

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: P236537

Luminaire Tested: **SKB4-LD5-18-W-UNV-L850-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236537
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-LD5-18-W-UNV-L850-CD2-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

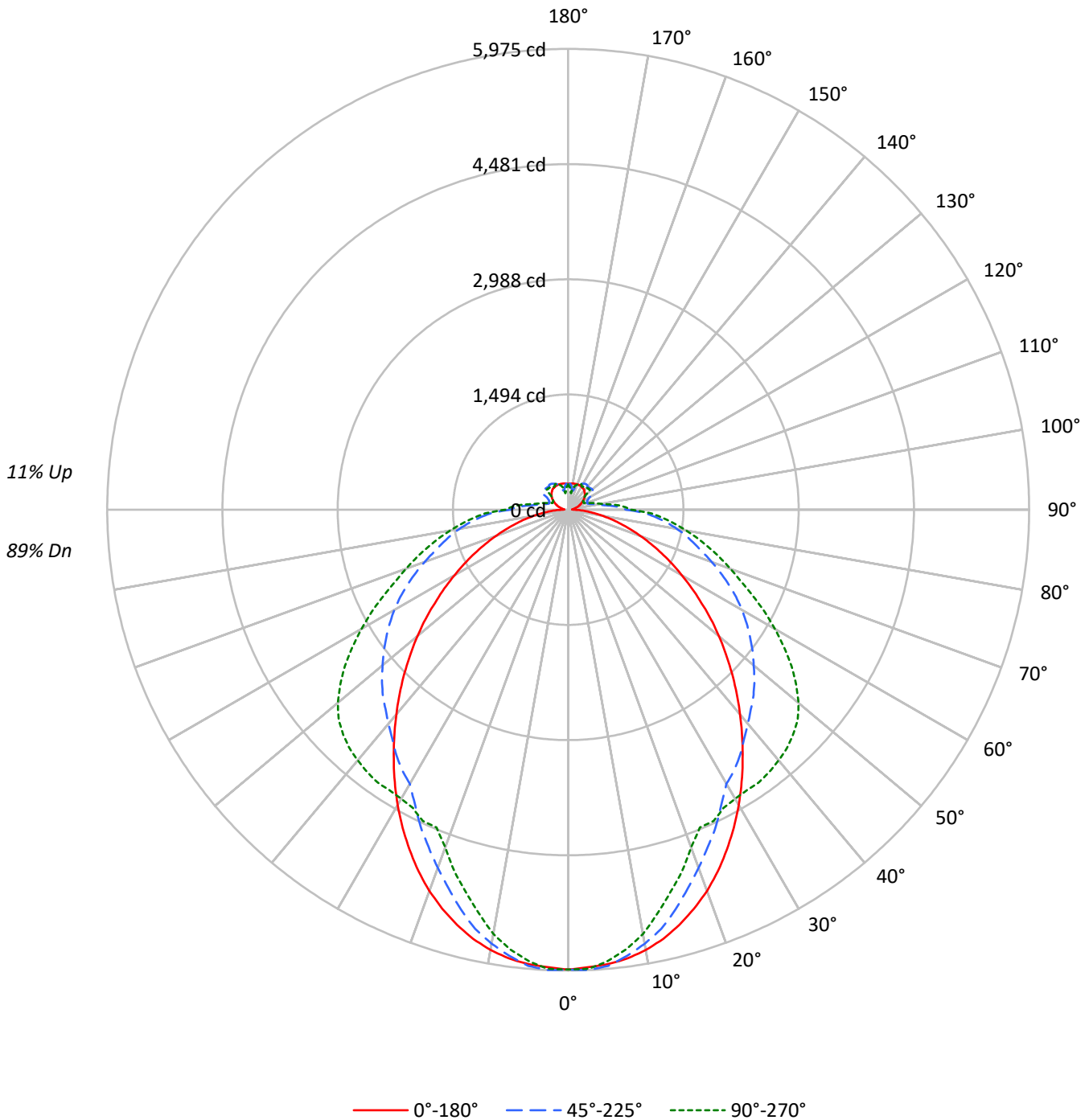
Lumens per Lamp: N/A
Luminaire Lumens: 18927.0 lumens
Efficiency: N/A
Efficacy: 132.0 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.07 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 143.4
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	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°	8556	8556	8556
5°	8483	8467	8382
10°	8370	8161	7986
15°	8164	7738	7402
20°	7884	7242	6837
25°	7520	6808	6706
30°	7112	6375	6738
35°	6665	6297	7014
40°	6222	6188	7272
45°	5789	6182	7533
50°	5362	6163	7686
55°	4912	6183	7628
60°	4482	6226	7447
65°	4076	6251	7232
70°	3661	6310	7187
75°	3272	6549	7388
80°	2873	7156	7875
85°	2436	8141	8928



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	558.4	3.0
10°-20°	1507.9	8.0
20°-30°	2118.2	11.2
30°-40°	2512.7	13.3
40°-50°	2690.6	14.2
50°-60°	2555.4	13.5
60°-70°	2132.3	11.3
70°-80°	1612.7	8.5
80°-90°	1065.4	5.6
90°-100°	530.1	2.8
100°-110°	306.0	1.6
110°-120°	266.4	1.4
120°-130°	286.8	1.5
130°-140°	282.1	1.5
140°-150°	224.8	1.2
150°-160°	160.4	0.8
160°-170°	87.3	0.5
170°-180°	29.3	0.2
0°-30°	4184.5	22.1
0°-40°	6697.3	35.4
0°-60°	11943.3	63.1
0°-90°	16753.8	88.5
90°-120°	1102.5	5.8
90°-150°	1896.2	10.0
90°-180°	2173.0	11.5
0°-180°	18927.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5962	5962	5962	5962	5962	
5°	5915	5961	5936	5888	5875	561
15°	5571	5544	5369	5183	5130	1567
25°	4864	4770	4530	4386	4454	2236
35°	3943	3866	3884	4153	4315	2465
45°	3001	3074	3397	3921	4124	2316
55°	2109	2350	2878	3387	3532	1892
65°	1334	1731	2296	2589	2637	1327
75°	705	1258	1690	1858	1885	751
85°	236	828	1146	1215	1231	238
90°	69	527	748	794	812	48
95°	65	358	562	638	657	55
105°	109	268	289	326	333	118
115°	183	358	272	237	221	181
125°	252	377	406	278	247	225
135°	304	362	398	394	379	234
145°	338	330	404	373	359	211
155°	349	263	368	382	368	161
165°	347	304	264	317	313	99
175°	342	339	338	315	288	33
180°	327	327	327	327	327	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6
2.5°	5938.5	5954.3	5990.6	5995.9	5992.6	5976.7	5968.2	5991.2	5980.0	5975.4	5964.9
5°	5914.8	5931.3	5968.8	5973.4	5969.5	5952.4	5943.1	5963.6	5947.7	5936.5	5916.8
7.5°	5869.9	5881.8	5918.7	5925.3	5915.4	5893.0	5875.2	5883.8	5855.4	5836.3	5813.9
10°	5796.1	5808.0	5844.2	5847.5	5828.4	5795.4	5767.1	5764.5	5739.4	5713.7	5682.7
12.5°	5698.5	5707.8	5742.7	5740.7	5708.4	5672.2	5642.5	5632.6	5599.0	5568.0	5528.5
15°	5571.3	5581.2	5612.2	5601.6	5564.1	5523.2	5490.9	5477.7	5425.6	5368.9	5310.2
17.5°	5425.0	5436.8	5456.6	5440.8	5403.2	5356.4	5318.8	5281.9	5210.7	5150.0	5092.7
20°	5260.1	5259.5	5278.6	5260.1	5219.9	5170.5	5112.5	5059.1	4990.5	4941.1	4884.4
22.5°	5072.3	5078.2	5082.8	5069.6	5026.1	4956.9	4889.6	4840.9	4778.9	4731.4	4676.7
25°	4863.9	4870.5	4871.2	4854.0	4809.2	4730.1	4669.5	4627.9	4569.2	4530.4	4456.5
27.5°	4648.4	4646.4	4657.6	4642.4	4576.5	4499.4	4453.9	4413.7	4367.5	4302.3	4242.3
30°	4420.9	4409.1	4427.5	4408.4	4338.5	4276.5	4232.4	4211.9	4146.7	4103.2	4142.7
32.5°	4183.6	4171.7	4192.2	4167.8	4103.2	4064.3	4032.0	4001.0	3956.1	4004.9	4049.1
35°	3943.0	3931.1	3952.9	3926.5	3877.0	3855.3	3826.9	3802.5	3839.5	3884.3	3923.8
37.5°	3703.0	3691.8	3714.9	3688.5	3660.8	3660.1	3625.2	3664.1	3702.3	3744.5	3818.4
40°	3466.3	3457.1	3480.2	3461.7	3453.8	3461.7	3453.8	3521.7	3548.7	3622.6	3717.5
42.5°	3231.6	3229.7	3248.8	3242.2	3258.7	3268.6	3304.2	3360.2	3408.3	3505.2	3627.8
45°	3000.9	3000.9	3020.7	3031.2	3059.6	3088.6	3140.0	3196.0	3273.8	3397.1	3520.4
47.5°	2772.8	2775.4	2798.5	2828.8	2863.1	2919.8	2974.5	3045.1	3149.2	3273.8	3396.4
50°	2550.6	2553.3	2583.6	2630.4	2673.3	2745.1	2803.1	2894.8	3014.7	3140.0	3277.8
52.5°	2332.4	2336.4	2377.9	2428.7	2490.0	2565.8	2644.2	2759.6	2875.0	3011.4	3153.2
55°	2108.9	2124.8	2174.9	2230.9	2310.7	2389.1	2488.7	2616.6	2739.2	2878.3	3012.1
57.5°	1902.6	1919.1	1974.4	2039.7	2134.0	2224.3	2350.2	2477.5	2607.3	2741.8	2870.4
60°	1702.2	1720.0	1778.7	1855.8	1963.9	2075.3	2211.8	2348.9	2472.8	2602.7	2712.8
62.5°	1518.9	1529.5	1584.8	1680.4	1801.7	1934.9	2083.2	2219.0	2337.0	2452.4	2553.3
65°	1334.3	1346.8	1400.9	1516.3	1653.4	1807.7	1961.9	2089.8	2195.3	2296.2	2384.5
67.5°	1160.9	1176.8	1232.1	1367.3	1522.2	1689.7	1836.0	1953.4	2048.3	2137.3	2213.1
70°	997.4	1011.9	1078.5	1235.4	1407.5	1571.6	1704.2	1814.3	1898.6	1980.4	2045.6
72.5°	844.5	861.0	944.0	1120.1	1302.0	1453.6	1569.7	1671.2	1753.6	1823.5	1887.4
75°	704.7	720.6	828.7	1023.2	1190.6	1326.4	1437.8	1536.0	1615.2	1689.7	1749.6
77.5°	572.9	597.9	735.1	928.2	1075.2	1203.1	1310.6	1414.1	1499.1	1565.1	1609.9
80°	450.3	492.5	654.0	828.7	963.2	1091.1	1205.8	1308.6	1379.1	1432.5	1467.5
82.5°	336.9	401.5	571.6	727.2	860.3	995.5	1100.9	1190.6	1250.6	1293.4	1319.8
85°	236.0	319.1	485.2	636.2	767.4	889.3	982.3	1059.4	1110.2	1146.4	1166.9
87.5°	156.9	245.2	404.8	539.3	653.3	762.7	843.8	913.7	959.2	993.5	1013.3
90°	69.2	184.6	309.8	402.8	488.5	565.6	631.6	689.6	723.2	747.6	754.8
92.5°	52.7	138.4	243.9	332.9	412.7	490.5	560.4	617.7	656.6	681.0	689.6
95°	65.3	114.7	188.5	254.5	325.0	390.9	445.7	493.8	532.7	562.3	579.5
97.5°	69.2	118.7	179.3	222.2	267.7	325.7	374.5	412.7	436.4	452.9	459.5
100°	79.1	127.9	197.1	219.5	248.5	276.2	317.1	353.4	375.1	389.0	395.5
102.5°	92.3	135.8	213.6	238.6	249.2	269.0	279.5	300.0	321.1	336.2	343.5
105°	108.8	143.1	228.8	273.6	266.3	269.6	278.2	278.9	278.2	288.8	295.3
107.5°	130.5	148.3	238.0	286.8	309.2	285.5	280.2	279.5	273.6	261.1	258.4
110°	149.6	151.0	233.4	295.3	329.0	315.8	294.0	282.8	272.9	264.4	253.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	165.5	156.9	234.0	307.2	339.5	362.6	320.4	296.7	277.5	263.0	253.2
115°	182.6	161.5	237.3	311.2	345.4	371.2	383.7	323.0	293.4	272.3	256.4
117.5°	201.1	168.8	242.6	309.2	354.0	379.7	391.6	392.3	320.4	290.1	268.3
120°	218.2	176.7	244.6	309.2	369.8	382.4	396.9	404.1	391.6	318.4	287.4
122.5°	236.0	187.9	247.2	309.8	361.3	386.3	402.1	407.4	407.4	394.9	322.4
125°	252.5	201.7	245.9	310.5	361.3	393.6	400.2	410.1	408.7	406.1	402.8
127.5°	267.7	218.2	242.6	309.8	358.0	392.3	399.5	407.4	410.1	406.8	403.5
130°	280.2	232.7	230.1	305.9	352.0	389.6	400.8	404.1	408.7	407.4	402.1
132.5°	291.4	246.6	220.8	302.6	348.1	386.3	403.5	403.5	403.5	404.8	400.8
135°	303.9	269.0	223.5	297.3	344.1	379.1	400.8	409.4	400.8	397.5	397.5
137.5°	314.5	292.0	227.4	290.1	338.9	372.5	396.9	408.1	395.5	394.9	391.6
140°	323.7	312.5	236.0	280.2	332.3	366.5	387.6	404.1	407.4	389.0	389.0
142.5°	332.9	330.3	249.9	259.1	323.0	358.0	379.1	396.9	405.4	404.8	381.7
145°	337.5	340.2	265.0	243.3	311.2	348.1	370.5	387.0	399.5	403.5	400.8
147.5°	340.8	344.1	276.2	241.9	296.0	336.2	361.9	378.4	390.3	398.8	399.5
150°	344.1	346.1	292.7	248.5	270.3	323.7	350.7	369.2	381.0	389.6	393.6
152.5°	347.4	348.1	316.4	262.4	249.9	307.2	336.9	357.3	370.5	379.7	383.0
155°	348.7	349.4	335.6	279.5	248.5	276.9	319.7	342.1	357.3	367.9	371.8
157.5°	350.1	349.4	348.7	292.7	260.4	251.2	296.7	324.4	341.5	354.0	359.9
160°	349.4	348.7	353.4	317.1	277.5	251.2	255.1	300.0	320.4	335.6	343.5
162.5°	348.7	348.1	350.7	338.9	292.7	267.0	249.2	253.2	290.1	312.5	322.4
165°	347.4	346.8	348.1	350.7	322.4	285.5	265.0	250.5	247.2	263.7	289.4
167.5°	346.1	345.4	346.1	348.7	344.1	317.1	286.8	271.6	256.4	244.6	241.9
170°	344.8	344.1	344.1	344.1	346.8	342.8	324.4	300.0	280.2	271.0	255.8
172.5°	343.5	342.8	342.8	342.8	342.1	342.1	345.4	339.5	326.3	311.2	292.7
175°	341.5	340.8	340.8	340.8	339.5	338.2	338.2	338.2	336.9	338.2	336.2
177.5°	340.2	339.5	339.5	338.9	337.5	336.2	336.2	335.6	332.9	331.6	328.3
180°	327.0	327.0	327.0	327.0	327.0	327.0	327.0	327.0	327.0	327.0	327.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6	5961.6
2.5°	5943.1	5953.0	5966.9	5949.7	5952.4	5966.2	5962.2	5958.9
5°	5891.0	5895.0	5899.6	5877.2	5875.9	5887.7	5875.9	5874.6
7.5°	5784.2	5782.3	5786.2	5756.6	5754.6	5764.5	5755.2	5750.0
10°	5652.4	5647.1	5643.8	5612.2	5601.6	5604.3	5595.0	5587.1
12.5°	5477.0	5450.7	5431.5	5395.9	5380.8	5379.5	5362.3	5357.0
15°	5254.2	5226.5	5202.1	5163.9	5154.0	5157.3	5143.5	5130.3
17.5°	5039.3	5011.6	4987.9	4947.0	4939.1	4943.7	4917.3	4912.7
20°	4832.9	4801.3	4780.9	4735.4	4716.3	4711.6	4668.8	4657.6
22.5°	4633.9	4585.7	4527.7	4483.5	4475.6	4482.2	4476.3	4458.5
25°	4385.3	4358.9	4372.8	4399.8	4439.4	4466.4	4467.7	4454.5
27.5°	4249.5	4302.3	4340.5	4345.1	4359.6	4376.7	4377.4	4360.9
30°	4191.5	4209.3	4228.4	4260.7	4303.6	4332.6	4339.8	4326.6
32.5°	4068.9	4115.0	4166.4	4215.9	4269.3	4308.2	4320.7	4310.8
35°	3979.9	4046.5	4118.3	4187.5	4252.8	4299.6	4320.1	4314.8
37.5°	3896.2	3988.5	4078.8	4161.8	4227.8	4268.0	4284.5	4283.8
40°	3824.3	3929.1	4018.8	4104.5	4173.7	4221.2	4240.3	4243.6
42.5°	3739.9	3840.8	3947.6	4046.5	4121.6	4171.7	4192.2	4196.8
45°	3631.8	3749.1	3869.1	3972.6	4040.5	4091.3	4116.3	4123.6
47.5°	3524.3	3650.3	3771.6	3873.1	3938.3	3995.0	4022.7	4033.3
50°	3406.3	3532.3	3656.8	3751.8	3813.1	3868.5	3891.5	3898.1
52.5°	3275.8	3404.4	3519.7	3606.1	3651.6	3701.7	3720.8	3722.8
55°	3139.3	3254.7	3351.6	3421.5	3466.3	3515.1	3529.6	3532.3
57.5°	2980.5	3080.7	3165.0	3229.7	3263.3	3304.2	3313.4	3316.7
60°	2811.0	2897.4	2967.9	3021.3	3049.0	3081.3	3089.2	3093.9
62.5°	2637.7	2701.6	2767.5	2815.0	2832.8	2861.8	2867.7	2870.4
65°	2452.4	2509.1	2571.1	2607.3	2619.9	2637.7	2636.3	2637.0
67.5°	2270.5	2321.2	2366.7	2404.3	2416.1	2422.7	2427.4	2422.7
70°	2091.1	2133.3	2180.1	2205.8	2227.6	2229.6	2237.5	2235.5
72.5°	1934.2	1975.1	2012.7	2035.1	2054.2	2054.2	2064.1	2058.2
75°	1789.9	1820.8	1849.8	1867.0	1883.5	1880.2	1890.1	1884.8
77.5°	1638.9	1662.6	1684.4	1703.5	1718.0	1723.3	1723.9	1718.0
80°	1489.2	1507.7	1524.2	1540.7	1553.2	1549.9	1558.5	1553.2
82.5°	1334.3	1348.2	1363.3	1377.8	1389.0	1391.7	1392.3	1387.1
85°	1178.7	1192.6	1210.4	1220.3	1230.8	1234.1	1234.8	1230.8
87.5°	1024.5	1038.3	1056.1	1066.0	1077.2	1079.8	1080.5	1077.2
90°	765.4	779.2	787.1	801.0	804.9	810.9	803.0	811.5
92.5°	701.4	713.3	723.2	733.7	739.0	742.3	739.0	743.0
95°	600.6	619.0	631.6	644.7	651.3	656.6	656.0	657.3
97.5°	470.0	485.9	501.7	518.8	526.7	534.0	533.3	534.0
100°	405.4	414.7	421.9	429.8	433.1	433.8	433.1	433.8
102.5°	352.7	361.9	369.8	377.1	379.1	381.7	381.0	379.7
105°	305.2	314.5	322.4	329.0	331.6	334.2	334.2	332.9
107.5°	265.7	272.3	279.5	285.5	288.8	290.1	291.4	290.1
110°	243.9	242.6	245.9	249.9	251.8	253.2	251.8	251.2



TEST NUMBER: P236537

CATALOG NUMBER: SKB4-LD5-18-W-UNV-L850-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	247.9	241.9	233.4	227.4	226.8	226.8	224.1	222.8
115°	246.6	241.9	238.0	235.4	232.1	228.8	224.1	220.8
117.5°	254.5	244.6	237.3	234.0	231.4	228.8	225.5	222.8
120°	269.6	256.4	245.9	239.3	234.7	230.7	226.1	223.5
122.5°	292.7	274.9	261.7	252.5	246.6	240.6	236.0	232.7
125°	334.9	303.3	284.1	271.6	263.7	256.4	250.5	247.2
127.5°	402.1	372.5	323.0	301.3	288.8	278.2	271.0	267.0
130°	400.8	400.2	398.2	381.7	335.6	317.8	306.6	300.6
132.5°	398.8	399.5	397.5	394.9	392.3	387.6	382.4	380.4
135°	397.5	396.2	394.9	393.6	390.3	386.3	381.0	379.1
137.5°	392.9	393.6	392.9	390.3	387.0	383.0	378.4	376.4
140°	387.0	386.3	387.0	387.0	385.0	380.4	375.8	373.1
142.5°	383.0	381.0	379.1	378.4	377.7	374.5	369.8	368.5
145°	390.3	374.5	373.8	371.8	369.8	365.9	361.3	358.6
147.5°	398.8	395.5	374.5	363.9	363.2	359.9	355.3	352.7
150°	396.2	395.5	391.6	388.3	383.0	371.8	358.6	349.4
152.5°	387.6	391.6	390.3	388.3	384.3	379.7	373.8	371.2
155°	377.1	381.0	381.7	381.7	379.7	376.4	371.2	368.5
157.5°	365.9	369.8	370.5	371.2	369.2	366.5	361.9	359.9
160°	350.7	356.0	357.3	358.0	356.0	354.0	349.4	347.4
162.5°	330.9	338.2	341.5	342.1	341.5	339.5	335.6	333.6
165°	303.3	312.5	316.4	318.4	319.1	317.8	314.5	313.1
167.5°	247.2	263.7	278.2	286.8	287.4	286.1	283.5	282.8
170°	247.2	240.6	234.0	231.4	228.1	223.5	220.2	217.6
172.5°	277.5	271.0	265.0	257.1	248.5	240.0	234.0	231.4
175°	331.6	327.0	319.1	311.8	303.9	296.7	290.7	288.1
177.5°	326.3	325.7	323.0	319.1	315.1	310.5	304.6	301.3
180°	327.0	327.0	327.0	327.0	327.0	327.0	327.0	327.0

(END OF REPORT)