

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: P236563

Luminaire Tested: **SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P236563  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24077)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees  
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE  
4 BLADES WITH WIDE DISTRIBUTION LENS, OUTER 2 BLADES TILTED OUT 20 DEGREES  
Light Source: (952) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

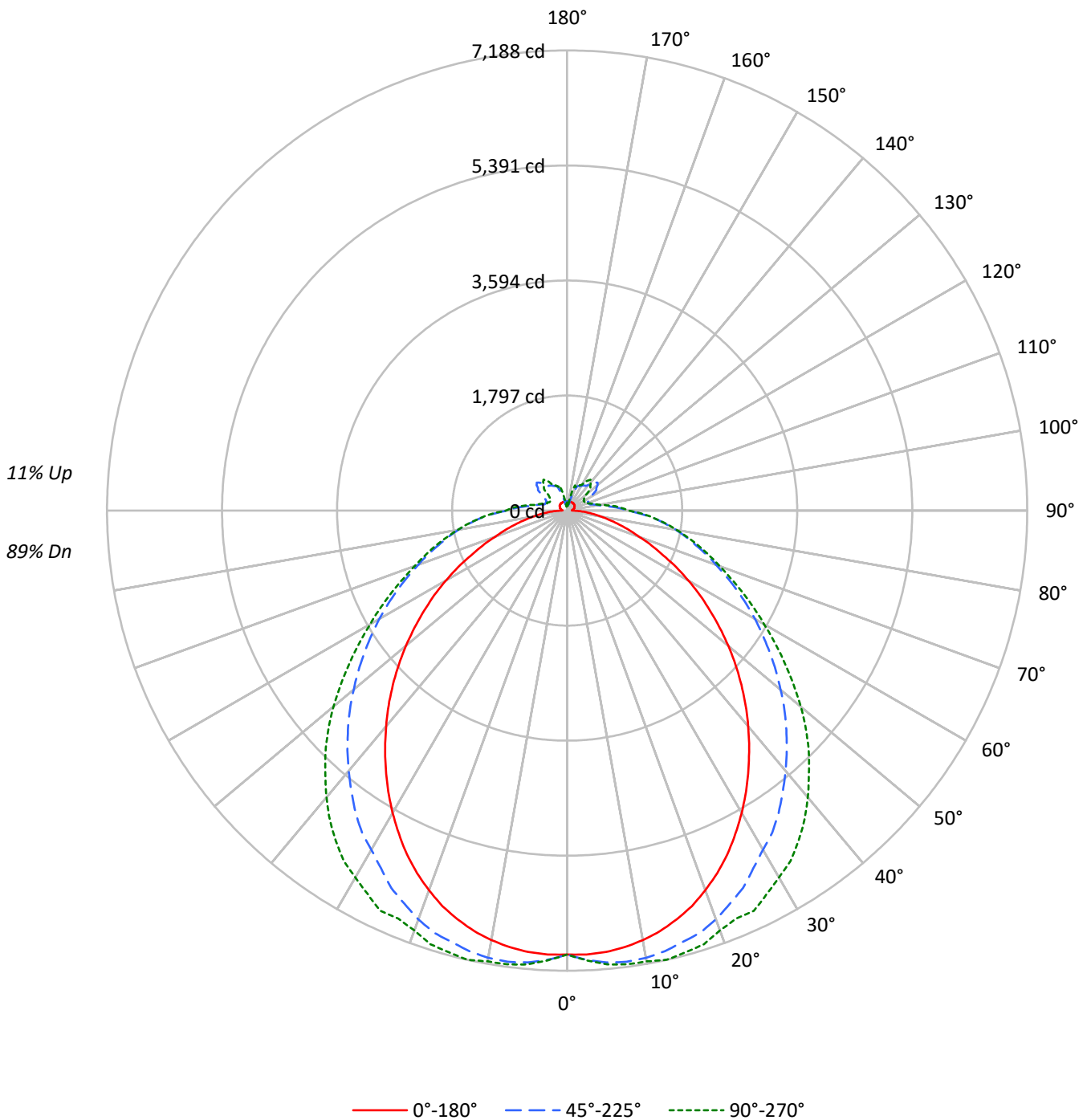
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24578.0 lumens  
Efficiency: N/A  
Efficacy: 119.2 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.4 / 1.41  
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')  
CIE Type: Semi-Direct  
  
Input Watts (W): 206.2  
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: P236563

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

### Luminous Intensity Polar Plot





TEST NUMBER: P236563

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 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	117	117	117	117	113	113	113	113	105	105	105	99	99	99	92	92	92	89
1	105	99	95	90	101	96	92	88	90	86	83	84	81	79	79	77	74	72
2	95	86	79	73	91	83	76	71	78	72	68	73	68	64	68	65	61	59
3	86	75	67	60	83	73	65	59	68	62	56	64	59	54	60	56	52	49
4	79	66	57	51	76	64	56	50	61	53	48	57	51	46	54	49	44	42
5	72	59	50	43	70	58	49	43	54	47	41	51	45	40	48	43	38	36
6	67	53	44	38	64	52	43	37	49	42	36	46	40	35	44	38	34	31
7	62	48	39	33	60	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	39	32	28	37	31	27	25
9	54	40	32	27	52	39	32	26	37	30	26	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	31	26	22	20

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9955	9955	9955
5°	9927	10105	10153
10°	9838	10132	10220
15°	9688	10053	10307
20°	9459	9958	10242
25°	9159	9774	10388
30°	8773	9504	10304
35°	8346	9338	10240
40°	7897	9065	10023
45°	7425	8811	9754
50°	6908	8542	9398
55°	6344	8297	8958
60°	5758	8106	8555
65°	5063	7941	8286
70°	4420	7890	8151
75°	3893	8050	8335
80°	3427	8604	8798
85°	3058	9629	9911



TEST NUMBER: P236563

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	673.6	2.7
10°-20°	1962.6	8.0
20°-30°	2978.0	12.1
30°-40°	3568.0	14.5
40°-50°	3651.0	14.9
50°-60°	3285.1	13.4
60°-70°	2644.3	10.8
70°-80°	1954.5	8.0
80°-90°	1270.2	5.2
90°-100°	655.8	2.7
100°-110°	390.2	1.6
110°-120°	342.7	1.4
120°-130°	358.4	1.5
130°-140°	357.9	1.5
140°-150°	265.0	1.1
150°-160°	151.4	0.6
160°-170°	57.7	0.2
170°-180°	11.6	0.0
0°-30°	5614.2	22.8
0°-40°	9182.2	37.4
0°-60°	16118.3	65.6
0°-90°	21987.3	89.5
90°-120°	1388.8	5.7
90°-150°	2370.1	9.6
90°-180°	2591.0	10.5
0°-180°	24578.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6936	6936	6936	6936	6936	
5°	6922	7027	7085	7103	7116	657
15°	6611	6835	6975	7109	7143	1862
25°	5925	6174	6504	6747	6900	2722
35°	4938	5251	5761	6182	6300	3086
45°	3849	4237	4842	5243	5340	2967
55°	2724	3239	3862	4125	4148	2441
65°	1658	2350	2917	3014	3021	1658
75°	839	1666	2077	2120	2126	898
85°	296	1082	1356	1362	1366	292
90°	90	724	929	958	956	62
95°	86	480	691	749	759	70
105°	102	354	372	411	412	111
115°	126	490	361	321	307	126
125°	142	449	554	362	324	126
135°	145	408	616	556	516	113
145°	149	336	476	570	575	93
155°	147	109	426	446	433	68
165°	147	117	112	297	327	42
175°	144	143	149	130	97	14
180°	129	129	129	129	129	



TEST NUMBER: P236563

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5
2.5°	6940.8	6942.5	6980.1	7003.1	6992.9	6995.4	6991.2	7013.4	7036.4	7023.6	7034.7
5°	6922.0	6930.5	6980.9	7015.9	7016.8	7036.4	7044.1	7073.1	7100.5	7085.1	7099.6
7.5°	6879.3	6893.8	6956.2	7005.7	7018.5	7038.1	7042.4	7078.3	7117.5	7109.9	7125.2
10°	6812.7	6835.7	6912.6	6969.0	6976.6	7004.8	7023.6	7059.5	7094.5	7093.6	7109.9
12.5°	6726.4	6752.1	6840.9	6898.1	6910.9	6947.6	6965.5	7005.7	7046.7	7049.2	7068.9
15°	6611.2	6645.3	6741.0	6798.2	6819.5	6850.3	6876.7	6923.7	6963.8	6974.9	7032.2
17.5°	6478.8	6513.0	6608.6	6669.2	6687.2	6728.2	6760.6	6807.6	6882.7	6913.5	6959.6
20°	6310.6	6351.6	6448.1	6511.3	6530.9	6578.7	6613.7	6695.7	6770.8	6793.9	6839.2
22.5°	6127.8	6167.1	6264.5	6332.8	6350.7	6398.5	6464.3	6550.5	6617.1	6645.3	6720.5
25°	5924.6	5958.8	6054.4	6121.0	6141.5	6206.4	6290.9	6373.8	6441.2	6504.4	6557.4
27.5°	5692.3	5729.0	5823.8	5884.5	5915.2	6012.6	6094.5	6174.8	6269.6	6297.8	6376.3
30°	5453.2	5484.8	5578.8	5631.7	5681.2	5785.4	5866.5	5980.1	6045.0	6116.7	6254.2
32.5°	5199.6	5230.4	5320.9	5369.5	5443.0	5553.1	5655.6	5746.1	5843.5	5963.9	6090.3
35°	4937.5	4967.3	5053.6	5102.3	5193.6	5308.1	5423.3	5521.5	5661.6	5760.6	5875.9
37.5°	4670.2	4701.8	4778.6	4834.1	4939.2	5065.5	5179.1	5314.0	5437.9	5534.4	5660.7
40°	4399.5	4423.4	4503.7	4566.0	4683.8	4809.4	4937.5	5082.6	5196.2	5307.2	5450.7
42.5°	4127.9	4148.4	4226.1	4309.8	4428.5	4556.6	4718.8	4827.3	4960.5	5079.2	5216.7
45°	3848.7	3868.3	3946.0	4043.4	4162.9	4311.5	4469.5	4573.7	4715.4	4841.8	4966.5
47.5°	3567.7	3589.9	3668.5	3782.1	3911.0	4069.9	4206.5	4331.2	4491.7	4603.6	4712.0
50°	3285.9	3308.1	3396.1	3520.8	3653.1	3817.9	3952.0	4090.3	4244.9	4351.7	4454.1
52.5°	3005.0	3029.8	3129.7	3255.2	3404.6	3566.9	3713.8	3856.4	3997.3	4110.8	4197.1
55°	2724.1	2754.8	2865.8	2993.9	3158.7	3320.1	3476.4	3617.3	3755.6	3862.3	3947.7
57.5°	2460.2	2490.1	2604.5	2749.7	2917.9	3085.3	3251.8	3385.0	3520.8	3622.4	3696.7
60°	2186.9	2221.1	2350.0	2507.2	2683.1	2864.1	3028.9	3164.7	3295.3	3388.4	3446.5
62.5°	1923.1	1979.4	2101.5	2276.6	2459.3	2649.8	2818.0	2953.8	3073.3	3151.0	3194.6
65°	1657.5	1735.2	1866.7	2060.5	2251.0	2448.2	2619.9	2753.1	2853.9	2917.0	2946.9
67.5°	1432.0	1507.2	1651.5	1860.7	2058.8	2263.8	2435.4	2553.3	2636.1	2689.0	2713.8
70°	1204.0	1295.4	1456.8	1677.1	1885.5	2092.1	2246.7	2350.9	2424.3	2476.4	2499.5
72.5°	1015.3	1101.6	1287.7	1512.3	1729.2	1921.4	2058.8	2157.9	2239.0	2274.0	2285.1
75°	838.6	925.7	1130.6	1368.9	1581.5	1750.6	1882.1	1983.7	2045.2	2076.8	2087.9
77.5°	680.6	780.5	1001.7	1237.4	1433.8	1591.7	1724.1	1809.5	1871.0	1896.6	1905.1
80°	537.1	647.3	888.1	1109.3	1291.1	1444.9	1563.6	1646.4	1701.9	1722.4	1724.9
82.5°	409.0	532.9	777.1	983.7	1153.7	1300.5	1409.8	1489.3	1528.5	1539.6	1537.1
85°	296.3	427.8	661.8	853.1	1015.3	1148.5	1244.2	1313.4	1347.5	1356.0	1348.4
87.5°	202.4	331.3	549.1	722.4	860.8	978.6	1061.4	1121.2	1154.5	1157.9	1157.9
90°	89.7	248.5	435.5	568.7	678.0	769.4	835.1	892.4	920.5	929.1	936.8
92.5°	73.4	191.3	343.3	467.1	568.7	658.4	731.0	787.3	818.1	830.0	836.0
95°	86.2	156.3	255.3	349.3	441.5	519.2	583.2	643.0	674.6	690.8	707.9
97.5°	88.8	153.7	236.5	300.6	357.8	430.4	490.2	531.1	550.8	560.2	575.6
100°	93.1	156.3	255.3	293.8	337.3	378.3	411.6	461.1	485.0	493.6	497.0
102.5°	96.5	153.7	276.7	310.8	333.0	361.2	379.1	391.1	416.7	433.8	443.2
105°	102.5	151.1	275.0	358.7	349.3	359.5	373.2	380.9	393.7	371.5	386.0
107.5°	114.4	151.1	268.1	390.2	389.4	374.0	374.0	373.2	372.3	355.2	365.5
110°	121.3	129.8	259.6	381.7	439.8	406.5	388.5	375.7	363.8	355.2	347.6



TEST NUMBER: P236563

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	123.0	116.1	257.0	369.8	484.2	480.8	417.6	391.1	369.8	351.0	339.9
115°	125.5	102.5	253.6	346.7	472.2	507.2	493.6	421.0	386.8	361.2	342.4
117.5°	129.8	102.5	257.0	343.3	457.7	556.8	532.0	484.2	417.6	380.9	355.2
120°	134.9	104.2	270.7	345.0	434.7	540.5	570.4	549.1	478.2	414.2	378.3
122.5°	138.3	105.9	250.2	342.4	406.5	520.9	602.9	575.6	554.2	479.1	415.9
125°	141.8	107.6	220.3	340.7	406.5	491.9	579.0	642.2	575.6	554.2	497.8
127.5°	144.3	107.6	174.2	343.3	403.9	448.3	551.6	618.2	634.5	574.7	554.2
130°	144.3	104.2	120.4	359.5	394.5	443.2	511.5	590.1	638.7	623.4	573.8
132.5°	143.5	103.3	93.9	328.8	388.5	438.1	469.7	555.1	611.4	645.6	630.2
135°	145.2	115.3	94.8	291.2	386.8	428.7	463.7	491.9	578.1	615.7	643.0
137.5°	146.9	131.5	96.5	242.5	408.2	417.6	456.9	479.9	524.3	583.2	613.1
140°	147.7	144.3	98.2	169.1	373.2	409.9	444.0	468.8	485.9	530.3	579.0
142.5°	149.4	156.3	99.9	112.7	328.8	419.3	428.7	457.7	474.8	486.7	520.9
145°	148.6	161.4	98.2	92.2	269.8	403.1	418.4	439.8	462.8	476.5	485.9
147.5°	146.9	158.0	96.5	92.2	183.6	351.0	438.1	427.0	446.6	464.5	474.8
150°	146.0	154.6	104.2	93.9	116.1	290.3	397.1	424.4	431.2	447.5	461.1
152.5°	146.9	152.9	127.2	97.3	93.1	202.4	338.2	419.3	422.7	431.2	441.5
155°	146.9	151.1	145.2	98.2	95.6	122.1	262.2	355.2	420.1	426.1	425.3
157.5°	146.9	150.3	158.0	103.3	98.2	93.9	151.1	277.5	353.5	407.3	443.2
160°	146.9	148.6	160.5	127.2	99.9	97.3	98.2	156.3	267.3	333.0	380.0
162.5°	146.9	147.7	155.4	149.4	105.0	99.1	97.3	98.2	140.9	226.3	289.5
165°	146.9	146.9	151.1	161.4	134.9	99.9	99.1	97.3	93.9	111.9	146.0
167.5°	146.0	146.0	148.6	155.4	156.3	129.8	100.8	98.2	96.5	94.8	92.2
170°	145.2	144.3	146.9	149.4	155.4	155.4	137.5	114.4	97.3	95.6	94.8
172.5°	144.3	143.5	144.3	146.0	146.9	150.3	155.4	152.0	140.0	124.7	108.4
175°	143.5	142.6	142.6	142.6	142.6	142.6	143.5	144.3	146.0	148.6	151.1
177.5°	142.6	140.9	140.9	140.9	140.0	139.2	138.3	137.5	136.6	135.8	134.9
180°	128.9	128.9	128.9	128.9	128.9	128.9	128.9	128.9	128.9	128.9	128.9



TEST NUMBER: P236563

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5	6936.5
2.5°	7027.0	7045.8	7033.0	7019.3	7017.6	7037.3	7035.6	7032.2
5°	7097.9	7116.7	7109.0	7097.9	7097.9	7119.3	7116.7	7115.8
7.5°	7126.1	7149.1	7141.5	7130.4	7138.0	7150.0	7152.6	7149.1
10°	7120.1	7148.3	7144.0	7133.8	7133.8	7151.7	7149.1	7150.0
12.5°	7080.8	7120.1	7135.5	7142.3	7157.7	7183.3	7185.0	7187.6
15°	7066.3	7105.6	7108.2	7109.0	7124.4	7146.6	7142.3	7143.2
17.5°	6987.7	7019.3	7024.5	7032.2	7056.1	7091.9	7091.1	7101.3
20°	6879.3	6932.2	6962.1	6970.7	6980.1	6995.4	6977.5	6977.5
22.5°	6782.8	6802.4	6798.2	6818.7	6864.8	6895.5	6900.6	6898.9
25°	6594.9	6659.0	6711.9	6782.0	6851.1	6889.5	6897.2	6899.8
27.5°	6480.5	6590.7	6648.7	6687.2	6722.2	6743.5	6757.2	6752.9
30°	6371.2	6429.3	6475.4	6540.3	6587.3	6606.0	6617.1	6616.3
32.5°	6173.9	6251.7	6308.0	6377.2	6454.0	6480.5	6491.6	6492.5
35°	5976.7	6068.1	6150.9	6212.4	6267.9	6286.7	6298.6	6299.5
37.5°	5781.1	5869.9	5944.2	6003.2	6053.5	6071.5	6083.4	6091.1
40°	5560.0	5641.1	5713.7	5782.8	5834.1	5837.5	5848.6	5848.6
42.5°	5314.9	5402.0	5478.0	5532.6	5577.0	5579.6	5590.7	5589.9
45°	5064.7	5145.0	5219.2	5266.2	5313.2	5321.7	5335.4	5339.7
47.5°	4806.8	4888.8	4956.2	5003.2	5040.8	5051.9	5060.4	5061.3
50°	4543.8	4630.0	4687.2	4722.3	4752.1	4762.4	4768.4	4766.7
52.5°	4286.8	4364.5	4404.6	4431.9	4461.8	4467.8	4469.5	4453.3
55°	4027.2	4088.6	4116.0	4133.9	4151.8	4164.6	4163.8	4148.4
57.5°	3759.9	3813.7	3822.2	3847.0	3854.7	3865.8	3859.8	3847.0
60°	3494.3	3533.6	3536.1	3559.2	3564.3	3561.8	3564.3	3554.1
62.5°	3228.7	3257.8	3261.2	3282.5	3292.8	3291.1	3292.8	3285.9
65°	2974.3	3001.6	3005.0	3022.1	3033.2	3030.6	3028.9	3021.2
67.5°	2740.3	2761.6	2770.2	2778.7	2783.8	2776.1	2772.7	2766.7
70°	2513.1	2526.8	2529.4	2536.2	2543.9	2537.0	2542.2	2535.3
72.5°	2294.5	2309.0	2319.3	2322.7	2331.2	2322.7	2327.8	2323.6
75°	2099.0	2110.9	2116.1	2124.6	2134.8	2127.2	2130.6	2126.3
77.5°	1913.7	1923.1	1930.7	1933.3	1942.7	1933.3	1935.0	1927.3
80°	1726.7	1730.9	1735.2	1737.8	1747.2	1739.5	1740.3	1735.2
82.5°	1537.9	1543.1	1554.2	1551.6	1560.1	1551.6	1553.3	1556.7
85°	1346.7	1356.0	1362.9	1360.3	1368.9	1365.4	1362.9	1366.3
87.5°	1157.9	1165.6	1174.2	1173.3	1181.0	1177.6	1177.6	1182.7
90°	935.9	941.9	952.1	963.2	964.9	966.7	963.2	955.6
92.5°	836.9	844.5	852.2	859.9	866.7	865.0	863.3	865.0
95°	718.2	731.0	744.6	754.0	765.1	765.1	765.1	759.1
97.5°	585.8	598.6	609.7	617.4	625.9	626.8	625.9	625.9
100°	497.8	502.1	506.4	511.5	517.5	519.2	517.5	518.3
102.5°	446.6	452.6	456.0	458.6	460.3	460.3	457.7	455.1
105°	394.5	403.9	409.0	413.3	415.9	416.7	415.0	412.5
107.5°	345.8	354.4	362.9	368.9	373.2	374.9	373.2	370.6
110°	333.0	355.2	334.7	325.3	328.8	333.0	332.2	329.6





TEST NUMBER: P236563

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades tilted out 20 degrees

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	335.6	333.0	321.9	316.0	332.2	339.9	334.7	332.2
115°	328.8	322.8	321.1	321.1	320.2	317.7	311.7	307.4
117.5°	338.2	325.3	316.8	312.5	310.8	308.3	304.0	300.6
120°	355.2	339.0	326.2	319.4	313.4	307.4	301.4	297.2
122.5°	381.7	359.5	342.4	333.0	326.2	319.4	312.5	307.4
125°	427.0	392.0	368.0	355.2	345.0	336.5	327.9	324.5
127.5°	537.1	451.7	410.7	388.5	372.3	360.4	351.0	345.8
130°	552.5	543.1	520.9	449.2	421.8	403.1	388.5	384.3
132.5°	573.8	557.6	544.0	535.4	527.7	516.6	490.2	485.0
135°	655.8	586.7	562.7	549.1	538.8	529.4	520.0	515.8
137.5°	634.5	650.7	627.6	578.1	561.0	548.2	537.1	532.0
140°	602.9	620.0	633.6	641.3	643.9	620.8	592.6	582.4
142.5°	565.3	586.7	601.2	610.6	616.5	616.5	610.6	607.1
145°	495.3	539.7	562.7	576.4	582.4	584.1	579.0	574.7
147.5°	479.9	484.2	494.4	525.2	538.8	544.8	542.2	538.8
150°	467.1	473.1	475.6	476.5	474.8	472.2	468.8	465.4
152.5°	451.7	459.4	462.0	463.7	462.8	460.3	452.6	448.3
155°	431.2	438.9	444.0	448.3	447.5	444.9	437.2	432.9
157.5°	417.6	420.1	423.6	426.1	426.1	424.4	418.4	415.0
160°	412.5	437.2	414.2	407.3	405.6	403.9	397.9	393.7
162.5°	331.3	362.1	384.3	400.5	409.9	417.6	414.2	411.6
165°	207.5	257.0	287.8	306.6	320.2	329.6	327.9	327.1
167.5°	94.8	114.4	129.8	144.3	168.2	192.1	193.8	196.4
170°	91.4	88.8	84.5	80.3	76.0	70.9	65.8	62.3
172.5°	94.8	88.8	85.4	82.0	77.7	71.7	65.8	60.6
175°	146.9	140.9	134.1	126.4	120.4	111.9	101.6	97.3
177.5°	132.4	130.7	128.1	124.7	121.3	115.3	107.6	102.5
180°	128.9	128.9	128.9	128.9	128.9	128.9	128.9	128.9

(END OF REPORT)