

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: P236551

Luminaire Tested: **SKB4-LD5-24-W-UNV-L840-CD4-U inner 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236551
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-LD5-24-W-UNV-L840-CD4-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

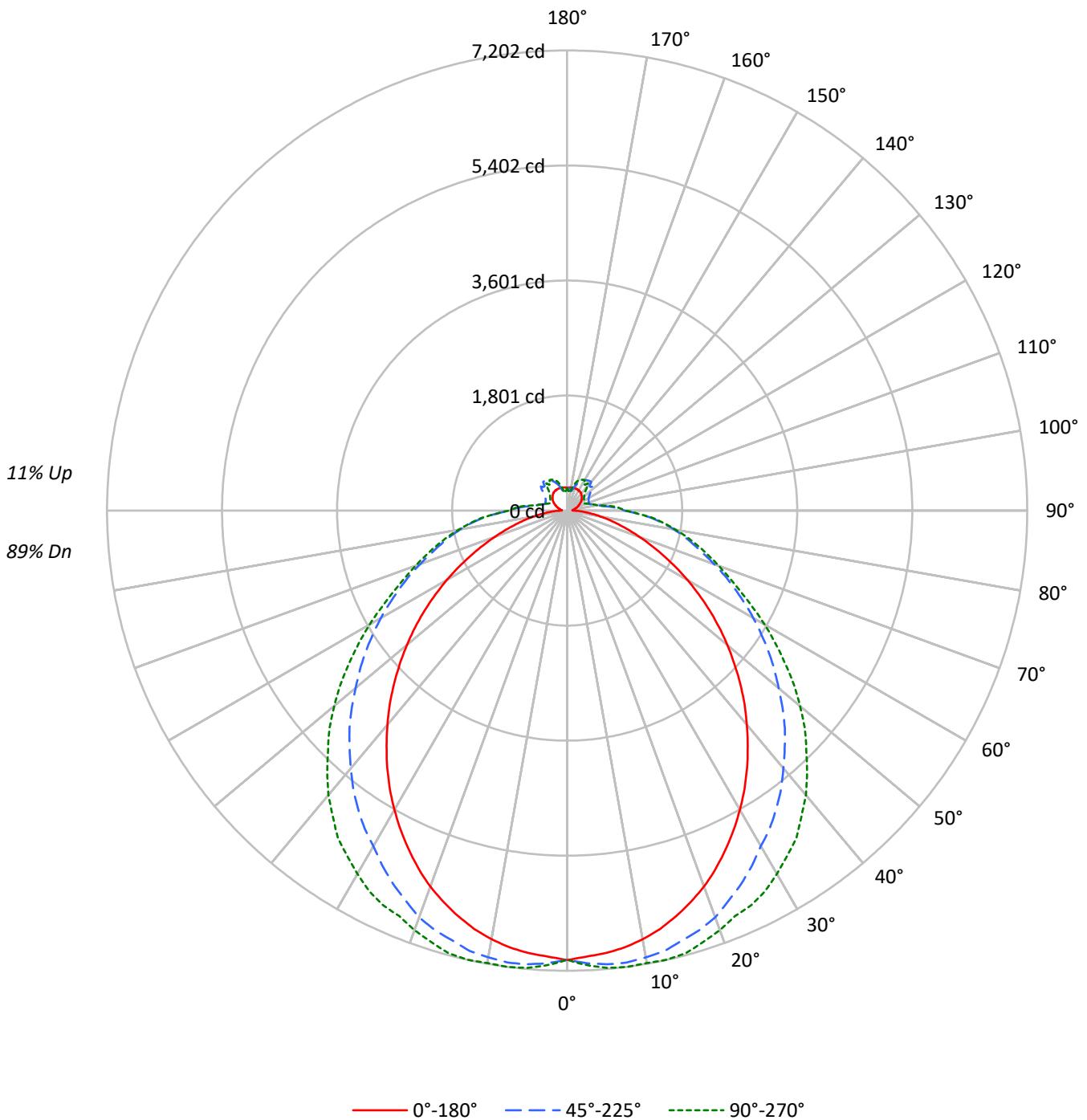
Lumens per Lamp: N/A
Luminaire Lumens: 24538.0 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.38 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 206.2
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-LD5-24-W-UNV-L840-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	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°	10094	10094	10094
5°	9970	10166	10252
10°	9837	10140	10279
15°	9635	10033	10348
20°	9386	9929	10256
25°	9060	9686	10261
30°	8698	9421	10224
35°	8298	9247	10169
40°	7854	8994	9960
45°	7387	8768	9670
50°	6883	8481	9383
55°	6326	8264	8990
60°	5722	8053	8596
65°	5068	7883	8204
70°	4436	7798	8104
75°	3861	7934	8278
80°	3345	8485	8733
85°	2899	9453	9800



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	677.2	2.8
10°-20°	1957.8	8.0
20°-30°	2951.9	12.0
30°-40°	3528.6	14.4
40°-50°	3617.8	14.7
50°-60°	3266.4	13.3
60°-70°	2621.8	10.7
70°-80°	1931.5	7.9
80°-90°	1236.4	5.0
90°-100°	632.2	2.6
100°-110°	386.5	1.6
110°-120°	347.4	1.4
120°-130°	359.0	1.5
130°-140°	358.1	1.5
140°-150°	308.9	1.3
150°-160°	215.5	0.9
160°-170°	108.6	0.4
170°-180°	32.4	0.1
0°-30°	5586.9	22.8
0°-40°	9115.4	37.1
0°-60°	15999.6	65.2
0°-90°	21789.3	88.8
90°-120°	1366.1	5.6
90°-150°	2392.2	9.7
90°-180°	2749.0	11.2
0°-180°	24538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7033	7033	7033	7033	7033	
5°	6952	7079	7128	7166	7185	659
15°	6575	6814	6961	7112	7172	1852
25°	5860	6131	6446	6674	6815	2697
35°	4909	5218	5704	6090	6256	3067
45°	3829	4207	4819	5186	5294	2953
55°	2716	3216	3847	4100	4163	2430
65°	1659	2334	2896	2978	2991	1653
75°	832	1641	2047	2102	2112	891
85°	281	1044	1331	1350	1351	280
90°	92	687	893	915	909	62
95°	96	467	676	728	730	79
105°	139	342	383	402	395	148
115°	204	433	371	322	296	203
125°	272	534	425	354	322	243
135°	321	514	522	446	390	248
145°	357	447	572	503	493	223
155°	368	351	506	545	533	170
165°	368	349	353	416	418	104
175°	363	359	348	336	308	35
180°	348	348	348	348	348	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0
2.5°	6986.0	7015.0	7026.1	7057.7	7070.5	7074.0	7082.5	7087.6	7080.8	7090.2	7080.8
5°	6951.8	6987.7	7009.9	7055.2	7074.0	7084.2	7101.3	7111.5	7112.4	7127.8	7124.3
7.5°	6895.5	6936.5	6971.5	7019.3	7043.2	7061.2	7086.8	7107.3	7121.8	7134.6	7128.6
10°	6811.8	6862.2	6903.2	6953.6	6986.9	7019.3	7052.6	7060.3	7073.1	7099.6	7115.8
12.5°	6708.5	6763.1	6804.1	6863.0	6910.0	6939.0	6967.2	6996.3	7030.4	7058.6	7059.4
15°	6575.3	6641.0	6681.2	6749.5	6800.7	6826.3	6877.6	6912.6	6927.1	6961.2	6998.8
17.5°	6425.8	6494.1	6536.0	6611.1	6658.9	6702.5	6762.3	6768.3	6828.0	6885.2	6929.6
20°	6261.9	6323.4	6366.1	6449.7	6500.1	6547.9	6594.9	6642.7	6723.0	6774.2	6803.3
22.5°	6072.3	6131.2	6189.3	6263.6	6319.9	6354.1	6438.6	6505.2	6571.0	6608.6	6655.5
25°	5860.5	5920.3	5975.8	6055.2	6103.9	6157.7	6273.0	6325.1	6378.9	6445.5	6499.3
27.5°	5641.9	5693.2	5754.6	5826.4	5879.3	5969.0	6074.0	6109.9	6192.7	6263.6	6308.0
30°	5406.2	5451.5	5509.6	5582.1	5647.0	5758.9	5840.0	5897.2	5987.8	6063.8	6162.0
32.5°	5165.4	5206.4	5255.9	5320.0	5413.1	5519.8	5604.3	5682.1	5779.4	5899.8	6003.1
35°	4909.2	4948.5	4991.2	5057.0	5169.7	5266.2	5368.7	5453.2	5584.7	5704.3	5815.3
37.5°	4643.7	4684.7	4719.7	4799.9	4915.2	5021.1	5127.0	5237.2	5369.5	5500.2	5592.4
40°	4375.5	4416.5	4446.4	4538.6	4658.2	4775.2	4890.5	5012.6	5150.1	5265.3	5372.1
42.5°	4107.4	4144.1	4178.3	4283.3	4397.7	4525.8	4653.9	4781.2	4910.1	5039.9	5158.6
45°	3829.0	3870.0	3903.3	4021.2	4135.6	4279.0	4410.6	4543.8	4670.1	4818.7	4908.4
47.5°	3550.6	3593.3	3630.9	3761.6	3884.5	4035.7	4163.8	4297.0	4439.6	4571.1	4662.5
50°	3274.0	3315.0	3365.3	3502.0	3626.6	3784.6	3918.7	4062.1	4203.0	4320.9	4425.1
52.5°	2996.4	3039.1	3103.2	3243.2	3377.3	3540.4	3678.7	3831.6	3958.8	4086.1	4174.0
55°	2716.4	2763.3	2844.4	2984.5	3135.6	3296.2	3445.6	3595.9	3725.7	3847.0	3922.1
57.5°	2441.4	2492.6	2588.3	2736.0	2895.7	3060.5	3226.1	3368.8	3498.6	3604.4	3677.0
60°	2173.3	2229.6	2337.2	2495.2	2666.8	2838.5	3003.3	3153.6	3268.0	3366.2	3413.2
62.5°	1911.1	1974.3	2091.3	2266.3	2444.8	2625.8	2800.9	2940.1	3040.0	3127.1	3167.2
65°	1659.2	1729.2	1859.0	2049.4	2240.7	2427.7	2603.6	2725.7	2819.7	2895.7	2926.4
67.5°	1425.2	1501.2	1649.8	1849.6	2052.8	2245.0	2406.4	2520.8	2607.0	2672.8	2692.4
70°	1208.3	1288.6	1454.2	1666.9	1882.1	2065.7	2214.2	2327.0	2398.7	2447.4	2454.2
72.5°	1009.3	1093.0	1279.2	1502.9	1720.7	1888.0	2034.1	2133.1	2198.0	2232.2	2251.0
75°	831.7	918.8	1125.5	1358.6	1561.0	1721.5	1856.4	1940.1	2006.7	2046.9	2064.8
77.5°	672.0	765.1	991.4	1219.4	1409.0	1557.6	1678.0	1769.3	1843.6	1875.2	1885.5
80°	524.3	631.9	872.7	1087.1	1261.3	1397.0	1526.0	1616.5	1678.8	1698.5	1702.7
82.5°	392.0	514.9	754.9	952.1	1114.4	1261.3	1376.5	1452.5	1505.5	1517.4	1520.0
85°	280.9	411.6	637.9	823.2	980.3	1106.7	1211.7	1275.8	1321.0	1331.3	1330.4
87.5°	190.4	326.2	532.9	693.4	829.2	943.6	1031.5	1085.3	1122.1	1107.5	1107.5
90°	92.2	256.2	417.6	539.7	637.9	736.1	801.0	849.7	881.3	893.2	895.8
92.5°	81.1	197.3	334.7	443.2	536.3	634.5	705.3	756.6	789.9	803.5	806.1
95°	96.5	159.7	256.2	339.9	426.1	507.2	563.6	606.3	649.8	676.3	690.8
97.5°	99.9	162.2	236.5	290.3	348.4	425.3	479.1	516.6	538.8	545.7	544.8
100°	109.3	188.7	244.2	287.8	322.8	357.8	411.6	452.6	476.5	485.0	485.0
102.5°	123.8	209.2	275.0	298.9	323.6	349.3	362.9	393.7	421.0	432.9	436.4
105°	139.2	217.8	320.2	315.1	333.0	350.1	364.6	368.9	371.5	383.4	390.2
107.5°	155.4	223.7	340.7	351.0	343.3	357.8	365.5	370.6	369.8	353.5	349.3
110°	172.5	228.9	347.5	391.1	368.0	368.0	373.2	374.9	369.8	362.9	349.3



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CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-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°	187.9	231.4	351.8	423.5	415.9	386.0	381.7	380.9	374.9	364.6	352.7
115°	204.1	233.1	353.5	440.6	446.6	420.1	397.1	391.1	381.7	370.6	356.9
117.5°	221.2	233.1	354.4	444.9	468.8	479.1	424.4	403.9	392.0	380.0	363.8
120°	239.1	234.0	352.7	449.2	513.2	495.3	469.7	427.8	405.6	390.2	374.0
122.5°	256.2	241.7	351.0	450.9	514.1	502.1	532.9	465.4	426.1	403.9	386.8
125°	272.4	252.8	349.3	450.0	514.1	553.3	513.2	532.9	459.4	425.3	403.1
127.5°	287.8	265.6	345.0	444.0	511.5	557.6	523.5	538.8	521.8	460.3	425.3
130°	298.9	281.8	336.4	431.2	504.7	551.6	575.5	517.5	552.5	524.3	462.0
132.5°	309.1	294.6	323.6	421.0	497.8	547.4	575.5	549.9	523.5	557.6	529.4
135°	321.1	309.1	308.3	409.9	487.6	540.5	568.7	588.4	529.4	521.8	554.2
137.5°	332.2	321.9	304.0	398.8	473.1	531.1	561.0	580.7	590.1	520.0	517.5
140°	341.6	333.9	304.0	385.1	456.0	518.3	549.9	570.4	583.2	585.8	518.3
142.5°	351.8	344.1	305.7	367.2	438.1	499.5	537.1	558.5	573.0	581.5	584.9
145°	356.9	350.1	321.9	339.0	418.4	476.5	519.2	544.8	562.7	572.1	577.3
147.5°	359.5	354.4	334.7	326.2	397.1	452.6	498.7	529.4	549.9	562.7	568.7
150°	362.1	358.7	344.1	318.5	371.5	429.5	474.8	508.9	533.7	549.1	556.8
152.5°	366.3	362.9	352.7	316.8	341.6	405.6	449.2	483.3	511.5	531.1	542.2
155°	368.0	365.5	357.8	337.3	326.2	374.9	421.0	453.4	482.5	506.4	521.8
157.5°	369.8	368.0	362.1	348.4	320.2	340.7	389.4	423.5	450.9	475.6	493.6
160°	368.9	368.0	363.8	355.2	335.6	321.9	345.8	388.5	416.7	439.8	456.9
162.5°	368.9	368.0	364.6	358.7	347.5	321.1	324.5	342.4	378.3	403.1	419.3
165°	368.0	368.0	365.5	361.2	354.4	343.3	319.4	318.5	333.0	352.7	375.7
167.5°	368.0	368.0	366.3	362.9	358.7	352.7	344.1	330.5	315.1	318.5	326.2
170°	366.3	367.2	365.5	362.9	360.4	356.1	351.8	345.8	337.3	327.9	310.0
172.5°	364.6	365.5	365.5	363.8	361.2	358.7	356.1	352.7	346.7	343.3	337.3
175°	362.9	363.8	363.8	362.9	360.4	357.8	356.9	354.4	350.1	348.4	345.0
177.5°	361.2	361.2	362.1	361.2	360.4	358.7	357.8	356.1	351.8	351.0	347.5
180°	348.4	348.4	348.4	348.4	348.4	348.4	348.4	348.4	348.4	348.4	348.4



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CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0	7033.0
2.5°	7074.8	7104.7	7103.8	7087.6	7103.8	7122.6	7112.4	7121.8
5°	7126.9	7166.2	7172.2	7160.2	7173.9	7190.1	7175.6	7185.0
7.5°	7130.3	7163.6	7171.3	7161.9	7186.7	7209.7	7195.2	7202.0
10°	7135.4	7173.9	7184.1	7169.6	7185.0	7197.8	7180.7	7191.8
12.5°	7064.6	7115.8	7145.7	7150.8	7179.8	7201.2	7186.7	7198.6
15°	7030.4	7083.4	7109.0	7115.8	7148.3	7171.3	7156.8	7172.2
17.5°	6962.1	6998.8	7006.5	7004.8	7041.5	7070.5	7065.4	7080.8
20°	6827.2	6876.7	6913.4	6921.1	6956.1	6980.0	6966.4	6986.9
22.5°	6707.6	6758.9	6770.8	6775.1	6823.8	6854.5	6852.8	6869.0
25°	6539.4	6590.6	6653.0	6694.8	6751.2	6787.9	6797.3	6815.2
27.5°	6396.8	6479.6	6554.8	6595.8	6653.0	6689.7	6703.4	6712.7
30°	6262.7	6349.8	6417.3	6460.8	6510.4	6539.4	6550.5	6565.0
32.5°	6098.8	6187.6	6245.6	6280.7	6330.2	6367.8	6391.7	6407.0
35°	5900.7	5982.6	6060.3	6119.3	6174.8	6212.3	6226.9	6255.9
37.5°	5685.5	5799.0	5879.3	5919.4	5951.9	5982.6	5999.7	6025.3
40°	5489.1	5584.7	5640.2	5681.2	5724.7	5764.9	5786.2	5811.9
42.5°	5250.0	5332.8	5409.6	5458.3	5495.9	5530.1	5544.6	5559.1
45°	5002.3	5100.5	5167.1	5204.7	5227.8	5263.6	5285.8	5293.5
47.5°	4764.9	4846.1	4899.9	4946.0	4977.6	5013.4	5033.1	5045.9
50°	4511.3	4582.2	4644.5	4686.4	4705.2	4729.1	4741.9	4759.0
52.5°	4252.6	4332.0	4370.4	4395.2	4414.0	4441.3	4455.0	4472.0
55°	3997.2	4045.9	4084.3	4115.1	4133.9	4154.4	4166.3	4162.9
57.5°	3722.3	3777.8	3811.1	3829.0	3840.1	3853.8	3857.2	3866.6
60°	3463.5	3502.8	3524.2	3540.4	3545.5	3556.6	3560.9	3571.1
62.5°	3206.5	3235.5	3246.6	3258.6	3265.4	3263.7	3264.6	3271.4
65°	2947.8	2971.7	2975.9	2981.1	2985.3	2987.0	2988.8	2991.3
67.5°	2700.1	2718.9	2724.9	2739.4	2745.4	2742.0	2742.0	2744.5
70°	2470.4	2488.4	2495.2	2506.3	2514.8	2514.8	2517.4	2520.8
72.5°	2260.4	2280.8	2294.5	2301.3	2313.3	2314.2	2314.2	2313.3
75°	2074.2	2089.6	2099.8	2104.9	2116.9	2116.0	2115.2	2111.8
77.5°	1888.9	1900.8	1912.8	1912.0	1923.9	1923.9	1921.3	1918.8
80°	1702.7	1716.4	1721.5	1719.8	1730.9	1729.2	1728.4	1722.4
82.5°	1511.5	1523.4	1528.5	1528.5	1538.8	1537.1	1536.2	1531.1
85°	1327.9	1335.5	1350.1	1349.2	1356.0	1356.0	1355.2	1350.9
87.5°	1089.6	1095.6	1100.7	1099.0	1104.1	1107.5	1104.1	1101.6
90°	896.6	902.6	913.7	916.3	920.5	916.3	915.4	908.6
92.5°	809.5	815.5	824.9	828.3	830.9	830.0	830.9	826.6
95°	701.1	712.2	726.7	730.1	734.4	733.5	736.1	730.1
97.5°	546.5	557.6	577.3	589.2	592.6	593.5	597.8	590.9
100°	485.0	487.6	491.0	489.3	488.4	486.7	485.9	480.8
102.5°	437.2	439.8	443.2	443.2	441.5	440.6	438.9	434.7
105°	393.7	397.9	401.3	402.2	401.3	400.5	398.8	395.4
107.5°	352.7	356.1	361.2	362.1	362.1	362.9	362.1	356.9
110°	329.6	323.6	325.3	325.3	325.3	326.2	324.5	320.2



TEST NUMBER: P236551

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L840-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.4	330.5	315.1	303.1	298.9	298.0	295.5	291.2
115°	343.3	333.0	325.3	317.7	312.5	307.4	300.6	296.3
117.5°	351.0	338.2	327.9	319.4	315.1	310.8	305.7	301.4
120°	360.4	345.8	335.6	326.2	320.2	314.2	308.3	304.0
122.5°	372.3	358.7	345.8	334.7	327.9	321.9	316.0	311.7
125°	386.8	371.5	359.5	349.3	340.7	333.9	327.1	321.9
127.5°	403.9	387.7	374.9	362.9	353.5	345.8	338.2	333.9
130°	428.7	409.0	394.5	380.0	369.8	361.2	353.5	347.5
132.5°	468.0	440.6	420.1	401.3	390.2	380.9	371.5	365.5
135°	548.2	487.6	456.9	434.7	419.3	406.5	396.2	390.2
137.5°	549.9	563.6	533.7	480.8	460.3	444.9	432.1	426.1
140°	514.1	531.1	554.2	557.6	554.2	526.0	508.1	502.1
142.5°	524.3	500.4	514.1	524.3	539.7	542.2	538.0	535.4
145°	581.5	561.0	512.4	494.4	495.3	501.3	497.8	492.7
147.5°	573.8	576.4	577.3	565.3	527.7	503.8	491.0	485.0
150°	564.4	567.9	569.6	569.6	567.9	564.4	557.6	552.5
152.5°	550.8	556.8	560.2	561.0	560.2	555.9	548.2	544.0
155°	532.9	539.7	544.0	545.7	546.5	544.0	537.1	532.9
157.5°	508.1	519.2	525.2	527.7	528.6	526.9	521.8	518.3
160°	474.8	487.6	497.0	500.4	503.8	503.8	499.5	496.1
162.5°	435.5	449.2	459.4	464.5	468.0	469.7	465.4	464.5
165°	393.7	405.6	414.2	418.4	421.8	423.5	420.1	417.6
167.5°	335.6	351.8	364.6	369.8	373.2	373.2	370.6	370.6
170°	309.1	311.7	312.5	312.5	310.8	309.1	305.7	304.0
172.5°	332.2	329.6	322.8	314.2	305.7	295.5	287.8	279.2
175°	341.6	341.6	338.2	333.0	327.1	321.1	314.2	308.3
177.5°	345.0	345.8	343.3	339.0	333.9	327.9	319.4	315.1
180°	348.4	348.4	348.4	348.4	348.4	348.4	348.4	348.4

(END OF REPORT)