

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: P236557

Luminaire Tested: **SKB4-LD5-36-W-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: P236557
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-LD5-36-W-UNV-L840-CD4-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) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

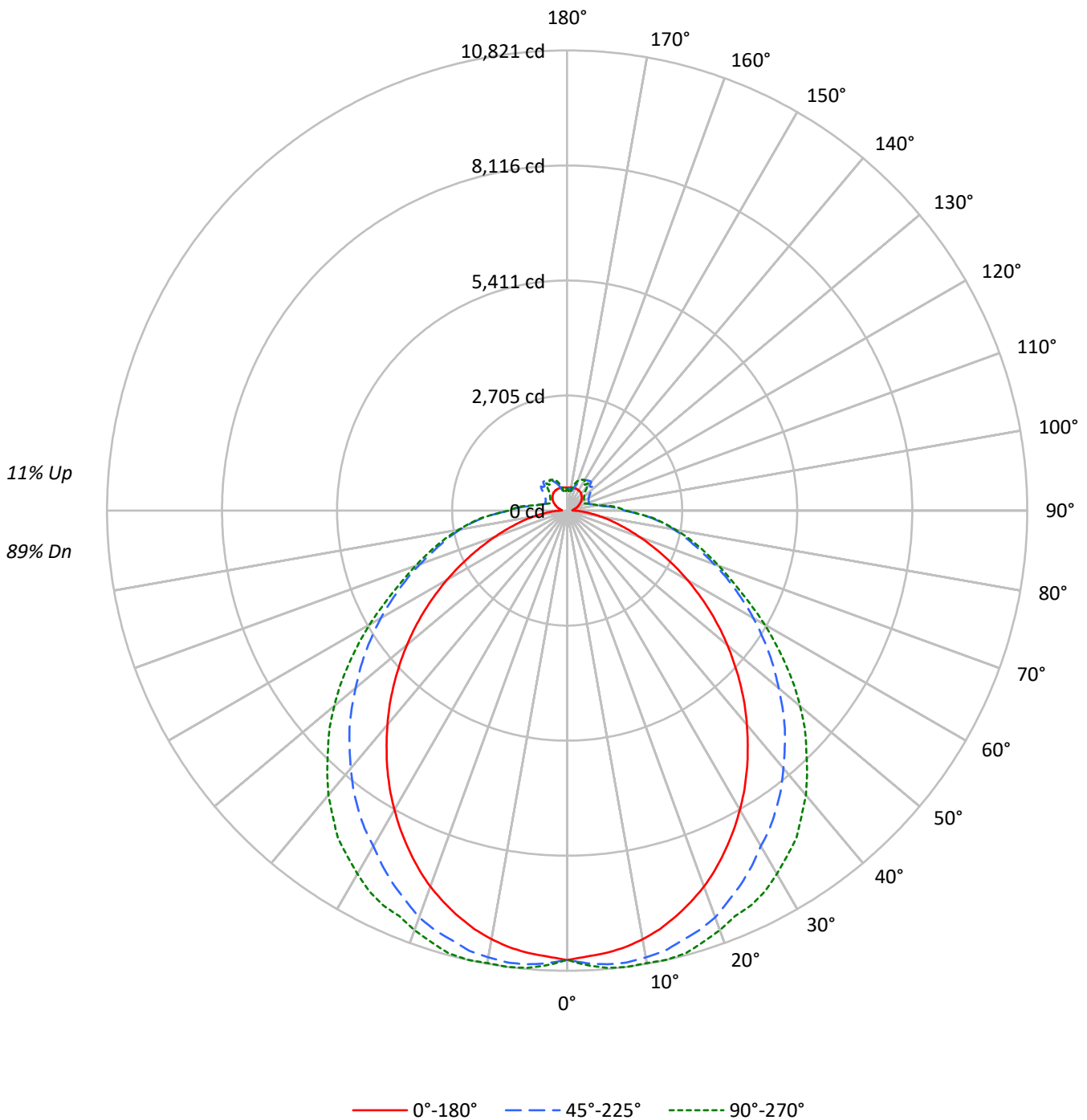
Lumens per Lamp: N/A
Luminaire Lumens: 36869.0 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.38 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 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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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	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°	15166	15166	15166
5°	14980	15275	15403
10°	14780	15236	15445
15°	14477	15075	15549
20°	14102	14919	15410
25°	13614	14553	15417
30°	13069	14156	15361
35°	12469	13894	15280
40°	11801	13513	14965
45°	11099	13175	14529
50°	10341	12743	14098
55°	9505	12417	13507
60°	8597	12099	12916
65°	7615	11844	12326
70°	6665	11716	12176
75°	5802	11920	12437
80°	5026	12749	13121
85°	4357	14204	14724



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1017.5	2.8
10°-20°	2941.6	8.0
20°-30°	4435.3	12.0
30°-40°	5301.8	14.4
40°-50°	5435.8	14.7
50°-60°	4907.8	13.3
60°-70°	3939.3	10.7
70°-80°	2902.1	7.9
80°-90°	1857.8	5.0
90°-100°	949.9	2.6
100°-110°	580.7	1.6
110°-120°	522.0	1.4
120°-130°	539.4	1.5
130°-140°	538.1	1.5
140°-150°	464.2	1.3
150°-160°	323.8	0.9
160°-170°	163.2	0.4
170°-180°	48.7	0.1
0°-30°	8394.4	22.8
0°-40°	13696.2	37.1
0°-60°	24039.8	65.2
0°-90°	32739.0	88.8
90°-120°	2052.7	5.6
90°-150°	3594.3	9.7
90°-180°	4130.0	11.2
0°-180°	36869.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10567	10567	10567	10567	10567	
5°	10445	10636	10710	10767	10796	991
15°	9880	10237	10459	10687	10776	2783
25°	8806	9212	9684	10028	10240	4053
35°	7376	7840	8571	9150	9400	4608
45°	5753	6322	7240	7792	7954	4437
55°	4081	4832	5780	6160	6255	3652
65°	2493	3507	4351	4475	4494	2484
75°	1250	2466	3076	3159	3173	1339
85°	422	1568	2000	2028	2030	421
90°	139	1032	1342	1375	1365	94
95°	145	701	1016	1094	1097	119
105°	209	513	576	604	594	222
115°	307	651	557	483	445	305
125°	409	802	639	532	484	365
135°	482	772	784	670	586	372
145°	536	672	860	756	740	335
155°	553	527	761	819	801	255
165°	553	524	530	626	627	157
175°	545	540	524	504	463	52
180°	524	524	524	524	524	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2
2.5°	10496.7	10540.3	10557.0	10604.4	10623.7	10628.8	10641.6	10649.3	10639.1	10653.2	10639.1
5°	10445.3	10499.2	10532.6	10600.6	10628.8	10644.2	10669.9	10685.3	10686.6	10709.6	10704.5
7.5°	10360.7	10422.2	10474.8	10546.7	10582.6	10609.6	10648.1	10678.9	10700.7	10719.9	10710.9
10°	10234.9	10310.6	10372.2	10447.9	10497.9	10546.7	10596.7	10608.3	10627.5	10667.3	10691.7
12.5°	10079.7	10161.8	10223.4	10311.9	10382.5	10426.1	10468.4	10512.1	10563.4	10605.7	10607.0
15°	9879.5	9978.3	10038.6	10141.3	10218.2	10256.7	10333.7	10386.3	10408.1	10459.4	10515.9
17.5°	9655.0	9757.6	9820.5	9933.4	10005.2	10070.7	10160.5	10169.5	10259.3	10345.3	10412.0
20°	9408.6	9501.0	9565.2	9690.9	9766.6	9838.5	9909.0	9980.9	10101.5	10178.5	10222.1
22.5°	9123.8	9212.3	9299.6	9411.2	9495.9	9547.2	9674.2	9774.3	9873.1	9929.5	10000.1
25°	8805.6	8895.4	8978.8	9098.1	9171.3	9252.1	9425.3	9503.6	9584.4	9684.5	9765.3
27.5°	8477.1	8554.1	8646.5	8754.3	8833.8	8968.5	9126.4	9180.2	9304.7	9411.2	9477.9
30°	8123.0	8191.0	8278.3	8387.3	8484.8	8652.9	8774.8	8860.8	8996.8	9111.0	9258.5
32.5°	7761.2	7822.8	7897.2	7993.4	8133.3	8293.7	8420.7	8537.4	8683.7	8864.6	9019.9
35°	7376.3	7435.3	7499.4	7598.2	7767.6	7912.6	8066.6	8193.6	8391.2	8570.8	8737.6
37.5°	6977.2	7038.8	7091.4	7212.0	7385.3	7544.4	7703.5	7869.0	8067.8	8264.1	8402.7
40°	6574.4	6636.0	6680.9	6819.4	6999.1	7174.8	7348.0	7531.5	7738.1	7911.3	8071.7
42.5°	6171.5	6226.7	6278.0	6435.8	6607.7	6800.2	6992.6	7183.8	7377.6	7572.6	7750.9
45°	5753.2	5814.8	5864.8	6041.9	6213.8	6429.4	6627.0	6827.1	7017.0	7240.3	7375.0
47.5°	5334.9	5399.1	5455.5	5651.8	5836.6	6063.7	6256.2	6456.3	6670.6	6868.2	7005.5
50°	4919.2	4980.8	5056.5	5261.8	5449.1	5686.5	5887.9	6103.5	6315.2	6492.2	6648.8
52.5°	4502.2	4566.4	4662.6	4873.0	5074.5	5319.5	5527.4	5757.1	5948.2	6139.4	6271.6
55°	4081.4	4152.0	4273.9	4484.3	4711.4	4952.6	5177.1	5402.9	5598.0	5780.2	5893.1
57.5°	3668.2	3745.2	3888.9	4110.9	4350.8	4598.5	4847.4	5061.6	5256.7	5415.8	5524.8
60°	3265.4	3350.1	3511.7	3749.1	4007.0	4264.9	4512.5	4738.3	4910.2	5057.8	5128.4
62.5°	2871.5	2966.4	3142.2	3405.2	3673.4	3945.4	4208.4	4417.6	4567.7	4698.5	4758.8
65°	2493.0	2598.2	2793.2	3079.3	3366.7	3647.7	3912.0	4095.5	4236.6	4350.8	4397.0
67.5°	2141.4	2255.6	2478.9	2779.1	3084.5	3373.1	3615.6	3787.6	3917.2	4016.0	4045.5
70°	1815.5	1936.1	2185.0	2504.5	2827.8	3103.7	3327.0	3496.3	3604.1	3677.2	3687.5
72.5°	1516.6	1642.3	1922.0	2258.2	2585.4	2836.8	3056.2	3205.1	3302.6	3353.9	3382.1
75°	1249.7	1380.6	1691.1	2041.3	2345.4	2586.6	2789.4	2915.1	3015.2	3075.5	3102.4
77.5°	1009.8	1149.6	1489.6	1832.2	2117.0	2340.3	2521.2	2658.5	2770.1	2817.6	2833.0
80°	787.8	949.5	1311.3	1633.3	1895.1	2099.1	2292.8	2428.8	2522.5	2552.0	2558.4
82.5°	588.9	773.7	1134.2	1430.6	1674.4	1895.1	2068.3	2182.5	2262.0	2280.0	2283.8
85°	422.1	618.4	958.4	1236.9	1472.9	1662.8	1820.7	1916.9	1984.9	2000.3	1999.0
87.5°	286.1	490.1	800.6	1041.8	1245.8	1417.8	1549.9	1630.8	1685.9	1664.1	1664.1
90°	138.6	384.9	627.4	810.9	958.4	1106.0	1203.5	1276.6	1324.1	1342.1	1345.9
92.5°	121.9	296.4	503.0	665.9	805.8	953.3	1059.8	1136.8	1186.8	1207.4	1211.2
95°	145.0	239.9	384.9	510.7	640.2	762.1	846.8	911.0	976.4	1016.2	1038.0
97.5°	150.1	243.8	355.4	436.2	523.5	639.0	719.8	776.2	809.6	819.9	818.6
100°	164.2	283.6	367.0	432.4	485.0	537.6	618.4	680.0	715.9	728.8	728.8
102.5°	186.0	314.3	413.1	449.1	486.3	524.8	545.3	591.5	632.5	650.5	655.6
105°	209.1	327.2	481.1	473.4	500.4	526.1	547.9	554.3	558.1	576.1	586.4
107.5°	233.5	336.2	511.9	527.3	515.8	537.6	549.1	556.8	555.6	531.2	524.8
110°	259.2	343.9	522.2	587.6	553.0	553.0	560.7	563.3	555.6	545.3	524.8



TEST NUMBER: P236557

CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-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°	282.3	347.7	528.6	636.4	624.8	579.9	573.5	572.2	563.3	547.9	529.9
115°	306.6	350.3	531.2	662.1	671.0	631.3	596.6	587.6	573.5	556.8	536.3
117.5°	332.3	350.3	532.5	668.5	704.4	719.8	637.7	606.9	588.9	571.0	546.6
120°	359.3	351.6	529.9	674.9	771.1	744.2	705.7	642.8	609.5	586.4	562.0
122.5°	384.9	363.1	527.3	677.5	772.4	754.4	800.6	699.3	640.2	606.9	581.2
125°	409.3	379.8	524.8	676.2	772.4	831.4	771.1	800.6	690.3	639.0	605.6
127.5°	432.4	399.0	518.4	667.2	768.5	837.8	786.5	809.6	783.9	691.6	639.0
130°	449.1	423.4	505.5	647.9	758.3	828.9	864.8	777.5	830.1	787.8	694.1
132.5°	464.5	442.7	486.3	632.5	748.0	822.4	864.8	826.3	786.5	837.8	795.5
135°	482.4	464.5	463.2	615.9	732.6	812.2	854.5	884.0	795.5	783.9	832.7
137.5°	499.1	483.7	456.8	599.2	710.8	798.1	843.0	872.5	886.6	781.4	777.5
140°	513.2	501.7	456.8	578.7	685.2	778.8	826.3	857.1	876.3	880.2	778.8
142.5°	528.6	517.1	459.3	551.7	658.2	750.6	807.0	839.1	860.9	873.8	878.9
145°	536.3	526.1	483.7	509.4	628.7	715.9	780.1	818.6	845.5	859.6	867.3
147.5°	540.2	532.5	503.0	490.1	596.6	680.0	749.3	795.5	826.3	845.5	854.5
150°	544.0	538.9	517.1	478.6	558.1	645.4	713.4	764.7	801.9	825.0	836.6
152.5°	550.4	545.3	529.9	476.0	513.2	609.5	674.9	726.2	768.5	798.1	814.7
155°	553.0	549.1	537.6	506.8	490.1	563.3	632.5	681.3	724.9	760.9	783.9
157.5°	555.6	553.0	544.0	523.5	481.1	511.9	585.1	636.4	677.5	714.7	741.6
160°	554.3	553.0	546.6	533.8	504.2	483.7	519.6	583.8	626.1	660.8	686.4
162.5°	554.3	553.0	547.9	538.9	522.2	482.4	487.6	514.5	568.4	605.6	630.0
165°	553.0	553.0	549.1	542.7	532.5	515.8	479.9	478.6	500.4	529.9	564.5
167.5°	553.0	553.0	550.4	545.3	538.9	529.9	517.1	496.5	473.4	478.6	490.1
170°	550.4	551.7	549.1	545.3	541.4	535.0	528.6	519.6	506.8	492.7	465.7
172.5°	547.9	549.1	549.1	546.6	542.7	538.9	535.0	529.9	520.9	515.8	506.8
175°	545.3	546.6	546.6	545.3	541.4	537.6	536.3	532.5	526.1	523.5	518.4
177.5°	542.7	542.7	544.0	542.7	541.4	538.9	537.6	535.0	528.6	527.3	522.2
180°	523.5	523.5	523.5	523.5	523.5	523.5	523.5	523.5	523.5	523.5	523.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2	10567.2
2.5°	10630.1	10675.0	10673.7	10649.3	10673.7	10701.9	10686.6	10700.7
5°	10708.4	10767.4	10776.4	10758.4	10778.9	10803.3	10781.5	10795.6
7.5°	10713.5	10763.5	10775.1	10761.0	10798.2	10832.8	10811.0	10821.3
10°	10721.2	10778.9	10794.3	10772.5	10795.6	10814.9	10789.2	10805.9
12.5°	10614.7	10691.7	10736.6	10744.3	10787.9	10820.0	10798.2	10816.1
15°	10563.4	10642.9	10681.4	10691.7	10740.4	10775.1	10753.3	10776.4
17.5°	10460.7	10515.9	10527.5	10524.9	10580.1	10623.7	10616.0	10639.1
20°	10258.0	10332.4	10387.6	10399.1	10451.8	10487.7	10467.1	10497.9
22.5°	10078.4	10155.4	10173.3	10179.7	10252.9	10299.1	10296.5	10320.9
25°	9825.6	9902.6	9996.3	10059.1	10143.8	10199.0	10213.1	10240.0
27.5°	9611.4	9735.8	9848.7	9910.3	9996.3	10051.4	10072.0	10086.1
30°	9409.9	9540.8	9642.1	9707.6	9782.0	9825.6	9842.3	9864.1
32.5°	9163.6	9297.0	9384.3	9436.9	9511.3	9567.7	9603.7	9626.7
35°	8865.9	8989.1	9105.8	9194.4	9277.8	9334.2	9356.0	9399.6
37.5°	8542.6	8713.2	8833.8	8894.1	8942.9	8989.1	9014.7	9053.2
40°	8247.5	8391.2	8474.6	8536.2	8601.6	8661.9	8694.0	8732.5
42.5°	7888.2	8012.7	8128.1	8201.3	8257.7	8309.1	8330.9	8352.7
45°	7516.1	7663.7	7763.8	7820.2	7854.9	7908.7	7942.1	7953.6
47.5°	7159.4	7281.3	7362.2	7431.4	7478.9	7532.8	7562.3	7581.6
50°	6778.4	6884.9	6978.5	7041.4	7069.6	7105.5	7124.8	7150.5
52.5°	6389.6	6508.9	6566.7	6603.9	6632.1	6673.2	6693.7	6719.3
55°	6006.0	6079.1	6136.8	6183.0	6211.3	6242.1	6260.0	6254.9
57.5°	5592.8	5676.2	5726.3	5753.2	5769.9	5790.4	5795.6	5809.7
60°	5204.1	5263.1	5295.2	5319.5	5327.2	5343.9	5350.3	5365.7
62.5°	4817.9	4861.5	4878.2	4896.1	4906.4	4903.8	4905.1	4915.4
65°	4429.1	4465.0	4471.4	4479.1	4485.6	4488.1	4490.7	4494.5
67.5°	4057.0	4085.2	4094.2	4116.0	4125.0	4119.9	4119.9	4123.7
70°	3711.9	3738.8	3749.1	3765.8	3778.6	3778.6	3782.4	3787.6
72.5°	3396.2	3427.0	3447.6	3457.8	3475.8	3477.1	3477.1	3475.8
75°	3116.5	3139.6	3155.0	3162.7	3180.7	3179.4	3178.1	3173.0
77.5°	2838.1	2856.1	2874.0	2872.8	2890.7	2890.7	2886.9	2883.0
80°	2558.4	2578.9	2586.6	2584.1	2600.7	2598.2	2596.9	2587.9
82.5°	2271.0	2289.0	2296.7	2296.7	2312.1	2309.5	2308.2	2300.5
85°	1995.1	2006.7	2028.5	2027.2	2037.5	2037.5	2036.2	2029.8
87.5°	1637.2	1646.2	1653.9	1651.3	1659.0	1664.1	1659.0	1655.1
90°	1347.2	1356.2	1372.9	1376.7	1383.1	1376.7	1375.4	1365.2
92.5°	1216.3	1225.3	1239.4	1244.6	1248.4	1247.1	1248.4	1242.0
95°	1053.4	1070.1	1091.9	1097.0	1103.4	1102.1	1106.0	1097.0
97.5°	821.2	837.8	867.3	885.3	890.4	891.7	898.1	887.9
100°	728.8	732.6	737.8	735.2	733.9	731.3	730.1	722.4
102.5°	656.9	660.8	665.9	665.9	663.3	662.1	659.5	653.1
105°	591.5	597.9	603.0	604.3	603.0	601.8	599.2	594.1
107.5°	529.9	535.0	542.7	544.0	544.0	545.3	544.0	536.3
110°	495.3	486.3	488.8	488.8	488.8	490.1	487.6	481.1



TEST NUMBER: P236557

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	514.5	496.5	473.4	455.5	449.1	447.8	443.9	437.5
115°	515.8	500.4	488.8	477.3	469.6	461.9	451.6	445.2
117.5°	527.3	508.1	492.7	479.9	473.4	467.0	459.3	452.9
120°	541.4	519.6	504.2	490.1	481.1	472.2	463.2	456.8
122.5°	559.4	538.9	519.6	503.0	492.7	483.7	474.7	468.3
125°	581.2	558.1	540.2	524.8	511.9	501.7	491.4	483.7
127.5°	606.9	582.5	563.3	545.3	531.2	519.6	508.1	501.7
130°	644.1	614.6	592.8	571.0	555.6	542.7	531.2	522.2
132.5°	703.1	662.1	631.3	603.0	586.4	572.2	558.1	549.1
135°	823.7	732.6	686.4	653.1	630.0	610.7	595.3	586.4
137.5°	826.3	846.8	801.9	722.4	691.6	668.5	649.2	640.2
140°	772.4	798.1	832.7	837.8	832.7	790.4	763.4	754.4
142.5°	787.8	751.9	772.4	787.8	810.9	814.7	808.3	804.5
145°	873.8	843.0	769.8	742.9	744.2	753.2	748.0	740.3
147.5°	862.2	866.1	867.3	849.4	792.9	757.0	737.8	728.8
150°	848.1	853.2	855.8	855.8	853.2	848.1	837.8	830.1
152.5°	827.6	836.6	841.7	843.0	841.7	835.3	823.7	817.3
155°	800.6	810.9	817.3	819.9	821.2	817.3	807.0	800.6
157.5°	763.4	780.1	789.1	792.9	794.2	791.6	783.9	778.8
160°	713.4	732.6	746.7	751.9	757.0	757.0	750.6	745.5
162.5°	654.4	674.9	690.3	698.0	703.1	705.7	699.3	698.0
165°	591.5	609.5	622.3	628.7	633.8	636.4	631.3	627.4
167.5°	504.2	528.6	547.9	555.6	560.7	560.7	556.8	556.8
170°	464.5	468.3	469.6	469.6	467.0	464.5	459.3	456.8
172.5°	499.1	495.3	485.0	472.2	459.3	443.9	432.4	419.6
175°	513.2	513.2	508.1	500.4	491.4	482.4	472.2	463.2
177.5°	518.4	519.6	515.8	509.4	501.7	492.7	479.9	473.4
180°	523.5	523.5	523.5	523.5	523.5	523.5	523.5	523.5

(END OF REPORT)