

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: P236498

Luminaire Tested: **SKB4-LD5-36-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236498
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24060)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-36-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH NARROW DISTRIBUTION LENS, INNER 2 BLADES TILTED OUT 20 DEGREES
Light Source: (952) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

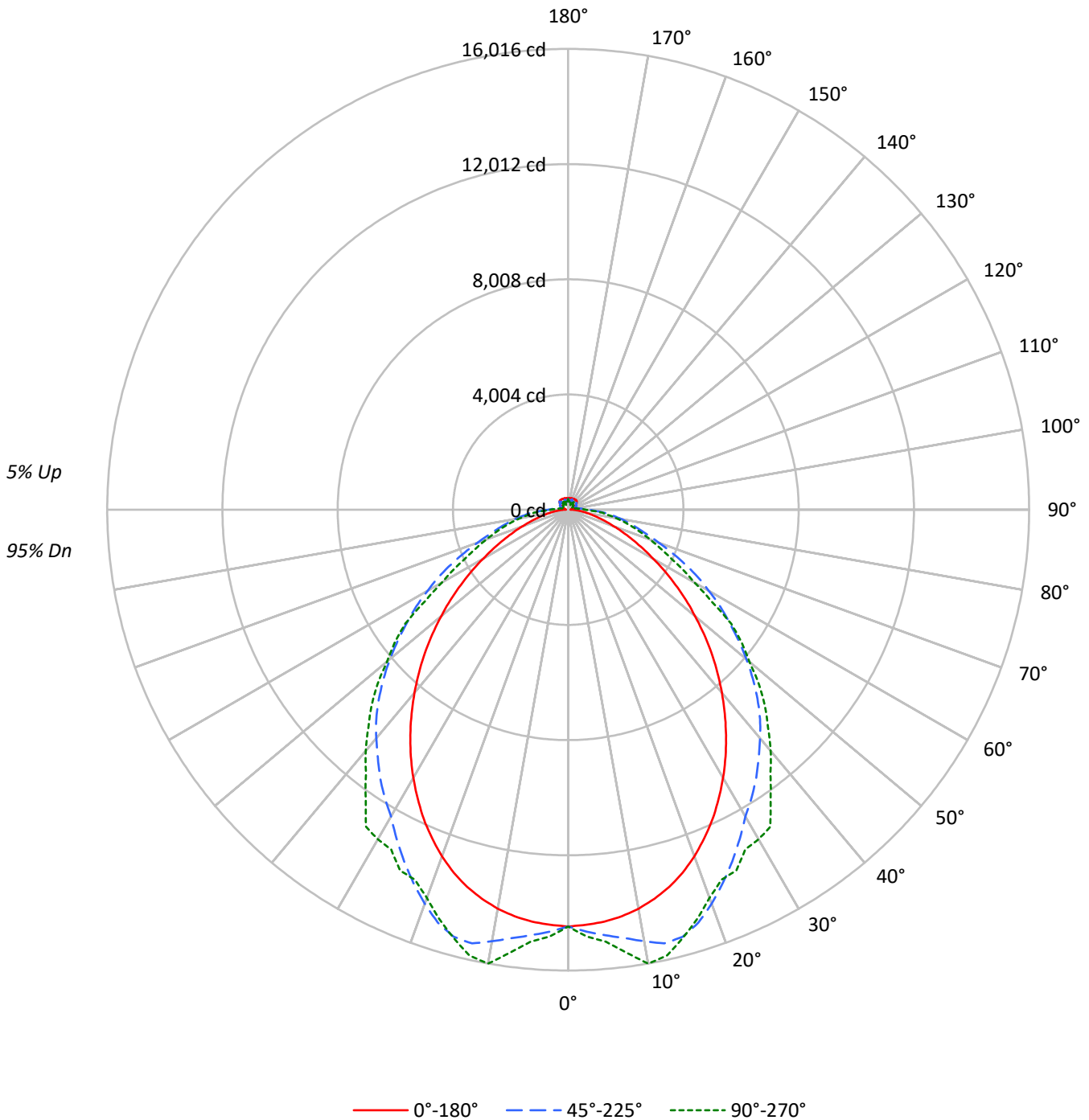
Lumens per Lamp: N/A
Luminaire Lumens: 40923.0 lumens
Efficiency: N/A
Efficacy: 122.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.34 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Direct

Input Watts (W): 333.5
Input Voltage (V): 120
Input Current (A_{in}): 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: P236498

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

Luminous Intensity Polar Plot





TEST NUMBER: P236498

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-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	118	118	118	118	114	114	114	114	108	108	108	103	103	103	97	97	97	95
1	108	103	98	95	104	100	96	93	95	92	89	90	87	85	86	84	82	79
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	76	72	69	67
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	57
4	82	71	62	56	80	69	61	55	66	59	54	63	57	52	60	55	51	49
5	76	64	55	48	74	62	54	48	59	52	47	57	51	46	55	49	45	43
6	70	57	49	42	68	56	48	42	54	47	41	52	45	41	50	44	40	38
7	65	52	44	38	63	51	43	37	49	42	37	47	41	36	46	40	36	33
8	61	48	39	34	59	47	39	33	45	38	33	43	37	32	42	36	32	30
9	57	44	36	30	55	43	35	30	42	35	30	40	34	29	39	33	29	27
10	53	41	33	28	52	40	32	27	39	32	27	37	31	27	36	30	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20788	20788	20788
5°	20609	21175	21504
10°	20333	21753	22893
15°	19882	22147	22227
20°	19212	21355	21073
25°	18350	20262	20822
30°	17314	19121	20596
35°	16158	18462	19933
40°	14912	17717	18761
45°	13577	16926	17661
50°	12091	15863	16196
55°	10596	14687	14926
60°	8994	13509	12213
65°	7559	12192	10664
70°	6219	10657	9730
75°	5079	9701	9089
80°	4262	9332	8589
85°	3576	9204	8549



TEST NUMBER: P236498

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1425.8	3.5
10°-20°	4191.1	10.2
20°-30°	6112.5	14.9
30°-40°	7056.6	17.2
40°-50°	6832.5	16.7
50°-60°	5621.9	13.7
60°-70°	3886.1	9.5
70°-80°	2419.1	5.9
80°-90°	1253.2	3.1
90°-100°	471.2	1.2
100°-110°	294.7	0.7
110°-120°	300.4	0.7
120°-130°	301.1	0.7
130°-140°	272.5	0.7
140°-150°	211.8	0.5
150°-160°	149.0	0.4
160°-170°	92.8	0.2
170°-180°	30.7	0.1
0°-30°	11729.4	28.7
0°-40°	18786.0	45.9
0°-60°	31240.4	76.3
0°-90°	38798.8	94.8
90°-120°	1066.3	2.6
90°-150°	1851.7	4.5
90°-180°	2124.0	5.2
0°-180°	40923.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	14485	14485	14485	14485	14485	
5°	14370	14683	14846	15002	15072	###
15°	13568	14413	15367	15413	15405	3815
25°	11869	13202	13484	13582	13830	5450
35°	9559	10763	11389	12128	12262	5970
45°	7038	8017	9302	9735	9668	5421
55°	4550	5630	6837	6955	6912	4078
65°	2475	3713	4478	4177	3888	2472
75°	1094	2338	2503	2481	2319	1192
85°	346	1291	1296	1267	1178	350
90°	106	751	683	651	598	71
95°	96	489	456	435	398	79
105°	142	416	257	196	164	156
115°	244	490	307	200	162	242
125°	348	467	326	249	209	310
135°	418	429	325	281	235	321
145°	428	433	305	255	237	269
155°	418	326	351	250	181	194
165°	413	294	315	350	320	117
175°	403	380	313	269	277	38
180°	371	371	371	371	371	



TEST NUMBER: P236498

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8
2.5°	14438.4	14446.7	14506.3	14529.5	14562.7	14559.4	14597.5	14655.5	14633.9	14682.0	14687.0
5°	14370.4	14392.0	14481.5	14554.4	14655.5	14710.2	14771.5	14827.9	14803.0	14846.1	14867.7
7.5°	14252.7	14295.8	14428.4	14559.4	14673.7	14708.5	14781.5	14884.2	14912.4	15013.5	15083.1
10°	14080.3	14141.7	14324.0	14468.2	14579.3	14665.4	14814.6	14965.4	15059.9	15230.6	15363.2
12.5°	13846.6	13926.2	14159.9	14290.8	14466.5	14615.7	14822.9	15041.7	15219.0	15437.8	15567.1
15°	13568.2	13666.0	13916.3	14075.4	14319.0	14506.3	14786.4	15051.6	15212.4	15366.6	15424.6
17.5°	13230.1	13361.0	13617.9	13826.8	14095.3	14333.9	14647.2	14871.0	14998.6	15048.3	15023.5
20°	12817.3	12993.0	13253.3	13496.9	13805.2	14087.0	14393.6	14554.4	14575.9	14569.3	14554.4
22.5°	12358.2	12573.7	12837.2	13115.7	13465.4	13757.1	14033.9	14068.7	14065.4	14043.9	14030.6
25°	11869.3	12093.0	12368.2	12676.5	13069.3	13334.5	13513.5	13518.5	13515.1	13483.7	13450.5
27.5°	11320.6	11567.6	11869.3	12192.5	12591.9	12794.1	12916.8	12930.1	12925.1	12901.9	12885.3
30°	10762.1	11012.3	11295.8	11663.7	12031.7	12154.3	12286.9	12303.5	12290.3	12306.8	12495.8
32.5°	10172.0	10417.3	10714.0	11088.6	11398.5	11488.0	11628.9	11628.9	11638.9	11862.6	12064.8
35°	9558.7	9800.7	10094.1	10462.1	10705.7	10820.1	10947.7	10931.1	11161.5	11388.6	11572.6
37.5°	8938.8	9167.6	9451.0	9805.7	10001.3	10143.8	10230.0	10389.1	10647.7	10864.8	11106.8
40°	8307.3	8511.2	8791.3	9117.8	9301.8	9454.3	9563.7	9853.8	10097.4	10372.5	10619.5
42.5°	7675.8	7864.8	8120.0	8415.1	8614.0	8748.2	9006.8	9283.6	9580.3	9868.7	10072.5
45°	7037.7	7201.8	7447.1	7722.2	7934.4	8100.1	8433.3	8728.3	9054.8	9301.8	9494.1
47.5°	6394.6	6555.4	6772.5	7060.9	7263.1	7530.0	7844.9	8181.4	8483.0	8701.8	8899.0
50°	5751.5	5890.7	6112.8	6406.2	6620.0	6939.9	7266.4	7616.1	7876.4	8081.9	8246.0
52.5°	5156.4	5275.8	5478.0	5773.0	6028.3	6344.9	6704.5	7019.5	7264.8	7452.1	7627.8
55°	4549.8	4652.6	4876.3	5151.5	5476.3	5783.0	6152.6	6434.4	6656.5	6837.1	6999.6
57.5°	3979.6	4092.3	4311.1	4576.3	4937.7	5262.5	5607.3	5869.2	6073.0	6258.7	6356.5
60°	3416.1	3553.7	3787.4	4067.5	4432.1	4766.9	5083.5	5327.2	5521.1	5647.1	5728.3
62.5°	2913.9	3053.1	3296.7	3610.0	3974.7	4301.2	4591.2	4803.4	4952.6	5086.8	5133.2
65°	2474.6	2600.6	2849.2	3200.6	3557.0	3868.6	4133.8	4287.9	4412.2	4478.5	4463.6
67.5°	2060.3	2197.8	2453.1	2836.0	3184.0	3475.7	3679.6	3807.2	3880.2	3893.4	3852.0
70°	1694.0	1841.5	2113.3	2507.8	2852.5	3102.8	3258.6	3329.9	3341.5	3344.8	3331.5
72.5°	1375.7	1529.9	1829.9	2221.0	2554.2	2739.8	2855.8	2870.8	2894.0	2884.0	2903.9
75°	1093.9	1261.3	1591.2	1977.4	2260.8	2415.0	2464.7	2468.0	2476.3	2502.8	2531.0
77.5°	870.2	1026.0	1384.0	1755.3	2002.2	2105.0	2118.3	2134.8	2153.1	2173.0	2201.1
80°	668.0	833.7	1206.7	1533.2	1735.4	1814.9	1834.8	1848.1	1856.4	1868.0	1886.2
82.5°	493.9	677.9	1031.0	1317.7	1488.4	1573.0	1574.6	1579.6	1587.9	1564.7	1571.3
85°	346.4	548.6	863.6	1108.9	1261.3	1321.0	1309.4	1311.1	1312.7	1296.2	1301.1
87.5°	225.4	432.6	699.5	896.7	1016.0	1057.5	1032.6	1017.7	992.8	924.9	903.3
90°	106.1	311.6	512.2	663.0	739.2	762.4	735.9	716.0	706.1	682.9	674.6
92.5°	79.6	218.8	379.6	507.2	588.4	616.6	601.7	585.1	571.8	558.6	555.3
95°	96.1	174.0	290.1	389.5	470.7	507.2	502.2	487.3	477.4	455.8	445.9
97.5°	99.4	185.6	281.8	341.4	391.2	427.6	422.7	404.4	387.9	366.3	353.0
100°	111.1	223.8	314.9	356.4	377.9	376.2	371.3	354.7	333.2	306.6	290.1
102.5°	127.6	253.6	361.3	394.5	399.5	386.2	349.7	324.9	300.0	275.1	253.6
105°	142.5	263.5	411.1	429.3	430.9	401.1	368.0	324.9	285.1	256.9	233.7
107.5°	164.1	270.2	427.6	467.4	454.2	429.3	377.9	336.5	301.7	261.9	228.7
110°	198.9	285.1	435.9	489.0	477.4	442.5	409.4	351.4	303.3	278.5	247.0



TEST NUMBER: P236498

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.4	283.4	435.9	500.6	512.2	449.2	421.0	382.9	324.9	276.8	250.3
115°	243.7	286.7	424.3	489.0	510.5	469.1	417.7	392.8	351.4	306.6	258.6
117.5°	268.5	290.1	421.0	475.7	500.6	525.4	426.0	387.9	358.0	328.2	290.1
120°	295.0	290.1	429.3	479.0	507.2	489.0	454.2	389.5	354.7	329.8	305.0
122.5°	323.2	291.7	449.2	492.3	489.0	464.1	503.9	409.4	354.7	326.5	305.0
125°	348.1	303.3	449.2	479.0	452.5	482.3	434.3	472.4	371.3	326.5	303.3
127.5°	371.3	316.6	442.5	474.0	450.8	470.7	421.0	454.2	411.1	341.4	305.0
130°	392.8	331.5	430.9	485.6	470.7	422.7	454.2	384.5	440.9	382.9	319.9
132.5°	407.7	338.1	412.7	512.2	462.4	396.1	444.2	391.2	351.4	419.3	369.6
135°	417.7	339.8	386.2	500.6	454.2	404.4	382.9	429.3	344.8	324.9	401.1
137.5°	426.0	341.4	354.7	474.0	462.4	409.4	349.7	407.7	397.8	311.6	298.3
140°	429.3	341.4	333.2	444.2	485.6	412.7	356.4	333.2	391.2	366.3	288.4
142.5°	429.3	343.1	321.6	409.4	462.4	412.7	369.6	316.6	323.2	369.6	353.0
145°	427.6	349.7	319.9	371.3	430.9	435.9	376.2	331.5	291.7	305.0	353.0
147.5°	426.0	359.7	318.2	326.5	399.5	429.3	386.2	354.7	309.9	276.8	285.1
150°	424.3	369.6	316.6	305.0	368.0	404.4	416.0	364.6	338.1	298.3	266.9
152.5°	421.0	377.9	316.6	303.3	338.1	377.9	399.5	399.5	354.7	333.2	295.0
155°	417.7	386.2	314.9	308.3	303.3	349.7	374.6	394.5	389.5	351.4	334.8
157.5°	417.7	394.5	316.6	308.3	291.7	316.6	349.7	369.6	386.2	389.5	356.4
160°	416.0	399.5	329.8	305.0	296.7	286.7	319.9	343.1	359.7	374.6	384.5
162.5°	414.4	402.8	346.4	306.6	298.3	285.1	283.4	313.3	331.5	344.8	356.4
165°	412.7	404.4	368.0	316.6	298.3	290.1	281.8	276.8	291.7	314.9	326.5
167.5°	409.4	404.4	381.2	339.8	308.3	291.7	285.1	278.5	268.5	270.2	280.1
170°	406.1	404.4	391.2	369.6	334.8	306.6	290.1	283.4	276.8	270.2	260.2
172.5°	404.4	402.8	396.1	386.2	369.6	341.4	321.6	300.0	281.8	276.8	270.2
175°	402.8	401.1	397.8	394.5	384.5	374.6	364.6	348.1	328.2	313.3	300.0
177.5°	401.1	399.5	397.8	397.8	394.5	387.9	384.5	376.2	366.3	359.7	349.7
180°	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3



TEST NUMBER: P236498

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8	14484.8
2.5°	14713.5	14763.2	14817.9	14774.8	14816.3	14847.8	14839.5	14849.4
5°	14889.2	14957.2	15015.2	14988.6	15031.7	15061.6	15051.6	15071.5
7.5°	15166.0	15268.8	15371.5	15388.1	15464.3	15529.0	15525.7	15529.0
10°	15524.0	15678.2	15817.4	15853.9	15948.3	16003.0	15999.7	16016.3
12.5°	15678.2	15792.5	15848.9	15830.7	15883.7	15890.3	15855.5	15867.1
15°	15431.2	15466.0	15439.5	15386.4	15426.2	15411.3	15384.8	15404.7
17.5°	14992.0	15001.9	14948.9	14889.2	14922.3	14922.3	14885.9	14907.4
20°	14496.4	14496.4	14440.0	14401.9	14406.9	14392.0	14342.2	14355.5
22.5°	13974.3	13939.5	13894.7	13850.0	13886.4	13893.1	13891.4	13916.3
25°	13400.8	13405.7	13526.7	13637.8	13747.2	13782.0	13770.4	13830.1
27.5°	13017.9	13150.5	13251.6	13263.2	13298.0	13284.8	13271.5	13312.9
30°	12649.9	12751.0	12845.5	12911.8	13024.5	13109.1	13172.0	13225.1
32.5°	12214.0	12356.6	12540.5	12674.8	12830.6	12931.7	12993.0	13066.0
35°	11748.3	11920.6	12101.3	12154.3	12220.6	12225.6	12204.1	12262.1
37.5°	11292.5	11440.0	11534.4	11559.3	11574.2	11546.1	11503.0	11544.4
40°	10783.6	10912.9	11007.4	10989.1	10980.8	10932.8	10899.6	10947.7
42.5°	10253.2	10339.4	10375.9	10321.2	10284.7	10256.5	10248.2	10279.7
45°	9658.2	9716.2	9754.3	9716.2	9693.0	9666.5	9646.6	9668.1
47.5°	9011.8	9076.4	9104.6	9073.1	9051.5	9011.8	8972.0	8995.2
50°	8380.3	8431.6	8439.9	8410.1	8325.6	8247.7	8184.7	8214.5
52.5°	7737.1	7733.8	7704.0	7654.3	7602.9	7578.0	7574.7	7597.9
55°	7065.9	7024.4	6983.0	6926.6	6888.5	6870.3	6885.2	6911.7
57.5°	6384.6	6343.2	6298.4	6182.4	6066.4	5957.0	5885.7	5869.2
60°	5758.1	5657.0	5541.0	5398.4	5279.1	5166.4	5071.9	5073.6
62.5°	5050.4	4931.0	4833.2	4720.5	4604.5	4513.3	4463.6	4457.0
65°	4387.4	4294.5	4226.6	4127.1	4026.0	3948.1	3901.7	3888.5
67.5°	3805.6	3750.9	3716.1	3649.8	3553.7	3484.0	3444.3	3434.3
70°	3328.2	3283.5	3257.0	3198.9	3119.4	3064.7	3033.2	3026.6
72.5°	2910.5	2884.0	2874.1	2817.7	2759.7	2700.0	2668.6	2660.3
75°	2552.5	2522.7	2501.1	2461.4	2403.4	2358.6	2335.4	2318.8
77.5°	2207.8	2181.3	2166.3	2133.2	2088.4	2047.0	2020.5	2003.9
80°	1887.9	1859.7	1846.4	1814.9	1770.2	1727.1	1710.5	1694.0
82.5°	1566.3	1541.5	1531.5	1508.3	1475.2	1443.7	1422.1	1407.2
85°	1301.1	1279.6	1274.6	1259.7	1231.5	1208.3	1190.1	1178.5
87.5°	886.8	878.5	876.8	863.6	843.7	823.8	807.2	797.3
90°	669.6	654.7	654.7	648.1	633.2	618.2	606.6	598.4
92.5°	553.6	548.6	548.6	538.7	525.4	512.2	498.9	490.6
95°	439.2	434.3	437.6	432.6	422.7	414.4	404.4	397.8
97.5°	344.8	339.8	344.8	341.4	333.2	324.9	316.6	308.3
100°	278.5	271.8	271.8	266.9	260.2	250.3	243.7	237.0
102.5°	238.7	228.7	223.8	218.8	210.5	202.2	195.6	189.0
105°	215.5	205.5	198.9	192.3	184.0	177.4	170.7	164.1
107.5°	205.5	192.3	184.0	177.4	169.1	162.4	154.1	149.2
110°	213.8	193.9	180.7	172.4	162.4	155.8	147.5	142.5



TEST NUMBER: P236498

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	230.4	212.2	192.3	177.4	169.1	160.8	152.5	147.5
115°	223.8	208.8	205.5	193.9	187.3	177.4	167.4	162.4
117.5°	248.6	215.5	195.6	184.0	179.0	175.7	170.7	165.7
120°	273.5	245.3	220.4	203.9	189.0	177.4	167.4	160.8
122.5°	283.4	260.2	242.0	228.7	218.8	207.2	195.6	189.0
125°	283.4	265.2	253.6	243.7	233.7	225.4	215.5	208.8
127.5°	286.7	271.8	260.2	248.6	240.3	232.0	223.8	218.8
130°	290.1	276.8	266.9	258.6	248.6	238.7	230.4	223.8
132.5°	308.3	285.1	271.8	263.5	256.9	247.0	238.7	232.0
135°	381.2	311.6	288.4	273.5	261.9	251.9	242.0	235.4
137.5°	379.6	392.8	353.0	300.0	280.1	266.9	255.3	248.6
140°	275.1	338.1	376.2	381.2	369.6	338.1	316.6	301.7
142.5°	275.1	265.2	263.5	314.9	356.4	361.3	358.0	354.7
145°	349.7	305.0	258.6	251.9	247.0	243.7	243.7	237.0
147.5°	334.8	344.8	343.1	306.6	275.1	245.3	238.7	237.0
150°	263.5	293.4	333.2	344.8	344.8	339.8	334.8	334.8
152.5°	260.2	250.3	256.9	271.8	295.0	303.3	311.6	298.3
155°	303.3	276.8	256.9	243.7	233.7	227.1	200.6	180.7
157.5°	338.1	324.9	306.6	290.1	271.8	240.3	213.8	207.2
160°	376.2	354.7	339.8	329.8	313.3	285.1	273.5	268.5
162.5°	366.3	374.6	371.3	361.3	326.5	309.9	300.0	293.4
165°	336.5	344.8	349.7	349.7	346.4	334.8	326.5	319.9
167.5°	301.7	314.9	324.9	328.2	338.1	334.8	321.6	314.9
170°	256.9	261.9	271.8	285.1	295.0	309.9	306.6	300.0
172.5°	263.5	260.2	263.5	266.9	270.2	278.5	278.5	275.1
175°	288.4	278.5	271.8	266.9	268.5	276.8	283.4	276.8
177.5°	339.8	331.5	319.9	313.3	314.9	318.2	326.5	303.3
180°	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3

(END OF REPORT)