

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: P27361

Luminaire Tested: **MPBL-3-LD4-UNV-1UP-HI-40**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P27361
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MPBL-3-LD4-UNV-1UP-HI-40
Description: FAILSAFE MPBL LED PATIENT BED LIGHT
Light Source: (84) 4000K NICHIA LEDS
2UT109028A8404A
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVERS
OT50W

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3821.9 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular w/ Sides (W: 3' x L: 0.42' x H: 0.29')
CIE Type: Indirect

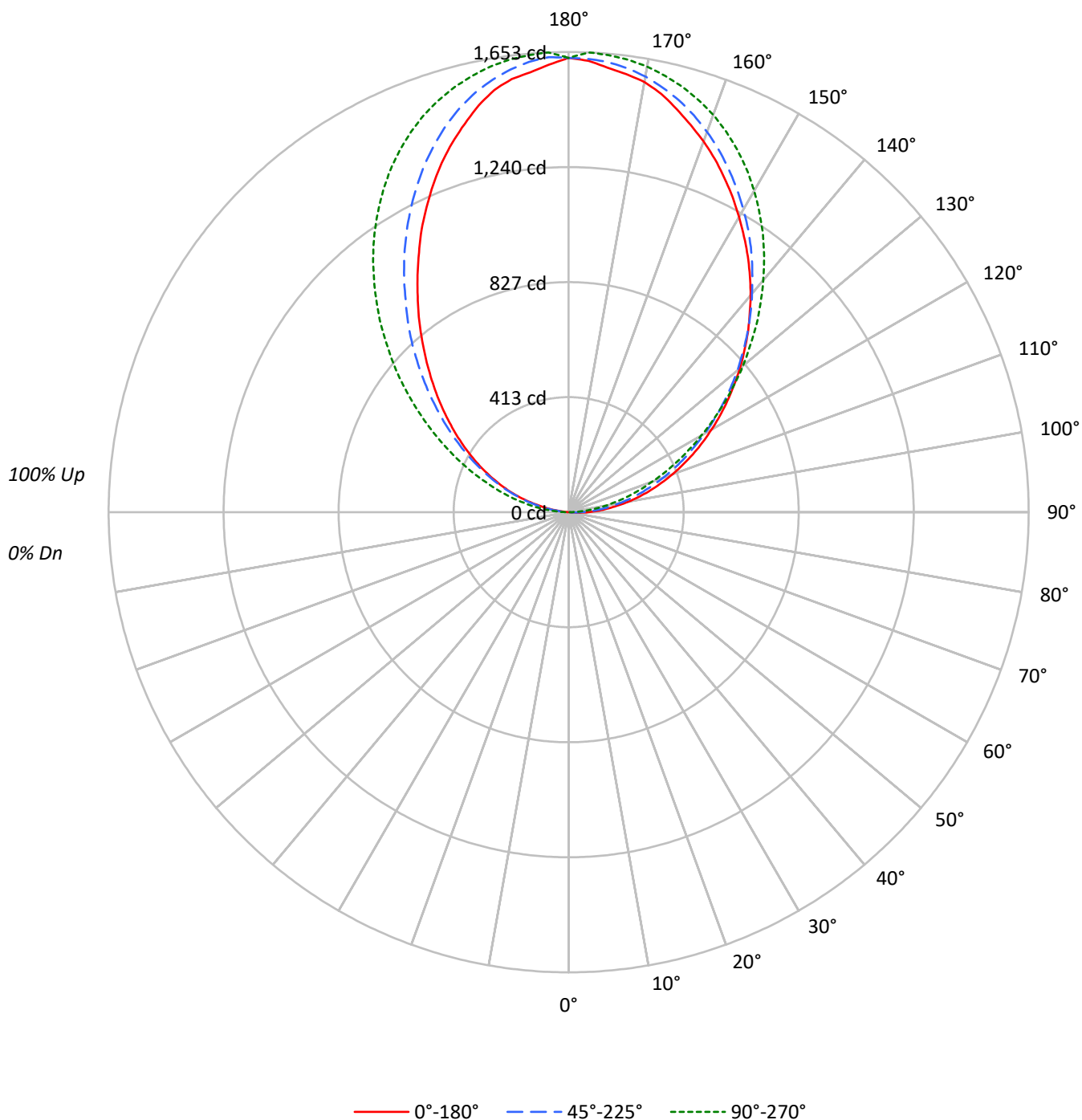
Input Watts (W): 36.7
Input Voltage (V): 120.05
Input Current (Ain): 0.30662
Voltage Rise (V): NR
Power Factor: 0.9986
Total Harmonic Distortion (THDi): 7.62%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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°	55	47	11



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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°	5.9	0.2
90°-100°	77.9	2.0
100°-110°	232.4	6.1
110°-120°	402.0	10.5
120°-130°	555.4	14.5
130°-140°	662.4	17.3
140°-150°	690.4	18.1
150°-160°	614.5	16.1
160°-170°	427.6	11.2
170°-180°	153.5	4.0
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	5.9	0.2
90°-120°	712.3	18.6
90°-150°	2620.5	68.6
90°-180°	3816.0	99.8
0°-180°	3821.9	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°	5	1	1	1	1	6
90°	70	44	1	4	6	38
95°	136	110	62	16	8	129
105°	305	269	222	160	150	323
115°	492	460	430	329	316	488
125°	696	676	681	532	498	623
135°	910	908	955	771	706	702
145°	1122	1144	1217	1031	946	702
155°	1324	1360	1435	1291	1208	610
165°	1499	1532	1581	1505	1444	422
175°	1603	1623	1648	1624	1586	152
180°	1632	1632	1632	1632	1632	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
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°	5	6	7	5	4	3	3	2	1	1	1
87.5°	34	36	37	33	31	31	29	26	22	18	15
90°	70	68	70	65	64	62	60	57	53	48	44
92.5°	104	102	104	99	98	95	94	90	86	80	77
95°	136	139	140	136	134	131	129	125	121	115	110
97.5°	175	177	179	174	172	169	167	163	158	152	147
100°	219	218	219	214	212	209	207	202	198	191	186
102.5°	261	260	262	256	254	251	248	244	239	232	227
105°	305	304	306	300	298	294	292	287	283	275	269
107.5°	349	349	351	345	342	338	337	332	327	319	313
110°	396	396	398	392	389	385	384	379	374	366	360



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	443	446	446	439	437	433	431	427	421	414	408
115°	492	495	495	488	485	481	480	476	471	466	460
117.5°	542	544	544	535	532	531	529	526	521	514	509
120°	592	595	595	589	586	582	581	577	573	566	564
122.5°	644	647	647	640	638	634	633	630	626	623	620
125°	696	700	699	693	691	688	686	684	680	678	676
127.5°	749	752	752	743	744	741	741	738	736	734	733
130°	803	806	806	800	798	796	796	794	792	792	792
132.5°	856	859	856	851	852	851	850	850	849	849	848
135°	910	912	913	904	907	906	905	905	906	907	908
137.5°	963	966	966	958	962	961	960	961	963	965	967
140°	1017	1019	1019	1012	1016	1016	1015	1016	1018	1022	1025
142.5°	1070	1072	1072	1065	1070	1069	1069	1071	1075	1079	1084
145°	1122	1123	1124	1118	1124	1124	1124	1127	1132	1138	1144
147.5°	1173	1174	1175	1170	1177	1178	1178	1182	1187	1194	1201
150°	1224	1225	1226	1221	1228	1229	1229	1233	1240	1247	1255
152.5°	1276	1276	1274	1271	1279	1279	1280	1282	1292	1300	1309
155°	1324	1325	1325	1321	1329	1330	1331	1335	1343	1352	1360
157.5°	1373	1373	1371	1370	1378	1379	1380	1385	1392	1401	1409
160°	1417	1418	1418	1417	1423	1424	1425	1431	1437	1446	1454
162.5°	1458	1458	1458	1458	1464	1466	1467	1473	1479	1486	1495
165°	1499	1499	1498	1498	1505	1506	1507	1512	1517	1525	1532
167.5°	1539	1539	1537	1536	1541	1542	1542	1545	1550	1554	1562
170°	1569	1569	1566	1567	1570	1570	1570	1572	1577	1581	1589
172.5°	1587	1586	1583	1587	1591	1592	1593	1595	1600	1603	1609
175°	1603	1602	1601	1604	1609	1609	1610	1611	1615	1618	1623
177.5°	1623	1622	1617	1617	1620	1620	1620	1618	1622	1625	1630
180°	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
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	1	1	1	1	1	1	1	1	1
87.5°	9	6	2	1	1	1	1	1	1	1	1
90°	39	35	30	24	22	19	13	9	2	1	1
92.5°	71	67	62	58	53	51	45	41	34	29	24
95°	104	101	95	89	87	84	79	74	67	62	57
97.5°	141	137	131	127	124	120	114	110	102	97	92
100°	179	175	169	165	161	157	152	146	140	135	129
102.5°	220	216	210	202	202	199	194	188	181	176	170
105°	263	259	253	247	246	242	238	235	226	222	213
107.5°	307	304	298	291	292	289	285	280	274	269	260
110°	355	351	346	339	339	338	335	331	325	318	310



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	403	400	396	392	392	390	388	385	379	374	363
115°	453	452	448	445	446	444	444	441	436	430	419
117.5°	505	505	502	501	502	500	502	500	495	489	477
120°	559	560	559	559	561	560	562	561	557	551	539
122.5°	615	617	617	618	621	621	625	624	620	615	602
125°	675	676	677	679	683	684	689	689	689	681	667
127.5°	730	732	738	742	746	748	754	755	751	748	733
130°	793	796	801	806	812	814	821	824	824	818	803
132.5°	853	858	861	870	874	879	888	891	887	883	871
135°	915	920	927	935	943	945	955	958	957	955	943
137.5°	975	981	990	999	1005	1011	1021	1025	1025	1021	1009
140°	1034	1041	1050	1062	1069	1075	1087	1094	1091	1088	1077
142.5°	1094	1102	1112	1124	1132	1138	1151	1156	1155	1154	1146
145°	1154	1162	1173	1186	1193	1200	1212	1218	1217	1217	1206
147.5°	1212	1219	1230	1244	1252	1259	1271	1278	1276	1276	1267
150°	1267	1274	1286	1301	1309	1316	1328	1337	1333	1333	1327
152.5°	1321	1328	1339	1354	1363	1370	1381	1387	1386	1387	1379
155°	1371	1377	1388	1403	1412	1418	1430	1437	1431	1435	1428
157.5°	1419	1424	1434	1449	1457	1463	1476	1481	1476	1479	1474
160°	1463	1467	1476	1490	1498	1503	1515	1520	1514	1519	1513
162.5°	1503	1505	1513	1527	1534	1539	1549	1553	1548	1552	1546
165°	1538	1538	1544	1558	1564	1568	1578	1581	1577	1581	1577
167.5°	1567	1566	1571	1584	1590	1594	1603	1605	1601	1605	1601
170°	1591	1589	1593	1606	1611	1614	1622	1625	1621	1625	1621
172.5°	1610	1607	1610	1622	1627	1629	1636	1638	1635	1639	1636
175°	1622	1618	1621	1632	1636	1638	1645	1646	1643	1648	1645
177.5°	1628	1624	1626	1637	1641	1643	1649	1651	1648	1653	1651
180°	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
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°	1	1	1	1	1	1	1	1	1	1	1
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	1	2	2	2	2	3	3	3	4	4	5
92.5°	19	13	8	6	5	3	4	4	4	5	5
95°	52	46	40	37	34	28	24	20	16	13	11
97.5°	86	79	74	73	69	63	57	52	48	44	41
100°	123	115	109	105	104	98	94	89	84	80	76
102.5°	162	153	147	142	141	134	130	126	122	119	115
105°	205	195	187	185	180	173	168	164	160	157	154
107.5°	252	240	231	228	223	214	208	203	199	196	193
110°	301	289	278	272	268	258	251	245	241	237	233



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CATALOG NUMBER: MPBL-3-LD4-UNV-1UP-HI-40

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	354	339	328	323	316	304	296	290	284	280	275
115°	409	393	380	374	367	354	344	336	329	324	320
117.5°	466	449	434	428	419	405	394	384	376	368	365
120°	526	508	492	485	476	459	446	436	426	419	413
122.5°	587	569	551	544	534	516	502	489	478	467	462
125°	651	632	613	606	594	575	559	544	532	522	514
127.5°	716	695	676	669	656	635	618	601	588	573	567
130°	784	761	741	734	721	699	680	662	647	634	623
132.5°	851	827	806	796	786	763	743	723	708	693	680
135°	918	894	873	867	854	831	808	788	771	754	740
137.5°	987	962	941	928	921	901	875	853	836	818	802
140°	1054	1028	1007	994	988	968	941	917	900	881	865
142.5°	1121	1094	1072	1060	1055	1035	1008	984	962	946	929
145°	1186	1159	1137	1126	1121	1103	1076	1052	1031	1013	997
147.5°	1247	1220	1199	1188	1184	1169	1143	1120	1098	1081	1064
150°	1305	1280	1259	1249	1246	1232	1209	1185	1164	1148	1131
152.5°	1361	1336	1318	1309	1303	1295	1272	1250	1229	1213	1196
155°	1411	1389	1371	1363	1358	1352	1332	1311	1291	1276	1260
157.5°	1457	1436	1420	1413	1409	1405	1389	1370	1352	1338	1324
160°	1499	1479	1464	1458	1455	1454	1440	1424	1407	1396	1382
162.5°	1535	1516	1503	1498	1496	1498	1487	1475	1459	1449	1437
165°	1565	1549	1537	1534	1533	1536	1529	1519	1505	1497	1487
167.5°	1591	1576	1566	1563	1564	1568	1563	1556	1545	1539	1530
170°	1612	1599	1589	1587	1589	1595	1593	1587	1577	1572	1567
172.5°	1627	1615	1607	1606	1608	1616	1615	1611	1604	1601	1597
175°	1637	1626	1619	1618	1621	1630	1632	1629	1624	1622	1620
177.5°	1644	1633	1626	1627	1629	1639	1642	1640	1636	1634	1634
180°	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632



TEST NUMBER: P27361

CATALOG NUMBER: MPBL-3-LD4-UNV-1UP-HI-40

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	0	0	0	0	0	0	0	0
2.5°	0	0	0	0	0	0	0	0
5°	0	0	0	0	0	0	0	0
7.5°	0	0	0	0	0	0	0	0
10°	0	0	0	0	0	0	0	0
12.5°	0	0	0	0	0	0	0	0
15°	0	0	0	0	0	0	0	0
17.5°	0	0	0	0	0	0	0	0
20°	0	0	0	0	0	0	0	0
22.5°	0	0	0	0	0	0	0	0
25°	0	0	0	0	0	0	0	0
27.5°	0	0	0	0	0	0	0	0
30°	0	0	0	0	0	0	0	0
32.5°	0	0	0	0	0	0	0	0
35°	0	0	0	0	0	0	0	0
37.5°	0	0	0	0	0	0	0	0
40°	0	0	0	0	0	0	0	0
42.5°	0	0	0	0	0	0	0	0
45°	0	0	0	0	0	0	0	0
47.5°	0	0	0	0	0	0	0	0
50°	0	0	0	0	0	0	0	0
52.5°	0	0	0	0	0	0	0	0
55°	0	0	0	0	0	0	0	0
57.5°	0	0	0	0	0	0	0	0
60°	0	0	0	0	0	0	0	0
62.5°	0	0	0	0	0	0	0	0
65°	0	0	0	0	0	0	0	0
67.5°	0	0	0	0	0	0	0	0
70°	0	0	0	0	0	0	0	0
72.5°	0	0	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0
85°	1	1	1	1	1	1	1	1
87.5°	1	2	2	2	2	3	3	3
90°	5	5	5	5	5	6	6	6
92.5°	5	6	6	6	6	6	6	6
95°	10	9	9	9	8	8	7	8
97.5°	39	38	36	37	35	33	32	34
100°	74	73	72	72	70	69	68	70
102.5°	114	113	111	109	109	108	106	109
105°	153	153	151	151	151	150	148	150
107.5°	193	193	191	191	192	191	190	192
110°	233	233	232	233	232	232	231	233



TEST NUMBER: P27361

CATALOG NUMBER: MPBL-3-LD4-UNV-1UP-HI-40

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	275	275	273	275	274	273	272	274
115°	318	317	317	317	316	316	314	316
117.5°	362	361	359	361	360	359	357	360
120°	410	408	407	406	405	404	403	404
122.5°	458	455	452	453	451	450	448	450
125°	509	504	501	502	500	499	496	498
127.5°	561	556	551	552	550	547	545	546
130°	616	609	605	605	599	599	596	598
132.5°	672	664	660	656	652	652	652	651
135°	731	721	716	715	710	706	706	706
137.5°	792	781	776	770	765	764	761	763
140°	853	843	836	834	825	823	822	822
142.5°	917	906	899	896	886	885	883	884
145°	984	971	965	957	950	948	946	946
147.5°	1051	1038	1028	1023	1014	1012	1010	1010
150°	1118	1105	1098	1089	1080	1081	1075	1076
152.5°	1183	1170	1160	1155	1147	1144	1138	1144
155°	1248	1236	1225	1221	1211	1210	1203	1208
157.5°	1312	1301	1291	1286	1276	1277	1268	1273
160°	1373	1362	1355	1348	1338	1340	1331	1335
162.5°	1429	1419	1409	1404	1395	1396	1389	1391
165°	1479	1470	1461	1457	1448	1449	1441	1444
167.5°	1525	1517	1509	1505	1498	1499	1493	1496
170°	1563	1557	1550	1547	1543	1543	1539	1540
172.5°	1594	1588	1582	1579	1574	1573	1570	1569
175°	1617	1612	1605	1602	1596	1593	1588	1586
177.5°	1632	1627	1622	1619	1614	1614	1611	1609
180°	1632	1632	1632	1632	1632	1632	1632	1632

(END OF REPORT)