

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: P236575

Luminaire Tested: **SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236575
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24080)
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 vertical inner 2 blades
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, OUTER 2 BLADES VERTICAL INNER 2
BLADES HORIZONTAL
Light Source: (952) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

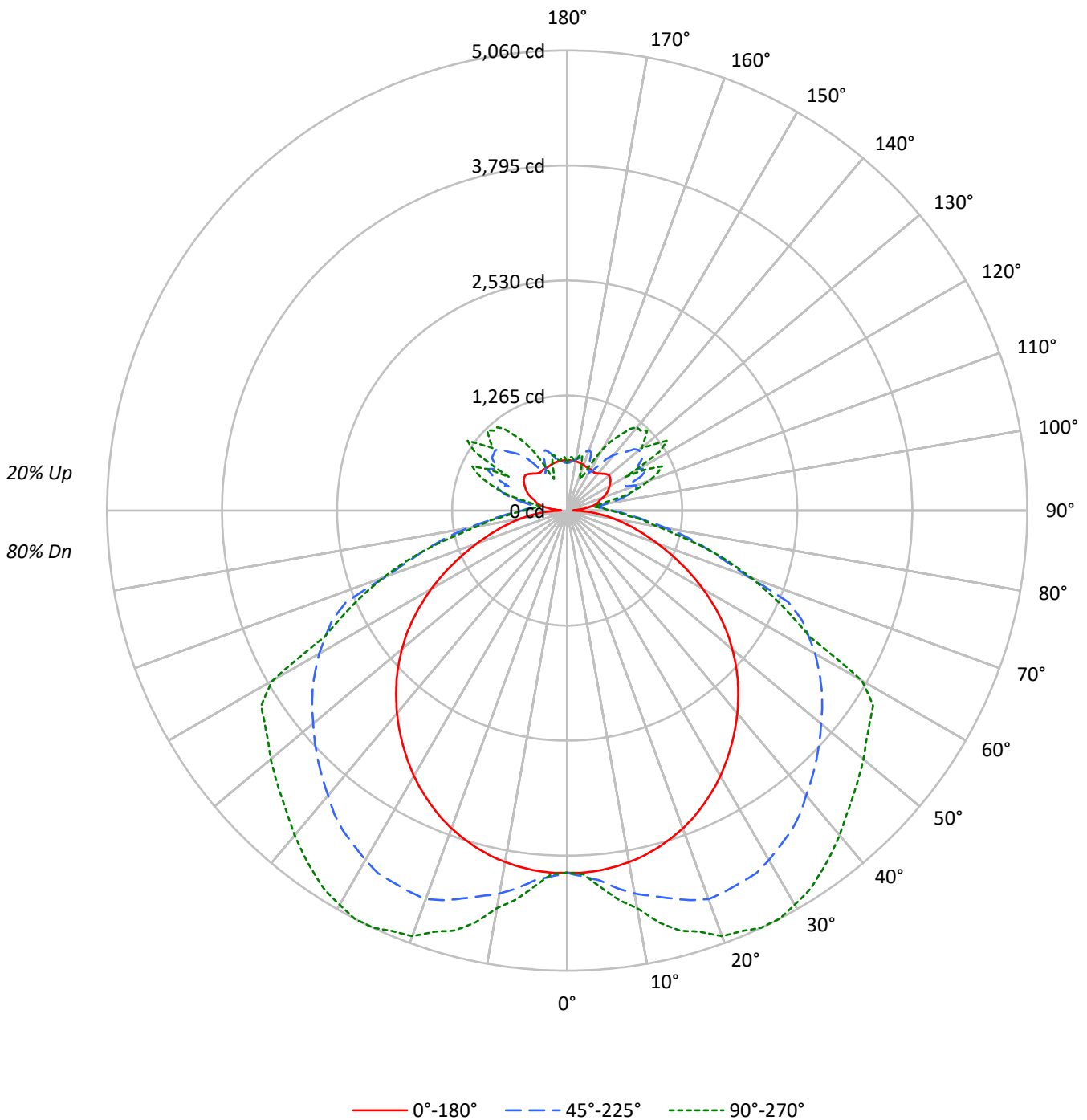
Lumens per Lamp: N/A
Luminaire Lumens: 21061.0 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.73 / 1.68
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

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

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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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80
1	103	98	93	89	98	93	89	85	85	82	79	78	75	73	71	69	67	64
2	93	84	77	71	88	80	74	68	73	68	64	67	63	59	61	58	55	52
3	84	73	65	58	80	70	62	56	64	58	52	59	53	49	53	49	46	42
4	76	64	55	48	73	61	53	47	56	49	44	52	46	41	47	42	38	36
5	70	57	48	41	66	54	46	40	50	43	37	46	40	35	42	37	33	30
6	64	51	42	35	61	49	40	34	45	38	32	41	35	30	38	33	29	26
7	59	46	37	31	56	44	36	30	41	33	28	37	31	27	34	29	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	20
9	51	38	30	24	49	36	29	23	34	27	22	31	25	21	29	24	20	18
10	48	35	27	21	46	33	26	21	31	24	20	29	23	19	27	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5715	5715	5715
5°	5700	5822	5920
10°	5668	6107	6343
15°	5626	6363	6897
20°	5573	6664	7309
25°	5503	6782	7615
30°	5423	6894	7796
35°	5322	6966	7900
40°	5224	6985	7986
45°	5120	7053	8119
50°	4985	7157	8387
55°	4801	7338	8772
60°	4544	7532	9013
65°	4218	7755	7431
70°	3875	6698	6902
75°	3588	6080	6079
80°	3367	5507	5057
85°	3094	5227	4906



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	394.3	1.9
10°-20°	1238.4	5.9
20°-30°	2041.3	9.7
30°-40°	2605.6	12.4
40°-50°	2880.1	13.7
50°-60°	2912.2	13.8
60°-70°	2415.4	11.5
70°-80°	1535.5	7.3
80°-90°	739.2	3.5
90°-100°	388.3	1.8
100°-110°	641.2	3.0
110°-120°	810.6	3.8
120°-130°	825.3	3.9
130°-140°	692.5	3.3
140°-150°	454.5	2.2
150°-160°	263.3	1.3
160°-170°	170.8	0.8
170°-180°	52.5	0.2
0°-30°	3674.0	17.4
0°-40°	6279.6	29.8
0°-60°	12071.8	57.3
0°-90°	16761.9	79.6
90°-120°	1840.1	8.7
90°-150°	3812.5	18.1
90°-180°	4299.0	20.4
0°-180°	21061.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3982	3982	3982	3982	3982	
5°	3974	4030	4082	4136	4149	378
15°	3839	4081	4415	4688	4780	1084
25°	3559	3952	4513	4908	5058	1640
35°	3148	3628	4297	4752	4860	1970
45°	2654	3142	3876	4338	4445	2046
55°	2061	2622	3416	3896	4062	1840
65°	1381	2072	2849	2673	2710	1370
75°	773	1488	1569	1579	1551	823
85°	300	664	736	689	676	290
90°	67	424	494	476	468	52
95°	146	311	361	365	363	143
105°	355	558	714	707	682	371
115°	488	709	902	1034	1151	481
125°	582	675	1013	1154	1337	517
135°	570	550	915	1158	1244	442
145°	512	649	610	886	1011	326
155°	522	609	582	481	437	242
165°	542	575	635	685	635	153
175°	553	554	543	508	591	53
180°	525	525	525	525	525	



TEST NUMBER: P236575

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9
2.5°	3985.3	3983.6	3995.6	4002.4	4012.7	4022.9	4022.9	4021.2	4021.2	4027.2	4022.1
5°	3974.2	3976.8	3996.4	4007.5	4024.6	4034.9	4036.6	4045.1	4055.4	4081.8	4096.4
7.5°	3953.7	3960.6	3983.6	3994.7	4018.6	4046.8	4078.4	4110.9	4149.3	4186.0	4203.1
10°	3924.7	3935.8	3958.9	3979.4	4025.5	4088.7	4136.5	4174.9	4221.0	4275.7	4312.4
12.5°	3888.0	3902.5	3929.0	3966.6	4044.3	4112.6	4169.8	4229.6	4292.8	4340.6	4377.3
15°	3839.3	3856.4	3888.0	3950.3	4044.3	4118.6	4203.1	4261.2	4326.1	4414.9	4491.7
17.5°	3783.0	3800.0	3842.7	3926.4	4025.5	4120.3	4199.7	4277.4	4391.0	4491.7	4577.1
20°	3718.1	3739.4	3792.4	3885.4	3996.4	4096.4	4191.1	4310.7	4433.7	4546.4	4617.3
22.5°	3644.6	3667.7	3728.3	3831.6	3953.7	4056.2	4188.6	4314.1	4449.0	4535.3	4626.7
25°	3559.2	3584.0	3653.2	3763.3	3889.7	4014.4	4165.5	4303.9	4400.4	4513.1	4639.5
27.5°	3467.9	3490.1	3564.4	3683.1	3816.3	3964.0	4125.4	4233.8	4356.0	4497.7	4606.2
30°	3370.5	3391.0	3470.4	3591.7	3734.3	3900.0	4046.0	4153.6	4313.3	4437.1	4551.5
32.5°	3261.2	3289.4	3365.4	3490.9	3639.5	3812.0	3939.2	4085.3	4235.6	4364.5	4507.1
35°	3148.5	3177.5	3253.5	3383.3	3547.3	3708.7	3835.9	3991.3	4143.3	4297.0	4431.1
37.5°	3031.5	3061.4	3135.7	3272.3	3434.6	3584.8	3736.8	3882.0	4053.7	4204.8	4322.7
40°	2910.2	2939.3	3015.3	3157.0	3321.0	3462.7	3623.3	3777.8	3956.3	4089.5	4221.9
42.5°	2784.7	2812.9	2892.3	3040.9	3192.0	3344.9	3505.4	3675.4	3841.9	3985.3	4114.3
45°	2654.1	2683.1	2766.8	2921.3	3059.7	3223.6	3393.6	3566.1	3731.7	3876.0	4000.7
47.5°	2515.7	2547.3	2634.4	2788.1	2924.7	3099.0	3276.6	3449.9	3619.9	3763.3	3894.0
50°	2371.4	2408.1	2499.5	2651.5	2793.2	2975.1	3156.2	3332.9	3507.1	3646.3	3785.5
52.5°	2222.0	2264.7	2370.5	2514.0	2660.9	2848.7	3035.8	3215.9	3391.9	3535.3	3671.9
55°	2061.4	2112.7	2236.5	2368.0	2527.7	2717.2	2909.4	3095.5	3271.5	3415.8	3551.5
57.5°	1895.8	1957.2	2082.8	2220.2	2389.3	2585.7	2781.3	2970.9	3145.9	3285.1	3424.3
60°	1725.8	1796.7	1923.9	2071.7	2250.1	2450.8	2651.5	2836.8	3008.4	3148.5	3276.6
62.5°	1553.3	1632.7	1771.9	1925.6	2111.8	2312.5	2515.7	2701.9	2862.4	2993.9	3134.0
65°	1380.8	1469.6	1625.1	1780.5	1970.9	2174.1	2370.5	2548.2	2702.7	2848.7	2973.4
67.5°	1213.5	1317.6	1475.6	1639.6	1830.9	2031.5	2219.4	2391.0	2552.4	2630.1	2477.3
70°	1055.5	1173.3	1326.2	1500.4	1691.7	1881.2	2062.3	2234.8	2262.9	2102.4	2060.6
72.5°	908.6	1024.7	1186.1	1366.3	1547.3	1725.8	1907.7	1926.5	1808.6	1806.1	1802.7
75°	772.8	889.0	1054.6	1232.2	1398.8	1577.2	1609.7	1558.4	1564.4	1568.7	1561.9
77.5°	647.3	763.4	929.1	1093.0	1256.1	1320.2	1310.8	1338.1	1344.1	1342.4	1328.7
80°	527.7	641.3	797.6	953.0	1039.2	1062.3	1107.6	1132.3	1127.2	1102.4	1060.6
82.5°	412.5	518.3	662.7	766.0	814.7	874.4	910.3	912.9	900.9	884.7	868.5
85°	299.7	390.3	497.8	576.4	640.5	686.6	729.3	754.0	753.2	736.1	713.9
87.5°	181.9	247.6	339.9	429.5	502.1	555.1	592.6	613.1	614.0	604.6	590.1
90°	66.6	131.5	234.8	325.4	398.8	449.2	485.9	501.3	500.4	494.4	480.8
92.5°	65.8	111.0	197.3	274.1	333.0	383.4	420.1	440.6	444.0	438.9	427.8
95°	146.0	164.8	215.2	260.5	297.2	325.4	346.7	355.2	356.9	361.2	359.5
97.5°	210.9	231.4	274.1	324.5	365.5	390.3	386.0	374.0	362.9	347.6	333.9
100°	274.1	300.6	336.5	389.4	439.8	474.8	496.1	508.9	492.7	450.0	409.9
102.5°	330.5	365.5	404.8	452.6	502.1	544.8	579.8	605.4	613.1	608.9	599.5
105°	355.2	398.8	432.9	494.4	545.7	571.3	613.1	672.9	707.1	713.9	716.5
107.5°	374.0	427.8	462.8	528.6	591.8	636.2	628.5	668.6	753.2	795.0	817.2
110°	418.4	473.1	498.7	564.5	637.9	665.2	728.4	697.7	680.6	811.2	877.9



TEST NUMBER: P236575

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	458.6	500.4	522.6	579.0	660.1	707.9	748.1	824.9	790.7	694.3	770.3
115°	488.5	526.9	539.7	580.7	666.9	750.6	772.8	824.1	912.9	901.8	795.9
117.5°	514.1	554.2	566.2	573.8	666.1	760.0	819.8	827.5	883.0	991.4	1019.6
120°	538.0	579.0	601.2	562.7	669.5	760.0	848.0	893.2	881.3	915.4	1032.4
122.5°	561.0	599.5	650.7	559.3	649.8	748.9	850.5	917.1	957.3	926.5	935.9
125°	581.5	611.4	682.3	583.2	610.6	739.5	830.0	936.8	977.8	1012.8	985.4
127.5°	595.2	615.7	690.8	621.7	573.0	707.1	807.0	906.0	994.0	1018.8	1058.9
130°	602.0	618.3	688.3	660.1	544.8	648.1	780.5	859.1	958.1	1031.6	1053.8
132.5°	590.9	604.6	670.3	693.4	552.5	573.0	720.7	821.5	889.0	1000.0	1069.1
135°	570.4	584.9	646.4	703.6	584.1	514.9	634.5	766.0	842.8	915.4	1021.3
137.5°	550.8	564.5	619.1	691.7	625.9	502.1	549.9	688.3	791.6	858.2	922.3
140°	531.2	545.7	589.2	665.2	658.4	532.9	496.1	594.3	713.0	799.3	857.4
142.5°	518.3	532.9	564.5	631.9	675.5	592.6	490.2	512.4	612.3	718.2	793.3
145°	511.5	524.3	545.7	601.2	662.7	636.2	524.3	474.8	521.8	609.7	697.7
147.5°	516.6	524.3	536.3	571.3	640.5	667.8	596.9	503.8	475.6	516.6	584.9
150°	520.9	527.7	538.8	556.8	618.3	661.8	662.7	571.3	503.0	475.6	500.4
152.5°	518.3	528.6	547.4	561.9	602.9	654.1	683.2	653.3	570.4	509.8	479.9
155°	521.8	529.4	547.4	561.0	584.9	632.8	672.1	688.3	662.7	581.5	531.2
157.5°	526.9	533.7	547.4	559.3	573.8	604.6	649.0	680.6	699.4	690.0	621.7
160°	532.0	538.0	549.9	561.0	569.6	587.5	620.0	661.8	689.1	707.1	708.8
162.5°	537.1	541.4	553.4	563.6	571.3	580.7	596.1	625.1	656.7	677.2	696.8
165°	542.3	545.7	555.1	564.5	573.0	577.3	584.1	595.2	614.0	635.3	651.6
167.5°	545.7	547.4	555.1	563.6	570.4	574.7	577.3	581.5	584.1	588.4	595.2
170°	548.2	549.9	555.1	561.0	565.3	569.6	570.4	572.1	573.0	569.6	562.7
172.5°	550.8	551.6	554.2	557.6	560.2	561.9	562.7	561.0	561.0	557.6	549.9
175°	553.4	553.4	555.1	554.2	554.2	554.2	552.5	549.9	546.5	543.1	535.4
177.5°	553.4	553.4	554.2	553.4	551.6	549.1	545.7	539.7	534.6	526.0	519.2
180°	525.2	525.2	525.2	525.2	525.2	525.2	525.2	525.2	525.2	525.2	525.2



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CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9	3981.9
2.5°	4016.9	4006.7	4001.6	4010.1	4026.3	4032.3	4021.2	4000.7
5°	4114.3	4120.3	4125.4	4147.6	4168.1	4177.5	4166.4	4149.3
7.5°	4227.0	4239.8	4256.0	4288.5	4321.8	4333.8	4324.4	4315.0
10°	4345.7	4357.7	4373.9	4402.9	4436.2	4449.0	4444.8	4437.9
12.5°	4433.7	4478.9	4519.9	4569.4	4630.1	4644.6	4643.7	4635.2
15°	4563.5	4606.2	4657.4	4718.0	4772.7	4789.8	4790.6	4780.4
17.5°	4659.1	4701.8	4729.1	4777.8	4850.4	4870.0	4864.1	4854.7
20°	4684.7	4738.5	4806.8	4884.5	4949.4	4973.4	4980.2	4979.3
22.5°	4729.1	4802.6	4874.3	4936.6	4988.7	5007.5	5011.8	5005.8
25°	4739.4	4794.9	4869.2	4946.9	5015.2	5045.9	5059.6	5057.9
27.5°	4699.2	4779.5	4881.1	4965.7	5028.0	5054.5	5060.5	5059.6
30°	4675.3	4766.7	4858.1	4921.3	4965.7	4990.4	5001.5	5005.8
32.5°	4624.9	4696.7	4784.6	4861.5	4911.0	4934.9	4946.0	4952.0
35°	4528.5	4619.8	4715.5	4788.1	4826.5	4845.3	4849.5	4859.8
37.5°	4440.5	4535.3	4620.7	4682.2	4720.6	4744.5	4755.6	4765.8
40°	4338.9	4425.1	4516.5	4585.7	4624.9	4643.7	4653.1	4660.0
42.5°	4226.2	4325.2	4417.4	4478.1	4509.7	4529.3	4544.7	4545.5
45°	4122.8	4221.0	4305.6	4369.6	4406.3	4430.2	4445.6	4444.8
47.5°	4022.1	4114.3	4200.5	4265.4	4303.0	4329.5	4344.0	4349.1
50°	3910.2	4005.8	4092.9	4157.8	4198.8	4230.4	4246.7	4253.5
52.5°	3800.0	3894.0	3980.2	4052.0	4099.8	4128.8	4143.3	4147.6
55°	3677.9	3773.6	3857.3	3935.0	3993.0	4030.6	4056.2	4062.2
57.5°	3547.3	3641.2	3739.4	3826.5	3897.4	3948.6	3977.7	3988.8
60°	3406.4	3514.8	3627.5	3730.0	3764.2	3769.3	3744.5	3744.5
62.5°	3278.3	3358.6	3329.5	3215.1	3098.1	3060.5	3038.3	3005.9
65°	2953.8	2763.4	2666.0	2679.7	2698.5	2709.6	2713.0	2709.6
67.5°	2367.1	2351.8	2380.8	2403.8	2413.2	2429.5	2431.2	2430.3
70°	2071.7	2074.2	2105.8	2126.3	2135.7	2148.5	2148.5	2146.8
72.5°	1818.9	1825.7	1847.1	1859.9	1862.4	1865.0	1867.6	1858.2
75°	1565.3	1570.4	1575.5	1583.2	1566.1	1567.8	1555.0	1550.8
77.5°	1314.2	1304.8	1285.2	1266.4	1242.5	1247.6	1232.2	1240.8
80°	1042.7	1035.8	1025.6	1009.4	993.1	996.5	993.1	997.4
82.5°	866.8	871.9	869.3	869.3	858.2	861.6	851.4	855.6
85°	703.6	693.4	690.0	687.4	678.9	680.6	672.1	676.3
87.5°	584.9	581.5	581.5	582.4	579.8	579.0	573.0	575.6
90°	477.4	475.6	475.6	475.6	474.8	472.2	465.4	468.0
92.5°	424.4	421.0	420.1	420.1	419.3	417.6	413.3	414.2
95°	361.2	362.9	364.6	365.5	365.5	364.6	360.4	362.9
97.5°	321.1	311.7	309.1	306.6	304.9	301.4	299.7	299.7
100°	381.7	368.0	357.8	351.0	345.0	339.9	337.3	332.2
102.5°	570.4	555.1	526.9	494.4	473.9	458.6	456.0	444.9
105°	713.0	711.3	707.9	705.4	701.9	697.7	695.1	682.3
107.5°	822.3	830.0	830.9	830.9	826.6	827.5	826.6	820.6
110°	911.2	934.2	949.6	960.7	963.2	961.5	962.4	955.6



TEST NUMBER: P236575

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	936.8	1000.0	1031.6	1055.5	1070.8	1077.7	1079.4	1076.0
115°	717.3	814.7	988.0	1080.2	1126.3	1146.0	1152.8	1151.1
117.5°	962.4	826.6	742.9	743.8	804.4	880.4	942.8	977.8
120°	1115.2	1113.5	1078.5	1008.5	890.7	801.0	759.2	740.4
122.5°	1035.8	1153.7	1211.7	1233.9	1233.9	1224.6	1222.0	1206.6
125°	956.4	1004.2	1100.7	1206.6	1282.6	1318.5	1333.0	1337.3
127.5°	1052.1	1011.9	1013.6	1041.8	1088.8	1126.3	1164.8	1191.2
130°	1103.3	1146.0	1115.2	1081.9	1066.6	1061.4	1063.2	1065.7
132.5°	1095.6	1125.5	1177.6	1212.6	1207.5	1189.5	1169.9	1156.2
135°	1092.2	1125.5	1147.7	1169.0	1203.2	1224.6	1237.4	1244.2
137.5°	1023.0	1096.5	1141.7	1169.9	1188.7	1193.0	1192.1	1193.0
140°	914.6	994.8	1075.1	1118.7	1159.7	1187.0	1194.7	1197.2
142.5°	852.2	894.9	949.6	1005.1	1058.0	1102.4	1128.1	1132.3
145°	778.8	829.2	870.2	901.8	926.5	957.3	992.3	1011.1
147.5°	669.5	741.2	793.3	828.3	853.9	874.4	897.5	904.3
150°	552.5	615.7	672.9	722.4	755.7	777.1	789.0	777.9
152.5°	479.1	508.9	551.6	588.4	612.3	636.2	614.0	602.0
155°	492.7	472.2	472.2	489.3	499.6	479.1	451.7	437.2
157.5°	572.1	529.4	492.7	470.5	448.3	396.2	380.9	377.4
160°	686.6	620.8	579.8	540.5	478.2	444.9	425.3	419.3
162.5°	707.9	707.9	696.8	670.3	607.2	563.6	538.8	530.3
165°	668.6	681.4	690.0	680.6	666.1	649.8	638.7	635.3
167.5°	607.2	623.4	631.9	633.6	643.9	638.7	619.1	615.7
170°	556.8	558.5	563.6	567.9	584.9	590.9	580.7	561.9
172.5°	538.8	532.9	528.6	532.0	544.8	561.9	558.5	559.3
175°	524.3	510.7	504.7	511.5	525.2	549.9	575.6	590.9
177.5°	508.1	491.0	483.3	490.2	504.7	532.0	575.6	589.2
180°	525.2	525.2	525.2	525.2	525.2	525.2	525.2	525.2

(END OF REPORT)