

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: P236559

Luminaire Tested: **SKB4-LD5-18-W-UNV-L835-CD2-U outer 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236559
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-L835-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) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

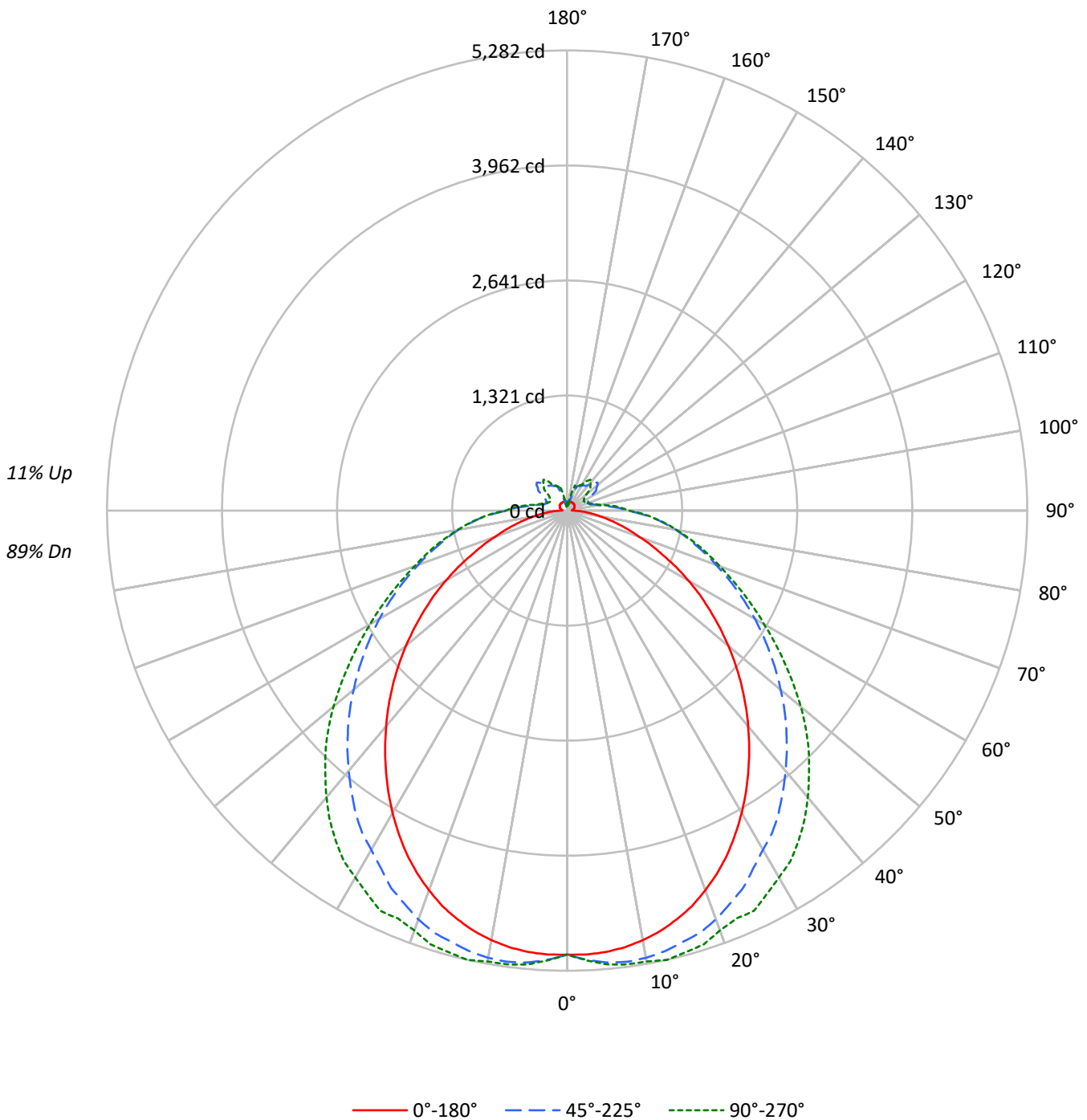
Lumens per Lamp: N/A
Luminaire Lumens: 18062.0 lumens
Efficiency: N/A
Efficacy: 126.0 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.4 / 1.41
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

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-L835-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										
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	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°	7316	7316	7316
5°	7295	7426	7461
10°	7230	7446	7510
15°	7119	7388	7574
20°	6951	7318	7527
25°	6731	7183	7634
30°	6447	6984	7572
35°	6134	6863	7525
40°	5804	6662	7366
45°	5456	6475	7168
50°	5077	6277	6907
55°	4662	6097	6583
60°	4231	5957	6287
65°	3721	5836	6089
70°	3248	5798	5990
75°	2861	5915	6125
80°	2518	6323	6465
85°	2248	7076	7284



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CATALOG NUMBER: SKB4-LD5-18-W-UNV-L835-CD2-U outer 2 blades tilted out 20 degrees

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	495.0	2.7
10°-20°	1442.3	8.0
20°-30°	2188.5	12.1
30°-40°	2622.1	14.5
40°-50°	2683.0	14.9
50°-60°	2414.2	13.4
60°-70°	1943.2	10.8
70°-80°	1436.3	8.0
80°-90°	933.5	5.2
90°-100°	482.0	2.7
100°-110°	286.7	1.6
110°-120°	251.9	1.4
120°-130°	263.4	1.5
130°-140°	263.0	1.5
140°-150°	194.8	1.1
150°-160°	111.2	0.6
160°-170°	42.4	0.2
170°-180°	8.5	0.0
0°-30°	4125.8	22.8
0°-40°	6747.9	37.4
0°-60°	11845.1	65.6
0°-90°	16158.1	89.5
90°-120°	1020.6	5.7
90°-150°	1741.7	9.6
90°-180°	1904.0	10.5
0°-180°	18062.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5098	5098	5098	5098	5098	
5°	5087	5164	5207	5220	5229	483
15°	4858	5023	5126	5224	5249	1368
25°	4354	4537	4780	4958	5071	2001
35°	3628	3859	4233	4543	4629	2268
45°	2828	3114	3558	3853	3924	2181
55°	2002	2381	2838	3031	3049	1794
65°	1218	1727	2144	2215	2220	1219
75°	616	1224	1526	1558	1563	660
85°	218	795	996	1001	1004	215
90°	66	532	683	704	702	46
95°	63	353	508	551	558	52
105°	75	260	273	302	303	82
115°	92	360	266	236	226	92
125°	104	330	407	266	238	93
135°	107	300	452	409	379	83
145°	109	247	350	419	422	68
155°	108	80	313	328	318	50
165°	108	86	82	218	240	31
175°	105	105	109	96	72	10
180°	95	95	95	95	95	



TEST NUMBER: P236559

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L835-CD2-U outer 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5
2.5°	5100.7	5101.9	5129.5	5146.5	5139.0	5140.8	5137.7	5154.0	5171.0	5161.5	5169.7
5°	5086.9	5093.1	5130.2	5155.9	5156.5	5171.0	5176.6	5197.9	5218.0	5206.7	5217.4
7.5°	5055.5	5066.2	5112.0	5148.4	5157.8	5172.2	5175.4	5201.7	5230.6	5224.9	5236.2
10°	5006.5	5023.5	5080.0	5121.4	5127.0	5147.7	5161.5	5187.9	5213.6	5213.0	5224.9
12.5°	4943.2	4962.0	5027.3	5069.3	5078.7	5105.7	5118.9	5148.4	5178.5	5180.4	5194.8
15°	4858.4	4883.5	4953.8	4995.9	5011.6	5034.2	5053.6	5088.1	5117.6	5125.8	5167.8
17.5°	4761.2	4786.3	4856.6	4901.1	4914.3	4944.4	4968.3	5002.8	5058.0	5080.6	5114.5
20°	4637.5	4667.7	4738.6	4785.0	4799.5	4834.6	4860.3	4920.6	4975.8	4992.7	5026.0
22.5°	4503.3	4532.1	4603.7	4653.9	4667.0	4702.2	4750.5	4813.9	4862.8	4883.5	4938.8
25°	4353.9	4379.0	4449.3	4498.2	4513.3	4561.0	4623.1	4684.0	4733.6	4780.0	4818.9
27.5°	4183.2	4210.2	4279.8	4324.4	4347.0	4418.5	4478.8	4537.8	4607.4	4628.1	4685.9
30°	4007.5	4030.7	4099.7	4138.7	4175.0	4251.6	4311.2	4394.7	4442.4	4495.1	4596.1
32.5°	3821.1	3843.7	3910.2	3946.0	4000.0	4080.9	4156.2	4222.7	4294.3	4382.8	4475.6
35°	3628.5	3650.4	3713.8	3749.6	3816.7	3900.8	3985.5	4057.7	4160.6	4233.4	4318.1
37.5°	3432.0	3455.3	3511.7	3552.5	3629.7	3722.6	3806.1	3905.2	3996.2	4067.1	4160.0
40°	3233.1	3250.7	3309.7	3355.5	3442.1	3534.3	3628.5	3735.1	3818.6	3900.2	4005.6
42.5°	3033.5	3048.6	3105.7	3167.2	3254.4	3348.6	3467.8	3547.5	3645.4	3732.6	3833.7
45°	2828.3	2842.8	2899.9	2971.4	3059.3	3168.5	3284.6	3361.1	3465.3	3558.2	3649.8
47.5°	2621.9	2638.2	2695.9	2779.4	2874.2	2990.9	3091.3	3182.9	3300.9	3383.1	3462.8
50°	2414.8	2431.1	2495.7	2587.4	2684.6	2805.7	2904.3	3005.9	3119.5	3198.0	3273.3
52.5°	2208.3	2226.5	2299.9	2392.2	2502.0	2621.3	2729.2	2834.0	2937.5	3021.0	3084.4
55°	2001.9	2024.5	2106.0	2200.2	2321.3	2439.9	2554.7	2658.3	2759.9	2838.4	2901.1
57.5°	1808.0	1829.9	1914.0	2020.7	2144.3	2267.3	2389.7	2487.6	2587.4	2662.0	2716.6
60°	1607.1	1632.2	1727.0	1842.5	1971.7	2104.8	2225.9	2325.7	2421.7	2490.1	2532.8
62.5°	1413.2	1454.6	1544.4	1673.0	1807.3	1947.3	2070.9	2170.7	2258.5	2315.6	2347.6
65°	1218.1	1275.2	1371.8	1514.3	1654.2	1799.2	1925.3	2023.2	2097.3	2143.7	2165.7
67.5°	1052.4	1107.6	1213.7	1367.4	1513.0	1663.6	1789.8	1876.4	1937.2	1976.1	1994.3
70°	884.8	952.0	1070.6	1232.5	1385.6	1537.5	1651.1	1727.6	1781.6	1819.9	1836.8
72.5°	746.1	809.5	946.3	1111.4	1270.8	1412.0	1513.0	1585.8	1645.4	1671.1	1679.3
75°	616.2	680.3	830.9	1006.0	1162.2	1286.5	1383.1	1457.8	1503.0	1526.2	1534.3
77.5°	500.2	573.6	736.1	909.3	1053.6	1169.7	1267.0	1329.8	1374.9	1393.8	1400.1
80°	394.7	475.7	652.6	815.2	948.8	1061.8	1149.0	1209.9	1250.7	1265.8	1267.6
82.5°	300.6	391.6	571.1	722.9	847.8	955.7	1036.1	1094.4	1123.3	1131.5	1129.6
85°	217.8	314.4	486.3	626.9	746.1	844.0	914.3	965.2	990.3	996.5	990.9
87.5°	148.7	243.5	403.5	530.9	632.6	719.2	780.0	824.0	848.4	850.9	850.9
90°	65.9	182.6	320.0	417.9	498.3	565.4	613.7	655.8	676.5	682.8	688.4
92.5°	54.0	140.6	252.3	343.3	417.9	483.8	537.2	578.6	601.2	610.0	614.4
95°	63.4	114.8	187.6	256.7	324.4	381.5	428.6	472.5	495.8	507.7	520.2
97.5°	65.3	113.0	173.8	220.9	262.9	316.3	360.2	390.3	404.8	411.7	423.0
100°	68.4	114.8	187.6	215.9	247.9	278.0	302.5	338.9	356.4	362.7	365.2
102.5°	70.9	113.0	203.3	228.4	244.7	265.5	278.6	287.4	306.2	318.8	325.7
105°	75.3	111.1	202.1	263.6	256.7	264.2	274.2	279.9	289.3	273.0	283.6
107.5°	84.1	111.1	197.0	286.8	286.2	274.9	274.9	274.2	273.6	261.1	268.6
110°	89.1	95.4	190.8	280.5	323.2	298.7	285.5	276.1	267.3	261.1	255.4



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CATALOG NUMBER: SKB4-LD5-18-W-UNV-L835-CD2-U outer 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	90.4	85.3	188.9	271.7	355.8	353.3	306.9	287.4	271.7	257.9	249.8
115°	92.2	75.3	186.4	254.8	347.0	372.8	362.7	309.4	284.3	265.5	251.6
117.5°	95.4	75.3	188.9	252.3	336.4	409.2	391.0	355.8	306.9	279.9	261.1
120°	99.2	76.6	198.9	253.5	319.4	397.2	419.2	403.5	351.4	304.4	278.0
122.5°	101.7	77.8	183.9	251.6	298.7	382.8	443.0	423.0	407.3	352.1	305.6
125°	104.2	79.1	161.9	250.4	298.7	361.5	425.5	471.9	423.0	407.3	365.9
127.5°	106.1	79.1	128.0	252.3	296.8	329.5	405.4	454.3	466.3	422.3	407.3
130°	106.1	76.6	88.5	264.2	289.9	325.7	375.9	433.6	469.4	458.1	421.7
132.5°	105.4	75.9	69.0	241.6	285.5	321.9	345.1	407.9	449.3	474.4	463.1
135°	106.7	84.7	69.7	214.0	284.3	315.0	340.8	361.5	424.8	452.5	472.5
137.5°	107.9	96.6	70.9	178.2	300.0	306.9	335.7	352.7	385.3	428.6	450.6
140°	108.6	106.1	72.2	124.3	274.2	301.2	326.3	344.5	357.1	389.7	425.5
142.5°	109.8	114.8	73.4	82.8	241.6	308.1	315.0	336.4	348.9	357.7	382.8
145°	109.2	118.6	72.2	67.8	198.3	296.2	307.5	323.2	340.1	350.2	357.1
147.5°	107.9	116.1	70.9	67.8	134.9	257.9	321.9	313.8	328.2	341.4	348.9
150°	107.3	113.6	76.6	69.0	85.3	213.4	291.8	311.9	316.9	328.8	338.9
152.5°	107.9	112.3	93.5	71.5	68.4	148.7	248.5	308.1	310.6	316.9	324.4
155°	107.9	111.1	106.7	72.2	70.3	89.7	192.7	261.1	308.8	313.1	312.5
157.5°	107.9	110.4	116.1	75.9	72.2	69.0	111.1	204.0	259.8	299.3	325.7
160°	107.9	109.2	118.0	93.5	73.4	71.5	72.2	114.8	196.4	244.7	279.3
162.5°	107.9	108.6	114.2	109.8	77.2	72.8	71.5	72.2	103.5	166.3	212.7
165°	107.9	107.9	111.1	118.6	99.2	73.4	72.8	71.5	69.0	82.2	107.3
167.5°	107.3	107.3	109.2	114.2	114.8	95.4	74.1	72.2	70.9	69.7	67.8
170°	106.7	106.1	107.9	109.8	114.2	114.2	101.0	84.1	71.5	70.3	69.7
172.5°	106.1	105.4	106.1	107.3	107.9	110.4	114.2	111.7	102.9	91.6	79.7
175°	105.4	104.8	104.8	104.8	104.8	104.8	105.4	106.1	107.3	109.2	111.1
177.5°	104.8	103.5	103.5	103.5	102.9	102.3	101.7	101.0	100.4	99.8	99.2
180°	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5	5097.5
2.5°	5164.1	5177.9	5168.5	5158.4	5157.2	5171.6	5170.3	5167.8
5°	5216.1	5229.9	5224.3	5216.1	5216.1	5231.8	5229.9	5229.3
7.5°	5236.9	5253.8	5248.1	5240.0	5245.6	5254.4	5256.3	5253.8
10°	5232.5	5253.2	5250.0	5242.5	5242.5	5255.7	5253.8	5254.4
12.5°	5203.6	5232.5	5243.8	5248.8	5260.1	5278.9	5280.2	5282.0
15°	5192.9	5221.8	5223.7	5224.3	5235.6	5251.9	5248.8	5249.4
17.5°	5135.2	5158.4	5162.2	5167.8	5185.4	5211.8	5211.1	5218.7
20°	5055.5	5094.4	5116.4	5122.6	5129.5	5140.8	5127.7	5127.7
22.5°	4984.6	4999.0	4995.9	5010.9	5044.8	5067.4	5071.2	5069.9
25°	4846.5	4893.6	4932.5	4984.0	5034.8	5063.0	5068.7	5070.6
27.5°	4762.4	4843.4	4886.1	4914.3	4940.0	4955.7	4965.8	4962.6
30°	4682.1	4724.8	4758.7	4806.4	4840.9	4854.7	4862.8	4862.2
32.5°	4537.1	4594.2	4635.7	4686.5	4743.0	4762.4	4770.6	4771.2
35°	4392.2	4459.3	4520.2	4565.4	4606.2	4620.0	4628.8	4629.4
37.5°	4248.5	4313.7	4368.3	4411.6	4448.7	4461.8	4470.6	4476.3
40°	4085.9	4145.6	4198.9	4249.7	4287.4	4289.9	4298.0	4298.0
42.5°	3905.8	3969.8	4025.7	4065.9	4098.5	4100.4	4108.5	4107.9
45°	3722.0	3781.0	3835.5	3870.1	3904.6	3910.9	3920.9	3924.0
47.5°	3532.4	3592.7	3642.3	3676.8	3704.4	3712.5	3718.8	3719.5
50°	3339.2	3402.5	3444.6	3470.3	3492.3	3499.8	3504.2	3502.9
52.5°	3150.3	3207.4	3236.9	3257.0	3278.9	3283.3	3284.6	3272.6
55°	2959.5	3004.7	3024.8	3037.9	3051.1	3060.5	3059.9	3048.6
57.5°	2763.1	2802.6	2808.9	2827.1	2832.7	2840.9	2836.5	2827.1
60°	2567.9	2596.8	2598.7	2615.6	2619.4	2617.5	2619.4	2611.8
62.5°	2372.7	2394.1	2396.6	2412.3	2419.8	2418.6	2419.8	2414.8
65°	2185.7	2205.8	2208.3	2220.9	2229.0	2227.2	2225.9	2220.2
67.5°	2013.8	2029.5	2035.8	2042.0	2045.8	2040.1	2037.6	2033.2
70°	1846.9	1856.9	1858.8	1863.8	1869.5	1864.4	1868.2	1863.2
72.5°	1686.2	1696.9	1704.4	1706.9	1713.2	1706.9	1710.7	1707.5
75°	1542.5	1551.3	1555.1	1561.3	1568.9	1563.2	1565.7	1562.6
77.5°	1406.3	1413.2	1418.9	1420.8	1427.7	1420.8	1422.0	1416.4
80°	1268.9	1272.0	1275.2	1277.1	1284.0	1278.3	1278.9	1275.2
82.5°	1130.2	1134.0	1142.1	1140.2	1146.5	1140.2	1141.5	1144.0
85°	989.6	996.5	1001.6	999.7	1006.0	1003.4	1001.6	1004.1
87.5°	850.9	856.6	862.9	862.2	867.9	865.4	865.4	869.1
90°	687.8	692.2	699.7	707.9	709.1	710.4	707.9	702.2
92.5°	615.0	620.6	626.3	631.9	637.0	635.7	634.4	635.7
95°	527.8	537.2	547.2	554.1	562.3	562.3	562.3	557.9
97.5°	430.5	439.9	448.1	453.7	460.0	460.6	460.0	460.0
100°	365.9	369.0	372.1	375.9	380.3	381.5	380.3	380.9
102.5°	328.2	332.6	335.1	337.0	338.2	338.2	336.4	334.5
105°	289.9	296.8	300.6	303.7	305.6	306.2	305.0	303.1
107.5°	254.2	260.4	266.7	271.1	274.2	275.5	274.2	272.4
110°	244.7	261.1	246.0	239.1	241.6	244.7	244.1	242.2



TEST NUMBER: P236559

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L835-CD2-U outer 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	246.6	244.7	236.6	232.2	244.1	249.8	246.0	244.1
115°	241.6	237.2	236.0	236.0	235.3	233.4	229.1	225.9
117.5°	248.5	239.1	232.8	229.7	228.4	226.5	223.4	220.9
120°	261.1	249.1	239.7	234.7	230.3	225.9	221.5	218.4
122.5°	280.5	264.2	251.6	244.7	239.7	234.7	229.7	225.9
125°	313.8	288.0	270.5	261.1	253.5	247.3	241.0	238.5
127.5°	394.7	332.0	301.8	285.5	273.6	264.8	257.9	254.2
130°	406.0	399.1	382.8	330.1	310.0	296.2	285.5	282.4
132.5°	421.7	409.8	399.7	393.5	387.8	379.7	360.2	356.4
135°	482.0	431.1	413.6	403.5	396.0	389.1	382.2	379.0
137.5°	466.3	478.2	461.2	424.8	412.3	402.9	394.7	391.0
140°	443.0	455.6	465.6	471.3	473.2	456.2	435.5	428.0
142.5°	415.4	431.1	441.8	448.7	453.1	453.1	448.7	446.2
145°	364.0	396.6	413.6	423.6	428.0	429.2	425.5	422.3
147.5°	352.7	355.8	363.3	385.9	396.0	400.4	398.5	396.0
150°	343.3	347.7	349.5	350.2	348.9	347.0	344.5	342.0
152.5°	332.0	337.6	339.5	340.8	340.1	338.2	332.6	329.5
155°	316.9	322.6	326.3	329.5	328.8	327.0	321.3	318.2
157.5°	306.9	308.8	311.3	313.1	313.1	311.9	307.5	305.0
160°	303.1	321.3	304.4	299.3	298.1	296.8	292.4	289.3
162.5°	243.5	266.1	282.4	294.3	301.2	306.9	304.4	302.5
165°	152.5	188.9	211.5	225.3	235.3	242.2	241.0	240.3
167.5°	69.7	84.1	95.4	106.1	123.6	141.2	142.5	144.3
170°	67.1	65.3	62.1	59.0	55.9	52.1	48.3	45.8
172.5°	69.7	65.3	62.8	60.2	57.1	52.7	48.3	44.6
175°	107.9	103.5	98.5	92.9	88.5	82.2	74.7	71.5
177.5°	97.3	96.0	94.1	91.6	89.1	84.7	79.1	75.3
180°	94.8	94.8	94.8	94.8	94.8	94.8	94.8	94.8

(END OF REPORT)