

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: P232584

Luminaire Tested: **4SKB1-LD5-4-N-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232584
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-L850-CD1-U
Description: METALUX SKYBAR 4' WAVESTREAM STRIP
WITH NARROW LENS
Light Source: (196) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4418.0 lumens
Efficiency: N/A
Efficacy: 152.3 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

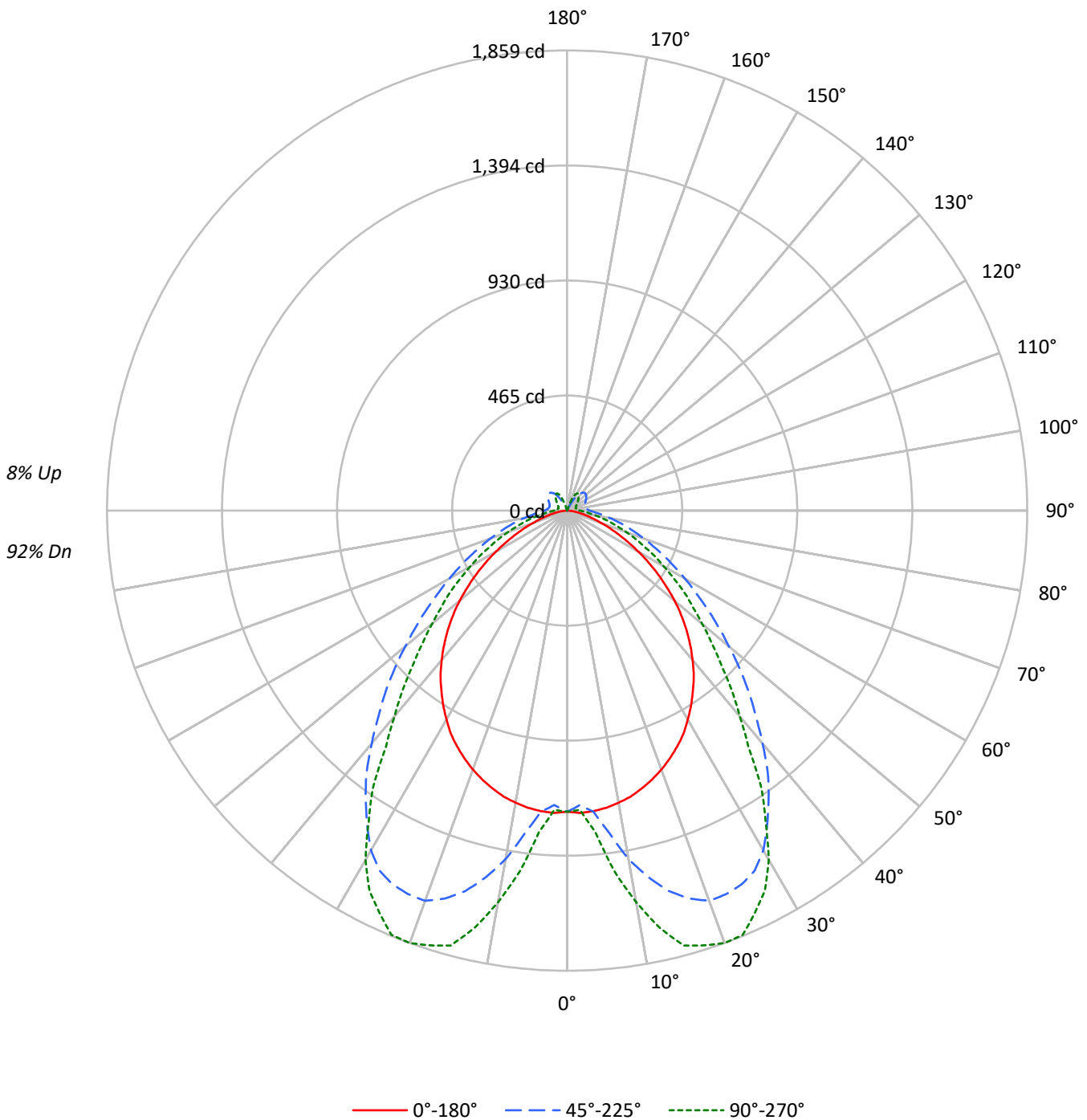
Input Watts (W): 29
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13098	13098	13098
5°	13084	12253	12778
10°	12931	13531	14558
15°	12706	14357	15442
20°	12426	14568	14946
25°	12078	14052	13794
30°	11623	13080	12099
35°	11079	11555	9905
40°	10438	9948	7703
45°	9669	8428	6180
50°	8734	6989	4987
55°	7618	5744	4083
60°	6353	4698	3220
65°	5048	3806	2495
70°	3817	3036	1902
75°	2769	2394	1376
80°	1859	1840	976
85°	1004	1384	669



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.6	2.8
10°-20°	433.5	9.8
20°-30°	713.6	16.2
30°-40°	801.7	18.1
40°-50°	713.5	16.1
50°-60°	551.8	12.5
60°-70°	374.7	8.5
70°-80°	223.6	5.1
80°-90°	119.9	2.7
90°-100°	78.9	1.8
100°-110°	66.9	1.5
110°-120°	61.9	1.4
120°-130°	57.7	1.3
130°-140°	48.9	1.1
140°-150°	33.4	0.8
150°-160°	12.9	0.3
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-30°	1271.7	28.8
0°-40°	2073.4	46.9
0°-60°	3338.6	75.6
0°-90°	4056.8	91.8
90°-120°	207.8	4.7
90°-150°	347.9	7.9
90°-180°	361.0	8.2
0°-180°	4418.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1219	1202	1221	1286	1303	116
15°	1162	1306	1591	1790	1819	328
25°	1052	1350	1667	1798	1793	484
35°	886	1216	1419	1406	1370	554
45°	682	940	1039	950	880	524
55°	448	640	689	625	580	400
65°	229	398	430	388	343	231
75°	85	240	246	212	177	93
85°	15	151	124	97	78	18
90°	1	128	90	66	51	1
95°	1	124	79	56	42	0
105°	1	113	73	47	36	0
115°	1	104	81	51	40	1
125°	1	85	94	63	49	1
135°	1	33	101	81	63	0
145°	1	3	78	91	79	0
155°	1	2	17	60	67	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°	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8
2.5°	1222.8	1218.0	1209.6	1209.0	1203.7	1201.3	1201.9	1200.1	1198.3	1195.3	1190.5
5°	1218.6	1209.6	1195.9	1195.9	1198.9	1201.9	1209.0	1215.6	1217.4	1221.6	1221.0
7.5°	1210.8	1197.1	1184.0	1194.7	1205.5	1209.6	1218.0	1229.9	1248.4	1282.4	1315.9
10°	1198.3	1179.8	1175.6	1192.9	1207.3	1219.8	1238.9	1294.4	1345.7	1396.4	1429.3
12.5°	1184.0	1161.3	1167.3	1189.4	1222.8	1246.6	1295.6	1369.0	1409.6	1468.6	1517.0
15°	1162.5	1141.0	1151.8	1184.6	1254.4	1305.7	1333.2	1422.7	1487.7	1536.7	1591.0
17.5°	1139.2	1120.1	1135.0	1192.9	1287.8	1337.4	1381.5	1457.3	1520.0	1592.2	1643.5
20°	1113.6	1096.9	1116.0	1203.7	1303.9	1354.7	1403.6	1475.8	1558.8	1633.3	1677.5
22.5°	1083.7	1068.8	1098.0	1208.4	1309.9	1360.6	1408.4	1492.5	1578.4	1639.9	1677.5
25°	1051.5	1036.6	1076.6	1198.9	1303.9	1350.5	1401.8	1501.5	1571.9	1620.2	1666.8
27.5°	1016.9	1000.2	1060.5	1179.2	1280.1	1332.6	1390.5	1484.2	1539.7	1593.4	1640.5
30°	974.5	959.6	1032.4	1150.6	1246.6	1308.7	1358.2	1442.4	1495.5	1548.6	1585.0
32.5°	932.1	917.8	998.4	1110.0	1208.4	1266.9	1314.7	1380.3	1440.6	1481.8	1504.4
35°	886.2	870.1	959.0	1060.5	1165.5	1216.2	1256.2	1315.9	1366.6	1397.0	1419.1
37.5°	840.2	822.9	908.9	1008.5	1108.8	1155.3	1188.8	1249.0	1287.8	1312.9	1331.4
40°	788.3	770.4	857.0	950.1	1049.7	1082.5	1117.1	1170.9	1199.5	1219.8	1228.7
42.5°	735.8	717.9	800.9	888.6	977.5	1009.7	1045.5	1087.9	1116.0	1127.9	1127.9
45°	681.5	664.2	743.0	827.7	902.9	939.9	971.5	1005.5	1028.8	1038.4	1039.0
47.5°	624.8	610.5	685.7	762.7	833.1	865.3	889.8	922.6	942.9	945.3	944.7
50°	566.9	554.4	621.8	697.6	760.3	788.9	810.4	840.8	857.0	856.4	853.4
52.5°	506.1	498.3	561.0	630.2	686.9	712.5	731.6	758.5	771.6	771.6	769.2
55°	448.2	443.4	497.7	564.5	617.7	640.3	658.2	682.1	692.8	692.8	689.3
57.5°	389.7	389.1	439.8	499.5	550.2	570.5	589.6	610.5	620.0	620.0	614.1
60°	332.4	335.4	385.5	440.4	487.0	506.7	523.4	543.7	549.6	550.8	549.6
62.5°	279.3	287.0	334.8	384.9	431.5	448.2	463.1	482.8	487.6	489.3	486.4
65°	229.2	241.1	289.4	337.2	380.7	398.0	411.2	424.9	429.1	430.9	430.3
67.5°	188.0	200.5	248.9	296.0	336.0	349.7	362.8	374.8	375.4	378.3	376.0
70°	145.6	164.7	213.0	257.8	295.4	307.9	318.7	327.0	328.8	329.4	328.8
72.5°	112.2	134.9	180.8	225.0	259.0	270.9	279.3	285.9	285.9	286.4	284.7
75°	84.7	112.2	156.9	197.5	228.0	239.9	246.5	250.6	248.3	247.7	245.9
77.5°	61.5	93.1	135.5	173.7	202.3	211.3	217.2	217.8	214.2	213.6	210.1
80°	42.4	75.8	117.0	152.8	179.0	188.0	191.0	188.6	185.6	182.0	177.2
82.5°	28.0	61.5	101.5	135.5	159.9	167.1	169.5	165.9	161.7	155.8	148.0
85°	14.9	49.5	88.3	121.1	144.4	151.0	152.2	145.6	139.0	131.3	123.5
87.5°	6.6	40.6	78.8	111.6	131.9	136.7	137.3	130.1	121.7	112.8	103.2
90°	1.2	34.6	72.8	104.4	124.1	128.3	128.3	118.8	110.4	100.9	90.1
92.5°	0.6	32.8	71.0	102.0	121.7	125.9	125.3	115.2	105.0	94.3	83.5
95°	0.6	28.6	66.8	99.7	119.9	124.1	123.5	112.8	102.0	90.7	78.8
97.5°	0.6	23.9	62.7	95.5	117.0	121.1	121.1	111.0	100.3	88.3	75.8
100°	0.0	18.5	57.9	91.3	112.8	118.2	118.8	109.2	97.9	85.9	74.0
102.5°	0.0	12.5	53.7	87.7	109.8	115.2	116.4	108.6	96.7	84.7	72.8
105°	0.6	7.8	48.3	83.5	106.8	112.8	114.6	108.0	96.1	84.7	72.8
107.5°	0.6	5.4	43.0	79.4	104.4	111.0	113.4	108.0	96.7	85.3	74.0
110°	0.6	4.8	36.4	75.2	101.5	108.6	112.2	108.6	97.9	87.1	75.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.6	3.6	27.5	69.8	97.9	106.2	111.0	109.2	99.7	88.9	78.2
115°	0.6	3.0	18.5	64.5	94.3	103.8	109.8	109.8	101.5	91.3	81.2
117.5°	0.6	3.0	12.5	57.3	90.1	100.9	107.4	110.4	103.8	93.7	84.7
120°	0.6	2.4	6.0	48.9	84.7	96.7	105.0	110.4	105.6	96.7	87.7
122.5°	0.6	2.4	4.8	37.6	78.8	91.9	101.5	109.8	107.4	99.1	91.3
125°	0.6	1.8	4.2	25.1	71.0	85.3	96.7	108.0	108.0	101.5	94.3
127.5°	0.6	1.8	3.6	17.9	60.9	78.2	90.1	105.0	108.0	103.2	97.3
130°	0.6	1.8	3.0	5.4	46.5	68.0	82.4	100.3	106.8	104.4	99.1
132.5°	0.6	1.2	3.0	4.2	29.8	53.1	71.6	92.5	103.2	104.4	100.9
135°	0.6	1.2	2.4	3.6	21.5	32.8	57.3	83.0	96.7	100.9	100.9
137.5°	0.6	1.2	2.4	3.0	9.5	24.5	35.8	71.6	88.3	96.1	97.9
140°	0.6	1.2	1.8	2.4	3.6	13.1	25.7	56.7	78.2	88.9	93.7
142.5°	0.6	1.2	1.8	2.4	3.0	3.0	15.5	32.8	65.6	79.4	87.1
145°	0.6	1.2	1.2	1.8	2.4	3.0	3.0	25.1	47.1	68.0	78.2
147.5°	0.6	0.6	1.2	1.8	2.4	2.4	2.4	11.3	28.0	51.9	66.8
150°	0.6	0.6	1.2	1.2	1.8	1.8	2.4	2.4	18.5	29.2	49.5
152.5°	0.6	0.6	1.2	1.2	1.8	1.8	1.8	2.4	2.4	19.7	27.5
155°	0.6	0.6	1.2	1.2	1.2	1.8	1.8	1.8	1.8	2.4	17.3
157.5°	0.6	0.6	1.2	1.2	1.2	1.2	1.2	1.8	1.8	2.4	2.4
160°	0.6	1.2	1.2	1.2	1.2	1.2	1.2	1.8	1.8	1.8	2.4
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°	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8
2.5°	1196.5	1205.5	1205.5	1213.2	1217.4	1216.2	1217.4	1219.8	1212.6	1210.2
5°	1234.1	1252.0	1261.0	1281.3	1286.0	1295.0	1298.0	1308.1	1310.5	1303.3
7.5°	1352.3	1389.3	1413.1	1437.6	1448.3	1453.7	1463.3	1469.8	1480.0	1472.2
10°	1463.3	1508.0	1542.0	1568.9	1575.5	1580.8	1592.2	1608.3	1607.1	1605.9
12.5°	1559.3	1598.7	1640.5	1679.3	1699.0	1703.2	1719.9	1739.6	1743.2	1727.0
15°	1638.7	1693.6	1740.8	1781.9	1789.7	1800.4	1813.0	1819.5	1816.6	1818.9
17.5°	1705.0	1751.5	1784.9	1807.0	1811.8	1820.1	1831.5	1839.8	1841.0	1841.6
20°	1731.2	1762.2	1794.5	1824.9	1834.5	1842.8	1856.5	1863.7	1862.5	1858.9
22.5°	1726.4	1771.8	1801.6	1826.7	1836.2	1844.0	1855.9	1860.7	1858.9	1855.3
25°	1719.3	1758.1	1784.3	1797.5	1797.5	1803.4	1800.4	1796.9	1792.7	1793.3
27.5°	1685.3	1707.9	1725.8	1740.8	1742.6	1743.2	1741.4	1737.8	1735.4	1730.0
30°	1616.0	1643.5	1651.8	1650.7	1648.3	1647.7	1640.5	1635.1	1628.6	1629.2
32.5°	1534.9	1540.8	1544.4	1534.3	1528.3	1527.1	1520.6	1511.6	1502.7	1493.1
35°	1430.4	1426.3	1417.9	1410.8	1406.0	1398.8	1389.3	1380.3	1369.0	1369.6
37.5°	1329.6	1316.5	1304.5	1284.8	1281.3	1264.5	1246.0	1231.7	1213.2	1203.1
40°	1224.6	1211.4	1196.5	1175.0	1165.5	1150.0	1129.7	1105.8	1090.9	1084.9
42.5°	1124.3	1108.2	1090.9	1065.2	1053.3	1040.8	1019.3	996.0	985.3	983.5
45°	1026.4	1007.9	991.2	962.6	950.1	935.1	913.1	898.7	883.2	879.6
47.5°	932.1	916.0	890.4	868.3	856.4	843.8	821.1	808.0	796.7	792.5
50°	840.8	825.3	805.6	781.2	769.8	757.9	741.8	729.2	716.1	711.9
52.5°	759.1	743.6	723.3	704.2	692.8	685.7	670.8	656.4	646.3	639.7
55°	680.3	666.0	647.5	629.6	625.4	615.9	598.6	586.0	579.5	580.1
57.5°	608.1	595.6	581.2	563.9	557.4	548.4	537.1	522.2	514.4	512.0
60°	542.5	530.5	518.6	505.5	497.1	490.5	475.0	463.1	452.9	451.8
62.5°	479.8	470.8	460.7	447.6	440.4	433.3	419.5	408.2	400.4	398.0
65°	425.5	417.7	405.8	395.1	387.9	380.7	367.6	356.3	349.7	343.1
67.5°	371.8	365.2	356.3	344.9	338.4	331.2	319.9	307.3	299.6	297.8
70°	324.0	316.9	309.7	297.8	291.8	287.6	275.1	262.6	256.6	254.2
72.5°	282.9	275.1	265.0	256.6	253.0	245.3	233.3	225.0	217.2	212.4
75°	239.9	235.1	228.0	218.4	211.9	206.5	196.9	188.6	182.0	177.2
77.5°	204.7	198.7	192.8	183.2	178.4	173.7	163.5	156.4	149.8	147.4
80°	171.9	166.5	158.1	151.0	146.8	142.6	134.9	127.1	122.3	119.9
82.5°	142.0	137.3	130.7	124.7	119.9	117.0	109.8	103.2	99.1	95.5
85°	117.6	111.6	105.6	100.3	96.7	94.3	88.9	84.1	78.8	77.6
87.5°	96.7	91.9	86.5	81.2	78.8	75.8	71.0	67.4	63.3	61.5
90°	83.0	77.0	72.2	68.0	65.6	63.9	60.3	55.5	52.5	50.7
92.5°	75.2	69.8	65.6	61.5	59.7	57.9	53.7	50.1	47.1	44.8
95°	70.4	65.0	60.9	57.3	55.5	54.3	50.7	47.1	44.2	42.4
97.5°	66.8	60.9	56.7	53.7	51.9	50.7	47.7	44.8	41.8	40.0
100°	63.9	57.9	53.7	50.7	49.5	48.3	45.4	42.4	40.0	38.2
102.5°	62.7	56.1	51.9	49.5	48.3	47.1	44.2	41.8	38.8	37.0
105°	62.7	55.5	51.3	48.3	47.1	46.0	43.6	41.2	38.2	36.4
107.5°	63.9	56.1	51.3	48.9	47.7	46.5	43.6	41.2	38.2	36.4
110°	65.6	57.9	52.5	49.5	48.3	47.1	44.2	41.8	38.8	37.0



TEST NUMBER: P232584

CATALOG NUMBER: 4SKB1-LD5-4-N-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	68.0	59.7	54.3	50.7	49.5	48.3	45.4	43.0	40.0	38.2
115°	71.0	62.1	56.7	52.5	51.3	50.1	47.1	44.2	41.8	40.0
117.5°	74.6	65.6	59.1	54.9	53.7	51.9	48.9	46.0	43.6	41.8
120°	78.2	69.8	62.7	57.9	56.1	54.3	51.3	48.3	45.4	43.6
122.5°	82.4	73.4	66.2	61.5	59.7	57.9	54.3	51.3	48.3	46.0
125°	86.5	78.2	70.4	65.0	62.7	60.9	57.3	53.7	51.3	48.9
127.5°	90.1	82.4	74.6	69.2	66.8	64.5	60.9	57.3	54.3	52.5
130°	93.1	86.5	79.4	73.4	71.0	69.2	64.5	60.9	57.9	56.1
132.5°	96.1	90.1	84.1	78.2	75.8	73.4	69.2	65.0	62.1	59.7
135°	97.9	93.1	88.3	83.0	80.6	77.6	73.4	69.2	65.6	63.3
137.5°	97.9	95.5	91.3	87.1	84.7	82.4	77.6	73.4	69.8	68.0
140°	94.9	95.5	93.7	90.7	88.3	86.5	82.4	77.6	74.0	72.2
142.5°	90.7	92.5	93.7	91.9	90.7	89.5	85.9	81.8	78.2	75.8
145°	84.1	87.7	90.1	91.9	91.3	90.7	87.7	84.7	81.2	78.8
147.5°	75.8	81.2	84.1	88.3	89.5	89.5	88.3	85.9	83.0	81.2
150°	63.9	71.6	77.0	81.2	83.0	85.3	85.3	83.5	81.8	80.0
152.5°	45.4	57.9	65.6	71.6	74.0	76.4	79.4	78.2	75.8	74.6
155°	25.7	31.6	47.7	57.3	60.3	63.3	68.0	69.2	68.6	66.8
157.5°	13.1	21.5	26.9	31.0	32.8	37.6	47.1	53.7	53.1	54.3
160°	3.0	3.6	10.1	19.1	21.5	22.7	25.1	26.9	26.9	25.7
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)