

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: P236550

Luminaire Tested: **SKB4-LD5-24-W-UNV-L835-CD4-U inner 2 blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236550
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24079)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-24-W-UNV-L835-CD4-U inner 2 blades tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, INNER 2 BLADES TILTED OUT 20 DEGREES
Light Source: (952) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

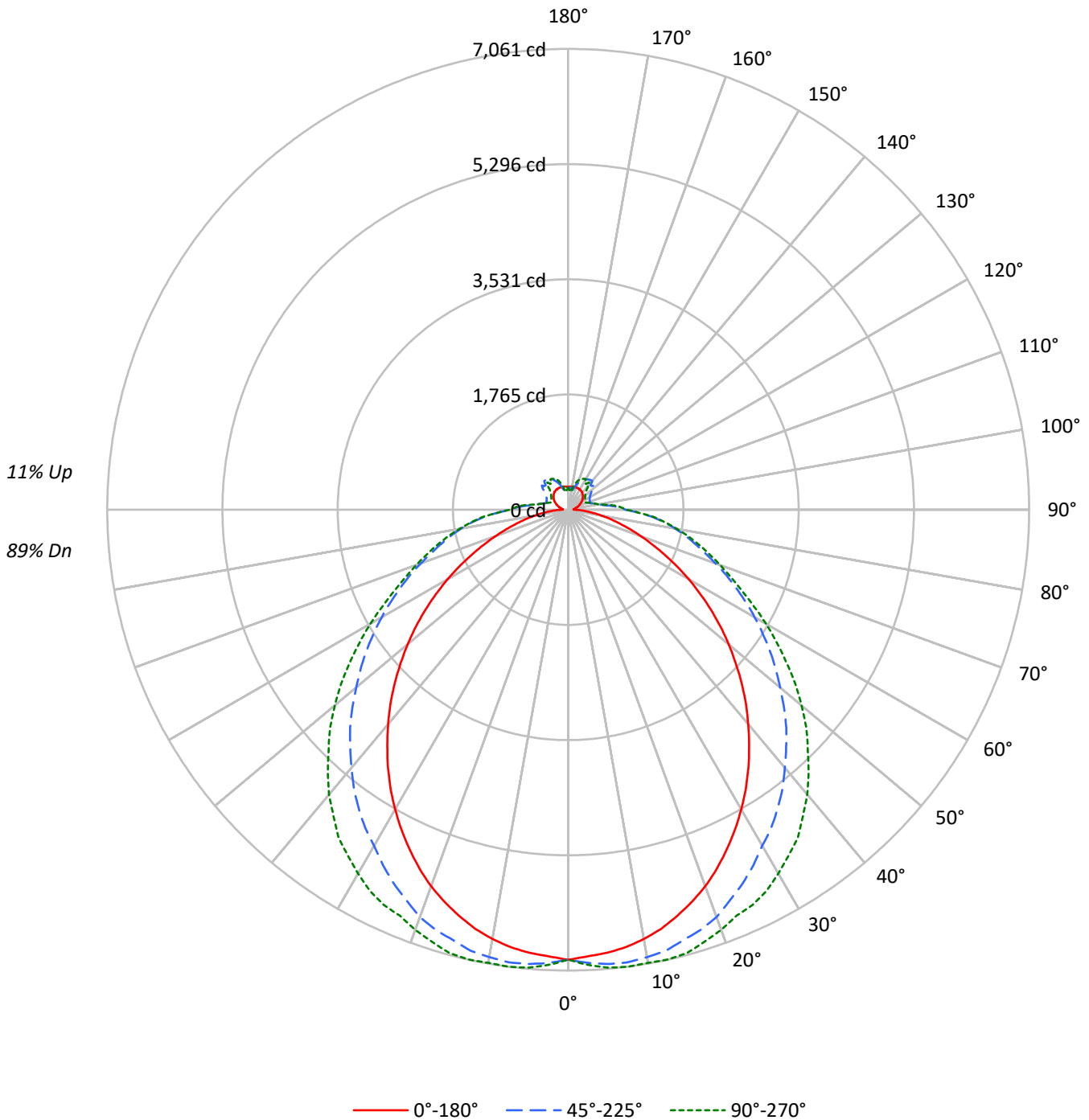
Lumens per Lamp: N/A
Luminaire Lumens: 24057.0 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.38 / 1.4
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 206.2
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	105	99	94	90	101	96	92	88	90	86	83	84	81	78	78	76	74	71
2	95	86	79	73	91	83	76	71	78	72	67	73	68	64	68	64	61	58
3	86	75	67	60	83	73	65	59	68	62	56	64	58	54	60	55	51	49
4	79	66	57	51	76	64	56	50	60	53	48	57	51	46	53	48	44	41
5	72	59	50	43	69	58	49	43	54	47	41	51	45	40	48	43	38	36
6	67	53	44	38	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	59	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	38	32	27	36	31	27	25
9	54	40	32	27	52	39	32	26	37	30	25	35	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	22	31	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9896	9896	9896
5°	9774	9967	10051
10°	9644	9941	10078
15°	9446	9836	10146
20°	9202	9735	10055
25°	8883	9496	10059
30°	8527	9237	10023
35°	8136	9066	9970
40°	7700	8817	9765
45°	7242	8597	9480
50°	6748	8315	9199
55°	6202	8102	8814
60°	5610	7895	8428
65°	4969	7728	8043
70°	4349	7645	7945
75°	3786	7778	8115
80°	3279	8319	8561
85°	2843	9268	9607



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	663.9	2.8
10°-20°	1919.4	8.0
20°-30°	2894.0	12.0
30°-40°	3459.4	14.4
40°-50°	3546.9	14.7
50°-60°	3202.3	13.3
60°-70°	2570.4	10.7
70°-80°	1893.6	7.9
80°-90°	1212.2	5.0
90°-100°	619.8	2.6
100°-110°	378.9	1.6
110°-120°	340.6	1.4
120°-130°	352.0	1.5
130°-140°	351.1	1.5
140°-150°	302.9	1.3
150°-160°	211.3	0.9
160°-170°	106.5	0.4
170°-180°	31.8	0.1
0°-30°	5477.4	22.8
0°-40°	8936.7	37.1
0°-60°	15686.0	65.2
0°-90°	21362.2	88.8
90°-120°	1339.4	5.6
90°-150°	2345.3	9.7
90°-180°	2695.0	11.2
0°-180°	24057.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6895	6895	6895	6895	6895	
5°	6816	6940	6988	7026	7044	646
15°	6446	6680	6825	6973	7032	1816
25°	5746	6011	6319	6543	6682	2644
35°	4813	5116	5592	5970	6133	3007
45°	3754	4125	4724	5084	5190	2895
55°	2663	3153	3772	4019	4081	2383
65°	1627	2288	2839	2920	2933	1621
75°	815	1609	2007	2061	2070	874
85°	275	1023	1305	1323	1324	275
90°	90	674	876	897	891	61
95°	95	458	663	714	716	78
105°	136	335	376	394	388	145
115°	200	425	363	315	290	199
125°	267	523	417	347	316	238
135°	315	504	512	437	383	243
145°	350	439	561	494	483	218
155°	361	344	496	534	522	167
165°	361	342	346	408	409	102
175°	356	352	342	329	302	34
180°	342	342	342	342	342	



TEST NUMBER: P236550

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1
2.5°	6849.1	6877.5	6888.4	6919.4	6931.9	6935.3	6943.7	6948.7	6942.0	6951.2	6942.0
5°	6815.6	6850.7	6872.5	6916.9	6935.3	6945.3	6962.1	6972.1	6973.0	6988.0	6984.7
7.5°	6760.3	6800.5	6834.8	6881.7	6905.2	6922.7	6947.9	6967.9	6982.2	6994.7	6988.9
10°	6678.3	6727.7	6767.9	6817.2	6849.9	6881.7	6914.4	6921.9	6934.5	6960.4	6976.3
12.5°	6577.0	6630.6	6670.7	6728.5	6774.6	6803.0	6830.6	6859.1	6892.6	6920.2	6921.1
15°	6446.4	6510.8	6550.2	6617.2	6667.4	6692.5	6742.7	6777.1	6791.3	6824.8	6861.6
17.5°	6299.9	6366.8	6407.9	6481.5	6528.4	6571.1	6629.7	6635.6	6694.2	6750.3	6793.8
20°	6139.1	6199.4	6241.3	6323.3	6372.7	6419.6	6465.6	6512.5	6591.2	6641.4	6669.9
22.5°	5953.3	6011.0	6068.0	6140.8	6196.1	6229.5	6312.4	6377.7	6442.2	6479.0	6525.1
25°	5745.6	5804.2	5858.7	5936.5	5984.2	6037.0	6150.0	6201.1	6253.8	6319.1	6371.9
27.5°	5531.3	5581.6	5641.8	5712.2	5764.1	5852.0	5954.9	5990.1	6071.3	6140.8	6184.3
30°	5300.3	5344.6	5401.6	5472.7	5536.3	5646.0	5725.6	5781.6	5870.4	5944.9	6041.2
32.5°	5064.2	5104.4	5152.9	5215.7	5307.0	5411.6	5494.5	5570.7	5666.1	5784.2	5885.5
35°	4813.0	4851.5	4893.4	4957.8	5068.4	5163.0	5263.4	5346.3	5475.2	5592.4	5701.3
37.5°	4552.6	4592.8	4627.2	4705.9	4818.9	4922.7	5026.5	5134.5	5264.3	5392.3	5482.8
40°	4289.8	4330.0	4359.3	4449.7	4566.9	4681.6	4794.6	4914.3	5049.1	5162.1	5266.8
42.5°	4026.9	4062.9	4096.4	4199.4	4311.5	4437.1	4562.7	4687.4	4813.9	4941.1	5057.5
45°	3754.0	3794.2	3826.8	3942.3	4054.5	4195.2	4324.1	4454.7	4578.6	4724.3	4812.2
47.5°	3481.0	3522.9	3559.7	3687.8	3808.4	3956.6	4082.1	4212.7	4352.6	4481.5	4571.1
50°	3209.8	3250.0	3299.4	3433.3	3555.6	3710.4	3841.9	3982.5	4120.7	4236.2	4338.3
52.5°	2937.7	2979.6	3042.4	3179.7	3311.1	3471.0	3606.6	3756.5	3881.2	4006.0	4092.2
55°	2663.1	2709.2	2788.7	2926.0	3074.2	3231.6	3378.1	3525.4	3652.7	3771.5	3845.2
57.5°	2393.5	2443.8	2537.5	2682.4	2838.9	3000.5	3162.9	3302.7	3430.0	3533.8	3604.9
60°	2130.7	2185.9	2291.4	2446.3	2614.5	2782.8	2944.4	3091.7	3203.9	3300.2	3346.3
62.5°	1873.6	1935.6	2050.3	2221.9	2396.9	2574.4	2746.0	2882.5	2980.4	3065.8	3105.1
65°	1626.7	1695.3	1822.6	2009.3	2196.8	2380.1	2552.6	2672.3	2764.4	2838.9	2869.1
67.5°	1397.3	1471.8	1617.5	1813.4	2012.6	2201.0	2359.2	2471.4	2555.9	2620.4	2639.7
70°	1184.6	1263.3	1425.7	1634.2	1845.2	2025.2	2170.8	2281.3	2351.7	2399.4	2406.1
72.5°	989.6	1071.6	1254.1	1473.5	1686.9	1851.0	1994.2	2091.3	2154.9	2188.4	2206.8
75°	815.4	900.8	1103.4	1332.0	1530.4	1687.8	1820.1	1902.1	1967.4	2006.7	2024.3
77.5°	658.9	750.1	972.0	1195.5	1381.4	1527.0	1645.1	1734.7	1807.5	1838.5	1848.5
80°	514.0	619.5	855.6	1065.7	1236.5	1369.6	1496.1	1584.8	1645.9	1665.2	1669.4
82.5°	384.3	504.8	740.1	933.5	1092.5	1236.5	1349.6	1424.1	1476.0	1487.7	1490.2
85°	275.4	403.5	625.4	807.1	961.1	1085.0	1188.0	1250.8	1295.1	1305.2	1304.3
87.5°	186.7	319.8	522.4	679.8	812.9	925.1	1011.3	1064.1	1100.1	1085.8	1085.8
90°	90.4	251.2	409.4	529.1	625.4	721.7	785.3	833.0	864.0	875.7	878.2
92.5°	79.5	193.4	328.2	434.5	525.8	622.0	691.5	741.8	774.4	787.8	790.3
95°	94.6	156.6	251.2	333.2	417.8	497.3	552.5	594.4	637.1	663.1	677.3
97.5°	98.0	159.1	231.9	284.6	341.6	416.9	469.7	506.5	528.3	535.0	534.1
100°	107.2	185.0	239.4	282.1	316.5	350.8	403.5	443.7	467.2	475.5	475.5
102.5°	121.4	205.1	269.6	293.0	317.3	342.4	355.8	385.9	412.7	424.5	427.8
105°	136.5	213.5	313.9	308.9	326.5	343.2	357.5	361.7	364.2	375.9	382.6
107.5°	152.4	219.3	334.0	344.1	336.6	350.8	358.3	363.3	362.5	346.6	342.4
110°	169.1	224.4	340.7	383.4	360.8	360.8	365.9	367.5	362.5	355.8	342.4



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CATALOG NUMBER: SKB4-LD5-24-W-UNV-L835-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	184.2	226.9	344.9	415.2	407.7	378.4	374.2	373.4	367.5	357.5	345.8
115°	200.1	228.6	346.6	432.0	437.9	411.9	389.3	383.4	374.2	363.3	349.9
117.5°	216.8	228.6	347.4	436.2	459.6	469.7	416.1	396.0	384.3	372.6	356.6
120°	234.4	229.4	345.8	440.4	503.2	485.6	460.5	419.4	397.7	382.6	366.7
122.5°	251.2	236.9	344.1	442.0	504.0	492.3	522.4	456.3	417.8	396.0	379.2
125°	267.1	247.8	342.4	441.2	504.0	542.5	503.2	522.4	450.4	416.9	395.2
127.5°	282.1	260.4	338.2	435.3	501.5	546.7	513.2	528.3	511.5	451.2	416.9
130°	293.0	276.3	329.9	422.8	494.8	540.8	564.3	507.3	541.7	514.0	452.9
132.5°	303.1	288.8	317.3	412.7	488.1	536.6	564.3	539.2	513.2	546.7	519.1
135°	314.8	303.1	302.2	401.9	478.0	529.9	557.6	576.8	519.1	511.5	543.3
137.5°	325.7	315.6	298.0	391.0	463.8	520.7	550.0	569.3	578.5	509.8	507.3
140°	334.9	327.3	298.0	377.6	447.1	508.2	539.2	559.2	571.8	574.3	508.2
142.5°	344.9	337.4	299.7	360.0	429.5	489.8	526.6	547.5	561.8	570.1	573.5
145°	349.9	343.2	315.6	332.4	410.2	467.2	509.0	534.1	551.7	560.9	565.9
147.5°	352.5	347.4	328.2	319.8	389.3	443.7	488.9	519.1	539.2	551.7	557.6
150°	355.0	351.6	337.4	312.3	364.2	421.1	465.5	499.0	523.2	538.3	545.8
152.5°	359.2	355.8	345.8	310.6	334.9	397.7	440.4	473.9	501.5	520.7	531.6
155°	360.8	358.3	350.8	330.7	319.8	367.5	412.7	444.5	473.0	496.5	511.5
157.5°	362.5	360.8	355.0	341.6	313.9	334.0	381.8	415.2	442.0	466.3	483.9
160°	361.7	360.8	356.6	348.3	329.0	315.6	339.1	380.9	408.5	431.2	447.9
162.5°	361.7	360.8	357.5	351.6	340.7	314.8	318.1	335.7	370.9	395.2	411.1
165°	360.8	360.8	358.3	354.1	347.4	336.6	313.1	312.3	326.5	345.8	368.4
167.5°	360.8	360.8	359.2	355.8	351.6	345.8	337.4	324.0	308.9	312.3	319.8
170°	359.2	360.0	358.3	355.8	353.3	349.1	344.9	339.1	330.7	321.5	303.9
172.5°	357.5	358.3	358.3	356.6	354.1	351.6	349.1	345.8	339.9	336.6	330.7
175°	355.8	356.6	356.6	355.8	353.3	350.8	349.9	347.4	343.2	341.6	338.2
177.5°	354.1	354.1	355.0	354.1	353.3	351.6	350.8	349.1	344.9	344.1	340.7
180°	341.6	341.6	341.6	341.6	341.6	341.6	341.6	341.6	341.6	341.6	341.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1	6895.1
2.5°	6936.1	6965.4	6964.6	6948.7	6964.6	6983.0	6973.0	6982.2
5°	6987.2	7025.7	7031.6	7019.9	7033.2	7049.2	7034.9	7044.1
7.5°	6990.5	7023.2	7030.7	7021.5	7045.8	7068.4	7054.2	7060.9
10°	6995.6	7033.2	7043.3	7029.1	7044.1	7056.7	7039.9	7050.8
12.5°	6926.1	6976.3	7005.6	7010.6	7039.1	7060.0	7045.8	7057.5
15°	6892.6	6944.5	6969.6	6976.3	7008.1	7030.7	7016.5	7031.6
17.5°	6825.6	6861.6	6869.2	6867.5	6903.5	6931.9	6926.9	6942.0
20°	6693.3	6741.9	6777.9	6785.4	6819.8	6843.2	6829.8	6849.9
22.5°	6576.1	6626.4	6638.1	6642.3	6690.0	6720.1	6718.5	6734.4
25°	6411.2	6461.4	6522.6	6563.6	6618.8	6654.8	6664.0	6681.6
27.5°	6271.4	6352.6	6426.3	6466.5	6522.6	6558.6	6572.0	6581.2
30°	6140.0	6225.4	6291.5	6334.2	6382.7	6411.2	6422.1	6436.3
32.5°	5979.2	6066.3	6123.2	6157.5	6206.1	6242.9	6266.4	6281.4
35°	5785.0	5865.4	5941.5	5999.3	6053.7	6090.6	6104.8	6133.3
37.5°	5574.0	5685.4	5764.1	5803.4	5835.2	5865.4	5882.1	5907.2
40°	5381.5	5475.2	5529.6	5569.8	5612.5	5651.9	5672.8	5697.9
42.5°	5147.1	5228.3	5303.6	5351.3	5388.2	5421.7	5435.9	5450.1
45°	4904.3	5000.5	5065.8	5102.7	5125.3	5160.4	5182.2	5189.7
47.5°	4671.5	4751.1	4803.8	4849.0	4880.0	4915.2	4934.4	4947.0
50°	4422.9	4492.4	4553.5	4594.5	4612.9	4636.4	4648.9	4665.7
52.5°	4169.2	4247.1	4284.7	4309.0	4327.4	4354.2	4367.6	4384.4
55°	3918.9	3966.6	4004.3	4034.4	4052.8	4072.9	4084.7	4081.3
57.5°	3649.3	3703.7	3736.4	3754.0	3764.8	3778.2	3781.6	3790.8
60°	3395.6	3434.2	3455.1	3471.0	3476.0	3486.9	3491.1	3501.1
62.5°	3143.7	3172.1	3183.0	3194.7	3201.4	3199.7	3200.6	3207.3
65°	2890.0	2913.4	2917.6	2922.6	2926.8	2928.5	2930.2	2932.7
67.5°	2647.2	2665.6	2671.5	2685.7	2691.6	2688.2	2688.2	2690.7
70°	2422.0	2439.6	2446.3	2457.2	2465.5	2465.5	2468.0	2471.4
72.5°	2216.0	2236.1	2249.5	2256.2	2268.0	2268.8	2268.8	2268.0
75°	2033.5	2048.6	2058.7	2063.7	2075.4	2074.6	2073.7	2070.4
77.5°	1851.9	1863.6	1875.3	1874.5	1886.2	1886.2	1883.7	1881.2
80°	1669.4	1682.8	1687.8	1686.1	1697.0	1695.3	1694.5	1688.6
82.5°	1481.8	1493.5	1498.6	1498.6	1508.6	1506.9	1506.1	1501.1
85°	1301.8	1309.4	1323.6	1322.8	1329.5	1329.5	1328.6	1324.4
87.5°	1068.3	1074.1	1079.1	1077.5	1082.5	1085.8	1082.5	1080.0
90°	879.1	884.9	895.8	898.3	902.5	898.3	897.5	890.8
92.5°	793.7	799.5	808.7	812.1	814.6	813.8	814.6	810.4
95°	687.3	698.2	712.4	715.8	720.0	719.1	721.7	715.8
97.5°	535.8	546.7	565.9	577.7	581.0	581.8	586.0	579.3
100°	475.5	478.0	481.4	479.7	478.9	477.2	476.4	471.3
102.5°	428.6	431.2	434.5	434.5	432.8	432.0	430.3	426.1
105°	385.9	390.1	393.5	394.3	393.5	392.6	391.0	387.6
107.5°	345.8	349.1	354.1	355.0	355.0	355.8	355.0	349.9
110°	323.2	317.3	319.0	319.0	319.0	319.8	318.1	313.9



TEST NUMBER: P236550

CATALOG NUMBER: SKB4-LD5-24-W-UNV-L835-CD4-U inner 2 blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	335.7	324.0	308.9	297.2	293.0	292.2	289.7	285.5
115°	336.6	326.5	319.0	311.4	306.4	301.4	294.7	290.5
117.5°	344.1	331.5	321.5	313.1	308.9	304.7	299.7	295.5
120°	353.3	339.1	329.0	319.8	313.9	308.1	302.2	298.0
122.5°	365.0	351.6	339.1	328.2	321.5	315.6	309.8	305.6
125°	379.2	364.2	352.5	342.4	334.0	327.3	320.6	315.6
127.5°	396.0	380.1	367.5	355.8	346.6	339.1	331.5	327.3
130°	420.3	401.0	386.8	372.6	362.5	354.1	346.6	340.7
132.5°	458.8	432.0	411.9	393.5	382.6	373.4	364.2	358.3
135°	537.5	478.0	447.9	426.1	411.1	398.5	388.5	382.6
137.5°	539.2	552.5	523.2	471.3	451.2	436.2	423.6	417.8
140°	504.0	520.7	543.3	546.7	543.3	515.7	498.1	492.3
142.5°	514.0	490.6	504.0	514.0	529.1	531.6	527.4	524.9
145°	570.1	550.0	502.3	484.7	485.6	491.4	488.1	483.1
147.5°	562.6	565.1	565.9	554.2	517.4	493.9	481.4	475.5
150°	553.4	556.7	558.4	558.4	556.7	553.4	546.7	541.7
152.5°	540.0	545.8	549.2	550.0	549.2	545.0	537.5	533.3
155°	522.4	529.1	533.3	535.0	535.8	533.3	526.6	522.4
157.5°	498.1	509.0	514.9	517.4	518.2	516.5	511.5	508.2
160°	465.5	478.0	487.2	490.6	493.9	493.9	489.8	486.4
162.5°	427.0	440.4	450.4	455.4	458.8	460.5	456.3	455.4
165°	385.9	397.7	406.0	410.2	413.6	415.2	411.9	409.4
167.5°	329.0	344.9	357.5	362.5	365.9	365.9	363.3	363.3
170°	303.1	305.6	306.4	306.4	304.7	303.1	299.7	298.0
172.5°	325.7	323.2	316.5	308.1	299.7	289.7	282.1	273.8
175°	334.9	334.9	331.5	326.5	320.6	314.8	308.1	302.2
177.5°	338.2	339.1	336.6	332.4	327.3	321.5	313.1	308.9
180°	341.6	341.6	341.6	341.6	341.6	341.6	341.6	341.6

(END OF REPORT)