

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: P236514

Luminaire Tested: **SKB4-LD5-24-N-UNV-L835-CD4-U outer 2 blades vertical inner 2 blades**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236514
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-L835-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) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

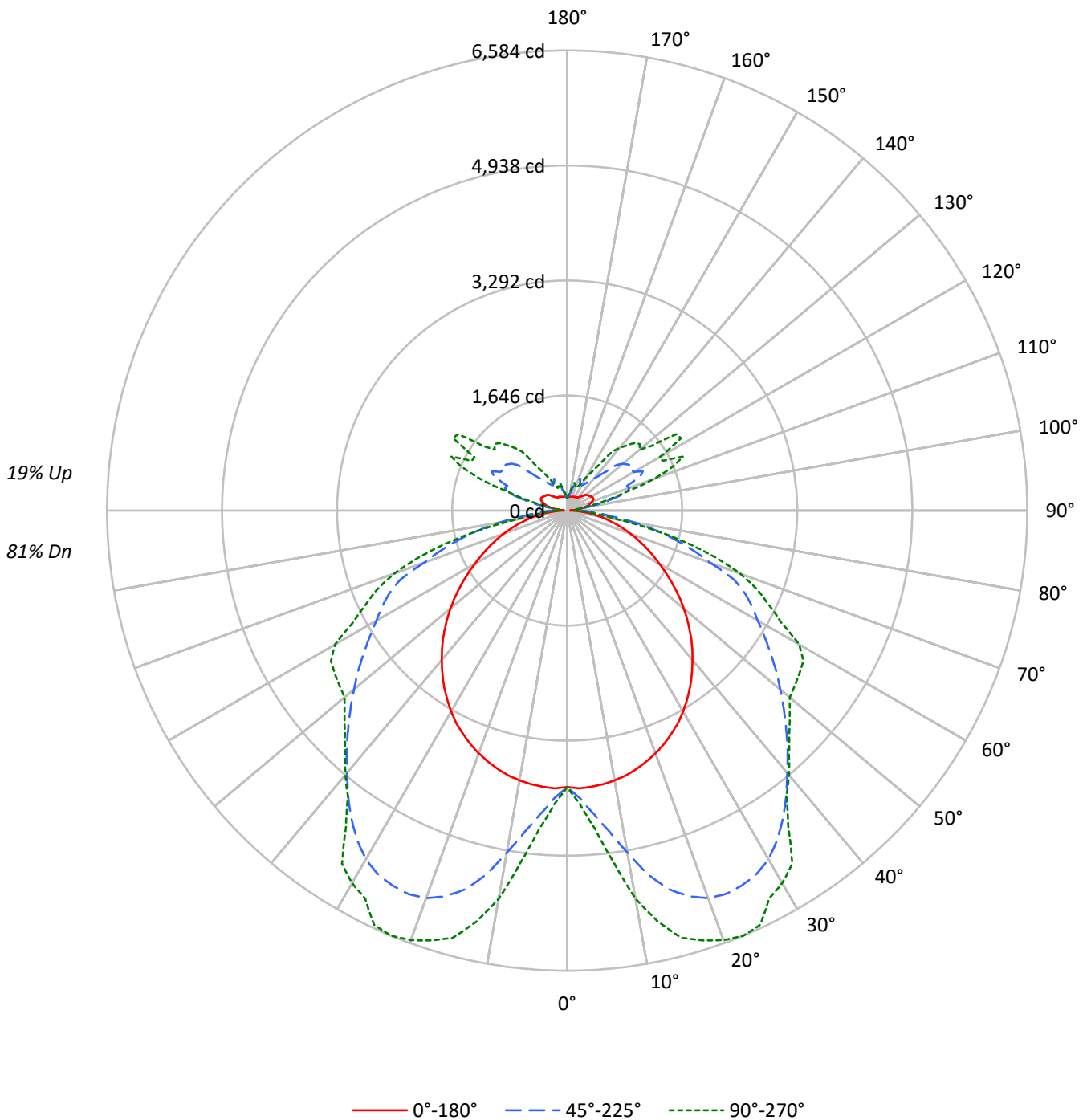
Lumens per Lamp: N/A
Luminaire Lumens: 22427.8 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.79 / 1.74
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 206.2
Input Voltage (V): 120
Input Current (A_{in}): 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-LD5-24-N-UNV-L835-CD4-U outer 2 blades vertical inner 2 blades

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°	5678	5678	5678
5°	5689	6212	6518
10°	5659	7098	8062
15°	5608	8080	9132
20°	5541	8651	9599
25°	5449	8891	9842
30°	5336	8951	9582
35°	5190	8725	8968
40°	5010	8365	8463
45°	4813	8067	8213
50°	4580	7813	8196
55°	4306	7621	8764
60°	4020	7533	9228
65°	3775	7646	8731
70°	3531	6942	8446
75°	3251	6170	6881
80°	2934	4852	3849
85°	2481	3213	2483



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CATALOG NUMBER: SKB4-LD5-24-N-UNV-L835-CD4-U outer 2 blades vertical inner 2 blades

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.8	1.9
10°-20°	1511.0	6.7
20°-30°	2543.2	11.3
30°-40°	3076.0	13.7
40°-50°	3130.2	14.0
50°-60°	2980.1	13.3
60°-70°	2525.5	11.3
70°-80°	1563.2	7.0
80°-90°	514.2	2.3
90°-100°	211.1	0.9
100°-110°	644.2	2.9
110°-120°	1046.5	4.7
120°-130°	952.6	4.2
130°-140°	654.5	2.9
140°-150°	346.2	1.5
150°-160°	183.0	0.8
160°-170°	95.2	0.4
170°-180°	21.3	0.1
0°-30°	4484.0	20.0
0°-40°	7560.0	33.7
0°-60°	13670.3	61.0
0°-90°	18273.1	81.5
90°-120°	1901.8	8.5
90°-150°	3855.1	17.2
90°-180°	4155.0	18.5
0°-180°	22427.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3956	3956	3956	3956	3956	
5°	3967	4134	4355	4492	4568	377
15°	3827	4556	5606	6128	6329	1080
25°	3525	4811	5917	6434	6537	1624
35°	3070	4425	5382	5568	5517	1918
45°	2495	3657	4433	4585	4496	1923
55°	1849	2815	3548	3952	4058	1655
65°	1236	2083	2809	3081	3184	1227
75°	700	1372	1592	1750	1756	743
85°	240	593	452	374	342	242
90°	46	331	215	167	146	38
95°	113	242	155	110	90	116
105°	323	571	718	637	620	337
115°	413	687	1153	1490	1829	402
125°	377	549	1119	1500	1906	337
135°	288	455	797	1257	1366	228
145°	229	475	480	658	805	146
155°	216	359	437	424	388	101
165°	206	256	368	431	412	58
175°	196	197	208	209	234	19
180°	182	182	182	182	182	



TEST NUMBER: P236514

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L835-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4
2.5°	3978.4	3964.8	3960.6	3981.6	4014.1	4029.9	4048.8	4064.5	4086.6	4112.8	4140.1
5°	3966.9	3962.7	3982.6	4036.2	4102.3	4165.3	4231.5	4269.3	4310.2	4355.4	4401.6
7.5°	3950.1	3958.5	4007.8	4100.2	4223.1	4291.3	4369.0	4453.0	4548.6	4630.5	4727.1
10°	3918.6	3948.0	4030.9	4170.6	4288.2	4407.9	4542.3	4673.5	4822.6	4969.6	5113.5
12.5°	3881.8	3925.9	4056.1	4197.9	4364.8	4537.0	4726.0	4924.5	5135.5	5328.7	5509.3
15°	3827.2	3895.5	4059.3	4217.8	4442.5	4670.4	4921.3	5181.7	5425.3	5605.9	5783.4
17.5°	3765.3	3854.5	4033.0	4235.7	4510.8	4795.3	5111.4	5382.3	5609.1	5784.4	5964.0
20°	3697.0	3807.3	3996.3	4245.1	4571.7	4915.0	5241.6	5492.5	5707.8	5902.0	6078.4
22.5°	3616.2	3749.5	3950.1	4239.9	4616.8	4986.4	5297.2	5536.6	5768.7	5936.7	6084.7
25°	3524.8	3677.1	3890.2	4219.9	4637.8	4983.3	5293.0	5548.2	5741.4	5916.7	6072.1
27.5°	3431.4	3584.7	3817.8	4179.0	4608.4	4946.5	5260.5	5481.0	5683.6	5865.3	6035.4
30°	3316.9	3477.6	3723.3	4112.8	4523.4	4861.5	5159.7	5380.2	5581.8	5761.3	5909.4
32.5°	3197.2	3357.9	3610.9	4021.5	4411.0	4747.0	5017.9	5235.3	5423.2	5591.2	5719.3
35°	3070.2	3223.5	3484.9	3901.8	4270.3	4579.0	4856.2	5055.7	5240.5	5382.3	5467.3
37.5°	2932.6	3078.6	3348.4	3754.8	4118.1	4401.6	4666.2	4857.3	5023.2	5148.1	5210.1
40°	2790.9	2926.3	3198.3	3594.1	3934.3	4211.5	4450.9	4644.1	4791.1	4897.2	4949.7
42.5°	2649.1	2765.7	3039.7	3421.9	3729.6	4006.8	4239.9	4420.5	4567.5	4669.3	4729.2
45°	2494.8	2604.0	2877.0	3240.3	3523.8	3790.5	4022.5	4195.8	4331.2	4433.1	4502.4
47.5°	2338.3	2440.2	2707.9	3053.4	3318.0	3578.4	3801.0	3970.0	4107.6	4205.2	4292.4
50°	2178.7	2274.3	2532.6	2841.3	3104.8	3357.9	3574.2	3743.2	3876.6	3980.5	4070.8
52.5°	2016.0	2105.2	2350.9	2639.7	2894.8	3148.9	3349.5	3518.5	3654.0	3769.5	3869.2
55°	1849.0	1938.3	2180.8	2447.5	2695.3	2934.7	3134.2	3299.1	3433.5	3547.9	3662.4
57.5°	1684.2	1773.4	2012.8	2258.5	2506.3	2734.2	2929.5	3081.7	3218.2	3345.3	3471.3
60°	1526.7	1620.1	1849.0	2086.3	2319.4	2539.9	2731.0	2872.8	3005.1	3148.9	3319.0
62.5°	1378.6	1477.3	1691.5	1927.8	2151.4	2357.2	2528.4	2662.8	2807.7	2989.3	3163.6
65°	1235.8	1339.8	1542.4	1773.4	1987.6	2177.7	2324.7	2455.9	2630.2	2808.7	2969.4
67.5°	1098.3	1204.3	1401.7	1623.3	1816.5	1993.9	2117.8	2269.0	2439.1	2584.0	2587.2
70°	961.8	1073.1	1267.3	1473.1	1650.6	1795.5	1936.2	2071.6	2161.9	2178.7	2255.4
72.5°	829.5	948.1	1128.7	1318.8	1478.4	1614.9	1746.1	1785.0	1803.9	1891.0	1950.9
75°	700.3	821.1	994.3	1163.4	1303.0	1440.6	1476.3	1480.5	1534.0	1591.8	1630.6
77.5°	576.4	695.1	859.9	1008.0	1145.5	1204.3	1216.9	1234.8	1256.8	1287.3	1305.1
80°	459.9	573.3	723.4	859.9	946.0	985.9	993.3	988.0	979.6	971.2	957.6
82.5°	348.6	453.6	585.9	701.4	763.3	788.5	771.7	737.1	706.6	664.6	636.3
85°	240.4	331.8	447.3	534.4	590.1	596.4	565.9	529.2	492.4	452.5	420.0
87.5°	138.6	210.0	308.7	395.8	450.4	447.3	409.5	370.6	339.1	312.9	294.0
90°	46.2	109.2	203.7	283.5	333.9	328.6	296.1	264.6	239.4	215.2	196.3
92.5°	49.3	90.3	159.6	220.5	259.3	263.5	241.5	216.3	191.1	166.9	150.1
95°	113.4	137.5	185.8	226.8	242.5	241.5	224.7	201.6	178.5	155.4	136.5
97.5°	172.2	200.5	240.4	292.9	324.4	318.1	289.8	245.7	216.3	194.2	175.3
100°	233.1	276.1	306.6	364.3	410.5	436.8	425.2	391.6	363.3	327.6	281.4
102.5°	290.8	345.4	373.8	435.7	491.4	532.3	558.6	557.5	538.6	501.9	478.8
105°	323.4	387.4	412.6	485.1	552.3	590.1	625.8	679.3	720.3	718.2	702.4
107.5°	350.7	410.5	442.0	513.4	592.2	676.2	684.6	711.9	826.3	893.5	932.4
110°	387.4	441.0	470.4	536.5	636.3	700.3	805.3	802.2	800.1	949.2	1081.5



TEST NUMBER: P236514

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L835-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°	406.3	455.7	476.7	536.5	648.9	732.9	810.6	940.8	957.6	925.0	1001.7
115°	412.6	457.8	483.0	522.9	626.8	747.6	819.0	917.7	1085.7	1152.9	1127.7
117.5°	409.5	450.4	498.7	506.1	589.0	739.2	842.1	906.1	1019.5	1219.0	1334.5
120°	397.9	430.5	511.3	483.0	557.5	698.2	840.0	939.7	996.4	1103.5	1296.7
122.5°	386.4	413.7	513.4	467.2	539.7	637.3	815.8	930.3	1034.2	1084.6	1157.1
125°	376.9	399.0	509.2	466.2	507.1	591.1	732.9	908.2	1014.3	1119.3	1173.9
127.5°	365.4	384.3	502.9	496.6	481.9	568.0	661.5	842.1	985.9	1085.7	1188.6
130°	348.6	366.4	489.3	527.1	458.8	527.1	603.7	719.2	922.9	1042.6	1138.2
132.5°	319.2	337.0	452.5	531.3	446.2	480.9	572.2	635.2	766.5	970.2	1079.4
135°	287.7	305.5	406.3	507.1	459.9	449.4	509.2	585.9	664.6	796.9	988.0
137.5°	265.6	282.4	362.2	478.8	498.7	427.3	469.3	537.6	594.3	674.1	784.3
140°	247.8	264.6	322.3	456.7	510.3	437.8	438.9	484.0	550.2	593.2	659.4
142.5°	235.2	249.9	294.0	420.0	487.2	463.0	420.0	444.1	486.1	546.0	582.7
145°	228.9	239.4	277.2	379.0	455.7	494.5	433.6	414.7	446.2	479.8	534.4
147.5°	228.9	235.2	264.6	332.8	432.6	485.1	460.9	424.2	415.8	443.1	470.4
150°	227.8	232.0	259.3	299.2	395.8	452.5	498.7	437.8	423.1	414.7	433.6
152.5°	221.5	226.8	256.2	287.7	363.3	434.7	474.6	488.2	438.9	429.4	410.5
155°	216.3	220.5	247.8	277.2	321.3	396.9	441.0	476.7	480.9	436.8	435.7
157.5°	213.1	216.3	238.3	264.6	289.8	352.8	409.5	441.0	477.7	493.5	458.8
160°	210.0	212.1	231.0	252.0	276.1	307.6	364.3	408.4	437.8	465.1	493.5
162.5°	206.8	207.9	222.6	241.5	261.4	280.3	312.9	358.0	395.8	425.2	438.9
165°	205.8	205.8	215.2	233.1	247.8	264.6	280.3	303.4	336.0	367.5	392.7
167.5°	202.6	202.6	208.9	221.5	236.2	246.7	260.4	271.9	280.3	300.3	320.2
170°	200.5	200.5	203.7	211.0	221.5	232.0	240.4	247.8	255.1	261.4	264.6
172.5°	198.4	197.4	198.4	201.6	206.8	213.1	221.5	226.8	229.9	234.1	235.2
175°	196.3	195.3	195.3	195.3	196.3	197.4	200.5	202.6	203.7	207.9	210.0
177.5°	194.2	193.2	193.2	192.1	191.1	190.0	189.0	187.9	185.8	184.8	183.7
180°	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6



TEST NUMBER: P236514

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L835-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4	3956.4
2.5°	4130.7	4151.7	4152.7	4167.4	4208.4	4213.6	4212.6	4203.1
5°	4416.3	4458.3	4476.1	4507.6	4562.2	4573.8	4578.0	4568.5
7.5°	4776.4	4855.2	4904.5	4956.0	5030.5	5068.3	5079.9	5072.5
10°	5212.2	5336.1	5418.0	5497.8	5596.5	5626.9	5650.0	5640.6
12.5°	5605.9	5717.2	5800.2	5896.8	5983.9	6013.3	6029.1	6027.0
15°	5877.9	5996.5	6083.7	6172.9	6265.3	6304.2	6329.4	6329.4
17.5°	6071.1	6192.9	6240.1	6329.4	6393.4	6418.6	6444.9	6448.0
20°	6159.3	6246.4	6318.9	6410.2	6487.9	6512.1	6537.3	6539.4
22.5°	6187.6	6280.0	6367.2	6470.1	6545.7	6565.6	6587.7	6584.5
25°	6179.2	6282.1	6381.9	6485.8	6555.1	6547.8	6561.4	6537.3
27.5°	6139.3	6217.0	6272.7	6303.1	6295.8	6264.3	6261.1	6259.0
30°	5976.6	6015.4	6059.5	6093.1	6117.3	6121.5	6147.7	6153.0
32.5°	5759.2	5801.2	5851.6	5901.0	5936.7	5950.3	5977.6	5994.4
35°	5493.6	5515.6	5557.6	5578.6	5574.4	5535.6	5517.7	5516.7
37.5°	5217.4	5248.9	5277.3	5274.1	5247.9	5190.1	5164.9	5153.4
40°	4981.2	5022.1	5044.2	5041.0	5008.5	4949.7	4937.1	4938.1
42.5°	4757.5	4794.3	4803.7	4783.8	4749.1	4708.2	4705.0	4698.7
45°	4539.1	4581.1	4592.7	4576.9	4549.6	4510.8	4497.1	4496.1
47.5°	4332.3	4378.5	4385.8	4370.1	4359.6	4333.3	4327.0	4319.7
50°	4135.9	4190.5	4194.7	4195.8	4184.2	4161.1	4159.0	4156.9
52.5°	3935.4	3983.7	4014.1	4056.1	4088.7	4090.8	4107.6	4108.6
55°	3738.0	3836.7	3916.5	3987.9	4029.9	4038.3	4056.1	4058.2
57.5°	3596.2	3722.2	3823.0	3900.7	3955.3	3976.3	4003.6	4006.8
60°	3466.0	3605.7	3705.4	3773.7	3807.3	3825.1	3840.9	3833.5
62.5°	3309.6	3424.0	3460.8	3439.8	3436.6	3438.7	3452.4	3444.0
65°	3026.1	3031.3	3047.1	3115.3	3156.3	3166.8	3184.6	3183.6
67.5°	2627.1	2712.1	2779.3	2860.2	2907.4	2920.0	2940.0	2937.9
70°	2325.7	2419.2	2481.1	2557.8	2595.6	2608.2	2629.2	2627.1
72.5°	2016.0	2088.4	2137.8	2195.5	2221.8	2234.4	2230.2	2227.0
75°	1674.7	1715.7	1735.6	1765.0	1767.1	1770.3	1760.8	1755.6
77.5°	1307.2	1310.4	1306.2	1310.4	1292.5	1281.0	1263.1	1251.6
80°	926.1	890.4	842.1	817.9	791.7	781.2	764.4	759.1
82.5°	610.0	591.1	558.6	539.7	519.7	502.9	490.3	484.0
85°	396.9	387.4	376.9	370.6	362.2	354.9	346.5	342.3
87.5°	280.3	274.0	264.6	259.3	252.0	245.7	237.3	234.1
90°	182.7	177.4	169.0	165.9	160.6	156.4	150.1	145.9
92.5°	139.6	132.3	127.0	122.8	117.6	112.3	107.1	105.0
95°	123.9	117.6	112.3	107.1	102.9	96.6	92.4	90.3
97.5°	164.8	156.4	149.1	145.9	142.8	134.4	131.2	129.1
100°	252.0	244.6	240.4	234.1	226.8	220.5	217.3	216.3
102.5°	468.3	464.1	445.2	431.5	405.3	383.2	375.9	373.8
105°	681.4	649.9	639.4	635.2	628.9	622.6	622.6	620.5
107.5°	950.2	962.8	966.0	959.7	926.1	898.8	886.2	882.0
110°	1153.9	1221.1	1272.6	1313.5	1318.8	1316.7	1317.7	1319.8



TEST NUMBER: P236514

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L835-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1218.0	1370.2	1479.4	1556.1	1594.9	1611.7	1624.3	1629.6
115°	1080.4	1197.0	1371.3	1609.6	1722.0	1785.0	1817.5	1829.1
117.5°	1367.1	1357.6	1311.4	1339.8	1434.3	1496.2	1531.9	1540.3
120°	1475.2	1564.5	1619.1	1630.6	1627.5	1587.6	1543.5	1529.8
122.5°	1299.9	1504.6	1660.0	1758.7	1828.0	1879.5	1919.4	1932.0
125°	1205.4	1299.9	1417.5	1582.3	1723.0	1817.5	1882.6	1905.7
127.5°	1263.1	1279.9	1310.4	1365.0	1430.1	1471.0	1509.9	1522.5
130°	1234.8	1319.8	1360.8	1370.2	1355.5	1351.3	1353.4	1352.4
132.5°	1170.7	1245.3	1326.1	1382.8	1402.8	1408.0	1410.1	1410.1
135°	1085.7	1165.5	1229.5	1284.1	1329.3	1347.1	1361.8	1366.0
137.5°	969.1	1067.8	1137.1	1191.7	1239.0	1256.8	1264.2	1266.3
140°	748.6	888.3	1013.2	1085.7	1140.3	1162.3	1170.7	1172.8
142.5°	627.9	697.2	770.7	882.0	984.9	1035.3	1065.7	1067.8
145°	570.1	591.1	631.0	685.6	732.9	764.4	792.7	805.3
147.5°	506.1	551.2	569.1	582.7	602.7	622.6	640.5	655.2
150°	455.7	475.6	504.0	538.6	555.4	562.8	571.2	561.7
152.5°	421.0	437.8	456.7	466.2	473.5	475.6	464.1	455.7
155°	413.7	407.4	418.9	429.4	431.5	427.3	397.9	388.5
157.5°	436.8	431.5	421.0	405.3	400.0	368.5	352.8	349.6
160°	489.3	457.8	424.2	417.9	395.8	369.6	362.2	359.1
162.5°	463.0	481.9	487.2	473.5	429.4	408.4	397.9	393.7
165°	416.8	424.2	429.4	432.6	428.4	416.8	412.6	411.6
167.5°	343.3	362.2	371.7	375.9	382.2	375.9	360.1	357.0
170°	268.8	283.5	290.8	297.1	313.9	313.9	301.3	291.9
172.5°	236.2	238.3	241.5	245.7	254.1	258.3	258.3	255.1
175°	208.9	207.9	207.9	211.0	217.3	223.6	228.9	234.1
177.5°	180.6	178.5	175.3	176.4	180.6	186.9	194.2	195.3
180°	181.6	181.6	181.6	181.6	181.6	181.6	181.6	181.6

(END OF REPORT)