

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: P236535

Luminaire Tested: **SKB4-LD5-18-W-UNV-L835-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236535
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-LD5-18-W-UNV-L835-CD2-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) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

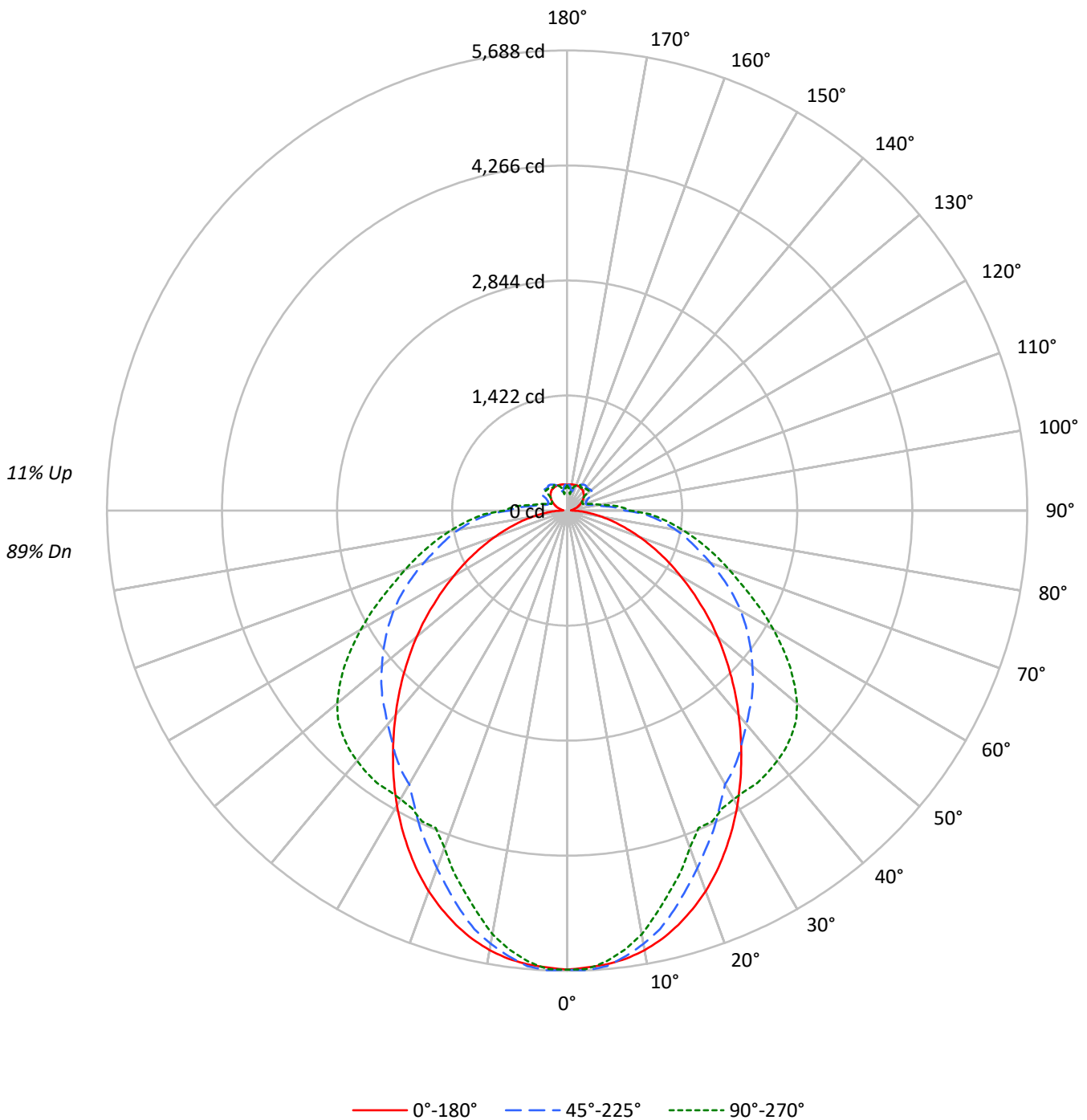
Lumens per Lamp: N/A
Luminaire Lumens: 18016.0 lumens
Efficiency: N/A
Efficacy: 125.6 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.07 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 143.4
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-LD5-18-W-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	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°	8144	8144	8144
5°	8074	8060	7978
10°	7967	7768	7601
15°	7771	7366	7046
20°	7505	6894	6508
25°	7158	6480	6384
30°	6770	6068	6414
35°	6344	5994	6676
40°	5923	5890	6922
45°	5511	5884	7170
50°	5104	5867	7316
55°	4675	5885	7261
60°	4266	5927	7089
65°	3880	5950	6884
70°	3485	6006	6841
75°	3114	6234	7032
80°	2735	6812	7496
85°	2319	7749	8499



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	531.6	3.0
10°-20°	1435.3	8.0
20°-30°	2016.2	11.2
30°-40°	2391.8	13.3
40°-50°	2561.1	14.2
50°-60°	2432.4	13.5
60°-70°	2029.7	11.3
70°-80°	1535.1	8.5
80°-90°	1014.1	5.6
90°-100°	504.6	2.8
100°-110°	291.2	1.6
110°-120°	253.6	1.4
120°-130°	273.0	1.5
130°-140°	268.6	1.5
140°-150°	214.0	1.2
150°-160°	152.7	0.8
160°-170°	83.1	0.5
170°-180°	27.9	0.2
0°-30°	3983.1	22.1
0°-40°	6374.9	35.4
0°-60°	11368.5	63.1
0°-90°	15947.4	88.5
90°-120°	1049.4	5.8
90°-150°	1804.9	10.0
90°-180°	2069.0	11.5
0°-180°	18016.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5675	5675	5675	5675	5675	
5°	5630	5674	5651	5605	5592	534
15°	5303	5277	5110	4934	4883	1492
25°	4630	4540	4312	4175	4240	2129
35°	3753	3680	3697	3953	4107	2347
45°	2856	2926	3234	3732	3925	2205
55°	2007	2237	2740	3224	3362	1801
65°	1270	1647	2186	2465	2510	1263
75°	671	1198	1608	1769	1794	714
85°	225	788	1091	1157	1172	227
90°	66	502	712	756	772	45
95°	62	341	535	607	626	52
105°	104	255	275	310	317	112
115°	174	341	259	225	210	173
125°	240	359	387	264	235	214
135°	289	344	378	375	361	223
145°	321	314	384	355	341	201
155°	332	250	350	363	351	153
165°	331	289	251	302	298	94
175°	325	323	322	300	274	31
180°	311	311	311	311	311	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6
2.5°	5652.7	5667.7	5702.2	5707.3	5704.1	5689.1	5680.9	5702.9	5692.2	5687.8	5677.8
5°	5630.1	5645.8	5681.5	5685.9	5682.2	5665.8	5657.1	5676.5	5661.5	5650.8	5632.0
7.5°	5587.4	5598.7	5633.8	5640.1	5630.7	5609.4	5592.4	5600.6	5573.6	5555.4	5534.1
10°	5517.1	5528.4	5562.9	5566.1	5547.9	5516.5	5489.5	5487.0	5463.2	5438.7	5409.2
12.5°	5424.3	5433.0	5466.3	5464.4	5433.7	5399.2	5370.9	5361.5	5329.5	5300.0	5262.4
15°	5303.1	5312.6	5342.1	5332.0	5296.2	5257.3	5226.6	5214.0	5164.5	5110.5	5054.6
17.5°	5163.8	5175.1	5194.0	5178.9	5143.1	5098.6	5062.8	5027.7	4959.9	4902.2	4847.6
20°	5007.0	5006.3	5024.5	5007.0	4968.7	4921.6	4866.4	4815.6	4750.3	4703.2	4649.3
22.5°	4828.1	4833.8	4838.2	4825.6	4784.2	4718.3	4654.3	4607.9	4548.9	4503.7	4451.6
25°	4629.8	4636.1	4636.7	4620.4	4577.7	4502.4	4444.7	4405.2	4349.3	4312.3	4242.0
27.5°	4424.6	4422.7	4433.4	4419.0	4356.2	4282.8	4239.5	4201.2	4157.3	4095.2	4038.1
30°	4208.1	4196.8	4214.4	4196.2	4129.7	4070.7	4028.7	4009.2	3947.1	3905.7	3943.3
32.5°	3982.2	3970.9	3990.4	3967.2	3905.7	3868.6	3837.9	3808.4	3765.7	3812.2	3854.2
35°	3753.2	3741.9	3762.6	3737.5	3690.4	3669.7	3642.7	3619.5	3654.7	3697.3	3735.0
37.5°	3524.8	3514.1	3536.1	3511.0	3484.6	3484.0	3450.7	3487.7	3524.1	3564.3	3634.6
40°	3299.5	3290.7	3312.7	3295.1	3287.6	3295.1	3287.6	3352.2	3377.9	3448.2	3538.6
42.5°	3076.1	3074.2	3092.4	3086.1	3101.8	3111.2	3145.1	3198.5	3244.3	3336.5	3453.2
45°	2856.5	2856.5	2875.3	2885.3	2912.3	2939.9	2988.9	3042.2	3116.2	3233.6	3350.9
47.5°	2639.3	2641.8	2663.8	2692.7	2725.3	2779.3	2831.4	2898.5	2997.6	3116.2	3233.0
50°	2427.9	2430.4	2459.2	2503.8	2544.6	2613.0	2668.2	2755.4	2869.6	2988.9	3120.0
52.5°	2220.2	2223.9	2263.5	2311.8	2370.1	2442.3	2517.0	2626.8	2736.6	2866.5	3001.4
55°	2007.4	2022.5	2070.2	2123.5	2199.4	2274.1	2368.9	2490.6	2607.3	2739.7	2867.1
57.5°	1811.0	1826.7	1879.4	1941.5	2031.3	2117.2	2237.1	2358.2	2481.8	2609.8	2732.2
60°	1620.2	1637.2	1693.0	1766.5	1869.4	1975.4	2105.3	2235.8	2353.8	2477.4	2582.2
62.5°	1445.8	1455.8	1508.6	1599.5	1715.0	1841.8	1983.0	2112.2	2224.5	2334.4	2430.4
65°	1270.1	1282.0	1333.5	1443.3	1573.8	1720.7	1867.5	1989.2	2089.6	2185.6	2269.7
67.5°	1105.1	1120.1	1172.8	1301.5	1448.9	1608.3	1747.6	1859.3	1949.7	2034.4	2106.6
70°	949.4	963.2	1026.6	1176.0	1339.7	1496.0	1622.1	1726.9	1807.2	1885.1	1947.2
72.5°	803.8	819.5	898.6	1066.2	1239.3	1383.7	1494.1	1590.8	1669.2	1735.7	1796.6
75°	670.8	685.9	788.8	973.9	1133.3	1262.6	1368.6	1462.1	1537.4	1608.3	1665.4
77.5°	545.3	569.2	699.7	883.5	1023.5	1145.2	1247.5	1346.0	1427.0	1489.7	1532.4
80°	428.6	468.8	622.5	788.8	916.8	1038.5	1147.7	1245.6	1312.8	1363.6	1396.9
82.5°	320.7	382.2	544.1	692.2	818.9	947.6	1048.0	1133.3	1190.4	1231.2	1256.3
85°	224.7	303.7	461.9	605.6	730.4	846.5	935.0	1008.4	1056.7	1091.3	1110.7
87.5°	149.3	233.4	385.3	513.3	621.9	726.0	803.2	869.7	913.0	945.7	964.5
90°	65.9	175.7	294.9	383.4	465.0	538.4	601.2	656.4	688.4	711.6	718.5
92.5°	50.2	131.8	232.2	316.9	392.8	466.9	533.4	588.0	625.0	648.2	656.4
95°	62.1	109.2	179.5	242.2	309.4	372.1	424.2	470.0	507.0	535.3	551.6
97.5°	65.9	113.0	170.7	211.5	254.8	310.0	356.4	392.8	415.4	431.1	437.4
100°	75.3	121.7	187.6	209.0	236.6	262.9	301.8	336.3	357.1	370.2	376.5
102.5°	87.9	129.3	203.3	227.2	237.2	256.0	266.1	285.5	305.6	320.0	326.9
105°	103.5	136.2	217.7	260.4	253.5	256.7	264.8	265.4	264.8	274.9	281.1
107.5°	124.2	141.2	226.5	273.0	294.3	271.7	266.7	266.1	260.4	248.5	246.0
110°	142.4	143.7	222.1	281.1	313.1	300.6	279.9	269.2	259.8	251.6	241.0



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CATALOG NUMBER: SKB4-LD5-18-W-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°	157.5	149.3	222.8	292.4	323.2	345.1	305.0	282.4	264.2	250.4	241.0
115°	173.8	153.7	225.9	296.2	328.8	353.3	365.2	307.5	279.2	259.2	244.1
117.5°	191.4	160.6	230.9	294.3	337.0	361.4	372.7	373.4	305.0	276.1	255.4
120°	207.7	168.2	232.8	294.3	352.0	364.0	377.8	384.7	372.7	303.1	273.6
122.5°	224.7	178.8	235.3	294.9	343.9	367.7	382.8	387.8	387.8	375.9	306.9
125°	240.3	192.0	234.1	295.6	343.9	374.6	380.9	390.3	389.1	386.6	383.4
127.5°	254.8	207.7	230.9	294.9	340.7	373.4	380.3	387.8	390.3	387.2	384.0
130°	266.7	221.5	219.0	291.2	335.1	370.9	381.5	384.7	389.1	387.8	382.8
132.5°	277.4	234.7	210.2	288.0	331.3	367.7	384.0	384.0	384.0	385.3	381.5
135°	289.3	256.0	212.7	283.0	327.6	360.8	381.5	389.7	381.5	378.4	378.4
137.5°	299.3	278.0	216.5	276.1	322.5	354.5	377.8	388.4	376.5	375.9	372.7
140°	308.1	297.4	224.7	266.7	316.3	348.9	369.0	384.7	387.8	370.2	370.2
142.5°	316.9	314.4	237.8	246.6	307.5	340.7	360.8	377.8	385.9	385.3	363.3
145°	321.3	323.8	252.3	231.6	296.2	331.3	352.7	368.4	380.3	384.0	381.5
147.5°	324.4	327.6	262.9	230.3	281.8	320.0	344.5	360.2	371.5	379.6	380.3
150°	327.6	329.4	278.6	236.6	257.3	308.1	333.8	351.4	362.7	370.9	374.6
152.5°	330.7	331.3	301.2	249.8	237.8	292.4	320.7	340.1	352.7	361.4	364.6
155°	332.0	332.6	319.4	266.1	236.6	263.6	304.3	325.7	340.1	350.2	353.9
157.5°	333.2	332.6	332.0	278.6	247.9	239.1	282.4	308.7	325.1	337.0	342.6
160°	332.6	332.0	336.3	301.8	264.2	239.1	242.8	285.5	305.0	319.4	326.9
162.5°	332.0	331.3	333.8	322.5	278.6	254.1	237.2	241.0	276.1	297.4	306.9
165°	330.7	330.1	331.3	333.8	306.9	271.7	252.3	238.5	235.3	251.0	275.5
167.5°	329.4	328.8	329.4	332.0	327.6	301.8	273.0	258.5	244.1	232.8	230.3
170°	328.2	327.6	327.6	327.6	330.1	326.3	308.7	285.5	266.7	257.9	243.5
172.5°	326.9	326.3	326.3	326.3	325.7	325.7	328.8	323.2	310.6	296.2	278.6
175°	325.1	324.4	324.4	324.4	323.2	321.9	321.9	321.9	320.7	321.9	320.0
177.5°	323.8	323.2	323.2	322.5	321.3	320.0	320.0	319.4	316.9	315.6	312.5
180°	311.2	311.2	311.2	311.2	311.2	311.2	311.2	311.2	311.2	311.2	311.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6	5674.6
2.5°	5657.1	5666.5	5679.7	5663.3	5665.8	5679.0	5675.3	5672.1
5°	5607.5	5611.3	5615.6	5594.3	5593.1	5604.4	5593.1	5591.8
7.5°	5505.8	5504.0	5507.7	5479.5	5477.6	5487.0	5478.2	5473.2
10°	5380.3	5375.3	5372.2	5342.1	5332.0	5334.5	5325.7	5318.2
12.5°	5213.4	5188.3	5170.1	5136.2	5121.8	5120.5	5104.2	5099.2
15°	5001.3	4975.0	4951.7	4915.3	4905.9	4909.1	4895.9	4883.3
17.5°	4796.7	4770.4	4747.8	4708.9	4701.4	4705.7	4680.6	4676.3
20°	4600.3	4570.2	4550.8	4507.5	4489.3	4484.9	4444.1	4433.4
22.5°	4410.8	4365.0	4309.8	4267.7	4260.2	4266.5	4260.8	4243.9
25°	4174.2	4149.1	4162.3	4188.0	4225.7	4251.4	4252.7	4240.1
27.5°	4045.0	4095.2	4131.6	4136.0	4149.8	4166.1	4166.7	4151.0
30°	3989.8	4006.7	4024.9	4055.6	4096.4	4124.0	4130.9	4118.4
32.5°	3873.0	3917.0	3965.9	4013.0	4063.8	4100.8	4112.7	4103.3
35°	3788.3	3851.7	3920.1	3986.0	4048.1	4092.7	4112.1	4107.1
37.5°	3708.6	3796.5	3882.4	3961.5	4024.3	4062.5	4078.2	4077.6
40°	3640.2	3740.0	3825.3	3906.9	3972.8	4018.0	4036.2	4039.3
42.5°	3559.9	3655.9	3757.6	3851.7	3923.2	3970.9	3990.4	3994.8
45°	3457.0	3568.7	3682.9	3781.4	3846.1	3894.4	3918.2	3925.1
47.5°	3354.7	3474.6	3590.0	3686.7	3748.8	3802.8	3829.1	3839.1
50°	3242.4	3362.2	3480.8	3571.2	3629.6	3682.3	3704.2	3710.5
52.5°	3118.1	3240.5	3350.3	3432.5	3475.8	3523.5	3541.7	3543.6
55°	2988.2	3098.1	3190.3	3256.8	3299.5	3345.9	3359.7	3362.2
57.5°	2837.0	2932.4	3012.7	3074.2	3106.2	3145.1	3153.9	3157.0
60°	2675.7	2757.9	2825.1	2875.9	2902.3	2933.0	2940.5	2944.9
62.5°	2510.7	2571.6	2634.3	2679.5	2696.4	2724.1	2729.7	2732.2
65°	2334.4	2388.3	2447.3	2481.8	2493.8	2510.7	2509.4	2510.1
67.5°	2161.2	2209.5	2252.8	2288.6	2299.8	2306.1	2310.5	2306.1
70°	1990.5	2030.6	2075.2	2099.7	2120.4	2122.3	2129.8	2127.9
72.5°	1841.1	1880.0	1915.8	1937.1	1955.3	1955.3	1964.8	1959.1
75°	1703.7	1733.2	1760.8	1777.1	1792.8	1789.7	1799.1	1794.1
77.5°	1560.0	1582.6	1603.3	1621.5	1635.3	1640.3	1641.0	1635.3
80°	1417.6	1435.1	1450.8	1466.5	1478.4	1475.3	1483.4	1478.4
82.5°	1270.1	1283.3	1297.7	1311.5	1322.2	1324.7	1325.3	1320.3
85°	1122.0	1135.2	1152.1	1161.5	1171.6	1174.7	1175.3	1171.6
87.5°	975.2	988.3	1005.3	1014.7	1025.4	1027.9	1028.5	1025.4
90°	728.5	741.7	749.3	762.4	766.2	771.8	764.3	772.5
92.5°	667.7	679.0	688.4	698.4	703.4	706.6	703.4	707.2
95°	571.7	589.2	601.2	613.7	620.0	625.0	624.4	625.6
97.5°	447.4	462.5	477.5	493.9	501.4	508.3	507.7	508.3
100°	385.9	394.7	401.6	409.1	412.3	412.9	412.3	412.9
102.5°	335.7	344.5	352.0	358.9	360.8	363.3	362.7	361.4
105°	290.5	299.3	306.9	313.1	315.6	318.2	318.2	316.9
107.5°	252.9	259.2	266.1	271.7	274.9	276.1	277.4	276.1
110°	232.2	230.9	234.1	237.8	239.7	241.0	239.7	239.1



TEST NUMBER: P236535

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L835-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	235.9	230.3	222.1	216.5	215.9	215.9	213.4	212.1
115°	234.7	230.3	226.5	224.0	220.9	217.7	213.4	210.2
117.5°	242.2	232.8	225.9	222.8	220.3	217.7	214.6	212.1
120°	256.7	244.1	234.1	227.8	223.4	219.6	215.2	212.7
122.5°	278.6	261.7	249.1	240.3	234.7	229.0	224.7	221.5
125°	318.8	288.7	270.5	258.5	251.0	244.1	238.5	235.3
127.5°	382.8	354.5	307.5	286.8	274.9	264.8	257.9	254.1
130°	381.5	380.9	379.0	363.3	319.4	302.5	291.8	286.1
132.5°	379.6	380.3	378.4	375.9	373.4	369.0	364.0	362.1
135°	378.4	377.1	375.9	374.6	371.5	367.7	362.7	360.8
137.5°	374.0	374.6	374.0	371.5	368.4	364.6	360.2	358.3
140°	368.4	367.7	368.4	368.4	366.5	362.1	357.7	355.2
142.5°	364.6	362.7	360.8	360.2	359.6	356.4	352.0	350.8
145°	371.5	356.4	355.8	353.9	352.0	348.3	343.9	341.4
147.5°	379.6	376.5	356.4	346.4	345.8	342.6	338.2	335.7
150°	377.1	376.5	372.7	369.6	364.6	353.9	341.4	332.6
152.5°	369.0	372.7	371.5	369.6	365.8	361.4	355.8	353.3
155°	358.9	362.7	363.3	363.3	361.4	358.3	353.3	350.8
157.5°	348.3	352.0	352.7	353.3	351.4	348.9	344.5	342.6
160°	333.8	338.9	340.1	340.7	338.9	337.0	332.6	330.7
162.5°	315.0	321.9	325.1	325.7	325.1	323.2	319.4	317.5
165°	288.7	297.4	301.2	303.1	303.7	302.5	299.3	298.1
167.5°	235.3	251.0	264.8	273.0	273.6	272.3	269.8	269.2
170°	235.3	229.0	222.8	220.3	217.1	212.7	209.6	207.1
172.5°	264.2	257.9	252.3	244.7	236.6	228.4	222.8	220.3
175°	315.6	311.2	303.7	296.8	289.3	282.4	276.7	274.2
177.5°	310.6	310.0	307.5	303.7	300.0	295.6	289.9	286.8
180°	311.2	311.2	311.2	311.2	311.2	311.2	311.2	311.2

(END OF REPORT)