

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: P236513

Luminaire Tested: **SKB4-LD5-18-N-UNV-L850-CD2-U outer 2 blades vertical inner 2 blades**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236513
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-LD5-18-N-UNV-L850-CD2-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

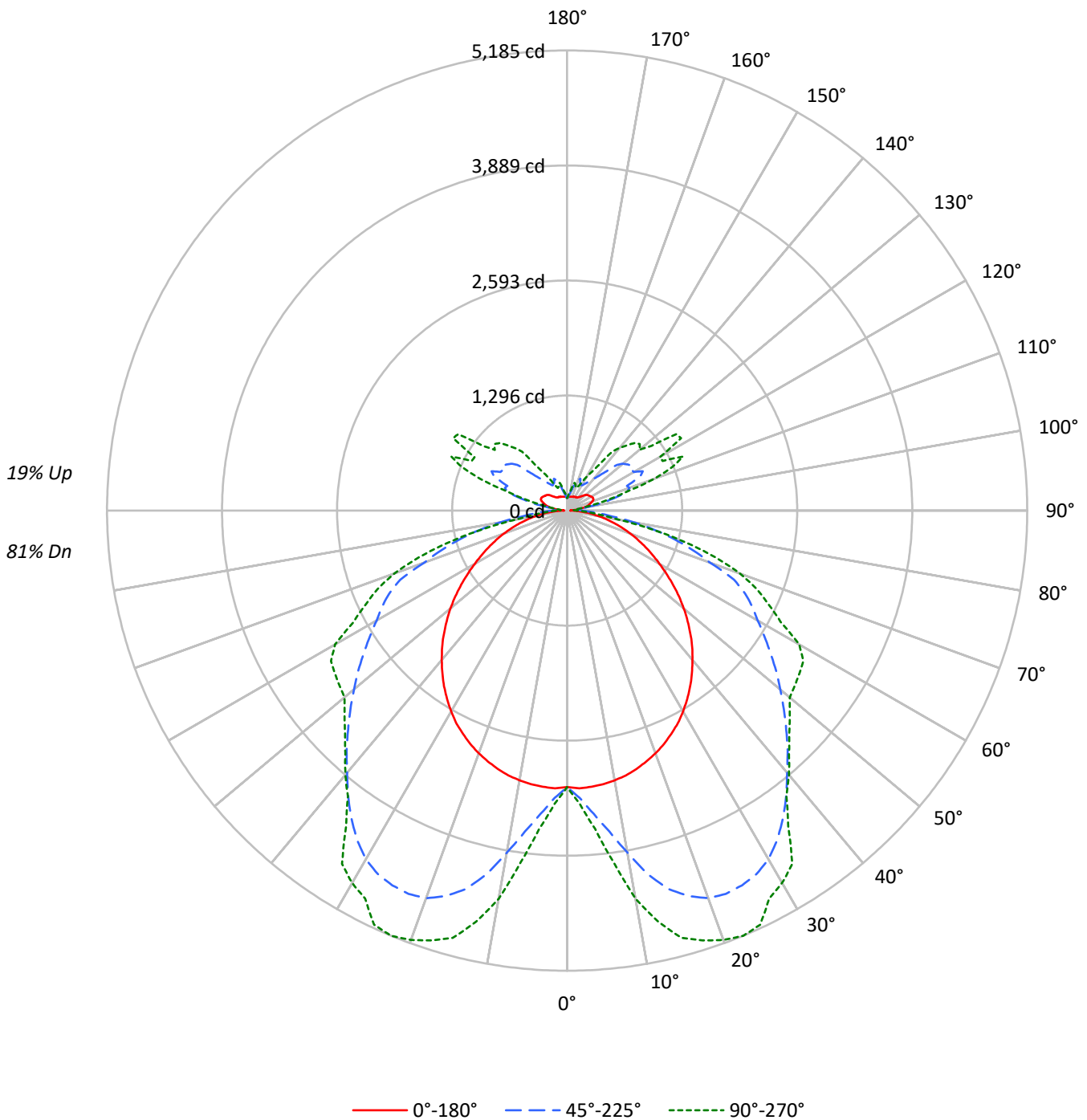
Lumens per Lamp: N/A
Luminaire Lumens: 17661.0 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.79 / 1.74
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 143.4
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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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°	4471	4471	4471
5°	4480	4892	5133
10°	4456	5589	6349
15°	4416	6362	7191
20°	4364	6812	7559
25°	4291	7001	7750
30°	4202	7049	7545
35°	4087	6871	7062
40°	3945	6587	6664
45°	3790	6352	6467
50°	3607	6152	6454
55°	3391	6002	6901
60°	3165	5932	7266
65°	2973	6021	6875
70°	2780	5466	6650
75°	2560	4858	5419
80°	2310	3821	3031
85°	1954	2531	1955



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.5	1.9
10°-20°	1189.8	6.7
20°-30°	2002.7	11.3
30°-40°	2422.2	13.7
40°-50°	2464.9	14.0
50°-60°	2346.7	13.3
60°-70°	1988.7	11.3
70°-80°	1230.9	7.0
80°-90°	404.9	2.3
90°-100°	166.2	0.9
100°-110°	507.3	2.9
110°-120°	824.1	4.7
120°-130°	750.1	4.2
130°-140°	515.4	2.9
140°-150°	272.7	1.5
150°-160°	144.1	0.8
160°-170°	75.0	0.4
170°-180°	16.8	0.1
0°-30°	3530.9	20.0
0°-40°	5953.2	33.7
0°-60°	10764.7	61.0
0°-90°	14389.3	81.5
90°-120°	1497.6	8.5
90°-150°	3035.8	17.2
90°-180°	3272.0	18.5
0°-180°	17661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3116	3116	3116	3116	3116	
5°	3124	3255	3430	3537	3598	297
15°	3014	3588	4414	4826	4984	850
25°	2776	3788	4659	5066	5148	1279
35°	2418	3484	4238	4385	4344	1510
45°	1964	2880	3491	3610	3540	1514
55°	1456	2217	2794	3112	3196	1303
65°	973	1640	2212	2426	2507	966
75°	552	1080	1254	1378	1382	585
85°	189	467	356	294	270	190
90°	36	261	170	132	115	30
95°	89	191	122	86	71	91
105°	255	450	566	502	489	265
115°	325	541	908	1174	1440	317
125°	297	432	881	1181	1501	266
135°	226	358	628	990	1076	179
145°	180	374	378	518	634	115
155°	170	283	344	334	306	79
165°	162	202	289	339	324	46
175°	155	155	164	165	184	15
180°	143	143	143	143	143	



TEST NUMBER: P236513

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L850-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5
2.5°	3132.8	3122.1	3118.8	3135.3	3160.9	3173.3	3188.2	3200.6	3218.0	3238.7	3260.2
5°	3123.7	3120.4	3136.1	3178.3	3230.4	3280.0	3332.1	3361.9	3394.1	3429.7	3466.0
7.5°	3110.5	3117.1	3156.0	3228.7	3325.5	3379.2	3440.4	3506.5	3581.8	3646.3	3722.3
10°	3085.7	3108.8	3174.2	3284.1	3376.7	3471.0	3576.8	3680.2	3797.6	3913.3	4026.6
12.5°	3056.8	3091.5	3194.0	3305.6	3437.1	3572.7	3721.5	3877.8	4044.0	4196.1	4338.3
15°	3013.8	3067.5	3196.5	3321.3	3498.3	3677.7	3875.3	4080.4	4272.2	4414.4	4554.1
17.5°	2965.0	3035.3	3175.8	3335.4	3552.0	3776.1	4025.0	4238.3	4416.9	4555.0	4696.3
20°	2911.2	2998.1	3146.9	3342.8	3600.0	3870.3	4127.5	4325.1	4494.6	4647.6	4786.5
22.5°	2847.6	2952.6	3110.5	3338.7	3635.5	3926.6	4171.3	4359.8	4542.6	4674.8	4791.4
25°	2775.6	2895.5	3063.4	3323.0	3652.1	3924.1	4168.0	4368.9	4521.1	4659.1	4781.5
27.5°	2702.1	2822.8	3006.3	3290.7	3628.9	3895.2	4142.4	4316.0	4475.6	4618.6	4752.6
30°	2611.9	2738.4	2931.9	3238.7	3561.9	3828.2	4063.0	4236.6	4395.4	4536.8	4653.3
32.5°	2517.7	2644.2	2843.4	3166.7	3473.5	3738.1	3951.4	4122.5	4270.5	4402.8	4503.7
35°	2417.6	2538.3	2744.2	3072.5	3362.7	3605.8	3824.0	3981.1	4126.7	4238.3	4305.3
37.5°	2309.3	2424.2	2636.7	2956.7	3242.8	3466.0	3674.4	3824.9	3955.5	4053.9	4102.7
40°	2197.7	2304.4	2518.5	2830.2	3098.1	3316.4	3504.9	3657.0	3772.8	3856.3	3897.6
42.5°	2086.1	2177.8	2393.6	2694.6	2936.9	3155.1	3338.7	3480.9	3596.7	3676.9	3724.0
45°	1964.5	2050.5	2265.5	2551.6	2774.8	2984.8	3167.6	3304.0	3410.6	3490.8	3545.4
47.5°	1841.3	1921.5	2132.4	2404.4	2612.8	2817.8	2993.1	3126.2	3234.5	3311.4	3380.0
50°	1715.7	1790.9	1994.3	2237.4	2444.9	2644.2	2814.5	2947.6	3052.6	3134.5	3205.6
52.5°	1587.5	1657.8	1851.3	2078.6	2279.5	2479.6	2637.6	2770.7	2877.3	2968.3	3046.8
55°	1456.0	1526.3	1717.3	1927.3	2122.4	2311.0	2468.1	2597.9	2703.7	2793.8	2884.0
57.5°	1326.2	1396.5	1585.0	1778.5	1973.6	2153.0	2306.8	2426.7	2534.2	2634.3	2733.5
60°	1202.2	1275.8	1456.0	1642.9	1826.4	2000.1	2150.6	2262.2	2366.4	2479.6	2613.6
62.5°	1085.6	1163.3	1332.0	1518.0	1694.2	1856.2	1991.0	2096.8	2210.9	2354.0	2491.2
65°	973.2	1055.0	1214.6	1396.5	1565.2	1714.8	1830.6	1933.9	2071.2	2211.7	2338.3
67.5°	864.9	948.4	1103.8	1278.3	1430.4	1570.1	1667.7	1786.8	1920.7	2034.8	2037.3
70°	757.4	845.0	998.0	1160.0	1299.8	1413.9	1524.7	1631.3	1702.4	1715.7	1776.0
72.5°	653.2	746.6	888.8	1038.5	1164.2	1271.7	1375.0	1405.6	1420.5	1489.1	1536.2
75°	551.5	646.6	783.0	916.1	1026.1	1134.4	1162.5	1165.8	1208.0	1253.5	1284.1
77.5°	453.9	547.4	677.2	793.7	902.1	948.4	958.3	972.3	989.7	1013.7	1027.7
80°	362.1	451.4	569.7	677.2	745.0	776.4	782.2	778.0	771.4	764.8	754.1
82.5°	274.5	357.2	461.4	552.3	601.1	620.9	607.7	580.4	556.5	523.4	501.1
85°	189.3	261.3	352.2	420.9	464.7	469.6	445.7	416.7	387.8	356.4	330.7
87.5°	109.1	165.4	243.1	311.7	354.7	352.2	322.5	291.9	267.1	246.4	231.5
90°	36.4	86.0	160.4	223.2	262.9	258.8	233.2	208.4	188.5	169.5	154.6
92.5°	38.9	71.1	125.7	173.6	204.2	207.5	190.2	170.3	150.5	131.5	118.2
95°	89.3	108.3	146.3	178.6	191.0	190.2	176.9	158.7	140.6	122.4	107.5
97.5°	135.6	157.9	189.3	230.7	255.5	250.5	228.2	193.5	170.3	153.0	138.1
100°	183.6	217.5	241.4	286.9	323.3	344.0	334.9	308.4	286.1	258.0	221.6
102.5°	229.0	272.0	294.3	343.1	387.0	419.2	439.9	439.0	424.2	395.2	377.0
105°	254.7	305.1	324.9	382.0	434.9	464.7	492.8	535.0	567.2	565.5	553.1
107.5°	276.2	323.3	348.1	404.3	466.3	532.5	539.1	560.6	650.7	703.6	734.2
110°	305.1	347.3	370.4	422.5	501.1	551.5	634.2	631.7	630.0	747.4	851.6



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CATALOG NUMBER: SKB4-LD5-18-N-UNV-L850-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	320.0	358.8	375.4	422.5	511.0	577.1	638.3	740.8	754.1	728.4	788.8
115°	324.9	360.5	380.3	411.8	493.6	588.7	644.9	722.6	854.9	907.8	888.0
117.5°	322.5	354.7	392.7	398.5	463.8	582.1	663.1	713.5	802.8	959.9	1050.9
120°	313.4	339.0	402.7	380.3	439.0	549.8	661.5	740.0	784.7	869.0	1021.1
122.5°	304.3	325.8	404.3	367.9	425.0	501.9	642.4	732.6	814.4	854.1	911.2
125°	296.8	314.2	401.0	367.1	399.4	465.5	577.1	715.2	798.7	881.4	924.4
127.5°	287.7	302.6	396.0	391.1	379.5	447.3	520.9	663.1	776.4	854.9	936.0
130°	274.5	288.6	385.3	415.1	361.3	415.1	475.4	566.4	726.8	821.0	896.3
132.5°	251.4	265.4	356.4	418.4	351.4	378.7	450.6	500.2	603.6	764.0	850.0
135°	226.5	240.6	320.0	399.4	362.1	353.9	401.0	461.4	523.4	627.6	778.0
137.5°	209.2	222.4	285.3	377.0	392.7	336.5	369.6	423.3	468.0	530.8	617.6
140°	195.1	208.4	253.8	359.7	401.8	344.8	345.6	381.2	433.3	467.2	519.2
142.5°	185.2	196.8	231.5	330.7	383.6	364.6	330.7	349.7	382.8	429.9	458.9
145°	180.2	188.5	218.3	298.5	358.8	389.4	341.5	326.6	351.4	377.9	420.9
147.5°	180.2	185.2	208.4	262.1	340.7	382.0	363.0	334.0	327.4	348.9	370.4
150°	179.4	182.7	204.2	235.6	311.7	356.4	392.7	344.8	333.2	326.6	341.5
152.5°	174.5	178.6	201.7	226.5	286.1	342.3	373.7	384.5	345.6	338.2	323.3
155°	170.3	173.6	195.1	218.3	253.0	312.5	347.3	375.4	378.7	344.0	343.1
157.5°	167.8	170.3	187.7	208.4	228.2	277.8	322.5	347.3	376.2	388.6	361.3
160°	165.4	167.0	181.9	198.4	217.5	242.3	286.9	321.6	344.8	366.3	388.6
162.5°	162.9	163.7	175.3	190.2	205.9	220.8	246.4	281.9	311.7	334.9	345.6
165°	162.1	162.1	169.5	183.6	195.1	208.4	220.8	239.0	264.6	289.4	309.2
167.5°	159.6	159.6	164.5	174.5	186.0	194.3	205.1	214.1	220.8	236.5	252.2
170°	157.9	157.9	160.4	166.2	174.5	182.7	189.3	195.1	200.9	205.9	208.4
172.5°	156.3	155.4	156.3	158.7	162.9	167.8	174.5	178.6	181.1	184.4	185.2
175°	154.6	153.8	153.8	153.8	154.6	155.4	157.9	159.6	160.4	163.7	165.4
177.5°	153.0	152.1	152.1	151.3	150.5	149.7	148.8	148.0	146.3	145.5	144.7
180°	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5	3115.5
2.5°	3252.7	3269.3	3270.1	3281.7	3313.9	3318.0	3317.2	3309.8
5°	3477.6	3510.7	3524.7	3549.5	3592.5	3601.6	3604.9	3597.5
7.5°	3761.2	3823.2	3862.1	3902.6	3961.3	3991.1	4000.2	3994.4
10°	4104.3	4201.9	4266.4	4329.2	4407.0	4430.9	4449.1	4441.7
12.5°	4414.4	4502.0	4567.4	4643.4	4712.1	4735.2	4747.6	4746.0
15°	4628.5	4722.0	4790.6	4860.9	4933.6	4964.2	4984.1	4984.1
17.5°	4780.7	4876.6	4913.8	4984.1	5034.5	5054.4	5075.0	5077.5
20°	4850.1	4918.8	4975.8	5047.7	5108.9	5127.9	5147.8	5149.4
22.5°	4872.5	4945.2	5013.8	5094.9	5154.4	5170.1	5187.5	5185.0
25°	4865.8	4946.9	5025.4	5107.3	5161.8	5156.1	5166.8	5147.8
27.5°	4834.4	4895.6	4939.4	4963.4	4957.6	4932.8	4930.3	4928.7
30°	4706.3	4736.9	4771.6	4798.0	4817.1	4820.4	4841.0	4845.2
32.5°	4535.1	4568.2	4607.9	4646.7	4674.8	4685.6	4707.1	4720.3
35°	4325.9	4343.3	4376.4	4392.9	4389.6	4359.0	4344.9	4344.1
37.5°	4108.5	4133.3	4155.6	4153.1	4132.5	4087.0	4067.1	4058.0
40°	3922.4	3954.7	3972.0	3969.6	3943.9	3897.6	3887.7	3888.5
42.5°	3746.3	3775.3	3782.7	3767.0	3739.7	3707.5	3705.0	3700.0
45°	3574.3	3607.4	3616.5	3604.1	3582.6	3552.0	3541.3	3540.4
47.5°	3411.5	3447.8	3453.6	3441.2	3433.0	3412.3	3407.3	3401.5
50°	3256.8	3299.8	3303.2	3304.0	3294.9	3276.7	3275.0	3273.4
52.5°	3098.9	3137.0	3160.9	3194.0	3219.6	3221.3	3234.5	3235.4
55°	2943.5	3021.2	3084.0	3140.3	3173.3	3180.0	3194.0	3195.7
57.5°	2831.9	2931.1	3010.5	3071.6	3114.6	3131.2	3152.7	3155.1
60°	2729.3	2839.3	2917.9	2971.6	2998.1	3012.1	3024.5	3018.7
62.5°	2606.1	2696.3	2725.2	2708.7	2706.2	2707.8	2718.6	2712.0
65°	2382.9	2387.0	2399.4	2453.2	2485.4	2493.7	2507.7	2506.9
67.5°	2068.7	2135.7	2188.6	2252.3	2289.5	2299.4	2315.1	2313.4
70°	1831.4	1905.0	1953.8	2014.1	2043.9	2053.8	2070.4	2068.7
72.5°	1587.5	1644.5	1683.4	1728.9	1749.6	1759.5	1756.2	1753.7
75°	1318.8	1351.0	1366.7	1389.9	1391.5	1394.0	1386.6	1382.4
77.5°	1029.4	1031.9	1028.6	1031.9	1017.8	1008.7	994.7	985.6
80°	729.3	701.1	663.1	644.1	623.4	615.2	601.9	597.8
82.5°	480.4	465.5	439.9	425.0	409.3	396.0	386.1	381.2
85°	312.5	305.1	296.8	291.9	285.3	279.5	272.9	269.5
87.5°	220.8	215.8	208.4	204.2	198.4	193.5	186.9	184.4
90°	143.9	139.7	133.1	130.6	126.5	123.2	118.2	114.9
92.5°	110.0	104.2	100.0	96.7	92.6	88.5	84.3	82.7
95°	97.6	92.6	88.5	84.3	81.0	76.1	72.8	71.1
97.5°	129.8	123.2	117.4	114.9	112.4	105.8	103.4	101.7
100°	198.4	192.6	189.3	184.4	178.6	173.6	171.2	170.3
102.5°	368.8	365.5	350.6	339.8	319.2	301.8	296.0	294.3
105°	536.6	511.8	503.5	500.2	495.3	490.3	490.3	488.7
107.5°	748.3	758.2	760.7	755.7	729.3	707.8	697.8	694.5
110°	908.7	961.6	1002.1	1034.4	1038.5	1036.8	1037.7	1039.3



TEST NUMBER: P236513

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L850-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	959.1	1079.0	1165.0	1225.3	1255.9	1269.2	1279.1	1283.2
115°	850.8	942.6	1079.8	1267.5	1356.0	1405.6	1431.2	1440.3
117.5°	1076.5	1069.1	1032.7	1055.0	1129.4	1178.2	1206.3	1212.9
120°	1161.7	1232.0	1275.0	1284.1	1281.6	1250.2	1215.4	1204.7
122.5°	1023.6	1184.8	1307.2	1384.9	1439.5	1480.0	1511.4	1521.4
125°	949.2	1023.6	1116.2	1246.0	1356.8	1431.2	1482.5	1500.7
127.5°	994.7	1007.9	1031.9	1074.9	1126.1	1158.4	1189.0	1198.9
130°	972.3	1039.3	1071.6	1079.0	1067.4	1064.1	1065.8	1064.9
132.5°	921.9	980.6	1044.3	1088.9	1104.6	1108.8	1110.4	1110.4
135°	854.9	917.8	968.2	1011.2	1046.8	1060.8	1072.4	1075.7
137.5°	763.2	840.9	895.4	938.4	975.6	989.7	995.5	997.1
140°	589.5	699.5	797.9	854.9	897.9	915.3	921.9	923.6
142.5°	494.4	549.0	606.9	694.5	775.6	815.2	839.2	840.9
145°	449.0	465.5	496.9	539.9	577.1	601.9	624.2	634.2
147.5°	398.5	434.1	448.1	458.9	474.6	490.3	504.4	515.9
150°	358.8	374.5	396.9	424.2	437.4	443.2	449.8	442.3
152.5°	331.6	344.8	359.7	367.1	372.9	374.5	365.5	358.8
155°	325.8	320.8	329.9	338.2	339.8	336.5	313.4	305.9
157.5°	344.0	339.8	331.6	319.2	315.0	290.2	277.8	275.3
160°	385.3	360.5	334.0	329.1	311.7	291.0	285.3	282.8
162.5°	364.6	379.5	383.6	372.9	338.2	321.6	313.4	310.1
165°	328.2	334.0	338.2	340.7	337.3	328.2	324.9	324.1
167.5°	270.4	285.3	292.7	296.0	301.0	296.0	283.6	281.1
170°	211.7	223.2	229.0	234.0	247.2	247.2	237.3	229.9
172.5°	186.0	187.7	190.2	193.5	200.1	203.4	203.4	200.9
175°	164.5	163.7	163.7	166.2	171.2	176.1	180.2	184.4
177.5°	142.2	140.6	138.1	138.9	142.2	147.2	153.0	153.8
180°	143.0	143.0	143.0	143.0	143.0	143.0	143.0	143.0

(END OF REPORT)