

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: P236492

Luminaire Tested: **SKB4-LD5-24-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236492
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24060)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-24-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH NARROW DISTRIBUTION LENS, INNER 2 BLADES TILTED OUT 20 DEGREES
Light Source: (952) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

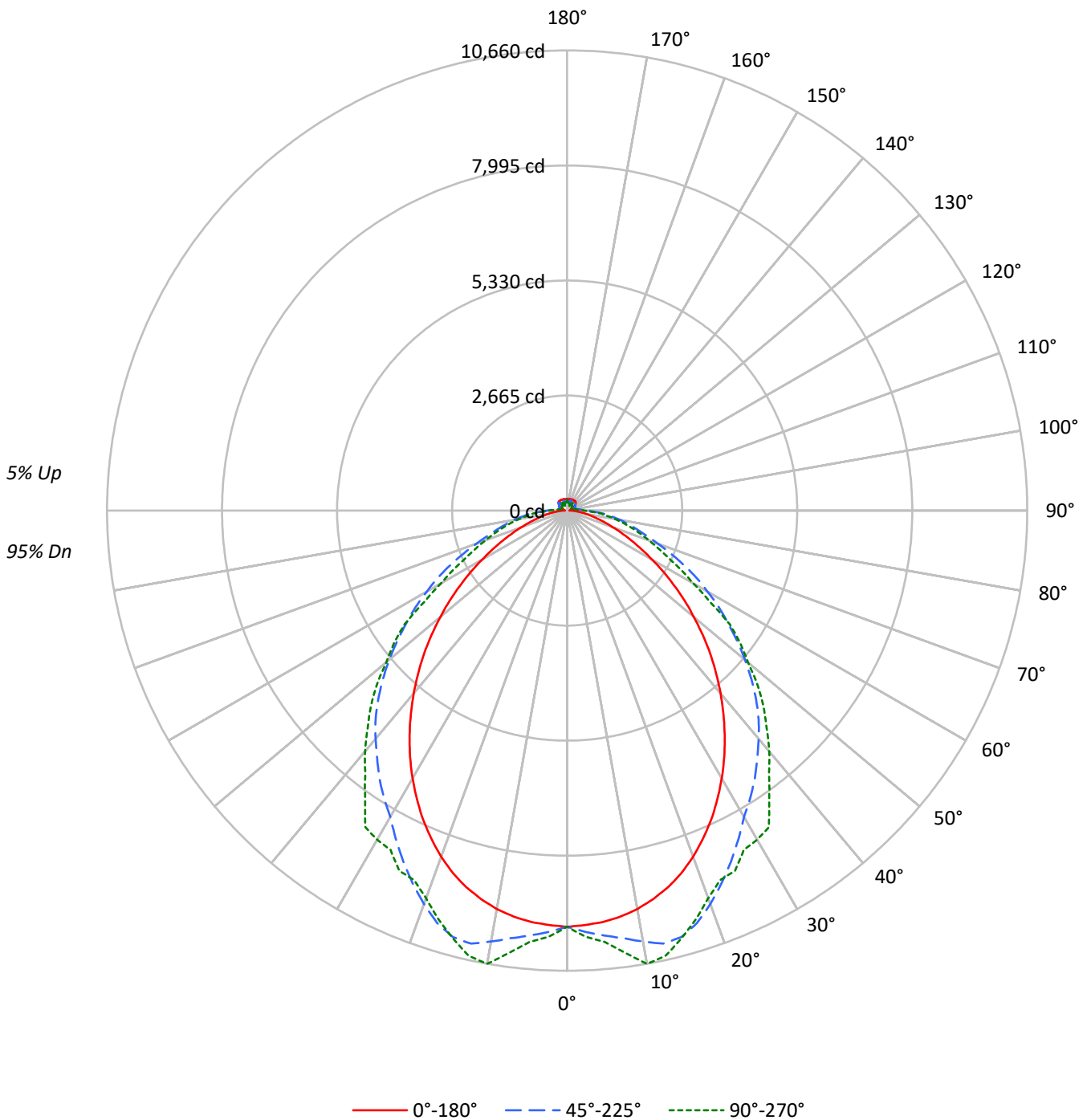
Lumens per Lamp: N/A
Luminaire Lumens: 27237.0 lumens
Efficiency: N/A
Efficacy: 132.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.34 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Direct

Input Watts (W): 206.2
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: SKB4-LD5-24-N-UNV-L850-CD4-U inner 2 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	103	103	103	97	97	97	95					95			
1	108	103	98	95	104	100	96	93	95	92	89	90	87	85	86	84	82	79					79			
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	76	72	69	67					67			
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	57					57			
4	82	71	62	56	80	69	61	55	66	59	54	63	57	52	60	55	51	49					49			
5	76	64	55	48	74	62	54	48	59	52	47	57	51	46	55	49	45	43					43			
6	70	57	49	42	68	56	48	42	54	47	41	52	45	41	50	44	40	38					38			
7	65	52	44	38	63	51	43	37	49	42	37	47	41	36	46	40	36	33					33			
8	61	48	39	34	59	47	39	33	45	38	33	43	37	32	42	36	32	30					30			
9	57	44	36	30	55	43	35	30	42	35	30	40	34	29	39	33	29	27					27			
10	53	41	33	28	52	40	32	27	39	32	27	37	31	27	36	30	26	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13836	13836	13836
5°	13717	14093	14312
10°	13533	14478	15236
15°	13233	14740	14793
20°	12787	14213	14025
25°	12213	13486	13858
30°	11524	12726	13708
35°	10754	12287	13267
40°	9925	11792	12487
45°	9036	11266	11754
50°	8047	10558	10780
55°	7053	9775	9934
60°	5986	8991	8128
65°	5031	8115	7098
70°	4139	7093	6476
75°	3380	6457	6049
80°	2837	6211	5716
85°	2380	6126	5690



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	949.0	3.5
10°-20°	2789.5	10.2
20°-30°	4068.3	14.9
30°-40°	4696.6	17.2
40°-50°	4547.5	16.7
50°-60°	3741.7	13.7
60°-70°	2586.5	9.5
70°-80°	1610.1	5.9
80°-90°	834.1	3.1
90°-100°	313.6	1.2
100°-110°	196.1	0.7
110°-120°	199.9	0.7
120°-130°	200.4	0.7
130°-140°	181.3	0.7
140°-150°	141.0	0.5
150°-160°	99.2	0.4
160°-170°	61.8	0.2
170°-180°	20.4	0.1
0°-30°	7806.7	28.7
0°-40°	12503.4	45.9
0°-60°	20792.6	76.3
0°-90°	25823.2	94.8
90°-120°	709.7	2.6
90°-150°	1232.4	4.5
90°-180°	1414.0	5.2
0°-180°	27237.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9641	9641	9641	9641	9641	
5°	9564	9772	9881	9985	10031	907
15°	9030	9593	10228	10258	10253	2539
25°	7900	8787	8974	9040	9205	3627
35°	6362	7163	7580	8072	8161	3973
45°	4684	5336	6191	6479	6435	3608
55°	3028	3747	4551	4629	4600	2714
65°	1647	2471	2981	2780	2588	1645
75°	728	1556	1666	1651	1543	793
85°	231	859	863	843	784	233
90°	71	500	454	434	398	47
95°	64	325	303	290	265	53
105°	95	277	171	130	109	104
115°	162	326	204	133	108	161
125°	232	311	217	166	139	206
135°	278	286	216	187	157	214
145°	285	288	203	170	158	179
155°	278	217	234	167	120	129
165°	275	196	210	233	213	78
175°	268	253	208	179	184	26
180°	247	247	247	247	247	



TEST NUMBER: P236492

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6
2.5°	9609.7	9615.2	9654.9	9670.4	9692.4	9690.2	9715.6	9754.2	9739.9	9771.9	9775.2
5°	9564.5	9578.8	9638.4	9686.9	9754.2	9790.6	9831.4	9868.9	9852.4	9881.1	9895.4
7.5°	9486.1	9514.8	9603.1	9690.2	9766.3	9789.5	9838.1	9906.5	9925.2	9992.5	10038.8
10°	9371.4	9412.2	9533.6	9629.6	9703.5	9760.8	9860.1	9960.5	10023.4	10137.0	10225.3
12.5°	9215.9	9268.8	9424.4	9511.5	9628.5	9727.7	9865.6	10011.3	10129.3	10274.9	10361.0
15°	9030.5	9095.6	9262.2	9368.1	9530.3	9654.9	9841.4	10017.9	10124.9	10227.5	10266.1
17.5°	8805.5	8892.6	9063.6	9202.6	9381.3	9540.2	9748.7	9897.6	9982.6	10015.7	9999.1
20°	8530.8	8647.7	8820.9	8983.1	9188.3	9375.8	9579.9	9686.9	9701.3	9696.8	9686.9
22.5°	8225.2	8368.6	8544.0	8729.4	8962.1	9156.3	9340.5	9363.7	9361.5	9347.1	9338.3
25°	7899.8	8048.7	8231.8	8437.0	8698.5	8875.0	8994.1	8997.4	8995.2	8974.3	8952.2
27.5°	7534.6	7699.0	7899.8	8114.9	8380.8	8515.4	8597.0	8605.8	8602.5	8587.1	8576.0
30°	7162.9	7329.5	7518.1	7763.0	8007.9	8089.5	8177.8	8188.8	8180.0	8191.0	8316.8
32.5°	6770.1	6933.4	7130.9	7380.2	7586.5	7646.1	7739.8	7739.8	7746.4	7895.4	8030.0
35°	6362.0	6523.0	6718.3	6963.2	7125.4	7201.5	7286.4	7275.4	7428.7	7579.9	7702.3
37.5°	5949.4	6101.6	6290.3	6526.3	6656.5	6751.4	6808.8	6914.7	7086.8	7231.3	7392.3
40°	5529.1	5664.8	5851.2	6068.5	6191.0	6292.5	6365.3	6558.3	6720.5	6903.6	7068.0
42.5°	5108.8	5234.5	5404.4	5600.8	5733.2	5822.5	5994.6	6178.8	6376.3	6568.3	6704.0
45°	4684.1	4793.3	4956.5	5139.7	5280.9	5391.2	5612.9	5809.3	6026.6	6191.0	6318.9
47.5°	4256.0	4363.0	4507.5	4699.5	4834.1	5011.7	5221.3	5445.2	5646.0	5791.6	5922.9
50°	3828.0	3920.7	4068.5	4263.7	4406.1	4619.0	4836.3	5069.1	5242.3	5379.0	5488.3
52.5°	3432.0	3511.4	3646.0	3842.3	4012.2	4222.9	4462.3	4671.9	4835.2	4959.8	5076.8
55°	3028.2	3096.6	3245.5	3428.6	3644.9	3849.0	4095.0	4282.5	4430.3	4550.6	4658.7
57.5°	2648.7	2723.7	2869.3	3045.8	3286.3	3502.6	3732.0	3906.3	4042.0	4165.6	4230.7
60°	2273.6	2365.2	2520.7	2707.2	2949.9	3172.7	3383.4	3545.6	3674.7	3758.5	3812.5
62.5°	1939.4	2032.0	2194.2	2402.7	2645.4	2862.7	3055.8	3197.0	3296.3	3385.6	3416.5
65°	1647.0	1730.9	1896.3	2130.2	2367.4	2574.8	2751.3	2853.9	2936.6	2980.8	2970.8
67.5°	1371.2	1462.8	1632.7	1887.5	2119.2	2313.3	2449.0	2534.0	2582.5	2591.3	2563.8
70°	1127.4	1225.6	1406.5	1669.1	1898.6	2065.1	2168.8	2216.3	2224.0	2226.2	2217.4
72.5°	915.6	1018.2	1217.9	1478.2	1700.0	1823.5	1900.8	1910.7	1926.1	1919.5	1932.8
75°	728.1	839.5	1059.0	1316.1	1504.7	1607.3	1640.4	1642.6	1648.1	1665.8	1684.5
77.5°	579.2	682.9	921.1	1168.3	1332.6	1401.0	1409.8	1420.9	1433.0	1446.3	1465.0
80°	444.6	554.9	803.1	1020.4	1155.0	1208.0	1221.2	1230.0	1235.5	1243.3	1255.4
82.5°	328.7	451.2	686.2	877.0	990.6	1046.9	1048.0	1051.3	1056.8	1041.4	1045.8
85°	230.6	365.1	574.8	738.0	839.5	879.2	871.5	872.6	873.7	862.7	866.0
87.5°	150.0	287.9	465.5	596.8	676.2	703.8	687.3	677.3	660.8	615.6	601.2
90°	70.6	207.4	340.9	441.3	492.0	507.5	489.8	476.6	469.9	454.5	449.0
92.5°	53.0	145.6	252.6	337.6	391.6	410.4	400.5	389.4	380.6	371.8	369.6
95°	64.0	115.8	193.1	259.2	313.3	337.6	334.3	324.3	317.7	303.4	296.8
97.5°	66.2	123.6	187.5	227.3	260.3	284.6	281.3	269.2	258.1	243.8	235.0
100°	73.9	148.9	209.6	237.2	251.5	250.4	247.1	236.1	221.7	204.1	193.1
102.5°	84.9	168.8	240.5	262.6	265.9	257.0	232.8	216.2	199.7	183.1	168.8
105°	94.9	175.4	273.6	285.7	286.8	267.0	244.9	216.2	189.7	171.0	155.5
107.5°	109.2	179.8	284.6	311.1	302.3	285.7	251.5	223.9	200.8	174.3	152.2
110°	132.4	189.7	290.1	325.4	317.7	294.5	272.5	233.9	201.9	185.3	164.4



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CATALOG NUMBER: SKB4-LD5-24-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.7	188.6	290.1	333.2	340.9	299.0	280.2	254.8	216.2	184.2	166.6
115°	162.2	190.8	282.4	325.4	339.8	312.2	278.0	261.5	233.9	204.1	172.1
117.5°	178.7	193.1	280.2	316.6	333.2	349.7	283.5	258.1	238.3	218.4	193.1
120°	196.4	193.1	285.7	318.8	337.6	325.4	302.3	259.2	236.1	219.5	203.0
122.5°	215.1	194.2	299.0	327.6	325.4	308.9	335.4	272.5	236.1	217.3	203.0
125°	231.7	201.9	299.0	318.8	301.2	321.0	289.0	314.4	247.1	217.3	201.9
127.5°	247.1	210.7	294.5	315.5	300.1	313.3	280.2	302.3	273.6	227.3	203.0
130°	261.5	220.6	286.8	323.2	313.3	281.3	302.3	255.9	293.4	254.8	212.9
132.5°	271.4	225.0	274.7	340.9	307.8	263.7	295.6	260.3	233.9	279.1	246.0
135°	278.0	226.1	257.0	333.2	302.3	269.2	254.8	285.7	229.5	216.2	267.0
137.5°	283.5	227.3	236.1	315.5	307.8	272.5	232.8	271.4	264.8	207.4	198.6
140°	285.7	227.3	221.7	295.6	323.2	274.7	237.2	221.7	260.3	243.8	192.0
142.5°	285.7	228.4	214.0	272.5	307.8	274.7	246.0	210.7	215.1	246.0	235.0
145°	284.6	232.8	212.9	247.1	286.8	290.1	250.4	220.6	194.2	203.0	235.0
147.5°	283.5	239.4	211.8	217.3	265.9	285.7	257.0	236.1	206.3	184.2	189.7
150°	282.4	246.0	210.7	203.0	244.9	269.2	276.9	242.7	225.0	198.6	177.6
152.5°	280.2	251.5	210.7	201.9	225.0	251.5	265.9	265.9	236.1	221.7	196.4
155°	278.0	257.0	209.6	205.2	201.9	232.8	249.3	262.6	259.2	233.9	222.8
157.5°	278.0	262.6	210.7	205.2	194.2	210.7	232.8	246.0	257.0	259.2	237.2
160°	276.9	265.9	219.5	203.0	197.5	190.8	212.9	228.4	239.4	249.3	255.9
162.5°	275.8	268.1	230.6	204.1	198.6	189.7	188.6	208.5	220.6	229.5	237.2
165°	274.7	269.2	244.9	210.7	198.6	193.1	187.5	184.2	194.2	209.6	217.3
167.5°	272.5	269.2	253.7	226.1	205.2	194.2	189.7	185.3	178.7	179.8	186.4
170°	270.3	269.2	260.3	246.0	222.8	204.1	193.1	188.6	184.2	179.8	173.2
172.5°	269.2	268.1	263.7	257.0	246.0	227.3	214.0	199.7	187.5	184.2	179.8
175°	268.1	267.0	264.8	262.6	255.9	249.3	242.7	231.7	218.4	208.5	199.7
177.5°	267.0	265.9	264.8	264.8	262.6	258.1	255.9	250.4	243.8	239.4	232.8
180°	247.1	247.1	247.1	247.1	247.1	247.1	247.1	247.1	247.1	247.1	247.1



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CATALOG NUMBER: SKB4-LD5-24-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6	9640.6
2.5°	9792.8	9825.9	9862.3	9833.6	9861.2	9882.2	9876.7	9883.3
5°	9909.8	9955.0	9993.6	9976.0	10004.6	10024.5	10017.9	10031.1
7.5°	10094.0	10162.4	10230.8	10241.8	10292.6	10335.6	10333.4	10335.6
10°	10332.3	10434.9	10527.5	10551.8	10614.7	10651.1	10648.9	10659.9
12.5°	10434.9	10511.0	10548.5	10536.4	10571.7	10576.1	10552.9	10560.6
15°	10270.5	10293.7	10276.0	10240.7	10267.2	10257.3	10239.6	10252.8
17.5°	9978.2	9984.8	9949.5	9909.8	9931.8	9931.8	9907.6	9921.9
20°	9648.3	9648.3	9610.8	9585.4	9588.7	9578.8	9545.7	9554.5
22.5°	9300.8	9277.6	9247.9	9218.1	9242.3	9246.8	9245.7	9262.2
25°	8919.1	8922.4	9003.0	9076.9	9149.7	9172.8	9165.1	9204.8
27.5°	8664.3	8752.5	8819.8	8827.6	8850.7	8841.9	8833.1	8860.6
30°	8419.4	8486.7	8549.6	8593.7	8668.7	8725.0	8766.9	8802.2
32.5°	8129.2	8224.1	8346.6	8435.9	8539.6	8606.9	8647.7	8696.3
35°	7819.3	7934.0	8054.2	8089.5	8133.7	8137.0	8122.6	8161.2
37.5°	7515.9	7614.1	7676.9	7693.5	7703.4	7684.7	7656.0	7683.6
40°	7177.2	7263.3	7326.1	7314.0	7308.5	7276.5	7254.4	7286.4
42.5°	6824.2	6881.6	6905.8	6869.4	6845.2	6826.4	6820.9	6841.8
45°	6428.2	6466.8	6492.1	6466.8	6451.3	6433.7	6420.4	6434.8
47.5°	5997.9	6040.9	6059.7	6038.7	6024.4	5997.9	5971.5	5986.9
50°	5577.6	5611.8	5617.3	5597.5	5541.2	5489.4	5447.4	5467.3
52.5°	5149.6	5147.4	5127.5	5094.4	5060.2	5043.7	5041.5	5056.9
55°	4702.8	4675.2	4647.6	4610.1	4584.8	4572.6	4582.6	4600.2
57.5°	4249.4	4221.8	4192.0	4114.8	4037.6	3964.8	3917.4	3906.3
60°	3832.4	3765.1	3687.9	3593.0	3513.6	3438.6	3375.7	3376.8
62.5°	3361.4	3281.9	3216.8	3141.8	3064.6	3003.9	2970.8	2966.4
65°	2920.1	2858.3	2813.1	2746.9	2679.6	2627.7	2596.9	2588.0
67.5°	2532.9	2496.5	2473.3	2429.2	2365.2	2318.9	2292.4	2285.8
70°	2215.2	2185.4	2167.7	2129.1	2076.2	2039.8	2018.8	2014.4
72.5°	1937.2	1919.5	1912.9	1875.4	1836.8	1797.1	1776.1	1770.6
75°	1698.9	1679.0	1664.7	1638.2	1599.6	1569.8	1554.4	1543.3
77.5°	1469.4	1451.8	1441.8	1419.8	1390.0	1362.4	1344.8	1333.7
80°	1256.5	1237.8	1228.9	1208.0	1178.2	1149.5	1138.5	1127.4
82.5°	1042.5	1025.9	1019.3	1003.9	981.8	960.9	946.5	936.6
85°	866.0	851.6	848.3	838.4	819.7	804.2	792.1	784.4
87.5°	590.2	584.7	583.6	574.8	561.5	548.3	537.2	530.6
90°	445.7	435.8	435.8	431.3	421.4	411.5	403.8	398.2
92.5°	368.5	365.1	365.1	358.5	349.7	340.9	332.1	326.5
95°	292.3	289.0	291.2	287.9	281.3	275.8	269.2	264.8
97.5°	229.5	226.1	229.5	227.3	221.7	216.2	210.7	205.2
100°	185.3	180.9	180.9	177.6	173.2	166.6	162.2	157.8
102.5°	158.9	152.2	148.9	145.6	140.1	134.6	130.2	125.8
105°	143.4	136.8	132.4	128.0	122.5	118.0	113.6	109.2
107.5°	136.8	128.0	122.5	118.0	112.5	108.1	102.6	99.3
110°	142.3	129.1	120.2	114.7	108.1	103.7	98.2	94.9



TEST NUMBER: P236492

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L850-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	153.3	141.2	128.0	118.0	112.5	107.0	101.5	98.2
115°	148.9	139.0	136.8	129.1	124.7	118.0	111.4	108.1
117.5°	165.5	143.4	130.2	122.5	119.1	116.9	113.6	110.3
120°	182.0	163.3	146.7	135.7	125.8	118.0	111.4	107.0
122.5°	188.6	173.2	161.1	152.2	145.6	137.9	130.2	125.8
125°	188.6	176.5	168.8	162.2	155.5	150.0	143.4	139.0
127.5°	190.8	180.9	173.2	165.5	160.0	154.4	148.9	145.6
130°	193.1	184.2	177.6	172.1	165.5	158.9	153.3	148.9
132.5°	205.2	189.7	180.9	175.4	171.0	164.4	158.9	154.4
135°	253.7	207.4	192.0	182.0	174.3	167.7	161.1	156.6
137.5°	252.6	261.5	235.0	199.7	186.4	177.6	169.9	165.5
140°	183.1	225.0	250.4	253.7	246.0	225.0	210.7	200.8
142.5°	183.1	176.5	175.4	209.6	237.2	240.5	238.3	236.1
145°	232.8	203.0	172.1	167.7	164.4	162.2	162.2	157.8
147.5°	222.8	229.5	228.4	204.1	183.1	163.3	158.9	157.8
150°	175.4	195.3	221.7	229.5	229.5	226.1	222.8	222.8
152.5°	173.2	166.6	171.0	180.9	196.4	201.9	207.4	198.6
155°	201.9	184.2	171.0	162.2	155.5	151.1	133.5	120.2
157.5°	225.0	216.2	204.1	193.1	180.9	160.0	142.3	137.9
160°	250.4	236.1	226.1	219.5	208.5	189.7	182.0	178.7
162.5°	243.8	249.3	247.1	240.5	217.3	206.3	199.7	195.3
165°	223.9	229.5	232.8	232.8	230.6	222.8	217.3	212.9
167.5°	200.8	209.6	216.2	218.4	225.0	222.8	214.0	209.6
170°	171.0	174.3	180.9	189.7	196.4	206.3	204.1	199.7
172.5°	175.4	173.2	175.4	177.6	179.8	185.3	185.3	183.1
175°	192.0	185.3	180.9	177.6	178.7	184.2	188.6	184.2
177.5°	226.1	220.6	212.9	208.5	209.6	211.8	217.3	201.9
180°	247.1	247.1	247.1	247.1	247.1	247.1	247.1	247.1

(END OF REPORT)