

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: METALUX

Report Number: P232581

Luminaire Tested: **4SKB1-LD5-3-N-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232581  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1709-317-6)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4SKB1-LD5-3-N-UNV-L850-CD1-U  
Description: METALUX SKYBAR 4' WAVESTREAM STRIP  
WITH NARROW LENS  
Light Source: (196) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3318.0 lumens  
Efficiency: N/A  
Efficacy: 154.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.53 / 1.51  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.29')  
CIE Type: Direct

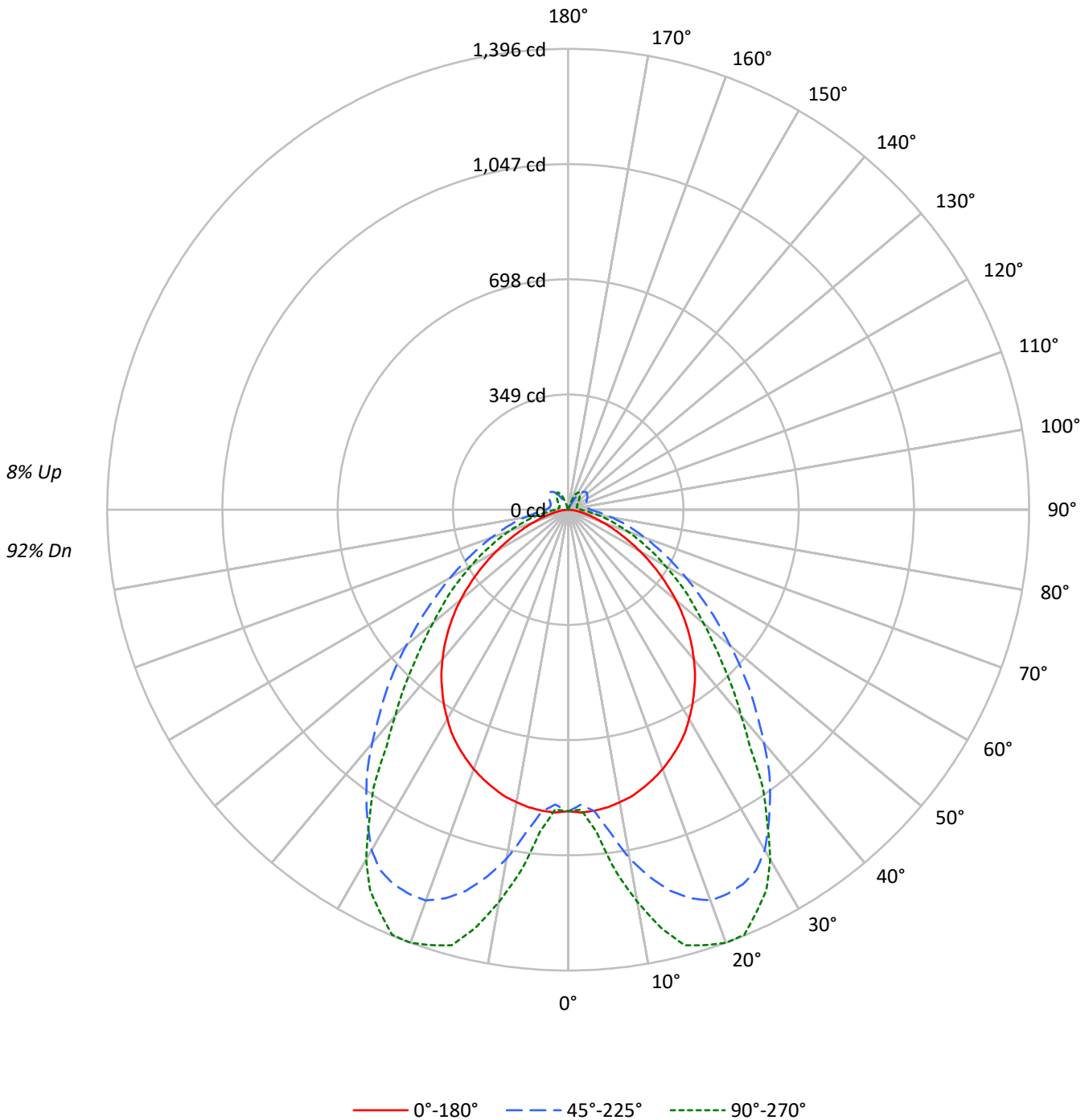
Input Watts (W): 21.44  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	117	117	117	117	113	113	113	113	107	107	107	100	100	100	95	95	95	92
1	107	103	98	95	104	99	96	92	94	91	88	88	86	84	84	82	80	77
2	98	90	84	78	95	88	82	77	83	78	74	78	74	71	74	71	68	65
3	90	80	72	66	87	78	70	65	74	68	63	70	65	61	66	62	58	56
4	83	71	63	56	80	69	62	56	66	59	54	63	57	52	60	55	51	48
5	76	64	55	49	74	62	54	48	59	52	47	56	51	46	54	49	45	42
6	70	58	49	43	68	56	48	42	54	47	41	51	45	40	49	44	40	37
7	65	52	44	38	63	51	43	38	49	42	37	47	41	36	45	39	35	33
8	61	48	40	34	59	47	39	34	45	38	33	43	37	32	41	36	32	30
9	57	44	36	31	55	43	36	30	41	35	30	40	34	29	38	33	29	27
10	53	41	33	28	52	40	33	28	38	32	27	37	31	27	35	30	26	24

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

	0°	45°	90°
0°	9836	9836	9836
5°	9826	9202	9596
10°	9711	10162	10933
15°	9543	10783	11598
20°	9332	10940	11225
25°	9071	10554	10359
30°	8729	9824	9086
35°	8321	8678	7439
40°	7839	7471	5785
45°	7261	6330	4641
50°	6560	5249	3746
55°	5721	4314	3066
60°	4771	3529	2418
65°	3791	2858	1874
70°	2868	2280	1429
75°	2079	1798	1034
80°	1394	1382	733
85°	754	1040	502



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.6	2.8
10°-20°	325.5	9.8
20°-30°	536.0	16.2
30°-40°	602.1	18.1
40°-50°	535.8	16.1
50°-60°	414.4	12.5
60°-70°	281.4	8.5
70°-80°	167.9	5.1
80°-90°	90.1	2.7
90°-100°	59.3	1.8
100°-110°	50.3	1.5
110°-120°	46.5	1.4
120°-130°	43.3	1.3
130°-140°	36.7	1.1
140°-150°	25.1	0.8
150°-160°	9.7	0.3
160°-170°	0.3	0.0
170°-180°	0.0	0.0
0°-30°	955.1	28.8
0°-40°	1557.2	46.9
0°-60°	2507.4	75.6
0°-90°	3046.8	91.8
90°-120°	156.1	4.7
90°-150°	261.2	7.9
90°-180°	271.0	8.2
0°-180°	3318.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	915	903	917	966	979	87
15°	873	981	1195	1344	1366	246
25°	790	1014	1252	1350	1347	363
35°	666	913	1066	1056	1029	416
45°	512	706	780	714	661	394
55°	337	481	518	470	436	301
65°	172	299	323	291	258	173
75°	64	180	185	159	133	70
85°	11	113	93	73	58	14
90°	1	96	68	49	38	1
95°	0	93	59	42	32	0
105°	0	85	55	35	27	0
115°	0	78	61	38	30	0
125°	0	64	71	47	37	0
135°	0	25	76	60	48	0
145°	0	2	59	69	59	0
155°	0	1	13	45	50	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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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8
2.5°	918.3	914.7	908.5	908.0	904.0	902.2	902.6	901.3	899.9	897.7	894.1
5°	915.2	908.5	898.2	898.2	900.4	902.6	908.0	912.9	914.3	917.4	917.0
7.5°	909.4	899.1	889.2	897.3	905.3	908.5	914.7	923.7	937.6	963.1	988.2
10°	899.9	886.1	882.9	895.9	906.7	916.1	930.4	972.1	1010.7	1048.7	1073.4
12.5°	889.2	872.2	876.6	893.2	918.3	936.3	973.0	1028.1	1058.6	1103.0	1139.3
15°	873.1	856.9	865.0	889.6	942.1	980.6	1001.2	1068.5	1117.3	1154.1	1194.9
17.5°	855.6	841.2	852.4	895.9	967.2	1004.4	1037.5	1094.5	1141.5	1195.7	1234.3
20°	836.3	823.8	838.1	904.0	979.3	1017.4	1054.1	1108.4	1170.7	1226.7	1259.8
22.5°	813.9	802.7	824.7	907.6	983.8	1021.9	1057.7	1120.9	1185.4	1231.6	1259.8
25°	789.7	778.5	808.5	900.4	979.3	1014.2	1052.8	1127.6	1180.5	1216.8	1251.8
27.5°	763.7	751.2	796.4	885.6	961.4	1000.8	1044.3	1114.6	1156.3	1196.6	1232.1
30°	731.9	720.7	775.4	864.1	936.3	982.9	1020.1	1083.3	1123.1	1163.0	1190.4
32.5°	700.1	689.3	749.8	833.6	907.6	951.5	987.3	1036.6	1081.9	1112.8	1129.9
35°	665.6	653.4	720.2	796.4	875.3	913.4	943.4	988.2	1026.3	1049.2	1065.8
37.5°	631.0	618.0	682.6	757.4	832.7	867.7	892.8	938.0	967.2	986.0	999.9
40°	592.0	578.6	643.6	713.5	788.4	813.0	839.0	879.3	900.8	916.1	922.8
42.5°	552.6	539.2	601.5	667.3	734.1	758.3	785.2	817.0	838.1	847.1	847.1
45°	511.8	498.8	558.0	621.6	678.1	705.9	729.6	755.2	772.7	779.8	780.3
47.5°	469.2	458.5	515.0	572.8	625.7	649.9	668.2	692.9	708.1	709.9	709.5
50°	425.8	416.4	467.0	523.9	571.0	592.5	608.6	631.5	643.6	643.1	640.9
52.5°	380.1	374.2	421.3	473.3	515.9	535.1	549.5	569.6	579.5	579.5	577.7
55°	336.6	333.0	373.8	424.0	463.9	480.9	494.3	512.3	520.3	520.3	517.7
57.5°	292.7	292.2	330.3	375.1	413.2	428.5	442.8	458.5	465.7	465.7	461.2
60°	249.6	251.9	289.5	330.8	365.7	380.5	393.1	408.3	412.8	413.7	412.8
62.5°	209.7	215.6	251.4	289.1	324.0	336.6	347.8	362.6	366.2	367.5	365.3
65°	172.1	181.1	217.4	253.2	285.9	298.9	308.8	319.1	322.2	323.6	323.1
67.5°	141.2	150.6	186.9	222.3	252.3	262.6	272.5	281.5	281.9	284.1	282.4
70°	109.4	123.7	160.0	193.6	221.9	231.3	239.3	245.6	246.9	247.4	246.9
72.5°	84.3	101.3	135.8	169.0	194.5	203.5	209.7	214.7	214.7	215.1	213.8
75°	63.6	84.3	117.9	148.3	171.2	180.2	185.1	188.2	186.4	186.0	184.7
77.5°	46.2	69.9	101.7	130.4	151.9	158.7	163.1	163.6	160.9	160.4	157.8
80°	31.8	56.9	87.8	114.7	134.5	141.2	143.4	141.6	139.4	136.7	133.1
82.5°	21.1	46.2	76.2	101.7	120.1	125.5	127.3	124.6	121.5	117.0	111.1
85°	11.2	37.2	66.3	91.0	108.5	113.4	114.3	109.4	104.4	98.6	92.8
87.5°	4.9	30.5	59.2	83.8	99.0	102.6	103.1	97.7	91.4	84.7	77.5
90°	0.9	26.0	54.7	78.4	93.2	96.4	96.4	89.2	82.9	75.7	67.7
92.5°	0.4	24.7	53.3	76.6	91.4	94.6	94.1	86.5	78.9	70.8	62.7
95°	0.4	21.5	50.2	74.8	90.1	93.2	92.8	84.7	76.6	68.1	59.2
97.5°	0.4	17.9	47.1	71.7	87.8	91.0	91.0	83.4	75.3	66.3	56.9
100°	0.0	13.9	43.5	68.6	84.7	88.7	89.2	82.0	73.5	64.5	55.6
102.5°	0.0	9.4	40.3	65.9	82.5	86.5	87.4	81.6	72.6	63.6	54.7
105°	0.4	5.8	36.3	62.7	80.2	84.7	86.1	81.1	72.2	63.6	54.7
107.5°	0.4	4.0	32.3	59.6	78.4	83.4	85.2	81.1	72.6	64.1	55.6
110°	0.4	3.6	27.3	56.5	76.2	81.6	84.3	81.6	73.5	65.4	56.9



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CATALOG NUMBER: 4SKB1-LD5-3-N-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.4	2.7	20.6	52.4	73.5	79.8	83.4	82.0	74.8	66.8	58.7
115°	0.4	2.2	13.9	48.4	70.8	78.0	82.5	82.5	76.2	68.6	61.0
117.5°	0.4	2.2	9.4	43.0	67.7	75.7	80.7	82.9	78.0	70.4	63.6
120°	0.4	1.8	4.5	36.8	63.6	72.6	78.9	82.9	79.3	72.6	65.9
122.5°	0.4	1.8	3.6	28.2	59.2	69.0	76.2	82.5	80.7	74.4	68.6
125°	0.4	1.3	3.1	18.8	53.3	64.1	72.6	81.1	81.1	76.2	70.8
127.5°	0.4	1.3	2.7	13.4	45.7	58.7	67.7	78.9	81.1	77.5	73.1
130°	0.4	1.3	2.2	4.0	35.0	51.1	61.8	75.3	80.2	78.4	74.4
132.5°	0.4	0.9	2.2	3.1	22.4	39.9	53.8	69.5	77.5	78.4	75.7
135°	0.4	0.9	1.8	2.7	16.1	24.7	43.0	62.3	72.6	75.7	75.7
137.5°	0.4	0.9	1.8	2.2	7.2	18.4	26.9	53.8	66.3	72.2	73.5
140°	0.4	0.9	1.3	1.8	2.7	9.9	19.3	42.6	58.7	66.8	70.4
142.5°	0.4	0.9	1.3	1.8	2.2	2.2	11.7	24.7	49.3	59.6	65.4
145°	0.4	0.9	0.9	1.3	1.8	2.2	2.2	18.8	35.4	51.1	58.7
147.5°	0.4	0.4	0.9	1.3	1.8	1.8	1.8	8.5	21.1	39.0	50.2
150°	0.4	0.4	0.9	0.9	1.3	1.3	1.8	1.8	13.9	22.0	37.2
152.5°	0.4	0.4	0.9	0.9	1.3	1.3	1.3	1.8	1.8	14.8	20.6
155°	0.4	0.4	0.9	0.9	0.9	1.3	1.3	1.3	1.3	1.8	13.0
157.5°	0.4	0.4	0.9	0.9	0.9	0.9	0.9	1.3	1.3	1.8	1.8
160°	0.4	0.9	0.9	0.9	0.9	0.9	0.9	1.3	1.3	1.3	1.8
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P232581

CATALOG NUMBER: 4SKB1-LD5-3-N-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8
2.5°	898.6	905.3	905.3	911.2	914.3	913.4	914.3	916.1	910.7	908.9
5°	926.8	940.3	947.0	962.2	965.8	972.6	974.8	982.4	984.2	978.8
7.5°	1015.6	1043.4	1061.3	1079.7	1087.7	1091.8	1098.9	1103.9	1111.5	1105.7
10°	1098.9	1132.6	1158.1	1178.3	1183.2	1187.2	1195.7	1207.9	1207.0	1206.1
12.5°	1171.1	1200.7	1232.1	1261.2	1276.0	1279.1	1291.7	1306.5	1309.1	1297.0
15°	1230.7	1271.9	1307.3	1338.3	1344.1	1352.2	1361.6	1366.5	1364.3	1366.1
17.5°	1280.5	1315.4	1340.5	1357.1	1360.7	1367.0	1375.5	1381.7	1382.6	1383.1
20°	1300.2	1323.5	1347.7	1370.5	1377.7	1384.0	1394.3	1399.7	1398.8	1396.1
22.5°	1296.6	1330.7	1353.1	1371.9	1379.1	1384.9	1393.8	1397.4	1396.1	1393.4
25°	1291.2	1320.3	1340.1	1349.9	1349.9	1354.4	1352.2	1349.5	1346.3	1346.8
27.5°	1265.7	1282.7	1296.1	1307.3	1308.7	1309.1	1307.8	1305.1	1303.3	1299.3
30°	1213.7	1234.3	1240.6	1239.7	1237.9	1237.4	1232.1	1228.0	1223.1	1223.5
32.5°	1152.7	1157.2	1159.9	1152.3	1147.8	1146.9	1142.0	1135.2	1128.5	1121.4
35°	1074.3	1071.2	1064.9	1059.5	1055.9	1050.5	1043.4	1036.6	1028.1	1028.6
37.5°	998.5	988.7	979.7	964.9	962.2	949.7	935.8	925.0	911.2	903.5
40°	919.7	909.8	898.6	882.5	875.3	863.6	848.4	830.5	819.3	814.8
42.5°	844.4	832.3	819.3	800.0	791.0	781.6	765.5	748.0	739.9	738.6
45°	770.9	757.0	744.4	722.9	713.5	702.3	685.7	675.0	663.3	660.6
47.5°	700.1	688.0	668.7	652.1	643.1	633.7	616.7	606.8	598.3	595.2
50°	631.5	619.8	605.0	586.7	578.2	569.2	557.1	547.7	537.8	534.7
52.5°	570.1	558.4	543.2	528.9	520.3	515.0	503.8	493.0	485.4	480.5
55°	510.9	500.2	486.3	472.8	469.7	462.5	449.5	440.1	435.2	435.6
57.5°	456.7	447.3	436.5	423.5	418.6	411.9	403.4	392.2	386.3	384.5
60°	407.4	398.4	389.5	379.6	373.3	368.4	356.8	347.8	340.2	339.3
62.5°	360.3	353.6	346.0	336.1	330.8	325.4	315.1	306.6	300.7	298.9
65°	319.6	313.7	304.8	296.7	291.3	285.9	276.1	267.6	262.6	257.7
67.5°	279.2	274.3	267.6	259.0	254.1	248.7	240.2	230.8	225.0	223.6
70°	243.4	238.0	232.6	223.6	219.2	216.0	206.6	197.2	192.7	190.9
72.5°	212.4	206.6	199.0	192.7	190.0	184.2	175.2	169.0	163.1	159.6
75°	180.2	176.6	171.2	164.0	159.1	155.1	147.9	141.6	136.7	133.1
77.5°	153.7	149.2	144.8	137.6	134.0	130.4	122.8	117.4	112.5	110.7
80°	129.1	125.0	118.8	113.4	110.3	107.1	101.3	95.5	91.9	90.1
82.5°	106.7	103.1	98.2	93.7	90.1	87.8	82.5	77.5	74.4	71.7
85°	88.3	83.8	79.3	75.3	72.6	70.8	66.8	63.2	59.2	58.3
87.5°	72.6	69.0	65.0	61.0	59.2	56.9	53.3	50.6	47.5	46.2
90°	62.3	57.8	54.2	51.1	49.3	48.0	45.3	41.7	39.4	38.1
92.5°	56.5	52.4	49.3	46.2	44.8	43.5	40.3	37.6	35.4	33.6
95°	52.9	48.9	45.7	43.0	41.7	40.8	38.1	35.4	33.2	31.8
97.5°	50.2	45.7	42.6	40.3	39.0	38.1	35.9	33.6	31.4	30.0
100°	48.0	43.5	40.3	38.1	37.2	36.3	34.1	31.8	30.0	28.7
102.5°	47.1	42.1	39.0	37.2	36.3	35.4	33.2	31.4	29.1	27.8
105°	47.1	41.7	38.5	36.3	35.4	34.5	32.7	30.9	28.7	27.3
107.5°	48.0	42.1	38.5	36.8	35.9	35.0	32.7	30.9	28.7	27.3
110°	49.3	43.5	39.4	37.2	36.3	35.4	33.2	31.4	29.1	27.8





TEST NUMBER: P232581

CATALOG NUMBER: 4SKB1-LD5-3-N-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	51.1	44.8	40.8	38.1	37.2	36.3	34.1	32.3	30.0	28.7
115°	53.3	46.6	42.6	39.4	38.5	37.6	35.4	33.2	31.4	30.0
117.5°	56.0	49.3	44.4	41.2	40.3	39.0	36.8	34.5	32.7	31.4
120°	58.7	52.4	47.1	43.5	42.1	40.8	38.5	36.3	34.1	32.7
122.5°	61.8	55.1	49.7	46.2	44.8	43.5	40.8	38.5	36.3	34.5
125°	65.0	58.7	52.9	48.9	47.1	45.7	43.0	40.3	38.5	36.8
127.5°	67.7	61.8	56.0	52.0	50.2	48.4	45.7	43.0	40.8	39.4
130°	69.9	65.0	59.6	55.1	53.3	52.0	48.4	45.7	43.5	42.1
132.5°	72.2	67.7	63.2	58.7	56.9	55.1	52.0	48.9	46.6	44.8
135°	73.5	69.9	66.3	62.3	60.5	58.3	55.1	52.0	49.3	47.5
137.5°	73.5	71.7	68.6	65.4	63.6	61.8	58.3	55.1	52.4	51.1
140°	71.3	71.7	70.4	68.1	66.3	65.0	61.8	58.3	55.6	54.2
142.5°	68.1	69.5	70.4	69.0	68.1	67.2	64.5	61.4	58.7	56.9
145°	63.2	65.9	67.7	69.0	68.6	68.1	65.9	63.6	61.0	59.2
147.5°	56.9	61.0	63.2	66.3	67.2	67.2	66.3	64.5	62.3	61.0
150°	48.0	53.8	57.8	61.0	62.3	64.1	64.1	62.7	61.4	60.1
152.5°	34.1	43.5	49.3	53.8	55.6	57.4	59.6	58.7	56.9	56.0
155°	19.3	23.8	35.9	43.0	45.3	47.5	51.1	52.0	51.5	50.2
157.5°	9.9	16.1	20.2	23.3	24.7	28.2	35.4	40.3	39.9	40.8
160°	2.2	2.7	7.6	14.3	16.1	17.0	18.8	20.2	20.2	19.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)