

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: P27269

Luminaire Tested: **MPBL-2-LD4-UNV-1UP-LO-40**

Test Date: 01/11/16

Test Information

Test Method: LM-79-08
Report Number: P27269
Test Lab: INNOVATION CENTER-P2
Test Date: 01/11/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MPBL-2-LD4-UNV-1UP-LO-40
Description: FAILSAFE MPBL LED PATIENT BED LIGHT
Light Source: (42) 4000K NICHIA LEDS
2UT217042A8404A
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVERS
OT25W

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1279.2 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular w/ Sides (W: 2' x L: 0.42' x H: 0.29')
CIE Type: Indirect

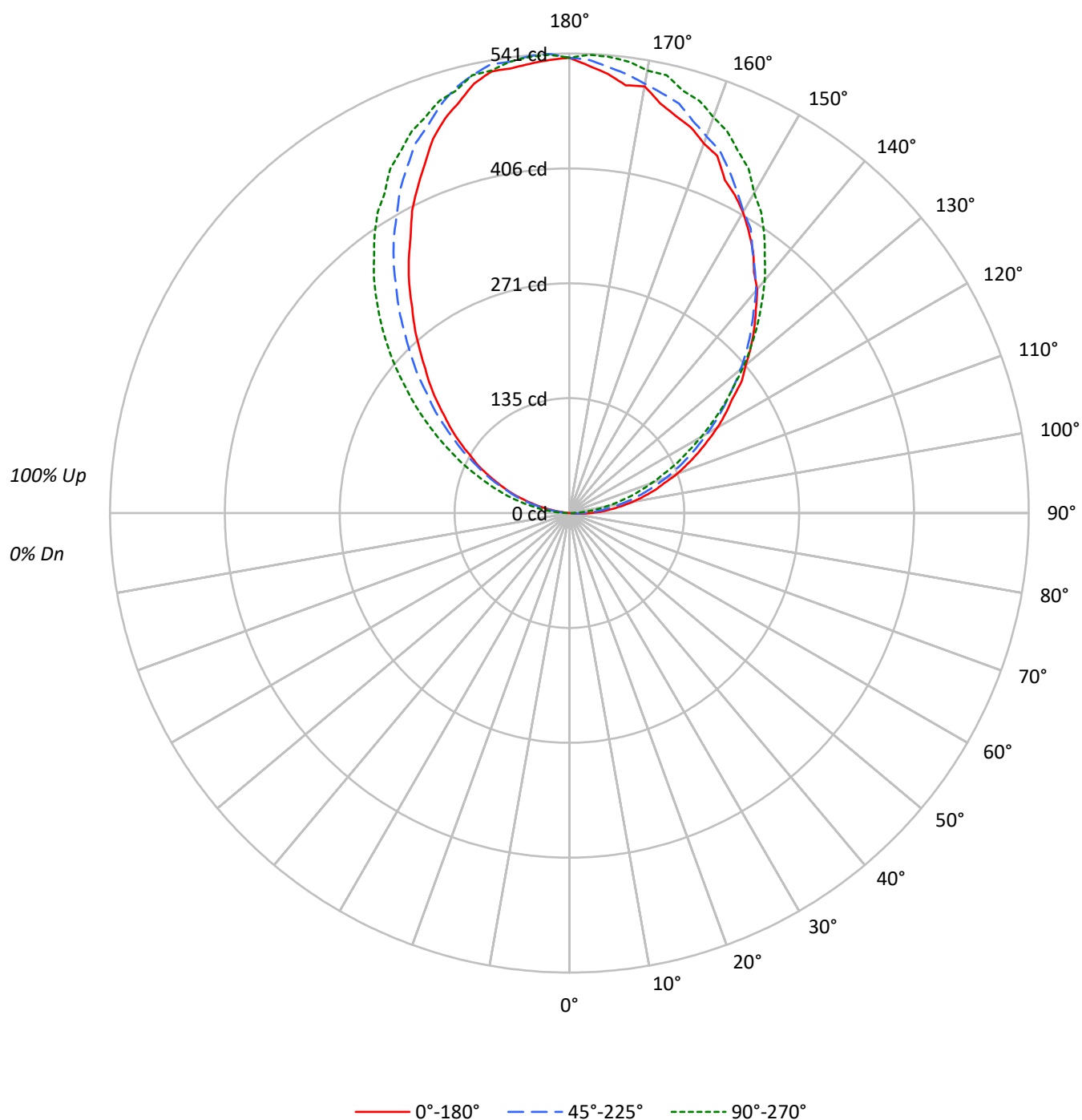
Input Watts (W): 12.9
Input Voltage (V): 120.02
Input Current (Ain): 0.10865
Voltage Rise (V): NR
Power Factor: 0.9917
Total Harmonic Distortion (THDi): 7.17%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	99	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	2.3	0.2
90°-100°	26.3	2.1
100°-110°	77.3	6.0
110°-120°	133.7	10.4
120°-130°	185.5	14.5
130°-140°	222.5	17.4
140°-150°	232.4	18.2
150°-160°	206.3	16.1
160°-170°	142.3	11.1
170°-180°	50.5	3.9
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	2.3	0.2
90°-120°	237.3	18.5
90°-150°	877.7	68.6
90°-180°	1277.0	99.8
0°-180°	1279.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	6	1	0	0	0	4
90°	25	15	0	1	2	14
95°	48	38	20	6	3	45
105°	104	90	72	53	48	110
115°	167	153	140	110	105	165
125°	234	224	222	180	168	211
135°	308	302	313	264	240	237
145°	377	376	400	361	329	235
155°	433	445	470	451	423	201
165°	484	499	515	518	501	137
175°	519	527	539	540	531	49
180°	536	536	536	536	536	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0	0	0	0	0	0	0	0	0	0	0
2.5°	0	0	0	0	0	0	0	0	0	0	0
5°	0	0	0	0	0	0	0	0	0	0	0
7.5°	0	0	0	0	0	0	0	0	0	0	0
10°	0	0	0	0	0	0	0	0	0	0	0
12.5°	0	0	0	0	0	0	0	0	0	0	0
15°	0	0	0	0	0	0	0	0	0	0	0
17.5°	0	0	0	0	0	0	0	0	0	0	0
20°	0	0	0	0	0	0	0	0	0	0	0
22.5°	0	0	0	0	0	0	0	0	0	0	0
25°	0	0	0	0	0	0	0	0	0	0	0
27.5°	0	0	0	0	0	0	0	0	0	0	0
30°	0	0	0	0	0	0	0	0	0	0	0
32.5°	0	0	0	0	0	0	0	0	0	0	0
35°	0	0	0	0	0	0	0	0	0	0	0
37.5°	0	0	0	0	0	0	0	0	0	0	0
40°	0	0	0	0	0	0	0	0	0	0	0
42.5°	0	0	0	0	0	0	0	0	0	0	0
45°	0	0	0	0	0	0	0	0	0	0	0
47.5°	0	0	0	0	0	0	0	0	0	0	0
50°	0	0	0	0	0	0	0	0	0	0	0
52.5°	0	0	0	0	0	0	0	0	0	0	0
55°	0	0	0	0	0	0	0	0	0	0	0
57.5°	0	0	0	0	0	0	0	0	0	0	0
60°	0	0	0	0	0	0	0	0	0	0	0
62.5°	0	0	0	0	0	0	0	0	0	0	0
65°	0	0	0	0	0	0	0	0	0	0	0
67.5°	0	0	0	0	0	0	0	0	0	0	0
70°	0	0	0	0	0	0	0	0	0	0	0
72.5°	0	0	0	0	0	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0
82.5°	1	1	1	0	0	0	0	0	0	0	0
85°	6	5	5	5	4	3	3	2	1	1	0
87.5°	15	14	14	13	13	11	11	9	8	6	5
90°	25	25	24	24	23	22	21	19	17	15	14
92.5°	37	36	36	35	34	33	32	30	28	26	24
95°	48	49	48	47	47	46	43	42	40	38	36
97.5°	61	61	60	60	59	58	56	53	51	49	47
100°	75	74	74	73	72	71	69	67	65	62	60
102.5°	89	89	88	87	87	85	83	80	79	76	73
105°	104	103	103	102	101	99	97	94	92	90	88
107.5°	117	118	119	117	116	115	112	111	108	105	103
110°	135	134	133	134	131	129	128	126	123	121	118



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	150	150	150	149	147	146	144	141	139	137	133
115°	167	166	167	165	164	163	161	159	156	153	150
117.5°	183	184	183	183	181	178	177	175	173	170	169
120°	201	201	200	199	198	197	196	193	191	187	185
122.5°	218	217	217	216	214	215	213	211	208	206	204
125°	234	236	234	236	233	232	229	228	227	224	223
127.5°	256	253	253	252	251	250	249	248	245	243	242
130°	271	271	272	271	270	270	268	265	265	263	262
132.5°	290	291	287	288	288	288	285	284	283	283	281
135°	308	307	307	306	306	306	303	303	301	302	303
137.5°	325	324	326	323	326	321	322	321	322	321	322
140°	344	342	341	340	340	342	338	339	340	342	340
142.5°	357	358	359	358	359	358	357	357	356	359	359
145°	377	375	376	375	378	375	377	375	375	376	378
147.5°	393	392	391	391	391	393	393	393	395	397	397
150°	409	406	408	408	408	410	407	411	408	410	413
152.5°	422	421	421	419	425	423	425	422	426	427	433
155°	433	438	440	437	436	438	441	440	440	445	446
157.5°	455	450	451	450	450	451	452	456	455	462	460
160°	463	462	461	462	464	467	465	465	470	472	476
162.5°	476	476	474	477	474	476	478	480	482	484	490
165°	484	484	485	483	486	485	487	490	491	499	498
167.5°	494	496	494	496	500	499	497	498	504	506	505
170°	510	509	506	507	508	510	510	510	513	513	518
172.5°	508	511	513	513	515	513	514	518	516	521	522
175°	519	519	516	519	521	519	521	522	529	527	527
177.5°	527	529	530	528	526	527	529	533	529	534	532
180°	536	536	536	536	536	536	536	536	536	536	536



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CATALOG NUMBER: MPBL-2-LD4-UNV-1UP-LO-40

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	0	0	0	0	0	0	0	0	0	0	0
2.5°	0	0	0	0	0	0	0	0	0	0	0
5°	0	0	0	0	0	0	0	0	0	0	0
7.5°	0	0	0	0	0	0	0	0	0	0	0
10°	0	0	0	0	0	0	0	0	0	0	0
12.5°	0	0	0	0	0	0	0	0	0	0	0
15°	0	0	0	0	0	0	0	0	0	0	0
17.5°	0	0	0	0	0	0	0	0	0	0	0
20°	0	0	0	0	0	0	0	0	0	0	0
22.5°	0	0	0	0	0	0	0	0	0	0	0
25°	0	0	0	0	0	0	0	0	0	0	0
27.5°	0	0	0	0	0	0	0	0	0	0	0
30°	0	0	0	0	0	0	0	0	0	0	0
32.5°	0	0	0	0	0	0	0	0	0	0	0
35°	0	0	0	0	0	0	0	0	0	0	0
37.5°	0	0	0	0	0	0	0	0	0	0	0
40°	0	0	0	0	0	0	0	0	0	0	0
42.5°	0	0	0	0	0	0	0	0	0	0	0
45°	0	0	0	0	0	0	0	0	0	0	0
47.5°	0	0	0	0	0	0	0	0	0	0	0
50°	0	0	0	0	0	0	0	0	0	0	0
52.5°	0	0	0	0	0	0	0	0	0	0	0
55°	0	0	0	0	0	0	0	0	0	0	0
57.5°	0	0	0	0	0	0	0	0	0	0	0
60°	0	0	0	0	0	0	0	0	0	0	0
62.5°	0	0	0	0	0	0	0	0	0	0	0
65°	0	0	0	0	0	0	0	0	0	0	0
67.5°	0	0	0	0	0	0	0	0	0	0	0
70°	0	0	0	0	0	0	0	0	0	0	0
72.5°	0	0	0	0	0	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	3	2	1	1	0	0	0	0	0	0	0
90°	12	10	8	7	5	3	2	0	0	1	1
92.5°	23	21	19	17	15	14	12	10	8	7	5
95°	34	32	30	28	26	24	22	20	19	17	15
97.5°	46	43	41	39	37	35	34	32	30	28	26
100°	58	56	54	51	49	48	46	43	42	40	38
102.5°	71	69	67	64	63	61	60	57	55	53	51
105°	86	83	80	78	77	75	74	72	70	66	65
107.5°	100	98	96	94	92	90	89	87	86	83	80
110°	116	114	112	109	107	106	107	103	101	97	95



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	133	130	127	128	125	124	123	120	119	116	113
115°	149	147	145	143	143	141	143	140	136	135	132
117.5°	165	165	162	161	161	160	160	158	158	152	150
120°	185	183	181	182	182	181	180	179	177	175	170
122.5°	202	203	203	200	200	201	203	200	199	194	191
125°	221	222	222	221	221	222	222	222	221	216	213
127.5°	242	241	242	243	243	243	247	243	242	239	234
130°	262	262	264	262	265	266	267	267	267	262	258
132.5°	280	281	281	284	286	289	291	290	287	285	283
135°	302	302	305	309	309	310	313	313	313	309	306
137.5°	322	325	325	328	328	332	335	335	335	331	331
140°	339	342	343	350	350	352	358	358	358	355	350
142.5°	361	364	367	369	373	374	376	378	379	377	374
145°	378	382	384	387	389	393	396	400	398	398	397
147.5°	399	401	404	410	410	414	416	420	423	417	418
150°	414	422	420	426	428	431	435	435	435	437	438
152.5°	432	433	437	444	445	451	452	457	457	455	452
155°	447	452	455	457	463	462	467	470	473	470	473
157.5°	464	464	469	472	474	478	482	486	486	485	487
160°	478	479	484	488	489	493	493	496	499	499	501
162.5°	488	493	495	496	501	500	505	509	510	509	510
165°	501	500	505	511	513	512	515	515	516	518	517
167.5°	508	513	513	517	522	521	523	528	524	525	530
170°	517	521	522	525	524	527	527	529	531	530	532
172.5°	524	526	533	533	533	533	536	536	536	535	537
175°	532	535	531	532	534	532	537	539	538	540	540
177.5°	532	532	538	537	538	541	537	540	538	536	536
180°	536	536	536	536	536	536	536	536	536	536	536



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CATALOG NUMBER: MPBL-2-LD4-UNV-1UP-LO-40

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	0	0	0	0	0	0	0	0	0	0	0
2.5°	0	0	0	0	0	0	0	0	0	0	0
5°	0	0	0	0	0	0	0	0	0	0	0
7.5°	0	0	0	0	0	0	0	0	0	0	0
10°	0	0	0	0	0	0	0	0	0	0	0
12.5°	0	0	0	0	0	0	0	0	0	0	0
15°	0	0	0	0	0	0	0	0	0	0	0
17.5°	0	0	0	0	0	0	0	0	0	0	0
20°	0	0	0	0	0	0	0	0	0	0	0
22.5°	0	0	0	0	0	0	0	0	0	0	0
25°	0	0	0	0	0	0	0	0	0	0	0
27.5°	0	0	0	0	0	0	0	0	0	0	0
30°	0	0	0	0	0	0	0	0	0	0	0
32.5°	0	0	0	0	0	0	0	0	0	0	0
35°	0	0	0	0	0	0	0	0	0	0	0
37.5°	0	0	0	0	0	0	0	0	0	0	0
40°	0	0	0	0	0	0	0	0	0	0	0
42.5°	0	0	0	0	0	0	0	0	0	0	0
45°	0	0	0	0	0	0	0	0	0	0	0
47.5°	0	0	0	0	0	0	0	0	0	0	0
50°	0	0	0	0	0	0	0	0	0	0	0
52.5°	0	0	0	0	0	0	0	0	0	0	0
55°	0	0	0	0	0	0	0	0	0	0	0
57.5°	0	0	0	0	0	0	0	0	0	0	0
60°	0	0	0	0	0	0	0	0	0	0	0
62.5°	0	0	0	0	0	0	0	0	0	0	0
65°	0	0	0	0	0	0	0	0	0	0	0
67.5°	0	0	0	0	0	0	0	0	0	0	0
70°	0	0	0	0	0	0	0	0	0	0	0
72.5°	0	0	0	0	0	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	1	1	1	1
90°	1	1	1	1	1	1	1	1	1	1	1
92.5°	4	2	1	1	1	1	1	1	2	2	2
95°	14	12	10	8	7	6	5	4	4	4	3
97.5°	25	23	21	19	17	15	14	14	13	13	12
100°	36	34	32	31	30	28	26	25	24	23	23
102.5°	49	47	45	44	42	40	40	38	38	36	36
105°	63	60	58	56	55	53	53	52	51	51	50
107.5°	76	74	71	70	68	67	66	65	64	64	63
110°	93	90	86	84	82	79	79	78	77	77	77



TEST NUMBER: P27269

CATALOG NUMBER: MPBL-2-LD4-UNV-1UP-LO-40

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	109	105	101	99	97	95	94	93	92	91	91
115°	128	122	119	116	113	110	109	107	106	107	104
117.5°	146	142	136	132	130	125	124	123	122	121	120
120°	164	160	154	151	147	144	141	139	137	137	137
122.5°	187	181	175	170	166	161	158	157	155	153	152
125°	208	202	195	190	186	180	177	173	172	171	168
127.5°	229	222	217	211	205	201	196	195	191	188	188
130°	253	246	241	233	227	219	215	213	208	207	206
132.5°	276	269	263	253	249	243	238	234	231	228	225
135°	301	293	287	278	273	264	258	254	250	248	244
137.5°	324	319	310	301	295	287	281	279	273	269	265
140°	348	338	334	327	320	312	303	298	294	291	288
142.5°	371	364	357	348	343	335	326	323	318	314	310
145°	395	387	380	373	368	361	355	345	343	338	334
147.5°	417	408	406	397	389	385	380	372	366	363	360
150°	434	433	424	418	415	406	400	392	390	385	383
152.5°	457	449	443	440	433	431	424	419	413	411	404
155°	471	468	464	460	456	451	446	443	437	433	432
157.5°	487	486	481	479	476	472	468	462	459	458	455
160°	504	498	498	495	491	486	486	482	482	477	473
162.5°	509	515	511	510	507	504	499	500	495	493	493
165°	522	522	520	518	516	518	519	513	507	509	505
167.5°	526	529	529	528	528	528	525	524	523	521	520
170°	534	535	533	532	532	536	533	531	532	530	530
172.5°	536	538	539	540	540	536	537	535	535	532	531
175°	540	541	538	539	538	540	539	536	534	534	538
177.5°	538	539	540	537	538	541	537	537	536	535	537
180°	536	536	536	536	536	536	536	536	536	536	536



TEST NUMBER: P27269

CATALOG NUMBER: MPBL-2-LD4-UNV-1UP-LO-40

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	0	0	0	0
2.5°	0	0	0	0
5°	0	0	0	0
7.5°	0	0	0	0
10°	0	0	0	0
12.5°	0	0	0	0
15°	0	0	0	0
17.5°	0	0	0	0
20°	0	0	0	0
22.5°	0	0	0	0
25°	0	0	0	0
27.5°	0	0	0	0
30°	0	0	0	0
32.5°	0	0	0	0
35°	0	0	0	0
37.5°	0	0	0	0
40°	0	0	0	0
42.5°	0	0	0	0
45°	0	0	0	0
47.5°	0	0	0	0
50°	0	0	0	0
52.5°	0	0	0	0
55°	0	0	0	0
57.5°	0	0	0	0
60°	0	0	0	0
62.5°	0	0	0	0
65°	0	0	0	0
67.5°	0	0	0	0
70°	0	0	0	0
72.5°	0	0	0	0
75°	0	0	0	0
77.5°	0	0	0	0
80°	0	0	0	0
82.5°	0	0	0	0
85°	0	0	0	0
87.5°	1	1	1	1
90°	1	1	2	2
92.5°	2	2	2	2
95°	3	3	2	3
97.5°	12	11	11	10
100°	23	22	22	22
102.5°	35	35	34	35
105°	49	50	49	48
107.5°	63	63	63	63
110°	76	77	76	77



TEST NUMBER: P27269

CATALOG NUMBER: MPBL-2-LD4-UNV-1UP-LO-40

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	91	91	90	90
115°	105	106	105	105
117.5°	120	120	119	121
120°	135	135	134	134
122.5°	152	152	151	151
125°	169	168	167	168
127.5°	186	184	185	184
130°	204	204	202	203
132.5°	224	224	221	222
135°	243	242	242	240
137.5°	263	262	262	261
140°	287	285	283	283
142.5°	308	306	308	304
145°	332	328	329	329
147.5°	356	354	352	352
150°	379	378	378	374
152.5°	404	400	402	401
155°	429	424	424	423
157.5°	451	451	446	445
160°	470	473	468	469
162.5°	489	488	489	487
165°	505	503	507	501
167.5°	517	518	518	518
170°	527	526	529	528
172.5°	531	529	531	528
175°	531	534	531	531
177.5°	533	535	535	534
180°	536	536	536	536

(END OF REPORT)