

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: P236464

Luminaire Tested: **SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236464  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24056)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES HORIZONTAL  
Light Source: (952) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

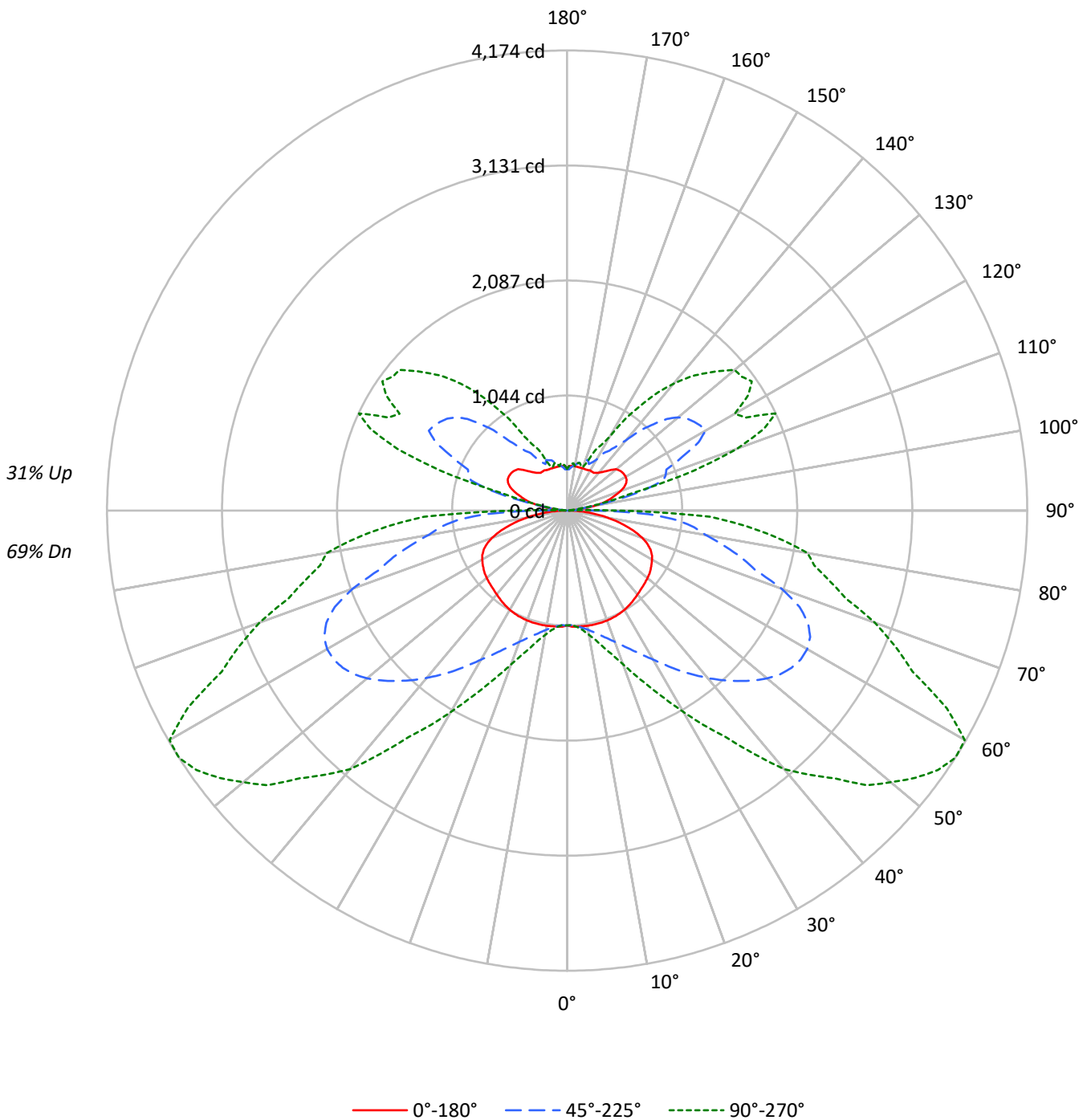
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15945.0 lumens  
Efficiency: N/A  
Efficacy: 111.2 lumens/watt  
Spacing Criteria (0/90/45): 1.49 / 3.46 / 2.71  
Luminous Opening: Rectangular (W 1.88' x L: 4' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 143.4  
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: P236464

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal

### Luminous Intensity Polar Plot





TEST NUMBER: P236464

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	50	30	10	0
RCR																					
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	69			69
1	98	92	87	82	92	87	82	77	77	73	69	68	65	62	59	57	55	50			50
2	87	77	69	62	81	73	65	59	64	58	53	56	51	47	49	45	42	38			38
3	78	66	56	49	73	62	53	46	54	47	42	47	42	37	41	37	33	29			29
4	70	57	47	39	65	53	44	37	47	39	33	41	35	30	35	30	26	23			23
5	64	49	40	32	59	47	37	31	41	33	27	36	29	24	31	26	21	18			18
6	58	44	34	27	54	41	32	26	36	29	23	31	25	20	27	22	18	15			15
7	53	39	29	23	50	37	28	22	32	25	19	28	22	17	24	19	15	12			12
8	49	35	26	20	46	33	25	19	29	22	17	25	19	15	22	17	13	11			11
9	46	32	23	17	43	30	22	16	26	19	15	23	17	13	20	15	11	9			9
10	43	29	20	15	40	27	19	14	24	17	13	21	15	11	18	13	10	8			8

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

	0°	45°	90°
0°	1494	1494	1494
5°	1522	1516	1527
10°	1545	1599	1668
15°	1578	1740	1910
20°	1620	1936	2267
25°	1668	2210	2784
30°	1723	2586	3491
35°	1783	3101	4390
40°	1861	3713	5732
45°	1972	4437	6969
50°	2124	5288	8561
55°	2314	6219	10269
60°	2551	7215	11953
65°	2833	8184	11739
70°	3042	8674	12451
75°	3125	9050	13662
80°	3092	10549	18293
85°	3027	16538	26902



TEST NUMBER: P236464

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.2	0.6
10°-20°	336.1	2.1
20°-30°	657.1	4.1
30°-40°	1121.1	7.0
40°-50°	1711.3	10.7
50°-60°	2237.4	14.0
60°-70°	2241.5	14.1
70°-80°	1680.1	10.5
80°-90°	980.7	6.2
90°-100°	108.6	0.7
100°-110°	671.0	4.2
110°-120°	1191.2	7.5
120°-130°	1175.3	7.4
130°-140°	859.8	5.4
140°-150°	469.9	2.9
150°-160°	237.3	1.5
160°-170°	125.9	0.8
170°-180°	38.4	0.2
0°-30°	1095.5	6.9
0°-40°	2216.6	13.9
0°-60°	6165.3	38.7
0°-90°	11067.6	69.4
90°-120°	1970.8	12.4
90°-150°	4475.7	28.1
90°-180°	4877.0	30.6
0°-180°	15945.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1041	1041	1041	1041	1041	
5°	1056	1060	1052	1052	1060	101
15°	1062	1103	1171	1244	1285	301
25°	1053	1160	1395	1658	1758	487
35°	1018	1227	1770	2322	2506	639
45°	971	1306	2186	3125	3434	752
55°	925	1362	2486	3691	4104	828
65°	834	1265	2410	3263	3457	817
75°	564	942	1632	2219	2464	589
85°	184	410	1004	1474	1634	190
90°	14	61	255	394	460	20
95°	93	59	18	14	14	110
105°	404	510	729	729	606	420
115°	591	798	1150	1658	2085	576
125°	608	715	1405	1890	2046	543
135°	507	544	1109	1620	1761	398
145°	418	508	661	1001	1163	268
155°	409	468	465	560	607	191
165°	407	434	458	471	447	115
175°	406	401	392	372	425	39
180°	377	377	377	377	377	



TEST NUMBER: P236464

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2
2.5°	1054.1	1054.9	1055.7	1055.7	1056.5	1056.5	1050.9	1048.5	1045.2	1041.2	1038.8
5°	1056.5	1056.5	1057.3	1058.1	1059.7	1060.5	1057.3	1055.7	1054.1	1052.5	1051.7
7.5°	1058.1	1058.9	1059.7	1061.3	1066.9	1070.9	1068.5	1070.1	1071.7	1071.7	1073.3
10°	1060.5	1061.3	1063.7	1069.3	1077.4	1086.2	1088.6	1092.6	1095.8	1097.4	1102.2
12.5°	1062.1	1062.9	1067.7	1075.7	1086.2	1097.4	1103.8	1112.7	1121.5	1131.9	1141.6
15°	1062.1	1063.7	1070.1	1080.6	1095.0	1110.3	1122.3	1140.0	1156.0	1171.3	1186.5
17.5°	1062.1	1063.7	1070.9	1086.2	1105.4	1126.3	1146.4	1171.3	1193.0	1214.6	1241.9
20°	1060.5	1062.1	1072.5	1091.8	1115.1	1143.2	1171.3	1202.6	1234.7	1267.6	1302.9
22.5°	1057.3	1060.5	1073.3	1096.6	1125.5	1162.4	1197.8	1240.3	1283.7	1327.0	1376.0
25°	1053.3	1056.5	1073.3	1100.6	1137.6	1181.7	1227.5	1282.1	1336.7	1395.3	1460.3
27.5°	1046.8	1051.7	1071.7	1104.6	1149.6	1202.6	1260.4	1327.0	1398.5	1475.5	1550.2
30°	1039.6	1045.2	1068.5	1107.1	1160.8	1224.3	1294.9	1377.6	1469.9	1560.6	1660.2
32.5°	1029.2	1035.6	1062.9	1109.5	1170.5	1246.7	1331.0	1437.8	1547.0	1661.8	1779.0
35°	1017.9	1026.0	1058.1	1111.1	1180.9	1272.4	1374.4	1502.0	1632.9	1770.2	1903.4
37.5°	1005.9	1015.5	1051.7	1112.7	1193.0	1297.3	1422.6	1566.3	1720.4	1872.9	2033.5
40°	993.1	1005.1	1044.4	1113.5	1205.0	1326.2	1470.7	1633.7	1803.9	1982.1	2162.7
42.5°	981.0	994.7	1037.2	1113.5	1217.0	1354.3	1514.9	1699.5	1889.8	2086.5	2286.4
45°	971.4	985.8	1030.8	1113.5	1229.1	1382.4	1558.2	1763.7	1973.3	2186.0	2406.8
47.5°	961.7	977.0	1024.4	1112.7	1240.3	1408.9	1599.2	1819.9	2046.3	2281.5	2529.6
50°	951.3	968.2	1018.7	1112.7	1250.8	1433.0	1636.1	1868.1	2110.6	2368.2	2637.2
52.5°	940.9	957.7	1012.3	1111.9	1261.2	1451.5	1663.4	1903.4	2164.3	2438.1	2724.7
55°	924.8	944.1	1001.9	1108.7	1265.2	1459.5	1674.6	1927.5	2198.9	2485.5	2789.7
57.5°	908.0	928.0	988.2	1101.4	1262.0	1454.7	1673.0	1935.5	2213.3	2512.8	2825.0
60°	888.7	908.0	968.2	1086.2	1245.9	1436.2	1662.6	1924.3	2210.1	2513.6	2831.5
62.5°	867.0	883.9	943.3	1062.1	1216.2	1404.9	1631.3	1898.6	2183.6	2485.5	2789.7
65°	834.1	849.4	910.4	1026.8	1171.3	1359.1	1583.9	1847.2	2121.8	2410.0	2692.6
67.5°	786.7	802.0	865.4	977.8	1115.9	1298.1	1518.9	1770.2	2019.8	2282.3	2520.0
70°	724.9	740.2	807.6	911.2	1044.4	1223.5	1430.6	1657.8	1881.8	2067.2	2173.2
72.5°	649.5	667.1	735.4	830.9	962.6	1130.3	1321.4	1525.3	1649.7	1787.0	1973.3
75°	563.6	583.6	650.3	739.4	867.0	1017.1	1194.6	1310.2	1452.3	1632.1	1792.6
77.5°	470.4	495.3	555.5	641.4	757.0	895.1	1003.5	1154.4	1299.7	1448.2	1595.2
80°	374.1	402.2	456.0	535.5	638.2	729.7	857.4	994.7	1130.3	1276.4	1419.3
82.5°	277.8	305.9	355.6	424.7	497.7	586.0	704.9	839.7	989.0	1161.6	1334.2
85°	183.8	207.9	252.1	289.0	361.3	458.4	599.7	743.4	870.2	1004.3	1133.5
87.5°	96.3	110.8	137.3	190.3	268.9	342.0	437.5	536.3	624.6	741.8	841.3
90°	13.6	14.5	19.3	25.7	49.8	71.4	116.4	169.4	191.9	255.3	285.0
92.5°	20.9	20.1	16.9	12.8	10.4	10.4	9.6	8.8	8.0	6.4	4.8
95°	93.1	101.2	92.3	79.5	62.6	55.4	40.9	28.9	24.1	18.5	16.9
97.5°	171.0	190.3	191.1	178.2	170.2	156.5	135.7	131.7	126.0	110.0	96.3
100°	257.7	285.0	293.8	283.4	280.2	298.6	293.8	273.0	246.5	225.6	235.2
102.5°	346.0	370.9	388.6	418.3	382.1	407.8	443.9	467.2	484.1	468.8	435.1
105°	403.8	424.7	456.8	499.3	530.6	489.7	524.2	607.7	684.8	728.9	757.0
107.5°	455.2	469.6	509.8	562.0	620.6	654.3	601.3	657.5	786.7	914.4	1007.5
110°	515.4	525.0	546.7	619.0	683.2	769.1	788.3	743.4	806.8	952.1	1140.8



TEST NUMBER: P236464

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	560.4	562.8	556.3	643.8	729.7	814.0	932.0	954.5	930.4	974.6	1091.0
115°	590.9	586.8	564.4	635.8	748.2	848.6	963.4	1107.9	1146.4	1149.6	1168.9
117.5°	607.7	600.5	579.6	623.0	745.8	867.8	985.0	1131.1	1282.1	1344.7	1397.7
120°	613.3	605.3	598.9	597.3	712.9	864.6	1001.9	1136.0	1289.3	1448.2	1538.2
122.5°	612.5	606.1	614.9	572.4	673.5	839.7	996.3	1139.2	1277.2	1433.8	1589.5
125°	608.5	603.7	621.4	567.6	646.3	783.5	960.9	1123.1	1262.0	1404.9	1545.4
127.5°	598.9	596.5	619.0	570.8	609.3	724.9	908.8	1080.6	1229.9	1369.6	1505.2
130°	582.8	582.8	604.5	582.8	569.2	676.0	817.2	1008.3	1167.3	1314.2	1453.1
132.5°	548.3	552.3	572.4	582.8	545.9	629.4	734.6	906.4	1067.7	1231.5	1366.4
135°	506.6	514.6	535.5	564.4	522.6	564.4	670.3	782.7	959.3	1108.7	1262.8
137.5°	475.3	485.7	506.6	544.3	529.8	531.5	627.8	708.1	818.0	989.0	1122.3
140°	448.8	460.0	480.9	521.8	532.3	505.8	555.5	655.9	728.1	833.3	987.4
142.5°	430.3	439.9	459.2	496.9	519.4	499.3	521.0	593.3	662.3	733.8	818.0
145°	418.3	426.3	442.3	472.8	505.0	511.4	492.1	530.6	609.3	660.7	722.5
147.5°	418.3	421.5	431.1	451.2	489.7	507.4	492.9	500.9	533.1	619.8	653.5
150°	420.7	421.5	430.3	443.1	474.5	500.1	511.4	476.9	500.1	531.5	589.3
152.5°	413.4	417.5	433.5	447.2	467.2	492.9	500.1	500.1	470.4	494.5	515.4
155°	409.4	412.6	429.5	442.3	456.0	479.3	492.1	499.3	494.5	464.8	480.1
157.5°	408.6	410.2	423.1	435.9	448.8	463.2	482.5	489.7	492.9	496.1	476.9
160°	407.8	408.6	419.9	430.3	442.3	452.0	465.6	480.9	484.1	485.7	497.7
162.5°	407.0	407.8	416.7	427.9	435.9	444.7	452.0	463.2	472.8	478.5	480.9
165°	407.0	407.0	413.4	424.7	431.1	437.5	443.1	448.0	450.4	458.4	465.6
167.5°	407.0	407.0	410.2	418.3	427.1	429.5	432.7	436.7	435.9	435.9	435.9
170°	407.8	407.8	407.8	411.8	419.1	423.9	423.9	424.7	422.3	419.9	415.0
172.5°	407.0	406.2	406.2	406.2	408.6	411.0	413.4	414.2	410.2	406.2	399.8
175°	406.2	405.4	403.8	402.2	402.2	399.8	398.2	396.6	393.4	391.8	386.9
177.5°	405.4	404.6	403.0	400.6	399.0	395.0	391.0	386.1	378.9	374.1	366.9
180°	377.3	377.3	377.3	377.3	377.3	377.3	377.3	377.3	377.3	377.3	377.3



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CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2	1041.2
2.5°	1035.6	1032.4	1032.4	1034.0	1036.4	1036.4	1036.4	1039.6
5°	1050.1	1049.3	1050.9	1054.1	1056.5	1056.5	1055.7	1059.7
7.5°	1074.9	1075.7	1079.0	1084.6	1088.6	1089.4	1089.4	1094.2
10°	1107.9	1112.7	1121.5	1129.5	1136.0	1138.4	1140.0	1144.8
12.5°	1152.0	1160.0	1171.3	1183.3	1193.0	1197.8	1200.2	1203.4
15°	1203.4	1218.6	1235.5	1251.6	1265.2	1273.2	1277.2	1285.3
17.5°	1266.8	1287.7	1308.6	1332.6	1351.1	1362.3	1368.8	1373.6
20°	1337.5	1370.4	1401.7	1433.8	1457.9	1472.3	1479.6	1484.4
22.5°	1425.0	1468.3	1508.5	1548.6	1576.7	1600.0	1610.4	1613.6
25°	1520.5	1576.7	1632.1	1683.5	1722.0	1742.1	1753.3	1758.1
27.5°	1632.9	1705.9	1768.6	1826.4	1869.7	1902.6	1917.9	1924.3
30°	1758.9	1842.4	1921.1	1994.9	2044.7	2080.0	2099.3	2106.5
32.5°	1894.6	2001.4	2090.5	2168.4	2237.4	2275.1	2299.2	2306.4
35°	2045.5	2162.7	2273.5	2370.7	2443.7	2484.7	2498.3	2505.5
37.5°	2190.0	2335.3	2459.0	2564.1	2656.5	2723.1	2762.4	2778.5
40°	2341.8	2500.7	2642.0	2780.1	2910.1	2998.4	3044.2	3059.5
42.5°	2485.5	2668.5	2843.5	3005.7	3134.1	3198.3	3235.3	3249.7
45°	2634.0	2844.3	3041.0	3208.8	3325.2	3383.0	3420.7	3433.6
47.5°	2778.5	3009.7	3224.0	3393.4	3528.3	3617.4	3669.6	3688.0
50°	2906.1	3159.0	3383.8	3571.6	3703.3	3772.3	3814.1	3834.2
52.5°	3014.5	3278.6	3513.8	3689.6	3822.9	3907.2	3960.2	3981.1
55°	3084.3	3361.3	3597.3	3784.4	3926.5	4018.0	4076.6	4103.9
57.5°	3126.9	3405.5	3643.1	3834.2	3983.5	4079.8	4140.8	4174.5
60°	3123.7	3393.4	3629.4	3817.3	3959.4	4059.7	4124.8	4164.1
62.5°	3069.9	3318.8	3532.3	3688.8	3805.3	3847.0	3853.4	3883.1
65°	2942.2	3133.3	3234.5	3290.7	3366.1	3410.3	3427.9	3456.8
67.5°	2634.0	2735.1	2871.6	2995.2	3104.4	3163.8	3199.1	3222.4
70°	2327.3	2499.1	2649.2	2770.4	2858.8	2920.6	2938.2	2967.1
72.5°	2137.8	2285.6	2412.4	2511.1	2587.4	2634.0	2640.4	2650.8
75°	1925.1	2041.5	2164.3	2274.3	2362.6	2414.0	2448.5	2463.8
77.5°	1734.8	1863.3	1985.3	2096.1	2190.8	2247.0	2282.3	2295.2
80°	1563.0	1722.8	1873.7	1997.4	2100.9	2176.4	2202.9	2213.3
82.5°	1484.4	1618.4	1734.8	1819.1	1890.6	1928.3	1937.1	1938.8
85°	1252.4	1349.5	1437.8	1510.9	1577.5	1620.0	1636.1	1633.7
87.5°	939.3	1018.7	1099.8	1168.9	1237.1	1285.3	1302.9	1301.3
90°	336.4	336.4	381.3	406.2	476.1	520.2	505.0	460.0
92.5°	3.2	3.2	2.4	1.6	1.6	0.8	0.8	0.8
95°	15.3	15.3	14.5	14.5	14.5	13.6	13.6	13.6
97.5°	77.9	69.8	58.6	51.4	41.7	36.1	35.3	33.7
100°	236.0	232.0	220.0	212.7	202.3	194.3	191.9	191.9
102.5°	391.8	354.8	345.2	353.2	362.1	365.3	365.3	367.7
105°	772.3	768.3	748.2	709.7	663.9	622.2	606.9	606.1
107.5°	1074.9	1135.2	1177.7	1197.8	1208.2	1200.2	1197.8	1207.4
110°	1282.9	1396.9	1492.4	1559.0	1603.2	1616.0	1625.7	1637.7





TEST NUMBER: P236464

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1283.7	1494.0	1675.4	1786.2	1861.7	1894.6	1913.9	1927.5
115°	1254.8	1378.4	1571.9	1744.5	1901.0	2004.6	2060.0	2084.9
117.5°	1392.9	1430.6	1520.5	1605.6	1691.5	1762.9	1808.7	1828.0
120°	1586.3	1634.5	1643.3	1670.6	1717.2	1734.0	1744.5	1754.9
122.5°	1690.7	1733.2	1791.8	1850.4	1884.2	1911.5	1931.5	1946.0
125°	1705.9	1797.5	1872.9	1906.6	1925.9	1959.6	2016.6	2045.5
127.5°	1634.5	1765.3	1886.6	1928.3	1972.5	1982.1	1990.9	1994.9
130°	1576.7	1692.3	1781.4	1871.3	1946.0	1978.9	1984.5	1984.5
132.5°	1501.2	1598.4	1699.5	1773.4	1815.1	1845.6	1864.9	1872.9
135°	1381.6	1494.0	1586.3	1653.0	1712.4	1742.1	1754.9	1761.3
137.5°	1254.0	1357.5	1447.4	1535.7	1597.6	1629.7	1641.7	1644.9
140°	1101.4	1200.2	1301.3	1382.4	1437.8	1478.8	1498.8	1502.0
142.5°	948.9	1050.9	1128.7	1200.2	1266.0	1317.4	1344.7	1351.9
145°	783.5	868.6	965.0	1037.2	1095.0	1131.1	1154.4	1163.3
147.5°	698.4	745.8	787.5	841.3	898.3	951.3	983.4	990.7
150°	639.0	666.3	698.4	728.9	753.0	767.5	778.7	772.3
152.5°	551.5	627.8	643.0	655.1	664.7	676.0	669.5	669.5
155°	496.1	514.6	545.9	574.0	626.2	611.7	608.5	606.9
157.5°	461.6	469.6	483.3	487.3	484.9	480.9	483.3	477.7
160°	487.3	468.8	443.9	443.1	431.1	424.7	421.5	418.3
162.5°	481.7	486.5	486.5	474.5	456.0	435.9	423.9	419.9
165°	470.4	472.0	473.6	468.8	464.0	453.6	448.0	447.2
167.5°	439.1	447.2	453.6	459.2	463.2	456.8	445.6	442.3
170°	412.6	413.4	415.0	421.5	431.1	433.5	427.1	408.6
172.5°	393.4	391.0	390.2	395.8	408.6	419.1	423.1	433.5
175°	378.9	371.7	369.3	374.9	388.6	403.8	420.7	424.7
177.5°	357.2	348.4	343.6	349.2	362.1	382.1	402.2	404.6
180°	377.3	377.3	377.3	377.3	377.3	377.3	377.3	377.3

(END OF REPORT)