

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: P236561

Luminaire Tested: **SKB4-LD5-18-W-UNV-L850-CD2-U outer 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236561
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-LD5-18-W-UNV-L850-CD2-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) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

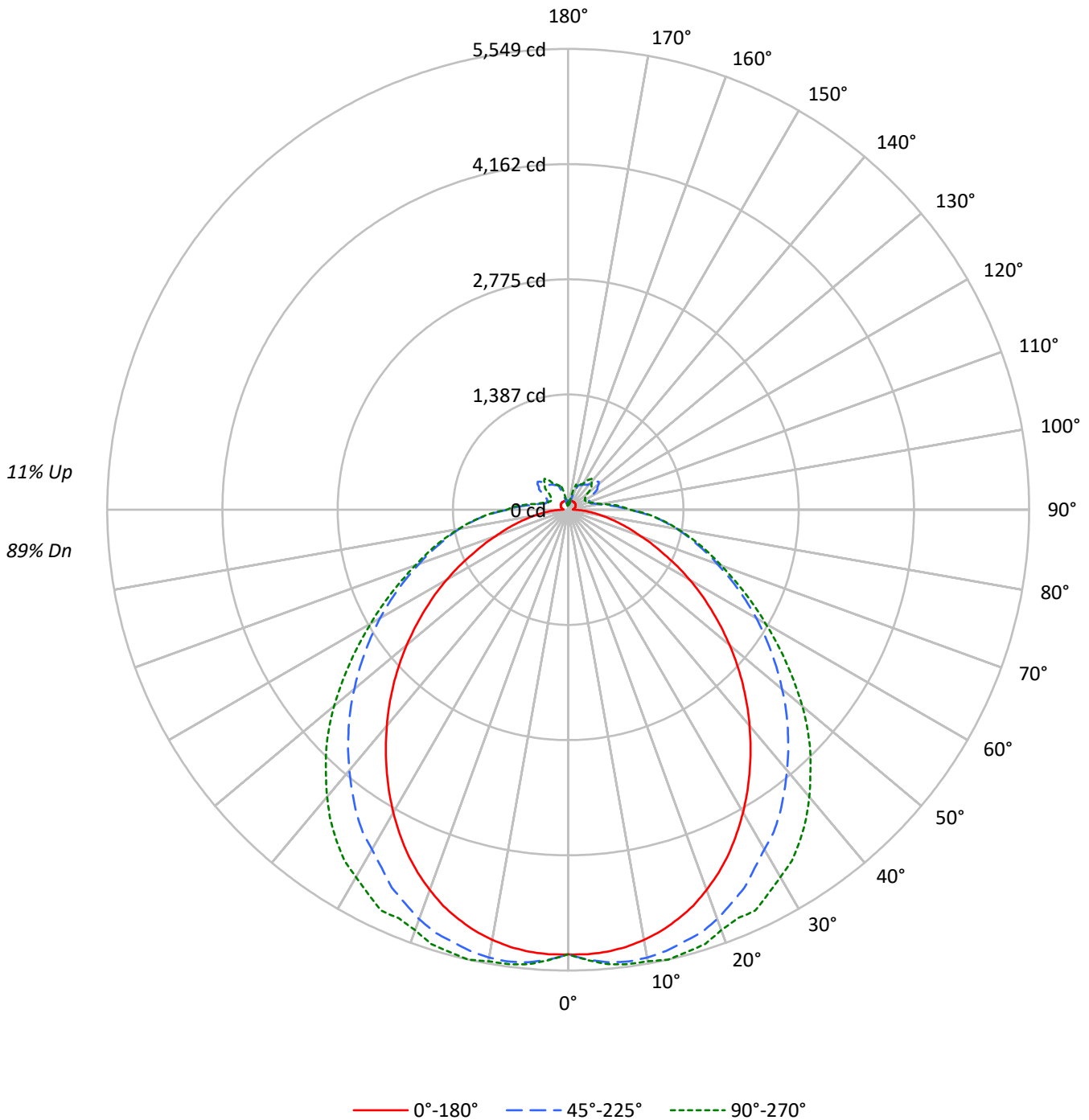
Lumens per Lamp: N/A
Luminaire Lumens: 18975.0 lumens
Efficiency: N/A
Efficacy: 132.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.4 / 1.41
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 143.4
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-LD5-18-W-UNV-L850-CD2-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	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°	7686	7686	7686
5°	7664	7802	7838
10°	7595	7822	7890
15°	7479	7761	7957
20°	7303	7688	7908
25°	7071	7546	8020
30°	6773	7337	7955
35°	6444	7209	7906
40°	6097	6999	7738
45°	5732	6802	7530
50°	5333	6594	7256
55°	4898	6406	6916
60°	4445	6258	6605
65°	3909	6131	6397
70°	3412	6091	6293
75°	3006	6214	6435
80°	2646	6643	6792
85°	2362	7434	7652



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CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U outer 2 blades tilted out 20 degrees

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	520.1	2.7
10°-20°	1515.2	8.0
20°-30°	2299.1	12.1
30°-40°	2754.6	14.5
40°-50°	2818.7	14.9
50°-60°	2536.2	13.4
60°-70°	2041.5	10.8
70°-80°	1508.9	8.0
80°-90°	980.6	5.2
90°-100°	506.3	2.7
100°-110°	301.2	1.6
110°-120°	264.6	1.4
120°-130°	276.7	1.5
130°-140°	276.3	1.5
140°-150°	204.6	1.1
150°-160°	116.9	0.6
160°-170°	44.5	0.2
170°-180°	9.0	0.0
0°-30°	4334.4	22.8
0°-40°	7089.0	37.4
0°-60°	12443.8	65.6
0°-90°	16974.9	89.5
90°-120°	1072.2	5.7
90°-150°	1829.8	9.6
90°-180°	2000.0	10.5
0°-180°	18975.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5355	5355	5355	5355	5355	
5°	5344	5425	5470	5484	5494	507
15°	5104	5277	5385	5488	5515	1438
25°	4574	4766	5022	5209	5327	2102
35°	3812	4054	4447	4772	4863	2383
45°	2971	3271	3738	4048	4122	2291
55°	2103	2501	2982	3185	3203	1885
65°	1280	1814	2252	2327	2332	1280
75°	647	1286	1603	1637	1642	693
85°	229	835	1047	1051	1055	226
90°	69	559	717	739	738	48
95°	67	371	533	578	586	54
105°	79	274	287	317	318	86
115°	97	378	279	248	237	97
125°	109	347	428	279	250	98
135°	112	315	475	429	398	87
145°	115	260	368	440	444	72
155°	113	84	329	344	334	52
165°	113	91	86	229	252	32
175°	111	110	115	101	75	11
180°	100	100	100	100	100	



TEST NUMBER: P236561

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U outer 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2
2.5°	5358.5	5359.8	5388.8	5406.6	5398.7	5400.7	5397.4	5414.5	5432.3	5422.5	5431.0
5°	5344.0	5350.6	5389.5	5416.5	5417.2	5432.3	5438.3	5460.7	5481.8	5469.9	5481.1
7.5°	5311.0	5322.2	5370.4	5408.6	5418.5	5433.7	5437.0	5464.6	5495.0	5489.0	5500.9
10°	5259.6	5277.4	5336.7	5380.3	5386.2	5408.0	5422.5	5450.1	5477.2	5476.5	5489.0
12.5°	5193.0	5212.8	5281.4	5325.5	5335.4	5363.8	5377.6	5408.6	5440.3	5442.2	5457.4
15°	5104.0	5130.4	5204.2	5248.4	5264.9	5288.6	5309.1	5345.3	5376.3	5384.9	5429.0
17.5°	5001.8	5028.2	5102.1	5148.9	5162.7	5194.3	5219.4	5255.7	5313.7	5337.4	5373.0
20°	4872.0	4903.6	4978.1	5026.9	5042.1	5079.0	5106.0	5169.3	5227.3	5245.1	5280.1
22.5°	4730.9	4761.2	4836.4	4889.1	4903.0	4939.9	4990.6	5057.2	5108.6	5130.4	5188.4
25°	4574.0	4600.4	4674.2	4725.6	4741.4	4791.5	4856.8	4920.8	4972.8	5021.6	5062.5
27.5°	4394.7	4423.0	4496.2	4543.0	4566.7	4641.9	4705.2	4767.1	4840.3	4862.1	4922.7
30°	4210.1	4234.5	4307.0	4347.9	4386.1	4466.5	4529.2	4616.8	4666.9	4722.3	4828.5
32.5°	4014.3	4038.0	4107.9	4145.5	4202.2	4287.2	4366.3	4436.2	4511.4	4604.3	4701.9
35°	3811.9	3834.9	3901.5	3939.1	4009.6	4098.0	4187.0	4262.8	4370.9	4447.4	4536.4
37.5°	3605.5	3629.9	3689.2	3732.1	3813.2	3910.8	3998.4	4102.6	4198.2	4272.7	4370.3
40°	3396.5	3415.0	3477.0	3525.1	3616.1	3713.0	3811.9	3923.9	4011.6	4097.3	4208.1
42.5°	3186.9	3202.7	3262.7	3327.3	3418.9	3517.8	3643.1	3726.8	3829.7	3921.3	4027.4
45°	2971.3	2986.5	3046.5	3121.6	3213.9	3328.6	3450.6	3531.0	3640.5	3738.0	3834.3
47.5°	2754.4	2771.5	2832.2	2919.9	3019.4	3142.1	3247.5	3343.8	3467.7	3554.1	3637.8
50°	2536.9	2554.0	2621.9	2718.1	2820.3	2947.6	3051.1	3157.9	3277.2	3359.6	3438.7
52.5°	2320.0	2339.1	2416.2	2513.1	2628.5	2753.7	2867.1	2977.2	3086.0	3173.7	3240.3
55°	2103.1	2126.8	2212.5	2311.4	2438.6	2563.2	2683.9	2792.6	2899.4	2981.9	3047.8
57.5°	1899.3	1922.4	2010.8	2122.8	2252.7	2381.9	2510.5	2613.3	2718.1	2796.6	2854.0
60°	1688.4	1714.7	1814.3	1935.6	2071.4	2211.2	2338.4	2443.2	2544.1	2616.0	2660.8
62.5°	1484.7	1528.2	1622.5	1757.6	1898.7	2045.7	2175.6	2280.4	2372.7	2432.7	2466.3
65°	1279.6	1339.6	1441.2	1590.8	1737.8	1890.1	2022.6	2125.5	2203.3	2252.0	2275.1
67.5°	1105.6	1163.6	1275.0	1436.5	1589.5	1747.7	1880.2	1971.2	2035.2	2076.0	2095.1
70°	929.6	1000.1	1124.7	1294.8	1455.7	1615.2	1734.5	1815.0	1871.7	1911.9	1929.7
72.5°	783.9	850.5	994.2	1167.6	1335.0	1483.3	1589.5	1666.0	1728.6	1755.6	1764.2
75°	647.4	714.6	872.9	1056.8	1221.0	1351.5	1453.0	1531.5	1578.9	1603.3	1611.9
77.5°	525.4	602.6	773.3	955.3	1106.9	1228.9	1331.1	1397.0	1444.4	1464.2	1470.8
80°	414.7	499.7	685.6	856.4	996.8	1115.5	1207.1	1271.1	1313.9	1329.7	1331.7
82.5°	315.8	411.4	599.9	759.5	890.7	1004.1	1088.4	1149.8	1180.1	1188.7	1186.7
85°	228.8	330.3	510.9	658.6	783.9	886.7	960.5	1013.9	1040.3	1046.9	1041.0
87.5°	156.2	255.8	423.9	557.7	664.5	755.5	819.5	865.6	891.3	894.0	894.0
90°	69.2	191.8	336.2	439.1	523.5	594.0	644.8	688.9	710.7	717.3	723.2
92.5°	56.7	147.7	265.0	360.6	439.1	508.3	564.3	607.8	631.6	640.8	645.4
95°	66.6	120.6	197.1	269.6	340.8	400.8	450.3	496.4	520.8	533.3	546.5
97.5°	68.6	118.7	182.6	232.1	276.2	332.3	378.4	410.1	425.2	432.5	444.3
100°	71.9	120.6	197.1	226.8	260.4	292.1	317.8	356.0	374.5	381.1	383.7
102.5°	74.5	118.7	213.6	240.0	257.1	278.9	292.7	301.9	321.7	334.9	342.2
105°	79.1	116.7	212.3	276.9	269.6	277.6	288.1	294.0	303.9	286.8	298.0
107.5°	88.3	116.7	207.0	301.3	300.6	288.8	288.8	288.1	287.4	274.3	282.2
110°	93.6	100.2	200.4	294.7	339.5	313.8	300.0	290.1	280.8	274.3	268.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	94.9	89.7	198.4	285.5	373.8	371.2	322.4	301.9	285.5	271.0	262.4
115°	96.9	79.1	195.8	267.7	364.6	391.6	381.1	325.0	298.6	278.9	264.4
117.5°	100.2	79.1	198.4	265.0	353.4	429.8	410.7	373.8	322.4	294.0	274.3
120°	104.2	80.4	209.0	266.3	335.6	417.3	440.4	423.9	369.2	319.7	292.1
122.5°	106.8	81.7	193.2	264.4	313.8	402.2	465.4	444.3	427.9	369.8	321.1
125°	109.4	83.1	170.1	263.0	313.8	379.7	447.0	495.8	444.3	427.9	384.4
127.5°	111.4	83.1	134.5	265.0	311.8	346.1	425.9	477.3	489.8	443.7	427.9
130°	111.4	80.4	93.0	277.6	304.6	342.2	394.9	455.6	493.1	481.3	443.0
132.5°	110.8	79.8	72.5	253.8	300.0	338.2	362.6	428.5	472.0	498.4	486.5
135°	112.1	89.0	73.2	224.8	298.6	331.0	358.0	379.7	446.3	475.3	496.4
137.5°	113.4	101.5	74.5	187.2	315.1	322.4	352.7	370.5	404.8	450.3	473.4
140°	114.1	111.4	75.8	130.5	288.1	316.4	342.8	361.9	375.1	409.4	447.0
142.5°	115.4	120.6	77.1	87.0	253.8	323.7	331.0	353.4	366.6	375.8	402.2
145°	114.7	124.6	75.8	71.2	208.3	311.2	323.0	339.5	357.3	367.9	375.1
147.5°	113.4	122.0	74.5	71.2	141.7	271.0	338.2	329.6	344.8	358.6	366.6
150°	112.7	119.3	80.4	72.5	89.7	224.2	306.6	327.7	332.9	345.5	356.0
152.5°	113.4	118.0	98.2	75.2	71.9	156.2	261.1	323.7	326.3	332.9	340.8
155°	113.4	116.7	112.1	75.8	73.8	94.3	202.4	274.3	324.4	329.0	328.3
157.5°	113.4	116.0	122.0	79.8	75.8	72.5	116.7	214.3	272.9	314.5	342.2
160°	113.4	114.7	123.9	98.2	77.1	75.2	75.8	120.6	206.3	257.1	293.4
162.5°	113.4	114.1	120.0	115.4	81.1	76.5	75.2	75.8	108.8	174.7	223.5
165°	113.4	113.4	116.7	124.6	104.2	77.1	76.5	75.2	72.5	86.4	112.7
167.5°	112.7	112.7	114.7	120.0	120.6	100.2	77.8	75.8	74.5	73.2	71.2
170°	112.1	111.4	113.4	115.4	120.0	120.0	106.1	88.3	75.2	73.8	73.2
172.5°	111.4	110.8	111.4	112.7	113.4	116.0	120.0	117.3	108.1	96.3	83.7
175°	110.8	110.1	110.1	110.1	110.1	110.1	110.8	111.4	112.7	114.7	116.7
177.5°	110.1	108.8	108.8	108.8	108.1	107.5	106.8	106.1	105.5	104.8	104.2
180°	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2	5355.2
2.5°	5425.1	5439.6	5429.7	5419.2	5417.8	5433.0	5431.7	5429.0
5°	5479.8	5494.3	5488.4	5479.8	5479.8	5496.3	5494.3	5493.7
7.5°	5501.6	5519.4	5513.4	5504.9	5510.8	5520.0	5522.0	5519.4
10°	5497.0	5518.7	5515.4	5507.5	5507.5	5521.3	5519.4	5520.0
12.5°	5466.6	5497.0	5508.8	5514.1	5526.0	5545.7	5547.1	5549.0
15°	5455.4	5485.7	5487.7	5488.4	5500.2	5517.4	5514.1	5514.8
17.5°	5394.8	5419.2	5423.1	5429.0	5447.5	5475.2	5474.5	5482.4
20°	5311.0	5351.9	5375.0	5381.6	5388.8	5400.7	5386.9	5386.9
22.5°	5236.5	5251.7	5248.4	5264.2	5299.8	5323.6	5327.5	5326.2
25°	5091.5	5140.9	5181.8	5235.9	5289.3	5318.9	5324.9	5326.9
27.5°	5003.2	5088.2	5133.0	5162.7	5189.7	5206.2	5216.8	5213.5
30°	4918.8	4963.6	4999.2	5049.3	5085.6	5100.1	5108.6	5108.0
32.5°	4766.5	4826.5	4870.0	4923.4	4982.7	5003.2	5011.7	5012.4
35°	4614.2	4684.7	4748.7	4796.2	4839.0	4853.5	4862.7	4863.4
37.5°	4463.2	4531.8	4589.1	4634.6	4673.5	4687.4	4696.6	4702.5
40°	4292.5	4355.1	4411.1	4464.5	4504.1	4506.7	4515.3	4515.3
42.5°	4103.3	4170.5	4229.2	4271.4	4305.7	4307.6	4316.2	4315.5
45°	3910.1	3972.1	4029.4	4065.7	4101.9	4108.5	4119.1	4122.4
47.5°	3711.0	3774.3	3826.4	3862.6	3891.6	3900.2	3906.8	3907.5
50°	3507.9	3574.5	3618.7	3645.7	3668.8	3676.7	3681.3	3680.0
52.5°	3309.5	3369.5	3400.5	3421.6	3444.7	3449.3	3450.6	3438.1
55°	3109.1	3156.6	3177.7	3191.5	3205.3	3215.2	3214.6	3202.7
57.5°	2902.7	2944.3	2950.9	2970.0	2975.9	2984.5	2979.9	2970.0
60°	2697.7	2728.0	2730.0	2747.8	2751.8	2749.8	2751.8	2743.9
62.5°	2492.7	2515.1	2517.7	2534.2	2542.1	2540.8	2542.1	2536.9
65°	2296.2	2317.3	2320.0	2333.1	2341.7	2339.7	2338.4	2332.5
67.5°	2115.6	2132.1	2138.7	2145.2	2149.2	2143.3	2140.6	2136.0
70°	1940.2	1950.8	1952.7	1958.0	1964.0	1958.7	1962.6	1957.4
72.5°	1771.4	1782.7	1790.6	1793.2	1799.8	1793.2	1797.2	1793.9
75°	1620.5	1629.7	1633.7	1640.3	1648.2	1642.2	1644.9	1641.6
77.5°	1477.4	1484.7	1490.6	1492.6	1499.8	1492.6	1493.9	1488.0
80°	1333.0	1336.3	1339.6	1341.6	1348.9	1342.9	1343.6	1339.6
82.5°	1187.3	1191.3	1199.9	1197.9	1204.5	1197.9	1199.2	1201.8
85°	1039.7	1046.9	1052.2	1050.2	1056.8	1054.2	1052.2	1054.8
87.5°	894.0	899.9	906.5	905.8	911.8	909.1	909.1	913.1
90°	722.6	727.2	735.1	743.7	745.0	746.3	743.7	737.7
92.5°	646.1	652.0	657.9	663.9	669.2	667.8	666.5	667.8
95°	554.4	564.3	574.9	582.1	590.7	590.7	590.7	586.1
97.5°	452.3	462.1	470.7	476.6	483.2	483.9	483.2	483.2
100°	384.4	387.6	390.9	394.9	399.5	400.8	399.5	400.2
102.5°	344.8	349.4	352.0	354.0	355.3	355.3	353.4	351.4
105°	304.6	311.8	315.8	319.1	321.1	321.7	320.4	318.4
107.5°	267.0	273.6	280.2	284.8	288.1	289.4	288.1	286.1
110°	257.1	274.3	258.4	251.2	253.8	257.1	256.5	254.5



TEST NUMBER: P236561

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U outer 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	259.1	257.1	248.5	243.9	256.5	262.4	258.4	256.5
115°	253.8	249.2	247.9	247.9	247.2	245.2	240.6	237.3
117.5°	261.1	251.2	244.6	241.3	240.0	238.0	234.7	232.1
120°	274.3	261.7	251.8	246.6	242.0	237.3	232.7	229.4
122.5°	294.7	277.6	264.4	257.1	251.8	246.6	241.3	237.3
125°	329.6	302.6	284.1	274.3	266.3	259.8	253.2	250.5
127.5°	414.7	348.8	317.1	300.0	287.4	278.2	271.0	267.0
130°	426.5	419.3	402.2	346.8	325.7	311.2	300.0	296.7
132.5°	443.0	430.5	420.0	413.4	407.4	398.9	378.4	374.5
135°	506.3	452.9	434.5	423.9	416.0	408.7	401.5	398.2
137.5°	489.8	502.4	484.6	446.3	433.1	423.2	414.7	410.7
140°	465.4	478.6	489.2	495.1	497.1	479.3	457.5	449.6
142.5°	436.4	452.9	464.1	471.4	476.0	476.0	471.4	468.7
145°	382.4	416.7	434.5	445.0	449.6	450.9	447.0	443.7
147.5°	370.5	373.8	381.7	405.4	416.0	420.6	418.6	416.0
150°	360.6	365.2	367.2	367.9	366.6	364.6	361.9	359.3
152.5°	348.8	354.7	356.7	358.0	357.3	355.3	349.4	346.1
155°	332.9	338.9	342.8	346.1	345.5	343.5	337.5	334.2
157.5°	322.4	324.4	327.0	329.0	329.0	327.7	323.0	320.4
160°	318.4	337.5	319.7	314.5	313.2	311.8	307.2	303.9
162.5°	255.8	279.5	296.7	309.2	316.4	322.4	319.7	317.8
165°	160.2	198.4	222.2	236.7	247.2	254.5	253.2	252.5
167.5°	73.2	88.3	100.2	111.4	129.9	148.3	149.7	151.6
170°	70.5	68.6	65.3	62.0	58.7	54.7	50.8	48.1
172.5°	73.2	68.6	65.9	63.3	60.0	55.4	50.8	46.8
175°	113.4	108.8	103.5	97.6	93.0	86.4	78.5	75.2
177.5°	102.2	100.9	98.9	96.3	93.6	89.0	83.1	79.1
180°	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5

(END OF REPORT)