

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: P236497

Luminaire Tested: **SKB4-LD5-36-N-UNV-L840-CD4-U inner 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236497
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-L840-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) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

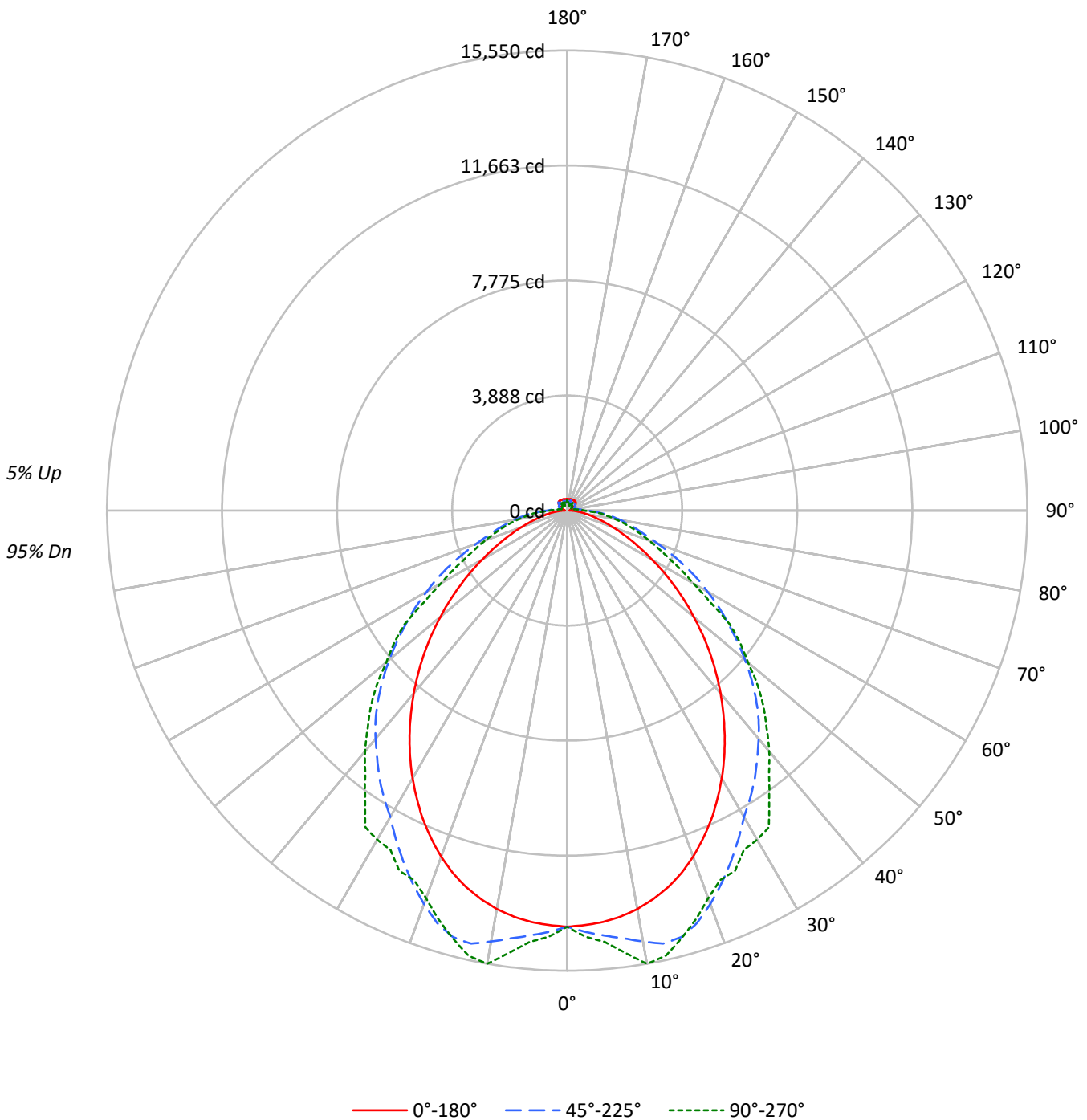
Lumens per Lamp: N/A
Luminaire Lumens: 39732.0 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.34 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Direct

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

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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	0		
RCR																										
0	118	118	118	118	114	114	114	114	108	108	108	103	103	103	97	97	97	95					95			
1	108	103	98	95	104	100	96	93	95	92	89	90	87	85	86	84	82	79					79			
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	76	72	69	67					67			
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	57					57			
4	82	71	62	56	80	69	61	55	66	59	54	63	57	52	60	55	51	49					49			
5	76	64	55	48	74	62	54	48	59	52	47	57	51	46	55	49	45	43					43			
6	70	57	49	42	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	33					33			
8	61	48	39	34	59	47	39	33	45	38	33	43	37	32	42	36	32	30					30			
9	57	44	36	30	55	43	35	30	42	35	30	40	34	29	39	33	29	27					27			
10	53	41	33	28	52	40	32	27	39	32	27	37	31	27	36	30	26	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20183	20183	20183
5°	20009	20558	20878
10°	19741	21120	22226
15°	19304	21502	21580
20°	18653	20733	20460
25°	17816	19672	20216
30°	16810	18565	19996
35°	15688	17924	19353
40°	14478	17202	18215
45°	13182	16434	17147
50°	11739	15402	15725
55°	10288	14260	14492
60°	8732	13116	11857
65°	7339	11837	10354
70°	6038	10347	9447
75°	4931	9419	8825
80°	4138	9060	8339
85°	3471	8936	8300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1384.3	3.5
10°-20°	4069.2	10.2
20°-30°	5934.6	14.9
30°-40°	6851.2	17.2
40°-50°	6633.7	16.7
50°-60°	5458.3	13.7
60°-70°	3773.0	9.5
70°-80°	2348.7	5.9
80°-90°	1216.7	3.1
90°-100°	457.5	1.2
100°-110°	286.1	0.7
110°-120°	291.6	0.7
120°-130°	292.4	0.7
130°-140°	264.5	0.7
140°-150°	205.6	0.5
150°-160°	144.7	0.4
160°-170°	90.1	0.2
170°-180°	29.8	0.1
0°-30°	11388.1	28.7
0°-40°	18239.3	45.9
0°-60°	30331.2	76.3
0°-90°	37669.7	94.8
90°-120°	1035.3	2.6
90°-150°	1797.8	4.5
90°-180°	2062.0	5.2
0°-180°	39732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	14063	14063	14063	14063	14063	
5°	13952	14256	14414	14565	14633	###
15°	13173	13993	14919	14964	14956	3704
25°	11524	12818	13091	13187	13428	5291
35°	9280	10450	11057	11775	11905	5796
45°	6833	7784	9031	9452	9387	5263
55°	4417	5466	6638	6752	6711	3959
65°	2403	3605	4348	4055	3775	2400
75°	1062	2270	2430	2409	2251	1157
85°	336	1254	1258	1230	1144	340
90°	103	729	663	632	581	69
95°	93	475	442	422	386	77
105°	138	404	249	190	159	151
115°	237	476	298	194	158	235
125°	338	454	317	241	203	301
135°	406	417	315	273	228	312
145°	415	421	296	248	230	261
155°	406	317	341	243	175	188
165°	401	286	306	340	311	113
175°	391	368	304	262	269	37
180°	360	360	360	360	360	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2
2.5°	14018.2	14026.2	14084.1	14106.7	14138.9	14135.6	14172.6	14229.0	14208.0	14254.7	14259.5
5°	13952.2	13973.1	14060.0	14130.8	14229.0	14282.1	14341.6	14396.3	14372.2	14414.0	14435.0
7.5°	13837.9	13879.8	14008.5	14135.6	14246.7	14280.5	14351.3	14451.0	14478.4	14576.6	14644.2
10°	13670.6	13730.1	13907.1	14047.1	14154.9	14238.6	14383.5	14529.9	14621.6	14787.4	14916.1
12.5°	13443.7	13520.9	13747.8	13874.9	14045.5	14190.3	14391.5	14603.9	14776.1	14988.5	15114.1
15°	13173.3	13268.2	13511.2	13665.7	13902.3	14084.1	14356.1	14613.6	14769.7	14919.3	14975.7
17.5°	12845.0	12972.1	13221.6	13424.3	13685.0	13916.8	14220.9	14438.2	14562.1	14610.4	14586.2
20°	12444.3	12614.9	12867.5	13104.1	13403.4	13677.0	13974.7	14130.8	14151.7	14145.3	14130.8
22.5°	11998.6	12207.8	12463.6	12734.0	13073.5	13356.8	13625.5	13659.3	13656.1	13635.2	13622.3
25°	11523.8	11741.1	12008.2	12307.5	12688.9	12946.4	13120.2	13125.0	13121.8	13091.2	13059.0
27.5°	10991.2	11230.9	11523.8	11837.6	12225.5	12421.8	12540.9	12553.7	12548.9	12526.4	12510.3
30°	10448.8	10691.8	10967.0	11324.3	11681.5	11800.6	11929.4	11945.4	11932.6	11948.7	12132.1
32.5°	9876.0	10114.1	10402.2	10765.9	11066.8	11153.7	11290.5	11290.5	11300.1	11517.4	11713.7
35°	9280.5	9515.5	9800.3	10157.6	10394.1	10505.2	10629.1	10613.0	10836.7	11057.1	11235.8
37.5°	8678.7	8900.7	9175.9	9520.3	9710.2	9848.6	9932.3	10086.8	10337.8	10548.6	10783.6
40°	8065.6	8263.5	8535.5	8852.5	9031.1	9179.1	9285.4	9567.0	9803.5	10070.7	10310.5
42.5°	7452.4	7635.9	7883.7	8170.2	8363.3	8493.6	8744.7	9013.4	9301.5	9581.5	9779.4
45°	6832.9	6992.2	7230.4	7497.5	7703.5	7864.4	8187.9	8474.3	8791.3	9031.1	9217.8
47.5°	6208.5	6364.6	6575.4	6855.4	7051.7	7310.8	7616.6	7943.2	8236.1	8448.6	8640.1
50°	5584.1	5719.3	5934.9	6219.7	6427.3	6737.9	7054.9	7394.5	7647.1	7846.7	8006.0
52.5°	5006.4	5122.2	5318.6	5605.0	5852.8	6160.2	6509.4	6815.2	7053.3	7235.2	7405.8
55°	4417.4	4517.2	4734.4	5001.5	5317.0	5614.7	5973.5	6247.1	6462.7	6638.1	6795.9
57.5°	3863.8	3973.2	4185.7	4443.1	4793.9	5109.4	5444.1	5698.3	5896.3	6076.5	6171.5
60°	3316.7	3450.2	3677.1	3949.1	4303.1	4628.2	4935.6	5172.1	5360.4	5482.7	5561.6
62.5°	2829.1	2964.2	3200.8	3504.9	3859.0	4176.0	4457.6	4663.6	4808.4	4938.8	4983.8
65°	2402.6	2524.9	2766.3	3107.5	3453.4	3756.0	4013.5	4163.1	4283.8	4348.2	4333.7
67.5°	2000.3	2133.9	2381.7	2753.4	3091.4	3374.6	3572.5	3696.4	3767.2	3780.1	3739.9
70°	1644.7	1787.9	2051.8	2434.8	2769.5	3012.5	3163.8	3233.0	3244.2	3247.5	3234.6
72.5°	1335.7	1485.3	1776.6	2156.4	2479.9	2660.1	2772.7	2787.2	2809.7	2800.1	2819.4
75°	1062.1	1224.6	1544.9	1919.8	2195.0	2344.7	2393.0	2396.2	2404.2	2430.0	2457.3
77.5°	844.9	996.1	1343.7	1704.2	1944.0	2043.7	2056.6	2072.7	2090.4	2109.7	2137.1
80°	648.5	809.5	1171.5	1488.6	1684.9	1762.1	1781.4	1794.3	1802.4	1813.6	1831.3
82.5°	479.6	658.2	1001.0	1279.4	1445.1	1527.2	1528.8	1533.6	1541.7	1519.1	1525.6
85°	336.3	532.7	838.4	1076.6	1224.6	1282.6	1271.3	1272.9	1274.5	1258.4	1263.3
87.5°	218.9	420.0	679.1	870.6	986.5	1026.7	1002.6	988.1	963.9	898.0	877.0
90°	103.0	302.5	497.3	643.7	717.7	740.3	714.5	695.2	685.5	663.0	655.0
92.5°	77.2	212.4	368.5	492.4	571.3	598.6	584.2	568.1	555.2	542.3	539.1
95°	93.3	169.0	281.6	378.2	457.0	492.4	487.6	473.1	463.5	442.5	432.9
97.5°	96.6	180.2	273.6	331.5	379.8	415.2	410.4	392.7	376.6	355.6	342.8
100°	107.8	217.2	305.8	346.0	366.9	365.3	360.5	344.4	323.5	297.7	281.6
102.5°	123.9	246.2	350.8	383.0	387.8	375.0	339.6	315.4	291.3	267.1	246.2
105°	138.4	255.9	399.1	416.8	418.4	389.4	357.3	315.4	276.8	249.4	226.9
107.5°	159.3	262.3	415.2	453.8	440.9	416.8	366.9	326.7	292.9	254.3	222.1
110°	193.1	276.8	423.2	474.7	463.5	429.7	397.5	341.2	294.5	270.4	239.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	214.0	275.2	423.2	486.0	497.3	436.1	408.7	371.7	315.4	268.7	243.0
115°	236.6	278.4	412.0	474.7	495.6	455.4	405.5	381.4	341.2	297.7	251.0
117.5°	260.7	281.6	408.7	461.9	486.0	510.1	413.6	376.6	347.6	318.6	281.6
120°	286.4	281.6	416.8	465.1	492.4	474.7	440.9	378.2	344.4	320.2	296.1
122.5°	313.8	283.2	436.1	477.9	474.7	450.6	489.2	397.5	344.4	317.0	296.1
125°	337.9	294.5	436.1	465.1	439.3	468.3	421.6	458.6	360.5	317.0	294.5
127.5°	360.5	307.4	429.7	460.2	437.7	457.0	408.7	440.9	399.1	331.5	296.1
130°	381.4	321.8	418.4	471.5	457.0	410.4	440.9	373.3	428.1	371.7	310.6
132.5°	395.9	328.3	400.7	497.3	449.0	384.6	431.3	379.8	341.2	407.1	358.9
135°	405.5	329.9	375.0	486.0	440.9	392.7	371.7	416.8	334.7	315.4	389.4
137.5°	413.6	331.5	344.4	460.2	449.0	397.5	339.6	395.9	386.2	302.5	289.7
140°	416.8	331.5	323.5	431.3	471.5	400.7	346.0	323.5	379.8	355.6	280.0
142.5°	416.8	333.1	312.2	397.5	449.0	400.7	358.9	307.4	313.8	358.9	342.8
145°	415.2	339.6	310.6	360.5	418.4	423.2	365.3	321.8	283.2	296.1	342.8
147.5°	413.6	349.2	309.0	317.0	387.8	416.8	375.0	344.4	300.9	268.7	276.8
150°	412.0	358.9	307.4	296.1	357.3	392.7	403.9	354.0	328.3	289.7	259.1
152.5°	408.7	366.9	307.4	294.5	328.3	366.9	387.8	387.8	344.4	323.5	286.4
155°	405.5	375.0	305.8	299.3	294.5	339.6	363.7	383.0	378.2	341.2	325.1
157.5°	405.5	383.0	307.4	299.3	283.2	307.4	339.6	358.9	375.0	378.2	346.0
160°	403.9	387.8	320.2	296.1	288.1	278.4	310.6	333.1	349.2	363.7	373.3
162.5°	402.3	391.0	336.3	297.7	289.7	276.8	275.2	304.1	321.8	334.7	346.0
165°	400.7	392.7	357.3	307.4	289.7	281.6	273.6	268.7	283.2	305.8	317.0
167.5°	397.5	392.7	370.1	329.9	299.3	283.2	276.8	270.4	260.7	262.3	272.0
170°	394.3	392.7	379.8	358.9	325.1	297.7	281.6	275.2	268.7	262.3	252.7
172.5°	392.7	391.0	384.6	375.0	358.9	331.5	312.2	291.3	273.6	268.7	262.3
175°	391.0	389.4	386.2	383.0	373.3	363.7	354.0	337.9	318.6	304.1	291.3
177.5°	389.4	387.8	386.2	386.2	383.0	376.6	373.3	365.3	355.6	349.2	339.6
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2	14063.2
2.5°	14285.3	14333.6	14386.7	14344.8	14385.1	14415.6	14407.6	14417.3
5°	14455.9	14521.9	14578.2	14552.4	14594.3	14623.2	14613.6	14632.9
7.5°	14724.6	14824.4	14924.2	14940.3	15014.3	15077.0	15073.8	15077.0
10°	15072.2	15221.9	15357.1	15392.5	15484.2	15537.3	15534.1	15550.2
12.5°	15221.9	15332.9	15387.6	15369.9	15421.4	15427.9	15394.1	15405.3
15°	14982.1	15015.9	14990.1	14938.6	14977.3	14962.8	14937.0	14956.3
17.5°	14555.6	14565.3	14513.8	14455.9	14488.1	14488.1	14452.7	14473.6
20°	14074.5	14074.5	14019.8	13982.8	13987.6	13973.1	13924.8	13937.7
22.5°	13567.6	13533.8	13490.3	13446.9	13482.3	13488.7	13487.1	13511.2
25°	13010.8	13015.6	13133.1	13240.9	13347.1	13380.9	13369.6	13427.6
27.5°	12639.0	12767.8	12865.9	12877.2	12911.0	12898.1	12885.2	12925.5
30°	12281.8	12379.9	12471.7	12536.0	12645.5	12727.5	12788.7	12840.2
32.5°	11858.5	11996.9	12175.6	12305.9	12457.2	12555.4	12614.9	12685.7
35°	11406.3	11573.7	11749.1	11800.6	11865.0	11869.8	11848.9	11905.2
37.5°	10963.8	11107.0	11198.8	11222.9	11237.4	11210.0	11168.2	11208.4
40°	10469.8	10595.3	10687.0	10669.3	10661.3	10614.6	10582.4	10629.1
42.5°	9954.8	10038.5	10073.9	10020.8	9985.4	9958.0	9950.0	9980.6
45°	9377.1	9433.4	9470.4	9433.4	9410.9	9385.1	9365.8	9386.7
47.5°	8749.5	8812.2	8839.6	8809.0	8788.1	8749.5	8710.9	8733.4
50°	8136.4	8186.2	8194.3	8165.3	8083.3	8007.6	7946.5	7975.4
52.5°	7512.0	7508.8	7479.8	7431.5	7381.6	7357.5	7354.3	7376.8
55°	6860.2	6820.0	6779.8	6725.0	6688.0	6670.3	6684.8	6710.6
57.5°	6198.8	6158.6	6115.1	6002.5	5889.8	5783.6	5714.4	5698.3
60°	5590.5	5492.4	5379.7	5241.3	5125.5	5016.0	4924.3	4925.9
62.5°	4903.4	4787.5	4692.6	4583.1	4470.5	4382.0	4333.7	4327.3
65°	4259.7	4169.6	4103.6	4007.0	3908.9	3833.2	3788.2	3775.3
67.5°	3694.8	3641.7	3607.9	3543.6	3450.2	3382.6	3344.0	3334.4
70°	3231.4	3187.9	3162.2	3105.8	3028.6	2975.5	2944.9	2938.5
72.5°	2825.8	2800.1	2790.4	2735.7	2679.4	2621.5	2590.9	2582.8
75°	2478.2	2449.3	2428.4	2389.7	2333.4	2290.0	2267.4	2251.3
77.5°	2143.5	2117.8	2103.3	2071.1	2027.7	1987.4	1961.7	1945.6
80°	1832.9	1805.6	1792.7	1762.1	1718.7	1676.8	1660.7	1644.7
82.5°	1520.7	1496.6	1486.9	1464.4	1432.2	1401.7	1380.7	1366.3
85°	1263.3	1242.3	1237.5	1223.0	1195.7	1173.1	1155.4	1144.2
87.5°	860.9	852.9	851.3	838.4	819.1	799.8	783.7	774.0
90°	650.1	635.7	635.7	629.2	614.7	600.2	589.0	580.9
92.5°	537.5	532.7	532.7	523.0	510.1	497.3	484.4	476.3
95°	426.5	421.6	424.8	420.0	410.4	402.3	392.7	386.2
97.5°	334.7	329.9	334.7	331.5	323.5	315.4	307.4	299.3
100°	270.4	263.9	263.9	259.1	252.7	243.0	236.6	230.1
102.5°	231.7	222.1	217.2	212.4	204.4	196.3	189.9	183.5
105°	209.2	199.5	193.1	186.7	178.6	172.2	165.8	159.3
107.5°	199.5	186.7	178.6	172.2	164.1	157.7	149.7	144.8
110°	207.6	188.3	175.4	167.4	157.7	151.3	143.2	138.4



TEST NUMBER: P236497

CATALOG NUMBER: SKB4-LD5-36-N-UNV-L840-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	223.7	206.0	186.7	172.2	164.1	156.1	148.1	143.2
115°	217.2	202.8	199.5	188.3	181.8	172.2	162.5	157.7
117.5°	241.4	209.2	189.9	178.6	173.8	170.6	165.8	160.9
120°	265.5	238.2	214.0	197.9	183.5	172.2	162.5	156.1
122.5°	275.2	252.7	235.0	222.1	212.4	201.2	189.9	183.5
125°	275.2	257.5	246.2	236.6	226.9	218.9	209.2	202.8
127.5°	278.4	263.9	252.7	241.4	233.3	225.3	217.2	212.4
130°	281.6	268.7	259.1	251.0	241.4	231.7	223.7	217.2
132.5°	299.3	276.8	263.9	255.9	249.4	239.8	231.7	225.3
135°	370.1	302.5	280.0	265.5	254.3	244.6	235.0	228.5
137.5°	368.5	381.4	342.8	291.3	272.0	259.1	247.8	241.4
140°	267.1	328.3	365.3	370.1	358.9	328.3	307.4	292.9
142.5°	267.1	257.5	255.9	305.8	346.0	350.8	347.6	344.4
145°	339.6	296.1	251.0	244.6	239.8	236.6	236.6	230.1
147.5°	325.1	334.7	333.1	297.7	267.1	238.2	231.7	230.1
150°	255.9	284.8	323.5	334.7	334.7	329.9	325.1	325.1
152.5°	252.7	243.0	249.4	263.9	286.4	294.5	302.5	289.7
155°	294.5	268.7	249.4	236.6	226.9	220.5	194.7	175.4
157.5°	328.3	315.4	297.7	281.6	263.9	233.3	207.6	201.2
160°	365.3	344.4	329.9	320.2	304.1	276.8	265.5	260.7
162.5°	355.6	363.7	360.5	350.8	317.0	300.9	291.3	284.8
165°	326.7	334.7	339.6	339.6	336.3	325.1	317.0	310.6
167.5°	292.9	305.8	315.4	318.6	328.3	325.1	312.2	305.8
170°	249.4	254.3	263.9	276.8	286.4	300.9	297.7	291.3
172.5°	255.9	252.7	255.9	259.1	262.3	270.4	270.4	267.1
175°	280.0	270.4	263.9	259.1	260.7	268.7	275.2	268.7
177.5°	329.9	321.8	310.6	304.1	305.8	309.0	317.0	294.5
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5

(END OF REPORT)