

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: P188991

Luminaire Tested: **LCWP1850**

Test Date: 06/15/15

**Test Information**

Test Method: LM-79-08  
Report Number: P188991  
Test Lab: INNOVATION CENTER-P2  
Test Date: 06/15/15  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LCWP1850  
Description: C&I LED WALLPACK  
Light Source: -  
Ballast/Driver: -

**Summary**

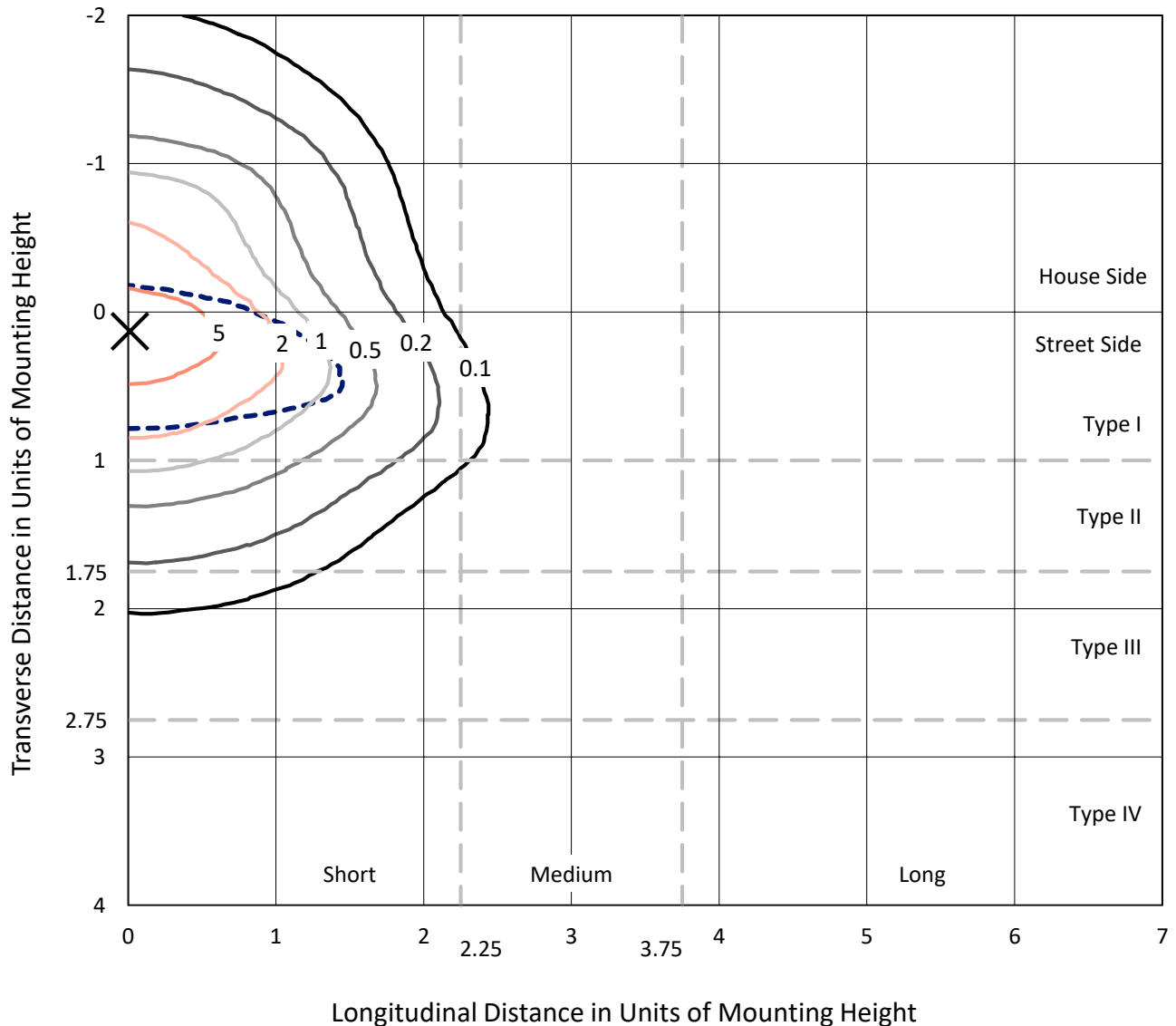
Lumens per Lamp: N/A  
Luminaire Lumens: 1608.8 lumens  
Efficiency: N/A  
Efficacy: 86.0 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.19' x H: 0.02')  
IES Classification: Type I - Short - Cutoff  
BUG Rating: B1 - U1 - G1

Input Watts (W): 18.7  
Input Voltage (V): 120.03  
Input Current (A<sub>in</sub>): 0.15748  
Voltage Rise (V): NR  
Power Factor: 0.9985  
Total Harmonic Distortion (THDi): 13.3%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: 4 HR  
Ambient Temperature (°C): 25.4  
Test Distance: 25 FT

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### Iso-Footcandle Lines of Horizontal Illumination

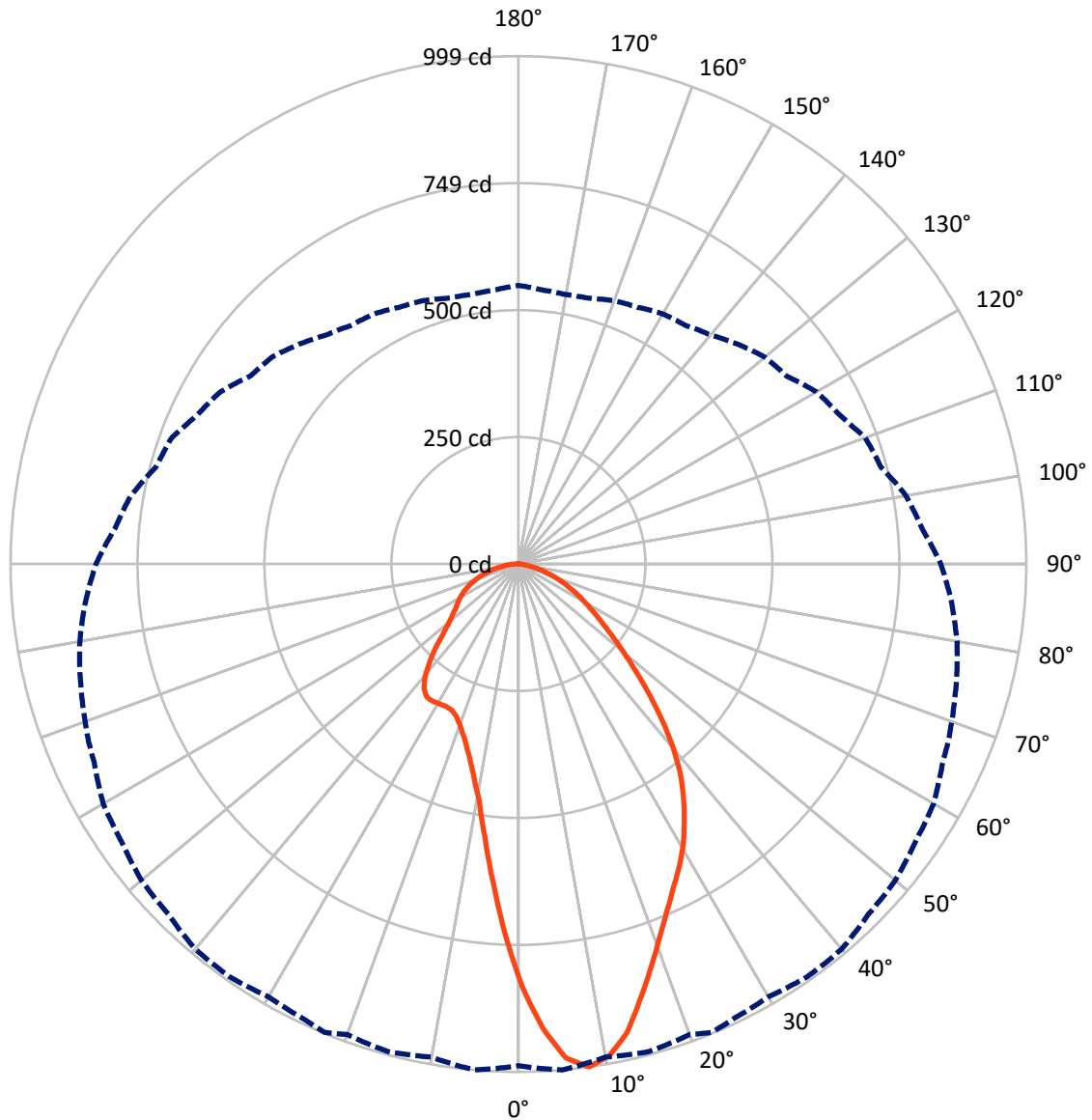
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.6 fc  
 Type I - Short - Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral      - - - Horizontal Cone Through 7.5-Deg Vertical

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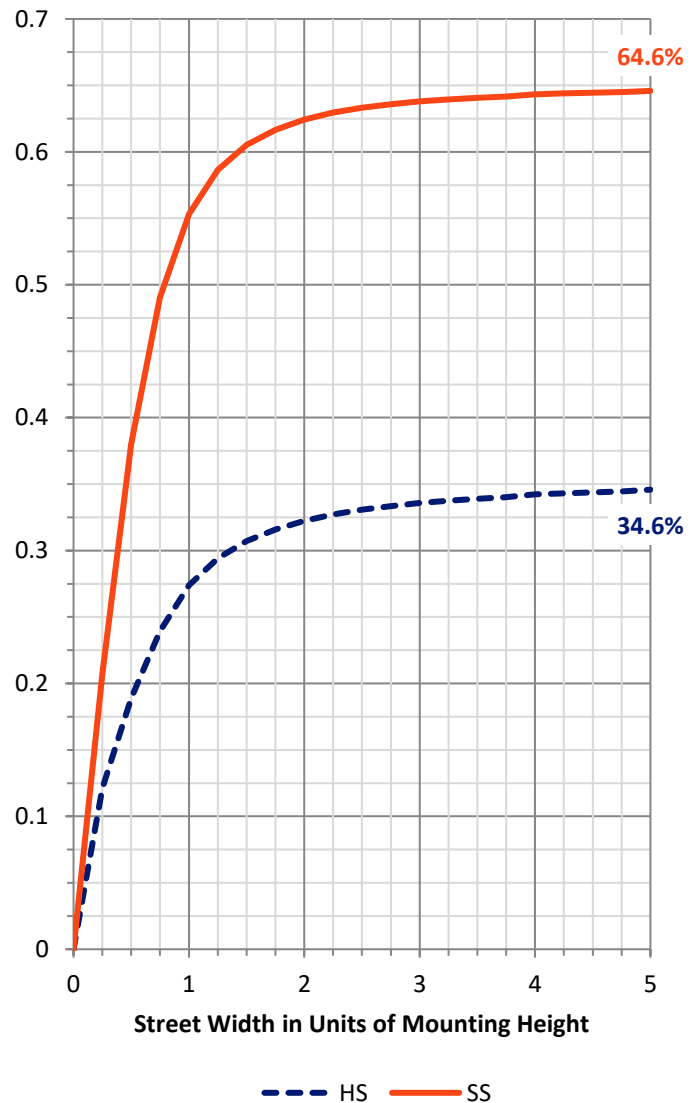
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	564.8	2.7	567.5
	% Fixture	35.1	0.2	35.3
<b>Street Side</b>	Lumens	1038.9	2.4	1041.3
	% Fixture	64.6	0.1	64.7
<b>Total</b>	Lumens	1603.7	5.1	1608.8
	% Fixture	99.7	0.3	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.0	4.7
10°-20°	199.2	12.4
20°-30°	273.4	17.0
30°-40°	310.4	19.3
40°-50°	293.1	18.2
50°-60°	224.2	13.9
60°-70°	138.9	8.6
70°-80°	66.1	4.1
80°-90°	22.3	1.4
90°-100°	4.3	0.3
100°-110°	0.8	0.1
110°-120°	0.0	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°-90°	1603.7	99.7
0°-180°	1608.8	100.0



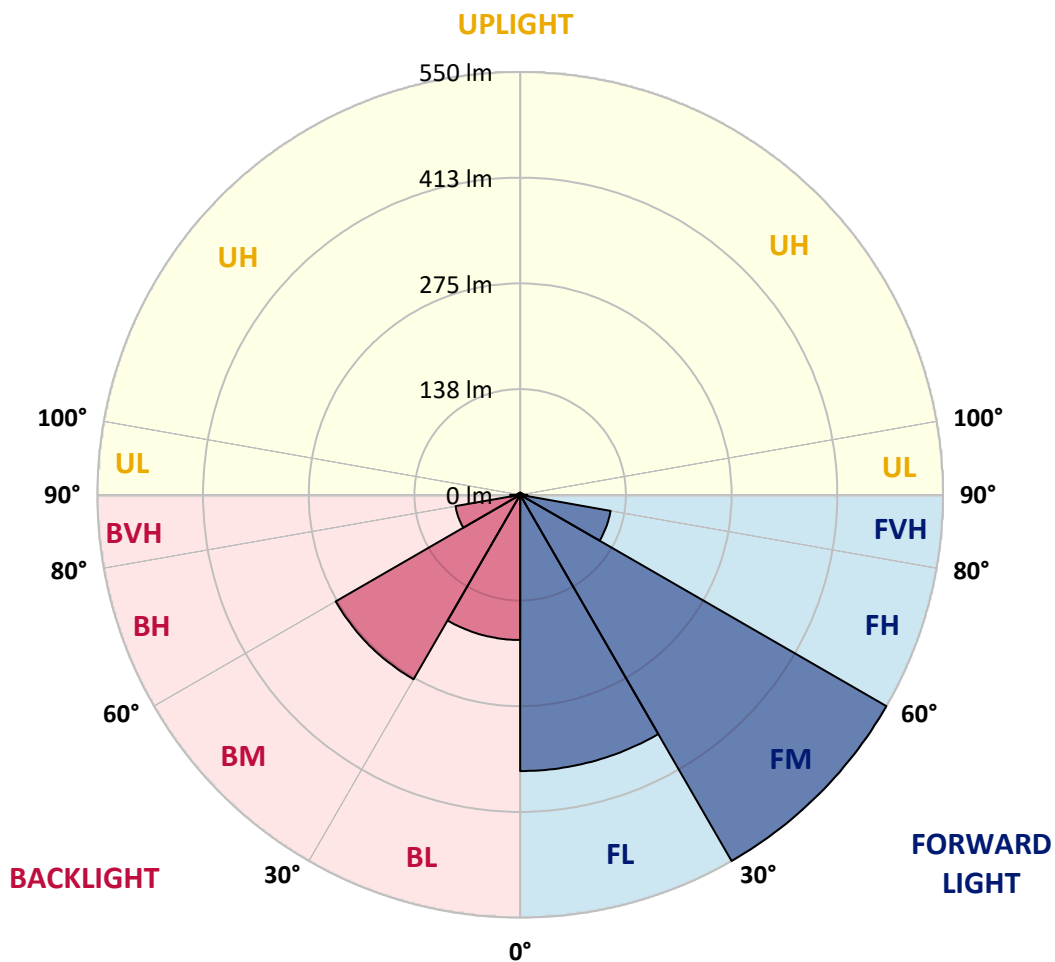
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	359.6	22.4			
FM (30°-60°)	550.4	34.2			
FH (60°-80°)	119.5	7.4			G0/660
FVH (80°-90°)	9.4	0.6			G0/10
BL (0°-30°)	189.0	11.7	B1/500		
BM (30°-60°)	277.4	17.2	B1/1000		
BH (60°-80°)	85.5	5.3	B0/110		G0/110
BVH (80°-90°)	13.0	0.8			G1/100
UL (90°-100°)	4.3	0.3		U1/10	
UH (100°-180°)	2.7	0.2		U1/10	

**BUG Rating: B1-U1-G1**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	830	830	830	830	830	830	830	830	830	830	830
2.5°	906	914	900	906	896	907	903	893	898	898	886
5°	966	976	961	967	956	967	961	952	956	955	940
7.5°	987	999	985	993	985	997	990	983	991	989	974
10°	971	983	969	982	976	990	983	982	994	996	986
12.5°	934	947	935	949	946	962	957	962	981	990	985
15°	879	892	885	901	901	918	916	927	950	968	973
17.5°	827	839	830	845	848	865	865	877	905	929	942
20°	775	789	780	794	798	814	815	827	856	881	900
22.5°	732	745	738	749	752	767	769	781	808	834	853
25°	699	707	701	712	714	728	729	741	767	791	811
27.5°	667	674	667	679	681	694	694	705	729	754	773
30°	631	639	633	643	646	659	658	669	689	714	733
32.5°	591	599	594	605	610	621	621	632	650	675	692
35°	550	559	555	567	572	586	585	596	614	637	654
37.5°	506	515	511	525	531	544	546	558	576	599	616
40°	457	464	462	478	486	498	501	516	535	559	577
42.5°	403	409	410	424	437	448	453	470	491	518	538
45°	350	355	358	371	384	396	402	422	446	474	498
47.5°	300	305	308	323	334	346	352	376	399	430	456
50°	255	262	264	276	288	299	305	328	352	384	413
52.5°	220	225	227	238	247	255	262	284	306	337	369
55°	191	195	196	205	212	219	224	243	263	289	319
57.5°	166	170	170	178	183	189	193	207	222	243	267
60°	144	148	147	154	158	163	166	178	188	203	221
62.5°	124	128	128	133	137	141	143	152	160	171	182
65°	106	109	109	114	118	121	122	130	136	144	152
67.5°	88	91	91	95	98	102	103	110	115	121	127
70°	71	74	74	78	81	84	86	92	96	101	106
72.5°	56	58	58	63	65	68	68	75	79	84	87
75°	42	44	44	47	50	53	53	59	62	68	71
77.5°	29	31	32	35	37	39	41	45	48	54	56
80°	19	20	20	23	26	28	29	33	36	41	43
82.5°	10	11	11	14	16	17	19	22	25	29	32
85°	5	5	6	7	9	10	11	14	16	20	22
87.5°	2	3	3	4	4	5	6	8	9	13	15
90°	2	2	2	3	3	3	3	4	5	7	9
92.5°	2	2	2	2	2	2	3	3	3	4	5
95°	1	1	1	2	2	2	2	2	2	2	3
97.5°	1	1	1	1	1	1	1	1	2	2	2
100°	1	1	1	1	1	1	1	1	1	2	2
102.5°	0	0	0	1	1	1	1	1	1	1	1
105°	0	0	0	0	0	0	1	1	1	1	1
107.5°	0	0	0	0	0	0	0	1	1	1	1
110°	0	0	0	0	0	0	0	0	0	1	1



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**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°	830	830	830	830	830	830	830	830	830	830	830
2.5°	883	872	870	859	858	854	852	851	845	837	819
5°	934	921	912	894	890	883	874	866	852	836	810
7.5°	968	953	943	921	915	907	892	876	855	831	797
10°	984	970	960	937	930	921	902	880	851	818	775
12.5°	988	981	975	953	946	936	914	886	849	809	757
15°	983	983	984	966	959	950	925	894	849	800	738
17.5°	962	972	980	969	964	955	931	895	843	785	715
20°	929	948	966	962	960	954	930	890	831	764	685
22.5°	887	918	943	948	949	945	922	878	813	737	650
25°	845	882	917	932	935	933	912	865	793	709	615
27.5°	808	847	887	911	918	918	900	851	771	681	582
30°	767	806	850	883	894	898	883	831	746	648	542
32.5°	727	766	811	852	866	875	862	809	717	612	507
35°	689	730	776	822	840	850	842	785	687	575	469
37.5°	650	692	740	790	812	825	817	758	652	536	433
40°	610	653	700	754	778	792	786	724	613	495	399
42.5°	571	614	663	715	740	758	751	685	569	453	362
45°	531	572	622	673	698	718	711	641	522	411	329
47.5°	490	530	578	629	653	674	667	593	476	373	297
50°	448	488	533	583	608	628	620	544	430	333	267
52.5°	404	445	489	537	563	581	570	493	384	296	236
55°	357	401	444	492	516	532	520	442	338	261	208
57.5°	301	349	396	446	468	484	467	386	291	225	181
60°	244	288	336	391	418	429	410	332	248	190	155
62.5°	197	225	274	327	355	372	355	281	209	159	131
65°	161	180	213	261	287	304	289	228	168	129	108
67.5°	133	145	168	201	225	240	224	174	131	103	89
70°	110	118	133	154	167	172	160	123	96	79	70
72.5°	91	96	105	117	122	122	106	84	68	59	55
75°	75	77	84	88	89	85	67	53	47	43	42
77.5°	59	62	65	65	63	57	43	34	33	32	32
80°	46	49	50	46	43	37	28	25	24	24	25
82.5°	35	37	37	32	27	24	20	19	18	19	20
85°	25	27	27	21	18	16	15	14	14	15	16
87.5°	18	19	19	14	12	12	11	11	11	12	12
90°	12	13	12	9	9	8	8	8	9	9	9
92.5°	7	8	8	6	6	6	6	6	7	7	7
95°	4	5	5	4	4	4	4	4	5	5	5
97.5°	2	3	3	3	3	3	3	3	3	3	4
100°	2	2	2	2	2	2	2	2	2	2	2
102.5°	1	2	2	1	1	1	1	1	2	2	2
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	0	1	0	0	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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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	830	830	830	830	830	830	830	830	830	830	830
2.5°	813	794	800	792	785	784	763	768	757	744	739
5°	796	769	767	755	743	734	706	702	685	666	657
7.5°	774	738	726	710	696	677	644	633	611	588	573
10°	744	701	679	659	641	617	580	564	538	519	503
12.5°	717	665	634	612	592	565	526	509	485	464	449
15°	689	628	592	568	546	519	479	462	440	422	409
17.5°	656	589	548	524	501	473	436	421	403	388	376
20°	618	548	505	481	459	432	400	388	372	360	351
22.5°	578	506	464	441	421	398	369	361	347	337	329
25°	539	468	428	407	389	369	345	337	327	319	313
27.5°	504	433	396	378	362	346	325	320	312	306	302
30°	469	401	368	351	337	325	307	304	299	295	293
32.5°	433	370	340	326	315	306	291	291	288	287	288
35°	400	343	317	306	296	290	279	282	282	284	286
37.5°	368	318	296	288	280	277	269	275	277	281	285
40°	338	294	277	270	264	264	260	268	272	278	282
42.5°	309	271	259	254	249	252	251	260	267	272	275
45°	281	249	241	238	235	240	242	252	258	262	261
47.5°	255	228	223	223	222	228	230	240	245	246	242
50°	230	209	207	207	206	213	217	225	227	225	217
52.5°	207	190	190	191	190	199	202	207	206	200	190
55°	184	171	172	172	174	183	184	187	183	175	165
57.5°	162	152	155	154	157	164	164	166	161	153	146
60°	141	133	135	136	137	144	143	144	140	135	131
62.5°	121	115	117	118	119	124	124	125	123	120	118
65°	102	98	100	101	102	107	107	109	109	108	107
67.5°	84	82	85	87	88	93	94	97	98	98	97
70°	69	68	71	73	75	81	82	86	87	88	87
72.5°	55	55	59	61	63	69	72	76	77	78	77
75°	43	44	48	51	53	59	63	66	68	68	67
77.5°	34	35	39	41	43	49	53	57	58	58	56
80°	27	28	31	33	35	41	44	48	49	48	47
82.5°	21	22	24	26	27	32	36	39	40	39	37
85°	17	17	19	20	21	25	28	31	31	30	28
87.5°	13	13	14	15	16	19	21	24	24	22	20
90°	10	10	10	11	11	13	15	17	17	15	12
92.5°	7	7	7	7	8	9	11	12	11	9	7
95°	5	5	5	5	5	6	7	7	6	4	2
97.5°	4	3	3	3	3	3	4	4	3	2	1
100°	2	2	2	2	2	2	2	2	1	1	0
102.5°	2	1	1	1	1	1	1	1	1	0	0
105°	1	1	1	1	1	1	1	1	0	0	0
107.5°	1	1	1	1	1	1	0	0	0	0	0
110°	1	0	0	0	0	0	0	0	0	0	0



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REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

	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	0°
115°	0	0	0	0	0	0	0	0	0	0	0	2.5°
117.5°	0	0	0	0	0	0	0	0	0	0	0	5°
120°	0	0	0	0	0	0	0	0	0	0	0	7.5°
122.5°	0	0	0	0	0	0	0	0	0	0	0	10°
125°	0	0	0	0	0	0	0	0	0	0	0	12.5°
127.5°	0	0	0	0	0	0	0	0	0	0	0	15°
130°	0	0	0	0	0	0	0	0	0	0	0	17.5°
132.5°	0	0	0	0	0	0	0	0	0	0	0	20°
135°	0	0	0	0	0	0	0	0	0	0	0	22.5°
137.5°	0	0	0	0	0	0	0	0	0	0	0	25°
140°	0	0	0	0	0	0	0	0	0	0	0	27.5°
142.5°	0	0	0	0	0	0	0	0	0	0	0	30°
145°	0	0	0	0	0	0	0	0	0	0	0	32.5°
147.5°	0	0	0	0	0	0	0	0	0	0	0	35°
150°	0	0	0	0	0	0	0	0	0	0	0	37.5°
152.5°	0	0	0	0	0	0	0	0	0	0	0	40°
155°	0	0	0	0	0	0	0	0	0	0	0	42.5°
157.5°	0	0	0	0	0	0	0	0	0	0	0	45°
160°	0	0	0	0	0	0	0	0	0	0	0	47.5°
162.5°	0	0	0	0	0	0	0	0	0	0	0	50°
165°	0	0	0	0	0	0	0	0	0	0	0	52.5°
167.5°	0	0	0	0	0	0	0	0	0	0	0	55°
170°	0	0	0	0	0	0	0	0	0	0	0	57.5°
172.5°	0	0	0	0	0	0	0	0	0	0	0	60°
175°	0	0	0	0	0	0	0	0	0	0	0	62.5°
177.5°	0	0	0	0	0	0	0	0	0	0	0	65°
180°	0	0	0	0	0	0	0	0	0	0	0	67.5°
												70°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°
												110°

NUMBER: P188991  
 NUMBER: LCWP1850

REPORT NUMBER: P  
 CATALOG NUMBER:

**DISTRIBUTION (continued):**

150°	155°	157.5°	160°	165°	170°	175°	180°
830	830	830	830	830	830	830	830
738	734	733	732	724	728	730	740
651	642	639	637	627	624	629	637
568	557	554	551	541	538	541	548
496	486	482	479	471	468	470	476
442	436	431	428	419	419	424	426
404	399	394	392	384	385	388	390
372	369	365	365	359	358	361	364
348	346	342	343	337	337	340	343
327	326	324	324	320	322	324	327
312	313	311	313	310	313	316	319
303	306	304	307	306	310	314	316
297	302	302	305	305	311	316	318
293	300	301	304	307	313	318	321
293	301	301	304	307	312	318	321
291	298	297	300	300	304	308	312
286	290	288	288	285	286	289	292
275	276	272	271	263	261	262	264
258	255	250	247	236	233	233	235
235	229	224	219	208	204	203	205
207	200	193	191	182	181	181	181
179	173	169	169	164	164	165	166
157	155	153	153	150	151	152	154
142	141	140	140	139	141	143	145
129	129	128	129	129	131	134	135
118	119	118	119	120	122	125	126
107	109	109	109	110	112	114	115
98	99	98	99	99	101	103	103
88	88	88	88	88	89	91	91
77	77	76	77	76	77	79	80
66	65	66	65	65	65	67	68
56	55	55	54	54	54	55	57
46	45	45	44	42	42	43	44
36	34	34	32	31	30	32	32
26	24	24	22	21	21	22	22
18	15	15	13	12	10	10	11
10	8	7	6	4	3	3	3
5	3	2	2	1	1	1	1
1	1	1	1	0	0	0	1
0	0	0	0	0	0	0	0
0	0	0	0	0	1	1	1
0	0	0	0	0	1	1	1
0	0	0	0	0	1	1	1
0	0	0	0	1	0	1	1
0	0	0	0	0	0	0	1

**CANDELA DISTRIBUTION:**

150°	
112.5°	0
115°	0
117.5°	0
120°	0
122.5°	0
125°	0
127.5°	0
130°	0
132.5°	0
135°	0
137.5°	0
140°	0
142.5°	0
145°	0
147.5°	0
150°	0
152.5°	0
155°	0
157.5°	0
160°	0
162.5°	0
165°	0
167.5°	0
170°	0
172.5°	0
175°	0
177.5°	0
180°	0



'188991  
LCWP1850

TION (continued):

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

(END OF REPORT)