

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: P236483

Luminaire Tested: **SKB4-LD5-30-N-UNV-L850-CD4-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236483
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24059)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-30-N-UNV-L850-CD4-U all blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES
Light Source: (952) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

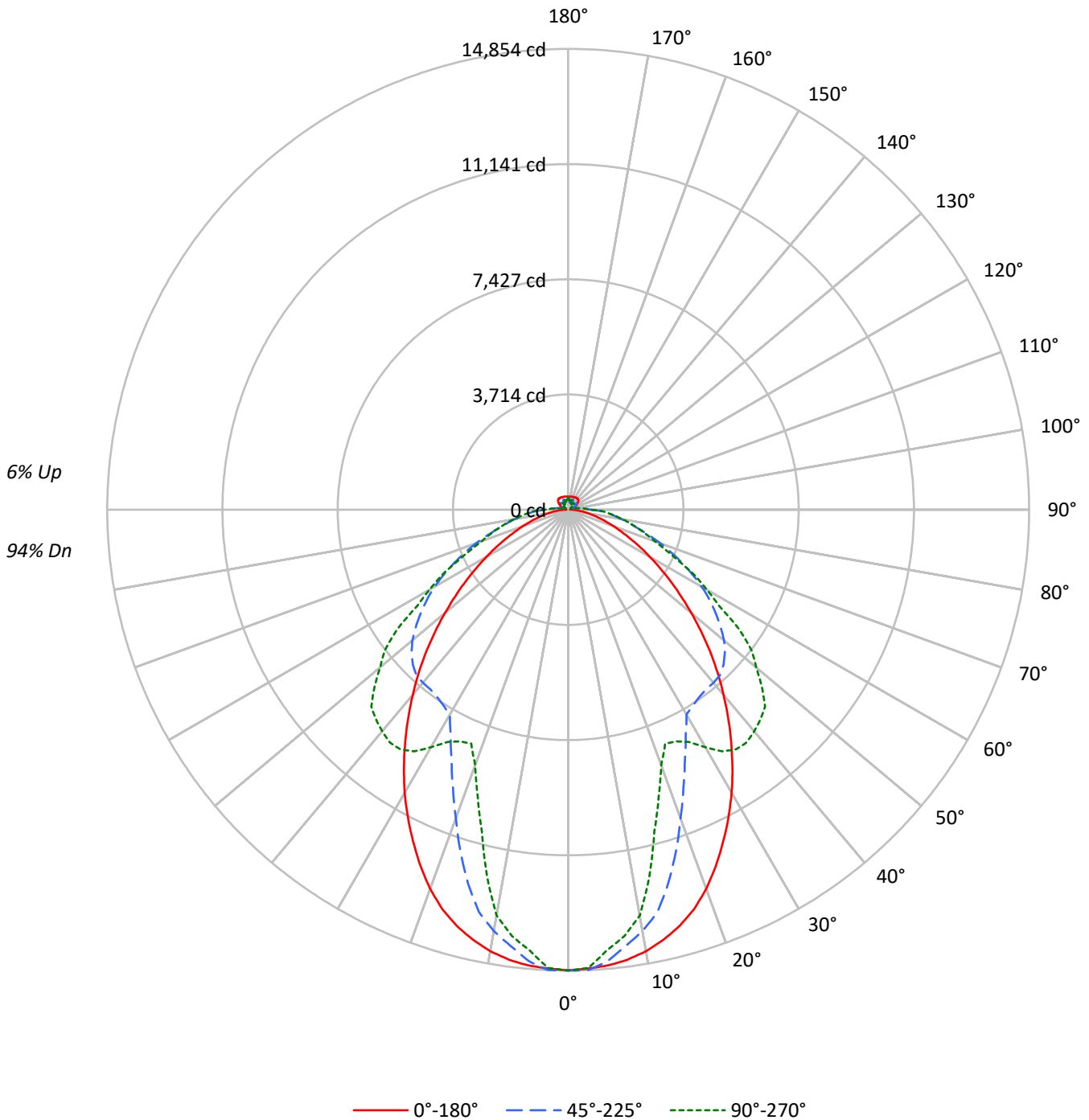
Lumens per Lamp: N/A
Luminaire Lumens: 33816.0 lumens
Efficiency: N/A
Efficacy: 129.8 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.71 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Direct

Input Watts (W): 260.5
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: SKB4-LD5-30-N-UNV-L850-CD4-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	0	
RCR																						
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94				
1	107	102	98	94	104	99	95	91	94	91	88	89	86	84	85	82	80	78				
2	97	89	82	76	94	87	80	75	82	77	72	78	74	70	74	71	68	65				
3	89	78	70	64	86	76	69	63	73	66	61	69	64	59	66	61	58	55				
4	82	70	61	54	79	68	60	54	65	58	52	62	56	51	59	54	50	47				
5	75	62	54	47	73	61	53	46	58	51	45	56	49	44	53	48	43	41				
6	70	56	48	41	67	55	47	41	53	45	40	51	44	39	49	43	38	36				
7	65	51	43	37	63	50	42	36	48	41	36	46	40	35	44	39	34	32				
8	60	47	39	33	58	46	38	32	44	37	32	43	36	31	41	35	31	29				
9	56	43	35	30	55	42	35	29	41	34	29	39	33	29	38	32	28	26				
10	53	40	32	27	51	39	32	27	38	31	26	37	30	26	35	30	26	24				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21314	21314	21314
5°	21147	20831	20351
10°	20865	19698	18984
15°	20347	17964	15490
20°	19486	15516	12863
25°	18263	13370	12400
30°	16945	11847	13764
35°	15474	11942	15328
40°	13988	12435	15980
45°	12470	12872	16391
50°	10882	12860	15600
55°	9393	12457	14531
60°	7992	11886	12404
65°	6737	11012	10831
70°	5710	10061	9533
75°	4765	9006	9102
80°	4033	8677	9029
85°	3333	8996	9330



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1368.0	4.0
10°-20°	3458.8	10.2
20°-30°	4413.8	13.1
30°-40°	5249.7	15.5
40°-50°	5583.0	16.5
50°-60°	4892.2	14.5
60°-70°	3526.2	10.4
70°-80°	2220.4	6.6
80°-90°	1239.9	3.7
90°-100°	475.2	1.4
100°-110°	238.7	0.7
110°-120°	224.9	0.7
120°-130°	243.4	0.7
130°-140°	235.1	0.7
140°-150°	182.5	0.5
150°-160°	140.7	0.4
160°-170°	91.2	0.3
170°-180°	32.1	0.1
0°-30°	9240.7	27.3
0°-40°	14490.4	42.9
0°-60°	24965.6	73.8
0°-90°	31952.1	94.5
90°-120°	938.8	2.8
90°-150°	1599.9	4.7
90°-180°	1864.0	5.5
0°-180°	33816.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	14851	14851	14851	14851	14851	
5°	14745	14812	14605	14311	14263	###
15°	13885	13464	12464	11228	10736	3898
25°	11813	10921	8897	8069	8236	5428
35°	9154	8005	7366	8873	9429	5720
45°	6464	5673	7074	8568	8973	4983
55°	4033	4111	5799	6614	6729	3625
65°	2205	2846	4045	4257	3949	2217
75°	1026	1889	2324	2401	2322	1111
85°	323	1099	1267	1338	1286	330
90°	85	644	734	776	745	58
95°	66	405	466	511	488	58
105°	130	343	186	161	142	141
115°	247	429	203	126	88	246
125°	368	340	290	178	126	329
135°	458	378	304	291	194	350
145°	463	362	252	227	231	291
155°	445	274	353	236	192	207
165°	436	307	264	333	327	124
175°	425	405	356	318	324	41
180°	394	394	394	394	394	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2
2.5°	14801.8	14859.5	14895.2	14941.9	14919.9	14859.5	14865.0	14896.6	14845.7	14854.0	14803.1
5°	14745.4	14804.5	14834.7	14876.0	14849.9	14774.3	14749.5	14739.9	14639.6	14605.3	14483.0
7.5°	14630.0	14687.7	14711.1	14739.9	14665.7	14526.9	14437.6	14364.8	14235.6	14183.4	14072.1
10°	14448.6	14499.5	14507.7	14484.3	14352.4	14176.5	14063.9	13992.4	13857.8	13791.8	13655.8
12.5°	14195.8	14235.6	14208.2	14153.2	13991.0	13804.2	13692.9	13562.3	13394.7	13286.1	13074.5
15°	13885.2	13901.7	13831.6	13760.2	13576.1	13352.1	13187.2	12985.2	12725.5	12464.4	12129.1
17.5°	13492.2	13492.2	13397.4	13308.1	13074.5	12776.3	12535.9	12224.0	11877.7	11547.9	11115.1
20°	13000.3	13000.3	12890.4	12780.5	12467.2	12111.3	11806.2	11424.2	10991.4	10586.0	10142.2
22.5°	12435.6	12453.4	12338.0	12171.7	11811.7	11416.0	11082.1	10580.5	10101.0	9701.1	9276.5
25°	11813.1	11825.5	11707.3	11520.4	11138.4	10702.8	10271.4	9743.7	9272.4	8897.3	8515.3
27.5°	11186.5	11198.9	11069.7	10848.5	10436.3	9955.3	9486.8	8960.5	8546.9	8197.9	7853.0
30°	10532.4	10535.2	10375.8	10158.7	9717.6	9183.1	8736.5	8276.2	7887.3	7624.9	7693.6
32.5°	9849.5	9855.0	9706.6	9456.5	8985.2	8447.9	8059.1	7648.2	7354.2	7483.3	7640.0
35°	9154.2	9151.5	9018.2	8746.1	8245.9	7763.6	7449.0	7078.0	7175.5	7366.5	7631.7
37.5°	8468.6	8461.7	8328.4	8038.5	7546.5	7145.3	6845.7	6814.1	6998.3	7293.7	7721.0
40°	7792.5	7792.5	7638.6	7333.5	6892.5	6584.7	6397.8	6586.0	6834.8	7280.0	7769.1
42.5°	7124.7	7112.3	6955.7	6650.6	6297.5	6030.9	6118.8	6348.3	6719.3	7237.4	7679.8
45°	6463.7	6440.4	6287.9	6013.0	5754.7	5591.2	5819.3	6128.5	6588.8	7073.8	7499.8
47.5°	5806.9	5790.4	5646.2	5424.9	5235.3	5264.2	5503.3	5915.5	6381.3	6845.7	7251.1
50°	5176.2	5165.2	5036.1	4889.0	4753.0	4906.9	5220.2	5677.8	6114.7	6551.7	6914.5
52.5°	4586.7	4574.4	4468.6	4393.0	4362.8	4548.3	4934.4	5376.8	5791.8	6187.6	6537.9
55°	4033.0	4019.2	3946.4	3924.4	4004.1	4217.1	4640.3	5052.6	5431.8	5798.7	6107.9
57.5°	3516.3	3508.1	3471.0	3482.0	3637.2	3903.8	4316.0	4706.3	5049.8	5397.4	5657.2
60°	3035.4	3036.8	3038.1	3102.7	3293.7	3596.0	3987.6	4342.1	4667.8	4968.7	5162.5
62.5°	2617.7	2603.9	2638.3	2771.6	2980.4	3292.3	3652.3	3980.8	4261.1	4507.0	4649.9
65°	2205.4	2227.4	2272.8	2461.0	2696.0	2995.5	3333.6	3613.9	3848.8	4045.3	4155.3
67.5°	1853.7	1882.5	1944.3	2179.3	2439.0	2723.5	3018.9	3247.0	3442.1	3587.8	3675.7
70°	1555.5	1580.2	1669.5	1933.4	2208.2	2467.9	2707.0	2895.2	3049.1	3157.7	3208.5
72.5°	1277.9	1316.4	1455.2	1725.9	2008.9	2219.2	2410.2	2566.8	2683.6	2712.5	2757.8
75°	1026.4	1080.0	1262.8	1552.7	1798.7	1978.7	2139.5	2242.5	2298.9	2323.6	2375.8
77.5°	817.6	872.6	1099.3	1397.5	1603.6	1756.1	1871.5	1930.6	1984.2	2014.4	2062.5
80°	632.1	693.9	966.0	1225.7	1418.1	1534.9	1620.1	1672.3	1709.4	1736.9	1783.6
82.5°	475.4	557.9	835.5	1070.4	1231.2	1345.2	1401.6	1440.1	1463.4	1495.0	1533.5
85°	322.9	448.0	696.7	908.3	1052.6	1144.6	1184.5	1212.0	1236.7	1266.9	1299.9
87.5°	199.2	343.5	571.6	742.0	858.8	934.4	963.2	981.1	1011.3	1045.7	1082.8
90°	85.2	247.3	417.7	548.3	625.2	662.3	691.2	693.9	720.0	733.8	768.1
92.5°	50.8	169.0	302.3	419.1	496.0	537.3	548.3	555.1	567.5	581.2	597.7
95°	66.0	134.7	235.0	320.2	386.1	423.2	435.6	448.0	454.8	465.8	480.9
97.5°	75.6	141.5	233.6	284.4	322.9	349.0	353.1	355.9	354.5	357.3	366.9
100°	90.7	159.4	266.6	299.6	313.3	305.0	296.8	289.9	281.7	276.2	277.6
102.5°	112.7	174.5	288.6	342.1	331.2	309.2	272.1	251.5	230.8	218.5	214.4
105°	130.5	182.8	303.7	386.1	365.5	320.2	283.1	244.6	211.6	185.5	171.8
107.5°	151.2	188.3	302.3	395.7	426.0	350.4	287.2	252.8	215.7	180.0	158.0
110°	191.0	203.4	299.6	387.5	439.7	394.4	321.5	254.2	213.0	189.6	162.1



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CATALOG NUMBER: SKB4-LD5-30-N-UNV-L850-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	219.9	207.5	306.4	372.4	437.0	426.0	362.8	292.7	224.0	177.3	166.3
115°	247.3	215.7	313.3	353.1	420.5	438.3	401.2	332.5	262.5	203.4	156.6
117.5°	278.9	229.5	322.9	336.7	393.0	432.8	401.2	383.4	300.9	239.1	191.0
120°	309.2	246.0	328.4	353.1	375.1	410.9	419.1	362.8	354.5	273.4	224.0
122.5°	339.4	263.8	331.2	384.7	353.1	377.9	405.4	395.7	324.3	322.9	254.2
125°	368.3	283.1	329.8	401.2	335.3	344.9	377.9	390.2	368.3	289.9	292.7
127.5°	397.1	302.3	328.4	404.0	353.1	342.1	344.9	371.0	368.3	343.5	266.6
130°	423.2	321.5	313.3	402.6	393.0	317.4	314.7	338.0	351.8	346.3	329.8
132.5°	441.1	342.1	303.7	395.7	415.0	314.7	320.2	303.7	324.3	331.2	327.0
135°	457.6	361.4	296.8	383.4	412.2	343.5	289.9	298.2	289.9	303.7	310.5
137.5°	465.8	382.0	294.1	368.3	404.0	384.7	285.8	298.2	259.7	272.1	283.1
140°	468.6	395.7	294.1	346.3	391.6	393.0	321.5	265.2	288.6	240.5	254.2
142.5°	467.2	405.4	296.8	311.9	372.4	384.7	364.1	276.2	258.3	278.9	224.0
145°	463.1	410.9	298.2	280.3	350.4	373.8	373.8	325.7	255.6	251.5	272.1
147.5°	458.9	413.6	306.4	266.6	328.4	358.6	368.3	360.0	302.3	244.6	237.7
150°	456.2	416.4	328.4	267.9	296.8	340.8	358.6	361.4	349.0	295.4	241.8
152.5°	449.3	419.1	350.4	276.2	263.8	321.5	344.9	354.5	357.3	344.9	306.4
155°	445.2	421.8	366.9	284.4	257.0	291.3	325.7	342.1	350.4	353.1	347.6
157.5°	445.2	426.0	376.5	307.8	263.8	250.1	305.0	322.9	336.7	344.9	349.0
160°	442.5	428.7	383.4	336.7	272.1	251.5	254.2	302.3	317.4	329.8	338.0
162.5°	438.3	430.1	390.2	360.0	300.9	259.7	244.6	248.7	294.1	309.2	320.2
165°	435.6	430.1	402.6	373.8	335.3	278.9	257.0	241.8	235.0	263.8	296.8
167.5°	432.8	428.7	410.9	383.4	365.5	324.3	280.3	255.6	243.2	230.8	226.7
170°	428.7	426.0	417.7	399.9	376.5	362.8	333.9	299.6	265.2	246.0	235.0
172.5°	426.0	424.6	420.5	412.2	397.1	376.5	369.6	357.3	329.8	307.8	281.7
175°	424.6	423.2	421.8	419.1	410.9	398.5	391.6	377.9	364.1	355.9	347.6
177.5°	423.2	421.8	421.8	420.5	417.7	409.5	408.1	399.9	391.6	383.4	373.8
180°	394.4	394.4	394.4	394.4	394.4	394.4	394.4	394.4	394.4	394.4	394.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2	14851.2
2.5°	14781.1	14811.4	14792.1	14752.3	14771.5	14814.1	14804.5	14785.3
5°	14412.9	14403.3	14337.3	14285.1	14276.9	14296.1	14286.5	14263.1
7.5°	14017.2	14011.7	13970.4	13892.1	13899.0	13897.6	13879.7	13857.8
10°	13576.1	13534.8	13462.0	13390.6	13354.8	13346.6	13313.6	13282.0
12.5°	12930.2	12780.5	12599.1	12412.2	12329.8	12206.1	12138.8	12093.4
15°	11873.6	11593.2	11348.7	11108.2	10985.9	10859.5	10782.5	10735.8
17.5°	10794.9	10536.6	10241.1	10024.0	9915.5	9808.3	9743.7	9695.6
20°	9835.8	9591.2	9338.4	9136.4	9014.1	8891.8	8817.6	8762.6
22.5°	8989.3	8747.5	8479.5	8298.2	8214.3	8184.1	8174.5	8160.8
25°	8229.5	8053.6	8041.2	8096.2	8167.6	8214.3	8236.3	8236.3
27.5°	7864.0	7969.8	8065.9	8177.2	8303.7	8394.4	8436.9	8439.7
30°	7839.2	8009.6	8177.2	8383.4	8593.6	8754.4	8820.3	8838.2
32.5°	7866.7	8166.3	8458.9	8742.0	8990.7	9157.0	9225.7	9232.5
35°	8022.0	8412.2	8743.4	9001.7	9213.3	9345.2	9413.9	9429.0
37.5°	8177.2	8546.9	8820.3	9077.3	9272.4	9385.1	9435.9	9449.7
40°	8182.7	8530.4	8799.7	9033.3	9202.3	9279.3	9315.0	9324.6
42.5°	8081.1	8419.1	8673.3	8868.4	9023.7	9118.5	9157.0	9168.0
45°	7891.4	8204.7	8465.8	8670.5	8831.3	8920.6	8964.6	8972.8
47.5°	7594.6	7923.0	8192.4	8380.6	8480.9	8518.0	8475.4	8461.7
50°	7244.2	7543.8	7756.8	7890.1	7931.3	7927.2	7906.5	7912.0
52.5°	6833.4	7075.2	7230.5	7321.2	7362.4	7428.4	7457.2	7451.7
55°	6363.4	6535.2	6597.0	6630.0	6656.1	6718.0	6738.6	6728.9
57.5°	5838.5	5940.2	5960.8	5973.2	5941.6	5888.0	5827.5	5771.2
60°	5294.4	5353.5	5368.6	5359.0	5320.5	5254.5	5179.0	5152.9
62.5°	4744.8	4795.6	4812.1	4780.5	4722.8	4669.2	4612.8	4612.8
65°	4222.6	4284.4	4281.7	4232.2	4115.4	4035.7	3962.9	3949.2
67.5°	3730.7	3743.0	3697.7	3627.6	3528.7	3473.7	3417.4	3403.6
70°	3205.8	3208.5	3170.0	3111.0	3043.6	3010.6	2983.2	2965.3
72.5°	2767.4	2771.6	2746.8	2709.7	2685.0	2654.8	2636.9	2642.4
75°	2396.4	2414.3	2407.4	2395.0	2374.4	2349.7	2333.2	2322.2
77.5°	2084.5	2106.5	2110.6	2107.9	2092.7	2072.1	2055.6	2057.0
80°	1808.3	1831.7	1835.8	1835.8	1820.7	1800.1	1775.3	1780.8
82.5°	1547.2	1570.6	1581.6	1570.6	1561.0	1540.4	1523.9	1523.9
85°	1310.9	1331.5	1341.1	1334.2	1319.1	1301.3	1286.2	1286.2
87.5°	1104.8	1128.1	1146.0	1146.0	1139.1	1125.4	1117.1	1113.0
90°	744.8	762.6	777.7	775.0	757.1	757.1	735.1	744.8
92.5°	604.6	618.3	623.8	619.7	611.5	599.1	586.7	586.7
95°	491.9	502.9	511.2	511.2	505.7	497.4	491.9	487.8
97.5°	372.4	382.0	391.6	391.6	388.9	379.3	373.8	369.6
100°	278.9	284.4	288.6	288.6	285.8	277.6	273.4	270.7
102.5°	213.0	213.0	214.4	214.4	208.9	202.0	197.9	195.1
105°	164.9	163.5	162.1	159.4	153.9	149.8	145.7	141.5
107.5°	141.5	131.9	126.4	122.3	115.4	112.7	107.2	103.1
110°	140.2	129.2	118.2	107.2	97.6	92.1	85.2	81.1



TEST NUMBER: P236483

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L850-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	153.9	136.0	118.2	104.4	98.9	93.4	87.9	83.8
115°	137.4	134.7	130.5	120.9	112.7	103.1	93.4	87.9
117.5°	151.2	125.0	112.7	107.2	107.2	104.4	100.3	96.2
120°	185.5	155.3	129.2	111.3	101.7	93.4	85.2	81.1
122.5°	215.7	182.8	158.0	142.9	129.2	116.8	105.8	100.3
125°	244.6	210.2	186.9	169.0	155.3	144.3	133.3	126.4
127.5°	241.8	270.7	213.0	195.1	181.4	169.0	159.4	152.5
130°	259.7	224.0	228.1	258.3	213.0	196.5	185.5	180.0
132.5°	317.4	285.8	232.2	211.6	203.4	208.9	208.9	210.2
135°	311.9	306.4	300.9	280.3	236.3	215.7	200.6	193.7
137.5°	289.9	296.8	298.2	295.4	292.7	288.6	280.3	272.1
140°	261.1	270.7	277.6	283.1	285.8	281.7	276.2	272.1
142.5°	233.6	243.2	250.1	257.0	261.1	262.5	259.7	257.0
145°	239.1	213.0	224.0	229.5	233.6	233.6	235.0	230.8
147.5°	261.1	262.5	221.2	196.5	206.1	207.5	204.7	203.4
150°	226.7	239.1	258.3	262.5	252.8	219.9	202.0	193.7
152.5°	250.1	225.4	221.2	224.0	232.2	233.6	235.0	232.2
155°	324.3	285.8	248.7	222.6	210.2	204.7	196.5	192.4
157.5°	347.6	339.4	327.0	305.0	280.3	261.1	241.8	233.6
160°	343.5	349.0	349.0	346.3	339.4	328.4	318.8	311.9
162.5°	329.8	340.8	344.9	347.6	347.6	343.5	335.3	329.8
165°	306.4	320.2	328.4	336.7	342.1	340.8	333.9	327.0
167.5°	237.7	274.8	299.6	314.7	325.7	329.8	325.7	320.2
170°	229.5	225.4	225.4	232.2	239.1	248.7	250.1	252.8
172.5°	263.8	246.0	241.8	241.8	244.6	251.5	254.2	248.7
175°	339.4	327.0	320.2	316.0	316.0	328.4	332.5	324.3
177.5°	364.1	355.9	347.6	343.5	351.8	358.6	366.9	347.6
180°	394.4	394.4	394.4	394.4	394.4	394.4	394.4	394.4

(END OF REPORT)