

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: P236506

Luminaire Tested: **SKB4-LD5-30-N-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: P236506  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24058)  
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-L840-CD4-U outer 2 blades tilted out 20 degrees  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH NARROW DISTRIBUTION LENS, OUTER 2 BLADES TILTED OUT 20  
DEGREES  
Light Source: (952) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

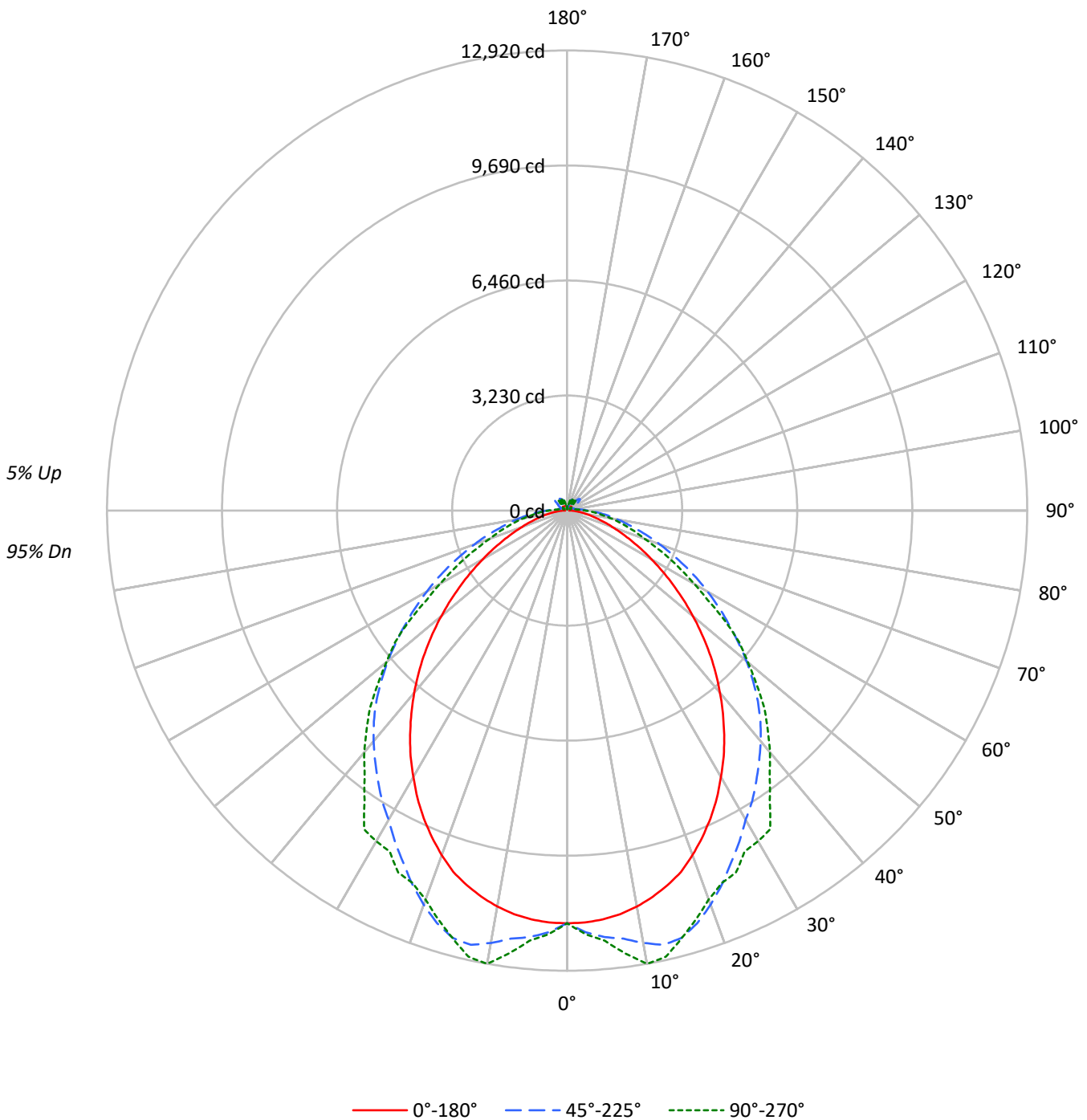
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32987.0 lumens  
Efficiency: N/A  
Efficacy: 126.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.35 / 1.37  
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: P236506

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

### Luminous Intensity Polar Plot





TEST NUMBER: P236506

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U outer 2 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	50	30	10	50	30	10	0																			
RCR																																														
0	118	118	118	118	115	115	115	115	108	108	108	103	103	103	97	97	97	95											95																	
1	108	103	99	95	104	100	96	93	95	92	89	90	88	85	86	84	82	79											79																	
2	98	90	83	78	95	88	82	77	84	78	74	80	75	72	76	72	69	67											67																	
3	90	80	72	65	87	78	70	64	74	68	63	71	65	61	67	63	59	57											57																	
4	83	71	62	56	80	69	61	55	66	59	54	63	57	53	61	56	51	49											49																	
5	76	64	55	48	74	62	54	48	60	52	47	57	51	46	55	49	45	43											43																	
6	70	57	49	43	68	56	48	42	54	47	41	52	45	41	50	44	40	38											38																	
7	65	52	44	38	63	51	43	37	49	42	37	47	41	36	46	40	36	34											34																	
8	61	48	39	34	59	47	39	34	45	38	33	44	37	33	42	36	32	30											30																	
9	57	44	36	30	55	43	36	30	42	35	30	40	34	29	39	33	29	27											27																	
10	54	41	33	28	52	40	33	28	39	32	27	37	31	27	36	31	27	25											25																	

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

	0°	45°	90°
0°	16629	16629	16629
5°	16521	17142	17299
10°	16302	17604	18468
15°	15954	17901	17930
20°	15427	17258	17059
25°	14726	16376	16884
30°	13891	15573	16697
35°	12994	15011	16126
40°	11986	14436	15192
45°	10902	13779	14305
50°	9695	12891	13057
55°	8457	11879	11725
60°	7207	10899	9936
65°	6019	9842	8649
70°	4956	8803	7432
75°	4069	7798	6840
80°	3422	7224	6270
85°	2892	6934	6068



TEST NUMBER: P236506

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1149.2	3.5
10°-20°	3384.0	10.3
20°-30°	4948.9	15.0
30°-40°	5727.8	17.4
40°-50°	5543.7	16.8
50°-60°	4540.7	13.8
60°-70°	3148.4	9.5
70°-80°	1912.6	5.8
80°-90°	983.7	3.0
90°-100°	385.9	1.2
100°-110°	224.2	0.7
110°-120°	218.1	0.7
120°-130°	233.9	0.7
130°-140°	237.3	0.7
140°-150°	179.3	0.5
150°-160°	115.0	0.3
160°-170°	45.2	0.1
170°-180°	9.2	0.0
0°-30°	9482.0	28.7
0°-40°	15209.9	46.1
0°-60°	25294.3	76.7
0°-90°	31339.0	95.0
90°-120°	828.1	2.5
90°-150°	1478.6	4.5
90°-180°	1648.0	5.0
0°-180°	32987.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	11586	11586	11586	11586	11586	
5°	11520	11831	12019	12070	12124	###
15°	10887	11638	12420	12447	12427	3063
25°	9525	10657	10898	11067	11214	4376
35°	7687	8684	9260	9881	9920	4798
45°	5651	6496	7572	7932	7831	4352
55°	3631	4563	5530	5613	5430	3256
65°	1970	2992	3615	3451	3154	1974
75°	876	1899	2012	1885	1745	955
85°	280	1047	976	915	836	282
90°	80	620	576	559	508	54
95°	61	398	371	352	316	52
105°	83	344	183	154	131	90
115°	119	468	211	131	100	118
125°	149	358	324	177	128	133
135°	155	378	454	326	207	120
145°	139	271	316	362	383	88
155°	129	69	340	381	362	60
165°	123	93	68	244	247	35
175°	117	115	120	120	115	11
180°	113	113	113	113	113	



TEST NUMBER: P236506

CATALOG NUMBER: SKB4-LD5-30-N-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°	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4
2.5°	11575.7	11567.7	11611.8	11665.1	11719.8	11710.5	11754.5	11810.5	11813.2	11849.2	11862.6
5°	11519.7	11530.4	11625.1	11729.2	11822.5	11839.9	11903.9	11976.0	11984.0	12018.7	12030.7
7.5°	11427.7	11463.7	11610.4	11746.5	11854.6	11869.2	11921.3	12009.3	12050.7	12125.4	12190.7
10°	11288.9	11363.6	11545.1	11678.5	11779.9	11826.5	11933.3	12082.7	12180.1	12325.5	12448.2
12.5°	11106.1	11207.5	11399.6	11535.7	11681.1	11785.2	11950.6	12170.7	12318.8	12488.2	12615.0
15°	10887.4	11015.4	11198.2	11366.3	11559.7	11715.8	11929.3	12185.4	12322.8	12420.2	12472.2
17.5°	10636.6	10767.3	10954.1	11159.5	11386.3	11582.4	11817.2	12042.7	12114.7	12145.4	12153.4
20°	10292.4	10465.8	10667.2	10902.0	11158.2	11385.0	11589.1	11767.8	11774.5	11774.5	11773.2
22.5°	9921.5	10118.9	10336.4	10595.2	10884.7	11112.8	11274.2	11403.6	11369.0	11358.3	11330.3
25°	9525.3	9725.4	9958.8	10245.7	10559.2	10755.3	10863.3	10954.1	10919.4	10898.0	10903.4
27.5°	9102.4	9299.8	9550.6	9858.8	10159.0	10316.4	10405.8	10485.8	10447.1	10471.1	10489.8
30°	8634.1	8847.6	9091.7	9425.2	9702.7	9810.8	9900.1	9982.9	9961.5	10022.9	10188.3
32.5°	8179.2	8368.6	8626.1	8950.3	9191.8	9275.8	9389.2	9458.6	9473.2	9669.4	9813.4
35°	7686.9	7873.7	8132.5	8440.7	8639.5	8728.8	8864.9	8915.6	9091.7	9259.8	9435.9
37.5°	7184.0	7362.7	7617.6	7907.0	8080.5	8179.2	8311.3	8486.0	8656.8	8856.9	9058.3
40°	6677.0	6839.8	7085.3	7346.7	7514.8	7641.6	7804.3	8043.1	8223.2	8451.3	8647.5
42.5°	6168.7	6322.2	6538.3	6770.4	6955.9	7077.3	7353.4	7580.2	7797.7	8033.8	8216.5
45°	5651.1	5772.5	5992.7	6208.8	6418.2	6574.3	6882.5	7121.3	7365.4	7572.2	7736.3
47.5°	5126.8	5240.2	5451.0	5664.5	5887.3	6107.4	6400.9	6669.0	6895.8	7081.3	7236.0
50°	4611.9	4717.3	4917.4	5149.5	5364.3	5629.8	5932.6	6202.1	6403.5	6567.6	6699.7
52.5°	4112.9	4207.7	4402.4	4645.2	4882.7	5153.5	5460.4	5721.8	5907.3	6046.0	6172.8
55°	3631.3	3731.4	3916.8	4155.6	4427.8	4698.6	5004.1	5241.6	5393.7	5529.7	5648.5
57.5°	3171.1	3268.5	3460.6	3700.7	3990.2	4265.0	4558.5	4773.3	4906.7	5037.5	5136.2
60°	2737.5	2837.6	3037.7	3288.5	3583.3	3856.8	4131.6	4318.4	4439.8	4555.9	4625.2
62.5°	2336.0	2436.0	2650.8	2917.6	3207.1	3475.3	3719.4	3876.8	3990.2	4084.9	4120.9
65°	1970.4	2074.5	2295.9	2576.1	2864.3	3120.4	3337.8	3464.6	3552.6	3615.3	3626.0
67.5°	1640.9	1761.0	1979.8	2281.3	2558.8	2794.9	2981.7	3076.4	3141.7	3168.4	3175.1
70°	1350.1	1476.8	1710.3	2014.4	2289.3	2502.7	2640.1	2705.5	2748.2	2762.9	2774.9
72.5°	1105.9	1231.3	1487.5	1782.3	2051.8	2223.9	2328.0	2369.3	2393.3	2381.3	2362.6
75°	876.5	1021.9	1294.0	1586.2	1833.0	1965.1	2034.5	2063.8	2045.1	2011.8	2007.8
77.5°	697.7	840.5	1127.3	1415.5	1624.9	1723.6	1769.0	1759.6	1734.3	1708.9	1711.6
80°	536.3	684.4	983.2	1251.4	1420.8	1502.2	1507.5	1494.2	1470.1	1446.1	1446.1
82.5°	398.9	557.6	859.1	1083.3	1228.7	1275.4	1274.0	1256.7	1226.0	1198.0	1191.3
85°	280.2	446.9	719.1	915.2	1031.2	1061.9	1052.6	1031.2	1007.2	976.5	969.9
87.5°	181.4	349.5	585.7	737.7	825.8	845.8	833.8	811.1	793.8	768.4	764.4
90°	80.0	244.1	434.9	545.6	613.7	627.0	617.7	603.0	595.0	576.3	576.3
92.5°	52.0	169.4	320.2	421.6	486.9	506.9	497.6	484.3	474.9	460.3	456.3
95°	61.4	134.7	238.8	322.8	388.2	408.2	404.2	394.9	385.5	370.9	364.2
97.5°	66.7	129.4	229.5	286.8	324.2	344.2	337.5	326.8	314.8	298.8	290.8
100°	73.4	133.4	253.5	297.5	316.2	308.2	289.5	277.5	262.8	244.1	236.1
102.5°	81.4	132.1	270.8	328.2	332.2	310.8	276.2	244.1	226.8	208.1	197.4
105°	82.7	126.7	261.5	377.5	362.9	325.5	284.2	246.8	213.5	182.8	172.1
107.5°	85.4	121.4	246.8	397.6	412.2	356.2	293.5	253.5	217.5	181.4	161.4
110°	105.4	121.4	241.5	376.2	449.6	394.9	328.2	260.1	216.1	190.8	165.4



TEST NUMBER: P236506

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	112.1	104.1	236.1	334.9	477.6	446.9	366.9	298.8	229.5	181.4	168.1
115°	118.7	93.4	230.8	297.5	452.3	482.9	408.2	336.2	266.8	210.8	161.4
117.5°	126.7	90.7	232.1	313.5	406.9	521.6	444.2	372.2	304.2	244.1	196.1
120°	133.4	88.0	233.5	328.2	337.5	490.9	504.3	402.9	332.2	277.5	228.1
122.5°	142.7	90.7	218.8	322.8	318.8	440.2	523.0	465.6	357.5	301.5	254.8
125°	149.4	96.1	182.8	318.8	365.5	349.5	490.9	527.0	429.6	324.2	273.5
127.5°	156.1	101.4	144.1	314.8	386.9	300.2	430.9	504.3	489.6	404.2	298.8
130°	160.1	106.7	113.4	316.2	377.5	358.9	322.8	460.3	498.9	465.6	388.2
132.5°	158.8	113.4	81.4	298.8	365.5	409.6	280.2	384.2	466.9	482.9	458.9
135°	154.8	120.1	57.4	246.8	354.9	400.2	346.9	249.5	406.9	453.6	465.6
137.5°	152.1	133.4	54.7	186.8	354.9	382.9	412.2	282.8	280.2	396.2	433.6
140°	148.1	142.7	53.4	133.4	332.2	366.9	402.9	389.5	246.8	269.5	378.9
142.5°	144.1	146.7	56.0	89.4	270.8	357.5	380.2	402.9	333.5	230.8	246.8
145°	138.7	145.4	61.4	44.0	193.4	348.2	358.9	384.2	397.6	316.2	226.8
147.5°	137.4	142.7	70.7	40.0	133.4	286.8	354.9	362.9	384.2	392.2	330.8
150°	134.7	138.7	92.1	42.7	85.4	214.8	332.2	348.2	362.9	380.2	386.9
152.5°	132.1	134.7	116.1	49.4	45.4	144.1	268.1	349.5	345.5	357.5	373.5
155°	129.4	130.7	130.7	58.7	45.4	93.4	182.8	286.8	348.2	340.2	350.9
157.5°	128.1	128.1	140.1	81.4	46.7	42.7	128.1	204.1	282.8	333.5	345.5
160°	126.7	126.7	137.4	112.1	54.7	45.4	50.7	136.1	192.1	262.8	309.5
162.5°	124.1	124.1	128.1	129.4	82.7	48.0	44.0	49.4	122.7	158.8	222.8
165°	122.7	122.7	124.1	137.4	117.4	69.4	46.7	44.0	41.4	68.0	132.1
167.5°	121.4	120.1	121.4	126.7	134.7	112.1	73.4	49.4	42.7	41.4	38.7
170°	120.1	118.7	118.7	120.1	125.4	133.4	117.4	96.1	64.0	48.0	41.4
172.5°	118.7	117.4	117.4	117.4	117.4	120.1	128.1	130.7	118.7	108.1	90.7
175°	117.4	117.4	117.4	117.4	116.1	114.7	114.7	116.1	118.7	120.1	125.4
177.5°	116.1	116.1	116.1	116.1	116.1	114.7	113.4	113.4	112.1	110.7	109.4
180°	113.4	113.4	113.4	113.4	113.4	113.4	113.4	113.4	113.4	113.4	113.4



TEST NUMBER: P236506

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4	11586.4
2.5°	11858.6	11869.2	11871.9	11882.6	11875.9	11909.3	11911.9	11905.3
5°	12028.0	12056.0	12058.7	12081.4	12085.4	12114.7	12129.4	12124.0
7.5°	12252.1	12329.5	12381.5	12441.6	12465.6	12524.3	12545.6	12544.3
10°	12559.0	12665.7	12743.1	12805.8	12837.8	12884.5	12912.5	12920.5
12.5°	12693.7	12757.7	12779.1	12787.1	12795.1	12805.8	12820.4	12827.1
15°	12484.2	12493.6	12466.9	12426.9	12418.9	12412.2	12422.9	12426.9
17.5°	12132.1	12120.0	12088.0	12062.7	12044.0	12033.3	12026.7	12034.7
20°	11743.8	11703.8	11654.5	11639.8	11627.8	11615.8	11611.8	11621.1
22.5°	11300.9	11279.6	11247.6	11256.9	11271.6	11295.6	11311.6	11323.6
25°	10886.0	10919.4	11011.4	11122.2	11174.2	11196.9	11200.9	11214.2
27.5°	10624.5	10700.6	10763.3	10812.7	10806.0	10798.0	10795.3	10792.6
30°	10307.0	10369.7	10445.8	10539.2	10607.2	10665.9	10703.3	10721.9
32.5°	9950.8	10062.9	10200.3	10363.1	10467.1	10553.8	10604.5	10608.5
35°	9586.6	9698.7	9832.1	9930.8	9937.5	9950.8	9932.2	9920.2
37.5°	9191.8	9298.5	9393.2	9458.6	9425.2	9395.9	9349.2	9338.5
40°	8779.5	8870.2	8938.3	8979.6	8934.3	8898.3	8874.2	8864.9
42.5°	8323.3	8395.3	8440.7	8446.0	8383.3	8354.0	8343.3	8329.9
45°	7828.3	7887.0	7932.4	7931.1	7884.4	7863.0	7851.0	7831.0
47.5°	7304.0	7374.7	7425.4	7404.1	7334.7	7292.0	7252.0	7205.3
50°	6775.8	6829.1	6842.5	6825.1	6730.4	6675.7	6647.7	6622.3
52.5°	6238.1	6272.8	6234.1	6220.8	6144.7	6130.1	6123.4	6102.0
55°	5692.5	5697.8	5632.5	5593.8	5497.7	5472.4	5461.7	5429.7
57.5°	5145.5	5122.8	5042.8	4988.1	4881.4	4800.0	4738.6	4686.6
60°	4607.9	4557.2	4487.8	4423.8	4314.4	4230.3	4171.6	4127.6
62.5°	4078.3	4024.9	3955.5	3892.8	3782.1	3696.7	3651.4	3619.3
65°	3602.0	3554.0	3480.6	3421.9	3317.8	3236.5	3187.1	3153.7
67.5°	3141.7	3111.1	3044.4	2959.0	2846.9	2776.2	2730.8	2697.5
70°	2716.2	2670.8	2600.1	2520.1	2429.3	2373.3	2341.3	2311.9
72.5°	2320.0	2265.3	2215.9	2159.9	2094.5	2049.1	2023.8	2015.8
75°	1979.8	1945.1	1905.1	1865.0	1814.3	1775.6	1750.3	1745.0
77.5°	1692.9	1666.3	1634.2	1602.2	1554.2	1519.5	1496.8	1486.2
80°	1426.1	1400.8	1370.1	1339.4	1296.7	1266.0	1246.0	1236.7
82.5°	1179.3	1154.0	1130.0	1107.3	1079.3	1047.2	1029.9	1024.6
85°	957.9	939.2	923.2	907.2	883.2	857.8	841.8	836.5
87.5°	760.4	753.8	741.7	731.1	712.4	691.0	677.7	672.4
90°	573.7	568.3	563.0	555.0	540.3	523.0	512.3	508.3
92.5°	453.6	449.6	445.6	438.9	428.2	413.6	402.9	398.9
95°	362.9	360.2	354.9	349.5	340.2	330.8	321.5	316.2
97.5°	286.8	285.5	281.5	278.8	273.5	262.8	254.8	249.5
100°	229.5	226.8	224.1	220.1	214.8	205.4	200.1	194.8
102.5°	190.8	188.1	184.1	180.1	174.8	168.1	161.4	157.4
105°	162.8	158.8	156.1	152.1	146.7	140.1	133.4	130.7
107.5°	144.1	142.7	136.1	132.1	125.4	121.4	116.1	110.7
110°	148.1	141.4	124.1	114.7	110.7	112.1	106.7	101.4





TEST NUMBER: P236506

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	154.8	140.1	128.1	124.1	121.4	117.4	105.4	100.1
115°	141.4	138.7	134.7	126.7	121.4	113.4	105.4	100.1
117.5°	154.8	129.4	117.4	113.4	113.4	113.4	108.1	102.7
120°	186.8	158.8	133.4	116.1	106.7	100.1	92.1	86.7
122.5°	216.1	184.1	160.1	144.1	133.4	121.4	112.1	105.4
125°	237.5	209.4	185.4	169.4	157.4	144.1	134.7	128.1
127.5°	253.5	226.8	205.4	192.1	180.1	168.1	158.8	152.1
130°	289.5	242.8	222.8	209.4	197.4	188.1	178.8	173.4
132.5°	374.9	318.8	250.8	225.5	210.8	202.8	194.8	185.4
135°	462.9	376.2	345.5	306.8	256.1	229.5	214.8	206.8
137.5°	444.2	452.3	440.2	360.2	334.9	321.5	310.8	305.5
140°	412.2	429.6	436.2	438.9	436.2	426.9	405.6	382.9
142.5°	352.2	386.9	406.9	413.6	414.9	413.6	409.6	404.2
145°	196.1	308.2	350.9	372.2	384.2	386.9	386.9	382.9
147.5°	237.5	198.8	193.4	284.2	321.5	337.5	338.9	340.2
150°	376.2	274.8	226.8	198.8	182.8	169.4	166.8	166.8
152.5°	381.5	382.9	374.9	302.8	249.5	221.5	206.8	198.8
155°	361.5	372.2	380.2	381.5	380.2	376.2	369.5	361.5
157.5°	342.9	348.2	358.9	362.9	364.2	364.2	360.2	357.5
160°	346.9	349.5	340.2	342.9	342.9	344.2	340.2	338.9
162.5°	269.5	301.5	325.5	341.5	349.5	344.2	337.5	330.8
165°	157.4	192.1	233.5	254.8	269.5	278.8	268.1	246.8
167.5°	48.0	84.0	122.7	138.7	146.7	146.7	134.7	129.4
170°	40.0	38.7	37.4	37.4	36.0	34.7	30.7	34.7
172.5°	73.4	61.4	49.4	46.7	45.4	40.0	37.4	33.4
175°	125.4	121.4	120.1	120.1	121.4	121.4	121.4	114.7
177.5°	108.1	108.1	112.1	114.7	118.7	122.7	116.1	112.1
180°	113.4	113.4	113.4	113.4	113.4	113.4	113.4	113.4

(END OF REPORT)