

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: P236525

Luminaire Tested: **SKB4-LD5-18-W-UNV-L850-CD2-U all blades horizontal**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236525  
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-L850-CD2-U all blades horizontal  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH WIDE DISTRIBUTION LENS, ALL BLADES HORIZONTAL  
Light Source: (952) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

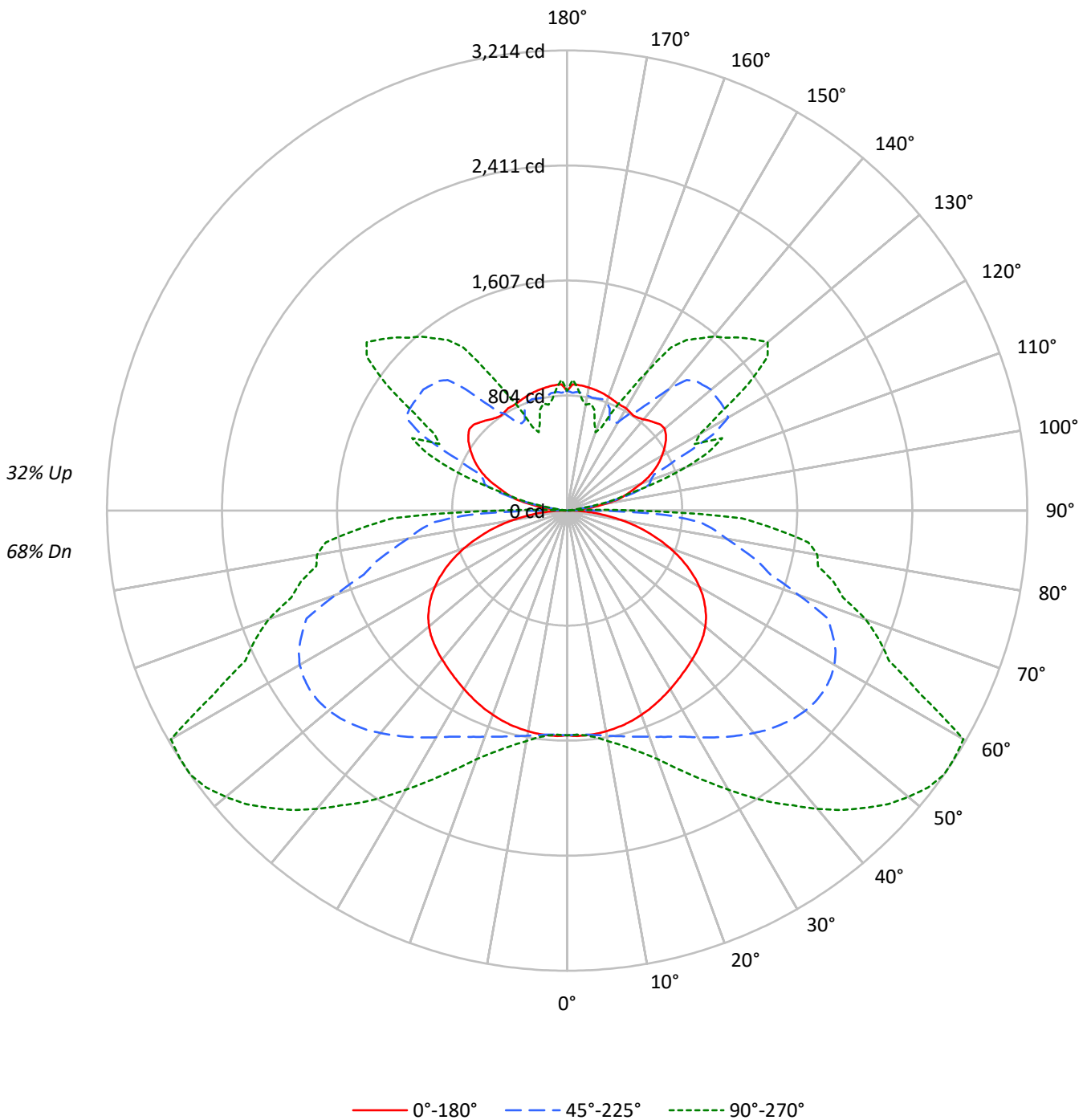
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15233.0 lumens  
Efficiency: N/A  
Efficacy: 106.2 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

TEST NUMBER: P236525

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U all blades horizontal

### Luminous Intensity Polar Plot





TEST NUMBER: P236525

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U all blades horizontal

**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	50	30	10	0	
RCR																						
0	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	68				
1	99	93	87	83	93	87	83	78	77	74	70	68	65	62	59	57	55	51				
2	88	78	71	64	82	74	67	61	65	59	55	57	53	49	50	46	43	39				
3	79	67	58	51	74	63	55	48	56	49	44	49	43	39	42	38	34	31				
4	71	58	49	42	67	55	46	40	48	41	36	42	37	32	37	32	28	25				
5	65	51	42	35	61	48	40	33	43	35	30	37	31	27	32	27	23	20				
6	60	45	36	29	56	43	34	28	38	31	25	33	27	22	29	24	20	17				
7	55	41	32	25	51	38	30	24	34	27	22	30	24	19	26	21	17	15				
8	51	37	28	22	47	35	26	21	31	24	19	27	21	17	23	19	15	13				
9	47	33	25	19	44	31	24	18	28	21	17	25	19	15	21	17	13	11				
10	44	30	22	17	41	29	21	16	26	19	15	23	17	13	20	15	12	10				

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

	0°	45°	90°
0°	2253	2253	2253
5°	2269	2262	2271
10°	2281	2327	2382
15°	2298	2426	2557
20°	2318	2568	2820
25°	2347	2759	3220
30°	2386	3030	3729
35°	2449	3380	4358
40°	2544	3799	5095
45°	2668	4290	5960
50°	2811	4853	6946
55°	2945	5482	8042
60°	3068	6192	9172
65°	3150	6945	8423
70°	3201	7212	9306
75°	3221	7666	10686
80°	3188	9323	14663
85°	3137	15350	23905



TEST NUMBER: P236525

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U all blades horizontal

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.3	1.0
10°-20°	465.7	3.1
20°-30°	816.0	5.4
30°-40°	1221.2	8.0
40°-50°	1645.8	10.8
50°-60°	1964.9	12.9
60°-70°	1857.8	12.2
70°-80°	1419.1	9.3
80°-90°	885.4	5.8
90°-100°	94.6	0.6
100°-110°	497.2	3.3
110°-120°	872.9	5.7
120°-130°	1089.2	7.2
130°-140°	948.2	6.2
140°-150°	633.2	4.2
150°-160°	364.3	2.4
160°-170°	226.9	1.5
170°-180°	79.2	0.5
0°-30°	1433.0	9.4
0°-40°	2654.3	17.4
0°-60°	6265.0	41.1
0°-90°	10427.4	68.5
90°-120°	1464.7	9.6
90°-150°	4135.2	27.1
90°-180°	4806.0	31.5
0°-180°	15233.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1570	1570	1570	1570	1570	
5°	1575	1583	1570	1576	1576	150
15°	1547	1581	1633	1695	1721	437
25°	1482	1565	1742	1954	2033	684
35°	1398	1548	1929	2344	2487	877
45°	1315	1542	2114	2725	2936	1016
55°	1177	1495	2191	2944	3214	1051
65°	928	1296	2045	2372	2480	914
75°	581	950	1382	1763	1927	610
85°	190	415	932	1292	1452	195
90°	8	50	192	374	479	17
95°	100	53	9	5	3	116
105°	425	484	486	467	430	444
115°	673	829	839	941	1195	661
125°	841	881	1311	1610	1551	749
135°	869	719	1278	1582	1709	672
145°	808	761	844	1322	1454	513
155°	828	800	698	763	786	384
165°	861	846	810	811	731	243
175°	881	872	831	770	855	84
180°	836	836	836	836	836	



TEST NUMBER: P236525

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7
2.5°	1576.3	1576.3	1580.3	1580.3	1582.9	1582.9	1580.9	1576.3	1573.0	1566.4	1562.5
5°	1575.0	1574.3	1579.6	1579.6	1582.9	1582.9	1580.9	1578.3	1575.0	1570.4	1568.4
7.5°	1571.7	1571.7	1576.3	1577.6	1581.6	1584.2	1584.9	1583.6	1583.6	1581.6	1580.9
10°	1565.1	1566.4	1571.7	1576.3	1586.2	1592.8	1596.1	1597.4	1598.1	1596.8	1598.1
12.5°	1557.2	1558.5	1567.1	1573.7	1579.6	1587.5	1594.1	1600.7	1608.0	1613.2	1619.8
15°	1546.7	1548.0	1556.5	1562.5	1574.3	1587.5	1598.7	1609.9	1623.1	1633.0	1642.9
17.5°	1534.1	1535.4	1543.4	1553.2	1570.4	1587.5	1603.4	1620.5	1639.6	1655.4	1671.9
20°	1517.6	1519.6	1529.5	1542.7	1563.8	1586.2	1608.0	1631.7	1658.1	1681.1	1704.9
22.5°	1501.2	1502.5	1515.0	1531.5	1556.5	1584.2	1611.9	1643.6	1677.9	1710.2	1743.8
25°	1482.0	1483.4	1498.5	1519.0	1548.6	1582.3	1617.9	1656.1	1701.6	1742.5	1787.3
27.5°	1460.9	1462.9	1481.4	1505.8	1540.1	1580.3	1623.8	1671.9	1726.6	1780.7	1840.0
30°	1439.9	1441.8	1462.9	1491.3	1531.5	1579.0	1631.0	1688.4	1758.9	1828.2	1900.0
32.5°	1418.8	1422.1	1445.8	1477.4	1523.6	1578.3	1640.3	1710.8	1797.8	1878.3	1963.3
35°	1397.7	1401.0	1428.0	1463.6	1516.3	1579.0	1650.8	1737.2	1837.4	1929.0	2026.6
37.5°	1377.2	1381.8	1410.8	1451.1	1509.1	1581.6	1666.6	1765.5	1875.6	1979.1	2089.2
40°	1358.1	1362.7	1393.7	1438.5	1503.1	1584.9	1684.4	1793.9	1915.8	2027.9	2150.5
42.5°	1337.7	1342.9	1376.6	1425.3	1496.6	1591.5	1700.9	1822.2	1952.1	2075.4	2204.6
45°	1314.6	1321.2	1356.1	1409.5	1488.0	1596.8	1715.4	1846.6	1982.4	2113.6	2256.7
47.5°	1290.2	1296.1	1333.1	1391.7	1478.7	1598.7	1724.7	1860.5	2004.8	2148.6	2302.2
50°	1259.2	1265.8	1304.7	1368.7	1466.9	1595.4	1724.7	1869.0	2022.0	2173.6	2336.5
52.5°	1223.0	1230.2	1271.7	1341.0	1449.1	1585.6	1718.7	1868.4	2027.3	2188.8	2359.5
55°	1176.8	1186.7	1230.9	1308.0	1426.0	1564.5	1698.9	1856.5	2022.7	2190.8	2368.8
57.5°	1127.4	1135.3	1183.4	1268.4	1393.7	1532.2	1671.9	1833.4	2004.2	2180.2	2365.5
60°	1068.7	1076.6	1129.3	1221.6	1350.2	1485.3	1633.0	1795.9	1975.8	2157.1	2343.1
62.5°	1001.4	1010.0	1066.7	1167.6	1294.8	1430.6	1582.3	1751.0	1935.0	2113.6	2291.6
65°	927.6	936.2	998.8	1105.6	1224.9	1366.7	1523.6	1695.0	1876.3	2045.1	2227.7
67.5°	847.8	858.4	928.9	1035.1	1152.4	1293.5	1453.0	1623.8	1793.2	1970.6	2049.7
70°	762.8	775.3	851.1	952.0	1069.3	1213.1	1371.9	1532.2	1702.9	1718.7	1697.6
72.5°	673.1	690.9	771.3	863.0	979.0	1121.4	1269.8	1432.6	1414.8	1488.6	1604.0
75°	580.8	601.9	683.0	768.1	884.1	1015.9	1166.9	1170.2	1273.7	1382.5	1483.4
77.5°	484.6	517.5	586.1	670.5	777.9	907.8	944.1	1043.0	1149.1	1248.0	1353.5
80°	385.7	427.2	485.2	567.0	667.8	709.4	805.0	910.5	1024.5	1128.0	1221.6
82.5°	286.8	331.0	381.7	450.3	491.2	573.6	678.4	785.9	908.5	1040.3	1170.2
85°	190.5	225.5	263.1	298.7	367.2	463.5	602.6	734.4	845.8	932.2	1027.8
87.5°	93.0	116.0	143.1	205.7	294.7	358.6	435.1	515.6	599.9	685.6	778.6
90°	7.9	9.2	10.5	19.8	39.6	60.7	102.2	123.3	166.1	192.5	238.7
92.5°	15.8	13.8	9.2	6.6	5.9	5.3	4.0	3.3	2.0	0.7	0.0
95°	99.6	107.5	90.3	67.2	58.7	47.5	29.7	19.8	13.2	9.2	7.3
97.5°	183.3	205.7	203.7	172.1	156.2	141.7	119.3	122.0	107.5	89.0	72.5
100°	274.3	312.5	304.6	282.8	263.7	258.4	241.3	232.1	207.7	198.4	207.7
102.5°	365.9	396.2	403.5	424.6	366.6	358.6	359.3	359.3	353.4	344.8	331.0
105°	425.2	450.3	477.3	501.7	534.7	433.1	423.9	460.2	483.9	486.5	489.2
107.5°	478.6	495.8	542.6	574.2	611.1	634.9	495.1	497.1	561.0	601.9	632.2
110°	550.5	557.1	585.4	650.7	683.0	741.0	731.1	582.1	559.1	621.0	728.5



TEST NUMBER: P236525

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	615.8	614.4	604.6	705.4	748.9	797.1	884.1	859.7	694.9	655.3	678.4
115°	673.1	662.6	623.7	717.3	805.6	853.1	925.6	1034.4	997.5	838.6	772.0
117.5°	721.2	704.1	667.2	715.3	852.4	904.5	967.8	1064.1	1174.8	1148.5	1033.1
120°	764.1	745.6	720.6	708.7	848.5	954.0	1017.3	1095.1	1196.6	1298.8	1307.3
122.5°	803.7	784.5	776.6	702.1	816.8	989.6	1052.2	1126.7	1211.1	1309.3	1406.2
125°	841.2	819.5	818.2	709.4	789.2	973.7	1089.1	1158.3	1228.2	1310.6	1403.6
127.5°	870.2	848.5	846.5	731.8	767.4	908.5	1099.7	1172.8	1246.0	1308.7	1398.3
130°	890.0	870.9	859.7	778.6	731.8	851.8	1037.7	1180.8	1240.8	1313.9	1385.8
132.5°	887.4	872.2	853.1	809.6	711.4	805.0	934.8	1135.3	1232.8	1293.5	1379.2
135°	868.9	859.7	837.9	824.8	705.4	732.5	849.1	1011.3	1195.9	1277.7	1346.9
137.5°	851.1	846.5	822.1	821.5	732.5	700.8	797.7	901.2	1078.6	1236.8	1314.6
140°	830.7	830.0	807.6	808.3	763.4	679.7	721.2	820.8	943.4	1108.2	1254.6
142.5°	816.2	817.5	795.1	791.8	781.2	690.3	691.6	779.3	841.9	954.6	1111.5
145°	808.3	808.9	787.8	779.9	781.9	739.7	673.1	703.4	796.4	843.9	952.0
147.5°	815.5	811.6	783.9	768.7	778.6	764.8	696.2	678.4	710.7	796.4	836.6
150°	825.4	820.8	795.1	770.0	774.6	786.5	756.8	688.9	685.0	710.7	793.1
152.5°	824.1	826.1	814.9	794.4	789.2	797.1	786.5	749.6	691.6	687.0	708.1
155°	828.0	828.7	825.4	808.3	798.4	801.0	795.7	783.2	753.5	698.2	687.0
157.5°	836.6	837.3	832.0	817.5	806.3	803.7	803.7	802.3	791.1	774.0	717.9
160°	845.2	845.8	843.9	832.7	820.8	813.5	809.6	812.9	811.6	805.6	790.5
162.5°	853.8	853.1	855.1	847.8	835.3	828.0	818.2	816.2	816.2	816.2	815.5
165°	861.0	860.4	863.0	860.4	851.8	840.6	830.0	820.8	815.5	810.2	813.5
167.5°	866.9	866.3	868.3	868.9	865.0	855.7	841.9	832.0	820.1	807.6	801.0
170°	872.2	871.6	872.9	874.2	871.6	866.9	853.1	843.9	831.3	814.9	799.0
172.5°	877.5	875.5	875.5	875.5	873.5	869.6	859.7	851.8	841.9	828.0	811.6
175°	880.8	878.8	878.2	876.2	873.5	869.6	860.4	851.8	841.9	831.3	818.2
177.5°	882.1	880.1	878.8	876.8	873.5	868.9	859.0	849.1	837.3	824.1	812.2
180°	836.0	836.0	836.0	836.0	836.0	836.0	836.0	836.0	836.0	836.0	836.0



TEST NUMBER: P236525

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7	1569.7
2.5°	1559.8	1562.5	1563.8	1566.4	1565.8	1566.4	1570.4	1566.4
5°	1567.8	1571.7	1574.3	1577.6	1577.0	1577.0	1579.6	1576.3
7.5°	1582.3	1588.8	1594.1	1598.7	1598.1	1599.4	1603.4	1598.7
10°	1602.0	1611.9	1619.2	1626.4	1629.1	1631.0	1636.3	1634.3
12.5°	1627.1	1641.6	1652.1	1661.4	1665.3	1669.9	1675.9	1672.6
15°	1656.8	1675.2	1689.1	1701.6	1708.2	1715.4	1723.3	1720.7
17.5°	1691.7	1716.7	1733.9	1752.3	1762.2	1771.5	1781.4	1777.4
20°	1733.9	1766.9	1791.2	1814.3	1828.2	1842.0	1850.6	1846.6
22.5°	1780.7	1824.9	1858.5	1890.1	1910.6	1925.7	1937.6	1936.3
25°	1838.7	1893.4	1936.3	1972.5	2000.9	2020.0	2034.5	2033.2
27.5°	1905.3	1969.9	2022.0	2066.2	2101.1	2126.2	2137.4	2138.7
30°	1977.2	2053.6	2115.6	2168.3	2208.6	2236.3	2248.1	2250.1
32.5°	2052.3	2141.3	2211.2	2270.5	2317.3	2349.6	2361.5	2368.1
35°	2126.8	2225.7	2308.8	2378.7	2429.4	2465.0	2477.5	2487.4
37.5°	2200.7	2314.0	2405.0	2480.8	2536.9	2577.1	2592.9	2595.6
40°	2272.5	2393.2	2498.0	2586.3	2649.6	2691.8	2711.6	2719.5
42.5°	2340.4	2475.6	2589.6	2688.5	2759.7	2803.2	2828.9	2836.9
45°	2405.0	2552.7	2674.0	2776.9	2850.7	2899.5	2928.5	2936.4
47.5°	2459.1	2615.3	2747.9	2861.2	2941.0	2995.7	3024.7	3036.6
50°	2504.6	2670.7	2811.8	2930.5	3011.6	3068.3	3100.6	3111.1
52.5°	2538.2	2705.7	2851.4	2977.3	3064.3	3128.9	3161.9	3177.0
55°	2554.0	2729.4	2879.7	3008.9	3095.3	3161.9	3196.8	3214.0
57.5°	2554.0	2730.1	2873.1	2992.4	3076.8	3147.4	3193.5	3210.7
60°	2523.0	2689.8	2843.4	2976.6	3068.3	3137.5	3186.9	3195.5
62.5°	2476.2	2647.0	2800.6	2834.9	2809.2	2780.8	2776.2	2786.1
65°	2411.0	2403.7	2386.6	2358.2	2385.3	2438.7	2463.7	2480.2
67.5°	2015.4	2031.9	2130.1	2207.2	2263.3	2309.4	2342.4	2359.5
70°	1816.3	1926.4	2022.0	2102.4	2147.3	2184.2	2202.6	2217.8
72.5°	1716.1	1804.4	1873.0	1933.0	1967.3	2000.9	2010.1	2020.0
75°	1574.3	1650.2	1726.6	1799.8	1854.5	1895.4	1917.2	1927.1
77.5°	1460.3	1544.0	1610.6	1677.9	1725.3	1758.9	1778.1	1794.5
80°	1320.5	1427.3	1526.2	1615.9	1681.1	1728.6	1760.9	1774.1
82.5°	1292.2	1401.0	1496.6	1571.0	1625.8	1668.0	1689.7	1699.6
85°	1110.9	1184.1	1256.6	1327.8	1385.1	1426.0	1445.8	1451.7
87.5°	859.7	935.5	1025.2	1084.5	1144.5	1191.3	1216.4	1221.0
90°	271.6	305.2	363.9	384.4	416.7	454.2	476.7	478.6
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	6.6	5.9	5.3	5.3	4.6	4.0	3.3	3.3
97.5°	60.7	45.5	36.3	29.0	23.1	20.4	19.8	19.8
100°	207.7	196.5	183.3	180.0	169.4	162.2	154.9	155.6
102.5°	315.8	292.7	298.7	311.8	319.1	321.7	318.4	320.4
105°	490.5	480.6	468.7	465.4	456.9	441.7	429.2	429.8
107.5°	649.4	658.6	664.5	665.9	662.6	658.0	649.4	650.7
110°	775.3	815.5	844.5	868.9	876.2	874.2	877.5	880.1





TEST NUMBER: P236525

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U all blades horizontal

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	774.6	914.4	971.1	1013.3	1039.0	1053.5	1063.4	1070.0
115°	756.2	803.7	891.3	991.5	1105.6	1166.3	1185.4	1195.3
117.5°	936.2	905.8	905.8	893.3	928.9	975.1	996.8	1005.4
120°	1236.1	1131.3	1090.4	1070.7	1070.0	1075.9	1069.3	1069.3
122.5°	1466.9	1430.0	1382.5	1336.3	1288.2	1275.7	1263.2	1265.1
125°	1507.8	1597.4	1613.9	1606.0	1589.5	1568.4	1550.6	1550.6
127.5°	1486.0	1598.1	1673.9	1733.9	1777.4	1767.5	1762.9	1763.6
130°	1473.5	1561.8	1640.3	1718.7	1774.1	1807.1	1822.9	1828.8
132.5°	1457.0	1528.9	1602.0	1664.0	1706.9	1743.1	1762.2	1769.5
135°	1422.7	1502.5	1556.5	1608.0	1652.1	1686.4	1699.6	1708.8
137.5°	1377.2	1443.8	1507.1	1567.1	1605.3	1627.1	1633.0	1637.0
140°	1335.0	1391.1	1443.1	1489.3	1530.8	1567.1	1580.9	1586.2
142.5°	1253.3	1340.3	1382.5	1423.4	1457.0	1491.3	1509.7	1514.4
145°	1074.0	1210.4	1291.5	1352.8	1390.4	1421.4	1439.2	1453.7
147.5°	926.3	1021.9	1101.6	1193.3	1259.2	1315.9	1344.9	1351.5
150°	824.8	882.1	938.8	992.2	1045.6	1094.4	1120.8	1125.4
152.5°	746.3	818.8	837.9	857.7	892.7	922.3	926.9	930.9
155°	692.9	708.7	738.4	787.2	813.5	807.0	795.7	785.9
157.5°	690.9	680.4	685.0	688.3	679.1	665.2	645.4	631.6
160°	769.4	716.6	692.9	674.4	645.4	616.4	585.4	582.1
162.5°	811.6	796.4	783.9	763.4	710.0	656.6	637.5	634.9
165°	816.2	816.2	814.9	807.0	775.3	743.0	731.8	731.1
167.5°	799.0	803.7	806.3	808.9	799.0	783.2	767.4	764.8
170°	786.5	783.9	783.2	781.2	791.1	789.2	769.4	750.3
172.5°	790.5	779.3	772.0	770.0	787.8	805.6	793.1	785.2
175°	796.4	777.9	767.4	772.7	793.8	828.7	848.5	855.1
177.5°	791.1	767.4	755.5	767.4	793.1	839.9	892.7	914.4
180°	836.0	836.0	836.0	836.0	836.0	836.0	836.0	836.0

(END OF REPORT)