

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: P236422

Luminaire Tested: **SKB2-LD5-15-N-UNV-L840-CD2-U all blades horizontal**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236422
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-LD5-15-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

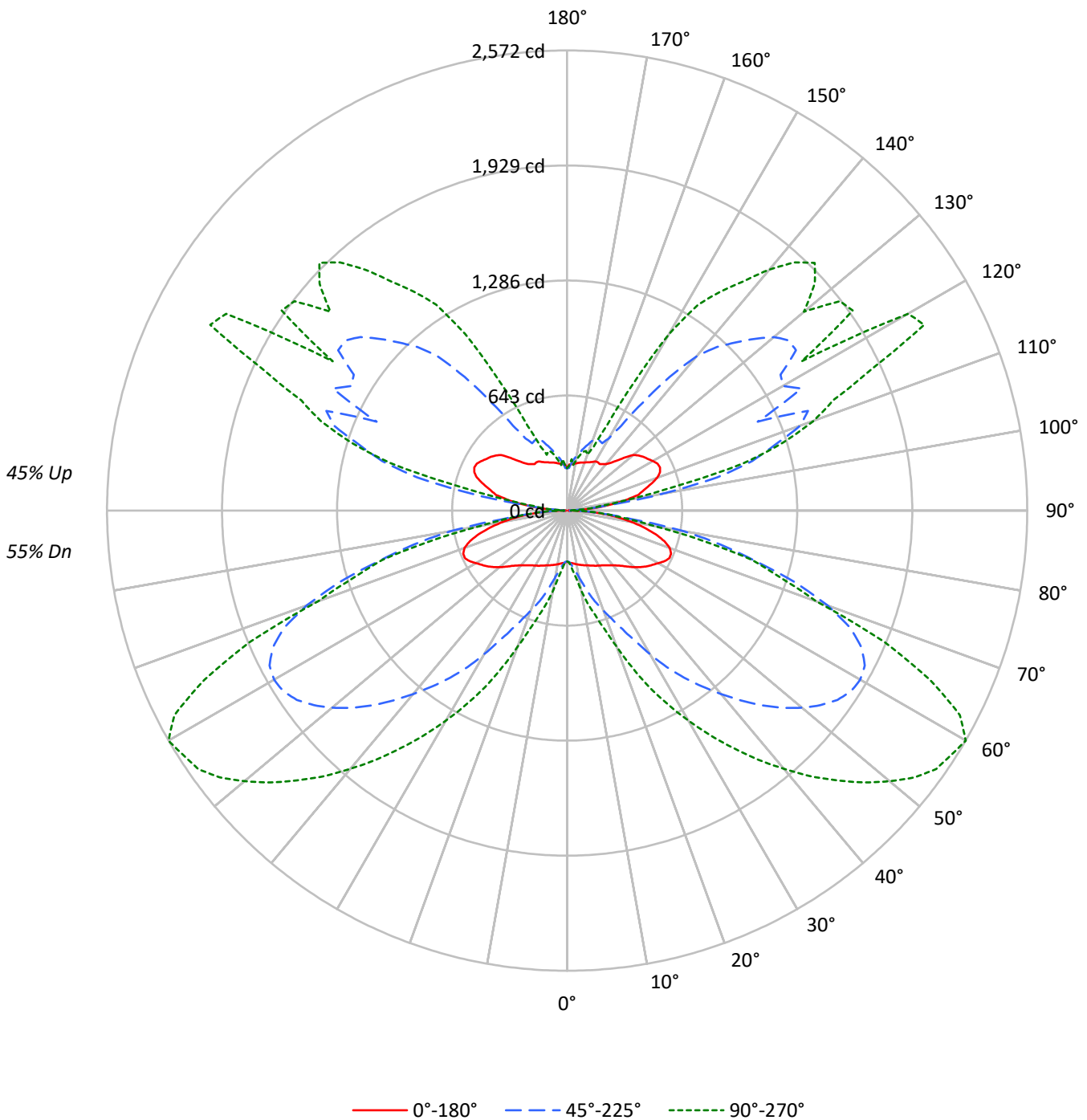
Lumens per Lamp: N/A
Luminaire Lumens: 12098.0 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 2.2 / 4.49 / 3.74
Luminous Opening: Rectangular (W 1.25' x L: 2' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 132.4
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

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CATALOG NUMBER: SKB2-LD5-15-N-UNV-L840-CD2-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°	1224	1224	1224
5°	1273	1332	1421
10°	1333	1640	1984
15°	1405	2161	2687
20°	1491	2723	3704
25°	1611	3474	5183
30°	1762	4598	6736
35°	1963	5987	8517
40°	2243	7519	10589
45°	2659	9376	12984
50°	3293	11484	15763
55°	4075	13847	18899
60°	5059	16283	22152
65°	6421	18513	22806
70°	7675	19470	18650
75°	8519	18093	17837
80°	9045	16265	12102
85°	9307	9732	10325



TEST NUMBER: P236422

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	0.3
10°-20°	137.2	1.1
20°-30°	344.5	2.8
30°-40°	678.3	5.6
40°-50°	1104.8	9.1
50°-60°	1522.4	12.6
60°-70°	1596.1	13.2
70°-80°	1016.6	8.4
80°-90°	270.0	2.2
90°-100°	181.7	1.5
100°-110°	931.7	7.7
110°-120°	1316.7	10.9
120°-130°	1169.7	9.7
130°-140°	929.2	7.7
140°-150°	529.4	4.4
150°-160°	215.5	1.8
160°-170°	96.4	0.8
170°-180°	25.9	0.2
0°-30°	513.4	4.2
0°-40°	1191.7	9.9
0°-60°	3818.9	31.6
0°-90°	6701.6	55.4
90°-120°	2430.1	20.1
90°-150°	5058.5	41.8
90°-180°	5396.0	44.6
0°-180°	12098.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	284	284	284	284	284	
5°	295	300	308	322	329	28
15°	315	371	485	569	603	90
25°	339	495	731	993	1091	158
35°	373	640	1139	1511	1620	236
45°	437	850	1540	2009	2132	342
55°	543	1084	1845	2379	2518	487
65°	630	1195	1817	2151	2239	613
75°	512	939	1088	1075	1072	532
85°	188	278	197	202	209	190
90°	7	14	15	15	17	21
95°	146	154	98	109	113	154
105°	444	826	1070	1064	1019	468
115°	572	1011	1175	1930	1886	558
125°	522	866	1562	1834	1949	468
135°	396	486	1327	1835	1958	313
145°	317	425	736	1295	1494	203
155°	298	373	432	493	521	139
165°	278	319	361	373	339	79
175°	260	259	266	251	288	25
180°	236	236	236	236	236	



TEST NUMBER: P236422

CATALOG NUMBER: SKB2-LD5-15-N-UNV-L840-CD2-U all blades horizontal

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	284.3	284.3	284.3	284.3	284.3	284.3	284.3	284.3	284.3	284.3	284.3
2.5°	292.9	292.9	292.9	292.9	291.2	292.9	291.2	291.2	289.5	287.7	287.7
5°	294.6	294.6	296.3	298.0	299.7	299.7	299.7	303.2	304.9	308.3	311.7
7.5°	299.7	299.7	301.4	304.9	308.3	313.4	320.3	328.8	335.7	339.1	344.3
10°	304.9	304.9	310.0	313.4	323.7	337.4	346.0	354.5	364.8	375.1	388.8
12.5°	310.0	311.7	316.9	327.1	344.3	358.0	370.0	388.8	409.3	426.5	447.0
15°	315.1	316.9	325.4	342.5	361.4	380.2	404.2	433.3	460.7	484.7	510.4
17.5°	320.3	323.7	335.7	359.7	380.2	412.8	445.3	481.3	515.5	541.2	566.9
20°	325.4	328.8	346.0	373.4	404.2	447.0	489.8	530.9	565.2	594.3	626.9
22.5°	332.3	335.7	359.7	388.8	431.6	484.7	532.7	575.5	614.9	657.7	700.5
25°	339.1	344.3	373.4	411.1	464.2	525.8	573.8	621.7	674.8	731.3	793.0
27.5°	347.7	352.8	387.1	433.3	498.4	563.5	614.9	676.5	745.0	818.7	900.9
30°	354.5	363.1	400.8	459.0	532.7	601.2	662.8	741.6	830.7	924.9	1017.4
32.5°	363.1	375.1	417.9	488.1	566.9	638.9	717.6	817.0	930.0	1036.2	1130.4
35°	373.4	387.1	436.7	517.2	597.7	681.7	781.0	906.0	1032.8	1139.0	1238.3
37.5°	385.4	402.5	459.0	549.8	633.7	734.8	856.4	1000.2	1125.3	1238.3	1344.5
40°	399.1	419.6	484.7	578.9	671.4	793.0	938.6	1087.6	1219.5	1337.7	1452.4
42.5°	416.2	438.5	513.8	609.7	717.6	861.5	1020.8	1171.5	1308.5	1438.7	1563.7
45°	436.7	460.7	546.4	642.3	769.0	931.7	1097.9	1253.7	1399.3	1539.8	1668.2
47.5°	464.2	488.1	582.3	680.0	827.3	1002.0	1169.8	1332.5	1488.4	1630.5	1769.3
50°	491.6	515.5	616.6	721.1	887.2	1061.9	1236.6	1406.2	1565.4	1714.5	1856.6
52.5°	519.0	546.4	647.4	765.6	943.7	1118.4	1298.3	1473.0	1634.0	1786.4	1937.1
55°	542.9	575.5	676.5	811.8	995.1	1173.2	1353.1	1526.1	1690.5	1844.6	1993.6
57.5°	565.2	601.2	702.2	858.1	1037.9	1219.5	1397.6	1565.4	1728.2	1880.6	2027.9
60°	587.5	628.6	731.3	899.2	1073.9	1255.4	1426.7	1587.7	1743.6	1890.9	2034.7
62.5°	613.2	656.0	762.2	930.0	1103.0	1276.0	1435.3	1587.7	1738.4	1875.5	2005.6
65°	630.3	673.1	787.9	947.1	1115.0	1274.3	1419.9	1560.3	1697.3	1817.2	1928.5
67.5°	628.6	671.4	793.0	947.1	1099.6	1245.2	1377.0	1498.6	1615.1	1712.7	1788.1
70°	609.7	650.8	777.6	923.2	1056.8	1186.9	1300.0	1399.3	1488.4	1546.6	1584.3
72.5°	570.3	611.4	739.9	871.8	986.5	1097.9	1190.4	1265.7	1310.2	1337.7	1344.5
75°	512.1	560.1	685.1	796.4	892.3	984.8	1044.8	1080.7	1103.0	1087.6	1070.5
77.5°	443.6	498.4	609.7	700.5	779.3	841.0	875.2	880.3	875.2	876.9	882.1
80°	364.8	424.8	513.8	589.2	638.9	669.7	673.1	680.0	678.2	656.0	618.3
82.5°	280.9	337.4	404.2	453.9	472.7	481.3	488.1	448.7	404.2	361.4	344.3
85°	188.4	232.9	274.0	292.9	292.9	263.8	224.4	209.0	203.8	197.0	198.7
87.5°	95.9	104.5	113.0	101.1	90.8	95.9	95.9	95.9	99.3	99.3	101.1
90°	6.9	6.9	8.6	10.3	12.0	15.4	17.1	17.1	18.8	15.4	15.4
92.5°	41.1	37.7	37.7	34.3	37.7	37.7	37.7	36.0	32.5	32.5	32.5
95°	145.6	178.1	205.5	210.7	169.6	138.7	126.7	116.5	102.8	97.6	99.3
97.5°	236.4	291.2	351.1	390.5	411.1	412.8	378.5	303.2	255.2	234.6	222.7
100°	325.4	380.2	465.9	536.1	587.5	620.0	635.4	632.0	608.0	542.9	479.6
102.5°	407.6	453.9	563.5	656.0	727.9	786.1	817.0	847.8	861.5	858.1	851.2
105°	443.6	476.1	606.3	721.1	801.6	851.2	933.4	995.1	1048.2	1070.5	1085.9
107.5°	489.8	495.0	640.6	763.9	847.8	914.6	959.1	1127.0	1176.7	1214.3	1255.4
110°	536.1	522.4	661.1	815.3	923.2	957.4	1020.8	1043.1	1322.2	1385.6	1404.4



TEST NUMBER: P236422

CATALOG NUMBER: SKB2-LD5-15-N-UNV-L840-CD2-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	561.8	537.8	618.3	827.3	952.3	1043.1	1072.2	1149.2	1111.6	1457.5	1615.1
115°	572.1	544.7	563.5	801.6	948.9	1073.9	1127.0	1188.6	1294.8	1174.9	1435.3
117.5°	568.6	542.9	525.8	739.9	930.0	1073.9	1195.5	1214.3	1300.0	1476.4	1312.0
120°	553.2	534.4	515.5	644.0	897.5	1065.3	1210.9	1329.1	1310.2	1392.5	1587.7
122.5°	536.1	524.1	515.5	565.2	830.7	1039.6	1198.9	1346.2	1450.7	1414.7	1452.4
125°	522.4	512.1	513.8	505.3	733.1	998.5	1169.8	1329.1	1466.1	1562.0	1539.8
127.5°	505.3	500.1	507.0	486.4	626.9	914.6	1132.1	1277.7	1435.3	1562.0	1659.6
130°	483.0	481.3	491.6	489.8	541.2	793.0	1063.6	1217.8	1358.2	1508.9	1640.8
132.5°	440.2	441.9	460.7	483.0	469.3	642.3	935.2	1151.0	1282.8	1419.9	1560.3
135°	395.6	402.5	433.3	467.6	440.2	530.9	763.9	1032.8	1212.6	1327.4	1454.1
137.5°	363.1	371.7	405.9	445.3	448.7	455.6	611.4	868.4	1103.0	1240.0	1342.8
140°	339.1	349.4	381.9	421.3	448.7	421.3	510.4	691.9	930.0	1125.3	1246.9
142.5°	327.1	335.7	361.4	400.8	435.0	431.6	445.3	551.5	734.8	940.3	1123.6
145°	316.9	323.7	344.3	380.2	414.5	435.0	416.2	460.7	570.3	736.5	918.0
147.5°	320.3	320.3	330.6	358.0	393.9	429.9	436.7	419.6	471.0	561.8	700.5
150°	316.9	315.1	330.6	347.7	380.2	416.2	440.2	433.3	426.5	465.9	529.2
152.5°	306.6	308.3	332.3	349.4	375.1	400.8	426.5	438.5	431.6	424.8	447.0
155°	298.0	299.7	322.0	339.1	361.4	383.7	404.2	426.5	438.5	431.6	417.9
157.5°	292.9	291.2	311.7	328.8	344.3	364.8	385.4	404.2	426.5	436.7	438.5
160°	286.0	284.3	303.2	320.3	332.3	351.1	368.2	383.7	400.8	417.9	428.2
162.5°	280.9	280.9	292.9	311.7	323.7	334.0	351.1	363.1	375.1	387.1	397.4
165°	277.5	277.5	284.3	301.4	315.1	322.0	332.3	344.3	352.8	361.4	366.5
167.5°	272.3	272.3	275.8	289.5	301.4	310.0	316.9	322.0	328.8	334.0	335.7
170°	267.2	267.2	267.2	275.8	287.7	296.3	301.4	304.9	308.3	310.0	308.3
172.5°	263.8	263.8	263.8	263.8	270.6	277.5	282.6	287.7	287.7	289.5	286.0
175°	260.3	260.3	258.6	258.6	258.6	258.6	260.3	262.0	263.8	265.5	263.8
177.5°	256.9	255.2	255.2	253.5	253.5	251.8	248.3	244.9	241.5	238.1	234.6
180°	236.4	236.4	236.4	236.4	236.4	236.4	236.4	236.4	236.4	236.4	236.4



TEST NUMBER: P236422

CATALOG NUMBER: SKB2-LD5-15-N-UNV-L840-CD2-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	284.3	284.3	284.3	284.3	284.3	284.3	284.3	284.3
2.5°	287.7	287.7	287.7	287.7	287.7	289.5	289.5	291.2
5°	315.1	318.6	322.0	322.0	323.7	327.1	327.1	328.8
7.5°	349.4	356.2	361.4	364.8	368.2	375.1	375.1	378.5
10°	400.8	412.8	423.0	431.6	436.7	447.0	447.0	453.9
12.5°	465.9	481.3	496.7	507.0	513.8	522.4	525.8	530.9
15°	530.9	548.1	563.5	573.8	582.3	594.3	597.7	602.9
17.5°	592.6	611.4	633.7	649.1	664.5	678.2	686.8	693.7
20°	662.8	693.7	724.5	745.0	767.3	786.1	798.1	808.4
22.5°	746.8	793.0	837.5	871.8	900.9	924.9	942.0	947.1
25°	859.8	919.7	974.5	1012.2	1044.8	1070.5	1085.9	1091.0
27.5°	981.4	1048.2	1104.7	1147.5	1181.8	1200.6	1224.6	1222.9
30°	1103.0	1174.9	1234.9	1279.4	1312.0	1335.9	1356.5	1354.8
32.5°	1221.2	1298.3	1358.2	1406.2	1443.8	1469.5	1486.7	1488.4
35°	1334.2	1416.4	1484.9	1538.0	1579.1	1604.8	1618.5	1620.3
37.5°	1450.7	1539.8	1611.7	1668.2	1712.7	1741.9	1755.6	1755.6
40°	1568.9	1659.6	1736.7	1798.4	1842.9	1870.3	1884.0	1884.0
42.5°	1683.6	1781.2	1856.6	1921.7	1967.9	1997.1	2012.5	2014.2
45°	1795.0	1894.3	1974.8	2043.3	2086.1	2115.2	2130.6	2132.4
47.5°	1897.7	2005.6	2086.1	2152.9	2202.6	2233.4	2247.1	2248.8
50°	1993.6	2101.5	2192.3	2259.1	2305.3	2334.5	2351.6	2353.3
52.5°	2072.4	2192.3	2277.9	2348.2	2397.8	2425.2	2445.8	2449.2
55°	2135.8	2248.8	2343.0	2415.0	2466.3	2498.9	2517.7	2517.7
57.5°	2166.6	2279.7	2368.7	2442.4	2497.2	2529.7	2541.7	2543.4
60°	2164.9	2267.7	2353.3	2423.5	2473.2	2512.6	2553.7	2572.5
62.5°	2120.4	2211.1	2284.8	2336.2	2385.8	2437.2	2468.1	2474.9
65°	2015.9	2086.1	2134.1	2168.3	2207.7	2235.1	2236.8	2238.6
67.5°	1837.8	1882.3	1904.6	1916.6	1928.5	1930.3	1920.0	1918.3
70°	1603.1	1613.4	1596.3	1563.7	1531.2	1510.6	1486.7	1481.5
72.5°	1318.8	1288.0	1262.3	1253.7	1253.7	1257.2	1255.4	1253.7
75°	1075.6	1077.3	1077.3	1072.2	1072.2	1073.9	1072.2	1072.2
77.5°	882.1	866.6	839.2	808.4	796.4	782.7	774.2	770.7
80°	580.6	544.7	522.4	501.8	496.7	491.6	488.1	488.1
82.5°	335.7	327.1	322.0	320.3	318.6	318.6	318.6	320.3
85°	198.7	200.4	200.4	203.8	205.5	205.5	209.0	209.0
87.5°	104.5	104.5	109.6	109.6	111.3	111.3	116.5	113.0
90°	17.1	17.1	17.1	13.7	15.4	15.4	15.4	17.1
92.5°	27.4	27.4	27.4	29.1	27.4	25.7	24.0	25.7
95°	101.1	104.5	107.9	109.6	113.0	113.0	113.0	113.0
97.5°	207.2	200.4	197.0	191.8	190.1	183.3	179.8	181.6
100°	414.5	383.7	368.2	358.0	346.0	335.7	335.7	332.3
102.5°	810.1	769.0	727.9	695.4	656.0	623.4	614.9	604.6
105°	1075.6	1070.5	1067.0	1060.2	1046.5	1037.9	1025.9	1019.1
107.5°	1270.9	1282.8	1291.4	1294.8	1289.7	1277.7	1276.0	1269.1
110°	1409.6	1435.3	1462.7	1474.7	1479.8	1474.7	1469.5	1466.1



TEST NUMBER: P236422

CATALOG NUMBER: SKB2-LD5-15-N-UNV-L840-CD2-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1637.4	1640.8	1639.1	1615.1	1598.0	1604.8	1608.3	1608.3
115°	1777.8	1894.3	1928.5	1932.0	1921.7	1901.1	1889.2	1885.7
117.5°	1351.4	1673.3	1985.1	2123.8	2206.0	2231.7	2238.6	2248.8
120°	1565.4	1401.0	1442.1	1640.8	1856.6	2058.7	2171.8	2200.9
122.5°	1613.4	1791.5	1717.9	1584.3	1514.1	1527.8	1551.7	1553.5
125°	1502.1	1613.4	1760.7	1908.0	1981.6	1967.9	1938.8	1949.1
127.5°	1681.9	1604.8	1630.5	1711.0	1781.2	1848.0	1908.0	1921.7
130°	1745.3	1810.4	1793.2	1733.3	1717.9	1721.3	1726.4	1728.2
132.5°	1695.6	1800.1	1878.9	1913.1	1913.1	1892.6	1877.2	1877.2
135°	1574.0	1697.3	1795.0	1875.5	1923.4	1944.0	1954.2	1957.7
137.5°	1454.1	1551.7	1659.6	1753.8	1817.2	1853.2	1877.2	1880.6
140°	1334.2	1430.1	1512.3	1589.4	1671.6	1735.0	1757.3	1759.0
142.5°	1233.2	1306.8	1385.6	1455.8	1505.5	1567.2	1611.7	1613.4
145°	1089.3	1193.8	1265.7	1323.9	1370.2	1416.4	1473.0	1493.5
147.5°	866.6	1003.7	1115.0	1197.2	1245.2	1289.7	1327.4	1365.1
150°	644.0	767.3	871.8	966.0	1037.9	1104.7	1154.4	1140.7
152.5°	486.4	556.6	640.6	717.6	769.0	820.4	829.0	798.1
155°	426.5	441.9	474.4	512.1	541.2	573.8	532.7	520.7
157.5°	426.5	407.6	411.1	414.5	424.8	397.4	388.8	387.1
160°	433.3	428.2	414.5	395.6	371.7	337.4	335.7	332.3
162.5°	409.3	412.8	407.6	400.8	368.2	356.2	349.4	349.4
165°	375.1	376.8	376.8	370.0	354.5	342.5	340.8	339.1
167.5°	339.1	342.5	342.5	335.7	330.6	323.7	311.7	311.7
170°	308.3	308.3	308.3	303.2	304.9	303.2	291.2	284.3
172.5°	282.6	279.2	277.5	274.0	277.5	284.3	284.3	256.9
175°	260.3	255.2	251.8	250.1	255.2	265.5	277.5	287.7
177.5°	231.2	224.4	217.5	217.5	220.9	231.2	246.6	251.8
180°	236.4	236.4	236.4	236.4	236.4	236.4	236.4	236.4

(END OF REPORT)