

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: P236431

Luminaire Tested: **SKB2-LD5-12-N-UNV-L840-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236431
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24070)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB2-LD5-12-N-UNV-L840-CD2-U all blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
2 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES
Light Source: (476) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

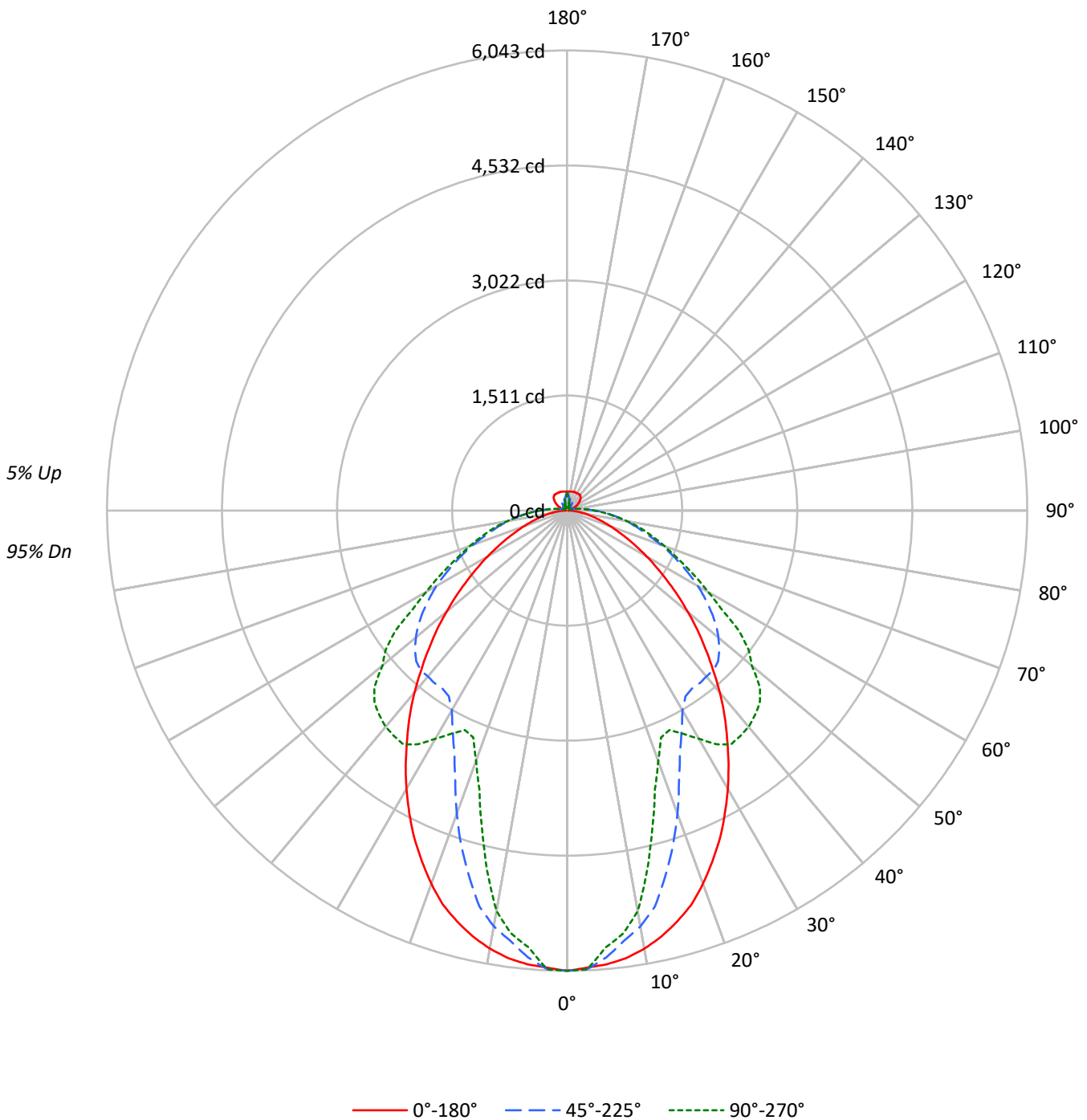
Lumens per Lamp: N/A
Luminaire Lumens: 13599.0 lumens
Efficiency: N/A
Efficacy: 129.6 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 0.7 / 1.06
Luminous Opening: Rectangular w/ Sides (W: 1.25' x L: 2' x H: 0.21')
CIE Type: Direct

Input Watts (W): 104.9
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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CATALOG NUMBER: SKB2-LD5-12-N-UNV-L840-CD2-U all blades tilted out 20 degrees

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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	95
1	107	102	97	93	103	99	95	91	94	90	87	89	86	84	84	82	80	78
2	97	89	82	76	94	86	80	74	82	77	72	78	73	69	74	70	67	65
3	89	78	70	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55
4	81	69	60	54	79	68	59	53	64	57	52	61	55	51	59	54	49	47
5	75	62	53	47	72	61	52	46	58	51	45	55	49	44	53	48	43	41
6	69	56	47	41	67	55	46	40	52	45	40	50	44	39	48	43	38	36
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	44	38	34	32
8	60	47	38	32	58	46	38	32	44	37	32	42	36	31	41	35	31	29
9	56	43	35	29	55	42	34	29	41	34	29	39	33	28	38	32	28	26
10	53	40	32	27	51	39	32	27	38	31	26	36	30	26	35	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26020	26020	26020
5°	25617	25037	24549
10°	25078	23441	22684
15°	24228	21091	18434
20°	23022	18156	15097
25°	21516	15283	14009
30°	19800	13552	15686
35°	17939	13236	17646
40°	16133	13775	18282
45°	14177	14318	18665
50°	12319	14141	17690
55°	10483	13597	16695
60°	8807	12806	14286
65°	7256	11805	12746
70°	5928	10780	11703
75°	4805	9862	10992
80°	3794	9336	10118
85°	2713	8698	9336



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	553.2	4.1
10°-20°	1386.3	10.2
20°-30°	1751.3	12.9
30°-40°	2074.3	15.3
40°-50°	2212.3	16.3
50°-60°	1951.8	14.4
60°-70°	1442.2	10.6
70°-80°	958.3	7.0
80°-90°	544.0	4.0
90°-100°	217.2	1.6
100°-110°	87.2	0.6
110°-120°	76.3	0.6
120°-130°	80.0	0.6
130°-140°	77.7	0.6
140°-150°	67.6	0.5
150°-160°	59.8	0.4
160°-170°	40.6	0.3
170°-180°	19.0	0.1
0°-30°	3690.8	27.1
0°-40°	5765.1	42.4
0°-60°	9929.1	73.0
0°-90°	12873.7	94.7
90°-120°	380.7	2.8
90°-150°	606.0	4.5
90°-180°	725.0	5.3
0°-180°	13599.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6043	6043	6043	6043	6043	
5°	5981	6011	5890	5805	5763	567
15°	5587	5400	4974	4537	4320	1569
25°	4749	4360	3504	3159	3178	2178
35°	3662	3186	2856	3493	3749	2291
45°	2571	2244	2802	3394	3576	1987
55°	1604	1609	2307	2643	2753	1444
65°	871	1119	1635	1763	1698	874
75°	401	753	1016	1102	1072	432
85°	120	490	562	576	549	124
90°	22	313	361	376	357	18
95°	28	175	218	239	225	24
105°	62	86	68	68	61	67
115°	120	111	58	48	37	121
125°	192	158	66	55	42	171
135°	250	146	65	62	47	191
145°	264	100	111	53	43	166
155°	261	165	105	123	112	121
165°	257	181	152	63	36	73
175°	252	239	199	166	172	24
180°	232	232	232	232	232	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4
2.5°	6007.5	6018.6	6047.6	6064.2	6051.7	6039.3	6039.3	6062.8	6026.9	6029.6	6011.6
5°	5981.2	5992.3	6018.6	6035.1	6021.3	6000.6	5979.8	5977.1	5914.8	5889.9	5829.1
7.5°	5927.3	5935.6	5960.5	5963.2	5919.0	5863.7	5813.9	5794.5	5725.4	5701.9	5664.5
10°	5841.5	5847.1	5856.7	5833.2	5765.5	5699.1	5659.0	5642.4	5576.0	5542.8	5487.5
12.5°	5726.8	5725.4	5715.7	5672.8	5605.1	5547.0	5501.3	5461.2	5378.3	5325.7	5238.6
15°	5587.1	5580.2	5548.4	5504.1	5436.3	5363.0	5288.4	5220.6	5083.7	4974.4	4845.8
17.5°	5425.3	5405.9	5364.4	5316.0	5231.7	5129.3	5017.3	4891.5	4740.7	4617.6	4458.6
20°	5215.1	5201.2	5158.4	5104.4	4989.6	4855.5	4708.9	4580.3	4406.0	4238.7	4046.5
22.5°	4984.1	4975.8	4931.6	4863.8	4728.3	4559.6	4421.3	4256.7	4042.3	3837.7	3671.7
25°	4749.0	4729.7	4686.8	4602.4	4444.8	4276.0	4112.9	3905.4	3667.6	3504.4	3389.6
27.5°	4486.3	4476.6	4426.8	4330.0	4159.9	3985.6	3790.6	3552.8	3374.4	3251.3	3146.2
30°	4222.1	4208.3	4157.1	4046.5	3872.2	3675.9	3460.1	3273.4	3136.5	3027.3	2987.1
32.5°	3944.1	3937.2	3881.9	3756.1	3591.5	3375.8	3173.8	3042.5	2926.3	2891.7	2960.9
35°	3662.0	3663.4	3603.9	3473.9	3295.5	3075.7	2938.7	2830.9	2779.7	2855.8	2998.2
37.5°	3396.5	3386.8	3321.8	3196.0	3003.7	2826.7	2734.1	2658.0	2718.9	2858.5	3023.1
40°	3121.3	3113.0	3036.9	2912.5	2723.0	2616.5	2523.9	2552.9	2680.1	2844.7	3059.1
42.5°	2836.4	2839.2	2760.3	2637.3	2481.0	2414.6	2381.4	2475.5	2633.1	2843.3	3049.4
45°	2570.9	2569.5	2494.8	2373.1	2270.8	2218.2	2258.3	2402.2	2586.1	2801.8	2976.1
47.5°	2320.6	2305.4	2237.6	2129.7	2084.1	2060.6	2156.0	2313.7	2523.9	2710.6	2884.8
50°	2067.5	2050.9	1997.0	1915.4	1894.6	1914.0	2044.0	2230.7	2427.1	2593.0	2765.9
52.5°	1829.6	1813.0	1768.8	1725.9	1717.6	1782.6	1932.0	2128.3	2297.1	2463.0	2609.6
55°	1604.2	1590.4	1557.2	1547.5	1562.7	1655.4	1822.7	1998.3	2161.5	2306.7	2442.3
57.5°	1398.2	1384.3	1363.6	1376.0	1414.7	1530.9	1701.0	1864.2	2012.2	2147.7	2262.5
60°	1207.3	1196.2	1194.9	1214.2	1284.8	1414.7	1572.4	1724.5	1855.9	1980.4	2073.0
62.5°	1028.9	1023.4	1038.6	1077.3	1165.8	1298.6	1439.6	1580.7	1696.9	1806.1	1884.9
65°	871.3	868.5	894.8	950.1	1053.8	1183.8	1316.6	1434.1	1536.4	1634.6	1702.4
67.5°	730.2	731.6	763.4	839.4	955.6	1077.3	1192.1	1295.8	1389.9	1468.7	1515.7
70°	605.7	611.3	651.4	746.8	867.1	975.0	1073.2	1171.3	1247.4	1306.9	1345.6
72.5°	497.9	506.2	561.5	668.0	785.5	878.2	970.8	1051.0	1110.5	1150.6	1183.8
75°	401.1	413.5	484.0	600.2	709.4	796.6	875.4	934.9	977.7	1016.5	1051.0
77.5°	316.7	329.1	423.2	542.1	641.7	723.3	778.6	831.1	867.1	897.5	928.0
80°	243.4	260.0	372.0	484.0	585.0	645.8	697.0	737.1	762.0	785.5	810.4
82.5°	178.4	207.4	325.0	438.4	521.4	585.0	620.9	645.8	662.4	677.6	687.3
85°	120.3	168.7	282.1	384.5	466.1	514.5	538.0	547.6	553.2	561.5	569.8
87.5°	73.3	134.1	242.0	330.5	391.4	427.3	442.5	449.5	456.4	464.7	470.2
90°	22.1	94.0	186.7	253.1	298.7	327.8	341.6	347.1	352.6	360.9	366.5
92.5°	16.6	59.5	124.5	182.5	226.8	254.5	264.1	269.7	276.6	283.5	287.7
95°	27.7	49.8	80.2	125.8	163.2	186.7	197.8	207.4	213.0	218.5	222.7
97.5°	31.8	60.8	69.1	95.4	121.7	141.1	148.0	150.7	152.1	154.9	164.6
100°	40.1	76.1	84.4	83.0	99.6	112.0	113.4	114.8	113.4	114.8	117.5
102.5°	52.6	87.1	99.6	89.9	89.9	95.4	96.8	92.7	87.1	84.4	84.4
105°	62.2	94.0	112.0	105.1	84.4	87.1	85.7	83.0	76.1	67.8	66.4
107.5°	74.7	99.6	131.4	114.8	98.2	80.2	80.2	77.4	70.5	63.6	58.1
110°	92.7	107.9	146.6	121.7	109.3	87.1	77.4	73.3	69.1	62.2	56.7



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CATALOG NUMBER: SKB2-LD5-12-N-UNV-L840-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	105.1	114.8	141.1	134.1	116.2	95.4	77.4	71.9	65.0	62.2	58.1
115°	120.3	121.7	134.1	152.1	118.9	103.7	83.0	70.5	67.8	58.1	56.7
117.5°	138.3	130.0	124.5	181.2	127.2	107.9	92.7	74.7	63.6	65.0	55.3
120°	156.3	139.7	118.9	178.4	141.1	110.6	98.2	83.0	66.4	58.1	62.2
122.5°	174.3	150.7	128.6	166.0	159.0	116.2	99.6	88.5	73.3	60.8	53.9
125°	192.2	163.2	145.2	150.7	188.1	127.2	99.6	91.3	80.2	66.4	55.3
127.5°	208.8	175.6	166.0	134.1	181.2	139.7	105.1	87.1	81.6	71.9	62.2
130°	225.4	188.1	188.1	117.5	166.0	161.8	112.0	87.1	77.4	73.3	67.8
132.5°	237.9	195.0	193.6	107.9	149.4	174.3	121.7	91.3	73.3	67.8	67.8
135°	250.3	200.5	193.6	123.1	130.0	161.8	142.4	99.6	76.1	65.0	63.6
137.5°	257.2	204.7	192.2	143.8	107.9	146.6	160.4	110.6	83.0	67.8	60.8
140°	262.8	207.4	193.6	167.3	87.1	131.4	149.4	150.7	94.0	74.7	63.6
142.5°	264.1	211.6	195.0	186.7	94.0	110.6	136.9	146.6	120.3	83.0	69.1
145°	264.1	218.5	196.4	186.7	114.8	84.4	123.1	135.5	141.1	110.6	78.8
147.5°	264.1	224.0	195.0	179.8	141.1	74.7	102.3	124.5	132.8	134.1	113.4
150°	261.4	229.6	193.6	181.2	170.1	94.0	73.3	109.3	123.1	127.2	127.2
152.5°	261.4	235.1	193.6	185.3	174.3	123.1	71.9	81.6	110.6	120.3	121.7
155°	261.4	242.0	195.0	188.1	171.5	159.0	96.8	62.2	80.2	105.1	114.8
157.5°	261.4	247.5	199.1	189.5	178.4	166.0	135.5	85.7	58.1	69.1	94.0
160°	261.4	250.3	206.1	189.5	181.2	168.7	161.8	127.2	85.7	60.8	52.6
162.5°	258.6	251.7	218.5	190.8	182.5	174.3	163.2	157.7	136.9	96.8	71.9
165°	257.2	253.1	229.6	199.1	183.9	178.4	172.9	163.2	156.3	152.1	128.6
167.5°	255.8	253.1	242.0	215.7	192.2	179.8	177.0	172.9	164.6	156.3	153.5
170°	254.5	253.1	246.2	232.3	211.6	190.8	181.2	174.3	170.1	166.0	161.8
172.5°	253.1	251.7	248.9	243.4	232.3	215.7	201.9	188.1	178.4	171.5	166.0
175°	251.7	251.7	250.3	247.5	243.4	235.1	229.6	219.9	208.8	199.1	189.5
177.5°	251.7	250.3	250.3	250.3	246.2	242.0	240.6	236.5	229.6	225.4	219.9
180°	232.3	232.3	232.3	232.3	232.3	232.3	232.3	232.3	232.3	232.3	232.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4	6043.4
2.5°	6007.5	6040.7	6051.7	6029.6	6024.1	6039.3	6040.7	6029.6
5°	5805.6	5819.4	5818.0	5791.8	5776.5	5776.5	5768.2	5762.7
7.5°	5650.7	5668.7	5665.9	5638.2	5621.6	5624.4	5617.5	5606.4
10°	5461.2	5468.1	5454.3	5417.0	5382.4	5372.7	5364.4	5340.9
12.5°	5157.0	5115.5	5057.4	4992.4	4939.9	4915.0	4880.4	4848.6
15°	4744.9	4670.2	4580.3	4493.2	4428.2	4377.0	4352.1	4320.3
17.5°	4323.1	4229.0	4103.2	4003.6	3931.7	3886.1	3863.9	3836.3
20°	3894.4	3790.6	3691.1	3619.2	3568.0	3544.5	3518.2	3494.7
22.5°	3558.3	3482.2	3396.5	3334.3	3285.9	3255.4	3231.9	3223.6
25°	3296.9	3220.9	3165.5	3153.1	3151.7	3162.8	3169.7	3178.0
27.5°	3090.9	3092.3	3124.1	3179.4	3229.2	3267.9	3295.5	3305.2
30°	3031.4	3128.2	3214.0	3295.5	3366.1	3413.1	3446.3	3458.7
32.5°	3086.7	3222.2	3320.4	3413.1	3508.5	3577.7	3624.7	3638.5
35°	3151.7	3294.2	3438.0	3548.6	3639.9	3703.5	3736.7	3749.1
37.5°	3218.1	3381.3	3501.6	3590.1	3649.6	3695.2	3724.3	3732.6
40°	3254.1	3381.3	3469.8	3562.5	3633.0	3673.1	3699.4	3707.7
42.5°	3211.2	3330.1	3433.8	3515.4	3579.0	3616.4	3642.7	3648.2
45°	3137.9	3256.8	3356.4	3432.5	3493.3	3537.6	3566.6	3576.3
47.5°	3034.2	3147.6	3238.8	3326.0	3382.7	3408.9	3422.8	3435.2
50°	2886.2	2991.3	3072.9	3135.1	3161.4	3157.3	3155.9	3165.5
52.5°	2727.2	2817.0	2865.5	2912.5	2941.5	2963.6	2985.8	3003.7
55°	2540.5	2597.2	2626.2	2659.4	2687.1	2711.9	2739.6	2753.4
57.5°	2334.4	2375.9	2398.0	2421.5	2424.3	2416.0	2399.4	2398.0
60°	2132.5	2164.3	2183.7	2196.1	2189.2	2171.2	2146.3	2138.0
62.5°	1934.7	1961.0	1970.7	1973.5	1959.6	1938.9	1922.3	1918.1
65°	1738.4	1763.2	1764.6	1761.9	1743.9	1717.6	1703.8	1698.2
67.5°	1550.3	1573.8	1575.2	1565.5	1546.1	1526.8	1517.1	1517.1
70°	1374.6	1395.4	1399.5	1389.9	1377.4	1366.3	1356.7	1355.3
72.5°	1214.2	1237.7	1246.0	1237.7	1229.4	1215.6	1207.3	1208.7
75°	1082.8	1099.4	1103.6	1100.8	1091.1	1080.1	1074.5	1071.8
77.5°	948.7	962.5	968.1	966.7	958.4	945.9	940.4	936.3
80°	829.8	838.1	840.8	832.5	821.5	803.5	798.0	793.8
82.5°	695.6	699.8	697.0	691.5	683.2	668.0	662.4	661.0
85°	575.3	579.5	578.1	573.9	568.4	554.6	551.8	549.0
87.5°	474.3	481.3	479.9	478.5	471.6	460.5	456.4	453.6
90°	372.0	377.5	380.3	372.0	370.6	363.7	358.2	356.8
92.5°	291.8	297.3	298.7	294.6	289.0	283.5	279.4	276.6
95°	228.2	235.1	239.2	237.9	236.5	231.0	228.2	225.4
97.5°	174.3	181.2	185.3	185.3	182.5	178.4	177.0	174.3
100°	120.3	125.8	128.6	127.2	127.2	128.6	128.6	127.2
102.5°	87.1	89.9	92.7	92.7	91.3	89.9	88.5	85.7
105°	66.4	66.4	67.8	67.8	66.4	65.0	62.2	60.8
107.5°	53.9	52.6	52.6	51.2	49.8	48.4	45.6	42.9
110°	53.9	49.8	47.0	44.3	41.5	38.7	36.0	34.6



TEST NUMBER: P236431

CATALOG NUMBER: SKB2-LD5-12-N-UNV-L840-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	53.9	51.2	47.0	44.3	41.5	38.7	36.0	33.2
115°	56.7	53.9	49.8	47.0	45.6	42.9	38.7	37.3
117.5°	51.2	51.2	51.2	51.2	49.8	47.0	44.3	41.5
120°	55.3	48.4	45.6	45.6	45.6	44.3	42.9	41.5
122.5°	51.2	58.1	51.2	45.6	41.5	38.7	34.6	33.2
125°	51.2	48.4	52.6	58.1	53.9	49.8	44.3	41.5
127.5°	52.6	49.8	48.4	47.0	44.3	45.6	45.6	45.6
130°	60.8	55.3	49.8	48.4	47.0	44.3	41.5	38.7
132.5°	66.4	62.2	58.1	53.9	49.8	45.6	41.5	38.7
135°	65.0	65.0	63.6	60.8	56.7	53.9	49.8	47.0
137.5°	59.5	62.2	62.2	62.2	60.8	59.5	55.3	53.9
140°	56.7	55.3	56.7	59.5	59.5	58.1	55.3	53.9
142.5°	59.5	55.3	52.6	51.2	51.2	51.2	49.8	48.4
145°	67.8	59.5	53.9	51.2	48.4	45.6	44.3	42.9
147.5°	76.1	67.8	60.8	56.7	51.2	48.4	45.6	42.9
150°	127.2	85.7	70.5	65.0	60.8	55.3	52.6	48.4
152.5°	123.1	125.8	125.8	99.6	71.9	63.6	58.1	55.3
155°	117.5	120.3	123.1	123.1	121.7	120.3	114.8	112.0
157.5°	107.9	114.8	117.5	117.5	117.5	114.8	112.0	109.3
160°	73.3	92.7	103.7	109.3	112.0	109.3	107.9	105.1
162.5°	55.3	49.8	59.5	71.9	80.2	83.0	81.6	83.0
165°	101.0	83.0	69.1	56.7	51.2	45.6	40.1	36.0
167.5°	153.5	150.7	138.3	124.5	114.8	110.6	98.2	94.0
170°	156.3	156.3	156.3	159.0	164.6	170.1	168.7	167.3
172.5°	161.8	160.4	161.8	163.2	164.6	171.5	171.5	168.7
175°	179.8	171.5	168.7	163.2	164.6	170.1	171.5	171.5
177.5°	214.4	208.8	200.5	195.0	195.0	199.1	207.4	190.8
180°	232.3	232.3	232.3	232.3	232.3	232.3	232.3	232.3

(END OF REPORT)