

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: P236474

Luminaire Tested: **SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236474
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24056)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES HORIZONTAL
Light Source: (952) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

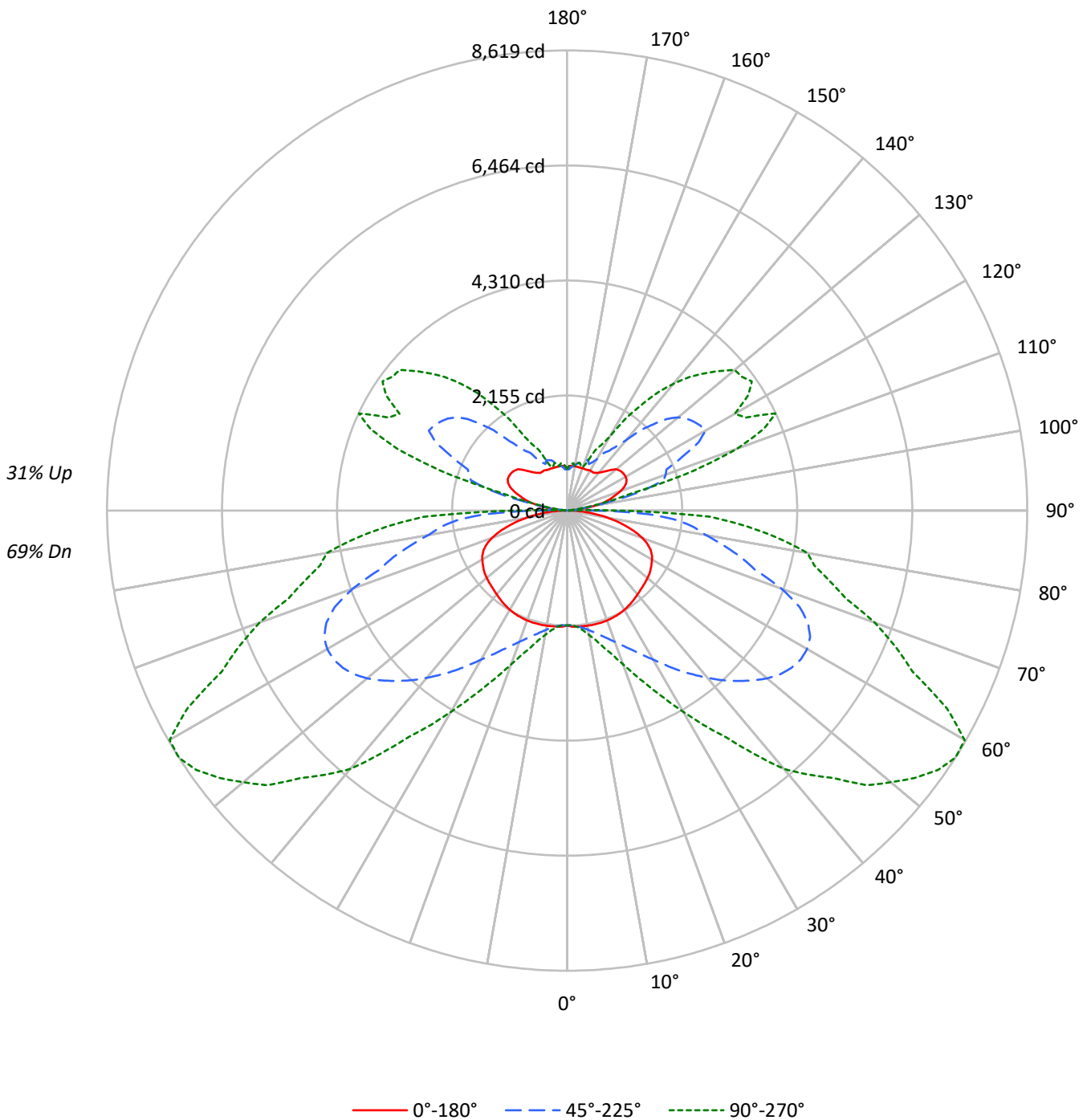
Lumens per Lamp: N/A
Luminaire Lumens: 32921.0 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Spacing Criteria (0/90/45): 1.49 / 3.46 / 2.71
Luminous Opening: Rectangular (W 1.88' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 333.5
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

TEST NUMBER: P236474

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal

Luminous Intensity Polar Plot





TEST NUMBER: P236474

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74
1	98	92	87	82	92	87	82	77	77	73	69	68	65	62	59	57	55
2	87	77	69	62	81	73	65	59	64	58	53	56	51	47	49	45	42
3	78	66	56	49	73	62	53	46	54	47	42	47	42	37	41	37	33
4	70	57	47	39	65	53	44	37	47	39	33	41	35	30	35	30	26
5	64	49	40	32	59	47	37	31	41	33	27	36	29	24	31	26	21
6	58	44	34	27	54	41	32	26	36	29	23	31	25	20	27	22	18
7	53	39	29	23	50	37	28	22	32	25	19	28	22	17	24	19	15
8	49	35	26	20	46	33	25	19	29	22	17	25	19	15	22	17	13
9	46	32	23	17	43	30	22	16	26	19	15	23	17	13	20	15	11
10	43	29	20	15	40	27	19	14	24	17	13	21	15	11	18	13	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3085	3085	3085
5°	3143	3131	3152
10°	3191	3302	3445
15°	3258	3593	3943
20°	3344	3997	4681
25°	3444	4562	5748
30°	3557	5340	7208
35°	3682	6403	9063
40°	3841	7667	11834
45°	4071	9161	14388
50°	4385	10917	17675
55°	4778	12840	21201
60°	5267	14896	24678
65°	5848	16898	24238
70°	6280	17910	25706
75°	6452	18685	28208
80°	6384	21781	37768
85°	6251	34144	55543



TEST NUMBER: P236474

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.0	0.6
10°-20°	694.0	2.1
20°-30°	1356.8	4.1
30°-40°	2314.7	7.0
40°-50°	3533.2	10.7
50°-60°	4619.5	14.0
60°-70°	4627.9	14.1
70°-80°	3468.8	10.5
80°-90°	2024.8	6.2
90°-100°	224.3	0.7
100°-110°	1385.3	4.2
110°-120°	2459.4	7.5
120°-130°	2426.5	7.4
130°-140°	1775.1	5.4
140°-150°	970.2	2.9
150°-160°	490.0	1.5
160°-170°	260.0	0.8
170°-180°	79.3	0.2
0°-30°	2261.8	6.9
0°-40°	4576.5	13.9
0°-60°	12729.3	38.7
0°-90°	22850.8	69.4
90°-120°	4069.1	12.4
90°-150°	9240.9	28.1
90°-180°	10070.0	30.6
0°-180°	32921.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2150	2150	2150	2150	2150	
5°	2181	2189	2173	2173	2188	208
15°	2193	2277	2418	2567	2654	621
25°	2175	2394	2881	3423	3630	1005
35°	2102	2533	3655	4794	5173	1318
45°	2006	2696	4513	6452	7089	1553
55°	1909	2813	5132	7620	8473	1709
65°	1722	2612	4976	6736	7137	1686
75°	1164	1945	3370	4582	5087	1217
85°	380	846	2074	3044	3373	391
90°	28	125	527	813	950	41
95°	192	122	38	30	28	226
105°	834	1053	1505	1505	1251	867
115°	1220	1648	2374	3424	4304	1189
125°	1256	1476	2901	3902	4223	1120
135°	1046	1122	2289	3344	3637	821
145°	864	1049	1364	2067	2402	552
155°	845	966	960	1156	1253	394
165°	840	897	946	973	923	238
175°	839	828	809	768	877	80
180°	779	779	779	779	779	



TEST NUMBER: P236474

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8
2.5°	2176.3	2178.0	2179.6	2179.6	2181.3	2181.3	2169.7	2164.7	2158.1	2149.8	2144.8
5°	2181.3	2181.3	2182.9	2184.6	2187.9	2189.6	2182.9	2179.6	2176.3	2173.0	2171.3
7.5°	2184.6	2186.2	2187.9	2191.2	2202.8	2211.1	2206.1	2209.4	2212.8	2212.8	2216.1
10°	2189.6	2191.2	2196.2	2207.8	2224.4	2242.6	2247.6	2255.9	2262.5	2265.8	2275.7
12.5°	2192.9	2194.5	2204.5	2221.1	2242.6	2265.8	2279.1	2297.3	2315.5	2337.1	2357.0
15°	2192.9	2196.2	2209.4	2231.0	2260.8	2292.3	2317.2	2353.7	2386.8	2418.3	2449.8
17.5°	2192.9	2196.2	2211.1	2242.6	2282.4	2325.5	2366.9	2418.3	2463.0	2507.8	2564.2
20°	2189.6	2192.9	2214.4	2254.2	2302.3	2360.3	2418.3	2482.9	2549.2	2617.2	2690.1
22.5°	2182.9	2189.6	2216.1	2264.1	2323.8	2400.1	2473.0	2560.8	2650.3	2739.8	2841.0
25°	2174.6	2181.3	2216.1	2272.4	2348.7	2439.8	2534.3	2647.0	2759.7	2880.7	3015.0
27.5°	2161.4	2171.3	2212.8	2280.7	2373.5	2482.9	2602.3	2739.8	2887.4	3046.5	3200.6
30°	2146.5	2158.1	2206.1	2285.7	2396.7	2527.7	2673.5	2844.3	3034.9	3222.2	3427.7
32.5°	2124.9	2138.2	2194.5	2290.7	2416.6	2574.1	2748.1	2968.6	3194.0	3431.0	3673.0
35°	2101.7	2118.3	2184.6	2294.0	2438.2	2627.1	2837.6	3101.2	3371.4	3654.8	3929.9
37.5°	2076.8	2096.7	2171.3	2297.3	2463.0	2678.5	2937.1	3233.8	3552.0	3866.9	4198.4
40°	2050.3	2075.2	2156.4	2299.0	2487.9	2738.2	3036.5	3373.0	3724.4	4092.4	4465.3
42.5°	2025.5	2053.6	2141.5	2299.0	2512.8	2796.2	3127.7	3508.9	3901.8	4307.8	4720.6
45°	2005.6	2035.4	2128.2	2299.0	2537.6	2854.2	3217.2	3641.5	4074.1	4513.4	4969.2
47.5°	1985.7	2017.2	2115.0	2297.3	2560.8	2908.9	3301.7	3757.6	4225.0	4710.6	5222.8
50°	1964.1	1998.9	2103.4	2297.3	2582.4	2958.6	3378.0	3857.0	4357.6	4889.6	5444.9
52.5°	1942.6	1977.4	2090.1	2295.6	2603.9	2996.8	3434.3	3929.9	4468.6	5033.8	5625.6
55°	1909.4	1949.2	2068.6	2289.0	2612.2	3013.3	3457.5	3979.7	4539.9	5131.6	5759.8
57.5°	1874.6	1916.1	2040.4	2274.1	2605.6	3003.4	3454.2	3996.2	4569.7	5188.0	5832.7
60°	1834.9	1874.6	1998.9	2242.6	2572.4	2965.3	3432.7	3973.0	4563.1	5189.6	5846.0
62.5°	1790.1	1824.9	1947.6	2192.9	2511.1	2900.6	3368.0	3920.0	4508.4	5131.6	5759.8
65°	1722.1	1753.6	1879.6	2119.9	2418.3	2806.1	3270.2	3813.9	4380.8	4975.8	5559.3
67.5°	1624.4	1655.8	1786.8	2018.8	2303.9	2680.2	3136.0	3654.8	4170.3	4712.3	5202.9
70°	1496.7	1528.2	1667.4	1881.3	2156.4	2526.0	2953.7	3422.7	3885.2	4268.1	4486.9
72.5°	1340.9	1377.4	1518.3	1715.5	1987.3	2333.8	2728.2	3149.3	3406.2	3689.6	4074.1
75°	1163.6	1205.0	1342.6	1526.6	1790.1	2100.1	2466.4	2705.0	2998.4	3369.7	3701.2
77.5°	971.3	1022.7	1147.0	1324.3	1563.0	1848.1	2071.9	2383.5	2683.5	2990.1	3293.5
80°	772.4	830.4	941.5	1105.6	1317.7	1506.7	1770.2	2053.6	2333.8	2635.4	2930.5
82.5°	573.5	631.5	734.3	876.8	1027.7	1210.0	1455.3	1733.7	2042.0	2398.4	2754.8
85°	379.6	429.3	520.5	596.7	745.9	946.4	1238.2	1534.8	1796.7	2073.5	2340.4
87.5°	198.9	228.7	283.4	392.8	555.3	706.1	903.3	1107.2	1289.5	1531.5	1737.1
90°	28.2	29.8	39.8	53.0	102.8	147.5	240.3	349.7	396.1	527.1	588.4
92.5°	43.1	41.4	34.8	26.5	21.5	21.5	19.9	18.2	16.6	13.3	9.9
95°	192.3	208.8	190.6	164.1	129.3	114.4	84.5	59.7	49.7	38.1	34.8
97.5°	353.0	392.8	394.5	368.0	351.4	323.2	280.1	271.8	260.2	227.1	198.9
100°	532.1	588.4	606.6	585.1	578.5	616.6	606.6	563.6	508.9	465.8	485.6
102.5°	714.4	765.8	802.2	863.6	789.0	842.0	916.6	964.7	999.5	968.0	898.4
105°	833.7	876.8	943.1	1031.0	1095.6	1011.1	1082.3	1254.7	1413.8	1505.0	1563.0
107.5°	939.8	969.6	1052.5	1160.3	1281.2	1350.9	1241.5	1357.5	1624.4	1887.9	2080.2
110°	1064.1	1084.0	1128.8	1277.9	1410.5	1587.9	1627.7	1534.8	1665.8	1965.8	2355.3



TEST NUMBER: P236474

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1156.9	1161.9	1148.6	1329.3	1506.7	1680.7	1924.4	1970.8	1921.0	2012.2	2252.5
115°	1219.9	1211.6	1165.2	1312.7	1544.8	1752.0	1989.0	2287.4	2366.9	2373.5	2413.3
117.5°	1254.7	1239.8	1196.7	1286.2	1539.8	1791.8	2033.8	2335.4	2647.0	2776.3	2885.7
120°	1266.3	1249.8	1236.5	1233.2	1471.9	1785.1	2068.6	2345.4	2661.9	2990.1	3175.8
122.5°	1264.7	1251.4	1269.6	1181.8	1390.6	1733.7	2057.0	2352.0	2637.1	2960.3	3281.9
125°	1256.4	1246.4	1282.9	1171.9	1334.3	1617.7	1984.0	2318.8	2605.6	2900.6	3190.7
127.5°	1236.5	1231.5	1277.9	1178.5	1258.0	1496.7	1876.3	2231.0	2539.3	2827.7	3107.8
130°	1203.3	1203.3	1248.1	1203.3	1175.2	1395.6	1687.3	2081.8	2410.0	2713.3	3000.1
132.5°	1132.1	1140.4	1181.8	1203.3	1127.1	1299.5	1516.6	1871.3	2204.5	2542.6	2821.1
135°	1045.9	1062.5	1105.6	1165.2	1079.0	1165.2	1384.0	1616.1	1980.7	2289.0	2607.2
137.5°	981.2	1002.8	1045.9	1123.8	1094.0	1097.3	1296.2	1461.9	1689.0	2042.0	2317.2
140°	926.5	949.7	992.8	1077.4	1098.9	1044.2	1147.0	1354.2	1503.4	1720.5	2038.7
142.5°	888.4	908.3	948.1	1026.0	1072.4	1031.0	1075.7	1224.9	1367.4	1515.0	1689.0
145°	863.6	880.1	913.3	976.3	1042.6	1055.8	1016.0	1095.6	1258.0	1364.1	1491.8
147.5°	863.6	870.2	890.1	931.5	1011.1	1047.5	1017.7	1034.3	1100.6	1279.6	1349.2
150°	868.5	870.2	888.4	914.9	979.6	1032.6	1055.8	984.6	1032.6	1097.3	1216.6
152.5°	853.6	861.9	895.1	923.2	964.7	1017.7	1032.6	1032.6	971.3	1021.0	1064.1
155°	845.3	852.0	886.8	913.3	941.5	989.5	1016.0	1031.0	1021.0	959.7	991.2
157.5°	843.7	847.0	873.5	900.0	926.5	956.4	996.2	1011.1	1017.7	1024.3	984.6
160°	842.0	843.7	866.9	888.4	913.3	933.2	961.4	992.8	999.5	1002.8	1027.7
162.5°	840.4	842.0	860.2	883.4	900.0	918.3	933.2	956.4	976.3	987.9	992.8
165°	840.4	840.4	853.6	876.8	890.1	903.3	914.9	924.9	929.9	946.4	961.4
167.5°	840.4	840.4	847.0	863.6	881.8	886.8	893.4	901.7	900.0	900.0	900.0
170°	842.0	842.0	842.0	850.3	865.2	875.2	875.2	876.8	871.8	866.9	856.9
172.5°	840.4	838.7	838.7	838.7	843.7	848.6	853.6	855.3	847.0	838.7	825.4
175°	838.7	837.0	833.7	830.4	830.4	825.4	822.1	818.8	812.2	808.9	798.9
177.5°	837.0	835.4	832.1	827.1	823.8	815.5	807.2	797.3	782.3	772.4	757.5
180°	779.0	779.0	779.0	779.0	779.0	779.0	779.0	779.0	779.0	779.0	779.0



TEST NUMBER: P236474

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8	2149.8
2.5°	2138.2	2131.5	2131.5	2134.9	2139.8	2139.8	2139.8	2146.5
5°	2168.0	2166.4	2169.7	2176.3	2181.3	2181.3	2179.6	2187.9
7.5°	2219.4	2221.1	2227.7	2239.3	2247.6	2249.2	2249.2	2259.2
10°	2287.4	2297.3	2315.5	2332.1	2345.4	2350.3	2353.7	2363.6
12.5°	2378.5	2395.1	2418.3	2443.2	2463.0	2473.0	2478.0	2484.6
15°	2484.6	2516.1	2550.9	2584.0	2612.2	2628.8	2637.1	2653.7
17.5°	2615.5	2658.6	2701.7	2751.5	2789.6	2812.8	2826.0	2836.0
20°	2761.4	2829.4	2894.0	2960.3	3010.0	3039.9	3054.8	3064.7
22.5°	2942.1	3031.6	3114.4	3197.3	3255.3	3303.4	3324.9	3331.6
25°	3139.3	3255.3	3369.7	3475.8	3555.3	3596.8	3620.0	3629.9
27.5°	3371.4	3522.2	3651.5	3770.8	3860.3	3928.3	3959.8	3973.0
30°	3631.6	3804.0	3966.4	4118.9	4221.7	4294.6	4334.4	4349.3
32.5°	3911.7	4132.1	4316.1	4476.9	4619.5	4697.4	4747.1	4762.0
35°	4223.3	4465.3	4694.0	4894.6	5045.4	5130.0	5158.1	5173.1
37.5°	4521.7	4821.7	5076.9	5294.1	5484.7	5622.2	5703.5	5736.6
40°	4834.9	5163.1	5454.8	5739.9	6008.4	6190.8	6285.2	6316.7
42.5°	5131.6	5509.5	5870.9	6205.7	6470.9	6603.5	6679.7	6709.6
45°	5438.3	5872.5	6278.6	6625.0	6865.4	6984.7	7062.6	7089.1
47.5°	5736.6	6214.0	6656.5	7006.3	7284.7	7468.7	7576.4	7614.6
50°	6000.2	6522.3	6986.4	7374.2	7646.0	7788.6	7874.8	7916.2
52.5°	6223.9	6769.2	7254.9	7617.9	7893.0	8067.1	8176.4	8219.5
55°	6368.1	6940.0	7427.3	7813.5	8106.8	8295.8	8416.8	8473.1
57.5°	6456.0	7031.1	7521.7	7916.2	8224.5	8423.4	8549.4	8619.0
60°	6449.3	7006.3	7493.6	7881.4	8174.8	8382.0	8516.2	8597.5
62.5°	6338.3	6852.1	7293.0	7616.2	7856.6	7942.7	7956.0	8017.3
65°	6074.7	6469.2	6678.1	6794.1	6949.9	7041.1	7077.5	7137.2
67.5°	5438.3	5647.1	5928.9	6184.1	6409.6	6532.2	6605.1	6653.2
70°	4805.1	5159.8	5469.8	5720.0	5902.4	6030.0	6066.5	6126.1
72.5°	4413.9	4718.9	4980.8	5184.7	5342.1	5438.3	5451.5	5473.1
75°	3974.7	4215.0	4468.6	4695.7	4878.0	4984.1	5055.4	5086.9
77.5°	3581.9	3847.1	4099.0	4327.7	4523.3	4639.3	4712.3	4738.8
80°	3227.2	3557.0	3868.6	4123.9	4337.7	4493.5	4548.2	4569.7
82.5°	3064.7	3341.5	3581.9	3755.9	3903.4	3981.3	3999.5	4002.9
85°	2585.7	2786.3	2968.6	3119.4	3257.0	3344.8	3378.0	3373.0
87.5°	1939.3	2103.4	2270.8	2413.3	2554.2	2653.7	2690.1	2686.8
90°	694.5	694.5	787.3	838.7	982.9	1074.1	1042.6	949.7
92.5°	6.6	6.6	5.0	3.3	3.3	1.7	1.7	1.7
95°	31.5	31.5	29.8	29.8	29.8	28.2	28.2	28.2
97.5°	160.8	144.2	121.0	106.1	86.2	74.6	72.9	69.6
100°	487.3	479.0	454.2	439.2	417.7	401.1	396.1	396.1
102.5°	808.9	732.6	712.7	729.3	747.5	754.2	754.2	759.1
105°	1594.5	1586.2	1544.8	1465.2	1370.8	1284.6	1253.1	1251.4
107.5°	2219.4	2343.7	2431.6	2473.0	2494.5	2478.0	2473.0	2492.9
110°	2648.7	2884.1	3081.3	3218.9	3310.0	3336.5	3356.4	3381.3



TEST NUMBER: P236474

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	2650.3	3084.6	3459.2	3687.9	3843.7	3911.7	3951.5	3979.7
115°	2590.7	2845.9	3245.4	3601.7	3925.0	4138.8	4253.1	4304.5
117.5°	2875.8	2953.7	3139.3	3315.0	3492.4	3639.9	3734.3	3774.1
120°	3275.2	3374.7	3392.9	3449.3	3545.4	3580.2	3601.7	3623.3
122.5°	3490.7	3578.5	3699.5	3820.5	3890.2	3946.5	3987.9	4017.8
125°	3522.2	3711.1	3866.9	3936.6	3976.3	4046.0	4163.6	4223.3
127.5°	3374.7	3644.8	3895.1	3981.3	4072.5	4092.4	4110.6	4118.9
130°	3255.3	3494.0	3678.0	3863.6	4017.8	4085.7	4097.3	4097.3
132.5°	3099.5	3300.1	3508.9	3661.4	3747.6	3810.6	3850.4	3866.9
135°	2852.6	3084.6	3275.2	3412.8	3535.4	3596.8	3623.3	3636.6
137.5°	2589.0	2802.8	2988.5	3170.8	3298.4	3364.7	3389.6	3396.2
140°	2274.1	2478.0	2686.8	2854.2	2968.6	3053.1	3094.6	3101.2
142.5°	1959.2	2169.7	2330.4	2478.0	2613.9	2720.0	2776.3	2791.2
145°	1617.7	1793.4	1992.3	2141.5	2260.8	2335.4	2383.5	2401.7
147.5°	1442.0	1539.8	1626.0	1737.1	1854.7	1964.1	2030.4	2045.4
150°	1319.4	1375.7	1442.0	1505.0	1554.7	1584.6	1607.8	1594.5
152.5°	1138.7	1296.2	1327.7	1352.5	1372.4	1395.6	1382.4	1382.4
155°	1024.3	1062.5	1127.1	1185.1	1292.9	1263.0	1256.4	1253.1
157.5°	953.1	969.6	997.8	1006.1	1001.1	992.8	997.8	986.2
160°	1006.1	968.0	916.6	914.9	890.1	876.8	870.2	863.6
162.5°	994.5	1004.4	1004.4	979.6	941.5	900.0	875.2	866.9
165°	971.3	974.6	977.9	968.0	958.0	936.5	924.9	923.2
167.5°	906.7	923.2	936.5	948.1	956.4	943.1	919.9	913.3
170°	852.0	853.6	856.9	870.2	890.1	895.1	881.8	843.7
172.5°	812.2	807.2	805.5	817.1	843.7	865.2	873.5	895.1
175°	782.3	767.4	762.5	774.1	802.2	833.7	868.5	876.8
177.5°	737.6	719.4	709.4	721.0	747.5	789.0	830.4	835.4
180°	779.0	779.0	779.0	779.0	779.0	779.0	779.0	779.0

(END OF REPORT)