

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: P236581

Luminaire Tested: **SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236581
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24080)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH WIDE DISTRIBUTION LENS, OUTER 2 BLADES VERTICAL INNER 2
BLADES HORIZONTAL
Light Source: (952) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

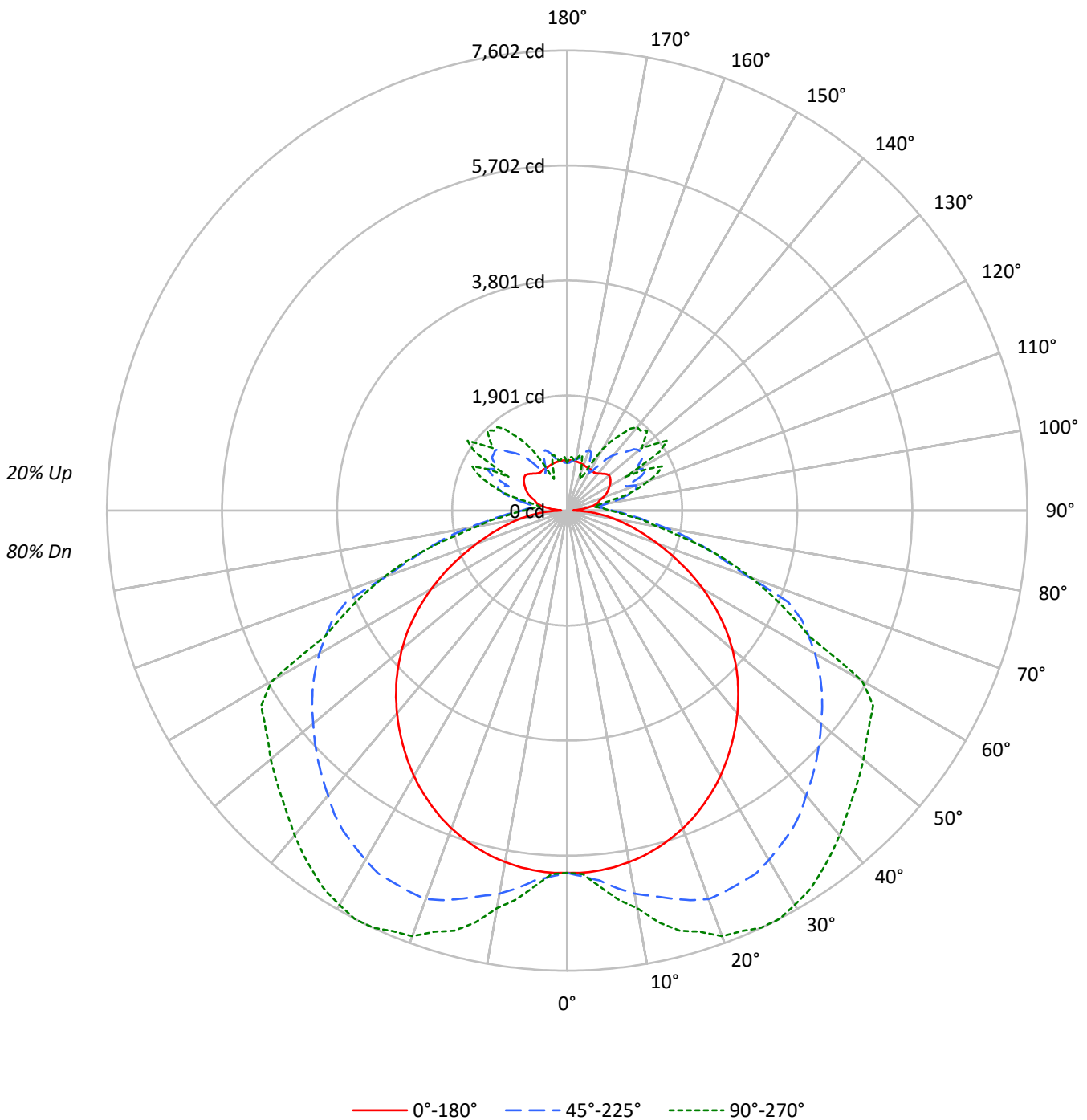
Lumens per Lamp: N/A
Luminaire Lumens: 31644.0 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.73 / 1.68
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 333.5
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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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80																				
1	103	98	93	89	98	93	89	85	85	82	79	78	75	73	71	69	67	64																				
2	93	84	77	71	88	80	74	68	73	68	64	67	63	59	61	58	55	52																				
3	84	73	65	58	80	70	62	56	64	58	52	59	53	49	53	49	46	42																				
4	76	64	55	48	73	61	53	47	56	49	44	52	46	41	47	42	38	36																				
5	70	57	48	41	66	54	46	40	50	43	37	46	40	35	42	37	33	30																				
6	64	51	42	35	61	49	40	34	45	38	32	41	35	30	38	33	29	26																				
7	59	46	37	31	56	44	36	30	41	33	28	37	31	27	34	29	25	23																				
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	20																				
9	51	38	30	24	49	36	29	23	34	27	22	31	25	21	29	24	20	18																				
10	48	35	27	21	46	33	26	21	31	24	20	29	23	19	27	22	18	16																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8586	8586	8586
5°	8564	8747	8895
10°	8516	9175	9531
15°	8453	9560	10363
20°	8373	10012	10982
25°	8268	10190	11441
30°	8147	10358	11713
35°	7997	10466	11870
40°	7849	10495	11999
45°	7693	10597	12199
50°	7490	10754	12601
55°	7213	11025	13180
60°	6827	11317	13543
65°	6338	11652	11165
70°	5821	10064	10370
75°	5391	9135	9133
80°	5059	8275	7598
85°	4648	7854	7372



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	592.4	1.9
10°-20°	1860.7	5.9
20°-30°	3067.1	9.7
30°-40°	3914.9	12.4
40°-50°	4327.3	13.7
50°-60°	4375.5	13.8
60°-70°	3629.1	11.5
70°-80°	2307.0	7.3
80°-90°	1110.7	3.5
90°-100°	583.5	1.8
100°-110°	963.5	3.0
110°-120°	1217.9	3.8
120°-130°	1240.1	3.9
130°-140°	1040.5	3.3
140°-150°	682.9	2.2
150°-160°	395.6	1.3
160°-170°	256.6	0.8
170°-180°	78.8	0.2
0°-30°	5520.2	17.4
0°-40°	9435.1	29.8
0°-60°	18137.8	57.3
0°-90°	25184.6	79.6
90°-120°	2764.8	8.7
90°-150°	5728.3	18.1
90°-180°	6459.0	20.4
0°-180°	31644.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5983	5983	5983	5983	5983	
5°	5971	6055	6133	6215	6234	568
15°	5769	6132	6633	7043	7182	1628
25°	5348	5938	6781	7374	7600	2465
35°	4731	5451	6456	7140	7302	2960
45°	3988	4720	5824	6517	6678	3074
55°	3097	3940	5132	5854	6103	2764
65°	2075	3114	4280	4016	4071	2059
75°	1161	2236	2357	2373	2330	1237
85°	450	997	1106	1035	1016	436
90°	100	637	743	715	703	78
95°	219	468	543	548	545	215
105°	534	839	1073	1062	1025	558
115°	734	1065	1355	1554	1730	722
125°	874	1014	1522	1733	2009	777
135°	857	826	1375	1740	1869	664
145°	768	976	916	1331	1519	489
155°	784	915	874	722	657	364
165°	815	864	955	1030	955	230
175°	831	833	816	763	888	79
180°	789	789	789	789	789	



TEST NUMBER: P236581

CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8
2.5°	5988.0	5985.4	6003.3	6013.6	6029.0	6044.4	6044.4	6041.8	6041.8	6050.8	6043.1
5°	5971.3	5975.1	6004.6	6021.3	6047.0	6062.4	6064.9	6077.8	6093.2	6132.9	6154.7
7.5°	5940.5	5950.7	5985.4	6002.1	6038.0	6080.3	6127.8	6176.6	6234.3	6289.5	6315.1
10°	5896.9	5913.5	5948.2	5979.0	6048.3	6143.2	6215.1	6272.8	6342.1	6424.2	6479.4
12.5°	5841.7	5863.5	5903.3	5959.7	6076.5	6179.1	6265.1	6354.9	6449.8	6521.7	6576.9
15°	5768.6	5794.2	5841.7	5935.3	6076.5	6188.1	6315.1	6402.4	6499.9	6633.3	6748.8
17.5°	5683.9	5709.5	5773.7	5899.4	6048.3	6190.7	6310.0	6426.8	6597.4	6748.8	6877.1
20°	5586.4	5618.4	5698.0	5837.8	6004.6	6154.7	6297.2	6476.8	6661.5	6830.9	6937.4
22.5°	5476.0	5510.7	5601.8	5757.0	5940.5	6094.4	6293.3	6481.9	6684.6	6814.2	6951.5
25°	5347.7	5384.9	5488.8	5654.4	5844.3	6031.6	6258.7	6466.5	6611.5	6780.9	6970.8
27.5°	5210.4	5243.8	5355.4	5533.8	5733.9	5955.9	6198.4	6361.3	6544.8	6757.8	6920.7
30°	5064.2	5095.0	5214.3	5396.5	5610.7	5859.6	6079.0	6240.7	6480.6	6666.7	6838.6
32.5°	4899.9	4942.3	5056.5	5245.1	5468.3	5727.5	5918.7	6138.1	6363.9	6557.6	6771.9
35°	4730.6	4774.2	4888.4	5083.4	5329.8	5572.2	5763.4	5996.9	6225.3	6456.3	6657.7
37.5°	4554.8	4599.7	4711.3	4916.6	5160.4	5386.2	5614.6	5832.7	6090.6	6317.7	6494.8
40°	4372.6	4416.2	4530.4	4743.4	4989.7	5202.7	5443.9	5676.2	5944.3	6144.5	6343.4
42.5°	4184.0	4226.3	4345.7	4568.9	4796.0	5025.7	5266.9	5522.2	5772.4	5988.0	6181.7
45°	3987.7	4031.3	4157.1	4389.3	4597.1	4843.5	5098.8	5358.0	5606.9	5823.7	6011.0
47.5°	3779.8	3827.3	3958.2	4189.1	4394.4	4656.2	4923.0	5183.5	5438.8	5654.4	5850.7
50°	3563.0	3618.2	3755.5	3983.8	4196.8	4470.1	4742.1	5007.7	5269.4	5478.6	5687.7
52.5°	3338.5	3402.6	3561.7	3777.3	3998.0	4280.2	4561.2	4831.9	5096.2	5311.8	5517.1
55°	3097.3	3174.2	3360.3	3557.9	3797.8	4082.6	4371.3	4651.0	4915.3	5132.2	5336.2
57.5°	2848.4	2940.7	3129.3	3335.9	3589.9	3885.0	4178.9	4463.7	4726.7	4935.9	5145.0
60°	2593.0	2699.5	2890.7	3112.7	3380.8	3682.3	3983.8	4262.3	4520.2	4730.6	4923.0
62.5°	2333.9	2453.2	2662.3	2893.3	3173.0	3474.5	3779.8	4059.5	4300.8	4498.3	4708.8
65°	2074.7	2208.1	2441.6	2675.1	2961.3	3266.6	3561.7	3828.6	4060.8	4280.2	4467.5
67.5°	1823.2	1979.7	2217.1	2463.4	2750.8	3052.4	3334.6	3592.5	3835.0	3951.8	3722.1
70°	1585.8	1762.9	1992.6	2254.3	2541.7	2826.5	3098.5	3357.7	3400.1	3158.8	3096.0
72.5°	1365.2	1539.6	1782.1	2052.9	2324.9	2593.0	2866.3	2894.5	2717.5	2713.6	2708.5
75°	1161.2	1335.6	1584.6	1851.4	2101.6	2369.8	2418.5	2341.5	2350.5	2356.9	2346.7
77.5°	972.5	1147.0	1395.9	1642.3	1887.4	1983.6	1969.5	2010.5	2019.5	2016.9	1996.4
80°	792.9	963.6	1198.4	1431.9	1561.5	1596.1	1664.1	1701.3	1693.6	1656.4	1593.5
82.5°	619.7	778.8	995.6	1150.9	1224.0	1313.8	1367.7	1371.6	1353.6	1329.2	1304.9
85°	450.3	586.3	748.0	866.1	962.3	1031.6	1095.7	1132.9	1131.6	1106.0	1072.6
87.5°	273.3	372.1	510.7	645.4	754.4	834.0	890.4	921.2	922.5	908.4	886.6
90°	100.1	197.6	352.8	488.8	599.2	674.9	730.1	753.1	751.9	742.9	722.4
92.5°	98.8	166.8	296.4	411.9	500.4	576.1	631.3	662.0	667.2	659.5	642.8
95°	219.4	247.6	323.3	391.3	446.5	488.8	520.9	533.7	536.3	542.7	540.2
97.5°	316.9	347.7	411.9	487.6	549.1	586.3	579.9	562.0	545.3	522.2	501.7
100°	411.9	451.6	505.5	585.1	660.8	713.4	745.4	764.7	740.3	676.2	615.9
102.5°	496.5	549.1	608.2	680.0	754.4	818.6	871.2	909.7	921.2	914.8	900.7
105°	533.7	599.2	650.5	742.9	819.9	858.4	921.2	1011.0	1062.4	1072.6	1076.5
107.5°	562.0	642.8	695.4	794.2	889.1	955.9	944.3	1004.6	1131.6	1194.5	1227.9
110°	628.7	710.8	749.3	848.1	958.4	999.5	1094.4	1048.2	1022.6	1218.9	1319.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	689.0	751.9	785.2	869.9	991.8	1063.6	1123.9	1239.4	1188.1	1043.1	1157.3
115°	733.9	791.6	810.9	872.5	1002.1	1127.8	1161.2	1238.1	1371.6	1354.9	1195.8
117.5°	772.4	832.7	850.7	862.2	1000.8	1141.9	1231.7	1243.3	1326.7	1489.6	1532.0
120°	808.3	869.9	903.3	845.5	1005.9	1141.9	1274.1	1342.1	1324.1	1375.4	1551.2
122.5°	843.0	900.7	977.7	840.4	976.4	1125.2	1277.9	1378.0	1438.3	1392.1	1406.2
125°	873.8	918.7	1025.1	876.3	917.4	1111.1	1247.1	1407.5	1469.1	1521.7	1480.6
127.5°	894.3	925.1	1038.0	934.1	860.9	1062.4	1212.5	1361.3	1493.5	1530.7	1591.0
130°	904.5	928.9	1034.1	991.8	818.6	973.8	1172.7	1290.7	1439.6	1549.9	1583.3
132.5°	887.9	908.4	1007.2	1041.8	830.1	860.9	1082.9	1234.3	1335.6	1502.4	1606.4
135°	857.1	878.9	971.3	1057.2	877.6	773.7	953.3	1150.9	1266.4	1375.4	1534.5
137.5°	827.6	848.1	930.2	1039.3	940.5	754.4	826.3	1034.1	1189.4	1289.5	1385.7
140°	798.1	819.9	885.3	999.5	989.2	800.6	745.4	893.0	1071.3	1200.9	1288.2
142.5°	778.8	800.6	848.1	949.5	1014.9	890.4	736.5	769.8	919.9	1079.0	1191.9
145°	768.5	787.8	819.9	903.3	995.6	955.9	787.8	713.4	783.9	916.1	1048.2
147.5°	776.2	787.8	805.7	858.4	962.3	1003.3	896.8	757.0	714.7	776.2	878.9
150°	782.7	792.9	809.6	836.5	928.9	994.4	995.6	858.4	755.7	714.7	751.9
152.5°	778.8	794.2	822.4	844.2	905.8	982.8	1026.4	981.5	857.1	766.0	721.1
155°	783.9	795.5	822.4	843.0	878.9	950.7	1009.8	1034.1	995.6	873.8	798.1
157.5°	791.6	801.9	822.4	840.4	862.2	908.4	975.1	1022.6	1050.8	1036.7	934.1
160°	799.3	808.3	826.3	843.0	855.8	882.7	931.5	994.4	1035.4	1062.4	1064.9
162.5°	807.0	813.4	831.4	846.8	858.4	872.5	895.6	939.2	986.7	1017.5	1047.0
165°	814.7	819.9	834.0	848.1	860.9	867.3	877.6	894.3	922.5	954.6	979.0
167.5°	819.9	822.4	834.0	846.8	857.1	863.5	867.3	873.8	877.6	884.0	894.3
170°	823.7	826.3	834.0	843.0	849.4	855.8	857.1	859.6	860.9	855.8	845.5
172.5°	827.6	828.8	832.7	837.8	841.7	844.2	845.5	843.0	843.0	837.8	826.3
175°	831.4	831.4	834.0	832.7	832.7	832.7	830.1	826.3	821.1	816.0	804.5
177.5°	831.4	831.4	832.7	831.4	828.8	825.0	819.9	810.9	803.2	790.4	780.1
180°	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8	5982.8
2.5°	6035.4	6020.0	6012.3	6025.2	6049.5	6058.5	6041.8	6011.0
5°	6181.7	6190.7	6198.4	6231.7	6262.5	6276.6	6260.0	6234.3
7.5°	6351.1	6370.3	6394.7	6443.4	6493.5	6511.4	6497.3	6483.2
10°	6529.4	6547.4	6571.7	6615.4	6665.4	6684.6	6678.2	6668.0
12.5°	6661.5	6729.6	6791.1	6865.6	6956.6	6978.5	6977.2	6964.3
15°	6856.6	6920.7	6997.7	7088.8	7170.9	7196.6	7197.9	7182.5
17.5°	7000.3	7064.4	7105.5	7178.6	7287.7	7317.2	7308.2	7294.1
20°	7038.8	7119.6	7222.2	7339.0	7436.5	7472.4	7482.7	7481.4
22.5°	7105.5	7215.8	7323.6	7417.3	7495.5	7523.8	7530.2	7521.2
25°	7120.9	7204.3	7315.9	7432.7	7535.3	7581.5	7602.0	7599.5
27.5°	7060.6	7181.2	7333.9	7460.9	7554.5	7594.3	7603.3	7602.0
30°	7024.6	7161.9	7299.2	7394.2	7460.9	7498.1	7514.8	7521.2
32.5°	6949.0	7056.7	7188.9	7304.4	7378.8	7414.7	7431.4	7440.4
35°	6804.0	6941.3	7085.0	7194.0	7251.7	7280.0	7286.4	7301.8
37.5°	6671.8	6814.2	6942.5	7034.9	7092.7	7128.6	7145.3	7160.7
40°	6519.1	6648.7	6786.0	6889.9	6949.0	6977.2	6991.3	7001.6
42.5°	6349.8	6498.6	6637.2	6728.3	6775.7	6805.2	6828.3	6829.6
45°	6194.5	6342.1	6469.1	6565.3	6620.5	6656.4	6679.5	6678.2
47.5°	6043.1	6181.7	6311.3	6408.8	6465.2	6505.0	6526.8	6534.5
50°	5875.0	6018.7	6149.6	6247.1	6308.7	6356.2	6380.6	6390.8
52.5°	5709.5	5850.7	5980.3	6088.0	6159.9	6203.5	6225.3	6231.7
55°	5526.1	5669.8	5795.5	5912.3	5999.5	6056.0	6094.4	6103.4
57.5°	5329.8	5470.9	5618.4	5749.3	5855.8	5932.8	5976.4	5993.1
60°	5118.1	5281.0	5450.4	5604.3	5655.6	5663.3	5626.1	5626.1
62.5°	4925.6	5046.2	5002.6	4830.6	4654.9	4598.4	4565.1	4516.3
65°	4438.0	4151.9	4005.7	4026.2	4054.4	4071.1	4076.2	4071.1
67.5°	3556.6	3533.5	3577.1	3611.8	3625.9	3650.3	3652.8	3651.5
70°	3112.7	3116.5	3164.0	3194.8	3208.9	3228.1	3228.1	3225.6
72.5°	2732.9	2743.1	2775.2	2794.5	2798.3	2802.2	2806.0	2791.9
75°	2351.8	2359.5	2367.2	2378.8	2353.1	2355.7	2336.4	2330.0
77.5°	1974.6	1960.5	1931.0	1902.7	1866.8	1874.5	1851.4	1864.3
80°	1566.6	1556.3	1540.9	1516.6	1492.2	1497.3	1492.2	1498.6
82.5°	1302.3	1310.0	1306.1	1306.1	1289.5	1294.6	1279.2	1285.6
85°	1057.2	1041.8	1036.7	1032.8	1020.0	1022.6	1009.8	1016.2
87.5°	878.9	873.8	873.8	875.0	871.2	869.9	860.9	864.8
90°	717.2	714.7	714.7	714.7	713.4	709.5	699.3	703.1
92.5°	637.7	632.5	631.3	631.3	630.0	627.4	621.0	622.3
95°	542.7	545.3	547.9	549.1	549.1	547.9	541.4	545.3
97.5°	482.4	468.3	464.5	460.6	458.0	452.9	450.3	450.3
100°	573.5	553.0	537.6	527.3	518.3	510.7	506.8	499.1
102.5°	857.1	834.0	791.6	742.9	712.1	689.0	685.1	668.5
105°	1071.3	1068.8	1063.6	1059.8	1054.7	1048.2	1044.4	1025.1
107.5°	1235.6	1247.1	1248.4	1248.4	1242.0	1243.3	1242.0	1233.0
110°	1369.0	1403.6	1426.7	1443.4	1447.3	1444.7	1446.0	1435.7



TEST NUMBER: P236581

CATALOG NUMBER: SKB4-LD5-36-W-UNV-L840-CD4-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1407.5	1502.4	1549.9	1585.8	1608.9	1619.2	1621.8	1616.6
115°	1077.8	1224.0	1484.5	1623.0	1692.3	1721.8	1732.1	1729.5
117.5°	1446.0	1242.0	1116.2	1117.5	1208.6	1322.8	1416.5	1469.1
120°	1675.7	1673.1	1620.5	1515.3	1338.2	1203.5	1140.6	1112.4
122.5°	1556.3	1733.4	1820.6	1854.0	1854.0	1839.9	1836.0	1812.9
125°	1437.0	1508.9	1653.8	1812.9	1927.1	1981.0	2002.8	2009.2
127.5°	1580.7	1520.4	1523.0	1565.3	1635.9	1692.3	1750.1	1789.8
130°	1657.7	1721.8	1675.7	1625.6	1602.5	1594.8	1597.4	1601.2
132.5°	1646.1	1691.0	1769.3	1821.9	1814.2	1787.3	1757.8	1737.2
135°	1641.0	1691.0	1724.4	1756.5	1807.8	1839.9	1859.1	1869.4
137.5°	1537.1	1647.4	1715.4	1757.8	1786.0	1792.4	1791.1	1792.4
140°	1374.1	1494.7	1615.3	1680.8	1742.4	1783.4	1795.0	1798.8
142.5°	1280.5	1344.6	1426.7	1510.1	1589.7	1656.4	1694.9	1701.3
145°	1170.1	1245.8	1307.4	1354.9	1392.1	1438.3	1490.9	1519.1
147.5°	1005.9	1113.7	1191.9	1244.5	1283.0	1313.8	1348.5	1358.7
150°	830.1	925.1	1011.0	1085.5	1135.5	1167.6	1185.5	1168.9
152.5°	719.8	764.7	828.8	884.0	919.9	955.9	922.5	904.5
155°	740.3	709.5	709.5	735.2	750.6	719.8	678.7	656.9
157.5°	859.6	795.5	740.3	707.0	673.6	595.3	572.2	567.1
160°	1031.6	932.8	871.2	812.2	718.5	668.5	639.0	630.0
162.5°	1063.6	1063.6	1047.0	1007.2	912.2	846.8	809.6	796.8
165°	1004.6	1023.9	1036.7	1022.6	1000.8	976.4	959.7	954.6
167.5°	912.2	936.6	949.5	952.0	967.4	959.7	930.2	925.1
170°	836.5	839.1	846.8	853.2	878.9	887.9	872.5	844.2
172.5°	809.6	800.6	794.2	799.3	818.6	844.2	839.1	840.4
175°	787.8	767.3	758.3	768.5	789.1	826.3	864.8	887.9
177.5°	763.4	737.7	726.2	736.5	758.3	799.3	864.8	885.3
180°	789.1	789.1	789.1	789.1	789.1	789.1	789.1	789.1

(END OF REPORT)