

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: P232583

Luminaire Tested: **4SKB1-LD5-4-N-UNV-L840-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232583
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1709-317-6)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SKB1-LD5-4-N-UNV-L840-CD1-U
Description: METALUX SKYBAR 4' WAVESTREAM STRIP
WITH NARROW LENS
Light Source: (196) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4282.0 lumens
Efficiency: N/A
Efficacy: 147.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.53 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.29')
CIE Type: Direct

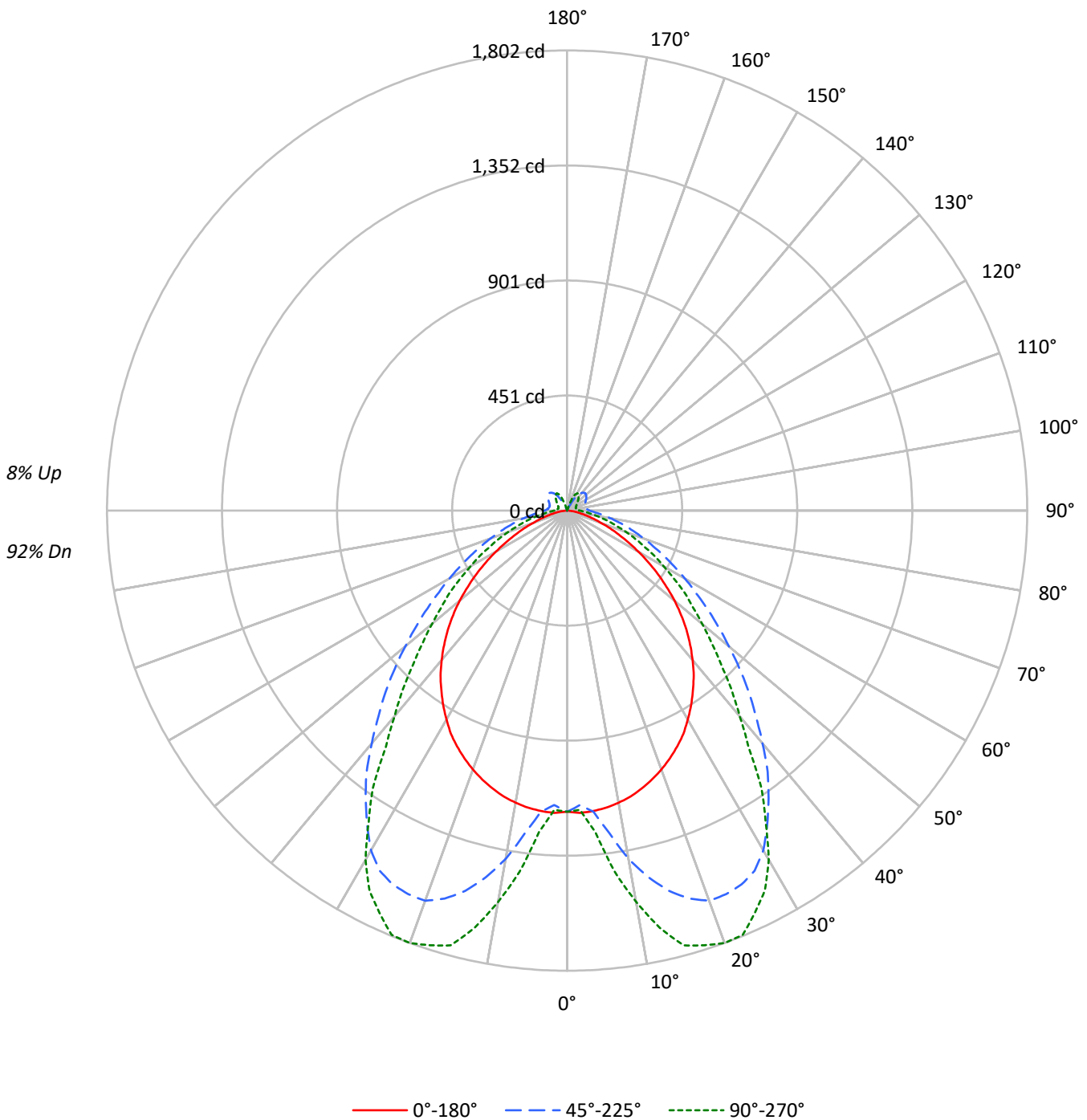
Input Watts (W): 29
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	117	117	117	117	113	113	113	113	107	107	107	100	100	100	95	95	95	92
1	107	103	98	95	104	99	96	92	94	91	88	88	86	84	84	82	80	77
2	98	90	84	78	95	88	82	77	83	78	74	78	74	71	74	71	68	65
3	90	80	72	66	87	78	70	65	74	68	63	70	65	61	66	62	58	56
4	83	71	63	56	80	69	62	56	66	59	54	63	57	52	60	55	51	48
5	76	64	55	49	74	62	54	48	59	52	47	56	51	46	54	49	45	42
6	70	58	49	43	68	56	48	42	54	47	41	51	45	40	49	44	40	37
7	65	52	44	38	63	51	43	38	49	42	37	47	41	36	45	39	35	33
8	61	48	40	34	59	47	39	34	45	38	33	43	37	32	41	36	32	30
9	57	44	36	31	55	43	36	30	41	35	30	40	34	29	38	33	29	27
10	53	41	33	28	52	40	33	28	38	32	27	37	31	27	35	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12694	12694	12694
5°	12681	11876	12385
10°	12533	13114	14110
15°	12315	13915	14966
20°	12043	14120	14486
25°	11705	13620	13369
30°	11265	12678	11727
35°	10738	11199	9600
40°	10118	9642	7466
45°	9371	8169	5990
50°	8466	6774	4834
55°	7383	5567	3957
60°	6158	4554	3120
65°	4892	3688	2419
70°	3699	2943	1844
75°	2684	2320	1334
80°	1802	1783	946
85°	977	1342	648



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	2.8
10°-20°	420.1	9.8
20°-30°	691.7	16.2
30°-40°	777.1	18.1
40°-50°	691.5	16.1
50°-60°	534.8	12.5
60°-70°	363.1	8.5
70°-80°	216.7	5.1
80°-90°	116.2	2.7
90°-100°	76.5	1.8
100°-110°	64.9	1.5
110°-120°	60.0	1.4
120°-130°	55.9	1.3
130°-140°	47.4	1.1
140°-150°	32.4	0.8
150°-160°	12.5	0.3
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-30°	1232.5	28.8
0°-40°	2009.6	46.9
0°-60°	3235.9	75.6
0°-90°	3932.0	91.8
90°-120°	201.4	4.7
90°-150°	337.1	7.9
90°-180°	350.0	8.2
0°-180°	4282.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1179	1179	1179	1179	1179	
5°	1181	1165	1183	1246	1263	112
15°	1127	1266	1542	1735	1763	318
25°	1019	1309	1616	1742	1738	469
35°	859	1179	1375	1363	1327	537
45°	660	911	1007	921	853	508
55°	434	621	668	606	562	388
65°	222	386	417	376	333	224
75°	82	232	238	205	172	90
85°	14	146	120	94	75	18
90°	1	124	87	64	49	1
95°	1	120	76	54	41	0
105°	1	109	71	46	35	0
115°	1	101	79	50	39	1
125°	1	83	91	61	47	1
135°	1	32	98	78	61	0
145°	1	3	76	88	76	0
155°	1	2	17	58	65	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3
2.5°	1185.1	1180.5	1172.4	1171.8	1166.6	1164.3	1164.9	1163.2	1161.4	1158.5	1153.9
5°	1181.1	1172.4	1159.1	1159.1	1162.0	1164.9	1171.8	1178.2	1179.9	1184.0	1183.4
7.5°	1173.6	1160.3	1147.5	1157.9	1168.4	1172.4	1180.5	1192.1	1210.0	1243.0	1275.4
10°	1161.4	1143.5	1139.4	1156.2	1170.1	1182.2	1200.7	1254.5	1304.3	1353.4	1385.3
12.5°	1147.5	1125.6	1131.3	1152.7	1185.1	1208.3	1255.7	1326.8	1366.2	1423.4	1470.3
15°	1126.7	1105.9	1116.3	1148.1	1215.8	1265.5	1292.1	1378.9	1441.9	1489.4	1542.0
17.5°	1104.2	1085.6	1100.1	1156.2	1248.2	1296.2	1339.0	1412.4	1473.2	1543.2	1592.9
20°	1079.3	1063.1	1081.6	1166.6	1263.8	1313.0	1360.4	1430.4	1510.8	1583.1	1625.9
22.5°	1050.4	1035.9	1064.2	1171.2	1269.6	1318.7	1365.0	1446.6	1529.9	1589.4	1625.9
25°	1019.1	1004.7	1043.4	1162.0	1263.8	1308.9	1358.6	1455.2	1523.5	1570.3	1615.5
27.5°	985.6	969.4	1027.8	1142.9	1240.7	1291.6	1347.7	1438.5	1492.3	1544.3	1590.0
30°	944.5	930.1	1000.6	1115.1	1208.3	1268.4	1316.4	1398.0	1449.5	1500.9	1536.2
32.5°	903.5	889.6	967.7	1075.8	1171.2	1227.9	1274.2	1337.8	1396.2	1436.2	1458.1
35°	858.9	843.3	929.5	1027.8	1129.6	1178.8	1217.5	1275.4	1324.5	1354.0	1375.4
37.5°	814.4	797.6	880.9	977.5	1074.7	1119.8	1152.2	1210.6	1248.2	1272.5	1290.4
40°	764.1	746.7	830.6	920.8	1017.4	1049.2	1082.8	1134.8	1162.6	1182.2	1190.9
42.5°	713.2	695.8	776.2	861.2	947.4	978.6	1013.3	1054.4	1081.6	1093.2	1093.2
45°	660.5	643.8	720.1	802.2	875.1	911.0	941.6	974.6	997.2	1006.4	1007.0
47.5°	605.6	591.7	664.6	739.2	807.4	838.7	862.4	894.2	913.9	916.2	915.6
50°	549.5	537.3	602.7	676.1	736.9	764.6	785.5	815.0	830.6	830.0	827.1
52.5°	490.5	483.0	543.7	610.8	665.7	690.6	709.1	735.1	747.9	747.9	745.6
55°	434.4	429.7	482.4	547.2	598.6	620.6	638.0	661.1	671.5	671.5	668.0
57.5°	377.7	377.1	426.3	484.1	533.3	552.9	571.5	591.7	601.0	601.0	595.2
60°	322.2	325.1	373.6	426.9	472.0	491.1	507.3	526.9	532.7	533.9	532.7
62.5°	270.7	278.2	324.5	373.1	418.2	434.4	448.8	467.9	472.5	474.3	471.4
65°	222.1	233.7	280.5	326.8	369.0	385.8	398.5	411.8	415.9	417.6	417.0
67.5°	182.2	194.3	241.2	286.9	325.6	338.9	351.7	363.2	363.8	366.7	364.4
70°	141.1	159.6	206.5	249.9	286.3	298.5	308.9	317.0	318.7	319.3	318.7
72.5°	108.7	130.7	175.3	218.1	251.0	262.6	270.7	277.1	277.1	277.6	275.9
75°	82.1	108.7	152.1	191.4	220.9	232.5	238.9	242.9	240.6	240.0	238.3
77.5°	59.6	90.2	131.3	168.3	196.1	204.8	210.5	211.1	207.6	207.1	203.6
80°	41.1	73.5	113.4	148.1	173.5	182.2	185.1	182.8	179.9	176.4	171.8
82.5°	27.2	59.6	98.3	131.3	155.0	162.0	164.3	160.8	156.7	151.0	143.4
85°	14.5	48.0	85.6	117.4	140.0	146.3	147.5	141.1	134.8	127.2	119.7
87.5°	6.4	39.3	76.3	108.2	127.8	132.5	133.0	126.1	118.0	109.3	100.1
90°	1.2	33.5	70.6	101.2	120.3	124.4	124.4	115.1	107.0	97.7	87.3
92.5°	0.6	31.8	68.8	98.9	118.0	122.0	121.5	111.6	101.8	91.4	81.0
95°	0.6	27.8	64.8	96.6	116.3	120.3	119.7	109.3	98.9	87.9	76.3
97.5°	0.6	23.1	60.7	92.5	113.4	117.4	117.4	107.6	97.2	85.6	73.5
100°	0.0	17.9	56.1	88.5	109.3	114.5	115.1	105.8	94.9	83.3	71.7
102.5°	0.0	12.1	52.1	85.0	106.4	111.6	112.8	105.3	93.7	82.1	70.6
105°	0.6	7.5	46.8	81.0	103.5	109.3	111.1	104.7	93.1	82.1	70.6
107.5°	0.6	5.2	41.6	76.9	101.2	107.6	109.9	104.7	93.7	82.7	71.7
110°	0.6	4.6	35.3	72.9	98.3	105.3	108.7	105.3	94.9	84.4	73.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	3.5	26.6	67.7	94.9	103.0	107.6	105.8	96.6	86.2	75.8
115°	0.6	2.9	17.9	62.5	91.4	100.6	106.4	106.4	98.3	88.5	78.7
117.5°	0.6	2.9	12.1	55.5	87.3	97.7	104.1	107.0	100.6	90.8	82.1
120°	0.6	2.3	5.8	47.4	82.1	93.7	101.8	107.0	102.4	93.7	85.0
122.5°	0.6	2.3	4.6	36.4	76.3	89.1	98.3	106.4	104.1	96.0	88.5
125°	0.6	1.7	4.0	24.3	68.8	82.7	93.7	104.7	104.7	98.3	91.4
127.5°	0.6	1.7	3.5	17.4	59.0	75.8	87.3	101.8	104.7	100.1	94.3
130°	0.6	1.7	2.9	5.2	45.1	65.9	79.8	97.2	103.5	101.2	96.0
132.5°	0.6	1.2	2.9	4.0	28.9	51.5	69.4	89.7	100.1	101.2	97.7
135°	0.6	1.2	2.3	3.5	20.8	31.8	55.5	80.4	93.7	97.7	97.7
137.5°	0.6	1.2	2.3	2.9	9.3	23.7	34.7	69.4	85.6	93.1	94.9
140°	0.6	1.2	1.7	2.3	3.5	12.7	24.9	54.9	75.8	86.2	90.8
142.5°	0.6	1.2	1.7	2.3	2.9	2.9	15.0	31.8	63.6	76.9	84.4
145°	0.6	1.2	1.2	1.7	2.3	2.9	2.9	24.3	45.7	65.9	75.8
147.5°	0.6	0.6	1.2	1.7	2.3	2.3	2.3	11.0	27.2	50.3	64.8
150°	0.6	0.6	1.2	1.2	1.7	1.7	2.3	2.3	17.9	28.3	48.0
152.5°	0.6	0.6	1.2	1.2	1.7	1.7	1.7	2.3	2.3	19.1	26.6
155°	0.6	0.6	1.2	1.2	1.2	1.7	1.7	1.7	1.7	2.3	16.8
157.5°	0.6	0.6	1.2	1.2	1.2	1.2	1.2	1.7	1.7	2.3	2.3
160°	0.6	1.2	1.2	1.2	1.2	1.2	1.2	1.7	1.7	1.7	2.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3	1179.3
2.5°	1159.7	1168.4	1168.4	1175.9	1179.9	1178.8	1179.9	1182.2	1175.3	1173.0
5°	1196.1	1213.5	1222.1	1241.8	1246.4	1255.1	1258.0	1267.8	1270.2	1263.2
7.5°	1310.6	1346.5	1369.6	1393.4	1403.8	1409.0	1418.2	1424.6	1434.4	1426.9
10°	1418.2	1461.6	1494.6	1520.6	1527.0	1532.2	1543.2	1558.8	1557.6	1556.5
12.5°	1511.3	1549.5	1590.0	1627.6	1646.7	1650.7	1666.9	1686.0	1689.5	1673.9
15°	1588.3	1641.5	1687.2	1727.1	1734.6	1745.0	1757.2	1763.5	1760.6	1762.9
17.5°	1652.5	1697.6	1730.0	1751.4	1756.0	1764.1	1775.1	1783.2	1784.3	1784.9
20°	1677.9	1708.0	1739.2	1768.7	1778.0	1786.1	1799.4	1806.3	1805.2	1801.7
22.5°	1673.3	1717.3	1746.2	1770.5	1779.7	1787.2	1798.8	1803.4	1801.7	1798.2
25°	1666.4	1704.0	1729.4	1742.1	1742.1	1747.9	1745.0	1741.5	1737.5	1738.1
27.5°	1633.4	1655.4	1672.7	1687.2	1688.9	1689.5	1687.8	1684.3	1682.0	1676.8
30°	1566.3	1592.9	1601.0	1599.8	1597.5	1596.9	1590.0	1584.8	1578.4	1579.0
32.5°	1487.6	1493.4	1496.9	1487.1	1481.3	1480.1	1473.8	1465.1	1456.4	1447.1
35°	1386.4	1382.4	1374.3	1367.3	1362.7	1355.8	1346.5	1337.8	1326.8	1327.4
37.5°	1288.7	1275.9	1264.4	1245.3	1241.8	1225.6	1207.7	1193.8	1175.9	1166.0
40°	1186.9	1174.1	1159.7	1138.9	1129.6	1114.6	1094.9	1071.8	1057.3	1051.5
42.5°	1089.7	1074.1	1057.3	1032.4	1020.9	1008.7	987.9	965.3	954.9	953.2
45°	994.8	976.9	960.7	933.0	920.8	906.3	884.9	871.1	856.0	852.6
47.5°	903.5	887.8	863.0	841.6	830.0	817.9	795.9	783.1	772.2	768.1
50°	815.0	799.9	780.8	757.1	746.1	734.6	718.9	706.8	694.1	690.0
52.5°	735.7	720.7	701.0	682.5	671.5	664.6	650.1	636.2	626.4	620.0
55°	659.4	645.5	627.6	610.2	606.2	596.9	580.1	568.0	561.6	562.2
57.5°	589.4	577.2	563.4	546.6	540.2	531.5	520.6	506.1	498.6	496.3
60°	525.8	514.2	502.6	489.9	481.8	475.4	460.4	448.8	439.0	437.8
62.5°	465.0	456.4	446.5	433.8	426.9	419.9	406.6	395.6	388.1	385.8
65°	412.4	404.9	393.3	382.9	376.0	369.0	356.3	345.3	338.9	332.6
67.5°	360.3	354.0	345.3	334.3	327.9	321.0	310.0	297.9	290.4	288.6
70°	314.1	307.1	300.2	288.6	282.8	278.8	266.6	254.5	248.7	246.4
72.5°	274.2	266.6	256.8	248.7	245.2	237.7	226.2	218.1	210.5	205.9
75°	232.5	227.9	220.9	211.7	205.3	200.1	190.9	182.8	176.4	171.8
77.5°	198.4	192.6	186.8	177.6	172.9	168.3	158.5	151.5	145.2	142.9
80°	166.6	161.4	153.3	146.3	142.3	138.2	130.7	123.2	118.6	116.3
82.5°	137.7	133.0	126.7	120.9	116.3	113.4	106.4	100.1	96.0	92.5
85°	113.9	108.2	102.4	97.2	93.7	91.4	86.2	81.6	76.3	75.2
87.5°	93.7	89.1	83.9	78.7	76.3	73.5	68.8	65.4	61.3	59.6
90°	80.4	74.6	70.0	65.9	63.6	61.9	58.4	53.8	50.9	49.2
92.5°	72.9	67.7	63.6	59.6	57.8	56.1	52.1	48.6	45.7	43.4
95°	68.3	63.0	59.0	55.5	53.8	52.6	49.2	45.7	42.8	41.1
97.5°	64.8	59.0	54.9	52.1	50.3	49.2	46.3	43.4	40.5	38.8
100°	61.9	56.1	52.1	49.2	48.0	46.8	44.0	41.1	38.8	37.0
102.5°	60.7	54.4	50.3	48.0	46.8	45.7	42.8	40.5	37.6	35.9
105°	60.7	53.8	49.7	46.8	45.7	44.5	42.2	39.9	37.0	35.3
107.5°	61.9	54.4	49.7	47.4	46.3	45.1	42.2	39.9	37.0	35.3
110°	63.6	56.1	50.9	48.0	46.8	45.7	42.8	40.5	37.6	35.9



TEST NUMBER: P232583

CATALOG NUMBER: 4SKB1-LD5-4-N-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	65.9	57.8	52.6	49.2	48.0	46.8	44.0	41.6	38.8	37.0
115°	68.8	60.2	54.9	50.9	49.7	48.6	45.7	42.8	40.5	38.8
117.5°	72.3	63.6	57.3	53.2	52.1	50.3	47.4	44.5	42.2	40.5
120°	75.8	67.7	60.7	56.1	54.4	52.6	49.7	46.8	44.0	42.2
122.5°	79.8	71.1	64.2	59.6	57.8	56.1	52.6	49.7	46.8	44.5
125°	83.9	75.8	68.3	63.0	60.7	59.0	55.5	52.1	49.7	47.4
127.5°	87.3	79.8	72.3	67.1	64.8	62.5	59.0	55.5	52.6	50.9
130°	90.2	83.9	76.9	71.1	68.8	67.1	62.5	59.0	56.1	54.4
132.5°	93.1	87.3	81.6	75.8	73.5	71.1	67.1	63.0	60.2	57.8
135°	94.9	90.2	85.6	80.4	78.1	75.2	71.1	67.1	63.6	61.3
137.5°	94.9	92.5	88.5	84.4	82.1	79.8	75.2	71.1	67.7	65.9
140°	92.0	92.5	90.8	87.9	85.6	83.9	79.8	75.2	71.7	70.0
142.5°	87.9	89.7	90.8	89.1	87.9	86.8	83.3	79.2	75.8	73.5
145°	81.6	85.0	87.3	89.1	88.5	87.9	85.0	82.1	78.7	76.3
147.5°	73.5	78.7	81.6	85.6	86.8	86.8	85.6	83.3	80.4	78.7
150°	61.9	69.4	74.6	78.7	80.4	82.7	82.7	81.0	79.2	77.5
152.5°	44.0	56.1	63.6	69.4	71.7	74.0	76.9	75.8	73.5	72.3
155°	24.9	30.7	46.3	55.5	58.4	61.3	65.9	67.1	66.5	64.8
157.5°	12.7	20.8	26.0	30.1	31.8	36.4	45.7	52.1	51.5	52.6
160°	2.9	3.5	9.8	18.5	20.8	22.0	24.3	26.0	26.0	24.9
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)