

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: P236475

Luminaire Tested: **SKB4-LD5-18-N-UNV-L835-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236475  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24059)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SKB4-LD5-18-N-UNV-L835-CD2-U all blades tilted out 20 degrees  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES  
Light Source: (952) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

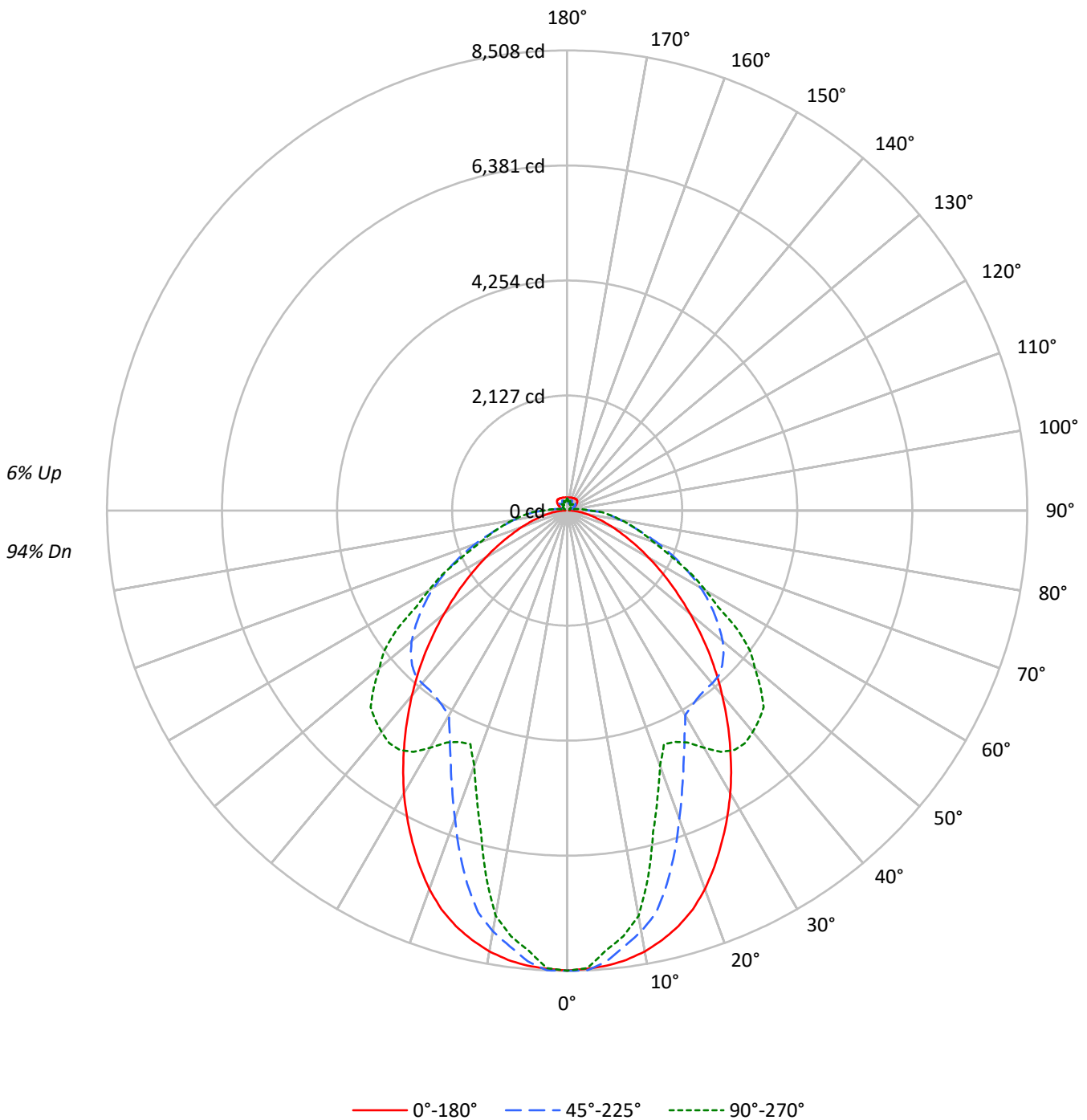
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19369.0 lumens  
Efficiency: N/A  
Efficacy: 135.1 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 0.71 / 1.1  
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')  
CIE Type: 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

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CATALOG NUMBER: SKB4-LD5-18-N-UNV-L835-CD2-U all 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	0
RCR																		
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	107	102	98	94	104	99	95	91	94	91	88	89	86	84	85	82	80	78
2	97	89	82	76	94	87	80	75	82	77	72	78	74	70	74	71	68	65
3	89	78	70	64	86	76	69	63	73	66	61	69	64	59	66	61	58	55
4	82	70	61	54	79	68	60	54	65	58	52	62	56	51	59	54	50	47
5	75	62	54	47	73	61	53	46	58	51	45	56	49	44	53	48	43	41
6	70	56	48	41	67	55	47	41	53	45	40	51	44	39	49	43	38	36
7	65	51	43	37	63	50	42	36	48	41	36	46	40	35	44	39	34	32
8	60	47	39	33	58	46	38	32	44	37	32	43	36	31	41	35	31	29
9	56	43	35	30	55	42	35	29	41	34	29	39	33	29	38	32	28	26
10	53	40	32	27	51	39	32	27	38	31	26	37	30	26	35	30	26	24

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

	0°	45°	90°
0°	12208	12208	12208
5°	12112	11931	11656
10°	11951	11283	10874
15°	11654	10290	8872
20°	11161	8887	7368
25°	10461	7658	7103
30°	9706	6785	7884
35°	8863	6840	8779
40°	8012	7122	9153
45°	7142	7373	9388
50°	6233	7366	8935
55°	5380	7135	8323
60°	4577	6808	7104
65°	3859	6308	6203
70°	3270	5762	5460
75°	2729	5158	5214
80°	2310	4970	5171
85°	1910	5153	5344



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	783.6	4.0
10°-20°	1981.1	10.2
20°-30°	2528.1	13.1
30°-40°	3006.9	15.5
40°-50°	3197.8	16.5
50°-60°	2802.1	14.5
60°-70°	2019.7	10.4
70°-80°	1271.8	6.6
80°-90°	710.2	3.7
90°-100°	272.2	1.4
100°-110°	136.7	0.7
110°-120°	128.8	0.7
120°-130°	139.4	0.7
130°-140°	134.7	0.7
140°-150°	104.6	0.5
150°-160°	80.6	0.4
160°-170°	52.2	0.3
170°-180°	18.4	0.1
0°-30°	5292.8	27.3
0°-40°	8299.8	42.9
0°-60°	14299.7	73.8
0°-90°	18301.4	94.5
90°-120°	537.7	2.8
90°-150°	916.4	4.7
90°-180°	1068.0	5.5
0°-180°	19369.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8506	8506	8506	8506	8506	
5°	8446	8484	8366	8197	8170	801
15°	7953	7712	7139	6431	6149	2233
25°	6766	6255	5096	4622	4718	3109
35°	5243	4585	4219	5082	5401	3276
45°	3702	3249	4052	4908	5139	2854
55°	2310	2354	3321	3788	3854	2076
65°	1263	1630	2317	2438	2262	1270
75°	588	1082	1331	1375	1330	637
85°	185	629	726	766	737	189
90°	49	369	420	445	427	33
95°	38	232	267	293	279	33
105°	75	196	106	92	81	81
115°	142	246	116	72	50	141
125°	211	195	166	102	72	188
135°	262	216	174	166	111	200
145°	265	207	144	130	132	167
155°	255	157	202	135	110	119
165°	250	176	151	190	187	71
175°	243	232	204	182	186	23
180°	226	226	226	226	226	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4
2.5°	8478.1	8511.2	8531.6	8558.4	8545.8	8511.2	8514.3	8532.4	8503.3	8508.0	8478.9
5°	8445.8	8479.7	8497.0	8520.6	8505.6	8462.4	8448.2	8442.7	8385.2	8365.5	8295.5
7.5°	8379.7	8412.8	8426.2	8442.7	8400.2	8320.7	8269.5	8227.8	8153.8	8123.9	8060.2
10°	8275.8	8304.9	8309.7	8296.3	8220.7	8120.0	8055.5	8014.5	7937.4	7899.6	7821.7
12.5°	8131.0	8153.8	8138.1	8106.6	8013.7	7906.7	7842.9	7768.2	7672.2	7610.0	7488.8
15°	7953.1	7962.6	7922.4	7881.5	7776.0	7647.8	7553.3	7437.6	7288.9	7139.3	6947.3
17.5°	7728.0	7728.0	7673.7	7622.6	7488.8	7318.0	7180.3	7001.6	6803.3	6614.4	6366.4
20°	7446.3	7446.3	7383.3	7320.3	7140.9	6937.1	6762.3	6543.5	6295.6	6063.4	5809.2
22.5°	7122.8	7133.0	7066.9	6971.7	6765.5	6538.8	6347.6	6060.3	5785.6	5556.6	5313.4
25°	6766.3	6773.3	6705.7	6598.6	6379.8	6130.3	5883.2	5581.0	5311.0	5096.1	4877.3
27.5°	6407.4	6414.5	6340.5	6213.8	5977.6	5702.2	5433.8	5132.3	4895.4	4695.5	4498.0
30°	6032.7	6034.3	5943.0	5818.7	5566.0	5259.9	5004.1	4740.4	4517.7	4367.3	4406.7
32.5°	5641.6	5644.7	5559.7	5416.5	5146.5	4838.8	4616.0	4380.7	4212.3	4286.3	4376.0
35°	5243.3	5241.7	5165.4	5009.6	4723.1	4446.8	4266.6	4054.1	4110.0	4219.4	4371.3
37.5°	4850.6	4846.7	4770.3	4604.2	4322.5	4092.7	3921.1	3903.0	4008.4	4177.7	4422.4
40°	4463.4	4463.4	4375.2	4200.5	3947.8	3771.5	3664.5	3772.3	3914.8	4169.8	4450.0
42.5°	4080.9	4073.8	3984.0	3809.3	3607.0	3454.4	3504.7	3636.2	3848.7	4145.4	4398.8
45°	3702.3	3688.9	3601.5	3444.1	3296.2	3202.5	3333.2	3510.2	3773.9	4051.7	4295.7
47.5°	3326.1	3316.6	3234.0	3107.3	2998.7	3015.2	3152.1	3388.2	3655.1	3921.1	4153.3
50°	2964.8	2958.5	2884.5	2800.3	2722.4	2810.6	2990.0	3252.1	3502.4	3752.7	3960.4
52.5°	2627.2	2620.1	2559.5	2516.2	2498.9	2605.1	2826.3	3079.7	3317.4	3544.1	3744.8
55°	2310.0	2302.1	2260.4	2247.8	2293.5	2415.5	2657.9	2894.0	3111.2	3321.3	3498.4
57.5°	2014.1	2009.3	1988.1	1994.4	2083.3	2236.0	2472.1	2695.6	2892.4	3091.5	3240.3
60°	1738.6	1739.4	1740.2	1777.2	1886.6	2059.7	2284.0	2487.1	2673.6	2846.0	2956.9
62.5°	1499.3	1491.5	1511.1	1587.5	1707.1	1885.8	2092.0	2280.1	2440.6	2581.5	2663.4
65°	1263.2	1275.8	1301.8	1409.6	1544.2	1715.8	1909.4	2069.9	2204.5	2317.1	2380.0
67.5°	1061.7	1078.3	1113.7	1248.3	1397.0	1559.9	1729.1	1859.8	1971.6	2055.0	2105.4
70°	890.9	905.1	956.3	1107.4	1264.8	1413.5	1550.5	1658.3	1746.5	1808.6	1837.8
72.5°	732.0	754.0	833.5	988.5	1150.7	1271.1	1380.5	1470.2	1537.1	1553.6	1579.6
75°	587.9	618.6	723.3	889.4	1030.2	1133.4	1225.4	1284.5	1316.7	1330.9	1360.8
77.5°	468.3	499.8	629.6	800.4	918.5	1005.8	1072.0	1105.8	1136.5	1153.8	1181.4
80°	362.0	397.5	553.3	702.0	812.2	879.1	927.9	957.8	979.1	994.8	1021.6
82.5°	272.3	319.5	478.5	613.1	705.2	770.5	802.8	824.8	838.2	856.3	878.3
85°	185.0	256.6	399.0	520.2	602.9	655.6	678.4	694.2	708.3	725.7	744.5
87.5°	114.1	196.8	327.4	425.0	491.9	535.2	551.7	562.0	579.3	598.9	620.2
90°	48.8	141.7	239.3	314.0	358.1	379.4	395.9	397.5	412.4	420.3	440.0
92.5°	29.1	96.8	173.2	240.1	284.1	307.7	314.0	318.0	325.1	332.9	342.4
95°	37.8	77.1	134.6	183.4	221.2	242.4	249.5	256.6	260.5	266.8	275.5
97.5°	43.3	81.1	133.8	162.9	185.0	199.9	202.3	203.8	203.1	204.6	210.1
100°	51.9	91.3	152.7	171.6	179.4	174.7	170.0	166.1	161.3	158.2	159.0
102.5°	64.5	100.0	165.3	196.0	189.7	177.1	155.8	144.0	132.2	125.1	122.8
105°	74.8	104.7	173.9	221.2	209.4	183.4	162.1	140.1	121.2	106.3	98.4
107.5°	86.6	107.8	173.2	226.7	244.0	200.7	164.5	144.8	123.6	103.1	90.5
110°	109.4	116.5	171.6	221.9	251.9	225.9	184.2	145.6	122.0	108.6	92.9



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CATALOG NUMBER: SKB4-LD5-18-N-UNV-L835-CD2-U all blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	125.9	118.8	175.5	213.3	250.3	244.0	207.8	167.6	128.3	101.5	95.2
115°	141.7	123.6	179.4	202.3	240.8	251.1	229.8	190.5	150.3	116.5	89.7
117.5°	159.8	131.4	185.0	192.8	225.1	247.9	229.8	219.6	172.4	136.9	109.4
120°	177.1	140.9	188.1	202.3	214.9	235.3	240.1	207.8	203.1	156.6	128.3
122.5°	194.4	151.1	189.7	220.4	202.3	216.4	232.2	226.7	185.7	185.0	145.6
125°	210.9	162.1	188.9	229.8	192.0	197.5	216.4	223.5	210.9	166.1	167.6
127.5°	227.5	173.2	188.1	231.4	202.3	196.0	197.5	212.5	210.9	196.8	152.7
130°	242.4	184.2	179.4	230.6	225.1	181.8	180.2	193.6	201.5	198.3	188.9
132.5°	252.6	196.0	173.9	226.7	237.7	180.2	183.4	173.9	185.7	189.7	187.3
135°	262.1	207.0	170.0	219.6	236.1	196.8	166.1	170.8	166.1	173.9	177.9
137.5°	266.8	218.8	168.4	210.9	231.4	220.4	163.7	170.8	148.8	155.8	162.1
140°	268.4	226.7	168.4	198.3	224.3	225.1	184.2	151.9	165.3	137.7	145.6
142.5°	267.6	232.2	170.0	178.7	213.3	220.4	208.6	158.2	148.0	159.8	128.3
145°	265.2	235.3	170.8	160.6	200.7	214.1	214.1	186.5	146.4	144.0	155.8
147.5°	262.9	236.9	175.5	152.7	188.1	205.4	210.9	206.2	173.2	140.1	136.2
150°	261.3	238.5	188.1	153.5	170.0	195.2	205.4	207.0	199.9	169.2	138.5
152.5°	257.4	240.1	200.7	158.2	151.1	184.2	197.5	203.1	204.6	197.5	175.5
155°	255.0	241.6	210.1	162.9	147.2	166.9	186.5	196.0	200.7	202.3	199.1
157.5°	255.0	244.0	215.7	176.3	151.1	143.2	174.7	185.0	192.8	197.5	199.9
160°	253.4	245.6	219.6	192.8	155.8	144.0	145.6	173.2	181.8	188.9	193.6
162.5°	251.1	246.3	223.5	206.2	172.4	148.8	140.1	142.5	168.4	177.1	183.4
165°	249.5	246.3	230.6	214.1	192.0	159.8	147.2	138.5	134.6	151.1	170.0
167.5°	247.9	245.6	235.3	219.6	209.4	185.7	160.6	146.4	139.3	132.2	129.9
170°	245.6	244.0	239.3	229.0	215.7	207.8	191.3	171.6	151.9	140.9	134.6
172.5°	244.0	243.2	240.8	236.1	227.5	215.7	211.7	204.6	188.9	176.3	161.3
175°	243.2	242.4	241.6	240.1	235.3	228.2	224.3	216.4	208.6	203.8	199.1
177.5°	242.4	241.6	241.6	240.8	239.3	234.5	233.8	229.0	224.3	219.6	214.1
180°	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4	8506.4
2.5°	8466.3	8483.6	8472.6	8449.8	8460.8	8485.2	8479.7	8468.7
5°	8255.4	8249.9	8212.1	8182.2	8177.4	8188.5	8183.0	8169.6
7.5°	8028.7	8025.5	8001.9	7957.1	7961.0	7960.2	7950.0	7937.4
10°	7776.0	7752.4	7710.7	7669.8	7649.3	7644.6	7625.7	7607.6
12.5°	7406.1	7320.3	7216.5	7109.4	7062.2	6991.4	6952.8	6926.8
15°	6800.9	6640.3	6500.2	6362.5	6292.5	6220.1	6176.0	6149.2
17.5°	6183.1	6035.1	5865.9	5741.5	5679.3	5618.0	5581.0	5553.4
20°	5633.7	5493.6	5348.8	5233.1	5163.0	5093.0	5050.5	5019.0
22.5°	5148.9	5010.4	4856.9	4753.0	4705.0	4687.7	4682.2	4674.3
25°	4713.6	4612.9	4605.8	4637.3	4678.2	4705.0	4717.6	4717.6
27.5°	4504.3	4564.9	4620.0	4683.7	4756.1	4808.1	4832.5	4834.1
30°	4490.1	4587.7	4683.7	4801.8	4922.2	5014.3	5052.1	5062.3
32.5°	4505.9	4677.4	4845.1	5007.2	5149.7	5244.9	5284.2	5288.2
35°	4594.8	4818.3	5008.0	5156.0	5277.2	5352.7	5392.1	5400.7
37.5°	4683.7	4895.4	5052.1	5199.2	5311.0	5375.5	5404.7	5412.5
40°	4686.9	4886.0	5040.3	5174.1	5270.9	5314.9	5335.4	5340.9
42.5°	4628.6	4822.3	4967.9	5079.6	5168.6	5222.9	5244.9	5251.2
45°	4520.0	4699.5	4849.0	4966.3	5058.4	5109.5	5134.7	5139.4
47.5°	4350.0	4538.1	4692.4	4800.2	4857.7	4878.9	4854.5	4846.7
50°	4149.3	4320.9	4442.9	4519.2	4542.8	4540.5	4528.7	4531.8
52.5°	3914.0	4052.5	4141.5	4193.4	4217.0	4254.8	4271.3	4268.2
55°	3644.8	3743.2	3778.6	3797.5	3812.5	3847.9	3859.7	3854.2
57.5°	3344.2	3402.4	3414.2	3421.3	3403.2	3372.5	3337.9	3305.6
60°	3032.5	3066.3	3075.0	3069.5	3047.5	3009.7	2966.4	2951.4
62.5°	2717.7	2746.8	2756.2	2738.1	2705.1	2674.4	2642.1	2642.1
65°	2418.6	2454.0	2452.4	2424.1	2357.2	2311.6	2269.9	2262.0
67.5°	2136.8	2143.9	2117.9	2077.8	2021.1	1989.7	1957.4	1949.5
70°	1836.2	1837.8	1815.7	1781.9	1743.3	1724.4	1708.7	1698.5
72.5°	1585.1	1587.5	1573.3	1552.1	1537.9	1520.6	1510.3	1513.5
75°	1372.6	1382.8	1378.9	1371.8	1360.0	1345.9	1336.4	1330.1
77.5°	1194.0	1206.5	1208.9	1207.3	1198.7	1186.9	1177.4	1178.2
80°	1035.8	1049.1	1051.5	1051.5	1042.8	1031.0	1016.9	1020.0
82.5°	886.2	899.6	905.9	899.6	894.1	882.3	872.8	872.8
85°	750.8	762.7	768.2	764.2	755.6	745.3	736.7	736.7
87.5°	632.8	646.2	656.4	656.4	652.5	644.6	639.9	637.5
90°	426.6	436.8	445.5	443.9	433.7	433.7	421.1	426.6
92.5°	346.3	354.2	357.3	355.0	350.2	343.2	336.1	336.1
95°	281.8	288.1	292.8	292.8	289.6	284.9	281.8	279.4
97.5°	213.3	218.8	224.3	224.3	222.7	217.2	214.1	211.7
100°	159.8	162.9	165.3	165.3	163.7	159.0	156.6	155.0
102.5°	122.0	122.0	122.8	122.8	119.6	115.7	113.3	111.8
105°	94.4	93.7	92.9	91.3	88.1	85.8	83.4	81.1
107.5°	81.1	75.6	72.4	70.0	66.1	64.5	61.4	59.0
110°	80.3	74.0	67.7	61.4	55.9	52.7	48.8	46.4





TEST NUMBER: P236475

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L835-CD2-U all blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	88.1	77.9	67.7	59.8	56.7	53.5	50.4	48.0
115°	78.7	77.1	74.8	69.3	64.5	59.0	53.5	50.4
117.5°	86.6	71.6	64.5	61.4	61.4	59.8	57.5	55.1
120°	106.3	88.9	74.0	63.8	58.2	53.5	48.8	46.4
122.5°	123.6	104.7	90.5	81.9	74.0	66.9	60.6	57.5
125°	140.1	120.4	107.0	96.8	88.9	82.6	76.3	72.4
127.5°	138.5	155.0	122.0	111.8	103.9	96.8	91.3	87.4
130°	148.8	128.3	130.7	148.0	122.0	112.5	106.3	103.1
132.5°	181.8	163.7	133.0	121.2	116.5	119.6	119.6	120.4
135°	178.7	175.5	172.4	160.6	135.4	123.6	114.9	111.0
137.5°	166.1	170.0	170.8	169.2	167.6	165.3	160.6	155.8
140°	149.5	155.0	159.0	162.1	163.7	161.3	158.2	155.8
142.5°	133.8	139.3	143.2	147.2	149.5	150.3	148.8	147.2
145°	136.9	122.0	128.3	131.4	133.8	133.8	134.6	132.2
147.5°	149.5	150.3	126.7	112.5	118.1	118.8	117.3	116.5
150°	129.9	136.9	148.0	150.3	144.8	125.9	115.7	111.0
152.5°	143.2	129.1	126.7	128.3	133.0	133.8	134.6	133.0
155°	185.7	163.7	142.5	127.5	120.4	117.3	112.5	110.2
157.5°	199.1	194.4	187.3	174.7	160.6	149.5	138.5	133.8
160°	196.8	199.9	199.9	198.3	194.4	188.1	182.6	178.7
162.5°	188.9	195.2	197.5	199.1	199.1	196.8	192.0	188.9
165°	175.5	183.4	188.1	192.8	196.0	195.2	191.3	187.3
167.5°	136.2	157.4	171.6	180.2	186.5	188.9	186.5	183.4
170°	131.4	129.1	129.1	133.0	136.9	142.5	143.2	144.8
172.5°	151.1	140.9	138.5	138.5	140.1	144.0	145.6	142.5
175°	194.4	187.3	183.4	181.0	181.0	188.1	190.5	185.7
177.5°	208.6	203.8	199.1	196.8	201.5	205.4	210.1	199.1
180°	225.9	225.9	225.9	225.9	225.9	225.9	225.9	225.9

(END OF REPORT)