

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: P236481

Luminaire Tested: **SKB4-LD5-30-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: P236481
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-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

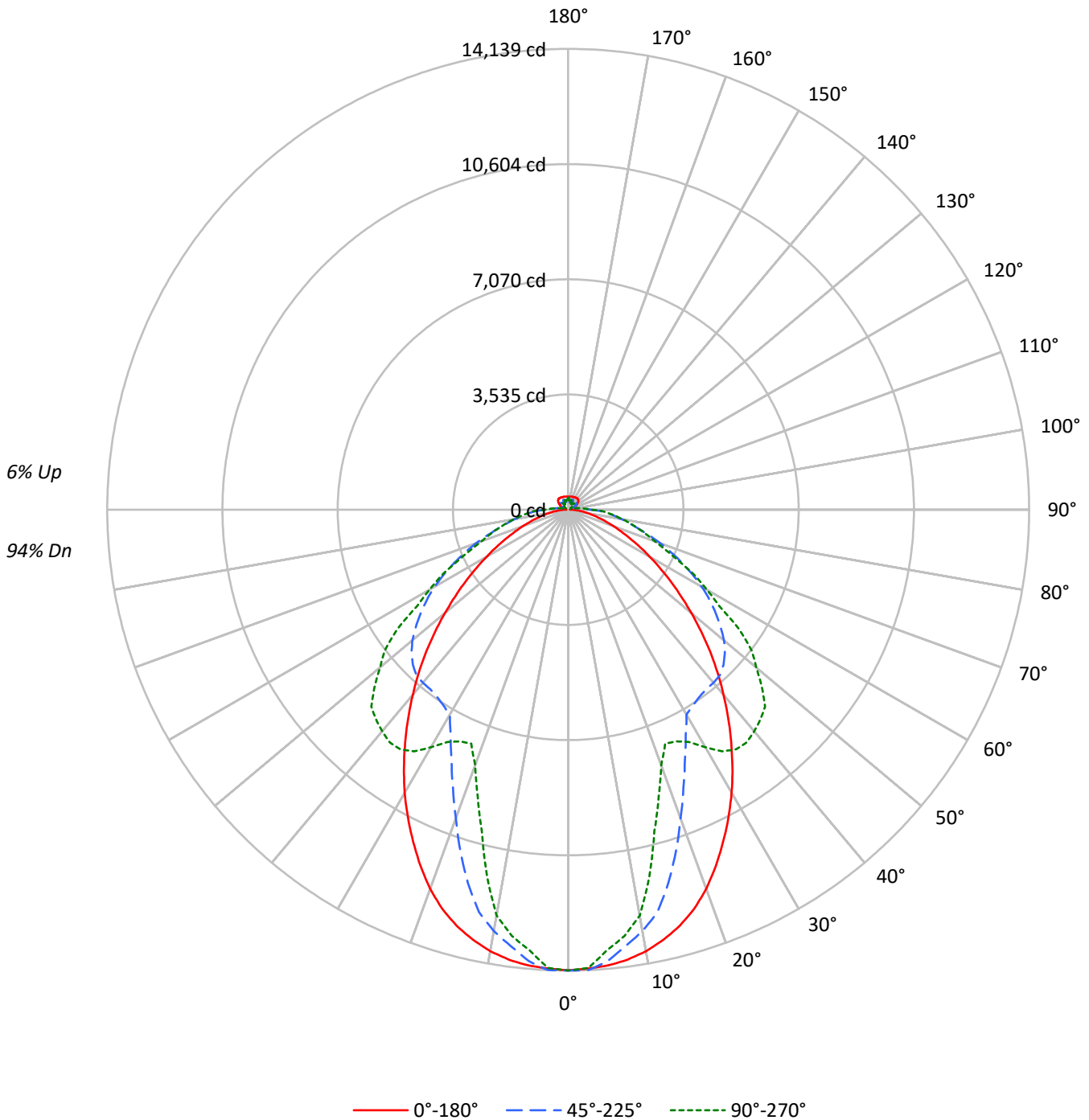
Lumens per Lamp: N/A
Luminaire Lumens: 32188.0 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.71 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Direct

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

TEST NUMBER: P236481

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L835-CD4-U all blades tilted out 20 degrees

Luminous Intensity Polar Plot





TEST NUMBER: P236481

CATALOG NUMBER: SKB4-LD5-30-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	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°	20288	20288	20288
5°	20129	19828	19371
10°	19860	18750	18070
15°	19367	17099	14745
20°	18548	14769	12244
25°	17384	12726	11803
30°	16129	11276	13101
35°	14729	11367	14590
40°	13314	11836	15211
45°	11870	12252	15602
50°	10358	12241	14849
55°	8940	11857	13832
60°	7607	11314	11806
65°	6413	10482	10309
70°	5435	9576	9074
75°	4536	8572	8664
80°	3839	8259	8594
85°	3173	8563	8881



TEST NUMBER: P236481

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L835-CD4-U all blades tilted out 20 degrees

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1302.2	4.0
10°-20°	3292.3	10.2
20°-30°	4201.3	13.1
30°-40°	4997.0	15.5
40°-50°	5314.2	16.5
50°-60°	4656.7	14.5
60°-70°	3356.4	10.4
70°-80°	2113.5	6.6
80°-90°	1180.2	3.7
90°-100°	452.4	1.4
100°-110°	227.2	0.7
110°-120°	214.1	0.7
120°-130°	231.7	0.7
130°-140°	223.8	0.7
140°-150°	173.8	0.5
150°-160°	134.0	0.4
160°-170°	86.8	0.3
170°-180°	30.6	0.1
0°-30°	8795.8	27.3
0°-40°	13792.8	42.9
0°-60°	23763.7	73.8
0°-90°	30413.9	94.5
90°-120°	893.6	2.8
90°-150°	1522.8	4.7
90°-180°	1774.0	5.5
0°-180°	32188.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	14136	14136	14136	14136	14136	
5°	14036	14099	13902	13622	13576	###
15°	13217	12816	11864	10688	10219	3710
25°	11244	10395	8469	7680	7840	5167
35°	8714	7619	7012	8445	8975	5444
45°	6153	5400	6733	8156	8541	4743
55°	3839	3913	5520	6295	6405	3450
65°	2099	2709	3851	4052	3759	2110
75°	977	1798	2212	2286	2210	1058
85°	307	1046	1206	1273	1224	314
90°	81	613	698	739	709	55
95°	63	385	443	487	464	55
105°	124	326	177	153	135	134
115°	235	409	194	120	84	235
125°	350	324	276	169	120	313
135°	436	360	289	277	184	333
145°	441	345	239	216	220	277
155°	424	261	336	224	183	197
165°	415	292	251	316	311	118
175°	404	385	339	303	309	39
180°	375	375	375	375	375	



TEST NUMBER: P236481

CATALOG NUMBER: SKB4-LD5-30-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°	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2
2.5°	14089.2	14144.1	14178.1	14222.6	14201.6	14144.1	14149.3	14179.4	14131.0	14138.9	14090.5
5°	14035.5	14091.8	14120.6	14159.8	14134.9	14063.0	14039.5	14030.3	13934.8	13902.1	13785.7
7.5°	13925.7	13980.6	14002.8	14030.3	13959.7	13827.6	13742.6	13673.2	13550.3	13500.6	13394.6
10°	13753.0	13801.4	13809.3	13787.0	13661.5	13494.0	13386.8	13318.8	13190.6	13127.8	12998.3
12.5°	13512.4	13550.3	13524.1	13471.8	13317.5	13139.6	13033.7	12909.4	12749.8	12646.5	12445.1
15°	13216.8	13232.5	13165.8	13097.7	12922.5	12709.3	12552.3	12360.1	12112.9	11864.3	11545.2
17.5°	12842.7	12842.7	12752.4	12667.4	12445.1	12161.3	11932.4	11635.5	11305.9	10992.0	10579.9
20°	12374.4	12374.4	12269.8	12165.2	11867.0	11528.2	11237.8	10874.2	10462.2	10076.4	9653.9
22.5°	11836.9	11853.9	11744.0	11585.8	11243.1	10866.4	10548.6	10071.2	9614.7	9234.1	8829.9
25°	11244.4	11256.2	11143.7	10965.8	10602.2	10187.6	9776.9	9274.6	8826.0	8468.9	8105.3
27.5°	10648.0	10659.7	10536.8	10326.2	9933.8	9476.0	9030.0	8529.1	8135.4	7803.2	7474.9
30°	10025.4	10028.0	9876.3	9669.6	9249.8	8741.0	8315.9	7877.7	7507.6	7257.8	7323.2
32.5°	9375.3	9380.6	9239.3	9001.3	8552.6	8041.2	7671.1	7280.0	7000.1	7123.1	7272.2
35°	8713.5	8710.9	8584.0	8325.1	7849.0	7389.9	7090.4	6737.2	6830.1	7011.9	7264.3
37.5°	8060.9	8054.3	7927.4	7651.5	7183.2	6801.3	6516.2	6486.1	6661.4	6942.6	7349.3
40°	7417.3	7417.3	7270.9	6980.5	6560.6	6267.7	6089.8	6269.0	6505.7	6929.5	7395.1
42.5°	6781.7	6769.9	6620.8	6330.4	5994.3	5740.6	5824.3	6042.7	6395.8	6888.9	7310.1
45°	6152.6	6130.3	5985.1	5723.6	5477.7	5322.0	5539.1	5833.4	6271.6	6733.3	7138.8
47.5°	5527.4	5511.7	5374.3	5163.8	4983.3	5010.7	5238.3	5630.7	6074.1	6516.2	6902.0
50°	4927.0	4916.6	4793.6	4653.7	4524.2	4670.7	4968.9	5404.4	5820.3	6236.3	6581.6
52.5°	4365.9	4354.1	4253.4	4181.5	4152.7	4329.3	4696.8	5118.0	5513.0	5889.7	6223.2
55°	3838.8	3825.7	3756.4	3735.5	3811.3	4014.1	4416.9	4809.3	5170.3	5519.5	5813.8
57.5°	3347.0	3339.2	3303.9	3314.3	3462.1	3715.9	4108.2	4479.7	4806.7	5137.6	5384.8
60°	2889.2	2890.6	2891.9	2953.3	3135.1	3422.9	3795.7	4133.1	4443.1	4729.5	4913.9
62.5°	2491.6	2478.6	2511.3	2638.1	2836.9	3133.8	3476.5	3789.1	4055.9	4290.1	4426.1
65°	2099.2	2120.2	2163.3	2342.5	2566.2	2851.3	3173.1	3439.9	3663.5	3850.6	3955.2
67.5°	1764.4	1791.9	1850.7	2074.4	2321.6	2592.3	2873.6	3090.7	3276.4	3415.0	3498.7
70°	1480.6	1504.1	1589.2	1840.3	2101.9	2349.1	2576.6	2755.8	2902.3	3005.7	3054.0
72.5°	1216.4	1253.0	1385.1	1642.8	1912.2	2112.3	2294.1	2443.2	2554.4	2581.9	2625.0
75°	977.0	1028.0	1202.0	1478.0	1712.1	1883.4	2036.5	2134.6	2188.2	2211.7	2261.4
77.5°	778.2	830.5	1046.4	1330.2	1526.4	1671.6	1781.4	1837.7	1888.7	1917.4	1963.2
80°	601.7	660.5	919.5	1166.7	1349.8	1461.0	1542.1	1591.8	1627.1	1653.2	1697.7
82.5°	452.5	531.0	795.2	1018.9	1171.9	1280.5	1334.1	1370.7	1393.0	1423.0	1459.7
85°	307.4	426.4	663.1	864.6	1001.9	1089.5	1127.4	1153.6	1177.1	1205.9	1237.3
87.5°	189.7	327.0	544.1	706.3	817.5	889.4	916.9	933.9	962.6	995.3	1030.7
90°	81.1	235.4	397.6	521.9	595.1	630.4	657.9	660.5	685.4	698.4	731.1
92.5°	48.4	160.9	287.7	398.9	472.2	511.4	521.9	528.4	540.2	553.3	569.0
95°	62.8	128.2	223.7	304.8	367.5	402.8	414.6	426.4	432.9	443.4	457.8
97.5°	71.9	134.7	222.4	270.7	307.4	332.2	336.1	338.8	337.4	340.1	349.2
100°	86.3	151.7	253.7	285.1	298.2	290.4	282.5	276.0	268.1	262.9	264.2
102.5°	107.3	166.1	274.7	325.7	315.2	294.3	259.0	239.4	219.7	208.0	204.0
105°	124.3	174.0	289.1	367.5	347.9	304.8	269.4	232.8	201.4	176.6	163.5
107.5°	143.9	179.2	287.7	376.7	405.5	333.5	273.4	240.7	205.3	171.3	150.4
110°	181.8	193.6	285.1	368.8	418.5	375.4	306.1	242.0	202.7	180.5	154.3



TEST NUMBER: P236481

CATALOG NUMBER: SKB4-LD5-30-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°	209.3	197.5	291.7	354.5	415.9	405.5	345.3	278.6	213.2	168.7	158.3
115°	235.4	205.3	298.2	336.1	400.2	417.2	381.9	316.5	249.8	193.6	149.1
117.5°	265.5	218.4	307.4	320.4	374.1	412.0	381.9	364.9	286.4	227.6	181.8
120°	294.3	234.1	312.6	336.1	357.1	391.1	398.9	345.3	337.4	260.3	213.2
122.5°	323.1	251.1	315.2	366.2	336.1	359.7	385.8	376.7	308.7	307.4	242.0
125°	350.5	269.4	313.9	381.9	319.1	328.3	359.7	371.5	350.5	276.0	278.6
127.5°	378.0	287.7	312.6	384.5	336.1	325.7	328.3	353.1	350.5	327.0	253.7
130°	402.8	306.1	298.2	383.2	374.1	302.1	299.5	321.8	334.8	329.6	313.9
132.5°	419.8	325.7	289.1	376.7	395.0	299.5	304.8	289.1	308.7	315.2	311.3
135°	435.5	344.0	282.5	364.9	392.4	327.0	276.0	283.8	276.0	289.1	295.6
137.5°	443.4	363.6	279.9	350.5	384.5	366.2	272.1	283.8	247.2	259.0	269.4
140°	446.0	376.7	279.9	329.6	372.8	374.1	306.1	252.4	274.7	228.9	242.0
142.5°	444.7	385.8	282.5	296.9	354.5	366.2	346.6	262.9	245.9	265.5	213.2
145°	440.8	391.1	283.8	266.8	333.5	355.8	355.8	310.0	243.3	239.4	259.0
147.5°	436.9	393.7	291.7	253.7	312.6	341.4	350.5	342.7	287.7	232.8	226.3
150°	434.2	396.3	312.6	255.0	282.5	324.4	341.4	344.0	332.2	281.2	230.2
152.5°	427.7	398.9	333.5	262.9	251.1	306.1	328.3	337.4	340.1	328.3	291.7
155°	423.8	401.5	349.2	270.7	244.6	277.3	310.0	325.7	333.5	336.1	330.9
157.5°	423.8	405.5	358.4	293.0	251.1	238.0	290.4	307.4	320.4	328.3	332.2
160°	421.2	408.1	364.9	320.4	259.0	239.4	242.0	287.7	302.1	313.9	321.8
162.5°	417.2	409.4	371.5	342.7	286.4	247.2	232.8	236.7	279.9	294.3	304.8
165°	414.6	409.4	383.2	355.8	319.1	265.5	244.6	230.2	223.7	251.1	282.5
167.5°	412.0	408.1	391.1	364.9	347.9	308.7	266.8	243.3	231.5	219.7	215.8
170°	408.1	405.5	397.6	380.6	358.4	345.3	317.8	285.1	252.4	234.1	223.7
172.5°	405.5	404.2	400.2	392.4	378.0	358.4	351.8	340.1	313.9	293.0	268.1
175°	404.2	402.8	401.5	398.9	391.1	379.3	372.8	359.7	346.6	338.8	330.9
177.5°	402.8	401.5	401.5	400.2	397.6	389.8	388.5	380.6	372.8	364.9	355.8
180°	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4



TEST NUMBER: P236481

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L835-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2	14136.2
2.5°	14069.5	14098.3	14080.0	14042.1	14060.4	14100.9	14091.8	14073.5
5°	13719.0	13709.9	13647.1	13597.4	13589.5	13607.8	13598.7	13576.4
7.5°	13342.3	13337.1	13297.9	13223.3	13229.8	13228.5	13211.5	13190.6
10°	12922.5	12883.2	12813.9	12745.9	12711.9	12704.0	12672.7	12642.6
12.5°	12307.7	12165.2	11992.5	11814.6	11736.2	11618.5	11554.4	11511.2
15°	11301.9	11035.1	10802.3	10573.4	10457.0	10336.7	10263.4	10219.0
17.5°	10275.2	10029.3	9748.1	9541.4	9438.1	9336.1	9274.6	9228.8
20°	9362.3	9129.4	8888.8	8696.5	8580.1	8463.7	8393.1	8340.8
22.5°	8556.6	8326.4	8071.3	7898.7	7818.9	7790.1	7781.0	7767.9
25°	7833.3	7665.9	7654.1	7706.4	7774.4	7818.9	7839.8	7839.8
27.5°	7485.4	7586.1	7677.6	7783.6	7903.9	7990.2	8030.8	8033.4
30°	7461.8	7624.0	7783.6	7979.8	8179.9	8332.9	8395.7	8412.7
32.5°	7488.0	7773.1	8051.7	8321.1	8557.9	8716.1	8781.5	8788.1
35°	7635.8	8007.2	8322.4	8568.3	8769.8	8895.3	8960.7	8975.1
37.5°	7783.6	8135.4	8395.7	8640.3	8826.0	8933.2	8981.6	8994.7
40°	7788.8	8119.7	8376.1	8598.4	8759.3	8832.5	8866.5	8875.7
42.5°	7692.0	8013.8	8255.7	8441.5	8589.3	8679.5	8716.1	8726.6
45°	7511.5	7809.7	8058.2	8253.1	8406.1	8491.2	8533.0	8540.9
47.5°	7229.0	7541.6	7798.0	7977.1	8072.6	8107.9	8067.4	8054.3
50°	6895.5	7180.6	7383.3	7510.2	7549.4	7545.5	7525.9	7531.1
52.5°	6504.4	6734.6	6882.4	6968.7	7008.0	7070.7	7098.2	7093.0
55°	6057.1	6220.6	6279.4	6310.8	6335.7	6394.5	6414.2	6405.0
57.5°	5557.4	5654.2	5673.9	5685.6	5655.5	5604.5	5547.0	5493.4
60°	5039.5	5095.7	5110.1	5101.0	5064.4	5001.6	4929.6	4904.8
62.5°	4516.3	4564.7	4580.4	4550.3	4495.4	4444.4	4390.8	4390.8
65°	4019.3	4078.2	4075.5	4028.5	3917.3	3841.4	3772.1	3759.0
67.5°	3551.1	3562.8	3519.7	3453.0	3358.8	3306.5	3252.9	3239.8
70°	3051.4	3054.0	3017.4	2961.2	2897.1	2865.7	2839.5	2822.5
72.5°	2634.2	2638.1	2614.6	2579.3	2555.7	2526.9	2509.9	2515.2
75°	2281.1	2298.1	2291.5	2279.7	2260.1	2236.6	2220.9	2210.4
77.5°	1984.1	2005.1	2009.0	2006.4	1992.0	1972.4	1956.7	1958.0
80°	1721.3	1743.5	1747.4	1747.4	1733.0	1713.4	1689.9	1695.1
82.5°	1472.7	1495.0	1505.4	1495.0	1485.8	1466.2	1450.5	1450.5
85°	1247.8	1267.4	1276.6	1270.0	1255.6	1238.6	1224.2	1224.2
87.5°	1051.6	1073.8	1090.8	1090.8	1084.3	1071.2	1063.4	1059.4
90°	708.9	725.9	740.3	737.7	720.7	720.7	699.7	708.9
92.5°	575.5	588.6	593.8	589.9	582.0	570.3	558.5	558.5
95°	468.2	478.7	486.6	486.6	481.3	473.5	468.2	464.3
97.5°	354.5	363.6	372.8	372.8	370.1	361.0	355.8	351.8
100°	265.5	270.7	274.7	274.7	272.1	264.2	260.3	257.7
102.5°	202.7	202.7	204.0	204.0	198.8	192.3	188.3	185.7
105°	157.0	155.6	154.3	151.7	146.5	142.6	138.6	134.7
107.5°	134.7	125.6	120.3	116.4	109.9	107.3	102.0	98.1
110°	133.4	122.9	112.5	102.0	92.9	87.6	81.1	77.2



TEST NUMBER: P236481

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L835-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	146.5	129.5	112.5	99.4	94.2	88.9	83.7	79.8
115°	130.8	128.2	124.3	115.1	107.3	98.1	88.9	83.7
117.5°	143.9	119.0	107.3	102.0	102.0	99.4	95.5	91.6
120°	176.6	147.8	122.9	105.9	96.8	88.9	81.1	77.2
122.5°	205.3	174.0	150.4	136.0	122.9	111.2	100.7	95.5
125°	232.8	200.1	177.9	160.9	147.8	137.3	126.9	120.3
127.5°	230.2	257.7	202.7	185.7	172.6	160.9	151.7	145.2
130°	247.2	213.2	217.1	245.9	202.7	187.0	176.6	171.3
132.5°	302.1	272.1	221.0	201.4	193.6	198.8	198.8	200.1
135°	296.9	291.7	286.4	266.8	225.0	205.3	191.0	184.4
137.5°	276.0	282.5	283.8	281.2	278.6	274.7	266.8	259.0
140°	248.5	257.7	264.2	269.4	272.1	268.1	262.9	259.0
142.5°	222.4	231.5	238.0	244.6	248.5	249.8	247.2	244.6
145°	227.6	202.7	213.2	218.4	222.4	222.4	223.7	219.7
147.5°	248.5	249.8	210.6	187.0	196.2	197.5	194.9	193.6
150°	215.8	227.6	245.9	249.8	240.7	209.3	192.3	184.4
152.5°	238.0	214.5	210.6	213.2	221.0	222.4	223.7	221.0
155°	308.7	272.1	236.7	211.9	200.1	194.9	187.0	183.1
157.5°	330.9	323.1	311.3	290.4	266.8	248.5	230.2	222.4
160°	327.0	332.2	332.2	329.6	323.1	312.6	303.4	296.9
162.5°	313.9	324.4	328.3	330.9	330.9	327.0	319.1	313.9
165°	291.7	304.8	312.6	320.4	325.7	324.4	317.8	311.3
167.5°	226.3	261.6	285.1	299.5	310.0	313.9	310.0	304.8
170°	218.4	214.5	214.5	221.0	227.6	236.7	238.0	240.7
172.5°	251.1	234.1	230.2	230.2	232.8	239.4	242.0	236.7
175°	323.1	311.3	304.8	300.8	300.8	312.6	316.5	308.7
177.5°	346.6	338.8	330.9	327.0	334.8	341.4	349.2	330.9
180°	375.4	375.4	375.4	375.4	375.4	375.4	375.4	375.4

(END OF REPORT)