

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: P236455

Luminaire Tested: **SKB2-LD5-12-W-UNV-L840-CD2-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236455
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24074)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB2-LD5-12-W-UNV-L840-CD2-U all blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
2 BLADES WITH WIDE DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES
Light Source: (476) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

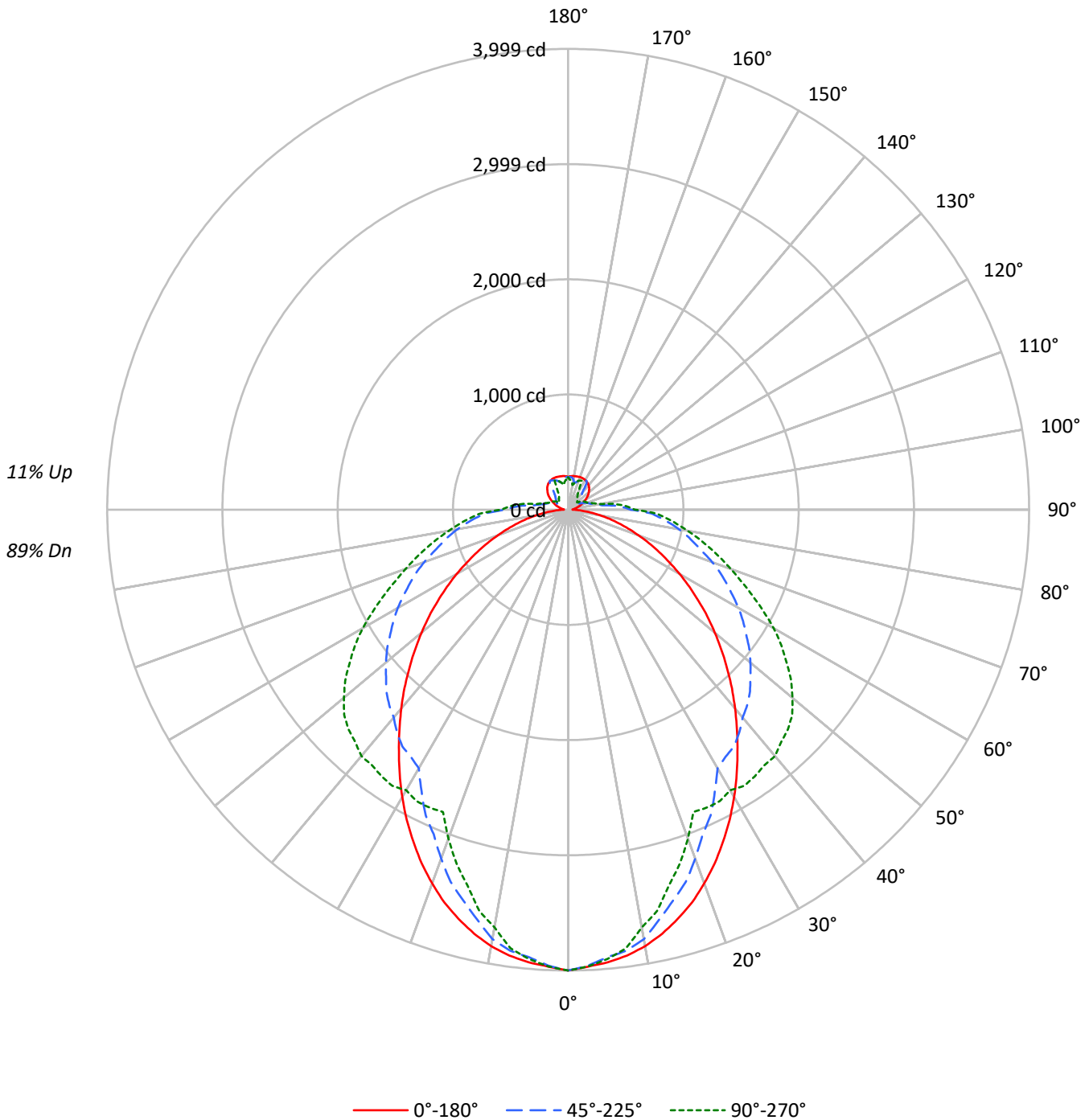
Lumens per Lamp: N/A
Luminaire Lumens: 12376.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.03 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 1.25' x L: 2' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 104.9
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	92	92	92	89
1	104	99	94	89	100	95	91	86	89	85	82	83	80	77	78	75	73	70
2	94	85	77	71	90	82	75	69	77	71	66	72	67	63	67	63	60	57
3	85	74	65	58	82	72	64	57	67	60	55	63	57	52	59	54	50	47
4	78	65	56	49	75	63	55	48	59	52	46	56	50	45	52	47	43	40
5	72	58	49	42	69	57	48	41	53	46	40	50	44	39	47	42	37	35
6	66	52	43	37	63	51	42	36	48	40	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	31	26	51	39	31	26	37	30	25	35	29	24	33	28	23	21
10	50	37	29	23	48	36	28	23	34	27	23	32	26	22	31	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17218	17218	17218
5°	16886	16569	16670
10°	16508	16002	15630
15°	15936	14892	14397
20°	15234	13800	13115
25°	14399	12760	12571
30°	13505	11602	12747
35°	12546	11626	13290
40°	11635	11403	13758
45°	10754	11399	14068
50°	9896	11250	14190
55°	9028	11103	14022
60°	8155	11037	13759
65°	7251	10949	13243
70°	6341	10953	12948
75°	5430	11044	13002
80°	4431	11597	13384
85°	3204	12418	14633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	370.1	3.0
10°-20°	990.3	8.0
20°-30°	1371.8	11.1
30°-40°	1633.3	13.2
40°-50°	1754.0	14.2
50°-60°	1671.2	13.5
60°-70°	1410.9	11.4
70°-80°	1079.3	8.7
80°-90°	738.8	6.0
90°-100°	366.4	3.0
100°-110°	192.6	1.6
110°-120°	150.9	1.2
120°-130°	137.0	1.1
130°-140°	141.0	1.1
140°-150°	141.4	1.1
150°-160°	126.0	1.0
160°-170°	74.9	0.6
170°-180°	26.1	0.2
0°-30°	2732.3	22.1
0°-40°	4365.6	35.3
0°-60°	7790.8	63.0
0°-90°	11019.7	89.0
90°-120°	709.9	5.7
90°-150°	1129.3	9.1
90°-180°	1356.0	11.0
0°-180°	12376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3999	3999	3999	3999	3999	
5°	3943	3949	3898	3918	3913	373
15°	3675	3657	3512	3434	3374	1034
25°	3178	3110	2926	2793	2852	1462
35°	2561	2514	2508	2727	2824	1602
45°	1950	1974	2231	2553	2695	1506
55°	1382	1521	1884	2213	2313	1238
65°	871	1135	1516	1721	1764	866
75°	453	830	1138	1247	1268	483
85°	142	571	802	849	860	146
90°	36	365	542	573	580	27
95°	46	230	400	453	467	40
105°	84	122	200	214	219	91
115°	142	142	137	164	163	141
125°	206	221	126	112	123	183
135°	257	275	156	129	113	198
145°	289	266	277	163	140	181
155°	301	248	282	287	279	139
165°	298	282	245	254	247	85
175°	292	290	283	273	259	28
180°	282	282	282	282	282	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0
2.5°	3968.2	3981.0	3993.8	4000.2	3995.1	3987.4	3988.7	3990.0	3964.4	3959.3	3949.0
5°	3942.6	3955.4	3963.1	3963.1	3955.4	3942.6	3936.2	3931.1	3901.7	3897.8	3890.1
7.5°	3902.9	3913.2	3915.7	3910.6	3895.2	3876.0	3878.6	3886.3	3864.5	3860.7	3850.4
10°	3845.3	3853.0	3850.4	3836.3	3819.7	3819.7	3824.8	3824.8	3797.9	3783.8	3755.7
12.5°	3768.5	3773.6	3767.2	3750.6	3753.1	3746.7	3746.7	3728.8	3677.6	3644.3	3602.0
15°	3675.0	3678.8	3664.8	3662.2	3663.5	3650.7	3627.6	3584.1	3526.5	3512.4	3486.8
17.5°	3573.8	3571.3	3557.2	3561.0	3558.5	3523.9	3481.7	3440.7	3412.5	3388.2	3349.8
20°	3450.9	3449.6	3439.4	3447.1	3427.9	3375.4	3345.9	3311.3	3278.1	3221.7	3153.8
22.5°	3321.6	3317.7	3313.9	3315.2	3287.0	3228.1	3214.0	3171.8	3103.9	3048.8	3030.9
25°	3178.2	3178.2	3178.2	3170.5	3132.1	3088.5	3074.5	2997.6	2952.8	2925.9	2882.4
27.5°	3032.2	3032.2	3034.8	3019.4	2981.0	2950.2	2905.4	2850.4	2829.9	2755.6	2676.2
30°	2879.8	2882.4	2884.9	2860.6	2833.7	2797.9	2750.5	2722.3	2658.3	2591.7	2626.3
32.5°	2719.8	2728.7	2728.7	2707.0	2686.5	2636.5	2619.9	2569.9	2505.9	2540.5	2613.5
35°	2561.0	2580.2	2569.9	2554.6	2532.8	2494.4	2480.3	2407.3	2439.3	2508.5	2554.6
37.5°	2404.8	2425.2	2412.4	2407.3	2376.6	2375.3	2319.0	2322.8	2389.4	2438.1	2481.6
40°	2251.1	2267.7	2261.3	2256.2	2238.3	2235.7	2201.2	2256.2	2311.3	2354.8	2439.3
42.5°	2102.6	2116.6	2111.5	2107.7	2110.2	2087.2	2116.6	2179.4	2222.9	2298.5	2385.6
45°	1950.2	1964.3	1964.3	1965.6	1978.4	1969.4	2029.6	2079.5	2143.5	2230.6	2303.6
47.5°	1804.2	1815.7	1819.6	1832.4	1836.2	1869.5	1933.5	1983.5	2070.6	2143.5	2237.0
50°	1660.8	1671.0	1678.7	1703.1	1705.6	1772.2	1824.7	1900.2	1977.1	2062.9	2157.6
52.5°	1521.2	1528.9	1544.3	1569.9	1589.1	1668.5	1726.1	1810.6	1887.4	1979.6	2062.9
55°	1381.6	1390.6	1412.4	1432.9	1482.8	1558.4	1632.6	1714.6	1802.9	1883.6	1977.1
57.5°	1247.2	1258.7	1280.5	1306.1	1379.1	1455.9	1541.7	1626.2	1713.3	1797.8	1881.0
60°	1117.9	1129.4	1152.4	1189.6	1277.9	1362.4	1450.8	1540.4	1624.9	1706.9	1774.8
62.5°	991.1	1002.6	1023.1	1084.6	1175.5	1274.1	1363.7	1454.6	1534.0	1607.0	1678.7
65°	870.7	882.3	902.7	986.0	1083.3	1187.0	1284.3	1366.3	1444.4	1516.1	1584.0
67.5°	756.8	767.0	792.6	895.1	1000.1	1106.3	1199.8	1281.8	1359.9	1427.7	1477.7
70°	647.9	658.2	695.3	809.3	922.0	1029.5	1116.6	1203.7	1275.4	1327.9	1372.7
72.5°	546.8	554.5	610.8	732.4	850.2	950.1	1044.9	1124.3	1183.2	1226.7	1266.4
75°	453.3	459.7	540.4	667.1	779.8	879.7	968.1	1037.2	1089.7	1138.4	1176.8
77.5°	366.2	380.3	478.9	607.0	712.0	810.5	884.8	956.5	1016.7	1059.0	1088.4
80°	284.3	308.6	425.1	545.5	651.8	733.7	818.2	891.2	941.2	975.7	996.2
82.5°	208.7	248.4	372.6	487.9	582.6	677.4	754.2	818.2	861.8	888.7	906.6
85°	142.1	198.5	320.1	430.2	528.8	613.4	682.5	740.1	778.5	801.6	818.2
87.5°	88.4	158.8	276.6	379.0	464.8	541.6	607.0	660.7	696.6	719.6	731.2
90°	35.9	103.7	197.2	270.2	332.9	397.0	450.7	495.5	526.3	541.6	550.6
92.5°	37.1	75.5	140.9	207.4	266.3	330.4	386.7	434.1	464.8	482.7	491.7
95°	46.1	70.4	103.7	158.8	206.2	253.5	294.5	331.6	372.6	399.5	416.2
97.5°	52.5	79.4	92.2	128.0	171.6	211.3	243.3	268.9	285.5	297.1	306.0
100°	62.7	94.8	101.2	103.7	147.3	184.4	210.0	230.5	244.6	253.5	258.7
102.5°	73.0	105.0	112.7	106.3	119.1	160.1	188.2	206.2	215.1	221.5	225.4
105°	84.5	114.0	129.3	117.8	110.1	134.5	166.5	187.0	195.9	199.8	201.0
107.5°	98.6	121.6	152.4	126.8	117.8	111.4	142.1	166.5	180.5	185.7	187.0
110°	112.7	128.0	167.7	138.3	128.0	115.2	112.7	144.7	161.3	171.6	176.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.8	133.2	178.0	157.5	135.7	125.5	112.7	117.8	142.1	154.9	162.6
115°	142.1	140.9	183.1	189.5	147.3	135.7	122.9	111.4	117.8	137.0	148.5
117.5°	157.5	147.3	189.5	215.1	162.6	143.4	131.9	119.1	110.1	115.2	131.9
120°	174.1	158.8	194.6	230.5	187.0	153.7	140.9	129.3	117.8	110.1	110.1
122.5°	189.5	171.6	199.8	234.3	224.1	169.0	148.5	137.0	126.8	116.5	110.1
125°	206.2	185.7	204.9	238.2	252.3	189.5	160.1	144.7	134.5	125.5	116.5
127.5°	220.2	201.0	207.4	240.7	265.1	217.7	174.1	152.4	140.9	133.2	124.2
130°	233.0	216.4	211.3	242.0	266.3	267.6	194.6	163.9	148.5	139.6	131.9
132.5°	244.6	231.8	213.8	243.3	266.3	285.5	224.1	180.5	158.8	146.0	138.3
135°	257.4	245.9	216.4	244.6	266.3	284.3	277.9	204.9	172.9	156.2	144.7
137.5°	267.6	258.7	219.0	244.6	266.3	283.0	295.8	239.5	193.4	169.0	156.2
140°	276.6	270.2	227.9	244.6	265.1	281.7	292.0	289.4	222.8	189.5	170.3
142.5°	284.3	277.9	244.6	243.3	262.5	277.9	289.4	295.8	283.0	219.0	190.8
145°	289.4	284.3	258.7	240.7	258.7	274.0	285.5	293.2	298.4	276.6	221.5
147.5°	293.2	289.4	271.5	236.9	254.8	270.2	281.7	289.4	294.5	297.1	284.3
150°	297.1	294.5	280.4	242.0	251.0	265.1	276.6	285.5	290.7	293.2	295.8
152.5°	299.6	298.4	288.1	257.4	247.1	259.9	270.2	279.1	285.5	288.1	290.7
155°	300.9	299.6	292.0	274.0	242.0	253.5	263.8	272.7	277.9	281.7	285.5
157.5°	300.9	299.6	294.5	283.0	252.3	245.9	256.1	263.8	270.2	275.3	277.9
160°	300.9	300.9	295.8	288.1	271.5	242.0	247.1	254.8	261.2	265.1	268.9
162.5°	299.6	299.6	297.1	292.0	281.7	262.5	239.5	245.9	251.0	254.8	258.7
165°	298.4	298.4	297.1	293.2	286.8	277.9	262.5	242.0	239.5	244.6	247.1
167.5°	297.1	297.1	297.1	293.2	289.4	284.3	277.9	266.3	247.1	236.9	234.3
170°	295.8	295.8	295.8	294.5	292.0	288.1	284.3	279.1	272.7	265.1	256.1
172.5°	294.5	294.5	293.2	293.2	292.0	289.4	288.1	285.5	281.7	277.9	272.7
175°	292.0	293.2	292.0	292.0	290.7	289.4	288.1	286.8	284.3	283.0	280.4
177.5°	290.7	290.7	290.7	290.7	289.4	289.4	288.1	286.8	285.5	284.3	281.7
180°	281.7	281.7	281.7	281.7	281.7	281.7	281.7	281.7	281.7	281.7	281.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0	3999.0
2.5°	3942.6	3964.4	3973.4	3954.2	3949.0	3952.9	3955.4	3967.0
5°	3891.4	3917.0	3926.0	3909.3	3902.9	3902.9	3902.9	3913.2
7.5°	3846.6	3869.6	3869.6	3845.3	3835.1	3829.9	3827.4	3837.6
10°	3731.3	3737.7	3730.1	3692.9	3681.4	3673.7	3669.9	3680.1
12.5°	3587.9	3608.4	3605.9	3573.8	3567.4	3559.8	3554.6	3564.9
15°	3470.1	3480.4	3456.0	3412.5	3389.5	3376.7	3366.4	3374.1
17.5°	3304.9	3284.5	3251.2	3215.3	3217.9	3216.6	3211.5	3221.7
20°	3130.8	3147.4	3130.8	3097.5	3079.6	3056.5	3034.8	3036.0
22.5°	3016.8	2997.6	2922.1	2850.4	2832.4	2829.9	2833.7	2838.8
25°	2795.3	2774.8	2787.6	2799.2	2808.1	2829.9	2850.4	2851.7
27.5°	2705.7	2742.8	2786.3	2824.8	2849.1	2849.1	2854.2	2850.4
30°	2694.2	2762.0	2763.3	2779.9	2804.3	2808.1	2812.0	2810.7
32.5°	2664.7	2703.1	2710.8	2732.6	2777.4	2814.5	2840.1	2841.4
35°	2599.4	2644.2	2703.1	2750.5	2783.8	2805.6	2822.2	2823.5
37.5°	2561.0	2637.8	2672.4	2709.5	2737.7	2765.9	2787.6	2795.3
40°	2523.8	2577.6	2614.8	2678.8	2733.8	2768.4	2782.5	2790.2
42.5°	2452.1	2520.0	2593.0	2648.1	2692.9	2721.0	2728.7	2733.8
45°	2394.5	2470.1	2529.0	2576.3	2628.8	2667.3	2690.3	2695.4
47.5°	2325.4	2386.8	2453.4	2526.4	2578.9	2609.6	2626.3	2635.2
50°	2228.1	2313.8	2389.4	2448.3	2490.6	2512.3	2526.4	2539.2
52.5°	2151.2	2229.3	2287.0	2344.6	2392.0	2421.4	2432.9	2439.3
55°	2056.5	2120.5	2185.8	2240.9	2278.0	2299.8	2308.7	2312.6
57.5°	1950.2	2016.8	2073.1	2119.2	2153.8	2176.8	2187.1	2193.5
60°	1849.0	1905.4	1954.0	2001.4	2032.1	2050.1	2052.6	2059.0
62.5°	1744.0	1794.0	1834.9	1870.8	1895.1	1906.6	1907.9	1909.2
65°	1632.6	1676.2	1706.9	1735.1	1755.6	1767.1	1767.1	1764.5
67.5°	1522.5	1554.5	1584.0	1612.1	1624.9	1630.1	1623.7	1626.2
70°	1406.0	1431.6	1453.4	1475.1	1490.5	1502.0	1496.9	1499.5
72.5°	1302.3	1327.9	1348.4	1365.0	1376.5	1385.5	1380.4	1381.6
75°	1208.8	1225.4	1239.5	1253.6	1263.8	1270.2	1265.1	1267.7
77.5°	1111.5	1124.3	1133.2	1147.3	1156.3	1162.7	1157.6	1158.8
80°	1012.9	1025.7	1033.4	1041.0	1051.3	1056.4	1048.7	1050.0
82.5°	919.4	928.4	936.0	946.3	952.7	956.5	954.0	952.7
85°	829.8	834.9	843.8	854.1	859.2	864.3	861.8	860.5
87.5°	738.8	741.4	749.1	759.3	763.2	767.0	763.2	763.2
90°	557.0	563.4	568.5	577.5	581.3	582.6	580.1	580.1
92.5°	499.4	507.1	512.2	517.3	523.7	525.0	523.7	526.3
95°	430.2	441.8	450.7	455.9	462.3	464.8	463.5	467.4
97.5°	326.5	350.9	368.8	377.7	388.0	390.5	390.5	390.5
100°	265.1	270.2	275.3	276.6	280.4	281.7	280.4	281.7
102.5°	230.5	235.6	240.7	244.6	247.1	247.1	245.9	247.1
105°	204.9	208.7	212.6	216.4	217.7	219.0	217.7	219.0
107.5°	188.2	189.5	190.8	193.4	194.6	195.9	195.9	194.6
110°	178.0	179.3	179.3	180.5	180.5	180.5	178.0	176.7



TEST NUMBER: P236455

CATALOG NUMBER: SKB2-LD5-12-W-UNV-L840-CD2-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	167.7	170.3	171.6	171.6	172.9	172.9	170.3	169.0
115°	154.9	160.1	162.6	165.2	166.5	165.2	163.9	162.6
117.5°	142.1	148.5	151.1	154.9	157.5	157.5	156.2	153.7
120°	126.8	134.5	139.6	144.7	147.3	147.3	146.0	144.7
122.5°	107.6	117.8	126.8	131.9	135.7	135.7	135.7	133.2
125°	111.4	106.3	108.8	115.2	122.9	124.2	122.9	122.9
127.5°	117.8	112.7	110.1	106.3	103.7	105.0	103.7	102.4
130°	125.5	120.4	116.5	112.7	110.1	106.3	102.4	101.2
132.5°	133.2	128.0	124.2	119.1	115.2	112.7	108.8	106.3
135°	139.6	135.7	131.9	126.8	122.9	119.1	115.2	112.7
137.5°	147.3	140.9	137.0	134.5	130.6	126.8	121.6	119.1
140°	157.5	149.8	143.4	138.3	135.7	131.9	128.0	125.5
142.5°	172.9	161.3	152.4	147.3	142.1	138.3	133.2	130.6
145°	195.9	179.3	167.7	158.8	152.4	147.3	142.1	139.6
147.5°	234.3	204.9	189.5	176.7	169.0	162.6	156.2	153.7
150°	297.1	267.6	226.6	204.9	193.4	185.7	179.3	175.4
152.5°	293.2	294.5	293.2	277.9	256.1	239.5	224.1	212.6
155°	286.8	288.1	288.1	286.8	285.5	284.3	281.7	279.1
157.5°	280.4	283.0	283.0	281.7	280.4	277.9	275.3	274.0
160°	272.7	274.0	275.3	274.0	274.0	271.5	268.9	267.6
162.5°	262.5	265.1	265.1	265.1	263.8	262.5	261.2	258.7
165°	249.7	252.3	253.5	253.5	252.3	251.0	248.4	247.1
167.5°	236.9	239.5	240.7	239.5	239.5	236.9	234.3	231.8
170°	242.0	236.9	227.9	224.1	224.1	221.5	217.7	217.7
172.5°	270.2	266.3	261.2	257.4	252.3	248.4	244.6	240.7
175°	277.9	276.6	275.3	271.5	268.9	265.1	262.5	258.7
177.5°	280.4	280.4	279.1	276.6	274.0	270.2	266.3	262.5
180°	281.7	281.7	281.7	281.7	281.7	281.7	281.7	281.7

(END OF REPORT)