

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: P236436

Luminaire Tested: **SKB2-LD5-18-N-UNV-L835-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236436
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24070)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB2-LD5-18-N-UNV-L835-CD2-U all blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
2 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES
Light Source: (476) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

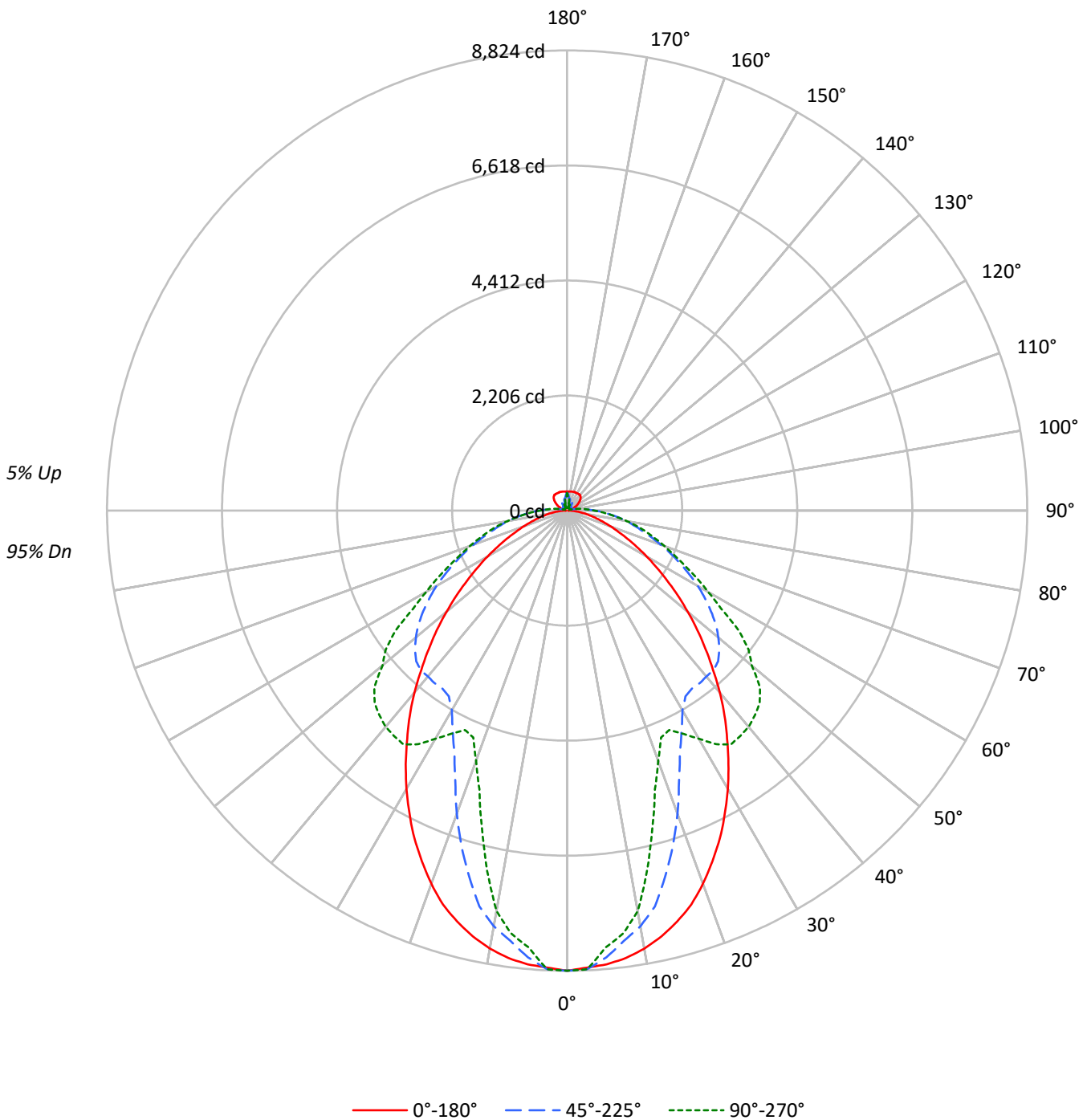
Lumens per Lamp: N/A
Luminaire Lumens: 19855.0 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 0.7 / 1.06
Luminous Opening: Rectangular w/ Sides (W: 1.25' x L: 2' x H: 0.21')
CIE Type: Direct

Input Watts (W): 168.5
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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CATALOG NUMBER: SKB2-LD5-18-N-UNV-L835-CD2-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	50	30	10	50	30	10	0		
RCR																										
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	95					95			
1	107	102	97	93	103	99	95	91	94	90	87	89	86	84	84	82	80	78					78			
2	97	89	82	76	94	86	80	74	82	77	72	78	73	69	74	70	67	65					65			
3	89	78	70	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55					55			
4	81	69	60	54	79	68	59	53	64	57	52	61	55	51	59	54	49	47					47			
5	75	62	53	47	72	61	52	46	58	51	45	55	49	44	53	48	43	41					41			
6	69	56	47	41	67	55	46	40	52	45	40	50	44	39	48	43	38	36					36			
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	44	38	34	32					32			
8	60	47	38	32	58	46	38	32	44	37	32	42	36	31	41	35	31	29					29			
9	56	43	35	29	55	42	34	29	41	34	29	39	33	28	38	32	28	26					26			
10	53	40	32	27	51	39	32	27	38	31	26	36	30	26	35	30	25	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37991	37991	37991
5°	37402	36555	35842
10°	36615	34225	33119
15°	35373	30793	26915
20°	33613	26508	22042
25°	31414	22314	20453
30°	28909	19786	22902
35°	26192	19324	25765
40°	23555	20112	26693
45°	20699	20905	27252
50°	17987	20647	25828
55°	15305	19852	24375
60°	12859	18697	20859
65°	10594	17236	18609
70°	8656	15739	17086
75°	7015	14398	16049
80°	5540	13632	14773
85°	3962	12700	13632



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	807.7	4.1
10°-20°	2024.0	10.2
20°-30°	2557.0	12.9
30°-40°	3028.6	15.3
40°-50°	3230.0	16.3
50°-60°	2849.6	14.4
60°-70°	2105.6	10.6
70°-80°	1399.2	7.0
80°-90°	794.3	4.0
90°-100°	317.2	1.6
100°-110°	127.3	0.6
110°-120°	111.4	0.6
120°-130°	116.8	0.6
130°-140°	113.4	0.6
140°-150°	98.7	0.5
150°-160°	87.3	0.4
160°-170°	59.2	0.3
170°-180°	27.7	0.1
0°-30°	5388.7	27.1
0°-40°	8417.2	42.4
0°-60°	14496.9	73.0
0°-90°	18796.0	94.7
90°-120°	555.9	2.8
90°-150°	884.8	4.5
90°-180°	1059.0	5.3
0°-180°	19855.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8824	8824	8824	8824	8824	
5°	8733	8776	8600	8475	8414	827
15°	8157	7884	7263	6624	6308	2291
25°	6934	6366	5116	4613	4640	3180
35°	5347	4651	4170	5100	5474	3345
45°	3754	3277	4091	4956	5222	2902
55°	2342	2349	3368	3859	4020	2108
65°	1272	1634	2387	2574	2480	1276
75°	586	1099	1484	1609	1565	631
85°	176	716	820	841	802	182
90°	32	457	527	549	521	27
95°	40	255	319	348	329	35
105°	91	125	99	99	89	99
115°	176	162	85	71	54	176
125°	281	230	97	81	61	250
135°	366	213	95	91	69	279
145°	386	145	162	77	63	242
155°	382	241	154	180	164	177
165°	376	264	222	92	52	107
175°	368	349	291	242	250	35
180°	339	339	339	339	339	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6
2.5°	8771.1	8787.3	8829.7	8853.9	8835.8	8817.6	8817.6	8851.9	8799.4	8803.4	8777.2
5°	8732.8	8748.9	8787.3	8811.5	8791.3	8761.0	8730.8	8726.7	8635.9	8599.5	8510.7
7.5°	8654.0	8666.1	8702.5	8706.5	8641.9	8561.1	8488.5	8460.2	8359.2	8324.9	8270.4
10°	8528.8	8536.9	8551.1	8516.7	8417.8	8320.9	8262.3	8238.1	8141.2	8092.7	8011.9
12.5°	8361.3	8359.2	8345.1	8282.5	8183.6	8098.8	8032.1	7973.6	7852.4	7775.7	7648.5
15°	8157.3	8147.2	8100.8	8036.2	7937.2	7830.2	7721.2	7622.2	7422.4	7262.8	7075.1
17.5°	7921.1	7892.8	7832.2	7761.6	7638.4	7489.0	7325.4	7141.7	6921.6	6741.9	6509.7
20°	7614.2	7594.0	7531.4	7452.6	7285.1	7089.2	6875.2	6687.4	6433.0	6188.7	5908.0
22.5°	7277.0	7264.9	7200.2	7101.3	6903.4	6657.1	6455.2	6214.9	5901.9	5603.1	5360.8
25°	6933.7	6905.5	6842.9	6719.7	6489.5	6243.2	6004.9	5702.0	5354.8	5116.5	4948.9
27.5°	6550.1	6536.0	6463.3	6321.9	6073.6	5819.2	5534.5	5187.2	4926.7	4747.0	4593.5
30°	6164.4	6144.2	6069.5	5908.0	5653.6	5366.9	5051.9	4779.3	4579.4	4419.9	4361.3
32.5°	5758.6	5748.5	5667.7	5484.0	5243.7	4928.7	4633.9	4442.1	4272.5	4222.0	4323.0
35°	5346.7	5348.7	5261.9	5072.1	4811.6	4490.6	4290.7	4133.2	4058.5	4169.5	4377.5
37.5°	4959.0	4944.9	4850.0	4666.2	4385.6	4127.1	3991.8	3880.8	3969.6	4173.6	4413.8
40°	4557.2	4545.1	4434.0	4252.3	3975.7	3820.2	3684.9	3727.3	3913.1	4153.4	4466.3
42.5°	4141.3	4145.3	4030.2	3850.5	3622.3	3525.4	3477.0	3614.3	3844.4	4151.3	4452.2
45°	3753.6	3751.6	3642.5	3464.8	3315.4	3238.7	3297.3	3507.2	3775.8	4090.8	4345.2
47.5°	3388.1	3365.9	3267.0	3109.5	3042.8	3008.5	3147.8	3378.0	3684.9	3957.5	4211.9
50°	3018.6	2994.4	2915.6	2796.5	2766.2	2794.5	2984.3	3256.9	3543.6	3785.9	4038.3
52.5°	2671.3	2647.1	2582.5	2519.9	2507.8	2602.7	2820.7	3107.5	3353.8	3596.1	3810.1
55°	2342.2	2322.0	2273.5	2259.4	2281.6	2416.9	2661.2	2917.7	3155.9	3367.9	3565.8
57.5°	2041.3	2021.2	1990.9	2009.0	2065.6	2235.2	2483.5	2721.8	2937.8	3135.7	3303.3
60°	1762.7	1746.6	1744.5	1772.8	1875.8	2065.6	2295.8	2517.9	2709.7	2891.4	3026.7
62.5°	1502.2	1494.2	1516.4	1572.9	1702.1	1896.0	2101.9	2307.9	2477.5	2637.0	2752.1
65°	1272.1	1268.0	1306.4	1387.1	1538.6	1728.4	1922.2	2093.8	2243.3	2386.6	2485.6
67.5°	1066.1	1068.1	1114.6	1225.6	1395.2	1572.9	1740.5	1891.9	2029.2	2144.3	2213.0
70°	884.4	892.5	951.0	1090.3	1266.0	1423.5	1566.9	1710.2	1821.3	1908.1	1964.6
72.5°	726.9	739.0	819.8	975.2	1146.9	1282.2	1417.4	1534.5	1621.4	1679.9	1728.4
75°	585.6	603.7	706.7	876.3	1035.8	1163.0	1278.1	1364.9	1427.5	1484.1	1534.5
77.5°	462.4	480.6	617.9	791.5	936.9	1056.0	1136.8	1213.5	1266.0	1310.4	1354.8
80°	355.4	379.6	543.1	706.7	854.1	942.9	1017.6	1076.2	1112.5	1146.9	1183.2
82.5°	260.5	302.9	474.5	640.1	761.2	854.1	906.6	942.9	967.2	989.4	1003.5
85°	175.7	246.3	411.9	561.3	680.4	751.1	785.4	799.6	807.7	819.8	831.9
87.5°	107.0	195.9	353.3	482.6	571.4	623.9	646.1	656.2	666.3	678.4	686.5
90°	32.3	137.3	272.6	369.5	436.1	478.5	498.7	506.8	514.9	527.0	535.1
92.5°	24.2	86.8	181.7	266.5	331.1	371.5	385.7	393.7	403.8	413.9	420.0
95°	40.4	72.7	117.1	183.7	238.3	272.6	288.7	302.9	310.9	319.0	325.1
97.5°	46.4	88.8	101.0	139.3	177.7	206.0	216.0	220.1	222.1	226.1	240.3
100°	58.6	111.1	123.2	121.1	145.4	163.6	165.6	167.6	165.6	167.6	171.6
102.5°	76.7	127.2	145.4	131.2	131.2	139.3	141.3	135.3	127.2	123.2	123.2
105°	90.9	137.3	163.6	153.5	123.2	127.2	125.2	121.1	111.1	98.9	96.9
107.5°	109.0	145.4	191.8	167.6	143.4	117.1	117.1	113.1	103.0	92.9	84.8
110°	135.3	157.5	214.0	177.7	159.5	127.2	113.1	107.0	101.0	90.9	82.8



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CATALOG NUMBER: SKB2-LD5-18-N-UNV-L835-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	153.5	167.6	206.0	195.9	169.6	139.3	113.1	105.0	94.9	90.9	84.8
115°	175.7	177.7	195.9	222.1	173.6	151.4	121.1	103.0	98.9	84.8	82.8
117.5°	201.9	189.8	181.7	264.5	185.8	157.5	135.3	109.0	92.9	94.9	80.8
120°	228.2	203.9	173.6	260.5	206.0	161.5	143.4	121.1	96.9	84.8	90.9
122.5°	254.4	220.1	187.8	242.3	232.2	169.6	145.4	129.2	107.0	88.8	78.7
125°	280.7	238.3	212.0	220.1	274.6	185.8	145.4	133.3	117.1	96.9	80.8
127.5°	304.9	256.4	242.3	195.9	264.5	203.9	153.5	127.2	119.1	105.0	90.9
130°	329.1	274.6	274.6	171.6	242.3	236.2	163.6	127.2	113.1	107.0	98.9
132.5°	347.3	284.7	282.7	157.5	218.1	254.4	177.7	133.3	107.0	98.9	98.9
135°	365.5	292.8	282.7	179.7	189.8	236.2	208.0	145.4	111.1	94.9	92.9
137.5°	375.6	298.8	280.7	210.0	157.5	214.0	234.2	161.5	121.1	98.9	88.8
140°	383.6	302.9	282.7	244.3	127.2	191.8	218.1	220.1	137.3	109.0	92.9
142.5°	385.7	308.9	284.7	272.6	137.3	161.5	199.9	214.0	175.7	121.1	101.0
145°	385.7	319.0	286.7	272.6	167.6	123.2	179.7	197.9	206.0	161.5	115.1
147.5°	385.7	327.1	284.7	262.5	206.0	109.0	149.4	181.7	193.8	195.9	165.6
150°	381.6	335.2	282.7	264.5	248.4	137.3	107.0	159.5	179.7	185.8	185.8
152.5°	381.6	343.3	282.7	270.6	254.4	179.7	105.0	119.1	161.5	175.7	177.7
155°	381.6	353.3	284.7	274.6	250.4	232.2	141.3	90.9	117.1	153.5	167.6
157.5°	381.6	361.4	290.8	276.6	260.5	242.3	197.9	125.2	84.8	101.0	137.3
160°	381.6	365.5	300.9	276.6	264.5	246.3	236.2	185.8	125.2	88.8	76.7
162.5°	377.6	367.5	319.0	278.6	266.5	254.4	238.3	230.2	199.9	141.3	105.0
165°	375.6	369.5	335.2	290.8	268.5	260.5	252.4	238.3	228.2	222.1	187.8
167.5°	373.5	369.5	353.3	315.0	280.7	262.5	258.4	252.4	240.3	228.2	224.1
170°	371.5	369.5	359.4	339.2	308.9	278.6	264.5	254.4	248.4	242.3	236.2
172.5°	369.5	367.5	363.4	355.4	339.2	315.0	294.8	274.6	260.5	250.4	242.3
175°	367.5	367.5	365.5	361.4	355.4	343.3	335.2	321.0	304.9	290.8	276.6
177.5°	367.5	365.5	365.5	365.5	359.4	353.3	351.3	345.3	335.2	329.1	321.0
180°	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6	8823.6
2.5°	8771.1	8819.6	8835.8	8803.4	8795.4	8817.6	8819.6	8803.4
5°	8476.3	8496.5	8494.5	8456.2	8433.9	8433.9	8421.8	8413.8
7.5°	8250.2	8276.4	8272.4	8232.0	8207.8	8211.8	8201.7	8185.6
10°	7973.6	7983.7	7963.5	7909.0	7858.5	7844.4	7832.2	7797.9
12.5°	7529.4	7468.8	7384.0	7289.1	7212.4	7176.0	7125.5	7079.1
15°	6927.7	6818.6	6687.4	6560.2	6465.3	6390.6	6354.2	6307.8
17.5°	6311.8	6174.5	5990.8	5845.4	5740.4	5673.8	5641.5	5601.1
20°	5685.9	5534.5	5389.1	5284.1	5209.4	5175.1	5136.7	5102.4
22.5°	5195.2	5084.2	4959.0	4868.1	4797.5	4753.1	4718.7	4706.6
25°	4813.6	4702.6	4621.8	4603.6	4601.6	4617.8	4627.9	4640.0
27.5°	4512.8	4514.8	4561.2	4642.0	4714.7	4771.2	4811.6	4825.7
30°	4426.0	4567.3	4692.5	4811.6	4914.6	4983.2	5031.7	5049.9
32.5°	4506.7	4704.6	4848.0	4983.2	5122.6	5223.5	5292.2	5312.4
35°	4601.6	4809.6	5019.6	5181.1	5314.4	5407.3	5455.7	5473.9
37.5°	4698.5	4936.8	5112.5	5241.7	5328.5	5395.1	5437.5	5449.7
40°	4751.0	4936.8	5066.0	5201.3	5304.3	5362.8	5401.2	5413.3
42.5°	4688.4	4862.1	5013.5	5132.7	5225.5	5280.0	5318.4	5326.5
45°	4581.4	4755.1	4900.4	5011.5	5100.3	5165.0	5207.4	5221.5
47.5°	4430.0	4595.6	4728.8	4856.0	4938.8	4977.2	4997.4	5015.5
50°	4213.9	4367.4	4486.5	4577.4	4615.8	4609.7	4607.7	4621.8
52.5°	3981.7	4113.0	4183.7	4252.3	4294.7	4327.0	4359.3	4385.6
55°	3709.2	3791.9	3834.3	3882.8	3923.2	3959.5	3999.9	4020.1
57.5°	3408.3	3468.9	3501.2	3535.5	3539.5	3527.4	3503.2	3501.2
60°	3113.5	3160.0	3188.2	3206.4	3196.3	3170.0	3133.7	3121.6
62.5°	2824.8	2863.1	2877.3	2881.3	2861.1	2830.8	2806.6	2800.5
65°	2538.1	2574.4	2576.4	2572.4	2546.1	2507.8	2487.6	2479.5
67.5°	2263.5	2297.8	2299.8	2285.7	2257.4	2229.1	2215.0	2215.0
70°	2007.0	2037.3	2043.4	2029.2	2011.1	1994.9	1980.8	1978.8
72.5°	1772.8	1807.1	1819.2	1807.1	1795.0	1774.8	1762.7	1764.7
75°	1581.0	1605.2	1611.3	1607.2	1593.1	1576.9	1568.9	1564.8
77.5°	1385.1	1405.3	1413.4	1411.4	1399.3	1381.1	1373.0	1367.0
80°	1211.5	1223.6	1227.6	1215.5	1199.4	1173.1	1165.0	1159.0
82.5°	1015.6	1021.7	1017.6	1009.6	997.5	975.2	967.2	965.1
85°	840.0	846.0	844.0	837.9	829.9	809.7	805.6	801.6
87.5°	692.6	702.7	700.6	698.6	688.5	672.4	666.3	662.3
90°	543.1	551.2	555.3	543.1	541.1	531.0	523.0	520.9
92.5°	426.0	434.1	436.1	430.1	422.0	413.9	407.9	403.8
95°	333.2	343.3	349.3	347.3	345.3	337.2	333.2	329.1
97.5°	254.4	264.5	270.6	270.6	266.5	260.5	258.4	254.4
100°	175.7	183.7	187.8	185.8	185.8	187.8	187.8	185.8
102.5°	127.2	131.2	135.3	135.3	133.3	131.2	129.2	125.2
105°	96.9	96.9	98.9	98.9	96.9	94.9	90.9	88.8
107.5°	78.7	76.7	76.7	74.7	72.7	70.7	66.6	62.6
110°	78.7	72.7	68.7	64.6	60.6	56.5	52.5	50.5



TEST NUMBER: P236436

CATALOG NUMBER: SKB2-LD5-18-N-UNV-L835-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	78.7	74.7	68.7	64.6	60.6	56.5	52.5	48.5
115°	82.8	78.7	72.7	68.7	66.6	62.6	56.5	54.5
117.5°	74.7	74.7	74.7	74.7	72.7	68.7	64.6	60.6
120°	80.8	70.7	66.6	66.6	66.6	64.6	62.6	60.6
122.5°	74.7	84.8	74.7	66.6	60.6	56.5	50.5	48.5
125°	74.7	70.7	76.7	84.8	78.7	72.7	64.6	60.6
127.5°	76.7	72.7	70.7	68.7	64.6	66.6	66.6	66.6
130°	88.8	80.8	72.7	70.7	68.7	64.6	60.6	56.5
132.5°	96.9	90.9	84.8	78.7	72.7	66.6	60.6	56.5
135°	94.9	94.9	92.9	88.8	82.8	78.7	72.7	68.7
137.5°	86.8	90.9	90.9	90.9	88.8	86.8	80.8	78.7
140°	82.8	80.8	82.8	86.8	86.8	84.8	80.8	78.7
142.5°	86.8	80.8	76.7	74.7	74.7	74.7	72.7	70.7
145°	98.9	86.8	78.7	74.7	70.7	66.6	64.6	62.6
147.5°	111.1	98.9	88.8	82.8	74.7	70.7	66.6	62.6
150°	185.8	125.2	103.0	94.9	88.8	80.8	76.7	70.7
152.5°	179.7	183.7	183.7	145.4	105.0	92.9	84.8	80.8
155°	171.6	175.7	179.7	179.7	177.7	175.7	167.6	163.6
157.5°	157.5	167.6	171.6	171.6	171.6	167.6	163.6	159.5
160°	107.0	135.3	151.4	159.5	163.6	159.5	157.5	153.5
162.5°	80.8	72.7	86.8	105.0	117.1	121.1	119.1	121.1
165°	147.4	121.1	101.0	82.8	74.7	66.6	58.6	52.5
167.5°	224.1	220.1	201.9	181.7	167.6	161.5	143.4	137.3
170°	228.2	228.2	228.2	232.2	240.3	248.4	246.3	244.3
172.5°	236.2	234.2	236.2	238.3	240.3	250.4	250.4	246.3
175°	262.5	250.4	246.3	238.3	240.3	248.4	250.4	250.4
177.5°	313.0	304.9	292.8	284.7	284.7	290.8	302.9	278.6
180°	339.2	339.2	339.2	339.2	339.2	339.2	339.2	339.2

(END OF REPORT)