

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: P236545

Luminaire Tested: **SKB4-LD5-36-W-UNV-L840-CD4-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236545
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24078)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-36-W-UNV-L840-CD4-U all blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES
Light Source: (952) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

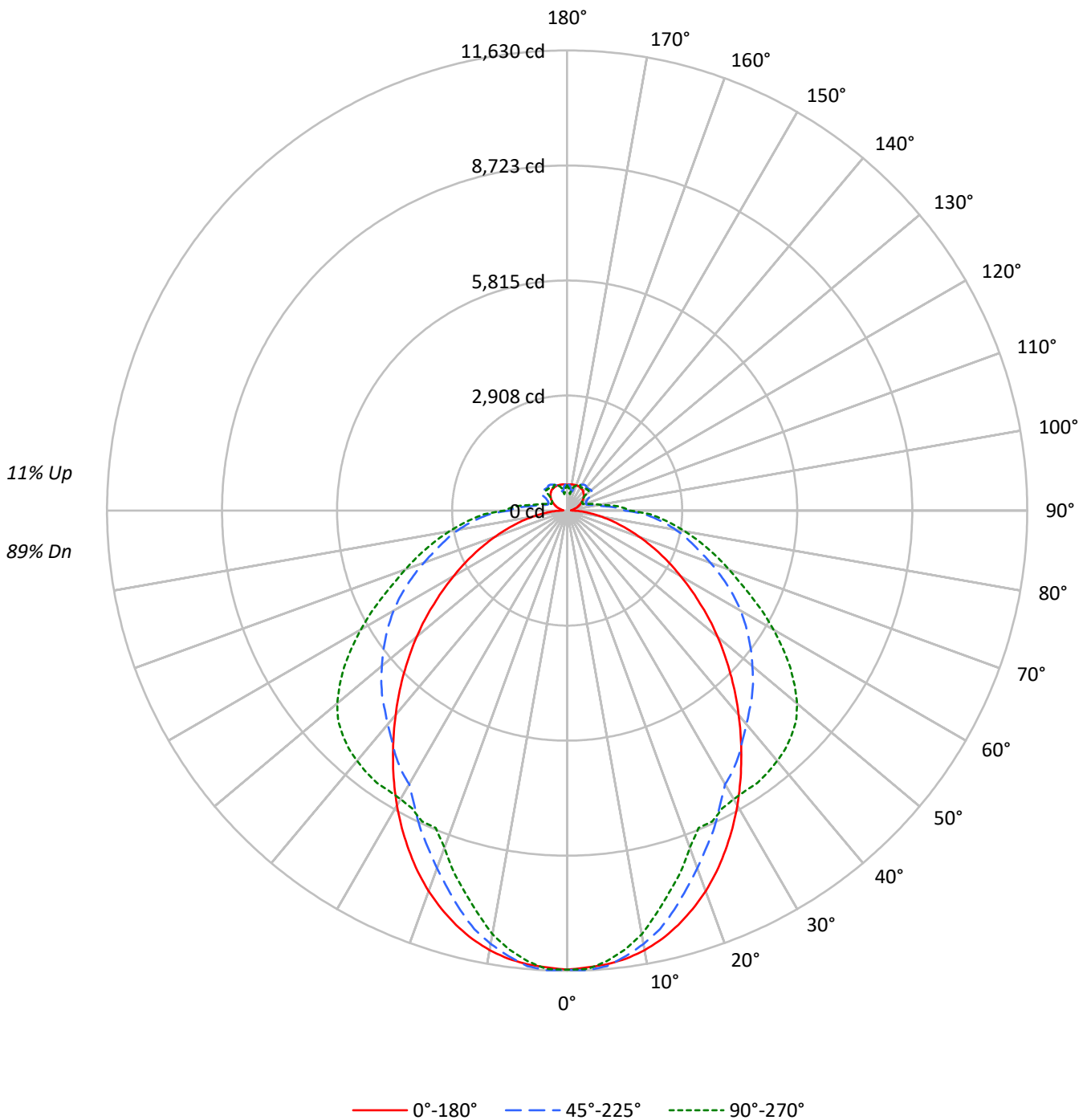
Lumens per Lamp: N/A
Luminaire Lumens: 36837.0 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.07 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 333.5
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-LD5-36-W-UNV-L840-CD4-U all 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	0
RCR																		
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	91	91	91	89
1	104	99	94	89	100	95	91	87	89	85	82	83	80	77	77	75	73	70
2	94	85	78	71	90	82	75	70	77	71	66	72	67	63	67	63	60	57
3	86	74	66	59	82	72	64	57	67	60	55	63	57	53	59	54	50	47
4	78	66	56	49	75	63	55	48	59	52	47	56	50	45	52	47	43	40
5	72	58	49	42	69	57	48	42	53	46	40	50	44	39	47	42	37	35
6	66	53	43	37	64	51	42	36	48	41	35	45	39	34	43	37	33	30
7	61	48	39	32	59	46	38	32	44	36	31	41	35	30	39	33	29	27
8	57	43	35	29	55	42	34	28	40	33	28	38	31	27	36	30	26	24
9	53	40	32	26	51	39	31	26	37	30	25	35	29	24	33	28	23	21
10	50	37	29	24	48	36	28	23	34	27	23	32	26	22	31	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16652	16652	16652
5°	16509	16479	16313
10°	16290	15883	15542
15°	15889	15060	14407
20°	15345	14095	13307
25°	14635	13250	13053
30°	13843	12408	13114
35°	12972	12255	13651
40°	12110	12043	14154
45°	11267	12031	14660
50°	10436	11995	14959
55°	9559	12034	14846
60°	8722	12118	14495
65°	7933	12166	14075
70°	7126	12280	13987
75°	6368	12746	14379
80°	5591	13928	15326
85°	4741	15844	17377



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1086.9	3.0
10°-20°	2934.8	8.0
20°-30°	4122.5	11.2
30°-40°	4890.4	13.3
40°-50°	5236.7	14.2
50°-60°	4973.6	13.5
60°-70°	4150.1	11.3
70°-80°	3138.8	8.5
80°-90°	2073.5	5.6
90°-100°	1031.7	2.8
100°-110°	595.5	1.6
110°-120°	518.5	1.4
120°-130°	558.1	1.5
130°-140°	549.1	1.5
140°-150°	437.6	1.2
150°-160°	312.2	0.8
160°-170°	169.9	0.5
170°-180°	57.1	0.2
0°-30°	8144.2	22.1
0°-40°	13034.7	35.4
0°-60°	23244.9	63.1
0°-90°	32607.3	88.5
90°-120°	2145.7	5.8
90°-150°	3690.5	10.0
90°-180°	4230.0	11.5
0°-180°	36837.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11603	11603	11603	11603	11603	
5°	11512	11602	11554	11460	11434	###
15°	10843	10789	10449	10088	9985	3050
25°	9466	9283	8817	8537	8670	4353
35°	7674	7525	7560	8083	8398	4798
45°	5840	5983	6612	7631	8026	4508
55°	4104	4574	5602	6591	6875	3683
65°	2597	3368	4469	5039	5132	2582
75°	1372	2449	3288	3617	3668	1461
85°	459	1612	2231	2365	2396	464
90°	135	1026	1455	1545	1580	93
95°	127	697	1094	1242	1279	106
105°	212	522	562	634	648	229
115°	355	697	530	461	430	353
125°	491	735	790	541	481	438
135°	592	704	774	767	738	456
145°	657	642	785	726	698	411
155°	679	511	716	743	717	314
165°	676	592	513	618	610	192
175°	665	660	658	614	561	64
180°	636	636	636	636	636	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8
2.5°	11557.9	11588.7	11659.3	11669.5	11663.1	11632.3	11615.7	11660.6	11638.8	11629.8	11609.2
5°	11511.7	11543.8	11616.9	11625.9	11618.2	11584.9	11566.9	11606.7	11575.9	11554.1	11515.6
7.5°	11424.5	11447.6	11519.4	11532.3	11513.0	11469.4	11434.7	11451.4	11396.3	11359.0	11315.4
10°	11280.8	11303.9	11374.4	11380.9	11343.6	11279.5	11224.3	11219.2	11170.4	11120.4	11060.1
12.5°	11090.9	11108.8	11176.8	11173.0	11110.1	11039.6	10981.8	10962.6	10897.1	10836.8	10759.8
15°	10843.2	10862.5	10922.8	10902.3	10829.1	10749.6	10686.7	10661.1	10559.7	10449.3	10335.2
17.5°	10558.4	10581.5	10620.0	10589.2	10516.1	10425.0	10351.8	10280.0	10141.4	10023.4	9911.7
20°	10237.6	10236.4	10273.6	10237.6	10159.4	10063.1	9950.2	9846.3	9712.9	9616.6	9506.3
22.5°	9872.0	9883.5	9892.5	9866.8	9782.1	9647.4	9516.6	9421.6	9301.0	9208.6	9102.1
25°	9466.5	9479.3	9480.6	9447.3	9360.0	9206.0	9088.0	9007.2	8893.0	8817.3	8673.6
27.5°	9046.9	9043.1	9064.9	9035.4	8907.1	8757.0	8668.4	8590.2	8500.4	8373.3	8256.6
30°	8604.3	8581.2	8617.1	8579.9	8443.9	8323.3	8237.3	8197.6	8070.5	7985.8	8062.8
32.5°	8142.4	8119.3	8159.1	8111.6	7985.8	7910.1	7847.3	7787.0	7699.7	7794.7	7880.6
35°	7674.1	7651.0	7693.3	7642.0	7545.8	7503.4	7448.2	7400.8	7472.6	7559.9	7636.8
37.5°	7207.0	7185.2	7230.1	7178.8	7124.9	7123.6	7055.6	7131.3	7205.7	7287.9	7431.6
40°	6746.4	6728.4	6773.3	6737.4	6722.0	6737.4	6722.0	6854.2	6906.8	7050.5	7235.2
42.5°	6289.6	6285.8	6323.0	6310.2	6342.2	6361.5	6430.8	6539.8	6633.5	6822.1	7060.7
45°	5840.5	5840.5	5879.0	5899.6	5954.7	6011.2	6111.3	6220.3	6371.7	6611.7	6851.6
47.5°	5396.6	5401.7	5446.6	5505.7	5572.4	5682.7	5789.2	5926.5	6129.2	6371.7	6610.4
50°	4964.2	4969.3	5028.4	5119.5	5202.9	5342.7	5455.6	5634.0	5867.5	6111.3	6379.4
52.5°	4539.5	4547.2	4628.0	4726.8	4846.2	4993.7	5146.4	5370.9	5595.5	5861.1	6136.9
55°	4104.5	4135.3	4232.9	4341.9	4497.2	4649.9	4843.6	5092.5	5331.2	5601.9	5862.4
57.5°	3702.9	3735.0	3842.8	3969.8	4153.3	4329.1	4574.2	4821.8	5074.6	5336.3	5586.5
60°	3312.9	3347.5	3461.7	3611.8	3822.3	4039.1	4304.7	4571.6	4812.8	5065.6	5279.8
62.5°	2956.2	2976.7	3084.5	3270.6	3506.6	3765.8	4054.5	4318.8	4548.5	4773.0	4969.3
65°	2596.9	2621.3	2726.5	2951.1	3217.9	3518.2	3818.4	4067.3	4272.6	4468.9	4640.9
67.5°	2259.5	2290.3	2398.1	2661.1	2962.6	3288.5	3573.4	3801.7	3986.5	4159.7	4307.3
70°	1941.3	1969.5	2099.1	2404.5	2739.4	3058.8	3316.7	3531.0	3695.2	3854.4	3981.4
72.5°	1643.6	1675.7	1837.4	2179.9	2534.1	2829.2	3055.0	3252.6	3413.0	3549.0	3673.4
75°	1371.6	1402.4	1612.8	1991.3	2317.2	2581.5	2798.4	2989.6	3143.5	3288.5	3405.3
77.5°	1115.0	1163.7	1430.6	1806.6	2092.7	2341.6	2550.7	2752.2	2917.7	3046.0	3133.3
80°	876.3	958.5	1272.8	1612.8	1874.6	2123.5	2346.7	2546.9	2684.2	2788.1	2856.1
82.5°	655.7	781.4	1112.4	1415.2	1674.4	1937.4	2142.7	2317.2	2434.0	2517.4	2568.7
85°	459.3	621.0	944.3	1238.2	1493.5	1730.9	1911.8	2061.9	2160.7	2231.3	2271.0
87.5°	305.4	477.3	787.8	1049.6	1271.5	1484.5	1642.3	1778.3	1866.9	1933.6	1972.1
90°	134.7	359.3	603.0	784.0	950.8	1100.9	1229.2	1342.1	1407.5	1455.0	1469.1
92.5°	102.6	269.4	474.7	648.0	803.2	954.6	1090.6	1202.2	1277.9	1325.4	1342.1
95°	127.0	223.3	367.0	495.3	632.6	760.9	867.4	961.0	1036.7	1094.5	1127.8
97.5°	134.7	231.0	349.0	432.4	520.9	633.8	728.8	803.2	849.4	881.5	894.3
100°	154.0	248.9	383.6	427.3	483.7	537.6	617.2	687.7	730.1	757.0	769.8
102.5°	179.6	264.3	415.7	464.5	485.0	523.5	544.0	583.8	624.9	654.4	668.5
105°	211.7	278.4	445.2	532.5	518.4	524.8	541.5	542.7	541.5	562.0	574.8
107.5°	254.0	288.7	463.2	558.1	601.8	555.6	545.3	544.0	532.5	508.1	503.0
110°	291.3	293.8	454.2	574.8	640.3	614.6	572.3	550.4	531.2	514.5	492.7



TEST NUMBER: P236545

CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	322.1	305.4	455.5	597.9	660.8	705.7	623.6	577.4	540.2	511.9	492.7
115°	355.4	314.4	461.9	605.6	672.3	722.4	746.7	628.7	571.0	529.9	499.1
117.5°	391.3	328.5	472.2	601.8	689.0	739.0	762.1	763.4	623.6	564.6	522.2
120°	424.7	343.9	476.0	601.8	719.8	744.2	772.4	786.5	762.1	619.7	559.4
122.5°	459.3	365.7	481.2	603.0	703.1	751.9	782.7	792.9	792.9	768.6	627.4
125°	491.4	392.6	478.6	604.3	703.1	766.0	778.8	798.1	795.5	790.4	784.0
127.5°	520.9	424.7	472.2	603.0	696.7	763.4	777.5	792.9	798.1	791.7	785.2
130°	545.3	452.9	447.8	595.3	685.2	758.3	780.1	786.5	795.5	792.9	782.7
132.5°	567.1	479.9	429.8	588.9	677.5	751.9	785.2	785.2	785.2	787.8	780.1
135°	591.5	523.5	435.0	578.7	669.8	737.8	780.1	796.8	780.1	773.7	773.7
137.5°	612.0	568.4	442.7	564.6	659.5	724.9	772.4	794.2	769.8	768.6	762.1
140°	630.0	608.2	459.3	545.3	646.7	713.4	754.4	786.5	792.9	757.0	757.0
142.5°	648.0	642.8	486.3	504.2	628.7	696.7	737.8	772.4	789.1	787.8	742.9
145°	656.9	662.1	515.8	473.5	605.6	677.5	721.1	753.2	777.5	785.2	780.1
147.5°	663.3	669.8	537.6	470.9	576.1	654.4	704.4	736.5	759.6	776.3	777.5
150°	669.8	673.6	569.7	483.7	526.1	630.0	682.6	718.5	741.6	758.3	766.0
152.5°	676.2	677.5	615.9	510.7	486.3	597.9	655.7	695.4	721.1	739.0	745.5
155°	678.7	680.0	653.1	544.0	483.7	538.9	622.3	665.9	695.4	716.0	723.7
157.5°	681.3	680.0	678.7	569.7	506.8	488.9	577.4	631.3	664.6	689.0	700.6
160°	680.0	678.7	687.7	617.2	540.2	488.9	496.5	583.8	623.6	653.1	668.5
162.5°	678.7	677.5	682.6	659.5	569.7	519.6	485.0	492.7	564.6	608.2	627.4
165°	676.2	674.9	677.5	682.6	627.4	555.6	515.8	487.6	481.2	513.2	563.3
167.5°	673.6	672.3	673.6	678.7	669.8	617.2	558.1	528.6	499.1	476.0	470.9
170°	671.0	669.8	669.8	669.8	674.9	667.2	631.3	583.8	545.3	527.3	497.8
172.5°	668.5	667.2	667.2	667.2	665.9	665.9	672.3	660.8	635.1	605.6	569.7
175°	664.6	663.3	663.3	663.3	660.8	658.2	658.2	658.2	655.7	658.2	654.4
177.5°	662.1	660.8	660.8	659.5	656.9	654.4	654.4	653.1	648.0	645.4	639.0
180°	636.4	636.4	636.4	636.4	636.4	636.4	636.4	636.4	636.4	636.4	636.4



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CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8	11602.8
2.5°	11566.9	11586.1	11613.1	11579.7	11584.9	11611.8	11604.1	11597.7
5°	11465.5	11473.2	11482.2	11438.6	11436.0	11459.1	11436.0	11433.5
7.5°	11257.7	11253.8	11261.5	11203.8	11199.9	11219.2	11201.2	11191.0
10°	11001.1	10990.8	10984.4	10922.8	10902.3	10907.4	10889.4	10874.0
12.5°	10659.8	10608.4	10571.2	10502.0	10472.4	10469.9	10436.5	10426.2
15°	10226.1	10172.2	10124.7	10050.3	10031.1	10037.5	10010.5	9984.9
17.5°	9807.8	9753.9	9707.7	9628.2	9612.8	9621.8	9570.4	9561.5
20°	9406.2	9344.6	9304.8	9216.3	9179.1	9170.1	9086.7	9064.9
22.5°	9018.7	8925.1	8812.1	8726.2	8710.8	8723.6	8712.1	8677.4
25°	8535.0	8483.7	8510.6	8563.2	8640.2	8692.8	8695.4	8669.7
27.5°	8270.7	8373.3	8447.8	8456.7	8485.0	8518.3	8519.6	8487.5
30°	8157.8	8192.4	8229.6	8292.5	8375.9	8432.4	8446.5	8420.8
32.5°	7919.1	8008.9	8109.0	8205.3	8309.2	8384.9	8409.3	8390.0
35°	7745.9	7875.5	8015.4	8150.1	8277.1	8368.2	8408.0	8397.7
37.5°	7583.0	7762.6	7938.4	8100.0	8228.3	8306.6	8338.7	8337.4
40°	7443.1	7647.1	7821.6	7988.4	8123.1	8215.5	8252.7	8259.1
42.5°	7278.9	7475.2	7683.0	7875.5	8021.8	8119.3	8159.1	8168.0
45°	7068.4	7296.8	7530.4	7731.8	7864.0	7962.7	8011.5	8025.6
47.5°	6859.3	7104.4	7340.5	7538.1	7665.1	7775.4	7829.3	7849.8
50°	6629.6	6874.7	7117.2	7302.0	7421.3	7529.1	7574.0	7586.8
52.5°	6375.6	6625.8	6850.3	7018.4	7106.9	7204.5	7241.7	7245.5
55°	6110.0	6334.5	6523.1	6659.1	6746.4	6841.3	6869.6	6874.7
57.5°	5800.8	5995.8	6160.0	6285.8	6351.2	6430.8	6448.7	6455.1
60°	5471.0	5639.1	5776.4	5880.3	5934.2	5997.1	6012.5	6021.5
62.5°	5133.6	5258.0	5386.3	5478.7	5513.4	5569.8	5581.4	5586.5
65°	4773.0	4883.4	5004.0	5074.6	5098.9	5133.6	5131.0	5132.3
67.5°	4418.9	4517.7	4606.2	4679.4	4702.5	4715.3	4724.3	4715.3
70°	4069.9	4152.0	4243.1	4293.2	4335.5	4339.4	4354.7	4350.9
72.5°	3764.5	3844.1	3917.2	3960.8	3998.1	3998.1	4017.3	4005.8
75°	3483.5	3543.8	3600.3	3633.7	3665.7	3659.3	3678.6	3668.3
77.5°	3189.7	3235.9	3278.3	3315.5	3343.7	3354.0	3355.2	3343.7
80°	2898.5	2934.4	2966.5	2998.5	3022.9	3016.5	3033.2	3022.9
82.5°	2596.9	2623.9	2653.4	2681.6	2703.4	2708.6	2709.8	2699.6
85°	2294.1	2321.1	2355.7	2375.0	2395.5	2401.9	2403.2	2395.5
87.5°	1993.9	2020.8	2055.5	2074.7	2096.5	2101.7	2103.0	2096.5
90°	1489.6	1516.6	1532.0	1558.9	1566.6	1578.2	1562.8	1579.5
92.5°	1365.2	1388.3	1407.5	1428.1	1438.3	1444.7	1438.3	1446.0
95°	1168.9	1204.8	1229.2	1254.8	1267.7	1277.9	1276.7	1279.2
97.5°	914.8	945.6	976.4	1009.8	1025.2	1039.3	1038.0	1039.3
100°	789.1	807.1	821.2	836.6	843.0	844.3	843.0	844.3
102.5°	686.4	704.4	719.8	733.9	737.8	742.9	741.6	739.0
105°	594.1	612.0	627.4	640.3	645.4	650.5	650.5	648.0
107.5°	517.1	529.9	544.0	555.6	562.0	564.6	567.1	564.6
110°	474.7	472.2	478.6	486.3	490.1	492.7	490.1	488.9



TEST NUMBER: P236545

CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	482.4	470.9	454.2	442.7	441.4	441.4	436.2	433.7
115°	479.9	470.9	463.2	458.1	451.6	445.2	436.2	429.8
117.5°	495.3	476.0	461.9	455.5	450.4	445.2	438.8	433.7
120°	524.8	499.1	478.6	465.8	456.8	449.1	440.1	435.0
122.5°	569.7	535.0	509.4	491.4	479.9	468.3	459.3	452.9
125°	651.8	590.2	553.0	528.6	513.2	499.1	487.6	481.2
127.5°	782.7	724.9	628.7	586.4	562.0	541.5	527.3	519.6
130°	780.1	778.8	775.0	742.9	653.1	618.4	596.6	585.1
132.5°	776.3	777.5	773.7	768.6	763.4	754.4	744.2	740.3
135°	773.7	771.1	768.6	766.0	759.6	751.9	741.6	737.8
137.5°	764.7	766.0	764.7	759.6	753.2	745.5	736.5	732.6
140°	753.2	751.9	753.2	753.2	749.3	740.3	731.4	726.2
142.5°	745.5	741.6	737.8	736.5	735.2	728.8	719.8	717.2
145°	759.6	728.8	727.5	723.7	719.8	712.1	703.1	698.0
147.5°	776.3	769.8	728.8	708.3	707.0	700.6	691.6	686.4
150°	771.1	769.8	762.1	755.7	745.5	723.7	698.0	680.0
152.5°	754.4	762.1	759.6	755.7	748.0	739.0	727.5	722.4
155°	733.9	741.6	742.9	742.9	739.0	732.6	722.4	717.2
157.5°	712.1	719.8	721.1	722.4	718.5	713.4	704.4	700.6
160°	682.6	692.9	695.4	696.7	692.9	689.0	680.0	676.2
162.5°	644.1	658.2	664.6	665.9	664.6	660.8	653.1	649.2
165°	590.2	608.2	615.9	619.7	621.0	618.4	612.0	609.5
167.5°	481.2	513.2	541.5	558.1	559.4	556.9	551.7	550.4
170°	481.2	468.3	455.5	450.4	443.9	435.0	428.5	423.4
172.5°	540.2	527.3	515.8	500.4	483.7	467.0	455.5	450.4
175°	645.4	636.4	621.0	606.9	591.5	577.4	565.8	560.7
177.5°	635.1	633.8	628.7	621.0	613.3	604.3	592.8	586.4
180°	636.4	636.4	636.4	636.4	636.4	636.4	636.4	636.4

(END OF REPORT)