

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: P236482

Luminaire Tested: **SKB4-LD5-30-N-UNV-L840-CD4-U all blades tilted out 20 degrees**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236482
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24059)
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 tilted out 20 degrees
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH NARROW DISTRIBUTION LENS, ALL BLADES TILTED OUT 20 DEGREES
Light Source: (952) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

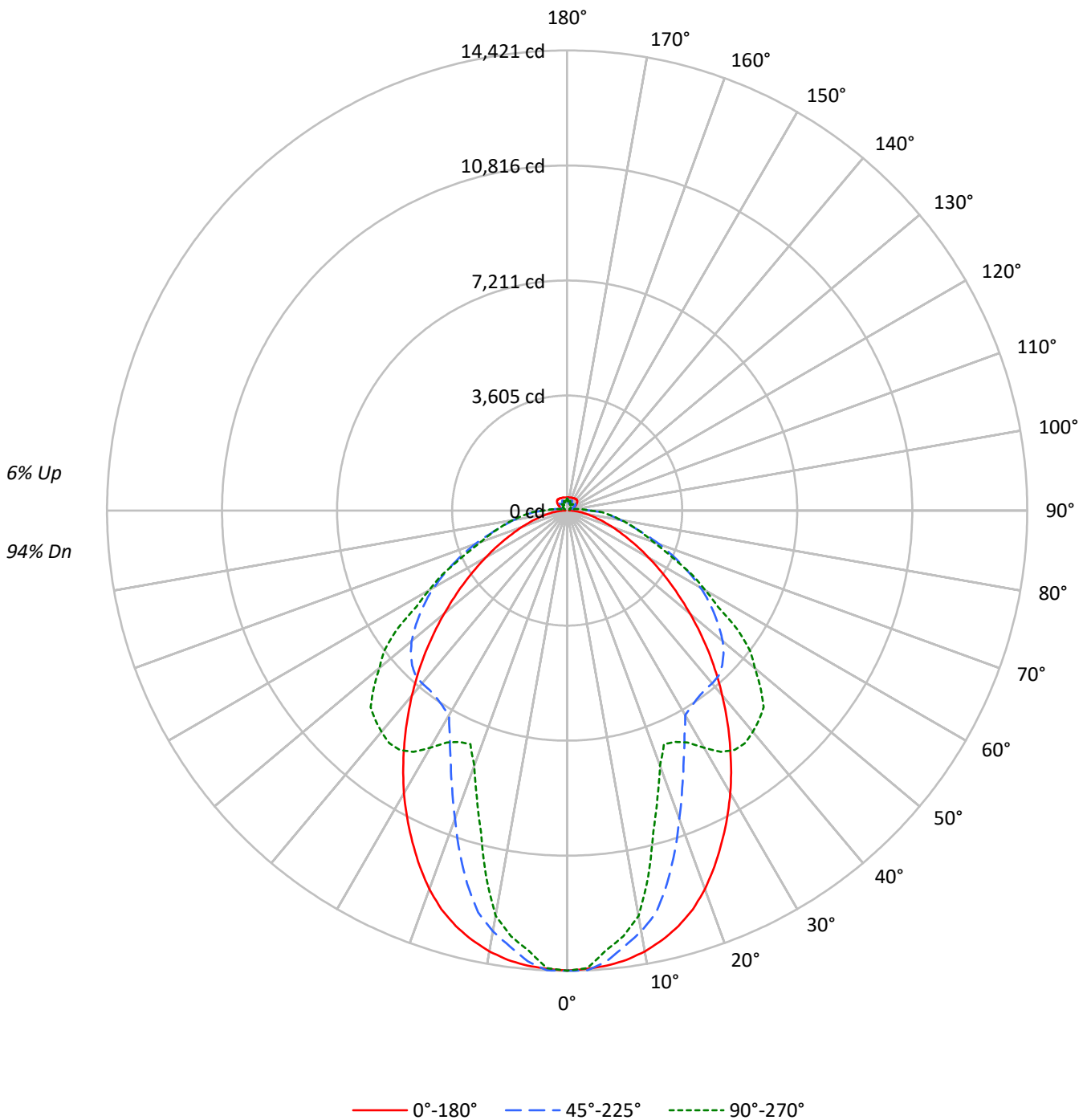
Lumens per Lamp: N/A
Luminaire Lumens: 32831.0 lumens
Efficiency: N/A
Efficacy: 126.0 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.71 / 1.1
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Direct

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 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	50	30	10	0	
RCR																						
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94				
1	107	102	98	94	104	99	95	91	94	91	88	89	86	84	85	82	80	78				
2	97	89	82	76	94	87	80	75	82	77	72	78	74	70	74	71	68	65				
3	89	78	70	64	86	76	69	63	73	66	61	69	64	59	66	61	58	55				
4	82	70	61	54	79	68	60	54	65	58	52	62	56	51	59	54	50	47				
5	75	62	54	47	73	61	53	46	58	51	45	56	49	44	53	48	43	41				
6	70	56	48	41	67	55	47	41	53	45	40	51	44	39	49	43	38	36				
7	65	51	43	37	63	50	42	36	48	41	36	46	40	35	44	39	34	32				
8	60	47	39	33	58	46	38	32	44	37	32	43	36	31	41	35	31	29				
9	56	43	35	30	55	42	35	29	41	34	29	39	33	29	38	32	28	26				
10	53	40	32	27	51	39	32	27	38	31	26	37	30	26	35	30	26	24				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20693	20693	20693
5°	20531	20224	19758
10°	20257	19125	18431
15°	19754	17441	15039
20°	18918	15064	12488
25°	17731	12980	12039
30°	16451	11502	13363
35°	15024	11594	14881
40°	13580	12073	15514
45°	12107	12497	15913
50°	10565	12485	15146
55°	9119	12094	14108
60°	7759	11540	12042
65°	6541	10692	10515
70°	5544	9768	9255
75°	4627	8744	8837
80°	3916	8424	8766
85°	3236	8734	9058



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1328.2	4.0
10°-20°	3358.1	10.2
20°-30°	4285.3	13.1
30°-40°	5096.8	15.5
40°-50°	5420.4	16.5
50°-60°	4749.7	14.5
60°-70°	3423.5	10.4
70°-80°	2155.7	6.6
80°-90°	1203.8	3.7
90°-100°	461.4	1.4
100°-110°	231.7	0.7
110°-120°	218.3	0.7
120°-130°	236.3	0.7
130°-140°	228.3	0.7
140°-150°	177.2	0.5
150°-160°	136.6	0.4
160°-170°	88.5	0.3
170°-180°	31.2	0.1
0°-30°	8971.5	27.3
0°-40°	14068.3	42.9
0°-60°	24238.4	73.8
0°-90°	31021.4	94.5
90°-120°	911.4	2.8
90°-150°	1553.3	4.7
90°-180°	1810.0	5.5
0°-180°	32831.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	14419	14419	14419	14419	14419	
5°	14316	14381	14180	13894	13848	###
15°	13481	13072	12101	10901	10423	3785
25°	11469	10603	8638	7834	7996	5270
35°	8888	7772	7152	8614	9154	5553
45°	6276	5508	6868	8319	8712	4838
55°	3916	3991	5630	6421	6533	3519
65°	2141	2763	3928	4133	3834	2152
75°	997	1834	2256	2331	2255	1079
85°	314	1067	1230	1299	1249	321
90°	83	625	712	754	723	56
95°	64	393	452	496	474	56
105°	127	333	180	156	137	137
115°	240	417	197	122	85	239
125°	358	330	282	173	123	319
135°	444	367	295	282	188	340
145°	450	352	244	220	224	282
155°	432	266	343	229	187	201
165°	423	298	256	323	318	120
175°	412	393	346	309	315	39
180°	383	383	383	383	383	



TEST NUMBER: P236482

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6
2.5°	14370.6	14426.6	14461.3	14506.7	14485.3	14426.6	14432.0	14462.7	14413.3	14421.3	14371.9
5°	14315.9	14373.3	14402.6	14442.7	14417.3	14343.9	14319.9	14310.6	14213.2	14179.8	14061.1
7.5°	14203.9	14259.9	14282.6	14310.6	14238.5	14103.8	14017.1	13946.4	13821.0	13770.3	13662.2
10°	14027.8	14077.1	14085.1	14062.4	13934.4	13763.6	13654.2	13584.8	13454.1	13390.1	13258.0
12.5°	13782.3	13821.0	13794.3	13740.9	13583.5	13402.1	13294.0	13167.3	13004.5	12899.1	12693.7
15°	13480.8	13496.8	13428.8	13359.4	13180.6	12963.2	12803.1	12607.0	12354.8	12101.4	11775.8
17.5°	13099.2	13099.2	13007.2	12920.5	12693.7	12404.2	12170.7	11867.9	11531.7	11211.5	10791.3
20°	12621.6	12621.6	12514.9	12408.2	12104.0	11758.5	11462.3	11091.5	10671.2	10277.7	9846.8
22.5°	12073.3	12090.7	11978.6	11817.2	11467.7	11083.5	10759.3	10272.3	9806.8	9418.5	9006.3
25°	11469.0	11481.0	11366.3	11184.8	10814.0	10391.1	9972.2	9459.9	9002.3	8638.1	8267.2
27.5°	10860.7	10872.7	10747.3	10532.5	10132.3	9665.3	9210.4	8699.5	8297.9	7959.1	7624.2
30°	10225.7	10228.3	10073.6	9862.8	9434.5	8915.6	8482.0	8035.1	7657.6	7402.8	7469.5
32.5°	9562.6	9568.0	9423.9	9181.1	8723.5	8201.9	7824.3	7425.4	7139.9	7265.3	7417.4
35°	8887.6	8884.9	8755.5	8491.4	8005.8	7537.5	7232.0	6871.8	6966.5	7152.0	7409.4
37.5°	8221.9	8215.2	8085.8	7804.3	7326.7	6937.2	6646.3	6615.7	6794.4	7081.2	7496.1
40°	7565.5	7565.5	7416.1	7119.9	6691.7	6392.9	6211.4	6394.2	6635.7	7067.9	7542.8
42.5°	6917.2	6905.2	6753.1	6456.9	6114.0	5855.2	5940.6	6163.4	6523.6	7026.6	7456.1
45°	6275.5	6252.8	6104.7	5837.9	5587.1	5428.3	5649.8	5950.0	6396.9	6867.8	7281.4
47.5°	5637.8	5621.8	5481.7	5266.9	5082.8	5110.8	5343.0	5743.2	6195.4	6646.3	7039.9
50°	5025.4	5014.8	4889.4	4746.6	4614.6	4764.0	5068.1	5512.4	5936.6	6360.8	6713.0
52.5°	4453.1	4441.1	4338.4	4265.0	4235.7	4415.8	4790.6	5220.2	5623.1	6007.3	6347.5
55°	3915.5	3902.2	3831.5	3810.1	3887.5	4094.3	4505.2	4905.4	5273.6	5629.8	5929.9
57.5°	3413.9	3405.9	3369.9	3380.5	3531.3	3790.1	4190.3	4569.2	4902.7	5240.2	5492.4
60°	2947.0	2948.3	2949.6	3012.3	3197.8	3491.3	3871.5	4215.7	4531.8	4824.0	5012.1
62.5°	2541.4	2528.1	2561.4	2690.8	2893.6	3196.4	3546.0	3864.8	4137.0	4375.8	4514.5
65°	2141.2	2162.5	2206.6	2389.3	2617.4	2908.3	3236.5	3508.6	3736.7	3927.5	4034.2
67.5°	1799.7	1827.7	1887.7	2115.8	2368.0	2644.1	2931.0	3152.4	3341.8	3483.3	3568.6
70°	1510.2	1534.2	1620.9	1877.0	2143.9	2396.0	2628.1	2810.9	2960.3	3065.7	3115.1
72.5°	1240.7	1278.0	1412.8	1675.6	1950.4	2154.5	2340.0	2492.0	2605.4	2633.5	2677.5
75°	996.6	1048.6	1226.0	1507.5	1746.3	1921.1	2077.1	2177.2	2231.9	2255.9	2306.6
77.5°	793.8	847.1	1067.3	1356.8	1556.9	1704.9	1817.0	1874.4	1926.4	1955.7	2002.4
80°	613.7	673.7	937.9	1190.0	1376.8	1490.2	1572.9	1623.6	1659.6	1686.3	1731.6
82.5°	461.6	541.6	811.1	1039.2	1195.3	1306.1	1360.8	1398.1	1420.8	1451.5	1488.8
85°	313.5	434.9	676.4	881.8	1021.9	1111.3	1150.0	1176.7	1200.7	1230.0	1262.0
87.5°	193.4	333.5	555.0	720.4	833.8	907.2	935.2	952.5	981.9	1015.2	1051.2
90°	82.7	240.1	405.6	532.3	607.0	643.0	671.0	673.7	699.1	712.4	745.7
92.5°	49.4	164.1	293.5	406.9	481.6	521.6	532.3	539.0	551.0	564.3	580.3
95°	64.0	130.7	228.1	310.8	374.9	410.9	422.9	434.9	441.6	452.3	466.9
97.5°	73.4	137.4	226.8	276.2	313.5	338.9	342.9	345.5	344.2	346.9	356.2
100°	88.0	154.8	258.8	290.8	304.2	296.2	288.2	281.5	273.5	268.1	269.5
102.5°	109.4	169.4	280.2	332.2	321.5	300.2	264.1	244.1	224.1	212.1	208.1
105°	126.7	177.4	294.8	374.9	354.9	310.8	274.8	237.5	205.4	180.1	166.8
107.5°	146.7	182.8	293.5	384.2	413.6	340.2	278.8	245.5	209.4	174.8	153.4
110°	185.4	197.4	290.8	376.2	426.9	382.9	312.2	246.8	206.8	184.1	157.4



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CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	213.5	201.4	297.5	361.5	424.2	413.6	352.2	284.2	217.5	172.1	161.4
115°	240.1	209.4	304.2	342.9	408.2	425.6	389.5	322.8	254.8	197.4	152.1
117.5°	270.8	222.8	313.5	326.8	381.5	420.2	389.5	372.2	292.2	232.1	185.4
120°	300.2	238.8	318.8	342.9	364.2	398.9	406.9	352.2	344.2	265.5	217.5
122.5°	329.5	256.1	321.5	373.5	342.9	366.9	393.6	384.2	314.8	313.5	246.8
125°	357.5	274.8	320.2	389.5	325.5	334.9	366.9	378.9	357.5	281.5	284.2
127.5°	385.5	293.5	318.8	392.2	342.9	332.2	334.9	360.2	357.5	333.5	258.8
130°	410.9	312.2	304.2	390.9	381.5	308.2	305.5	328.2	341.5	336.2	320.2
132.5°	428.2	332.2	294.8	384.2	402.9	305.5	310.8	294.8	314.8	321.5	317.5
135°	444.2	350.9	288.2	372.2	400.2	333.5	281.5	289.5	281.5	294.8	301.5
137.5°	452.3	370.9	285.5	357.5	392.2	373.5	277.5	289.5	252.1	264.1	274.8
140°	454.9	384.2	285.5	336.2	380.2	381.5	312.2	257.5	280.2	233.5	246.8
142.5°	453.6	393.6	288.2	302.8	361.5	373.5	353.5	268.1	250.8	270.8	217.5
145°	449.6	398.9	289.5	272.2	340.2	362.9	362.9	316.2	248.1	244.1	264.1
147.5°	445.6	401.6	297.5	258.8	318.8	348.2	357.5	349.5	293.5	237.5	230.8
150°	442.9	404.2	318.8	260.1	288.2	330.8	348.2	350.9	338.9	286.8	234.8
152.5°	436.2	406.9	340.2	268.1	256.1	312.2	334.9	344.2	346.9	334.9	297.5
155°	432.2	409.6	356.2	276.2	249.5	282.8	316.2	332.2	340.2	342.9	337.5
157.5°	432.2	413.6	365.5	298.8	256.1	242.8	296.2	313.5	326.8	334.9	338.9
160°	429.6	416.2	372.2	326.8	264.1	244.1	246.8	293.5	308.2	320.2	328.2
162.5°	425.6	417.6	378.9	349.5	292.2	252.1	237.5	241.5	285.5	300.2	310.8
165°	422.9	417.6	390.9	362.9	325.5	270.8	249.5	234.8	228.1	256.1	288.2
167.5°	420.2	416.2	398.9	372.2	354.9	314.8	272.2	248.1	236.1	224.1	220.1
170°	416.2	413.6	405.6	388.2	365.5	352.2	324.2	290.8	257.5	238.8	228.1
172.5°	413.6	412.2	408.2	400.2	385.5	365.5	358.9	346.9	320.2	298.8	273.5
175°	412.2	410.9	409.6	406.9	398.9	386.9	380.2	366.9	353.5	345.5	337.5
177.5°	410.9	409.6	409.6	408.2	405.6	397.6	396.2	388.2	380.2	372.2	362.9
180°	382.9	382.9	382.9	382.9	382.9	382.9	382.9	382.9	382.9	382.9	382.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6	14418.6
2.5°	14350.6	14379.9	14361.3	14322.6	14341.3	14382.6	14373.3	14354.6
5°	13993.1	13983.7	13919.7	13869.0	13861.0	13879.7	13870.3	13847.7
7.5°	13608.9	13603.5	13563.5	13487.5	13494.1	13492.8	13475.4	13454.1
10°	13180.6	13140.6	13069.9	13000.5	12965.8	12957.8	12925.8	12895.1
12.5°	12553.6	12408.2	12232.1	12050.7	11970.6	11850.6	11785.2	11741.2
15°	11527.7	11255.6	11018.1	10784.6	10665.9	10543.2	10468.5	10423.1
17.5°	10480.5	10229.7	9942.8	9732.0	9626.7	9522.6	9459.9	9413.2
20°	9549.3	9311.8	9066.3	8870.2	8751.5	8632.8	8560.7	8507.4
22.5°	8727.5	8492.7	8232.6	8056.5	7975.1	7945.7	7936.4	7923.0
25°	7989.8	7819.0	7807.0	7860.3	7929.7	7975.1	7996.4	7996.4
27.5°	7634.9	7737.6	7831.0	7939.1	8061.8	8149.8	8191.2	8193.9
30°	7610.9	7776.3	7939.1	8139.2	8343.3	8499.4	8563.4	8580.7
32.5°	7637.6	7928.4	8212.5	8487.4	8728.8	8890.2	8957.0	8963.6
35°	7788.3	8167.2	8488.7	8739.5	8944.9	9073.0	9139.7	9154.4
37.5°	7939.1	8297.9	8563.4	8812.9	9002.3	9111.7	9161.1	9174.4
40°	7944.4	8281.9	8543.4	8770.2	8934.3	9009.0	9043.7	9053.0
42.5°	7845.7	8173.9	8420.7	8610.1	8760.8	8852.9	8890.2	8900.9
45°	7661.6	7965.7	8219.2	8418.0	8574.1	8660.8	8703.5	8711.5
47.5°	7373.4	7692.3	7953.7	8136.5	8233.9	8269.9	8228.5	8215.2
50°	7033.2	7324.0	7530.8	7660.2	7700.3	7696.3	7676.2	7681.6
52.5°	6634.3	6869.1	7019.9	7107.9	7148.0	7212.0	7240.0	7234.7
55°	6178.1	6344.8	6404.9	6436.9	6462.2	6522.3	6542.3	6532.9
57.5°	5668.5	5767.2	5787.2	5799.2	5768.5	5716.5	5657.8	5603.1
60°	5140.2	5197.5	5212.2	5202.9	5165.5	5101.5	5028.1	5002.8
62.5°	4606.5	4655.9	4671.9	4641.2	4585.2	4533.2	4478.5	4478.5
65°	4099.6	4159.6	4157.0	4108.9	3995.5	3918.2	3847.5	3834.1
67.5°	3622.0	3634.0	3590.0	3521.9	3425.9	3372.5	3317.8	3304.5
70°	3112.4	3115.1	3077.7	3020.3	2955.0	2922.9	2896.3	2878.9
72.5°	2686.8	2690.8	2666.8	2630.8	2606.8	2577.4	2560.1	2565.4
75°	2326.6	2344.0	2337.3	2325.3	2305.3	2281.3	2265.3	2254.6
77.5°	2023.8	2045.1	2049.1	2046.5	2031.8	2011.8	1995.8	1997.1
80°	1755.6	1778.3	1782.3	1782.3	1767.6	1747.6	1723.6	1729.0
82.5°	1502.2	1524.8	1535.5	1524.8	1515.5	1495.5	1479.5	1479.5
85°	1272.7	1292.7	1302.1	1295.4	1280.7	1263.4	1248.7	1248.7
87.5°	1072.6	1095.3	1112.6	1112.6	1105.9	1092.6	1084.6	1080.6
90°	723.1	740.4	755.1	752.4	735.1	735.1	713.7	723.1
92.5°	587.0	600.3	605.7	601.7	593.7	581.7	569.6	569.6
95°	477.6	488.3	496.3	496.3	490.9	482.9	477.6	473.6
97.5°	361.5	370.9	380.2	380.2	377.5	368.2	362.9	358.9
100°	270.8	276.2	280.2	280.2	277.5	269.5	265.5	262.8
102.5°	206.8	206.8	208.1	208.1	202.8	196.1	192.1	189.4
105°	160.1	158.8	157.4	154.8	149.4	145.4	141.4	137.4
107.5°	137.4	128.1	122.7	118.7	112.1	109.4	104.1	100.1
110°	136.1	125.4	114.7	104.1	94.7	89.4	82.7	78.7



TEST NUMBER: P236482

CATALOG NUMBER: SKB4-LD5-30-N-UNV-L840-CD4-U all blades tilted out 20 degrees

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	149.4	132.1	114.7	101.4	96.1	90.7	85.4	81.4
115°	133.4	130.7	126.7	117.4	109.4	100.1	90.7	85.4
117.5°	146.7	121.4	109.4	104.1	104.1	101.4	97.4	93.4
120°	180.1	150.8	125.4	108.1	98.7	90.7	82.7	78.7
122.5°	209.4	177.4	153.4	138.7	125.4	113.4	102.7	97.4
125°	237.5	204.1	181.4	164.1	150.8	140.1	129.4	122.7
127.5°	234.8	262.8	206.8	189.4	176.1	164.1	154.8	148.1
130°	252.1	217.5	221.5	250.8	206.8	190.8	180.1	174.8
132.5°	308.2	277.5	225.5	205.4	197.4	202.8	202.8	204.1
135°	302.8	297.5	292.2	272.2	229.5	209.4	194.8	188.1
137.5°	281.5	288.2	289.5	286.8	284.2	280.2	272.2	264.1
140°	253.5	262.8	269.5	274.8	277.5	273.5	268.1	264.1
142.5°	226.8	236.1	242.8	249.5	253.5	254.8	252.1	249.5
145°	232.1	206.8	217.5	222.8	226.8	226.8	228.1	224.1
147.5°	253.5	254.8	214.8	190.8	200.1	201.4	198.8	197.4
150°	220.1	232.1	250.8	254.8	245.5	213.5	196.1	188.1
152.5°	242.8	218.8	214.8	217.5	225.5	226.8	228.1	225.5
155°	314.8	277.5	241.5	216.1	204.1	198.8	190.8	186.8
157.5°	337.5	329.5	317.5	296.2	272.2	253.5	234.8	226.8
160°	333.5	338.9	338.9	336.2	329.5	318.8	309.5	302.8
162.5°	320.2	330.8	334.9	337.5	337.5	333.5	325.5	320.2
165°	297.5	310.8	318.8	326.8	332.2	330.8	324.2	317.5
167.5°	230.8	266.8	290.8	305.5	316.2	320.2	316.2	310.8
170°	222.8	218.8	218.8	225.5	232.1	241.5	242.8	245.5
172.5°	256.1	238.8	234.8	234.8	237.5	244.1	246.8	241.5
175°	329.5	317.5	310.8	306.8	306.8	318.8	322.8	314.8
177.5°	353.5	345.5	337.5	333.5	341.5	348.2	356.2	337.5
180°	382.9	382.9	382.9	382.9	382.9	382.9	382.9	382.9

(END OF REPORT)