

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: P236538

Luminaire Tested: **SKB4-LD5-24-W-UNV-L835-CD4-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236538  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24078)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SKB4-LD5-24-W-UNV-L835-CD4-U all blades tilted out 20 degrees  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH WIDE DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES  
Light Source: (952) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

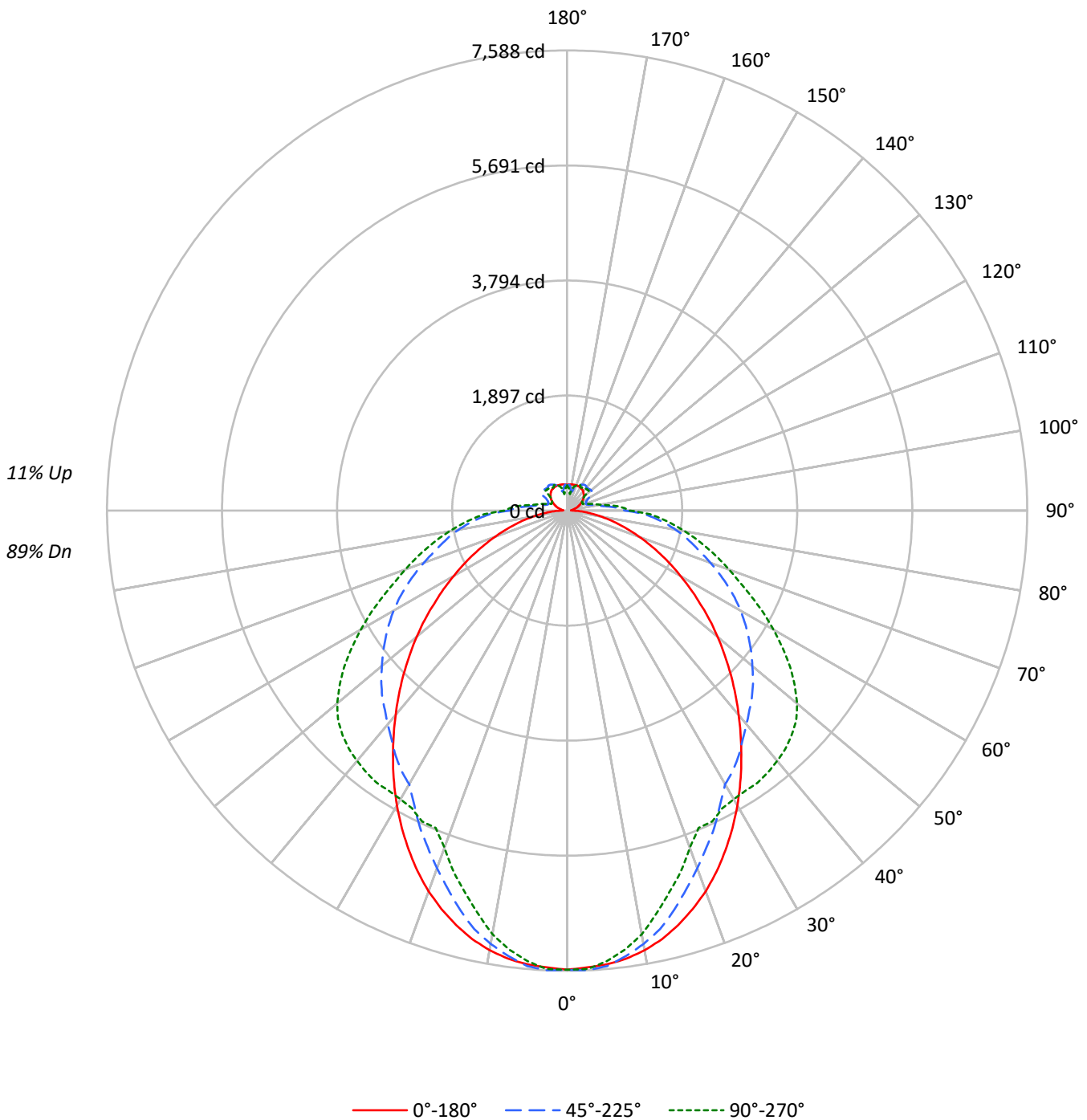
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24036.0 lumens  
Efficiency: N/A  
Efficacy: 116.6 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 1.07 / 1.26  
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')  
CIE Type: Semi-Direct  
  
Input Watts (W): 206.2  
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-LD5-24-W-UNV-L835-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	50	30	10	0		
RCR																										
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	91	91	91	89								
1	104	99	94	89	100	95	91	87	89	85	82	83	80	77	77	75	73	70								
2	94	85	78	71	90	82	75	70	77	71	66	72	67	63	67	63	60	57								
3	86	74	66	59	82	72	64	57	67	60	55	63	57	53	59	54	50	47								
4	78	66	56	49	75	63	55	48	59	52	47	56	50	45	52	47	43	40								
5	72	58	49	42	69	57	48	42	53	46	40	50	44	39	47	42	37	35								
6	66	53	43	37	64	51	42	36	48	41	35	45	39	34	43	37	33	30								
7	61	48	39	32	59	46	38	32	44	36	31	41	35	30	39	33	29	27								
8	57	43	35	29	55	42	34	28	40	33	28	38	31	27	36	30	26	24								
9	53	40	32	26	51	39	31	26	37	30	25	35	29	24	33	28	23	21								
10	50	37	29	24	48	36	28	23	34	27	23	32	26	22	31	25	21	19								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10866	10866	10866
5°	10772	10753	10644
10°	10629	10364	10141
15°	10368	9827	9400
20°	10013	9197	8683
25°	9550	8645	8517
30°	9032	8096	8557
35°	8464	7996	8907
40°	7902	7858	9235
45°	7352	7850	9566
50°	6809	7827	9761
55°	6237	7852	9687
60°	5691	7907	9458
65°	5176	7938	9184
70°	4650	8013	9127
75°	4155	8317	9382
80°	3648	9088	10000
85°	3094	10338	11339



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	709.2	3.0
10°-20°	1915.0	8.0
20°-30°	2689.9	11.2
30°-40°	3191.0	13.3
40°-50°	3416.9	14.2
50°-60°	3245.2	13.5
60°-70°	2707.9	11.3
70°-80°	2048.1	8.5
80°-90°	1353.0	5.6
90°-100°	673.2	2.8
100°-110°	388.6	1.6
110°-120°	338.3	1.4
120°-130°	364.2	1.5
130°-140°	358.3	1.5
140°-150°	285.5	1.2
150°-160°	203.7	0.8
160°-170°	110.8	0.5
170°-180°	37.2	0.2
0°-30°	5314.1	22.1
0°-40°	8505.1	35.4
0°-60°	15167.2	63.1
0°-90°	21276.2	88.5
90°-120°	1400.0	5.8
90°-150°	2408.0	10.0
90°-180°	2760.0	11.5
0°-180°	24036.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7571	7571	7571	7571	7571	
5°	7511	7570	7539	7478	7460	712
15°	7075	7040	6818	6582	6515	1990
25°	6177	6057	5753	5570	5657	2840
35°	5007	4910	4933	5274	5480	3131
45°	3811	3904	4314	4979	5237	2942
55°	2678	2984	3655	4301	4486	2403
65°	1694	2198	2916	3288	3349	1685
75°	895	1598	2146	2360	2394	953
85°	300	1052	1456	1543	1563	303
90°	88	669	949	1008	1031	61
95°	83	455	714	810	835	69
105°	138	340	367	414	423	149
115°	232	455	346	301	280	230
125°	321	479	516	353	314	286
135°	386	459	505	501	481	297
145°	429	419	512	473	455	268
155°	443	334	467	485	468	205
165°	441	386	335	403	398	125
175°	434	430	430	401	366	42
180°	415	415	415	415	415	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8
2.5°	7541.5	7561.6	7607.6	7614.3	7610.1	7590.1	7579.2	7608.5	7594.2	7588.4	7575.0
5°	7511.4	7532.3	7580.0	7585.9	7580.8	7559.1	7547.4	7573.3	7553.2	7539.0	7513.9
7.5°	7454.4	7469.5	7516.4	7524.8	7512.2	7483.7	7461.1	7472.0	7436.0	7411.7	7383.3
10°	7360.7	7375.7	7421.8	7426.0	7401.7	7359.8	7323.8	7320.5	7288.7	7256.0	7216.7
12.5°	7236.8	7248.5	7292.8	7290.3	7249.3	7203.3	7165.6	7153.0	7110.3	7071.0	7020.8
15°	7075.2	7087.7	7127.1	7113.7	7066.0	7014.1	6973.0	6956.3	6890.2	6818.2	6743.6
17.5°	6889.3	6904.4	6929.5	6909.4	6861.7	6802.3	6754.5	6707.6	6617.2	6540.2	6467.4
20°	6680.0	6679.2	6703.5	6680.0	6628.9	6566.2	6492.5	6424.7	6337.6	6274.8	6202.8
22.5°	6441.4	6449.0	6454.8	6438.1	6382.8	6294.9	6209.5	6147.6	6068.9	6008.6	5939.1
25°	6176.9	6185.2	6186.1	6164.3	6107.4	6006.9	5929.9	5877.1	5802.6	5753.2	5659.5
27.5°	5903.1	5900.6	5914.8	5895.6	5811.8	5713.9	5656.1	5605.1	5546.5	5463.6	5387.4
30°	5614.3	5599.2	5622.6	5598.4	5509.6	5430.9	5374.8	5348.9	5266.0	5210.7	5261.0
32.5°	5312.9	5297.8	5323.8	5292.8	5210.7	5161.3	5120.3	5081.0	5024.0	5086.0	5142.1
35°	5007.3	4992.2	5019.9	4986.4	4923.6	4895.9	4859.9	4829.0	4875.9	4932.8	4983.0
37.5°	4702.6	4688.3	4717.6	4684.1	4649.0	4648.1	4603.8	4653.2	4701.7	4755.3	4849.1
40°	4402.0	4390.3	4419.6	4396.1	4386.1	4396.1	4386.1	4472.3	4506.6	4600.4	4721.0
42.5°	4104.0	4101.4	4125.7	4117.3	4138.3	4150.8	4196.0	4267.2	4328.3	4451.4	4607.1
45°	3810.9	3810.9	3836.1	3849.4	3885.4	3922.3	3987.6	4058.7	4157.5	4314.1	4470.6
47.5°	3521.3	3524.6	3553.9	3592.4	3636.0	3708.0	3777.4	3867.0	3999.3	4157.5	4313.3
50°	3239.1	3242.5	3281.0	3340.4	3394.8	3486.1	3559.8	3676.1	3828.5	3987.6	4162.6
52.5°	2962.0	2967.0	3019.8	3084.2	3162.1	3258.4	3358.0	3504.5	3651.0	3824.3	4004.3
55°	2678.2	2698.3	2761.9	2833.1	2934.4	3034.0	3160.4	3322.8	3478.6	3655.2	3825.2
57.5°	2416.2	2437.1	2507.4	2590.3	2710.0	2824.7	2984.6	3146.2	3311.1	3481.9	3645.2
60°	2161.7	2184.3	2258.8	2356.7	2494.0	2635.5	2808.8	2982.9	3140.3	3305.3	3445.1
62.5°	1928.9	1942.3	2012.6	2134.0	2288.1	2457.2	2645.6	2818.0	2967.9	3114.4	3242.5
65°	1694.5	1710.4	1779.1	1925.6	2099.7	2295.6	2491.5	2653.9	2787.9	2916.0	3028.2
67.5°	1474.3	1494.4	1564.7	1736.4	1933.1	2145.7	2331.6	2480.6	2601.2	2714.2	2810.5
70°	1266.7	1285.1	1369.7	1568.9	1787.4	1995.9	2164.2	2304.0	2411.1	2514.9	2597.8
72.5°	1072.5	1093.4	1198.9	1422.4	1653.5	1846.0	1993.4	2122.3	2227.0	2315.7	2396.9
75°	895.0	915.1	1052.4	1299.3	1512.0	1684.4	1825.9	1950.7	2051.1	2145.7	2221.9
77.5°	727.5	759.3	933.5	1178.8	1365.5	1527.9	1664.4	1795.8	1903.8	1987.5	2044.4
80°	571.8	625.4	830.5	1052.4	1223.1	1385.6	1531.2	1661.8	1751.4	1819.2	1863.6
82.5°	427.8	509.9	725.9	923.4	1092.5	1264.2	1398.1	1512.0	1588.2	1642.6	1676.1
85°	299.7	405.2	616.2	807.9	974.5	1129.4	1247.4	1345.4	1409.8	1455.9	1481.8
87.5°	199.3	311.4	514.0	684.8	829.7	968.6	1071.6	1160.4	1218.1	1261.7	1286.8
90°	87.9	234.4	393.5	511.5	620.4	718.3	802.0	875.7	918.4	949.4	958.6
92.5°	67.0	175.8	309.8	422.8	524.1	622.9	711.6	784.5	833.9	864.8	875.7
95°	82.9	145.7	239.4	323.2	412.7	496.5	565.9	627.1	676.5	714.1	735.9
97.5°	87.9	150.7	227.7	282.1	339.9	413.6	475.5	524.1	554.2	575.2	583.5
100°	100.5	162.4	250.3	278.8	315.6	350.8	402.7	448.7	476.4	493.9	502.3
102.5°	117.2	172.5	271.3	303.1	316.5	341.6	355.0	380.9	407.7	427.0	436.2
105°	138.1	181.7	290.5	347.4	338.2	342.4	353.3	354.1	353.3	366.7	375.1
107.5°	165.8	188.4	302.2	364.2	392.6	362.5	355.8	355.0	347.4	331.5	328.2
110°	190.0	191.7	296.4	375.1	417.8	401.0	373.4	359.2	346.6	335.7	321.5



TEST NUMBER: P236538

CATALOG NUMBER: SKB4-LD5-24-W-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°	210.1	199.3	297.2	390.1	431.2	460.5	406.9	376.7	352.5	334.0	321.5
115°	231.9	205.1	301.4	395.2	438.7	471.3	487.3	410.2	372.6	345.8	325.7
117.5°	255.3	214.3	308.1	392.6	449.6	482.2	497.3	498.1	406.9	368.4	340.7
120°	277.1	224.4	310.6	392.6	469.7	485.6	504.0	513.2	497.3	404.4	365.0
122.5°	299.7	238.6	314.0	393.5	458.8	490.6	510.7	517.4	517.4	501.5	409.4
125°	320.6	256.2	312.3	394.3	458.8	499.8	508.2	520.7	519.1	515.7	511.5
127.5°	339.9	277.1	308.1	393.5	454.6	498.1	507.3	517.4	520.7	516.6	512.4
130°	355.8	295.5	292.2	388.5	447.1	494.8	509.0	513.2	519.1	517.4	510.7
132.5°	370.0	313.1	280.5	384.3	442.0	490.6	512.4	512.4	512.4	514.0	509.0
135°	385.9	341.6	283.8	377.6	437.0	481.4	509.0	519.9	509.0	504.8	504.8
137.5°	399.3	370.9	288.8	368.4	430.3	473.0	504.0	518.2	502.3	501.5	497.3
140°	411.1	396.8	299.7	355.8	421.9	465.5	492.3	513.2	517.4	493.9	493.9
142.5°	422.8	419.4	317.3	329.0	410.2	454.6	481.4	504.0	514.9	514.0	484.7
145°	428.6	432.0	336.6	308.9	395.2	442.0	470.5	491.4	507.3	512.4	509.0
147.5°	432.8	437.0	350.8	307.3	375.9	427.0	459.6	480.6	495.6	506.5	507.3
150°	437.0	439.5	371.7	315.6	343.3	411.1	445.4	468.8	483.9	494.8	499.8
152.5°	441.2	442.0	401.9	333.2	317.3	390.1	427.8	453.8	470.5	482.2	486.4
155°	442.9	443.7	426.1	355.0	315.6	351.6	406.0	434.5	453.8	467.2	472.2
157.5°	444.6	443.7	442.9	371.7	330.7	319.0	376.7	411.9	433.7	449.6	457.1
160°	443.7	442.9	448.7	402.7	352.5	319.0	324.0	380.9	406.9	426.1	436.2
162.5°	442.9	442.0	445.4	430.3	371.7	339.1	316.5	321.5	368.4	396.8	409.4
165°	441.2	440.4	442.0	445.4	409.4	362.5	336.6	318.1	314.0	334.9	367.5
167.5°	439.5	438.7	439.5	442.9	437.0	402.7	364.2	344.9	325.7	310.6	307.3
170°	437.9	437.0	437.0	437.0	440.4	435.3	411.9	380.9	355.8	344.1	324.8
172.5°	436.2	435.3	435.3	435.3	434.5	434.5	438.7	431.2	414.4	395.2	371.7
175°	433.7	432.8	432.8	432.8	431.2	429.5	429.5	429.5	427.8	429.5	427.0
177.5°	432.0	431.2	431.2	430.3	428.6	427.0	427.0	426.1	422.8	421.1	416.9
180°	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3



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CATALOG NUMBER: SKB4-LD5-24-W-UNV-L835-CD4-U all blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8	7570.8
2.5°	7547.4	7559.9	7577.5	7555.7	7559.1	7576.7	7571.6	7567.5
5°	7481.2	7486.2	7492.1	7463.6	7462.0	7477.0	7462.0	7460.3
7.5°	7345.6	7343.1	7348.1	7310.4	7307.9	7320.5	7308.8	7302.1
10°	7178.2	7171.5	7167.3	7127.1	7113.7	7117.0	7105.3	7095.3
12.5°	6955.5	6922.0	6897.7	6852.5	6833.2	6831.6	6809.8	6803.1
15°	6672.5	6637.3	6606.3	6557.8	6545.2	6549.4	6531.8	6515.1
17.5°	6399.6	6364.4	6334.3	6282.3	6272.3	6278.2	6244.7	6238.8
20°	6137.5	6097.3	6071.4	6013.6	5989.3	5983.5	5929.1	5914.8
22.5°	5884.7	5823.6	5749.9	5693.8	5683.8	5692.1	5684.6	5662.0
25°	5569.1	5535.6	5553.1	5587.5	5637.7	5672.0	5673.7	5657.0
27.5°	5396.6	5463.6	5512.1	5518.0	5536.4	5558.2	5559.0	5538.1
30°	5322.9	5345.5	5369.8	5410.8	5465.2	5502.1	5511.3	5494.5
32.5°	5167.2	5225.8	5291.1	5353.9	5421.7	5471.1	5487.0	5474.5
35°	5054.2	5138.7	5230.0	5317.9	5400.8	5460.2	5486.2	5479.5
37.5°	4947.9	5065.1	5179.8	5285.2	5369.0	5420.0	5441.0	5440.1
40°	4856.6	4989.7	5103.6	5212.4	5300.3	5360.6	5384.9	5389.1
42.5°	4749.4	4877.5	5013.2	5138.7	5234.2	5297.8	5323.8	5329.6
45°	4612.1	4761.2	4913.5	5045.0	5131.2	5195.7	5227.5	5236.7
47.5°	4475.7	4635.6	4789.6	4918.6	5001.4	5073.4	5108.6	5122.0
50°	4325.8	4485.7	4643.9	4764.5	4842.4	4912.7	4942.0	4950.4
52.5°	4160.0	4323.3	4469.8	4579.5	4637.3	4700.9	4725.2	4727.7
55°	3986.7	4133.3	4256.3	4345.1	4402.0	4464.0	4482.4	4485.7
57.5°	3785.0	3912.2	4019.4	4101.4	4144.1	4196.0	4207.8	4212.0
60°	3569.8	3679.5	3769.1	3836.9	3872.1	3913.1	3923.1	3929.0
62.5°	3349.6	3430.8	3514.6	3574.8	3597.4	3634.3	3641.8	3645.2
65°	3114.4	3186.4	3265.1	3311.1	3327.0	3349.6	3348.0	3348.8
67.5°	2883.3	2947.8	3005.5	3053.3	3068.3	3076.7	3082.6	3076.7
70°	2655.6	2709.2	2768.6	2801.3	2828.9	2831.4	2841.5	2838.9
72.5°	2456.3	2508.3	2556.0	2584.4	2608.7	2608.7	2621.3	2613.7
75°	2273.0	2312.3	2349.2	2371.0	2391.9	2387.7	2400.3	2393.6
77.5°	2081.3	2111.4	2139.0	2163.3	2181.7	2188.4	2189.3	2181.7
80°	1891.2	1914.7	1935.6	1956.5	1972.4	1968.3	1979.1	1972.4
82.5°	1694.5	1712.1	1731.3	1749.7	1764.0	1767.3	1768.2	1761.5
85°	1496.9	1514.5	1537.1	1549.7	1563.1	1567.2	1568.1	1563.1
87.5°	1301.0	1318.6	1341.2	1353.8	1368.0	1371.3	1372.2	1368.0
90°	972.0	989.6	999.6	1017.2	1022.2	1029.8	1019.7	1030.6
92.5°	890.8	905.9	918.4	931.8	938.5	942.7	938.5	943.5
95°	762.7	786.1	802.0	818.8	827.2	833.9	833.0	834.7
97.5°	596.9	617.0	637.1	658.9	668.9	678.1	677.3	678.1
100°	514.9	526.6	535.8	545.9	550.0	550.9	550.0	550.9
102.5°	447.9	459.6	469.7	478.9	481.4	484.7	483.9	482.2
105°	387.6	399.3	409.4	417.8	421.1	424.5	424.5	422.8
107.5°	337.4	345.8	355.0	362.5	366.7	368.4	370.0	368.4
110°	309.8	308.1	312.3	317.3	319.8	321.5	319.8	319.0





TEST NUMBER: P236538

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L835-CD4-U all blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	314.8	307.3	296.4	288.8	288.0	288.0	284.6	283.0
115°	313.1	307.3	302.2	298.9	294.7	290.5	284.6	280.5
117.5°	323.2	310.6	301.4	297.2	293.9	290.5	286.3	283.0
120°	342.4	325.7	312.3	303.9	298.0	293.0	287.2	283.8
122.5°	371.7	349.1	332.4	320.6	313.1	305.6	299.7	295.5
125°	425.3	385.1	360.8	344.9	334.9	325.7	318.1	314.0
127.5°	510.7	473.0	410.2	382.6	366.7	353.3	344.1	339.1
130°	509.0	508.2	505.7	484.7	426.1	403.5	389.3	381.8
132.5°	506.5	507.3	504.8	501.5	498.1	492.3	485.6	483.1
135°	504.8	503.2	501.5	499.8	495.6	490.6	483.9	481.4
137.5°	499.0	499.8	499.0	495.6	491.4	486.4	480.6	478.0
140°	491.4	490.6	491.4	491.4	488.9	483.1	477.2	473.9
142.5°	486.4	483.9	481.4	480.6	479.7	475.5	469.7	468.0
145°	495.6	475.5	474.7	472.2	469.7	464.6	458.8	455.4
147.5°	506.5	502.3	475.5	462.1	461.3	457.1	451.3	447.9
150°	503.2	502.3	497.3	493.1	486.4	472.2	455.4	443.7
152.5°	492.3	497.3	495.6	493.1	488.1	482.2	474.7	471.3
155°	478.9	483.9	484.7	484.7	482.2	478.0	471.3	468.0
157.5°	464.6	469.7	470.5	471.3	468.8	465.5	459.6	457.1
160°	445.4	452.1	453.8	454.6	452.1	449.6	443.7	441.2
162.5°	420.3	429.5	433.7	434.5	433.7	431.2	426.1	423.6
165°	385.1	396.8	401.9	404.4	405.2	403.5	399.3	397.7
167.5°	314.0	334.9	353.3	364.2	365.0	363.3	360.0	359.2
170°	314.0	305.6	297.2	293.9	289.7	283.8	279.6	276.3
172.5°	352.5	344.1	336.6	326.5	315.6	304.7	297.2	293.9
175°	421.1	415.3	405.2	396.0	385.9	376.7	369.2	365.9
177.5°	414.4	413.6	410.2	405.2	400.2	394.3	386.8	382.6
180°	415.3	415.3	415.3	415.3	415.3	415.3	415.3	415.3

(END OF REPORT)