

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: P236472

Luminaire Tested: **SKB4-LD5-36-N-UNV-L835-CD4-U all blades horizontal**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236472
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-L835-CD4-U all blades horizontal
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES HORIZONTAL
Light Source: (952) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

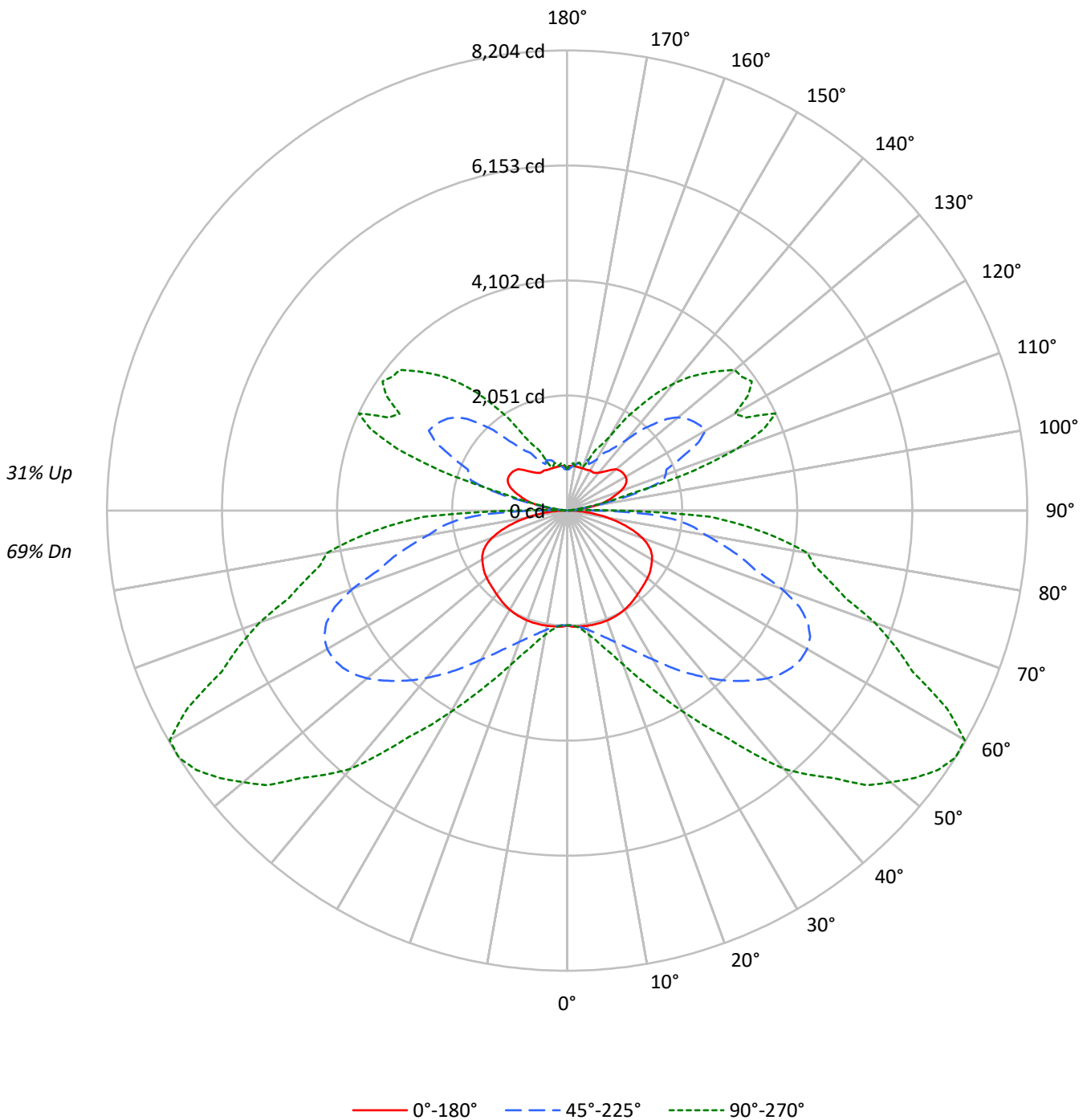
Lumens per Lamp: N/A
Luminaire Lumens: 31336.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.49 / 3.46 / 2.71
Luminous Opening: Rectangular (W 1.88' x L: 4' x H: 0')
CIE Type: Semi-Direct

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

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CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades horizontal

Luminous Intensity Polar Plot





TEST NUMBER: P236472

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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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	69
1	98	92	87	82	92	87	82	77	77	73	69	68	65	62	59	57	55	50
2	87	77	69	62	81	73	65	59	64	58	53	56	51	47	49	45	42	38
3	78	66	56	49	73	62	53	46	54	47	42	47	42	37	41	37	33	29
4	70	57	47	39	65	53	44	37	47	39	33	41	35	30	35	30	26	23
5	64	49	40	32	59	47	37	31	41	33	27	36	29	24	31	26	21	18
6	58	44	34	27	54	41	32	26	36	29	23	31	25	20	27	22	18	15
7	53	39	29	23	50	37	28	22	32	25	19	28	22	17	24	19	15	12
8	49	35	26	20	46	33	25	19	29	22	17	25	19	15	22	17	13	11
9	46	32	23	17	43	30	22	16	26	19	15	23	17	13	20	15	11	9
10	43	29	20	15	40	27	19	14	24	17	13	21	15	11	18	13	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2937	2937	2937
5°	2991	2980	3000
10°	3037	3143	3279
15°	3101	3420	3753
20°	3183	3805	4455
25°	3278	4342	5472
30°	3386	5083	6861
35°	3505	6095	8627
40°	3656	7298	11265
45°	3875	8720	13696
50°	4174	10392	16824
55°	4548	12222	20181
60°	5013	14179	23490
65°	5567	16084	23071
70°	5978	17048	24469
75°	6141	17786	26850
80°	6076	20733	35950
85°	5950	32501	52869



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.8	0.6
10°-20°	660.6	2.1
20°-30°	1291.5	4.1
30°-40°	2203.3	7.0
40°-50°	3363.1	10.7
50°-60°	4397.1	14.0
60°-70°	4405.1	14.1
70°-80°	3301.8	10.5
80°-90°	1927.3	6.2
90°-100°	213.5	0.7
100°-110°	1318.6	4.2
110°-120°	2341.0	7.5
120°-130°	2309.7	7.4
130°-140°	1689.7	5.4
140°-150°	923.5	2.9
150°-160°	466.4	1.5
160°-170°	247.5	0.8
170°-180°	75.4	0.2
0°-30°	2152.9	6.9
0°-40°	4356.2	13.9
0°-60°	12116.4	38.7
0°-90°	21750.6	69.4
90°-120°	3873.1	12.4
90°-150°	8796.0	28.1
90°-180°	9585.0	30.6
0°-180°	31336.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2046	2046	2046	2046	2046	
5°	2076	2083	2068	2068	2083	198
15°	2087	2167	2302	2444	2526	591
25°	2070	2279	2742	3258	3455	956
35°	2000	2411	3479	4563	4924	1255
45°	1909	2566	4296	6141	6748	1478
55°	1818	2677	4885	7254	8065	1627
65°	1639	2486	4736	6412	6794	1605
75°	1108	1851	3208	4362	4842	1158
85°	361	805	1974	2897	3211	372
90°	27	119	502	774	904	39
95°	183	116	36	28	27	215
105°	794	1003	1433	1433	1191	825
115°	1161	1569	2259	3259	4097	1132
125°	1196	1405	2761	3714	4020	1066
135°	996	1068	2179	3183	3462	781
145°	822	999	1298	1967	2286	526
155°	805	919	914	1100	1193	375
165°	800	854	901	926	879	227
175°	798	788	770	731	835	76
180°	742	742	742	742	742	



TEST NUMBER: P236472

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades horizontal

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3
2.5°	2071.5	2073.1	2074.7	2074.7	2076.3	2076.3	2065.2	2060.5	2054.2	2046.3	2041.5
5°	2076.3	2076.3	2077.8	2079.4	2082.6	2084.1	2077.8	2074.7	2071.5	2068.4	2066.8
7.5°	2079.4	2081.0	2082.6	2085.7	2096.8	2104.7	2099.9	2103.1	2106.2	2106.2	2109.4
10°	2084.1	2085.7	2090.5	2101.5	2117.3	2134.6	2139.4	2147.2	2153.6	2156.7	2166.2
12.5°	2087.3	2088.9	2098.3	2114.1	2134.6	2156.7	2169.3	2186.7	2204.0	2224.6	2243.5
15°	2087.3	2090.5	2103.1	2123.6	2152.0	2182.0	2205.6	2240.3	2271.9	2301.9	2331.8
17.5°	2087.3	2090.5	2104.7	2134.6	2172.5	2213.5	2253.0	2301.9	2344.5	2387.1	2440.7
20°	2084.1	2087.3	2107.8	2145.7	2191.4	2246.6	2301.9	2363.4	2426.5	2491.2	2560.6
22.5°	2077.8	2084.1	2109.4	2155.1	2211.9	2284.5	2353.9	2437.5	2522.7	2607.9	2704.2
25°	2069.9	2076.3	2109.4	2163.0	2235.6	2322.4	2412.3	2519.6	2626.9	2742.0	2869.8
27.5°	2057.3	2066.8	2106.2	2170.9	2259.3	2363.4	2477.0	2607.9	2748.4	2899.8	3046.5
30°	2043.1	2054.2	2099.9	2175.6	2281.4	2406.0	2544.8	2707.3	2888.8	3067.0	3262.7
32.5°	2022.6	2035.2	2088.9	2180.4	2300.3	2450.2	2615.8	2825.7	3040.2	3265.8	3496.2
35°	2000.5	2016.3	2079.4	2183.5	2320.8	2500.7	2701.0	2951.9	3209.0	3478.8	3740.7
37.5°	1976.9	1995.8	2066.8	2186.7	2344.5	2549.6	2795.7	3078.1	3381.0	3680.8	3996.3
40°	1951.6	1975.3	2052.6	2188.3	2368.1	2606.4	2890.3	3210.6	3545.1	3895.3	4250.3
42.5°	1927.9	1954.8	2038.4	2188.3	2391.8	2661.6	2977.1	3340.0	3713.9	4100.4	4493.3
45°	1909.0	1937.4	2025.8	2188.3	2415.5	2716.8	3062.3	3466.2	3878.0	4296.1	4729.9
47.5°	1890.1	1920.1	2013.1	2186.7	2437.5	2768.9	3142.8	3576.6	4021.6	4483.8	4971.3
50°	1869.6	1902.7	2002.1	2186.7	2458.1	2816.2	3215.4	3671.3	4147.8	4654.2	5182.7
52.5°	1849.1	1882.2	1989.5	2185.1	2478.6	2852.5	3269.0	3740.7	4253.5	4791.5	5354.7
55°	1817.5	1855.4	1969.0	2178.8	2486.5	2868.3	3291.1	3788.1	4321.3	4884.6	5482.5
57.5°	1784.4	1823.8	1942.1	2164.6	2480.1	2858.8	3287.9	3803.8	4349.7	4938.2	5551.9
60°	1746.5	1784.4	1902.7	2134.6	2448.6	2822.5	3267.4	3781.7	4343.4	4939.8	5564.5
62.5°	1703.9	1737.0	1853.8	2087.3	2390.2	2761.0	3205.9	3731.3	4291.3	4884.6	5482.5
65°	1639.2	1669.2	1789.1	2017.9	2301.9	2671.0	3112.8	3630.3	4169.9	4736.3	5291.6
67.5°	1546.1	1576.1	1700.8	1921.6	2193.0	2551.1	2985.0	3478.8	3969.5	4485.4	4952.4
70°	1424.7	1454.6	1587.2	1790.7	2052.6	2404.4	2811.5	3257.9	3698.1	4062.6	4270.8
72.5°	1276.4	1311.1	1445.2	1632.9	1891.7	2221.4	2596.9	2997.6	3242.2	3512.0	3878.0
75°	1107.5	1147.0	1277.9	1453.1	1703.9	1998.9	2347.6	2574.8	2854.1	3207.5	3523.0
77.5°	924.5	973.4	1091.8	1260.6	1487.8	1759.1	1972.1	2268.7	2554.3	2846.2	3134.9
80°	735.2	790.4	896.1	1052.3	1254.3	1434.1	1685.0	1954.8	2221.4	2508.5	2789.4
82.5°	545.9	601.1	698.9	834.6	978.2	1151.7	1385.2	1650.3	1943.7	2282.9	2622.1
85°	361.3	408.6	495.4	568.0	710.0	900.9	1178.5	1460.9	1710.2	1973.7	2227.7
87.5°	189.3	217.7	269.8	373.9	528.5	672.1	859.8	1053.9	1227.4	1457.8	1653.4
90°	26.8	28.4	37.9	50.5	97.8	140.4	228.8	332.9	377.1	501.7	560.1
92.5°	41.0	39.4	33.1	25.2	20.5	20.5	18.9	17.4	15.8	12.6	9.5
95°	183.0	198.8	181.4	156.2	123.1	108.9	80.5	56.8	47.3	36.3	33.1
97.5°	336.0	373.9	375.5	350.2	334.5	307.7	266.6	258.7	247.7	216.1	189.3
100°	506.4	560.1	577.4	556.9	550.6	586.9	577.4	536.4	484.4	443.3	462.3
102.5°	680.0	728.9	763.6	822.0	751.0	801.5	872.5	918.2	951.4	921.4	855.1
105°	793.6	834.6	897.7	981.3	1042.9	962.4	1030.2	1194.3	1345.8	1432.6	1487.8
107.5°	894.6	923.0	1001.8	1104.4	1219.6	1285.8	1181.7	1292.1	1546.1	1797.0	1980.0
110°	1012.9	1031.8	1074.4	1216.4	1342.6	1511.4	1549.3	1460.9	1585.6	1871.2	2241.9



TEST NUMBER: P236472

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1101.2	1106.0	1093.3	1265.3	1434.1	1599.8	1831.7	1875.9	1828.6	1915.3	2144.1
115°	1161.2	1153.3	1109.1	1249.5	1470.4	1667.6	1893.2	2177.2	2253.0	2259.3	2297.1
117.5°	1194.3	1180.1	1139.1	1224.3	1465.7	1705.5	1935.8	2223.0	2519.6	2642.6	2746.8
120°	1205.4	1189.6	1177.0	1173.8	1401.0	1699.2	1969.0	2232.4	2533.8	2846.2	3022.9
122.5°	1203.8	1191.2	1208.5	1124.9	1323.7	1650.3	1957.9	2238.8	2510.1	2817.8	3123.8
125°	1195.9	1186.4	1221.1	1115.4	1270.0	1539.8	1888.5	2207.2	2480.1	2761.0	3037.1
127.5°	1177.0	1172.2	1216.4	1121.7	1197.5	1424.7	1786.0	2123.6	2417.0	2691.6	2958.2
130°	1145.4	1145.4	1188.0	1145.4	1118.6	1328.4	1606.1	1981.6	2294.0	2582.7	2855.6
132.5°	1077.6	1085.5	1124.9	1145.4	1072.8	1236.9	1443.6	1781.2	2098.3	2420.2	2685.2
135°	995.5	1011.3	1052.3	1109.1	1027.1	1109.1	1317.4	1538.3	1885.4	2178.8	2481.7
137.5°	934.0	954.5	995.5	1069.7	1041.3	1044.4	1233.8	1391.5	1607.7	1943.7	2205.6
140°	881.9	904.0	945.0	1025.5	1046.0	994.0	1091.8	1289.0	1431.0	1637.7	1940.6
142.5°	845.6	864.6	902.4	976.6	1020.8	981.3	1023.9	1165.9	1301.6	1442.0	1607.7
145°	822.0	837.8	869.3	929.3	992.4	1005.0	967.1	1042.9	1197.5	1298.4	1419.9
147.5°	822.0	828.3	847.2	886.7	962.4	997.1	968.7	984.5	1047.6	1218.0	1284.2
150°	826.7	828.3	845.6	870.9	932.4	982.9	1005.0	937.2	982.9	1044.4	1158.0
152.5°	812.5	820.4	852.0	878.8	918.2	968.7	982.9	982.9	924.5	971.9	1012.9
155°	804.6	810.9	844.1	869.3	896.1	941.9	967.1	981.3	971.9	913.5	943.5
157.5°	803.0	806.2	831.4	856.7	881.9	910.3	948.2	962.4	968.7	975.0	937.2
160°	801.5	803.0	825.1	845.6	869.3	888.2	915.1	945.0	951.4	954.5	978.2
162.5°	799.9	801.5	818.8	840.9	856.7	874.0	888.2	910.3	929.3	940.3	945.0
165°	799.9	799.9	812.5	834.6	847.2	859.8	870.9	880.4	885.1	900.9	915.1
167.5°	799.9	799.9	806.2	822.0	839.3	844.1	850.4	858.3	856.7	856.7	856.7
170°	801.5	801.5	801.5	809.4	823.6	833.0	833.0	834.6	829.9	825.1	815.7
172.5°	799.9	798.3	798.3	798.3	803.0	807.8	812.5	814.1	806.2	798.3	785.7
175°	798.3	796.7	793.6	790.4	790.4	785.7	782.5	779.4	773.1	769.9	760.5
177.5°	796.7	795.2	792.0	787.3	784.1	776.2	768.3	758.9	744.7	735.2	721.0
180°	741.5	741.5	741.5	741.5	741.5	741.5	741.5	741.5	741.5	741.5	741.5



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CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3	2046.3
2.5°	2035.2	2028.9	2028.9	2032.1	2036.8	2036.8	2036.8	2043.1
5°	2063.6	2062.1	2065.2	2071.5	2076.3	2076.3	2074.7	2082.6
7.5°	2112.5	2114.1	2120.4	2131.5	2139.4	2140.9	2140.9	2150.4
10°	2177.2	2186.7	2204.0	2219.8	2232.4	2237.2	2240.3	2249.8
12.5°	2264.0	2279.8	2301.9	2325.5	2344.5	2353.9	2358.7	2365.0
15°	2365.0	2394.9	2428.1	2459.6	2486.5	2502.2	2510.1	2525.9
17.5°	2489.6	2530.6	2571.6	2619.0	2655.3	2677.4	2690.0	2699.4
20°	2628.4	2693.1	2754.7	2817.8	2865.1	2893.5	2907.7	2917.2
22.5°	2800.4	2885.6	2964.5	3043.4	3098.6	3144.4	3164.9	3171.2
25°	2988.2	3098.6	3207.5	3308.4	3384.2	3423.6	3445.7	3455.2
27.5°	3209.0	3352.6	3475.7	3589.3	3674.5	3739.1	3769.1	3781.7
30°	3456.7	3620.8	3775.4	3920.6	4018.4	4087.8	4125.7	4139.9
32.5°	3723.4	3933.2	4108.3	4261.4	4397.0	4471.2	4518.5	4532.7
35°	4020.0	4250.3	4468.0	4658.9	4802.5	4883.0	4909.8	4924.0
37.5°	4304.0	4589.5	4832.5	5039.2	5220.6	5351.6	5428.9	5460.4
40°	4602.1	4914.5	5192.2	5463.6	5719.2	5892.7	5982.6	6012.6
42.5°	4884.6	5244.3	5588.2	5906.9	6159.3	6285.6	6358.1	6386.5
45°	5176.4	5589.8	5976.3	6306.1	6534.8	6648.4	6722.6	6747.8
47.5°	5460.4	5914.8	6336.0	6668.9	6934.0	7109.1	7211.7	7247.9
50°	5711.3	6208.2	6650.0	7019.2	7277.9	7413.6	7495.6	7535.1
52.5°	5924.3	6443.3	6905.6	7251.1	7513.0	7678.7	7782.8	7823.8
55°	6061.5	6605.8	7069.7	7437.3	7716.5	7896.4	8011.6	8065.2
57.5°	6145.1	6692.6	7159.6	7535.1	7828.5	8017.9	8137.8	8204.0
60°	6138.8	6668.9	7132.8	7502.0	7781.2	7978.4	8106.2	8183.5
62.5°	6033.1	6522.2	6941.9	7249.5	7478.3	7560.3	7573.0	7631.3
65°	5782.3	6157.8	6356.5	6467.0	6615.3	6702.1	6736.8	6793.6
67.5°	5176.4	5375.2	5643.4	5886.4	6101.0	6217.7	6287.1	6332.9
70°	4573.7	4911.4	5206.4	5444.6	5618.2	5739.7	5774.4	5831.2
72.5°	4201.4	4491.7	4741.0	4935.0	5084.9	5176.4	5189.1	5209.6
75°	3783.3	4012.1	4253.5	4469.6	4643.2	4744.1	4812.0	4842.0
77.5°	3409.4	3661.8	3901.6	4119.4	4305.5	4416.0	4485.4	4510.6
80°	3071.8	3385.7	3682.3	3925.3	4128.8	4277.1	4329.2	4349.7
82.5°	2917.2	3180.6	3409.4	3575.1	3715.5	3789.6	3807.0	3810.1
85°	2461.2	2652.1	2825.7	2969.2	3100.2	3183.8	3215.4	3210.6
87.5°	1845.9	2002.1	2161.4	2297.1	2431.2	2525.9	2560.6	2557.5
90°	661.1	661.1	749.4	798.3	935.6	1022.3	992.4	904.0
92.5°	6.3	6.3	4.7	3.2	3.2	1.6	1.6	1.6
95°	30.0	30.0	28.4	28.4	28.4	26.8	26.8	26.8
97.5°	153.0	137.3	115.2	101.0	82.0	71.0	69.4	66.3
100°	463.8	456.0	432.3	418.1	397.6	381.8	377.1	377.1
102.5°	769.9	697.3	678.4	694.2	711.5	717.9	717.9	722.6
105°	1517.7	1509.9	1470.4	1394.7	1304.8	1222.7	1192.7	1191.2
107.5°	2112.5	2230.9	2314.5	2353.9	2374.4	2358.7	2353.9	2372.9
110°	2521.2	2745.2	2932.9	3063.9	3150.7	3175.9	3194.8	3218.5



TEST NUMBER: P236472

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	2522.7	2936.1	3292.7	3510.4	3658.7	3723.4	3761.2	3788.1
115°	2465.9	2708.9	3089.1	3428.3	3736.0	3939.5	4048.4	4097.3
117.5°	2737.3	2811.5	2988.2	3155.4	3324.2	3464.6	3554.6	3592.4
120°	3117.5	3212.2	3229.6	3283.2	3374.7	3407.8	3428.3	3448.9
122.5°	3322.6	3406.3	3521.4	3636.6	3702.9	3756.5	3795.9	3824.3
125°	3352.6	3532.5	3680.8	3747.0	3784.9	3851.2	3963.2	4020.0
127.5°	3212.2	3469.4	3707.6	3789.6	3876.4	3895.3	3912.7	3920.6
130°	3098.6	3325.8	3500.9	3677.6	3824.3	3889.0	3900.1	3900.1
132.5°	2950.3	3141.2	3340.0	3485.1	3567.2	3627.1	3665.0	3680.8
135°	2715.2	2936.1	3117.5	3248.5	3365.2	3423.6	3448.9	3461.5
137.5°	2464.4	2667.9	2844.6	3018.1	3139.6	3202.7	3226.4	3232.7
140°	2164.6	2358.7	2557.5	2716.8	2825.7	2906.1	2945.6	2951.9
142.5°	1864.8	2065.2	2218.2	2358.7	2488.0	2589.0	2642.6	2656.8
145°	1539.8	1707.1	1896.4	2038.4	2152.0	2223.0	2268.7	2286.1
147.5°	1372.6	1465.7	1547.7	1653.4	1765.4	1869.6	1932.7	1946.9
150°	1255.8	1309.5	1372.6	1432.6	1479.9	1508.3	1530.4	1517.7
152.5°	1083.9	1233.8	1263.7	1287.4	1306.3	1328.4	1315.8	1315.8
155°	975.0	1011.3	1072.8	1128.1	1230.6	1202.2	1195.9	1192.7
157.5°	907.2	923.0	949.8	957.7	952.9	945.0	949.8	938.7
160°	957.7	921.4	872.5	870.9	847.2	834.6	828.3	822.0
162.5°	946.6	956.1	956.1	932.4	896.1	856.7	833.0	825.1
165°	924.5	927.7	930.8	921.4	911.9	891.4	880.4	878.8
167.5°	863.0	878.8	891.4	902.4	910.3	897.7	875.6	869.3
170°	810.9	812.5	815.7	828.3	847.2	852.0	839.3	803.0
172.5°	773.1	768.3	766.8	777.8	803.0	823.6	831.4	852.0
175°	744.7	730.5	725.7	736.8	763.6	793.6	826.7	834.6
177.5°	702.1	684.7	675.3	686.3	711.5	751.0	790.4	795.2
180°	741.5	741.5	741.5	741.5	741.5	741.5	741.5	741.5

(END OF REPORT)