

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: P236540

Luminaire Tested: **SKB4-LD5-24-W-UNV-L850-CD4-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236540
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-LD5-24-W-UNV-L850-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) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

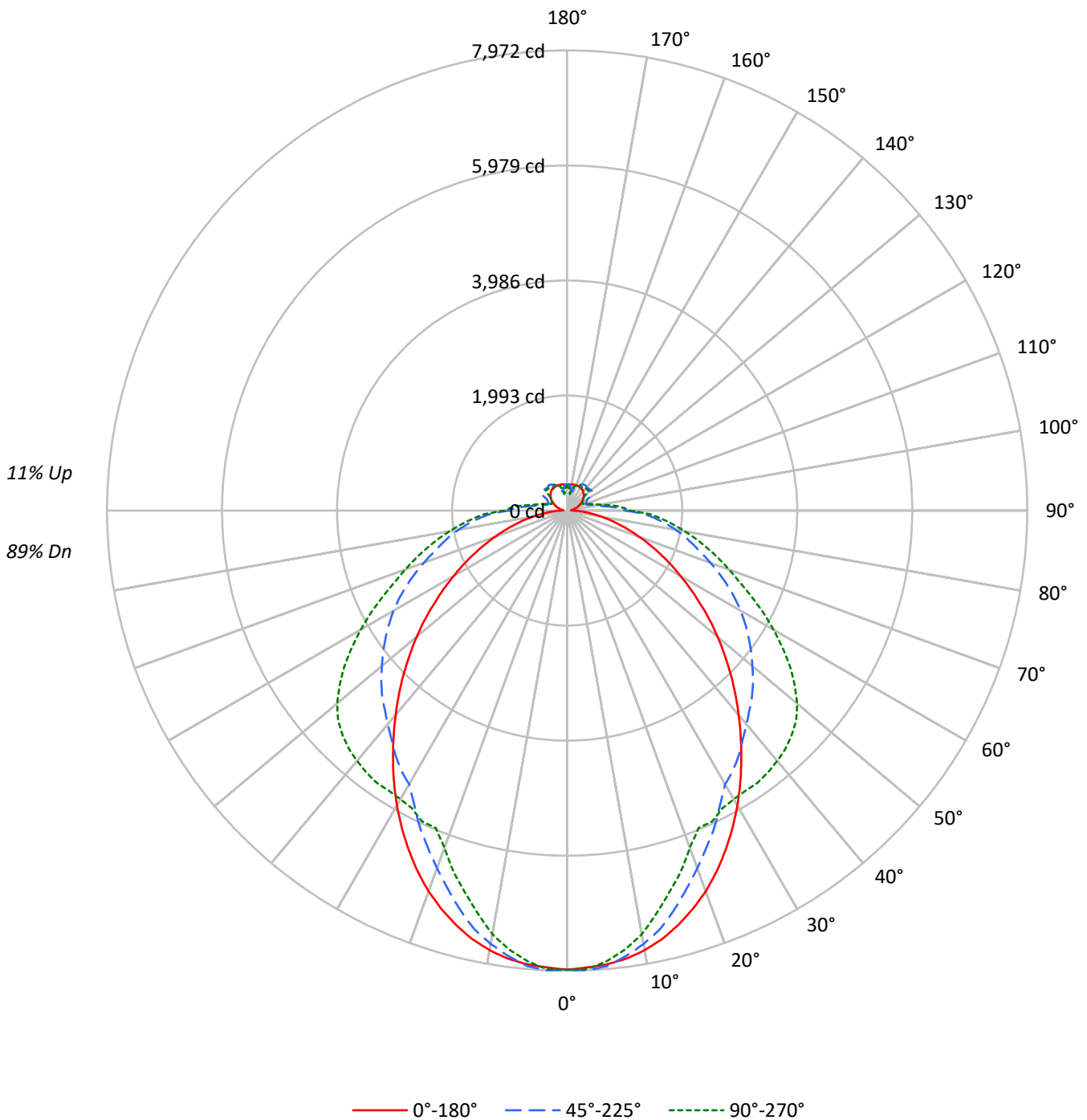
Lumens per Lamp: N/A
Luminaire Lumens: 25252.0 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.07 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 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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CATALOG NUMBER: SKB4-LD5-24-W-UNV-L850-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°	11415	11415	11415
5°	11317	11297	11183
10°	11167	10888	10654
15°	10892	10324	9876
20°	10519	9663	9122
25°	10033	9083	8948
30°	9489	8505	8990
35°	8892	8401	9358
40°	8302	8256	9703
45°	7724	8247	10050
50°	7154	8223	10254
55°	6553	8249	10177
60°	5979	8307	9936
65°	5438	8340	9649
70°	4885	8418	9588
75°	4365	8738	9857
80°	3833	9548	10506
85°	3250	10861	11912



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	745.0	3.0
10°-20°	2011.8	8.0
20°-30°	2826.0	11.2
30°-40°	3352.4	13.3
40°-50°	3589.8	14.2
50°-60°	3409.4	13.5
60°-70°	2844.9	11.3
70°-80°	2151.7	8.5
80°-90°	1421.4	5.6
90°-100°	707.2	2.8
100°-110°	408.2	1.6
110°-120°	355.4	1.4
120°-130°	382.6	1.5
130°-140°	376.4	1.5
140°-150°	300.0	1.2
150°-160°	214.0	0.8
160°-170°	116.4	0.5
170°-180°	39.1	0.2
0°-30°	5582.9	22.1
0°-40°	8935.4	35.4
0°-60°	15934.5	63.1
0°-90°	22352.5	88.5
90°-120°	1470.9	5.8
90°-150°	2529.9	10.0
90°-180°	2899.0	11.5
0°-180°	25252.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7954	7954	7954	7954	7954	
5°	7891	7953	7920	7856	7838	748
15°	7433	7396	7163	6915	6845	2091
25°	6489	6364	6044	5852	5943	2984
35°	5261	5158	5182	5541	5757	3289
45°	4004	4101	4532	5231	5502	3090
55°	2814	3135	3840	4518	4713	2525
65°	1780	2309	3064	3454	3518	1770
75°	940	1679	2254	2479	2515	1001
85°	315	1105	1530	1622	1642	318
90°	92	703	997	1059	1083	64
95°	87	478	750	851	877	73
105°	145	358	385	434	444	157
115°	244	478	363	316	295	242
125°	337	504	542	371	330	300
135°	406	482	530	526	506	312
145°	450	440	538	497	478	282
155°	465	350	491	509	492	215
165°	464	405	352	424	418	131
175°	456	452	451	421	384	44
180°	436	436	436	436	436	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8
2.5°	7923.0	7944.1	7992.5	7999.5	7995.2	7974.0	7962.6	7993.4	7978.4	7972.3	7958.2
5°	7891.4	7913.4	7963.5	7969.6	7964.4	7941.5	7929.2	7956.5	7935.3	7920.4	7894.0
7.5°	7831.6	7847.4	7896.6	7905.4	7892.2	7862.3	7838.6	7850.0	7812.2	7786.7	7756.8
10°	7733.0	7748.9	7797.3	7801.6	7776.1	7732.2	7694.3	7690.8	7657.4	7623.1	7581.8
12.5°	7602.9	7615.2	7661.8	7659.2	7616.1	7567.7	7528.1	7514.9	7470.1	7428.7	7375.9
15°	7433.1	7446.3	7487.6	7473.6	7423.4	7368.9	7325.8	7308.2	7238.7	7163.1	7084.8
17.5°	7237.9	7253.7	7280.1	7259.0	7208.8	7146.4	7096.2	7047.0	6952.0	6871.1	6794.6
20°	7018.0	7017.1	7042.6	7018.0	6964.3	6898.3	6820.9	6749.7	6658.2	6592.3	6516.6
22.5°	6767.3	6775.2	6781.4	6763.8	6705.7	6613.4	6523.7	6458.6	6375.9	6312.6	6239.6
25°	6489.4	6498.1	6499.0	6476.2	6416.4	6310.8	6229.9	6174.5	6096.2	6044.3	5945.8
27.5°	6201.7	6199.1	6214.1	6193.8	6105.9	6003.0	5942.3	5888.6	5827.0	5740.0	5659.9
30°	5898.3	5882.5	5907.1	5881.6	5788.3	5705.7	5646.7	5619.5	5532.4	5474.3	5527.1
32.5°	5581.7	5565.8	5593.1	5560.5	5474.3	5422.5	5379.4	5338.0	5278.2	5343.3	5402.2
35°	5260.6	5244.8	5273.8	5238.6	5172.7	5143.6	5105.8	5073.3	5122.5	5182.3	5235.1
37.5°	4940.5	4925.5	4956.3	4921.1	4884.2	4883.3	4836.7	4888.6	4939.6	4995.9	5094.4
40°	4624.7	4612.4	4643.2	4618.5	4608.0	4618.5	4608.0	4698.6	4734.6	4833.2	4959.8
42.5°	4311.6	4308.9	4334.4	4325.6	4347.6	4360.8	4408.3	4483.1	4547.3	4676.6	4840.2
45°	4003.7	4003.7	4030.1	4044.2	4082.0	4120.7	4189.3	4264.1	4367.9	4532.3	4696.8
47.5°	3699.4	3702.9	3733.7	3774.2	3819.9	3895.5	3968.6	4062.7	4201.6	4367.9	4531.5
50°	3403.0	3406.5	3447.0	3509.4	3566.6	3662.5	3739.9	3862.1	4022.2	4189.3	4373.1
52.5°	3111.9	3117.1	3172.6	3240.3	3322.1	3423.2	3527.9	3681.8	3835.7	4017.8	4206.9
55°	2813.7	2834.8	2901.7	2976.4	3082.8	3187.5	3320.3	3491.0	3654.5	3840.1	4018.7
57.5°	2538.4	2560.4	2634.3	2721.3	2847.1	2967.6	3135.6	3305.4	3478.6	3658.1	3829.6
60°	2271.0	2294.8	2373.0	2475.9	2620.2	2768.8	2950.9	3133.9	3299.2	3472.5	3619.4
62.5°	2026.5	2040.6	2114.4	2242.0	2403.8	2581.5	2779.4	2960.6	3118.0	3271.9	3406.5
65°	1780.2	1796.9	1869.1	2023.0	2205.9	2411.7	2617.6	2788.2	2928.9	3063.5	3181.3
67.5°	1548.9	1570.0	1643.9	1824.2	2030.9	2254.3	2449.6	2606.1	2732.8	2851.5	2952.7
70°	1330.8	1350.1	1439.0	1648.3	1877.8	2096.9	2273.6	2420.5	2533.1	2642.2	2729.3
72.5°	1126.7	1148.7	1259.5	1494.4	1737.1	1939.4	2094.2	2229.7	2339.6	2432.8	2518.2
75°	940.2	961.4	1105.6	1365.1	1588.5	1769.7	1918.3	2049.4	2154.9	2254.3	2334.3
77.5°	764.3	797.8	980.7	1238.4	1434.6	1605.2	1748.6	1886.6	2000.1	2088.1	2147.9
80°	600.7	657.0	872.5	1105.6	1285.0	1455.7	1608.7	1745.9	1840.0	1911.3	1957.9
82.5°	449.5	535.6	762.6	970.1	1147.8	1328.1	1468.9	1588.5	1668.5	1725.7	1760.9
85°	314.9	425.7	647.4	848.8	1023.8	1186.5	1310.5	1413.4	1481.2	1529.5	1556.8
87.5°	209.3	327.2	540.0	719.5	871.6	1017.6	1125.8	1219.1	1279.8	1325.5	1351.9
90°	92.4	246.3	413.4	537.4	651.7	754.7	842.6	920.0	964.9	997.4	1007.1
92.5°	70.4	184.7	325.4	444.2	550.6	654.4	747.6	824.1	876.0	908.6	920.0
95°	87.1	153.0	251.6	339.5	433.6	521.6	594.6	658.8	710.7	750.3	773.1
97.5°	92.4	158.3	239.2	296.4	357.1	434.5	499.6	550.6	582.3	604.3	613.0
100°	105.5	170.6	263.0	292.9	331.6	368.5	423.1	471.4	500.5	518.9	527.7
102.5°	123.1	181.2	285.0	318.4	332.5	358.9	372.9	400.2	428.3	448.6	458.2
105°	145.1	190.9	305.2	365.0	355.3	359.7	371.2	372.1	371.2	385.2	394.0
107.5°	174.2	197.9	317.5	382.6	412.5	380.8	373.8	372.9	365.0	348.3	344.8
110°	199.7	201.4	311.4	394.0	438.9	421.3	392.3	377.3	364.1	352.7	337.7



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CATALOG NUMBER: SKB4-LD5-24-W-UNV-L850-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.8	209.3	312.2	409.9	453.0	483.8	427.5	395.8	370.3	350.9	337.7
115°	243.6	215.5	316.6	415.1	460.9	495.2	511.9	431.0	391.4	363.3	342.1
117.5°	268.3	225.2	323.7	412.5	472.3	506.6	522.5	523.3	427.5	387.0	358.0
120°	291.1	235.7	326.3	412.5	493.4	510.1	529.5	539.2	522.5	424.8	383.5
122.5°	314.9	250.7	329.8	413.4	482.0	515.4	536.5	543.6	543.6	526.9	430.1
125°	336.9	269.1	328.1	414.3	482.0	525.1	533.9	547.1	545.3	541.8	537.4
127.5°	357.1	291.1	323.7	413.4	477.6	523.3	533.0	543.6	547.1	542.7	538.3
130°	373.8	310.5	307.0	408.1	469.7	519.8	534.8	539.2	545.3	543.6	536.5
132.5°	388.8	329.0	294.7	403.7	464.4	515.4	538.3	538.3	538.3	540.0	534.8
135°	405.5	358.9	298.2	396.7	459.1	505.7	534.8	546.2	534.8	530.4	530.4
137.5°	419.5	389.6	303.4	387.0	452.1	496.9	529.5	544.4	527.7	526.9	522.5
140°	431.9	416.9	314.9	373.8	443.3	489.0	517.2	539.2	543.6	518.9	518.9
142.5°	444.2	440.7	333.4	345.7	431.0	477.6	505.7	529.5	540.9	540.0	509.3
145°	450.3	453.9	353.6	324.6	415.1	464.4	494.3	516.3	533.0	538.3	534.8
147.5°	454.7	459.1	368.5	322.8	394.9	448.6	482.9	504.9	520.7	532.1	533.0
150°	459.1	461.8	390.5	331.6	360.6	431.9	467.9	492.6	508.4	519.8	525.1
152.5°	463.5	464.4	422.2	350.1	333.4	409.9	449.5	476.7	494.3	506.6	511.0
155°	465.3	466.2	447.7	372.9	331.6	369.4	426.6	456.5	476.7	490.8	496.1
157.5°	467.0	466.2	465.3	390.5	347.4	335.1	395.8	432.7	455.6	472.3	480.2
160°	466.2	465.3	471.4	423.1	370.3	335.1	340.4	400.2	427.5	447.7	458.2
162.5°	465.3	464.4	467.9	452.1	390.5	356.2	332.5	337.7	387.0	416.9	430.1
165°	463.5	462.6	464.4	467.9	430.1	380.8	353.6	334.2	329.8	351.8	386.1
167.5°	461.8	460.9	461.8	465.3	459.1	423.1	382.6	362.4	342.1	326.3	322.8
170°	460.0	459.1	459.1	459.1	462.6	457.4	432.7	400.2	373.8	361.5	341.3
172.5°	458.2	457.4	457.4	457.4	456.5	456.5	460.9	453.0	435.4	415.1	390.5
175°	455.6	454.7	454.7	454.7	453.0	451.2	451.2	451.2	449.5	451.2	448.6
177.5°	453.9	453.0	453.0	452.1	450.3	448.6	448.6	447.7	444.2	442.4	438.0
180°	436.3	436.3	436.3	436.3	436.3	436.3	436.3	436.3	436.3	436.3	436.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8	7953.8
2.5°	7929.2	7942.4	7960.8	7938.0	7941.5	7960.0	7954.7	7950.3
5°	7859.7	7865.0	7871.1	7841.2	7839.5	7855.3	7839.5	7837.7
7.5°	7717.2	7714.6	7719.9	7680.3	7677.6	7690.8	7678.5	7671.5
10°	7541.3	7534.3	7529.9	7487.6	7473.6	7477.1	7464.8	7454.2
12.5°	7307.3	7272.2	7246.7	7199.2	7178.9	7177.2	7154.3	7147.3
15°	7010.1	6973.1	6940.6	6889.6	6876.4	6880.8	6862.3	6844.7
17.5°	6723.3	6686.4	6654.7	6600.2	6589.6	6595.8	6560.6	6554.4
20°	6448.0	6405.8	6378.5	6317.8	6292.3	6286.2	6229.0	6214.1
22.5°	6182.4	6118.2	6040.8	5981.9	5971.3	5980.1	5972.2	5948.4
25°	5850.8	5815.6	5834.1	5870.1	5922.9	5959.0	5960.7	5943.2
27.5°	5669.6	5740.0	5791.0	5797.1	5816.5	5839.4	5840.2	5818.3
30°	5592.2	5616.0	5641.5	5684.6	5741.7	5780.4	5790.1	5772.5
32.5°	5428.6	5490.2	5558.8	5624.8	5696.0	5747.9	5764.6	5751.4
35°	5309.9	5398.7	5494.6	5586.9	5674.0	5736.5	5763.7	5756.7
37.5°	5198.2	5321.3	5441.8	5552.6	5640.6	5694.2	5716.2	5715.3
40°	5102.3	5242.1	5361.8	5476.1	5568.5	5631.8	5657.3	5661.7
42.5°	4989.7	5124.3	5266.8	5398.7	5499.0	5565.8	5593.1	5599.2
45°	4845.5	5002.0	5162.1	5300.2	5390.8	5458.5	5491.9	5501.6
47.5°	4702.1	4870.1	5031.9	5167.4	5254.5	5330.1	5367.0	5381.1
50°	4544.7	4712.7	4878.9	5005.5	5087.3	5161.2	5192.0	5200.8
52.5°	4370.5	4542.0	4695.9	4811.2	4871.9	4938.7	4964.2	4966.8
55°	4188.4	4342.4	4471.7	4564.9	4624.7	4689.8	4709.1	4712.7
57.5°	3976.5	4110.2	4222.7	4308.9	4353.8	4408.3	4420.6	4425.0
60°	3750.4	3865.6	3959.8	4031.0	4067.9	4111.0	4121.6	4127.7
62.5°	3519.1	3604.4	3692.4	3755.7	3779.4	3818.1	3826.1	3829.6
65°	3271.9	3347.6	3430.3	3478.6	3495.4	3519.1	3517.3	3518.2
67.5°	3029.2	3096.9	3157.6	3207.7	3223.6	3232.4	3238.5	3232.4
70°	2789.9	2846.2	2908.7	2943.0	2972.0	2974.7	2985.2	2982.6
72.5°	2580.6	2635.1	2685.3	2715.2	2740.7	2740.7	2753.9	2746.0
75°	2388.0	2429.3	2468.0	2490.9	2512.9	2508.5	2521.7	2514.6
77.5°	2186.6	2218.2	2247.3	2272.8	2292.1	2299.2	2300.0	2292.1
80°	1986.9	2011.5	2033.5	2055.5	2072.2	2067.8	2079.3	2072.2
82.5°	1780.2	1798.7	1818.9	1838.3	1853.2	1856.7	1857.6	1850.6
85°	1572.6	1591.1	1614.9	1628.1	1642.1	1646.5	1647.4	1642.1
87.5°	1366.8	1385.3	1409.0	1422.2	1437.2	1440.7	1441.6	1437.2
90°	1021.2	1039.6	1050.2	1068.7	1073.9	1081.9	1071.3	1082.7
92.5°	935.8	951.7	964.9	978.9	986.0	990.4	986.0	991.3
95°	801.3	825.9	842.6	860.2	869.0	876.0	875.2	876.9
97.5°	627.1	648.2	669.3	692.2	702.8	712.4	711.6	712.4
100°	540.9	553.2	562.9	573.5	577.9	578.7	577.9	578.7
102.5°	470.6	482.9	493.4	503.1	505.7	509.3	508.4	506.6
105°	407.2	419.5	430.1	438.9	442.4	445.9	445.9	444.2
107.5°	354.5	363.3	372.9	380.8	385.2	387.0	388.8	387.0
110°	325.4	323.7	328.1	333.4	336.0	337.7	336.0	335.1



TEST NUMBER: P236540

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L850-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	330.7	322.8	311.4	303.4	302.6	302.6	299.0	297.3
115°	329.0	322.8	317.5	314.0	309.6	305.2	299.0	294.7
117.5°	339.5	326.3	316.6	312.2	308.7	305.2	300.8	297.3
120°	359.7	342.1	328.1	319.3	313.1	307.8	301.7	298.2
122.5°	390.5	366.8	349.2	336.9	329.0	321.0	314.9	310.5
125°	446.8	404.6	379.1	362.4	351.8	342.1	334.2	329.8
127.5°	536.5	496.9	431.0	402.0	385.2	371.2	361.5	356.2
130°	534.8	533.9	531.3	509.3	447.7	423.9	409.0	401.1
132.5°	532.1	533.0	530.4	526.9	523.3	517.2	510.1	507.5
135°	530.4	528.6	526.9	525.1	520.7	515.4	508.4	505.7
137.5°	524.2	525.1	524.2	520.7	516.3	511.0	504.9	502.2
140°	516.3	515.4	516.3	516.3	513.7	507.5	501.3	497.8
142.5°	511.0	508.4	505.7	504.9	504.0	499.6	493.4	491.7
145°	520.7	499.6	498.7	496.1	493.4	488.2	482.0	478.5
147.5°	532.1	527.7	499.6	485.5	484.6	480.2	474.1	470.6
150°	528.6	527.7	522.5	518.1	511.0	496.1	478.5	466.2
152.5°	517.2	522.5	520.7	518.1	512.8	506.6	498.7	495.2
155°	503.1	508.4	509.3	509.3	506.6	502.2	495.2	491.7
157.5°	488.2	493.4	494.3	495.2	492.6	489.0	482.9	480.2
160°	467.9	475.0	476.7	477.6	475.0	472.3	466.2	463.5
162.5°	441.5	451.2	455.6	456.5	455.6	453.0	447.7	445.1
165°	404.6	416.9	422.2	424.8	425.7	423.9	419.5	417.8
167.5°	329.8	351.8	371.2	382.6	383.5	381.7	378.2	377.3
170°	329.8	321.0	312.2	308.7	304.3	298.2	293.8	290.3
172.5°	370.3	361.5	353.6	343.0	331.6	320.2	312.2	308.7
175°	442.4	436.3	425.7	416.0	405.5	395.8	387.9	384.4
177.5°	435.4	434.5	431.0	425.7	420.4	414.3	406.4	402.0
180°	436.3	436.3	436.3	436.3	436.3	436.3	436.3	436.3

(END OF REPORT)