

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: P236416

Luminaire Tested: **SKB2-LD5-9-N-UNV-L840-CD1-U all blades horizontal**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236416
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24071)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB2-LD5-9-N-UNV-L840-CD1-U all blades horizontal
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
2 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES HORIZONTAL
Light Source: (476) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

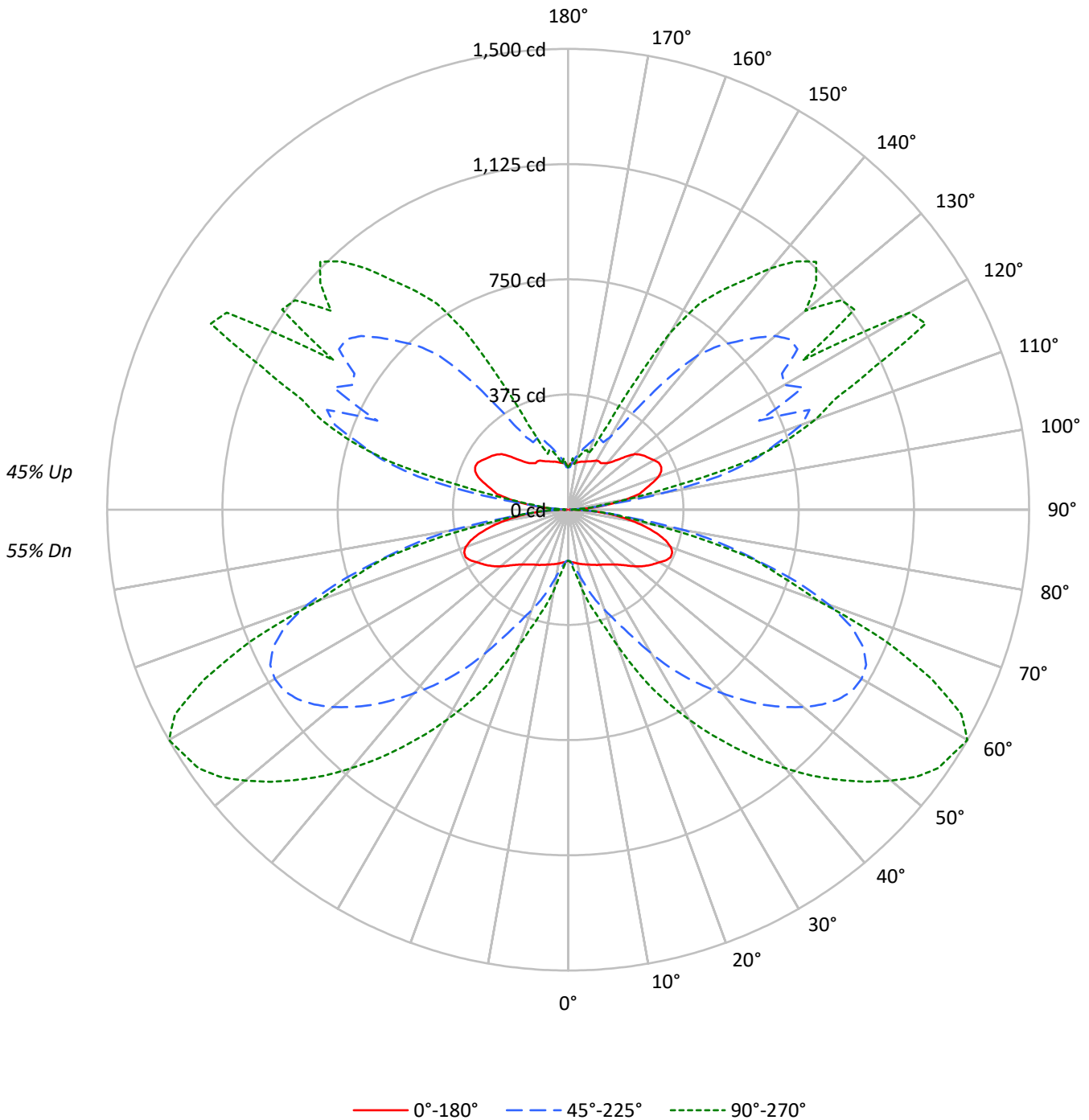
Lumens per Lamp: N/A
Luminaire Lumens: 7052.0 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 2.2 / 4.49 / 3.74
Luminous Opening: Rectangular (W 1.25' x L: 2' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 75.4
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

TEST NUMBER: P236416

CATALOG NUMBER: SKB2-LD5-9-N-UNV-L840-CD1-U all blades horizontal

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	108	108	108	108	101	101	101	101	86	86	86		73	73	73		61	61	61	55
1	97	91	86	82	89	85	80	77	72	69	66		61	58	56		50	49	47	42
2	86	77	69	63	79	71	65	59	60	55	51		50	47	43		41	38	36	31
3	77	66	57	50	71	61	53	46	51	45	40		43	38	34		34	31	28	24
4	69	57	47	40	63	52	44	37	44	37	32		36	31	27		29	25	22	18
5	63	49	40	33	57	45	37	31	38	31	26		32	26	22		25	21	18	14
6	57	43	34	27	52	40	32	25	34	27	22		28	22	18		22	18	15	12
7	52	38	29	23	48	36	27	22	30	23	18		25	19	15		20	15	12	9
8	48	34	26	20	44	32	24	18	27	20	16		22	17	13		18	13	10	8
9	45	31	23	17	41	29	21	16	24	18	14		20	15	11		16	12	9	7
10	42	28	20	15	38	26	19	14	22	16	12		18	13	10		15	11	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	713	713	713
5°	742	777	829
10°	777	956	1157
15°	819	1259	1566
20°	869	1587	2159
25°	939	2025	3021
30°	1028	2680	3926
35°	1144	3490	4964
40°	1307	4382	6172
45°	1550	5465	7569
50°	1919	6694	9189
55°	2376	8071	11017
60°	2948	9491	12912
65°	3743	10792	13294
70°	4474	11349	10872
75°	4966	10547	10397
80°	5274	9482	7054
85°	5424	5671	6017



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.5	0.3
10°-20°	80.0	1.1
20°-30°	200.8	2.8
30°-40°	395.4	5.6
40°-50°	644.0	9.1
50°-60°	887.4	12.6
60°-70°	930.4	13.2
70°-80°	592.6	8.4
80°-90°	157.4	2.2
90°-100°	105.9	1.5
100°-110°	543.1	7.7
110°-120°	767.5	10.9
120°-130°	681.8	9.7
130°-140°	541.7	7.7
140°-150°	308.6	4.4
150°-160°	125.6	1.8
160°-170°	56.2	0.8
170°-180°	15.1	0.2
0°-30°	299.3	4.2
0°-40°	694.7	9.9
0°-60°	2226.1	31.6
0°-90°	3906.4	55.4
90°-120°	1416.5	20.1
90°-150°	2948.7	41.8
90°-180°	3146.0	44.6
0°-180°	7052.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	166	166	166	166	166	
5°	172	175	180	188	192	17
15°	184	216	282	332	351	52
25°	198	289	426	579	636	92
35°	218	373	664	881	944	138
45°	255	496	898	1171	1243	199
55°	316	632	1075	1387	1468	284
65°	367	696	1059	1254	1305	357
75°	298	547	634	626	625	310
85°	110	162	115	118	122	111
90°	4	8	9	9	10	12
95°	85	90	57	63	66	90
105°	259	482	624	620	594	273
115°	334	590	685	1125	1099	325
125°	304	505	910	1069	1136	273
135°	231	283	774	1070	1141	183
145°	185	248	429	755	871	118
155°	174	217	252	288	304	81
165°	162	186	211	218	198	46
175°	152	151	155	146	168	15
180°	138	138	138	138	138	



TEST NUMBER: P236416

CATALOG NUMBER: SKB2-LD5-9-N-UNV-L840-CD1-U all blades horizontal

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	165.7	165.7	165.7	165.7	165.7	165.7	165.7	165.7	165.7	165.7	165.7
2.5°	170.7	170.7	170.7	170.7	169.7	170.7	169.7	169.7	168.7	167.7	167.7
5°	171.7	171.7	172.7	173.7	174.7	174.7	174.7	176.7	177.7	179.7	181.7
7.5°	174.7	174.7	175.7	177.7	179.7	182.7	186.7	191.7	195.7	197.7	200.7
10°	177.7	177.7	180.7	182.7	188.7	196.7	201.7	206.7	212.7	218.6	226.6
12.5°	180.7	181.7	184.7	190.7	200.7	208.7	215.6	226.6	238.6	248.6	260.6
15°	183.7	184.7	189.7	199.7	210.7	221.6	235.6	252.6	268.6	282.5	297.5
17.5°	186.7	188.7	195.7	209.7	221.6	240.6	259.6	280.5	300.5	315.5	330.5
20°	189.7	191.7	201.7	217.6	235.6	260.6	285.5	309.5	329.5	346.4	365.4
22.5°	193.7	195.7	209.7	226.6	251.6	282.5	310.5	335.5	358.4	383.4	408.3
25°	197.7	200.7	217.6	239.6	270.6	306.5	334.5	362.4	393.4	426.3	462.2
27.5°	202.7	205.7	225.6	252.6	290.5	328.5	358.4	394.4	434.3	477.2	525.1
30°	206.7	211.7	233.6	267.6	310.5	350.4	386.4	432.3	484.2	539.1	593.0
32.5°	211.7	218.6	243.6	284.5	330.5	372.4	418.3	476.2	542.1	604.0	658.9
35°	217.6	225.6	254.6	301.5	348.4	397.4	455.3	528.1	602.0	663.9	721.8
37.5°	224.6	234.6	267.6	320.5	369.4	428.3	499.2	583.0	655.9	721.8	783.7
40°	232.6	244.6	282.5	337.4	391.4	462.2	547.1	634.0	710.8	779.7	846.6
42.5°	242.6	255.6	299.5	355.4	418.3	502.2	595.0	682.9	762.8	838.6	911.5
45°	254.6	268.6	318.5	374.4	448.3	543.1	640.0	730.8	815.7	897.5	972.4
47.5°	270.6	284.5	339.4	396.4	482.2	584.0	681.9	776.7	867.6	950.4	1031.3
50°	286.5	300.5	359.4	420.3	517.2	619.0	720.8	819.7	912.5	999.4	1082.2
52.5°	302.5	318.5	377.4	446.3	550.1	651.9	756.8	858.6	952.4	1041.3	1129.2
55°	316.5	335.5	394.4	473.2	580.1	683.9	788.7	889.5	985.4	1075.2	1162.1
57.5°	329.5	350.4	409.3	500.2	605.0	710.8	814.7	912.5	1007.4	1096.2	1182.1
60°	342.4	366.4	426.3	524.1	626.0	731.8	831.6	925.5	1016.3	1102.2	1186.1
62.5°	357.4	382.4	444.3	542.1	642.9	743.8	836.6	925.5	1013.3	1093.2	1169.1
65°	367.4	392.4	459.2	552.1	649.9	742.8	827.6	909.5	989.4	1059.3	1124.2
67.5°	366.4	391.4	462.2	552.1	641.0	725.8	802.7	873.6	941.5	998.4	1042.3
70°	355.4	379.4	453.3	538.1	616.0	691.9	757.8	815.7	867.6	901.5	923.5
72.5°	332.5	356.4	431.3	508.2	575.1	640.0	693.9	737.8	763.8	779.7	783.7
75°	298.5	326.5	399.3	464.2	520.1	574.1	609.0	630.0	642.9	634.0	624.0
77.5°	258.6	290.5	355.4	408.3	454.3	490.2	510.2	513.2	510.2	511.2	514.2
80°	212.7	247.6	299.5	343.4	372.4	390.4	392.4	396.4	395.4	382.4	360.4
82.5°	163.7	196.7	235.6	264.6	275.5	280.5	284.5	261.6	235.6	210.7	200.7
85°	109.8	135.8	159.7	170.7	170.7	153.7	130.8	121.8	118.8	114.8	115.8
87.5°	55.9	60.9	65.9	58.9	52.9	55.9	55.9	55.9	57.9	57.9	58.9
90°	4.0	4.0	5.0	6.0	7.0	9.0	10.0	10.0	11.0	9.0	9.0
92.5°	24.0	22.0	22.0	20.0	22.0	22.0	22.0	21.0	19.0	19.0	19.0
95°	84.9	103.8	119.8	122.8	98.8	80.9	73.9	67.9	59.9	56.9	57.9
97.5°	137.8	169.7	204.7	227.6	239.6	240.6	220.6	176.7	148.8	136.8	129.8
100°	189.7	221.6	271.6	312.5	342.4	361.4	370.4	368.4	354.4	316.5	279.5
102.5°	237.6	264.6	328.5	382.4	424.3	458.3	476.2	494.2	502.2	500.2	496.2
105°	258.6	277.5	353.4	420.3	467.2	496.2	544.1	580.1	611.0	624.0	633.0
107.5°	285.5	288.5	373.4	445.3	494.2	533.1	559.1	656.9	685.9	707.8	731.8
110°	312.5	304.5	385.4	475.2	538.1	558.1	595.0	608.0	770.7	807.7	818.7



TEST NUMBER: P236416

CATALOG NUMBER: SKB2-LD5-9-N-UNV-L840-CD1-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	327.5	313.5	360.4	482.2	555.1	608.0	625.0	669.9	647.9	849.6	941.5
115°	333.5	317.5	328.5	467.2	553.1	626.0	656.9	692.9	754.8	684.9	836.6
117.5°	331.5	316.5	306.5	431.3	542.1	626.0	696.9	707.8	757.8	860.6	764.7
120°	322.5	311.5	300.5	375.4	523.1	621.0	705.8	774.7	763.8	811.7	925.5
122.5°	312.5	305.5	300.5	329.5	484.2	606.0	698.9	784.7	845.6	824.7	846.6
125°	304.5	298.5	299.5	294.5	427.3	582.0	681.9	774.7	854.6	910.5	897.5
127.5°	294.5	291.5	295.5	283.5	365.4	533.1	659.9	744.8	836.6	910.5	967.4
130°	281.5	280.5	286.5	285.5	315.5	462.2	620.0	709.8	791.7	879.6	956.4
132.5°	256.6	257.6	268.6	281.5	273.6	374.4	545.1	670.9	747.8	827.6	909.5
135°	230.6	234.6	252.6	272.6	256.6	309.5	445.3	602.0	706.8	773.7	847.6
137.5°	211.7	216.6	236.6	259.6	261.6	265.6	356.4	506.2	642.9	722.8	782.7
140°	197.7	203.7	222.6	245.6	261.6	245.6	297.5	403.3	542.1	655.9	726.8
142.5°	190.7	195.7	210.7	233.6	253.6	251.6	259.6	321.5	428.3	548.1	654.9
145°	184.7	188.7	200.7	221.6	241.6	253.6	242.6	268.6	332.5	429.3	535.1
147.5°	186.7	186.7	192.7	208.7	229.6	250.6	254.6	244.6	274.6	327.5	408.3
150°	184.7	183.7	192.7	202.7	221.6	242.6	256.6	252.6	248.6	271.6	308.5
152.5°	178.7	179.7	193.7	203.7	218.6	233.6	248.6	255.6	251.6	247.6	260.6
155°	173.7	174.7	187.7	197.7	210.7	223.6	235.6	248.6	255.6	251.6	243.6
157.5°	170.7	169.7	181.7	191.7	200.7	212.7	224.6	235.6	248.6	254.6	255.6
160°	166.7	165.7	176.7	186.7	193.7	204.7	214.6	223.6	233.6	243.6	249.6
162.5°	163.7	163.7	170.7	181.7	188.7	194.7	204.7	211.7	218.6	225.6	231.6
165°	161.7	161.7	165.7	175.7	183.7	187.7	193.7	200.7	205.7	210.7	213.7
167.5°	158.7	158.7	160.7	168.7	175.7	180.7	184.7	187.7	191.7	194.7	195.7
170°	155.7	155.7	155.7	160.7	167.7	172.7	175.7	177.7	179.7	180.7	179.7
172.5°	153.7	153.7	153.7	153.7	157.7	161.7	164.7	167.7	167.7	168.7	166.7
175°	151.8	151.8	150.8	150.8	150.8	150.8	151.8	152.8	153.7	154.7	153.7
177.5°	149.8	148.8	148.8	147.8	147.8	146.8	144.8	142.8	140.8	138.8	136.8
180°	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8



TEST NUMBER: P236416

CATALOG NUMBER: SKB2-LD5-9-N-UNV-L840-CD1-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	165.7	165.7	165.7	165.7	165.7	165.7	165.7	165.7
2.5°	167.7	167.7	167.7	167.7	167.7	168.7	168.7	169.7
5°	183.7	185.7	187.7	187.7	188.7	190.7	190.7	191.7
7.5°	203.7	207.7	210.7	212.7	214.6	218.6	218.6	220.6
10°	233.6	240.6	246.6	251.6	254.6	260.6	260.6	264.6
12.5°	271.6	280.5	289.5	295.5	299.5	304.5	306.5	309.5
15°	309.5	319.5	328.5	334.5	339.4	346.4	348.4	351.4
17.5°	345.4	356.4	369.4	378.4	387.4	395.4	400.3	404.3
20°	386.4	404.3	422.3	434.3	447.3	458.3	465.2	471.2
22.5°	435.3	462.2	488.2	508.2	525.1	539.1	549.1	552.1
25°	501.2	536.1	568.1	590.0	609.0	624.0	633.0	636.0
27.5°	572.1	611.0	643.9	668.9	688.9	699.9	713.8	712.8
30°	642.9	684.9	719.8	745.8	764.7	778.7	790.7	789.7
32.5°	711.8	756.8	791.7	819.7	841.6	856.6	866.6	867.6
35°	777.7	825.6	865.6	896.5	920.5	935.5	943.5	944.5
37.5°	845.6	897.5	939.5	972.4	998.4	1015.3	1023.3	1023.3
40°	914.5	967.4	1012.3	1048.3	1074.2	1090.2	1098.2	1098.2
42.5°	981.4	1038.3	1082.2	1120.2	1147.1	1164.1	1173.1	1174.1
45°	1046.3	1104.2	1151.1	1191.1	1216.0	1233.0	1242.0	1243.0
47.5°	1106.2	1169.1	1216.0	1254.9	1283.9	1301.9	1309.9	1310.9
50°	1162.1	1225.0	1277.9	1316.8	1343.8	1360.8	1370.8	1371.8
52.5°	1208.0	1277.9	1327.8	1368.8	1397.7	1413.7	1425.7	1427.7
55°	1245.0	1310.9	1365.8	1407.7	1437.6	1456.6	1467.6	1467.6
57.5°	1262.9	1328.8	1380.7	1423.7	1455.6	1474.6	1481.6	1482.6
60°	1261.9	1321.8	1371.8	1412.7	1441.6	1464.6	1488.6	1499.5
62.5°	1236.0	1288.9	1331.8	1361.8	1390.7	1420.7	1438.6	1442.6
65°	1175.1	1216.0	1244.0	1263.9	1286.9	1302.9	1303.9	1304.9
67.5°	1071.2	1097.2	1110.2	1117.2	1124.2	1125.2	1119.2	1118.2
70°	934.5	940.5	930.5	911.5	892.5	880.6	866.6	863.6
72.5°	768.7	750.8	735.8	730.8	730.8	732.8	731.8	730.8
75°	627.0	628.0	628.0	625.0	625.0	626.0	625.0	625.0
77.5°	514.2	505.2	489.2	471.2	464.2	456.3	451.3	449.3
80°	338.4	317.5	304.5	292.5	289.5	286.5	284.5	284.5
82.5°	195.7	190.7	187.7	186.7	185.7	185.7	185.7	186.7
85°	115.8	116.8	116.8	118.8	119.8	119.8	121.8	121.8
87.5°	60.9	60.9	63.9	63.9	64.9	64.9	67.9	65.9
90°	10.0	10.0	10.0	8.0	9.0	9.0	9.0	10.0
92.5°	16.0	16.0	16.0	17.0	16.0	15.0	14.0	15.0
95°	58.9	60.9	62.9	63.9	65.9	65.9	65.9	65.9
97.5°	120.8	116.8	114.8	111.8	110.8	106.8	104.8	105.8
100°	241.6	223.6	214.6	208.7	201.7	195.7	195.7	193.7
102.5°	472.2	448.3	424.3	405.3	382.4	363.4	358.4	352.4
105°	627.0	624.0	622.0	618.0	610.0	605.0	598.0	594.0
107.5°	740.8	747.8	752.8	754.8	751.8	744.8	743.8	739.8
110°	821.7	836.6	852.6	859.6	862.6	859.6	856.6	854.6



TEST NUMBER: P236416

CATALOG NUMBER: SKB2-LD5-9-N-UNV-L840-CD1-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	954.4	956.4	955.4	941.5	931.5	935.5	937.5	937.5
115°	1036.3	1104.2	1124.2	1126.2	1120.2	1108.2	1101.2	1099.2
117.5°	787.7	975.4	1157.1	1238.0	1285.9	1300.9	1304.9	1310.9
120°	912.5	816.7	840.6	956.4	1082.2	1200.0	1265.9	1282.9
122.5°	940.5	1044.3	1001.4	923.5	882.6	890.5	904.5	905.5
125°	875.6	940.5	1026.3	1112.2	1155.1	1147.1	1130.2	1136.1
127.5°	980.4	935.5	950.4	997.4	1038.3	1077.2	1112.2	1120.2
130°	1017.3	1055.3	1045.3	1010.3	1001.4	1003.4	1006.4	1007.4
132.5°	988.4	1049.3	1095.2	1115.2	1115.2	1103.2	1094.2	1094.2
135°	917.5	989.4	1046.3	1093.2	1121.2	1133.1	1139.1	1141.1
137.5°	847.6	904.5	967.4	1022.3	1059.3	1080.2	1094.2	1096.2
140°	777.7	833.6	881.6	926.5	974.4	1011.3	1024.3	1025.3
142.5°	718.8	761.8	807.7	848.6	877.6	913.5	939.5	940.5
145°	635.0	695.9	737.8	771.7	798.7	825.6	858.6	870.6
147.5°	505.2	585.0	649.9	697.9	725.8	751.8	773.7	795.7
150°	375.4	447.3	508.2	563.1	605.0	643.9	672.9	664.9
152.5°	283.5	324.5	373.4	418.3	448.3	478.2	483.2	465.2
155°	248.6	257.6	276.5	298.5	315.5	334.5	310.5	303.5
157.5°	248.6	237.6	239.6	241.6	247.6	231.6	226.6	225.6
160°	252.6	249.6	241.6	230.6	216.6	196.7	195.7	193.7
162.5°	238.6	240.6	237.6	233.6	214.6	207.7	203.7	203.7
165°	218.6	219.6	219.6	215.6	206.7	199.7	198.7	197.7
167.5°	197.7	199.7	199.7	195.7	192.7	188.7	181.7	181.7
170°	179.7	179.7	179.7	176.7	177.7	176.7	169.7	165.7
172.5°	164.7	162.7	161.7	159.7	161.7	165.7	165.7	149.8
175°	151.8	148.8	146.8	145.8	148.8	154.7	161.7	167.7
177.5°	134.8	130.8	126.8	126.8	128.8	134.8	143.8	146.8
180°	137.8	137.8	137.8	137.8	137.8	137.8	137.8	137.8

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