

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: P236512

Luminaire Tested: **SKB4-LD5-18-N-UNV-L840-CD2-U outer 2 blades vertical inner 2 blades**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236512
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-L840-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) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

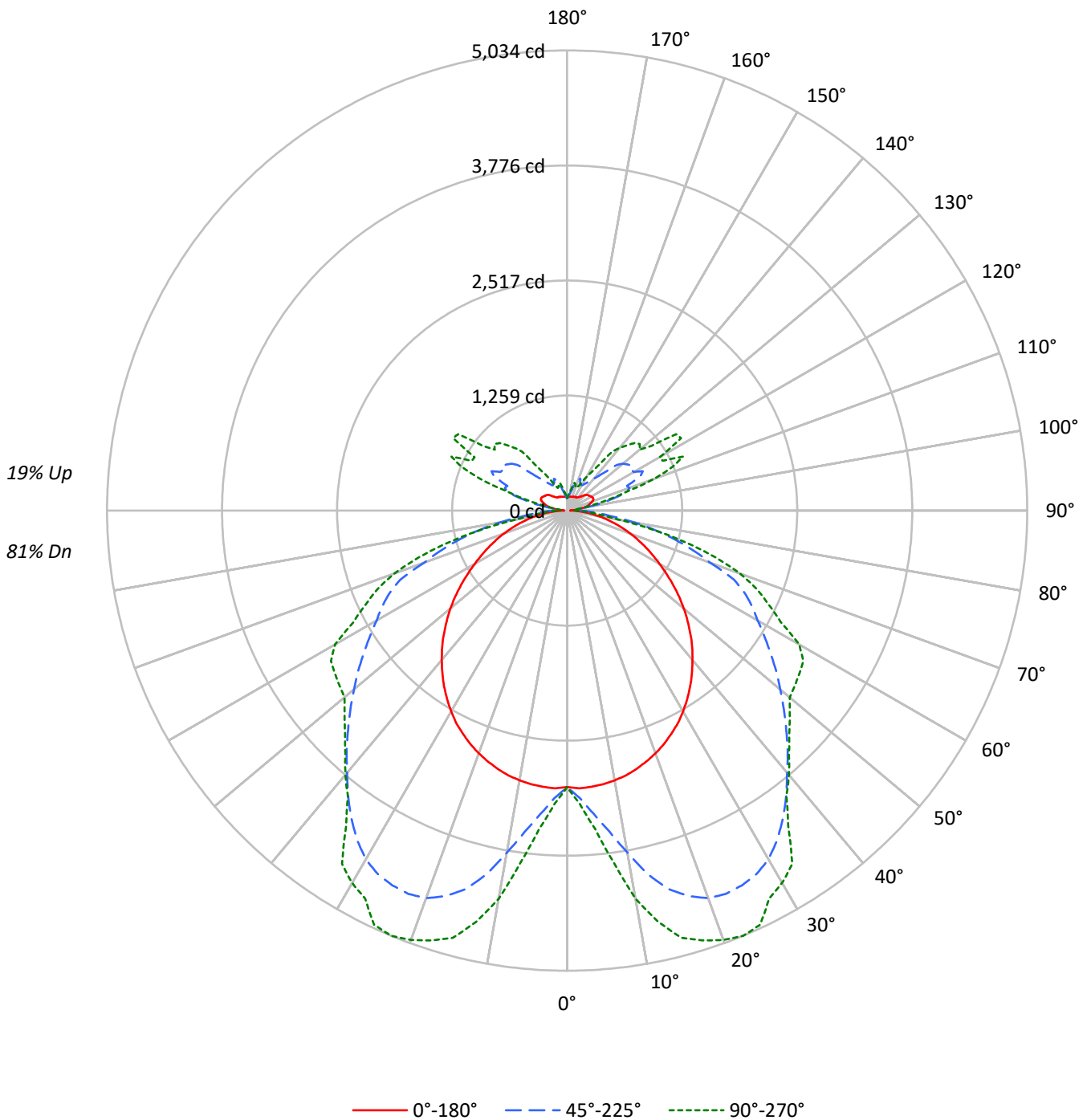
Lumens per Lamp: N/A
Luminaire Lumens: 17147.0 lumens
Efficiency: N/A
Efficacy: 119.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.79 / 1.74
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 143.4
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P236512

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U outer 2 blades vertical inner 2 blades

Luminous Intensity Polar Plot





TEST NUMBER: P236512

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U outer 2 blades vertical inner 2 blades

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°	4341	4341	4341
5°	4349	4749	4984
10°	4326	5427	6164
15°	4288	6177	6982
20°	4237	6614	7339
25°	4166	6797	7525
30°	4080	6844	7326
35°	3968	6670	6856
40°	3830	6395	6470
45°	3680	6167	6279
50°	3502	5973	6266
55°	3292	5827	6700
60°	3073	5759	7055
65°	2886	5846	6675
70°	2699	5307	6457
75°	2486	4717	5261
80°	2243	3710	2943
85°	1897	2457	1898



TEST NUMBER: P236512

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U outer 2 blades vertical inner 2 blades

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.6	1.9
10°-20°	1155.2	6.7
20°-30°	1944.4	11.3
30°-40°	2351.7	13.7
40°-50°	2393.2	14.0
50°-60°	2278.4	13.3
60°-70°	1930.8	11.3
70°-80°	1195.1	7.0
80°-90°	393.1	2.3
90°-100°	161.4	0.9
100°-110°	492.5	2.9
110°-120°	800.1	4.7
120°-130°	728.3	4.2
130°-140°	500.4	2.9
140°-150°	264.7	1.5
150°-160°	139.9	0.8
160°-170°	72.8	0.4
170°-180°	16.3	0.1
0°-30°	3428.2	20.0
0°-40°	5779.9	33.7
0°-60°	10451.4	61.0
0°-90°	13970.5	81.5
90°-120°	1454.0	8.5
90°-150°	2947.5	17.2
90°-180°	3177.0	18.5
0°-180°	17147.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3025	3025	3025	3025	3025	
5°	3033	3160	3330	3434	3493	288
15°	2926	3484	4286	4685	4839	825
25°	2695	3678	4524	4919	4998	1242
35°	2347	3383	4115	4257	4218	1466
45°	1907	2796	3389	3505	3437	1470
55°	1414	2152	2712	3022	3103	1265
65°	945	1592	2147	2356	2434	938
75°	535	1049	1217	1338	1342	568
85°	184	454	346	286	262	185
90°	35	253	165	128	112	29
95°	87	185	119	84	69	89
105°	247	437	549	487	474	257
115°	316	525	881	1140	1398	308
125°	288	420	856	1147	1457	258
135°	220	348	609	961	1044	174
145°	175	363	367	503	616	112
155°	165	274	334	324	297	77
165°	157	196	281	330	315	45
175°	150	150	159	160	179	14
180°	139	139	139	139	139	



TEST NUMBER: P236512

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8
2.5°	3041.6	3031.2	3028.0	3044.1	3068.9	3081.0	3095.4	3107.5	3124.3	3144.4	3165.3
5°	3032.8	3029.6	3044.9	3085.8	3136.4	3184.5	3235.1	3264.0	3295.3	3329.8	3365.2
7.5°	3020.0	3026.4	3064.1	3134.8	3228.7	3280.9	3340.3	3404.5	3477.5	3540.2	3614.0
10°	2995.9	3018.4	3081.8	3188.6	3278.5	3370.0	3472.7	3573.1	3687.1	3799.5	3909.4
12.5°	2967.8	3001.5	3101.1	3209.4	3337.1	3468.7	3613.2	3764.9	3926.3	4074.0	4212.1
15°	2926.1	2978.2	3103.5	3224.7	3396.5	3570.7	3762.5	3961.6	4147.8	4285.9	4421.6
17.5°	2878.7	2946.9	3083.4	3238.3	3448.6	3666.2	3907.8	4114.9	4288.3	4422.4	4559.7
20°	2826.5	2910.8	3055.3	3245.5	3495.2	3757.7	4007.4	4199.2	4363.8	4512.3	4647.2
22.5°	2764.7	2866.6	3020.0	3241.5	3529.7	3812.3	4049.9	4232.9	4410.4	4538.8	4652.0
25°	2694.9	2811.3	2974.2	3226.3	3545.8	3809.9	4046.7	4241.8	4389.5	4523.5	4642.3
27.5°	2623.4	2740.6	2918.8	3195.0	3523.3	3781.8	4021.8	4190.4	4345.3	4484.2	4614.3
30°	2535.9	2658.7	2846.6	3144.4	3458.3	3716.8	3944.8	4113.3	4267.5	4404.7	4517.9
32.5°	2444.4	2567.2	2760.7	3074.6	3372.4	3629.3	3836.4	4002.5	4146.2	4274.7	4372.6
35°	2347.3	2464.5	2664.4	2983.0	3264.8	3500.8	3712.8	3865.3	4006.6	4114.9	4180.0
37.5°	2242.1	2353.7	2560.0	2870.7	3148.4	3365.2	3567.5	3713.6	3840.4	3935.9	3983.3
40°	2133.7	2237.3	2445.2	2747.8	3007.9	3219.9	3402.9	3550.6	3663.0	3744.1	3784.2
42.5°	2025.4	2114.5	2324.0	2616.2	2851.4	3063.3	3241.5	3379.6	3492.0	3569.9	3615.6
45°	1907.4	1990.8	2199.6	2477.3	2694.1	2898.0	3075.4	3207.8	3311.4	3389.2	3442.2
47.5°	1787.7	1865.6	2070.3	2334.4	2536.7	2735.8	2906.0	3035.2	3140.4	3215.0	3281.7
50°	1665.7	1738.8	1936.3	2172.3	2373.8	2567.2	2732.6	2861.8	2963.8	3043.3	3112.3
52.5°	1541.3	1609.5	1797.4	2018.1	2213.2	2407.5	2560.8	2690.0	2793.6	2881.9	2958.2
55°	1413.7	1481.9	1667.3	1871.2	2060.7	2243.7	2396.2	2522.3	2625.0	2712.5	2800.0
57.5°	1287.6	1355.9	1538.9	1726.7	1916.2	2090.4	2239.7	2356.1	2460.5	2557.6	2653.9
60°	1167.2	1238.7	1413.7	1595.1	1773.3	1941.9	2088.0	2196.3	2297.5	2407.5	2537.5
62.5°	1054.0	1129.5	1293.2	1473.9	1644.9	1802.2	1933.0	2035.8	2146.6	2285.5	2418.7
65°	944.8	1024.3	1179.3	1355.9	1519.6	1664.9	1777.3	1877.7	2010.9	2147.4	2270.2
67.5°	839.7	920.8	1071.7	1241.1	1388.8	1524.4	1619.2	1734.8	1864.8	1975.6	1978.0
70°	735.3	820.4	968.9	1126.3	1261.9	1372.7	1480.3	1583.8	1652.9	1665.7	1724.3
72.5°	634.2	724.9	863.0	1008.3	1130.3	1234.6	1335.0	1364.7	1379.1	1445.8	1491.5
75°	535.4	627.8	760.2	889.5	996.2	1101.4	1128.7	1131.9	1172.8	1217.0	1246.7
77.5°	440.7	531.4	657.5	770.6	875.8	920.8	930.4	944.0	960.9	984.2	997.8
80°	351.6	438.3	553.1	657.5	723.3	753.8	759.4	755.4	749.0	742.6	732.1
82.5°	266.5	346.8	447.9	536.2	583.6	602.9	590.0	563.5	540.3	508.1	486.5
85°	183.8	253.7	342.0	408.6	451.1	456.0	432.7	404.6	376.5	346.0	321.1
87.5°	106.0	160.6	236.0	302.6	344.4	342.0	313.1	283.4	259.3	239.2	224.8
90°	35.3	83.5	155.7	216.7	255.3	251.3	226.4	202.3	183.0	164.6	150.1
92.5°	37.7	69.0	122.0	168.6	198.3	201.5	184.6	165.4	146.1	127.6	114.8
95°	86.7	105.2	142.1	173.4	185.4	184.6	171.8	154.1	136.5	118.8	104.4
97.5°	131.7	153.3	183.8	224.0	248.1	243.2	221.6	187.8	165.4	148.5	134.1
100°	178.2	211.1	234.4	278.6	313.9	333.9	325.1	299.4	277.8	250.5	215.1
102.5°	222.4	264.1	285.8	333.1	375.7	407.0	427.1	426.3	411.8	383.7	366.1
105°	247.2	296.2	315.5	370.9	422.3	451.1	478.4	519.4	550.7	549.1	537.0
107.5°	268.1	313.9	338.0	392.5	452.8	517.0	523.4	544.3	631.8	683.1	712.8
110°	296.2	337.2	359.6	410.2	486.5	535.4	615.7	613.3	611.7	725.7	826.8



TEST NUMBER: P236512

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-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°	310.7	348.4	364.5	410.2	496.1	560.3	619.7	719.3	732.1	707.2	765.8
115°	315.5	350.0	369.3	399.8	479.2	571.6	626.2	701.6	830.1	881.4	862.2
117.5°	313.1	344.4	381.3	386.9	450.3	565.1	643.8	692.8	779.5	932.0	1020.3
120°	304.2	329.1	390.9	369.3	426.3	533.8	642.2	718.5	761.8	843.7	991.4
122.5°	295.4	316.3	392.5	357.2	412.6	487.3	623.7	711.2	790.7	829.2	884.6
125°	288.2	305.0	389.3	356.4	387.7	452.0	560.3	694.4	775.5	855.7	897.5
127.5°	279.4	293.8	384.5	379.7	368.5	434.3	505.7	643.8	753.8	830.1	908.7
130°	266.5	280.2	374.1	403.0	350.8	403.0	461.6	549.9	705.6	797.1	870.2
132.5°	244.0	257.7	346.0	406.2	341.2	367.7	437.5	485.7	586.0	741.7	825.2
135°	220.0	233.6	310.7	387.7	351.6	343.6	389.3	447.9	508.1	609.3	755.4
137.5°	203.1	215.9	277.0	366.1	381.3	326.7	358.8	411.0	454.4	515.4	599.7
140°	189.5	202.3	246.4	349.2	390.1	334.7	335.6	370.1	420.6	453.6	504.1
142.5°	179.8	191.1	224.8	321.1	372.5	354.0	321.1	339.6	371.7	417.4	445.5
145°	175.0	183.0	211.9	289.8	348.4	378.1	331.5	317.1	341.2	366.9	408.6
147.5°	175.0	179.8	202.3	254.5	330.7	370.9	352.4	324.3	317.9	338.8	359.6
150°	174.2	177.4	198.3	228.8	302.6	346.0	381.3	334.7	323.5	317.1	331.5
152.5°	169.4	173.4	195.9	220.0	277.8	332.3	362.8	373.3	335.6	328.3	313.9
155°	165.4	168.6	189.5	211.9	245.6	303.4	337.2	364.5	367.7	333.9	333.1
157.5°	163.0	165.4	182.2	202.3	221.6	269.7	313.1	337.2	365.3	377.3	350.8
160°	160.6	162.2	176.6	192.7	211.1	235.2	278.6	312.3	334.7	355.6	377.3
162.5°	158.1	158.9	170.2	184.6	199.9	214.3	239.2	273.7	302.6	325.1	335.6
165°	157.3	157.3	164.6	178.2	189.5	202.3	214.3	232.0	256.9	281.0	300.2
167.5°	154.9	154.9	159.7	169.4	180.6	188.6	199.1	207.9	214.3	229.6	244.8
170°	153.3	153.3	155.7	161.4	169.4	177.4	183.8	189.5	195.1	199.9	202.3
172.5°	151.7	150.9	151.7	154.1	158.1	163.0	169.4	173.4	175.8	179.0	179.8
175°	150.1	149.3	149.3	149.3	150.1	150.9	153.3	154.9	155.7	158.9	160.6
177.5°	148.5	147.7	147.7	146.9	146.1	145.3	144.5	143.7	142.1	141.3	140.5
180°	138.9	138.9	138.9	138.9	138.9	138.9	138.9	138.9	138.9	138.9	138.9



TEST NUMBER: P236512

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8	3024.8
2.5°	3158.0	3174.1	3174.9	3186.1	3217.5	3221.5	3220.7	3213.4
5°	3376.4	3408.5	3422.2	3446.2	3488.0	3496.8	3500.0	3492.8
7.5°	3651.7	3712.0	3749.7	3789.0	3846.0	3874.9	3883.7	3878.1
10°	3984.9	4079.6	4142.2	4203.2	4278.7	4302.0	4319.6	4312.4
12.5°	4285.9	4371.0	4434.4	4508.3	4574.9	4597.4	4609.4	4607.8
15°	4493.8	4584.5	4651.2	4719.4	4790.1	4819.8	4839.0	4839.0
17.5°	4641.5	4734.7	4770.8	4839.0	4888.0	4907.3	4927.3	4929.7
20°	4709.0	4775.6	4831.0	4900.8	4960.2	4978.7	4998.0	4999.6
22.5°	4730.7	4801.3	4867.9	4946.6	5004.4	5019.6	5036.5	5034.1
25°	4724.2	4802.9	4879.2	4958.6	5011.6	5006.0	5016.4	4998.0
27.5°	4693.7	4753.1	4795.7	4819.0	4813.3	4789.3	4786.8	4785.2
30°	4569.3	4599.0	4632.7	4658.4	4676.9	4680.1	4700.1	4704.2
32.5°	4403.1	4435.2	4473.8	4511.5	4538.8	4549.2	4570.1	4582.9
35°	4200.0	4216.9	4249.0	4265.1	4261.8	4232.1	4218.5	4217.7
37.5°	3988.9	4013.0	4034.7	4032.3	4012.2	3968.0	3948.8	3939.9
40°	3808.3	3839.6	3856.4	3854.0	3829.2	3784.2	3774.6	3775.4
42.5°	3637.3	3665.4	3672.6	3657.4	3630.9	3599.6	3597.2	3592.3
45°	3470.3	3502.4	3511.3	3499.2	3478.3	3448.6	3438.2	3437.4
47.5°	3312.2	3347.5	3353.1	3341.1	3333.0	3313.0	3308.2	3302.5
50°	3162.1	3203.8	3207.0	3207.8	3199.0	3181.3	3179.7	3178.1
52.5°	3008.7	3045.7	3068.9	3101.1	3125.9	3127.5	3140.4	3141.2
55°	2857.8	2933.3	2994.3	3048.9	3081.0	3087.4	3101.1	3102.7
57.5°	2749.4	2845.8	2922.8	2982.2	3024.0	3040.0	3060.9	3063.3
60°	2649.9	2756.7	2832.9	2885.1	2910.8	2924.4	2936.5	2930.9
62.5°	2530.3	2617.8	2645.9	2629.8	2627.4	2629.0	2639.5	2633.0
65°	2313.5	2317.6	2329.6	2381.8	2413.1	2421.1	2434.8	2434.0
67.5°	2008.5	2073.5	2124.9	2186.7	2222.8	2232.5	2247.7	2246.1
70°	1778.1	1849.6	1896.9	1955.5	1984.4	1994.0	2010.1	2008.5
72.5°	1541.3	1596.7	1634.4	1678.6	1698.6	1708.3	1705.1	1702.6
75°	1280.4	1311.7	1327.0	1349.4	1351.0	1353.4	1346.2	1342.2
77.5°	999.4	1001.8	998.6	1001.8	988.2	979.4	965.7	956.9
80°	708.0	680.7	643.8	625.3	605.3	597.3	584.4	580.4
82.5°	466.4	452.0	427.1	412.6	397.4	384.5	374.9	370.1
85°	303.4	296.2	288.2	283.4	277.0	271.3	264.9	261.7
87.5°	214.3	209.5	202.3	198.3	192.7	187.8	181.4	179.0
90°	139.7	135.7	129.2	126.8	122.8	119.6	114.8	111.6
92.5°	106.8	101.1	97.1	93.9	89.9	85.9	81.9	80.3
95°	94.7	89.9	85.9	81.9	78.7	73.9	70.6	69.0
97.5°	126.0	119.6	114.0	111.6	109.2	102.8	100.3	98.7
100°	192.7	187.0	183.8	179.0	173.4	168.6	166.2	165.4
102.5°	358.0	354.8	340.4	329.9	309.9	293.0	287.4	285.8
105°	521.0	496.9	488.9	485.7	480.9	476.0	476.0	474.4
107.5°	726.5	736.1	738.5	733.7	708.0	687.2	677.5	674.3
110°	882.2	933.6	972.9	1004.2	1008.3	1006.7	1007.5	1009.1



TEST NUMBER: P236512

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L840-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	931.2	1047.6	1131.1	1189.7	1219.4	1232.2	1241.9	1245.9
115°	826.0	915.1	1048.4	1230.6	1316.5	1364.7	1389.6	1398.4
117.5°	1045.2	1038.0	1002.6	1024.3	1096.6	1143.9	1171.2	1177.6
120°	1127.9	1196.1	1237.9	1246.7	1244.3	1213.8	1180.1	1169.6
122.5°	993.8	1150.4	1269.2	1344.6	1397.6	1436.9	1467.4	1477.1
125°	921.6	993.8	1083.7	1209.8	1317.3	1389.6	1439.3	1457.0
127.5°	965.7	978.6	1001.8	1043.6	1093.4	1124.7	1154.4	1164.0
130°	944.0	1009.1	1040.4	1047.6	1036.4	1033.1	1034.8	1034.0
132.5°	895.1	952.1	1013.9	1057.2	1072.5	1076.5	1078.1	1078.1
135°	830.1	891.1	940.0	981.8	1016.3	1029.9	1041.2	1044.4
137.5°	740.9	816.4	869.4	911.1	947.3	960.9	966.5	968.1
140°	572.4	679.1	774.7	830.1	871.8	888.7	895.1	896.7
142.5°	480.0	533.0	589.2	674.3	753.0	791.5	814.8	816.4
145°	435.9	452.0	482.5	524.2	560.3	584.4	606.1	615.7
147.5°	386.9	421.4	435.1	445.5	460.8	476.0	489.7	500.9
150°	348.4	363.6	385.3	411.8	424.7	430.3	436.7	429.5
152.5°	321.9	334.7	349.2	356.4	362.0	363.6	354.8	348.4
155°	316.3	311.5	320.3	328.3	329.9	326.7	304.2	297.0
157.5°	333.9	329.9	321.9	309.9	305.9	281.8	269.7	267.3
160°	374.1	350.0	324.3	319.5	302.6	282.6	277.0	274.5
162.5°	354.0	368.5	372.5	362.0	328.3	312.3	304.2	301.0
165°	318.7	324.3	328.3	330.7	327.5	318.7	315.5	314.7
167.5°	262.5	277.0	284.2	287.4	292.2	287.4	275.3	272.9
170°	205.5	216.7	222.4	227.2	240.0	240.0	230.4	223.2
172.5°	180.6	182.2	184.6	187.8	194.3	197.5	197.5	195.1
175°	159.7	158.9	158.9	161.4	166.2	171.0	175.0	179.0
177.5°	138.1	136.5	134.1	134.9	138.1	142.9	148.5	149.3
180°	138.9	138.9	138.9	138.9	138.9	138.9	138.9	138.9

(END OF REPORT)