

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: P236419

Luminaire Tested: **SKB2-LD5-12-N-UNV-L840-CD2-U all blades horizontal**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236419  
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-LD5-12-N-UNV-L840-CD2-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**

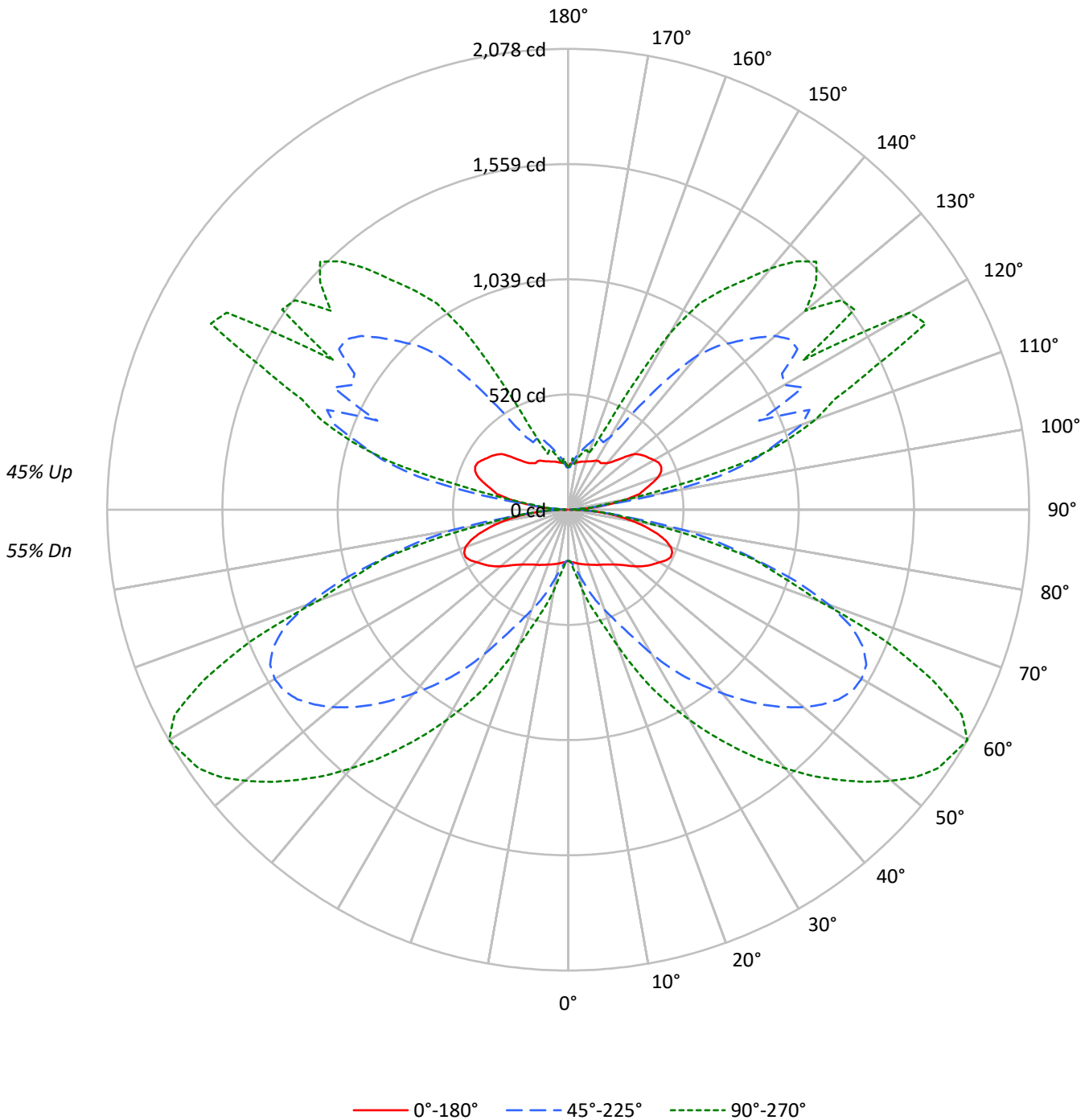
Lumens per Lamp: N/A  
Luminaire Lumens: 9772.0 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Spacing Criteria (0/90/45): 2.2 / 4.49 / 3.74  
Luminous Opening: Rectangular (W 1.25' x L: 2' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 104.9  
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: P236419

CATALOG NUMBER: SKB2-LD5-12-N-UNV-L840-CD2-U all blades horizontal

### Luminous Intensity Polar Plot





TEST NUMBER: P236419

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**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	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°	989	989	989
5°	1029	1076	1148
10°	1077	1325	1603
15°	1135	1745	2171
20°	1205	2200	2992
25°	1301	2806	4187
30°	1424	3714	5440
35°	1585	4836	6879
40°	1811	6073	8553
45°	2148	7573	10488
50°	2659	9276	12733
55°	3292	11185	15266
60°	4086	13152	17893
65°	5187	14954	18422
70°	6200	15726	15065
75°	6880	14614	14406
80°	7307	13139	9777
85°	7519	7860	8339



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.6	0.3
10°-20°	110.8	1.1
20°-30°	278.3	2.8
30°-40°	547.9	5.6
40°-50°	892.4	9.1
50°-60°	1229.7	12.6
60°-70°	1289.3	13.2
70°-80°	821.1	8.4
80°-90°	218.1	2.2
90°-100°	146.8	1.5
100°-110°	752.6	7.7
110°-120°	1063.5	10.9
120°-130°	944.8	9.7
130°-140°	750.6	7.7
140°-150°	427.7	4.4
150°-160°	174.1	1.8
160°-170°	77.9	0.8
170°-180°	20.9	0.2
0°-30°	414.7	4.2
0°-40°	962.6	9.9
0°-60°	3084.7	31.6
0°-90°	5413.1	55.4
90°-120°	1962.9	20.1
90°-150°	4086.0	41.8
90°-180°	4359.0	44.6
0°-180°	9772.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	230	230	230	230	230	
5°	238	242	249	260	266	23
15°	255	300	392	459	487	72
25°	274	400	591	802	881	127
35°	302	517	920	1221	1309	191
45°	353	687	1244	1623	1722	276
55°	439	876	1490	1922	2034	393
65°	509	965	1468	1738	1808	495
75°	414	758	878	868	866	429
85°	152	225	159	163	169	154
90°	6	11	12	12	14	17
95°	118	125	79	88	91	124
105°	358	668	865	859	823	378
115°	462	817	949	1559	1523	450
125°	422	699	1262	1482	1574	378
135°	320	392	1072	1482	1581	253
145°	256	343	595	1046	1206	164
155°	241	301	349	398	421	112
165°	224	257	292	302	274	64
175°	210	209	214	203	232	20
180°	191	191	191	191	191	



TEST NUMBER: P236419

CATALOG NUMBER: SKB2-LD5-12-N-UNV-L840-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	229.7	229.7	229.7	229.7	229.7	229.7	229.7	229.7	229.7	229.7	229.7
2.5°	236.6	236.6	236.6	236.6	235.2	236.6	235.2	235.2	233.8	232.4	232.4
5°	238.0	238.0	239.3	240.7	242.1	242.1	242.1	244.9	246.3	249.0	251.8
7.5°	242.1	242.1	243.5	246.3	249.0	253.2	258.7	265.6	271.2	273.9	278.1
10°	246.3	246.3	250.4	253.2	261.5	272.5	279.5	286.4	294.7	303.0	314.0
12.5°	250.4	251.8	255.9	264.2	278.1	289.1	298.8	314.0	330.6	344.5	361.1
15°	254.6	255.9	262.9	276.7	291.9	307.1	326.5	350.0	372.1	391.5	412.3
17.5°	258.7	261.5	271.2	290.5	307.1	333.4	359.7	388.7	416.4	437.2	457.9
20°	262.9	265.6	279.5	301.6	326.5	361.1	395.7	428.9	456.5	480.1	506.3
22.5°	268.4	271.2	290.5	314.0	348.6	391.5	430.3	464.8	496.7	531.2	565.8
25°	273.9	278.1	301.6	332.0	374.9	424.7	463.5	502.2	545.1	590.7	640.5
27.5°	280.8	285.0	312.7	350.0	402.6	455.2	496.7	546.5	601.8	661.3	727.7
30°	286.4	293.3	323.7	370.8	430.3	485.6	535.4	599.0	671.0	747.1	821.8
32.5°	293.3	303.0	337.6	394.3	457.9	516.0	579.7	659.9	751.2	837.0	913.1
35°	301.6	312.7	352.8	417.8	482.8	550.6	630.9	731.8	834.2	920.0	1000.2
37.5°	311.3	325.1	370.8	444.1	511.9	593.5	691.7	807.9	908.9	1000.2	1086.0
40°	322.3	338.9	391.5	467.6	542.3	640.5	758.1	878.5	985.0	1080.5	1173.2
42.5°	336.2	354.2	415.0	492.5	579.7	695.9	824.5	946.3	1057.0	1162.1	1263.1
45°	352.8	372.1	441.3	518.8	621.2	752.6	886.8	1012.7	1130.3	1243.7	1347.5
47.5°	374.9	394.3	470.4	549.2	668.2	809.3	944.9	1076.3	1202.2	1317.0	1429.1
50°	397.0	416.4	498.0	582.4	716.6	857.7	998.8	1135.8	1264.5	1384.8	1499.7
52.5°	419.2	441.3	522.9	618.4	762.3	903.4	1048.7	1189.8	1319.8	1442.9	1564.7
55°	438.6	464.8	546.5	655.8	803.8	947.7	1092.9	1232.6	1365.5	1490.0	1610.3
57.5°	456.5	485.6	567.2	693.1	838.4	985.0	1128.9	1264.5	1395.9	1519.0	1638.0
60°	474.5	507.7	590.7	726.3	867.4	1014.1	1152.4	1282.5	1408.3	1527.3	1643.5
62.5°	495.3	529.9	615.6	751.2	890.9	1030.7	1159.3	1282.5	1404.2	1514.9	1620.0
65°	509.1	543.7	636.4	765.0	900.6	1029.3	1146.9	1260.3	1371.0	1467.8	1557.8
67.5°	507.7	542.3	640.5	765.0	888.2	1005.8	1112.3	1210.5	1304.6	1383.4	1444.3
70°	492.5	525.7	628.1	745.7	853.6	958.7	1050.0	1130.3	1202.2	1249.2	1279.7
72.5°	460.7	493.9	597.6	704.2	796.9	886.8	961.5	1022.4	1058.3	1080.5	1086.0
75°	413.6	452.4	553.4	643.3	720.8	795.5	843.9	873.0	890.9	878.5	864.7
77.5°	358.3	402.6	492.5	565.8	629.5	679.3	706.9	711.1	706.9	708.3	712.5
80°	294.7	343.1	415.0	475.9	516.0	540.9	543.7	549.2	547.8	529.9	499.4
82.5°	226.9	272.5	326.5	366.6	381.8	388.7	394.3	362.5	326.5	291.9	278.1
85°	152.2	188.1	221.4	236.6	236.6	213.1	181.2	168.8	164.6	159.1	160.5
87.5°	77.5	84.4	91.3	81.6	73.3	77.5	77.5	77.5	80.2	80.2	81.6
90°	5.5	5.5	6.9	8.3	9.7	12.5	13.8	13.8	15.2	12.5	12.5
92.5°	33.2	30.4	30.4	27.7	30.4	30.4	30.4	29.1	26.3	26.3	26.3
95°	117.6	143.9	166.0	170.2	137.0	112.1	102.4	94.1	83.0	78.9	80.2
97.5°	190.9	235.2	283.6	315.4	332.0	333.4	305.7	244.9	206.1	189.5	179.8
100°	262.9	307.1	376.3	433.0	474.5	500.8	513.3	510.5	491.1	438.6	387.4
102.5°	329.3	366.6	455.2	529.9	588.0	635.0	659.9	684.8	695.9	693.1	687.6
105°	358.3	384.6	489.7	582.4	647.5	687.6	754.0	803.8	846.7	864.7	877.1
107.5°	395.7	399.8	517.4	617.0	684.8	738.8	774.7	910.3	950.4	980.9	1014.1
110°	433.0	422.0	534.0	658.5	745.7	773.3	824.5	842.5	1068.0	1119.2	1134.4



TEST NUMBER: P236419

CATALOG NUMBER: SKB2-LD5-12-N-UNV-L840-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	453.8	434.4	499.4	668.2	769.2	842.5	866.0	928.3	897.9	1177.3	1304.6
115°	462.1	439.9	455.2	647.5	766.4	867.4	910.3	960.1	1045.9	949.0	1159.3
117.5°	459.3	438.6	424.7	597.6	751.2	867.4	965.6	980.9	1050.0	1192.5	1059.7
120°	446.9	431.6	416.4	520.2	724.9	860.5	978.1	1073.6	1058.3	1124.7	1282.5
122.5°	433.0	423.3	416.4	456.5	671.0	839.8	968.4	1087.4	1171.8	1142.7	1173.2
125°	422.0	413.6	415.0	408.1	592.1	806.5	944.9	1073.6	1184.2	1261.7	1243.7
127.5°	408.1	404.0	409.5	392.9	506.3	738.8	914.5	1032.0	1159.3	1261.7	1340.6
130°	390.1	388.7	397.0	395.7	437.2	640.5	859.1	983.6	1097.1	1218.8	1325.3
132.5°	355.5	356.9	372.1	390.1	379.1	518.8	755.4	929.7	1036.2	1146.9	1260.3
135°	319.6	325.1	350.0	377.7	355.5	428.9	617.0	834.2	979.5	1072.2	1174.5
137.5°	293.3	300.2	327.9	359.7	362.5	368.0	493.9	701.4	890.9	1001.6	1084.6
140°	273.9	282.2	308.5	340.3	362.5	340.3	412.3	558.9	751.2	908.9	1007.1
142.5°	264.2	271.2	291.9	323.7	351.4	348.6	359.7	445.5	593.5	759.5	907.5
145°	255.9	261.5	278.1	307.1	334.8	351.4	336.2	372.1	460.7	594.9	741.5
147.5°	258.7	258.7	267.0	289.1	318.2	347.2	352.8	338.9	380.4	453.8	565.8
150°	255.9	254.6	267.0	280.8	307.1	336.2	355.5	350.0	344.5	376.3	427.5
152.5°	247.6	249.0	268.4	282.2	303.0	323.7	344.5	354.2	348.6	343.1	361.1
155°	240.7	242.1	260.1	273.9	291.9	309.9	326.5	344.5	354.2	348.6	337.6
157.5°	236.6	235.2	251.8	265.6	278.1	294.7	311.3	326.5	344.5	352.8	354.2
160°	231.0	229.7	244.9	258.7	268.4	283.6	297.4	309.9	323.7	337.6	345.9
162.5°	226.9	226.9	236.6	251.8	261.5	269.8	283.6	293.3	303.0	312.7	321.0
165°	224.1	224.1	229.7	243.5	254.6	260.1	268.4	278.1	285.0	291.9	296.1
167.5°	220.0	220.0	222.7	233.8	243.5	250.4	255.9	260.1	265.6	269.8	271.2
170°	215.8	215.8	215.8	222.7	232.4	239.3	243.5	246.3	249.0	250.4	249.0
172.5°	213.1	213.1	213.1	213.1	218.6	224.1	228.3	232.4	232.4	233.8	231.0
175°	210.3	210.3	208.9	208.9	208.9	208.9	210.3	211.7	213.1	214.4	213.1
177.5°	207.5	206.1	206.1	204.7	204.7	203.4	200.6	197.8	195.1	192.3	189.5
180°	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9



TEST NUMBER: P236419

CATALOG NUMBER: SKB2-LD5-12-N-UNV-L840-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	229.7	229.7	229.7	229.7	229.7	229.7	229.7	229.7
2.5°	232.4	232.4	232.4	232.4	232.4	233.8	233.8	235.2
5°	254.6	257.3	260.1	260.1	261.5	264.2	264.2	265.6
7.5°	282.2	287.8	291.9	294.7	297.4	303.0	303.0	305.7
10°	323.7	333.4	341.7	348.6	352.8	361.1	361.1	366.6
12.5°	376.3	388.7	401.2	409.5	415.0	422.0	424.7	428.9
15°	428.9	442.7	455.2	463.5	470.4	480.1	482.8	487.0
17.5°	478.7	493.9	511.9	524.3	536.8	547.8	554.8	560.3
20°	535.4	560.3	585.2	601.8	619.8	635.0	644.7	653.0
22.5°	603.2	640.5	676.5	704.2	727.7	747.1	760.9	765.0
25°	694.5	742.9	787.2	817.6	843.9	864.7	877.1	881.3
27.5°	792.7	846.7	892.3	926.9	954.6	969.8	989.2	987.8
30°	890.9	949.0	997.5	1033.4	1059.7	1079.1	1095.7	1094.3
32.5°	986.4	1048.7	1097.1	1135.8	1166.2	1187.0	1200.8	1202.2
35°	1077.7	1144.1	1199.4	1242.3	1275.5	1296.3	1307.4	1308.7
37.5°	1171.8	1243.7	1301.8	1347.5	1383.4	1407.0	1418.0	1418.0
40°	1267.2	1340.6	1402.8	1452.6	1488.6	1510.7	1521.8	1521.8
42.5°	1359.9	1438.8	1499.7	1552.2	1589.6	1613.1	1625.5	1626.9
45°	1449.8	1530.1	1595.1	1650.4	1685.0	1708.6	1721.0	1722.4
47.5°	1532.9	1620.0	1685.0	1739.0	1779.1	1804.0	1815.1	1816.5
50°	1610.3	1697.5	1770.8	1824.8	1862.1	1885.6	1899.5	1900.9
52.5°	1674.0	1770.8	1840.0	1896.7	1936.8	1959.0	1975.6	1978.3
55°	1725.2	1816.5	1892.6	1950.7	1992.2	2018.4	2033.7	2033.7
57.5°	1750.1	1841.4	1913.3	1972.8	2017.1	2043.3	2053.0	2054.4
60°	1748.7	1831.7	1900.9	1957.6	1997.7	2029.5	2062.7	2077.9
62.5°	1712.7	1786.0	1845.5	1887.0	1927.1	1968.6	1993.5	1999.1
65°	1628.3	1685.0	1723.8	1751.4	1783.3	1805.4	1806.8	1808.2
67.5°	1484.4	1520.4	1538.4	1548.1	1557.8	1559.1	1550.8	1549.5
70°	1294.9	1303.2	1289.4	1263.1	1236.8	1220.2	1200.8	1196.7
72.5°	1065.3	1040.3	1019.6	1012.7	1012.7	1015.4	1014.1	1012.7
75°	868.8	870.2	870.2	866.0	866.0	867.4	866.0	866.0
77.5°	712.5	700.0	677.9	653.0	643.3	632.2	625.3	622.5
80°	469.0	439.9	422.0	405.3	401.2	397.0	394.3	394.3
82.5°	271.2	264.2	260.1	258.7	257.3	257.3	257.3	258.7
85°	160.5	161.9	161.9	164.6	166.0	166.0	168.8	168.8
87.5°	84.4	84.4	88.5	88.5	89.9	89.9	94.1	91.3
90°	13.8	13.8	13.8	11.1	12.5	12.5	12.5	13.8
92.5°	22.1	22.1	22.1	23.5	22.1	20.8	19.4	20.8
95°	81.6	84.4	87.2	88.5	91.3	91.3	91.3	91.3
97.5°	167.4	161.9	159.1	154.9	153.6	148.0	145.3	146.6
100°	334.8	309.9	297.4	289.1	279.5	271.2	271.2	268.4
102.5°	654.4	621.2	588.0	561.7	529.9	503.6	496.7	488.4
105°	868.8	864.7	861.9	856.4	845.3	838.4	828.7	823.1
107.5°	1026.5	1036.2	1043.1	1045.9	1041.7	1032.0	1030.7	1025.1
110°	1138.6	1159.3	1181.5	1191.1	1195.3	1191.1	1187.0	1184.2





TEST NUMBER: P236419

CATALOG NUMBER: SKB2-LD5-12-N-UNV-L840-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1322.6	1325.3	1324.0	1304.6	1290.8	1296.3	1299.1	1299.1
115°	1436.0	1530.1	1557.8	1560.5	1552.2	1535.6	1525.9	1523.2
117.5°	1091.5	1351.6	1603.4	1715.5	1781.9	1802.6	1808.2	1816.5
120°	1264.5	1131.7	1164.9	1325.3	1499.7	1662.9	1754.2	1777.7
122.5°	1303.2	1447.1	1387.6	1279.7	1223.0	1234.0	1253.4	1254.8
125°	1213.3	1303.2	1422.2	1541.2	1600.6	1589.6	1566.1	1574.4
127.5°	1358.5	1296.3	1317.0	1382.1	1438.8	1492.7	1541.2	1552.2
130°	1409.7	1462.3	1448.5	1400.0	1387.6	1390.4	1394.5	1395.9
132.5°	1369.6	1454.0	1517.6	1545.3	1545.3	1528.7	1516.3	1516.3
135°	1271.4	1371.0	1449.8	1514.9	1553.6	1570.2	1578.5	1581.3
137.5°	1174.5	1253.4	1340.6	1416.6	1467.8	1496.9	1516.3	1519.0
140°	1077.7	1155.2	1221.6	1283.8	1350.2	1401.4	1419.4	1420.8
142.5°	996.1	1055.6	1119.2	1175.9	1216.0	1265.9	1301.8	1303.2
145°	879.9	964.3	1022.4	1069.4	1106.8	1144.1	1189.8	1206.4
147.5°	700.0	810.7	900.6	967.0	1005.8	1041.7	1072.2	1102.6
150°	520.2	619.8	704.2	780.3	838.4	892.3	932.4	921.4
152.5°	392.9	449.6	517.4	579.7	621.2	662.7	669.6	644.7
155°	344.5	356.9	383.2	413.6	437.2	463.5	430.3	420.6
157.5°	344.5	329.3	332.0	334.8	343.1	321.0	314.0	312.7
160°	350.0	345.9	334.8	319.6	300.2	272.5	271.2	268.4
162.5°	330.6	333.4	329.3	323.7	297.4	287.8	282.2	282.2
165°	303.0	304.4	304.4	298.8	286.4	276.7	275.3	273.9
167.5°	273.9	276.7	276.7	271.2	267.0	261.5	251.8	251.8
170°	249.0	249.0	249.0	244.9	246.3	244.9	235.2	229.7
172.5°	228.3	225.5	224.1	221.4	224.1	229.7	229.7	207.5
175°	210.3	206.1	203.4	202.0	206.1	214.4	224.1	232.4
177.5°	186.8	181.2	175.7	175.7	178.5	186.8	199.2	203.4
180°	190.9	190.9	190.9	190.9	190.9	190.9	190.9	190.9

(END OF REPORT)