

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: P236516

Luminaire Tested: **SKB4-LD5-24-N-UNV-L850-CD4-U outer 2 blades vertical inner 2 blades**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236516  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24061)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SKB4-LD5-24-N-UNV-L850-CD4-U outer 2 blades vertical inner 2 blades  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH NARROW DISTRIBUTION LENS, OUTER 2 BLADES VERTICAL INNER 2  
BLADES HORIZONTAL  
Light Source: (952) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

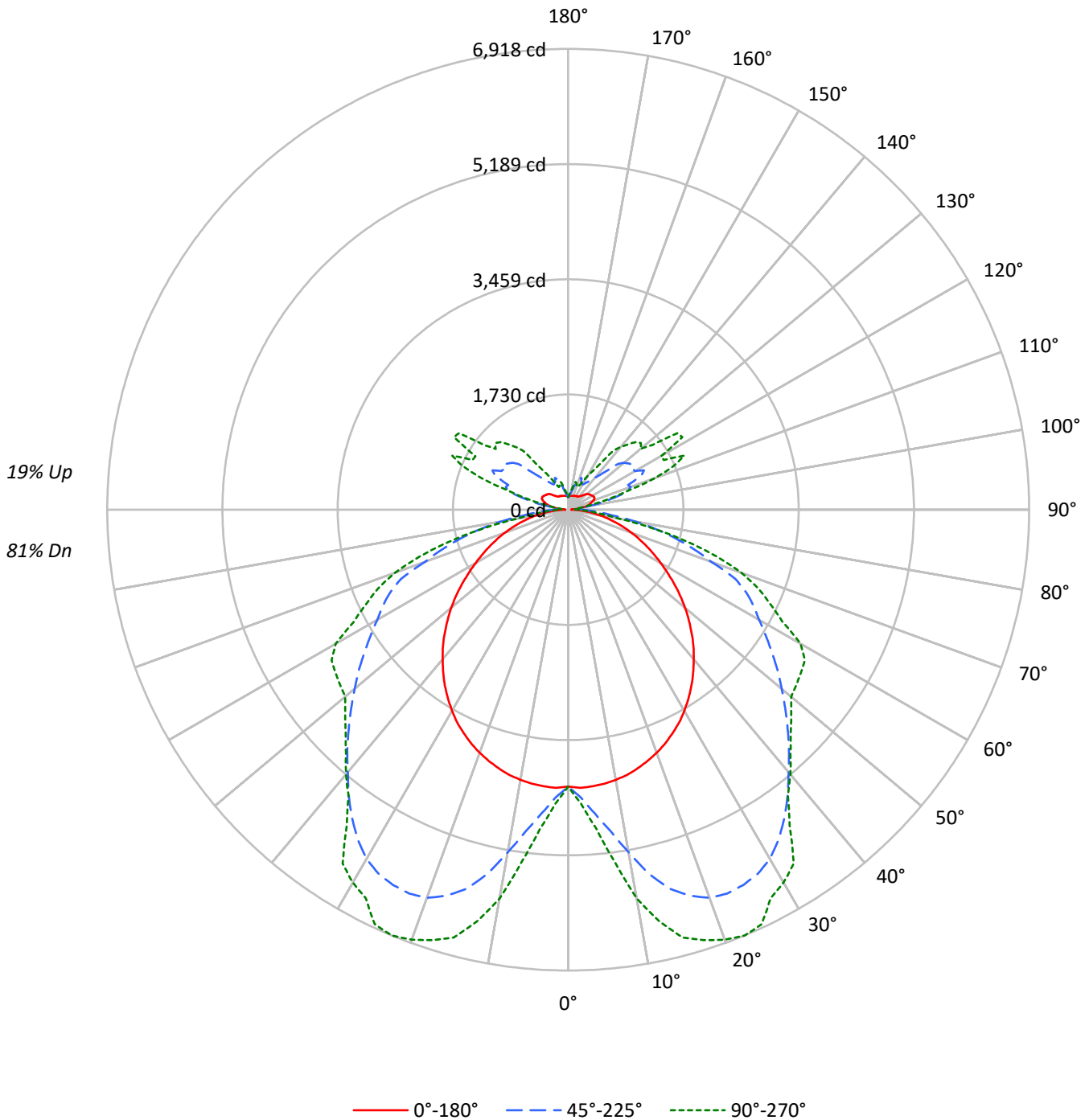
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 23563.0 lumens  
Efficiency: N/A  
Efficacy: 114.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.79 / 1.74  
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')  
CIE Type: Semi-Direct  
  
Input Watts (W): 206.2  
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	0
RCR																		
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	85	85	85	81
1	104	99	95	91	99	95	91	87	87	84	81	80	78	75	74	72	70	67
2	94	86	79	73	90	82	76	70	76	70	66	70	65	62	64	61	58	55
3	85	75	66	60	81	72	64	58	66	60	55	61	56	51	56	52	48	45
4	78	66	57	50	74	63	55	49	58	52	46	54	48	44	50	45	41	38
5	71	58	49	43	68	56	48	42	52	45	40	48	42	37	44	39	35	33
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	28
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	36	31	27	25
8	56	43	34	29	54	41	33	28	39	32	27	36	30	25	33	28	24	22
9	53	39	31	25	50	38	30	25	35	29	24	33	27	23	31	26	22	20
10	49	36	28	23	47	35	27	22	33	26	21	30	25	21	28	23	20	18

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

	0°	45°	90°
0°	5966	5966	5966
5°	5977	6526	6848
10°	5945	7457	8470
15°	5892	8488	9595
20°	5822	9089	10085
25°	5725	9341	10340
30°	5606	9404	10067
35°	5453	9166	9421
40°	5263	8788	8891
45°	5056	8475	8629
50°	4812	8209	8611
55°	4524	8007	9207
60°	4223	7914	9695
65°	3966	8033	9173
70°	3709	7293	8873
75°	3416	6482	7230
80°	3083	5098	4044
85°	2607	3376	2609



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	451.6	1.9
10°-20°	1587.4	6.7
20°-30°	2671.9	11.3
30°-40°	3231.7	13.7
40°-50°	3288.6	14.0
50°-60°	3130.9	13.3
60°-70°	2653.3	11.3
70°-80°	1642.3	7.0
80°-90°	540.2	2.3
90°-100°	221.8	0.9
100°-110°	676.8	2.9
110°-120°	1099.5	4.7
120°-130°	1000.8	4.2
130°-140°	687.7	2.9
140°-150°	363.8	1.5
150°-160°	192.3	0.8
160°-170°	100.1	0.4
170°-180°	22.4	0.1
0°-30°	4710.9	20.0
0°-40°	7942.6	33.7
0°-60°	14362.1	61.0
0°-90°	19197.9	81.5
90°-120°	1998.1	8.5
90°-150°	4050.4	17.2
90°-180°	4365.0	18.5
0°-180°	23563.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4157	4157	4157	4157	4157	
5°	4168	4343	4576	4719	4800	396
15°	4021	4787	5890	6438	6650	1134
25°	3703	5054	6216	6759	6868	1706
35°	3226	4649	5655	5850	5796	2015
45°	2621	3842	4657	4817	4724	2021
55°	1943	2957	3728	4152	4264	1738
65°	1298	2188	2951	3237	3345	1289
75°	736	1441	1672	1839	1844	781
85°	253	623	475	393	360	254
90°	48	348	226	176	153	40
95°	119	254	163	115	95	122
105°	340	600	754	670	652	354
115°	434	722	1211	1566	1922	423
125°	396	577	1176	1576	2002	354
135°	302	478	837	1320	1435	239
145°	240	499	504	692	846	154
155°	227	377	459	446	408	106
165°	216	269	386	453	432	61
175°	206	207	218	220	246	20
180°	191	191	191	191	191	



TEST NUMBER: P236516

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L850-CD4-U outer 2 blades vertical inner 2 blades

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6
2.5°	4179.8	4165.4	4161.0	4183.1	4217.3	4233.8	4253.7	4270.2	4293.4	4321.0	4349.6
5°	4167.6	4163.2	4184.2	4240.4	4309.9	4376.1	4445.6	4485.3	4528.4	4575.8	4624.3
7.5°	4150.0	4158.8	4210.6	4307.7	4436.8	4508.5	4590.1	4678.4	4778.8	4864.8	4966.3
10°	4116.9	4147.8	4234.9	4381.6	4505.2	4630.9	4772.1	4910.0	5066.7	5221.1	5372.2
12.5°	4078.3	4124.6	4261.4	4410.3	4585.7	4766.6	4965.2	5173.7	5395.4	5598.4	5788.1
15°	4020.9	4092.6	4264.7	4431.3	4667.3	4906.7	5170.4	5443.9	5699.9	5889.6	6076.0
17.5°	3955.8	4049.6	4237.1	4450.0	4739.0	5038.0	5370.0	5654.6	5892.9	6077.1	6265.8
20°	3884.1	4000.0	4198.5	4460.0	4803.0	5163.8	5506.8	5770.5	5996.6	6200.7	6386.0
22.5°	3799.2	3939.3	4150.0	4454.4	4850.5	5238.8	5565.3	5816.8	6060.6	6237.1	6392.6
25°	3703.2	3863.2	4087.1	4433.5	4872.5	5235.5	5560.9	5828.9	6031.9	6216.1	6379.4
27.5°	3605.0	3766.1	4011.0	4390.5	4841.6	5196.8	5526.7	5758.3	5971.2	6162.1	6340.8
30°	3484.8	3653.6	3911.7	4321.0	4752.3	5107.5	5420.8	5652.4	5864.2	6052.9	6208.4
32.5°	3359.0	3527.8	3793.7	4225.0	4634.3	4987.3	5271.9	5500.2	5697.7	5874.2	6008.8
35°	3225.6	3386.6	3661.3	4099.2	4486.4	4810.8	5102.0	5311.6	5505.7	5654.6	5744.0
37.5°	3081.0	3234.4	3517.9	3944.8	4326.5	4624.3	4902.3	5103.1	5277.4	5408.6	5473.7
40°	2932.1	3074.4	3360.1	3776.0	4133.4	4424.7	4676.2	4879.1	5033.6	5145.0	5200.2
42.5°	2783.2	2905.6	3193.6	3595.1	3918.3	4209.5	4454.4	4644.2	4798.6	4905.6	4968.5
45°	2621.0	2735.8	3022.6	3404.3	3702.1	3982.3	4226.1	4408.1	4550.4	4657.4	4730.2
47.5°	2456.7	2563.7	2845.0	3207.9	3485.9	3759.5	3993.3	4170.9	4315.4	4418.0	4509.6
50°	2289.0	2389.4	2660.8	2985.1	3262.0	3527.8	3755.1	3932.7	4072.8	4182.0	4276.8
52.5°	2118.0	2211.8	2469.9	2773.3	3041.3	3308.3	3519.0	3696.6	3838.9	3960.2	4065.0
55°	1942.6	2036.4	2291.2	2571.4	2831.7	3083.2	3292.8	3466.0	3607.2	3727.5	3847.7
57.5°	1769.4	1863.2	2114.7	2372.8	2633.2	2872.6	3077.7	3237.7	3381.1	3514.6	3646.9
60°	1604.0	1702.1	1942.6	2191.9	2436.8	2668.5	2869.2	3018.2	3157.2	3308.3	3487.0
62.5°	1448.4	1552.1	1777.1	2025.3	2260.3	2476.5	2656.3	2797.5	2949.8	3140.6	3323.7
65°	1298.4	1407.6	1620.5	1863.2	2088.2	2287.9	2442.3	2580.2	2763.3	2950.9	3119.7
67.5°	1153.9	1265.3	1472.7	1705.4	1908.4	2094.8	2225.0	2383.9	2562.6	2714.8	2718.1
70°	1010.5	1127.4	1331.5	1547.7	1734.1	1886.4	2034.2	2176.5	2271.3	2289.0	2369.5
72.5°	871.5	996.1	1185.9	1385.5	1553.2	1696.6	1834.5	1875.3	1895.2	1986.7	2049.6
75°	735.8	862.6	1044.7	1222.3	1369.0	1513.5	1551.0	1555.4	1611.7	1672.3	1713.2
77.5°	605.6	730.3	903.5	1059.0	1203.5	1265.3	1278.5	1297.3	1320.4	1352.4	1371.2
80°	483.2	602.3	760.1	903.5	993.9	1035.8	1043.6	1038.0	1029.2	1020.4	1006.1
82.5°	366.2	476.6	615.5	736.9	802.0	828.5	810.8	774.4	742.4	698.3	668.5
85°	252.6	348.6	469.9	561.5	620.0	626.6	594.6	556.0	517.4	475.4	441.3
87.5°	145.6	220.6	324.3	415.9	473.2	469.9	430.2	389.4	356.3	328.7	308.9
90°	48.5	114.7	214.0	297.8	350.8	345.3	311.1	278.0	251.5	226.1	206.3
92.5°	51.8	94.9	167.7	231.7	272.5	276.9	253.7	227.2	200.8	175.4	157.7
95°	119.1	144.5	195.3	238.3	254.8	253.7	236.1	211.8	187.5	163.3	143.4
97.5°	180.9	210.7	252.6	307.8	340.9	334.2	304.5	258.1	227.2	204.1	184.2
100°	244.9	290.1	322.1	382.8	431.3	458.9	446.8	411.5	381.7	344.2	295.6
102.5°	305.6	362.9	392.7	457.8	516.3	559.3	586.9	585.8	565.9	527.3	503.0
105°	339.8	407.1	433.5	509.6	580.2	620.0	657.5	713.7	756.7	754.5	738.0
107.5°	368.4	431.3	464.4	539.4	622.2	710.4	719.2	747.9	868.2	938.8	979.6
110°	407.1	463.3	494.2	563.7	668.5	735.8	846.1	842.8	840.6	997.2	1136.2



TEST NUMBER: P236516

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L850-CD4-U outer 2 blades vertical inner 2 blades

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	426.9	478.8	500.8	563.7	681.7	770.0	851.6	988.4	1006.1	971.9	1052.4
115°	433.5	481.0	507.4	549.4	658.6	785.4	860.4	964.1	1140.6	1211.2	1184.8
117.5°	430.2	473.2	524.0	531.7	618.9	776.6	884.7	952.0	1071.1	1280.7	1402.1
120°	418.1	452.3	537.2	507.4	585.8	733.6	882.5	987.3	1046.9	1159.4	1362.4
122.5°	406.0	434.6	539.4	490.9	567.0	669.6	857.1	977.4	1086.6	1139.5	1215.6
125°	396.0	419.2	535.0	489.8	532.8	621.1	770.0	954.2	1065.6	1175.9	1233.3
127.5°	383.9	403.7	528.4	521.8	506.3	596.8	695.0	884.7	1035.8	1140.6	1248.7
130°	366.2	385.0	514.1	553.8	482.1	553.8	634.3	755.6	969.7	1095.4	1195.8
132.5°	335.4	354.1	475.4	558.2	468.8	505.2	601.2	667.4	805.3	1019.3	1134.0
135°	302.3	321.0	426.9	532.8	483.2	472.1	535.0	615.5	698.3	837.3	1038.0
137.5°	279.1	296.7	380.6	503.0	524.0	449.0	493.1	564.8	624.4	708.2	824.0
140°	260.3	278.0	338.7	479.9	536.1	460.0	461.1	508.5	578.0	623.3	692.8
142.5°	247.1	262.5	308.9	441.3	511.9	486.5	441.3	466.6	510.7	573.6	612.2
145°	240.5	251.5	291.2	398.2	478.8	519.6	455.6	435.7	468.8	504.1	561.5
147.5°	240.5	247.1	278.0	349.7	454.5	509.6	484.3	445.7	436.8	465.5	494.2
150°	239.4	243.8	272.5	314.4	415.9	475.4	524.0	460.0	444.6	435.7	455.6
152.5°	232.8	238.3	269.2	302.3	381.7	456.7	498.6	513.0	461.1	451.2	431.3
155°	227.2	231.7	260.3	291.2	337.6	417.0	463.3	500.8	505.2	458.9	457.8
157.5°	223.9	227.2	250.4	278.0	304.5	370.7	430.2	463.3	501.9	518.5	482.1
160°	220.6	222.8	242.7	264.8	290.1	323.2	382.8	429.1	460.0	488.7	518.5
162.5°	217.3	218.4	233.9	253.7	274.7	294.5	328.7	376.2	415.9	446.8	461.1
165°	216.2	216.2	226.1	244.9	260.3	278.0	294.5	318.8	353.0	386.1	412.6
167.5°	212.9	212.9	219.5	232.8	248.2	259.2	273.6	285.7	294.5	315.5	336.5
170°	210.7	210.7	214.0	221.7	232.8	243.8	252.6	260.3	268.1	274.7	278.0
172.5°	208.5	207.4	208.5	211.8	217.3	223.9	232.8	238.3	241.6	246.0	247.1
175°	206.3	205.2	205.2	205.2	206.3	207.4	210.7	212.9	214.0	218.4	220.6
177.5°	204.1	203.0	203.0	201.9	200.8	199.7	198.6	197.5	195.3	194.2	193.0
180°	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6	4156.6
2.5°	4339.7	4361.8	4362.9	4378.3	4421.3	4426.9	4425.8	4415.8
5°	4639.8	4683.9	4702.6	4735.7	4793.1	4805.2	4809.6	4799.7
7.5°	5018.1	5100.9	5152.7	5206.8	5285.1	5324.8	5336.9	5329.2
10°	5475.9	5606.1	5692.2	5776.0	5879.7	5911.7	5935.9	5926.0
12.5°	5889.6	6006.5	6093.7	6195.2	6286.7	6317.6	6334.2	6332.0
15°	6175.3	6300.0	6391.5	6485.3	6582.4	6623.2	6649.7	6649.7
17.5°	6378.3	6506.3	6555.9	6649.7	6717.0	6743.4	6771.0	6774.3
20°	6471.0	6562.5	6638.6	6734.6	6816.2	6841.6	6868.1	6870.3
22.5°	6500.7	6597.8	6689.4	6797.5	6876.9	6897.9	6921.0	6917.7
25°	6491.9	6600.0	6704.8	6814.0	6886.8	6879.1	6893.5	6868.1
27.5°	6450.0	6531.6	6590.1	6622.1	6614.4	6581.3	6578.0	6575.8
30°	6279.0	6319.8	6366.2	6401.5	6426.8	6431.3	6458.8	6464.3
32.5°	6050.7	6094.8	6147.7	6199.6	6237.1	6251.4	6280.1	6297.8
35°	5771.6	5794.7	5838.9	5860.9	5856.5	5815.7	5797.0	5795.8
37.5°	5481.5	5514.5	5544.3	5541.0	5513.4	5452.8	5426.3	5414.2
40°	5233.3	5276.3	5299.4	5296.1	5261.9	5200.2	5186.9	5188.0
42.5°	4998.3	5036.9	5046.8	5025.9	4989.5	4946.4	4943.1	4936.5
45°	4768.8	4813.0	4825.1	4808.5	4779.9	4739.0	4724.7	4723.6
47.5°	4551.5	4600.1	4607.8	4591.2	4580.2	4552.6	4546.0	4538.3
50°	4345.2	4402.6	4407.0	4408.1	4396.0	4371.7	4369.5	4367.3
52.5°	4134.5	4185.3	4217.3	4261.4	4295.6	4297.8	4315.4	4316.5
55°	3927.1	4030.8	4114.7	4189.7	4233.8	4242.6	4261.4	4263.6
57.5°	3778.2	3910.6	4016.5	4098.1	4155.5	4177.6	4206.2	4209.5
60°	3641.4	3788.2	3892.9	3964.7	4000.0	4018.7	4035.3	4027.5
62.5°	3477.1	3597.3	3635.9	3613.9	3610.5	3612.8	3627.1	3618.3
65°	3179.2	3184.7	3201.3	3273.0	3316.0	3327.0	3345.8	3344.7
67.5°	2760.0	2849.4	2920.0	3004.9	3054.6	3067.8	3088.8	3086.6
70°	2443.4	2541.6	2606.7	2687.2	2726.9	2740.2	2762.2	2760.0
72.5°	2118.0	2194.1	2246.0	2306.6	2334.2	2347.5	2343.0	2339.7
75°	1759.5	1802.5	1823.5	1854.4	1856.6	1859.9	1849.9	1844.4
77.5°	1373.4	1376.7	1372.3	1376.7	1358.0	1345.8	1327.1	1314.9
80°	973.0	935.5	884.7	859.3	831.8	820.7	803.1	797.6
82.5°	640.9	621.1	586.9	567.0	546.0	528.4	515.2	508.5
85°	417.0	407.1	396.0	389.4	380.6	372.9	364.0	359.6
87.5°	294.5	287.9	278.0	272.5	264.8	258.1	249.3	246.0
90°	191.9	186.4	177.6	174.3	168.8	164.4	157.7	153.3
92.5°	146.7	139.0	133.5	129.1	123.6	118.0	112.5	110.3
95°	130.2	123.6	118.0	112.5	108.1	101.5	97.1	94.9
97.5°	173.2	164.4	156.6	153.3	150.0	141.2	137.9	135.7
100°	264.8	257.0	252.6	246.0	238.3	231.7	228.3	227.2
102.5°	492.0	487.6	467.7	453.4	425.8	402.6	394.9	392.7
105°	715.9	682.8	671.8	667.4	660.8	654.2	654.2	652.0
107.5°	998.3	1011.6	1014.9	1008.3	973.0	944.3	931.0	926.6
110°	1212.3	1282.9	1337.0	1380.0	1385.5	1383.3	1384.4	1386.6





TEST NUMBER: P236516

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L850-CD4-U outer 2 blades vertical inner 2 blades

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1279.6	1439.6	1554.3	1634.8	1675.7	1693.3	1706.5	1712.1
115°	1135.1	1257.6	1440.7	1691.1	1809.1	1875.3	1909.5	1921.7
117.5°	1436.3	1426.3	1377.8	1407.6	1506.9	1572.0	1609.5	1618.3
120°	1549.9	1643.7	1701.0	1713.2	1709.9	1667.9	1621.6	1607.3
122.5°	1365.7	1580.8	1744.0	1847.7	1920.6	1974.6	2016.5	2029.8
125°	1266.4	1365.7	1489.2	1662.4	1810.2	1909.5	1977.9	2002.2
127.5°	1327.1	1344.7	1376.7	1434.1	1502.5	1545.5	1586.3	1599.5
130°	1297.3	1386.6	1429.7	1439.6	1424.1	1419.7	1421.9	1420.8
132.5°	1230.0	1308.3	1393.3	1452.8	1473.8	1479.3	1481.5	1481.5
135°	1140.6	1224.5	1291.8	1349.1	1396.6	1415.3	1430.8	1435.2
137.5°	1018.2	1121.9	1194.7	1252.1	1301.7	1320.4	1328.2	1330.4
140°	786.5	933.2	1064.5	1140.6	1198.0	1221.2	1230.0	1232.2
142.5°	659.7	732.5	809.7	926.6	1034.7	1087.7	1119.7	1121.9
145°	599.0	621.1	663.0	720.3	770.0	803.1	832.9	846.1
147.5°	531.7	579.1	597.9	612.2	633.2	654.2	672.9	688.4
150°	478.8	499.7	529.5	565.9	583.6	591.3	600.1	590.2
152.5°	442.4	460.0	479.9	489.8	497.5	499.7	487.6	478.8
155°	434.6	428.0	440.1	451.2	453.4	449.0	418.1	408.2
157.5°	458.9	453.4	442.4	425.8	420.3	387.2	370.7	367.3
160°	514.1	481.0	445.7	439.0	415.9	388.3	380.6	377.3
162.5°	486.5	506.3	511.9	497.5	451.2	429.1	418.1	413.7
165°	437.9	445.7	451.2	454.5	450.1	437.9	433.5	432.4
167.5°	360.7	380.6	390.5	394.9	401.5	394.9	378.4	375.1
170°	282.4	297.8	305.6	312.2	329.8	329.8	316.6	306.7
172.5°	248.2	250.4	253.7	258.1	267.0	271.4	271.4	268.1
175°	219.5	218.4	218.4	221.7	228.3	235.0	240.5	246.0
177.5°	189.7	187.5	184.2	185.3	189.7	196.4	204.1	205.2
180°	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8

(END OF REPORT)