

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: P236570

Luminaire Tested: **SKB4-LD5-36-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: P236570
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-LD5-36-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

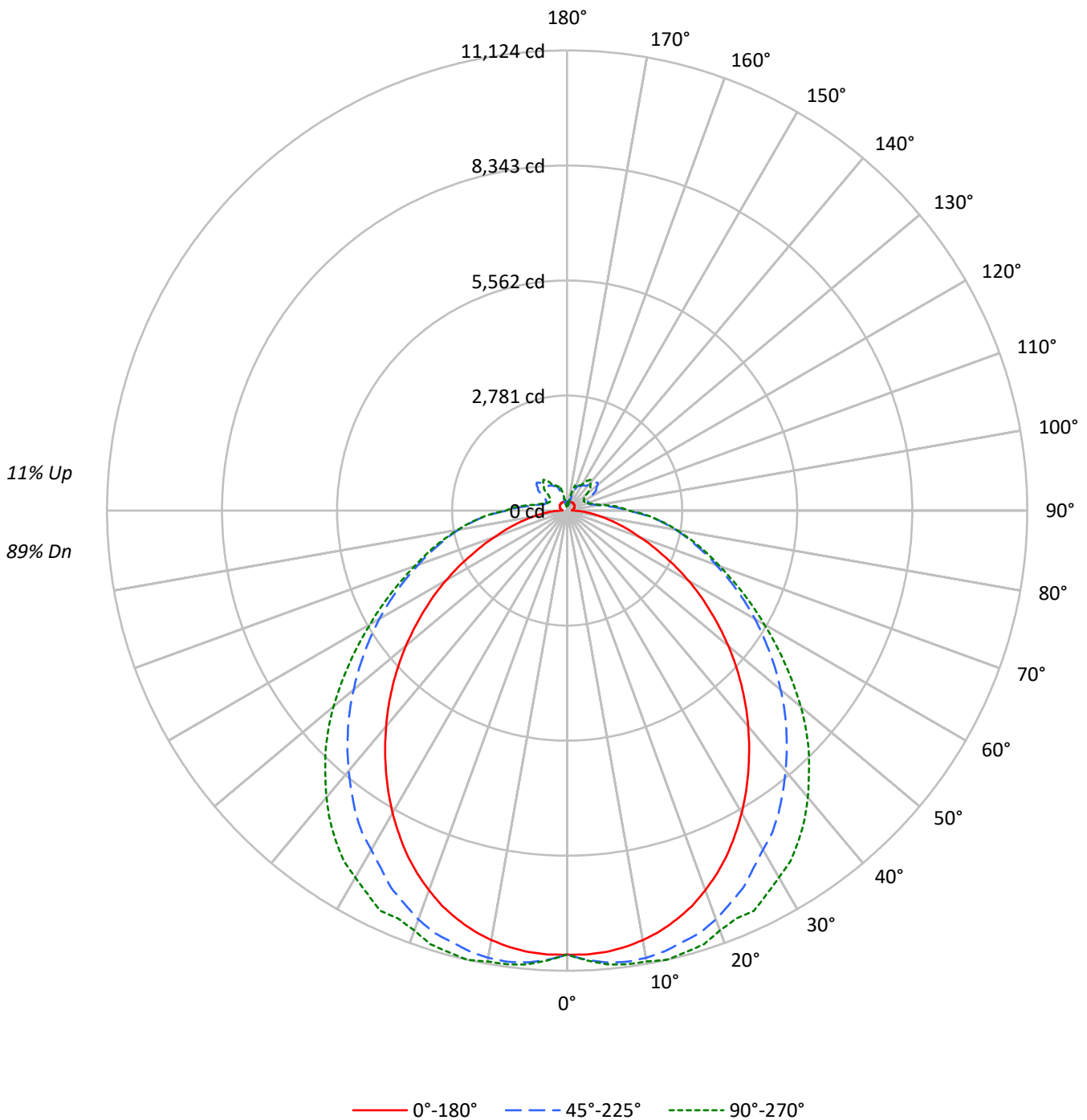
Lumens per Lamp: N/A
Luminaire Lumens: 38037.0 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.4 / 1.41
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 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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CATALOG NUMBER: SKB4-LD5-36-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°	15407	15407	15407
5°	15363	15639	15713
10°	15225	15680	15816
15°	14993	15557	15951
20°	14639	15411	15851
25°	14175	15127	16076
30°	13578	14708	15946
35°	12917	14452	15848
40°	12222	14029	15511
45°	11491	13635	15095
50°	10691	13219	14545
55°	9818	12840	13864
60°	8911	12545	13240
65°	7836	12289	12823
70°	6840	12211	12614
75°	6025	12457	12899
80°	5304	13316	13615
85°	4734	14902	15339



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1042.5	2.7
10°-20°	3037.3	8.0
20°-30°	4608.8	12.1
30°-40°	5521.8	14.5
40°-50°	5650.2	14.9
50°-60°	5084.1	13.4
60°-70°	4092.3	10.8
70°-80°	3024.7	8.0
80°-90°	1965.8	5.2
90°-100°	1015.0	2.7
100°-110°	603.8	1.6
110°-120°	530.4	1.4
120°-130°	554.6	1.5
130°-140°	554.0	1.5
140°-150°	410.1	1.1
150°-160°	234.3	0.6
160°-170°	89.3	0.2
170°-180°	18.0	0.0
0°-30°	8688.6	22.8
0°-40°	14210.4	37.4
0°-60°	24944.7	65.6
0°-90°	34027.5	89.5
90°-120°	2149.3	5.7
90°-150°	3668.0	9.6
90°-180°	4009.0	10.5
0°-180°	38037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10735	10735	10735	10735	10735	
5°	10712	10874	10965	10993	11012	###
15°	10232	10578	10794	11001	11055	2882
25°	9169	9555	10066	10442	10678	4213
35°	7641	8126	8915	9567	9749	4776
45°	5956	6558	7493	8114	8264	4592
55°	4216	5013	5977	6384	6420	3778
65°	2565	3636	4514	4664	4676	2567
75°	1298	2578	3214	3281	3291	1390
85°	459	1674	2099	2107	2114	453
90°	139	1120	1438	1482	1479	97
95°	134	743	1069	1160	1175	109
105°	159	548	575	636	638	172
115°	194	758	559	497	476	194
125°	219	695	858	560	502	196
135°	225	631	953	860	798	174
145°	230	521	737	881	889	144
155°	227	168	660	690	670	105
165°	227	182	173	460	506	64
175°	222	221	230	202	151	21
180°	200	200	200	200	200	



TEST NUMBER: P236570

CATALOG NUMBER: SKB4-LD5-36-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°	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0
2.5°	10741.6	10744.2	10802.4	10838.1	10822.2	10826.2	10819.6	10853.9	10889.6	10869.8	10887.0
5°	10712.5	10725.7	10803.7	10857.9	10859.2	10889.6	10901.5	10946.4	10988.7	10964.9	10987.4
7.5°	10646.4	10668.9	10765.4	10842.0	10861.8	10892.2	10898.8	10954.3	11015.1	11003.2	11027.0
10°	10543.3	10579.0	10698.0	10785.2	10797.1	10840.7	10869.8	10925.3	10979.5	10978.1	11003.2
12.5°	10409.9	10449.5	10587.0	10675.5	10695.3	10752.2	10779.9	10842.0	10905.5	10909.4	10939.8
15°	10231.5	10284.3	10432.3	10520.9	10553.9	10601.5	10642.5	10715.1	10777.3	10794.4	10883.0
17.5°	10026.6	10079.5	10227.5	10321.3	10349.1	10412.5	10462.7	10535.4	10651.7	10699.3	10770.7
20°	9766.3	9829.7	9979.0	10076.8	10107.2	10181.2	10235.4	10362.3	10478.6	10514.3	10584.3
22.5°	9483.5	9544.3	9694.9	9800.6	9828.4	9902.4	10004.2	10137.6	10240.7	10284.3	10400.6
25°	9168.9	9221.8	9369.8	9472.9	9504.6	9605.0	9735.9	9864.1	9968.5	10066.3	10148.2
27.5°	8809.5	8866.3	9013.0	9106.8	9154.4	9305.1	9431.9	9556.1	9702.8	9746.5	9868.0
30°	8439.4	8488.3	8633.7	8715.6	8792.3	8953.5	9079.1	9254.8	9355.3	9466.3	9679.1
32.5°	8046.9	8094.5	8234.6	8309.9	8423.6	8594.1	8752.6	8892.7	9043.4	9229.7	9425.3
35°	7641.2	7687.5	7820.9	7896.3	8037.7	8214.8	8393.2	8545.2	8761.9	8915.2	9093.6
37.5°	7227.6	7276.5	7395.4	7481.3	7643.9	7839.5	8015.2	8224.0	8415.6	8565.0	8760.6
40°	6808.6	6845.6	6969.9	7066.3	7248.7	7443.0	7641.2	7865.9	8041.6	8213.4	8435.5
42.5°	6388.4	6420.1	6540.4	6669.9	6853.6	7051.8	7302.9	7470.7	7676.9	7860.6	8073.4
45°	5956.2	5986.6	6106.9	6257.6	6442.6	6672.5	6917.0	7078.2	7297.6	7493.2	7686.1
47.5°	5521.4	5555.8	5677.4	5853.2	6052.7	6298.5	6510.0	6702.9	6951.4	7124.5	7292.3
50°	5085.3	5119.7	5255.8	5448.8	5653.6	5908.7	6116.1	6330.2	6569.4	6734.6	6893.2
52.5°	4650.5	4688.9	4843.5	5037.8	5269.0	5520.1	5747.4	5968.1	6186.2	6362.0	6495.4
55°	4215.8	4263.3	4435.1	4633.4	4888.4	5138.2	5380.0	5598.1	5812.2	5977.4	6109.5
57.5°	3807.4	3853.6	4030.7	4255.4	4515.7	4774.8	5032.5	5238.6	5448.8	5606.0	5721.0
60°	3384.5	3437.4	3636.9	3880.1	4152.3	4432.5	4687.5	4897.7	5099.9	5243.9	5333.8
62.5°	2976.1	3063.4	3252.3	3523.3	3806.1	4100.8	4361.1	4571.3	4756.3	4876.5	4943.9
65°	2565.1	2685.4	2888.9	3188.9	3483.6	3788.9	4054.5	4260.7	4416.6	4514.4	4560.7
67.5°	2216.2	2332.5	2555.9	2879.7	3186.3	3503.4	3769.1	3951.4	4079.6	4161.6	4199.9
70°	1863.4	2004.8	2254.6	2595.5	2918.0	3237.8	3477.0	3638.2	3751.9	3832.5	3868.2
72.5°	1571.3	1704.8	1992.9	2340.5	2676.1	2973.5	3186.3	3339.6	3465.1	3519.3	3536.5
75°	1297.8	1432.6	1749.7	2118.4	2447.5	2709.2	2912.7	3070.0	3165.1	3214.0	3231.2
77.5°	1053.3	1207.9	1550.2	1914.9	2218.9	2463.4	2668.2	2800.4	2895.5	2935.2	2948.4
80°	831.3	1001.7	1374.4	1716.7	1998.2	2236.1	2419.8	2548.0	2633.9	2665.6	2669.5
82.5°	633.0	824.6	1202.6	1522.4	1785.4	2012.7	2181.9	2304.8	2365.6	2382.8	2378.8
85°	458.6	662.1	1024.2	1320.2	1571.3	1777.5	1925.5	2032.5	2085.4	2098.6	2086.7
87.5°	313.2	512.8	849.8	1118.0	1332.1	1514.5	1642.7	1735.2	1786.7	1792.0	1792.0
90°	138.8	384.6	674.0	880.2	1049.3	1190.7	1292.5	1381.0	1424.6	1437.8	1449.7
92.5°	113.7	296.0	531.3	722.9	880.2	1018.9	1131.2	1218.5	1266.0	1284.5	1293.8
95°	133.5	241.8	395.1	540.5	683.2	803.5	902.6	995.1	1044.0	1069.1	1095.6
97.5°	137.4	237.9	366.1	465.2	553.7	666.1	758.6	822.0	852.4	866.9	890.7
100°	144.0	241.8	395.1	454.6	522.0	585.4	637.0	713.6	750.6	763.9	769.1
102.5°	149.3	237.9	428.2	481.0	515.4	559.0	586.8	605.3	644.9	671.3	685.9
105°	158.6	233.9	425.5	555.1	540.5	556.4	577.5	589.4	609.2	574.9	597.3
107.5°	177.1	233.9	415.0	603.9	602.6	578.8	578.8	577.5	576.2	549.8	565.6
110°	187.7	200.9	401.8	590.7	680.6	629.1	601.3	581.5	563.0	549.8	537.9



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CATALOG NUMBER: SKB4-LD5-36-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°	190.3	179.7	397.8	572.2	749.3	744.0	646.2	605.3	572.2	543.2	526.0
115°	194.3	158.6	392.5	536.6	730.8	785.0	763.9	651.5	598.7	559.0	529.9
117.5°	200.9	158.6	397.8	531.3	708.4	861.7	823.3	749.3	646.2	589.4	549.8
120°	208.8	161.2	418.9	533.9	672.7	836.5	882.8	849.8	740.1	641.0	585.4
122.5°	214.1	163.9	387.2	529.9	629.1	806.1	933.0	890.7	857.7	741.4	643.6
125°	219.4	166.5	341.0	527.3	629.1	761.2	896.0	993.8	890.7	857.7	770.5
127.5°	223.3	166.5	269.6	531.3	625.1	693.8	853.7	956.8	981.9	889.4	857.7
130°	223.3	161.2	186.3	556.4	610.6	685.9	791.6	913.2	988.5	964.7	888.1
132.5°	222.0	159.9	145.4	508.8	601.3	678.0	726.9	859.0	946.2	999.1	975.3
135°	224.7	178.4	146.7	450.6	598.7	663.4	717.6	761.2	894.7	952.8	995.1
137.5°	227.3	203.5	149.3	375.3	631.7	646.2	707.0	742.7	811.4	902.6	948.9
140°	228.6	223.3	152.0	261.7	577.5	634.3	687.2	725.5	752.0	820.7	896.0
142.5°	231.3	241.8	154.6	174.4	508.8	648.9	663.4	708.4	734.8	753.3	806.1
145°	230.0	249.8	152.0	142.7	417.6	623.8	647.6	680.6	716.3	737.4	752.0
147.5°	227.3	244.5	149.3	142.7	284.1	543.2	678.0	660.8	691.2	718.9	734.8
150°	226.0	239.2	161.2	145.4	179.7	449.3	614.5	656.8	667.4	692.5	713.6
152.5°	227.3	236.6	196.9	150.7	144.0	313.2	523.3	648.9	654.2	667.4	683.2
155°	227.3	233.9	224.7	152.0	148.0	189.0	405.7	549.8	650.2	659.5	658.1
157.5°	227.3	232.6	244.5	159.9	152.0	145.4	233.9	429.5	547.1	630.4	685.9
160°	227.3	230.0	248.5	196.9	154.6	150.7	152.0	241.8	413.6	515.4	588.1
162.5°	227.3	228.6	240.5	231.3	162.6	153.3	150.7	152.0	218.1	350.2	448.0
165°	227.3	227.3	233.9	249.8	208.8	154.6	153.3	150.7	145.4	173.1	226.0
167.5°	226.0	226.0	230.0	240.5	241.8	200.9	155.9	152.0	149.3	146.7	142.7
170°	224.7	223.3	227.3	231.3	240.5	240.5	212.8	177.1	150.7	148.0	146.7
172.5°	223.3	222.0	223.3	226.0	227.3	232.6	240.5	235.2	216.7	192.9	167.8
175°	222.0	220.7	220.7	220.7	220.7	220.7	222.0	223.3	226.0	230.0	233.9
177.5°	220.7	218.1	218.1	218.1	216.7	215.4	214.1	212.8	211.4	210.1	208.8
180°	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6



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CATALOG NUMBER: SKB4-LD5-36-W-UNV-L850-CD4-U outer 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0	10735.0
2.5°	10875.1	10904.1	10884.3	10863.2	10860.5	10890.9	10888.3	10883.0
5°	10984.7	11013.8	11001.9	10984.7	10984.7	11017.8	11013.8	11012.5
7.5°	11028.4	11064.0	11052.1	11035.0	11046.9	11065.4	11069.3	11064.0
10°	11019.1	11062.7	11056.1	11040.3	11040.3	11068.0	11064.0	11065.4
12.5°	10958.3	11019.1	11042.9	11053.5	11077.3	11116.9	11119.5	11123.5
15°	10935.8	10996.6	11000.6	11001.9	11025.7	11060.1	11053.5	11054.8
17.5°	10814.3	10863.2	10871.1	10883.0	10920.0	10975.5	10974.2	10990.0
20°	10646.4	10728.4	10774.6	10787.8	10802.4	10826.2	10798.4	10798.4
22.5°	10497.1	10527.5	10520.9	10552.6	10624.0	10671.5	10679.5	10676.8
25°	10206.4	10305.5	10387.4	10495.8	10602.8	10662.3	10674.2	10678.1
27.5°	10029.3	10199.7	10289.6	10349.1	10403.3	10436.3	10457.4	10450.8
30°	9860.1	9950.0	10021.3	10121.8	10194.5	10223.5	10240.7	10239.4
32.5°	9554.8	9675.1	9762.3	9869.4	9988.3	10029.3	10046.4	10047.8
35°	9249.5	9391.0	9519.1	9614.3	9700.2	9729.3	9747.8	9749.1
37.5°	8946.9	9084.4	9199.3	9290.5	9368.5	9396.2	9414.7	9426.6
40°	8604.6	8730.2	8842.5	8949.6	9028.8	9034.1	9051.3	9051.3
42.5°	8225.3	8360.1	8477.8	8562.3	8631.1	8635.0	8652.2	8650.9
45°	7838.1	7962.4	8077.3	8150.0	8222.7	8235.9	8257.1	8263.7
47.5°	7439.0	7565.9	7670.3	7743.0	7801.1	7818.3	7831.5	7832.8
50°	7032.0	7165.5	7254.0	7308.2	7354.4	7370.3	7379.5	7376.9
52.5°	6634.2	6754.5	6816.6	6858.9	6905.1	6914.4	6917.0	6891.9
55°	6232.4	6327.6	6369.9	6397.6	6425.4	6445.2	6443.9	6420.1
57.5°	5818.8	5902.1	5915.3	5953.6	5965.5	5982.7	5973.4	5953.6
60°	5407.8	5468.6	5472.5	5508.2	5516.2	5512.2	5516.2	5500.3
62.5°	4996.8	5041.7	5047.0	5080.0	5095.9	5093.3	5095.9	5085.3
65°	4603.0	4645.3	4650.5	4677.0	4694.2	4690.2	4687.5	4675.7
67.5°	4240.9	4273.9	4287.1	4300.3	4308.3	4296.4	4291.1	4281.8
70°	3889.3	3910.5	3914.4	3925.0	3936.9	3926.3	3934.3	3923.7
72.5°	3551.0	3573.5	3589.3	3594.6	3607.8	3594.6	3602.6	3595.9
75°	3248.4	3266.9	3274.8	3288.0	3303.9	3292.0	3297.3	3290.7
77.5°	2961.6	2976.1	2988.0	2992.0	3006.5	2992.0	2994.6	2982.7
80°	2672.2	2678.8	2685.4	2689.4	2703.9	2692.0	2693.3	2685.4
82.5°	2380.1	2388.0	2405.2	2401.3	2414.5	2401.3	2403.9	2409.2
85°	2084.1	2098.6	2109.2	2105.2	2118.4	2113.2	2109.2	2114.5
87.5°	1792.0	1803.9	1817.1	1815.8	1827.7	1822.4	1822.4	1830.4
90°	1448.4	1457.7	1473.5	1490.7	1493.4	1496.0	1490.7	1478.8
92.5°	1295.1	1307.0	1318.9	1330.8	1341.4	1338.7	1336.1	1338.7
95°	1111.4	1131.2	1152.4	1166.9	1184.1	1184.1	1184.1	1174.9
97.5°	906.6	926.4	943.6	955.5	968.7	970.0	968.7	968.7
100°	770.5	777.1	783.7	791.6	800.9	803.5	800.9	802.2
102.5°	691.2	700.4	705.7	709.7	712.3	712.3	708.4	704.4
105°	610.6	625.1	633.0	639.6	643.6	644.9	642.3	638.3
107.5°	535.2	548.4	561.7	570.9	577.5	580.2	577.5	573.6
110°	515.4	549.8	518.0	503.5	508.8	515.4	514.1	510.1



TEST NUMBER: P236570

CATALOG NUMBER: SKB4-LD5-36-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°	519.4	515.4	498.2	489.0	514.1	526.0	518.0	514.1
115°	508.8	499.5	496.9	496.9	495.6	491.6	482.4	475.8
117.5°	523.3	503.5	490.3	483.7	481.0	477.1	470.5	465.2
120°	549.8	524.7	504.8	494.3	485.0	475.8	466.5	459.9
122.5°	590.7	556.4	529.9	515.4	504.8	494.3	483.7	475.8
125°	660.8	606.6	569.6	549.8	533.9	520.7	507.5	502.2
127.5°	831.3	699.1	635.7	601.3	576.2	557.7	543.2	535.2
130°	855.0	840.5	806.1	695.1	652.8	623.8	601.3	594.7
132.5°	888.1	863.0	841.8	828.6	816.7	799.5	758.6	750.6
135°	1015.0	907.9	870.9	849.8	833.9	819.4	804.8	798.2
137.5°	981.9	1007.0	971.3	894.7	868.3	848.4	831.3	823.3
140°	933.0	959.4	980.6	992.5	996.5	960.8	917.2	901.3
142.5°	874.9	907.9	930.4	944.9	954.2	954.2	944.9	939.6
145°	766.5	835.2	870.9	892.0	901.3	903.9	896.0	889.4
147.5°	742.7	749.3	765.2	812.8	833.9	843.2	839.2	833.9
150°	722.9	732.1	736.1	737.4	734.8	730.8	725.5	720.2
152.5°	699.1	711.0	715.0	717.6	716.3	712.3	700.4	693.8
155°	667.4	679.3	687.2	693.8	692.5	688.5	676.6	670.0
157.5°	646.2	650.2	655.5	659.5	659.5	656.8	647.6	642.3
160°	638.3	676.6	641.0	630.4	627.7	625.1	615.8	609.2
162.5°	512.8	560.3	594.7	619.8	634.3	646.2	641.0	637.0
165°	321.1	397.8	445.4	474.4	495.6	510.1	507.5	506.2
167.5°	146.7	177.1	200.9	223.3	260.3	297.3	300.0	304.0
170°	141.4	137.4	130.8	124.2	117.6	109.7	101.8	96.5
172.5°	146.7	137.4	132.2	126.9	120.3	111.0	101.8	93.8
175°	227.3	218.1	207.5	195.6	186.3	173.1	157.3	150.7
177.5°	204.8	202.2	198.2	192.9	187.7	178.4	166.5	158.6
180°	199.6	199.6	199.6	199.6	199.6	199.6	199.6	199.6

(END OF REPORT)