

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: P236449

Luminaire Tested: **SKB2-LD5-18-W-UNV-L840-CD2-U all blades horizontal**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236449
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24072)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB2-LD5-18-W-UNV-L840-CD2-U all blades horizontal
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
2 BLADES WITH WIDE DISTRIBUTION LENS, ALL BLADES HORIZONTAL
Light Source: (476) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

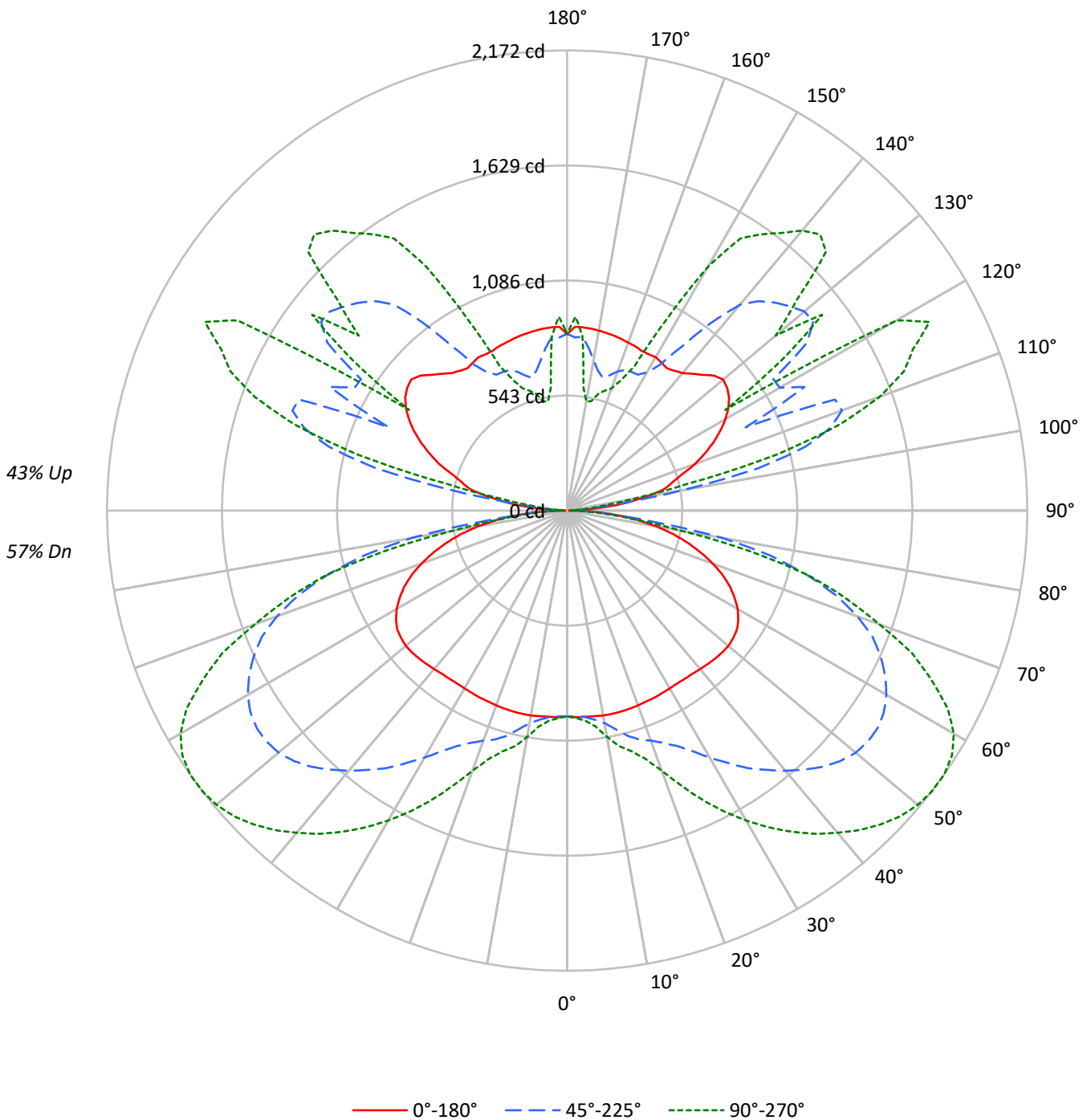
Lumens per Lamp: N/A
Luminaire Lumens: 13250.0 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 1.53 / 2.62 / 2.36
Luminous Opening: Rectangular (W 1.25' x L: 2' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 168.5
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-LD5-18-W-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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	97	92	87	83	90	86	82	78	73	70	67	62	60	58	52	50	49	44
2	87	78	71	65	80	73	66	61	62	57	53	52	49	45	43	41	38	34
3	78	67	59	52	72	62	55	49	53	47	42	45	40	36	37	33	30	26
4	71	58	49	42	65	54	46	40	46	40	35	39	34	30	32	28	25	21
5	64	51	42	35	59	48	39	33	41	34	29	34	29	25	28	24	20	17
6	59	45	36	30	54	42	34	28	36	29	24	30	25	21	25	21	17	14
7	54	40	32	25	50	38	30	24	32	26	21	27	22	18	22	18	15	12
8	50	36	28	22	46	34	26	21	29	23	18	24	19	15	20	16	13	10
9	46	33	25	19	43	31	23	18	26	20	16	22	17	13	18	14	11	9
10	43	30	22	17	40	28	21	16	24	18	14	20	15	12	17	13	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4181	4181	4181
5°	4221	4230	4303
10°	4295	4453	4744
15°	4379	4905	5245
20°	4484	5295	5984
25°	4631	5825	7145
30°	4818	6692	8396
35°	5093	7795	9726
40°	5490	9010	11161
45°	6017	10410	12752
50°	6657	11911	14474
55°	7346	13434	16306
60°	8001	14984	18148
65°	8631	16642	19357
70°	9204	18334	19724
75°	9818	19478	19573
80°	10478	18410	13501
85°	11382	9781	9312



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.3	0.7
10°-20°	309.8	2.3
20°-30°	577.6	4.4
30°-40°	910.6	6.9
40°-50°	1258.0	9.5
50°-60°	1509.5	11.4
60°-70°	1498.1	11.3
70°-80°	1078.9	8.1
80°-90°	288.6	2.2
90°-100°	182.1	1.4
100°-110°	976.8	7.4
110°-120°	1251.3	9.4
120°-130°	1044.0	7.9
130°-140°	971.7	7.3
140°-150°	663.4	5.0
150°-160°	361.2	2.7
160°-170°	199.0	1.5
170°-180°	74.1	0.6
0°-30°	982.7	7.4
0°-40°	1893.3	14.3
0°-60°	4660.8	35.2
0°-90°	7526.4	56.8
90°-120°	2410.2	18.2
90°-150°	5089.3	38.4
90°-180°	5724.0	43.2
0°-180°	13250.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	977	984	979	990	996	93
15°	982	1014	1100	1154	1177	278
25°	975	1078	1226	1425	1504	451
35°	969	1132	1483	1772	1850	609
45°	988	1233	1710	2019	2094	764
55°	979	1323	1790	2090	2172	871
65°	847	1239	1634	1859	1900	833
75°	590	948	1171	1192	1177	618
85°	230	316	198	185	188	226
90°	10	14	17	15	19	24
95°	175	157	90	94	93	181
105°	514	849	1165	1116	1028	544
115°	762	1034	929	1764	1801	751
125°	933	1044	1382	1438	1232	829
135°	906	739	1388	1695	1729	704
145°	820	669	948	1407	1592	522
155°	832	667	722	789	750	387
165°	855	784	649	644	571	242
175°	868	858	822	742	824	83
180°	834	834	834	834	834	



TEST NUMBER: P236449

CATALOG NUMBER: SKB2-LD5-18-W-UNV-L840-CD2-U all blades horizontal

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.0	971.0	971.0	971.0	971.0	971.0	971.0	971.0	971.0	971.0	971.0
2.5°	976.7	976.7	976.7	976.7	978.6	982.4	980.5	976.7	974.8	972.9	971.0
5°	976.7	976.7	976.7	978.6	982.4	986.2	986.2	982.4	980.5	978.6	980.5
7.5°	978.6	978.6	980.5	984.3	988.1	991.9	993.8	995.7	995.7	995.7	997.6
10°	982.4	982.4	984.3	990.0	993.8	1003.3	1007.1	1007.1	1010.9	1018.5	1028.1
12.5°	982.4	982.4	988.1	991.9	1003.3	1012.8	1018.5	1028.1	1041.4	1056.6	1069.9
15°	982.4	982.4	988.1	995.7	1007.1	1020.4	1039.5	1058.5	1079.5	1100.4	1115.6
17.5°	980.5	982.4	988.1	1001.4	1010.9	1039.5	1064.2	1092.8	1115.6	1132.8	1146.1
20°	978.6	980.5	988.1	1001.4	1022.4	1062.3	1094.7	1121.4	1140.4	1155.6	1174.7
22.5°	974.8	978.6	988.1	1003.3	1035.7	1081.4	1115.6	1138.5	1161.3	1186.1	1214.6
25°	974.8	976.7	990.0	1010.9	1052.8	1104.2	1130.9	1153.7	1188.0	1226.1	1269.9
27.5°	971.0	972.9	988.1	1020.4	1069.9	1119.4	1144.2	1180.4	1226.1	1279.4	1338.4
30°	969.0	971.0	986.2	1030.0	1085.2	1129.0	1161.3	1212.7	1277.5	1346.0	1408.8
32.5°	967.1	971.0	990.0	1043.3	1096.6	1140.4	1186.1	1256.5	1338.4	1412.6	1485.0
35°	969.0	971.0	995.7	1056.6	1106.1	1157.5	1218.4	1307.9	1399.3	1483.1	1555.4
37.5°	971.0	974.8	1007.1	1069.9	1115.6	1180.4	1262.2	1363.1	1458.3	1542.1	1622.1
40°	976.7	980.5	1020.4	1081.4	1130.9	1212.7	1311.7	1420.3	1517.3	1603.0	1684.9
42.5°	982.4	986.2	1033.8	1090.9	1151.8	1250.8	1359.3	1471.7	1572.6	1658.2	1743.9
45°	988.1	990.0	1047.1	1098.5	1176.6	1288.9	1405.0	1519.3	1622.1	1709.6	1795.3
47.5°	991.9	993.8	1058.5	1108.0	1203.2	1325.1	1445.0	1559.2	1662.0	1749.6	1833.4
50°	993.8	995.7	1062.3	1117.5	1229.9	1355.5	1477.4	1591.6	1692.5	1778.2	1860.0
52.5°	988.1	993.8	1054.7	1123.3	1248.9	1374.6	1498.3	1608.7	1705.8	1789.6	1873.4
55°	978.6	984.3	1041.4	1127.1	1260.3	1386.0	1507.8	1614.4	1705.8	1789.6	1871.5
57.5°	957.6	969.0	1022.4	1125.2	1256.5	1384.1	1502.1	1601.1	1692.5	1772.5	1852.4
60°	929.1	944.3	995.7	1111.8	1243.2	1368.8	1477.4	1572.6	1660.1	1740.1	1820.1
62.5°	891.0	910.0	965.2	1089.0	1218.4	1340.3	1441.2	1530.7	1616.3	1692.5	1770.6
65°	847.2	866.2	932.9	1056.6	1182.3	1296.5	1389.8	1477.4	1559.2	1633.5	1705.8
67.5°	793.9	811.0	889.1	1014.7	1132.8	1235.6	1327.0	1410.7	1486.9	1561.1	1620.2
70°	731.1	748.2	839.6	961.4	1068.0	1167.0	1250.8	1330.8	1403.1	1456.4	1498.3
72.5°	662.5	681.6	784.4	896.7	991.9	1083.3	1165.1	1235.6	1285.1	1328.9	1365.0
75°	590.2	614.9	723.5	818.6	906.2	990.0	1060.4	1108.0	1151.8	1170.9	1180.4
77.5°	512.1	544.5	649.2	733.0	809.1	877.7	923.4	957.6	971.0	982.4	984.3
80°	422.6	468.3	557.8	626.4	689.2	734.9	761.5	767.2	763.4	742.5	691.1
82.5°	329.4	384.6	449.3	502.6	533.1	548.3	554.0	517.8	466.4	413.1	382.7
85°	230.4	272.2	316.0	335.1	333.2	298.9	255.1	226.6	211.3	198.0	194.2
87.5°	116.1	125.7	135.2	114.2	95.2	91.4	93.3	89.5	91.4	89.5	89.5
90°	9.5	9.5	11.4	11.4	13.3	15.2	17.1	19.0	19.0	17.1	17.1
92.5°	41.9	38.1	36.2	34.3	36.2	36.2	36.2	32.4	32.4	32.4	30.5
95°	175.2	205.6	226.6	228.5	177.1	137.1	118.0	102.8	93.3	89.5	85.7
97.5°	279.9	329.4	388.4	436.0	462.6	443.6	371.2	289.4	245.6	222.7	201.8
100°	377.0	428.4	508.3	584.5	651.1	689.2	694.9	677.8	613.0	544.5	460.7
102.5°	470.2	504.5	607.3	696.8	774.9	845.3	891.0	923.4	932.9	925.3	887.2
105°	514.0	527.4	645.4	748.2	824.4	873.9	971.0	1064.2	1140.4	1165.1	1163.2
107.5°	567.3	550.2	683.5	790.1	851.0	902.4	944.3	1136.6	1214.6	1302.2	1359.3
110°	641.6	590.2	723.5	854.8	934.8	929.1	965.2	978.6	1296.5	1380.3	1441.2



TEST NUMBER: P236449

CATALOG NUMBER: SKB2-LD5-18-W-UNV-L840-CD2-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	702.5	626.4	708.2	881.5	980.5	1003.3	1005.2	1033.8	965.2	1368.8	1536.4
115°	761.5	672.0	675.9	883.4	991.9	1075.7	1033.8	1079.5	1127.1	929.1	1245.1
117.5°	814.8	723.5	668.2	864.3	1007.1	1104.2	1155.6	1066.1	1138.5	1262.2	965.2
120°	862.4	773.0	689.2	816.7	1020.4	1130.9	1216.5	1237.5	1102.3	1159.4	1332.7
122.5°	902.4	818.6	721.5	776.8	995.7	1149.9	1243.2	1317.4	1307.9	1153.7	1151.8
125°	932.9	856.7	748.2	738.7	936.7	1151.8	1258.4	1347.9	1399.3	1382.2	1229.9
127.5°	951.9	885.3	765.3	721.5	858.6	1096.6	1260.3	1340.3	1416.4	1464.0	1456.4
130°	961.4	906.2	771.0	733.0	793.9	1005.2	1226.1	1317.4	1386.0	1462.1	1521.2
132.5°	942.4	898.6	759.6	740.6	731.1	872.0	1117.5	1283.2	1351.7	1426.0	1511.6
135°	906.2	873.9	750.1	733.0	696.8	780.6	972.9	1191.8	1315.5	1387.9	1460.2
137.5°	875.8	852.9	744.4	712.0	694.9	717.7	839.6	1045.2	1248.9	1340.3	1403.1
140°	847.2	833.9	736.8	687.3	694.9	679.7	763.4	902.4	1104.2	1267.9	1347.9
142.5°	832.0	820.5	731.1	666.3	683.5	679.7	710.1	793.9	946.2	1115.6	1266.0
145°	820.5	811.0	727.3	656.8	662.5	675.9	677.8	731.1	818.6	948.1	1090.9
147.5°	828.2	812.9	731.1	654.9	643.5	674.0	689.2	696.8	746.3	814.8	921.5
150°	835.8	820.5	753.9	668.2	635.9	666.3	696.8	704.4	717.7	752.0	793.9
152.5°	832.0	824.4	786.3	706.3	656.8	658.7	687.3	702.5	715.8	723.5	742.5
155°	832.0	826.3	805.3	731.1	679.7	654.9	668.2	693.0	712.0	721.5	723.5
157.5°	839.6	832.0	820.5	759.6	700.6	656.8	654.9	674.0	702.5	717.7	727.3
160°	843.4	835.8	835.8	786.3	731.1	687.3	654.9	660.6	679.7	698.7	713.9
162.5°	849.1	841.5	843.4	816.7	769.1	723.5	687.3	658.7	658.7	670.1	681.6
165°	854.8	849.1	849.1	843.4	805.3	763.4	723.5	691.1	662.5	649.2	647.3
167.5°	858.6	854.8	852.9	854.8	837.7	803.4	767.2	731.1	700.6	674.0	647.3
170°	862.4	860.5	858.6	858.6	858.6	843.4	811.0	780.6	750.1	719.6	689.2
172.5°	866.2	864.3	860.5	858.6	858.6	858.6	847.2	824.4	801.5	774.9	746.3
175°	868.1	868.1	866.2	862.4	858.6	856.7	851.0	841.5	832.0	822.5	803.4
177.5°	868.1	868.1	866.2	864.3	862.4	860.5	851.0	841.5	828.2	818.6	805.3
180°	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9



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CATALOG NUMBER: SKB2-LD5-18-W-UNV-L840-CD2-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.0	971.0	971.0	971.0	971.0	971.0	971.0	971.0
2.5°	971.0	971.0	972.9	976.7	976.7	978.6	980.5	980.5
5°	982.4	984.3	988.1	991.9	991.9	993.8	993.8	995.7
7.5°	999.5	1003.3	1009.0	1016.6	1020.4	1020.4	1024.3	1028.1
10°	1039.5	1045.2	1058.5	1068.0	1073.8	1077.6	1083.3	1085.2
12.5°	1087.1	1096.6	1111.8	1121.4	1127.1	1130.9	1134.7	1138.5
15°	1129.0	1138.5	1149.9	1157.5	1163.2	1167.0	1170.9	1176.6
17.5°	1159.4	1170.9	1188.0	1201.3	1210.8	1216.5	1224.2	1228.0
20°	1199.4	1220.4	1245.1	1264.1	1281.3	1288.9	1300.3	1306.0
22.5°	1248.9	1285.1	1321.3	1346.0	1370.8	1380.3	1395.5	1403.1
25°	1321.3	1366.9	1410.7	1439.3	1467.8	1477.4	1496.4	1504.0
27.5°	1399.3	1454.5	1502.1	1532.6	1561.1	1576.4	1593.5	1599.2
30°	1481.2	1542.1	1589.7	1624.0	1654.4	1667.8	1683.0	1688.7
32.5°	1559.2	1625.9	1673.5	1709.6	1740.1	1755.3	1766.7	1772.5
35°	1633.5	1702.0	1753.4	1789.6	1820.1	1835.3	1846.7	1850.5
37.5°	1703.9	1770.6	1823.9	1863.8	1896.2	1911.4	1919.1	1922.9
40°	1772.5	1839.1	1894.3	1932.4	1964.7	1976.2	1985.7	1985.7
42.5°	1829.6	1898.1	1949.5	1989.5	2020.0	2033.3	2040.9	2044.7
45°	1877.2	1943.8	1999.0	2039.0	2069.5	2084.7	2088.5	2094.2
47.5°	1915.2	1981.9	2037.1	2079.0	2107.5	2122.8	2128.5	2134.2
50°	1941.9	2010.4	2063.7	2103.7	2134.2	2151.3	2158.9	2160.8
52.5°	1953.3	2020.0	2073.3	2113.2	2145.6	2164.6	2174.2	2172.3
55°	1949.5	2014.2	2069.5	2111.3	2143.7	2164.6	2172.3	2172.3
57.5°	1930.5	1995.2	2046.6	2090.4	2122.8	2141.8	2149.4	2153.2
60°	1892.4	1957.1	2006.6	2048.5	2077.1	2098.0	2103.7	2107.5
62.5°	1839.1	1901.9	1947.6	1980.0	2004.7	2014.2	2020.0	2025.7
65°	1768.7	1818.2	1846.7	1871.5	1888.6	1892.4	1894.3	1900.0
67.5°	1662.0	1696.3	1724.9	1743.9	1762.9	1762.9	1759.1	1762.9
70°	1536.4	1566.8	1576.4	1574.5	1582.1	1572.6	1564.9	1566.8
72.5°	1372.7	1380.3	1386.0	1382.2	1391.7	1386.0	1380.3	1382.2
75°	1186.1	1191.8	1197.5	1186.1	1195.6	1182.3	1172.8	1176.6
77.5°	972.9	959.5	944.3	908.1	906.2	879.6	870.0	883.4
80°	653.0	622.6	599.7	563.5	555.9	540.7	529.3	544.5
82.5°	354.1	342.7	337.0	321.7	327.5	317.9	316.0	321.7
85°	186.6	186.6	186.6	182.8	188.5	184.7	184.7	188.5
87.5°	87.6	87.6	89.5	85.7	91.4	89.5	91.4	93.3
90°	15.2	15.2	17.1	13.3	19.0	15.2	15.2	19.0
92.5°	28.6	30.5	28.6	28.6	24.7	26.7	24.7	24.7
95°	87.6	91.4	93.3	95.2	95.2	97.1	95.2	93.3
97.5°	188.5	182.8	171.3	171.3	163.7	159.9	158.0	152.3
100°	403.6	377.0	344.6	337.0	321.7	310.3	310.3	300.8
102.5°	826.3	765.3	712.0	683.5	637.8	609.2	603.5	580.7
105°	1153.7	1151.8	1121.4	1109.9	1079.5	1058.5	1050.9	1028.1
107.5°	1376.5	1387.9	1382.2	1386.0	1374.6	1365.0	1363.1	1346.0
110°	1496.4	1547.8	1574.5	1591.6	1589.7	1584.0	1580.2	1568.8



TEST NUMBER: P236449

CATALOG NUMBER: SKB2-LD5-18-W-UNV-L840-CD2-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1585.9	1629.7	1662.0	1684.9	1702.0	1719.2	1723.0	1721.1
115°	1625.9	1732.5	1759.1	1768.7	1778.2	1793.4	1802.9	1801.0
117.5°	1003.3	1374.6	1709.6	1829.6	1877.2	1903.8	1922.9	1926.7
120°	1182.3	917.6	969.0	1174.7	1439.3	1633.5	1732.5	1795.3
122.5°	1319.4	1422.2	1222.3	997.6	877.7	873.9	868.1	885.3
125°	1136.6	1237.5	1391.7	1485.0	1483.1	1387.9	1306.0	1231.8
127.5°	1353.6	1218.4	1197.5	1281.3	1374.6	1437.4	1490.7	1517.3
130°	1545.9	1519.3	1424.1	1323.2	1273.7	1267.9	1275.6	1285.1
132.5°	1580.2	1631.6	1646.8	1629.7	1578.3	1532.6	1494.5	1467.8
135°	1532.6	1608.7	1671.6	1719.2	1730.6	1732.5	1734.4	1728.7
137.5°	1471.7	1536.4	1610.6	1683.0	1736.3	1751.5	1761.0	1766.7
140°	1405.0	1467.8	1528.8	1584.0	1662.0	1705.8	1719.2	1724.9
142.5°	1347.9	1395.5	1452.6	1507.8	1555.4	1606.8	1646.8	1650.6
145°	1243.2	1328.9	1386.0	1427.9	1473.6	1507.8	1563.0	1591.6
147.5°	1050.9	1176.6	1283.2	1346.0	1397.4	1433.6	1471.7	1523.1
150°	877.7	990.0	1077.6	1153.7	1245.1	1294.6	1344.1	1327.0
152.5°	773.0	828.2	889.1	950.0	1018.5	1047.1	1045.2	1020.4
155°	740.6	752.0	778.7	799.6	837.7	849.1	774.9	750.1
157.5°	733.0	723.5	733.0	734.9	748.2	693.0	670.1	666.3
160°	721.5	721.5	717.7	702.5	674.0	620.6	613.0	613.0
162.5°	693.0	696.8	693.0	679.7	628.3	599.7	594.0	594.0
165°	651.1	653.0	651.1	635.9	597.8	569.2	569.2	571.1
167.5°	624.5	614.9	611.1	588.3	567.3	544.5	527.4	529.3
170°	662.5	641.6	622.6	594.0	578.8	565.4	533.1	521.6
172.5°	717.7	693.0	674.0	656.8	653.0	660.6	641.6	586.4
175°	780.6	757.7	742.5	740.6	750.1	782.5	797.7	824.4
177.5°	788.2	765.3	755.8	765.3	788.2	833.9	889.1	915.7
180°	833.9	833.9	833.9	833.9	833.9	833.9	833.9	833.9

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