

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: P236490

Luminaire Tested: **SKB4-LD5-24-N-UNV-L835-CD4-U inner 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236490
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-L835-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) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

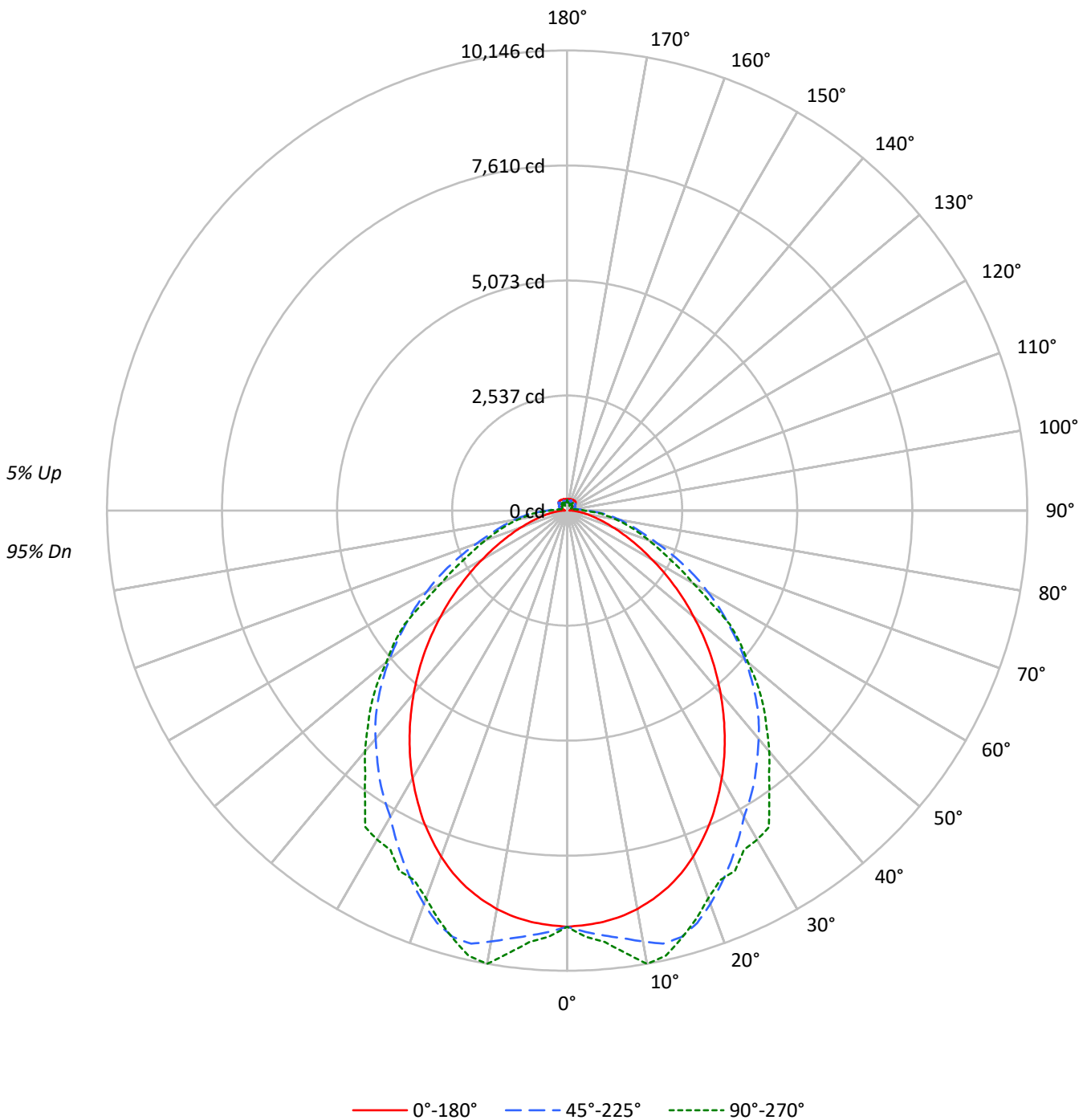
Lumens per Lamp: N/A
Luminaire Lumens: 25925.1 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.34 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Direct

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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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	118	118	118	118	114	114	114	114	108	108	108	103	103	103	97	97	97	95
1	108	103	98	95	104	100	96	93	95	92	89	90	87	85	86	84	82	79
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	76	72	69	67
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	57
4	82	71	62	56	80	69	61	55	66	59	54	63	57	52	60	55	51	49
5	76	64	55	48	74	62	54	48	59	52	47	57	51	46	55	49	45	43
6	70	57	49	42	68	56	48	42	54	47	41	52	45	41	50	44	40	38
7	65	52	44	38	63	51	43	37	49	42	37	47	41	36	46	40	36	33
8	61	48	39	34	59	47	39	33	45	38	33	43	37	32	42	36	32	30
9	57	44	36	30	55	43	35	30	42	35	30	40	34	29	39	33	29	27
10	53	41	33	28	52	40	32	27	39	32	27	37	31	27	36	30	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13170	13170	13170
5°	13056	13414	13623
10°	12881	13781	14503
15°	12596	14030	14081
20°	12171	13528	13350
25°	11625	12836	13191
30°	10969	12113	13047
35°	10236	11695	12628
40°	9447	11224	11885
45°	8601	10723	11188
50°	7660	10049	10260
55°	6713	9305	9456
60°	5698	8558	7737
65°	4789	7724	6756
70°	3939	6751	6164
75°	3217	6145	5758
80°	2700	5912	5441
85°	2266	5831	5416



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	903.3	3.5
10°-20°	2655.1	10.2
20°-30°	3872.3	14.9
30°-40°	4470.4	17.2
40°-50°	4328.5	16.7
50°-60°	3561.5	13.7
60°-70°	2461.9	9.5
70°-80°	1532.5	5.9
80°-90°	793.9	3.1
90°-100°	298.6	1.2
100°-110°	186.7	0.7
110°-120°	190.3	0.7
120°-130°	190.8	0.7
130°-140°	172.6	0.7
140°-150°	134.2	0.5
150°-160°	94.4	0.4
160°-170°	58.8	0.2
170°-180°	19.4	0.1
0°-30°	7430.7	28.7
0°-40°	11901.1	45.9
0°-60°	19791.0	76.3
0°-90°	24579.3	94.8
90°-120°	675.6	2.6
90°-150°	1173.1	4.5
90°-180°	1346.0	5.2
0°-180°	25925.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9176	9176	9176	9176	9176	
5°	9104	9302	9405	9504	9548	863
15°	8596	9131	9735	9764	9759	2417
25°	7519	8364	8542	8604	8761	3453
35°	6056	6818	7215	7683	7768	3782
45°	4458	5079	5893	6167	6125	3434
55°	2882	3566	4331	4406	4379	2583
65°	1568	2352	2837	2646	2463	1566
75°	693	1481	1586	1572	1469	755
85°	220	818	821	803	747	222
90°	67	476	433	413	379	45
95°	61	310	289	276	252	50
105°	90	264	163	124	104	99
115°	154	310	194	127	103	154
125°	220	296	207	158	132	196
135°	265	272	206	178	149	204
145°	271	275	193	162	150	170
155°	265	207	223	159	114	123
165°	262	186	200	222	203	74
175°	255	240	198	171	175	24
180°	235	235	235	235	235	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2
2.5°	9146.8	9152.1	9189.9	9204.6	9225.6	9223.5	9247.6	9284.4	9270.7	9301.2	9304.3
5°	9103.8	9117.4	9174.1	9220.3	9284.4	9319.0	9357.9	9393.6	9377.8	9405.1	9418.8
7.5°	9029.2	9056.5	9140.5	9223.5	9295.9	9318.0	9364.2	9429.3	9447.1	9511.2	9555.3
10°	8920.0	8958.8	9074.4	9165.7	9236.1	9290.7	9385.2	9480.7	9540.6	9648.7	9732.7
12.5°	8771.9	8822.3	8970.4	9053.3	9164.7	9259.2	9390.4	9529.0	9641.4	9780.0	9861.9
15°	8595.5	8657.5	8816.0	8916.8	9071.2	9189.9	9367.3	9535.3	9637.2	9734.8	9771.6
17.5°	8381.3	8464.3	8627.0	8759.3	8929.4	9080.7	9279.1	9420.9	9501.7	9533.2	9517.5
20°	8119.9	8231.2	8396.0	8550.4	8745.7	8924.2	9118.5	9220.3	9234.0	9229.8	9220.3
22.5°	7829.0	7965.5	8132.5	8308.9	8530.4	8715.2	8890.6	8912.6	8910.5	8896.9	8888.5
25°	7519.3	7661.0	7835.3	8030.6	8279.5	8447.5	8560.9	8564.0	8561.9	8542.0	8521.0
27.5°	7171.7	7328.2	7519.3	7724.0	7977.1	8105.2	8182.9	8191.3	8188.1	8173.4	8162.9
30°	6817.8	6976.4	7155.9	7389.1	7622.2	7699.9	7783.9	7794.4	7786.0	7796.5	7916.2
32.5°	6444.0	6599.4	6787.4	7024.7	7221.0	7277.8	7367.0	7367.0	7373.3	7515.1	7643.2
35°	6055.5	6208.8	6394.7	6627.8	6782.1	6854.6	6935.4	6924.9	7070.9	7214.7	7331.3
37.5°	5662.8	5807.7	5987.3	6212.0	6335.9	6426.2	6480.8	6581.6	6745.4	6882.9	7036.2
40°	5262.7	5391.9	5569.4	5776.2	5892.8	5989.4	6058.7	6242.4	6396.8	6571.1	6727.5
42.5°	4862.7	4982.4	5144.1	5331.0	5457.0	5542.1	5705.9	5881.2	6069.2	6251.9	6381.0
45°	4458.4	4562.4	4717.8	4892.1	5026.5	5131.5	5342.5	5529.5	5736.3	5892.8	6014.6
47.5°	4051.0	4152.9	4290.4	4473.1	4601.2	4770.3	4969.8	5182.9	5374.0	5512.7	5637.6
50°	3643.6	3731.8	3872.5	4058.4	4193.8	4396.5	4603.3	4824.9	4989.7	5119.9	5223.9
52.5°	3266.6	3342.2	3470.3	3657.3	3819.0	4019.5	4247.4	4446.9	4602.3	4720.9	4832.2
55°	2882.3	2947.4	3089.2	3263.5	3469.3	3663.6	3897.7	4076.2	4216.9	4331.4	4434.3
57.5°	2521.1	2592.5	2731.1	2899.1	3128.0	3333.8	3552.2	3718.2	3847.3	3964.9	4026.9
60°	2164.1	2251.3	2399.3	2576.8	2807.8	3019.9	3220.4	3374.8	3497.6	3577.4	3628.9
62.5°	1846.0	1934.2	2088.5	2287.0	2518.0	2724.8	2908.6	3043.0	3137.5	3222.5	3251.9
65°	1567.7	1647.5	1805.0	2027.6	2253.4	2450.8	2618.8	2716.4	2795.2	2837.2	2827.7
67.5°	1305.2	1392.3	1554.0	1796.6	2017.1	2201.9	2331.1	2411.9	2458.1	2466.5	2440.3
70°	1073.1	1166.6	1338.8	1588.7	1807.1	1965.7	2064.4	2109.5	2116.9	2119.0	2110.6
72.5°	871.5	969.2	1159.2	1407.0	1618.1	1735.7	1809.2	1818.7	1833.4	1827.1	1839.7
75°	693.0	799.1	1008.0	1252.7	1432.2	1529.9	1561.4	1563.5	1568.7	1585.5	1603.4
77.5°	551.3	650.0	876.8	1112.0	1268.4	1333.5	1341.9	1352.4	1364.0	1376.6	1394.4
80°	423.2	528.2	764.4	971.3	1099.4	1149.8	1162.4	1170.8	1176.0	1183.4	1194.9
82.5°	312.9	429.5	653.1	834.8	942.9	996.5	997.5	1000.7	1005.9	991.2	995.4
85°	219.5	347.6	547.1	702.5	799.1	836.9	829.5	830.6	831.6	821.1	824.3
87.5°	142.8	274.1	443.1	568.1	643.7	669.9	654.2	644.7	629.0	585.9	572.3
90°	67.2	197.4	324.5	420.0	468.3	483.0	466.2	453.6	447.3	432.6	427.4
92.5°	50.4	138.6	240.5	321.3	372.8	390.6	381.2	370.7	362.3	353.9	351.8
95°	60.9	110.3	183.8	246.8	298.2	321.3	318.2	308.7	302.4	288.8	282.5
97.5°	63.0	117.6	178.5	216.3	247.8	270.9	267.8	256.2	245.7	232.1	223.7
100°	70.4	141.8	199.5	225.8	239.4	238.4	235.2	224.7	211.1	194.3	183.8
102.5°	80.9	160.7	228.9	249.9	253.1	244.7	221.6	205.8	190.1	174.3	160.7
105°	90.3	167.0	260.4	272.0	273.0	254.1	233.1	205.8	180.6	162.8	148.1
107.5°	104.0	171.2	270.9	296.1	287.7	272.0	239.4	213.2	191.1	165.9	144.9
110°	126.0	180.6	276.2	309.8	302.4	280.4	259.4	222.6	192.2	176.4	156.5



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CATALOG NUMBER: SKB4-LD5-24-N-UNV-L835-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°	139.7	179.6	276.2	317.1	324.5	284.6	266.7	242.6	205.8	175.4	158.6
115°	154.4	181.7	268.8	309.8	323.4	297.2	264.6	248.9	222.6	194.3	163.8
117.5°	170.1	183.8	266.7	301.4	317.1	332.9	269.9	245.7	226.8	207.9	183.8
120°	186.9	183.8	272.0	303.5	321.3	309.8	287.7	246.8	224.7	209.0	193.2
122.5°	204.8	184.8	284.6	311.9	309.8	294.0	319.2	259.4	224.7	206.9	193.2
125°	220.5	192.2	284.6	303.5	286.7	305.6	275.1	299.3	235.2	206.9	192.2
127.5°	235.2	200.6	280.4	300.3	285.6	298.2	266.7	287.7	260.4	216.3	193.2
130°	248.9	210.0	273.0	307.7	298.2	267.8	287.7	243.6	279.3	242.6	202.7
132.5°	258.3	214.2	261.5	324.5	293.0	251.0	281.4	247.8	222.6	265.7	234.2
135°	264.6	215.3	244.7	317.1	287.7	256.2	242.6	272.0	218.4	205.8	254.1
137.5°	269.9	216.3	224.7	300.3	293.0	259.4	221.6	258.3	252.0	197.4	189.0
140°	272.0	216.3	211.1	281.4	307.7	261.5	225.8	211.1	247.8	232.1	182.7
142.5°	272.0	217.4	203.7	259.4	293.0	261.5	234.2	200.6	204.8	234.2	223.7
145°	270.9	221.6	202.7	235.2	273.0	276.2	238.4	210.0	184.8	193.2	223.7
147.5°	269.9	227.9	201.6	206.9	253.1	272.0	244.7	224.7	196.4	175.4	180.6
150°	268.8	234.2	200.6	193.2	233.1	256.2	263.6	231.0	214.2	189.0	169.1
152.5°	266.7	239.4	200.6	192.2	214.2	239.4	253.1	253.1	224.7	211.1	186.9
155°	264.6	244.7	199.5	195.3	192.2	221.6	237.3	249.9	246.8	222.6	212.1
157.5°	264.6	249.9	200.6	195.3	184.8	200.6	221.6	234.2	244.7	246.8	225.8
160°	263.6	253.1	209.0	193.2	188.0	181.7	202.7	217.4	227.9	237.3	243.6
162.5°	262.5	255.2	219.5	194.3	189.0	180.6	179.6	198.5	210.0	218.4	225.8
165°	261.5	256.2	233.1	200.6	189.0	183.8	178.5	175.4	184.8	199.5	206.9
167.5°	259.4	256.2	241.5	215.3	195.3	184.8	180.6	176.4	170.1	171.2	177.5
170°	257.3	256.2	247.8	234.2	212.1	194.3	183.8	179.6	175.4	171.2	164.9
172.5°	256.2	255.2	251.0	244.7	234.2	216.3	203.7	190.1	178.5	175.4	171.2
175°	255.2	254.1	252.0	249.9	243.6	237.3	231.0	220.5	207.9	198.5	190.1
177.5°	254.1	253.1	252.0	252.0	249.9	245.7	243.6	238.4	232.1	227.9	221.6
180°	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2	9176.2
2.5°	9321.1	9352.6	9387.3	9360.0	9386.2	9406.2	9400.9	9407.2
5°	9432.4	9475.5	9512.2	9495.4	9522.7	9541.6	9535.3	9547.9
7.5°	9607.8	9672.9	9738.0	9748.5	9796.8	9837.7	9835.6	9837.7
10°	9834.6	9932.2	10020.4	10043.5	10103.4	10138.0	10135.9	10146.4
12.5°	9932.2	10004.7	10040.4	10028.8	10062.4	10066.6	10044.6	10051.9
15°	9775.8	9797.8	9781.0	9747.4	9772.6	9763.2	9746.4	9759.0
17.5°	9497.5	9503.8	9470.2	9432.4	9453.4	9453.4	9430.3	9444.0
20°	9183.6	9183.6	9147.9	9123.7	9126.9	9117.4	9085.9	9094.3
22.5°	8852.8	8830.7	8802.4	8774.0	8797.1	8801.3	8800.3	8816.0
25°	8489.5	8492.6	8569.3	8639.6	8708.9	8731.0	8723.6	8761.4
27.5°	8246.9	8330.9	8395.0	8402.3	8424.4	8416.0	8407.6	8433.8
30°	8013.8	8077.9	8137.7	8179.7	8251.1	8304.7	8344.6	8378.2
32.5°	7737.7	7828.0	7944.5	8029.6	8128.3	8192.3	8231.2	8277.4
35°	7442.6	7551.8	7666.3	7699.9	7741.9	7745.0	7731.4	7768.1
37.5°	7153.8	7247.3	7307.2	7322.9	7332.4	7314.5	7287.2	7313.5
40°	6831.5	6913.4	6973.2	6961.7	6956.4	6926.0	6905.0	6935.4
42.5°	6495.5	6550.1	6573.2	6538.5	6515.4	6497.6	6492.3	6512.3
45°	6118.5	6155.3	6179.4	6155.3	6140.6	6123.8	6111.2	6124.8
47.5°	5709.0	5750.0	5767.8	5747.9	5734.2	5709.0	5683.8	5698.5
50°	5308.9	5341.5	5346.7	5327.8	5274.3	5224.9	5185.0	5203.9
52.5°	4901.5	4899.4	4880.5	4849.0	4816.5	4800.7	4798.6	4813.3
55°	4476.3	4450.0	4423.8	4388.1	4363.9	4352.4	4361.8	4378.6
57.5°	4044.7	4018.5	3990.1	3916.6	3843.1	3773.8	3728.7	3718.2
60°	3647.8	3583.7	3510.2	3419.9	3344.3	3272.9	3213.1	3214.1
62.5°	3199.4	3123.8	3061.9	2990.5	2917.0	2859.2	2827.7	2823.5
65°	2779.4	2720.6	2677.6	2614.6	2550.5	2501.2	2471.8	2463.4
67.5°	2410.9	2376.2	2354.2	2312.2	2251.3	2207.2	2182.0	2175.7
70°	2108.5	2080.1	2063.3	2026.6	1976.2	1941.5	1921.6	1917.4
72.5°	1843.9	1827.1	1820.8	1785.0	1748.3	1710.5	1690.5	1685.3
75°	1617.0	1598.1	1584.5	1559.3	1522.5	1494.2	1479.5	1469.0
77.5°	1398.6	1381.8	1372.4	1351.4	1323.0	1296.8	1280.0	1269.5
80°	1196.0	1178.1	1169.7	1149.8	1121.4	1094.1	1083.6	1073.1
82.5°	992.3	976.5	970.2	955.5	934.5	914.6	900.9	891.5
85°	824.3	810.6	807.5	798.0	780.2	765.5	753.9	746.6
87.5°	561.8	556.5	555.5	547.1	534.5	521.9	511.4	505.1
90°	424.2	414.8	414.8	410.6	401.1	391.7	384.3	379.1
92.5°	350.7	347.6	347.6	341.3	332.9	324.5	316.1	310.8
95°	278.3	275.1	277.2	274.1	267.8	262.5	256.2	252.0
97.5°	218.4	215.3	218.4	216.3	211.1	205.8	200.6	195.3
100°	176.4	172.2	172.2	169.1	164.9	158.6	154.4	150.2
102.5°	151.2	144.9	141.8	138.6	133.4	128.1	123.9	119.7
105°	136.5	130.2	126.0	121.8	116.6	112.4	108.2	104.0
107.5°	130.2	121.8	116.6	112.4	107.1	102.9	97.7	94.5
110°	135.5	122.9	114.5	109.2	102.9	98.7	93.5	90.3



TEST NUMBER: P236490

CATALOG NUMBER: SKB4-LD5-24-N-UNV-L835-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	146.0	134.4	121.8	112.4	107.1	101.9	96.6	93.5
115°	141.8	132.3	130.2	122.9	118.7	112.4	106.1	102.9
117.5°	157.5	136.5	123.9	116.6	113.4	111.3	108.2	105.0
120°	173.3	155.4	139.7	129.2	119.7	112.4	106.1	101.9
122.5°	179.6	164.9	153.3	144.9	138.6	131.3	123.9	119.7
125°	179.6	168.0	160.7	154.4	148.1	142.8	136.5	132.3
127.5°	181.7	172.2	164.9	157.5	152.3	147.0	141.8	138.6
130°	183.8	175.4	169.1	163.8	157.5	151.2	146.0	141.8
132.5°	195.3	180.6	172.2	167.0	162.8	156.5	151.2	147.0
135°	241.5	197.4	182.7	173.3	165.9	159.6	153.3	149.1
137.5°	240.5	248.9	223.7	190.1	177.5	169.1	161.7	157.5
140°	174.3	214.2	238.4	241.5	234.2	214.2	200.6	191.1
142.5°	174.3	168.0	167.0	199.5	225.8	228.9	226.8	224.7
145°	221.6	193.2	163.8	159.6	156.5	154.4	154.4	150.2
147.5°	212.1	218.4	217.4	194.3	174.3	155.4	151.2	150.2
150°	167.0	185.9	211.1	218.4	218.4	215.3	212.1	212.1
152.5°	164.9	158.6	162.8	172.2	186.9	192.2	197.4	189.0
155°	192.2	175.4	162.8	154.4	148.1	143.9	127.1	114.5
157.5°	214.2	205.8	194.3	183.8	172.2	152.3	135.5	131.3
160°	238.4	224.7	215.3	209.0	198.5	180.6	173.3	170.1
162.5°	232.1	237.3	235.2	228.9	206.9	196.4	190.1	185.9
165°	213.2	218.4	221.6	221.6	219.5	212.1	206.9	202.7
167.5°	191.1	199.5	205.8	207.9	214.2	212.1	203.7	199.5
170°	162.8	165.9	172.2	180.6	186.9	196.4	194.3	190.1
172.5°	167.0	164.9	167.0	169.1	171.2	176.4	176.4	174.3
175°	182.7	176.4	172.2	169.1	170.1	175.4	179.6	175.4
177.5°	215.3	210.0	202.7	198.5	199.5	201.6	206.9	192.2
180°	235.2	235.2	235.2	235.2	235.2	235.2	235.2	235.2

(END OF REPORT)