

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: P236438

Luminaire Tested: **SKB2-LD5-18-N-UNV-L850-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236438
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-LD5-18-N-UNV-L850-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) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

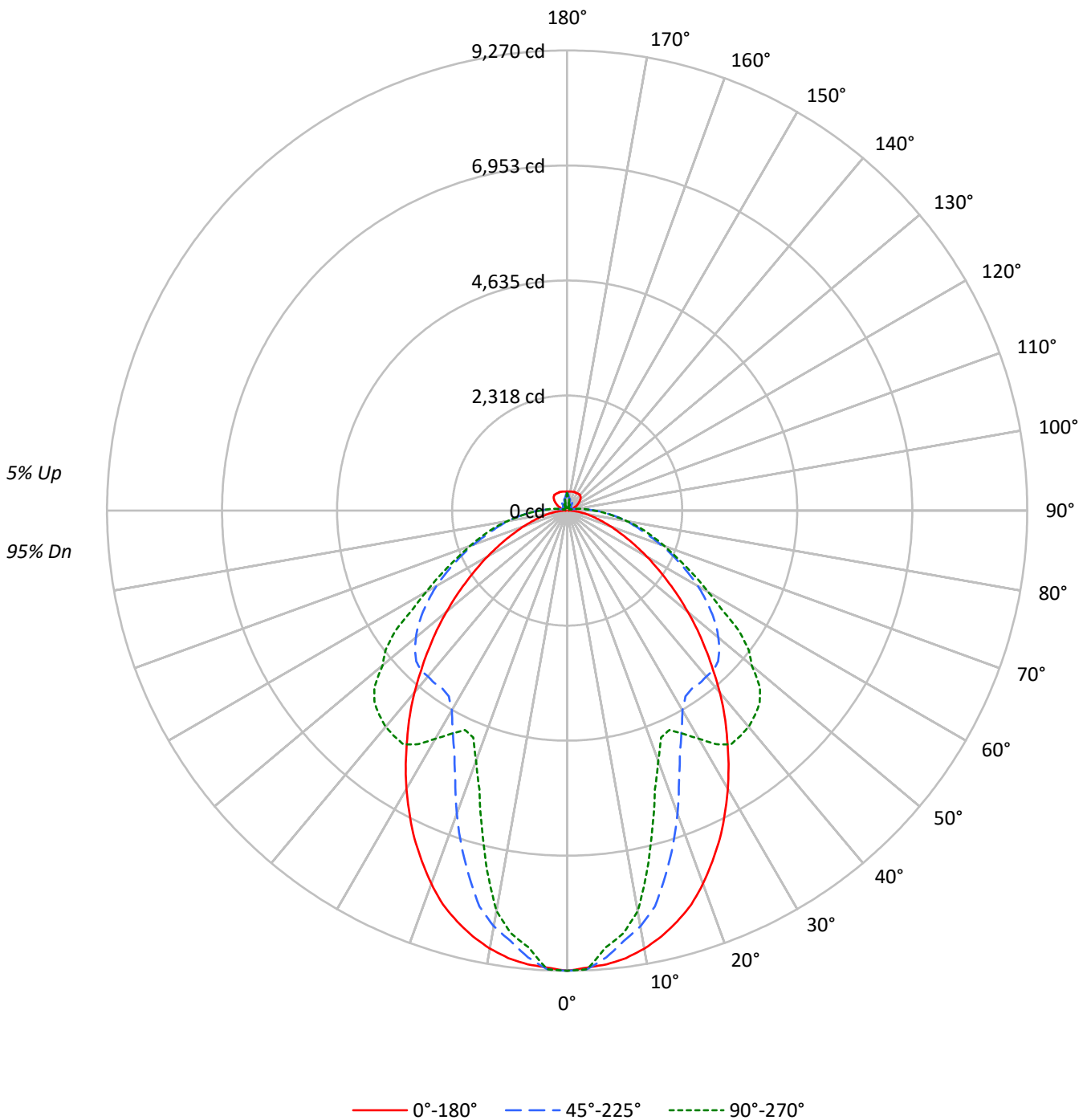
Lumens per Lamp: N/A
Luminaire Lumens: 20860.0 lumens
Efficiency: N/A
Efficacy: 123.8 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 0.7 / 1.06
Luminous Opening: Rectangular w/ Sides (W: 1.25' x L: 2' x H: 0.21')
CIE Type: Direct

Input Watts (W): 168.5
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: SKB2-LD5-18-N-UNV-L850-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	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						95		
1	107	102	97	93	103	99	95	91	94	90	87	89	86	84	84	82	80	78						78		
2	97	89	82	76	94	86	80	74	82	77	72	78	73	69	74	70	67	65						65		
3	89	78	70	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55						55		
4	81	69	60	54	79	68	59	53	64	57	52	61	55	51	59	54	49	47						47		
5	75	62	53	47	72	61	52	46	58	51	45	55	49	44	53	48	43	41						41		
6	69	56	47	41	67	55	46	40	52	45	40	50	44	39	48	43	38	36						36		
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	44	38	34	32						32		
8	60	47	38	32	58	46	38	32	44	37	32	42	36	31	41	35	31	29						29		
9	56	43	35	29	55	42	34	29	41	34	29	39	33	28	38	32	28	26						26		
10	53	40	32	27	51	39	32	27	38	31	26	36	30	26	35	30	25	24						24		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	39914	39914	39914
5°	39295	38405	37656
10°	38469	35958	34795
15°	37164	32352	28277
20°	35314	27850	23157
25°	33004	23444	21489
30°	30372	20788	24062
35°	27518	20303	27069
40°	24747	21130	28044
45°	21747	21963	28631
50°	18897	21692	27135
55°	16080	20857	25609
60°	13510	19643	21915
65°	11129	18108	19551
70°	9094	16536	17951
75°	7369	15127	16861
80°	5820	14321	15520
85°	4163	13343	14322



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	848.6	4.1
10°-20°	2126.4	10.2
20°-30°	2686.4	12.9
30°-40°	3181.9	15.3
40°-50°	3393.5	16.3
50°-60°	2993.9	14.4
60°-70°	2212.2	10.6
70°-80°	1470.0	7.0
80°-90°	834.5	4.0
90°-100°	333.2	1.6
100°-110°	133.7	0.6
110°-120°	117.0	0.6
120°-130°	122.7	0.6
130°-140°	119.1	0.6
140°-150°	103.7	0.5
150°-160°	91.7	0.4
160°-170°	62.2	0.3
170°-180°	29.1	0.1
0°-30°	5661.4	27.1
0°-40°	8843.3	42.4
0°-60°	15230.6	73.0
0°-90°	19747.4	94.7
90°-120°	584.0	2.8
90°-150°	929.6	4.5
90°-180°	1113.0	5.3
0°-180°	20860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9270	9270	9270	9270	9270	
5°	9175	9220	9035	8904	8840	869
15°	8570	8283	7630	6959	6627	2407
25°	7285	6689	5376	4846	4875	3341
35°	5617	4887	4381	5359	5751	3514
45°	3944	3443	4298	5207	5486	3049
55°	2461	2468	3538	4054	4224	2214
65°	1336	1716	2507	2705	2605	1340
75°	615	1155	1559	1691	1644	663
85°	185	752	861	884	842	191
90°	34	480	554	577	547	28
95°	42	268	335	366	346	37
105°	96	132	104	104	93	104
115°	185	171	89	74	57	185
125°	295	242	102	85	64	263
135°	384	224	100	95	72	293
145°	405	153	170	81	66	254
155°	401	254	161	189	172	186
165°	395	278	233	97	55	112
175°	386	367	306	255	263	37
180°	356	356	356	356	356	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3
2.5°	9215.1	9232.1	9276.6	9302.1	9283.0	9263.9	9263.9	9300.0	9244.8	9249.0	9221.5
5°	9174.8	9191.8	9232.1	9257.5	9236.3	9204.5	9172.7	9168.4	9073.0	9034.8	8941.5
7.5°	9092.1	9104.8	9143.0	9147.2	9079.3	8994.5	8918.1	8888.4	8782.4	8746.3	8689.0
10°	8960.5	8969.0	8983.9	8947.8	8843.9	8742.0	8680.5	8655.1	8553.2	8502.3	8417.5
12.5°	8784.5	8782.4	8767.5	8701.7	8597.8	8508.7	8438.7	8377.2	8249.9	8169.3	8035.6
15°	8570.2	8559.6	8510.8	8442.9	8339.0	8226.6	8112.0	8008.1	7798.1	7630.5	7433.2
17.5°	8322.0	8292.3	8228.7	8154.4	8025.0	7868.1	7696.2	7503.2	7272.0	7083.2	6839.2
20°	7999.6	7978.4	7912.6	7829.9	7653.8	7448.0	7223.2	7025.9	6758.6	6501.9	6207.0
22.5°	7645.3	7632.6	7564.7	7460.8	7252.9	6994.1	6781.9	6529.5	6200.7	5886.7	5632.2
25°	7284.7	7255.0	7189.2	7059.8	6818.0	6559.2	6308.9	5990.7	5625.8	5375.5	5199.4
27.5°	6881.6	6866.8	6790.4	6641.9	6381.0	6113.7	5814.6	5449.7	5176.1	4987.3	4826.1
30°	6476.5	6455.2	6376.8	6207.0	5939.8	5638.5	5307.6	5021.2	4811.2	4643.6	4582.1
32.5°	6050.1	6039.5	5954.6	5761.6	5509.1	5178.2	4868.5	4667.0	4488.8	4435.7	4541.8
35°	5617.3	5619.4	5528.2	5328.8	5055.2	4717.9	4507.8	4342.4	4263.9	4380.6	4599.1
37.5°	5210.0	5195.2	5095.5	4902.4	4607.6	4336.0	4193.9	4077.2	4170.6	4384.8	4637.3
40°	4787.9	4775.1	4658.5	4467.5	4176.9	4013.6	3871.4	3916.0	4111.2	4363.6	4692.4
42.5°	4350.9	4355.1	4234.2	4045.4	3805.7	3703.9	3652.9	3797.2	4039.0	4361.5	4677.6
45°	3943.6	3941.5	3826.9	3640.2	3483.2	3402.6	3464.2	3684.8	3966.9	4297.8	4565.1
47.5°	3559.6	3536.3	3432.3	3266.9	3196.9	3160.8	3307.2	3549.0	3871.4	4157.8	4425.1
50°	3171.4	3145.9	3063.2	2938.1	2906.2	2935.9	3135.3	3421.7	3723.0	3977.5	4242.7
52.5°	2806.5	2781.1	2713.2	2647.4	2634.7	2734.4	2963.5	3264.7	3523.5	3778.1	4003.0
55°	2460.8	2439.5	2388.6	2373.8	2397.1	2539.2	2795.9	3065.3	3315.7	3538.4	3746.3
57.5°	2144.7	2123.5	2091.6	2110.7	2170.1	2348.3	2609.2	2859.6	3086.6	3294.4	3470.5
60°	1851.9	1835.0	1832.8	1862.5	1970.7	2170.1	2412.0	2645.3	2846.8	3037.8	3179.9
62.5°	1578.3	1569.8	1593.1	1652.5	1788.3	1991.9	2208.3	2424.7	2602.9	2770.5	2891.4
65°	1336.4	1332.2	1372.5	1457.4	1616.5	1815.9	2019.5	2199.8	2356.8	2507.4	2611.4
67.5°	1120.1	1122.2	1171.0	1287.7	1465.8	1652.5	1828.6	1987.7	2131.9	2252.9	2325.0
70°	929.1	937.6	999.2	1145.5	1330.1	1495.5	1646.2	1796.8	1913.4	2004.7	2064.1
72.5°	763.7	776.4	861.3	1024.6	1204.9	1347.1	1489.2	1612.2	1703.4	1765.0	1815.9
75°	615.2	634.3	742.5	920.7	1088.2	1221.9	1342.8	1434.0	1499.8	1559.2	1612.2
77.5°	485.8	504.9	649.1	831.6	984.3	1109.5	1194.3	1274.9	1330.1	1376.8	1423.4
80°	373.4	398.8	570.6	742.5	897.3	990.7	1069.2	1130.7	1168.9	1204.9	1243.1
82.5°	273.7	318.2	498.5	672.5	799.7	897.3	952.5	990.7	1016.1	1039.5	1054.3
85°	184.6	258.8	432.8	589.7	714.9	789.1	825.2	840.1	848.5	861.3	874.0
87.5°	112.4	205.8	371.2	507.0	600.3	655.5	678.8	689.4	700.0	712.8	721.3
90°	33.9	144.3	286.4	388.2	458.2	502.8	524.0	532.5	540.9	553.7	562.2
92.5°	25.5	91.2	190.9	280.0	347.9	390.3	405.2	413.7	424.3	434.9	441.2
95°	42.4	76.4	123.0	193.0	250.3	286.4	303.4	318.2	326.7	335.2	341.5
97.5°	48.8	93.3	106.1	146.4	186.7	216.4	227.0	231.2	233.3	237.6	252.4
100°	61.5	116.7	129.4	127.3	152.7	171.8	173.9	176.1	173.9	176.1	180.3
102.5°	80.6	133.6	152.7	137.9	137.9	146.4	148.5	142.1	133.6	129.4	129.4
105°	95.5	144.3	171.8	161.2	129.4	133.6	131.5	127.3	116.7	103.9	101.8
107.5°	114.6	152.7	201.5	176.1	150.6	123.0	123.0	118.8	108.2	97.6	89.1
110°	142.1	165.5	224.9	186.7	167.6	133.6	118.8	112.4	106.1	95.5	87.0



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CATALOG NUMBER: SKB2-LD5-18-N-UNV-L850-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.2	176.1	216.4	205.8	178.2	146.4	118.8	110.3	99.7	95.5	89.1
115°	184.6	186.7	205.8	233.3	182.4	159.1	127.3	108.2	103.9	89.1	87.0
117.5°	212.1	199.4	190.9	277.9	195.2	165.5	142.1	114.6	97.6	99.7	84.9
120°	239.7	214.3	182.4	273.7	216.4	169.7	150.6	127.3	101.8	89.1	95.5
122.5°	267.3	231.2	197.3	254.6	244.0	178.2	152.7	135.8	112.4	93.3	82.7
125°	294.9	250.3	222.7	231.2	288.5	195.2	152.7	140.0	123.0	101.8	84.9
127.5°	320.3	269.4	254.6	205.8	277.9	214.3	161.2	133.6	125.2	110.3	95.5
130°	345.8	288.5	288.5	180.3	254.6	248.2	171.8	133.6	118.8	112.4	103.9
132.5°	364.9	299.1	297.0	165.5	229.1	267.3	186.7	140.0	112.4	103.9	103.9
135°	384.0	307.6	297.0	188.8	199.4	248.2	218.5	152.7	116.7	99.7	97.6
137.5°	394.6	314.0	294.9	220.6	165.5	224.9	246.1	169.7	127.3	103.9	93.3
140°	403.1	318.2	297.0	256.7	133.6	201.5	229.1	231.2	144.3	114.6	97.6
142.5°	405.2	324.6	299.1	286.4	144.3	169.7	210.0	224.9	184.6	127.3	106.1
145°	405.2	335.2	301.2	286.4	176.1	129.4	188.8	207.9	216.4	169.7	120.9
147.5°	405.2	343.7	299.1	275.8	216.4	114.6	157.0	190.9	203.6	205.8	173.9
150°	400.9	352.1	297.0	277.9	260.9	144.3	112.4	167.6	188.8	195.2	195.2
152.5°	400.9	360.6	297.0	284.3	267.3	188.8	110.3	125.2	169.7	184.6	186.7
155°	400.9	371.2	299.1	288.5	263.0	244.0	148.5	95.5	123.0	161.2	176.1
157.5°	400.9	379.7	305.5	290.6	273.7	254.6	207.9	131.5	89.1	106.1	144.3
160°	400.9	384.0	316.1	290.6	277.9	258.8	248.2	195.2	131.5	93.3	80.6
162.5°	396.7	386.1	335.2	292.7	280.0	267.3	250.3	241.8	210.0	148.5	110.3
165°	394.6	388.2	352.1	305.5	282.1	273.7	265.2	250.3	239.7	233.3	197.3
167.5°	392.4	388.2	371.2	330.9	294.9	275.8	271.5	265.2	252.4	239.7	235.5
170°	390.3	388.2	377.6	356.4	324.6	292.7	277.9	267.3	260.9	254.6	248.2
172.5°	388.2	386.1	381.8	373.4	356.4	330.9	309.7	288.5	273.7	263.0	254.6
175°	386.1	386.1	384.0	379.7	373.4	360.6	352.1	337.3	320.3	305.5	290.6
177.5°	386.1	384.0	384.0	384.0	377.6	371.2	369.1	362.7	352.1	345.8	337.3
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3	9270.3
2.5°	9215.1	9266.0	9283.0	9249.0	9240.6	9263.9	9266.0	9249.0
5°	8905.4	8926.6	8924.5	8884.2	8860.8	8860.8	8848.1	8839.6
7.5°	8667.8	8695.4	8691.1	8648.7	8623.3	8627.5	8616.9	8599.9
10°	8377.2	8387.8	8366.6	8309.3	8256.3	8241.4	8228.7	8192.6
12.5°	7910.5	7846.8	7757.7	7658.0	7577.4	7539.2	7486.2	7437.4
15°	7278.3	7163.8	7025.9	6892.2	6792.5	6714.0	6675.9	6627.1
17.5°	6631.3	6487.1	6294.0	6141.3	6031.0	5961.0	5927.0	5884.6
20°	5973.7	5814.6	5661.9	5551.5	5473.1	5437.0	5396.7	5360.6
22.5°	5458.2	5341.5	5210.0	5114.6	5040.3	4993.6	4957.6	4944.8
25°	5057.3	4940.6	4855.7	4836.7	4834.5	4851.5	4862.1	4874.8
27.5°	4741.2	4743.3	4792.1	4877.0	4953.3	5012.7	5055.2	5070.0
30°	4650.0	4798.5	4930.0	5055.2	5163.3	5235.5	5286.4	5305.5
32.5°	4734.8	4942.7	5093.3	5235.5	5381.8	5487.9	5560.0	5581.2
35°	4834.5	5053.0	5273.7	5443.4	5583.4	5681.0	5731.9	5751.0
37.5°	4936.4	5186.7	5371.2	5507.0	5598.2	5668.2	5712.8	5725.5
40°	4991.5	5186.7	5322.4	5464.6	5572.8	5634.3	5674.6	5687.3
42.5°	4925.8	5108.2	5267.3	5392.4	5490.0	5547.3	5587.6	5596.1
45°	4813.3	4995.8	5148.5	5265.2	5358.5	5426.4	5470.9	5485.8
47.5°	4654.2	4828.2	4968.2	5101.8	5188.8	5229.1	5250.3	5269.4
50°	4427.2	4588.5	4713.6	4809.1	4849.4	4843.0	4840.9	4855.7
52.5°	4183.3	4321.2	4395.4	4467.5	4512.1	4546.0	4580.0	4607.6
55°	3896.9	3983.9	4028.4	4079.3	4121.8	4160.0	4202.4	4223.6
57.5°	3580.8	3644.5	3678.4	3714.5	3718.7	3706.0	3680.5	3678.4
60°	3271.1	3319.9	3349.6	3368.7	3358.1	3330.5	3292.3	3279.6
62.5°	2967.8	3008.1	3022.9	3027.2	3005.9	2974.1	2948.7	2942.3
65°	2666.5	2704.7	2706.8	2702.6	2675.0	2634.7	2613.5	2605.0
67.5°	2378.0	2414.1	2416.2	2401.4	2371.7	2342.0	2327.1	2327.1
70°	2108.6	2140.4	2146.8	2131.9	2112.9	2095.9	2081.0	2078.9
72.5°	1862.5	1898.6	1911.3	1898.6	1885.9	1864.7	1851.9	1854.1
75°	1661.0	1686.5	1692.8	1688.6	1673.7	1656.8	1648.3	1644.0
77.5°	1455.2	1476.5	1484.9	1482.8	1470.1	1451.0	1442.5	1436.1
80°	1272.8	1285.5	1289.8	1277.0	1260.1	1232.5	1224.0	1217.6
82.5°	1067.0	1073.4	1069.2	1060.7	1047.9	1024.6	1016.1	1014.0
85°	882.5	888.8	886.7	880.4	871.9	850.7	846.4	842.2
87.5°	727.6	738.2	736.1	734.0	723.4	706.4	700.0	695.8
90°	570.6	579.1	583.4	570.6	568.5	557.9	549.4	547.3
92.5°	447.6	456.1	458.2	451.8	443.4	434.9	428.5	424.3
95°	350.0	360.6	367.0	364.9	362.7	354.3	350.0	345.8
97.5°	267.3	277.9	284.3	284.3	280.0	273.7	271.5	267.3
100°	184.6	193.0	197.3	195.2	195.2	197.3	197.3	195.2
102.5°	133.6	137.9	142.1	142.1	140.0	137.9	135.8	131.5
105°	101.8	101.8	103.9	103.9	101.8	99.7	95.5	93.3
107.5°	82.7	80.6	80.6	78.5	76.4	74.2	70.0	65.8
110°	82.7	76.4	72.1	67.9	63.6	59.4	55.2	53.0



TEST NUMBER: P236438

CATALOG NUMBER: SKB2-LD5-18-N-UNV-L850-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	82.7	78.5	72.1	67.9	63.6	59.4	55.2	50.9
115°	87.0	82.7	76.4	72.1	70.0	65.8	59.4	57.3
117.5°	78.5	78.5	78.5	78.5	76.4	72.1	67.9	63.6
120°	84.9	74.2	70.0	70.0	70.0	67.9	65.8	63.6
122.5°	78.5	89.1	78.5	70.0	63.6	59.4	53.0	50.9
125°	78.5	74.2	80.6	89.1	82.7	76.4	67.9	63.6
127.5°	80.6	76.4	74.2	72.1	67.9	70.0	70.0	70.0
130°	93.3	84.9	76.4	74.2	72.1	67.9	63.6	59.4
132.5°	101.8	95.5	89.1	82.7	76.4	70.0	63.6	59.4
135°	99.7	99.7	97.6	93.3	87.0	82.7	76.4	72.1
137.5°	91.2	95.5	95.5	95.5	93.3	91.2	84.9	82.7
140°	87.0	84.9	87.0	91.2	91.2	89.1	84.9	82.7
142.5°	91.2	84.9	80.6	78.5	78.5	78.5	76.4	74.2
145°	103.9	91.2	82.7	78.5	74.2	70.0	67.9	65.8
147.5°	116.7	103.9	93.3	87.0	78.5	74.2	70.0	65.8
150°	195.2	131.5	108.2	99.7	93.3	84.9	80.6	74.2
152.5°	188.8	193.0	193.0	152.7	110.3	97.6	89.1	84.9
155°	180.3	184.6	188.8	188.8	186.7	184.6	176.1	171.8
157.5°	165.5	176.1	180.3	180.3	180.3	176.1	171.8	167.6
160°	112.4	142.1	159.1	167.6	171.8	167.6	165.5	161.2
162.5°	84.9	76.4	91.2	110.3	123.0	127.3	125.2	127.3
165°	154.9	127.3	106.1	87.0	78.5	70.0	61.5	55.2
167.5°	235.5	231.2	212.1	190.9	176.1	169.7	150.6	144.3
170°	239.7	239.7	239.7	244.0	252.4	260.9	258.8	256.7
172.5°	248.2	246.1	248.2	250.3	252.4	263.0	263.0	258.8
175°	275.8	263.0	258.8	250.3	252.4	260.9	263.0	263.0
177.5°	328.8	320.3	307.6	299.1	299.1	305.5	318.2	292.7
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4

(END OF REPORT)