

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: FAIL-SAFE

Report Number: P27181

Luminaire Tested: **FMB-N-2-LD4-2DN/HI-40-UNV-80/86**

Test Date: 12/08/15

Test Information

Test Method: LM-79-08
Report Number: P27181
Test Lab: INNOVATION CENTER-P2
Test Date: 12/08/15
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMB-N-2-LD4-2DN/HI-40-UNV-80/86
Description: FAILSAFE LED 2FT FMB WALL MOUNT CORRECTIONAL LUMINAIRE
Light Source: (84) LUMILEDS 4000K LEDS
2UT217042A8404A
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OT50W

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2537.4 lumens
Efficiency: N/A
Efficacy: 56.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.2 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 1.75' x L: 0.29' x H: 0.04')
CIE Type: Direct

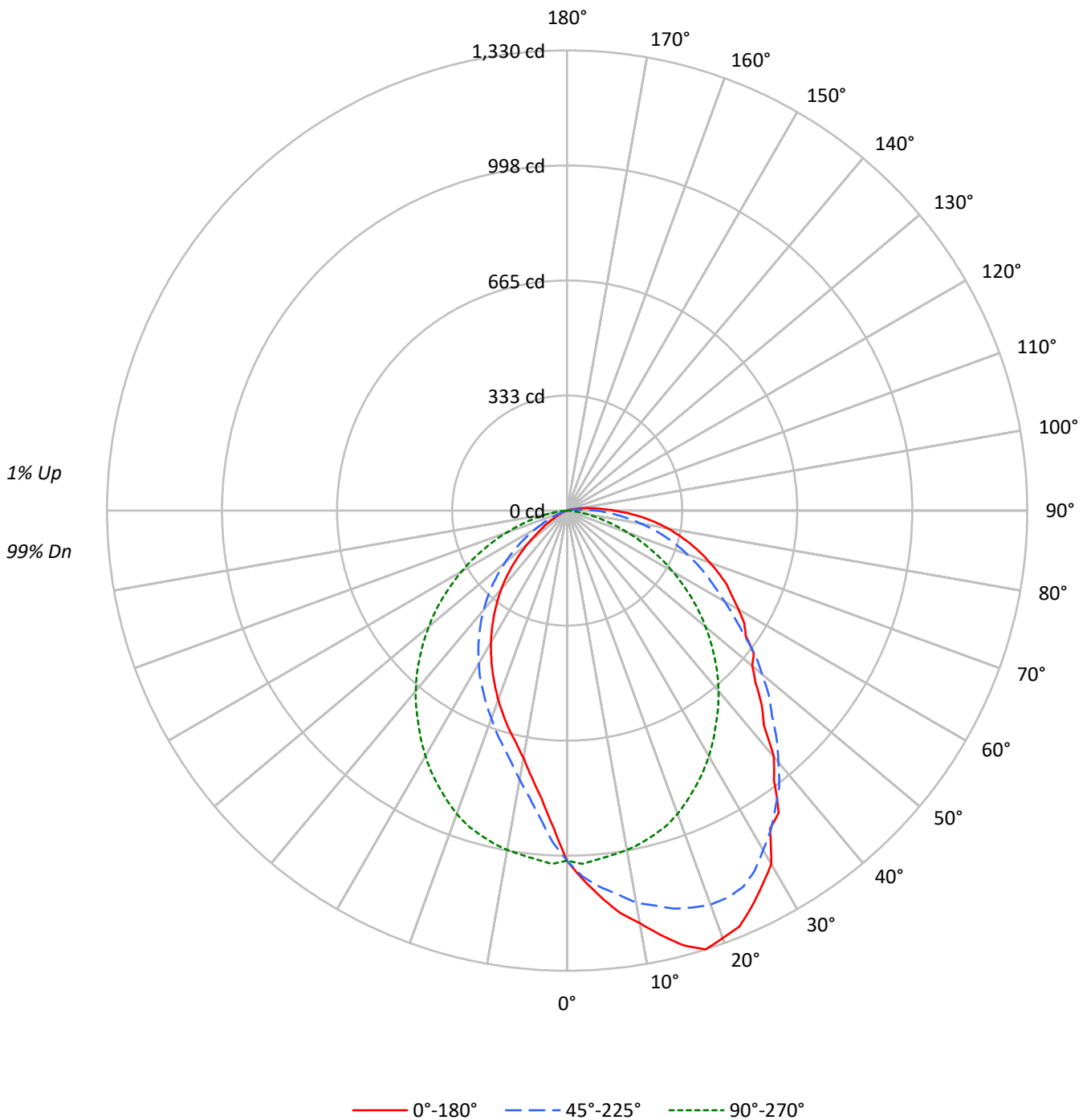
Input Watts (W): 45
Input Voltage (V): 120.03
Input Current (A_{in}): 0.37641
Voltage Rise (V): NR
Power Factor: 0.9994
Total Harmonic Distortion (THDi): 7.86%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P27181

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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	109	104	99	96	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	91	84	79	96	89	83	78	85	80	76	82	78	74	79	75	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	65	62	59
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	53	51
5	77	64	56	49	75	63	55	49	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	42	39
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	47	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	38	34	44	38	33	32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	21342	21342	21342
5°	23438	21379	17500
10°	25295	21239	15164
15°	27357	21043	13710
20°	28052	20758	12416
25°	27553	20228	11148
30°	26545	19673	9920
35°	24948	18992	8612
40°	22837	18380	7276
45°	20772	17565	5741
50°	19568	16653	4093
55°	19238	15574	2596
60°	19340	14258	1386
65°	19481	12676	688
70°	19394	10822	0
75°	19557	8456	0
80°	19791	5671	0
85°	19942	2663	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.5	3.7
10°-20°	270.7	10.7
20°-30°	404.0	15.9
30°-40°	459.4	18.1
40°-50°	435.1	17.1
50°-60°	357.0	14.1
60°-70°	257.2	10.1
70°-80°	157.9	6.2
80°-90°	75.6	3.0
90°-100°	22.5	0.9
100°-110°	3.6	0.1
110°-120°	0.1	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°-30°	769.1	30.3
0°-40°	1228.5	48.4
0°-60°	2020.6	79.6
0°-90°	2511.3	99.0
90°-120°	26.1	1.0
90°-150°	26.1	1.0
90°-180°	26.0	1.0
0°-180°	2537.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1012	1012	1012	1012	1012	
5°	1121	1092	1012	892	837	110
15°	1301	1191	970	708	652	367
25°	1263	1201	879	575	511	580
35°	1066	1049	750	444	368	656
45°	796	837	603	306	220	615
55°	630	622	438	167	85	571
65°	510	445	267	52	18	502
75°	368	295	113	1	0	388
85°	217	144	14	1	0	193
90°	136	83	1	1	0	76
95°	77	37	1	1	0	55
105°	14	1	1	1	0	17
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
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



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CATALOG NUMBER: FMB-N-2-LD4-2DN/HI-40-UNV-80/86

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012
2.5°	1068	1070	1068	1067	1068	1066	1065	1067	1065	1064	1060
5°	1121	1119	1116	1114	1112	1109	1107	1105	1101	1097	1092
7.5°	1173	1172	1170	1166	1162	1157	1153	1149	1140	1130	1118
10°	1211	1212	1208	1201	1195	1189	1186	1180	1174	1164	1151
12.5°	1257	1256	1254	1247	1240	1234	1230	1218	1205	1187	1169
15°	1301	1302	1297	1288	1277	1272	1263	1246	1230	1214	1191
17.5°	1330	1328	1324	1314	1300	1295	1289	1275	1254	1228	1203
20°	1315	1314	1310	1311	1308	1305	1301	1285	1262	1240	1212
22.5°	1301	1301	1298	1294	1284	1277	1272	1269	1261	1239	1211
25°	1263	1262	1255	1247	1247	1247	1251	1244	1226	1219	1201
27.5°	1221	1222	1227	1229	1226	1218	1208	1199	1198	1184	1174
30°	1180	1181	1177	1167	1163	1165	1173	1174	1155	1147	1133
32.5°	1091	1095	1101	1111	1131	1129	1123	1113	1119	1103	1095
35°	1066	1063	1063	1055	1045	1045	1056	1074	1062	1064	1049
37.5°	982	982	986	990	1013	1018	1012	996	1012	1008	1007
40°	929	941	945	951	943	940	940	961	948	960	950
42.5°	841	839	843	851	883	897	902	891	906	894	896
45°	796	800	808	808	804	803	806	844	843	850	837
47.5°	739	737	733	738	755	763	763	758	788	791	791
50°	698	703	707	708	700	693	696	718	710	737	735
52.5°	680	677	668	658	659	663	663	653	671	664	686
55°	630	633	630	639	632	623	614	620	612	621	622
57.5°	607	612	608	599	588	588	589	579	575	569	572
60°	572	570	565	561	563	559	552	544	537	530	525
62.5°	538	539	539	537	526	520	515	511	502	492	483
65°	510	512	507	499	492	490	487	473	467	457	445
67.5°	475	475	471	465	462	456	450	442	429	420	408
70°	438	439	439	433	427	421	418	406	394	382	369
72.5°	404	405	403	399	392	387	383	370	356	346	333
75°	368	368	366	361	354	350	347	334	321	306	295
77.5°	331	328	329	323	318	313	309	297	284	270	256
80°	295	292	290	288	280	276	273	260	247	233	217
82.5°	257	253	253	250	242	240	236	224	210	195	179
85°	217	215	214	212	204	203	197	188	174	160	144
87.5°	176	173	171	172	166	165	161	152	140	127	111
90°	136	134	133	133	129	128	125	118	106	97	83
92.5°	103	102	102	100	96	95	92	87	77	69	57
95°	77	75	74	73	69	68	65	60	52	46	37
97.5°	54	53	51	50	47	45	43	39	33	28	21
100°	36	35	33	32	30	28	27	23	19	16	12
102.5°	22	22	21	20	18	17	16	14	12	10	7
105°	14	14	14	13	12	12	11	9	4	1	1
107.5°	10	9	8	5	3	2	1	1	1	1	1
110°	1	1	1	1	1	1	1	1	1	1	1



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CATALOG NUMBER: FMB-N-2-LD4-2DN/HI-40-UNV-80/86

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
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
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°	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012
2.5°	1058	1053	1047	1043	1043	1042	1038	1035	1029	1022	1016
5°	1088	1082	1077	1069	1066	1061	1050	1038	1025	1012	1002
7.5°	1108	1098	1091	1083	1079	1074	1059	1041	1022	1004	988
10°	1138	1123	1105	1090	1084	1079	1064	1042	1019	996	976
12.5°	1154	1139	1120	1097	1086	1076	1059	1039	1014	985	961
15°	1167	1145	1124	1101	1088	1074	1049	1030	1003	970	940
17.5°	1179	1153	1122	1095	1083	1069	1039	1015	989	955	919
20°	1180	1153	1122	1088	1072	1059	1029	997	969	933	892
22.5°	1182	1148	1114	1079	1061	1043	1012	977	945	907	864
25°	1169	1138	1101	1066	1048	1027	990	955	919	879	835
27.5°	1154	1122	1086	1046	1026	1007	964	928	888	851	804
30°	1120	1095	1062	1025	1003	983	939	898	856	819	771
32.5°	1077	1060	1029	995	975	954	910	867	824	786	739
35°	1037	1018	990	958	941	924	878	833	791	750	705
37.5°	991	975	949	918	902	886	844	799	757	717	672
40°	946	929	903	877	861	849	809	766	722	681	636
42.5°	892	881	860	835	821	807	772	730	684	643	599
45°	836	830	815	792	778	765	733	689	646	603	561
47.5°	782	776	771	749	737	720	689	649	606	563	522
50°	732	724	717	702	692	677	646	609	566	522	481
52.5°	683	672	665	655	646	632	603	567	523	481	439
55°	633	625	610	605	599	586	557	525	481	438	396
57.5°	582	577	563	551	548	539	512	481	440	395	354
60°	525	528	516	499	496	489	463	436	393	352	311
62.5°	479	480	470	450	445	439	417	391	353	311	269
65°	434	429	422	402	396	387	372	345	309	267	228
67.5°	394	383	376	355	348	337	323	300	267	227	188
70°	356	340	328	309	301	290	275	255	224	187	152
72.5°	317	299	282	265	257	245	230	210	182	149	117
75°	278	260	240	222	214	202	184	168	142	113	85
77.5°	239	223	201	183	174	162	146	129	105	80	57
80°	201	185	165	143	136	125	109	92	73	53	35
82.5°	164	149	131	111	101	92	77	61	45	30	18
85°	129	116	99	80	72	65	50	37	24	14	7
87.5°	98	85	71	55	48	40	29	19	10	4	2
90°	71	58	46	34	29	24	15	8	3	1	1
92.5°	46	37	28	19	15	12	6	2	1	1	1
95°	29	21	15	9	7	5	1	1	1	1	1
97.5°	16	11	8	4	1	1	1	1	1	1	1
100°	9	6	1	1	1	1	1	1	1	1	1
102.5°	1	1	1	1	1	1	1	1	1	1	1
105°	1	1	1	1	1	1	1	1	1	1	1
107.5°	1	1	1	1	1	1	1	1	1	1	1
110°	1	1	1	1	1	1	1	1	1	1	1



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
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
180°	0	0	0	0	0	0	0	0	0	0	0



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CATALOG NUMBER: FMB-N-2-LD4-2DN/HI-40-UNV-80/86

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012	1012
2.5°	1007	997	990	988	986	979	972	964	959	953	943
5°	989	976	963	957	951	936	920	904	892	881	868
7.5°	972	952	930	918	909	885	865	848	836	825	812
10°	953	924	893	879	867	841	823	804	790	776	763
12.5°	932	893	858	841	827	802	782	760	745	733	723
15°	904	860	821	804	791	763	742	722	708	698	686
17.5°	876	825	787	770	755	727	707	688	675	661	651
20°	845	791	752	735	719	693	673	654	640	629	617
22.5°	812	756	719	702	686	661	641	622	608	595	583
25°	780	723	685	668	653	628	609	590	575	563	549
27.5°	746	689	651	635	622	597	578	560	545	530	517
30°	712	657	620	604	591	566	546	527	510	496	483
32.5°	680	623	588	573	559	535	514	495	478	462	450
35°	646	591	556	542	528	503	481	462	444	429	415
37.5°	613	560	525	510	495	472	448	428	410	395	382
40°	580	526	493	478	464	439	414	394	376	359	347
42.5°	545	493	461	445	431	405	380	359	341	325	312
45°	508	459	426	411	397	371	345	325	306	288	275
47.5°	471	423	392	376	362	336	309	289	270	254	240
50°	433	386	357	341	327	300	274	254	235	219	205
52.5°	394	350	320	305	291	264	238	218	201	188	171
55°	354	311	283	268	256	229	203	184	167	151	138
57.5°	313	274	245	231	219	194	168	151	134	123	108
60°	272	235	208	194	183	158	136	119	104	93	80
62.5°	232	199	172	161	149	125	105	90	78	66	56
65°	193	163	138	125	117	95	77	64	52	45	36
67.5°	155	127	106	96	87	69	54	43	34	28	22
70°	120	94	77	68	61	46	34	26	20	16	13
72.5°	88	68	52	45	40	28	20	15	12	8	1
75°	61	45	32	28	23	15	11	8	1	1	1
77.5°	39	27	17	15	12	8	2	1	1	1	1
80°	22	14	9	8	6	1	1	1	1	1	1
82.5°	10	6	1	1	1	1	1	1	1	1	1
85°	4	1	1	1	1	1	1	1	1	1	1
87.5°	1	1	1	1	1	1	1	1	1	1	0
90°	1	1	1	1	1	1	1	1	1	1	1
92.5°	1	1	1	1	1	1	1	1	1	1	0
95°	1	1	1	1	1	1	1	1	1	1	0
97.5°	1	1	1	1	1	1	1	1	1	1	1
100°	1	1	1	1	1	1	1	1	1	1	0
102.5°	1	1	1	1	1	1	1	1	1	0	0
105°	1	1	1	1	1	1	1	1	1	0	0
107.5°	1	1	1	1	1	1	1	1	1	1	0
110°	1	1	1	1	1	1	1	1	1	1	0



TEST NUMBER: P27181

CATALOG NUMBER: FMB-N-2-LD4-2DN/HI-40-UNV-80/86

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
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
180°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P27181

CATALOG NUMBER: FMB-N-2-LD4-2DN/HI-40-UNV-80/86

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1012	1012	1012	1012	1012	1012	1012	1012
2.5°	940	933	930	931	924	920	922	916
5°	863	855	852	851	845	840	841	837
7.5°	805	797	794	793	787	782	783	779
10°	753	745	742	738	733	729	730	726
12.5°	713	705	701	699	692	688	688	686
15°	676	667	665	663	657	654	654	652
17.5°	642	633	630	628	621	619	618	617
20°	606	598	596	594	588	584	583	582
22.5°	573	564	561	558	552	549	547	546
25°	538	530	528	525	517	513	511	511
27.5°	505	496	493	490	483	480	477	475
30°	472	463	460	457	448	445	442	441
32.5°	437	427	424	421	412	408	406	404
35°	403	393	389	383	377	373	370	368
37.5°	367	358	353	348	341	337	334	332
40°	332	323	318	313	304	300	296	296
42.5°	298	287	282	277	269	264	260	259
45°	262	251	246	240	232	226	222	220
47.5°	227	215	210	204	195	189	184	183
50°	192	179	174	168	159	153	148	146
52.5°	157	145	141	134	125	120	115	113
55°	125	113	109	103	95	91	86	85
57.5°	95	84	81	75	69	66	63	63
60°	69	59	57	52	48	44	43	41
62.5°	47	40	37	35	31	29	28	28
65°	29	25	23	22	20	19	18	18
67.5°	18	16	15	14	12	11	11	11
70°	11	7	4	2	0	0	0	0
72.5°	1	1	1	0	0	0	0	0
75°	1	1	1	0	0	0	0	0
77.5°	1	1	1	0	0	0	0	0
80°	1	1	1	1	0	0	0	0
82.5°	1	0	0	0	0	0	0	0
85°	1	1	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0



TEST NUMBER: P27181

CATALOG NUMBER: FMB-N-2-LD4-2DN/HI-40-UNV-80/86

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0
117.5°	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0
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
180°	0	0	0	0	0	0	0	0

(END OF REPORT)