

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: P236569

Luminaire Tested: **SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236569  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24077)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH WIDE DISTRIBUTION LENS, OUTER 2 BLADES TILTED OUT 20 DEGREES  
Light Source: (952) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

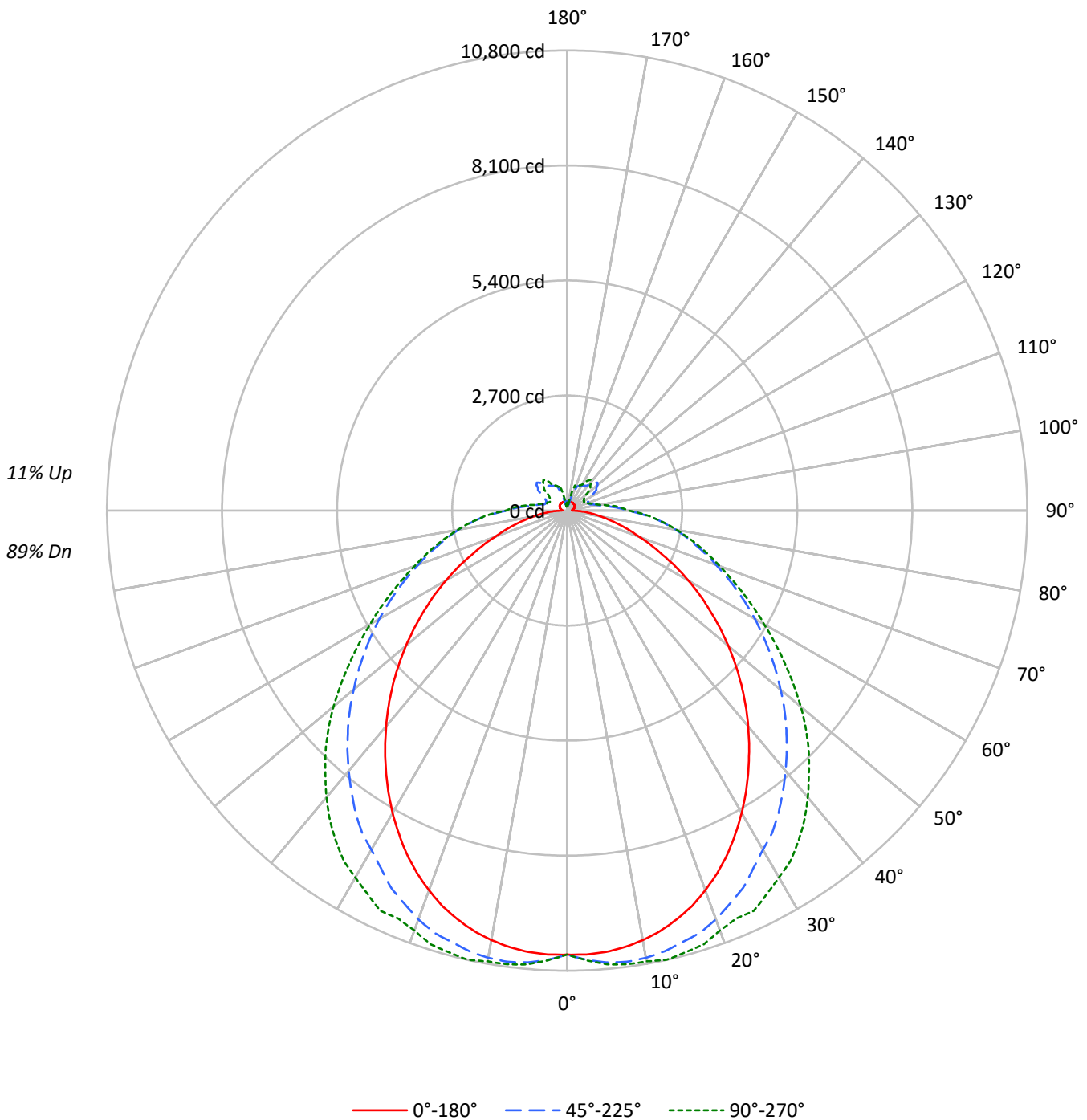
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 36929.0 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.4 / 1.41  
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')  
CIE Type: Semi-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

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CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 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	0
RCR																		
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	92	92	92	89
1	105	99	95	90	101	96	92	88	90	86	83	84	81	79	79	77	74	72
2	95	86	79	73	91	83	76	71	78	72	68	73	68	64	68	65	61	59
3	86	75	67	60	83	73	65	59	68	62	56	64	59	54	60	56	52	49
4	79	66	57	51	76	64	56	50	61	53	48	57	51	46	54	49	44	42
5	72	59	50	43	70	58	49	43	54	47	41	51	45	40	48	43	38	36
6	67	53	44	38	64	52	43	37	49	42	36	46	40	35	44	38	34	31
7	62	48	39	33	60	47	39	33	44	37	32	42	36	31	40	34	30	28
8	58	44	35	30	55	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	27	52	39	32	26	37	30	26	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	31	26	22	20

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

	0°	45°	90°
0°	14958	14958	14958
5°	14916	15183	15255
10°	14782	15223	15355
15°	14556	15104	15486
20°	14212	14962	15390
25°	13762	14686	15608
30°	13182	14279	15481
35°	12540	14031	15386
40°	11866	13621	15060
45°	11156	13238	14656
50°	10379	12834	14121
55°	9532	12466	13460
60°	8651	12179	12854
65°	7608	11931	12449
70°	6641	11855	12246
75°	5850	12094	12523
80°	5149	12928	13219
85°	4595	14468	14892



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1012.2	2.7
10°-20°	2948.8	8.0
20°-30°	4474.5	12.1
30°-40°	5361.0	14.5
40°-50°	5485.7	14.9
50°-60°	4936.0	13.4
60°-70°	3973.1	10.8
70°-80°	2936.6	8.0
80°-90°	1908.5	5.2
90°-100°	985.4	2.7
100°-110°	586.3	1.6
110°-120°	515.0	1.4
120°-130°	538.5	1.5
130°-140°	537.8	1.5
140°-150°	398.2	1.1
150°-160°	227.4	0.6
160°-170°	86.7	0.2
170°-180°	17.4	0.0
0°-30°	8435.5	22.8
0°-40°	13796.5	37.4
0°-60°	24218.1	65.6
0°-90°	33036.3	89.5
90°-120°	2086.6	5.7
90°-150°	3561.1	9.6
90°-180°	3893.0	10.5
0°-180°	36929.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	10422	10422	10422	10422	10422	
5°	10400	10558	10646	10673	10692	987
15°	9933	10270	10480	10681	10733	2798
25°	8902	9276	9773	10137	10367	4090
35°	7419	7890	8656	9288	9465	4637
45°	5783	6367	7275	7877	8023	4458
55°	4093	4867	5803	6198	6233	3668
65°	2490	3530	4383	4528	4540	2492
75°	1260	2503	3120	3186	3195	1349
85°	445	1626	2038	2046	2053	439
90°	135	1087	1396	1439	1436	94
95°	130	722	1038	1126	1141	106
105°	154	532	558	618	620	167
115°	189	736	543	482	462	189
125°	213	675	833	543	488	190
135°	218	613	925	835	775	169
145°	223	506	716	856	864	140
155°	221	164	640	670	650	102
165°	221	176	168	446	491	62
175°	216	214	223	196	146	21
180°	194	194	194	194	194	



TEST NUMBER: P236569

CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3
2.5°	10428.7	10431.2	10487.7	10522.3	10506.9	10510.8	10504.4	10537.7	10572.4	10553.1	10569.8
5°	10400.5	10413.3	10489.0	10541.6	10542.9	10572.4	10583.9	10627.6	10668.6	10645.5	10667.3
7.5°	10336.3	10358.1	10451.8	10526.2	10545.4	10575.0	10581.4	10635.3	10694.3	10682.7	10705.8
10°	10236.2	10270.9	10386.3	10471.0	10482.6	10524.9	10553.1	10607.0	10659.6	10658.3	10682.7
12.5°	10106.6	10145.1	10278.6	10364.5	10383.8	10438.9	10465.9	10526.2	10587.8	10591.6	10621.1
15°	9933.4	9984.7	10128.4	10214.4	10246.5	10292.7	10332.5	10403.0	10463.3	10480.0	10566.0
17.5°	9734.5	9785.9	9929.6	10020.7	10047.6	10109.2	10158.0	10228.5	10341.4	10387.6	10456.9
20°	9481.8	9543.4	9688.4	9783.3	9812.8	9884.7	9937.3	10060.4	10173.4	10208.0	10276.0
22.5°	9207.2	9266.2	9412.5	9515.1	9542.1	9613.9	9712.7	9842.3	9942.4	9984.7	10097.7
25°	8901.8	8953.2	9096.9	9196.9	9227.7	9325.3	9452.3	9576.7	9678.1	9773.0	9852.6
27.5°	8552.9	8608.0	8750.4	8841.5	8887.7	9034.0	9157.2	9277.8	9420.2	9462.5	9580.6
30°	8193.6	8241.1	8382.2	8461.8	8536.2	8692.7	8814.6	8985.2	9082.8	9190.5	9397.1
32.5°	7812.5	7858.7	7994.7	8067.9	8178.2	8343.7	8497.7	8633.7	8780.0	8960.9	9150.8
35°	7418.6	7463.5	7593.1	7666.3	7803.5	7975.5	8148.7	8296.2	8506.7	8655.5	8828.7
37.5°	7017.0	7064.5	7180.0	7263.4	7421.2	7611.1	7781.7	7984.5	8170.5	8315.5	8505.4
40°	6610.3	6646.2	6766.8	6860.5	7037.6	7226.2	7418.6	7636.8	7807.4	7974.2	8189.7
42.5°	6202.3	6233.1	6349.8	6475.6	6653.9	6846.4	7090.2	7253.1	7453.3	7631.6	7838.2
45°	5782.7	5812.2	5929.0	6075.3	6254.9	6478.2	6715.5	6872.1	7085.0	7274.9	7462.3
47.5°	5360.6	5394.0	5512.0	5682.7	5876.4	6115.0	6320.3	6507.7	6748.9	6917.0	7079.9
50°	4937.2	4970.6	5102.7	5290.0	5488.9	5736.5	5938.0	6145.8	6378.1	6538.5	6692.4
52.5°	4515.1	4552.3	4702.4	4891.0	5115.5	5359.3	5580.0	5794.3	6006.0	6176.6	6306.2
55°	4092.9	4139.1	4305.9	4498.4	4746.0	4988.5	5223.3	5435.0	5642.9	5803.3	5931.6
57.5°	3696.5	3741.4	3913.3	4131.4	4384.2	4635.7	4885.9	5086.0	5290.0	5442.7	5554.4
60°	3285.9	3337.2	3531.0	3767.1	4031.4	4303.4	4551.0	4755.0	4951.3	5091.2	5178.4
62.5°	2889.4	2974.1	3157.6	3420.6	3695.2	3981.3	4234.1	4438.1	4617.7	4734.5	4799.9
65°	2490.4	2607.2	2804.8	3096.0	3382.1	3678.5	3936.4	4136.6	4288.0	4382.9	4427.8
67.5°	2151.7	2264.6	2481.4	2795.8	3093.4	3401.4	3659.3	3836.3	3960.8	4040.3	4077.6
70°	1809.1	1946.4	2188.9	2519.9	2833.0	3143.5	3375.7	3532.3	3642.6	3720.9	3755.5
72.5°	1525.6	1655.1	1934.8	2272.3	2598.2	2886.9	3093.4	3242.3	3364.2	3416.8	3433.5
75°	1260.0	1390.8	1698.8	2056.7	2376.2	2630.3	2827.9	2980.5	3072.9	3120.4	3137.1
77.5°	1022.6	1172.7	1505.0	1859.1	2154.3	2391.6	2590.5	2718.8	2811.2	2849.7	2862.5
80°	807.0	972.6	1334.4	1666.7	1940.0	2170.9	2349.3	2473.7	2557.1	2587.9	2591.8
82.5°	614.6	800.6	1167.6	1478.1	1733.4	1954.1	2118.3	2237.7	2296.7	2313.4	2309.5
85°	445.2	642.8	994.4	1281.8	1525.6	1725.7	1869.4	1973.3	2024.7	2037.5	2025.9
87.5°	304.1	497.8	825.0	1085.5	1293.3	1470.4	1594.8	1684.7	1734.7	1739.8	1739.8
90°	134.7	373.4	654.4	854.5	1018.7	1156.0	1254.8	1340.8	1383.1	1396.0	1407.5
92.5°	110.3	287.4	515.8	701.8	854.5	989.2	1098.3	1183.0	1229.2	1247.1	1256.1
95°	129.6	234.8	383.6	524.8	663.3	780.1	876.3	966.1	1013.6	1038.0	1063.7
97.5°	133.4	231.0	355.4	451.6	537.6	646.7	736.5	798.1	827.6	841.7	864.8
100°	139.9	234.8	383.6	441.4	506.8	568.4	618.4	692.9	728.8	741.6	746.7
102.5°	145.0	231.0	415.7	467.0	500.4	542.7	569.7	587.6	626.1	651.8	665.9
105°	154.0	227.1	413.1	538.9	524.8	540.2	560.7	572.2	591.5	558.1	579.9
107.5°	171.9	227.1	402.9	586.4	585.1	562.0	562.0	560.7	559.4	533.8	549.1
110°	182.2	195.0	390.0	573.5	660.8	610.7	583.8	564.5	546.6	533.8	522.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	184.8	174.5	386.2	555.6	727.5	722.4	627.4	587.6	555.6	527.3	510.7
115°	188.6	154.0	381.1	520.9	709.5	762.1	741.6	632.5	581.2	542.7	514.5
117.5°	195.0	154.0	386.2	515.8	687.7	836.6	799.3	727.5	627.4	572.2	533.8
120°	202.7	156.5	406.7	518.4	653.1	812.2	857.1	825.0	718.5	622.3	568.4
122.5°	207.9	159.1	375.9	514.5	610.7	782.7	905.8	864.8	832.7	719.8	624.8
125°	213.0	161.7	331.0	511.9	610.7	739.0	869.9	964.9	864.8	832.7	748.0
127.5°	216.8	161.7	261.7	515.8	606.9	673.6	828.9	928.9	953.3	863.5	832.7
130°	216.8	156.5	180.9	540.2	592.8	665.9	768.6	886.6	959.7	936.6	862.2
132.5°	215.6	155.2	141.1	494.0	583.8	658.2	705.7	834.0	918.7	970.0	946.9
135°	218.1	173.2	142.4	437.5	581.2	644.1	696.7	739.0	868.6	925.1	966.1
137.5°	220.7	197.6	145.0	364.4	613.3	627.4	686.4	721.1	787.8	876.3	921.2
140°	222.0	216.8	147.6	254.0	560.7	615.9	667.2	704.4	730.1	796.8	869.9
142.5°	224.5	234.8	150.1	169.4	494.0	630.0	644.1	687.7	713.4	731.3	782.7
145°	223.3	242.5	147.6	138.6	405.4	605.6	628.7	660.8	695.4	715.9	730.1
147.5°	220.7	237.4	145.0	138.6	275.9	527.3	658.2	641.5	671.0	698.0	713.4
150°	219.4	232.2	156.5	141.1	174.5	436.2	596.6	637.7	647.9	672.3	692.9
152.5°	220.7	229.7	191.2	146.3	139.9	304.1	508.1	630.0	635.1	647.9	663.3
155°	220.7	227.1	218.1	147.6	143.7	183.5	393.9	533.8	631.3	640.2	639.0
157.5°	220.7	225.8	237.4	155.2	147.6	141.1	227.1	417.0	531.2	612.0	665.9
160°	220.7	223.3	241.2	191.2	150.1	146.3	147.6	234.8	401.6	500.4	571.0
162.5°	220.7	222.0	233.5	224.5	157.8	148.8	146.3	147.6	211.7	340.0	435.0
165°	220.7	220.7	227.1	242.5	202.7	150.1	148.8	146.3	141.1	168.1	219.4
167.5°	219.4	219.4	223.3	233.5	234.8	195.0	151.4	147.6	145.0	142.4	138.6
170°	218.1	216.8	220.7	224.5	233.5	233.5	206.6	171.9	146.3	143.7	142.4
172.5°	216.8	215.6	216.8	219.4	220.7	225.8	233.5	228.4	210.4	187.3	162.9
175°	215.6	214.3	214.3	214.3	214.3	214.3	215.6	216.8	219.4	223.3	227.1
177.5°	214.3	211.7	211.7	211.7	210.4	209.1	207.9	206.6	205.3	204.0	202.7
180°	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3	10422.3
2.5°	10558.3	10586.5	10567.3	10546.7	10544.2	10573.7	10571.1	10566.0
5°	10664.8	10693.0	10681.4	10664.8	10664.8	10696.8	10693.0	10691.7
7.5°	10707.1	10741.7	10730.2	10713.5	10725.1	10743.0	10746.9	10741.7
10°	10698.1	10740.5	10734.0	10718.7	10718.7	10745.6	10741.7	10743.0
12.5°	10639.1	10698.1	10721.2	10731.5	10754.6	10793.1	10795.6	10799.5
15°	10617.3	10676.3	10680.2	10681.4	10704.5	10737.9	10731.5	10732.8
17.5°	10499.3	10546.7	10554.4	10566.0	10601.9	10655.8	10654.5	10669.9
20°	10336.3	10415.9	10460.8	10473.6	10487.7	10510.8	10483.9	10483.9
22.5°	10191.3	10220.8	10214.4	10245.2	10314.5	10360.7	10368.4	10365.8
25°	9909.0	10005.3	10084.8	10190.0	10294.0	10351.7	10363.2	10367.1
27.5°	9737.1	9902.6	9989.9	10047.6	10100.2	10132.3	10152.8	10146.4
30°	9572.9	9660.1	9729.4	9826.9	9897.5	9925.7	9942.4	9941.1
32.5°	9276.5	9393.3	9477.9	9581.9	9697.3	9737.1	9753.8	9755.1
35°	8980.1	9117.4	9241.9	9334.2	9417.6	9445.9	9463.8	9465.1
37.5°	8686.3	8819.7	8931.4	9019.9	9095.6	9122.5	9140.5	9152.0
40°	8354.0	8475.9	8584.9	8688.9	8765.8	8771.0	8787.7	8787.7
42.5°	7985.7	8116.6	8230.8	8312.9	8379.6	8383.5	8400.2	8398.9
45°	7609.8	7730.4	7842.0	7912.6	7983.2	7996.0	8016.5	8023.0
47.5°	7222.3	7345.5	7446.9	7517.4	7573.9	7590.6	7603.4	7604.7
50°	6827.1	6956.7	7042.7	7095.3	7140.2	7155.6	7164.6	7162.0
52.5°	6440.9	6557.7	6618.0	6659.1	6704.0	6713.0	6715.5	6691.1
55°	6050.9	6143.3	6184.3	6211.3	6238.2	6257.5	6256.2	6233.1
57.5°	5649.3	5730.1	5743.0	5780.2	5791.7	5808.4	5799.4	5780.2
60°	5250.3	5309.3	5313.1	5347.8	5355.5	5351.6	5355.5	5340.1
62.5°	4851.2	4894.9	4900.0	4932.1	4947.5	4944.9	4947.5	4937.2
65°	4468.9	4509.9	4515.1	4540.7	4557.4	4553.6	4551.0	4539.5
67.5°	4117.3	4149.4	4162.2	4175.1	4182.8	4171.2	4166.1	4157.1
70°	3776.0	3796.6	3800.4	3810.7	3822.2	3812.0	3819.7	3809.4
72.5°	3447.6	3469.4	3484.8	3489.9	3502.7	3489.9	3497.6	3491.2
75°	3153.8	3171.7	3179.4	3192.2	3207.6	3196.1	3201.2	3194.8
77.5°	2875.3	2889.4	2901.0	2904.8	2919.0	2904.8	2907.4	2895.9
80°	2594.3	2600.8	2607.2	2611.0	2625.1	2613.6	2614.9	2607.2
82.5°	2310.8	2318.5	2335.2	2331.3	2344.1	2331.3	2333.9	2339.0
85°	2023.4	2037.5	2047.8	2043.9	2056.7	2051.6	2047.8	2052.9
87.5°	1739.8	1751.4	1764.2	1762.9	1774.5	1769.3	1769.3	1777.0
90°	1406.2	1415.2	1430.6	1447.3	1449.9	1452.4	1447.3	1435.7
92.5°	1257.4	1268.9	1280.5	1292.0	1302.3	1299.7	1297.2	1299.7
95°	1079.1	1098.3	1118.8	1132.9	1149.6	1149.6	1149.6	1140.6
97.5°	880.2	899.4	916.1	927.6	940.5	941.8	940.5	940.5
100°	748.0	754.4	760.9	768.6	777.5	780.1	777.5	778.8
102.5°	671.0	680.0	685.2	689.0	691.6	691.6	687.7	683.9
105°	592.8	606.9	614.6	621.0	624.8	626.1	623.6	619.7
107.5°	519.6	532.5	545.3	554.3	560.7	563.3	560.7	556.8
110°	500.4	533.8	503.0	488.8	494.0	500.4	499.1	495.3





TEST NUMBER: P236569

CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	504.2	500.4	483.7	474.7	499.1	510.7	503.0	499.1
115°	494.0	485.0	482.4	482.4	481.1	477.3	468.3	461.9
117.5°	508.1	488.8	476.0	469.6	467.0	463.2	456.8	451.6
120°	533.8	509.4	490.1	479.9	470.9	461.9	452.9	446.5
122.5°	573.5	540.2	514.5	500.4	490.1	479.9	469.6	461.9
125°	641.5	588.9	553.0	533.8	518.4	505.5	492.7	487.6
127.5°	807.0	678.7	617.2	583.8	559.4	541.4	527.3	519.6
130°	830.1	816.0	782.7	674.9	633.8	605.6	583.8	577.4
132.5°	862.2	837.8	817.3	804.5	792.9	776.2	736.5	728.8
135°	985.4	881.5	845.5	825.0	809.6	795.5	781.4	775.0
137.5°	953.3	977.7	943.0	868.6	843.0	823.7	807.0	799.3
140°	905.8	931.5	952.0	963.6	967.4	932.8	890.4	875.0
142.5°	849.4	881.5	903.3	917.4	926.4	926.4	917.4	912.3
145°	744.2	810.9	845.5	866.1	875.0	877.6	869.9	863.5
147.5°	721.1	727.5	742.9	789.1	809.6	818.6	814.7	809.6
150°	701.8	710.8	714.7	715.9	713.4	709.5	704.4	699.3
152.5°	678.7	690.3	694.1	696.7	695.4	691.6	680.0	673.6
155°	647.9	659.5	667.2	673.6	672.3	668.5	656.9	650.5
157.5°	627.4	631.3	636.4	640.2	640.2	637.7	628.7	623.6
160°	619.7	656.9	622.3	612.0	609.5	606.9	597.9	591.5
162.5°	497.8	544.0	577.4	601.8	615.9	627.4	622.3	618.4
165°	311.8	386.2	432.4	460.6	481.1	495.3	492.7	491.4
167.5°	142.4	171.9	195.0	216.8	252.8	288.7	291.3	295.1
170°	137.3	133.4	127.0	120.6	114.2	106.5	98.8	93.7
172.5°	142.4	133.4	128.3	123.2	116.8	107.8	98.8	91.1
175°	220.7	211.7	201.4	189.9	180.9	168.1	152.7	146.3
177.5°	198.9	196.3	192.5	187.3	182.2	173.2	161.7	154.0
180°	193.7	193.7	193.7	193.7	193.7	193.7	193.7	193.7

(END OF REPORT)