

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: P236461

Luminaire Tested: **SKB2-LD5-18-W-UNV-L840-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236461
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24074)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB2-LD5-18-W-UNV-L840-CD2-U all blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
2 BLADES WITH WIDE DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES
Light Source: (476) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

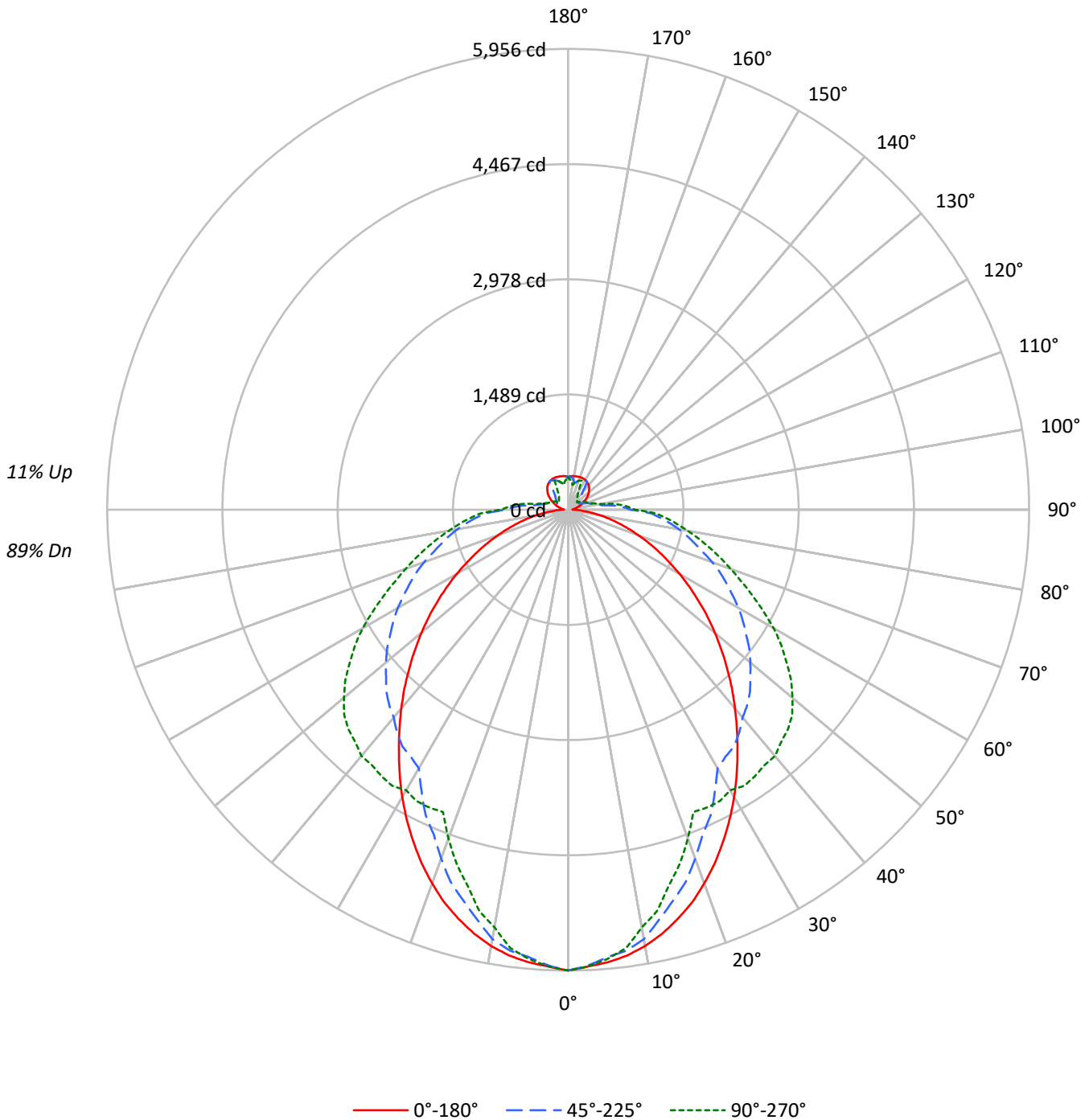
Lumens per Lamp: N/A
Luminaire Lumens: 18431.0 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.03 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 1.25' x L: 2' x H: 0.21')
CIE Type: Semi-Direct

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-W-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	0		
RCR																										
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89								
1	104	99	94	89	100	95	91	86	89	85	82	83	80	77	78	75	73	70								
2	94	85	77	71	90	82	75	69	77	71	66	72	67	63	67	63	60	57								
3	85	74	65	58	82	72	64	57	67	60	55	63	57	52	59	54	50	47								
4	78	65	56	49	75	63	55	48	59	52	46	56	50	45	52	47	43	40								
5	72	58	49	42	69	57	48	41	53	46	40	50	44	39	47	42	37	35								
6	66	52	43	37	63	51	42	36	48	40	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	31	26	51	39	31	26	37	30	25	35	29	24	33	28	23	21								
10	50	37	29	23	48	36	28	23	34	27	23	32	26	22	31	25	21	19								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25642	25642	25642
5°	25148	24675	24825
10°	24585	23832	23277
15°	23733	22178	21441
20°	22688	20551	19532
25°	21444	19004	18720
30°	20113	17279	18984
35°	18684	17314	19792
40°	17328	16982	20489
45°	16016	16976	20951
50°	14737	16754	21132
55°	13445	16535	20882
60°	12145	16437	20490
65°	10798	16306	19722
70°	9444	16312	19282
75°	8087	16447	19362
80°	6598	17271	19932
85°	4774	18493	21792



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	551.2	3.0
10°-20°	1474.8	8.0
20°-30°	2043.0	11.1
30°-40°	2432.4	13.2
40°-50°	2612.2	14.2
50°-60°	2488.9	13.5
60°-70°	2101.1	11.4
70°-80°	1607.3	8.7
80°-90°	1100.2	6.0
90°-100°	545.7	3.0
100°-110°	286.8	1.6
110°-120°	224.7	1.2
120°-130°	204.1	1.1
130°-140°	209.9	1.1
140°-150°	210.6	1.1
150°-160°	187.6	1.0
160°-170°	111.5	0.6
170°-180°	38.9	0.2
0°-30°	4069.1	22.1
0°-40°	6501.4	35.3
0°-60°	11602.5	63.0
0°-90°	16411.1	89.0
90°-120°	1057.2	5.7
90°-150°	1681.8	9.1
90°-180°	2020.0	11.0
0°-180°	18431.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5956	5956	5956	5956	5956	
5°	5872	5881	5805	5834	5828	556
15°	5473	5446	5231	5114	5025	1539
25°	4733	4632	4357	4160	4247	2177
35°	3814	3743	3736	4061	4205	2386
45°	2904	2940	3322	3802	4014	2243
55°	2058	2265	2805	3296	3444	1843
65°	1297	1691	2258	2563	2628	1290
75°	675	1236	1695	1856	1888	720
85°	212	850	1194	1264	1282	218
90°	53	544	807	853	864	40
95°	69	342	595	675	696	60
105°	126	182	298	319	326	135
115°	212	211	204	244	242	210
125°	307	329	187	167	183	273
135°	383	410	233	193	168	295
145°	431	397	412	243	208	269
155°	448	369	420	428	416	207
165°	444	420	364	378	368	126
175°	435	432	421	407	385	42
180°	420	420	420	420	420	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5
2.5°	5909.7	5928.8	5947.9	5957.4	5949.8	5938.3	5940.2	5942.1	5904.0	5896.4	5881.1
5°	5871.6	5890.6	5902.1	5902.1	5890.6	5871.6	5862.0	5854.4	5810.5	5804.8	5793.4
7.5°	5812.5	5827.7	5831.5	5823.9	5801.0	5772.4	5776.2	5787.7	5755.2	5749.5	5734.3
10°	5726.6	5738.1	5734.3	5713.3	5688.5	5688.5	5696.1	5696.1	5656.1	5635.1	5593.2
12.5°	5612.2	5619.9	5610.3	5585.5	5589.3	5579.8	5579.8	5553.1	5476.8	5427.2	5364.3
15°	5473.0	5478.7	5457.8	5453.9	5455.9	5436.8	5402.5	5337.6	5251.8	5230.8	5192.7
17.5°	5322.4	5318.5	5297.6	5303.3	5299.5	5248.0	5185.1	5124.0	5082.1	5045.9	4988.6
20°	5139.3	5137.4	5122.1	5133.6	5105.0	5026.8	4982.9	4931.4	4881.9	4797.9	4696.9
22.5°	4946.7	4941.0	4935.2	4937.2	4895.2	4807.5	4786.5	4723.6	4622.5	4540.5	4513.8
25°	4733.1	4733.1	4733.1	4721.7	4664.5	4599.6	4578.6	4464.2	4397.5	4357.4	4292.6
27.5°	4515.7	4515.7	4519.5	4496.6	4439.4	4393.7	4326.9	4244.9	4214.4	4103.8	3985.6
30°	4288.8	4292.6	4296.4	4260.2	4220.1	4166.7	4096.2	4054.2	3958.9	3859.7	3911.2
32.5°	4050.4	4063.8	4063.8	4031.3	4000.8	3926.5	3901.7	3827.3	3731.9	3783.4	3892.1
35°	3813.9	3842.6	3827.3	3804.4	3772.0	3714.8	3693.8	3585.1	3632.8	3735.8	3804.4
37.5°	3581.3	3611.8	3592.7	3585.1	3539.3	3537.4	3453.5	3459.3	3558.4	3630.9	3695.7
40°	3352.5	3377.3	3367.7	3360.1	3333.4	3329.6	3278.1	3360.1	3442.1	3506.9	3632.8
42.5°	3131.3	3152.2	3144.6	3138.9	3142.7	3108.4	3152.2	3245.7	3310.5	3423.0	3552.7
45°	2904.3	2925.3	2925.3	2927.2	2946.3	2932.9	3022.6	3096.9	3192.3	3321.9	3430.6
47.5°	2686.9	2704.1	2709.8	2728.9	2734.6	2784.2	2879.5	2953.9	3083.6	3192.3	3331.5
50°	2473.3	2488.6	2500.0	2536.3	2540.1	2639.3	2717.4	2829.9	2944.4	3072.1	3213.3
52.5°	2265.5	2276.9	2299.8	2337.9	2366.6	2484.8	2570.6	2696.5	2810.9	2948.2	3072.1
55°	2057.6	2071.0	2103.4	2133.9	2208.3	2320.8	2431.4	2553.4	2685.0	2805.2	2944.4
57.5°	1857.4	1874.6	1907.0	1945.1	2053.8	2168.2	2296.0	2421.9	2551.5	2677.4	2801.3
60°	1664.8	1682.0	1716.3	1771.6	1903.2	2029.0	2160.6	2294.1	2419.9	2542.0	2643.1
62.5°	1476.0	1493.2	1523.7	1615.2	1750.6	1897.4	2030.9	2166.3	2284.6	2393.3	2500.0
65°	1296.7	1313.9	1344.4	1468.4	1613.3	1767.8	1912.7	2034.7	2151.1	2257.9	2358.9
67.5°	1127.0	1142.3	1180.4	1333.0	1489.3	1647.6	1786.8	1908.9	2025.2	2126.3	2200.6
70°	964.9	980.2	1035.5	1205.2	1373.0	1533.2	1662.9	1792.6	1899.3	1977.5	2044.3
72.5°	814.3	825.7	909.6	1090.8	1266.2	1415.0	1556.1	1674.3	1762.0	1826.9	1886.0
75°	675.1	684.6	804.7	993.5	1161.3	1310.1	1441.7	1544.6	1622.8	1695.3	1752.5
77.5°	545.4	566.4	713.2	903.9	1060.3	1207.1	1317.7	1424.5	1514.1	1577.1	1620.9
80°	423.3	459.6	633.1	812.4	970.6	1092.7	1218.6	1327.3	1401.6	1453.1	1483.6
82.5°	310.8	370.0	554.9	726.6	867.7	1008.8	1123.2	1218.6	1283.4	1323.4	1350.1
85°	211.7	295.6	476.7	640.7	787.6	913.4	1016.4	1102.2	1159.4	1193.8	1218.6
87.5°	131.6	236.5	411.9	564.5	692.2	806.6	903.9	984.0	1037.4	1071.7	1088.9
90°	53.4	154.5	293.7	402.4	495.8	591.2	671.3	738.0	783.8	806.6	820.0
92.5°	55.3	112.5	209.8	308.9	396.7	492.0	575.9	646.5	692.2	718.9	732.3
95°	68.7	104.9	154.5	236.5	307.0	377.6	438.6	493.9	554.9	595.0	619.8
97.5°	78.2	118.2	137.3	190.7	255.5	314.7	362.3	400.5	425.3	442.4	455.8
100°	93.4	141.1	150.7	154.5	219.3	274.6	312.7	343.3	364.2	377.6	385.2
102.5°	108.7	156.4	167.8	158.3	177.3	238.4	280.3	307.0	320.4	329.9	335.6
105°	125.9	169.7	192.6	175.4	164.0	200.2	247.9	278.4	291.8	297.5	299.4
107.5°	146.8	181.2	226.9	188.8	175.4	165.9	211.7	247.9	268.9	276.5	278.4
110°	167.8	190.7	249.8	206.0	190.7	171.6	167.8	215.5	240.3	255.5	263.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	188.8	198.3	265.1	234.6	202.1	186.9	167.8	175.4	211.7	230.7	242.2
115°	211.7	209.8	272.7	282.2	219.3	202.1	183.1	165.9	175.4	204.0	221.2
117.5°	234.6	219.3	282.2	320.4	242.2	213.6	196.4	177.3	164.0	171.6	196.4
120°	259.3	236.5	289.9	343.3	278.4	228.8	209.8	192.6	175.4	164.0	164.0
122.5°	282.2	255.5	297.5	349.0	333.7	251.7	221.2	204.0	188.8	173.5	164.0
125°	307.0	276.5	305.1	354.7	375.7	282.2	238.4	215.5	200.2	186.9	173.5
127.5°	328.0	299.4	308.9	358.5	394.7	324.2	259.3	226.9	209.8	198.3	185.0
130°	347.1	322.3	314.7	360.4	396.7	398.6	289.9	244.1	221.2	207.9	196.4
132.5°	364.2	345.2	318.5	362.3	396.7	425.3	333.7	268.9	236.5	217.4	206.0
135°	383.3	366.1	322.3	364.2	396.7	423.3	413.8	305.1	257.4	232.7	215.5
137.5°	398.6	385.2	326.1	364.2	396.7	421.4	440.5	356.6	288.0	251.7	232.7
140°	411.9	402.4	339.4	364.2	394.7	419.5	434.8	431.0	331.8	282.2	253.6
142.5°	423.3	413.8	364.2	362.3	390.9	413.8	431.0	440.5	421.4	326.1	284.1
145°	431.0	423.3	385.2	358.5	385.2	408.1	425.3	436.7	444.3	411.9	329.9
147.5°	436.7	431.0	404.3	352.8	379.5	402.4	419.5	431.0	438.6	442.4	423.3
150°	442.4	438.6	417.6	360.4	373.8	394.7	411.9	425.3	432.9	436.7	440.5
152.5°	446.2	444.3	429.1	383.3	368.0	387.1	402.4	415.7	425.3	429.1	432.9
155°	448.1	446.2	434.8	408.1	360.4	377.6	392.8	406.2	413.8	419.5	425.3
157.5°	448.1	446.2	438.6	421.4	375.7	366.1	381.4	392.8	402.4	410.0	413.8
160°	448.1	448.1	440.5	429.1	404.3	360.4	368.0	379.5	389.0	394.7	400.5
162.5°	446.2	446.2	442.4	434.8	419.5	390.9	356.6	366.1	373.8	379.5	385.2
165°	444.3	444.3	442.4	436.7	427.2	413.8	390.9	360.4	356.6	364.2	368.0
167.5°	442.4	442.4	442.4	436.7	431.0	423.3	413.8	396.7	368.0	352.8	349.0
170°	440.5	440.5	440.5	438.6	434.8	429.1	423.3	415.7	406.2	394.7	381.4
172.5°	438.6	438.6	436.7	436.7	434.8	431.0	429.1	425.3	419.5	413.8	406.2
175°	434.8	436.7	434.8	434.8	432.9	431.0	429.1	427.2	423.3	421.4	417.6
177.5°	432.9	432.9	432.9	432.9	431.0	431.0	429.1	427.2	425.3	423.3	419.5
180°	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5	5955.5
2.5°	5871.6	5904.0	5917.3	5888.7	5881.1	5886.8	5890.6	5907.8
5°	5795.3	5833.4	5846.8	5822.0	5812.5	5812.5	5812.5	5827.7
7.5°	5728.5	5762.9	5762.9	5726.6	5711.4	5703.8	5699.9	5715.2
10°	5556.9	5566.5	5555.0	5499.7	5482.5	5471.1	5465.4	5480.6
12.5°	5343.3	5373.9	5370.0	5322.4	5312.8	5301.4	5293.8	5309.0
15°	5167.9	5183.2	5146.9	5082.1	5047.8	5028.7	5013.4	5024.9
17.5°	4921.9	4891.4	4841.8	4788.4	4792.2	4790.3	4782.7	4797.9
20°	4662.6	4687.3	4662.6	4613.0	4586.3	4551.9	4519.5	4521.4
22.5°	4492.8	4464.2	4351.7	4244.9	4218.2	4214.4	4220.1	4227.8
25°	4162.9	4132.4	4151.5	4168.6	4182.0	4214.4	4244.9	4246.8
27.5°	4029.4	4084.7	4149.6	4206.8	4243.0	4243.0	4250.6	4244.9
30°	4012.3	4113.3	4115.2	4140.0	4176.3	4182.0	4187.7	4185.8
32.5°	3968.4	4025.6	4037.1	4069.5	4136.2	4191.5	4229.7	4231.6
35°	3871.2	3937.9	4025.6	4096.2	4145.8	4178.2	4203.0	4204.9
37.5°	3813.9	3928.4	3979.9	4035.2	4077.1	4119.1	4151.5	4162.9
40°	3758.6	3838.7	3894.0	3989.4	4071.4	4122.9	4143.9	4155.3
42.5°	3651.9	3752.9	3861.6	3943.6	4010.4	4052.3	4063.8	4071.4
45°	3566.0	3678.6	3766.3	3836.8	3915.0	3972.2	4006.6	4014.2
47.5°	3463.1	3554.6	3653.8	3762.5	3840.6	3886.4	3911.2	3924.6
50°	3318.1	3445.9	3558.4	3646.1	3709.1	3741.5	3762.5	3781.5
52.5°	3203.7	3320.0	3405.9	3491.7	3562.2	3606.1	3623.2	3632.8
55°	3062.6	3157.9	3255.2	3337.2	3392.5	3424.9	3438.3	3444.0
57.5°	2904.3	3003.5	3087.4	3156.0	3207.5	3241.9	3257.1	3266.6
60°	2753.7	2837.6	2910.0	2980.6	3026.4	3053.1	3056.9	3066.4
62.5°	2597.3	2671.7	2732.7	2786.1	2822.3	2839.5	2841.4	2843.3
65°	2431.4	2496.2	2542.0	2583.9	2614.5	2631.6	2631.6	2627.8
67.5°	2267.4	2315.1	2358.9	2400.9	2419.9	2427.6	2418.0	2421.9
70°	2093.9	2132.0	2164.4	2196.8	2219.7	2236.9	2229.3	2233.1
72.5°	1939.4	1977.5	2008.0	2032.8	2050.0	2063.3	2055.7	2057.6
75°	1800.2	1825.0	1846.0	1866.9	1882.2	1891.7	1884.1	1887.9
77.5°	1655.3	1674.3	1687.7	1708.6	1722.0	1731.5	1723.9	1725.8
80°	1508.4	1527.5	1538.9	1550.4	1565.6	1573.3	1561.8	1563.7
82.5°	1369.2	1382.6	1394.0	1409.3	1418.8	1424.5	1420.7	1418.8
85°	1235.7	1243.3	1256.7	1272.0	1279.6	1287.2	1283.4	1281.5
87.5°	1100.3	1104.1	1115.6	1130.8	1136.6	1142.3	1136.6	1136.6
90°	829.5	839.1	846.7	860.0	865.8	867.7	863.9	863.9
92.5°	743.7	755.2	762.8	770.4	780.0	781.9	780.0	783.8
95°	640.7	657.9	671.3	678.9	688.4	692.2	690.3	696.0
97.5°	486.3	522.5	549.2	562.6	577.8	581.6	581.6	581.6
100°	394.7	402.4	410.0	411.9	417.6	419.5	417.6	419.5
102.5°	343.3	350.9	358.5	364.2	368.0	368.0	366.1	368.0
105°	305.1	310.8	316.6	322.3	324.2	326.1	324.2	326.1
107.5°	280.3	282.2	284.1	288.0	289.9	291.8	291.8	289.9
110°	265.1	267.0	267.0	268.9	268.9	268.9	265.1	263.2



TEST NUMBER: P236461

CATALOG NUMBER: SKB2-LD5-18-W-UNV-L840-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	249.8	253.6	255.5	255.5	257.4	257.4	253.6	251.7
115°	230.7	238.4	242.2	246.0	247.9	246.0	244.1	242.2
117.5°	211.7	221.2	225.0	230.7	234.6	234.6	232.7	228.8
120°	188.8	200.2	207.9	215.5	219.3	219.3	217.4	215.5
122.5°	160.2	175.4	188.8	196.4	202.1	202.1	202.1	198.3
125°	165.9	158.3	162.1	171.6	183.1	185.0	183.1	183.1
127.5°	175.4	167.8	164.0	158.3	154.5	156.4	154.5	152.6
130°	186.9	179.3	173.5	167.8	164.0	158.3	152.6	150.7
132.5°	198.3	190.7	185.0	177.3	171.6	167.8	162.1	158.3
135°	207.9	202.1	196.4	188.8	183.1	177.3	171.6	167.8
137.5°	219.3	209.8	204.0	200.2	194.5	188.8	181.2	177.3
140°	234.6	223.1	213.6	206.0	202.1	196.4	190.7	186.9
142.5°	257.4	240.3	226.9	219.3	211.7	206.0	198.3	194.5
145°	291.8	267.0	249.8	236.5	226.9	219.3	211.7	207.9
147.5°	349.0	305.1	282.2	263.2	251.7	242.2	232.7	228.8
150°	442.4	398.6	337.5	305.1	288.0	276.5	267.0	261.3
152.5°	436.7	438.6	436.7	413.8	381.4	356.6	333.7	316.6
155°	427.2	429.1	429.1	427.2	425.3	423.3	419.5	415.7
157.5°	417.6	421.4	421.4	419.5	417.6	413.8	410.0	408.1
160°	406.2	408.1	410.0	408.1	408.1	404.3	400.5	398.6
162.5°	390.9	394.7	394.7	394.7	392.8	390.9	389.0	385.2
165°	371.9	375.7	377.6	377.6	375.7	373.8	370.0	368.0
167.5°	352.8	356.6	358.5	356.6	356.6	352.8	349.0	345.2
170°	360.4	352.8	339.4	333.7	333.7	329.9	324.2	324.2
172.5°	402.4	396.7	389.0	383.3	375.7	370.0	364.2	358.5
175°	413.8	411.9	410.0	404.3	400.5	394.7	390.9	385.2
177.5°	417.6	417.6	415.7	411.9	408.1	402.4	396.7	390.9
180°	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5

(END OF REPORT)