

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: P236484

Luminaire Tested: **SKB4-LD5-36-N-UNV-L835-CD4-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236484
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-LD5-36-N-UNV-L835-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) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

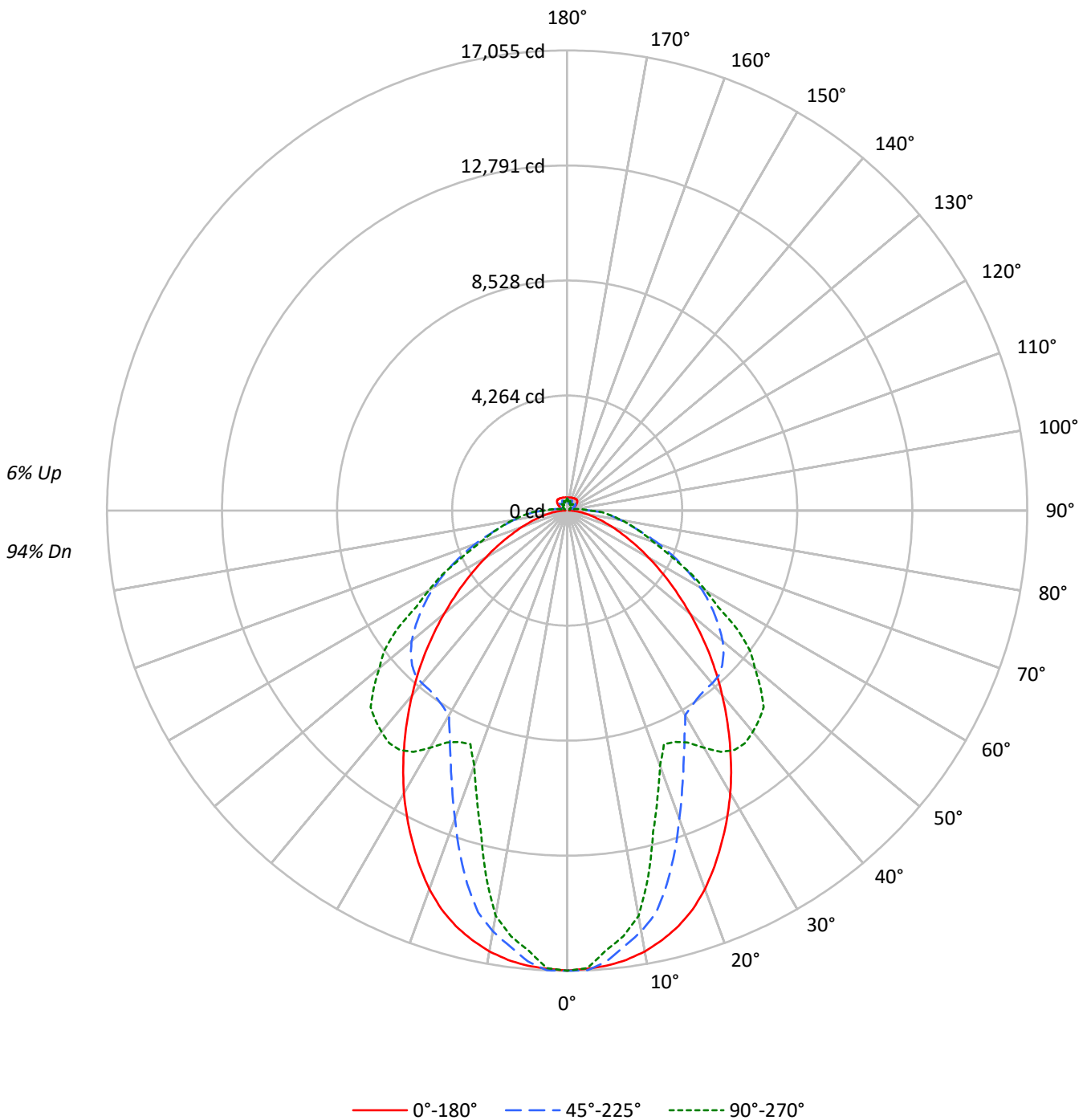
Lumens per Lamp: N/A
Luminaire Lumens: 38826.0 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.71 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Direct

Input Watts (W): 333.5
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

TEST NUMBER: P236484

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades tilted out 20 degrees

Luminous Intensity Polar Plot





TEST NUMBER: P236484

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades tilted out 20 degrees

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	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°	24472	24472	24472
5°	24280	23917	23366
10°	23956	22617	21797
15°	23361	20626	17785
20°	22373	17815	14769
25°	20969	15351	14237
30°	19455	13602	15803
35°	17767	13711	17598
40°	16060	14277	18347
45°	14317	14779	18819
50°	12494	14765	17911
55°	10784	14302	16684
60°	9176	13647	14241
65°	7735	12644	12435
70°	6556	11551	10945
75°	5471	10340	10451
80°	4630	9962	10367
85°	3827	10329	10712



TEST NUMBER: P236484

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades tilted out 20 degrees

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1570.7	4.0
10°-20°	3971.3	10.2
20°-30°	5067.8	13.1
30°-40°	6027.5	15.5
40°-50°	6410.1	16.5
50°-60°	5617.0	14.5
60°-70°	4048.6	10.4
70°-80°	2549.4	6.6
80°-90°	1423.6	3.7
90°-100°	545.6	1.4
100°-110°	274.0	0.7
110°-120°	258.2	0.7
120°-130°	279.5	0.7
130°-140°	270.0	0.7
140°-150°	209.6	0.5
150°-160°	161.6	0.4
160°-170°	104.7	0.3
170°-180°	36.9	0.1
0°-30°	10609.7	27.3
0°-40°	16637.2	42.9
0°-60°	28664.4	73.8
0°-90°	36686.0	94.5
90°-120°	1077.9	2.8
90°-150°	1836.9	4.7
90°-180°	2140.0	5.5
0°-180°	38826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	17052	17052	17052	17052	17052	
5°	16930	17007	16769	16432	16376	###
15°	15942	15459	14311	12892	12326	4476
25°	13563	12539	10215	9264	9457	6233
35°	10510	9191	8458	10187	10826	6567
45°	7421	6513	8122	9838	10302	5721
55°	4630	4720	6658	7593	7726	4162
65°	2532	3267	4645	4888	4534	2545
75°	1178	2169	2668	2757	2666	1276
85°	371	1261	1455	1536	1477	379
90°	98	739	842	891	855	66
95°	76	465	535	587	560	66
105°	150	394	213	185	162	162
115°	284	493	234	144	101	283
125°	423	390	333	204	145	378
135°	525	434	349	334	222	402
145°	532	416	289	260	265	334
155°	511	315	406	271	221	238
165°	500	353	303	382	376	142
175°	488	465	409	365	372	47
180°	453	453	453	453	453	



TEST NUMBER: P236484

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5
2.5°	16994.7	17061.0	17102.0	17155.6	17130.4	17061.0	17067.3	17103.6	17045.2	17054.7	16996.3
5°	16930.0	16997.9	17032.6	17079.9	17049.9	16963.2	16934.8	16923.7	16808.5	16769.1	16628.7
7.5°	16797.5	16863.8	16890.6	16923.7	16838.5	16679.2	16576.6	16493.0	16344.7	16284.8	16157.0
10°	16589.2	16647.6	16657.1	16630.3	16478.8	16276.9	16147.5	16065.5	15910.8	15835.1	15678.9
12.5°	16299.0	16344.7	16313.2	16250.0	16063.9	15849.3	15721.5	15571.6	15379.2	15254.5	15011.6
15°	15942.4	15961.3	15880.9	15798.8	15587.4	15330.3	15140.9	14909.0	14610.8	14311.1	13926.1
17.5°	15491.2	15491.2	15382.3	15279.8	15011.6	14669.2	14393.1	14035.0	13637.4	13258.8	12761.8
20°	14926.4	14926.4	14800.2	14674.0	14314.2	13905.6	13555.4	13116.8	12619.8	12154.4	11644.8
22.5°	14278.0	14298.5	14165.9	13975.0	13561.7	13107.3	12723.9	12148.1	11597.5	11138.4	10650.9
25°	13563.3	13577.5	13441.8	13227.2	12788.6	12288.5	11793.1	11187.3	10646.1	10215.4	9776.8
27.5°	12843.8	12858.0	12709.7	12455.7	11982.4	11430.3	10892.3	10288.0	9813.1	9412.4	9016.4
30°	12092.9	12096.0	11913.0	11663.7	11157.3	10543.6	10030.9	9502.3	9055.9	8754.5	8833.4
32.5°	11308.8	11315.1	11144.7	10857.6	10316.4	9699.5	9253.1	8781.3	8443.7	8592.0	8771.9
35°	10510.5	10507.3	10354.3	10041.9	9467.6	8913.9	8552.6	8126.6	8238.6	8457.9	8762.4
37.5°	9723.2	9715.3	9562.3	9229.4	8664.6	8203.9	7860.0	7823.7	8035.1	8374.3	8865.0
40°	8947.0	8947.0	8770.3	8420.0	7913.6	7560.2	7345.7	7561.8	7847.4	8358.5	8920.2
42.5°	8180.2	8166.0	7986.2	7635.9	7230.5	6924.4	7025.4	7288.9	7714.8	8309.6	8817.6
45°	7421.4	7394.6	7219.4	6903.9	6607.3	6419.6	6681.5	7036.4	7564.9	8121.9	8610.9
47.5°	6667.3	6648.3	6482.7	6228.7	6010.9	6044.1	6318.6	6791.9	7326.7	7860.0	8325.4
50°	5943.1	5930.5	5782.2	5613.4	5457.2	5633.9	5993.6	6519.0	7020.7	7522.4	7938.9
52.5°	5266.3	5252.1	5130.6	5043.8	5009.1	5222.1	5665.4	6173.4	6649.9	7104.3	7506.6
55°	4630.5	4614.7	4531.1	4505.8	4597.3	4841.9	5327.8	5801.1	6236.5	6657.8	7012.8
57.5°	4037.3	4027.8	3985.2	3997.8	4176.1	4482.2	4955.5	5403.5	5798.0	6197.1	6495.3
60°	3485.1	3486.7	3488.2	3562.4	3781.7	4128.8	4578.4	4985.5	5359.4	5704.9	5927.3
62.5°	3005.5	2989.7	3029.1	3182.2	3422.0	3780.1	4193.5	4570.5	4892.4	5174.8	5338.9
65°	2532.2	2557.4	2609.5	2825.6	3095.4	3439.3	3827.4	4149.3	4419.1	4644.7	4770.9
67.5°	2128.3	2161.4	2232.4	2502.2	2800.4	3127.0	3466.2	3728.0	3952.1	4119.3	4220.3
70°	1785.9	1814.3	1916.9	2219.8	2535.3	2833.5	3108.0	3324.2	3500.9	3625.5	3683.9
72.5°	1467.2	1511.4	1670.8	1981.6	2306.6	2547.9	2767.2	2947.1	3081.2	3114.3	3166.4
75°	1178.5	1240.1	1449.9	1782.8	2065.2	2271.9	2456.4	2574.8	2639.4	2667.8	2727.8
77.5°	938.7	1001.8	1262.1	1604.5	1841.1	2016.3	2148.8	2216.6	2278.2	2312.9	2368.1
80°	725.7	796.7	1109.1	1407.3	1628.2	1762.3	1860.1	1920.0	1962.6	1994.2	2047.8
82.5°	545.9	640.5	959.2	1229.0	1413.6	1544.5	1609.2	1653.4	1680.2	1716.5	1760.7
85°	370.8	514.3	799.9	1042.8	1208.5	1314.2	1360.0	1391.5	1419.9	1454.6	1492.5
87.5°	228.8	394.4	656.3	851.9	986.0	1072.8	1105.9	1126.5	1161.2	1200.6	1243.2
90°	97.8	284.0	479.6	629.5	717.8	760.4	793.6	796.7	826.7	842.5	881.9
92.5°	58.4	194.1	347.1	481.2	569.5	616.9	629.5	637.4	651.6	667.4	686.3
95°	75.7	154.6	269.8	367.6	443.3	485.9	500.1	514.3	522.2	534.8	552.2
97.5°	86.8	162.5	268.2	326.6	370.8	400.7	405.5	408.6	407.0	410.2	421.2
100°	104.1	183.0	306.1	343.9	359.7	350.2	340.8	332.9	323.4	317.1	318.7
102.5°	129.4	200.4	331.3	392.8	380.2	355.0	312.4	288.7	265.0	250.9	246.1
105°	149.9	209.8	348.7	443.3	419.7	367.6	325.0	280.8	243.0	213.0	197.2
107.5°	173.5	216.1	347.1	454.4	489.1	402.3	329.7	290.3	247.7	206.7	181.4
110°	219.3	233.5	343.9	444.9	504.9	452.8	369.2	291.9	244.5	217.7	186.2



TEST NUMBER: P236484

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	252.4	238.2	351.8	427.5	501.7	489.1	416.5	336.0	257.2	203.5	190.9
115°	284.0	247.7	359.7	405.5	482.8	503.3	460.7	381.8	301.3	233.5	179.9
117.5°	320.3	263.5	370.8	386.5	451.2	497.0	460.7	440.2	345.5	274.5	219.3
120°	355.0	282.4	377.1	405.5	430.7	471.7	481.2	416.5	407.0	314.0	257.2
122.5°	389.7	302.9	380.2	441.7	405.5	433.9	465.4	454.4	372.3	370.8	291.9
125°	422.8	325.0	378.6	460.7	385.0	396.0	433.9	448.1	422.8	332.9	336.0
127.5°	455.9	347.1	377.1	463.8	405.5	392.8	396.0	426.0	422.8	394.4	306.1
130°	485.9	369.2	359.7	462.3	451.2	364.4	361.3	388.1	403.9	397.6	378.6
132.5°	506.4	392.8	348.7	454.4	476.5	361.3	367.6	348.7	372.3	380.2	375.5
135°	525.4	414.9	340.8	440.2	473.3	394.4	332.9	342.4	332.9	348.7	356.6
137.5°	534.8	438.6	337.6	422.8	463.8	441.7	328.2	342.4	298.2	312.4	325.0
140°	538.0	454.4	337.6	397.6	449.6	451.2	369.2	304.5	331.3	276.1	291.9
142.5°	536.4	465.4	340.8	358.1	427.5	441.7	418.1	317.1	296.6	320.3	257.2
145°	531.7	471.7	342.4	321.8	402.3	429.1	429.1	373.9	293.4	288.7	312.4
147.5°	526.9	474.9	351.8	306.1	377.1	411.8	422.8	413.4	347.1	280.8	272.9
150°	523.8	478.0	377.1	307.6	340.8	391.3	411.8	414.9	400.7	339.2	277.7
152.5°	515.9	481.2	402.3	317.1	302.9	369.2	396.0	407.0	410.2	396.0	351.8
155°	511.2	484.3	421.2	326.6	295.0	334.5	373.9	392.8	402.3	405.5	399.2
157.5°	511.2	489.1	432.3	353.4	302.9	287.1	350.2	370.8	386.5	396.0	400.7
160°	508.0	492.2	440.2	386.5	312.4	288.7	291.9	347.1	364.4	378.6	388.1
162.5°	503.3	493.8	448.1	413.4	345.5	298.2	280.8	285.6	337.6	355.0	367.6
165°	500.1	493.8	462.3	429.1	385.0	320.3	295.0	277.7	269.8	302.9	340.8
167.5°	497.0	492.2	471.7	440.2	419.7	372.3	321.8	293.4	279.2	265.0	260.3
170°	492.2	489.1	479.6	459.1	432.3	416.5	383.4	343.9	304.5	282.4	269.8
172.5°	489.1	487.5	482.8	473.3	455.9	432.3	424.4	410.2	378.6	353.4	323.4
175°	487.5	485.9	484.3	481.2	471.7	457.5	449.6	433.9	418.1	408.6	399.2
177.5°	485.9	484.3	484.3	482.8	479.6	470.1	468.6	459.1	449.6	440.2	429.1
180°	452.8	452.8	452.8	452.8	452.8	452.8	452.8	452.8	452.8	452.8	452.8



TEST NUMBER: P236484

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5	17051.5
2.5°	16971.0	17005.8	16983.7	16937.9	16960.0	17008.9	16997.9	16975.8
5°	16548.2	16537.2	16461.5	16401.5	16392.0	16414.1	16403.1	16376.3
7.5°	16093.9	16087.5	16040.2	15950.3	15958.2	15956.6	15936.1	15910.8
10°	15587.4	15540.1	15456.5	15374.4	15333.4	15324.0	15286.1	15249.8
12.5°	14845.9	14674.0	14465.7	14251.1	14156.5	14014.5	13937.2	13885.1
15°	13632.7	13310.8	13030.0	12753.9	12613.5	12468.4	12380.0	12326.4
17.5°	12394.2	12097.6	11758.4	11509.1	11384.5	11261.4	11187.3	11132.1
20°	11293.0	11012.2	10721.9	10490.0	10349.5	10209.1	10123.9	10060.8
22.5°	10321.1	10043.5	9735.8	9527.6	9431.3	9396.6	9385.6	9369.8
25°	9448.7	9246.8	9232.6	9295.7	9377.7	9431.3	9456.6	9456.6
27.5°	9029.0	9150.5	9260.9	9388.7	9533.9	9638.0	9686.9	9690.1
30°	9000.6	9196.3	9388.7	9625.4	9866.8	10051.4	10127.1	10147.6
32.5°	9032.2	9376.1	9712.2	10037.2	10322.7	10513.6	10592.5	10600.4
35°	9210.5	9658.5	10038.7	10335.3	10578.3	10729.8	10808.6	10826.0
37.5°	9388.7	9813.1	10127.1	10422.1	10646.1	10775.5	10833.9	10849.7
40°	9395.1	9794.2	10103.4	10371.6	10565.7	10654.0	10695.1	10706.1
42.5°	9278.3	9666.4	9958.3	10182.3	10360.6	10469.4	10513.6	10526.2
45°	9060.6	9420.3	9720.1	9955.1	10139.7	10242.3	10292.7	10302.2
47.5°	8719.8	9096.9	9406.1	9622.2	9737.4	9780.0	9731.1	9715.3
50°	8317.5	8661.4	8906.0	9059.0	9106.3	9101.6	9077.9	9084.3
52.5°	7845.8	8123.4	8301.7	8405.9	8453.2	8528.9	8562.0	8555.7
55°	7306.2	7503.4	7574.4	7612.3	7642.3	7713.3	7736.9	7725.9
57.5°	6703.5	6820.3	6844.0	6858.2	6821.9	6760.3	6690.9	6626.2
60°	6078.8	6146.6	6164.0	6152.9	6108.8	6033.0	5946.3	5916.3
62.5°	5447.7	5506.1	5525.0	5488.7	5422.5	5360.9	5296.3	5296.3
65°	4848.2	4919.2	4916.0	4859.2	4725.1	4633.6	4550.0	4534.2
67.5°	4283.4	4297.6	4245.5	4165.1	4051.5	3988.4	3923.7	3907.9
70°	3680.7	3683.9	3639.7	3571.9	3494.5	3456.7	3425.1	3404.6
72.5°	3177.4	3182.2	3153.8	3111.2	3082.8	3048.1	3027.6	3033.9
75°	2751.5	2772.0	2764.1	2749.9	2726.2	2697.8	2678.9	2666.3
77.5°	2393.3	2418.6	2423.3	2420.2	2402.8	2379.1	2360.2	2361.8
80°	2076.2	2103.0	2107.8	2107.8	2090.4	2066.8	2038.4	2044.7
82.5°	1776.5	1803.3	1815.9	1803.3	1792.2	1768.6	1749.6	1749.6
85°	1505.1	1528.8	1539.8	1531.9	1514.6	1494.1	1476.7	1476.7
87.5°	1268.5	1295.3	1315.8	1315.8	1307.9	1292.1	1282.6	1277.9
90°	855.1	875.6	893.0	889.8	869.3	869.3	844.1	855.1
92.5°	694.2	710.0	716.3	711.5	702.1	687.9	673.7	673.7
95°	564.8	577.4	586.9	586.9	580.6	571.1	564.8	560.1
97.5°	427.5	438.6	449.6	449.6	446.5	435.4	429.1	424.4
100°	320.3	326.6	331.3	331.3	328.2	318.7	314.0	310.8
102.5°	244.5	244.5	246.1	246.1	239.8	231.9	227.2	224.0
105°	189.3	187.7	186.2	183.0	176.7	172.0	167.2	162.5
107.5°	162.5	151.5	145.1	140.4	132.5	129.4	123.1	118.3
110°	160.9	148.3	135.7	123.1	112.0	105.7	97.8	93.1



TEST NUMBER: P236484

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L835-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	176.7	156.2	135.7	119.9	113.6	107.3	101.0	96.2
115°	157.8	154.6	149.9	138.8	129.4	118.3	107.3	101.0
117.5°	173.5	143.6	129.4	123.1	123.1	119.9	115.2	110.4
120°	213.0	178.3	148.3	127.8	116.7	107.3	97.8	93.1
122.5°	247.7	209.8	181.4	164.1	148.3	134.1	121.5	115.2
125°	280.8	241.4	214.6	194.1	178.3	165.7	153.0	145.1
127.5°	277.7	310.8	244.5	224.0	208.3	194.1	183.0	175.1
130°	298.2	257.2	261.9	296.6	244.5	225.6	213.0	206.7
132.5°	364.4	328.2	266.6	243.0	233.5	239.8	239.8	241.4
135°	358.1	351.8	345.5	321.8	271.4	247.7	230.3	222.5
137.5°	332.9	340.8	342.4	339.2	336.0	331.3	321.8	312.4
140°	299.8	310.8	318.7	325.0	328.2	323.4	317.1	312.4
142.5°	268.2	279.2	287.1	295.0	299.8	301.3	298.2	295.0
145°	274.5	244.5	257.2	263.5	268.2	268.2	269.8	265.0
147.5°	299.8	301.3	254.0	225.6	236.7	238.2	235.1	233.5
150°	260.3	274.5	296.6	301.3	290.3	252.4	231.9	222.5
152.5°	287.1	258.7	254.0	257.2	266.6	268.2	269.8	266.6
155°	372.3	328.2	285.6	255.6	241.4	235.1	225.6	220.9
157.5°	399.2	389.7	375.5	350.2	321.8	299.8	277.7	268.2
160°	394.4	400.7	400.7	397.6	389.7	377.1	366.0	358.1
162.5°	378.6	391.3	396.0	399.2	399.2	394.4	385.0	378.6
165°	351.8	367.6	377.1	386.5	392.8	391.3	383.4	375.5
167.5°	272.9	315.5	343.9	361.3	373.9	378.6	373.9	367.6
170°	263.5	258.7	258.7	266.6	274.5	285.6	287.1	290.3
172.5°	302.9	282.4	277.7	277.7	280.8	288.7	291.9	285.6
175°	389.7	375.5	367.6	362.9	362.9	377.1	381.8	372.3
177.5°	418.1	408.6	399.2	394.4	403.9	411.8	421.2	399.2
180°	452.8	452.8	452.8	452.8	452.8	452.8	452.8	452.8

(END OF REPORT)