

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: P236564

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236564
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24077)
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-L850-CD4-U outer 2 blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, OUTER 2 BLADES TILTED OUT 20 DEGREES
Light Source: (952) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

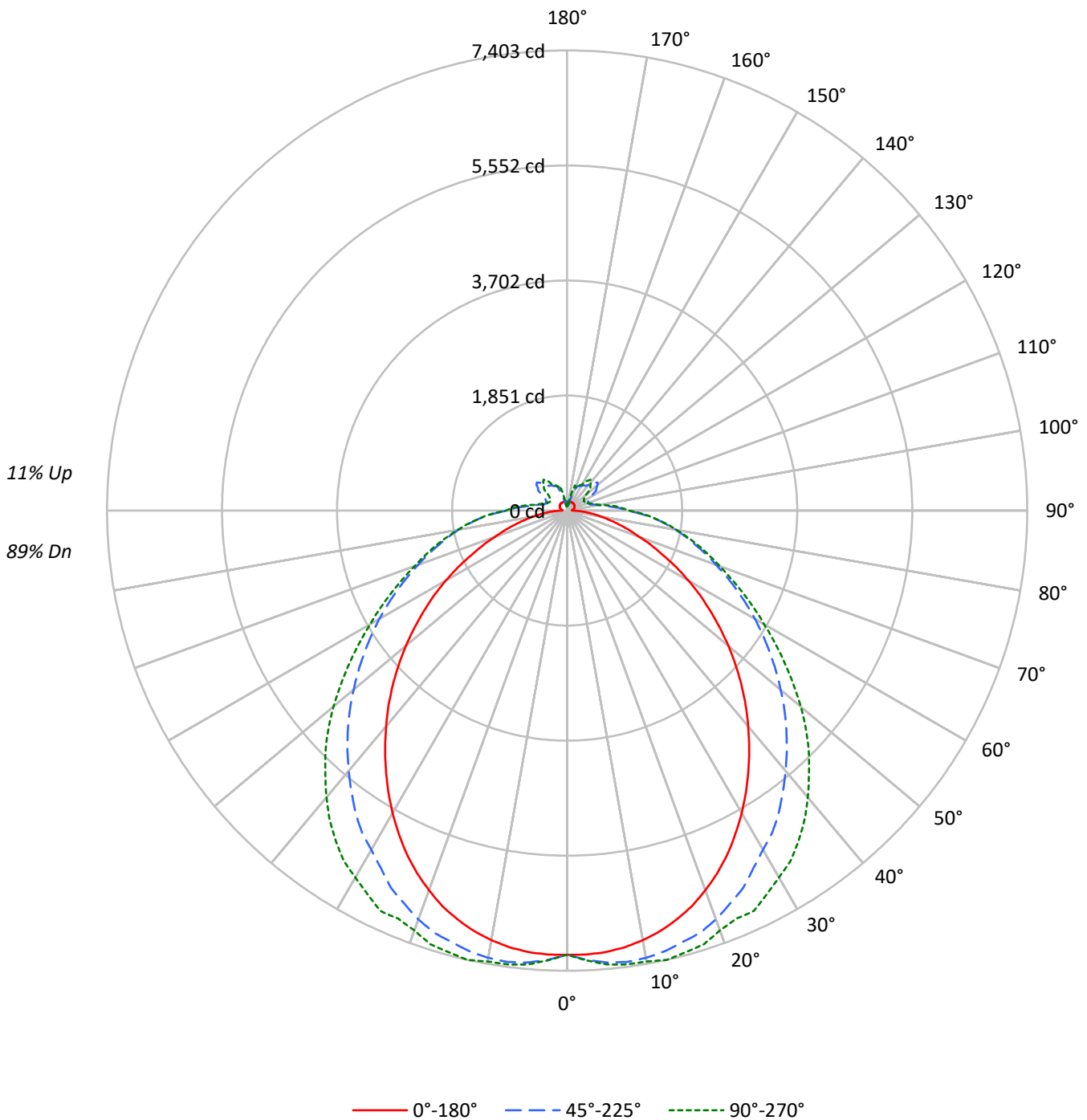
Lumens per Lamp: N/A
Luminaire Lumens: 25316.0 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.4 / 1.41
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

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-L850-CD4-U outer 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	117	117	117	117	113	113	113	113	105	105	105	99	99	99	92	92	92	89
1	105	99	95	90	101	96	92	88	90	86	83	84	81	79	79	77	74	72
2	95	86	79	73	91	83	76	71	78	72	68	73	68	64	68	65	61	59
3	86	75	67	60	83	73	65	59	68	62	56	64	59	54	60	56	52	49
4	79	66	57	51	76	64	56	50	61	53	48	57	51	46	54	49	44	42
5	72	59	50	43	70	58	49	43	54	47	41	51	45	40	48	43	38	36
6	67	53	44	38	64	52	43	37	49	42	36	46	40	35	44	38	34	31
7	62	48	39	33	60	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	39	32	28	37	31	27	25
9	54	40	32	27	52	39	32	26	37	30	26	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	31	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10254	10254	10254
5°	10225	10409	10458
10°	10133	10436	10527
15°	9979	10355	10616
20°	9743	10257	10550
25°	9435	10068	10700
30°	9037	9789	10613
35°	8597	9619	10548
40°	8134	9338	10324
45°	7648	9075	10047
50°	7115	8798	9681
55°	6535	8546	9228
60°	5931	8349	8812
65°	5215	8179	8534
70°	4553	8127	8395
75°	4010	8291	8585
80°	3530	8863	9062
85°	3150	9919	10209



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	693.9	2.7
10°-20°	2021.5	8.0
20°-30°	3067.4	12.1
30°-40°	3675.1	14.5
40°-50°	3760.6	14.9
50°-60°	3383.8	13.4
60°-70°	2723.7	10.8
70°-80°	2013.2	8.0
80°-90°	1308.4	5.2
90°-100°	675.5	2.7
100°-110°	401.9	1.6
110°-120°	353.0	1.4
120°-130°	369.1	1.5
130°-140°	368.7	1.5
140°-150°	273.0	1.1
150°-160°	155.9	0.6
160°-170°	59.4	0.2
170°-180°	12.0	0.0
0°-30°	5782.8	22.8
0°-40°	9457.9	37.4
0°-60°	16602.3	65.6
0°-90°	22647.5	89.5
90°-120°	1430.5	5.7
90°-150°	2441.3	9.6
90°-180°	2669.0	10.5
0°-180°	25316.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7145	7145	7145	7145	7145	
5°	7130	7238	7298	7317	7330	677
15°	6810	7040	7184	7322	7358	1918
25°	6102	6359	6700	6950	7107	2804
35°	5086	5408	5934	6367	6489	3179
45°	3964	4364	4987	5400	5500	3056
55°	2806	3337	3978	4249	4273	2514
65°	1707	2420	3005	3104	3112	1708
75°	864	1716	2139	2184	2190	925
85°	305	1114	1397	1402	1407	301
90°	92	745	957	986	984	64
95°	89	495	712	772	782	72
105°	106	365	383	424	425	114
115°	129	504	372	331	317	129
125°	146	463	571	372	334	130
135°	150	420	634	573	531	116
145°	153	347	491	587	592	96
155°	151	112	439	460	446	70
165°	151	121	115	306	337	43
175°	148	147	153	134	100	14
180°	133	133	133	133	133	



TEST NUMBER: P236564

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8
2.5°	7149.2	7151.0	7189.7	7213.4	7202.8	7205.5	7201.1	7224.0	7247.7	7234.5	7245.9
5°	7129.8	7138.6	7190.5	7226.6	7227.5	7247.7	7255.6	7285.5	7313.7	7297.8	7312.8
7.5°	7085.9	7100.8	7165.0	7216.0	7229.2	7249.5	7253.9	7290.8	7331.3	7323.3	7339.2
10°	7017.3	7041.0	7120.2	7178.2	7186.1	7215.2	7234.5	7271.5	7307.5	7306.6	7323.3
12.5°	6928.4	6954.8	7046.3	7105.2	7118.4	7156.2	7174.7	7216.0	7258.3	7260.9	7281.1
15°	6809.7	6844.9	6943.4	7002.3	7024.3	7056.0	7083.2	7131.6	7172.9	7184.4	7243.3
17.5°	6673.3	6708.5	6807.0	6869.5	6888.0	6930.2	6963.6	7012.0	7089.4	7121.0	7168.5
20°	6500.1	6542.3	6641.7	6706.8	6727.0	6776.3	6812.3	6896.8	6974.2	6997.9	7044.5
22.5°	6311.8	6352.3	6452.6	6522.9	6541.4	6590.7	6658.4	6747.2	6815.8	6844.9	6922.3
25°	6102.5	6137.7	6236.2	6304.8	6325.9	6392.8	6479.8	6565.2	6634.6	6699.7	6754.3
27.5°	5863.3	5901.1	5998.7	6061.2	6092.8	6193.1	6277.5	6360.2	6457.8	6486.9	6567.8
30°	5617.0	5649.5	5746.3	5800.8	5851.8	5959.1	6042.7	6159.7	6226.5	6300.4	6442.0
32.5°	5355.7	5387.4	5480.6	5530.8	5606.4	5719.9	5825.4	5918.7	6018.9	6143.0	6273.1
35°	5085.7	5116.5	5205.3	5255.5	5349.6	5467.4	5586.2	5687.3	5831.6	5933.6	6052.4
37.5°	4810.4	4842.9	4922.1	4979.3	5087.5	5217.6	5334.6	5473.6	5601.1	5700.5	5830.7
40°	4531.6	4556.2	4638.9	4703.1	4824.5	4953.8	5085.7	5235.2	5352.2	5466.6	5614.3
42.5°	4251.9	4273.0	4353.0	4439.2	4561.5	4693.4	4860.5	4972.2	5109.5	5231.7	5373.3
45°	3964.2	3984.5	4064.5	4164.8	4287.9	4441.0	4603.7	4711.0	4857.0	4987.2	5115.6
47.5°	3674.9	3697.7	3778.7	3895.6	4028.5	4192.1	4332.8	4461.2	4626.6	4741.8	4853.5
50°	3384.6	3407.5	3498.1	3626.5	3762.8	3932.6	4070.7	4213.2	4372.4	4482.3	4587.9
52.5°	3095.2	3120.7	3223.6	3352.9	3506.9	3674.0	3825.3	3972.2	4117.3	4234.3	4323.1
55°	2805.8	2837.5	2951.9	3083.8	3253.6	3419.8	3580.8	3725.9	3868.4	3978.3	4066.3
57.5°	2534.1	2564.8	2682.7	2832.2	3005.5	3177.9	3349.4	3486.6	3626.5	3731.2	3807.7
60°	2252.6	2287.8	2420.6	2582.4	2763.6	2950.1	3119.9	3259.7	3394.3	3490.2	3550.0
62.5°	1980.8	2038.9	2164.6	2344.9	2533.2	2729.3	2902.6	3042.5	3165.6	3245.6	3290.5
65°	1707.3	1787.3	1922.8	2122.4	2318.6	2521.7	2698.5	2835.8	2939.5	3004.6	3035.4
67.5°	1475.0	1552.5	1701.1	1916.6	2120.7	2331.8	2508.6	2629.9	2715.3	2769.8	2795.3
70°	1240.2	1334.3	1500.6	1727.5	1942.1	2155.0	2314.2	2421.5	2497.1	2550.8	2574.5
72.5°	1045.8	1134.7	1326.4	1557.7	1781.1	1979.0	2120.7	2222.7	2306.2	2342.3	2353.7
75°	863.7	953.5	1164.6	1410.0	1629.0	1803.1	1938.6	2043.3	2106.6	2139.1	2150.6
77.5°	701.0	803.9	1031.7	1274.5	1476.8	1639.5	1775.9	1863.8	1927.2	1953.5	1962.3
80°	553.3	666.7	914.8	1142.6	1329.9	1488.2	1610.5	1695.8	1753.0	1774.1	1776.7
82.5°	421.3	548.9	800.4	1013.3	1188.3	1339.6	1452.2	1534.0	1574.4	1585.9	1583.2
85°	305.2	440.7	681.7	878.7	1045.8	1183.0	1281.5	1352.8	1388.0	1396.8	1388.9
87.5°	208.5	341.3	565.6	744.1	886.6	1008.0	1093.3	1154.9	1189.2	1192.7	1192.7
90°	92.4	256.0	448.6	585.8	698.4	792.5	860.2	919.2	948.2	957.0	964.9
92.5°	75.6	197.0	353.6	481.1	585.8	678.2	752.9	811.0	842.6	854.9	861.1
95°	88.8	161.0	263.0	359.7	454.7	534.8	600.8	662.3	694.9	711.6	729.2
97.5°	91.5	158.3	243.6	309.6	368.5	443.3	504.9	547.1	567.3	577.0	592.8
100°	95.9	161.0	263.0	302.6	347.4	389.7	424.0	475.0	499.6	508.4	511.9
102.5°	99.4	158.3	285.0	320.2	343.0	372.1	390.5	402.8	429.2	446.8	456.5
105°	105.5	155.7	283.2	369.4	359.7	370.3	384.4	392.3	405.5	382.6	397.6
107.5°	117.9	155.7	276.2	402.0	401.1	385.3	385.3	384.4	383.5	365.9	376.5
110°	124.9	133.7	267.4	393.2	453.0	418.7	400.2	387.0	374.7	365.9	358.0



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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.7	119.6	264.8	380.9	498.7	495.2	430.1	402.8	380.9	361.5	350.1
115°	129.3	105.5	261.2	357.1	486.4	522.5	508.4	433.6	398.4	372.1	352.7
117.5°	133.7	105.5	264.8	353.6	471.5	573.5	548.0	498.7	430.1	392.3	365.9
120°	139.0	107.3	278.8	355.3	447.7	556.8	587.6	565.6	492.6	426.6	389.7
122.5°	142.5	109.1	257.7	352.7	418.7	536.5	621.0	592.8	570.8	493.4	428.4
125°	146.0	110.8	226.9	351.0	418.7	506.6	596.4	661.4	592.8	570.8	512.8
127.5°	148.6	110.8	179.4	353.6	416.0	461.8	568.2	636.8	653.5	592.0	570.8
130°	148.6	107.3	124.0	370.3	406.4	456.5	526.9	607.8	657.9	642.1	591.1
132.5°	147.8	106.4	96.8	338.6	400.2	451.2	483.8	571.7	629.8	665.0	649.1
135°	149.5	118.7	97.6	299.9	398.4	441.5	477.6	506.6	595.5	634.2	662.3
137.5°	151.3	135.5	99.4	249.8	420.4	430.1	470.6	494.3	540.1	600.8	631.5
140°	152.2	148.6	101.2	174.2	384.4	422.2	457.4	482.9	500.5	546.2	596.4
142.5°	153.9	161.0	102.9	116.1	338.6	431.9	441.5	471.5	489.0	501.4	536.5
145°	153.0	166.2	101.2	95.0	277.9	415.2	431.0	453.0	476.7	490.8	500.5
147.5°	151.3	162.7	99.4	95.0	189.1	361.5	451.2	439.8	460.0	478.5	489.0
150°	150.4	159.2	107.3	96.8	119.6	299.1	409.0	437.1	444.2	460.9	475.0
152.5°	151.3	157.4	131.1	100.3	95.9	208.5	348.3	431.9	435.4	444.2	454.7
155°	151.3	155.7	149.5	101.2	98.5	125.8	270.0	365.9	432.8	438.9	438.0
157.5°	151.3	154.8	162.7	106.4	101.2	96.8	155.7	285.9	364.1	419.6	456.5
160°	151.3	153.0	165.4	131.1	102.9	100.3	101.2	161.0	275.3	343.0	391.4
162.5°	151.3	152.2	160.1	153.9	108.2	102.0	100.3	101.2	145.1	233.1	298.2
165°	151.3	151.3	155.7	166.2	139.0	102.9	102.0	100.3	96.8	115.2	150.4
167.5°	150.4	150.4	153.0	160.1	161.0	133.7	103.8	101.2	99.4	97.6	95.0
170°	149.5	148.6	151.3	153.9	160.1	160.1	141.6	117.9	100.3	98.5	97.6
172.5°	148.6	147.8	148.6	150.4	151.3	154.8	160.1	156.6	144.3	128.4	111.7
175°	147.8	146.9	146.9	146.9	146.9	146.9	147.8	148.6	150.4	153.0	155.7
177.5°	146.9	145.1	145.1	145.1	144.3	143.4	142.5	141.6	140.7	139.9	139.0
180°	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8	7144.8
2.5°	7238.0	7257.4	7244.2	7230.1	7228.4	7248.6	7246.8	7243.3
5°	7311.0	7330.4	7322.5	7311.0	7311.0	7333.0	7330.4	7329.5
7.5°	7340.1	7363.8	7355.9	7344.5	7352.4	7364.7	7367.3	7363.8
10°	7333.9	7362.9	7358.5	7348.0	7348.0	7366.4	7363.8	7364.7
12.5°	7293.4	7333.9	7349.7	7356.8	7372.6	7399.0	7400.8	7403.4
15°	7278.5	7319.0	7321.6	7322.5	7338.3	7361.2	7356.8	7357.7
17.5°	7197.6	7230.1	7235.4	7243.3	7267.9	7304.9	7304.0	7314.6
20°	7085.9	7140.4	7171.2	7180.0	7189.7	7205.5	7187.0	7187.0
22.5°	6986.5	7006.7	7002.3	7023.4	7070.9	7102.6	7107.9	7106.1
25°	6793.0	6858.9	6913.5	6985.6	7056.8	7096.4	7104.3	7107.0
27.5°	6675.1	6788.6	6848.4	6888.0	6924.0	6946.0	6960.1	6955.7
30°	6562.5	6622.3	6669.8	6736.7	6785.0	6804.4	6815.8	6815.0
32.5°	6359.3	6439.4	6497.4	6568.7	6647.8	6675.1	6686.5	6687.4
35°	6156.2	6250.3	6335.6	6398.9	6456.1	6475.4	6487.8	6488.6
37.5°	5954.7	6046.2	6122.7	6183.4	6235.3	6253.8	6266.1	6274.0
40°	5726.9	5810.5	5885.2	5956.5	6009.3	6012.8	6024.2	6024.2
42.5°	5474.5	5564.2	5642.5	5698.8	5744.5	5747.1	5758.6	5757.7
45°	5216.8	5299.4	5376.0	5424.3	5472.7	5481.5	5495.6	5500.0
47.5°	4951.1	5035.6	5105.1	5153.4	5192.1	5203.6	5212.4	5213.2
50°	4680.2	4769.1	4828.0	4864.1	4894.8	4905.4	4911.6	4909.8
52.5°	4415.5	4495.5	4536.9	4565.0	4595.8	4601.9	4603.7	4587.0
55°	4148.1	4211.4	4239.6	4258.0	4276.5	4289.7	4288.8	4273.0
57.5°	3872.8	3928.2	3937.0	3962.5	3970.4	3981.8	3975.7	3962.5
60°	3599.2	3639.7	3642.3	3666.1	3671.3	3668.7	3671.3	3660.8
62.5°	3325.7	3355.6	3359.1	3381.1	3391.6	3389.9	3391.6	3384.6
65°	3063.6	3091.7	3095.2	3112.8	3124.3	3121.6	3119.9	3111.9
67.5°	2822.6	2844.5	2853.3	2862.1	2867.4	2859.5	2856.0	2849.8
70°	2588.6	2602.7	2605.3	2612.3	2620.3	2613.2	2618.5	2611.5
72.5°	2363.4	2378.4	2388.9	2392.4	2401.2	2392.4	2397.7	2393.3
75°	2162.0	2174.3	2179.6	2188.4	2198.9	2191.0	2194.5	2190.1
77.5°	1971.1	1980.8	1988.7	1991.4	2001.0	1991.4	1993.1	1985.2
80°	1778.5	1782.9	1787.3	1789.9	1799.6	1791.7	1792.6	1787.3
82.5°	1584.1	1589.4	1600.8	1598.2	1607.0	1598.2	1599.9	1603.5
85°	1387.1	1396.8	1403.8	1401.2	1410.0	1406.4	1403.8	1407.3
87.5°	1192.7	1200.6	1209.4	1208.5	1216.5	1212.9	1212.9	1218.2
90°	964.0	970.2	980.7	992.2	993.9	995.7	992.2	984.2
92.5°	862.0	869.9	877.8	885.7	892.8	891.0	889.3	891.0
95°	739.7	752.9	767.0	776.7	788.1	788.1	788.1	781.9
97.5°	603.4	616.6	628.0	635.9	644.7	645.6	644.7	644.7
100°	512.8	517.2	521.6	526.9	533.0	534.8	533.0	533.9
102.5°	460.0	466.2	469.7	472.3	474.1	474.1	471.5	468.8
105°	406.4	416.0	421.3	425.7	428.4	429.2	427.5	424.8
107.5°	356.2	365.0	373.8	380.0	384.4	386.1	384.4	381.7
110°	343.0	365.9	344.8	335.1	338.6	343.0	342.2	339.5



TEST NUMBER: P236564

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	345.7	343.0	331.6	325.4	342.2	350.1	344.8	342.2
115°	338.6	332.5	330.7	330.7	329.8	327.2	321.0	316.6
117.5°	348.3	335.1	326.3	321.9	320.2	317.5	313.1	309.6
120°	365.9	349.2	336.0	329.0	322.8	316.6	310.5	306.1
122.5°	393.2	370.3	352.7	343.0	336.0	329.0	321.9	316.6
125°	439.8	403.7	379.1	365.9	355.3	346.6	337.8	334.2
127.5°	553.3	465.3	423.1	400.2	383.5	371.2	361.5	356.2
130°	569.1	559.4	536.5	462.7	434.5	415.2	400.2	395.8
132.5°	591.1	574.4	560.3	551.5	543.6	532.1	504.9	499.6
135°	675.5	604.3	579.6	565.6	555.0	545.3	535.7	531.3
137.5°	653.5	670.2	646.5	595.5	577.9	564.7	553.3	548.0
140°	621.0	638.6	652.6	660.6	663.2	639.5	610.4	599.9
142.5°	582.3	604.3	619.2	628.9	635.1	635.1	628.9	625.4
145°	510.2	555.9	579.6	593.7	599.9	601.6	596.4	592.0
147.5°	494.3	498.7	509.3	540.9	555.0	561.2	558.5	555.0
150°	481.1	487.3	489.9	490.8	489.0	486.4	482.9	479.4
152.5°	465.3	473.2	475.9	477.6	476.7	474.1	466.2	461.8
155°	444.2	452.1	457.4	461.8	460.9	458.3	450.3	445.9
157.5°	430.1	432.8	436.3	438.9	438.9	437.1	431.0	427.5
160°	424.8	450.3	426.6	419.6	417.8	416.0	409.9	405.5
162.5°	341.3	372.9	395.8	412.5	422.2	430.1	426.6	424.0
165°	213.7	264.8	296.4	315.8	329.8	339.5	337.8	336.9
167.5°	97.6	117.9	133.7	148.6	173.3	197.9	199.7	202.3
170°	94.1	91.5	87.1	82.7	78.3	73.0	67.7	64.2
172.5°	97.6	91.5	88.0	84.4	80.0	73.9	67.7	62.4
175°	151.3	145.1	138.1	130.2	124.0	115.2	104.7	100.3
177.5°	136.3	134.6	131.9	128.4	124.9	118.7	110.8	105.5
180°	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8

(END OF REPORT)