

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: P236549

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236549
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24079)
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 inner 2 blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, INNER 2 BLADES TILTED OUT 20 DEGREES
Light Source: (952) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

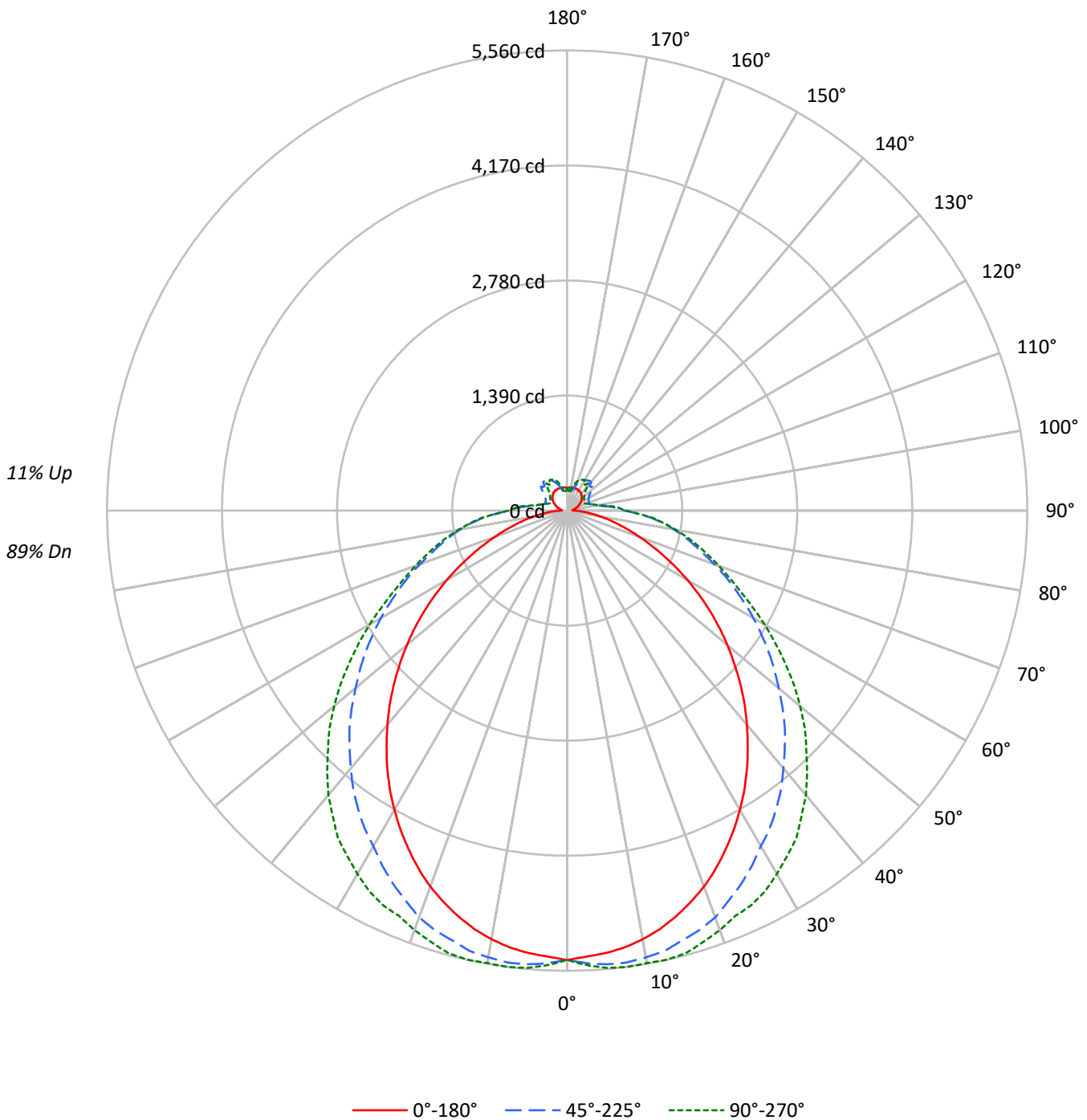
Lumens per Lamp: N/A
Luminaire Lumens: 18944.0 lumens
Efficiency: N/A
Efficacy: 132.1 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.38 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

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

TEST NUMBER: P236549

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

Luminous Intensity Polar Plot





TEST NUMBER: P236549

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U inner 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	0
RCR																		
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	105	99	94	90	101	96	92	88	90	86	83	84	81	78	78	76	74	71
2	95	86	79	73	91	83	76	71	78	72	67	73	68	64	68	64	61	58
3	86	75	67	60	83	73	65	59	68	62	56	64	58	54	60	55	51	49
4	79	66	57	51	76	64	56	50	60	53	48	57	51	46	53	48	44	41
5	72	59	50	43	69	58	49	43	54	47	41	51	45	40	48	43	38	36
6	67	53	44	38	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	59	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	38	32	27	36	31	27	25
9	54	40	32	27	52	39	32	26	37	30	25	35	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	22	31	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7793	7793	7793
5°	7697	7848	7914
10°	7594	7828	7936
15°	7439	7746	7989
20°	7246	7666	7918
25°	6995	7478	7921
30°	6715	7273	7893
35°	6407	7139	7851
40°	6064	6943	7689
45°	5703	6770	7465
50°	5314	6548	7244
55°	4884	6380	6940
60°	4417	6217	6636
65°	3913	6086	6333
70°	3424	6020	6256
75°	2981	6125	6390
80°	2583	6551	6742
85°	2239	7298	7565



TEST NUMBER: P236549

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	522.8	2.8
10°-20°	1511.4	8.0
20°-30°	2278.9	12.0
30°-40°	2724.1	14.4
40°-50°	2793.0	14.7
50°-60°	2521.7	13.3
60°-70°	2024.1	10.7
70°-80°	1491.1	7.9
80°-90°	954.6	5.0
90°-100°	488.1	2.6
100°-110°	298.4	1.6
110°-120°	268.2	1.4
120°-130°	277.2	1.5
130°-140°	276.5	1.5
140°-150°	238.5	1.3
150°-160°	166.4	0.9
160°-170°	83.8	0.4
170°-180°	25.0	0.1
0°-30°	4313.2	22.8
0°-40°	7037.4	37.1
0°-60°	12352.1	65.2
0°-90°	16821.9	88.8
90°-120°	1054.7	5.6
90°-150°	1846.9	9.7
90°-180°	2122.0	11.2
0°-180°	18944.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5430	5430	5430	5430	5430	
5°	5367	5465	5503	5532	5547	509
15°	5076	5260	5374	5491	5537	1430
25°	4524	4733	4976	5152	5262	2082
35°	3790	4028	4404	4701	4830	2368
45°	2956	3248	3720	4004	4087	2280
55°	2097	2483	2970	3165	3214	1876
65°	1281	1802	2236	2300	2309	1276
75°	642	1267	1580	1623	1630	688
85°	217	806	1028	1042	1043	216
90°	71	530	690	706	701	48
95°	74	360	522	562	564	61
105°	108	264	296	310	305	114
115°	158	335	286	248	229	157
125°	210	412	328	274	248	188
135°	248	397	403	344	301	191
145°	276	345	442	389	380	172
155°	284	271	391	421	411	131
165°	284	269	272	321	322	81
175°	280	277	269	259	238	27
180°	269	269	269	269	269	



TEST NUMBER: P236549

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6
2.5°	5393.4	5415.8	5424.4	5448.8	5458.7	5461.3	5467.9	5471.8	5466.6	5473.8	5466.6
5°	5367.0	5394.7	5411.8	5446.8	5461.3	5469.2	5482.4	5490.3	5491.0	5502.8	5500.2
7.5°	5323.5	5355.1	5382.2	5419.1	5437.6	5451.4	5471.2	5487.0	5498.2	5508.1	5503.5
10°	5258.9	5297.8	5329.4	5368.3	5394.0	5419.1	5444.8	5450.7	5460.6	5481.1	5493.6
12.5°	5179.1	5221.3	5253.0	5298.5	5334.7	5357.1	5378.9	5401.3	5427.7	5449.4	5450.1
15°	5076.3	5127.0	5158.0	5210.8	5250.3	5270.1	5309.7	5336.7	5347.9	5374.3	5403.3
17.5°	4960.9	5013.7	5046.0	5104.0	5140.9	5174.5	5220.7	5225.3	5271.4	5315.6	5349.9
20°	4834.3	4881.8	4914.8	4979.4	5018.3	5055.2	5091.4	5128.4	5190.3	5229.9	5252.3
22.5°	4688.0	4733.5	4778.3	4835.7	4879.2	4905.5	4970.8	5022.2	5073.0	5102.0	5138.3
25°	4524.5	4570.6	4613.5	4674.8	4712.4	4753.9	4842.9	4883.1	4924.7	4976.1	5017.6
27.5°	4355.7	4395.3	4442.7	4498.1	4539.0	4608.2	4689.3	4717.0	4780.9	4835.7	4869.9
30°	4173.8	4208.7	4253.5	4309.6	4359.7	4446.0	4508.7	4552.8	4622.7	4681.4	4757.2
32.5°	3987.8	4019.5	4057.7	4107.2	4179.0	4261.4	4326.7	4386.7	4461.9	4554.8	4634.6
35°	3790.1	3820.4	3853.4	3904.1	3991.1	4065.6	4144.8	4210.0	4311.5	4403.8	4489.5
37.5°	3585.0	3616.7	3643.7	3705.7	3794.7	3876.4	3958.2	4043.2	4145.4	4246.3	4317.5
40°	3378.0	3409.7	3432.8	3504.0	3596.2	3686.6	3775.6	3869.8	3976.0	4065.0	4147.4
42.5°	3171.0	3199.4	3225.7	3306.8	3395.2	3494.1	3593.0	3691.2	3790.7	3890.9	3982.6
45°	2956.1	2987.8	3013.5	3104.4	3192.8	3303.5	3405.1	3507.9	3605.5	3720.2	3789.4
47.5°	2741.2	2774.2	2803.2	2904.0	2999.0	3115.7	3214.5	3317.4	3427.5	3529.0	3599.5
50°	2527.6	2559.2	2598.1	2703.6	2799.9	2921.8	3025.3	3136.1	3244.9	3335.8	3416.3
52.5°	2313.3	2346.3	2395.7	2503.9	2607.4	2733.3	2840.1	2958.1	3056.3	3154.5	3222.4
55°	2097.1	2133.4	2196.0	2304.1	2420.8	2544.7	2660.1	2776.1	2876.3	2970.0	3028.0
57.5°	1884.8	1924.4	1998.2	2112.3	2235.5	2362.8	2490.7	2600.8	2701.0	2782.7	2838.8
60°	1677.8	1721.3	1804.4	1926.4	2058.9	2191.4	2318.6	2434.6	2523.0	2598.8	2635.1
62.5°	1475.4	1524.2	1614.5	1749.7	1887.5	2027.2	2162.4	2269.8	2347.0	2414.2	2445.2
65°	1280.9	1335.0	1435.2	1582.2	1729.9	1874.3	2010.1	2104.3	2176.9	2235.5	2259.3
67.5°	1100.3	1159.0	1273.7	1428.0	1584.9	1733.2	1857.8	1946.1	2012.7	2063.5	2078.6
70°	932.8	994.8	1122.7	1286.9	1453.0	1594.7	1709.5	1796.5	1851.9	1889.4	1894.7
72.5°	779.2	843.8	987.6	1160.3	1328.4	1457.6	1570.4	1646.8	1696.9	1723.3	1737.8
75°	642.1	709.4	868.9	1048.9	1205.1	1329.1	1433.2	1497.8	1549.3	1580.2	1594.1
77.5°	518.8	590.7	765.4	941.4	1087.8	1202.5	1295.4	1366.0	1423.3	1447.7	1455.6
80°	404.8	487.9	673.8	839.2	973.7	1078.5	1178.1	1248.0	1296.1	1311.3	1314.6
82.5°	302.6	397.5	582.8	735.1	860.3	973.7	1062.7	1121.4	1162.3	1171.5	1173.5
85°	216.9	317.8	492.5	635.5	756.8	854.4	935.5	984.9	1019.9	1027.8	1027.1
87.5°	147.0	251.8	411.4	535.3	640.1	728.5	796.4	837.9	866.3	855.1	855.1
90°	71.2	197.8	322.4	416.7	492.5	568.3	618.4	656.0	680.4	689.6	691.6
92.5°	62.6	152.3	258.4	342.2	414.0	489.8	544.5	584.1	609.8	620.4	622.3
95°	74.5	123.3	197.8	262.4	329.0	391.6	435.1	468.1	501.7	522.1	533.3
97.5°	77.1	125.3	182.6	224.1	269.0	328.3	369.8	398.9	416.0	421.3	420.6
100°	84.4	145.7	188.5	222.2	249.2	276.2	317.8	349.4	367.9	374.5	374.5
102.5°	95.6	161.5	212.3	230.7	249.9	269.6	280.2	303.9	325.0	334.2	336.9
105°	107.5	168.1	247.2	243.3	257.1	270.3	281.5	284.8	286.8	296.0	301.3
107.5°	120.0	172.7	263.0	271.0	265.0	276.2	282.2	286.1	285.5	272.9	269.6
110°	133.2	176.7	268.3	301.9	284.1	284.1	288.1	289.4	285.5	280.2	269.6



TEST NUMBER: P236549

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	145.0	178.7	271.6	327.0	321.1	298.0	294.7	294.0	289.4	281.5	272.3
115°	157.6	180.0	272.9	340.2	344.8	324.4	306.6	301.9	294.7	286.1	275.6
117.5°	170.7	180.0	273.6	343.5	361.9	369.8	327.7	311.8	302.6	293.4	280.8
120°	184.6	180.6	272.3	346.8	396.2	382.4	362.6	330.3	313.1	301.3	288.8
122.5°	197.8	186.6	271.0	348.1	396.9	387.6	411.4	359.3	329.0	311.8	298.6
125°	210.3	195.1	269.6	347.4	396.9	427.2	396.2	411.4	354.7	328.3	311.2
127.5°	222.2	205.0	266.3	342.8	394.9	430.5	404.1	416.0	402.8	355.3	328.3
130°	230.7	217.6	259.7	332.9	389.6	425.9	444.3	399.5	426.5	404.8	356.7
132.5°	238.7	227.4	249.9	325.0	384.3	422.6	444.3	424.6	404.1	430.5	408.7
135°	247.9	238.7	238.0	316.4	376.4	417.3	439.1	454.2	408.7	402.8	427.9
137.5°	256.5	248.5	234.7	307.9	365.2	410.1	433.1	448.3	455.5	401.5	399.5
140°	263.7	257.8	234.7	297.3	352.0	400.2	424.6	440.4	450.3	452.3	400.2
142.5°	271.6	265.7	236.0	283.5	338.2	385.7	414.7	431.2	442.4	449.0	451.6
145°	275.6	270.3	248.5	261.7	323.0	367.9	400.8	420.6	434.5	441.7	445.7
147.5°	277.5	273.6	258.4	251.8	306.6	349.4	385.0	408.7	424.6	434.5	439.1
150°	279.5	276.9	265.7	245.9	286.8	331.6	366.5	392.9	412.0	423.9	429.8
152.5°	282.8	280.2	272.3	244.6	263.7	313.1	346.8	373.1	394.9	410.1	418.6
155°	284.1	282.2	276.2	260.4	251.8	289.4	325.0	350.1	372.5	390.9	402.8
157.5°	285.5	284.1	279.5	269.0	247.2	263.0	300.6	327.0	348.1	367.2	381.1
160°	284.8	284.1	280.8	274.3	259.1	248.5	267.0	300.0	321.7	339.5	352.7
162.5°	284.8	284.1	281.5	276.9	268.3	247.9	250.5	264.4	292.1	311.2	323.7
165°	284.1	284.1	282.2	278.9	273.6	265.0	246.6	245.9	257.1	272.3	290.1
167.5°	284.1	284.1	282.8	280.2	276.9	272.3	265.7	255.1	243.3	245.9	251.8
170°	282.8	283.5	282.2	280.2	278.2	274.9	271.6	267.0	260.4	253.2	239.3
172.5°	281.5	282.2	282.2	280.8	278.9	276.9	274.9	272.3	267.7	265.0	260.4
175°	280.2	280.8	280.8	280.2	278.2	276.2	275.6	273.6	270.3	269.0	266.3
177.5°	278.9	278.9	279.5	278.9	278.2	276.9	276.2	274.9	271.6	271.0	268.3
180°	269.0	269.0	269.0	269.0	269.0	269.0	269.0	269.0	269.0	269.0	269.0



TEST NUMBER: P236549

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6	5429.6
2.5°	5461.9	5485.0	5484.4	5471.8	5484.4	5498.9	5491.0	5498.2
5°	5502.2	5532.5	5537.1	5527.9	5538.4	5550.9	5539.7	5547.0
7.5°	5504.8	5530.5	5536.4	5529.2	5548.3	5566.1	5554.9	5560.2
10°	5508.8	5538.4	5546.3	5535.1	5547.0	5556.9	5543.7	5552.3
12.5°	5454.0	5493.6	5516.7	5520.6	5543.0	5559.5	5548.3	5557.5
15°	5427.7	5468.5	5488.3	5493.6	5518.6	5536.4	5525.2	5537.1
17.5°	5374.9	5403.3	5409.2	5407.9	5436.2	5458.7	5454.7	5466.6
20°	5270.8	5309.0	5337.3	5343.3	5370.3	5388.8	5378.2	5394.0
22.5°	5178.5	5218.0	5227.3	5230.5	5268.1	5291.9	5290.5	5303.1
25°	5048.6	5088.1	5136.3	5168.6	5212.1	5240.4	5247.7	5261.5
27.5°	4938.5	5002.4	5060.5	5092.1	5136.3	5164.6	5175.2	5182.4
30°	4835.0	4902.2	4954.3	4987.9	5026.2	5048.6	5057.2	5068.4
32.5°	4708.4	4777.0	4821.8	4848.8	4887.1	4916.1	4934.5	4946.4
35°	4555.5	4618.8	4678.7	4724.2	4767.1	4796.1	4807.3	4829.7
37.5°	4389.3	4477.0	4539.0	4570.0	4595.0	4618.8	4631.9	4651.7
40°	4237.7	4311.5	4354.4	4386.0	4419.7	4450.6	4467.1	4486.9
42.5°	4053.1	4117.1	4176.4	4214.0	4243.0	4269.4	4280.6	4291.8
45°	3861.9	3937.7	3989.2	4018.2	4036.0	4063.7	4080.8	4086.7
47.5°	3678.7	3741.3	3782.8	3818.4	3842.8	3870.5	3885.7	3895.6
50°	3482.9	3537.6	3585.7	3618.0	3632.5	3651.0	3660.9	3674.0
52.5°	3283.1	3344.4	3374.1	3393.2	3407.7	3428.8	3439.3	3452.5
55°	3086.0	3123.6	3153.2	3177.0	3191.5	3207.3	3216.5	3213.9
57.5°	2873.7	2916.6	2942.3	2956.1	2964.7	2975.2	2977.9	2985.1
60°	2673.9	2704.3	2720.8	2733.3	2737.2	2745.8	2749.1	2757.0
62.5°	2475.5	2497.9	2506.5	2515.7	2521.0	2519.7	2520.3	2525.6
65°	2275.8	2294.2	2297.5	2301.5	2304.8	2306.1	2307.4	2309.4
67.5°	2084.6	2099.1	2103.7	2114.9	2119.5	2116.9	2116.9	2118.9
70°	1907.2	1921.1	1926.4	1934.9	1941.5	1941.5	1943.5	1946.1
72.5°	1745.1	1760.9	1771.4	1776.7	1785.9	1786.6	1786.6	1785.9
75°	1601.3	1613.2	1621.1	1625.1	1634.3	1633.6	1633.0	1630.3
77.5°	1458.3	1467.5	1476.7	1476.1	1485.3	1485.3	1483.3	1481.4
80°	1314.6	1325.1	1329.1	1327.7	1336.3	1335.0	1334.3	1329.7
82.5°	1166.9	1176.1	1180.1	1180.1	1188.0	1186.7	1186.0	1182.0
85°	1025.1	1031.1	1042.3	1041.6	1046.9	1046.9	1046.2	1042.9
87.5°	841.2	845.8	849.8	848.5	852.4	855.1	852.4	850.4
90°	692.2	696.8	705.4	707.4	710.7	707.4	706.7	701.4
92.5°	625.0	629.6	636.8	639.5	641.5	640.8	641.5	638.2
95°	541.3	549.8	561.0	563.7	567.0	566.3	568.3	563.7
97.5°	421.9	430.5	445.7	454.9	457.5	458.2	461.5	456.2
100°	374.5	376.4	379.1	377.8	377.1	375.8	375.1	371.2
102.5°	337.5	339.5	342.2	342.2	340.8	340.2	338.9	335.6
105°	303.9	307.2	309.9	310.5	309.9	309.2	307.9	305.2
107.5°	272.3	274.9	278.9	279.5	279.5	280.2	279.5	275.6
110°	254.5	249.9	251.2	251.2	251.2	251.8	250.5	247.2



TEST NUMBER: P236549

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	264.4	255.1	243.3	234.0	230.7	230.1	228.1	224.8
115°	265.0	257.1	251.2	245.2	241.3	237.3	232.1	228.8
117.5°	271.0	261.1	253.2	246.6	243.3	240.0	236.0	232.7
120°	278.2	267.0	259.1	251.8	247.2	242.6	238.0	234.7
122.5°	287.4	276.9	267.0	258.4	253.2	248.5	243.9	240.6
125°	298.6	286.8	277.5	269.6	263.0	257.8	252.5	248.5
127.5°	311.8	299.3	289.4	280.2	272.9	267.0	261.1	257.8
130°	330.9	315.8	304.6	293.4	285.5	278.9	272.9	268.3
132.5°	361.3	340.2	324.4	309.9	301.3	294.0	286.8	282.2
135°	423.2	376.4	352.7	335.6	323.7	313.8	305.9	301.3
137.5°	424.6	435.1	412.0	371.2	355.3	343.5	333.6	329.0
140°	396.9	410.1	427.9	430.5	427.9	406.1	392.3	387.6
142.5°	404.8	386.3	396.9	404.8	416.7	418.6	415.3	413.4
145°	449.0	433.1	395.6	381.7	382.4	387.0	384.3	380.4
147.5°	443.0	445.0	445.7	436.4	407.4	389.0	379.1	374.5
150°	435.8	438.4	439.7	439.7	438.4	435.8	430.5	426.5
152.5°	425.2	429.8	432.5	433.1	432.5	429.2	423.2	419.9
155°	411.4	416.7	419.9	421.3	421.9	419.9	414.7	411.4
157.5°	392.3	400.8	405.4	407.4	408.1	406.8	402.8	400.2
160°	366.5	376.4	383.7	386.3	389.0	389.0	385.7	383.0
162.5°	336.2	346.8	354.7	358.6	361.3	362.6	359.3	358.6
165°	303.9	313.1	319.7	323.0	325.7	327.0	324.4	322.4
167.5°	259.1	271.6	281.5	285.5	288.1	288.1	286.1	286.1
170°	238.7	240.6	241.3	241.3	240.0	238.7	236.0	234.7
172.5°	256.5	254.5	249.2	242.6	236.0	228.1	222.2	215.6
175°	263.7	263.7	261.1	257.1	252.5	247.9	242.6	238.0
177.5°	266.3	267.0	265.0	261.7	257.8	253.2	246.6	243.3
180°	269.0	269.0	269.0	269.0	269.0	269.0	269.0	269.0

(END OF REPORT)