

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: P236437

Luminaire Tested: **SKB2-LD5-18-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: P236437  
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-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

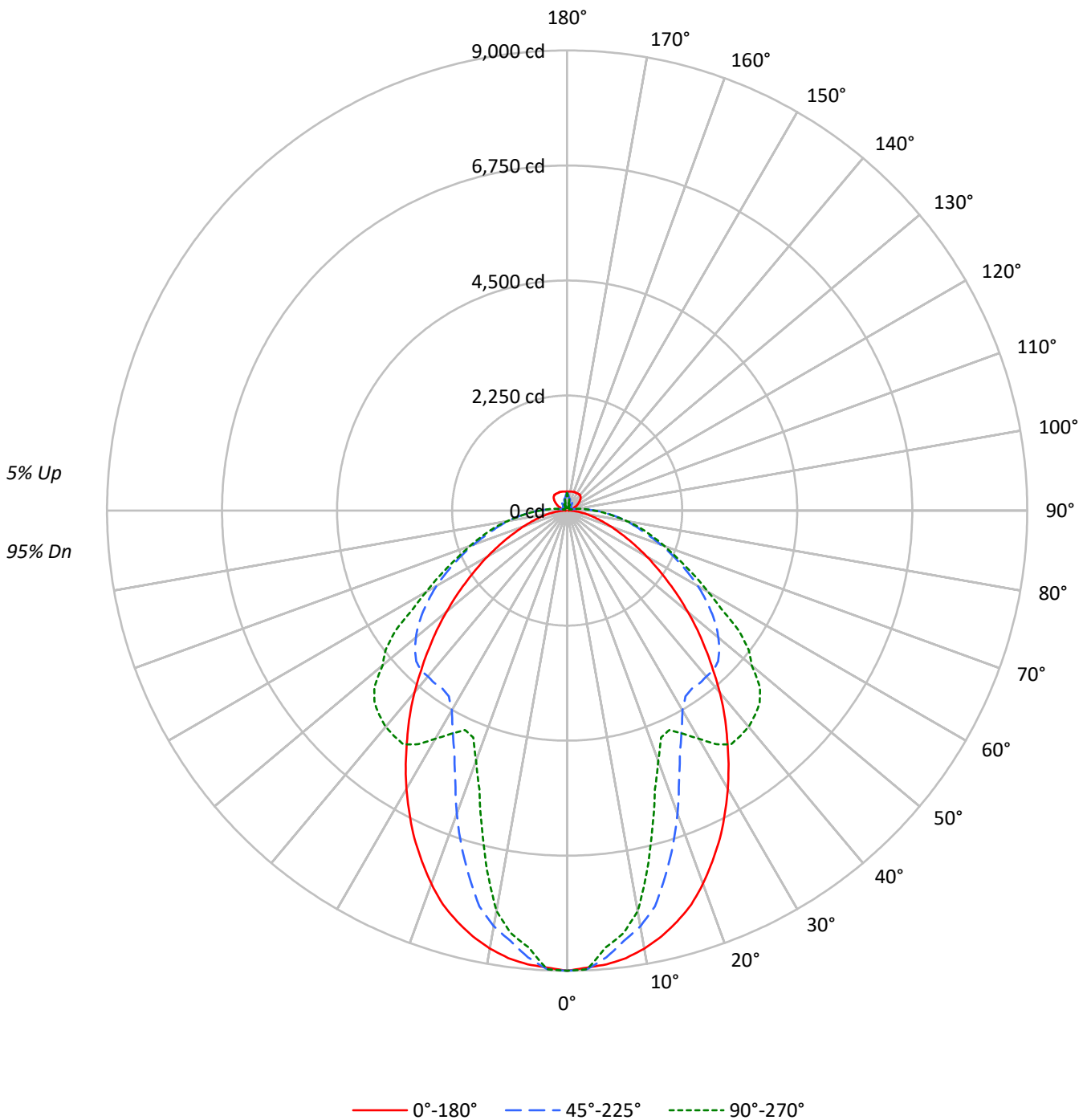
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20252.0 lumens  
Efficiency: N/A  
Efficacy: 120.2 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 (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-LD5-18-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	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°	38751	38751	38751
5°	38150	37286	36558
10°	37348	34910	33781
15°	36081	31409	27453
20°	34285	27038	22482
25°	32042	22760	20863
30°	29487	20182	23360
35°	26716	19711	26280
40°	24026	20514	27226
45°	21113	21323	27797
50°	18346	21060	26344
55°	15611	20249	24863
60°	13116	19070	21276
65°	10805	17580	18982
70°	8829	16053	17427
75°	7155	14685	16370
80°	5650	13904	15069
85°	4041	12954	13904



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	823.9	4.1
10°-20°	2064.5	10.2
20°-30°	2608.1	12.9
30°-40°	3089.1	15.3
40°-50°	3294.6	16.3
50°-60°	2906.6	14.4
60°-70°	2147.7	10.6
70°-80°	1427.2	7.0
80°-90°	810.2	4.0
90°-100°	323.5	1.6
100°-110°	129.8	0.6
110°-120°	113.6	0.6
120°-130°	119.1	0.6
130°-140°	115.7	0.6
140°-150°	100.7	0.5
150°-160°	89.0	0.4
160°-170°	60.4	0.3
170°-180°	28.3	0.1
0°-30°	5496.4	27.1
0°-40°	8585.5	42.4
0°-60°	14786.7	73.0
0°-90°	19171.8	94.7
90°-120°	567.0	2.8
90°-150°	902.5	4.5
90°-180°	1080.0	5.3
0°-180°	20252.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	9000	9000	9000	9000	9000	
5°	8907	8952	8772	8645	8582	844
15°	8320	8041	7408	6756	6434	2337
25°	7072	6494	5219	4705	4733	3244
35°	5454	4744	4253	5202	5583	3412
45°	3829	3343	4173	5055	5326	2960
55°	2389	2396	3435	3936	4100	2150
65°	1298	1666	2434	2626	2529	1301
75°	597	1121	1514	1641	1596	644
85°	179	730	836	858	818	185
90°	33	466	538	560	531	27
95°	41	260	325	355	336	36
105°	93	128	101	101	91	100
115°	179	166	86	72	56	180
125°	286	235	99	82	62	255
135°	373	217	97	93	70	285
145°	393	148	165	78	64	247
155°	389	246	156	183	167	180
165°	383	270	226	94	54	109
175°	375	356	297	247	255	36
180°	346	346	346	346	346	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1
2.5°	8946.5	8963.0	9006.2	9031.0	9012.4	8993.9	8993.9	9028.9	8975.3	8979.5	8952.7
5°	8907.4	8923.9	8963.0	8987.7	8967.1	8936.2	8905.3	8901.2	8808.5	8771.5	8680.8
7.5°	8827.1	8839.4	8876.5	8880.6	8814.7	8732.3	8658.2	8629.4	8526.4	8491.4	8435.8
10°	8699.4	8707.6	8722.0	8687.0	8586.1	8487.2	8427.5	8402.8	8303.9	8254.5	8172.1
12.5°	8528.4	8526.4	8512.0	8448.1	8347.2	8260.7	8192.7	8133.0	8009.4	7931.2	7801.4
15°	8320.4	8310.1	8262.8	8196.9	8095.9	7986.8	7875.6	7774.7	7570.8	7408.1	7216.5
17.5°	8079.5	8050.6	7988.8	7916.8	7791.1	7638.7	7471.9	7284.5	7060.0	6876.7	6639.9
20°	7766.4	7745.8	7682.0	7601.7	7430.7	7230.9	7012.6	6821.1	6561.6	6312.4	6026.1
22.5°	7422.5	7410.1	7344.2	7243.3	7041.5	6790.2	6584.3	6339.2	6020.0	5715.1	5468.0
25°	7072.4	7043.5	6979.7	6854.1	6619.3	6368.0	6125.0	5816.1	5461.8	5218.8	5047.9
27.5°	6681.1	6666.6	6592.5	6448.3	6195.0	5935.5	5645.1	5290.9	5025.2	4841.9	4685.4
30°	6287.7	6267.1	6190.9	6026.1	5766.6	5474.2	5152.9	4874.9	4671.0	4508.3	4448.5
32.5°	5873.7	5863.4	5781.0	5593.6	5348.6	5027.3	4726.6	4530.9	4357.9	4306.4	4409.4
35°	5453.6	5455.6	5367.1	5173.5	4907.8	4580.4	4376.5	4215.8	4139.6	4252.9	4465.0
37.5°	5058.2	5043.7	4946.9	4759.5	4473.3	4209.6	4071.7	3958.4	4049.0	4257.0	4502.1
40°	4648.3	4636.0	4522.7	4337.3	4055.2	3896.6	3758.6	3801.9	3991.3	4236.4	4555.6
42.5°	4224.1	4228.2	4110.8	3927.5	3694.8	3595.9	3546.5	3686.5	3921.3	4234.4	4541.2
45°	3828.6	3826.6	3715.4	3534.1	3381.7	3303.5	3363.2	3577.4	3851.3	4172.6	4432.1
47.5°	3455.9	3433.2	3332.3	3171.6	3103.7	3068.7	3210.8	3445.6	3758.6	4036.6	4296.1
50°	3079.0	3054.3	2973.9	2852.4	2821.5	2850.4	3044.0	3322.0	3614.4	3861.6	4119.0
52.5°	2724.7	2700.0	2634.1	2570.3	2557.9	2654.7	2877.1	3169.6	3420.8	3668.0	3886.3
55°	2389.0	2368.4	2319.0	2304.6	2327.2	2465.2	2714.4	2976.0	3219.0	3435.3	3637.1
57.5°	2082.2	2061.6	2030.7	2049.2	2106.9	2279.9	2533.2	2776.2	2996.6	3198.4	3369.4
60°	1798.0	1781.5	1779.4	1808.3	1913.3	2106.9	2341.7	2568.2	2763.9	2949.2	3087.2
62.5°	1532.3	1524.0	1546.7	1604.4	1736.2	1933.9	2144.0	2354.0	2527.0	2689.7	2807.1
65°	1297.5	1293.4	1332.5	1414.9	1569.3	1762.9	1960.7	2135.7	2288.1	2434.3	2535.3
67.5°	1087.4	1089.5	1136.9	1250.1	1423.1	1604.4	1775.3	1929.8	2069.8	2187.2	2257.2
70°	902.1	910.3	970.0	1112.1	1291.3	1452.0	1598.2	1744.4	1857.7	1946.2	2003.9
72.5°	741.4	753.8	836.2	994.7	1169.8	1307.8	1445.8	1565.2	1653.8	1713.5	1762.9
75°	597.3	615.8	720.8	893.8	1056.5	1186.3	1303.7	1392.2	1456.1	1513.7	1565.2
77.5°	471.6	490.2	630.2	807.3	955.6	1077.1	1159.5	1237.8	1291.3	1336.6	1381.9
80°	362.5	387.2	554.0	720.8	871.2	961.8	1038.0	1097.7	1134.8	1169.8	1206.9
82.5°	265.7	308.9	484.0	652.9	776.4	871.2	924.7	961.8	986.5	1009.2	1023.6
85°	179.2	251.3	420.1	572.5	694.1	766.1	801.1	815.6	823.8	836.2	848.5
87.5°	109.2	199.8	360.4	492.2	582.8	636.4	659.0	669.3	679.6	692.0	700.2
90°	33.0	140.0	278.0	376.9	444.9	488.1	508.7	516.9	525.2	537.5	545.8
92.5°	24.7	88.6	185.4	271.9	337.8	379.0	393.4	401.6	411.9	422.2	428.4
95°	41.2	74.1	119.5	187.4	243.0	278.0	294.5	308.9	317.2	325.4	331.6
97.5°	47.4	90.6	103.0	142.1	181.2	210.1	220.4	224.5	226.5	230.7	245.1
100°	59.7	113.3	125.6	123.6	148.3	166.8	168.9	170.9	168.9	170.9	175.1
102.5°	78.3	129.7	148.3	133.9	133.9	142.1	144.2	138.0	129.7	125.6	125.6
105°	92.7	140.0	166.8	156.5	125.6	129.7	127.7	123.6	113.3	100.9	98.9
107.5°	111.2	148.3	195.7	170.9	146.2	119.5	119.5	115.3	105.0	94.7	86.5
110°	138.0	160.6	218.3	181.2	162.7	129.7	115.3	109.2	103.0	92.7	84.4



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CATALOG NUMBER: SKB2-LD5-18-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°	156.5	170.9	210.1	199.8	173.0	142.1	115.3	107.1	96.8	92.7	86.5
115°	179.2	181.2	199.8	226.5	177.1	154.5	123.6	105.0	100.9	86.5	84.4
117.5°	206.0	193.6	185.4	269.8	189.5	160.6	138.0	111.2	94.7	96.8	82.4
120°	232.7	208.0	177.1	265.7	210.1	164.8	146.2	123.6	98.9	86.5	92.7
122.5°	259.5	224.5	191.5	247.1	236.8	173.0	148.3	131.8	109.2	90.6	80.3
125°	286.3	243.0	216.2	224.5	280.1	189.5	148.3	135.9	119.5	98.9	82.4
127.5°	311.0	261.6	247.1	199.8	269.8	208.0	156.5	129.7	121.5	107.1	92.7
130°	335.7	280.1	280.1	175.1	247.1	241.0	166.8	129.7	115.3	109.2	100.9
132.5°	354.2	290.4	288.3	160.6	222.4	259.5	181.2	135.9	109.2	100.9	100.9
135°	372.8	298.6	288.3	183.3	193.6	241.0	212.1	148.3	113.3	96.8	94.7
137.5°	383.1	304.8	286.3	214.2	160.6	218.3	238.9	164.8	123.6	100.9	90.6
140°	391.3	308.9	288.3	249.2	129.7	195.7	222.4	224.5	140.0	111.2	94.7
142.5°	393.4	315.1	290.4	278.0	140.0	164.8	203.9	218.3	179.2	123.6	103.0
145°	393.4	325.4	292.5	278.0	170.9	125.6	183.3	201.8	210.1	164.8	117.4
147.5°	393.4	333.6	290.4	267.7	210.1	111.2	152.4	185.4	197.7	199.8	168.9
150°	389.2	341.9	288.3	269.8	253.3	140.0	109.2	162.7	183.3	189.5	189.5
152.5°	389.2	350.1	288.3	276.0	259.5	183.3	107.1	121.5	164.8	179.2	181.2
155°	389.2	360.4	290.4	280.1	255.4	236.8	144.2	92.7	119.5	156.5	170.9
157.5°	389.2	368.7	296.6	282.2	265.7	247.1	201.8	127.7	86.5	103.0	140.0
160°	389.2	372.8	306.9	282.2	269.8	251.3	241.0	189.5	127.7	90.6	78.3
162.5°	385.1	374.8	325.4	284.2	271.9	259.5	243.0	234.8	203.9	144.2	107.1
165°	383.1	376.9	341.9	296.6	273.9	265.7	257.4	243.0	232.7	226.5	191.5
167.5°	381.0	376.9	360.4	321.3	286.3	267.7	263.6	257.4	245.1	232.7	228.6
170°	379.0	376.9	366.6	346.0	315.1	284.2	269.8	259.5	253.3	247.1	241.0
172.5°	376.9	374.8	370.7	362.5	346.0	321.3	300.7	280.1	265.7	255.4	247.1
175°	374.8	374.8	372.8	368.7	362.5	350.1	341.9	327.5	311.0	296.6	282.2
177.5°	374.8	372.8	372.8	372.8	366.6	360.4	358.4	352.2	341.9	335.7	327.5
180°	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1	9000.1
2.5°	8946.5	8995.9	9012.4	8979.5	8971.2	8993.9	8995.9	8979.5
5°	8645.8	8666.4	8664.4	8625.2	8602.6	8602.6	8590.2	8582.0
7.5°	8415.2	8441.9	8437.8	8396.6	8371.9	8376.0	8365.7	8349.3
10°	8133.0	8143.3	8122.7	8067.1	8015.6	8001.2	7988.8	7953.8
12.5°	7679.9	7618.1	7531.6	7434.8	7356.6	7319.5	7268.0	7220.6
15°	7066.2	6955.0	6821.1	6691.4	6594.6	6518.4	6481.3	6433.9
17.5°	6438.0	6298.0	6110.6	5962.3	5855.2	5787.2	5754.3	5713.1
20°	5799.6	5645.1	5496.8	5389.7	5313.5	5278.5	5239.4	5204.4
22.5°	5299.1	5185.8	5058.2	4965.5	4893.4	4848.1	4813.1	4800.7
25°	4909.9	4796.6	4714.2	4695.7	4693.6	4710.1	4720.4	4732.8
27.5°	4603.0	4605.1	4652.4	4734.8	4809.0	4866.6	4907.8	4922.2
30°	4514.4	4658.6	4786.3	4907.8	5012.8	5082.9	5132.3	5150.8
32.5°	4596.8	4798.7	4944.9	5082.9	5225.0	5328.0	5398.0	5418.6
35°	4693.6	4905.8	5119.9	5284.7	5420.6	5515.4	5564.8	5583.3
37.5°	4792.5	5035.5	5214.7	5346.5	5435.0	5503.0	5546.3	5558.6
40°	4846.0	5035.5	5167.3	5305.3	5410.3	5470.1	5509.2	5521.5
42.5°	4782.2	4959.3	5113.8	5235.3	5330.0	5385.6	5424.8	5433.0
45°	4673.0	4850.1	4998.4	5111.7	5202.3	5268.2	5311.5	5325.9
47.5°	4518.6	4687.4	4823.4	4953.1	5037.6	5076.7	5097.3	5115.8
50°	4298.2	4454.7	4576.2	4668.9	4708.0	4701.9	4699.8	4714.2
52.5°	4061.4	4195.2	4267.3	4337.3	4380.6	4413.5	4446.5	4473.3
55°	3783.3	3867.8	3911.0	3960.4	4001.6	4038.7	4079.9	4100.5
57.5°	3476.5	3538.2	3571.2	3606.2	3610.3	3598.0	3573.3	3571.2
60°	3175.8	3223.1	3252.0	3270.5	3260.2	3233.4	3196.4	3184.0
62.5°	2881.3	2920.4	2934.8	2938.9	2918.3	2887.4	2862.7	2856.5
65°	2588.8	2625.9	2627.9	2623.8	2597.0	2557.9	2537.3	2529.1
67.5°	2308.7	2343.7	2345.8	2331.4	2302.5	2273.7	2259.3	2259.3
70°	2047.2	2078.0	2084.2	2069.8	2051.3	2034.8	2020.4	2018.3
72.5°	1808.3	1843.3	1855.6	1843.3	1830.9	1810.3	1798.0	1800.0
75°	1612.6	1637.3	1643.5	1639.4	1625.0	1608.5	1600.2	1596.1
77.5°	1412.8	1433.4	1441.7	1439.6	1427.2	1408.7	1400.5	1394.3
80°	1235.7	1248.1	1252.2	1239.8	1223.3	1196.6	1188.3	1182.2
82.5°	1035.9	1042.1	1038.0	1029.8	1017.4	994.7	986.5	984.4
85°	856.8	862.9	860.9	854.7	846.5	825.9	821.7	817.6
87.5°	706.4	716.7	714.7	712.6	702.3	685.8	679.6	675.5
90°	554.0	562.2	566.4	554.0	551.9	541.7	533.4	531.4
92.5°	434.6	442.8	444.9	438.7	430.4	422.2	416.0	411.9
95°	339.8	350.1	356.3	354.2	352.2	343.9	339.8	335.7
97.5°	259.5	269.8	276.0	276.0	271.9	265.7	263.6	259.5
100°	179.2	187.4	191.5	189.5	189.5	191.5	191.5	189.5
102.5°	129.7	133.9	138.0	138.0	135.9	133.9	131.8	127.7
105°	98.9	98.9	100.9	100.9	98.9	96.8	92.7	90.6
107.5°	80.3	78.3	78.3	76.2	74.1	72.1	68.0	63.8
110°	80.3	74.1	70.0	65.9	61.8	57.7	53.5	51.5





TEST NUMBER: P236437

CATALOG NUMBER: SKB2-LD5-18-N-UNV-L840-CD2-U all blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	80.3	76.2	70.0	65.9	61.8	57.7	53.5	49.4
115°	84.4	80.3	74.1	70.0	68.0	63.8	57.7	55.6
117.5°	76.2	76.2	76.2	76.2	74.1	70.0	65.9	61.8
120°	82.4	72.1	68.0	68.0	68.0	65.9	63.8	61.8
122.5°	76.2	86.5	76.2	68.0	61.8	57.7	51.5	49.4
125°	76.2	72.1	78.3	86.5	80.3	74.1	65.9	61.8
127.5°	78.3	74.1	72.1	70.0	65.9	68.0	68.0	68.0
130°	90.6	82.4	74.1	72.1	70.0	65.9	61.8	57.7
132.5°	98.9	92.7	86.5	80.3	74.1	68.0	61.8	57.7
135°	96.8	96.8	94.7	90.6	84.4	80.3	74.1	70.0
137.5°	88.6	92.7	92.7	92.7	90.6	88.6	82.4	80.3
140°	84.4	82.4	84.4	88.6	88.6	86.5	82.4	80.3
142.5°	88.6	82.4	78.3	76.2	76.2	76.2	74.1	72.1
145°	100.9	88.6	80.3	76.2	72.1	68.0	65.9	63.8
147.5°	113.3	100.9	90.6	84.4	76.2	72.1	68.0	63.8
150°	189.5	127.7	105.0	96.8	90.6	82.4	78.3	72.1
152.5°	183.3	187.4	187.4	148.3	107.1	94.7	86.5	82.4
155°	175.1	179.2	183.3	183.3	181.2	179.2	170.9	166.8
157.5°	160.6	170.9	175.1	175.1	175.1	170.9	166.8	162.7
160°	109.2	138.0	154.5	162.7	166.8	162.7	160.6	156.5
162.5°	82.4	74.1	88.6	107.1	119.5	123.6	121.5	123.6
165°	150.3	123.6	103.0	84.4	76.2	68.0	59.7	53.5
167.5°	228.6	224.5	206.0	185.4	170.9	164.8	146.2	140.0
170°	232.7	232.7	232.7	236.8	245.1	253.3	251.3	249.2
172.5°	241.0	238.9	241.0	243.0	245.1	255.4	255.4	251.3
175°	267.7	255.4	251.3	243.0	245.1	253.3	255.4	255.4
177.5°	319.2	311.0	298.6	290.4	290.4	296.6	308.9	284.2
180°	346.0	346.0	346.0	346.0	346.0	346.0	346.0	346.0

(END OF REPORT)