

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: P236566

Luminaire Tested: **SKB4-LD5-30-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: P236566
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-LD5-30-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

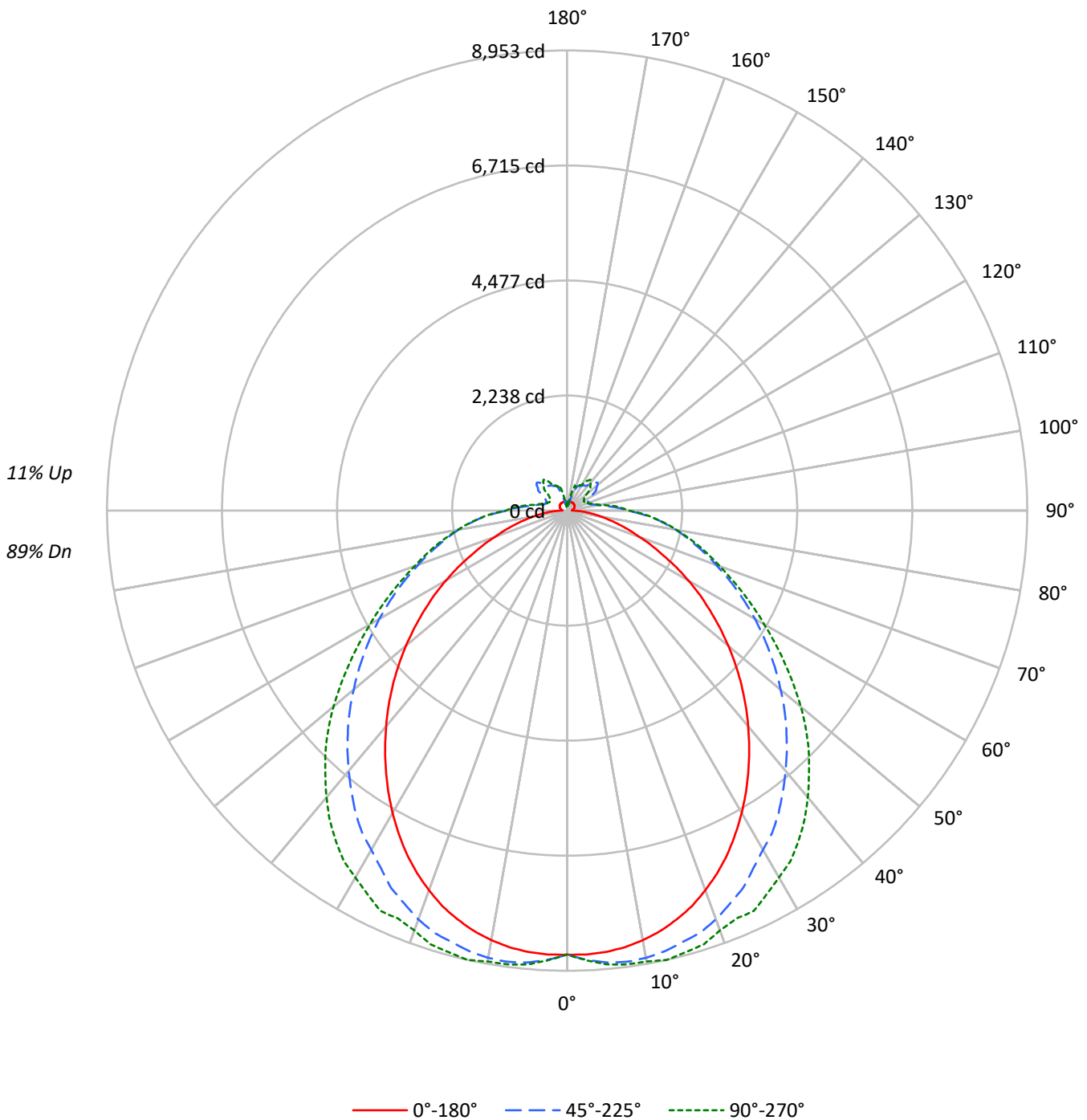
Lumens per Lamp: N/A
Luminaire Lumens: 30615.0 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.4 / 1.41
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 260.5
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	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°	12400	12400	12400
5°	12365	12587	12647
10°	12254	12620	12730
15°	12067	12522	12838
20°	11782	12404	12758
25°	11409	12175	12940
30°	10928	11838	12834
35°	10396	11632	12756
40°	9837	11292	12485
45°	9249	10975	12150
50°	8605	10639	11707
55°	7903	10335	11159
60°	7172	10097	10657
65°	6307	9891	10321
70°	5506	9828	10153
75°	4849	10027	10382
80°	4269	10718	10958
85°	3810	11994	12346



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	839.1	2.7
10°-20°	2444.7	8.0
20°-30°	3709.5	12.1
30°-40°	4444.4	14.5
40°-50°	4547.7	14.9
50°-60°	4092.0	13.4
60°-70°	3293.8	10.8
70°-80°	2434.5	8.0
80°-90°	1582.2	5.2
90°-100°	816.9	2.7
100°-110°	486.0	1.6
110°-120°	426.9	1.4
120°-130°	446.4	1.5
130°-140°	445.9	1.5
140°-150°	330.1	1.1
150°-160°	188.6	0.6
160°-170°	71.8	0.2
170°-180°	14.5	0.0
0°-30°	6993.2	22.8
0°-40°	11437.6	37.4
0°-60°	20077.4	65.6
0°-90°	27387.9	89.5
90°-120°	1729.9	5.7
90°-150°	2952.2	9.6
90°-180°	3227.0	10.5
0°-180°	30615.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8640	8640	8640	8640	8640	
5°	8622	8753	8825	8848	8864	819
15°	8235	8514	8688	8855	8898	2320
25°	7380	7690	8102	8404	8595	3391
35°	6150	6541	7176	7700	7847	3844
45°	4794	5278	6031	6530	6651	3696
55°	3393	4035	4811	5138	5167	3041
65°	2065	2927	3634	3754	3763	2066
75°	1044	2075	2587	2641	2649	1119
85°	369	1348	1689	1696	1702	364
90°	112	902	1157	1193	1190	78
95°	107	598	860	933	946	88
105°	128	441	463	512	514	138
115°	156	610	450	400	383	156
125°	177	560	690	450	404	157
135°	181	508	767	692	642	140
145°	185	419	594	710	716	116
155°	183	136	531	556	539	85
165°	183	146	139	370	407	52
175°	179	178	185	162	121	17
180°	161	161	161	161	161	



TEST NUMBER: P236566

CATALOG NUMBER: SKB4-LD5-30-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°	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3
2.5°	8645.6	8647.7	8694.5	8723.3	8710.5	8713.7	8708.4	8736.0	8764.8	8748.8	8762.6
5°	8622.2	8632.9	8695.6	8739.2	8740.3	8764.8	8774.3	8810.5	8844.5	8825.4	8843.5
7.5°	8569.0	8587.1	8664.8	8726.5	8742.4	8766.9	8772.2	8816.9	8865.8	8856.2	8875.4
10°	8486.1	8514.8	8610.5	8680.7	8690.3	8725.4	8748.8	8793.5	8837.1	8836.0	8856.2
12.5°	8378.6	8410.5	8521.2	8592.4	8608.4	8654.1	8676.5	8726.5	8777.5	8780.7	8805.2
15°	8235.0	8277.6	8396.7	8468.0	8494.6	8532.9	8565.8	8624.3	8674.3	8688.2	8759.4
17.5°	8070.2	8112.7	8231.8	8307.4	8329.7	8380.8	8421.2	8479.7	8573.3	8611.6	8669.0
20°	7860.6	7911.7	8031.9	8110.6	8135.1	8194.6	8238.2	8340.3	8433.9	8462.7	8519.0
22.5°	7633.0	7681.9	7803.2	7888.3	7910.6	7970.2	8052.1	8159.5	8242.5	8277.6	8371.2
25°	7379.8	7422.4	7541.5	7624.5	7650.0	7730.9	7836.2	7939.3	8023.4	8102.1	8168.0
27.5°	7090.5	7136.3	7254.3	7329.8	7368.1	7489.4	7591.5	7691.5	7809.6	7844.7	7942.5
30°	6792.7	6832.0	6949.0	7015.0	7076.7	7206.5	7307.5	7449.0	7529.8	7619.2	7790.4
32.5°	6476.8	6515.1	6627.8	6688.4	6779.9	6917.1	7044.8	7157.5	7278.8	7428.8	7586.2
35°	6150.2	6187.4	6294.9	6355.5	6469.3	6611.9	6755.5	6877.8	7052.2	7175.6	7319.2
37.5°	5817.3	5856.6	5952.4	6021.5	6152.3	6309.8	6451.2	6619.3	6773.5	6893.7	7051.2
40°	5480.1	5509.9	5609.9	5687.5	5834.3	5990.7	6150.2	6331.0	6472.5	6610.8	6789.5
42.5°	5141.8	5167.4	5264.2	5368.4	5516.3	5675.8	5877.9	6013.0	6178.9	6326.8	6498.0
45°	4794.0	4818.5	4915.3	5036.5	5185.5	5370.5	5567.3	5697.1	5873.7	6031.1	6186.4
47.5°	4444.1	4471.7	4569.6	4711.1	4871.7	5069.5	5239.7	5395.0	5595.0	5734.3	5869.4
50°	4093.1	4120.7	4230.3	4385.6	4550.4	4755.7	4922.7	5095.0	5287.6	5420.5	5548.2
52.5°	3743.1	3773.9	3898.4	4054.8	4240.9	4443.0	4626.0	4803.6	4979.1	5120.6	5228.0
55°	3393.2	3431.4	3569.7	3729.3	3934.6	4135.6	4330.3	4505.8	4678.1	4811.0	4917.4
57.5°	3064.5	3101.7	3244.2	3425.1	3634.6	3843.1	4050.5	4216.4	4385.6	4512.1	4604.7
60°	2724.1	2766.6	2927.3	3123.0	3342.1	3567.6	3772.9	3942.0	4104.8	4220.7	4293.0
62.5°	2395.4	2465.6	2617.7	2835.8	3063.4	3300.6	3510.2	3679.3	3828.2	3925.0	3979.2
65°	2064.6	2161.4	2325.2	2566.7	2803.9	3049.6	3263.4	3429.3	3554.8	3633.5	3670.8
67.5°	1783.8	1877.4	2057.2	2317.8	2564.5	2819.8	3033.6	3180.4	3283.6	3349.5	3380.4
70°	1499.8	1613.6	1814.6	2089.1	2348.6	2606.0	2798.6	2928.3	3019.8	3084.7	3113.4
72.5°	1264.7	1372.2	1604.0	1883.8	2154.0	2393.3	2564.5	2687.9	2789.0	2832.6	2846.4
75°	1044.5	1153.0	1408.3	1705.1	1969.9	2180.6	2344.4	2470.9	2547.5	2586.9	2600.7
77.5°	847.8	972.2	1247.7	1541.3	1785.9	1982.7	2147.6	2253.9	2330.5	2362.4	2373.1
80°	669.1	806.3	1106.2	1381.7	1608.3	1799.8	1947.6	2050.8	2119.9	2145.4	2148.6
82.5°	509.5	663.7	968.0	1225.4	1437.0	1620.0	1756.1	1855.1	1904.0	1917.8	1914.6
85°	369.1	532.9	824.4	1062.6	1264.7	1430.7	1549.8	1635.9	1678.5	1689.1	1679.6
87.5°	252.1	412.7	683.9	899.9	1072.2	1219.0	1322.2	1396.6	1438.1	1442.4	1442.4
90°	111.7	309.5	542.5	708.4	844.6	958.4	1040.3	1111.5	1146.7	1157.3	1166.9
92.5°	91.5	238.3	427.6	581.8	708.4	820.1	910.5	980.7	1019.0	1033.9	1041.3
95°	107.4	194.7	318.0	435.0	549.9	646.7	726.5	801.0	840.3	860.5	881.8
97.5°	110.6	191.5	294.6	374.4	445.7	536.1	610.6	661.6	686.1	697.8	716.9
100°	115.9	194.7	318.0	365.9	420.2	471.2	512.7	574.4	604.2	614.8	619.1
102.5°	120.2	191.5	344.6	387.2	414.8	449.9	472.3	487.2	519.1	540.4	552.1
105°	127.6	188.3	342.5	446.7	435.0	447.8	464.8	474.4	490.4	462.7	480.8
107.5°	142.5	188.3	334.0	486.1	485.0	465.9	465.9	464.8	463.8	442.5	455.3
110°	151.0	161.7	323.4	475.5	547.8	506.3	484.0	468.0	453.1	442.5	432.9



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CATALOG NUMBER: SKB4-LD5-30-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°	153.2	144.7	320.2	460.6	603.1	598.9	520.1	487.2	460.6	437.2	423.3
115°	156.4	127.6	315.9	431.9	588.2	631.8	614.8	524.4	481.8	449.9	426.5
117.5°	161.7	127.6	320.2	427.6	570.1	693.5	662.7	603.1	520.1	474.4	442.5
120°	168.1	129.8	337.2	429.7	541.4	673.3	710.5	683.9	595.7	515.9	471.2
122.5°	172.3	131.9	311.7	426.5	506.3	648.8	751.0	716.9	690.3	596.7	518.0
125°	176.6	134.0	274.4	424.4	506.3	612.7	721.2	799.9	716.9	690.3	620.1
127.5°	179.8	134.0	217.0	427.6	503.1	558.4	687.1	770.1	790.3	715.9	690.3
130°	179.8	129.8	150.0	447.8	491.4	552.1	637.1	735.0	795.6	776.5	714.8
132.5°	178.7	128.7	117.0	409.5	484.0	545.7	585.0	691.4	761.6	804.1	785.0
135°	180.8	143.6	118.1	362.7	481.8	534.0	577.6	612.7	720.1	766.9	801.0
137.5°	183.0	163.8	120.2	302.1	508.4	520.1	569.1	597.8	653.1	726.5	763.7
140°	184.0	179.8	122.3	210.6	464.8	510.6	553.1	584.0	605.2	660.5	721.2
142.5°	186.1	194.7	124.5	140.4	409.5	522.3	534.0	570.1	591.4	606.3	648.8
145°	185.1	201.0	122.3	114.9	336.1	502.1	521.2	547.8	576.5	593.5	605.2
147.5°	183.0	196.8	120.2	114.9	228.7	437.2	545.7	531.8	556.3	578.6	591.4
150°	181.9	192.5	129.8	117.0	144.7	361.7	494.6	528.7	537.2	557.4	574.4
152.5°	183.0	190.4	158.5	121.3	115.9	252.1	421.2	522.3	526.5	537.2	549.9
155°	183.0	188.3	180.8	122.3	119.1	152.1	326.6	442.5	523.3	530.8	529.7
157.5°	183.0	187.2	196.8	128.7	122.3	117.0	188.3	345.7	440.4	507.4	552.1
160°	183.0	185.1	200.0	158.5	124.5	121.3	122.3	194.7	332.9	414.8	473.3
162.5°	183.0	184.0	193.6	186.1	130.8	123.4	121.3	122.3	175.5	281.9	360.6
165°	183.0	183.0	188.3	201.0	168.1	124.5	123.4	121.3	117.0	139.3	181.9
167.5°	181.9	181.9	185.1	193.6	194.7	161.7	125.5	122.3	120.2	118.1	114.9
170°	180.8	179.8	183.0	186.1	193.6	193.6	171.3	142.5	121.3	119.1	118.1
172.5°	179.8	178.7	179.8	181.9	183.0	187.2	193.6	189.3	174.4	155.3	135.1
175°	178.7	177.6	177.6	177.6	177.6	177.6	178.7	179.8	181.9	185.1	188.3
177.5°	177.6	175.5	175.5	175.5	174.4	173.4	172.3	171.3	170.2	169.1	168.1
180°	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3	8640.3
2.5°	8753.1	8776.5	8760.5	8743.5	8741.4	8765.8	8763.7	8759.4
5°	8841.3	8864.7	8855.2	8841.3	8841.3	8867.9	8864.7	8863.7
7.5°	8876.4	8905.2	8895.6	8881.8	8891.3	8906.2	8909.4	8905.2
10°	8869.0	8904.1	8898.8	8886.0	8886.0	8908.4	8905.2	8906.2
12.5°	8820.1	8869.0	8888.1	8896.6	8915.8	8947.7	8949.8	8953.0
15°	8802.0	8850.9	8854.1	8855.2	8874.3	8902.0	8896.6	8897.7
17.5°	8704.1	8743.5	8749.9	8759.4	8789.2	8833.9	8832.8	8845.6
20°	8569.0	8635.0	8672.2	8682.8	8694.5	8713.7	8691.4	8691.4
22.5°	8448.8	8473.3	8468.0	8493.5	8551.0	8589.2	8595.6	8593.5
25°	8214.8	8294.6	8360.6	8447.8	8533.9	8581.8	8591.4	8594.6
27.5°	8072.3	8209.5	8281.8	8329.7	8373.3	8399.9	8416.9	8411.6
30°	7936.1	8008.5	8065.9	8146.8	8205.3	8228.7	8242.5	8241.4
32.5°	7690.4	7787.2	7857.4	7943.6	8039.3	8072.3	8086.1	8087.2
35°	7444.7	7558.5	7661.7	7738.3	7807.4	7830.8	7845.7	7846.8
37.5°	7201.1	7311.8	7404.3	7477.7	7540.5	7562.8	7577.7	7587.3
40°	6925.6	7026.7	7117.1	7203.3	7267.1	7271.3	7285.2	7285.2
42.5°	6620.4	6728.9	6823.5	6891.6	6946.9	6950.1	6963.9	6962.9
45°	6308.7	6408.7	6501.2	6559.7	6618.2	6628.9	6645.9	6651.2
47.5°	5987.5	6089.6	6173.6	6232.1	6278.9	6292.8	6303.4	6304.5
50°	5659.9	5767.3	5838.6	5882.2	5919.4	5932.2	5939.6	5937.5
52.5°	5339.7	5436.5	5486.5	5520.5	5557.7	5565.2	5567.3	5547.1
55°	5016.3	5092.9	5127.0	5149.3	5171.6	5187.6	5186.5	5167.4
57.5°	4683.4	4750.4	4761.0	4791.9	4801.5	4815.3	4807.8	4791.9
60°	4352.6	4401.5	4404.7	4433.4	4439.8	4436.6	4439.8	4427.1
62.5°	4021.8	4058.0	4062.2	4088.8	4101.6	4099.4	4101.6	4093.1
65°	3704.8	3738.8	3743.1	3764.4	3778.2	3775.0	3772.9	3763.3
67.5°	3413.4	3440.0	3450.6	3461.2	3467.6	3458.0	3453.8	3446.3
70°	3130.4	3147.4	3150.6	3159.1	3168.7	3160.2	3166.6	3158.1
72.5°	2858.1	2876.2	2889.0	2893.2	2903.9	2893.2	2899.6	2894.3
75°	2614.5	2629.4	2635.8	2646.4	2659.2	2649.6	2653.9	2648.6
77.5°	2383.7	2395.4	2405.0	2408.2	2419.9	2408.2	2410.3	2400.7
80°	2150.8	2156.1	2161.4	2164.6	2176.3	2166.7	2167.8	2161.4
82.5°	1915.7	1922.1	1935.9	1932.7	1943.3	1932.7	1934.8	1939.1
85°	1677.4	1689.1	1697.6	1694.4	1705.1	1700.8	1697.6	1701.9
87.5°	1442.4	1451.9	1462.6	1461.5	1471.1	1466.8	1466.8	1473.2
90°	1165.8	1173.2	1186.0	1199.8	1202.0	1204.1	1199.8	1190.3
92.5°	1042.4	1052.0	1061.6	1071.1	1079.6	1077.5	1075.4	1077.5
95°	894.6	910.5	927.5	939.2	953.1	953.1	953.1	945.6
97.5°	729.7	745.6	759.5	769.0	779.7	780.7	779.7	779.7
100°	620.1	625.4	630.8	637.1	644.6	646.7	644.6	645.7
102.5°	556.3	563.8	568.0	571.2	573.3	573.3	570.1	566.9
105°	491.4	503.1	509.5	514.8	518.0	519.1	517.0	513.8
107.5°	430.8	441.4	452.1	459.5	464.8	467.0	464.8	461.6
110°	414.8	442.5	417.0	405.3	409.5	414.8	413.8	410.6



TEST NUMBER: P236566

CATALOG NUMBER: SKB4-LD5-30-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°	418.0	414.8	401.0	393.6	413.8	423.3	417.0	413.8
115°	409.5	402.1	399.9	399.9	398.9	395.7	388.2	382.9
117.5°	421.2	405.3	394.6	389.3	387.2	384.0	378.7	374.4
120°	442.5	422.3	406.3	397.8	390.4	382.9	375.5	370.2
122.5°	475.5	447.8	426.5	414.8	406.3	397.8	389.3	382.9
125°	531.8	488.2	458.4	442.5	429.7	419.1	408.5	404.2
127.5°	669.1	562.7	511.6	484.0	463.8	448.9	437.2	430.8
130°	688.2	676.5	648.8	559.5	525.5	502.1	484.0	478.7
132.5°	714.8	694.6	677.6	666.9	657.4	643.5	610.6	604.2
135°	816.9	730.8	701.0	683.9	671.2	659.5	647.8	642.5
137.5°	790.3	810.5	781.8	720.1	698.8	682.9	669.1	662.7
140°	751.0	772.2	789.3	798.8	802.0	773.3	738.2	725.4
142.5°	704.2	730.8	748.8	760.5	768.0	768.0	760.5	756.3
145°	616.9	672.2	701.0	718.0	725.4	727.6	721.2	715.9
147.5°	597.8	603.1	615.9	654.2	671.2	678.6	675.4	671.2
150°	581.8	589.3	592.5	593.5	591.4	588.2	584.0	579.7
152.5°	562.7	572.3	575.5	577.6	576.5	573.3	563.8	558.4
155°	537.2	546.7	553.1	558.4	557.4	554.2	544.6	539.3
157.5°	520.1	523.3	527.6	530.8	530.8	528.7	521.2	517.0
160°	513.8	544.6	515.9	507.4	505.2	503.1	495.7	490.4
162.5°	412.7	451.0	478.7	498.9	510.6	520.1	515.9	512.7
165°	258.5	320.2	358.5	381.9	398.9	410.6	408.5	407.4
167.5°	118.1	142.5	161.7	179.8	209.5	239.3	241.5	244.6
170°	113.8	110.6	105.3	100.0	94.7	88.3	81.9	77.6
172.5°	118.1	110.6	106.4	102.1	96.8	89.3	81.9	75.5
175°	183.0	175.5	167.0	157.4	150.0	139.3	126.6	121.3
177.5°	164.9	162.7	159.6	155.3	151.0	143.6	134.0	127.6
180°	160.6	160.6	160.6	160.6	160.6	160.6	160.6	160.6

(END OF REPORT)