

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: P236505

Luminaire Tested: **SKB4-LD5-30-N-UNV-L835-CD4-U outer 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236505  
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-L835-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) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

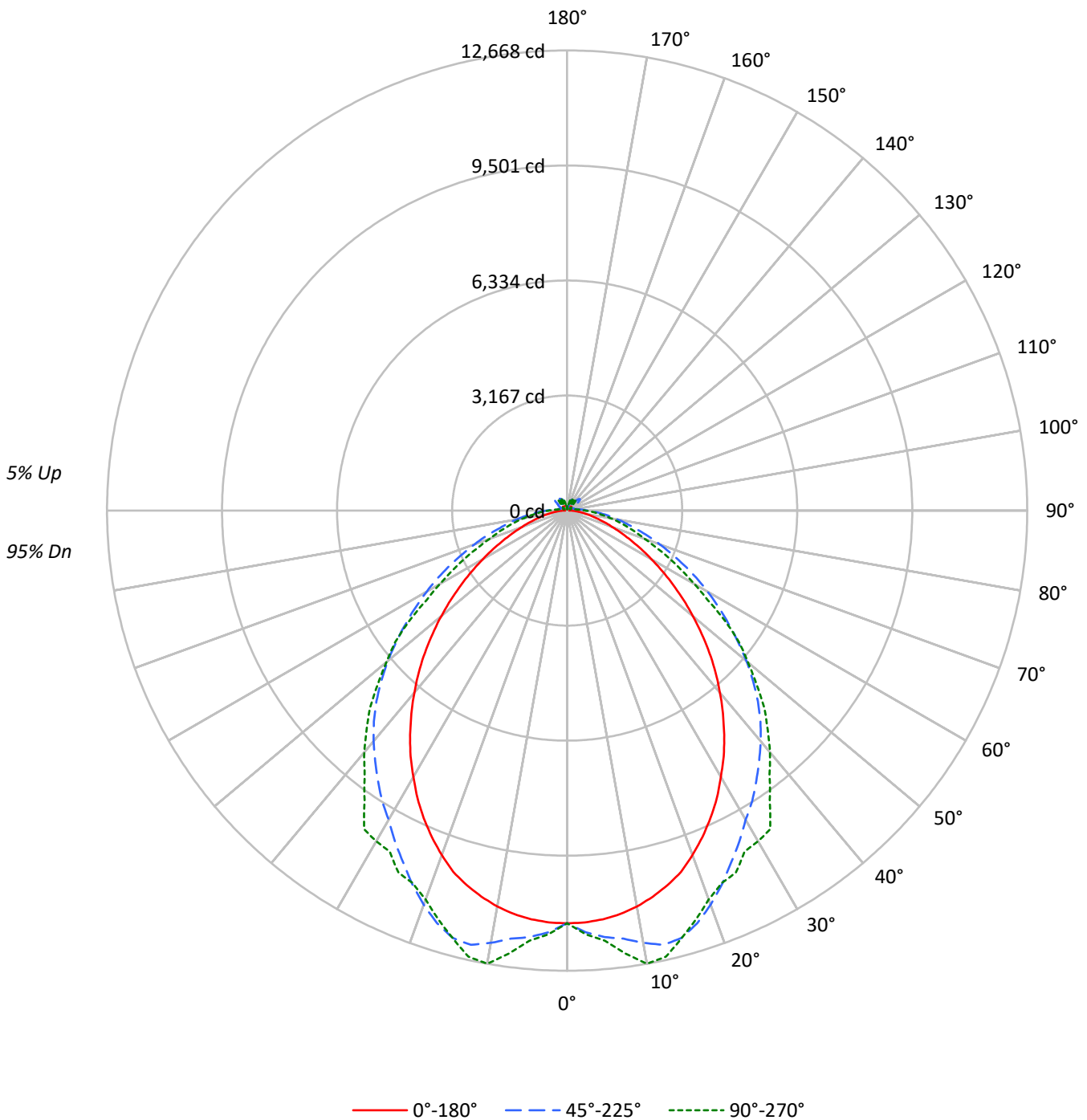
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32341.0 lumens  
Efficiency: N/A  
Efficacy: 124.1 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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### 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	0
RCR																		
0	118	118	118	118	115	115	115	115	108	108	108	103	103	103	97	97	97	95
1	108	103	99	95	104	100	96	93	95	92	89	90	88	85	86	84	82	79
2	98	90	83	78	95	88	82	77	84	78	74	80	75	72	76	72	69	67
3	90	80	72	65	87	78	70	64	74	68	63	71	65	61	67	63	59	57
4	83	71	62	56	80	69	61	55	66	59	54	63	57	53	61	56	51	49
5	76	64	55	48	74	62	54	48	60	52	47	57	51	46	55	49	45	43
6	70	57	49	43	68	56	48	42	54	47	41	52	45	41	50	44	40	38
7	65	52	44	38	63	51	43	37	49	42	37	47	41	36	46	40	36	34
8	61	48	39	34	59	47	39	34	45	38	33	44	37	33	42	36	32	30
9	57	44	36	30	55	43	36	30	42	35	30	40	34	29	39	33	29	27
10	54	41	33	28	52	40	33	28	39	32	27	37	31	27	36	31	27	25

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

	0°	45°	90°
0°	16303	16303	16303
5°	16197	16806	16960
10°	15983	17259	18106
15°	15641	17550	17579
20°	15125	16920	16725
25°	14438	16056	16553
30°	13619	15268	16370
35°	12739	14717	15810
40°	11751	14153	14895
45°	10689	13509	14025
50°	9506	12639	12801
55°	8292	11646	11496
60°	7066	10685	9741
65°	5901	9649	8480
70°	4859	8630	7287
75°	3989	7645	6706
80°	3355	7083	6147
85°	2835	6798	5949



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1126.6	3.5
10°-20°	3317.7	10.3
20°-30°	4852.0	15.0
30°-40°	5615.7	17.4
40°-50°	5435.1	16.8
50°-60°	4451.7	13.8
60°-70°	3086.8	9.5
70°-80°	1875.2	5.8
80°-90°	964.4	3.0
90°-100°	378.3	1.2
100°-110°	219.8	0.7
110°-120°	213.8	0.7
120°-130°	229.3	0.7
130°-140°	232.7	0.7
140°-150°	175.8	0.5
150°-160°	112.7	0.3
160°-170°	44.3	0.1
170°-180°	9.1	0.0
0°-30°	9296.3	28.7
0°-40°	14912.0	46.1
0°-60°	24798.9	76.7
0°-90°	30725.2	95.0
90°-120°	811.9	2.5
90°-150°	1449.7	4.5
90°-180°	1616.0	5.0
0°-180°	32341.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11360	11360	11360	11360	11360	
5°	11294	11600	11783	11834	11887	###
15°	10674	11410	12177	12203	12184	3003
25°	9339	10449	10685	10850	10995	4291
35°	7536	8514	9078	9688	9726	4704
45°	5540	6369	7424	7776	7678	4267
55°	3560	4474	5421	5503	5323	3193
65°	1932	2934	3544	3384	3092	1936
75°	859	1862	1972	1848	1711	936
85°	275	1026	957	897	820	277
90°	78	608	565	548	498	53
95°	60	390	364	345	310	51
105°	81	337	179	151	128	88
115°	116	458	207	128	98	116
125°	146	351	318	174	126	131
135°	152	370	445	320	203	118
145°	136	266	310	354	375	87
155°	127	68	334	373	354	59
165°	120	92	67	239	242	34
175°	115	113	118	118	112	11
180°	111	111	111	111	111	



TEST NUMBER: P236505

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L835-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5
2.5°	11349.0	11341.2	11384.4	11436.7	11490.3	11481.2	11524.3	11579.2	11581.9	11617.2	11630.3
5°	11294.1	11304.6	11397.4	11499.5	11591.0	11608.0	11670.8	11741.4	11749.3	11783.3	11795.1
7.5°	11203.9	11239.2	11383.1	11516.5	11622.4	11636.8	11687.8	11774.1	11814.7	11887.9	11952.0
10°	11067.8	11141.1	11319.0	11449.8	11549.2	11594.9	11699.6	11846.1	11941.5	12084.1	12204.4
12.5°	10888.7	10988.1	11176.4	11309.8	11452.4	11554.4	11716.6	11932.4	12077.6	12243.7	12367.9
15°	10674.1	10799.7	10978.9	11143.7	11333.4	11486.4	11695.7	11946.8	12081.5	12177.0	12228.0
17.5°	10428.3	10556.4	10739.5	10941.0	11163.3	11355.6	11585.8	11806.8	11877.5	11907.5	11915.4
20°	10090.8	10260.8	10458.3	10688.5	10939.7	11162.0	11362.1	11537.4	11543.9	11543.9	11542.6
22.5°	9727.2	9920.8	10134.0	10387.7	10671.5	10895.2	11053.5	11180.3	11146.3	11135.9	11108.4
25°	9338.7	9534.9	9763.8	10045.0	10352.4	10544.7	10650.6	10739.5	10705.5	10684.6	10689.8
27.5°	8924.1	9117.7	9363.6	9665.7	9960.0	10114.3	10202.0	10280.5	10242.5	10266.1	10284.4
30°	8465.0	8674.3	8913.7	9240.6	9512.7	9618.6	9706.3	9787.4	9766.4	9826.6	9988.8
32.5°	8019.0	8204.7	8457.2	8775.0	9011.7	9094.2	9205.3	9273.3	9287.7	9480.0	9621.3
35°	7536.4	7719.5	7973.2	8275.4	8470.3	8557.9	8691.3	8741.0	8913.7	9078.5	9251.1
37.5°	7043.3	7218.6	7468.4	7752.2	7922.2	8019.0	8148.5	8319.8	8487.3	8683.5	8881.0
40°	6546.3	6705.8	6946.5	7202.9	7367.7	7491.9	7651.5	7885.6	8062.2	8285.8	8478.1
42.5°	6047.9	6198.4	6410.2	6637.8	6819.6	6938.7	7209.4	7431.8	7644.9	7876.5	8055.6
45°	5540.5	5659.5	5875.3	6087.2	6292.5	6445.6	6747.7	6981.8	7221.2	7423.9	7584.8
47.5°	5026.4	5137.6	5344.3	5553.5	5772.0	5987.8	6275.5	6538.4	6760.8	6942.6	7094.3
50°	4521.6	4624.9	4821.1	5048.7	5259.3	5519.5	5816.4	6080.6	6278.1	6439.0	6568.5
52.5°	4032.4	4125.3	4316.2	4554.3	4787.1	5052.6	5353.4	5609.8	5791.6	5927.6	6051.9
55°	3560.2	3658.3	3840.1	4074.3	4341.1	4606.6	4906.1	5138.9	5288.0	5421.4	5537.8
57.5°	3109.0	3204.5	3392.8	3628.2	3912.1	4181.5	4469.3	4679.8	4810.6	4938.8	5035.6
60°	2683.9	2782.0	2978.2	3224.1	3513.1	3781.3	4050.7	4233.8	4352.8	4466.6	4534.6
62.5°	2290.2	2388.3	2598.9	2860.5	3144.3	3407.2	3646.6	3800.9	3912.1	4004.9	4040.2
65°	1931.8	2033.9	2251.0	2525.6	2808.2	3059.3	3272.5	3396.7	3483.1	3544.5	3555.0
67.5°	1608.8	1726.5	1941.0	2236.6	2508.6	2740.1	2923.3	3016.1	3080.2	3106.4	3112.9
70°	1323.6	1447.9	1676.8	1975.0	2244.4	2453.7	2588.4	2652.5	2694.4	2708.8	2720.5
72.5°	1084.3	1207.2	1458.4	1747.4	2011.6	2180.3	2282.4	2322.9	2346.5	2334.7	2316.4
75°	859.3	1001.9	1268.7	1555.1	1797.1	1926.6	1994.6	2023.4	2005.1	1972.4	1968.5
77.5°	684.1	824.0	1105.2	1387.7	1593.1	1689.9	1734.3	1725.2	1700.3	1675.5	1678.1
80°	525.8	671.0	964.0	1226.9	1393.0	1472.7	1478.0	1464.9	1441.4	1417.8	1417.8
82.5°	391.1	546.7	842.3	1062.1	1204.6	1250.4	1249.1	1232.1	1202.0	1174.5	1168.0
85°	274.7	438.2	705.0	897.3	1011.0	1041.1	1032.0	1011.0	987.5	957.4	950.9
87.5°	177.9	342.7	574.2	723.3	809.6	829.2	817.5	795.2	778.2	753.4	749.5
90°	78.5	239.4	426.4	535.0	601.7	614.7	605.6	591.2	583.3	565.0	565.0
92.5°	51.0	166.1	313.9	413.3	477.4	497.0	487.9	474.8	465.6	451.2	447.3
95°	60.2	132.1	234.1	316.5	380.6	400.2	396.3	387.2	378.0	363.6	357.1
97.5°	65.4	126.9	225.0	281.2	317.8	337.5	330.9	320.4	308.7	293.0	285.1
100°	71.9	130.8	248.5	291.7	310.0	302.1	283.8	272.1	257.7	239.4	231.5
102.5°	79.8	129.5	265.5	321.8	325.7	304.8	270.7	239.4	222.4	204.0	193.6
105°	81.1	124.3	256.4	370.1	355.8	319.1	278.6	242.0	209.3	179.2	168.7
107.5°	83.7	119.0	242.0	389.8	404.2	349.2	287.7	248.5	213.2	177.9	158.3
110°	103.3	119.0	236.7	368.8	440.8	387.2	321.8	255.0	211.9	187.0	162.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	109.9	102.0	231.5	328.3	468.2	438.2	359.7	293.0	225.0	177.9	164.8
115°	116.4	91.6	226.3	291.7	443.4	473.5	400.2	329.6	261.6	206.7	158.3
117.5°	124.3	88.9	227.6	307.4	398.9	511.4	435.5	364.9	298.2	239.4	192.3
120°	130.8	86.3	228.9	321.8	330.9	481.3	494.4	395.0	325.7	272.1	223.7
122.5°	140.0	88.9	214.5	316.5	312.6	431.6	512.7	456.5	350.5	295.6	249.8
125°	146.5	94.2	179.2	312.6	358.4	342.7	481.3	516.6	421.2	317.8	268.1
127.5°	153.0	99.4	141.3	308.7	379.3	294.3	422.5	494.4	480.0	396.3	293.0
130°	157.0	104.6	111.2	310.0	370.1	351.8	316.5	451.2	489.2	456.5	380.6
132.5°	155.6	111.2	79.8	293.0	358.4	401.5	274.7	376.7	457.8	473.5	449.9
135°	151.7	117.7	56.2	242.0	347.9	392.4	340.1	244.6	398.9	444.7	456.5
137.5°	149.1	130.8	53.6	183.1	347.9	375.4	404.2	277.3	274.7	388.5	425.1
140°	145.2	140.0	52.3	130.8	325.7	359.7	395.0	381.9	242.0	264.2	371.5
142.5°	141.3	143.9	54.9	87.6	265.5	350.5	372.8	395.0	327.0	226.3	242.0
145°	136.0	142.6	60.2	43.2	189.7	341.4	351.8	376.7	389.8	310.0	222.4
147.5°	134.7	140.0	69.3	39.2	130.8	281.2	347.9	355.8	376.7	384.5	324.4
150°	132.1	136.0	90.2	41.9	83.7	210.6	325.7	341.4	355.8	372.8	379.3
152.5°	129.5	132.1	113.8	48.4	44.5	141.3	262.9	342.7	338.8	350.5	366.2
155°	126.9	128.2	128.2	57.5	44.5	91.6	179.2	281.2	341.4	333.5	344.0
157.5°	125.6	125.6	137.3	79.8	45.8	41.9	125.6	200.1	277.3	327.0	338.8
160°	124.3	124.3	134.7	109.9	53.6	44.5	49.7	133.4	188.3	257.7	303.4
162.5°	121.6	121.6	125.6	126.9	81.1	47.1	43.2	48.4	120.3	155.6	218.4
165°	120.3	120.3	121.6	134.7	115.1	68.0	45.8	43.2	40.5	66.7	129.5
167.5°	119.0	117.7	119.0	124.3	132.1	109.9	71.9	48.4	41.9	40.5	37.9
170°	117.7	116.4	116.4	117.7	122.9	130.8	115.1	94.2	62.8	47.1	40.5
172.5°	116.4	115.1	115.1	115.1	115.1	117.7	125.6	128.2	116.4	105.9	88.9
175°	115.1	115.1	115.1	115.1	113.8	112.5	112.5	113.8	116.4	117.7	122.9
177.5°	113.8	113.8	113.8	113.8	113.8	112.5	111.2	111.2	109.9	108.6	107.3
180°	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5	11359.5
2.5°	11626.3	11636.8	11639.4	11649.9	11643.3	11676.0	11678.7	11672.1
5°	11792.4	11819.9	11822.5	11844.8	11848.7	11877.5	11891.8	11886.6
7.5°	12012.2	12088.0	12139.0	12197.9	12221.4	12279.0	12299.9	12298.6
10°	12313.0	12417.6	12493.5	12555.0	12586.4	12632.1	12659.6	12667.5
12.5°	12445.1	12507.9	12528.8	12536.7	12544.5	12555.0	12569.4	12575.9
15°	12239.8	12248.9	12222.8	12183.5	12175.7	12169.1	12179.6	12183.5
17.5°	11894.5	11882.7	11851.3	11826.4	11808.1	11797.7	11791.1	11799.0
20°	11513.9	11474.6	11426.2	11411.8	11400.1	11388.3	11384.4	11393.5
22.5°	11079.6	11058.7	11027.3	11036.5	11050.8	11074.4	11090.1	11101.8
25°	10672.8	10705.5	10795.8	10904.3	10955.4	10977.6	10981.5	10994.6
27.5°	10416.5	10491.0	10552.5	10600.9	10594.4	10586.5	10583.9	10581.3
30°	10105.2	10166.7	10241.2	10332.8	10399.5	10457.0	10493.7	10512.0
32.5°	9756.0	9865.8	10000.6	10160.1	10262.1	10347.2	10396.9	10400.8
35°	9398.9	9508.8	9639.6	9736.4	9742.9	9756.0	9737.7	9725.9
37.5°	9011.7	9116.4	9209.2	9273.3	9240.6	9211.9	9166.1	9155.6
40°	8607.6	8696.5	8763.2	8803.8	8759.3	8724.0	8700.5	8691.3
42.5°	8160.3	8230.9	8275.4	8280.6	8219.1	8190.4	8179.9	8166.8
45°	7675.0	7732.6	7777.0	7775.7	7730.0	7709.0	7697.3	7677.6
47.5°	7161.0	7230.3	7280.0	7259.1	7191.1	7149.2	7110.0	7064.2
50°	6643.1	6695.4	6708.5	6691.5	6598.6	6545.0	6517.5	6492.6
52.5°	6116.0	6150.0	6112.0	6099.0	6024.4	6010.0	6003.5	5982.5
55°	5581.0	5586.2	5522.1	5484.2	5390.0	5365.2	5354.7	5323.3
57.5°	5044.7	5022.5	4944.0	4890.4	4785.8	4706.0	4645.8	4594.8
60°	4517.6	4467.9	4399.9	4337.1	4229.9	4147.5	4089.9	4046.8
62.5°	3998.4	3946.1	3878.1	3816.6	3708.0	3624.3	3579.8	3548.5
65°	3531.5	3484.4	3412.4	3354.9	3252.9	3173.1	3124.7	3092.0
67.5°	3080.2	3050.1	2984.7	2901.0	2791.2	2721.8	2677.4	2644.7
70°	2663.0	2618.5	2549.2	2470.7	2381.8	2326.8	2295.4	2266.7
72.5°	2274.5	2220.9	2172.5	2117.6	2053.5	2009.0	1984.2	1976.3
75°	1941.0	1907.0	1867.7	1828.5	1778.8	1740.9	1716.0	1710.8
77.5°	1659.8	1633.6	1602.2	1570.8	1523.8	1489.8	1467.5	1457.1
80°	1398.2	1373.3	1343.3	1313.2	1271.3	1241.2	1221.6	1212.5
82.5°	1156.2	1131.4	1107.8	1085.6	1058.1	1026.7	1009.7	1004.5
85°	939.1	920.8	905.1	889.4	865.9	841.0	825.3	820.1
87.5°	745.5	739.0	727.2	716.8	698.4	677.5	664.4	659.2
90°	562.4	557.2	552.0	544.1	529.7	512.7	502.3	498.3
92.5°	444.7	440.8	436.9	430.3	419.9	405.5	395.0	391.1
95°	355.8	353.1	347.9	342.7	333.5	324.4	315.2	310.0
97.5°	281.2	279.9	276.0	273.4	268.1	257.7	249.8	244.6
100°	225.0	222.4	219.7	215.8	210.6	201.4	196.2	191.0
102.5°	187.0	184.4	180.5	176.6	171.3	164.8	158.3	154.3
105°	159.6	155.6	153.0	149.1	143.9	137.3	130.8	128.2
107.5°	141.3	140.0	133.4	129.5	122.9	119.0	113.8	108.6
110°	145.2	138.6	121.6	112.5	108.6	109.9	104.6	99.4





TEST NUMBER: P236505

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L835-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	151.7	137.3	125.6	121.6	119.0	115.1	103.3	98.1
115°	138.6	136.0	132.1	124.3	119.0	111.2	103.3	98.1
117.5°	151.7	126.9	115.1	111.2	111.2	111.2	105.9	100.7
120°	183.1	155.6	130.8	113.8	104.6	98.1	90.2	85.0
122.5°	211.9	180.5	157.0	141.3	130.8	119.0	109.9	103.3
125°	232.8	205.3	181.8	166.1	154.3	141.3	132.1	125.6
127.5°	248.5	222.4	201.4	188.3	176.6	164.8	155.6	149.1
130°	283.8	238.0	218.4	205.3	193.6	184.4	175.3	170.0
132.5°	367.5	312.6	245.9	221.0	206.7	198.8	191.0	181.8
135°	453.9	368.8	338.8	300.8	251.1	225.0	210.6	202.7
137.5°	435.5	443.4	431.6	353.1	328.3	315.2	304.8	299.5
140°	404.2	421.2	427.7	430.3	427.7	418.5	397.6	375.4
142.5°	345.3	379.3	398.9	405.5	406.8	405.5	401.5	396.3
145°	192.3	302.1	344.0	364.9	376.7	379.3	379.3	375.4
147.5°	232.8	194.9	189.7	278.6	315.2	330.9	332.2	333.5
150°	368.8	269.4	222.4	194.9	179.2	166.1	163.5	163.5
152.5°	374.1	375.4	367.5	296.9	244.6	217.1	202.7	194.9
155°	354.5	364.9	372.8	374.1	372.8	368.8	362.3	354.5
157.5°	336.1	341.4	351.8	355.8	357.1	357.1	353.1	350.5
160°	340.1	342.7	333.5	336.1	336.1	337.5	333.5	332.2
162.5°	264.2	295.6	319.1	334.8	342.7	337.5	330.9	324.4
165°	154.3	188.3	228.9	249.8	264.2	273.4	262.9	242.0
167.5°	47.1	82.4	120.3	136.0	143.9	143.9	132.1	126.9
170°	39.2	37.9	36.6	36.6	35.3	34.0	30.1	34.0
172.5°	71.9	60.2	48.4	45.8	44.5	39.2	36.6	32.7
175°	122.9	119.0	117.7	117.7	119.0	119.0	119.0	112.5
177.5°	105.9	105.9	109.9	112.5	116.4	120.3	113.8	109.9
180°	111.2	111.2	111.2	111.2	111.2	111.2	111.2	111.2

(END OF REPORT)