2	2	2	2	2
117.5°	2	2	2	2	2	2	2	2	2	2	2
120°	2	2	2	2	2	2	2	2	2	2	2
122.5°	2	2	2	2	2	2	2	2	2	2	2
125°	2	2	2	2	2	2	2	2	2	2	2
127.5°	2	2	2	2	2	2	2	2	2	2	2
130°	2	2	2	2	2	2	2	2	2	2	2
132.5°	2	2	2	2	2	2	2	2	2	2	2
135°	2	2	2	3	2	3	3	3	2	2	2
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



TEST NUMBER: P273472

CATALOG NUMBER: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
180°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P273472

CATALOG NUMBER: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	838	838	838	838	838	838	838	838
1°	722	707	703	681	682	676	679	679
2°	606	588	581	560	558	550	551	550
3°	501	482	474	454	450	442	442	441
4°	411	392	383	367	362	354	353	350
5°	338	320	311	299	293	286	285	283
6°	279	264	255	244	238	232	232	230
7°	233	220	213	205	200	195	194	193
8°	199	185	182	176	172	168	167	165
9°	174	162	160	155	151	148	147	146
10°	154	145	143	139	136	133	133	131
11°	138	132	130	127	124	122	122	121
12°	127	122	120	118	115	113	113	112
13°	118	113	112	110	107	105	105	104
14°	110	106	104	103	100	99	98	97
15°	104	99	98	96	93	92	91	90
16°	97	93	91	89	87	86	85	85
17°	91	87	86	85	82	81	80	80
18°	86	82	81	80	77	76	76	75
19°	81	78	76	75	73	72	71	71
20°	77	74	72	71	69	68	68	67
21°	73	70	68	67	65	64	64	63
22°	69	66	65	64	62	61	60	60
23°	66	63	61	60	58	57	56	56
24°	62	59	58	57	55	53	53	52
25°	59	56	54	53	51	50	49	49
26°	56	52	51	50	48	47	46	46
27°	52	49	48	47	45	44	43	43
28°	49	46	45	44	42	41	41	40
29°	46	43	42	41	40	39	38	38
30°	43	41	40	39	38	36	36	35
32.5°	38	35	34	34	32	31	31	30
35°	33	30	29	29	28	27	27	26
37.5°	28	26	26	25	24	24	23	24
40°	25	23	22	22	21	21	21	21
42.5°	21	20	20	19	19	19	19	19
45°	19	18	18	18	18	18	18	18
47.5°	17	16	16	16	16	16	16	16
50°	15	15	15	15	15	15	15	15
52.5°	13	13	13	13	13	13	13	13
55°	12	12	11	11	11	11	11	11
57.5°	10	10	9	9	9	9	8	8
60°	8	7	7	7	6	6	6	6
62.5°	6	6	6	6	6	6	6	6
65°	5	5	6	6	6	6	6	6



TEST NUMBER: P273472

CATALOG NUMBER: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
67.5°	5	5	5	5	6	6	6	6
70°	5	5	6	6	6	6	6	6
72.5°	5	5	5	5	6	6	6	6
75°	5	5	5	5	5	6	5	5
77.5°	5	5	5	5	5	5	5	5
80°	5	5	5	5	5	5	5	5
82.5°	4	5	5	5	5	5	5	5
85°	4	4	4	5	5	5	5	5
87.5°	4	4	4	4	4	4	4	4
90°	4	4	4	4	4	4	4	4
92.5°	3	4	4	4	4	4	4	4
95°	3	3	3	3	3	4	4	4
97.5°	3	3	3	3	3	3	3	3
100°	3	3	3	3	3	3	3	3
102.5°	2	3	3	3	3	3	3	3
105°	2	2	2	2	3	3	3	3
107.5°	2	2	2	2	2	2	2	2
110°	2	2	2	2	2	2	2	2
112.5°	2	2	2	2	2	2	2	2
115°	2	2	2	2	2	2	2	2
117.5°	2	2	2	2	2	2	2	2
120°	2	2	2	2	2	2	2	2
122.5°	2	2	2	2	2	2	2	2
125°	2	2	2	2	2	2	2	2
127.5°	2	2	2	2	2	2	2	2
130°	2	2	2	2	2	2	2	2
132.5°	2	2	2	2	2	2	2	2
135°	2	2	2	2	2	2	2	2
137.5°	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0





TEST NUMBER: P273472

CATALOG NUMBER: 0.05-12W-830-90ASYM-STD-UNV-AN-3F0

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
180°	0	0	0	0	0	0	0	0

(END OF REPORT)