

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: P236524

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236524
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24075)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-18-W-UNV-L840-CD2-U all blades horizontal
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, ALL BLADES HORIZONTAL
Light Source: (952) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

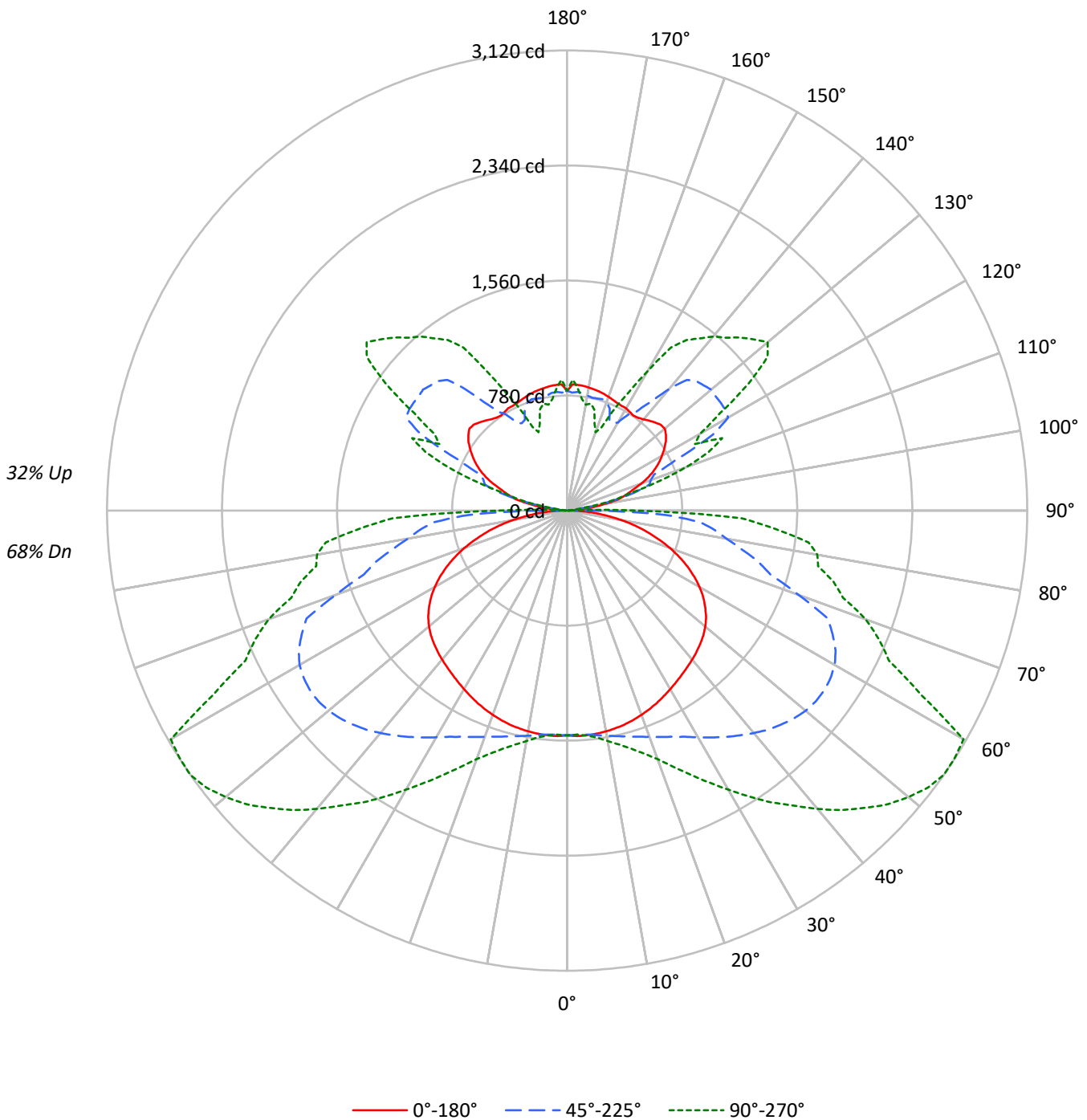
Lumens per Lamp: N/A
Luminaire Lumens: 14790.0 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 2.46 / 2.11
Luminous Opening: Rectangular (W 1.88' x L: 4' x H: 0')
CIE Type: Semi-Direct

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

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CATALOG NUMBER: SKB4-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				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	105	105	105	105	94	94	94	83	83	83	73	73	73	68			68
1	99	93	87	83	93	87	83	78	77	74	70	68	65	62	59	57	55	51			51
2	88	78	71	64	82	74	67	61	65	59	55	57	53	49	50	46	43	39			39
3	79	67	58	51	74	63	55	48	56	49	44	49	43	39	42	38	34	31			31
4	71	58	49	42	67	55	46	40	48	41	36	42	37	32	37	32	28	25			25
5	65	51	42	35	61	48	40	33	43	35	30	37	31	27	32	27	23	20			20
6	60	45	36	29	56	43	34	28	38	31	25	33	27	22	29	24	20	17			17
7	55	41	32	25	51	38	30	24	34	27	22	30	24	19	26	21	17	15			15
8	51	37	28	22	47	35	26	21	31	24	19	27	21	17	23	19	15	13			13
9	47	33	25	19	44	31	24	18	28	21	17	25	19	15	21	17	13	11			11
10	44	30	22	17	41	29	21	16	26	19	15	23	17	13	20	15	12	10			10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2187	2187	2187
5°	2203	2197	2205
10°	2215	2259	2312
15°	2231	2356	2482
20°	2250	2493	2738
25°	2279	2679	3126
30°	2317	2942	3621
35°	2378	3281	4231
40°	2470	3689	4947
45°	2591	4165	5787
50°	2730	4712	6744
55°	2859	5322	7808
60°	2978	6012	8906
65°	3058	6743	10178
70°	3108	7002	11436
75°	3127	7443	13075
80°	3095	9052	16236
85°	3046	14904	23210



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.9	1.0
10°-20°	452.1	3.1
20°-30°	792.3	5.4
30°-40°	1185.7	8.0
40°-50°	1598.0	10.8
50°-60°	1907.8	12.9
60°-70°	1803.8	12.2
70°-80°	1377.9	9.3
80°-90°	859.7	5.8
90°-100°	91.8	0.6
100°-110°	482.7	3.3
110°-120°	847.5	5.7
120°-130°	1057.5	7.2
130°-140°	920.6	6.2
140°-150°	614.8	4.2
150°-160°	353.7	2.4
160°-170°	220.3	1.5
170°-180°	76.9	0.5
0°-30°	1391.4	9.4
0°-40°	2577.1	17.4
0°-60°	6082.8	41.1
0°-90°	10124.1	68.5
90°-120°	1422.1	9.6
90°-150°	4015.0	27.1
90°-180°	4666.0	31.5
0°-180°	14790.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1524	1524	1524	1524	1524	
5°	1529	1537	1525	1530	1530	146
15°	1502	1535	1586	1646	1671	425
25°	1439	1520	1692	1898	1974	664
35°	1357	1503	1873	2276	2415	852
45°	1276	1498	2052	2646	2851	986
55°	1143	1452	2127	2859	3120	1020
65°	901	1258	1986	2303	2408	888
75°	564	922	1342	1712	1871	592
85°	185	403	905	1255	1410	189
90°	8	49	187	363	465	17
95°	97	52	9	5	3	113
105°	413	470	472	454	417	431
115°	654	805	814	914	1160	641
125°	817	856	1272	1563	1506	727
135°	844	698	1240	1536	1659	653
145°	785	739	819	1284	1411	498
155°	804	776	678	741	763	373
165°	836	822	787	787	710	236
175°	855	846	807	748	830	81
180°	812	812	812	812	812	



TEST NUMBER: P236524

CATALOG NUMBER: SKB4-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°	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1
2.5°	1530.5	1530.5	1534.3	1534.3	1536.9	1536.9	1535.0	1530.5	1527.3	1520.9	1517.0
5°	1529.2	1528.6	1533.7	1533.7	1536.9	1536.9	1535.0	1532.4	1529.2	1524.7	1522.8
7.5°	1526.0	1526.0	1530.5	1531.8	1535.6	1538.2	1538.8	1537.5	1537.5	1535.6	1535.0
10°	1519.6	1520.9	1526.0	1530.5	1540.1	1546.5	1549.7	1551.0	1551.6	1550.3	1551.6
12.5°	1511.9	1513.2	1521.5	1527.9	1533.7	1541.4	1547.8	1554.2	1561.2	1566.3	1572.7
15°	1501.7	1503.0	1511.3	1517.0	1528.6	1541.4	1552.2	1563.1	1575.9	1585.5	1595.1
17.5°	1489.5	1490.8	1498.5	1508.1	1524.7	1541.4	1556.7	1573.4	1591.9	1607.3	1623.3
20°	1473.5	1475.4	1485.0	1497.8	1518.3	1540.1	1561.2	1584.2	1609.9	1632.3	1655.3
22.5°	1457.5	1458.8	1471.0	1487.0	1511.3	1538.2	1565.0	1595.8	1629.1	1660.4	1693.1
25°	1438.9	1440.2	1454.9	1474.8	1503.6	1536.2	1570.8	1607.9	1652.1	1691.8	1735.3
27.5°	1418.5	1420.4	1438.3	1462.0	1495.3	1534.3	1576.6	1623.3	1676.4	1728.9	1786.5
30°	1398.0	1399.9	1420.4	1447.9	1487.0	1533.0	1583.6	1639.3	1707.8	1775.0	1844.8
32.5°	1377.5	1380.7	1403.7	1434.5	1479.3	1532.4	1592.6	1661.1	1745.6	1823.6	1906.2
35°	1357.0	1360.2	1386.5	1421.0	1472.2	1533.0	1602.8	1686.7	1784.0	1872.9	1967.7
37.5°	1337.2	1341.7	1369.8	1408.9	1465.2	1535.6	1618.2	1714.2	1821.1	1921.6	2028.5
40°	1318.6	1323.1	1353.2	1396.7	1459.4	1538.8	1635.5	1741.7	1860.1	1968.9	2088.0
42.5°	1298.8	1303.9	1336.5	1383.9	1453.0	1545.2	1651.5	1769.2	1895.3	2015.0	2140.5
45°	1276.4	1282.8	1316.7	1368.5	1444.7	1550.3	1665.5	1792.9	1924.8	2052.2	2191.1
47.5°	1252.7	1258.4	1294.3	1351.3	1435.7	1552.2	1674.5	1806.4	1946.5	2086.1	2235.2
50°	1222.6	1229.0	1266.8	1328.8	1424.2	1549.0	1674.5	1814.7	1963.2	2110.4	2268.5
52.5°	1187.4	1194.4	1234.8	1302.0	1406.9	1539.4	1668.7	1814.0	1968.3	2125.1	2290.9
55°	1142.6	1152.2	1195.1	1270.0	1384.5	1519.0	1649.5	1802.5	1963.8	2127.1	2299.9
57.5°	1094.6	1102.3	1149.0	1231.6	1353.2	1487.6	1623.3	1780.1	1945.9	2116.8	2296.7
60°	1037.6	1045.3	1096.5	1186.1	1310.9	1442.1	1585.5	1743.6	1918.4	2094.4	2274.9
62.5°	972.3	980.6	1035.7	1133.6	1257.2	1389.0	1536.2	1700.1	1878.7	2052.2	2225.0
65°	900.6	908.9	969.8	1073.4	1189.3	1326.9	1479.3	1645.7	1821.7	1985.6	2162.9
67.5°	823.2	833.4	901.9	1005.0	1118.9	1255.9	1410.8	1576.6	1741.1	1913.3	1990.1
70°	740.6	752.8	826.4	924.3	1038.2	1177.8	1332.0	1487.6	1653.4	1668.7	1648.3
72.5°	653.5	670.8	748.9	837.9	950.5	1088.8	1232.8	1390.9	1373.7	1445.3	1557.4
75°	563.9	584.4	663.1	745.7	858.4	986.4	1133.0	1136.2	1236.7	1342.3	1440.2
77.5°	470.5	502.5	569.0	651.0	755.3	881.4	916.6	1012.6	1115.7	1211.7	1314.1
80°	374.5	414.8	471.1	550.5	648.4	688.7	781.6	884.0	994.7	1095.2	1186.1
82.5°	278.4	321.3	370.6	437.2	476.9	556.9	658.7	763.0	882.1	1010.1	1136.2
85°	185.0	218.9	255.4	290.0	356.5	450.0	585.1	713.1	821.2	905.1	997.9
87.5°	90.3	112.7	138.9	199.7	286.1	348.2	422.5	500.6	582.5	665.7	756.0
90°	7.7	9.0	10.2	19.2	38.4	58.9	99.2	119.7	161.3	186.9	231.7
92.5°	15.4	13.4	9.0	6.4	5.8	5.1	3.8	3.2	1.9	0.6	0.0
95°	96.7	104.3	87.7	65.3	57.0	46.1	28.8	19.2	12.8	9.0	7.0
97.5°	177.9	199.7	197.8	167.1	151.7	137.6	115.9	118.4	104.3	86.4	70.4
100°	266.3	303.4	295.7	274.6	256.0	250.9	234.3	225.3	201.6	192.7	201.6
102.5°	355.3	384.7	391.7	412.2	355.9	348.2	348.9	348.9	343.1	334.8	321.3
105°	412.9	437.2	463.4	487.1	519.1	420.5	411.6	446.8	469.8	472.4	475.0
107.5°	464.7	481.4	526.8	557.5	593.4	616.4	480.7	482.6	544.7	584.4	613.9
110°	534.5	540.9	568.4	631.8	663.1	719.5	709.9	565.2	542.8	603.0	707.3



TEST NUMBER: P236524

CATALOG NUMBER: SKB4-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°	597.9	596.6	587.0	684.9	727.2	773.9	858.4	834.7	674.7	636.3	658.7
115°	653.5	643.3	605.5	696.4	782.2	828.3	898.7	1004.3	968.5	814.2	749.6
117.5°	700.3	683.6	647.8	694.5	827.6	878.2	939.7	1033.1	1140.7	1115.1	1003.0
120°	741.9	724.0	699.6	688.1	823.8	926.2	987.7	1063.2	1161.8	1261.0	1269.3
122.5°	780.3	761.7	754.0	681.7	793.1	960.8	1021.6	1093.9	1175.9	1271.2	1365.3
125°	816.8	795.6	794.4	688.7	766.2	945.4	1057.4	1124.7	1192.5	1272.5	1362.8
127.5°	844.9	823.8	821.9	710.5	745.1	882.1	1067.7	1138.7	1209.8	1270.6	1357.7
130°	864.1	845.6	834.7	756.0	710.5	827.0	1007.5	1146.4	1204.7	1275.7	1345.5
132.5°	861.6	846.9	828.3	786.0	690.7	781.6	907.7	1102.3	1197.0	1255.9	1339.1
135°	843.7	834.7	813.6	800.8	684.9	711.2	824.4	981.9	1161.1	1240.5	1307.7
137.5°	826.4	821.9	798.2	797.6	711.2	680.4	774.5	875.0	1047.2	1200.8	1276.4
140°	806.5	805.9	784.1	784.8	741.2	659.9	700.3	796.9	916.0	1076.0	1218.1
142.5°	792.4	793.7	772.0	768.8	758.5	670.2	671.5	756.6	817.4	926.9	1079.2
145°	784.8	785.4	764.9	757.2	759.2	718.2	653.5	683.0	773.2	819.3	924.3
147.5°	791.8	788.0	761.1	746.4	756.0	742.5	675.9	658.7	690.0	773.2	812.3
150°	801.4	796.9	772.0	747.6	752.1	763.6	734.8	668.9	665.1	690.0	770.0
152.5°	800.1	802.0	791.2	771.3	766.2	773.9	763.6	727.8	671.5	667.0	687.5
155°	804.0	804.6	801.4	784.8	775.2	777.7	772.6	760.4	731.6	677.9	667.0
157.5°	812.3	812.9	807.8	793.7	782.8	780.3	780.3	779.0	768.1	751.5	697.1
160°	820.6	821.2	819.3	808.4	796.9	789.9	786.0	789.2	788.0	782.2	767.5
162.5°	828.9	828.3	830.2	823.2	811.0	804.0	794.4	792.4	792.4	792.4	791.8
165°	836.0	835.3	837.9	835.3	827.0	816.1	805.9	796.9	791.8	786.7	789.9
167.5°	841.7	841.1	843.0	843.7	839.8	830.9	817.4	807.8	796.3	784.1	777.7
170°	846.9	846.2	847.5	848.8	846.2	841.7	828.3	819.3	807.2	791.2	775.8
172.5°	852.0	850.1	850.1	850.1	848.1	844.3	834.7	827.0	817.4	804.0	788.0
175°	855.2	853.3	852.6	850.7	848.1	844.3	835.3	827.0	817.4	807.2	794.4
177.5°	856.5	854.5	853.3	851.3	848.1	843.7	834.1	824.4	812.9	800.1	788.6
180°	811.6	811.6	811.6	811.6	811.6	811.6	811.6	811.6	811.6	811.6	811.6



TEST NUMBER: P236524

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1	1524.1
2.5°	1514.5	1517.0	1518.3	1520.9	1520.2	1520.9	1524.7	1520.9
5°	1522.2	1526.0	1528.6	1531.8	1531.1	1531.1	1533.7	1530.5
7.5°	1536.2	1542.6	1547.8	1552.2	1551.6	1552.9	1556.7	1552.2
10°	1555.4	1565.0	1572.1	1579.1	1581.7	1583.6	1588.7	1586.8
12.5°	1579.8	1593.9	1604.1	1613.1	1616.9	1621.4	1627.1	1623.9
15°	1608.6	1626.5	1639.9	1652.1	1658.5	1665.5	1673.2	1670.7
17.5°	1642.5	1666.8	1683.5	1701.4	1711.0	1720.0	1729.6	1725.7
20°	1683.5	1715.5	1739.2	1761.6	1775.0	1788.4	1796.8	1792.9
22.5°	1728.9	1771.8	1804.4	1835.2	1855.0	1869.7	1881.3	1880.0
25°	1785.2	1838.4	1880.0	1915.2	1942.7	1961.3	1975.4	1974.1
27.5°	1849.9	1912.6	1963.2	2006.1	2040.0	2064.3	2075.2	2076.5
30°	1919.7	1993.9	2054.1	2105.3	2144.3	2171.2	2182.7	2184.7
32.5°	1992.6	2079.0	2146.9	2204.5	2250.0	2281.3	2292.8	2299.2
35°	2065.0	2161.0	2241.6	2309.5	2358.8	2393.3	2405.5	2415.1
37.5°	2136.7	2246.8	2335.1	2408.7	2463.1	2502.2	2517.5	2520.1
40°	2206.4	2323.6	2425.3	2511.1	2572.6	2613.5	2632.7	2640.4
42.5°	2272.4	2403.6	2514.3	2610.3	2679.5	2721.7	2746.7	2754.4
45°	2335.1	2478.5	2596.2	2696.1	2767.8	2815.2	2843.3	2851.0
47.5°	2387.6	2539.3	2667.9	2778.0	2855.5	2908.6	2936.8	2948.3
50°	2431.7	2593.0	2730.0	2845.2	2924.0	2979.0	3010.4	3020.6
52.5°	2464.4	2627.0	2768.4	2890.7	2975.2	3037.9	3069.9	3084.6
55°	2479.7	2650.0	2796.0	2921.4	3005.3	3069.9	3103.8	3120.5
57.5°	2479.7	2650.7	2789.6	2905.4	2987.3	3055.8	3100.6	3117.3
60°	2449.7	2611.6	2760.8	2890.1	2979.0	3046.2	3094.2	3102.6
62.5°	2404.2	2570.0	2719.1	2752.4	2727.5	2699.9	2695.5	2705.1
65°	2340.8	2333.8	2317.2	2289.6	2315.9	2367.7	2392.1	2408.1
67.5°	1956.8	1972.8	2068.2	2143.1	2197.5	2242.3	2274.3	2290.9
70°	1763.5	1870.4	1963.2	2041.3	2084.8	2120.7	2138.6	2153.3
72.5°	1666.2	1752.0	1818.5	1876.8	1910.1	1942.7	1951.7	1961.3
75°	1528.6	1602.2	1676.4	1747.5	1800.6	1840.3	1861.4	1871.0
77.5°	1417.8	1499.1	1563.8	1629.1	1675.1	1707.8	1726.4	1742.4
80°	1282.1	1385.8	1481.8	1568.9	1632.3	1678.3	1709.7	1722.5
82.5°	1254.6	1360.2	1453.0	1525.4	1578.5	1619.5	1640.6	1650.2
85°	1078.6	1149.6	1220.0	1289.2	1344.9	1384.5	1403.7	1409.5
87.5°	834.7	908.3	995.4	1053.0	1111.2	1156.7	1181.0	1185.5
90°	263.7	296.4	353.3	373.2	404.5	441.0	462.8	464.7
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	6.4	5.8	5.1	5.1	4.5	3.8	3.2	3.2
97.5°	58.9	44.2	35.2	28.2	22.4	19.8	19.2	19.2
100°	201.6	190.7	177.9	174.7	164.5	157.5	150.4	151.1
102.5°	306.6	284.2	290.0	302.8	309.8	312.4	309.2	311.1
105°	476.2	466.6	455.1	451.9	443.6	428.9	416.7	417.3
107.5°	630.5	639.5	645.2	646.5	643.3	638.8	630.5	631.8
110°	752.8	791.8	820.0	843.7	850.7	848.8	852.0	854.5



TEST NUMBER: P236524

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	752.1	887.8	942.9	983.8	1008.8	1022.9	1032.5	1038.9
115°	734.2	780.3	865.4	962.7	1073.4	1132.3	1150.9	1160.5
117.5°	908.9	879.5	879.5	867.3	901.9	946.7	967.8	976.2
120°	1200.2	1098.4	1058.7	1039.5	1038.9	1044.6	1038.2	1038.2
122.5°	1424.2	1388.4	1342.3	1297.5	1250.8	1238.6	1226.4	1228.4
125°	1463.9	1551.0	1567.0	1559.3	1543.3	1522.8	1505.5	1505.5
127.5°	1442.8	1551.6	1625.2	1683.5	1725.7	1716.1	1711.6	1712.3
130°	1430.6	1516.4	1592.6	1668.7	1722.5	1754.5	1769.9	1775.6
132.5°	1414.6	1484.4	1555.4	1615.6	1657.2	1692.4	1711.0	1718.0
135°	1381.3	1458.8	1511.3	1561.2	1604.1	1637.4	1650.2	1659.1
137.5°	1337.2	1401.8	1463.3	1521.5	1558.6	1579.8	1585.5	1589.4
140°	1296.2	1350.6	1401.2	1446.0	1486.3	1521.5	1535.0	1540.1
142.5°	1216.8	1301.3	1342.3	1382.0	1414.6	1447.9	1465.8	1470.3
145°	1042.7	1175.2	1254.0	1313.5	1350.0	1380.1	1397.3	1411.4
147.5°	899.3	992.2	1069.6	1158.6	1222.6	1277.6	1305.8	1312.2
150°	800.8	856.5	911.5	963.4	1015.2	1062.6	1088.2	1092.7
152.5°	724.6	795.0	813.6	832.8	866.7	895.5	900.0	903.8
155°	672.7	688.1	716.9	764.3	789.9	783.5	772.6	763.0
157.5°	670.8	660.6	665.1	668.3	659.3	645.9	626.7	613.2
160°	747.0	695.8	672.7	654.8	626.7	598.5	568.4	565.2
162.5°	788.0	773.2	761.1	741.2	689.4	637.5	619.0	616.4
165°	792.4	792.4	791.2	783.5	752.8	721.4	710.5	709.9
167.5°	775.8	780.3	782.8	785.4	775.8	760.4	745.1	742.5
170°	763.6	761.1	760.4	758.5	768.1	766.2	747.0	728.4
172.5°	767.5	756.6	749.6	747.6	764.9	782.2	770.0	762.4
175°	773.2	755.3	745.1	750.2	770.7	804.6	823.8	830.2
177.5°	768.1	745.1	733.6	745.1	770.0	815.5	866.7	887.8
180°	811.6	811.6	811.6	811.6	811.6	811.6	811.6	811.6

(END OF REPORT)