

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: P236434

Luminaire Tested: **SKB2-LD5-15-N-UNV-L840-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236434
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-LD5-15-N-UNV-L840-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) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

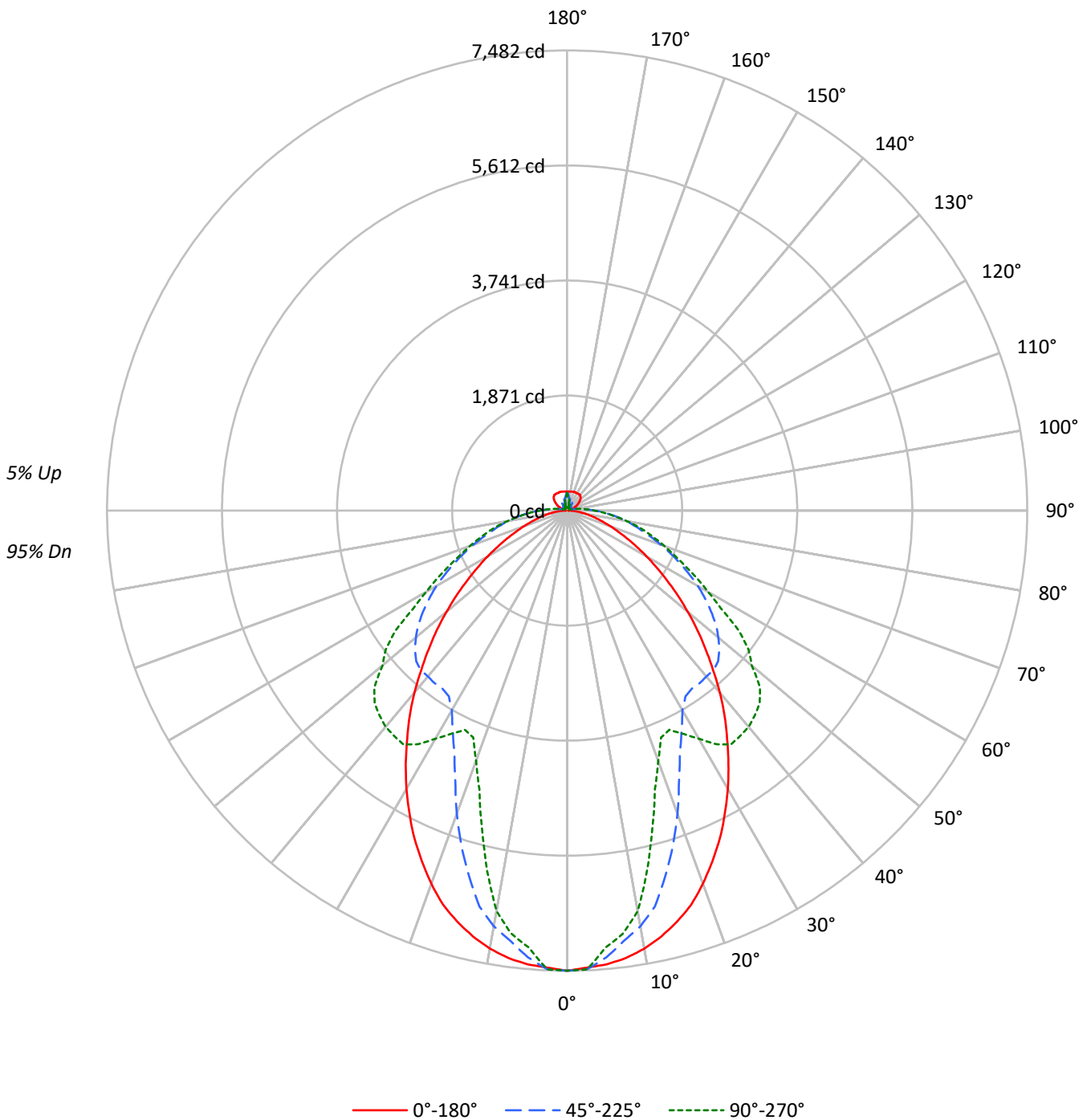
Lumens per Lamp: N/A
Luminaire Lumens: 16835.0 lumens
Efficiency: N/A
Efficacy: 127.2 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 0.7 / 1.06
Luminous Opening: Rectangular w/ Sides (W: 1.25' x L: 2' x H: 0.21')
CIE Type: Direct

Input Watts (W): 132.4
Input Voltage (V): 120
Input Current (A_{in}): 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-LD5-15-N-UNV-L840-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	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																
1	107	102	97	93	103	99	95	91	94	90	87	89	86	84	84	82	80	78																
2	97	89	82	76	94	86	80	74	82	77	72	78	73	69	74	70	67	65																
3	89	78	70	63	86	76	68	62	72	66	60	69	63	59	66	61	57	55																
4	81	69	60	54	79	68	59	53	64	57	52	61	55	51	59	54	49	47																
5	75	62	53	47	72	61	52	46	58	51	45	55	49	44	53	48	43	41																
6	69	56	47	41	67	55	46	40	52	45	40	50	44	39	48	43	38	36																
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	44	38	34	32																
8	60	47	38	32	58	46	38	32	44	37	32	42	36	31	41	35	31	29																
9	56	43	35	29	55	42	34	29	41	34	29	39	33	28	38	32	28	26																
10	53	40	32	27	51	39	32	27	38	31	26	36	30	26	35	30	25	24																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32212	32212	32212
5°	31713	30995	30390
10°	31046	29020	28081
15°	29993	26110	22821
20°	28500	22476	18689
25°	26636	18920	17342
30°	24512	16777	19419
35°	22208	16385	21846
40°	19972	17053	22632
45°	17551	17726	23107
50°	15251	17506	21899
55°	12977	16833	20667
60°	10903	15853	17686
65°	8982	14614	15779
70°	7340	13345	14487
75°	5947	12207	13608
80°	4696	11558	12526
85°	3358	10768	11559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	684.9	4.1
10°-20°	1716.1	10.2
20°-30°	2168.0	12.9
30°-40°	2567.9	15.3
40°-50°	2738.7	16.3
50°-60°	2416.2	14.4
60°-70°	1785.3	10.6
70°-80°	1186.4	7.0
80°-90°	673.5	4.0
90°-100°	268.9	1.6
100°-110°	107.9	0.6
110°-120°	94.5	0.6
120°-130°	99.0	0.6
130°-140°	96.2	0.6
140°-150°	83.7	0.5
150°-160°	74.0	0.4
160°-170°	50.2	0.3
170°-180°	23.5	0.1
0°-30°	4569.0	27.1
0°-40°	7136.9	42.4
0°-60°	12291.8	73.0
0°-90°	15937.1	94.7
90°-120°	471.3	2.8
90°-150°	750.2	4.5
90°-180°	898.0	5.3
0°-180°	16835.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7482	7482	7482	7482	7482	
5°	7404	7441	7292	7186	7134	701
15°	6917	6685	6158	5616	5348	1943
25°	5879	5398	4338	3911	3934	2696
35°	4533	3944	3535	4325	4641	2836
45°	3183	2779	3469	4202	4427	2460
55°	1986	1992	2856	3272	3409	1787
65°	1079	1385	2024	2183	2102	1082
75°	496	932	1258	1364	1327	535
85°	149	607	695	713	680	154
90°	27	388	447	466	442	23
95°	34	217	270	295	279	30
105°	77	106	84	84	75	84
115°	149	138	72	60	46	149
125°	238	195	82	68	51	212
135°	310	181	80	77	58	237
145°	327	123	137	65	53	205
155°	324	205	130	152	139	150
165°	318	224	188	78	44	90
175°	312	296	246	205	212	30
180°	288	288	288	288	288	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5
2.5°	7437.0	7450.7	7486.7	7507.2	7491.8	7476.4	7476.4	7505.5	7461.0	7464.4	7442.2
5°	7404.5	7418.2	7450.7	7471.3	7454.1	7428.5	7402.8	7399.4	7322.3	7291.5	7216.2
7.5°	7337.7	7348.0	7378.8	7382.2	7327.5	7259.0	7197.3	7173.4	7087.8	7058.7	7012.4
10°	7231.6	7238.4	7250.4	7221.3	7137.4	7055.2	7005.6	6985.0	6902.9	6861.8	6793.3
12.5°	7089.5	7087.8	7075.8	7022.7	6938.8	6866.9	6810.4	6760.8	6658.1	6593.0	6485.1
15°	6916.6	6908.0	6868.6	6813.8	6730.0	6639.2	6546.8	6462.9	6293.4	6158.1	5998.9
17.5°	6716.3	6692.3	6640.9	6581.0	6476.6	6349.9	6211.2	6055.4	5868.8	5716.4	5519.6
20°	6456.0	6438.9	6385.8	6319.1	6177.0	6010.9	5829.4	5670.2	5454.5	5247.3	5009.4
22.5°	6170.1	6159.9	6105.1	6021.2	5853.4	5644.5	5473.3	5269.6	5004.2	4750.9	4545.4
25°	5879.1	5855.1	5802.0	5697.6	5502.4	5293.6	5091.6	4834.8	4540.3	4338.3	4196.2
27.5°	5553.8	5541.8	5480.2	5360.3	5149.8	4934.0	4692.7	4398.2	4177.3	4025.0	3894.9
30°	5226.8	5209.7	5146.3	5009.4	4793.7	4550.6	4283.5	4052.4	3882.9	3747.6	3698.0
32.5°	4882.7	4874.1	4805.6	4649.9	4446.1	4179.0	3929.1	3766.4	3622.6	3579.8	3665.4
35°	4533.4	4535.1	4461.5	4300.6	4079.7	3807.5	3638.0	3504.5	3441.2	3535.3	3711.7
37.5°	4204.7	4192.7	4112.3	3956.5	3718.5	3499.4	3384.7	3290.5	3365.8	3538.7	3742.5
40°	3864.0	3853.8	3759.6	3605.5	3371.0	3239.1	3124.4	3160.4	3317.9	3521.6	3787.0
42.5°	3511.4	3514.8	3417.2	3264.8	3071.4	2989.2	2948.1	3064.5	3259.7	3519.9	3775.0
45°	3182.6	3180.9	3088.5	2937.8	2811.1	2746.1	2795.7	2973.8	3201.5	3468.6	3684.3
47.5°	2872.8	2853.9	2770.1	2636.5	2580.0	2550.9	2669.0	2864.2	3124.4	3355.6	3571.3
50°	2559.5	2538.9	2472.2	2371.2	2345.5	2369.4	2530.4	2761.5	3004.6	3210.0	3424.0
52.5°	2265.0	2244.5	2189.7	2136.6	2126.3	2206.8	2391.7	2634.8	2843.7	3049.1	3230.6
55°	1985.9	1968.8	1927.7	1915.8	1934.6	2049.3	2256.4	2473.9	2675.9	2855.7	3023.4
57.5°	1730.9	1713.7	1688.1	1703.5	1751.4	1895.2	2105.8	2307.8	2491.0	2658.8	2800.9
60°	1494.6	1480.9	1479.2	1503.2	1590.5	1751.4	1946.6	2134.9	2297.5	2451.6	2566.3
62.5°	1273.7	1266.9	1285.7	1333.7	1443.2	1607.6	1782.2	1956.8	2100.7	2235.9	2333.5
65°	1078.6	1075.1	1107.7	1176.2	1304.6	1465.5	1629.8	1775.4	1902.1	2023.6	2107.5
67.5°	903.9	905.7	945.0	1039.2	1183.0	1333.7	1475.8	1604.2	1720.6	1818.2	1876.4
70°	749.9	756.7	806.4	924.5	1073.4	1207.0	1328.5	1450.1	1544.2	1617.9	1665.8
72.5°	616.3	626.6	695.1	826.9	972.4	1087.1	1201.8	1301.1	1374.8	1424.4	1465.5
75°	496.5	511.9	599.2	743.0	878.3	986.1	1083.7	1157.3	1210.4	1258.3	1301.1
77.5°	392.1	407.5	523.9	671.1	794.4	895.4	963.9	1028.9	1073.4	1111.1	1148.8
80°	301.3	321.9	460.5	599.2	724.2	799.5	862.9	912.5	943.3	972.4	1003.2
82.5°	220.9	256.8	402.3	542.7	645.4	724.2	768.7	799.5	820.1	838.9	850.9
85°	148.9	208.9	349.3	475.9	577.0	636.9	666.0	678.0	684.8	695.1	705.4
87.5°	90.7	166.1	299.6	409.2	484.5	529.0	547.8	556.4	565.0	575.2	582.1
90°	27.4	116.4	231.1	313.3	369.8	405.7	422.9	429.7	436.6	446.8	453.7
92.5°	20.5	73.6	154.1	226.0	280.8	315.0	327.0	333.8	342.4	351.0	356.1
95°	34.2	61.6	99.3	155.8	202.0	231.1	244.8	256.8	263.7	270.5	275.6
97.5°	39.4	75.3	85.6	118.1	150.7	174.6	183.2	186.6	188.3	191.7	203.7
100°	49.6	94.2	104.4	102.7	123.3	138.7	140.4	142.1	140.4	142.1	145.5
102.5°	65.1	107.9	123.3	111.3	111.3	118.1	119.8	114.7	107.9	104.4	104.4
105°	77.0	116.4	138.7	130.1	104.4	107.9	106.1	102.7	94.2	83.9	82.2
107.5°	92.4	123.3	162.6	142.1	121.6	99.3	99.3	95.9	87.3	78.8	71.9
110°	114.7	133.5	181.5	150.7	135.2	107.9	95.9	90.7	85.6	77.0	70.2



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CATALOG NUMBER: SKB2-LD5-15-N-UNV-L840-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	130.1	142.1	174.6	166.1	143.8	118.1	95.9	89.0	80.5	77.0	71.9
115°	148.9	150.7	166.1	188.3	147.2	128.4	102.7	87.3	83.9	71.9	70.2
117.5°	171.2	160.9	154.1	224.3	157.5	133.5	114.7	92.4	78.8	80.5	68.5
120°	193.5	172.9	147.2	220.9	174.6	137.0	121.6	102.7	82.2	71.9	77.0
122.5°	215.7	186.6	159.2	205.4	196.9	143.8	123.3	109.6	90.7	75.3	66.8
125°	238.0	202.0	179.8	186.6	232.8	157.5	123.3	113.0	99.3	82.2	68.5
127.5°	258.5	217.4	205.4	166.1	224.3	172.9	130.1	107.9	101.0	89.0	77.0
130°	279.1	232.8	232.8	145.5	205.4	200.3	138.7	107.9	95.9	90.7	83.9
132.5°	294.5	241.4	239.7	133.5	184.9	215.7	150.7	113.0	90.7	83.9	83.9
135°	309.9	248.2	239.7	152.4	160.9	200.3	176.3	123.3	94.2	80.5	78.8
137.5°	318.4	253.4	238.0	178.1	133.5	181.5	198.6	137.0	102.7	83.9	75.3
140°	325.3	256.8	239.7	207.2	107.9	162.6	184.9	186.6	116.4	92.4	78.8
142.5°	327.0	261.9	241.4	231.1	116.4	137.0	169.5	181.5	148.9	102.7	85.6
145°	327.0	270.5	243.1	231.1	142.1	104.4	152.4	167.8	174.6	137.0	97.6
147.5°	327.0	277.3	241.4	222.6	174.6	92.4	126.7	154.1	164.4	166.1	140.4
150°	323.6	284.2	239.7	224.3	210.6	116.4	90.7	135.2	152.4	157.5	157.5
152.5°	323.6	291.0	239.7	229.4	215.7	152.4	89.0	101.0	137.0	148.9	150.7
155°	323.6	299.6	241.4	232.8	212.3	196.9	119.8	77.0	99.3	130.1	142.1
157.5°	323.6	306.5	246.5	234.5	220.9	205.4	167.8	106.1	71.9	85.6	116.4
160°	323.6	309.9	255.1	234.5	224.3	208.9	200.3	157.5	106.1	75.3	65.1
162.5°	320.1	311.6	270.5	236.3	226.0	215.7	202.0	195.2	169.5	119.8	89.0
165°	318.4	313.3	284.2	246.5	227.7	220.9	214.0	202.0	193.5	188.3	159.2
167.5°	316.7	313.3	299.6	267.1	238.0	222.6	219.1	214.0	203.7	193.5	190.0
170°	315.0	313.3	304.7	287.6	261.9	236.3	224.3	215.7	210.6	205.4	200.3
172.5°	313.3	311.6	308.2	301.3	287.6	267.1	250.0	232.8	220.9	212.3	205.4
175°	311.6	311.6	309.9	306.5	301.3	291.0	284.2	272.2	258.5	246.5	234.5
177.5°	311.6	309.9	309.9	309.9	304.7	299.6	297.9	292.8	284.2	279.1	272.2
180°	287.6	287.6	287.6	287.6	287.6	287.6	287.6	287.6	287.6	287.6	287.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5	7481.5
2.5°	7437.0	7478.1	7491.8	7464.4	7457.6	7476.4	7478.1	7464.4
5°	7187.1	7204.2	7202.5	7169.9	7151.1	7151.1	7140.8	7134.0
7.5°	6995.3	7017.6	7014.2	6979.9	6959.4	6962.8	6954.2	6940.5
10°	6760.8	6769.3	6752.2	6706.0	6663.2	6651.2	6640.9	6611.8
12.5°	6384.1	6332.8	6260.9	6180.4	6115.3	6084.5	6041.7	6002.3
15°	5873.9	5781.5	5670.2	5562.4	5481.9	5418.5	5387.7	5348.4
17.5°	5351.8	5235.4	5079.6	4956.3	4867.3	4810.8	4783.4	4749.1
20°	4821.1	4692.7	4569.4	4480.4	4417.0	4387.9	4355.4	4326.3
22.5°	4405.0	4310.9	4204.7	4127.7	4067.8	4030.1	4001.0	3990.7
25°	4081.5	3987.3	3918.8	3903.4	3901.7	3915.4	3924.0	3934.2
27.5°	3826.4	3828.1	3867.5	3935.9	3997.6	4045.5	4079.7	4091.7
30°	3752.8	3872.6	3978.7	4079.7	4167.1	4225.3	4266.4	4281.8
32.5°	3821.2	3989.0	4110.6	4225.3	4343.4	4429.0	4487.2	4504.3
35°	3901.7	4078.0	4256.1	4393.0	4506.0	4584.8	4625.9	4641.3
37.5°	3983.9	4185.9	4334.8	4444.4	4518.0	4574.5	4610.5	4620.7
40°	4028.4	4185.9	4295.5	4410.2	4497.5	4547.1	4579.7	4589.9
42.5°	3975.3	4122.5	4251.0	4352.0	4430.7	4476.9	4509.5	4516.3
45°	3884.6	4031.8	4155.1	4249.2	4324.6	4379.4	4415.3	4427.3
47.5°	3756.2	3896.6	4009.6	4117.4	4187.6	4220.1	4237.3	4252.7
50°	3573.0	3703.1	3804.1	3881.2	3913.7	3908.5	3906.8	3918.8
52.5°	3376.1	3487.4	3547.3	3605.5	3641.5	3668.9	3696.3	3718.5
55°	3145.0	3215.2	3251.1	3292.2	3326.5	3357.3	3391.5	3408.6
57.5°	2889.9	2941.3	2968.6	2997.8	3001.2	2990.9	2970.4	2968.6
60°	2639.9	2679.3	2703.3	2718.7	2710.1	2687.9	2657.1	2646.8
62.5°	2395.1	2427.6	2439.6	2443.1	2425.9	2400.3	2379.7	2374.6
65°	2152.0	2182.8	2184.5	2181.1	2158.9	2126.3	2109.2	2102.4
67.5°	1919.2	1948.3	1950.0	1938.0	1914.0	1890.1	1878.1	1878.1
70°	1701.7	1727.4	1732.6	1720.6	1705.2	1691.5	1679.5	1677.8
72.5°	1503.2	1532.3	1542.5	1532.3	1522.0	1504.9	1494.6	1496.3
75°	1340.5	1361.1	1366.2	1362.8	1350.8	1337.1	1330.2	1326.8
77.5°	1174.4	1191.6	1198.4	1196.7	1186.4	1171.0	1164.2	1159.0
80°	1027.2	1037.5	1040.9	1030.6	1016.9	994.7	987.8	982.7
82.5°	861.1	866.3	862.9	856.0	845.7	826.9	820.1	818.3
85°	712.2	717.3	715.6	710.5	703.6	686.5	683.1	679.7
87.5°	587.2	595.8	594.1	592.4	583.8	570.1	565.0	561.5
90°	460.5	467.4	470.8	460.5	458.8	450.3	443.4	441.7
92.5°	361.2	368.1	369.8	364.7	357.8	351.0	345.8	342.4
95°	282.5	291.0	296.2	294.5	292.8	285.9	282.5	279.1
97.5°	215.7	224.3	229.4	229.4	226.0	220.9	219.1	215.7
100°	148.9	155.8	159.2	157.5	157.5	159.2	159.2	157.5
102.5°	107.9	111.3	114.7	114.7	113.0	111.3	109.6	106.1
105°	82.2	82.2	83.9	83.9	82.2	80.5	77.0	75.3
107.5°	66.8	65.1	65.1	63.3	61.6	59.9	56.5	53.1
110°	66.8	61.6	58.2	54.8	51.4	47.9	44.5	42.8



TEST NUMBER: P236434

CATALOG NUMBER: SKB2-LD5-15-N-UNV-L840-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	66.8	63.3	58.2	54.8	51.4	47.9	44.5	41.1
115°	70.2	66.8	61.6	58.2	56.5	53.1	47.9	46.2
117.5°	63.3	63.3	63.3	63.3	61.6	58.2	54.8	51.4
120°	68.5	59.9	56.5	56.5	56.5	54.8	53.1	51.4
122.5°	63.3	71.9	63.3	56.5	51.4	47.9	42.8	41.1
125°	63.3	59.9	65.1	71.9	66.8	61.6	54.8	51.4
127.5°	65.1	61.6	59.9	58.2	54.8	56.5	56.5	56.5
130°	75.3	68.5	61.6	59.9	58.2	54.8	51.4	47.9
132.5°	82.2	77.0	71.9	66.8	61.6	56.5	51.4	47.9
135°	80.5	80.5	78.8	75.3	70.2	66.8	61.6	58.2
137.5°	73.6	77.0	77.0	77.0	75.3	73.6	68.5	66.8
140°	70.2	68.5	70.2	73.6	73.6	71.9	68.5	66.8
142.5°	73.6	68.5	65.1	63.3	63.3	63.3	61.6	59.9
145°	83.9	73.6	66.8	63.3	59.9	56.5	54.8	53.1
147.5°	94.2	83.9	75.3	70.2	63.3	59.9	56.5	53.1
150°	157.5	106.1	87.3	80.5	75.3	68.5	65.1	59.9
152.5°	152.4	155.8	155.8	123.3	89.0	78.8	71.9	68.5
155°	145.5	148.9	152.4	152.4	150.7	148.9	142.1	138.7
157.5°	133.5	142.1	145.5	145.5	145.5	142.1	138.7	135.2
160°	90.7	114.7	128.4	135.2	138.7	135.2	133.5	130.1
162.5°	68.5	61.6	73.6	89.0	99.3	102.7	101.0	102.7
165°	125.0	102.7	85.6	70.2	63.3	56.5	49.6	44.5
167.5°	190.0	186.6	171.2	154.1	142.1	137.0	121.6	116.4
170°	193.5	193.5	193.5	196.9	203.7	210.6	208.9	207.2
172.5°	200.3	198.6	200.3	202.0	203.7	212.3	212.3	208.9
175°	222.6	212.3	208.9	202.0	203.7	210.6	212.3	212.3
177.5°	265.4	258.5	248.2	241.4	241.4	246.5	256.8	236.3
180°	287.6	287.6	287.6	287.6	287.6	287.6	287.6	287.6

(END OF REPORT)