

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: P236548

Luminaire Tested: **SKB4-LD5-18-W-UNV-L840-CD2-U inner 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236548
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24079)
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-L840-CD2-U inner 2 blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, INNER 2 BLADES TILTED OUT 20 DEGREES
Light Source: (952) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

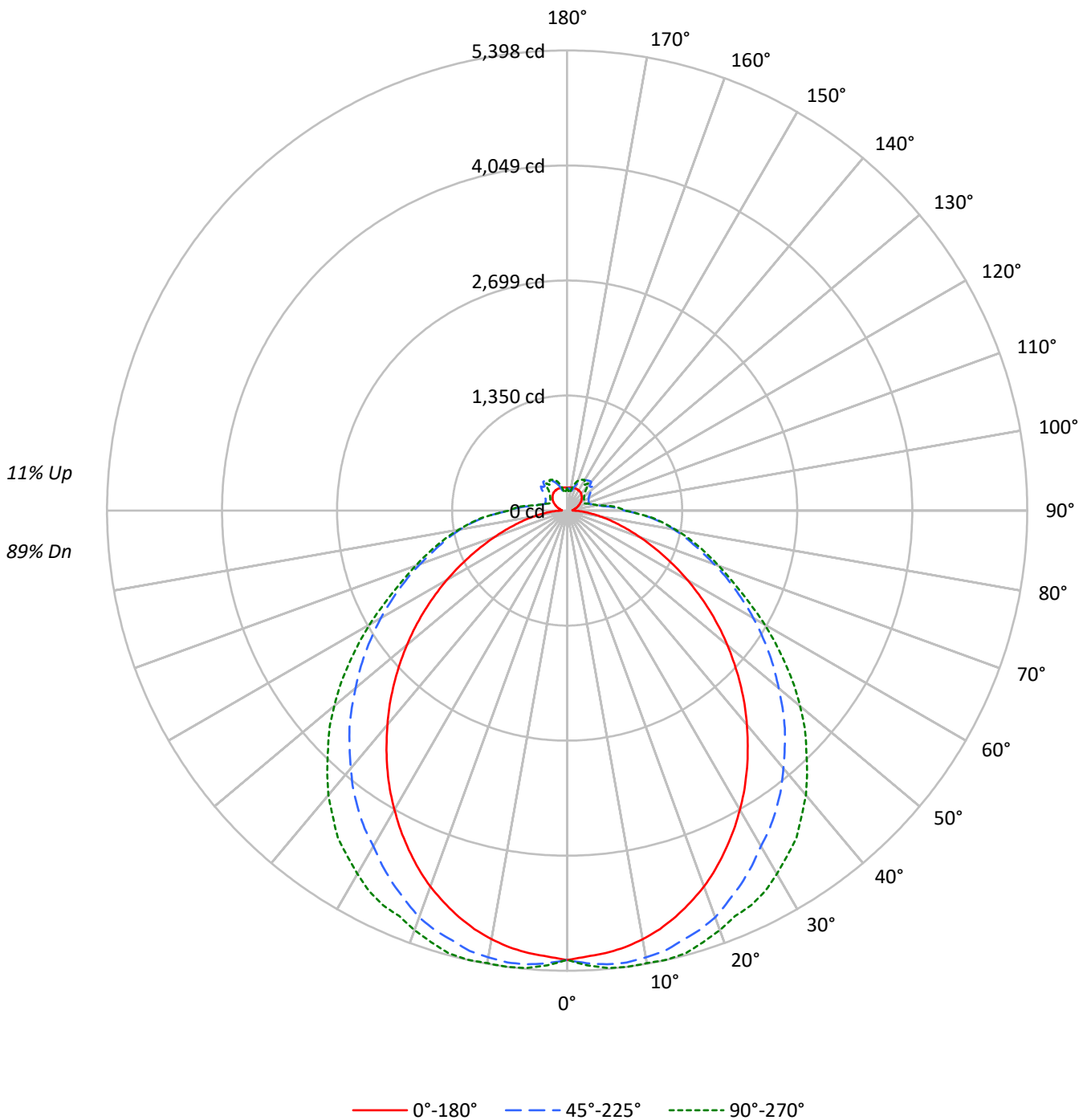
Lumens per Lamp: N/A
Luminaire Lumens: 18393.0 lumens
Efficiency: N/A
Efficacy: 128.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.38 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

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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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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	105	99	94	90	101	96	92	88	90	86	83	84	81	78	78	76	74	71
2	95	86	79	73	91	83	76	71	78	72	67	73	68	64	68	64	61	58
3	86	75	67	60	83	73	65	59	68	62	56	64	58	54	60	55	51	49
4	79	66	57	51	76	64	56	50	60	53	48	57	51	46	53	48	44	41
5	72	59	50	43	69	58	49	43	54	47	41	51	45	40	48	43	38	36
6	67	53	44	38	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	59	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	38	32	27	36	31	27	25
9	54	40	32	27	52	39	32	26	37	30	25	35	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	22	31	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7566	7566	7566
5°	7473	7620	7684
10°	7373	7601	7705
15°	7222	7520	7757
20°	7035	7443	7688
25°	6791	7260	7691
30°	6520	7062	7664
35°	6220	6931	7623
40°	5887	6741	7466
45°	5537	6573	7248
50°	5159	6357	7033
55°	4742	6194	6739
60°	4289	6036	6443
65°	3799	5909	6149
70°	3325	5845	6074
75°	2894	5947	6205
80°	2507	6360	6545
85°	2174	7086	7346



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	507.6	2.8
10°-20°	1467.5	8.0
20°-30°	2212.7	12.0
30°-40°	2644.9	14.4
40°-50°	2711.8	14.7
50°-60°	2448.4	13.3
60°-70°	1965.2	10.7
70°-80°	1447.8	7.9
80°-90°	926.8	5.0
90°-100°	473.9	2.6
100°-110°	289.7	1.6
110°-120°	260.4	1.4
120°-130°	269.1	1.5
130°-140°	268.4	1.5
140°-150°	231.6	1.3
150°-160°	161.5	0.9
160°-170°	81.4	0.4
170°-180°	24.3	0.1
0°-30°	4187.8	22.8
0°-40°	6832.7	37.1
0°-60°	11992.8	65.2
0°-90°	16332.6	88.8
90°-120°	1024.0	5.6
90°-150°	1793.1	9.7
90°-180°	2060.0	11.2
0°-180°	18393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5272	5272	5272	5272	5272	
5°	5211	5306	5343	5372	5386	494
15°	4929	5107	5218	5331	5376	1388
25°	4393	4595	4831	5003	5108	2022
35°	3680	3911	4276	4565	4689	2299
45°	2870	3154	3612	3887	3968	2213
55°	2036	2411	2884	3073	3120	1822
65°	1244	1750	2170	2233	2242	1239
75°	623	1230	1534	1576	1583	668
85°	211	782	998	1012	1013	210
90°	69	515	670	686	681	47
95°	72	350	507	546	547	60
105°	104	256	287	301	296	111
115°	153	325	278	241	222	152
125°	204	400	319	266	241	182
135°	241	385	391	334	292	186
145°	268	335	429	377	369	167
155°	276	263	380	408	399	127
165°	276	261	264	312	313	78
175°	272	269	261	252	231	26
180°	261	261	261	261	261	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7
2.5°	5236.5	5258.3	5266.6	5290.3	5299.9	5302.4	5308.8	5312.7	5307.6	5314.6	5307.6
5°	5210.9	5237.8	5254.4	5288.4	5302.4	5310.1	5322.9	5330.6	5331.2	5342.8	5340.2
7.5°	5168.7	5199.4	5225.6	5261.5	5279.4	5292.8	5312.0	5327.4	5338.3	5347.9	5343.4
10°	5105.9	5143.7	5174.4	5212.2	5237.2	5261.5	5286.4	5292.2	5301.8	5321.6	5333.8
12.5°	5028.5	5069.5	5100.2	5144.3	5179.5	5201.3	5222.4	5244.2	5269.8	5290.9	5291.6
15°	4928.6	4977.9	5008.0	5059.2	5097.6	5116.8	5155.2	5181.5	5192.3	5218.0	5246.1
17.5°	4816.6	4867.8	4899.2	4955.5	4991.4	5024.0	5068.8	5073.3	5118.1	5161.0	5194.3
20°	4693.7	4739.8	4771.8	4834.5	4872.3	4908.2	4943.4	4979.2	5039.4	5077.8	5099.5
22.5°	4551.6	4595.8	4639.3	4695.0	4737.2	4762.9	4826.2	4876.1	4925.4	4953.6	4988.8
25°	4392.9	4437.7	4479.3	4538.8	4575.3	4615.6	4702.0	4741.1	4781.4	4831.3	4871.7
27.5°	4229.0	4267.4	4313.5	4367.3	4407.0	4474.2	4552.9	4579.8	4641.9	4695.0	4728.3
30°	4052.4	4086.3	4129.8	4184.2	4232.9	4316.7	4377.5	4420.4	4488.3	4545.2	4618.8
32.5°	3871.9	3902.6	3939.7	3987.7	4057.5	4137.5	4200.9	4259.1	4332.1	4422.3	4499.8
35°	3679.8	3709.3	3741.3	3790.6	3875.1	3947.4	4024.2	4087.6	4186.1	4275.8	4359.0
37.5°	3480.8	3511.5	3537.7	3597.9	3684.3	3763.7	3843.1	3925.6	4024.8	4122.8	4191.9
40°	3279.8	3310.5	3332.9	3402.0	3491.6	3579.3	3665.8	3757.3	3860.3	3946.7	4026.8
42.5°	3078.8	3106.3	3131.9	3210.7	3296.4	3392.4	3488.4	3583.8	3680.5	3777.8	3866.7
45°	2870.1	2900.9	2925.8	3014.1	3099.9	3207.5	3306.0	3405.9	3500.6	3612.0	3679.2
47.5°	2661.5	2693.5	2721.6	2819.6	2911.7	3025.0	3121.0	3220.9	3327.8	3426.4	3494.8
50°	2454.1	2484.8	2522.6	2625.0	2718.4	2836.8	2937.3	3044.9	3150.5	3238.8	3316.9
52.5°	2246.0	2278.1	2326.1	2431.0	2531.5	2653.8	2757.5	2872.0	2967.4	3062.8	3128.7
55°	2036.1	2071.3	2132.1	2237.1	2350.4	2470.7	2582.7	2695.4	2792.7	2883.6	2939.9
57.5°	1830.0	1868.4	1940.1	2050.8	2170.5	2294.1	2418.2	2525.1	2622.4	2701.8	2756.2
60°	1629.0	1671.3	1751.9	1870.3	1999.0	2127.6	2251.2	2363.8	2449.6	2523.2	2558.4
62.5°	1432.5	1479.9	1567.6	1698.8	1832.6	1968.3	2099.5	2203.8	2278.7	2344.0	2374.1
65°	1243.7	1296.2	1393.5	1536.2	1679.6	1819.8	1951.6	2043.1	2113.6	2170.5	2193.6
67.5°	1068.3	1125.3	1236.6	1386.4	1538.8	1682.8	1803.8	1889.5	1954.2	2003.5	2018.2
70°	905.7	965.9	1090.1	1249.4	1410.7	1548.4	1659.7	1744.2	1798.0	1834.5	1839.6
72.5°	756.6	819.3	958.8	1126.5	1289.8	1415.2	1524.7	1598.9	1647.6	1673.2	1687.3
75°	623.4	688.7	843.6	1018.4	1170.1	1290.4	1391.5	1454.3	1504.2	1534.3	1547.7
77.5°	503.7	573.5	743.1	914.0	1056.1	1167.5	1257.8	1326.3	1381.9	1405.6	1413.3
80°	393.0	473.7	654.2	814.8	945.4	1047.2	1143.8	1211.7	1258.4	1273.1	1276.3
82.5°	293.8	386.0	565.8	713.7	835.3	945.4	1031.8	1088.8	1128.5	1137.4	1139.3
85°	210.6	308.5	478.1	617.0	734.8	829.5	908.3	956.3	990.2	997.9	997.2
87.5°	142.7	244.5	399.4	519.7	621.5	707.3	773.2	813.5	841.1	830.2	830.2
90°	69.1	192.0	313.0	404.5	478.1	551.8	600.4	636.9	660.6	669.5	671.4
92.5°	60.8	147.9	250.9	332.2	402.0	475.6	528.7	567.1	592.1	602.3	604.2
95°	72.3	119.7	192.0	254.8	319.4	380.2	422.5	454.5	487.1	506.9	517.8
97.5°	74.9	121.6	177.3	217.6	261.2	318.8	359.1	387.2	403.9	409.0	408.4
100°	81.9	141.5	183.1	215.7	242.0	268.2	308.5	339.2	357.2	363.6	363.6
102.5°	92.8	156.8	206.1	224.0	242.6	261.8	272.0	295.1	315.6	324.5	327.1
105°	104.3	163.2	240.0	236.2	249.6	262.4	273.3	276.5	278.4	287.4	292.5
107.5°	116.5	167.7	255.4	263.1	257.3	268.2	274.0	277.8	277.2	265.0	261.8
110°	129.3	171.5	260.5	293.2	275.9	275.9	279.7	281.0	277.2	272.0	261.8



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CATALOG NUMBER: SKB4-LD5-18-W-UNV-L840-CD2-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	140.8	173.5	263.7	317.5	311.7	289.3	286.1	285.5	281.0	273.3	264.4
115°	153.0	174.7	265.0	330.3	334.8	314.9	297.6	293.2	286.1	277.8	267.6
117.5°	165.8	174.7	265.6	333.5	351.4	359.1	318.1	302.8	293.8	284.8	272.7
120°	179.2	175.4	264.4	336.7	384.7	371.2	352.0	320.7	304.0	292.5	280.4
122.5°	192.0	181.1	263.1	338.0	385.3	376.4	399.4	348.8	319.4	302.8	290.0
125°	204.2	189.5	261.8	337.3	385.3	414.8	384.7	399.4	344.4	318.8	302.1
127.5°	215.7	199.1	258.6	332.8	383.4	418.0	392.4	403.9	391.1	345.0	318.8
130°	224.0	211.2	252.2	323.2	378.3	413.5	431.4	387.9	414.1	393.0	346.3
132.5°	231.7	220.8	242.6	315.6	373.2	410.3	431.4	412.2	392.4	418.0	396.9
135°	240.7	231.7	231.1	307.2	365.5	405.2	426.3	441.0	396.9	391.1	415.4
137.5°	249.0	241.3	227.9	298.9	354.6	398.1	420.5	435.3	442.3	389.8	387.9
140°	256.0	250.3	227.9	288.7	341.8	388.5	412.2	427.6	437.2	439.1	388.5
142.5°	263.7	258.0	229.1	275.2	328.4	374.4	402.6	418.6	429.5	435.9	438.5
145°	267.6	262.4	241.3	254.1	313.6	357.2	389.2	408.4	421.8	428.9	432.7
147.5°	269.5	265.6	250.9	244.5	297.6	339.2	373.8	396.9	412.2	421.8	426.3
150°	271.4	268.8	258.0	238.8	278.4	322.0	355.9	381.5	400.1	411.6	417.3
152.5°	274.6	272.0	264.4	237.5	256.0	304.0	336.7	362.3	383.4	398.1	406.5
155°	275.9	274.0	268.2	252.8	244.5	281.0	315.6	339.9	361.6	379.6	391.1
157.5°	277.2	275.9	271.4	261.2	240.0	255.4	291.9	317.5	338.0	356.5	370.0
160°	276.5	275.9	272.7	266.3	251.6	241.3	259.2	291.2	312.4	329.6	342.4
162.5°	276.5	275.9	273.3	268.8	260.5	240.7	243.2	256.7	283.6	302.1	314.3
165°	275.9	275.9	274.0	270.8	265.6	257.3	239.4	238.8	249.6	264.4	281.6
167.5°	275.9	275.9	274.6	272.0	268.8	264.4	258.0	247.7	236.2	238.8	244.5
170°	274.6	275.2	274.0	272.0	270.1	266.9	263.7	259.2	252.8	245.8	232.3
172.5°	273.3	274.0	274.0	272.7	270.8	268.8	266.9	264.4	259.9	257.3	252.8
175°	272.0	272.7	272.7	272.0	270.1	268.2	267.6	265.6	262.4	261.2	258.6
177.5°	270.8	270.8	271.4	270.8	270.1	268.8	268.2	266.9	263.7	263.1	260.5
180°	261.2	261.2	261.2	261.2	261.2	261.2	261.2	261.2	261.2	261.2	261.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7	5271.7
2.5°	5303.1	5325.5	5324.8	5312.7	5324.8	5338.9	5331.2	5338.3
5°	5342.1	5371.6	5376.1	5367.1	5377.3	5389.5	5378.6	5385.7
7.5°	5344.7	5369.7	5375.4	5368.4	5386.9	5404.2	5393.3	5398.5
10°	5348.5	5377.3	5385.0	5374.1	5385.7	5395.3	5382.5	5390.8
12.5°	5295.4	5333.8	5356.2	5360.0	5381.8	5397.8	5386.9	5395.9
15°	5269.8	5309.5	5328.7	5333.8	5358.1	5375.4	5364.5	5376.1
17.5°	5218.6	5246.1	5251.9	5250.6	5278.1	5299.9	5296.0	5307.6
20°	5117.5	5154.6	5182.1	5187.9	5214.1	5232.0	5221.8	5237.2
22.5°	5027.8	5066.3	5075.2	5078.4	5114.9	5137.9	5136.7	5148.8
25°	4901.8	4940.2	4986.9	5018.2	5060.5	5088.0	5095.1	5108.5
27.5°	4794.9	4856.9	4913.3	4944.0	4986.9	5014.4	5024.6	5031.7
30°	4694.4	4759.7	4810.2	4842.9	4880.0	4901.8	4910.1	4921.0
32.5°	4571.5	4638.0	4681.6	4707.8	4744.9	4773.1	4791.0	4802.5
35°	4423.0	4484.4	4542.7	4586.8	4628.4	4656.6	4667.5	4689.2
37.5°	4261.7	4346.8	4407.0	4437.1	4461.4	4484.4	4497.2	4516.4
40°	4114.4	4186.1	4227.7	4258.5	4291.1	4321.2	4337.2	4356.4
42.5°	3935.2	3997.3	4054.9	4091.4	4119.6	4145.2	4156.1	4166.9
45°	3749.6	3823.2	3873.1	3901.3	3918.6	3945.5	3962.1	3967.9
47.5°	3571.7	3632.5	3672.8	3707.4	3731.0	3757.9	3772.6	3782.2
50°	3381.6	3434.7	3481.4	3512.8	3526.9	3544.8	3554.4	3567.2
52.5°	3187.6	3247.1	3275.9	3294.5	3308.6	3329.1	3339.3	3352.1
55°	2996.2	3032.7	3061.5	3084.6	3098.6	3114.0	3123.0	3120.4
57.5°	2790.1	2831.7	2856.7	2870.1	2878.5	2888.7	2891.3	2898.3
60°	2596.2	2625.6	2641.6	2653.8	2657.6	2665.9	2669.1	2676.8
62.5°	2403.5	2425.3	2433.6	2442.6	2447.7	2446.4	2447.0	2452.2
65°	2209.6	2227.5	2230.7	2234.5	2237.7	2239.0	2240.3	2242.2
67.5°	2023.9	2038.0	2042.5	2053.4	2057.9	2055.3	2055.3	2057.2
70°	1851.8	1865.2	1870.3	1878.6	1885.0	1885.0	1887.0	1889.5
72.5°	1694.3	1709.7	1719.9	1725.0	1734.0	1734.6	1734.6	1734.0
75°	1554.8	1566.3	1574.0	1577.8	1586.8	1586.1	1585.5	1582.9
77.5°	1415.9	1424.8	1433.8	1433.1	1442.1	1442.1	1440.2	1438.3
80°	1276.3	1286.6	1290.4	1289.1	1297.4	1296.2	1295.5	1291.0
82.5°	1132.9	1141.9	1145.7	1145.7	1153.4	1152.1	1151.5	1147.7
85°	995.3	1001.1	1012.0	1011.3	1016.5	1016.5	1015.8	1012.6
87.5°	816.7	821.2	825.1	823.8	827.6	830.2	827.6	825.7
90°	672.1	676.6	684.9	686.8	690.0	686.8	686.2	681.0
92.5°	606.8	611.3	618.3	620.9	622.8	622.2	622.8	619.6
95°	525.5	533.8	544.7	547.3	550.5	549.8	551.8	547.3
97.5°	409.7	418.0	432.7	441.7	444.2	444.9	448.1	442.9
100°	363.6	365.5	368.0	366.8	366.1	364.8	364.2	360.4
102.5°	327.7	329.6	332.2	332.2	330.9	330.3	329.0	325.8
105°	295.1	298.3	300.8	301.5	300.8	300.2	298.9	296.4
107.5°	264.4	266.9	270.8	271.4	271.4	272.0	271.4	267.6
110°	247.1	242.6	243.9	243.9	243.9	244.5	243.2	240.0



TEST NUMBER: P236548

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L840-CD2-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	256.7	247.7	236.2	227.2	224.0	223.4	221.5	218.3
115°	257.3	249.6	243.9	238.1	234.3	230.4	225.3	222.1
117.5°	263.1	253.5	245.8	239.4	236.2	233.0	229.1	225.9
120°	270.1	259.2	251.6	244.5	240.0	235.6	231.1	227.9
122.5°	279.1	268.8	259.2	250.9	245.8	241.3	236.8	233.6
125°	290.0	278.4	269.5	261.8	255.4	250.3	245.2	241.3
127.5°	302.8	290.6	281.0	272.0	265.0	259.2	253.5	250.3
130°	321.3	306.6	295.7	284.8	277.2	270.8	265.0	260.5
132.5°	350.8	330.3	314.9	300.8	292.5	285.5	278.4	274.0
135°	410.9	365.5	342.4	325.8	314.3	304.7	297.0	292.5
137.5°	412.2	422.5	400.1	360.4	345.0	333.5	323.9	319.4
140°	385.3	398.1	415.4	418.0	415.4	394.3	380.8	376.4
142.5°	393.0	375.1	385.3	393.0	404.5	406.5	403.3	401.3
145°	435.9	420.5	384.0	370.6	371.2	375.7	373.2	369.3
147.5°	430.1	432.1	432.7	423.7	395.6	377.6	368.0	363.6
150°	423.1	425.7	426.9	426.9	425.7	423.1	418.0	414.1
152.5°	412.9	417.3	419.9	420.5	419.9	416.7	410.9	407.7
155°	399.4	404.5	407.7	409.0	409.7	407.7	402.6	399.4
157.5°	380.8	389.2	393.7	395.6	396.2	394.9	391.1	388.5
160°	355.9	365.5	372.5	375.1	377.6	377.6	374.4	371.9
162.5°	326.4	336.7	344.4	348.2	350.8	352.0	348.8	348.2
165°	295.1	304.0	310.4	313.6	316.2	317.5	314.9	313.0
167.5°	251.6	263.7	273.3	277.2	279.7	279.7	277.8	277.8
170°	231.7	233.6	234.3	234.3	233.0	231.7	229.1	227.9
172.5°	249.0	247.1	242.0	235.6	229.1	221.5	215.7	209.3
175°	256.0	256.0	253.5	249.6	245.2	240.7	235.6	231.1
177.5°	258.6	259.2	257.3	254.1	250.3	245.8	239.4	236.2
180°	261.2	261.2	261.2	261.2	261.2	261.2	261.2	261.2

(END OF REPORT)