

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: P236477

Luminaire Tested: **SKB4-LD5-18-N-UNV-L850-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236477  
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-L850-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) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

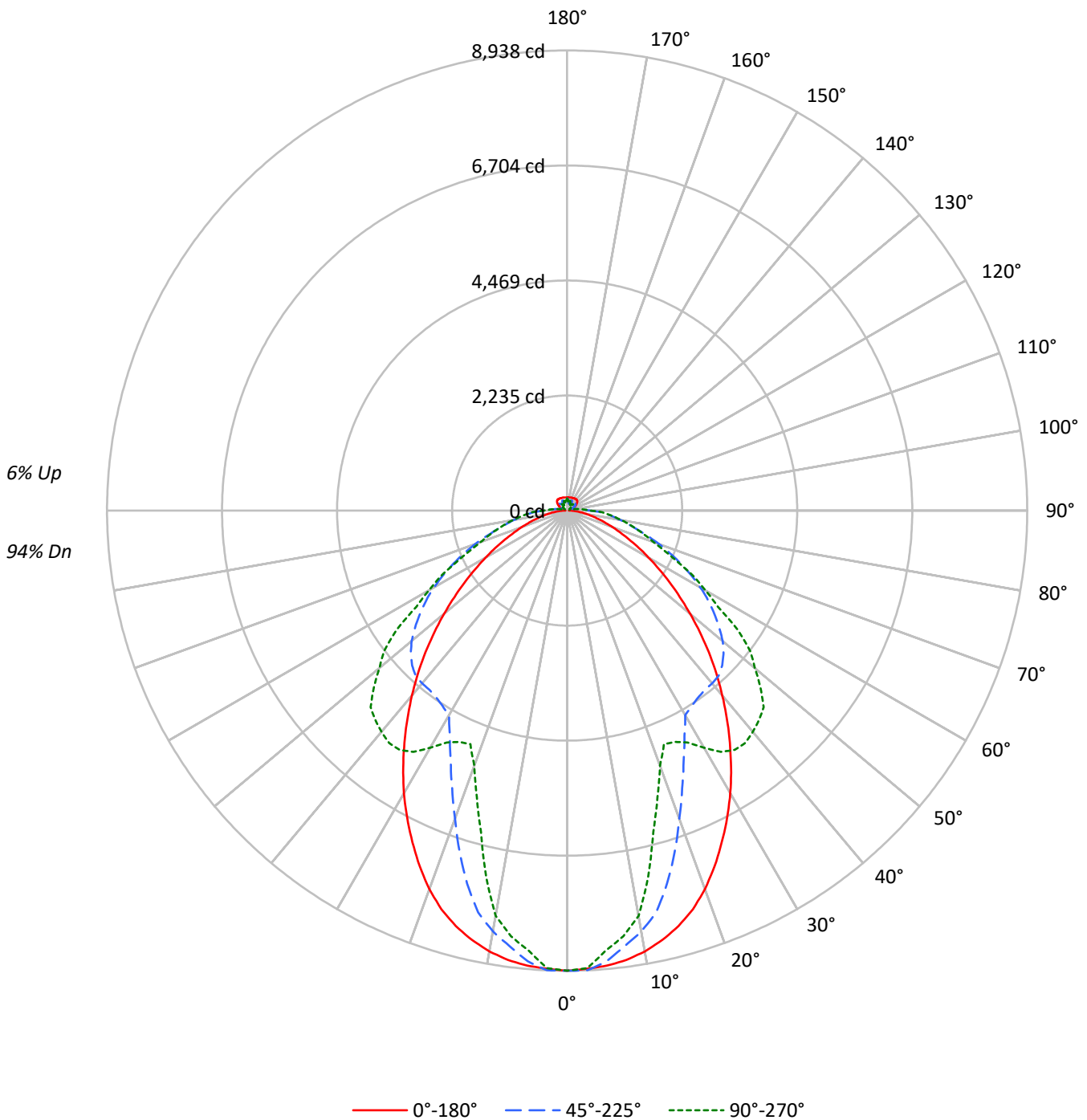
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20349.0 lumens  
Efficiency: N/A  
Efficacy: 141.9 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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### 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	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°	12826	12826	12826
5°	12725	12535	12246
10°	12556	11854	11424
15°	12244	10810	9321
20°	11726	9337	7740
25°	10990	8045	7462
30°	10197	7129	8282
35°	9312	7186	9223
40°	8417	7483	9616
45°	7504	7746	9863
50°	6548	7738	9387
55°	5652	7496	8744
60°	4809	7153	7464
65°	4054	6627	6517
70°	3436	6054	5737
75°	2868	5419	5477
80°	2427	5221	5433
85°	2006	5414	5615



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	823.2	4.0
10°-20°	2081.4	10.2
20°-30°	2656.1	13.1
30°-40°	3159.1	15.5
40°-50°	3359.6	16.5
50°-60°	2943.9	14.5
60°-70°	2121.9	10.4
70°-80°	1336.1	6.6
80°-90°	746.1	3.7
90°-100°	286.0	1.4
100°-110°	143.6	0.7
110°-120°	135.3	0.7
120°-130°	146.5	0.7
130°-140°	141.5	0.7
140°-150°	109.8	0.5
150°-160°	84.7	0.4
160°-170°	54.9	0.3
170°-180°	19.3	0.1
0°-30°	5560.6	27.3
0°-40°	8719.7	42.9
0°-60°	15023.2	73.8
0°-90°	19227.4	94.5
90°-120°	564.9	2.8
90°-150°	962.7	4.7
90°-180°	1122.0	5.5
0°-180°	20349.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	8937	8937	8937	8937	8937	
5°	8873	8913	8789	8612	8583	841
15°	8356	8102	7500	6757	6460	2346
25°	7109	6572	5354	4855	4956	3267
35°	5509	4817	4433	5339	5674	3442
45°	3890	3414	4257	5156	5400	2998
55°	2427	2474	3489	3980	4049	2181
65°	1327	1712	2434	2562	2376	1334
75°	618	1137	1398	1445	1397	669
85°	194	661	762	805	774	199
90°	51	387	442	467	448	35
95°	40	244	280	308	294	35
105°	79	206	112	97	85	85
115°	149	258	122	76	53	148
125°	222	205	174	107	76	198
135°	275	227	183	175	117	211
145°	279	218	151	136	139	175
155°	268	165	212	142	116	125
165°	262	185	159	200	197	74
175°	256	244	214	191	195	24
180°	237	237	237	237	237	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8
2.5°	8907.1	8941.8	8963.3	8991.4	8978.2	8941.8	8945.1	8964.1	8933.5	8938.5	8907.9
5°	8873.2	8908.7	8926.9	8951.7	8936.0	8890.5	8875.6	8869.8	8809.5	8788.8	8715.2
7.5°	8803.7	8838.4	8852.5	8869.8	8825.2	8741.7	8687.9	8644.1	8566.4	8535.0	8468.0
10°	8694.6	8725.1	8730.1	8716.0	8636.7	8530.8	8463.0	8420.0	8339.0	8299.3	8217.4
12.5°	8542.4	8566.4	8549.8	8516.8	8419.2	8306.7	8239.8	8161.2	8060.3	7995.0	7867.7
15°	8355.5	8365.5	8323.3	8280.3	8169.5	8034.7	7935.5	7813.9	7657.7	7500.5	7298.8
17.5°	8119.0	8119.0	8062.0	8008.2	7867.7	7688.2	7543.5	7355.8	7147.5	6949.0	6688.6
20°	7823.0	7823.0	7756.9	7690.7	7502.2	7288.0	7104.5	6874.6	6614.1	6370.2	6103.1
22.5°	7483.2	7493.9	7424.5	7324.4	7107.8	6869.6	6668.7	6366.9	6078.3	5837.7	5582.2
25°	7108.6	7116.1	7044.9	6932.5	6702.6	6440.5	6180.9	5863.3	5579.7	5354.0	5124.1
27.5°	6731.6	6739.0	6661.3	6528.1	6280.1	5990.7	5708.7	5392.0	5143.1	4933.1	4725.6
30°	6338.0	6339.6	6243.7	6113.1	5847.6	5526.0	5257.2	4980.2	4746.2	4588.3	4629.7
32.5°	5927.0	5930.3	5841.0	5690.5	5406.9	5083.6	4849.6	4602.4	4425.4	4503.1	4597.4
35°	5508.6	5507.0	5426.8	5263.0	4962.1	4671.8	4482.5	4259.2	4317.9	4432.9	4592.4
37.5°	5096.0	5091.9	5011.7	4837.2	4541.2	4299.7	4119.5	4100.5	4211.3	4389.0	4646.2
40°	4689.2	4689.2	4596.6	4413.0	4147.6	3962.4	3849.9	3963.2	4112.9	4380.8	4675.1
42.5°	4287.3	4279.9	4185.6	4002.1	3789.6	3629.1	3682.1	3820.1	4043.4	4355.1	4621.4
45°	3889.6	3875.5	3783.8	3618.4	3462.9	3364.5	3501.8	3687.8	3964.8	4256.7	4513.1
47.5°	3494.4	3484.4	3397.6	3264.5	3150.4	3167.7	3311.6	3559.7	3840.0	4119.5	4363.4
50°	3114.8	3108.2	3030.5	2942.0	2860.1	2952.8	3141.3	3416.6	3679.6	3942.5	4160.8
52.5°	2760.1	2752.7	2689.0	2643.5	2625.3	2736.9	2969.3	3235.5	3485.3	3723.4	3934.3
55°	2426.9	2418.6	2374.8	2361.5	2409.5	2537.7	2792.3	3040.4	3268.6	3489.4	3675.4
57.5°	2116.0	2111.0	2088.7	2095.3	2188.7	2349.1	2597.2	2832.0	3038.8	3247.9	3404.2
60°	1826.6	1827.4	1828.2	1867.1	1982.0	2163.9	2399.6	2612.9	2808.9	2990.0	3106.6
62.5°	1575.2	1566.9	1587.6	1667.8	1793.5	1981.2	2197.8	2395.4	2564.1	2712.1	2798.1
65°	1327.1	1340.4	1367.6	1480.9	1622.3	1802.6	2006.0	2174.7	2316.1	2434.3	2500.5
67.5°	1115.4	1132.8	1170.0	1311.4	1467.7	1638.9	1816.6	1953.9	2071.3	2159.0	2211.9
70°	936.0	950.9	1004.6	1163.4	1328.8	1485.1	1628.9	1742.2	1834.8	1900.1	1930.7
72.5°	769.0	792.1	875.7	1038.6	1208.9	1335.4	1450.3	1544.6	1614.9	1632.2	1659.5
75°	617.7	649.9	759.9	934.4	1082.4	1190.7	1287.4	1349.5	1383.4	1398.2	1429.7
77.5°	492.0	525.1	661.5	840.9	965.0	1056.7	1126.2	1161.8	1194.0	1212.2	1241.1
80°	380.4	417.6	581.3	737.6	853.3	923.6	974.9	1006.3	1028.6	1045.2	1073.3
82.5°	286.1	335.7	502.7	644.1	740.9	809.5	843.4	866.6	880.6	899.6	922.8
85°	194.3	269.6	419.2	546.6	633.4	688.8	712.8	729.3	744.2	762.4	782.2
87.5°	119.9	206.7	344.0	446.5	516.8	562.3	579.6	590.4	608.6	629.2	651.6
90°	51.3	148.8	251.4	329.9	376.2	398.6	415.9	417.6	433.3	441.5	462.2
92.5°	30.6	101.7	181.9	252.2	298.5	323.3	329.9	334.1	341.5	349.8	359.7
95°	39.7	81.0	141.4	192.7	232.4	254.7	262.1	269.6	273.7	280.3	289.4
97.5°	45.5	85.2	140.6	171.2	194.3	210.0	212.5	214.2	213.3	215.0	220.8
100°	54.6	95.9	160.4	180.3	188.5	183.6	178.6	174.5	169.5	166.2	167.0
102.5°	67.8	105.0	173.6	205.9	199.3	186.0	163.7	151.3	138.9	131.5	129.0
105°	78.6	110.0	182.7	232.4	219.9	192.7	170.3	147.2	127.3	111.6	103.4
107.5°	91.0	113.3	181.9	238.1	256.3	210.9	172.8	152.1	129.8	108.3	95.1
110°	114.9	122.4	180.3	233.2	264.6	237.3	193.5	153.0	128.2	114.1	97.6



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CATALOG NUMBER: SKB4-LD5-18-N-UNV-L850-CD2-U all blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	132.3	124.9	184.4	224.1	262.9	256.3	218.3	176.1	134.8	106.7	100.1
115°	148.8	129.8	188.5	212.5	253.0	263.8	241.4	200.1	157.9	122.4	94.3
117.5°	167.9	138.1	194.3	202.6	236.5	260.5	241.4	230.7	181.1	143.9	114.9
120°	186.0	148.0	197.6	212.5	225.7	247.2	252.2	218.3	213.3	164.5	134.8
122.5°	204.2	158.8	199.3	231.5	212.5	227.4	243.9	238.1	195.1	194.3	153.0
125°	221.6	170.3	198.4	241.4	201.8	207.5	227.4	234.8	221.6	174.5	176.1
127.5°	239.0	181.9	197.6	243.1	212.5	205.9	207.5	223.3	221.6	206.7	160.4
130°	254.7	193.5	188.5	242.3	236.5	191.0	189.4	203.4	211.7	208.4	198.4
132.5°	265.4	205.9	182.7	238.1	249.7	189.4	192.7	182.7	195.1	199.3	196.8
135°	275.3	217.5	178.6	230.7	248.1	206.7	174.5	179.4	174.5	182.7	186.9
137.5°	280.3	229.9	177.0	221.6	243.1	231.5	172.0	179.4	156.3	163.7	170.3
140°	282.0	238.1	177.0	208.4	235.7	236.5	193.5	159.6	173.6	144.7	153.0
142.5°	281.1	243.9	178.6	187.7	224.1	231.5	219.1	166.2	155.5	167.9	134.8
145°	278.7	247.2	179.4	168.7	210.9	224.9	224.9	196.0	153.8	151.3	163.7
147.5°	276.2	248.9	184.4	160.4	197.6	215.8	221.6	216.6	181.9	147.2	143.0
150°	274.5	250.5	197.6	161.2	178.6	205.1	215.8	217.5	210.0	177.8	145.5
152.5°	270.4	252.2	210.9	166.2	158.8	193.5	207.5	213.3	215.0	207.5	184.4
155°	267.9	253.8	220.8	171.2	154.6	175.3	196.0	205.9	210.9	212.5	209.2
157.5°	267.9	256.3	226.6	185.2	158.8	150.5	183.6	194.3	202.6	207.5	210.0
160°	266.3	258.0	230.7	202.6	163.7	151.3	153.0	181.9	191.0	198.4	203.4
162.5°	263.8	258.8	234.8	216.6	181.1	156.3	147.2	149.7	177.0	186.0	192.7
165°	262.1	258.8	242.3	224.9	201.8	167.9	154.6	145.5	141.4	158.8	178.6
167.5°	260.5	258.0	247.2	230.7	219.9	195.1	168.7	153.8	146.4	138.9	136.4
170°	258.0	256.3	251.4	240.6	226.6	218.3	200.9	180.3	159.6	148.0	141.4
172.5°	256.3	255.5	253.0	248.1	239.0	226.6	222.4	215.0	198.4	185.2	169.5
175°	255.5	254.7	253.8	252.2	247.2	239.8	235.7	227.4	219.1	214.2	209.2
177.5°	254.7	253.8	253.8	253.0	251.4	246.4	245.6	240.6	235.7	230.7	224.9
180°	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8	8936.8
2.5°	8894.7	8912.8	8901.3	8877.3	8888.9	8914.5	8908.7	8897.1
5°	8673.1	8667.3	8627.6	8596.2	8591.2	8602.8	8597.0	8582.9
7.5°	8434.9	8431.6	8406.8	8359.7	8363.8	8363.0	8352.2	8339.0
10°	8169.5	8144.7	8100.9	8057.9	8036.4	8031.4	8011.6	7992.5
12.5°	7780.9	7690.7	7581.6	7469.1	7419.5	7345.1	7304.6	7277.3
15°	7145.0	6976.3	6829.1	6684.4	6610.8	6534.8	6488.5	6460.3
17.5°	6495.9	6340.4	6162.7	6032.0	5966.7	5902.2	5863.3	5834.4
20°	5918.7	5771.6	5619.4	5497.9	5424.3	5350.7	5306.0	5273.0
22.5°	5409.4	5263.9	5102.6	4993.5	4943.0	4924.8	4919.1	4910.8
25°	4952.1	4846.3	4838.9	4871.9	4914.9	4943.0	4956.3	4956.3
27.5°	4732.2	4795.9	4853.7	4920.7	4996.8	5051.4	5077.0	5078.6
30°	4717.3	4819.8	4920.7	5044.7	5171.3	5268.0	5307.7	5318.4
32.5°	4733.8	4914.1	5090.2	5260.6	5410.2	5510.3	5551.6	5555.7
35°	4827.3	5062.1	5261.4	5416.8	5544.2	5623.6	5664.9	5674.0
37.5°	4920.7	5143.1	5307.7	5462.3	5579.7	5647.5	5678.1	5686.4
40°	4924.0	5133.2	5295.3	5435.9	5537.6	5583.9	5605.4	5611.1
42.5°	4862.8	5066.2	5219.2	5336.6	5430.1	5487.1	5510.3	5516.9
45°	4748.7	4937.2	5094.4	5217.6	5314.3	5368.0	5394.5	5399.5
47.5°	4570.1	4767.7	4929.8	5043.1	5103.4	5125.8	5100.1	5091.9
50°	4359.3	4539.5	4667.7	4747.9	4772.7	4770.2	4757.8	4761.1
52.5°	4112.0	4257.6	4351.0	4405.6	4430.4	4470.1	4487.4	4484.1
55°	3829.2	3932.6	3969.8	3989.7	4005.4	4042.6	4055.0	4049.2
57.5°	3513.4	3574.6	3587.0	3594.4	3575.4	3543.1	3506.8	3472.9
60°	3185.9	3221.5	3230.6	3224.8	3201.6	3162.0	3116.5	3100.8
62.5°	2855.2	2885.8	2895.7	2876.7	2842.0	2809.7	2775.8	2775.8
65°	2541.0	2578.2	2576.5	2546.8	2476.5	2428.5	2384.7	2376.4
67.5°	2245.0	2252.4	2225.1	2182.9	2123.4	2090.3	2056.4	2048.2
70°	1929.1	1930.7	1907.6	1872.0	1831.5	1811.7	1795.1	1784.4
72.5°	1665.3	1667.8	1652.9	1630.6	1615.7	1597.5	1586.8	1590.1
75°	1442.1	1452.8	1448.7	1441.2	1428.8	1413.9	1404.0	1397.4
77.5°	1254.4	1267.6	1270.1	1268.4	1259.3	1246.9	1237.0	1237.8
80°	1088.2	1102.2	1104.7	1104.7	1095.6	1083.2	1068.3	1071.6
82.5°	931.1	945.1	951.7	945.1	939.3	926.9	917.0	917.0
85°	788.8	801.2	807.0	802.9	793.8	783.0	774.0	774.0
87.5°	664.8	678.9	689.6	689.6	685.5	677.2	672.2	669.8
90°	448.2	458.9	468.0	466.4	455.6	455.6	442.4	448.2
92.5°	363.8	372.1	375.4	372.9	368.0	360.5	353.1	353.1
95°	296.0	302.6	307.6	307.6	304.3	299.3	296.0	293.5
97.5°	224.1	229.9	235.7	235.7	234.0	228.2	224.9	222.4
100°	167.9	171.2	173.6	173.6	172.0	167.0	164.5	162.9
102.5°	128.2	128.2	129.0	129.0	125.7	121.6	119.1	117.4
105°	99.2	98.4	97.6	95.9	92.6	90.1	87.6	85.2
107.5°	85.2	79.4	76.1	73.6	69.5	67.8	64.5	62.0
110°	84.3	77.7	71.1	64.5	58.7	55.4	51.3	48.8





TEST NUMBER: P236477

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L850-CD2-U all blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	92.6	81.9	71.1	62.8	59.5	56.2	52.9	50.4
115°	82.7	81.0	78.6	72.8	67.8	62.0	56.2	52.9
117.5°	91.0	75.2	67.8	64.5	64.5	62.8	60.4	57.9
120°	111.6	93.4	77.7	67.0	61.2	56.2	51.3	48.8
122.5°	129.8	110.0	95.1	86.0	77.7	70.3	63.7	60.4
125°	147.2	126.5	112.5	101.7	93.4	86.8	80.2	76.1
127.5°	145.5	162.9	128.2	117.4	109.1	101.7	95.9	91.8
130°	156.3	134.8	137.3	155.5	128.2	118.2	111.6	108.3
132.5°	191.0	172.0	139.7	127.3	122.4	125.7	125.7	126.5
135°	187.7	184.4	181.1	168.7	142.2	129.8	120.7	116.6
137.5°	174.5	178.6	179.4	177.8	176.1	173.6	168.7	163.7
140°	157.1	162.9	167.0	170.3	172.0	169.5	166.2	163.7
142.5°	140.6	146.4	150.5	154.6	157.1	157.9	156.3	154.6
145°	143.9	128.2	134.8	138.1	140.6	140.6	141.4	138.9
147.5°	157.1	157.9	133.1	118.2	124.0	124.9	123.2	122.4
150°	136.4	143.9	155.5	157.9	152.1	132.3	121.6	116.6
152.5°	150.5	135.6	133.1	134.8	139.7	140.6	141.4	139.7
155°	195.1	172.0	149.7	134.0	126.5	123.2	118.2	115.8
157.5°	209.2	204.2	196.8	183.6	168.7	157.1	145.5	140.6
160°	206.7	210.0	210.0	208.4	204.2	197.6	191.8	187.7
162.5°	198.4	205.1	207.5	209.2	209.2	206.7	201.8	198.4
165°	184.4	192.7	197.6	202.6	205.9	205.1	200.9	196.8
167.5°	143.0	165.4	180.3	189.4	196.0	198.4	196.0	192.7
170°	138.1	135.6	135.6	139.7	143.9	149.7	150.5	152.1
172.5°	158.8	148.0	145.5	145.5	147.2	151.3	153.0	149.7
175°	204.2	196.8	192.7	190.2	190.2	197.6	200.1	195.1
177.5°	219.1	214.2	209.2	206.7	211.7	215.8	220.8	209.2
180°	237.3	237.3	237.3	237.3	237.3	237.3	237.3	237.3

(END OF REPORT)