

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: P236507

Luminaire Tested: **SKB4-LD5-30-N-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236507  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24058)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SKB4-LD5-30-N-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH NARROW DISTRIBUTION LENS, OUTER 2 BLADES TILTED OUT 20  
DEGREES  
Light Source: (952) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

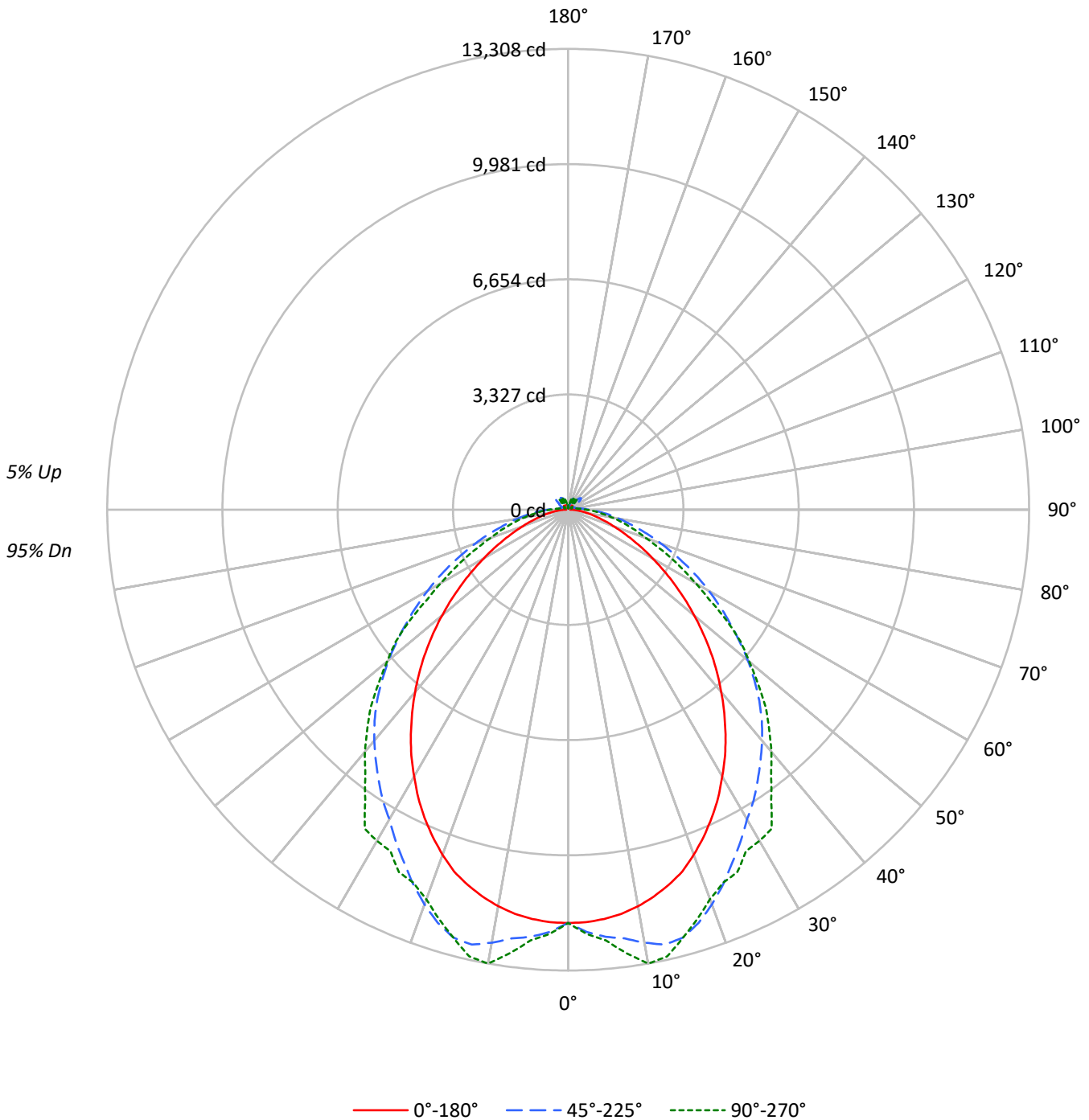
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 33977.0 lumens  
Efficiency: N/A  
Efficacy: 130.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.35 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')  
CIE Type: Direct  
  
Input Watts (W): 260.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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-LD5-30-N-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees

### 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	50	30	10	50	30	10	0		
RCR																										
0	118	118	118	118	115	115	115	115	108	108	108	103	103	103	97	97	97	95	95	95	95	95	95	95		
1	108	103	99	95	104	100	96	93	95	92	89	90	88	85	86	84	82	79	79	79	79	79	79	79		
2	98	90	83	78	95	88	82	77	84	78	74	80	75	72	76	72	69	67	67	67	67	67	67	67		
3	90	80	72	65	87	78	70	64	74	68	63	71	65	61	67	63	59	57	57	57	57	57	57	57		
4	83	71	62	56	80	69	61	55	66	59	54	63	57	53	61	56	51	49	49	49	49	49	49	49		
5	76	64	55	48	74	62	54	48	60	52	47	57	51	46	55	49	45	43	43	43	43	43	43	43		
6	70	57	49	43	68	56	48	42	54	47	41	52	45	41	50	44	40	38	38	38	38	38	38	38		
7	65	52	44	38	63	51	43	37	49	42	37	47	41	36	46	40	36	34	34	34	34	34	34	34		
8	61	48	39	34	59	47	39	34	45	38	33	44	37	33	42	36	32	30	30	30	30	30	30	30		
9	57	44	36	30	55	43	36	30	42	35	30	40	34	29	39	33	29	27	27	27	27	27	27	27		
10	54	41	33	28	52	40	33	28	39	32	27	37	31	27	36	31	27	25	25	25	25	25	25	25		

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

	0°	45°	90°
0°	17128	17128	17128
5°	17017	17656	17818
10°	16791	18132	19022
15°	16433	18438	18468
20°	15890	17776	17571
25°	15168	16868	17390
30°	14308	16040	17198
35°	13384	15461	16610
40°	12345	14869	15648
45°	11229	14192	14734
50°	9986	13278	13449
55°	8711	12235	12077
60°	7424	11226	10234
65°	6200	10137	8909
70°	5105	9067	7655
75°	4191	8032	7045
80°	3524	7441	6458
85°	2979	7142	6250



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CATALOG NUMBER: SKB4-LD5-30-N-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1183.6	3.5
10°-20°	3485.5	10.3
20°-30°	5097.4	15.0
30°-40°	5899.8	17.4
40°-50°	5710.1	16.8
50°-60°	4676.9	13.8
60°-70°	3242.9	9.5
70°-80°	1970.0	5.8
80°-90°	1013.2	3.0
90°-100°	397.5	1.2
100°-110°	230.9	0.7
110°-120°	224.6	0.7
120°-130°	240.9	0.7
130°-140°	244.4	0.7
140°-150°	184.7	0.5
150°-160°	118.4	0.3
160°-170°	46.5	0.1
170°-180°	9.5	0.0
0°-30°	9766.6	28.7
0°-40°	15666.4	46.1
0°-60°	26053.4	76.7
0°-90°	32279.5	95.0
90°-120°	853.0	2.5
90°-150°	1523.0	4.5
90°-180°	1697.0	5.0
0°-180°	33977.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11934	11934	11934	11934	11934	
5°	11865	12186	12379	12432	12488	###
15°	11214	11987	12793	12820	12800	3155
25°	9811	10977	11225	11399	11551	4508
35°	7918	8945	9538	10178	10218	4942
45°	5821	6691	7799	8170	8066	4483
55°	3740	4700	5696	5782	5593	3354
65°	2030	3082	3724	3555	3248	2034
75°	903	1956	2072	1942	1797	984
85°	289	1078	1006	943	862	291
90°	82	639	594	576	524	56
95°	63	410	382	363	326	53
105°	85	355	188	159	135	92
115°	122	482	217	135	103	122
125°	154	368	334	183	132	137
135°	159	389	467	336	213	124
145°	143	279	326	372	394	91
155°	133	71	350	392	372	62
165°	126	96	70	252	254	36
175°	121	119	124	124	118	12
180°	117	117	117	117	117	



TEST NUMBER: P236507

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1
2.5°	11923.2	11914.9	11960.3	12015.2	12071.6	12061.9	12107.3	12165.0	12167.7	12204.8	12218.6
5°	11865.4	11876.4	11974.0	12081.2	12177.4	12195.2	12261.2	12335.4	12343.6	12379.4	12391.7
7.5°	11770.6	11807.7	11958.9	12099.0	12210.3	12225.5	12279.0	12369.7	12412.3	12489.3	12556.6
10°	11627.7	11704.7	11891.5	12029.0	12133.4	12181.5	12291.4	12445.3	12545.6	12695.4	12821.8
12.5°	11439.5	11543.9	11741.8	11881.9	12031.7	12138.9	12309.3	12536.0	12688.5	12863.0	12993.6
15°	11214.1	11346.0	11534.3	11707.4	11906.7	12067.4	12287.3	12551.1	12692.7	12793.0	12846.6
17.5°	10955.8	11090.4	11282.8	11494.4	11728.0	11930.0	12171.9	12404.1	12478.3	12509.9	12518.1
20°	10601.3	10779.9	10987.4	11229.2	11493.1	11726.7	11936.9	12121.0	12127.9	12127.9	12126.5
22.5°	10219.3	10422.6	10646.6	10913.2	11211.4	11446.3	11612.6	11745.9	11710.2	11699.2	11670.3
25°	9811.1	10017.3	10257.7	10553.2	10876.1	11078.1	11189.4	11282.8	11247.1	11225.1	11230.6
27.5°	9375.6	9578.9	9837.3	10154.7	10463.8	10626.0	10718.1	10800.5	10760.7	10785.4	10804.6
30°	8893.2	9113.1	9364.6	9708.1	9993.9	10105.2	10197.3	10282.5	10260.5	10323.7	10494.1
32.5°	8424.7	8619.8	8885.0	9218.9	9467.6	9554.2	9671.0	9742.4	9757.6	9959.5	10108.0
35°	7917.6	8110.0	8376.6	8694.0	8898.7	8990.8	9131.0	9183.2	9364.6	9537.7	9719.1
37.5°	7399.6	7583.7	7846.2	8144.3	8323.0	8424.7	8560.7	8740.7	8916.6	9122.7	9330.2
40°	6877.4	7045.1	7297.9	7567.2	7740.4	7870.9	8038.5	8284.5	8470.0	8705.0	8907.0
42.5°	6353.9	6511.9	6734.5	6973.6	7164.6	7289.7	7574.1	7807.7	8031.7	8274.9	8463.1
45°	5820.7	5945.8	6172.5	6395.1	6610.8	6771.6	7089.0	7335.0	7586.5	7799.4	7968.5
47.5°	5280.7	5397.5	5614.6	5834.5	6063.9	6290.7	6593.0	6869.2	7102.8	7293.8	7453.2
50°	4750.3	4858.9	5065.0	5304.1	5525.3	5798.7	6110.7	6388.2	6595.7	6764.7	6900.8
52.5°	4236.4	4333.9	4534.6	4784.7	5029.2	5308.2	5624.2	5893.6	6084.6	6227.5	6358.0
55°	3740.3	3843.4	4034.4	4280.4	4560.7	4839.6	5154.3	5398.9	5555.5	5695.7	5818.0
57.5°	3266.3	3366.6	3564.4	3811.8	4110.0	4393.0	4695.3	4916.6	5054.0	5188.6	5290.3
60°	2819.7	2922.7	3128.8	3387.2	3690.9	3972.6	4255.6	4448.0	4573.0	4692.6	4764.0
62.5°	2406.1	2509.1	2730.4	3005.2	3303.4	3579.6	3831.0	3993.2	4110.0	4207.5	4244.6
65°	2029.6	2136.7	2364.8	2653.4	2950.2	3214.0	3438.0	3568.6	3659.3	3723.8	3734.8
67.5°	1690.2	1813.8	2039.2	2349.7	2635.5	2878.8	3071.1	3168.7	3236.0	3263.5	3270.4
70°	1390.6	1521.1	1761.6	2074.9	2358.0	2577.8	2719.4	2786.7	2830.7	2845.8	2858.1
72.5°	1139.1	1268.3	1532.1	1835.8	2113.4	2290.6	2397.8	2440.4	2465.2	2452.8	2433.5
75°	902.8	1052.6	1332.9	1633.8	1888.0	2024.1	2095.5	2125.7	2106.5	2072.2	2068.0
77.5°	718.7	865.7	1161.1	1457.9	1673.7	1775.4	1822.1	1812.5	1786.3	1760.2	1763.0
80°	552.4	704.9	1012.7	1288.9	1463.4	1547.2	1552.7	1539.0	1514.3	1489.5	1489.5
82.5°	410.9	574.4	884.9	1115.8	1265.6	1313.6	1312.3	1294.4	1262.8	1234.0	1227.1
85°	288.6	460.3	740.6	942.6	1062.2	1093.8	1084.2	1062.2	1037.5	1005.8	999.0
87.5°	186.9	360.0	603.2	759.9	850.6	871.2	858.8	835.5	817.6	791.5	787.4
90°	82.4	251.5	448.0	562.0	632.1	645.8	636.2	621.1	612.9	593.6	593.6
92.5°	53.6	174.5	329.8	434.2	501.6	522.2	512.5	498.8	489.2	474.1	469.9
95°	63.2	138.8	246.0	332.5	399.9	420.5	416.4	406.7	397.1	382.0	375.1
97.5°	68.7	133.3	236.3	295.4	333.9	354.5	347.6	336.7	324.3	307.8	299.6
100°	75.6	137.4	261.1	306.4	325.7	317.4	298.2	285.8	270.7	251.5	243.2
102.5°	83.8	136.0	278.9	338.0	342.2	320.2	284.4	251.5	233.6	214.4	203.4
105°	85.2	130.5	269.3	388.9	373.8	335.3	292.7	254.2	219.9	188.3	177.3
107.5°	87.9	125.0	254.2	409.5	424.6	366.9	302.3	261.1	224.0	186.9	166.3
110°	108.6	125.0	248.7	387.5	463.1	406.7	338.0	268.0	222.6	196.5	170.4



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CATALOG NUMBER: SKB4-LD5-30-N-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	115.4	107.2	243.2	344.9	491.9	460.3	377.9	307.8	236.3	186.9	173.1
115°	122.3	96.2	237.7	306.4	465.8	497.4	420.5	346.3	274.8	217.1	166.3
117.5°	130.5	93.4	239.1	322.9	419.1	537.3	457.6	383.4	313.3	251.5	202.0
120°	137.4	90.7	240.5	338.0	347.6	505.7	519.4	415.0	342.2	285.8	235.0
122.5°	147.0	93.4	225.4	332.5	328.4	453.5	538.7	479.6	368.3	310.5	262.5
125°	153.9	98.9	188.3	328.4	376.5	360.0	505.7	542.8	442.5	333.9	281.7
127.5°	160.8	104.4	148.4	324.3	398.5	309.2	443.8	519.4	504.3	416.4	307.8
130°	164.9	109.9	116.8	325.7	388.9	369.6	332.5	474.1	513.9	479.6	399.9
132.5°	163.5	116.8	83.8	307.8	376.5	421.9	288.6	395.7	480.9	497.4	472.7
135°	159.4	123.7	59.1	254.2	365.5	412.2	357.3	257.0	419.1	467.2	479.6
137.5°	156.6	137.4	56.3	192.4	365.5	394.4	424.6	291.3	288.6	408.1	446.6
140°	152.5	147.0	55.0	137.4	342.2	377.9	415.0	401.2	254.2	277.6	390.2
142.5°	148.4	151.2	57.7	92.1	278.9	368.3	391.6	415.0	343.5	237.7	254.2
145°	142.9	149.8	63.2	45.3	199.2	358.6	369.6	395.7	409.5	325.7	233.6
147.5°	141.5	147.0	72.8	41.2	137.4	295.4	365.5	373.8	395.7	404.0	340.8
150°	138.8	142.9	94.8	44.0	87.9	221.2	342.2	358.6	373.8	391.6	398.5
152.5°	136.0	138.8	119.5	50.8	46.7	148.4	276.2	360.0	355.9	368.3	384.8
155°	133.3	134.7	134.7	60.5	46.7	96.2	188.3	295.4	358.6	350.4	361.4
157.5°	131.9	131.9	144.3	83.8	48.1	44.0	131.9	210.2	291.3	343.5	355.9
160°	130.5	130.5	141.5	115.4	56.3	46.7	52.2	140.2	197.9	270.7	318.8
162.5°	127.8	127.8	131.9	133.3	85.2	49.5	45.3	50.8	126.4	163.5	229.5
165°	126.4	126.4	127.8	141.5	120.9	71.5	48.1	45.3	42.6	70.1	136.0
167.5°	125.0	123.7	125.0	130.5	138.8	115.4	75.6	50.8	44.0	42.6	39.8
170°	123.7	122.3	122.3	123.7	129.2	137.4	120.9	98.9	66.0	49.5	42.6
172.5°	122.3	120.9	120.9	120.9	120.9	123.7	131.9	134.7	122.3	111.3	93.4
175°	120.9	120.9	120.9	120.9	119.5	118.2	118.2	119.5	122.3	123.7	129.2
177.5°	119.5	119.5	119.5	119.5	119.5	118.2	116.8	116.8	115.4	114.1	112.7
180°	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8



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CATALOG NUMBER: SKB4-LD5-30-N-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1	11934.1
2.5°	12214.5	12225.5	12228.2	12239.2	12232.3	12266.7	12269.4	12262.6
5°	12389.0	12417.8	12420.6	12443.9	12448.1	12478.3	12493.4	12487.9
7.5°	12619.8	12699.5	12753.1	12814.9	12839.7	12900.1	12922.1	12920.8
10°	12935.9	13045.8	13125.5	13190.1	13223.1	13271.2	13300.0	13308.3
12.5°	13074.7	13140.6	13162.6	13170.8	13179.1	13190.1	13205.2	13212.1
15°	12858.9	12868.5	12841.1	12799.8	12791.6	12784.7	12795.7	12799.8
17.5°	12496.2	12483.8	12450.8	12424.7	12405.5	12394.5	12387.6	12395.8
20°	12096.3	12055.1	12004.2	11989.1	11976.7	11964.4	11960.3	11969.9
22.5°	11640.1	11618.1	11585.1	11594.7	11609.9	11634.6	11651.1	11663.4
25°	11212.7	11247.1	11341.9	11456.0	11509.5	11532.9	11537.0	11550.8
27.5°	10943.4	11021.7	11086.3	11137.2	11130.3	11122.0	11119.3	11116.5
30°	10616.4	10681.0	10759.3	10855.5	10925.5	10986.0	11024.5	11043.7
32.5°	10249.5	10364.9	10506.4	10674.1	10781.3	10870.6	10922.8	10926.9
35°	9874.4	9989.8	10127.2	10228.9	10235.7	10249.5	10230.2	10217.9
37.5°	9467.6	9577.5	9675.1	9742.4	9708.1	9677.9	9629.8	9618.8
40°	9043.0	9136.5	9206.5	9249.1	9202.4	9165.3	9140.6	9131.0
42.5°	8573.1	8647.3	8694.0	8699.5	8634.9	8604.7	8593.7	8579.9
45°	8063.3	8123.7	8170.5	8169.1	8121.0	8099.0	8086.6	8066.0
47.5°	7523.3	7596.1	7648.3	7626.3	7554.9	7510.9	7469.7	7421.6
50°	6979.1	7034.1	7047.8	7029.9	6932.4	6876.0	6847.2	6821.1
52.5°	6425.3	6461.1	6421.2	6407.5	6329.2	6314.0	6307.2	6285.2
55°	5863.3	5868.8	5801.5	5761.6	5662.7	5636.6	5625.6	5592.6
57.5°	5299.9	5276.6	5194.1	5137.8	5027.9	4944.0	4880.8	4827.2
60°	4746.2	4694.0	4622.5	4556.5	4443.9	4357.3	4296.8	4251.5
62.5°	4200.7	4145.7	4074.2	4009.7	3895.6	3807.7	3760.9	3728.0
65°	3710.1	3660.6	3585.1	3524.6	3417.4	3333.6	3282.7	3248.4
67.5°	3236.0	3204.4	3135.7	3047.8	2932.4	2859.5	2812.8	2778.5
70°	2797.7	2751.0	2678.1	2595.7	2502.3	2444.5	2411.6	2381.3
72.5°	2389.6	2333.2	2282.4	2224.7	2157.4	2110.6	2084.5	2076.3
75°	2039.2	2003.5	1962.2	1921.0	1868.8	1828.9	1802.8	1797.3
77.5°	1743.7	1716.3	1683.3	1650.3	1600.8	1565.1	1541.8	1530.8
80°	1468.9	1442.8	1411.2	1379.6	1335.6	1304.0	1283.4	1273.8
82.5°	1214.7	1188.6	1163.9	1140.5	1111.7	1078.7	1060.8	1055.3
85°	986.6	967.4	950.9	934.4	909.7	883.6	867.1	861.6
87.5°	783.2	776.4	764.0	753.0	733.8	711.8	698.0	692.6
90°	590.9	585.4	579.9	571.6	556.5	538.7	527.7	523.5
92.5°	467.2	463.1	459.0	452.1	441.1	426.0	415.0	410.9
95°	373.8	371.0	365.5	360.0	350.4	340.8	331.2	325.7
97.5°	295.4	294.1	289.9	287.2	281.7	270.7	262.5	257.0
100°	236.3	233.6	230.9	226.7	221.2	211.6	206.1	200.6
102.5°	196.5	193.7	189.6	185.5	180.0	173.1	166.3	162.1
105°	167.6	163.5	160.8	156.6	151.2	144.3	137.4	134.7
107.5°	148.4	147.0	140.2	136.0	129.2	125.0	119.5	114.1
110°	152.5	145.7	127.8	118.2	114.1	115.4	109.9	104.4





TEST NUMBER: P236507

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	159.4	144.3	131.9	127.8	125.0	120.9	108.6	103.1
115°	145.7	142.9	138.8	130.5	125.0	116.8	108.6	103.1
117.5°	159.4	133.3	120.9	116.8	116.8	116.8	111.3	105.8
120°	192.4	163.5	137.4	119.5	109.9	103.1	94.8	89.3
122.5°	222.6	189.6	164.9	148.4	137.4	125.0	115.4	108.6
125°	244.6	215.7	191.0	174.5	162.1	148.4	138.8	131.9
127.5°	261.1	233.6	211.6	197.9	185.5	173.1	163.5	156.6
130°	298.2	250.1	229.5	215.7	203.4	193.7	184.1	178.6
132.5°	386.1	328.4	258.3	232.2	217.1	208.9	200.6	191.0
135°	476.8	387.5	355.9	316.0	263.8	236.3	221.2	213.0
137.5°	457.6	465.8	453.5	371.0	344.9	331.2	320.2	314.7
140°	424.6	442.5	449.3	452.1	449.3	439.7	417.7	394.4
142.5°	362.8	398.5	419.1	426.0	427.3	426.0	421.9	416.4
145°	202.0	317.4	361.4	383.4	395.7	398.5	398.5	394.4
147.5°	244.6	204.7	199.2	292.7	331.2	347.6	349.0	350.4
150°	387.5	283.1	233.6	204.7	188.3	174.5	171.8	171.8
152.5°	393.0	394.4	386.1	311.9	257.0	228.1	213.0	204.7
155°	372.4	383.4	391.6	393.0	391.6	387.5	380.6	372.4
157.5°	353.1	358.6	369.6	373.8	375.1	375.1	371.0	368.3
160°	357.3	360.0	350.4	353.1	353.1	354.5	350.4	349.0
162.5°	277.6	310.5	335.3	351.8	360.0	354.5	347.6	340.8
165°	162.1	197.9	240.5	262.5	277.6	287.2	276.2	254.2
167.5°	49.5	86.6	126.4	142.9	151.2	151.2	138.8	133.3
170°	41.2	39.8	38.5	38.5	37.1	35.7	31.6	35.7
172.5°	75.6	63.2	50.8	48.1	46.7	41.2	38.5	34.4
175°	129.2	125.0	123.7	123.7	125.0	125.0	125.0	118.2
177.5°	111.3	111.3	115.4	118.2	122.3	126.4	119.5	115.4
180°	116.8	116.8	116.8	116.8	116.8	116.8	116.8	116.8

(END OF REPORT)