

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: P236546

Luminaire Tested: **SKB4-LD5-36-W-UNV-L850-CD4-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236546
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24078)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-36-W-UNV-L850-CD4-U all blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES
Light Source: (952) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

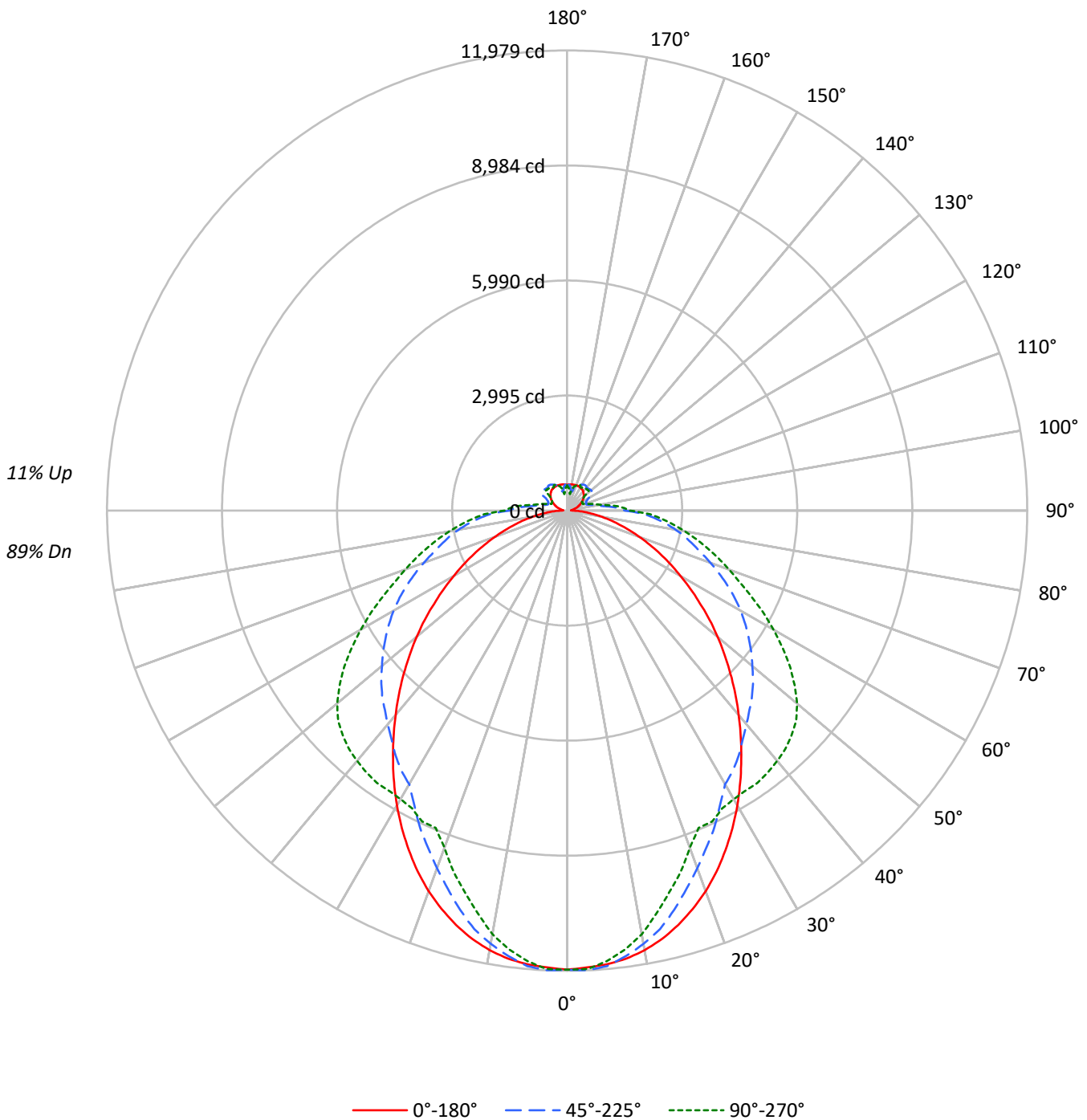
Lumens per Lamp: N/A
Luminaire Lumens: 37942.0 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.07 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 333.5
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	91	91	91	89
1	104	99	94	89	100	95	91	87	89	85	82	83	80	77	77	75	73	70
2	94	85	78	71	90	82	75	70	77	71	66	72	67	63	67	63	60	57
3	86	74	66	59	82	72	64	57	67	60	55	63	57	53	59	54	50	47
4	78	66	56	49	75	63	55	48	59	52	47	56	50	45	52	47	43	40
5	72	58	49	42	69	57	48	42	53	46	40	50	44	39	47	42	37	35
6	66	53	43	37	64	51	42	36	48	41	35	45	39	34	43	37	33	30
7	61	48	39	32	59	46	38	32	44	36	31	41	35	30	39	33	29	27
8	57	43	35	29	55	42	34	28	40	33	28	38	31	27	36	30	26	24
9	53	40	32	26	51	39	31	26	37	30	25	35	29	24	33	28	23	21
10	50	37	29	24	48	36	28	23	34	27	23	32	26	22	31	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17152	17152	17152
5°	17005	16974	16803
10°	16779	16359	16009
15°	16366	15512	14839
20°	15805	14518	13706
25°	15074	13647	13444
30°	14258	12780	13507
35°	13361	12623	14061
40°	12473	12404	14579
45°	11605	12392	15100
50°	10749	12355	15407
55°	9846	12395	15291
60°	8984	12482	14929
65°	8171	12531	14497
70°	7340	12649	14407
75°	6559	13129	14810
80°	5759	14346	15786
85°	4883	16319	17899



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1119.5	3.0
10°-20°	3022.9	8.0
20°-30°	4246.2	11.2
30°-40°	5037.1	13.3
40°-50°	5393.8	14.2
50°-60°	5122.8	13.5
60°-70°	4274.6	11.3
70°-80°	3233.0	8.5
80°-90°	2135.7	5.6
90°-100°	1062.6	2.8
100°-110°	613.3	1.6
110°-120°	534.1	1.4
120°-130°	574.9	1.5
130°-140°	565.6	1.5
140°-150°	450.7	1.2
150°-160°	321.6	0.8
160°-170°	175.0	0.5
170°-180°	58.8	0.2
0°-30°	8388.5	22.1
0°-40°	13425.7	35.4
0°-60°	23942.2	63.1
0°-90°	33585.5	88.5
90°-120°	2210.0	5.8
90°-150°	3801.2	10.0
90°-180°	4357.0	11.5
0°-180°	37942.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11951	11951	11951	11951	11951	
5°	11857	11950	11901	11804	11776	###
15°	11168	11113	10763	10390	10284	3141
25°	9750	9562	9082	8793	8930	4483
35°	7904	7750	7787	8325	8650	4942
45°	6016	6162	6810	7860	8266	4643
55°	4228	4711	5770	6789	7081	3794
65°	2675	3469	4603	5190	5286	2659
75°	1413	2523	3387	3726	3778	1505
85°	473	1661	2298	2436	2467	478
90°	139	1057	1499	1592	1627	96
95°	131	718	1127	1279	1318	109
105°	218	537	579	653	667	236
115°	366	718	546	474	443	364
125°	506	757	814	557	496	451
135°	609	725	797	790	760	469
145°	677	661	809	747	719	423
155°	699	527	737	765	739	323
165°	696	609	529	636	628	198
175°	685	679	678	632	578	66
180°	656	656	656	656	656	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9
2.5°	11904.6	11936.3	12009.0	12019.6	12013.0	11981.3	11964.1	12010.3	11987.9	11978.6	11957.5
5°	11857.0	11890.1	11965.4	11974.7	11966.7	11932.4	11913.9	11954.8	11923.1	11900.7	11861.0
7.5°	11767.2	11791.0	11865.0	11878.2	11858.4	11813.4	11777.8	11794.9	11738.1	11699.8	11654.8
10°	11619.2	11643.0	11715.6	11722.2	11683.9	11617.8	11561.0	11555.7	11505.5	11454.0	11391.9
12.5°	11423.6	11442.1	11512.1	11508.2	11443.4	11370.7	11311.2	11291.4	11224.0	11161.9	11082.6
15°	11168.5	11188.3	11250.5	11229.3	11154.0	11072.0	11007.3	10980.9	10876.4	10762.8	10645.2
17.5°	10875.1	10898.9	10938.6	10906.8	10831.5	10737.7	10662.4	10588.3	10445.6	10324.0	10209.1
20°	10544.7	10543.4	10581.7	10544.7	10464.1	10365.0	10248.7	10141.7	10004.2	9905.1	9791.4
22.5°	10168.1	10180.0	10189.2	10162.8	10075.6	9936.8	9802.0	9704.2	9580.0	9484.8	9375.2
25°	9750.5	9763.7	9765.0	9730.7	9640.8	9482.2	9360.6	9277.4	9159.7	9081.8	8933.8
27.5°	9318.3	9314.4	9336.8	9306.4	9174.3	9019.7	8928.5	8847.9	8755.3	8624.5	8504.2
30°	8862.4	8838.6	8875.6	8837.3	8697.2	8573.0	8484.4	8443.5	8312.6	8225.4	8304.7
32.5°	8386.6	8362.8	8403.8	8354.9	8225.4	8147.4	8082.7	8020.6	7930.7	8028.5	8117.0
35°	7904.3	7880.5	7924.1	7871.2	7772.1	7728.5	7671.7	7622.8	7696.8	7786.6	7865.9
37.5°	7423.2	7400.7	7447.0	7394.1	7338.6	7337.3	7267.3	7345.2	7421.9	7506.5	7654.5
40°	6948.8	6930.3	6976.5	6939.5	6923.7	6939.5	6923.7	7059.8	7114.0	7262.0	7452.3
42.5°	6478.3	6474.3	6512.7	6499.4	6532.5	6552.3	6623.7	6736.0	6832.5	7026.7	7272.6
45°	6015.7	6015.7	6055.4	6076.5	6133.4	6191.5	6294.6	6406.9	6562.9	6810.0	7057.1
47.5°	5558.5	5563.8	5610.0	5670.8	5739.5	5853.2	5962.9	6104.3	6313.1	6562.9	6808.7
50°	5113.1	5118.4	5179.2	5273.0	5358.9	5503.0	5619.3	5803.0	6043.5	6294.6	6570.8
52.5°	4675.7	4683.6	4766.9	4868.6	4991.5	5143.5	5300.8	5532.1	5763.3	6036.9	6321.0
55°	4227.7	4259.4	4359.8	4472.2	4632.1	4789.3	4988.9	5245.3	5491.1	5769.9	6038.2
57.5°	3814.0	3847.1	3958.1	4088.9	4277.9	4458.9	4711.4	4966.4	5226.8	5496.4	5754.1
60°	3412.3	3448.0	3565.6	3720.2	3936.9	4160.3	4433.8	4708.7	4957.2	5217.5	5438.2
62.5°	3044.9	3066.0	3177.0	3368.7	3611.8	3878.8	4176.1	4448.4	4684.9	4916.2	5118.4
65°	2674.8	2699.9	2808.3	3039.6	3314.5	3623.7	3933.0	4189.3	4400.8	4603.0	4780.1
67.5°	2327.3	2359.0	2470.0	2740.9	3051.5	3387.2	3680.5	3915.8	4106.1	4284.5	4436.5
70°	1999.5	2028.6	2162.1	2476.6	2821.5	3150.6	3416.2	3636.9	3806.1	3970.0	4100.8
72.5°	1692.9	1726.0	1892.5	2245.3	2610.1	2914.0	3146.6	3350.2	3515.4	3655.4	3783.6
75°	1412.7	1444.5	1661.2	2051.1	2386.7	2659.0	2882.3	3079.2	3237.8	3387.2	3507.4
77.5°	1148.4	1198.7	1473.5	1860.8	2155.5	2411.8	2627.3	2834.7	3005.2	3137.4	3227.3
80°	902.6	987.2	1311.0	1661.2	1930.8	2187.2	2417.1	2623.3	2764.7	2871.8	2941.8
82.5°	675.3	804.8	1145.8	1457.7	1724.6	1995.6	2207.0	2386.7	2507.0	2592.9	2645.8
85°	473.1	639.6	972.7	1275.3	1538.3	1782.8	1969.1	2123.7	2225.5	2298.2	2339.2
87.5°	314.5	491.6	811.4	1081.0	1309.7	1529.0	1691.6	1831.7	1922.9	1991.6	2031.2
90°	138.8	370.0	621.1	807.5	979.3	1133.9	1266.1	1382.4	1449.8	1498.7	1513.2
92.5°	105.7	277.5	489.0	667.4	827.3	983.2	1123.3	1238.3	1316.3	1365.2	1382.4
95°	130.8	230.0	378.0	510.1	651.5	783.7	893.4	989.8	1067.8	1127.3	1161.7
97.5°	138.8	237.9	359.5	445.4	536.6	652.9	750.6	827.3	874.9	907.9	921.1
100°	158.6	256.4	395.1	440.1	498.2	553.7	635.7	708.4	752.0	779.7	792.9
102.5°	185.0	272.2	428.2	478.4	499.6	539.2	560.3	601.3	643.6	674.0	688.5
105°	218.1	286.8	458.6	548.4	533.9	540.5	557.7	559.0	557.7	578.8	592.1
107.5°	261.7	297.4	477.1	574.9	619.8	572.2	561.7	560.3	548.4	523.3	518.1
110°	300.0	302.6	467.8	592.1	659.5	633.0	589.4	566.9	547.1	529.9	507.5



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CATALOG NUMBER: SKB4-LD5-36-W-UNV-L850-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	331.7	314.5	469.2	615.8	680.6	726.9	642.3	594.7	556.4	527.3	507.5
115°	366.1	323.8	475.8	623.8	692.5	744.0	769.1	647.6	588.1	545.8	514.1
117.5°	403.1	338.3	486.3	619.8	709.7	761.2	785.0	786.3	642.3	581.5	537.9
120°	437.4	354.2	490.3	619.8	741.4	766.5	795.6	810.1	785.0	638.3	576.2
122.5°	473.1	376.6	495.6	621.1	724.2	774.4	806.2	816.7	816.7	791.6	646.2
125°	506.2	404.4	492.9	622.5	724.2	789.0	802.2	822.0	819.4	814.1	807.5
127.5°	536.6	437.4	486.3	621.1	717.6	786.3	800.9	816.7	822.0	815.4	808.8
130°	561.7	466.5	461.2	613.2	705.7	781.0	803.5	810.1	819.4	816.7	806.2
132.5°	584.1	494.3	442.7	606.6	697.8	774.4	808.8	808.8	808.8	811.4	803.5
135°	609.2	539.2	448.0	596.0	689.9	759.9	803.5	820.7	803.5	796.9	796.9
137.5°	630.4	585.5	455.9	581.5	679.3	746.7	795.6	818.0	792.9	791.6	785.0
140°	648.9	626.4	473.1	561.7	666.1	734.8	777.1	810.1	816.7	779.7	779.7
142.5°	667.4	662.1	500.9	519.4	647.6	717.6	759.9	795.6	812.8	811.4	765.2
145°	676.6	681.9	531.3	487.7	623.8	697.8	742.7	775.8	800.9	808.8	803.5
147.5°	683.2	689.9	553.7	485.0	593.4	674.0	725.5	758.6	782.4	799.5	800.9
150°	689.9	693.8	586.8	498.2	541.8	648.9	703.1	740.1	763.9	781.0	789.0
152.5°	696.5	697.8	634.3	526.0	500.9	615.8	675.3	716.3	742.7	761.2	767.8
155°	699.1	700.4	672.7	560.3	498.2	555.1	641.0	685.9	716.3	737.4	745.4
157.5°	701.7	700.4	699.1	586.8	522.0	503.5	594.7	650.2	684.6	709.7	721.6
160°	700.4	699.1	708.4	635.7	556.4	503.5	511.4	601.3	642.3	672.7	688.5
162.5°	699.1	697.8	703.1	679.3	586.8	535.2	499.6	507.5	581.5	626.4	646.2
165°	696.5	695.1	697.8	703.1	646.2	572.2	531.3	502.2	495.6	528.6	580.2
167.5°	693.8	692.5	693.8	699.1	689.9	635.7	574.9	544.5	514.1	490.3	485.0
170°	691.2	689.9	689.9	689.9	695.1	687.2	650.2	601.3	561.7	543.2	512.8
172.5°	688.5	687.2	687.2	687.2	685.9	685.9	692.5	680.6	654.2	623.8	586.8
175°	684.6	683.2	683.2	683.2	680.6	678.0	678.0	678.0	675.3	678.0	674.0
177.5°	681.9	680.6	680.6	679.3	676.6	674.0	674.0	672.7	667.4	664.7	658.1
180°	655.5	655.5	655.5	655.5	655.5	655.5	655.5	655.5	655.5	655.5	655.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9	11950.9
2.5°	11913.9	11933.7	11961.4	11927.1	11932.4	11960.1	11952.2	11945.6
5°	11809.5	11817.4	11826.7	11781.7	11779.1	11802.9	11779.1	11776.4
7.5°	11595.4	11591.4	11599.3	11539.9	11535.9	11555.7	11537.2	11526.7
10°	11331.1	11320.5	11313.9	11250.5	11229.3	11234.6	11216.1	11200.2
12.5°	10979.5	10926.7	10888.3	10817.0	10786.6	10783.9	10749.6	10739.0
15°	10532.8	10477.3	10428.4	10351.8	10332.0	10338.6	10310.8	10284.4
17.5°	10102.0	10046.5	9998.9	9917.0	9901.1	9910.4	9857.5	9848.3
20°	9688.4	9624.9	9584.0	9492.8	9454.4	9445.2	9359.3	9336.8
22.5°	9289.3	9192.8	9076.5	8987.9	8972.1	8985.3	8973.4	8937.7
25°	8791.0	8738.2	8765.9	8820.1	8899.4	8953.6	8956.2	8929.8
27.5°	8518.8	8624.5	8701.2	8710.4	8739.5	8773.8	8775.2	8742.1
30°	8402.5	8438.2	8476.5	8541.2	8627.2	8685.3	8699.8	8673.4
32.5°	8156.7	8249.2	8352.3	8451.4	8558.4	8636.4	8661.5	8641.7
35°	7978.3	8111.7	8255.8	8394.6	8525.4	8619.2	8660.2	8649.6
37.5°	7810.4	7995.4	8176.5	8343.0	8475.2	8555.8	8588.8	8587.5
40°	7666.4	7876.5	8056.2	8228.0	8366.8	8462.0	8500.3	8506.9
42.5°	7497.2	7699.4	7913.5	8111.7	8262.4	8362.8	8403.8	8413.1
45°	7280.5	7515.7	7756.2	7963.7	8099.8	8201.6	8251.8	8266.4
47.5°	7065.1	7317.5	7560.7	7764.2	7895.0	8008.7	8064.2	8085.3
50°	6828.5	7080.9	7330.7	7521.0	7643.9	7754.9	7801.2	7814.4
52.5°	6566.8	6824.5	7055.8	7228.9	7320.1	7420.6	7458.9	7462.9
55°	6293.3	6524.5	6718.8	6858.9	6948.8	7046.6	7075.6	7080.9
57.5°	5974.8	6175.7	6344.8	6474.3	6541.7	6623.7	6642.2	6648.8
60°	5635.1	5808.3	5949.7	6056.7	6112.2	6177.0	6192.8	6202.1
62.5°	5287.6	5415.8	5547.9	5643.1	5678.7	5736.9	5748.8	5754.1
65°	4916.2	5029.9	5154.1	5226.8	5251.9	5287.6	5284.9	5286.2
67.5°	4551.5	4653.2	4744.4	4819.7	4843.5	4856.7	4866.0	4856.7
70°	4192.0	4276.6	4370.4	4421.9	4465.6	4469.5	4485.4	4481.4
72.5°	3877.5	3959.4	4034.7	4079.7	4118.0	4118.0	4137.8	4125.9
75°	3588.0	3650.2	3708.3	3742.7	3775.7	3769.1	3788.9	3778.3
77.5°	3285.4	3333.0	3376.6	3414.9	3444.0	3454.6	3455.9	3444.0
80°	2985.4	3022.4	3055.4	3088.5	3113.6	3107.0	3124.2	3113.6
82.5°	2674.8	2702.6	2733.0	2762.1	2784.5	2789.8	2791.1	2780.6
85°	2363.0	2390.7	2426.4	2446.2	2467.4	2474.0	2475.3	2467.4
87.5°	2053.7	2081.5	2117.1	2137.0	2159.4	2164.7	2166.0	2159.4
90°	1534.3	1562.1	1577.9	1605.7	1613.6	1625.5	1609.7	1626.8
92.5°	1406.1	1429.9	1449.8	1470.9	1481.5	1488.1	1481.5	1489.4
95°	1203.9	1240.9	1266.1	1292.5	1305.7	1316.3	1315.0	1317.6
97.5°	942.3	974.0	1005.7	1040.1	1055.9	1070.5	1069.1	1070.5
100°	812.8	831.3	845.8	861.7	868.3	869.6	868.3	869.6
102.5°	707.0	725.5	741.4	755.9	759.9	765.2	763.9	761.2
105°	611.9	630.4	646.2	659.5	664.7	670.0	670.0	667.4
107.5°	532.6	545.8	560.3	572.2	578.8	581.5	584.1	581.5
110°	489.0	486.3	492.9	500.9	504.8	507.5	504.8	503.5



TEST NUMBER: P236546

CATALOG NUMBER: SKB4-LD5-36-W-UNV-L850-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	496.9	485.0	467.8	455.9	454.6	454.6	449.3	446.7
115°	494.3	485.0	477.1	471.8	465.2	458.6	449.3	442.7
117.5°	510.1	490.3	475.8	469.2	463.9	458.6	452.0	446.7
120°	540.5	514.1	492.9	479.7	470.5	462.5	453.3	448.0
122.5°	586.8	551.1	524.7	506.2	494.3	482.4	473.1	466.5
125°	671.4	607.9	569.6	544.5	528.6	514.1	502.2	495.6
127.5°	806.2	746.7	647.6	604.0	578.8	557.7	543.2	535.2
130°	803.5	802.2	798.2	765.2	672.7	637.0	614.5	602.6
132.5°	799.5	800.9	796.9	791.6	786.3	777.1	766.5	762.5
135°	796.9	794.3	791.6	789.0	782.4	774.4	763.9	759.9
137.5°	787.7	789.0	787.7	782.4	775.8	767.8	758.6	754.6
140°	775.8	774.4	775.8	775.8	771.8	762.5	753.3	748.0
142.5°	767.8	763.9	759.9	758.6	757.3	750.6	741.4	738.8
145°	782.4	750.6	749.3	745.4	741.4	733.5	724.2	718.9
147.5°	799.5	792.9	750.6	729.5	728.2	721.6	712.3	707.0
150°	794.3	792.9	785.0	778.4	767.8	745.4	718.9	700.4
152.5°	777.1	785.0	782.4	778.4	770.5	761.2	749.3	744.0
155°	755.9	763.9	765.2	765.2	761.2	754.6	744.0	738.8
157.5°	733.5	741.4	742.7	744.0	740.1	734.8	725.5	721.6
160°	703.1	713.6	716.3	717.6	713.6	709.7	700.4	696.5
162.5°	663.4	678.0	684.6	685.9	684.6	680.6	672.7	668.7
165°	607.9	626.4	634.3	638.3	639.6	637.0	630.4	627.7
167.5°	495.6	528.6	557.7	574.9	576.2	573.6	568.3	566.9
170°	495.6	482.4	469.2	463.9	457.3	448.0	441.4	436.1
172.5°	556.4	543.2	531.3	515.4	498.2	481.0	469.2	463.9
175°	664.7	655.5	639.6	625.1	609.2	594.7	582.8	577.5
177.5°	654.2	652.9	647.6	639.6	631.7	622.5	610.6	604.0
180°	655.5	655.5	655.5	655.5	655.5	655.5	655.5	655.5

(END OF REPORT)