

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: P236470

Luminaire Tested: **SKB4-LD5-30-N-UNV-L840-CD4-U all blades horizontal**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236470
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24056)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-30-N-UNV-L840-CD4-U all blades horizontal
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES HORIZONTAL
Light Source: (952) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

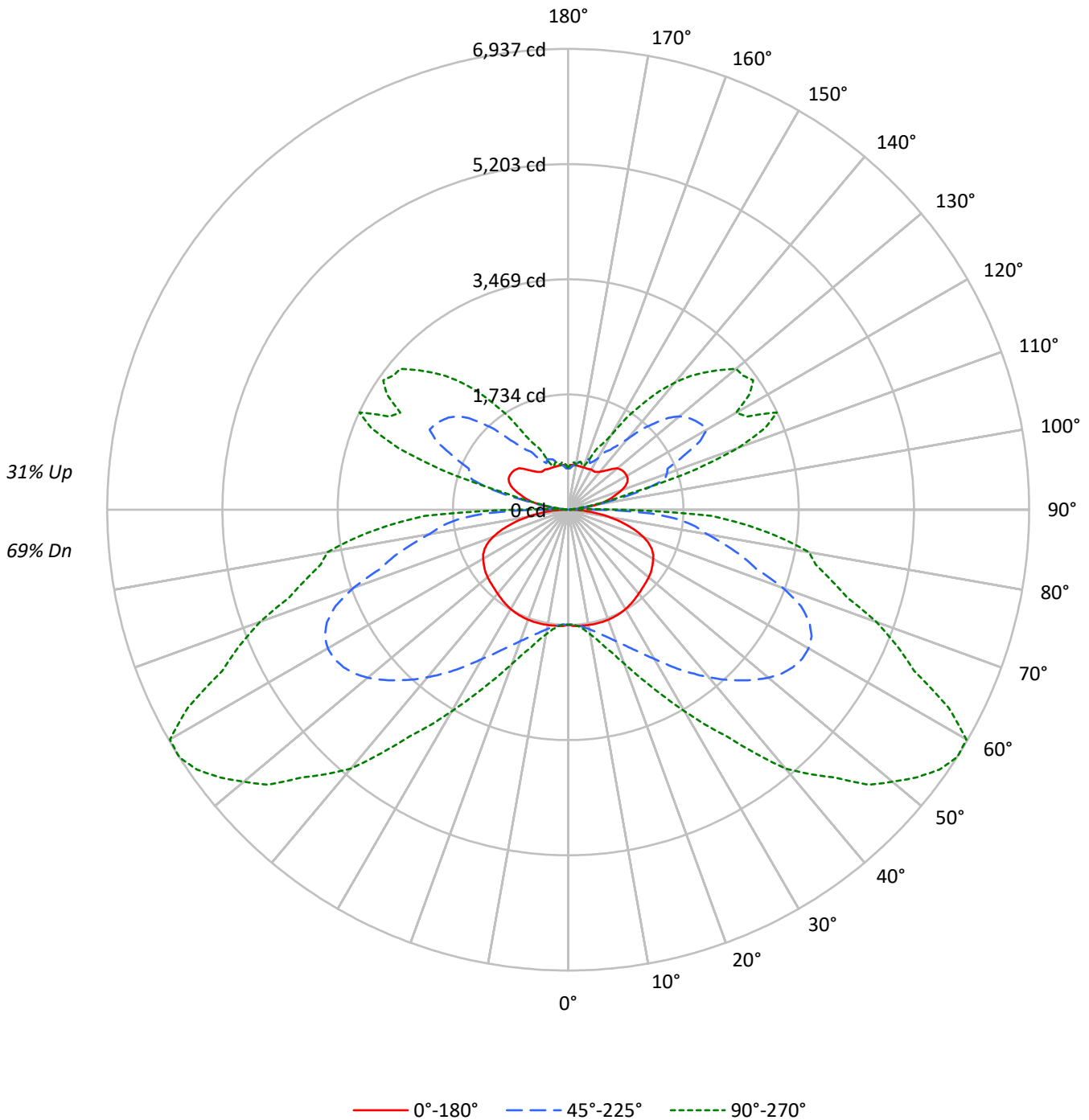
Lumens per Lamp: N/A
Luminaire Lumens: 26497.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.49 / 3.46 / 2.71
Luminous Opening: Rectangular (W 1.88' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 260.5
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-LD5-30-N-UNV-L840-CD4-U all blades horizontal

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	0	
RCR																						
0	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	69				
1	98	92	87	82	92	87	82	77	77	73	69	68	65	62	59	57	55	50				
2	87	77	69	62	81	73	65	59	64	58	53	56	51	47	49	45	42	38				
3	78	66	56	49	73	62	53	46	54	47	42	47	42	37	41	37	33	29				
4	70	57	47	39	65	53	44	37	47	39	33	41	35	30	35	30	26	23				
5	64	49	40	32	59	47	37	31	41	33	27	36	29	24	31	26	21	18				
6	58	44	34	27	54	41	32	26	36	29	23	31	25	20	27	22	18	15				
7	53	39	29	23	50	37	28	22	32	25	19	28	22	17	24	19	15	12				
8	49	35	26	20	46	33	25	19	29	22	17	25	19	15	22	17	13	11				
9	46	32	23	17	43	30	22	16	26	19	15	23	17	13	20	15	11	9				
10	43	29	20	15	40	27	19	14	24	17	13	21	15	11	18	13	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2483	2483	2483
5°	2529	2520	2537
10°	2568	2658	2772
15°	2622	2892	3173
20°	2692	3217	3767
25°	2772	3672	4627
30°	2863	4298	5801
35°	2964	5154	7295
40°	3092	6171	9525
45°	3276	7373	11581
50°	3530	8787	14226
55°	3845	10335	17064
60°	4239	11990	19862
65°	4707	13600	19508
70°	5055	14415	20690
75°	5193	15040	22703
80°	5138	17532	30398
85°	5031	27482	44704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.8	0.6
10°-20°	558.6	2.1
20°-30°	1092.0	4.1
30°-40°	1863.0	7.0
40°-50°	2843.8	10.7
50°-60°	3718.1	14.0
60°-70°	3724.9	14.1
70°-80°	2791.9	10.5
80°-90°	1629.7	6.2
90°-100°	180.5	0.7
100°-110°	1115.0	4.2
110°-120°	1979.5	7.5
120°-130°	1953.0	7.4
130°-140°	1428.7	5.4
140°-150°	780.9	2.9
150°-160°	394.4	1.5
160°-170°	209.3	0.8
170°-180°	63.8	0.2
0°-30°	1820.4	6.9
0°-40°	3683.5	13.9
0°-60°	10245.4	38.7
0°-90°	18391.9	69.4
90°-120°	3275.0	12.4
90°-150°	7437.7	28.1
90°-180°	8105.0	30.6
0°-180°	26497.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1730	1730	1730	1730	1730	
5°	1756	1762	1749	1749	1761	168
15°	1765	1832	1946	2066	2136	500
25°	1750	1927	2319	2755	2922	809
35°	1692	2038	2942	3859	4164	1061
45°	1614	2170	3633	5193	5706	1250
55°	1537	2264	4130	6133	6820	1376
65°	1386	2102	4005	5422	5744	1357
75°	936	1566	2712	3688	4094	979
85°	306	681	1669	2450	2715	315
90°	23	101	424	654	764	33
95°	155	98	31	24	23	182
105°	671	848	1211	1211	1007	698
115°	982	1327	1910	2756	3465	957
125°	1011	1188	2335	3140	3399	902
135°	842	903	1842	2691	2927	661
145°	695	844	1098	1664	1933	445
155°	680	777	772	931	1009	317
165°	676	722	762	783	743	192
175°	675	666	651	618	706	64
180°	627	627	627	627	627	



TEST NUMBER: P236470

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U all blades horizontal

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3
2.5°	1751.6	1753.0	1754.3	1754.3	1755.6	1755.6	1746.3	1742.3	1737.0	1730.3	1726.3
5°	1755.6	1755.6	1757.0	1758.3	1761.0	1762.3	1757.0	1754.3	1751.6	1749.0	1747.6
7.5°	1758.3	1759.6	1761.0	1763.6	1773.0	1779.6	1775.6	1778.3	1781.0	1781.0	1783.6
10°	1762.3	1763.6	1767.6	1777.0	1790.3	1805.0	1809.0	1815.7	1821.0	1823.7	1831.7
12.5°	1765.0	1766.3	1774.3	1787.6	1805.0	1823.7	1834.3	1849.0	1863.7	1881.0	1897.0
15°	1765.0	1767.6	1778.3	1795.7	1819.7	1845.0	1865.0	1894.4	1921.1	1946.4	1971.7
17.5°	1765.0	1767.6	1779.6	1805.0	1837.0	1871.7	1905.0	1946.4	1982.4	2018.4	2063.8
20°	1762.3	1765.0	1782.3	1814.3	1853.0	1899.7	1946.4	1998.4	2051.8	2106.5	2165.2
22.5°	1757.0	1762.3	1783.6	1822.3	1870.4	1931.7	1990.4	2061.1	2133.2	2205.2	2286.6
25°	1750.3	1755.6	1783.6	1829.0	1890.4	1963.7	2039.8	2130.5	2221.2	2318.6	2426.7
27.5°	1739.6	1747.6	1781.0	1835.7	1910.4	1998.4	2094.5	2205.2	2323.9	2452.0	2576.1
30°	1727.6	1737.0	1775.6	1839.7	1929.1	2034.5	2151.8	2289.3	2442.7	2593.4	2758.8
32.5°	1710.3	1720.9	1766.3	1843.7	1945.1	2071.8	2211.9	2389.3	2570.7	2761.5	2956.3
35°	1691.6	1704.9	1758.3	1846.3	1962.4	2114.5	2283.9	2496.0	2713.5	2941.6	3163.1
37.5°	1671.6	1687.6	1747.6	1849.0	1982.4	2155.9	2364.0	2602.8	2858.9	3112.4	3379.2
40°	1650.2	1670.3	1735.6	1850.3	2002.4	2203.9	2444.0	2714.8	2997.6	3293.8	3594.0
42.5°	1630.2	1652.9	1723.6	1850.3	2022.4	2250.6	2517.4	2824.2	3140.4	3467.2	3799.4
45°	1614.2	1638.2	1712.9	1850.3	2042.5	2297.3	2589.4	2930.9	3279.1	3632.7	3999.5
47.5°	1598.2	1623.6	1702.3	1849.0	2061.1	2341.3	2657.5	3024.3	3400.5	3791.4	4203.6
50°	1580.9	1608.9	1692.9	1849.0	2078.5	2381.3	2718.8	3104.4	3507.3	3935.5	4382.4
52.5°	1563.5	1591.5	1682.3	1847.7	2095.8	2412.0	2764.2	3163.1	3596.6	4051.6	4527.8
55°	1536.8	1568.9	1664.9	1842.3	2102.5	2425.3	2782.9	3203.1	3654.0	4130.3	4635.9
57.5°	1508.8	1542.2	1642.2	1830.3	2097.2	2417.3	2780.2	3216.4	3678.0	4175.6	4694.6
60°	1476.8	1508.8	1608.9	1805.0	2070.5	2386.6	2762.9	3197.8	3672.7	4177.0	4705.3
62.5°	1440.8	1468.8	1567.5	1765.0	2021.1	2334.6	2710.8	3155.1	3628.7	4130.3	4635.9
65°	1386.1	1411.4	1512.8	1706.3	1946.4	2258.6	2632.1	3069.7	3525.9	4004.9	4474.5
67.5°	1307.4	1332.7	1438.1	1624.9	1854.4	2157.2	2524.1	2941.6	3356.5	3792.7	4187.6
70°	1204.7	1230.0	1342.1	1514.2	1735.6	2033.1	2377.3	2754.8	3127.1	3435.2	3611.3
72.5°	1079.3	1108.6	1222.0	1380.8	1599.5	1878.4	2195.9	2534.7	2741.5	2969.6	3279.1
75°	936.5	969.9	1080.6	1228.7	1440.8	1690.3	1985.1	2177.2	2413.3	2712.2	2979.0
77.5°	781.8	823.1	923.2	1065.9	1258.0	1487.5	1667.6	1918.4	2159.9	2406.7	2650.8
80°	621.7	668.4	757.7	889.8	1060.6	1212.7	1424.8	1652.9	1878.4	2121.2	2358.6
82.5°	461.6	508.3	591.0	705.7	827.1	973.9	1171.3	1395.4	1643.6	1930.4	2217.2
85°	305.5	345.5	418.9	480.3	600.3	761.8	996.5	1235.3	1446.1	1668.9	1883.7
87.5°	160.1	184.1	228.1	316.2	446.9	568.3	727.1	891.2	1037.9	1232.7	1398.1
90°	22.7	24.0	32.0	42.7	82.7	118.7	193.4	281.5	318.8	424.2	473.6
92.5°	34.7	33.4	28.0	21.3	17.3	17.3	16.0	14.7	13.3	10.7	8.0
95°	154.8	168.1	153.4	132.1	104.1	92.1	68.0	48.0	40.0	30.7	28.0
97.5°	284.2	316.2	317.5	296.2	282.8	260.1	225.5	218.8	209.4	182.8	160.1
100°	428.2	473.6	488.3	470.9	465.6	496.3	488.3	453.6	409.6	374.9	390.9
102.5°	575.0	616.3	645.7	695.0	635.0	677.7	737.7	776.4	804.4	779.1	723.1
105°	671.0	705.7	759.1	829.8	881.8	813.8	871.1	1009.9	1138.0	1211.3	1258.0
107.5°	756.4	780.4	847.1	933.8	1031.2	1087.3	999.2	1092.6	1307.4	1519.5	1674.3
110°	856.5	872.5	908.5	1028.6	1135.3	1278.0	1310.1	1235.3	1340.7	1582.2	1895.7



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CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	931.2	935.2	924.5	1069.9	1212.7	1352.7	1548.9	1586.2	1546.2	1619.6	1813.0
115°	981.9	975.2	937.8	1056.6	1243.3	1410.1	1600.9	1841.0	1905.0	1910.4	1942.4
117.5°	1009.9	997.9	963.2	1035.2	1239.3	1442.1	1636.9	1879.7	2130.5	2234.6	2322.6
120°	1019.2	1005.9	995.2	992.5	1184.7	1436.8	1664.9	1887.7	2142.5	2406.7	2556.1
122.5°	1017.9	1007.2	1021.9	951.2	1119.3	1395.4	1655.6	1893.0	2122.5	2382.6	2641.5
125°	1011.2	1003.2	1032.6	943.2	1073.9	1302.0	1596.9	1866.4	2097.2	2334.6	2568.1
127.5°	995.2	991.2	1028.6	948.5	1012.6	1204.7	1510.2	1795.7	2043.8	2275.9	2501.4
130°	968.5	968.5	1004.6	968.5	945.9	1123.3	1358.1	1675.6	1939.7	2183.9	2414.7
132.5°	911.2	917.8	951.2	968.5	907.2	1045.9	1220.7	1506.2	1774.3	2046.5	2270.6
135°	841.8	855.1	889.8	937.8	868.5	937.8	1113.9	1300.7	1594.2	1842.3	2098.5
137.5°	789.8	807.1	841.8	904.5	880.5	883.2	1043.2	1176.6	1359.4	1643.6	1865.0
140°	745.7	764.4	799.1	867.1	884.5	840.5	923.2	1089.9	1210.0	1384.8	1640.9
142.5°	715.1	731.1	763.1	825.8	863.1	829.8	865.8	985.9	1100.6	1219.3	1359.4
145°	695.0	708.4	735.1	785.8	839.1	849.8	817.8	881.8	1012.6	1097.9	1200.7
147.5°	695.0	700.4	716.4	749.7	813.8	843.1	819.1	832.5	885.8	1029.9	1085.9
150°	699.1	700.4	715.1	736.4	788.4	831.1	849.8	792.4	831.1	883.2	979.2
152.5°	687.0	693.7	720.4	743.1	776.4	819.1	831.1	831.1	781.8	821.8	856.5
155°	680.4	685.7	713.7	735.1	757.7	796.4	817.8	829.8	821.8	772.4	797.8
157.5°	679.0	681.7	703.1	724.4	745.7	769.8	801.8	813.8	819.1	824.5	792.4
160°	677.7	679.0	697.7	715.1	735.1	751.1	773.8	799.1	804.4	807.1	827.1
162.5°	676.4	677.7	692.4	711.1	724.4	739.1	751.1	769.8	785.8	795.1	799.1
165°	676.4	676.4	687.0	705.7	716.4	727.1	736.4	744.4	748.4	761.8	773.8
167.5°	676.4	676.4	681.7	695.0	709.7	713.7	719.1	725.7	724.4	724.4	724.4
170°	677.7	677.7	677.7	684.4	696.4	704.4	704.4	705.7	701.7	697.7	689.7
172.5°	676.4	675.0	675.0	675.0	679.0	683.0	687.0	688.4	681.7	675.0	664.4
175°	675.0	673.7	671.0	668.4	668.4	664.4	661.7	659.0	653.7	651.0	643.0
177.5°	673.7	672.4	669.7	665.7	663.0	656.4	649.7	641.7	629.7	621.7	609.7
180°	627.0	627.0	627.0	627.0	627.0	627.0	627.0	627.0	627.0	627.0	627.0



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CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3	1730.3
2.5°	1720.9	1715.6	1715.6	1718.3	1722.3	1722.3	1722.3	1727.6
5°	1745.0	1743.6	1746.3	1751.6	1755.6	1755.6	1754.3	1761.0
7.5°	1786.3	1787.6	1793.0	1802.3	1809.0	1810.3	1810.3	1818.3
10°	1841.0	1849.0	1863.7	1877.0	1887.7	1891.7	1894.4	1902.4
12.5°	1914.4	1927.7	1946.4	1966.4	1982.4	1990.4	1994.4	1999.8
15°	1999.8	2025.1	2053.1	2079.8	2102.5	2115.8	2122.5	2135.8
17.5°	2105.2	2139.8	2174.5	2214.5	2245.2	2263.9	2274.6	2282.6
20°	2222.6	2277.3	2329.3	2382.6	2422.7	2446.7	2458.7	2466.7
22.5°	2368.0	2440.0	2506.7	2573.4	2620.1	2658.8	2676.1	2681.5
25°	2526.7	2620.1	2712.2	2797.5	2861.6	2894.9	2913.6	2921.6
27.5°	2713.5	2834.9	2938.9	3035.0	3107.0	3161.7	3187.1	3197.8
30°	2922.9	3061.7	3192.4	3315.2	3397.9	3456.6	3488.6	3500.6
32.5°	3148.4	3325.8	3473.9	3603.3	3718.0	3780.7	3820.8	3832.8
35°	3399.2	3594.0	3778.1	3939.5	4060.9	4128.9	4151.6	4163.6
37.5°	3639.3	3880.8	4086.2	4261.0	4414.4	4525.2	4590.5	4617.2
40°	3891.5	4155.6	4390.4	4619.9	4836.0	4982.7	5058.8	5084.1
42.5°	4130.3	4434.4	4725.3	4994.7	5208.2	5314.9	5376.3	5400.3
45°	4377.1	4726.6	5053.4	5332.3	5525.7	5621.8	5684.5	5705.8
47.5°	4617.2	5001.4	5357.6	5639.1	5863.2	6011.3	6098.0	6128.7
50°	4829.3	5249.5	5623.1	5935.3	6154.0	6268.8	6338.1	6371.5
52.5°	5009.4	5448.3	5839.2	6131.4	6352.8	6492.9	6580.9	6615.6
55°	5125.5	5585.7	5977.9	6288.8	6524.9	6677.0	6774.4	6819.7
57.5°	5196.2	5659.1	6054.0	6371.5	6619.6	6779.7	6881.1	6937.1
60°	5190.9	5639.1	6031.3	6343.5	6579.6	6746.4	6854.4	6919.8
62.5°	5101.5	5515.0	5869.9	6130.0	6323.5	6392.8	6403.5	6452.9
65°	4889.4	5206.9	5375.0	5468.3	5593.7	5667.1	5696.5	5744.5
67.5°	4377.1	4545.2	4772.0	4977.4	5158.8	5257.6	5316.3	5354.9
70°	3867.5	4152.9	4402.4	4603.9	4750.6	4853.3	4882.7	4930.7
72.5°	3552.6	3798.1	4008.9	4173.0	4299.7	4377.1	4387.7	4405.1
75°	3199.1	3392.5	3596.6	3779.4	3926.2	4011.5	4068.9	4094.2
77.5°	2882.9	3096.4	3299.1	3483.2	3640.7	3734.1	3792.7	3814.1
80°	2597.4	2862.9	3113.7	3319.2	3491.3	3616.7	3660.7	3678.0
82.5°	2466.7	2689.5	2882.9	3023.0	3141.7	3204.4	3219.1	3221.8
85°	2081.1	2242.6	2389.3	2510.7	2621.4	2692.1	2718.8	2714.8
87.5°	1560.9	1692.9	1827.7	1942.4	2055.8	2135.8	2165.2	2162.5
90°	559.0	559.0	633.7	675.0	791.1	864.5	839.1	764.4
92.5°	5.3	5.3	4.0	2.7	2.7	1.3	1.3	1.3
95°	25.3	25.3	24.0	24.0	24.0	22.7	22.7	22.7
97.5°	129.4	116.1	97.4	85.4	69.4	60.0	58.7	56.0
100°	392.2	385.5	365.5	353.5	336.2	322.8	318.8	318.8
102.5°	651.0	589.7	573.6	587.0	601.7	607.0	607.0	611.0
105°	1283.4	1276.7	1243.3	1179.3	1103.3	1033.9	1008.6	1007.2
107.5°	1786.3	1886.4	1957.1	1990.4	2007.8	1994.4	1990.4	2006.4
110°	2131.8	2321.3	2480.0	2590.8	2664.1	2685.5	2701.5	2721.5



TEST NUMBER: P236470

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U all blades horizontal

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	2133.2	2482.7	2784.2	2968.3	3093.7	3148.4	3180.4	3203.1
115°	2085.1	2290.6	2612.1	2898.9	3159.1	3331.2	3423.2	3464.6
117.5°	2314.6	2377.3	2526.7	2668.1	2810.9	2929.6	3005.7	3037.7
120°	2636.1	2716.2	2730.8	2776.2	2853.6	2881.6	2898.9	2916.3
122.5°	2809.5	2880.2	2977.6	3075.0	3131.1	3176.4	3209.8	3233.8
125°	2834.9	2987.0	3112.4	3168.4	3200.4	3256.5	3351.2	3399.2
127.5°	2716.2	2933.6	3135.1	3204.4	3277.8	3293.8	3308.5	3315.2
130°	2620.1	2812.2	2960.3	3109.7	3233.8	3288.5	3297.8	3297.8
132.5°	2494.7	2656.1	2824.2	2947.0	3016.3	3067.0	3099.0	3112.4
135°	2295.9	2482.7	2636.1	2746.8	2845.6	2894.9	2916.3	2926.9
137.5°	2083.8	2255.9	2405.3	2552.1	2654.8	2708.2	2728.2	2733.5
140°	1830.3	1994.4	2162.5	2297.3	2389.3	2457.3	2490.7	2496.0
142.5°	1576.9	1746.3	1875.7	1994.4	2103.8	2189.2	2234.6	2246.6
145°	1302.0	1443.5	1603.5	1723.6	1819.7	1879.7	1918.4	1933.1
147.5°	1160.6	1239.3	1308.7	1398.1	1492.8	1580.9	1634.2	1646.2
150°	1061.9	1107.3	1160.6	1211.3	1251.4	1275.4	1294.0	1283.4
152.5°	916.5	1043.2	1068.6	1088.6	1104.6	1123.3	1112.6	1112.6
155°	824.5	855.1	907.2	953.9	1040.6	1016.6	1011.2	1008.6
157.5°	767.1	780.4	803.1	809.8	805.8	799.1	803.1	793.8
160°	809.8	779.1	737.7	736.4	716.4	705.7	700.4	695.0
162.5°	800.4	808.4	808.4	788.4	757.7	724.4	704.4	697.7
165°	781.8	784.4	787.1	779.1	771.1	753.7	744.4	743.1
167.5°	729.7	743.1	753.7	763.1	769.8	759.1	740.4	735.1
170°	685.7	687.0	689.7	700.4	716.4	720.4	709.7	679.0
172.5°	653.7	649.7	648.4	657.7	679.0	696.4	703.1	720.4
175°	629.7	617.7	613.7	623.0	645.7	671.0	699.1	705.7
177.5°	593.7	579.0	571.0	580.3	601.7	635.0	668.4	672.4
180°	627.0	627.0	627.0	627.0	627.0	627.0	627.0	627.0

(END OF REPORT)